Applicable Model: MS-6.3DB90, MS-6.3DB90-T

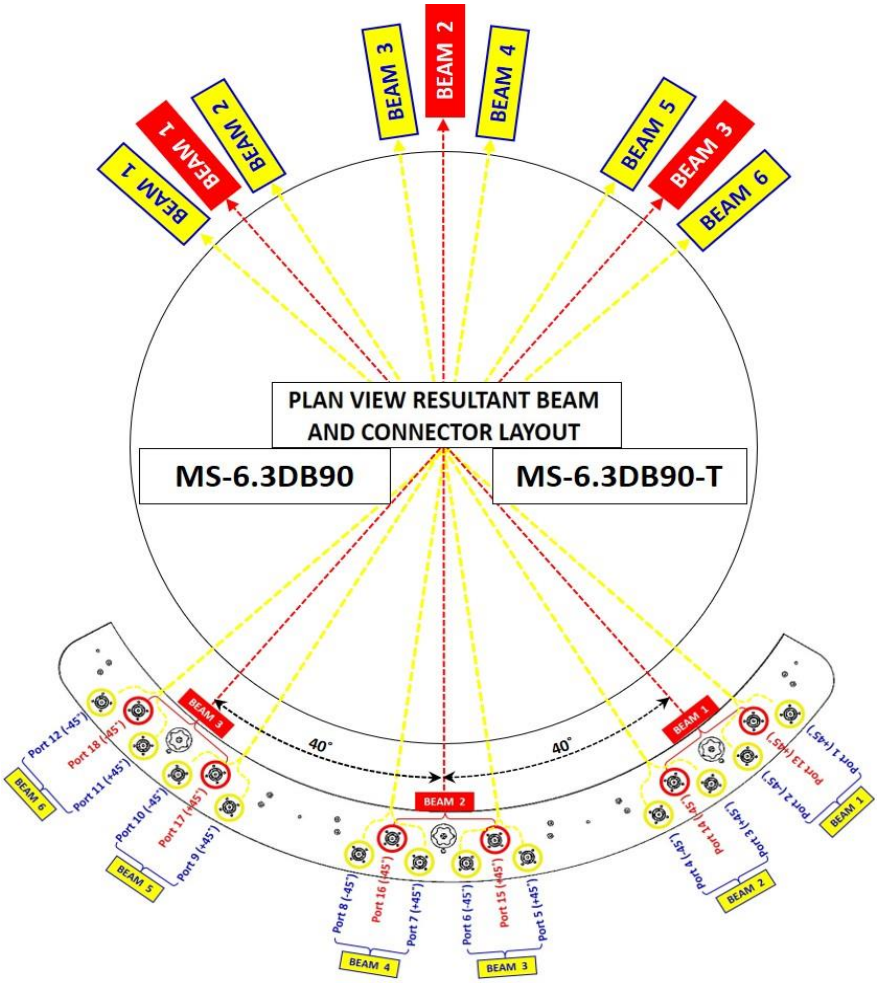
TABLE OF CONTENTS:

Revision History:

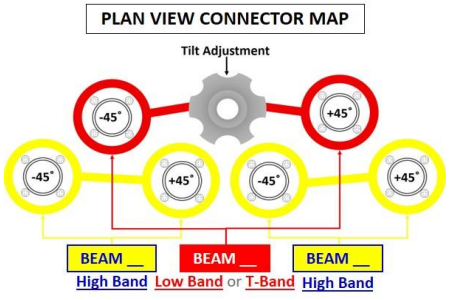
Date	Description	Revised by	Revision nos.
19-May-20	To include MS-6.3DB90-T and update all to newest requirement.	Ray Ling	1

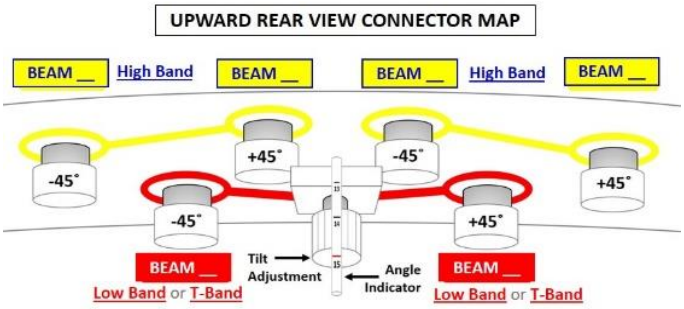
1.00 BEAMS & CONNECTORS:

1.10 Plan View Resultant Beam And Connector Layout



1.20 Connector Detail





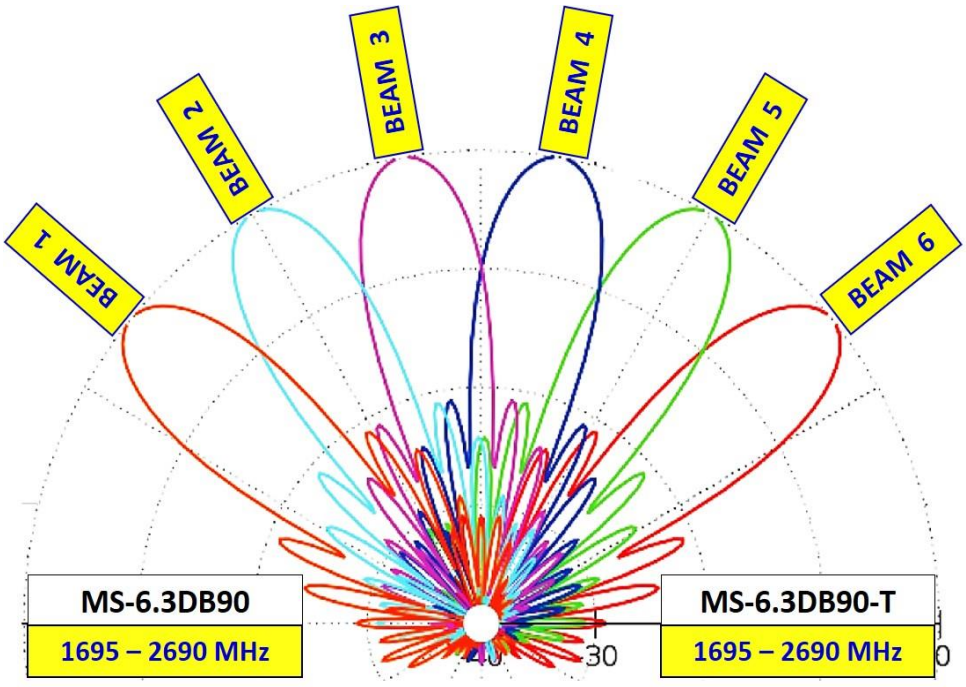
1.30 Connector Ports Table

Low Band or T-Band	BEAM 3				BEAM 2				BEAM 1			
	Port 18 (-45°)		Port 17 (+45°)		Port 16 (-45°)		Port 15 (+45°)		Port 14 (-45°)		Port 13 (+45°)	
High Band	BEAM 6		BEAM 5		BEAM 4		BEAM 3		BEAM 2		BEAM 1	
	Port 12 (-45°)	Port 11 (+45°)	Port 10 (-45°)	Port 9 (+45°)	Port 8 (-45°)	Port 7 (+45°)	Port 6 (-45°)	Port 5 (+45°)	Port 4 (-45°)	Port 3 (+45°)	Port 2 (-45°)	Port 1 (+45°)

