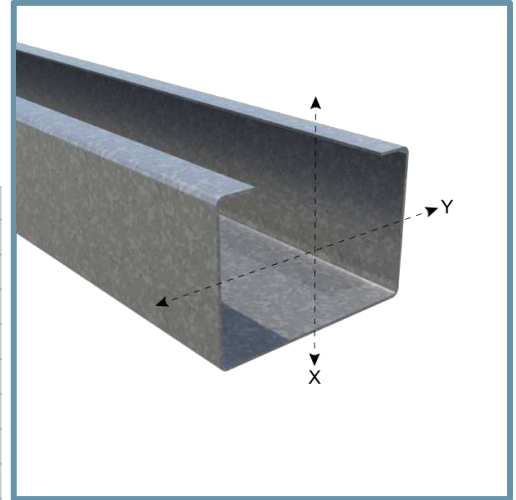


## Redheader Lite 250RHL250-33 (33ksi, CP60) - As Header

### 2-1/2" Header stud with 2-1/2" flange for interior openings - Unpunched

#### Geometric Properties

|                                  |                                    |  |
|----------------------------------|------------------------------------|--|
| <b>Web depth:</b> 2.500 in       | <b>Flange width:</b> 2.500 in      | <b>Return lip:</b> 0.625 in            |
| <b>Thickness:</b> 33mils (20ga)  | <b>Design Thickness:</b> 0.0346 in | <b>Min. steel thickness:</b> 0.0329 in |
| <b>Yield strength, Fy:</b> 33ksi | <b>Coating:</b> CP60               |  |



| Gross Section Properties of Full Section, Strong Axis                    |                       |
|--|-----------------------|
| Cross sectional area (A)   | 0.292 in <sup>2</sup> |
| Member weight per foot of length   | 0.99 lb/ft            |
| Moment of inertia (Ix)   | 0.331 in <sup>4</sup> |
| Section Modulus (Sx)   | 0.265in <sup>3</sup>  |
| Radius of gyration (Rx)  | 1.065 in              |
| Moment of inertia (Iy)   | 0.262 in <sup>4</sup> |
| Section modulus (Sy)   | 0.245 <sup>3</sup>    |
| Gross radius of gyration (Ry)  | 0.946 in              |
| Effective Section Properties   |                       |
| Cross sectional area (Ae)  | 0.217 in <sup>2</sup> |
| Moment of Inertia about x-axis (Ixe)                                     | 0.315 in <sup>4</sup> |
| Moment of Inertia about y-axis (Iye)                                     | 0.262 in <sup>4</sup> |
| Section Modulus about x-axis (Sxe)                                       | 0.214 in <sup>3</sup> |
| Section Modulus about y-axis (Sye)                                       | 0.176 in <sup>3</sup> |
| Allowable local moment capacity about x-axis (Max-local)                 | 4.22 (in-k)           |
| Allowable local moment capacity about y-axis (May-local)                 | 3.48 (in-k)           |
| Allowable distortional moment capacity about x-axis (Max-dist)           | 4.44 (in-k)           |
| Allowable distortional moment capacity about y-axis (May-dist)           | 3.06 (in-k)           |
| Shear strength capacity of section about x-axis (Vax)                    | 975 lbs               |
| Shear strength capacity of section about y-axis (Vay)                    | 772 lbs               |
| Torsional Properties   |                       |
| St. Venant torsional constant (J x 1000)                                 | 0.117 in <sup>4</sup> |
| Warping constant (Cw)  | 0.502 in <sup>6</sup> |
| Distance from shear center to the centroid along the principal axis (Xo) | -2.416 in             |
| Distance from shear center to web centerline (m)                         | 1.366 in              |
| Radii of gyration (Ro)   | 2.807 in              |
| Torsional flexural constant (Beta)                                       | 0.258                 |

- Section properties are based on using AIS S100-16/S2-20.
- Moment and Shear capacities about Y-axis listed in unperforated effective section can be used for perforated effective section properties.
- Axial load capacities are based on fully-brace condition.
- **Flange-Width to thickness ration exceeds 60.**

#### Code Approvals & Performance Standards

- [AISI S100-16 \(2020\) w/S2-20](#) North American Specification for the Design of Cold-Formed Steel Structural Members
- [AISI S240-20](#) North American Standard for Cold-Formed Steel Structural Framing
  - (Compliant to ASTM C955, but IBC replaced with AISI S200 in IBC 2015, AISI S240 in IBC 2018)
  - Section A3 Material - Chemical & mechanical requirements (Referencing ASTM A1003/A1003M)
  - Section A4 Corrosion Protection (Referencing ASTM A653/A653M)
  - Section C Installation - (Referencing ASTM C1007)
- [SDS For ASTM A1003 Steel Framing Products](#) For Interior Framing, Exterior Framing and Clips/Accessories

#### Features:

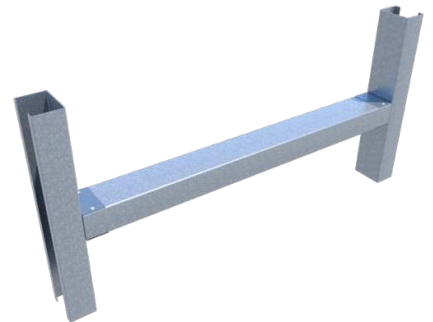
- Replaces lay-in and boxed headers.
- Reduces material pieces, weight & screws.
- Reduces installation time.

