

## Channel Tray

In order to ensure that your Channel Tray installation will meet your present and future needs, a sequence of decisions must be made. These decisions are relatively simple and can be condensed down to four steps.

### Material Choice

- Aluminum
- Pre-Galvanized
- Hot-Dipped Galvanized
- Stainless Steel
- Coatings
- Other

T&B Channel Tray systems are fabricated from a corrosion-resistant metal (low-carbon steel, stainless steel or an aluminum alloy) or from a metal with a corrosion-resistant finish (zinc or epoxy). The choice of material for any particular installation depends on the installation environment (corrosion and electrical considerations) and cost. Please refer to **pages B-424-B-438** for further explanation.

### Type of Tray Bottom

- Ventilated
- Solid

Thomas & Betts offers cable channel in solid or ventilated straight sections. Ventilated channel has burr-free oblong punched holes for easy access. Ty-Rap® slots are provided between each opening for securing of cable. Thomas & Betts channel tray meets NEMA VE-1/CSA C22.22 No. 126.1-02.

### T&B Channel Tray Width

- 1.5"
- 3"
- 4"
- 6"

The width of a channel tray is a function of the number, size, spacing and weight of the cables in the tray. Available nominal widths are 1.5, 3, 4 and 6 inches. When specifying width, cable ties or other spacing devices may be used to maintain the required air space between cables.

### Fittings Selection

- Horizontal Bends (90°, 60°, 45° and 30°)
- Horizontal Tees and Crosses
- Vertical Bends (90°, 60°, 45° and 30°)

Fittings are used to change the size or direction of the channel tray. The most important decision to be made in fitting design concerns radius. The radius of the bend, whether horizontal or vertical, can be zero (non-radius), 12", 24" or greater on a custom basis. The selection requires a compromise, with the considerations being available space, minimum bending radius of cables, ease of cable pulling and cost. The typical radius is 24 inches.

Fittings are also available for 30°, 45°, 60° and 90° angles. When a standard angle will not work, field fittings or adjustable elbows can be used. It may be necessary to add supports to the tray at these points.

Refer to CSA/NEMA VE2 Installation Guidelines for suggested support locations.



Ventilated Channel



Solid Channel

## Channel Tray

### How to create Straight Section catalog numbers

1. Select the material
2. Select nominal width of tray
3. Select the bottom type
4. The last number is the length of the channel tray

Example: ALTC04V-3

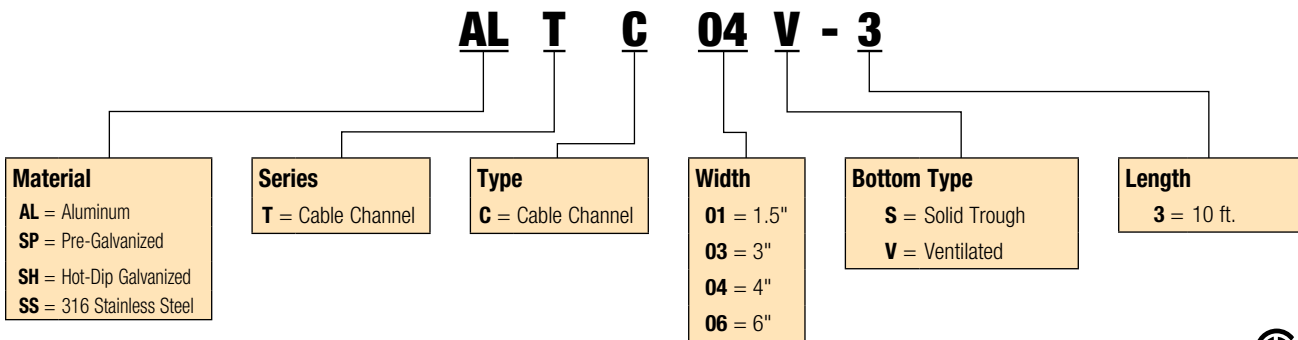
- Aluminum
- 4" wide
- Ventilated bottom
- 10-ft. length



Ventilated Channel



Solid Channel



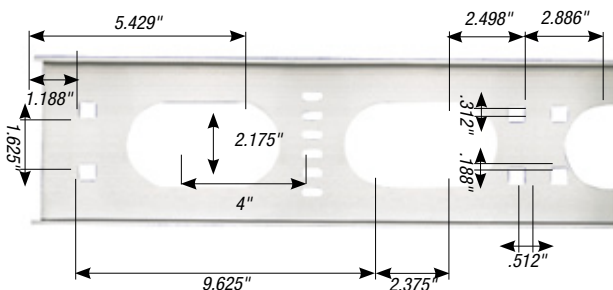
Vented style offered in 1.5" width only.



Vented style offered in 3", 4", 6" widths only.



Solid style offered in all widths.



Bottom view of ventilated Channel Tray larger than 1.5" wide.

### Selection Guide

**Prefix:** ALT (Alum.), SPT (Pre-Galv.), SHT (Hot-Dip Galv.) SST (Stainless Steel)

**Inside Channel Widths:** 01 = 1.5", 03 = 3", 04 = 4", 06 = 6"

**Bottom Styles:** V – Ventilated, S – Solid

## Channel Tray

### Solid and Vented Bottom Straight Sections



**Solid:** Steel — Roll-formed steel. Aluminum — Extruded material

**Vented:** Pre-punched burr-free oblong holes with Ty-Rap® slots between each opening

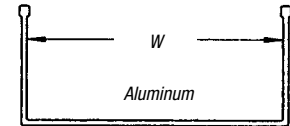
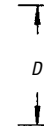
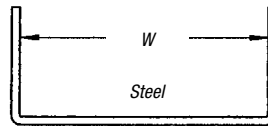
**Accessories:** One connector complete with hardware supplied for each length

**Material:** Aluminum-6063-T6

Pre-Galvanized

Hot-Dip Galvanized

Stainless Steel 316



			SUPPORT SPAN (FEET)					
ALUMINUM SOLID	CHANNEL WIDTH (W)	DEPTH (D)		2	4	6	8	10
ALTC	1.5"	¾"	LOAD (LB./FT.)	47.5	11.9	5.4	3.0	1.9
			DEFLECTION (IN.)	.170	.680	.745	1.325	2.070
	3"	1⅝"	LOAD (LB./FT.)	362.5	90.6	40.3	22.7	17.0
			DEFLECTION (IN.)	.083	.330	.743	1.322	2.065
	4"	1⅝"	LOAD (LB./FT.)	580.0	145.0	64.4	36.3	24.0
			DEFLECTION (IN.)	.065	.260	.585	1.041	1.626
	6"	1¾"	LOAD (LB./FT.)	607.5	151.9	67.5	38.0	25.0
			DEFLECTION (IN.)	.061	.244	.550	.977	1.527

ALUMINUM VENTILATED	CHANNEL WIDTH (W)	DEPTH (D)	SUPPORT SPAN (FEET)					
				2	4	6	8	10
ALTC	1.5"	¾"	LOAD (LB./FT.)	47.5	11.9	5.4	3.0	1.9
			DEFLECTION (IN.)	.170	.680	.745	1.325	2.070
	3"	1⅝"	LOAD (LB./FT.)	300.0	75.0	33.3	18.8	14.0
			DEFLECTION (IN.)	.100	.400	.900	1.600	2.500
	4"	1⅝"	LOAD (LB./FT.)	525.0	131.3	58.3	32.8	19.0
			DEFLECTION (IN.)	.074	.295	.664	1.181	1.846
	6"	1¾"	LOAD (LB./FT.)	580.0	145.0	64.4	36.3	21.0
			DEFLECTION (IN.)	.065	.261	.587	1.044	1.631

STEEL SOLID	CHANNEL WIDTH (W)	DEPTH (D)	SUPPORT SPAN (FEET)					
				2	4	6	8	10
SPTC SHTC SSTC	1.5"	¾"	LOAD (LB./FT.)	97.5	24.4	10.8	6.1	3.9
			DEFLECTION (IN.)	.045	.181	.408	.725	1.133
	3"	1⅝"	LOAD (LB./FT.)	252.0	63.0	28.0	15.8	17.0
			DEFLECTION (IN.)	.034	.134	.302	.538	.840
	4"	1⅝"	LOAD (LB./FT.)	408.0	102.0	45.3	25.5	24.0
			DEFLECTION (IN.)	.026	.105	.237	.421	.658
	6"	1¾"	LOAD (LB./FT.)	432.0	108.0	48.0	27.0	25.0
			DEFLECTION (IN.)	.024	.096	.217	.386	.603

STEEL VENTILATED	CHANNEL WIDTH (W)	DEPTH (D)	SUPPORT SPAN (FEET)					
				2	4	6	8	10
SPTC SHTC SSTC	1.5"	¾"	LOAD (LB./FT.)	97.5	24.4	10.8	6.1	3.9
			DEFLECTION (IN.)	.045	.181	.408	.725	1.133
	3"	1⅝"	LOAD (LB./FT.)	207.0	51.8	23.0	12.9	14.0
			DEFLECTION (IN.)	.041	.163	.366	.652	1.018
	4"	1⅝"	LOAD (LB./FT.)	363.0	90.8	40.3	22.7	19.0
			DEFLECTION (IN.)	.030	.119	.269	.477	.746
	6"	1¾"	LOAD (LB./FT.)	405.0	101.3	45.0	25.3	21.0
			DEFLECTION (IN.)	.027	.106	.239	.425	.664