

Date	Prepared by	Approved by	Document nos	Revision
1 Jul 2021	Ray Ling	Pavel	MS-12H180-IM-001	1

INSTRUCTION MANUAL MS-12H180

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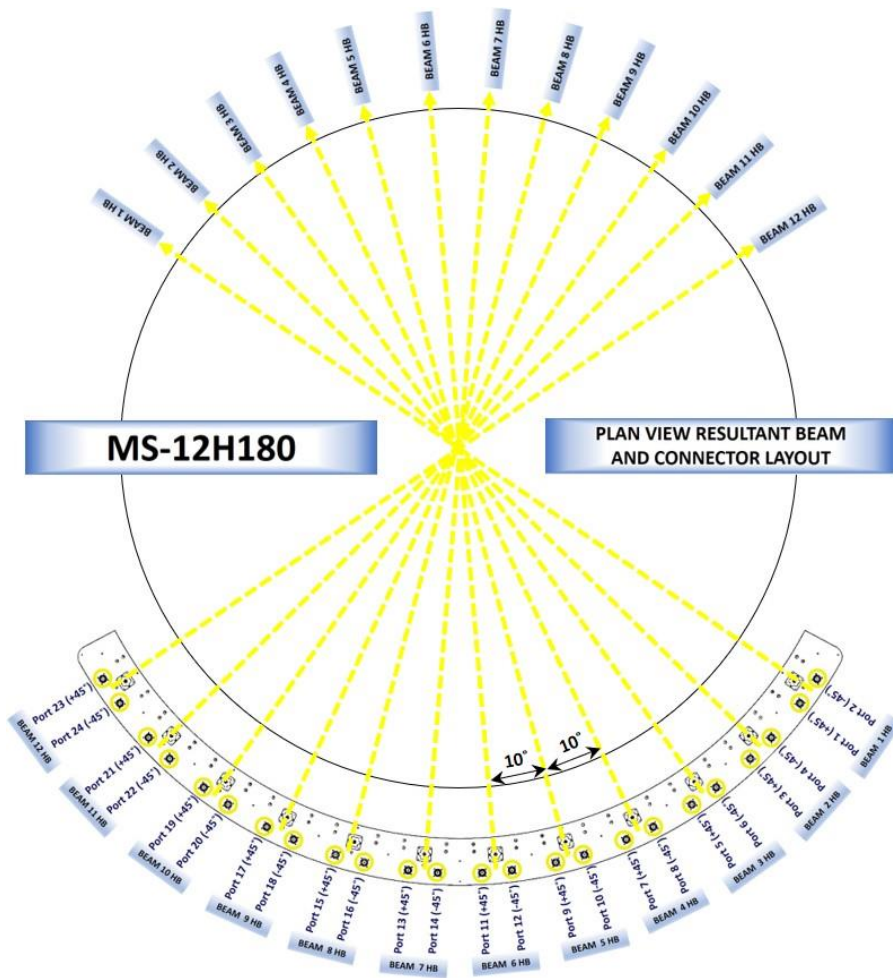
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Revision History:

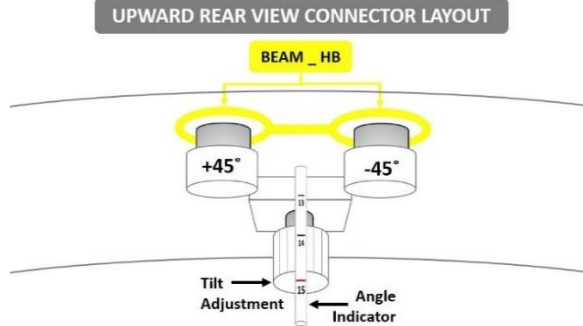
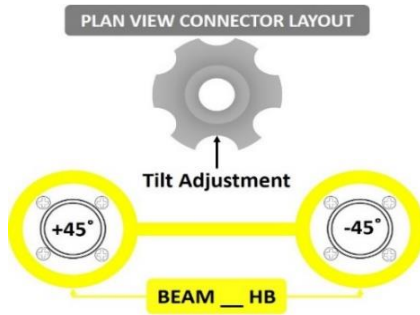
Date	Description	Revised by	Revision nos.
01-Jul-21	To include additional OPEN END bolt and nut sets for bracket mounting and Leveling of Antenna.	Ray Ling	1

