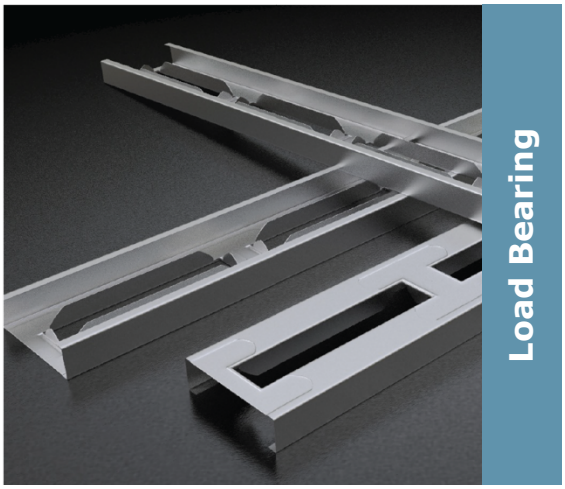
R-stud
STEEL FRAMING STUDS

Product Data Sheet

www.rstud.com
800-971-8095
info@Rstud.com

Product category: R-stud 33 mil Load Bearing Stud
Product name: 400RS162-33 50Ksi G60
4.00" x 1-5/8" R-stud

Coating: G60
Color coding: White



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

Geometric Properties

Web depth	4.000 in	Weight	0.90299 lb/ft
Flange width	1.625 in	Web opening width	9-13/16 in
Stiffening lip	0.310 in	Web opening length	2-3/16 in
Design thickness	0.0346 in	Minimum thickness	0.0330
Yield stress, Fy	50 Ksi		

Gross Section Properties of Full Section, Strong Axis

Cross sectional area (A)	0.26559 in^2
Moment of inertia (Ix)	0.7069 in^4
Radius of gyration (Rx, r1)	1.6314 in]
Moment of inertia (Iy)	0.0779 in^4
Radius of gyration (Ry, r2)	0.5416 in
Max bending moment Ix (Maxo)	9.7756 k-in
Max bending moment Iy (Maxo)	2.7151 k-in
Allowable shear force in web (Vax)	2.1845 k

Tension/Compression Properties

Warping constant (Cw)	0.011635 in^6
Distance from shear center to neutral axis (Xo)	-0.9620-in
Radii of gyration (Ro)	1.9699 in
Torsional flexural constant (Beta)	FEA-in^4
Compression Pao (max)	6.3859-k
Tension Tao (Ta)	9.2955 k
Unbraced Length (Lu)	Full / Non-braced
Fully Braced Strength (CFS)	
*CFS result	

ASTM & Code Standards:

- ✓ NTA-ICC ESR
- ✓ IBC 2012 Compliant
- ✓ AISI S902-08 & S909-13
- ✓ AISI A370-17 & S100-12
- ✓ ASTM E119, E72, E90
- ✓ ASTM AC46, C645, & C745
- ✓ UL 2 Hour Load Bearing Fire
- ✓ U.S. Patent Numbers:
  US7866112
  US7743578
  US8424266

Notes:

- Calculated properties are based on AISI S100-12, North American Specifications for Cold-Formed Steel Structure Members and AISI S909-13, AISI S902-08 and ASTM A370-17 North American Standard for Cold-Formed Steel Framing – Structural 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-stud's 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 opening 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 USS-POSCO in Pittsburg, California for rolling in our manufacturing facility in Donald, Oregon. Our coils contain approximately 34.2% recycled steel. Approximately 19.8% is Post-consumer content, while Pre-consumer content is approximately 14.4%. 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:

- 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, and 2002 ASCE – ASD and LRFD (stainless)

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

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4.00" x 1-5/8 R-Stud

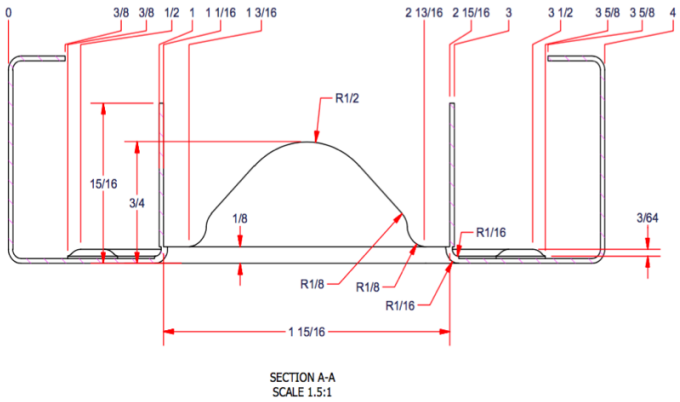
Limiting Wall Heights

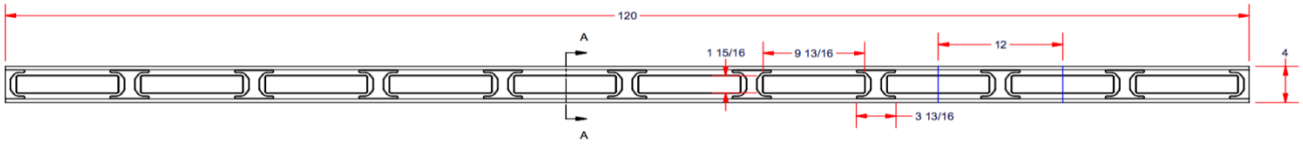
Spacing (inches)	5 psf			7.5 psf			10 psf		
	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
16	26'4"	20'11"	18'3"	23'1"	18'3"	15'11"	20'11"	16'6"	14'6"
24	23'8"	18'9"	15'11"	20'9"	15'11"	13'10"	18'3"	13'11"	12'8"

Table Notes:

- Allowable composite limiting heights were determined from AC46-2012 testing by ICC-NTA Testing.
- The composite limiting heights tables provided above are based on a single layer of Type X gypsum board from the following manufacturers, American, CertainTeed, Georgia Pacific, National, PABCO, and USG.
- They gypsum is to be applied full height in the vertical orientation to each stud flange and installed in accordance with ASTM C754-2004 using a minimum of No. 6 Type S Drywall spaced as listed below:
- Screws spaced a minimum of 12 inches on-center to framing members spaced at 16 or 24 inches on-center.
- Screws spaced a minimum of 12 inches on-center to framing members spaced at 24 inches on-center.
- No fasteners are required for attaching the stud to the track except as detailed in ASTM C754-2008

Profile





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