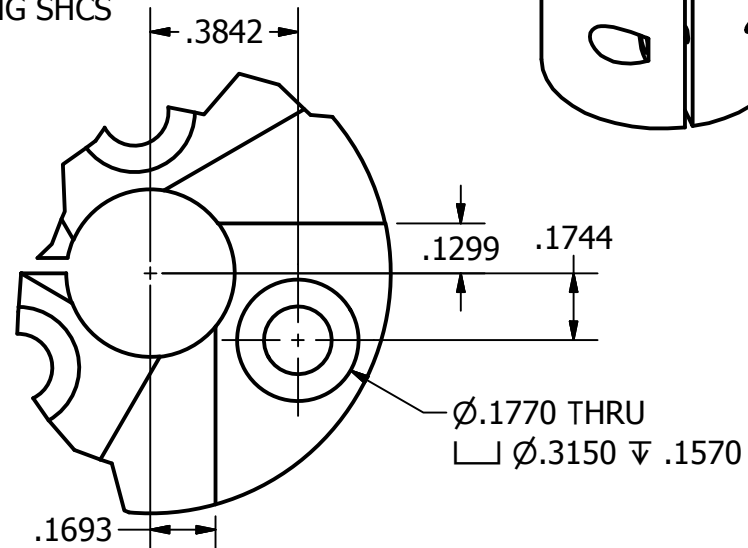
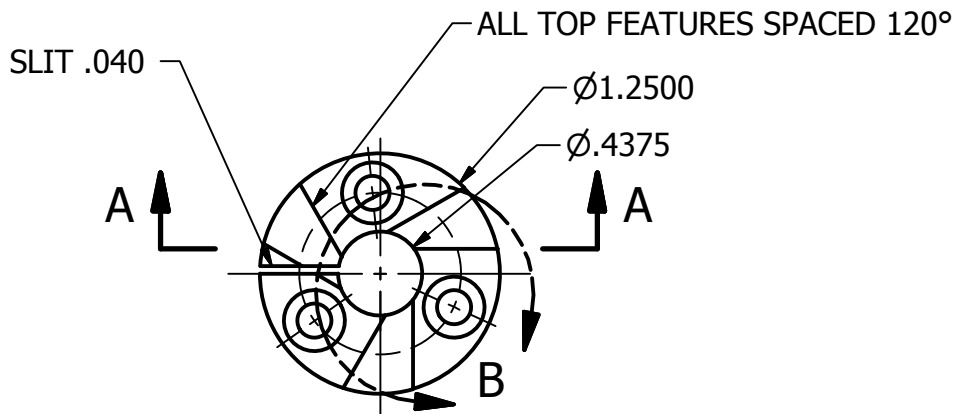
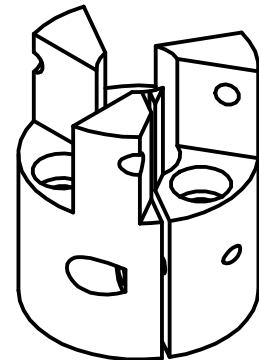


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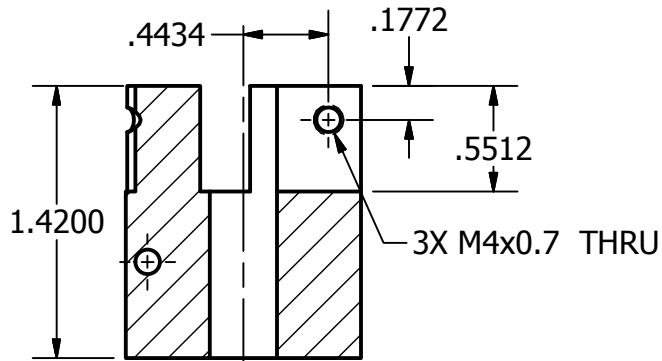
1

MACHINING NOTES:

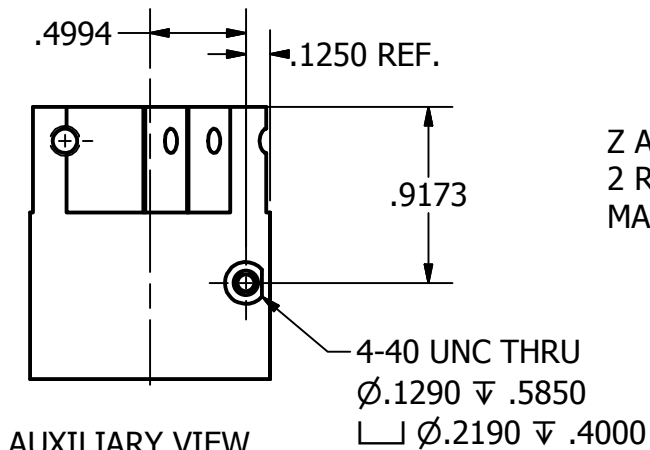
STARTING WITH  $\varnothing 1.250$  X 1.420 CYLINDER DRILL CENTER THRU HOLE THEN  
 USING DIVIDING HEAD OR EQUIVALENT (ROTARY TABLE)  
 MILL 3 BEARING RECESSES, THEN DRILL AND CBORE M4 THRU MOUNTING HOLES  
 IF POSSIBLE LEAVE FIXTURED TO DIVIDING HEAD AND ROTATE PART 90 DEGREES,  
 INDICATE TO CENTER OF PART AND TOP SURFACE THEN DRILL AND TAP M4 HOLES  
 FOR BEARINGS, THEN DRILL, TAP, CBORE HOLE FOR #4 TENSIONING SHCS