#### Header Brackets:

RedHeader Lite requires the use of the RHLC Header Bracket or EasyClip S-Series clip. Refer to [RedHeader Lite Technical Data](#) to determine the applicable clip for your condition. All headers brackets require the RedHeader Lite to be installed leg up.

#### Ordering information:

When using the RHLC clip, header lengths should be ordered 1/2" shorter to fit inside RHLC Header Brackets (Header length = inside of jamb to inside of jamb - 1/2").



## RedHeader Lite Jamb Stud 250RHL250-33 (33ksi, CP60) - As Jamb

2-1/2" Jamb stud with 2-1/2" for interior openings - Unpunched

### Geometric Properties

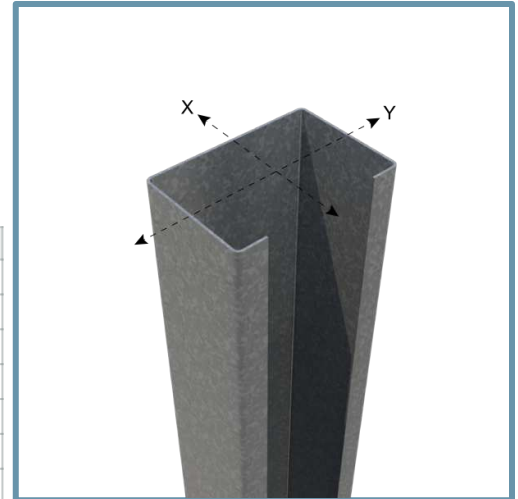
**Web depth:** 2.500 in      **Flange width:** 2.500 in      **Return lip:** 0.625 in  
**Thickness:** 33mils (20ga)      **Design Thickness:** 0.0346 in      **Min. steel thickness:** 0.0329 in  
**Yield strength, F<sub>y</sub>:** 33ksi      **Coating:** CP60

| Gross Section Properties of Full Section, Strong Axis              |                       |
|--|-----------------------|
| Cross sectional area (A)   | 0.292 in <sup>2</sup> |
| Member weight per foot of length                                   | 0.99 lb/ft            |
| Moment of inertia (I <sub>x</sub> )                                | 0.331 in <sup>4</sup> |
| Section Modulus (S <sub>x</sub> )                                  | 0.265in <sup>3</sup>  |
| Radius of gyration (R <sub>x</sub> )                               | 1.065 in              |
| Moment of inertia (I <sub>y</sub> )                                | 0.262 in <sup>4</sup> |
| Section modulus (S <sub>y</sub> )                                  | 0.245 <sup>3</sup>    |
| Gross radius of gyration (R <sub>y</sub> )                         | 0.946 in              |
| Effective Section Properties                                       |                       |
| Cross sectional area (A <sub>e</sub> )                             | 0.198 in <sup>2</sup> |
| Moment of Inertia about x-axis (I <sub>xe</sub> )                  | 0.315 in <sup>4</sup> |
| Section Modulus about x-axis (S <sub>xe</sub> )                    | 0.214 in <sup>3</sup> |
| Allowable local moment capacity about x-axis (Max-local)           | 4.22 (in-k)           |
| Allowable distortional moment capacity about x-axis (Max-dist)     | 4.30 (in-k)           |
| Shear strength capacity of section about x-axis (V <sub>ax</sub> ) | 399 lbs               |
| Shear strength capacity of section about y-axis (V <sub>ay</sub> ) | lbs                   |
| Torsional Properties   |                       |
| St. Venant torsional constant (J x 1000)                           | 0.117 in <sup>4</sup> |
| Warping constant (C <sub>w</sub> )                                 | 0.502 in <sup>6</sup> |
| Distance from shear center to web centerline (m)                   | 1.366 in              |
| Radius of gyration (R <sub>o</sub> )                               | 2.807 in              |
| Torsional flexural constant (Beta)                                 | 0.258                 |
| Maximum unbraced length (L <sub>u</sub> )                          | 66.5 in               |
| Axial Load   |                       |
| Allowable axial load for section                                   | 3.6 kips              |

- Section properties are based on using AIS S100-16/S2-20.
- Effective section properties are based on a perforated profile.
- Moment and Shear capacities about Y-axis listed in unperforated effective section can be used for perforated effective section properties.
- Axial load capacities are based on fully-brace condition.
- **Flange-Width to thickness ratio exceeds 60.**

### Code Approvals & Performance Standards

- [AISI S100-16 \(2020\) w/S2-20](#) North American Specification for the Design of Cold-Formed Steel Structural Members
- [AISI S240-20](#) North American Standard for Cold-Formed Steel Structural Framing
  - (Compliant to ASTM C955, but IBC replaced with AISI S200 in IBC 2015, AISI S240 in IBC 2018)
  - Section A3 Material - Chemical & mechanical requirements (Referencing ASTM A1003/A1003M)
  - Section A4 Corrosion Protection (Referencing ASTM A653/A653M)
  - Section C Installation - (Referencing ASTM C1007)
- [SDS For ASTM A1003 Steel Framing Products](#) For Interior Framing, Exterior Framing and Clips/Accessories



#### Features:

- Replaces built-up jambs.
- Reduces material pieces, weight & screws.
- Reduces installation time.

