

Product category: R-stud 30 mil Load Bearing Stud
Product name: 600RS162-30 50 Ksi G60
6" x 1-5/8" R-stud

Coating: G60
Color coding: White

Geometric Properties

Web depth	6.000 in	Weight	0.9984 lb/ft
Flange width	1.625 in	Web opening length	9-13/16 in
Stiffening lip	0.500 in	Web opening width	2-3/16 in
Design thickness	0.030 in	Minimum thickness	0.0296 in
Yield stress, Fy	50 Ksi		

Gross Section Properties of Full Section, Strong Axis*

Cross sectional area (A)	0.29365 in ²
Moment of inertia (Ix)	1.6016 in ⁴
Radius of gyration (Rx, r1)	2.3354 in
Moment of inertia (Iy)	0.0899 in ⁴
Radius of gyration (Ry, r2)	0.5534 in
Max bending moment Ix (Maxo)	13.867 k-in
Max bending moment Iy (Mayo)	2.345 k-in
Allowable shear force in web (Vax)	1.5696 k

Tension/Compression Properties*

Warping constant (Cw)	0.038983 in ⁶
Distance from shear center to neutral axis (Xo)	-0.8892 in
Radii of gyration (Ro)	2.5595 in
Torsional flexural constant (Beta)	FEA-in ⁴
Compression Pao(max)	6.3574 k
Tension Tao (Ta)	9.0823 k
Unbraced Length (Lu)	Full / Non-braced
Fully Braced Strength (CFS) *CFS result	

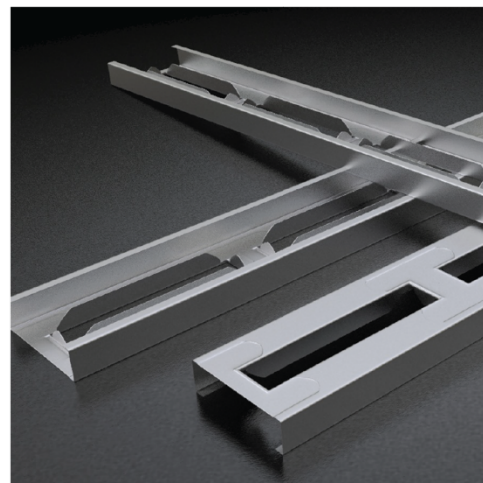
Notes:

- 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- 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.** 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.

Supported 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 & 2002 ASCE - ASD and LRFD (stainless steel)



Load Bearing Stud

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

ASTM & Code Standards:

- ✓ ICC-NTA ESR
- ✓ ICC-ES 4510
- ✓ IBC 2024 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

Project Information Name: Address:	Contractor Information Name: Contact: Phone: Fax:	Architect Information Name: Contact: Phone: Fax:
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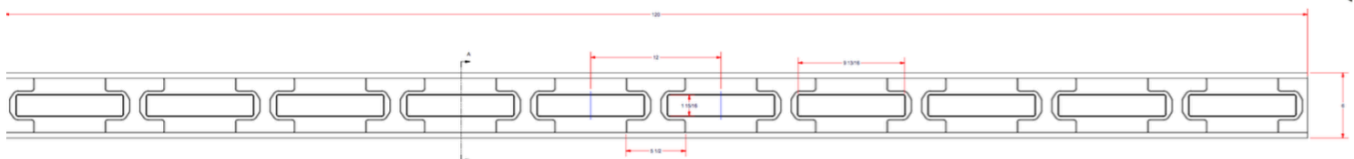
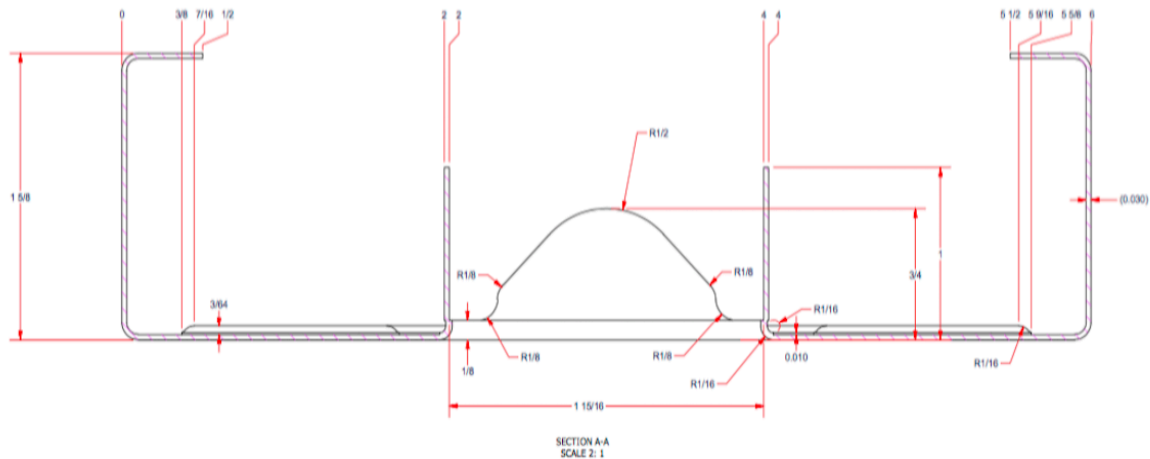
Limiting Wall Heights

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	36'2"	28'7"	25'1"	31'6"	25'1"	21'11"	28'7"	22'9"	19'9"
24	31'7"	24'5"	21'9"	27'6"	21'9"	19'2"	25'1"	19'10"	17'4"

Table Notes:

- Allowable composite limiting heights were determined from AC86-2012 testing by Intertek Testing / Architectural Testing, Inc.
- 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.
- The 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 16 inches on-center to framing members spaced at 12 or 16 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



Project Information

Name:
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Contractor Information

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Architect Information

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