1.00 BEAMS & CONNECTORS:

1.10 Plan View Resultant Beam And Connector Layout



1.20 HB Connector



1.30 Connector Ports Table

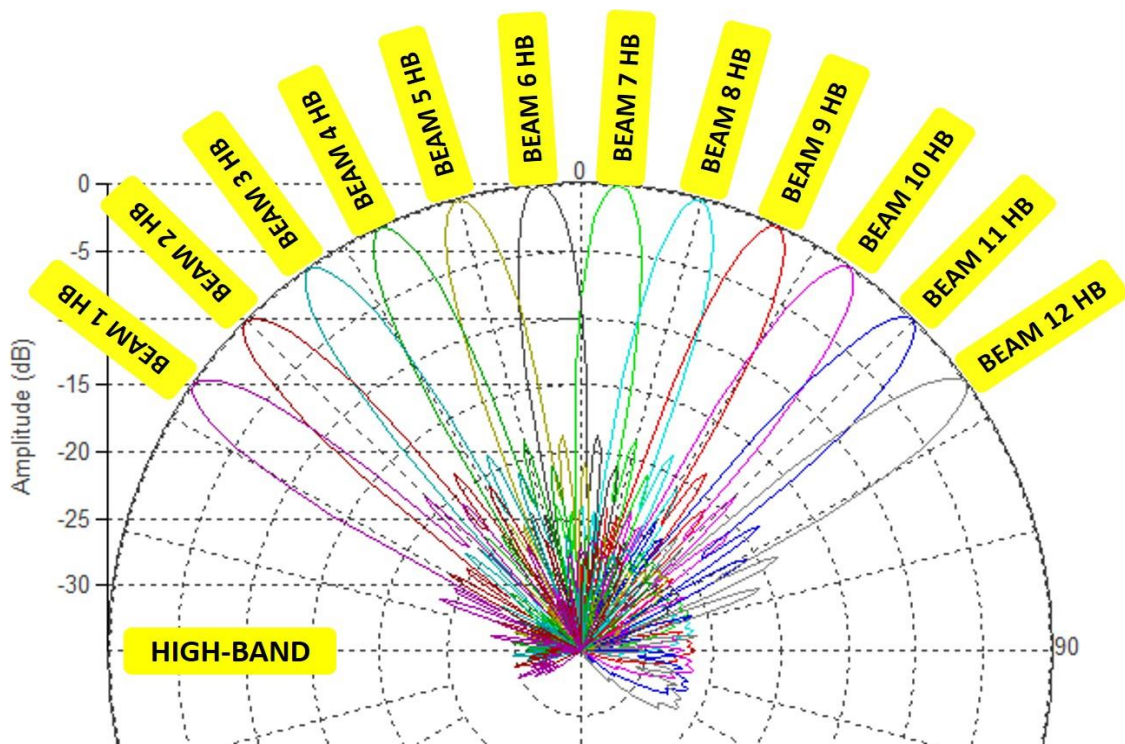
BEAM 6 HB	BEAM 5 HB	BEAM 4 HB	BEAM 3 HB	BEAM 2 HB	BEAM 1 HB
Port 11 (+45°)	Port 12 (-45°)	Port 9 (+45°)	Port 10 (-45°)	Port 7 (+45°)	Port 8 (-45°)
Port 5 (+45°)	Port 6 (-45°)	Port 3 (+45°)	Port 4 (-45°)	Port 1 (+45°)	Port 2 (-45°)

