

05.40.00 (Cold-Formed Metal Framing)



## Redheader PRO 362PRO300-33 (33ksi, CP60) - As Header

3-5/8" Header stud with 3" flange for structural openings - Unpunched

### **Geometric Properties**

Web depth: 3.625 in Flange width: 3.000 in Return lip: 1.000 in

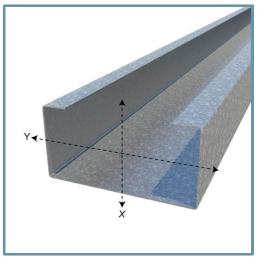
Thickness: 33mils (20ga) Design Thickness: 0.0346 in Min. steel thickness: 0.0329 in

Yield strength, Fy: 33ksi Coating: CP60

Gross Section Properties of Full Section, Strong Axis	
Cross sectional area (A)	0.392 in <sup>2</sup>
Member weight per foot of length	1.33 lb/ft
Moment of inertia (lx)	0.898 in <sup>4</sup>
Section Modulus (Sx)	0.495in <sup>3</sup>
Radius of gyration (Rx)	1.514 in
Moment of inertia (ly)	0.543 in <sup>4</sup>
Section modulus (Sy)	0.317 <sup>3</sup>
Gross radius of gyration (Ry)	1.177 in
Effective Section Properties	<u>'</u>
Cross sectional area (Ae)	0.225 in <sup>2</sup>
Moment of Inertia about x-axis (Ixe)	0.790 in <sup>4</sup>
Moment of Inertia about y-axis (lye)	0.496 in <sup>4</sup>
Section Modulus about x-axis (Sxe)	0.357 in <sup>3</sup>
Section Modulus about y-axis (Sye)	0.257 in <sup>3</sup>
Allowable local moment capacity about x-axis (Max-local)	7.06 (in-k)
Allowable local moment capacity about y-axis (May-local)	5.09 (in-k)
Allowable distortional moment capacity about x-axis (Max-dist)	8.07 (in-k)
Allowable distortional moment capacity about y-axis (May-dist)	5.17 (in-k)
Shear strength capacity of section about x-axis (Vax)	1024 lbs
Shear strength capacity of section about y-axis (Vay)	638 lbs
Torsional Properties	
St. Venant torsional constant (J x 1000)	0.156 in <sup>4</sup>
Warping constant (Cw)	2.437 in <sup>6</sup>
Distance from shear center to the centroid along the principal axis (Xo)	-2.979 in
Distance from shear center to web centerline (m)	1.709 in
Radii of gyration (Ro)	3.543 in
Torsional flexural constant (Beta)	0.293

# **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
  - o (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)
- IBC 2021 International Building Code
- IAPMO ER-0723 Evaluation Report for HDS and RedHeader Pro
- 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.

### **Ordering Information:**

Header lengths should be ordered 1/2" shorter to fit inside HDSC Header Brackets (Header length = inside of jamb to inside of jamb - 1/2")

### **HDSC Header Bracket profile data:**

See HDSC Header Bracket submittal sheet for allowable clip loads. All headers require the attachment of the HDSC Clip at each end with headers installed leg up.



05.40.00 (Cold-Formed Metal Framing)



## RedHeader PRO Jamb Stud 362PRO300-33 (33ksi, CP60) - As Jamb

3-5/8" Jamb stud with 3" for structural openings - Unpunched

### **Geometric Properties**

Web depth: 3.625 in Flange width: 3.000 in Return lip: 1.000 in

Thickness: 33mils (20ga) Design Thickness: 0.0346 in Min. steel thickness: 0.0329 in

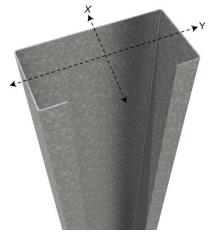
Yield strength, Fy: 33ksi Coating: CP60

Gross Section Properties of Full Section	, Strong Axis
Cross sectional area (A)	0.392 in <sup>2</sup>
Member weight per foot of length	1.33 lb/ft
Moment of inertia (Ix)	0.898 in <sup>4</sup>
Section Modulus (Sx)	0.495in <sup>3</sup>
Radius of gyration (Rx)	1.514 in
Moment of inertia (ly)	0.543 in <sup>4</sup>
Section modulus (Sy)	0.317 <sup>3</sup>
Gross radius of gyration (Ry)	1.177 in
Effective Section Properties	
Cross sectional area (Ae)	0.204 in <sup>2</sup>
Moment of Inertia about x-axis (lxe)	0.791 in <sup>4</sup>
Section Modulus about x-axis (Sxe)	0.324 in <sup>3</sup>
Allowable local moment capacity about x-axis (Max-local)	6.39 (in-k)
Allowable distortional moment capacity about x-axis (Max-dist)	7.92 (in-k)
Shear strength capacity of section about x-axis (Vax)	521 lbs
Shear strength capacity of section about y-axis (Vay)	638 lbs
Torsional Properties	
St. Venant torsional constant (J x 1000)	0.156 in <sup>4</sup>
Warping constant (Cw)	2.437 in <sup>6</sup>
Distance from shear center to web centerline (m)	1.709 in
Radii of gyration (Ro)	3.543 in
Torsional flexural constant (Beta)	0.293
Maximum unbraced length (Lu)	86.3 in
Axial Load	
Allowable axial load for section	3.7 kips

- Axial load capacities are based on full-braced condition (structural elements that are installed to provide full restraint or support, i.e. KL=0)
- Section properties are based on a punched jamb stud.

# **Code Approvals & Performance Standards**

- AISI S100-16 (2020) w/S2-20 North American Specification for the Design of Cold-Formed Steel
- AISI S240-20 North American Standard for Cold-Formed Steel Structural Framing
  - o (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)
- IBC 2021 International Building Code
- IAPMO ER-0723 Evaluation Report for HDS and RedHeader Pro
- 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.

