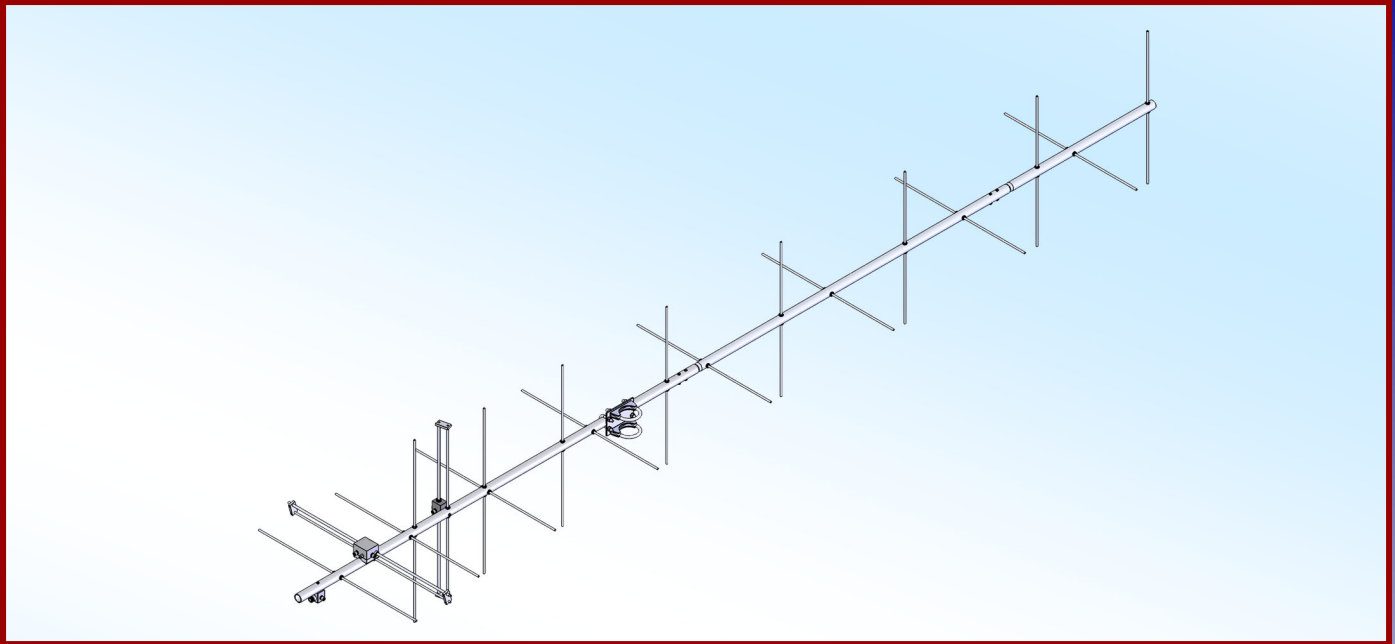




M2 Antenna Systems, Inc.

Model No: 295XP18



SPECIFICATIONS:

Model	295XP18	Power Handling	500 Watts
Frequency Range.....	292 To 298 MHz	Boom Length / Dia.....	113" / 1"
*Gain	14.1 dBi	Maximum Element Length.....	24"
Front to back	22 dB Typical	Turning Radius:	60"
Feed type	"T" Match	Stacking Distance.....	Call
Feed Impedance	50 Ohms Unbalanced	Mast Size.....	1-1/2" to 2" Nom.
Beamwidth.....	36°	Wind area / Survival	0.8 Sq. Ft. / 100MPH
Maximum VSWR.....	1.2:1 Typical	Weight / Ship Wt.....	5 Lbs. / 7 Lbs.
Input Connector.....	"N" Female		

