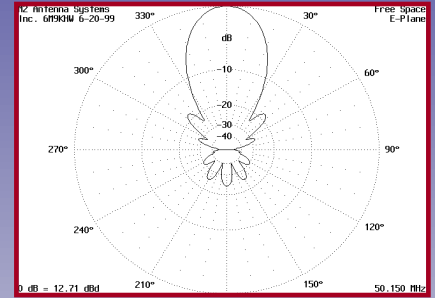
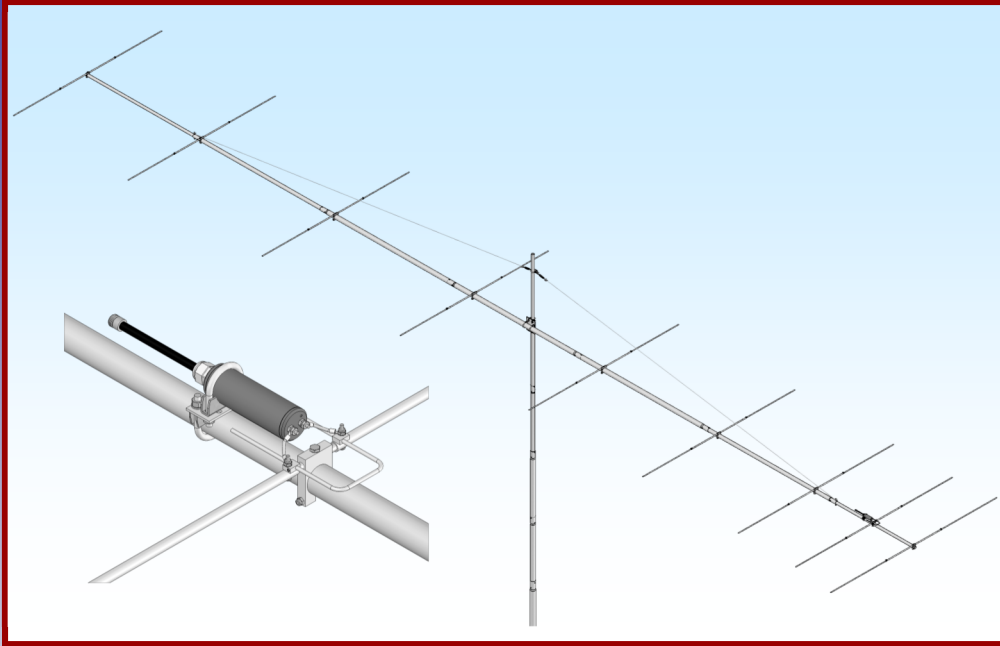




# M2 Antenna Systems, Inc.

## Model No: 6M9KHW-125



### SPECIFICATIONS:

Model .....	6M9KHW-125	Power Handling .....	3 kW, Higher avl.
Frequency Range.....	50.0 To 50.4 mHz	Boom Length / Dia.....	49' 4" / 2-1/2" To 1-1/2"
*Gain, (FS) / Over gnd .....	14.8 dBi	Maximum Element Length.....	9' 9"
Front to back .....	23 dB Typical	Turning Radius:.....	27' 7"
Beamwidth .....	E=34° H=39°	Stacking Distance.....	27' High & 30' Wide
Feed type .....	Direct feed	Mast Size.....	2" Nom.
Feed Impedance.....	50 Ohms Unbalanced	Wind area / Survival .....	4.3 Sq. Ft. / 125 MPH
Maximum VSWR.....	1.2 Typical	Weight / Ship Wt.....	52 Lbs. / 62 Lbs.
Input Connector.....	"N" Female		

