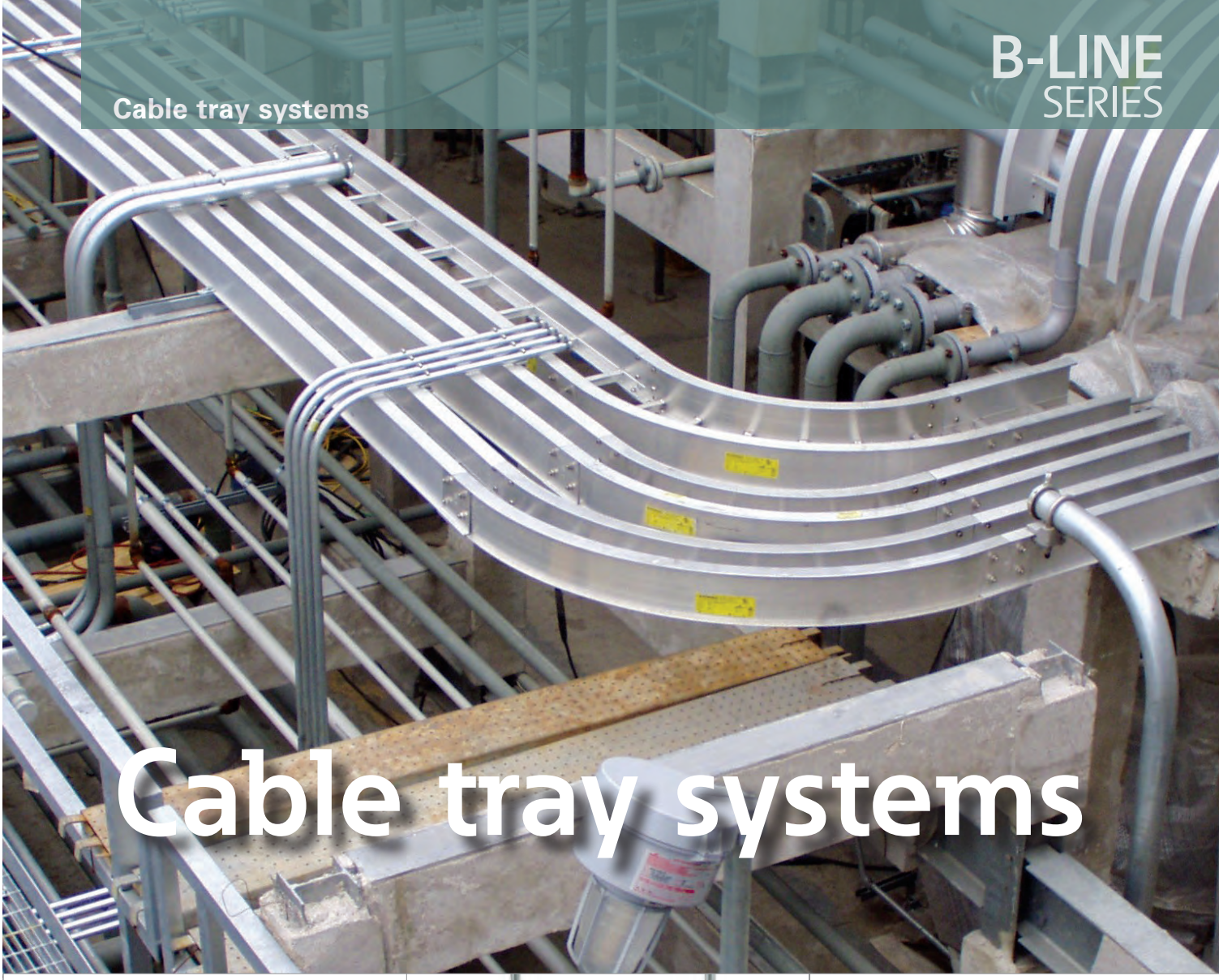
B-LINE SERIES

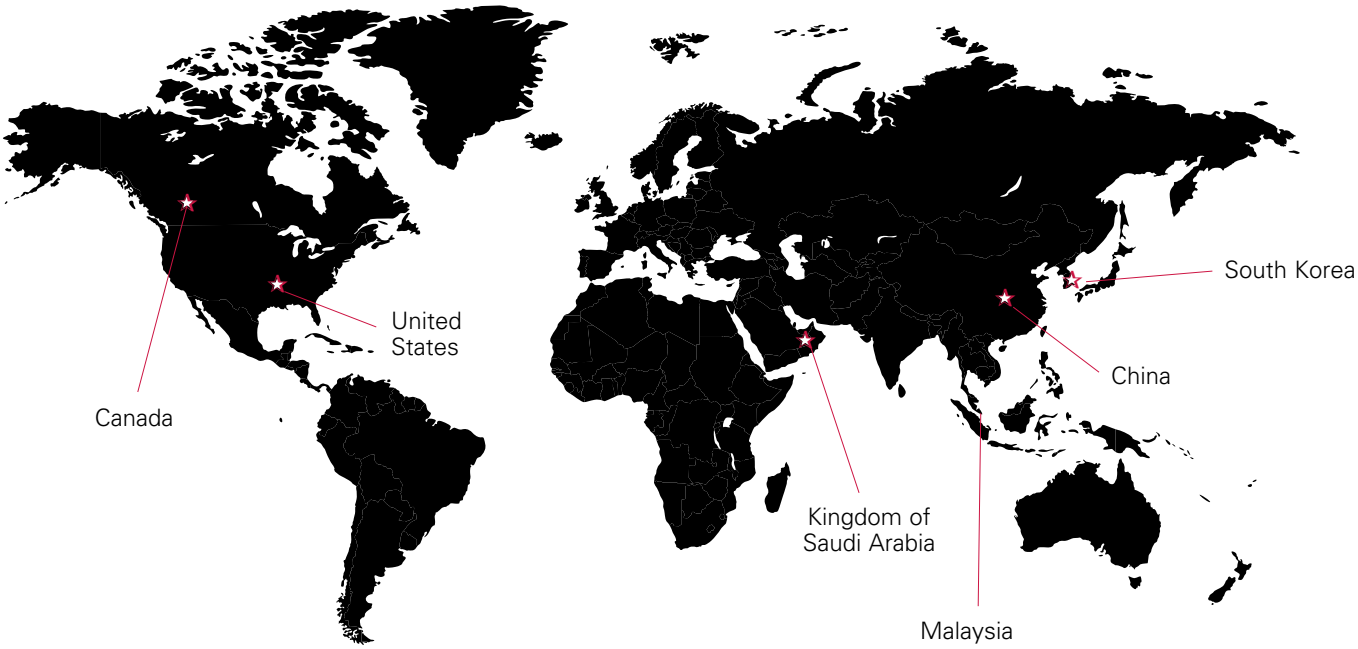


Cable tray systems

EATON
Powering Business Worldwide

For over 60 years, Eaton has manufactured B-Line series cable tray systems. Today, our state-of-the-art facilities and Engineering Services team support small to large scale cable management applications for commercial, industrial, data and communication new and retrofit construction projects. For more information, visit Eaton.com/cabletray.

Manufacturing Locations



B-Line series cable trays conform to the requirements of IEC Standard 61537, 2006 Ed.

Important notice: No warranty, either expressed or implied, is made as to either its applicability to or its compatibility with specific requirements of this information, nor for damages consequential to its use. All design characteristics, specifications, tolerances and similar information are subject to change without notice.

NOTICE

Eaton reserves the right to change the specifications, materials, equipment, prices or the availability of products at any time without prior notice. While every effort has been made to assure the accuracy of information contained in this catalog at the time of publication, Eaton is not responsible for inaccuracies resulting from undetected errors or omissions.

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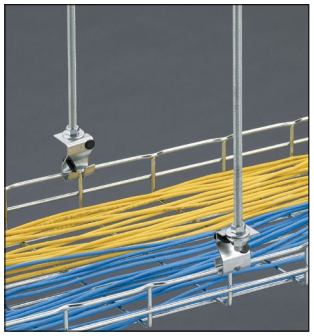

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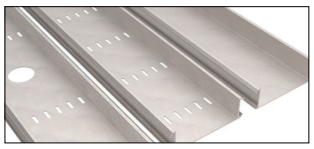

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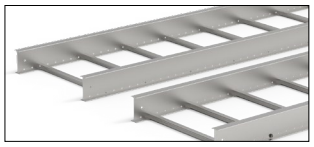

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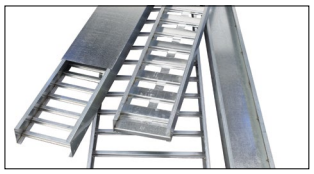

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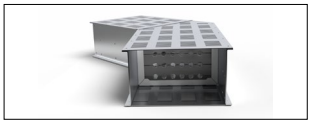

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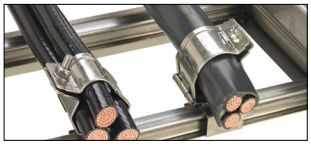

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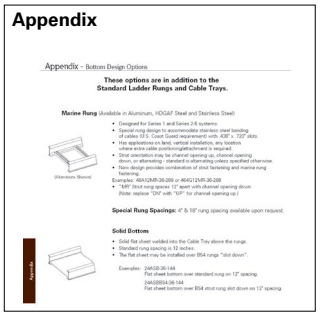


General Information - CoSPEC 2D and 3D Drawings

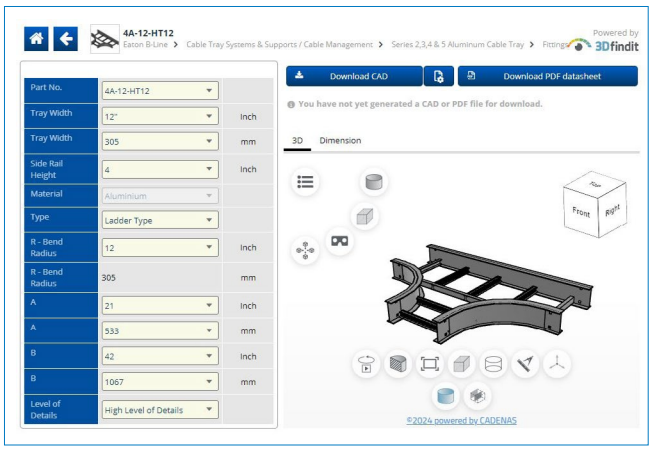
CoSPEC™, the Specifier Center, is designed to help you easily SELECT, VIEW and DOWNLOAD B-Line series product design content in any one of nearly one hundred non-proprietary and proprietary CAD, BIM, PDMS, and graphics formats, which helps speed the integration of the content into your design project.

Features

- Easy integration and configuration
- Comprehensive library of 2D drawings and 3D models for CAD, BIM, PDMS, SP3D, and graphics output
- The most up to date software versions and product data information are always available
- Submittals and specification sheets in PDF format
- Proprietary file format outputs are native to the chosen software

Nearly a Hundred Download Options

- Aveva PDMS and Intergraph SmartPlant SP3D (on select products) content
- Autodesk Revit output available
- Proprietary formats from AutoCAD to SolidWorks to Catia
- Non-proprietary formats like DXF and STEP, and more
- Graphics files in a number of formats including EPS



To get started planning your next project, visit Eaton.com/CoSPEC.

CoSPEC B-Line series Specifier Center - Available Outputs

2D Native	2D Neutral & Graphics	3D Native	3D Neutral
• Allplan 2008 • AutoCAD >=V14 • Cadkey CDL >=V19 • Catia IUA - V4 • HP ME 10 >=V9 • Medusa >=2000i • Microstation (DGN) >=V8 • SolidEdge >=V17 • VX (Varimetrix) >=V5.0	• BMP (2D & 3D View) • DWF-ASCII 5.5, Binary 5.5 and Compressed 5.5 • DWG >=V14 • DXF-V12\HPGL-V2 • IGES >=V5.0 • JPEG (2D & 3D Views) • Metafile 2D-V1, & PS2-V2 • MI >=V8 • PDF Datasheet • Postscript EPS • SVG • TIFF (2D & 3D View)	• Autodesk 3D Studio MAX • Allplan = 2008 • AutoCAD >=V14 • AVEVA PDMS/Marine (Equipment Spec) • Caddy++ via SAT-V4.2 • Catis >=V5 R8 and IUA-V4 • EMS • Google SketchUp • Autodesk Inventor >=R5.3, R10, R11 • Mechanical Desktop >=V5 • Nupas/Cadmatic • One Space Modeling >=2007 • Pro/E Wildfire >=I • PRO-Desktop • Autodesk Revit >= 2009* (coming soon) • SolidEdge >=V17 • SolidWorks >=2001+ • Think3 >=2006.2 • Tribon M3 • Unigraphics >=NX3 • VX (Varimetrix) >=V5	• CIP • DWG >=V14 • DXF V14 • IGES • JT • Metafile 3D (PS3)-V2 • Parasolid-Binary V15 and Text V15 • PDF 3D-7.01 • SAT - V2.0 through V6.0 • STEP-AP203, AP215a & AP214b • STL • U3D (Universal 3D) • VRML >=V1.0 • XGL

To get started, visit Eaton.com/CoSPEC.

Trust your seismic engineering needs to the TOLCO™ seismic experts

Codes and requirements differ by location and project. Our seismic experts understand the codes, and can help you reduce risk and meet your project requirements.

De-Risk your electrical, mechanical, fire protection, HVAC project today by following these easy steps:

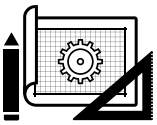
Step 1: Request a quote

Simply contact us at blineseismicsupport@eaton.com and include your project drawings, specifications, and bid date.

- Don't have drawings? Arrange a site visit with your team
- Services include: a detailed review of project requirements, professional engineer certification, OSHPD OPM approval, full submittal package… and more
- Products include: full breadth of TOLCO™ seismic bracing and B-Line series cable tray, pipe hangers, vibration isolation and strut systems
- Products meet or exceed all building code requirements
- Products are designed to help deliver lowest total installed cost solution

Step 2: Review seismic layout drawings

Once you are ready to proceed with your project, our engineering team develops detailed seismic layouts on the project drawings.



- We determine the minimum number of brace locations to meet local codes and specifications
- Drawings are stamped by a Professional structural engineer
- We allow for up to 15% of brace location changes and 1 layout revisions at no charge
- You can rely on our quoted number from estimation to execution

Step 3: Product delivered to jobsite for install

Upon approval of the layout drawings, our products are delivered to the job site through your preferred distributor.

- No need for kits and laying out the braces, each type of brace assembly is exactly the same
- Products ship as full upper and lower attachment assemblies
- Keep it simple and only use what you need
- Return unused material to your distributor, or keep for the next project and reduce your material cost
- We make inspection easier, all products feature visual verification break away bolts to help ensure correct torque

From Mechanical, Electrical, Plumbing, Fire Protection to HVAC Equipment, Eaton is your one-source solution for engineering services and product solutions.

Contact us at blineseismicsupport@eaton.com

For more information, visit Eaton.com/TOLCO.

One source for all of your seismic and cable management needs

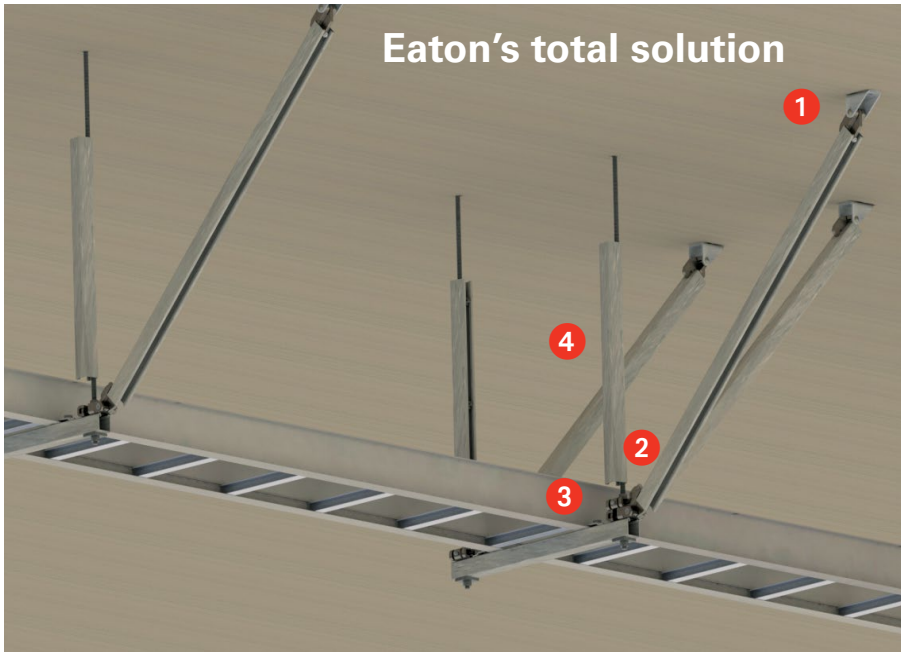


Fig. 980

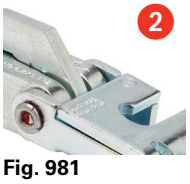


Fig. 981

9ZN-1208

Fig. 98B

Benefits of Eaton's Turn-Key Seismic Solutions

- Pre-approved assembly drawing packages for B-Line series cable tray with TOLCO seismic bracing attachments
- Ideal for new construction and retrofit installations
- Install up to 50% faster
  - No torque-wrench for break-off bolts
  - Braces fully assembled
  - Only 3 parts per brace
- Secure cable tray B-Line series cable tray with hold down clamps and guides approved for seismic applications

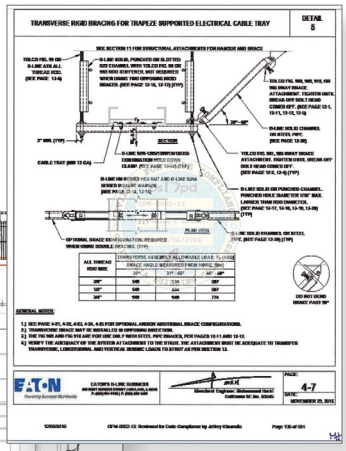
Eaton's B-Line series cable tray with TOLCO seismic bracing is the recommended total solution for your project. Our cable tray, bolted framing, and seismic bracing are approved as one system through third party testing.

Our team of experts can help you select the best cable tray series for your application, as well as designing your seismic bracing layout to ensure it meets applicable building codes and standards.

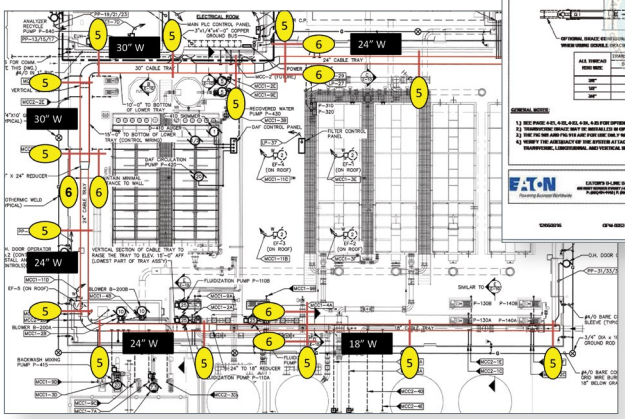
Maximize your productivity by utilizing our engineering services:

- BOM assistance
- submittal packages
- engineered design layout
- PE Stamp in all 50 states and Canada

Rely on Eaton for one solution for your B-Line series cable tray and TOLCO seismic bracing installation.



Stamped submittal



Cable tray layout with seismic bracing locations

Request a quote:
Blineseismicsupport@eaton.com

For additional information, visit Eaton.com/seismicbracing.

Cable Tray Systems

Cable tray is a mechanical support system that can support cables and raceways. Cable tray is not a raceway. Cable tray systems are required to be electrically continuous but not mechanically continuous.

Advantages of Eaton's B-Line series Cable Tray Systems

- **Safety**
- **Dependability**
- **Space Savings**
- **Cost Savings**
- **Design Cost Savings**
- **Material Savings**
- **Installation Cost & Time Savings**
- **Maintenance Savings**

For more information refer to the Cable Tray Manual (Pages MAN-1 thru MAN-53) or call us at 1-800-851-7415

Quick List Selection Process

See pages C-20 & C-21 for expanded selection process.

1. **Support Span Issues are: Strength and Length**

   It is very important to first consider the support span as it affects the strength of the system and the length of the straight sections required.

   - Short Span, 6 to 8 foot support spacing - use 12 foot sections.
   - Intermediate Span, 8 to 12 foot support spacing - use 12 foot sections.
   - Long Span, 16 to 20 foot support spacing - use 20 foot sections.
   - Extra Long Span, over 20 foot to 30 foot support spacing - use 24 or 30 foot sections.

2. **Working Load Issues are: Size (Width, Loading Depth, and Strength)**
   Cable Load

   - Types and numbers of cables to support - Total cable load in lbs. per linear foot (lbs/ft)
   - Power - is single layer - issue width (refer to local electrical code)
   - Low Voltage - is stacked - issue loading depth and width (refer to affecting code)
   - See chart of listed cable load guidelines (refer to page C-24)

   Additional Loads

   - 200 lb. concentrated load - Industrial installations
   - Ice, Wind, Snow loads - Outdoor installations

   Select a Cable Tray system that meets the working load for the support span required and a straight section length that fits the installation. NEMA VE 2 - Straight sections equal to or larger than span.
   Eaton.com/cabletray

3. **Installation Environment Issues are: Material and Finish**

   - Indoor Dry - Institutional, Office, Commercial, Light Industrial
     Aluminum, Pre-Galvanized Steel
   - Indoor Industrial - Automotive, Pulp and Paper, Power Plants
     Aluminum, Pre-Galvanized Steel, Possibly Hot-Dipped Galvanized After Fabrication (HDGAF)
   - Outdoor Industrial - Petrochemical, Automotive, Power Plants
     Aluminum, Hot-Dipped Galvanized After Fabrication (HDGAF)
   - Outdoor Marine - Off Shore Platforms
     Aluminum, Stainless Steel, Fiberglass
   - Special - Petrochemical, Pulp and Paper, Environmental Air
     Contact B-Line (1-800-851-7415)

Cable Tray Product Offering

1.Support Span Issues are: Strength and Length

It is very important to first consider the support span as it affects the strength of the system and the length

Two Side Rail Systems

- Aluminum, Pre-Galvanized Steel, Hot Dip Galvanized After Fabrication Steel, 304 and 316L Stainless Steel, Fiberglass in Polyester Resin, and Vinyl Ester
- Systems tested to 100+ lbs/ft on a 40 foot span
- Special bottom options and splices
- Highest quality fittings
- Unmatched accessories supplied with attachment hardware

Cable Channel (See Cable Channel Section - pages E-1 – E-33)

- 2, 3, 4, and 6 inch widths in Aluminum
- 3, 4, and 6 inch widths in Pre-Galvanized Steel, Hot Dip Galvanized after Fabrication Steel and 304 or 316L Stainless Steel
- 3, 4, 6, and 8 inch widths in Fiberglass in Polyester Resin, and Vinyl Ester
- Unmatched fitting and accessory offering
- Special bottom options and splices
- Highest quality fittings
- Unmatched accessories supplied with attachment hardware

FLEXTRAY™ Wire Basket (See FLEXTRAY Section - pages D-1 – D-58)

- One of the best finishes in the industry, ASTM B633, SC2 (ZN)
- Strong straight top wire design maximizes strength and minimizes weight
- Unmatched accessory package

Advantage of Using Eaton's B-Line series Cable Tray? Selection!

What kind of B-Line series cable tray will work for your project?
First, answer three questions.

1. **Location:** Where will the project be located?
   A. Is the installation inside or outside?
   (decision dealing with thermal and weather conditions)
   B. Any contact of corrosive materials?
   (decision on cable tray material or finish)
   C. Is the location for the cable tray confined or open?
   (decision on the size and type of cable tray)
2. **Span:** What would be the longest and shortest spans between supporting locations for the installation of cables? (decision on type or combination of types of cable tray design needed to be the most efficient and economical)
3. **Cables:** How many and what type of cables are involved in the support installation?
   (decision on the strength of the cable tray)

All these variables are important to the cost savings and safety of Eaton's B-Line series Cable Tray installation project.

Important notice: The information herein has been carefully checked for accuracy and is believed to be correct and current. No warranty, either expressed or implied, is made as to either its applicability to or its compatibility with specific requirements of this information, nor for damages consequential to its use. All design characteristics, specifications, tolerances and similar information are subject to change without notice.

Short Span 6 - 8 Foot
(distance between the supports)

Recommended Short Span Cable Tray Selection
Use 10 ft or 12 ft Sections

	Catalog Number	Rail Height	Load Depth	Span Load lbs./ft. 6′	8′	Available Widths	Material*	Straight Sections & Accessories Page	Fittings Pages
FLEXTRAY™	FT2X2X10	2.380"	2.000"	28	20	2"	S	Section D	—
	FT2X4X10	2.380"	2.000"	43	27	4"	S	Section D	—
	FT2X6X10	2.380"	2.000"	47	27	6"	S	Section D	—
	FT2X8X10	2.380"	2.000"	47	27	8"	S	Section D	—
	FT2X12X10	2.380"	2.000"	47	27	12"	S	Section D	—
	FT2X18X10	2.380"	2.000"	47	27	18"	S	Section D	—
	FT2X20X10	2.380"	2.000"	47	27	20"	S	Section D	—
	FT2X24X10	2.380"	2.000"	47	27	24"	S	Section D	—
	FT4X4X10	4.380"	4.000"	49	36	4"	S	Section D	—
	FT4X8X10	4.380"	4.000"	77	46	8"	S	Section D	—
	FT4X12X10	4.380"	4.000"	83	47	12"	S	Section D	—
	FT4X18X10	4.380"	4.000"	83	47	18"	S	Section D	—
	FT4X20X10	4.380"	4.000"	83	47	20"	S	Section D	—
	FT4X24X10	4.380"	4.000"	89	50	24"	S	Section D	—
	FT6X12X10	6.380"	6.000"	86	48	12"	S	Section D	—
	FT6X18X10	6.380"	6.000"	89	50	18"	S	Section D	—
	FT6X20X10	6.380"	6.000"	98	55	20"	S	Section D	—
	FT6X24X10	6.380"	6.000"	107	60	24"	S	Section D	—
Cable Channel	ACC-03	1.25	1.18	12	—	3"	A	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	ACCN-03	1.25	1.18	16	—	3"	A	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	ACC-04	1.75	1.68	32	—	4"	A	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	ACC-06	1.75	1.68	42	—	6"	A	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	†CC-03	1.25	1.176	17	11.5	3"	S, SS_	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	†CC-04	1.75	1.676	36	24.5	4"	S, SS_	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	†CC-06	1.75	1.676	41	28	6"	S, SS_	E-18 - E-19 & E-20 - E-24	E-25 - E-32
Fiberglass	FCC-03	1	0.81	8	—	3"	F	M-29 & M-30 - M-31	M-29 - M-30
	FCC-04	1.38	1.19	12	—	4"	F	M-29 & M-30 - M-31	M-29 - M-30
	FCC-06	1.63	1.44	58	—	6"	F	M-29 & M-30 - M-31	M-29 - M-30
	FCC-08	2.19	1.94	87	—	8"	F	M-29 & M-30 - M-31	M-29 - M-30
Cable Tray Aluminum	KRA4A	3.86"	2.97"	221	124	6 - 36"	A	KR-3 - KR-4 & KR-5 - KR-14	KR-16 – KR-20
	KRB4A	3.88"	2.95"	—	198	6 - 36"	A	KR-3 - KR-4 & KR-5 - KR-14	KR-16 – KR-20
	KRB6A	5.88"	4.95"	—	170	6 - 36"	A	KR-3 - KR-4 & KR-5 - KR-14	KR-16 – KR-20
Cable Tray Steel	148	3.625"	3.077"	204	115	6" - 36"	S	Section H	H-18 – H-26
	156	4.188"	3.628"	304	171	6" - 36"	S	Section H	H-18 – H-26
	166	5.188"	4.628"	308	173	6" - 36"	S	Section H	H-18 – H-26
	176	6.188"	5.628"	-	194	6" - 36"	S	Section H	H-18 – H-26

*Material: A = Aluminum • S = Steel • SS_ = Stainless Steel Type 304 or 316 • F = Fiberglass
† = G for HDGAF • P for Pre-Galvanized • SS4 for 304 or SS6 for 316 Stainless Steel
① Insert 2, 3, 4, 5 or 6 for number of tiers • ② Insert 2, 3 or 4 for number of tiers

Recommended Intermediate Span Cable Tray Selection
Use 12 ft Sections

Intermediate Span 10 - 12 Foot
(distance between the supports)

	Catalog Number	Rail Height	Load Depth	Span Load lbs./ft. 10′	Span Load lbs./ft. 12′	Available Widths	Material*	Straight Sections & Accessories Page	Fittings Pages
Cable Tray Aluminum	24A	4.120"	3.050"	181	126	6" - 36"	A	I-3 – I-4 & I-13 – I-25	L-3 – L-17
	25A	5.000"	3.930"	200	139	6" - 36"	A	I-5 – I-6 & I-13 – I-25	L-3 – L-17
	26A	6.120"	5.040"	204	142	6" - 36"	A	I-7 – I-8 & I-13 – I-25	L-3 – L-17
	27A	7.140"	6.000"	177	123	6" - 36"	A	I-9 – I-10 & I-13 – I-25	L-3 – L-17
	37A	7.140"	6.050"	—	222	6" - 36"	A	I-9 – I-10 & I-13 – I-25	L-3 – L-17
	KSCC*A-02	2"	1.906"	13	6	2"	A	E-3 - E-4 & E-5 - E-9	E-10 - E-14
	KSCC*A-04	2"	1.906"	27	12	4"	A	E-3 - E-4 & E-5 - E-9	E-10 - E-14
	KSCC*A-06	2"	1.906"	40	18	6"	A	E-3 - E-4 & E-5 - E-9	E-10 - E-14
	KRA4A	3.86"	2.97"	79	55	6″ - 36″	A	KR-3 - KR-4 & KR-5 - KR-14	KR-16 - KR-20
	KRB4A	3.88"	2.95"	127	88	6″ - 36″	A	KR-3 - KR-4 & KR-5 - KR-14	KR-16 - KR-20
	KRB6A	5.88"	4.95"	114	79	6" - 36"	A	KR-3 - KR-4 & KR-5 - KR-14	KR-16 - KR-20
	ACC-03	1.25	1.18	4	3	3"	A	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	ACCN-03	1.25	1.18	6	4	3"	A	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	ACC-04	1.75	1.68	12	8	4"	A	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	ACC-06	1.75	1.68	15	10	6"	A	E-18 - E-19 & E-20 - E-24	E-25 - E-32
Cable Tray Steel	148	3.625"	3.077"	73	51	6" - 36"	S	H-3 & H-7 – H-16	H-18 – H-26
	156	4.188"	3.628"	109	76	6" - 36"	S	H-4 & H-7 – H-16	H-18 – H-26
	166	5.188"	4.628"	111	77	6 "- 36"	S	H-5 & H-7 – H-16	H-18 – H-26
	176	6.188"	5.628"	124	86	6" - 36"	S	H-6 & H-7 – H-16	H-18 – H-26
	248	4.188"	3.140"	148	103	6" - 36"	S	J-3 – J-4 & J-11 – J-23	L-3 – L-17
	258	5.188"	4.140"	157	109	6" - 36"	S	J-5 – J-6 & J-11 – J-23	L-3 – L-17
	268	6.188"	5.140"	158	110	6" - 36"	S	J-7 – J-8 & J-11 – J-23	L-3 – L-17
	378	7.188"	6.140"	204	142	6" - 36"	S	J-9 – J-10 & J-11 – J-23	L-3 – L-17
Cable Tray Stainless Steel	†CC-03	1.25	1.176	17	11.5	3"	S, SS_	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	†CC-04	1.75	1.676	36	24.5	4"	S, SS_	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	†CC-06	1.75	1.676	41	28	6"	S, SS_	E-18 - E-19 & E-20 - E-24	E-25 - E-32
	348	4.188"	3.130"	180	125	6" - 36"	SS_	K-3 & K-6 – K-17	L-3 – L-17
	358	5.188"	4.130"	248	172	6" - 36"	SS_	K-4 & K-6 – K-17	L-3 – L-17
	368	6.188"	5.130"	236	164	6" - 36"	SS_	K-5 & K-6 – K-17	L-3 – L-17
Cable Tray Fiberglass	24F	4.000"	3.000"	226	157	6" - 36"	F	M-22 & M-45 – M-48	M-27 – M-44

*Material: A = Aluminum • S = Steel • SS_ = Stainless Steel Type 304 or 316 • F = Fiberglass
† = G for HDGAF • P for Pre-Galvanized • SS4 for 304 or SS6 for 316 Stainless Steel
① Insert 2, 3, 4, 5 or 6 for number of tiers • ② Insert 2, 3 or 4 for number of tiers

Long 16 - 20 Foot
(distance between the supports)

Recommended Intermediate Span Cable Tray Selection
Use 20 ft Sections

	Catalog Number	Rail Height	Load Depth	Span Load lbs./ft. 16'	18'	20'	Available Widths	Material*	Straight Sections & Accessories Page	Fittings Pages
Cable Tray Aluminum	H24A	4.190"	2.980"	88	70	56	6" - 36"	A	I-3 – I-4 & I-13 – I-25	L-3 – L-17
	25A	5.000"	3.930"	78	62	50	6" - 36"	A	I-5 – I-6 & I-13 – I-25	L-3 – L-17
	34A	4.200"	3.080"	125	99	80	6" - 36"	A	I-3 – I-4 & I-13 – I-25	L-3 – L-17
	35A	5.060"	3.960"	121	96	77	6" - 36"	A	I-5 – I-6 & I-13 – I-25	L-3 – L-17
	26A	6.120"	5.040"	80	63	51	6" - 36"	A	I-7 – I-8 & I-13 – I-25	L-3 – L-17
	36A	6.170"	5.060"	131	104	84	6" - 36"	A	I-7 – I-8 & I-13 – I-25	L-3 – L-17
	37A	7.140"	6.050"	125	99	80	6" - 36"	A	I-9 – I-10 & I-13 – I-25	L-3 – L-17
	46A	6.190"	5.080"	161	127	103	6" - 36"	A	I-7 – I-8 & I-13 – I-25	L-3 – L-17
	47A	7.240"	6.130"	156	123	100	6" - 36"	A	I-9 – I-10 & I-13 – I-25	L-3 – L-17
	H46A	6.240"	5.090"	261	206	167	6" - 36"	A	I-7 – I-8 & I-13 – I-25	L-3 – L-17
	H47A	7.240"	6.090"	233	184	149	6" - 36"	A	I-9 – I-10 & I-13 – I-25	L-3 – L-17
	KSCC*A-02	2"	1.906"	—	—	3	2"	A	E-3 - E-4 & E-5 - E-9	E-10 - E-14
	KSCC*A-04	2"	1.906"	—	—	7	4"	A	E-3 - E-4 & E-5 - E-9	E-10 - E-14
	KSCC*A-06	2"	1.906"	—	—	10	6"	A	E-3 - E-4 & E-5 - E-9	E-10 - E-14
Cable Tray Steel	346	4.188"	3.130"	98	78	63	6" - 36"	S	J-3 – J-4 & HDS-11 – HDS-21	L-3 – L-17
	356	5.188"	4.130"	108	85	69	6" - 36"	S	J-5 – J-6 & HDS-11 – HDS-21	L-3 – L-17
	366	6.188"	5.140"	117	93	75	6" - 36"	S	J-7 – J-8 & HDS-11 – HDS-21	L-3 – L-17
	378	7.188"	6.140"	80	63	51	6" - 36"	S	J-9 – J-10 & HDS-11 – HDS-21	L-3 – L-17
	444	4.188"	3.110"	142	112	91	6" - 36"	S	J-3 – J-4 & HDS-11 – HDS-21	L-3 – L-17
	454	5.188"	4.110"	166	131	106	6" - 36"	S	J-5 – J-6 & HDS-11 – HDS-21	L-3 – L-17
	464	6.188"	5.110"	192	152	51	6" - 36"	S	J-7 – J-8 & HDS-11 – HDS-21	L-3 – L-17
	476	7.188"	6.130"	120	95	77	6" - 36"	S	J-9 – J-10 & HDS-11 – HDS-21	L-3 – L-17
	574	7.188"	6.110"	203	160	130	6" - 36"	S	J-9 – J-10 & HDS-11 – HDS-21	L-3 – L-17
Cable Tray Stainless Steel	348	4.188"	3.130"	70	56	45	6" - 36"	SS_	K-3 & K-6 – K-17	L-3 – L-17
	358	5.188"	4.130"	97	77	62	6" - 36"	SS_	K-4 & K-6 – K-17	L-3 – L-17
	368	6.188"	5.130"	92	73	59	6" - 36"	SS_	K-5 & K-6 – K-17	L-3 – L-17
	464	6.188"	5.110"	192	152	123	6" - 36"	SS_	K-5 & K-6 – K-17	L-3 – L-17
Cable Tray Fiberglass	36F	6.000"	5.000"	139	109	89	6" - 36"	F	M-23 & M-45 – M-48	M-27 – M-44
	46F	6.000"	5.000"	221	174	141	6" - 36"	F	M-24 & M-45 – M-48	M-27 – M-44

*Material
A = Aluminum
S = Steel
SS_ = Stainless Steel Type 304 or 316
F = Fiberglass

Recommended Extra Long Span Cable Tray Selection

Use 24 ft or 30 ft Sections
(40 ft with S8A)

Extra Long Span 24 - 30 Foot

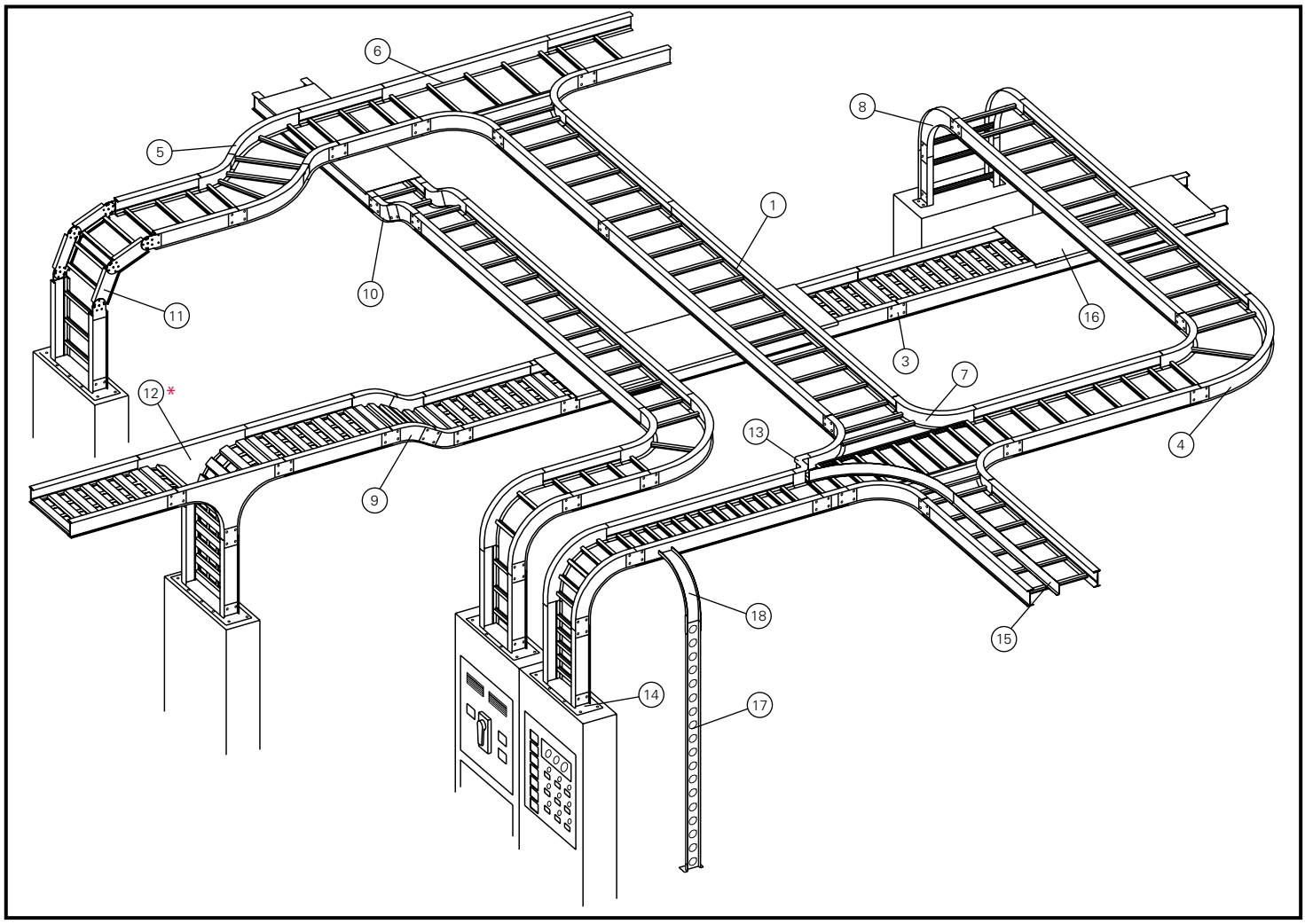
(distance between the supports)

	Catalog Number	Rail Height	Load Depth	Span Load lbs/ft 24′	Span Load lbs/ft 30′	Available Widths	Material*	Straight Sections & Accessories Pages	Fittings Pages
Cable Tray Aluminum	46A	6.190"	5.080"	72	-	6" - 36"	A	I-7 – I-8 & I-13 – I-25	L-3 – L-17
	47A	7.240"	6.130"	69	-	6" - 36"	A	I-9 – I-10 & I-13 – I-25	L-3 – L-17
	56A	6.430"	5.263"	117	75	6" - 36"	A	I-7 – I-8 & I-13 – I-25	L-3 – L-17
	57A	7.400"	6.230"	161	102	12" - 36"	A	I-9 – I-10 & I-13 – I-25	L-3 – L-17
	H46A	6.240"	5.090"	116	-	6" - 36"	A	I-7 – I-8 & I-13 – I-25	L-3 – L-17
	H47A	7.240"	6.090"	103	-	6" - 36"	A	I-9 – I-10 & I-13 – I-25	L-3 – L-17
	S8A	8.000"	6.200"	252	161	12" - 36"	A	I-11 & I-12	I-12
Cable Tray Steel	444	4.188"	2.110"	63	-	6" - 36"	S	J-3 – J-4 & HDS-11 – HDS-21	L-3 – L-17
	454	5.188"	4.110"	74	-	6" - 36"	S	J-5 – J-6 & HDS-11 – HDS-21	L-3 – L-17
	464	6.188"	5.110"	85	-	6" - 36"	S	J-7 – J-8 & HDS-11 – HDS-21	L-3 – L-17
	476	7.188"	6.130"	53	-	6" - 36"	S	J-9 – J-10 & HDS-11 – HDS-21	L-3 – L-17
	574	7.188"	6.110"	90	-	6" - 36"	S	J-9 – J-10 & HDS-11 – HDS-21	L-3 – L-17
Cable Tray Stainless Steel	464	6.188"	5.110"	85	-	6" - 36"	SS_	K-5 & K-6 – K-17	L-3 – L-17

*Material
A = Aluminum
S = Steel
SS_ = Stainless Steel Type 304 or 316

Eaton's B-Line series cable trays -

Designed for Your Cable Support Requirements



Nomenclature

① Ladder Type Cable Tray

③ Straight Splice Plate

④ 90° Horizontal Bend, Ladder Type Cable Tray

⑤ 45° Horizontal Bend, Ladder Type Cable Tray

⑥ Horizontal Tee, Ladder Type Cable Tray

⑦ Horizontal Cross, Ladder Type Cable Tray

⑧ 90° Vertical Outside Bend, Ladder Type Cable Tray

⑨ 45° Vertical Outside Bend, Ventilated Type Cable Tray

⑩ 30° Vertical Inside Bend, Ladder Type Cable Tray

⑪ Vertical Bend Segment (VBS)

⑫ Vertical Tee Down

⑬ Left Hand Reducer, Ladder Type Cable Tray

⑭ Frame Type Box Connector

⑮ Barrier Strip Straight Section

⑯ Solid Flanged Tray Cover

⑰ Ventilated Channel Straight Section

⑱ Channel Cable Tray, 90° Vertical Outside Bend

- A proven industry leader with over fifty years experience.
- Committed to the success of its customers through manufacturing, engineering and service.

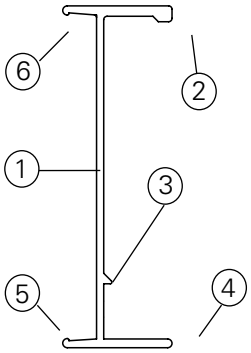
- Four United States cable tray fabrication sites: (★)
  Troy, IL Sherman, TX Pinckneyville, IL Reno, NV Calgary, AB
- Twelve inventory locations (◆) and numerous distribution locations.
- Industry involvement:
  - NEMA - 5VE Member - Metallic Cable Tray Section
  - NEMA - 5FG Member - Nonmetallic Cable Tray Section
  - Cable Tray Institute (CTI) - A Founding Member
  - Conforms to the requirements of IEC Standard 61537, 2006 Ed.
- Unmatched cable support systems:
  - Cable Tray - Two Side Rail (Metallic)
  - Cable Tray - KwikRail Cable Tray System
  - Cable Tray - Two Side Rail (Nonmetallic)
  - Cable Tray - FLEXTRAY™ Cable Support Systems
  - Cable Trays
  - Cable Runways - Data Centers
  - NEMA Wireways

Aluminum Cable Tray, Series 2, 3, 4 & 5

- **Side Rails**

  Our I-Beam - the most efficient structural shape

  Using "Copper-free" 6063-T6 Aluminum Alloy



1. **I-beam side rail design**
   - maximize strength-to-weight ratio
2. **Added material to top flange to increase cable tray stiffness**
3. **Welding bead**
   - positive rung lock
   - added material disperses heat
4. **Bottom flange inside**
   - positive rung support
5. **Bottom flange outside**
   - strong lower flange for hold down clamps and expansion guides
6. **Top flange outside**
   - strong upper flange for securing the tray cover or the conduit-to-tray adapter

- **Rungs** - provide system integrity

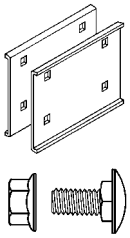
  The rungs can represent 40% of your cable tray system.

  Rung A - Standard for widths through 24"

  Rung B - Standard for widths greater than 24"

  - For industrial applications — 200 lb. concentrated loads
  - New P-Rung design allows P-Clamp cable fastening at any location.

- **Splices** - provide system integrity



With the unique Wedge Lock splice system:
- Channel-shaped for extra strength
- Snaps into the side rail
- Positions and holds for bolting, a labor-saving feature
- Four bolt patterns, a labor-saving feature
- 316 Stainless Steel hardware is available as an option

- **Fittings** - provide system integrity

  Surpasses NEMA VE 1 requirements
  3" straight tangents for splice integrity

- **A 200 lb. Concentrated Load** - providing system integrity

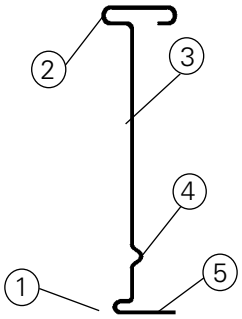
  Side rails engineered to support a 200 lb. concentrated load + cable load
  Rungs engineered to support a 200 lb. concentrated load + cable load

- Reliable time-tested products.

Steel Cable Tray, Series 2, 3, 4 & 5

- **Side Rails**

  Our I-Beam - the most efficient structural shape



1. Roll formed for extra strength
2. Enlarged top flange for stiffness
3. Structural grade traceable steel
4. Rung top lock
5. Rung bottom rest

Side rails and rungs are stamped every 18" with:

- Company Name
- Part Number
- Material
- Heat Trace Number

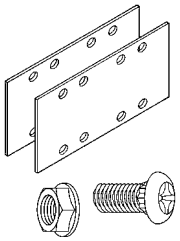
- **Rungs** - provide system integrity

  The rungs can represent 40% of your cable tray system.

Rung - Standard for all widths

- For industrial applications - 200 lb. concentrated loads.
- Rungs are roll formed from traceable structural grade steel

- **Splices** - provide system integrity



The Splices - the engineered connection:
- Special high strength eleven gauge steel
- Eight bolt connection for required strength
- Finish and hardware options

- **Hot Dip Galvanized After Fabrication (HDGAF)** providing system integrity

  - ASTM A123/CSA Type I
  - In plant post-dip inspection and deburr
  - ASTM F-1136-88 Grade 3 Splice hardware exceeds NEMA requirements.
  - ASTM A123 Covers available - system compatibility

- **Pre-Galvanized- Hot Dip Mill Galvanized** providing system integrity

  - ASTM A653SS Gr.33 G90/ CSA Type II
  - Anti-corrosive silicon bronze welds eliminate cosmetic painting

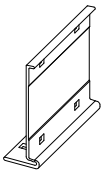
- **Reliable time-tested products**

  - 200 lb. Concentrated Load- side rail and rungs
  - Splice integrity - 3" fitting tangents

- **Special Packaging**

- For less than truckload (LTL) shipments
- Helps reduce freight claims over 50%
- A positive package for all

- **Mid Span Aluminum Splice**

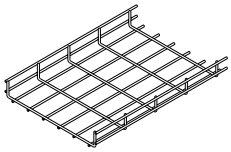


- The standard splice for H46A, H47A and 57A systems
- Optional availability for other systems
- See appendix page APP-2 for details

- **Special Aluminum Long Span Systems**

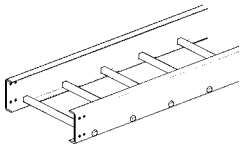
- 57A12-36-360 Tested to 102 lbs./ft. on 30' span - safety factor 1.5
  (Page I-9 & I-10)
- S8A12-36-480 Tested to 101 lbs./ft. on 40' span - safety factor 1.5
  (Page I-11 & I-12)

- **Wire Basket Cable Support Systems** (See FLEXTRAY™ Section D)



- Field adaptable - no fittings to order
- Low profile in 2", 4" and 6" loading depths
- Rugged welded steel, wire mesh construction

- **Non-Metallic Cable Tray** (See Fiberglass Section M)



- For corrosive environments
- For voltage isolation
- A complete line offering
- Request latest catalog

B-Line series cable trays conform to the requirements of IEC Standard 61537, 2001 Ed.

The following factors should be considered when determining the appropriate cable tray system.

1. Material & Finish

- Standards Available (Pages C-2 – C-4)
- Corrosion (Pages C-5 – C-7)
- Thermal Contraction and Expansion (Page C-8)
- Installation Considerations and Electrical Grounding Capacity (Page C-9)

2. Strength

- Environmental Loads (Pages C-10 & C-11)
- Concentrated Loads (Page C-11)
- Support Span (Page C-11)
- Deflection (Page C-12)
- Rung (Page C-13)
- Load Capacity (NEMA & CSA Classes) (Pages C-14 & C-15)
- Cable Data (Page C-16)

3. Width & Available Loading Depth

- Cable Diameter (Page C-16)
- Allowable Cable Fill (Pages C-17 - C-21)
- Barrier Requirements (Page C-22)
- Future Expansion Requirements (Page C-22)
- Space Limitations (Page C-22)

4. Length

- Lengths Available (Page C-23)
- Support Spans (Not to exceed the length of straight sections) (Page C-23)
- Space Limitations (Page C-23)
- Installation (Page C-23)

5. Loading Possibilities

- Power Application (Page C-24)
- Data/Communication Cabling (Page C-24)
- Other Factors to Consider (Page C-24)

6. Bottom Type

- Type of Cable (Page C-25)
- Cost vs. Strength (Page C-25)
- Cable Exposure (Page C-25)
- Cable Attachment (Page C-25)

7. Fitting Radius

- Cable Flexibility (Page C-25)
- Space Limitations (Page C-25)

Standards Available

Material	Material Specification	Advantages
Aluminum	6063-T6 (Side rails, Rungs and Splice Plates) 5052-H32 (Solid Bottoms, Covers and Accessories)	• Corrosion Resistance • Easy Field Fabrication & Installation • Excellent Strength to Weight Ratio • Excellent Grounding Conductor
Steel	ASTM A1011 SS Gr. 33 (14 Gauge Plain Steel) ASTM A1008 Gr. 33 Type 2 (16 & 18 Gauge Plain) ASTM A653SS Gr. 33 G90 (Pre-Galvanized) ASTM A510 Gr. 1008 (FLEXTRAY) (plain wire)	• Electric Shielding • Finish Options • Low Thermal Expansion • Limited Deflection
Stainless Steel	AISI Type 304 or AISI Type 316/316L ASTM A240	• Superior Corrosion Resistance • Withstands High Temperatures

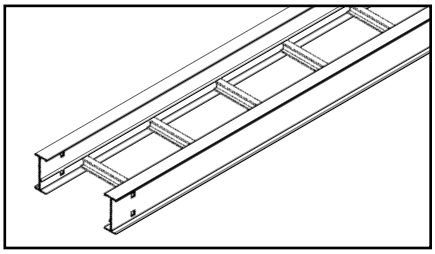
Note: Fiberglass available - see page M-5

Aluminum

Aluminum cable trays are fabricated from structural grade "copper free" (marine grade) aluminum extrusions. Aluminum's excellent corrosion resistance is due to its ability to form an aluminum oxide film that when scratched or cut reforms the original protective film. Aluminum has excellent resistance to "weathering" in most outdoor applications. Aluminum cable tray has excellent corrosion resistance in many chemical environments and has been used for over thirty years in petro-chemical plants and paper mills along the gulf coast from Texas to Florida. Typically, aluminum cable trays can perform indefinitely, with little or no degradation over time, making it ideal for many chemical and marine environments. The resistance to chemicals, indoor and outdoor, can best be determined by tests conducted by the user with exposure to the specific conditions for which it is intended. For further information, contact us or the Aluminum Association.

Some common chemicals which aluminum resists are shown on pages C-6 & C-7.

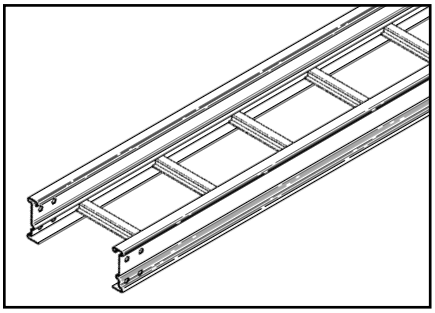
Aluminum Cable Tray



Steel

Steel cable trays are fabricated from continuous roll-formed structural quality steel. By roll-forming steel, the mechanical properties are increased allowing the use of a lighter gauge steel to carry the required load. This reduces the dead weight that must be carried by the supports and the installers. Using structural quality steel, we assure that the material will meet the minimum yield and tensile strengths of applicable ASTM standards. All cable tray side rails, rungs and splice plates are numbered for material traceability. The corrosion resistance of steel varies widely with coating and alloy.

Steel and Stainless Steel Cable Tray



Note:

For help choosing proper cable tray material, see our Technical Paper Series.

Eaton.com/cabletray

Stainless Steel

Stainless Steel cable trays are fabricated from continuous roll-formed AISI Type 304 or AISI Type 316/316L stainless steel. Both are non-magnetic and belong to the group called austenitic stainless steels. Like carbon steel, they exhibit increased strength when cold worked by roll-forming or bending.

Several important conditions could make the use of stainless steel imperative. These include long term maintenance costs, corrosion resistance, appearance and locations where product contamination is undesirable. Stainless steel exhibits stable structural properties such as yield strength and high creep strength at elevated temperatures.

Our stainless steel cable trays are welded using stainless steel welding wire to ensure each weldment exhibits the same corrosion resistant characteristic as the base metal. Localized staining in the weld area or heat affected zone may occur in severe environments. Specialized shielding gases and low carbon materials are used to minimize carbon contamination during welding and reduce staining and stress corrosion. Specify passivation after fabrication per ASTM A380 to minimize staining, improve aesthetics and further improve corrosion resistance.

A detailed study of the corrosive environment is recommended when considering a stainless steel design (see pages C-6 & C-7).

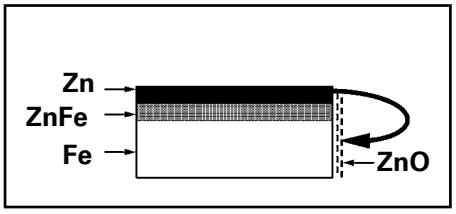
Standards Available

Finish	Specification	Recommended Use
Electrogalvanized Zinc	ASTM B633 (For Cable Tray Hardware and Accessories, Alum. and Pre-Galv.) (For Flextray Standard is B633 SC2)	Indoor
Chromium Zinc	ASTM F-1136-88 (Hardware for Hot Dip Galvanized Cable Tray)	Indoor/Outdoor
Pre-Galvanized Zinc	ASTM A653SS Gr.33 G90 (CSA Type 2) (Steel Cable Tray and Fittings)	Indoor
Hot Dip Galvanized Zinc After Fabrication	ASTM A123 (CSA Type 1) (Steel Cable Tray and Fittings)	Indoor/Outdoor
Special Paint	Per Customer Specification (Aluminum or Steel Cable Tray & Fittings)	Indoor

Zinc Coatings

Zinc protects steel in two ways. First it protects the steel as a coating and second as a sacrificial anode to repair bare areas such as cut edges, scratches, and gouges. The corrosion protection of zinc is directly related to its thickness and the environment. This means a .2 mil coating will last twice as long as a .1 mil coating in the same environment.

Galvanizing also protects cut and drilled edges.



Electrogalvanized Zinc

Electrogalvanized Zinc (also known as zinc plated or electroplated) is the process by which a coating of zinc is deposited on the steel by electrolysis from a bath of zinc salts. This finish is standard for cable tray hardware and some accessories for aluminum and pre-galvanized systems.

A rating of SC3, our standard, provides a minimum zinc coating thickness of .5 mils (excluding threaded rod, which is SC1 = .2 mils)

When exposed to air and moisture, zinc forms a tough, adherent, protective film consisting of a mixture of zinc oxides, hydroxides, and carbonates. This film is in itself a barrier coating which slows subsequent corrosive attack on the zinc. This coating is usually recommended for indoor use in relatively dry areas, as it provides ninety-six hours protection in salt spray testing per ASTM B117.

Chromium/Zinc

Chromium/Zinc is a corrosion resistant composition, which was developed to protect fasteners and small bulk items for automotive use. The coating applications have since been extended to larger parts and other markets.

Chromium/Zinc composition is an aqueous coating dispersion containing chromium, proprietary organics, and zinc flake.

This finish provides 720 hours protection in salt spray testing per ASTM B117, exceeding NEMA VE-1 (NEMA BI 50015) requirements by 300%.

Pre-Galvanized Zinc

(Mill galvanized, hot dip mill galvanized or continuous hot dip galvanized)

Pre-Galvanized steel is produced by coating coils of sheet steel with zinc by continuously rolling the material through molten zinc at the mills. This is also known as mill galvanized or hot dip mill galvanized. These coils are then slit to size and fabricated by roll forming, shearing, punching, or forming to produce our pre-galvanized cable tray products.

The G90 specification calls for a coating of .90 ounces of zinc per square foot of steel. This results in a coating of .45 ounces per square foot on each side of the sheet. This is important when comparing this finish to hot dip galvanized after fabrication.

During fabrication, cut edges and welded areas are not normally zinc coated; however, the zinc near the uncoated metal becomes a sacrificial anode to protect the bare areas after a short period of time.

To further insure a quality product, our welds all pre-galvanized cable trays with a silicon bronze welding wire allowing only a small heat affected zone to be exposed. This small area quickly repairs itself by the same process as cut edges.

Hot Dip Galvanized After Fabrication

(Hot dip galvanized or batch hot dip galvanized)

Hot Dip Galvanized After Fabrication cable tray products are fabricated from steel and then completely immersed in a bath of molten zinc. A metallic bond occurs resulting in a zinc coating that completely coats all surfaces, including edges and welds.

Another advantage of this method is coating thickness. Cable, trays hot dip galvanized after fabrication, have a minimum thickness of 1.50 ounces per square foot on each side, or a total 3.0 ounces per square foot of steel, according to ASTM A123.

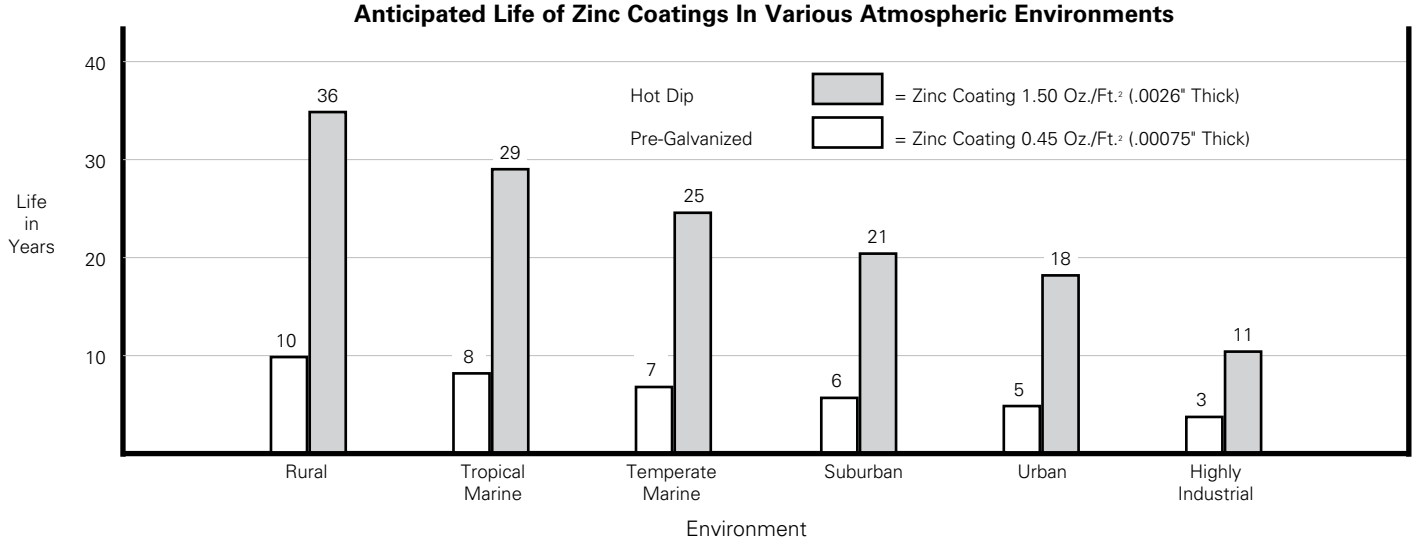
The zinc thickness is controlled by the amount of time each part is immersed in the molten zinc bath as well as the speed at which it is removed. The term "double dipping" refers to parts too large to fit into the galvanizing kettle and, therefore, must be dipped one end at a time. It does not refer to extra coating thickness.

The layer of zinc which bonds to steel provides a dual protection against corrosion. It protects first as an overall barrier coating. If this coating happens to be scratched or gouged, zinc's secondary defense is called upon to protect the steel by galvanic action.

Hot dip galvanized after fabrication is recommended for prolonged outdoor exposure and will protect steel for many years in most outdoor environments and in many aggressive industrial environments (see charts on page C-4).

Standards Available

Service Life is defined as the time to 5% rusting of the steel surface.
Anticipated Life of Zinc Coatings In Various Atmospheric Environments



PVC Coating

PVC coating aluminum or steel cable tray is not recommended and has been removed from our cable tray line.

The application of a 15 mil PVC coating to aluminum or steel cable tray was a somewhat popular finish option 15 or more years ago. The soft PVC coating must be completely intact for the finish to be effective. In a caustic atmosphere, a pinhole in the coating can render it useless and corrode the cable tray. The shipment of the cable tray consistently damages the coating, as does installation. The splice hardware, splice plates and ground straps require field removal of the coating to ensure connections. PVC coated cable tray drastically increases the product's cost and delivery time.

We recommend using fiberglass - See Fiberglass section, or stainless steel cable tray systems in highly corrosive areas.

Painting Cable Tray

We offer painted cable tray to any color specified by the customer. It is important to note that there are key advantages and disadvantages to ordering factory painted cable tray. We typically do not recommend factory painted cable tray for most applications.

Painted cable tray is often used in "open ceiling" applications, where all the overhead equipment and structure is painted the same color. In this type of application, additional painting is often necessary in the field, after installation, to ensure all of the supporting components, such as hanger rods, clamps and attaching hardware have been painted uniformly. Pre-painted cable tray interferes with common grounding practices, requiring the paint to be removed at splice locations, and/or the addition of bonding jumpers that were otherwise unnecessary. This additional field modification not only increases the installation cost, but causes potential damage to the special painted finish.

It is typically more cost effective to use an Aluminum or Pre-Galvanized Steel cable tray and paint it after installation, along with the other un-painted building components. Consult painting contractor for proper surface preparation.

Special Paint

Our cable tray and supports can be painted or primed to meet the customers requirements. We have several colors available, consult the factory.

If a non-standard color is required the following information needs to be specified:

1. Type of material preparation (primer, etc.)
2. Type of paint, manufacturer and paint number or type of paint with chip.
3. Dry film thickness.

Material/Finish Prefix Designation Chart

Catalog Number Prefix	Material to be Furnished
A	Aluminum
P	Pre-Galvanized
G	Hot Dip Galvanized
ZN	Zinc Plated
S	Plain Steel
SS4	Type 304 Stainless Steel
SS6	Type 316 Stainless Steel

Corrosion

All metal surfaces are affected by corrosion. Depending on the physical properties of the metal and the environment to which it is exposed, chemical or electromechanical corrosion may occur.

Atmospheric Corrosion

Atmospheric corrosion occurs when metal is exposed to airborne liquids, solids or gases. Some sources of atmospheric corrosion are moisture, salt, dirt and sulphuric acid. This form of corrosion is typically worse outdoors, especially near marine environments.

Chemical Corrosion

Chemical corrosion takes place when metal comes in direct contact with a corrosive solution. Some factors which affect the severity of chemical corrosion include: chemical concentration level, duration of contact, frequency of washing, and operating temperature.

Storage Corrosion

Wet storage stain (White rust) is caused by the entrapment of moisture between surfaces of closely packed and poorly ventilated material for an extended period. Wet storage stain is usually superficial, having no affect on the properties of the metal.

Light staining normally disappears with weathering. Medium to heavy buildup should be removed, in order to allow the formation of normal protective film.

Proper handling and storage will help to assure stain-free material. If product arrives wet, it should be unpacked and dried before storage. Dry material should be stored in a well ventilated "low moisture" environment to avoid condensation formation. Outdoor storage is undesirable, and should be avoided whenever possible.

Galvanic Corrosion

Galvanic corrosion occurs when two or more dissimilar metals are in contacts in the presence of an electrolyte (ie. moisture). An electrolytic cell is created and the metals form an anode or a cathode depending on their relative position on the Galvanic Series Table. The anodic material will be the one to corrode. Whether a material is anodic depends on the relative position of the other material. For example: If zinc and steel are in contact, the zinc acts as the anode and will corrode; the steel acts as the cathode, and will be protected. If steel and copper are in contact, the steel is now the anode and will corrode.

The rate at which galvanic corrosion occurs depends on several factors:

1. The amount and concentration of electrolyte present An indoor, dry environment will have little or no galvanic corrosion compared to a wet atmosphere.
2. The relative size of the materials- A small amount of anodic material in contact with a large cathodic material will result in greater corrosion. Likewise, a large anode in contact with a small cathode will decrease the rate of attack.
3. The relative position on the Galvanic Series Table - The further apart in the Galvanic Series Table, the greater the potential for corrosion of the anodic material.

Galvanic Series In Sea Water

Anodic End

More Anodic

Magnesium
Magnesium Alloys
Zinc
Beryllium
Aluminum - Zinc Alloys (7000 series)
Aluminum - Magnesium Alloys (5000 series)
Aluminum (1000 series)
Aluminum - Magnesium Alloys (3000 series)
Aluminum - Magnesium - Silicon Alloys (6000 series)
Cadmium
Aluminum - Copper Alloys (2000 series)
Cast Iron, Wrought Iron, **Mild Steel**
Austenitic Nickel Cast Iron
Type 410 Stainless Steel (active)
Type 316 Stainless Steel (active)
Type 304 Stainless Steel (active)
Naval Brass, Yellow Brass, Red Brass
Tin
Copper
Lead-Tin Solders
Admiralty Brass, Aluminum Brass
Manganese Bronze
Silicon Bronze
Tin Bronze
Type 410 Stainless Steel (passive)
Nickel - Silver
Copper Nickel Alloys
Lead
Nickel - Aluminum Bronze
Silver Solder
Nickel 200
Silver
Type 316 Stainless Steel (passive)
Type 304 Stainless Steel (passive)
Incoloy 825
Hastelloy B
Titanium
Hastelloy C
Platinum
Graphite

Cathodic End

Corrosion Guide

Chemical	Cable Tray Material								
	Aluminum			Stainless Type 304			Stainless Type 316		
	Cold	Warm	Hot	Cold	Warm	Hot	Cold	Warm	Hot
Acteone	R	R	R	R	R	R	R	R	R
Aluminum Chloride Solution	NR	NR	NR	NR	—	—	F	—	—
Anhydrous Aluminum Chloride	R	R	R	NR	—	—	F	—	—
Aluminum Sulfate	R	R	R	R	R	R	R	R	R
Ammonium Chloride 10%	F	F	NR	R	R	R	R	R	R
Ammonium Hydroxide	F	F	F	R	R	R	R	R	R
Ammonium Phosphate	F	F	NR	R	—	—	R	—	—
Ammonium Sulfate	F	—	—	R	R	R	R	R	R
Ammonium Thiocyanate	R	R	R	R	—	—	R	R	R
Amyl Acetate	R	R	R	R	R	R	R	R	R
Amyl Alcohol	R	R	R	R	—	—	R	R	R
Arsenic Acid	F	F	F	R	R	—	R	R	R
Barium Chloride	F	F	NR	R	R	R	R	R	R
Barium Sulfate	R	R	R	R	R	—	R	R	—
Barium Sulfide	NR	NR	NR	R	R	—	R	R	—
Benzene	R	R	R	R	R	R	R	R	R
Benzoic Acid	F	F	NR	R	R	R	R	R	R
Boric Acid	R	R	F	R	R	R	R	R	R
Bromine Liquid or Vapor	NR	NR	NR	NR	NR	NR	NR	NR	NR
Butyl Acetate	R	R	R	R	—	—	R	R	R
Butyl Alcohol	R	R	R	R	R	R	R	R	R
Butyric Acid	F	F	F	R	R	R	R	R	R
Calcium Chloride 20%	F	F	NR	R	—	—	R	—	—
Calcium Hydroxide	N	—	—	R	R	F	R	R	R
Calcium Hypochlorite 2 - 3%	F	—	—	R	—	—	R	—	—
Calcium Sulfate	R	R	—	R	R	—	R	R	—
Carbon Monoxide Gas	R	R	R	R	R	R	R	R	R
Carbon Tetrachloride	F	F	NR	F	F	F	R	R	R
Chloroform Dry	R	NR	NR	R	R	—	R	R	—
Chloroform Solution	R	NR	NR	—	—	—	—	—	—
Chromic Acid 10% CP	R	R	—	R	R	F	R	R	R
Citric Acid	F	F	F	R	R	NR	R	R	R
Copper Cyanide	NR	NR	NR	R	R	R	R	R	R
Copper Sulfate 5%	NR	NR	NR	R	R	R	R	R	R
Ethyl Alcohol	R	R	R	R	R	R	R	R	R
Ethylene Glycol	R	R	F	R	R	—	R	R	R
Ferric Chloride	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ferrous Sulfate 10%	R	NR	NR	R	R	—	R	R	—
Formaldehyde 37%	R	R	R	R	R	R	R	R	R
Formic Acid 10%	R	R	—	R	R	NR	R	R	R
Gallic Acid 5%	R	R	NR	R	R	R	R	R	R
Hydrochloride Acid 25%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Hydrofluoric Acid 10%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Hydrogen Peroxide 30%	R	R	R	R	R	R	R	R	R
Hydrogen Sulfide Wet	R	—	—	NR	NR	NR	R	R	R

R = Recommended
F = May be used under some conditions
NR = Not Recommended
— = Information not available

The corrosion data given in this table is for general comparison only. (Reference Corrosion Resistance Tables, Second Edition)

The presence of contaminates in chemical environments can greatly affect the corrosion rate of any material.

We strongly suggest that field service tests or simulated laboratory tests using actual environmental conditions be conducted in order to determine the proper materials and finishes to be selected.

For questionable environments see Fiberglass Cable Tray Corrosion Guide (Pages M-3 & M-4).

Cold = 50 - 80°F Warm = 130 - 170°F Hot = 200 - 212°F

Corrosion Guide

Chemical	Cable Tray Material								
	Aluminum			Stainless Type 304			Stainless Type 316		
	Cold	Warm	Hot	Cold	Warm	Hot	Cold	Warm	Hot
Lactic Acid 10%	R	F	NR	R	R	F	R	R	R
Lead Acetate 5%	NR	NR	NR	R	R	R	R	R	R
Magnesium Chloride 1%	NR	NR	NR	R	—	F	R	—	R
Magnesium Hydroxide	R	R	R	R	R	—	R	R	—
Magnesium Nitrate 5%	R	—	—	R	R	R	R	R	R
Nickel Chloride	NR	NR	NR	R	—	—	R	—	—
Nitric Acid 15%	NR	NR	NR	R	R	R	R	R	R
Oleic Acid	R	R	F	R	R	F	R	R	R
Oxalic Acid 10%	R	F	NR	NR	NR	NR	R	R	R
Phenol CP	R	R	R	R	R	R	R	R	R
Phosphoric Acid 50%	NR	NR	NR	R	R	R	R	F	NR
Potassium Bromide 100%	R	F	NR	R	R	—	R	R	R
Potassium Carbonate 100%	F	F	—	R	R	R	R	R	R
Potassium Chloride 5%	R	R	R	R	R	R	R	R	R
Potassium Dichromate	R	R	R	R	R	R	R	R	R
Potassium Hydroxide 50%	NR	NR	NR	R	R	R	R	R	R
Potassium Nitrate 50%	R	R	R	R	R	R	R	R	R
Potassium Sulfate 5%	R	R	R	R	R	R	R	R	R
Propyl Alcohol	R	R	R	R	R	R	R	R	R
Sodium Acetate 20%	R	F	F	R	R	R	R	R	R
Sodium Bisulfate 10%	R	F	F	R	R	R	R	R	R
Sodium Borate	R	F	F	R	R	R	R	R	R
Sodium Carbonate 18%	R	F	F	R	R	R	R	R	R
Sodium Chloride 5%	R	NR	NR	R	R	R	R	R	R
Sodium Hydroxide 50%	NR	NR	NR	R	R	R	R	R	R
Sodium Hypochlorite 5%	R	F	F	F	—	—	R	—	—
Sodium Nitrate 100%	R	R	R	R	R	R	R	R	R
Sodium Nitrite 100%	R	R	R	R	R	R	R	R	R
Sodium Sulfate 100%	R	R	F	R	R	R	R	R	R
Sodium Thiosulfate	R	R	R	R	R	R	R	R	R
Sulfur Dioxide (Dry)	R	R	R	R	R	R	R	R	R
Sulfuric Acid 5%	NR	NR	—	F	NR	NR	R	—	—
Sulfuric Acid 10%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sulfuric Acid 50%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sulfuric Acid 75 - 98%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sulfuric Acid 98 - 100%	NR	NR	—	R	—	—	R	R	F
Tannic Acid 10 & 50%	NR	NR	NR	R	R	R	R	R	R
Tartaric Acid 10 & 50%	F	NR	NR	R	R	R	R	R	R
Vinegar	F	F	F	R	R	R	R	R	R
Zinc Chloride 5 & 20%	F	NR	NR	R	F	NR	R	R	R
Zinc Nitrate	F	NR	NR	R	R	R	R	R	R
Zinc Sulfate	F	NR	NR	R	R	R	R	R	R

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F = May be used under some conditions
NR = Not Recommended
— = Information not available

The corrosion data given in this table is for general comparison only. (Reference Corrosion Resistance Tables, Second Edition)

The presence of contaminates in chemical environments can greatly affect the corrosion rate of any material.

We strongly suggest that field service tests or simulated laboratory tests using actual environmental conditions be conducted in order to determine the proper materials and finishes to be selected.

For questionable environments see Fiberglass Cable Tray Corrosion Guide (Pages M-3 & M-4).

Cold = 50 - 80°F Warm = 130 - 170°F Hot = 200 - 212°F

Thermal Contraction and Expansion

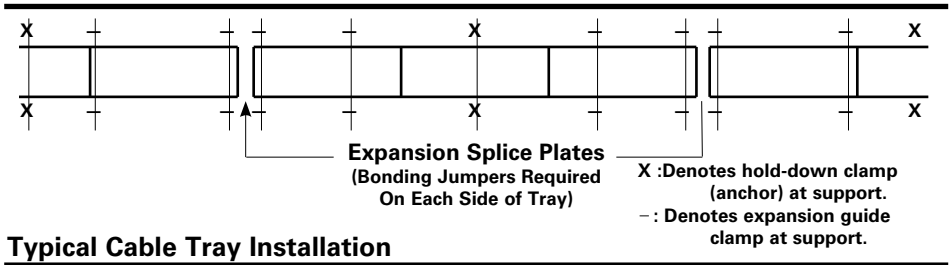
It is important that thermal contraction and expansion be considered when installing cable tray systems. The length of the straight cable tray runs and the temperature differential govern the number of expansion splice plates required (see Table 1 below).

The cable tray should be anchored at the support nearest to its midpoint between the expansion splice plates and secured by expansion guides at all other support locations (see Figure 1). The cable tray should be permitted longitudinal movement in both directions from that fixed point. When used, covers should be overlapped at expansion splices.

Accurate gap settings at the time of installation are necessary for the proper operation of the expansion splice plates. The following procedure should assist the installer in determining the correct gap: (see Figure 2)

1. Plot the highest expected metal temperature on the maximum temperature line.
2. Plot the lowest expected metal temperature on the minimum temperature line.
3. Draw a line between the maximum and minimum points.
4. Plot the metal temperature at the time of installation to determine the gap setting.

Figure 1



Typical Cable Tray Installation

Figure 2

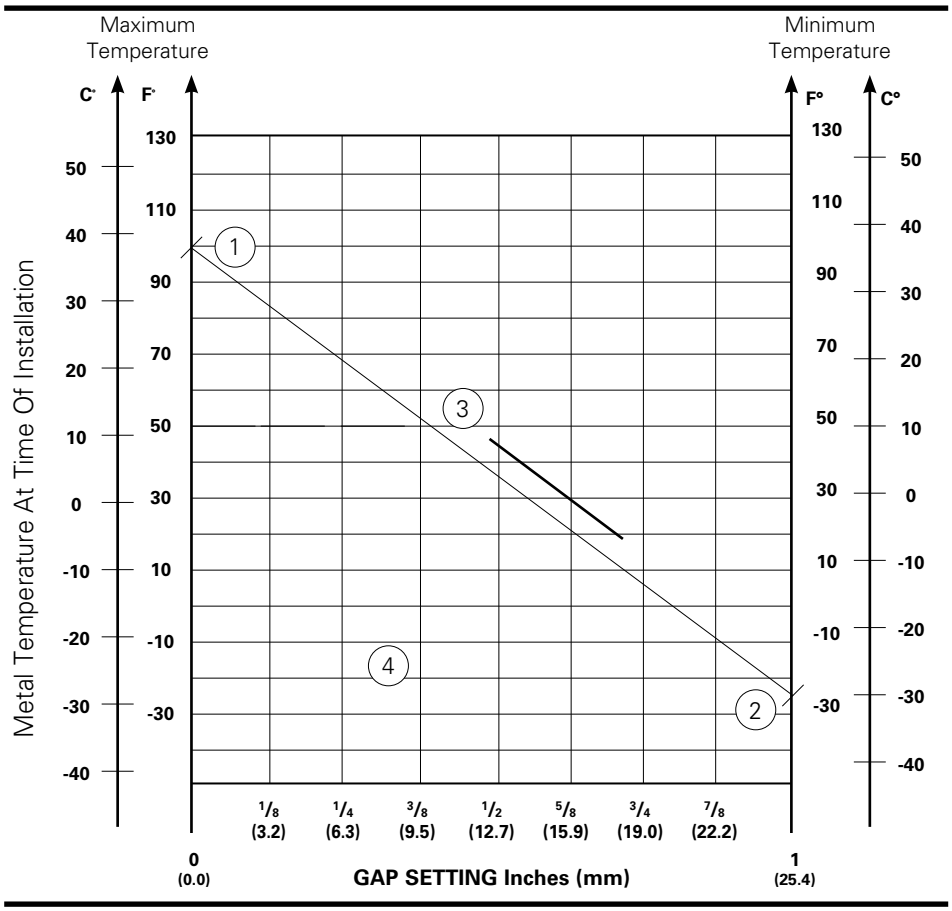


Table 1

Maximum Spacing Between Expansion Joints For 1" Movement

Temperature Differential		Steel		Aluminum		Stainless Steel 304		Stainless Steel 316	
°F	(°C)	Feet	(m)	Feet	(m)	Feet	(m)	Feet	(m)
25	(13.9)	512	(156.0)	260	(79.2)	347	(105.7)	379	(115.5)
50	(27.8)	256	(78.0)	130	(39.6)	174	(53.0)	189	(57.6)
75	(41.7)	171	(52.1)	87	(26.5)	116	(35.4)	126	(38.4)
100	(55.6)	128	(39.0)	65	(19.8)	87	(26.5)	95	(29.0)
125	(69.4)	102	(31.1)	52	(15.8)	69	(21.0)	76	(23.2)
150	(83.3)	85	(25.9)	43	(13.1)	58	(17.7)	63	(19.2)
175	(97.2)	73	(22.2)	37	(11.3)	50	(15.2)	54	(16.4)

Notes: Every pair of expansion splice plates requires two bonding jumpers for grounding continuity. For gap set and hold down/guide location, see installation instruction above. 1" (25.4mm) slotted holes in each expansion connector allow 5/8" (15.9mm) total expansion or contraction.

Installation Considerations

Weight

The weight of an aluminum cable tray is approximately half that of a comparable steel tray. Some factors to consider include: shipping costs, material, handling, project weight restrictions and the strength of support members.

Field Modifications

Aluminum cable tray is easier to cut and drill than steel cable tray since it is a "softer" material. Similarly, galvanized steel cable tray is easier to cut and drill than stainless steel cable tray. Our aluminum cable tray uses a four bolt splice, resulting in half as much drilling and hardware installation as most steel cable tray, which uses an eight bolt splice. Hot dip galvanized and painted steel cable tray finishes must be repaired when field cutting or drilling. Failure to repair coatings will impair the cable tray's corrosion resistance.

Availability

Aluminum, pre-galvanized, stainless steel and fiberglass cable tray can normally be shipped from the factory in a short period of time. Hot dip galvanized and painted cable tray requires an additional coating process, adding several days of preparation before final shipment. Typically, a coated cable tray will be sent to an outside source for coating, requiring additional packing and shipping.

Electrical Grounding Capacity

The National Electrical Code, Article 392.6 allows cable tray to be used as an equipment grounding conductor. All standard steel and aluminum cable trays are classified by Underwriter's Laboratories per NEC Table 392.6 based on their cross-sectional area.

The corresponding cross-sectional area for each side rail design (2 side rails) is listed on a fade resistant UV stabilized label (see Figure 3). This cable tray label is attached to each straight section and fitting that is U.L. classified. U.L. assigned cross-sectional area is also stated in the loading charts in this catalog for each system.

NEMA Installation Guide

The new NEMA VE 2 is a cable tray installation guideline and is available from NEMA, CTI or us. For free download see www.cabletrays.com.

Table 392.6(B)(2)
Metal Area Requirements for Cable Trays Used as Equipment Grounding Conductors

Maximum Fuse Ampere Rating, Circuit Breaker Ampere Trip Setting, or Circuit Breaker Protective Relay Ampere Trip Setting for Ground Fault Protection of any Cable Circuit in the Cable Tray System	Minimum Cross-Sectional Area of Metal* In Square Inches	
	Steel Cable Trays	Aluminum Cable Trays
60	0.20	0.20
100	0.40	0.20
200	0.70	0.20
400	1.00	0.40
600	1.50**	0.40
1000	—	0.60
1200	—	1.00
1600	—	1.50
2000	—	2.00**

For SI units: one square inch = 645 square millimeters.
* Total cross-sectional area of both side rails for ladder cable trays; or the minimum cross-sectional area of metal in channel-type cable trays or cable trays of one-piece construction.
** Steel cable trays shall not be used as equipment grounding conductors for circuits with ground-fault protection above 600 amperes. Aluminum cable trays shall not be used as equipment grounding conductors for circuits with ground-fault protection above 2000 amperes.
For larger ampere ratings an additional grounding conductor must be used.

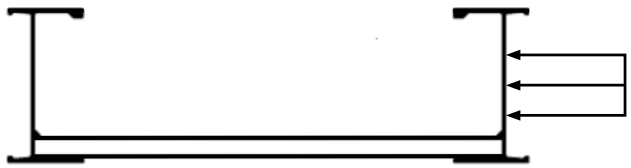
Figure 3

Environmental Loads

Wind Loads

Wind loads need to be determined for all outdoor cable tray installations. Most outdoor cable trays are ladder type trays, therefore the most severe loading to be considered is impact pressure normal to the cable tray side rails (see detail 1).

Detail 1



The impact pressure corresponding to several wind velocities are given below in Table 2.

Table 2

Impact Pressures

V(mph)	P(lbs/ft²)	V(mph)	P(lbs/ft²)
15	0.58	85	18.5
20	1.02	90	20.7
25	1.60	95	23.1
30	2.30	100	25.6
35	3.13	105	28.2
40	4.09	110	30.9
45	5.18	115	33.8
50	6.39	120	36.8
55	7.73	125	40.0
60	9.21	130	43.3
65	10.80	135	46.6
70	12.50	140	50.1
75	14.40	145	53.8
80	16.40	150	57.6

V = Wind Velocity P = Impact Pressure

Note: These values are for an air density of 0.07651 lbs/ft³ corresponding to a temperature of 60˚ F and barometric pressure of 14.7 lbs/in².

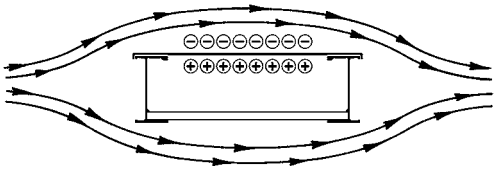
Example Calculation:

Side load for 6" side rail with 100 mph wind

$$\frac{25.6 \times 6}{12} = 12.8 \text{ lbs/ft}$$

When covers are installed on outdoor cable trays, another factor to be considered is the aerodynamic effect which can produce a lift strong enough to separate a cover from a tray. Wind moving across a covered tray (see Detail 2) creates a positive pressure inside the tray and a negative pressure above the cover. This pressure difference can lift the cover off the tray. We recommend the use of heavy duty wrap-around cover clamps when covered trays are installed in an area where strong winds occur.

Detail 2



Special Notice:

Covers on wide cable tray and/or cable tray installed at elevations high off the ground may require additional heavy duty clamps or thicker cover material.

Ice Loads

Glaze ice is the most commonly seen form of ice build-up. It is the result of rain or drizzle freezing on impact with an exposed object. Generally, only the top surface (or the cover) and the windward side of a cable tray system is significantly coated with ice. The maximum design load to be added due to ice should be calculated as follows:

$$LI = \left(\frac{W \times TI}{144}\right) \times DI \quad \text{where;}$$

LI= Ice Load (lbs/linear foot)
W= Cable Tray Width (inches)
TI= Maximum Ice Thickness (inches)
DI= Ice Density = 57 lbs/ft³

the maximum ice thickness will vary depending on location. A thickness of 1/2" can be used as a conservative standard.

Example Calculation:

Ice Loads for 24" wide tray with 1/2" thick ice;

$$\frac{24 \times .5}{144} \times 57 = 4.75 \text{ lbs/ft}$$

Environmental Loads

Snow Loads

Snow is measured by density and thickness. The density of snow varies almost as much as its thickness. The additional design load from snowfall should be determined using the building codes which apply for each installation.

Seismic Loads

A great deal of seismic testing and evaluation of cable tray systems, and their supports, has been performed. The conclusions reached from these evaluations is that cable tray is stronger laterally than vertically, since it acts as a truss in the lateral direction. Other factors that contribute to the stability of cable tray are the energy dissipating motion of the cables within the tray, and the high degree of ductility of the cable tray and the support material. These factors, working in conjunction with a properly designed cable tray system, should afford reasonable assurance to withstand even strong motion earthquakes.

When seismic bracing is required for a cable tray system, it should be applied to the supports and not the cable tray itself. Our "Seismic Restraints" brochure provides OSHPD approved methods of bracing cable tray supports using standard Eaton's B-Line series products. Contact us to receive a copy of this brochure.

Concentrated Loads

A concentrated static load represents a static weight applied at a single point between the side rails. Tap boxes, conduit attachments and long cable drops are just some of the many types of concentrated loads. When so specified, these concentrated static loads may be converted to an equivalent, uniform load (We) by using the following formula:

$$We = \frac{2 \times (\text{concentrated Static Load})}{\text{span length}}$$

Our cable tray side rails, rungs and bottoms will withstand a 200 lb. static load without collapse (series 14 excluded)*. However, it should be noted that per NEMA Standard Publication VE1 cable tray is designed as a support for power or control cables, or both, and is not intended or designed to be a walkway for personnel. Each section of the Cable Tray has a label stating the following message:

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Warning! Not to be used as a walkway, ladder or support for personnel.

To be used only as a mechanical support for cables and raceway.

Failure to adhere to these warnings may result in serious injury or property damage.

Support Span

The strength of a cable tray is largely determined by the strength of its side rails. The strength of a cable tray side rail is proportionate to the distance between the supports on which it is installed, commonly referred to as the "support span". Therefore, the strength of a cable tray system can be altered by changing the support span. However, there is a limit to how much the strength of a cable tray system can be increased by reducing the support span, because the strength of the cable tray bottom members could become the determining factor of strength.

Once the load requirement of a cable tray system has been established, the following factors should be considered:

1. Sometimes the location of existing structural beams will dictate the cable tray support span. This is typical with outdoor installations where adding intermediate supports could be financially prohibitive. For this situation the appropriate cable tray must be selected to accommodate the existing span.
2. When cable tray supports are randomly located, the added cost of a higher strength cable tray system should be compared to the cost of additional supports. Typically, adding supports is more costly than installing a stronger series of cable tray. The stronger cable tray series (e.g. from 75 lbs./ft. on 20' span to 100 lbs./ft. on 20' span) will increase the price of the cable tray system minimally, possibly less than $1/ft., with little or no additional labor cost for installation. Alternately, one extra support may cost $100.00 (material and labor) for a simple trapeze. Future cable additions or the capability of supporting equipment, raceways for example, also favor stronger cable tray systems. *In summary, upgrading to a stronger cable tray series is typically more cost-effective than using the recommended additional supports for a lighter duty cable tray series.*
3. The support span lengths should be equal to or less than unspliced straight section lengths, to ensure that no more than one splice is placed between supports as stated in the NEMA VE 2 Cable Tray Installation Guideline.

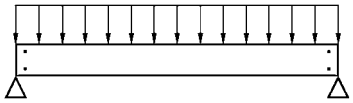
Deflection

Deflection in a cable tray system is primarily an aesthetic consideration. When a cable tray system is installed in a prominent location, a maximum simple beam deflection of 1/200 of support span can be used as a guideline to minimize visual deflection.

It is important at this point to mention that there are two typical beam configurations, simple beam and continuous beam, and to clarify the difference.

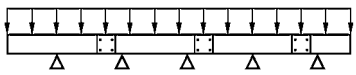
A good example of a simple beam is a single straight section of cable tray supported, but not fastened at either end. When the tray is loaded the cable tray is allowed to flex. Simple beam analysis is used almost universally for beam comparisons even though it is seldom practical in the field installations. The three most prominent reasons for using a simple beam analysis are: ① calculations are simplified; ② it represents the worst case loading; and ③ testing is simple and reliable. The published load data in our cable tray catalog is based on the simple beam analysis per NEMA & CSA Standards.

Simple Beam



Continuous beam is the beam configuration most commonly used in cable tray installations. An example of this configuration is where cable trays are installed across several supports to form a number of spans. The continuous beam possesses traits of both the simple and fixed beams. When equal loads are applied to all spans simultaneously, the counterbalancing effect of the loads on both sides of a support restricts the movement of the cable tray at the support. The effect is similar to that of a fixed beam. The end spans behave substantially like simple beams. When cable trays of identical design are compared, the continuous beam installation will typically have approximately half the deflection of a simple beam of the same span. Therefore, simple beam data should be used only as a general comparison. The following factors should be considered when addressing cable tray deflection:

Continuous Beam

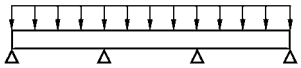


1. Economic consideration must be considered when addressing cable deflection criteria.
2. Deflection in a cable tray system can be reduced by decreasing the support span, or by using a taller or stronger cable tray.
3. When comparing cable trays of equivalent strength, a steel cable tray will typically exhibit less deflection than an aluminum cable tray since the modulus of elasticity of steel is nearly three times that of aluminum.
4. The location of splices in a continuous span will affect the deflection of the cable tray system. The splices should be located at points of minimum stress whenever practical. NEMA Standards VE 1 limits the use of splice plates as follows:

Unspliced straight sections should be used on all simple spans and on end spans of continuous span runs. Straight section lengths should be equal to or greater than the span length to ensure not more than one splice between supports.

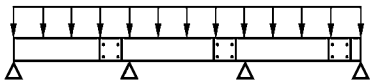
See the figures below for splicing configuration samples.

Typical Continuous Span Configuration

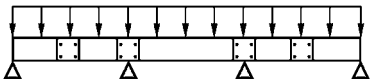


+ Maximum Positive Moment
- Maximum Negative Moment

Preferred Splice Plate Locations



Undesirable Splice Plate Locations



Load Capacity

Calculate each anticipated load factor, then add them to obtain a total load.
(Example: Working Load = Cable + Concentrated + Wind + Snow + Ice Loads).

The Working Load should be used, along with the maximum support spacing, to select a span/load class designation from Table 3. Table 4 (page C-15) contains the most common load/span class designations per the US and Canadian metallic cable tray standard, CSA, C22.2 No. 126.1-98 First Addition, NEMA VE 1-1998.

Table 3
These Loading Classes Are Historical and Supplied For Reference Only

Load Class		Class Designations for lengths of				
lb/ft	(kg/m)	ft 8 m (2.4)	ft 10 m (3.0)	ft 12 m (3.7)	ft 16 m (4.9)	ft 20 m (6.0)
25	(37)	—	A	—	—	—
45	(67)	—	—	—	—	D
50	(74)	8A	—	12A	16A	20A
65	(97)	—	C	—	—	—
75	(112)	8B	—	12B	16B	E or 20B
100	(149)	8C	—	12C	16C	20C
120	(179)	—	D	—	—	—
200	(299)	—	E	—	—	—

Note: 8A/B/C, 12A/B/C, 16A/B/C, and 20A/B/C were the traditional NEMA designations. A, C, D, and E were the conventional CSA designations. Actual tested loadings per span will be stated on the product labels.

Table 4
B-Line series Cable Tray Load Classes

Aluminum
Copper free

Series	Load Depth	Load lb/ft (kg/m)	Span ft (m)	Wt./C NEMA	Wt./C CSA
KRA4A	2.97"	55 (82)	12 (3.7)	12A	C (3m)
KRB4A	2.95"	89 (133)	12 (3.7)	12B	D (3m)
KRB6A	4.95"	79 (118)	12 (3.7)	12B	D (3m)
24A	3.05"	126 (187)	12 (3.7)	12C	D (3m)
H24A	2.98"	56 (83)	20 (6.1)	20A	D (6m)
34A	3.08"	80 (119)	20 (6.1)	20B	E (6m)
25A	3.93"	50 (74)	20 (6.1)	20A	D (6m)
35A	3.96"	77 (115)	20 (6.1)	20B	E (6m)
26A	5.04"	51 (76)	20 (6.1)	20A	D (6m)
36A	5.06"	84 (125)	20 (6.1)	20B	E (6m)
46A	5.08"	103 (153)	20 (6.1)	20C	E (6m)
H46A	5.09"	167 (248)	20 (6.1)	88# @ 25'	131 kg/m (7.6m)
56A	5.26"	75 (112)	30 (9.1)	75# @ 30'	112 kg/m (9.1m)
27A	6.00"	123 (183)	12 (3.7)	12C	D (6m)
37A	6.05"	80 (119)	20 (6.1)	20B	D (6m)
47A	6.13"	100 (149)	20 (6.1)	20C	E (6m)
H47A	6.09"	95 (141)	25 (7.6)	95# @ 25'	141 kg/m (7.6m)
57A	6.23"	102 (152)	30 (9.1)	102# @ 30'	152 kg/m (9.1m)
S8A	6.175"	101 (150)	40 (12.2)	101# @ 40'	240 kg/m (9.1m)

Fiberglass

Series	Load Depth	Load lb/ft (kg/m)	Span ft (m)	Wt./C NEMA	Wt./C CSA
24F	3	161 (240)	12 (3.7)	12C	E (3m)
36F	5	72 (107)	20 (6.1)	20A	E (6m)
46F	5	128 (190)	20 (6.1)	20C	210 kg/m (6m)

Steel
HDGAF/Pre-Galvanized

Series	Load Depth	Load lb/ft (kg/m)	Span ft (m)	Wt./C NEMA	Wt./C CSA
148*	3.077"	51 (76)	12 (3.7)	12A	C1 (3m)
248*	3.140"	103 (153)	12 (3.7)	12C	D1 (3m)
346*	3.130"	63 (943)	20 (6.1)	20A	D1 (6m)
444*	3.110"	91 (135)	20 (6.1)	20B	E (3m)
156*	3.628"	76 (113)	12 (3.7)	12B	C1 (3m)
258*	4.140"	109 (162)	12 (3.7)	12C	D1 (3m)
356*	4.130"	69 (103)	20 (6.1)	20A	D1 (6m)
454*	4.110"	106 (158)	20 (6.1)	20C	E (6m)
166*	4.628"	77 (115)	12 (3.7)	12B	C1 (3m)
268*	5.140"	110 (164)	12 (3.7)	12C	D1 (3m)
368†	5.130"	59 (88)	20 (6.1)	20A	D1 (3m)
366*	5.140"	75 (112)	20 (6.1)	20B	E (6m)
464* †	5.110"	123 (183)	20 (6.1)	123# @ 20'	E (6m)
176*	5.628"	86 (128)	12 (3.7)	12B	137 kg/m (3.7m)
378*	6.140"	51 (76)	20 (6.1)	20A	D1 (3m)
476*	6.130"	77 (115)	20 (6.1)	20B	D1 (6m)
574*	6.110"	130 (193)	20 (6.1)	130# @ 20'	E (6m)
348†	3.130"	125 (186)	12 (3.7)	12C	C1 (3m)
358†	4.130"	62 (92)	20 (6.1)	20A	89 kg/m (6.1m)
FT2X2	2	20 (30)	8 (2.4)		
FT2X4	2	27 (40)	8 (2.4)		
FT2X6	2	27 (40)	8 (2.4)		
FT2X8	2	27 (40)	8 (2.4)		
FT2X12	2	27 (40)	8 (2.4)		
FT2X16	2	27 (40)	8 (2.4)		
FT2X18	2	27 (40)	8 (2.4)		
FT2X20	2	27 (40)	8 (2.4)		
FT2X24	2	27 (40)	8 (2.4)		
FT2X30	2	27 (40)	8 (2.4)		
FT2X32	2	30 (40)	8 (2.4)		
FT4X4	4	36 (53)	8 (2.4)		
FT4X6	4	46 (53)	8 (2.4)		
FT4X8	4	47 (70)	8 (2.4)		
FT4X12	4	47 (70)	8 (2.4)		
FT4X16	4	47 (70)	8 (2.4)		
FT4X18	4	47 (70)	8 (2.4)		
FT4X20	4	47 (70)	8 (2.4)		
FT4X24	4	50 (74)	8 (2.4)	8A	
FT4X30	4	50 (74)	8 (2.4)	8A	
FT6X8	6	43 (64)	8 (2.4)		
FT6X12	6	48 (71)	8 (2.4)		
FT6X16	6	50 (74)	8 (2.4)	8A	
FT6X18	6	50 (74)	8 (2.4)	8A	
FT6X20	6	55 (82)	8 (2.4)	8A	
FT6X24	6	60 (89)	8 (2.4)	8A	

* G denotes CSA Type 1 (HDGAF) or P denotes CSA Type 2 (Mill-Galvanized)

† SS4 (Type 304 Stainless) or SS6 (Type 316 Stainless)

Cable Data

The cable load is simply the total weight of all the cables to be placed in the tray. This load should be expressed in lbs/ft.

The data on this page provides average weights for common cable sizes.

Multiconductor Cable Type TC, 600V with XHHW Conductors, Copper

	3 conductors with ground			4 conductors with ground		
Size	Diameter in.	Area in.²	Weight lbs/ft	Diameter in.	Area in.²	Weight lbs/ft
8	0.66	0.34	0.33	0.72	0.41	0.42
6	0.74	0.43	0.45	0.81	0.52	0.58
4	0.88	0.61	0.66	0.96	0.72	0.84
2	1.00	0.79	0.96	1.10	0.95	1.20
1	1.13	1.00	1.17	1.25	1.23	1.55
1/0	1.22	1.17	1.43	1.35	1.43	1.84
2/0	1.31	1.35	1.72	1.45	1.65	2.20
3/0	1.42	1.58	2.14	1.58	1.96	2.80
4/0	1.55	—	2.64	1.77	—	3.46
250	1.76	—	3.18	1.93	—	4.04
350	1.98	—	4.29	2.18	—	5.48
500	2.26	—	5.94	2.50	—	7.64
750	2.71	—	9.01	3.12	—	11.40
1000	3.10	—	11.70	—	—	—

Multiconductor Cable Type MC, 600V with XHHW Conductors, Copper

	3 conductors with ground						4 conductors with ground					
	Diameter in.		Area in.²		Weight lbs/ft		Diameter in.		Area in.²		Weight lbs/ft	
Size	Without Jacket	With Jacket	Without Jacket	With Jacket	Alum. Armor	Steel Armor	Without Jacket	With Jacket	Without Jacket	With Jacket	Alum. Armor	Steel Armor
8	0.70	0.80	0.38	0.50	0.41	0.57	0.76	0.86	0.45	0.58	0.51	0.68
6	0.78	0.88	0.48	0.61	0.55	0.74	0.85	0.95	0.57	0.71	0.69	0.87
4	0.89	0.99	0.62	0.77	0.74	0.95	0.97	1.07	0.74	0.90	0.93	1.15
2	1.01	1.12	0.80	0.99	1.08	1.32	1.10	1.22	0.95	1.17	1.29	1.56
1	1.16	1.27	1.06	1.27	1.38	1.63	1.25	1.36	1.23	1.45	1.61	1.91
1/0	1.23	1.34	1.19	1.41	1.56	1.86	1.35	1.46	1.43	1.67	1.94	2.27
2/0	1.32	1.43	1.37	1.61	1.85	2.20	1.46	1.56	1.67	1.91	2.36	2.72
3/0	1.46	1.57	1.67	1.94	2.35	2.67	1.58	1.71	1.96	2.30	2.94	3.33
4/0	1.56	1.68	—	—	2.82	3.21	1.75	1.88	—	—	3.64	3.97
250	1.74	1.86	—	—	3.31	3.94	1.92	2.04	—	—	4.21	4.64
350	1.96	2.10	—	—	4.48	4.97	2.16	2.30	—	—	5.71	6.12
500	2.24	2.37	—	—	6.08	6.58	2.47	2.63	—	—	7.91	8.39
750	2.68	2.84	—	—	8.96	9.70	3.03	3.22	—	—	11.48	12.17

Single Conductor Cable 600V

	XHHW			THHN, THWN			TW, THW			USE, RHH, RHW		
Size	Diameter in.	Area in.²	Weight lbs/ft	Diameter in.	Area in.²	Weight lbs/ft	Diameter in.	Area in.²	Weight lbs/ft	Diameter in.	Area in.²	Weight lbs/ft
1/0	0.48	—	0.37	0.50	—	0.37	0.53	—	0.39	0.53	—	0.39
2/0	0.52	—	0.46	0.54	—	0.46	0.57	—	0.48	0.57	—	0.49
3/0	0.58	—	0.57	0.60	—	0.57	0.62	—	0.60	0.63	—	0.60
4/0	0.63	—	0.71	0.66	—	0.71	0.68	—	0.74	0.68	—	0.75
250	0.70	0.38	0.85	0.72	0.41	0.85	0.75	0.44	0.88	0.76	0.45	0.89
300	0.75	0.44	1.02	0.77	0.47	1.02	0.81	0.52	1.04	0.81	0.52	1.05
350	0.80	0.50	1.17	0.83	0.54	1.17	0.86	0.58	1.21	0.86	0.58	1.22
400	0.85	0.57	1.33	0.87	0.59	1.33	0.90	0.64	1.37	0.91	0.65	1.38
500	0.93	0.68	1.64	0.96	0.72	1.64	0.98	0.75	1.69	0.99	0.77	1.70
600	1.04	0.85	2.03	1.06	0.88	2.01	1.09	0.93	2.03	1.10	0.95	2.07
750	1.14	1.02	2.24	1.17	1.08	2.48	1.19	1.11	2.51	1.20	1.13	2.55
1000	1.29	—	2.52	1.32	—	3.30	1.34	—	3.31	1.35	—	3.33

Allowable Cable Fill

For allowable cable types see the Appendix page APP-5.
The following guidelines are based on the 2011 National Electrical Code, Article 392.

I) Number of Multiconductor Cables rated 2000 volts or less in the Cable Tray

(1) 4/0 or Larger Cables

The ladder cable tray must have an inside available width equal to or greater than the sum of the diameters (Sd) of the cables, which must be installed in a single layer. When using solid bottom cable tray, the sum of the cable diameters is not to exceed 90% of the available cable tray width.

Example: Cable Tray width is obtained as follows:

List Cable Sizes	(D) List Cable Outside Diameter	(N) List Number of Cables	Multiply (D) x (N) = Subtotal of the Sum of the Cable Diameters
3/C - #500 kcmil	2.26 inches	1	2.26 inches
3/C - #250 kcmil	1.76 inches	2	3.52 inches
3/C - #4/0 AWG	1.55 inches	4	6.20 inches

The sum of the diameters (Sd) of all cables = 2.26 + 3.52 + 6.20 = 11.98 inches; therefore a cable tray with an available width of at least 12 inches is required.

(2) Cables Smaller Than 4/0

The total sum of the cross-sectional areas of all the cables to be installed in the cable tray must be equal to or less than the allowable cable area for the tray width, as indicated in Table 5.

When using solid bottom cable tray, the allowable cable area is reduced by 22%.

Table 5

Inside Width of Cable Tray inches	Allowable Cable Area square inches
6	7.0
9	10.5
12	14.0
18	21.0
24	28.0

Example: The cable tray width is obtained as follows:

List Cable Sizes	(A) List Cable Cross Sectional Areas	(N) List Number of Cables	Multiply (A) x (N) + Total of the Cross-Sectional Area for each Size
3/C - #12 AWG	0.167 sq. in.	10	1.67 sq. in.
4/C - #12 AWG	0.190 sq. in.	8	1.52 sq. in.
3/C - # 6 AWG	0.430 sq. in.	6	2.58 sq. in.
3/C - # 2 AWG	0.800 sq. in.	9	7.20 sq. in.

The sum of the total areas is 1.67 + 1.52 + 2.58 + 7.20 = 12.97 inches.
Using Table 5, a 12-inch wide tray with an allowable cable area of 14 sq. inches should be used.

Note: Increasing the cable tray loading depth does not permit an increase in allowable cable area for power and lighting cables. The maximum allowable cable area for all cable tray with a 3 inch or greater loading depth is limited to the allowable cable area for a 3 inch loading depth.

(3) 4/0 or Larger Cables Installed with Cables Smaller than 4/0

The ladder cable tray needs to be divided into two zones (a barrier or divider is not required but one can be used if desired) so that the No. 4/0 and larger cables have a dedicated zone, as they are to be placed in a single layer.

continued on C-18

Allowable Cable Fill

A direct method to determine the correct cable tray width is to figure the cable tray widths required for each of the cable combinations per steps (2) & (3).

Then add the widths in order to select the proper cable tray width.

Example: The cable tray width is obtained as follows:

Part A- Width required for #4/0 AWG and larger multiconductor cables

List Cable Size	(D) List Cable Outside Diameter	(N) List Number of Cables	Multiply (D) x (N) = Subtotal of the Sum of the Cable Diameters (Sd)
3/C - #500 kcmil	2.26 inches	1	2.26 inches
3/C - #4/0 AWG	1.55 inches	2	3.10 inches

Cable tray width (inches) required for large cables = 2.26 + 3.10 = 5.36 inches.

Part B- Width required for multiconductor cables smaller than #4/0 AWG

List Cable Sizes	(A) List Cable Cross Sectional Areas	(N) List Number of Cables	Multiply (A) x (N) = Total of the Cross-Sectional Area for each Size
3/C - #12 AWG	0.167 sq. in.	10	1.67 sq. in.
3/C - #6 AWG	0.430 sq. in.	8	3.44 sq. in.
3/C - #2 AWG	0.800 sq. in.	2	1.60 sq. in.

The sum of the total areas (inches) = 1.67 + 3.44 + 1.60 = 6.71 sq. inches.
From Table 5 (page 33), the cable tray width required for small cables is 6 inches.

The total cable tray width (inches) = 5.36 + 6.00 = 11.36 inches. A 12-inch wide cable tray is required.

(4) Multiconductor Control and/or Signal Cables Only

A ladder cable tray containing only control and/or signal cables, may have 50% of its total available cable area filled with cable. When using solid bottom cable tray pans, the allowable cable area is reduced from 50% to 40%.

Example: Cable tray width is obtained as follows:

2/C- #16 AWG instrumentation cable cross sectional area = 0.04 sq. in.
Total cross sectional area for 300 Cables = 12.00 sq. in.
Minimum available cable area needed = 12.00 x 2 = 24.00 sq. in.; therefore the cable tray width required for 4 inch available loading depth tray = 24.00/4 = 6 inches.

II) Number of Single Conductor Cables Rated 2000 Volts or Less in the Cable Tray

All single conductor cables to be installed in the cable tray must be 1/0 or larger, and are not to be installed with continuous bottom pans.

(1) 1000 KCMIL or Larger Cables

The sum of the diameters (Sd) for all single conductor cables to be installed shall not exceed the cable tray width. See Table 6.

Table 6

Inside Width of Cable Tray inches	Allowable Cable Area square inches
6	6.50
9	9.50
12	13.00
18	19.50
24	26.00
30	32.50
36	39.00

continued on C-19

Allowable Cable Fill

(2) 250 KCMIL to 1000 KCMIL Cables

The total sum of the cross-sectional areas of all the single conductor cables to be installed in the cable tray must be equal to or less than the allowable cable area for the tray width, as indicated in Table 6 (page C-18). (Reference Table 8)

(3) 1000 KCMIL or Larger Cables Installed with Cables Smaller Than 1000 KCMIL

The total sum of the cross-sectional areas of all the single conductor cables to be installed in the cable tray must be equal to or less than the allowable cable area for the tray width, as indicated in Table 7.

Table 7

Inside Width of Cable Tray inches	Allowable Cable Area square inches
6	6.50 - (1.1 Sd)
9	9.50 - (1.1 Sd)
12	13.00 - (1.1 Sd)
18	19.50 - (1.1 Sd)
24	26.00 - (1.1 Sd)
30	32.50 - (1.1 Sd)
36	39.00 - (1.1 Sd)

(4) Single Conductor Cables 1/0 through 4/0

These single conductors must be installed in a single layer. See Table 8.

Note: It is the opinion of some that this practice may cause problems with unbalanced voltages. To avoid these potential problems, the individual conductors for this type of cable tray wiring system should be bundled with ties. The bundle should contain all of the three-phase conductors for the circuit, plus the neutral if used. The single conductor cables bundle should be firmly tied to the cable tray assembly at least every 6 feet.

Table 8

Number of 600 Volt Single Conductor Cables That May Be Installed in Ladder Cable Tray

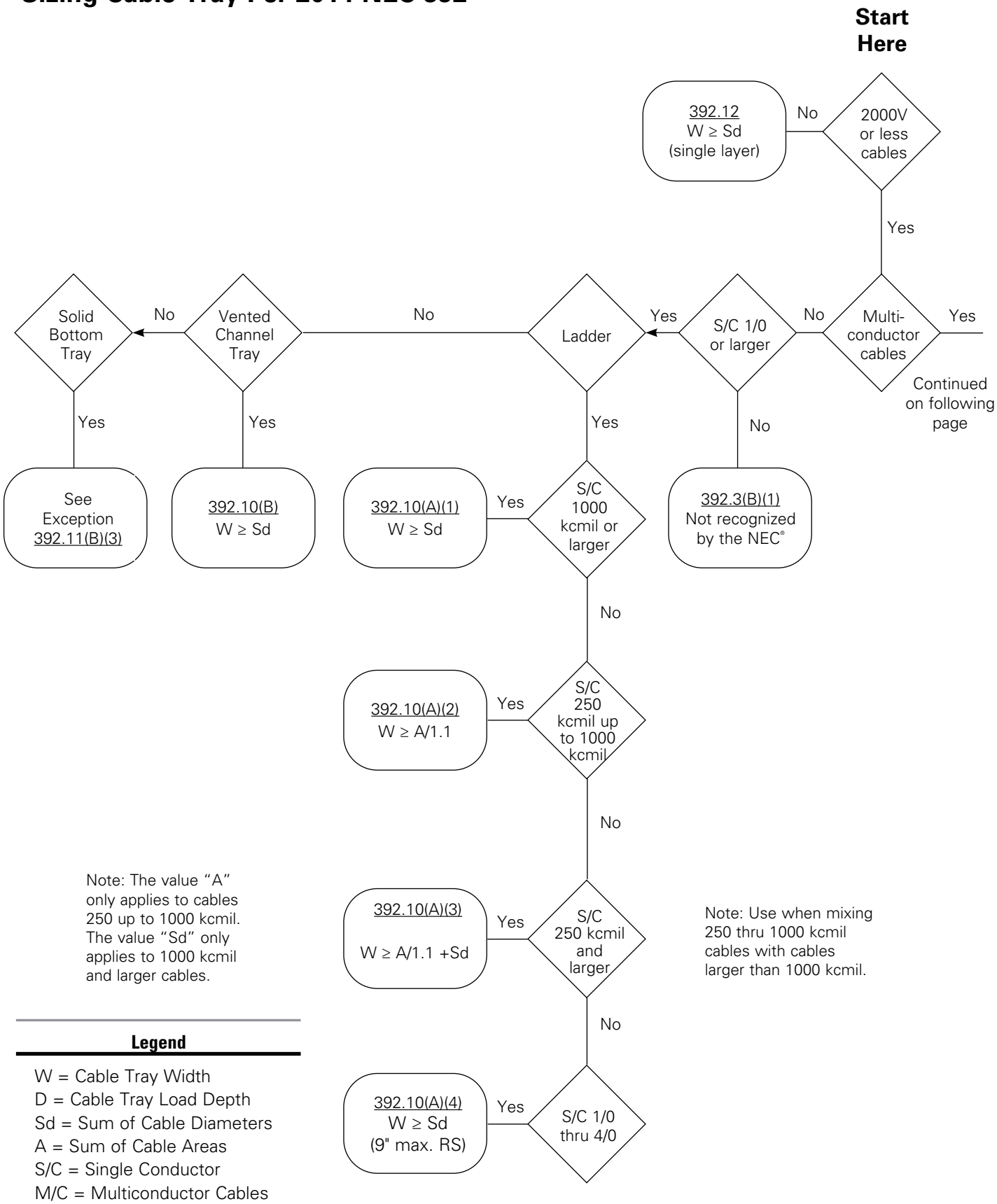
Single Conductor Size	Outside Diameter in.	Area sq. in.	Cable Tray Width 6 in.	9 in.	12 in.	18 in.	24 in.
1/0	0.58	—	10	15	20	31	41
2/0	0.62	—	9	14	19	29	38
3/0	0.68	—	8	13	17	26	35
4/0	0.73	—	8	12	16	24	32
250 Kcmil	0.84	.55	11	18	24	35	47
350 Kcmil	0.94	.69	9	14	19	28	38
500 Kcmil	1.07	.90	7	11	14	22	29
750 Kcmil	1.28	1.29	5	8	10	15	20
1000 Kcmil	1.45	—	4	6	8	12	16

Cable diameters used are those for Oknite-Okolon 600 volt single conductor power cables.

III) Number of Type MV and MC Cables Rated 2001 Volts or Over in the Cable Tray

The sum of the diameters (Sd) of all cables, rated 2001 volts or over, is not to exceed the cable tray width.

Sizing Cable Tray Per 2014 NEC 392



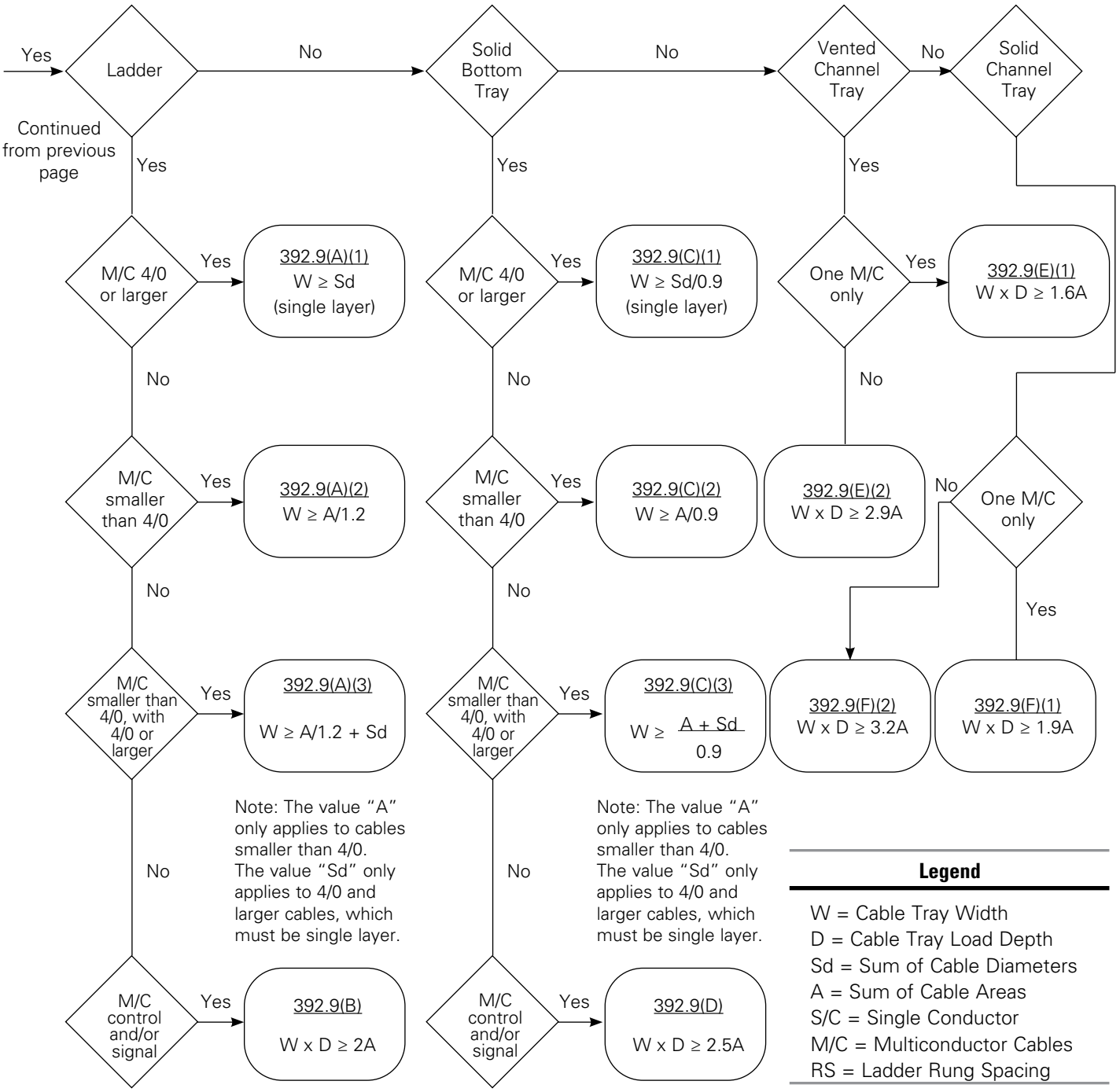
Note: The value "A" only applies to cables 250 up to 1000 kcmil. The value "Sd" only applies to 1000 kcmil and larger cables.

Note: Use when mixing 250 thru 1000 kcmil cables with cables larger than 1000 kcmil.

Legend

W = Cable Tray Width
D = Cable Tray Load Depth
Sd = Sum of Cable Diameters
A = Sum of Cable Areas
S/C = Single Conductor
M/C = Multiconductor Cables
RS = Ladder Rung Spacing

Note: See appendix on page APP-15 for additional information regarding cable ampacity and hazardous (classified) location requirements which might affect the cable tray sizing flow chart.

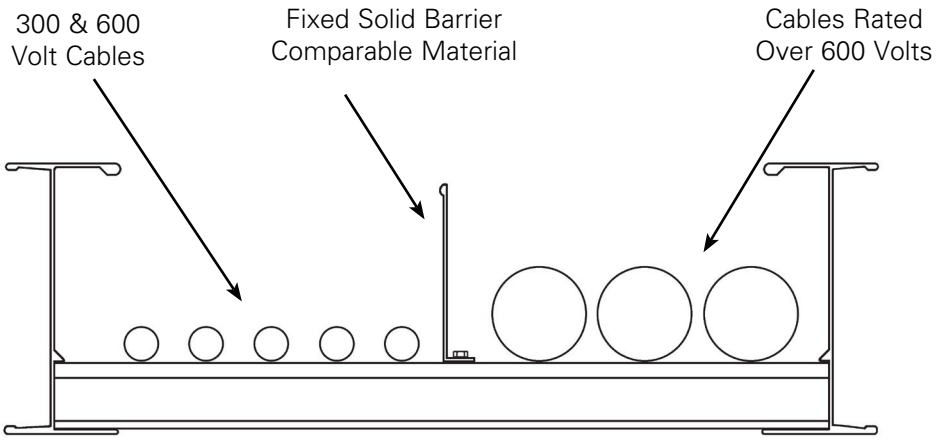


Legend

W = Cable Tray Width
D = Cable Tray Load Depth
Sd = Sum of Cable Diameters
A = Sum of Cable Areas
S/C = Single Conductor
M/C = Multiconductor Cables
RS = Ladder Rung Spacing

Barrier Requirements

Barrier strips are used to separate cable systems, such as when cables above and below 600 volts per NEC 392.6(F) are installed in the same cable tray. However, when MC type cables rated over 600 volts are installed in the same cable tray with cables rated 600 volts or less, no barriers are required. The barriers should be made of the same material type as the cable tray. When ordering the barrier, the height must match the *loading depth* of the cable tray into which it is being installed.



Future Expansion Requirements

One of the many features of cable tray is the ease of adding cables to an existing system. Future expansion should always be considered when selecting a cable tray, and allowance should be made for additional *fill area* and *load capacity*. A minimum of 50% expansion allowance is recommended.

Space Limitations

Any obstacles which could interfere with a cable tray installation should be considered when selecting a cable tray width and height. Adequate clearances should be allowed for installation of supports and for cable accessibility.

Note: The overall cable tray dimensions typically exceed the nominal tray width and loading depth.

Lengths Available

The current Cable Tray Standard, NEMA VE 1 and C22.2 No. 126.1, lists typical lengths as 3000 mm (10 ft), 3660 mm (12 ft), 6000 mm (20 ft), and 7320 mm (24 ft). It is impractical to manufacture either lighter systems in the longer lengths or heavier systems in the shorter lengths. For that reason, we have introduced a primary and secondary length for each system.

These straight section lengths were selected to direct the user to lengths that best suit support span demands and practical loading requirements. The primary length is the one that is the most appropriate for the strength of the system and that will provide the fastest service levels. The secondary lengths will be made available to service additional requirements. Special lengths are available with extended lead times.

Support Span

Per the NEMA VE 2, the support span on which a cable tray is installed should not exceed the length of the unspliced straight section. Thus installations with support spans greater than 12 feet should use 240" (20 feet) or 288" (24 feet) cable tray lengths.

Space Limitations

Consideration should be given to the space available for moving the cable tray from delivery to it's final installation location. Obviously, shorter cable tray allows for more maneuverability in tight spaces.

Installation

Shorter cable tray lengths are typically easier to maneuver on the job site during installation. Two people may be needed to manipulate longer cable tray sections, while shorter sections might be handled by one person. Although longer cable tray lengths are more difficult to maneuver, they can reduce installation time due to the fact that there are fewer splice connections. This trade-off should be evaluated for each set of job site restrictions.

Power Application:

Power application can create the heaviest loading. The heaviest cable combination found was for large diameter cables (i.e. steel armor, 600V, 4 conductor 750 kcmil). The cables weigh less than 3.8 lbs. per inch width of cable tray. As power cables are installed in a single layer, the width of the cable affects the possible loading.

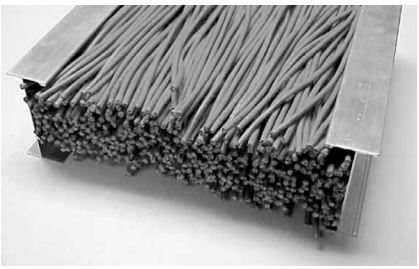
36" Wide	30" Wide	24" Wide	18" Wide	12" Wide	9" Wide	6" Wide
140 lbs/ft	115 lbs/ft	90 lbs/ft	70 lbs/ft	45 lbs/ft	35 lbs/ft	23 lbs/ft

Data/Communication Cabling:

Low voltage cables can be stacked as there is no heat generation problems. The NEC employs a calculation of the total cross sectional area of the cables not exceeding 50% of the fill area of the cable tray. As the cable fill area of the cable tray system affects the possible loading, both the loading depth and width of the systems must be considered. For this example, 4UTP category 5 cable (O.D. = .21, .026 lbs./ft.) were used.

Calculated Cable Weight in Lbs/Ft

	36" Wide	30" Wide	24" Wide	18" Wide	12" Wide	9" Wide	6" Wide
6" Fill	81	64	52	41	27	20	14
5" Fill	68	53	43	34	23	17	12
4" Fill	54	43	35	27	18	13	9
3" Fill	41	32	26	21	14	10	7



The picture shows a 12" cable tray with a 3" load depth. The tray contains 520 4 UTP Category 5 cables with a .21" diameter.

The National Electrical Code allows for 50% fill of ventilated and ladder cable tray for control or signal wiring (Article 392.22(A)(2)). ANSI/EIA/TIA 569-A Section 4.5* also requires that the fill ratio of cable tray is not to exceed 50%.

Calculation Example:
Tray Area = 12 in. x 3 in. = 36 sq. in.
50% Fill = 36 sq. in. x .5 = 18 sq. in.
Cable Area = $(.21 \text{ in.})^2 \times 3.14/4 = .0346$ sq. in.
Number of Cables = 18 sq. in. / .0346 sq. in. = 520 cables

*Section 4.5 is currently under review.

Other Factors To Consider

- **Support Span -** The distance between the supports affects the loading capabilities exponentially. To calculate loading values not cataloged use:

$W_1 L_1^2 = W_2 L_2^2$
W_1 - tested loading
L_1 - span in feet, a tested span
W_2 - loading in question
L_2 - known span for new loading

- **Other Loads -** Ice, wind, snow for outdoor systems see pages C-10 and C-11 for information. A 200 lb. concentrated load for industrial systems. The affect of a concentrated load can be calculated as follows

$$\frac{2 \times (\text{concentrated static load})}{\text{span in feet}}$$

When considering concentrated loads the rung strength should be considered.

- **Length Of The Straight Sections:** The VE 2, Cable Tray Installation Guide, states that the support span shall not be greater than the straight section length. If a 20C system is manufactured in 12 foot sections the greatest span for supports would be 12 feet. This dramatically affects the loading of the system.

$W_1 L_1^2 = W_2 L_2^2$
$100 (20^2) = W_2 (12^2)$
$40{,}000 = 144 W_2$
$W_2 = 277$ lbs. per foot

Type of Cable

According to NEC Article 392, multiconductor tray cable may be installed in any standard cable tray bottom type. According to the 2014 NEC Article 392.11(8)(3), single conductor tray cable may be installed in any standard cable tray bottom type. Solid bottom cable trays are not allowed to be installed in Class II, Division 2 locations (2014 NEC Section 502.4(B)). In general, small, highly flexible cables should be installed in solid bottom, vented bottom or 6" rung spacing ladder type cable trays. Sensitive cables (e.g. fiber optic) are typically installed in flat, solid bottom cable trays. Larger, less flexible cables are typically installed in ladder type cable trays having 9" or 12" rung spacing. Ladder type cable trays having 18" rung spacing should be used for large, stiff cables to reduce cost and facilitate cable drop-outs.

Cost Versus Strength

Often, more than one bottom type is acceptable. In this case, the economic difference should be considered. Ladder cable trays have a lower cost than either non-ventilated or ventilated bottom configurations. Typically, the cost of ladder type cable tray decreases as rung spacing increases. However, the effect of rung spacing on load capacity for ladder type cable trays with 18" rung spacing should be evaluated, since NEMA published load capacities are based on 12" rung spacing. Rung spacing can affect individual rung and side rail loading as well as system load capacity. Rung loads applied during cable installation should also be considered.

Cable Exposure

Tray cables are manufactured to withstand the environment without additional protection, favoring the use of the ladder type cable tray. Some areas may benefit from the limited exposure of solid or vented bottom cable tray. Solid bottom metal cable tray with solid metal covers can be utilized in other spaces used for environmental air to support non plenum rated tray cables (2014 NEC® 300.22(C)(1)).

Cable Attachment

The major advantage of ladder type cable tray is the freedom of entry and exit of the cables. Another advantage of ladder type cable tray is the ability to secure cables in the cable tray. With standard rungs, the cables may be attached with either cable ties or cable clamps. The ladder type cable tray is also available with special purpose, slotted marine or strut rungs to facilitate banding or clamping cables. Cable attachment is particularly important on vertical runs or when the tray is installed on its side. Ladder rung spacing should be chosen to provide adequate cable attachment points while allowing the cables to exit the system.

