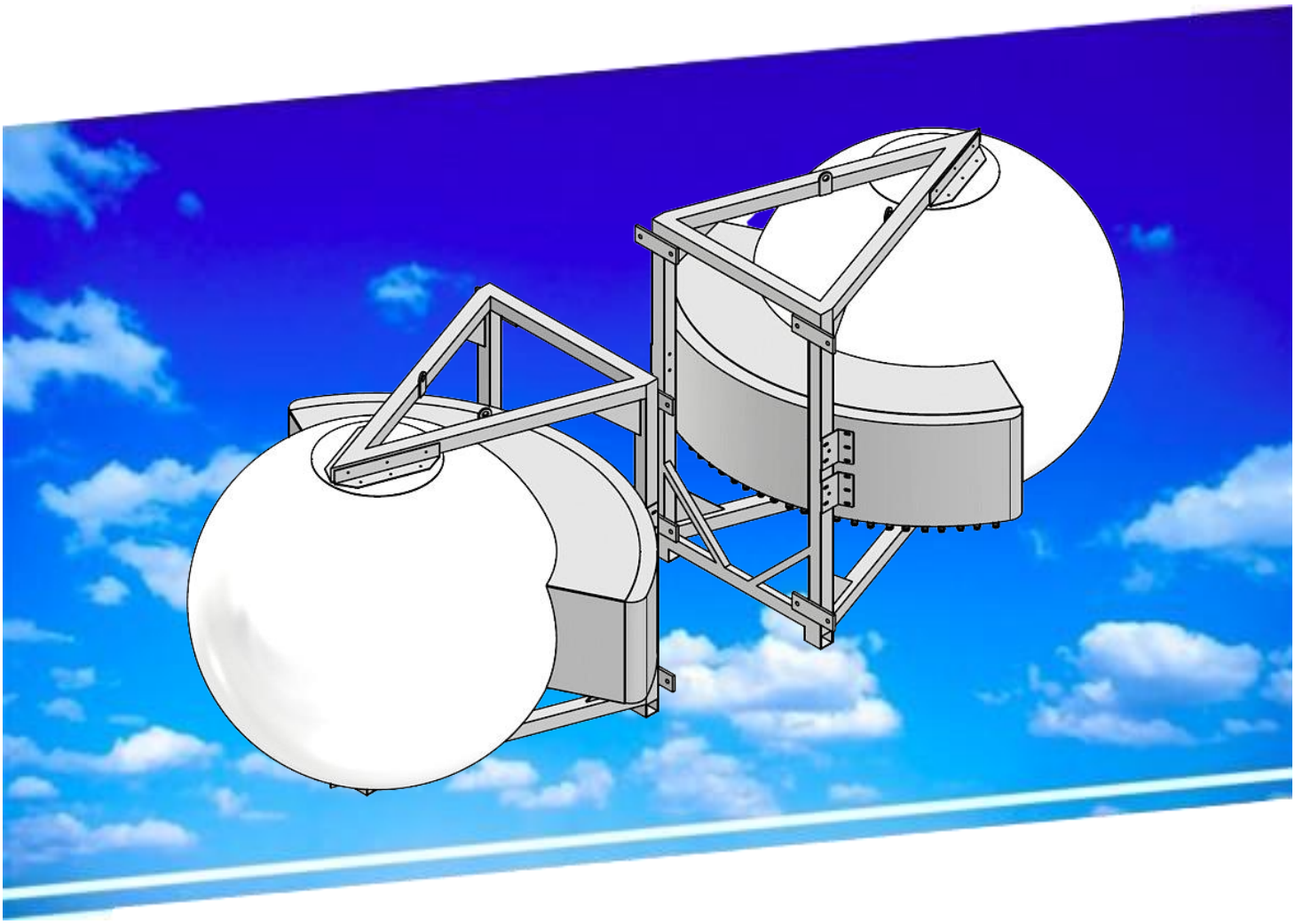
MATSING®

LENS TECHNOLOGY ENABLED

# MS-16H-120-FT

## Instruction Manual