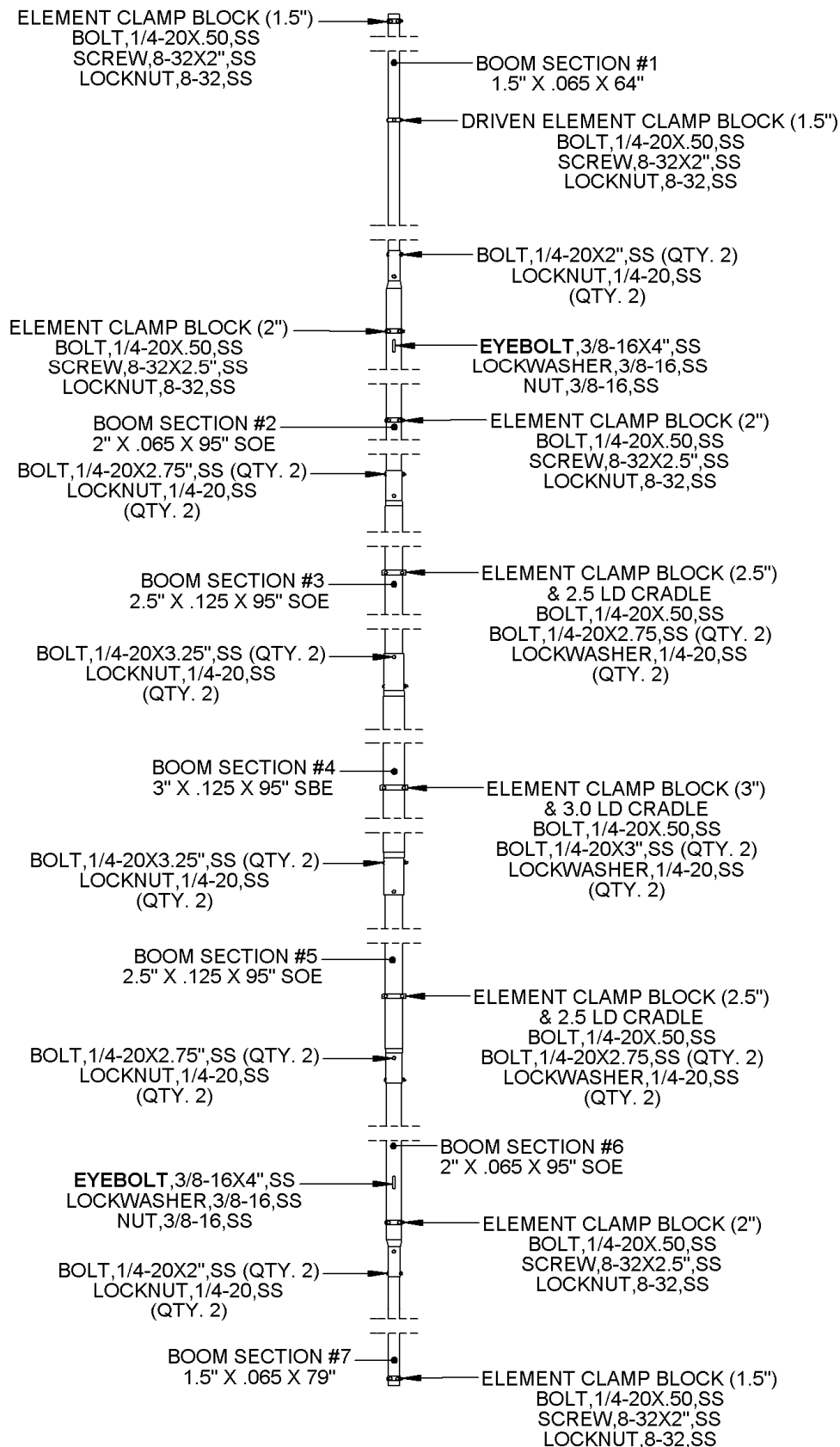
**\*Subtract 2.14 from dBi for dBd / FS = Free Space**

### FEATURES:

This antenna was inspired by Ray Grenier, K9KHW. Countless hours of computer optimization, range confirmation and on the air testing have resulted in a truly remarkable antenna. The 6M9KHW is capable of producing moon echoes when pointed at rising or setting moon and running the legal power limit. If you can hear your own moon echoes over a one half million mile path, just think what it could do for your signal on long haul tropo, meteor scatter or just an ordinary E or F2 opening. And for the adventurous, imagine what four would do.

The 6M9KHW-125 boom center sections are 3" dia. & the rest of the sections all telescope in 1/2" or 1/4" increments. It will survive horrible conditions (125 MPH). This antenna is fed with a new hairpin design to optimize VSWR and new 1:1 balun, designed more rugged than the previous feed. Rugged 1/2" X 40" element center sections and 3/8" dia. tips mounted on machined, "slip on" element to boom clamps guarantees this antenna will stay up for years to come.