DETAIL B



SECTION A-A



AUXILIARY VIEW

Z AXIS 360 DEGREE BEARING  
 2 REQUIRED  
 MATERIAL: ALUMINUM

2

1

2

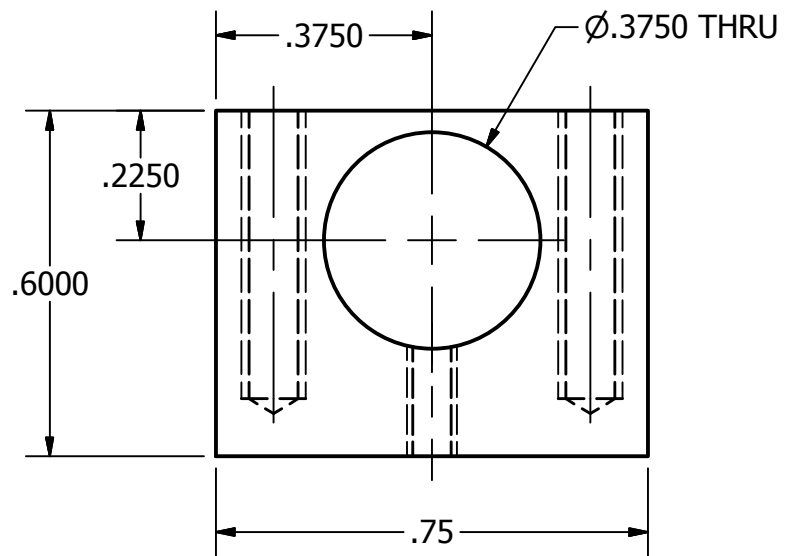
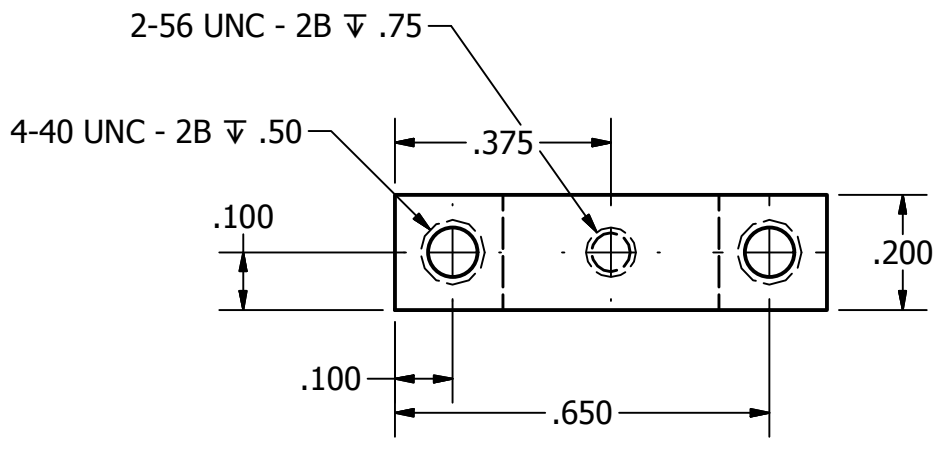
1

B

B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT



A

A

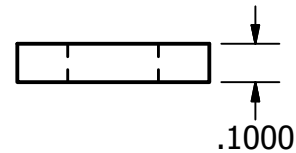
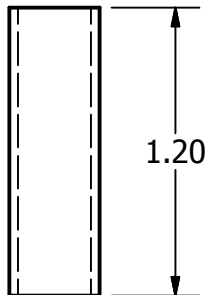
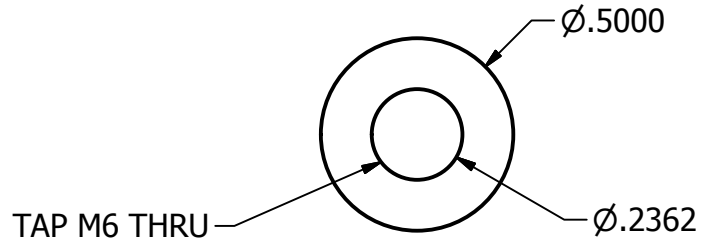
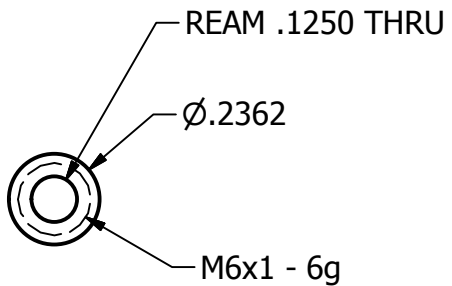
BAR CLAMP  
 12 REQUIRED  
 2-56 HOLE IS FOR SET SCREW

2

1

2

1



EXTRUDER BARRELL  
 1 REQUIRED  
 MATERIAL: ALUMINUM OR BRASS

BARRELL RETAINER  
 UNUSED IN CURRENT DESIGN  
 MATERIAL: ALUMINUM

2

1

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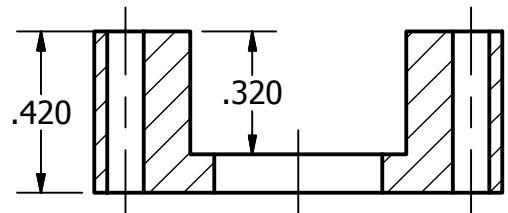
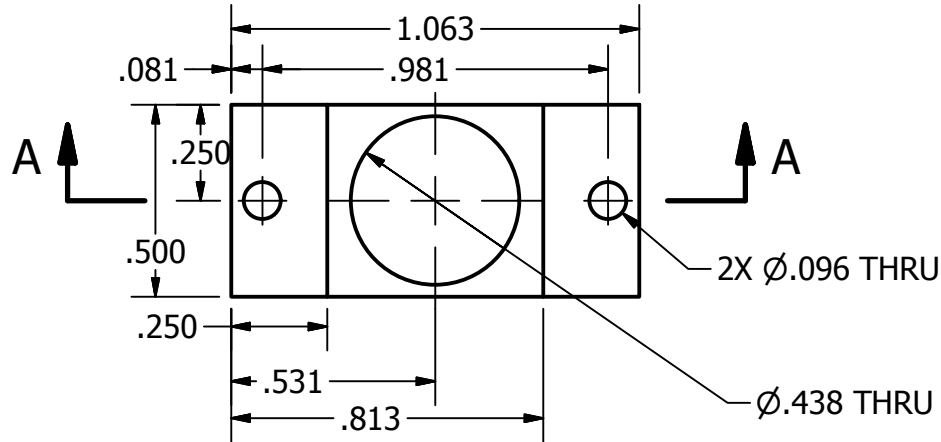
PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

B

B

A

A



SECTION A-A

Z AXIS NUT RETAINER  
NUMBER REQUIRED: 2  
MATERIAL ALUMINUM

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

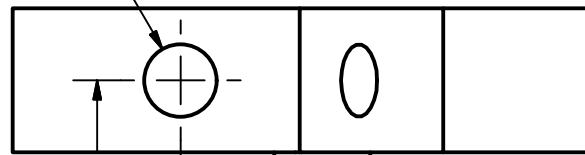
PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

2

1

TOOLING BALL MEASUREMENTS FOR REPEATABLE MANUFACTURE OF REPRAP CORNER BRACKETS TO BE CUT FROM SCRAP NUMBER REQUIRED: 6 MATERIAL: ALUMINUM

