

CHALFANT

OBO Bettermann Group



Series 6
Trough Style Tray



**Series 6
Trough Cable Tray**
Typical Installations



Series 6 Trough Cable Tray

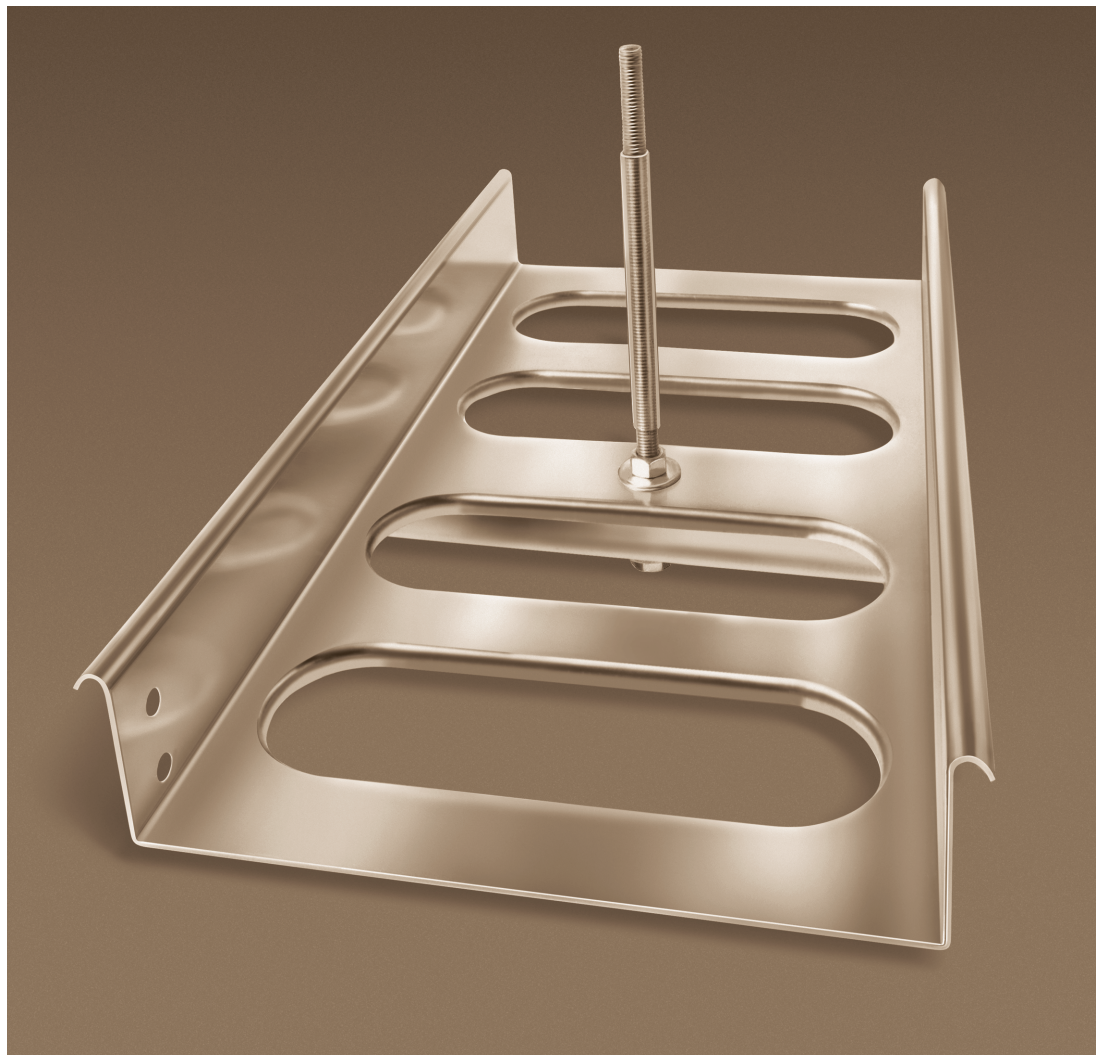
Since it was introduced in the 50's, Chalfant's Series 6 Cable Tray has become the preferred choice for many hospitals, schools, universities, laboratories, airports, retail stores and offices as well as industrial and plant applications. Series 6 Cable Tray is extremely versatile and adaptable to your special needs and is very easy to specify and install.

- Takes up to 25 percent less space than ladder or corrugated bottom designs.
- Has an installed cost of 40 to 60 percent less than conduit.

- One-piece design provides rigidity.
- Easy to design, modify or extend.
- Available in galvanized or plain steel, aluminum or stainless steel.
- Can be painted.
- Can be custom cut to length
- Barriers can be installed to reduce field labor costs.

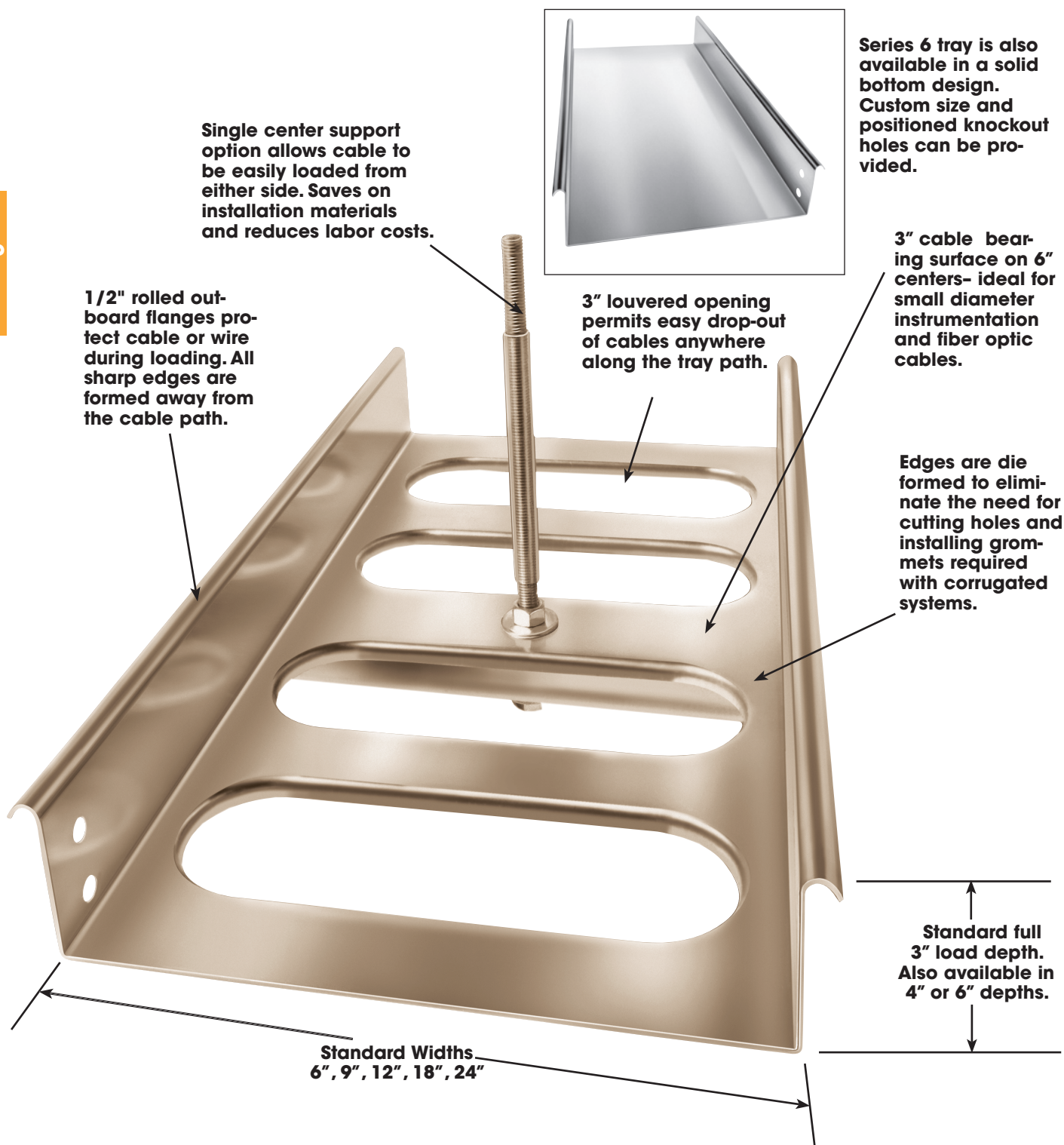
Other custom modifications available:

- Special widths.
- Special load depths from 2" to 8".
- Manufactured with 90° flanges inboard or outboard.
- Can be punched with special holes and knock-outs.



Straight Sections

Trough

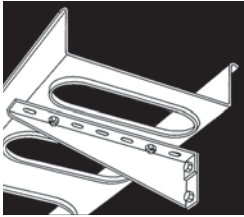


- UL Classified as an equipment grounding conductor.
- Build to NEMA VE-1-2015 standards.
- Meets NEC Article 392-5.
- Made in the U.S.A.

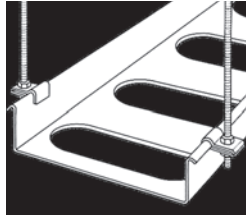
Mounting/Application Flexibility

Series 6 can be supported directly on roof trusses or wall brackets up to a 12' span or can be mounted to the floor or elevated off the floor using Chalfant's

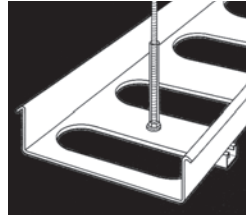
patented integral support splice plates. It can also be suspended using hanger rods to single or trapeze supports.



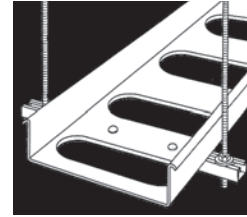
Wall Brackets--
Use either a strut style or (shelf) wall bracket. Mounts directly to wall or strut on wall. Tray can also be directly bolted to bracket (as shown) for indoor applications. Allowance must be made for expansion if temperature extremes exist.



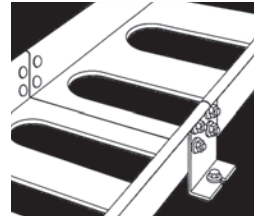
Hanger Rod Clamps--
Use two (2), threaded rods and hanger rod clamps that directly attach to tray side rails. Unique 2-piece clamp design gets tighter when loaded and has a clean look from the bottom. Saves space in cramped, above drop ceiling installations.



Single Center Support--
Use 1/2" rod. Has the lowest installed costs. Field drill 1/2" hole centered on rung. Good for up to 12' support spans. 6" plastic tubing installs over rod inside tray to protect cabling.



Trapeze, with strut--
Use two (2), threaded rods with tray directly supported by strut. Fasten tray to strut by means of wall bracket clamp or bolt directly to strut by field drilling hole in bottom of tray.



Pedestal Splice Plate--
Mount tray to floor or vertical runs up walls or off floors up to a 10" elevation using Chalfant's patented integral splice plate. Series 6 can also be used with Chalfant's under floor COM-TRAY system or in place of it.

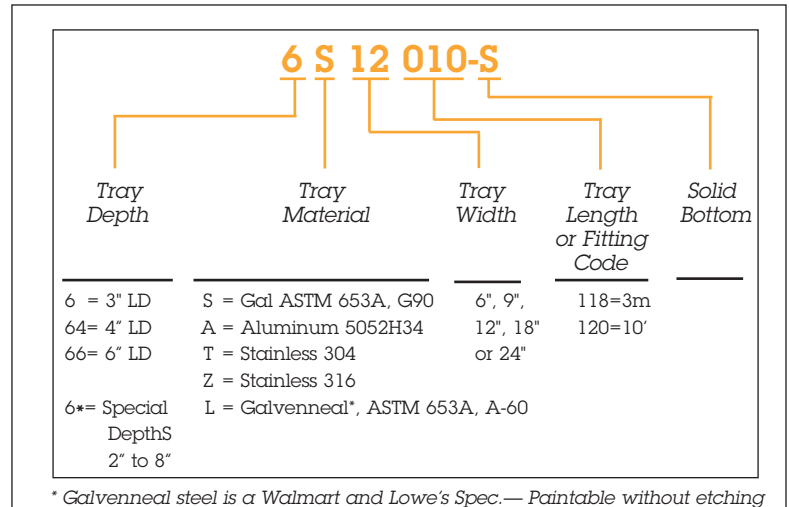
Trough

How to Order

Once you have selected the Series 6 Model to meet your requirements, use the number system shown to order straight sections, fittings and accessories which are detailed on the following pages.

Example: The following part number is for a 12" wide louvered tray in galvanized steel with a 3" loading depth.

6S12010



Part Numbers for Standard 3" (76) X 12' (3,658) Straight Sections

Load Depth	Tray Width	Part Number		
		Ventilated	Solid	Cover
3" Standard	6" (152)	6 * 06010	6 * 06010-S	67 * 06010
	9" (229)	6 * 09010	6 * 09010-S	67 * 09010
	12" (305)	6 * 12010	6 * 12010-S	67 * 12010
	18" (457)	6 * 18010	6 * 18010-S	67 * 18010
	24" (610)	6 * 24010	6 * 24010-S	67 * 21010

* Indicates type of material, See "Order Code" above.

Notes:

- Dimensions given in inches. For metric conversion multiply inches X 25.4 = (mm).
- Solid bottom designs are 6 to 13 percent less cost than louvered models.
- Each straight section and fitting comes with a pair of splice plates and eight (8), 9TBN302 nut and bolt assemblies.

Maximum Loading & Deflection

The charts below were developed from actual NEMA VE-1-1991 Simple Beam Testing of two, 24" wide tray samples for each style. Maximum load data provided is at a Safety Factor = 1.5. This data has been plotted to give you better understanding of the performance of various designs. The charts also permit you to quickly determine your simple beam deflection for your load/span conditions.

Aluminum is often preferred because of its ease of installation. Aluminum is 3 times as deflective

and not as strong as a steel design at a 12' span. However, at 6 or 8 ft. spans, aluminum is capable of carrying even the heaviest loads.