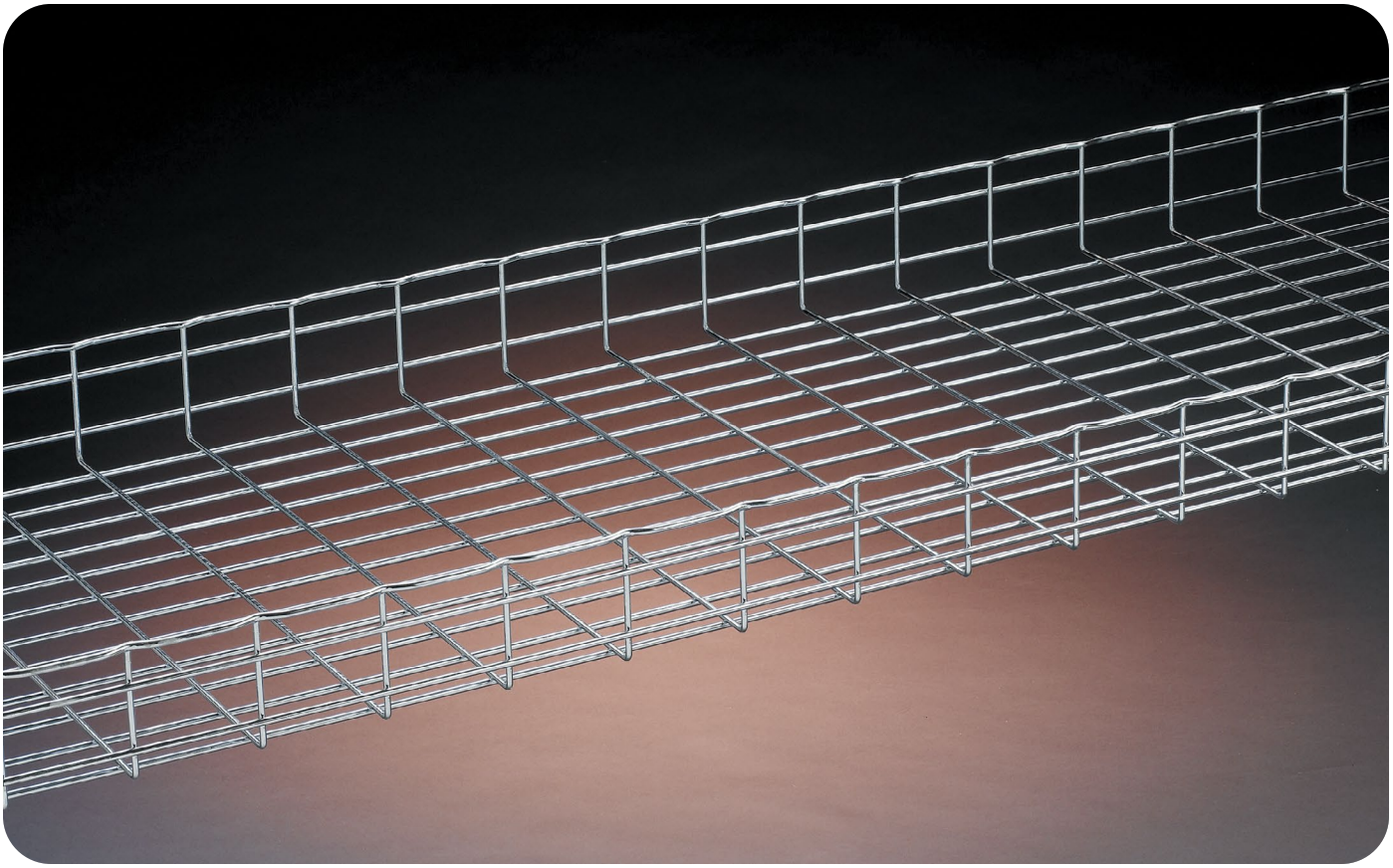
Cable Tray Selection - Fitting Radius

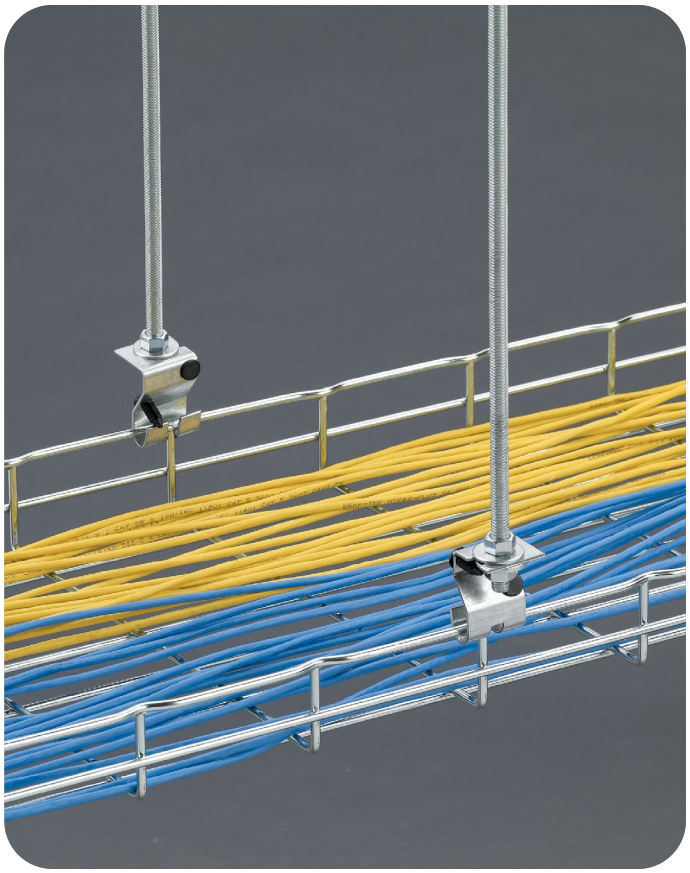
Cable Flexibility

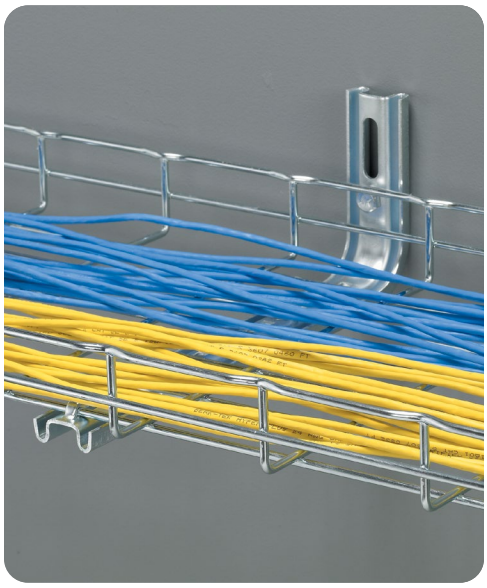
The proper bend radius for cable tray fittings is usually determined by the bend radius and stiffness of the tray cables to be installed. Typically, the tray cable manufacturer will recommend a minimum bend allowance for each cable. The fitting radius should be equal to or larger than the minimum bend radius of the largest cable which may ever be installed in the system. When several cables are to be installed in the same cable tray, a larger bend radius may be desirable to ease cable installation.

Space Limitations

The overall dimensions for a cable tray fitting will increase as the bend radius increases. Size and cost make the smallest acceptable fitting radius most desirable. When large radius fittings are required, the system layout must be designed to allow adequate space.







The Flextray™ system is a flexible, field-adaptable way to manage cables throughout your project. The tray can be cut and bent to the needs of the installer on the jobsite, allowing cable runs to be adjusted as needed. The wide range of sizes offered makes Flextray a great choice for everything from a small cable drop to a large trunk of cables. Our tray has the market-preferred "T" weld safety edge, protecting both the cable and the installer during cable installation. Flextray is also UL Classified as an equipment grounding conductor.

Finish Information

Flextray cable tray and accessories are available in a wide variety of finishes to meet the environmental or aesthetic requirements of customer installations. Use the list below to find the finish and suffix that will meet your needs.

Available product finishes will be listed on individual pages throughout the catalog.

Finish codes shown in **bold** type are the standard for that product.

Plain wire: ASTM A510, Grade 1008

EG (ELG)
Electroplated zinc galvanized finish applied after fabrication
Recommended applications: Controlled interior
UL/CSA Classified as an equipment ground conductor when spliced as recommended
ASTM B633 - Average thickness of 0.3 mils (8 microns)

GS (GLV)
Pre-galvanized zinc finish applied before fabrication
Recommended applications: Limited industrial & interior
UL/CSA Classified as an equipment ground conductor when spliced as recommended
ASTM A641

BLE
Black powder coat finish applied after fabrication
Recommended applications: Controlled interior
UL/CSA Classified as an equipment ground conductor when coating has been removed at splice contact points
Average paint thickness of 1.2 mils (30 microns) to 3.0 mils (75 microns)

HD (HDG)
Hot dip galvanized finish applied after fabrication
Recommended applications: Exterior, corrosive. Not intended for clean room applications.
UL/CSA Classified as an equipment ground conductor when spliced as recommended
ASTM A123 - Average thickness of 2.4 mils (60 microns) to 3.2 mils (80 microns)

316S (SS6)
316L Stainless steel
Recommended applications: Highly corrosive applications, marine environments, food preparation and wash-down areas
ASTM A580

Custom powder coat finish applied after fabrication
Recommended applications: Controlled interior
UL/CSA Classified as an equipment ground conductor when coating has been removed at splice contact points
No Specification

Grounding Information

Statement for all UL Classified products:

This product is classified by Underwriters Laboratories, Inc. as to its suitability as an equipment grounding conductor only. 556E

Most sizes of the Flextray system are UL Classified to serve as an Equipment Ground Conductor. The ground path can be achieved in one of two ways listed on page D-4:

Grounding Information (cont.)

1. Use the recommended quantity of UL Classified splices to connect sections and at places where the tray is cut.
2. Run an appropriately sized ground wire alongside the tray and attach it to each tray section and on both sides of a cut in the tray. (This method is recommended by NEMA VE-2 (NEMA BI 50016) Installation Manual.)

Load & Fill Chart

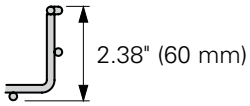
Flextray Series Part Number	Size height x width	Support Span / Loading Capacity* Lbs/Ft (max) 5'-0"	6'-0"	7'-0"	8'-0"	Cable Fill (50% fill)** Actual Area Inside Tray (in²)	Number of CAT 5e Cables***	Number of CAT CAT 6 Cables***	Number of CAT CAT 6A Cables***
FT2X2	2" x 2"	34	28	24	20	4.3	61	43	33
FT2X4	2" x 4"	52	43	35	27	8.2	118	83	64
FT2X6	2" x 6"	66	47	35	27	12.1	175	123	95
FT2X8	2" x 8"	66	47	35	27	16.1	231	163	125
FT2X12	2" x 12"	68	47	35	27	23.9	345	243	187
FT2X16	2" x 16"	68	47	35	27	31.8	459	324	249
FT2X18	2" x 18"	68	47	35	27	35.8	516	364	280
FT2X20	2" x 20"	68	47	35	27	39.7	573	404	311
FT2X24	2" x 24"	68	47	35	27	47.5	686	484	372
FT2X30	2" x 30"	68	47	35	27	59.8	862	608	468
FT2X32	2" x 32"	77	53	39	30	63.3	914	645	496
FT4X4	4" x 4"	58	49	42	36	15.8	227	160	123
FT4X6	4" x 6"	93	77	60	46	23.6	341	240	185
FT4X8	4" x 8"	94	78	61	47	31.5	454	321	247
FT4X12	4" x 12"	119	83	61	47	47.5	686	484	372
FT4X16	4" x 16"	119	83	61	47	63.5	917	647	498
FT4X18	4" x 18"	119	83	61	47	71.5	1032	728	560
FT4X20	4" x 20"	119	83	61	47	79.5	1148	810	623
FT4X24	4" x 24"	128	89	65	50	95.5	1379	973	749
FT4X30	4" x 30"	128	89	65	50	119.5	1725	1217	936
FT6X8	6" x 8"	111	77	57	43	47.3	682	481	370
FT6X12	6" x 12"	124	86	63	48	71.6	1034	729	561
FT6X16	6" x 16"	128	89	65	50	95.3	1375	970	746
FT6X18	6" x 18"	128	89	65	50	107.3	1549	1092	840
FT6X20	6" x 20"	141	98	72	55	118.9	1716	1211	932
FT6X24	6" x 24"	154	107	78	60	143.3	2068	1459	1123

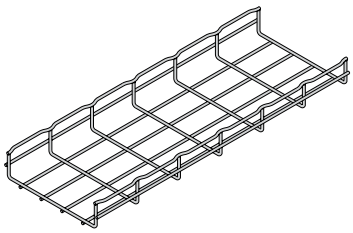
* Published load chart has not been tested with Flexmate™ splice. Please consult the factory for load information when using the Flexmate option.

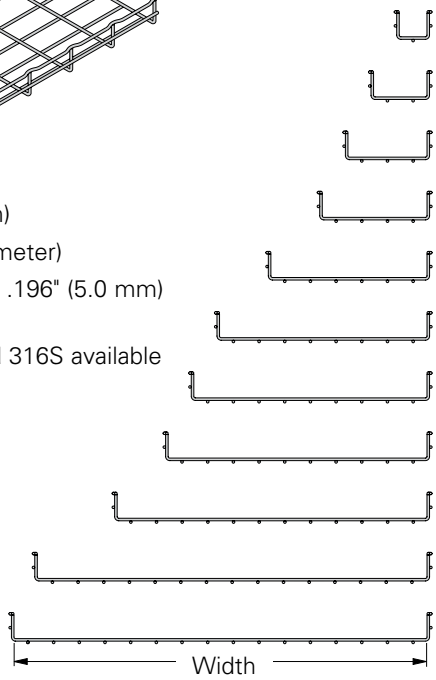
** Flextray fill capacity is based on NEC allowable fill of 50%. The NEC rule requires that the cable cross-sectional areas together may not exceed 50% of the tray area (width x depth = fill). Cables will nearly completely fill the cable tray when reaching the 50% cable fill, due to empty space between the surface of the cables. TIA recommends 40% fill ratio. Flextray loads shown in the loading chart will not be exceeded at 50% fill.

*** CAT 5e 4-pr non-plenum approximated at .21 in. diameter, CAT 6 4-pr non-plenum approximated at .25 in. diameter, CAT 6A approximated at .285 diameter. Actual diameters vary by cable manufacturer.

2" Deep Flextray







Height: 2.38" (60 mm)
Length: 118.312" (3 meter)
Wire Dia. Minimum: .196" (5.0 mm)
Finishes:
EG, **BLE** (GS, HD and 316S available upon request).

Part Number	Width in. (mm)	Wt. Per Piece lbs. (kg)	UL Marking
FT2X2X10	2 (50)	6.6 (2.99)	None
FT2X4X10	4 (100)	8.2 (3.72)	None
FT2X6X10	6 (150)	9.7 (4.40)	.20IN^2
FT2X8X10	8 (200)	11.2 (5.08)	.20IN^2
FT2X12X10	12 (300)	14.3 (6.48)	.20IN^2
FT2X16X10	16 (400)	17.4 (7.89)	.20IN^2
FT2X18X10	18 (450)	18.9 (8.57)	.20IN^2
FT2X20X10	20 (500)	20.4 (9.25)	.40IN^2
FT2X24X10	24 (600)	23.5 (10.66)	.40IN^2
FT2X30X10	30 (750)	28.1 (12.74)	.40IN^2
FT2X32X10	32 (800)	29.7 (13.47)	.40IN^2

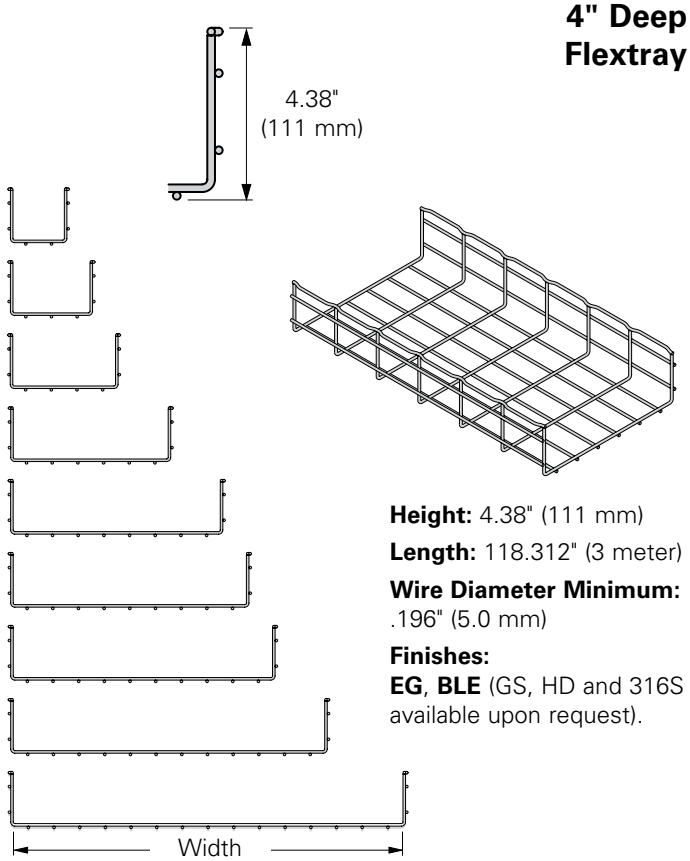
FT2X6 (6" wide) through FT2X32 (32" wide) are UL Classified

See page D-3 for finish information

4" Deep Flextray

Part Number	Width in. (mm)	Wt. Per Piece lbs. (kg)	UL Marking
FT4X4X10	4 (100)	11.25 (5.10)	.20IN²
FT4X6X10	6 (150)	12.79 (5.80)	.20IN²
FT4X8X10	8 (200)	14.32 (6.49)	.20IN²
FT4X12X10	12 (300)	17.39 (7.89)	.20IN²
FT4X16X10	16 (400)	20.45 (9.27)	.40IN²
FT4X18X10	18 (450)	21.99 (9.97)	.40IN²
FT4X20X10	20 (500)	23.52 (10.67)	.40IN²
FT4X24X10	24 (600)	26.59 (12.06)	.40IN²
FT4X30X10	30 (750)	31.19 (14.15)	.40IN²

All 4" deep Flextrays are UL Classified



Height: 4.38" (111 mm)

Length: 118.312" (3 meter)

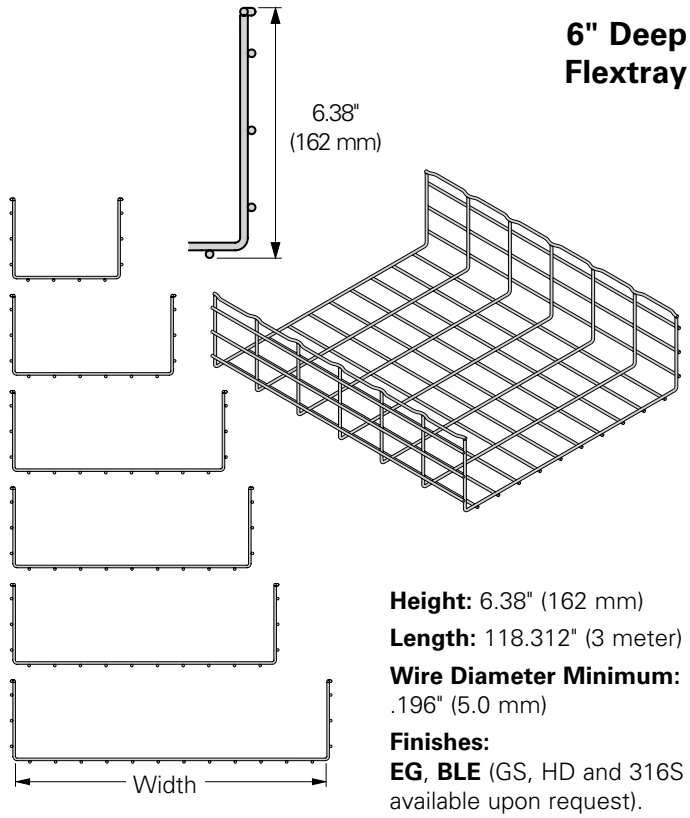
Wire Diameter Minimum: .196" (5.0 mm)

Finishes:
EG, **BLE** (GS, HD and 316S available upon request).

6" Deep Flextray

Part Number	Width in. (mm)	Wt. Per Piece lbs. (kg)	UL Marking
FT6X8X10	8 (200)	17.39 (7.89)	.20IN²
FT6X12X10	12 (300)	20.45 (9.27)	.40IN²
FT6X16X10	16 (400)	23.52 (10.67)	.40IN²
FT6X18X10	18 (450)	25.06 (11.37)	.40IN²
FT6X20X10	20 (500)	26.59 (12.06)	.40IN²
FT6X24X10	24 (600)	29.66 (13.45)	.40IN²

All 6" deep Flextrays are UL Classified



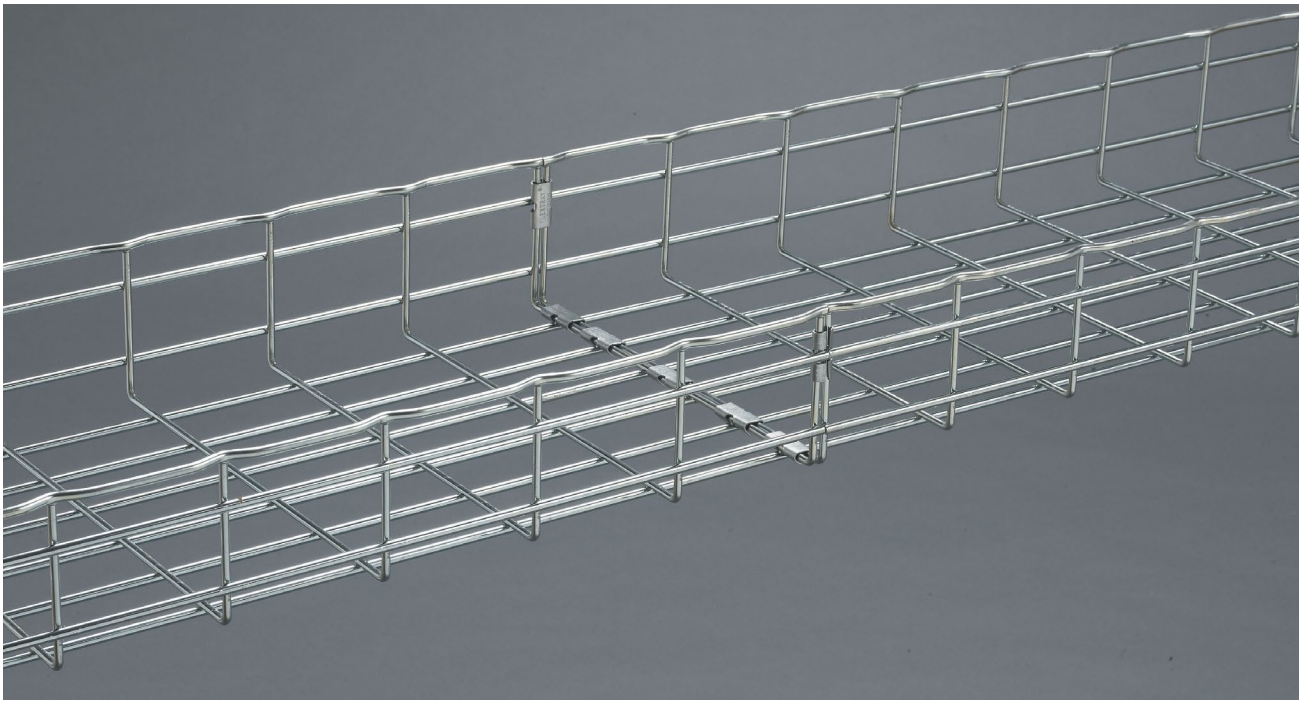
Height: 6.38" (162 mm)

Length: 118.312" (3 meter)

Wire Diameter Minimum: .196" (5.0 mm)

Finishes:
EG, **BLE** (GS, HD and 316S available upon request).

See page D-3 for finish information

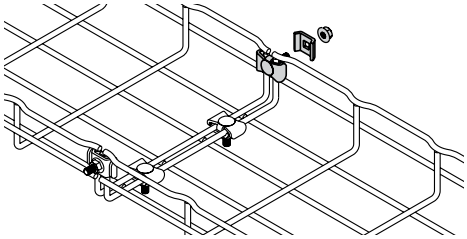


Washer Splice Kit

- Washer is staked to bolt, holding part stationary during installation.
- Fewer parts to handle.
- For use with all tray widths and sizes.
- Finishes __: **EG**, **BLE.**

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
WASHER SPL KIT__	Assembly of Staked Washer Stud/Washer & Finned Nut	100	4.5 (2.04)

- **BLE** suffix indicates black zinc finish for this part only



Splicing Chart (number of splices required for UL Classification)

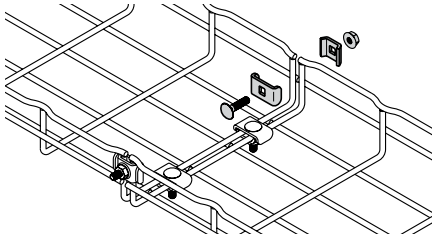
Tray Height	Tray Width - number of splices									
	2" (50mm)	4" (100mm)	6" (150mm)	8" (200mm)	12" (300mm)	16" (400mm)	18" (450mm)	20" (500mm)	24" (600mm)	>24" (>600mm)
2"	NC	NC	3	3	3	4	4	4	4	5
4"	NM	3	3	3	3	4	4	4	4	5
6"	NM	NM	3	3	3	4	4	4	4	5

NC = Not UL Classified in this size NM = Flextray is not manufactured in this size

Splice Hardware Components

- Works with all splicing needs.
- For use with all tray widths and sizes.
- Components are sold separately.
- Finishes __: **EG**, **BLE** (316S available upon request). **FTHDWE 1/4** not available in **BLE**.

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FTHDWE 1/4__	1/4" x 1" Carriage Bolt & Finned nut	50	2.4 (1.08)
TOP WASHER__	1" Square Splice Washer	100	2.8 (1.26)
BTM WASHER __	13/16" Square Splice Washer	100	4.0 (1.82)



BTM WASHER

FTHDWE1/4

TOP WASHER

Splicing Chart (number of splices required for UL Classification)

Tray Height	Tray Width - number of splices									
	2" (50mm)	4" (100mm)	6" (150mm)	8" (200mm)	12" (300mm)	16" (400mm)	18" (450mm)	20" (500mm)	24" (600mm)	>24" (>600mm)
2"	NC	NC	3	3	3	4	4	4	4	5
4"	NM	3	3	3	3	4	4	4	4	5
6"	NM	NM	3	3	3	4	4	4	4	5

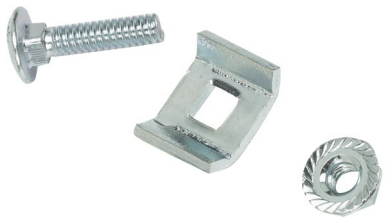
NC = Not UL Classified in this size NM = Flextray is not manufactured in this size

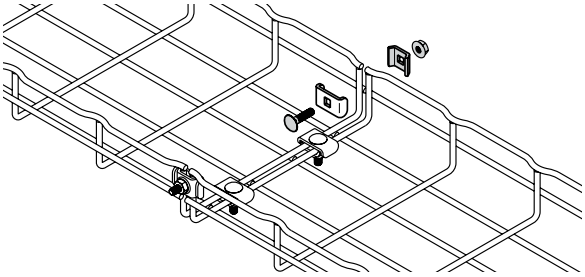
See page D-3 for finish and grounding information

Connecting Hardware

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FTSCH__	Connecting Hardware	50	2.0 (0.91)

- Adaptable and designed for use with splice plate (FTS3SP), SPLICE BAR, and long splice bar (FTS36SB).
- Finishes __: **EG** (BLE, BLO and 316S available upon request).





Splicing Chart

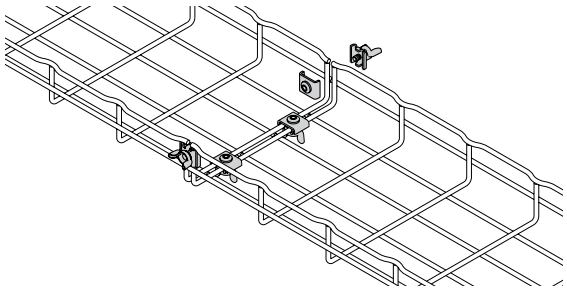
Tray Height	Tray Width - number of splices									
	2" (50mm)	4" (100mm)	6" (150mm)	8" (200mm)	12" (300mm)	16" (400mm)	18" (450mm)	20" (500mm)	24" (600mm)	>24" (>600mm)
2"	NC	NC	3	3	3	4	4	4	4	5
4"	NM	3	3	3	3	4	4	4	4	5
6"	NM	NM	3	3	3	4	4	4	4	5

NC = Not UL Classified in this size NM = Flextray is not manufactured in this size

Wing Splice

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FTSWN__	Wing Splice™	50	3.0 (1.38)

- Two piece design for easy handling.
- Tool-less installation.
- Reduces installation time, especially when used on fittings and bends.
- Finish__: **ZN**.



Splicing Chart (number of splices required for UL Classification)

Tray Height	Tray Width - number of splices									
	2" (50mm)	4" (100mm)	6" (150mm)	8" (200mm)	12" (300mm)	16" (400mm)	18" (450mm)	20" (500mm)	24" (600mm)	>24" (>600mm)
2"	NC	NC	3	3	3	4	4	4	4	5
4"	NM	3	3	3	3	4	4	4	4	5
6"	NM	NM	3	3	3	4	4	4	4	5

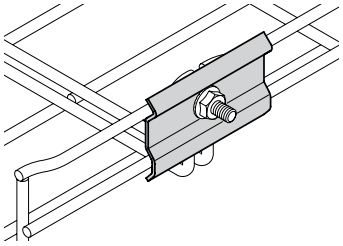
NC = Not UL Classified in this size NM = Flextray is not manufactured in this size

See page D-3 for finish and grounding information

Splice Plate (only)

Part Number	Description	Length in. (mm)	Height in. (mm)	Hole Diameter in. (mm)	Qty./ Box	Wt./Box lbs. (kg)
FTS3SP__	Splice Plate	2.7″ (68.5)	1.6″ (40.6)	0.27″ (6.8)	50	6.1 (2.76)
FTS3SPKIT	Splice Plate Kit includes FTSCH	—	—	—	—	—

- Splice plate is designed for use with connecting hardware (FTSCH) to provide added stability of splice connections.
- Hardware sold separately.
- Finish__: **ZN** (SS6 available upon request).
- Note: FT2x2x10 and FT2x4x10 are not UL Classified.

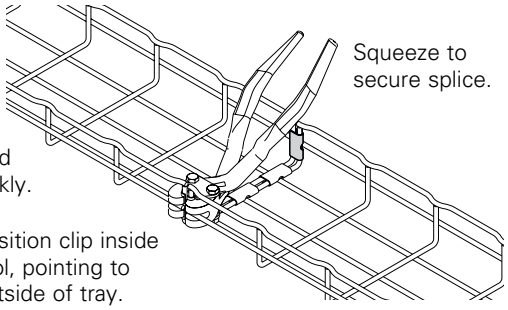


FLEXMATE Splice System

- One of the fastest splice connection methods available in the industry.
- For use with 2" (100mm) to 12" (300mm) wide tray.
- FLEXMATE™ clips and tool sold separately.
- Finishes __: **GS** (BLE available upon request).

Note: Tray widths larger than 12" (300mm) are not UL Classified. We recommend that splice/supports comply with NEMA VE-2 (NEMA BI 50016) installation requirements

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FLEXMATE2__	Flexmate Splice Clips	100	1.0 (0.45)
FLEXMATE TOOL	Flexmate Splice Tool	1	0.7 (0.32)



FLEXMATE2

FLEXMATE TOOL

Splicing Chart (number of splices required for UL Classification)

Tray Height	Tray Width - number of splices 2" (50mm)	4" (100mm)	6" (150mm)	8" (200mm)	12" (300mm)
2"	2 (NC)	2 (NC)	4	4	4
4"	NM	4	5	6	6
6"	NM	NM	NM	6	6

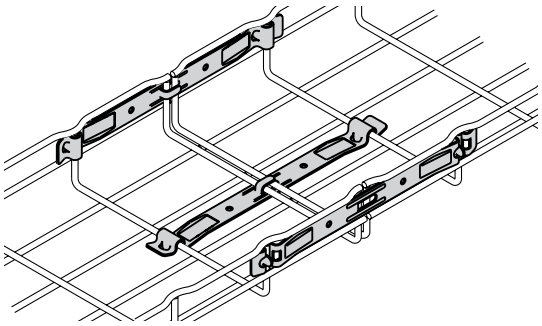
NM = Flextray is not manufactured in this size
NC = Not UL Classified in this size

See page D-3 for finish and grounding information

Tab-Loc Connector

Part Number	Description	Length in. (mm)	Qty./Box	Wt./Box lbs. (kg)
FTSTLC__	Tab-Loc Connectors	9.29″ (235.9)	50	7.2 (3.26)

- Fast splice for straight runs of tray.
- For use with 2" (50mm) to 32" (800mm) wide tray to connect straight sections only.
- Finishes __: **ZN** (SS6 available upon request).



Application Requirements

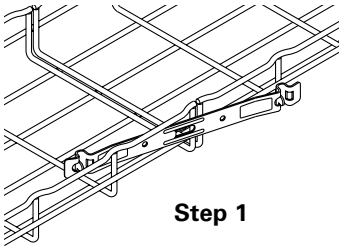
The recommendations listed are equal for all depths (except as noted).

Splicing Chart

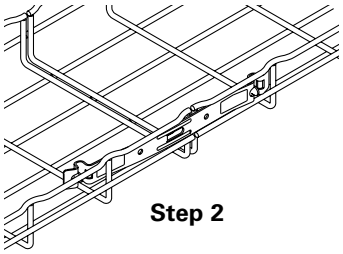
Tray Height	Tray Width - number of splices								
	2" (50mm)	4" (100mm)	6" (150mm)	8" (200mm)	12" (300mm)	16" (400mm)	18" (450mm)	20" (500mm)	24" (600mm)
2"	2	2	4	4	4	4	4	5	5
4"	NM	4	5	6	6	7	7	7	8
6"	NM	NM	NM	6	6	7	7	7	8

NM = Flextray is not manufactured in this size

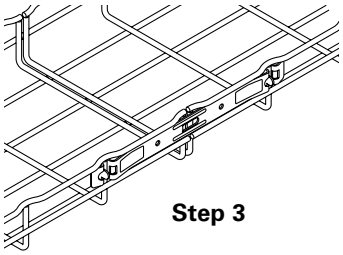
Tab-Loc security without special tools.
Screwdriver can also be used to bend tab-locs (hold connector ends while bending).



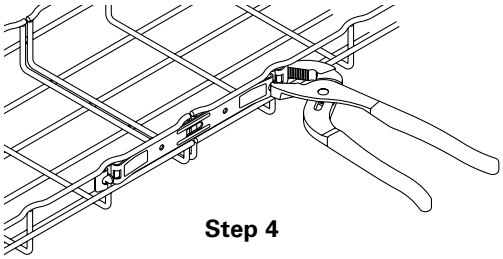
Step 1



Step 2



Step 3



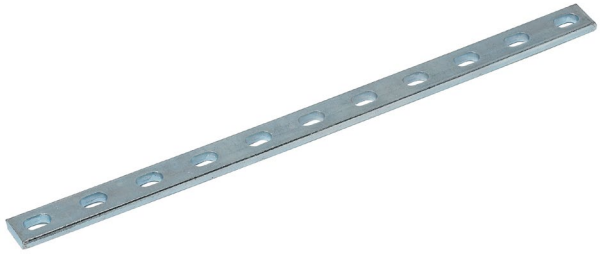
Step 4

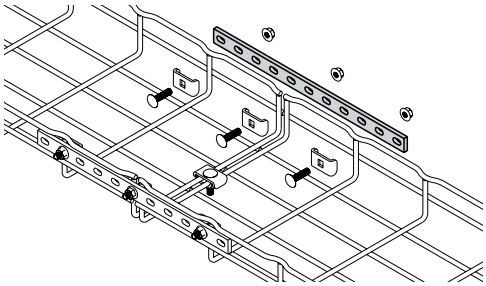
See page D-3 for finish and grounding information

Splice Bar

- Adds rigidity to washer splice methods.
- Used on side rails only (not for use in tray bottom).
- For use on trays when using splice hardware FTSCH.
- Hardware sold separately.
- Each splice bar requires three (3) each of Hardware Splice Components - TOP WASHER, and FTHDWE 1/4 to complete connection. These items must be ordered separately.
- Washer Splice Kits (WASHER SPL KIT) are required for connections on bottom of tray.
- Finishes __: **EG**, (BLE, HD and 316S available upon request).

Part Number	Bar Length in.	(mm)	Qty./Box	Wt./Box lbs.	(kg)
SPLICE BAR__	10 13/16"	(274.6)	50	14.0	(6.35)





Splicing Chart (number of splices required for UL Classification)

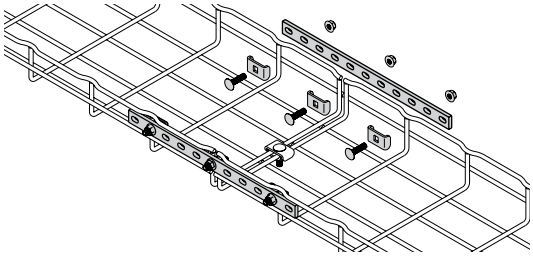
Tray Height	Tray Width - number of splices 2" (50mm)	4" (100mm)	6" (150mm)	8" (200mm)	12" (300mm)	16" (400mm)	18" (450mm)	20" (500mm)	24" (600mm)
2"	NC	NC	2	2	2	2	2	2	2
4"	NM	2	2	2	2	2	2	2	2
6"	NM	NM	2	2	2	2	2	2	2

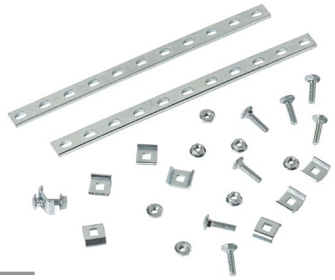
NC = Not UL Classified in this size NM = Flextray is not manufactured in this size

Splice Bar Kit

- Adds rigidity.
- Includes two (2) SPLICE BAR and hardware.
- Finishes __: **ZN** (FB and SS6 available upon request).

Part Number	Bar Length in.	(mm)	Qty./Box	Wt./Box lbs.	(kg)
FTSBK__	12"	(304.8)	5 Sets	6.4	(2.90)





Splicing Chart (number of splices required for UL Classification)

Tray Height	Tray Width - number of splices 2" (50mm)	4" (100mm)	6" (150mm)	8" (200mm)	12" (300mm)	16" (400mm)	18" (450mm)	20" (500mm)	24" (600mm)
2"	NC	NC	2	2	2	2	2	2	2
4"	NM	2	2	2	2	2	2	2	2
6"	NM	NM	2	2	2	2	2	2	2

NC = Not UL Classified in this size NM = Flextray is not manufactured in this size

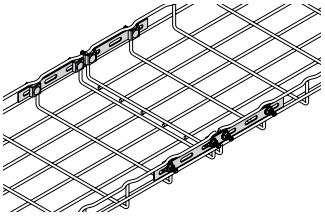
See page D-3 for finish and grounding information

Expansion Splice Kit

Part Number	Bar Length in. (mm)	Qty./Box	Wt./Box lbs. (kg)
FTS12ESK__	12" (304.8)	1 Kit	0.45 (0.20)

- Allows 1 3/4" (44mm) of expansion between two pieces of Flextray at expansion joints.
- To install, tighten nylon loc-nut until nut comes into contact with splice bar, then loosen approximately 1/4 turn.
- Includes two (2) splice bars and eight (8) sets of hardware.
- Finishes __: **ZN.**

Requires supports within 24" on both sides, per NEMA VE 2.

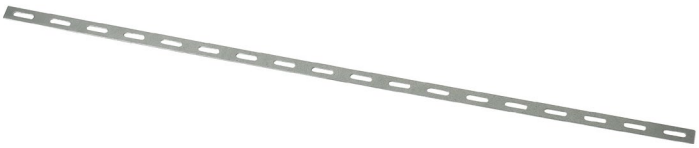


Long Splice Bar (only)

Part Number	Bar Length in. (mm)	Qty./Box	Wt./Box lbs. (kg)
FTS12SB__	12" (304.8)	1	0.13 (0.06)
FTS36SB__	36" (914.4)	1	0.40 (0.18)

- FTS36SB long splice bar is used for assembly of large radius horizontal bends or field cut into short splice bars.
- Splice Bars are designed for use with connecting hardware (FTSCH).
- Hardware sold separately.
- Finishes __: **ZN** (FB and SS6 available upon request).

FTS12SB - 6 slots

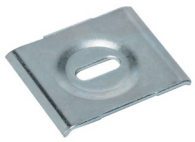


FTS36SB - 18 slots

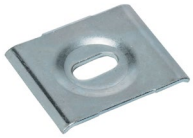
Hold Down Plate

Part Number	Description	Box/ Qty.	Wt./Box lbs. kg
SUPT WASHER__	.28" x .70" (7.1mm x 17.8mm)	100	9.4 (4.26)
FTA6HD__	.40" x .70" (10.1mm x 17.8mm)	100	7.0 (3.17)

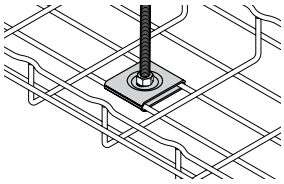
- Easy way to mount 4" (100mm) wide tray for raceway run.
- Use 1/4" screws to attach SUPT WASHER to your specific wall/stud application (hardware sold separately).
- FTA6HD can be used in pairs to create a center-hung support using 3/8" rod.
- To protect cables use threaded rod protector (page D-21).
- To complete 3/8" center hanger assembly use:
  2 - FTA6HD
  2 - HN 3/8"-16 hex nuts
- Finish: **ZN** (SS6 available upon request).

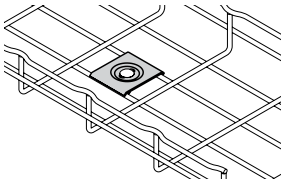


SUPT WASHER



FTA6HD



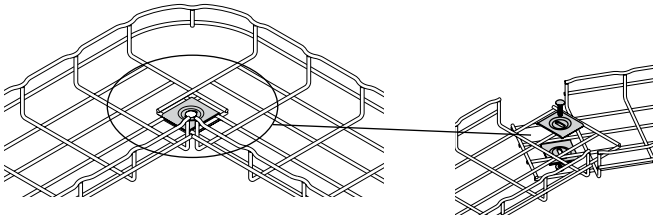


See page D-3 for finish and grounding information

Horizontal Adjustable Kit

- Horizontal adjustable kit can be used to create horizontal angles from prepared Flextray straight sections.
- Conveniently poly-bagged.
- Finishes __: **EG** (BLE and 316S available upon request).

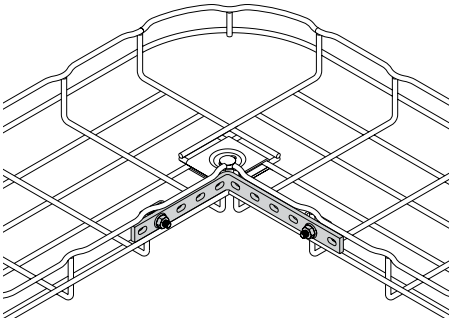
Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FTSHAK__	Horizontal Adjustable Kit	10	2.4 (1.09)

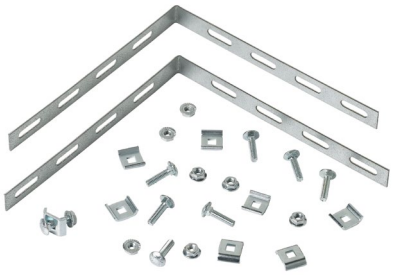


90 Degree Kit

- For fast assembly of 90° turns and tee fittings.
- For use with all tray widths and sizes.
- One kit will make two 90° turns or one tee fitting.
- 90 DEGREE KIT includes: two (2) 90° splice bars and eight (8) FTSCH.
- Finishes __: **EG** (BLE and 316S available upon request).

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
90 DEGREE KIT__	90 degree splice bar & hardware	1	1.3 (0.59)

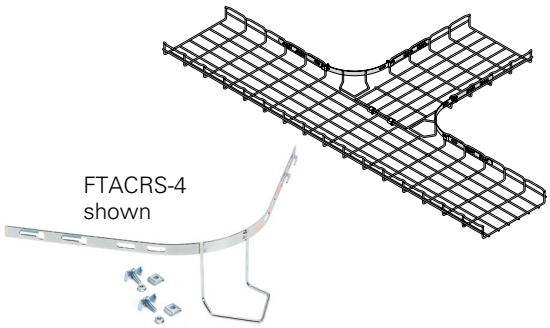


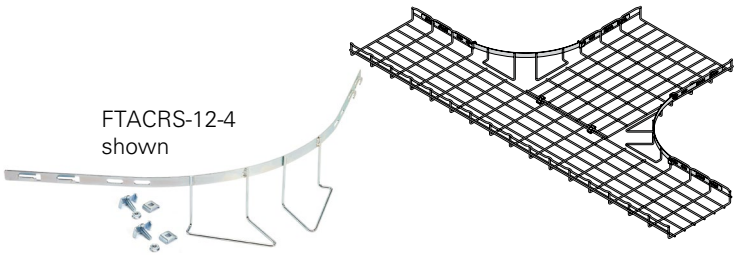


Corner Radius Kit

- Helps eliminate need for field fabrication and is quick to install.
- Built in tab features for positioning onto side rails at transition locations.
- For fast assembly of a 90° bend, tee, and cross fittings.
- One kit will make one 90° bend, two kits will make one tee, and four kits will make one cross fitting.
- Kit includes: one (1) corner radius and two (2) WASHER SPL KIT.
- Finishes __: **EG** (BLE and 316S available upon request).

Part Number	Height in. (mm)	Radius in. (mm)	Qty. per Box	Wt./Box lbs. (kg)
FTACRS-2	2" (50.8)	6" (152.4)	1	1.3 (0.59)
FTACRS-4	4" (101.6)	6" (152.4)	1	1.3 (0.59)
FTACRS-6	6" (152.4)	6" (152.4)	1	1.3 (0.59)
FTACRS-12-2	2" (50.8)	12" (304.8)	1	1.3 (0.59)
FTACRS-12-4	4" (101.6)	12" (304.8)	1	1.3 (0.59)
FTACRS-12-6	6" (152.4)	12" (304.8)	1	1.3 (0.59)





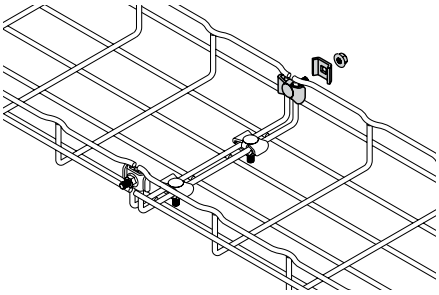
See page D-3 for finish and grounding information

Components Required to Connect Two Sections of Flextray

System Part Number	System Width in.	System Width (mm)	Connector Assembly WASHER SPL KIT	Connecting Hardware FTSCH	Splice Plate FTS3SP	Splice Bar SPLICE BAR
FT2X2 †	2"	(50)	2	—	—	—
FT2X4 †	4"	(100)	2	—	—	—
FT2X6	6"	(150)	3[1]	—	—	—
FT2X8	8"	(200)	3[1]	—	—	—
FT2X12	12"	(300)	3[1]	—	—	—
FT2X16	16"	(400)	4[1]	—	—	—
FT2X18	18"	(450)	4[1]	—	—	—
FT2X20	20"	(500)	4[1]	—	—	—
FT2X24	24"	(600)	4[1]	—	—	—
FT2X30	30"	(750)	5[1]	—	—	—
FT2X32	32"	(800)	5[1]	—	—	—
FT4X4	4"	100	3[1]	—	—	—
FT4X6	6"	150	3[1]	—	—	—
FT4X8	8"	200	3[1]	—	—	—
FT(*)X12	12"	300	3[1]	—	—	—
FT(*)X16	16"	400	4[1]	—	—	—
FT(*)X18	18"	(450)	4[1]	—	—	—
FT(*)X20	20"	500	4[1]	—	—	—
FT(*)X24	24"	600	4[1]	—	—	—
FT(*)X30	30"	(750)	5[1]	—	—	—
FT2X2 †	2"	(50)	—	2	2	—
FT2X4 †	4"	(100)	—	2	2	—
FT2X6	6"	(150)	1	2	2	—
FT2X8	8"	(200)	1	2	2	—
FT2X12	12"	(300)	1	2	2	—
FT2X16	16"	(400)	2	2	2	—
FT2X18	18"	(450)	2	2	2	—
FT2X20	20"	(500)	2	2	2	—
FT2X24	24"	(600)	2	2	2	—
FT2X30	30"	(750)	3	2	2	—
FT2X32	32"	(800)	3	2	2	—
FT4X4	4"	(100)	1	2	2	—
FT4X6	6"	(150)	1	2	2	—
FT4X8	8"	(200)	1	2	2	—
FT(*)X12	12"	(300)	1	2	2	—
FT(*)X16	16"	(400)	2	2	2	—
FT(*)X18	18"	(450)	2	2	2	—
FT(*)X20	20"	(500)	2	2	2	—
FT(*)X24	24"	(600)	2	2	2	—
FT(*)X30	30"	(750)	3	2	2	—
FT2X2 †	2"	(50)	—	6	—	2
FT2X4 †	4"	(100)	—	6	—	2
FT2X6	6"	(150)	1	6	—	2
FT2X8	8"	(200)	1	6	—	2
FT2X12	12"	(300)	1	6	—	2
FT2X16	16"	(400)	2	6	—	2
FT2X18	18"	(450)	2	6	—	2
FT2X20	20"	(500)	2	6	—	2
FT2X24	24"	(600)	2	6	—	2
FT2X30	30"	(750)	3	6	—	2
FT2X32	32"	800	3	6	—	2
FT4X4	4"	(100)	1	6	—	2
FT4X6	6"	(150)	1	6	—	2
FT4X8	8"	(200)	1	6	—	2
FT(*)X12	12"	(300)	1	6	—	2
FT(*)X16	16"	(400)	2	6	—	2
FT(*)X18	18"	(450)	2	6	—	2
FT(*)X20	20"	(500)	2	6	—	2
FT(*)X24	24"	(600)	2	6	—	2
FT(*)X30	30"	(750)	3	6	—	2

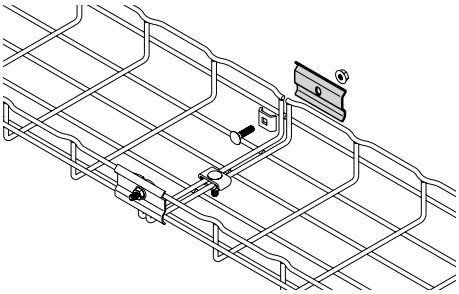
(*) 4 for 4" Deep Flextray
6 for 6" Deep Flextray

Washer Splice Kits



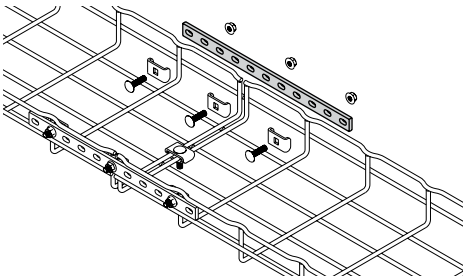
[1] Install one kit on each side and remaining kit(s) on bottom.

Splice Plates



Install splice plates on sides and WASHER SPL KIT on bottom.

Splice Bars

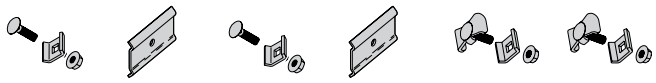
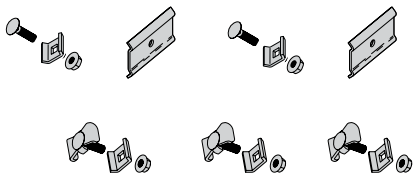


Install splice bars on sides and WASHER SPL KIT on bottom.

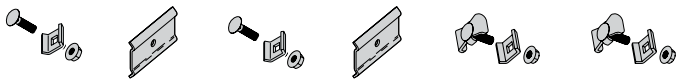
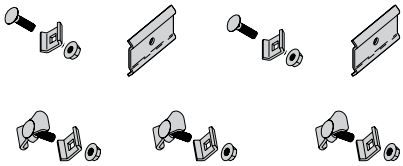
† Sizes not UL Classified

Flextray

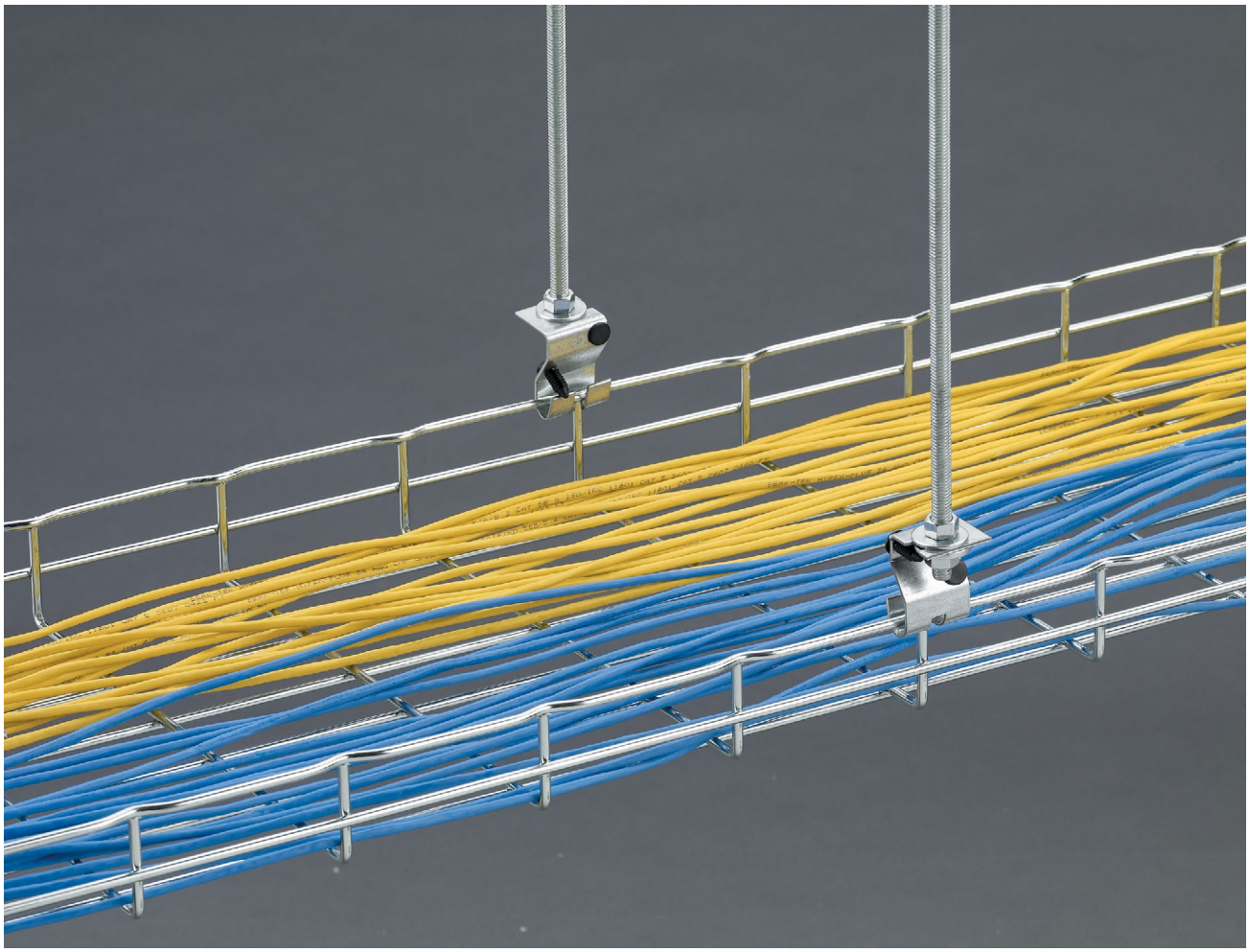
Splice Plate Kits for 2" Deep Flextray

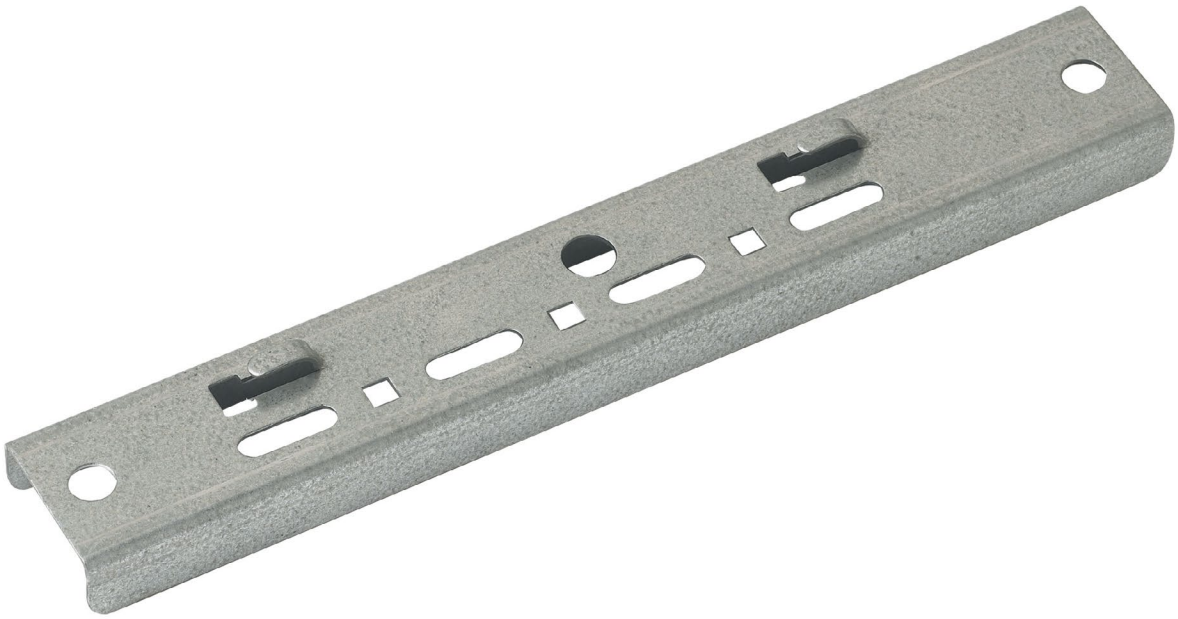
Part Number	System Width in.	System Width (mm)	Weight Per 100 lbs.	Weight Per 100 (kg)	Box Quantity	Conveniently poly-bagged for use with 2" Deep Flextray
FTS20SK	2" 4"	(50) (100)	2.91	(1.32)	10	
FTS21SK	6" 8" 12"	(150) (200) (300)	3.63	(1.64)	10	
FTS22SK	16" 18" 20" 24"	(300) (450) (500) (600)	4.35	(1.97)	10	
FTS23SK	30" 32"	(750) (800)	5.07	(2.30)	10	

Splice Plate Kits for 4" & 6" Deep Flextray

Part Number	System Width in.	System Width (mm)	Weight Per 100 lbs.	Weight Per 100 (kg)	Box Quantity	Conveniently poly-bagged for use with 4" & 6" Deep Flextray
FTS21SK	4" 6" 8" 12"	(100) (150) (200) (300)	3.63	(1.64)	10	
FTS22SK	16" 18" 20" 24"	(400) (450) (500) (600)	4.35	(1.97)	10	
FTS23SK	30"	(750)	5.07	(2.30)	10	

Flextray



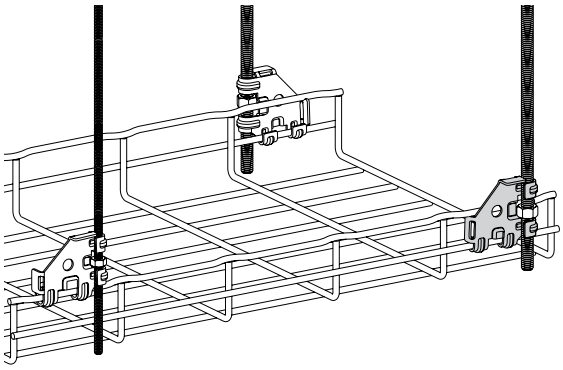


Flip Clip™

- Accommodates 1/4" and 3/8" rod sizes.
- Installs quickly with a screwdriver or pliers thus reducing installation time.
- Requires only one hex nut (not included) to hang and level the Flextray.
- Retainer tabs can be bent over to lock-in the threaded rod and wire basket.
- Finishes __: **ZN** (FB and SS6 available upon request).

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
WB46H__	Flip Clip™	50	5.2 (2.36)

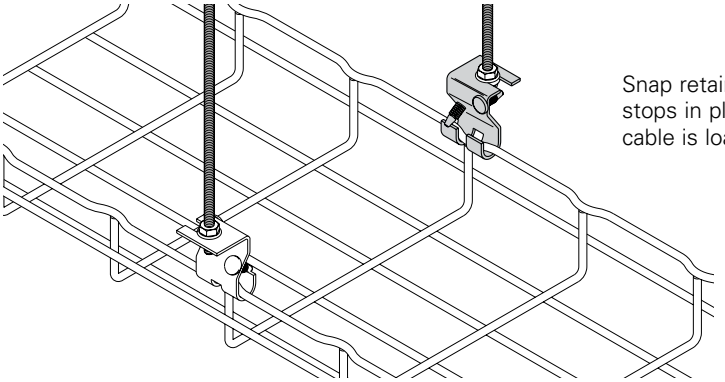
Snap retainer stops in place after cable is loaded.



Trapeze Support

- Trapeze Clip installs fast.
- For use with trays up to 4" (100mm) deep, 12" (300mm) wide, and spans up to 8'-0" (2.44m).
- Tray can be released from support to allow side cable loading.
- Accepts 1/4" and 3/8" threaded rod sizes.
- Finishes __: **GS** (BLE available upon request).

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
TRAPEZE SUPT2__	Trapeze Support Clip	50 trapeze clips 100 retainer stops	7.0 (3.17)



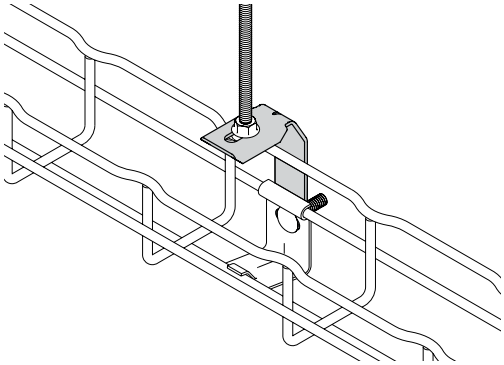
Snap retainer stops in place after cable is loaded.

See page D-3 for finish information

2" Center Hanger

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
2 IN CTR SUPT__	Center Support Hanger for FT2x2	50	5.0 (2.27)

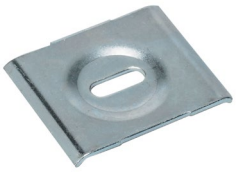
- For use with 2" (50mm) tray widths only.
- Accepts 1/4" threaded rod.
- Hardware sold separately.
- Assemble with ATTACHMENT CLP & FTHDWE 1/4 hardware.
- Finishes __: **GS** (BLE available upon request).



Hold Down Plate

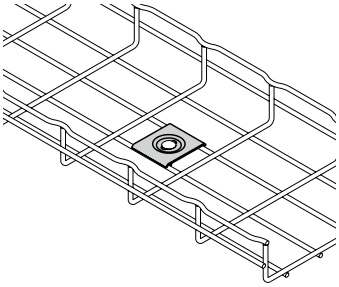
Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
SUPT WASHER__	.28" x .70" (7.1mm x 17.8mm)	100	9.4 (4.26)
FTA6HD__	.40" x .70" (10.1mm x 17.8mm)	100	7.0 (3.18)

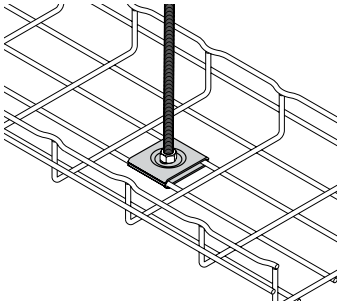
- Easy way to mount 4" (100mm) wide tray for raceway run.
- Use 1/4" screws to attach SUPT WASHER to your specific wall/stud application (hardware sold separately).
- FTA6HD can be used in pairs to create a center-hung support using 3/8" rod.
- To protect cables use threaded rod protector (page D-20).
- To complete 3/8" center hanger assembly use:
  2 - FTA6HD
  2 - HN 3/8"-16 hex nuts
- Finish: **ZN** (SS6 available upon request).



SUPT WASHER

FTA6HD



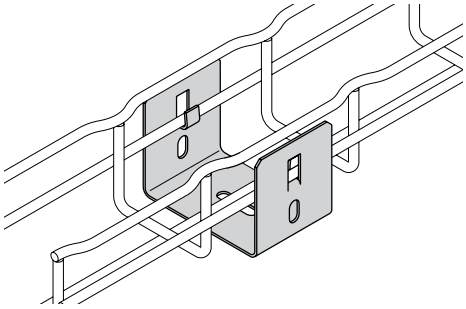


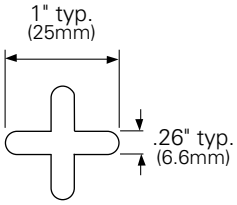
See page D-3 for finish information

Mounting Bracket

- Designed to support FT2X2X10 Flextray.
- Click tabs for Flextray attachment.
- Use 1/4" hardware and washer (not included) to mount bracket.
- Finishes __: **SS6.**

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FTB2UB__	Light Duty Wall/Rack Bracket	10	2.1 (0.95)

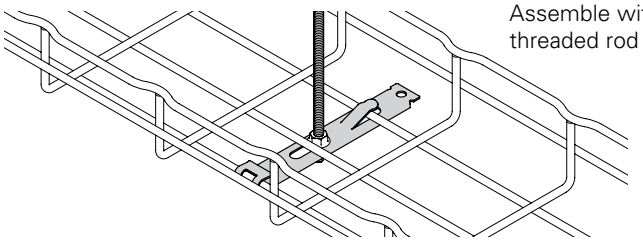




Center Hung Clip

- Use for light duty cabling applications.
- For use with 1 1/2" (38mm) & 2" (51mm) deep tray with 4" (100mm) and 6" (150mm) widths.
- When hanging 4" (100mm) wide tray, center hung clip must be run parallel with the tray.
- Built-in hold down tab.
- Accepts 1/4" threaded rod.
- Threaded rod and nuts sold separately.
- Finishes __: **GS** (BLE available upon request).

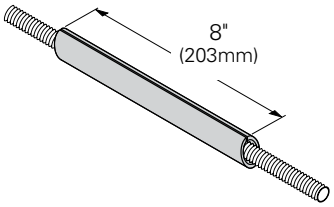
Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
CTR HUNG CLP__	Light Duty Center Hanger	50	4.0 (1.81)

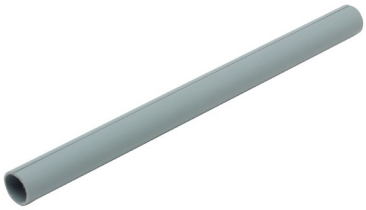


Threaded Rod Protector

- Use to protect cables from 1/4" to 1/2" threaded rod.
- PVC UL94V-O material.
- Color: Gray.
- Not plenum rated.

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
SB301-1/2x8	Rod Protector	1	0.03 (0.013)



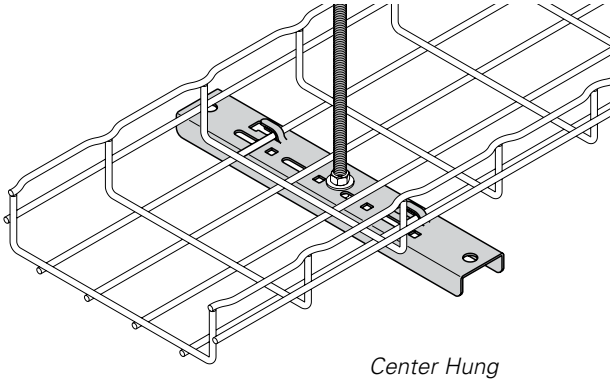


See page D-3 for finish information

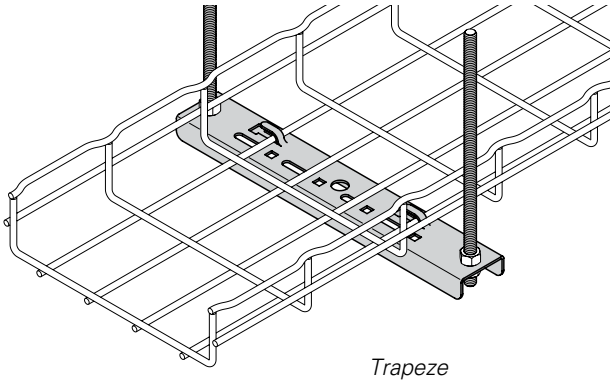
Center Trapeze Hanger

- Can be installed as center-hung or traditional trapeze hanger.
- Multiple options to secure Flextray to hanger.
  - Built in hold down tabs (use screwdriver to bend down tab).
  - Compatible with TOOLLESS CLIP with snap-inlocking pin.
  - Compatible with WBUHD hold down clip whentray crosswire is aligned over top of hanger.
  - Slots and holes for optional hardware attachment.
- Corrosion resistant pre-galvanized zinc finish (other finishes available upon request).
- Center hole for up to 1/2" rod.
- Hole on each end for up to 3/8" rod.
- Threaded rod protector available (SB301-1/2 x 8) see page D-20.
- When 1/2" trapeze rods are required, add -1/2 to end of part number when ordering.

Part Number	Maximum Tray Width in.	(mm)	Actual Length in.	(mm)	Wt./Pc. lbs.	(kg)
FTB06CT	6"	(150)	9.78"	(248)	0.61	(0.27)
FTB08CT	8"	(200)	11.75"	(298)	0.74	(0.33)
FTB12CT	12"	(300)	15.69"	(398)	0.98	(0.44)
FTB16CT	16"	(400)	19.63"	(498)	1.61	(0.73)
FTB18CT	18"	(450)	21.59"	(548)	1.77	(0.80)
FTB20CT	20"	(500)	23.56"	(598)	1.93	(0.87)
FTB24CT	24"	(600)	27.50"	(698)	2.25	(1.02)



Center Hung



Trapeze

See page D-3 for finish information

KwikWire Clamps & Wire Rope

- KwikWire™ system replaces jack chain or ATR to support lighting, ductwork, and Flextray.
- Can be quickly installed around beams - No drilling required.
- Ideal for sloped ceilings - can hang objects at up to 60° angles.
- Simple height adjustments are made by releasing locking tab, no tools required.
- Spools of wire can be cut to length in field, reducing waste and up front planning.

Part No.	Clamps - For Use With Wire Rope Diameters	Box Qty.
BKC100	1/16" (1.6mm) & 3/32" (2.3mm)	100
BKC200-1	3/32" (2.4 mm), 1/8" (3.2mm), & 3/16" (4.7mm)	50

Part No.	Rope Dia. in.	Rope Dia. (mm)	Working Load Lbs.	Working Load (kg)	Spool
BKW063 (1)	1/16"	(1.6)	96	(43.5)	500 ft.
BKW094 (1)	3/32"	(2.3)	184	(83.4)	500 ft.
BKW125 (1)	1/8"	(3.2)	340	(154.2)	500 ft.
BKW188 (2)	3/16"	(4.8)	840	(381.0)	250 ft.

Wire Rope Construction

(1) 7 x 7

(2) 7 x 19

KwikWire Clamp Working Loads*

Clamp Part No.	Wire Rope Dia.	Lbs. Safety Factor 4
BKC100	1/16"	0-75
BKC100	3/32"	25-150
BKC200-1	3/32"	25-150
BKC200-1	1/8"	25-250
BKC200-1	3/16"	50-500

* Working loads shown are for hanging vertically. For suspending at 15°, 30°, 45° or 60° angles from vertical, use the following percentage of the working loads from the chart:

15° = 96%
30° = 86%
45° = 70%
60° = 50%

Cutter Part No.	Box Qty.
BKCC	1

KwikPak Wire Rope & Clamps

- KwikPak™ includes a supply of kwik-clamps and a spool of wire rope.
- KwikPak are shipped in a specially designed dispenser box to ease field cutting of wire.

Part No.	For Use With Wire Rope Diameters	Box Qty.
BKP10063	BKC100 (100 pcs.) 1/16"Ø Wire Rope (500 ft.)	1
BKP10094	BKC100 (100 pcs.) 3/32"Ø Wire Rope (500 ft.)	1
BKP20125	BKC200-1 (50 pcs.) 1/8"Ø Wire Rope (500 ft.)	1
BKP20188	BKC200-1 (50 pcs.) 3/16"Ø Wire Rope (500 ft.)	1

See page D-3 for finish information

KwikWire Accessory Features

- Helps reduce on the job installation time.
- Can be installed quickly without drilling into existing structure.
- Increases versatility in the field.
- KwikWire accessory system helps reduce inventory and shipping costs.
- No more sawing, filing, or fixing nuts.
- Designed for use with cable tray, lighting, and HVAC.
- Eliminates the need for all threaded rod.
- Cost effective solution for jack chain.
- "Y" style accessories require 50% less drilling.

KwikWire Accessory Numbering System

Product Line	Assembly Configuration	Leg Termination	Leg Length	Wire Rope Diameter	Straight Length	Assembly or Kit
BK = KwikWire	Blank = Single Leg	A = Angle Bracket w/Pin	Blank = See Straight Length	063 = 1/16"	Blank = Loop w/ Plastic Tube	Blank = Assembly Only
	Y = 2 Legs	H = Hook	18 = 18" Leg	094 = 3/32"	18 = 18"	K = Kit (Assembly & BKC100 Clamp)
	3 - 3 Legs	L = Loop	30 = 30" Leg		30 = 30"	
		T = Toggle			40 = 40"	
		W = Fuse Cut			80 = 80"	
		B25 = Bolt w/ 1/4"-20 Thread			120 = 120"	
		B38 = Bolt w/ 3/8"-16 Thread			180 = 180"	
		BM6 = Bolt w/ M6 Thread			240 = 240"	
		BM8 = Bolt w/ M8 Thread			360 = 360"	
		BM10 = Bolt w/ M10 Thread				

Examples

BKYT18-094-120K

BK Y T 18 - 063 - 120 K

KwikWire Accessory
2 legs - toggle leg termination - 18" legs - 1/16" diameter wire - 120" straight length - kit with clamp

BKL-063-120K

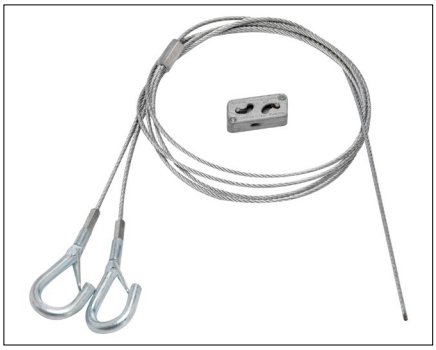
BK L - 063 - 120 K

KwikWire Accessory
single leg - looped leg termination - 1/16" diameter wire - 120" straight length - kit with clamp

See page D-3 for finish information

KwikWire 'Y' Style Hook Termination

Part No.	Leg Length in.	Leg Length (mm)	Wire Rope Dia. in.	Wire Rope Dia. (mm)	Length in.	Length (mm)
BKYH18-094-40	18"	(457)	3/32"	(2.3)	40"	(1016)
BKYH18-094-80	18"	(457)	3/32"	(2.3)	80"	(2032)
BKYH18-094-120	18"	(457)	3/32"	(2.3)	120"	(3048)
BKYH18-094-180	18"	(457)	3/32"	(2.3)	180"	(4572)
BKYH18-094-240	18"	(457)	3/32"	(2.3)	240"	(6096)
BKYH18-094-360	18"	(457)	3/32"	(2.3)	360"	(9144)
BKYH30-094-40	30"	(762)	3/32"	(2.3)	40"	(1016)
BKYH30-094-80	30"	762)	3/32"	(2.3)	80"	(2032)
BKYH30-094-120	30"	(762)	3/32"	(2.3)	120"	(3048)
BKYH30-094-180	30"	(762)	3/32"	(2.3)	180"	(4572)
BKYH30-094-240	30"	(762)	3/32"	(2.3)	240"	(6096)
BKYH30-094-360	30"	(762)	3/32"	(2.3)	360"	(9144)

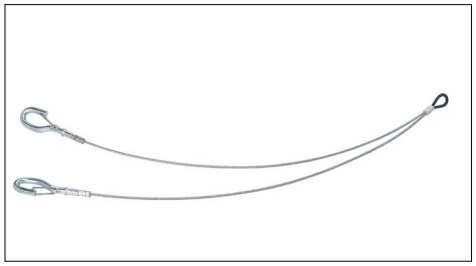


Box Quantity - 10
5 bags containing 2 pieces per bag

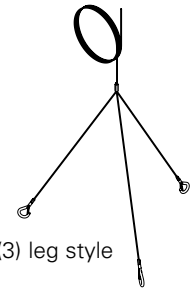
KwikWire 'Y' Style Hook Termination With Loop

Part No.	Wire Rope Dia. in.	Wire Rope Dia. (mm)	Length in.	Length (mm)
BKYH18-094	3/32"	(2.3)	18"	(457)
BKYH30-094	3/32"	(2.3)	30"	(762)

- Hook designed for up to 3/8" diameter wire.
- Available as a wire rope with hook termination only or as a ready-to-use kit with a BKC100 clamp.
- Available in lengths of 40", 80", 120", 180", 240", and 360".
- Available in single, double (Y), and triple (3) leg styles.



Box Quantity - 10
5 bags containing 2 pieces per bag



Triple (3) leg style

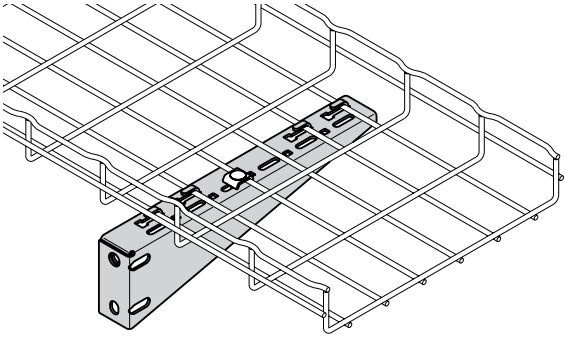
For more information on KwikWire accessories see the KwikWire catalog.

See page D-3 for finish information

Shelf Brackets

- Heavy-duty support bracket.
- For use with 6" (150mm) to 24" (600mm) wide trays.
- Built-in tab for hold down.
- Optional hardware (FTSCH) sold separately.
- Finishes __: **GLV** (HDG and SS6 available upon request).

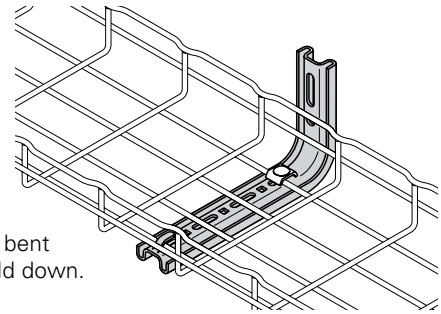
Part Number	Use With Tray Width in.	(mm)	Qty./Box	Wt./Pc. lbs.	(kg)
FTB06CS__	6"	(150)	1	0.5	(0.22)
FTB08CS__	8"	(200)	1	0.6	(0.27)
FTB12CS__	12"	(300)	1	1.2	(0.54)
FTB16CS __	16"	(400)	1	1.7	(0.77)
FTB18CS __	18"	(450)	1	1.9	(0.86)
FTB20CS __	20"	(500)	1	2.6	(1.18)
FTB24CS __	24"	(600)	1	3.2	(1.45)



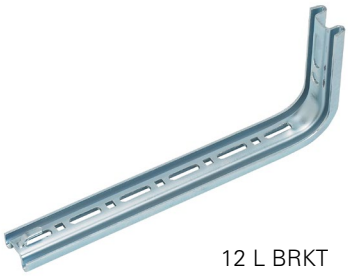
L Brackets

- Installs tray to wall cleanly.
- Built-in tab for hold down (not available in stainless steel).
- For use with 4" (100mm) to 24" (600mm) wide trays.
- Use with pedestal clamp in raised floor applications.
- Optional hardware (FTSCH) sold separately.
- Finishes __: **EG** (HD, BLE and 316S available upon request).

Part Number	Use With Tray Width in.	(mm)	Qty./Box	Wt./Pc. lbs.	(kg)
4 L BRKT__	4"	(150)	1	0.6	(0.27)
8 L BRKT__	6" 8"	(150) (200)	1	0.8	(0.36)
12 L BRKT__	12"	(300)	1	1.3	(0.59)
16 L BRKT__	16"	(400)	1	1.4	(0.63)
20 L BRKT__	18" 20"	(450) (500)	1	2.0	(0.91)
24 L BRKT__	24"	(600)	1	2.3	(1.04)



Tab can be bent over for hold down.



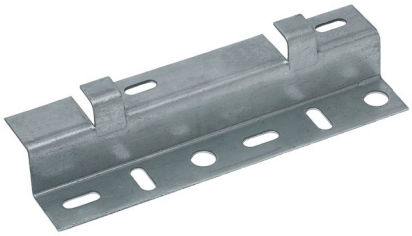
12 L BRKT

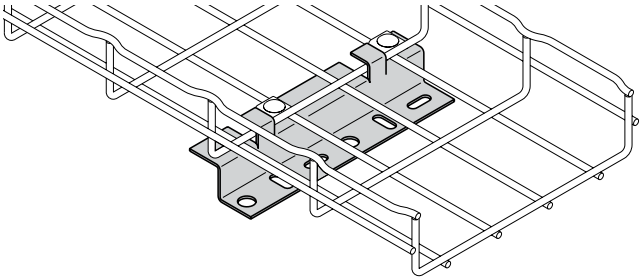
See page D-3 for finish information

Z Brackets

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
Z BRKT__	Z Bracket	25	14.0 (6.35)

- Used for horizontal and/or vertical mounting.
- 8" (200mm) wide bracket for use with 6" (100mm) to 32" (800mm) wide trays.
- Can be used to offset trays from floor.
- Can be used to terminate tray run at wall.
- Multiple brackets can be used for wider tray widths.
- Use with two (2) FTSCH (sold separately).
- Finishes __: **GS** (BLE available upon request).





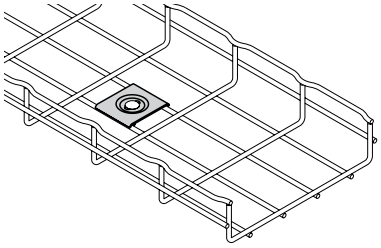
Hold Down Plate

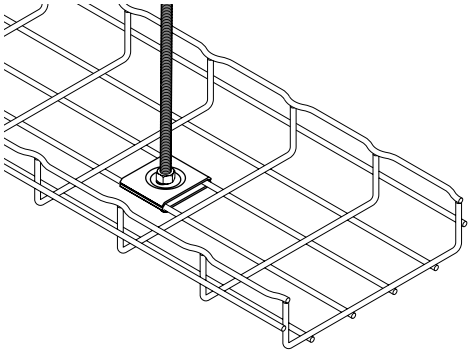
Part Number	Description	Qty./ Box	Wt./Box lbs. (kg)
SUPT WASHER__	.28" x .70" (7.1mm x 17.8mm)	50	4.7 (2.13)
FTA6HD__	.40" x .70" (10.1mm x 17.8mm)	50	3.5 (1.59)

- Easy way to mount 4" (100mm) wide tray for raceway run.
- Use 1/4" screws to attach SUPT WASHER to your specific wall/ stud application (hardware sold separately).
- FTA6HD can be used in pairs to create a center-hung support using 3/8" rod.
- To protect cables use threaded rod protector (page D-20).
- To complete 3/8" center hanger assembly use:
  2 - FTA6HD
  2 - HN 3/8"-16 hex nuts
- Finish: **ZN** (SS6 available upon request).

SUPT WASHER

FTA6HD



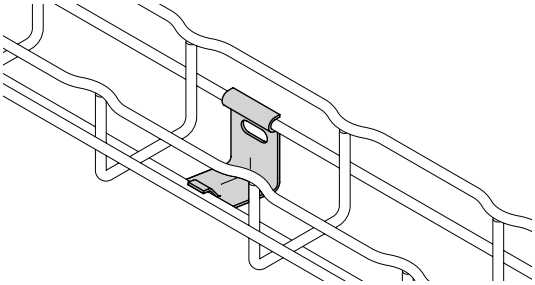


See page D-3 for finish information

Attachment Clips

- Wall attachment for 2" (50mm) wide tray only (FT2X2X10).
- Low-profile appearance.
- Built-in tab to hold down tray.
- Can also be used with 2" (50mm) Center Hanger (see page D-19).
- Hardware sold separately.
- Finishes __: **GS** (BLE available upon request).

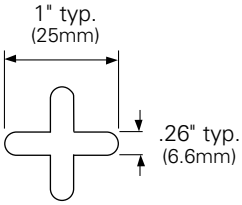
Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
ATTACHMENT CLP__	Support for FT2x2x10	50	3.4 (1.54)

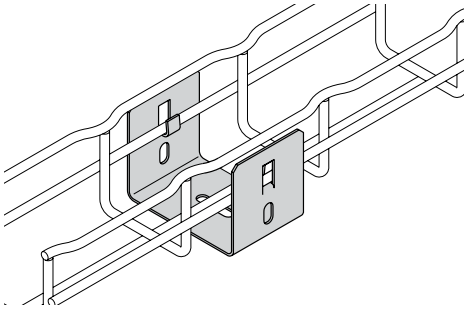


Mounting Bracket

- Designed to support FT2X2X10 Flextray.
- Click tabs for Flextray attachment.
- Use 1/4" hardware and washer (not included) to mount bracket.
- Finishes __: **SS6.**

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FTB2UB__	Light Duty Wall/Rack Bracket	10	2.1 (0.95)

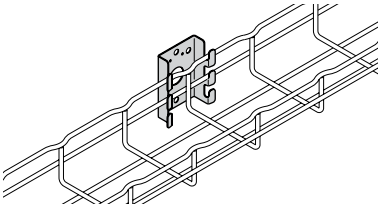


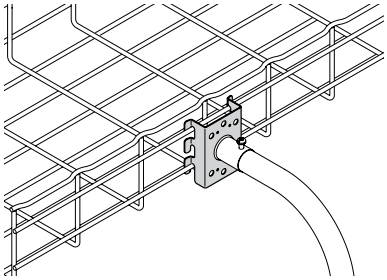


Wall Supports

- Used to attach 2" (50mm) or 4" (100mm) wide trays to walls, struts or cabinets.
- Use for raceway mounting.
- Mount to metal framing for vertical support.
- Tabs are built in for tray hold down.
- Mount to side rail for electrical box connection.
- Finishes __: **GLV.**

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FTA050CC__	Wall Support Bracket	1	0.8 (0.36)



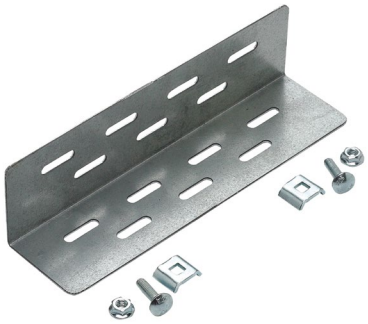


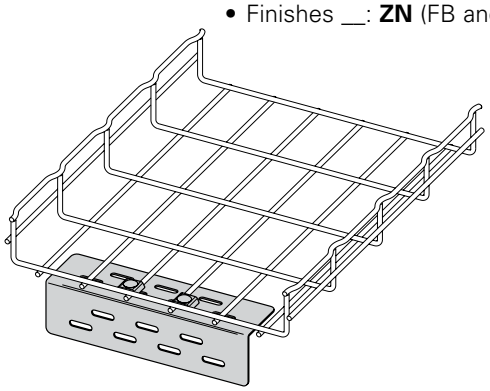
See page D-3 for finish information

Wall Termination Kit

Part Number	Length in. (mm)	Qty./Box	Wt./Box lbs. (kg)
FTA9WTK__	9" (228.6)	1	1.3 (0.59)

- Kit includes all hardware necessary to support Flextray when terminated at a wall.
- Mount slotted angle to wall with up to 3/8" hardware (not included).
- Wall Termination Kit includes:
  1 - Angle with Slots
  2 - FTSCH
- Finishes __: **ZN** (FB and SS6 available upon request).





Wall Mount Kit

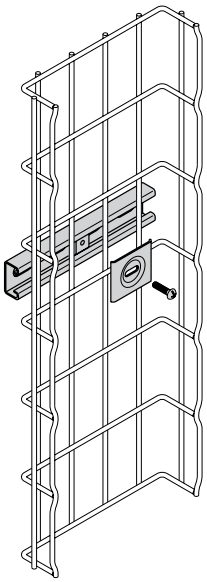
Part Number	Length in. (mm)	Qty./Box	Wt./Box lbs. (kg)
WB48WMK__	8" (203.2)	1	0.76 (0.35)
WB1224WMK__	12" (304.8)	1	1.22 (0.55)

- Kit includes all components necessary to mount Flextray to a wall horizontally or vertically
- Mount strut to wall with up to 1/2" hardware (not included).
- Wall Mount Kit includes:

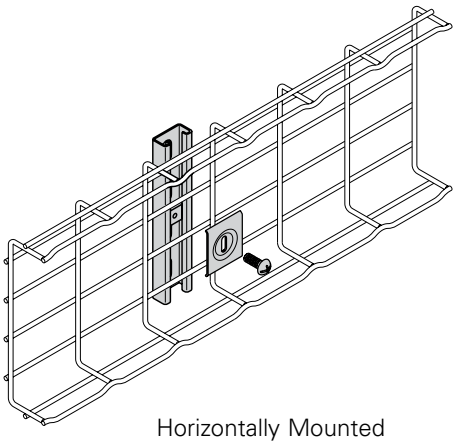
WB48WMK	WB1224WMK	
1	1	B54SH Strut
1	2	SUPT WASHER Hold Downs
1	2	1/4"-20 x 1" Slotted Head Screw
1	2	N224WO Channel Nut

- Finish: Channel - **GLV**; Hardware - **ZN;**
  (SS6 available upon request)

WB1224WMK shown



Vertically Mounted



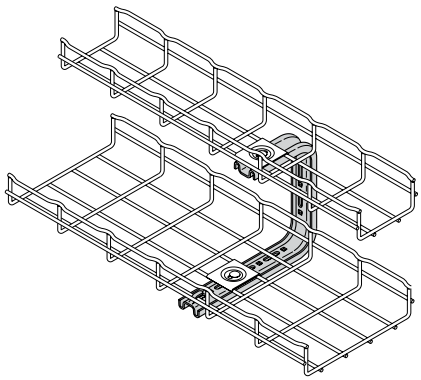
Horizontally Mounted

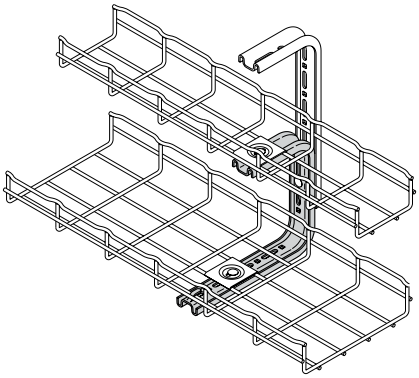
See page D-3 for finish information

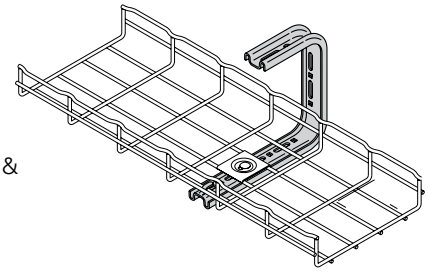
C Brackets

- Tab can be used for hold down (stainless steel will not have these tabs)
- For use with 4" (100mm) to 12" (300mm) wide trays
- C bracket attaches to hard ceiling types
- All brackets are 7-7/8" (200mm) tall
- Cables can be side loaded
- L brackets (page D-26) and C brackets can be combined for layered tray runs
- Finishes __: **EG** (BLE and HD available upon request)

Part Number	Tray Width - Up To in.	(mm)	Qty./Box	Wt./Box lbs. (kg)
4 C BRKT__	4"	(100)	1	1.2 (0.54)
8 C BRKT__	8"	(200)	1	1.4 (0.63)
12 C BRKT__	12"	(300)	1	1.9 (0.86)



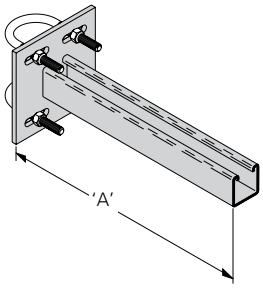


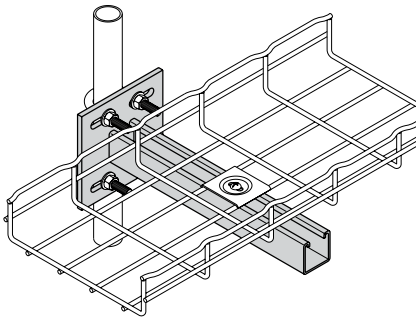


Under floor support bracket

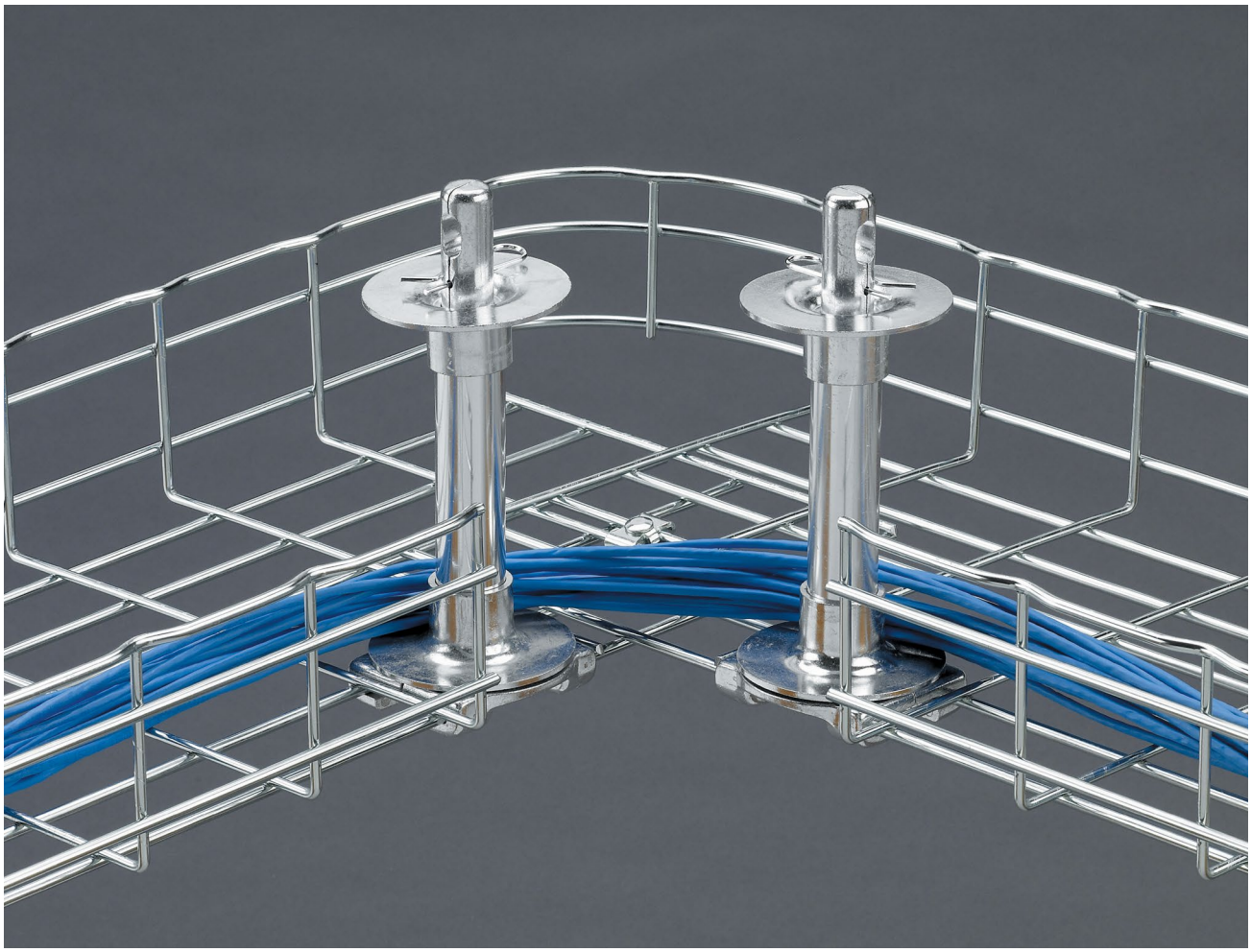
- Under floor support bracket provides rugged support for FLEXTRAY System from access floor post.
- To complete the installation, the following hardware must be ordered separately.
  (2) - B501 U-Bolts
  (1) - SUPT WASHER Hold Down
  (1) - 1/4"-20 x 1" Slotted Head Screw
  (1) - N224WO Channel Nut
- Finish: **ZN**

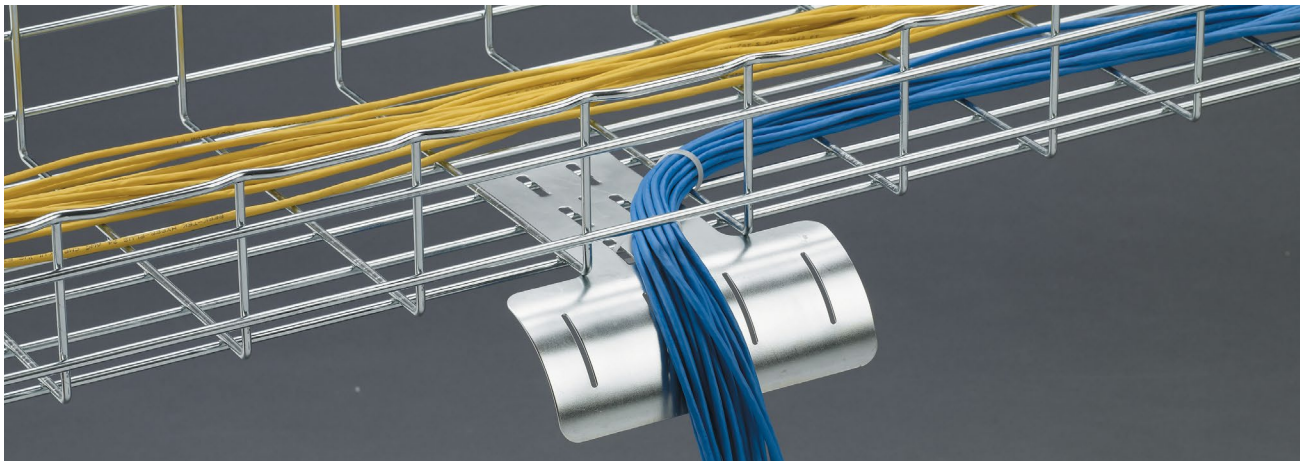
Part Number	'A' in.	(mm)	Box Quantity	Wt. Per Each lbs. (kg)
B409UF-12	12"	(300)	1	3.6 (1.63)
B409UF-18	18"	(450)	1	4.5 (2.04)
B409UF-21	21"	(533)	1	5.4 (2.45)





See page D-3 for finish information



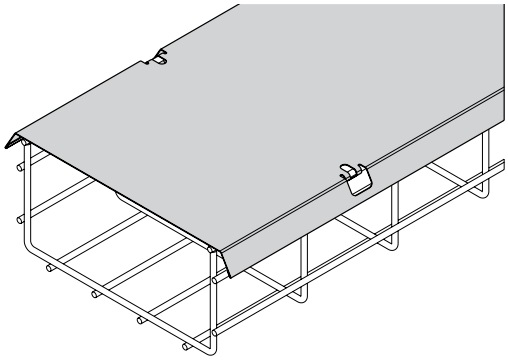


FLEXTRAY®
IT'S SIMPLE CABLE MANAGEMENT

Covers

- Protects cable from debris and dust
- Adds security to installation; please note flex tray covers are not designed to be utilized in environments with environmental loads
- Easy bend-over tabs secure cover to trays
- Available for 2" (50mm) to 24" (600mm) wide trays
- Comes in 118" (2997mm) length
- Flextray covers are intended for indoor use only
- Finishes __: **GS** (BLE, 304S and 316S available upon request)

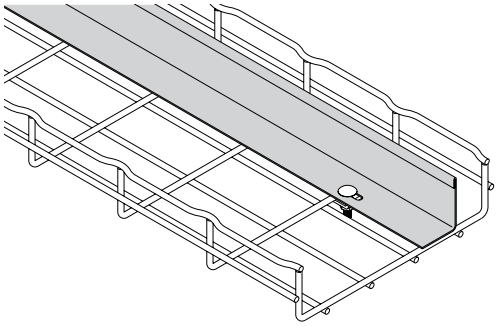
Part Number	For Tray Width Of in.	(mm)	Qty./Box	Wt./Box lbs.	(kg)
2 IN COVER__	2"	(50)	1	3.8	(1.72)
4 IN COVER__	4"	(100)	1	5.7	(2.58)
6 IN COVER__	6"	(150)	1	6.7	(3.04)
8 IN COVER__	8"	(200)	1	8.7	(3.94)
12 IN COVER__	12"	(300)	1	11.6	(5.26)
16 IN COVER__	16"	(400)	1	15.6	(7.07)
18 IN COVER__	18"	(450)	1	17.0	(7.71)
20 IN COVER__	20"	(500)	1	18.5	(8.39)
24 IN COVER__	24"	(600)	1	22.0	(9.98)



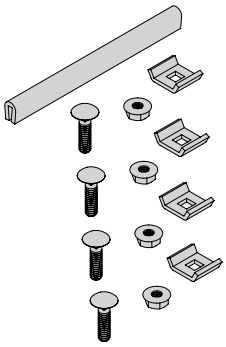
Dividers

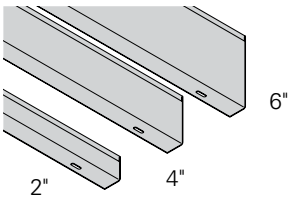
- Allows cable separation within a single tray
- Hemmed, rounded edge provides cable jacket safety
- Hardware included (see image below)
- Field miter for bends and turns
- Dual slots every 24" (609mm) for field cutting
- Available in 2" (50mm), 4" (100mm) and 6" (150mm) heights
- Comes in 118.125" (3000mm) length
- Finishes __: **GS** (BLE, 304S and 316S available upon request)

Part Number	For Tray Depth Of in.	(mm)	Qty./Box	Wt./Box lbs.	(kg)
2 IN DIVIDER__	2"	(50)	1	3.5	(1.59)
4 IN DIVIDER __	4"	(100)	1	9.6	(4.35)
6 IN DIVIDER __	6"	(150)	1	14.5	(6.58)



Dividers include hardware shown below

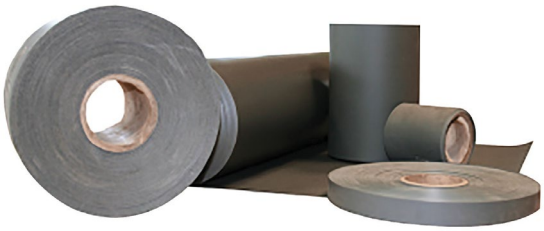


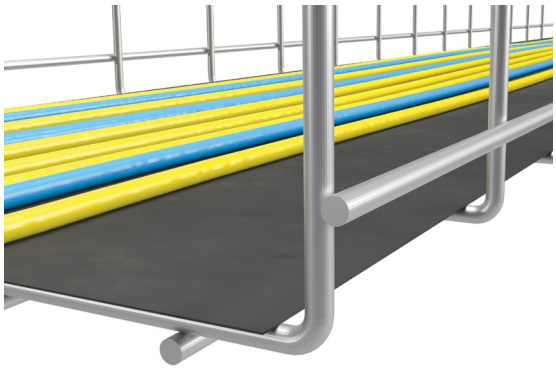


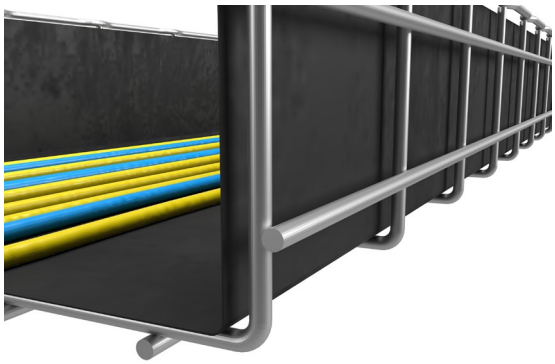
See page D-3 for finish information

Polypropylene liner for Flextray wire basket

- Uses UL 94 V-0 rated material in thickness of 0.017"
- Available in flat and scored flat for sidewalls
- Available in black (BLK) and white (WHT)
- Rolls are 100 feet in length
- Installation is as simple as position, roll and cut to size by using industrial utility knife







Flat liners

Straight Cut Part No.*	Flextray Width in.
FT POLY-LINER 6x100 ___	6
FT POLY-LINER 12x100 ___	12
FT POLY-LINER 18x100 ___	18
FT POLY-LINER 24x100 ___	24
FT POLY-LINER 34x100 ___	34

* Specify color ___: Black (BLK) or White (WHT)

Scored flat plus sidewall

Scored Flat Plus Sidewall Part No.*	Flextray Width in.	Sidewall Flextray Height in.
FT POLY-LINERSW 2x2x100 ___	2	2
FT POLY-LINERSW 2x32x100 ___	32	2
FT POLY-LINERSW 2x34x100 ___	34	2
FT POLY-LINERSW 4x4x100 ___	4	4
FT POLY-LINERSW 4x30x100 ___	30	4
FT POLY-LINERSW 6x6x100 ___	6	6
FT POLY-LINERSW 6x8x100 ___	12	6
FT POLY-LINERSW 6x10x100 ___	10	6
FT POLY-LINERSW 6x12x100 ___	12	6
FT POLY-LINERSW 6x14x100 ___	14	6
FT POLY-LINERSW 6x16x100 ___	16	6
FT POLY-LINERSW 6x18x100 ___	18	6
FT POLY-LINERSW 6x20x100 ___	20	6
FT POLY-LINERSW 6x24x100 ___	24	6

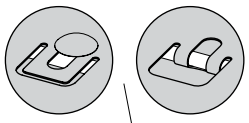
* Specify color ___: Black (BLK) or White (WHT)

See page D-3 for finish information

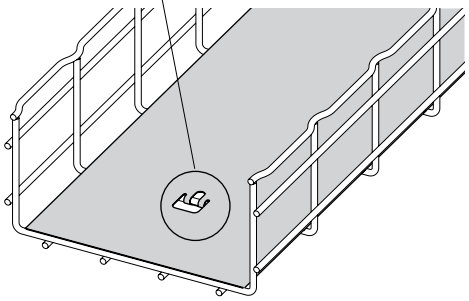
Solid bottom inserts

Part Number	For Tray Width Of in.	mm	Qty./Box	Wt./Box lbs.	kg
INSERT 4X118__	4"	(100)	1	6.8	(3.08)
INSERT 6X118__	6"	(150)	1	9.8	(4.44)
INSERT 8X118__	8"	(200)	1	13.3	(6.03)
INSERT 12X118__	12"	(300)	1	21.6	(9.80)
INSERT 16X118__	16"	(400)	1	26.4	(11.97)
INSERT 18X118__	18"	(450)	1	32.4	(14.69)
INSERT 20X118__	20"	(500)	1	32.9	(14.92)
INSERT 24X118__	24"	(600)	1	39.3	(17.82)

- Continuous support for sensitive cables
- Security of cable in high-traffic areas
- Hardware included
- Available for 4" (100mm) to 24" (600mm) wide trays
- Comes in 118" (2997mm) length
- Finishes __: **GS** (BLE, 304S and 316S also available upon request)



Attachment methods



Attach with FTHDWE 1/4 & Top Washer

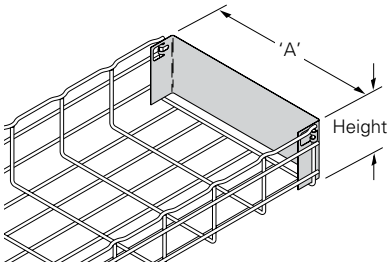
Blind ends

Part Number	'A' in.	(mm)	Height in.	(mm)	Box Quantity
FT BE 2X2	2"	(50)	2"	(50)	1
FT BE (*)X4	4"	(100)	(*)	(*)	1
FT BE (*)X6	6"	(150)	(*)	(*)	1
FT BE (**)X8	8"	(200)	(*)	(*)	1
FT BE (**)X12	12"	(300)	(**)	(**)	1
FT BE (**)X16	16"	(400)	(**)	(**)	1
FT BE (**)X18	18"	(450)	(**)	(**)	1
FT BE (**)X20	20"	(500)	(**)	(**)	1
FT BE (**)X24	24"	(600)	(**)	(**)	1

- Tab features eliminate need for hardware
- Forms a closure for a dead-end Flextray
- Hardware included
- Finish: **GLV** (SS6 also available upon request)

(*) Insert: 2 = 2" (50 mm), 4 = 4" (100 mm) for height

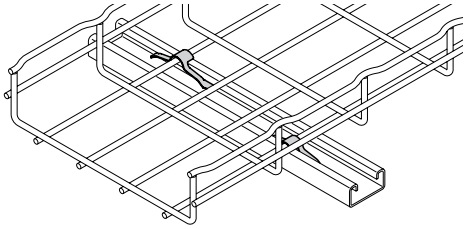
(**) Insert: 2 = 2" (50mm), 4 = 4" (100mm), 6 = 6" (150mm) for height



Strut mounting clip

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
BW4	Strut Mounting Clip	100	0.9 (0.41)

- Use to secure FLEXTRAY to horizontal strut support
- Designed for use as shown in drawing (no load rating)
- Finish: Black Zinc Phosphate

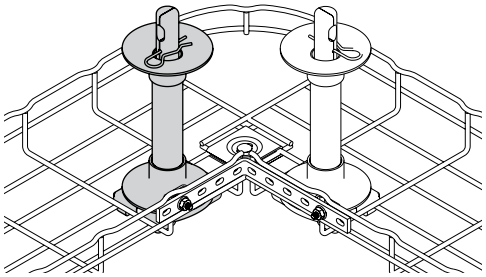


See page D-3 for finish information

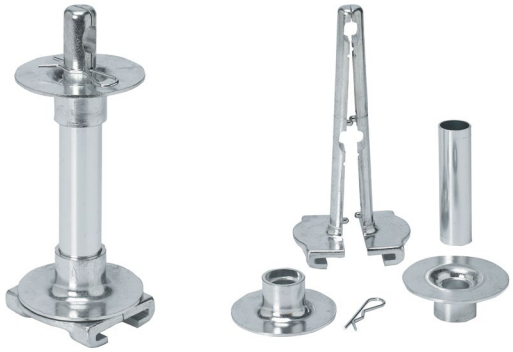
Cable roller

- Protects and maintains recommended cable radii for Cat 5, Cat 5E, Cat 6, Cat 6A, Fiber, etc.
- Height of roller can be adjusted to tray depth
- Installs in seconds with no tools
- Reduces cable installation time
- Prevents migration of cables
- For use with 4" (100mm) to 32" (800mm) tray widths
- Finish: Cast Aluminum

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
CABLE ROLLER	Cable Roller	1	1.0 (0.45)



Quick, snap-together design



Toolless clip

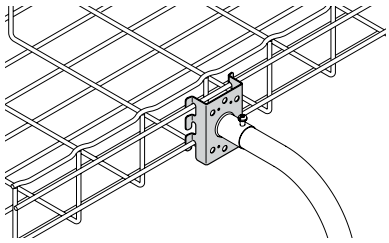
- Securely holds tray to support
- Snap-in locking pin
- No tools or fastening required
- Fast hold-down method
- For use with the following:
  - FTB__CS (see pg. D-26)
  - L BRKT (see pg. D-26)
  - C BRKT (see pg. D-30)
- Finish: Plenum rated resin (black)

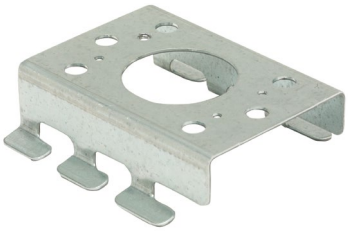
Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
TOOLLESS CLIP	Toolless Hold-Down Clip	50	1.0 (0.45)

Conduit connector

- Conduit connector is designed to connect conduit to the side or bottom of Flextray
- Conduit bushing will remain outside of tray to keep cable pathway clear
- Bend tabs to secure connector to tray
- No hardware included
- Finishes __: **GLV**

Part Number	Conduit Size in. (mm)	Qty./Box	Wt./Box lbs. (kg)
FTA050CC__	1/2" (15)	10	2.0 (0.91)
FTA075CC __	3/4" (20)	10	2.0 (0.91)
FTA100CC __	1" (25)	10	2.0 (0.91)
FTA125CC __	1 1/4" (32)	10	2.0 (0.91)



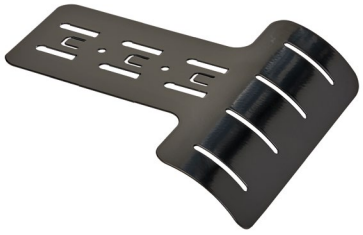


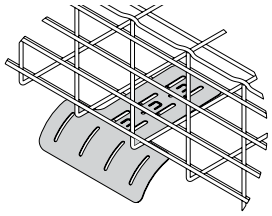
See page D-3 for finish information

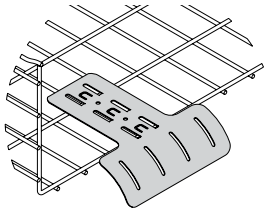
Drop out fitting

Part Number	Description	Bend radius	Qty./ Box	Wt./Box lbs. (kg)
DROP OUT__	Drop Out Fitting	2.5″	50	15.0 (6.8)

- Keeps cable radius secure at drop point
- Retention tabs to secure positioning
- For use with 4" (100mm) to 32" (800mm) wide trays
- Attaches to tray without hardware
- Drop outs can be attached at bottom, side or ends of tray
- Retention tabs on bottom of drop out to secure positioning
- Finishes __: **EG** (BLE and SS6 also available upon request)



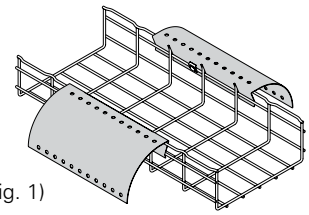




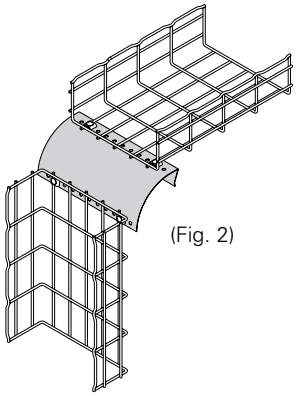
Side drop out fitting

Part Number	Width in. (mm)	Bend radius	Qty./ Box	Wt./Box lbs. (kg)
FTA6SDO	6.0 (152.4)	4"	10	7.17 (3.2)
FTA8SDO	8.0 (203.2)	4"	10	9.57 (4.3)
FTA12SDO	12.0 (304.8)	4"	10	14.35 (6.5)

- Keeps cable radius secure at drop point
- For use with 4" (100mm) to 32" (800mm) wide trays (Fig. 1)
- For use with 6" (152mm) to 12" (300mm) wide trays (Fig. 2)
- Drop outs can be attached at side or ends of tray as shown
- Finishes __: **EG** (BLE and SS6 also available upon request)



(Fig. 1)

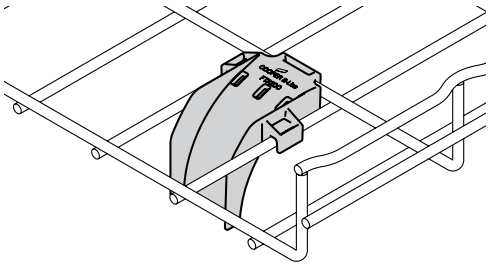


(Fig. 2)

Cable drop out

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
FTA2DO	Cable Drop Out	10	0.17 (0.08)

- Non-metallic 2" (50mm) radius Cable Drop-Out snap locks into mesh bottom and protects cables from sharp bend
- Material: Black Plenum-rated Plastic

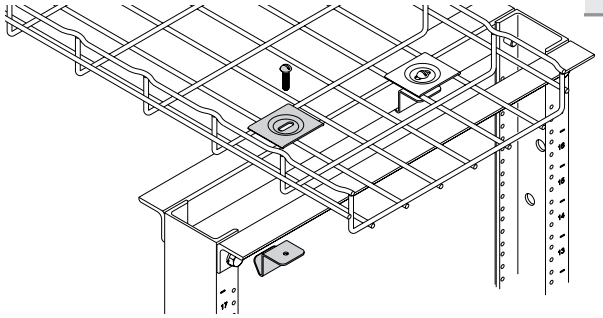


See page D-3 for finish information

Rack clamp

- Securely holds tray down to rack
- Installs without drilling
- Black-painted finish to match rack
- Finish__: **BLE**

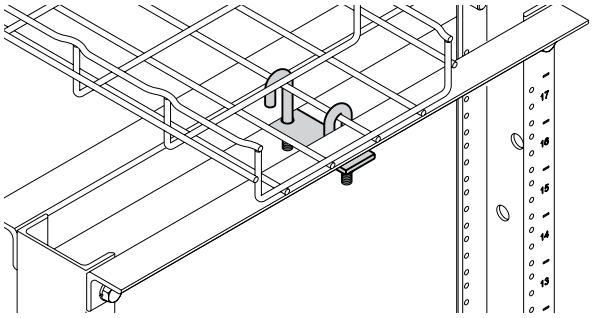
Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
RACK CLAMP__	Rack Clamp	4	4.7 (2.13)



Adaptor kit

- Adaptor kit includes all hardware necessary to connect Flextray system to top of relay rack at right angle or parallel position
- Finish__: **YZN**

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
SB2204__	Adaptor Kit	1	0.37 (0.17)



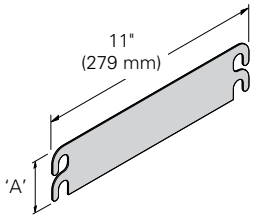
Adaptor Kit includes:

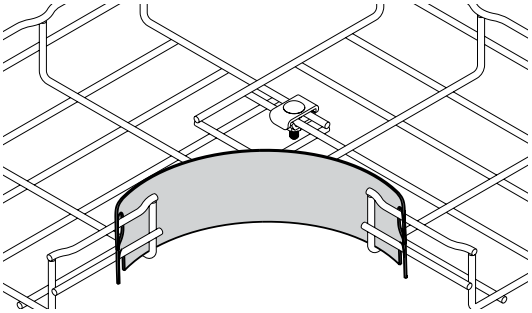
(1) - Mounting Plate
(2) - 5/16"-18 x 2" "J"-Bolts
(2) - HN 5/16"-18 Hex Nuts
(2) - LW 5/16" Lock Washers

Radius shield

- Provides a smooth inside radius surface.
- No tools or fasteners needed to install.
- Sizes for 2", 4" & 6" deep Flextray; 90° horizontal bends, tees, and crosses.
- Installs in seconds. Simply hold in place and bend back tabs.
- Slick surface to reduce cable friction.
- Material: Black Polycarbonate

Part Number	Height A in. (mm)	Qty./Box	Wt./Box lbs. (kg)
FTA2RS	2.5 (63)	50	4.0 (1.8)
FTA4RS	4.3 (110)	50	7.0 (3.2)
FTA6RS	5.9 (150)	25	5.0 (2.3)

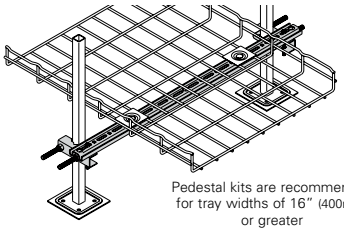




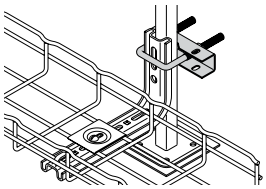
See page D-3 for finish information

Pedestal Clamp & Kit

Part Number	Description	Qty./ Box	Wt./Box lbs. (kg)
PEDESTAL CLAMP__	Pedestal Clamp	1	0.6 (0.27)
PEDESTAL KIT__	Pedestal Clamp Kit	1*	3.3 (1.49)



Pedestal kits are recommended for tray widths of 16" (400mm) or greater



- Clamps to existing raised-access floor stanchion
- Use L BRKT (shown on D-26) or full pedestal kit to support trays under the raised access floor (sold separately)
- For tray widths 2" (50mm) to 20" (500mm)
- *Pedestal Clamp Kit includes two (2) pedestal clamps, 28" (711mm) profile section, bolts & nuts
- Kits include hardware
- SUPTWASHER & FTHDWE 1/4 sold separately
- Finishes __: **EG**

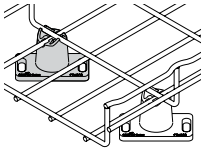
Under floor stand

Part Number	Overall Height in.	(mm)	Wt. Per Each lbs.	(kg)
WBU1203	3"	(76)	1.32	(0.60)
WBU1204	4"	(101)	1.60	(0.72)
WBU1205	5"	(127)	1.88	(0.85)
WBU1206	6"	(152)	2.17	(0.98)

- Heights of 3", 4", 5" or 6"
- Leg cutout allows for airflow
- No tools required to mount FLEXTRAY to stand
- Use WBUHD hold down clips to secure basket
- Stand width is 12"
- Fasten to floor for maximum stability
- Floor mounting slot size: .313" (7.9mm) x .813" (20.6mm) for 1/4" hardware

Floor Stand

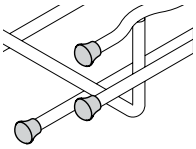
Part Number	Wt. Per Pc. lbs.	(kg)	Box Quantity
FTA2FS	0.44"	(0.20)	10



- Non-metallic snap lock floor stand is designed for use under access floors.
- Floor stand elevates Flextray system 1 5/8" (41.3mm) above the floor.
- To attach floor stand, use construction adhesive or anchors.
- Elevation increments of 1 3/8" (35mm) can be obtained by stacking floor stands.
- Sized for 1/4" hardware (order separately).
- Material: Black Plenum-rated plastic

Rubber cap

Part Number	Box Quantity	Wt. Per 100 lbs.	(kg)
B719EB	100	0.20	(0.10)



- Install on wire ends if required. Fits all wire diameters
- Sold as each

Paint

Part Number	Color	Qty./Box	Wt./Box lbs.	(kg)
SB420ATG	Gray Lacquer	1	0.9	(0.41)
SB420ACW	Computer White Lacquer	1	0.9	(0.41)
B999	Silver Zinc-Rich Paint	1	0.9	(0.41)

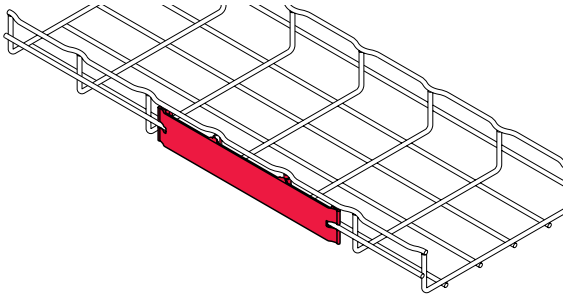
- Size: 12 ounce aerosol can
- Cannot ship air freight

See page D-3 for finish information

Label clip

- Clips easily into trays
- Use for identifying your cable pathways
- Can be used on all tray sizes
- Will not fit on side of 1 1/2" deep Flextray
- Finish: Non-plenum-rated resins

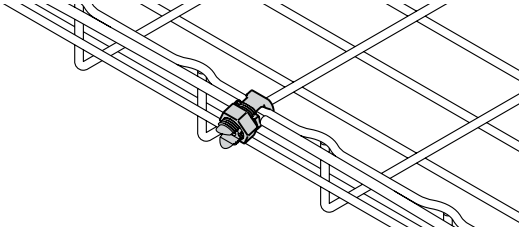
Part Number	Length in. (mm)	Qty./Box	Wt./Box lbs. (kg)
LABEL CLIP	10 1/2" (267)	10	0.6 (0.27)

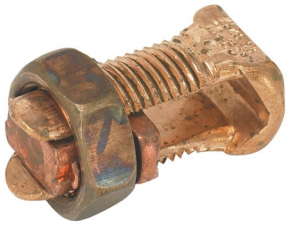


Ground bolt

- Attaches up to #1 ground wire to each tray section when separate ground wire is required
- Used for UL grounding compliance.
- When using color powder coated finish or paint, coating must be removed at the points of contact.
- Finish: Copper Plated

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
GROUND BOLT	Ground Bolt	100	1.0 (0.45)

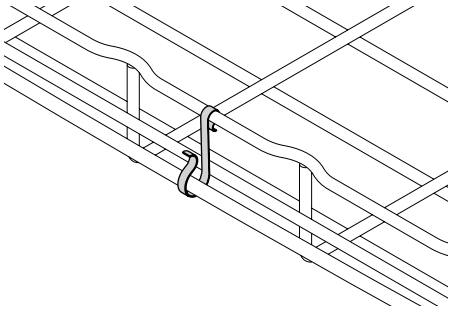




Ground wire supports

- Supports ground wire along side of tray
- Can be used on all trays
- Finish __: Zinc plated

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
GROUND SUPT GL	Ground Wire Support	100	0.6 (0.27)



See page D-3 for finish information

- Complete source of hardware for ceiling connections
- Available in stock
- Strut can be purchased in pre-cut lengths and various colors
- All hardware is zinc plated

Threaded rod

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
ATR1/4x72	1/4" x 72" (1828mm)	1	0.7 (0.31)
ATR1/4x120	1/4" x 120" (3048mm)	1	1.2 (0.54)
ATR1/4x144	1/4" x 144" (3657mm)	1	1.4 (0.63)
ATR3/8x72	3/8" x 72" (1828mm)	1	1.7 (0.77)
ATR3/8x120	3/8" x 120" (3048mm)	1	2.9 (1.31)
ATR3/8x144	3/8" x 144" (3657mm)	1	3.5 (1.58)
ATR1/2x72	1/2" x 72" (1828mm)	1	3.2 (1.45)
ATR1/2x120	1/2" x 120" (3048mm)	1	5.4 (2.45)
ATR1/2x144	1/2" x 144" (3657mm)	1	6.5 (2.95)

Rod couplings

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
B655-1/4	1/4"-20	50	2.0 (0.91)
B655-3/8	3/8"-16	50	5.5 (2.49)
B655-1/2	1/2"-13	50	6.0 (2.72)

Hex Nuts

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
1/4HN	1/4"-20	100	0.6 (0.27)
3/8HN	3/8"-16	100	1.6 (0.72)
1/2HN	1/2"-13	100	4.3 (1.95)

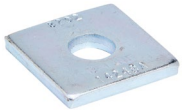
Lock washers

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
1/4 LW	1/4"	200	0.6 (0.27)
3/8 LW	3/8"	200	1.6 (0.72)
1/2 LW	1/2"	200	2.0 (0.91)

Flat washers

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
1/4 FW	1/4"	200	1.2 (0.54)
3/8 FW	3/8"	200	3.0 (1.36)
1/2 FW	1/2"	200	6.6 (2.99)

Square washers



Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
B201	7/16	50	6.0 (2.72)
B202	9/16	50	7.0 (3.17)

Beam Clamps

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
B3036L-3/8	3/8"-16	100	60.0 (27.2)
B3036L-1/2	1/2"-13	100	140.0 (63.5)

See page D-3 for finish information

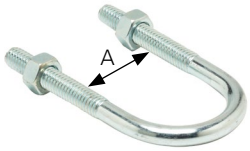
Beam clamps

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
B444-1/4	1/4"-20	100	160 (72.5)
B444-3/8	3/8"-16	100	430 (195.0)
B444-1/2	1/2"-13	100	430 (195.0)

U-Bolt clamps

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
B441-22	3/8"-16 x 3 3/8" long	100	160 (72.5)

U-Bolts



Part Number	'A' in.	(mm)	Thread Size	Box Qty	Wt. Per Box lbs.	(kg)
B501-1	1 3/8"	(30)	5/16"-18	50	7.0	(3.17)
B501-1 1/2	2"	(50)	5/16"-18	50	8.0	(3.63)
B501-2	2 7/16"	(62)	3/8"-16	20	5.4	(2.45)
B501-2 1/2	2 15/16"	(75)	3/8"-16	25	8.0	(3.63)

Strut channels

B22S B22SH

Part Number	Channel Size	Qty.	Wt./Qty. lbs. (kg)
B22SGALV120	1 5/8" x 120" - 12 ga.	1	6.0 (2.72)
B22SHGALV120	1 5/8" x 120" - 12 ga.	1	6.0 (2.72)

Spring nuts

Part Number	Thread Size	Qty.	Wt./Qty. lbs. (kg)
N224	1/4"-20	100	6.5 (2.95)
N228	3/8"-16	100	9.3 (4.22)
N225	1/2"-13	100	11.3 (5.12)

Concrete Rapid Rod™ hanger

Part Number	Rod Size	Shank Size	Qty.	Wt./Qty. lbs. (kg)
ARC-37-150-2	3/8"	1/4" x 1 1/2"	100	3.4 (1.54)

Wood Rapid Rod™ hanger

Part Number	Rod Size	Shank Size	Qty.	Wt./Qty. lbs. (kg)
ARW-37-200-2	3/8"	1/4" x 2"	100	3.4 (1.54)
ARW-37-200SW-2	3/8"	1/4" x 2"	100	3.4 (1.54)

SW = Side Mount

Steel Rapid Rod™ hanger

Part Number	Rod Size	Shank Size	Qty.	Wt./Qty. lbs. (kg)
ARS-37-150-2	3/8"	1/4" x 1 1/2"	100	3.4 (1.54)
ARS-37-100SW-2	3/8"	1/4" x 1"	100	3.4 (1.54)

SW = Side Mount

Sockets for Rapid Rod hangers

Part Number	Size	Qty.	Wt./Qty. lbs. (kg)
7187S-2	Steel Socket	1	4.5 (2.04)
7187-2	Concrete Socket	1	4.5 (2.04)
7197-2	3/8" Concrete Socket	1	4.5 (2.04)

See page D-3 for finish information

CleanShear Cutters
PATENT PENDING
FLEXTRAY
GS METALS

Flextray cutters

- Exclusive, patented Cleanshear™ cuts tray fast
- No sharp edges
- Designed specifically for cutting Flextray
- Safely cut and bend Flextray into any configuration

Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
CLEANSHEAR	CLEANSHEAR Cutting Tool	1 per box	4.3 (1.95)

Patented

1 Face tray up. Slide cutter next to vertical wire and cut.

2 Turn tray to the side with open side facing you. Repeat step 1 to cut wire.

3 Finish cutting all side wires.

4 Turn tray open-side down and cut wires from bottom of tray.

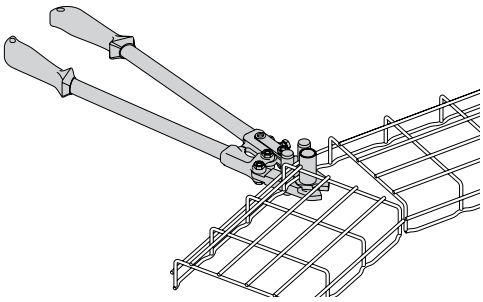
5 Finish cutting by moving to other side of tray to cut remaining wires.

