



**G. S. I. Inc.**

*Manufacturer & Distributor of Aerospace Lighting*

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## EXEL FRANIBLE CITY MASTS

### Applications:

Base station masts are mounted on the roofs of industrial or commercial buildings in cities and densely populated and built-up locations. Exel Composites, a leading manufacturer of products based on composite technology, has developed glass fiber reinforced composite masts with lattice structures to incorporate innovative details. The City Mast was developed using Exel Composites' technology specifically for these high density environments.



### Features:

Exel Composites' Safety Masts are built out of fiberglass and based on thorough knowledge of composite technology. Fiberglass reinforced composite materials have numerous advantages compared to conventional materials like metal. Exel Composites' City Masts are made according to a special lattice structure and they have many innovative technical details in their construction. Glass fiber is the ideal material, since it is transparent to radio waves and does not conduct electricity.

### Advantages:

Composite materials are corrosion-free. They are neutral to environments that might be encountered due to geographic location, such as humidity, salty winds, etc. Extreme temperatures have no affect, as the masts perform equally well in tropical climates to the Arctic. There is practically no need for maintenance, as Exel Composites' City Masts have excellent fatigue resistance properties due to their ingenious design. Therefore, Exel Composites' City Masts are the smart choice when long service lifetime is required.

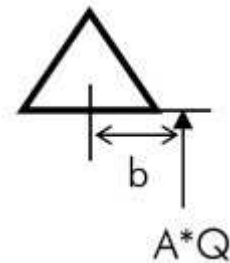


- Heat resistant.
- Rigidity (free standing masts).
- Chemical resistant.
- High tensile strength.
- Low weight, easy installation.
- Resists ice formation in freezing conditions.
- A variety of different colors, steps, and safety rails are available.

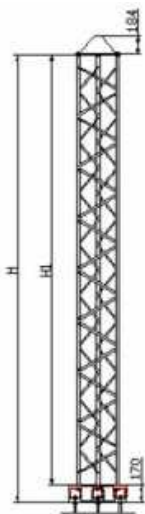


**CASE – Installation Height 30 Meters:**

- Allowed Deflection: 3 Degrees
- Allowed Torsion: 1 Degree
- Wind Speed: 20.5 m/s (74 kph / 45.98 mph) Continuous, 32.8 m/s (118 kph / 73.32 mph) Gust



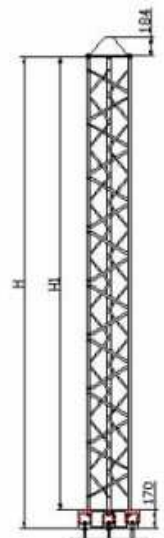
***Cross Section 400 mm mm***



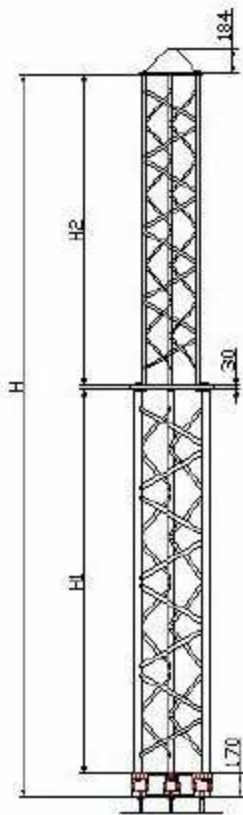
H1, mm	H, mm	A(1,0 m <sup>2</sup> )*b <sub>max</sub> (torsion 1°)	A <sub>max</sub> (b=0.25) (def'n 3°)
6000	6170	0,60	1,65
5000	5170	0,72	1,45
4000	4170	0,91	2,15
3000	3170	1,23	3,30
2000	2170	1,89	4,00
1000	1170	3,95	4,20

***Cross Section 500***

H1, mm	H, mm	A(1,0 m <sup>2</sup> )*b <sub>max</sub> (torsion 1°)	A <sub>max</sub> (b=0.25) (def'n 3°)
8000	8170	1,03	2,85
7000	7170	1,18	3,30
6000	6170	1,39	3,85
5000	5170	1,68	4,60
4000	4170	2,10	5,80
3000	3170	2,82	7,90
2000	2170	4,25	12,00



**Cross Section 400 / 500 mm  
Base Plate Layout**



H1, mm	H2, mm	H, mm	A(1,0 m <sup>2</sup> )*b <sub>max</sub> (torsion 1°)	A <sub>max</sub> (b=0.25) (defl'n 3°)
7000	1000	8200	0,70	1,95
6000	2000	8200	0,65	1,81
5000	3000	8200	0,60	1,67
4000	4000	8200	0,56	1,56
6000	1000	7200	0,80	2,23
5000	2000	7200	0,73	2,03
4000	3000	7200	0,67	1,86
5000	1000	6200	0,92	2,57
4000	2000	6200	0,83	2,31
3000	3000	6200	0,75	2,10
4000	1000	5200	1,09	3,03
3000	2000	5200	0,96	2,69
3000	1000	4200	1,33	3,70
2000	2000	4200	1,15	3,18
2000	1000	3200	1,70	4,70

*The busiest aviation centers (among other areas)*

*from the Arctic Circle to the Equator (over 500 airfields)*

*have chosen Exel Composites Approach, Weather, and City Masts.*

