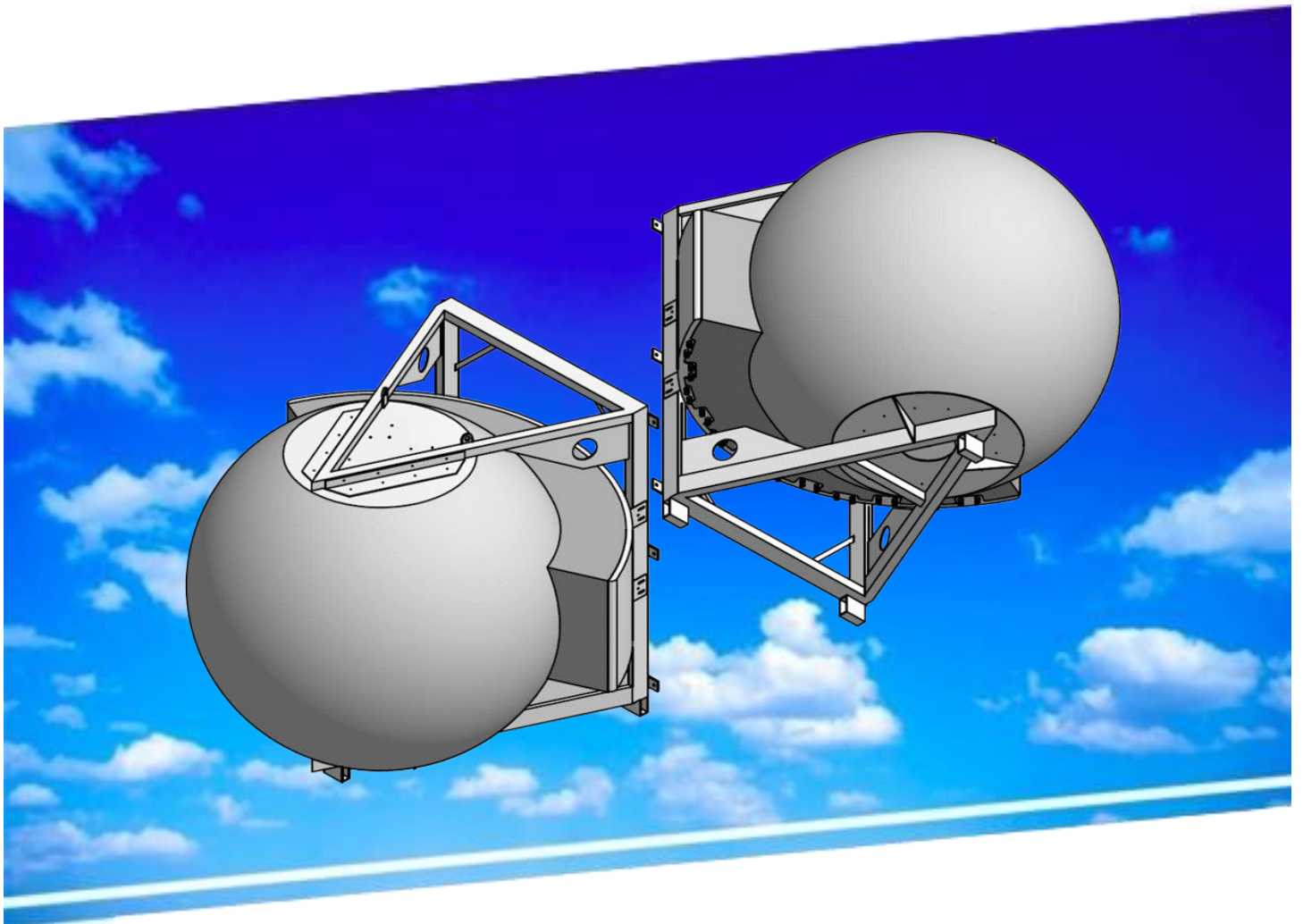


MATSING®

LENS TECHNOLOGY ENABLED

MS-12L180

Instruction Manual



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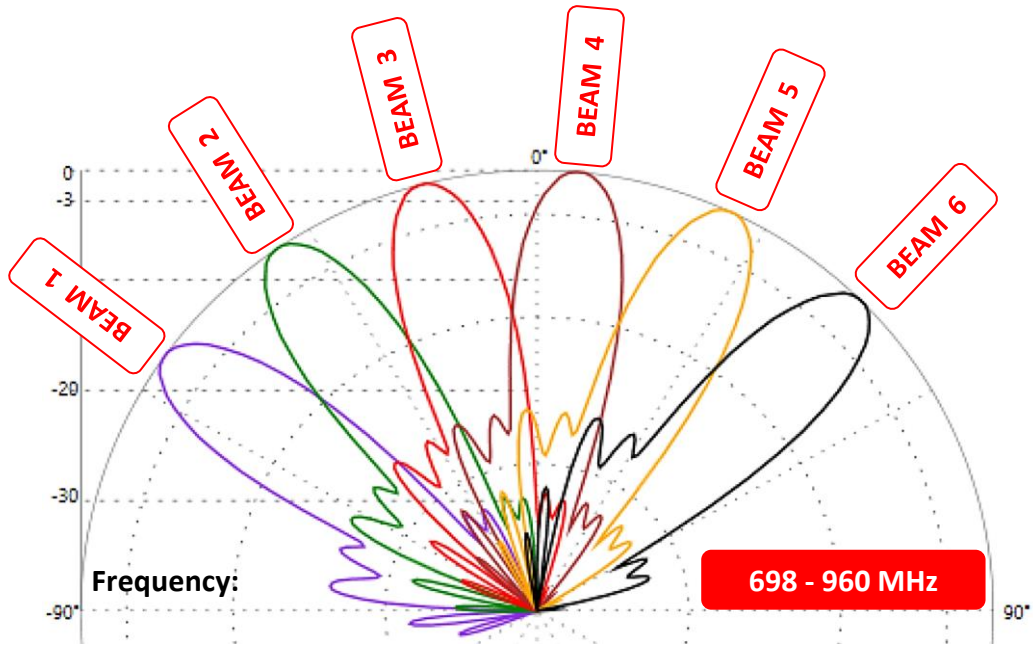
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Revision History:

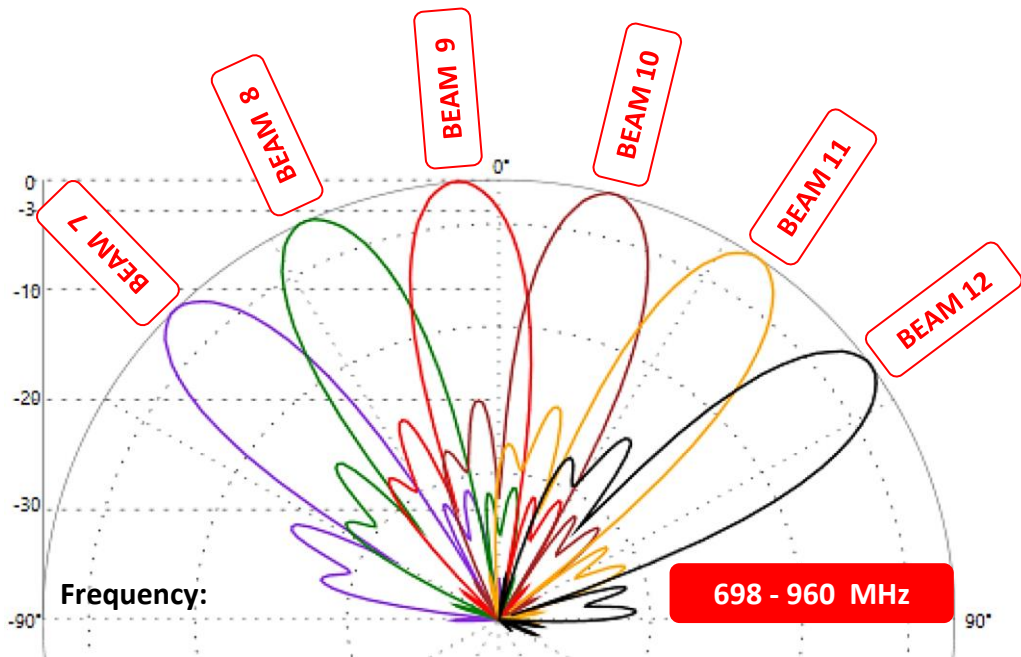
<u>Date</u>	<u>Description</u>	<u>Rev By</u>	<u>Check By</u>	<u>Rev no</u>
09-Jul-2021	Initial Release	RL	Pavel	0
05-May-2023	General update	RL	Pavel	1
14-May-2024	General update	RL	Pavel	2
09-May-2025	New cover update	RL	Pavel	3

1.00 Pattern diagram

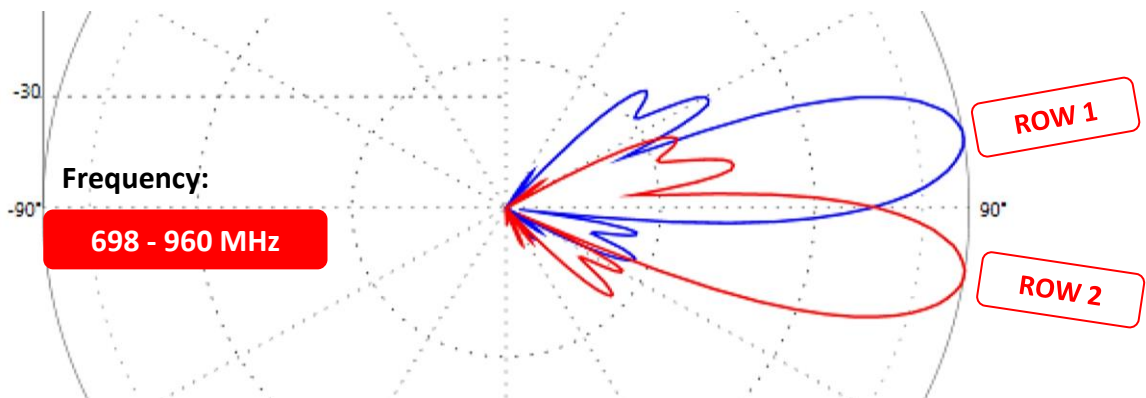
1.10 Horizontal pattern (Row 1)