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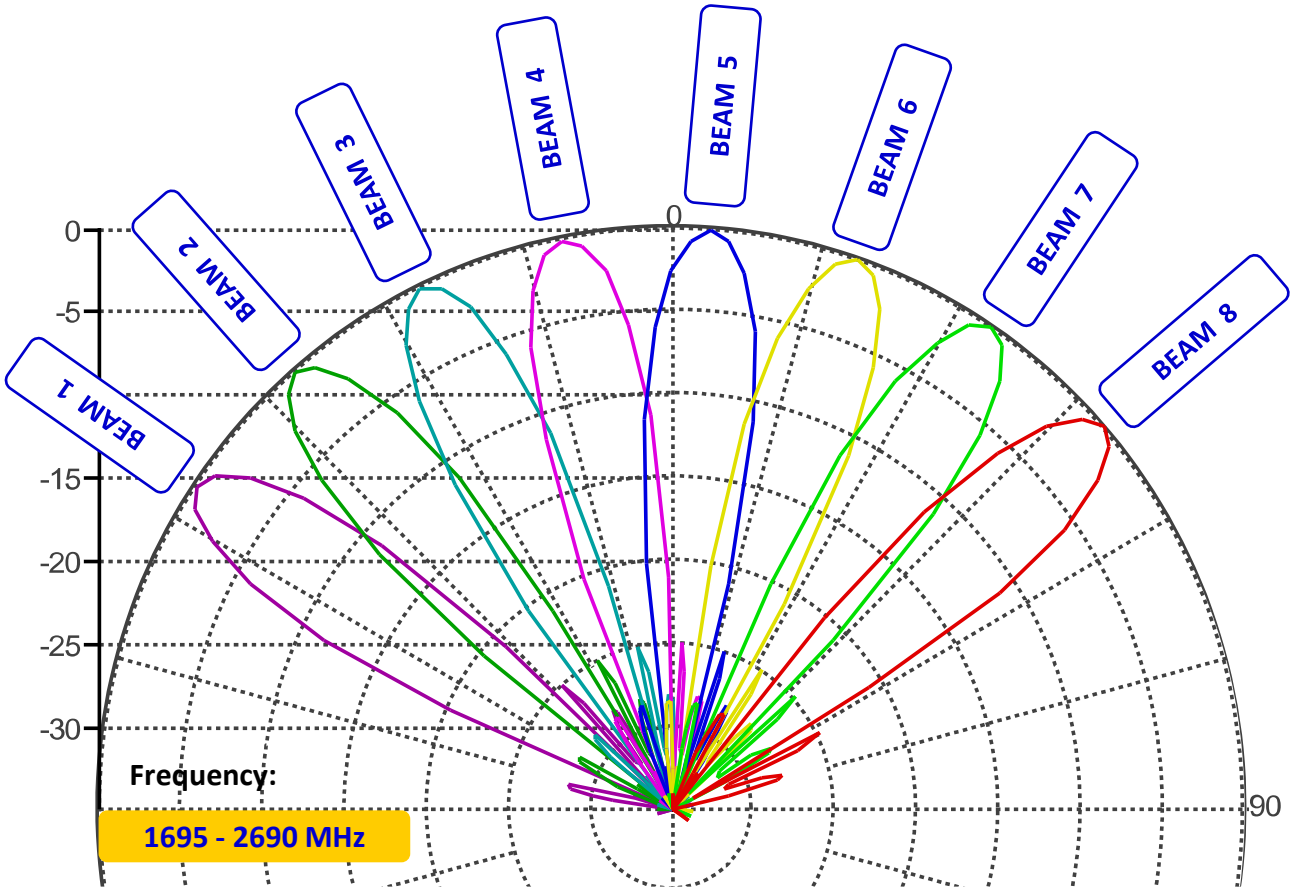
*Revision History:*