Notes:

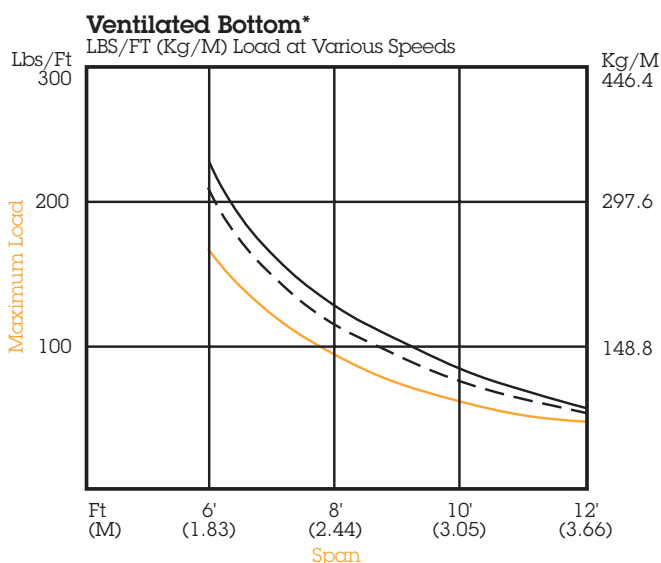
- Simple beam tests—actual installed deflection about 1/2 to 1/3 that of simple beam.
- Load capacity for narrow widths are slightly lower because system moment of inertial and system modules are a function of width of tray.

Tray Depth

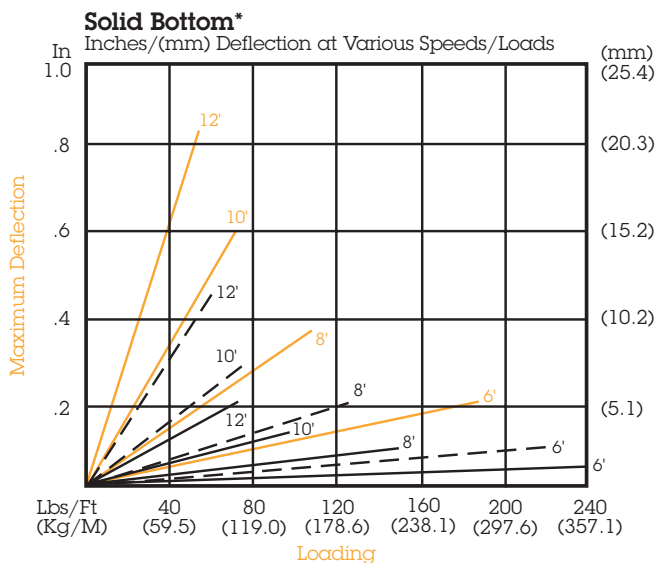
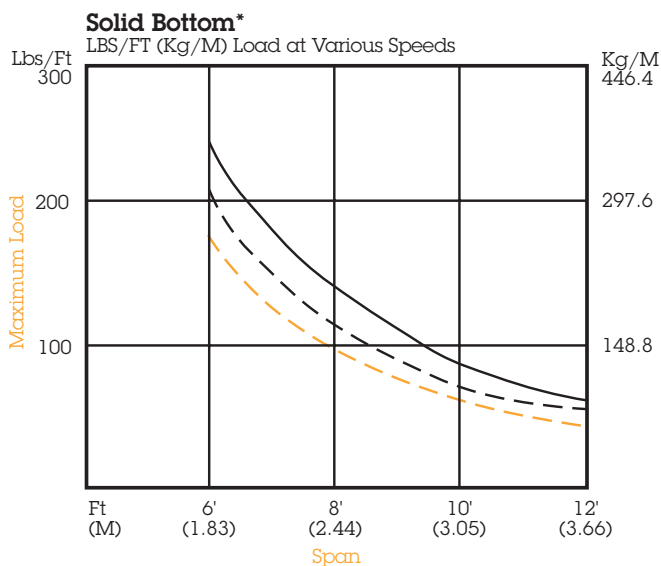
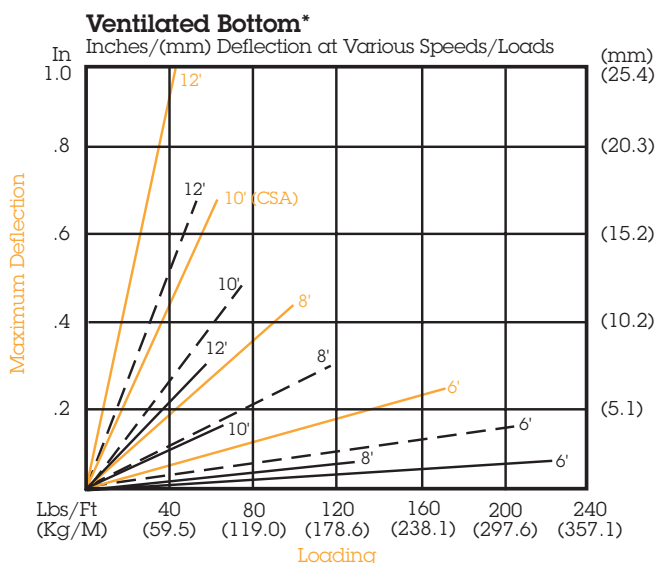
3" --- 4" — 6"

Aluminum

Maximum Loading



Maximum Deflection



*Aluminum .063 & .080

*Aluminum .063 & .080

NEMA Class Ratings

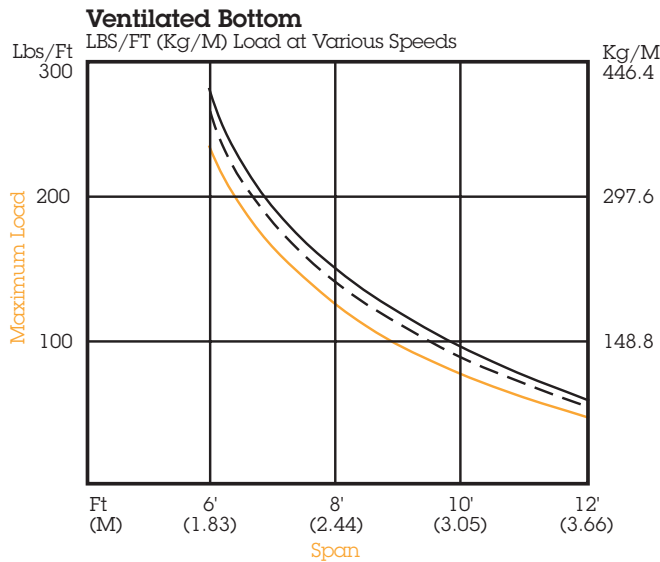


	Aluminum .063 & .080*		Steel	
	Tray	Rated for:	Tray	Rated for:
Ventilated Bottom	6A	10A, 8B, 6C	6S	12A, 10B, 8C
	64A	12A, 10B, 8C	64S	12A, 10B, 8C
	66A	12A, 10B, 8C	66S	12A, 10B, 8C
Solid Bottom	6A	12A, 10A, 8C	6S	12B, 10C
	64A	12A, 10B, 8C	64S	12B, 10C
	66A	12A, 10B, 8C	66S	12C, 10C

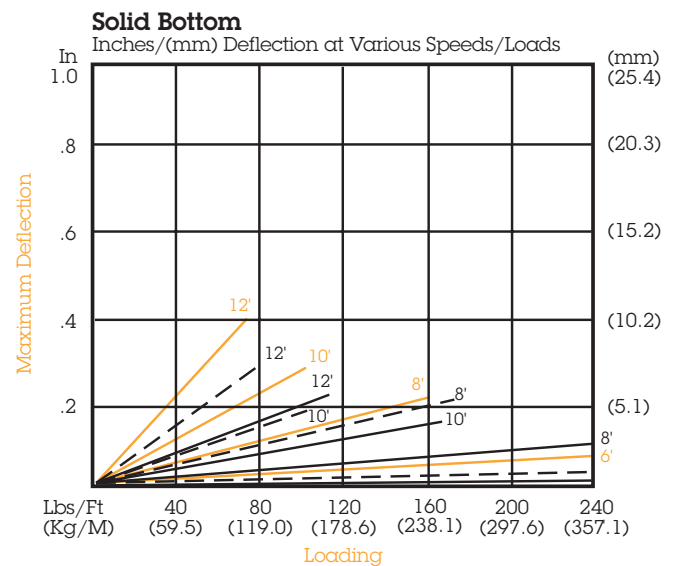
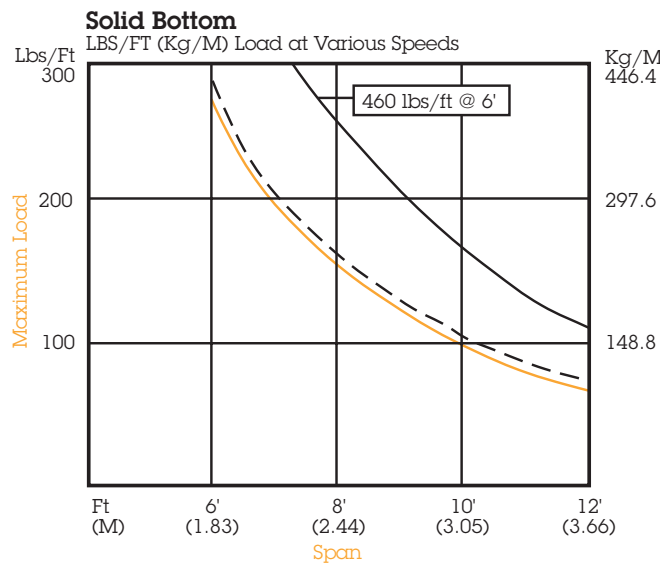
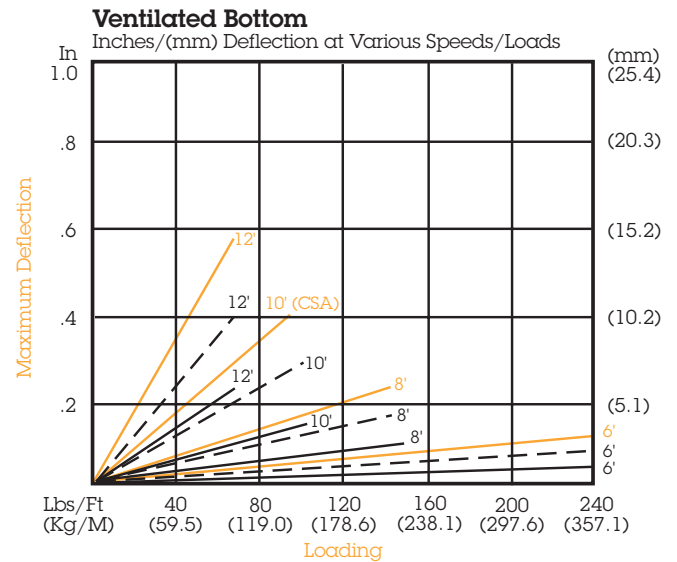
* Load ratings for aluminum .063 & .050 are available from the factory.

Steel

Maximum Loading



Maximum Deflection



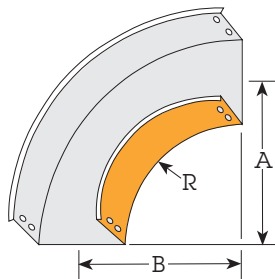
Fittings

90° & 45° Fittings

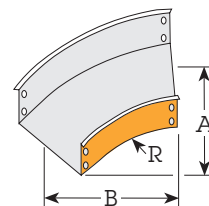
Series 6 fittings are solid bottom with a 3" tangent for easy fit-up during installation. Bottoms are MIG welded on the outside to eliminate any weld splatter or roughness. 12" bend radius fittings are recommended for the majority of low voltage and communications cables. 30° and 60° bends are also available.

■ See pages 1-12 to 1-15 in the Ladder Tray Section for Vertical Fitting Dimensions for 64" and 66" systems.

90° Horizontal Bend



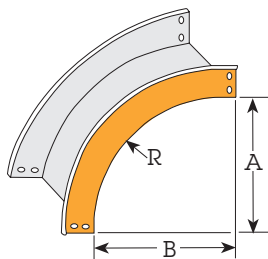
45° Horizontal Bend



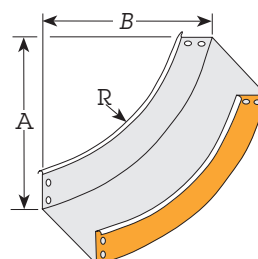
Radius R	Tray Width	Dimensions		Part Number	Cover Number
		A	B		
12 (305)	6	18 (457)	18 (457)	6 • 06030	67 • 06030
	9	19.5 (495)	19.5 (495)	6 • 09030	67 • 09030
	12	21 (533)	21 (533)	6 • 12030	67 • 12030
	18	24 (610)	24 (610)	6 • 18030	67 • 18030
	24	27 (686)	27 (686)	6 • 24030	67 • 24030
24 (610)	6	30 (762)	30 (762)	6 • 06032	67 • 06032
	9	31.5 (800)	31.5 (800)	6 • 09032	67 • 09032
	12	33 (838)	33 (838)	6 • 12032	67 • 12032
	18	36 (914)	36 (914)	6 • 18032	67 • 18032
	24	39 (991)	39 (991)	6 • 24032	67 • 24032

Radius R	Tray Width	Dimensions		Part Number	Cover Number
		A	B		
12 (305)	6	15.73 (400)	9.51 (242)	6 • 06020	67 • 06020
	9	16.79 (400)	11.45 (291)	6 • 09020	67 • 09020
	12	17.91 (455)	13.39 (340)	6 • 12020	67 • 12020
	18	19.97 (507)	17.27 (439)	6 • 18020	67 • 18020
	24	22.09 (561)	21.15 (537)	6 • 24020	67 • 24020
24 (610)	6	24.21 (615)	13.03 (331)	6 • 06022	67 • 06022
	9	25.27 (642)	14.97 (380)	6 • 09022	67 • 09022
	12	26.33 (669)	16.91 (430)	6 • 12022	67 • 12022
	18	28.45 (723)	20.79 (528)	6 • 18022	67 • 18022
	24	30.58 (777)	24.66 (626)	6 • 24022	67 • 24022

