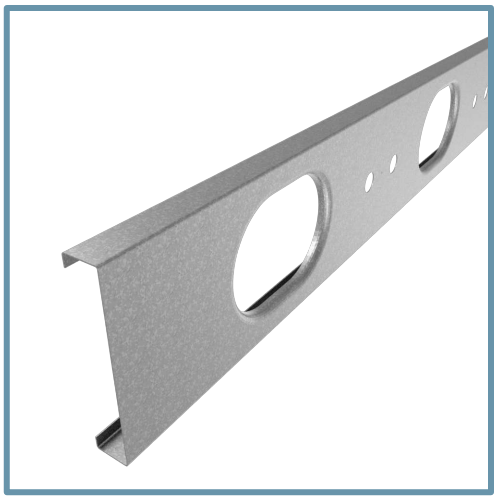
9-1/4" TradeReady® Floor Joist (925TDJ24-175-97)

Floor Joist with extruded holes



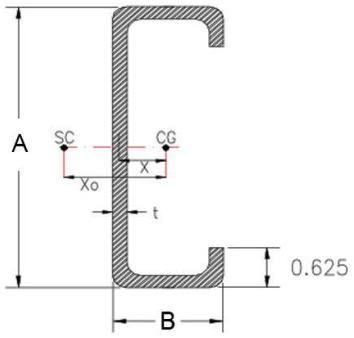
Geometric Properties

Web depth (A): 9.25 in
Flange width (B): 1.75 in
Extruded hole spacing: 24 in
Coating: CP60

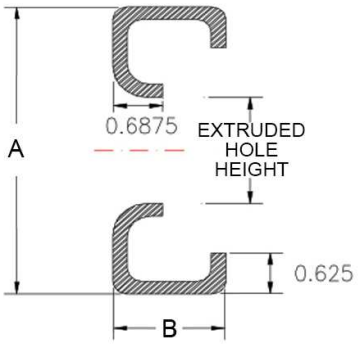
Extruded hole shape: Ellipse
Extruded hole Height: 6.25"
Extruded hole width: 9"

Design thickness: 0.1017 in
Min. steel thickness: 0.0966 in
Yield stress, Fy: 50 ksi

Gross Section Properties of Full 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 (Iy)	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 (Iy 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 (Ixe)	14.899 in^4
Section modulus (Sxe)	3.217 in^3



GROSS SECTION



NET SECTION

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