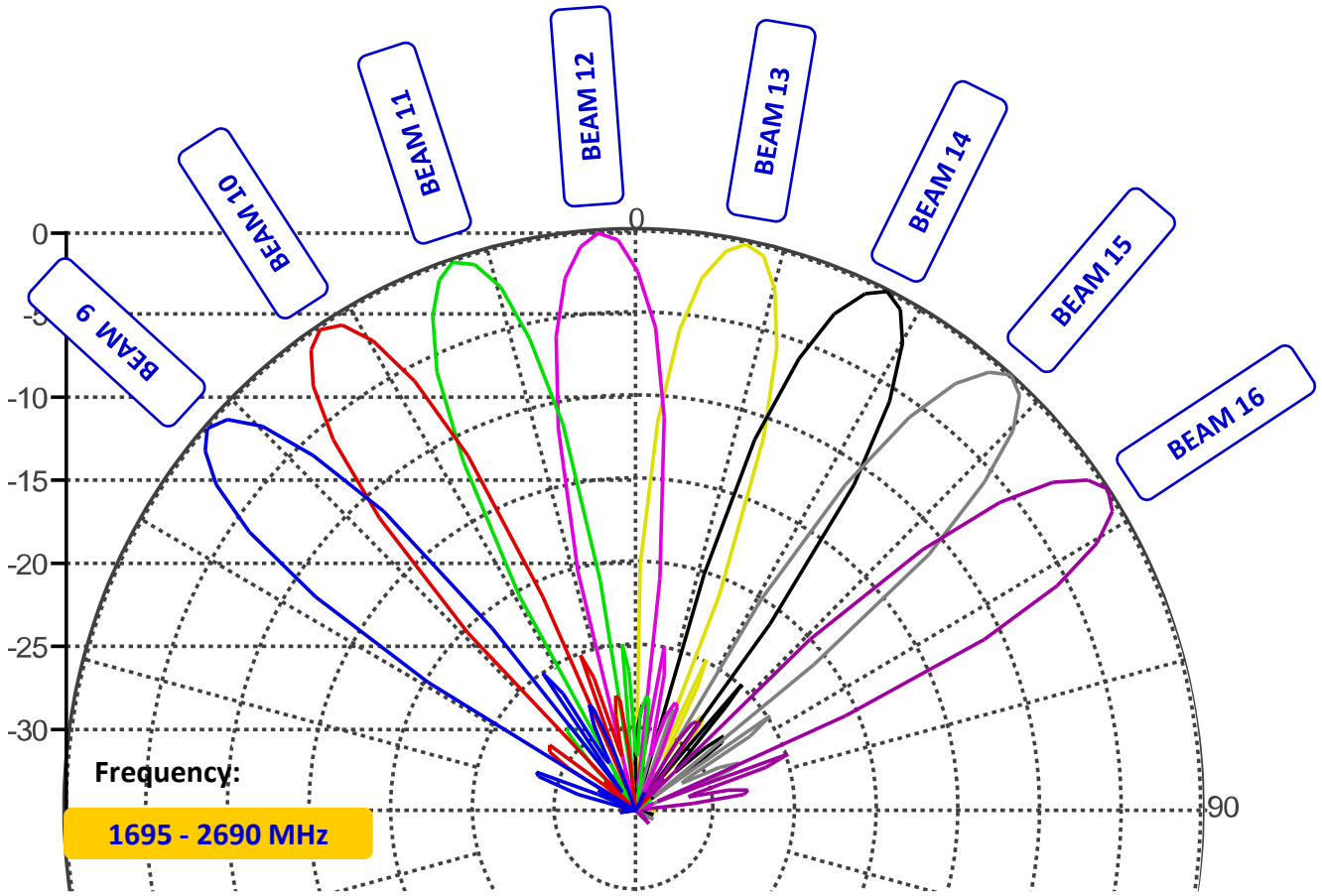
| *Date* | *Description* | *Rev By* | *Check By* | *Rev no* |
|---|---|---|---|---|
| *13-Mar-2026* | *Initial Release* | *RL* | *Pavel* | *0* |
| | | | | |

