

MATSING[®]

LENS TECHNOLOGY ENABLED

MS LSA Series antenna's
(Unpacking instruction)



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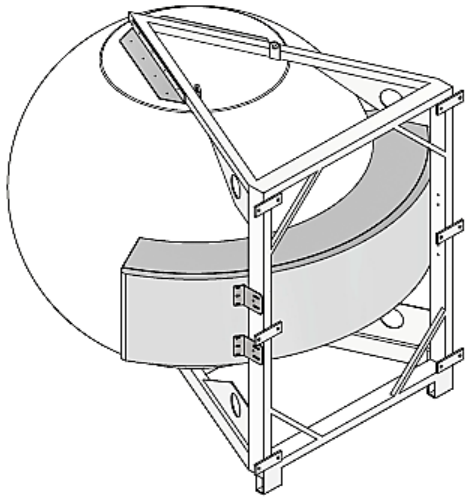
4.00 Wooden crate caution label

Revision History:

<u>Date</u>	<u>Description</u>	<u>Rev By</u>	<u>Check By</u>	<u>Rev no</u>
29-May-2020	Initial Release	RL	Pavel	0
31-Aug-2023	General update and included new model of MS-24C180-I	RL	Patrick	1
27-Nov-2024	Update new model	RL	Patrick	2

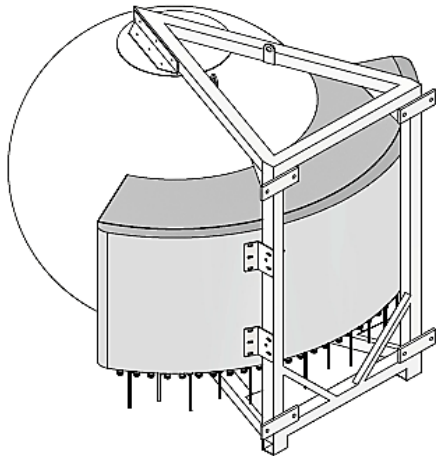
1.00 Large sphere antenna's (LSA) product overview

1.10 180cm lens antennas



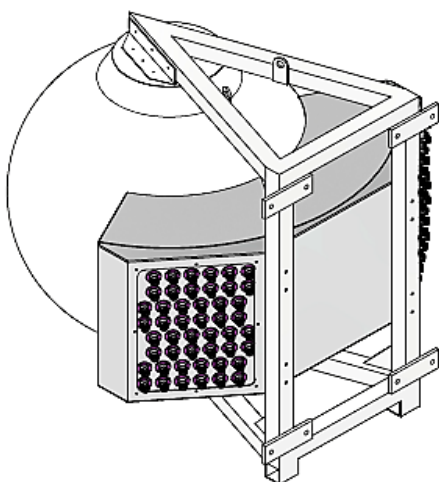
no.	Model	Dimensions (cm)		
		Height	Width	Depth
1	MS-48H180	187.4	206.6	207.2
2	MS-24H180	187.9	206.6	207.2
3	MS-24C180-I	120.1	202.7	207.2
4	MS-24C180	120.1	202.7	207.2
5	MS-12T180	187.4	213.7	202.2
6	MS-12L180	187.4	213.7	202.2
7	MS-12H180	187.4	204.7	207.2
8	MS-12.6DB180-T	187.4	204.7	207.2
9	MS-12.6DB180	187.4	204.7	207.2
10	MS-6T180	187.9	204.7	207.2
11	MS-6L180	187.9	204.7	207.2

1.20 120cm lens antennas



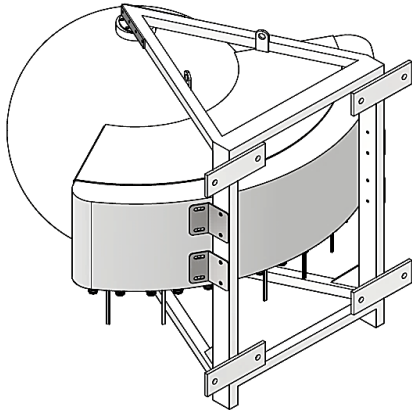
no.	Model	Dimensions (cm)		
		Height	Width	Depth
1	MS-16H120	128.2	149.2	142.5
2	MS-8T120	128.2	155.4	142.5
3	MS-8L120	128.2	155.4	142.5
4	MS-8H120	128.2	145.7	142.5
5	MS-8.4DB120-T	128.2	145.7	143.2
6	MS-8.4DB120	128.2	145.7	143.2

