

# **MATSING<sup>®</sup>**

**LENS TECHNOLOGY ENABLED**

## **MS-LSA-SLP-2 Mounting Guide**

***(Large sphere antenna stadium laser pointer for 16 models)***



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*Revision History:*

<u>Date</u>	<u>Description</u>	<u>Rev By</u>	<u>Check By</u>	<u>Rev no</u>
27-Jan-2024	Initial Release	RL	Pavel	0
26-Sep-2024	Document and part renaming and general update	RL	Pavel	1

## 1.00 MatSing antenna stadium laser pointer (SLP)

### 1.10 Applicable antenna models

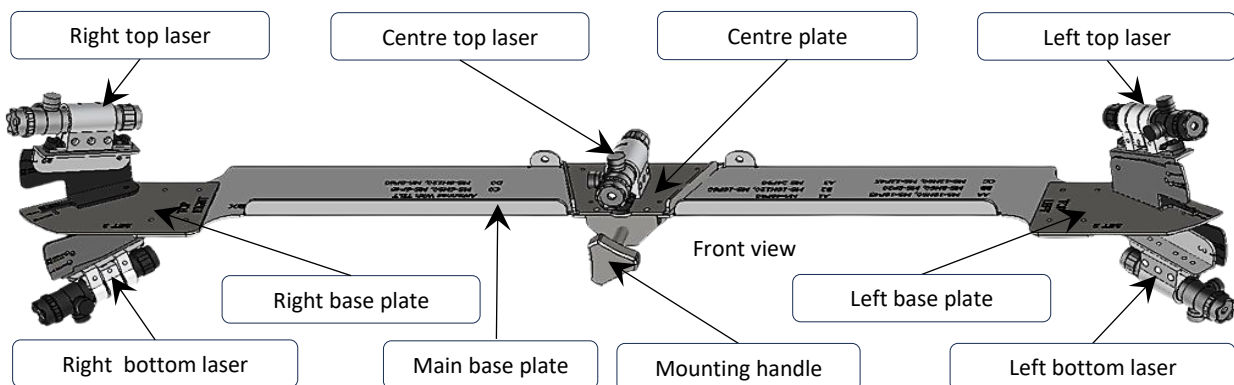
1	MS-18H90	5	MS-12H90	9	MS-8H120	13	MS-16H120
2	MS-18F45	6	MS-12F45	10	MS-8F60	14	MS-16F60
3	MS-8H60	7	MS-6H90	11	MS-48H180	15	MS-24H180
4	MS-8F30	8	MS-6F45	12	MS-48F90	16	MS-24F90

### 1.20 Model setting and assembly configuration table

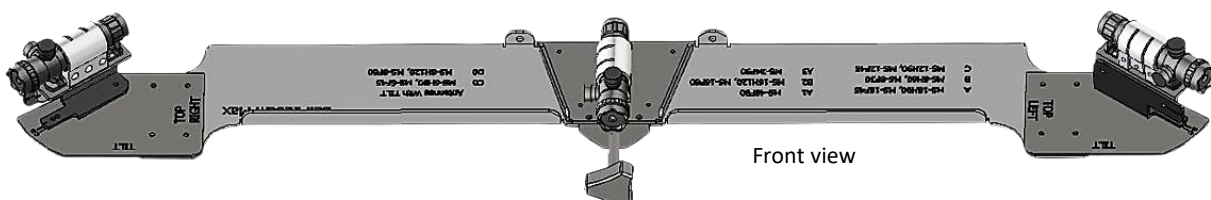
Setting	Model	Frame Width	Main Base Plate ID	Left & Right Base Plate ID	Left Top Angle	Right Top Angle	Nos of Rows	Tilt Up	Row nos	Tilt Down	Row nos
AA	MS-18H90	620.00 (24.41")	Ball 120cm Max	SET 1	55	45	3	-17	Row 1	17	Row 3
	MS-18F45	350.80 (13.81")			55	45	3	-17	Row 1	17	Row 3
BB	MS-8H60	466.82 (18.38")	Ball 120cm Max	SET 1	52.5	37.5	2	-13	Row 1	13	Row 2
	MS-8F30	220.00 (8.66")			52.5	37.5	2	-13	Row 1	13	Row 2
CC	MS-12H90	535.00 (21.06")	Ball 120cm Max	SET 1	55	45	2	-8.7	Row 1	8.7	Row 2
	MS-12F45	350.80 (13.81")			55	45	2	-8.7	Row 1	8.7	Row 2
A1	MS-48H180	1290.00 (50.79")	Ball 180cm	SET 2	52.5	57.5	4	-12.9	Row 1	12.9	Row 4
	MS-48F90	518.00 (20.39")	Ball 120cm Max		52.5	57.5	4	-12.9	Row 1	12.9	Row 4
B2	MS-16H120	720.00 (28.35")	Ball 120cm Max	SET 2	56.2	48.8	2	-6.5	Row 1	6.5	Row 2
	MS-16F60	466.80 (18.38")			56.3	48.8	2	-6.5	Row 1	6.5	Row 2
A3	MS-24H180	1290.00 (50.79")	Ball 180cm	SET 2	52.5	57.5	2	-4.3	Row 1	4.3	Row 2
	MS-24F90	518.00 (20.39")	Ball 120cm Max		52.5	57.5	2	-4.3	Row 1	4.3	Row 2
C0	MS-6H90	612.00 (24.09")	Ball 120cm Max	TILT	50	50	1				
	MS-6F45	350.80 (13.81")			50	50	1				
D0	MS-8H120	720.00 (28.35")	Ball 120cm Max	TILT	52.5	52.5	1				
	MS-8F60	466.80 (18.38")			52.5	52.5	1				

## 2.00 SLP General descriptions and parts overview

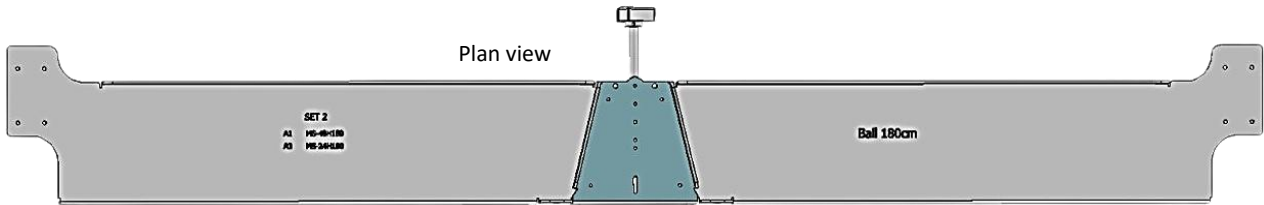
### 2.10 SLP with center, top and bottom laser pointer (SET1+120cm, SET 2+120cm/180cm)