## 1.00 Pattern diagram

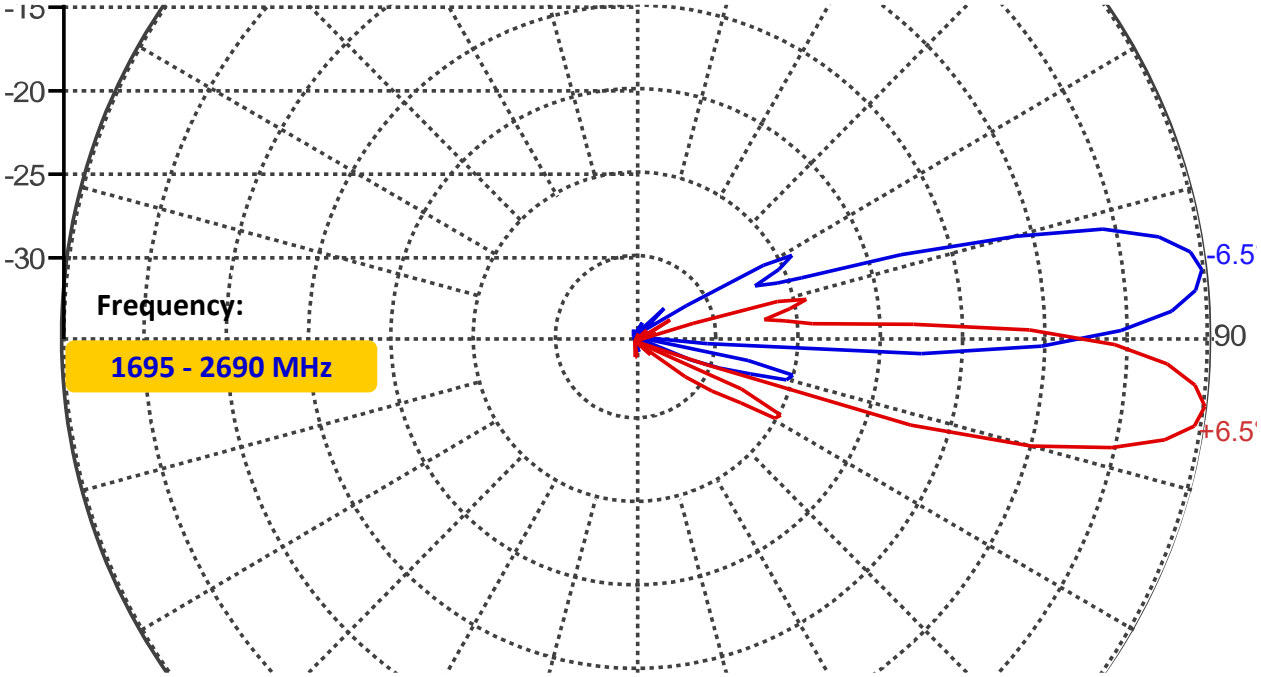
1.10 Horizontal pattern (Top row)