2.00 PATTERN DIAGRAM

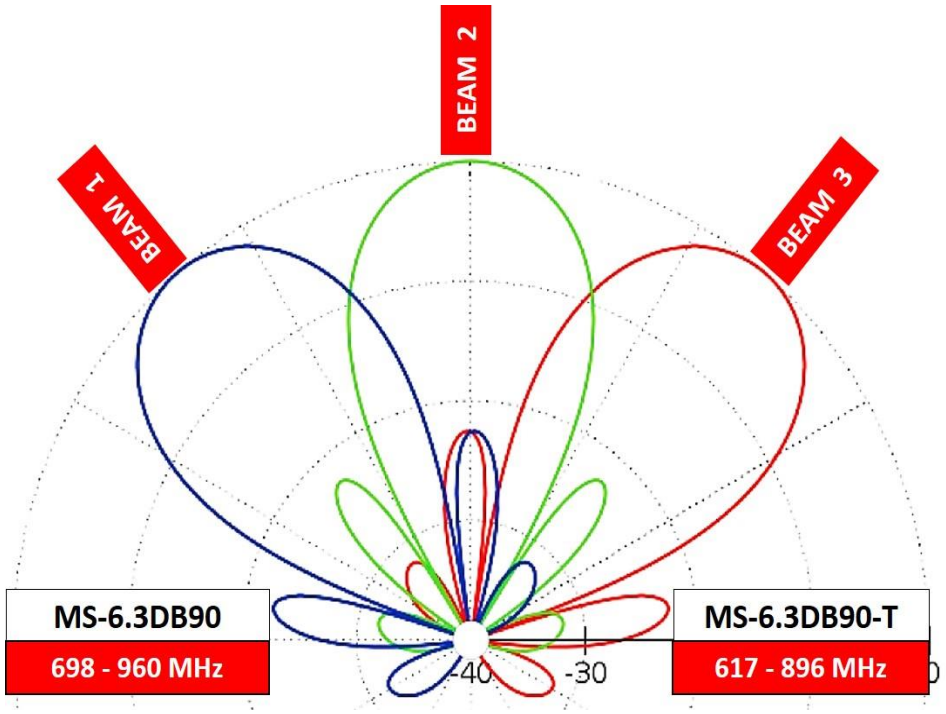
2.10 High Band **2.11 MS-6.3DB90 (Frequency: 1695 - 2690 MHz)**

2.12 MS-6.3DB90-T (Frequency: 1695 - 2690 MHz)



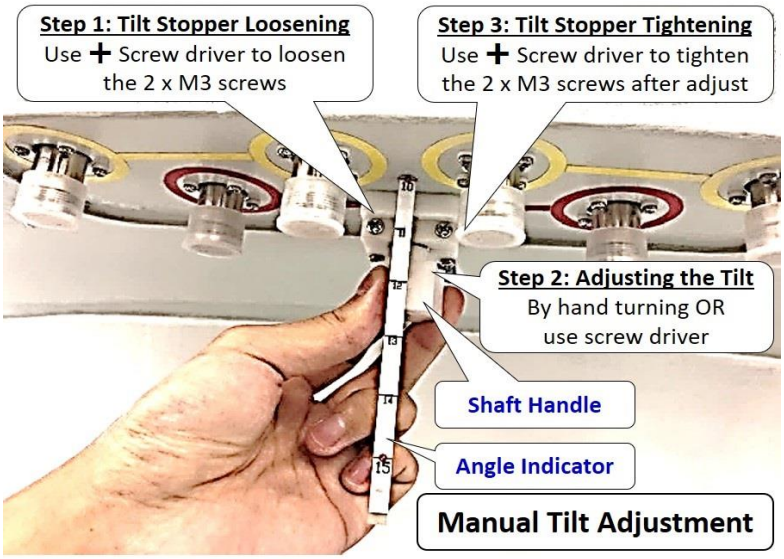
2.20 Low Band **2.21 MS-6.3DB90 (Frequency: 698 - 960 MHz)**

2.30 T Band **2.31 MS-6.3DB90-T (Frequency: 617 - 896 MHz)**



3.00 MANUAL TILT ADJUSTMENT

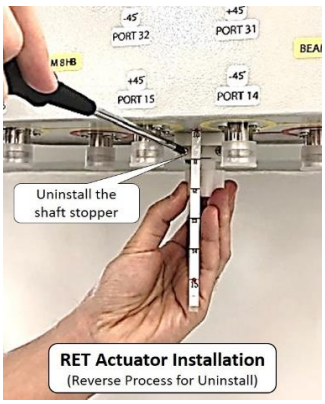
Step 1: Tilt Stopper Loosening. Step 2: Adjusting the Tilt. Step 3: Tilt Stopper Tightening.



4.00 RET ACTUATOR INSTALLATIONS (Optional)

4.10 Installation Process (Reverse Process for Uninstallation)

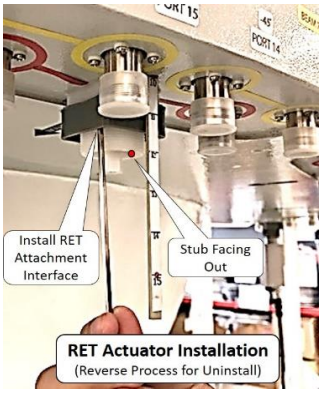
Step 1: Uninstall the Shaft stopper



Step 2: Uninstall the Shaft Handle

Step 3: Install the Hex adaptor and screw it on

Step 4: Install the RET attachment interface

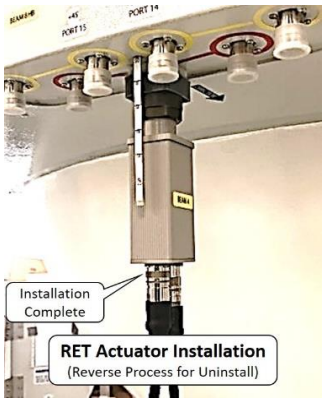


Step 5: RET Actuator stub gap facing out

Step 6: RET Actuator Tighten to RET attachment interface

Step 7: Screw and tighten RET cable

Step 8: RET Actuator installation complete.



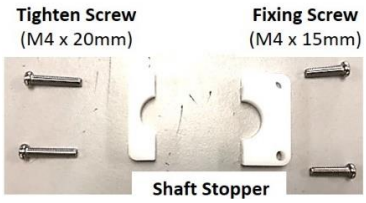
4.20 RET Actuator kit and tools

RET Attachment Interface (Sub-Assy)

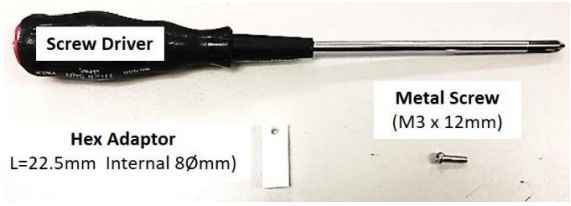
RET Attachment Interface (Sub-Assy)

RET Attachment Interface Kits

Shaft Stopper



Hex Adaptor



Shaft Handle

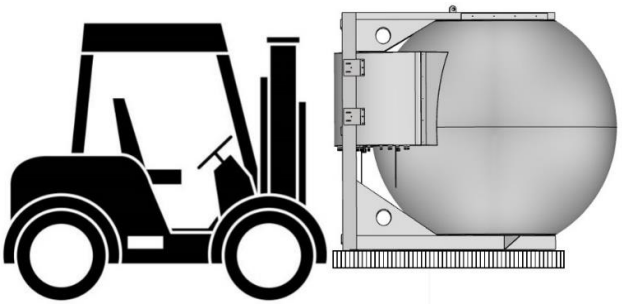
RET Actuator

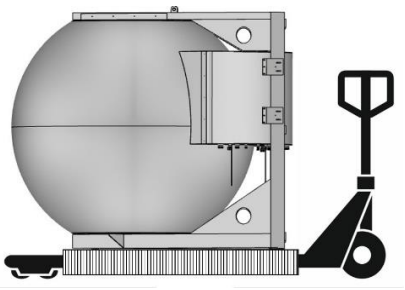
RET cable

5.00 TRANSPORTATION / INSTALLATION

5.10 Transportation (From Point to Point)

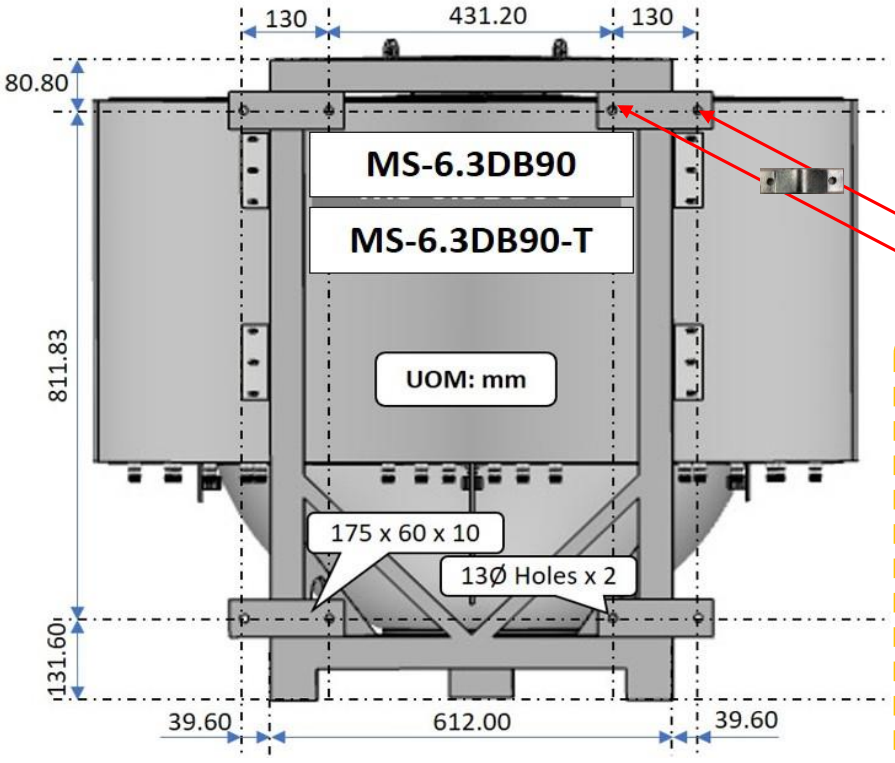
Strictly comply to the Local authority and regulatory on Workplace Safety and Health Control and Measure when moving and transportation of large or heavy equipment, appropriate material handling machine should be use. **(Risk Assessment apply for Forklift or Pallet Truck Lifting)**





