05.40.00 (Cold-Formed Metal Framing)



Technical Services: 888-437-3244, Engineering Services: 877-832-3206, Sales 800-543-7140

9-1/4" TradeReady® Floor Joist (925TDJ24-175-97)

Floor Joist with extruded holes

Geometric Properties

Web depth (A): 9.25 in Flange width (B): 1.75 in Extruded hole shape: Ellipse Extruded hole Height: 6.25"

Design thickness: 0.1017 in Min. steel thickness: 0.0966 in

Extruded hole spacing: 24 in Coating: CP60	Extruded hole width: 9"	Yield stress, Fy: 50 ksi
Gr	oss Section Properties of Ful	I Section
Cross sectional area		1.346 in ²
Member weight per foot of length		4.423 lbs/ft
Moment of inertia (Ix)		14.880 in ⁴
Radius of gyration (Rx)		3.325 in
Gross moment of inertia (ly)		0.426 in ⁴
Gross radius of gyration (Ry)		0.563 in
Ne	t Section Properties (at Extru	ded Hole)
Cross sectional area (A net)		0.821 in ²
Moment of inertia (lx net)		13.932 in ⁴
Badius of gyration (Bx net)		4 119 in

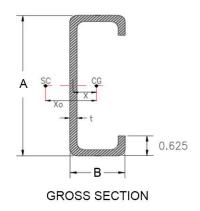
Radius of gyration (Rx)	3.325 in		
Gross moment of inertia (ly)	0.426 in ⁴		
Gross radius of gyration (Ry)	0.563 in		
Net Section Properties (at Extruded Hole)			
Cross sectional area (A net)	0.821 in ²		
Moment of inertia (Ix net)	13.932 in ⁴		
Radius of gyration (Rx net)	4.119 in		
Net moment of inertia (ly net)	0.302 in ⁴		
Net radius of gyration (Ry net)	0.606 in		
Allowable Capacities (Fully Braced)			
Local Moment at Full Section (Mal-full)	96.33 in-kips		
Distortional Moment at Full Section (Mad-full)	91.97 in-kips		
Local Moment at Knockout (Mal-kno)	90.19 in-kips		
Distortional Moment at Knockout (Mad-kno)	80.11 in-kips		
Shear at Knockout (Va-kno)	3772 lbs		
Shear at Full Section (Va-full)	10708 lbs		
Torsional Section Properties			
Distance between centroid and shear-center (Xo)	-0.952 in		
Distance between centroid and web-centerline (X)	0.326 in		
St. Venant torsional constant (J*1000)	4.644 in ⁴		
Torsional warping constant (Cw)	7.739 in ⁶		
Radii of gyration (Ro)	3.505 in		
Torsional flexural constant (Beta)	0.926		
Unbraced Length (Lu)	34.6 in		
Effective Section Properties			
Moment of inertia (lxe)	14.899 in ⁴		

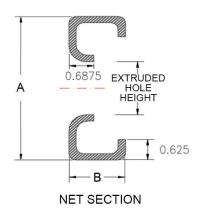
Code Approvals & Performance Standards

Section modulus (Sxe)

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







3.217 in³