1.20 Horizontal pattern (Bottom row)

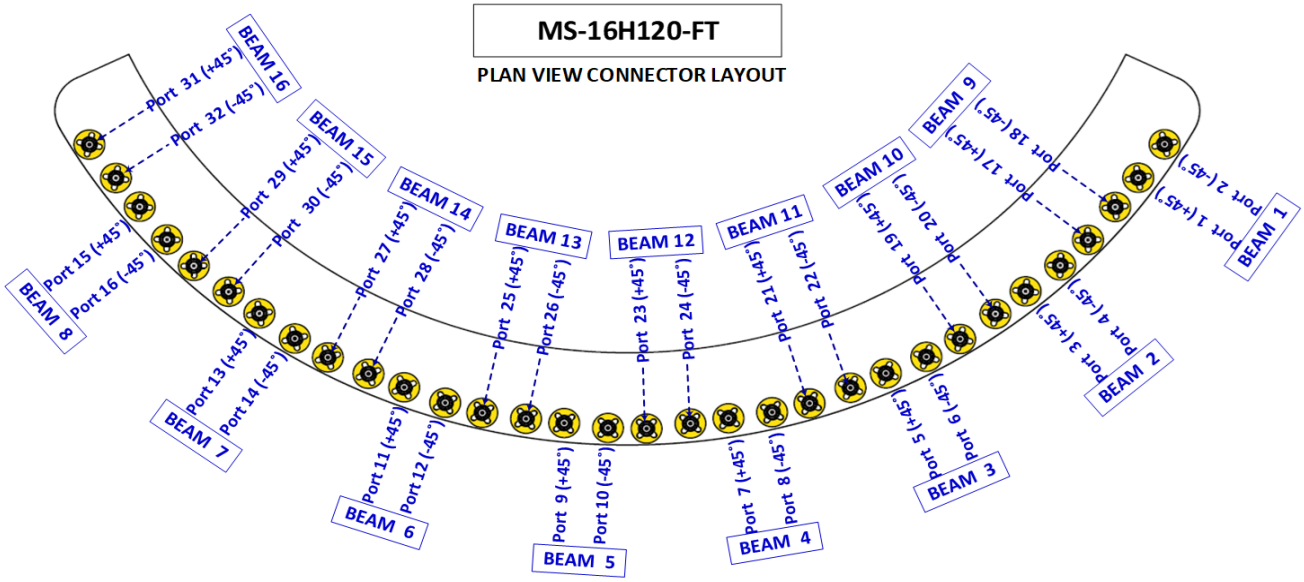


1.30 Vertical pattern




## 2.00 Beams and connectors

2.10 Connector layout

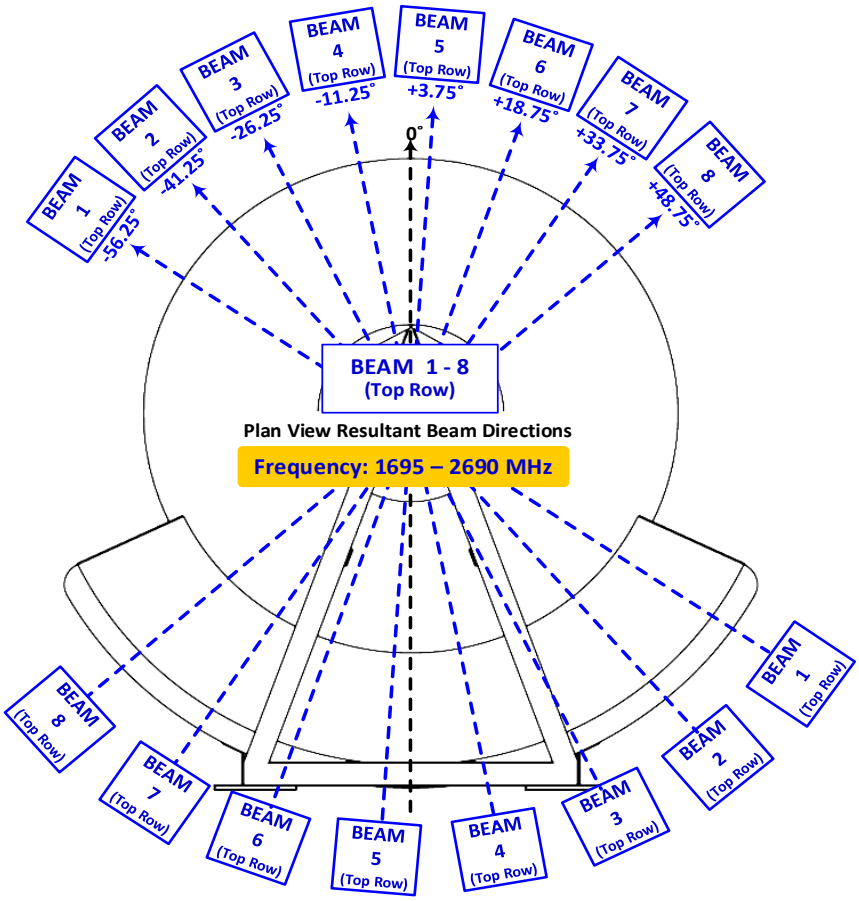



2.20 Connector port table

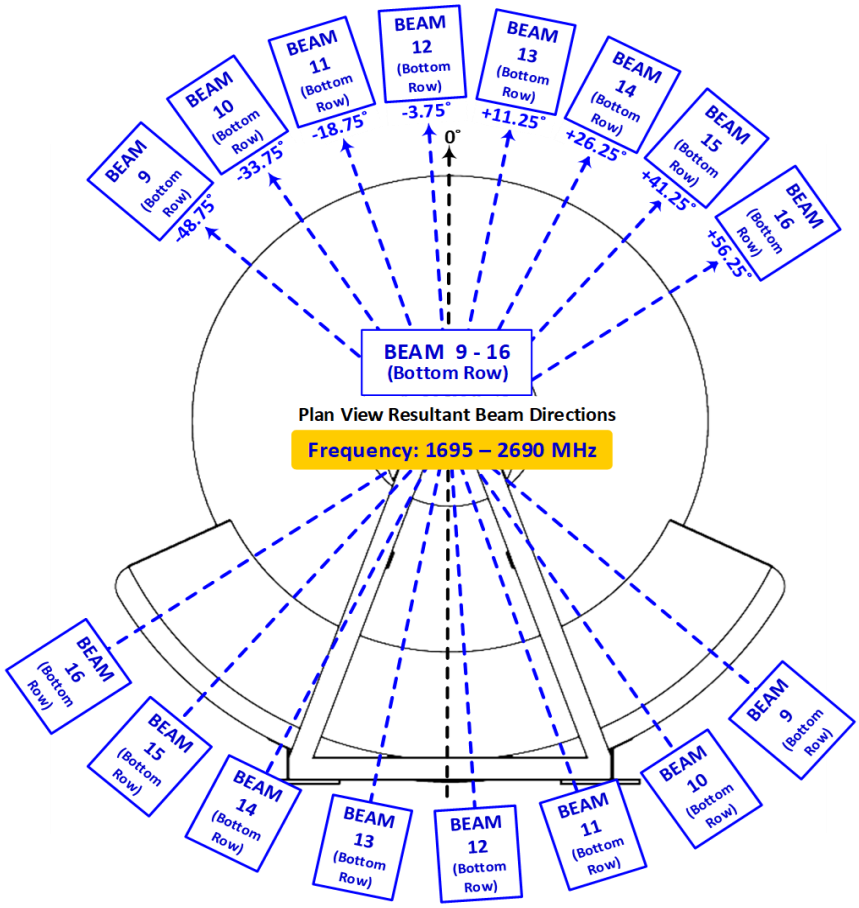
| BEAM 16 | | BEAM 15 | | BEAM 14 | | BEAM 13 | | BEAM 12 | | BEAM 11 | | BEAM 10 | | BEAM 9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PORT 31 (+45°) | PORT 32 (-45°) | PORT 29 (+45°) | PORT 30 (-45°) | PORT 27 (+45°) | PORT 28 (-45°) | PORT 25 (+45°) | PORT 26 (-45°) | PORT 23 (+45°) | PORT 24 (-45°) | PORT 21 (+45°) | PORT 22 (-45°) | PORT 19 (+45°) | PORT 20 (-45°) | PORT 17 (+45°) | PORT 18 (-45°) |

| BEAM 8 | | BEAM 7 | | BEAM 6 | | BEAM 5 | | BEAM 4 | | BEAM 3 | | BEAM 2 | | BEAM 1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PORT 15 (+45°) | PORT 16 (-45°) | PORT 13 (+45°) | PORT 14 (-45°) | PORT 11 (+45°) | PORT 12 (-45°) | PORT 9 (+45°) | PORT 10 (-45°) | PORT 7 (+45°) | PORT 8 (-45°) | PORT 5 (+45°) | PORT 6 (-45°) | PORT 3 (+45°) | PORT 4 (-45°) | PORT 1 (+45°) | PORT 2 (-45°) |

2.30 Plan view beam direction (Top row)




2.40 Plan view beam direction (Bottom row)

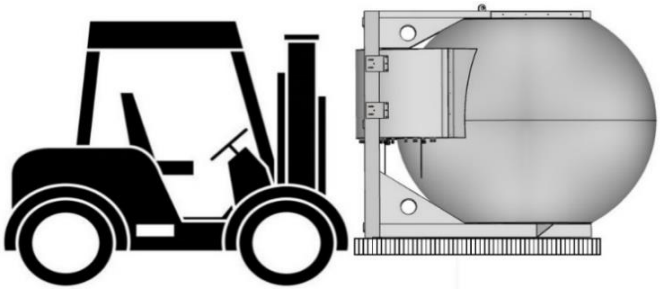


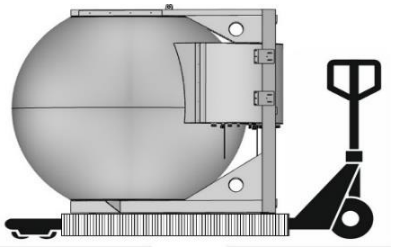
## 3.00 Transportation and installation

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.