5.20 Bracket Mounting

Lens Size (Model)	Bracket Qty (pc)	Bolt & Nuts Size	Bolts Set (pc)
MS-XXX180 Lens	6	M14 x 15cm	12
MS-XXXX 60,90,120 Lens	4	M12 x 15cm	8



Tighten to the pole with Bolt & Nuts Sets

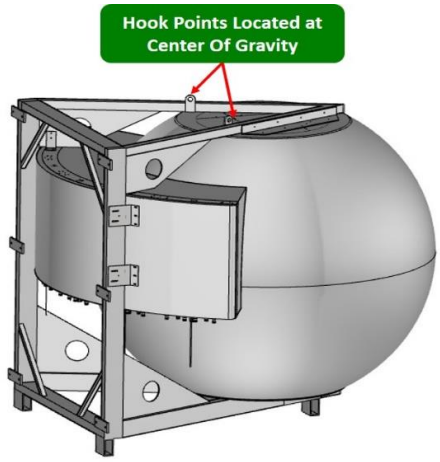
Important Notes:
End User is require to Custom-Make the additional supporting bracket and tighten to the existing Antenna bracket to meet the deployment needs.

5.30 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.)**

5.31 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.

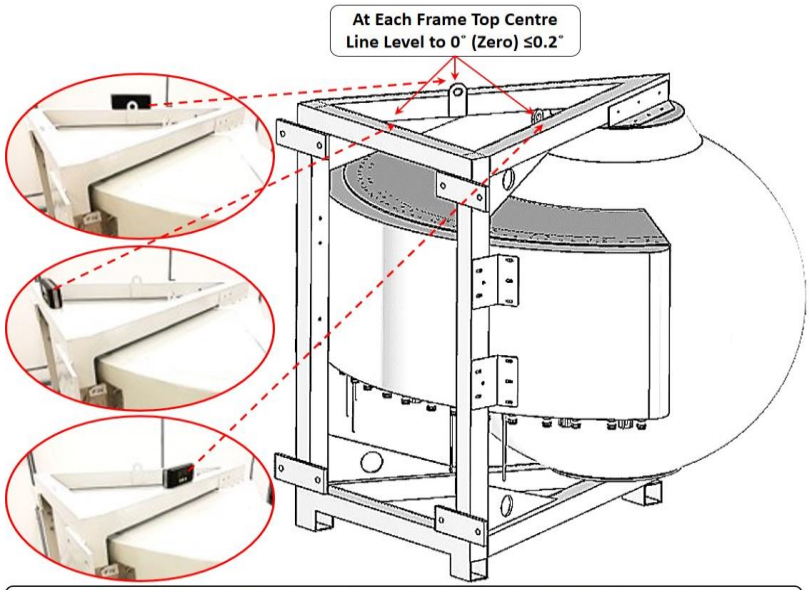


5.40 Antenna Installation

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.

5.41 Antenna Levelling

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 & Left=As shown in picture)



ANTENNA LEVELING ADJUSTMENT (AFTER INSTALLATION)

5.42 Digital Level Gauge Calibration

5.43 Adjustment Requirement

ANTENNA LEVELING ACCEPTED

REQUIRE ADJUSTMENT