

## H-164

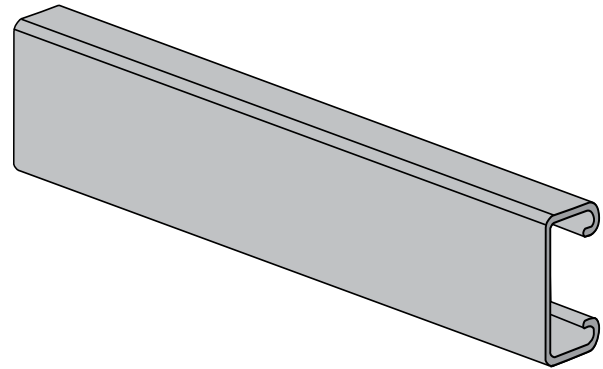
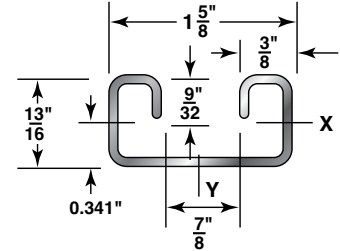
Insert custom dimensions

$1\frac{3}{16}" \times 1\frac{5}{8}"$

**14 Gauge Channel**

**Weight/100 ft. - 103 lbs.**

H-164 is the most common channel used for supporting conduit and other electrical systems. Sometimes known as "shallow" strut, it is available "slotted" or with several other pre-punched hole and weld configurations.



### SPECIFICATIONS

#### General

H-STRUT® channels are manufactured from high quality, domestically sourced structural steel and roll formed into shape. These products comply with MFMA-4 standards, and beam and column load tables are calculated in accordance with the ANSI North American Specification for the Design of Cold-Formed Steel Structural Members, 2016 Edition.

#### Length Information

H-Strut channels are produced in standard 10' and 20' lengths with a tolerance of  $\pm\frac{1}{8}"$ . Other lengths are available upon request.

#### Loading Data

1. Load capacities in this section include a safety factor (to the yield strength) of 1.68 for beam loads and 1.80 for column loads.
2. When calculating load at center of span, multiply load from table 0.5 and deflection by 0.8.
3. When calculating beam and column loads for aluminum, multiply by 33%.

#### Material

H-Strut channels are produced from prime structural metals covered by the following specifications.

(See the technical section for additional information.)

- Aluminum (Type 6063-T6) . . . . . ASTM B221
- Plain Steel . . . . . ASTM A1011 SS Grade 33
- Pre-Galvanized Steel . . . . . ASTM A653 SS Grade 33, G90
- Stainless Steel (Type 304 & 316L) . . . . . ASTM A240

Other materials and specifications are available upon request.

#### Finishes

H-Strut is available in powder-coated and zinc trivalent. Other finishes are available upon request.

- Hot- Dip Galvanized. . . . . ASTM A123
- Zinc Trivalent Chromium (ZTC) . . . . . ASTM B633 85
- Powder-Coated

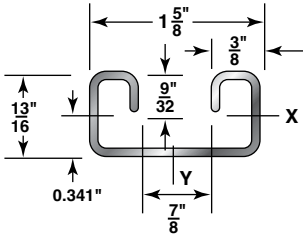


# H-164

## Section Properties

| Catalog No. | Wt.    | Area            | X-X Axis        |                 |     | Y-Y Axis        |                 |      | dy<br>in |
|-------------|--------|-----------------|-----------------|-----------------|-----|-----------------|-----------------|------|----------|
|             |        |                 | I               | S               | r   | I               | S               | r    |          |
|             | lbs/ft | in <sup>2</sup> | in <sup>4</sup> | in <sup>3</sup> | in  | in <sup>4</sup> | in <sup>3</sup> | in   |          |
| H-164       | 1.03   | 0.287           | 0.026           | 0.054           | 0.3 | 0.106           | 0.131           | 0.61 | 0.341    |