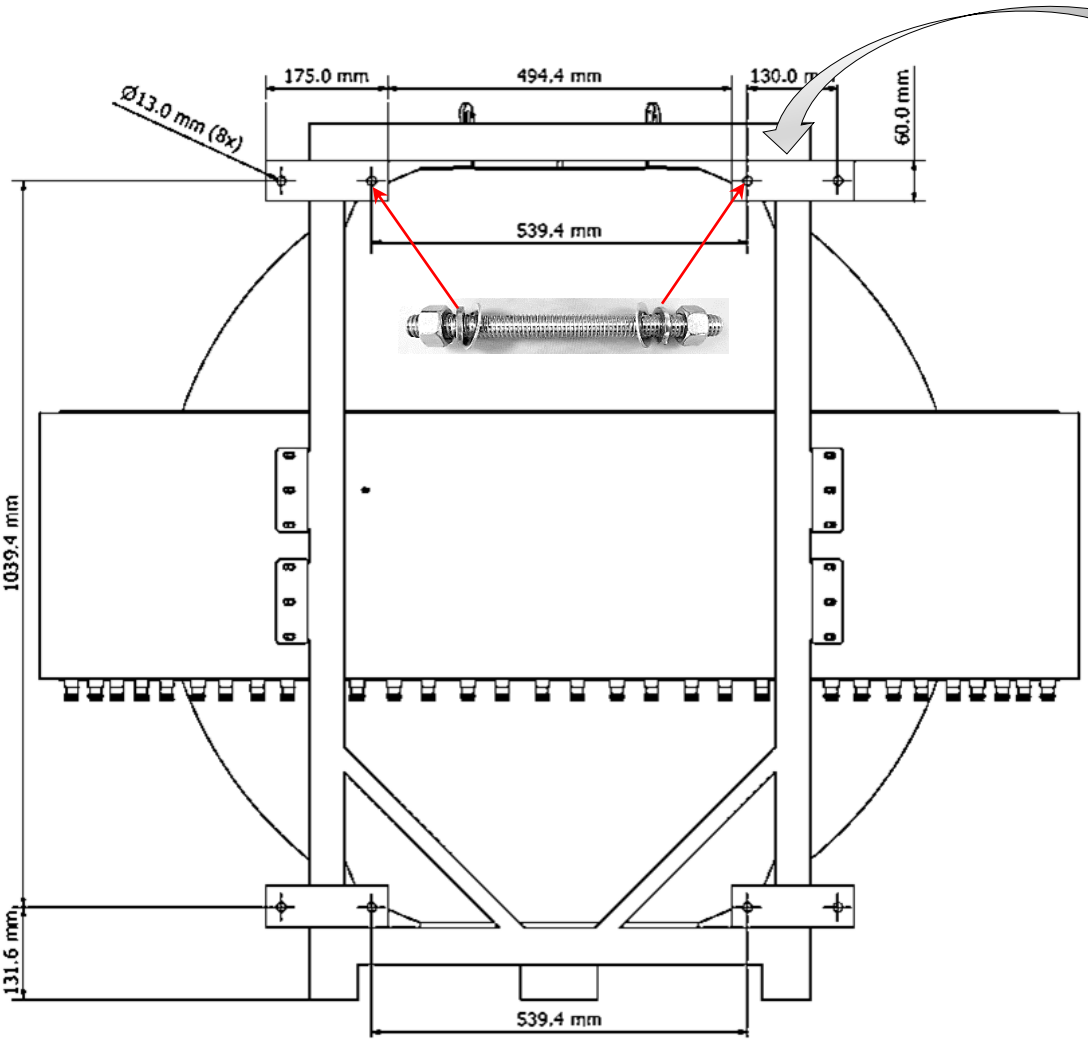
**(Risk Assessment apply for Forklift or Pallet Truck Lifting)**





3.20 Bracket mounting

| Item | Lens Size (cm) | Holes Size | Bracket Qty | Bolt & Nuts Sets |
|---|---|---|---|---|
| 1 | 30 to 120 | Ø13mm x 8 | 4 | M12 x 20cm = 8 Sets |




Attached the bracket tightened with specified bolt sets

***Important Notes:***
The end user is required to customize the additional supporting bracket and tighten the existing antenna bracket to meet the deployment needs.

