

Product category: R-stud 23 mil drywall stud
Product name: 400RS137-23 50Ksi G60
 4.00" R-stud

Coating: G60
 Color coding: White

Geometric Properties

| | | | |
|------------------|-----------|--------------------|---------------|
| Web depth | 4.00 in | Weight | 0.59615-lb/ft |
| Flange width | 1.375 in | Web opening length | 9-13/16-in |
| Stiffening lip | 0.375 in | Web opening width | 2.0-in |
| Design thickness | 0.0241 in | Minimum thickness | 0.023 in |
| Yield stress, Fy | 50 Ksi | | |

Gross Section Properties of Full Section, Strong Axis

| | |
|------------------------------------|----------------------------|
| Cross sectional area (A) | [0.17534-in ²] |
| Moment of inertia (Ix) | [0.45089-in ⁴] |
| Radius of gyration (Rx, r1) | [1.6036-in] |
| Moment of inertia (Iy) | [0.03790-in ⁴] |
| Radius of gyration (Ry, r2) | [0.4649-in] |
| Max bending moment Ix (Maxo) | [6.2454-k-in] |
| Max bending moment Iy (Maxo) | [1.5142-k-in] |
| Allowable shear force in web (Vax) | [1.2732-k] |

Tension/Compression Properties

| | |
|---|------------------------------|
| Warping constant (Cw) | [0.0076975-in ⁶] |
| Distance from shear center to neutral axis (Xo) | [-0.8977-in] |
| Radii of gyration (Ro) | [1.8956-in] |
| Torsional flexural constant (Beta) | [FEA-in ⁴] |
| Compression Pao(max) | [4.1052-k] |
| Tension Tao (Ta) | [6.1369-k] |
| Unbraced Length (Lu) | [full] |

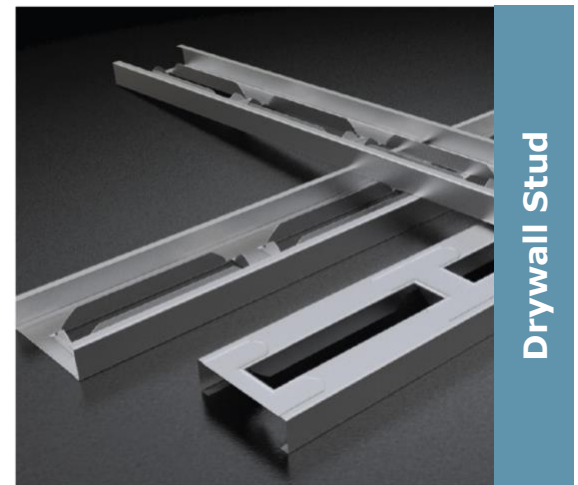
Notes:

- Calculated properties are based on Supported specifications.
- Effective properties herein incorporate the increased strength from cold working of the steel while forming. We only use 50Ksi coils.
- Tabulated properties, including torsional properties, are based on the added cross section properties of the web openings and indents as R-studs do not have punch-outs.
- Maxo Allowable moment includes cold work of forming
- Maxo Allowable moment is taken as the maximum value based on local or distortional buckling.
- For deflection calculations use the moment of inertia.
- Web opening is every 12 inches and are 9-13/16 inches long with flanges opening out of web. Corners of the web openings are enhanced with flared reliefs.

Sustainability- Steel is one of the most sustainable building materials in the world. It is recycled content, recyclable again and again, durable, safe, zinc coated, dimensionally stable and strong, as well as not susceptible to rot, termites, or mold.

Supported specifications:

- 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)



Drywall Stud

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

ASTM & Code Standards:

- ✓ ATI/Intertek CCRR 1073
- ✓ IBC 2024 Compliant
- ✓ AISI S-100 & S220-11
- ✓ ASTM E119, E72, E90
- ✓ ASTM AC86, C645, & C745
- ✓ U.S., Canadian & International Patents Issued

✓

| | | |
|---|--|---|
| <p>Project Information</p> <p>Name: Address:</p> | <p>Contractor Information</p> <p>Name: Contact: Phone: Fax:</p> | <p>Architect Information</p> <p>Name: Contact: Phone: Fax:</p> |
|---|--|---|



Product category: R-stud 23 mil Drywall Stud

Product name: 400RS137-23

4" R-stud

400RS137-23 50Ksi On 16 inch spacing

Composite 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 | 20'7" | 17'11" | 16'4" | 16'3" | 14'2" | 12'11" | 14'3" | 12'6" | 11'4" |

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.
- 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 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.

400RS137-23 50Ksi G60 On 24 inch spacing

| 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 |
| 24 | 17'11" | 15'9" | 14'3" | 14'1" | 12'9" | 11'6" | 12'7" | 10'11" | 9'10" |

| | | |
|---|--|---|
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|---|--|---|



Product Submittal Sheet

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