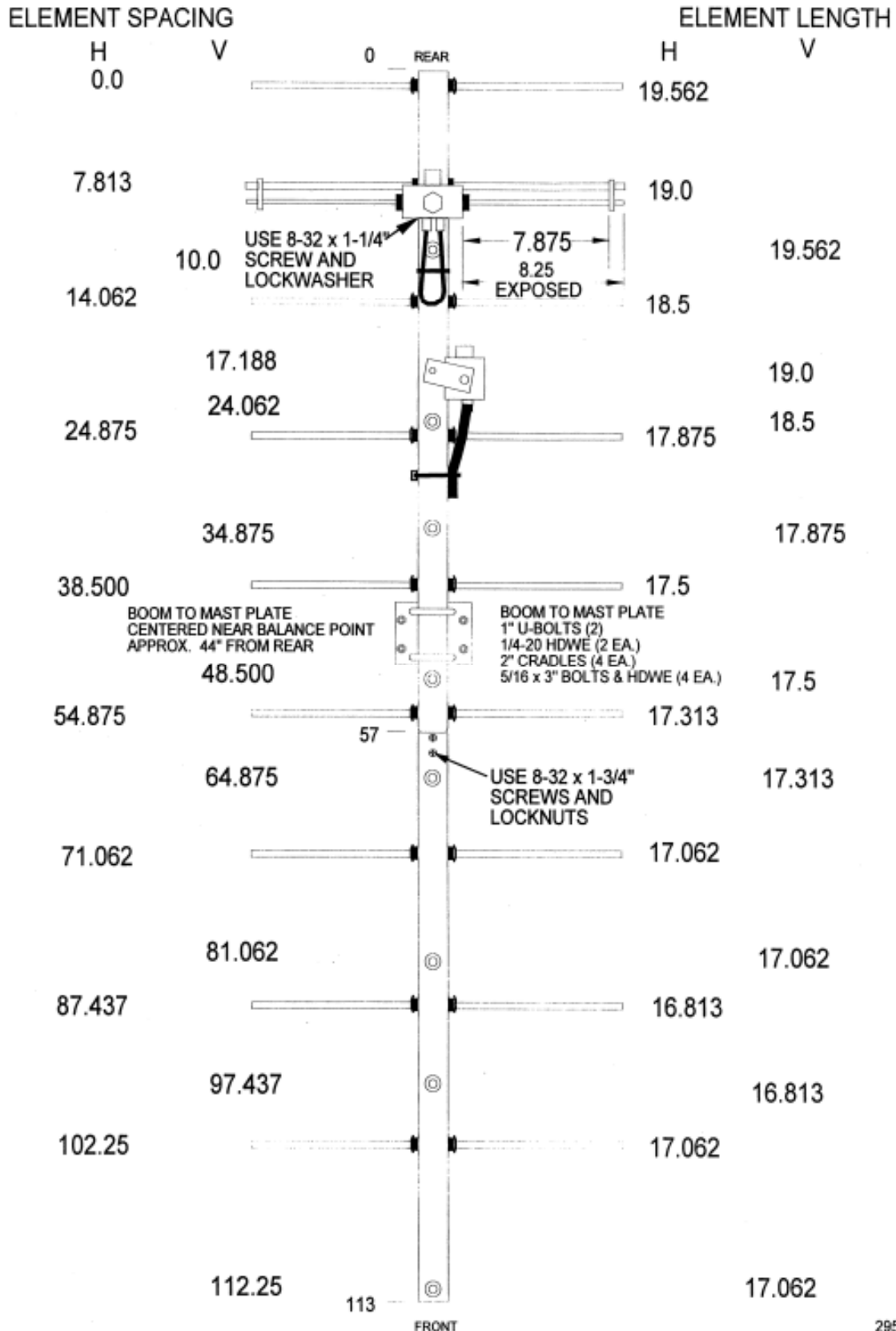
***Subtract 2.14 from dBi for dBd**

FEATURES:

The 295XP18 is a medium sized, computer optimized, cross-polarized antenna. Depending on phasing between the vertical and horizontal element set, horizontal, vertical, right or left hand circular polarity is available. Electro-mechanical features include machined components and stainless steel hardware. The rod elements are centered in the boom on UV stabilized insulators and secured with stainless steel shaft retainer. All connectors are threaded and O-ring sealed to the feed block. The block's internal cavity and connections are encapsulated in a silicone gel that seals out moisture and provides a dielectric strength 3.7 times greater than air for improved power handling capability. Balun connectors are triple-sealed to the coax and nut-sealed at the block.

295XP18 DIMENSION SHEET

295CP18 DIMENSION SHEET



295XP18 ASSEMBLY MANUAL

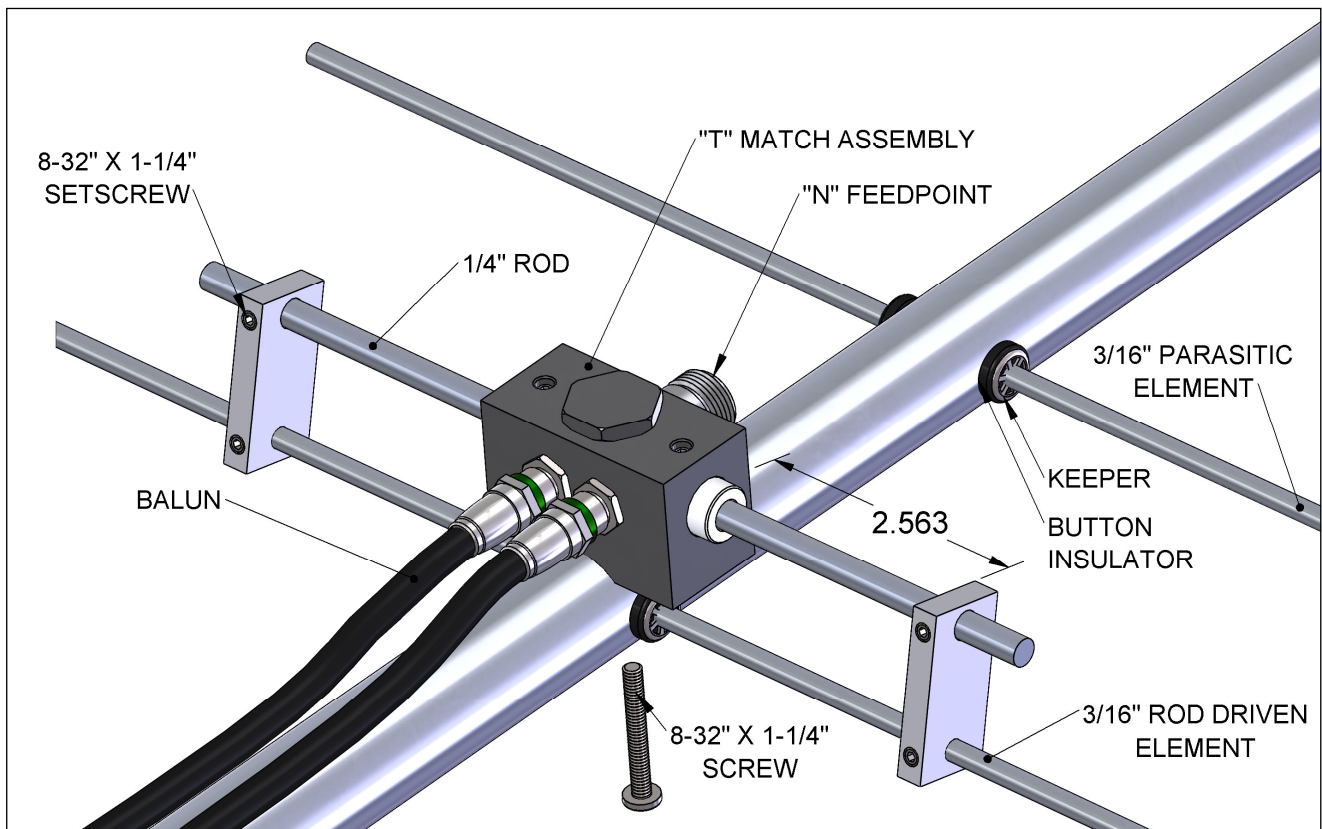
TOOLS REQUIRED FOR ASSEMBLY: 1/2" and 7/16" end wrenches or sockets, pliers, measuring tape.

BOOM ASSEMBLY

1. using the DIMENSION SHEET as a guide, assemble the two boom sections using the supplied 8-32 x 1-3/4" screws and locknuts. Note that the rear boom section is longer and has more holes than front section.

HORIZONTAL ELEMENT ASSEMBLY

1. Separate the 3/16" ROD elements by length into two identical sets. "H" and "V". Position the "H" element set along the boom by length and spacing as shown on the DIMENSION SHEET. Start with the REFLECTOR (longest) element. Balance it on your finger to roughly determine it's centerpoint and push on a black button insulator on one side of the rod to about 1" off of center. Next push the REFLECTOR element through the appropriate holes in the boom and allow to protrude about 1" on the opposite side. Now install the second button, snugging it up to the boom. DO NOT CENTER the element at this time and DO NOT INSTALL any of the stainless steel SHAT RETAINERS yet. It is easier to do it after all the horizontal elements are installed in the boom.
2. Repeat (1) for the installation of the remaining two HORIZONTAL "H" SET of 3/16" ELEMENTS.
3. Now accurately center the elements using a tape measure. EQUALIZE the amount of rod sticking out on each side of the boom. Once you have all the elements centered, sight down the element tips from the rear comparing each side. Look for any obvious discrepancies and correct if found.
4. Begin installing the stainless SHAFT RETAINERS. Use thumb and index finger to hold a retainer over end of the 3/8" x 3" push tube (keeper dished into tube). Hold the element firmly and start the retainer onto the rod by applying pressure with the push tube). Hold the element firmly and start the retainer onto the rod by applying pressure with the push tube. Push the retainer until up tight against the button insulator (Locking pliers, clamped up against the opposite button insulator will help maintain center reference and keep you from pushing the first retainer too far, or, grab the opposite side of the element and pull it hard sideways to the boom to preload and increase the friction of the element on the button insulators while pushing the retainer). Repeat for the opposite side.



295XP18 PARTS & HARDWARE

DESCRIPTION	QTY
BOOM SECTION, 1" X .058 X 60"	1
BOOM SECTION, 1" X .058 X 56"	1
ELEMENTS, 3/16" ROD X DIMENSION SHEET	18
DRIVEN ELEMENT BLOCK	2
BALUN, 1/2 WAVE, (295 MHz)	2
BOOM TO MAST PLATE, .125 X 3" X 4"	1
U-BOLT, 1"	2
CRADLE, 2"	4
ASSEMBLY MANUAL	1

IN HARDWARE BAG:

SHORTING BAR, .250 X .75 X 1.532	4
BUTTON INSULATOR, 3/16"	36
SHAFT RETAINER, 3/16"	36
BOLT, 5/16-18 X 3" SS	4
NUT, 5/16 SS	4
LOCKWASHER, 5/16 SS	4
NUT, 1/4-20 SS	4
LOCKWASHER, 1/4-20 SS	4
SCREW, 8-32 X 1-1/4" SS	2
SCREW, 8-32 X 1-3/4" SS	2
LOCKWASHER, 8-32 SS	2
LOCKNUT, 8-32 SS	2
SET SCREW, 8-32 X 1/4" SS	8
CABLE TIE, NYLON	6
ALLEN HEAD WRENCH, 5/64	1
PUSH TUBE, 3/8" X 3"	1
NUT SEALS	4

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