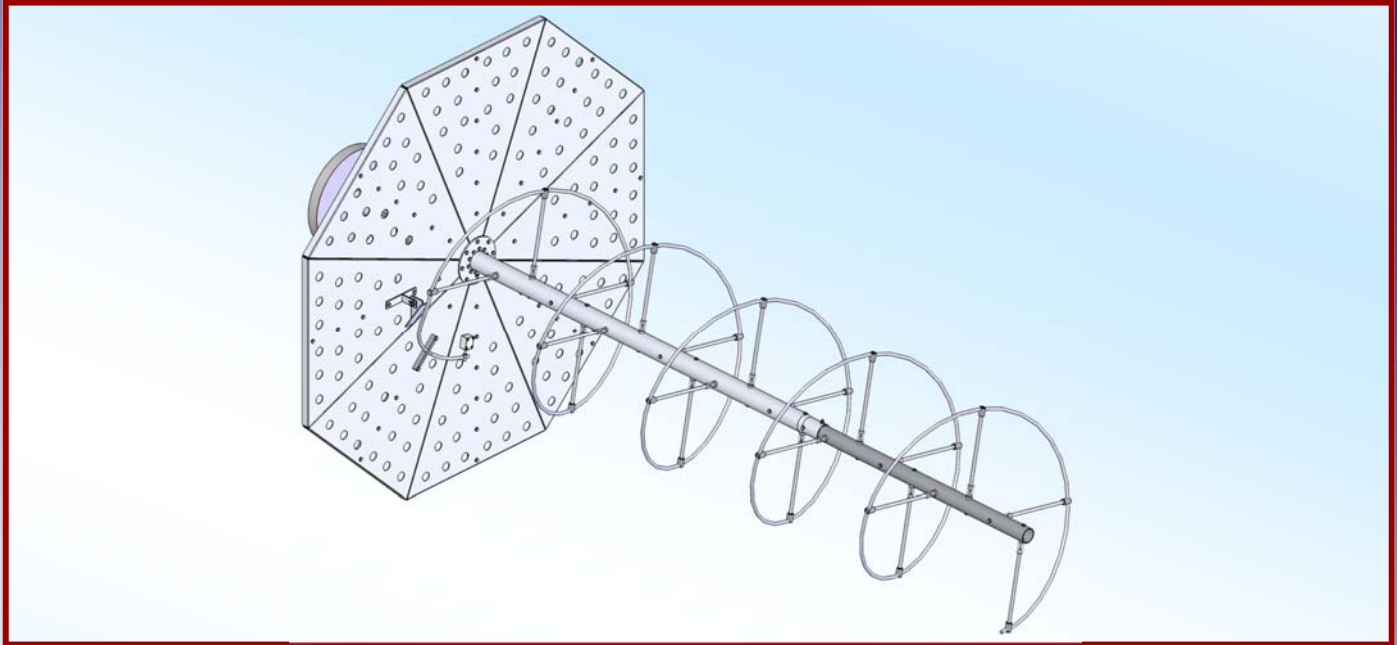




# M2 Antenna Systems, Inc. Model No: 125-175-5



## SPECIFICATIONS:

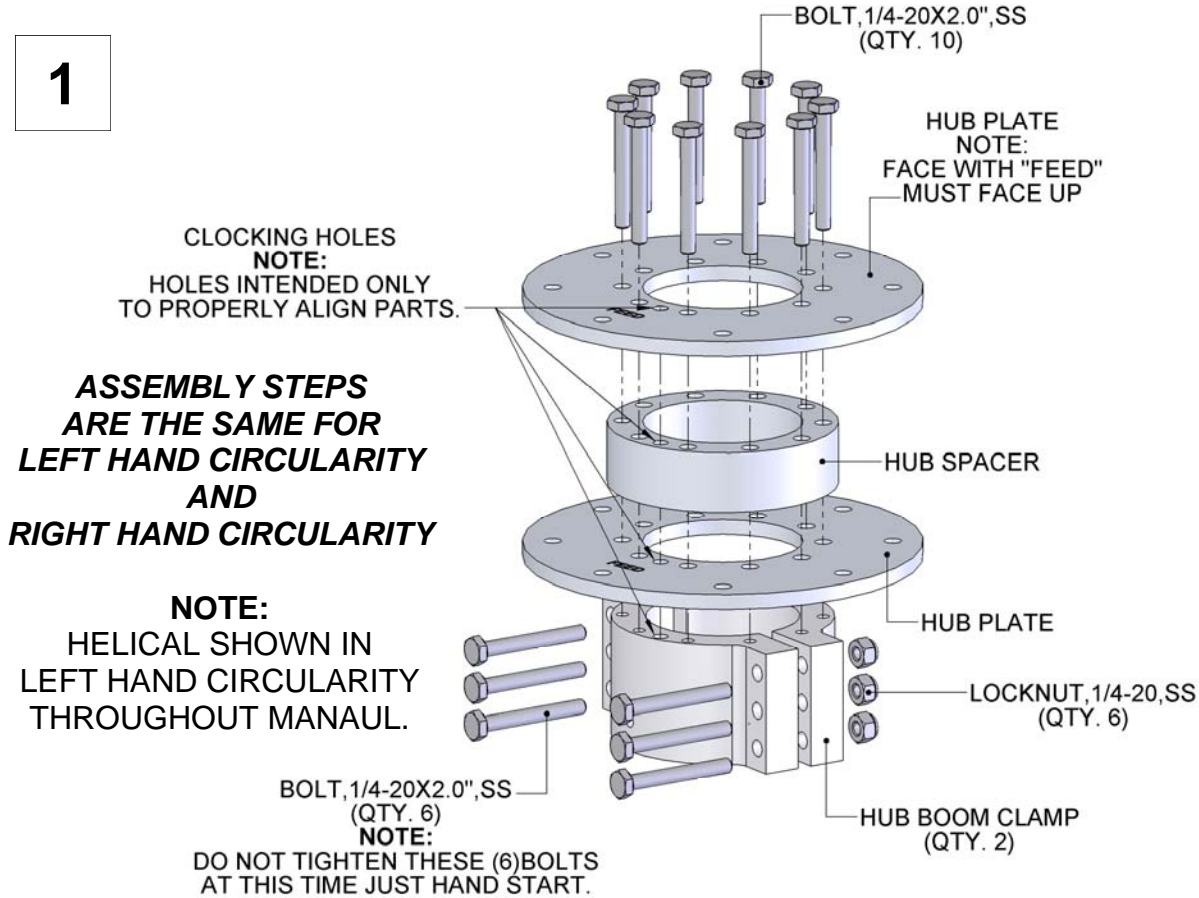
Model .....	125-175-5	Elipticity .....	<3db
Frequency Range.....	125 To 175 mHz	Connector.....	Type "N" Female
*Gain .....	8.2 dBic Nominal	Power Handling .....	1 kW, Higher avl.
Beamwidth .....	150 mHz = 70°	Boom Length / Dia.....	122.5" / 2" to 2.5"
Impedance. ....	50 Ohms Unbalanced	Turning Radius:.....	106"
VSWR .....	1.5 Typical	Mast Size.....	1.5" Nom.
Polarity .....	RHCP or LHC (Customer Specified)	Wind Survival .....	100 MPH
		Weight / Ship Wt.....	100 Lbs. / 400 Lbs.

