

Metallic – aluminum

Straight lengths

Tray bottom types – ladder, ventilated and solid trough

Ladder

- Extra-wide aluminum rungs are welded to extruded aluminum I-beam side rails. Every second rung is reversed to allow for easy top or bottom mounting of cable ties and clamps. All edges and welds are rounded and smooth to prevent cable damage.

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

Note: For load CSA Class C/3M, NEMA 8C or less, please see alternative ventilated series of cable tray called One-Piece found on pages A-170–A-204 of the catalog.

Solid trough

- A fabricated structure consisting of a bottom without ventilation openings within separate longitudinal side rails.

Note: Fast and easy snap-in splice plates are provided with each straight section.



Metallic — aluminum

Straight lengths (continued)

A

How to create catalog numbers

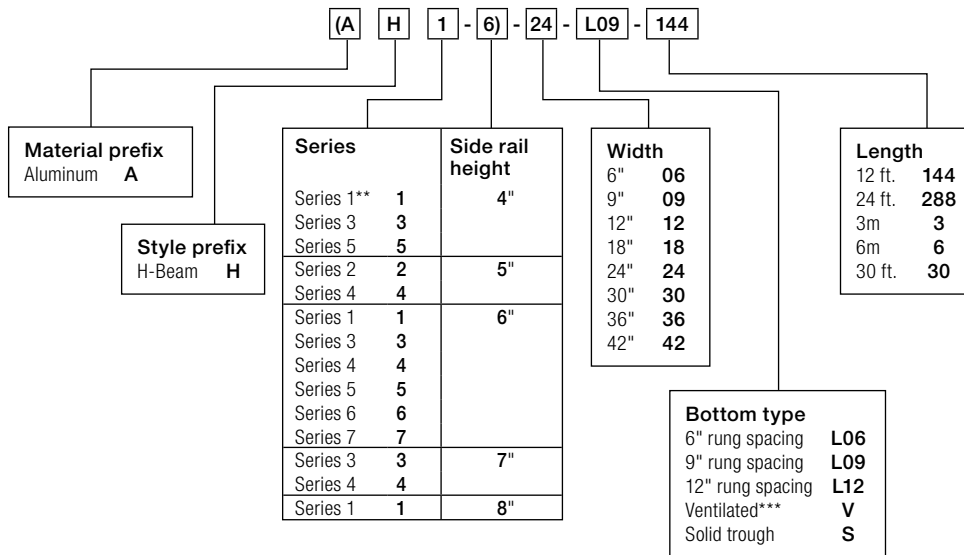
Thomas & Betts has created a numbering system based on the order of selection criteria. For example, the first selection issue is the environment to which the cable tray will be subjected. This selection will lead to the best material for your application. For complete details on the cable tray selection process, see page A-10 in the technical section.

Methods

1. Select the material best suited to your environment.
Refer to technical section page A-10.
2. Determine the tray series using the NEMA/CSA load/span designations page A-16, and sizing cable tray page A-23.
3. Select nominal depth and width of tray based on cable loading. See “Sizing Cable Tray” page A-23.
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



** Fittings not available for 8" side rail series 1.

*** For load CSA Class C/3M, NEMA 8C or less, please see an alternative ventilated series of cable tray called One-Piece found on pages A-170–A-204 of this catalog.

† For series 76, 47 and 18 only.

NOTE: The following special options are available. To order, add the indicated suffix to the very end of the catalog number.

FO = Flange out

G = Ground holes (specify locations and size)

H = Stainless steel type 316 hardware nuts and bolts

MR = Marine rung alternated

UM = Marine rung holes up

RU = Rung with square holes on top

FR = Flat rung

Contact your T&B representative for additional options.