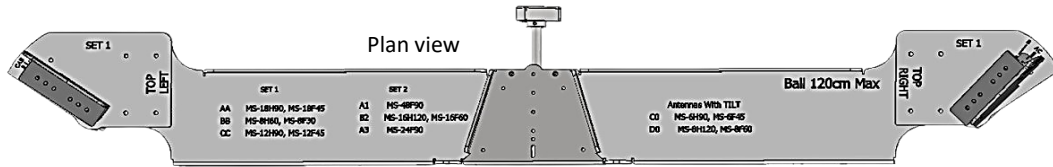
### 2.20 SLP with centre and top (Only) laser pointer (TILT+120cm)



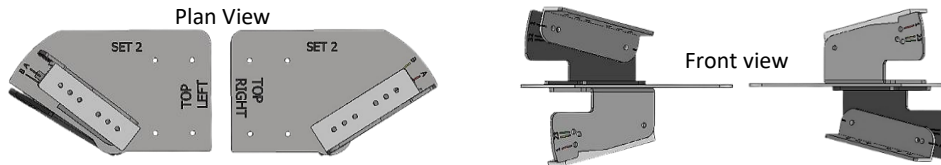
### 2.30 180cm main base plate (Pre-assembly with mounting handle)



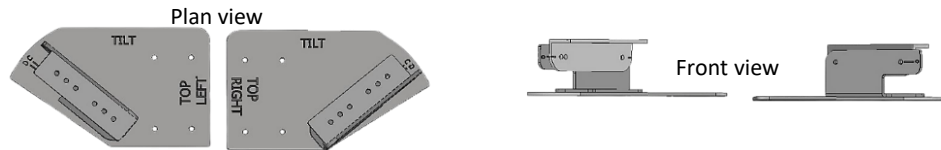
### 2.40 120cm main base plate (Pre-assembly with mounting handle and "SET 1" left and right base plate)



### 2.50 Pre-assembly "SET 2" left and right base plate



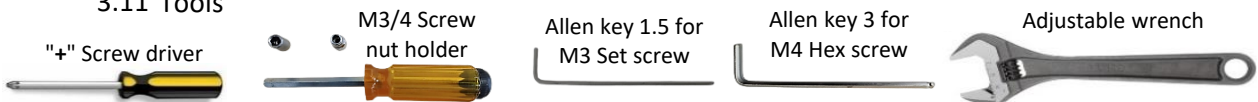
### 2.60 Pre-assembly "TILT" left and right base plate



## 3.00 SLP General assembly guide

### 3.10 Tools, parts and fittings

#### 3.11 Tools



#### 3.12 Laser pointer and accessory



#### 3.13 Parts & Fittings

Item	Description	Qty
LP	Laser pointer	5
LR	Large rail	1
MR	Medium rail	2
SR	Small rail	2

Item	Description	Qty
1	M4x12mm PH screw+locknut (Main+left right base plate assy)	24
2	M4x8mm PH screw (Centre top laser assembly)	6
3	M4x12mm PH screw+nut (Left,right,top,bottom,laser assy)	20

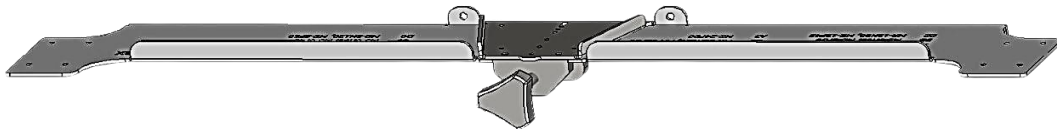


### 3.20 SLP Model's assembly guide table

Model	Frame Width	Main Base Plate ID	Left & Right Base Plate ID	Setting
MS-8F30	220.00 (8.66")	Ball 120cm Max	SET 1	BB
MS-6F45	350.80 (13.81")	Ball 120cm Max	TILT	C0
MS-12F45	350.80 (13.81")	Ball 120cm Max	SET 1	CC
MS-18F45	350.80 (13.81")	Ball 120cm Max	SET 1	AA
MS-8H60	466.82 (18.38")	Ball 120cm Max	SET 1	BB
MS-8F60	466.80 (18.38")	Ball 120cm Max	TILT	D0
MS-16F60	466.80 (18.38")	Ball 120cm Max	SET 2	B2
MS-24F90	518.00 (20.39")	Ball 120cm Max	SET 2	A3
MS-48F90	518.00 (20.39")	Ball 120cm Max	SET 2	A1
MS-12H90	535.00 (21.06")	Ball 120cm Max	SET 1	CC
MS-6H90	612.00 (24.09")	Ball 120cm Max	TILT	C0
MS-18H90	620.00 (24.41")	Ball 120cm Max	SET 1	AA
MS-8H120	720.00 (28.35")	Ball 120cm Max	TILT	D0
MS-16H120	720.00 (28.35")	Ball 120cm Max	SET 2	B2
MS-48H180	1290.00 (50.79")	Ball 180cm	SET 2	A1
MS-24H180	1290.00 (50.79")	Ball 180cm	SET 2	A3

### 3.30 Assembly guide example (Example of model: *MS-16H120*)

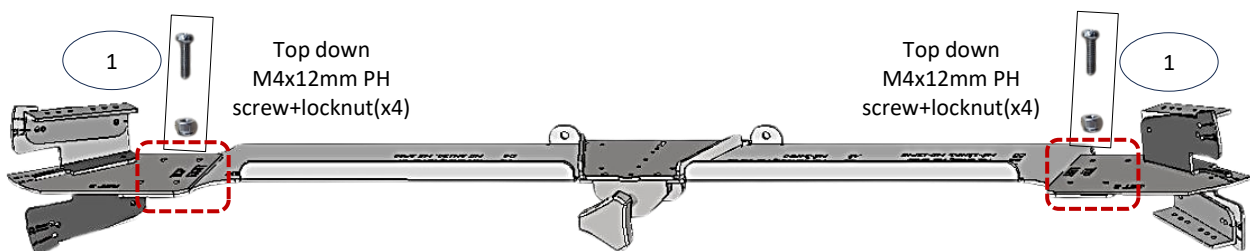
3.31 Select assembled main base plate (ID = "Ball 120cm Max")