2X Ø.3750 THRU



.6875

TOOLING BALL

.7388

Ø.5000

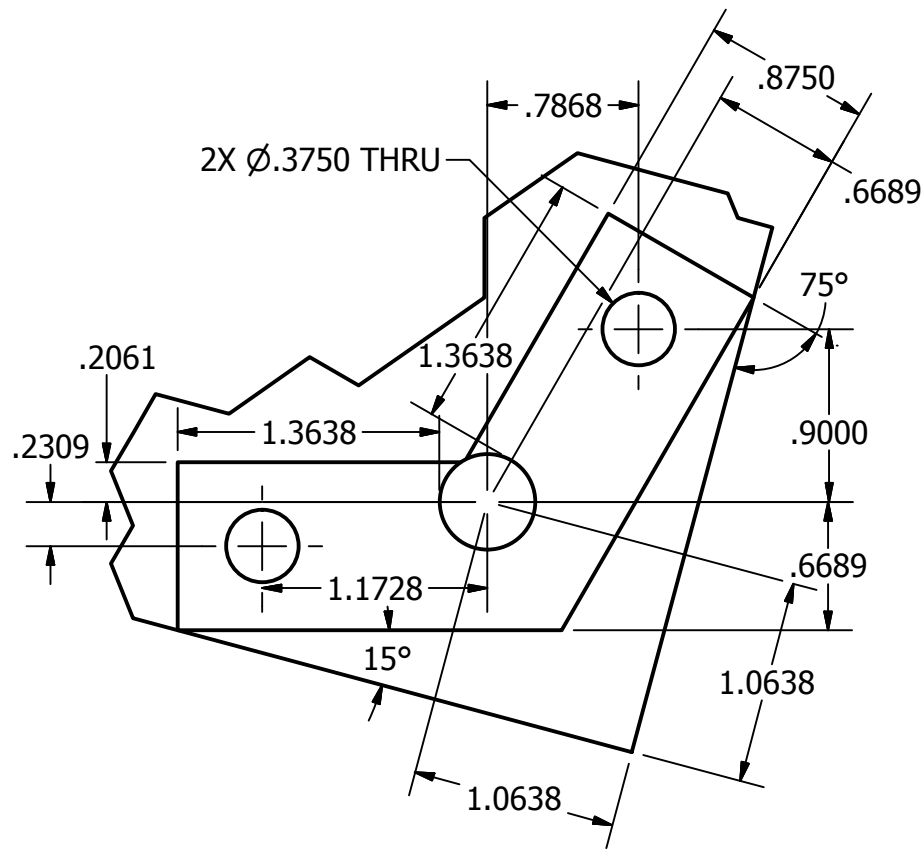
B

B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

2X Ø.3750 THRU



.2061

.2309

1.3638

1.3638

.7868

.8750

.6689

75°

.9000

.6689

1.1728

15°

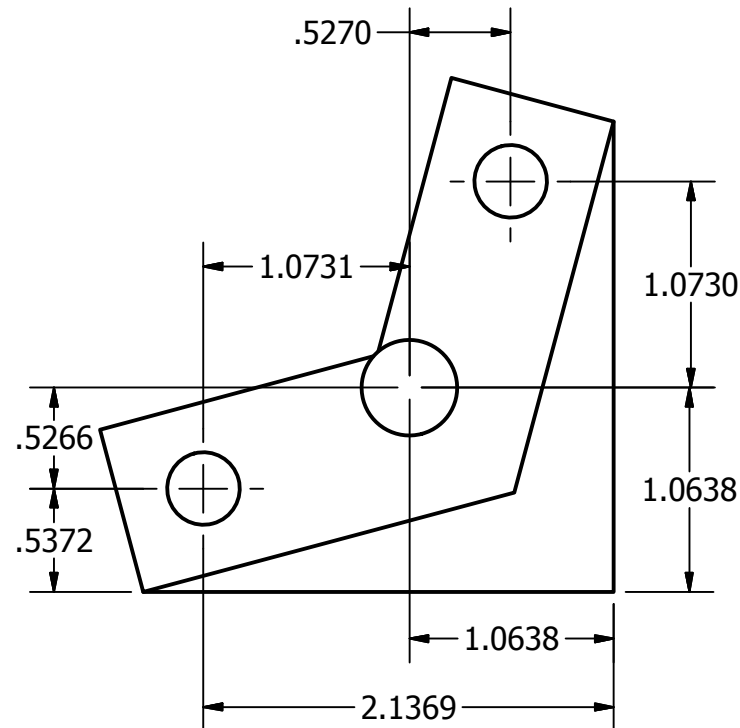
1.0638

