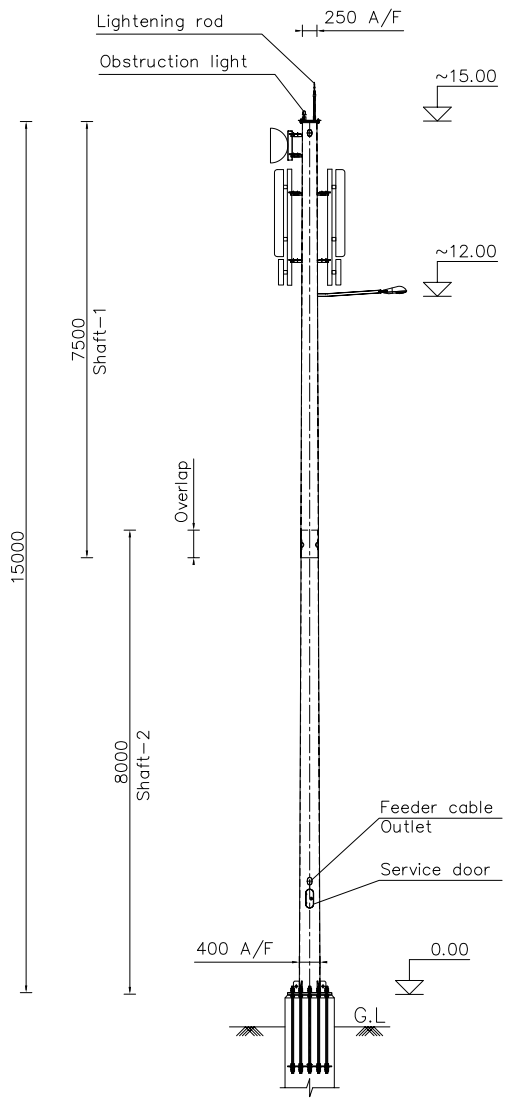
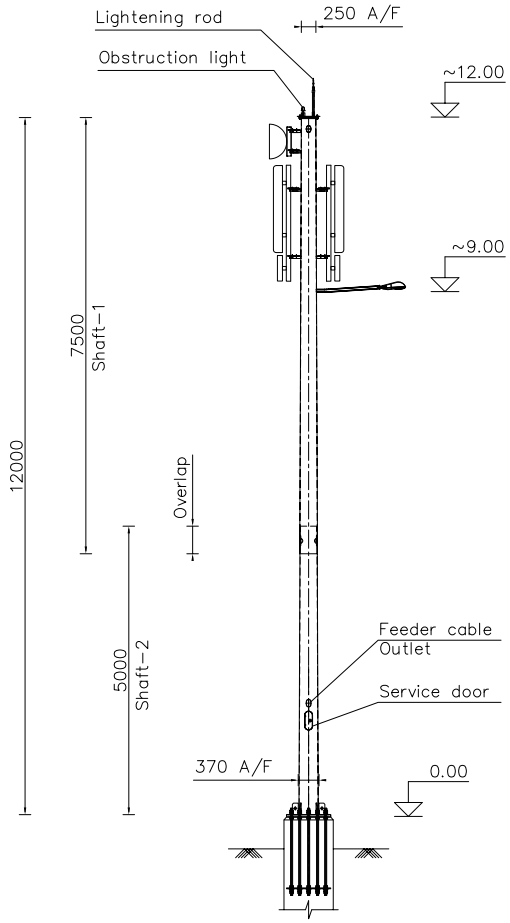


15m Pole
(Elevation)



12m Pole
(Elevation)
(Truncation)

DESIGN DATA

WIND SPEED–170KMPH

Antenna Area:

- 3 Nos. of GSM antennas (1.5x0.3m)
- 3 Nos. of BBU antennas (0.44x0.31x0.086m)
- 1 No. of 0.6m MW antenna (Cylindrical shroud)

Resulting in total effective area of 2.65sqm on the monopole

Accessories details:

- 1 no. of Light arm below the antennas.

NOTE:

The monopole is designed according to:

- Wind loads : As per IS: 875 (Part–3) – 2015
- Design standard : IS: 800–2007
- Basic wind Speed : 170KMPH
- Operational wind Speed : 70% of basic wind speed
- Mean probable design life : 50 years
- Terrain Category : 2
- Topography factor, k3 : 1 (Flat terrain)
- Importance factor for cyclonic region, k4 : 1.0 (Non–cyclonic region)
- Wind directionality factor, kd : 1.0
- Area averaging factor, ka : 1.0
- Combination factor, kc : 1.0
- Factor of safety : 1.5
- Twist & sway limits : ±1.0 deg. at operational wind speed
- Shaft type : 20sided polygon

Shaft steel is of quality E350 grade and angle members are E250(A) grade conforming to IS: 2062–2006.

Bolts are of Grade 8.8 conforming to IS: 4000–1992 . All bolts are hexagon head bolts, screws and nuts.

All structural steel is hot–dip galvanized conforming to IS standards.

Anchor bolts shall confirm 5.6 grade.

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Original paper size A2

Rev.	Date	Signature	Checked	Approved	
1	2018-06-04	BALA	KV	KV	Additional 3Nos. of BBU's
	2018-05-29	BALA	KV	KV	

RAMBØLL

Project no. 18RIT-70 Scale: NTS

Rambøll
Monopoles

Layout for 12 & 15m Monopoles @ 170kmph