

## TradeReady® Floor Joist

### 05.40.00 (Cold-Formed Metal Framing)

Product category 8" x 1-3/4" Flange 16ga TradeReady Joist  
 Product name 800TDJ175-54 (50ksi) - Punched Finish: CP60

#### Geometric Properties

Web depth:	8.000 in	Knock Out Shape:	Ellipse	Design thickness:	0.0566 in
Flange width:	1.750 in	Knock Out Height:	4-1/4"	Min. steel thickness:	0.0538 in
Stiffening lip:	0.625 in	Knock Out Width:	7"	Yield stress, Fy:	50ksi
		Small Hole Dia.:	1-11/32"	Ultimate, Fu:	65 ksi

#### Gross Section Properties of Full Section

Cross sectional area (A)	0.698 in <sup>(2)</sup>
Member weight per foot of length	2.284 lbs/ft
Moment of inertia (Ix)	6.131 in <sup>(4)</sup>
Radius of gyration (Rx)	2.963 in
Gross moment of inertia (Iy)	0.258 in <sup>(4)</sup>
Gross radius of gyration (Ry)	0.608 in

#### Net Section Properties (at knockout)

Cross sectional area (A)	0.503 in <sup>(2)</sup>
Moment of inertia (Ix)	5.990 in <sup>(4)</sup>
Radius of gyration (Rx)	3.450 in
Gross moment of inertia (Iy)	0.200 in <sup>(4)</sup>
Gross radius of gyration (Ry)	0.631 in

#### Allowable Capacities

Fully Braced Allowable Moment at Knockout (Ma-kno)	37,689 in-lbs
Fully Braced Allowable Moment at Full Section (Ma-full)	40,991 in-lbs
Allowable Shear at Knockout (Va-kno)	1,440 lbs
Allowable Shear at Full Section (Va-full)	2,091 lbs

#### Torsional Section Properties

Distance between centroid and shear-center (Xo)	-1.074 in
Distance between centroid and web-centerline (X)	0.383 in
St. Venant torsional constant (J*1000)	0.746 (in <sup>4</sup> )
Torsional warping constant (Cw)	3.425 (in <sup>6</sup> )
Radii of gyration (Ro)	3.210 in
Torsional flexural constant (Beta)	0.888

#### Effective Section Properties

Moment of inertia (Ix)	5.982 (in <sup>4</sup> )
Section modulus (Sx)	1.369 (in <sup>3</sup> )

#### ASTM & Code Standards:

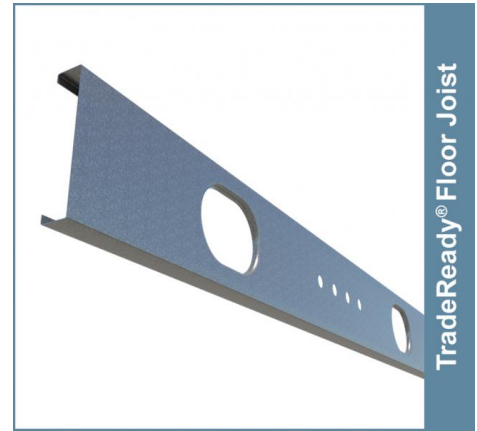
- AISI North American Specification [NASPEC] 2004
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- SDS & Product Certification Information is available at [www.clarkdietrich.com/SupportDocs](http://www.clarkdietrich.com/SupportDocs)
- U.S. Patent Nos. 6,301,854; 6,691,478; 6,418,694; 6,691,487; 6,761,005; 7,240,459
- Canadian Patent No. 2319346, Mexican Patent No. 243294

#### Sustainability Credits:

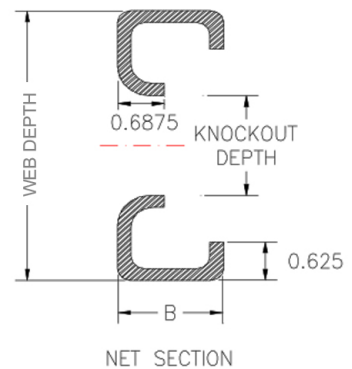
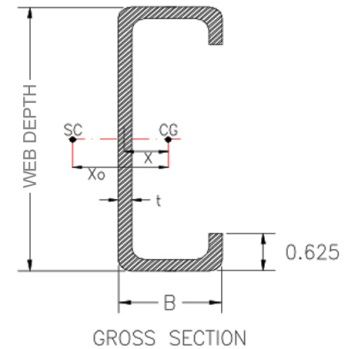
For more details and LEED letters contact Technical Services at 888-437-3244 or visit [www.clarkdietrich.com/LEED](http://www.clarkdietrich.com/LEED)

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

**LEED 2009 Credit MR 2 & MR 4** -- ClarkDietrich's steel products are 100% recyclable and have a national average recycled content of 34.2% (19.8% post-consumer and 14.4% pre-consumer). If seeking a higher number to meet Credit MR 5, please contact us at ([info@clarkdietrich.com](mailto:info@clarkdietrich.com) / 888-437-3244)



TradeReady® Floor Joist



#### Project Information

Name:  
Address:

#### Contractor Information

Name:  
Contact:  
Phone:  
Fax:

#### Architect Information

Name:  
Contact:  
Phone:  
Fax: