

# L 300 x 300 L 250 x 250 New equal leg angles



## Introduction

Aimed principally for girder pylons, towers for wind power mills, power pylons and antenna pylons and many other applications. ArcelorMittal is now offering new hot rolled equal leg angles. With a leg length of up to 300 mm and material thickness from 18 up to 35 mm, other material thicknesses are possible upon agreement.

Increasing rotor shaft height, wind energy efficiency increases significantly. The height of tubular towers is limited to approx. 100 m due to its construction type whereas truss pylons can be built higher and more economically; cable stayed steel truss pylons, for example, can reach more than 500 m.

## Why Truss Girder?

Due to their transparency, trusses are much less visible and much less exposed to wind loads. When comparing truss girder pylon construction to tubular towers and assuming the same rotor shaft height and installed power, truss girder pylons offer numerous advantages. Approximately 60% of steel weight-saving can be achieved whilst fabrication and logistics savings can be made; with assembly on site, the structure is mostly independent from transport infrastructure and allows use even in remote areas. This improves sustainability whilst a durable corrosion protection by hot dip galvanizing enhances the environmental footprint.

## Why L 300 x 300?

The largest angles until now, L 250 x 250, achieved with the 2.5MW installation in Laasow (D), were at the limits of feasibility. Now with L 300 x 300, wind power mills with much higher rotor shaft are possible and further potential of wind energy can now be better harnessed.

## Delivery conditions

- Dimensions in accordance with table overleaf.
- Steel grade S355M according to EN 10025-4: 2004.
- Rolling tolerances according EN 10056-2: 1994.
- Surface conditions according EN 10163-3: 2004, class C, sub-class 1.
- Mill certification type to be agreed at time of order.
- CE-marking.
- Minimum order: 20t per section and grade or upon agreement.

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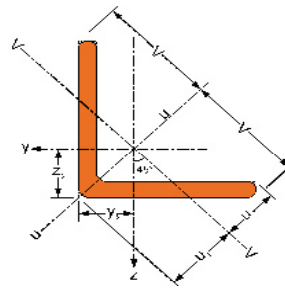
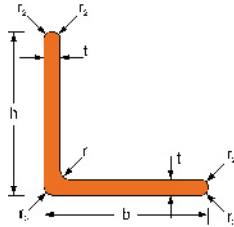
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Equal leg angles ▼  
 Dimensions: ArcelorMittal Standard  
 Tolerances: EN 10056-2: 1994  
 Surface condition: according to EN 10163-3: 2004, class C, subclass 1  
 Gleichschenkliger Winkelstahl ▼  
 Abmessungen: ArcelorMittal Standard  
 Toleranzen: EN 10056-2: 1994  
 Oberflächenbeschaffenheit: gemäß EN 10163-3: 2004, Klasse C, Untergruppe 1  
 Cornières à ailes égales ▼  
 Dimensions: ArcelorMittal Standard  
 Tolérances: EN 10056-2: 1994  
 Etat de surface: conforme à EN 10163-3: 2004, classe C, sous-classe 1



