

# Ground Based Cell Towers



## Ground Based Towers Design & Supply

Qualified and competent in-house design teams at Aster are proficient in designing and developing all types of towers using relevant and latest software that use national standards.

ATPL has seven tower manufacturing units with total production capacity of 170,000 MT per annum, spread through three strategic locations of Hyderabad, Raipur and Vadodara. This ensures cost effectiveness and proximity to the customer site locations .

Equipped with state-of-the-art technology and machinery for Tower Manufacturing and allied Structural Fabrication Facilities and with significant technical expertise, Aster builds solutions that are fast and reliable.

### Based on Design of Tower

- Square Angular Tower
- Tri-Angular Tower
- Polygonal Tower
- Monopoles
- Guyed Masts

### Based on type of Material Sections

- Angular Towers
- Tubular Towers
- Hybrid Tower (Legs with tubes and bracings with angles)



# Designs Capabilities

Sl. No.	Description	Base Width C/C (mm)	Top Width C/C (mm)	Antenna Loading	Wind Speed (kmph)	Approval
<b>TUBULAR GROUND BASED TOWERS</b>						
1	40 m	6590	1310	MW 1.2 m dia. - 3 nos.	180	SERC-Chennai
	34 m	5800		Patch Panel - 6 nos. or equivalent		
2	40 m	4000	1500	MW 1.2 m dia. - 3 nos.	180	SERC-Chennai
				Patch Panel - 6 nos. or equivalent		
	34 m	3600				
3	60 m	6500	1500	MW 2.4 m dia. - 2 nos.	170	SERC-Chennai
	54 m	6000		MW 0.6 m dia. - 4 nos.		
	51 m	5750		Patch Panel - 6 nos. or equivalent		
	45 m	5250				
	42 m	5000				
<b>ANGULAR GROUND BASED TOWERS</b>						
1	70 m Square Angular	6970	1500	MW 2.4 m dia. - 2 nos.	180	SERC-Chennai
	60 m	6040		MW 1.8 m dia. - 3 nos.		
	50 m	5133		MW 1.2 m dia. - 4 nos.		
	40 m	4206		Patch Panel - 9 nos. or equivalent		
2	70 m Square Angular	6360 B/B	1200	MW 1.8 m dia. - 2 nos.	170	SERC-Chennai
	60 m	5400		MW 1.2 m dia. - 2 nos.		
	50 m	4540		MW 0.6 m dia. - 2 nos.		
	40 m	3686		Patch Panel - 6 nos. or equivalent		
	30 m	2826				
3	60 m Square Angular	6250 B/B	1500	MW 0.6 m dia. - 2 nos.	180	SERC-Chennai
				Patch Panel - 12 nos. or equivalent		
4	80 m Square Angular	9346	1500	MW 2.4 m dia. - 2 nos.	180	IIT-Chennai
	70 m	8211		MW 1.8 m dia. - 2 nos.		
	60 m	7088		MW 1.2 m dia. - 2 nos.		
	50 m	5955		MW 0.6 m dia. - 2 nos.		
	40 m	4821		Patch Panel - 6 nos. or equivalent		
				<b>1.5 FOS</b>		
5	40 m Square Angular	3918	1500	MW 1.8 m dia. - 2 nos.	180	IIT-Chennai
	30 m	3095		MW 1.2 m dia. - 2 nos.		
				MW 0.6 m dia. - 2 nos.		
				Patch Panel - 6 nos. or equivalent		
6	60 m Square Angular	5643	1500	MW 1.8 m dia. - 2 nos.	180	IIT-Chennai
	50 m	4919		MW 1.2 m dia. - 2 nos.		
	40 m	4069		MW 0.6 m dia. - 2 nos.		
	30 m	3217		Patch Panel - 6 nos. or equivalent		
7	60 m Square Angular	6167	1500	MW 1.2 m dia. - 6 nos.	170	IIT-Chennai
	50 m	5238		MW 0.6 m dia. - 4 nos.		
	40 m	4288		Patch Panel - 12 nos. or equivalent		
	30 m	3333		<b>FOS - 1.2</b>		

Sl. No.	Description	Base Width C/C (mm)	Top Width C/C (mm)	Antenna Loading	Wind Speed (kmph)	Approval
8	80 m Square Angular	8800	1500	MW 3.0 m dia. – 4 nos.	180	IIT-Chennai
	70 m	7793		MW 2.4 m dia. – 2 nos.		
	60 m	6750		MW 1.8 m dia. – 2 nos.		
	50 m	5583		MW 1.2 m dia. – 2 nos.		
	40 m	4541		MW 0.6 m dia. – 4 nos.		
				Patch Panel – 6 nos. or equivalent		
				FOS-1.5; LIFE PERIOD: 100 YRS		
9	60 m Square Angular	5643	1500	MW 1.2 m dia. – 2 nos.	170	IIT-Chennai
	50 m	4831		MW 0.6 m dia. – 6 nos.		
	40 m	3981		Patch Panel – 6 nos. or equivalent		
				FOS – 1.2		
10	80 m Square Angular	8810	1500	MW 3.0 m dia. – 4 nos.	180	SERC-Chennai
	50 m			MW 0.6 m dia. – 5 nos.		
	40 m			Patch Panel – 9 nos. or equivalent		
11	80 m Square Angular	8210	1500	MW 1.8 m dia. – 2 nos.	180	SERC-Chennai
	70 m	7262		MW 1.2 m dia. – 2 nos.		
	60 m	6305		MW 0.6 m dia. – 6 nos.		
	50 m	5230		Patch Panel – 12 nos. or equivalent		
	40 m	4293				
12	70 m Triangular Angular	6820	1500	MW 1.2 m dia. – 2 nos.	180	IIT-Chennai
	60 m	5893		MW 0.6 m dia. – 4 nos.		
	50 m	4969		Patch Panel – 6 nos. or equivalent		
	40 m	4073		FOS -1.1		
13	80 m Square Angular (Type 1)	8088	1500	MW 1.8 m dia. – 2 nos.	170	SERC-Chennai
	70 m	7163		MW 0.6 m dia. – 2 nos.		
	60 m	6206		Patch Panel – 6 nos. or equivalent		
	50 m	5252				
	40 m	4307				
	30 m	3360				
14	80 m Square Angular (Type 2)	8088	1500	MW 2.4 m dia. – 2 nos.	170	SERC-Chennai
	70 m	7163		MW 1.2 m dia. – 2 nos.		
	60 m	6206		Patch Panel – 6 nos. or equivalent		
	50 m	5252				
	40 m	4307				
	30 m	3352				
15	80 m Square Angular (Type 3)	8088	1500	MW 2.4 m dia. – 2 nos.	170	SERC-Chennai
	70 m	7163		MW 1.8 m dia. – 2 nos.		
	60 m	6206		MW 1.2 m dia. – 2 nos.		
	50 m	5252		Patch Panel – 6 nos. or equivalent		
	40 m	4307				
	30 m	3352				