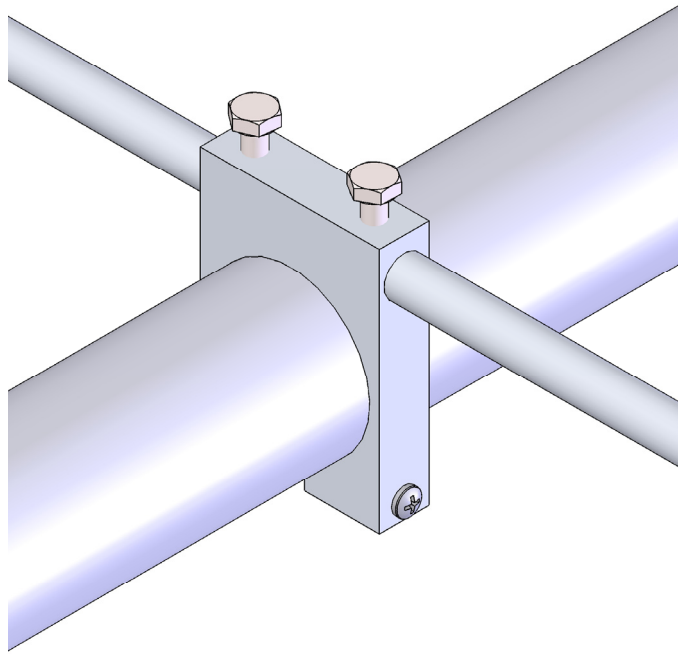
# 6M9KHW-125 BOOM LAYOUT



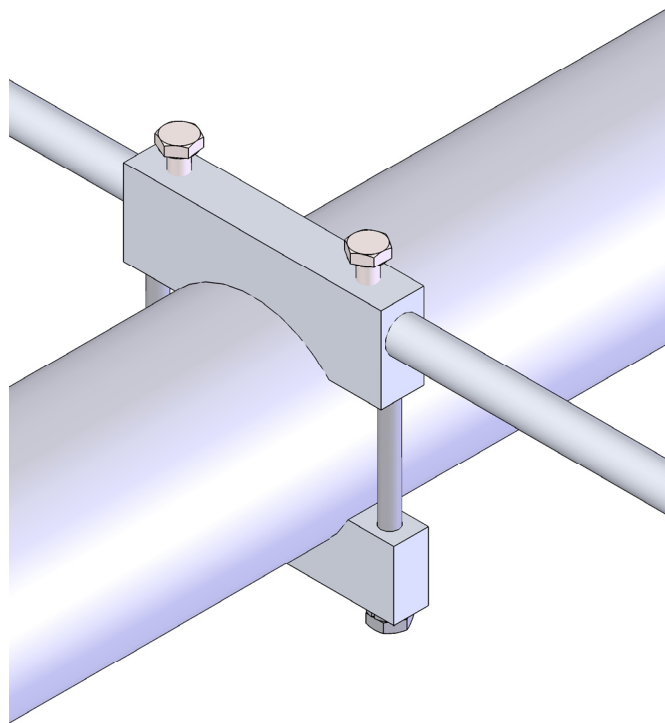
**Note:**

**\*\*Make sure to slip element clamp blocks before adding the next boom section.