

Tolerances - BS EN 10219

	Type	Cold formed welded structural hollow sections of non-alloy and fine grain steels	
		BS EN 10219	
Outside Dimension (OD)	CHS	± 1% with a min. of ± 0.5mm and a max. of ± 10mm	
	SHS & RHS	Size (mm)	Tolerance
H, B < 100mm 100mm ≤ H, B ≤ 200mm H, B > 200mm		± 1% with a min. of ± 0.5mm ± 0.8% ± 0.6%	
Thickness (t)	CHS	For OD ≤ 406.4mm t ≤ 5mm t > 5mm	± 10% ± 0.50mm
	SHS & RHS	For OD > 406.4mm t ≤ 5mm t > 5mm	± 10% with a max. of 2mm ± 10% ± 0.50mm
Tolerances of Length	CHS SHS & RHS	-0mm, + 50mm	
Out of Roundness	CHS	2% for hollow sections having a diameter to thickness ratio not exceeding 100	
Concavity / convexity	SHS & RHS	max. 0.8% with a min. of 0.5mm	
Squareness of Size	SHS & RHS	90° ± 1°	
External Corner Profile	SHS & RHS	t ≤ 6mm 6mm < t ≤ 10mm 10mm < t	1.6T to 2.4T 2.0T to 3.0T 2.4T to 3.6T
Twist	SHS & RHS	2mm plus 0.50mm/m length	
Straightness	CHS	0.2% of total length	
	SHS & RHS	0.15% of total length	
Mass	CHS	± 6% on individual length	
	SHS & RHS	± 6% on individual length	

NOTES : CHS - Circular Hollow Sections
RHS - Rectangular Hollow Sections
SHS - Square Hollow Sections