MATSING®

LENS TECHNOLOGY ENABLED

LSA Tilt Adjustment & "S"RET Motor General Guide

(Large Sphere Antenna)

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LENS TECHNOLOGY ENABLED

Table Of Content

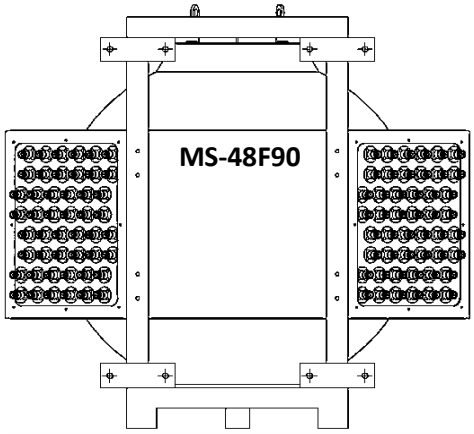
Revision History:

Date	*Description*	*Revised By*	*Revision Nos*
26-Sep-2023	*Initial Release*	*RL*	*0*
07-May-2024	*General Update*	*RL*	*1*
06-Jun-2024	*Update Tilt Adjustment/"S" RET Operations*	*RL*	*2*

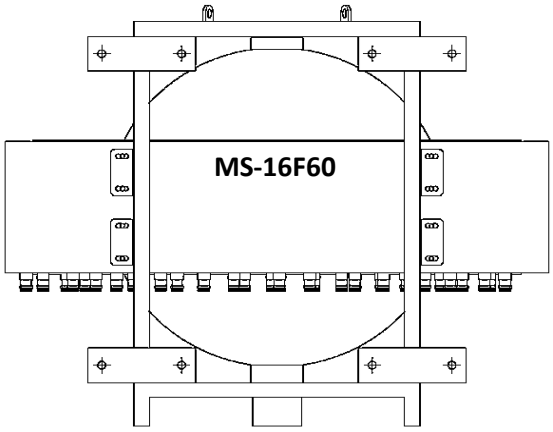
1.00 Large Sphere Antenna's (LSA) Product Overview

