



# METAL FRAMING CHANNEL

## Cold Formed Strut

19449 Progress Dr. • Strongsville • OH • 44149 • PH: 440-878-1199

### ES5002T3 STANDARD, ES5002T3EH SLOTTED

1-5/8" x 1-5/8"

14 Gauge

Part No.: ES5002T3 Weight: 197lbs /100 Ft.

Part No.: ES5002T3EH Weight: 174lbs /100 Ft.

ORDER BY: Part Number, Finish, Length

Material: ASTM A-653 LOW CARBON STEEL

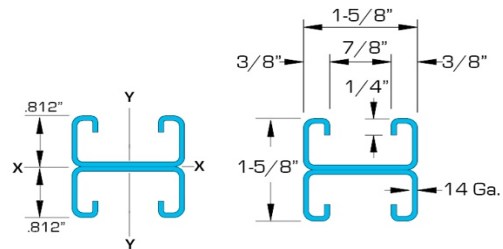
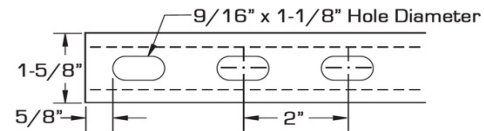
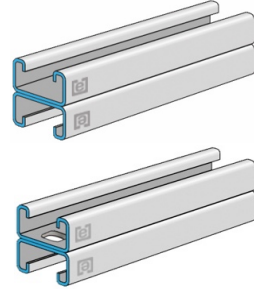
Finish: PL - Plain

PG90 - Pre-Galvanized Grade 90

PG60 - Pre-Galvanized Grade 60

HG - Hot Dipped Galvanized

Length : 10'  
(feet) 20'



ELEMENTS OF SECTION - ES5002T3 & ES5002T3EH

| Area of Section | X-X Axis                               |                                      |                           | Y-Y Axis                               |                                      |                           |
|-----------------|--|--------------------------------------|---------------------------|--|--------------------------------------|---------------------------|
|                 | Moment of Inertia (Inch <sup>4</sup> ) | Section Modulus (Inch <sup>3</sup> ) | Radius of Gyration (Inch) | Moment of Inertia (Inch <sup>4</sup> ) | Section Modulus (Inch <sup>3</sup> ) | Radius of Gyration (Inch) |
| 0.579           | 0.117                                  | 0.143                                | 0.449                     | 0.214                                  | 0.264                                | 0.608                     |

BEAM LOADING ES5002T3 & ES5002T3EH

| Span (inch) | Lateral Bracing Load Reduction Factors | Maximum Allowable Uniform Load (lbs) | Deflection at Uniform Load (lbs) | Uniform Loading Deflection |                |                |
|-------------|--|--------------------------------------|----------------------------------|----------------------------|----------------|----------------|
|             |  |                                      |                                  | Span/180 (lbs)             | Span/240 (lbs) | Span/360 (lbs) |
| 24          | 1.00                                   | 1,090 *                              | 0.06                             | 1,090 *                    | 1,090 *        | 1,090 *        |
| 36          | 1.00                                   | 800                                  | 0.14                             | 800                        | 800            | 570            |
| 48          | 1.00                                   | 600                                  | 0.25                             | 600                        | 480            | 320            |
| 60          | 0.96                                   | 480                                  | 0.39                             | 410                        | 310            | 200            |
| 72          | 0.92                                   | 400                                  | 0.57                             | 280                        | 210            | 140            |
| 84          | 0.89                                   | 340                                  | 0.76                             | 210                        | 160            | 100            |
| 96          | 0.85                                   | 300                                  | 1.00                             | 160                        | 120            | 80             |
| 108         | 0.81                                   | 270                                  | 1.29                             | 130                        | 90             | 60             |
| 120         | 0.78                                   | 240                                  | 1.57                             | 100                        | 80             | 50             |

\*Load limited by spot weld shear

† Bearing load may govern capacity.

For concentrated load at center of span, divide uniform load by 2 and multiply corresponding deflection by 0.8.

This load table is based on a solid channel section.

Loads include weight of channel, which must be deducted.

Loads must be multiplied by the applicable unbraced factor located in the blue column in the chart above.

For Pierced Channels, reduce beam load values as follows: ES5002T3EH 15%

COLUMN LOADING ES5002T3 & ES50002T3EH

| Unbraced Height (inches) | Maximum Allowable Load at Slot Face (lbs) | Maximum Column Load Applied at C. G. |              |             |             |
|--------------------------|---|--------------------------------------|--------------|-------------|-------------|
|                          |   | K=0.65 (lbs)                         | K=0.80 (lbs) | K=1.0 (lbs) | K=1.2 (lbs) |
| 24                       | 3,240                                     | 12,370                               | 11,950       | 11,370      | 10,540      |
| 36                       | 3,120                                     | 11,470                               | 10,540       | 9,160       | 7,720       |
| 48                       | 2,940                                     | 10,090                               | 8,680        | 6,770       | 4,980       |
| 60                       | 2,680                                     | 8,560                                | 6,770        | 4,590       | 3,190       |
| 72                       | 2,310                                     | 7,010                                | 4,980        | 3,190       | 2,220       |
| 84                       | 1,950                                     | 5,530                                | 3,660        | 2,340       | **          |
| 96                       | 1,650                                     | 4,250                                | 2,800        | **          | **          |
| 108                      | 1,410                                     | 3,360                                | 2,220        | **          | **          |

\*\* KL / r > 200

Column loads are for allowable axial loads and must be reduced for eccentric loading.