## FEATURES:

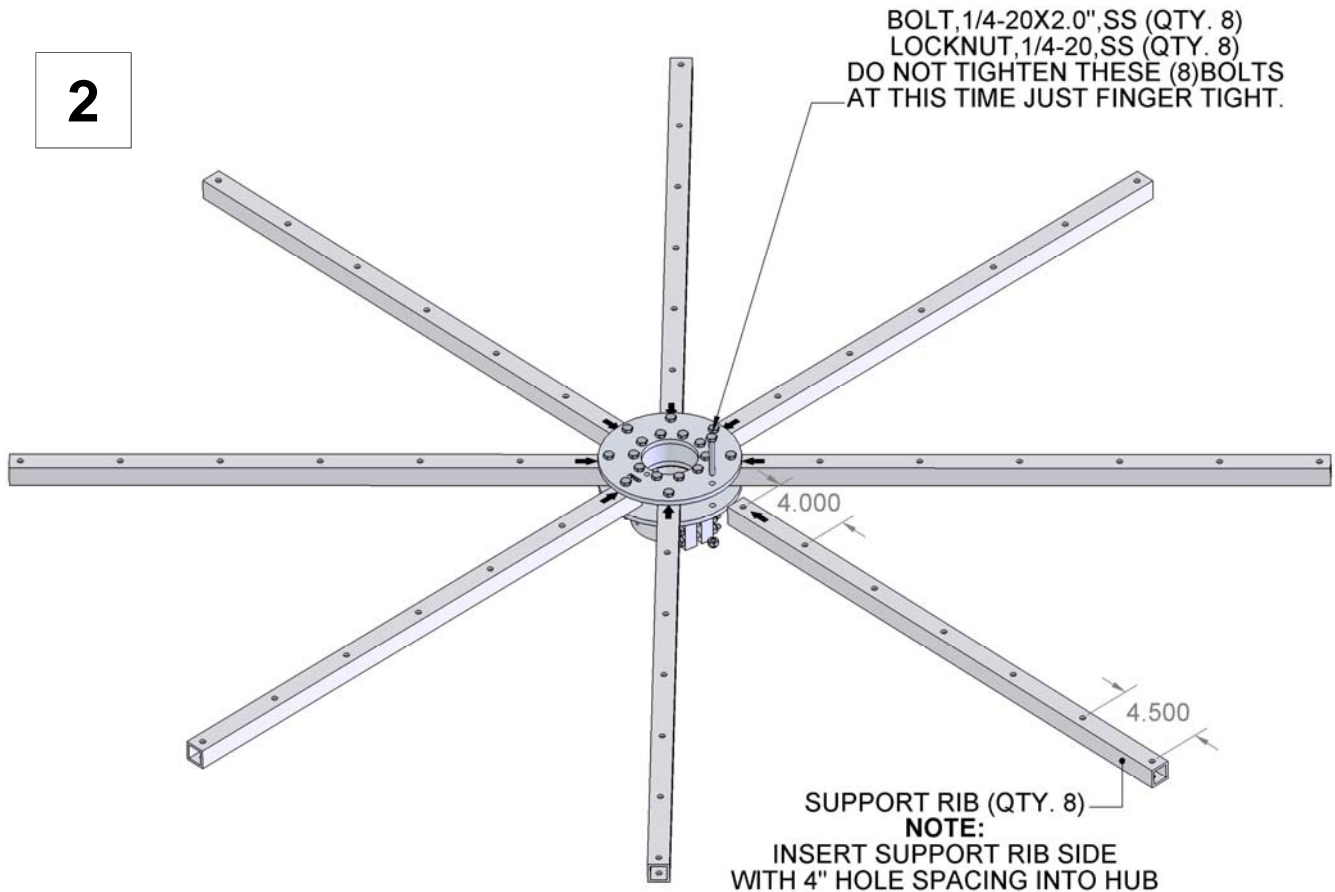
The M2 125-175-8 Helix antenna offers medium performance characteristics for specialized fixed and rapid deploy operations within the 150 to 175 MHz band. It is perfect for either terrestrial or satellite applications. The antenna is supplied with a counter weight. The antenna is shipped with the helix assembled less ground plane. Finishes are optional. The steel counterweight is zinc plated. Optional arrays of 2 or more are available. Other frequency ranges and gains are also available down to 100 and up to 1300 MHz. Complete motorized, computer controlled AZ-EL systems are also manufactured by M2. Where circular polarity is not required but high bandwidth is, M2 offers a line of various log periodic antennas from 5 to 1300 MHz. If it is antenna related, we probably have made it. Call us with your requirements.