1.10 LSA with ***FIXED TILT*** -Factory Set (Sample Models)

1.11 FIXED TILT Model

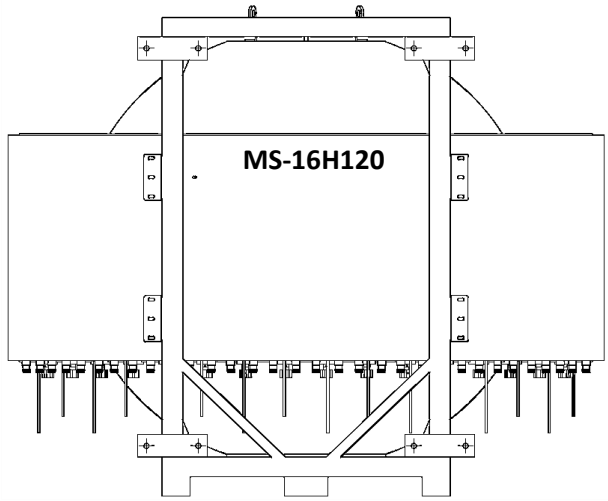


1.12 FIXED TILT Model

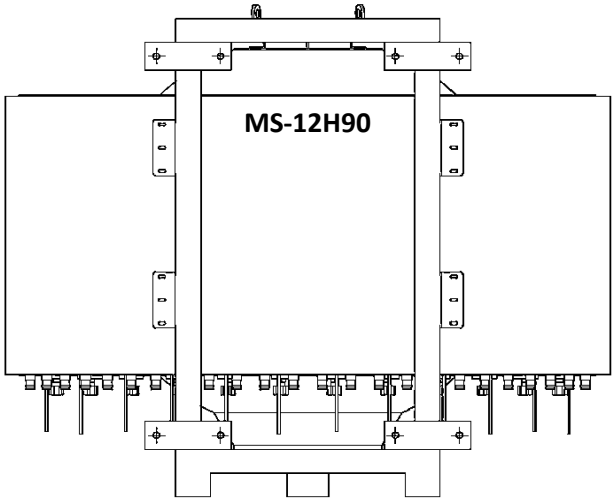


1.20 LSA with ***MANUAL TILT*** (Sample Models)

1.21 MANUAL TILT Model

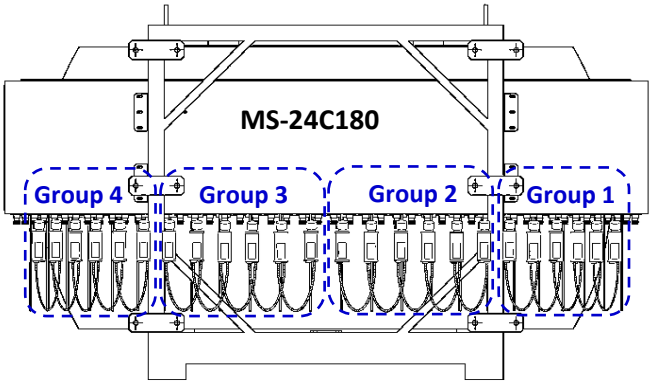


1.22 MANUAL TILT Model

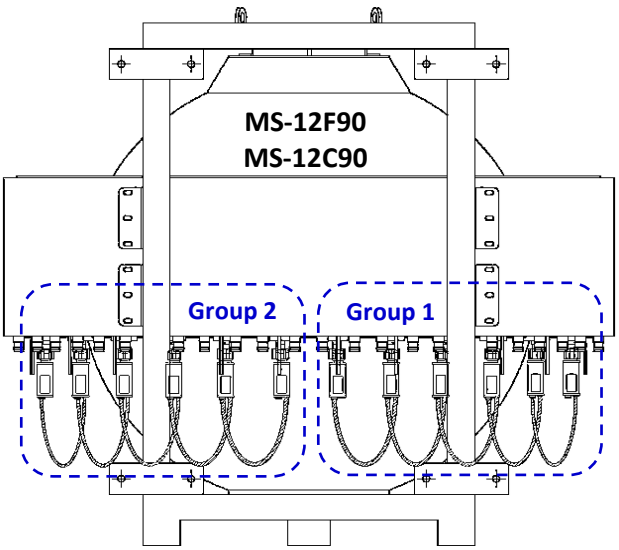


1.30 LSA with ***"S RET Motor*** (Sample Models)

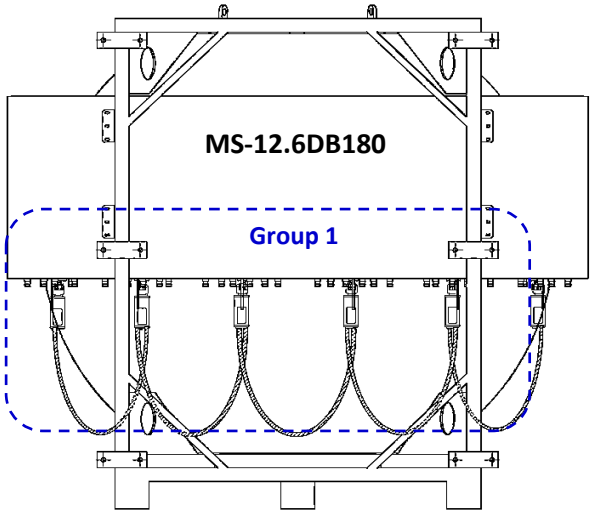
1.31 4 Groups x 6 Motors Model



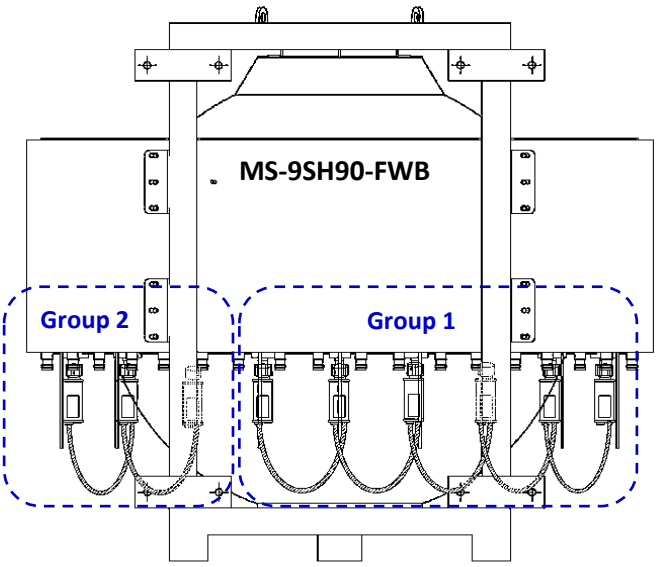
1.32 2 Groups x 6 Motors Model



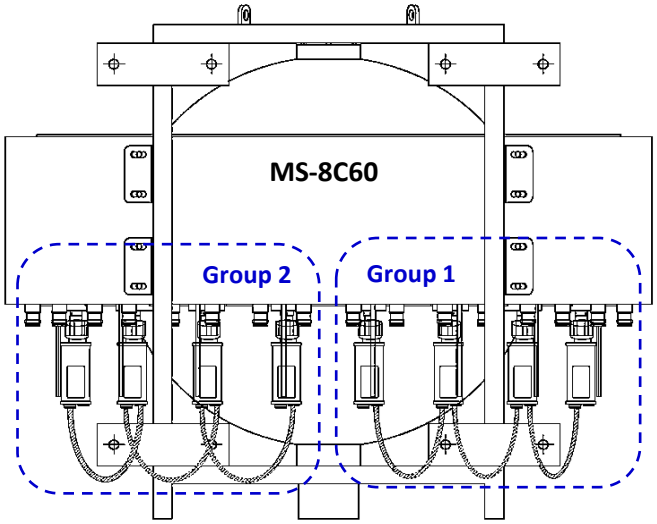
1.33 1 Group x 6 Motor Model



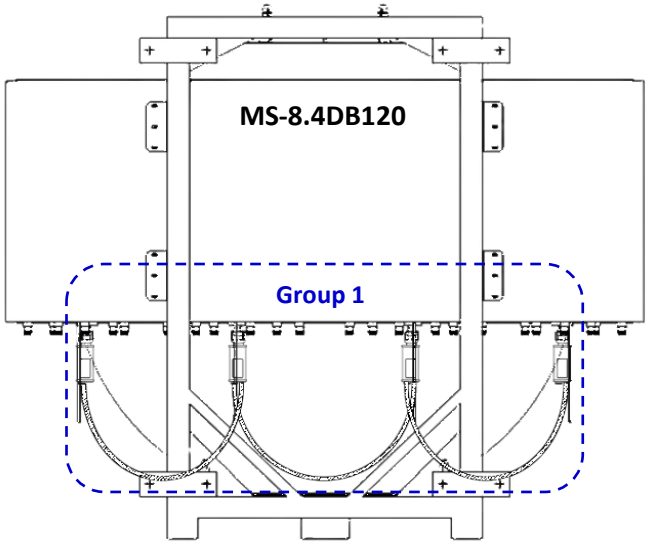
1.34 1 Grp x 6 Motor + 1 Grp x 3 Motor Model



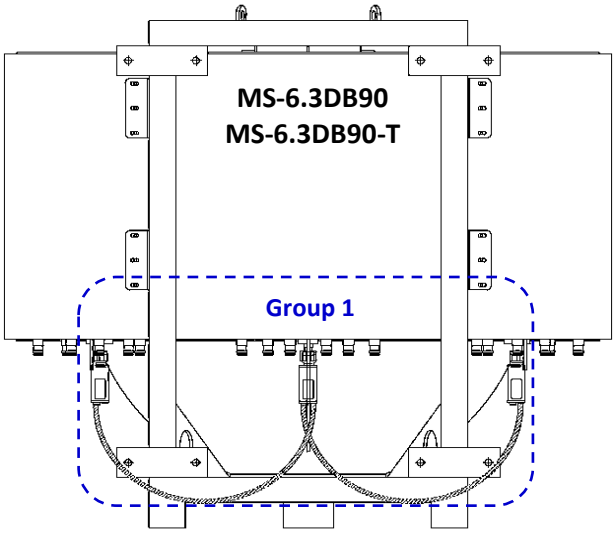
1.35 2 Groups x 4 Motor Model



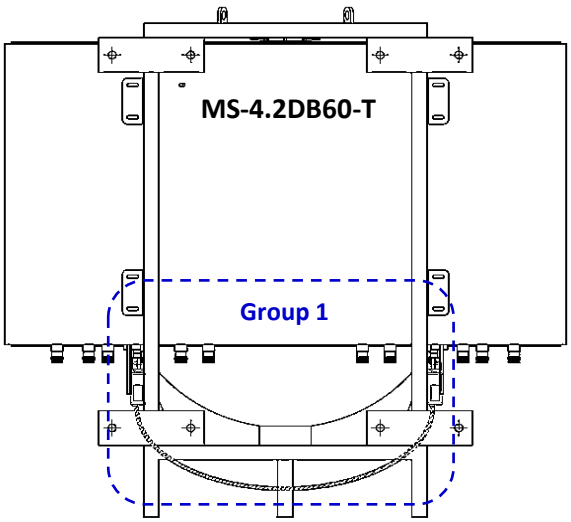
1.36 1 Group x 4 Motor Model



1.37 1 Group x 3 Motor Model

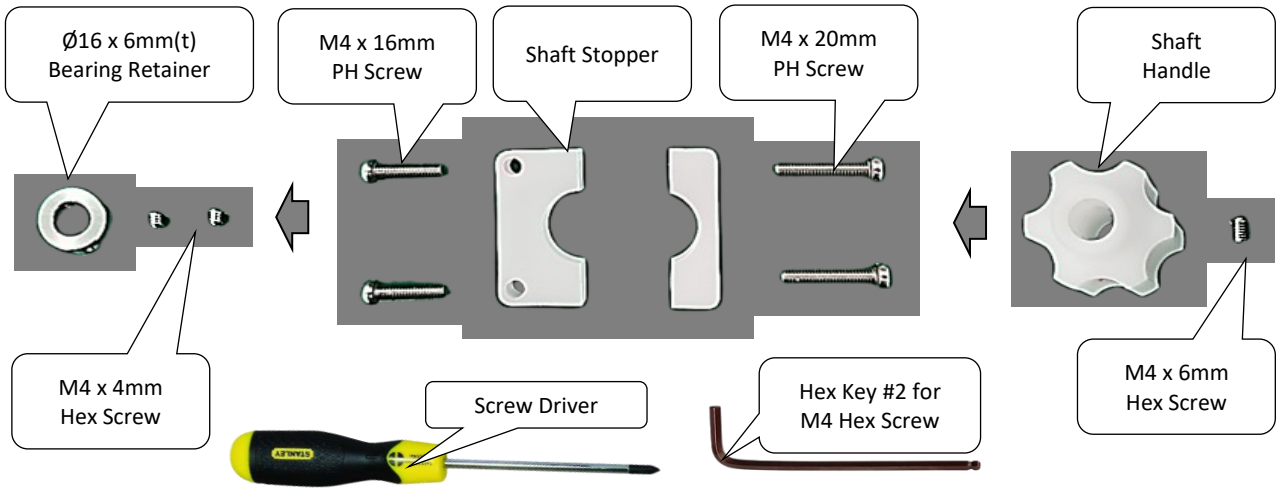


1.38 1 Group x 2 Motor Model

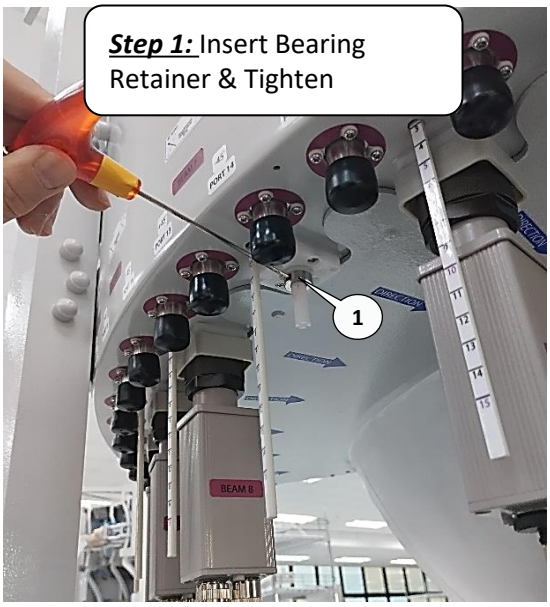


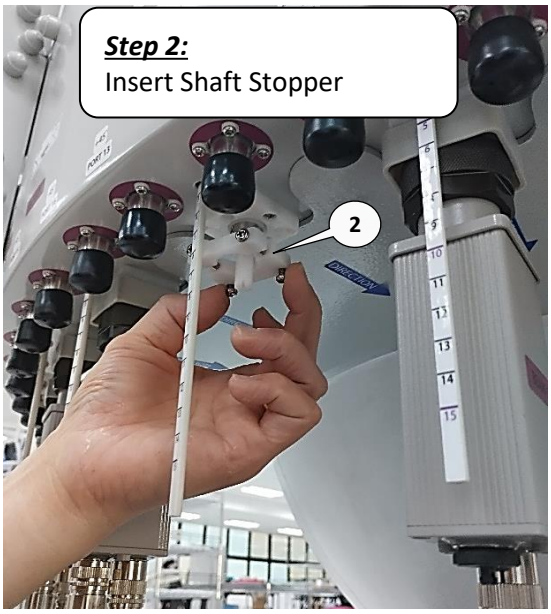
2.00 LSA Manual Tilt & "S" RET Motor Kit Assembly Parts & Tools

