

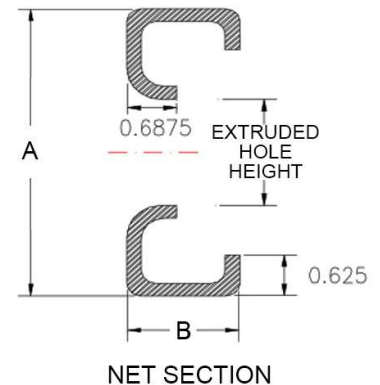
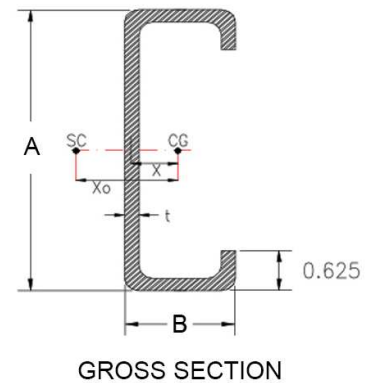
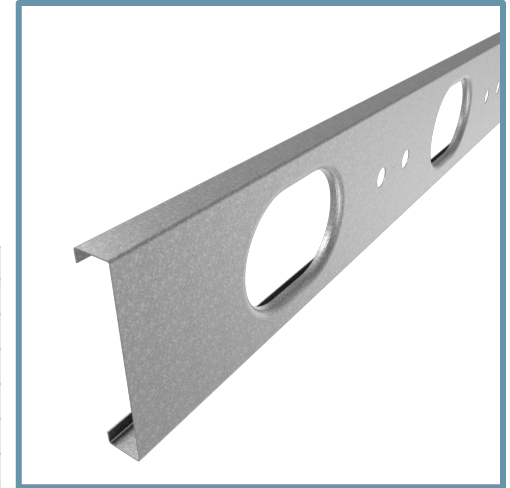
7-1/4" TradeReady® Floor Joist (725TDJ24-175-68)

Floor Joist with extruded holes

Geometric Properties

Web depth (A): 7.25 in	Extruded hole shape: Ellipse	Design thickness: 0.0713 in
Flange width (B): 1.75 in	Extruded hole Height: 4.25"	Min. steel thickness: 0.0677 in
Extruded hole spacing: 24 in	Extruded hole width: 7"	Yield stress, Fy: 50 ksi
Coating: CP60		

Gross Section Properties of Full Section	
Cross sectional area	0.817 in ²
Member weight per foot of length	2.673 lbs/ft
Moment of inertia (Ix)	5.964 in ⁴
Radius of gyration (Rx)	2.701 in
Gross moment of inertia (Iy)	0.305 in ⁴
Gross radius of gyration (Ry)	0.611 in
Net Section Properties (at Extruded Hole)	
Cross sectional area (A net)	0.598 in ²
Moment of inertia (Ix net)	5.899 in ⁴
Radius of gyration (Rx net)	3.140 in
Net moment of inertia (Iy net)	0.233 in ⁴
Net radius of gyration (Ry net)	0.625 in
Allowable Capacities (Fully Braced)	
Local Moment at Full Section (Mal-full)	49.25 in-kips
Distortional Moment at Full Section (Mad-full)	45.50 in-kips
Local Moment at Knockout (Mal-kno)	48.72 in-kips
Distortional Moment at Knockout (Mad-kno)	42.58 in-kips
Shear at Knockout (Va-kno)	1982 lbs
Shear at Full Section (Va-full)	4679 lbs
Torsional Section Properties	
Distance between centroid and shear-center (Xo)	-1.109 in
Distance between centroid and web-centerline (X)	0.400 in
St. Venant torsional constant (J*1000)	1.386 in ⁴
Torsional warping constant (Cw)	3.367 in ⁶
Radii of gyration (Ro)	2.984 in
Torsional flexural constant (Beta)	0.862
Unbraced Length (Lu)	36.1 in
Effective Section Properties	
Moment of inertia (Ixe)	5.969 in ⁴
Section modulus (Sxe)	1.645 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