Flextray bender

- Cleanshear bender has our exclusive bending attachment
- Makes bending larger trays easy
- Recommended for bending tray widths of 16" (400mm) or greater

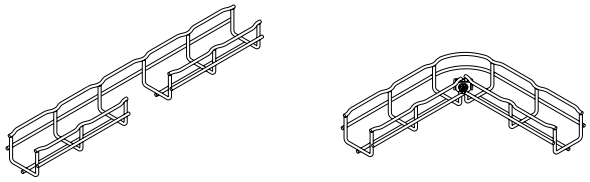
Part Number	Description	Qty./Box	Wt./Box lbs. (kg)
CLEANSHEAR BEND	CLEANSHEAR Cutting Tool With Bender Attachment	1 per box	5.4 (2.45)

Patented



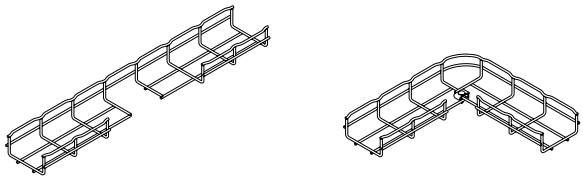
90° Horizontal bends (short radius)

- Make your own field cut horizontal bends using Cleanshear to make safe, smooth cuts
- Can be made from any tray width and depth with any available finish
- SUPT WASHER & FTHDWE 1/4 hardware may be used on bottom of tray instead of WASHER SPL KIT where desired
- Note: Please note the number of WASHER SPL KIT's recommended on this page for forming fittings does not guarantee the UL Classification will be met



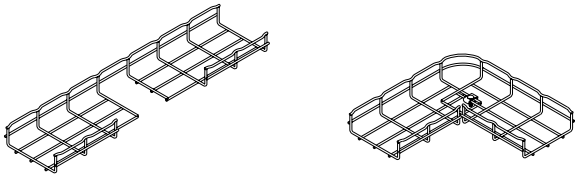
2" (50mm) Tray Width

Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	1



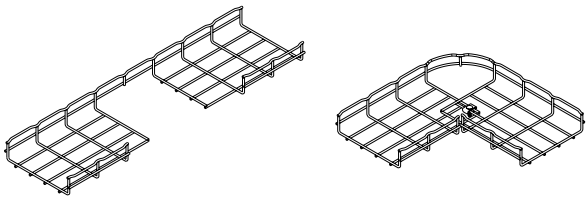
4" (100mm) Tray Width

Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	1
4" (100)	WASHER SPL KIT	1



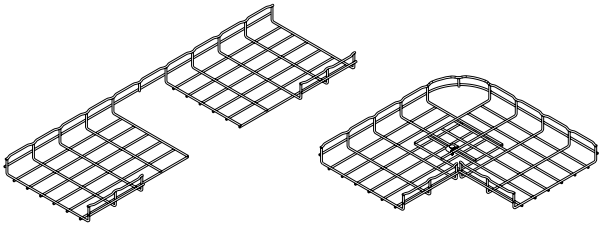
6" (150mm) Tray Width

Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	1
4" (100)	WASHER SPL KIT	1



8" (200mm) Tray Width

Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	1
4" (100)	WASHER SPL KIT	1
6" (150)	WASHER SPL KIT	1



12" (300mm) Tray Width

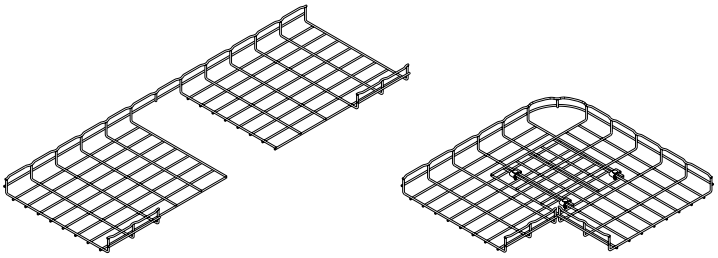
Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	1
4" (100)	WASHER SPL KIT	1
6" (150)	WASHER SPL KIT	1

90° Horizontal bends (short radius)

- Make your own field cut horizontal bends using Cleanshear to make safe, smooth cuts
- Can be made from any tray width and depth with any available finish
- SUPT WASHER & FTHDWE 1/4 hardware may be used on bottom of tray instead of WASHER SPL KIT where desired

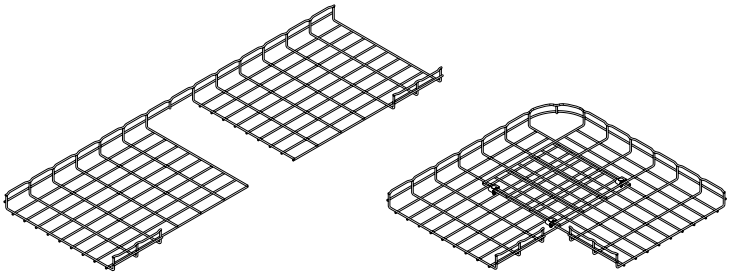
16" (400mm) Tray Width

Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	3
4" (100)	WASHER SPL KIT	3
6" (150)	WASHER SPL KIT	3



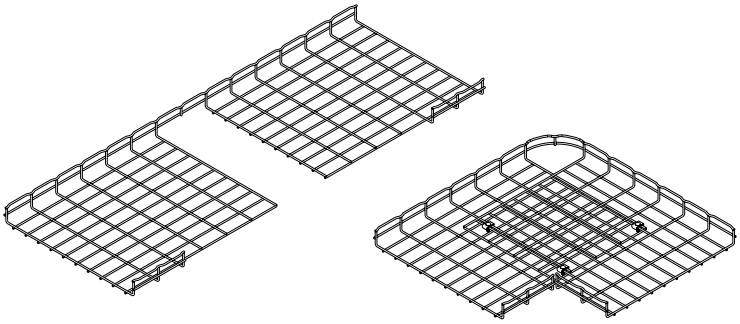
18" (450mm) Tray Width

Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	3
4" (100)	WASHER SPL KIT	3
6" (150)	WASHER SPL KIT	3



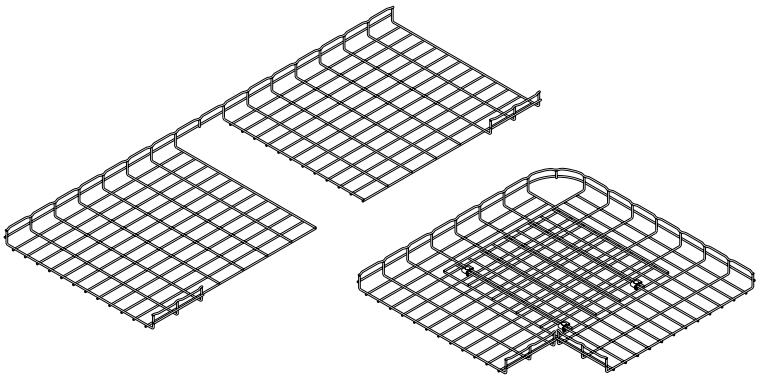
20" (500mm) Tray Width

Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	3
4" (100)	WASHER SPL KIT	3
6" (150)	WASHER SPL KIT	3



24" (600mm) Tray Width

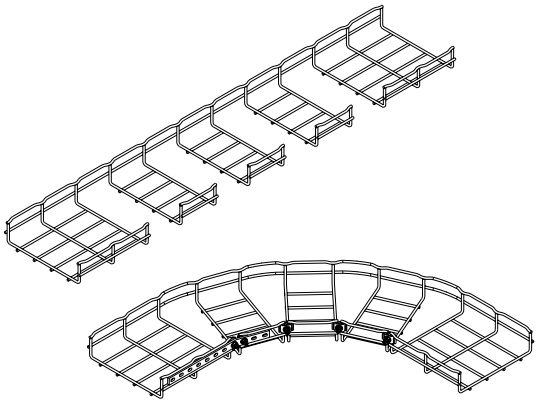
Flextray Depth in. (mm)	Required Hardware Description	Quantity
2" (50)	WASHER SPL KIT	3
4" (100)	WASHER SPL KIT	3
6" (150)	WASHER SPL KIT	3



90° Horizontal Bends (Long Radius)

- Make your own field cut horizontal sweeps using Cleanshear to make safe, smooth cuts
- Can be made from any tray width and depth with any available finish
- Cut as many segments as required to control sweep radius (use chart for recommendations)
- One (1) WASHER SPL KIT is required to connect each cut segment minus one, this segment uses one (1) SPLICE BAR, two (2) FTHDWE 1/4 and two (2) BTM WASHER

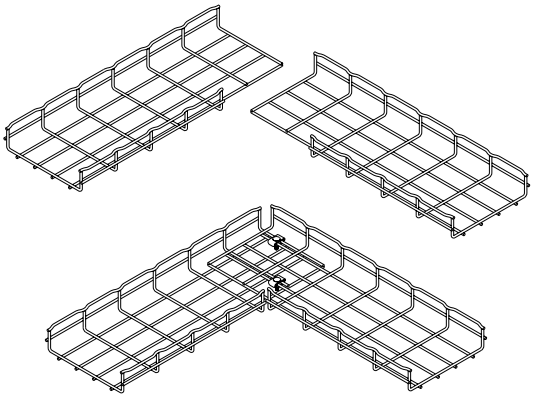
- Illustration shown below is for a 8" (200mm) width
- 1.5" deep Flextray has only one (1) side wire
  2" deep Flextray has two (2) side wires - shown
  4" deep Flextray has three (3) side wires
  6" deep Flextray has four (4) side wires



Flextray Width in. (mm)	Segments To Be Removed	Component Qty. WASHER SPL KIT	FTHDWE 1/4 & BTM WASHER	SPLICE BAR
4" (100)	2	1	2	1
6" (150)	3	2	2	1
8" (200)	4	3	2	1
12" (300)	6	5	2	1
16" (400)	7	6	2	1
18" (450)	8	7	2	1
20" (500)	10	9	2	1
24" (600)	11	10	2	1
30" (750)	13	12	2	1
32" (800)	13	12	2	1

90° Horizontal Bend From (2) Straight Sections

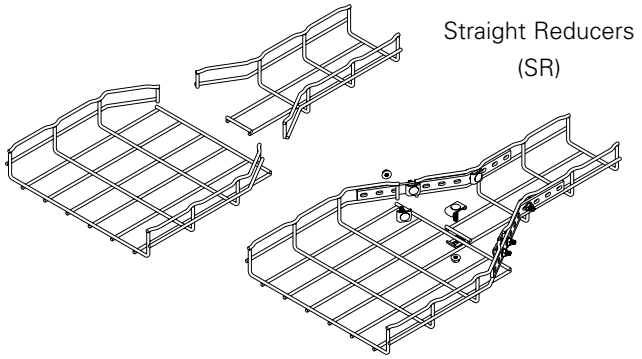
- Cut required number of wire side sections listed in chart per the illustration below
  (Illustration is for a 8" (200mm) width)
- 1.5" deep Flextray has only one (1) side wire
  2" deep Flextray has two (2) side wires - shown
  4" deep Flextray has three (3) side wires
  6" deep Flextray has four (4) side wires

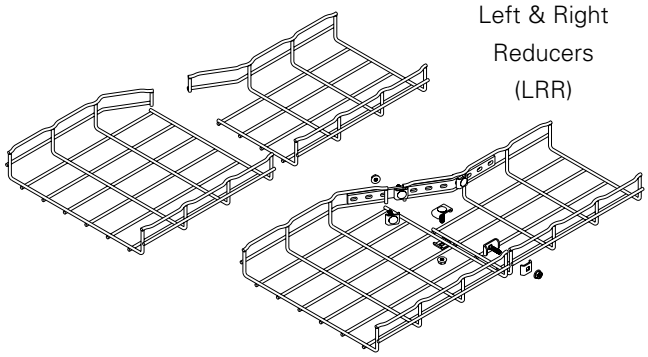


Flextray Width in. (mm)	Side Sections To Be Removed	WASHER SPL KIT Qty.
4" (100)	1	2
6" (150)	2	2
8" (200)	2	2
12" (300)	3	2
16" (400)	4	2
18" (450)	5	2
20" (500)	5	2
24" (600)	6	2
30" (750)	8	2
32" (800)	8	2

Reducers

Large Flextray Width		Component Qty. WASHER SPL KIT		FTHDWE 1/4 & BTM WASHER		SPLICE BAR	
in.	(mm)	(SR)	(LRR)	(SR)	(LRR)	(SR)	(LRR)
4"	(100)	—	1	—	2	—	1
6"	(150)	—	2	—	2	—	1
8"	(200)	1	2	4	2	2	1
12"	(300)	2	3	4	2	2	1
16"	(400)	2	3	4	2	2	1
18"	(450)	2	3	4	2	2	1
20"	(500)	3	3	4	2	2	1
24"	(600)	3	3	4	2	2	1
30"	(750)	3	3	4	2	2	1
32"	(800)	3	3	4	2	2	1

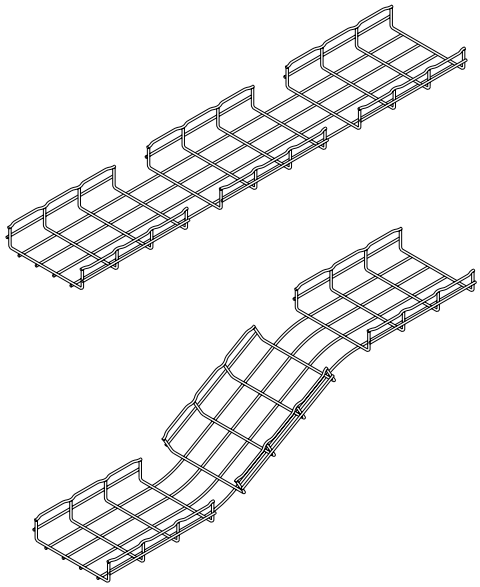




- 1.5" deep Flextray has only one (1) side wire
  2" deep Flextray has two (2) side wires - shown
  4" deep Flextray has three (3) side wires
  6" deep Flextray has four (4) side wires

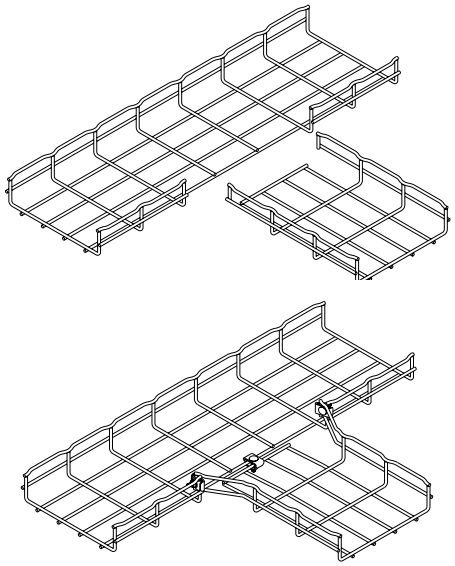
Vertical inside & outside bends

- Cut wire section as shown and bend to desired angle
- 1.5" deep Flextray has only one (1) side wire
  2" deep Flextray has two (2) side wires - shown
  4" deep Flextray has three (3) side wires
  6" deep Flextray has four (4) side wires



Horizontal tees (and crosses)

- Cut wire side sections as shown in the illustration below (Illustration is for a 8" (200mm) width)
  - 2" deep Flextray has two (2) side wires - (shown below)
  - 4" deep Flextray has three (3) side wires
  - 6" deep Flextray has four (4) side wires
- For crosses, duplicate process on opposite side



Tray Width in.	(mm)	WASHER SPL KIT Qty.
2"	(50)	2
4"	(100)	2
6"	(150)	3
8"	(200)	3
12"	(300)	4
16"	(400)	4
18"	(450)	4
20"	(500)	4
24"	(600)	4
30"	(750)	5
32"	(800)	5

KwikSplice cable channel tray

With an innovative dove tail splice design, Eaton's B-Line series KwikSplice cable channel is designed for fast installation, reduced complexity and improved versatility.

The system is ideal in a variety of commercial and industrial applications.

- Commercial buildings
- Institutional buildings
- Data centers
- Healthcare and hospitals
- Manufacturing facilities
- Petrochemical

Installs quickly and easily

The KwikSplice cable channel dove tail side rail and guided splice plate system is fast and easy to install. As an added benefit, fittings are shipped pre-assembled with an integrated splice attachment, which helps reduce the total installation time.

Reduces jobsite complexity

Unlike other instrumentation channel tray, the KwikSplice cable channel can be cut and spliced at any point along the tray, simplifying field modification. Plus, it is available with perforated holes along the channel which provides ventilation and NEC heat compliance.

Improved versatility

The system includes an extensive line of quick connect fittings and accessories to provide pathway integrity and versatility.

KwikSplice system helps pay for itself through support savings

The KwikSplice cable channel comes in 20-foot spans, requiring fewer supports than other channel solutions available today. For example, transitioning from 10 ft. (3m) spans to 20 ft. (6m) spans reduces supports by 50%. Now, multiply the number of cable channels installed on a typical jobsite and the savings really add up.* In fact, the savings often outweigh the cost of the cable channel.

**NEMA VE-2 (NEMA BI 50016), (section 3.4.1) defines an allowable straight section support span as the following: "straight section support span should not exceed the straight section length". Therefore, to eliminate supports, one option is to increase the length of cable ladder.*

For additional information on KwikSplice cable channel, visit Eaton.com/KSCC.

The KwikSplice difference - Dove tail side rail and guided splice plate system

- Installs quick and easy
- Superior strength allows for longer spans and higher loads
- Designed for easy field modification - no drilling required!
- Thermal expansion splice plate available

KSCCNA-06-240
Non-Ventilated Cable Channel
Patent pending

KSCCSA-06-240
Ventilated Cable Channel
Patent pending

KSCCA-06-240
Ventilated Cable Channel with Pass Through

Patent pending

Cable Channel

KSCC Splice Pate
Patent pending

KSCC Horizontal Cross
Patent pending

KSCC Horizontal Tee
Patent pending

KSCC Drop Out
Patent pending

KSCC Reducer Splice Plate

KSCC Horizontal Adjustable Splice Plate
Patent pending

KSCC Vertical Adjustable Splice Plate
Patent pending

KSCC Heavy Duty Expansion Splice Plate

KSCC Blind End

KSCC Expansion Splice Plate

How The Service Advisor Works

We know that your time is important! That's why the color-coding system in this catalog is designed to help you select products that fit your service needs. Products are marked to indicate the typical lead time for orders of 50 pieces or less.

Customer: How do I select my cable channel product so that I get the quickest turnaround?

Service Advisor: Each part of our selection chart is shown in colors. If any section of a part number is a different color, the part will typically ship with the longer lead time represented by the colors.

- ● Green = Fastest shipped items
- ● Black = Normal lead-time items

Example:	**KSCC**	**A**	**06**	**- 120**
	●	●	●	●

Cable Channel

Straight Section Part Numbering

Example: Prefix **KSCC A - 04 - 240**

Type

- **KSCC** = Ventilated Cable Channel with Pass Through
- **KSCCS** = Ventilated Cable Channel
- **KSCCN** = Non-Ventilated Cable Channel Solid Bottom

Material

Only available in Aluminum

A = Aluminum 6063-T6

Width

- ● **02** = 2"**
- ● **04** = 4"
- ● **06** = 6"

Length

- ①● **120** = 10 ft.
- ②● **144** = 12 ft.
- ③● **240** = 20 ft.

** 2" width is not offered with the KSCC Ventilated Cable Channel Pass Through option (the prefix of this option is: KSCC)

KSCCNA-06-240
Non-Ventilated Cable Channel

Patent pending

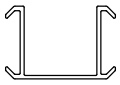
KSCCNA-06, KSCCA-06 & KSCCSA-06
6" (150mm) wide
2" (51mm) deep

KSCCNA-04, KSCCA-04 & KSCCSA-04
4" (100mm) wide
2" (51mm) deep

KSCCSA-06-240
Ventilated Cable Channel

Patent pending

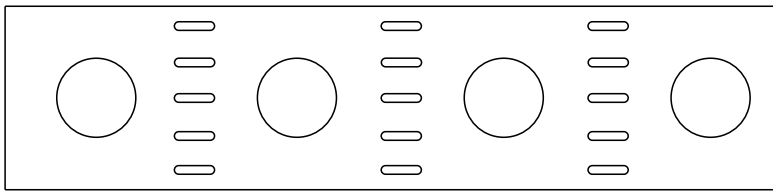
KSCCNA-02 & KSCCSA-02
2" (51mm) wide
2" (51mm) deep



**2x2 not available in KSCCA perforation pattern

KSCCA-06-240
Ventilated Cable Channel with Pass Through

Patent pending



4" wide pattern shown

Ventilated straight sections contain 2¹/₄" (57.1mm) pass through and ¹/₄" (6.4mm) x 1" (25.4mm) slots for cable attachment.

Cable Channel

● Green = Fastest shipped items ● Black = Normal lead-time items

Tray data & loading

Material Type	Tray Series	Width in.	Width (mm)	Depth in.	Depth (mm)	UL Cross-Sectional Area	Span ft.	Span (m)	Loading lbs/ft	Loading (kg/m)
Aluminum Non-Ventilated solid bottom	**KSCCN*A-02**	2	(51)	2	(51)	0.40 in²	10	(3.0)	13	(20)
							12	(3.7)	9	(14)
							20	(6.1)	3	(5)
	KSCCN*A-04	4	(101)	2	(51)	0.60 in²	10	(3.0)	27	(40)
							12	(3.7)	19	(28)
							20	(6.1)	7	(10)
	KSCCN*A-06	6	(152)	2	(51)	0.60 in²	10	(3.0)	40	(60)
							12	(3.7)	28	(41)
							20	(6.1)	10	(15)
Aluminum Ventilated slotted	**KSCCS*A-02**	2	(51)	2	(51)	0.40 in²	10	(3.0)	13	(20)
							12	(3.7)	9	(14)
							20	(6.1)	3	(5)
	KSCCS*A-04	4	(101)	2	(51)	0.60 in²	10	(3.0)	27	(40)
							12	(3.7)	19	(28)
							20	(6.1)	7	(10)
	KSCCS*A-06	6	(152)	2	(51)	0.60 in²	10	(3.0)	40	(60)
							12	(3.7)	28	(41)
							20	(6.1)	10	(15)
Aluminum Ventilated with Pass Through	**KSCC*A-04**	4	(101)	2	(51)	0.40 in²	10	(3.0)	27	(40)
							12	(3.7)	19	(28)
							20	(6.1)	7	(10)
	KSCC*A-06	6	(152)	2	(51)	0.60 in²	10	(3.0)	40	(60)
							12	(3.7)	28	(41)
							20	(6.1)	10	(15)

Splice Plate

Features dove tail locking design which allows for quick installation.

- Furnished in pairs with pre-installed hardware
- One pair provided with each straight section (Expansion splice quantity subtracted)
- 1 size fits all channel widths
- UL Classified as equipment grounding conductor

Patent pending

Catalog No.	Channel Width in.	(mm)
KSCCA-SSP	2 to 6	(51 to 152)

Horizontal Adjustable Splice Plate

Adapts to changes in direction on a horizontal plane beyond the capability of the standard horizontal fittings.

- Allows 0 to 90° of adjustment
- Furnished as one assembly with hardware
- UL Classified as equipment grounding conductor

Patent pending

Catalog No.	Channel Width in.	(mm)
KSCCA-02-HSP	2	(51)
KSCCA-04-HSP	4	(101)
KSCCA-06-HSP	6	(152)

Requires supports within 24" on both sides, per NEMA VE 2.

Vertical Adjustable Splice Plate

Adapts to changes in direction on a vertical plane beyond the capability of the standard vertical fittings.

- Allows 0 to 90° of adjustment
- Furnished as one assembly with hardware
- UL Classified as equipment grounding conductor

Patent pending

Catalog No.	Channel Width in.	(mm)
KSCCA-02-VSP	2	(51)
KSCCA-04-VSP	4	(101)
KSCCA-06-VSP	6	(152)

Expansion Splice Plate

Allow for one inch expansion or contraction of the cable channel run. See page C-8 for use instructions.

- 1 size fits all channel widths
- Bonding jumpers required

Patent pending

Catalog No.	Channel Width in.	(mm)
KSCCA-ESP	2 to 6	(51 to 152)

Requires supports within 24" on both sides, per NEMA VE 2.

Heavy Duty Expansion Splice Plate

Engineered to eliminate the additional supports recommended by NEMA at an expansion joint location.

- Can be placed out to 1/4 support span without requiring any additional supports at junction.
- Can be used on all widths 2", 4" and 6"
- Installation will require field drilling on straight sections
- Bonding jumpers required

Catalog No.	Channel Width in.	(mm)
KSCCA-HDESP	2 to 6	(51 to 152)

Channel Reducer Plate

Used to join cable channel sections with different widths.

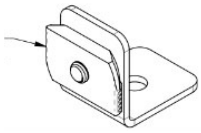
- Product will be boxed with one standard splice plate (included with the kit)
- Requires supports within 24" on both sides per NEMA VE 2

Catalog No.	Channel Width in.	(mm)
KSCCA-2OFSP	4 to 2	(101-51)
	6 to 4	(152-101)
KSCCA-4OFSP	6 to 2	(152-51)

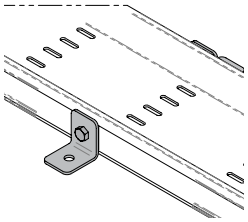
Hold Down/Guide/Trapeze Support Bracket

- Locks into side rail with channel nut attachment
- No drilling of channel is required
- Furnished as pair of brackets with channel mounting hardware.
- Order 3/8"support attachment hardware separately
- Can be used on all widths 2", 4" and 6" widths
- To use part as a guide, torque down the nut before inserting into the channel

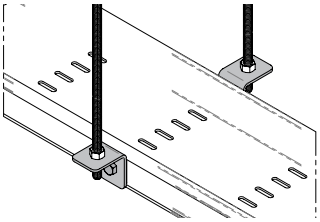
Bracket includes dove tail nut



Catalog No.	Channel Width in.	(mm)
KSCCA-HLD	2 to 6	(51-152)



Hold down



Trapeze

Parallel Tray Mounting Bracket

Allows a parallel run of cable channel to be attached to the side of a cable tray / channel.

- Furnished as one support with channel mounting hardware
- Will support all widths 2", 4" and 6" widths

Catalog No.	Channel Width in.	(mm)
KSCCA-UMB	2 to 6	(51-152)

Tray Mounting Bracket

Allows a perpendicular run of cable channel to be attached to the side of a cable tray / channel.

- Furnished as one support with channel mounting hardware
- Will support all widths 2", 4" and 6" widths

Catalog No.	Channel Width in.	(mm)
KSCCA-06-TMB	2 to 6	(51-152)

End Drop Out

- Provides 4" (101mm) radius
- Holes provided to help secure cables

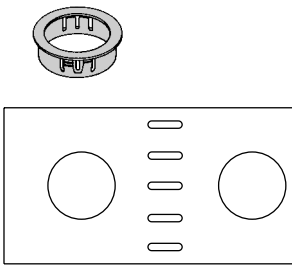
Patent pending

Catalog No.	Channel Width in.	(mm)
KSCCA-02-OUT	2	(51)
KSCCA-04-OUT	4	(101)
KSCCA-06-OUT	6	(152)

Cable Channel Bushing

Used to help protect cable from mechanical wear.

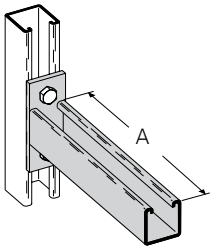
- Snap in place plastic bushing



Catalog No.
99-1125

Cable Channel Bracket

- Safety factor of 2.5
- Finishes available: ZN, GRN, HDG



Catalog No.	Channel Width in.	(mm)	Uniform Load lbs	(kN)	A in.	(mm)
B409-6	3	(76)	1920	(8.54)	6	(152)
B409-9	4, 6	(101, 152)	1280	(5.69)	9	(228)

Blind End

Designed to terminate channel run.

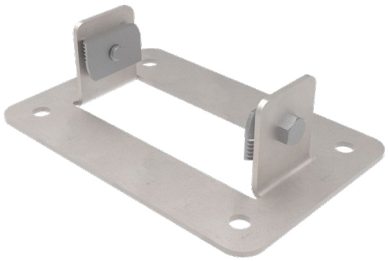
- Furnished as one plate with hardware
- Comes pre-assembled as pictured

Catalog No.	Channel Width in.	(mm)
KSCCA-02-END	2	(51)
KSCCA-04-END	4	(101)
KSCCA-06-END	6	(152)

Frame Type Connector

Designed to attach the end of a cable channel run to a distribution cabinet or control center.

- Helps reinforce the box at the point of entry
- Furnished with channel connection hardware
- Comes pre-assembled as pictured

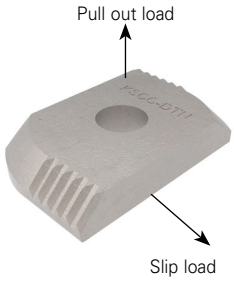


Catalog No.	Channel Width in.	(mm)
KSCCA-02-FTB	2	(51)
KSCCA-04-FTB	4	(101)
KSCCA-06-FTB	6	(152)

Dove Tail Nut

Used to mount onto dove tail channel.

- The slip load is 300 lbs with a safety factor of 3
- The pull out is 330 lbs with a safety factor of 3



Catalog No.	Channel Width in.	(mm)
KSCC-DTN-SS6	2 to 6	(51-152)

Side Rail Drop Out

Used to drop cable out of the side of the channel.

- Furnished with 3/8" bolt and dove tail nut hardware for connection
- Works on all channel widths
- Comes pre-assembled as pictured

Catalog No.	Channel Width in.	(mm)
KSCC-SDO	2 to 6	(51-152)

Cable Drop Opening

Fitting design to provide pass through hole on solid bottom and slotted channel.

- Furnished as one assembly with hardware
- 6" and 4" width have 2 1/4" pass through opening. 2" width has 1 1/2" pass through opening
- Comes pre-assembled as pictured

Patent pending

Catalog No.	Channel Width in.	(mm)
KSCCA-02-CDO	2	(51)
KSCCA-04-CDO	4	(101)
KSCCA-06-CDO	6	(152)

Bolted Cover Clamp

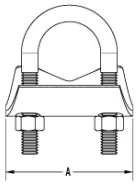
- Secures the cover to the cable channel
- Furnished as one clamp with hardware

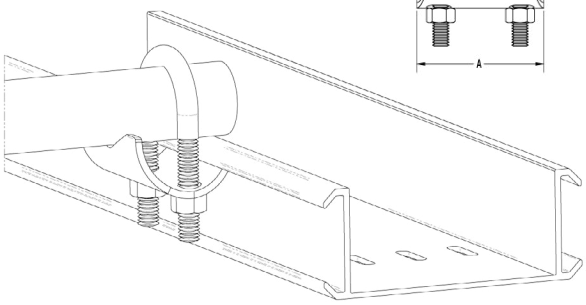
Quantity of Standard Cover Clamps Required	
Straight Section 120", 144" or 240"	6 pcs.
Horizontal/Vertical Bends	4 pcs.
Tees	6 pcs.
Crosses	8 pcs.

Catalog No.	Channel Width in.	(mm)
KSCCA-HDCC-02	2	(51)
KSCCA-HDCC-04	4	(101)
KSCCA-HDCC-06	6	(152)

Conduit to Channel Adaptor

- Material: 7 gauge (4.5)
- Standard finishes: ZN, SS4

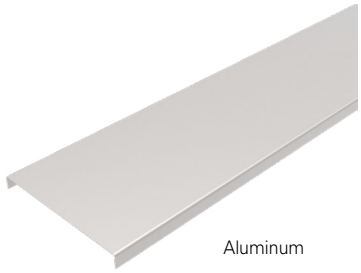




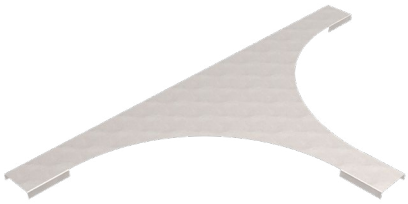
Catalog No.	Conduit size In. mm	A In. mm	Wt./C Lbs. kg
B422-1/2	1/2" (15)	2 3/8" (60.3)	38 (17.2)
B422-3/4	3/4" (20)	2 3/8" (60.3)	39 (17.7)
B422-1	1" (25)	2 7/8" (73.0)	48 (21.8)
B422-1 1/4	1 1/4" (32)	2 7/8" (73.0)	50 (22.7)
B422-1 1/2	1 1/2" (40)	3 1/4" (82.5)	59 (26.7)
B422-2	2 (50)	3 11/16" (93.7)	75 (34.0)
B422-2 1/2	2 1/2" (65)	4 1/4" (107.9)	98 (44.4)
B422-3	3" (80)	4 7/8" (123.8)	111 (50.3)
B422-3 1/2	3 1/2" (90)	5 7/16" (138.1)	123 (55.8)
B422-4	4" (100)	6" (152.4)	135 (61.2)

Note: Recommended torque would be 11 ft-lbs.
Max torque would be 15 ft-lbs.

Cable Channel Covers



Standard Straight Section



Fitting Covers
Horizontal Tee (HT) shown above

Straight Section Covers Part Numbering

Prefix

Example: **KSCC - 80 8 A - 02 - 120**

Cover Type
80 = Solid

Detail
8 = Flanged

Material
A = Aluminum

Tray Width
02 = 2"
04 = 4"
06 = 6"

Item Description

Straight sections covers are only available in aluminum.

144 = 12 ft.
120 = 10 ft.
72 = 6 ft.
60 = 5 ft.

See below for fitting catalog number examples.

Fittings Part Numbering

To order covers for fittings, reference examples below.

Horizontal Bend Cover Example

Prefix / Suffix

KSCC - 80 8 A - 18 - 90 HB 24

- 24 — Radius
- HB — Fitting
- 90 — Angle
- 18 — Width
- A — Material
- 8 — Detail
- 80 — Cover Type

Vertical Bend Cover Example

Prefix / Suffix

KSCC - 80 8 A - 24 - 90 VO 24 - 4*

- 4* — Side Rail* Height
- 24 — Radius
- VO — Fitting (see options below)
- 90 — Angle
- 24 — Width
- A — Material
- 8 — Detail
- 80 — Cover Type

* Required for vertical outside (VO) fittings only

Cover clamps are not included with the cover and must be ordered separately. We recommend that covers be placed on vertical cable tray runs to a height of 6 ft. (1.83 m) to 8 ft. (2.44 m) above the floor to both isolate the cables and protect personnel.

Fitting Options

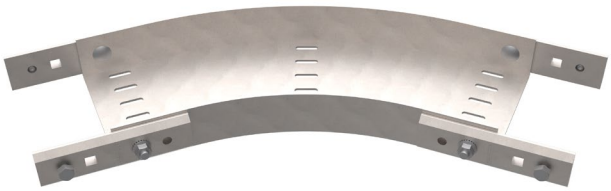
HB__= Horizontal Bend
HT__= Horizontal Tee
HX__= Horizontal Cross
VI__= Vertical Inside Bend
VO__= Vertical Outside Bend

Check with B-Line Technical Support (blinetechnicalsupport@eaton.com) if there are questions/concerns about environmental loads for covers (wind, snow, sleet, rain, etc.).

Fittings engineered with 3" tangents for splicing integrity.

90° Horizontal bend fitting
Patent pending

Horizontal tee
Patent pending



45° Horizontal bend fitting
Patent pending

Horizontal cross
Patent pending

Fittings Part Numbering

Prefix

Example: **KSCC A- 06 - 90 HB 12**

Type	Material	Width	Angle*	Fitting Type	Radius
KSCC = Ventilated Cable Channel with Pass Through KSCCS = Ventilated Cable Channel KSCCN = Non-Ventilated Cable Channel	A = Aluminum	02 = 2"** 04 = 4" 06 = 6"	45 = 45° 90 = 90°	*HB = Horizontal Bend HT = Horizontal Tee HX = Horizontal Cross *VI = Vertical Inside Bend *VO = Vertical Outside Bend	12 = 12" 24 = 24"

* Angle only required for HB, VI and VO fittings.

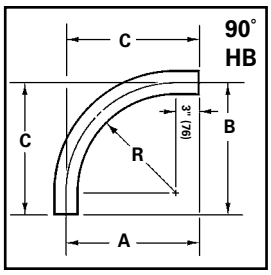
** 2" width is not offered with the KSCC Ventilated Cable Channel Pass Through option (the prefix of this option is: KSCC)

90° Horizontal Bend (HB)

• Factory mounted splice plate and hardware included

90° Horizontal Bend
Ventilated perforation style shown

Catalog No.	Bend Radius R in.	Bend Radius R (mm)	Tray Width in.	Tray Width (mm)	90° Horizontal Bend A in.	A (mm)	B in.	B (mm)	C in.	C (mm)
(Pre)-02-90HB12	12	(305)	2	(25)	17.0	(432)	17	(432)	17	(432)
(Pre)-04-90HB12			4	(101)	17.0	(432)	17	(432)	17	(432)
(Pre)-06-90HB12			6	(152)	17.0	(432)	17	(432)	17	(432)
(Pre)-02-90HB24	24	(610)	2	(25)	29.0	(737)	29	(737)	29	(737)
(Pre)-04-90HB24			4	(101)	29.0	(737)	29	(737)	29	(737)
(Pre)-06-90HB24			6	(152)	29.0	(737)	29	(737)	29	(737)

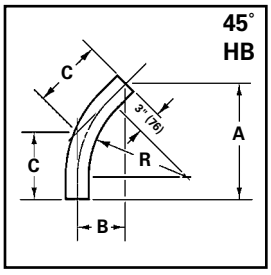


45° Horizontal Bend (HB)

• Factory mounted splice plate and hardware included

45° Horizontal Bend
Ventilated perforation style shown

Catalog No.	Bend Radius R in.	Bend Radius R (mm)	Tray Width in.	Tray Width (mm)	45° Horizontal Bend A in.	A (mm)	B in.	B (mm)	C in.	C (mm)
(Pre)-02-45HB12	12	(305)	2	(25)	15.0	(382)	6.222	(158)	8.799	(223)
(Pre)-04-45HB12			4	(101)	15.0	(382)	6.222	(158)	8.799	(223)
(Pre)-06-45HB12			6	(152)	15.0	(382)	6.222	(158)	8.799	(223)
(Pre)-02-45HB24	24	(610)	2	(25)	23.5	(597)	9.737	(247)	13.77	(350)
(Pre)-04-45HB24			4	(101)	23.5	(597)	9.737	(247)	13.77	(350)
(Pre)-06-45HB24			6	(152)	23.5	(597)	9.737	(247)	13.77	(350)



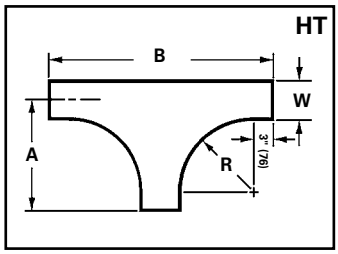
(Pre) = prefix. See page E-10 for catalog number prefix.

Horizontal Tee (HT)

• Factory mounted splice plate and hardware included

Catalog No.	Bend Radius R in.	Bend Radius R (mm)	Tray Width in.	Tray Width (mm)	Horizontal Tee A in.	A (mm)	B in.	B (mm)
(Pre)-02-HT12	12	(305)	2	(25)	16	(406)	32	(813)
(Pre)-04-HT12			4	(101)	17	(432)	34	(864)
(Pre)-06-HT12			6	(152)	18	(457)	36	(914)
(Pre)-02-HT24	24	(610)	2	(25)	28	(711)	56	(1422)
(Pre)-04-HT24			4	(101)	29	(737)	58	(1473)
(Pre)-06-HT24			6	(152)	30	(762)	60	(1524)

Horizontal Tee
Ventilated perforation style shown

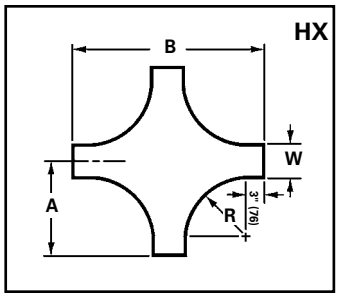


Horizontal Cross (HX)

• Factory mounted splice plate and hardware included

Catalog No.	Bend Radius R in.	Bend Radius R (mm)	Tray Width in.	Tray Width (mm)	Horizontal Cross A in.	A (mm)	B in.	B (mm)
(Pre)-02-HX12	12	(305)	2	(25)	16	(406)	32	(813)
(Pre)-04-HX12			4	(101)	17	(432)	34	(864)
(Pre)-06-HX12			6	(152)	18	(457)	36	(914)
(Pre)-02-HX24	24	(610)	2	(25)	28	(711)	56	(1422)
(Pre)-04-HX24			4	(101)	29	(737)	58	(1473)
(Pre)-06-HX24			6	(152)	30	(762)	60	(1524)

Horizontal Cross
Ventilated perforation style shown



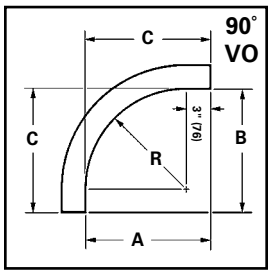
(Pre) = prefix. See page E-10 for catalog number prefix.

90° Vertical Outside Bends (VO)

• Factory mounted splice plate and hardware included

90° Vertical Outside Bend
Ventilated perforation style shown

Catalog No.	Bend Radius R in.	Bend Radius R (mm)	Tray Width in.	Tray Width (mm)	90° Vertical Outside Bend A in.	A (mm)	B in.	B (mm)	C in.	C (mm)
(Pre)-02-90VO12	12	(305)	2	(25)	15	(381)	15	(381)	15	(381)
(Pre)-04-90VO12			4	(101)	15	(381)	15	(381)	15	(381)
(Pre)-06-90VO12			6	(152)	15	(381)	15	(381)	15	(381)
(Pre)-02-90VO24	24	(610)	2	(25)	27	(686)	27	(686)	27	(686)
(Pre)-04-90VO24			4	(101)	27	(686)	27	(686)	27	(686)
(Pre)-06-90VO24			6	(152)	27	(686)	27	(686)	27	(686)

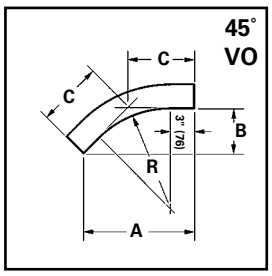


45° Vertical Outside Bends (VO)

• Factory mounted splice plate and hardware included

45° Vertical Outside Bend
Ventilated perforation style shown

Catalog No.	Bend Radius R in.	Bend Radius R (mm)	Tray Width in.	Tray Width (mm)	45° Vertical Outside Bend A in.	A (mm)	B in.	B (mm)	C in.	C (mm)
(Pre)-02-45VO12	12	(305)	2	(25)	13.607	(346)	5.6	(143)	7.971	(202)
(Pre)-04-45VO12			4	(101)	13.607	(346)	5.6	(143)	7.971	(202)
(Pre)-06-45VO12			6	(152)	13.607	(346)	5.6	(143)	7.971	(202)
(Pre)-02-45VO24	24	(610)	2	(25)	22.092	(561)	9.2	(232)	12.941	(329)
(Pre)-04-45VO24			4	(101)	22.092	(561)	9.2	(232)	12.941	(329)
(Pre)-06-45VO24			6	(152)	22.092	(561)	9.2	(232)	12.941	(329)



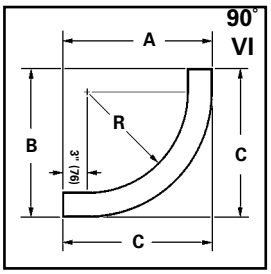
(Pre) = prefix. See page E-10 for catalog number prefix.

90° Vertical Inside Bends (VI)

• Factory mounted splice plate and hardware included

Catalog No.	Bend Radius R in.	Bend Radius R (mm)	Tray Width in.	Tray Width (mm)	90° Vertical Inside Bend A in.	A (mm)	B in.	B (mm)	C in.	C (mm)
(Pre)-02-90VI12	12	(305)	2	(25)	17.0	(432)	17	(432)	17	(432)
(Pre)-04-90VI12			4	(101)	17.0	(432)	17	(432)	17	(432)
(Pre)-06-90VI12			6	(152)	17.0	(432)	17	(432)	17	(432)
(Pre)-02-90VI24	24	(305)	2	(25)	29.0	(737)	29	(737)	29	(737)
(Pre)-04-90VI24			4	(101)	29.0	(737)	29	(737)	29	(737)
(Pre)-06-90VI24			6	(152)	29.0	(737)	29	(737)	29	(737)

90° Vertical Inside Bend
Ventilated perforation style shown

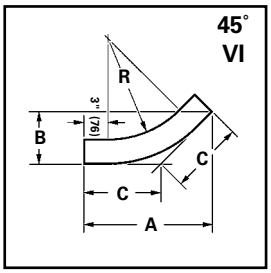


45° Vertical Inside Bends (VI)

• Factory mounted splice plate and hardware included

Catalog No.	Bend Radius R in.	Bend Radius R (mm)	Tray Width in.	Tray Width (mm)	45° Vertical Inside Bend A in.	A (mm)	B in.	B (mm)	C in.	C (mm)
(Pre)-02-45VI12	12	(305)	2	(25)	15.0	(382)	6.222	(158)	8.799	(223)
(Pre)-04-45VI12			4	(101)	15.0	(382)	6.222	(158)	8.799	(223)
(Pre)-06-45VI12			6	(152)	15.0	(382)	6.222	(158)	8.799	(223)
(Pre)-02-45VI24	24	(305)	2	(25)	23.5	(597)	9.737	(247)	13.77	(350)
(Pre)-04-45VI24			4	(101)	23.5	(597)	9.737	(247)	13.77	(350)
(Pre)-06-45VI24			6	(152)	23.5	(597)	9.737	(247)	13.77	(350)

45° Vertical Inside Bend
Ventilated perforation style shown



(Pre) = prefix. See page E-10 for catalog number prefix.

Section 1- Acceptable Manufacturers

1.1 **Manufacturer:** Subject to compliance with these specifications, B-Line series channel cable tray systems shall be as manufactured by Eaton.

Section 2- Selection and Components

2.1 **General:** Except as otherwise indicated, provide ventilated metal channel cable trays, of types, classes and sizes indicated with splice connectors, fittings and all other necessary accessories for a complete system. Provide channel cable tray with rounded edges and smooth surfaces in compliance with applicable standards and with the following additional requirements.

2.2 **Materials and finishes:** Material and finishes specifications for each channel cable tray are as follows:

A. **Aluminum:** Extruded components shall be made from Aluminum Association Alloy 6063. All fabricated parts shall be made from Aluminum Association Alloy 5052.

2.3 Cable channel straight sections shall consist of a singularly extruded channel shaped body that includes dove tail openings on each channel upright for the explicit purposes of:

A. Accommodating field cuts at any point on the section of cable channel without the need for additional modification, splices, hardware and/or labor
B. Attachment of splices, fittings and/or accessories in the creation of the desired cable channel system

2.4 The cable channel shall have a post-punched pattern on the underside of the profile consistent with one of the following:

A. Ventilated cable channel with pass through holes: a repeating uniform perforated pattern with 2.25 diameter cable pass through holes every 12 inches.
B. Ventilated cable channel: a repeating uniform perforated pattern for ventilation every 6 inches without pass through holes.
C. Non-ventilated cable channel (solid bottom).

2.5 Straight sections shall be supplied in standard [10 ft (3 m)] [12 ft (4 m)] [20 foot (6 m)] lengths, except where shorter lengths are permitted to facilitate cable channel assembly as shown on drawings.

2.6 Channel cable tray width shall be [2] [4] [6] inches with a minimum loading depth of 2 inches.

2.7 Fittings shall have a minimum radius of [12] [24] inches.

2.8 Each straight section of cable channel:

A. Shall include pre-assembled splices and hardware.
B. Pre-assembled splices and hardware can be pre-installed in straight sections upon request.

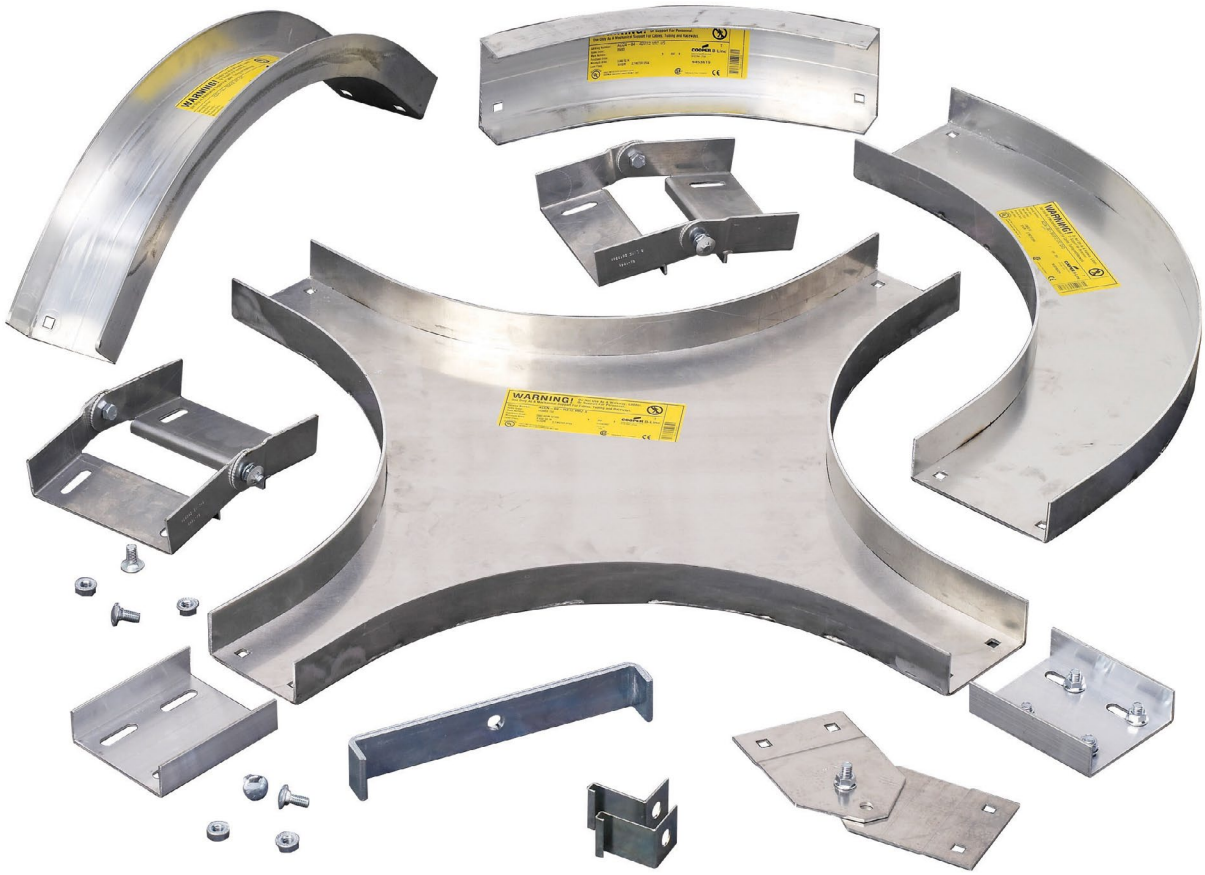
2.9 Fittings are to be supplied with pre-installed splices.

2.10 Loading Capacities

A. Cable channels shall be capable of carrying a uniformly distributed load of 10 lbs./ft. on a 20-foot support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE 1 Section 5.2

2.11 Accessories to facilitate cable channel assembly as shown on drawings.

A. Splices
1. Shall be universally compatible for all cable channel widths.
2. Shall be pre-assembled for immediate field installation.
3. The resistance of fixed splice connections between adjacent sections of cable channel shall not exceed 0.00033 ohms.



How The Service Advisor Works

We know that your time is important! That's why the color-coding system in this catalog is designed to help you select products that fit your service needs. Products are marked to indicate the typical lead time for orders of 50 pieces or less.

Customer: How do I select my cable channel product so that I get the quickest turnaround?

Service Advisor: Each part of our selection chart is shown in colors. If any section of a part number is a different color, the part will typically ship with the longer lead time represented by the colors.

- Green = Fastest shipped items
- Black = Normal lead-time items
- Red = Normally long lead-time items

Example: **A CC 03 - 144** **Part will have a normal lead time because of the 03 width.**

Changing the part number to 04 width instead of 03 will reduce the lead time.

Straight Section Part Numbering

Prefix

Example: **A CC - 04 - 120**

Material
- **A** = Aluminum 6063-T4
- **G** = Type 1 - HDGAF
- **P** = Type 2 - Pre-Galvanized
- **SS4** = 304 Stainless Steel
- **SS6** = 316 Stainless Steel

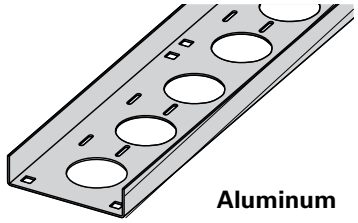
Type
- **CC** = Ventilated Cable Channel
- **CCN** = Non-Ventilated Cable Channel

Width
- **03** = 3"
- **04** = 4"
- **06** = 6"

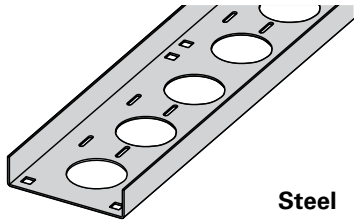
Length
- ① **144** = 12 ft.
- ② 120 = 10 ft.

① Primary Length.
② Secondary Length.

See page C-23 for explanation of lengths.



Aluminum



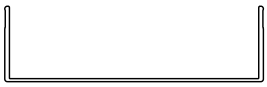
Steel

Ventilated

ACC & ACCN03
3" (75mm) wide
1¹/₄" (32mm) deep

ACC & ACCN04
4" (100mm) wide
1³/₄" (44mm) deep

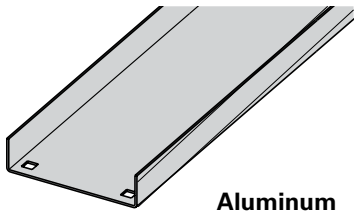
ACC & ACCN06
6" (150mm) wide
1³/₄" (44mm) deep



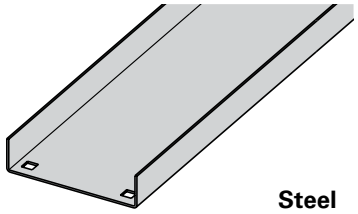
PCC & PCCN03
SS4CC & SS4CCN03
SS6CC & SS6CCN03
3" (75mm) wide
1¹/₄" (32mm) deep

PCC & PCCN04
SS4CC & SS4CCN04
SS6CC & SS6CCN04
4" (100mm) wide
1³/₄" (44mm) deep

PCC & PCCN06
SS4CC & SS4CCN06
SS6CC & SS6CCN06
6" (150mm) wide
1³/₄" (44mm) deep

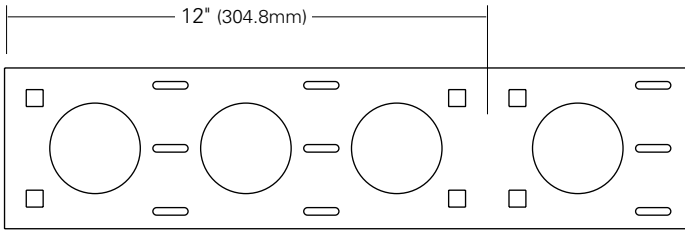


Aluminum



Steel

Non-Ventilated



4" wide pattern shown

Ventilated straight sections contain 2¹/₄" (57.1mm) diameter holes and ³/₁₆" (4.7mm) x ⁷/₈" (22.2mm) slots for cable attachment. Ventilated straight sections also have splice holes repeating every 12" (304.8mm) to simplify field modifications.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

Cable Channel

Tray data & loading

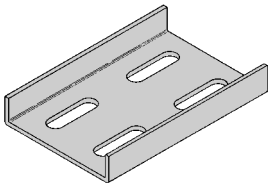
Material Type	Tray Series	Width in. (mm)	Depth in. (mm)	UL Cross-Sectional Area	Span ft. (m)	Loading Deflection lbs./ft. Multiplier	Loading Deflection kg./m. Multiplier
Aluminum Ventilated	**ACC-03**	3 (76)	1 1/4 (32)	0.40 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	17 0.020 12 0.042 4 0.326 3 0.676	(26) 0.350 (18) 0.720 (6) 5.600 (4) 12.000
Aluminum Ventilated	**ACC-04**	4 (101)	1 3/4 (44)	0.60 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	46 0.007 32 0.015 12 0.118 8 0.244	(69) 0.130 (48) 0.260 (17) 2.000 (12) 4.200
Aluminum Ventilated	**ACC-06**	6 (152)	1 3/4 (44)	0.60 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	60 0.006 42 0.013 15 0.102 10 0.211	(90) 0.110 (62) 0.230 (22) 1.700 (16) 3.600
Aluminum Non-Ventilated	**ACCN-03**	3 (76)	1 1/4 (32)	0.40 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	23 0.020 16 0.042 6 0.326 4 0.676	(34) 0.350 (24) 0.720 (9) 5.600 (6) 12.000
Aluminum Non-Ventilated	**ACCN-04**	4 (101)	1 3/4 (44)	0.60 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	46 0.007 32 0.015 12 0.118 8 0.244	(69) 0.130 (48) 0.260 (17) 2.000 (12) 4.200
Aluminum Non-Ventilated	**ACCN-06**	6 (152)	1 3/4 (44)	0.60 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	60 0.006 42 0.013 15 0.102 10 0.211	(90) 0.110 (62) 0.230 (22) 1.700 (16) 3.600

Material Type	Tray Series	Width in. (mm)	Depth in. (mm)	UL Cross-Sectional Area	Span ft. (m)	Loading Deflection lbs./ft. Multiplier	Loading Deflection kg./m. Multiplier
Steel & Stainless Steel Ventilated	**GCC-03** **PCC-03** **SS4CC-03** **SS6CC-03**	3 (76)	1 1/4 (32)	0.20 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	24 0.013 17 0.028 6 0.216 4 0.447	(36) 0.220 (25) 0.480 (9) 3.700 (6) 7.600
Steel & Stainless Steel Ventilated	**GCC-04** **PCC-04** **SS4CC-04** **SS6CC-04**	4 (101)	1 3/4 (44)	0.40 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	52 0.0039 36 0.0082 13 0.063 9 0.130	(77) 0.070 (54) 0.140 (19) 1.100 (13) 2.200
Steel & Stainless Steel Ventilated	**GCC-06** **PCC-06** **SS4CC-06** **SS6CC-06**	6 (152)	1 3/4 (44)	0.40 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	59 0.003 41 0.0063 15 0.049 10 0.101	(88) 0.050 (61) 0.110 (22) 0.840 (15) 1.700
Steel & Stainless Steel Non-Ventilated	**GCCN-03** **PCCN-03** **SS4CCN-03** **SS6CCN-03**	3 (76)	1 1/4 (32)	0.20 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	24 0.013 17 0.028 6 0.216 4 0.447	(36) 0.220 (25) 0.480 (9) 3.700 (6) 7.600
Steel & Stainless Steel Non-Ventilated	**GCCN-04** **PCCN-04** **SS4CCN-04** **SS6CCN-04**	4 (101)	1 3/4 (44)	0.40 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	52 0.0039 36 0.0082 13 0.063 9 0.130	(77) 0.070 (54) 0.140 (19) 1.100 (13) 2.200
Steel & Stainless Steel Non-Ventilated	**GCCN-06** **PCCN-06** **SS4CCN-06** **SS6CCN-06**	6 (152)	1 3/4 (44)	0.40 in²	5 (1.5) 6 (1.8) 10 (3.0) 12 (3.7)	59 0.003 41 0.0063 15 0.049 10 0.101	(88) 0.050 (61) 0.110 (22) 0.840 (15) 1.700

Splice Plate

The Splice Plate has the standard 4-hole pattern for all cable channel.

- Provided with straight sections and fittings.
- UL Classified as equipment grounding conductor†.
- Furnished as one plate with hardware.
- (*) Insert A G P SS4 SS6



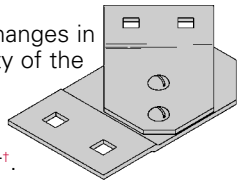
Catalog No.	Channel Width in.	(mm)
9(*)-1043	3	(76)
9(*)-1044	4	(101)
9(*)-1044-6	6	(152)

(†) Not applicable for stainless steel.

Horizontal Adjustable Splice Plate

The Horizontal Adjustable Splice Plate adapts to changes in direction in a horizontal plane, beyond the capability of the standard horizontal fittings.

- Furnished as one plate with hardware.
- UL Classified as equipment grounding conductor†.
- (*) Insert A G P SS4 SS6



Requires supports within 24" on both sides, per NEMA VE 2.

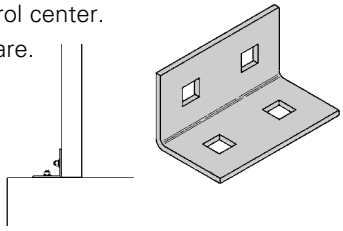
Catalog No.	Channel Width in.	(mm)
9(*)-1743	3	(76)
9(*)-1744	4	(101)
9(*)-1746	6	(152)

(†) Not applicable for stainless steel.

Box Connector

The Box Connector is used to attach the end of a cable channel run to a distribution box or a control center.

- Furnished as one connector with hardware.
- (*) Insert A G P SS4 SS6

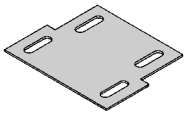


Catalog No.	Channel Width in.	(mm)
9(*)-1543	3	(76)
9(*)-1544	4	(101)
9(*)-1546	6	(152)

Channel Reducer Plate

The Channel Reducer Plate is used to join cable channel sections of different widths.

- Furnished as one plate with hardware.
- UL Classified as equipment grounding conductor†.
- (*) Insert A G P SS4 SS6



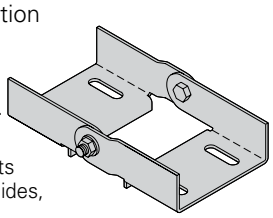
Catalog No.	Channel Width in.	(mm)
9(*)-1843	4 to 3	(101 to 76)
9(*)-1863	6 to 3	(152 to 76)
9(*)-1864	6 to 4	(152 to 101)

(†) Not applicable for stainless steel.

Vertical Adjustable Splice Plate

The Adjustable Splice Plate allows changes in elevation where standard vertical fittings are not applicable.

- Furnished as one plate with hardware.
- UL Classified as equipment grounding conductor†.
- (*) Insert A G P SS4 SS6



Requires supports within 24" on both sides, per NEMA VE 2.

Catalog No.	Channel Width in.	(mm)
9(*)-1643	3	(76)
9(*)-1644	4	(101)
9(*)-1646	6	(152)

(†) Not applicable for stainless steel.

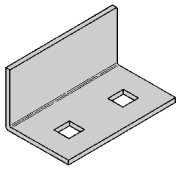
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in shaded areas are millimeters unless otherwise specified.

Blind End Plate

The Blind End Plate forms a closure for any cable channel dead end.

- Furnished as one plate with hardware.
- (*) Insert A G P SS4 SS6

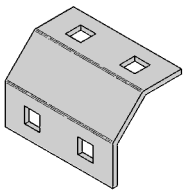


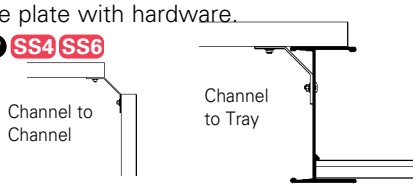
Catalog No.	Channel Width in.	(mm)
9(*)-1583	3	(76)
9(*)-1584	4	(101)
9(*)-1586	6	(152)

Channel To Tray or Channel To Channel Connector

The Channel Connector is used to link a cable channel to a cable tray, or a cable channel to cable channel.

- Furnished as one plate with hardware.
- (*) Insert A G P SS4 SS6



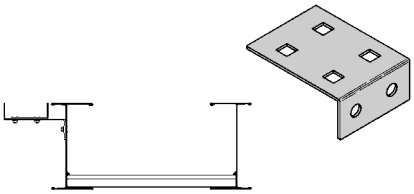


Catalog No.	Channel Width in.	(mm)
9(*)-1261-3	3	(76)
9(*)-1261-4	4	(101)
9(*)-1261-6	6	(152)

Mounting Bracket - Channel To Tray

The Mounting Bracket allows a parallel run of cable channel to be attached to the side of a cable tray. It can also serve as a support splice connection.

- Furnished as one bracket.
- Order hardware separately.
- (*) Insert A G ZN SS4 SS6

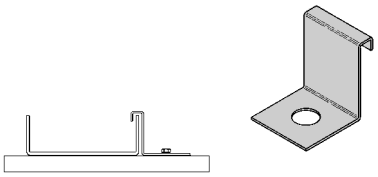


Catalog No.	Channel Width in.	(mm)
9(*)-1237-3	3	(76)
9(*)-1237-4	4	(101)
9(*)-1237-6	6	(152)

Expansion Guide Clamp

The Expansion Guide Clamp allows cable channel to expand and contract in the horizontal plane, but not in the transverse plane.

- Furnished as one clamp.
- Order 1/2" hardware separately.
- (*) Insert A G ZN SS4 SS6

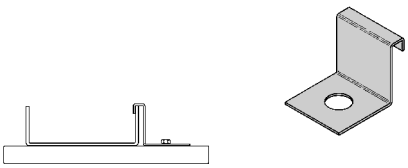


Catalog No.	Channel Width in.	(mm)
9(*)-1243	3	(76)
9(*)-1244	4	(101)
9(*)-1244	6	(152)

Hold-Down Clamp

The Hold-Down Clamp secures cable channel to a support member.

- Furnished as one clamp.
- Order 1/2" hardware separately.
- (*) Insert A G ZN SS4 SS6



Catalog No.	Channel Width in.	(mm)
9(*)-1245	3	(76)
9(*)-1246	4	(101)
9(*)-1246	6	(152)

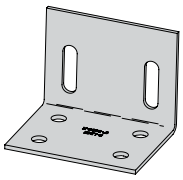
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in shaded areas are millimeters unless otherwise specified.

Channel To Floor Base Plate

The Channel to Floor Base Plate is used to attach the end of a cable channel run to the floor or to an equipment mounting pad.

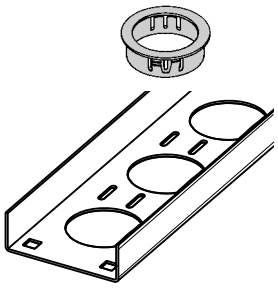
- Anchors and hardware are ordered separately.
- (*) Insert A G ZN SS4 SS6



Catalog No.	Channel Width in.	(mm)
9(*)-3305-3	3	(76)
9(*)-3305-4	4	(101)
9(*)-3305-6	6	(152)

Cable Channel Bushing

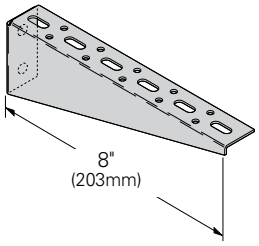
The Cable Channel Bushing is a snap-in plastic bushing used to protect cable insulation from mechanical wear.



Catalog No.
99-1125

Cable Channel Bracket

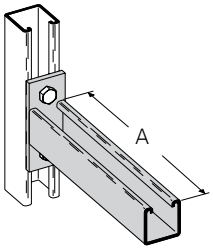
- Uniform Load: 225 lbs (1.00 kN) Safety Factor of 2.5
- Finishes available: ZN G



Catalog No.	Channel Width in.	(mm)
B185CCL	3 to 6	(76 to 152)

Cable Channel Bracket

- Safety Factor of 2.5
- Finishes available: ZN G GRN

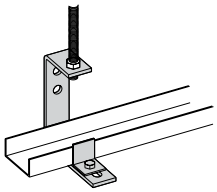


Catalog No.	Channel Width in.	(mm)	Uniform Load lbs	(kN)	A in.	(mm)
B409-6	3	(76)	1920	(8.54)	6	(152)
B409-9	4, 6	(101, 152)	1280	(5.69)	9	(228)

Cable Channel Hanger

Designed for 1/2" threaded rod, double nut installation

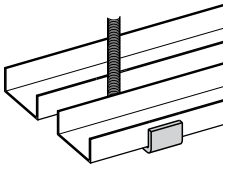
Single Cable Channel Hanger and Wall Mount



150 lb.
Safety Factor 3.0

Material	Channel Width in. (mm)	in. (mm)	in. (mm)
	3 (76)	4 (101)	6 (152)
Zinc Plated Steel			
Double Channel	● 9ZN-1232-3	● 9ZN-1232-4	● 9ZN-1232-6
Single Channel	● 9ZN-1231-3 & 4	● 9ZN-1231-3 & 4	● 9ZN-1231-6
HDGAF Steel (18 Ga.)			
Double Channel	● 9G-1232-3	● 9G-1232-4	● 9G-1232-6
Single Channel	● 9G-1231-3 & 4	● 9G-1231-3 & 4	● 9G-1231-6

Double Cable Channel Hanger

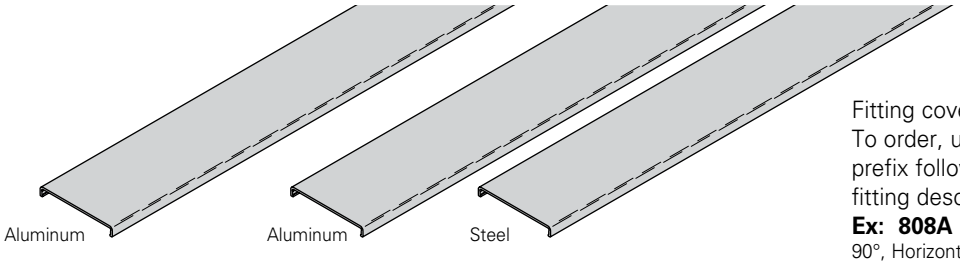


265 lb.
Safety Factor 3.0

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

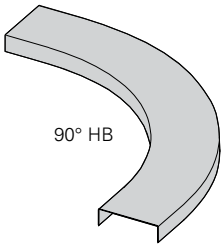
All dimensions in shaded areas are millimeters unless otherwise specified.

Cable Channel Covers



Snap-On **Standard Straight Section**

Fitting covers are available. To order, use the cover prefix followed by the fitting description.
Ex: 808A - 03 - 90HB12
90°, Horizontal Bend, 12" Radius



Covers Part Numbering

Prefix

Example: **80 8 S A - 04 - 144**

Cover Type
80 = Solid

Detail
8 = Flanged

Style
S = Snap-On
(Aluminum only*)
__ = Standard

Material
- A = Aluminum
- G = Type 1 HDGAF
- P = Type 2 Pre-Galvanized
- SS4 = 304 Stainless Steel
- SS6 = 316 Stainless Steel

Tray Width
- 03 = 3"
- 04 = 4"
- 06 = 6"

Item Description

For Straight Section Cover:
Pre-Galv & Aluminum Only:
144 = 12 ft.
120 = 10 ft.
Pre-Galv, HDGAF & Alum
72 = 6 ft.*
60 = 5 ft.*

Insert suffix of fitting to be covered from the fitting's page.
__HB__ = Horizontal Bend
HT__ = Horizontal Tee
HX__ = Horizontal Cross
__VI__ = Vertical Inside Bend
__VO__ = Vertical Outside Bend

All items normal lead time except for those indicated

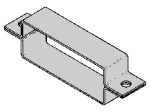
Material	Length ft	Length (m)	Channel Width - Straight Section Part Number in. (mm)	in. (mm)	in. (mm)
			3 (76)	4 (101)	6 (152)
Aluminum (.032)	12	3.56m	**808A-03-144**	**808A-04-144**	**808A-06-144**
Solid	10	3.05m	**808A-03-120**	**808A-04-120**	**808A-06-120**
Type II Pre-Galvanized Steel (20 Ga.)	12	3.56m	**808P-03-144**	**808P-04-144**	**808P-06-144**
Solid	10	3.05m)	**808P-03-120**	**808P-04-120**	**808P-06-120**
Type I Hot Dip Galvanized Steel (18 Ga.)	12	3.56m	**808G-03-72**	**808G-04-72**	**808G-06-72**
Solid	10	3.05m	**808G-03-60**	**808G-04-60**	**808G-06-60**

Wrap-Around Cover Clamp

Wrap-Around Cover Clamps are used to securely hold a cover on cable channel in locations where strong winds can prevail.
- Furnished as one clamp with hardware.
- (*) Insert A G P SS4 SS6

Quantity of Standard Cover Clamps Required

Straight Section 120", 144" or 240"	6 pcs.
Horizontal/Vertical Bends	4 pcs.
Tees	6 pcs.
Crosses	8 pcs.

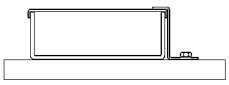


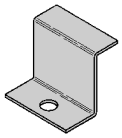
Catalog No.	Channel Width in.	(mm)
9(*)-9033	3	(76)
9(*)-9034	4	(101)
9(*)-9036	6	(152)

Cover clamps are not included with the cover and must be ordered separately. We recommend that covers be placed on vertical cable tray runs to a height of 6 ft. (1.83 m) to 8 ft. (2.44 m) above the floor to both isolate the cables and protect personnel.

Combination Hold-Down & Cover Clamp

This clamp is used to hold both the cable channel and cover in place at the same time.
- Furnished as one clamp.
- Order ¼" hardware separately.
- (*) Insert A G P SS6





Catalog No.	Channel Width in.	(mm)
9(*)-9023	3	(76)
9(*)-9024	4	(101)
9(*)-9024	6	(152)

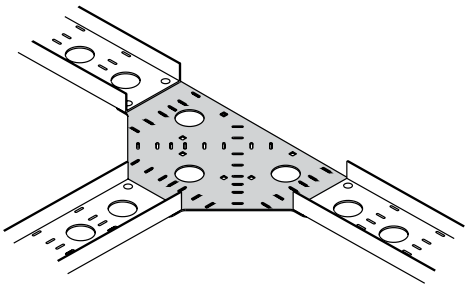
Check with B-Line Technical Support (blinetechnicalsupport@eaton.com) if there are questions/concerns about environmental loads for covers (wind, snow, sleet, rain, etc.).

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in shaded areas are millimeters unless otherwise specified.

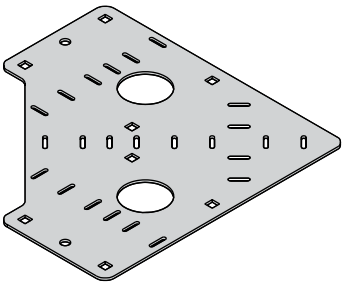
Cable Channel

Channel Cable Tray Connectors

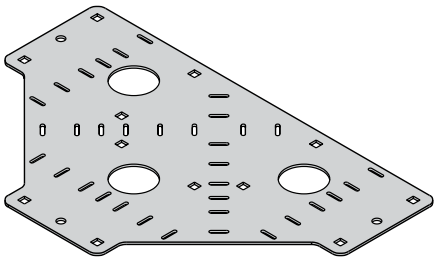


Fast, economical, space saving Channel Cable Tray Connectors
Patent No. 5,628,481; 5,782,439. Other patents pending.

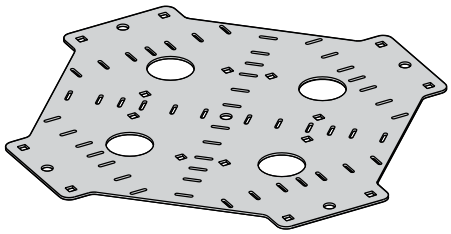
Horizontal:



90˚ Bend

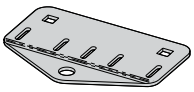


Tee



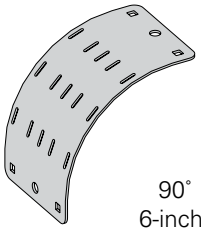
Cross

- Provides 0 or 6-inch radius connection for Cable Channel
- The Pivot Connector is available for custom angle adjustment
  - up to +/– 45˚ angle adjustment
  - order the desired quantity separately
- Slotted for easy cable fastening
- Shipped with the required hardware

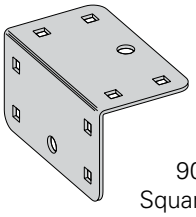


Pivot Connector

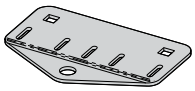
Vertical:



90˚ Bend
6-inch radius



90˚ Vertical
Square Connector
0-inch radius



Pivot Connector

- Use the same part for VO and VI applications
- Slotted for easy cable fastening
- The Pivot Connector is available for custom angle adjustment (order separately)
- Shipped with the required hardware

Connector Part Numbering

Prefix

Example: **A CC - 04 - 90HC 060**

Material	Tray Type	Width	Connector Type	Radius
● A = Aluminum ● G = Type 1 HDGAF	CC = Ventilated Cable Channel	● 03 = 3" ● 04 = 4" ● 06 = 6"	● 90HC = 90˚ Horizontal ● HTC = Horizontal Tee ● HXC = Horizontal Cross ● 90VC = 90˚ Vertical ● PC = Pivot Connector	Horizontal Connectors 060 = 0" & 6" Radii Vertical Connectors 00 = 0" Radius 06 = 6" Radius

All items normal lead time except for those indicated

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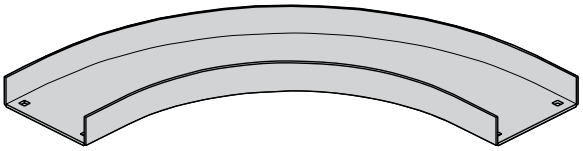
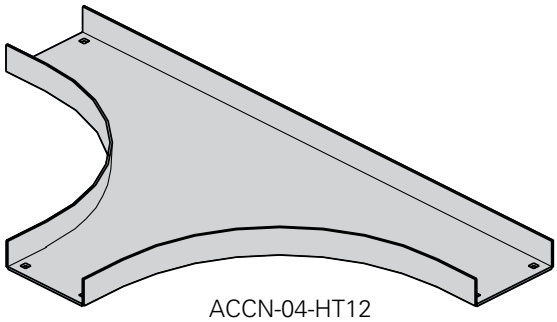
All dimensions in shaded areas are millimeters unless otherwise specified.

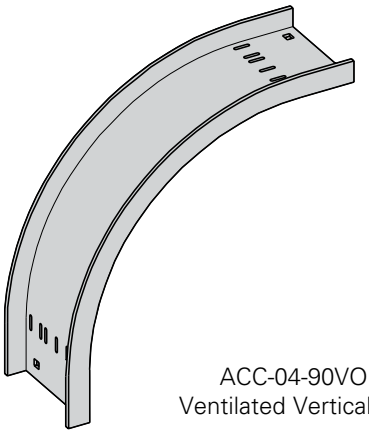


ACCN-04-90HB12
Non-Ventilated Horizontal Bend

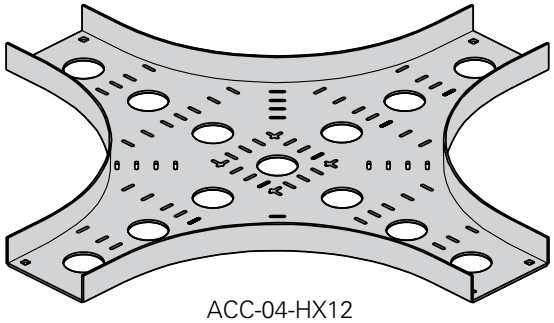


ACCN-04-HT12
Non-Ventilated Tee

Fittings engineered with 3" tangents for splicing integrity.



ACC-04-90VO12
Ventilated Vertical Bend



ACC-04-HX12
Ventilated Horizontal Cross

Fittings Part Numbering

Prefix

Example: **A CCN - 04 - 90 HB 24**

Material	Tray Type	Width	Angle*	Fitting Type	Radius
● A = Aluminum	●**CC = Ventilated Cable Channel	● 03 = 3"	● 30 = 30°	*HB = Horizontal Bend	● 12 = 12"
● G = Type 1 HDGAF	● CCN = Non-ventilated Cable Channel	● 04 = 4"	● 45 = 45°	HT = Horizontal Tee	● 24 = 24"
● SS4 = 304 Stainless Steel		● 06 = 6"	● 60 = 60°	HX = Horizontal Cross	● 36 = 36"
● SS6 = 316 Stainless Steel			● 90 = 90°	*VI = Vertical Inside Bend	● 48 = 48"
P = †				*VO = Vertical Outside Bend	

* Angle only required for HB, VI and VO fittings.
** Ventilated Cable Channel Fittings are available only in 12" and 24" radii.
† - Due to multiple piece welded construction, P fittings are not available - substitute G.

All items normal lead time except for those indicated

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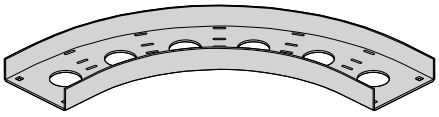
All dimensions in shaded areas are millimeters unless otherwise specified.

Horizontal Bends 90°, 60° (HB)

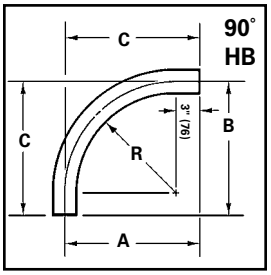
1 splice plate with hardware included.

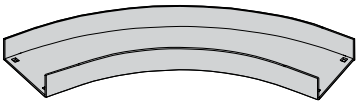
Bend Radius R in. (mm)	Tray Width in. (mm)	Catalog No.	A in. (mm)	B in. (mm)	C in. (mm)
		90° Horizontal Bend Dimensions			
12 (305)	3 (76)	**(Pre)-03-90HB12**	16 1/2 (419)	16 1/2 (419)	16 1/2 (419)
	4 (101)	**(Pre)-04-90HB12**	17 (432)	17 (432)	17 (432)
	6 (152)	**(Pre)-06-90HB12**	18 (457)	18 (457)	18 (457)
24 (609)	3 (76)	**(Pre)-03-90HB24**	28 1/2 (723)	28 1/2 (723)	28 1/2 (723)
	4 (101)	**(Pre)-04-90HB24**	29 (737)	29 (737)	29 (737)
	6 (152)	**(Pre)-06-90HB24**	30 (762)	30 (762)	30 (762)
36 (915)	3 (76)	**(Pre)-03-90HB36**	40 1/2 (1029)	40 1/2 (1029)	40 1/2 (1029)
	4 (101)	**(Pre)-04-90HB36**	41 (1041)	41 (1041)	41 (1041)
	6 (152)	**(Pre)-06-90HB36**	42 (1067)	42 (1067)	42 (1067)
48 (1218)	3 (76)	**(Pre)-03-90HB48**	52 1/2 (1334)	52 1/2 (1334)	52 1/2 (1334)
	4 (101)	**(Pre)-04-90HB48**	53 (1346)	53 (1346)	53 (1346)
	6 (152)	**(Pre)-06-90HB48**	54 (1372)	54 (1372)	54 (1372)
		60° Horizontal Bend			
12 (305)	3 (76)	**(Pre)-03-60HB12**	16 1/4 (412)	9 3/8 (239)	10 3/4 (273)
	4 (101)	**(Pre)-04-60HB12**	16 5/8 (422)	9 5/8 (245)	11 1/8 (283)
	6 (152)	**(Pre)-06-60HB12**	17 1/2 (445)	10 (254)	11 5/8 (296)
24 (609)	3 (76)	**(Pre)-03-60HB24**	26 5/8 (676)	15 3/8 (391)	17 3/4 (451)
	4 (101)	**(Pre)-04-60HB24**	27 (686)	15 5/8 (397)	18 (450)
	6 (152)	**(Pre)-06-60HB24**	27 7/8 (708)	16 (406)	18 5/8 (466)
36 (915)	3 (76)	**(Pre)-03-60HB36**	37 (940)	21 3/8 (543)	24 5/8 (625)
	4 (101)	**(Pre)-04-60HB36**	37 3/8 (949)	21 5/8 (549)	25 (635)
	6 (152)	**(Pre)-06-60HB36**	38 1/4 (972)	22 (559)	25 1/2 (648)
48 (1218)	3 (76)	**(Pre)-03-60HB48**	47 3/8 (1203)	27 3/8 (695)	31 5/8 (803)
	4 (101)	**(Pre)-04-60HB48**	47 7/8 (1216)	27 5/8 (702)	31 7/8 (810)
	6 (152)	**(Pre)-06-60HB48**	48 5/8 (1235)	28 (711)	32 1/2 (826)

(Pre) See page E-10 for catalog number prefix.

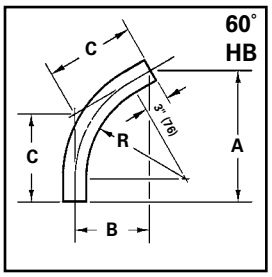


90° Horizontal Bend
Ventilated Horizontal Bend





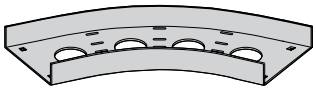
60° Horizontal Bend
Non-Ventilated Horizontal Bend



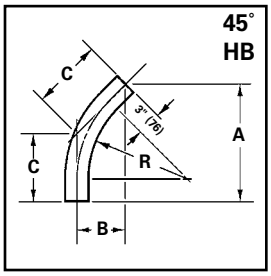
All dimensions in shaded areas are millimeters unless otherwise specified.

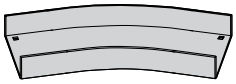
Horizontal Bends 45°, 30° (HB)

1 splice plate with hardware included.

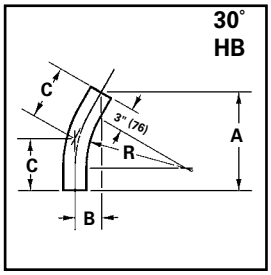


45° Horizontal Bend
Ventilated Horizontal Bend





30° Horizontal Bend
Non-Ventilated Horizontal Bend



Bend Radius R in. (mm)	Tray Width in. (mm)	Catalog No.	A in. (mm)	B in. (mm)	C in. (mm)
		45° Horizontal Bend Dimensions			
12 (305)	3 (76)	**(Pre)-03-45HB12**	14 5/8 (371)	6 1/8 (156)	8 5/8 (219)
	4 (101)	**(Pre)-04-45HB12**	15 (381)	6 1/4 (159)	8 7/8 (225)
	6 (152)	**(Pre)-06-45HB12**	15 3/4 (400)	6 1/2 (165)	9 1/4 (235)
24 (609)	3 (76)	**(Pre)-03-45HB24**	23 1/8 (587)	9 5/8 (244)	13 5/8 (346)
	4 (101)	**(Pre)-04-45HB24**	23 1/2 (597)	9 3/4 (248)	13 3/4 (349)
	6 (152)	**(Pre)-06-45HB24**	24 1/8 (613)	10 (254)	14 1/8 (359)
36 (915)	3 (76)	**(Pre)-03-45HB36**	31 5/8 (803)	13 1/8 (334)	18 5/8 (473)
	4 (101)	**(Pre)-04-45HB36**	32 (813)	13 1/4 (337)	18 3/4 (476)
	6 (152)	**(Pre)-06-45HB36**	32 3/4 (832)	13 1/2 (343)	19 1/8 (486)
48 (1218)	3 (76)	**(Pre)-03-45HB48**	40 1/8 (1019)	16 5/8 (422)	23 1/2 (597)
	4 (101)	**(Pre)-04-45HB48**	40 1/2 (1029)	16 3/4 (425)	23 3/4 (603)
	6 (152)	**(Pre)-06-45HB48**	41 1/8 (1045)	17 (432)	24 1/8 (613)
		30° Horizontal Bend			
12 (305)	3 (76)	**(Pre)-03-30HB12**	12 3/8 (314)	3 1/4 (83)	6 5/8 (168)
	4 (101)	**(Pre)-04-30HB12**	12 5/8 (321)	3 3/8 (86)	6 3/4 (171)
	6 (152)	**(Pre)-06-30HB12**	13 1/8 (334)	3 1/2 (89)	7 (178)
24 (609)	3 (76)	**(Pre)-03-30HB24**	18 3/8 (467)	4 7/8 (124)	9 7/8 (251)
	4 (101)	**(Pre)-04-30HB24**	18 5/8 (473)	5 (127)	10 (254)
	6 (152)	**(Pre)-06-30HB24**	19 1/8 (486)	5 1/8 (130)	10 1/4 (260)
36 (915)	3 (76)	**(Pre)-03-30HB36**	24 3/8 (619)	6 1/2 (165)	13 (330)
	4 (101)	**(Pre)-04-30HB36**	24 5/8 (626)	6 5/8 (168)	13 1/8 (334)
	6 (152)	**(Pre)-06-30HB36**	25 1/8 (638)	6 3/4 (171)	13 1/2 (343)
48 (1218)	3 (76)	**(Pre)-03-30HB48**	30 3/8 (772)	8 1/8 (207)	16 1/4 (413)
	4 (101)	**(Pre)-04-30HB48**	30 5/8 (778)	8 1/4 (210)	16 3/8 (416)
	6 (152)	**(Pre)-06-30HB48**	31 1/8 (791)	8 3/8 (213)	16 5/8 (422)

(Pre) See page E-10 for catalog number prefix.

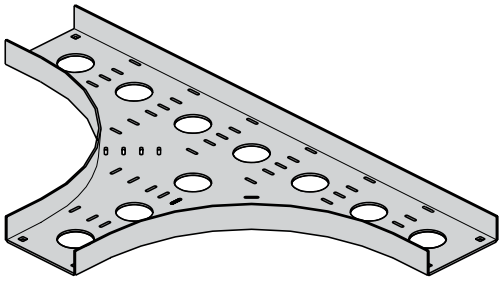
All dimensions in shaded areas are millimeters unless otherwise specified.

Horizontal Tee (HT)

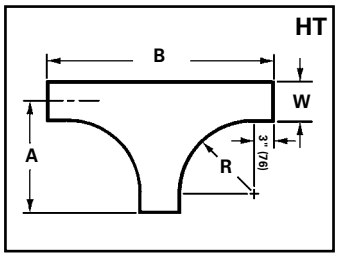
2 splice plates with hardware included.

Bend Radius R in. (mm)	Tray Width in. (mm)	Horizontal Tee Dimensions Catalog No.	A in. (mm)	B in. (mm)
12 (305)	3 (76)	**(Pre)-03-HT12**	16½ (419)	33 (838)
	4 (101)	**(Pre)-04-HT12**	17 (432)	34 (864)
	6 (152)	**(Pre)-06-HT12**	18 (457)	36 (914)
24 (609)	3 (76)	**(Pre)-03-HT24**	28½ (723)	57 (1448)
	4 (101)	**(Pre)-04-HT24**	29 (737)	58 (1473)
	6 (152)	**(Pre)-06-HT24**	30 (762)	60 (1524)
36 (915)	3 (76)	**(Pre)-03-HT36**	40½ (1029)	81 (2057)
	4 (101)	**(Pre)-04-HT36**	41 (1041)	82 (2083)
	6 (152)	**(Pre)-06-HT36**	42 (1067)	84 (2134)
48 (1218)	3 (76)	**(Pre)-03-HT48**	52½ (1334)	105 (2667)
	4 (101)	**(Pre)-04-HT48**	53 (1346)	106 (2692)
	6 (152)	**(Pre)-06-HT48**	54 (1372)	108 (2743)

(Pre) See page E-10 for catalog number prefix.



Horizontal Tee
Ventilated Horizontal Tee

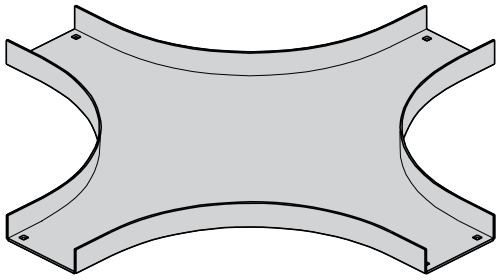


Horizontal Cross (HX)

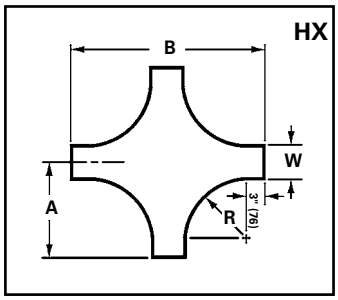
3 splice plates with hardware included.

Bend Radius R in. (mm)	Tray Width in. (mm)	Horizontal Cross Dimensions Catalog No.	A in. (mm)	B in. (mm)
12 (305)	3 (76)	**(Pre)-03-HX12**	16½ (419)	33 (838)
	4 (101)	**(Pre)-04-HX12**	17 (432)	34 (864)
	6 (152)	**(Pre)-06-HX12**	18 (457)	36 (914)
24 (609)	3 (76)	**(Pre)-03-HX24**	28½ (723)	57 (1448)
	4 (101)	**(Pre)-04-HX24**	29 (737)	58 (1473)
	6 (152)	**(Pre)-06-HX24**	30 (762)	60 (1524)
36 (915)	3 (76)	**(Pre)-03-HX36**	40½ (1029)	81 (2057)
	4 (101)	**(Pre)-04-HX36**	41 (1041)	82 (2083)
	6 (152)	**(Pre)-06-HX36**	42 (1067)	84 (2134)
48 (1218)	3 (76)	**(Pre)-03-HX48**	52½ (1334)	105 (2667)
	4 (101)	**(Pre)-04-HX48**	53 (1346)	106 (2692)
	6 (152)	**(Pre)-06-HX48**	54 (1372)	108 (2743)

(Pre) See page E-10 for catalog number prefix.



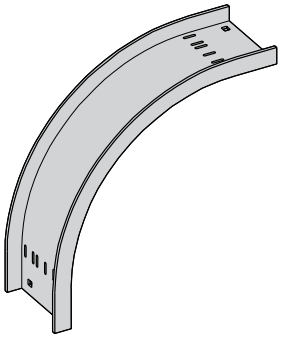
Horizontal Cross
Non-Ventilated Horizontal Cross



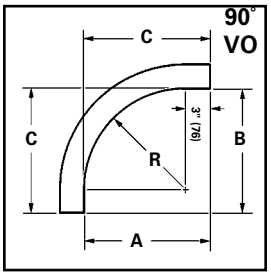
All dimensions in shaded areas are millimeters unless otherwise specified.

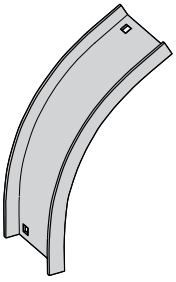
Vertical Outside Bends 90°, 60° (VO)

1 splice plate with hardware included.

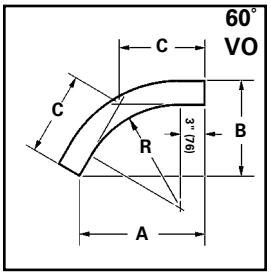


90° Vertical Outside Bend
Ventilated Vertical Outside Bend





60° Vertical Outside Bend
Non-Ventilated Vertical Outside Bend



Bend Radius R in. (mm)	Tray Width in. (mm)	Catalog No.	A in. (mm)	B in. (mm)	C in. (mm)
		90° Vertical Outside Bend Dimensions			
12 (305)	3 (76)	**(Pre)-03-90VO12**	15 (381)	15 (381)	15 (381)
	4 (101)	**(Pre)-04-90VO12**	15 (381)	15 (381)	15 (381)
	6 (152)	**(Pre)-06-90VO12**	15 (381)	15 (381)	15 (381)
24 (609)	3 (76)	**(Pre)-03-90VO24**	27 (686)	27 (686)	27 (686)
	4 (101)	**(Pre)-04-90VO24**	27 (686)	27 (686)	27 (686)
	6 (152)	**(Pre)-06-90VO24**	27 (686)	27 (686)	27 (686)
36 (915)	3 (76)	**(Pre)-03-90VO36**	39 (991)	39 (991)	39 (991)
	4 (101)	**(Pre)-04-90VO36**	39 (991)	39 (991)	39 (991)
	6 (152)	**(Pre)-06-90VO36**	39 (991)	39 (991)	39 (991)
48 (1218)	3 (76)	**(Pre)-03-90VO48**	51 (1295)	51 (1295)	51 (1295)
	4 (101)	**(Pre)-04-90VO48**	51 (1295)	51 (1295)	51 (1295)
	6 (152)	**(Pre)-06-90VO48**	51 (1295)	51 (1295)	51 (1295)
		60° Vertical Outside Bend			
12 (305)	3 (76)	**(Pre)-03-60VO12**	14 7/8 (378)	8 1/2 (216)	9 7/8 (251)
	4 (101)	**(Pre)-04-60VO12**	14 7/8 (378)	8 1/2 (216)	9 7/8 (251)
	6 (152)	**(Pre)-06-60VO12**	14 7/8 (378)	8 1/2 (216)	9 7/8 (251)
24 (609)	3 (76)	**(Pre)-03-60VO24**	25 3/8 (645)	14 5/8 (372)	16 7/8 (428)
	4 (101)	**(Pre)-04-60VO24**	25 3/8 (645)	14 5/8 (372)	16 7/8 (428)
	6 (152)	**(Pre)-06-60VO24**	25 3/8 (645)	14 5/8 (372)	16 7/8 (428)
36 (915)	3 (76)	**(Pre)-03-60VO36**	35 3/8 (905)	20 5/8 (524)	23 3/4 (603)
	4 (101)	**(Pre)-04-60VO36**	35 3/8 (905)	20 5/8 (524)	23 3/4 (603)
	6 (152)	**(Pre)-06-60VO36**	35 3/8 (905)	20 5/8 (524)	23 3/4 (603)
48 (1218)	3 (76)	**(Pre)-03-60VO48**	46 1/8 (1172)	26 5/8 (676)	30 3/4 (781)
	4 (101)	**(Pre)-04-60VO48**	46 1/8 (1172)	26 5/8 (676)	30 3/4 (781)
	6 (152)	**(Pre)-06-60VO48**	46 1/8 (1172)	26 5/8 (676)	30 3/4 (781)

(Pre) See page E-10 for catalog number prefix.

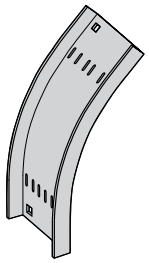
All dimensions in shaded areas are millimeters unless otherwise specified.

Vertical Outside Bends 45°, 30° (VO)

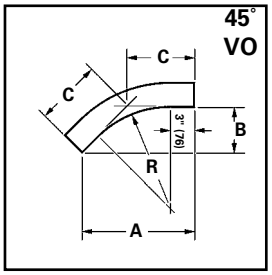
1 splice plate with hardware included.

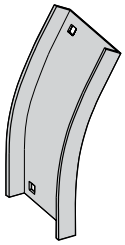
Bend Radius R in.	(mm)	Tray Width in.	(mm)	45° Vertical Outside Bend Dimensions Catalog No.	A in.	(mm)	B in.	(mm)	C in.	(mm)
12	(305)	3	(76)	**(Pre)-03-45VO12**	13 5/8	(346)	5 5/8	(143)	8	(203)
		4	(101)	**(Pre)-04-45VO12**	13 5/8	(346)	5 5/8	(143)	8	(203)
		6	(152)	**(Pre)-06-45VO12**	13 5/8	(346)	5 5/8	(143)	8	(203)
24	(609)	3	(76)	**(Pre)-03-45VO24**	22 1/4	(565)	9 1/4	(235)	13	(330)
		4	(101)	**(Pre)-04-45VO24**	22 1/4	(565)	9 1/4	(235)	13	(330)
		6	(152)	**(Pre)-06-45VO24**	22 1/4	(565)	9 1/4	(235)	13	(330)
36	(915)	3	(76)	**(Pre)-03-45VO36**	30 1/2	(775)	12 5/8	(321)	17 7/8	(454)
		4	(101)	**(Pre)-04-45VO36**	30 1/2	(775)	12 5/8	(321)	17 7/8	(454)
		6	(152)	**(Pre)-06-45VO36**	30 1/2	(775)	12 5/8	(321)	17 7/8	(454)
48	(1218)	3	(76)	**(Pre)-03-45VO48**	39	(991)	16 1/8	(410)	22 7/8	(581)
		4	(101)	**(Pre)-04-45VO48**	39	(991)	16 1/8	(410)	22 7/8	(581)
		6	(152)	**(Pre)-06-45VO48**	39	(991)	16 1/8	(410)	22 7/8	(581)
				30° Vertical Outside Bend						
12	(305)	3	(76)	**(Pre)-03-30VO12**	11 5/8	(296)	3 1/8	(79)	6 1/4	(158)
		4	(101)	**(Pre)-04-30VO12**	11 5/8	(296)	3 1/8	(79)	6 1/4	(158)
		6	(152)	**(Pre)-06-30VO12**	11 5/8	(296)	3 1/8	(79)	6 1/4	(158)
24	(609)	3	(76)	**(Pre)-03-30VO24**	17 1/2	(445)	4 7/8	(124)	9 3/8	(238)
		4	(101)	**(Pre)-04-30VO24**	17 1/2	(445)	4 7/8	(124)	9 3/8	(238)
		6	(152)	**(Pre)-06-30VO24**	17 1/2	(445)	4 7/8	(124)	9 3/8	(238)
36	(915)	3	(76)	**(Pre)-03-30VO36**	23 1/2	(597)	6 3/8	(162)	12 5/8	(321)
		4	(101)	**(Pre)-04-30VO36**	23 1/2	(597)	6 3/8	(162)	12 5/8	(321)
		6	(152)	**(Pre)-06-30VO36**	23 1/2	(597)	6 3/8	(162)	12 5/8	(321)
48	(1218)	3	(76)	**(Pre)-03-30VO48**	29 5/8	(753)	8	(203)	15 7/8	(403)
		4	(101)	**(Pre)-04-30VO48**	29 5/8	(753)	8	(203)	15 7/8	(403)
		6	(152)	**(Pre)-06-30VO48**	29 5/8	(753)	8	(203)	15 7/8	(403)

(Pre) See page E-10 for catalog number prefix.

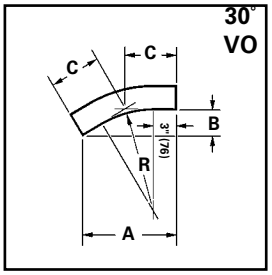


45° Vertical Outside Bend
Ventilated Vertical Outside Bend





30° Vertical Outside Bend
Non-Ventilated Vertical Outside Bend

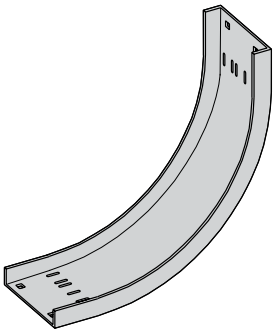


Cable Channel

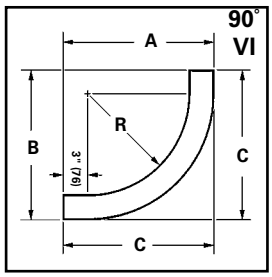
All dimensions in shaded areas are millimeters unless otherwise specified.

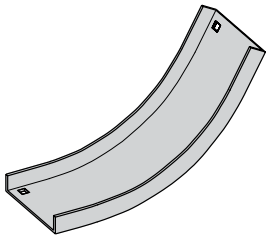
Vertical Inside Bends 90°, 60° (VI)

1 splice plate with hardware included.

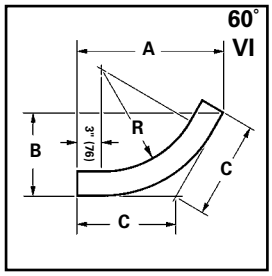


90° Vertical Inside Bend
Ventilated Vertical Inside Bend





60° Vertical Inside Bend
Non-Ventilated Vertical Inside Bend



Bend Radius R in. (mm)	Tray Width in. (mm)	Catalog No.	A in. (mm)	B in. (mm)	C in. (mm)
		90° Vertical Inside Bend Dimensions			
12 (305)	3 (76)	**(Pre)-03-90VI12**	16 1/4 (413)	16 1/4 (413)	16 1/4 (413)
	4 (101)	**(Pre)-04-90VI12**	16 3/4 (425)	16 3/4 425)	16 3/4 425)
	6 (152)	**(Pre)-06-90VI12**	16 3/4 (425)	16 3/4 425)	16 3/4 425)
24 (609)	3 (76)	**(Pre)-03-90VI24**	28 1/4 (718)	28 1/4 (718)	28 1/4 (718)
	4 (101)	**(Pre)-04-90VI24**	28 3/4 (730)	28 3/4 (730)	28 3/4 (730)
	6 (152)	**(Pre)-06-90VI24**	28 3/4 (730)	28 3/4 (730)	28 3/4 (730)
36 (915)	3 (76)	**(Pre)-03-90VI36**	40 1/4 (1024)	40 1/4 (1024)	40 1/4 (1024)
	4 (101)	**(Pre)-04-90VI36**	40 3/4 (1035)	40 3/4 (1035)	40 3/4 (1035)
	6 (152)	**(Pre)-06-90VI36**	40 3/4 (1035)	40 3/4 (1035)	40 3/4 (1035)
48 (1218)	3 (76)	**(Pre)-03-90VI48**	52 1/4 (1327)	52 1/4 (1327)	52 1/4 (1327)
	4 (101)	**(Pre)-04-90VI48**	52 3/4 (1340)	52 3/4 (1340)	52 3/4 (1340)
	6 (152)	**(Pre)-06-90VI48**	52 3/4 (1340)	52 3/4 (1340)	52 3/4 (1340)
		60° Vertical Inside Bend			
12 (305)	3 (76)	**(Pre)-03-60VI12**	16 (406)	9 1/4 (235)	10 5/8 (270)
	4 (101)	**(Pre)-04-60VI12**	16 1/2 (419)	9 1/2 (241)	11 (280)
	6 (152)	**(Pre)-06-60VI12**	16 1/2 (419)	9 1/2 (241)	11 (280)
24 (609)	3 (76)	**(Pre)-03-60VI24**	26 1/2 (673)	15 1/4 (387)	17 5/8 (448)
	4 (101)	**(Pre)-04-60VI24**	26 7/8 (683)	15 1/2 (394)	17 7/8 (454)
	6 (152)	**(Pre)-06-60VI24**	26 7/8 (683)	15 1/2 (394)	17 7/8 (454)
36 (915)	3 (76)	**(Pre)-03-60VI36**	36 3/4 (933)	21 1/4 (540)	24 1/2 (622)
	4 (101)	**(Pre)-04-60VI36**	37 1/8 (943)	21 3/8 (543)	24 3/4 (629)
	6 (152)	**(Pre)-06-60VI36**	37 1/8 (943)	21 3/8 (543)	24 3/4 (629)
48 (1218)	3 (76)	**(Pre)-03-60VI48**	47 1/8 (1197)	27 1/8 (689)	31 3/8 (797)
	4 (101)	**(Pre)-04-60VI48**	47 5/8 (1210)	27 1/2 (699)	31 3/4 (806)
	6 (152)	**(Pre)-06-60VI48**	47 5/8 (1210)	27 1/2 (699)	31 3/4 (806)

(Pre) See page E-10 for catalog number prefix.

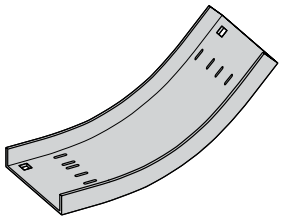
All dimensions in shaded areas are millimeters unless otherwise specified.

Vertical Inside Bends 45°, 30° (VI)

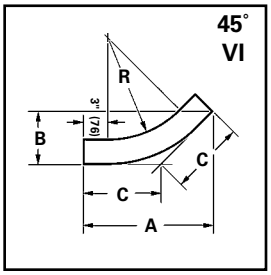
1 splice plate with hardware included.

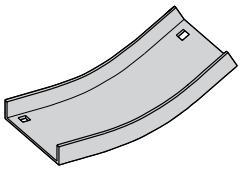
Bend Radius R in. (mm)	Tray Width in. (mm)	45˚ Vertical Inside Bend Dimensions: Catalog No.	A in. (mm)	B in. (mm)	C in. (mm)
12 (305)	3 (76)	**(Pre)-03-45VI12**	14 1/2 (368)	6 (152)	8 1/2 (216)
	4 (101)	**(Pre)-04-45VI12**	14 7/8 (373)	6 1/8 (156)	8 3/4 (222)
	6 (152)	**(Pre)-06-45VI12**	14 7/8 (373)	6 1/8 (156)	8 3/4 (222)
24 (609)	3 (76)	**(Pre)-03-45VI24**	23 (584)	9 1/2 (241)	13 1/2 (343)
	4 (101)	**(Pre)-04-45VI24**	23 1/4 (591)	9 5/8 (245)	13 5/8 (346)
	6 (152)	**(Pre)-06-45VI24**	23 1/4 (591)	9 5/8 (245)	13 5/8 (346)
36 (915)	3 (76)	**(Pre)-03-45VI36**	31 3/8 (797)	13 (330)	18 3/8 (467)
	4 (101)	**(Pre)-04-45VI36**	31 3/4 (806)	13 1/8 (334)	18 5/8 (473)
	6 (152)	**(Pre)-06-45VI36**	31 3/4 (806)	13 1/8 (334)	18 5/8 (473)
48 (1218)	3 (76)	**(Pre)-03-45VI48**	39 7/8 (1013)	16 1/2 (419)	23 3/8 (594)
	4 (101)	**(Pre)-04-45VI48**	40 3/8 (1026)	16 3/4 (425)	23 5/8 (600)
	6 (152)	**(Pre)-06-45VI48**	40 3/8 (1026)	16 3/4 (425)	23 5/8 (600)
		30˚ Vertical Inside Bend			
12 (305)	3 (76)	**(Pre)-03-30VI12**	12 1/8 (308)	3 1/8 (83)	6 1/2 (165)
	4 (101)	**(Pre)-04-30VI12**	12 3/8 (314)	3 3/8 (86)	6 5/8 (163)
	6 (152)	**(Pre)-06-30VI12**	12 3/8 (314)	3 3/8 (86)	6 5/8 (163)
24 (609)	3 (76)	**(Pre)-03-30VI24**	18 1/8 (461)	4 3/4 (121)	9 3/4 (248)
	4 (101)	**(Pre)-04-30VI24**	18 3/8 (467)	4 7/8 (124)	9 7/8 (251)
	6 (152)	**(Pre)-06-30VI24**	18 3/8 (467)	4 7/8 (124)	9 7/8 (251)
36 (915)	3 (76)	**(Pre)-03-30VI36**	24 1/4 (616)	6 1/2 (165)	13 (330)
	4 (101)	**(Pre)-04-30VI36**	24 1/2 (622)	6 5/8 (168)	13 1/8 (334)
	6 (152)	**(Pre)-06-30VI36**	24 1/2 (622)	6 5/8 (168)	13 1/8 (334)
48 (1218)	3 (76)	**(Pre)-03-30VI48**	30 3/8 (772)	8 1/8 (207)	16 1/4 (413)
	4 (101)	**(Pre)-04-30VI48**	30 5/8 (778)	8 1/4 (210)	16 3/8 (416)
	6 (152)	**(Pre)-06-30VI48**	30 5/8 (778)	8 1/4 (210)	16 3/8 (416)

(Pre) See page E-10 for catalog number prefix.

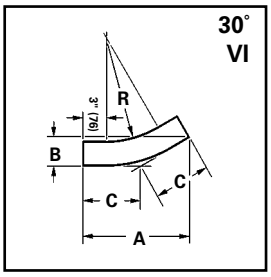


45° Vertical Inside Bend
Ventilated Vertical Inside Bend





30° Vertical Inside Bend
Non-Ventilated Vertical Inside Bend



Cable Channel

All dimensions in shaded areas are millimeters unless otherwise specified.

Section 1- Acceptable Manufacturers

1.01 Manufacturer: Subject to compliance with these specifications, B-Line series channel cable tray systems shall be as manufactured by Eaton.

Section 2- Selection and Components

2.01 General: Except as otherwise indicated, provide ventilated metal channel cable trays, of types, classes and sizes indicated with splice connectors, fittings and all other necessary accessories for a complete system. Provide channel cable tray with rounded edges and smooth surfaces in compliance with applicable standards, and with the following additional requirements.

2.02 Materials and finishes: Material and finishes specifications for each channel cable tray are as follows:

1. Aluminum: Extruded components shall be made from Aluminum Association Alloy 6063. All fabricated parts shall be made from Aluminum Association Alloy 5052.
2. Pre-Galvanized Steel: Straight sections and fittings shall be made from structural quality mill galvanized 14 gauge steel meeting the properties of ASTM A653SS, coating designation G90.
3. Hot Dip Galvanized Steel: Straight sections and fittings shall be made from 14 gauge structural quality steel meeting the minimum mechanical properties of ASTM A1011 SS, Grade 33 and shall be hot-dip galvanized after fabrication in accordance with ASTM A123.
   All hot dip galvanized after fabrication cable trays must be returned to point of manufacture after coating for inspection, conditioning and labeling.
4. Stainless Steel: Straight sections and fittings shall be AISI Type [304] [316].

2.03 Channel cable tray straight sections shall be constructed with ventilated flat bottom. Ventilated bottom shall be perforated with 2.25" diameter holes and have slots to facilitate the use of cable ties to secure the cables.

2.04 Straight sections shall be supplied in standard [12 foot] [10 foot (3 m)] lengths, except where shorter lengths are permitted to facilitate tray assembly as shown on drawings.

2.05 Ventilated straight sections shall have splice holes every 12 inches to simplify field modifications.

2.06 Channel cable tray width shall be [3] [4] [6] inches with a minimum loading depth of 1¼".

2.07 Fittings will have a minimum radius of [12] [24] [36] [48] inches.

2.08 Splice plates and hardware shall be included with each straight section and fitting.

KwikRail aluminum cable tray

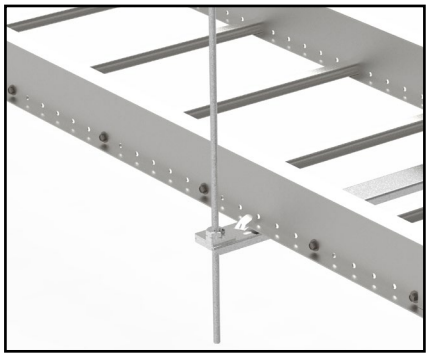
Reduce installation time and modify to your needs

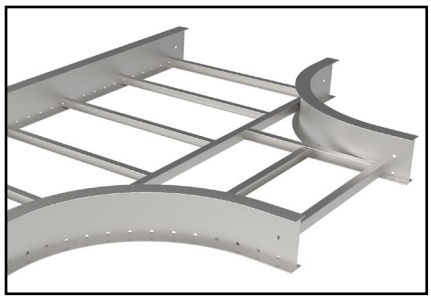
The KwikRail™ cable tray system features an I-beam side rail splice retention groove that allows installers to easily guide and snap the splice in place with just 2 bolts. The splice retention groove holds the splice in place while maintaining structural integrity.

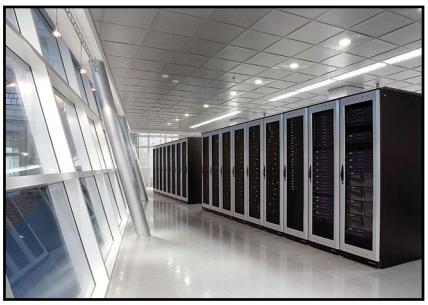
NEMA class 12A and 12B, the KwikRail cable tray system is ideal for cable management in commercial buildings, light industrial buildings, data centers, hospitals, healthcare facilities, university buildings, government buildings and multi-tenant buildings.

Features and benefits

- I-beam rungs for high strength to weight ratio
- Siderail splice retention groove to snap in 2-bolt splice plate to speed install while maintaining structural integrity
- Straight sections available with welded rungs or bolted rungs to allow installers to add or remove rungs* in the field
- Straight sections and fittings feature perforations along the side rail to allow for quick, easy additions or changes
- Wide range of fittings and accessories to support various cable management applications
- Add-a-rung kits allow for a rung to be added at any location along the length of the tray
- Tab-and-lock trapeze solution can save up to 75% installation time over traditional methods







Specifications and certifications

- NEMA 12A and 12B (CSA class C-3 and D-3M) load classes
- Vibration tested
- UL Classified as an electrical grounding conductor
- CSA Certified

KwikRail cable tray system advantages

The KwikRail straight sections are available with welded rungs or bolted rungs to allow installers to add or remove rungs* in the field.

The straight sections and fittings feature perforations along the side rail to allow you to quickly and easily alter the system.

Plus, add-rung-kits allow you to add rung at any location along the length of the tray making cable support and adding accessories simple to achieve.

- I-beam rungs provide high strength to weight ratio
- Vibration tested
- Patented fastener holes provide maximum grip for fastener threads
- Innovative time saving accessories
- Fast, easy to modify tray in the field

Patent Information

U.S. Patent D361982; 5,580,014
Canada 2,137,879
UK Patent 2,285,343

******If your application requires removal of more than one (1) rung from a KwikRail straight section, please contact the B-Line series technical team. We do not recommend removing rungs from the welded system. Please contact us if you have any questions.*

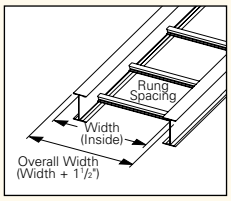
Straight Sections see pages KR-1 – KR-3
Accessories see pages KR-4 – KR15
Covers see page KR-10
Fittings see pages KR16 – KR-20
Specifications see pages KR-21 – KR-22

KwikRail Straight Section Part Numbering

Prefix

Example: **KR A 4 A B 09 - 12 - 144**

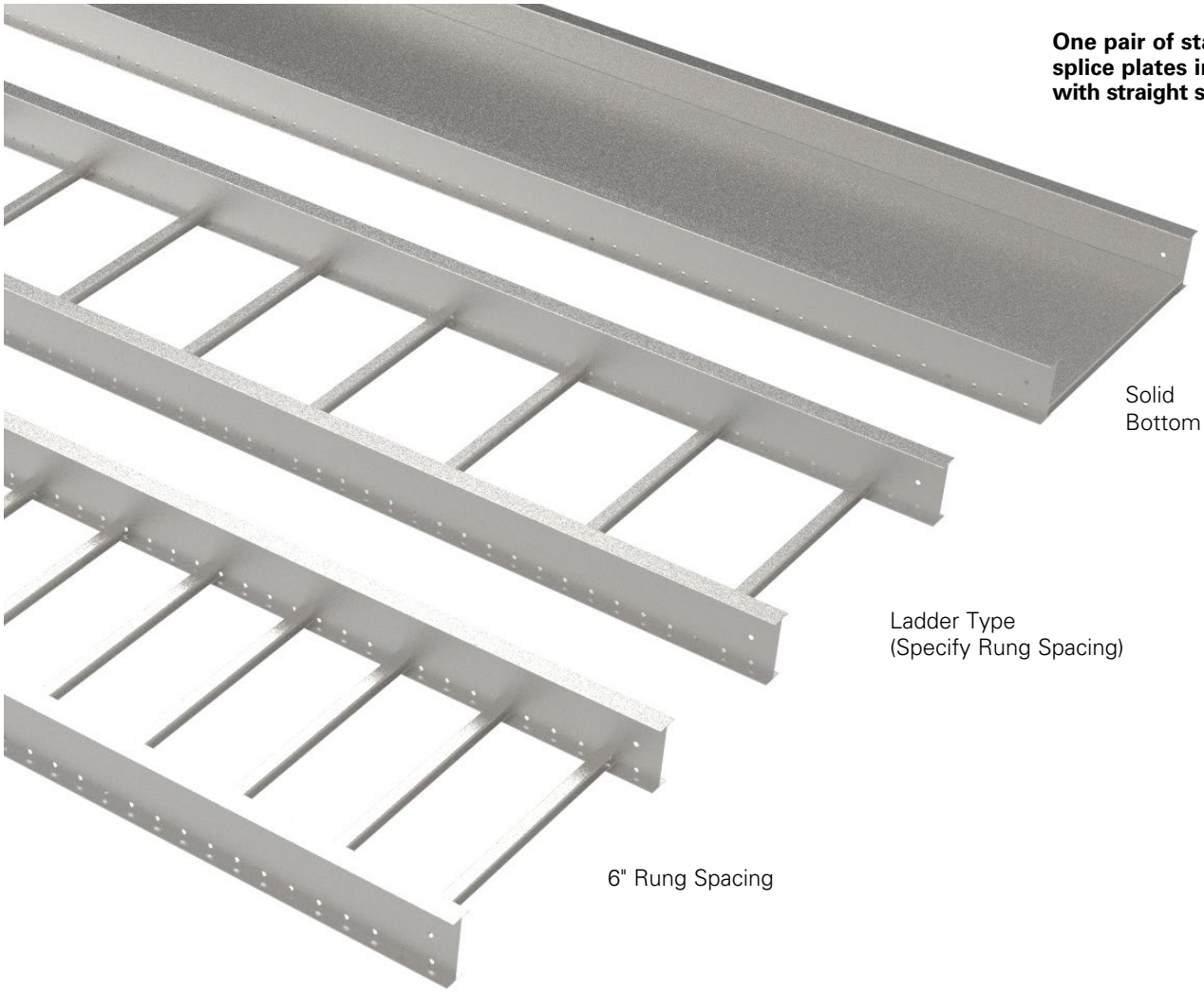
Series	NEMA Class	Height	Material	Fabrication	Type	Width	Length
KR	A = 50 Lbs/Ft NEMA 12A (12 ft. span) B = 75 Lbs/Ft NEMA 12B (12 ft. span)	4 = 4" 6 = 6"**	A = Aluminum	Blank = Welded B = Bolted	● SB = Solid Bottom* ● 04 = 4" rung spacing* ● 06 = 6" rung spacing ● 09 = 9" rung spacing ● 12 = 12" rung spacing	06 = 6" 09 = 9" 12 = 12" 18 = 18" 24 = 24" 30 = 30" 36 = 36"	● 144 = 12 ft. ● 120 = 10 ft.



* 4" rung spacing and solid bottom only available on welded fabrication.

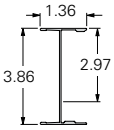
** Only available in NEMA 12 B class

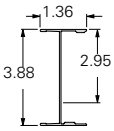
● Green = Fastest shipped items ● Black = Normal lead-time items

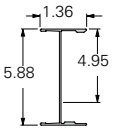


All dimensions in parentheses are millimeters unless otherwise specified.

KRA4A, KRB4A and KRB6A
Straight Section Technical Data

Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
KRA4A 	NEMA: 12A CSA: C-3m UL Cross-Sectional Area: 0.60 in²	6	221	0.0016	Area = 0.80 in² Sx = 0.90 in³ Ix = 1.79 in⁴	1.8	328	0.028	Area = 5.16 cm² Sx = 14.75 cm³ Ix = 74.51 cm⁴
		8	124	0.0051		2.4	185	0.088	
		10	79	0.0126		3.0	125	0.215	
		12	55	0.0261		3.7	82	0.445	

Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
KRB4A 	NEMA: 12B CSA: D-3m UL Cross-Sectional Area: 0.60 in²	8	198	0.0040	Area = 0.99 in² Sx = 1.07 in³ Ix = 2.32 in⁴	2.4	295	0.068	Area = 6.39 cm² Sx = 17.53 cm³ Ix = 96.57 cm⁴
		10	127	0.0097		3.0	195	0.166	
		12	88	0.0201		3.7	131	0.343	

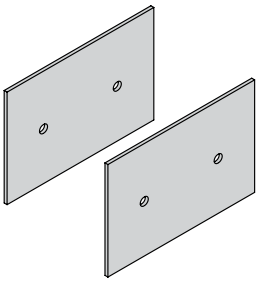
Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
KRB6A 	NEMA: 12B CSA: D-3m UL Cross-Sectional Area: 1.00 in²	8	170	0.0015	Area = 1.25 in² Sx = 1.91 in³ Ix = 6.16 in⁴	2.4	266	0.026	Area = 8.06 cm² Sx = 31.30 cm³ Ix = 256.40 cm⁴
		10	114	0.0037		3.0	179	0.062	
		12	79	0.0076		3.7	118	0.129	

When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%.
Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

Values are based on simple beam tests per NEMA VE-1 (NEMA BI 50015) on 36" wide cable tray with rungs spaced on 12" centers. The published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply the published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the tray.

Standard Splice Plates

- Furnished in pairs with 1/4" hardware.
- UL Classified as equipment grounding conductor.
- Splice plates and hardware included with straight sections and fittings.



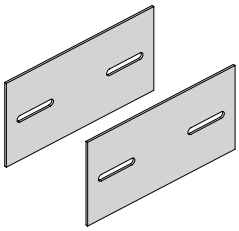
Tray Series	Catalog No.
KR_4A	**KR4A-SSP**
KRB6A	**KR6A-SSP**

_ = insert A or B for class

Expansion Splice Plates

- Furnished in pairs with 1/4" hardware.
- Bonding jumpers required on each side rail.

Requires supports within 24" on both sides, per NEMA VE 2.

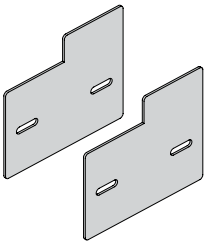


Tray Series	Catalog No.
KR_4A	**KR4A-ESP**
KRB6A	**KR6A-ESP**

_ = insert A or B for class

Step Down Splice Plates

- Furnished in pairs with 1/4" hardware.
- UL Classified as equipment grounding conductor.

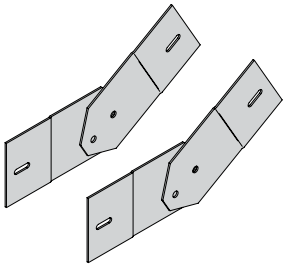


Tray Series	Catalog No.
KR_4A to KRB6A	**KRA-DSP-46**

_ = insert A or B for class

Vertical Adjustable Splice Plates

- Furnished in pairs with 1/4" hardware.
- UL Classified as equipment grounding conductor.
- Bonding jumpers not required.
- Requires supports within 24" on both sides, per NEMA VE 2.

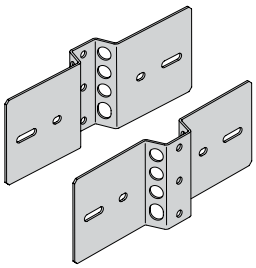


Tray Series	Catalog No.
KR_4A	**KR4A-VSP**
KRB6A	**KR6A-VSP**

_ = insert A or B for class

Horizontal Adjustable Splice Plates (Flex-Mount™)

- Furnished in pairs with 1/4" hardware.
- Horizontally adjustable to 90°.
- Vertically adjustable to 15°.
- UL Classified as equipment grounding conductor.
- Requires supports within 24" on both sides, per NEMA VE 2.
- For optional rung, see page KR-14.

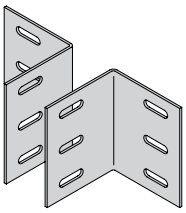


Tray Series	Catalog No.
KR_4A	**KR4A-FSP**
KRB6A	**KR6A-FSP**

_ = insert A or B for class

Tray-To-Box Splice Plates

- Furnished in pairs with 1/4" hardware.



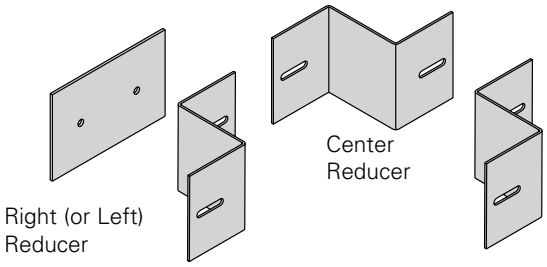
Tray Series	Catalog No.
KR_4A	**KR4A-TTB**
KRB6A	**KR6A-TTB**

_ = insert A or B for class

All dimensions in parentheses are millimeters unless otherwise specified.

Offset Reducing Splice Plates

- Furnished in pairs with 1/4" hardware.



Tray Series	Catalog No.
KR_4A	**KR4A-RSP-† r**
KRB6A	**KR6A-RSP-† r**

_ = insert A or B for class

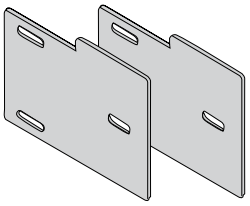
Specify the following:

† C = center reducer
S = side reducer

r (tray reduction) 3", 6", 9", 12", 15", 18", 21", 24", 27", or 30"

Adapter Splice Plates

- Furnished in pairs with 1/4" hardware.
- For transitioning from Redi-Rail to KwikRail.

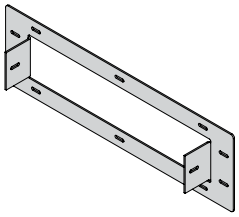


Tray Series	Catalog No.
KR_4A	**KR4A-ASP**
KRB6A	**KR6A-ASP**

_ = insert A or B for class

Frame Type Box Connector

- Furnished with 1/4" hardware for tray connection.

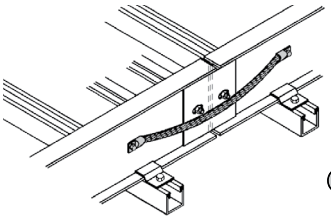


Tray Series	Catalog No.
KR_4A	**KR4A-FTB-†**
KRB6A	**KR6A-FTB-†**

† = Insert tray width

Bonding Jumper

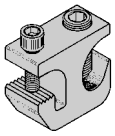
- Sold individually with ¼" hardware.
- UL Classified.
- Length: 14 1/2" (368mm)



Ampacity	Catalog No.
1200	**99-30**

Grounding Clamp

- Accepts #6 AWG to 250 MCM.
- UL Classified.

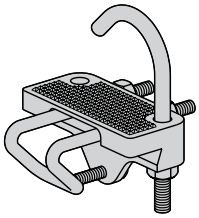


Material	Catalog No.
Tin plated aluminum	**9A-2130**

Eaton's B-Line series cable tray is UL® classified as to its suitability as an equipment grounding conductor. If a separate conductor for additional grounding capability is desired, we offer this clamp for bolting the conductor at least once to each tray section.

Conduit-to-Tray Adaptors

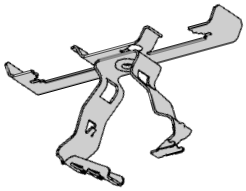
- For easy attachment of conduit terminating at a cable tray.
- Use on aluminum or steel cable trays.
- UL Classified.



Conduit Size in.	(mm)	Catalog No.
1/2, 3/4	(15, 20)	**9G-1158-1/2 & 3/4**
1, 1 1/4	(25, 32)	**9G-1158-1 & 1 1/4**
1 1/2, 2	(40, 50)	**9G-1158-1 1/2 & 2**
2 1/2, 3	(65, 80)	**9G-1158-2 1/2 & 3**
3 1/2, 4	(90, 100)	**9G-1158-3 1/2 & 4**

Guide-Rite™ Conduit-to-Tray Adaptor

- Assemblies support 1/2", 3/4", & 1" conduit.
- Attaches to top or bottom of I-Beam side rail flange.



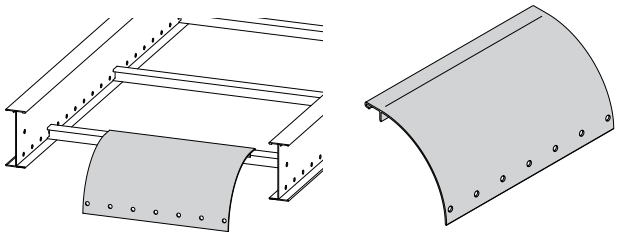
Conduit Size in.	(mm)	Catalog No.
1/2, 3/4	(15, 20)	**BG-8-12-W2**
1, 1 1/4	(25, 32)	**BG-16-W2**

Patent #4958792

All dimensions in parentheses are millimeters unless otherwise specified.

Drop-Out

- Snaps on to both bolted and welded rung variations .
- Provides 4" (101mm) radius.
- Holes provided to secure cables.

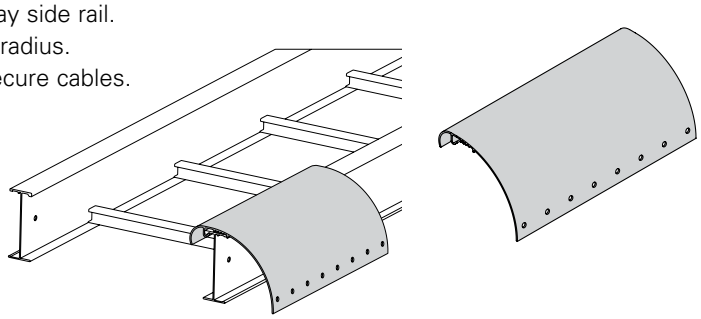


Catalog No.
KRA-OUT-†

† = Insert tray width

Side Rail Drop-Out

- Snaps on to cable tray side rail.
- Provides 4" (101mm) radius.
- Holes provided to secure cables.

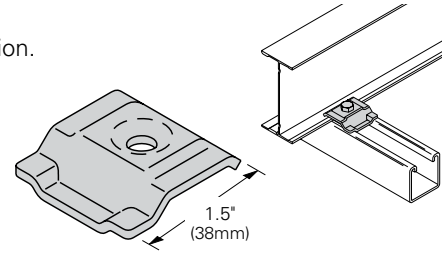


Catalog No.	Length in.	Length (mm)
KRA-SDO-06	6	(152)
KRA-SDO-12	12	(305)
KRA-SDO-18	18	(457)

Clamp/Guide

- Features a no-twist design.
- Each side is labeled to ensure proper installation.
- Designed for 1/4" hardware.
- Furnished in pairs with or without hardware.
- Not recommended for vertical support.

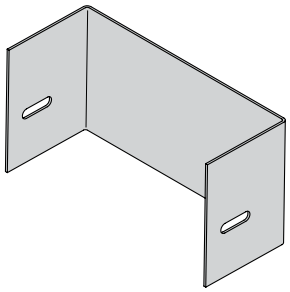
Patent No. RE35479



Catalog No.
9ZN-1204 (without hardware)
9ZN-1204NB (with hardware)

Blind End

- Furnished as one plate with 1/4" hardware.



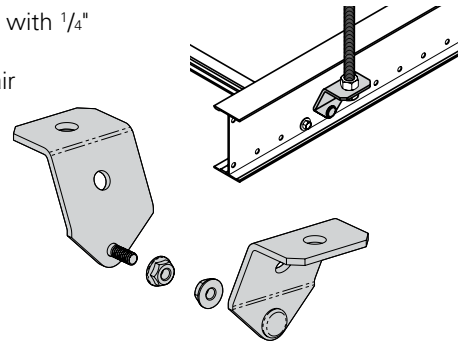
Tray Series	Catalog No.
KR_4A	KR4A-END-†
KRB6A	KR6A-END-†

† = Insert tray width

_ = insert A or B for class

Hanger Rod Bracket

- Furnished as pair of studded clamps with 1/4" serrated flanged lock nuts.
- Loading is 1,000 lbs. (4.45kN) per pair with safety factor of 3.
- Position ATR 3" (76mm) wider than cable tray.



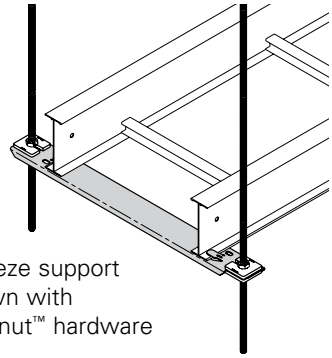
Support ATR Size	Catalog No.
3/8"	9(*)-R238
1/2"	9(*)-R250

(*) Insert ZN option or SS4 option

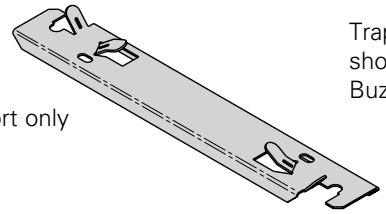
All dimensions in parentheses are millimeters unless otherwise specified.

Tab and Lock Trapeze Support

- Hardware purchased separately.
- Accepts up to 3/8" rod.
- Accepts traditional hold down clamps (9ZN-1204) if necessary.
- Ability to adjust tabs with flat head screw driver (not included).
- Tabs clamp cable tray to trapeze support.
- Load capacity: Rated for maximum load of KwikRail cable tray system.
- Corrosion resistant pre-galvanized zinc finish.
- Other finishes available upon request.