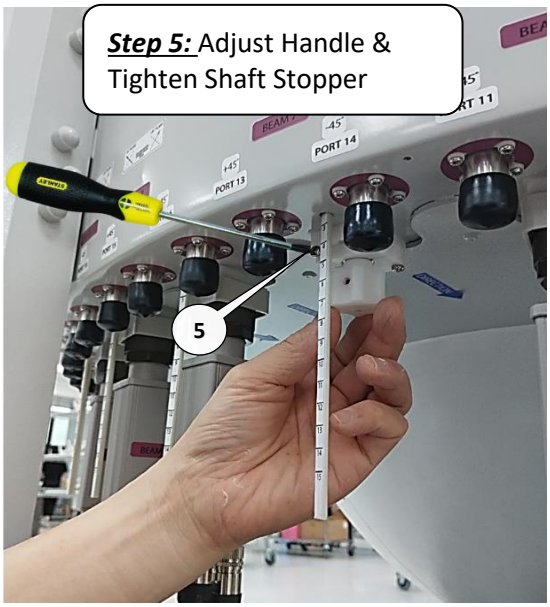
2.10 Manual Tilt Assembly Parts & Tools (Example Type 1)

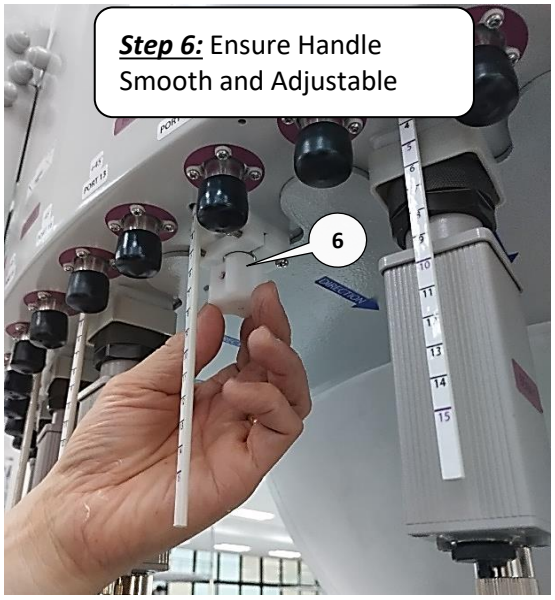


2.11 Manual Tilt Kit Assembly Process (Reverse for Dis-Assembly)







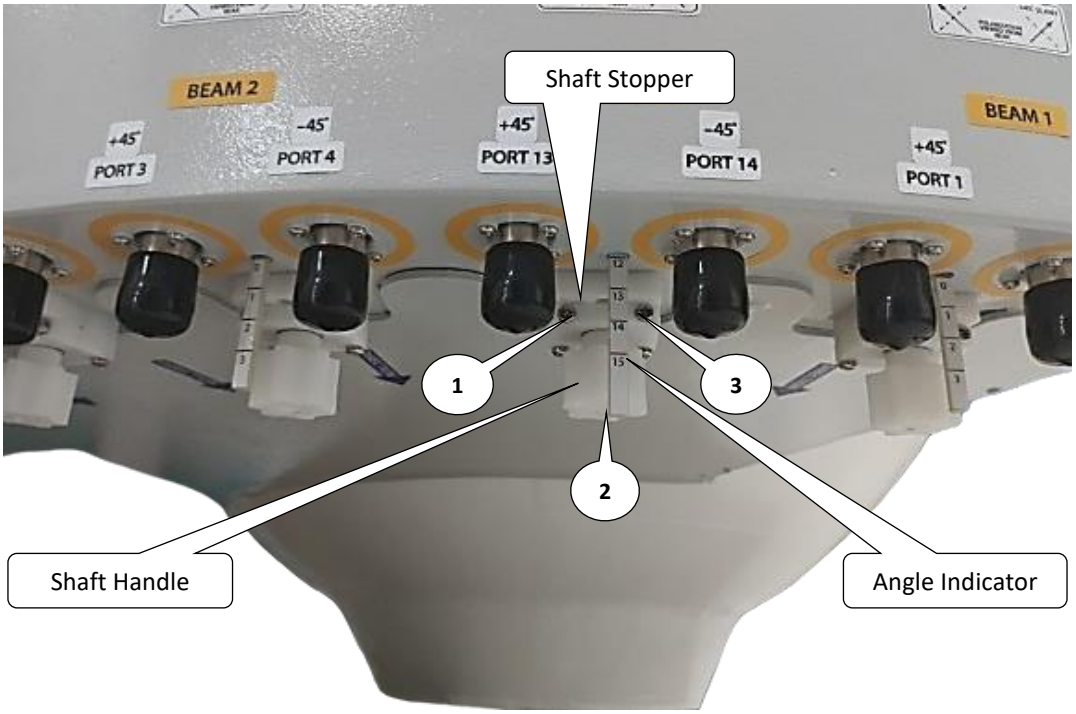


2.12 Manual Tilt Adjustment

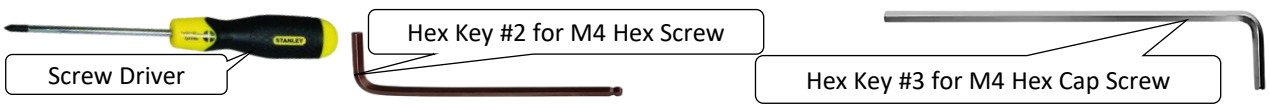
Step 1: Tilt Stopper Loosening
Use ✙ Screw Driver to loosen the shaft stopper 2 x M3 screws

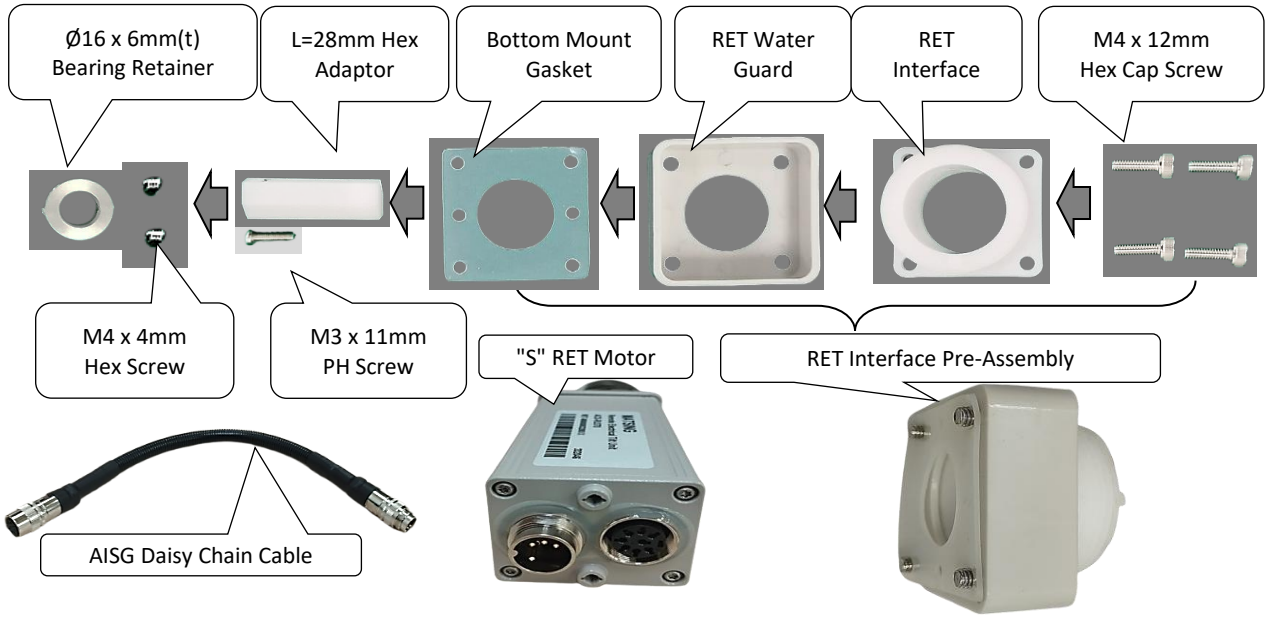
Step 2: Adjusting the Tilt
By hand or use screw driver to turn the shaft handle for adjustment

Step 3: Tilt Stopper Tightening
Use ✙ Screw Driver to Tighten Back the shaft stopper 2 x M3 screws

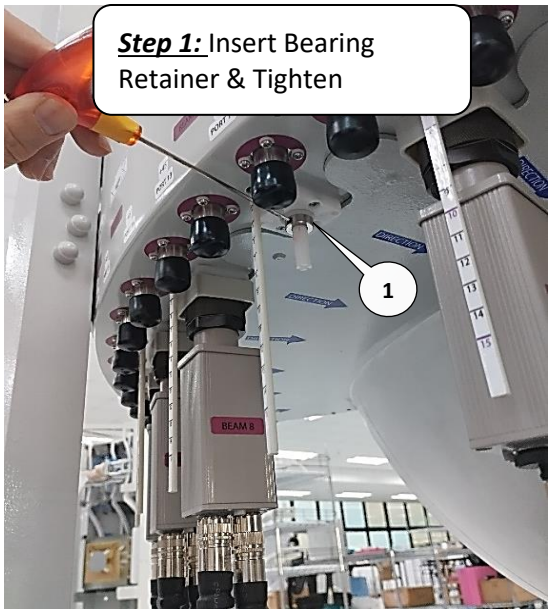


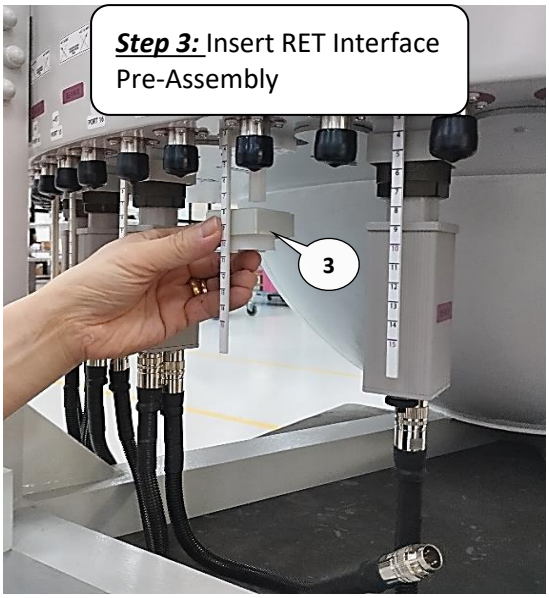
2.20 "S" RET Motor Kit without RET Gasket Adaptor Assembly Parts & Tools (Example Type 2)