Rear View Left ← Continue BEAM 7 HB → Rear View Right

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

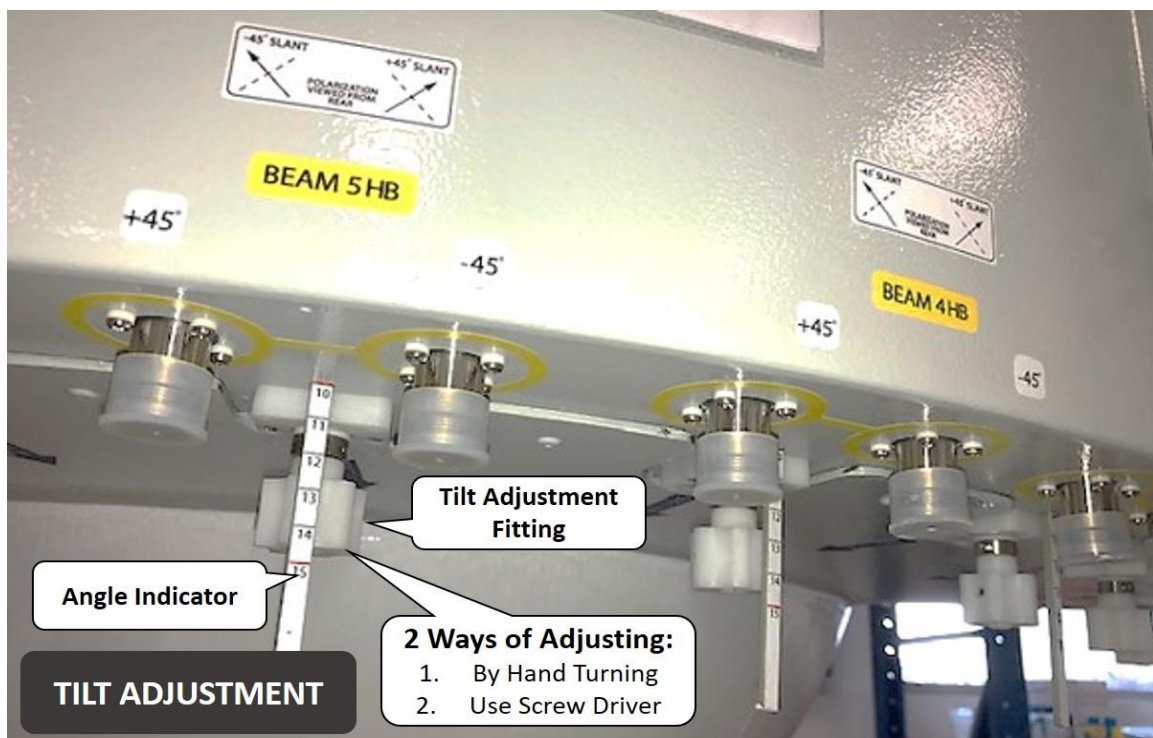
2.00 PATTERN DIAGRAM

2.10 High Band



3.00 MANUAL TILT ADJUSTMENT

There are 2 ways of adjustment: 1. By Hand turning. 2. Use Screw Driver as shown in pictured below. When using this method, please be extra careful not to adjust tilt beyond the 0-15° tilt range, as there is no restrictor on the tilt knob.

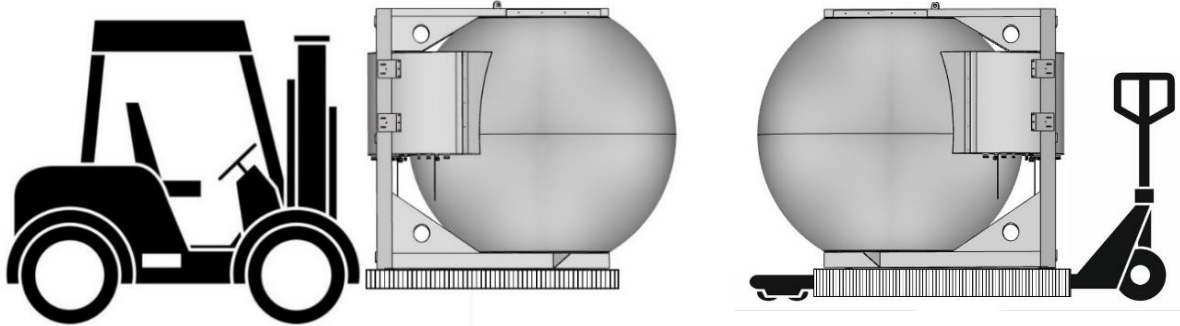


4.00 TRANSPORTATION / INSTALLATION

4.10 Transportation (From Point to Point)

Strictly comply to the Local authority and regulatory on Workplace Safety and Health Control and Measure when moving and transportation of large or heavy equipment, appropriate material handling machine should be use.

(Risk Assessment apply for Forklift or Pallet Truck Lifting)



4.20 Bracket Mounting

Lens Size (Model)	Bracket Qty (pc)	OPEN End Bolt & Nut Sets	ONE End Bolt & Nut Sets
MS-XXX180 Lens	6	M14 x 15cm=4sets	M14 x 15cm=12sets