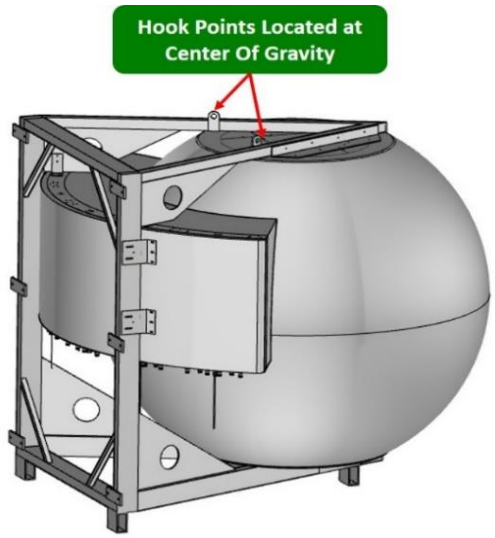
### 3.30 Installation using a crane

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.

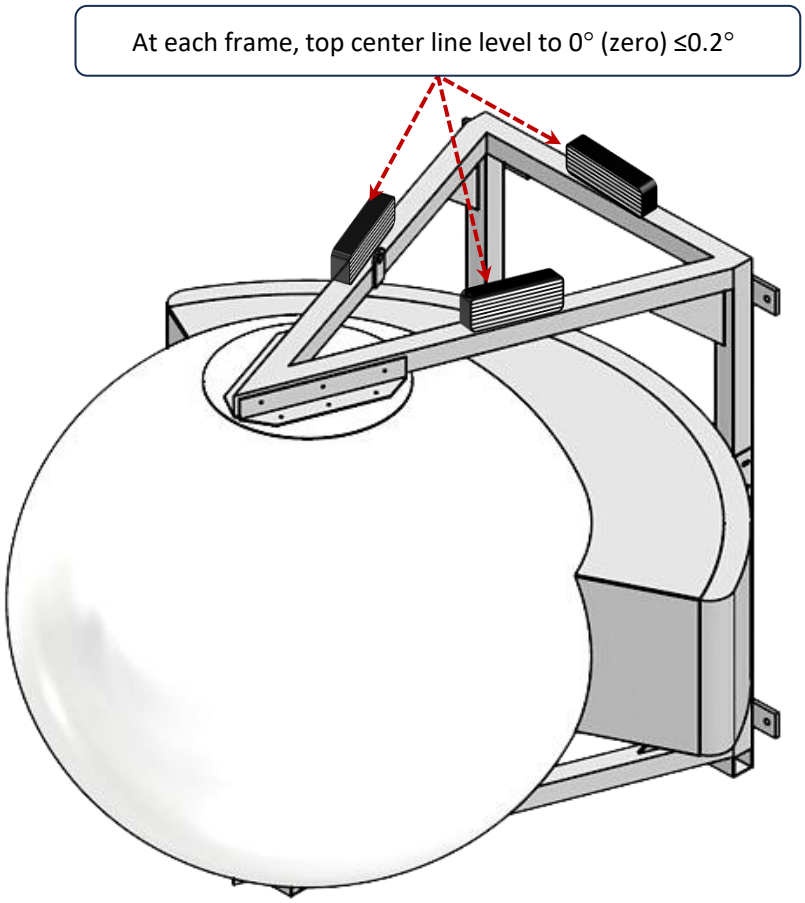



3.40 Antenna Installation

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 ≤0.2˚ on 3 sides of the frame top level. (rear, right, and left, as shown in picture)




3.42 Digital level gauge calibration


3.43 Adjustment requirement