

12" TradeReady® Floor Joist (1200TDW24-200-54)

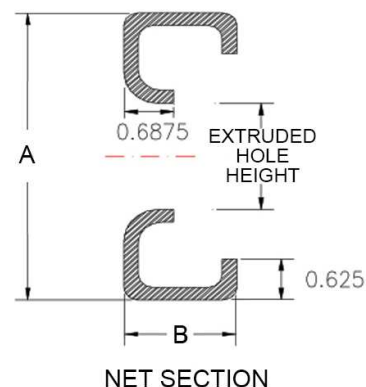
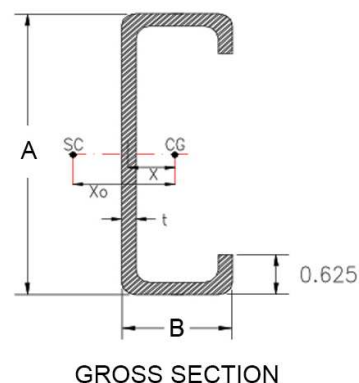
Floor Joist with extruded holes

Geometric Properties

Web depth (A): 12.00 in	Extruded hole shape: Circular	Design thickness: 0.0566 in
Flange width (B): 2.00 in	Extruded hole Height: 8"	Min. steel thickness: 0.0538 in
Extruded hole spacing: 24 in	Extruded hole width: 8"	Yield stress, Fy: 50 ksi
Coating: CP60		



Gross Section Properties of Full Section	
Cross sectional area	0.952 in ²
Member weight per foot of length	3.118 lbs/ft
Moment of inertia (I _x)	17.653 in ⁴
Radius of gyration (R _x)	4.305 in
Gross moment of inertia (I _y)	0.393 in ⁴
Gross radius of gyration (R _y)	0.643 in
Net Section Properties (at Extruded Hole)	
Cross sectional area (A _{net})	0.568 in ²
Moment of inertia (I _x net)	16.354 in ⁴
Radius of gyration (R _x net)	5.364 in
Net moment of inertia (I _y net)	0.293 in ⁴
Net radius of gyration (R _y net)	0.718 in
Allowable Capacities (Fully Braced)	
Local Moment at Full Section (M _{al} -full)	54.46 in-kips
Distortional Moment at Full Section (M _{ad} -full)	54.31 in-kips
Local Moment at Knockout (M _{al} -kno)	81.61 in-kips
Distortional Moment at Knockout (M _{ad} -kno)	49.12 in-kips
Shear at Knockout (V _a -kno)	1243 lbs
Shear at Full Section (V _a -full)	1377 lbs
Torsional Section Properties	
Distance between centroid and shear-center (X _o)	-1.032 in
Distance between centroid and web-centerline (X)	0.351 in
St. Venant torsional constant (J*1000)	1.017 in ⁴
Torsional warping constant (C _w)	11.550 in ⁶
Radii of gyration (R _o)	4.475 in
Torsional flexural constant (Beta)	0.947
Unbraced Length (L _u)	39.0 in
Effective Section Properties	
Moment of inertia (I _{xe})	16.107 in ⁴
Section modulus (S _{xe})	1.819 in ³



Code Approvals & Performance Standards

- [AISI S100-16 \(2020\) w/S2-20](#) North American Specification for the Design of Cold-Formed Steel Structural Members
 - Direct Strength Method (DSM) utilized for calculating flexural strength
- [AISI S240-15](#) North American Standard for Cold-Formed Steel Structural Framing
 - Section A3 Material - Chemical & mechanical requirements (Referencing ASTM A1003/A1003M)
 - Section A4 Corrosion Protection (Referencing ASTM A653/A653M)
 - Section A5 Products - Thickness, shapes, tolerances, identification
- [SDS For ASTM A1003 Steel Framing Products](#) For Interior Framing, Exterior Framing and Clips/Accessories