1.0638

A

A

.5270



1.0731

1.0730

.5266

.5372

1.0638

1.0638

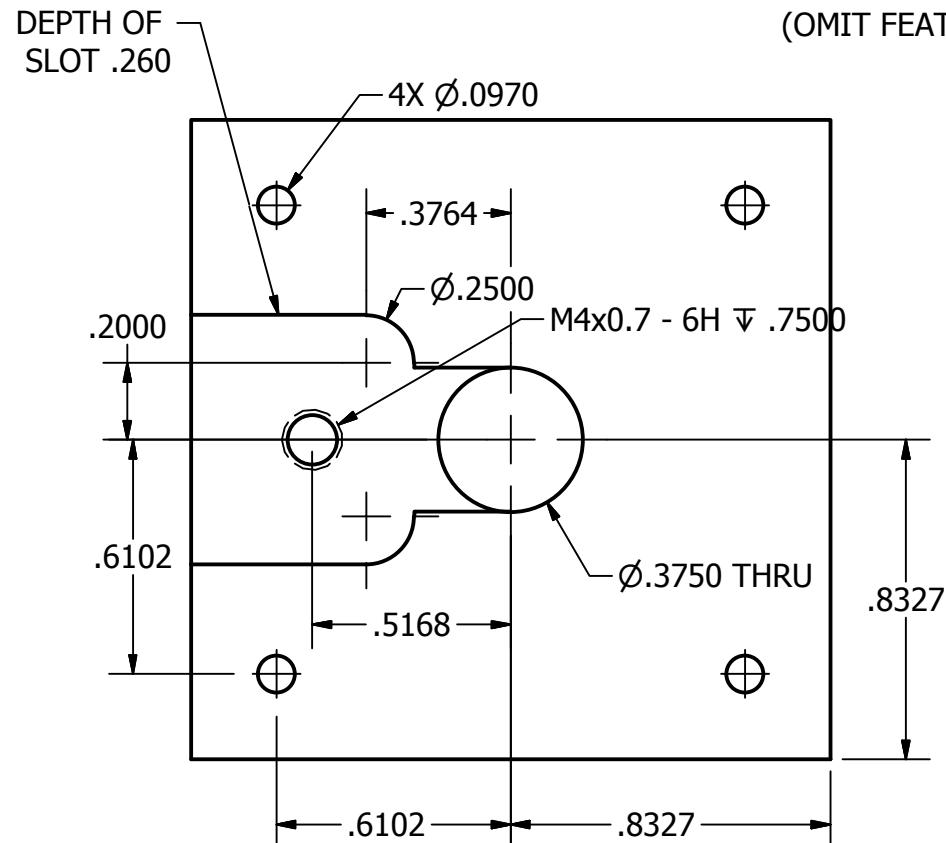
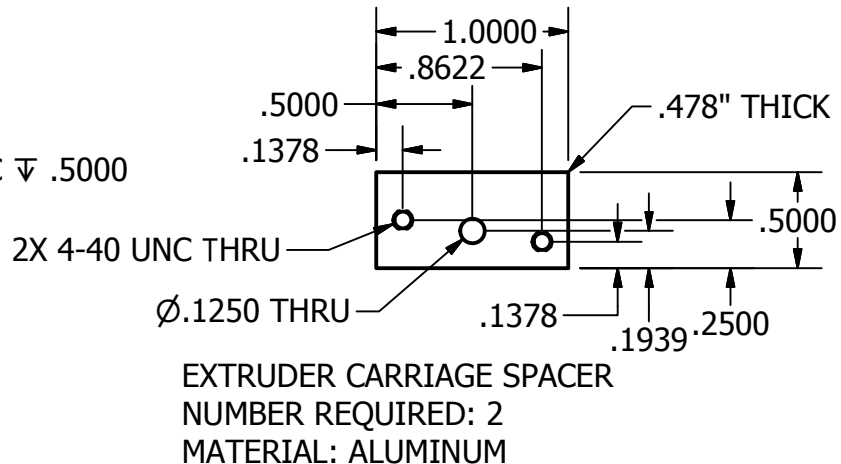
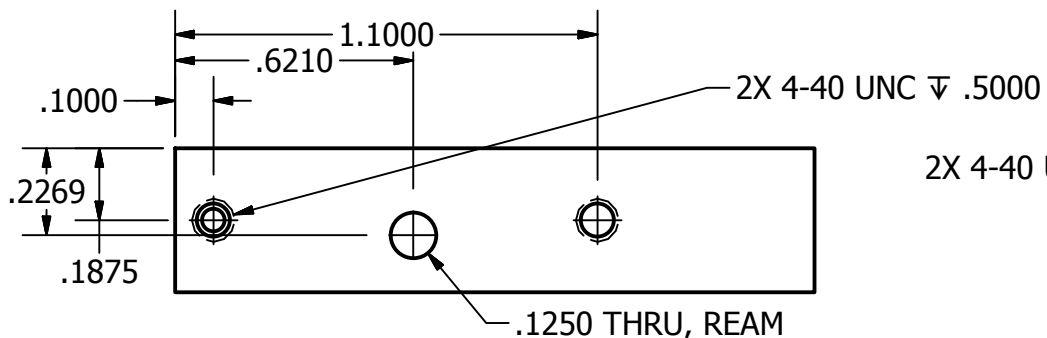
2.1369

2

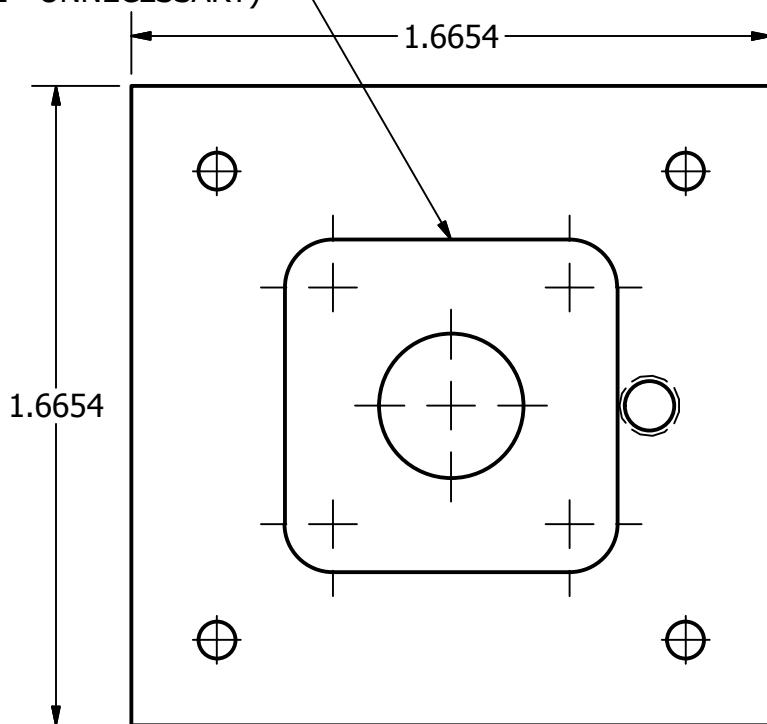
1

2

1



DEPTH OF SLOT 2MM  
(OMIT FEATURE - UNNECESSARY)



