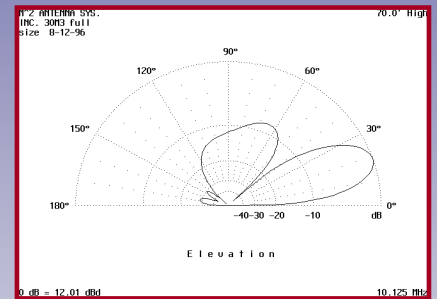
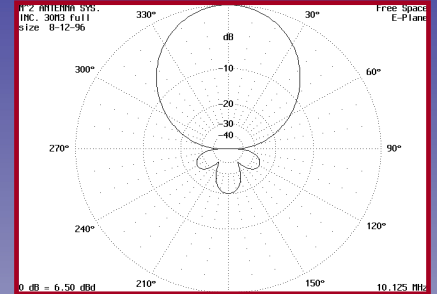
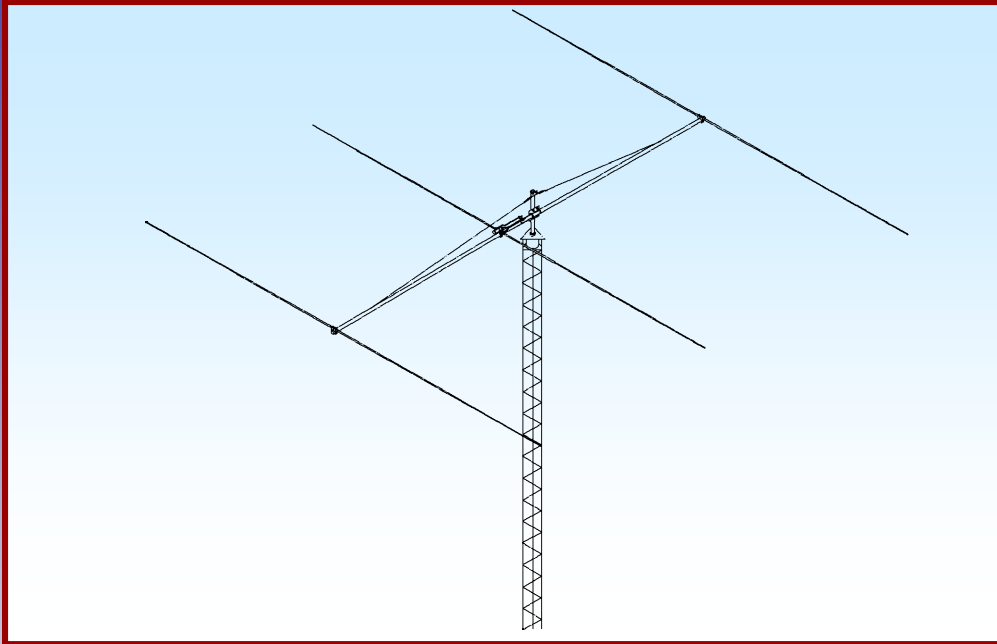




M2 Antenna Systems, Inc.

Model No: 30M3-125



SPECIFICATIONS:

Model	30M3-125	Power Handling	3 kW, Higher avl.
Frequency Range	10.1 To 10.150 MHz	Boom Length / Dia	30' / 3" x .125 Wall
*Gain, (FS) / Over gnd	8.69dBi / 14.1dBi @70'	Element Length / Dia	51' / 1-7/8" To 1/2"
Front to back	20 dB Typical	Turning Radius:	28'
Beamwidth	E=62° / H=90°	Stacking Distance	64' To 74'
Feed type	Hair pin match	Mast Size	2" to 3" Nom.
Feed Impedance	50 Ohms Unbalanced	Wind area / Survival	10 Sq. Ft. / 125 MPH
Maximum VSWR	1.2:1	Weight / Ship Wt.	123 Lbs. / 149 Lbs.
Input Connector	SO-239, Others avl.		

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

FEATURES:

This antenna really lights up band! Sun spots up or down: who cares. Day or night 10 MHz is always open somewhere! The 30M3-125 let you have all the fun you deserve and because of it's 125 mph rating you won't lose any sleep on those stormy nights. The 30M3-125 provides performance and durability. Physically, the Yagi is a medium spaced, managable 3 element of very rugged construction. A pair of machined, 1/2" thick aluminum boom-to-element plates secure each element with double cradle clamps to the 3" x .125" wall boom. Elements taper in size from 1-7/8" to wind area reducing 1/2" tips. Each inner section is double or triple walled at critical points to achieve a 125 MPH wind survival rating. All hardware, except U-bolts, is stainless steel.

30M3-125 ASSEMBLY MANUAL

Tools required: Screwdriver, Phillips and slot, 11/32 nut driver ore equivalent, 7/16", 1/2 and 9/16" end wrench or sockets.

NOTE: Refer to the 'ASSEMBLY DETAILS' AND 'DIMENSIONS' SHEETS

1. Begin by assembling the center section of the three (3) elements. Locate the (2) 1-1/2" diameter, 18" long solid aluminum rods that form the center splice sleeves for the director and reflector. Slide a 1-7/8" section over each half and secure with 1/4-20 x 2-1/2" bolts and locknuts.

2. Repeat step #1 using the 1-1/2" diameter fiberglass center section for the DRIVEN ELEMENT (D.E.). Pin the 1-7/8" diameter sections with two 1/4-20 x 2-3/4" bolts. Then place two 1" x 1-1/4" x 1/4" clamp blocks over each bolt. Orient the clamp blocks so the 3/8" half round grooves face each other. Add the locknut but do not tighten. The hair pin tubes will be inserted in these clamp blocks later.

3. Next, assemble the center element to boom clamps onto the center of each 1-1/2" middle section. Center the element and secure each clamp with six 1/4-20 x 2-3/4" bolts and lockwashers. Keep the plates parallel as you tighten the assembly. On the driven element clamp assembly, also install the balun mounting bracket. and orient the bolts through the element halves so the studs are up. This sets up the correct orientation for the beta rod clamps.

4. Assemble the rest of the element tip sections as noted in the ELEMENT ASSEMBLY DETAILS.

5. Assemble the boom as shown on the DIMENSION SHEET. Install the two 3/8" EYEBOLTS and secure with 3/8-16 nuts and lock washers.

6. Orient the eyebolts up and mount the REFLECTOR center section on the boom placing the rear clamp about 1/2 inch from the rear of the boom.

7. Next mount the Driven element and the director center sections per the DIMENSION SHEET.

8. Assemble the Hair pin system as shown in the sketches.

9. Add the element tips noting the different tip lengths for each element.

10 locate the balance point and mount the BOOM TO MAST PLATE as close to it as possible without interfering with the hair pin tubes. Orient the plate perpendicular to the elements. and secure with the two 3" U-bolts.

30M3-125 ASSEMBLY MANUAL

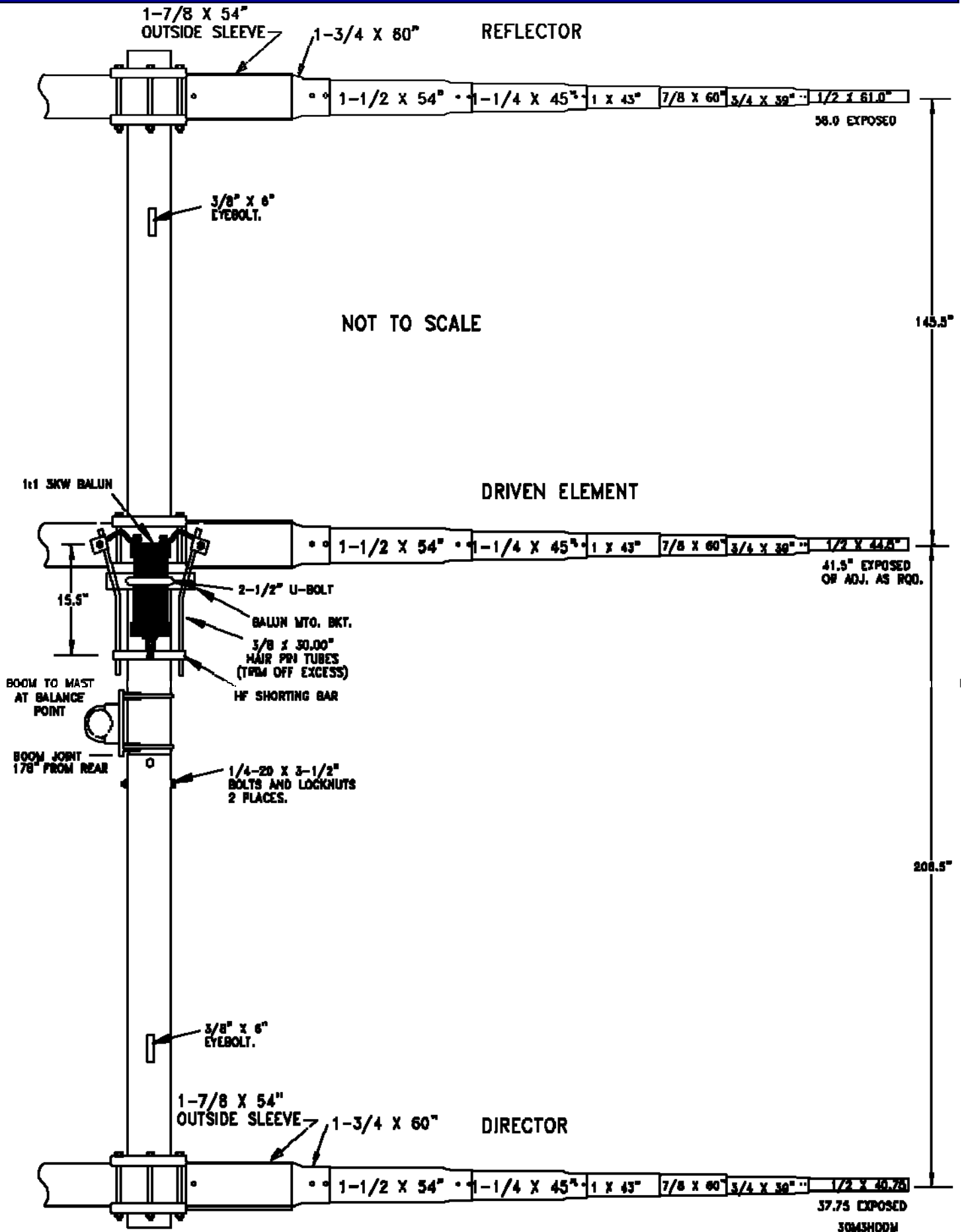
11. Next insert a standard 2" U-bolt through the turnbuckle plate. Insert this assembly through the top set of u-bolt holes in the boom to mast plate from the boom side and add the nuts loosely. This operation centers the turnbuckle plate correctly without putting in a temporary mast section. Open the turnbuckles evenly until just one thread appears inside the body at each end of the turnbuckle. Hook the turnbuckles onto the plate.

12. Tie one end of the 5/16' dacron cord to an eyebolt using 3 half hitches or equivalent. Pull the knots tight. Without cutting the cord, tie the other end to the other eyebolt. Return to the boom to mast plate, center the cord and cut it so you have an even amount to attach to the turnbuckle eyes. Loop one cord through a turnbuckle, pull the cord tight and secure as you did at the eyebolts. Repeat for the other turnbuckle. Now remove the turnbuckle assembly from the boom to mast plate. and raise it above the boom until the boom is level. This is the approximate height you will need above the boom to secure the turnbuckle assembly during final assembly on the mast.

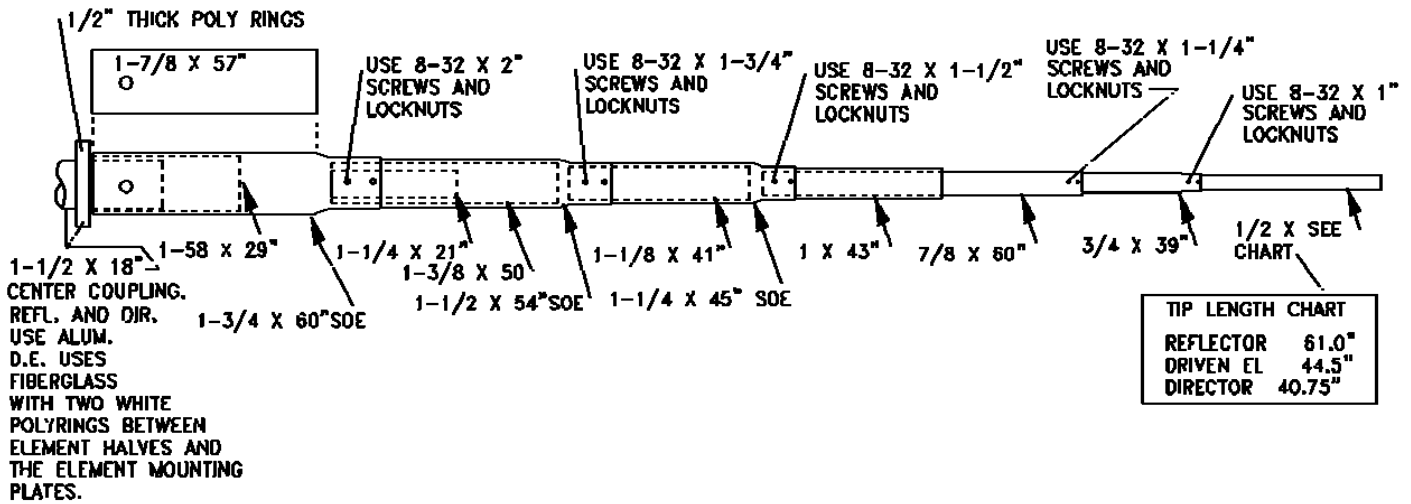
THIS COMPLETES THE ANTENNA ASSEMBLY

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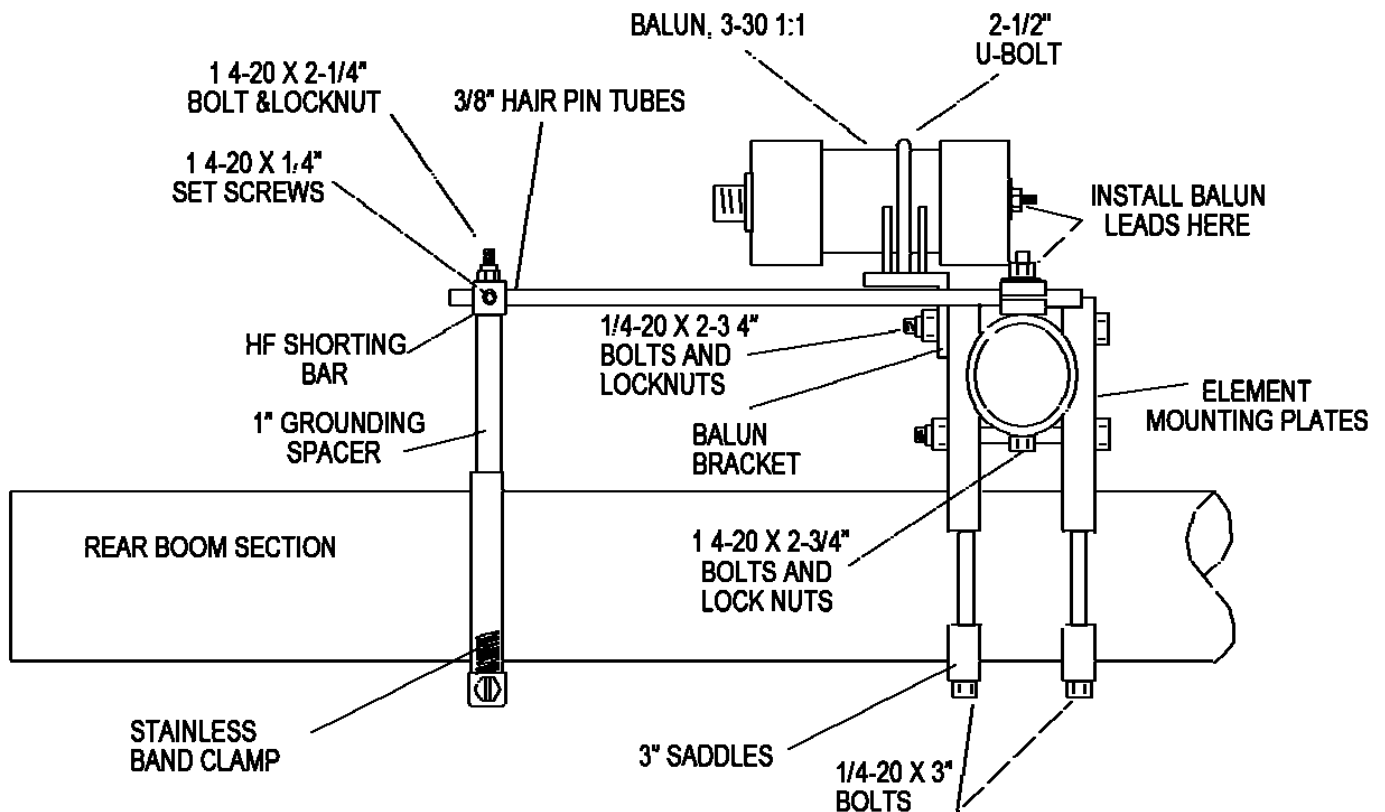
30M3-125 DIMENSION SHEET



30M3-125 ASSEMBLY DETAIL



SIDE VIEW DRIVEN ELEMENT



30M3-125 PARTS & HARDWARE

DESCRIPTION	QTY
Boom section, 3 X .125 X 180" SOE	1
Boom section, 3 X .125 X 180 plain	1
Element center splice, 1-1/2" round alum. rod X 18"	2
Element center insulator, 1-1/2" round fiberglass rod X 18"	1
Element section, 1-875 X .058 X 57" plain	6
Element section, 1-3/4 X .058 X 60" SOE	6
Element section, 1-5/8 X .058 X 29"	6
Element section, 1-1/2 X .058 X 54" SOE	6
Element section, 1-3/8 X .058 X 50'	6
Element section, 1-1/4 X .058 X 21"	6
Element section, 1-1/4 X .058 X 45 SOE	6
Element section, 1-1/8 X .058 X 41"	6
Element section, 1 X .058 X 43"	6
Element section, 7/8 X .058 X 60"	6
Element section, 3/4 X .058 X 39 SOE	6
Element section, 1/2 X .049 X 61.0"	2
Element section, 1/2 X .049 X 44.5"	2
Element section, 1/2 .058 X 40.75	2
Element Mounting Plate, 3" X 6" X 1/2 (M2AEC0041)	6
Cradle Clamps, 3" 1 X 1/2 X 4" (M2AMC0136)	6
Band clamp, 2-1/2 TO 3-1/2" SS	1
Hair Pin tubes, 3/8 X .049 X 30", bent at 25 degrees	2
HF Shorting Bar, 1/2" X 1/2" X 5" (M2ASB0262)	1
Clamp block, 1 X 1 1/4 X .25" (M2AMC0261)	4
Spacer, 3/8 X .049 X 1"	1
Polydisc, 1-1/2" (M2ADI0010)	2
Turnbuckle plate 2 X .5 X 250" alum. (M2APT0110)	1
Turnbuckle, 3/8 X 6"	2
Boom to Mast Plate, 8 X 8 X .25" punched alum. (M2APT0070)	1
Mounting bracket, balun, 1 X 1 X 5" angle alum. (M2APT0016)	1
U-bolt and saddle, 3"	2
U-bolt and saddle 2-1/2"	1
U-bolt and saddle, 2" heavy duty, 3/8-16 thread	4
U-bolt and saddle, 2" standard	1
Eye bolt, 3/8" X 6"	2
Dacron rope, 5/16" X 24 ft.	1
Balun Assembly, SO239, 3 kW 1:1 (FGBL0100)	1
Assembly Manual	1
HARDWARE	
Bolt, 1/4-20 x 3-1/2" ss hex cap	2
Bolt, 1/4-20 x 3" ss hex cap	12
Bolt, 1/4-20 x 2-3/4" ss hex cap	20
Bolt, 1/4-20 x 2-1/2" ss hex cap	4
Bolt, 1/4-20 x 2-1/4" ss hex cap	1
Set screw, 1/4-20 x 1/4" ss	2
Screw, 8-32 x 2" ss pan head	12
Screw, 8-32 x 1-3/4" ss pan head	12
Screw, 8-32 x 1-1/2": ss pan head	12
Screw, 8-32 x 1-1/4" ss pan head	12
Screw, 8-32 x 1" ss pan head	12
Nut, 3/8-16 ss	14
Lock washer, 3/8" split ring ss	14
Nut, 5/16-18 ss	4
Lockwasher, 5/16" split ring ss	4
Nut, 1/4-20 locking, ss	28
Nut 8-32 ss locking	60
Nylon ties, large 14" black	3
Allen wrench, 1/8"	1
Penetrox cup	1

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