# GROUND PLANE HUB ASSEMBLY

1

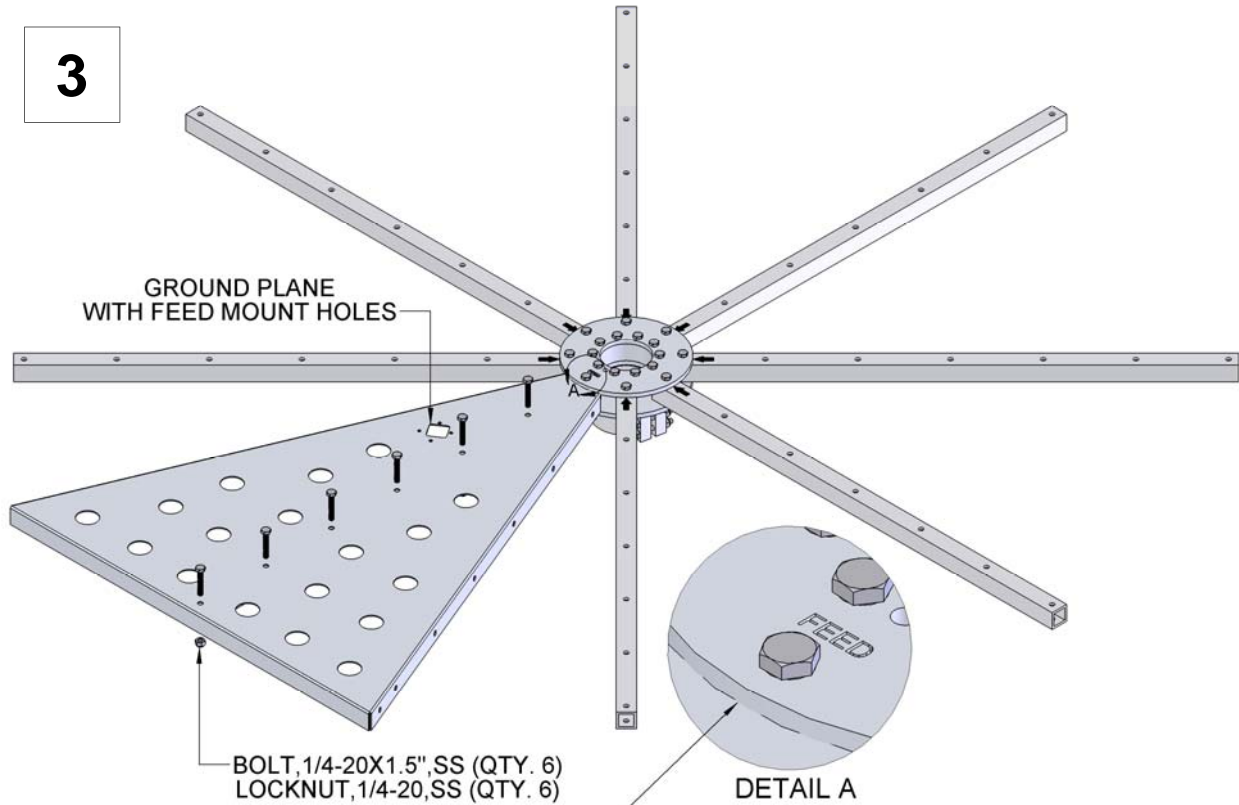


2



# GROUND PLANE HUB ASSEMBLY

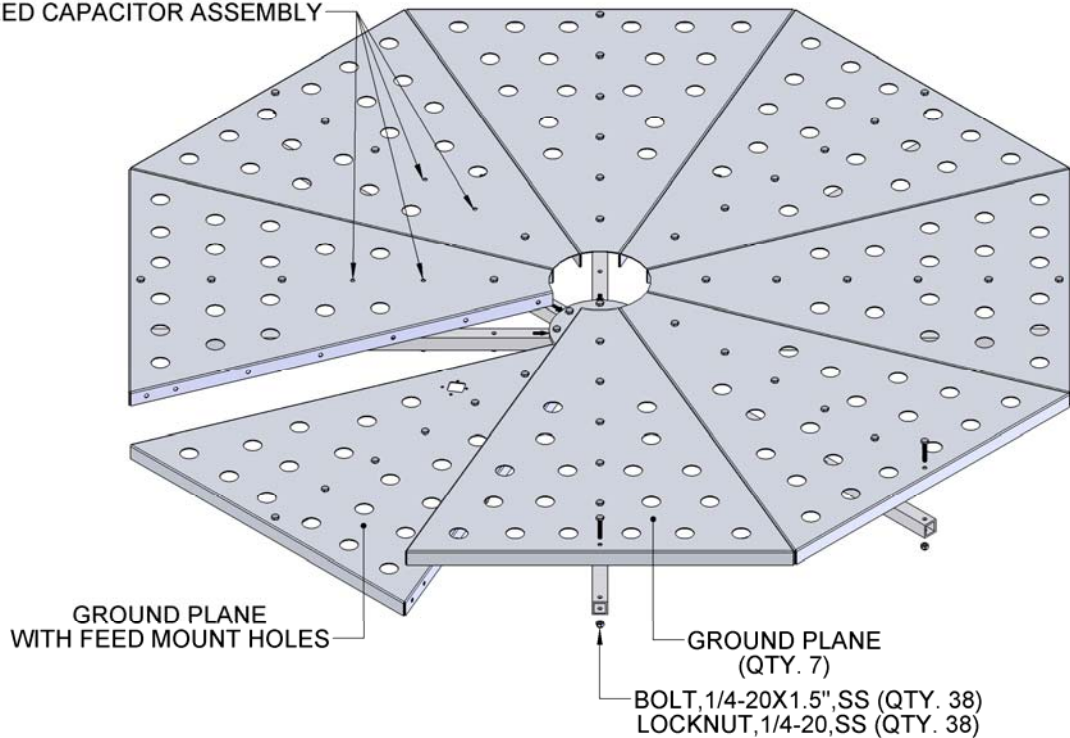
3



NOTE:  
INSTALL GROUND PLANE WITH FEED MOUNT HOLES TO SUPPORT RIB LOCATED IN-LINE WITH "FEED" ON HUB PLATE

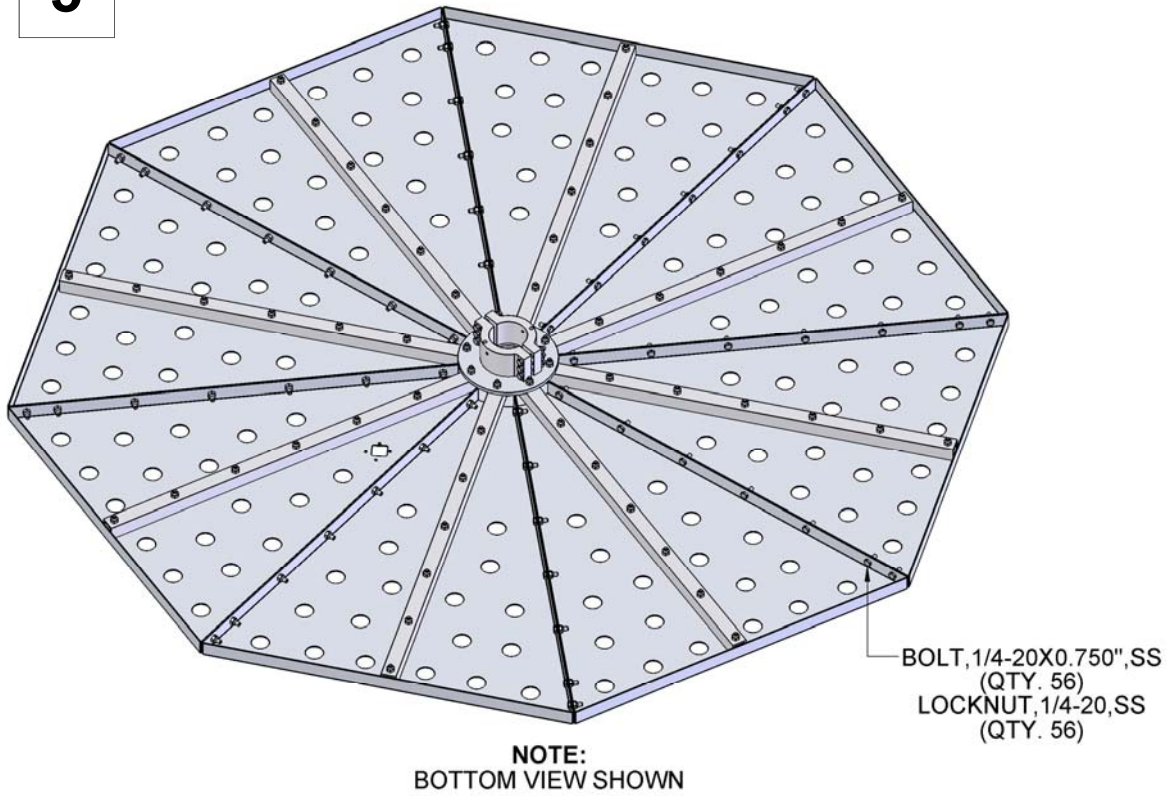