Sl. No.	Description	Base Width C/C (mm)	Top Width C/C (mm)	Antenna Loading	Wind Speed (kmph)	Approval
16	60 m Triangular Angular	5850	1200	MW 0.6 m dia. – 2 nos.	200	SERC-Chennai
	50 m	5040		Patch Panel – 12 nos. or equivalent		
	40 m	4080				
	30 m	3119				
17	60 m Square Angular	5360	1200	MW 1.8 m dia. – 2 nos.	200	SERC-Chennai
	50 m	4496		MW 1.2 m dia. – 2 nos.		
	40 m	3636		Patch Panel – 6 nos. or equivalent		
	30 m	2920				
18	60 m Square Angular	5400	1200	MW 1.8 m dia. – 2 nos.		
	55 m	4982		MW 1.2 m dia. – 2 nos.		
	50 m	4540		MW 0.6 m dia. – 2 nos.		
	40 m	3686		Patch Panel – 6 nos. or equivalent		
	30 m	2826				
	25 m	2435				
19	60 m Square Angular	5400	1200	MW 1.8 m dia. – 2 nos.	120	SERC-Chennai
	50 m	4540		MW 1.2 m dia. – 2 nos.		
	40 m	3686		MW 0.6 m dia. – 2 nos.		
	30 m	2920		Patch Panel – 6 nos. or equivalent		
20	80 m Square Angular	12700	1500	MW 3.0 m dia. – 2 nos.	180	SERC-Chennai
	70 m	11300		MW 1.2 m dia. – 2 nos.		
	65 m	10600		MW 0.6 m dia. – 2 nos.		
	60 m	9780		Patch Panel – 4 nos. or equivalent		
	55 m	9080				
	50 m	8412				
	45 m	7712				
	40 m	7012				
	35 m	6312				
	30 m	5480				
21	60 m Square Angular	9900	1500	MW 3.0 m dia. – 2 nos.	250	SERC-Chennai
	50 m	8500		MW 1.2 m dia. – 2 nos.		
	40 m	6990		MW 0.6 m dia. – 2 nos.		
	30 m	5400		Patch Panel – 8 nos. or equivalent		
22	100 m Square Angular	15500	1500	MW 3.0 m dia. – 3 nos.	200	SERC-Chennai
	90 m	14100		MW 2.4 m dia.–3 nos. or equivalent		
	80 m	12700				
	70 m	11300				
	65 m	10600				
	60 m	9780				
	55 m	9080				
	50 m	8412				
	45 m	7712				
	40 m	7012				
	35 m	6312				
	30 m	5400				

SI No	Description	Base Width C/C (mm)	Top Width C/C (mm)	Antenna Loading	Wind Speed (kmph)	Approval
23	60 m Square Angular	5090	1200	MW 1.2 m dia. – 2 nos.	180	SERC-Chennai
	50 m	4290		Patch Panel – 4 nos. or equivalent		
	40 m	3490				
	30 m	2700				
24	50 m Square Angular	5130	1200	MW 2.0 m dia. – 2 nos.	180	SERC-Chennai
	45 m	4690		MW 1.2 m dia. – 2 nos.		
	40 m	4290		Patch Panel – 8 nos. or equivalent		
	35 m	3890				
	30 m	3490				
25	50 m Square Angular	6400	1500	MW 1.2 m dia. – 1 no.	170	SERC-Chennai
	45 m	5775		MW 0.6 m dia. – 4 nos.		
	40 m	5150		Patch Panel – 6 nos. or equivalent		
	35 m	4525				
	30 m	3900				
26	100 m Square Angular	15500	1500	MW 1.2 m dia. – 4 no.	180	SERC-Chennai
	90 m	14100		Patch Panel – 8 nos. or equivalent		
	80 m	12700				
	70 m	11300				
	65 m	10450				
	60 m	9780				
	55 m	9080				
	50 m	8412				
	45 m	7712				
	40 m	7012				
	35 m	6312				
	30 m	5480				
27	70 m Angular	6800	1500	MW 3.0 m dia. – 3 no.	200	SERC-Chennai
	60 m	6000		MW 2.4 m dia. – 3 no. or equivalent		
	50 m	5200				
	40 m	4400				
	30 m	3500				
	36 m	4500				

Note:

MW - Microwave (Type – Solid Parabolic)

Patch Panel - Base Station Antennae (GSM / CDMA etc.) or Conventional (Frequency Range - 900 / 1800 MHz)