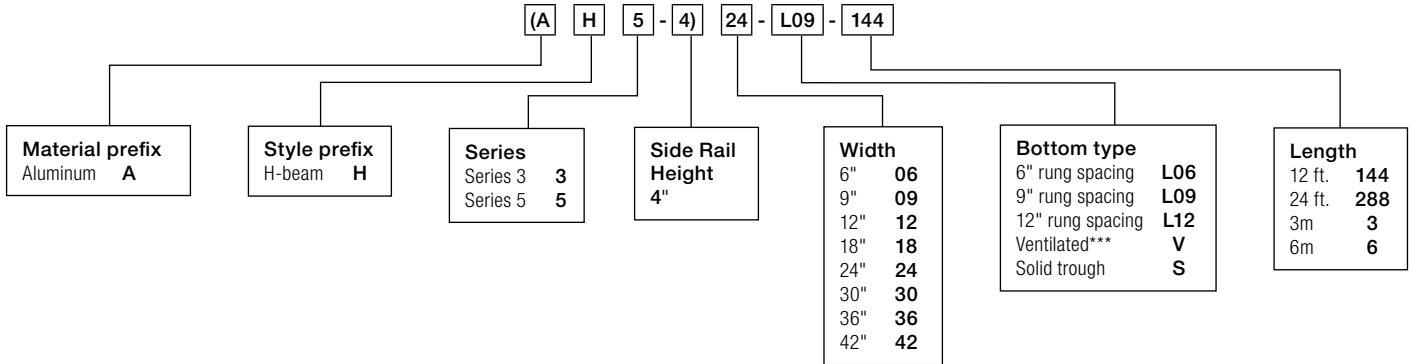
Metallic – aluminum

Straight lengths (continued)

A

4" Straight sections/series 3-4, 5-4 – ladder, ventilated and solid trough

Straight section number selection



Technical specifications

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

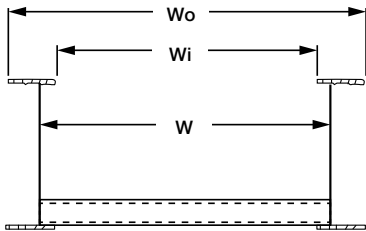
Deflection factor: For lighter loads, deflection at any length can be calculated by multiplying the load by the deflection factor.

For fittings, consult pages A-52–A-97.



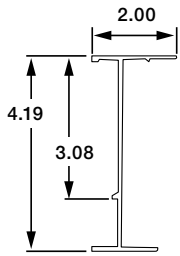
| Series | | Classifications NEMA | Support Span (ft.) | | | | | | | |
|--------|-------------------|-------------------------|--------------------|--------|--------|--------|-------|-------|-------|-------|
| | | | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| AH3-4 | Load (lb./ft.) | 12C, 16B | 230 | 230 | 204 | 142 | 104 | 80 | 63 | 51 |
| | Deflection (in.) | | 0.192 | 0.607 | 1.315 | 1.894 | 2.578 | 3.367 | 4.261 | 5.261 |
| | Deflection factor | | 0.0008 | 0.0026 | 0.0064 | 0.0134 | 0.025 | 0.043 | 0.068 | 0.103 |
| AH5-4 | Load (lb./ft.) | 20B, 16C | 230 | 230 | 230 | 230 | 192 | 147 | 116 | 94 |
| | Deflection (in.) | | 0.126 | 0.398 | 0.972 | 2.015 | 3.113 | 4.066 | 5.147 | 6.354 |
| | Deflection factor | | 0.0005 | 0.0017 | 0.0042 | 0.0088 | 0.016 | 0.028 | 0.044 | 0.068 |

4" Straight sections/series 3-4, 5-4 — ladder, ventilated and solid trough

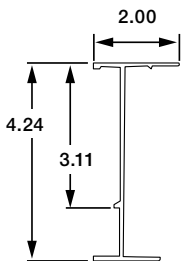


Dimensions

| W (in.) | AH3-4 | | AH5-4 | |
|---------|----------|----------|----------|----------|
| | Wo (in.) | Wi (in.) | Wo (in.) | Wi (in.) |
| 6 | 8.86 | 4.86 | 8.86 | 4.86 |
| 9 | 11.86 | 7.86 | 11.86 | 7.86 |
| 12 | 14.86 | 10.86 | 14.86 | 10.86 |
| 18 | 20.86 | 16.86 | 20.86 | 16.86 |
| 24 | 26.86 | 22.86 | 26.86 | 22.86 |
| 30 | 32.86 | 28.86 | 32.86 | 28.86 |
| 36 | 38.86 | 34.86 | 38.86 | 34.86 |
| 42 | 44.86 | 40.86 | 44.86 | 40.86 |



AH3-4



AH5-4

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 | Side rail design factors 1 pair | Classifications | | |
|--------|--|-----------------|-------|---|
| | | NEMA | CSA | UL® |
| AH3-4 | $I_x = 3.49^{in^4}$ $S_x = 1.64^{in^3}$ Area = 1.28^{in^2} | 12C, 16B | D/6 m | UL cross-sectional area: 1.00^{in^2} |
| AH5-4 | $I_x = 5.33^{in^4}$ $S_x = 2.36^{in^3}$ Area = 1.93^{in^2} | 20B, 16C | E/6 m | UL cross-sectional area: 1.50^{in^2} |