

Straight Lengths

Tray Bottom

Ladder, ventilated and solid trough

Ladder

Formed side rails are welded to 1-5/8 in. wide rungs to provide maximum rigidity and strength. Rung design includes exclusive Ty-Rap® cable tie slots on 1 in. centers.

Ventilated

A fabricated structure consisting of integral or separate longitudinal rails and a bottom having openings sufficient for the passage of air and utilizing 75% or less of the plan area of the surface to support cables.

The maximum open spacings between cable support surfaces of transverse elements do not exceed 102 mm (4 in.) in the direction parallel to the tray side rails (rung to rung).

Solid Trough

Solid sheet welded to steel side rails below rungs. This design offers added cable protection.



Straight Lengths

Number Selection

How to Create Part Numbers

Thomas & Betts has created a numbering system based on the order of selection criteria. For example the first selection issue is the environment which the cable tray will be subjected to. This selection will lead to the best material for your application. For complete details on cable tray selection process, see page A8 in the technical section.

Methods

1. Select the material best suited to your environment. Refer to technical section page A8.
2. Determine the tray series using the NEMA/CSA Load/Span designations page A16, and sizing cable tray page A32.
3. Select nominal depth and width of tray based on cable loading. See sizing cable tray page A32.
4. Select the bottom type based on cables and spacing requirements.
5. The last number is the length of the cable tray in meters or inches.

Straight Section Number Selection

SH3624L09144						
Material Prefix	Series	Side Rail Height (in.)	Width	Bottom Type	Length	
SP • Pregalvanized SH • Hot-dipped galvanized after fabrication SS • Stainless steel 316	1 • Series 1	3-5/8	06 • (6 in.) 09 • (9 in.) 12 • (12 in.) 18 • (18 in.) 24 • (24 in.) 30 • (30 in.) 36 • (36 in.) 42 • (42 in.)	L06 (6 in. rung spacing) L09 (9 in. rung spacing) L12 (12 in. rung spacing) **V (ventilated) S (solid trough)	3 (3 meters) 6 (6 meters) 144 (12 ft.) 288 (24 ft.)	
	1 • Series 1 3 • Series 3		4			
	2 • Series 2 4 • Series 4 5 • Series 5		5			
	1 • Series 1 3 • Series 3 4 • Series 4		6			
	3 • Series 3		7			

* Series 1-3 and 1-4 are not available in 6 meter and 288 in. lengths.

** For load ratings of CSA Class C/NEMA 8C or less, please see an alternative ventilated series of cable tray called - One-Piece found on pages A160 to A191 of this catalogue.

Straight Lengths

3-5/8 in. Straight Sections
Series 1-3

Ladder, ventilated and solid trough

Straight Section Number Selection

SH1324L09-3					
Material Prefix	Series	Side Rail Height	Width	Bottom Type	Length
SP • Pregalvanized SH • Hot-dipped galvanized after fabrication SS • Stainless steel 316	1 • Series 1	3 • (3-5/8 in.)	06 • (6 in.) 09 • (9 in.) 12 • (12 in.) 18 • (18 in.) 24 • (24 in.) 30 • (30 in.) 36 • (36 in.) 42 • (42 in.)	L06 • 6 in. rung spacing L09 • 9 in. rung spacing L12 • 12 in. rung spacing V • Ventilated * S • Solid trough	3 • (3 meters) 144 • (12 ft.)

* For load CSA Class C3M, NEMA 8C or less, please see an alternative ventilated series of cable tray called - One-Piece found on pages A160 to A191 of this catalogue.

Technical Specifications

All calculations and data are based on 42 in. wide cable trays with rungs spaced 12 inches center to center with tray supported as simple spans with deflection measured at the midpoint. Continuous spans may reduce deflection by as much as 50%.

Deflection factor: For lighter loads, deflection at any length can be calculated by multiplying the load by the deflection factor.

For Fittings consult pages A50 to A91.

Series		Support Span (Feet)			
		6	8	10	12
SP1-3 SH1-3 SS1-3	Load (lb.)/ft.)	200	112.5	72	50
	Deflection (in.)	0.242	0.430	0.672	0.967
	Deflection Factor	0.001	0.004	0.009	0.019

Straight Lengths

3-5/8 in. Straight Sections Series 1-3

Ladder, ventilated and solid trough



Dimensions

SP1-3, SH1-3, SS1-3	
W (in.)	Wi (in.)
6	4.5
9	7.5
12	10.5
18	16.5
24	22.5
30	28.5
36	34.5
42	40.5



Technical Specifications

LOAD RATINGS: 1.5 Safety factor. All tray sections will support an additional 200 lb. concentrated load on any portion of tray (side rail, rung, etc.) above and beyond published load class.