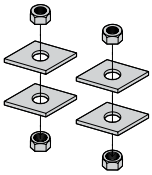


Trapeze support shown with Buzznut™ hardware

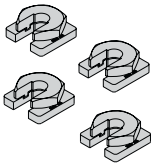


Trapeze support only

Hardware	Qty.	Catalog No.
Standard	(4) (4)	**B201** **3/8" HN**
	or	
Buzznut	(4)	**SLWN3/8**



Standard hardware



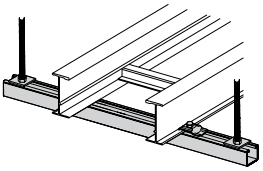
Buzznut hardware

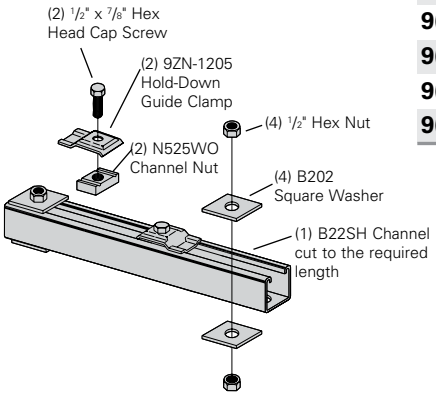
Catalog No.	Tray Width in.	(mm)
KRA-06CT	6	(152)
KRA-09CT	9	(229)
KRA-12CT	12	(305)
KRA-18CT	18	(457)
KRA-24CT	24	(610)
KRA-30CT	30	(762)
KRA-36CT	36	(914)

Trapeze Support Kit

Kit includes components for a single trapeze in one package.

- Kits available in pre-galvanized (P) or hot dip galvanized steel (G) with 316 stainless steel hardware.
- SH channel has pre-punched slots to eliminate field drilling
- Hardware is shipped in sealed plast back and boxed with pre-cut strut.
- Design for use with 1/2" all threaded rod (sold separately).
- Safety factor of 3.0 on all loads.



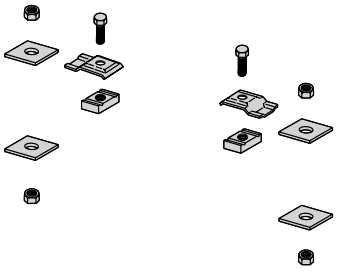


Catalog No.	Tray Width in.	(mm)	Channel Length in.	(mm)	Uniform Load lbs	(kN)
9(*)-5506-22SH(†)	6	(152)	16	(406)	1600	(7.11)
9(*)-5509-22SH(†)	9	(229)	18	(457)	1250	(5.56)
9(*)-5512-22SH(†)	12	(305)	22	(559)	1125	(5.00)
9(*)-5518-22SH(†)	18	(457)	28	(711)	865	(3.85)
9(*)-5524-22SH(†)	24	(610)	34	(864)	700	(3.11)
9(*)-5530-22SH(†)	30	(762)	40	(1016)	590	(2.62)
9(*)-5536-22SH(†)	36	(914)	46	(1168)	510	(2.27)

- (*) Insert P or G
- (†) Insert 3/8 for 3/8" threaded rod hardware.

Trapeze Hardware Kit

- Hardware shipped in plastic bag.

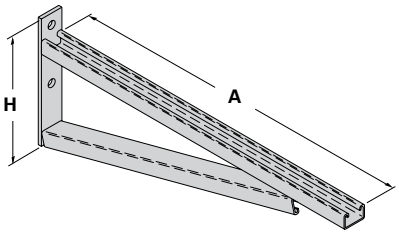


Catalog No.	
9ZN-5500-1/2	**9G-5500-1/2**
(1) pr. 9ZN-1205	(1) pr. 9G-1205
(2) HHC Screw 1/2 x 7/8 ZN	(2) HHC Screw 1/2 x 7/8 SS6
(2) N525 WO ZN	(2) N525 WO SS6
(4) B202 ZN 1/2" sq washer	(4) B202 HDG 1/2" sq washer
(4) HN 1/2 ZN	(4) HN 1/2 SS6

All dimensions in parentheses are millimeters unless otherwise specified.

Bracket

- Finishes available: ZN, GRN, or HDG.
- Safety Load Factor 2.5.
- Bottom brace is B42 channel on B494-24 and smaller and B22 channel on B494-30 and larger.

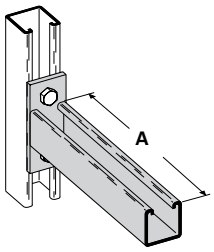


Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)	'H' in.	(mm)
B494-12	2500	(11.12)	6 & 9	(152 & 229)	12	(305)	8 3/4	(222)
B494-18	1700	(7.56)	12	(305)	18	(457)	8 3/4	(222)
B494-24	1300	(5.78)	18	(457)	24	(610)	8 3/4	(222)
B494-30	1600	(7.11)	24	(610)	30	(762)	11 1/4	(286)
B494-36	1100	(4.89)	30	(762)	36	(914)	11 1/4	(286)
B494-42	980	(4.36)	36	(914)	42	(1067)	16	(406)

For more dimensional data, see B-Line series Strut Systems catalog.

Cantilever Bracket

- Finishes available: ZN, GRN, HDG, SS4 or SS6.
- Safety Load Factor 2.5.

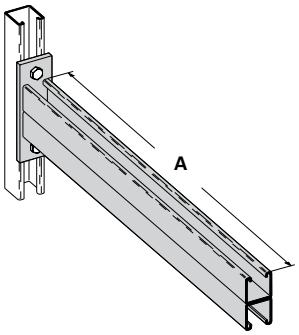


Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)
B409-12	960	(4.27)	6 & 9	(152 & 229)	12	(305)
B409-18	640	(2.84)	12	(305)	18	(457)
B409-24	480	(2.13)	18	(457)	24	(610)

For more dimensional data, see B-Line series Strut Systems catalog.

Cantilever Bracket

- Finishes available: ZN, GRN, HDG, or SS4.
- Safety Load Factor 2.5.



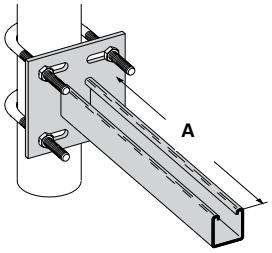
Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)
B297-12	1660	(7.38)	6 & 9	(152 & 229)	12	(305)
B297-18	1100	(4.89)	12	(305)	18	(457)
B297-24	835	(3.71)	18	(457)	24	(610)
B297-30	665	(2.95)	24	(610)	30	(762)
B297-36	550	(2.44)	30	(762)	36	(914)
B297-42	465	(2.06)	36	(914)	42	(1067)

For more dimensional data, see B-Line series Strut Systems catalog.

All dimensions in parentheses are millimeters unless otherwise specified.

Underfloor Support (U-Bolts not included)

- Finishes available: ZN.
- Safety Load Factor 2.5.
- Order 2 properly sized U-Bolts (sold separately) for each underfloor support.

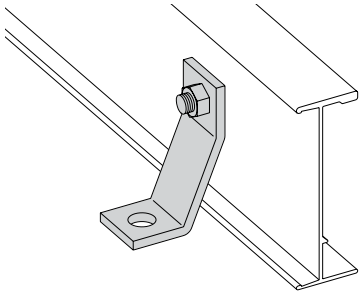


Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)
B409UF-12	800	(3.55)	6 & 9	(152 & 229)	12	(305)
B409UF-21	450	(2.00)	12 & 18	(305 & 457)	21	(533)

U-Bolt Size	Fits Pipe O.D. in.	(mm)
B501-3/4	.841 - 1.050	(21 - 26)
B501-1	1.051 - 1.315	(27 - 33)
B501-1 1/4	1.316 - 1.660	(33 - 42)
B501-1 1/2	1.661 - 1.900	(42 - 48)
B501-2	1.901 - 2.375	(48 - 60)
B501-2 1/2	2.376 - 2.875	(60 - 73)

Heavy Duty Hold Down Bracket

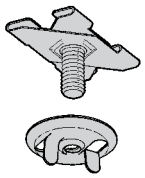
- Design load is 2000 lbs/pair.
- Two bolt design.
- Sold in pairs.
- 3/8" cable tray attachment hardware provided.
- 3/8" support attachment hardware **not** provided.
- Recommended for support of vertical trays.
- (*) Insert ZN, SS4, or SS6.

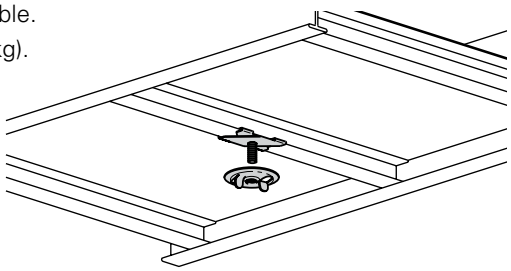


Catalog No.
9(*)-1241

Under Rung Fastener Attachment

- Supports electrical fixtures from bottom of rung or siderails.
- Wing nut included.
- Various 1/4"-20 stud lengths available.
- Static Load Capacity: 75 Lbs. (34kg).





Catalog No.	Stud Length in.	(mm)
BAX-4-16	5/8	(16)
BAX-4-16-24	1 1/2	(38)
BAX-4-16-32	2	(51)
BAX-4-16-48	3	(76)

DURA-BLOK™ Support Bases with B22 Channel

- Designed as a superior rooftop support for cable tray, UV resistant and approved for most roofing material or other flat surfaces.
- Can be used with any of our cable tray clamps and guides.
- Ultimate Uniform Load Capacity: 1,000 lbs. (4.45kN).

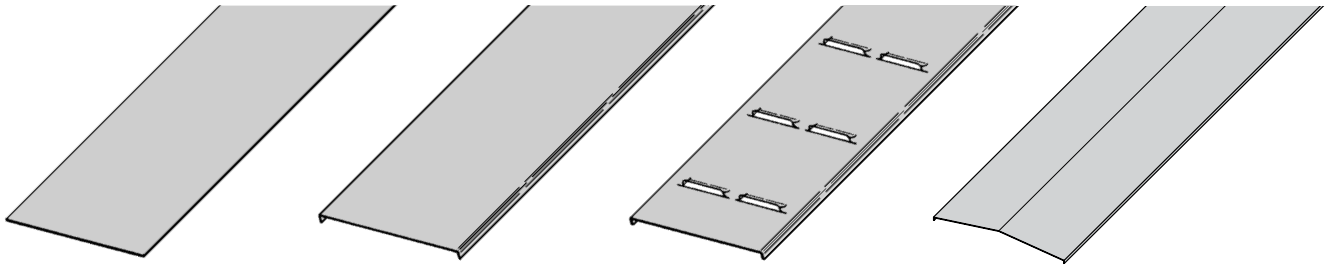
Catalog No.	Height x Width x Length in.	(mm)
DB10-28	5 5/8 x 6 x 28	(143 x 152 x 711)
DB10-36	5 5/8 x 6 x 36	(143 x 152 x 914)
DB10-42	5 5/8 x 6 x 42	(143 x 152 x 1067)
DB10-50	5 5/8 x 6 x 50	(143 x 152 x 1270)
DB10-60	5 5/8 x 6 x 60	(143 x 152 x 1524)

General Note: Consult roofing manufacturer or engineer for roof load capacity. The weakest point may be the insulation board beneath the rubber membrane.

LEEDS credit available, base made from 100% recycled material.

All dimensions in parentheses are millimeters unless otherwise specified.

Covers for KRA4A, KRB4A and KRB6A



Solid Non-Flanged | Solid Flanged | Ventilated Flanged | Peaked Flanged

A full range of covers are available for straight sections and fittings.

Solid covers should be used when maximum enclosure of the cable is desired and no accumulation of heat is expected.
Ventilated covers provide cable protection, while allowing heat to escape.
Flanged covers have a ½ in. (13 mm) flange.

We recommend that covers be placed on vertical cable tray runs to a height of 6 ft. (1.83 m) to 8 ft. (2.44 m) above the floor to both isolate cables and protect personnel. Cover clamps are not included with the cover and must be ordered separately.

Aluminum Cover Part Numbering

Prefix

Example: **80 7 A - 24 - 144**

Cover Type	Detail	Material	Tray Width	Item Description
80 = Solid	6 = Non-Flanged (80 & 81 type only)	A = Aluminum	06 = 6"	For Straight Section Cover:
81 = Ventilated	7 = Flange		09 = 9"	144 = 12 ft. (3.66 m)
82 = Peaked			12 = 12"	120 = 10 ft. (3.05 m)
			18 = 18"	72 = 6 ft. (1.83 m)
			24 = 24"	60 = 5 ft. (1.52 m)
			30 = 30"	For fitting covers: Insert suffix of fitting to be covered.
			36 = 36"	See example below.

Examples of Catalog Numbers for Fitting Covers:

Horizontal Bend Cover

Prefix / Suffix

80 7 A - 18 - 90 HB 24

- 24 — Radius
- HB — Fitting
- 90 — Angle
- 18 — Width
- A — Material
- 7 — Detail
- 80 — Cover Type

Vertical Bend Cover

Prefix / Suffix

80 7 A - 24 - 90 VO 24 - 4*

- 4* — Side Rail* Height
- 24 — Radius
- VO — Fitting
- 90 — Angle
- 24 — Width
- A — Material
- 7 — Detail
- 80 — Cover Type

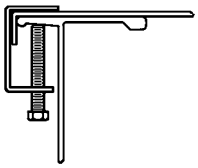
* Required for VO fittings only

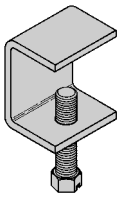
Check with B-Line Technical Support (blinetechnicalsupport@eaton.com) if there are questions/concerns about environmental loads for covers (wind, snow, sleet, rain, etc.).

All dimensions in parentheses are millimeters unless otherwise specified.

Standard Cover Clamp

- For indoor service only.
- Setscrew included.
- Sold per piece.

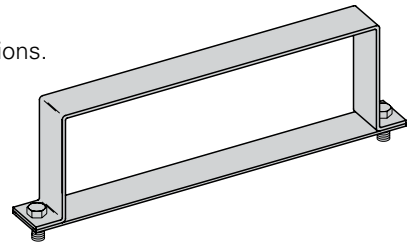




Tray Type	Side Rail Height	Catalog No.
KR Series	All Sizes	**9ZN-9012**
		9A-9012

Heavy Duty Cover Clamp

- Recommended for outdoor service.
- Should not be used on overlapping sections.
- Use Series 2-5 AL part numbers for peaked covers.



Side Rail Height in.	(mm)	Catalog No.
4	(101)	**KR4A-HDCC-(‡)**
6	(152)	**KR6A-HDCC-(‡)**

(‡) Insert tray width

Quantity of Standard Cover Clamps Required

Straight Section 60" or 72"	4 pcs.
Straight Section 120" or 144"	6 pcs.
Horizontal/Vertical Bends	4 pcs.
Tees	6 pcs.
Crosses	8 pcs.

Notes:

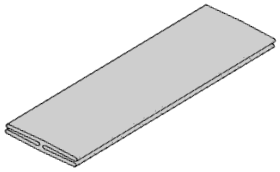
When using the Heavy Duty Cover Clamp, only one-half the number of clamps stated above is required.

Additional clamps may be necessary in extreme wind applications.

Cover Joint Strip

- Used to join covers.
- Plastic.
- Only for use on flat covers.
- Color - gray.
- (‡) Insert tray width.

Catalog No.
99-9980-(‡)

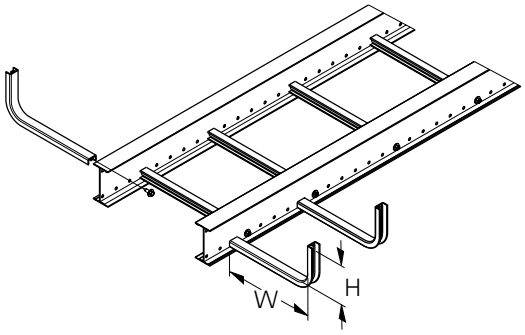


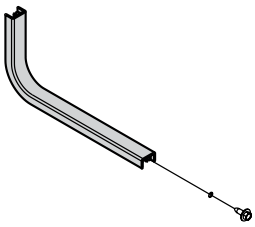
All dimensions in parentheses are millimeters unless otherwise specified.

Out Board Rungs

- Formed aluminum rung with attachment screw.
- Field installs as required.
- Torque rung fasteners to 6 ft•lbs.
- Uniform load capacity on rung: 10 lbs. (0.04kN)

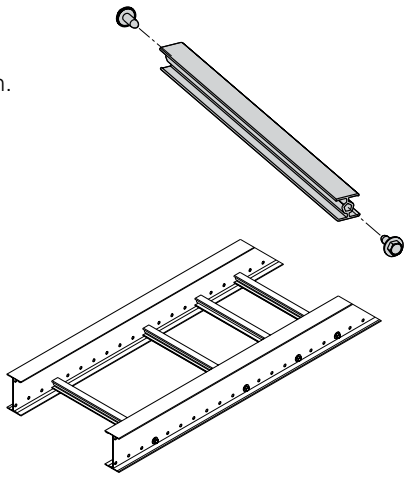
Catalog No.	Fill Depth 'H' in	(mm)	Width 'W' in	(mm)
9A-SR0406	4	101	6	152
9A-SR0409	4	101	9	226
9A-SR0506	5	127	6	152
9A-SR0509	5	127	9	226





Add-a-Rung Kit

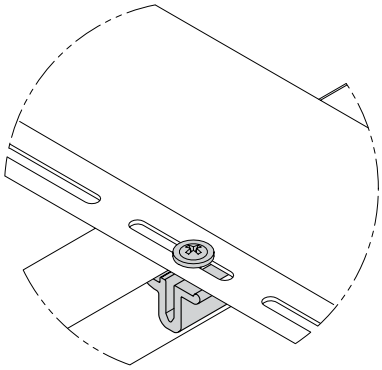
- Kit allows an additional rung to be added to a desired location throughout the tray system.
- Pre-cut rung sections supplied.
- Attachment hardware is included.
- Torque rung fasteners to 18 ft•lbs.
- Add-a-Rung™ kit can be added to welded or bolted versions of KwikRail.
- Add-a-Rung kit does not work on any of the KwikRail horizontal fittings.
- Add-a-Rung does work with KwikRail VI/VO fittings.



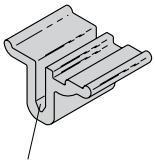
Tray Width in	(mm)	Catalog No.
6	(152)	**9A-R06RK**
9	(226)	**9A-R09RK**
12	(305)	**9A-R12RK**
18	(452)	**9A-R18RK**
24	(609)	**9A-R24RK**
30	(762)	**9A-R30RK**
36	(914)	**9A-R36RK**

Barrier Strip Clip

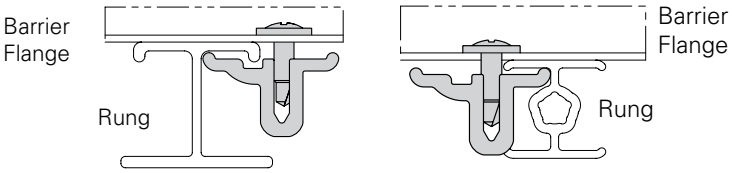
- Provides attachment to bolted or welded KwikRail rungs.
- Allows for installed barrier adjustment.
- Asymmetrical clip provides a wide range for screw location.
- Barrier strip clips and hardware are included with all barriers.



Catalog No.
9A-RBC



Screw slot for sheet metal screw



Welded rung assembly

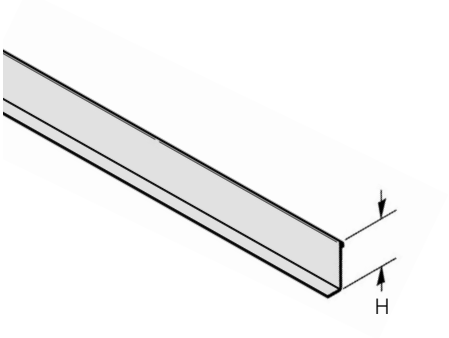
Bolted rung assembly

All dimensions in parentheses are millimeters unless otherwise specified.

Straight Section Barrier Strip

- Furnished with four (4) barrier strip clips, mounting hardware and splice.
- Standard lengths are 144" or 12 ft (3.7m) & 120" or 10 ft (3.0m).
- Order catalog number based on loading depth 'H'.

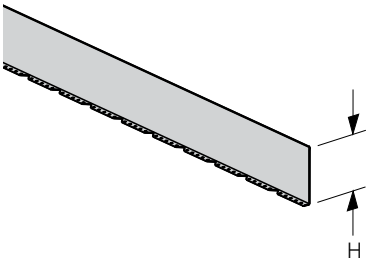
Tray Series	Catalog No.	H in.	H (mm)
KR_4A	**KR4A-DSL-Length**	3	(76)
KRB6A	**KR6A-DSL-Length**	5	(127)



Horizontal Bend Barrier Strip

- Furnished with three (3) barrier strip clips, mounting hardware and splice.
- Standard length is 72" or 6 ft (1.8m).
- Flexible to fit desired angles.
- Order catalog number based on loading depth 'H'.

Tray Series	Catalog No.	H in.	H (mm)
KR_4A	**KR4A-DHB**	3	(76)
KRB6A	**KR6A-DHB**	5	(127)

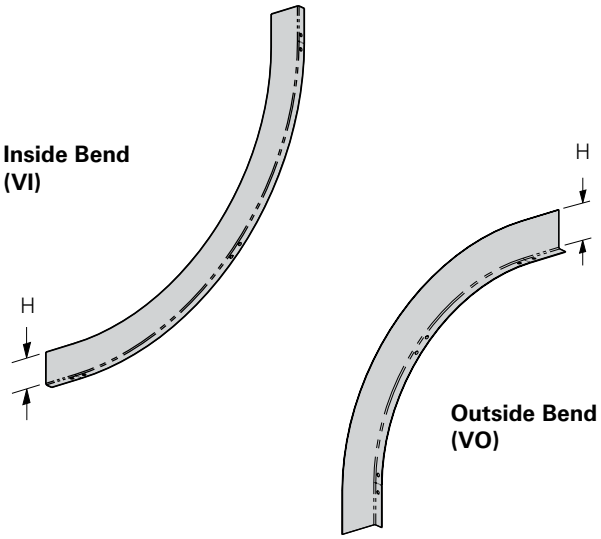


Vertical Bend Barrier Strip

- Furnished with three (3) barrier strip clips, mounting hardware and splice.

Tray Series	Catalog No. Inside Bend	Catalog No. Outside Bend	H in.	H (mm)
KR_4A	**KR4A-DVI-(**)R(†)**	**KR4A-DVO-(**)R(†)**	3	(76)
KRB6A	**KR6A-DVI-(**)R(†)**	**KR6A-DVO-(**)R(†)**	5	(127)

(**) Insert 45°, 90° for angles
(†) Insert 12, 24 for radius

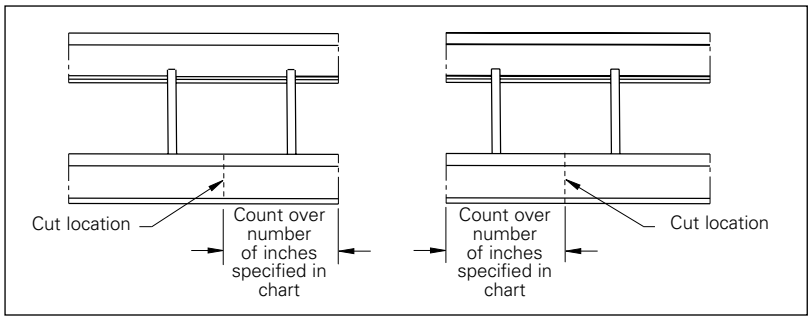


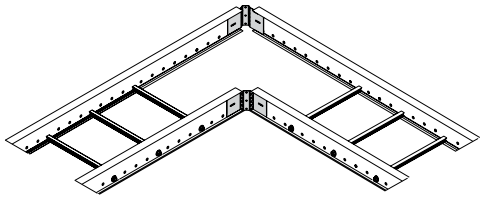
All dimensions in parentheses are millimeters unless otherwise specified.

How to miter cut KwikRail cable tray for use with Horizontal Adjustable splice plates.

- Mark desired hole/cut locations per chart.
- Remove any rungs (if necessary) affected by cuts.
- Cut side rails through center of required holes per chart.
- Mount outside Horizontal Adjustable splice plate with provided hardware and bend KwikRail sections to desired angle.
- Form inside Horizontal Adjustable splice plate to fit contour of inner rails and bolt into place.
- Reinstall (if necessary) appropriate rungs. Torque to 18 ft•lbs.
- If Splice Rung Kit (see below) is required, order separately.
- Recommend adding one to the value in the chart if the first hole is less than 3/8" (9.5mm) from the end of tray.

Tray Width		Cut Length from Rail End For Desired Angle							
		30°		45°		60°		90°	
in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
6	(152)	1 5/8	(41.3)	3 1/8	(79.4)	3 1/8	(79.4)	6 1/4	(158.7)
9	(228)	3 1/8	(79.4)	3 1/8	(79.4)	4 3/4	(120.6)	9 3/8	(238.2)
12	(305)	3 1/8	(79.4)	4 1/8	(120.6)	6 1/4	(158.7)	12 5/8	(320.7)
18	(457)	4 3/4	(120.6)	7 7/8	(200.0)	11	(279.4)	17 1/4	(438.1)
24	(609)	6 1/4	(158.7)	9 3/8	(238.2)	14 1/8	(358.8)	23 5/8	(600.1)
30	(762)	7 7/8	(200.0)	12 5/8	(320.7)	17 1/4	(438.1)	29 7/8	(758.8)
36	(914)	9 3/8	(238.2)	15 3/4	(400.0)	20 3/8	(517.5)	36 1/8	(917.6)





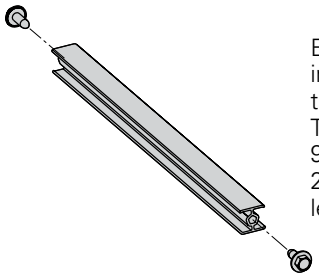
KRA5A09-12-144 Straight Section shown with required side rail removed to form 90° fitting.

Example: For a 12" (305mm) wide 90° bend, the cuts must be made 12 5/8" (320.7mm) from the end.

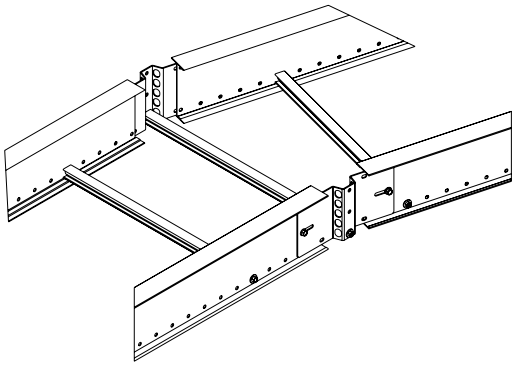
Flex-Mount Splice Rung Kit

- Kit allows a support rung to be added to flex-mount splice plates so that cables may be supported through a bend.
- The support rung is available in three lengths and should be ordered based upon tray width.
- The rung length is sized so that it will fit a maximum tray width when Flex-Mount™ splices are used to make a bend up to 90°.
- Once the Flex-Mount splices are installed in the cable tray system, the distance between the splice mounting surfaces should be measured. Cut support rung to the measured distance and install using the hardware included. Torque to 18 ft•lbs.

For Tray Width		Catalog No.	Actual Rung Length	
in.	(mm)		in.	(mm)
Up to 12	(Up to 305)	**9A-RFM-12RK**	20"	(508)
18 & 24	(453 to 609)	**9A-RFM-24RK**	37"	(940)
30 & 36	(762 to 914)	**9A-RFM-36RK**	54"	(1448)



Example: Flex connectors are installed on an 18" (452mm) wide tray with approximately a 45° bend. The correct support rung kit is 9A-RFM-24RK. The tray width is 24" (609mm) orless and the angle is less than 90°.



Data Cables

The National Electrical Code allows for 50% fill of ventilated cable tray for control or signal wiring (Article 392-9(b)).

This rule requires that all the individual cable cross-sectional areas added up may not exceed one half the cable tray area.

The cable tray area is equal to the width times the load depth.

In actual practice with data cables, however, the cable tray becomes completely full in reaching the "50% cable fill".

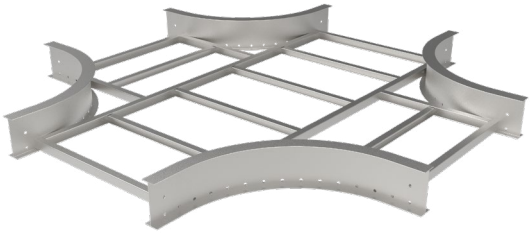
The tray is completely full, but the sum of the cable areas is only 50% of the tray area, due to the empty spaces between the cables.

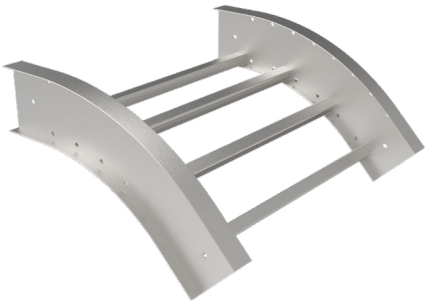
Data Cable Fill and Weight Chart

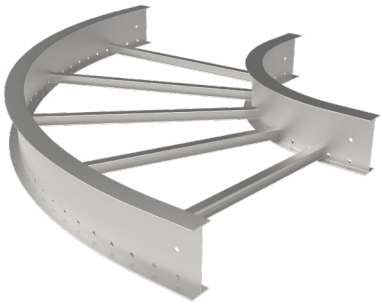
Number of Category 5/5e/6 Cables and Calculated Cable Weight in Lbs/Ft

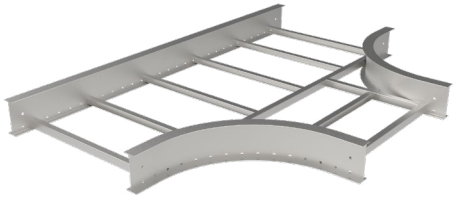
Tray Depth	Tray Width													
	6" (152mm)		9" (228mm)		12" (305mm)		18" (457mm)		24" (609mm)		30" (762mm)		36" (914mm)	
in (mm)	Cables	lbs/ft	Cables	lbs/ft	Cables	lbs/ft	Cables	lbs/ft	Cables	lbs/ft	Cables	lbs/ft	Cables	lbs/ft
4" (101)	347	9	520	13	693	18	1040	27	1386	35	1733	43	2079	54
6" (152)	520	14	780	20	1040	27	1559	41	2079	52	2599	64	3119	81

This chart was based on 50% fill of 4 UTP Category 5, 5e, or 6 cables (O.D. = .21" .026 lbs/ft). In the above loading grid, the weight of the cables is not the issue. The volume capacity of the tray governs. For example, the worst case (6" load depth, 36" wide) has a total cable weight of 81 lbs/ft.









Note: All fittings are only offered in welded assembly

Fittings engineered with 3" tangents for splicing integrity.

Fitting Part Numbering

Prefix

Example: **KR 4 A 09 - 12 - 90 HB 24**

Series	Height	Material	Type	Width	Angle*	Fitting Type	Radius
KR = KwikRail	4 = 4" 6 = 6"	A = Aluminum	**Ladder** 09 = 9" rung spacing **Other** 04 = 4" rung spacing SB = Solid Bottom	06 = 6" 09 = 9" 12 = 12" 18 = 18" 24 = 24" 30 = 30" 36 = 36"	45 = 45° 90 = 90°	*HB = Horizontal Bend HT = Horizontal Tee HX = Horizontal Cross *VI = Vertical Inside Bend *VO = Vertical Outside Bend	12 = 12" 24 = 24"

* Angle only required for HB, VI and VO fittings.

For ventilated or solid bottom, add 04 or SB as shown below: Available 6" thru 36"

Prefix
KR6A04 - 24 - 90HB24
4" Rung Spacing Bottom

Prefix
KR6ASB - 24 - 90HB24
Solid Bottom

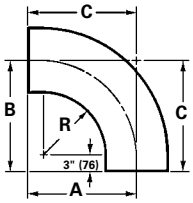
All dimensions in parentheses are millimeters unless otherwise specified.

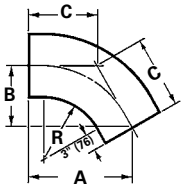
Horizontal Bend 90° 45° (HB)

1 pair splice plates with hardware included.

90˚ Horizontal Bend

45˚ Horizontal Bend





Bottoms manufactured:

Ladder = 9" Rung Spacing
04 = 4" Rung Spacing
SB = Flat sheet over 9" Rung Spacing

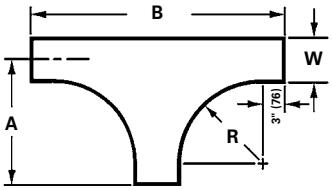
Bend Radius R in. (mm)	Tray Width in. (mm)	90˚ Horizontal Bend Catalog No.	A in. (mm)	B in. (mm)	C in. (mm)	45˚ Horizontal Bend Catalog No.	A in. (mm)	B in. (mm)	C in. (mm)
	6 (152)	**(Pre)-06-90HB12**	18 (457)	18 (457)	18 (457)	**(Pre)-06-45HB12**	15 3/4 (400)	6 1/2 (165)	9 3/16 (233)
	9 (228)	**(Pre)-09-90HB12**	19 1/2 (495)	19 1/2 (495)	19 1/2 (495)	**(Pre)-09-45HB12**	16 13/16 (427)	6 15/16 (176)	9 13/16 (249)
	12 (305)	**(Pre)-12-90HB12**	21 (533)	21 (533)	21 (533)	**(Pre)-12-45HB12**	17 7/8 (454)	7 3/8 (187)	10 7/16 (265)
12 (305)	18 (457)	**(Pre)-18-90HB12**	24 (610)	24 (610)	24 (610)	**(Pre)-18-45HB12**	20 (508)	8 1/4 (210)	11 11/16 (297)
	24 (610)	**(Pre)-24-90HB12**	27 (686)	27 (686)	27 (686)	**(Pre)-24-45HB12**	22 1/16 (560)	9 1/8 (232)	12 15/16 (329)
	30 (762)	**(Pre)-30-90HB12**	30 (762)	30 (762)	30 (762)	**(Pre)-30-45HB12**	22 1/16 (560)	9 1/8 (232)	12 15/16 (329)
	36 (914)	**(Pre)-36-90HB12**	33 (838)	33 (838)	33 (838)	**(Pre)-36-45HB12**	30 1/2 (775)	17 5/8 (448)	20 5/16 (516)
	6 (152)	**(Pre)-06-90HB24**	30 (762)	30 (762)	30 (762)	**(Pre)-06-45HB24**	24 3/16 (614)	10 (254)	14 3/16 (360)
	9 (228)	**(Pre)-09-90HB24**	31 1/2 (800)	31 1/2 (800)	31 1/2 (800)	**(Pre)-09-45HB24**	25 1/4 (641)	10 1/2 (267)	14 13/16 (376)
	12 (305)	**(Pre)-12-90HB24**	33 (838)	33 (838)	33 (838)	**(Pre)-12-45HB24**	26 5/16 (668)	10 15/16 (278)	15 7/16 (392)
24 (610)	18 (457)	**(Pre)-18-90HB24**	36 (914)	36 (914)	36 (914)	**(Pre)-18-45HB24**	28 7/16 (722)	11 13/16 (300)	16 11/16 (424)
	24 (610)	**(Pre)-24-90HB24**	39 (991)	39 (991)	39 (991)	**(Pre)-24-45HB24**	30 9/16 (766)	12 11/16 (322)	17 15/16 (456)
	30 (762)	**(Pre)-30-90HB24**	42 (1067)	42 (1067)	42 (1067)	**(Pre)-30-45HB24**	32 11/16 (830)	13 9/16 (344)	19 1/8 (486)
	36 (914)	**(Pre)-36-90HB24**	45 (1143)	45 (1143)	45 (1143)	**(Pre)-36-45HB24**	34 13/16 (884)	14 7/16 (367)	20 3/8 (518)

(Pre) = prefix. See page KR-16 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

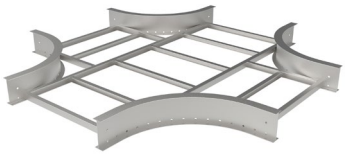
Horizontal Tee (HT)

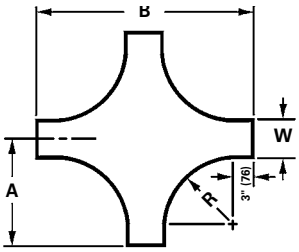
2 pair splice plates with hardware included.



Horizontal Cross (HX)

3 pair splice plates with hardware included.





Bend Radius R in. (mm)	Tray Width in. (mm)	Horizontal Tee Catalog Number	Horizontal Tee Dimensions A in. (mm)	Horizontal Tee Dimensions B in. (mm)	Horizontal Cross Catalog Number	Horizontal Cross Dimensions A in. (mm)	Horizontal Cross Dimensions B in. (mm)
12 (305)	6 (152)	**(Prefix)-06-HT12**	18 (457)	36 (914)	**(Prefix)-06-HX12**	18 (457)	36 (914)
	9 (229)	**(Prefix)-09-HT12**	19½ (496)	39 (991)	**(Prefix)-09-HX12**	19½ (496)	39 (991)
	12 (305)	**(Prefix)-12-HT12**	21 (533)	42 (1067)	**(Prefix)-12-HX12**	21 (533)	42 (1067)
	18 (457)	**(Prefix)-18-HT12**	24 (609)	48 (1219)	**(Prefix)-18-HX12**	24 (609)	48 (1219)
	24 (609)	**(Prefix)-24-HT12**	27 (686)	54 (1372)	**(Prefix)-24-HX12**	27 (686)	54 (1372)
	30 (762)	**(Prefix)-30-HT12**	30 (762)	60 (1524)	**(Prefix)-30-HX12**	30 (762)	60 (1524)
	36 (914)	**(Prefix)-36-HT12**	33 (838)	66 (1676)	**(Prefix)-36-HX12**	33 (838)	66 (1676)
24 (610)	6 (152)	**(Prefix)-06-HT24**	30 (762)	60 (1524)	**(Prefix)-06-HX24**	30 (762)	60 (1524)
	9 (229)	**(Prefix)-09-HT24**	31½ (800)	63 (1600)	**(Prefix)-09-HX24**	31½ (800)	63 (1600)
	12 (305)	**(Prefix)-12-HT24**	33 (838)	66 (1676)	**(Prefix)-12-HX24**	33 (838)	66 (1676)
	18 (457)	**(Prefix)-18-HT24**	36 (914)	72 (1828)	**(Prefix)-18-HX24**	36 (914)	72 (1828)
	24 (609)	**(Prefix)-24-HT24**	39 (991)	78 (1982)	**(Prefix)-24-HX24**	39 (991)	78 (1982)
	30 (762)	**(Prefix)-30-HT24**	42 (1067)	84 (2134)	**(Prefix)-30-HX24**	42 (1067)	84 (2134)
	36 (914)	**(Prefix)-36-HT24**	45 (1143)	90 (2286)	**(Prefix)-36-HX24**	45 (1143)	90 (2286)

(Prefix) See page KR-16 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches for total outside width.
Manufacturing tolerances apply to all dimensions.

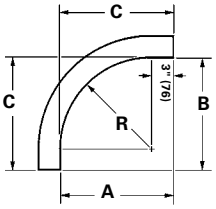
All dimensions in parentheses are millimeters unless otherwise specified.

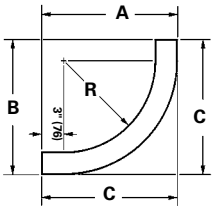
Vertical Bend 90˚ (VO, VI)

1 pair splice plates with hardware included.

90˚ Vertical Outside

90˚ Vertical Inside





Bend Radius R in. (mm)	Tray Width Insert in. (mm)	(*) Insert "VO" for Vert. Outside Bend "VI" for Vert. Inside Bend Catalog No.	VO Side Rail Height 4" - 6" (101-152) A in. (mm)	B in. (mm)	C in. (mm)	VI Side Rail Height 4" (101) A in. (mm)	B in. (mm)	C in. (mm)	6" (152) A in. (mm)	B in. (mm)	C in. (mm
12 (305)	6 (152)	**(Prefix)-06-90(*)12**	15 (381)	15 (381)	15 (381)	19 (483)	19 (483)	19 (483)	21 ((533)	21 (533)	21 (533)
	9 (228)	**(Prefix)-09-90(*)12**									
	12 (305)	**(Prefix)-12-90(*)12**									
	18 (457)	**(Prefix)-18-90(*)12**									
	24 (609)	**(Prefix)-24-90(*)12**									
	30 (762)	**(Prefix)-30-90(*)12**									
	36 (914)	**(Prefix)-36-90(*)12**									
24 (609)	6 (152)	**(Prefix)-06-90(*)24**	27 (686)	27 (686)	27 (686)	31 (787)	31 (787)	31 (787)	33 (838)	33 (838)	33 (838)
	9 (228)	**(Prefix)-09-90(*)24**									
	12 (305)	**(Prefix)-12-90(*)24**									
	18 (457)	**(Prefix)-18-90(*)24**									
	24 (609)	**(Prefix)-24-90(*)24**									
	30 (762)	**(Prefix)-30-90(*)24**									
	36 (914)	**(Prefix)-36-90(*)24**									

(Prefix) See page KR-16 for catalog number prefix.
Manufacturing tolerances apply to all dimensions.

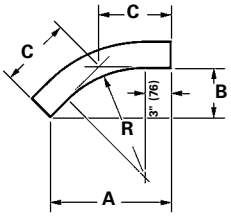
All dimensions in parentheses are millimeters unless otherwise specified.

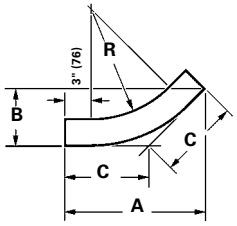
Vertical Bend 45° (VO, VI)

1 pair splice plates with hardware included.

45° Vertical Outside

45° Vertical Inside





Bend Radius R in. (mm)	Tray Width Insert in. (mm)	(*) Insert "VO" for Vert. Outside Bend "VI" for Vert. Inside Bend Catalog No.	VO Side Rail Height 4" - 6" (101-152) A in. (mm)	B in. (mm)	C in. (mm)	VI Side Rail Height 4" (101) A in. (mm)	B in. (mm)	C in. (mm)	6" (127) A in. (mm)	B in. (mm)	C in. (mm)
12 (305)	6 (152)	**(Prefix)-06-45(*)12**	$13\frac{5}{8}$ (346)	$5\frac{5}{8}$ (143)	8 (203)	$16\frac{7}{16}$ (417)	$6\frac{13}{16}$ (173)	$9\frac{5}{8}$ (245)	$17\frac{7}{8}$ (454)	$7\frac{3}{8}$ (188)	$10\frac{7}{16}$ (265)
	9 (228)	**(Prefix)-09-45(*)12**									
	12 (305)	**(Prefix)-12-45(*)12**									
	18 (457)	**(Prefix)-18-45(*)12**									
	24 (609)	**(Prefix)-24-45(*)12**									
	30 (762)	**(Prefix)-30-45(*)12**									
	36 (914)	**(Prefix)-36-45(*)12**									
24 (609)	6 (152)	**(Prefix)-06-45(*)24**	$22\frac{1}{16}$ (561)	$9\frac{1}{8}$ (232)	$12\frac{15}{16}$ (329)	$24\frac{15}{16}$ (634)	$10\frac{5}{16}$ (262)	$14\frac{5}{8}$ (372)	$26\frac{5}{16}$ (668)	$10\frac{15}{16}$ (278)	$15\frac{7}{16}$ (392)
	9 (228)	**(Prefix)-09-45(*)24**									
	12 (305)	**(Prefix)-12-45(*)24**									
	18 (457)	**(Prefix)-18-45(*)24**									
	24 (609)	**(Prefix)-24-45(*)24**									
	30 (762)	**(Prefix)-30-45(*)24**									
	36 (914)	**(Prefix)-36-45(*)24**									

(Prefix) See page KR-16 for catalog number prefix.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

Section 161xx - KwikRail Cable Tray

PART 1 GENERAL

1.01 Section Includes

A. The work covered under this section consists of the furnishing of all necessary labor, supervision, materials, equipment, tests and services to install complete cable tray systems as shown on the drawings.

B. Cable tray systems are defined to include, but are not limited to straight sections of of [ladder type] [vented bottom type] [solid bottom type] cable trays, bends, tees, elbows, drop-outs, supports, and accessories.

1.02 References

A. ANSI/NFPA 70 - National Electrical Code

B. NEMA VE 1-2009 (NEMA BI 50015) - Metallic Cable Tray Systems

C. NEMA VE 2-2013 (NEMA BI 50016) - Cable Tray installation Guidelines

1.03 Drawings

A. The drawings, which constitute a part of these specifications, indicate the general route of the cable runway systems. Data presented on these drawings is as accurate as preliminary surveys and planning can determine until final equipment selection is made. Accuracy is not guaranteed and field verification of all dimensions, routing, etc., is required.

B. Specifications and drawings are for assistance and guidance, but exact routing, locations, distances and levels will be governed by actual field conditions. Contractor is directed to make field surveys as part of his work prior to submitting system layout drawings.

1.04 Submittals

A. Submittal Drawings: Submit drawings of cable tray and accessories including clamps, brackets, hanger rods, splice plate connectors, expansion joint assemblies, and fittings, showing accurately scaled components.

B. Product Data: Submit manufacturer's data on cable tray including, but not limited to, types, materials, finishes, rung spacings, inside depths and fitting radii. For side rails and rungs, submit cross sectional properties including Section Modulus (Sx) and Moment of Inertia (Ix).

1.05 Quality Assurance

A. Manufacturers: Firms regularly engaged in manufacture of cable trays and fittings of types and capacities required, whose products have been in satisfactory use in similar service for not less than 10 years.

B. NEMA Compliance: Comply with NEMA Standards Publication Number VE 1, "Cable Tray Systems".

C. NEC Compliance: Comply with NEC, as applicable to construction and installation of cable tray and cable channel systems (Article 392, NEC).

D. UL Compliance: Provide products that are UL-classified and labeled.

E. NFPA Compliance: Comply with NFPA 70B, "Recommended Practice for Electrical Equipment Maintenance" pertaining to installation of cable tray systems.

1.06 Delivery, Storage and Handling

A. Deliver cable tray systems and components carefully to avoid breakage, denting and scoring finishes. Do not install damaged equipment.

B. Store cable trays and accessories in original cartons and in clean dry space; protect from weather and construction traffic. Wet materials should be unpacked and dried before storage.

PART 2 PRODUCTS

2.01 Acceptable Manufacturers

A. Subject to compliance with these specifications, B-Line series cable tray systems shall be as manufactured by Eaton.

2.02 Cable Tray Sections and Components

A. General: Except as otherwise indicated, provide metal cable trays, of types, classes, and sizes indicated; with splice plates, bolts, nuts, and washers for connecting units. Construct units with rounded edges and smooth surfaces; in compliance with applicable standards; and with the following additional construction features. Cable tray shall be installed according to the latest revision of NEMA VE-2 (NEMA BI 50016).

B. Material and Finish: Straight sections, fitting side rails, rungs and splice plates shall be extruded from Aluminum Association Alloy 6063. All fabricated parts shall be made from Aluminum Association Alloy 5052.

(continued on page KR-22)

(continued from page KRA-21)

2.03 Type of Tray System

A. Ladder Cable Trays shall consist of two longitudinal members (side rails) with transverse members (rungs) either mechanically fastened or welded to the side rails with the option to add mechanically fastened rungs at any point along the longitudinal members. Rungs shall be spaced [6] [9] [12] inches apart. Rung spacing in radiused fittings shall be industry standard 9" maximum and measured at the center of the tray's width. Mechanically fastened rungs shall be capable of easy removal, reinstallation, or replacement if necessary.

B. Ventilated Bottom Cable Trays shall consist of two longitudinal members (side rails) with rungs spaced 6" apart.

C. Solid Bottom Cable Trays shall consist of two longitudinal members (side rails) with a solid sheet over rungs spaced on 12" centers.

D. Cable tray loading depth shall be [3] [4] [5] inched per NEMA VE-1 (NEMA BI 50015).

E. Straight sections shall be supplied in standard [10 foot (3.05m)] [12 foot (3.65m)] lengths.

F. Cable tray widths shall be [6] [9] [12] [18] [24] [30] [36] inches or as shown on drawings.

G. Splice plates shall have (2) two nuts and bolts per plate. The resistance of fixed splice connections between adjacent sections of tray shall not exceed 0.00033 ohms. Splice plates shall be furnished with straight sections and fittings.

H. All fittings must have an inside radius of [12] [24] inches.

2.04 Loading Capacities

A. Cable trays shall meet NEMA class designation:
{NEMA 12A: [50 lbs./ft. on 12 ft. span]} OR {NEMA 12B: [75 lbs./ft. on 12 ft. span]}.

****** [OR] ******

B. Cable tray shall be capable of carrying a uniformly distributed load of _____ lbs./ft on a _____ foot support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE-1 (NEMA BI 50015) Section 5.2.

PART 3 EXECUTION

3.01 Installation

A. Install cable trays as indicated: Installation shall be in accordance with equipment manufacturer's instructions, and with recognized industry practices to ensure that cable tray equipment comply with requirements of NEC and applicable portions of NFPA 70B. Reference NEMA VE-2 (NEMA BI 50016) for general cable tray installation guidelines.

B. Coordinate cable tray with other electrical work as necessary to properly integrate installation of cable tray work with other work.

C. Provide sufficient space encompassing cable trays to permit access for installing and maintaining cables.

D. Cable tray fitting supports shall be located such that they meet the strength requirements of straight sections. Install fitting supports per NEMA VE-2 (NEMA BI 50016) guidelines, or in accordance with manufacturer's instructions.

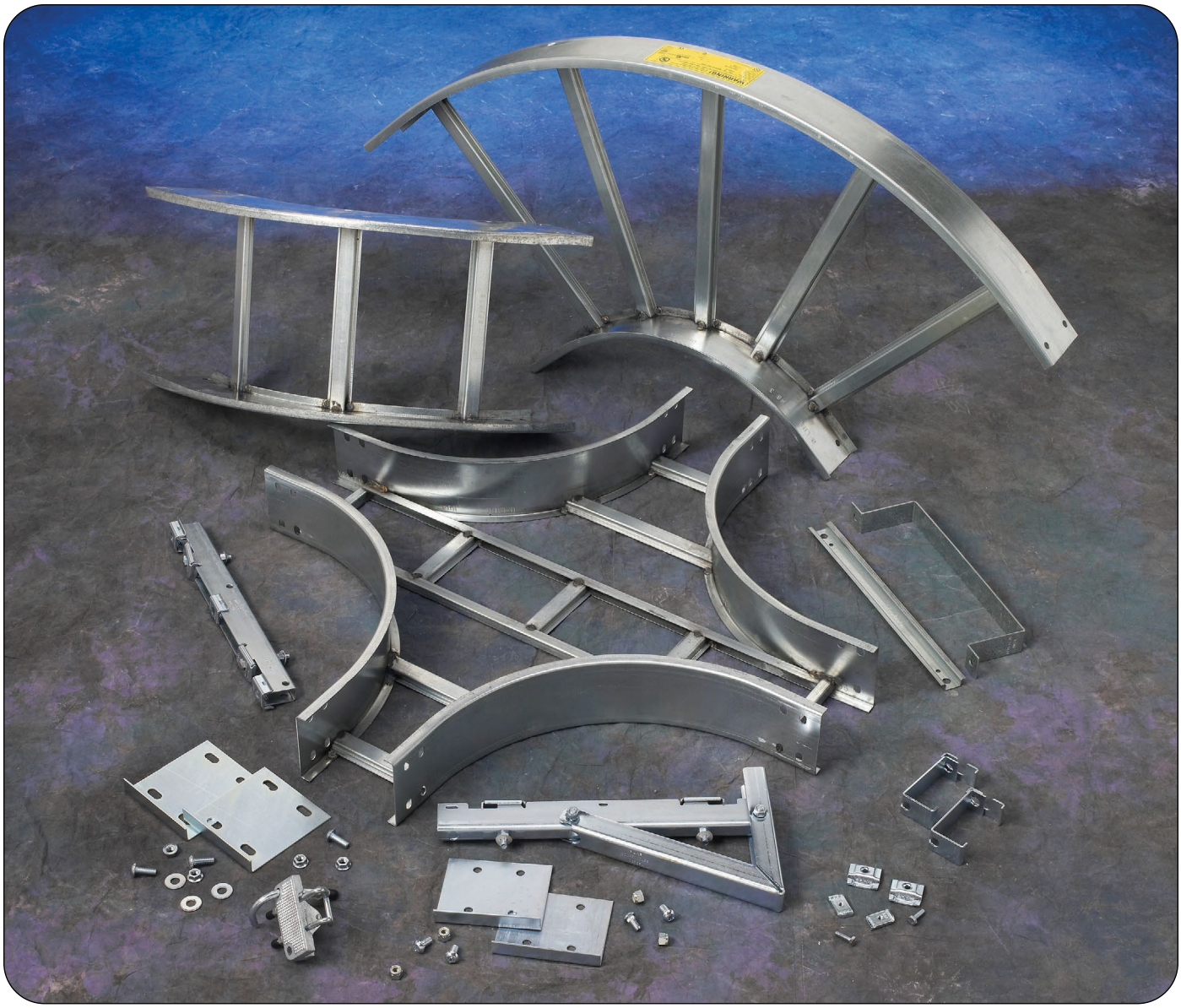
3.02 Testing

A. Test cable trays to ensure electrical continuity of bonding and grounding connections, and to demonstrate compliance with specified maximum grounding resistance. See NFPA 70B, Chapter 18, for testing and test methods.

B. Manufacturer shall provide test reports witnessed by an independent testing laboratory of the "worst case" loading conditions outlined in this specification and performed in accordance with the latest revision of NEMA VE-1-2002 (NEMA BI 50015)/CSA C22.2 No. 126.1-02.

END OF SECTION

Series 1 Steel



How The Service Advisor Works

We know that your time is important! That's why the color-coding system in this catalog is designed to help you select products that fit your service needs. Products are marked to indicate the typical lead time for orders of 50 pieces or less.

Customer: How do I select my straight sections. covers, or fittings so that I get the quickest turnaround?

Service Advisor: Each part of our selection chart is shown in colors. If any section of a part number is a different color, the part will typically ship with the longer lead time represented by the colors.

- Green = Fastest shipped items
- Black = Normal lead-time items
- Red = Normally long lead-time items

Example: **156G** **09** - **24** - **144**

Part will have a long lead time because of the 156G material.

Changing the part number from 156G to 156P will change the coding to black for all sections and reduce lead time.

3" NEMA VE 1 Loading Depth

Actual Loading Depth = 3.077"

Straight Section Part Numbering

Prefix

Example: **148 P 09 - 24 - 144**

Series
148

Material
- **P** = Pre-Galvanized Steel
- **G** = Hot Dip Galvanized After Fabrication Steel

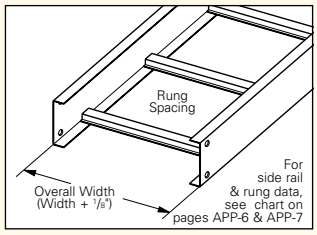
Type
- **SB** = Solid Bottom*
- **06** = 6" rung spacing**
- **09** = 9" rung spacing
- **12** = 12" rung spacing

Width
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

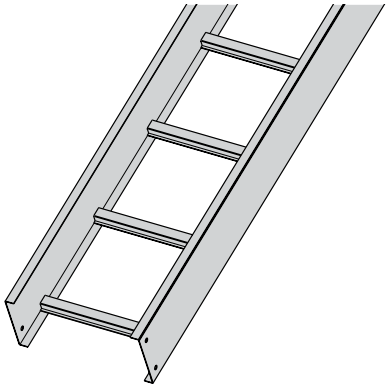
Length
- ① **144** = 12 ft.
- ② 120 = 10 ft.

① Primary Length.
② Secondary Length.

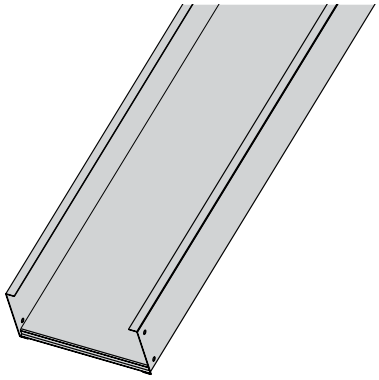
See page C-23 for explanation of lengths.



See page APP-1 for additional rung options.
*SB available for all widths.
**6" rung spacing is equivalent to vented bottom

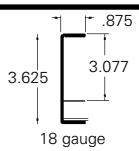


Ladder Type
(Specify Rung Spacing)



Non-Ventilated

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. The published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply the published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

B-Line Series Slde Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
148 	NEMA: 12A, 8C	6	204*	0.0011	Area = 0.510 in²	1.8	304*	0.019	Area = 3.290 cm²
	CSA: C1-3m	8	115	0.0036	Sx = 0.480 in³	2.4	171	0.061	Sx = 7.870 cm³
	UL Cross-Sectional	10	73	0.0087	Ix = 0.890 in⁴	3.0	109	0.149	Ix = 37.04 cm⁴
	Area: 0.40 in²	12	51	0.0181		3.7	76	0.309	

*When using 12" rung spacing load capacity is limited to 195 lbs/ft (290.16 kg/m) for 36" tray width. When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%.
Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

4" NEMA VE 1 Loading Depth

Actual Loading Depth = 3.628"

Straight Section Part Numbering

Prefix

Example: **156 P 09 - 24 - 144**

Series
156

Material
- **P** = Pre-Galvanized Steel
- **G** = Hot Dip Galvanized After Fabrication Steel

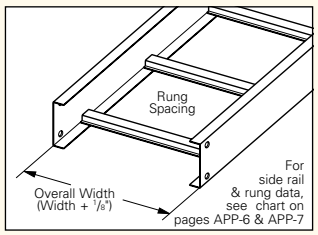
Type
- **SB** = Solid Bottom*
- **06** = 6" rung spacing**
- **09** = 9" rung spacing
- **12** = 12" rung spacing

Width
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

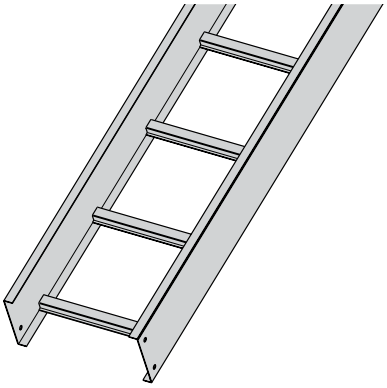
Length
- ① **144** = 12 ft.
- ② 120 = 10 ft.

① Primary Length.
② Secondary Length.

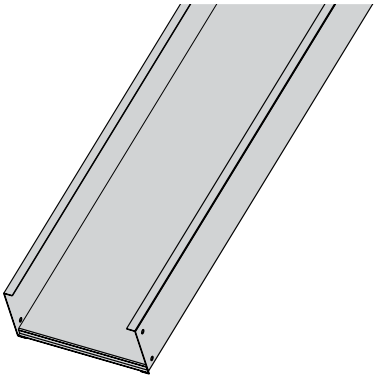
See page C-23 for explanation of lengths.



See page APP-1 for additional rung options.
*SB available for all widths.
**6" rung spacing is equivalent to vented bottom.

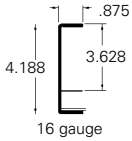


Ladder Type
(Specify Rung Spacing)



Non-Ventilated

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above the published loads. The published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply the published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

B-Line Series Slde Rail Dimensions		NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
156		NEMA: 12B, 8C	6	304*	0.0007	Area = 0.690 in²	1.8	452*	0.011	Area = 4.390 cm²
		CSA: C1-3m	8	171	0.0021	Sx = 0.724 in³	2.4	254	0.036	Sx = 11.860 cm³
		UL Cross-Sectional	10	109	0.0051	Ix = 1.517 in⁴	3.0	163	0.087	Ix = 63.140 cm⁴
		Area: 0.40 in²	12	76	0.0011		3.7	113	0.181	

*When using 12" rung spacing, load capacity is limited to 234 lbs/ft (348.192 kg/m) for 30" tray width and 195 lbs/ft (290.16 kg/m) for 36" tray width. When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

5" NEMA VE 1 Loading Depth

Actual Loading Depth = 4.628"

Straight Section Part Numbering

Prefix

Example: **166 P 09 - 24 - 144**

Series
166

Material
- **P** = Pre-Galvanized Steel
- **G** = Hot Dip Galvanized After Fabrication Steel

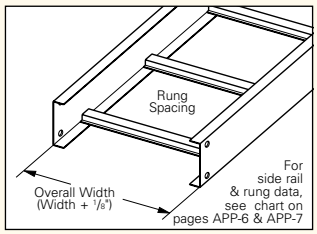
Type
- **SB** = Solid Bottom*
- **06** = 6" rung spacing**
- **09** = 9" rung spacing
- **12** = 12" rung spacing

Width
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

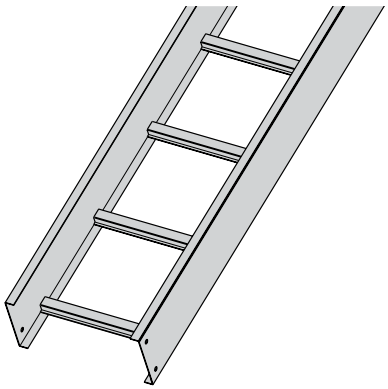
Length
- ① **144** = 12 ft.
- ② 120 = 10 ft.

Note
① Primary Length.
② Secondary Length.

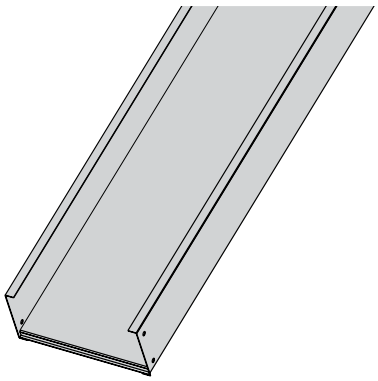
See page C-23 for explanation of lengths.



See page APP-1 for additional rung options.
*SB available for all widths.
**6" rung spacing is equivalent to vented bottom.

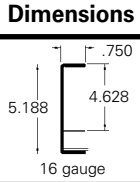


Ladder Type
(Specify Rung Spacing)



Non-Ventilated

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. The published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply the published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

B-Line Series Slde Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
166 	NEMA: 12B, 8C	6	308*	0.0004	Area = 0.770 in²	1.8	458*	0.007	Area = 4.970 cm²
	CSA: C1-3m	8	173	0.0013	Sx = 0.930 in³	2.4	258	0.023	Sx = 15.240 cm³
	UL Cross-Sectional	10	111	0.0032	Ix = 2.400 in⁴	3.0	165	0.055	Ix = 99.900 cm⁴
	Area: 0.70 in²	12	77	0.0067		3.7	115	0.114	

*When using 12" rung spacing, the load capacity is limited to 234 lbs/ft (348.192 kg/m) for 30" tray width and 195 lbs/ft (290.16 kg/m) for 36" tray width. When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%.
Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

6" NEMA VE 1 Loading Depth

Actual Loading Depth = 5.628"

Straight Section Part Numbering

Prefix

Example: **176 P 09 - 24 - 144**

Series
176

Material
- **P** = Pre-Galvanized Steel
- **G** = Hot Dip Galvanized After Fabrication Steel

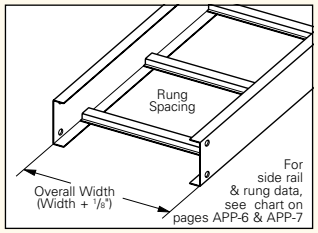
Type
- **SB** = Solid Bottom*
- **06** = 6" rung spacing**
- **09** = 9" rung spacing
- **12** = 12" rung spacing

Width
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

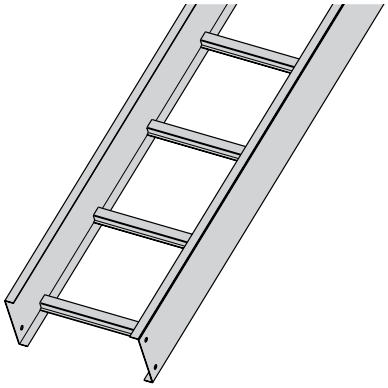
Length
- ① **144** = 12 ft.
- ② 120 = 10 ft.

① Primary Length.
② Secondary Length.

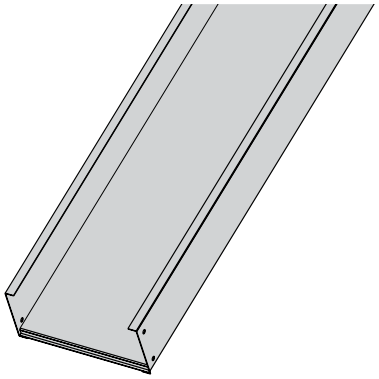
See page C-23 for explanation of lengths.



See page APP-1 for additional rung options.
*SB available for all widths.
**6" rung spacing is equivalent to vented bottom.

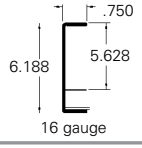


Ladder Type
(Specify Rung Spacing)



Non-Ventilated

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. The published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

B-Line Series Slde Rail Dimensions		NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
176		NEMA: 12B, 8C	8	194	0.0008	Area = 0.890 in²	2.4	458*	0.014	Area = 5.740 cm²
		CSA: 137 kg/m 3.7m	10	124	0.0020	Sx = 1.230 in³	3.0	258	0.035	Sx = 20.160 cm³
		UL Cross-Sectional	12	86	0.0042	Ix = 3.800 in⁴	3.7	165	0.072	Ix = 158.200 cm⁴
		Area: 0.70 in²								

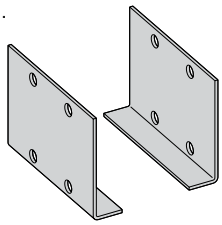
When cable trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%.
Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Standard (L-Shaped) Splice Plates

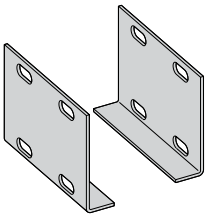
- One pair including hardware provided with each straight section. (Expansion splice quantity subtracted)
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- Prepackaged in pairs in a plastic bag, with hardware.
- 4-hole pattern L-shaped splice plates.
- L-shaped lay-in design.
- (*) Insert ZN or G



Tray Series	Catalog No.
148	9(*)-4004
156	9(*)-4005
166	9(*)-4006
176	9(*)-4007

Expansion (L-Shaped) Splice Plates

- Expansion plates allow for one inch expansion or contraction of the cable tray, or where expansion joints occur in the supporting structure.
- Bonding Jumpers are required on each side rail. Order Separately.
- L-shaped lay-in design.
- Furnished in pairs with hardware.
- (*) Insert ZN or G

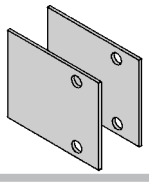


Tray Series	Catalog No.
148	9(*)-4014
156	9(*)-4015
166	9(*)-4016
176	9(*)-4017

Requires supports within 24" on both sides, per NEMA VE 2.

Universal Splice Plates

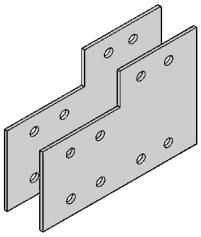
- Used to splice to existing cable tray systems.
- Furnished in pairs with hardware.
- (*) Insert P or G



Tray Series	Catalog No.
148	9(*)-2004-1/2
156	9(*)-2005-1/2
166	9(*)-2006-1/2
176	9(*)-2007-1/2

Step Down Splice Plates

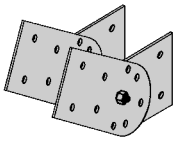
- These splice plates are offered for connecting cable tray sections having side rails of different heights.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- (*) Insert ZN or G



Tray Series	Catalog No.
156 to148	9(*)-8044
166 to 156 or 148	9(*)-8045
176 to 156 or 148	9(*)-8046
176 to 166	9(*)-8060

Vertical Adjustable Splice Plates

- These plates provide for changes in elevation that do not conform to standard vertical fittings.
- UL Classified as equipment grounding conductor.
- Bonding jumpers not required.
- Furnished in pairs with hardware.
- (*) Insert ZN or G
- (**) Insert P or G



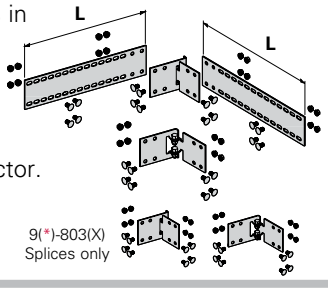
Requires supports within 24" on both sides, per NEMA VE 2.

Tray Series	Catalog No.
148	9(**)-7024
156	9(*)-8024
166	9(*)-8025
176	9(*)-8026

Horizontal Adjustable Splice Plates

- Offered to adjust a cable tray run for changes in direction in a horizontal plane that do not conform to standard horizontal fittings.
- Furnished in pairs with hardware.
- Bonding jumpers not required.
- UL Classified as equipment grounding conductor.
- (*) Insert ZN or G
- (X) Insert 4 for series 148 or 156, 5 for series 166, or 6 for series 176

9(*)-803(X)-12 or 9(*)-803(X)-36
One pair splice plates with extensions.



9(*)-803(X)
Splices only

Catalog No.	Cable Tray End Cut	Tray Width	'L'
9(*)-803(X)	Mitered	Thru 36"	N/A
9(*)-803(X)-12	Not mitered	Thru 12"	16"
9(*)-803(X)-36	Not mitered	Thru 36"	41"

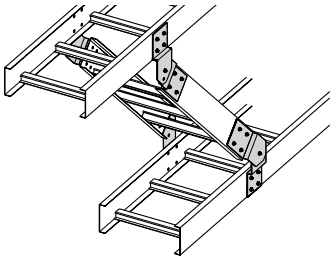
Requires supports within 24" on both sides, per NEMA VE 2.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Branch Pivot Connectors

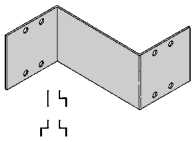
- Branch from existing cable tray runs at any point.
- Pivot to any required angle.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- (*) Insert ZN or G



Tray Series	Catalog No.
156 to 148	9(*)-8244
166	9(*)-8245
176	9(*)-8246

Offset Reducing Splice Plate

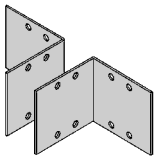
- This plate is used for joining cable trays having different widths. When used in pairs they form a straight reduction; when used singly with a standard splice plate they form an offset reduction.
- Furnished as one plate with hardware.
- (‡) Insert reduction
- (*) Insert P or G



Tray Series	Catalog No.
148	9(*)-8064-(‡)
156	9(*)-8064-(‡)
166	9(*)-8065-(‡)
176	9(*)-8066-(‡)

Tray to Box Splice Plates

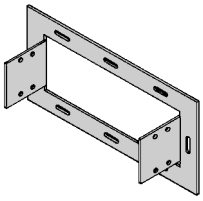
- Used to attach the end of a cable tray run to a distribution box or control panel.
- Furnished in pairs with hardware.
- (*) Insert P or G



Tray Series	Catalog No.
148	9(*)-8054
156	9(*)-8054
166	9(*)-8055
176	9(*)-8056

Frame Type Box Connector

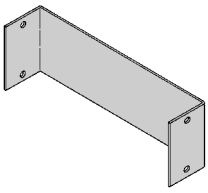
- Designed to attach the end of a cable tray run to a distribution cabinet or control center to help reinforce the box at the point of entry.
- Furnished with tray connection hardware.
- (‡) Insert tray width
- (*) Insert ZN or G



Tray Series	Catalog No.
148	9(*)-8074-(‡)
156	9(*)-8074-(‡)
166	9(*)-8075-(‡)
176	9(*)-8076-(‡)

Blind End

- This plate forms a closure for a dead end cable tray.
- Furnished as one plate with hardware.
- (‡) Insert tray width
- (*) Insert P or G



Tray Series	Catalog No.
148	9(*)-8084-(‡)
156	9(*)-8084-(‡)
166	9(*)-8085-(‡)
176	9(*)-8086-(‡)

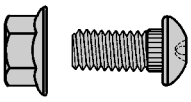
Tray Hardware

Pre-Galvanized Tray Hardware

Catalog No. ● **RNCB 3/8"-16 x 3/4" Znplt** Ribbed Neck Carriage Bolt ASTM A307 Grade A

Catalog No. ● **SFHN 3/8"-16 Znplt** Serrated Flange Hex Nut ASTM A563 Grade A

Finish: Zinc Plated ASTM B633, SC1



Hot Dip Galvanized Tray Hardware

Catalog No. ● **RNCB 3/8"-16 x 3/4" CZ** Ribbed Neck Carriage Bolt Chromium Zinc ASTM F-1136-88

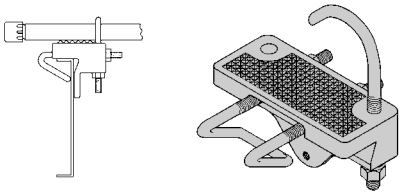
Catalog No. ● **SFHN 3/8"-16 CZ** Serrated Flange Hex Nut Chromium Zinc ASTM F-1136-88

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Conduit-to-Tray Adaptor

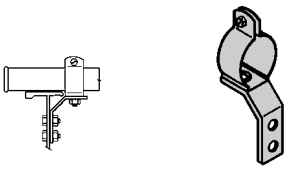
- For easy attachment of conduit terminating at a cable tray.
- Use on aluminum or steel cable trays.



Conduit Size in.	(mm)	Catalog No.
1/2, 3/4	(15, 20)	**9G-1158-1/2, 3/4**
1, 1 1/4	(25, 32)	**9G-1158-1, 1 1/4**
1 1/2, 2	(40, 50)	**9G-1158-1 1/2, 2**
2 1/2, 3	(65, 80)	**9G-1158-2 1/2, 3**
3 1/2, 4	(90, 100)	**9G-1158-3 1/2, 4**

Conduit-to-Tray Adaptor

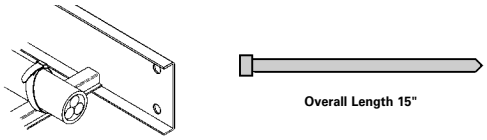
- Assembly required.
- Mounting hardware included.
- Conduit clamp included
- (‡) = Conduit size (1/2" thru 4").



Catalog No.
9ZN-1150-(‡)

Cable Tie (Ladder Tray)

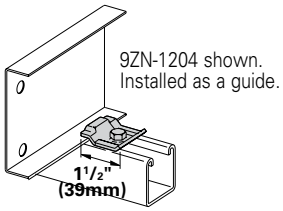
- Nylon ties provide easy attachment of cable to ladder rungs; maximum cable O.D. of 3" (76 mm).
- Cable ties are UV resistant.

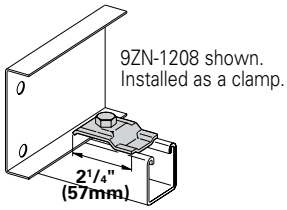


Catalog No.
● **99-2125-15**

Cable Tray Clamp/Guide

- Features a no-twist design.
- Has four times the strength of the traditional design.
- Each side is labeled to ensure proper installation.
- Furnished in pairs, with or without hardware.
- Not recommended for vertical support.





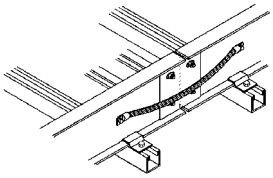
Catalog No. Without Hardware	Catalog No. With Hardware	Overall Length in.	(mm)	Hardware Size	Finish
● **9ZN-1204**	● **9ZN-1204NB**	1 1/2	38	1/4"	G90
● **9ZN-1208**	● **9ZN-1208NB**	2 1/4	57	3/8"	G90

Patent # RE35479

Bonding Jumper

Use at each expansion splice and where the cable tray is not mechanically/electrically continuous to ground. Sold individually.

- Hardware included.
- See table 392.7(B)(2) on page C-9 for amperage ratings required to match the UL cross-sectional area of the tray.
- 600 amp rating.
- Bonding jumper is 14 1/2" (368mm) long.

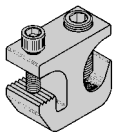


Catalog No.	Copper Wire Size
● **99-N1**	#1

Grounding Clamp

Eaton's B-Line series cable tray is UL® classified as to its suitability as an equipment grounding conductor. If a separate conductor for additional grounding capability is desired, we offer this clamp for bolting the conductor at least once to each tray section.

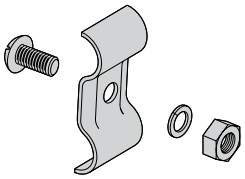
- Tin plated Aluminum clamp accepts #6 AWG to 250 MCM.



Catalog No.
● **9A-2130**

Ground Wire Clamp

- Mechanically attaches grounding cables to cable tray.
- Hardware included.
- (*) Insert ZN or SS4



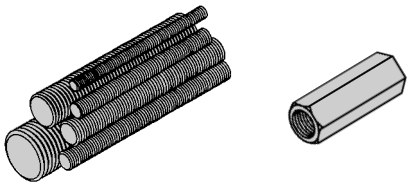
Catalog No.	Cable Size
9(*)-2351	#1 thru 2/0
9(*)-2352	3/0 thru 250 MCM

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Threaded Rod (ATR) & Rod Coupling

- Loading based on safety factor 5.
- Standard Finish: Zinc plated

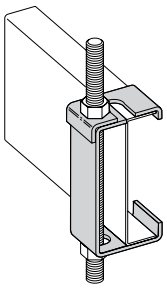


Size	Loading lbs. (kN)	Threaded Rod Catalog No.	Available Lengths in. (mm)	Coupling Cat. No.
3/8-16	730 (3.25)	● **ATR 3/8 x Length**	36, 72, 120, 144 (914, 1829, 3048, 3657)	● **B655-3/8**
1/2-13	1350 (6.00)	● **ATR 3/8 x Length**	36, 72, 120, 144 (914, 1829, 3048, 3657)	● **B655-1/2**

See B-Line series Strut Systems Catalog for other sizes and finishes.

Hanger Rod Clamp

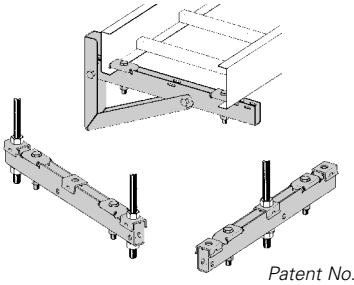
- For 1/2" ATR.
- Furnished in pairs.
- Order ATR and hex nuts separately.
- Two piece "J"-hanger design.
- 9ZN-1113 has 275 lbs./pair safety factor 3.
- 9ZN-532(X) has 1500 lbs./pair safety factor 3.



Tray Series	Catalog No.
148	● **9ZN-1113**
156	● **9ZN-5324**
166	● **9ZN-5325**
176	● **9ZN-5326**

Support Bracket

- Designed for center hung or trapeze supports.
- Used with ladder or vented bottom tray only.
- Can be purchased as a wall mounted bracket.
- Load capacity is 600 lbs. (272.1 kg), safety factor 3.
- All components are zinc plated.
- 1/2" threaded rod and 1/2" hex nuts not included.

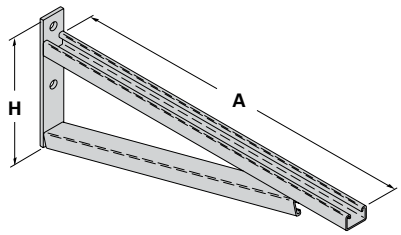


Patent No. 5,100,086

Catalog No. Center Hung or Trapeze	Catalog No. Wall Mount	For Cable Tray Width in. (mm)
● **9ZN-5106**	● **9ZN-5106-WB**	6 (152)
● **9ZN-5109**	● **9ZN-5109-WB**	9 (226)
● **9ZN-5112**	● **9ZN-5112-WB**	12 (305)
● **9ZN-5118**	● **9ZN-5118-WB**	18 (452)
● **9ZN-5124**	● **9ZN-5124-WB**	24 (609)

Cantilever Bracket (12" - 42")

- Finishes available: ZN GRN or HDG
- Safety Load Factor 2.5



Bottom brace is B42 channel on B494-24 and smaller and B22 channel on B494-30 and larger

Catalog No.	Uniform Load lbs (kN)	Tray Width in. (mm)	'A' in. (mm)	'H' in. (mm)
● **B494-12**	2500 (11.12)	6 & 9 (152 & 229)	12 (305)	8 3/4 (222)
● **B494-18**	1700 (7.56)	12 (305)	18 (457)	8 3/4 (222)
● **B494-24**	1300 (5.78)	18 (457)	24 (610)	8 3/4 (222)
B494-30	1600 (7.11)	24 (610)	30 (762)	11 1/4 (286)
B494-36	1100 (4.89)	30 (762)	36 (914)	11 1/4 (286)
B494-42	980 (4.36)	36 (914)	42 (1067)	16 (406)

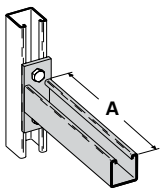
For more dimensional data see Strut Systems catalog

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Cantilever Bracket

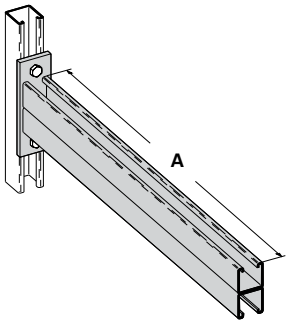
- Finishes available:
  ZN GRN HDG SS4 or SS6
- Safety Load Factor 2.5



Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)
B409-12	960	(4.27)	6 & 9	(152 & 229)	12	(304.8)
B409-18	640	(2.84)	12	(305)	18	(457.2)
B409-24	480	(2.13)	18	(457)	24	(609.6)

Cantilever Bracket

- Finishes available:
  ZN GRN HDG or SS4
- Safety Load Factor 2.5

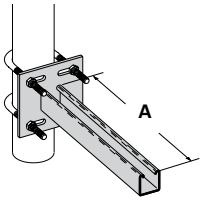


Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)
B297-30	665	(2.95)	24	(609.6)	30	(762.0)
B297-36	550	(2.44)	30	(762.0)	36	(914.4)
B297-42	465	(2.06)	36	(914.4)	42	(1066.8)

Underfloor Support (U-Bolts not included)

- Finishes available: ZN
- Safety Load Factor 2.5
- Order properly sized U-Bolts separately.

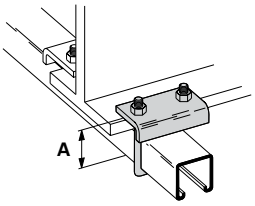
U-Bolt Size	Fits Pipe O.D.
B501-3/4	.841 - 1.050
B501-1	1.051 - 1.315
B501-1 1/4	1.316 - 1.660
B501-1 1/2	1.661 - 1.900
B501-2	1.901 - 2.375
B501-2 1/2	2.376 - 2.875



Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)
B409UF-12	800	(3.55)	6 & 9	(152 & 229)	12	(304.8)
B409UF-21	450	(2.00)	12 & 18	(305 & 457)	21	(533.4)

Beam Clamp

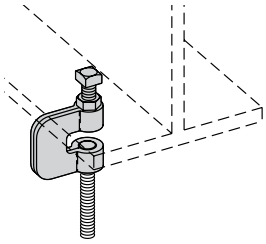
- Finishes available: ZN or HDG
- Sold in pieces with hardware.
- Design load when used in pairs. Safety Load Factor 5.0



Catalog No.	Design Load* lbs	(kN)	'A' in.	(mm)
B441-22	1200	(5.34)	3 3/8	(86)
B441-22A	1200	(5.34)	5	(127)

Steel C-Clamp With Locknut

- Finishes available:
  ZN for 3/8 & 1/2
  ZN for 5/8 & 3/4
  SS4 all sizes
- Safety Load Factor 5.0



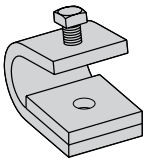
Catalog Number	Rod Size	Design Load lbs	(kN)
B351L-3/8	3/8"-16	300	(0.89)
B351L-1/2	1/2"-13	380	(1.69)
B351L-5/8	5/8"-11	550	(2.44)
B351L-3/4	3/4"-10	630	(2.80)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Beam Clamp

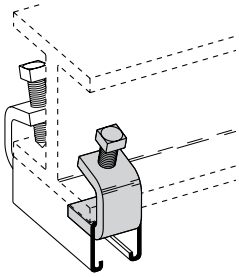
- Finishes available: ZN GRN or HDG
- Setscrew included.
- Sold in pieces.
- Design load when used in pairs. Safety Load Factor 5.0



Cat. No.	B210	B210A
Design Load	800 lbs. (3.56kN)	300 lbs. (1.33kN)
Tap Size	1/2"-13	3/8"-16
Mat'l. Thickness	3/8" (9.5mm)	1/4" (6.4mm)

Beam Clamp

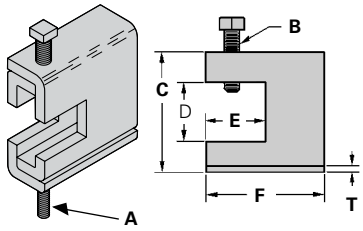
- Finishes available: ZN GRN or HDG
- Setscrew included.
- Sold in pieces.
- Design load when used in pairs. Safety Load Factor 5.0



Cat. No.	B212-1/4	B212-3/8
Design Load	800 lbs. (3.56kN)	1000 lbs. (4.45kN)
Max. Flange Thick.	3/4" (19.0mm)	1 1/8" (28.6mm
Mat'l. Thickness	1/4" (6.4mm)	3/8" (9.5mm)

B305 Thru B308 & B321 Series Beam Clamps

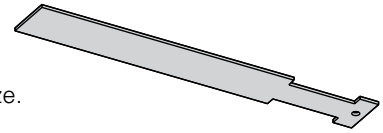
- Finishes available: ZN or HDG
- Setscrew included.
- Safety Load Factor 5.0



Cat. No.	A	B	C in.	C (mm)	D in.	D (mm)	E in.	E (mm)	F in.	F (mm)	T in.	T (mm)	Design Load lbs	Design Load (kN)
B305	3/8"-16	3/8"-16	2 5/16	(58.7)	7/8	(22.2)	1 1/8	(28.6)	2 1/2	(63.5)	11 Ga.	(3.0)	600	(2.67)
B306	3/8"-16	1/2"-13	2 7/16	(61.9)	7/8	(22.2)	1 1/8	(28.6)	2 1/2	(63.5)	7 Ga.	(4.5)	1100	(4.90)
B307	1/2"-13	1/2"-13	2 7/16	(61.9)	7/8	(22.2)	1 1/8	(28.6)	2 1/2	(63.5)	7 Ga.	(4.5)	1100	(4.90)
B308	1/2"-13	1/2"-13	2 9/16	(65.1)	7/8	(22.2)	1 1/8	(28.6)	2 1/2	(63.5)	1/4	(6.3)	1500	(6.68)
B321-1	3/8"-16	1/2"-13	3 9/16	(90.5)	1 11/16	(42.8)	1 5/8	(41.3)	3 1/4	(82.5)	1/4	(6.3)	1300	(5.79)
B321-2	1/2"-13	1/2"-13	3 9/16	(90.5)	1 11/16	(42.8)	1 5/8	(41.3)	3 1/4	(82.5)	1/4	(6.3)	1400	(6.23)

B312 Anchor Strap

- Finishes available: ZN or HDG
- For a maximum beam thickness of 3/4".
- For thicker beams, step up one flange width size.

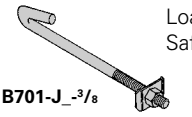


Cat. No.	Flange Width in.	Flange Width (mm)
B312-6	Up to 6	(up to 152.4)
B312-9	6 - 9	(152.4 to 228.6)
B312-12	9 - 12	(228.6 to 304.8)

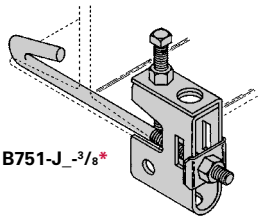
B751 Bottom Beam Clamp and Accessories

- Setscrew included.
- Finish available: ZN

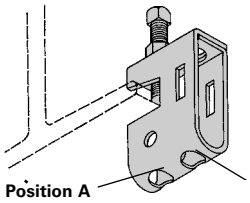
Loading position A - 500 lbs.
Loading position B - 300 lbs.
Safety Load Factor 5.0



B701-J_-3/8

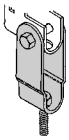


B751-J_-3/8*



B753

Provides a full 15° swivel in any direction. (State the desired rod size.)



B752

Assembly No.	B751	B701J_	B752	B753
Fits Flange Sizes in. (mm)	Clamp, Setscrew & J-Hook	J-Hook, Clip & Square Nut	Swivel & Bolt Only	Swivel Nut Only
4 - 5 7/8 (101 - 149)	● B751-J4-3/8*	● B701-J4-3/8	● B752	● B753-**
6 - 8 7/8 (152 - 225)	● B751-J6-3/8*	● B701-J6-3/8	● B752	● B753-**
9 - 11 7/8 (228 - 301)	● B751-J9-3/8*	● B701-J9-3/8	● B752	● B753-**

* Clamp Assembly complete with J-Hook Assembly. Setscrew included. ** Insert 1/4, 3/8 or 1/2 for the desired rod size.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Trapeze Support Kit

Trapeze kits provide the components required for a single trapeze support in one package. These kits are available in pre-galvanized steel with zinc-plated hardware or hot dip galvanized steel with 316 stainless steel hardware.

The SH channel provides the convenience of pre-punched slots, which eliminate the need for field drilling.

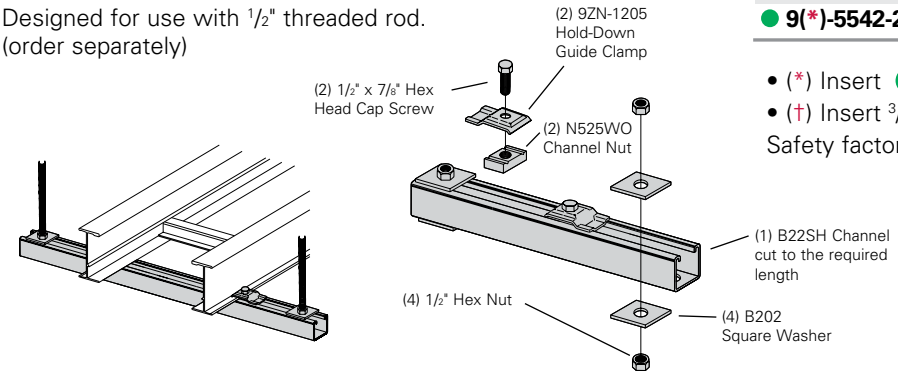
The illustrated hardware is sealed in a plastic bag and boxed with the channel, which is pre-cut to the appropriate length as shown in the chart.

Designed for use with 1/2" threaded rod. (order separately)

Catalog No.	Tray Width in.	(mm)	Channel Length in.	(mm)	Uniform Load lbs	(kN)
● 9(*)-5506-22SH(†)	6	(152)	16	(406)	1600	(7.11)
● 9(*)-5509-22SH(†)	9	(229)	18	(457)	1250	(5.56)
● 9(*)-5512-22SH(†)	12	(305)	22	(559)	1125	(5.00)
● 9(*)-5518-22SH(†)	18	(457)	28	(711)	865	(3.85)
● 9(*)-5524-22SH(†)	24	(610)	34	(864)	700	(3.11)
● 9(*)-5530-22SH(†)	30	(762)	40	(1016)	590	(2.62)
● 9(*)-5536-22SH(†)	36	(914)	46	(1168)	510	(2.27)
● 9(*)-5542-22SH(†)	42	(1067)	52	(1321)	450	(2.00)

- (*) Insert P or G
- (†) Insert 3/8 for 3/8" threaded rod hardware.

Safety factor of 3.0 on all loads.



Heavy Duty Trapeze Support Kit

Trapeze kits provide the components required for a single trapeze support in one package. These kits are available in Dura Green™ epoxy coated steel with zinc-plated hardware or hot dip galvanized steel with 316 stainless steel hardware.

The SH channel provides the convenience of pre-punched slots, which eliminates the need for field drilling.

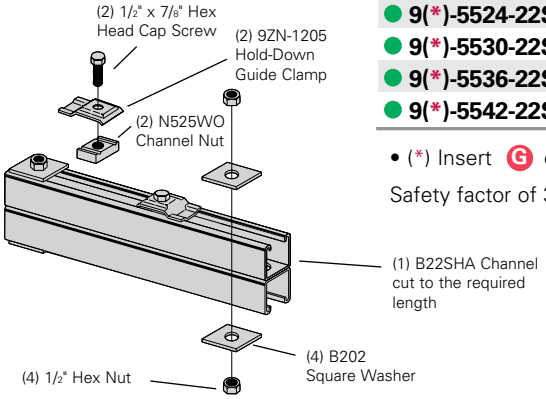
The illustrated hardware is sealed in a plastic bag and boxed with the channel, which is pre-cut to the appropriate length as shown in the chart.

Designed for use with 1/2" threaded rod. (order rod separately)

Catalog No.	Tray Width in.	(mm)	Channel Length in.	(mm)	Uniform Load lbs	(kN)
● 9(*)-5506-22SHA	6	(152)	16	(406)	1350	(6.01)
● 9(*)-5509-22SHA	9	(229)	18	(457)	1350	(6.01)
● 9(*)-5512-22SHA	12	(305)	22	(559)	1350	(6.01)
● 9(*)-5518-22SHA	18	(457)	28	(711)	1350	(6.01)
● 9(*)-5524-22SHA	24	(610)	34	(864)	1350	(6.01)
● 9(*)-5530-22SHA	30	(762)	40	(1016)	1350	(6.01)
● 9(*)-5536-22SHA	36	(914)	46	(1168)	1350	(6.01)
● 9(*)-5542-22SHA	42	(1067)	52	(1321)	1350	(6.01)

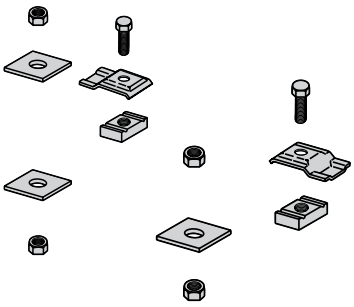
- (*) Insert G or GRN

Safety factor of 3.0 on all loads.



Trapeze Hardware Kit

- Kit sold in plastic bag.



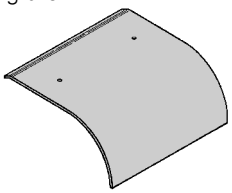
Catalog No.	
● 9ZN-5500-1/2	● 9G-5500-1/2
(1) pr. 9ZN-1205	(1) pr. 9G-1205
(2) HHC Screw 1/2" x 7/8" ZN	(2) HHC Screw 1/2" x 7/8" SS6
(2) N525 WO ZN	(2) N525 WO SS6
(4) B202 ZN 1/2" sq washer	(4) B202 HDG 1/2" sq washer
(4) HN 1/2" ZN	(4) HN 1/2" SS6

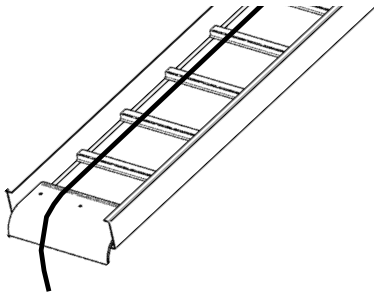
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Ladder Drop-Out

- This special designed, easy to install drop-out provides a 4" (101.6 mm) radius to protect cables exiting the cable tray from damage.
- Attaches to a ladder rung.
- Hardware included.
- (*) Insert P or G
- (‡) Insert tray width

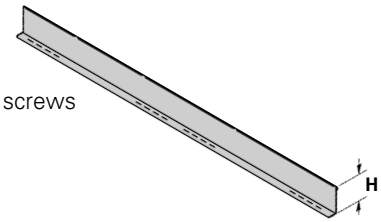




Catalog No.
9(*)-1104T-(‡)

Straight Section

- Standard length: 120" (3 m) 144" (12 ft.).
- Order catalog number based on loading depth.
- Furnished with four #10 x ½" plated self-drilling screws and a 99-9982 splice.
- (*) Insert P or G

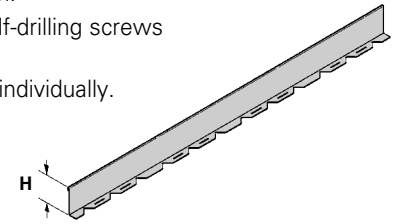


Length =
144 for 12' or 120 for 10'

Tray Series	Catalog No.	H in.	H (mm)
148	72(*)-Length	2.8	(58)
156	737(*)-Length	3.4	(70)
166	747(*)-Length	4.4	(91)
176	757(*)-Length	5.4	(112)

Horizontal Bend

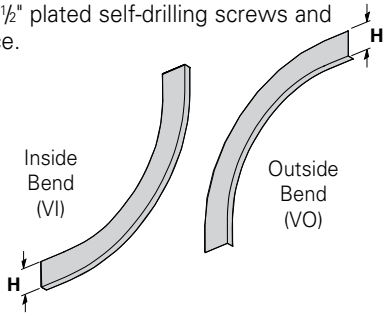
- Horizontal Bend Barriers are flexible in order to conform to any horizontal fitting radius. Cut to length.
- Order catalog number based on loading depth.
- Furnished with three #10 x ½" zinc plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- Standard length is 72" [6 ft.] (1829mm), sold individually.
- (*) Insert P or G



Tray Series	Catalog No.	H in.	H (mm)
148	72(*)-90HBFL	2.8	(58)
156	737(*)-90HBFL	3.4	(70)
166	747(*)-90HBFL	4.4	(91)
176	757(*)-90HBFL	5.4	(112)

Vertical Bend Barriers

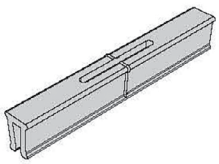
- Vertical Bend Barriers are preformed to conform to a specific vertical fitting.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert P or G
- (**) Insert 30, 45, 60 or 90 for degrees
- (†) Insert 12, 24, or 36 for radius

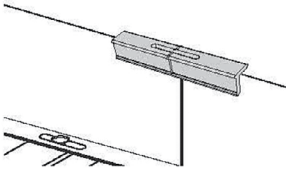


Tray Series	Catalog No. Inside Bend	Catalog No. Outside Bend	H in.	H (mm)
148	72(*)-(**)VI(†)	72(*)-(**)VO(†)	2.8	(58)
156	737(*)-(**)VI(†)	737(*)-(**)VO(†)	3.4	(70)
166	747(*)-(**)VI(†)	747(*)-(**)VO(†)	4.4	(91)
176	757(*)-(**)VI(†)	757(*)-(**)VO(†)	5.4	(112)

Barrier Strip Splice

- 2.85" (72.4mm) long
- Ribbed edge for increased rigidity and grip
- Comfort edge for ease of installation
- Slotted top window with center mark for accurate placement and inspection capability
- Patent pending





Catalog No.
● 99-9982

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

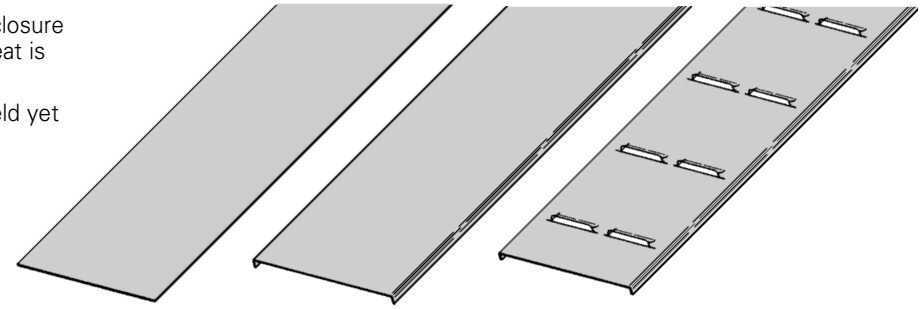
Covers

Solid covers should be used when maximum enclosure of the cables is desired and no accumulation of heat is expected.

Ventilated covers provide an overhead cable shield yet allow heat to escape.

Flanged covers have a .30 in. (7.6 mm) flange.

We recommend that covers on vertical cable tray runs to a height of 6 ft. (1.83 m) to 8 ft. (2.44 m) above the floor to both isolate cables and personnel. Cover clamps are not included with the cover and must be ordered separately.



Solid Non-Flanged **Solid Flanged** **Ventilated Flanged**

Covers Part Numbering

Prefix

Example: **80 1 P - 24 - 144**

Cover Type
- 80 = Solid
- 81 = Ventilated

Detail
- 1 = Flanged
- 9 = Non-Flanged

Material
- P = Pre-Galvanized
- G18 = HDGAF

Tray Width
- 06 = 6"
- 09 = 9"
- 12 = 12"
- 18 = 18"
- 24 = 24"
- 30 = 30"
- 36 = 36"

Item Description

For Straight Section Cover:

Pre-Galvanized Only:
- 144 = 12 ft. (3.66 m)
- 120 = 10 ft. (3.05 m)

Pre-Galvanized & HDGAF
- 72 = 6 ft. (1.83 m)
- 60 = 5 ft. (1.52 m)

For fitting covers: Insert suffix of fitting to be covered. See example below.

Example of Catalog Number for Fitting Cover:

Vertical Bend Cover

Prefix: 80 1 P - 24 - 90

Suffix: VO 24 - 4*

* Required for VO fittings only.

- 4* — Side Rail* Height
- 24 — Radius
- VO — Fitting
- 90 — Angle
- 24 — Width
- P — Material
- 1 — Detail
- 80 — Cover Type

Quantity of Standard Cover Clamps Required

Straight Section 60" or 72"	4 pcs.
Straight Section 120" or 144"	6 pcs.
Horizontal/Vertical Bends	4 pcs.
Tees	6 pcs.
Crosses	8 pcs.
Reducers	4 pcs.

Note: When using the Heavy Duty Cover Clamp, only one-half the number of clamps stated above is required.

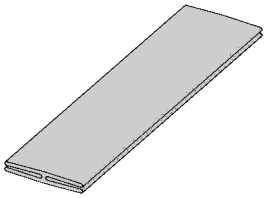
Check with B-Line Technical Support (blinetechnicalsupport@eaton.com) if there are questions/concerns about environmental loads for covers (wind, snow, sleet, rain, etc.).

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Cover Joint Strip

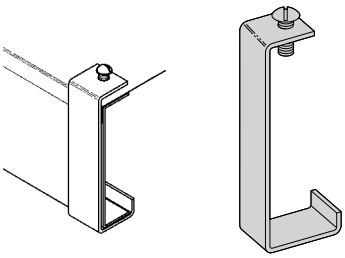
- Used to join covers.
- Plastic.
- Only for use on flat covers.
- Color - gray.
- (‡) Insert tray width.



Catalog No.
● 99-9980-(‡)

Standard Cover Clamp

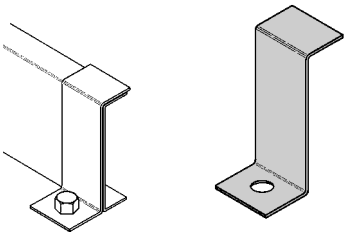
- Sold per piece
- For indoor service only



Tray Series	Catalog No. Znplt	Catalog No. HDGAF
148	● 9ZN-9019	● 9G-9019
156	● 9ZN-9014	● 9G-9014
166	● 9ZN-9015	● 9G-9015
176	● 9ZN-9016	● 9G-9016

Combination Hold Down & Cover Clamp

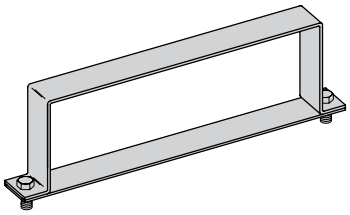
- Sold per piece
- For indoor service only



Tray Series	Catalog No. Znplt/Pre-Galv	Catalog No. HDGAF
148	● 9ZN-9243	● 9G-9243
156	● 9P-9043	● 9G-9043
166	● 9P-9053	● 9G-9053
176	● 9P-9063	● 9G-9063

Heavy Duty Cover Clamp

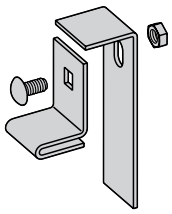
- Should not be used on overlapping sections.
- (‡) Insert tray width



Tray Series	Catalog No. Pre-Galv	Catalog No. HDGAF
148	● 9P-(‡)-9040	● 9G-(‡)-9040
156	● 9P-(‡)-9044	● 9G-(‡)-9044
166	● 9P-(‡)-9054	● 9G-(‡)-9054
176	● 9P-(‡)-9064	● 9G-(‡)-9064

Raised Cover Clamp

- For indoor service only.
- Sold per piece
- For use with flanged covers only.



Tray Series	Catalog No.	Gap in.	Gap (mm)
Series 1	9ZN-9101	1	(25.4)
	9ZN-9102	2	(50.8)
	9ZN-9103	3	(76.2)
	9ZN-9104	4	(101.6)

† Specify gap of 1", 2", 3" or 4".

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Section 1- Acceptable Manufacturers

1.01 Manufacturer: Subject to compliance with these specifications, Eaton's B-Line series cable tray systems shall be as manufactured by Eaton.

Section 2- Cable Tray Sections and Components

2.01 General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates, bolts, nuts and washers for connecting units. Construct units with rounded edges and smooth surfaces; in compliance with applicable standards; and with the following additional construction features. Cable tray shall be installed according to the latest revision of NEMA VE 2.

2.02 Pre-Galvanized Steel: Straight sections, fitting side rails, rungs, and covers shall be made from structural quality steel meeting the minimum mechanical properties and mill galvanized in accordance with ASTM A653 SS, Grade 33, coating designation G90. Hardware finish shall be electro-galvanized zinc per ASTM B633.

2.03 Hot dip Galvanized Steel: All side rails, covers, splice plates, and rungs shall be made from structural quality steel meeting the minimum mechanical properties of ASTM A1011 SS, Grade 33 for 14 gauge and heavier, ASTM A1008, Grade 33 Type 2 for 16 gauge and lighter, and shall be hot dip galvanized after fabrication in accordance with ASTM A123. Mill galvanized covers are not acceptable for hot dipped galvanized cable tray. Hardware finish shall be chromium zinc per ASTM F-1136-88.

2.04 Ladder Cable Trays shall consist of two longitudinal members (side rails) with transverse members (rungs) welded to the side rails. Rungs shall be spaced [6] [9] [12] inches apart. Rung spacing in radiused fittings shall be industry standard 9" and measured at the center of the tray's width. No portion of the rungs shall protrude below the bottom plane of the side rails.

2.06 Cable tray loading depth shall be [3] [4] [5] [6] inches per NEMA VE 1.

2.06 Straight sections shall be supplied in standard [12 foot] [10 foot (3 m)] lengths.

2.07 Cable tray widths shall be [6] [9] [12] [18] [24] [30] [36] inches or as shown on drawings.

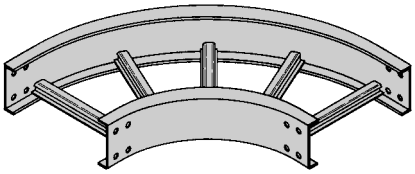
2.08 Splice plates shall be L-shaped with 4 nuts and bolts per plate. The resistance of fixed splice connections between an adjacent section of tray shall not exceed 0.00033 ohm.

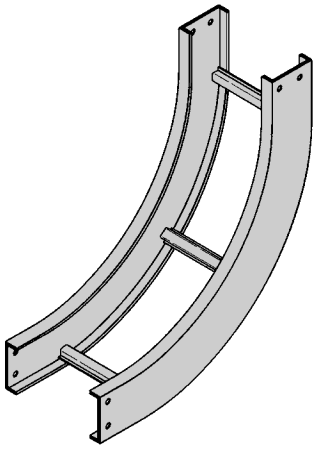
2.09 All fittings must have a minimum radius of [12] [24] inches.

Section 3- Loading Capacities and Testing

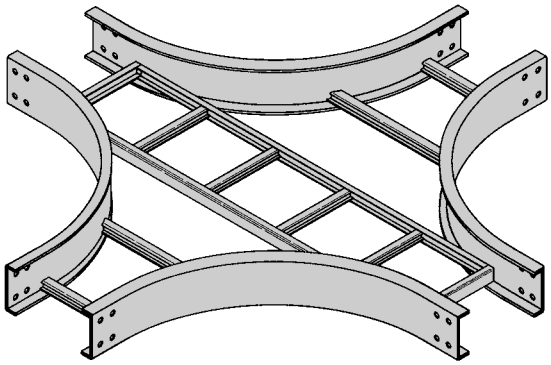
3.01 Cable tray shall be capable of carrying a uniformly distributed load of _____ lbs./ft. on a _____ ft. support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE 1 5.2. Cable tray shall be made to manufacturing tolerances as specified by NEMA.

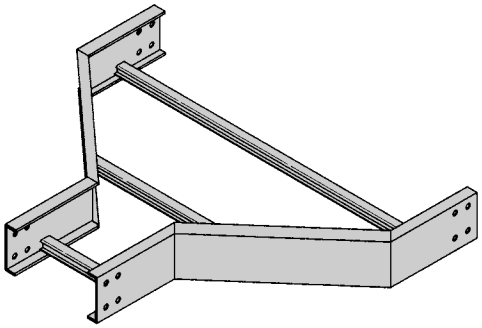
3.02 Upon request, manufacturer shall provide test reports in accordance with the latest revision of NEMA VE 1 or CSA C22.2 No. 126.





Fittings engineered with 3" tangents for splicing integrity.





Fittings Part Numbering

Prefix

Example: **1 4 P - 24 - 90 HB 24** (9" rung spacing is standard)

Series	Height	Material	Width	Angle*	Type	Radius
1	● 4 = 148	● P = Pre-Galvanized	● 06 = 6" (152)	● 30 = 30°	● *HB = Horizontal Bend	● 12 = 12" (305)
	● 5 = 156	● G = HDGAF	● 09 = 9" (228)	● 45 = 45°	● HT = Horizontal Tee	● 24 = 24" (609)
	● 6 = 166		● 12 = 12" (305)	● 60 = 60°	● HX = Horizontal Cross	● 36 = 36" (914)
	● 7 = 176		● 18 = 18" (457)	● 90 = 90°	● *VI = Vertical Inside Bend	
			● 24 = 24" (609)		● *VO = Vertical Outside Bend	
			● 30 = 30" (762)		● LR = Left Reducer	
			● 36 = 36" (914)		● RR = Right Reducer	
					● SR = Straight Reducer	

* Angle only required for HB, VI and VO fittings.

For steel 4", 5", 6", 7" non-ventilated add SB as shown below.

Prefix

15PSB - 24 - 90HB24

Solid Bottom

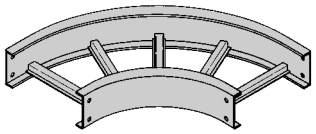
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

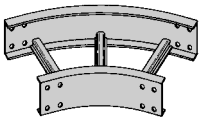
Horizontal Bends 90° 60° 45° 30° (HB)

1 pair splice plates with hardware included.

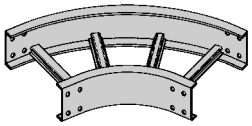
Bottoms manufactured:
Ladder = 9" Rung Spacing
04 = 4" Rung Spacing
SB = Flat sheet over 12" Rung Spacing



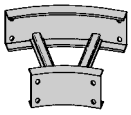
90˚ Horizontal Bend



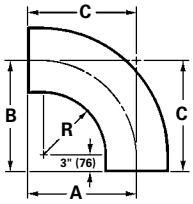
45˚ Horizontal Bend

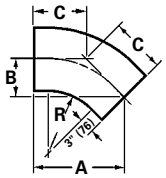


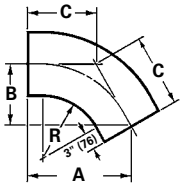
60˚ Horizontal Bend

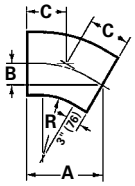


30˚ Horizontal Bend









Bend Radius R in.	(mm)	Tray Width in.	(mm)	90˚ Horizontal Bend Dimensions Catalog No.	A in.	(mm)	B in.	(mm)	C in.	(mm)	60˚ Horizontal Bend Dimensions Catalog No.	A in.	(mm)	B in.	(mm)	C in.	(mm)
		6	(152)	**(Pre)-06-90HB12**	18	(457)	18	(457)	18	(457)	**(Pre)-06-60HB12**	17 1/2	(445)	10 1/8	(257)	11 11/16	(297)
		9	(228)	**(Pre)-09-90HB12**	19 1/2	(495)	19 1/2	(495)	19 1/2	(495)	**(Pre)-09-60HB12**	18 13/16	(478)	10 7/8	(276)	12 1/2	(318)
		12	(305)	**(Pre)-12-90HB12**	21	(533)	21	(533)	21	(533)	**(Pre)-12-60HB12**	20 1/16	(510)	11 5/8	(295)	13 3/8	(340)
12	(305)	18	(457)	**(Pre)-18-90HB12**	24	(610)	24	(610)	24	(610)	**(Pre)-18-60HB12**	22 11/16	(576)	13 1/8	(333)	15 1/8	(384)
		24	(609)	**(Pre)-24-90HB12**	27	(686)	27	(686)	27	(686)	**(Pre)-24-60HB12**	25 5/16	(643)	14 5/8	(372)	16 7/8	(429)
		30	(762)	**(Pre)-30-90HB12**	30	(762)	30	(762)	30	(762)	**(Pre)-30-60HB12**	27 7/8	(708)	16 1/8	(410)	18 9/16	(472)
		36	(914)	**(Pre)-36-90HB12**	33	(838)	33	(838)	33	(838)	**(Pre)-36-60HB12**	30 1/2	(775)	17 5/8	(448)	20 5/16	(516)
		6	(152)	**(Pre)-06-90HB24**	30	(762)	30	(762)	30	(762)	**(Pre)-06-60HB24**	27 7/8	(708)	16 1/8	(410)	18 9/16	(472)
		9	(228)	**(Pre)-09-90HB24**	31 1/2	(800)	31 1/2	(800)	31 1/2	(800)	**(Pre)-09-60HB24**	29 3/16	(741)	16 7/8	(429)	19 7/16	(494)
		12	(305)	**(Pre)-12-90HB24**	33	(838)	33	(838)	33	(838)	**(Pre)-12-60HB24**	30 1/2	(775)	17 5/8	(448)	20 5/16	(516)
24	(609)	18	(457)	**(Pre)-18-90HB24**	36	(914)	36	(914)	36	(914)	**(Pre)-18-60HB24**	33 1/16	(840)	19 1/8	(486)	22 1/16	(560)
		24	(609)	**(Pre)-24-90HB24**	39	(991)	39	(991)	39	(991)	**(Pre)-24-60HB24**	35 11/16	(907)	20 5/8	(524)	23 13/16	(605)
		30	(762)	**(Pre)-30-90HB24**	42	(1067)	42	(1067)	42	(1067)	**(Pre)-30-60HB24**	38 1/4	(972)	22 1/8	(562)	25 1/2	(648)
		36	(914)	**(Pre)-36-90HB24**	45	(1143)	45	(1143)	45	(1143)	**(Pre)-36-60HB24**	40 7/8	(1038)	23 5/8	(600)	27 1/4	(692

				45˚ Horizontal Bend							30˚ Horizontal Bend						
		6	(152)	**(Pre)-06-45HB12**	15 3/4	(400)	6 1/2	(165)	9 3/16	(233)	**(Pre)-06-30HB12**	13 1/8	(333)	3 1/2	(89)	7	(175)
		9	(228)	**(Pre)-09-45HB12**	16 13/16	(427)	6 15/16	(176)	9 13/16	(249)	**(Pre)-09-30HB12**	13 7/8	(352)	3 11/16	(94)	7 7/16	(189)
		12	(305)	**(Pre)-12-45HB12**	17 7/8	(454)	7 3/8	(187)	10 7/16	(265)	**(Pre)-12-30HB12**	14 5/8	(372)	3 15/16	(100)	7 13/16	(198)
12	(305)	18	(457)	**(Pre)-18-45HB12**	20	(500)	8 1/4	(210)	11 11/16	(297)	**(Pre)-18-30HB12**	16 1/8	(410)	4 5/16	(135)	8 5/8	(219)
		24	(609)	**(Pre)-24-45HB12**	22 1/16	(560)	9 1/8	(232)	12 15/16	(329)	**(Pre)-24-30HB12**	17 5/8	(448)	4 11/16	(119)	9 7/16	(240)
		30	(762)	**(Pre)-30-45HB12**	24 3/16	(614)	10	(250)	14 3/16	(360)	**(Pre)-30-30HB12**	19 1/8	(486)	5 1/8	(130)	10 1/4	(260)
		36	(914)	**(Pre)-36-45HB12**	26 5/16	(668)	10 15/16	(278)	15 7/16	(392)	**(Pre)-36-30HB12**	20 5/8	(524)	5 1/2	(140)	11 1/16	(281)
		6	(152)	**(Pre)-06-45HB24**	24 3/16	(614)	10	(250)	14 3/16	(360)	**(Pre)-06-30HB24**	19 1/8	(486)	5 1/8	(130)	10 1/4	(260)
		9	(228)	**(Pre)-09-45HB24**	25 1/4	(641)	10 1/2	(267)	14 13/16	(376)	**(Pre)-09-30HB24**	19 7/8	(505)	5 5/16	(135)	10 5/8	(270)
		12	(305)	**(Pre)-12-45HB24**	26 5/16	(668)	10 15/16	(278)	15 7/16	(392)	**(Pre)-12-30HB24**	20 5/8	(524)	5 1/2	(140)	11 1/16	(281)
24	(609)	18	(457)	**(Pre)-18-45HB24**	28 7/16	(722)	11 13/16	(300)	16 11/16	(424)	**(Pre)-18-30HB24**	22 1/8	(562)	5 15/16	(151)	11 13/16	(300)
		24	(609)	**(Pre)-24-45HB24**	30 9/16	(776)	12 11/16	(322)	17 15/16	(456)	**(Pre)-24-30HB24**	23 5/8	(600)	6 5/16	(160)	12 5/8	(321)
		30	(762)	**(Pre)-30-45HB24**	32 11/16	(830)	13 9/16	(345)	19 1/8	(486)	**(Pre)-30-30HB24**	25 1/8	(638)	6 3/4	(172)	13 7/16	(341)
		36	(914)	**(Pre)-36-45HB24**	34 13/16	(884)	14 7/16	(367)	20 3/8	(518)	**(Pre)-36-30HB24**	26 5/8	(676)	7 1/8	(181)	14 1/4	(362)

(Pre) See page H-18 for catalog number prefix.
Width dimensions are to inside wall. Manufacturing tolerances apply to all dimensions.

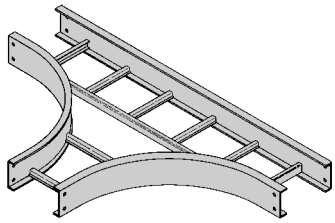
All dimensions in parentheses are millimeters unless otherwise specified.

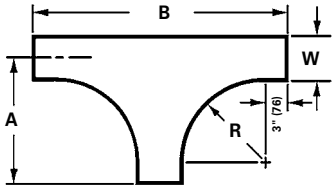
Horizontal Tee (HT)

2 pair splice plates with hardware included.

Bend Radius R in.	(mm)	Tray Width in.	(mm)	Horizontal Tee Dimensions Catalog No.	A in.	(mm)	B in.	(mm)
12	(305)	6	(152)	**(Prefix)-06-HT12**	18	(457)	36	(914)
		9	(228)	**(Prefix)-09-HT12**	19½	(495)	39	(991)
		12	(305)	**(Prefix)-12-HT12**	21	(533)	42	(1067)
		18	(457)	**(Prefix)-18-HT12**	24	(610)	48	(1219)
		24	(609)	**(Prefix)-24-HT12**	27	(686)	54	(1372)
		30	(762)	**(Prefix)-30-HT12**	30	(762)	60	(1524)
		36	(914)	**(Prefix)-36-HT12**	33	(838)	66	(1676)
24	(609)	6	(152)	**(Prefix)-06-HT24**	30	(762)	60	(1524)
		9	(228)	**(Prefix)-09-HT24**	31½	(800)	63	(1600)
		12	(305)	**(Prefix)-12-HT24**	33	(838)	66	(1676)
		18	(457)	**(Prefix)-18-HT24**	36	(914)	72	(1829)
		24	(609)	**(Prefix)-24-HT24**	39	(991)	78	(1981)
		30	(762)	**(Prefix)-30-HT24**	42	(1067)	84	(2134)
		36	(914)	**(Prefix)-36-HT24**	45	(1143)	90	(2286)

(Prefix) See page H-18 for catalog number prefix.



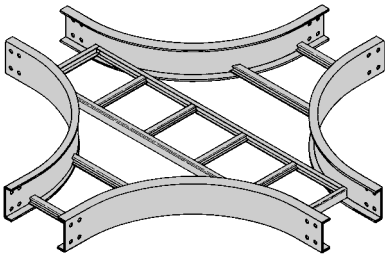


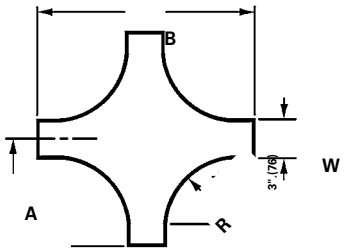
Horizontal Cross (HX)

3 pair splice plates with hardware included.

Bend Radius R in.	(mm)	Tray Width in.	(mm)	Horizontal Cross Dimensions Catalog No.	A in.	(mm)	B in.	(mm)
12	(305)	6	(152)	**(Prefix)-06-HX12**	18	(457)	36	(914)
		9	(228)	**(Prefix)-09-HX12**	19½	(495)	39	(991)
		12	(305)	**(Prefix)-12-HX12**	21	(533)	42	(1067)
		18	(457)	**(Prefix)-18-HX12**	24	(610)	48	(1219)
		24	(609)	**(Prefix)-24-HX12**	27	(686)	54	(1372)
		30	(762)	**(Prefix)-30-HX12**	30	(762)	60	(1524)
		36	(914)	**(Prefix)-36-HX12**	33	(838)	66	(1676)
24	(609)	6	(152)	**(Prefix)-06-HX24**	30	(762)	60	(1524)
		9	(228)	**(Prefix)-09-HX24**	31½	(800)	63	(1600)
		12	(305)	**(Prefix)-12-HX24**	33	(838)	66	(1676)
		18	(457)	**(Prefix)-18-HX24**	36	(914)	72	(1829)
		24	(609)	**(Prefix)-24-HX24**	39	(991)	78	(1981)
		30	(762)	**(Prefix)-30-HX24**	42	(1067)	84	(2134)
		36	(914)	**(Prefix)-36-HX24**	45	(1143)	90	(2286)

(Prefix) See page H-18 for catalog number prefix.





Width dimensions are to inside wall. Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

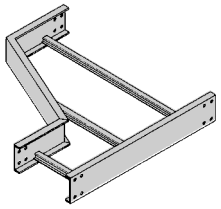
Reducers (LR, SR, RR)

1 pair splice plates with hardware included.

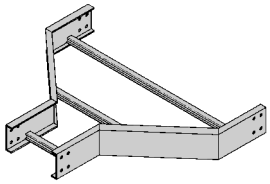
Reducer Part Numbering

14P - 24 - RR 18

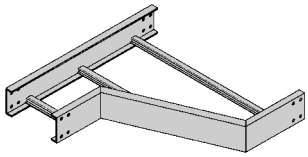
- Width$_2$
- Fitting
- Width$_1$
- Prefix



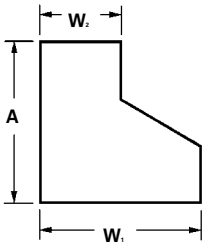
Left Reducer - LR

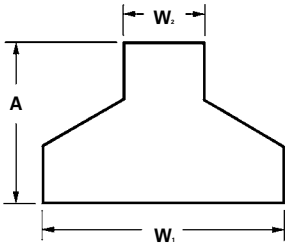


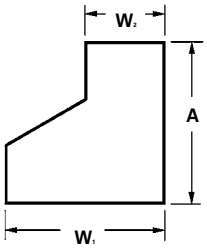
Straight Reducer - SR



Right Reducer - RR







Tray Width		Left Reducer - LR		Straight Reducer - SR		Right Reducer - RR	
W_1	W_2	Catalog No.	A	Catalog No.	A	Catalog No.	A
in. (mm)	in. (mm)		in. (mm)		in. (mm)		in. (mm)
9 (228)	6 (152)	**(Prefix)-09-LR06**	9 3/4 (248)	**(Prefix)-09-SR06**	8 7/8 (225)	**(Prefix)-09-RR06**	9 3/4 (248)
12 (305)	6 (152)	**(Prefix)-12-LR06**	11 1/2 (292)	**(Prefix)-12-SR06**	9 3/4 (248)	**(Prefix)-12-RR06**	11 1/2 (292)
	9 (228)	**(Prefix)-12-LR09**	9 3/4 (248)	**(Prefix)-12-SR09**	8 7/8 (225)	**(Prefix)-12-RR09**	9 3/4 (248)
18 (457)	6 (152)	**(Prefix)-18-LR06**	14 15/16 (379)	**(Prefix)-18-SR06**	11 1/2 (292)	**(Prefix)-18-RR06**	14 15/16 (379)
	9 (228)	**(Prefix)-18-LR09**	13 3/16 (335)	**(Prefix)-18-SR09**	10 5/8 (270)	**(Prefix)-18-RR09**	13 3/16 (335)
	12 (305)	**(Prefix)-18-LR12**	11 1/2 (292)	**(Prefix)-18-SR12**	9 3/4 (248)	**(Prefix)-18-RR12**	11 1/2 (292)
24 (609)	6 (152)	**(Prefix)-24-LR06**	18 3/8 (467)	**(Prefix)-24-SR06**	13 3/16 (335)	**(Prefix)-24-RR06**	18 3/8 (467)
	9 (228)	**(Prefix)-24-LR09**	16 11/16 (424)	**(Prefix)-24-SR09**	12 3/8 (314)	**(Prefix)-24-RR09**	16 11/16 (424)
	12 (305)	**(Prefix)-24-LR12**	14 15/16 (379)	**(Prefix)-24-SR12**	11 1/2 (292)	**(Prefix)-24-RR12**	14 15/16 (379)
	18 (457)	**(Prefix)-24-LR18**	11 1/2 (292)	**(Prefix)-24-SR18**	9 3/4 (248)	**(Prefix)-24-RR18**	11 1/2 (292)
30 (762)	6 (152)	**(Prefix)-30-LR06**	21 7/8 (555)	**(Prefix)-30-SR06**	14 15/16 (379)	**(Prefix)-30-RR06**	21 7/8 (555)
	9 (228)	**(Prefix)-30-LR09**	20 1/8 (511)	**(Prefix)-30-SR09**	14 1/16 (358)	**(Prefix)-30-RR09**	20 1/8 (511)
	12 (305)	**(Prefix)-30-LR12**	18 3/8 (467)	**(Prefix)-30-SR12**	13 3/16 (335)	**(Prefix)-30-RR12**	18 3/8 (467)
	18 (457)	**(Prefix)-30-LR18**	14 15/16 (379)	**(Prefix)-30-SR18**	11 1/2 (292)	**(Prefix)-30-RR18**	14 15/16 (379)
	24 (609)	**(Prefix)-30-LR24**	11 1/2 (292)	**(Prefix)-30-SR24**	9 3/4 (248)	**(Prefix)-30-RR24**	11 1/2 (292)
36 (914)	6 (152)	**(Prefix)-36-LR06**	25 5/16 (643)	**(Prefix)-36-SR06**	16 11/16 (424)	**(Prefix)-36-RR06**	23 5/16 (643)
	9 (228)	**(Prefix)-36-LR09**	23 9/16 (598)	**(Prefix)-36-SR09**	15 13/16 (402)	**(Prefix)-36-RR09**	23 9/16 (598)
	12 (305)	**(Prefix)-36-LR12**	21 7/8 (555)	**(Prefix)-36-SR12**	14 15/16 (379)	**(Prefix)-36-RR12**	21 7/8 (555)
	18 (457)	**(Prefix)-36-LR18**	18 3/8 (467)	**(Prefix)-36-SR18**	13 3/16 (335)	**(Prefix)-36-RR18**	18 3/8 (467)
	24 (609)	**(Prefix)-36-LR24**	14 15/16 (379)	**(Prefix)-36-SR24**	11 1/2 (292)	**(Prefix)-36-RR24**	14 15/16 (379)
	30 (762)	**(Prefix)-36-LR30**	11 1/2 (292)	**(Prefix)-36-SR30**	9 3/4 (248)	**(Prefix)-36-RR30**	11 1/2 (292)

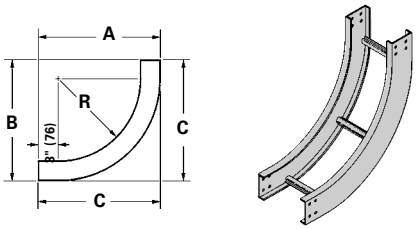
(Prefix) See page H-18 for catalog number prefix.

Width dimensions are to inside wall. Manufacturing tolerances apply to all dimensions.

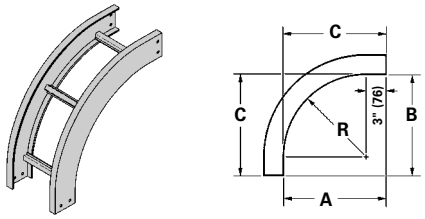
All dimensions in parentheses are millimeters unless otherwise specified.

Vertical Bend 90° (VO, VI)

1 pair splice plates with hardware included.



90° Vertical Inside



90° Vertical Outside

90° Vertical Inside Bend (VI)

Bend Radius R in. (mm)	Width in. (mm)	Catalog No.	VI Dimensions [in. (mm)] Series 14 Steel A	Series 14 Steel B	Series 14 Steel C	Series 15 Steel A	Series 15 Steel B	Series 15 Steel C	Series 16 Steel A	Series 16 Steel B	Series 16 Steel C	Series 17 Steel A	Series 17 Steel B	Series 17 Steel C
12 (305)	6 (152)	(Pre)-06-90VI12	18 7/16 (468)	18 7/16 (468)	18 7/16 (468)	19 3/16 (487)	19 3/16 (487)	19 3/16 (487)	20 3/16 (513)	20 3/16 (513)	20 3/16 (513)	21 3/16 (538)	21 3/16 (538)	21 3/16 (538)
	9 (228)	(Pre)-09-90VI12												
	12 (305)	(Pre)-12-90VI12												
	18 (457)	(Pre)-18-90VI12												
	24 (609)	(Pre)-24-90VI12												
	30 (762)	(Pre)-30-90VI12												
	36 (914)	(Pre)-36-90VI12												
24 (609)	6 (152)	(Pre)-06-90VI24	30 7/16 (773)	30 7/16 (773)	30 7/16 (773)	31 3/16 (792)	31 3/16 (792)	31 3/16 (792)	32 3/16 (817)	32 3/16 (817)	32 3/16 (817)	33 3/16 (843)	33 3/16 (843)	33 3/16 (843)
	9 (228)	(Pre)-09-90VI24												
	12 (305)	(Pre)-12-90VI24												
	18 (457)	(Pre)-18-90VI24												
	24 (609)	(Pre)-24-90VI24												
	30 (762)	(Pre)-30-90VI24												
	36 (914)	(Pre)-36-90VI24												

90° Vertical Outside Bend (VO)

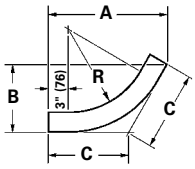
Bend Radius R in. (mm)	Width in. (mm)	Catalog No.	VO Dimensions [in. (mm)] All Series 1 A	All Series 1 B	All Series 1 C
12 (305)	6 (152)	(Pre)-06-90VO12	15 (381)	15 (381)	15 (381)
	9 (228)	(Pre)-09-90VO12			
	12 (305)	(Pre)-12-90VO12			
	18 (457)	(Pre)-18-90VO12			
	24 (609)	(Pre)-24-90VO12			
	30 (762)	(Pre)-30-90VO12			
	36 (914)	(Pre)-36-90VO12			
24 (609)	6 (152)	(Pre)-06-90VO24	27 (686)	27 (686)	27 (686)
	9 (228)	(Pre)-09-90VO24			
	12 (305)	(Pre)-12-90VO24			
	18 (457)	(Pre)-18-90VO24			
	24 (609)	(Pre)-24-90VO24			
	30 (762)	(Pre)-30-90VO24			
	36 (914)	(Pre)-36-90VO24			

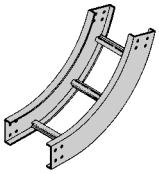
(Pre) See page H-18 for catalog number prefix.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

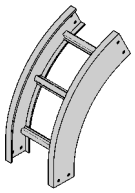
Vertical Bend 60° (VO, VI)

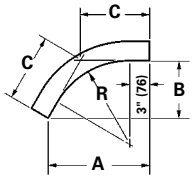
1 pair splice plates with hardware included.





