

RANGE OF DIMENSIONS AND TOLERANCES

GEOMETRIC PROPERTIES AND PROCESSIBILITY

Benchmarking of standards on the example of a hollow section 120/120x8

	EN 10219:2019 Cold formed welded steel structural hollow sections from unalloyed structural steel and fine-grained structural steel		EN 10210:2019 Hot-finished steel structural hollow sections from unalloyed structural steel and fine-grained structural steel		endurance dynamic	
Outer radii R	2,0 to 3,0 T	16 - 24	3T max. per rounding	max. 24	-	-
Edges C1, C2	2,0 to 3,0 T	16 - 24	3T max. per rounding	max. 24	≤ 1,8 x T	max. 14,4
Straightness deviation	0,15% over total length; max. 3mm/m		0,2% over total length; 3mm/m		max. 1,3mm / m	
Twisting deviation	2mm + 0,5 mm /m		2mm + 0,5 mm /m		max. 1mm + 0,25 mm /m	
Perpendicularity	± 1°	89 - 91	± 1°	89 - 91	± 1°	89 - 91
Camber concave/convex of the sides	max. 0,8%; but at least 0,5 mm		1%		Camber within the dimension tolerance	
Wall thickness tolerance	T>5mm: ± 0,5mm	7,5 - 8,5	-10%	min. 7,2*	± 0,5 mm	7,5 - 8,5
Dimension tolerance height	100 ≤ H ≤ 200: ± 0,8%	119,04 - 120,96	± 1%, but at least ± 0,5 mm	118,8 - 121,2	± 0,5 mm	119,5 - 120,5
Dimension tolerance width	100 ≤ H ≤ 200: ± 0,8%	119,04 - 120,96	± 1%, but at least ± 0,5 mm	118,8 - 121,2	± 0,5 mm	119,5 - 120,5

* The upper limiting dimension is given by the limiting deviation of the mass.

Excellent fatigue strength of endurance dynamic hollow sections due to narrowest chamfer dimensions ≤1,8xT. Restricted tolerances compared to the hollow section standard EN 10219 enable repeatable automated processability.

AVAILABLE DIMENSIONS FOR RECTANGULAR OR SQUARE HOLLOW SECTIONS

Square hollow sections S355M - S550M

DIRECT FORMING	ROUND-TUBE OR DIRECT FORMING	ROUND-TUBE FORMING
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Height	Width	Wall thickness in [mm]															
		3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0	8,5	9,0	9,5	10,0	
50	50																
60	60																
70	70																
75	75																
80	80																
90	90																
100	100																
110	110																
120	120																
127	127																
130	130																
140	140																
150	150																
160	160																
180	180																
200	200																
220	220																

Rectangular hollow sections S355M - S550M

DIRECT FORMING	ROUND-TUBE OR DIRECT FORMING	ROUND-TUBE FORMING	UPON REQUEST
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Height	Width	Wall thickness in [mm]															
		3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0	8,5	9,0	9,5	10,0	
60	40																
70	40																
80	40																
80	50																
80	60																
90	50																
100	50																
100	60																
100	80																
110	60																
120	60																
120	80																
140	70																
140	80																
150	50																
150	75																
150	100																
160	80																
160	90																
180	100																
200	100																
200	120																
200	150																
220	120																
250	150																
260	140																
260	180																