I = Moment of Inertia    S = Section Modulus    r = Radius of Gyration



| Span or Unbraced Height | Static Beam Load (X-X Axis) |                            |                            |          |          |                   | Max. Allowable Load at Slot Face | Column Loading Data              |        |       |       | Unbraced Length Factor |
|-------------------------|-----------------------------|----------------------------|----------------------------|----------|----------|-------------------|----------------------------------|----------------------------------|--------|-------|-------|------------------------|
|                         | Max Allowable Uniform Load  | Deflection at Uniform Load | Uniform Load at Deflection |          |          |                   |                                  | Max. Column Load Applied at C.G. |        |       |       |                        |
|                         |                             |                            | Span/180                   | Span/240 | Span/360 | Weight of Channel |                                  | k=0.65                           | k=0.80 | k=1.0 | k=1.2 |                        |
| in                      | lbs                         | in                         | lbs                        | lbs      | lbs      | lbs               | lbs                              | lbs                              | lbs    | lbs   | lbs   |                        |
| 24                      | 450                         | 0.11                       | 450                        | 410      | 280      | 2.1               | 1,830                            | 5,520                            | 5,110  | 4,590 | 4,120 | 1.00                   |
| 36                      | 300                         | 0.24                       | 250                        | 180      | 120      | 3.1               | 1,690                            | 4,650                            | 4,120  | 3,530 | 3,050 | 1.00                   |
| 48                      | 220                         | 0.42                       | 140                        | 100      | 70       | 4.1               | 1,530                            | 3,910                            | 3,360  | 2,770 | 2,270 | 1.00                   |
| 60                      | 180                         | 0.67                       | 90                         | 70       | 40       | 5.2               | 1,410                            | 3,320                            | 2,770  | **    | **    | 1.00                   |
| 72                      | 150                         | 0.96                       | 60                         | 50       | 30       | 6.2               | 1,206                            | 2,830                            | 2,270  | **    | **    | 0.99                   |
| 84                      | 120                         | 1.22                       | 50                         | 30       | 20       | 7.2               | **                               | 2,410                            | **     | **    | **    | 0.96                   |
| 96                      | 110                         | 1.67                       | 30                         | 30       | 20       | 8.2               | **                               | **                               | **     | **    | **    | 0.92                   |
| 108                     | 100                         | 2.16                       | 30                         | 20       | 10       | 9.3               | **                               | **                               | **     | **    | **    | 0.88                   |
| 120                     | 90                          | 2.67                       | 20                         | 20       | NR       | 10.3              | **                               | **                               | **     | **    | **    | 0.84                   |
| 144                     | 70                          | 3.59                       | 20                         | NR       | NR       | 12.4              | **                               | **                               | **     | **    | **    | 0.75                   |
| 168                     | 60                          | 4.88                       | NR                         | NR       | NR       | 14.4              | **                               | **                               | **     | **    | **    | 0.67                   |
| 192                     | 50                          | 6.08                       | NR                         | NR       | NR       | 16.5              | **                               | **                               | **     | **    | **    | 0.58                   |
| 216                     | 50                          | 8.65                       | NR                         | NR       | NR       | 18.5              | **                               | **                               | **     | **    | **    | 0.49                   |
| 240                     | 40                          | 9.49                       | NR                         | NR       | NR       | 20.6              | **                               | **                               | **     | **    | **    | 0.43                   |

NR indicates not recommended | \* indicates uniform load limited by weld shear | \*\* indicates KL/r>200

### Notes:

- The beam weight must be subtracted from the above capacities to arrive at the net beam capacity.
- Allowable beam loads are based on a uniformly loaded, simply supported beam. For capacities of a beam loaded at midspan at a single point, multiply the beam capacity by 50% and deflection by 80%.
- The above chart shows beam capacities for strut without holes. For strut with holes, multiply by the following:
  - OS by 88%
  - OS3 by 90%
  - RS (9/16 holes) by 88%
  - KO by 82%
- Refer to the latest Haydon Engineering Catalog for reduction factors for unbraced lengths, or contact us at [engineering@haydoncorp.com](mailto:engineering@haydoncorp.com) or 1-800-242-9366.

| PROJECT INFORMATION                        |            |        |          |
|--------------------------------------------|------------|--------|----------|
| Project:                                   |            | Notes: |          |
| Address:                                   |            |        |          |
| Contractor:                                |            |        |          |
| Engineer:                                  |            |        |          |
| Date:                                      |            |        |          |
| APPROVAL                                   |            |        |          |
| <input type="checkbox"/> Approved          | Signature: |        | Remarks: |
| <input type="checkbox"/> Approved as Noted |            |        |          |
| <input type="checkbox"/> Not Approved      |            |        |          |