1.30 90cm lens antennas



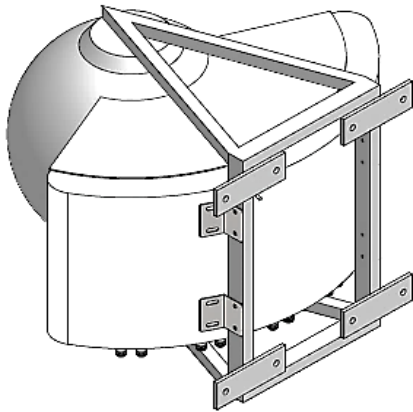
no.	Model	Dimensions		
		Height	Width	Depth
1	MS-48F90	105.4	108.7	110.0
2	MS-48C90	105.4	108.7	110.0
3	MS-24F90	105.4	108.7	110.0
4	MS-24C90	105.4	108.7	110.0
5	MS-18H90	105.4	118.4	110.0
6	MS-12H90	105.4	122.6	114.7
7	MS-12F90	105.4	114.0	110.0
8	MS-12C90	105.4	114.0	110.0
9	MS-9SH90-FWB-S	105.4	114.0	110.0
10	MS-9H90-FWB2.3	105.4	114.0	110.0
11	MS-6H90	105.4	116.6	113.4
12	MS-6.3DB90-T	105.4	116.6	113.3
13	MS-6.3DB90	105.4	116.6	113.3

1.40 60cm lens antennas



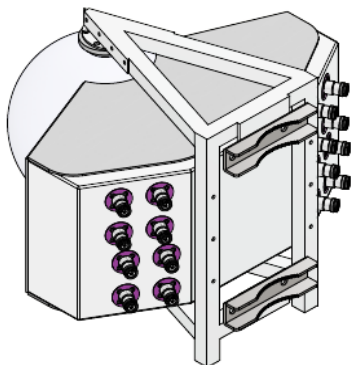
no.	Model	Dimensions		
		Height	Width	Depth
1	MS-24F60	72.6	92.7	80.0
2	MS-16F60	72.6	88.8	80.0
3	MS-8H60	81.6	92.7	80.0
4	MS-8F60	72.6	86.1	80.0
5	MS-8C60 (S)	72.6	86.1	80.0
6	MS-4H60	66.1	83.3	79.3
7	MS-4.2DB60-T	88.7	92.8	84.8
8	MS-4.2DB60	88.7	92.8	84.8

1.50 45cm lens antennas



no.	Model	Dimensions		
		Height	Width	Depth
1	MS-18F45	55.2	79.2	69.5
2	MS-18C45	55.2	79.2	69.5
3	MS-12F45	62.0	79.2	69.5
4	MS-12C45	62.0	79.2	69.5
5	MS-6F45	62.0	73.0	67.9
6	MS-6C45	62.0	73.0	67.9


1.60 30cm lens antennas




no.	Model	Dimensions		
		Height	Width	Depth
1	MS-8F30	40.6	52.2	48.4
2	MS-4F30	41.7	52.2	51.4

2.00 Antenna unloading, transportation, and unpacking

2.10 Safety precaution

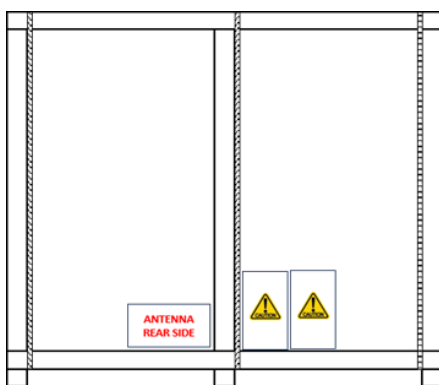
	<p><i>Workplace safety and health compliance are required when performing the antenna loading, unloading, lifting, and transportation.</i></p> <p><i>Appropriate personal protection equipment, material handling machinery, equipment's, and tool's should be used together with certified personnel.</i></p>
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2.20 Antenna wooden crate lifting and handling caution point (90 to 180cm lens)