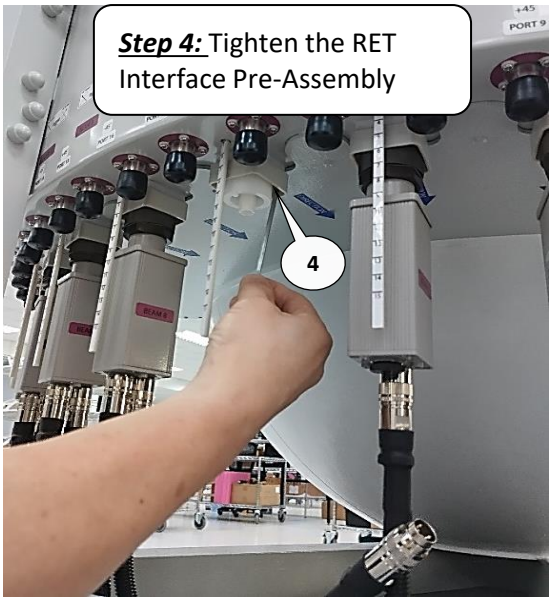


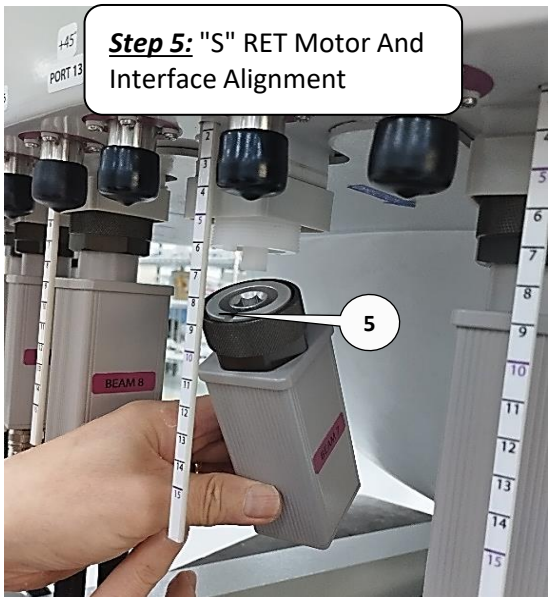


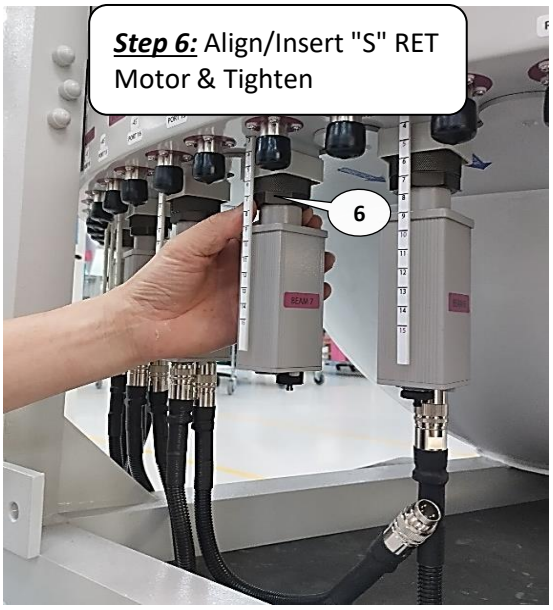
2.21 S RET Motor Kit without RET Gasket Adaptor Assembly Process (Reverse for Dis-Assembly)