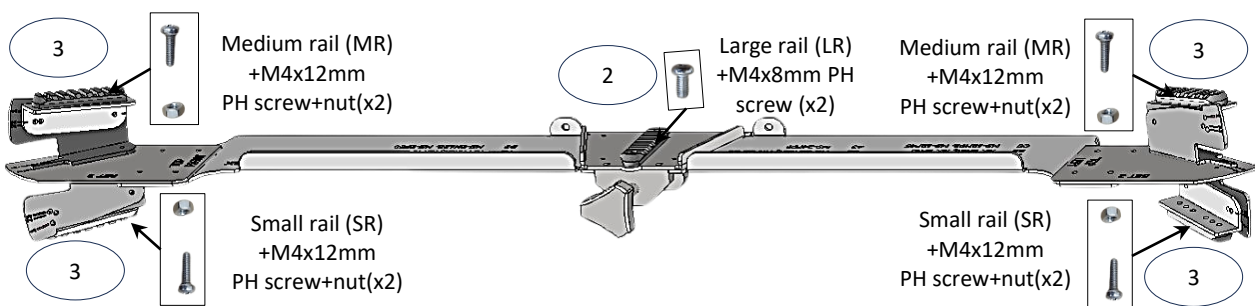
3.32 Select assembled left and right base plate (ID = "SET 2")



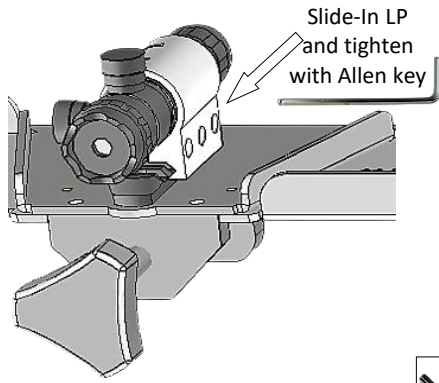
3.33 Main base plate and left and right base plate assembly



3.34 Laser holder rail assembly



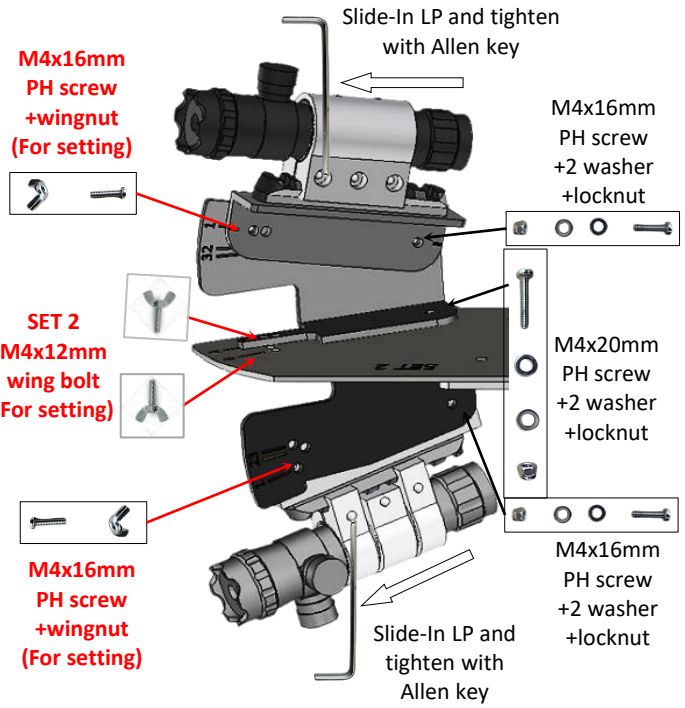
3.35 Centre TOP laser pointer assembly (Apply for all)



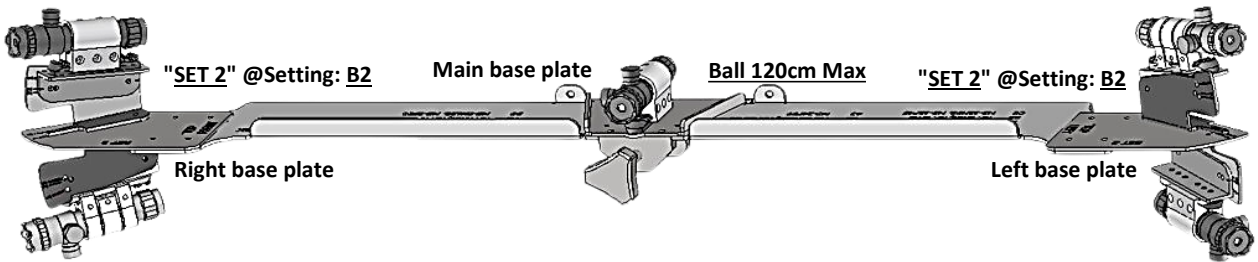
SET 1 use  
M4x16mm  
PH screw  
+wingnut  
(For setting)



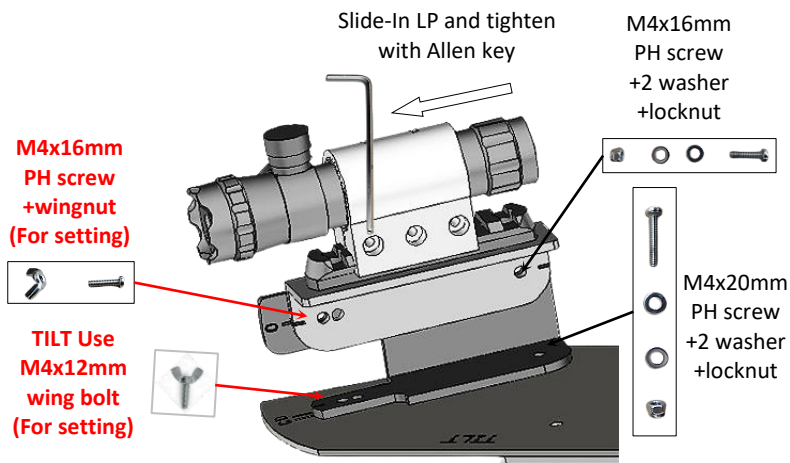
3.36 "SET 2" right side top and bottom laser pointer assembly (Symmetrical for left side)



