

C-Joists

with Big Stiffened Web Holes



MATERIAL	
Web (in)	10
Flange (in)	2
Lip (in)	0.625
Yield Strength F_y (KSI)	50
Tensile Strength F_u (KSI)	65
Design Thickness (in)	0.0566
Minimum Thickness (mil)	54
Gauge	16
Available Finish G60, G90	

GROSS SECTION PROPERTIES	
Weight of Member: (lb/ft)	2.86
Cross Sectional Area: A (in ²)	0.839
Moment of Inertia: I_x (in ⁴)	11.282
Section Modulus: S_x (in ³)	2.256
Radius of Gyration: R_x (in)	3.666
Moment of Inertia: I_y (in ⁴)	0.378
Radius of Gyration: R_y (in)	0.671

EFFECTIVE SECTION PROPERTIES FOR 20ft JOIST SPAN*			
Hole Spacing (in)	48	32	16
Moment of Inertia-Deflection: I_{xe} (in ⁴)	9.59	9.59	9.59
Allowable Design Bending Moment: M_d (in-k)	42	42	38
Allowable Shear Force: V_a (lb) (solid section)	1660	1660	1660
Check web crippling			
* For other joist spans, see Hermes Technical Manual			

TORSIONAL SECTION PROPERTIES (Solid Section)	
St. Venant Torsional Constant: J_{x1000} (in ⁴)	0.896
Torsional Warping Constant: C_w (in ⁶)	7.665
Shear Center to Centroid on Principal X-axis: X_o (in)	-1.135
Radius of Gyration on the Centroid Principal axis: R_o (in)	3.896

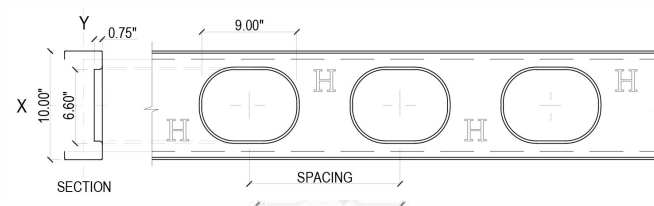
PRODUCT ID

1000 H 48 J 200-54 (10x2x16ga) Holes@48"
 1000 H 32 J 200-54 (10x2x16ga) Holes@32"
 1000 H 16 J 200-54 (10x2x16ga) Holes@16"

CODES & STANDARDS

- ASTM A 1003, A 653, & C 955
- AISI S100-16

HOLE SIZE AND SPACING



See Hermes/Hephaistos Technical Manual
for complete design data