90° Outside



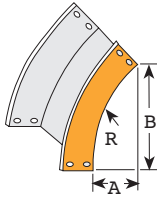
90° Inside



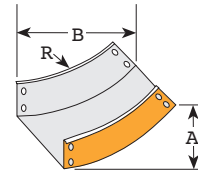
Radius R	Tray Width	Outside Vertical Bend				Inside Vertical Bend			
		Dimensions—H @ 3"		Part Number		Dimensions—H @ 3"		Part Number	
		A	B	Bend	Cover	A	B	Bend	Cover
12 (305)	6	15 (381)	15 (381)	6 • 06050	67 • 06050	18 (457)	18 (457)	6 • 06070	67 • 06070
	9			6 • 09050	67 • 09050			6 • 09070	67 • 09070
	12			6 • 12050	67 • 12050			6 • 12070	67 • 12070
	18			6 • 18050	67 • 18050			6 • 18070	67 • 18070
	24			6 • 24050	67 • 24050			6 • 24070	67 • 24070
24 (610)	6	27 (686)	27 (686)	6 • 06052	67 • 06052	30 (762)	30 (762)	6 • 06072	67 • 06072
	9			6 • 09052	67 • 09052			6 • 09072	67 • 09072
	12			6 • 12052	67 • 12052			6 • 12072	67 • 12072
	18			6 • 18052	67 • 18052			6 • 18072	67 • 18072
	24			6 • 24052	67 • 24052			6 • 24072	67 • 24072

Fittings

45° Outside

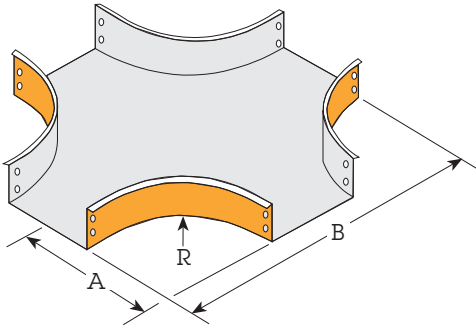


45° Inside

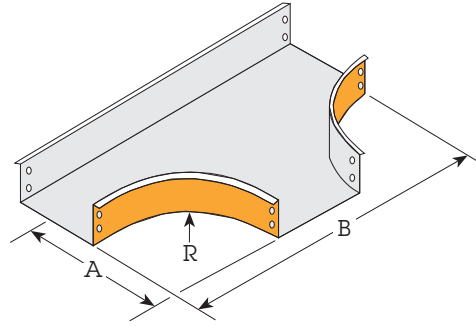


Radius R	Tray Width	Outside Vertical Bend				Inside Vertical Bend			
		Dimensions		Part Number		Dimensions— H @ 3"		Part Number	
		A	B	Bend	Cover	A	B	Bend	Cover
Cover 12 (305)	6	5.63 (143)	13.61 (356)	6 • 06040	67 • 06040	6.51 (165)	15.73 (400)	6 • 06060	67 • 06060
	9			6 • 09040	67 • 09040			6 • 09060	67 • 09060
	12			6 • 12040	67 • 12040			6 • 12060	67 • 12060
	18			6 • 18040	67 • 18040			6 • 18060	67 • 18060
	24			6 • 24040	67 • 24040			6 • 24060	67 • 24060
24 (610)	6	9.15 (232)	22.09 (561)	6 • 06042	67 • 06042	10.03 (255)	24.21 (619)	6 • 06062	67 • 06062
	9			6 • 09042	67 • 09042			6 • 09062	67 • 09062
	12			6 • 12042	67 • 12042			6 • 12062	67 • 12062
	18			6 • 18042	67 • 18042			6 • 18062	67 • 18062
	24			6 • 24042	67 • 24042			6 • 24062	67 • 24062

Cross



Tee



Radius R	Tray Width	Dimensions		Part Number	Cover Number
		A	B		
12 (305)	6	18 (457)	36 (914)	6 • 06080	67 • 06080
	9	19.5 (495)	39 (919)	6 • 09080	67 • 09080
	12	21 (533)	42 (1067)	6 • 12080	67 • 12080
	18	24 (610)	48 (1372)	6 • 18080	67 • 18080
	24	27 (686)	54 (1549)	6 • 24080	67 • 24080
24 (610)	6	30 (762)	60 (1524)	6 • 06082	67 • 06082
	9	31.5 (800)	63 (1600)	6 • 09082	67 • 09082
	12	33 (838)	66 (1676)	6 • 12082	67 • 12082
	18	36 (914)	72 (1829)	6 • 18082	67 • 18082
	24	39 (991)	78 (1981)	6 • 24082	67 • 24082

Radius R	Tray Width	Dimensions		Part Number	Cover Number
		A	B		
12 (305)	6	18 (457)	36 (914)	6 • 06085	67 • 06085
	9	19.5 (495)	39 (991)	6 • 09085	67 • 09085
	12	21 (533)	42 (1067)	6 • 12085	67 • 12085
	18	24 (610)	48 (1372)	6 • 18085	67 • 18085
	24	27 (686)	54 (1549)	6 • 24085	67 • 24085
24 (610)	6	30 (762)	60 (1524)	6 • 06087	67 • 06087
	9	31.5 (800)	63 (1600)	6 • 09087	67 • 09087
	12	33 (838)	66 (1676)	6 • 12087	67 • 12087
	18	36 (914)	72 (1829)	6 • 18087	67 • 18087
	24	39 (991)	78 (1981)	6 • 24087	67 • 24087

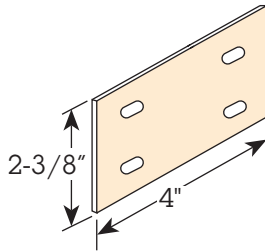
Splice Plates, Support Equipment and Accessories

Note: All splice plates, reducers, cover bars, blind ends, etc. are shipped with necessary hardware.

Standard Splice Plate—

Splice plates (one pair with hardware) are shipped with each straight section. Fittings are provided with the appropriate number of splice plates required. Only 4 bolts per plate and slotted hole design, make installation easy.

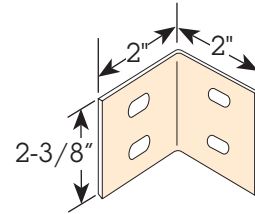
6 • SP200



Tray to Box Splice Plate—

A good solution for attaching tray to distribution boxes, control centers or making a non-radius 90° bend or tee.

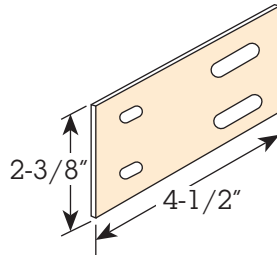
6 • SP213



Expansion Splice Plate—

Needed for outdoor long runs only. Call factory or your representative if in doubt or you need advice on location, etc.