60° Vertical Inside





60° Vertical Outside

60° Vertical Inside Bend (VI)

Bend Radius R in. (mm)	Width in. (mm)	Catalog No.	VI Dimensions [in. (mm)] Series 14 Steel A	Series 14 Steel B	Series 14 Steel C	Series 15 Steel A	Series 15 Steel B	Series 15 Steel C	Series 16 Steel A	Series 16 Steel B	Series 16 Steel C	Series 17 Steel A	Series 17 Steel B	Series 17 Steel C
12 (305)	6 (152)	(Pre)-06-60VI12	18 1/16 (459)	10 7/16 (265)	12 (305)	18 1/2 (470)	10 11/16 (271)	12 3/8 (314)	19 3/8 (492)	11 3/16 (284)	12 15/16 (328)	20 1/4 (514)	11 11/16 (297)	13 1/2 (343)
	9 (228)	(Pre)-09-60VI12												
	12 (305)	(Pre)-12-60VI12												
	18 (457)	(Pre)-18-60VI12												
	24 (609)	(Pre)-24-60VI12												
	30 (762)	(Pre)-30-60VI12												
	36 (914)	(Pre)-36-60VI12												
24 (609)	6 (152)	(Pre)-06-60VI24	28 7/16 (722)	16 7/16 (417)	18 15/16 (481)	28 15/16 (735)	18 11/16 (424)	19 1/4 (489)	29 3/4 (755)	17 3/16 (436)	19 7/8 (505)	30 5/8 (778)	17 11/16 (449)	20 7/16 (519)
	9 (228)	(Pre)-09-60VI24												
	12 (305)	(Pre)-12-60VI24												
	18 (457)	(Pre)-18-60VI24												
	24 (609)	(Pre)-24-60VI24												
	30 (762)	(Pre)-30-60VI24												
	36 (914)	(Pre)-36-60VI24												

60° Vertical Outside Bend (VO)

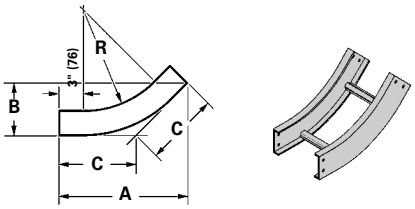
Bend Radius R in. (mm)	Width in. (mm)	Catalog No.	VO Dimensions [in. (mm)] All Series 1 A	All Series 1 B	All Series 1 C
12 (305)	6 (152)	(Pre)-06-60VO12	14 7/8 (378)	8 5/8 (219)	9 15/16 (252)
	9 (228)	(Pre)-09-60VO12			
	12 (305)	(Pre)-12-60VO12			
	18 (457)	(Pre)-18-60VO12			
	24 (609)	(Pre)-24-60VO12			
	30 (762)	(Pre)-30-60VO12			
	36 (914)	(Pre)-36-60VO12			
24 (609)	6 (152)	(Pre)-06-60VO24	25 5/16 (643)	14 5/8 (371)	16 7/8 (428)
	9 (228)	(Pre)-09-60VO24			
	12 (305)	(Pre)-12-60VO24			
	18 (457)	(Pre)-18-60VO24			
	24 (609)	(Pre)-24-60VO24			
	30 (762)	(Pre)-30-60VO24			
	36 (914)	(Pre)-36-60VO24			

(Pre) See page H-18 for catalog number prefix.
Manufacturing tolerances apply to all dimensions.

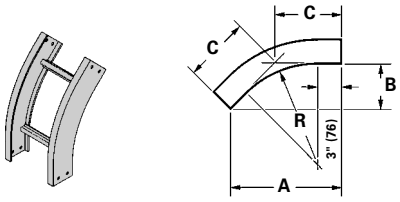
All dimensions in parentheses are millimeters unless otherwise specified.

Vertical Bend 45° (VO, VI)

1 pair splice plates with hardware included.



45° Vertical Inside



45° Vertical Outside

45° Vertical Inside Bend (VI)

Bend Radius R in. (mm)	Width in. (mm)	Catalog No.	VI Dimensions [in. (mm)] Series 14 Steel A	Series 14 Steel B	Series 14 Steel C	Series 15 Steel A	Series 15 Steel B	Series 15 Steel C	Series 16 Steel A	Series 16 Steel B	Series 16 Steel C	Series 17 Steel A	Series 17 Steel B	Series 17 Steel C
12 (305)	6 (152)	(Pre)-06-45VI12	16 3/16 (411)	6 11/16 (170)	9 1/2 (241)	16 9/16 (420)	6 7/8 (174)	9 11/16 (246)	17 1/4 (438)	7 3/16 (182)	10 1/8 (257)	18 (457)	7 7/16 (189)	10 9/16 (268)
	9 (228)	(Pre)-09-45VI12												
	12 (305)	(Pre)-12-45VI12												
	18 (457)	(Pre)-18-45VI12												
	24 (609)	(Pre)-24-45VI12												
	30 (762)	(Pre)-30-45VI12												
	36 (914)	(Pre)-36-45VI12												
24 (609)	6 (152)	(Pre)-06-45VI24	24 11/16 (627)	10 3/16 (259)	14 7/16 (367)	25 1/16 (792)	10 3/8 (792)	14 11/16 (373)	25 3/4 (654)	10 11/16 (271)	15 1/16 (382)	26 1/2 (673)	11 (279)	15 1/2 (394)
	9 (228)	(Pre)-09-45VI24												
	12 (305)	(Pre)-12-45VI24												
	18 (457)	(Pre)-18-45VI24												
	24 (609)	(Pre)-24-45VI24												
	30 (762)	(Pre)-30-45VI24												
	36 (914)	(Pre)-36-45VI24												

45° Vertical Outside Bend (VO)

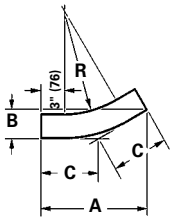
Bend Radius R in. (mm)	Width in. (mm)	Catalog No.	VO Dimensions [in. (mm)] All Series 1 A	All Series 1 B	All Series 1 C
12 (305)	6 (152)	(Pre)-06-45VO12	13 5/8 (346)	5 5/8 (143)	8 (203)
	9 (228)	(Pre)-09-45VO12			
	12 (305)	(Pre)-12-45VO12			
	18 (457)	(Pre)-18-45VO12			
	24 (609)	(Pre)-24-45VO12			
	30 (762)	(Pre)-30-45VO12			
	36 (914)	(Pre)-36-45VO12			
24 (609)	6 (152)	(Pre)-06-45VO24	22 1/16 (560)	9 1/8 (232)	12 15/16 (328)
	9 (228)	(Pre)-09-45VO24			
	12 (305)	(Pre)-12-45VO24			
	18 (457)	(Pre)-18-45VO24			
	24 (609)	(Pre)-24-45VO24			
	30 (762)	(Pre)-30-45VO24			
	36 (914)	(Pre)-36-45VO24			

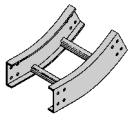
(Pre) See page H-18 for catalog number prefix.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

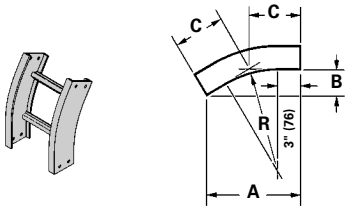
Vertical Bend 30° (VO, VI)

1 pair splice plates with hardware included.





30° Vertical Inside



30° Vertical Outside

30° Vertical Inside Bend (VI)

Bend Radius R in.	(mm)	Width in.	(mm)	Catalog No.	VI Dimensions [in. (mm)] Series 14 Steel A	B	C	Series 15 Steel A	B	C	Series 16 Steel A	B	C	Series 17 Steel A	B	C
12	(305)	6	(152)	**(Pre)-06-30VI12**	13 7/16 (341)	3 5/8 (92)	7 3/16 (182)	13 11/16 (347)	3 11/16 (93)	7 5/16 (186)	14 3/16 (360)	3 13/16 (97)	7 5/8 (193)	14 11/16 (373)	3 15/16 (100)	7 7/8 (200)
		9	(228)	**(Pre)-09-30VI12**												
		12	(305)	**(Pre)-12-30VI12**												
		18	(457)	**(Pre)-18-30VI12**												
		24	(609)	**(Pre)-24-30VI12**												
		30	(762)	**(Pre)-30-30VI12**												
		36	(914)	**(Pre)-36-30VI12**												
24	(609)	6	(152)	**(Pre)-06-30VI24**	19 7/16 (494)	5 3/16 (132)	10 7/16 (265)	19 11/16 (500)	5 5/16 (135)	10 9/16 (268)	20 3/16 (513)	5 7/16 (138)	10 13/16 (274)	20 11/16 (525)	5 9/16 (141)	11 1/16 (281)
		9	(228)	**(Pre)-09-30VI24**												
		12	(305)	**(Pre)-12-30VI24**												
		18	(457)	**(Pre)-18-30VI24**												
		24	(609)	**(Pre)-24-30VI24**												
		30	(762)	**(Pre)-30-30VI24**												
		36	(914)	**(Pre)-36-30VI24**												

30° Vertical Outside Bend (VO)

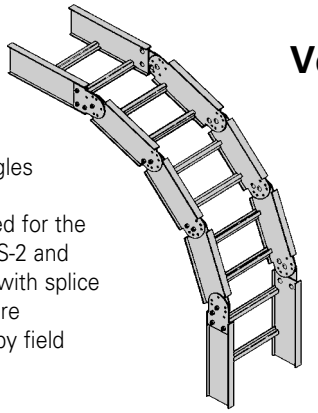
Bend Radius R in.	(mm)	Width in.	(mm)	Catalog No.	VO Dimensions [in. (mm)] All Series 1 A	B	C
12	(305)	6	(152)	**(Pre)-06-30VO12**	11 5/8 (295)	3 1/8 (79)	6 3/16 (157)
		9	(228)	**(Pre)-09-30VO12**			
		12	(305)	**(Pre)-12-30VO12**			
		18	(457)	**(Pre)-18-30VO12**			
		24	(609)	**(Pre)-24-30VO12**			
		30	(762)	**(Pre)-30-30VO12**			
		36	(914)	**(Pre)-36-30VO12**			
24	(609)	6	(152)	**(Pre)-06-30VO24**	17 5/8 (448)	4 11/16 (119)	9 7/16 (240)
		9	(228)	**(Pre)-09-30VO24**			
		12	(305)	**(Pre)-12-30VO24**			
		18	(457)	**(Pre)-18-30VO24**			
		24	(609)	**(Pre)-24-30VO24**			
		30	(762)	**(Pre)-30-30VO24**			
		36	(914)	**(Pre)-36-30VO24**			

(Pre) See page H-18 for catalog number prefix.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

Vertical Bend Segments (VBS)

Adjustable Vertical Bends are made up of one or more vertical bend segments and can be used as a vertical inside (VI) or vertical outside (VO) bend. This design provides for vertical changes in direction with angles 45˚, 60˚ and 90˚ for 12" (305 mm) or 24" (609 mm) radius. The chart below shows the number of segments required for the various combinations of angles and radii. The VBS-1, VBS-2 and VBS-3 include one, two or three segments respectively with splice plates and hardware. Holes for setting standard angles are pre-punched in each segment. Other angles can be set by field drilling another hole for the locking bolt.

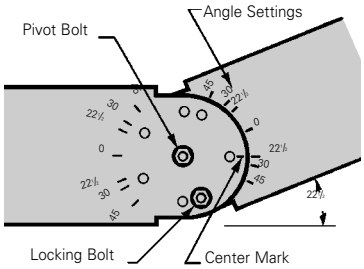


Available for 148P and 148G only.

Nominal Bend Radius in. (mm)	Catalog No.	Dimensions VO A in. (mm)	VO B in. (mm)	VO R in. (mm)	VI A in. (mm)	VI B in. (mm)	VI R in. (mm)
90˚ Vertical Inside or Outside							
12 (305)	**14(*)-(‡)-VBS-1**	8 1/4 (210)	8 1/4 (210)	6 1/2 (165)	12 1/8 (303)	12 1/8 (303)	10 1/2 (267)
24 (609)	**14(*)-(‡)-VBS-3**	24 (610)	24 (610)	22 1/4 (565)	27 7/8 (708)	27 7/8 (708)	26 1/4 (667)
60˚ Vertical Inside or Outside							
12 (305)	**14(*)-(‡)-VBS-1**	11 3/4 (298)	6 1/2 (165)	12 (305)	14 3/4 (375)	8 1/2 (216)	16 (406)
24 (609)	**14(*)-(‡)-VBS-2**	11 3/4 (298)	6 1/2 (165)	12 (305)	14 3/4 (375)	8 1/2 (216)	16 (406)
45˚ Vertical Inside or Outside							
12 (305)	**14(*)-(‡)-VBS-1**	12 3/4 (324)	5 1/4 (133)	17 1/8 (435)	15 1/2 (394)	6 7/8 (175)	21 (540)
24 (609)	**14(*)-(‡)-VBS-1**	12 3/4 (324)	5 1/4 (133)	17 1/8 (435)	15 1/2 (394)	6 7/8 (175)	21 (540)

Notes:
1. (*) Insert material type: P=Pre Galvanized, G=HDGAF
2. (‡) Insert width 6, 9, 12, 18, 24, 30, 36

Fitting Hole Pattern



Setting the Angle

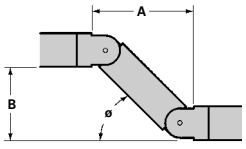
To find correct angle setting, divide angle of offset by the number of segments plus one. The result is equal to the angle setting stamped on the vertical bend segment and the splice plate. After inserting center pivot bolt, align the mark at the end of the segment or splice plate with the angle and insert locking bolt in the pre-punched hole.

Example: 90˚ bend, 24" radius requires 3 segments
3 segments + 1 = 4
90˚ divided by 4 = 22 1/2˚
Set all vertical segments at 22 1/2˚

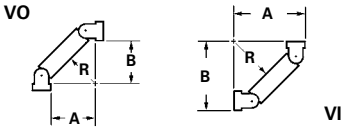
Offset Dimensions

One vertical bend segment can be used to complete a vertical offset. Offset dimensions are shown.

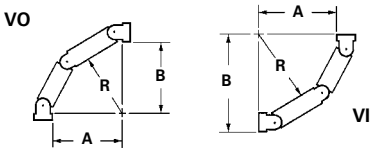
Angle ø	A in. (mm)	B in. (mm)
45˚	12 (305)	8 1/2 (216)
30˚	14 (355)	5 3/4 (146)
22 1/2˚	14 1/4 (362)	5 (127)



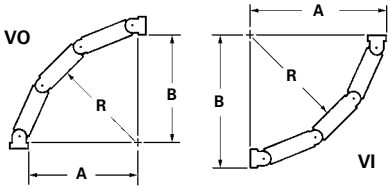
VBS-1 (1 Segment)



VBS-2 (2 Segments)



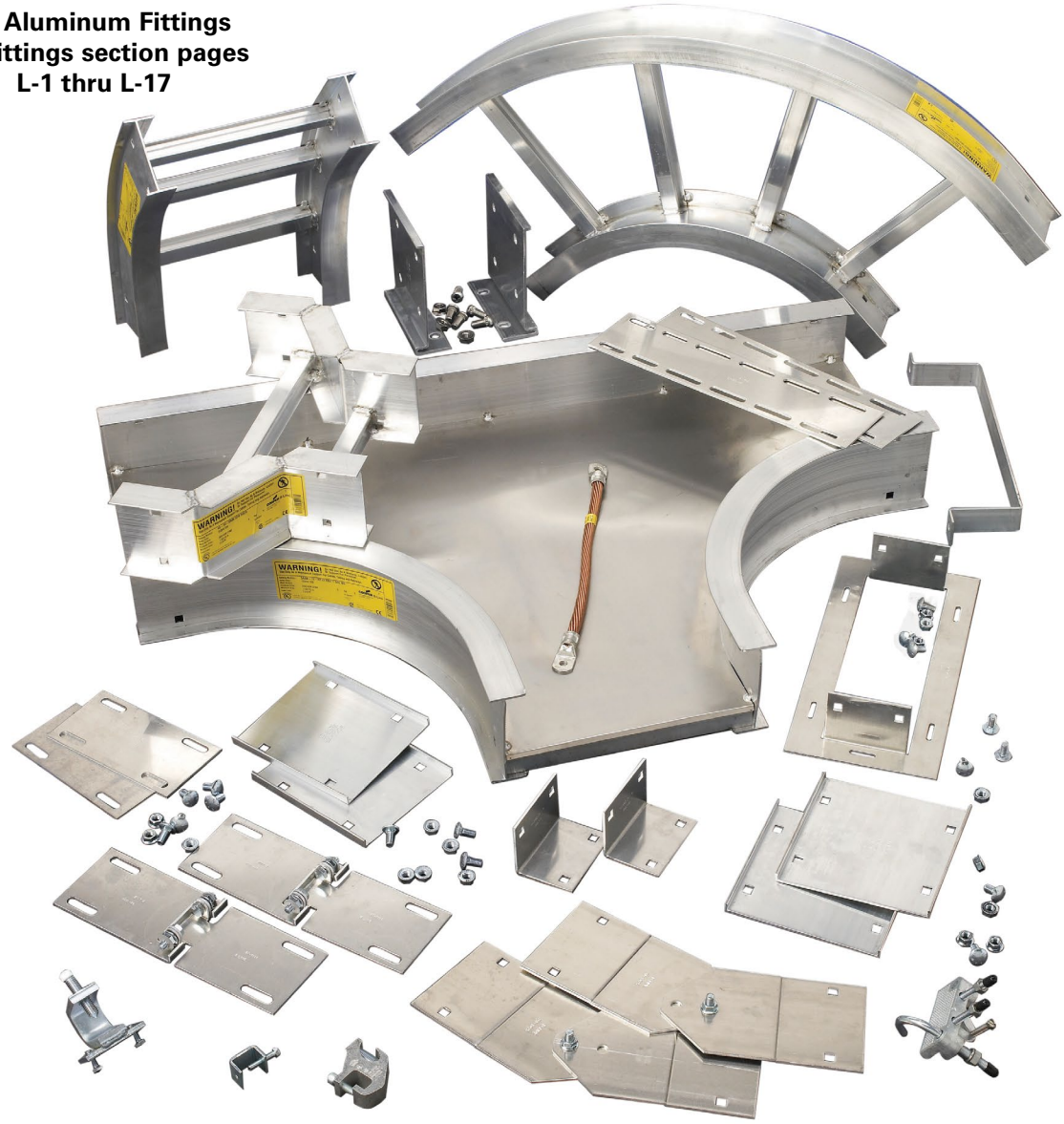
VBS-3 (3 Segments)



Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

For Aluminum Fittings see fittings section pages L-1 thru L-17



How The Service Advisor Works

We know that your time is important! That's why the color-coding system in this catalog is designed to help you select products that fit your service needs. Products are marked to indicate the typical lead time for orders of 50 pieces or less.

Customer: How do I select my straight sections. covers, or fittings so that I get the quickest turnaround?

Service Advisor: Each part of our selection chart is shown in colors. If any section of a part number is a different color, the part will typically ship with the longer lead time represented by the colors.

- Green = Fastest shipped items
- Black = Normal lead-time items
- Red = Normally long lead-time items

Example: **34A 09 - 24 - 144**

Part will have a normal lead time because of the 144" length.

Changing the part number from -144 to -240 will change the coding to green and reduce lead time.

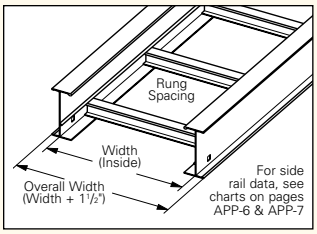
3" NEMA VE 1 Loading Depth
4" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **24 A 09 - 24 - 144**

Series	Material	*Type	*Width	Length
● **24**	● **A** = Aluminum	**SB** = Solid Bottom	● **06** = 6"	● ① **144** = 12 ft. (24)
● **H24**		● **06** = 6" rung spacing	● **09** = 9"	● ② 120 = 10 ft. (24)
● **34**		● **09** = 9" rung spacing	● **12** = 12"	● ① **240** = 20 ft. (H24)
		● **12** = 12" rung spacing	● **18** = 18"	● ② 144 = 12 ft. (H24)
			● **24** = 24"	● ① **240** = 20 ft. (34)
			● **30** = 30"	● ② 144 = 12 ft. (34)
			● **36** = 36"	

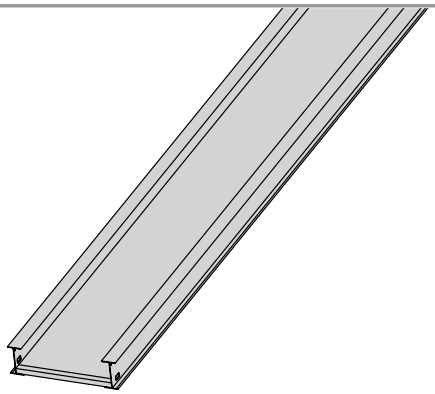


☐ Primary Length.
② Secondary Length.

See page C-23 for explanation of lengths.

See page APP-1 for additional rung options. *Special sizes available.

Ladder Type
(Specify Rung Spacing)



Solid Bottom

Series 2, 3, 4, & 5 Aluminum

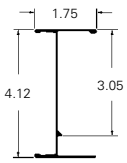
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

3" NEMA VE 1 Loading Depth
4" Side Rail Height

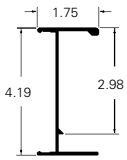
Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply the published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

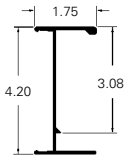
B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
24		NEMA: 16A, 12C	6	487*	0.001	Area = 1.05 in²	1.8	725*	0.017	Area = 6.77 cm²
		CSA: 277 kg/m 3.0m	8	284	0.003	Sx = 1.34 in³	2.4	422	0.055	Sx = 21.96 cm³
		D-3m	10	181	0.008	Ix = 2.85 in⁴	3.0	270	0.136	Ix = 118.63 cm⁴
		UL Cross-Sectional	12	126	0.016		3.7	187	0.279	
		Area: 1.00 in²	14	93	0.030		4.3	138	0.618	
			16	71	0.052		4.9	105	0.883	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%.
Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

* When using 18" rung spacing, load capacity is limited to 394 lbs/ft (586.27 kg/m) for 30" tray width and 325 lbs/ft (483.6 kg/m) for 36" tray width.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
H24		NEMA: 20A	10	225	0.006	Area = 1.32 in²	3.0	330	0.106	Area = 8.52 cm²
		CSA: 84 kg/m 6.1m	12	156	0.013	Sx = 1.57 in³	3.7	226	0.222	Sx = 25.73 cm³
		D-6m	14	115	0.023	Ix = 3.69 in⁴	4.3	171	0.400	Ix = 153.59 cm⁴
		UL Cross-Sectional	16	88	0.040		4.9	129	0.693	
		Area: 1.00 in²	18	70	0.064		5.5	103	1.093	
			20	56	0.098		6.1	83	1.682	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
34		NEMA: 20B, 16C	10	320	0.005	Area = 1.82 in²	3.0	476	0.077	Area = 11.74 cm²
		CSA: 112 kg/m 6.0m	12	222	0.009	Sx = 2.10 in³	3.7	331	0.160	Sx = 34.41 cm³
		E-6m	14	163	0.017	Ix = 4.98 in⁴	4.3	243	0.296	Ix = 207.28 cm⁴
		UL Cross-Sectional	16	125	0.030		4.9	186	0.505	
		Area: 1.50 in²	18	99	0.047		5.5	147	0.810	
			20	80	0.072		6.1	119	1.234	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

All dimensions in parentheses are millimeters unless otherwise specified.

4" NEMA VE 1 Loading Depth
5" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **25 A 09 - 24 - 144**

Series
- **25**
- **35**

Material
- **A** = Aluminum

***Type**
- **SB** = Solid Bottom
- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing

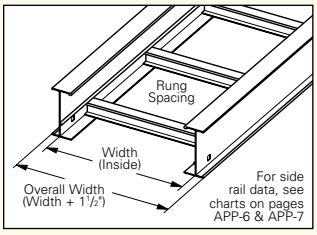
***Width**
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

Length

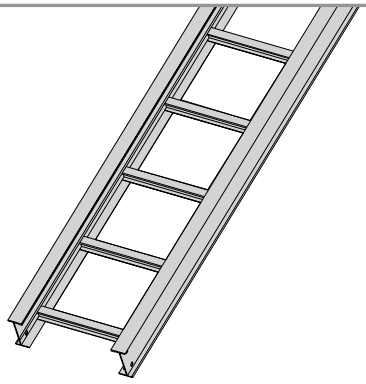
① **144** = 12 ft.	25
② 120 = 10 ft.	
① **240** = 20 ft.	35
② 144 = 12 ft.	

① Primary Length.
② Secondary Length.

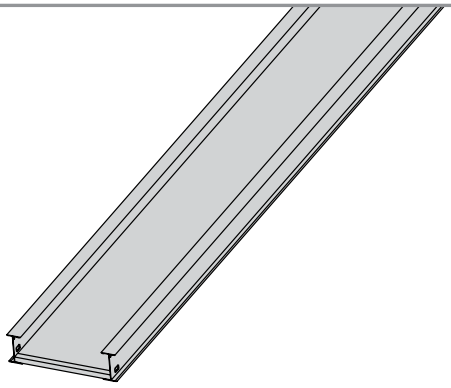
See page C-23 for explanation of lengths.



See page APP-1 for additional rung options. *Special sizes available.



Ladder Type
(Specify Rung Spacing)



Solid Bottom

Series 2, 3, 4, & 5 Aluminum

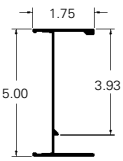
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

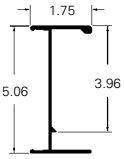
4" NEMA VE 1 Loading Depth
5" Side Rail Height

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
25		NEMA: 20A, 12C CSA: 67 kg/m 6.0m D-6m UL Cross-Sectional Area: 1.00 in²	10	200	0.0049	Area = 1.24 in² Sx = 1.80 in³ Ix = 4.62 in⁴	3.0	298	0.083	Area = 8.00 cm² Sx = 29.50 cm³ Ix = 192.30 cm⁴
			12	139	0.010		3.7	207	0.172	
			14	102	0.019		4.3	152	0.319	
			16	78	0.032		4.9	116	0.545	
			18	62	0.051		5.5	92	0.873	
			20	50	0.078		6.1	74	1.330	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
35		NEMA: 20B, 16C CSA: 112 kg/m 6.0m E-6m UL Cross-Sectional Area: 1.50 in²	10	310	0.0036	Area = 1.67 in² Sx = 2.35 in³ Ix = 6.37 in⁴	3.0	461	0.060	Area = 10.77 cm² Sx = 38.51 cm³ Ix = 265.14 cm⁴
			12	215	0.0073		3.7	320	0.125	
			14	158	0.014		4.3	235	0.232	
			16	121	0.023		4.9	180	0.395	
			18	96	0.037		5.5	142	0.633	
			20	77	0.057		6.1	115	0.965	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

All dimensions in parentheses are millimeters unless otherwise specified.

5" NEMA VE 1 Loading Depth
6" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **26 A 09 - 24 - 144**

Series

- ● **26**
- ● **36**
- ● **46**
- ● **H46†**
- ● **56†**

Material

- ● **A** = Aluminum

***Type**

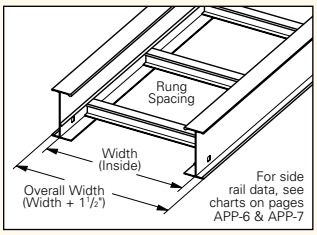
- **SB** = Solid Bottom
- ● **06** = 6" rung spacing
- ● **09** = 9" rung spacing
- ● **12** = 12" rung spacing

***Width**

- ● **06** = 6"
- ● **09** = 9"
- ● **12** = 12"
- ● **18** = 18"
- ● **24** = 24"
- ● **30** = 30"
- ● **36** = 36"

Length

● ① **144** = 12 ft.	26
● ② 120 = 10 ft.	
● ① **240** = 20 ft.	36
● ② 144 = 12 ft.	
● ① **240** = 20 ft.	46
● ② 288 = 24 ft.	
● ① **240** = 20 ft.	H46
● ① 300 = 25 ft.	
● ① **240** = 20 ft.	56
● ② 288 = 24 ft.	
● ① 300 = 25 ft.	
● ② 360 = 30 ft.	

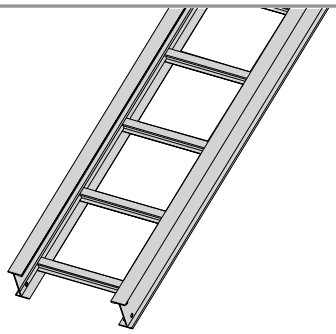


† H46A & 56A only available in ladder type 9" and 12" rung spacing. See page APP-2.

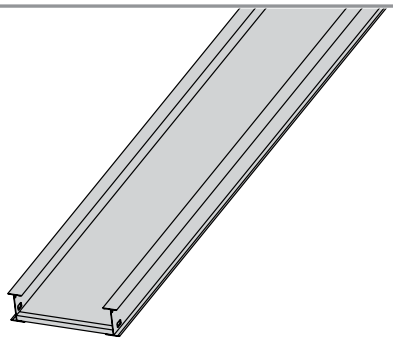
① Primary Length.
② Secondary Length.

See page C-23 for explanation of lengths.

See page APP-1 for additional rung options. *Special sizes available.



Ladder Type
(Specify Rung Spacing)



Solid Bottom

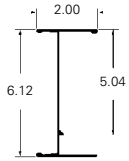
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

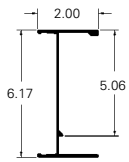
5" NEMA VE 1 Loading Depth
6" Side Rail Height

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support, without collapse, a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply the published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

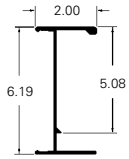
Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
26		NEMA: 20A, 16B CSA: 67 kg/m 6.0m D-6m UL Cross-Sectional Area: 1.00 in²	10	204	0.0028	Area = 1.41 in² Sx = 2.53 in³ Ix = 7.915 in⁴	3.0	304	0.049	Area = 9.10 cm² Sx = 41.46 cm³ Ix = 329.45 cm⁴
			12	142	0.006		3.7	211	0.101	
			14	104	0.011		4.3	155	0.186	
			16	80	0.019		4.9	119	0.318	
			18	63	0.030		5.5	94	0.509	
			20	51	0.045		6.1	76	0.776	

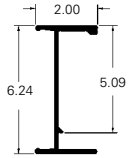
When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
36		NEMA: 20B, 16C CSA: 112 kg/m 6.0m E-6m UL Cross-Sectional Area: 1.50 in²	12	233	0.0043	Area = 1.81 in² Sx = 3.36 in³ Ix = 10.85 in⁴	3.7	347	0.073	Area = 11.68 cm² Sx = 55.06 cm³ Ix = 451.61 cm⁴
			14	171	0.008		4.3	255	0.136	
			16	131	0.014		4.9	195	0.232	
			18	104	0.022		5.5	154	0.372	
			20	84	0.033		6.1	125	0.566	
			22	69	0.049		6.7	103	0.829	

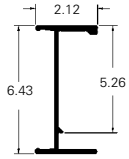
When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
46		NEMA: 20C CSA: 168 kg/m 6.1m E-6m UL Cross-Sectional Area: 1.50 in²	14	210	0.0071	Area = 2.06 in² Sx = 3.59 in³ Ix = 12.18 in⁴	4.3	313	0.121	Area = 13.29 cm² Sx = 58.83 cm³ Ix = 506.97 cm⁴
			16	161	0.012		4.9	239	0.207	
			18	127	0.019		5.5	189	0.331	
			20	103	0.030		6.1	153	0.505	
			22	85	0.043		6.7	127	0.739	
			24	72	0.061		7.3	106	1.046	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
H46		NEMA: 20C+ CSA: 131 kg/m 7.6m E-6m UL Cross-Sectional Area: 2.00 in²	16	261	0.0085	Area = 2.95 in² Sx = 5.33 in³ Ix = 17.30 in⁴	4.9	388	0.145	Area = 19.03 cm² Sx = 87.34 cm³ Ix = 720.08 cm⁴
			18	206	0.014		5.5	307	0.233	
			20	167	0.021		6.1	248	0.355	
			22	138	0.030		6.7	205	0.520	
			24	116	0.043		7.3	173	0.737	
			25	88	0.051		7.6	131	0.867	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
56		NEMA: 20C+ CSA: 112 kg/m 9.1m E-6m UL Cross-Sectional Area: 2.00 in²	20	169	0.016	Area = 3.63 in² Sx = 6.12 in³ Ix = 22.63 in⁴	6.1	251	0.272	Area = 23.42 cm² Sx = 100.29 cm³ Ix = 941.86 cm⁴
			22	139	0.023		6.7	208	0.398	
			24	117	0.033		7.3	174	0.563	
			26	100	0.045		7.9	149	0.776	
			28	86	0.061		8.5	128	1.043	
			30	75	0.081		9.1	112	1.375	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

All dimensions in parentheses are millimeters unless otherwise specified.

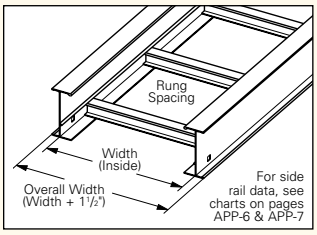
6" NEMA VE 1 Loading Depth
7" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **37 A 09 - 24 - 144**

Series	Material	*Type	*Width	Length	
● **27**	● **A** = Aluminum	**SB** = Solid Bottom	● **06** = 6"	● ① **144** = 12 ft.	27
● **37**		● **06** = 6" rung spacing	● **09** = 9"	● ② 120 = 10 ft.	
● **47**		● **09** = 9" rung spacing	● **12** = 12"	● ① **240** = 20 ft.	37
● **H47**†		● **12** = 12" rung spacing	● **18** = 18"	● ② 144 = 12 ft.	
● **57**†			● **24** = 24"	● ① **240** = 20 ft.	47
			● **30** = 30"	● ② 288 = 24 ft.	
			● **36** = 36"	● ① **240** = 20 ft.	H47
				● ② 300 = 25 ft.	
				● ① **360** = 30 ft.	57
				● ② 300 = 25 ft.	

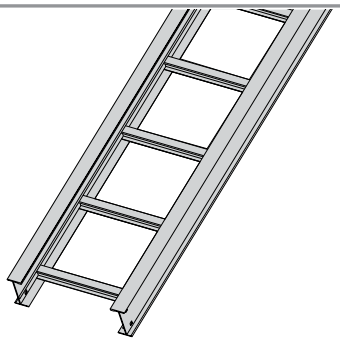


† H47A & 57A only available in ladder type 9" and 12" rung spacing, or solid bottom. See page APP-2.

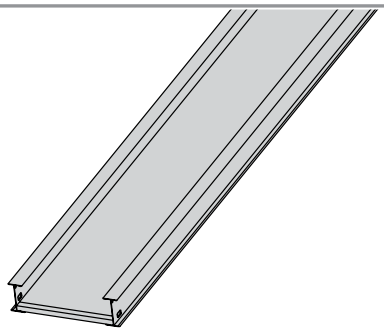
① Primary Length.
② Secondary Length.

See page C-23 for explanation of lengths.

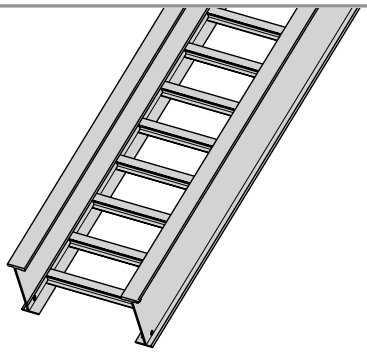
See page APP-1 for additional rung options. *Special sizes available.



Ladder Type
(Specify Rung Spacing)



Solid Bottom



57A only available in ladder type 9" and 12" rung spacing, and also solid bottom

Series 2, 3, 4, & 5 Aluminum

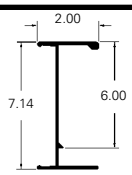
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

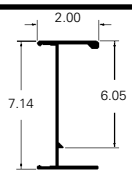
All dimensions in parentheses are millimeters unless otherwise specified.

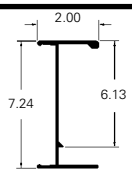
6" NEMA VE 1 Loading Depth
7" Side Rail Height

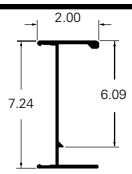
Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply the published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

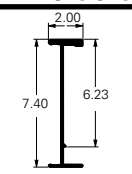
Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
27		NEMA: 12C	10	177	0.006		3.0	269	0.033	
		CSA: 68 kg/m 6.0m	12	123	0.013	Area = 1.63 in²	3.7	177	0.073	Area = 10.52 cm²
		D-6m	14	90	0.023	Sx = 2.93 in³	4.3	134	0.131	Sx = 48.01 cm³
		UL Cross-Sectional	16	69	0.040	Ix = 11.28 in⁴	4.9	101	0.227	Ix = 469.51 cm⁴
		Area: 1.50 in²	18	54	0.064		5.5	81	0.357	
			20	44	0.098		6.1	67	0.534	

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
37		NEMA: 20B, 16C	12	222	0.0035		3.7	331	0.059	
		CSA: 101 kg/m 6.1m	14	163	0.0064	Area = 1.81 in²	4.3	243	0.109	Area = 11.68 cm²
		D-6m	16	125	0.011	Sx = 3.77 in³	4.9	186	0.186	Sx = 61.78 cm³
		UL Cross-Sectional	18	99	0.017	Ix = 13.50 in⁴	5.5	147	0.299	Ix = 561.91 cm⁴
		Area: 1.50 in²	20	80	0.027		6.1	119	0.455	
			22	66	0.039		6.7	98	0.666	

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
47		NEMA: 20C	14	204	0.0048		4.3	305	0.083	
		CSA: 142 kg/m 6.1m	16	156	0.0082	Area = 2.38 in²	4.9	233	0.141	Area = 15.35 cm²
		E-6m	18	123	0.0132	Sx = 4.94 in³	5.5	184	0.225	Sx = 80.95 cm³
		UL Cross-Sectional	20	100	0.0201	Ix = 17.88 in⁴	6.1	149	0.344	Ix = 744.22 cm⁴
		Area: 2.00 in²	22	83	0.0295		6.7	123	0.503	
			24	69	0.0418		7.3	103	0.713	

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
H47		NEMA: 20C+	16	233	0.0064		4.9	346	0.110	
		CSA: 241 kg/m 6.1m	18	184	0.010	Area = 3.04 in²	5.4	274	0.176	Area = 19.61 cm²
		E-6m	20	149	0.016	Sx = 6.10 in³	6.1	222	0.268	Sx = 99.96 cm³
		UL Cross-Sectional	22	123	0.023	Ix = 22.91 in⁴	6.7	183	0.393	Ix = 953.59 cm⁴
		Area: 2.00 in²	24	103	0.033		7.3	154	0.556	
			25	95	0.038		7.6	142	0.655	

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
57		NEMA: 20C+	20	232	0.011		6.1	345	0.187	
		CSA: 151 kg/m 9.1m	22	192	0.016	Area = 4.22 in²	6.7	285	0.274	Area = 27.73 cm²
		E-6m	24	161	0.023	Sx = 7.73 in³	7.3	240	0.388	Sx = 126.67 cm³
		UL Cross-Sectional	26	136	0.031	Ix = 32.86 in⁴	7.9	202	0.534	Ix = 1367.74 cm⁴
		Area: 2.00 in²	28	117	0.042		8.5	174	0.718	
			30	102	0.055		9.1	152	0.947	

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

All dimensions in parentheses are millimeters unless otherwise specified.

6" NEMA VE 1 Loading Depth
8" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **S8 A 09 - 24 - 144**

Series
- **S8**

Material
- **A** = Aluminum

***Type**
Ladder-
- **09** = 9" rung spacing
- **12** = 12" rung spacing

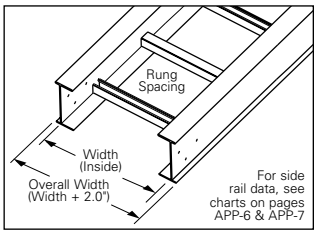
***Width**
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

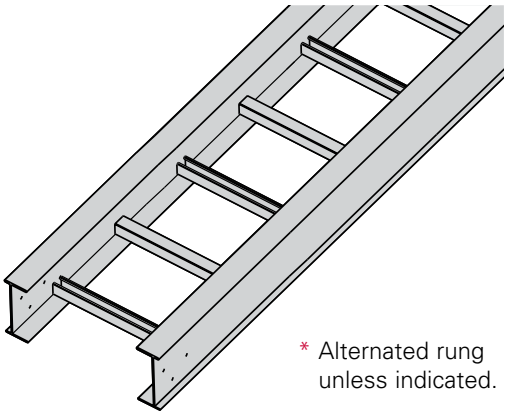
Length
- **480** = 40 ft.
- ① **360** = 30 ft.
- ② **300** = 25 ft.

① Primary Length.
② Secondary Length.

See page C-23 for explanation of lengths.

See page APP-1 for additional rung options. *Special sizes available.

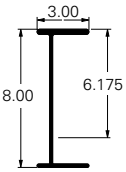




* Alternated rung unless indicated.

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply the published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line Series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
S8A		NEMA: 20C+	20	363	0.007	Area=5.50 in² Sx=15.39 in³ Ix=55.35 in⁴	6.1	540	0.111	Area=35.48 cm² Sx=252.20 cm³ Ix=2303.84 cm⁴
		CSA: 240 kg/m 9.1m	22	300	0.010		6.7	446	0.163	
			24	252	0.013		7.3	375	0.230	
		UL Cross-Sectional Area: 2.00 in²	26	215	0.019		7.9	320	0.317	
			28	185	0.025		8.5	276	0.427	
			30	161	0.033		9.1	240	0.562	
			40	101	0.146		12.2	151	2.488	

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

The following is a list of accessories and fittings that can be provided with S8A tray. For more information on these items, contact our Engineering Department.

● Fittings

Horizontal Bends
30° Bends with 24", 36", or 48" radius
45° Bends with 24", 36", or 48" radius
60° Bends with 24", 36", or 48" radius
90° Bends with 24", 36", or 48" radius

Horizontal Tees & Crosses
With 24", 36", or 48" radius

Vertical Outside Bends
30° Bends with 24", 36", or 48" radius
45° Bends with 24", 36", or 48" radius
60° Bends with 24", 36", or 48" radius
90° Bends with 24", 36", or 48" radius

Vertical Inside Bends
30° Bends with 24", 36", or 48" radius
45° Bends with 24", 36", or 48" radius
60° Bends with 24", 36", or 48" radius
90° Bends with 24", 36", or 48" radius

Reducing Fittings

● Accessories - (standard hardware is stainless steel Type 316)

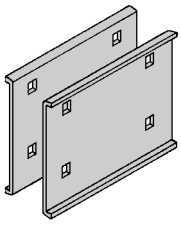
Splice Plate - 9A-1008
Expansion Splice Plate - 9A-1018
Horizontal Adjustable Splice Plate - 9A-1038
Vertical Adjustable Splice Plate - 9A-1028
Hold Down Clamps - 9ZN-1281, 9G-1281, 9A-1281
Guides - S9ZN-1202, S9G-1202
Step Down Splice Plate -
9A-1048 = 8" to 4"
9A-1051 = 8" to 5"
9A-1050 = 8" to 6"
9A-1078 = 8" to 7"
Other Accessories Include:
Offset Splice Plates
Blind Ends
Covers - Standard aluminum cover number with S in front (Example: S807A40)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Wedge Lock Splice Plates

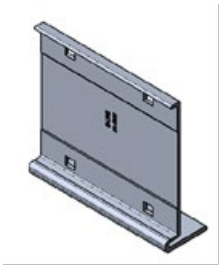
- Furnished in pairs with 3/8" hardware.
- UL Classified as equipment grounding conductor.
- Standard 4-hole pattern.
- One pair provided with each straight section. (Expansion splice quantity subtracted)
- For field installation drill 13/32" hole.



Catalog No.	Height in.	mm
● 9A-1004	4	(101)
● 9A-1005	5	(127)
● 9A-1006	6	(152)
● 9A-1007	7	(178)

H46A, H47A, 56A and 57A Mid-Span Splice

- Furnished in pairs with 3/8" hardware.
- UL Classified as equipment grounding conductor.
- Standard for H46A, H47A, 56A and 57A straight sections.
- Six bolt design 3/8" Stainless Steel Type 316 hardware standard.
- Available on ladder bottoms only. 09 and 12" rung spacing.
- One pair provided with each straight section. (Expansion splice quantity subtracted)

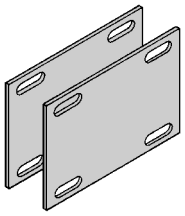


Catalog No.	Tray Series
● 9A-6006	H46A, 56A
● 9A-6007	H47A, 57A

Expansion Splice Plates

- Expansion plates allow for one inch expansion or contraction of the cable tray, or where expansion joints occur in the supporting structure.
- Furnished in pairs with hardware.
- **Bonding Jumpers are required on each siderail. Order Separately.**

For heavy duty expansion splice plates see page APP-3.

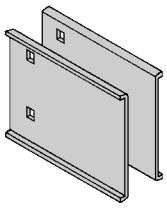


Catalog No.	Height in.	mm
● 9A-1014	4	(101)
● 9A-1015	5	(127)
● 9A-1016	6	(152)
● 9A-1017	7	(178)

Requires supports within 24" on both sides, per NEMA VE 2.

Universal Splice Plates

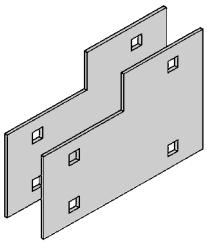
- Furnished in pairs with 3/8" hardware.
- UL Classified as equipment grounding conductor.



Catalog No.	Height in.	mm
● 9A-1004-1/2	4	(101)
● 9A-1005-1/2	5	(127)
● 9A-1006-1/2	6	(152)
● 9A-1007-1/2	7	(178)

Step Down Splice Plates

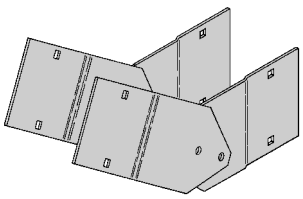
- These splice plates are offered for connecting cable tray sections having side rails of different heights.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.



Catalog No.	Height in. mm
● 9A-1045	5 to 4 (127 to 101)
● 9A-1046	6 to 4 (152 to 101)
● 9A-1060	6 to 5 (152 to 127)
● 9A-1047	7 to 4 (178 to 101)
● 9A-1061	7 to 5 (178 to 127)
● 9A-1062	7 to 6 (178 to 152)

Vertical Adjustable Splice Plates

- These plates provide for changes in elevation that do not conform to standard vertical fittings.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- Bonding Jumpers not required.



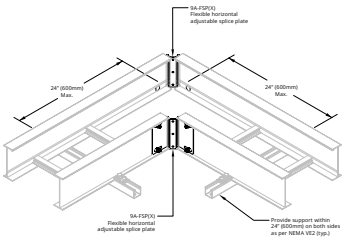
Catalog No.	Height in.	mm
● 9A-1024	4	(101)
● 9A-1025	5	(127)
● 9A-1026	6	(152)
● 9A-1027	7	(178)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

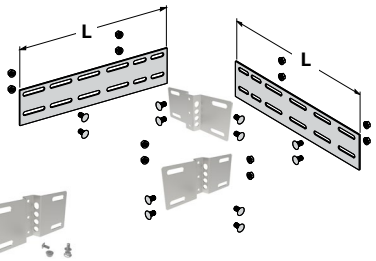
All dimensions in parentheses are millimeters unless otherwise specified.

Horizontal Adjustable Splice Plates

- Offered to adjust a cable tray run for changes in direction in a horizontal plane that do not conform to standard horizontal fittings.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- Bonding jumpers **not** required.
- (X) Insert 4, 5, 6 or 7 for side rail height.



9A-FSP(X)-12 or 9A-FSP(X)-36
One pair splice plates with extensions.



9A-FSP(X)
Splice only

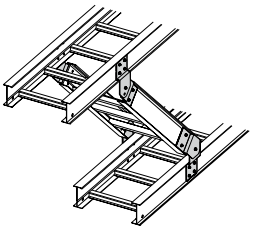
Catalog No.	Width (in.)	Height (in.)	Depth (in.)	Weight (lbs.)
9A-FSP4	8.575	3.891	.820	0.253
9A-FSP5	8.575	4.781	.820	0.312
9A-FSP6	8.575	5.891	.820	0.386
9A-FSP7	8.575	6.891	.820	0.456

Catalog No.	Cable Tray End Cut	Thru Tray Width in.	mm	'L' in.	mm
● **9A-FSP(X)**	Mitered	36	(914)	N/A	N/A
● **9A-FSP(X)-12**	Not mitered	12	(305)	16	(406)
● **9A-FSP(X)-36**	Not mitered	36	(914)	41	(1041)

Requires supports within 24" on both sides, per NEMA VE 2.

Branch Pivot Connectors

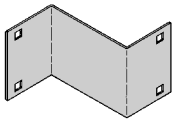
- Branch from existing cable tray runs at any point.
- Pivot to any required angle.
- UL Classified as equipment grounding conductor (bonding jumpers not required).
- Furnished in pairs with hardware.



Catalog No.	Height in.	mm
● **9A-2044**	4	(101)
● **9A-2045**	5	(127)
● **9A-2046**	6	(152)
● **9A-2047**	7	(178)

Offset Reducing Splice Plate

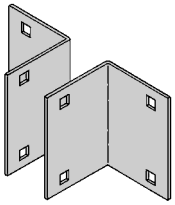
- This plate is used for joining cable trays having different widths. When used in pairs they form a straight reduction; when used singly with a standard splice plate, they form an offset reduction.
- Furnished as one plate with hardware.
- (‡) Insert reduction



Catalog No.	Height in.	mm
● **9A-1064-(‡)**	4	(101)
● **9A-1065-(‡)**	5	(127)
● **9A-1066-(‡)**	6	(152)
● **9A-1067-(‡)**	7	(178)

Tray-to-Box Splice Plates

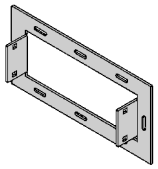
- Used to attach the end of a cable tray run to a distribution box or control panel.
- Furnished in pairs with hardware



Catalog No.	Height in.	mm
● **9A-1054**	4	(101)
● **9A-1055**	5	(127)
● **9A-1056**	6	(152)
● **9A-1057**	7	(178)

Frame Type Box Connector

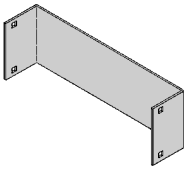
- Designed to attach the end of a cable tray run to a distribution cabinet or control center to help reinforce the box at the point of entry.
- Furnished with tray connection hardware.
- (‡) Insert tray width



Catalog No.	Height in.	mm
● **9A-1074-(‡)**	4	(101)
● **9A-1075-(‡)**	5	(127)
● **9A-1076-(‡)**	6	(152)
● **9A-1077-(‡)**	7	(178)

Blind End

- This plate forms a closure for a dead end cable tray.
- Furnished as one plate with hardware.
- (‡) Insert tray width



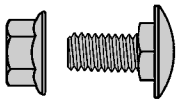
Catalog No.	Height in.	mm
● **9A-1084-(‡)**	4	(101)
● **9A-1085-(‡)**	5	(127)
● **9A-1086-(‡)**	6	(152)
● **9A-1087-(‡)**	7	(178)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Standard Tray Hardware (for field installation drill 13/32" hole)

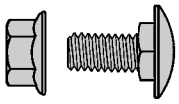
- Finish: Zinc Plated ASTM B633 SC1



Catalog No.	Description
● SNCB 3/8" x 3/4" ZN	Square Neck Carriage Bolt ASTM A307 Grade A
● SFHN 3/8"-16 ZN	Serrated Flange Hex Nut ASTM A563 Grade A

Optional Tray Hardware (for field installation drill 13/32" hole)

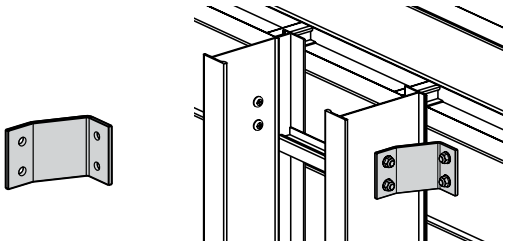
- To order 316 stainless steel hardware add SS6 suffix to catalog number - Example: 9A1004SS6



Catalog No.	Description
● SNCB 3/8" x 3/4" SS6	Square Neck Carriage Bolt AISI 316 Stainless Steel
● SFHN 3/8"-16 SS6	Serrated Flange Hex Nut AISI 316 Stainless Steel

Cross Connector Bracket

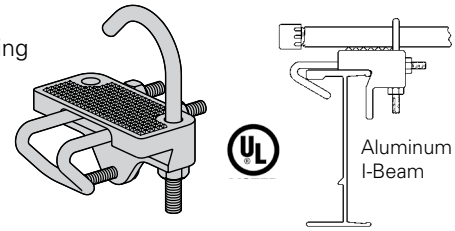
- For field connecting crossing section.
- Furnished in pairs with 3/8" hardware.



Catalog No.
● 9A-1240

Conduit-to-Cable Tray Adaptor

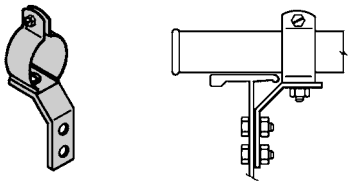
- For easy attachment of conduit terminating at a cable tray.
- Use on aluminum or steel cable trays.
- Will not fit on S8A.



Catalog No.	Conduit Size in.	Conduit Size mm
● 9G-1158-1/2 & 3/4	1/2, 3/4	(15, 20)
● 9G-1158-1 & 1 1/4	1, 1 1/4	(25, 32)
● 9G-1158-1 1/2 & 2	1 1/2, 2	(40, 50)
● 9G-1158-2 1/2 & 3	2 1/2, 3	(65, 80)
● 9G-1158-3 1/2 & 4	3 1/2, 4	(90, 100)

Conduit-to-Cable Tray Adaptor

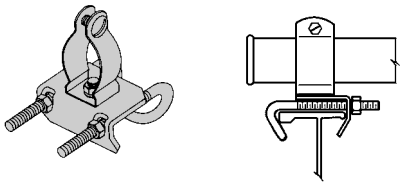
- Assembly required.
- Mounting hardware included.
- Conduit clamps provided.
- (‡) = Insert conduit size (1/2" thru 4").



Catalog No.
● 9ZN-1150-(‡)

Conduit-to-Cable Tray Adaptor

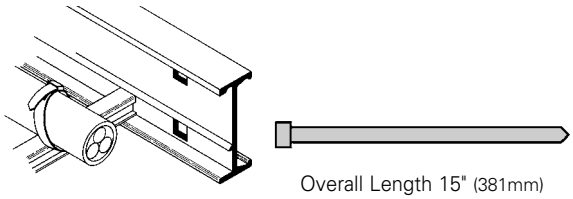
- Assembly required.
- Conduit clamps included.
- Will not fit on S8A.
- (‡) = Insert conduit size (1/2" thru 4").



Catalog No.
● 9ZN-1155-(‡)

Cable Tie (Ladder Tray)

- Nylon ties provide easy attachment of cable to ladder rungs; maximum cable O.D. is 3" (76mm).
- Cable ties are UV resistant.



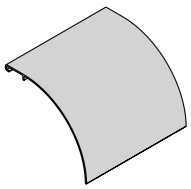
Catalog No.
● 99-2125-15

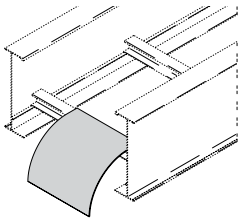
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Ladder Drop-Out

- Specially-designed Ladder Drop-Outs provide a rounded surface with 4" (101 mm) radius to protect cable as it exits from the cable tray, preventing damage to insulation.The drop-out will attach to any desired rung.
- (‡) Insert tray width

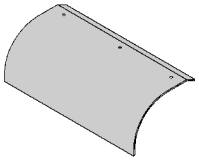




Catalog No.
9A-1104-(‡)

Trough Drop-Out

- This device provides a rounded surface to protect cable as it exits from the cable tray.
- Hardware is included for bottom drop-out.
- (‡) Insert tray width

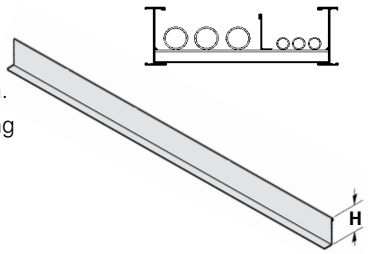


Trough-Type Drop-Out

Catalog No.
9A-1104T-(‡)

Barrier - Straight Section

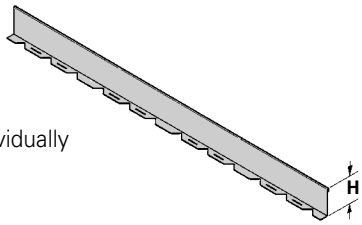
- Length: Insert 120 for [120" - 10 ft.] (3.0 m) or 144 for [144" - 12 ft.] (3.6 m)
- Order catalog number based on loading depth.
- Furnished with four #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.



Catalog No.	Side Rail Height in.	Side Rail Height mm	Loading Depth 'H' in.	Loading Depth 'H' mm
73A-Length	4	(101)	3	(76)
74A-Length	5	(127)	4	(101)
75A-Length	6	(152)	5	(127)
76A-Length	7	(178)	6	(152)

Barrier - Horizontal Bend

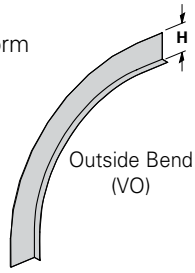
- Horizontal Bend Barriers are flexible in order to conform to any horizontal fitting radius. Can be cut to desired length.
- Standard length is 72" [6 ft.] (1.8 m) - sold individually
- Order catalog number based on loading depth.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.



Catalog No.	Side Rail Height in.	Side Rail Height mm	Loading Depth 'H' in.	Loading Depth 'H' mm
73A-90HBFL	4	(101)	3	(76)
74A-90HBFL	5	(127)	4	(101)
75A-90HBFL	6	(152)	5	(127)
76A-90HBFL	7	(178)	6	(152)

Barrier - Vertical Outside Bend

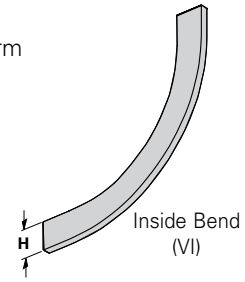
- Vertical Outside Bend Barriers are preformed to conform to a specific vertical outside bend fitting.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert 30, 45, 60 or 90 for degrees
- (†) Insert 12, 24, 36 or 48 for radius



Catalog No.	Side Rail Height in.	Side Rail Height mm	Loading Depth 'H' in.	Loading Depth 'H' mm
73A-(*)VO(†)	4	(101)	3	(76)
74A-(*)VO(†)	5	(127)	4	(101)
75A-(*)VO(†)	6	(152)	5	(127)
76A-(*)VO(†)	7	(178)	6	(152)

Barrier - Vertical Inside Bend

- Vertical Inside Bend Barriers are preformed to conform to a specific vertical inside bend fitting.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert 30, 45, 60 or 90 for degrees
- (†) Insert 12, 24, 36 or 48 for radius



Catalog No.	Side Rail Height in.	Side Rail Height mm	Loading Depth 'H' in.	Loading Depth 'H' mm
73A-(*)VI(†)	4	(101)	3	(76)
74A-(*)VI(†)	5	(127)	4	(101)
75A-(*)VI(†)	6	(152)	5	(127)
76A-(*)VI(†)	7	(178)	6	(152)

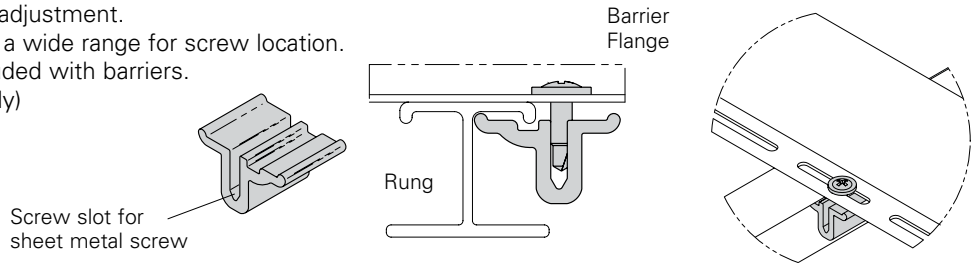
Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Barrier Strip Clip

Catalog No.
● 9A-RBC

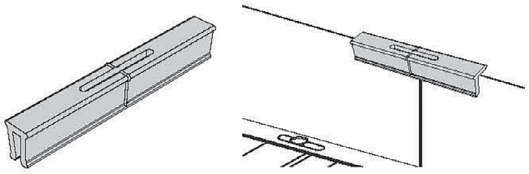
- Provides attachment to rung.
- Allows for installed barrier adjustment.
- Asymmetrical clip provides a wide range for screw location.
- Barriers strip clips not included with barriers. (Must be ordered separately)



Barrier Strip Splice

Catalog No.
● 99-9982

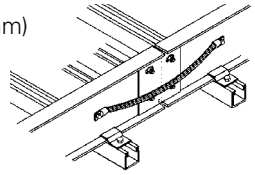
- 2.85" (72.4mm) long
- Ribbed edge for increased rigidity and grip
- Comfort edge for ease of installation
- Slotted top window with center mark for accurate placement and inspection capability
- Patent pending



Bonding Jumper

Use at each expansion splice and where the cable tray is not mechanically/electrically continuous to ground. Sold individually.

- Hardware included.
- See table 392.60(A) on page MAN-29 for amperage ratings required to match the UL cross-sectional area of the tray.
- See tray loading chart for UL cross-sectional area.
- Bonding jumper is 14½" (368mm) or 24" (609.6mm)



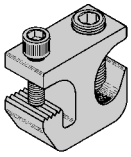
Catalog No.	Copper Wire Size	Ampacity
● 99-N1	#1	600
● 99-30	3/0	1200
● 99-40	4/0	1600
● 99-1620	250 MCM	2000

Catalog No.	Ampacity
● 99-40-24 W/ZN	1600
● 99-40-24 W/SS6	1600
● 99-1620-24 W/SS6	2000
● 99-N1-24 W/SS6	600

Grounding Clamp

Eaton's B-Line series cable tray is UL® classified as to its suitability as an equipment grounding conductor. If a separate conductor for additional grounding capability is desired, B-Line offers this clamp for bolting the conductor at least once to each cable tray section.

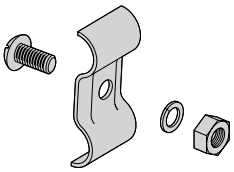
- Accepts #6 AWG to 250 MCM.



Catalog No.	Material
● 9A-2130	Tin Plated Aluminum

Ground Wire Clamp

- Mechanically attaches grounding cables to cable tray.
- Hardware included.
- (*) Insert ZN or SS4

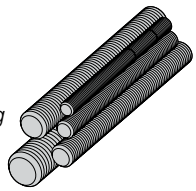


Catalog No.	Material
9(*)-2351	#1 thru 2/0
9(*(-2352	3/0 thru 250 MCM

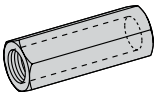
Thread Rod (ATR) & Rod Couplings

Loading based on safety factor 5.
Standard Finish: Zinc plated

See B-Line series Strut Systems Catalog for other sizes and finishes.



ATR
All Threaded Rod



B655
Rod Coupling

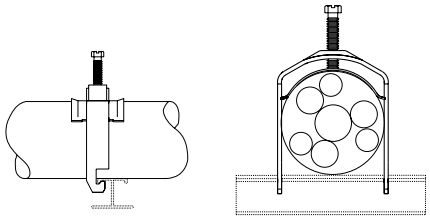
Size	Catalog No.	Available Length	Loading
All Threaded Rod			
⅜"-16	● ATR ⅜" x Length	36", 72", 120", 144"	730 lbs.
½"-13	● ATR ½" x Length	36", 72", 120", 144"	1350 lbs.
Rod Coupling			
⅜"-16	● B655-⅜"	NA	730 lbs.
½"-13	● B655-½"	NA	1350 lbs.

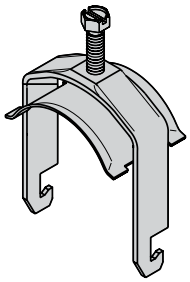
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Stainless Steel Cable Clamp 'P'

- Fits with series 2, 3, & 4 rungs.
- Attaches to rung at any point.
- 14 gauge Type 316 stainless steel material to minimize corrosion and induction heating.
- Plated steel and aluminum also available.



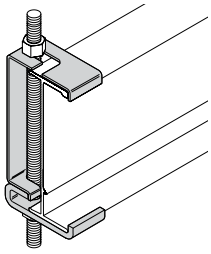


Refer to pages N2-N5

Catalog No.	Cable Size in.	mm
● BP081SS	.250 - .840	(6.4 - 21.3)
● BP110SS	.810 - 1.100	(20.6 - 28.0)
● BP135SS	.850 - 1.350	(21.6 - 34.8)
● BP175SS	1.250 - 1.750	(31.8 - 44.5)
● BP205SS	1.550 - 2.050	(39.4 - 52.1)
● BP250SS	2.000 - 2.500	(50.8 - 63.5)
● BP300SS	2.500 - 3.000	(63.5 - 76.2)
● BP325SS	2.750 - 3.250	(69.9 - 82.6)
● BP375SS	3.250 - 3.750	(82.6 - 95.3)
● BP425SS	3.750 - 4.250	(95.3 - 108.0)
● BP475SS	4.250 - 4.750	(108.0 - 120.7)

Hanger Rod Clamp

- For 1/2" ATR.
- Furnished in pairs.
- Order ATR and hex nuts separately.
- Two-piece "J"-hanger design.
- 1500 lbs./pair capacity safety factor 3.
- (*) Insert ZN or G

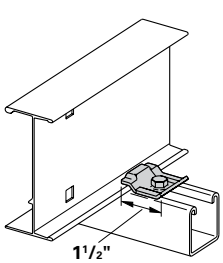


Catalog No.	Height in.	mm
9(*)-5324	4	(101)
9(*)-5325	5	(127)
9(*)-5326	6	(152)
9(*)-5327	7	(178)

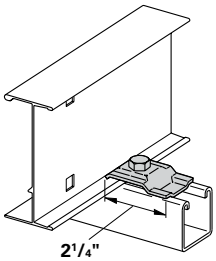
Cable Tray Clamp/Guide

- Features a no-twist design.
- Has four times the strength of the traditional design.
- Each side is labeled to ensure proper installation.
- Furnished in pairs, with or without hardware (9A-1206 sold individually).
- Not recommended for vertical support.

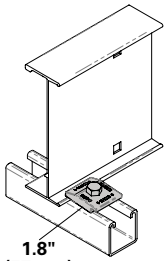
Patent # RE35479



1 1/2" (39mm) 9ZN-1204 shown. Installed as a guide.



2 1/4" (57mm) 9ZN-1208 shown. Installed as a clamp.



1.8" (57mm) 9A-1206 shown. Installed as a clamp.

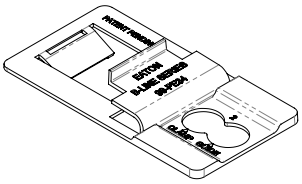
Catalog No. Without Hardware	Catalog No. With Hardware	Overall Length in. (mm)	Hardware Size in.	Finish
● 9ZN-1204	● 9ZN-1204NB	1 1/2 (38)	1/4"	G90
● 9ZN-1208	● 9ZN-1208NB	2 1/4 (57)	3/8"	G90
● 9A-1206	9A-1206NB	2 1/4 (57)	3/8"	Alum.
● 9A-1205	9A-1205NB	2 1/4 (57)	1/2"	Alum.
● 9G-1205	9G-1205NB	2 1/4 (57)	1/2"	HDGAF
● 9SS6-1205	9SS6-1205NB	2 1/4 (57)	1/2"	316SS
● 9ZN-1205	9ZN-1205NB	2 1/4 (57)	1/2"	G90

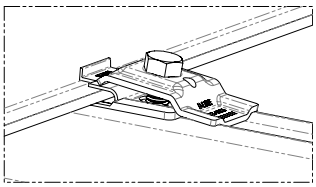
Note: For heavy duty or vertical applications see 9(*)-1241 or 9(*)-1242 page I-22

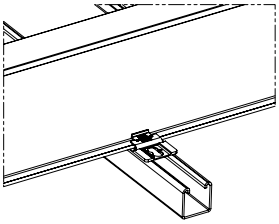
Isolator Pad

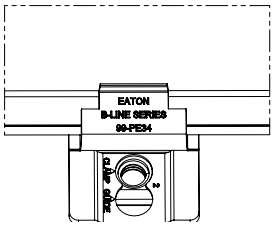
- Use as a friction reducer and/or as a dissimilar metal isolator barrier.
- UV resistant HDPE.
- Temperature range: -100 to 160° F.
- Designed to use with 9(*)-1205 or 9(*)-1208 clamp/guide.
- Color - White.

Catalog No.
● 99-PE34







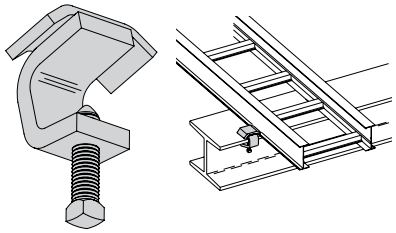


● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Cable Tray Clamp

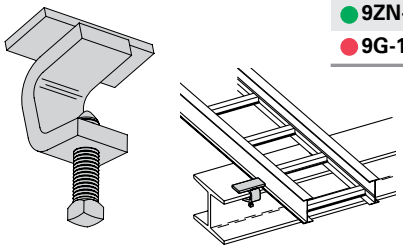
- Hold-down clamps for single or double cable tray runs.
- No drilling of support I-beam or channel is required.
- Sold in pieces - two clamps are required per tray.
- Maximum beam flange thickness 1 1/8" (28.58 mm).



Catalog No.	Finish
● 9ZN-1249HD	Znplt
● 9G-1249HD	HDGAF

Cable Tray Guide

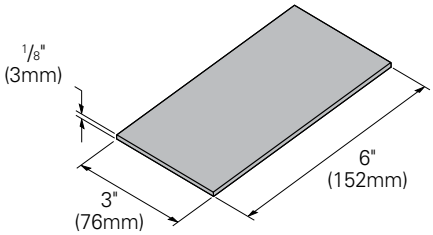
- Expansion guide for single or double cable tray runs.
- Guide allows for longitudinal movement of the cable tray.
- No field drilling of support I-beam or channel is required.
- Guides are required on both sides of cable tray to prevent lateral movement - can be placed on either the inside or outside flange of cable tray.
- Guides are sold in pieces - two guides are required per tray.
- Maximum flange thickness 1 1/8" (28.58 mm).



Catalog No.	Finish
● 9ZN-1249	Znplt
● 9G-1249	HDGAF

Nylon Pad

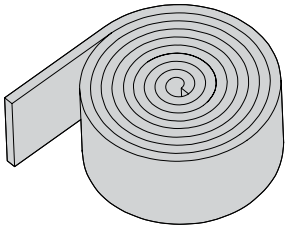
- Use for friction reduction.
- Hardness: Shore D80.
- Low friction coefficient.
- UV resistant.
- Excellent weatherability.
- UL - 94HB.



Catalog No.
● 99-PE36

Neoprene Roll

- Use for material isolation.
- 1/8" x 2" x 25' roll.
- Hardness: Shore A60.
- Good weatherability.



Catalog No.
● 99-NP300

DURA-BLOK™ Rooftop Support Bases with B22 Channel

- Designed as a superior rooftop support for cable tray,
- UV resistant and approved for most roofing material or other flat surfaces.
- Can be used with any of B-Line series cable tray clamps and guides.
- Ultimate Load Capacity: 1,000 lbs. (uniform load)

Catalog No.	Height x Width x Length in.	(mm)
● DB10-28	5 5/8 x 6 x 28.0	(143 x 152 x 711)
● DB10-36	5 5/8 x 6 x 36.0	(143 x 152 x 914)
● DB10-42	5 5/8 x 6 x 42.0	(143 x 152 x 1067)
● DB10-50	5 5/8 x 6 x 50.0	(143 x 152 x 1270)
● DB10-60	5 5/8 x 6 x 60.0	(143 x 152 x 1524)

LEEDS credit available, base made from 100% recycled material.

General Note: Consult roofing manufacturer or engineer for roof load capacity. The weakest point may be the insulation board beneath the rubber membrane.

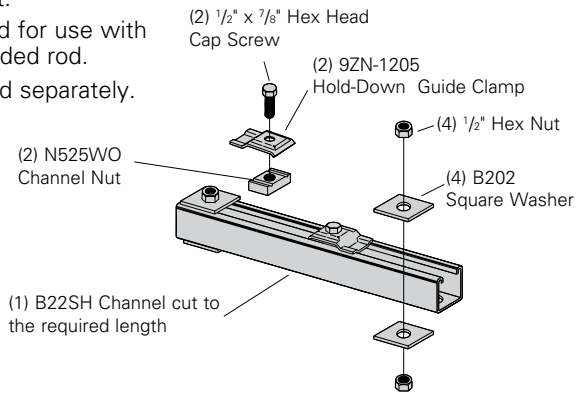
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

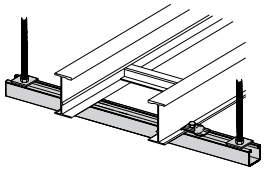
All dimensions in parentheses are millimeters unless otherwise specified.

Trapeze Support Kit

- Eaton's B-Line series trapeze kits provide the components required for a single trapeze support in one package. These kits are available in pre-galvanized steel with zinc-plated hardware, hot dip galvanized steel with 316 stainless steel hardware, or DURA GREEN™ painted steel with zinc-plated hardware.
- The SH channel provides the convenience of pre-punched slots, which eliminate the need for field drilling.
- The illustrated hardware is sealed in a plastic bag and boxed with the channel, which is pre-cut to the appropriate length as shown in the chart.
- Designed for use with ½" threaded rod.

  Order rod separately.





Catalog No.	Tray Width in.	Tray Width mm	Channel Length in.	Channel Length mm	Uniform Load lbs	Uniform Load kN
● 9(*)-5506-22SH(†)	6	(152)	16	(406)	1350	(6.00)
● 9(*)-5509-22SH(†)	9	(229)	18	(457)	1250	(5.56)
● 9(*)-5512-22SH(†)	12	(305)	22	(559)	1125	(5.00)
● 9(*)-5518-22SH(†)	18	(457)	28	(711)	865	(3.85)
● 9(*)-5524-22SH(†)	24	(610)	34	(864)	700	(3.11)
● 9(*)-5530-22SH(†)	30	(762)	40	(1016)	590	(2.62)
● 9(*)-5536-22SH(†)	36	(914)	46	(1168)	510	(2.27)
● 9(*)-5542-22SH(†)	42	(1067)	52	(1321)	450	(2.00)

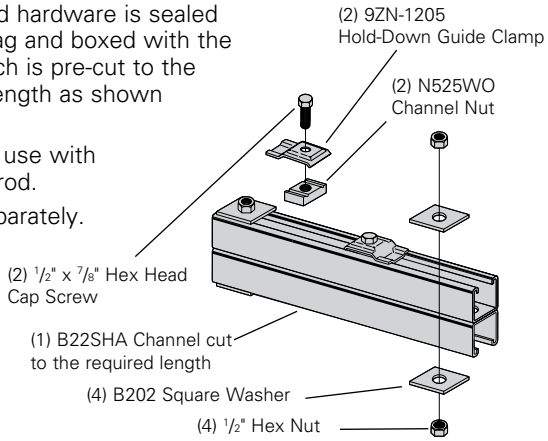
- (*) Insert P G or GRN
- (†) Insert ⅜ for ⅜" threaded rod hardware.

Safety factor of 3.0 on all loads.

Heavy Duty Trapeze Support Kit

- Eaton's B-Line series trapeze kits provide the components required for a single trapeze support in one package. These kits are available in pre-galvanized steel with zinc-plated hardware, hot dip galvanized steel with 316 stainless steel hardware, or DURA GREEN™ painted steel with zinc-plated hardware.
- The SH channel provides the convenience of pre-punched slots, which eliminates the need for field drilling.
- The illustrated hardware is sealed in a plastic bag and boxed with the channel, which is pre-cut to the appropriate length as shown in the chart.
- Designed for use with ½" threaded rod.

  Order rod separately.

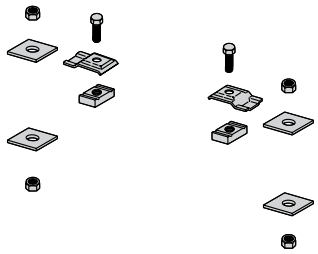


Catalog No.	Tray Width in.	Tray Width mm	Channel Length in.	Channel Length mm	Uniform Load lbs	Uniform Load kN
● 9(*)-5506-22SHA	6	(152)	16	(406)	1350	(6.00)
● 9(*)-5509-22SHA	9	(229)	18	(457)	1350	(6.00)
● 9(*)-5512-22SHA	12	(305)	22	(559)	1350	(6.00)
● 9(*)-5518-22SHA	18	(457)	28	(711)	1350	(6.00)
● 9(*)-5524-22SHA	24	(610)	34	(864)	1350	(6.00)
● 9(*)-5530-22SHA	30	(762)	40	(1016)	1350	(6.00)
● 9(*)-5536-22SHA	36	(914)	46	(1168)	1350	(6.00)
● 9(*)-5542-22SHA	42	(1067)	52	(1321)	1350	(6.00)

- (*) Insert P G or GRN

Safety factor of 3.0 on all loads.

Trapeze Hardware Kit



Catalog No.	● 9ZN-5500-½	● 9G-5500-½
In plastic bag	1 pr. 9ZN-1205 2 HHC Screw ½ x ⅞ ZN 2 N525 WO ZN 4 B202 ZN ½" sq washer 4 HN ½ ZN	1 pr. 9G-1205 2 HHC Screw ½ x ⅞ SS6 2 N525 WO SS6 4 B202 HDG ½" sq washer 4 HN ½" SS6

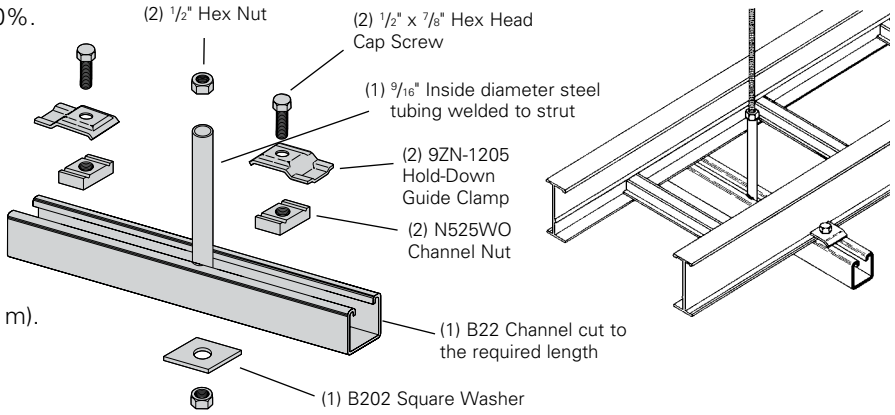
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

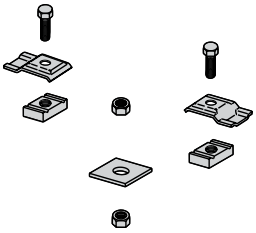
Center Hung Tray Support

- Center Hung Cable Tray Support allows cable to be laid-in from both sides.
- Eliminates costly cable pulling and field cutting of cable tray supports. Labor costs are dramatically reduced.
- Required hardware and threaded rod material for trapeze assemblies are reduced by up to 50%.
- Designed for use with 1/2" threaded rod. (Order rod separately)
- Use with all aluminum and steel cable trays through 24" width.
- Load capacity is 700 lbs. (311kN) per support. Safety factor of 3.0. Eccentric loading is not to exceed a 60% vs. 40% load differential.
- The maximum recommended unsupportedspan length is 144"/12 ft. (3.66 m).
- Hardware shown is furnished.
- Finish available: Zinc Plated

Catalog No.	Tray Width in.	Tray Width (mm)	Channel Length in.	Channel Length (mm)
●9ZN-5212	6", 9", 12"	(152, 228, 305)	18"	(457)
●9ZN-5224	18", 24"	(457, 609)	30"	(762)



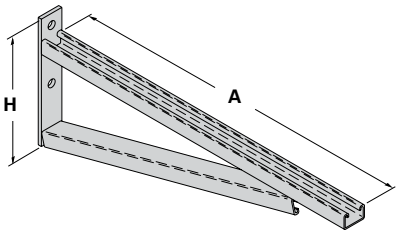
Center Hung Support Hardware Kit



Catalog No.	● 9ZN-5200
In plastic bag	1 pr. 9ZN-1205 2 HHC Screw 1/2 x 7/8 ZN 2 N525 WO ZN 1 B202 ZN 1/2" sq washer 4 HN 1/2 ZN

Bracket (12" - 48")

- (*) Insert available finish: ZN GRN or HDG
- Safety Load Factor 2.5



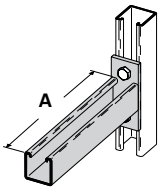
Bottom brace is B42 channel on B494-24 and smaller and B22 channel on B494-30 and larger

Catalog No.	Uniform Load lbs	Uniform Load (kN)	Tray Width in.	Tray Width (mm)	'A' in.	'A' (mm)	'H' in.	'H' (mm)
●B494-12	2500	(11.12)	6 & 9	(152 & 229)	12	(305)	8 3/4	(222)
●B494-18	1700	(7.56)	12	(305)	18	(457)	8 3/4	(222)
●B494-24	1300	(5.78)	18	(457)	24	(610)	8 3/4	(222)
B494-30	1600	(7.11)	24	(610)	30	(762)	11 1/4	(286)
B494-36	1100	(4.89)	30	(762)	36	(914)	11 1/4	(286)
B494-42	980	(4.36)	36	(914)	42	(1067)	16	(406)
B494-48	980	(4.36)	42	(1067)	48	(1219)	16	(406)

For more dimensional data see Strut Systems catalog

Cantilever Bracket

- (*) Insert available finish: ZN GRN HDG SS4 or SS6
- Safety Load Factor 2.5



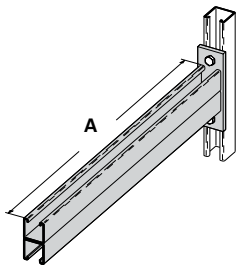
Catalog No.	Uniform Load lbs	Uniform Load kN	Tray Width in.	Tray Width mm	'A' in.	'A' mm
B409-12	960	(4.27)	6 & 9	(152 & 229)	12	(305)
B409-18	640	(2.84)	12	(305)	18	(457)
B409-24	480	(2.13)	18	(457)	24	(610)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Cantilever Bracket

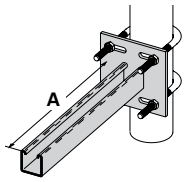
- (*) Insert available finish: ZN GRN HDG or SS4
- Safety Load Factor 2.5



Catalog No.	Uniform Load lbs kN	Tray Width in. mm	'A' in. mm
B297-12	1660 (7.38)	6 & 9 (152 & 229)	12 (305)
B297-18	1100 (4.89)	12 (305)	18 (457)
B297-24	835 (3.71)	18 (457)	24 (610)
B297-30	665 (2.93)	24 (610)	30 (762)
B297-36	550 (2.44)	30 (762)	36 (914)
B297-42	465 (2.06)	36 (914)	42 (1067)

Underfloor Support (U-Bolts not included)

- Finishes available: ZN
- Safety Load Factor 2.5

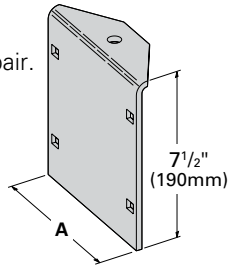


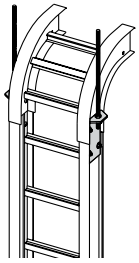
U-Bolt Size	Fits Pipe O.D.
B501-3/4	.841 - 1.050
B501-1	1.051 - 1.315
B501-1 1/4	1.316 - 1.660
B501-1 1/2	1.661 - 1.900
B501-2	1.901 - 2.375
B501-2 1/2	2.376 - 2.875

Catalog No.	Uniform Load lbs (kN)	Tray Width in. (mm)	'A' in. (mm)
B409UF-12	800 (3.56)	6 & 9 (152 & 229)	12 (305)
B409UF-21	450 (2.00)	12 & 18(305 & 457)	21 (533)

Vertical Hanger Splice Plates

- Design load is 1500 lbs (6.67kN) per pair.
- Safety Factor of 2.5
- Furnished in pairs.
- Hole size: 9/16" (14mm) for 1/2" threaded rod.

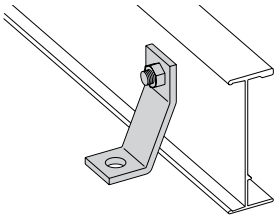




Catalog No.	Outside Cable Tray Ht.	'A' in. (mm)
● 9A-1224	4"	3.84 (97.54)
● 9A-1225	5"	4.73 (120.14)
● 9A-1226	6"	5.84 (148.34)
● 9A-1227	7"	6.84 (173.74)

Heavy Duty Hold Down Bracket

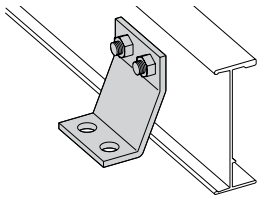
- Design load is 2000 lbs (8.89kN) per pair.
- Two bolt design.
- Sold in pairs.
- 3/8" cable tray attachment hardware provided.
- 3/8" support attachment hardware **not** provided.
- (*) Insert ZN SS4 or SS6
- Recommended for support of vertical trays.

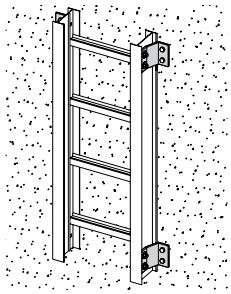


Catalog No.
9(*)-1241

Heavy Duty Hold Down Bracket

- Design load is 4000 lbs (17.79kN) per pair.
- Four bolt design.
- Sold in pairs.
- 3/8" cable tray attachment hardware provided
- 3/8" support attachment hardware **not** provided.
- (*) Insert ZN SS4 or SS6
- Recommended for support of vertical trays.

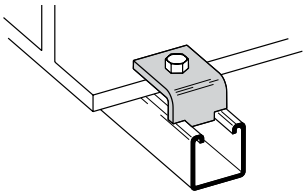




Catalog No.
9(*)-1242

Beam Clamp

- Finishes available: ZN GRN HDG or SS4
- Sold in pieces.
- Design load is 1200 lbs (5.34kN) per pair.
- Safety Load Factor 5.0.
- Order HHCS and Channel Nuts separately.



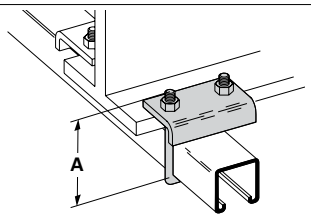
Catalog No.
B355

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Beam Clamp

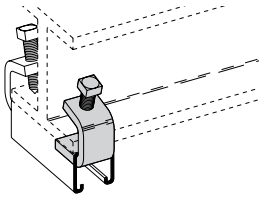
- Finishes available: ZN or HDG
- Sold in pieces.
- *Design load when used in pairs. Safety Load Factor 5.0



Catalog No.	Design Load lbs	(kN)	'A' in.	(mm)
B441-22	1200	(5.34)	3 3/8	(86)
B441-22A	1200	(5.34)	5	(127)

Beam Clamp

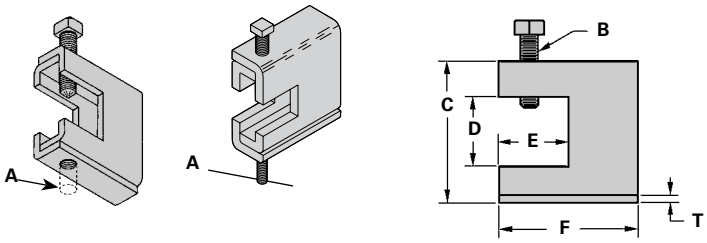
- Finishes available: ZN or HDG
- Sold in pieces.
- *Design load when used in pairs. Safety Load Factor 5.0



Catalog No.	B212-1/4	B212-3/8
Design Load *	600 lbs. (2.67kN)	1000 lbs. (4.45 kN)
Max. Flange Thick	3/4" (19 mm)	1 1/8" (28.6 mm)
Mat'l. Thickness	1/4" (6.3 mm)	3/8" (9.5 mm)

B305 Thru B308 & B321 Series Beam Clamps

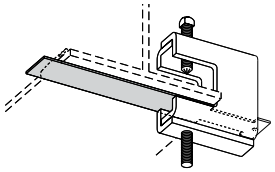
- Finishes available: ZN or HDG
- Setscrew included.
- Safety Load Factor 5.0



Catalog No.	Rod Size A	B	C in.	(mm)	D in.	(mm)	E in.	(mm)	F in.	(mm)	T in.	(mm)	Design Load lbs	(kN)
B305	3/8"-16	3/8"-16	2 5/16	(58.7)	7/8	(22.2)	1 1/8	(28.6)	2 1/2	(63.5)	11 Ga.	(3.0)	600	(2.67)
B306	3/8"-16	1/2"-13	2 7/16	(61.9)	7/8	(22.2)	1 1/8	(28.6)	2 1/2	(63.5)	7 Ga.	(4.5)	1100	(4.90)
B307	1/2"-13	1/2"-13	2 7/16	(61.9)	7/8	(22.2)	1 1/8	(28.6)	2 1/2	(63.5)	7 Ga.	(4.5)	1100	(4.90)
B308	1/2"-13	1/2"-13	2 9/16	(65.1)	7/8	(22.2)	1 1/8	(28.6)	2 1/2	(63.5)	1/4	(6.3)	1500	(6.68)
B321-1	3/8"-16	1/2"-13	3 9/16	(90.5)	1 11/16	(42.9)	1 5/8	(41.3)	3 1/4	(82.5)	1/4	(6.3)	1300	(5.79)
B321-2	1/2"-13	1/2"-13	3 9/16	(90.5)	1 11/16	(42.9)	1 5/8	(41.3)	3 1/4	(82.5)	1/4	(6.3)	1400	(6.23)

Anchor Strap - for B305 thru B308 & B321 Series

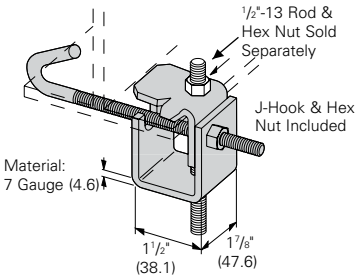
- Finish available: ZN
- For a maximum beam thickness of 3/4" (19mm).
- For thicker beams, step up one flange width size.



Catalog No.	Flange Width in.	(mm)
B312-6	Up to 6	(Up to 152)
B312-9	6 - 9	(152 to 228)
B312-12	9 - 12	(228 to 305)

Beam Clamp

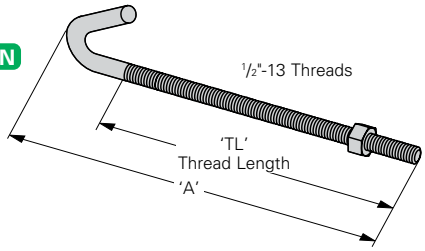
- Finish available: ZN
- Design Load 500 lbs. (2.22 kN)
- Safety Load Factor 5.0
- Recommended torque: 'J'-Hook Nut 125 In.-Lbs. (14.1 kN/m)
- Maximum flange thickness of 3/4" (19mm).



Catalog No.	For Flange Width in.	(mm)	Wt./C lbs	(kg)
B750-J4	3 - 6	(76.2 - 152.4)	109	(49.4)
B750-J6	5 - 9	(127.0 - 288.6)	124	(56.2)
B750-J9	8 - 12	(203.2 - 304.8)	135	(61.,2)
B750-J12	11 - 15	(279.4 - 381.0)	147	(66.7)

'J'-Hook

- Finishes available: ZN
- Hex Nut included.

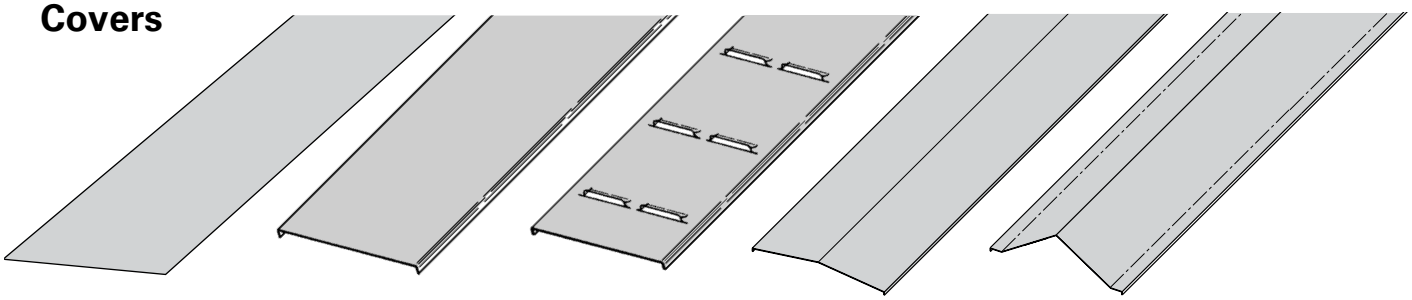


Catalog No.	'A' in.	(mm)	'TL' in.	(mm)	Wt./C lbs	(kg)
B700-J4	8 1/2	(215.9)	5	(127.0)	44	(19.9)
B700-J6	11 1/2	(292.1)	6	(152.4)	53	(24.0)
B700-J9	12 1/4	(368.3)	6	(152.4)	63	(28.6)
B700-J12	17 1/2	(444.5)	6	(152.4)	78	(35.4)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Covers



Solid Non-Flanged | Solid Flanged | Ventilated Flanged | Peaked Flanged | 2 to 3 Pitch Peaked Flanged (See page APP-4)

A full range of covers is available for straight sections and fittings.

Solid covers should be used when maximum enclosure of the cable is desired and no accumulation of heat is expected.
Ventilated covers provide an overhead cable shield, yet allow heat to escape.
Flanged covers have a ½ in. (13 mm) flange.

We recommend that covers be placed on vertical cable tray runs to a height of 6 ft. (1.83 m) to 8 ft. (2.44 m) above the floor to both isolate cables and personnel. Cover clamps are not included with the cover and must be ordered separately. All **peaked covers** are flanged. Standard peaked covers have ½" peak. Special purpose peaked covers, having a 2 to 3 pitch, provide additional slope and material thickness. The 2 to 3 pitch fitting covers are of multiple piece, welded construction.

Aluminum Cover Part Numbering

Prefix

Example: **80 7 A - 24 - 144**

Cover Type
- 80 = Solid
- 81 = Ventilated
- 82 = Peaked

Detail
- 6 = Non-Flanged (80 & 81 type only)
- 7 = Flange

Material
- A = Aluminum

Tray Width
- 06 = 6"
- 09 = 9"
- 12 = 12"
- 18 = 18"
- 24 = 24"
- 30 = 30"
- 36 = 36"

Item Description
For Straight Section Cover:
- 144 = 12 ft. (3.66 m)
- 120 = 10 ft. (3.05 m)
- 72 = 6 ft. (1.83 m)
- 60 = 5 ft. (1.52 m)

For fitting covers: Insert suffix of fitting to be covered. See example below.

Examples of Catalog Numbers for Fitting Covers:

Horizontal Bend Cover

Prefix / Suffix

80 7 A - 18 - 90 HB 24

- Radius
- Fitting
- Angle
- Width
- Material
- Detail
- Cover Type

Vertical Bend Cover

Prefix / Suffix

80 7 A - 24 - 90 VO 24 - 4*

- Side Rail* Height
- Radius
- Fitting
- Angle
- Width
- Material
- Detail
- Cover Type

* Required for VO fittings only

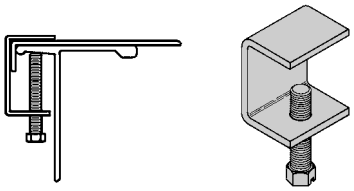
Note: Covers may not be suitable for all environmental loads. Check with B-Line Technical Support (blinetechnicalsupport@eaton.com) if there are questions/concerns about environmental loads for covers (wind, snow, sleet, rain, etc.).

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Standard Cover Clamp

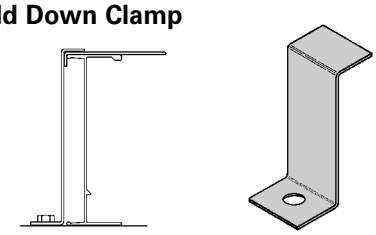
- For indoor service only.
- Setscrew included.
- Sold per piece.



Tray Type	Catalog No.	Side Rail Height
Aluminum	● 9ZN-9012	All Sizes
	● 9A-9012	

Combination Cover and Hold Down Clamp

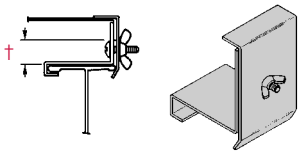
- Sold per piece.
- For indoor service only.



Tray Type	Catalog No.	Side Rail Height in.	(mm)
Aluminum	● 9A-9043	4	(101)
	● 9A-9053	5	(127)
	● 9A-9063	6	(152)
	● 9A-9073	7	(78)

Raised Cover Clamp

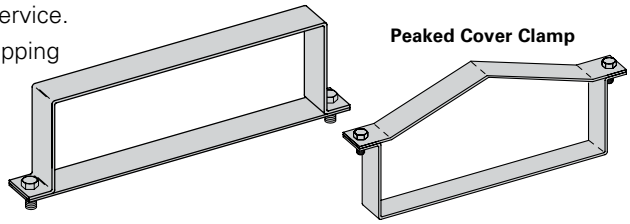
- For indoor service only.
- For use with flanged covers only.
  † Specify gap of 1", 2", 3" or 4".



Tray Type	Catalog No.	Side Rail Height
Aluminum	● 9ZN-9112-†	4 & 5 Deep
	● 9ZN-9113-†	6 & 7 Deep

Heavy Duty Cover Clamp

- Recommended for outdoor service.
- Should not be used on overlapping sections.
- (‡) Insert tray width
  †Add P to Catalog No. for peaked cover clamp.



Catalog No.	Side Rail Height in.	mm
● 9A-(‡)-9044†	4	(101)
● 9A-(‡)-9054†	5	(127)
● 9A-(‡)-9064†	6	(152)
● 9A-(‡)-9074†	7	(178)

Quantity of Standard Cover Clamps Required

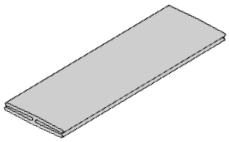
Notes:
When using the Heavy Duty Cover Clamp, only on-half the number of clamps stated above is required.

Additional clamps may be necessary in extreme wind applications.

Straight Section 60" or 72"	4 pcs.
Straight Section 120" or 144"	6 pcs.
Horizontal/Vertical Bends	4 pcs.
Tees	6 pcs.
Crosses	8 pcs.
Reducers	4 pcs.

Cover Joint Strip

- Used to join covers
- Plastic
- Only for use on flat covers
- Color - gray.
- (‡) Insert tray width



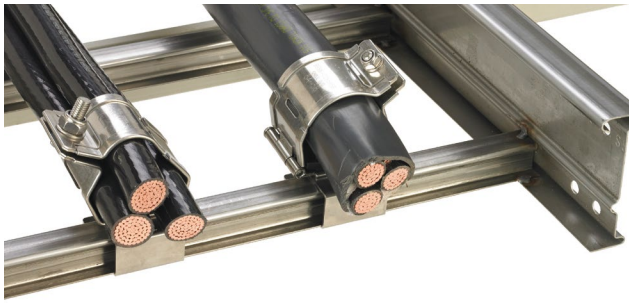
Catalog No.
● 99-9980-(‡)

Cable Cleats

(see pages N-1 thru N-5) Standard

Trefoil Cable Cleats

Single Cable Cleats



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All dimensions in parentheses are millimeters unless otherwise specified.

Section 1- Acceptable Manufacturers

1.01 Manufacturer: Subject to compliance with these specifications, Eaton's B-Line series cable tray systems shall be as manufactured by Eaton.

Section 2- Cable Tray Sections and Components

2.01 General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates, bolts, nuts and washers for connecting units. Construct units with rounded edges and smooth surfaces; in compliance with applicable standards; and with the following additional construction features. Cable tray shall be installed according to the latest revision of NEMA VE 2.

2.02 Materials and Finish: Straight section and fitting side rails and rungs shall be extruded from Aluminum Association Alloy 6063. All fabricated parts shall be made from Aluminum Association Alloy 5052.

2.03 Ladder Cable Trays shall consist of two longitudinal members (side rails) with transverse members (rungs) welded to the side rails. Rungs shall be spaced [6] [9] [12] inches apart. Rung spacing in radiused fittings shall be industry standard 9" and measured at the center of the tray's width. Each rung must be capable of supporting a 200 lb. concentrated load at the center of the cable tray over and above the cable load with a safety factor of 1.5.

2.04 Cable tray loading depth shall be [3] [4] [5] [6] inches per NEMA VE 1.

2.05 Straight sections shall have side rails fabricated as I-beams. Straight sections shall be supplied in standard [12 foot] [24 foot] [10 foot (3 m)] [20 foot (6 m)] lengths.

2.06 Cable tray widths shall be [6] [9] [12] [18] [24] [30] [36] inches or as shown on drawings.

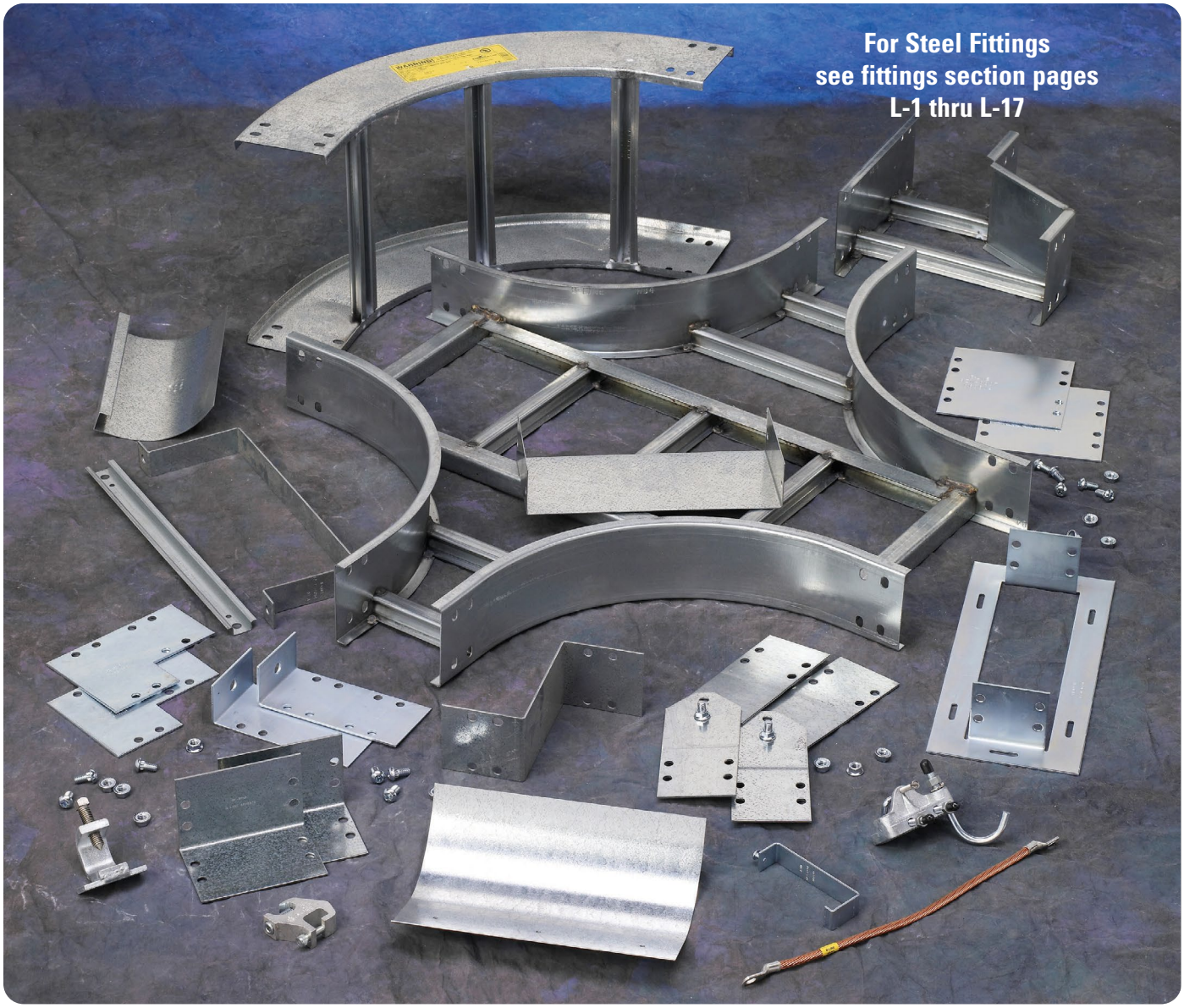
2.06 Splice plates shall be the Wedge-Lock design with 4 nuts and bolts per plate. The resistance of fixed splice connections between an adjacent section of tray shall not exceed 0.00033 ohm.

2.08 All fittings must have a minimum radius of [12] [24] [36] [48] inches.

Section 3- Loading Capacities and Testing

3.01 Cable tray shall be capable of carrying a uniformly distributed load of _____ lbs./ft. on a _____ ft. support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE 1 5.2. In addition to the uniformly distributed load the cable tray shall support 200 lbs. concentrated load at mid-point of span. Load and safety factors specified are applicable to both the side rails and rung capacities. Cable tray shall be made to manufacturing tolerances as specified by NEMA.

3.02 Upon request, manufacturer shall provide test reports in accordance with the latest revision of NEMA VE 1 or CSA C22.2 No. 126.



How The Service Advisor Works

We know that your time is important! That's why the color-coding system in this catalog is designed to help you select products that fit your service needs. Products are marked to indicate the typical lead time for orders of 50 pieces or less.

Customer: How do I select my straight sections. covers, or fittings so that I get the quickest turnaround?

Service Advisor: Each part of our selection chart is shown in colors. If any section of a part number is a different color, the part will typically ship with the longer lead time represented by the colors.

- Green = Fastest shipped items
- Black = Normal lead-time items
- Red = Normally long lead-time items

Example: **258G 12 - 24 - 144**

Part will have a long lead time because of the 258G material.

Changing the part number from 258G to 258P will change the coding to black and reduce lead time.

3" NEMA VE 1 Loading Depth
4" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **248 P 09 - 24 - 144**

Series
- 248
- 346
- 444

Material
- **P** = Pre-Galvanized
- **G** = HDGAF

***Type**
- **SB** = Solid Bottom
- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing

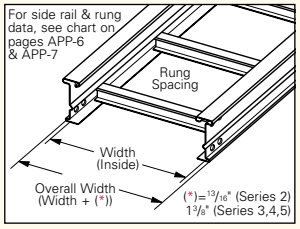
***Width**
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

Length

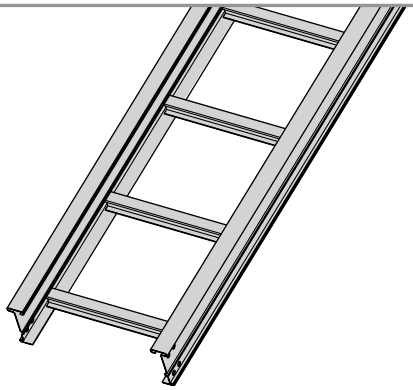
① **144** = 12 ft.	248
② 120 = 10 ft.	
① **240** = 20 ft.	346
② 144 = 12 ft.	
① **240** = 20 ft.	444
② 288 = 24 ft.	

①Primary Length.
②Secondary Length.

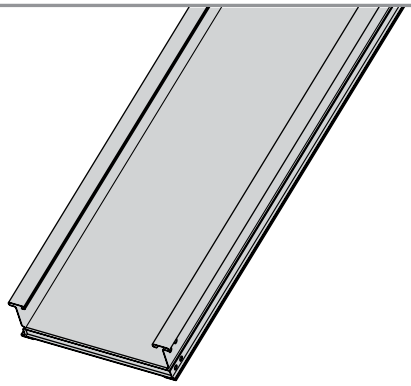
See page C-23 for explanation of lengths.



See page APP-1 for additional rung options. *Special sizes available.



Ladder Type
(Specify Rung Spacing)



Solid Bottom

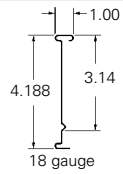
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

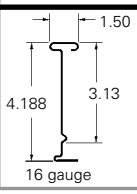
All dimensions in parentheses are millimeters unless otherwise specified.

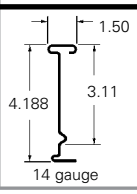
3" NEMA VE 1 Loading Depth
4" Side Rail Height

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply publish load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
248		NEMA: 16A, 12C CSA: D1-3m UL Cross-Sectional Area: 0.40 in²	6	412*	0.0007	Area = 0.62 in² Sx = 0.64 in³ Ix = 1.43 in⁴	1.8	613*	0.012	Area = 4.00 cm² Sx = 10.49 cm³ Ix = 59.52 cm⁴
			8	232	0.0022		2.4	345	0.038	
			10	148	0.0054		3.0	221	0.093	
			12	103	0.011		3.7	153	0.192	
			14	76	0.021		4.3	113	0.356	
			16	58	0.036		4.9	86	0.607	

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
346		NEMA: 20A, 16B CSA: D1-6m UL Cross-Sectional Area: 0.70 in²	10	252	0.0036	Area = 0.89 in² Sx = 0.96 in³ Ix = 2.22 in⁴	3.0	375	0.060	Area = 5.74 cm² Sx = 15.73 cm³ Ix = 92.40 cm⁴
			12	175	0.0072		3.7	260	0.124	
			14	129	0.013		4.3	191	0.229	
			16	98	0.023		4.9	146	0.391	
			18	78	0.037		5.5	116	0.626	
			20	63	0.056		6.1	94	0.955	

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
444		NEMA: 20B, 16C CSA: E-3m UL Cross-Sectional Area: 1.00 in²	12	253	0.0055	Area = 1.19 in² Sx = 1.27 in³ Ix = 2.94 in⁴	3.7	376	0.093	Area = 7.68 cm² Sx = 20.81 cm³ Ix = 122.37 cm⁴
			16	142	0.027		4.9	212	0.295	
			18	112	0.028		5.5	167	0.473	
			20	91	0.042		6.1	135	0.721	
			22	75	0.062		6.7	112	1.055	
			24	63	0.088		7.3	94	1.495	

*When using 18" rung spacing, load capacity is limited to 394 lbs/ft (586.272 kg/m) for 30" cable tray width and 325 lbs/ft (483.6 kg/m) for 36" cable tray width. When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

All dimensions in parentheses are millimeters unless otherwise specified.

4" NEMA VE 1 Loading Depth
5" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **258 P 09 - 24 - 144**

Series
- 258
- 356
- 454

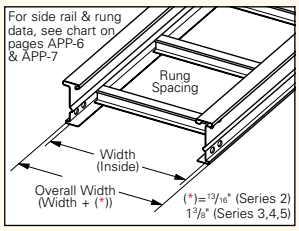
Material
- **P** = Pre-Galvanized
- **G** = HDGAF

***Type**
- **SB** = Solid Bottom
- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing

***Width**
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

Length

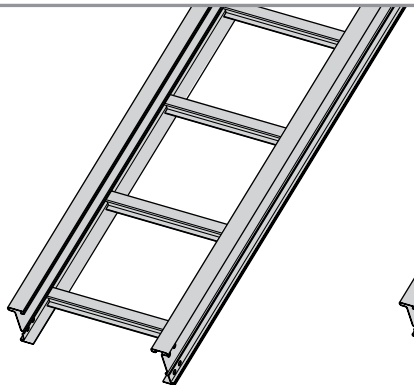
①**144** = 12 ft.	258
②120 = 10 ft.	
①**240** = 20 ft.	356
②144 = 12 ft.	
①**240** = 20 ft.	454
②288 = 24 ft.	



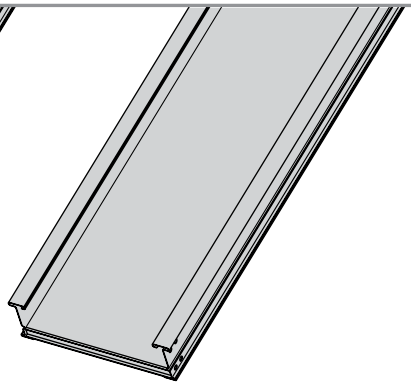
①Primary Length.
②Secondary Length.

See page C-23 for explanation of lengths.

See page APP-1 for additional rung options. *Special sizes available.



Ladder Type
(Specify Rung Spacing)



Solid Bottom

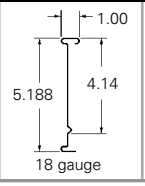
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

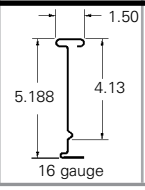
All dimensions in parentheses are millimeters unless otherwise specified.

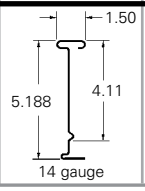
4" NEMA VE 1 Loading Depth
5" Side Rail Height

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply publish load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
258		NEMA: 16A, 12C CSA: D1-3m UL Cross-Sectional Area: 0.40 in²	6	436*	0.0004	Area = 0.71 in² Sx = 0.89 in³ Ix = 2.44 in⁴	1.8	649*	0.007	Area = 4.58 cm² Sx = 14.58 cm³ Ix = 101.56 cm⁴
			8	245	0.0013		2.4	365	0.022	
			10	157	0.0032		3.0	234	0.054	
			12	109	0.0066		3.7	162	0.113	
			14	80	0.012		4.3	119	0.209	
			16	61	0.021		4.9	91	0.356	

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
356		NEMA: 20A, 16C CSA: D1-6m UL Cross-Sectional Area: 0.70 in²	10	276	0.0021	Area = 1.00 in² Sx = 1.31 in³ Ix = 3.73 in⁴	3.0	411	0.036	Area = 6.45 cm² Sx = 21.47 cm³ Ix = 155.25 cm⁴
			12	192	0.0043		3.7	285	0.074	
			14	141	0.0080		4.3	210	0.136	
			16	108	0.014		4.9	160	0.233	
			18	85	0.022		5.5	127	0.373	
			20	69	0.033		6.1	103	0.568	

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
454		NEMA: 20C CSA: E-6m UL Cross-Sectional Area: 1.00 in²	12	294	0.0032	Area = 1.34 in² Sx = 1.75 in³ Ix = 4.96 in⁴	3.7	438	0.055	Area = 8.65 cm² Sx = 28.68 cm³ Ix = 206.45 cm⁴
			16	166	0.010		4.9	246	0.175	
			18	131	0.016		5.5	195	0.280	
			20	106	0.026		6.1	158	0.427	
			22	88	0.037		6.7	130	0.625	
			24	74	0.052		7.3	110	0.886	

*When using 18" rung spacing, load capacity is limited to 394 lbs/ft (586.272 kg/m) for 30" cable tray width and 325 lbs/ft (483.6 kg/m) for 36" cable tray width. When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

All dimensions in parentheses are millimeters unless otherwise specified.

5" NEMA VE 1 Loading Depth
6" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **268 P 09 - 24 - 144**

Series
- 268
- 366
- 464

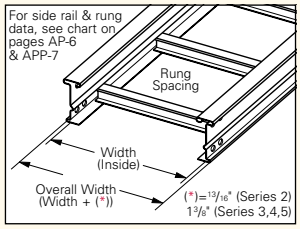
Material
- **P** = Pre-Galvanized
- **G** = HDGAF

***Type**
- **SB** = Solid Bottom
- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing

***Width**
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

Length

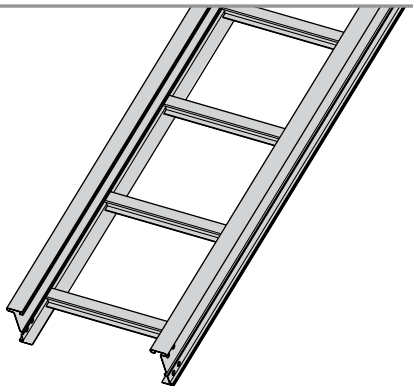
① **144** = 12 ft.	268
② 120 = 10 ft.	
① **240** = 20 ft.	366
② 144 = 12 ft.	
① **240** = 20 ft.	464
② 288 = 24 ft.	



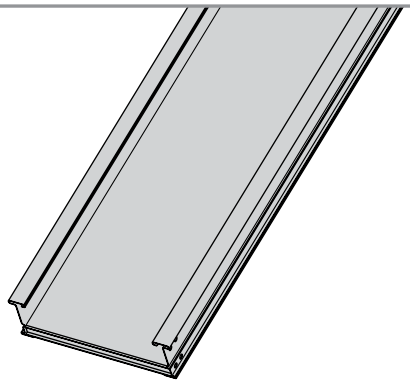
①Primary Length.
②Secondary Length.

See page C-23 for explanation of lengths.

See page APP-1 for additional rung options. *Special sizes available.



Ladder Type
(Specify Rung Spacing)



Solid Bottom

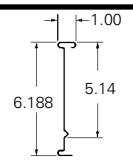
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

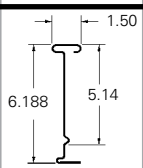
All dimensions in parentheses are millimeters unless otherwise specified.

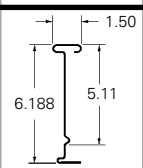
5" NEMA VE 1 Loading Depth
6" Side Rail Height

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply publish load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
268		NEMA: 16A, 12C CSA: D1-3m UL Cross-Sectional Area: 0.70 in²	6	440*	0.0003	Area = 0.80 in² Sx = 1.18 in³ Ix = 3.81 in⁴	1.8	655*	0.005	Area = 5.16 cm² Sx = 19.34 cm³ Ix = 158.58 cm⁴
			8	248	0.0008		2.4	368	0.014	
			10	158	0.0020		3.0	236	0.035	
			12	110	0.0042		3.7	164	0.072	
			14	81	0.0078		4.3	120	0.134	
			16	62	0.013		4.9	92	0.228	

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
366		NEMA: 20B, 16C CSA: E-6m UL Cross-Sectional Area: 1.00 in²	10	300	0.0014	Area = 1.11 in² Sx = 1.71 in³ Ix = 5.74 in⁴	3.0	446	0.023	Area = 7.16 cm² Sx = 28.02 cm³ Ix = 238.92 cm⁴
			12	208	0.0028		3.7	310	0.048	
			14	153	0.0052		4.3	228	0.089	
			16	117	0.0089		4.9	174	0.151	
			18	93	0.014		5.5	138	0.242	
			20	75	0.022		6.1	112	0.369	

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
464		NEMA: 20C CSA: E-6m UL Cross-Sectional Area: 1.00 in²	12	342*	0.002	Area = 1.49 in² Sx = 2.27 in³ Ix = 7.65 in⁴	3.7	508*	0.035	Area = 9.61 cm² Sx = 37.36 cm³ Ix = 318.42 cm⁴
			16	192	0.007		4.9	286	0.113	
			18	152	0.011		5.5	226	0.182	
			20	123	0.016		6.1	183	0.277	
			22	102	0.024		6.7	151	0.406	
			24	85	0.034		7.3	127	0.574	

*When using 18" rung spacing, load capacity is limited to 394 lbs/ft (586.272 kg/m) for 30" cable tray width and 325 lbs/ft (483.6 kg/m) for 36" cable tray width. When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

All dimensions in parentheses are millimeters unless otherwise specified.

6" NEMA VE 1 Loading Depth
7" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **378 P 09 - 24 - 144**

Series
- 378
- 476
- 574

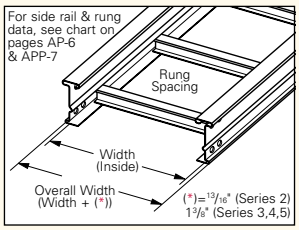
Material
- **P** = Pre-Galvanized
- **G** = HDGAF

***Type**
- **SB** = Solid Bottom
- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing

***Width**
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

Length

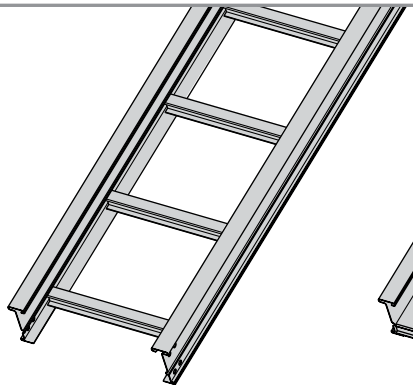
① **144** = 12 ft.	378
② 120 = 10 ft.	
① **240** = 20 ft.	476
② 144 = 12 ft.	
① **240** = 20 ft.	574
② 288 = 24 ft.	



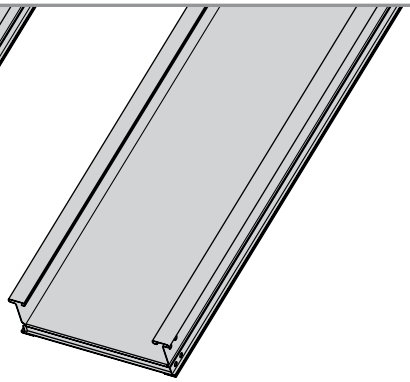
①Primary Length.
②Secondary Length.

See page C-23 for explanation of lengths.

See page APP-1 for additional rung options. *Special sizes available.



Ladder Type
(Specify Rung Spacing)



Solid Bottom

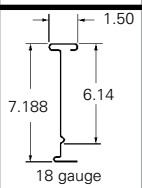
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

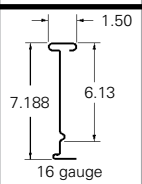
All dimensions in parentheses are millimeters unless otherwise specified.

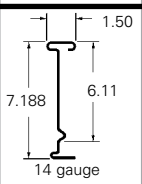
6" NEMA VE 1 Loading Depth
7" Side Rail Height

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray with rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply publish load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable tray being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
378		NEMA: 20A, 16B CSA: D1-3m UL Cross-Sectional Area: 0.70 in²	8	319	0.0006	Area = 1.01 in² Sx = 1.77 in³ Ix = 6.90 in⁴	2.4	474	0.009	Area = 6.52 cm² Sx = 29.01 cm³ Ix = 287.20 cm⁴
			10	204	0.0014		3.0	304	0.023	
			12	142	0.0028		3.7	211	0.048	
			14	104	0.0052		4.3	155	0.089	
			16	80	0.0089		4.9	119	0.151	
			18	63	0.014		5.5	94	0.242	
			20	51	0.022		6.1	76	0.369	

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
476		NEMA: 20B, 16C CSA: D1-6m UL Cross-Sectional Area: 1.00 in²	12	214	0.0019	Area = 1.22 in² Sx = 2.14 in³ Ix = 8.30 in⁴	3.7	318	0.033	Area = 7.87 cm² Sx = 35.07 cm³ Ix = 345.47 cm⁴
			16	129	0.0061		4.9	179	0.105	
			18	95	0.010		5.5	141	0.168	
			20	77	0.015		6.1	115	0.255	
			22	64	0.022		6.7	95	0.374	
			24	53	0.031		7.3	80	0.529	

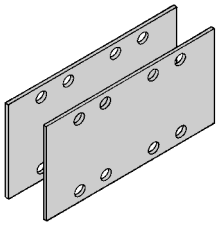
B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
574		NEMA: 20C CSA: E-6m UL Cross-Sectional Area: 1.50 in²	12	361	0.0014	Area = 1.64 in² Sx = 2.87 in³ Ix = 11.10 in⁴	3.7	537	0.025	Area = 10.58 cm² Sx = 47.03 cm³ Ix = 462.02 cm⁴
			16	203	0.0046		4.9	302	0.078	
			18	160	0.0073		5.5	239	0.125	
			20	130	0.011		6.1	193	0.191	
			22	107	0.016		6.7	160	0.280	
			24	90	0.023		7.3	134	0.396	

When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%.
Design factors: Ix = Moment of Inertia, Sx = Section Modulus.

All dimensions in parentheses are millimeters unless otherwise specified.

Splice Plates

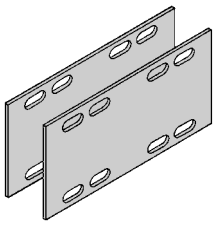
- Standard 8-hole pattern for all steel splice plates.
- Furnished in pairs with hardware.
- UL Classified as equipment grounding conductor.
- One pair including hardware provided with straight section. (Expansion splice quantity subtracted)
- Bonding jumpers not required.
- (*) Insert ZN or G



Catalog No.	Height in.	mm
9(*)-8004	4	(101)
9(*)-8005	5	(127)
9(*)-8006	6	(152)
9(*)-8007	7	(178)

Expansion Splice Plates

- Expansion plates allow for one inch expansion or contraction of the cable tray, or where expansion joints occur in the support structure.
- Furnished in pairs with hardware.
- Bonding jumpers are required on each siderail. Order Separately.
- (*) Insert ZN or G



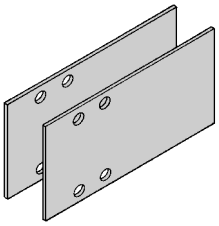
For heavy duty expansion splice plates see page APP-3.

Catalog No.	Height in.	mm
9(*)-8014	4	(101)
9(*)-8015	5	(127)
9(*)-8016	6	(152)
9(*)-8017	7	(178)

Requires supports within 24" on both sides, per NEMA VE 2.

Universal Splice Plates

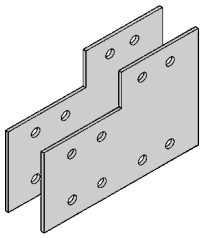
- Used to splice to existing cable tray systems.
- Furnished in pairs with hardware.
- Bonding jumpers not required.
- (*) Insert ZN or G



Catalog No.	Height in.	mm
9(*)-8004-1/2	4	(101)
9(*)-8005-1/2	5	(127)
9(*)-8006 -1/2	6	(152)
9(*)-8007 -1/2	7	(178)

Step Down Splice Plates

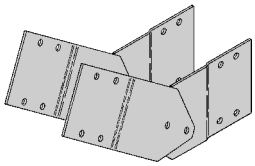
- These splice plates are offered for connecting cable tray sections having side rails of different heights.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- Bonding jumpers not required.
- (*) Insert ZN or G



Catalog No.	Height in.	mm
9(*)-8045	5 to 4	(127 to 101)
9(*)-8046	6 to 4	(152 to 101)
9(*)-8060	6 to 5	(152 to 127)
9(*)-8047	7 to 4	(178 to 101)
9(*)-8061	7 to 5	(178 to 127)
9(*)-8062	7 to 6	(178 to 152)

Vertical Adjustable Splice Plates

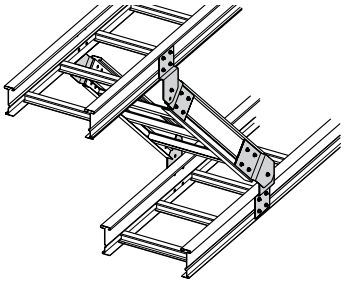
- These plates provide for changes in elevation that do not conform to standard vertical fittings.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- Bonding jumpers not required.
- (*) Insert G or P



Catalog No.	Height in.	mm
9(*)-8024	4	(101)
9(*)-8025	5	(127)
9(*)-8026	6	(152)
9(*)-8027	7	(178)

Branch Pivot Connectors

- Branch from existing cable tray runs at any point.
- Pivot to any required angle.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- (*) Insert ZN or G



Catalog No.	Height in.	mm
9(*)-8244	4	(101)
9(*)-8245	5	(127)
9(*)-8246	6	(152)
9(*)-8247	7	(178)

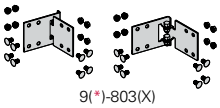
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

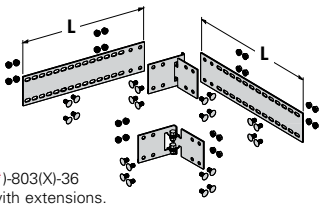
Horizontal Adjustable Splice Plates

- Offered to adjust a cable tray run for changes in direction in a horizontal plane that do not conform to standard horizontal fittings.
- UL Classified as equipment grounding conductor.
- Furnished in pairs with hardware.
- Bonding jumpers **not** required.
- (*) Insert ZN or G
- (X) Insert 4, 5, 6 or 7 for side rail height.

Requires supports within 24" on both sides, per NEMA VE 2.



9(*)-803(X)
Splice only

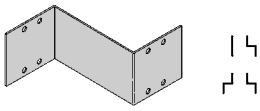


9(*)-803(X)-12 or 9(*)-803(X)-36
One pair splice plates with extensions.

Catalog No.	Cable Tray End Cut	Thru Tray Width in.	(mm)	'L' in.	(mm)
9(*)-803(X)	Mitered	36	(914)	N/A	(NA)
9(*)-803(X)-12	Not mitered	12	(305)	16	(406)
9(*)-803(X)-36	Not mitered	36	(914)	41	(1041)

Offset Reducing Splice Plate

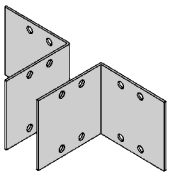
- This plate is used for joining cable trays having different widths. When used in pairs they form a straight reduction; when used singly with a standard splice plate, they form an offset reduction.
- Furnished as one plate with hardware.
- Bonding jumpers not required.
- (‡) Insert reduction
- (*) Insert G or P



Catalog No.	Height in.	mm
9(*)-8064-(‡)	4	(101)
9(*)-8065-(‡)	5	(127)
9(*)-8066-(‡)	6	(152)
9(*)-8067-(‡)	7	(178)

Tray to Box Splice Plates

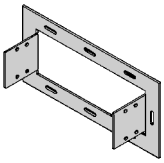
- Used to attach the end of a cable tray run to a distribution box or control panel.
- Furnished in pairs with hardware.
- (*) Insert G or P



Catalog No.	Height in.	mm
9(*)-8054	4	(101)
9(*)-8055	5	(127)
9(*)-8056	6	(152)
9(*)-8057	7	(178)

Frame Type Box Connector

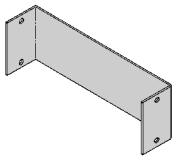
- Designed to attach the end of a cable tray run to a distribution cabinet or control center to help reinforce the box at the point of entry.
- Furnished with tray connection hardware.
- (*) Insert ZN or G
- (‡) Insert tray width



Catalog No.	Height in.	mm
9(*)-8074-(‡)	4	(101)
9(*)-8075-(‡)	5	(127)
9(*)-8076-(‡)	6	(152)
9(*)-8077-(‡)	7	(178)

Blind End

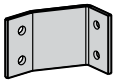
- This plate forms a closure for a dead end cable tray.
- Furnished as one plate with hardware.
- (*) Insert G or P
- (‡) Insert tray width

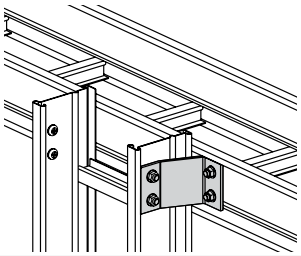


Catalog No.	Height in.	mm
9(*)-8084-(‡)	4	(101)
9(*)-8085-(‡)	5	(127)
9(*)-8086-(‡)	6	(152)
9(*)-8087-(‡)	7	(178)

Cross Connector Bracket

- For field connecting crossing section.
- Furnished in pairs with 3/8" hardware.
- (*) Insert ZN or G





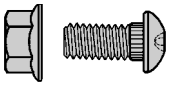
Catalog No.
9(*)-1240

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Standard Tray Hardware (for field installation drill 13/32" hole)

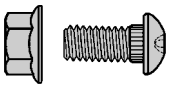
- Finishes: [ZN] Zinc Plated ASTM B633 SC1 for pre-galvanized tray [CZ] Chromium Zinc Plated F1136-88 Grade A for hot dip galvanized tray



Catalog No.	Description
● **RNCB 3/8" x 3/4" ZN**	Ribbed Neck Carriage Bolt ASTM A307 Grade A
● **SFHN 3/8"-16 ZN**	Serrated Flange Hex Nut ASTM A563 Grade A
● **RNCB 3/8" x 3/4" CZ**	Ribbed Neck Carriage Bolt ASTM F1136-88 Grade 3
● **SFHN 3/8"-16 CZ**	Serrated Flange Hex Nut ASTM F1136-88 Grade A

Optional Tray Hardware (for field installation drill 13/32" hole)

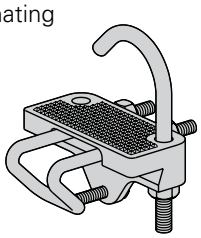
- To order 316 stainless steel hardware add SS6 suffix to catalog number - Example: 9G-8004SS6

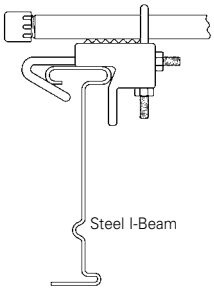


Catalog No.	Description
● **RNCB 3/8" x 3/4" SS6**	Ribbed Neck Carriage Bolt AISI 316 Stainless Steel
● **SFHN 3/8"-16 SS6**	Serrated Flange Hex Nut AISI 316 Stainless Steel

Conduit-to-Cable Tray Adaptor

- For easy attachment of conduit terminating at a cable tray.
- Use on aluminum or steel cable trays.