EXTRUDER BODY  
NUMBER REQUIRED: 1  
MATERIAL: ALUMINUM

2

1

2

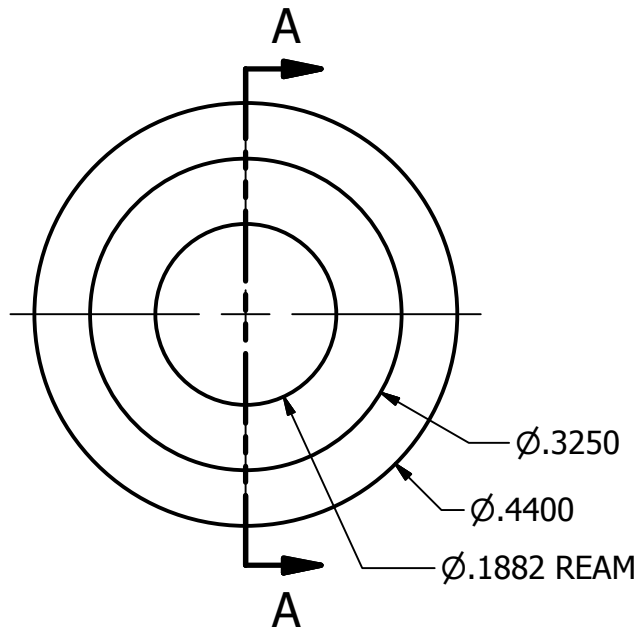
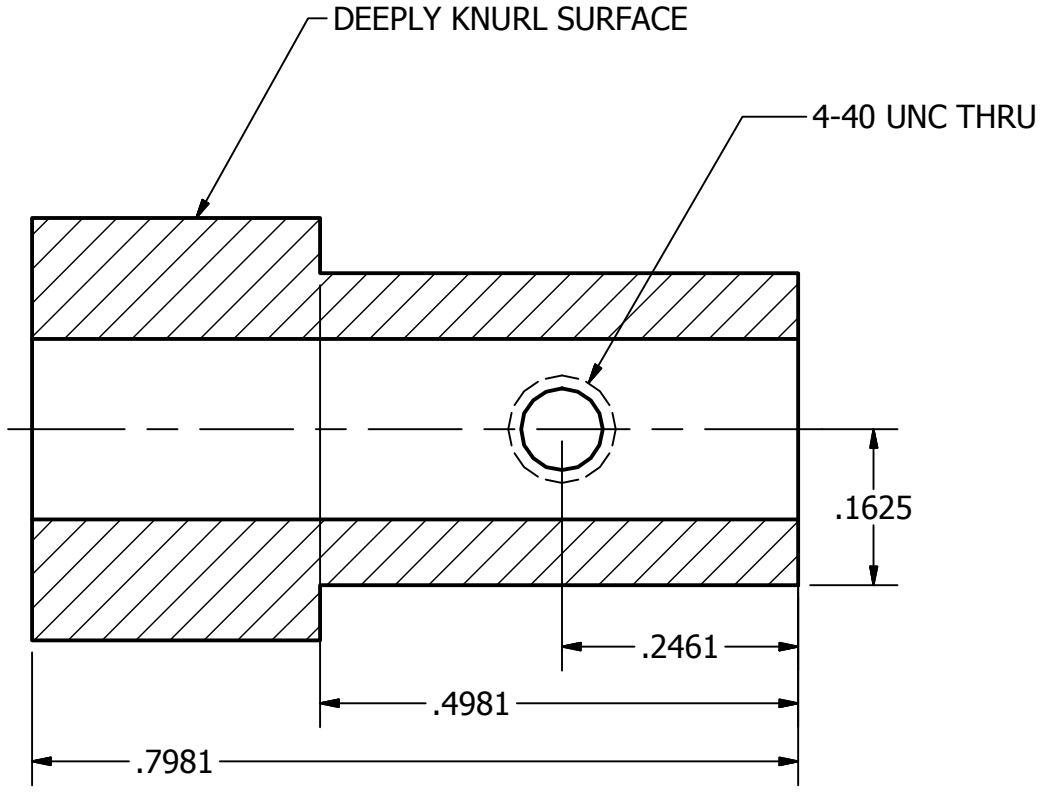
1