1.20 Horizontal pattern (Row 2)

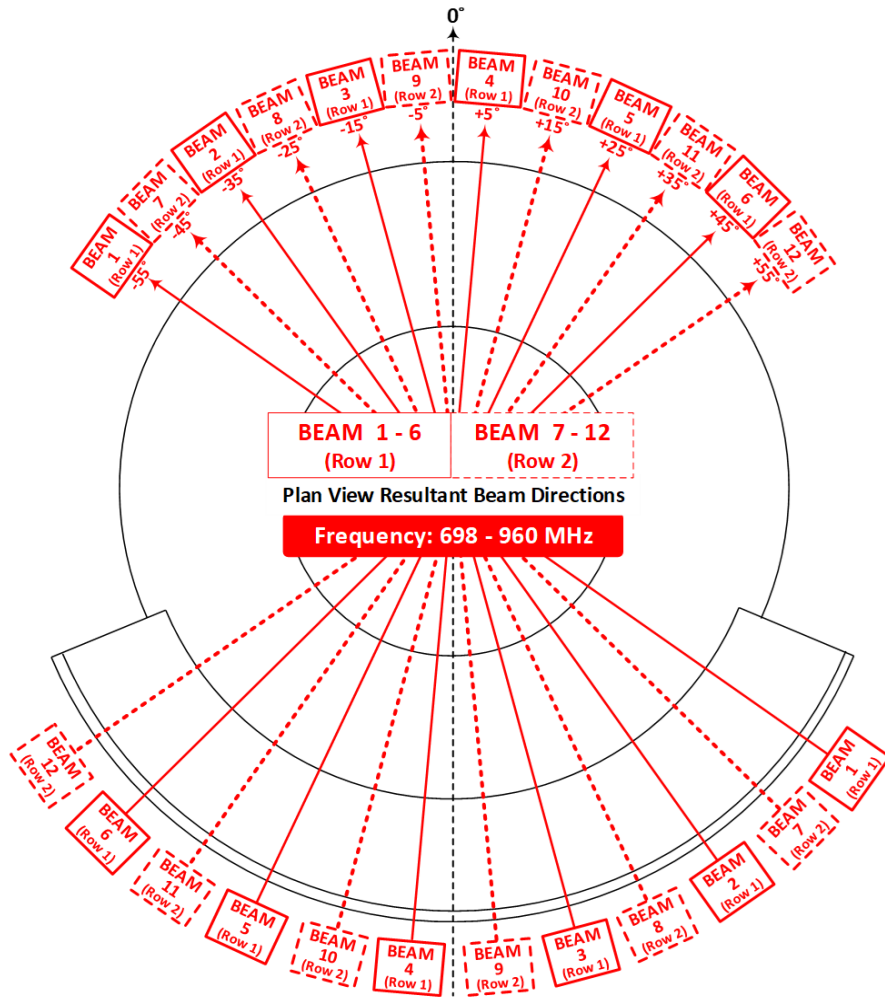


1.30 Vertical pattern



2.00 Beams and connectors

2.10 Plan view resultants beam direction

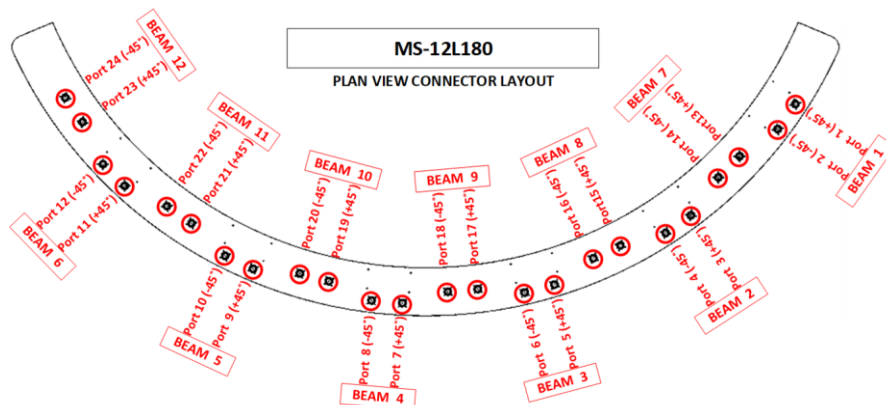


2.20 Connector port table

ROW 1											
BEAM 6		BEAM 5		BEAM 4		BEAM 3		BEAM 2		BEAM 1	
PORT 12	PORT 11	PORT 10	PORT 9	PORT 8	PORT 7	PORT 6	PORT 5	PORT 4	PORT 3	PORT 2	PORT 1
(-45°)	(+45°)	(-45°)	(+45°)	(-45°)	(+45°)	(-45°)	(+45°)	(-45°)	(+45°)	(-45°)	(+45°)

ROW 2											
BEAM 12		BEAM 11		BEAM 10		BEAM 9		BEAM 8		BEAM 7	
PORT 24	PORT 23	PORT 22	PORT 21	PORT 20	PORT 19	PORT 18	PORT 17	PORT 16	PORT 15	PORT 14	PORT 13
(-45°)	(+45°)	(-45°)	(+45°)	(-45°)	(+45°)	(-45°)	(+45°)	(-45°)	(+45°)	(-45°)	(+45°)