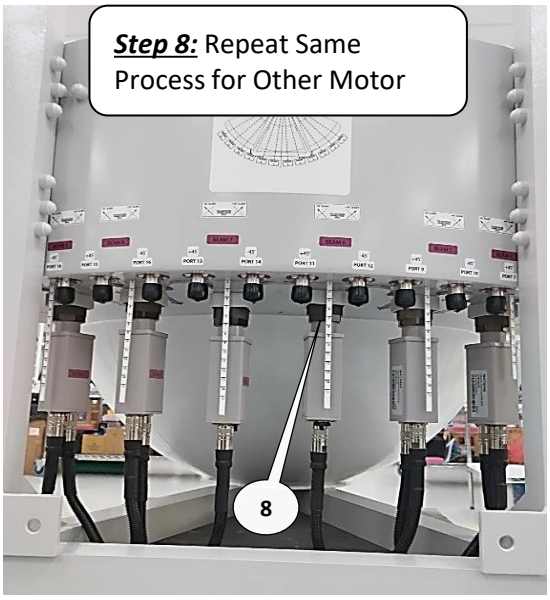




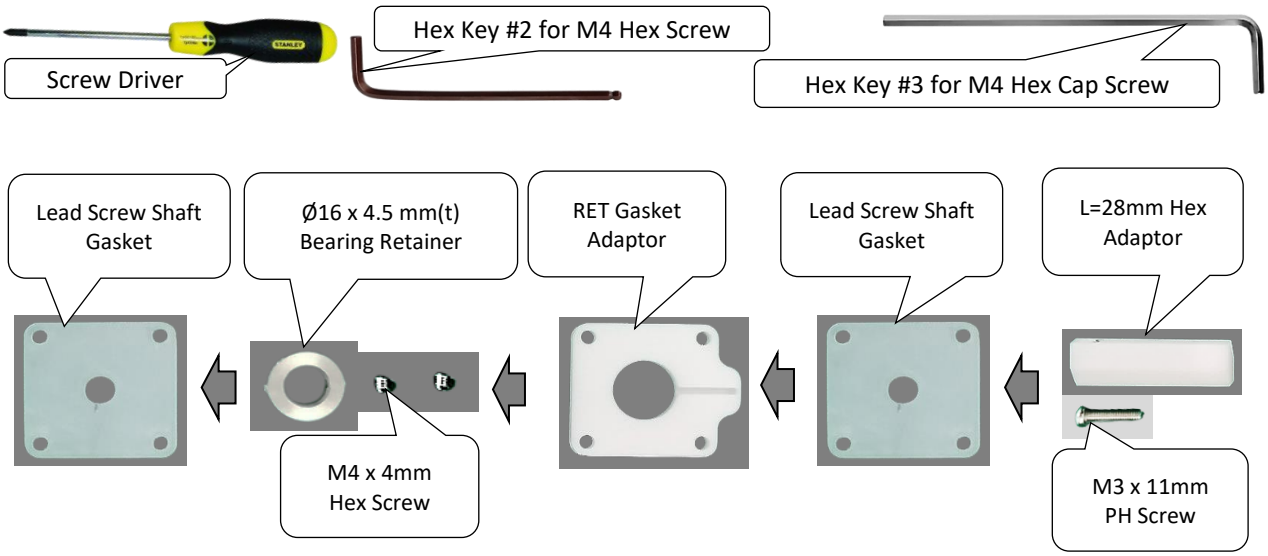


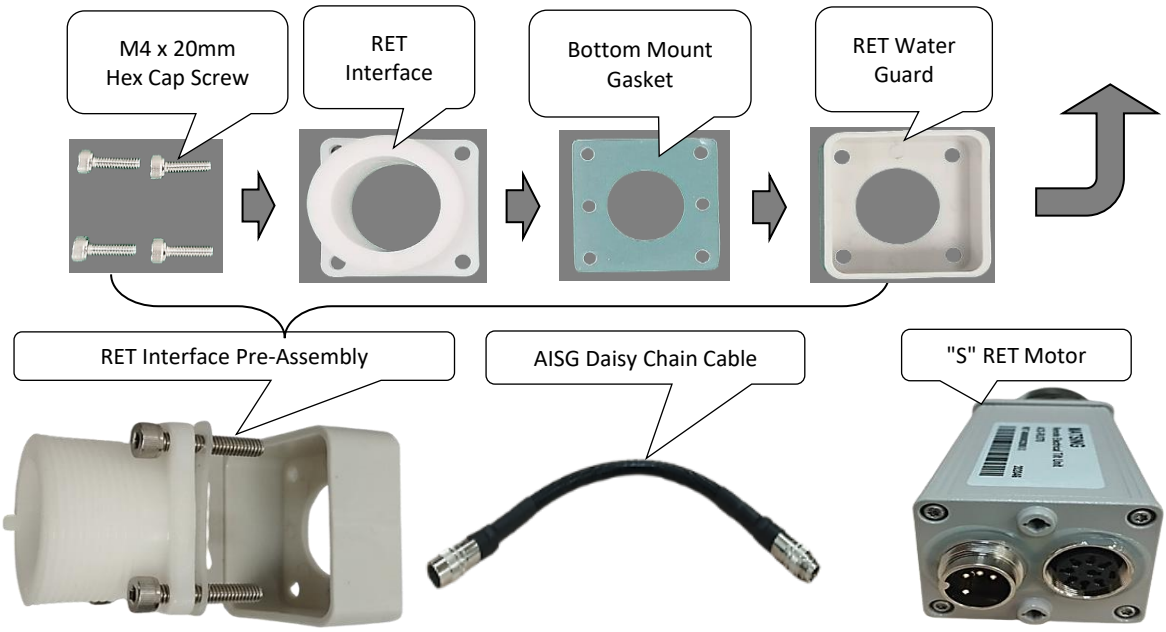




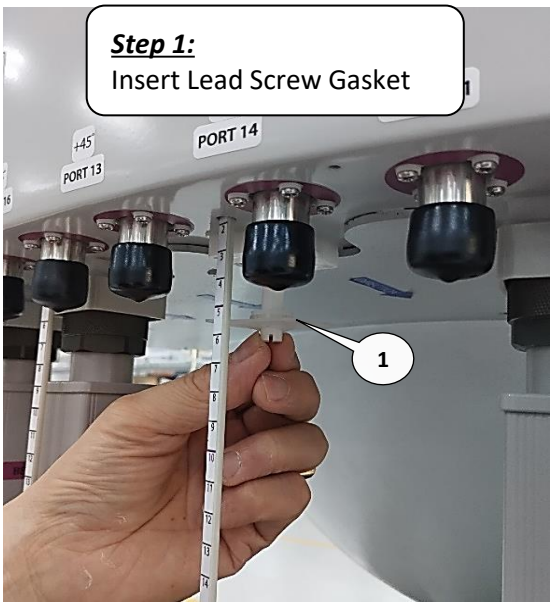


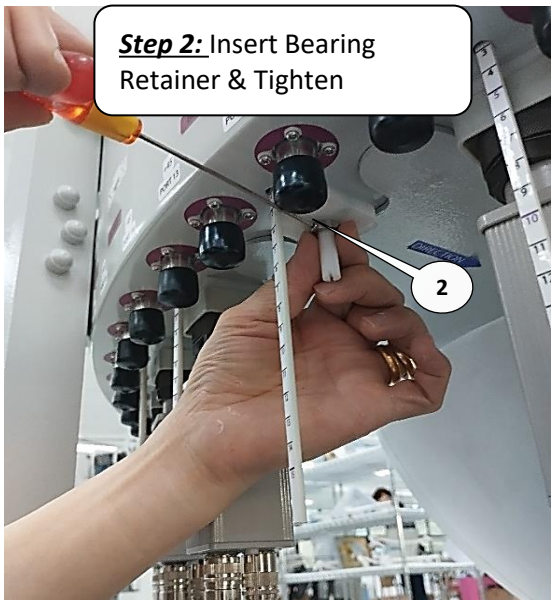
2.30 "S" RET Motor Kit with RET Gasket Adaptor Assembly Parts & Tools (Example Type 3)

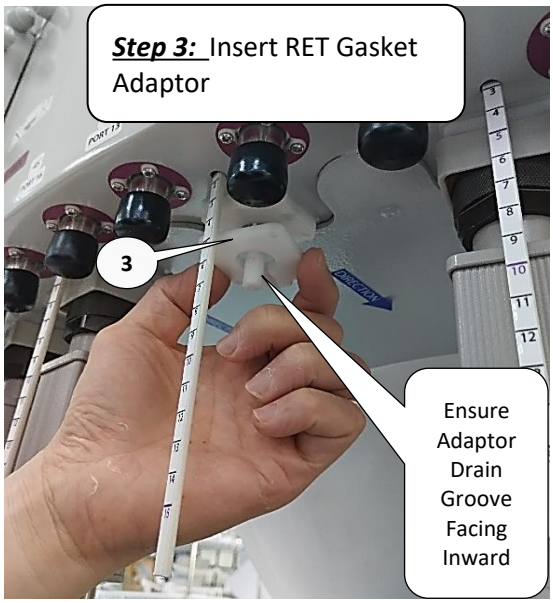


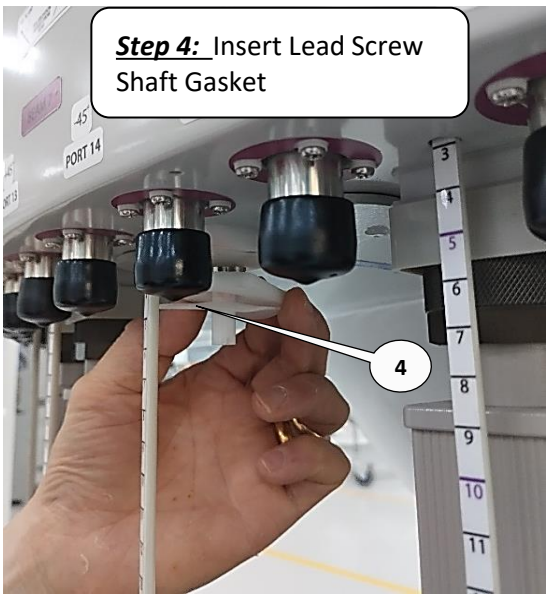


2.31 "S" RET Motor Kit with RET Gasket Adaptor Assembly Process (Reverse for Dis-Assembly)