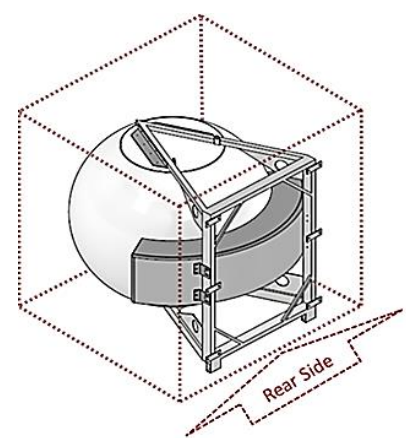
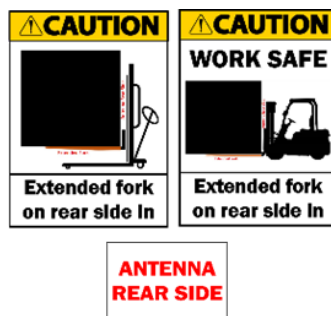
	<p>1) To prevent unbalance during lifting and moving for the antenna's lens with 90 cm to 180 cm, lifting the fork can "only" entry from the antenna's "REAR SIDE."</p> <p>2) "Extended fork "must" be used for lifting and moving, and the length shall not exceed 1.5 times the lifting fork.</p>
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2.21 Unloading, transportation, and unpacking

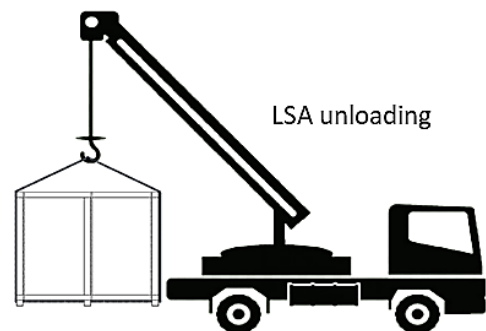
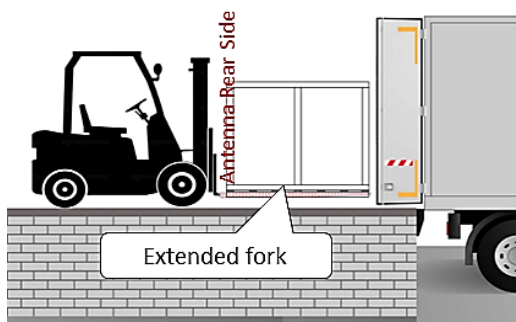
(example of 180cm lens antenna)



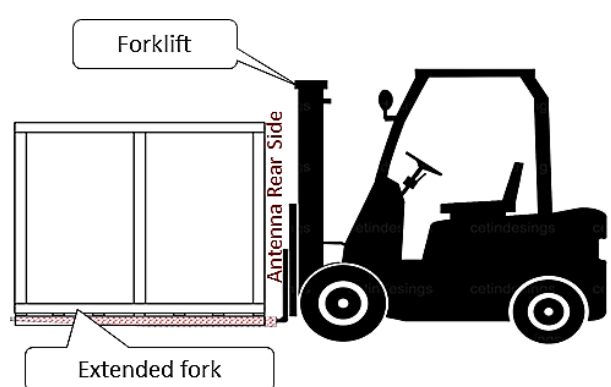
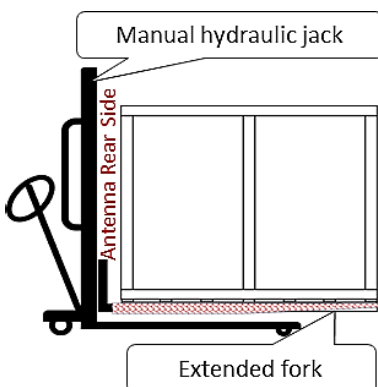
Antenna rear side label