Désignation Bezeichnung Designation	Dimensions Abmessungen							Position of axes Lage der Achsen Position des axes					Surface Oberfläche	
	G kg/m	h=b mm	t mm	r <sub>1</sub> mm	r <sub>2</sub> mm	r <sub>3</sub> mm	A mm <sup>2</sup> x10 <sup>2</sup>	z <sub>s</sub> =y <sub>s</sub> mm x10	v mm x10	u <sub>1</sub> mm x10	u <sub>2</sub> mm x10	A <sub>L</sub> m <sup>2</sup> /m	A <sub>G</sub> m <sup>2</sup> /t	
L 250 x 250 x 18*	68.1	250	18	18	9	3	86.7	6.83	17.68	9.66	9.29	0.976	14.33	
L 250 x 250 x 19*	71.7	250	19	18	9	3	91.4	6.87	17.68	9.72	9.30	0.976	13.60	
L 250 x 250 x 20*	75.3	250	20	18	9	3	96.0	6.91	17.68	9.78	9.31	0.976	12.95	
L 250 x 250 x 21*	78.9	250	21	18	9	3	100.6	6.96	17.68	9.84	9.33	0.976	12.36	
L 250 x 250 x 22*	82.5	250	22	18	9	3	105.1	7.00	17.68	9.89	9.34	0.976	11.82	
L 250 x 250 x 23*	86.1	250	23	18	9	3	109.7	7.03	17.68	9.95	9.36	0.976	11.33	
L 250 x 250 x 24*	89.7	250	24	18	9	3	114.2	7.07	17.68	10.00	9.37	0.976	10.88	
L 250 x 250 x 25*	93.2	250	25	18	9	3	118.7	7.11	17.68	10.06	9.39	0.976	10.47	
L 250 x 250 x 26*	96.7	250	26	18	9	3	123.2	7.15	17.68	10.11	9.40	0.976	10.09	
L 250 x 250 x 27*	101	250	27	18	9	3	127.7	7.19	17.68	10.17	9.42	0.976	9.66	
L 250 x 250 x 28*	104	250	28	18	9	3	132.1	7.23	17.68	10.22	9.44	0.976	9.40	
L 250 x 250 x 29*	107	250	29	18	9	3	136.6	7.27	17.68	10.28	9.45	0.976	9.10	
L 250 x 250 x 30*	111	250	30	18	9	3	141.0	7.30	17.68	10.33	9.47	0.976	8.81	
L 250 x 250 x 31*	114	250	31	18	9	3	145.4	7.34	17.68	10.38	9.49	0.976	8.55	
L 250 x 250 x 32*	118	250	32	18	9	3	149.7	7.38	17.68	10.44	9.50	0.976	8.30	
L 250 x 250 x 33*	121	250	33	18	9	3	154.1	7.42	17.68	10.49	9.52	0.976	8.06	
L 250 x 250 x 34*	124	250	34	18	9	3	158.4	7.45	17.68	10.54	9.54	0.976	7.84	
L 250 x 250 x 35*	128	250	35	18	9	3	162.7	7.49	17.68	10.59	9.56	0.976	7.64	
L 300 x 300 x 25*	112	300	25	18	12	15	142.7	8.35	21.21	11.80	11.18	1.165	10.40	
L 300 x 300 x 26*	116	300	26	18	12	15	148.2	8.39	21.21	11.86	11.19	1.165	10.01	
L 300 x 300 x 27*	121	300	27	18	12	15	153.7	8.43	21.21	11.92	11.21	1.165	9.66	
L 300 x 300 x 28*	125	300	28	18	12	15	159.1	8.47	21.21	11.97	11.22	1.165	9.33	
L 300 x 300 x 29*	129	300	29	18	12	15	164.6	8.50	21.21	12.03	11.24	1.165	9.02	
L 300 x 300 x 30*	133	300	30	18	12	15	170.0	8.54	21.21	12.08	11.25	1.165	8.73	
L 300 x 300 x 31*	138	300	31	18	12	15	175.4	8.58	21.21	12.14	11.27	1.165	8.46	
L 300 x 300 x 32*	142	300	32	18	12	15	180.7	8.62	21.21	12.19	11.29	1.165	8.21	
L 300 x 300 x 33*	146	300	33	18	12	15	186.1	8.66	21.21	12.24	11.30	1.165	7.98	
L 300 x 300 x 34*	150	300	34	18	12	15	191.4	8.70	21.21	12.30	11.32	1.165	7.75	
L 300 x 300 x 35*	154	300	35	18	12	15	196.7	8.73	21.21	12.35	11.34	1.165	7.55	