Series	Dimensions	Side Rail Design Factors • 1 Pair	Classifications			
			NEMA	CSA	UL	ABS
SP1-3 SH1-3 SS1-3		$I_x = 0.804 \text{ in.}^4$ $S_x = 0.444 \text{ in.}^3$ Area = 0.488 in.^2	12A	C/3 m	UL cross sectional Area : 0.40 in.^2	Stainless steel only

Straight Lengths

4 in. Straight Sections
Series 1-4, 3-4

Ladder, ventilated and solid trough

Straight Section Number Selection

SH3424L09144					
Material Prefix	Series	Side Rail Height	Width	Bottom Type	Length *
SP • Pregalvanized SH • Hot-dipped galvanized after fabrication SS • Stainless steel 316	1 • Series 1 3 • Series 3	4 • (4 in.)	06 • (6 in.) 09 • (9 in.) 12 • (12 in.) 18 • (18 in.) 24 • (24 in.) 30 • (30 in.) 36 • (36 in.) 42 • (42 in.)	L06 • 6 in. rung spacing L09 • 9 in. rung spacing L12 • 12 in. rung spacing V • Ventilated ** S • Solid trough	3 • (3 meters) 6 • (6 meters) 144 • (12 ft.) 288 • (24 ft.)

* Series 1-4 not available in 6 meters or 288 in. lengths.

** For load CSA Class C3M, NEMA 8C or less, please see an alternative ventilated series of cable tray called - One-Piece found on pages A160 to A191 of this catalogue.

Technical Specifications

All calculations and data are based on 42 in. wide cable trays with rungs spaced on 12 in. centers with tray supported as simple spans with deflection measured at the midpoint. Continuous spans may reduce deflection by as much as 50%.

Deflection factor: For lighter loads, deflection at any length can be calculated by multiplying the load by the deflection factor.

For Fittings consult pages A50 to A91.

Series		Support Span (Feet)								
		6	8	10	12	14	16	18	20	
SP1-4	Load (lb.)/ft.)	420	236	151	105	–	–	–	–	
	SH1-4	Deflection (in.)	0.207	0.368	0.574	0.827	–	–	–	–
		SS1-4	Deflection Factor	0.001	0.002	0.004	0.008	–	–	–
SP3-4	Load (lb.)/ft.)	556	313	200	139	102	78	62	50	
	SH3-4	Deflection (in.)	0.243	0.432	0.674	0.971	1.322	1.727	2.185	2.698
		SS3-4	Deflection Factor	0.0004	0.0014	0.0033	0.00700	0.0130	0.022	0.035

Straight Lengths

4 in. Straight Sections Series 1-4, 3-4

Ladder, ventilated and solid trough



Dimensions

SP1-4, SH1-4, SS1-4 SP3-4, SH3-4, SS3-4	
W (in.)	Wi (in.)
6	3.34
9	6.34
12	9.34
18	15.34
24	21.34
30	27.34
36	33.34
42	39.34



Technical Specifications

LOAD RATINGS: 1.5 Safety factor. All tray sections will support an additional 200 lb. concentrated load on any portion of tray (side rail, rung, etc.) above and beyond published load class.

Series	Dimensions	Side Rail Design Factors • 1 Pair	Classifications			
			NEMA	CSA	UL	ABS
SP1-4 SH1-4 SS1-4		$I_x = 1.974 \text{ in.}^4$ $S_x = 0.788 \text{ in.}^3$ Area = 0.682 in.^2	12C	D/3M	UL cross sectional Area : 0.70 in.^2	Stainless steel only
SP3-4 SH3-4 SS3-4		$I_x = 2.224 \text{ in.}^4$ $S_x = 1.022 \text{ in.}^3$ Area = 1.080 in.^2	20A	D/6M	UL cross sectional Area : 0.70 in.^2	Stainless steel only