\*\***

# GENERIC ELEMENT CENTER DETAILS



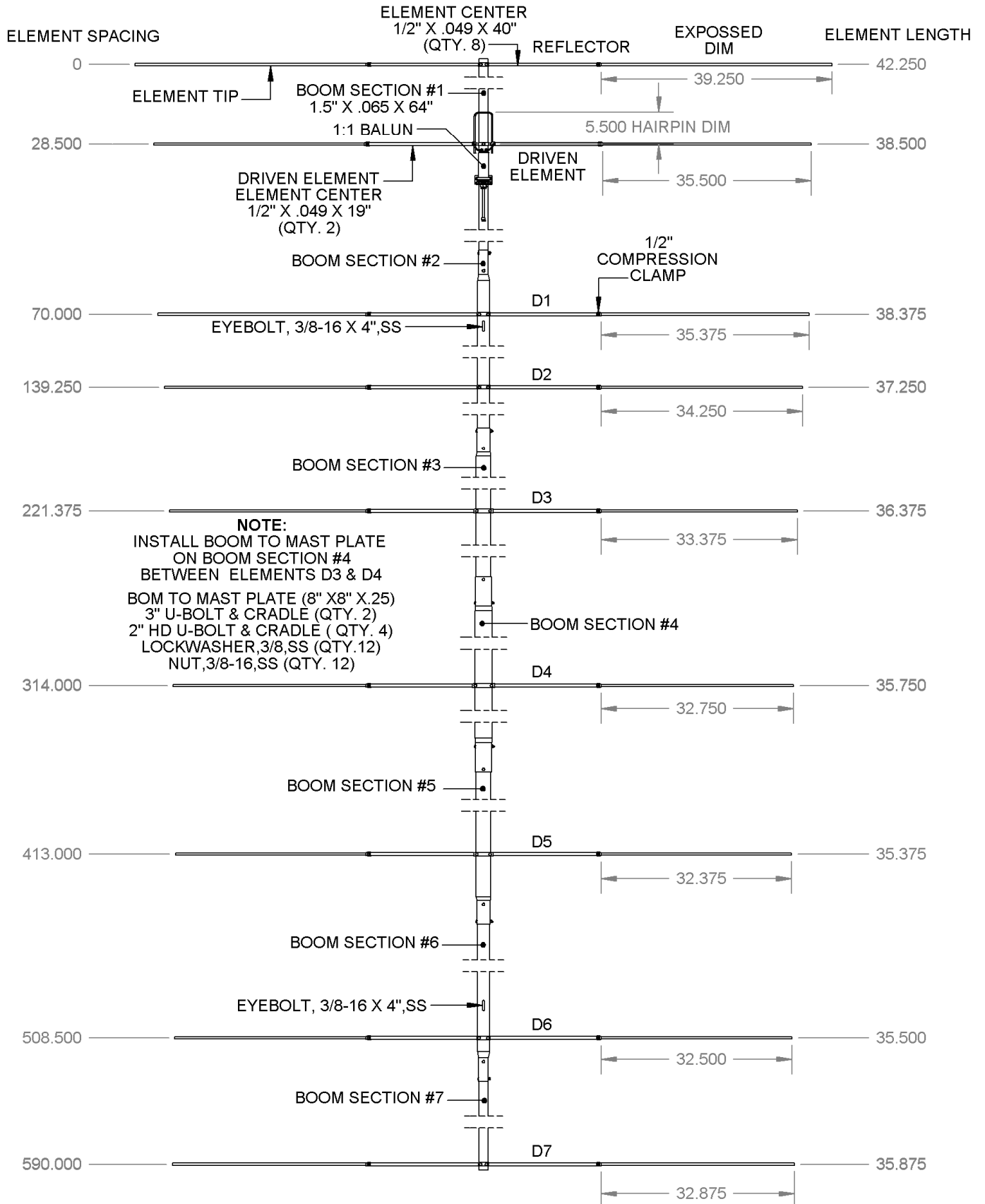
**NOTE:**  
(1-1/2" THRU 2") BOOM SECTIONS,  
USE ELEMENT CLAMP STYLE AS SHOWN ABOVE.  
REFER TO BOOM LAYOUT PAGE FOR HARDWARE CALLOUTS.