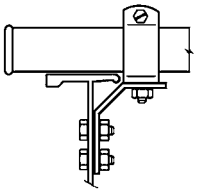




Catalog No.	Conduit Size in.	Conduit Size mm
● **9G-1158-1/2 & 3/4**	1/2, 3/4	(15, 20)
● **9G-1158-1 & 11/4**	1, 1 1/4	(25, 32)
● **9G-1158-11/2 & 2**	1 1/2, 2	(40, 50)
● **9G-1158-21/2 & 3**	2 1/2, 3	(65, 80)
● **9G-1158-3 1/2 & 4**	3 1/2, 4	(90, 100)

Conduit-to-Cable Tray Adaptor

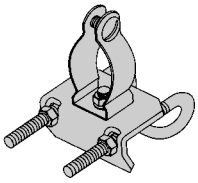
- Assembly required.
- Mounting hardware included.
- Conduit clamps provided.
- (‡) = Insert conduit size (1/2" thru 4").

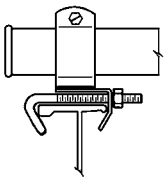


Catalog No.
● **9ZN-1150-(‡)**

Conduit-to-Cable Tray Adaptor

- Assembly required.
- Conduit clamps included.
- (‡) = Insert conduit size (1/2" thru 4").



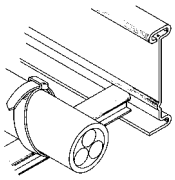


Catalog No.
● **9ZN-1155-(‡)**

Cable Tie (Ladder Tray)

- Nylon ties provide easy attachment of cable to ladder rungs; maximum cable O.D. is 3" (76mm).
- Cable ties are UV resistant.

Overall Length 15" (381mm)



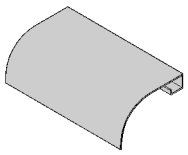
Catalog No.
● **99-2125-15**

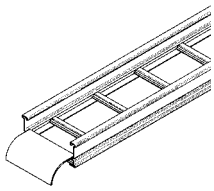
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Ladder Drop-Out

- Specially-designed Ladder Drop-Outs provide a rounded surface with 4" (101 mm) radius to protect cable as it exits from the cable tray, preventing damage to insulation. The drop-out will attach to any desired rung.
- (*) Insert P or G
- (‡) Insert tray width

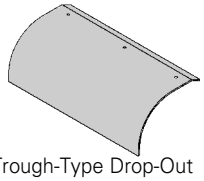




Catalog No.
9(*)-1104-(‡)

Trough Drop-Out

- These devices provide a rounded surface to protect cable as it exits.
- Hardware is included.
- (*) Insert P or G
- (‡) Insert tray width

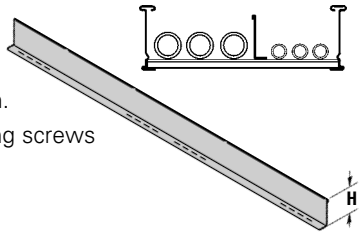


Trough-Type Drop-Out

Catalog No.
9(*)-1104T-(‡)

Barrier - Straight Section

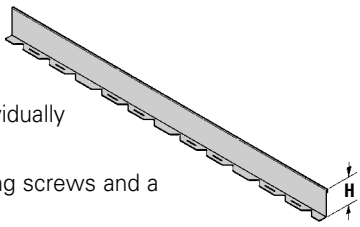
- Length: Insert 120 for [120" - 10 ft.] (3.0 m) or 144 for [144" - 12 ft.] (3.6 m)
- Order catalog number based on loading depth.
- Furnished with four #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert P or G



Catalog No.	Side Rail Height in. mm	Loading Depth 'H' in. mm
73(*)-Length	4 (101)	3 (76)
74(*)-Length	5 (127)	4 (101)
75(*)-Length	6 (152)	5 (127)
76(*)-Length	7 (178)	6 (152)

Barrier - Horizontal Bend

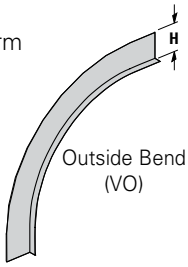
- Horizontal Bend Barriers are flexible in order to conform to any horizontal fitting radius. Can be cut to desired length.
- Standard length is 72" [6 ft.] (1.8 m) - sold individually
- Order catalog number based on loading depth.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert P or G



Catalog No.	Side Rail Height in. mm	Loading Depth 'H' in. mm
73(*)-90HBFL	4 (101)	3 (76)
74(*)-90HBFL	5 (127)	4 (101)
75(*)-90HBFL	6 (152)	5 (127)
76(*)-90HBFL	7 (178)	6 (152)

Barrier - Vertical Outside Bend

- Vertical Outside Bend Barriers are preformed to conform to a specific vertical outside bend fitting.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert P or G
- (**) Insert 30, 45, 60 or 90 for degrees
- (†) Insert 12, 24, 36 or 48 for radius

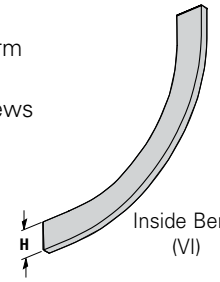


Outside Bend (VO)

Catalog No.	Side Rail Height in. mm	Loading Depth 'H' in. mm
73(*)-(**)VO(†)	4 (101)	3 (76)
74(*)-(**)VO(†)	5 (127)	4 (101)
75(*)-(**)VO(†)	6 (152)	5 (127)
76(*)-(**)VO(†)	7 (178)	6 (152)

Barrier - Vertical Inside Bend

- Vertical Inside Bend Barriers are preformed to conform to a specific vertical inside bend fitting.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert P or G
- (**) Insert 30, 45, 60 or 90 for degrees
- (†) Insert 12, 24, 36 or 48 for radius



Inside Bend (VI)

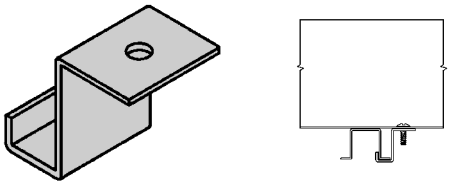
Catalog No.	Side Rail Height in. mm	Loading Depth 'H' in. mm
73(*)-(**)VI(†)	4 (101)	3 (76)
74(*)-(**)VI(†)	5 (127)	4 (101)
75(*)-(**)VI(†)	6 (152)	5 (127)
76(*)-(**)VI(†)	7 (178)	6 (152)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Barrier Strip Clip

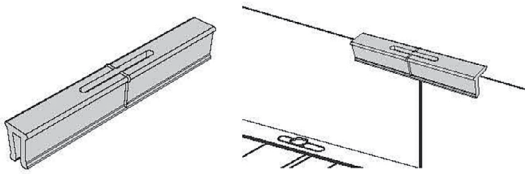
- Zinc plated steel barrier clip fastens to either aluminum or steel ladder rung.
- Furnished with one #10 x 1/2" zinc plated self-drilling screw.



Catalog No.
● 9ZN-9002

Barrier Strip Splice

- 2.85" (72.4mm) long
- Ribbed edge for increased rigidity and grip
- Comfort edge for ease of installation
- Slotted top window with center mark for accurate placement and inspection capability
- Patent pending

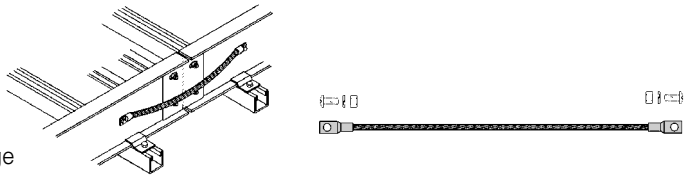


Catalog No.
● 99-9982

Bonding Jumper

Use at each expansion splice and where the cable tray is not mechanically/electrically continuous to ground. Sold individually.

- Hardware included.
- See table See table 392.60(A) on page MAN-29 for amperage ratings required to match the UL cross-sectional area of the tray.
- See tray loading chart for UL cross-sectional area.
- Bonding jumper is 14 1/2" (368mm) long.

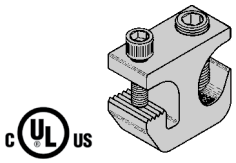


Catalog No.	Copper Wire Size	Ampacity
● 99-N1	#1	600
● 99-N6	#6	200

Grounding Clamp

B-Line series cable tray is UL® classified as to its suitability as an equipment grounding conductor. If a separate conductor for additional grounding capability is desired, we offer this clamp for bolting the conductor at least once to each cable tray section.

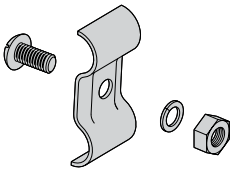
- Accepts #6 AWG to 250 MCM.



Catalog No.	Material
● 9A-2130	Tin Plated Aluminum

Ground Wire Clamp

- Mechanically attaches grounding cables to cable tray.
- Hardware included.
- (*) Insert ZN or SS4



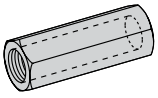
Catalog No.	Material
9(*)-2351	#1 thru 2/0
9(*)-2352	3/0 thru 250 MCM

Thread Rod (ATR) & Rod Couplings

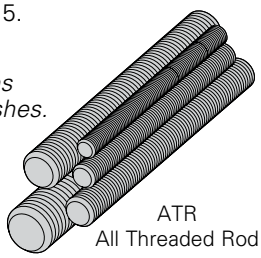
Loading based on safety factor 5.

Standard Finish: Zinc plated

See B-Line series Strut Systems Catalog for other sizes and finishes.



B655
Rod Coupling



ATR
All Threaded Rod

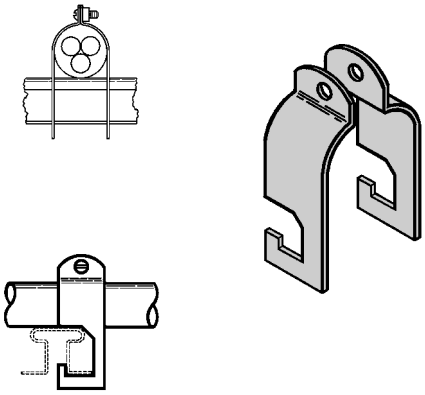
Size	Catalog No.	Available Length	Loading
All Threaded Rod			
3/8"-16	● ATR 3/8" x Length	36", 72", 120", 144"	730 lbs.
1/2"-13	● ATR 1/2" x Length	36", 72", 120", 144"	1350 lbs.
Rod Coupling			
3/8"-16	● B655-3/8"	NA	730 lbs.
1/2"-13	● B655-1/2"	NA	1350 lbs.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Stainless Steel Cable Clamp

- Fits with series 2, 3, 4 & 5 standard steel rungs.
- Shipped flat. Field form around the cable at the time of installation.

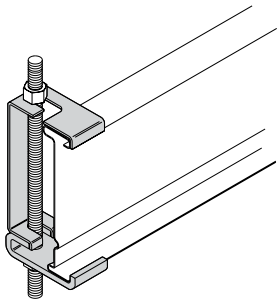


Refer to Section CF Cable Fixing

Catalog No.	Cable Size in.	mm
● 9SS4-4050	0.50 - 0.75	(13 - 19)
● 9SS4-4075	0.75 - 1.00	(19 - 25)
● 9SS4-4100	1.00 - 1.25	(25 - 32)
● 9SS4-4125	1.25 - 1.50	(32 - 38)
● 9SS4-4150	1.50 - 1.75	(38 - 45)
● 9SS4-4175	1.75 - 2.00	(45 - 51)
● 9SS4-4200	2.00 - 2.25	(51 - 57)
● 9SS4-4225	2.25 - 2.50	(57 - 64)
● 9SS4-4250	2.50 - 2.75	(64 - 70)
● 9SS4-4275	2.75 - 3.00	(70 - 76)
● 9SS4-4300	3.00 - 3.25	(76 - 82)
● 9SS4-4325	3.25 - 3.50	(82 - 89)
● 9SS4-4350	3.50 - 3.75	(89 - 95)
● 9SS4-4375	3.75 - 4.00	(95 - 100)
● 9SS4-4400	4.00 - 4.25	(100 - 106)
● 9SS4-4425	4.25 - 4.50	(106 - 113)
● 9SS4-4450	4.50 - 4.75	(113 - 121)
● 9SS4-4475	4.75 - 5.00	(121 - 125)

Hanger Rod Clamp

- For 1/2" ATR.
- Furnished in pairs.
- Order ATR and hex nuts separately.
- Two-piece "J"-hanger design.
- 1500 lbs./pair capacity safety factor 3.
- (*) Insert ZN or G

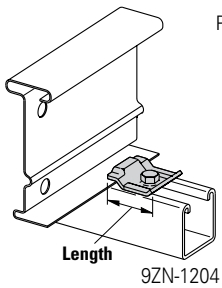


Catalog No.	Height in.	mm
9(*)-5324	4	(101)
9(*)-5325	5	(127)
9(*)-5326	6	(152)
9(*)-5327	7	(178)

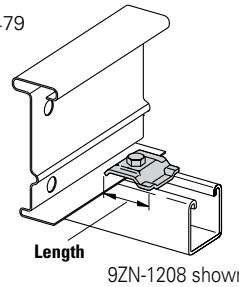
Cable Tray Clamp/Guide

- Features a no-twist design.
- Has four times the strength of the traditional design.
- Each side is labeled to ensure proper installation.
- Furnished in pairs, with or without hardware.
- Not recommended for vertical support.

Patent # RE35479



9ZN-1204 shown.
Installed as a guide.



9ZN-1208 shown.
Installed as a clamp.

When installing this device as an expansion guide on the outside flange of *Steel Side Rail*, use the Catalog No. **B202** Square Washer in order to properly elevate the guide.

Note: For heavy duty or vertical applications see 9(*)-1241 or 9(*)-1242 page J-20

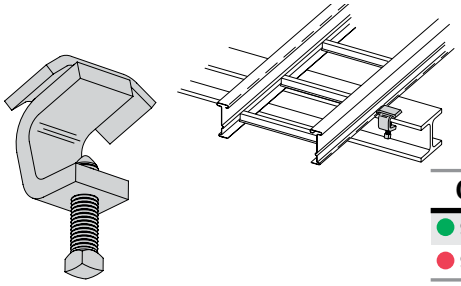
Catalog No. Without Hardware	Catalog No. With Hardware	Overall Length in. (mm)	Hardware Size in.	Finish
● 9ZN-1204	● 9ZN-1204NB	1 1/2 (38)	1/4"	G90
● 9ZN-1208	● 9ZN-1208NB	2 1/4 (57)	3/8"	G90
● 9A-1205	9A-1205NB	2 1/4 (57)	1/2"	Alum.
● 9A-1206	9A-1206NB	2 1/4 (57)	3/8"	Alum.
● 9G-1205	9G-1205NB	2 1/4 (57)	1/2"	HDGAF
● 9SS6-1205	9SS6-1205NB	2 1/4 (57)	1/2"	316SS
● 9ZN-1205	9ZN-1205NB	2 1/4 (57)	1/2"	G90

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Cable Tray Clamp

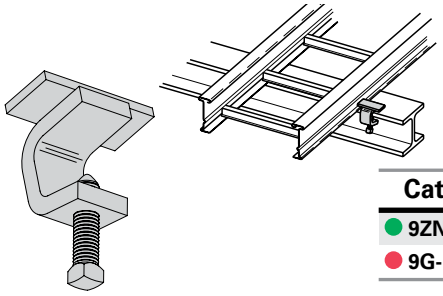
- Hold-down clamps for single or double cable tray runs.
- No drilling of support I-beam or channel is required.
- Sold in pieces - two clamps are required per tray.
- Maximum beam flange thickness 1 1/8" (28.58 mm).



Catalog No.	Finish
9ZN-1249HD	Znplt
9G-1249HD	HDGAF

Cable Tray Guide

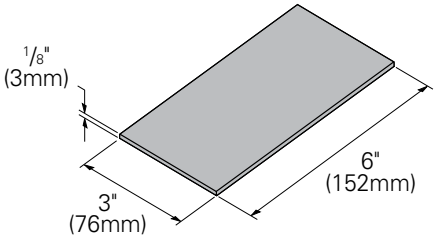
- Expansion guide for single or double cable tray runs.
- Guide allows for longitudinal movement of the cable tray.
- No field drilling of support I-beam or channel is required.
- Guides are required on both sides of cable tray to prevent lateral movement - can be placed on either the inside or outside flange of cable tray.
- Guides are sold in pieces - two guides are required per tray.
- Maximum flange thickness 1 1/8" (28.58 mm).



Catalog No.	Finish
9ZN-1249	Znplt
9G-1249	HDGAF

Nylon Pad

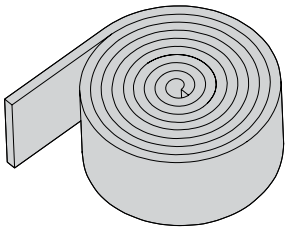
- Use for friction reduction.
- Hardness: Shore D80.
- Low friction coefficient.
- UV resistant.
- Excellent weatherability.
- UL - 94HB.



Catalog No.
99-PE36

Neoprene Roll

- Use for material isolation.
- 1/8" x 2" x 25' roll.
- Hardness: Shore A60.
- Good weatherability.



Catalog No.
99-NP300

DURA-BLOK™ Rooftop Support Bases with B22 Channel

- Designed as a superior rooftop support for cable tray,
- UV resistant and approved for most roofing material or other flat surfaces.
- Can be used with any of B-Line series cable tray clamps and guides.
- Ultimate Load Capacity: 1,000 lbs. (uniform load)

Catalog No.	Height x Width x Length in.	(mm)
DB10-28	5 5/8 x 6 x 28.0	(143 x 152 x 711)
DB10-36	5 5/8 x 6 x 36.0	(143 x 152 x 914)
DB10-42	5 5/8 x 6 x 42.0	(143 x 152 x 1067)
DB10-50	5 5/8 x 6 x 50.0	(143 x 152 x 1270)
DB10-60	5 5/8 x 6 x 60.0	(143 x 152 x 1524)

LEEDS credit available, base made from 100% recycled material.

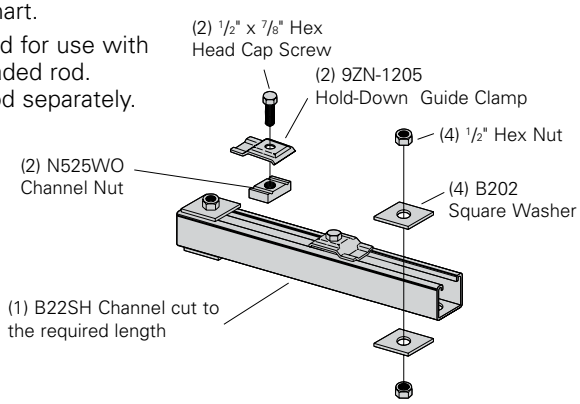
General Note: Consult roofing manufacturer or engineer for roof load capacity. The weakest point may be the insulation board beneath the rubber membrane.

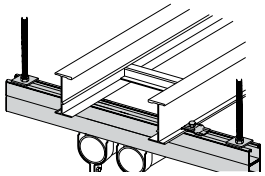
Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Trapeze Support Kit

- Eaton's B-Line series trapeze kits provide the components required for a single trapeze support in one package. These kits are available in pre-galvanized steel with zinc-plated hardware,hot dip galvanized steel with 316 stainless steel hardware, or DURA GREEN™ painted steel with zinc-plated hardware.
- The SH channel provides the convenience of pre-punched slots, which eliminate the need for field drilling.
- The illustrated hardware is sealed in a plastic bag and boxed with the channel, which is pre-cut to the appropriate length as shown in the chart.
- Designed for use with ½" threaded rod. Order rod separately.





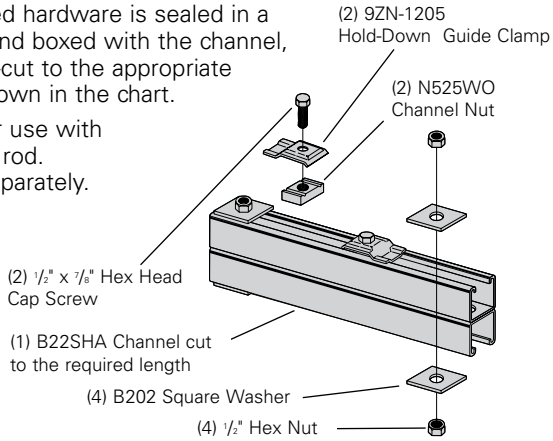
Catalog No.	Tray Width in.	Tray Width mm	Channel Length in.	Channel Length mm	Uniform Load lbs	Uniform Load kN
● 9(*)-5506-22SH(†)	6	(152)	16	(406)	1350	(6.00)
● 9(*)-5509-22SH(†)	9	(229)	18	(457)	1250	(5.56)
● 9(*)-5512-22SH(†)	12	(305)	22	(559)	1125	(5.00)
● 9(*)-5518-22SH(†)	18	(457)	28	(711)	865	(3.85)
● 9(*)-5524-22SH(†)	24	(610)	34	(864)	700	(3.11)
● 9(*)-5530-22SH(†)	30	(762)	40	(1016)	590	(2.62)
● 9(*)-5536-22SH(†)	36	(914)	46	(1168)	510	(2.27)
● 9(*)-5542-22SH(†)	42	(1067)	52	(1321)	450	(2.00)

- (*) Insert P G or GRN
- (†) Insert ⅜ for ⅜" threaded rod hardware.

Safety factor of 3.0 on all loads.

Heavy Duty Trapeze Support Kit

- Eaton's B-Line series trapeze kits provide the components required for a single trapeze support in one package. These kits are available in pre-galvanized steel with zinc-plated hardware, hot dip galvanized steel with 316 stainless steel hardware, or DURA GREEN™ painted steel with zinc-plated hardware.
- The SH channel provides the convenience of pre-punched slots, which eliminates the need for field drilling.
- The illustrated hardware is sealed in a plastic bag and boxed with the channel, which is pre-cut to the appropriate length as shown in the chart.
- Designed for use with ½" threaded rod. Order rod separately.

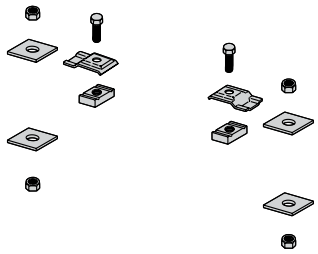


Catalog No.	Tray Width in.	Tray Width mm	Channel Length in.	Channel Length mm	Uniform Load lbs	Uniform Load kN
● 9(*)-5506-22SHA	6	(152)	16	(406)	1350	(6.00)
● 9(*)-5509-22SHA	9	(229)	18	(457)	1350	(6.00)
● 9(*)-5512-22SHA	12	(305)	22	(559)	1350	(6.00)
● 9(*)-5518-22SHA	18	(457)	28	(711)	1350	(6.00)
● 9(*)-5524-22SHA	24	(610)	34	(864)	1350	(6.00)
● 9(*)-5530-22SHA	30	(762)	40	(1016)	1350	(6.00)
● 9(*)-5536-22SHA	36	(914)	46	(1168)	1350	(6.00)
● 9(*)-5542-22SHA	42	(1067)	52	(1321)	1350	(6.00)

- (*) Insert P G or GRN

Safety factor of 3.0 on all loads.

Trapeze Hardware Kit



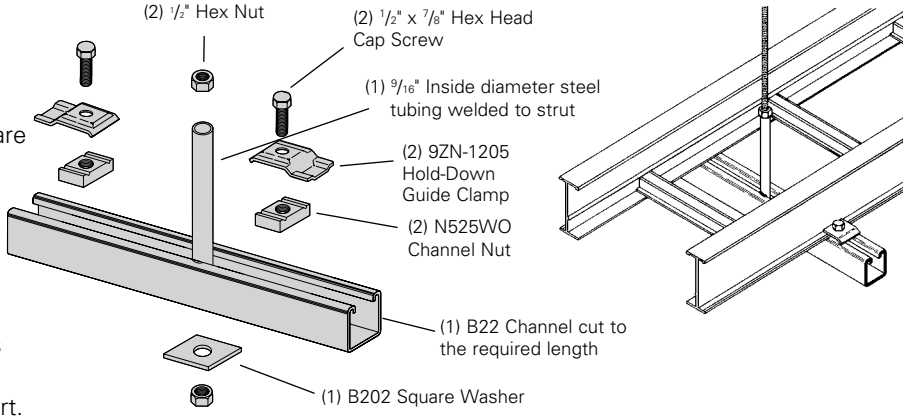
Catalog No.	● 9ZN-5500-½	● 9G-5500-½
In plastic bag	1 pr. 9ZN-1205 2 HHC Screw ½ x ⅞ ZN 2 N525 WO ZN 4 B202 ZN ½" sq washer 4 HN ½ ZN	1 pr. 9G-1205 2 HHC Screw ½ x ⅞ SS6 2 N525 WO SS6 4 B202 HDG ½" sq washer 4 HN ½" SS6

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

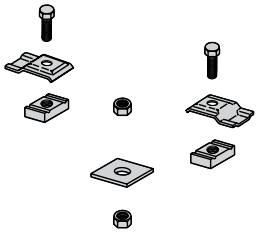
Center Hung Tray Support

- Center Hung Cable Tray Support allows cable to be laid-in from both sides.
- Eliminates costly cable pulling and field cutting of cable tray supports. Labor costs are dramatically reduced.
- Required hardware and threaded rod material for trapeze assemblies are reduced by up to 50%.
- Designed for use with 1/2" threaded rod. (Order rod separately)
- Use with all aluminum and steel cable trays through 24" width.
- Load capacity is 700 lbs. (311kN) per support. Safety factor of 3.0. Eccentric loading is not to exceed a 60% vs. 40% load differential.
- The maximum recommended unsupported span length is 144"/12 ft. (3.66 m).
- Hardware shown is furnished.
- Finish available: Zinc Plated



Catalog No.	Tray Width in.	(mm)	Channel Length in.	(mm)
● 9ZN-5212	6", 9", 12"	(152, 228, 305)	18"	(457)
● 9ZN-5224	18", 24"	(457, 609)	30"	(762)

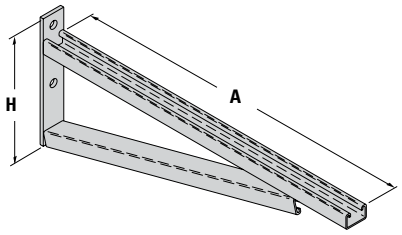
Center Hung Support Hardware Kit



Catalog No.	● 9ZN-5200
In plastic bag	1 pr. 9ZN-1205 2 HHC Screw 1/2 x 7/8 ZN 2 N525 WO ZN 1 B202 ZN 1/2" sq washer 4 HN 1/2 ZN

Bracket (12" - 48")

- (*) Insert available finish: ZN GRN or HDG
- Safety Load Factor 2.5



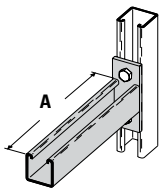
Bottom brace is B42 channel on B494-24 and smaller and B22 channel on B494-30 and larger

Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)	'H' in.	(mm)
● B494-12	2500	(11.12)	6 & 9	(152 & 229)	12	(305)	8 3/4	(222)
● B494-18	1700	(7.56)	12	(305)	18	(457)	8 3/4	(222)
● B494-24	1300	(5.78)	18	(457)	24	(610)	8 3/4	(222)
B494-30	1600	(7.11)	24	(610)	30	(762)	11 1/4	(286)
B494-36	1100	(4.89)	30	(762)	36	(914)	11 1/4	(286)
B494-42	980	(4.36)	36	(914)	42	(1067)	16	(406)
B494-48	980	(4.36)	42	(1067)	48	(1219)	16	(406)

For more dimensional data see Strut Systems catalog

Cantilever Bracket

- (*) Insert available finish: ZN GRN or HDG
- Safety Load Factor 2.5



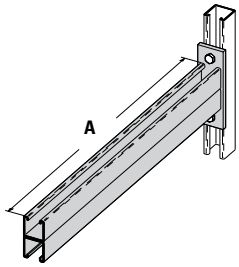
Catalog No.	Uniform Load lbs	kN	Tray Width in.	mm	'A' in.	mm
B409-12	960	(4.27)	6 & 9	(152 & 229)	12	(305)
B409-18	640	(2.84)	12	(305)	18	(457)
B409-24	480	(2.13)	18	(457)	24	(610)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Cantilever Bracket

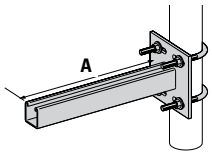
- (*) Insert available finish: ZN GRN or HDG
- Safety Load Factor 2.5



Catalog No.	Uniform Load lbs	kN	Tray Width in.	mm	'A' in.	mm
B297-12	1660	(7.38)	6 & 9	(152 & 229)	12	(305)
B297-18	1100	(4.89)	12	(305)	18	(457)
B297-24	835	(3.71)	18	(457)	24	(610)
B297-30	665	(2.93)	24	(610)	30	(762)
B297-36	550	(2.44)	30	(762)	36	(914)
B297-42	465	(2.06)	36	(914)	42	(1067)

Underfloor Support (U-Bolts not included)

- Finishes available: ZN
- Safety Load Factor 2.5

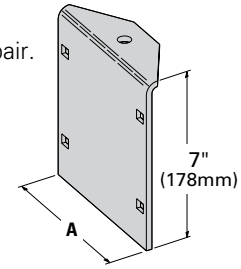


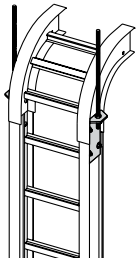
U-Bolt Size	Fits Pipe O.D.
B501-3/4	.841 - 1.050
B501-1	1.051 - 1.315
B501-1 1/4	1.316 - 1.660
B501-1 1/2	1.661 - 1.900
B501-2	1.901 - 2.375
B501-2 1/2	2.376 - 2.875

Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)
B409UF-12	800	(3.56)	6 & 9	(152 & 229)	12	(305)
B409UF-21	450	(2.00)	12 & 18	(305 & 457)	21	(533)

Vertical Hanger Splice Plates

- Design load is 1500 lbs (6.67kN) per pair.
- Safety Factor of 2.5
- Furnished in pairs.
- Hole size: 9/16" (14mm) for 1/2" threaded rod.
- (*) Insert ZN or G

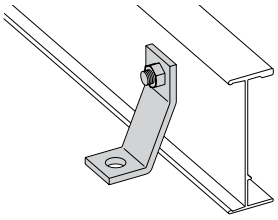




Catalog No.	Outside Cable Tray Ht.	'A' in.	(mm)
●9(*)-8224	4"	3.84	(97.54)
●9(*)-8225	5"	4.73	(120.14)
●9(*)-8226	6"	5.84	(148.34)
●9(*)-8227	7"	6.84	(173.74)

Heavy Duty Hold Down Bracket

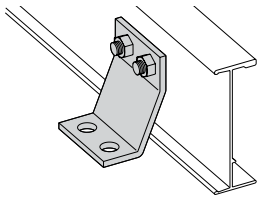
- Design load is 2000 lbs (8.89kN) per pair.
- Two bolt design.
- Sold in pairs.
- 3/8" cable tray attachment hardware provided.
- 3/8" support attachment hardware **not** provided.
- (*) Insert ZN or G
- Recommended for support of vertical trays.

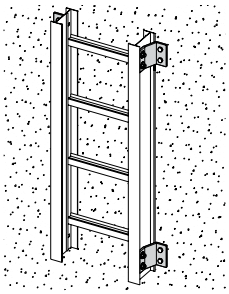


Catalog No.
9(*)-1241

Heavy Duty Hold Down Bracket

- Design load is 4000 lbs (17.79kN) per pair.
- Four bolt design.
- Sold in pairs.
- 3/8" cable tray attachment hardware provided
- 3/8" support attachment hardware **not** provided.
- (*) Insert ZN or G
- Recommended for support of vertical trays.

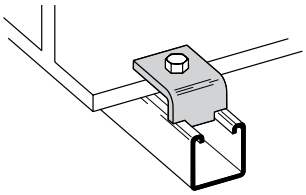




Catalog No.
9(*)-1242

Beam Clamp

- Finishes available: ZN GRN HDG or SS4
- Sold in pieces.
- Design load is 1200 lbs (5.34kN) per pair.
- Safety Load Factor 5.0.
- Order HHCS and Channel Nuts separately.



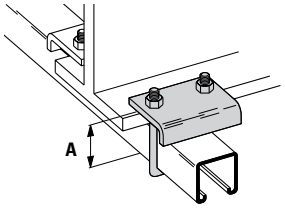
Catalog No.
B355

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Beam Clamp

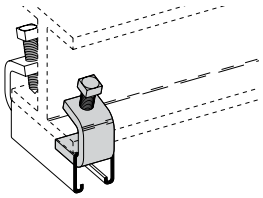
- Finishes available: ZN or HDG
- Sold in pieces.
- *Design load when used in pairs. Safety Load Factor 5.0



Catalog No.	Design Load lbs (kN)	'A' in. (mm)
B441-22	1200 (5.34)	3 3/8 (86)
B441-22A	1200 (5.34)	5 (127)

Beam Clamp

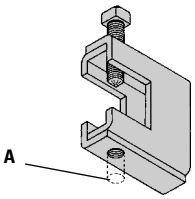
- Finishes available: ZN GRN or HDG
- Sold in pieces.
- *Design load when used in pairs. Safety Load Factor 5.0

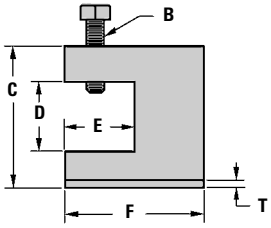


Catalog No.	B212-1/4	B212-3/8
Design Load *	600 lbs. (2.67kN)	1000 lbs. (4.45 kN)
Max. Flange Thick	3/4" (19 mm)	1 1/8" (28.6 mm)
Mat'l. Thickness	1/4" (6.3 mm)	3/8" (9.5 mm)

B305 Thru B308 & B321 Series Beam Clamps

- Finishes available: ZN or HDG
- Setscrew included.
- Safety Load Factor 5.0

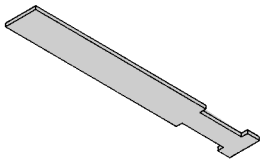




Catalog No.	Rod Size A	B	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	T in. (mm)	Design Load lbs (kN)
B305	3/8"-16	3/8"-16	2 5/16 (58.7)	7/8 (22.2)	1 1/8 (28.6)	2 1/2 (63.5)	11 Ga. (3.0)	600 (2.67)
B306	3/8"-16	1/2"-13	2 7/16 (61.9)	7/8 (22.2)	1 1/8 (28.6)	2 1/2 (63.5)	7 Ga. (4.5)	1100 (4.90)
B307	1/2"-13	1/2"-13	2 7/16 (61.9)	7/8 (22.2)	1 1/8 (28.6)	2 1/2 (63.5)	7 Ga. (4.5)	1100 (4.90)
B308	1/2"-13	1/2"-13	2 9/16 (65.1)	7/8 (22.2)	1 1/8 (28.6)	2 1/2 (63.5)	1/4 (6.3)	1500 (6.68)
B321-1	3/8"-16	1/2"-13	3 9/16 (90.5)	1 11/16 (42.9)	1 5/8 (41.3)	3 1/4 (82.5)	1/4 (6.3)	1300 (5.79)
B321-2	1/2"-13	1/2"-13	3 9/16 (90.5)	1 11/16 (42.9)	1 5/8 (41.3)	3 1/4 (82.5)	1/4 (6.3)	1400 (6.23)

Anchor Strap - for B305 thru B308 & B321 Series

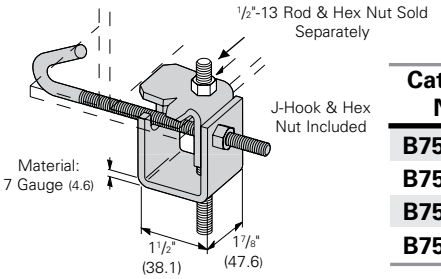
- Finish available: ZN
- For a maximum beam thickness of 3/4" (19mm).
- For thicker beams, step up one flange width size.



Catalog No.	Flange Width in. (mm)
B312-6	Up to 6 (Up to 152)
B312-9	6 - 9 (152 to 228)
B312-12	9 - 12 (228 to 305)

Beam Clamp

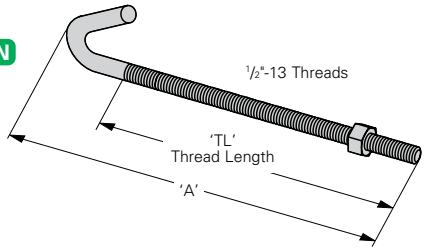
- Finish available: ZN
- Design Load 500 lbs. (2.22 kN)
- Safety Load Factor 5.0
- Recommended torque: 'J'-Hook Nut 125 In.-Lbs. (14.1 kN/m)
- Maximum flange thicknes of 3/4" (19mm).



Catalog No.	For Flange Width in. (mm)	Wt./C lbs (kg)
B750-J4	3 - 6 (76.2 - 152.4)	109 (49.4)
B750-J6	5 - 9 (127.0 - 288.6)	124 (56.2)
B750-J9	8 - 12 (203.2 - 304.8)	135 (61.2)
B750-J12	11 - 15 (279.4 - 381.0)	147 (66.7)

'J'-Hook

- Finishes available: ZN
- Hex Nut included.

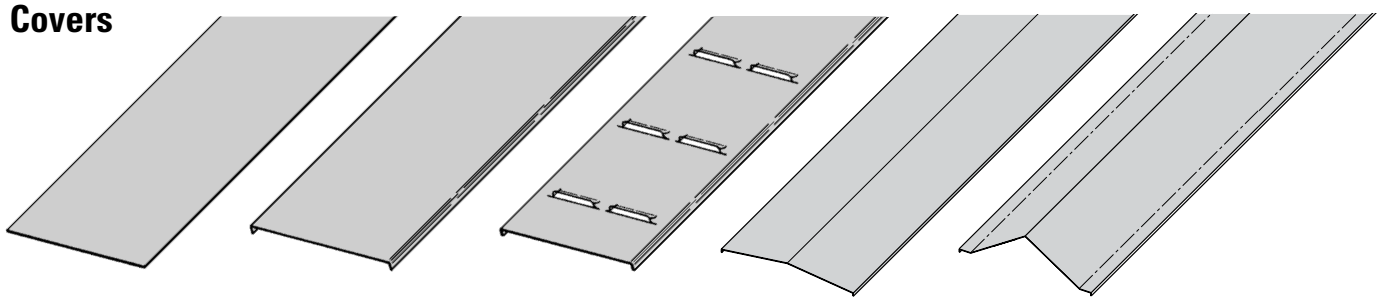


Catalog No.	'A' in. (mm)	'TL' in. (mm)	Wt./C lbs (kg)
B700-J4	8 1/2 (215.9)	5 (127.0)	44 (19.9)
B700-J6	11 1/2 (292.1)	6 (152.4)	53 (24.0)
B700-J9	12 1/4 (368.3)	6 (152.4)	63 (28.6)
B700-J12	17 1/2 (444.5)	6 (152.4)	78 (35.4)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Covers



Solid Non-Flanged | Solid Flanged | Ventilated Flanged | Peaked Flanged | 2 to 3 Pitch Peaked Flanged (See page APP-4)

A full range of covers is available for straight sections and fittings.

Solid covers should be used when maximum enclosure of the cable is desired and no accumulation of heat is expected.

Ventilated covers provide an overhead cable shield, yet allow heat to escape.

Flanged covers have a 1/2 in. (13 mm) flange.

We recommend that covers be placed on vertical cable tray runs to a height of 6 ft. (1.83 m) to 8 ft. (2.44 m) above the floor to both isolate cables and personnel. Cover clamps are not included with the cover and must be ordered separately. All **peaked covers** are flanged. Standard peaked covers have 1/2" peak. Special purpose peaked covers, having a 2 to 3 pitch, provide additional slope and material thickness. The 2 to 3 pitch fitting covers are of multiple piece, welded construction.

Steel Cover Part Numbering

Prefix

Example: **80 2 P - 24 - 144**

Cover Type
- 80 = Solid
- 81 = Ventilated
- 82 = Peaked

Detail
- 2 = Flanged Steel (248,258, 268 straight sections and all fittings)
- 3 = Flanged Steel (all straight sections except 248, 258, 268)
- 4 = Non-Flanged Steel (80 & 81 type only)

Material
- P = Pre-Galvanized (Not available in Type 83)
- G18 = HDGAF

Tray Width
- 06 = 6"
- 09 = 9"
- 12 = 12"
- 18 = 18"
- 24 = 24"
- 30 = 30"
- 36 = 36"

Item Description

For Straight Section Cover:

Pre-Galvanized Only
- 144 = 12 ft. (3.66 m)
- 120 = 10 ft. (3.05 m)

Pre-Galvanized & HDGAF
- 72 = 6 ft. (1.83 m)
- 60 = 5 ft. (1.52 m)

For fitting covers: Insert suffix of fitting to be covered. See example below.

Examples of Catalog Numbers for Fitting Covers:

Horizontal Bend Cover

Prefix / Suffix

80 2 P - 18 - 90 HB 24

- Radius
- Fitting
- Angle
- Width
- Material
- Detail
- Cover Type

Vertical Bend Cover

Prefix / Suffix

80 2 G - 24 - 90 VO 24 - 4*

- Side Rail* Height
- Radius
- Fitting
- Angle
- Width
- Material
- Detail
- Cover Type

* Required for VO fittings only

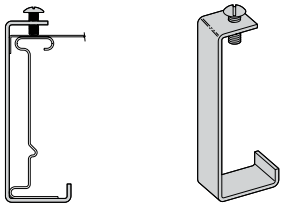
Note: Covers may not be suitable for all environmental loads. Check with B-Line Technical Support (blinetechnicalsupport@eaton.com) if there are questions/concerns about environmental loads for covers (wind, snow, sleet, rain, etc.).

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Standard Cover Clamp

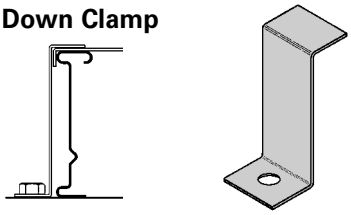
- For indoor service only.
- Screw included.
- Sold per piece.
- (*) Insert ZN or G



Tray Type	Catalog No.	Side Rail Height in.	(mm)
Steel	9(*)-9014	4	(101)
	9(*)-9015	5	(127)
	9(*)-9016	6	(152)
	9(*)-9017	7	(78)

Combination Cover and Hold Down Clamp

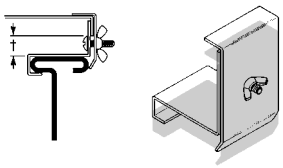
- Sold per piece.
- For indoor service only.
- (*) Insert P or G



Tray Type	Catalog No.	Side Rail Height in.	(mm)
Steel	9(*)-9043	4	(101)
	9(*)-9053	5	(127)
	9(*)-9063	6	(152)
	9(*)-9073	7	(78)

Raised Cover Clamp

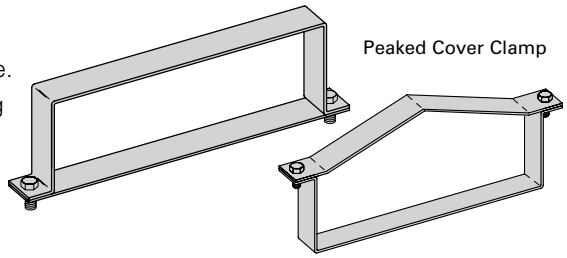
- For indoor service only.
- For use with flanged covers only.
  † Specify gap of 1", 2", 3" or 4".



Tray Type	Catalog No.	Tray Type
●	9ZN-9114-†	Series 2 Steel Straight Section
●	9ZN-9115-†	Series 3 & 4 Steel Straight Section
●	9ZN-910†	All Steel Fittings (Also Series 1 Steel Straight Sections)

Heavy Duty Cover Clamp

- Recommended for outdoor service.
- Should not be used on overlapping sections.
- (‡) Insert tray width
  † Add P to Catalog No. for peaked cover clamp.
- (*) Insert P or G



Catalog No.	Side Rail Height in.	mm
9(*)-(‡)-9044†	4	(101)
9(*)-(‡)-9054†	5	(127)
9(*)-(‡)-9064†	6	(152)
9(*)-(‡)-9074†	7	(178)

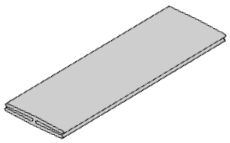
Quantity of Standard Cover Clamps Required

Notes:
When using the Heavy Duty Cover Clamp, only on-half the number of clamps stated above is required.
Additional clamps may be necessary in extreme wind applications.

Straight Section 60" or 72"	4 pcs.
Straight Section 120" or 144"	6 pcs.
Horizontal/Vertical Bends	4 pcs.
Tees	6 pcs.
Crosses	8 pcs.
Reducers	4 pcs.

Cover Joint Strip

- Used to join covers
- Plastic
- Only for use on flat covers
- Color - gray.
- (‡) Insert tray width



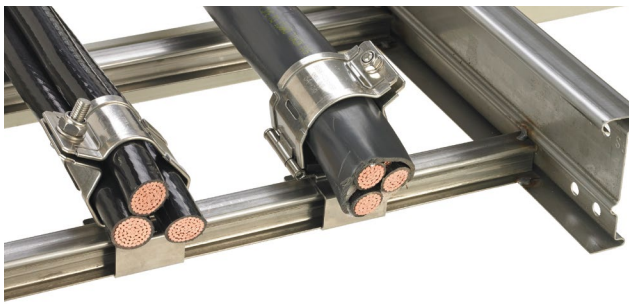
Catalog No.
● 99-9980-(‡)

Cable Cleats

(see pages N-1 thru N-5) Standard

Trefoil Cable Cleats

Single Cable Cleats



● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Section 1- Acceptable Manufacturers

1.01 Manufacturer: Subject to compliance with these specifications, Eaton's B-Line series cable tray systems shall be as manufactured by Eaton.

Section 2- Cable Tray Sections and Components

2.01 General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates, bolts, nuts and washers for connecting units. Construct units with rounded edges and smooth surfaces; in compliance with applicable standards; and with the following additional construction features. Cable tray shall be installed according to the latest revision of NEMA VE 2.

2.02 Pre-Galvanized Steel: Straight sections, fitting side rails, rungs, and covers shall be made from structural quality steel meeting the minimum mechanical properties and mill galvanized in accordance with ASTM A653 SS, Grade 33, coating designation G90. Hardware finish shall be electrogalvanized zinc per ASTM B633.

2.03 Hot Dip Galvanized Steel: All side rails, covers, splice plates, and rungs shall be made from structural quality steel meeting the minimum mechanical properties of ASTM A1011 SS, Grade 33 for 14 gauge and heavier, ASTM A1008, Grade 33 Type 2 for 16 gauge and lighter, and shall be hot dip galvanized after fabrication in accordance with ASTM A123. Mill galvanized covers are not acceptable for hot dip galvanized cable tray. Hardware finish shall be chromium zinc per ASTM F-1136-88.

2.04 Ladder Cable Trays shall consist of two longitudinal members (side rails) with transverse members (rungs) welded to the side rails. Rungs shall be spaced [6] [9] [12] inches apart. Rung spacing in radiused fittings shall be industry standard 9" and measured at the center of the tray's width. No portion of the rungs shall protrude below the bottom plane of the side rails. Each rung must be capable of supporting a 200 lb. concentrated load at the center of the cable tray over and above the cable load with a safety factor of 1.5.

2.05 Cable tray loading depth shall be [3] [4] [5] [6] inches per NEMA VE 1.

2.06 Straight sections shall have side rails fabricated as I-beams. Straight sections shall be supplied in standard [12 foot] [24 foot] [10 foot (3 m)] [20 foot (6 m)] lengths.

2.07 Cable tray widths shall be [6] [9] [12] [18] [24] [30] [36] inches or as shown on drawings.

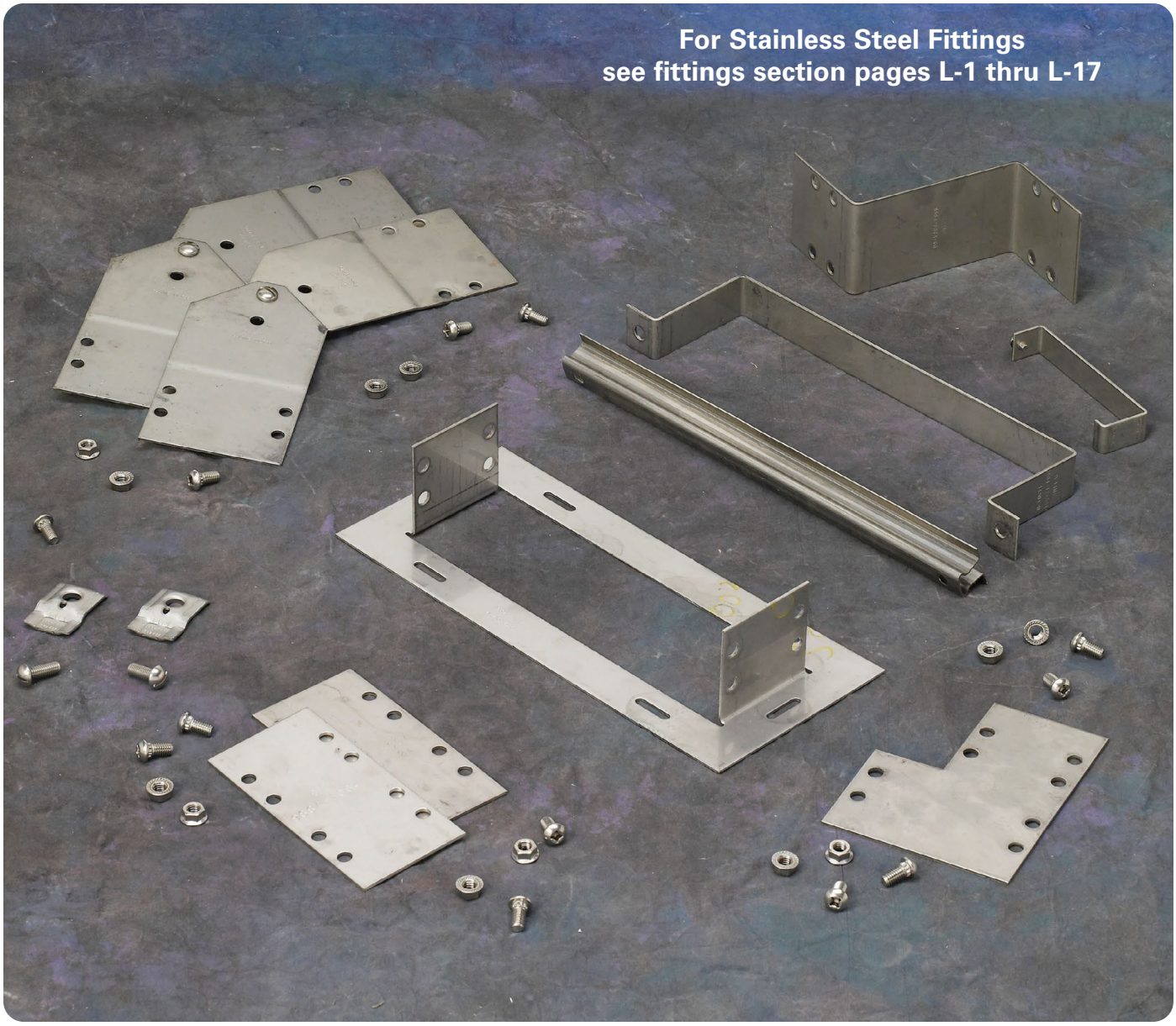
2.08 Splice plates shall be manufactured of high strength steel, meeting the minimum mechanical properties of ASTM A1011 HSLAS, Grade 50, Class 1 and be secured with 8 nuts and bolts per plate. The resistance of fixed splice connections between an adjacent section of tray shall not exceed 0.00033 ohm.

2.09 All fittings must have a minimum radius of [12] [24] [36] [48] inches.

Section 3- Loading Capacities and Testing

3.01 Cable tray shall be capable of carrying a uniformly distributed load of _____ lbs./ft. on a _____ ft. support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE 1 5.2. In addition to the uniformly distributed load the cable tray shall support 200 lbs. concentrated load at mid-point of span. Load and safety factors specified are applicable to both the side rails and rung capacities. Cable tray shall be made to manufacturing tolerances as specified by NEMA.

3.02 Upon request, manufacturer shall provide test reports in accordance with the latest revision of NEMA VE 1 or CSA C22.2 No. 126.



How The Service Advisor Works

We know that your time is important! That's why the color-coding system in this catalog is designed to help you select products that fit your service needs. Products are marked to indicate the typical lead time for orders of 50 pieces or less.

Customer: How do I select my straight sections. covers, or fittings so that I get the quickest turnaround?

Service Advisor: Each part of our selection chart is shown in colors. If any section of a part number is a different color, the part will typically ship with the longer lead time represented by the colors.

- Green = Fastest shipped items
- Black = Normal lead-time items
- Red = Normally long lead-time items

Example: **348SS4 09 - 12 - 144**

Part will have a long lead time.

3" NEMA VE 1 Loading Depth
4" Side Rail Height

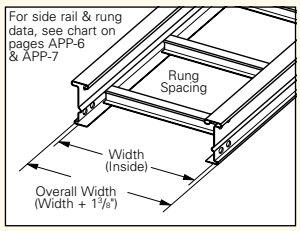
Straight Section Part Numbering

Prefix

Example: **348 SS6 09 - 24 - 144**

Series
- **348**

Material
- **SS4** = 304 Stainless Steel
- **SS6** = 316 Stainless Steel



***Type**
- **SB** = Solid Bottom
- **06** = 6″ rung spacing
- **09** = 9″ rung spacing
- **12** = 12″ rung spacing

***Width**
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

Length
- ① **144** = 12 ft.
- ② **120** = 10 ft.

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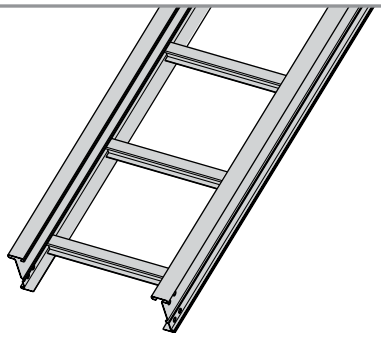
Notes:
① Primary Length.
② Secondary Length.

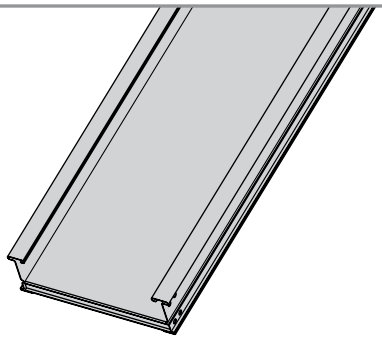
See page C-23 for explanation of lengths.

Passivation available see page C-2.

See page APP-1 for additional rung options. *Special sizes available.



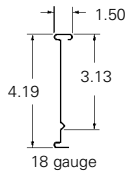
Ladder Type
(Specify Rung Spacing)



Solid Bottom

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the NEMA rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
348 SS†		NEMA: 16A, 12C CSA: C1-3m	10	180	0.0042	Area = 0.74 in² Sx = 0.79 in³ Ix = 1.85 in⁴	3.0	268	0.072	Area = 4.77 cm² Sx = 12.95 cm³ Ix = 77.00 cm⁴
			12	125	0.009		3.7	186	0.148	
			14	92	0.016		4.3	137	0.275	
			16	70	0.027		4.9	105	0.469	
			18	56	0.044		5.5	83	0.752	
			20	45	0.067		6.1	67	1.145	

When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus. † Insert 4 for 304 stainless steel or 6 for 316 stainless steel.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

4" NEMA VE 1 Loading Depth
5" Side Rail Height

Straight Section Part Numbering

Prefix

Example: **358 SS6 09 - 24 - 144**

Series
- **358**

Material
- **SS4** = 304 Stainless Steel
- **SS6** = 316 Stainless Steel

***Type**
- **SB** = Solid Bottom
- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing

***Width**
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

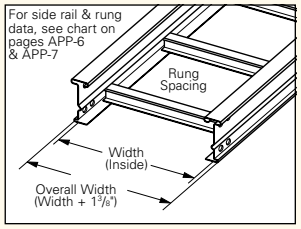
Length
- ① **144** = 12 ft.
- ② **120** = 10 ft.

358

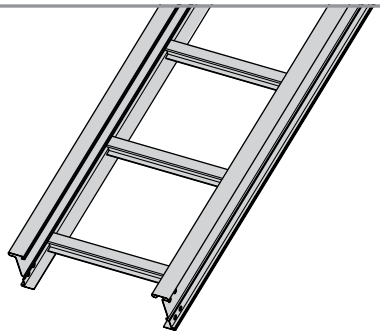
Notes:
① Primary Length.
② Secondary Length.

See page C-23 for explanation of lengths.

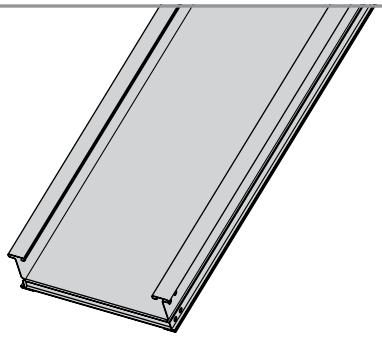
Passivation available see page C-2.



See page APP-1 for additional rung options. *Special sizes available.



Ladder Type
(Specify Rung Spacing)



Solid Bottom

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the Nema rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
358 SS†	1.50, 4.13, 5.19, 18 gauge	NEMA: 20A, 16B CSA: 89kg/m 6.1m	10	248	0.0025	Area = 0.83 in² Sx = 1.09 in³ Ix = 3.10 in⁴	3.0	369	0.043	Area = 5.35 cm² Sx = 17.86 cm³ Ix = 129.03 cm⁴
			12	172	0.0052		3.7	256	0.089	
			14	127	0.010		4.3	188	0.164	
			16	97	0.016		4.9	144	0.280	
			18	77	0.026		5.5	114	0.448	
			20	62	0.040		6.1	92	0.684	

When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus. † Insert 4 for 304 stainless steel or 6 for 316 stainless steel.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

5" NEMA VE 1 Loading Depth
6" Side Rail Height

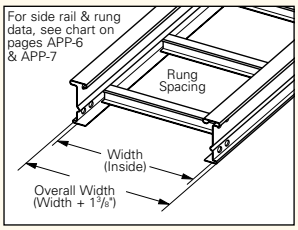
Straight Section Part Numbering

Prefix

Example: **368 SS6 09 - 24 - 144**

Series
- **368**
- **464**

Material
- **SS4** = 304 Stainless Steel
- **SS6** = 316 Stainless Steel



***Type**
- **SB** = Solid Bottom
- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing

***Width**
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

Length

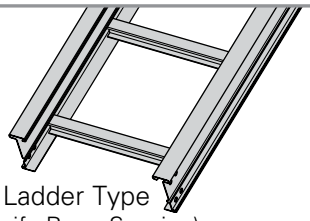
① **144** = 12 ft.	368
② **120** = 10 ft.	
① **144** = 12 ft.	464
② **120** = 10 ft.	

Notes:
① Primary Length.
② Secondary Length.

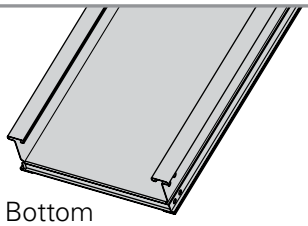
See page C-23 for explanation of lengths.

Passivation available see page C-2.

See page APP-1 for additional rung options. *Special sizes available.



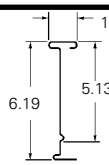
Ladder Type
(Specify Rung Spacing)

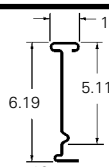


Solid Bottom

Values are based on simple beam tests per NEMA VE 1 on 36" wide cable tray rungs spaced on 12" centers. Cable trays will support without collapse a 200 lb. (90.7 kg) concentrated load over and above published loads. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable being installed.

Individual rungs will support without collapse a 200 lb. (90.7 kg) concentrated load applied at the mid-span of the rung, over and above the Nema rated cable load with a 1.5 safety factor for highlighted NEMA spans and loads.

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
368 SS†		NEMA: 20A, 16B CSA: D1-3m	10	236	0.0016	Area = 0.92 in² Sx = 1.41 in³ Ix = 4.77 in⁴	3.0	351	0.028	Area = 5.94 cm² Sx = 23.11 cm³ Ix = 198.54 cm⁴
			12	164	0.0034		3.7	244	0.058	
			14	120	0.0062		4.3	179	0.107	
			16	92	0.011		4.9	137	0.182	
			18	73	0.017		5.5	108	0.291	
			20	59	0.026		6.1	88	0.444	

B-Line series	Side Rail Dimensions	NEMA, CSA & UL Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Design Factors for Two Rails	Span meters	Load kg/m	Deflection Multiplier	Design Factors for Two Rails
464 SS†		NEMA: 20C+ CSA: E-6m	12	342	0.002	Area = 1.49 in² Sx = 2.28 in³ Ix = 7.65 in⁴	3.7	508	0.036	Area = 9.61 cm² Sx = 37.36 cm³ Ix = 318.42 cm⁴
			16	192	0.007		4.9	286	0.113	
			18	152	0.011		5.5	226	0.182	
			20	123	0.016		6.1	183	0.277	
			22	102	0.024		6.7	151	0.406	
			24	85	0.034		7.3	127	0.574	

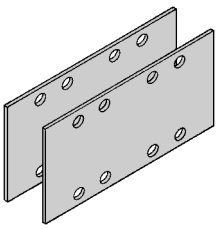
When cable trays are used in continuous spans, the deflection of the cable tray is reduced by as much as 50%. Design factors: Ix = Moment of Inertia, Sx = Section Modulus. † Insert 4 for 304 stainless steel or 6 for 316 stainless steel.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Splice Plates

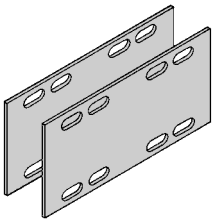
- Standard 8-hole pattern for all steel splice plates.
- Furnished in pairs with hardware.
- One pair including hardware provided with straight section. (Expansion splice quantity subtracted).
- Boxed in pairs with hardware.
- (*) Insert SS4 or SS6.



Catalog No.	Height in.	Height mm
9(*)-8004	4	(101)
9(*)-8005	5	(127)
9(*)-8006	6	(152)

Expansion Splice Plates

- Expansion plates allow for one inch expansion or contraction of the cable tray or where expansion joints occur in the support structure.
- Furnished in pairs with hardware.
- (*) Insert SS4 or SS6.



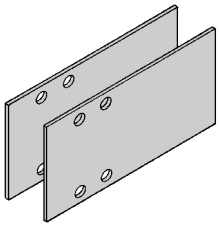
For heavy duty expansion splice plates see page APP-3.

Catalog No.	Height in.	Height mm
9(*)-8014	4	(101)
9(*)-8015	5	(127)
9(*)-8016	6	(152)

Requires supports within 24" on both sides, per NEMA VE 2.

Universal Splice Plates

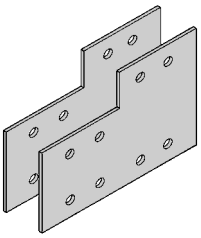
- Used to splice to existing cable tray systems.
- Furnished in pairs with hardware.
- (*) Insert SS4 or SS6.



Catalog No.	Height in.	Height mm
9(*)-8004-1/2	4	(101)
9(*)-8005-1/2	5	(127)
9(*)-8006-1/2	6	(152)

Step Down Splice Plates

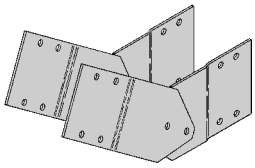
- These splice plates are offered for connecting cable tray sections having side rails of different heights.
- Furnished in pairs with hardware.
- (*) Insert SS4 or SS6.



Catalog No.	Height in.	Height mm
9(*)-8045	5 to 4	(127 to 101)
9(*)-8046	6 to 4	(152 to 101)
9(*)-8060	6 to 5	(152 to 127)

Vertical Adjustable Splice Plates

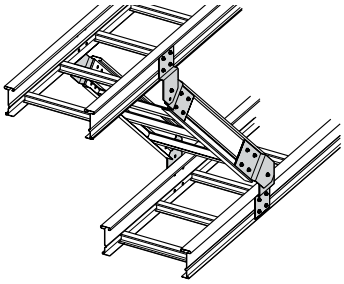
- These plates provide for changes in elevation that do not conform to standard vertical fittings.
- Furnished in pairs with hardware.
- (*) Insert SS4 or SS6.



Catalog No.	Height in.	Height mm
9(*)-8024	4	(101)
9(*)-8025	5	(127)
9(*)-8026	6	(152)

Branch Pivot Connectors

- Branch from existing cable tray runs at any point.
- Pivot to any required angle.
- Furnished in pairs with hardware.
- Bonding jumpers or a ground wire required. Order separately.
- (*) Insert SS4 or SS6.



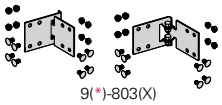
Catalog No.	Height in.	Height mm
9(*)-8244	4	(101)
9(*)-8245	5	(127)
9(*)-8246	6	(152)

Horizontal Adjustable Splice Plates

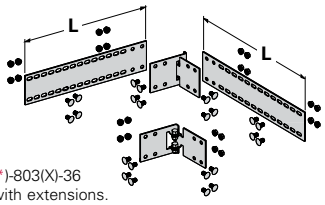
- Used to adjust a cable tray run for changes in direction in a horizontal plane that do not conform to standard horizontal fittings.
- Furnished in pairs with hardware.
- Bonding jumpers or a ground wire required. Order separately.
- (*) Insert SS4 or SS6.
- (X) Insert 4, 5, 6 or 7 for side rail height.

Requires supports within 24" on both sides per NEMA VE 2.

Catalog No.	Cable Tray End Cut	Thru Tray Width in.	(mm)	'L' in.	(mm)
9(*)-803(X)	Mitered	36	(914)	N/A	(NA)
9(*)-803(X)-12	Not mitered	12	(305)	16	(406)
9(*)-803(X)-36	Not mitered	36	(914)	41	(1041)



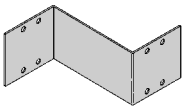
9(*)-803(X)
Splice only



9(*)-803(X)-12 or 9(*)-803(X)-36
One pair splice plates with extensions.

Offset Reducing Splice Plate

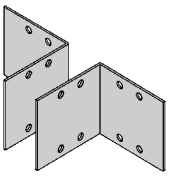
- This plate is used for joining cable trays having different widths. When used in pairs, they form a straight reduction. When used singly with a standard splice plate, they form an offset reduction.
- Bonding jumpers or a ground wire required. Order separately.
- Furnished as one plate with hardware.
- (‡) Insert reduction
- (*) Insert SS4 or SS6.



Catalog No.	Height in.	mm
9(*)-8064-(‡)	4	(101)
9(*)-8065-(‡)	5	(127)
9(*)-8066-(‡)	6	(152)

Tray-to-Box Splice Plates

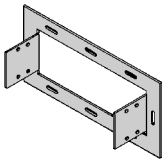
- Used to attach the end of a cable tray run to a distribution box or control panel.
- Furnished in pairs with hardware.
- (*) Insert SS4 or SS6.



Catalog No.	Height in.	mm
9(*)-8054	4	(101)
9(*)-8055	5	(127)
9(*)-8056	6	(152)

Frame Type Box Connector

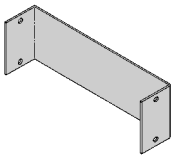
- Used to attach the end of a cable tray run to a distribution cabinet or control center. Helps reinforce the box at the point of entry.
- Furnished with tray connection hardware.
- (*) Insert SS4 or SS6.
- (‡) Insert tray width.



Catalog No.	Height in.	mm
9(*)-8074-(‡)	4	(101)
9(*)-8075-(‡)	5	(127)
9(*)-8076-(‡)	6	(152)

Blind End

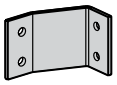
- This plate forms a closure for a dead end cable tray.
- Furnished as one plate with hardware.
- (*) Insert SS4 or SS6.
- (‡) Insert tray width.

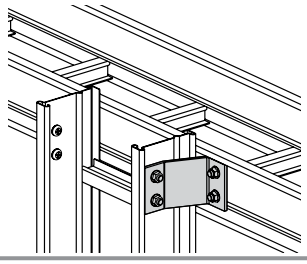


Catalog No.	Height in.	mm
9(*)-8084-(‡)	4	(101)
9(*)-8085-(‡)	5	(127)
9(*)-8086-(‡)	6	(152)

Cross Connector Bracket

- For field connecting crossing section.
- Furnished in pairs with 3/8" hardware.
- (*) Insert SS4 or SS6.

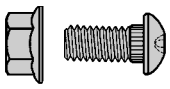




Catalog No.
9(*)-1240

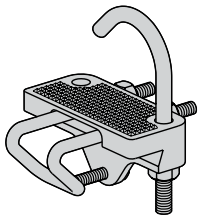
Standard Tray Hardware
(for field installation drill 13/32" hole)

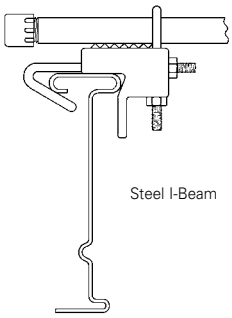
Catalog No.	Description
● **RNCB 3/8" x 3/4" SS6**	Ribbed Neck Carriage Bolt AISI 316 Stainless Steel
● **SFHN 3/8"-16 SS6**	Serrated Flange Hex Nut AISI 316 Stainless Steel



Conduit-to-Cable Tray Adaptor

- For easy attachment of conduit termination on a cable tray.

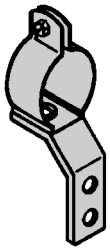


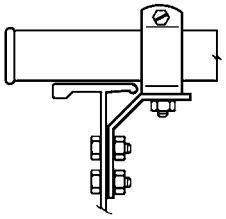


Catalog No.	Conduit Size in.	Conduit Size mm
● **9G-1158-1/2 & 3/4**	1/2, 3/4	(15, 20)
● **9G-1158-1 & 1 1/4**	1, 1 1/4	(25, 32)
● **9G-1158-1 1/2 & 2**	1 1/2, 2	(40, 50)
● **9G-1158-2 1/2 & 3**	2 1/2, 3	(65, 80)
● **9G-1158-3 1/2 & 4**	3 1/2, 4	(90, 100)

Conduit-to-Cable Tray Adaptor

- Assembly required.
- Mounting hardware included.
- Conduit clamps provided.
- (‡) = Insert conduit size (1/2" thru 4").

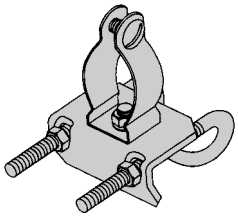


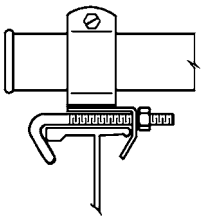


Catalog No.
● **9SS4-1150-(‡)**

Conduit-to-Cable Tray Adaptor

- Assembly required.
- Conduit clamps included.
- (‡) = Insert conduit size (1/2" thru 4").



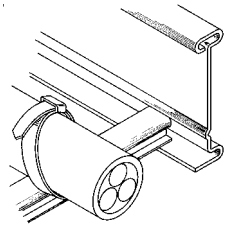


Catalog No.
● **9SS4-1155-(‡)**

Cable Tie (Ladder Tray)

- Nylon ties provide easy attachment of cable to ladder rungs.
- Maximum cable O.D. is 3" (76mm).
- Cable ties are UV resistant.

Overall Length 15" (381mm)



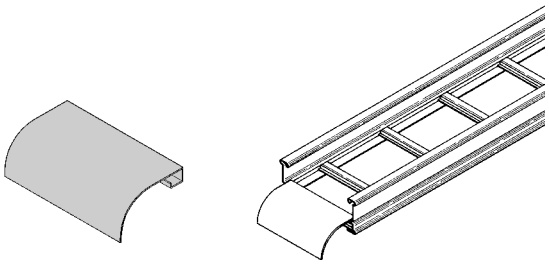
Catalog No.
● **99-2125-15**

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Ladder Drop-Out

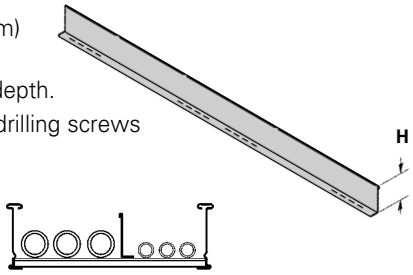
- Provide a rounded surface with 4" (101 mm) radius to help protect cable as it exits from the cable tray.
- Helps prevent damage to insulation.
- Attaches to any rung in the cable tray.
- (*) Insert SS4 or SS6.
- (‡) Insert tray width.



Catalog No.
● 9(*)-1104-(‡)

Barrier - Straight Section

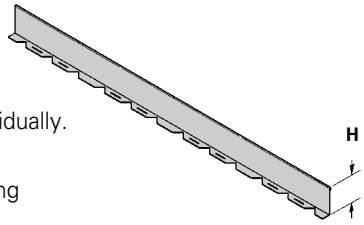
- Length: Insert 120 for [120" - 10 ft.] (3.0 m) or 144 for [144" - 12 ft.] (3.6 m)
- Order catalog number based on loading depth.
- Furnished with four #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert SS4 or SS6.



Catalog No.	Side Rail Height in. mm	Loading Depth 'H' in. mm
73(*)-Length	4 (101)	3 (76)
74(*)-Length	5 (127)	4 (101)
75(*)-Length	6 (152)	5 (127)

Barrier - Horizontal Bend

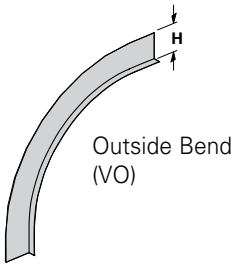
- Flexible to help conform to any horizontal fitting radius.
- Can be cut to desired length.
- Standard length is 72" [6 ft.] (1.8 m); sold individually.
- Order catalog number based on loading depth.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert SS4 or SS6.



Catalog No.	Side Rail Height in. mm	Loading Depth 'H' in. mm
73(*)-90HBFL	4 (101)	3 (76)
74(*)-90HBFL	5 (127)	4 (101)
75(*)-90HBFL	6 (152)	5 (127)

Barrier - Vertical Outside Bend

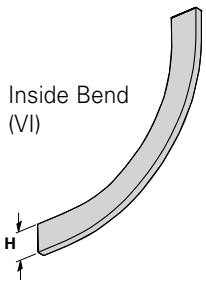
- For use to help conform to a specific vertical outside bend fitting.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert SS4 or SS6.
- (**) Insert 30, 45, 60 or 90 for degrees.
- (†) Insert 12, 24, 36 or 48 for radius.



Catalog No.	Side Rail Height in. mm	Loading Depth 'H' in. mm
73(*)-(**)VO(†)	4 (101)	3 (76)
74(*)-(**)VO(†)	5 (127)	4 (101)
75(*)-(**)VO(†)	6 (152)	5 (127)

Barrier - Vertical Inside Bend

- Vertical Inside Bend Barriers are preformed to conform to a specific vertical inside bend fitting.
- Furnished with three #10 x ½" plated self-drilling screws and a 99-9982 Barrier Strip Splice.
- (*) Insert SS4 or SS6.
- (**) Insert 30, 45, 60 or 90 for degrees.
- (†) Insert 12, 24, 36 or 48 for radius.



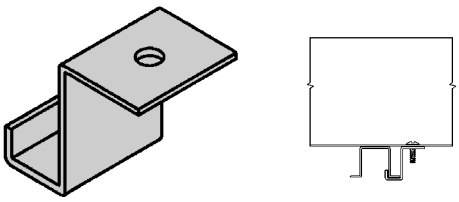
Catalog No.	Side Rail Height in. mm	Loading Depth 'H' in. mm
73(*)-(**)VI(†)	4 (101)	3 (76)
74(*)-(**)VI(†)	5 (127)	4 (101)
75(*)-(**)VI(†)	6 (152)	5 (127)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Barrier Strip Clip

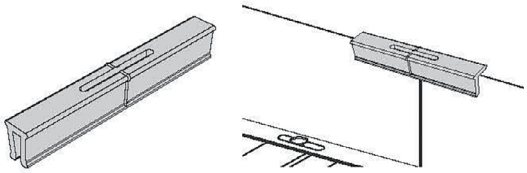
- Barrier clip fastens to either aluminum or steel ladder rung.
- Furnished with one #10 x 1/2" zinc plated self-drilling screw.
- (*) Insert SS4 or SS6.



Catalog No.
9(*)-9002

Barrier Strip Splice

- 2.85" (72.4mm) long
- Ribbed edge for increased rigidity and grip
- Comfort edge for ease of installation
- Slotted top window with center mark for accurate placement and inspection capability
- Patent pending

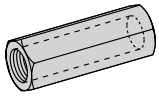


Catalog No.
● 99-9982

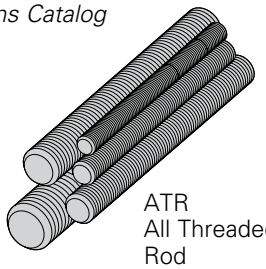
Thread Rod (ATR) & Rod Couplings

- Loading based on safety factor 5.
- Standard Finish: SS4 or SS6.

See B-Line series Strut Systems Catalog for other sizes and finishes.



B655
Rod Coupling

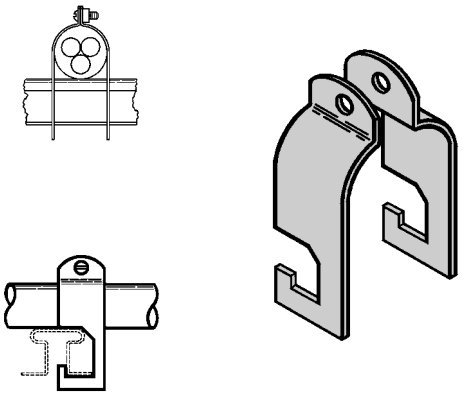


ATR
All Threaded
Rod

Size	Catalog No.	Available Length	Loading
All Threaded Rod			
3/8"-16	● **ATR 3/8" x Length**	36", 72", 120", 144"	730 lbs.
1/2"-13	● **ATR 1/2" x Length**	36", 72", 120", 144"	1350 lbs.
Rod Coupling			
3/8"-16	● **B655-3/8"**	NA	730 lbs.
1/2"-13	● **B655-1/2"**	NA	1350 lbs.

Stainless Steel Cable Clamp

- Fits with series 2, 3, 4 & 5 standard steel rungs.
- See cable cleats section of the cable tray catalog for more information.
- Field form around the cable at the time of installation.
- Shipped flat.



Catalog No.	Cable Size in.	Cable Size mm
● **9SS4-4050**	0.50 - 0.75	(13 - 19)
● **9SS4-4075**	0.75 - 1.00	(19 - 25)
● **9SS4-4100**	1.00 - 1.25	(25 - 32)
● **9SS4-4125**	1.25 - 1.50	(32 - 38)
● **9SS4-4150**	1.50 - 1.75	(38 - 45)
● **9SS4-4175**	1.75 - 2.00	(45 - 51)
● **9SS4-4200**	2.00 - 2.25	(51 - 57)
● **9SS4-4225**	2.25 - 2.50	(57 - 64)
● **9SS4-4250**	2.50 - 2.75	(64 - 70)
● **9SS4-4275**	2.75 - 3.00	(70 - 76)
● **9SS4-4300**	3.00 - 3.25	(76 - 82)
● **9SS4-4325**	3.25 - 3.50	(82 - 89)
● **9SS4-4350**	3.50 - 3.75	(89 - 95)
● **9SS4-4375**	3.75 - 4.00	(95 - 100)
● **9SS4-4400**	4.00 - 4.25	(100 - 106)
● **9SS4-4425**	4.25 - 4.50	(106 - 113)
● **9SS4-4450**	4.50 - 4.75	(113 - 121)
● **9SS4-4475**	4.75 - 5.00	(121 - 125)

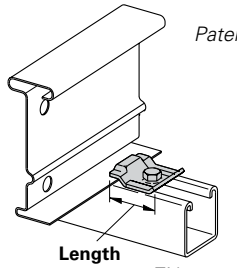
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

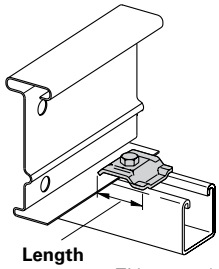
Cable Tray Clamp/Guide

- Features a no-twist design.
- Has four times the strength of the traditional design.
- Each side is labeled to ensure proper installation.
- Furnished in pairs without hardware.
- Not recommended for vertical support.

Catalog No. Without Hardware	Catalog No. With Hardware	Overall Length in. (mm)	Hardware Size in.	Finish
● 9SS6-1205	● 9SS6-1205NB	2 1/4 (57)	1/2"	316SS



9ZN-1204 shown.
Installed as a guide.



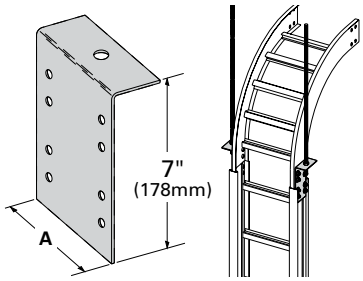
9ZN-1208 shown.
Installed as a clamp.

When installing this device as an expansion guide on the outside flange of *Steel Side Rail*, use the Catalog No. **B202** Square Washer in order to properly elevate the guide.

Note: For heavy duty or vertical applications see 9(*)-1241 or 9(*)-1242 page K-15

Vertical Hanger Splice Plates

- Design load is 1500 lbs (6.67kN) per pair.
- Safety Factor of 2.5.
- Furnished in pairs.
- Hole size: 9/16" (14mm) for 1/2" threaded rod.
- (*) Insert SS4 or SS6.

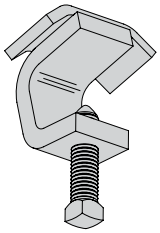


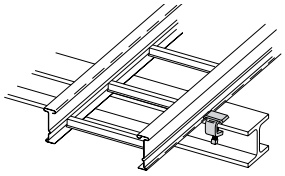
Catalog No.	Outside Cable Tray Ht.	'A' in.	'A' (mm)
9(*)-8224	4"	3.84	(97.54)
9(*)-8225	5"	4.73	(120.14)
9(*)-8226	6"	5.84	(148.34)
9(*)-8227	7"	6.84	(173.74)

Cable Tray Clamp

- Hold-down clamps for single or double cable tray runs.
- No drilling of support I-beam or channel is required.
- Sold in pieces; two clamps are required per tray.
- Maximum beam flange thickness 1 1/8" (28.58 mm).
- (*) Insert SS4 or SS6.

Catalog No.	Finish
● 9SS4-1249HD	304SS
● 9SS6-1249HD	316SS

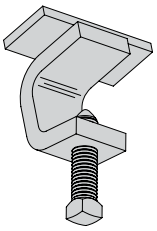


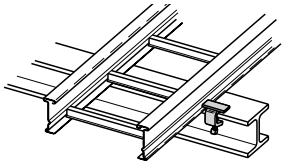


Cable Tray Guide

- Expansion guide for single or double cable tray runs.
- Guide allows for longitudinal movement of the cable tray.
- No field drilling of support I-beam or channel is required.
- Guides are required on both sides of cable tray to prevent lateral movement; can be placed on either the inside or outside flange of cable tray.
- Guides are sold in pieces - two guides are required per tray.
- Maximum flange thickness 1 1/8" (28.58 mm).
- (*) Insert SS4 or SS6.

Catalog No.	Finish
● 9SS4-1249	304SS
● 9SS6-1249	316SS



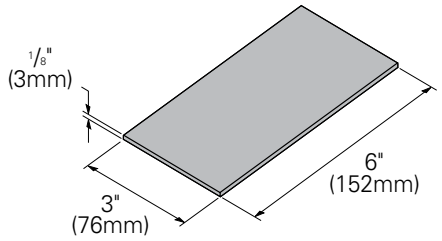


● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Nylon Pad

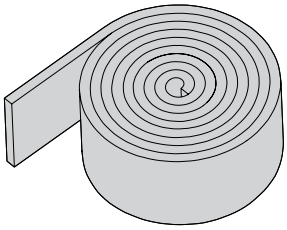
- Use for friction reduction.
- Hardness: Shore D80.
- Low friction coefficient.
- UV resistant.
- Excellent weatherability.
- UL - 94HB.



Catalog No.
● 99-PE36

Neoprene Roll

- Use for material isolation.
- 1/8" x 2" x 25' roll.
- Hardness: Shore A60.
- Good weatherability.



Catalog No.
● 99-NP300

DURA-BLOK™ Rooftop Support Bases with B22 Channel

- Designed as a superior rooftop support for cable tray.
- UV resistant and approved for most roofing material or other flat surfaces.
- Can be used with any of B-Line series cable tray clamps and guides.
- Ultimate Load Capacity: 1,000 lbs. (uniform load).

Catalog No.	Height x Width x Length in.	(mm)
● DB10-28	5 5/8 x 6 x 28.0	(143 x 152 x 711)
● DB10-36	5 5/8 x 6 x 36.0	(143 x 152 x 914)
● DB10-42	5 5/8 x 6 x 42.0	(143 x 152 x 1067)
● DB10-50	5 5/8 x 6 x 50.0	(143 x 152 x 1270)
● DB10-60	5 5/8 x 6 x 60.0	(143 x 152 x 1524)

LEEDS credit available, base made from 100% recycled material.

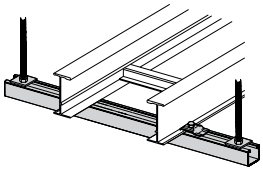
General Note: Consult roofing manufacturer or engineer for roof load capacity. The weakest point may be the insulation board beneath the rubber membrane.

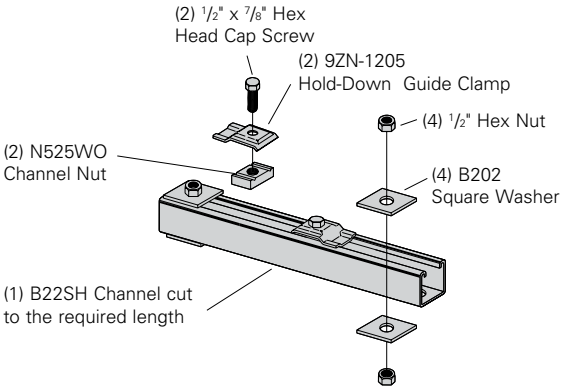
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Trapeze Support Kit

- Kit includes components for a single trapeze support in one package.
- The SH channel provides the convenience of pre-punched slots, which helps eliminate the need for field drilling.
- The illustrated hardware is (shown below) sealed in a plastic bag and boxed with the channel, which is pre-cut to the appropriate length as shown in the chart.
- Designed for use with 1/2" threaded rod. **Order rod separately.**
- Available in type 304 or Type 316 stainless steel.





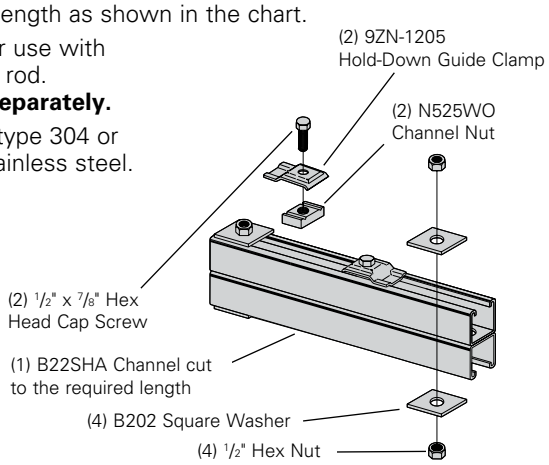
Catalog No.	Tray Width in.	Tray Width mm	Channel Length in.	Channel Length mm	Uniform Load lbs	Uniform Load kN
● 9(*)-5506-22SH(†)	6	(152)	16	(406)	1350	(6.00)
● 9(*)-5509-22SH(†)	9	(229)	18	(457)	1250	(5.56)
● 9(*)-5512-22SH(†)	12	(305)	22	(559)	1125	(5.00)
● 9(*)-5518-22SH(†)	18	(457)	28	(711)	865	(3.85)
● 9(*)-5524-22SH(†)	24	(610)	34	(864)	700	(3.11)
● 9(*)-5530-22SH(†)	30	(762)	40	(1016)	590	(2.62)
● 9(*)-5536-22SH(†)	36	(914)	46	(1168)	510	(2.27)
● 9(*)-5542-22SH(†)	42	(1067)	52	(1321)	450	(2.00)

- (*) Insert SS4 or SS6.
- (†) Insert 3/8 for 3/8" threaded rod hardware.

Safety factor of 3.0 on all loads.

Heavy Duty Trapeze Support Kit

- Kit includes components for a single trapeze support in one package.
- The SH channel provides the convenience of pre-punched slots, which helps eliminates the need for field drilling.
- The illustrated hardware (shown below) is sealed in a plastic bag and boxed with the channel, which is pre-cut to the appropriate length as shown in the chart.
- Designed for use with 1/2" threaded rod. **Order rod separately.**
- Available in type 304 or Type 316 stainless steel.



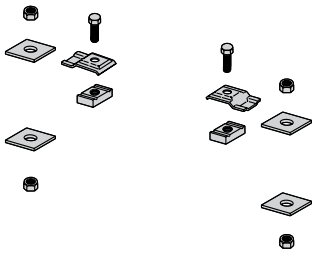
Catalog No.	Tray Width in.	Tray Width mm	Channel Length in.	Channel Length mm	Uniform Load lbs	Uniform Load kN
● 9(*)-5506-22SHA	6	(152)	16	(406)	1350	(6.00)
● 9(*)-5509-22SHA	9	(229)	18	(457)	1350	(6.00)
● 9(*)-5512-22SHA	12	(305)	22	(559)	1350	(6.00)
● 9(*)-5518-22SHA	18	(457)	28	(711)	1350	(6.00)
● 9(*)-5524-22SHA	24	(610)	34	(864)	1350	(6.00)
● 9(*)-5530-22SHA	30	(762)	40	(1016)	1350	(6.00)
● 9(*)-5536-22SHA	36	(914)	46	(1168)	1350	(6.00)
● 9(*)-5542-22SHA	42	(1067)	52	(1321)	1350	(6.00)

- (*) Insert SS4 or SS6.

Safety factor of 3.0 on all loads.

Trapeze Hardware Kit

- Hardware shipped in plastic bag.



Description	Catalog No.	
	● 9SS4-5500-1/2	● 9SS6-5500-1/2
Items included in the kit.	1 pr. 9SS6-1205 2 HHC Screw 1/2 x 7/8 SS4 2 N525 WO SS6 4 B202 SS4 1/2" sq washer 4 HN 1/2 SS4	1 pr. SS6-1205 2 HHC Screw 1/2 x 7/8 SS6 2 N525 WO SS6 4 B202 SS6 1/2" sq washer 4 HN 1/2" SS6

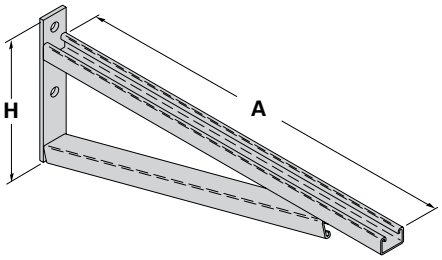
● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Bracket (12"- 42")

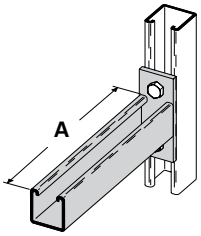
- Bottom brace is B42 channel on B494-24 and smaller and B22 channel on B494-30 and larger.
- For more dimensional data see Strut Systems catalog.
- Safety Load Factor 2.5.
- (*) Insert available finish: SS4 or SS6.
- Safety Load Factor 2.5.

Catalog No.	Uniform Load lbs	(kN)	Tray Width in.	(mm)	'A' in.	(mm)	'H' in.	(mm)
B494-12	2500	(11.12)	6 & 9	(152 & 229)	12	(305)	8 3/4	(222)
B494-18	1700	(7.56)	12	(305)	18	(457)	8 3/4	(222)
B494-24	1300	(5.78)	18	(457)	24	(610)	8 3/4	(222)
B494-30	1600	(7.11)	24	(610)	30	(762)	11 1/4	(286)
B494-36	1100	(4.89)	30	(762)	36	(914)	11 1/4	(286)
B494-42	980	(4.36)	36	(914)	42	(1067)	16	(406)
B494-48	980	(4.36)	42	(1067)	48	(1219)	16	(406)



Cantilever Bracket

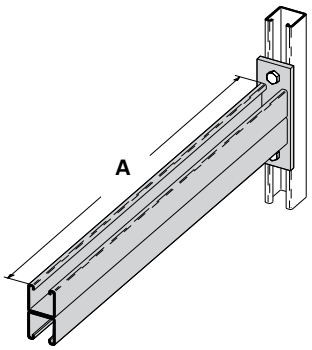
- (*) Insert available finish: SS4 or SS6.
- Safety Load Factor 2.5.



Catalog No.	Uniform Load lbs	kN	Tray Width in.	mm	'A' in.	mm
B409-12(*)	960	(4.27)	6 & 9	(152 & 229)	12	(305)
B409-18(*)	640	(2.84)	12	(305)	18	(457)
B409-24(*)	480	(2.13)	18	(457)	24	(610)

Cantilever Bracket

- (*) Insert available finish: SS4 or SS6.
- Safety Load Factor 2.5.



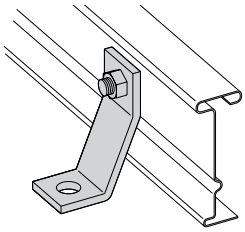
Catalog No.	Uniform Load lbs	kN	Tray Width in.	mm	'A' in.	mm
B297-12(*)	1660	(7.38)	6 & 9	(152 & 229)	12	(305)
B297-18(*)	1100	(4.89)	12	(305)	18	(457)
B297-24(*)	835	(3.71)	18	(457)	24	(610)
B297-30(*)	665	(2.93)	24	(610)	30	(762)
B297-36(*)	550	(2.44)	30	(762)	36	(914)
B297-42(*)	465	(2.06)	36	(914)	42	(1067)

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Heavy Duty Hold Down Bracket

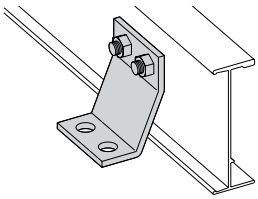
- Design load is 2000 lbs (8.89kN) per pair.
- Two bolt design.
- Sold in pairs.
- 3/8" cable tray attachment hardware provided.
- 3/8" support attachment hardware **not** provided.
- Recommended for support of vertical trays.
- (*) Insert SS4 or SS6.

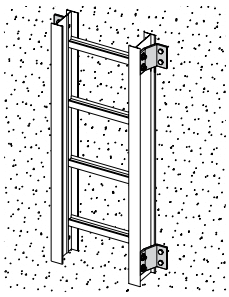


Catalog No.
9(*)-1241

Heavy Duty Hold Down Bracket

- Design load is 4000 lbs (17.79kN) per pair.
- Four bolt design.
- Sold in pairs.
- 3/8" cable tray attachment hardware provided
- 3/8" support attachment hardware **not** provided.
- Recommended for support of vertical trays.
- (*) Insert SS4 or SS6.

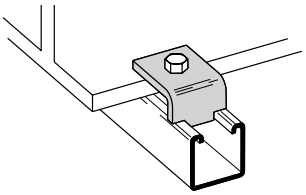




Catalog No.
9(*)-1242

Beam Clamp

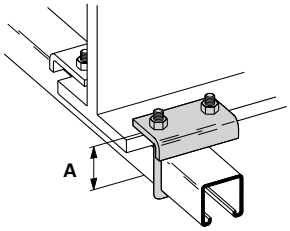
- Sold in pieces.
- Design load is 1200 lbs (5.34kN) per pair.
- Safety Load Factor 5.0.
- Order HHCS and Channel Nuts separately.
- Finishes available: SS4.



Catalog No.
B355SS4

Beam Clamp

- Sold in pieces.
- (*) Insert SS4 or SS6.

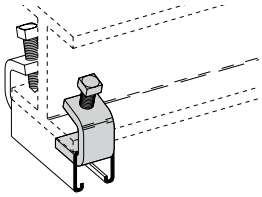


Catalog No.	Design Load lbs (kN)	'A' in. (mm)
B441-22(*)	1200 (5.34)	3 3/8 (86)
B441-22A(*)	1200 (5.34)	5 (127)

*Design load when used in pairs.
Safety Load Factor 5.0.

Beam Clamp

- Sold in pieces.
- Finishes available: SS4.



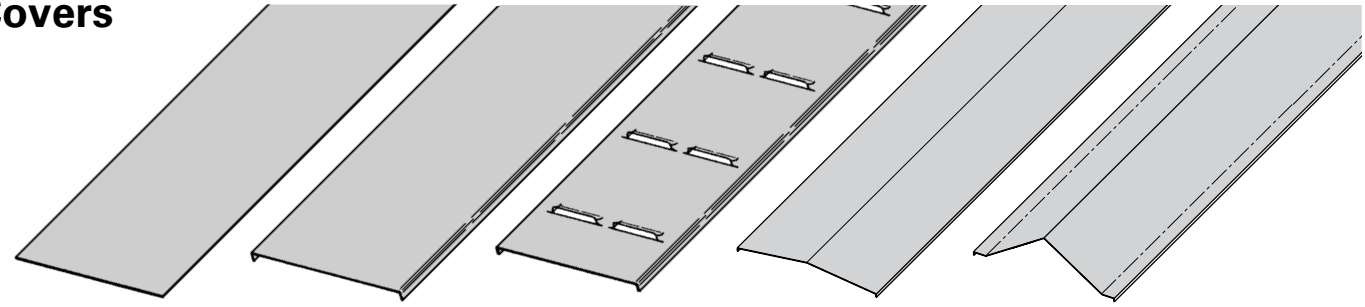
Description	Catalog No.	
	B212-1/4SS4	B212-3/8SS6
Design Load *	600 lbs. (2.67kN)	1000 lbs. (4.45 kN)
Max. Flange Thick	3/4" (19 mm)	1 1/8" (28.6 mm)
Mat'l. Thickness	1/4" (6.3 mm)	3/8" (9.5 mm)

*Design load when used in pairs.
Safety Load Factor 5.0.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Covers



Solid Non-Flanged | Solid Flanged | Ventilated Flanged | Peaked Flanged | 2 to 3 Pitch Peaked Flanged (See page APP-4)

A full range of covers is available for straight sections and fittings.

Solid covers should be used when maximum enclosure of the cable is desired and no accumulation of heat is expected.

Ventilated covers provide an overhead cable shield yet allow heat to escape.

Flanged covers have a ½ in. (13 mm) flange.

We recommends that covers be placed on vertical cable tray runs to a height of 6 ft. (1.83 m) to 8 ft. (2.44 m) above the floor to isolate both cables and personnel. Cover clamps are not included with the cover and must be ordered separately. All **peaked covers** are flanged. Standard peaked covers have ½" peak. Special purpose peaked covers, having a 2 to 3 pitch, provide additional slope and material thickness. The 2 to 3 pitch fitting covers are of multiple piece, welded construction.

Steel Cover Part Numbering

Prefix

Example: **80 2 SS4 - 24 - 144**

Cover Type
- 80 = Solid
- 81 = Ventilated
- 82 = Peaked

Detail
- 2 = Flanged Stainless Steel (all fittings)
- 3 = Flanged Steel (all straight sections)
- 4 = Non-Flanged Stainless Steel (80 & 81 type only)

Material
- SS4 = 304 Stainless Steel
- SS6 = 316 Stainless Steel

Tray Width
- 06 = 6"
- 09 = 9"
- 12 = 12"
- 18 = 18"
- 24 = 24"
- 30 = 30"
- 36 = 36"

Item Description

For Straight Section Cover:
- 144 = 12 ft. (3.66 m)
- 120 = 10 ft. (3.05 m)
- 72 = 6 ft. (1.83 m)
- 60 = 5 ft. (1.52 m)

For fitting covers: Insert suffix of fitting to be covered. See example below.

Examples of Catalog Numbers for Fitting Covers:

Horizontal Bend Cover

Prefix / Suffix

80 2 SS4 - 18 - 90 HB 24

- Radius
- Fitting
- Angle
- Width
- Material
- Detail
- Cover Type

Vertical Bend Cover

Prefix / Suffix

80 2 SS4 - 24 - 90 VO 24 - 4*

- Side Rail* Height
- Radius
- Fitting
- Angle
- Width
- Material
- Detail
- Cover Type

* Required for VO fittings only

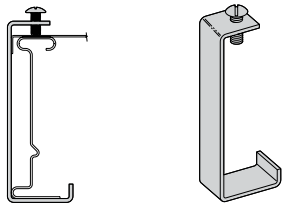
Check with B-Line Technical Support (blinetechnicalsupport@eaton.com) if there are questions/concerns about environmental loads for covers (wind, snow, sleet, rain, etc.).

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Standard Cover Clamp

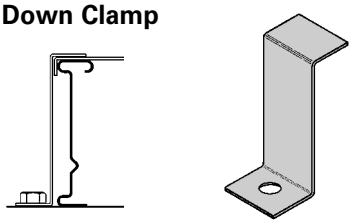
- For indoor service only.
- Screw included.
- Sold per piece.



Tray Type	Catalog No.	Side Rail Height in.	(mm)
Stainless Steel	**9SS6-9014**	4	(101)
	9SS6-9015	5	(127)
	9SS6-9016	6	(152)

Combination Cover and Hold Down Clamp

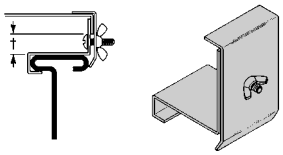
- Sold per piece.
- For indoor service only.
- (*) Insert SS4 or SS6.



Tray Type	Catalog No.	Side Rail Height in.	(mm)
Stainless Steel	**9(*)-9043**	4	(101)
	9(*)-9053	5	(127)
	9(*)-9063	6	(152)

Raised Cover Clamp

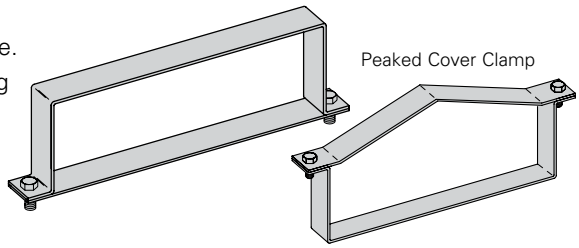
- For indoor service only.
- For use with flanged covers only.
  † Specify gap of 1", 2", 3" or 4".
- (*) Insert SS4 or SS6.



Tray Type	Catalog No.	Tray Type
● **9(*)-9115-†**	Series 3 & 4 Steel Straight Section	
● **9(*)-910†**	All Steel Fittings (Also Series 1 Steel Straight Sections)	

Heavy Duty Cover Clamp

- Recommended for outdoor service.
- Should not be used on overlapping sections.
- (‡) Insert tray width
  † Add P to Catalog No. for peaked cover clamp.
- (*) Insert SS4 or SS6.



Catalog No.	Side Rail Height in.	mm
9(*)-(‡)-9044†	4	(101)
9(*)-(‡)-9054†	5	(127)
9(*)-(‡)-9064†	6	(152)

Quantity of Standard Cover Clamps Required

Notes:

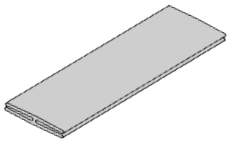
When using the Heavy Duty Cover Clamp, only on-half the number of clamps stated above is required.

Additional clamps may be necessary in extreme wind applications.

Straight Section 60" or 72"	4 pcs.
Straight Section 120" or 144"	6 pcs.
Horizontal/Vertical Bends	4 pcs.
Tees	6 pcs.
Crosses	8 pcs.
Reducers	4 pcs.

Cover Joint Strip

- Used to join covers.
- Plastic.
- Only for use on flat covers
- Color - gray.
- (‡) Insert tray width.



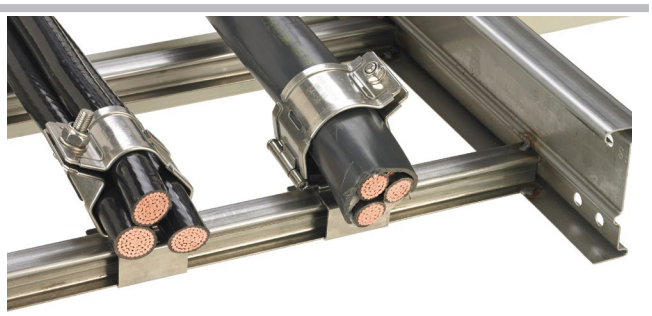
Catalog No.
● **99-9980-(‡)**

Cable Cleats

- For additional information, see pages N-1 to N-5 in this catalog.

Trefoil Cable Cleats

Single Cable Cleats



● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

All dimensions in parentheses are millimeters unless otherwise specified.

Section 1- Acceptable Manufacturers

1.01 Manufacturer: Subject to compliance with these specifications, Eaton's B-Line series cable tray systems shall be as manufactured by Eaton.

Section 2- Cable Tray Sections and Components

2.01 General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates, bolts, nuts and washers for connecting units. Construct units with rounded edges and smooth surfaces; in compliance with applicable standards; and with the following additional construction features. Cable tray shall be installed according to the latest revision of NEMA VE 2.

2.02 Stainless Steel: Straight section and fitting side rails and rungs shall be made of AISI Type [304] [316] stainless steel. Transverse members (rungs) or corrugated bottoms shall be welded to the side rails with Type 316 stainless steel welding wire. Hardware shall be AISI Type 316 stainless steel.

2.03 Ladder Cable Trays shall consist of two longitudinal members (side rails) with transverse members (rungs) welded to the side rails. Rungs shall be spaced [6] [9] [12] inches apart. Rung spacing in radiused fittings shall be industry standard 9" and measured at the center of the tray's width. Each rung must be capable of supporting a 200 lb. concentrated load at the center of the cable tray with a safety factor of 1.5.

2.04 Cable tray loading depth shall be [3] [4] [5] inches per NEMA VE 1.

2.05 Straight sections shall be fabricated as I-beams. Straight sections shall be supplied in standard [12 foot] [24 foot] [10 foot (3 m)] [20 foot (6 m)] lengths.

2.06 Cable tray widths shall be [6] [9] [12] [18] [24] [30] [36] inches or as shown on drawings.

2.07 Splice plates shall be manufactured of high strength steel and be secured with 8 nuts and bolts per plate. The resistance of fixed splice connections between an adjacent section of tray shall not exceed 0.00033 ohm.

2.08 All fittings must have a minimum radius of [12] [24] [36] [48] inches.

Section 3- Loading Capacities and Testing

3.01 Cable tray shall be capable of carrying a uniformly distributed load of _____ lbs./ft. on a _____ ft. support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE 1 5.2. In addition to the uniformly distributed load the cable tray shall support 200 lbs. concentrated load at mid-point of span. Load and safety factors specified are applicable to both the side rails and rung capacities. Cable tray shall be made to manufacturing tolerances as specified by NEMA.

3.02 Upon request, manufacturer shall provide test reports in accordance with the latest revision of NEMA VE 1 or CSA C22.2 No. 126.

WARNING!

How The Service Advisor Works

We know that your time is important! That's why the color-coding system in this catalog is designed to help you select products that fit your service needs. Products are marked to indicate the typical lead time for orders of 50 pieces or less.

Customer: How do I select my fittings so that I get the quickest turnaround?

Service Advisor: Each part of our selection chart is shown in colors. If any section of a part number is a different color, the part will typically ship with the longer lead time represented by the colors.

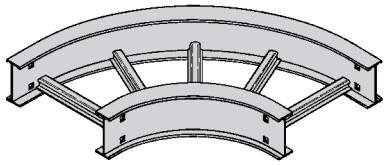
- Green = Fastest shipped items
- Black = Normal lead-time items
- Red = Normally long lead-time items

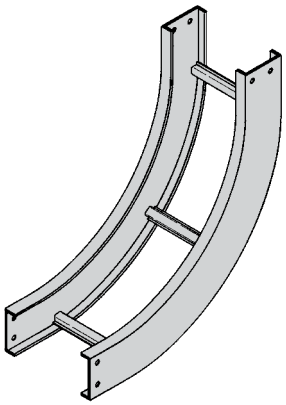
Example:

5	G	-	09	-	90	HB	24
●	●		●		●	●	●

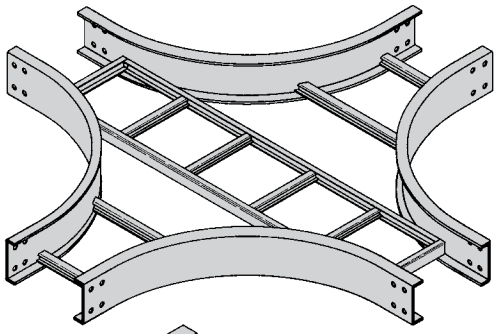
Part will have a long lead time because of the G material.

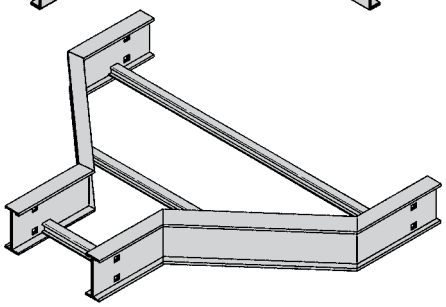
Changing the part number from G to A or P will change the coding to black and reduce lead time.





Fittings engineered with 3" tangents for splicing integrity.





Fittings Part Numbering

Prefix

Example: **4 A - 24 - 90 HB 24** (9" rung spacing is standard)

Side Rail Height

- 4 = 4" (101)
- 5 = 5" (127)
- 6 = 6" (152)
- 7 = 7" (178)

Material

- A = Aluminum
- G =HDGAF
- P = Pre-Galvanized
- SS4 = 304 Stainless Steel
- SS6 = 316 Stainless Steel

Width

- 06 = 6" (152)
- 09 = 9" (228)
- 12 = 12" (305)
- 18 = 18" (457)
- 24 = 24" (609)
- 30 = 30" (762)
- 36 = 36" (914)

Angle*

- 30 = 30°
- 45 = 45°
- 60 = 60°
- 90 = 90°

Type

- *HB = Horizontal Bend
- HT = Horizontal Tee
- HX = Horizontal Cross
- *VI = Vertical Inside Bend
- *VO = Vertical Outside Bend
- VT = Vertical Tee
- VTU = Vertical Tee, Up
- HYR = Horizontal Wye, Right
- HYL = Horizontal Wye, Left
- CSF = Cable Support Fitting
- LR = Left Reducer Fitting
- RR = Right Reducer Fitting
- SR = Straight Reducer Fitting

Radius

- 12 = 12" (305)
- 24 = 24" (609)
- 36 = 36" (914)
- 48 = 48" (1219)

See page APP-2 for 6" fittings with 9A-6006 and 9A-6007 splice plates.

* Angle only required for HB, VI and VO fittings.

For flat non-ventilated: Available 6" and Wider

Prefix

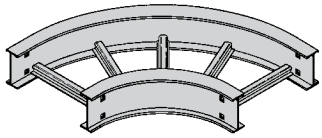
5PSB - 24 - 90HB24

Non-Ventilated

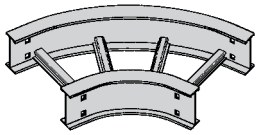
Note: Horizontal crosses and tees 30" or wider, with a radius of 36" or larger, will be of two-piece construction.

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

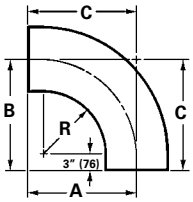
All dimensions in parentheses are millimeters unless otherwise specified.

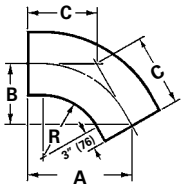


90˚ Horizontal Bend



60˚ Horizontal Bend





Horizontal Bend 90° 60° (HB)

1 pair splice plates with hardware included.

Bottoms manufactured:
Ladder = 9" Rung Spacing
VT & 04 = 4" Rung Spacing
ST & SB = Flat sheet over 12" Rung Spacing

Bend Radius R	Tray Width	90˚ Horizontal Bend Dimensions							60˚ Horizontal Bend Dimensions							
		Catalog No.	A		B		C		Catalog No.	A		B		C	
in. (mm)	in. (mm)		in.	(mm)	in.	(mm)	in.	(mm)		in.	(mm)	in.	(mm)	in.	(mm)
12 (305)	6 (152)	**(Pre)-06-90HB12**	18	(457)	18	(457)	18	(457)	**(Pre)-06-60HB12**	17 1/2	(445)	10 1/8	(257)	11 11/16	(297)
	9 (228)	**(Pre)-09-90HB12**	19 1/2	(495)	19 1/2	(495)	19 1/2	(495)	**(Pre)-09-60HB12**	18 13/16	(478)	10 7/8	(276)	12 1/2	(318)
	12 (305)	**(Pre)-12-90HB12**	21	(533)	21	(533)	21	(533)	**(Pre)-12-60HB12**	20 1/16	(510)	11 5/8	(295)	13 3/8	(340)
	18 (457)	**(Pre)-18-90HB12**	24	(610)	24	(610)	24	(610)	**(Pre)-18-60HB12**	22 11/16	(576)	13 1/8	(333)	15 1/8	(384)
	24 (609)	**(Pre)-24-90HB12**	27	(686)	27	(686)	27	(686)	**(Pre)-24-60HB12**	25 5/16	(643)	14 5/8	(372)	16 7/8	(429)
	30 (762)	**(Pre)-30-90HB12**	30	(762)	30	(762)	30	(762)	**(Pre)-30-60HB12**	27 7/8	(708)	16 1/8	(410)	18 9/16	(472)
	36 (914)	**(Pre)-36-90HB12**	33	(838)	33	(838)	33	(838)	**(Pre)-36-60HB12**	30 1/2	(775)	17 5/8	(448)	20 5/16	(516)
	42 (1067)	**(Pre)-42-90HB12**	36	(914)	36	(914)	36	(914)	**(Pre)-42-60HB12**	33 1/16	840	19 1/8	(486)	22 1/16	(560)
24 (610)	6 (152)	**(Pre)-06-90HB24**	30	(762)	30	(762)	30	(762)	**(Pre)-06-60HB24**	27 7/8	(708)	16 1/8	(410)	18 9/16	(472)
	9 (228)	**(Pre)-09-90HB24**	31 1/2	(800)	31 1/2	(800)	31 1/2	(800)	**(Pre)-09-60HB24**	29 3/16	(741)	16 7/8	(429)	19 7/16	(494)
	12 (305)	**(Pre)-12-90HB24**	33	(838)	33	(838)	33	(838)	**(Pre)-12-60HB24**	30 1/2	(775)	17 5/8	(448)	20 5/16	(516)
	18 (457)	**(Pre)-18-90HB24**	36	(914)	36	(914)	36	(914)	**(Pre)-18-60HB24**	33 1/16	(708)	19 1/8	(486)	22 1/16	(560)
	24 (609)	**(Pre)-24-90HB24**	39	(991)	39	(991)	39	(991)	**(Pre)-24-60HB24**	35 11/16	(907)	20 5/8	(524)	23 13/16	(605)
	30 (762)	**(Pre)-30-90HB24**	42	(1067)	42	(1067)	42	(1067)	**(Pre)-30-60HB24**	38 1/4	(972)	22 1/8	(564)	25 1/2	(648)
	36 (914)	**(Pre)-36-90HB24**	45	(1143)	45	(1143)	45	(1143)	**(Pre)-36-60HB24**	40 7/8	(1038)	23 5/8	(600)	27 1/4	(692)
	42 (1067)	**(Pre)-42-90HB24**	48	(1219)	48	(1219)	48	(1219)	**(Pre)-42-60HB24**	43 1/2	(1105)	25 1/8	(638)	29	(737)
36 (914)	6 (152)	**(Pre)-06-90HB36**	42	(1067)	42	(1067)	(1067)	(1067)	**(Pre)-06-60HB36**	38 1/4	(971)	22 1/8	(562)	25 1/2	(648)
	9 (228)	**(Pre)-09-90HB36**	43 1/2	(1105)	43 1/2	(1105)	43 1/2	(1105)	**(Pre)-09-60HB36**	39 9/16	(1005)	22 7/8	(581)	26 3/8	(670)
	12 (305)	**(Pre)-12-90HB36**	45	(1143)	45	(1143)	45	(1143)	**(Pre)-12-60HB36**	40 7/8	(1038)	23 5/8	(600)	27 1/4	(692)
	18 (457)	**(Pre)-18-90HB36**	48	(1219)	48	(1219)	48	(1219)	**(Pre)-18-60HB36**	43 1/2	(1105)	25 1/8	(638)	29	(737)
	24 (609)	**(Pre)-24-90HB36**	51	(1295)	51	(1295)	51	(1295)	**(Pre)-24-60HB36**	46 1/16	(1170)	26 5/8	(676)	30 11/16	(780)
	30 (762)	**(Pre)-30-90HB36**	54	(1372)	54	(1372)	54	(1372)	**(Pre)-30-60HB36**	48 1/16	(1237)	28 1/8	(714)	32 7/16	(824)
	36 (914)	**(Pre)-36-90HB36**	57	(1448)	57	(1448)	57	(1448)	**(Pre)-36-60HB36**	51 1/4	(1302)	29 5/8	(753)	34 3/16	(869)
	42 (1067)	**(Pre)-42-90HB36**	60	(1524)	60	(1524)	60	(1524)	**(Pre)-42-60HB36**	53 7/8	(1368)	31 1/8	(791)	35 15/16	(913)
48 (1220)	6 (152)	**(Pre)-06-90HB48**	54	(1372)	54	(1372)	54	(1372)	**(Pre)-06-60HB48**	48 1/16	(1221)	28 1/8	(715)	32 11/16	(830)
	9 (228)	**(Pre)-09-90HB48**	55 1/2	(1410)	55 1/2	(1410)	55 1/2	(1410)	**(Pre)-09-60HB48**	49 15/16	(1268)	28 7/8	(734)	33 5/16	(846)
	12 (305)	**(Pre)-12-90HB48**	57	(1448)	57	(1448)	57	(1448)	**(Pre)-12-60HB48**	51 1/4	(1302)	29 5/8	(753)	34 3/16	(869)
	18 (457)	**(Pre)-18-90HB48**	60	(1524)	60	(1524)	60	(1524)	**(Pre)-18-60HB48**	53 7/8	(1368)	31 1/8	(737)	35 15/16	(913)
	24 (609)	**(Pre)-24-90HB48**	63	(1600)	63	(1600)	63	(1600)	**(Pre)-24-60HB48**	56 7/16	(1434)	32 5/8	(829)	37 5/8	(956)
	30 (762)	**(Pre)-30-90HB48**	66	(1676)	66	(1676)	66	(1676)	**(Pre)-30-60HB48**	59 1/16	(1500)	34 1/8	(867)	39 3/8	(1000)
	36 (914)	**(Pre)-36-90HB48**	69	(1753)	69	(1753)	69	(1753)	**(Pre)-36-60HB48**	61 11/16	(1567)	35 5/8	(905)	41 1/8	(1045)
	42 (1067)	**(Pre)-42-90HB48**	72	(1829)	72	(1829)	72	(1829)	**(Pre)-42-60HB48**	64 1/4	(1632)	37 1/8	(943)	42 13/16	(1087)

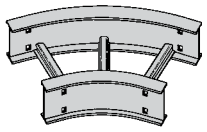
(Pre) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

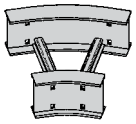
Horizontal Bend 45° 30° (HB)

1 pair splice plates with hardware included.

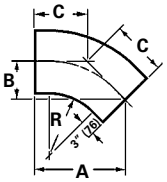
Bottoms manufactured:
Ladder = 9" Rung Spacing
VT & 04 = 4" Rung Spacing
ST & SB = Flat sheet over 12" Rung Spacing

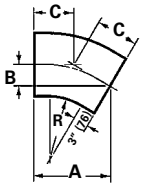


45˚ Horizontal Bend



30˚ Horizontal Bend





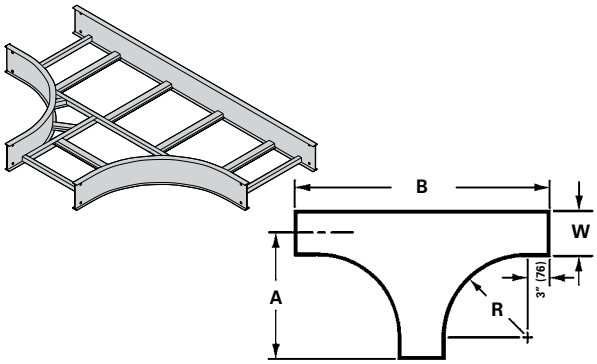
Bend Radius R in.	(mm)	Tray Width in.	(mm)	45˚ Horizontal Bend Dimensions Catalog No.	A in.	(mm)	B in.	(mm)	C in.	(mm)	30˚ Horizontal Bend Dimensions Catalog No.	A in.	(mm)	B in.	(mm)	C in.	(mm)
12	(305)	6	(152)	**(Pre)-06-45HB12**	15 3/4	(400)	6 1/2	(165)	9 3/16	(233)	**(Pre)-06-30HB12**	13 1/8	(333)	3 1/2	(89)	7	(179)
		9	(228)	**(Pre)-09-45HB12**	16 13/16	(427)	6 15/16	(176)	9 13/16	(249)	**(Pre)-09-30HB12**	13 7/8	(352)	3 11/16	(94)	7 7/16	(189)
		12	(305)	**(Pre)-12-45HB12**	17 7/8	(454)	7 3/8	(187)	10 7/16	(265)	**(Pre)-12-30HB12**	14 5/8	(372)	3 15/16	(100)	7 13/16	(198)
		18	(457)	**(Pre)-18-45HB12**	20	(508)	8 1/4	(210)	11 11/16	(297)	**(Pre)-18-30HB12**	16 1/8	(410)	4 5/16	(135)	8 5/8	(219)
		24	(609)	**(Pre)-24-45HB12**	22 1/16	(560)	9 1/8	(232)	12 15/16	(329)	**(Pre)-24-30HB12**	17 5/8	(448)	4 11/16	(119)	9 7/16	(240)
		30	(762)	**(Pre)-30-45HB12**	24 3/16	(614)	10	(254)	14 3/16	(360)	**(Pre)-30-30HB12**	19 1/8	(486)	5 1/8	(130)	10 1/4	(260)
		36	(914)	**(Pre)-36-45HB12**	26 5/16	(668)	10 15/16	(278)	15 7/16	(392)	**(Pre)-36-30HB12**	20 5/8	(524)	5 1/2	(140)	11 1/16	(281)
		42	(1067)	**(Pre)-42-45HB12**	28 7/16	(722)	11 13/16	300	16 11/16	(424)	**(Pre)-42-30HB12**	22 1/8	(562)	5 15/16	(151)	11 13/16	(300)
24	(610)	6	(152)	**(Pre)-06-45HB24**	24 3/16	(614)	10	(254)	14 3/16	(360)	**(Pre)-06-30HB24**	19 1/8	(486)	5 1/8	(130)	10 1/4	(260)
		9	(228)	**(Pre)-09-45HB24**	25 1/4	(641)	10 1/2	(267)	14 13/16	(376)	**(Pre)-09-30HB24**	19 7/8	(505)	5 5/16	(135)	10 5/8	(270)
		12	(305)	**(Pre)-12-45HB24**	26 5/16	(668)	10 15/16	(278)	15 7/16	(392)	**(Pre)-12-30HB24**	20 5/8	(524)	5 1/2	(140)	11 1/16	(281)
		18	(457)	**(Pre)-18-45HB24**	28 7/16	(722)	11 13/16	(300)	16 11/16	(424)	**(Pre)-18-30HB24**	22 1/8	(562)	5 15/16	(151)	11 13/16	(300)
		24	(609)	**(Pre)-24-45HB24**	30 9/16	(766)	12 11/16	(322)	17 15/16	(456)	**(Pre)-24-30HB24**	23 5/8	(600)	6 5/16	(160)	12 5/8	(321)
		30	(762)	**(Pre)-30-45HB24**	32 11/16	(830)	13 9/16	(344)	19 1/8	(486)	**(Pre)-30-30HB24**	25 1/8	(638)	6 3/4	(172)	13 7/16	(341)
		36	(914)	**(Pre)-36-45HB24**	34 13/16	(884)	14 7/16	(367)	20 3/8	(518)	**(Pre)-36-30HB24**	26 5/8	(676)	7 1/8	(181)	14 1/4	(362)
		42	(1067)	**(Pre)-42-45HB24**	36 15/16	(938)	15 5/16	(389)	21 5/8	(549)	**(Pre)-42-30HB24**	28 1/8	(715)	7 1/2	(191)	15 1/16	(383)
36	(914)	6	(152)	**(Pre)-06-45HB36**	32 11/16	(830)	13 9/16	(344)	19 1/8	(486)	**(Pre)-06-30HB36**	25 1/8	(638)	6 3/4	(171)	13 7/16	(341)
		9	(228)	**(Pre)-09-45HB36**	33 3/4	(857)	14	(356)	19 3/4	(502)	**(Pre)-09-30HB36**	25 7/8	(657)	6 15/16	(176)	13 7/8	(352)
		12	(305)	**(Pre)-12-45HB36**	34 13/16	(884)	14 7/16	(367)	20 3/8	(518)	**(Pre)-12-30HB36**	26 5/8	(676)	7 1/8	(181)	14 1/4	(362)
		18	(457)	**(Pre)-18-45HB36**	36 15/16	(938)	15 5/16	(389)	21 5/8	(549)	**(Pre)-18-30HB36**	28 1/8	(715)	7 1/2	(191)	15 1/16	(383)
		24	(609)	**(Pre)-24-45HB36**	39 1/16	(992)	16 3/16	(411)	22 7/8	(581)	**(Pre)-24-30HB36**	29 5/8	(753)	7 15/16	(202)	15 7/8	(403)
		30	(762)	**(Pre)-30-45HB36**	41 3/16	(1046)	17 1/16	(433)	24 1/8	(613)	**(Pre)-30-30HB36**	31 1/8	(790)	8 5/16	(211)	16 11/16	(424)
		36	(914)	**(Pre)-36-45HB36**	43 5/16	(1100)	17 15/16	(456)	25 3/8	(645)	**(Pre)-36-30HB36**	32 5/8	(829)	8 3/4	(222)	17 1/2	(445)
		42	(1067)	**(Pre)-42-45HB36**	45 7/16	(1154)	18 13/16	(478)	26 5/8	(676)	**(Pre)-42-30HB36**	34 1/8	(867)	9 1/8	(232)	18 1/4	(464)
48	(1220)	6	(152)	**(Pre)-06-45HB48**	41 3/16	(1046)	17 1/16	(433)	24 1/8	(613)	**(Pre)-06-30HB48**	31 1/8	(791)	8 5/16	(211)	16 11/16	(424)
		9	(228)	**(Pre)-09-45HB48**	42 1/4	(1073)	17 1/2	(445)	24 3/4	(629)	**(Pre)-09-30HB48**	31 7/8	(810)	8 9/16	(218)	17 1/16	(433)
		12	(305)	**(Pre)-12-45HB48**	43 5/16	(1100)	17 15/16	(456)	25 3/8	(645)	**(Pre)-12-30HB48**	32 5/8	(829)	8 3/4	(222)	17 1/2	(445)
		18	(457)	**(Pre)-18-45HB48**	45 7/16	(1154)	18 13/16	(487)	26 5/8	(676)	**(Pre)-18-30HB48**	34 1/8	(867)	9 1/8	(232)	18 1/4	(464)
		24	(609)	**(Pre)-24-45HB48**	47 9/16	(1208)	19 11/16	(500)	27 7/8	(708)	**(Pre)-24-30HB48**	35 5/8	(905)	9 9/16	(243)	19 1/16	(484)
		30	(762)	**(Pre)-30-45HB48**	49 11/16	(1262)	20 9/16	(522)	29 1/8	(740)	**(Pre)-30-30HB48**	37 1/8	(943)	9 15/16	(252)	19 7/8	(505)
		36	(914)	**(Pre)-36-45HB48**	51 13/16	(1316)	21 7/16	(545)	30 5/16	(770)	**(Pre)-36-30HB48**	38 5/8	(981)	10 5/16	(262)	20 11/16	(525)
		42	(1067)	**(Pre)-42-45HB48**	54 15/16	(1395)	22 5/16	(567)	31 9/16	(802)	**(Pre)-42-30HB48**	40 1/8	(1019)	10 3/4	(273)	21 1/2	(546)

(Pre) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

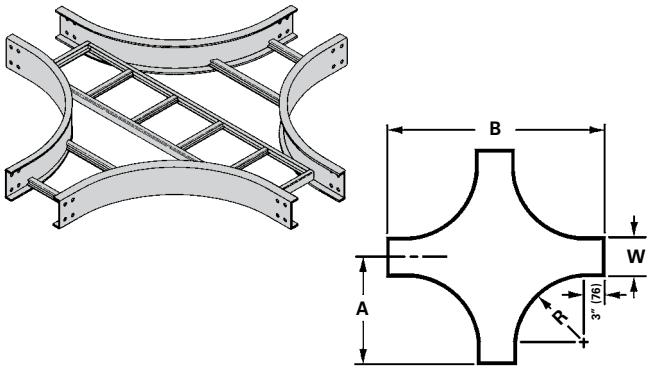
Horizontal Tee (HT)

2 pair splice plates with hardware included.



Horizontal Cross (HX)

3 pair splice plates with hardware included.



Bend Radius R in. (mm)	Tray Width in. (mm)	Horizontal Tee Catalog Number	Horizontal Tee Dimensions A in. (mm)	Horizontal Tee Dimensions B in. (mm)	Horizontal Cross Catalog Number	Horizontal Cross Dimensions A in. (mm)	Horizontal Cross Dimensions B in. (mm)
12 (305)	6 (152)	**(Prefix)-06-HT12**	18 (457)	36 (914)	**(Prefix)-06-HX12**	18 (457)	36 (914)
	9 (229)	**(Prefix)-09-HT12**	19½ (496)	39 (991)	**(Prefix)-09-HX12**	19½ (496)	39 (991)
	12 (305)	**(Prefix)-12-HT12**	21 (533)	42 (1067)	**(Prefix)-12-HX12**	21 (533)	42 (1067)
	18 (457)	**(Prefix)-18-HT12**	24 (609)	48 (1219)	**(Prefix)-18-HX12**	24 (609)	48 (1219)
	24 (609)	**(Prefix)-24-HT12**	27 (686)	54 (1372)	**(Prefix)-24-HX12**	27 (686)	54 (1372)
	30 (762)	**(Prefix)-30-HT12**	30 (762)	60 (1524)	**(Prefix)-30-HX12**	30 (762)	60 (1524)
	36 (914)	**(Prefix)-36-HT12**	33 (838)	66 (1676)	**(Prefix)-36-HX12**	33 (838)	66 (1676)
	42 (1067)	**(Prefix)-42-HT12**	36 914	72 (1829)	**(Prefix)-42-HX12**	36 914	72 (1829)
24 (610)	6 (152)	**(Prefix)-06-HT24**	30 (762)	60 (1524)	**(Prefix)-06-HX24**	30 (762)	60 (1524)
	9 (229)	**(Prefix)-09-HT24**	31½ (800)	63 (1600)	**(Prefix)-09-HX24**	31½ (800)	63 (1600)
	12 (305)	**(Prefix)-12-HT24**	33 (838)	66 (1676)	**(Prefix)-12-HX24**	33 (838)	66 (1676)
	18 (457)	**(Prefix)-18-HT24**	36 (914)	72 (1829)	**(Prefix)-18-HX24**	36 (914)	72 (1829)
	24 (609)	**(Prefix)-24-HT24**	39 (991)	78 (1982)	**(Prefix)-24-HX24**	39 (991)	78 (1982)
	30 (762)	**(Prefix)-30-HT24**	42 (1067)	84 (2134)	**(Prefix)-30-HX24**	42 (1067)	84 (2134)
	36 (914)	**(Prefix)-36-HT24**	45 (1143)	90 (2286)	**(Prefix)-36-HX24**	45 (1143)	90 (2286)
	42 (1067)	**(Prefix)-42-HT24**	48 (1219)	96 (2438)	**(Prefix)-42-HX24**	48 (1219)	96 (2438)
36 (914)	6 (152)	**(Prefix)-06-HT36**	42 (1067)	84 (2134)	**(Prefix)-06-HX36**	42 (1067)	84 (2134)
	9 (229)	**(Prefix)-09-HT36**	43½ (1105)	87 (2210)	**(Prefix)-09-HX36**	43½ (1105)	87 (2210)
	12 (305)	**(Prefix)-12-HT36**	45 (1143)	90 (2286)	**(Prefix)-12-HX36**	45 (1143)	90 (2286)
	18 (457)	**(Prefix)-18-HT36**	48 (1219)	96 (2438)	**(Prefix)-18-HX36**	48 (1219)	96 (2438)
	24 (609)	**(Prefix)-24-HT36**	51 (1295)	102 (2590)	**(Prefix)-24-HX36**	51 (1295)	102 (2590)
	30 (762)	**(Prefix)-30-HT36**	54 (1372)	108 (2744)	**(Prefix)-30-HX36**	54 (1372)	108 (2744)
	36 (914)	**(Prefix)-36-HT36**	57 (1448)	114 (2896)	**(Prefix)-36-HX36**	57 (1448)	114 (2896)
	42 (1067)	**(Prefix)-42-HT36**	60 (1524)	120 (3048)	**(Prefix)-42-HX36**	60 (1524)	120 (3048)
48 (1220)	6 (152)	**(Prefix)-06-HT48**	54 (1372)	108 (2744)	**(Prefix)-06-HX48**	54 (1372)	108 (2744)
	9 (229)	**(Prefix)-09-HT48**	55½ (1410)	111 (2820)	**(Prefix)-09-HX48**	55½ (1410)	111 (2820)
	12 (305)	**(Prefix)-12-HT48**	57 (1448)	114 (2896)	**(Prefix)-12-HX48**	57 (1448)	114 (2896)
	18 (457)	**(Prefix)-18-HT48**	60 (1524)	120 (3048)	**(Prefix)-18-HX48**	60 (1524)	120 (3048)
	24 (609)	**(Prefix)-24-HT48**	63 (1600)	126 (3200)	**(Prefix)-24-HX48**	63 (1600)	126 (3200)
	30 (762)	**(Prefix)-30-HT48**	66 (1676)	132 (3353)	**(Prefix)-30-HX48**	66 (1676)	132 (3353)
	36 (914)	**(Prefix)-36-HT48**	69 (1753)	138 (3535)	**(Prefix)-36-HX48**	69 (1753)	138 (3535)
	42 (1067)	**(Prefix)-42-HT48**	72 (1829)	144 (3658)	**(Prefix)-42-HX48**	72 (1829)	144 (3658)

(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

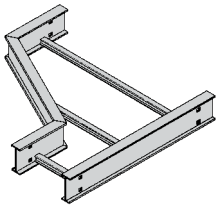
Reducers (LR, SR, RR)

1 pair splice plates with hardware included.

