

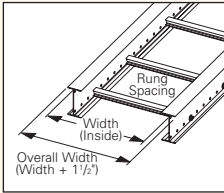
RSI04A and RSI05A Straight Sections

Straight Section Part Numbering

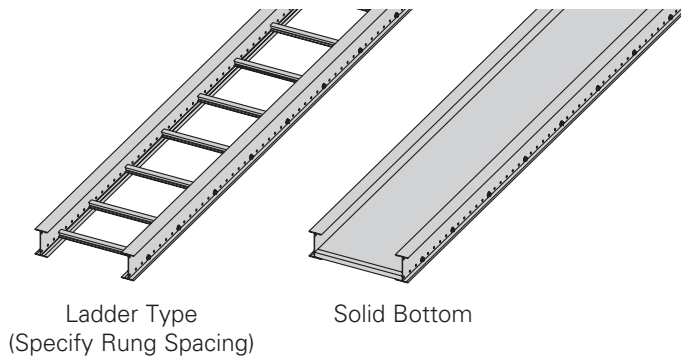
Prefix

Example: **RSI 04 A 075KO 09 SL - 12 - 120**

Series	Height	Material	Knockout Type	Bottom Type	Construction	Width	Length
● RSI	● 04 = 4" ● 05 = 5"	A = Aluminum	● Blank = None ● 050KO = 1/2" KO ● 075KO = 3/4" KO ● 100KO = 1" KO	● 04 = 4" rung spacing ● 06 = 6" rung spacing ● 09 = 9" rung spacing ● 12 = 12" rung spacing	SB = Solid Bottom SL = Straight Ladder	● 06 = 6" ● 09 = 9" ● 12 = 12" ● 18 = 18" ● 24 = 24" ● 30 = 30" ● 36 = 36"	● ① 144 = 12 ft. ● ② 120 = 10 ft.



Values are based on simple beam tests per 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 tray. These systems will support without collapse a 200 lb. concentrated load.



Redi-Rail with knockouts

- Splices included with straight sections

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
RSI04A		NEMA: 12B CSA: 112kg/m 3.7m UL Cross Sectional Area: 0.40 in ²	6	224	0.0015	Area=0.93 in ² Sx=1.11 in ³ Ix=1.96 in ⁴	1.8	333	0.025	Area=5.99 cm ³ Sx=18.10 cm ³ Ix=81.70 cm ⁴
			8	169	0.0047		2.4	252	0.080	
			10	108	0.0115		3.0	161	0.196	
			12	75	0.0238		3.7	112	0.406	
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
RSI05A		NEMA: 12B CSA: 123kg/m 3.7m UL Cross Sectional Area: 0.60 in ²	6	224	0.0008	Area=1.08 in ² Sx=1.55 in ³ Ix=3.53 in ⁴	1.8	333	0.014	Area=6.95 cm ³ Sx=25.40 cm ³ Ix=147.00 cm ⁴
			8	187	0.0026		2.4	278	0.045	
			10	119	0.0064		3.0	178	0.109	
			12	83	0.0132		3.7	123	0.225	

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

All dimensions in parentheses are millimeters unless otherwise specified.

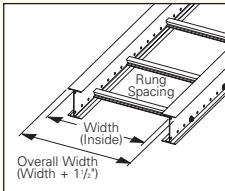
RSI06A and RSI07A Straight Sections

Straight Section Part Numbering

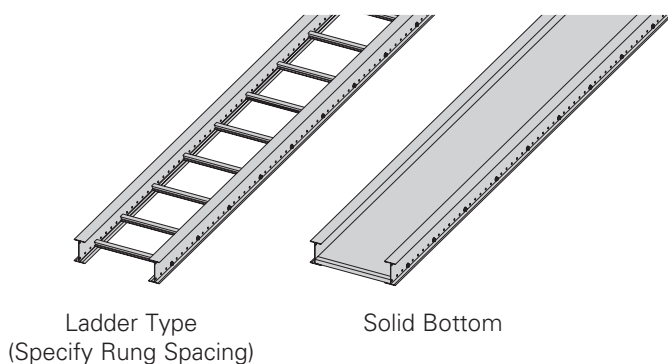
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Example: **RSI 06 A 075KO 09 SL - 12 - 120**

Series	Height	Material	Knockout Type	Bottom Type	Construction	Width	Length
● RSI	● 06 = 6" ● 07 = 7"	A = Aluminum	● Blank = None ● 050KO = 1/2" KO ● 075KO = 3/4" KO ● 100KO = 1" KO ● 125KO = 1 1/4" KO ● 150KO = 1 1/2" KO	● 04 = 4" rung spacing ● 06 = 6" rung spacing ● 09 = 9" rung spacing ● 12 = 12" rung spacing	SL = Straight Ladder SB = Solid Bottom	● 06 = 6" ● 09 = 9" ● 12 = 12" ● 18 = 18" ● 24 = 24" ● 30 = 30" ● 36 = 36"	● ①144 = 12 ft. ● ②120 = 10 ft.



Values are based on simple beam tests per 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 tray. These systems will support without collapse a 200 lb. concentrated load.



Redi-Rail with knockouts

- Splices included with straight sections

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
RSI06A		NEMA: 12B CSA: 121kg/m 3.7m UL Cross Sectional Area: 0.60 in ²	6	224	0.0005	Area=1.18 in ² Sx=1.98 in ³ Ix=5.51 in ⁴	1.8	333	0.009	Area=7.59 cm ³ Sx=32.50 cm ³ Ix=230.00 cm ⁴
			8	184	0.0017		2.4	273	0.029	
			10	118	0.0041		3.0	175	0.070	
			12	82	0.0085		3.7	121	0.144	
RSI07A		NEMA: 12C CSA: 182kg/m 3.7m UL Cross Sectional Area: 0.60 in ²	6	224	0.0003	Area=1.50 in ² Sx=2.69 in ³ Ix=8.79 in ⁴	1.8	333	0.006	Area=9.68 cm ³ Sx=44.10 cm ³ Ix=366.00 cm ⁴
			8	224	0.0010		2.4	333	0.018	
			10	176	0.0026		3.0	262	0.044	
			12	122	0.0053		3.7	182	0.091	

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

All dimensions in parentheses are millimeters unless otherwise specified.

Section 161xx - Redi-Rail 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 [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 - Metallic Cable Tray Systems
- C. NEMA VE 2-2006 - 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 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 or 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 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.

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2.03 Type of Tray System

- A. Ladder Cable Trays shall consist of two longitudinal members (side rails) with transverse members (rungs) mechanically fastened 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 a 18" wide cable tray with a safety factor of 1.5. 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 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 [3] [4] [5] [6] inches per NEMA VE-1.
- 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 (4) four 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 a minimum radius of [12] [24] inches.

2.04 Loading Capacities

- A. Cable trays shall meet NEMA class designation: [75 lbs./ft. on 12 ft. span].
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.

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. 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/CSA C22.2 No. 126.1-02.

End Of Section.