4

NOTE:  
DO NOT INSTALL HARDWARE IN THESE (4) HOLES USED LATER TO MOUNT FEED SUPPORT BLOCK & FEED CAPACITOR ASSEMBLY



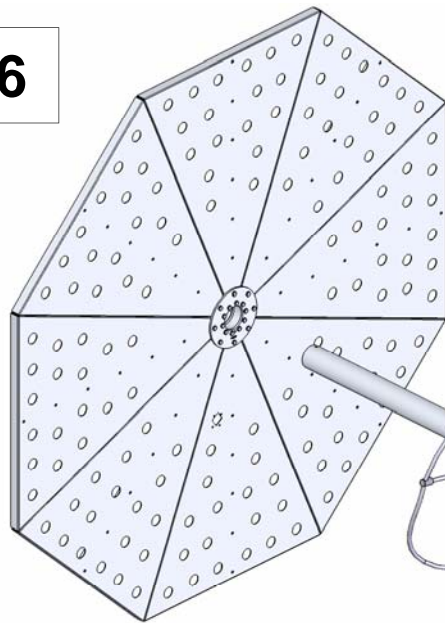
# GROUND PLANE HUB ASSEMBLY

5

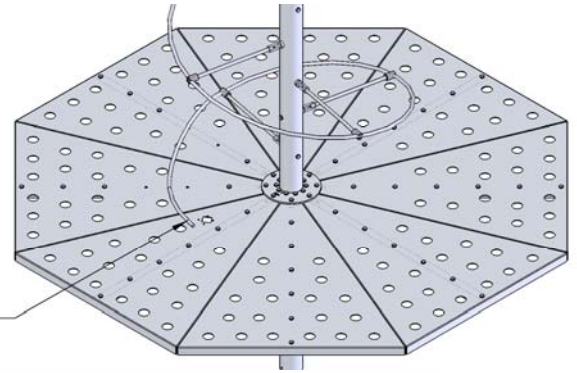


# 125-175-5 HELICAL ASSEMBLY

6

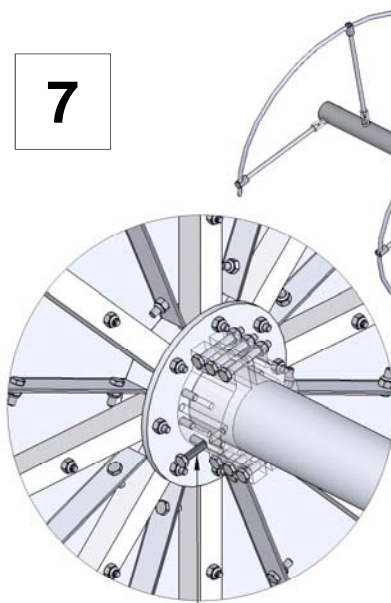


NOTE:  
HELIX ENDING POINT



NOTE:  
INSERT HELIX & BOOM ASSEMBLY  
THRU CENTER OF GROUND PLANE ASSEMBLY  
THIS PROCEDURE MAY REQUIRE A SECOND PERSON  
CAUTION:  
PLEASE HANDLE HELIX & BOOM ASSEMBLY  
WITH EXTRA CARE TO AVOID DAMAGE.