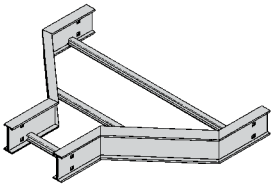
Reducer Part Numbering

Prefix - 24 - RR - 18

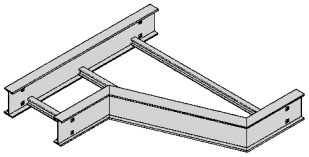
- 18 — $Width_2$
- RR — Fitting
- 24 — $Width_1$
- Prefix — Prefix



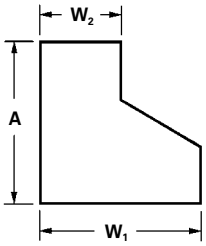
Left Reducer - LR

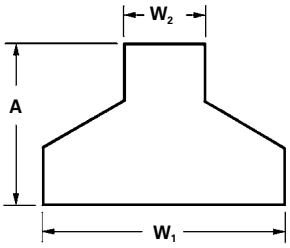


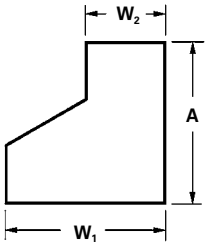
Straight Reducer SR



Right Reducer -RR



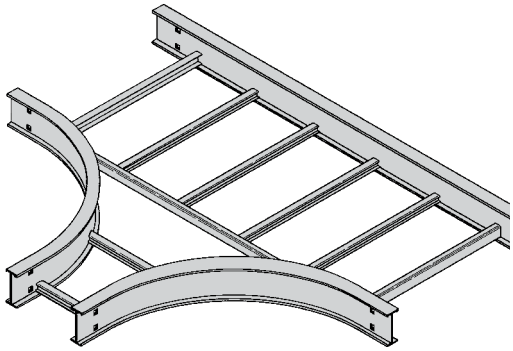




Tray Width				Left Hand Reducer			Straight Reducer			Right Hand Reducer		
W1		W2		Catalog No.	A		Catalog No.	A		Catalog No.	A	
in.	(mm)	in.	(mm)		in.	(mm)		in.	(mm)		in.	(mm)
9	(228)	6	(152)	**(Prefix)-09-LR06**	9 3/4	(248)	**(Prefix)-09-SR06**	8 15/16	(227)	**(Prefix)-09-RR06**	9 3/4	(248)
12	305	6	(152)	**(Prefix)-12-LR06**	11 1/2	(292)	**(Prefix)-12-SR06**	9 3/4	(248)	**(Prefix)-12-RR06**	11 1/2	(292)
		9	(228)	**(Prefix)-12-LR09**	9 3/4	(248)	**(Prefix)-12-SR09**	8 15/16	(227)	**(Prefix)-12-RR09**	9 3/4	(248)
18	(457)	6	(152)	**(Prefix)-18-LR06**	14 15/16	(379)	**(Prefix)-18-SR06**	11 1/2	(292)	**(Prefix)-18-RR06**	14 15/16	(379)
		9	(228)	**(Prefix)-18-LR09**	13 3/16	(340)	**(Prefix)-18-SR09**	10 5/8	(270)	**(Prefix)-18-RR09**	13 3/16	(340)
		12	(305)	**(Prefix)-18-LR12**	11 1/2	(292)	**(Prefix)-18-SR12**	9 3/4	(248)	**(Prefix)-18-RR12**	11 1/2	(292)
24	609	6	(152)	**(Prefix)-24-LR06**	18 3/8	(467)	**(Prefix)-24-SR06**	13 1/4	(336)	**(Prefix)-24-RR06**	18 3/8	(467)
		9	(228)	**(Prefix)-24-LR09**	16 11/16	(424)	**(Prefix)-24-SR09**	12 3/8	(314)	**(Prefix)-24-RR09**	16 11/16	(424)
		12	(305)	**(Prefix)-24-LR12**	14 15/16	(379)	**(Prefix)-24-SR12**	11 1/2	(292)	**(Prefix)-24-RR12**	14 15/16	(379)
		18	(457)	**(Prefix)-24-LR18**	11 1/2	(292)	**(Prefix)-24-SR18**	9 3/4	(248)	**(Prefix)-24-RR18**	11 1/2	(292)
30	(762)	6	(152)	**(Prefix)-30-LR06**	21 7/8	(555)	**(Prefix)-30-SR06**	14 15/16	(379)	**(Prefix)-30-RR06**	21 7/8	(555)
		9	(228)	**(Prefix)-30-LR09**	20 1/8	(511)	**(Prefix)-30-SR09**	14 1/8	(359)	**(Prefix)-30-RR09**	20 1/8	(511)
		12	(305)	**(Prefix)-30-LR12**	18 3/8	(467)	**(Prefix)-30-SR12**	13 1/4	(336)	**(Prefix)-30-RR12**	18 3/8	(467)
		18	(457)	**(Prefix)-30-LR18**	14 15/16	(379)	**(Prefix)-30-SR18**	11 1/2	(292)	**(Prefix)-30-RR18**	14 15/16	(379)
		24	(609)	**(Prefix)-30-LR24**	11 1/2	(292)	**(Prefix)-30-SR24**	9 3/4	(248)	**(Prefix)-30-RR24**	11 1/2	(292)
36	(914)	6	(152)	**(Prefix)-36-LR06**	25 5/16	(643)	**(Prefix)-36-SR06**	16 11/16	(424)	**(Prefix)-36-RR06**	25 5/16	(643)
		9	(228)	**(Prefix)-36-LR09**	23 9/16	(598)	**(Prefix)-36-SR09**	15 13/16	(402)	**(Prefix)-36-RR09**	23 9/16	(598)
		12	(305)	**(Prefix)-36-LR12**	21 7/8	(555)	**(Prefix)-36-SR12**	14 15/16	(379)	**(Prefix)-36-RR12**	21 7/8	(555)
		18	(457)	**(Prefix)-36-LR18**	18 3/8	(467)	**(Prefix)-36-SR18**	13 1/4	(336)	**(Prefix)-36-RR18**	18 3/8	(467)
		24	(609)	**(Prefix)-36-LR24**	14 15/16	(379)	**(Prefix)-36-SR24**	11 1/2	(292)	**(Prefix)-36-RR24**	14 15/16	(379)
		30	(762)	**(Prefix)-36-LR30**	11 1/2	(292)	**(Prefix)-36-SR30**	9 3/4	(248)	**(Prefix)-36-RR30**	11 1/2	(292)
42	(1067)	6	(152)	**(Prefix)-42-LR06**	28 3/4	(730)	**(Prefix)-42-SR06**	18 3/8	(467)	**(Prefix)-42-RR06**	28 3/4	(730)
		9	(228)	**(Prefix)-42-LR09**	27 1/16	(687)	**(Prefix)-42-SR09**	17 9/16	(446)	**(Prefix)-42-RR09**	27 1/16	(687)
		12	(305)	**(Prefix)-42-LR12**	25 5/16	(643)	**(Prefix)-42-SR12**	16 11/16	(424)	**(Prefix)-42-RR12**	25 5/16	(643)
		18	(457)	**(Prefix)-42-LR18**	21 7/8	(555)	**(Prefix)-42-SR18**	14 15/16	(379)	**(Prefix)-42-RR18**	21 7/8	(555)
		24	(609)	**(Prefix)-42-LR24**	18 3/8	(467)	**(Prefix)-42-SR24**	13 1/4	(336)	**(Prefix)-42-RR24**	18 3/8	(467)
		30	(762)	**(Prefix)-42-LR30**	14 15/16	(379)	**(Prefix)-42-SR30**	11 1/2	(292)	**(Prefix)-42-RR30**	14 15/16	(379)
		36	(914)	**(Prefix)-42-LR36**	11 1/2	(292)	**(Prefix)-42-SR36**	9 3/4	(248)	**(Prefix)-42-RR36**	11 1/2	(292)

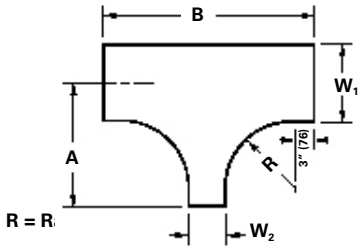
(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.



Horizontal Reducing Tee (HT)

2 pair splice plates with hardware included.



Prefix - 36 - 18 HT 24

- Radius
- Fitting
- Width W_2
- Width W_1
- To complete catalog number, insert fitting prefix.

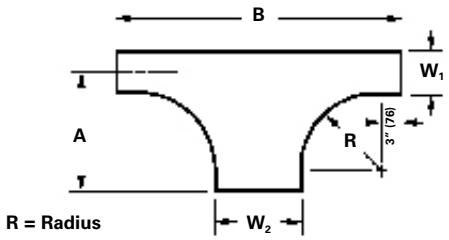
Tray Width W1 in.	mm	Tray Width W2 in.	mm	* Insert Radius (12", 24", 36", or 48") Catalog No.	12" Radius A in.	mm	12" Radius B in.	mm	24" Radius A in.	mm	24" Radius B in.	mm	36" Radius A in.	mm	36" Radius B in.	mm	48" Radius A in.	mm	48" Radius B in.	mm
9	(228)	6	(152)	**(Prefix)-09-06-HT***	19 1/2	(496)	36	(914)	31 1/2	(800)	60	(1524)	43	(1092)	84	(2134)	55 1/2	(1410)	108	(2743)
12	(305)	6	(152)	**(Prefix)-12-06-HT***	21	(533)	36	(914)	33	(838)	60	(1524)	45	(1143)	84	(2134)	57	(1448)	108	(2743)
		9	(228)	**(Prefix)-12-09-HT***	21	(533)	39	(991)	33	(838)	63	(1600)	45	(1143)	87	(2210)	57	(1448)	111	(2819)
18	(457)	6	(152)	**(Prefix)-18-06-HT***	24	(609)	36	(914)	36	(914)	60	(1524)	48	((1143))	84	(2134)	60	(1524)	108	(2743)
		9	(228)	**(Prefix)-18-09-HT***	24	(609)	39	(991)	36	(914)	63	(1600)	48	(1219)	87	(2210)	60	(1524)	111	(2819)
		12	(305)	**(Prefix)-18-12-HT***	24	(609)	42	(1067)	36	(914)	66	(1676)	48	(1219)	90	(2286)	60	(1524)	114	(2895)
24	(609)	6	(152)	**(Prefix)-24-06-HT***	27	(686)	36	(914)	39	(991)	60	(1524)	51	(1295)	84	(2134)	63	(1600)	108	(2743)
		9	(228)	**(Prefix)-24-09-HT***	27	(686)	39	(991)	39	(991)	63	(1600)	51	(1295)	87	(2210)	63	(1600)	111	(2819)
		12	(305)	**(Prefix)-24-12-HT***	27	(686)	42	(1067)	39	(991)	66	(1676)	51	(1295)	90	(2286)	63	(1600)	114	(2895)
		18	(457)	**(Prefix)-24-18-HT***	27	(686)	48	(1219)	39	(991)	72	(1829)	51	(1295)	96	(2438)	63	(1600)	120	(3048)
30	(762)	6	(152)	**(Prefix)-30-06-HT***	30	(762)	36	(914)	42	(1067)	60	(1524)	54	(1372)	84	(2134)	66	(1676)	108	(2743)
		9	(228)	**(Prefix)-30-09-HT***	30	(762)	39	(991)	42	(1067)	63	(1600)	54	(1372)	87	(2210)	66	(1676)	111	(2819)
		12	(305)	**(Prefix)-30-12-HT***	30	(762)	42	(1067)	42	(1067)	66	(1676)	54	(1372)	90	(2286)	66	(1676)	114	(2895)
		18	(457)	**(Prefix)-30-18-HT***	30	(762)	48	(1219)	42	(1067)	72	(1829)	54	(1372)	96	(2438)	66	(1676)	120	(3048)
		24	(609)	**(Prefix)-30-24-HT***	30	(762)	54	(1372)	42	(1067)	78	(1981)	54	(1372)	102	(2591)	66	(1676)	126	(3200)
36	(914)	6	(152)	**(Prefix)-30-06-HT***	33	(838)	36	(914)	45	(1143)	60	(1524)	57	(1448)	84	(2134)	69	(1753)	108	(2743)
		9	(228)	**(Prefix)-36-09-HT***	33	(838)	39	(991)	45	(1143)	63	(1600)	57	(1448)	87	(2210)	69	(1753)	111	(2819)
		12	(305)	**(Prefix)-36-12-HT***	33	(838)	42	(1067)	45	(1143)	66	(1676)	57	(1448)	90	(2286)	69	(1753)	114	(2895)
		18	(457)	**(Prefix)-36-18-HT***	33	(838)	48	(1219)	45	(1143)	72	(1829)	57	(1448)	96	(2438)	69	(1753)	120	(3048)
		24	(609)	**(Prefix)-36-24-HT***	33	(838)	54	(1372)	45	(1143)	78	(1981)	57	(1448)	102	(2591)	69	(1753)	126	(3200)
		30	(762)	**(Prefix)-36-30-HT***	33	(838)	60	(1524)	45	(1143)	84	(2134)	57	(1448)	108	(2743)	69	(1753)	132	(3353)
42	(1067)	6	(152)	**(Prefix)-42-06-HT***	36	(914)	36	(914)	48	(1219)	60	(1524)	60	(1524)	84	(2134)	72	(1829)	108	(2743)
		9	(228)	**(Prefix)-42-09-HT***	36	(914)	39	(991)	48	(1219)	63	(1600)	60	(1524)	87	(2210)	72	(1829)	111	(2819)
		12	(305)	**(Prefix)-42-12-HT***	36	(914)	42	(1067)	48	(1219)	66	(1676)	60	(1524)	90	(2286)	72	(1829)	114	(2895)
		18	(457)	**(Prefix)-42-18-HT***	36	(914)	48	(1219)	48	(1219)	72	(1829)	60	(1524)	96	(2438)	72	(1829)	120	(3048)
		24	(609)	**(Prefix)-42-24-HT***	36	(914)	54	(1372)	48	(1219)	78	(1981)	60	(1524)	102	(2591)	72	(1829)	126	(3200)
		30	(762)	**(Prefix)-42-30-HT***	36	(914)	60	(1524)	48	(1219)	84	(2134)	60	(1524)	108	(2743)	72	(1829)	132	(3353)
		36	(914)	**(Prefix)-42-36-HT***	36	(914)	66	(1676)	48	(1219)	90	(2286)	60	(1524)	114	(2895)	72	(1829)	138	(3505)

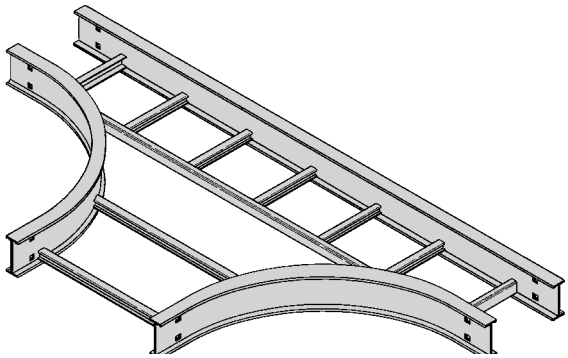
(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

Horizontal Expanding Tee (HT)

2 pair splice plates with hardware included.





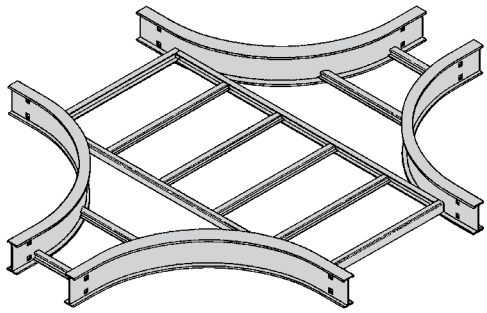
Prefix - 09 - 30 HT 12

- Radius
- Fitting
- Width W_2
- Width W_1
- To complete catalog number, insert fitting prefix.

Tray Width W1 in.	Tray Width W1 mm	Tray Width W2 in.	Tray Width W2 mm	* Insert Radius (12", 24", 36", or 48") Catalog No.	12" Radius A in.	12" Radius A mm	12" Radius B in.	12" Radius B mm	24" Radius A in.	24" Radius A mm	24" Radius B in.	24" Radius B mm	36" Radius A in.	36" Radius A mm	36" Radius B in.	36" Radius B mm	48" Radius A in.	48" Radius A mm	48" Radius B in.	48" Radius B mm
6	(152)	9	228	**(Prefix)-06-09-HT***	18	(457)	39	(991)	30	(762)	63	(1600)	42	(1067)	87	(2210)	54	(1372)	111	2819
		12	(305)	**(Prefix)-06-12-HT***	18	(457)	42	(1067)	30	(762)	66	(1676)	42	(1067)	90	(2286)	54	(1372)	114	(2895)
		18	(457)	**(Prefix)-06-18-HT***	18	457)	48	(1219)	30	(762)	72	(1829)	42	(1067)	96	(2438)	54	(1372)	120	(3048)
		24	(609)	**(Prefix)-06-24-HT***	18	(457)	54	(1372)	30	(762)	78	(1981)	42	(1067)	102	(2591)	54	(1372)	126	(3200)
		30	(762)	**(Prefix)-06-30-HT***	18	(457)	60	(1524)	30	(762)	84	(2134)	42	(1067)	108	(2743)	54	(1372)	132	(3353)
		36	(914)	**(Prefix)-06-36-HT***	18	(457)	66	(1676)	30	(762)	90	(2286)	42	(1067)	114	(2895)	54	(1372)	138	(3503)
		42	(1067)	**(Prefix)-06-42-HT***	18	(457)	72	(1829)	30	(762)	96	(2438)	42	(1067)	120	(3048)	54	(1372)	144	(3658)
9	(228)	12	(305)	**(Prefix)-09-12-HT***	19 1/2	(496)	42	(1067)	31 1/2	(800)	66	(1676)	43 1/2	(1105)	90	(2286)	55 1/2	(1410)	114	(2895)
		18	(457)	**(Prefix)-09-18-HT***	19 1/2	(496)	48	(1219)	31 1/2	(800)	72	(1829)	43 1/2	(1105)	96	(2438)	55 1/2	(1410)	120	(3048)
		24	(609)	**(Prefix)-09-24-HT***	19 1/2	(496)	54	(1372)	31 1/2	(800)	78	(1981)	43 1/2	(1105)	102	(2591)	55 1/2	(1410)	126	(3200)
		30	(762)	**(Prefix)-09-30-HT***	19 1/2	(496)	60	(1524)	31 1/2	(800)	84	(2134)	43 1/2	(1105)	108	(2743)	55 1/2	(1410)	132	(3353)
		36	(914)	**(Prefix)-09-36-HT***	19 1/2	(496)	66	(1676)	31 1/2	(800)	90	(2286)	43 1/2	(1105)	114	(2895)	55 1/2	(1410)	138	(3503)
		42	(1067)	**(Prefix)-09-42-HT***	19 1/2	(496)	72	(1829)	31 1/2	(800)	96	(2438)	43 1/2	(1105)	120	(3048)	55 1/2	(1410)	144	(3658)
12	(305)	18	(457)	**(Prefix)-12-18-HT***	21	(533)	48	(1219)	33	(838)	72	(1829)	45	(1143)	96	(2438)	57	(1448)	120	(3048)
		24	(609)	**(Prefix)-12-24-HT***	21	(533)	54	(1372)	33	(838)	78	(1981)	45	(1143)	102	(2591)	57	(1448)	126	(3200)
		30	(762)	**(Prefix)-12-30-HT***	21	(533)	60	(1524)	33	(838)	84	(2134)	45	(1143)	108	(2743)	57	(1448)	132	(3353)
		36	(914)	**(Prefix)-12-36-HT***	21	(533)	66	(1676)	33	(838)	90	(2286)	45	(1143)	114	(2895)	57	(1448)	138	(3503)
		42	(1067)	**(Prefix)-12-42-HT***	21	(533)	72	(1829)	33	(838)	96	(2438)	45	(1143)	120	(3048)	57	(1448)	144	(3658)
18	(457)	24	(609)	**(Prefix)-18-24-HT***	24	(609)	54	(1372)	36	(914)	78	(1981)	48	(1219)	102	(2591)	60	(1524)	126	(3200)
		30	(762)	**(Prefix)-18-30-HT***	24	(609)	60	(1524)	36	(914)	84	(2134)	48	(1219)	108	(2743)	60	(1524)	132	(3353)
		36	(914)	**(Prefix)-18-36-HT***	24	(609)	66	(1676)	36	(914)	90	(2286)	48	(1219)	114	(2895)	60	(1524)	138	(3503)
		42	(1067)	**(Prefix)-18-42-HT***	24	(609)	72	(1829)	36	(914)	96	(2438)	48	(1219)	120	(3048)	60	(1524)	144	(3658)
24	(609)	30	(762)	**(Prefix)-24-30-HT***	27	(686)	60	(1524)	39	(991)	84	(2134)	51	(1295)	108	(2743)	63	(1600)	132	(3353)
		36	(914)	**(Prefix)-24-36-HT***	27	(686)	66	(1676)	39	(991)	90	(2286)	51	(1295)	114	(2895)	63	(1600)	138	(3503)
		42	(1067)	**(Prefix)-24-42-HT***	27	(686)	72	(1829)	39	(991)	96	(2438)	51	(1295)	120	(3048)	63	(1600)	144	(3658)
30	(762)	36	(914)	**(Prefix)-30-36-HT***	30	(762)	66	(1676)	42	(1067)	90	(2286)	54	(1372)	114	(2895)	66	(1676)	138	(3503)
		42	(1067)	**(Prefix)-30-42-HT***	30	(762)	72	(1829)	42	(1067)	96	(2438)	54	(1372)	120	(3048)	66	(1676)	144	(3658)
36	(914)	42	(1067)	**(Prefix)-36-42-HT***	33	(838)	72	(1829)	45	(1143)	96	(2438)	57	(1448)	120	(3048)	69	(1753)	144	(3658)

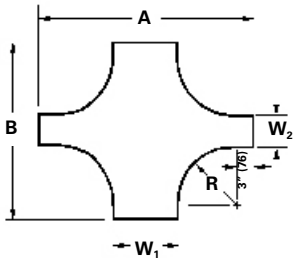
(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.



Horizontal Expanding/Reducing Cross (HX)

3 pair splice plates with hardware included.



Prefix - 36 - 18 HX 24

- Radius
- Fitting
- Width W_2
- Width W_1
- To complete catalog number, insert fitting prefix.

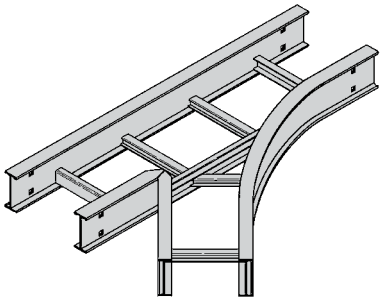
Tray Width W1 in.	Tray Width W1 mm	Tray Width W2 in.	Tray Width W2 mm	* Insert Radius (12", 24", 36", or 48") Catalog No.	12" Radius A in.	12" Radius A mm	12" Radius B in.	12" Radius B mm	24" Radius A in.	24" Radius A mm	24" Radius B in.	24" Radius B mm	36" Radius A in.	36" Radius A mm	36" Radius B in.	36" Radius B mm	48" Radius A in.	48" Radius A mm	48" Radius B in.	48" Radius B mm
9	(228)	6	(152)	**(Prefix)-09-06-HX***	39	(991)	36	(914)	63	1600	60	(1524)	87	(2210)	84	(2134)	111	2819	108	(2743)
12	(305)	6	(152)	**(Prefix)-12-06-HX***	42	(1067)	36	(914)	66	(1676)	60	(1524)	90	(2286)	84	(2134)	114	(2895)	108	(2743)
		9	(228)	**(Prefix)-12-09-HX***	42	(1067)	39	(991)	66	(1676)	63	(1600)	90	(2286)	87	(2210)	114	(2895)	111	(2819)
18	(457)	6	(152)	**(Prefix)-18-06-HX***	48	(1219)	36	(914)	72	(1829)	60	(1524)	96	(2438)	84	(2134)	120	(3048)	108	(2743)
		9	(228)	**(Prefix)-18-09-HX***	48	(1219)	39	(991)	72	(1829)	63	(1600)	96	(2438)	87	(2210)	120	(3048)	111	(2819)
		12	(305)	**(Prefix)-18-12-HX***	48	(1219)	42	(1067)	72	(1829)	66	(1676)	96	(2438)	90	(2286)	120	(3048)	114	(2895)
24	(609)	6	(152)	**(Prefix)-24-06-HX***	54	(1372)	36	(914)	78	(1981)	60	(1524)	102	(2591)	84	(2134)	126	(3200)	108	(2743)
		9	(228)	**(Prefix)-24-09-HX***	54	(1372)	39	(991)	78	(1981)	63	(1600)	102	(2591)	87	(2210)	126	(3200)	111	(2819)
		12	(305)	**(Prefix)-24-12-HX***	54	(1372)	42	(1067)	78	(1981)	66	(1676)	102	(2591)	90	(2286)	126	(3200)	114	(2895)
		18	(457)	**(Prefix)-24-18-HX***	54	(1372)	48	(1219)	78	(1981)	72	(1829)	102	(2591)	96	(2438)	126	(3200)	120	(3048)
30	(762)	6	(152)	**(Prefix)-30-06-HX***	60	(1524)	36	(914)	84	(2134)	60	(1524)	108	(2743)	84	(2134)	132	(3353)	108	(2743)
		9	(228)	**(Prefix)-30-09-HX***	60	(1524)	39	(991)	84	(2134)	63	(1600)	108	(2743)	87	(2210)	132	(3353)	111	(2819)
		12	(305)	**(Prefix)-30-12-HX***	60	(1524)	42	(1067)	84	(2134)	66	(1676)	108	(2743)	90	(2286)	132	(3353)	114	(2895)
		18	(457)	**(Prefix)-30-18-HX***	60	(1524)	48	(1219)	84	(2134)	72	(1829)	108	(2743)	96	(2438)	132	(3353)	120	(3048)
		24	(609)	**(Prefix)-30-24-HX***	60	(1524)	54	(1372)	84	(2134)	78	(1981)	108	(2743)	102	(2591)	132	(3353)	126	(3200)
36	(914)	6	(152)	**(Prefix)-30-06-HX***	66	(1676)	36	(914)	90	(2286)	60	(1524)	114	(2895)	84	(2134)	138	(3505)	108	(2743)
		9	(228)	**(Prefix)-36-09-HX***	66	(1676)	39	(991)	90	(2286)	63	(1600)	114	(2895)	87	(2210)	138	(3505)	111	(2819)
		12	(305)	**(Prefix)-36-12-HX***	66	(1676)	42	(1067)	90	(2286)	66	(1676)	114	(2895)	90	(2286)	138	(3505)	114	(2895)
		18	(457)	**(Prefix)-36-18-HX***	66	(1676)	48	(1219)	90	(2286)	72	(1829)	114	(2895)	96	(2438)	138	(3505)	120	(3048)
		24	(609)	**(Prefix)-36-24-HX***	66	(1676)	54	(1372)	90	(2286)	78	(1981)	114	(2895)	102	(2591)	138	(3505)	126	(3200)
		30	(762)	**(Prefix)-36-30-HX***	66	(1676)	60	(1524)	90	(2286)	84	(2134)	114	(2895)	108	(2743)	138	(3505)	132	(3353)
42	(1067)	6	(152)	**(Prefix)-42-06-HX***	72	(1829)	36	(914)	96	(2438)	60	(1524)	120	(3048)	84	(2134)	144	(3658)	108	(2743)
		9	(228)	**(Prefix)-42-09-HX***	72	(1829)	39	(991)	96	(2438)	63	(1600)	120	(3048)	87	(2210)	144	(3658)	111	(2819)
		12	(305)	**(Prefix)-42-12-HX***	72	(1829)	42	(1067)	96	(2438)	66	(1676)	120	(3048)	90	(2286)	144	(3658)	114	(2895)
		18	(457)	**(Prefix)-42-18-HX***	72	(1829)	48	(1219)	96	(2438)	72	(1829)	120	(3048)	96	(2438)	144	(3658)	120	(3048)
		24	(609)	**(Prefix)-42-24-HX***	72	(1829)	54	(1372)	96	(2438)	78	(1981)	120	(3048)	102	(2591)	144	(3658)	126	(3200)
		30	(762)	**(Prefix)-42-30-HX***	72	(1829)	60	(1524)	96	(2438)	84	(2134)	120	(3048)	108	(2743)	144	(3658)	132	(3353)
		36	(914)	**(Prefix)-42-36-HX***	72	(1829)	66	(1676)	96	(2438)	90	(2286)	120	(3048)	114	(2895)	144	(3658)	138	(3505)

(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

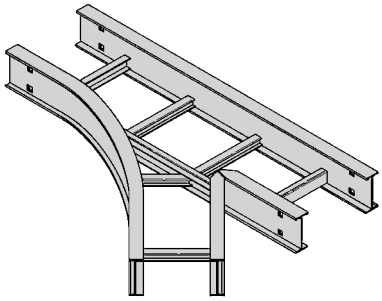
All dimensions in parentheses are millimeters unless otherwise specified.

Horizontal Wye (HYL, HYR)

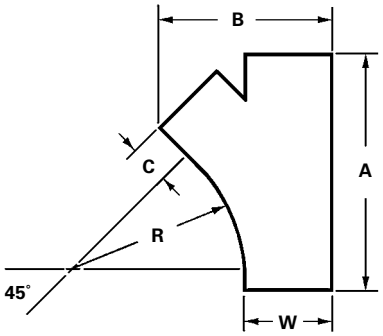
2 pair splice plates with hardware included.

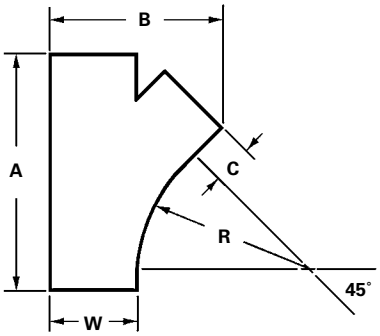


Left Hand Wye - HYL



Right Hand Wye - HYR



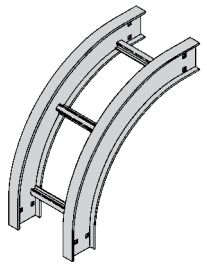


R = Radius

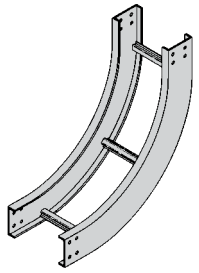
Bend Radius in.	mm	Tray Width in.	mm	Left Hand Wye Catalog No.	Right Hand Wye Catalog No.	A in.	mm	B in.	mm	C in.	mm
24	(609)	6	(152)	**(Prefix)-06-HYL**	**(Prefix)-06-HYR**	28 7/16	(722)	15 3/16	(386)	3 1/16	(77)
		9	(228)	**(Prefix)-09-HYL**	**(Prefix)-09-HYR**	32 11/16	(831)	20 5/16	(516)	6 1/16	(154)
		12	(305)	**(Prefix)-12-HYL**	**(Prefix)-12-HYR**	36 15/16	(938)	25 7/16	(646)	9 1/16	(231)
		18	(457)	**(Prefix)-18-HYL**	**(Prefix)-18-HYR**	45 3/8	(1153)	35 13/16	(910)	15 1/16	(383)
		24	(609)	**(Prefix)-24-HYL**	**(Prefix)-24-HYR**	53 7/8	(1368)	45 15/16	(1167)	21 1/16	(535)
		30	(762)	**(Prefix)-30-HYL**	**(Prefix)-30-HYR**	62 3/8	(1585)	56 3/16	(1427)	27 1/16	(688)
		36	(914)	**(Prefix)-36-HYL**	**(Prefix)-36-HYR**	70 7/8	(1800)	66 7/16	(1687)	33 1/16	(840)
		42	(1067)	**(Prefix)-42-HYL**	**(Prefix)-42-HYR**	79 3/8	(2016)	76 5/8	(1946)	39 1/16	(992)

(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.



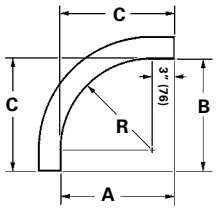
90˚ Vertical Outside - VO

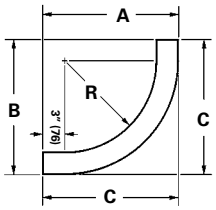


90˚ Vertical Inside - VI

Vertical Bend 90˚ (VO, VI)

1 pair splice plates with hardware included.





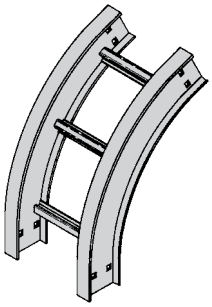
Bend Radius R in./(mm)	Tray Width Insert in. (mm)	(*) Insert "VO" for Vert. Outside Bend "VI" for Vert. Inside Bend Catalog No.	VO Side Rail Height 4" - 7" in./(mm) A	B	C	VI Side Rail Height 4" in./(mm) A	B	C	5" in./(mm) A	B	C	6" in./(mm) A	B	C	7" in./(mm) A	B	C
12 (305)	6 (152)	**(Prefix)-06-90(*)12**	15 (381)	15 (381)	15 (381)	19 (483)	19 (483)	19 (483)	20 (508)	20 (508)	20 (508)	21 (533)	21 (533)	21 (533)	22 (559)	22 (559)	22 (559)
	9 (228)	**(Prefix)-09-90(*)12**															
	12 (305)	**(Prefix)-12-90(*)12**															
	18 (457)	**(Prefix)-18-90(*)12**															
	24 (609)	**(Prefix)-24-90(*)12**															
	30 (762)	**(Prefix)-30-90(*)12**															
	36 (914)	**(Prefix)-36-90(*)12**															
	42 (1067)	**(Prefix)-42-90(*)12**															
24 (609)	6 (152)	**(Prefix)-06-90(*)24**	27 (686)	27 (686)	27 (686)	31 (787)	31 (787)	31 (787)	32 (813)	32 (813)	32 (813)	33 (838)	33 (838)	33 (838)	34 (864)	34 (864)	34 (864)
	9 (228)	**(Prefix)-09-90(*)24**															
	12 (305)	**(Prefix)-12-90(*)24**															
	18 (457)	**(Prefix)-18-90(*)24**															
	24 (609)	**(Prefix)-24-90(*)24**															
	30 (762	**(Prefix)-30-90(*)24**															
	36 (914)	**(Prefix)-36-90(*)24**															
	42 (1067)	**(Prefix)-42-90(*)24**															
36 (914)	6 (152)	**(Prefix)-06-90(*)36**	39 (991)	39 (991)	39 (991)	43 (1092)	43 (1092)	43 (1092)	44 (1118)	44 (1118)	44 (1118)	45 (1143)	45 (1143)	45 (1143)	46 (1168)	46 (1168)	46 (1168)
	9 (228)	**(Prefix)-09-90(*)36**															
	12 (305)	**(Prefix)-12-90(*)36**															
	18 (457)	**(Prefix)-18-90(*)36**															
	24 (609)	**(Prefix)-24-90(*)36**															
	30 (762	**(Prefix)-30-90(*)36**															
	36 (914)	**(Prefix)-36-90(*)36**															
	42 (1067)	**(Prefix)-42-90(*)36**															
48 (1219)	6 (152)	**(Prefix)-06-90(*)48**	51 (1295)	51 (1295)	51 (1295)	55 (1397)	55 (1397)	55 (1397)	56 (1422)	56 (1422)	56 (1422)	57 (1448)	57 (1448)	57 (1448)	58 (1473)	58 (1473)	58 (1473)
	9 (228)	**(Prefix)-09-90(*)48**															
	12 (305)	**(Prefix)-12-90(*)48**															
	18 (457)	**(Prefix)-18-90(*)48**															
	24 (609)	**(Prefix)-24-90(*)48**															
	30 (762	**(Prefix)-30-90(*)48**															
	36 (914)	**(Prefix)-36-90(*)48**															
	42 (1067)	**(Prefix)-42-90(*)48**															

(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

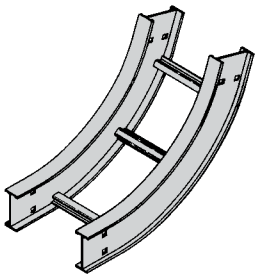
All dimensions in parentheses are millimeters unless otherwise specified.

Vertical Bend 60˚ (VO, VI)

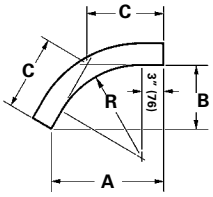
1 pair splice plates with hardware included.

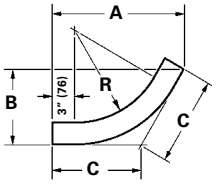


60˚ Vertical Outside - VO



60˚ Vertical Inside - VI

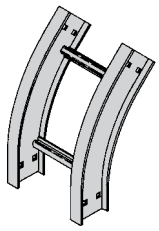




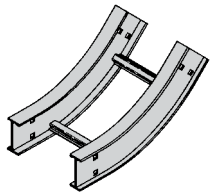
Bend Radius R in./(mm)	Tray Width Insert in. (mm)	(*) Insert "VO" for Vert. Outside Bend "VI" for Vert. Inside Bend Catalog No.	VO Side Rail Height 4" - 7" in./(mm) A	B	C	VI Side Rail Height 4" in./(mm) A	B	C	5" in./(mm) A	B	C	6" in./(mm) A	B	C	7" in./(mm) A	B	C
12 (305)	6 (152)	**(Prefix)-06-60(*)12**	14 7/8 (378)	8 5/8 (219)	9 15/16 (253)	18 3/8 (467)	10 7/8 (270)	12 1/4 (311)	19 1/4 (489	11 1/8 (283)	12 13/16 (326)	20 1/16 (510)	11 5/8 (296)	13 3/8 (340)	21 15/16 (557)	12 1/8 (308)	14 (356)
	9 (228)	**(Prefix)-09-60(*)12**															
	12 (305)	**(Prefix)-12-60(*)12**															
	18 (457)	**(Prefix)-18-60(*)12**															
	24 (609)	**(Prefix)-24-60(*)12**															
	30 (762)	**(Prefix)-30-60(*)12**															
	36 (914)	**(Prefix)-36-60(*)12**															
	42 (1067)	**(Prefix)-42-60(*)12**															
24 (609)	6 (152)	**(Prefix)-06-60(*)24**	25 5/16 (643)	14 5/8 (372)	16 7/8 (428)	28 3/4 (730)	16 5/8 (422)	19 3/16 (488)	29 5/8 (753)	17 1/8 (435)	19 3/4 (502)	30 1/2 (775)	17 5/8 (448)	20 5/16 (516)	31 3/8 (797)	18 1/8 (461)	20 7/8 (530)
	9 (228)	**(Prefix)-09-60(*)24**															
	12 (305)	**(Prefix)-12-60(*)24**															
	18 (457)	**(Prefix)-18-60(*)24**															
	24 (609)	**Prefix)-24-60(*)24**															
	30 (762	**(Prefix)-30-60(*)24**															
	36 (914)	**(Prefix)-36-60(*)24**															
	42 (1067)	**(Prefix)-42-60(*)24**															
36 (914)	6 (152)	**(Prefix)-06-60(*)36**	35 11/16 (907)	20 5/8 (524)	23 13/16 (605)	39 1/8 (994)	22 5/8 (575)	26 1/8 (663)	40 (1016)	23 1/8 (587)	26 11/16 (687)	40 7/8 (1038)	23 5/8 (600)	27 1/4 (692)	41 3/4 (1060)	24 1/8 (613)	27 13/16 (706)
	9 (228)	**(Prefix)-09-60(*)36**															
	12 (305)	**(Prefix)-12-60(*)36**															
	18 (457)	**(Prefix)-18-60(*)36**															
	24 (609)	**(Prefix)-24-60(*)36**															
	30 (762	**(Prefix)-30-60(*)36**															
	36 (914)	**(Prefix)-36-60(*)36**															
	42 (1067)	**(Prefix)-42-60(*)36**															
48 (1219)	6 (152)	**(Prefix)-06-60(*)48**	46 1/16 (1170)	26 5/8 (676)	30 11/16 (780)	49 9/16 (1259)	28 5/8 (727)	33 (838)	50 3/8 (1280)	29 1/8 (740)	33 5/8 (854)	51 1/4 (1302)	29 5/8 (753)	34 3/16 (868)	52 1/8 (1324)	30 1/8 (765)	34 3/4 (883)
	9 (228)	**(Prefix)-09-60(*)48**															
	12 (305)	**(Prefix)-12-60(*)48**															
	18 (457)	**(Prefix)-18-60(*)48**															
	24 (609)	**(Prefix)-24-60(*)48**															
	30 (762	**(Prefix)-30-60(*)48**															
	36 (914)	**(Prefix)-36-60(*)48**															
	42 (1067)	**(Prefix)-42-60(*)48**															

(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.



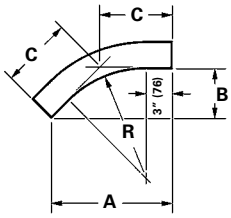
45° Vertical Outside -VO

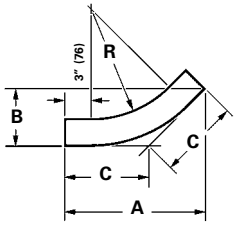


45° Vertical Inside -VI

Vertical Bend 45° (VO, VI)

1 pair splice plates with hardware included.





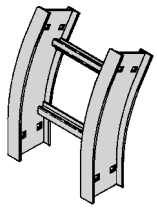
Bend Radius R in./(mm)	Tray Width Insert in. (mm)	(*) Insert "VO" for Vert. Outside Bend "VI" for Vert. Inside Bend Catalog No.	VO Side Rail Height 4" - 7" in./(mm) A	B	C	VI Side Rail Height 4" in./(mm) A	B	C	5" in./(mm) A	B	C	6" in./(mm) A	B	C	7" in./(mm) A	B	C
12 (305)	6 (152)	**(Prefix)-06-45(*)12**	13 5/8 (346)	5 5/8 (143)	8 (203)	16 7/16 (417)	6 13/16 (173)	9 5/8 (245)	17 1/8 (435)	7 1/8 (181)	10 1/16 (256)	17 7/8 (454)	7 3/8 (188)	10 7/16 (265)	18 9/16 (471)	7 11/16 (195)	10 7/8 (2176)
	9 (228)	**(Prefix)-09-45(*)12**															
	12 (305)	**(Prefix)-12-45(*)12**															
	18 (457)	**(Prefix)-18-45(*)12**															
	24 (609)	**(Prefix)-24-45(*)12**															
	30 (762)	**(Prefix)-30-45(*)12**															
	36 (914)	**(Prefix)-36-45(*)12**															
	42 (1067)	**(Prefix)-42-45(*)12**															
24 (609)	6 (152)	**(Prefix)-06-45(*)24**	22 1/16 (561)	9 1/8 (232)	12 15/16 (329)	24 15/16 (634)	10 5/16 (262)	14 5/8 (372)	25 5/8 (651)	10 5/8 (270)	15 (381)	26 5/16 (668)	10 15/16 (278)	15 7/16 (392)	27 1/16 (687)	11 3/16 (284)	15 13/16 (402)
	9 (228)	**(Prefix)-09-45(*)24**															
	12 (305)	**(Prefix)-12-45(*)24**															
	18 (457)	**(Prefix)-18-45(*)24**															
	24 (609)	**(Prefix)-24-45(*)24**															
	30 (762	**(Prefix)-30-45(*)24**															
	36 (914)	**(Prefix)-36-45(*)24**															
	42 (1067)	**(Prefix)-42-45(*)24**															
36 (914)	6 (152)	**(Prefix)-06-45(*)36**	30 9/16 (776)	12 11/16 (323)	17 15/16 (456)	33 3/8 (848)	13 13/16 (351)	19 9/16 (497)	34 1/8 (867)	14 1/8 (359)	20 (508)	34 13/16 (885)	14 7/16 (367)	20 3/8 (518)	35 1/2 (902)	14 11/16 (284)	20 13/16 (402)
	9 (228)	**(Prefix)-09-45(*)36**															
	12 (305)	**(Prefix)-12-45(*)36**															
	18 (457)	**(Prefix)-18-45(*)36**															
	24 (609)	**(Prefix)-24-45(*)36**															
	30 (762	**(Prefix)-30-45(*)36**															
	36 (914)	**(Prefix)-36-45(*)36**															
	42 (1067)	**(Prefix)-42-45(*)36**															
48 (1219)	6 (152)	**(Prefix)-06-45(*)48**	39 1/16 (992)	16 3/16 (411)	22 7/8 (581)	41 7/8 (1064)	17 3/8 (441)	24 9/16 (624)	42 5/8 (1083)	17 5/8 (448)	24 15/16 (633)	43 5/16 (1100)	17 15/16 (456)	25 3/8 (645)	44 (1118)	18 1/4 (464)	25 13/16 (656)
	9 (228)	**(Prefix)-09-45(*)48**															
	12 (305)	**(Prefix)-12-45(*)48**															
	18 (457)	**(Prefix)-18-45(*)48**															
	24 (609)	**(Prefix)-24-45(*)48**															
	30 (762	**(Prefix)-30-45(*)48**															
	36 (914)	**(Prefix)-36-45(*)48**															
	42 (1067)	**(Prefix)-42-45(*)48**															

(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

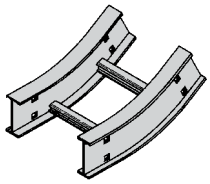
All dimensions in parentheses are millimeters unless otherwise specified.

Vertical Bend 30˚ (VO, VI)

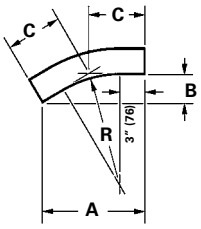
1 pair splice plates with hardware included.

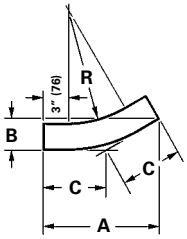


30˚ Vertical Outside -VO



30˚ Vertical Inside -VI

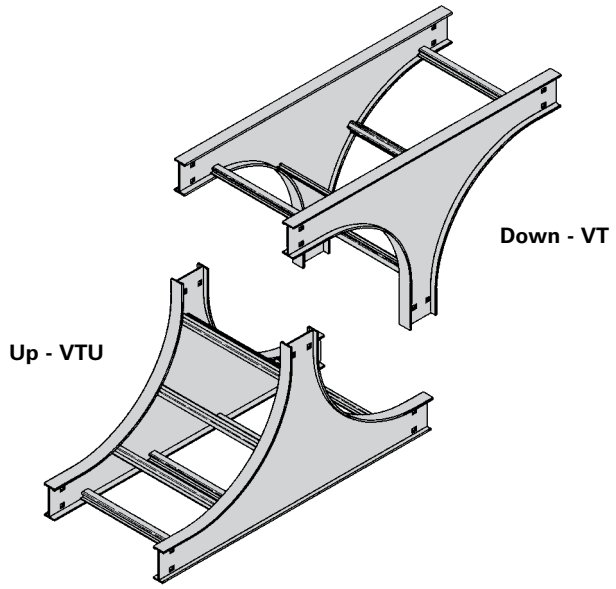




Bend Radius R in./(mm)	Tray Width Insert in. (mm)	(*) Insert "VO" for Vert. Outside Bend "VI" for Vert. Inside Bend Catalog No.	VO Side Rail Height 4" - 7" in./(mm) A	B	C	VI Side Rail Height 4" in./(mm) A	B	C	5" in./(mm) A	B	C	6" in./(mm) A	B	C	7" in./(mm) A	B	C
12 (305)	6 (152)	**(Prefix)-06-30(*)12**	11 5/8 (296)	3 1/8 (79)	6 3/16 (157)	13 5/8 (346)	3 5/8 (92)	7 5/16 (186)	14 1/8 (359)	3 3/4 (95)	7 9/16 (192)	14 5/8 (372)	3 15/16 (100)	7 13/16 (199)	15 1/8 (384)	4 1/16 (103)	8 1/16 (205)
	9 (228)	**(Prefix)-09-30(*)12**															
	12 (305)	**(Prefix)-12-30(*)12**															
	18 (457)	**(Prefix)-18-30(*)12**															
	24 (609)	**(Prefix)-24-30(*)12**															
	30 (762)	**(Prefix)-30-30(*)12**															
	36 (914)	**(Prefix)-36-30(*)12**															
	42 (1067)	**(Prefix)-42-30(*)12**															
24 (609)	6 (152)	**(Prefix)-06-30(*)24**	17 5/8 (448)	4 11/16 (120)	9 7/16 (240)	19 5/8 (499)	5 1/4 (133)	10 1/2 (267)	20 1/8 (511	5 3/8 (137)	10 3/4 (273)	20 5/8 (524)	5 1/2 (140)	11 1/16 (282)	21 1/8 (537)	5 5/8 (143)	11 5/16 (287)
	9 (228)	**(Prefix)-09-30(*)24**															
	12 (305)	**(Prefix)-12-30(*)24**															
	18 (457)	**(Prefix)-18-30(*)24**															
	24 (609)	**(Prefix)-24-30(*)24**															
	30 (762	**(Prefix)-30-30(*)24**															
	36 (914)	**(Prefix)-36-30(*)24**															
	42 (1067)	**(Prefix)-42-30(*)24**															
36 (914)	6 (152)	**(Prefix)-06-30(*)36**	23 5/8 (600)	6 5/16 (160)	12 5/8 (321)	25 5/8 (651)	6 7/8 (174)	13 11/16 (348)	26 1/8 (663)	7 (175)	14 (356)	26 5/8 (676)	7 1/8 (181)	14 1/4 (362)	27 1/8 (689)	7 1/4 (184)	14 1/2 (287)
	9 (228)	**(Prefix)-09-30(*)36**															
	12 (305)	**(Prefix)-12-30(*)36**															
	18 (457)	**(Prefix)-18-30(*)36**															
	24 (609)	**(Prefix)-24-30(*)36**															
	30 (762	**(Prefix)-30-30(*)36**															
	36 (914)	**(Prefix)-36-30(*)36**															
	42 (1067)	**(Prefix)-42-30(*)36**															
48 (1219)	6 (152)	**(Prefix)-06-30(*)48**	29 5/8 (753)	7 15/16 (202)	15 7/8 (403)	31 5/8 (803)	8 7/16 (214)	16 15/16 (430)	32 1/8 (816)	8 5/8 (219)	17 3/16 (437)	32 5/8 (829)	8 3/4 (222)	17 1/2 (445)	33 1/8 (842)	8 7/8 (226)	17 3/4 (451)
	9 (228)	**(Prefix)-09-30(*)48**															
	12 (305)	**(Prefix)-12-30(*)48**															
	18 (457)	**(Prefix)-18-30(*)48**															
	24 (609)	**(Prefix)-24-30(*)48**															
	30 (762	**(Prefix)-30-30(*)48**															
	36 (914)	**(Prefix)-36-30(*)48**															
	42 (1067)	**(Prefix)-42-30(*)48**															

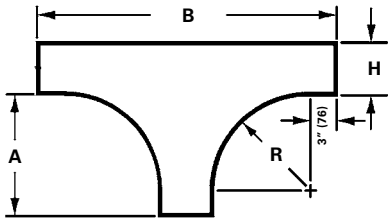
(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.



Vertical Tee Up/Down (VTU/VT)

2 pair splice plates with hardware included.



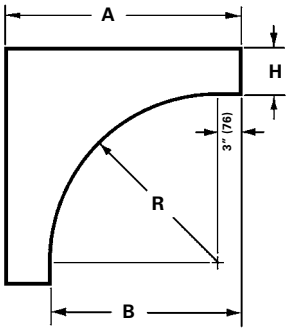
Bend Radius R in./(mm)	Tray Width in. mm	Vertical Tee Down Catalog No.	Vertical Tee Up Catalog No.	Side Rail Height "H" 4" A in./(mm)	4" B in./(mm)	5" A in./(mm)	5" B in./(mm)	6" A in./(mm)	6" B in./(mm)	7" A in./(mm)	7" B in./(mm)
12 (305)	6 (152)	(Prefix)-06-VT12	(Prefix)-06-VTU12	15 (381)	34 (846)	15 (381)	35 (889)	15 (381)	36 (914)	15 (381)	37 (940)
	9 (228)	(Prefix)-09-VT12	(Prefix)-09-VTU12								
	12 (305)	(Prefix)-12-VT12	(Prefix)-12-VTU12								
	18 (457)	(Prefix)-18-VT12	(Prefix)-18-VTU12								
	24 (609)	(Prefix)-24-VT12	(Prefix)-24-VTU12								
	30 (762)	(Prefix)-30-VT12	(Prefix)-30-VTU12								
	36 (914)	(Prefix)-36-VT12	(Prefix)-36-VTU12								
	42 (1067)	(Prefix)-42-VT12	(Prefix)-42-VTU12								
24 (609)	6 (152)	(Prefix)-06-VT24	(Prefix)-06-VTU24	27 (6867)	58 (1473)	27 (686)	59 (1498)	27 (686)	60 (1524)	27 (686)	61 (1549)
	9 (228)	(Prefix)-09-VT24	(Prefix)-09-VTU24								
	12 (305)	(Prefix)-12-VT24	(Prefix)-12-VTU24								
	18 (457)	(Prefix)-18-VT24	(Prefix)-18-VTU24								
	24 (609)	(Prefix)-24-VT24	(Prefix)-24-VTU24								
	30 (762)	(Prefix)-30-VT24	(Prefix)-30-VTU24								
	36 (914)	(Prefix)-36-VT24	(Prefix)-36-VTU24								
	42 (1067)	(Prefix)-42-VT24	(Prefix)-42-VTU24								
36 (914)	6 (152)	(Prefix)-06-VT36	(Prefix)-06-VTU36	39 (991)	82 (2083)	39 (991)	83 (2108)	39 (991)	84 (2134)	39 (991)	85 (2159)
	9 (228)	(Prefix)-09-VT36	(Prefix)-09-VTU36								
	12 (305)	(Prefix)-12-VT36	(Prefix)-12-VTU36								
	18 (457)	(Prefix)-18-VT36	(Prefix)-18-VTU36								
	24 (609)	(Prefix)-24-VT36	(Prefix)-24-VTU36								
	30 (762)	(Prefix)-30-VT36	(Prefix)-30-VTU36								
	36 (914)	(Prefix)-36-VT36	(Prefix)-36-VTU36								
	42 (1067)	(Prefix)-42-VT36	(Prefix)-42-VTU36								
48 (1219)	6 (152)	(Prefix)-06-VT48	(Prefix)-06-VTU48	51 (1295)	106 (2692)	51 (1295)	107 (2718)	51 (1295)	108 (2743)	51 (1295)	109 (2769)
	9 (228)	(Prefix)-09-VT48	(Prefix)-09-VTU48								
	12 (305)	(Prefix)-12-VT48	(Prefix)-12-VTU48								
	18 (457)	(Prefix)-18-VT48	(Prefix)-18-VTU48								
	24 (609)	(Prefix)-24-VT48	(Prefix)-24-VTU48								
	30 (762)	(Prefix)-30-VT48	(Prefix)-30-VTU48								
	36 (914)	(Prefix)-36-VT48	(Prefix)-36-VTU48								
	42 (1067)	(Prefix)-42-VT48	(Prefix)-42-VTU48								

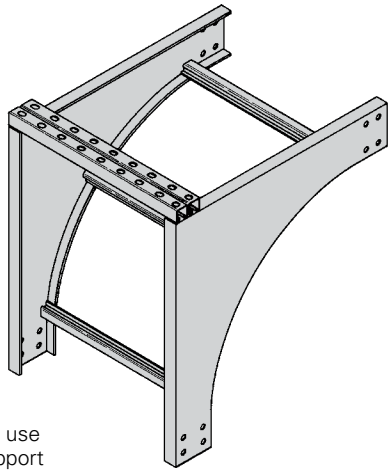
(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.

Cable Support Fittings (CSF)

1 pair splice plates with hardware included.



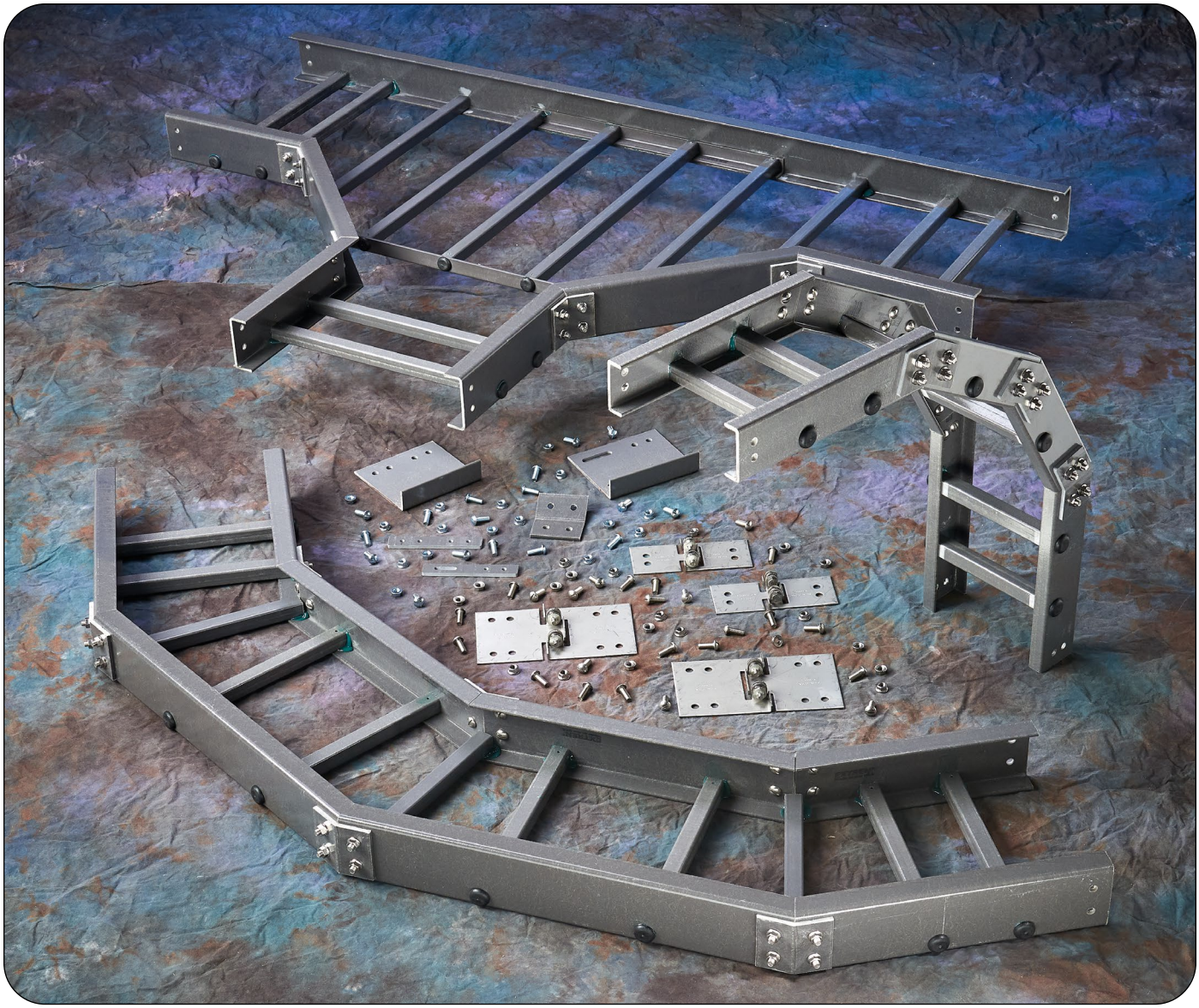


This fitting is recommended for use at the top of vertical runs to support the weight of the cables. The top cross brace is drilled for installing eyebolts, ordered separately.

Bend Radius R in./(mm)	Tray Width in.	Tray Width mm	Catalog No.	Side Rail Height "H" 4" A in./(mm)	4" B in./(mm)	5" A in./(mm)	5" B in./(mm)	6" A in./(mm)	6" B in./(mm)	7" A in./(mm)	7" B in./(mm)
12 (305)	6	152	**(Prefix)-06-CSF12**	19 (483)	15 (381)	20 (508)	15 (381)	21 (533)	15 (381)	22 (559)	15 (381)
	9	228	**(Prefix)-09-CSF12**								
	12	305	**(Prefix)-12-CSF12**								
	18	457	**(Prefix)-18-CSF12**								
	24	609	**(Prefix)-24-CSF12**								
	30	762	**(Prefix)-30-CSF12**								
	36	914	**(Prefix)-36-CSF12**								
	42	1067	**(Prefix)-42-CSF12**								
24 (609)	6	152	**(Prefix)-06-CSF24**	31 (787)	27 (686)	32 (813)	27 (686)	33 (838)	27 (686)	34 (864)	27 (686)
	9	228	**(Prefix)-09-CSF24**								
	12	305	**(Prefix)-12-CSF24**								
	18	457	**(Prefix)-18-CSF24**								
	24	609	**(Prefix)-24-CSF24**								
	30	762	**(Prefix)-30-CSF24**								
	36	914	**(Prefix)-36-CSF24**								
	42	1067	**(Prefix)-42-CSF24**								
36 (914)	6	152	**(Prefix)-06-CSF36**	43 (1092)	39 (991)	44 (1118)	39 (991)	45 (1143)	39 (991)	46 (1168)	39 (991)
	9	228	**(Prefix)-09-CSF36**								
	12	305	**(Prefix)-12-CSF36**								
	18	457	**(Prefix)-18-CSF36**								
	24	609	**(Prefix)-24-CSF36**								
	30	762	**(Prefix)-30-CSF36**								
	36	914	**(Prefix)-36-CSF36**								
	42	1067	**(Prefix)-42-CSF36**								
48 (1219)	6	152	**(Prefix)-06-CSF48**	55 (1397)	51 (1295)	56 (1422)	51 (1295)	57 (1448)	51 (1295)	58 (1473)	51 (1295)
	9	228	**(Prefix)-09-CSF48**								
	12	305	**(Prefix)-12-CSF48**								
	18	457	**(Prefix)-18-CSF48**								
	24	609	**(Prefix)-24-CSF48**								
	30	762	**(Prefix)-30-CSF48**								
	36	914	**(Prefix)-36-CSF48**								
	42	1067	**(Prefix)-42-CSF48**								

(Prefix) See page L-3 for catalog number prefix.
Width dimensions are to inside wall. For aluminum fittings add 1.5 inches (38mm) for total outside width.
Manufacturing tolerances apply to all dimensions.

All dimensions in parentheses are millimeters unless otherwise specified.



How The Service Advisor Works

We know that your time is important! That's why the color-coding system in this catalog is designed to help you select products that fit your service needs. Products are marked to indicate the typical lead time for orders of 50 pieces or less.

Customer: How do I select my straight sections. covers, or fittings so that I get the quickest turnaround?

Service Advisor: Each part of our selection chart is shown in colors. If any section of a part number is a different color, the part will typically ship with the longer lead time represented by the colors.

- Green = Fastest shipped items
- Black = Normal lead-time items
- Red = Normally long lead-time items

Example:	**24**	**FV**	**-**	**09**	**-**	**24**	**-**	**120**
	3-5	15		3-5		3-5		3-5

Part will have a long lead time because of the FV material.

Changing the part number from 24FV to 24F will change the coding to black for all sections and reduce the lead time.

Corrosion Guide

The information shown in this corrosion guide is based on full immersion laboratory tests and data generated from resin manufacturer's data. It should be noted that in some of the environments listed, splashes and spill situations may result in a more corrosive situation than indicated due to the evaporation of water. Regular wash down is recommended in these situations.

All data represents the best available information and is believed to be correct. The data should not be construed as a warranty of performance for that product as presented in these tables. User tests should be performed to determine suitability of service if there is any doubt or concern. Such variables as concentration, temperature, time and combined chemical effects of mixtures of chemicals make it impossible to specify the exact suitability of fiber reinforced plastics in all environments. We will be happy to supply material samples for testing. These recommendations should only be used as a guide and we do not take responsibility for design or suitability of materials for service intended. In no event will we be liable for any consequential or special damages for any defective material or workmanship including without limitation, labor charge, other expense or damage to properties resulting from loss of materials or profits or increased expenses of operations.

CHEMICAL ENVIRONMENT	POLYESTER		VINYL ESTER	
	Max Wt. %	Max Oper. Temp °F	Max Wt. %	Max Oper. Temp °F
Acetic Acid	10	190	10	210
Acetic Acid	50	125	50	180
Acetone	N/R	N/R	100	75
Aluminum Chloride	SAT	170	SAT	200
Aluminum Hydroxide	SAT	160	SAT	170
Aluminum Nitrate	SAT	150	SAT	170
Aluminum Sulfate	SAT	180	SAT	200
Ammonium Chloride	SAT	170	SAT	190
Ammonium Hydroxide	1	100	10	150
Ammonium Hydroxide	28	N/R	28	100
Ammonium Carbonate	N/R	N/R	SAT	150
Ammonium Bicarbonate	15	125	SAT	130
Ammonium Nitrate	SAT	160	SAT	190
Ammonium Persulfate	SAT	N/R	SAT	150
Ammonium Sulfate	SAT	170	SAT	200
Amyl Alcohol	ALL	N/R	ALL	90
Amyl Alcohol Vapor	-	140	-	120
Benzene	N/R	N/R	100	140
Benzene Sulfonic Acid	25	110	SAT	200
Benzoic Acid	SAT	150	SAT	200
Benzoyl Alcohol	100	N/R	100	N/R
Borax	SAT	170	SAT	200
Calcium Carbonate	SAT	170	SAT	200
Calcium Chloride	SAT	170	SAT	200
Calcium Hydroxide	25	70	25	165
Calcium Nitrate	SAT	180	SAT	200
Calcium Sulfate	SAT	180	SAT	200
Carbon Disulfide	N/R	N/R	N/R	N/R
Carbonic Acid	SAT	130	SAT	180
Carbon Dioxide Gas	-	200	-	200
Carbon Monoxide Gas	-	200	-	200
Carbon Tetrachloride	N/R	N/R	100	75
Chlorine, Dry Gas	-	140	-	170
Chlorine, Wet Gas	-	N/R	-	180
Chlorine Water	SAT	80	SAT	180

CHEMICAL ENVIRONMENT	POLYESTER		VINYL ESTER	
	Max Wt. %	Max Oper. Temp °F	Max Wt. %	Max Oper. Temp °F
Chromic Acid	5	70	10	120
Citric Acid	SAT	170	SAT	200
Copper Chloride	SAT	170	SAT	200
Copper Cyanide	SAT	170	SAT	200
Copper Nitrate	SAT	170	SAT	200
Crude Oil, Sour	100	170	100	200
Cyclohexane	N/R	N/R	N/R	N/R
Cyclohexane, Vapor	ALL	100	ALL	130
Diesel Fuel	100	160	100	180
Diethyl Ether	N/R	N/R	N/R	N/R
Dimethyl Phthalate	N/R	N/R	N/R	N/R
Ethanol	50	75	50	90
Ethyl Acetate	N/R	N/R	N/R	N/R
Ethylene Chloride	N/R	N/R	N/R	N/R
Ethylene Glycol	100	90	100	200
Fatty Acids	SAT	180	SAT	200
Ferric Chloride	SAT	170	SAT	200
Ferric Nitrate	SAT	170	SAT	200
Ferric Sulfate	SAT	170	SAT	200
Ferrous Chloride	SAT	170	SAT	200
Fluoboric Acid	N/R	N/R	SAT	165
Fluosilicic Acid	N/R	N/R	SAT	70
Formaldehyde	50	75	50	100
Formic Acid	N/R	N/R	50	100
Gasoline	100	80	100	150
Glucose	100	170	100	200
Glycerine	100	150	100	200
Heptane	100	110	100	120
Hexane	100	90	100	130
Hydrobromic Acid	50	120	50	120
Hydrochloric Acid	10	150	10	200
Hydrochloric Acid	20	140	20	190
Hydrochloric Acid	37	75	37	95
Hydrofluoric Acid	N/R	N/R	15	80
Hydrogen Bromide, Dry	100	190	100	200

-: No Information Available N/R: Not Recommended SAT: Saturated Solution FUM: Fumes

Corrosion Guide

CHEMICAL ENVIRONMENT	POLYESTER		VINYL ESTER	
	Max Wt. %	Max Oper. Temp °F	Max Wt. %	Max Oper. Temp °F
Hydrogen Bromide, Wet	100	75	100	130
Hydrogen Chloride	-	120	-	200
Hydrogen Peroxide	5	100	30	100
Hydrogen Sulfide, Dry	100	170	100	210
Hydrogen Sulfide, Wet	100	170	100	210
Hypochlorous Acid	20	80	20	150
Isopropyl Alcohol	N/R	N/R	15	80
Kerosene	100	140	100	180
Lactic Acid	SAT	170	SAT	200
Lead Acetate	SAT	170	SAT	200
Lead Chloride	SAT	140	SAT	200
Lead Nitrate	SAT	-	SAT	200
Linseed Oil	100	150	100	190
Lithium Chloride	SAT	150	SAT	190
Magnesium Carbonate	SAT	140	SAT	170
Magnesium Chloride	SAT	170	SAT	200
Magnesium Hydroxide	SAT	150	SAT	190
Magnesium Nitrate	SAT	140	SAT	180
Magnesium Sulfate	SAT	170	SAT	190
Mercuric Chloride	SAT	150	SAT	190
Mercurous Chloride	SAT	140	SAT	180
Methyl Ethyl Ketone	N/R	N/R	N/R	N/R
Mineral Oils	100	170	100	200
Monochlorobenzene	N/R	N/R	N/R	N/R
Naphtha	100	140	100	170
Nickel Chloride	SAT	170	SAT	200
Nickel Nitrate	SAT	170	SAT	200
Nickel Sulfate	SAT	170	SAT	200
Nitric Acid	5	140	5	150
Nitric Acid	20	70	20	100
Oleic Acid	100	170	100	190
Oxalic Acid	ALL	75	ALL	120
Paper Mill Liquors	-	100	-	120
Perchlorethylene	100	N/R	100	N/R
Perchloric Acid	N/R	N/R	10	150
Perchloric Acid	N/R	N/R	30	80
Phosphoric Acid	10	160	10	200
Phosphoric Acid	100	120	100	200
Potassium Aluminum Sulfate	SAT	170	SAT	200
Potassium Bicarbonate	50	80	50	140
Potassium Carbonate	10	N/R	10	120
Potassium Chloride	SAT	170	SAT	200
Potassium Dichromate	SAT	170	SAT	200

CHEMICAL ENVIRONMENT	POLYESTER		VINYL ESTER	
	Max Wt.	Max Oper. Temp °F	Max Wt. %	Max Oper. Temp °F
Potassium Hydroxide	N/R	N/R	25	150
Potassium Nitrate	SAT	170	SAT	200
Potassium Permanganate	100	80	100	210
Potassium Sulfate	SAT	170	SAT	200
Propylene Glycol	ALL	170	ALL	200
Phthalic Acid	-	-	SAT	200
Sodium Acetate	SAT	160	SAT	200
Sodium Benzoate	SAT	170	SAT	200
Sodium Bicarbonate	SAT	160	SAT	175
Sodium Bisulfate	ALL	170	ALL	200
Sodium Bromide	ALL	170	ALL	200
Sodium Carbonate	10	80	35	160
Sodium Chloride	SAT	170	SAT	200
Sodium Cyanide	SAT	170	SAT	200
Sodium Hydroxide	N/R	N/R	50	150
Sodium Hydroxide	N/R	N/R	25	80
Sodium Hypochloride	N/R	N/R	10	150
Sodium Monophosphate	SAT	170	SAT	200
Sodium Nitrate	SAT	170	SAT	200
Sodium Sulfate	SAT	170	SAT	200
Sodium Thiosulfate	ALL	100	ALL	120
Stannic Chloride	SAT	160	SAT	190
Styrene	N/R	N/R	N/R	N/R
Sulfated Detergent	0/50	170	0/50	200
Sulfur Dioxide	100	80	100	200
Sulfur Trioxide	100	80	100	200
Sulfuric Acid	93	N/R	93	N/R
Sulfuric Acid	50	N/R	50	180
Sulfuric Acid	25	75	25	190
Sulfurous Acid	SAT	80	N/R	N/R
Tartaric Acid	SAT	170	SAT	200
Tetrachloroethylene	N/R	N/R	FUM	75
Toluene	N/R	N/R	N/R	N/R
Trisodium Phosphate	N/R	N/R	SAT	175
Urea	SAT	130	SAT	140
Vinegar	100	170	100	200
Water, Distilled	100	170	100	190
Water, Tap	100	170	100	190
Water, Sea	SAT	170	SAT	190
Xylene	N/R	N/R	N/R	N/R
Zinc Chloride	SAT	170	SAT	200
Zinc Nitrate	SAT	170	SAT	200
Zinc Sulfate	SAT	170	SAT	200

-: No Information Available N/R: Not Recommended SAT: Saturated Solution FUM: Fumes

Load Data

Fiberglass Cable Tray and Cable Channel are offered in two (2) versions for applications as follows:

Standard Series	Resin Type	Color	Meets
13F, 24F, 36F, 46F, 48F FCC-03, FCC-04, FCC-06, FCC-08	Fire Retardant Polyester	Gray	ASTM E-84 Class 1 - UL94 VO Good Corrosion Resistance in most environments
High Performance			
13FV, 24FV, 36FV, 46FV, 48FV FCCV-03, FCCV-04, FCCV-06, FCCV-08	Fire Retardant Vinyl Ester	Beige	ASTM E-84 Class 1 - UL94 VO Improved Corrosion Resistance For more severe environments Higher Heat Distortion Temperature

Effect of Temperature

Strength properties of reinforced plastics are reduced when continuously exposed to elevated temperatures. Working loads shall be reduced based on the chart to the right:

NEMA Standard 8-10-1986
If unusual temperature conditions exist, the manufacturer should be consulted. Authorized Engineering information 8-20-1986

Temperature in Degrees F	Approximate Percent of Strength
75	100
100	90
125	78
150	68
175	60
200	52

Typical Properties of Pultruded Components

Eaton B-Line Division Fiberglass Cable Tray systems are manufactured from glass fiber-reinforced plastic shapes that meet ASTM E-84, Smoke Density rating for polyester of 680, for vinyl ester 1025, Class 1 Flame Rating and self-extinguishing requirements of ASTM D-635. A surface veil is applied during pultrusion to insure a resin-rich surface and ultraviolet resistance.

Flame Resistance (FTMS 406-2023) ign/burn, seconds	75/75
Intermittent Flame Test (HLT-15), rating	100
Flammability Test (ASTM D635) Ignition Burning Time	 none 0 sec.

Properties	Test Method	Unit/ Value	3" & 4" Cable Tray, Cable Channel		6" Cable Tray	
			Longitudinal	Transverse	Longitudinal	Transverse
Density	ASTM D1505	lbs/in³	.058-.062	-	.072 - .076	-
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	5.0×10^{-6}	-	5.0×10^{-6}	-
Water Absorption	ASTM D570	Max %	0.5	-	0.5	-
Dielectic Strength	ASTM D149	V/mil (vpm)	200	-	200	-
Flammability Classification	UL94	VO	-	-	-	-
Flame Spread	ASTM E-84	20 Max	-	-	-	-

Expansion or Contraction for Various Temperature Differences

Temperature Differential	Cable Tray Length for 1" Expansion	Tray Length for Each Expansion Connector*
25°F (13.9°C)	667 Feet (203.3m)	417 Feet (127.1m)
50°F (27.8°C)	333 Feet (101.5m)	208 Feet (63.4m)
75°F (41.7°C)	222 Feet (67.6m)	139 Feet (42.3m)
100°F (55.6°C)	167 Feet (50.9m)	104 Feet (31.7m)
125°F (69.4°C)	133 Feet (40.5m)	83 Feet (25.3m)
150°F (83.3°C)	111 Feet (33.8m)	69 Feet (21.0m)
175°F (97.2°C)	95 Feet (28.9m)	59 Feet (18.0m)

Note for gap set and hold down/guide location, see installation instruction above.
*1" (25.4mm) slotted holes in each expansion connector allow 5/8" (15.9mm) total expansion or contraction.
Authorized Engineering Information 8-20-1986

Cable Tray Installation Guide

Installation of B-Line series fiberglass cable tray should be made in accordance with the standards set by NEMA Publication VE-2 (NEMA BI 50016), Cable Tray Installation Guide, and National Electrical Code, Article 318.

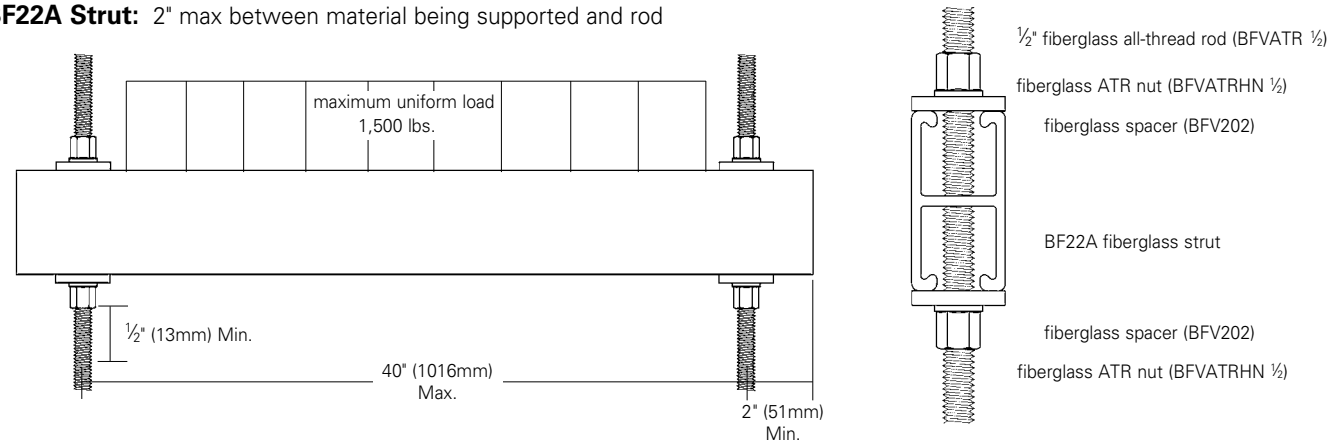
- Always observe common safety practices when assembling tray and fittings. Installations generally require some field cutting. Dust created during fabrication presents no serious health hazard, but skin irritation may be experienced by some workers.
- Operators of saws and drills should wear masks, long sleeve shirts or coveralls.
- Fabrication with fiberglass is relatively easy and comparable to working with wood. Ordinary hand tools may be used in most cases.
- Avoid excessive pressure when sawing or drilling. Too much force can rapidly dull tools and also produce excessive heat which softens the bonding resin in the fiberglass resulting in a ragged edge rather than a clean-cut edge.
- Field cutting is simple and can be accomplished with a circular power saw with an abrasive cut-off wheel (masonry type) or hack saw (24 to 32 teeth per inch).
- Drill fiberglass as you would drill hard wood. Standard twist drills are more than adequate.
- Any surface that has been drilled, cut, sanded or otherwise broken, **must be sealed** with a compatible resin. (see page M-48)
- Carbide tipped saw blades and drill bits are recommended when cutting large quantities.
- Support the fiberglass material firmly during cutting operations to keep material from shifting which may cause chipping at the cut edge.
- Each tray section length should be equal to or greater than the support span.
- When possible, the splice should be located at quarter span.
- Fittings should be supported as per NEMA FG-1.

Recommended Fiberglass Trapeze Hanging Systems

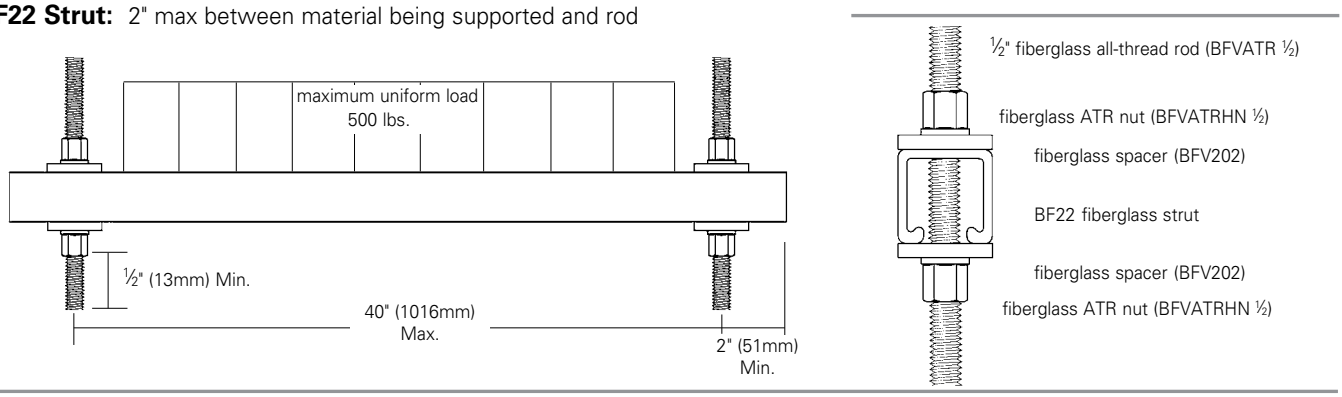
Notes:

1) A snug three to four ft.-lbs. torque is sufficient for all thread rod nuts.
2) When supporting cable tray, the spacing between each trapeze should not exceed the distance between splice plates.
3) When hanging from beam, B-Line series BFV751 series clamps provide extra thread engagement necessary for load ratings. All thread rod must be fully engaged in the clamp.
4) Design load safety factor is 3:1

BF22A Strut: 2" max between material being supported and rod



BF22 Strut: 2" max between material being supported and rod



For vinyl ester resin, 'V' must be added appropriately to part number. Example: BFV22A.

WARNING

APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATORY PROTECTION DEVICE SHOULD BE WORN WHEN FIELD CUTTING OR GRINDING FIBERGLASS.

SECTION 161xx

NON-METALLIC CABLE TRAY
POLYESTER, VINYL ESTER

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. The work covered under this section consists of the furnishing of all necessary labor, supervision, materials, equipment, tests and services to install complete cable tray systems as shown on the drawings.

B. Cable tray systems are defined to include, but are not limited to straight sections of [ladder type] [vented bottom type] [solid bottom type] cable trays, bends, tees, elbows, drop-outs, supports and accessories.

1.02 REFERENCES

A. ANSI/NFPA 70 – National Electrical Code

B. NEMA FG 1-2002 – Non-Metallic Cable Tray Systems

C. NEMA VE 2-2002 – Cable Tray Installation Guidelines

1.03 DRAWINGS

A. The drawings, which constitute a part of these specifications, indicate the general route of the cable tray systems. Data presented on these drawings are as accurate as preliminary surveys and planning can determine until final equipment selection is made. Accuracy is not guaranteed and field verification, of all dimensions, routing, etc., is directed.

B. Specifications and drawings are for assistance and guidance, but exact routing, locations, distances and levels will be governed by actual field conditions. Contractor is directed to make field surveys as part of his work prior to submitting system layout drawings.

1.04 SUBMITTALS

A. Submittal Drawings: Submit drawings of cable tray and accessories including clamps, brackets, hanger rods, splice plate connectors, expansion joint assemblies, and fittings, showing accurately scaled components.

B. Product Data: Submit manufacturer's data on cable tray including, but not limited to, types, materials, finishes, rung spacings, inside depths and fitting radii. For side rails and rungs, submit cross sectional properties including Section Modulus (Sx) and Moment of Inertia (Ix).

1.05 QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of cable trays and fittings of types and capacities required, whose products have been in satisfactory use in similar service for not less than 5 years.

B. NEMA Compliance: Comply with NEMA Standards Publication Number FG-1, "Non-Metallic Cable Tray Systems".

C. NEC Compliance: Comply with NEC, as applicable to construction and installation of cable tray and cable channel systems (Article 318, NEC).

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver cable tray systems and components carefully to avoid breakage, denting and scoring finishes. Do not install damaged equipment.

B. Store cable trays and accessories in original cartons and in clean dry space; protect from weather and construction traffic. Wet materials should be unpacked and dried before storage.

continued on page M-8

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with these specifications, Eaton's B-Line series cable tray systems shall be as manufactured by Eaton.

2.02 CABLE TRAY SECTIONS AND COMPONENTS

A. General: Except as otherwise indicated, provide non-metallic cable trays, of types, classes, and sizes indicated; with splice plates, bolts, nuts and washers for connecting units. Construct units with rounded edges and smooth surfaces; in compliance with applicable standards; and with the following additional construction features. Cable tray shall be installed according to the latest revision of NEMA VE 2.

B. Material and Finish: Straight section structural elements; side rails, rungs and splice plates shall be pultruded from glass fiber reinforced polyester resin or vinyl ester resin.

C. Pultruded shapes shall be constructed with a surface veil to insure a resin-rich surface and ultraviolet resistance.

D. Pultruded shapes shall meet ASTM E-84, Class 1 flame rating and self-extinguishing requirements of ASTM D-635.

2.03 TYPE OF TRAY SYSTEM

A. Ladder Cable Trays shall consist of two longitudinal members (side rails) with transverse members (rungs) mechanically fastened and adhesively bonded to the side rails. Rungs shall be spaced [6] [9] [12] inches apart. Rung spacing in radiused fittings shall be industry standard 9" and measured at the center of the tray's width. Each rung must be capable of supporting a 200 lb. concentrated load at the center of the cable tray with a safety factor of 1.5 (See following rung loading table).

B. Ventilated Bottom Cable Trays shall consist of two longitudinal members (side rails) with rungs spaced 4" apart.

C. Solid Bottom Cable Trays shall consist of two longitudinal members (side rails) with a solid sheet over rungs spaced on 12" centers.

D. Cable tray loading depth shall be [2] [3] [5] inches per NEMA FG 1.

E. Straight sections shall be supplied in standard [10 foot (3m)] [20 foot (6m)] lengths.

F. Cable tray inside widths shall be [6] [9] [12] [18] [24] [30] [36] inches or as shown on drawings. Outside width shall not exceed inside by more than a total of 2".

G. Straight and expansion splice plates will be of "L" shaped lay-in design with an eight-bolt pattern in 5" fill systems and four-bolt pattern in 3" and 2" fill systems. Splice plates shall be furnished with straight sections and fittings.

H. All fittings must have a minimum radius of [12] [24] [36].

I. Fittings shall be of mitered construction.

J. Dimension tolerances will be per NEMA FG 1.

2.04 LOADING CAPACITIES

A. Cable trays shall meet NEMA class designation: [8C] [12C] [20B] [20C].

Or

A. Cable tray shall be capable of carrying a uniformly distributed load of _____ lbs./ft on a _____ foot support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE 1 Section 5.2.

continued on page M-9

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install cable trays as indicated: Installation shall be in accordance with equipment manufacturer's instructions, and with recognized industry practices to ensure that cable tray equipment comply with requirements of NEC and applicable portions of NFPA 70B. Reference NEMA VE 2 for general cable tray installation guidelines.

B. Coordinate cable tray with other electrical work as necessary to properly integrate installation of cable tray work with other work.

C. Provide sufficient space encompassing cable trays to permit access for installing and maintaining cables.

D. Cable tray fitting supports shall be located such that they meet the strength requirements of straight sections. Install fitting supports per NEMA VE 2 guidelines, or in accordance with manufacturer's instructions.

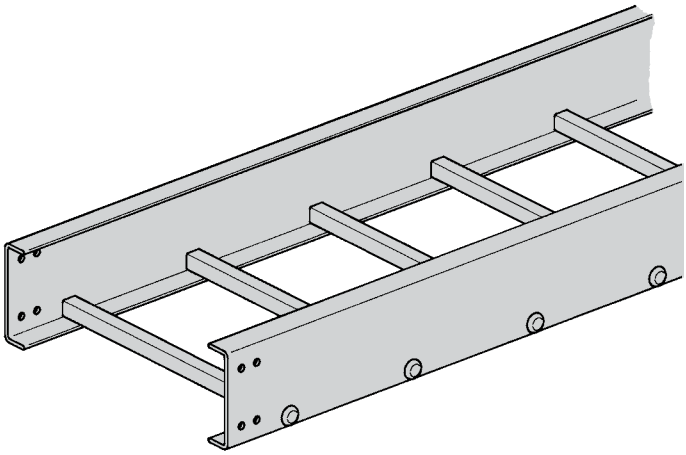
3.02 TESTING

A. Upon request manufacturer shall provide test reports witnessed by an independent testing laboratory of the "worst case" loading conditions outlined in this specification and performed in accordance with the latest revision of NEMA FG 1.

To order a Fiberglass straight section of cable tray, select the appropriate size and material from the charts below and place those symbols in the sequence shown to form the complete catalog number.

Procedure:

1. Select the correct **B-Line series Fiberglass** tray using the Load Data for straight sections shown on page M-16 for 4", page M-17 and M-18 for 6".
2. Select the resin required. Polyester or Vinyl Ester. Refer to Corrosion Guide on pages M-3 and M-4, for the effect of environmental conditions on the desired material and the effective temperature range on page M-5.
3. The tray prefix is completed by inserting the rung spacing.
4. Select the desired width in inches.
5. Finally select the straight section length in inches. Fiberglass 120 [10′] (3m) or 240 [20′] (6m)



Straight Section Part Numbering

Example: Prefix **24 F 09 - 24 - 120**

Series	Material	Rung Spacing	Width	Length
24	F - Fiberglass (Gray) Polyester Resin	06 = 6" (152)	06 = 6" (152)	120 = 120" (3m)
36		09 = 9" (228)	09 = 9" (228)	240 = 240" (6m)
46	FV - Fiberglass (Beige) Vinyl Ester Resin	12 = 12" (305)	12 = 12" (305)	
		† SB = Solod Bottom	18 = 18" (457)	
		*See page APP-1 for Marine Rung option.	24 = 24" (609)	
			30 = 30" (762)	
			36 = 36" (914)	

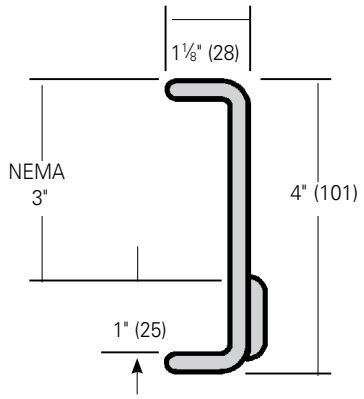
Note: One pair of splice plates with SS6 hardware included. † Solid bottom sheets ship separately with connecting handware and assembled on site.

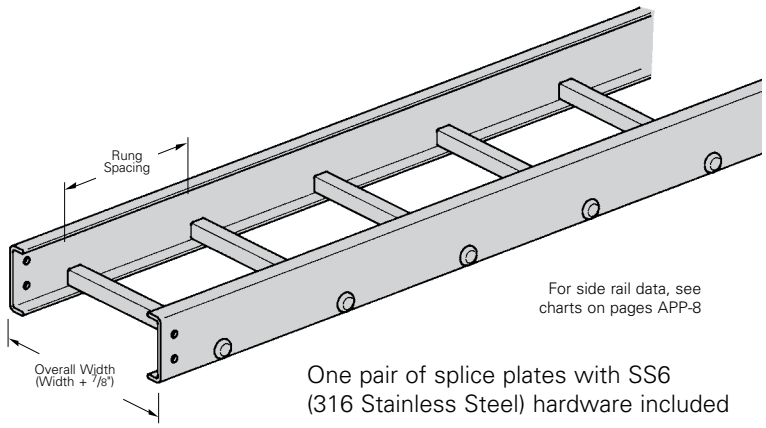
Fitting Section Part Selector

Example: Prefix **4 F SB - 24 - 90 HB 24**

Height	Material	Bottom	Width	Angle	Type	Radius
4″ (101)	F - Fiberglass (Gray) Polyester Resin	Blank = Ladder Type	6" (152)	45˚	HB - Horizontal Bend	12" (305)
6″ (152)	FV - Fiberglass (Beige) Vinyl Ester Resin	SB = Solid Bottom	9" (228)	90˚	HT - Horizontal Tee	24" (609)
			12" (305)		HX - Horizontal Cross	36" (914)
			18" (457)		VI - Vertical Inside Bend	
			24" (609)		VO - Vertical Outside Bend	
			30" (762)		VT - Vertical Tee	
			36" (914)		VTU - Vertical Tee, Up	
					RR - Right Reducer	
					LR - Left Reducer	
					SR - Straight Reducer	

Notes: Standard rung spacing on fittings is 9" (225).
Splice plates with SS6 hardware included.





One pair of splice plates with SS6 (316 Stainless Steel) hardware included

Series 24 Fiberglass Straight Section Part Numbering

Prefix

Example: **24 F 09 - 24 - 120**

Series
24

Material
- **F** = Polyester
- **FV** = Vinyl Ester

Type
Ladder -
- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing
- **SB** = Solid bottom †

Width
- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

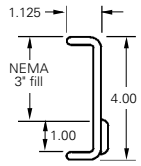
Length
- ① **120** = 10 ft.
- ② 240 = 20 ft.

①Primary Length.
②Secondary Length.

See page C-23 for explanation of lengths.

See page M-38 for additional rung options.

† Solid bottom sheets ship separately with connecting handware and assembled on site.

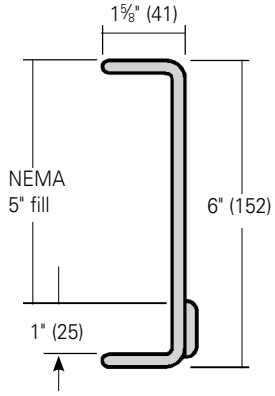
B-Line series	Side Rail Dimensions	NEMA & CSA Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Span meters	Load kg/m	Deflection Multiplier
24F 24FV		NEMA: 12C CSA: E-3m	6	672	0.001	1.8	958	0.023
			8	378	0.004	2.4	539	0.074
			10	242	0.011	3.0	345	0.182
			12	161	0.022	3.7	240	0.378

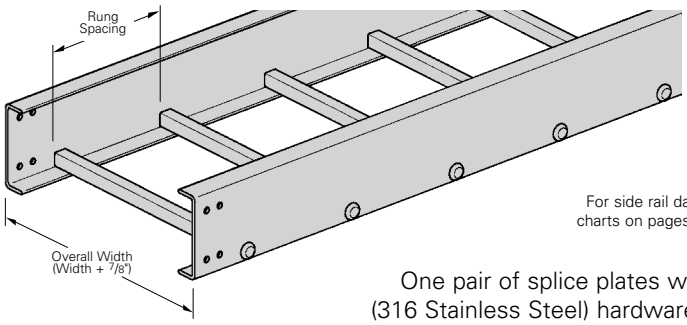
Values are based on simple beam tests per NEMA FG-1 on 36" wide cable tray rungs spaced on 12" centers. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable being installed.

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%.

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

Dimensions shown in parentheses are in millimeters, unless otherwise specified.





For side rail data, see charts on pages APP-8

One pair of splice plates with SS6 (316 Stainless Steel) hardware included

Series 36 Fiberglass Straight Section Part Numbering

Prefix

Example: **36 F 09 - 24 - 120**

Series
36

Material
- ● **F** = Polyester
- ● **FV** = Vinyl Ester

Type
Ladder -
- ● **06** = 6" rung spacing
- ● **09** = 9" rung spacing
- ● **12** = 12" rung spacing
- ● **SB** = Solid bottom †

Width
- ● **06** = 6"
- ● **09** = 9"
- ● **12** = 12"
- ● **18** = 18"
- ● **24** = 24"
- ● **30** = 30"
- ● **36** = 36"

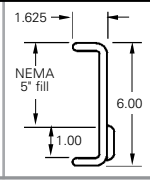
Length
- ● **120** = 10 ft.
- ● 240 = 20 ft.

Primary Length.
Secondary Length.

See page C-23 for explanation of lengths.

See page M-38 for additional rung options.

† Solid bottom sheets ship separately with connecting hardware and assembled on site.

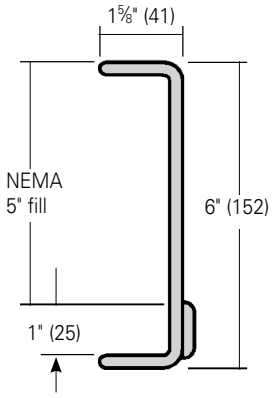
B-Line Series	Side Rail Dimensions	NEMA & CSA Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Span meters	Load kg/m	Deflection Multiplier
36F 36FV		NEMA: 20A CSA: E-6m	12	200	0.005	3.7	298	0.081
			14	147	0.009	4.3	219	0.151
			16	113	0.015	4.9	167	0.257
			18	89	0.024	5.5	132	0.411
			20	72	0.037	6.1	107	0.627

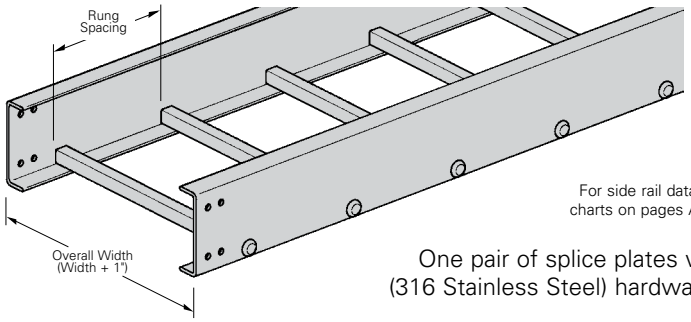
Values are based on simple beam tests per NEMA FG-1 on 36" wide cable tray rungs spaced on 12" centers. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable being installed.

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%.

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

Dimensions shown in parentheses are in millimeters, unless otherwise specified.





For side rail data, see charts on pages APP-8

One pair of splice plates with SS6 (316 Stainless Steel) hardware included

Series 46 Fiberglass Straight Section Part Numbering

Prefix

Example: **46 F 09 - 24 - 120**

Series

46

Material

- **F** = Polyester
- **FV** = Vinyl Ester

Type

Ladder -

- **06** = 6" rung spacing
- **09** = 9" rung spacing
- **12** = 12" rung spacing
- **SB** = Solid bottom †

Width

- **06** = 6"
- **09** = 9"
- **12** = 12"
- **18** = 18"
- **24** = 24"
- **30** = 30"
- **36** = 36"

Length

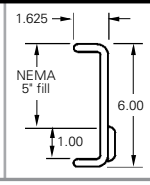
- **120** = 10 ft.
- 240 = 20 ft.

Primary Length.
Secondary Length.

See page C-23 for explanation of lengths.

See page M-38 for additional rung options.

† Solid bottom sheets ship separately with connecting handware and assembled on site.

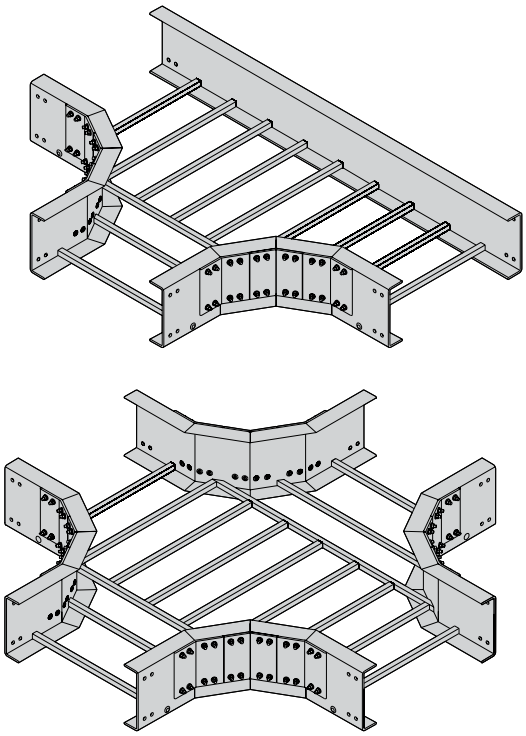
B-Line Series	Side Rail Dimensions	NEMA & CSA Classifications	Span ft	Load lbs/ft	Deflection Multiplier	Span meters	Load kg/m	Deflection Multiplier
46F 46FV		NEMA: 20C CSA: E-6m	12	356	0.005	3.7	529	0.079
			14	261	0.009	4.3	389	0.145
			16	200	0.015	4.9	298	0.246
			18	157	0.023	5.5	235	0.396
			20	128	0.035	6.1	190	0.605

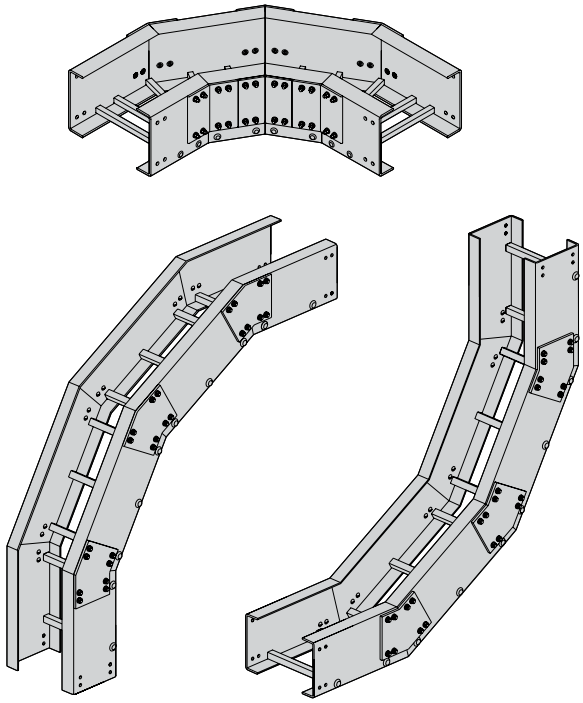
Values are based on simple beam tests per NEMA FG-1 on 36" wide cable tray rungs spaced on 12" centers. Published load safety factor is 1.5. To convert 1.5 safety factor to 2.0, multiply published load by 0.75. To obtain mid-span deflection, multiply a load by the deflection multiplier. Cable tray must be supported on spans shorter than or equal to the length of the cable being installed.

When trays are used in continuous spans, the deflection of the tray is reduced by as much as 50%.

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

Dimensions shown in parentheses are in millimeters, unless otherwise specified.





Fiberglass Fittings Part Numbering

Prefix

Example: **4** **F** **SB** - **12** - **90** **HB** **12**

(9" rung spacing is standard)

Height
- **4** = 4″
- **6** = 6″

Material
- **F** = Polyester
- **FV** = Vinyl Ester

Bottom
- Blank = Ladder Type
- SB = Solid Bottom†

Width
- **06** = 6" (152)
- **09** = 9" (228)
- **12** = 12" (305)
- **18** = 18" (457)
- **24** = 24" (609)
- **30** = 30" (762)
- **36** = 36" (914)

Angle*
- **45** = 45°
- **90** = 90°

Type
- ***HB** = Horizontal Bend
- **HT** = Horizontal Tee
- **HX** = Horizontal Cross
- ***VI** = Vertical Inside Bend
- ***VO** = Vertical Outside Bend
- **LR** = Left Reducer
- **RR** = Right Reducer
- **SR** = Straight Reducer

Radius
- **12** = 12" (305)
- **24** = 24" (609)
- **36** = 36" (914)

* Angle only required for HB, VI and VO fittings.

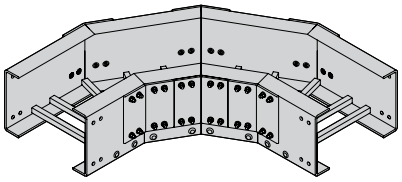
† Solid bottom sheets ship separately with connecting hardware and assembled on site.

Fiberglass

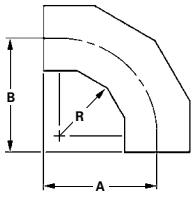
Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Bend 90° (HB)



One pair of splice plates with SS6 hardware included.



90˚ Mitered

Prefix - 06 - 90 HB 12
- Radius
- Fitting
- Angle
- Width
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix.
Dimensions for reference only, when critical contact factory.

- R - Bend Radius in. (mm)	Tray Width in. (mm)		90˚ Horizontal Bend - Mitered Dimensions				
			Catalog No.	A in.	A (mm)	B in.	B (mm)
12 (305)	6	(152)	**(Prefix)-06-90HB12**	28 11/16	(728)	28 11/16	(728)
	9	(228)	**(Prefix)-09-90HB12**	30 3/16	(767)	30 3/16	(767)
	12	(305)	**(Prefix)-12-90HB12**	31 11/16	(805)	31 11/16	(805)
	18	(457)	**(Prefix)-18-90HB12**	34 11/16	(881)	34 11/16	(881)
	24	(609)	**(Prefix)-24-90HB12**	37 11/16	(957)	37 11/16	(957)
	30	(762)	**(Prefix)-30-90HB12**	40 11/16	(1033)	40 11/16	(1033)
	36	(914)	**(Prefix)-36-90HB12**	43 11/16	(1109)	43 11/16	(1109)
24 (609)	6	(152)	**(Prefix)-06-90HB24**	41	(1041)	41	(1041)
	9	(228)	**(Prefix)-09-90HB24**	42 1/2	(1079)	42 1/2	(1079)
	12	(305)	**(Prefix)-12-90HB24**	44	(1117)	44	(1117)
	18	(457)	**(Prefix)-18-90HB24**	47	(1193)	47	(1193)
	24	(609)	**(Prefix)-24-90HB24**	50	(1269)	50	(1269)
	30	(762)	**(Prefix)-30-90HB24**	53	(1346)	53	(1346)
	36	(914)	**(Prefix)-36-90HB24**	56	(1422)	56	(1422)
36 (914)	6	(152)	**(Prefix)-06-90HB36**	53 1/4	(1353)	53 1/4	(1353)
	9	(228)	**(Prefix)-09-90HB36**	54 3/4	(1391)	54 3/4	(1391)
	12	(305)	**(Prefix)-12-90HB36**	56 1/4	(1429)	56 1/4	(1429)
	18	(457)	**(Prefix)-18-90HB36**	59 1/4	(1505)	59 1/4	(1505)
	24	(609)	**(Prefix)-24-90HB36**	62 1/4	(1582)	62 1/4	(1582)
	30	(762)	**(Prefix)-30-90HB36**	65 1/4	(1658)	65 1/4	(1658)
	36	(914)	**(Prefix)-36-90HB36**	68 1/4	(1734)	68 1/4	(1734)

For 4" Fittings

(Tray Widths - 6" thru 36" • Radius 12", 24" & 36")
Polyester, Vinyl Ester
All radius are mitered

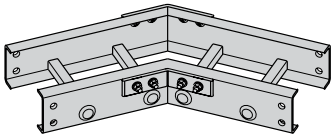
For 6" Fittings

(Tray Widths - 6" thru 36" • Radius 12", 24" & 36")
Polyester, Vinyl Ester
All radius are mitered

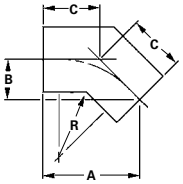
Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Bend 45° (HB)



One pair of splice plates with SS6 hardware included.



45˚ Mitered

Prefix - 06 - 45 HB 12
- Radius
- Fitting
- Angle
- Width
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix.
Dimensions for reference only, when critical contact factory.

- R - Bend Radius in.	(mm)	Tray Width in.	(mm)	45˚ Horizontal Bend - Mitered Dimensions Catalog No.	A in.	(mm)	B in.	(mm)	C in.	(mm)
12	(305)	6	(152)	**(Prefix)-06-45HB12**	24 21/32	(626)	10 7/32	(259)	14 7/16	(367)
		9	(228)	**(Prefix)-09-45HB12**	25 23/32	(653)	10 21/32	(271)	15 1/16	(383)
		12	(305)	**(Prefix)-12-45HB12**	26 25/32	(680)	11 3/32	(282)	15 11/18	(398)
		18	(457)	**(Prefix)-18-45HB12**	28 29/32	(734)	11 31/32	(304)	16 15/16	(430)
		24	(609)	**(Prefix)-24-45HB12**	31 1/32	(788)	12 27/32	(326)	18 5/32	(462)
		30	(762)	**(Prefix)-30-45HB12**	33 5/32	(842)	13 3/4	(349)	19 13/32	(493)
		36	(914)	**(Prefix)-36-45HB12**	35 1/4	(896)	14 5/8	(371)	20 21/32	(525)
24	(609)	6	(152)	**(Prefix)-06-45HB12**	24 21/32	(626)	10 7/32	(259)	14 7/16	(367)
		9	(228)	**(Prefix)-09-45HB12**	25 23/32	(653)	10 21/32	(271)	15 1/16	(383)
		12	(305)	**(Prefix)-12-45HB12**	26 25/32	(680)	11 3/32	(282)	15 11/18	(398)
		18	(457)	**(Prefix)-18-45HB12**	28 29/32	(734)	11 31/32	(304)	16 15/16	(430)
		24	(609)	**(Prefix)-24-45HB12**	31 1/32	(788)	12 27/32	(326)	18 5/32	(462)
		30	(762)	**(Prefix)-30-45HB12**	33 5/32	(842)	13 3/4	(349)	19 13/32	(493)
		36	(914)	**(Prefix)-36-45HB12**	35 1/4	(896)	14 5/8	(371)	20 21/32	(525)
36	(914)	6	(152)	**(Prefix)-06-45HB12**	24 21/32	(626)	10 7/32	(259)	14 7/16	(367)
		9	(228)	**(Prefix)-09-45HB12**	25 23/32	(653)	10 21/32	(271)	15 1/16	(383)
		12	(305)	**(Prefix)-12-45HB12**	26 25/32	(680)	11 3/32	(282)	15 11/18	(398)
		18	(457)	**(Prefix)-18-45HB12**	28 29/32	(734)	11 31/32	(304)	16 15/16	(430)
		24	(609)	**(Prefix)-24-45HB12**	31 1/32	(788)	12 27/32	(326)	18 5/32	(462)
		30	(762)	**(Prefix)-30-45HB12**	33 5/32	(842)	13 3/4	(349)	19 13/32	(493)
		36	(914)	**(Prefix)-36-45HB12**	35 1/4	(896)	14 5/8	(371)	20 21/32	(525)

For 4" Fittings

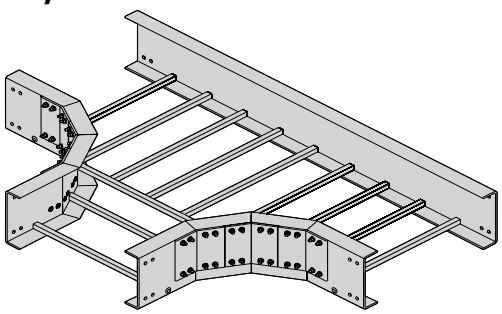
(Tray Widths - 6" thru 36"
Radius 12", 24" & 36")
Polyester, Vinyl Ester
All radius are mitered

For 6" Fittings

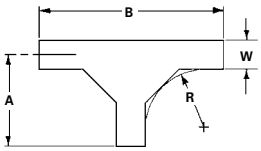
(Tray Widths - 6" thru 36"
Radius 12", 24" & 36")
Polyester, Vinyl Ester
All radius are mitered

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Tee (HT)



Two pair of splice plates with SS6 hardware included.



Mitered Tee

Prefix - 06 - HT 12
- Radius
- Fitting
- Width
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix.
Dimensions for reference only, when critical contact factory.

- R - Bend Radius in. (mm)	Tray Width in. (mm)	Horizontal Tee - Mitered Dimensions		
		Catalog No.	A in. (mm)	B in. (mm)
12 (305)	6 (152)	**(Prefix)-06-HT12**	28 7/32 (716)	56 13/32 (1433)
	9 (228)	**(Prefix)-09-HT12**	29 11/16 (754)	59 13/32 (1509)
	12 (305)	**(Prefix)-12-HT12**	31 7/32 (792)	62 13/32 (1585)
	18 (457)	**(Prefix)-18-HT12**	34 7/32 (869)	68 13/32 (1737)
	24 (609)	**(Prefix)-24-HT12**	37 7/32 (945)	74 13/32 (1890)
	30 (762)	**(Prefix)-30-HT12**	40 7/32 (1021)	80 13/32 (2042)
	36 (914)	**(Prefix)-36-HT12**	43 7/32 (1097)	86 13/32 (2195)
24 (609)	6 (152)	**(Prefix)-06-HT24**	40 7/32 (1021)	80 13/32 (2042)
	9 (228)	**(Prefix)-09-HT24**	41 11/16 (1059)	83 13/32 (2118)
	12 (305)	**(Prefix)-12-HT24**	43 7/32 (1097)	86 13/32 (2195)
	18 (457)	**(Prefix)-18-HT24**	46 7/32 (1173)	92 13/32 (2347)
	24 (609)	**(Prefix)-24-HT24**	49 7/32 (1250)	98 13/32 (2499)
	30 (762)	**(Prefix)-30-HT24**	52 7/32 (1326)	104 13/32 (2652)
	36 (914)	**(Prefix)-36-HT24**	55 7/32 (1402)	110 13/32 (2804)
36 (914)	6 (152)	**(Prefix)-06-HT36**	52 7/32 (1326)	104 13/32 (2652)
	9 (228)	**(Prefix)-09-HT36**	53 11/16 (1364)	107 13/32 (2728)
	12 (305)	**(Prefix)-12-HT36**	55 7/32 (1402)	110 13/32 (2804)
	18 (457)	**(Prefix)-18-HT36**	58 7/32 (1478)	116 13/32 (2957)
	24 (609)	**(Prefix)-24-HT36**	61 7/32 (1554)	122 13/32 (3109)
	30 (762)	**(Prefix)-30-HT36**	64 7/32 (1631)	128 13/32 (3261)
	36 (914)	**(Prefix)-36-HT36**	67 7/32 (1707)	134 13/32 (3414)

For 4" Fittings

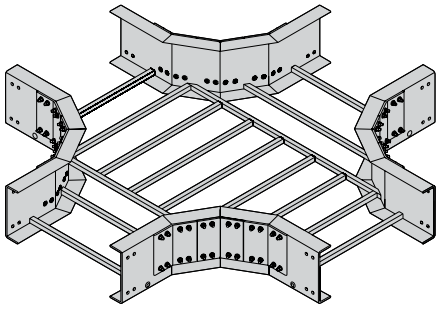
(Tray Widths - 6" thru 36" • Radius 12", 24" & 36")
Polyester, Vinyl Ester
All radius are mitered

For 6" Fittings

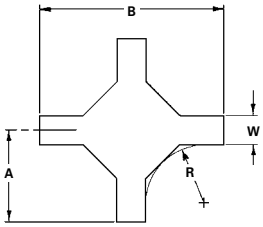
(Tray Widths - 6" thru 36" • Radius 12", 24" & 36")
Polyester, Vinyl Ester
All radius are mitered

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Cross (HX)



Three pair of splice plates with SS6 hardware included.



Mitered Cross

Prefix - 06 - HX 12
- Radius
- Fitting
- Width
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix.
Dimensions for reference only, when critical contact factory.

- R - Bend Radius in.	(mm)	Tray Width in.	(mm)	Horizontal Cross - Mitered Dimensions Catalog No.	A in.	(mm)	B in.	(mm)
12	(305)	6	(152)	**(Prefix)-06-HX12**	28 3/16	(716)	56 13/32	(1433)
		9	(228)	**(Prefix)-09-HX12**	29 11/16	(754)	59 13/32	(1509)
		12	(305)	**(Prefix)-12-HX12**	31 3/16	(792)	62 13/32	(1585)
		18	(457)	**(Prefix)-18-HX12**	34 3/16	(869)	68 13/32	(1737)
		24	(609)	**(Prefix)-24-HX12**	37 3/16	(945)	74 13/32	(1890)
		30	(762)	**(Prefix)-30-HX12**	40 3/16	(1021)	80 13/32	(2042)
		36	(914)	**(Prefix)-36-HX12**	43 3/16	(1097)	86 13/32	(2195)
24	(609)	6	(152)	**(Prefix)-06-HX24**	40 3/16	(1021)	80 13/32	(2042)
		9	(228)	**(Prefix)-09-HX24**	41 11/16	(1059)	83 13/32	(2118)
		12	(305)	**(Prefix)-12-HX24**	43 3/16	(1097)	86 13/32	(2195)
		18	(457)	**(Prefix)-18-HX24**	46 3/16	(1173)	92 13/32	(2347)
		24	(609)	**(Prefix)-24-HX24**	49 3/16	(1250)	98 13/32	(2499)
		30	(762)	**(Prefix)-30-HX24**	52 3/16	(1326)	104 13/32	(2652)
		36	(914)	**(Prefix)-36-HX24**	55 3/16	(1402)	110 13/32	(2804)
36	(914)	6	(152)	**(Prefix)-06-HX36**	52 3/16	(1326)	104 13/32	(2652)
		9	(228)	**(Prefix)-09-HX36**	53 11/16	(1364)	107 13/32	(2728)
		12	(305)	**(Prefix)-12-HX36**	55 3/16	(1402)	110 13/32	(2804)
		18	(457)	**(Prefix)-18-HX36**	58 3/16	(1478)	116 13/32	(2957)
		24	(609)	**(Prefix)-24-HX36**	61 3/16	(1554)	122 13/32	(3109)
		30	(762)	**(Prefix)-30-HX36**	64 3/16	(1631)	128 13/32	(3261)
		36	(914)	**(Prefix)-36-HX36**	67 3/16	(1707)	134 13/32	(3414)

For 4" Fittings

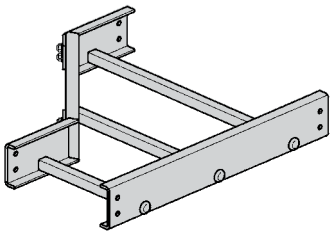
(Tray Widths - 6" thru 36"
Radius 12", 24" & 36")
Polyester, Vinyl Ester
All radius are mitered

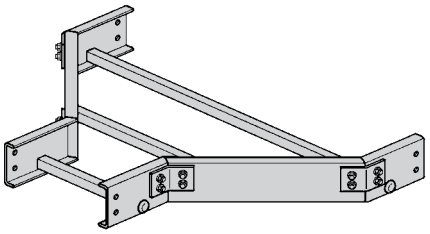
For 6" Fittings

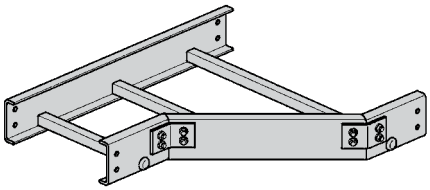
(Tray Widths - 6" thru 36"
Radius 12", 24" & 36")
Polyester, Vinyl Ester
All radius are mitered

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

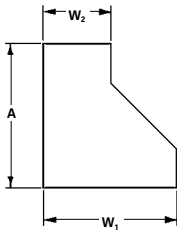
Reducers
(LR) (SR) (RR)



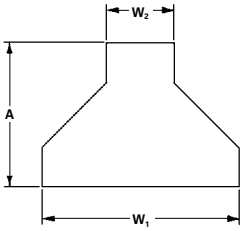




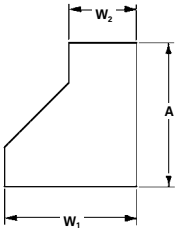
One pair of splice plates with SS6 hardware included.



Left Reducer



Straight Reducer



Right Reducer

4" & 6" Fittings

(Available in all W1 widths shown in chart)

Reducers are all of mitered construction.

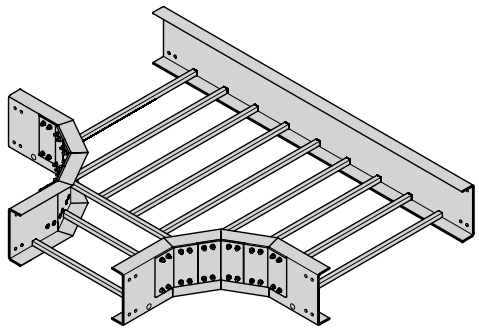
Prefix - 12 - SR 09
- 09 — Width$_2$ W_2
- SR — Fitting
- 12 — Width$_1$ W_1
- Prefix — To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix.
Dimensions for reference only, when critical contact factory.

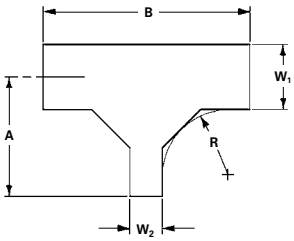
Tray Width		Left Hand Reducer			Straight Reducer			Right Hand Reducer		
W_1 in. (mm)	W_2 in. (mm)	Catalog No.	A in.	A (mm)	Catalog No.	A in.	A (mm)	Catalog No.	A in.	A (mm)
9 (228)	6 (152)	**(Prefix)-09-LR06**	21	(533)	**(Prefix)-09-SR06**	19 1/2	(495)	**(Prefix)-09-RR06**	21	(533)
12 (305)	6 (152)	**(Prefix)-12-LR06**	24	(609)	**(Prefix)-12-SR06**	21	(533)	**(Prefix)-12-RR06**	24	(609)
	9 (228)	**(Prefix)-12-LR09**	21	(533)	**(Prefix)-12-SR09**	19 1/2	(495)	**(Prefix)-12-RR09**	21	(533)
18 (457)	6 (152)	**(Prefix)-18-LR06**	30	(762)	**(Prefix)-18-SR06**	24	(609)	**(Prefix)-18-RR06**	30	(762)
	9 (228)	**(Prefix)-18-LR09**	27	(686)	**(Prefix)-18-SR09**	22 1/2	(571)	**(Prefix)-18-RR09**	27	(686)
	12 (305)	**(Prefix)-18-LR12**	24	(609)	**(Prefix)-18-SR12**	21	(533)	**(Prefix)-18-RR12**	24	(609)
24 (609)	6 (152)	**(Prefix)-24-LR06**	36	(914)	**(Prefix)-24-SR06**	27	(686)	**(Prefix)-24-RR06**	36	(914)
	9 (228)	**(Prefix)-24-LR09**	33	(838)	**(Prefix)-24-SR09**	25 1/2	(648)	**(Prefix)-24-RR09**	33	(838)
	12 (305)	**(Prefix)-24-LR12**	30	(762)	**(Prefix)-24-SR12**	24	(609)	**(Prefix)-24-RR12**	30	(762)
	18 (457)	**(Prefix)-24-LR18**	24	(609)	**(Prefix)-24-SR18**	21	(533)	**(Prefix)-24-RR18**	24	(609)
30 (762)	6 (152)	**(Prefix)-30-LR06**	42	(1067)	**(Prefix)-30-SR06**	30	(762)	**(Prefix)-30-RR06**	42	(1067)
	9 (228)	**(Prefix)-30-LR09**	39	(990)	**(Prefix)-30-SR09**	28 1/2	(724)	**(Prefix)-30-RR09**	39	(990)
	12 (305)	**(Prefix)-30-LR12**	36	(914)	**(Prefix)-30-SR12**	27	(686)	**(Prefix)-30-RR12**	36	(914)
	18 (457)	**(Prefix)-30-LR18**	30	(762)	**(Prefix)-30-SR18**	24	(609)	**(Prefix)-30-RR18**	30	(762)
	24 (609)	**(Prefix)-30-LR24**	24	(609)	**(Prefix)-30-SR24**	21	(533)	**(Prefix)-30-RR24**	24	(609)
36 (914)	6 (152)	**(Prefix)-36-LR06**	48	(1219)	**(Prefix)-36-SR06**	33	(838)	**(Prefix)-36-RR06**	48	(1219)
	9 (228)	**(Prefix)-36-LR09**	45	(1143)	**(Prefix)-36-SR09**	31 1/2	(800)	**(Prefix)-36-RR09**	45	(1143)
	12 (305)	**(Prefix)-36-LR12**	42	(1067)	**(Prefix)-36-SR12**	30	(762)	**(Prefix)-36-RR12**	42	(1067)
	18 (457)	**(Prefix)-36-LR18**	36	(914)	**(Prefix)-36-SR18**	27	(686)	**(Prefix)-36-RR18**	36	(914)
	24 (609)	**(Prefix)-36-LR24**	30	(762)	**(Prefix)-36-SR24**	24	(609)	**(Prefix)-36-RR24**	30	(762)
	30 (762)	**(Prefix)-36-LR30**	24	(609)	**(Prefix)-36-SR30**	21	(533)	**(Prefix)-36-RR30**	24	(609)

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Reducing Tee (HT)



Two pair of splice plates with SS6 hardware included.



Mitered Reducing Tee

Prefix - 36 - 18 HT 24
- Radius
- Fitting
- Width2 W2
- Width1 W1
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix.
Dimensions for reference only, when critical contact factory.

Mitered Fittings

Tray Width W_1 in. (mm)	Tray Width W_2 in. (mm)	Catalog No. * Insert radius (12", 24" or 36")	12" Radius (305) A in. (mm)	12" Radius (305) B in. (mm)	24" Radius (609) A in. (mm)	24" Radius (609) B in. (mm)	36" Radius (914) A in. (mm)	36" Radius (914) B in. (mm)
9 (228)	6 (152)	**(Prefix)-09-06-HT***	29 11/16 (754)	56 13/32 (1433)	41 11/16 (1059)	80 13/32 (2042)	53 11/16 (1364)	104 13/32 (2652)
12 (305)	6 (152)	**(Prefix)-12-06-HT***	31 3/16 (792)	56 13/32 (1433)	43 3/16 (1097)	80 13/32 (2042)	55 3/16 (1402)	104 13/32 (2652)
	9 (228)	**(Prefix)-12-09-HT***	31 3/16 (792)	59 13/32 (1509)	43 3/16 (1097)	83 13/32 (2118)	55 3/16 (1402)	107 13/32 (2728)
18 (457)	6 (152)	**(Prefix)-18-06-HT***	34 3/16 (869)	56 13/32 (1433)	46 3/16 (1173)	80 13/32 (2042)	58 3/16 (1478)	104 13/32 (2652)
	9 (228)	**(Prefix)-18-09-HT***	34 3/16 (869)	59 13/32 (1509)	46 3/16 (1173)	83 13/32 (2118)	58 3/16 (1478)	107 13/32 (2728)
	12 (305)	**(Prefix)-18-12-HT***	34 3/16 (869)	62 13/32 (1585)	46 3/16 (1173)	86 13/32 (2195)	58 3/16 (1478)	110 13/32 (2804)
24 (609)	6 (152)	**(Prefix)-24-06-HT***	37 3/16 (945)	56 13/32 (1433)	49 3/16 (1250)	80 13/32 (2042)	61 3/16 (1554)	104 13/32 (2652)
	9 (228)	**(Prefix)-24-09-HT***	37 3/16 (945)	59 13/32 (1509)	49 3/16 (1250)	83 13/32 (2118)	61 3/16 (1554)	107 13/32 (2728)
	12 (305)	**(Prefix)-24-12-HT***	37 3/16 (945)	62 13/32 (1585)	49 3/16 (1250)	86 13/32 (2195)	61 3/16 (1554)	110 13/32 (2804)
	18 (457)	**(Prefix)-24-18-HT***	37 3/16 (945)	68 13/32 (1737)	49 3/16 (1250)	92 13/32 (2347)	61 3/16 (1554)	116 13/32 (2957)
30 (762)	6 (152)	**(Prefix)-30-06-HT***	40 3/16 (1021)	56 13/32 (1433)	52 3/16 (1326)	80 13/32 (2042)	64 3/16 (1631)	104 13/32 (2652)
	9 (228)	**(Prefix)-30-09-HT***	40 3/16 (1021)	59 13/32 (1509)	52 3/16 (1326)	83 13/32 (2118)	64 3/16 (1631)	107 13/32 (2728)
	12 (305)	**(Prefix)-30-12-HT***	40 3/16 (1021)	62 13/32 (1585)	52 3/16 (1326)	86 13/32 (2195)	64 3/16 (1631)	110 13/32 (2804)
	18 (457)	**(Prefix)-30-18-HT***	40 3/16 (1021)	68 13/32 (1737)	52 3/16 (1326)	92 13/32 (2347)	64 3/16 (1631)	116 13/32 (2957)
	24 (609)	**(Prefix)-30-24-HT***	40 3/16 (1021)	74 13/32 (1890)	52 3/16 (1326)	98 13/32 (2499)	64 3/16 (1631)	122 13/32 (3109)
36 (914)	6 (152)	**(Prefix)-36-06-HT***	43 3/16 (1097)	56 13/32 (1433)	55 3/16 (1402)	80 13/32 (2042)	67 3/16 (1707)	104 13/32 (2652)
	9 (228)	**(Prefix)-36-09-HT***	43 3/16 (1097)	59 13/32 (1509)	55 3/16 (1402)	83 13/32 (2118)	67 3/16 (1707)	107 13/32 (2728)
	12 (305)	**(Prefix)-36-12-HT***	43 3/16 (1097)	62 13/32 (1585)	55 3/16 (1402)	86 13/32 (2195)	67 3/16 (1707)	110 13/32 (2804)
	18 (457)	**(Prefix)-36-18-HT***	43 3/16 (1097)	68 13/32 (1737)	55 3/16 (1402)	92 13/32 (2347)	67 3/16 (1707)	116 13/32 (2957)
	24 (609)	**(Prefix)-36-24-HT***	43 3/16 (1097)	74 13/32 (1890)	55 3/16 (1402)	98 13/32 (2499)	67 3/16 (1707)	122 13/32 (3109)
	30 (762)	**(Prefix)-36-30-HT***	43 3/16 (1097)	80 13/32 (2042)	55 3/16 (1402)	104 13/32 (2652)	67 3/16 (1707)	128 13/32 (3261)

For 4" Fittings

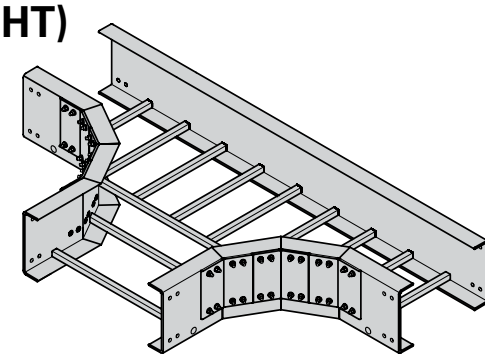
(Radius 12", 24" & 36"
W_1 tray widths - 9" thru 36")
Polyester, Vinyl Ester
All radius are mitered

For 6" Fittings

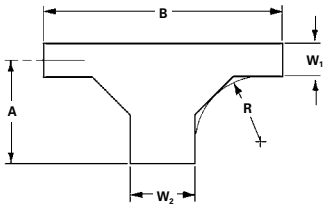
(Radius 12", 24" & 36"
W_1 tray widths - 9" thru 36")
Polyester, Vinyl Ester
All radius are mitered

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Expanding Tee (HT)



Two pair of splice plates with SS6 hardware included.



Mitered

Prefix - 18 - 36 HT 24
- Radius
- Fitting Width2
- W2
- Width1 W1
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix.
Dimensions for reference only, when critical contact factory.