Straight Lengths

5 in. Straight Sections
Series 2-5, 4-5, 5-5

Ladder, ventilated and solid trough

Straight Section Number Selection

SH2524L09144

Material Prefix	Series	Side Rail Height	Width	Bottom Type	Length
SP • Pregalvanized SH • Hot-dipped galvanized after fabrication SS • Stainless steel 316	2 • Series 2 4 • Series 4 5 • Series 5	5 • (5 in.)	06 • (6 in.) 09 • (9 in.) 12 • (12 in.) 18 • (18 in.) 24 • (24 in.) 30 • (30 in.) 36 • (36 in.) 42 • (42 in.)	L06 • 6 in. rung spacing L09 • 9 in. rung spacing L12 • 12 in. rung spacing V • Ventilated S • Solid trough	3 • (3 meters) 6 • (6 meters) 144 • (12 ft.) 288 • (24 ft.)

Technical Specifications

All calculations and data are based on 42 in. wide cable trays with rungs spaced on 12 in. centers with tray supported as simple spans with deflection measured at the midpoint. Continuous spans may reduce deflection by as much as 50%.

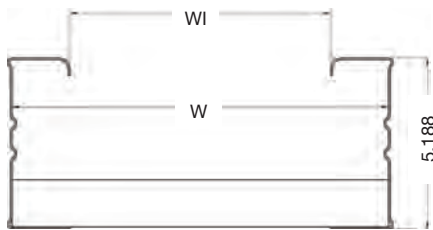
Deflection factor: For lighter loads, deflection at any length can be calculated by multiplying the load by the deflection factor.
For Fittings consult pages A50 to A91.

Series		Support Span (Feet)							
		6	8	10	12	14	16	18	20
SP2-5	Load (lb./ft.)	556	313	200	139	102	78	62	50
	Deflection (in.)	0.187	0.332	0.519	0.747	1.017	1.329	1.682	2.076
	Deflection Factor	0.0003	0.0011	0.0026	0.0054	0.0100	0.0170	0.0271	0.042
SH2-5	Load (lb./ft.)	833	469	300	208	153	117	93	75
	Deflection (in.)	0.216	0.384	0.600	0.864	1.176	1.536	1.944	2.400
	Deflection Factor	0.003	0.0008	0.0021	0.0043	0.0077	0.0131	0.0211	0.0320
SS2-5	Load (lb./ft.)	–	625	400	278	204	156	123	100
	Deflection (in.)	–	0.414	0.647	0.932	1.268	1.657	2.097	2.589
	Deflection Factor	–	0.0007	0.0016	0.0034	0.0062	0.0106	0.0169	0.0259
SP4-5	Load (lb./ft.)	833	469	300	208	153	117	93	75
	Deflection (in.)	0.216	0.384	0.600	0.864	1.176	1.536	1.944	2.400
	Deflection Factor	0.003	0.0008	0.0021	0.0043	0.0077	0.0131	0.0211	0.0320
SH4-5	Load (lb./ft.)	–	625	400	278	204	156	123	100
	Deflection (in.)	–	0.414	0.647	0.932	1.268	1.657	2.097	2.589
	Deflection Factor	–	0.0007	0.0016	0.0034	0.0062	0.0106	0.0169	0.0259
SS4-5	Load (lb./ft.)	–	625	400	278	204	156	123	100
	Deflection (in.)	–	0.414	0.647	0.932	1.268	1.657	2.097	2.589
	Deflection Factor	–	0.0007	0.0016	0.0034	0.0062	0.0106	0.0169	0.0259
SP5-5	Load (lb./ft.)	–	625	400	278	204	156	123	100
	Deflection (in.)	–	0.414	0.647	0.932	1.268	1.657	2.097	2.589
	Deflection Factor	–	0.0007	0.0016	0.0034	0.0062	0.0106	0.0169	0.0259
SH5-5	Load (lb./ft.)	–	625	400	278	204	156	123	100
	Deflection (in.)	–	0.414	0.647	0.932	1.268	1.657	2.097	2.589
	Deflection Factor	–	0.0007	0.0016	0.0034	0.0062	0.0106	0.0169	0.0259
SS5-5	Load (lb./ft.)	–	625	400	278	204	156	123	100
	Deflection (in.)	–	0.414	0.647	0.932	1.268	1.657	2.097	2.589
	Deflection Factor	–	0.0007	0.0016	0.0034	0.0062	0.0106	0.0169	0.0259

Straight Lengths

5 in. Straight Sections Series 2-5, 4-5, 5-5

Ladder, ventilated and solid trough



Dimensions

SP2-5, SH2-5, SS2-5, SP4-5, SH4-5, SS4-5, SP5-5, SH5-5, SS5-5	
W (in.)	Wi (in.)
6	3.34
9	6.34
12	9.34
18	15.34
24	21.34
30	27.34
36	33.34
42	39.34



Technical Specifications

LOAD RATINGS: 1.5 Safety factor. All tray sections will support an additional 200 lb. concentrated load on any portion of tray (side rail, rung, etc.) above and beyond published load class.