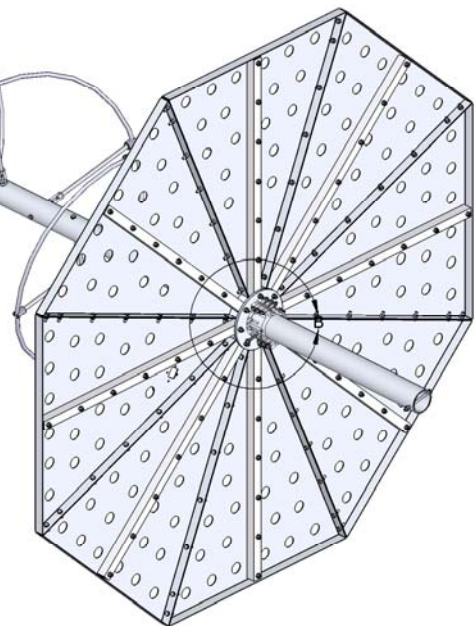
7



NOTE:  
HUB BOOM CLAMPS  
SHOWN TRASPARENT  
TO SHOW MORE DETAIL

BOLT, 1/4-20X1.0", SS  
(ONLY ONE REQUIRED)  
LOCATOR HOLE IN BOOM MUST  
ALIGN WITH LOCATOR HOLE ON HUB BOOM CLAMP.

NOTE:  
BEFORE YOU TIGHTEN LOCATOR BOLT  
MAKE SURE THE LAST 1/4" WAVE  
OF HELIX ENDS AT FEED  
BLOCK MOUNTING POINT.  
TIGHTEN CLAMP BOLTS EVENLY.  
MAKE SURE ALL REMAINING LOSE  
HARDWARE IS TIGHTEN.

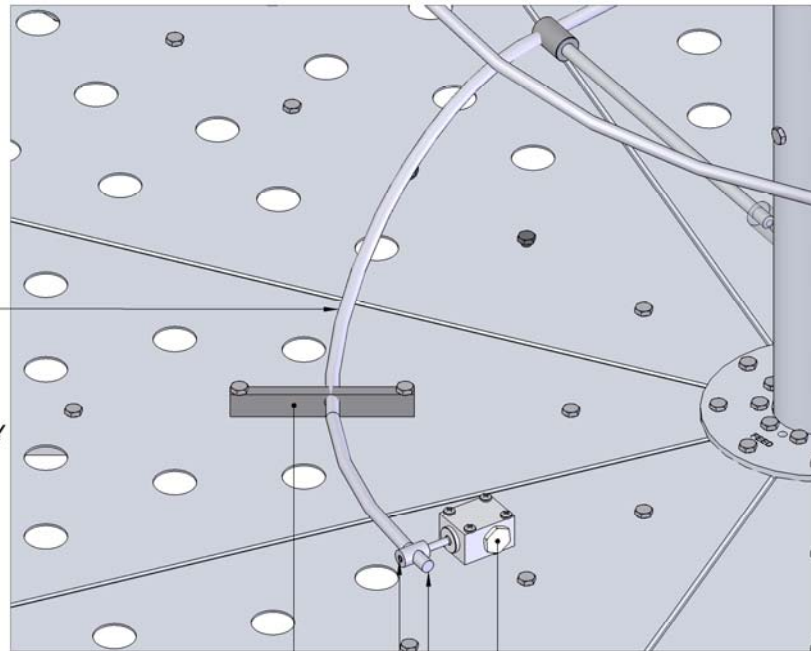


# 125-175-5 HELICAL ASSEMBLY

8

**CAUTION:**  
HANDLE HELIX WITH  
CAUTION AND CARE.

**NOTE:**  
THE LAST 1/4" WAVE  
OF HELIX AS BEEN FACTORY  
TUNED.  
BENDING OR RE-FORMING  
WILL EFFECT HELICAL  
TUNING & PERFORMANCE.