B

B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT



A

A

EXPERIMENTAL EXTRUSION PULLEY  
NUMBER REQUIRED: 1  
MATERIAL: ALUMINUM

2

1

2

1

B

B

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A

A

.25

.97

9.13

8.22

2.24

2.35

6.81

DRILL CLEARANCE FOR TAPPED  
HOLES IN Y AXIS BEARINGS

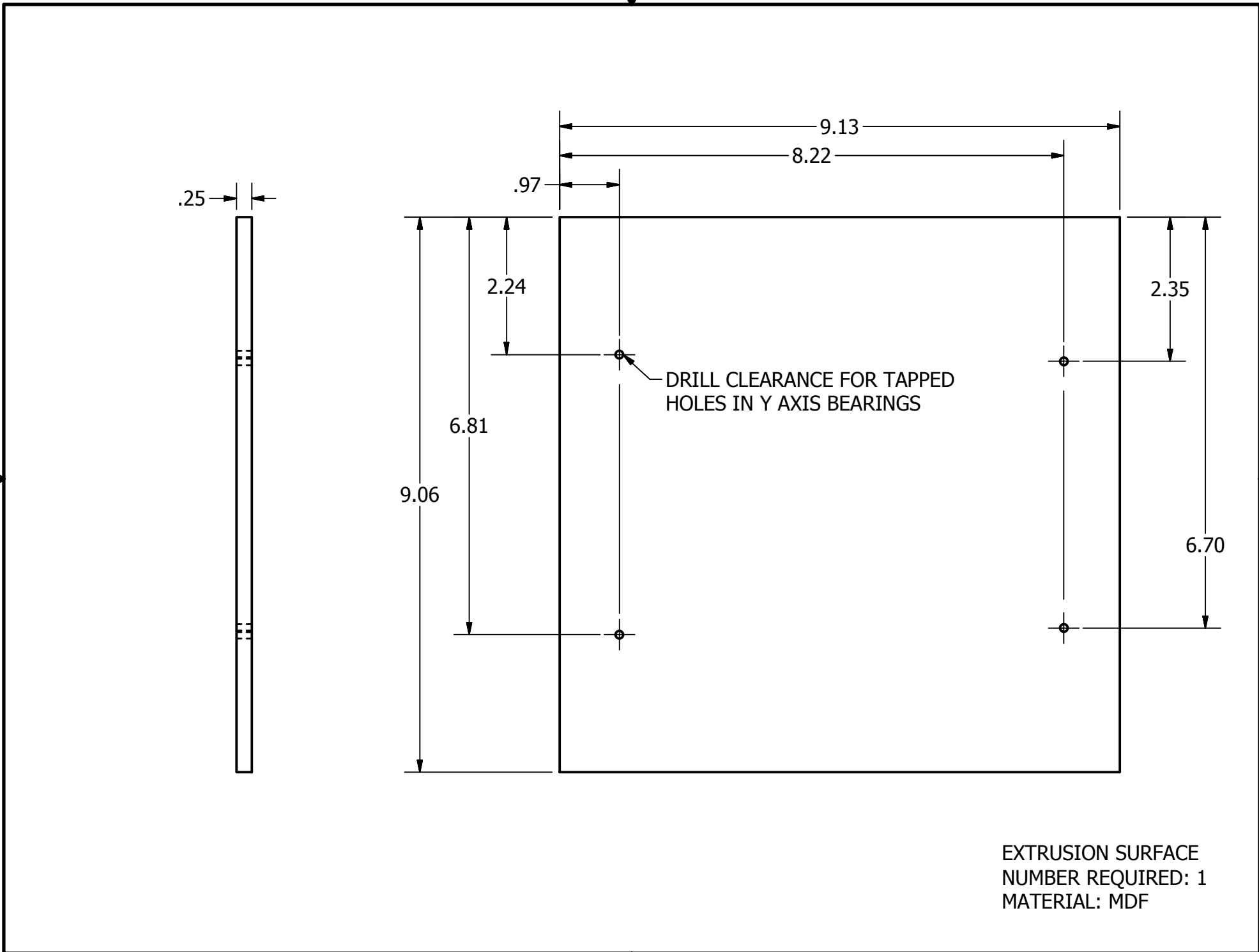
9.06

6.70

EXTRUSION SURFACE  
NUMBER REQUIRED: 1  
MATERIAL: MDF

2

1





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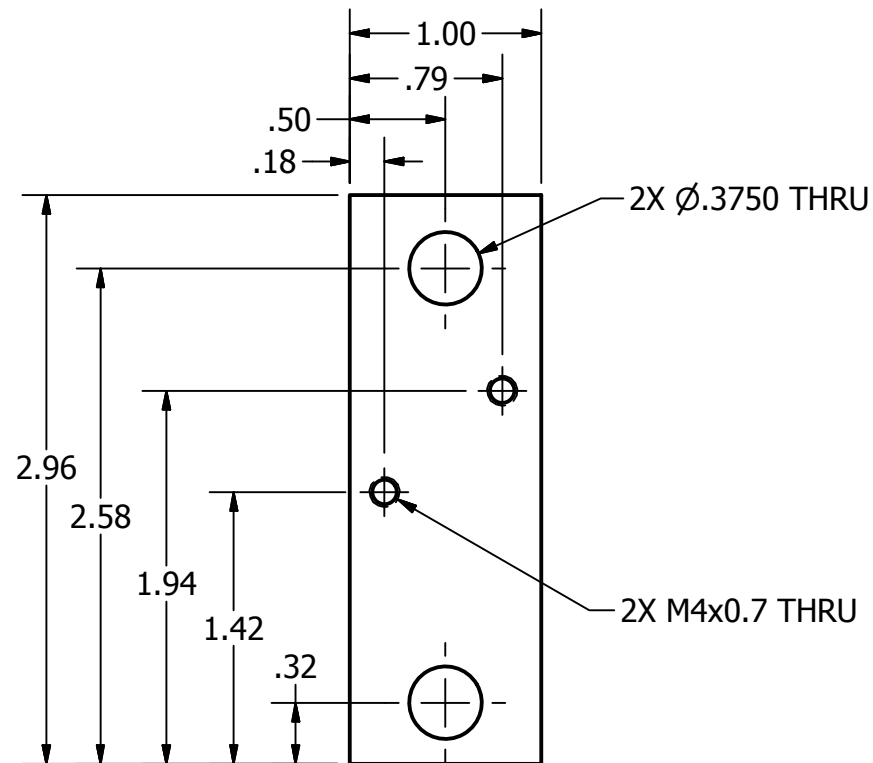
B

A

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B

A



Y AXIS PULLEY BLOCK  
NUMBER REQUIRED: 1  
MATERIAL: ALUMINUM

2

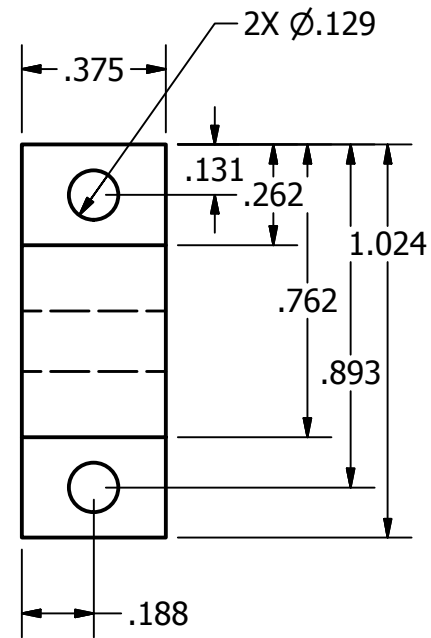
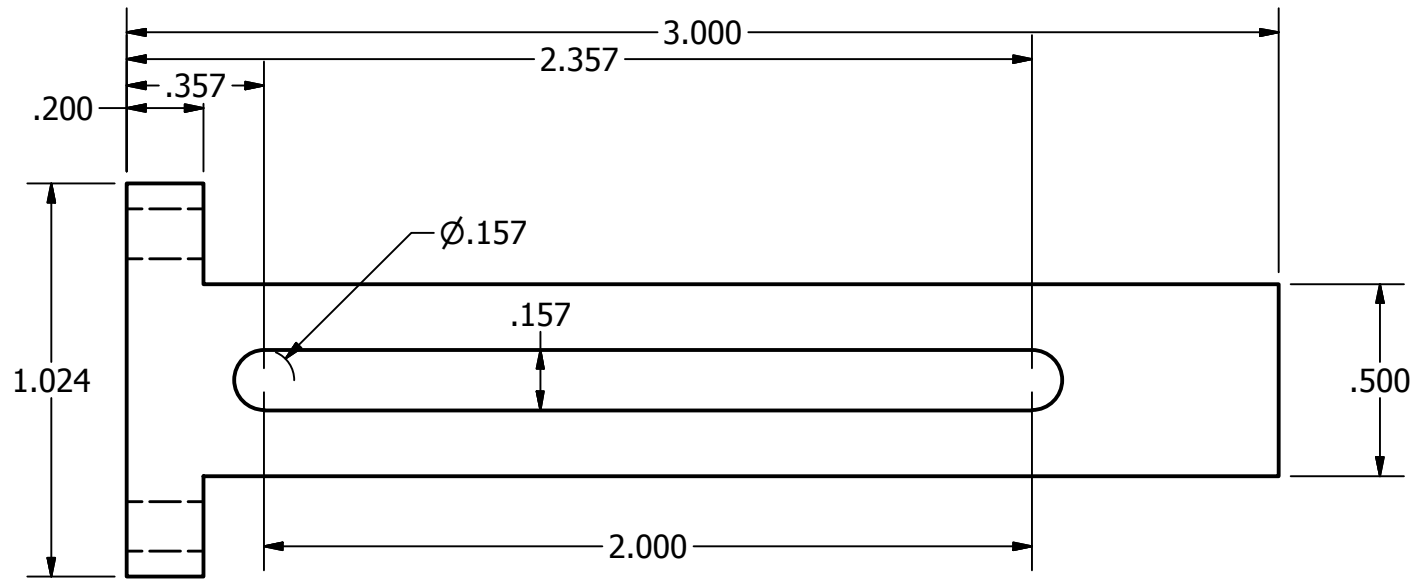
1