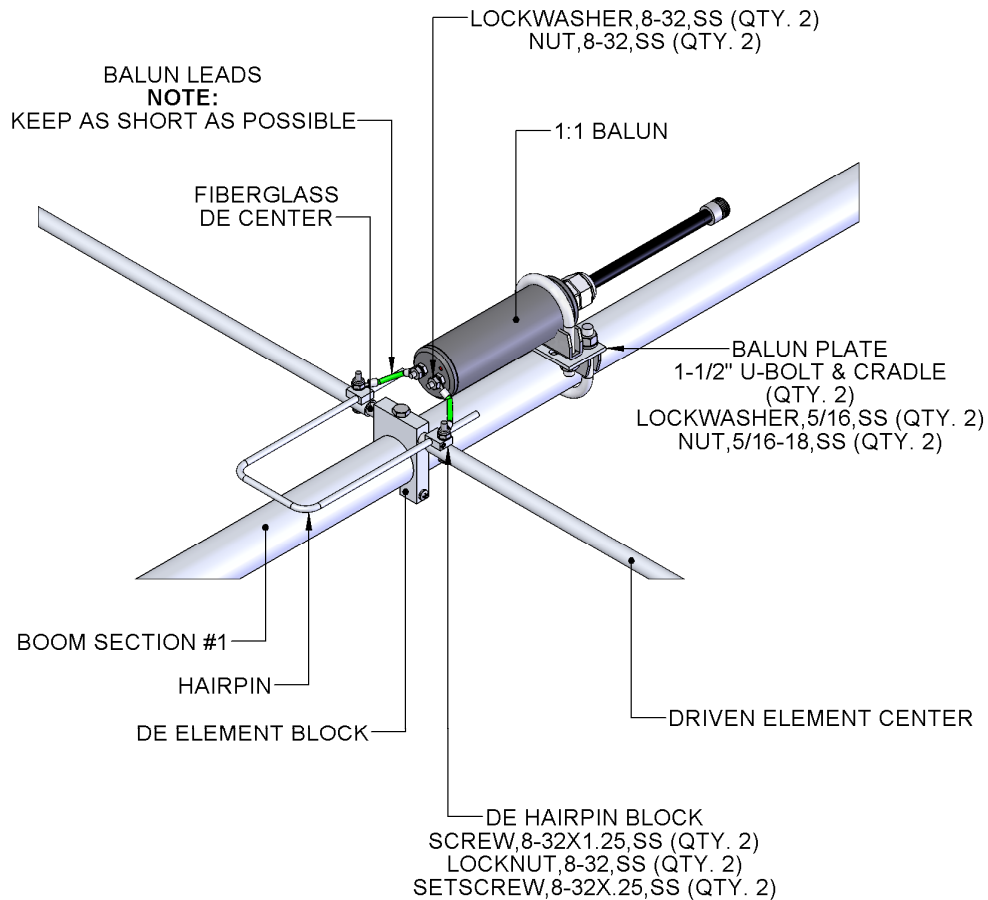
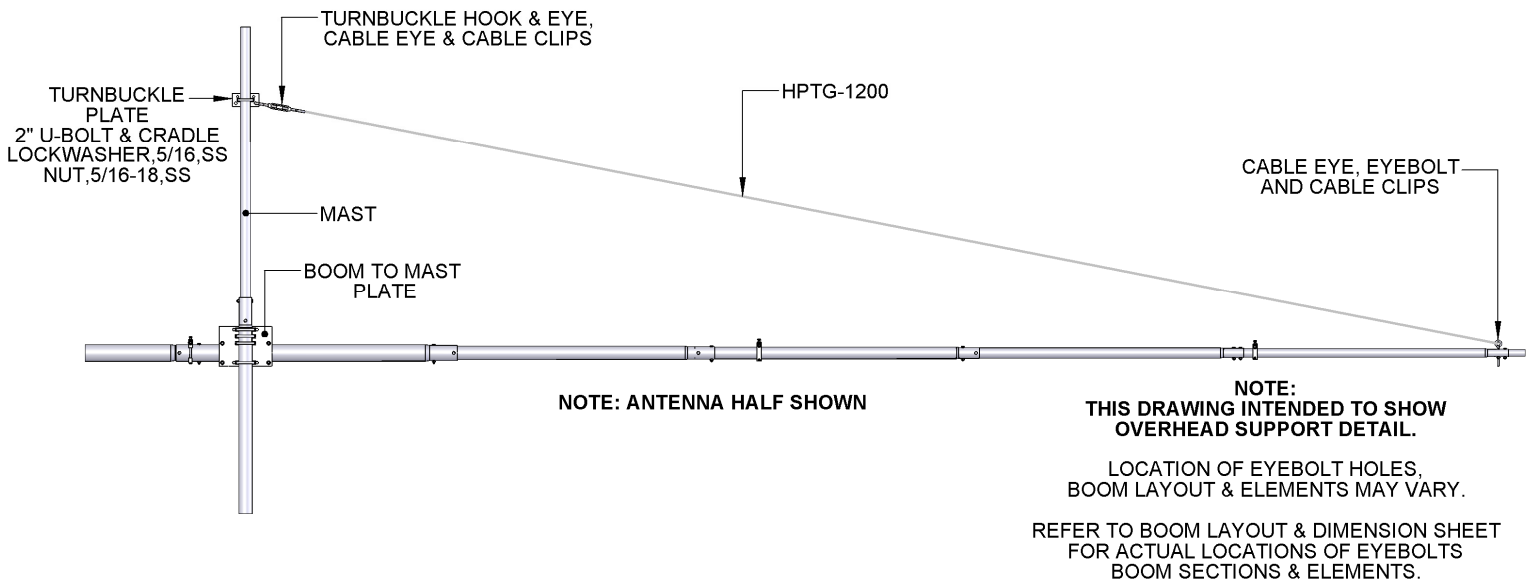
**NOTE:**  
(2-1/2" THRU 3") BOOM SECTIONS,  
USE ELEMENT CLAMP STYLE AS SHOWN ABOVE.  
REFER TO BOOM LAYOUT PAGE FOR HARDWARE CALLOUTS.