2.30 Plan view connector layout

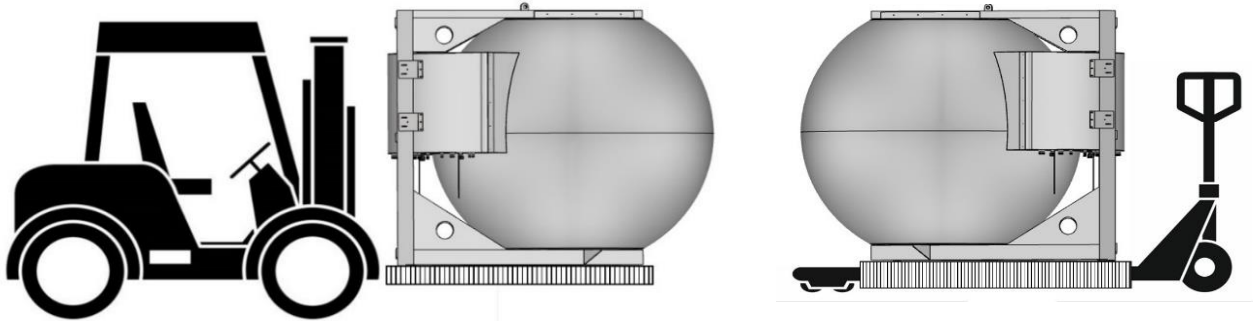


3.00 Transportation and installation

3.10 Transportation (From point to point)

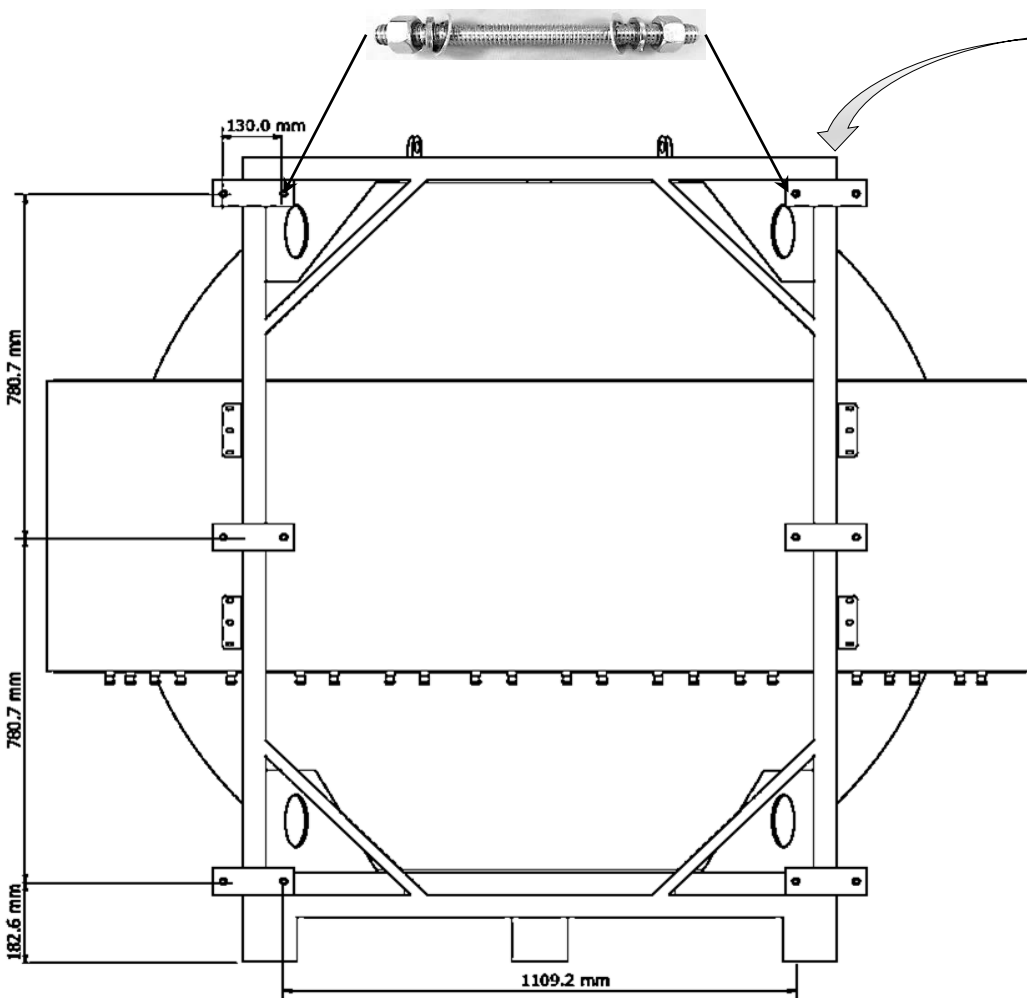
Strictly comply with the local authority and regulations on workplace safety and health control and measure when moving and transporting large or heavy equipment; an appropriate material handling machine should be used.

(Risk Assessment apply for Forklift or Pallet Truck Lifting)



3.20 Bracket mounting

Item	Lens Size	Holes Size	Bracket Qty	Bolt & Nuts Sets
1	180cm	Ø15mm x 12	6	M14 x 20cm = 12 Sets



Attached the bracket tighten with specified bolts sets.

Important Notes:
End User is require to Custom-Make the additional supporting bracket and tighten to the existing Antenna bracket to meet the deployment needs.