2.22 Unloading using a crane truck, manual hydraulic jack, or forklift



2.23 Point-to-point transport by manual hydraulic jack or forklift



3.00 Wooden crate unpacking tools and steps

3.10 Unpacking tools



Crow bar



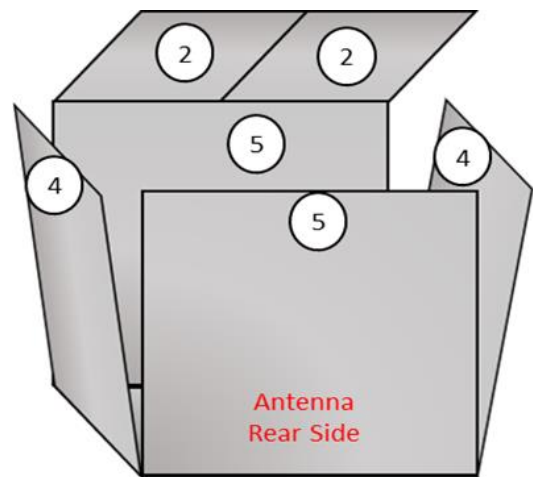
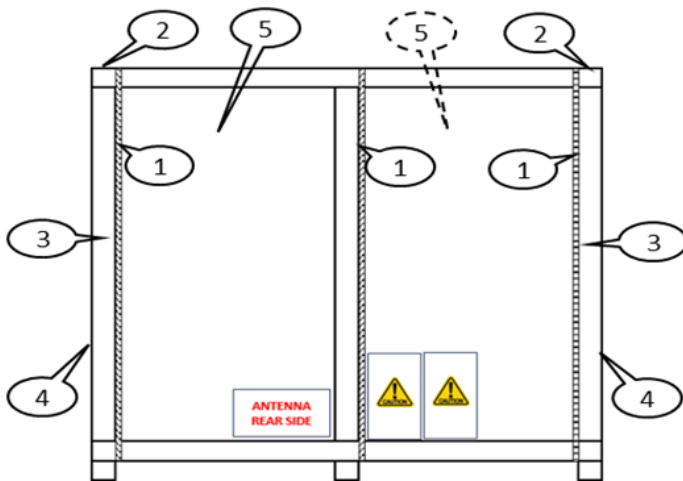
Cutter



Electric Driver

3.20 Unpacking steps

Unpacking steps (example of 180cm Antenna)	
Step 1	Use a cutter to cut and remove plastic straps.
Step 2	Unscrew and remove the top panel.
Step 3	Unscrew the left and right sides to remove the rear panel.
Step 4	Remove left and right side panels.
Step 5	Remove front and rear panels.

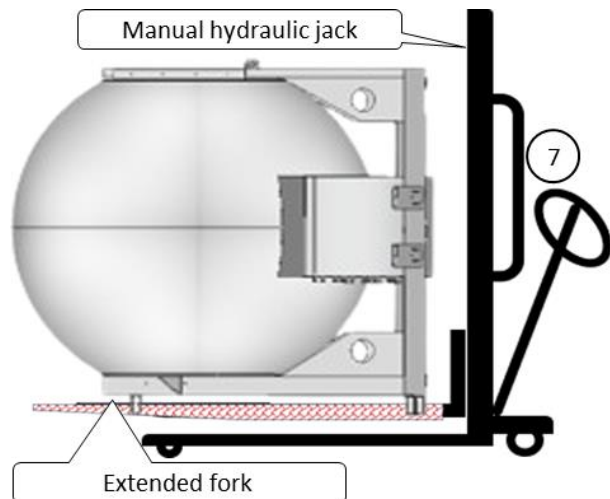


Step 6	Unwrapping the shrink wrap.
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Step 7	Use a manual hydraulic jack with an extended fork for transporting.
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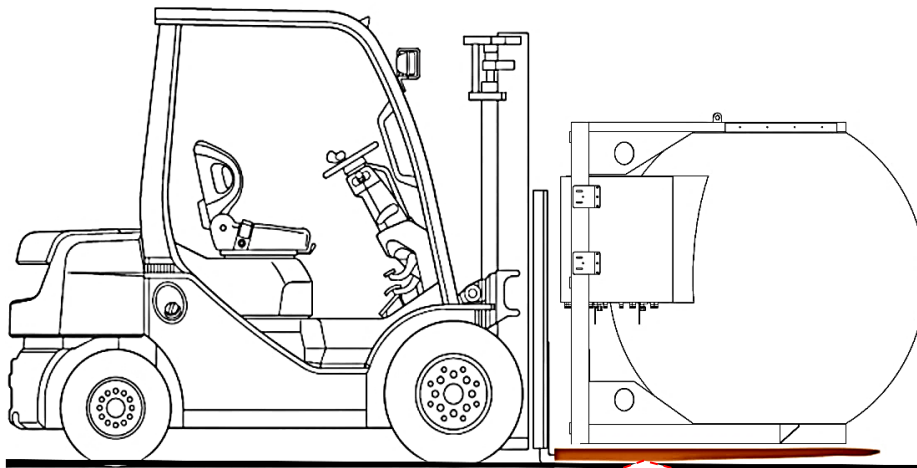
Shrink wrap