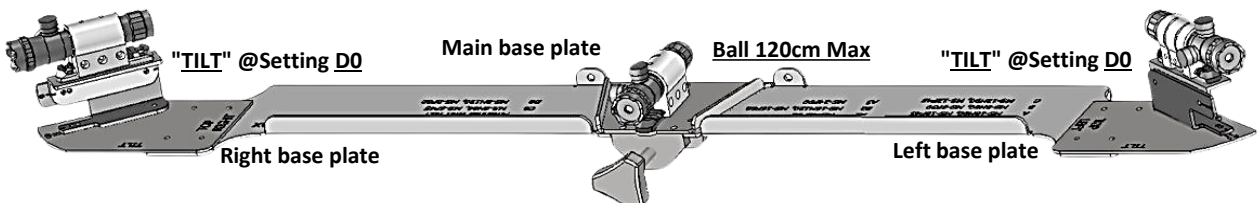
3.37 Assembly complete for model: MS-16H120



3.38 Example of "TILT" right side TOP ONLY laser pointer assembly (Symmetrical for left side)



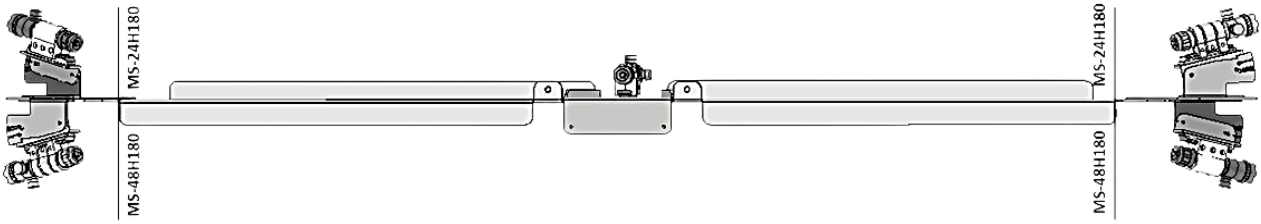
3.39 Similar assembly process for model with only centre and top laser pointer (e.g. MS-8H120)