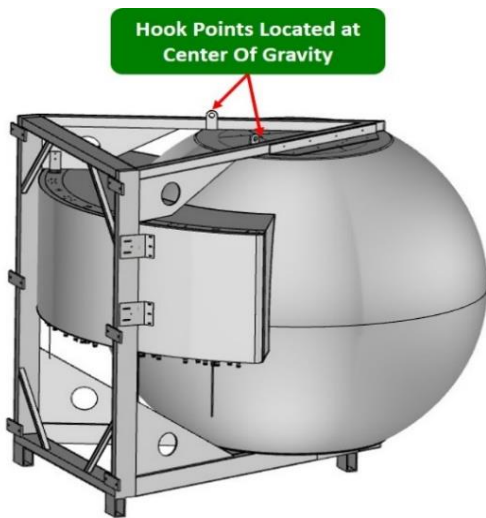
3.30 Installation using a crane

Strictly comply with the local authority and regulations on workplace safety, health control, and measures when performing lifting of large or heavy equipment; an appropriate material handling machine should be used, and only certified personnel should perform the task.

(The risk assessment requirement applies for both uplifting and down lifting.)

3.31 Lifting the antenna

The antenna has 2 hook points installed on the top frame (located slightly behind the center of the sphere). These hooks are designed at the center of gravity of the antenna. A cable and rope can be securely fastened to the hooks, and the antenna can be lifted using a crane, as pictured below.

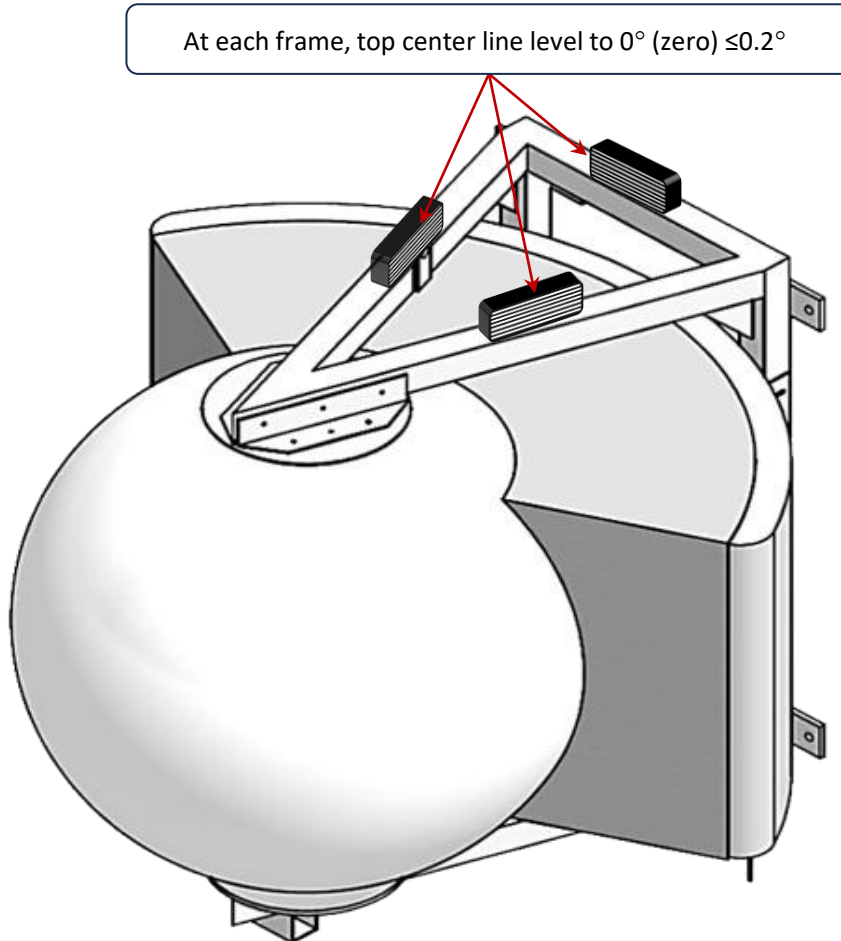


3.40 Antenna Installation

With reference to the "bracket mounting" procedure, the end user is required to custom-make the additional supporting bracket and tighten it to the existing antenna bracket to meet the deployment needs.

3.41 Antenna Levelling (After Installation)

After the antenna is mounted to the bracket, it is required to be adjusted to 0° (zero degree) with $\leq 0.2^\circ$ on 3 sides of the frame top level. (rear, right, and left, as shown in picture)



3.42 Digital level gauge calibration

Calibrate to ZERO Level



3.43 Adjustment requirement

Level with $\leq 0.2^\circ$ = ACCEPTED



ANTENNA LEVELING ACCEPTED

Level with $\geq 0.3^\circ$ = NEED ADJUST



REQUIRE ADJUSTMENT

