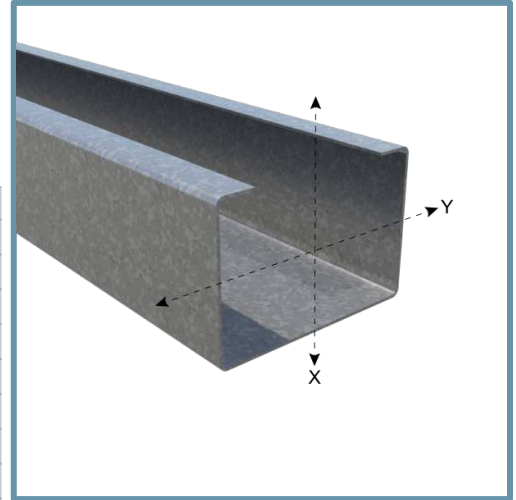


## Redheader Lite 400RHL250-43 (33ksi, CP60) - As Header

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

#### Geometric Properties

<b>Web depth:</b> 4.000 in	<b>Flange width:</b> 2.500 in	<b>Return lip:</b> 0.625 in
<b>Thickness:</b> 43mils (18ga)	<b>Design Thickness:</b> 0.0451 in	<b>Min. steel thickness:</b> 0.0428 in
<b>Yield strength, Fy:</b> 33ksi	<b>Coating:</b> CP60	



Gross Section Properties of Full Section, Strong Axis	
Cross sectional area (A)	0.447 in <sup>2</sup>
Member weight per foot of length	1.52 lb/ft
Moment of inertia (Ix)	1.224 in <sup>4</sup>
Section Modulus (Sx)	0.612in <sup>3</sup>
Radius of gyration (Rx)	1.655 in
Moment of inertia (Iy)	0.399 in <sup>4</sup>
Section modulus (Sy)	0.438 <sup>3</sup>
Gross radius of gyration (Ry)	0.945 in
Effective Section Properties	
Cross sectional area (Ae)	0.327 in <sup>2</sup>
Moment of Inertia about x-axis (Ixe)	1.224 in <sup>4</sup>
Moment of Inertia about y-axis (Iye)	0.399 in <sup>4</sup>
Section Modulus about x-axis (Sxe)	0.539 in <sup>3</sup>
Section Modulus about y-axis (Sye)	0.251 in <sup>3</sup>
Allowable local moment capacity about x-axis (Max-local)	10.66 (in-k)
Allowable local moment capacity about y-axis (May-local)	4.95 (in-k)
Allowable distortional moment capacity about x-axis (Max-dist)	10.42 (in-k)
Allowable distortional moment capacity about y-axis (May-dist)	4.27 (in-k)
Shear strength capacity of section about x-axis (Vax)	1740 lbs
Shear strength capacity of section about y-axis (Vay)	1713 lbs
Torsional Properties	
St. Venant torsional constant (J x 1000)	0.303 in <sup>4</sup>
Warping constant (Cw)	1.486 in <sup>6</sup>
Distance from shear center to the centroid along the principal axis (Xo)	-2.139 in
Distance from shear center to web centerline (m)	1.252 in
Radii of gyration (Ro)	2.869 in
Torsional flexural constant (Beta)	0.443

- 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.

#### 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:

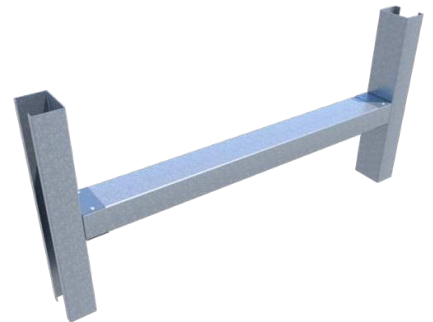
- Replaces lay-in and boxed headers.
- Reduces material pieces, weight & screws.
- Reduces installation time.

#### 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 400RHL250-43 (33ksi, CP60) - As Jamb

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

#### Geometric Properties

**Web depth:** 4.000 in      **Flange width:** 2.500 in      **Return lip:** 0.625 in  
**Thickness:** 43mils (18ga)      **Design Thickness:** 0.0451 in      **Min. steel thickness:** 0.0428 in  
**Yield strength, F<sub>y</sub>:** 33ksi      **Coating:** CP60

Gross Section Properties of Full Section, Strong Axis	
Cross sectional area (A)	0.447 in <sup>2</sup>
Member weight per foot of length	1.52 lb/ft
Moment of inertia (I <sub>x</sub> )	1.224 in <sup>4</sup>
Section Modulus (S <sub>x</sub> )	0.612in <sup>3</sup>
Radius of gyration (R <sub>x</sub> )	1.655 in
Moment of inertia (I <sub>y</sub> )	0.399 in <sup>4</sup>
Section modulus (S <sub>y</sub> )	0.438 <sup>3</sup>
Gross radius of gyration (R <sub>y</sub> )	0.945 in
Effective Section Properties	
Cross sectional area (A <sub>e</sub> )	0.292 in <sup>2</sup>
Moment of Inertia about x-axis (I <sub>xe</sub> )	1.224 in <sup>4</sup>
Section Modulus about x-axis (S <sub>xe</sub> )	0.503 in <sup>3</sup>
Allowable local moment capacity about x-axis (Max-local)	9.93 (in-k)
Allowable distortional moment capacity about x-axis (Max-dist)	10.09 (in-k)
Shear strength capacity of section about x-axis (V <sub>ax</sub> )	810 lbs
Shear strength capacity of section about y-axis (V <sub>ay</sub> )	lbs
Torsional Properties	
St. Venant torsional constant (J x 1000)	0.303 in <sup>4</sup>
Warping constant (C <sub>w</sub> )	1.486 in <sup>6</sup>
Distance from shear center to web centerline (m)	1.252 in
Radii of gyration (R <sub>o</sub> )	2.869 in
Torsional flexural constant (Beta)	0.443
Maximum unbraced length (L <sub>u</sub> )	63.7 in
Axial Load	
Allowable axial load for section	5.4 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.

#### Code Approvals & Performance Standards

- [AIS S100-16 \(2020\) w/S2-20](#) North American Specification for the Design of Cold-Formed Steel Structural Members
- [AIS 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.