B

B

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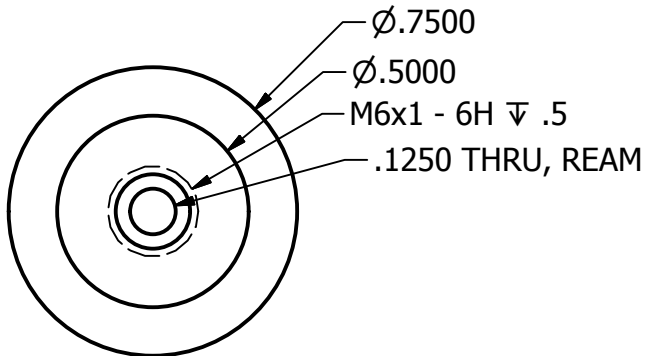
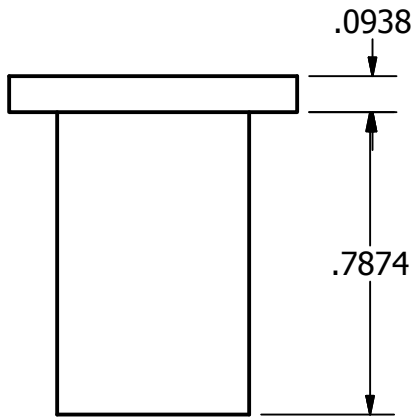
A

A

Z BELT TENSIONER  
NUMBER REQUIRED: 1  
MATERIAL: ALUMINUM

2

1

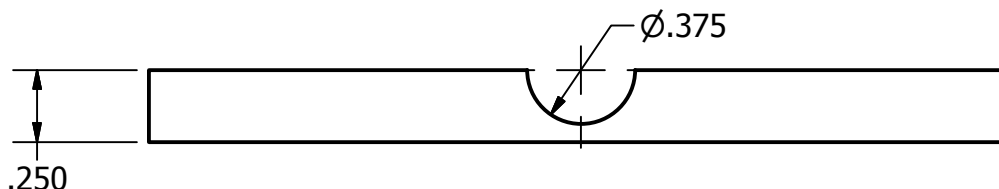
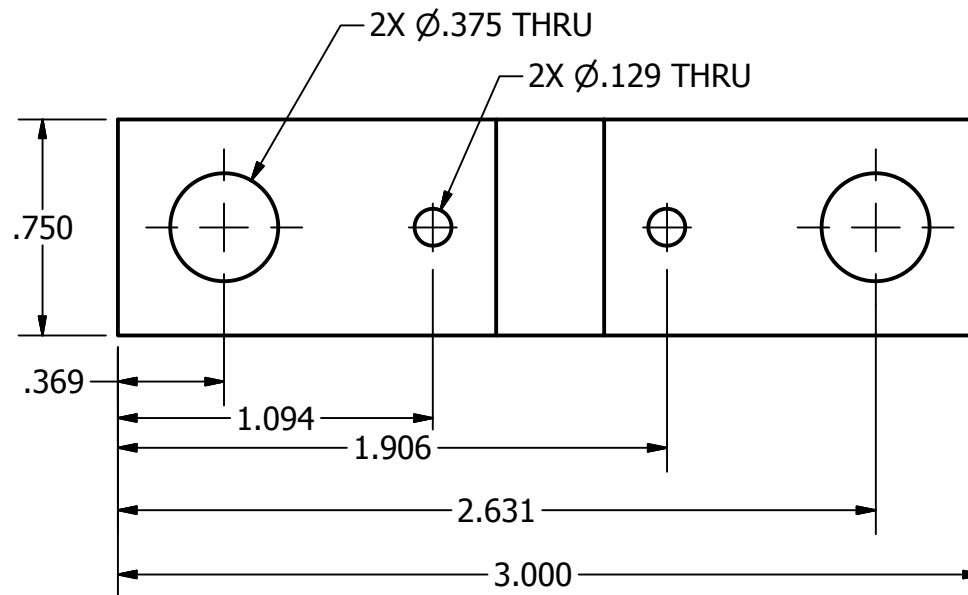


THERMAL BARRIER  
NUMBER REQUIRED: 1  
MATERIAL: PTFE (TEFLON)