Mitered Fittings

Tray Width W_1 in. (mm)	Tray Width W_2 in. (mm)	Catalog No. * Insert radius (12", 24" or 36")	12" Radius (305) A in. (mm)	12" Radius (305) B in. (mm)	24" Radius (609) A in. (mm)	24" Radius (609) B in. (mm)	36" Radius (914) A in. (mm)	36" Radius (914) B in. (mm)
6 (152)	9 (228)	**(Prefix)-06-09-HT***	28 3/16 (716)	59 13/32 (1509)	40 3/16 (1021)	83 13/32 (2118)	52 3/16 (1326)	107 13/32 (2728)
	12 (305)	**(Prefix)-06-12-HT***	28 3/16 (716)	62 13/32 (1585)	40 3/16 (1021)	86 13/32 (2195)	52 3/16 (1326)	110 13/32 (2804)
	18 (457)	**(Prefix)-06-18-HT***	28 3/16 (716)	68 13/32 (1737)	40 3/16 (1021)	92 13/32 (2347)	52 3/16 (1326)	116 13/32 (2957)
	24 (609)	**(Prefix)-06-24-HT***	28 3/16 (716)	74 13/32 (1890)	40 3/16 (1021)	98 13/32 (2499)	52 3/16 (1326)	122 13/32 (3109)
	30 (762)	**(Prefix)-06-30-HT***	28 3/16 (716)	80 13/32 (2042)	40 3/16 (1021)	104 13/32 (2652)	52 3/16 (1326)	128 13/32 (3261)
	36 (914)	**(Prefix)-06-36-HT***	28 3/16 (716)	86 13/32 (2195)	40 3/16 (1021)	110 13/32 (2804)	52 3/16 (1326)	134 13/32 (3414)
9 (228)	12 (305)	**(Prefix)-09-12-HT***	29 11/16 (754)	62 13/32 (1585)	41 11/16 (1059)	86 13/32 (2195)	53 11/16 (1364)	110 13/32 (2804)
	18 (457)	**(Prefix)-09-18-HT***	29 11/16 (754)	68 13/32 (1737)	41 11/16 (1059)	92 13/32 (2347)	53 11/16 (1364)	116 13/32 (2957)
	24 (609)	**(Prefix)-09-24-HT***	29 11/16 (754)	74 13/32 (1890)	41 11/16 (1059)	98 13/32 (2499)	53 11/16 (1364)	122 13/32 (3109)
	30 (762)	**(Prefix)-09-30-HT***	29 11/16 (754)	80 13/32 (2042)	41 11/16 (1059)	104 13/32 (2652)	53 11/16 (1364)	128 13/32 (3261)
	36 (914)	**(Prefix)-09-36-HT***	29 11/16 (754)	86 13/32 (2195)	41 11/16 (1059)	110 13/32 (2804)	53 11/16 (1364)	134 13/32 (3414)
12 (305)	18 (457)	**(Prefix)-12-18-HT***	31 3/16 (792)	68 13/32 (1737)	43 3/16 (1097)	92 13/32 (2347)	55 3/16 (1402)	116 13/32 (2957)
	24 (609)	**(Prefix)-12-24-HT***	31 3/16 (792)	74 13/32 (1890)	43 3/16 (1097)	98 13/32 (2499)	55 3/16 (1402)	122 13/32 (3109)
	30 (762)	**(Prefix)-12-30-HT***	31 3/16 (792)	80 13/32 (2042)	43 3/16 (1097)	104 13/32 (2652)	55 3/16 (1402)	128 13/32 (3261)
	36 (914)	**(Prefix)-12-36-HT***	31 3/16 (792)	86 13/32 (2195)	43 3/16 (1097)	110 13/32 (2804)	55 3/16 (1402)	134 13/32 (3414)
18 (457)	24 (609)	**(Prefix)-18-24-HT***	34 3/16 (869)	74 13/32 (1890)	46 3/16 (1173)	98 13/32 (2499)	58 3/16 (1478)	122 13/32 (3109)
	30 (762)	**(Prefix)-18-30-HT***	34 3/16 (869)	80 13/32 (2042)	46 3/16 (1173)	104 13/32 (2652)	58 3/16 (1478)	128 13/32 (3261)
	36 (914)	**(Prefix)-18-36-HT***	34 3/16 (869)	86 13/32 (2195)	46 3/16 (1173)	110 13/32 (2804)	58 3/16 (1478)	134 13/32 (3414)
24 (609)	30 (762)	**(Prefix)-24-30-HT***	37 3/16 (945)	80 13/32 (2042)	49 3/16 (1250)	104 13/32 (2652)	61 3/16 (1554)	128 13/32 (3261)
	36 (914)	**(Prefix)-24-36-HT***	37 3/16 (945)	86 13/32 (2195)	49 3/16 (1250)	110 13/32 (2804)	61 3/16 (1554)	134 13/32 (3414)
30 (762)	36 (914)	**(Prefix)-30-36-HT***	40 3/16 (1021)	86 13/32 (2195)	52 3/16 (1326)	110 13/32 (2804)	64 3/16 (1631)	134 13/32 (3414)

For 4" Fittings

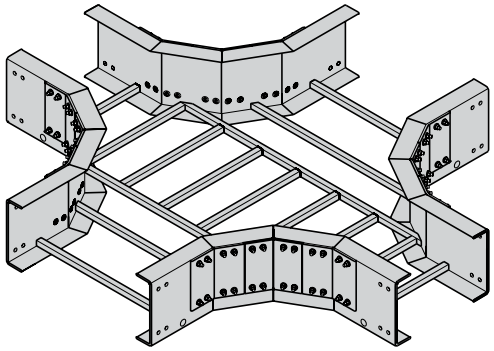
(Radius 12", 24" & 36"
W_1 tray widths - 6" thru 30")
W_2 tray widths - 9" thru 36")
Polyester, Vinyl Ester
All radius are mitered

For 6" Fittings

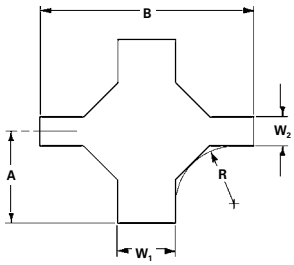
(Radius 12", 24" & 36"
W_1 tray widths - 6" thru 30")
W_2 tray widths - 9" thru 36")
Polyester, Vinyl Ester
All radius are mitered

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Expanding/Reducing Cross (HX)



Three pair of splice plates with SS6 hardware included.



Mitered

Prefix - 18 - 12 HX 12
- Radius
- Fitting
- Width2 W2
- Width1 W1
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix.
Dimensions for reference only, when critical contact factory.

Mitered Fittings

Tray Width W_1 in. (mm)	Tray Width W_2 in. (mm)	Catalog No. * Insert radius (12", 24" or 36")	12" Radius (305) A in. (mm)	12" Radius (305) B in. (mm)	24" Radius (609) A in. (mm)	24" Radius (609) B in. (mm)	36" Radius (914) A in. (mm)	36" Radius (914) B in. (mm)
9 (228)	6 (152)	**(Prefix)-09-06-HX***	28 3/16 (716)	59 13/32 (1509)	40 3/16 (1021)	83 13/32 (2118)	52 3/16 (1326)	107 13/32 (2728)
12 (305)	6 (152)	**(Prefix)-12-06-HX***	28 3/16 (716)	62 13/32 (1585)	40 3/16 (1021)	86 13/32 (2195)	52 3/16 (1326)	110 13/32 (2804)
	9 (228)	**(Prefix)-12-09-HX***	29 11/16 (754)	62 13/32 (1585)	41 11/16 (1059)	86 13/32 (2195)	53 11/16 (1364)	110 13/32 (2804)
18 (457)	6 (152)	**(Prefix)-18-06-HX***	28 3/16 (716)	68 13/32 (1737)	40 3/16 (1021)	92 13/32 (2347)	52 3/16 (1326)	116 13/32 (2957)
	9 (228)	**(Prefix)-18-09-HX***	29 11/16 (754)	68 13/32 (1737)	41 11/16 (1059)	92 13/32 (2347)	53 11/16 (1364)	116 13/32 (2957)
	12 (305)	**(Prefix)-18-12-HX***	31 3/16 (792)	68 13/32 (1737)	43 3/16 (1097)	92 13/32 (2347)	55 3/16 (1402)	116 13/32 (2957)
24 (609)	6 (152)	**(Prefix)-24-06-HX***	28 3/16 (716)	74 13/32 (1890)	40 3/16 (1021)	98 13/32 (2499)	52 3/16 (1326)	122 13/32 (3109)
	9 (228)	**(Prefix)-24-09-HX***	29 11/16 (754)	74 13/32 (1890)	41 11/16 (1059)	98 13/32 (2499)	53 11/16 (1364)	122 13/32 (3109)
	12 (305)	**(Prefix)-24-12-HX***	31 3/16 (792)	74 13/32 (1890)	43 3/16 (1097)	98 13/32 (2499)	55 3/16 (1402)	122 13/32 (3109)
	18 (457)	**(Prefix)-24-18-HX***	34 3/16 (869)	74 13/32 (1890)	46 3/16 (1173)	98 13/32 (2499)	58 3/16 (1478)	122 13/32 (3109)
30 (762)	6 (152)	**(Prefix)-30-06-HX***	28 3/16 (716)	80 13/32 (2042)	40 3/16 (1021)	104 13/32 (2652)	52 3/16 (1326)	128 13/32 (3261)
	9 (228)	**(Prefix)-30-09-HX***	29 11/16 (754)	80 13/32 (2042)	41 11/16 (1059)	104 13/32 (2652)	53 11/16 (1364)	128 13/32 (3261)
	12 (305)	**(Prefix)-30-12-HX***	31 3/16 (792)	80 13/32 (2042)	43 3/16 (1097)	104 13/32 (2652)	55 3/16 (1402)	128 13/32 (3261)
	18 (457)	**(Prefix)-30-18-HX***	34 3/16 (869)	80 13/32 (2042)	46 3/16 (1173)	104 13/32 (2652)	58 3/16 (1478)	128 13/32 (3261)
	24 (609)	**(Prefix)-30-24-HX***	37 3/16 (945)	80 13/32 (2042)	49 3/16 (1250)	104 13/32 (2652)	61 3/16 (1554)	128 13/32 (3261)
36 (914)	6 (152)	**(Prefix)-36-06-HX***	28 3/16 (716)	86 13/32 (2195)	40 3/16 (1021)	110 13/32 (2804)	52 3/16 (1326)	134 13/32 (3414)
	9 (228)	**(Prefix)-36-09-HX***	29 11/16 (754)	86 13/32 (2195)	41 11/16 (1059)	110 13/32 (2804)	53 11/16 (1364)	134 13/32 (3414)
	12 (305)	**(Prefix)-36-12-HX***	31 3/16 (792)	86 13/32 (2195)	43 3/16 (1097)	110 13/32 (2804)	55 3/16 (1402)	134 13/32 (3414)
	18 (457)	**(Prefix)-36-18-HX***	34 3/16 (869)	86 13/32 (2195)	46 3/16 (1173)	110 13/32 (2804)	58 3/16 (1478)	134 13/32 (3414)
	24 (609)	**(Prefix)-36-24-HX***	37 3/16 (945)	86 13/32 (2195)	49 3/16 (1250)	110 13/32 (2804)	61 3/16 (1554)	134 13/32 (3414)
	30 (762)	**(Prefix)-36-30-HX***	40 3/16 (1021)	86 13/32 (2195)	52 3/16 (1326)	110 13/32 (2804)	64 3/16 (1631)	134 13/32 (3414)

For 4" Fittings

(Radius 12", 24" & 36"
W_1 tray widths - 9" thru 36")
W_2 tray widths - 6" thru 30")
Polyester, Vinyl Ester
All radius are mitered

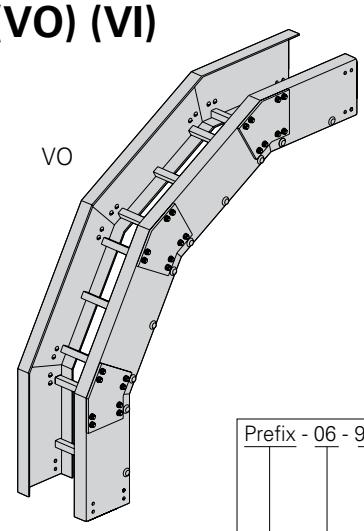
For 6" Fittings

(Radius 12", 24" & 36"
W_1 tray widths - 9" thru 36")
W_2 tray widths - 6" thru 30")
Polyester, Vinyl Ester
All radius are mitered

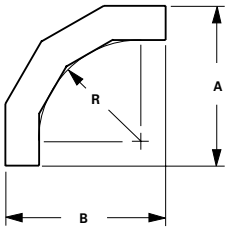
Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Vertical Bends 90° (VO) (VI)

One pair of splice plates with SS6 hardware included.

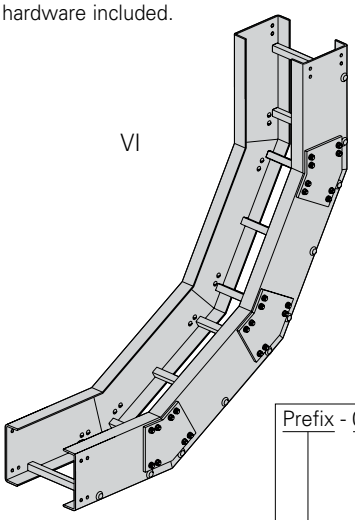


Vertical Outside Bend

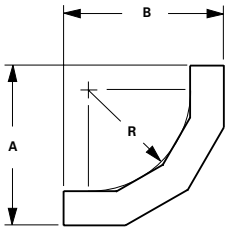


90˚ (VO) Mitered

Prefix - 06 - 90 VO 24
- Radius
- Fitting
- Angle
- Width
- To complete catalog number, insert fitting prefix.



Vertical Inside Bend



90˚ (VI) Mitered

Prefix - 06 - 90 VI 24
- Radius
- Fitting
- Angle
- Width
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix. Dimensions for reference only, when critical contact factory.

- R - Bend Radius in. (mm)	Tray Width in. (mm)	Catalog No.	90˚ Mitered VO & VI Bend A in. / (mm)	B in. / (mm)
12 (305)	6 (152)	**(Prefix)-06-90(*)12**	27 5/32 (690)	27 5/32 (690)
	9 (228)	**(Prefix)-09-90(*)12**		
	12 (305)	**(Prefix)-12-90(*)12**		
	18 (457)	**(Prefix)-18-90(*)12**		
	24 (609)	**(Prefix)-24-90(*)12**		
	30 (762)	**(Prefix)-30-90(*)12**		
	36 (914)	**(Prefix)-36-90(*)12**		
24 (609)	6 (152)	**(Prefix)-06-90(*)24**	36 23/32 (933)	36 23/32 (933)
	9 (228)	**(Prefix)-09-90(*)24**		
	12 (305)	**(Prefix)-12-90(*)24**		
	18 (457)	**(Prefix)-18-90(*)24**		
	24 (609)	**(Prefix)-24-90(*)24**		
	30 (762)	**(Prefix)-30-90(*)24**		
	36 (914)	**(Prefix)-36-90(*)24**		
36 (914)	6 (152)	**(Prefix)-06-90(*)36**	44 29/32 (1141)	44 29/32 (1141)
	9 (228)	**(Prefix)-09-90(*)36**		
	12 (305)	**(Prefix)-12-90(*)36**		
	18 (457)	**(Prefix)-18-90(*)36**		
	24 (609)	**(Prefix)-24-90(*)36**		
	30 (762)	**(Prefix)-30-90(*)36**		
	36 (914)	**(Prefix)-36-90(*)36**		

(*) Insert 'VO' for Vertical Outside Bend or 'VI' for Vertical Inside Bend.

For 4" Fittings

(Radius 12", 24" & 36"
Tray widths - 6" thru 36")
Polyester, Vinyl Ester
All radius are mitered

For 6" Fittings

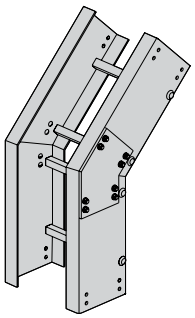
(Radius 12", 24" & 36"
Tray widths - 6" thru 36")
Polyester, Vinyl Estert
All radius are mitered

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

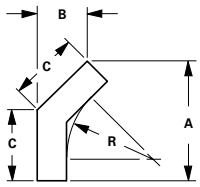
Vertical Bends 45° (VO) (VI)

Vertical Outside Bend

VO



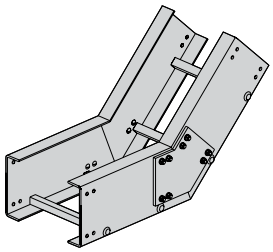
One pair of splice plates with SS6 hardware included.

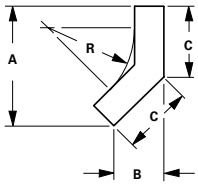


45˚ (VO) Mitered

Vertical Inside Bend

VI





45˚ (VI) Mitered

Prefix - 06 - 45 VO 24
- Radius
- Fitting
- Angle
- Width
- To complete catalog number, insert fitting prefix.

Prefix - 06 - 45 VI 24
- Radius
- Fitting
- Angle
- Width
- To complete catalog number, insert fitting prefix.

(Prefix) See page M-20 for catalog number prefix. Dimensions for reference only, when critical contact factory.

- R - Bend Radius in.	mm	Tray Width in.	mm	Catalog No.	45˚ Mitered VO & VI Bend A in. / (mm)	B in. / (mm)	C in. / (mm)
12	(305)	6	(152)	**(Prefix)-06-45(*)12**	23 1/16 (585)	9 9/16 (242)	13 1/2 (343)
		9	(228)	**(Prefix)-09-45(*)12**			
		12	(305)	**(Prefix)-12-45(*)12**			
		18	(457)	**(Prefix)-18-45(*)12**			
		24	(609)	**(Prefix)-24-45(*)12**			
		30	(762)	**(Prefix)-30-45(*)12**			
		36	(914)	**(Prefix)-36-45(*)12**			
24	(609)	6	(152)	**(Prefix)-06-45(*)24**	23 1/16 (585)	9 9/16 (242)	13 1/2 (343)
		9	(228)	**(Prefix)-09-45(*)24**			
		12	(305)	**(Prefix)-12-45(*)24**			
		18	(457)	**(Prefix)-18-45(*)24**			
		24	(609)	**(Prefix)-24-45(*)24**			
		30	(762)	**(Prefix)-30-45(*)24**			
		36	(914)	**(Prefix)-36-45(*)24**			
36	(914)	6	(152)	**(Prefix)-06-45(*)36**	23 1/16 (585)	9 9/16 (242)	13 1/2 (343)
		9	(228)	**(Prefix)-09-45(*)36**			
		12	(305)	**(Prefix)-12-45(*)36**			
		18	(457)	**(Prefix)-18-45(*)36**			
		24	(609)	**(Prefix)-24-45(*)36**			
		30	(762)	**(Prefix)-30-45(*)36**			
		36	(914)	**(Prefix)-36-45(*)36**			

(*) Insert 'VO' for Vertical Outside Bend or 'VI' for Vertical Inside Bend.
60˚ and 30˚ vertical bends available in mitered construction.

For 4" Fittings

(Radius 12", 24" & 36"
Tray widths - 6" thru 36")
Polyester, Vinyl Ester
All radius are mitered

For 6" Fittings

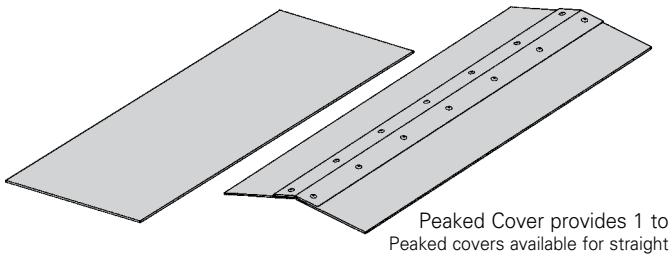
(Radius 12", 24" & 36"
Tray widths - 6" thru 36")
Polyester, Vinyl Ester
All radius are mitered

Fiberglass

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Covers

Material Thickness: .090" (2.3)
Cover Length: 10′ (3m)
Standard Mounting Hardware: (10 each) #10 x ¾" stainless, self drilling screws provided with each section



Peaked Cover provides 1 to 3.7 pitch
Peaked covers available for straight sections only.
No Hardware provided.

Covers F C - 24 - 120

- 120 — Length or fitting description
- 24 — Width
- C — Rail design
- F — Material

●	F	C - 24 - 120	=	Flat polyester
●	FV	C - 24 - 120	=	Flat vinyl ester
●	FP	C - 24 - 120	=	Peaked polyester

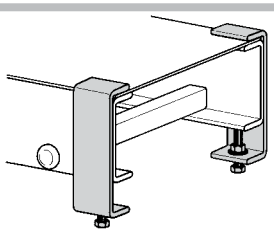
Quantity of Standard Cover Clamps Required

Straight Section 60" or 72"	4 pcs.
Straight Section 120" or 144"	6 pcs.
Horizontal/Vertical Bends	4 pcs.
Tees	6 pcs.
Crosses	8 pcs.
Reducers	4 pcs.

Note: When using the Heavy Duty Cover Clamp, only one-half the number of clamps stated above is required.

Standard Cover Clamp

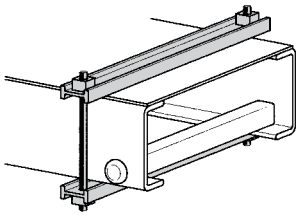
- Furnished in pairs with hardware.



Catalog No.	Side Rail Height in.	(mm)
9(Δ)-9013	3	(76)
9(Δ)-9014	4	(101)
9(Δ)-9016	6	(152)

Heavy Duty Cover Clamp

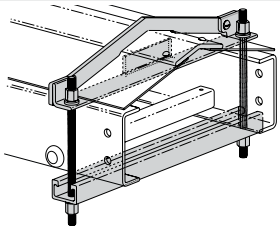
Recommended for outdoor service.
- W = tray width
- Heavy duty cover clamp available for flat covers only



Catalog No.	Side Rail Height in.	(mm)
9F-W-9034	3	(76)
9F-W-9044	4	(101)
9F-W-9064	6	(152)
9F-W-9084	8	(203)

Peaked Cover Clamp

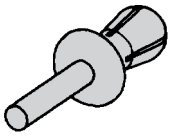
- W = tray width



Catalog No.	Side Rail Height in.	(mm)
9F-W-9034P	3	(76)
9F-W-9044P	4	(101)
9F-W-9064P	6	(152)
9F-W-9084P	8	(203)

Thermo Plastic Drive Rivet

- Sold individually.
- Shipped in packages of 25 pcs.



Catalog No.
● TPDR

Material Designations
(Δ) Insert one of the following material designations when required.
● F = Polyester Resin (Example: 9F-9013)
● FV = Vinyl Ester Resin (Example: 9FV-9013)

Check with B-Line Technical Support (blinetechnicalsupport@eaton.com) if there are questions/concerns about environmental loads for covers (wind, snow, sleet, rain, etc.).

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

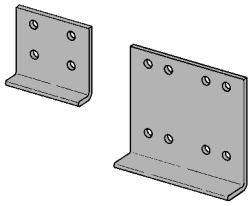
Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Hardware Option	316 Stainless Steel
	SS6

Part Number with Hardware Explanation
Note: All hardware is 3/8"
Example: 9F-4004 SS6: pair of 4-hole splice plates for 4" (101) system with stainless steel hardware
9FV-8006 SS6: pair of 8-hole vinyl ester splice plates for 6" (152) system with stainless steel hardware

Standard Lay-In Splice Plates

- Furnished in pairs with 316 stainless steel hardware
- One pair including hardware provided with straight section. (Expansion splice quantity subtracted)

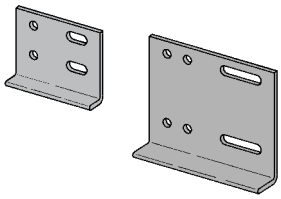


Material	Height in. (mm)	Catalog No.
Fiberglass	3" (76)	**9(Δ)-4003SS6**
	4" (101)	**9(Δ)-4004SS6**
	6" (152)	**9(Δ)-8006SS6**
	8" (203)	**9(Δ)-8008SS6**

Expansion Lay-In Splice Plates

- Furnished in pairs with 316 stainless steel hardware

Requires supports within 24" on both sides, per NEMA VE 2.

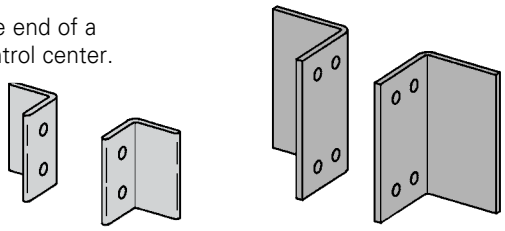


Material	Height in. (mm)	Catalog No.
Fiberglass	3" (76)	**9(Δ)-4013SS6**
	4" (101)	**9(Δ)-4014SS6**
	6" (152)	**9(Δ)-8016SS6**
	8" (203)	**9(Δ)-8018SS6**

Tray to Box Splice Plates

These plates are used to attach the end of a tray run to a distribution box or control center.

- Furnished in pairs with 316 stainless steel hardware

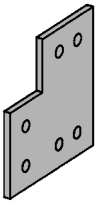


Material	Height in. (mm)	Catalog No.
Fiberglass	3" (76)	**9(Δ)-4053SS6**
	4" (101)	**9(Δ)-4054SS6**
	6" (152)	**9(Δ)-8056SS6**
	8" (203)	**9(Δ)-8058SS6**

Step Down Splice Plates

These plates are offered for connecting cable tray sections having side rails of different heights.

- Furnished in pairs with 316 stainless steel hardware

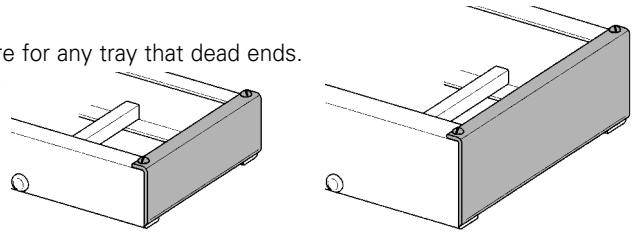


Material	Height in. (mm)	Catalog No.
Fiberglass	8" to 6" (203 to 152)	**9(Δ)-8086SS6**
	8" to 4" (203 to 101)	**9(Δ)-8084SS6**
	6" to 3" (152 to 76)	**9(Δ)-8063SS6**
	6" to 4" (152 to 101)	**9(Δ)-8064SS6**
	4" to 3" (101 to 76)	**9(Δ)-4043SS6**

Blind End Plate

This plate forms a closure for any tray that dead ends.

- Furnished as one plate
- W = tray width



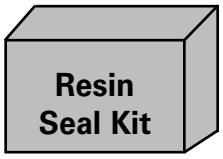
Material	Height in. (mm)	Catalog No.
Fiberglass	3" (76)	**9(Δ)-1083-WSS6**
	4" (101)	**9(Δ)-1084-WSS6**
	6" (152)	**9(Δ)-1086-WSS6**
	8" (203)	**9(Δ)-1088-WSS6**

Resin Seal Kit

To reseal fiberglass after field modifications.

- 1 pint (473ml)

Contents: Sealant and Applicator.



Catalog No.
RSK-010

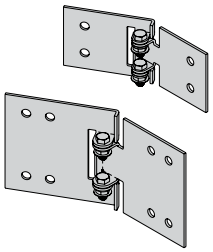
(Δ) See page M-25 for material selection

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Adjustable Splice Plates

These plates provide for changes in the horizontal direction that do not conform to standard fittings.

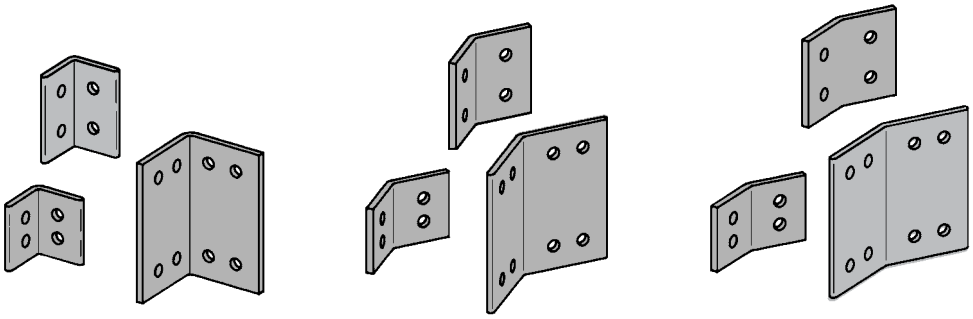
- Furnished in pairs with 316 stainless steel hardware
- Body made from 316 stainless steel
- Used for all material finishes
- Requires supports within 24" on both sides, per NEMA VE 2



Material	Height in. (mm)	Catalog No.
316SS	3" (76)	**9F-4033SS6**
	4" (101)	**9F-4034SS6**
	6" (152)	**9F-8036SS6**
	8" (203)	**9F-8038SS6**

Horizontal Splice Plates

- Furnished in pairs with 316 stainless steel hardware

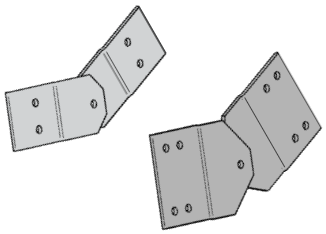


Material	Height in. (mm)	Catalog No. 90°	45°	30°
Fiberglass	3" (76)	**9(Δ)-4903HSS6**	**9(Δ)-4453HSS6**	**9(Δ)-4303HSS6**
	4" (101)	**9(Δ)-4904HSS6**	**9(Δ)-4454HSS6**	**9(Δ)-4304HSS6**
	6" (152)	**9(Δ)-8906HSS6**	**9(Δ)-8456HSS6**	**9(Δ)-8306HSS6**
	8" (203)	**9(Δ)-8908HSS6**	**9(Δ)-8458HSS6**	**9(Δ)-8308HSS6**

Vertical Adjustable Splice Plates

These plates provide for changes in elevation that do not conform to standard vertical fittings.

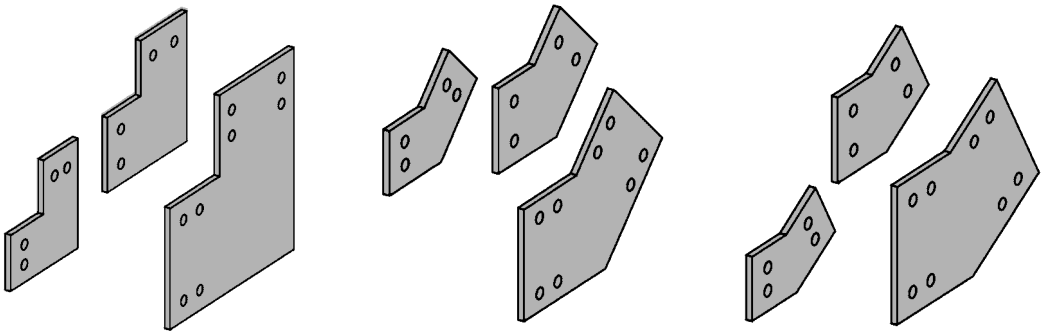
- Furnished in pairs with 316 stainless steel hardware
- Requires supports within 24" on both sides, per NEMA VE 2



Material	Height in. (mm)	Catalog No.
Fiberglass	3" (76)	**9(Δ)-4023SS6**
	4" (101)	**9(Δ)-4024SS6**
	6" (152)	**9(Δ)-8026SS6**
	8" (203)	**9(Δ)-8028SS6**

Vertical Splice Plates

- Furnished in pairs with 316 stainless steel hardware



Material	Height in. (mm)	Catalog No. 90°	45°	30°
Fiberglass	3" (76)	**9(Δ)-4903VSS6**	**9(Δ)-4453VSS6**	**9(Δ)-4303VSS6**
	4" (101)	**9(Δ)-4904VSS6**	**9(Δ)-4454VSS6**	**9(Δ)-4304VSS6**
	6" (152)	**9(Δ)-8906VSS6**	**9(Δ)-8456VSS6**	**9(Δ)-8306VSS6**
	8" (203)	**9(Δ)-8908VSS6**	**9(Δ)-8458VSS6**	**9(Δ)-8308VSS6**

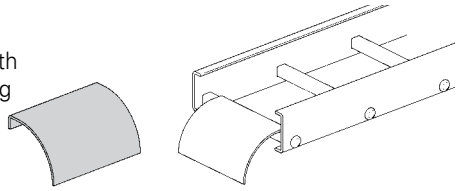
(Δ) See page M-25 for material selection

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Ladder Drop-Out

Specially-designed Ladder Drop-Outs provide a rounded surface with adequate radius to protect cable as it exits from the tray, preventing damage to insulation.

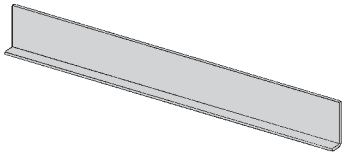
- 4" (101) radius
- W = tray width
- Furnished with #10 x ¾" self-drilling stainless steel screws



Catalog No.
9(Δ)-1104-W

Barriers

- Furnished with #10 x ¾" self-drilling stainless steel screws



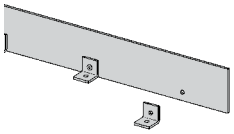
Catalog No.	Side Rail Height in.	(mm)
72(Δ)-120	3"	(76)
73(Δ)-120	4"	(101)
75(Δ)-120	6"	(152)
77(Δ)-120	8"	(203)

Flexible Horizontal Barrier Kit

One kit allows up to a 36" (914) radius position of the barrier.

Kit Contents:

1 pc — 72" (1829) Straight Barrier
4 pc — 9F-9002 Barrier Strip Clip
8 pc — Thermo Plastic Drive Rivet
4 pc — #10 x ¾" Stainless Steel Self-Drilling Screw
Assembly required — directions included.

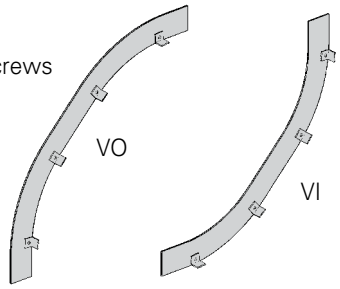


Catalog No.	Side Rail Height in.	(mm)
72(Δ)-90HBFL	3"	(76)
73(Δ)-90HBFL	4"	(101)
75(Δ)-90HBFL	6"	(152)
77(Δ)-90HBFL	8"	(203)

Vertical Bend Barriers

- Furnished with #10 x ¾" self-drilling stainless steel screws

* Insert 2 for 3" (76) siderail height
3 for 4" (101) siderail height
5 for 6" (152) siderail height

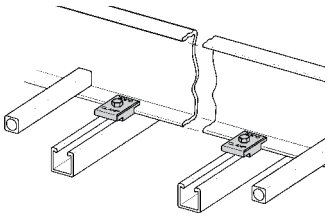


7* (Δ) - 90 VO 24

- 24 — Radius
- VO — VI or VO
- 90 — Angle
- (Δ) — Material
- 7* — Barrier Size

Clamp/Guide - Fiberglass

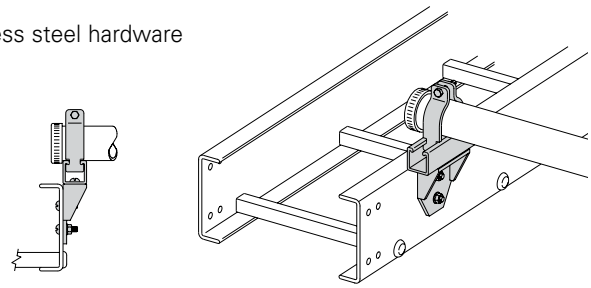
- Nonmetallic
- Designed for ⅜" hardware - not included
- Combination hold down clamp and guide
- Material: Glass reinforced polyurethane
- Sold in pairs



Catalog No.
9F-1208

Fiberglass Conduit to Cable Tray Adapter

- For rigid or PVC conduit
- Furnished in pairs with 316 stainless steel hardware



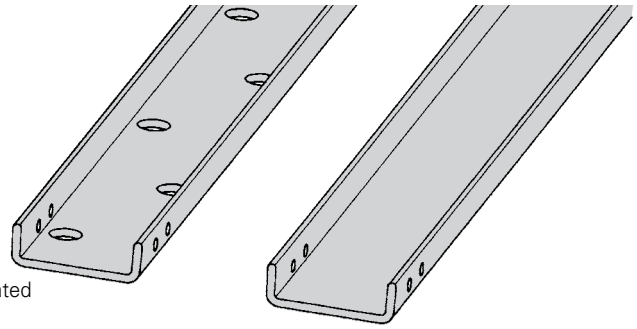
Catalog No.	Conduit Size in.	(mm)
9FV-2008	0.50	(15)
9FV-2009	0.75	(20)
9FV-2010	1.00	(25)
9FV-2011	1.25	(32)
9FV-2012	1.50	(40)
9FV-2013	2.00	(50)
9FV-2014	2.50	(65)
9FV-2015	3.00	(80)
9FV-2016	3.50	(90)
9FV-2017	4.00	(100)

(Δ) See page M-25 for material selection

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Straight Section

- Load data was interpolated from CSA testing.
- Loads shown are for FCCN series.
- Loads shown are for 6 ft. (1.83m) span with deflection of .7 (18.26) inches.
- One pair of splice plates included with each straight section.



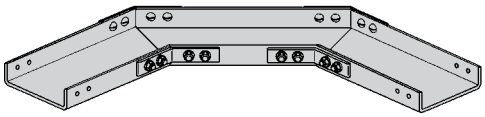
FCC Fiberglass Cable Channel Ventilated

FCCN Fiberglass Cable Channel Non-Ventilated

Catalog No.		Width		Length		Height		Load	
Ventilated	Non-Ventilated	in.	(mm)	ft.	(m)	in.	(mm)	Lbs/Ft	(kg/m)
(*)-03-120	(*)N-03-120	3	(76)	10	(3)	1	(25)	8	(12)
(*)-03-240	(*)N-03-240	3	(76)	20	(6)	1	(25)	8	(12)
(*)-04-120	(*)N-04-120	4	(101)	10	(3)	1⅛	(28)	12	(18)
(*)-04-240	(*)N-04-240	4	(101)	20	(6)	1⅛	(28)	12	(18)
(*)-06-120	(*)N-06-120	6	(152)	10	(3)	1⅝	(35)	58	(86)
(*)-06-240	(*)N-06-240	6	(152)	20	(6)	1⅝	(35)	58	(86)
(*)-08-120	(*)N-08-120	8	(203)	10	(3)	2 3/16	(55)	87	(129)
(*)-08-240	(*)N-08-240	8	(203)	20	(6)	2 3/16	(55)	87	(129)

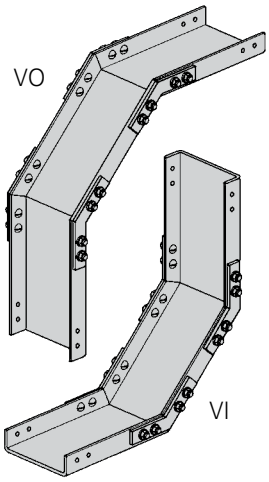
Cable Channel Fittings

All fittings are of mitered construction with 12" (305) radius.



Horizontal	3" series	4" series	6" series	8" series
90˚	(*)N-03-90HB12	(*)N-04-90HB12	(*)N-06-90HB12	(*)N-08-90HB12
45˚	(*)N-03-45HB12	(*)N-04-45HB12	(*)N-06-45HB12	(*)N-08-45HB12

One pair of splice plates included.



Vertical	3" series	4" series	6" series	8" series
90˚	(*)N-03-90V*12	(*)N-04-90V*12	(*)N-06-90V*12	(*)N-08-90V*12
45˚	(*)N-03-45V*12	(*)N-04-45V*12	(*)N-06-45V*12	(*)N-08-45V*12

One pair of splice plates included.

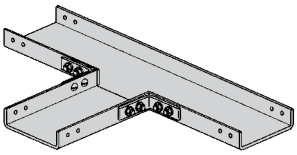
(*) Insert material type
- ● FCC for Polyester Resin
- ● FCCV for Vinyl Ester Resin

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Horizontal Tees

• Two pair of splice plates included.



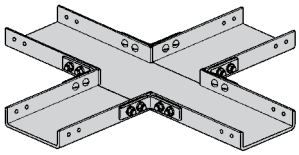
Catalog No.	Width in. (mm)
FCC(*)N-03-HT12	3 (76)
FCC(*)N-04-HT12	4 (101)
FCC(*)N-06-HT12	6 (152)
FCC(*)N-08-HT12	8 (203)

(*) See page fitting material selection bottom of page M-29

All fittings are of mitered construction with 12" (305) radius.

Horizontal Crosses

• Three pair of splice plates included.



Catalog No.	Width in. (mm)
FCC(*)N-03-HX12	3 (76)
FCC(*)N-04-HX12	4 (101)
FCC(*)N-06-HX12	6 (152)
FCC(*)N-08-HX12	8 (203)

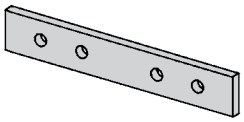
(*) See page fitting material selection bottom of page M-29

All fittings are of mitered construction with 12" (305) radius.

Splice Plates

• Sold in pairs - included with tray sections.

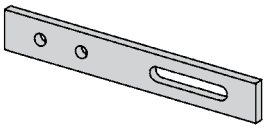
• Uses 1/4"-20 316SS hardware



Catalog No.
9(Δ)-1001SS6

Expansion Splice Plates

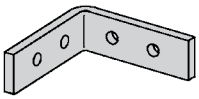
• Sold in pairs
• Uses 1/4"-20 316SS hardware



Catalog No.
9(Δ)-1013SS6

Horizontal 90˚ Splice Plates

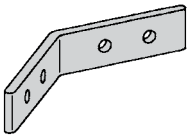
• Sold in pairs
• Uses 1/4"-20 316SS hardware



Catalog No.
9(Δ)-1901HSS6

Horizontal 45˚ Splice Plates

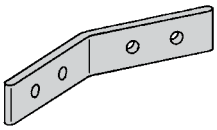
• Sold in pairs
• Uses 1/4"-20 316SS hardware



Catalog No.
9(Δ)-1451HSS6

Horizontal 30˚ Splice Plates

• Sold in pairs
• Uses 1/4"-20 316SS hardware



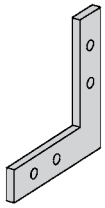
Catalog No.
9(Δ)-1301HSS6

Splice plates included with cable channel sections.
Hardware for splice plates is 1/4"-20 (316SS).

(Δ) See page M-25 for material selection

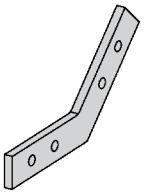
Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Vertical 90˚ Splice Plates
- Sold in pairs
- Uses 1/4"-20 316SS hardware



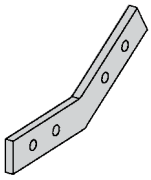
Catalog No.
9(Δ)-1901VSS6

Vertical 45˚ Splice Plates
- Sold in pairs
- Uses 1/4"-20 316SS hardware



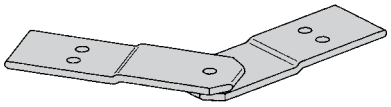
Catalog No.
9(Δ)-1451VSS6

Vertical 30˚ Splice Plates
- Sold in pairs
- Uses 1/4"-20 316SS hardware



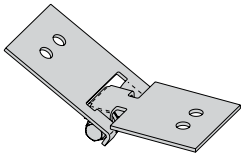
Catalog No.
9(Δ)-1301VSS6

Horizontal Adjustable Splice Plates
- Sold per piece
- Uses 3/8"-16 316SS hardware



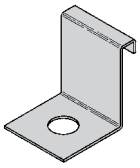
Catalog No.
9(Δ)-1023SS6

Vertical Adjustable Splice Plates
- Sold per piece
- Uses 3/8"-16 316SS hardware
- Boby made from 316 stainless steel
- Used for all material finishes



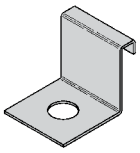
Catalog No.
9F-1033SS6

Expansion Guide Clamp
- Sold per clamp
- Order 1/2" hardware separately



Catalog No.	Width in. (mm)
9SS6-1248-3	3 (76)
9SS6-1248-4	4 (101)
9SS6-1248-6	6 (152)
9SS6-1248-8	8 (203)

Hold-Down Clamp
- Sold per clamp
- Order 1/2" hardware separately



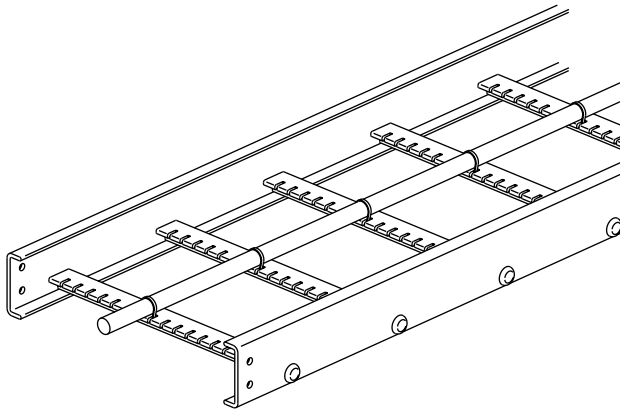
Catalog No.	Width in. (mm)
9SS6-1247-3	3 (76)
9SS6-1247-4	4 (101)
9SS6-1247-6	6 (152)
9SS6-1247-8	8 (203)

Green = Fastest shipped items Black = Normal lead-time items Red = Normally long lead-time items

(Δ) See page M-25 for material selection

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

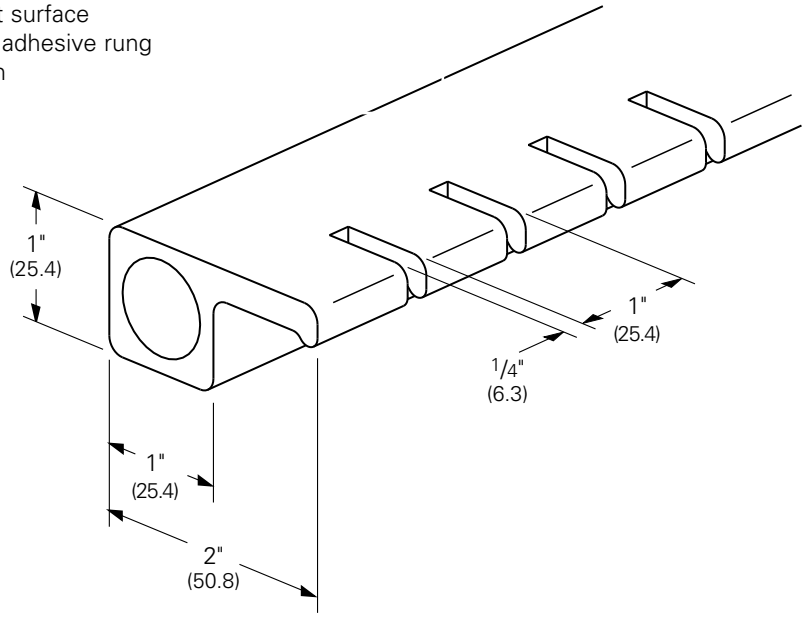
Marine Rung Cable Tray/Fiberglass



Features:

- For Coast Guard Requirements
  - Allows stainless steel banding of cables
  - 5/32" (15.9) slots 1" (25.4) on centers
  - Accommodates up to 5/8" (15.9) banding
- Has applications on land
  - Vertical installation
  - Any location where extra cable positioning is required
- Designed for Earton's B-Line series Fiberglass Cable Trays
- Part Number Indication
  - Add MR after rung spacing
  - Example: 46F09MR-36-240

Rung design provides:
- 2" (50.8) cable support surface
- Both mechanical and adhesive rung to side rail connection



Fiberglass

Dimensions shown in parentheses are in millimeters, unless otherwise specified.

Custom cable bus solutions

Safely and efficiently manage high-capacity electrical loads

Eaton's Cable Bus is a customizable, enclosed power distribution system designed to safely and efficiently manage high-capacity electrical loads from 600-35,000V and 800-6,000A. It offers an ideal hybrid solution between cable tray and busway, delivering superior cable support and isolation for high-power transmission and a highly customizable design.

Eaton Cable Bus features an enclosed design which protects cables from environmental hazards in both interior and exterior uses, making it ideal for applications such as data centers, utility plants, co-generation facilities, and light industrial environments, providing a continuous and reliable flow of power to ensure operational stability.

Choosing Eaton's Cable Bus system provides the convenience of sourcing all components through a single, trusted supplier and the confidence of knowing that your project is backed by Eaton's industry expertise and support.

Features and benefits

- Ideal for high-capacity electrical loads.
- Superior protections from environmental hazards. Suitable for interior and exterior use in a variety of environments.
- Highly customizable. Ideal for complex layouts and specific project requirements.
- Modular design allows for easy installation and on-site modifications. Standard maintenance required.
- High safety standards with fully insulated conductors, compliant with industry regulations.
- Cost-effective solution for high-power applications, reducing installation and maintenance costs.

Certifications

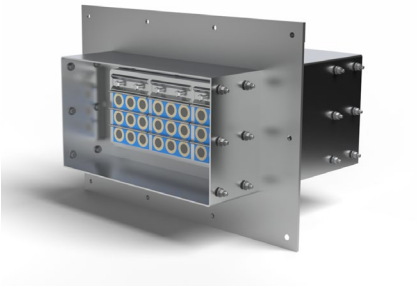
- Certified as per CSA C22.2 No. 273:19

Straight runs

Horizontal bends

Vertical bends

Tap box or termination box



Wall penetration kits

Tray-to-box connector

Cable Bus System advantages

Reliable power distribution

Ensures a continuous and reliable flow of power, providing operational stability for high-capacity electrical loads. This reliability is crucial for industries where power interruptions can lead to significant downtime and financial losses. By maintaining a stable power supply, Eaton's Cable Bus system helps to ensure that operations run smoothly and efficiently.

Single-supplier convenience

Eaton provides a comprehensive range of Cable Bus components and complementary parts including cable glands, strut supports, switchgear, transformers, enclosures, and cable tray for lower power wire. Ordering from a single, trusted supplier helps to simplify the procurement process, reduce lead times, and ensure full-system compatibility. Additionally, Eaton's extensive distribution network helps you get the parts you need, when you need them.

Expert planning and assistance

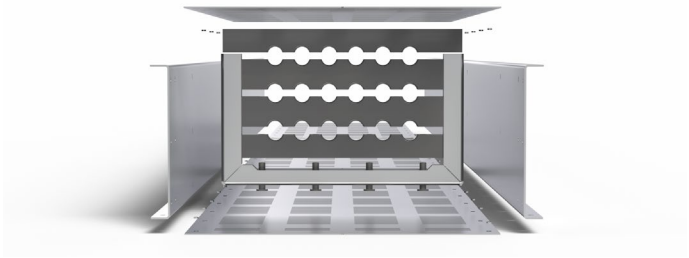
Our team of experts works closely with you to develop a tailored solution that meets your specific project layouts and requirements. Various configuration options are available, allowing you to choose the best setup for your needs. Backed by Eaton's industry expertise and support, this system offers a seamless experience, ensuring easy installation and long-term reliability for even the most demanding power applications.

Cost-effective solutions

Reduce installation and maintenance costs compared to traditional power distribution methods. Modular design allows for easy installation, minimizing labor costs and reducing the time required to set up the system. Robust construction and high-quality materials ensure long-term durability, reducing the need for frequent maintenance and replacements.

Safety and compliance

Safety is a top priority in power distribution, and Eaton's Cable Bus system is designed to meet high safety standards. The system features fully insulated conductors, which help to prevent electrical faults and reduce the risk of accidents. Additionally, the Cable Bus system complies with industry regulations and standards, ensuring that it meets the necessary safety and performance criteria.



Let's talk about your next project!

Scan the QR code to access an inquiry form where you can share your project details or request more information.

You can also contact us at BLineTechnicalSupport@Eaton.com or use the sales agent locator on MyEaton to get connected.

Cable Bus systems are highly configurable and are engineered-to-order for each specific power distribution system.

The catalog part numbering chart below provides a reference to our most popular options. Contact us at **BLineTechnicalSupport@Eaton.com** for specific project requirements.

Cable Bus Straight Section Part Numbering

Prefix

Example: **CB S A - N - 06 1600 - 144**

Cable Bus	Material	Conductors	Neutral	Voltage	Amperage	Length
CB = Cable bus	S = Sheet metal E = Extrusion	A = Aluminum C = Copper	N = No neutral (3P 3W) W = With neutral (3P 4W)	06 = 600V 50 = 5kV 15 = 15kV 35 = 35kV	800 = 800A 1200 = 1200A 1600 = 1600A 2000 = 2000A 2500 = 2500A 3000 = 3000A 3500 = 3500A 4000 = 4000A 5000 = 5000A 6000 = 6000A	144 = Length in inches (Other lengths to be set up as custom parts by ETO team. e.g. 36, 60, 72, 84, etc.)

Cable Bus Fittings Part Numbering

Prefix

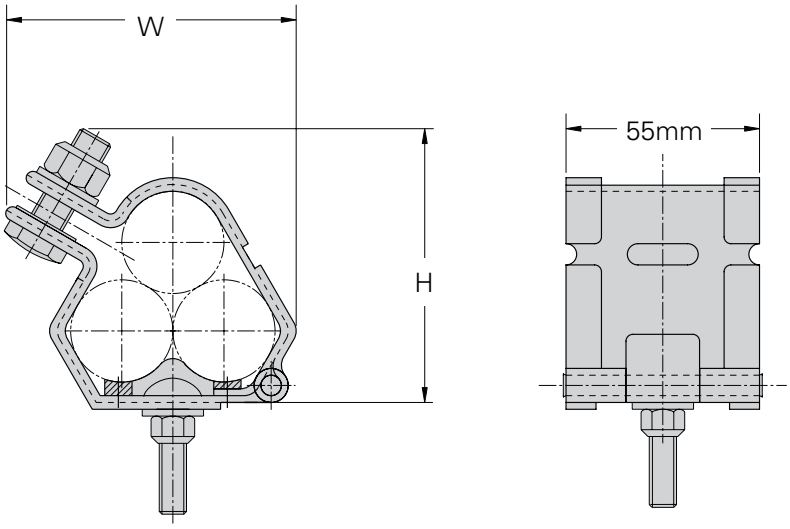
Example: **CB S A - W - 06 1200 - 90HB**

Cable Bus	Material	Conductors	Neutral	Voltage	Amperage	Angle	Fitting Type
CB = Cable bus	S = Sheet metal E = Extrusion	A = Aluminum C = Copper	N = No neutral (3P 3W) W = With neutral (3P 4W)	06 = 600V 50 = 5kV 15 = 15kV 35 = 35kV	800 = 800A 1200 = 1200A 1600 = 1600A 2000 = 2000A 2500 = 2500A 3000 = 3000A 3500 = 3500A 4000 = 4000A 5000 = 5000A 6000 = 6000A	30 45 60 90	HB VI VO

Voltage (V)	Ampere (A)								
600, 5000, 15000, 35000	800	1200	1600	2000	2500	3500	4000	5000	6000

Trefoil Cable Cleat with LSF Pad

1. Recommended for installations where the highest levels of short circuit withstand are required.
2. Short circuit current tested in accordance with BS EN/IEC 61914 standard.
3. Available for single and trefoil cable applications.
4. LSF-pad incorporates an integral low smoke, low fume, zero halogen pad.
5. Hardware to attach cleat to rung attachment bracket is included with cleat. Bracket must be ordered separately.



BS EN/IEC 61914 (Cable Cleats for Electric Installations) Classification	
Cleat Type	Composite
Resistance to Electromechanical Force	130 kA peak / 50 kA RMS 600 mm spacing
Lateral Load Test	3.439 kg average
Axial Load Test	Pass
Operating Temperature Range	-40°C to +60°C
Impact Resistance	Very Heavy
Needle Flame Test	30 seconds

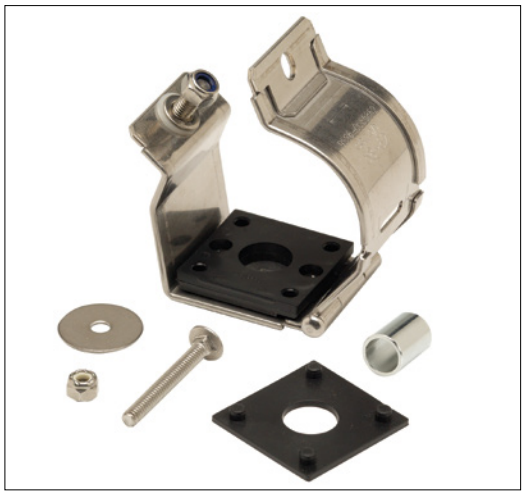
Technical Specifications	
Frame	50mm x 2mm Marine grade, Non-magnetic 316L
Closure Hardware	Captive 316 Stainless Steel M8 or M10 (M12 available) bolt and nylon-lock nut (Optional Hex Flange Lock Nut available)
Integral Pad	Low Smoke, Low Fume, Zero Halogen
Tools Required	Impact Wrench
Mounting Bolt	Provided with Cable Cleat

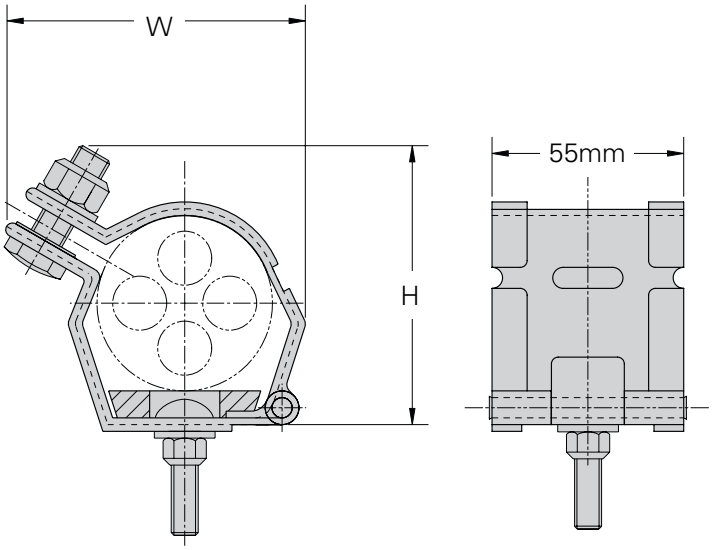
	Cable Range (mm)		Dimensions (mm)	
Part No.	Min. Dia.	Max. Dia.	H	W
9SS6-CCT1323	13	22	74	66
9SS6-CCT2125	21	25	77	70
9SS6-CCT2329	23	29	81	78
9SS6-CCT2531	25	31	84	81
9SS6-CCT2733	27	33	86	83
9SS6-CCT2935	29	35	90	89
9SS6-CCT3238	32	38	94	95
9SS6-CCT3541	35	41.5	98	100
9SS6-CCT3844	38	44.5	101	104
9SS6-CCT4248	42	48	105	111
9SS6-CCT4551	45	51	109	117
9SS6-CCT4753	47	53	111	120
9SS6-CCT4955	49	55	114	124
9SS6-CCT5157	51	57	116	127
9SS6-CCT5359	53	59	119	133
9SS6-CCT5561	55	61	127	137
9SS6-CCT5763	57	63	126	140
9SS6-CCT5965	59	65	128	144
9SS6-CCT6167	61	67	132	147
9SS6-CCT6369	63	69	136	150

	Cable Range (mm)		Dimensions (mm)	
Part No.	Min. Dia.	Max. Dia.	H	W
9SS6-CCT6571	65	71	140	153
9SS6-CCT6773	67	73	143	156
9SS6-CCT6975	69	75	147	160
9SS6-CCT7177	71	77	151	163
9SS6-CCT7379	73	79	154	166
9SS6-CCT7581	75	81	158	169
9SS6-CCT7783	77	83	161	173
9SS6-CCT7985	79	85	164	176
9SS6-CCT8187	81	87	169	179
9SS6-CCT8389	83	89	173	182
9SS6-CCT8692	86	92	177	187
9SS6-CCT8896	88	96	181	192
9SS6-CCT9199	91	99	185	196
9SS6-CCT96103	96	103	190	201
9SS6-CCT99107	99	107	194	202
9SS6-CCT103111	103	111	199	204
9SS6-CCT107115	107	115	203	208
9SS6-CCT111119	111	119	208	213
9SS6-CCT115123	115	123	213	217
9SS6-CCT119128	119	128	217	221

Single Cable Cleat with LSF Pad

1. Recommended for installations where the highest levels of short circuit withstand are required.
2. Short circuit current tested in accordance with BS EN/IEC 61914 standard.
3. Available for single and trefoil cable applications.
4. LSF-pad incorporates an integral low smoke, low fume, zero halogen pad.
5. Hardware to attach cleat to rung attachment bracket is included with cleat. Bracket must be ordered separately.





BS EN/IEC 61914 (Cable Cleats for Electric Installations) Classification	
Cleat Type	Composite
Resistance to Electromechanical Force	130 kA peak / 50 kA RMS 600 mm spacing
Lateral Load Test	3.439 kg average
Axial Load Test	Pass
Operating Temperature Range	-40°C to +60°C
Impact Resistance	Very Heavy
Needle Flame Test	30 seconds

Technical Specifications	
Frame	50mm x 2mm Marine grade, Non-magnetic 316L
Closure Hardware	Captive 316 Stainless Steel M8 or M10 (M12 available) bolt and nylon-lock nut (Optional Hex Flange Lock Nut available)
Integral Pad	Low Smoke, Low Fume, Zero Halogen
Tools Required	Impact Wrench
Mounting Bolt	Provided with Cable Cleat

	Cable Range (mm)		Dimensions (mm)	
Part No.	Min. Dia.	Max. Dia.	H	W
9SS6-CCS2832	28	32	61	55
9SS6-CCS3034	30	34	63	57
9SS6-CCS3236	32	36	65	59
9SS6-CCS3438	34	38	67	61
9SS6-CCS3640	36	40	71	63
9SS6-CCS3842	38	42	69	65
9SS6-CCS4044	40	44	71	67
9SS6-CCS4246	42	46	72	69
9SS6-CCS4448	44	48	74	71
9SS6-CCS4650	46	50	75	73
9SS6-CCS4852	48	52	77	75
9SS6-CCS5054	50	54	79	77
9SS6-CCS5256	52	56	80	79
9SS6-CCS5458	54	58	81	81
9SS6-CCS5660	56	60	83	83
9SS6-CCS5862	58	62	85	85
9SS6-CCS6064	60	64	86	87
9SS6-CCS6266	62	66	88	89
9SS6-CCS6468	64	68	90	91
9SS6-CCS6670	66	70	91	93

	Cable Range (mm)		Dimensions (mm)	
Part No.	Min. Dia.	Max. Dia.	H	W
9SS6-CCS6872	68	72	93	95
9SS6-CCS7074	70	74	95	97
9SS6-CCS7276	72	76	97	99
9SS6-CCS7478	74	78	99	101
9SS6-CCS7680	76	80	101	103
9SS6-CCS7682	76	82	103	105
9SS6-CCS8084	80	84	105	107
9SS6-CCS8286	82	86	107	109
9SS6-CCS8488	84	88	109	111
9SS6-CCS8690	86	90	110	113
9SS6-CCS88192	88	192	113	117
9SS6-CCS9094	90	94	116	120
9SS6-CCS9296	92	96	126	127
9SS6-CCS94106	94	106	135	133
9SS6-CCS100112	100	112	140	139
9SS6-CCS106118	106	118	145	145
9SS6-CCS112124	112	124	153	155
9SS6-CCS118130	118	130	162	165
9SS6-CCS127139	127	139	161	167
9SS6-CCS132144	132	144	165	173
9SS6-CCS138150	138	150	170	179

Step 1: Know Your Cables

- What type of cable is being used?
  - Single or Multi-conductor
- What is the outside diameter of the cable(s)?
- What is the cable arrangement (single conductor cables only)?
  - Flat or Trefoil
- If a ground wire will be installed within the cleat, you will need the ground wire outside diameter.

Step 2: Know Your System

- What is the available short circuit current (RMS or i_p (peak))?
- What type of B-Line cable tray is installed?

Step 3: Select Your Cable Cleats

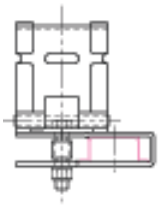
- See Pages N-2 & N-3

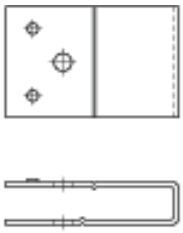
Step 4: Select Your Mounting Bracket

Mounting brackets are used to attach cable cleats to the rungs of the ladder type cable trays. Your tray type will determine the mounting bracket used.

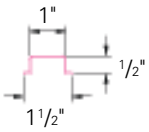
B-Line Tray Types	Mounting Bracket
Steel Series 1 trays with standard rungs	9SS6-CCB-A
Steel trays with strut rungs Aluminum trays with "Marine Rungs"	9SS6-CCB-B
Aluminum welded rung trays with standard rungs. Steel Series 2, 3, 4 or 5, trays with standard rungs Fiberglass trays with standard rungs	9SS6-CCB-C
KwikRail™ cable tray	9SS6-CCB-D

9SS6-CCB-A





Use with rungs



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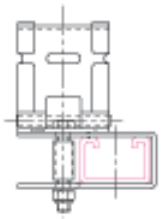

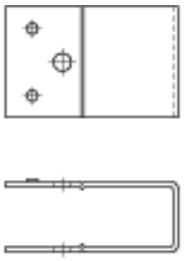

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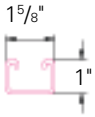

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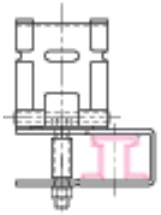

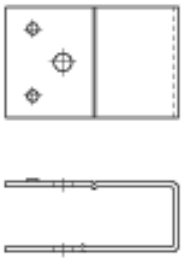

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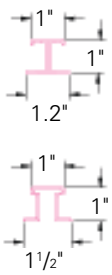

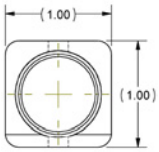

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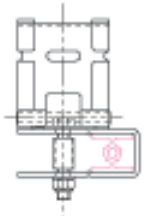
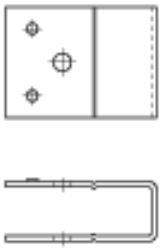
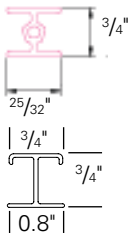




Use with rungs

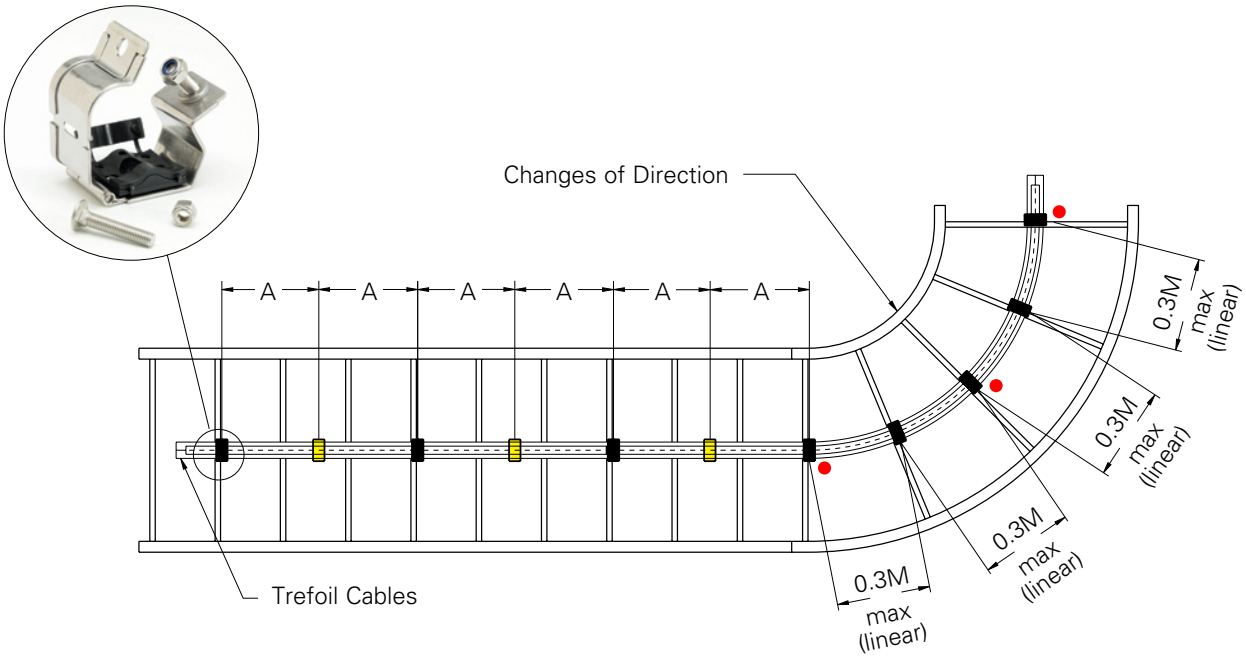


Step 5: Determine Cleat Spacing for Installation

Your cable diameter is equal to the spacing between conductor centers shown below.
Find your cable diameter at the top of the table and look down at the column below it.
Find the value equal to or greater than the available short circuit for your system.

Single Conductor Short Circuit Withstand Table

Max. Cable Cleat Spacing (A)		Spacing Between Conductor Centers (mm)											
		23	25	27	29	31	33	35	37	39	41	43	45
mm	In.	**i_p peak (kA)**											
225	9	179	187	194	203	209	216	220	229	234	240	246	250
300	12	155	163	168	174	181	187	192	198	203	209	214	215
450	18	128	133	137	144	148	152	157	161	165	170	174	178
600	24	110	115	119	124	128	132	135	139	143	148	150	153
675	27	104	108	113	117	121	124	128	132	135	139	143	147
900	36	89	93	97	102	104	108	110	115	117	121	124	127



IMPORTANT: Recommended Installation Procedures

It is important that the cleats are installed properly to secure your cables:

- It is not necessary for every cleat to be attached to the tray. Every other cleat (▮) must be attached to the tray system to mount cable in tray. Unattached cleats (▮) provide additional restraint to keep cables bundled.
- The bend radius should be 8 to 12 times the cable diameter.
- Cleats should always be installed at the beginning, middle and end of a bend (●), and at no time should the distance between cleats on a bend be more than 0.3M center to center.

3M
Fire Barrier
Self-Locking Pillow (Large)
3 in x 6 in x 9 in
(76,2 mm x 152 mm x 228
Store In A Cool Dry Place
3M
Fire Barrier
Self-Locking Pillow (Medium)
2 in x 6 in x 9 in
(50,8 mm x 152 mm x 228 mm)
Store in A Cool Dry Place
Made in U.S.A. from U.S. and Canadian Materials
34-7054-6926-9
3M
Fire Barrier
Self-Locking Pillow (Small)
2 in x 4 in x 9 in
(50,8 mm x 101 mm x 228 mm)
Store In A Cool Dry Place
Made in U.S.A. from U.S. and Canadian Materials
34-7054-6901-2

3M™† Fire Barrier Self-Locking Pillows

Features & Benefits

- Extremely easy to install - saves time and labor
- Easy removal and fully reusable - with no blocking or fusing of materials
- No cutting required, no left over debris
- Up to three-hour UL Listed F-Rating
- UL Listed systems up to 540 sq. in. opening
- Passes hose stream test without cumbersome wire mesh
- Smoke seal tested and listed
- Listed for blank or filled openings in gypsum wallboard or concrete
- Available in three (3) sizes
- One (1) or two (2) cable trays per opening

This product will intumesce and lock tightly into place eliminating the prep work of cutting or leaving any messy debris. The resulting barrier retards the transmission of smoke, fire, and toxic gases from spreading between adjacent rooms and floors for the rated time period.

Catalog Number	Type	Pillow Size in. (mm)
FSP-SLP-S	Small	2″ x 4″ x 9″ (51 x 101 x 228)
FSP-SLP-M	Medium	2″ x 6″ x 9″ (51 x 152 x 228)
FSP-SLP-L	Large	3″ x 6″ x 9″ (76 x 152 x 228)

The following charts give the number of 3M pillows needed to completely firestop an opening that cable tray passes through.* Two (2) sticks of moldable putty (part number FSP-MPS) are also needed for each opening.

Flextray

	Height		
Width	**2**	**4**	**6**
2	4	--	--
4	5	7	--
6	6	8	--
8	7	10	13
12	10	13	17
16	12	17	21
18	13	18	24
20	15	20	26
24	17	24	30
30	21	29	--
36	22	--	--

Two (2) Side Rail Cable Tray

	Height			
Width	**4**	**5**	**6**	**7**
6	8	9	10	11
9	11	12	14	15
12	13	15	17	19
18	18	21	24	26
24	24	27	30	34
30	29	33	37	41
36	34	39	44	49
42	39	45	51	56
48	45	51	57	64

Pan Tray

	Height		
Width	**4**	**5**	**6**
6	8	9	10
9	11	12	14
12	13	15	17
18	18	21	24
24	24	27	30
30	29	33	37
36	34	39	44

UL Listed Systems

Concrete Wall - C-AJ-4056 3 HR F-Rating, 3/4 HR T-Rating

Gypsum Wall - W-L-4037 1 HR and 2 HR F-Ratings, 0 HR and 1/2 HR T-Ratings

For tray larger than 4″ x 24″, or a tray style other than ladder tray call 1-800-328-1687 then option 8 to obtain a free engineering judgement letter.

* Number of pillows refers to 3M's medium self-locking pillows (part number FSP-SLP-M) and are based on an opening that is 1.5″ larger than the tray on all sides.

Example: For a 4″ x 12″ tray the recommended opening would be 7″ x 15″.

† 3M™ is a registered trademark of the 3M Company

3M™† Fire Barrier Moldable Putty+

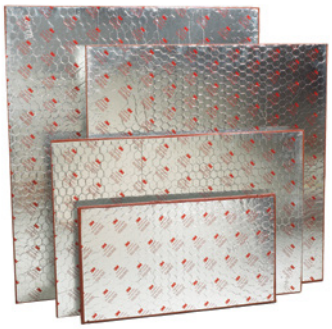
Features & Benefits

- Pliable. Easy to mold into any shape
- Adheres. Sticks well to most surfaces but not to the applicator's hands
- Conformable. Pads easily conform and adhere to a wide variety of metallic and non-metallic electrical outlet boxes
- UL Listed. Wide range of UL Listed systems
- Ages Well. Excellent aging properties

3M Fire Barrier Moldable Putty+ is a one-part, halogen-free product designed to firestop electrical outlet boxes and a wide variety of through-penetrations including cable, conduit, insulated pipe and metal pipe, which penetrate fire-rated construction.

Catalog Number	Type	Size in.	(mm)
FSP-MPP-4x8	Small Pad	4″ x 8″	(101 x 203)
FSP-MPP-7x7	Medium Pad	7″ x 7″	(178 x 178)
FSP-MPP-9x9	Large Pad	9 1/2″ x 9 1/2″	(241 x 241)

3M™† Fire Barrier CS-195+ Composite Sheets



Features & Benefits

- Ideal for fire-stopping blank openings and through-penetrations of multiple cable, pipe ducts, buss ducts and cable trays
- Intumescent
- Lightweight and easy to handle - just cut and form to fit
- Easy to install using common trade tools
- Easy to fasten - bolt punch or drill through and use self-tapping screws or anchor bolts
- Bottom-of-floor applications available
- No mixing or damming required
- Re-enterable
- Documented aging properties

This organic/inorganic elastomeric sheet is bonded on one side to a layer of 28-gauge galvanized steel. The other side is reinforced with a steel-wire mesh and covered with aluminum foil.

Catalog Number	Type	Size in.	(mm)
FSP-CS-16x28	Sheet	16″ x 28″	(406 x 711)
FSP-CS-28x52	Sheet	28″ x 52″	(711 x 1320)
FSP-CS-36x24	Sheet	36″ x 24″	(914 x 609)
FSP-CS-36x36	Sheet	36″ x 36″	(914 x 914)
FSP-CS-36x41	Sheet	36″ x 41″	(914 x 1041)

† 3M™ is a registered trademark of the 3M Company

3M™† Fire Barrier Quick Pass Devices

Features & Benefits

- Hinged for existing cables
- Stackable for multiple penetrations
- Optional mounting brackets - single or triplex
- Install before or after gypsum wall assembly
- Easily identified red color
- Quick to pass cables
- JCAHO and NFPA Life Safety Code 101 compliant
- UL Classified 1, 2 and 3 hour fire (F) and temperature (T) rating
- UL Classified L rating, Hot and Cold Smoke Seal
- ULC

The Quick Pass Device makes installation and retrofitting a snap. Simply follow the instructions located on the product. Use this product in new construction or update your fire protection in a renovation - the optional mounting bracket opens easily allowing retrofit installations. As your needs change, reuse the device for additional cables and wiring.

Catalog Number	Type	Size
PT2RD	Round Device	2" (25 mm) Round
PT4SD	Square Device	4" (101mm) Square
PT4RD	Round Device	4" (101mm) Round

† 3M™ is a registered trademark of the 3M Company

3M™† Fire Barrier CP-25WB+ Caulk

Features & Benefits

- Water based - easy cleanup and routine disposal with no special handling
- One-part system - no mixing or measuring required
- Intumescent and endothermic
- No-sag, non-halogen formula
- Fast drying - tack-free in approximately 10 to 15 minutes
- Water-resistant seal
- Paintable
- Documented aging properties

Our premium, intumescent latex/water-based caulk.
CP 25WB Caulk can be installed with a standard caulking gun

Catalog Number	Type
FSP-BC-25	10.1 ounce Tube

3M™† Fire Barrier IC-15WB+ Caulk

Features & Benefits

- Cost effective
- UL tested
- Distinctive yellow color makes inspections easier
- For use as a one-part fire, smoke, noxious gas and water sealant

This is an affordable firestop caulk that helps you stay on budget. Its unique intumescent property allows IC 15WB Caulk to effectively contain fire and smoke at its origin. IC 15WB Caulk can be installed with a standard caulking gun

Catalog Number	Type
FSP-BC-15	10.1 ounce Tube

3M™ Aluminum Foil Tape 425

Features & Benefits

- 3-mil aluminum foil
- Acrylic adhesive performs in high temperatures

Designed to seal the cut edges of 3M™ Interam Mats to complete the total encapsulation.

Catalog Number	Type
FSP-AT-425	4" (101mm) x 180' (27.5m) Roll

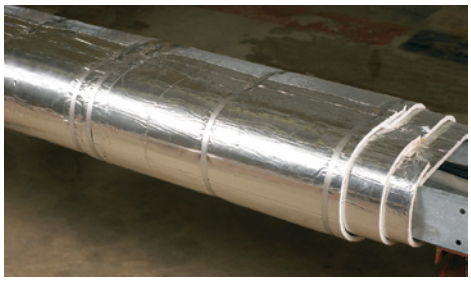
† 3M™ is a registered trademark of the 3M Company

3M™† Interam™† E-5 Series Mat

Features & Benefits

- Provides up to three (3) hours of electrical circuit protection
- Made of a combination of organic/inorganic materials
- Outdoor durable
- Endothermic
- Available with a stainless-steel or aluminum backing
- Outstanding performance in high-intensity fires
- Easy to install in new applications or directly over existing fire protection

Blocks heat penetration by chemically absorbing heat energy to protect structural steel and cable trays.



Catalog Number	Type
FSP-EMAT	24 1/2" (622mm) x 20' (6.09m) Roll

† 3M™ and Interam™ are registered trademarks of the 3M Company

Wall Sleeve Kits

'CT' Type Wall Sleeve
Sleeve is 20" long

'U' Type Wall Sleeve
WS (Wall Sleeve) shown
Sleeve is 20" long

- "CT" Type tray includes two (2) pair 9ZN-800* splice plates with 3/8" zinc plated hardware.
- "U" Type tray does not include splices. Example uses include Wire Basket or Half-Rack.

  * Insert tray height.

Classified by Underwriters Laboratories, Inc. as to it's suitability as an equipment grounding conductor only. 556E

Wall Sleeve Part Numbering

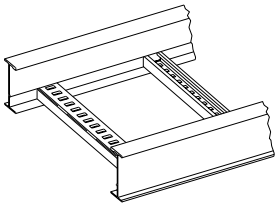
Example: **9P - xxx - CT - 4 - 12**

Finish	Type	Tray Type	Tray Height	Tray Width
P = Pregalvanized	**WS** = Wall Sleeve	**CT** = Cable Tray †	**4**	**06** = 6"
		U = Universal	**5**	**09** = 9"
			6	**12** = 12"
			7	**18** = 18"
				24 = 24"
				30 = 30"
				36 = 36"

† 'CT' Type furnished with steel splice plates (9ZN-800*). For aluminum cable trays use the furnished splice plates and field drill 13/32" diameter holes in the aluminum side rails.

These options are in addition to the Standard Ladder Rungs and Cable Trays.

Marine Rung (Available in Aluminum, HDGAF Steel and Stainless Steel)

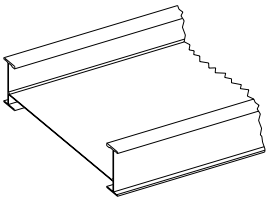


(Aluminum Shown)

- Designed for Series 1 and Series 2-5 systems.
- Special rung design to accommodate stainless steel banding of cables (U.S. Coast Guard requirement) with .438" x .720" slots.
- Has applications on land, vertical installation, any location where extra cable positioning/attachment is required.
- Strut orientation may be channel opening up, channel opening down, or alternating - standard is alternating unless specified otherwise.
- New design provides combination of strut fastening and marine rung fastening.

Examples: 46A12MR-36-288 or 464G12MR-36-288

- "MR" Strut rung spaces 12" apart with channel opening down (Note: replace "DN" with "UP" for channel opening up.)



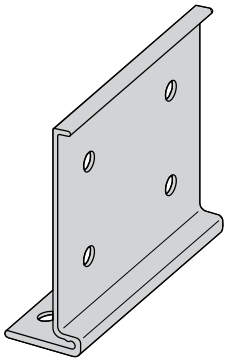
Solid Bottom

- Solid flat sheet welded into the Cable Tray above the rungs.
- Standard rung spacing is 12 inches.
- The flat sheet may be installed over B54 rungs "slot down".

Examples: 24ASB-36-144
Flat sheet bottom over standard rung on 12" spacing.

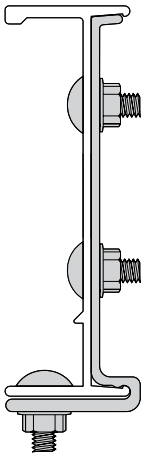
24ASBB54-36-144
Flat sheet bottom over B54 strut rung slot down on 12" spacing.

9A-6006 and 9A-6007
Aluminum Mid-Span Splice



Features
- Standard for H46A, H47A and 57A straight sections.
- Allows random splice location.
- Six bolt design furnished with standard 1/2" Stainless Steel Type 316 hardware.
- Furnished in pairs.
- Available on ladder bottoms only. 09" and 12" rung spacing.

Tray Series	Catalog No.
H46A	**9A-6006**
H47A	**9A-6007**
57A	**9A-6007**



Cable Tray:

H46A
Tested to:
- 167 lbs/ft (safety factor 1.5)
- 125 lbs/ft (safety factor 2.0)
- 20 ft. simple beam test
  12" rung spacing - 36" wide

H47A
Tested to:
- 149 lbs/ft (safety factor 1.5)
- 112 lbs/ft (safety factor 2.0)
- 20 ft. simple beam test
  12" rung spacing - 36" wide

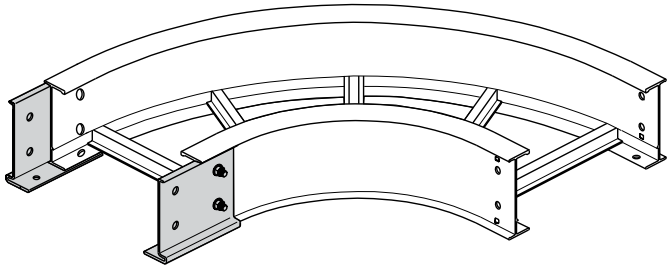
Splice:

9A-6006
Tested to:
- 135 lbs/ft (safety factor 1.5)
- 101 lbs/ft (safety factor 2.0)
- 20 ft. simple beam test
  mid-span splice

9A-6007
Tested to:
- 143 lbs/ft (safety factor 1.5)
- 107 lbs/ft (safety factor 2.0)
- 20 ft. simple beam test
  mid-span splice

Options: The 9A-6006 and 9A-6007 splice is also available with B-Line 46A and 47A series cable tray systems

- Available on ladder bottoms only (09" and 12" rung spacing).
- Available on 240" (20') or longer span straight sections.
- To order add MS* to part number: Ex. 46AMS09-24-288.
- For standard 6A or 7A fittings with H46A or H47A systems an additional pair of standard splice plates is required (9A-1006 or 9A-1007).



One pair 9A-6006 or 9A-6007 included.

Also available:
H6A and H7A Fittings
- Ladder bottom only (09" RS).
- Incorporates the 9A-6006 or 9A-6007 splice.
- Example: H6A-12-90HB24 or H7A-12-90HB24

* MS designates additional hole punches in side rail to accept mid-span splices.

Heavy Duty Expansion Splice Plates
9A-6016 and 9A-6017 (aluminum)
9G-6016 and 9G-6017 (HDG steel)
9SS6-6016 (stainless steel)

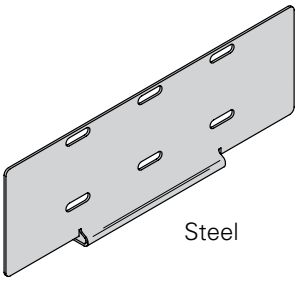
The Heavy Duty Expansion Splice Plate is engineered to eliminate the NEMA recommended additional supports at each expansion joint where expansion splice plates are utilized. Expansion splices are common in long-run outdoor applications, where temperature variations result in thermal expansion and contraction of the cable tray system. The installer using the traditional expansion splice would be required to install two supports, one on either side of the expansion splice. By utilizing the Heavy Duty Expansion Splice Plate, no additional supports are required when the splice is placed at quarter span.

- NEMA VE 2 Compliant
- Lowest total cost of installation solution
- "Wrap around" design that supports the side rail on the bottom of each tray section
- Aluminum HD Expansion Splice includes viewing windows to correctly set the thermal expansion gap. See Figure 4.13B on MAN-39 of the cable tray catalog .
- Available in lightweight, marine-grade 6063-T6 aluminum material, hot dip galvanized steel, and stainless steel 316 for easy installation in a variety of applications
- Visit https://www.eaton.com/us/en-us/site-search.searchTerm$S00015664-series-2-5-aluminum-accessory-splice-heavy-duty-expansion.tabs$all.html for detailed installation instructions
- Splice plate hardware included
- Furnished in pairs
- Cannot be used with solid bottom or trough bottom styles of cable tray.

Heavy Duty Expansion Splice Plates are currently available with aluminum (46A, 47A, 46A, H46A, H47A & 57A), steel (464, 476 & 574), and stainless steel (464) tray systems. These tray systems are heavy duty ladders that are ideal for long-span, outdoor applications.

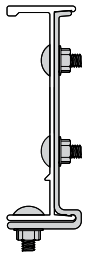
Patented: Patent No. US8459604 B2

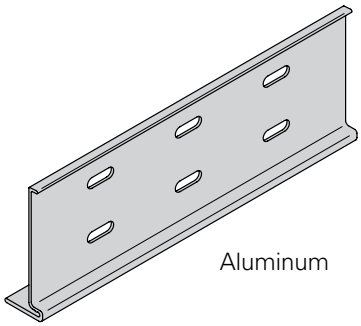
Options: The 9A-6006 and 9A-6007 splice is also available with B-Line 46A and 47A series cable tray systems



Steel

Steel Tray Series	Catalog No.
464	**9G-6016 or 9SS6-6016**
476	**9G-6017**
574	**9G-6017**



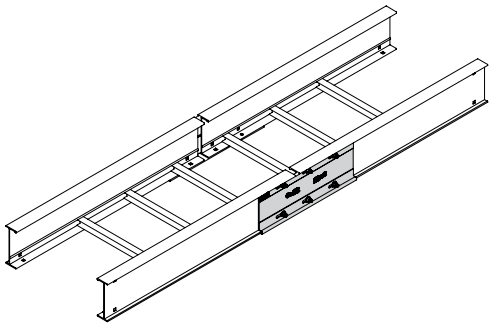


Aluminum

Aluminum Tray Series	Catalog No.
46A*	**9A-6016**
H46A	**9A-6016**
47A*	**9A-6017**
H47A	**9A-6017**
56A	**9A-6016**
57A	**9A-6017**

* Additional field drilling is required

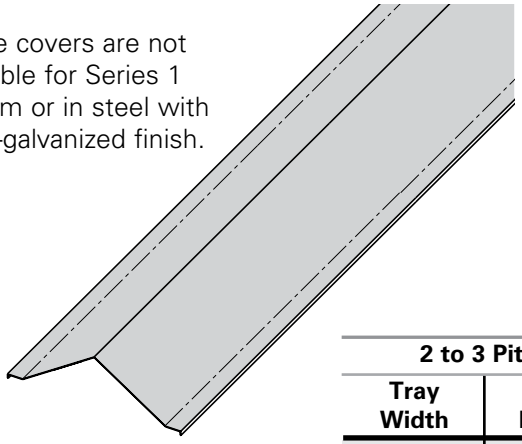
Note: 24" (609mm) bonding jumper **(99-1620-24)** available.



Aluminum heavy-duty expansion splice plates shown.

Special Purpose 2 to 3 Pitch Peaked Covers

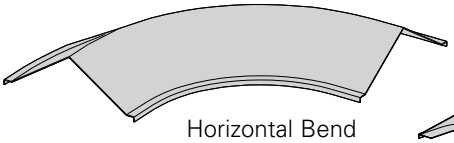
These covers are not available for Series 1 system or in steel with a pre-galvanized finish.



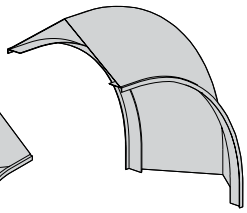
Features

- 33° slope to shed precipitants.
- Heavy construction - made for the industrial environment.
- Available in aluminum and steel; hot dip galvanized after fabrication (HDGAF ASTM A-123), 304 stainless and 316 stainless.
- Available in flanged design only.
- Fittings are in multiple piece welded construction.
- Expanding/Reducing HT and HX covers are not available.

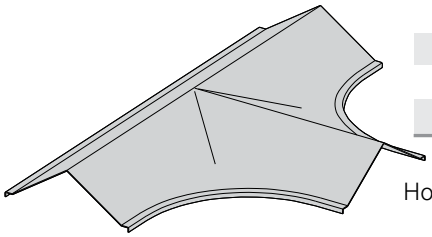
2 to 3 Pitch	
Tray Width	**Peak Height**
6"	2"
9"	3"
12"	4"
18"	6"
24"	8"
30"	10"
36"	12"



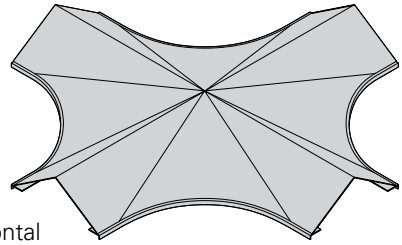
Horizontal Bend



Vertical Outside Bend



Horizontal Tee



Horizontal Cross

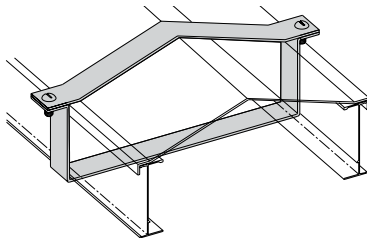
Catalog Number Selector

Example: 83 7 A 80 - 24 - 144

Cover Type	Detail	Material	Material Thickness	Tray Width	Item Description
● 83 = 2 to 3 Pitch Peaked	7 = Flanged Aluminum 2 = Flanged Steel (248, 258, 268 straight sections & fittings 3 = Flanged Steel (All straight sections except 248, 258, 268)	A = Aluminum G = HDGAF ASTM A-123 SS4 = 304 Stainless Steel SS6 = 316 Stainless Steel	80 = .080 Aluminum straight section 125 = .125 Aluminum fittings 16 = 16 Ga. Steel straight sections. 18 = 16 Ga. Steel fittings.	06 = 6" 09 = 9" 12 = 12" 18 = 18" 24 = 24" 30 = 30" 36 = 36"	144 = 12 ft. (3.66 m) 120 = 10 ft. (3.05 m) 72 = 6 ft. (1.83 m) 60 = 5 ft. (1.52 m)

2 to 3 Pitch Cover Clamp

- Recommended for outdoor service.



Side Rail Height in. (mm)	Catalog No. Aluminum	Catalog No. Steel	Catalog No. Stainless Steel
4 (101)	● 9A-(‡)-9P44	● 9G-(‡)-9P44	● 9**-(‡)-9P44
5 (127)	● 9A-(‡)-9P54	● 9G-(‡)-9P54	● 9**-(‡)-9P54
6 (152)	● 9A-(‡)-9P64	● 9G-(‡)-9P64	● 9**-(‡)-9P64
7 (178)	● 9A-(‡)-9P74	● 9G-(‡)-9P74	● 9**-(‡)-9P74

(‡) Insert tray width (**) Insert SS4 or SS6

● Green = Fastest shipped items ● Black = Normal lead-time items ● Red = Normally long lead-time items

Wiring methods permitted in cable tray per the 2020 NEC®

1. Armored cable ..... (Article 320)
2. Electrical metallic tubing ..... (Article 358)
3. Electrical nonmetallic tubing ..... (Article 362)
4. Fire alarm cables ..... (Article 760)
5. Flexible metal conduit ..... (Article 348)
6. Flexible metallic tubing ..... (Article 360)
7. Instrumentation tray cable ..... (Article 727)
8. Intermediate metal conduit ..... (Article 342)
9. Liquidtight flexible metal conduit ..... (Article 350)
10. Liquidtight flexible nonmetallic conduit ..... (Article 356)
11. Metal-clad cable ..... (Article 330)
12. Mineral-insulated, metal-sheathed cable ..... (Article 332)
13. Multiconductor service-entrance cable ..... (Article 338)
14. Multiconductor underground feeder and branch-circuit cable ..... (Article 340)
15. Multipurpose and communications cables ..... (Article 800)
16. Nonmetallic-sheathed cable ..... (Article 334)
17. Power and control tray cable ..... (Article 336)
18. Power-limited tray cable ..... (Section 725.61(C) and 725.71(E)
19. Optical fiber cables ..... (Article 770)
20. Other factory-assembled, multiconductor control, signal, or power cables that are specifically approved for installation in cable trays
21. Rigid metal conduit ..... (Article 344)
22. Rigid nonmetallic conduit ..... (Article 352)

Appendix - Reference Material - Formulas

Formulas

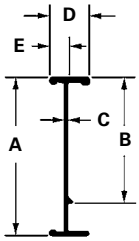
- Allowable load: $w = \frac{F96Sx}{L^2}$
- Deflection: $\Delta = \frac{5wL^3}{384EIx} = \frac{5wL^4}{4608EIx}$
- Stress: $F = \frac{wL^2}{96Sx}$
- Deflection Multiplier (K) $= \frac{\text{deflection}}{w} = \frac{5L^4}{4608EIx}$
- Max. Working Load $= \frac{\text{Max. deflection}}{\text{Deflection Multiplier}}$

Legend		
w	=	load (lbs/ft)
W	=	total load across span (lbs)
F	=	design stress (lbs/in^2)
L	=	span (inches)
Sx	=	section modulus for 2 rails (in^3) (see page APP-6 for Sx values)
E	=	10 million for Alum. (lb/in.^{2}) 29 million for Steel (lb/in.^{2})
Ix	=	moment of inertia for 2 rails (in^4) (see page APP-6 for Ix values)

Cable Tray Side Rails

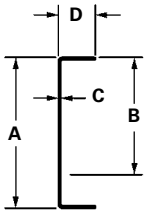
Design Data For One Rail

Aluminum

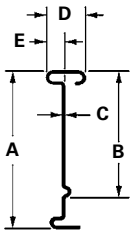


B-Line series	Side Rail Height	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	Sx (in.³)	Ix (in.⁴)	Area (in.²)	Weight (lbs./ft.)
KRA4A	4	3.86	2.970	.059	1.36	.750	0.450	0.895	0.400	0.467
KRB4A	4	3.880	2.950	.067	1.36	.750	0.535	1.160	0.494	0.578
KRB6A	6	5.880	4.950	.067	1.36	.750	0.955	3.080	0.624	0.730
24	4	4.120	3.050	.060	1.75	.740	0.670	1.430	0.525	0.620
H24	4	4.185	3.105	.070	1.75	.750	0.785	1.845	0.640	0.745
34	4	4.200	3.080	.100	1.75	.750	1.050	2.490	0.902	1.060
25	5	5.000	3.930	.068	1.75	.748	0.900	2.310	0.620	0.720
35	5	5.060	3.960	.090	1.75	.745	1.180	3.190	0.857	0.980
26	6	6.120	5.040	.065	2.00	.745	1.260	3.950	0.698	0.820
36	6	6.170	5.060	.075	2.00	.725	1.680	5.420	0.903	1.050
46	6	6.190	5.080	.085	2.00	.650	1.790	6.090	0.989	1.170
H46	6	6.240	5.090	.130	2.00	.750	2.670	8.650	1.473	1.740
56	6	6.433	5.263	.140	2.12	.760	3.059	11.316	1.185	2.113
27	7	7.140	6.058	.075	2.00	.725	1.465	5.640	0.810	0.943
37	7	7.140	6.050	.075	2.00	.750	1.880	6.750	0.904	1.060
47	7	7.240	6.130	.100	2.00	.675	2.470	8.940	1.189	1.400
H47	7	7.240	6.090	.125	2.00	.675	3.050	11.460	1.520	1.770
57	7	7.400	6.230	.160	2.00	.875	3.860	16.430	2.114	2.460
S8A	8	8.000	6.170	.170	3.00	1.000	7.690	27.670	2.754	3.200

Steel



Series 148-176 Rail Only



All Other Steel Rails

B-Line series	Side Rail Height	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	Sx (in.³)	Ix (in.⁴)	Area (in.²)	Weight (lbs./ft.)
148	4	3.625	3.125	.048	.875	—	.250	.450	.251	.840
156	5	4.188	3.688	.060	.875	—	.360	.760	.340	1.160
166	6	5.188	4.688	.060	.750	—	.460	1.200	.385	1.310
176	7	6.188	5.688	.060	.750	—	.640	1.900	.444	1.520
248	4	4.188	3.140	.048	1.000	.392	.320	.720	.313	1.170
346	4	4.188	3.130	.060	1.500	.655	.480	1.110	.449	1.640
444	4	4.188	3.110	.075	1.500	.670	.640	1.470	.561	2.020
258	5	5.188	4.140	.048	1.000	.392	.450	1.220	.361	1.340
356	5	5.188	4.130	.060	1.500	.655	.660	1.860	.509	1.860
454	5	5.188	4.110	.075	1.500	.670	.870	2.480	.636	2.290
268	6	6.188	5.140	.048	1.000	.392	.590	1.900	.409	1.520
368	6	6.188	5.130	.048	1.500	.643	.710	2.390	.457	1.700
366	6	6.188	5.140	.060	1.500	.655	.850	2.870	.569	2.080
464	6	6.188	5.110	.075	1.500	.670	1.140	3.830	.711	2.560
378	7	7.188	6.140	.048	1.500	.643	.890	3.450	.505	1.880
476	7	7.188	6.130	.060	1.500	.655	1.070	4.150	.629	2.300
574	7	7.188	6.110	.075	1.500	.670	1.430	5.550	.792	2.830

A - Side Rail Height **B -** Loading Depth **C -** Web Thickness **D -** Flange Width
Design Factors: Ix = Moment of Inertia, Sx = Section Modulus

Series 1

Steel Side Rail Weights

Tray Series		148	156	166	176
Weight for 2 Side Rails	lbs/ft	1.68	2.32	2.62	3.03
	kg/m	2.50	3.45	3.90	4.51

Example:
Weight for 148P09-12-144
= 1.68 lbs/ft + .51 lbs/ft = 2.19 lbs/ft
= (2.19 lbs/ft) (12 ft) = 26.28 lbs.

Tray Bottom Weights

Tray Width (inches)			6	9	12	18	24	30	36
All Series 1 Steel	6" Spacing Rung Weight	lbs/ft	0.38	0.57	0.76	1.14	1.52	2.25	2.70
		kg/m	0.57	0.85	1.13	1.70	2.26	3.35	4.02
	9" Spacing Rung Weight	lbs/ft	0.25	0.38	0.51	0.76	1.01	1.50	1.80
		kg/m	0.38	0.57	0.75	1.13	1.51	2.23	2.68
	12" Spacing Rung Weight	lbs/ft	0.19	0.29	0.38	0.57	0.76	1.13	1.35
		kg/m	0.29	0.43	0.57	0.85	1.13	1.68	2.01
Series 156, 166 & 176 Steel	Solid Bottom Weight	lbs/ft	1.01	1.51	2.01	3.02	4.02	5.20	6.25
		kg/m	1.50	2.24	2.99	4.49	5.98	7.74	9.29

When using steel tray that is hot dip galvanized after fabrication add 9.6% to weights.

Series 2, 3, 4 or 5

Aluminum Side Rail Weights

Tray Series		24	H24	34	25	35	26	36	46	H46	56	27	37	47	H47	57	S8A
Weight for 2 Side Rails	lbs/ft	1.23	1.49	2.12	1.44	1.96	1.64	2.09	2.33	3.47	4.22	1.88	2.12	2.80	3.54	4.92	
	kg/m	1.83	2.22	3.15	2.14	2.92	2.44	3.11	3.47	5.16	6.29	2.80	3.15	4.16	5.27	7.32	

Steel Side Rail Weights

Tray Series		248	346	444	258	356	454	268	368	366	464	378	476	574
Weight for 2 Side Rails	lbs/ft	2.34	3.28	4.04	2.68	3.72	4.58	3.04	3.40	4.16	5.12	3.76	4.60	5.66
	kg/m	3.48	4.88	6.01	3.99	5.54	6.82	4.52	5.06	6.19	7.62	5.59	6.84	8.42

Series 2, 3, 4 or 5 weights continued on page 387.

Series 2, 3, 4 or 5

Tray Bottom Weights

Tray Width (inches)			6	9	12	18	24	30	36	42
All Series 2,3,4 Aluminum	6" Spacing Rung Weight	lbs/ft	0.30	0.44	0.59	0.89	1.18	1.70	2.04	2.38
		kg/m	0.44	0.66	0.88	1.32	1.76	2.53	3.04	3.54
	9" Spacing Rung Weight	lbs/ft	0.20	0.29	0.39	0.59	0.78	1.13	1.36	1.58
		kg/m	0.29	0.44	0.58	0.87	1.16	1.68	2.02	2.35
	12" Spacing Rung Weight	lbs/ft	0.15	0.22	0.29	0.44	0.58	0.85	1.02	1.19
		kg/m	0.22	0.32	0.43	0.65	0.86	1.26	1.52	1.77
All Series 2,3,4,5 Steel	6" Spacing Rung Weight	lbs/ft	0.62	0.92	1.23	1.85	2.46	3.67	4.40	5.14
		kg/m	0.92	1.37	1.83	2.75	3.66	5.46	6.55	7.65
	9" Spacing Rung Weight	lbs/ft	0.41	0.62	0.82	1.23	1.64	2.45	2.94	3.43
		kg/m	0.61	0.92	1.22	1.83	2.44	3.65	4.37	5.10
	12" Spacing Rung Weight	lbs/ft	0.31	0.47	0.62	0.93	1.24	1.84	2.21	2.58
		kg/m	0.46	0.69	0.92	1.38	1.85	2.74	3.29	3.83

When using steel tray that is hot dip galvanized after fabrication add 9.6% to weights.

Fiberglass

Fiberglass Side Rail Weights

Tray Series		24	36	46
Weight for 2 Side Rails	lbs/ft	1.78	2.82	3.72
	kg/m	2.65	4.20	5.54

Fiberglass Bottom Weights

Tray Width (inches)			6	9	12	18	24	30	36
All Series Fiberglass	6" Spacing Rung Weight	lbs/ft	0.54	0.81	1.08	1.62	2.16	2.70	3.23
		kg/m	0.80	1.20	1.60	2.41	3.21	4.01	4.81
	9" Spacing Rung Weight	lbs/ft	0.35	.053	0.70	1.05	1.40	1.75	2.10
		kg/m	0.52	0.78	1.04	1.56	2.09	2.61	3.13
	12" Spacing Rung Weight	lbs/ft	0.27	0.40	0.54	0.81	1.08	1.35	1.62
		kg/m	0.40	0.60	0.80	1.20	1.60	2.01	2.41
	6" Spacing Marine Rung Wt.	lbs/ft	0.75	1.12	1.49	2.24	2.98	3.73	4.48
		kg/m	1.11	1.67	2.,22	3.33	4.44	5.55	6.66
	9" Spacing Marine Rung Wt.	lbs/ft	0.48	0.73	0.97	1.45	1.94	2.42	2.91
		kg/m	0.,72	1.08	1.44	2.16	2.89	3.61	4.33
	12" Spacing Marine Rung Wt.	lbs/ft	0.37	0.56	0.75	1.12	1.49	1.87	2.24
		kg/m	0.56	0.83	1.11	1.67	2.22	2.78	3.33

Metric Conversion Chart

To Convert From	To	Multiply By
Angle		
degree	radian (rad)	0.01745329
radian (rad)	degree	57.295780
Area		
$foot^2$	square meter (m^2)	0.09290304
$inch^2$	square meter (m^2)	0.0064516×10^{-2}
circular mil	square meter (m^2)	$0.00005067075 \times 10^{-5}$
sq. centimeter (cm^2)	square inch (in^2)	0.15500030
square meter (m^2)	$foot^2$	10.763910
square meter (m^2)	$inch^2$	1550.0030
square meter (m^2)	circular mil	1973523000.0
Temperature		
degree Fahrenheit	degree Celsius	$t^{o}_{C} = (t^{o}_{F} - 32) / 1.8$
degree Celsius	degree Fahrenheit	$t^{o}_{F} = 1.8t^{o}_{C} + 32$
Force		
pounds - force (lbf)	newtons (N)	4.4482220
Length		
foot (ft)	meter (m)	0.30480
inch (in)	meter (m)	0.02540
mil	meter (m)	0.002540×10^{-3}
inch	micrometer (μm)	25400.0
millimeters	inch (in)	0.039370
meter (m)	foot (ft)	3.280840
meter (m)	inch (in)	39.370080
meter (m)	mil	39370.0080
micrometer (μm)	inch (in)	$0.039370080 \times 10^{-3}$
Volume		
$foot^3$	cubic meter (m^3)	0.028316850
$inch^3$	cubic meter (m^3)	$0.016387060 \times 10^{-3}$
cubic centimeter (cm^3)	cubic inch (in^3)	0.061023740
cubic meter (m^3)	$foot^3$	35.314660
cubic meter (m^3)	$inch^3$	61023.760
gallon (U.S. liquid)	cubic meter (m^3)	0.0037854120
Section Properties		
section modulus S (in^3)	S (m^3)	$0.016387060 \times 10^{-3}$
moment of inertia I (in^4)	I (m^4)	$0.00041623140 \times 10^{-3}$
modulus of elasticity E (psi)	E (Pa)	6894.7570
section modulus S (m^3)	S (in^3)	61023.740
moment of inertia I (m^4)	I (in^4)	2402510.0
modulus of elasticity E (Pa)	E (psi)	$0.014503770 \times 10^{-2}$

Metric Conversion Chart (Cont.)

To Convert From	To	Multiply By
Bending Moment or Torque		
lbf • ft	newton meter (N•m)	1.3558180
lbf • in	newton meter (N•m)	0.11298480
N•m	lbf • ft	0.73756210
N•m	lbf • in	8.8507480
Mass		
ounce (avoirdupois)	kilogram (kg)	0.028349520
pound (avoirdupois)	kilogram (kg)	0.45359240
ton (short, 2000 lb)	kilogram (kg)	907.18470
ton (long, 2240 lb)	kilogram (kg)	1016.0470
kilogram (kg)	ounce (avoirdupois)	35.273960
kilogram (kg)	pound (avoirdupois)	2.2046220
kilogram (kg)	ton (short, 2000 lb)	0.0011023110
kilogram (kg)	ton (long, 2240 lb)	$0.98420640 \times 10^{-3}$
Mass Per Unit Length		
lb/ft	kilogram per meter (kg/m)	1.4881640
lb/in	kilogram per meter (kg/m)	17.857970
kilogram per meter (kg/m)	lb/ft	0.67196890
kilogram per meter (kg/m)	lb/in	0.55997410
Mass Per Unit Volume		
lb/ft^3	kilogram per cubic meter (kg/m^3)	16.018460
lb/in^3	kilogram per cubic meter (kg/m^3)	27679.90
kilogram per cubic meter (kg/m^3)	lb/ft^3	0.062427970
kilogram per cubic meter (kg/m^3)	lb/in^3	$0.03612730 \times 10^{-3}$
lb/ft^3	lb/in^3	1728.0
Mass Per Unit Area		
lb/ft^2	kilogram per square meter (kg/m^2)	4.8824280
kg/m^2	pound per square foot (lb/ft^2)	0.20481610
Pressure or Stress		
lbf/in^2 (psi)	pascal (Pa)	6894.7570
kip/in^3 (ksi)	pascal (Pa)	6894757.0
lbf/in^2 (psi)	megapascals (MPa)	0.0068947570
pascal (Pa)	pound-force per square inch (psi)	$0.0014503770 \times 10^{-1}$
pascal (Pa)	kip per square inch (ksi)	$0.0014503770 \times 10^{-4}$
megapascals (MPa)	lbf/in^2 (psi)	145.03770

Metric Symbols

m = meter	N = newton
cm = centimeter	kN = kilonewton
mm = millimeter	Pa = pascal
µm = micrometer	MPa = megapascal
kg = kilogram	

Appendix

SECTION 16114
CABLE TRAYS

PART I - GENERAL

1.01 SECTION INCLUDES

A. The work covered under this section consists of the furnishing of all necessary labor, supervision, materials, equipment, tests and services to install complete cable tray systems as shown on the drawings.

B. Cable tray systems are defined to include, but are not limited to straight sections of [ladder type] [trough type] [solid bottom type] [channel type] cable trays, bends, tees, elbows, drop-outs, supports and accessories.

1.02 REFERENCES

A. ANSI/NFPA 70 - National Electrical Code.

B. ASTM A123 - Specification for Zinc (Hot Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strip.

C. ASTM A653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process, Structural (Physical) Quality.

D. ASTM A1011 - Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High Strength Low Alloy with Improved Formability.

E. ASTM A1008 - Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.

F. ASTM B633 - Specification for Electrodeposited Coatings of Zinc on Iron and Steel.

G. NEMA VE 1 - Metallic Cable Tray Systems.

H. NEMA VE 2 - Cable Tray Installation Guidelines.

1.03 DRAWINGS

A. The drawings which constitute a part of these specifications indicate the general route of the cable tray systems. Data presented on these drawings is as accurate as preliminary surveys and planning can determine until final equipment selection is made. Accuracy is not guaranteed and field verification of all dimensions, routing, etc., is required.

B. Specifications and drawings are for assistance and guidance, but exact routing, locations, distances and levels will be governed by actual field conditions. Contractor is directed to make field surveys as part of his work prior to submitting system layout drawings.

1.04 SUBMITTALS

A. Submittal Drawings: Submit drawings of cable tray and accessories including clamps, brackets, hanger rods, splice plate connectors, expansion joint assemblies, and fittings, showing accurately scaled components.

B. Product Data: Submit manufacturer's data on cable tray including, but not limited to, types, materials, finishes, rung spacings, inside depths and fitting radii. For side rails and rungs, submit cross sectional properties including Section Modulus (Sx) and Moment of Inertia (Ix).

1.05 QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of cable trays and fittings of types and capacities required, whose products have been in satisfactory use in similar service for not less than 5 years.

B. NEMA Compliance: Comply with NEMA Standards Publication Number VE 1, "Cable Tray Systems".

C. NEC Compliance: Comply with NEC, as applicable to construction and installation of cable tray and cable channel systems (Article 392, NEC).

D. UL Compliance: Provide products which are UL classified and labeled.

E. NFPA Compliance: Comply with NFPA 70B, "Recommended Practice for Electrical Equipment Maintenance" pertaining to installation of cable tray systems.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver cable tray systems and components carefully to avoid breakage, denting and scoring finishes. Do not install damaged equipment.

B. Store cable trays and accessories in original cartons and in clean dry space; protect from weather and construction traffic.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Manufacturer: Subject to compliance with these specifications, Eaton's B-Line series cable tray and cable channel, systems to be installed shall be as manufactured by Eaton.

2.02 CABLE TRAY SECTIONS AND COMPONENTS

A. General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates, bolts, nuts and washers for connecting units. Construct units with rounded edges and smooth surfaces; in compliance with applicable standards; and with the following additional construction features.

B. Materials and Finish: Material and finish specifications for each tray type are as follows:

1. Aluminum: Straight section and fitting side rails and rungs shall be extruded from Aluminum Association Alloy 6063. All fabricated parts shall be made from Aluminum Association Alloy 5052.
2. Pre-Galvanized Steel: Straight sections, fitting side rails, rungs, and covers shall be made from structural quality steel meeting the minimum mechanical properties and mill galvanized in accordance with ASTM A653 SS, Grade 33, coating designation G90. Covers for all steel trays will also be furnished from mill galvanized steel in accordance with ASTM A653 G90.
3. Hot Dip Galvanized Steel: Straight section and fitting side rails and rungs shall be made from structural quality steel meeting the minimum mechanical properties of ASTM A1011 SS, Grade 33 for 14 gauge and heavier, ASTM A1008, Grade 33, Type 2 for 16 gauge and lighter, and shall be hot dip galvanized after fabrication in accordance with ASTM A123. All covers and splice plates must also be hot dip galvanized after fabrication; mill galvanized covers are not acceptable for hot dipped galvanized cable tray. All hot dip galvanized after fabrication steel cable trays must be returned to point of manufacture after coating for inspection and removal of all icicles and excess zinc. Failure to do so can cause damage to cables and/or injury to installers.
4. Stainless Steel: Straight section and fitting side rails and rungs shall be made of AISI Type 304 or Type 316 stainless steel. Transverse members (rungs) shall be welded to the side rails with Type 316 stainless steel welding wire.

2.03 TYPE OF TRAY SYSTEM

A. Ladder type trays shall consist of two longitudinal members (side rails) with transverse members (rungs) welded to the side rails. Rungs shall be spaced [6] [9] [12] inches on center. Spacing in radiused fittings shall be 9 inches and measured at the center of the tray's width. Rungs shall have a minimum cable bearing surface of 7/8" with radiused edges. No portion of the rungs shall protrude below the bottom plane of the side rails.** Each rung must be capable of supporting the cable load, with a safety factor of 1.5, and a 200 lb. concentrated load when tested in accordance with NEMA VE 1, section 5.4.

***Omit text for Series 1 cable tray systems.*

B. Non-ventilated solid bottom trays shall consist of two longitudinal members (side rails) with a flat bottom welded to the side rails on top of 12" spaced rungs.

C. Tray Sizes shall have [3] [4] [5] [6] inch minimum usable load depth, or as noted on the drawing.

D. Straight tray sections shall have side rails fabricated as I-Beams. All straight sections shall be supplied in standard [10] [12] [20] [24] [25] [30] [40] foot lengths, except where shorter lengths are permitted to facilitate tray assembly lengths as shown on drawings.

E. Tray widths shall be [6] [9] [12] [18] [24] [30] [36] inches or as shown on drawings.

F. All fittings must have a three inch tangent and a minimum radius of [12] [24] [36] [48] inches.

G. Splice plates shall be the bolted type made as indicated below for each tray type. The resistance of fixed splice connections between an adjacent section of tray shall not exceed .00033 ohm. Splice plate construction shall be such that a splice may be located anywhere within a continuously supported span without diminishing rated loading capacity of the cable tray.

1. Aluminum Tray - Splice plates shall be made of 6063-T6 aluminum, using four square neck carriage bolts and serrated flange locknuts. Hardware shall be zinc plated in accordance with ASTM B633, SC1. If aluminum cable tray is to be used outdoors, then hardware shall be Type 316 stainless steel.

2. Steel (including Pre-Galvanized and Hot Dip Galvanized) - Splice plates shall be manufactured of high strength steel, meeting the minimum mechanical properties of ASTM A1011 HSLAS, Grade 50, Class 1. Each splice plate shall be attached with ribbed neck carriage bolts and serrated flange locknuts. Hardware shall be zinc plated in accordance with ASTM B633 SC1 for pre-galvanized cable trays, or Chromium Zinc in accordance with ASTM F-1136-88 for hot dip galvanized cable trays.

Splice plates shall be furnished with straight sections and fittings.

H. Cable Tray Supports: Shall be placed so that the support spans do not exceed the maximum span indicated on drawings. Supports shall be constructed from 12 gauge steel formed shape channel members 1 5/8" x 1 5/8" with necessary hardware such as Trapeze Support Kits (9G-55XX-22SH) as manufactured by Eaton [or engineer approved equal]. Cable trays installed adjacent to walls shall be supported on wall mounted brackets such as B409 as manufactured by B-Line [or engineer-approved equal].

I. Trapeze hangers and center hung supports shall be supported by 1/2" (minimum) diameter rods.

J. Barrier Strips: Shall be placed as specified on drawings and be fastened into the tray with self drilling screws.

K. Accessories: Special accessories shall be furnished as required to protect, support, and install a cable tray system. Accessories shall consist of, but are not limited to; section splice plates, expansion plates, blind-end plates, specially-designed ladder drop-outs, barriers, etc.

2.04 LOADING CAPACITIES

A. Cable tray shall be capable of carrying a uniformly distributed load of _____ lbs./ft. on a _____ ft. support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE 1, section 5.2. **In addition to the uniformly distributed load the cable tray shall support 200 lbs. concentrated load at mid-point of span.** Load and safety factors specified are applicable to both the side rails and rung capacities. Cable tray shall be made to manufacturing tolerances as specified by NEMA.

***Omit text for Series 1 cable tray systems.*

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install cable trays as indicated; in accordance with equipment manufacturer's instructions, and with recognized industry practices (NEMA VE 2), to ensure that the cable tray equipment complies with requirements of NEC, and applicable portions of NFPA 70B and NECA's "Standards of Installation" pertaining to general electrical installation practices.

B. Coordinate cable tray with other electrical work as necessary to properly interface installation of cable tray work with other work.

C. Provide sufficient space encompassing cable trays to permit access for installing and maintaining cables.

3.02 TESTING

A. Test cable trays to ensure electrical continuity of bonding and grounding connections, and to demonstrate compliance with specified maximum grounding resistance. See NFPA 70B, Chapter 18, for testing and test methods.

B. Manufacturer shall provide test reports witnessed by an independent testing laboratory of the "worst case" loading conditions outlined in this specification and performed in accordance with the latest revision of NEMA VE 1.

END OF SECTION

AMPACITY:

Multiconductor Cables (2000 Volts or Less)

Cable ampacities shall comply with Tables 310.16 and 310.18 of the NEC® subject to the provisions below:

1. If there are more than 3 current carrying conductors in a cable, derate cable ampacity per section 310.15(B)(2)(A).
2. If tray has solid covers, use 95% of the ampacity values shown in Tables 310.16 and 310.18.
3. If cables are placed in a single layer, with a maintained spacing of not less than 1 cable diameter between cables, the ampacity of the cables shall not exceed the allowable ambient temperature-corrected ampacities of multiconductor cables with not more than 3 insulated conductors in free air in accordance with Section 310.15(C) and Table B.310.3. You must use the ambient ampacity correction factors, found below Table B.310.3, for ambient temperatures other than 40°C (104°F).

Multiconductor Cables (2001 Volts and over) Type MV and Type MC Cables

1. Where cable trays are covered for more than 6 ft. with solid, unventilated covers, use not more than 95% of the ampacity values of Tables 310.75 and 310.76.
2. Where cables are installed in a single layer in uncovered trays with a maintained spacing of not less than one cable diameter between cables, you can use the ampacity values listed in Tables 310.71 and 310.72.

Single Conductor Cables

Ampacity of Cables Rated 2000 Volts or Less in Cable Tray (single conductor cables)

Cable Sizes	Solid Unventilated Cable Tray Cover ?	Applicable Ampacity Tables (*)	Mult. Amp. Table Values By	Special Conditions
600 kcmil and Larger	No (**)	310.17 and 310.19	0.75	
600 kcmil and Larger	Yes	310.17 and 310.19	0.70	
1/0 AWG through 500 kcmil	No (**)	310.17 and 310.19	0.65	
1/0 AWG through 500 kcmil	Yes	310.17 and 310.19	0.60	
1/0 AWG & Larger In Single Layer	No (**)	310.17 and 310.19	1.00	Maintained Spacing Of One Cable Diameter
Single Conductors In Triangle Config. 1/0 AWG and Larger	No (**)	310.20 [See NEC Section 310.15(B)]	1.00	Spacing Of 2.15 x One Conductor O.D. Between Cables

Ampacity of Type MV and Type MC Cables (2001 Volts or over) in Cable Trays (single conductor cables)

Cable Sizes	Solid Unventilated Cable Tray Cover ?	Applicable Ampacity Tables (*)	Mult. Amp. Table Values By	Special Conditions
1/0 AWG and Larger	No (**)	310.69 and 310.70	0.75	
1/0 AWG and Larger	Yes	310.69 and 310.70	0.70	
1/0 AWG & Larger In Single Layer	No (**)	310.69 and 310.70	1.00	Maintained Spacing Of One Cable Diameter
Single Conductors In Triangle Config. 1/0 AWG and Larger	No (**)	310.67 and 310.68	1.05	Spacing Of 2.15 x One Conductor O.D. Between Cables

(*) The ambient ampacity correction factors must be used.
(**) At a specific position, where it is determined that the tray cables require mechanical protection, a single cable tray cover of six feet or less in length can be installed.

Cable Fill in Hazardous (Classified) Locations:

Section 392.3 of the NEC regulates the use of cable tray wiring systems in hazardous (classified) locations. This section states that if cable tray wiring systems are installed in hazardous (classified) locations, the cables that they support must be suitable for installation in those hazardous (classified) locations. The cable carries the installation restriction, not the cable tray except that the cable tray installation must comply with Section 392.4.

Some hazardous (classified) locations require special spacing of the cables. When installing Type MC, MI & TC cables in cable tray in Class II, Division 2 Hazardous (classified) areas, (combustible dusts), the cables are limited to a single layer with spacing between cables equal to the diameter of the largest adjacent cable. This is the only hazardous (classified) location where the spacing of the cables is required although it is recommended that this wiring method also be employed in Class III, Division I, and Class III, Division 2 (Ignitable Fibers & Flyings). Please note that this will alter the cable tray sizing information obtained from the sizing flow chart on page C-20 & C-21 of this catalog.

Please reference NEMA VE 2, metal cable tray installation guideline, for more complete information.
www.cabletrays.com

Supports - Eaton's B-Line series cable tray shall be sized and installed as a complete cable support system appropriate for the cable types installed. Recommended cable tray support locations are as shown below. Do not exceed the maximum support spacing and design load as printed on the side rail label. Refer to Canadian Electrical Code (CEC) section 12-2202 for minimum cable tray clearances. For Series 2-5 trays and KSCC, see our Structural Steel Savings Guide and KwikSplice cable channel system technical guide for approved support reductions.

Splice Plates - Use factory supplied splice plates only. Splice plates located at the quarter span between supports are preferred. Avoid placing splices at midspan and directly above supports. Torque all splice plate fasteners to 19 ft. - lbs. for 3/8" and 50 ft. - lbs. for 1/2". Expansion splice plate fasteners should be loosened 1/2 turn after reaching full torque to allow for travel. Set the side rail gap for expansion plates according to the chart on page C-8 and ensure that a support is located within 2 feet on each side of the expansion splice.

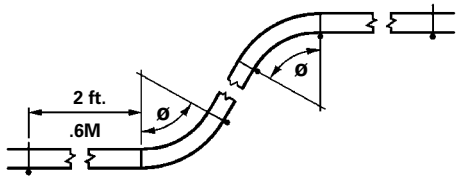
Conductors - The Cable Tray system installation shall be completed prior to pulling conductors. Cable support distances for conductor size should be referenced in CEC Part 1, Table 21. Single conductor cables placed one diameter or more apart in ventilated or ladder type tray are allowed to use the free air rating per the CEC. Any conductor in vertical runs of cable tray and all single conductor cables must be fastened to the rungs with nylon cable ties or stainless steel clamps. Carbon steel cable clamps should not be used due to induction heating, per CEC section 12-2204 (5).

Covers - Vertical cable trays which penetrate dry floors must be covered for 2m (two meter) above the floor level. All cable tray dead ends must be closed with blind ends per CEC section 12-2202.

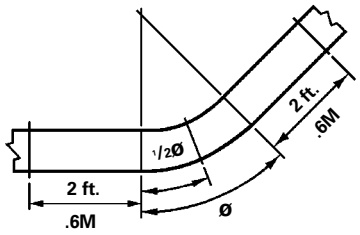
Handling - Cable tray is shipped without exterior crating, therefore careful material handling practices should be used. Cable tray straight sections should be lifted with wide slings and an overhead crane. If a crane is not available and a fork lift is to be used, only single bundles should be lifted. Ensure that each bundle is properly centered. Cable tray fittings that are not crated should be unbanded and off-loaded by hand.

Storage - All cable tray materials are subject to storage stain (white rust) if improperly stored. If cable tray is stored as shipped, it must be stored indoors. If the cable tray material must be stored outside, it must be unbanded and loosely stacked on an angle to minimize the components' contact area as well as provide for adequate drainage.

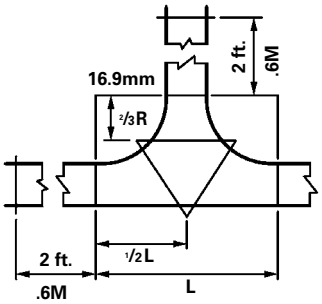
NEMA RECOMMENDED SUPPORT LOCATIONS FOR FITTINGS



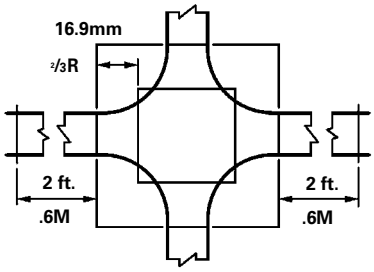
Vertical Elbows



Horizontal Elbows



Horizontal Tee



Horizontal Cross

Channel Sizes & Hole Patterns Selection Chart

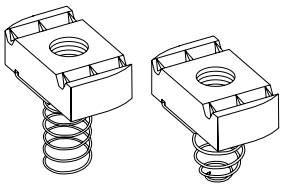
TH Channel Type	Channel Dimensions Height	Channel Dimensions Width	Material & Thickness Steel[1]	Material & Thickness Aluminum[2]	Material & Thickness Stainless Steel Type 304[3]	Material & Thickness Stainless Steel Type 316[4]	Channel Hole Patterns ** SH	Channel Hole Patterns ** S	Channel Hole Patterns ** H1 7/8	Channel Hole Patterns **
B11	3 1/4"	1 5/8"	12 Ga.	—	—	—	1	1	1	—
B12	2 7/16"	1 5/8"	12 Ga.	.105	—	—	1,2	1	1,2	—
B22	1 5/8"	1 5/8"	12 Ga.	.105	12 Ga.	12 Ga.	1,2,3,4	1	1,2,3,4	1
B24	1 5/8"	1 5/8"	14 Ga.	.080	14 Ga.	14 Ga.	1,2,3,4	1	1,2,3,4	—
B32	1 3/8"	1 5/8"	12 Ga.	—	12 Ga.	—	1,3	1	1,3	—
B42	1 "	1 5/8"	12 Ga.	—	12 Ga.	—	1,3	1	1,3	—
B52	13/16"	1 5/8"	12 Ga.	—	12 Ga.	—	1,3	1	1,3	—
B54	13/16"	1 5/8"	14 Ga.	.080	14 Ga.	14 Ga.	1,2,3,4	1	1,2,3,4	—

Available Finishes on Steel: Plain (Oil Coated), Dura-Green Epoxy, Pre-Galvanized, and Hot Dip Galvanized are standard.

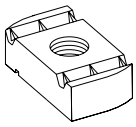
** 1 - Steel
2 - Aluminum
3 - Type 304 Stainless Steel
4 - Type 316 Stainless Steel

Channel Nuts

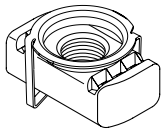
With Spring B11 B12	With Spring B22 B24 B32	With Spring B42 B52 B54	Without Spring B11 B22 B12 B24 B32	Without Spring B42 B52 B54	Twirl Nut B11 B22 B12 B24 B32	Twirl Nut B42 B52 B54	Thread Size	Thickness
N728	N228	N528	N228WO	N228WO	TN228	TN228	3/8"-16	3/8" for all nuts
N725	N225	N525	N225WO	N525WO	TN225	TN525	1/2"-13	1/2" for N725,N225,N225WO,TN225 3/8" for N525,N525WO,TN525
N755	N255	N555	N255WO	N555WO	—	—	5/8"-11	1/2" for N755,N255,N255WO 3/8" for N555,N555WO



Channel Nut With Spring



Channel Nut Without Spring



Twirl Nut

For other channels, channel nuts, and fittings see B-Line Strut Systems Catalog.

Continuous Concrete Insert

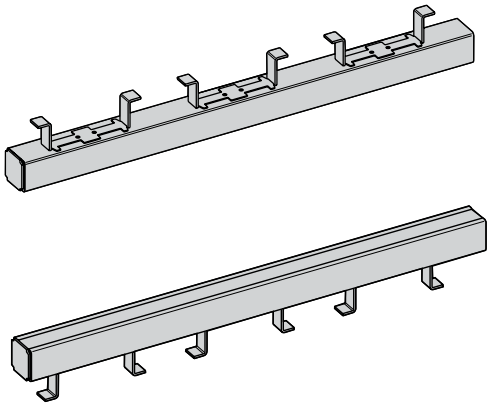
Catalog Number for Channel 120" (10 ft.)	240" (20 ft.)	Channel Size	Maximum Depth	Load
B22I-120	**B22I-240**	B22	1 5/8"	2000 lbs./ft.
B32I-120	**B32I-240**	B32	1 3/8"	2000 lbs./ft.
B52I-120	**B52I-240**	B52	13/16"	1500 lbs./ft.

Safety factor of 3 on loading.

Other lengths available upon request.

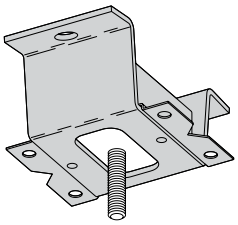
Furnished with end caps and styrofoam filler installed.

Standard finishes:
- Plain (Oil Coated)
- Dura Green Epoxy
- Pre-Galvanized
- Hot Dip Galvanized

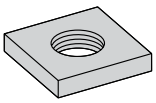


B2500 Spot Insert & N2500 Insert Nut

Standard Finish: Zinc Plated



B2500 Insert

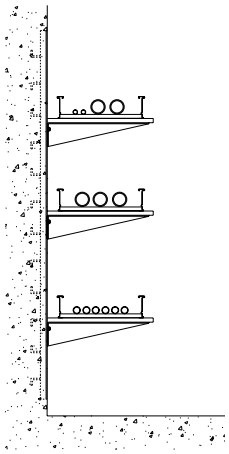


N2500 Insert Nut

Insert rod size behind part number.

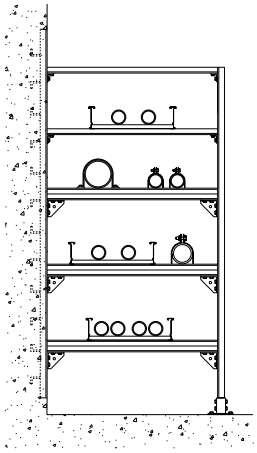
Square Nuts for Spot Inserts

Concrete Insert Applications

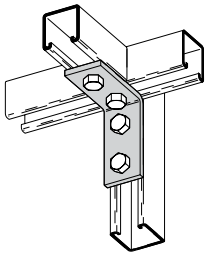


Continuous inserts used vertically are ideal mounting bases for cable tray brackets.

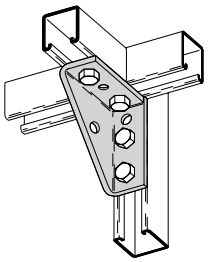
For multi-tiered tray assemblies, inserts function as the anchors for each stanchion.



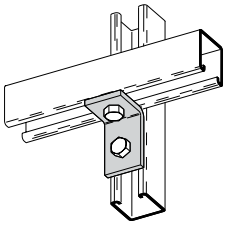
Angle Fittings



B104



B844



B101

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