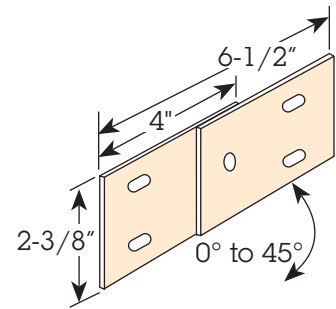
6 • SP201



Vertical Adjustable Splice Plates—

For field installing vertical transitions. Install on each end after rise angle is set. Then drill through center pivot hole into back plate then bolt in place. Efficient for angles to 45 degrees.

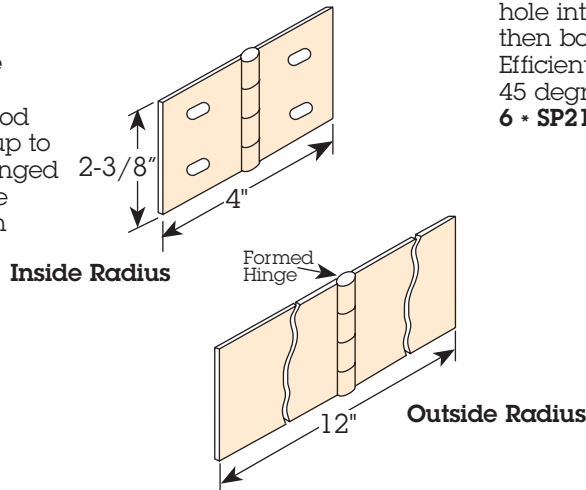
6 • SP212



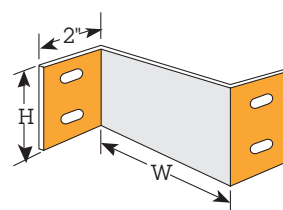
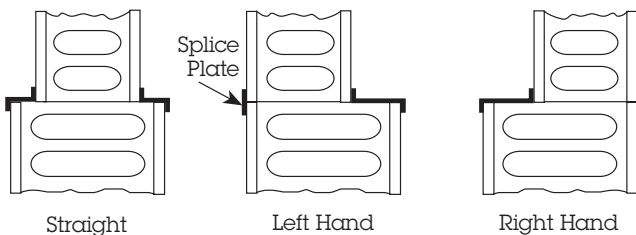
Horizontal Adjustable Splice Plates—

An inexpensive method to field install bends up to 45 degrees. Install hinged side, set desired angle then field drill holes in long hinge plate.

6 • SP210



Reducers



H = 6 * = 3" LD
64 * = 4" LD
66 * = 6" LD

Note: Complete set of hardware furnished with each reducer.

Reducers are installed on outside of tray. For right or left hand reducers, the splice plate element installs on the outside. This is a very inexpensive method of joining various widths.

Reduction "W"	Concentric (Straight)	Right or Left Hand
3	6 • 03237	6 • 03236
6	6 • 06237	6 • 06236
9	6 • 09237	6 • 09236
12	6 • 12237	6 • 12236
18	6 • 18237	6 • 18236

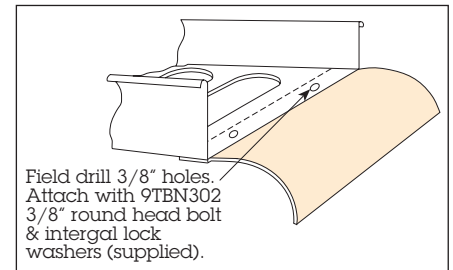
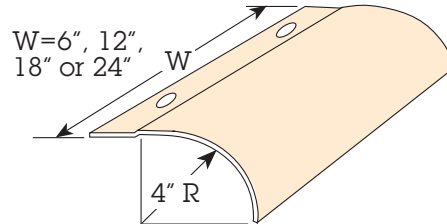
*Indicates type of material—See Order Code on Page 2-6.

Splice Plates, Support Equipment and Accessories

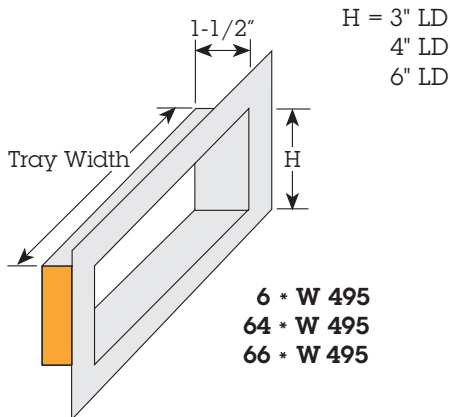
End of Run Drop Out

6 * W198

Used at end of runs when cable is dropping to a lower tray run...to prevent mechanical wear or damage to cables because of the tray edge. Use a bonding jumper to attach to vertically off-set trays to maintain grounding integrity.

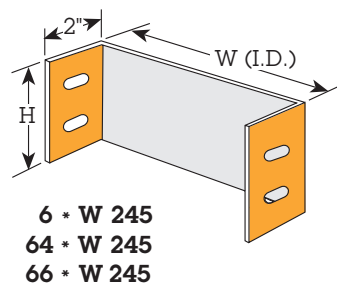


Wall Frame



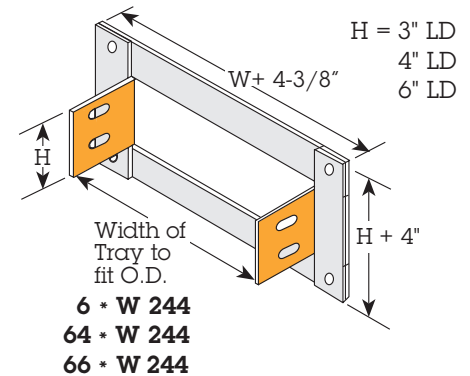
Designed to install in a wall cut-out for a finished look.
Note: Mounting hardware not included.

Blind Ends



These are used as an end cap or cover at the end of a run. If a more finished look is desired, install with round head bolt to outside. Note: Splice plates can also be installed on the inside of tray for a cleaner look.

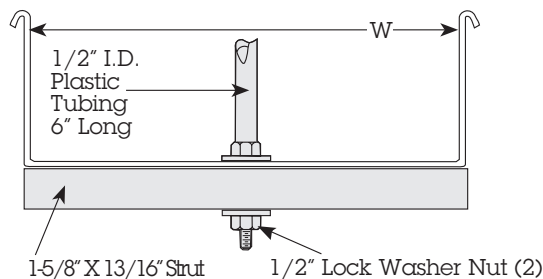
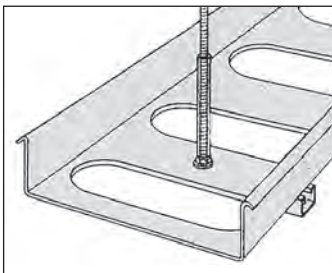
Tray to Panel Frame



Designed to terminate tray at a control panel to reinforce the box or panel and cover the cut made in the panel.
Note: Mounting hardware not included.

