



TECHNICAL DATA OF HOLLOW SECTIONS CONFORMING TO AS/NZS 1163

SCOPE : Electric Resistance Welded, Steel Hollow Sections used for structural purposes.
SIZE RANGE : CHS: Size 21.3-219.1 mm & Thickness 2.00-8.20 mm, SHS: Size 16X16-200X200 mm; RHS: Size 30X15-200X100 mm & Thickness 1.00-8.50 mm

TOLERANCES :

Circular Shape - Tolerances on dimensions	Square / Rectangular Shape - Tolerances on dimensions
Characteristics / Tolerances	
External Dimensions (D) : ±1%, with a minimum of ±0.5 mm	External Dimensions (B/H) : ±1% with a minimum of ±0.5 mm
Thickness (T) : ±10% of specified Wall Thickness	Thickness (T) : ±10% of specified Wall Thickness
Out-of-roundness : 2% for hollow sections having d/ts ≤ 100	Concavity/Convexity (x1/x2) : Max. 0.8% or 0.5 mm; whichever is greater
Straightness (e) : 0.20% of total length	Squareness of side (θ) : 90° ± 1°
Mass per unit length : Not less than 0.96 times the specified mass	External Corner Profile (R) : For Side ≤ 50mm: 1.5T to 3.0T, Side > 50mm: 1.8T to 3.0T
Manipulation (Bend Test for Galvanized Tubes do≤60mm) :	
Bending angle : 90° ; Bending radius : 6 times to the OD of Tube	
Flattening Test :	
a) Flatten upto 75% of O.D. for weld; (Weld at 45° position for do≤60mm)	
b) Flatten upto 75% of O.D. for weld; (Weld at 90° position for do>60mm)	

MECHANICAL PROPERTIES

Grade	YS (Min) MPa	UTS (Min) MPa	%EI (Min)						Min. Absorbed Energy (J)					
			Circular - do/t			Rectangular - b/t, d/t			Average tests			Individual tests		
			≤15	>15≤30	>30	≤15	>15≤30	>30	10x10	10x7.5	10x5.0	10x10	10x7.5	10x5.0
C250, C250L0	250	320	18	20	22	14	16	18	27	22	18	20	16	13
C350, C350L0	350	430	16	18	20	12	14	16	27	22	18	20	16	13
C450, C450L0	450	500	12	14	16	10	12	14	27	22	18	20	16	13

CHEMICAL COMPOSITION (%) Max.

Grade	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	V+Nb	Ceq
C250, C250L0	0.120	0.05	0.50	0.03	0.03	0.25	0.25	0.15	0.10	0.02	0.01	0.04	0.10	0.03	0.25
C350, C350L0	0.200	0.25	1.60	0.03	0.03	0.25	0.25	0.30	0.10	0.10	0.01	0.04	0.10	0.11	0.43
C450, C450L0	0.200	0.45	1.70	0.03	0.03	0.25	0.25	0.30	0.35	0.10	0.01	0.04	0.10	0.11	0.43

WORKMANSHIP : All Sections are finished with Bare, Black Lacquer Coated or Galvanized
MARKING : Each Pipe shall be stencilled as per AS-NZS 1163 / Client Requirement
 "TIGER/MADE IN UAE ASTM AS-NZS 1163 GRADE ----- / BATCH NO-----/HEAT NO-----/SIZE-----/LENGTH-----"

Value Addition: We are limiting the out-of-roundness for CHS section upto 0.50%D. For SHS/RHS section, Side tolerances ±0.5%, Concavity/convexity 0.50mm max, External corner profile 2T average, Twist 2mm/6mtr max and Straightness 1 mm per meter

DETAILED DRAWINGS / DIAGRAMS

