HDS® 600HDS300-54 (50ksi, CP60) - As Header

6" Heavy duty stud with 3" flange for structural openings - Unpunched

Geometric Properties

Web depth: 6.000 in
Flange width (A): 3.000 in
Thickness: 54mils (16ga)

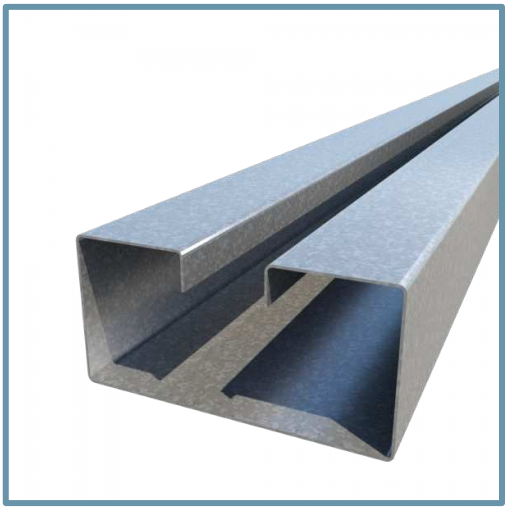
Yield strength, Fy: 50ksi
Return lip (B): 2.250 in
Design Thickness: 0.0566 in

Coating: CP60
Stiffening lip (C): 0.750
Min. steel thickness: 0.0538 in

Gross Section Properties of Full Section, Strong Axis	
Cross sectional area (A)	0.983 in^2
Member weight per foot of length	3.34 lb/ft
Moment of inertia (Ix)	4.851 in^4
Section Modulus (Sx)	1.617in^3
Radius of gyration (Rx)	2.222 in
Moment of inerita (Iy)	1.571 in^4
Section modulus (Sy)	1.048^3
Radius of gyration (Ry)	1.265 in
Effective Section Properties	
Cross sectional area (Ae)	0.395 in^2
Moment of Inertia about x-axis (Ixe)	4.753 in^4
Moment of Inertia about y-axis (Iye)	1.573 in^4
Section Modulus about x-axis (Sxe)	1.379 in^3
Section Modulus about y-axis (Sye)	1.048 in^3
Allowable local moment capacity about x-axis (Max-local)	41.30 (in-k)
Allowable local moment capacity about y-axis (May-local)	31.37 (in-k)
Allowable distortional moment capacity about x-axis (Max-dist)	47.66 (in-k)
Allowable distortional moment capacity about y-axis (May-dist)	30.29 (in-k)
Shear strength capacity of section about x-axis (Vax)	2822 lbs
Shear strength capacity of section about y-axis (Vay)	5767 lbs
Torsional Properties	
St. Venant torsional constant (J x 1000)	1.052 in^4
Warping constant (Cw)	38.082 in^6
Distance from shear center to the centroid along the principal axis (Xo)	-3.630 in
Distance from shear center to web centerline (m)	1.534 in
Radii of gyration (Ro)	4.440 in
Torsional flexural constant (Beta)	0.332

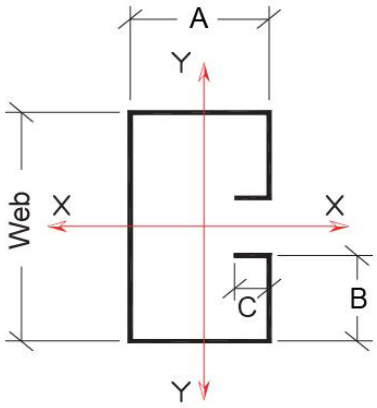
Code Approvals & Performance Standards

- 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)
- IBC 2024 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")

Sustainability Credits For more details and LEED letters contact Technical Services at 888-437-3244 or visit clarkdietrich.com/LEED.

- **LEED v4.1 MR Credit:** Environmental Product Declarations: EPD (1 point) - Sourcing of Raw Materials (up to 2 points) - Material Ingredients (1 point) - Construction and Demolition Waste Management (up to 2 points)
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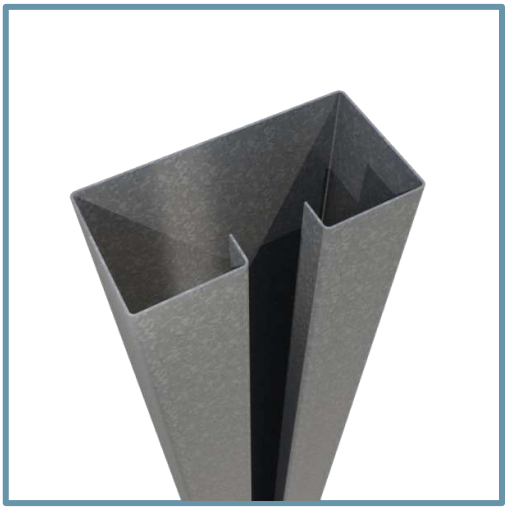

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Gross radius of gyration (Ry)	1.265 in
Effective Section Properties	
Cross sectional area (Ae)	0.395 in^2
Moment of Inertia about x-axis (Ixe)	4.753 in^4
Section Modulus about x-axis (Sxe)	1.225 in^3
Allowable local moment capacity about x-axis (Max-local)	36.68 (in-k)
Allowable distortional moment capacity about x-axis (Max-dist)	47.43 (in-k)
Shear strength capacity of section about x-axis (Vax)	1947 lbs
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Distance from shear center to web centerline (m)	1.534 in
Radii of gyration (Ro)	4.440 in
Torsional flexural constant (Beta)	0.332
Maximum unbraced length (Lu)	100.4 in
Axial Load	
Allowable axial load for section	11.0 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.

Features:

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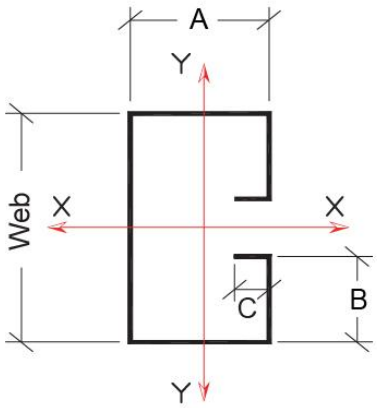

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