Single Center Support

6SW263



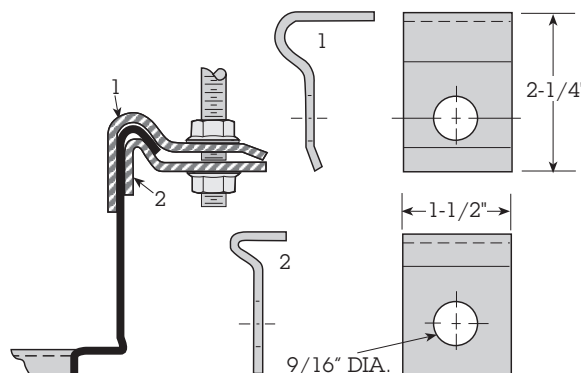
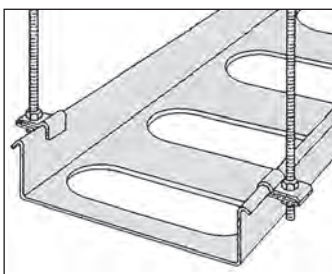
Includes strut, Nuts & Bolts and Plastic Rod Sleeve

Rod ordered separately.
See page 2-11.

1/2"-13 Rod
(1130 lbs. allowable load)
Up to 10' span recommended

Hanger Rod Clamps

6SOB249

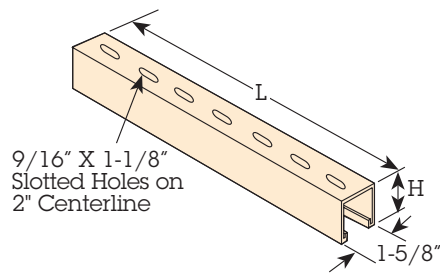
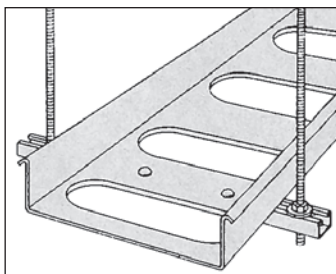


Rod ordered separately.
See page 2-11.

3/8"-16 Rod
(610 lbs. allowable load)
Up to 12' span recommended

Splice Plates, Support Equipment and Accessories

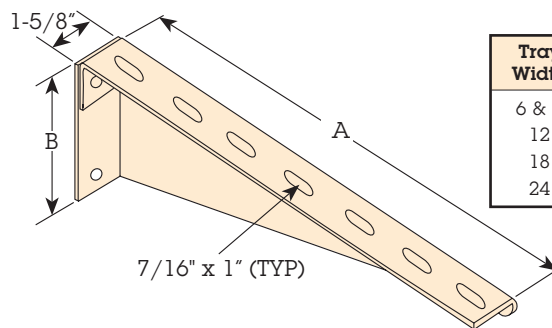
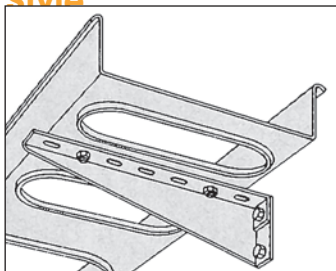
Trapeze with Strut



Tray Width	L	H	Usable Load (lbs.)	Ga	Part Number
6	12.00	0.8125	985	14	9S12323
9	15.00	0.8125	830	14	9S15323
12	18.00	0.8125	680	14	9S18323
18	24.00	0.8125	495	14	9S24323
24	30.00	1.625	1050	14	9S30323
30	36.00	1.625	880	14	9S36323

Note: Order required hanger rods and hardware separately.

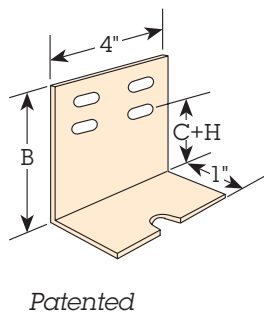
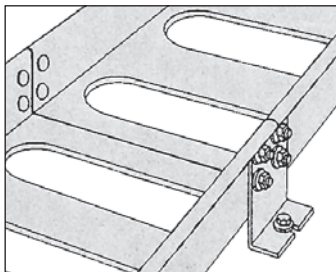
Wall Bracket Shelf Style



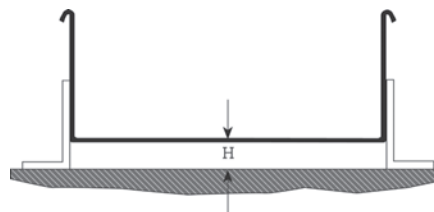
Tray Width	A	B	Uniform Load (lbs.)	Part Number
6 & 9	10.00	3.00	300	9S10322
12	16.00	4.50	300	9S16322
18	22.00	6.00	300	9S22322
24	28.00	7.50	300	9S28322

Important:
Allowance must be made for expansion if temperature extremes exist.

Pedestal Splice Plate



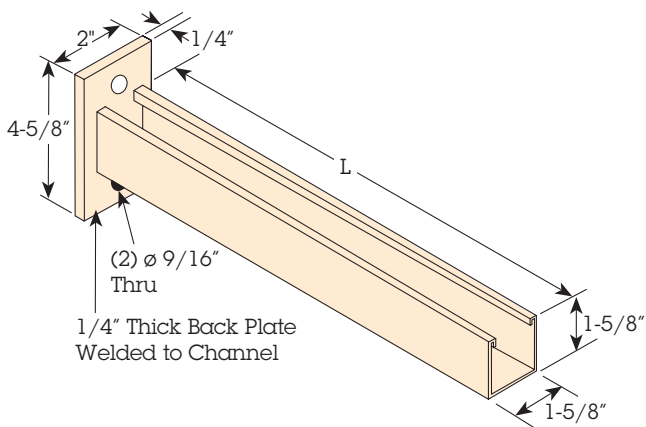
Patented



H = 0" thru 10 "
Specify Height of Tray above Floor.

Load Depth	B	C	Part Number
3	2.6875	0.875	6 • SP200-H
4	3.1875	1.375	64 • SP200-H
6	4.1875	2.375	66 • SP200-H

Medium Duty Strut Channel Bracket



Tray Width	L	Uniform Load (lbs.)	Ga	Part Number
6 & 9	12"	1500	12	9S12580
12	18"	750	12	9S18580
18	24"	500	12	9S24580
24	30"	250	12	9S30580

F.O.S. = 2.5

Securely mounted to wall with proper hardware.

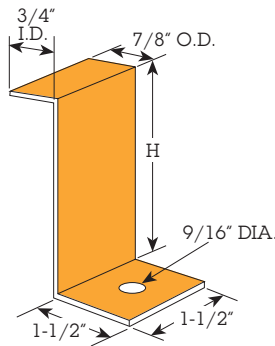
* For hot dipped ASTM 123 galvanized steel after fabrication: specify "G" for material designation.

Support Equipment and Accessories

Wall Bracket Clamp

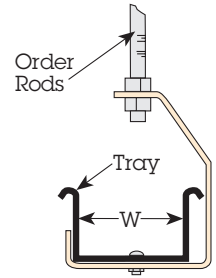
Used for holding tray to strut or wall brackets. Can be used in pairs (both sides of tray) or on one side alternating sides from support to support. Use with Hex bolt to twist nut in strut, or with bolt to nut with wall brackets.