Series	Dimensions	Side Rail Design Factors • 1 Pair	Classifications			
			NEMA	CSA	UL	ABS
SP2-5 SH2-5 SS2-5		$I_x = 2.89 \text{ in.}^4$ $S_x = 1.09 \text{ in.}^3$ Area = 0.778 in.^2	20A	D/6M	UL cross sectional Area : 0.70 in.^2	Stainless steel only
SP4-5 SH4-5 SS4-5		$I_x = 3.75 \text{ in.}^4$ $S_x = 1.40 \text{ in.}^3$ Area = 1.018 in.^2	20B	E/6M	UL cross sectional Area : 1.00 in.^2	Stainless steel only
SP5-5 SH5-5 SS5-5		$I_x = 4.635 \text{ in.}^4$ $S_x = 1.732 \text{ in.}^3$ Area = 1.24 in.^2	20C	Exceeds E/6M	UL cross sectional Area : 1.00 in.^2	Stainless steel only

Straight Lengths

6 in. Straight Sections
Series 1-6, 3-6, 4-6

Ladder, ventilated and solid trough

Straight Section Number Selection

SH3624L12-6

Material Prefix	Series	Side Rail Height	Width	Bottom Type	Length
SP • Pregalvanized SH • Hot-dipped galvanized after fabrication SS • Stainless Steel 316	1 • Series 1 3 • Series 3 4 • Series 4	6 • (6 in.)	06 • (6 in.) 09 • (9 in.) 12 • (12 in.) 18 • (18 in.) 24 • (24 in.) 30 • (30 in.) 36 • (36 in.) 42 • (42 in.)	L06 • 6 in. rung spacing L09 • 9 in. rung spacing L12 • 12 in. rung spacing V • Ventilated ** S • Solid trough	3 • (3 meters) 6 • (6 meters) 144 • (12 ft.) 288 • (24 ft.)

** For load ratings of CSA Class C/NEMA 8C or less, please see an alternative ventilated series of cable tray called - One-Piece found on pages A160 to A191 of this catalogue.

Technical Specifications

All calculations and data are based on 42 in. wide cable trays with rungs spaced on 12 in. centers with tray supported as simple spans with deflection measured at the midpoint. Continuous spans may reduce deflection by as much as 50%.

Deflection factor: For lighter loads, deflection at any length can be calculated by multiplying the load by the deflection factor.

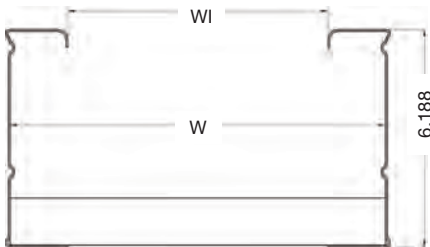
For Fittings consult pages A50 to A91.

Series		Support Span (Feet)							
		6	8	10	12	14	16	18	20
SP1-6	Load (lb./ft.)	556	313	200	139	102	78	62	50
	Deflection (in.)	0.122	0.216	0.338	0.486	0.662	0.865	1.095	1.351
	Deflection Factor	0.0002	0.0007	0.0017	0.0036	0.0065	0.0111	0.0177	0.0270
SP3-6	Load (lb./ft.)	833	469	300	208	153	117	93	75
	Deflection (in.)	0.151	0.268	0.419	0.603	0.821	1.072	1.357	1.675
	Deflection Factor	0.0002	0.0006	0.0014	0.0030	0.0055	0.0092	0.0146	0.0223
SP4-6	Load (lb./ft.)	–	728	466	324	238	182	144	117
	Deflection (in.)	–	0.312	0.487	0.702	0.955	1.247	1.579	1.949
	Deflection Factor	–	0.0004	0.0011	0.0022	0.0041	0.0069	0.0110	0.0167

Straight Lengths

6 in. Straight Sections Series 1-6, 3-6, 4-6

Ladder, ventilated and solid trough



Dimensions

SP1-6, SH1-6, SS1-6, SP3-6, SH3-6, SS3-6, SP4-6, SH4-6, SS4-6	
W (in.)	Wi (in.)
6	3.34
9	6.34
12	9.34
18	15.34
24	21.34
30	27.34
36	33.34
42	39.34



Technical Specifications

LOAD RATINGS: 1.5 Safety factor. All tray sections will support an additional 200 lb. concentrated load on any portion of tray (side rail, rung, etc.) above and beyond published load class.