Extended fork

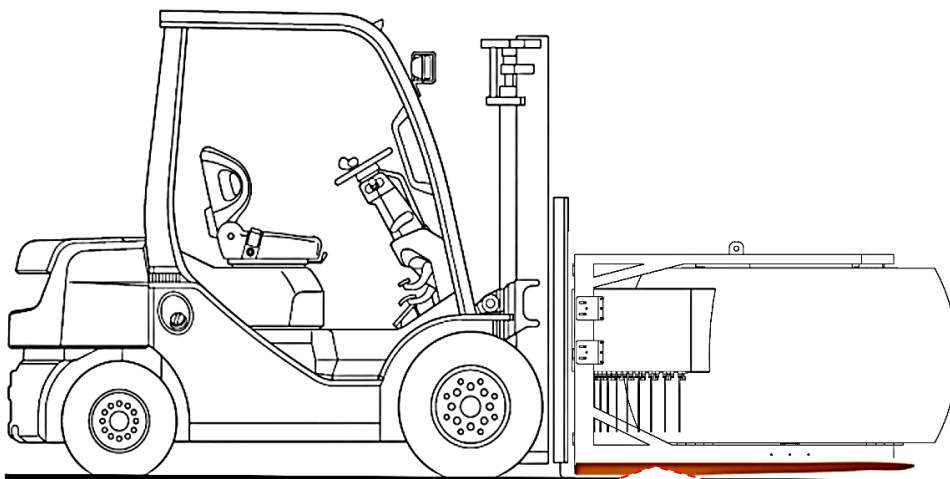
3.30 Forklift use for point to point transporting

3.31 180cm (Full height) lens antenna



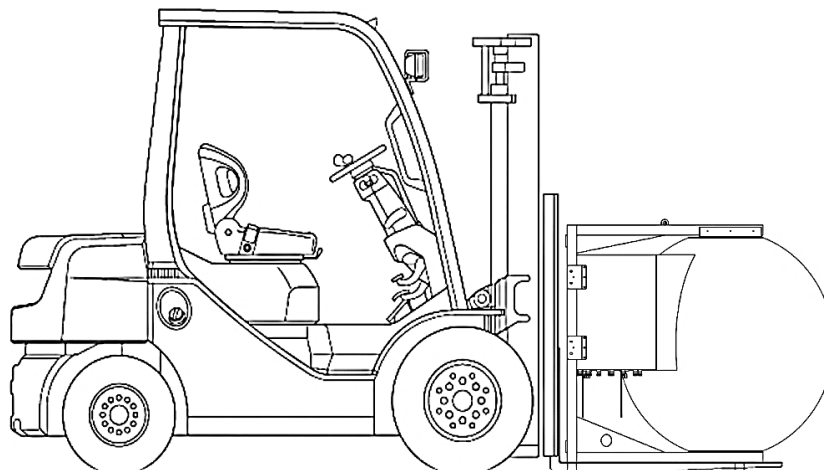
Extended Fork **Must Not be More 1.5x Length** of the Pallet Fork

3.32 180cm (3/4 height) lens antenna



Extended Fork **Must Not be More 1.5x Length** of the Pallet Fork

3.33 120cm lens antenna



4.00 Wooden crate caution label

CAUTION

WORK SAFE

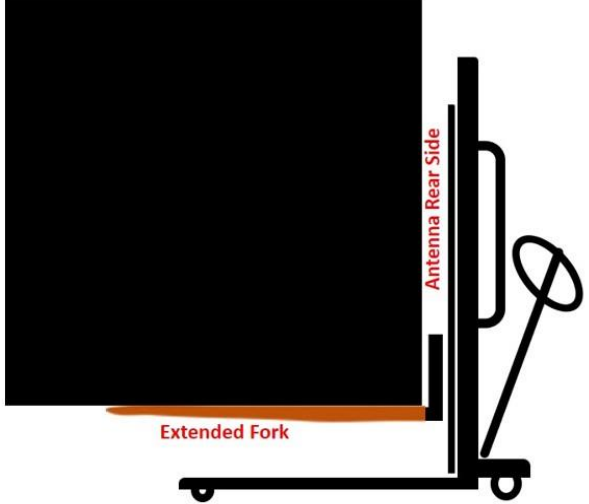


Antenna Rear Side

Extended Fork

**Extended fork
on rear side in**

CAUTION



Antenna Rear Side

Extended Fork

**Extended fork
on rear side in**

**ANTENNA
REAR SIDE**