



ESCO Hot – Rolled Equal Angles are as follows :

Table 1: Physical Specification of Hot – Rolled Equal Angles

Size	Dimensions (mm)						Cross section A cm ²	Weight & tolerance	
	Leg length (a)		Thickness (S)		Radius of curvature (r)			Unit weight kg/m	Tolerance %
	Nominal value	Tolerance	Nominal value	Tolerance	r1	r2			
40x40x4	40	±1.0	4	±0.5	6	3	3.08	2.42	± 8
50x50x5	50		5		7	3.5	4.80	3.77	
60x60x6	60		6		8	4	6.91	5.42	
80x80x8	80	±1.5	8	±0.80	10	5	12.30	9.63	± 5
100x100x10	100		10		12	6	19.20	15.0	

Table 2 : Axis Separation & Static Data of Hot - Rolled Equal Angles

Size	Distances of center of gravity			Static value								
	c cm	w cm	v ₁ cm	x-x=y-y axis			ζ-ζ axis			η-η axis		
				Section modules	Moment of inertia	Radius of gyration	Moment of inertia	Radius of gyration	Section modules	Moment of inertia	Radius of gyration	
				I_x cm ³	cm ⁴	i_x cm	I_ζ cm ⁴	i_ζ cm	I_η cm ³	W_η cm ⁴	i_η cm	
40x40x4	1.12	2.83	1.58	4.47	1.55	1.21	7.09	1.52	1.86	1.17	0.78	
50x50x5	1.40	3.54	1.99	11.0	3.05	1.51	17.40	1.90	4.55	2.29	0.98	
60x60x6	1.69	4.24	2.39	22.8	5.29	1.82	36.10	2.29	9.43	3.95	1.17	
80x80x8	2.26	5.66	3.20	72.3	12.6	2.42	115	3.06	29.9	9.37	1.55	
100x100x10	2.82	7.07	3.99	177	24.7	3.04	280	3.82	73.3	18.3	1.95	

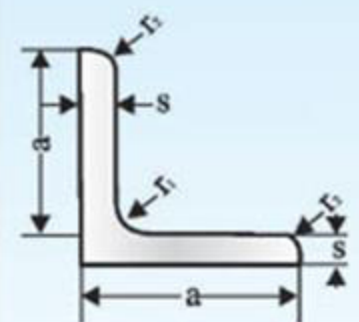
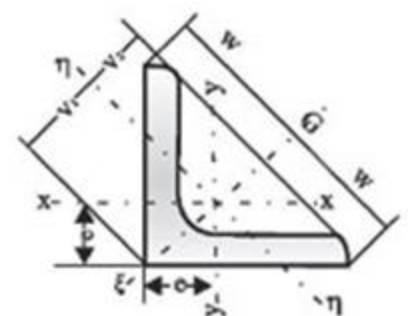


Table 3 : Chemical Composition of Hot - Rolled Equal Angles

Steel grade	Equivalent standard EN 10025	Weight of elements (%)					
		C(max)	Si	Mn	P(max)	S(max)	N(max)
St 37	S235JR	0.20	0.15-0.35	0.35-0.75	0.050	0.050	0.011
St 44	S275JR	0.23	0.15-0.45	0.35-0.90	0.050	0.050	0.011
St 52	S355JR	0.23	<0.60	<1.60	0.045	0.045	-

Table 4: Mechanical Properties of Hot - Rolled Equal Angles

Steel grade	Tensile test			Cold bend Test at angle of 180° Bend mandrel radius in terms of specimen thickness
	Min. yield point Y.P N/(mm) ²	Tensile strength U.T.S N/(mm) ²	Min. Elongation δ ₅ %	
St 37	235	360-460	25	2 S*
St 44	275	430-530	22	3 S*
St 52	355	510-630	21	3 S*



S*: Tested specimen thickness



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