# 6M9KHA-125 DIMENSION SHEET

TOOLS REQUIRED: Screwdriver, 11/32 wrench, socket or spintite, a 7/16" and 1/2" wrench or socket, tape measure.



# OVERHEAD SUPPORT & BALUN DETAIL



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

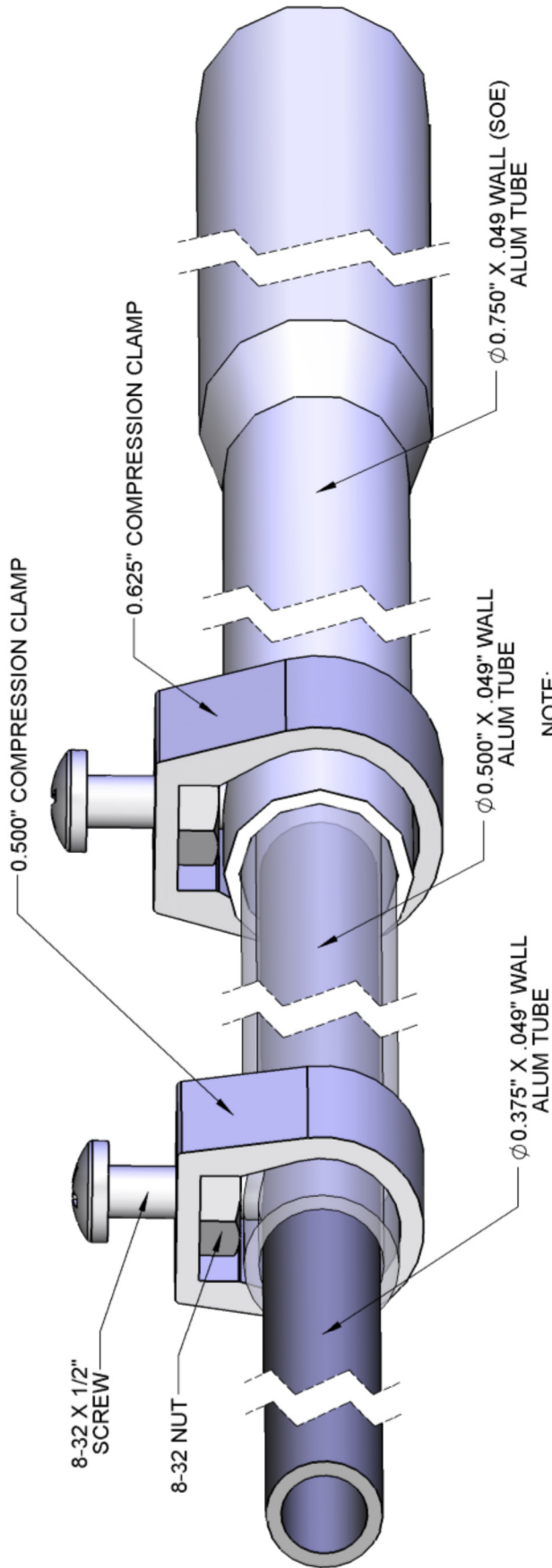
4402 N. SELLAND AVE.