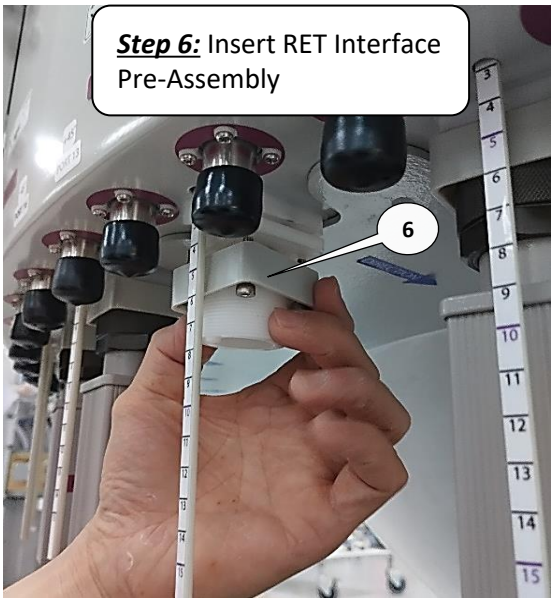


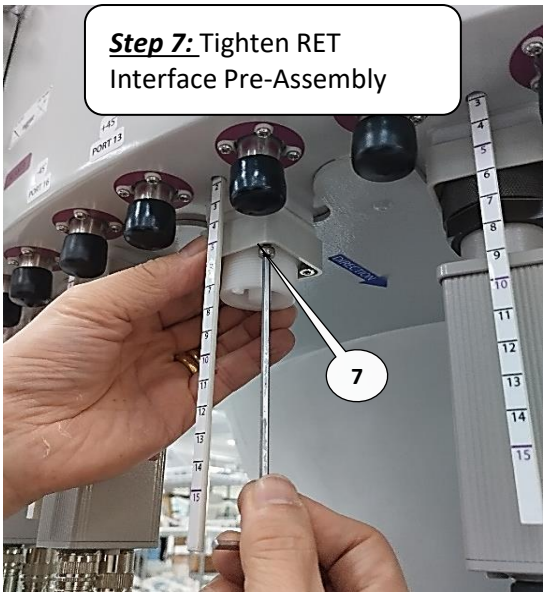






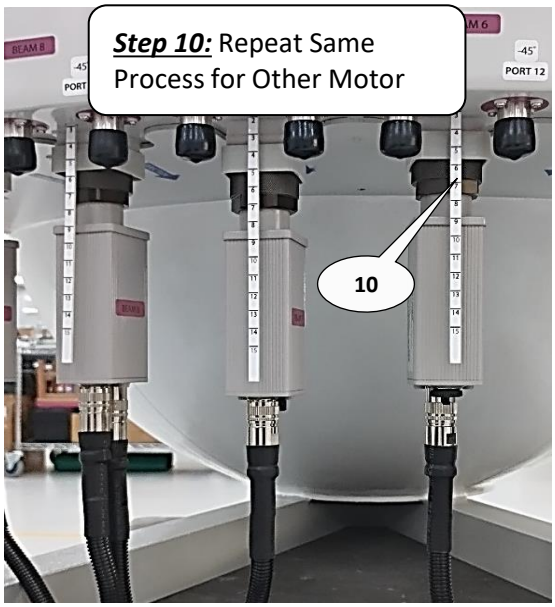

Step 5: Insert Hex Adaptor & Tighten
5


Step 6: Insert RET Interface Pre-Assembly
6


Step 7: Tighten RET Interface Pre-Assembly
7

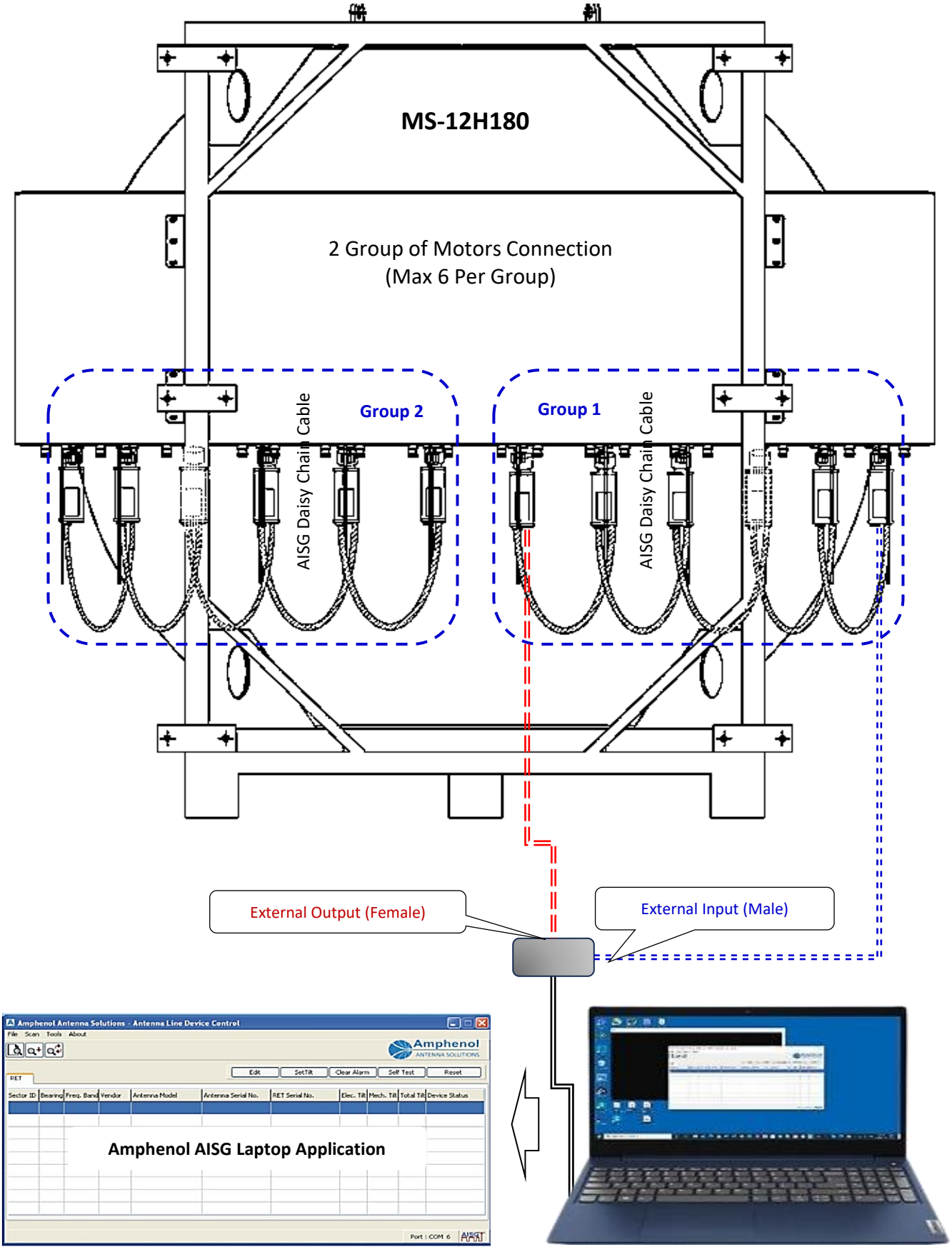

Step 8: Align/Insert "S" RET Motor & Tighten
8


Step 9: Insert AISG Daisy Chain Cable & Tighten
9


Step 10: Repeat Same Process for Other Motor
10

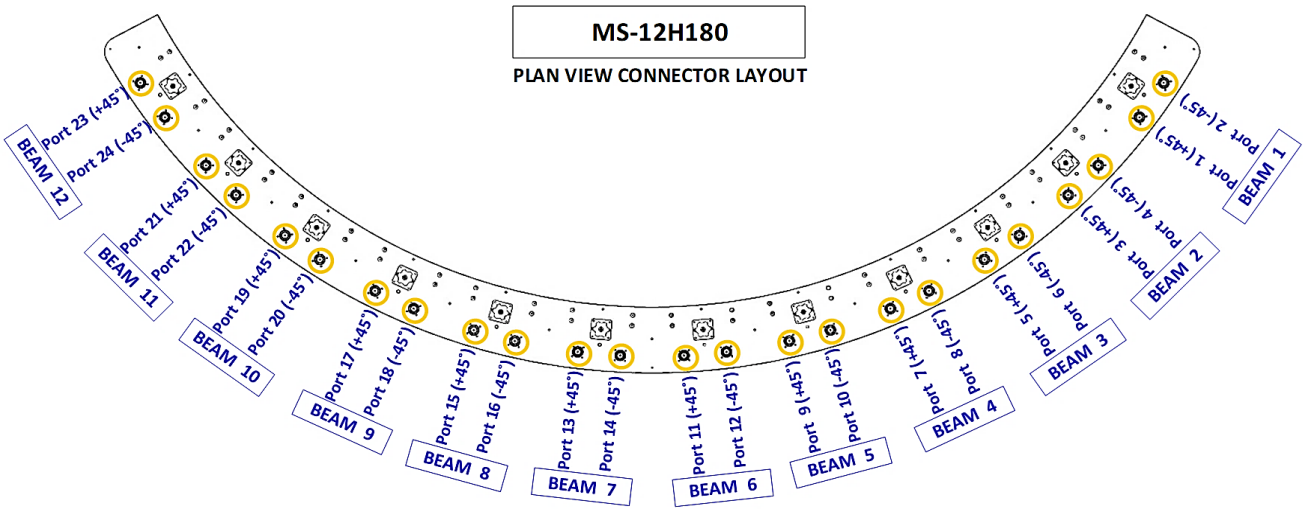
3.00 LSA "S" RET Installation & Controller Display

3.10 "S" RET Installation/Connection *(Example of MS-12H180 sn: #10)*



****** Repeat Same Process For Group 2 Testing***

3.20 Antenna Connector Layout



3.30 Antenna Connector Port Table

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

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

3.40 LSA RET Operations / Information

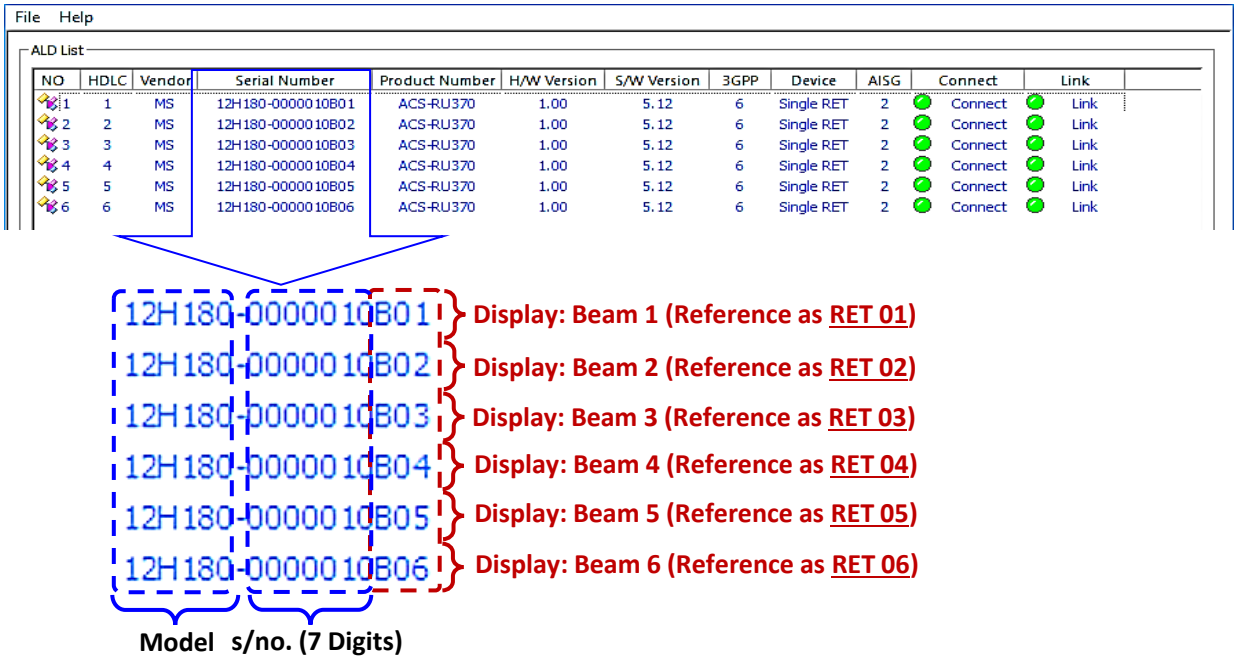
A standard AISG 2.0 compliant cable (not included) is used to connect the MDCU to the AISG interface control. Once connected, use an AISG 2.0 compliant Control software to perform a Sub Unit SCAN to identify the RET Elements.