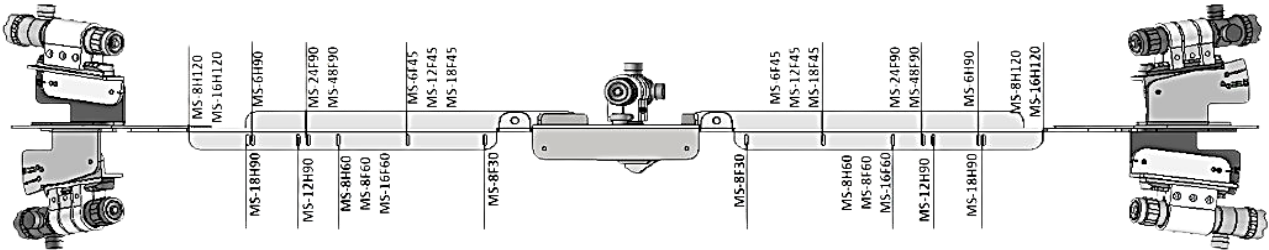
## 4.00 SLP antenna mounting guide

### 4.10 Models from main base plate

#### 4.11 Main base plate ID: "Ball 180 cm"

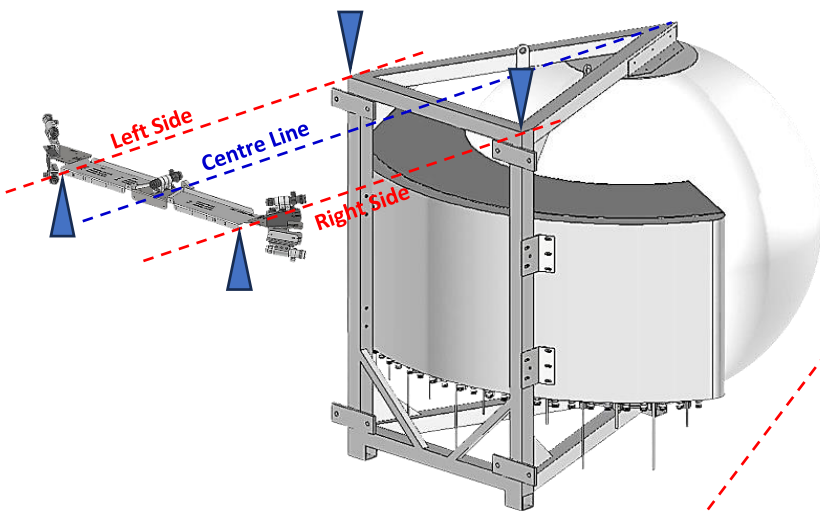


#### 4.12 Main base plate ID: "Ball 120 cm Max"

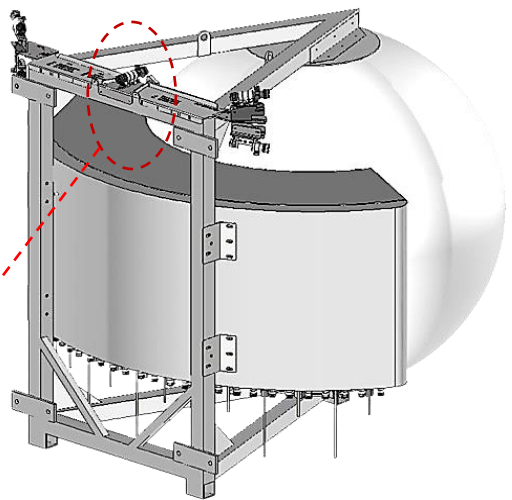


### 4.20 SLP Mounting

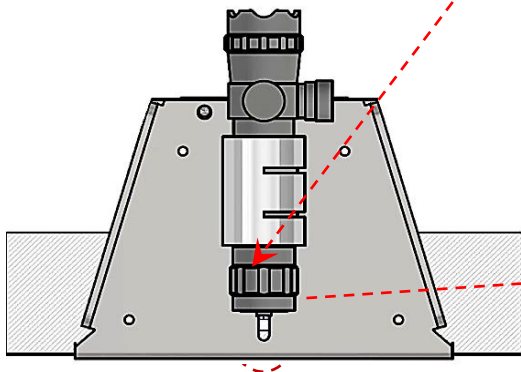
#### 4.21 SLP and frame alignment



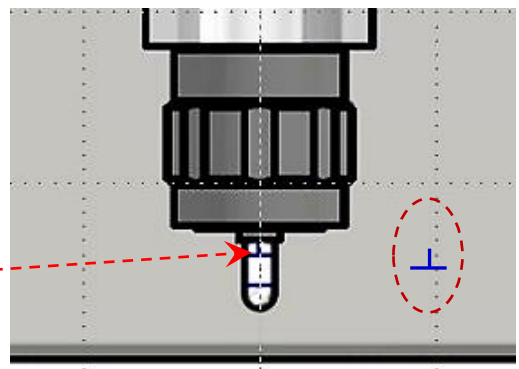
#### 4.22 SLP Aligned and seated flat



#### 4.23 Centre line check

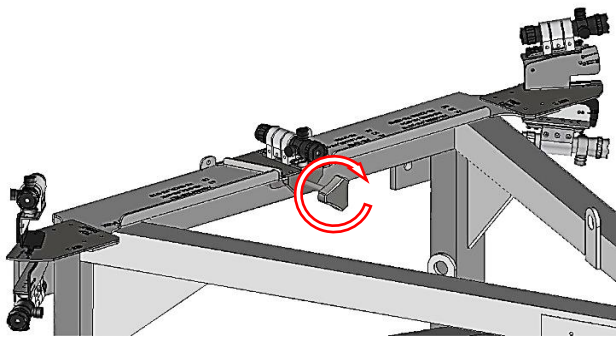


#### 4.24 Frame center line label visible

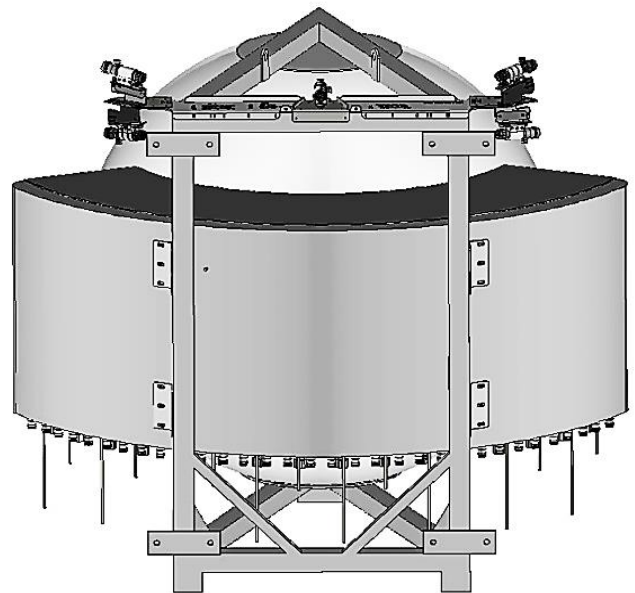




#### 4.25 Tighten SLP onto the frame



#### 4.26 Final check ensure all parts secured

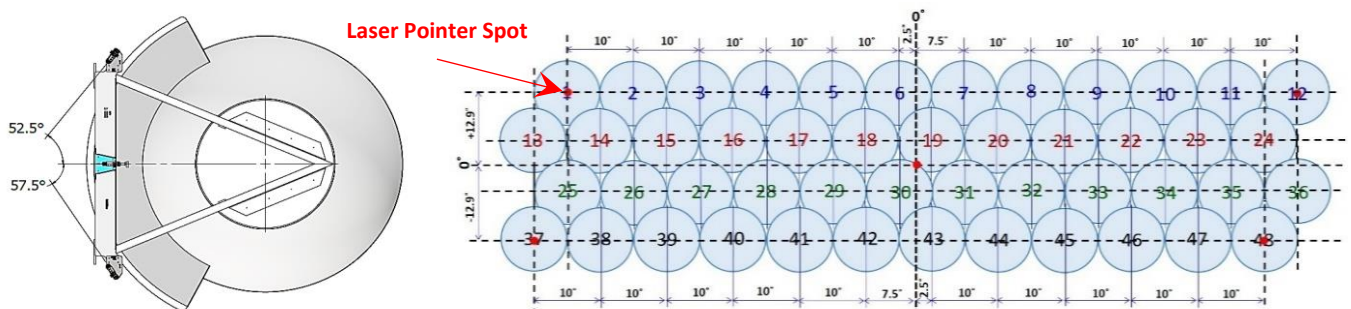


### 5.00 SLP on antenna positioning guide

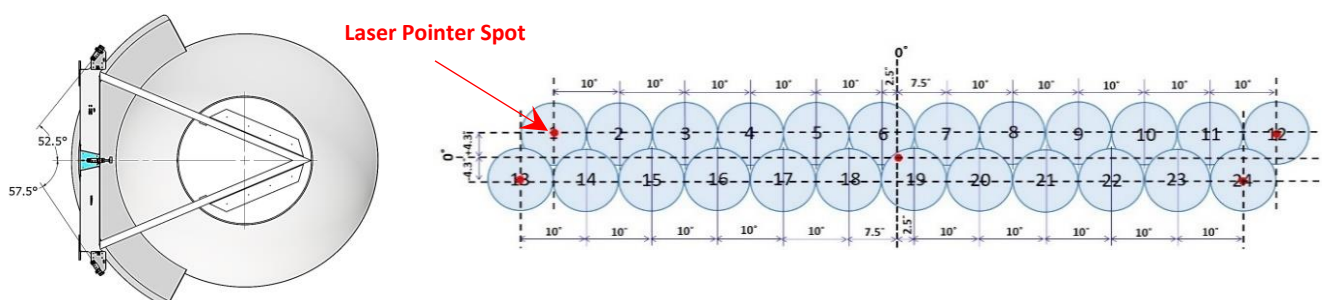
#### 5.10 180cm lens antenna model setting

180cm Lens	Main Base Plate ID	Left/Right BP ID	Setting
MS-48H180	Ball 180cm	SET 2	A1
MS-24H180	Ball 180cm	SET 2	A3

#### 5.11 MS-48H180 (Ball 180cm + SET 2 + "A1" Setting)



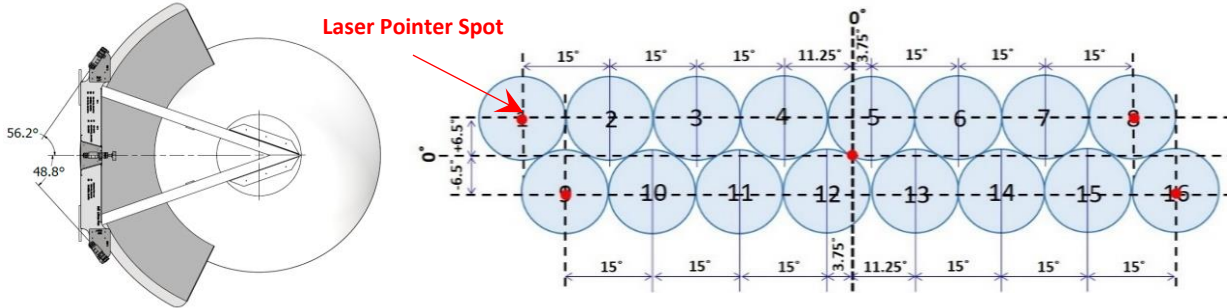
#### 5.12 MS-24H180 (Ball 180cm + SET 2 + "A3" Setting)



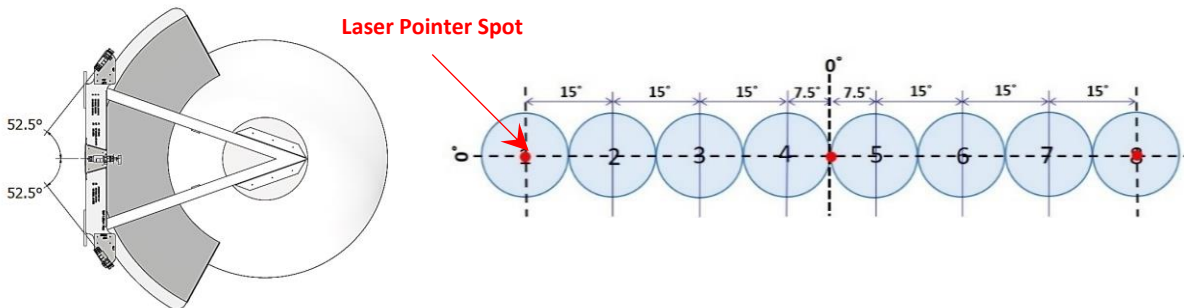
### 5.20 120cm lens antenna model setting

120cm Lens	Main Base Plate ID	Left/Right BP ID	Setting
MS-16H120	Ball 120cm Max	SET 2	B2
MS-8H120	Ball 120cm Max	TILT	D0

#### 5.21 MS-16H120 (Ball 120cm Max + SET 2 + "B2" Setting)



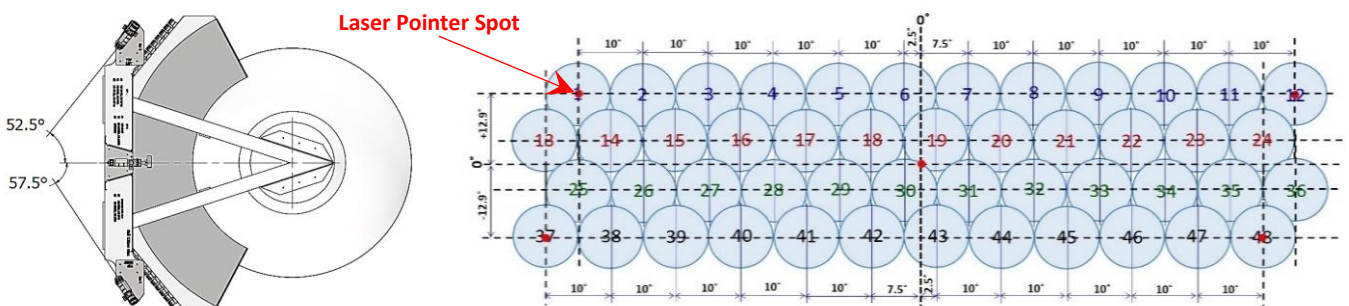
#### 5.22 MS-8H120 (Ball 120cm Max + TILT + "D0" Setting)



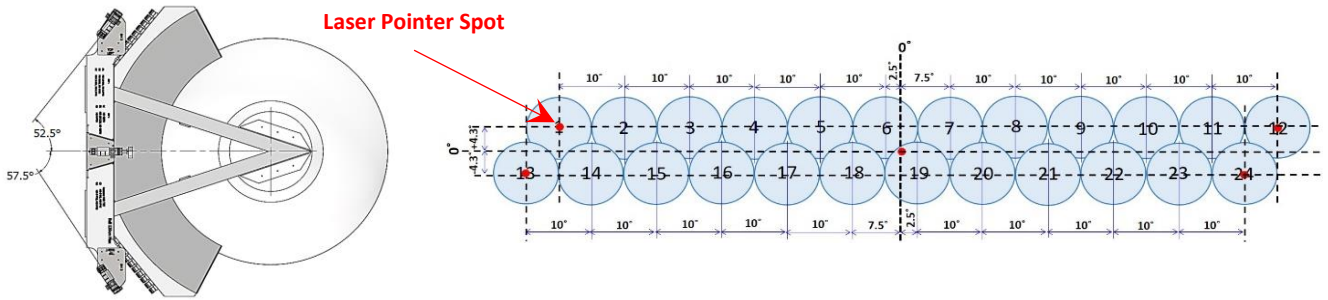
### 5.30 90cm lens antenna model setting

90cm Lens	Main Base Plate ID	Left/Right BP ID	Setting
MS-48F90	Ball 120cm Max	SET 2	A1
MS-24F90	Ball 120cm Max	SET 2	A3
MS-18H90	Ball 120cm Max	SET 1	AA
MS-12H90	Ball 120cm Max	SET 1	CC
MS-6H90	Ball 120cm Max	TILT	C0

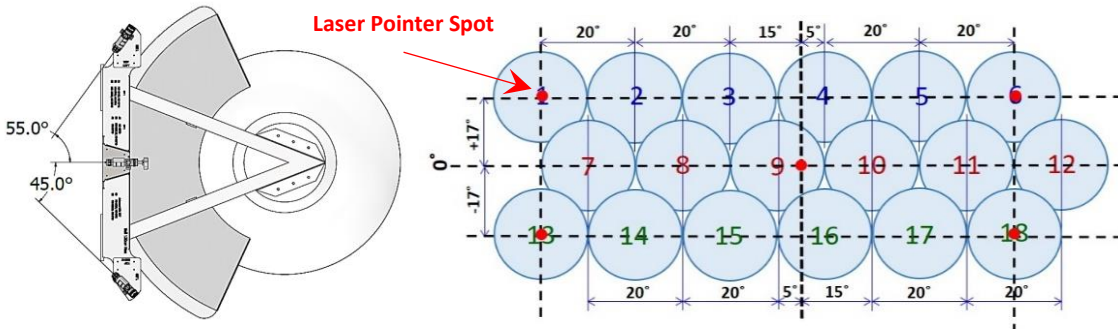
#### 5.31 MS-48F90 (Ball 120cm Max + SET 2 + "A1" Setting)



### 5.32 MS-24F90 (Ball 120cm Max + SET 2 + "A3" Setting)

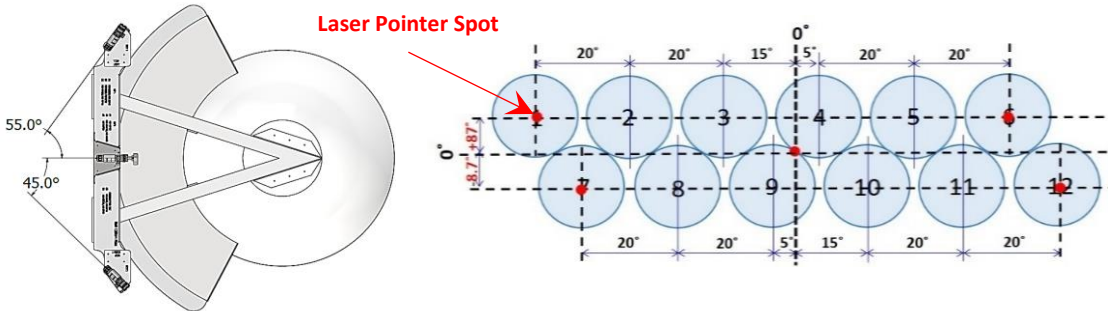


### 5.33 MS-18H90 (Ball 120cm Max + SET 1 + "AA" Setting)

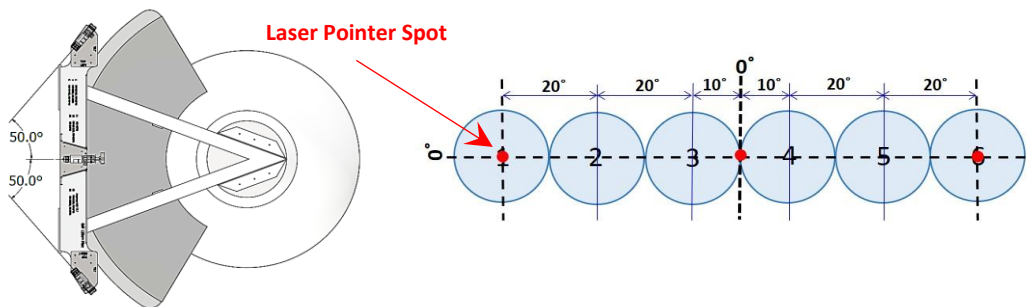


### 5.34 MS-12H90 (Ball 120cm Max + SET 1 + "CC" Setting)

*(Note: MS-12H90 Tilt Angle need to LOCK at +8.7°/-8.7° for Laser Spot Positioning)*



### 5.35 MS-6H90 (Ball 120cm Max + TILT + "C0" Setting)

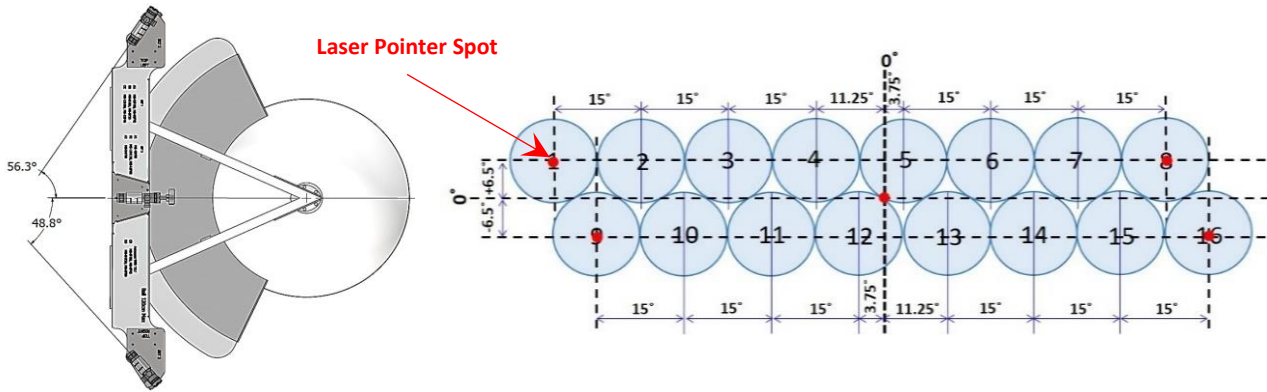




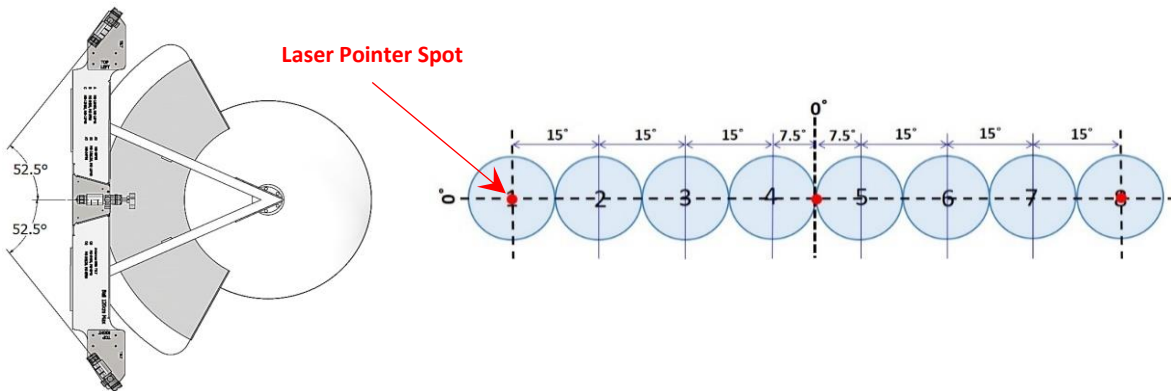
### 5.40 60cm lens antenna model setting

60cm Lens	Main Base Plate ID	Left/Right BP ID	Setting
MS-16F60	Ball 120cm Max	SET 2	B2
MS-8F60	Ball 120cm Max	TILT	D0
MS-8H60	Ball 120cm Max	SET 1	BB

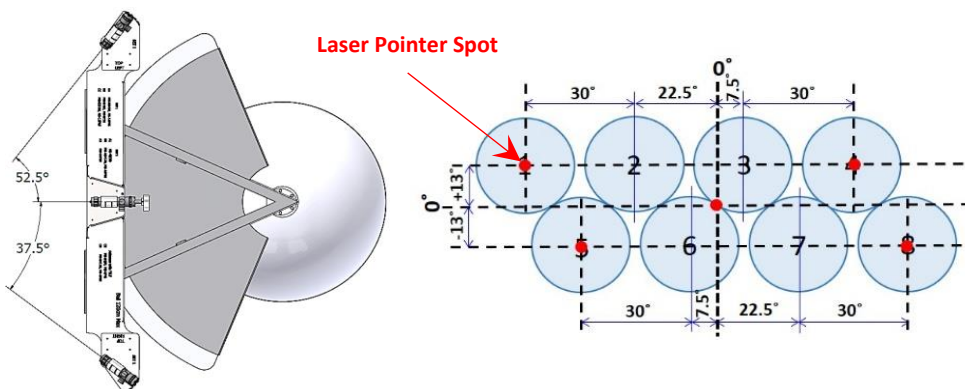
#### 5.41 MS-16F60 (Ball 120cm Max + SET 2 + "B2" Setting)



#### 5.42 MS-8F60 (Ball 120cm Max + TILT + "D0" Setting)



#### 5.43 MS-8H60 (Ball 120cm Max + SET 1 + "BB" Setting)

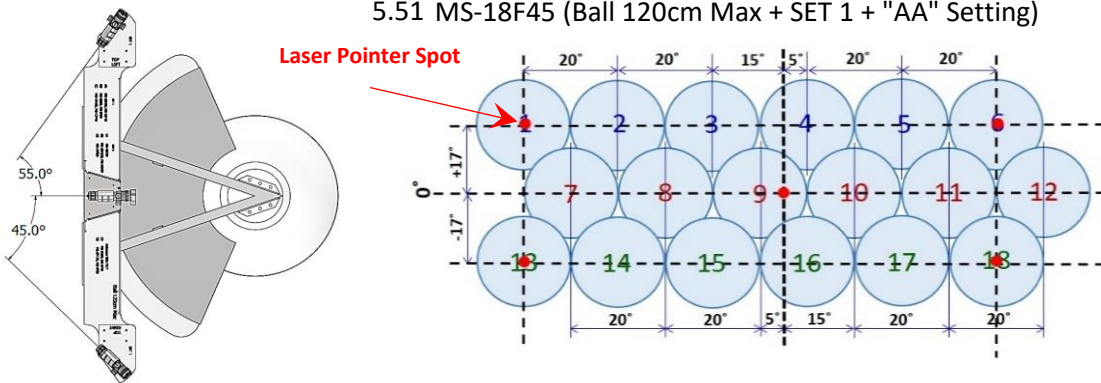




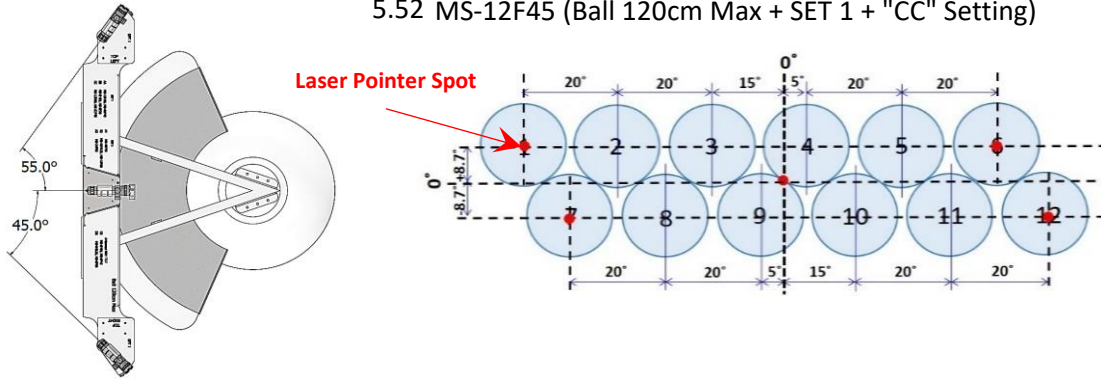
### 5.50 45cm lens antenna model setting

45cm Lens	Main Base Plate ID	Left/Right BP ID	Setting
MS-18F45	Ball 120cm Max	SET 1	AA
MS-12F45	Ball 120cm Max	SET 1	CC
MS-6F45	Ball 120cm Max	TILT	CO

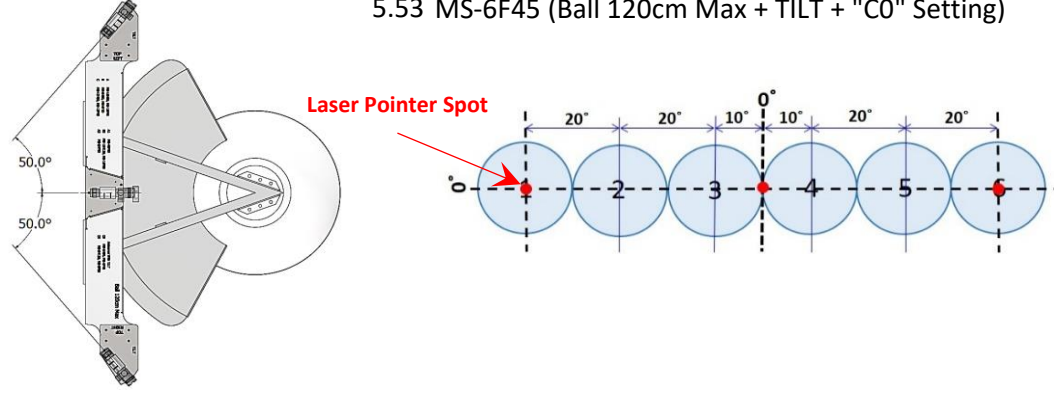
5.51 MS-18F45 (Ball 120cm Max + SET 1 + "AA" Setting)



5.52 MS-12F45 (Ball 120cm Max + SET 1 + "CC" Setting)



5.53 MS-6F45 (Ball 120cm Max + TILT + "CO" Setting)



### 5.60 30cm lens antenna model setting

30cm Lens	Main Base Plate ID	Left/Right BP ID	Setting
MS-8F30	Ball 120cm Max	SET 1	BB

5.61 MS-8F30 (Ball 120cm Max + SET 1 + "BB" Setting)