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[www.m2inc.com](http://www.m2inc.com) Email: [sales@m2inc.com](mailto:sales@m2inc.com)

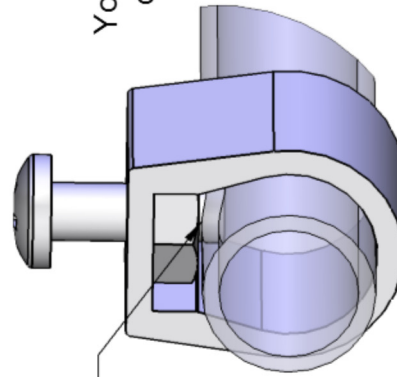
# GENERIC COMPRESSION CLAMP DETAIL



NOTE:  
TUBES SHOWN TRANSPARENT  
TO SHOW MORE DETAIL

**NOTE:**

Generic layout to show  
how compression clamps work.  
Your antenna may have one or the other  
or may even have both compression  
clamp sizes.



NOTE:  
8-32 X 1/2\"/>

NOTE: INSIDE TUBE NOT SHOWN FOR CLARITY

# 6M9KHWA-125 PARTS & HARDWARE

DESCRIPTION.....	QTY
BOOM SECTION #1: 1.5" X .065 X 64" .....	1
BOOM SECTION #2 & #6: 2.0" X .065 X 95" SOE .....	2
BOOM SECTION #3 & #5: 2.5" X .125 X 95" SOE .....	2
BOOM SECTION #4: 3.0" X .125 X 95" SBE .....	1
BOOM SECTION #7: 1.5" X .065 X 79" .....	1
ELEMENT CENTER, .50" X .049 X 40" .....	8
DE ELEMENT CENTER, .50" X .049 X 19" .....	2
ELEMENT TIPS 3/8", .375" X .049 X SEE CHART .....	18
FIBERGLASS DE CENTER, .375" X 10" (M2AFG0017).....	1
DE MOUNT BLOCK, (M2ADE0094) .....	1
ELEMENT CLAMP BLOCK (M2AEC0108) .....	2
ELEMENT CLAMP BLOCK (M2AEC0114) .....	3
ELEMENT CLAMP BLOCK (M2AEC0116) .....	2
CRADLE, 2.5 LD (M2AMC0134).....	2
ELEMENT CLAMP BLOCK (M2AEC0119) .....	1
CRADLE 3.0 LD (M2AMC0136).....	1
DE HAIRPIN BLOCK, (M2ADP0620).....	2
HAIRPIN ROD 3/16".....	1
BALUN PLATE, .125" X 1.5" X 3" (M2APT0013) .....	1
TURNBUCKLE PLATE, 2" X .250 X 5".....	1
BOOM TO MAST PLATE, 8" X .250 X 8" .....	1
(3) FAIRITE 1:1 VHF BALUN ASSEMBLY W/ STUDS.....	1
PENETROX / ZINC PASTE CUP .....	1
ASSEMBLY MANUAL.....	1

## HARDWARE:

TURNBUCKLE, 3/8" FORGED, HOOK & EYE .....	2
HPTG-1200 X 40" .....	1
CABLE EYE, 1/8" .....	4
CABLE CLIPS, 1/8" .....	8
EYEBOLT, 3/8-16 X 4", S.S .....	2
COMPRESSION CLAMP, 1/2" .....	18
U-BOLT AND CRADLE, 3" .....	2
U-BOLT AND CRADLE, 2" HD .....	4
U-BOLT AND CRADLE, 2" .....	1
U-BOLT AND CRADLE, 1-1/2" .....	2
LOCKWASHER, 3/8, SS .....	14
NUT, 3/8-16, SS .....	14
LOCKWASHER, 5/16, SS .....	6
NUT, 5/16-18, SS .....	6
BOLT, 1/4-20 X 3-1/4", SS .....	4
BOLT, 1/4-20 X 3", SS .....	2
BOLT, 1/4-20 X 2-3/4", SS .....	8
BOLT, 1/4-20 X 2", SS .....	4
BOLT, 1/4-20 X 1/2", SS .....	17
LOCKWASHERS, 1/4, SS.....	6
NUT, 1/4-20, SS .....	2
LOCKNUT, 1/4-20, SS .....	12
SCREW, 8-32 X 2-1/2", SS .....	3
SCREW, 8-32 X 2", SS .....	3
SCREW, 8-32 X 1-1/4, SS .....	2
SCREW, 8-32 X 1/2", SS .....	18
SET SCREW, 8-32 X 1/4", SS .....	2
LOCKWASHER, 8-32, SS.....	2
NUT, 8-32, SS .....	20
LOCKNUT, 8-32, SS .....	8
ALLEN HEAD WRENCH, 5/64".....	1

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