3.41 Model & S/N Reference From Label

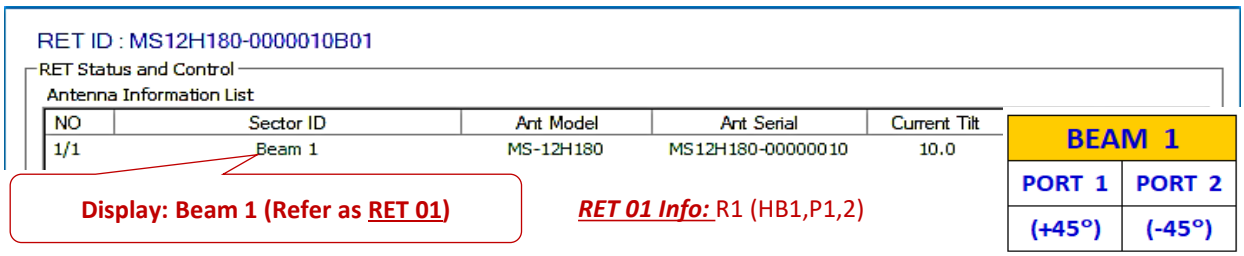
Reminder: If Information Has Been Edited, Remember to Perform "Radio Hard Reset" for Changes to take Place

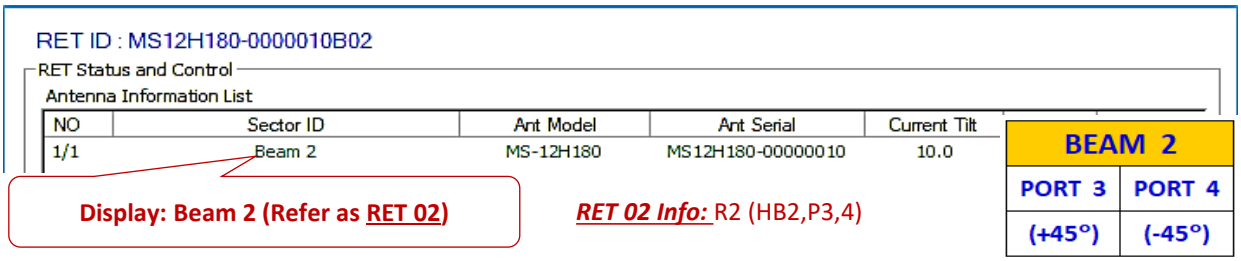
Add 3 Zero(0) in front if the serial nos
If is shorter than 7 digits