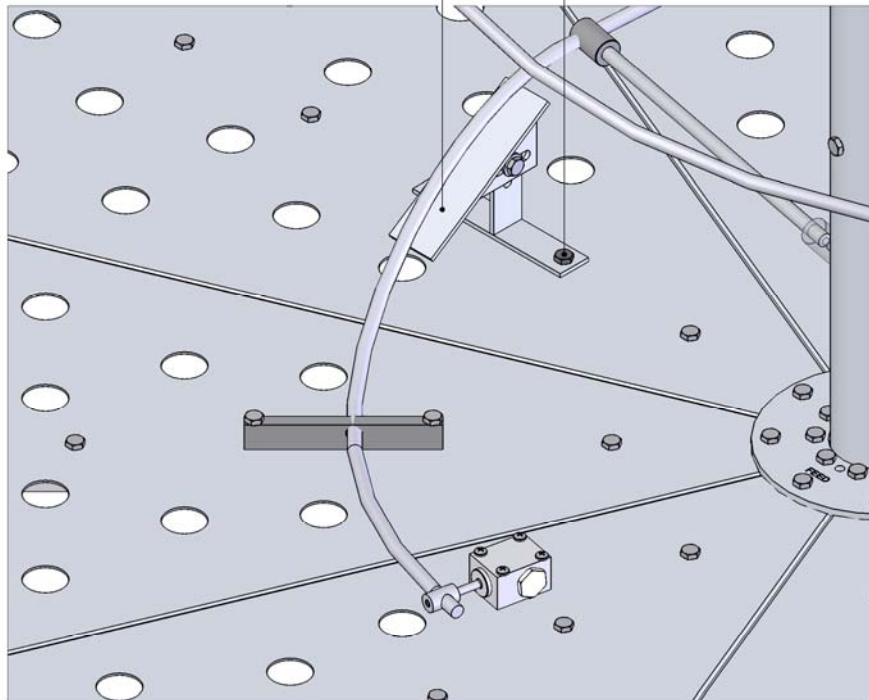
FEED SUPPORT BLOCK  
BOLT, 1/4-20X2.25", SS (QTY. 2)  
LOCKNUT, 1/4-20, SS (QTY. 2)  
**NOTE:**  
YOU MUST INSTALL  
FEED SUPPORT BLOCK BEFORE  
FEED BLOCK ASSEMBLY

FEED BLOCK ASSEMBLY  
SCREW, 8-32X1.5", SS (QTY. 4)  
LOCKNUT, 8-32, SS (QTY. 4)  
HELIX ENDING POINT  
SET SCREW, 1/4-20X0.25", SS

9

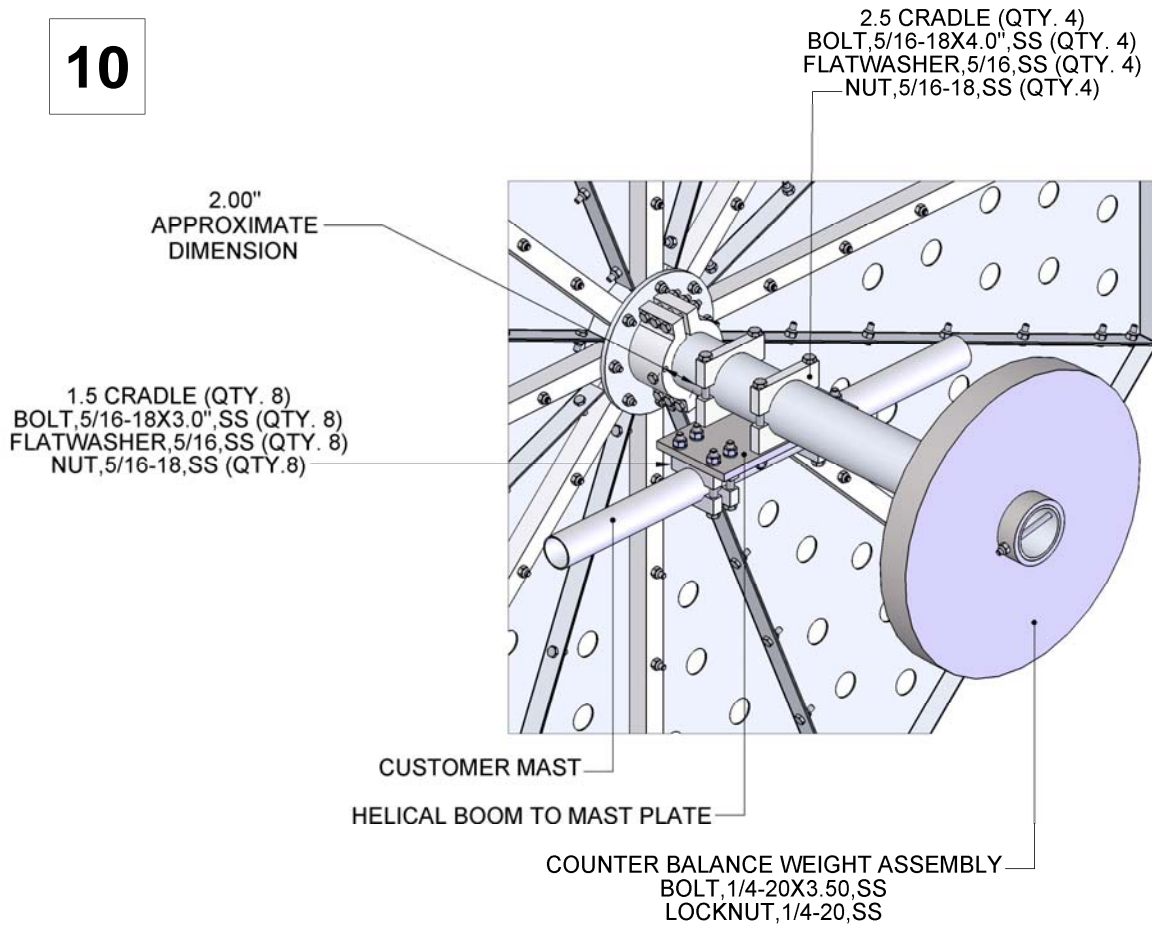
FEED CAPACITOR ASSEMBLY  
**CAUTION:**  
FEED CAPACITOR ASSEMBLY  
HAS BEEN FACTORY TUNED

BOLT, 1/4-20X1.75", SS  
(QTY. 2)  
LOCKNUT, 1/4-20, SS  
(QTY. 2)



# 125-175-5 HELICAL ASSEMBLY

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**M<sup>2</sup> ANTENNA SYSTEMS, INC.**

4402 N. SELLAND AVE.

FRESNO, CA 93722

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# 125-175-5 PARTS & HARDWARE

DESCRIPTION.....	QTY
HELIX & BOOM ASSEMBLY .....	1
FEED BLOCK ASSEMBLY .....	1
FEED CAPACITOR ASSEMBLY (FACTORY TUNNED) .....	1
FEED SUPPORT BLOCK .....	1
GROUND PLANE (W/ FEED MOUNT HOLES) .....	1
GROUND PLANE.....	7
HUB PLATE .....	2
HUB SPACER.....	1
HUB BOOM CLAMP .....	2
SUPPORT RIB (SQ. TUBE).....	8
CRADLE, 2.5" (M2AMC0132) .....	4
COUNTER BALANCE WEIGHT ASSEMBLY .....	1
ASSEMBLY MANUAL .....	1

## HARDWARE:

BOLT, 5/16-18 X 4.0", SS .....	4
LOCKWASHER, 5/16, SS .....	12
NUT, 5/16-18, SS.....	12
BOLT, 1/4-20 X 3-1/2", SS .....	1
BOLT, 1/4-20 X 2-1/4", SS .....	2
BOLT, 1/4-20 X 2", SS .....	72
BOLT, 1/4-20 X 1-3/4", SS .....	2
BOLT, 1/4-20 X 1", SS .....	1
BOLT, 1/4-20 X 3/4", SS .....	64
SET SCREW, 1/4-20 X 1/4", SS .....	1
LOCKNUT, 1/4-20, SS .....	132
SCREW, 8-32 X 1-1/2", SS .....	4
LOCKNUT, 8-32, SS .....	4
ALLEN KEY, 1/8" .....	1

## OPTIONAL 1.5 CROSSBOOM MOUNTING KIT:

HELICAL BOOM TO MAST PLATE .....	1
CRADLE, 1.5" (M2AMC0125) .....	8
BOLT, 5/16-18 X 3.0", SS .....	8
LOCKWASHER, 5/16, SS .....	8
NUT, 5/16-18, SS.....	8

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# 125-175-5 (PRE-ASSEMBLED OPTION)

DESCRIPTION.....	QTY
HELIX BOOM ASSEMBLY.....	1
FEED BLOCK ASSEMBLY .....	1
FEED CAPACITOR ASSEMBLY (FACTORY TUNNED) .....	1
FEED SUPPORT BLOCK .....	1
GROUND PLANE HALF ASSEMBLY .....	2
PENETROX (ZINC PASTE) CUP.....	1
ASSEMBLY MANUAL.....	1

#### FEED HARDWARE:

BOLT, 1/4-20 X 2-1/4", SS .....	2
BOLT. 1/4-20 X 1-3/4", SS .....	2
SET SCREW, 1/4-20 X 1/4", SS .....	1
LOCKNUT, 1/4-20, SS .....	4
SCREW, 8-32 X 1-1/2", SS .....	4
LOCKNUT, 8-32, SS .....	4
ALLEN KEY, 1/8" .....	1

#### GROUND PLANE HARDWARE:

BOLT, 1/4-20 X 2", SS .....	8
BOLT. 1/4-20 X 3/4", SS .....	14
LOCKNUT, 1/4-20, SS .....	22

**Note: Use penetrox or zinc paste on all re-assembled hardware.**

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