Series	Dimensions	Side Rail Design Factors • 1 Pair	Classifications			
			NEMA	CSA	UL	ABS
SP1-6 SH1-6 SS1-6		$I_x = 4.44 \text{ in.}^4$ $S_x = 1.39 \text{ in.}^3$ Area = 0.874 in. ²	20A	D/6M	UL cross sectional Area : 0.70 in. ²	Stainless steel only
SP3-6 SH3-6 SS3-6		$I_x = 5.373 \text{ in.}^4$ $S_x = 1.70 \text{ in.}^3$ Area = 1.229 in. ²	20A	E/6M	UL cross sectional Area : 1.00 in. ²	Stainless steel only
SP4-6 SH4-6 SS4-6		$I_x = 7.173 \text{ in.}^4$ $S_x = 2.250 \text{ in.}^3$ Area = 1.471 in. ²	20C	Exceeds E/6M	UL cross sectional Area : 1.00 in. ²	Stainless steel only

Straight Lengths

7 in. Straight Sections
Series 3-7

Ladder, ventilated and solid trough

Straight Section Number Selection

SH3724L09288

Material Prefix	Series	Side Rail Height	Width	Bottom Type	Length
SP • Pregalvanized SH • Hot-dipped galvanized after fabrication SS • Stainless Steel 316	3 • Series 3	7 • (7 in.)	06 • (6 in.) 09 • (9 in.) 12 • (12 in.) 18 • (18 in.) 24 • (24 in.) 30 • (30 in.) 36 • (36 in.) 42 • (42 in.)	L06 • 6 in. rung spacing L09 • 9 in. rung spacing L12 • 12 in. rung spacing V • Ventilated * S • Solid trough	3 • (3 meters) 6 • (6 meters) 144 • (12 ft.) 288 • (24 ft.)

* For load ratings of CSA Class C/NEMA 12C or less, please see an alternative ventilated series of cable tray called - One-Piece found on pages A160 to A191 of this catalogue.

Technical Specifications

All calculations and data are based on 42 in. wide cable trays with rungs spaced on 12 in. centers with tray supported as simple spans with deflection measured at the midpoint. Continuous spans may reduce deflection by as much as 50%.

Deflection factor: For lighter loads, deflection at any length can be calculated by multiplying the load by the deflection factor.

For Fittings consult pages A50 to A91.

Series		Support Span (Feet)								
		6	8	10	12	14	16	18	20	
SP3-7	Load (lb./ft.)	–	750	480	333	245	188	148	120	
	SH3-7	Deflection (in.)	–	0.221	0.346	0.498	0.678	0.885	1.120	1.383
	SS3-7	Deflection Factor	–	0.0003	0.001	0.002	0.003	0.005	0.008	0.012

Straight Lengths

7 in. Straight Sections Series 3-7

Ladder, ventilated and solid trough



Dimensions

SP3-7, SH3-7, SS3-7	
W (in.)	Wi (in.)
6	3.34
9	6.34
12	9.34
18	15.34
24	21.34
30	27.34
36	33.34
42	39.34

Technical Specifications

LOAD RATINGS: 1.5 Safety factor. All tray sections will support an additional 200 lb. concentrated load on any portion of tray (side rail, rung, etc.) above and beyond published load class.

Series	Dimensions	Side Rail Design Factors • 1 Pair	Classifications			
			NEMA	CSA	UL	ABS
SP3-7 SH3-7 SS3-7		$I_x = 10.411 \text{ in.}^4$ $S_x = 2.820 \text{ in.}^3$ $\text{Area} = 1.54 \text{ in.}^2$	Exceeds 20C	Exceeds E/6M	UL cross sectional Area : 1.50 in. ²	Stainless steel only