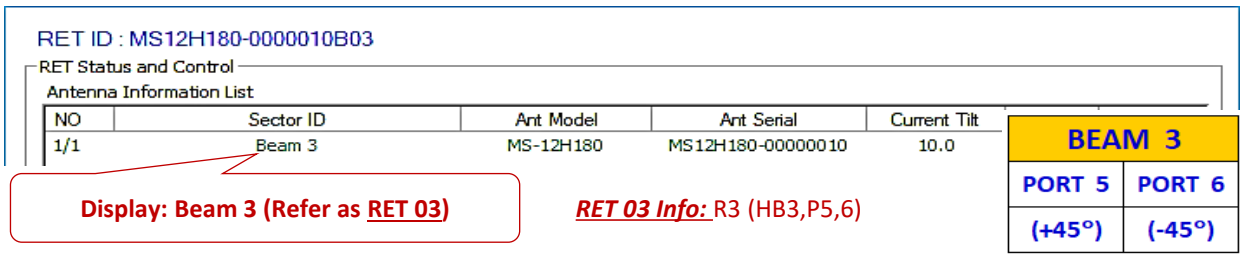
3.50 Group 1 - Information & Display

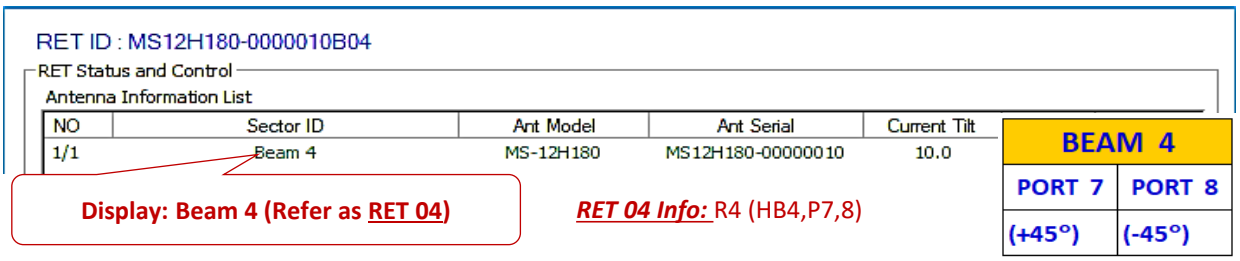


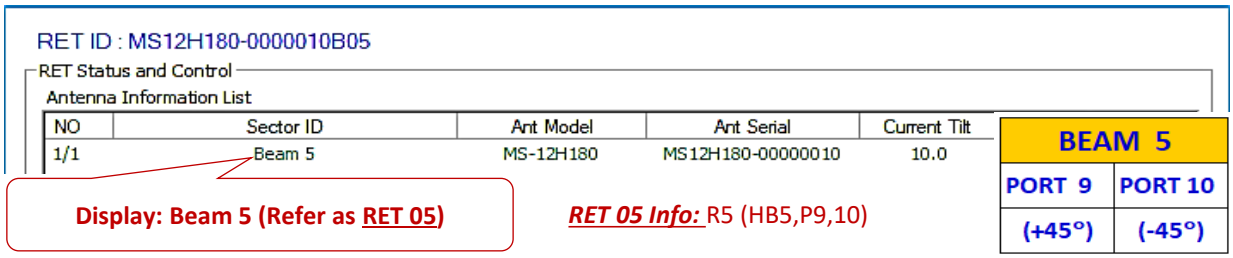
3.51 Beam Nos & Port Nos Display

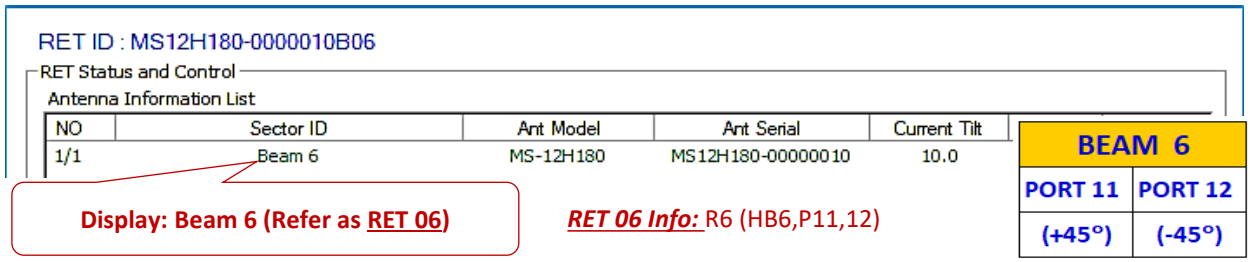




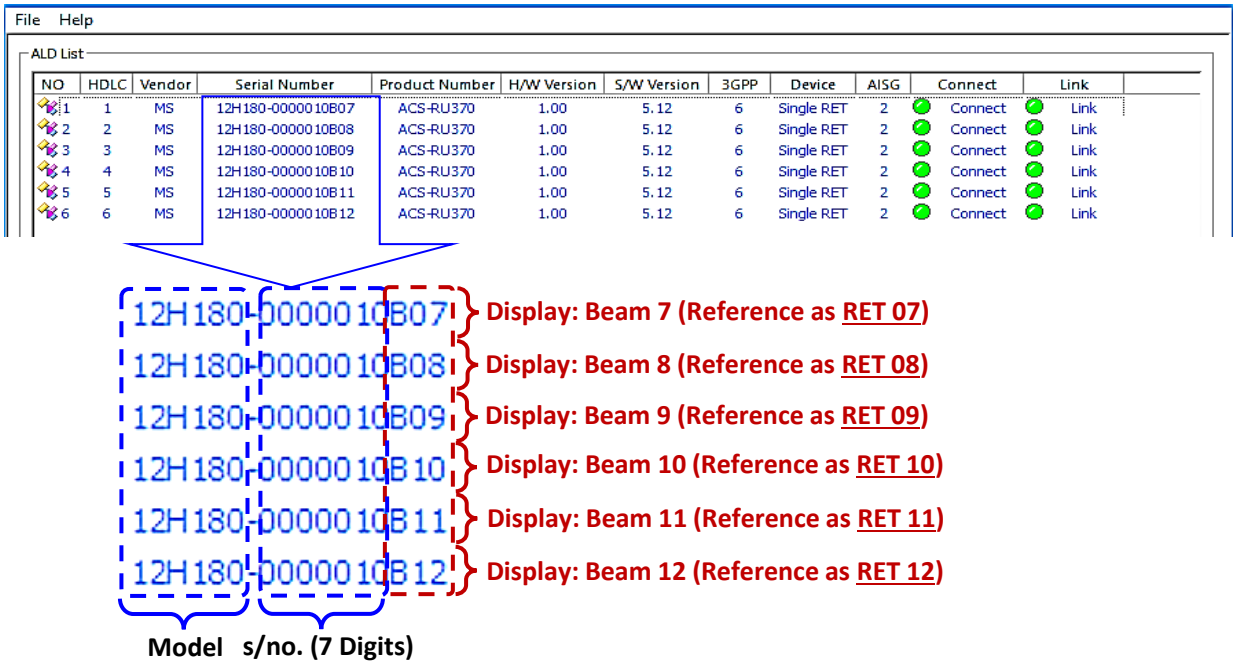




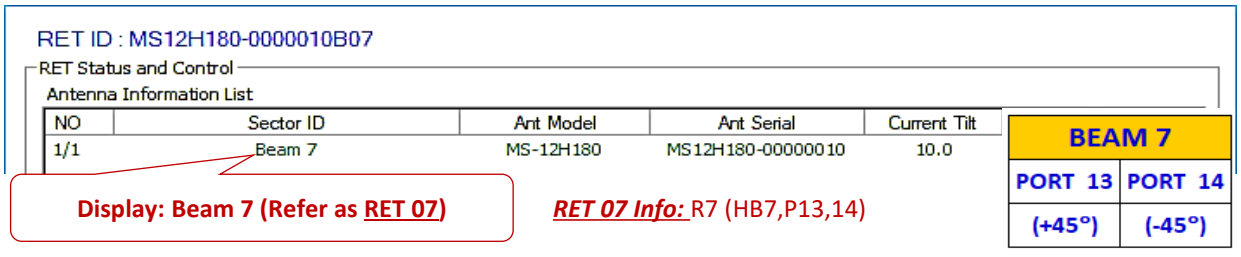


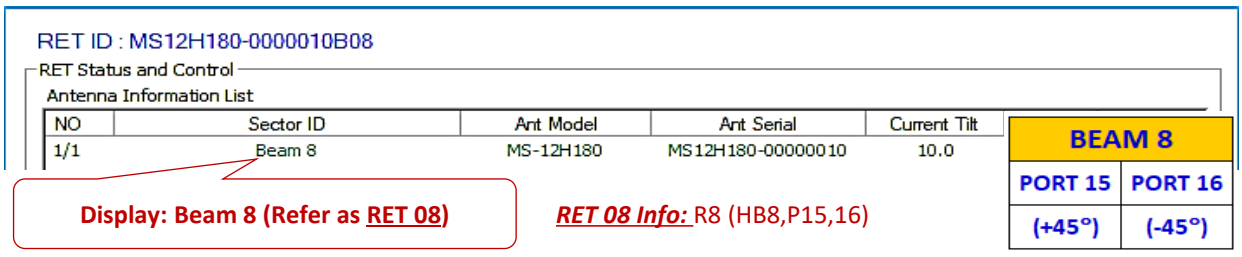


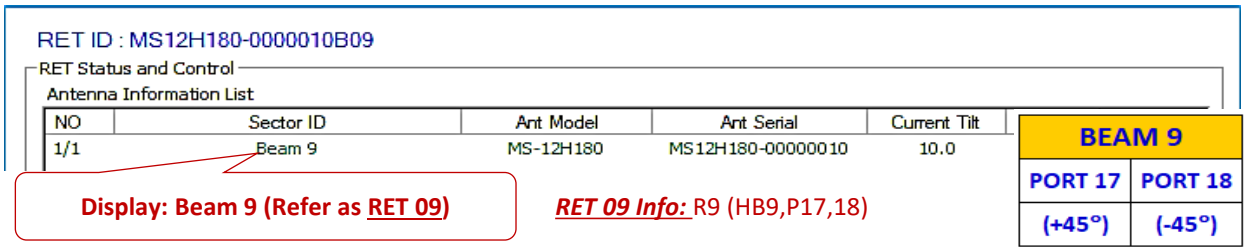
3.60 Group 2 - Information & Display

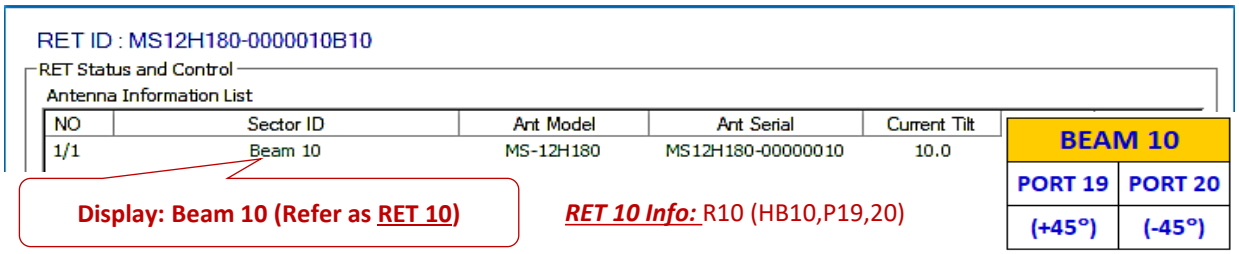


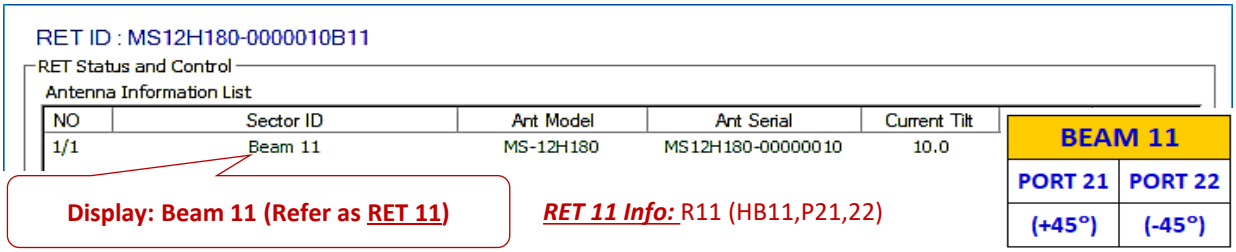
3.61 Beam Nos & Port Nos Display

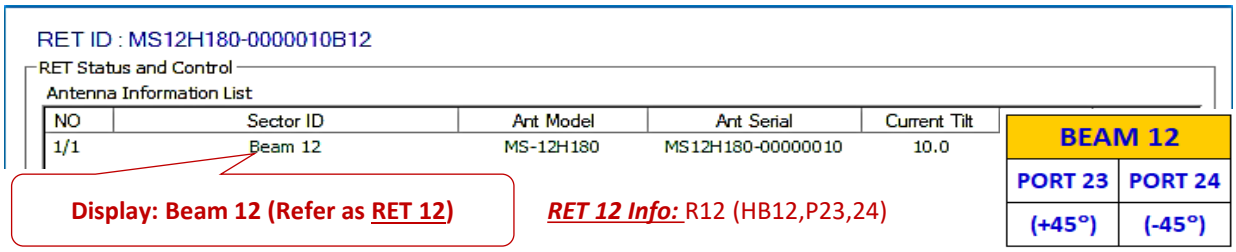





RET ID : MS12H180-0000010B09
RET Status and Control
Antenna Information List
NO
Sector ID
Ant Model
Ant Serial
Current Tilt
1/1
Beam 9
MS-12H180
MS12H180-00000010
10.0
Display: Beam 9 (Refer as RET 09)
RET 09 Info: R9 (HB9,P17,18)
BEAM 9
PORT 17
PORT 18
(+45°)
(-45°)


RET ID : MS12H180-0000010B10
RET Status and Control
Antenna Information List
NO
Sector ID
Ant Model
Ant Serial
Current Tilt
1/1
Beam 10
MS-12H180
MS12H180-00000010
10.0
Display: Beam 10 (Refer as RET 10)
RET 10 Info: R10 (HB10,P19,20)
BEAM 10
PORT 19
PORT 20
(+45°)
(-45°)


RET ID : MS12H180-0000010B11
RET Status and Control
Antenna Information List
NO
Sector ID
Ant Model
Ant Serial
Current Tilt
1/1
Beam 11
MS-12H180
MS12H180-00000010
10.0
Display: Beam 11 (Refer as RET 11)
RET 11 Info: R11 (HB11,P21,22)
BEAM 11
PORT 21
PORT 22
(+45°)
(-45°)


RET ID : MS12H180-0000010B12
RET Status and Control
Antenna Information List
NO
Sector ID
Ant Model
Ant Serial
Current Tilt
1/1
Beam 12
MS-12H180
MS12H180-00000010
10.0
Display: Beam 12 (Refer as RET 12)
RET 12 Info: R12 (HB12,P23,24)
BEAM 12
PORT 23
PORT 24
(+45°)
(-45°)