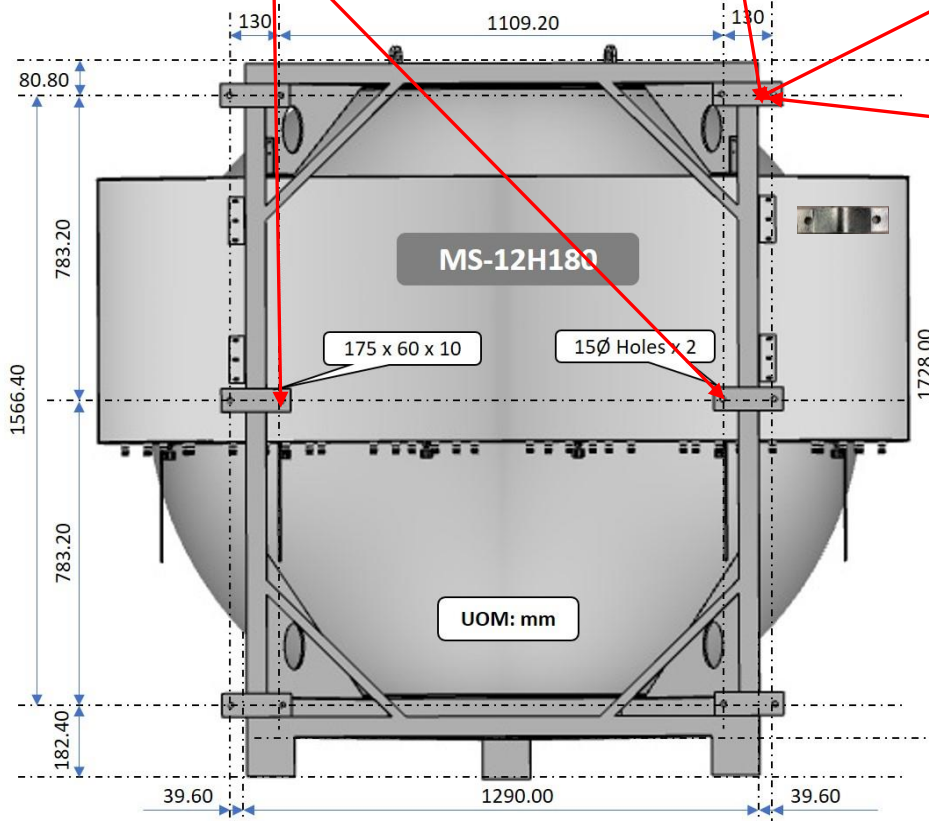
OPEN End Bolts Sets



ONE End Bolts Sets



Bracket



Tighten to the pole with Bolt & Nuts Sets

Important Notes:

End User is required to CUSTOM-MAKE the additional supporting bracket and tighten it to the existing Antenna bracket to meet the deployment needs.

4.30 Installation using a crane

Strictly comply to the Local authority and regulatory on Workplace Safety and Health Control and Measure when performing lifting of large or heavy equipment, appropriate material handling machine should be use and only certified personal should perform the task. **(Risk Assessment require to apply for both Up-Lifting and Down-Lifting.)**

4.31 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 point of the antenna. A cable, rope can be securely fastened to the hooks and the antenna can be lifted using a crane or forklift as pictured below.

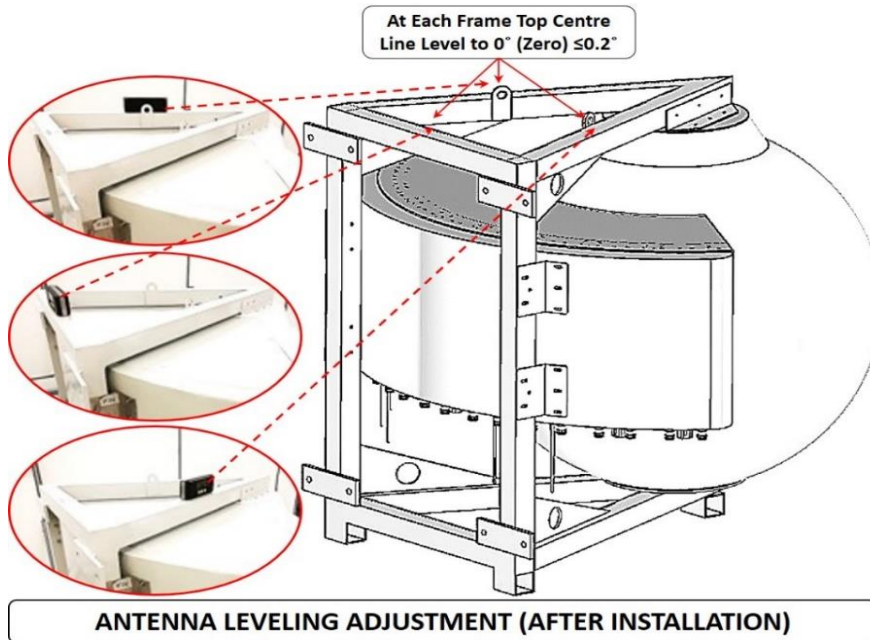


4.40 Antenna Installation

With reference to "**Bracket Mounting**" Procedure, End user is required to Custom-Make the additional supporting bracket and tighten it to the existing Antenna bracket to meet the deployment needs.

4.41 Antenna Levelling

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 & Left=As shown in picture)



4.42 Digital Level Gauge Calibration



4.43 Adjustment Requirement