Designation Bezeichnung Désignation	G kg/m	Section properties / Statische Kennwerte/ Valeurs statiques									Classification EN 1993-1-1: 2005	
		axis y-y / axis z-z Achse y-y / Achse z-z axe y-y / axe z-z			axis u-u Achse u-u axe u-u		axis v-v Achse v-v axe v-v		I <sub>yz</sub> mm <sup>4</sup> x10 <sup>4</sup>			
		I <sub>y</sub> =I <sub>z</sub> mm <sup>4</sup> x10 <sup>4</sup>	W <sub>elz</sub> =W <sub>ely</sub> mm <sup>3</sup> x10 <sup>3</sup>	i <sub>y</sub> =i <sub>z</sub> mm x10	I <sub>u</sub> mm <sup>4</sup> x10 <sup>4</sup>	i <sub>u</sub> mm x10	I <sub>v</sub> mm <sup>4</sup> x10 <sup>4</sup>	i <sub>v</sub> mm x10	I <sub>yz</sub> mm <sup>4</sup> x10 <sup>4</sup>	pure compression		
										S235	S355	
L 250 x 250 x 18*	68.1	5156	283.8	7.71	8208	9.73	2104	4.93	-3052	3	3	
L 250 x 250 x 19*	71.7	5417	298.9	7.70	8622	9.71	2212	4.92	-3205	3	3	
L 250 x 250 x 20*	75.3	5674	313.8	7.69	9031	9.70	2318	4.91	-3357	3	3	
L 250 x 250 x 21*	78.9	5929	328.6	7.68	9435	9.69	2423	4.91	-3506	3	3	
L 250 x 250 x 22*	82.5	6180	343.3	7.67	9833	9.67	2528	4.90	-3652	2	3	
L 250 x 250 x 23*	86.1	6429	357.8	7.66	10230	9.66	2632	4.90	-3797	2	3	
L 250 x 250 x 24*	89.7	6674	372.3	7.64	10610	9.64	2735	4.89	-3939	1	3	
L 250 x 250 x 25*	93.2	6917	386.7	7.63	11000	9.63	2837	4.89	-4079	1	3	
L 250 x 250 x 26*	96.7	7156	400.9	7.62	11370	9.61	2939	4.88	-4217	1	2	
L 250 x 250 x 27*	101	7393	415.1	7.61	11750	9.59	3040	4.88	-4353	1	2	
L 250 x 250 x 28*	104	7627	429.2	7.60	12110	9.57	3141	4.88	-4486	1	1	
L 250 x 250 x 29*	107	7858	443.1	7.59	12480	9.56	3241	4.87	-4618	1	1	
L 250 x 250 x 30*	111	8087	457.0	7.57	12830	9.54	3340	4.87	-4747	1	1	
L 250 x 250 x 31*	114	8313	470.8	7.56	13190	9.53	3439	4.86	-4874	1	1	
L 250 x 250 x 32*	118	8536	484.4	7.55	13540	9.51	3538	4.86	-4998	1	1	
L 250 x 250 x 33*	121	8757	498.0	7.54	13880	9.49	3636	4.86	-5121	1	1	
L 250 x 250 x 34*	124	8975	511.5	7.53	14220	9.47	3734	4.86	-5241	1	1	
L 250 x 250 x 35*	128	9191	524.9	7.52	14550	9.46	3832	4.85	-5359	1	1	
L 300 x 300 x 25*	112	12150	561.1	9.23	19370	11.65	4930	5.88	-7220	3	3	
L 300 x 300 x 26*	116	12590	582.5	9.22	20060	11.63	5115	5.87	-7475	2	3	
L 300 x 300 x 27*	121	13020	603.5	9.20	20750	11.62	5294	5.87	-7726	2	3	
L 300 x 300 x 28*	125	13450	624.6	9.19	21420	11.60	5475	5.87	-7975	2	3	
L 300 x 300 x 29*	129	13870	645.2	9.18	22090	11.59	5650	5.86	-8220	1	3	
L 300 x 300 x 30*	133	14290	666.0	9.17	22750	11.57	5828	5.86	-8462	1	3	
L 300 x 300 x 31*	138	14700	686.3	9.16	23400	11.55	5999	5.85	-8701	1	2	
L 300 x 300 x 32*	142	15120	707.2	9.15	24050	11.54	6184	5.85	-8936	1	2	
L 300 x 300 x 33*	146	15520	727.2	9.13	24690	11.52	6351	5.84	-9169	1	2	
L 300 x 300 x 34*	150	15930	747.7	9.12	25320	11.50	6532	5.84	-9398	1	1	
L 300 x 300 x 35*	154	16320	767.4	9.11	25950	11.49	6696	5.83	-9624	1	1	

▼ Other dimensions on request. The Radius r<sub>1</sub>, r<sub>2</sub> and r<sub>3</sub> may vary.

+ Minimum order: 20t per section and grade or upon agreement.