6 SOB 248 = 3" Load Depth
64SOB 248 = 4" Load Depth
66SOB 248 = 6" Load Depth



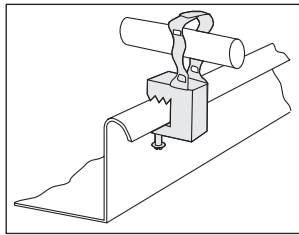
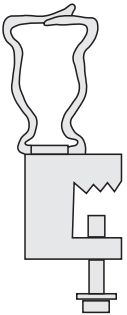
Single Support Bracket

This Z bracket gives a very good single support to 6, 9 and 12" width tray (most economical for 6" width). Use with 1/2" rod with supports on 6' centers. Tray bolts directly to bracket. (Field drill 3/8" hole in tray.)
6SW272



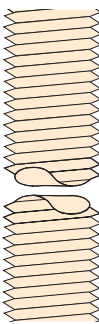
Conduit Clamp Bracket

9SCB424*



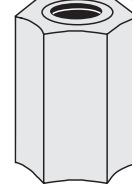
1/2" to 3/4" Conduit and Beam Clamp (Caddy Design)

Hanger Rods



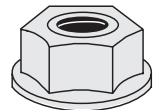
L	Part Number	
	3/8"-16	1/2"-13
12"	9S12310	9S12312
24"	9S24310	9S24312
36"	9S36310	9S36312
48"	9S48310	9S48312
72"	9S72310	9S72312
120"	9S120310	9S120312

Hanger Rod Coupling



9S38318 3/8" - 16
9S12318 1/2" - 13

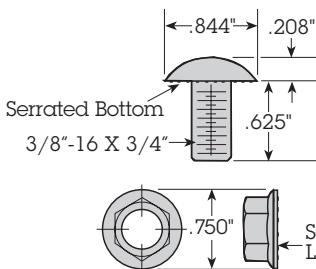
Flanged Washer/Hex Nut



9S38309 3/8" - 16
9S12309 1/2" - 13

Splice Plate Nut & Bolt Assembly

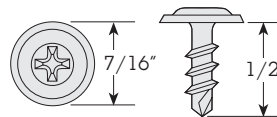
9TBN302



This is Chalfant's new exclusive standard splice plate nut and bolt assembly. Made from 304SS, it has a round truss head, serrated shoulder neck and integral flanged serrated lock washer hex nut.

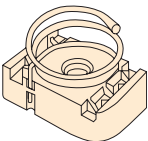
Self-Tapping Screw

9STK774



Used to attach barriers and covers. Made from steel with special Dorri Tech™ coating. This TEK screw can be easily attached with a magnetic phillips head holder. Screws can be backed out but not reused if covers are removed.

Twist Nut



9S38575 - 3/8" - 16
9S12575 - 1/2" - 13

Misc. Accessories

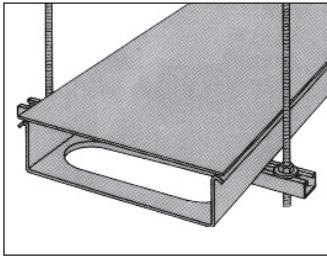
9S38574 3/8" - 16 X 1" Hex Head Machine Bolt
9S12574 1/2" - 13 X 1" Hex Head Machine Bolt
9S12578 1 5/8" Square Washer for Strut
9S38307 3/8" washer
9S12307 1/2" washer
9S38318 3/8" - 16 Beam Clamp - Malleable Iron Plated
9S12318 1/2" - 13 Beam Clamp - Malleable Iron Plated
9SCB422* Optional Conduit Clamp Bracket

* 9SCB424 is the recommended option for 9SCB422.

Trough

Covers, Barriers and Accessories

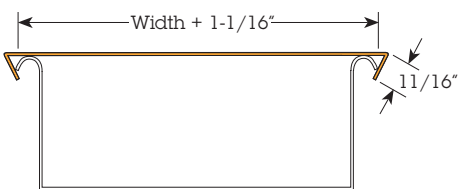
Covers



Standard covers for Series 6 tray are flat (no flanges). If you want ventilated covers, add the suffix -V for louvered ventilation. Covers follow the number system shown on page 1-20 with a 67S/A prefix. Covers can be held to tray with Caddy Beam Clamp 9SCB424BC or with 9STK774 self-drilling/tapping screws. Cover hold downs must be ordered separately. Covers to 24" widths are made from 20-gauge G-90 coated galvanized steel or 0.040" thick 5052H32 aluminum sheet.

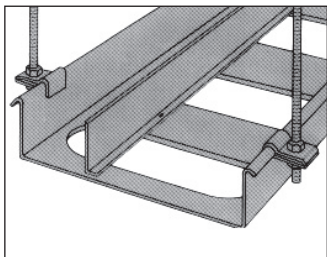
Snap-On Covers

7 • W010-S0



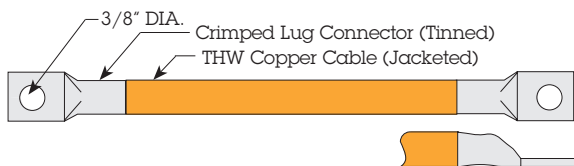
A new design Snap-On Cover is available in aluminum or steel that is tight fit to 12". Loose cover fit for 18" and 24" trays. No hardware required.

Barriers



Barriers are popular for isolating or separating various cables. For example, telephone from computer cables or fire alarm cables from intercom cabling. Straight barriers are furnished in 12' lengths (8*BS010-H) made of 20-gauge steel with top edge folded back or extruded aluminum with radiused edges. Barrier height equals load depth. 9STK774 steel self drilling tapping screws are included to fasten barrier to tray bottom. For horizontal bends and tees, an adjustable barrier in 4' lengths (8*BS340-H) is furnished. Vertical fitting barriers are formed to match fittings and ordered with same fitting part code. Barriers can be installed at the factory at nominal cost to save field installation time and labor.

Bonding Jumper



Cable Size	Rated AMPS	Part Number
#6	200	9CBJ200
#1	600	9CBJ600

If you are using the tray as an equipment ground as classified by UL, you must use a bonding jumper (one only with Series 6-single piece construction) for bridging adjustable splice plates and runs that aren't connected or across expansion joints.

- For **steel trays** use a 200 Amp jumper. This provides a 100 Amp equipment ground thru 18" width tray and a 200 Amp ground on 24" wide tray.
- For **aluminum trays** use a 600 Amp jumper to 18" widths and two 600 Amp jumpers to provide 1000 Amp ground for 24" wide tray. For 64A24010 and 66A24010 tray you get 1200 Amp ground.



OBO Bettermann Group

50 Pearl Road, Suite 212 ■ Brunswick, Ohio 44212

Phone: 330/273-3510 FAX: 330/273-8149

Facilities: Brunswick and Elyria, Ohio

www.chalfant-obo.com

sales@chalfant-obo.com