Product Data Sheet

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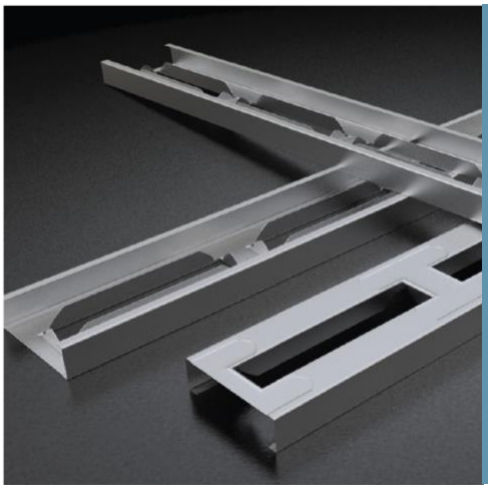
Product category: R-stud 54 mil Load Bearing Stud
Product name: 600RS200-54 50 Ksi G90
6" x 2" R-stud

Coating: G90
Color coding: Orange



Web openings (not punch-outs) formed from web every 12 in. with Stamping at bridge every 12 in.

Geometric Properties

Web depth	6.000 in	Weight	1.991 lb/ft
Flange width	2.00 in	Web opening width	2.0 in
Stiffening lip	0.500 in	Web opening length	9-13/16 in
Design thickness	0.0566 in	Minimum thickness	0.0538 in
Yield stress, Fy	50 Ksi		

Gross Section Properties of Full Section, Strong Axis*

Cross sectional area (A)	0.59731 in^2
Moment of inertia (Ix)	3.3771 in^4
Radius of gyration (Rx, r1)	2.3778 in
Moment of inertia (Iy)	0.2870 in^4
Radius of gyration (Ry, r2)	0.6931 in
Max bending moment Ix (Maxo)	35.775 k-in
Max bending moment Iy (Mayo)	7.829 k-in
Allowable shear force in web (Vax)	4.399 k

Tension/Compression Properties*

Warping constant (Cw)	0.094432 in^6
Distance from shear center to neutral axis (Xo)	-0.9823 in
Radii of gyration (ro)	2.6644 in
Torsional flexural constant (Beta)	FEA-in^4
Compression Pao (max)	16.933 k
Tension Tao (Ta)	20.906 k
Unbraced Length (Lu)	Full / Non-braced

Fully Braced Strength (CFS) *CFS result

ASTM & Code Standards:

- ✓ ICC-NTA ESR
- ✓ ICC-ES 4510
- ✓ IBC 2012 Compliant
- ✓ AISI S902-08 & S909-13
- ✓ AISI A370-17 & S100-12
- ✓ ASTM AC46, C645, & C745
- ✓ UL Two Hour Load Bearing Fire
- ✓ US, Canadian, and International Patents Issued

Notes:

- Calculated properties are based on AISI S100-12, North American Specifications for Cold-Formed Steel Structure Members and ICC-ES AC46-2015, Acceptance Criteria for Cold-Formed Steel Framing Members.
- Effective properties herein incorporate the increased strength from cold working of the steel while forming. We only use 50Ksi coils.
- Tabulated gross properties, including torsional properties, are based on the added cross section properties of the web openings. R-studs do not have punch-outs.
- Allowable moment includes cold work of forming.
- Allowable moment is taken as the lowest value based on local or distortional buckling. Distortional buckling strength is based on K-phi=0
- For deflection calculations, use the effective moment of inertia.
- Web openings are every 12 inches and are 9-13/16 inches long with flanges being 0.94 inches tall and corners of the web openings enhanced.

Sustainability: **R-stud** sources its steel coils from American Suppliers, such as US Steel and NUCOR's California Steel Industries for rolling in our manufacturing facilities. Our coils contain approximately 34.2% recycled steel. Approximately 19.8% is Post-consumer content, while Pre-consumer content is approximately 14.4%. R-studs are listed as "Red List Free" by the International Living Future Institute. **R-stud can provide a significant reduction of Embodied Carbon over comparable standard steel studs. Hot Box Testing shows R-stud has 40% LESS thermal transfer than SFIA or SSMA steel studs, reducing overall Operational Carbon for exterior wall assemblies.** Steel is one of the most sustainable building materials in the world. It is recycled content, recyclable, durable, safe, zinc-coated, dimensionally stable and strong, as well as not susceptible to rot, termites, or mold.

Supporting Documentation

Project Information	Contractor Information	Architect Information
Name:	Name:	Name:
Address:	Contact:	Contact:
	Phone:	Phone:
	Fax:	Fax:

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- 2016 AISI - ASD, LRFD, and LSD
- 2012 AISI - ASD, LRFD, and LSD
- 2010 AISI - ASD, LRFD, and LSD
- 2007 AISI - ASD, LRFD, and LSD
- 2004 AISI - ASD, LRFD, and LSD
- 2001 AISI - ASD, LRFD, and LSD
- 1999 AISI - ASD and LRFD & 2002 ASCE – ASD and LRFD (stainless steel)

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Address:	Contact:	Contact:
	Phone:	Phone:
	Fax:	Fax: