American Amplifier Technologies, LLC

8 Inch Band Pass Filter Manual

AAT-IR-BP-3-7K

Table of Contents

AAT BP-IR Band Pass Filters

American Amplifier Technologies band pass filters provide superb performance in a compact size. The BP-IR series units are available in two, three, and four cavity configurations. The high quality aluminum assembly allows for reduced manufacturing costs while maintaining excellent performance. The iris coupled design is perfect for analog and/or IBOC applications. Available in floor, ceiling, and wall mount configurations.

Specifications

Frequency	88 – 108 MHz
Input Power Rating	7 KW
Output Rating	7 KW
Cooling Method	Conventional or Forced
Rejection	> -55 dB
Group Delay	100 ns 200 KHz
Insertion Loss	< -0.8 dB

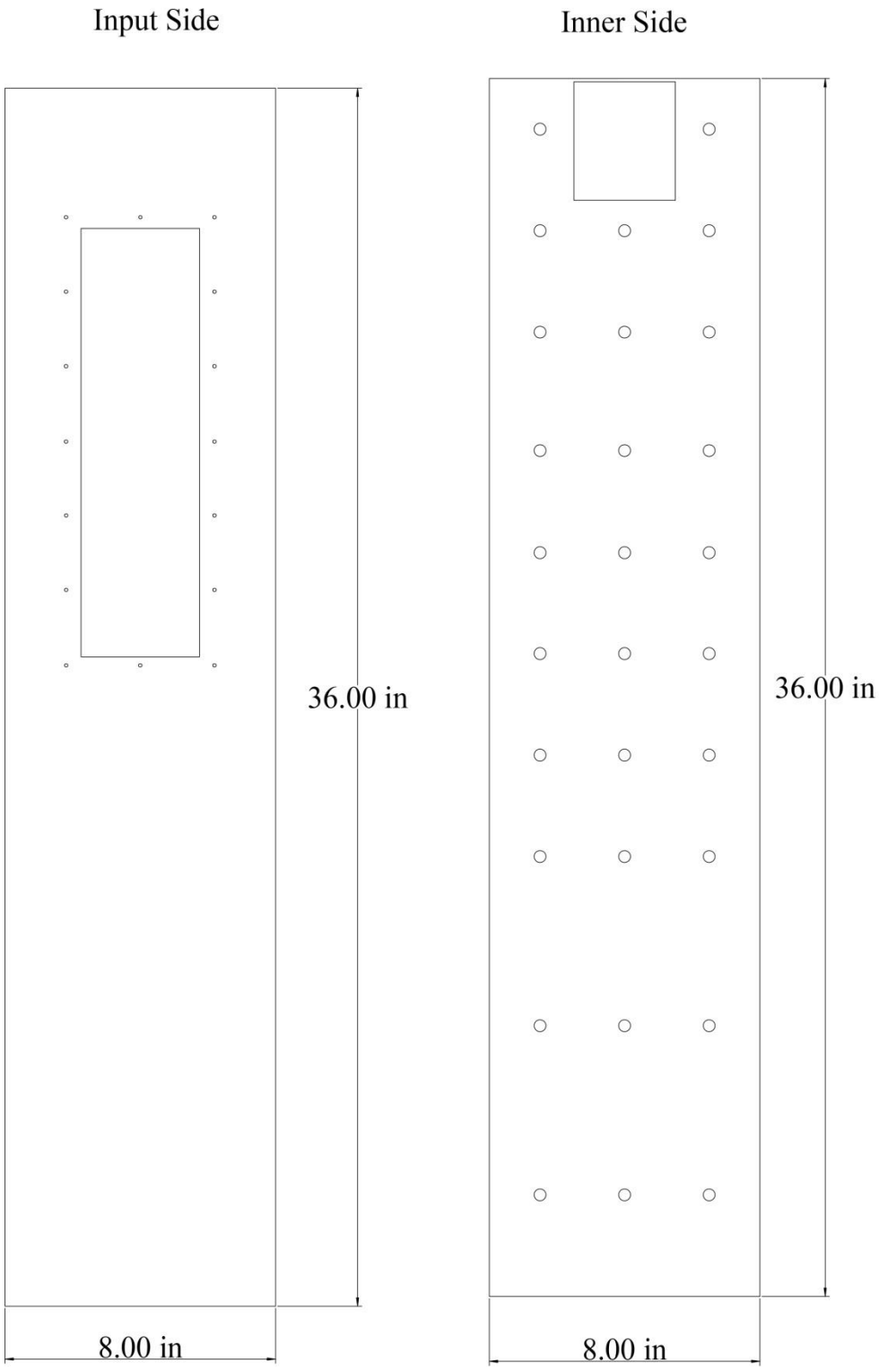
Aluminum Cavity
Dimensions:
(may vary)

Weight	200 lbs
Length (L):	24-inches
Width (W):	8-inches
Height (H):	45-inches

Note: Ratings are based on elevations up to 2300'
Derating begins after 2300'

8'' Input Cavity

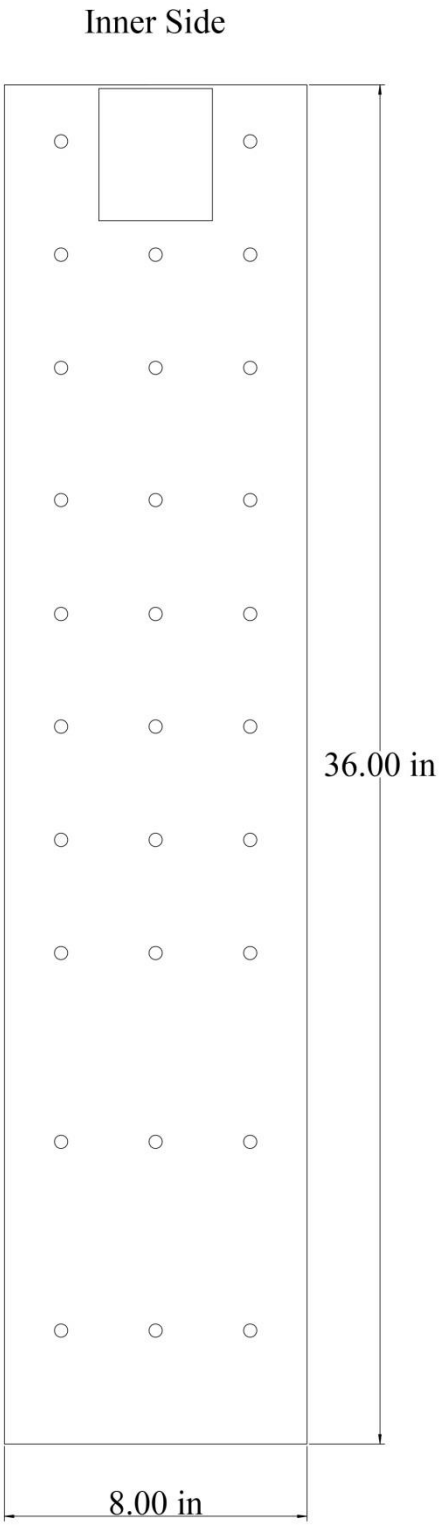
Opposite sides of 8” Aluminum Square Member



8” Input Cavity		
Date	Version	Company
12/15/2016	1.1	AAT

8'' inner cavity

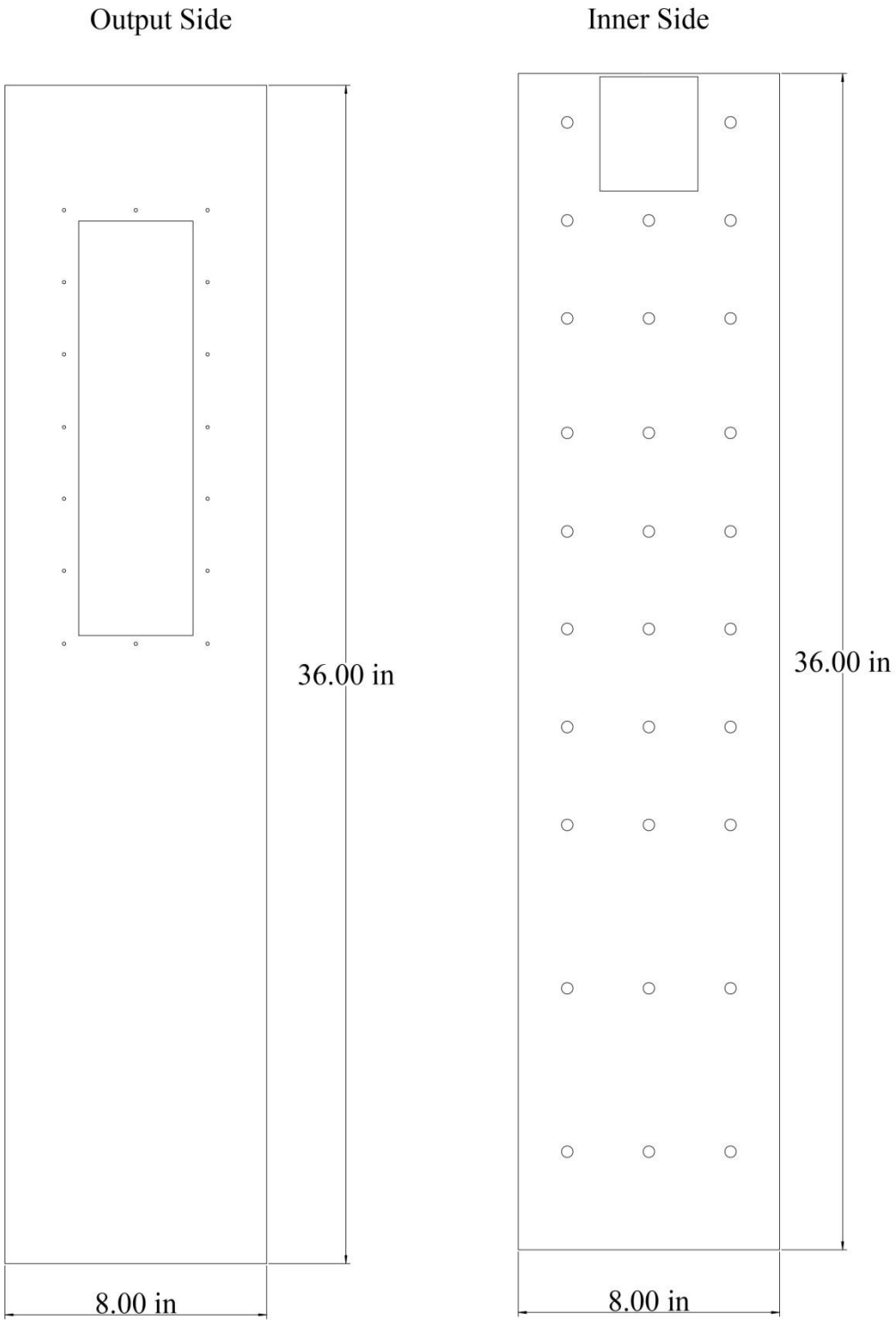
Opposite sides of 8” Aluminum Square Member



8” Inner Cavity		
Date	Version	Company
12/15/2016	1.1	AAT

8'' output cavity

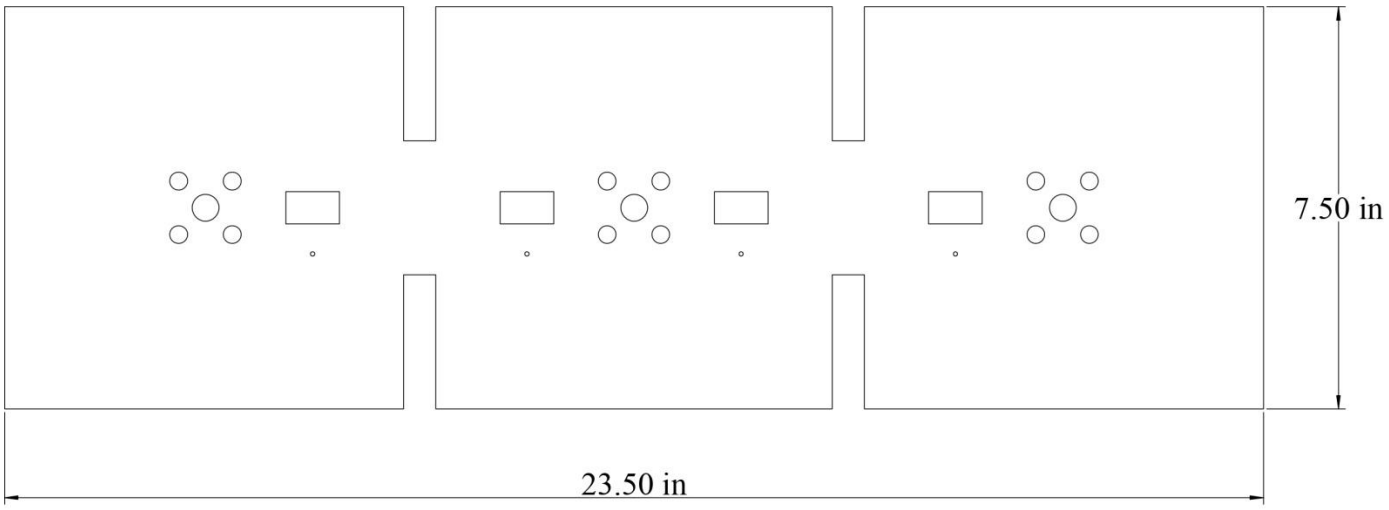
Opposite sides of 8” Aluminum Square Member



8” Output Cavity		
Date	Version	Company
12/15/2016	1.1	AAT

Module Top Plate

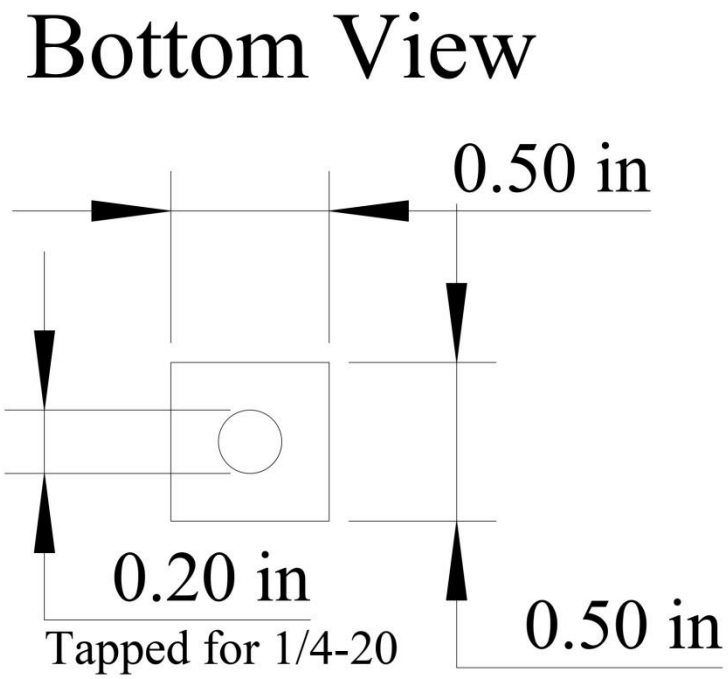
Aluminum 0.25" Thick

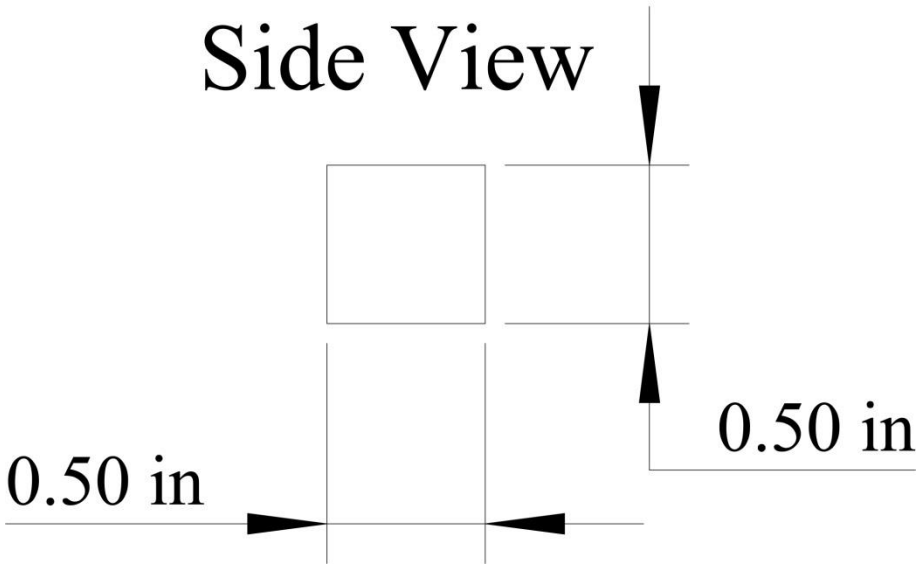


8” Module Top Plate 3 Cavity		
Date	Version	Company
12/15/2016	1.1	AAT

Bottom plate mounts

Aluminum 0.5'' X 0.5'' X 0.5'' square

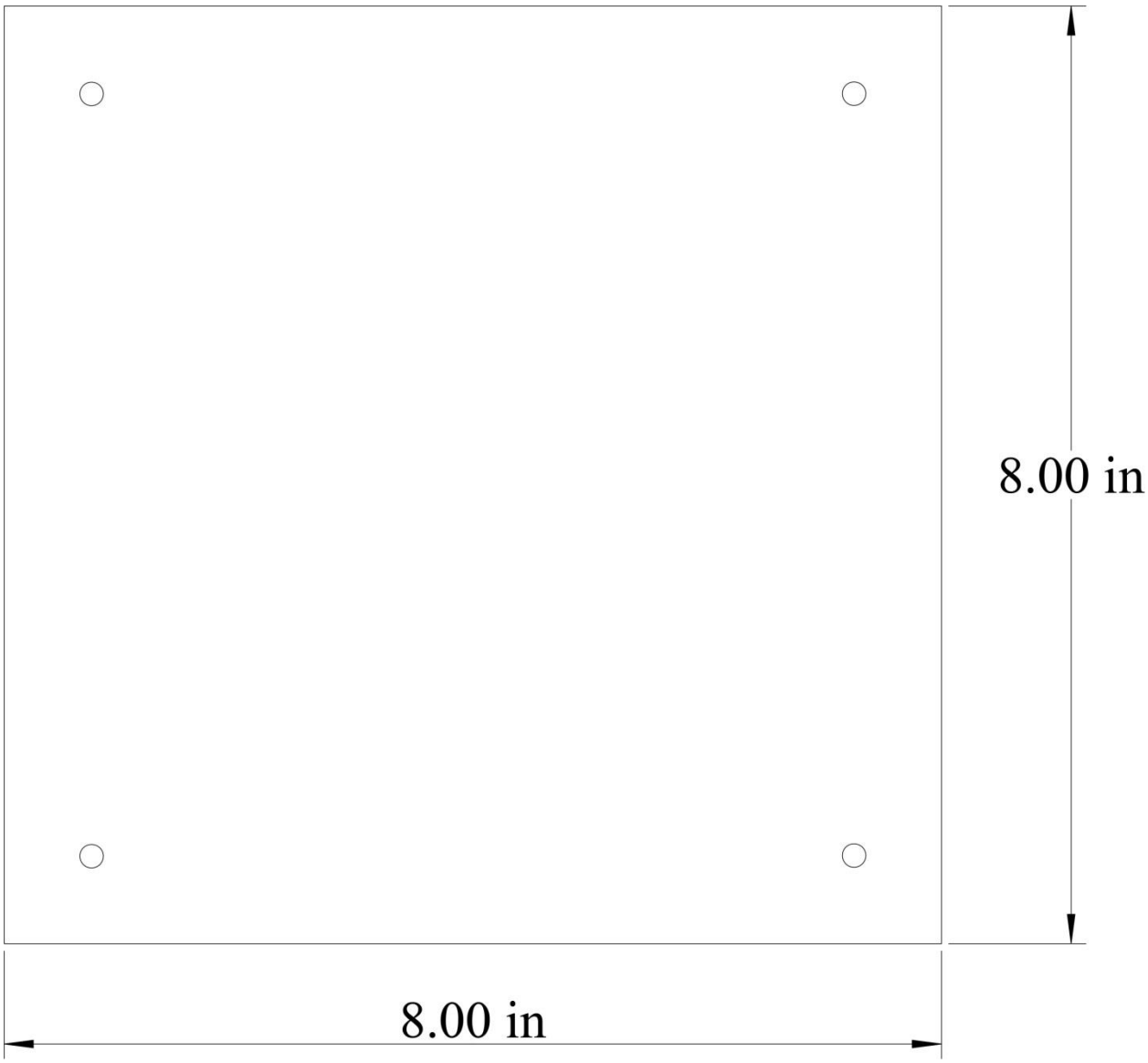




Bottom Plate Mounts		
Date	Version	Company
12/15/2016	1.1	AAT

8'' cavity bottom cover

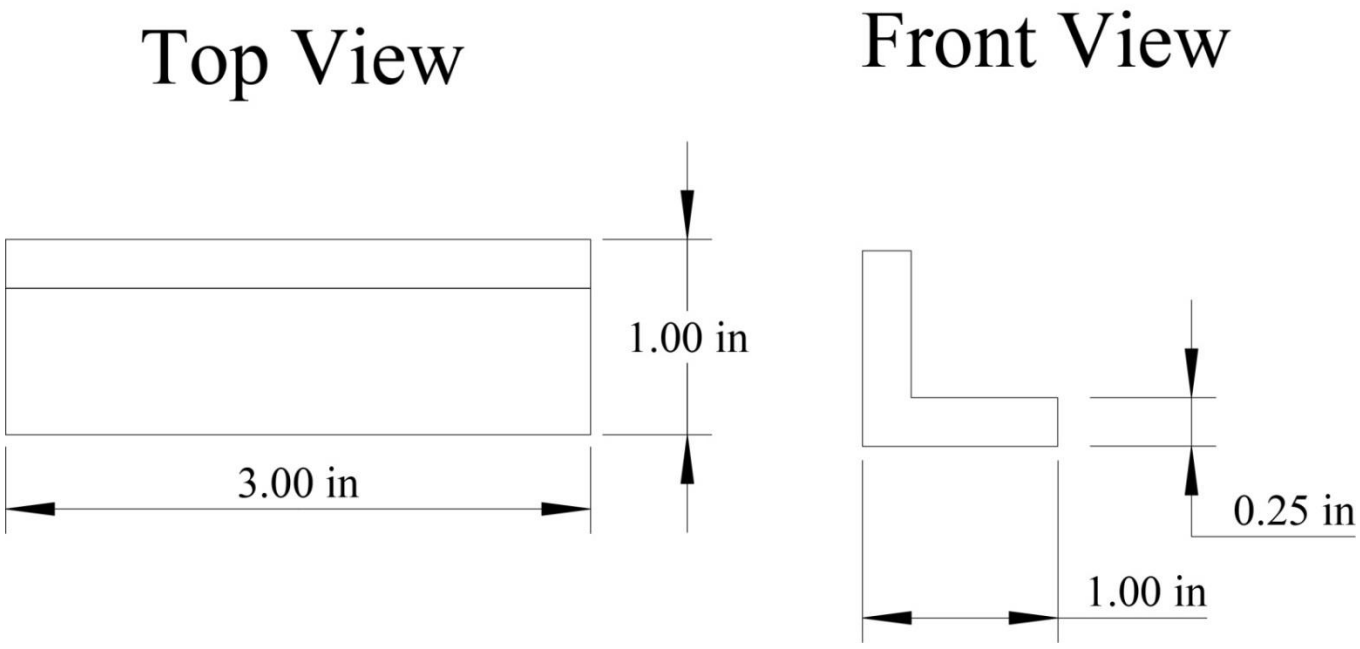
Aluminum sheet 90,000 Thick



8” Bottom Cover Plate Single Cavity		
Date	Version	Company
12/15/2016	1.1	AAT

Cavity stands/feet

Aluminum angle 1/4'' thick, 1'' X 1'', 3'' length



Cavity Feet / Stands		
Date	Version	Company
12/15/2016	1.1	AAT

Radiator Bellow Assembly (1 per module)

26" to 32" overall length depending on frequency calculated with **Shop Tech Calcs** spreadsheet

HARDWARE REQUIRED

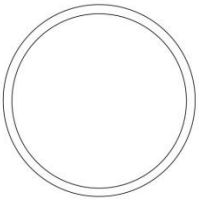
Bearings (QTY 2 per radiator)
5/16" Flat Washer
5/16" Lock Washer
5/16" Nut
SOCKET CAP Screws 1/4 - 20, 3/4" (QTY 3 per module)
1/4" Lock Washers (QTY 3 per module)

Copper Pipe

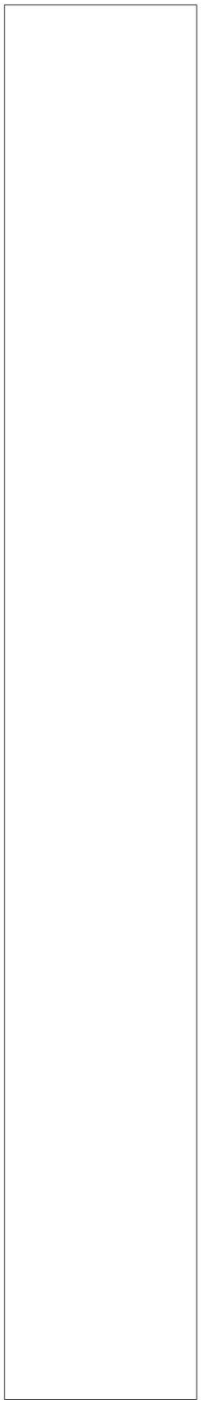
2.25" ID

26" to 32" depending on frequency calculated with **Shop Tech Calcs** spreadsheet

Top View



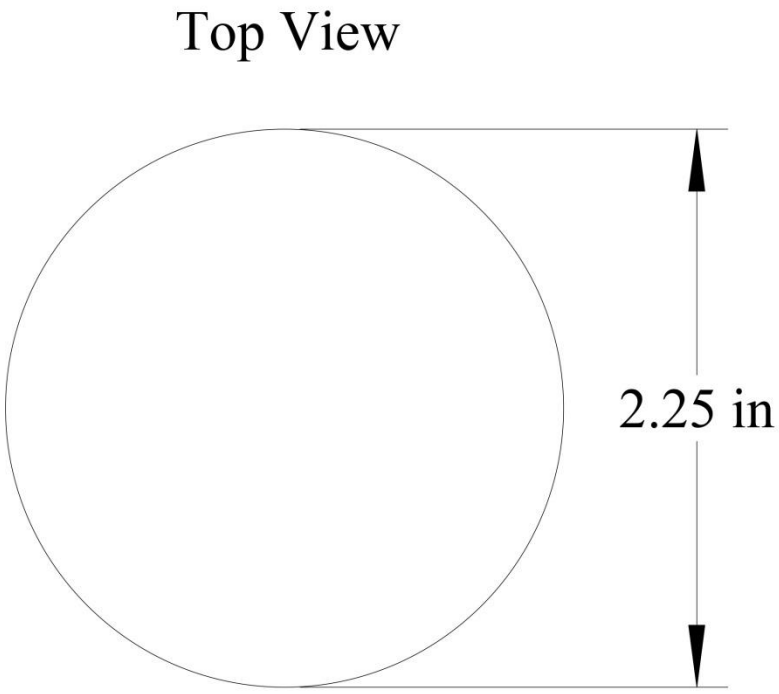
Side View

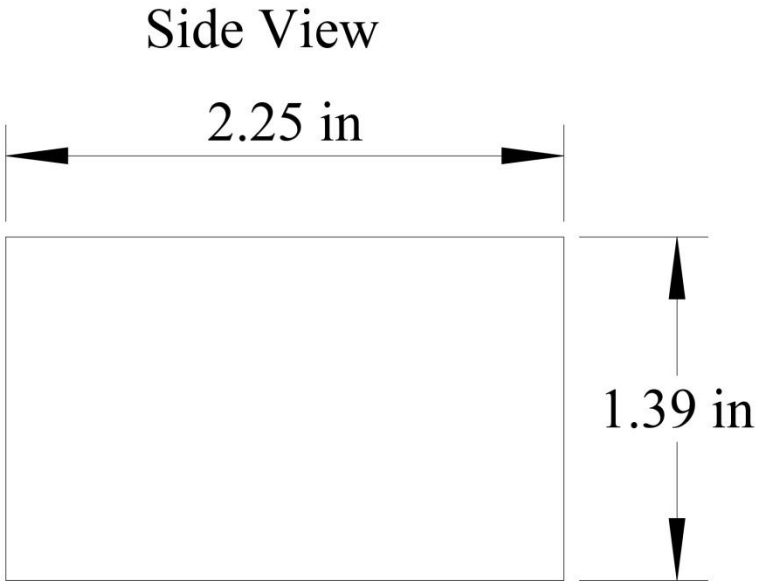


2.25” ID Copper Pipe		
Date	Version	Company
2/15/2016	1.1	AAT

Copper Cap

2..25" OD



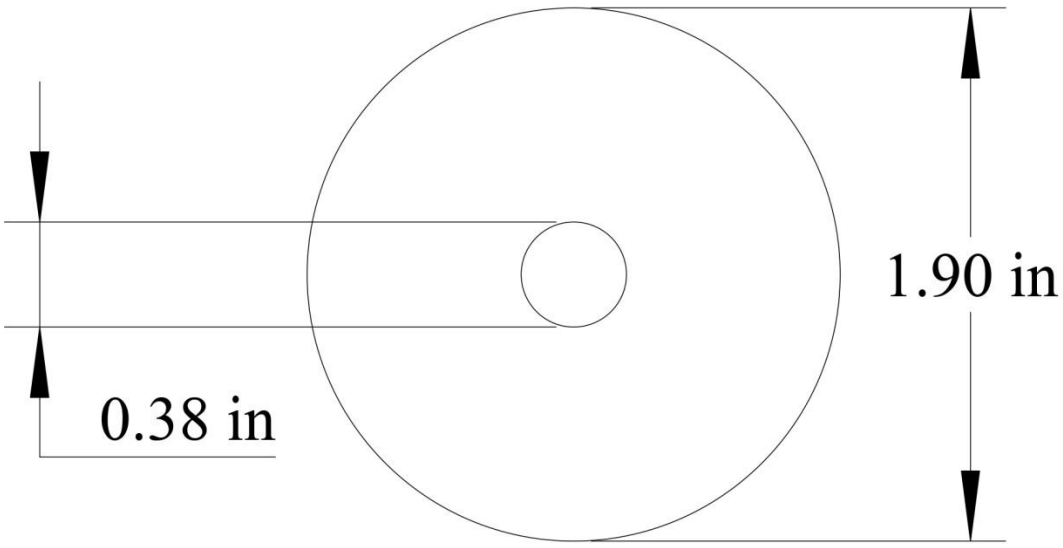


2.25” OD Copper Cap		
Date	Version	Company
12/15/2016	1.1	AAT

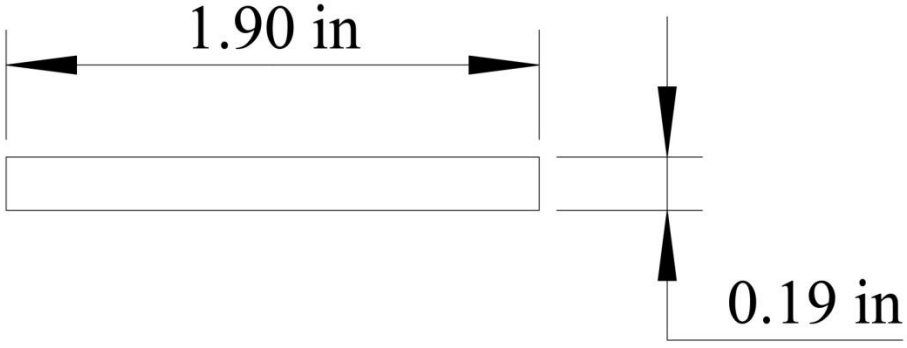
Brass Inner Disks

0.19" Thick cut from 1.9" Solid Brass Rod, 3/8” Center Hole (QTY 2 per radiator)

Top View



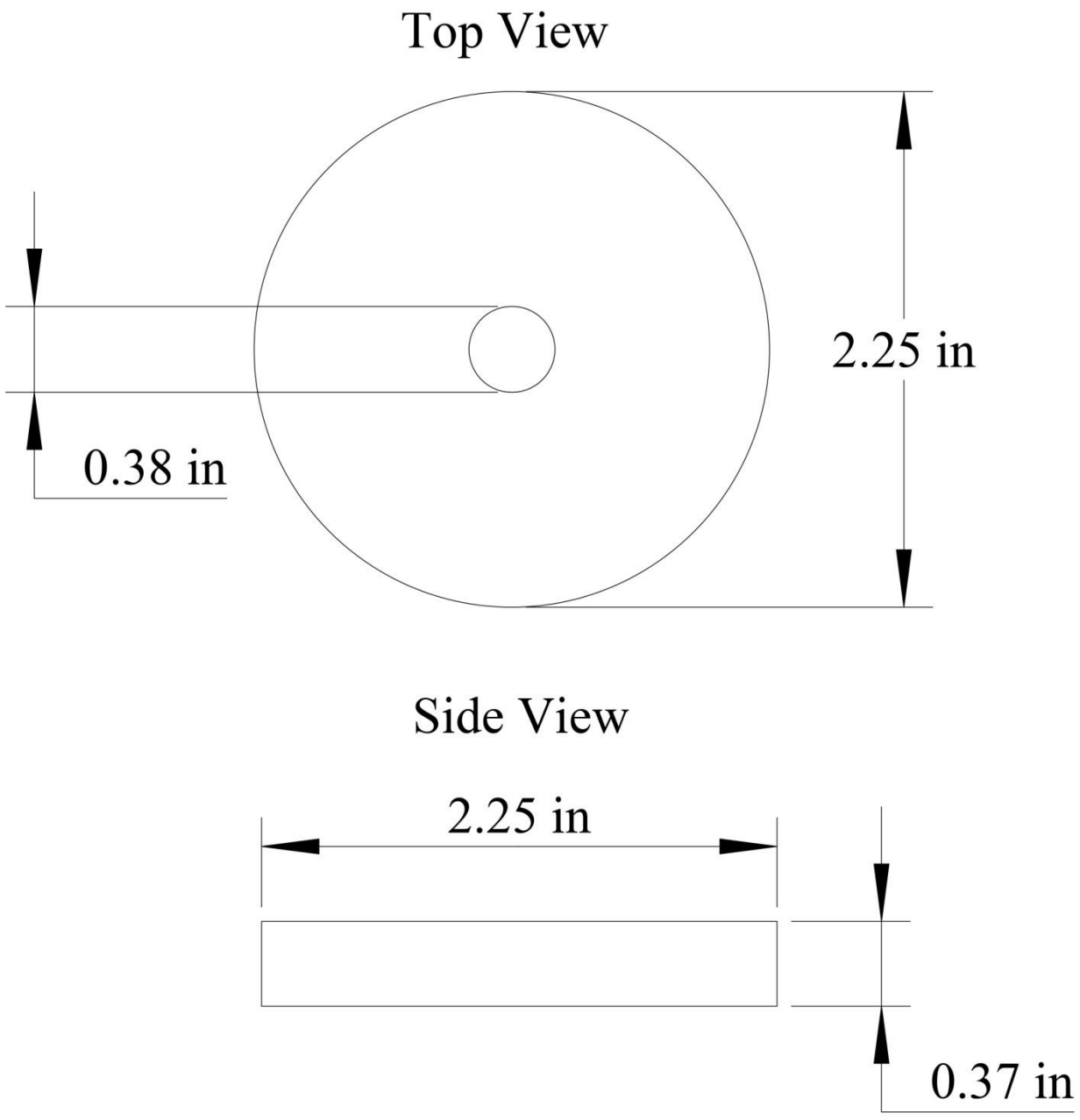
Side View



Brass Inner Disk		
Date	Version	Company
12/15/2016	1.1	AAT

Brass Outer Disk

0.37" Thick cut from 2.25" Solid Brass Rod, 3/8” Center Hole

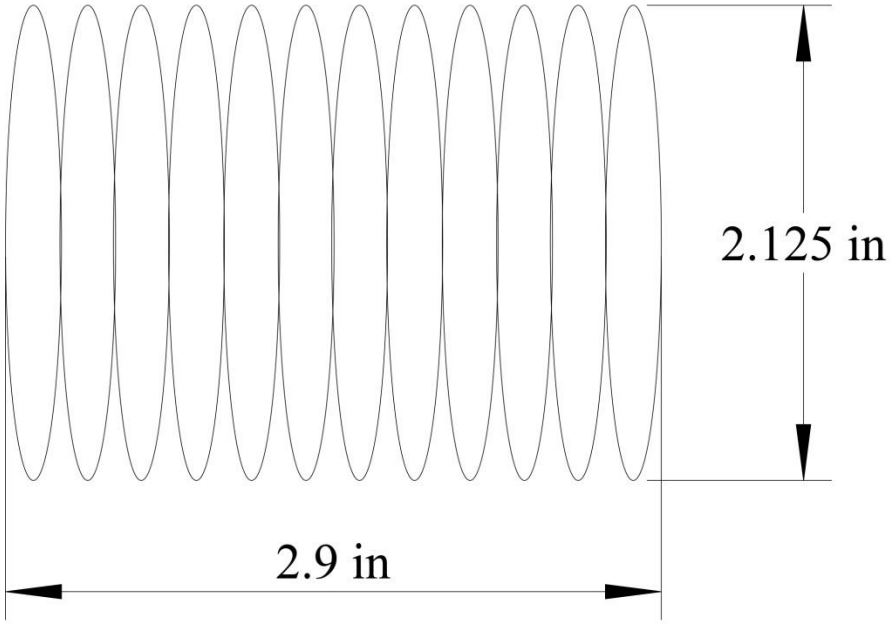


Brass Outer Disk		
Date	Version	Company
12/15/2016	1.1	AAT

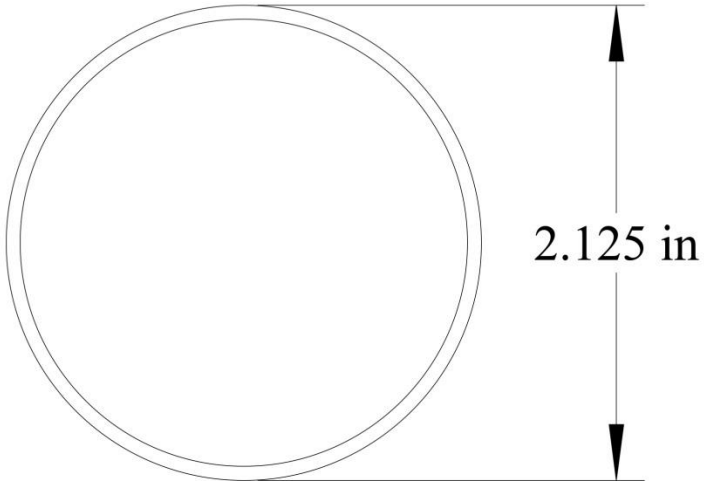
Copper Bellow

2.125" diameter, cut to 2.9" length

Side View



Top View

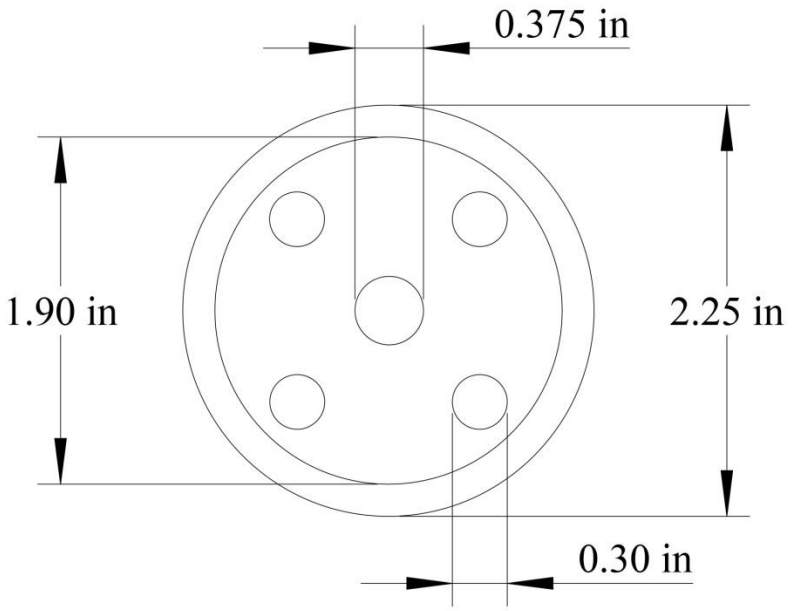


Copper Bellow		
Date	Version	Company
12/15/2016	1.1	AAT

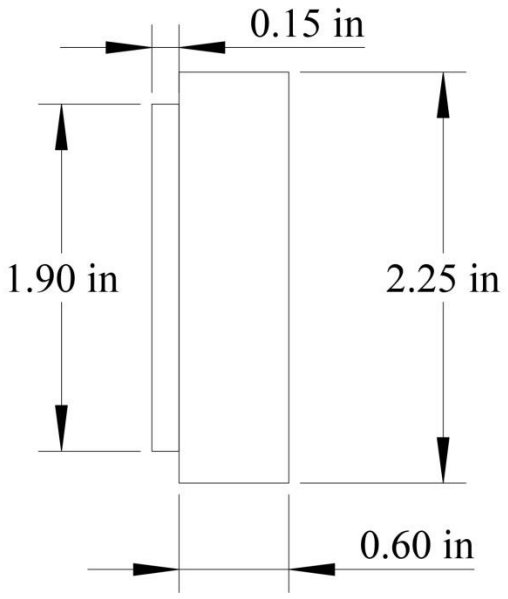
Radiator Top Plate

0.5" Thick cut from 1.5" Solid Brass Rod

Top View



Side View

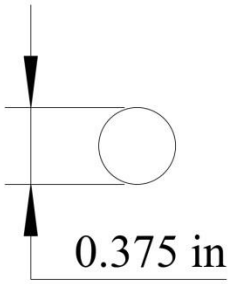


Radiator Top Plate		
Date	Version	Company
12/15/2016	1.1	AAT

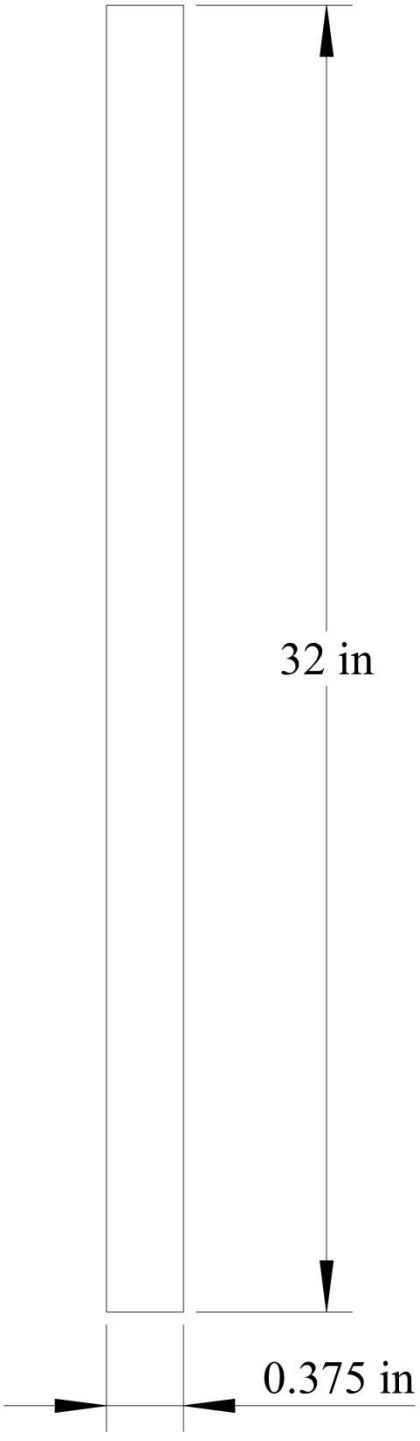
3/8" All Thread Stainless Steel Rod

32" length

Top View



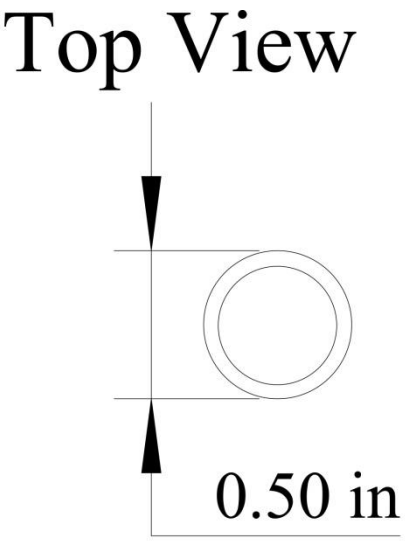
Side View

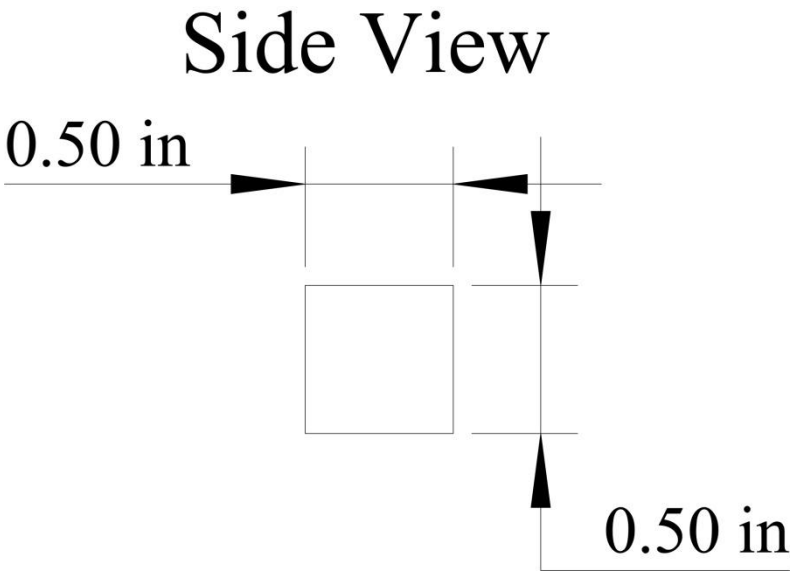


Radiator Top Plate		
Date	Version	Company
12/15/2016	1.1	AAT

Collar

0.5" length cut from Stainless Steel Tube, 0.5" OD





Stainless Steel Collar		
Date	Version	Company
12/15/2016	1.1	AAT

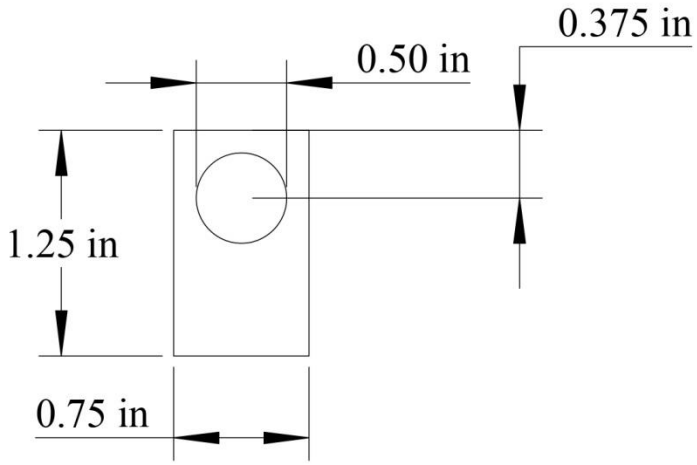
Input/Output Tuning Assembly

HARDWARE REQUIRED
#6 PIM nut (QTY 12 for INPUT/OUTPUT, QTY 24 with FEEDBACK LOOP
SOCKET CAP Screws 1/4 - 20, 1/2" (QTY 12 for INPUT/OUTPUT, QTY 24 w/FEEDBACK

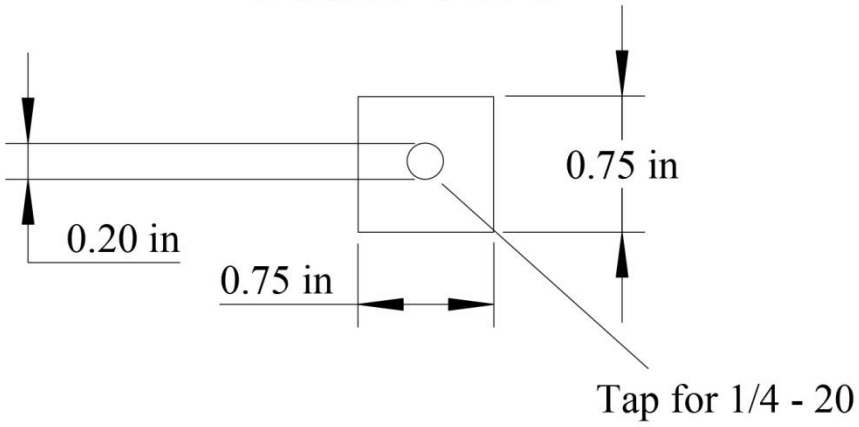
Brass Input Fastener

Solid Brass 0.75"x 0.75"x 0.94" .20 Hole tapped for 1/4 - 20. 5/16" (0.31) through hole

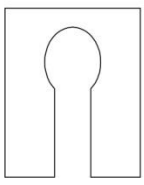
Top View



Front View



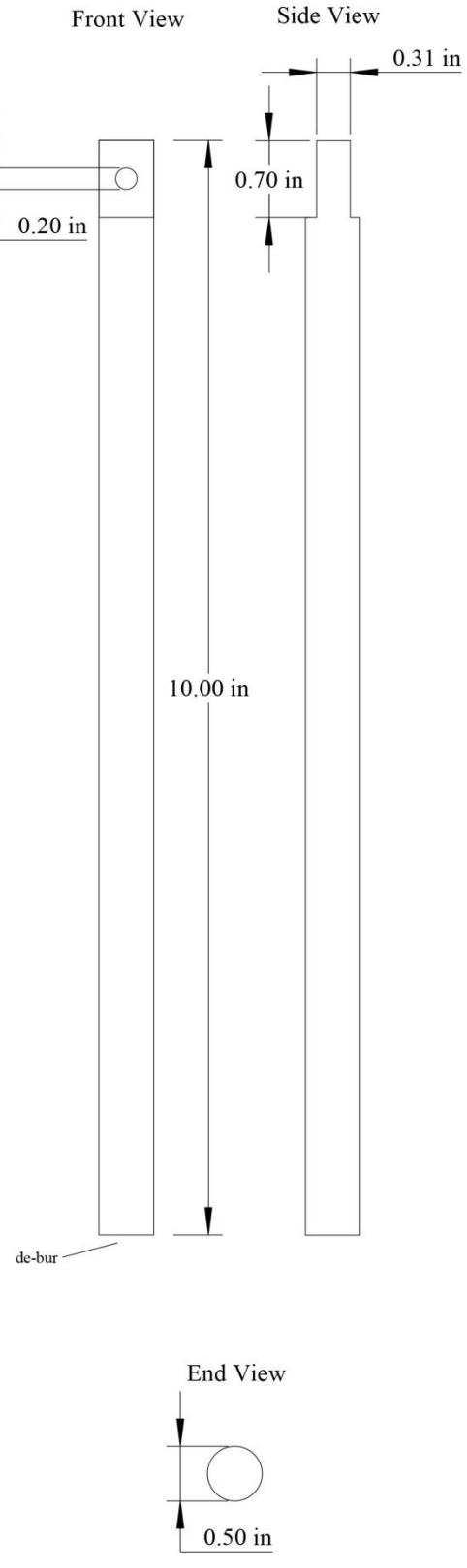
Top View
Showing Tap depth



4” Cavity Brass Input Fastener		
Date	Version	Company
12/15/2016	1.1	AAT

1/2" Brass Round Member

10" length. 0.195" hole. 0.7" Flat section on one end

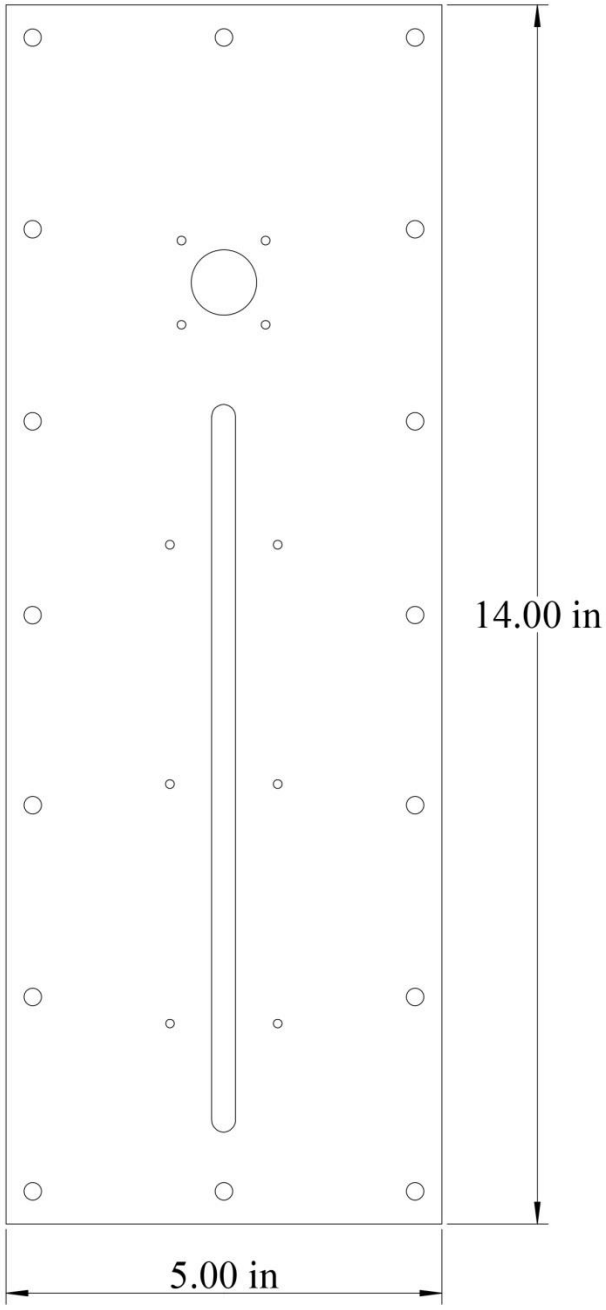


1/2” Brass Round Member		
Date	Version	Company
12/15/2016	1.1	AAT

7/16” DIN Output Cavity Tuning Cover

Aluminum 0.25” Thick

Through Holes will be drilled for ¼-20 Through

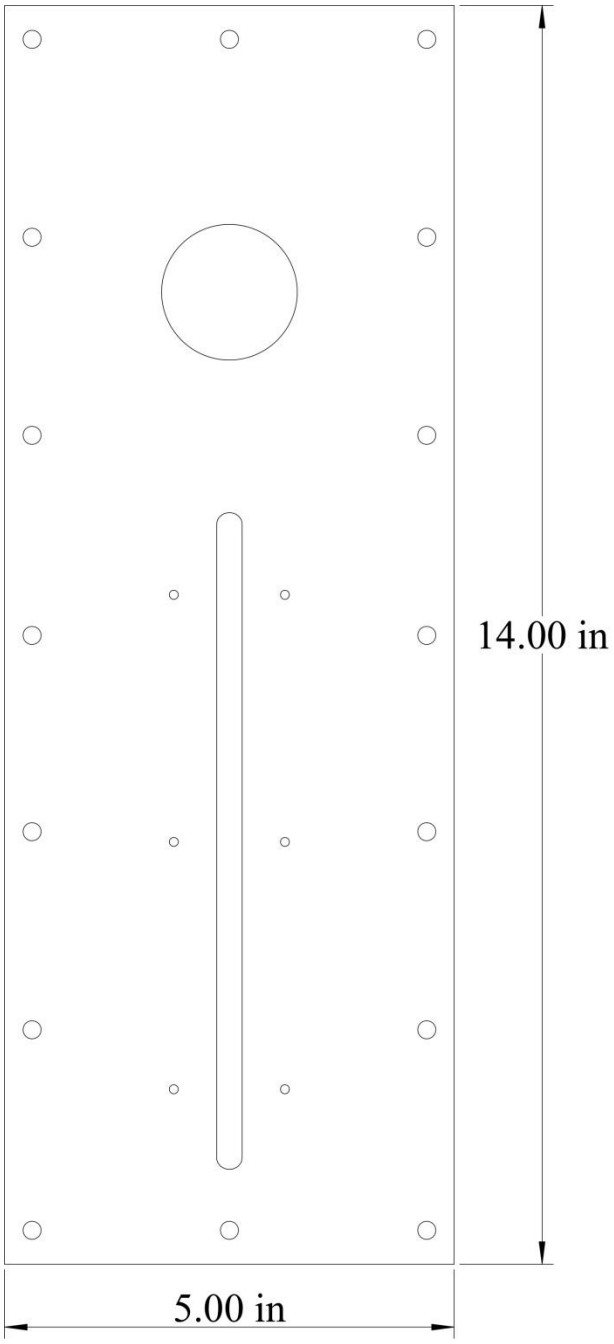


7/16” DIN Cavity Tuning Cover		
Date	Version	Company
12/15/2016	1.1	AAT

1-5/8” EIA Output Cavity Tuning Cover

Aluminum 0.25” Thick

Through Holes will be drilled for ¼-20 Through

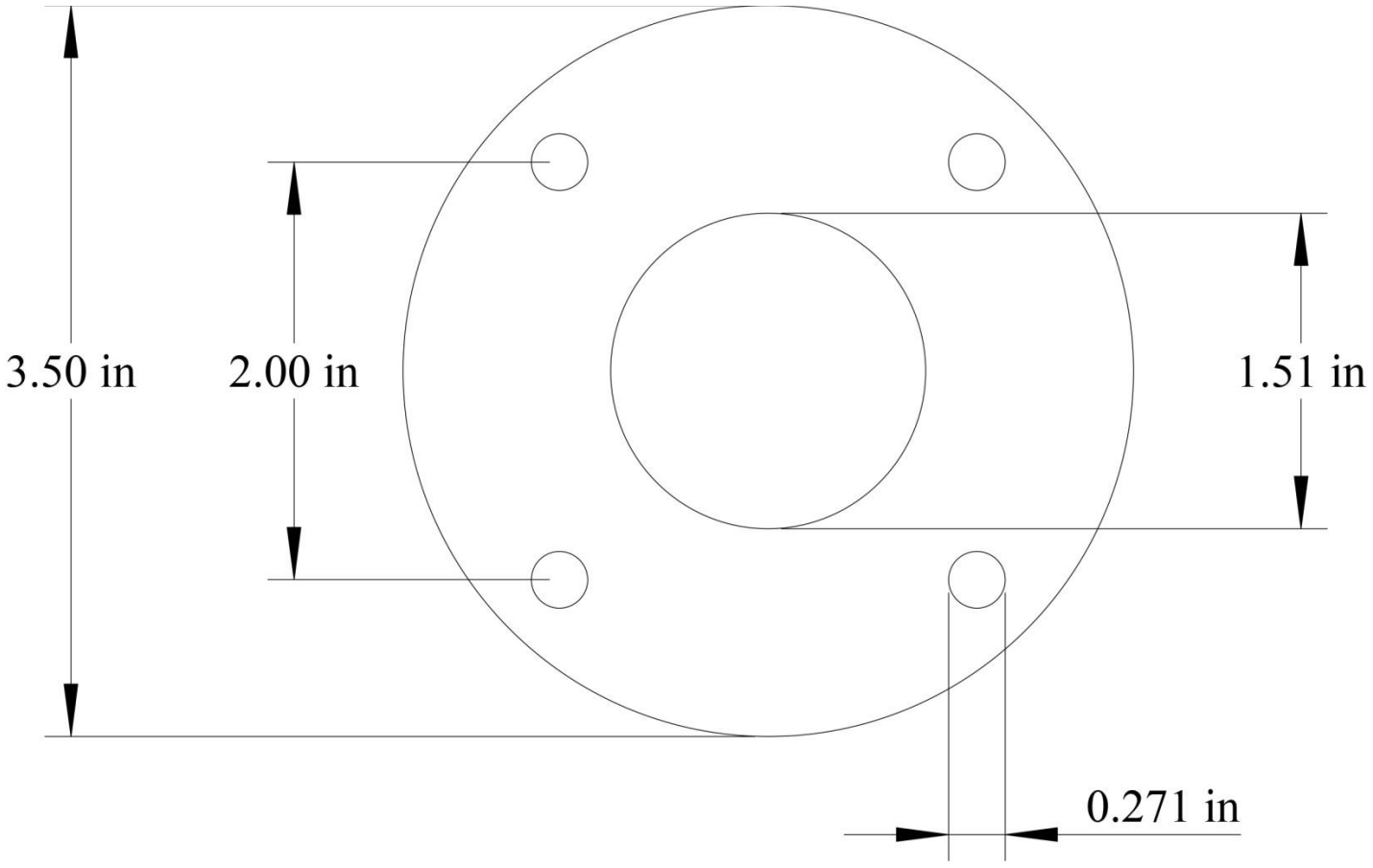


1-5/8” EIA Cavity Tuning Cover		
Date	Version	Company
12/15/2016	1.1	AAT

1-5/8” EIA Output Flange

Aluminum 0.375” Thick

All Four Holes Tapped for 5/16” Bolt



1-5/8 EIA Output Flange		
Date	Version	Company
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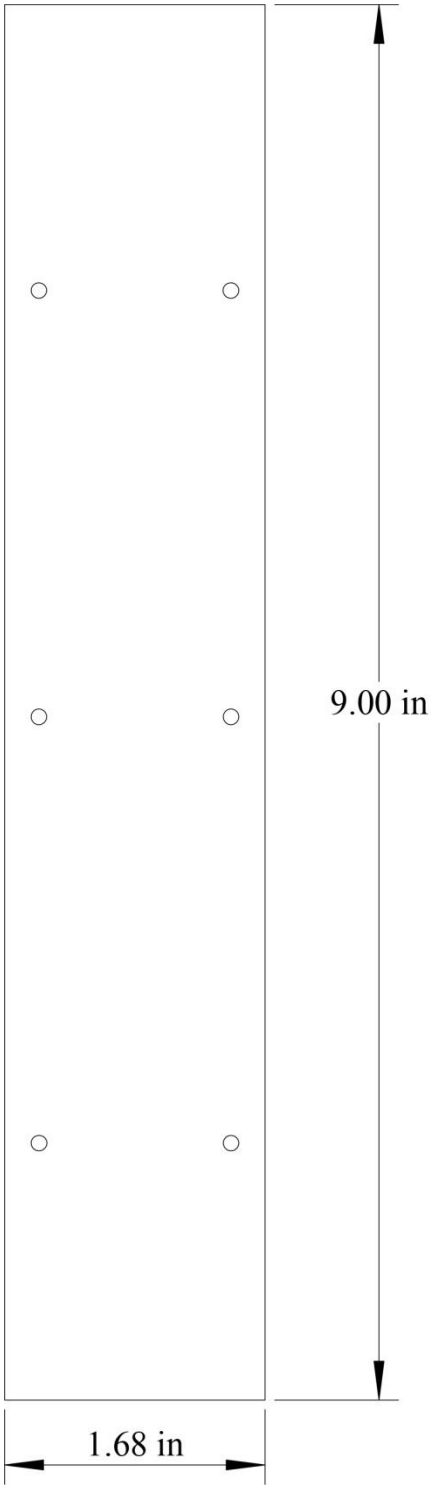
Cavity Tuning Top Plate

Aluminum 80,000 thick

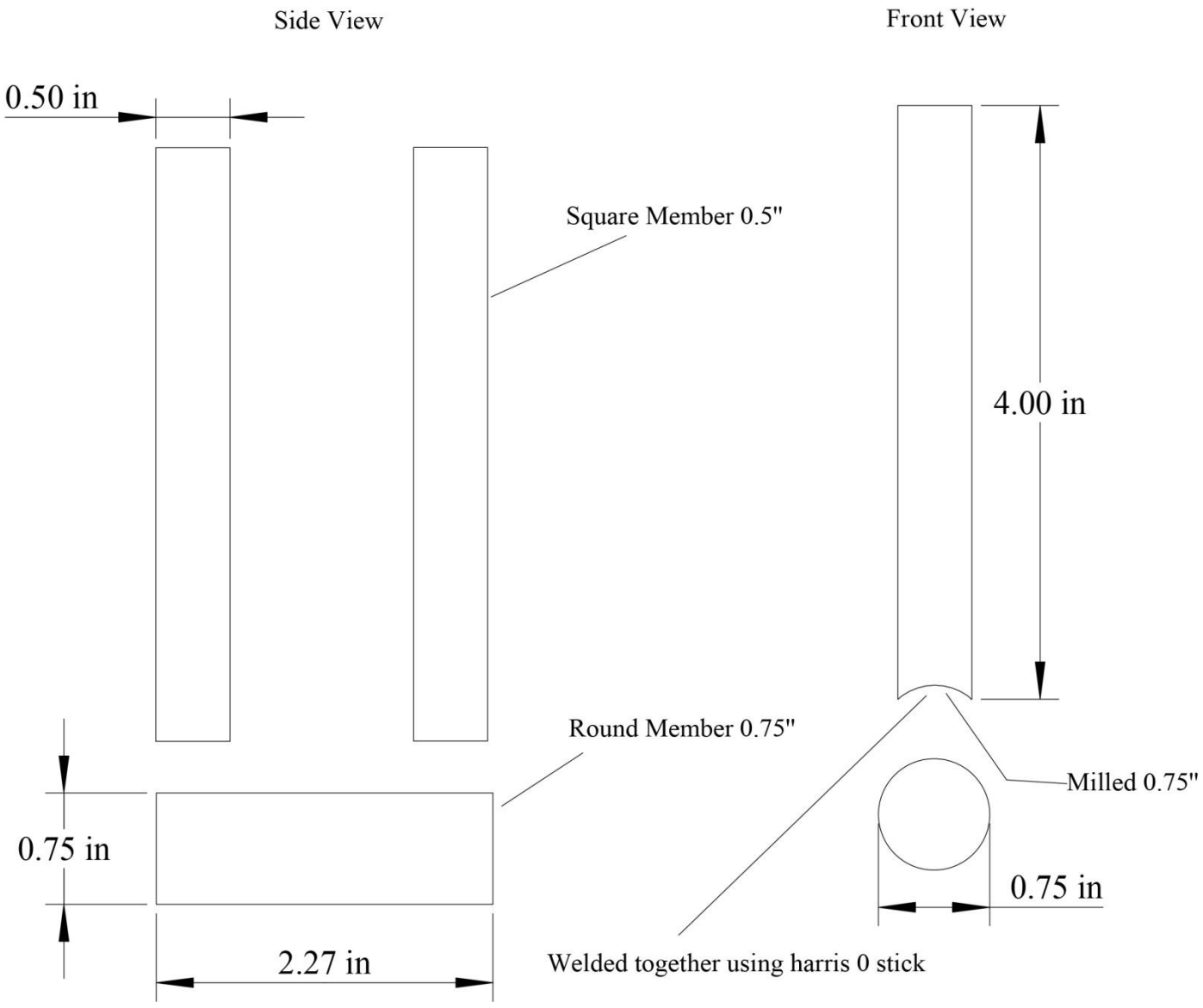


Cavity Tuning Top Plate		
Date	Version	Company
12/15/2016	1.1	AAT

7/16'' DIN input & output connector

7/16” DIN Connector		
Date	Version	Company
12/15/2016	1.1	AAT

Input Loop Assembly (2 per three cavity filter)

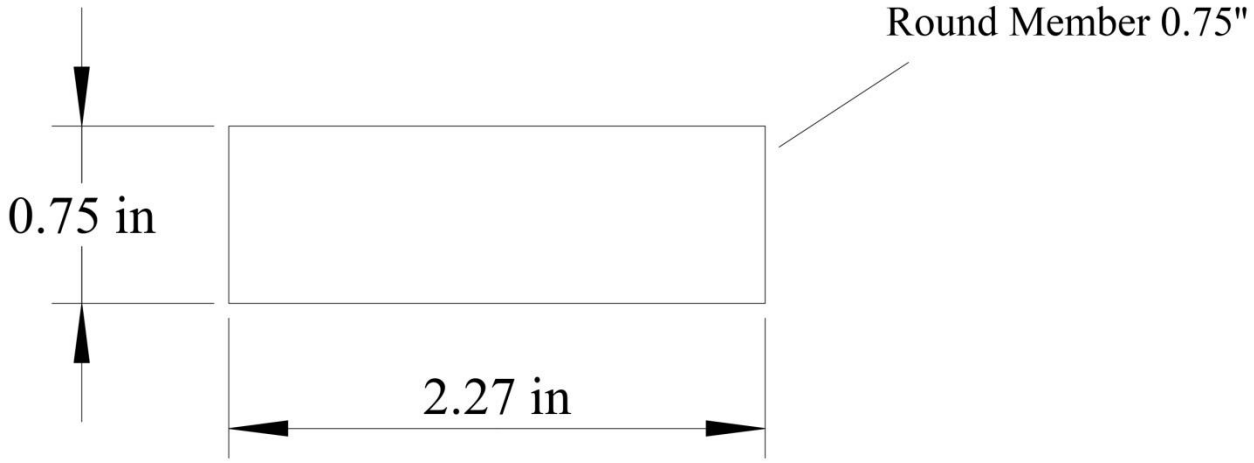


8” Cavity Brass Inner Loops		
Date	Version	Company
12/15/2016	1.1	AAT

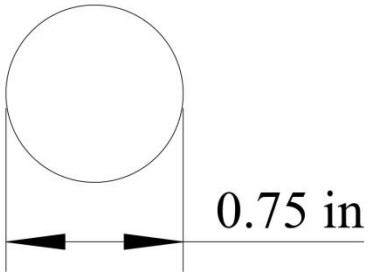
Brass 0.75" round member solid

2.27" length

Side View



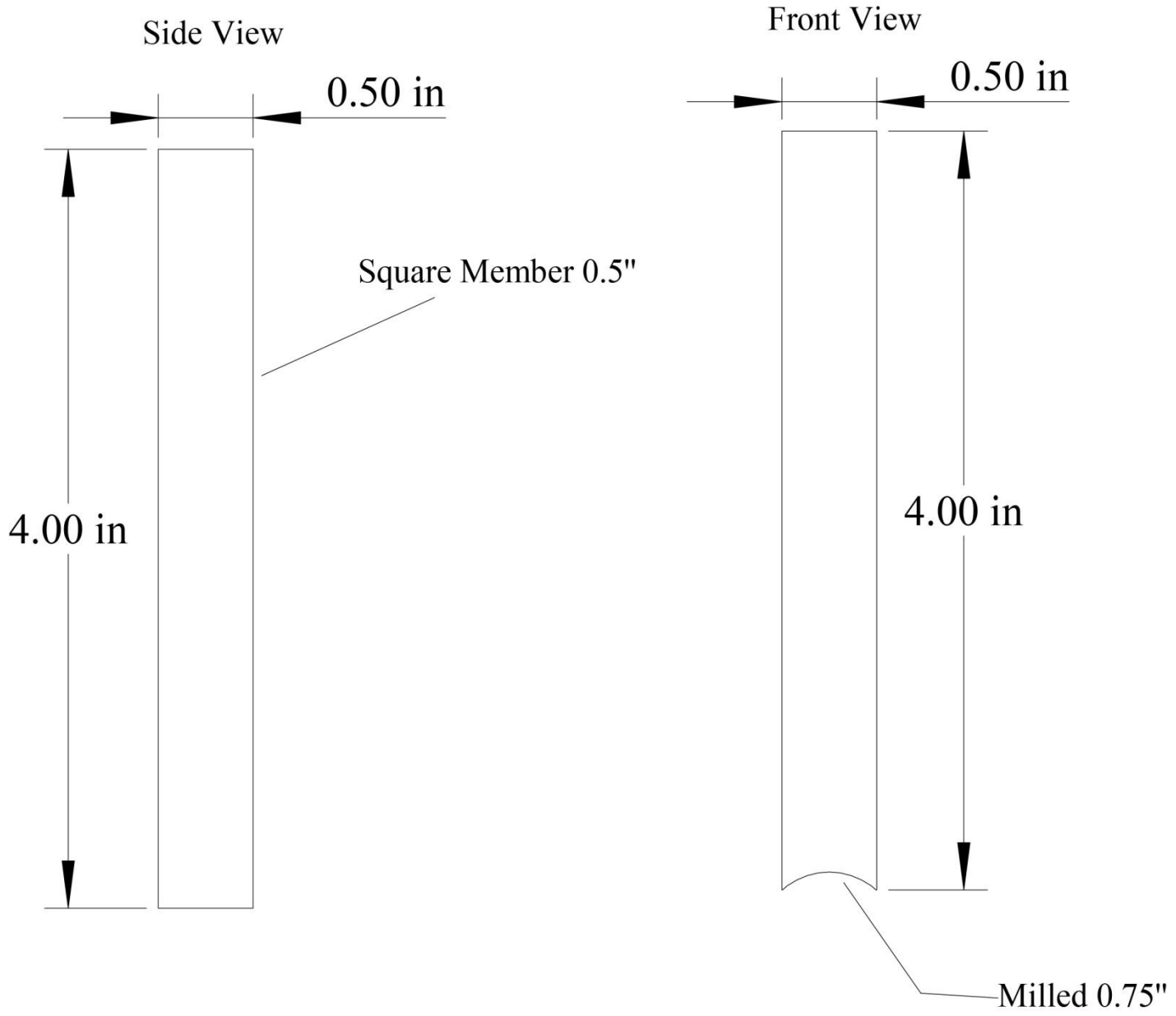
Front View



Brass 0.75” round member solid		
Date	Version	Company
12/15/2016	1.1	AAT

Brass 0.5" square member solid

4" length, 3/4" mill on one end

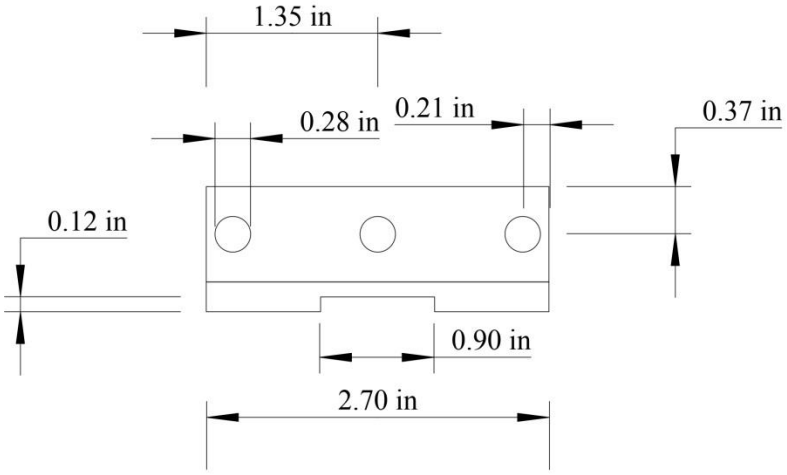


Brass 0.5” square member solid		
Date	Version	Company
12/15/2016	1.1	AAT

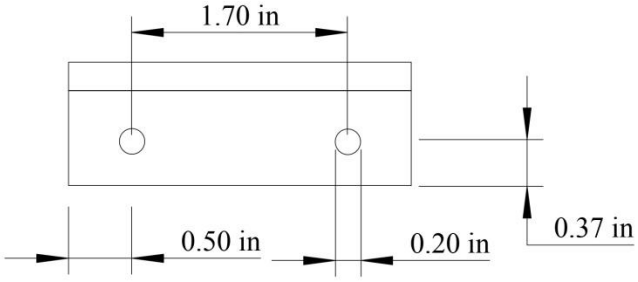
Clamp Assembly

2.7" wide

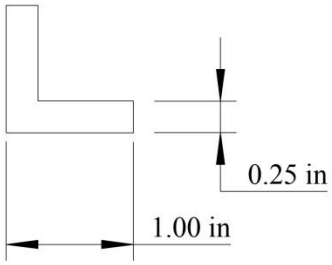
Side View



Top View



Front View

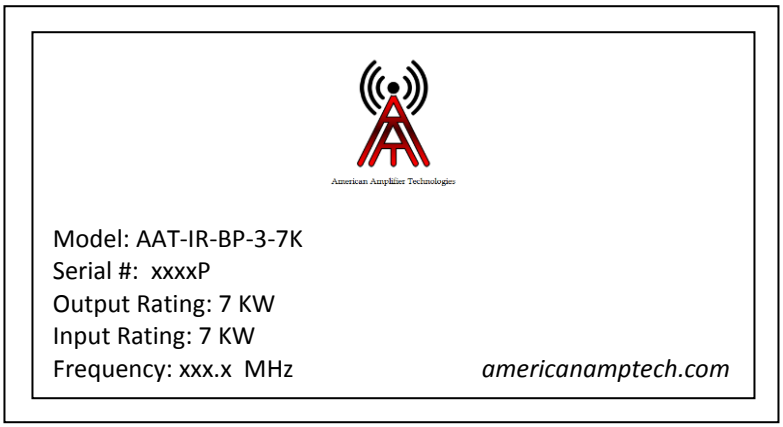


Inner Loop Clamp Assembly		
Date	Version	Company
12/15/2016	1.1	AAT

Finishing Touches

Paint

Label



Crate and Packing

2x3 Lumber – QTY 5
OSB Plywood – QTY 1
4x4 Lumber – QTY 1
3 hours Labor
Hardware
Bubble Wrap

Shipping

Process for Ordering Freight pickup from AAT North Highlands Facility using FreightPros.com

Freight Shipping is ordered through FreightPros.com. The request for shipping is initiated by sending an email to Eric Zapata, ezapata@freightpros.com. If for any reason you need a shipment set up after 3:30 CST or you get Eric's out of office, you can email Brooke bmoore@freightpros.com

Follow this email template;

Subject: Need to schedule a freight pick up for today MM/DD/YYYY

> Hi Eric,
>
> I need to schedule the following freight pick up today for AAT.
>
> From:
>
> AAT
> Steve Wilde
> 3485 Orange Grove Ave
> Suite L
> North Highlands, CA 95660
> 530-574-3474
>
> To:
>
> Enter Ship to information here
>
> Item: Item Name
> Size: XX'' L X XX'' W X XX'' H
>
> Weight: XXX lbs
>
> Total Insurance: $XX,XXX
>
> *We would like to request that Carrier Name be used for this shipment.
> Lift Gate Required at Pickup location.
>
> Please include the rate when you send the BOLs.

*Sometimes we will request a specific carrier such as R&L or FedEx Freight
Call or text one of the guys in the shop to determine the Size and Weight of the crate:
Kevin 916-257-6539, Hai 916-806-5678
The Total Insurance is determined by the item that is being shipped.
Once the BOL is received, print out 5 copies (3 for the crate, 1 for the driver, 1 for us)
Call the Carrier listed on the BOL to confirm ETA for pick up and often times to request the last pickup of the day