2

1

FOUR OF THESE NEED TO BE MADE, TWO WITH CLEARANCE HOLES FOR 4-40 FASTENERS, AND TWO WITH 4-40 TAPPED HOLES



Z AXIS BEARING ROD CLAMP  
NUMBER REQUIRED: 4  
MATERIAL: ALUMINUM

2

1

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

B

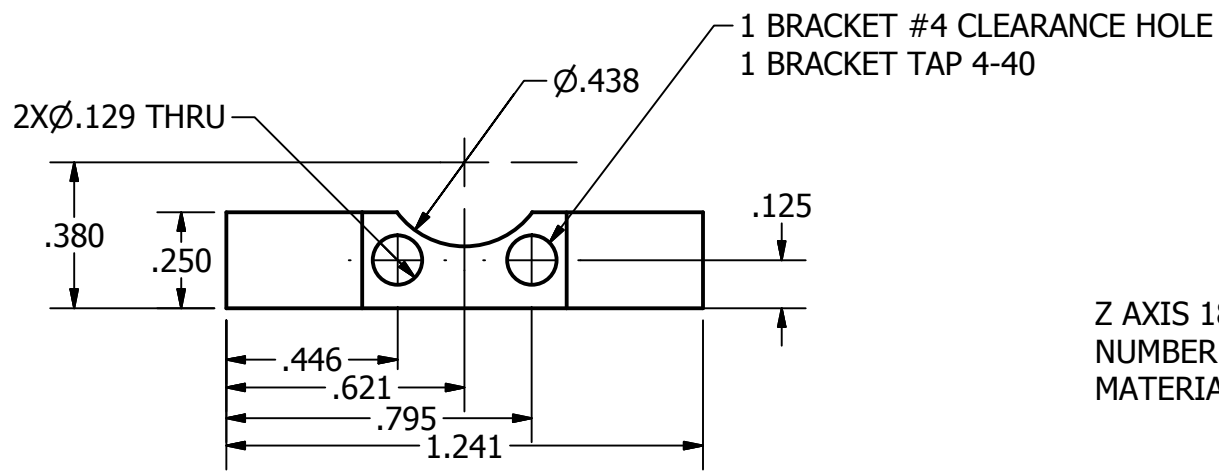
B

A

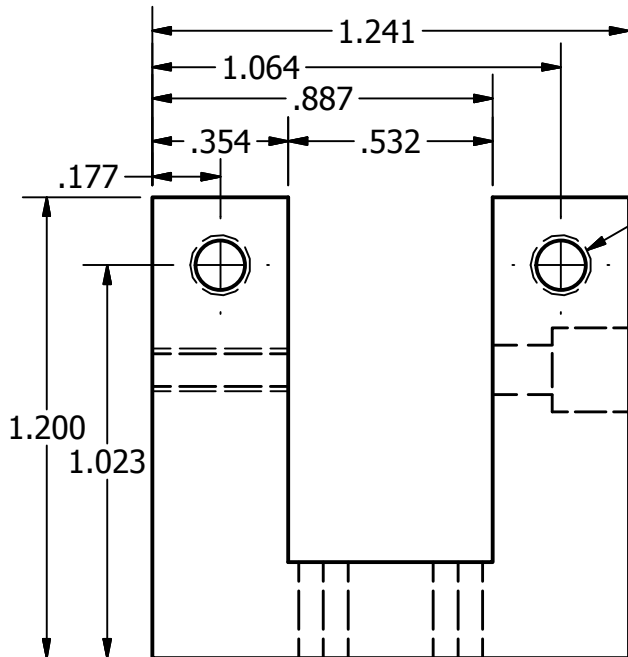
A

2

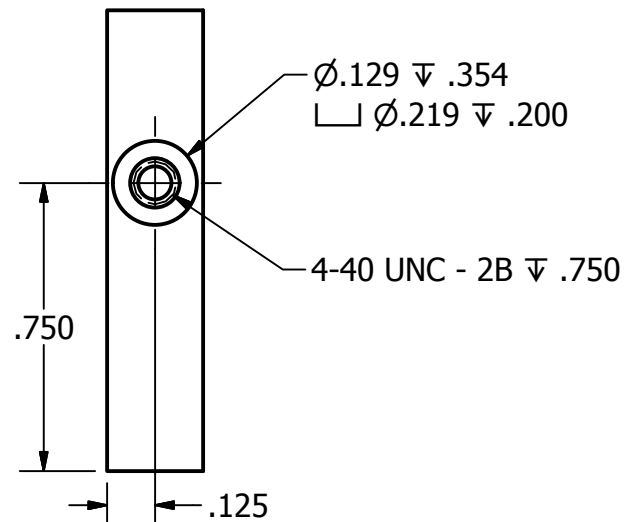
1



Z AXIS 180 BEARING  
NUMBER REQUIRED: 2  
MATERIAL: ALUMINUM



M4x0.7 - 6H  $\nabla$  .750



B

B

A

A

2

1

2

1

B

B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

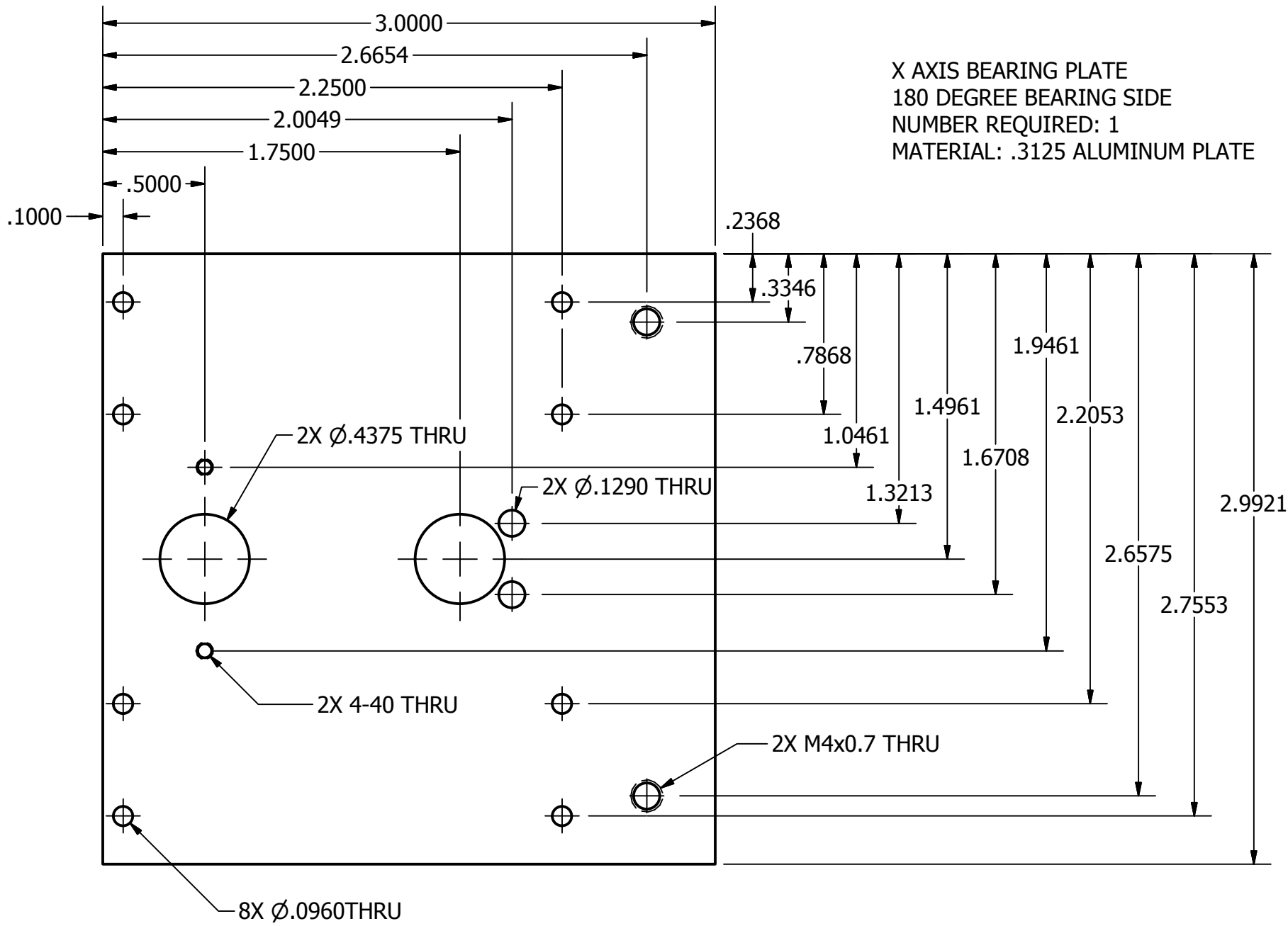
A

A

2

1

X AXIS BEARING PLATE  
 180 DEGREE BEARING SIDE  
 NUMBER REQUIRED: 1  
 MATERIAL: .3125 ALUMINUM PLATE



2

1

CLAMP FOR X AXIS BELT  
NUMBER REQUIRED: 1  
MATERIAL: ALUMINUM  
ACCURACY NOT PARAMOUNT

B

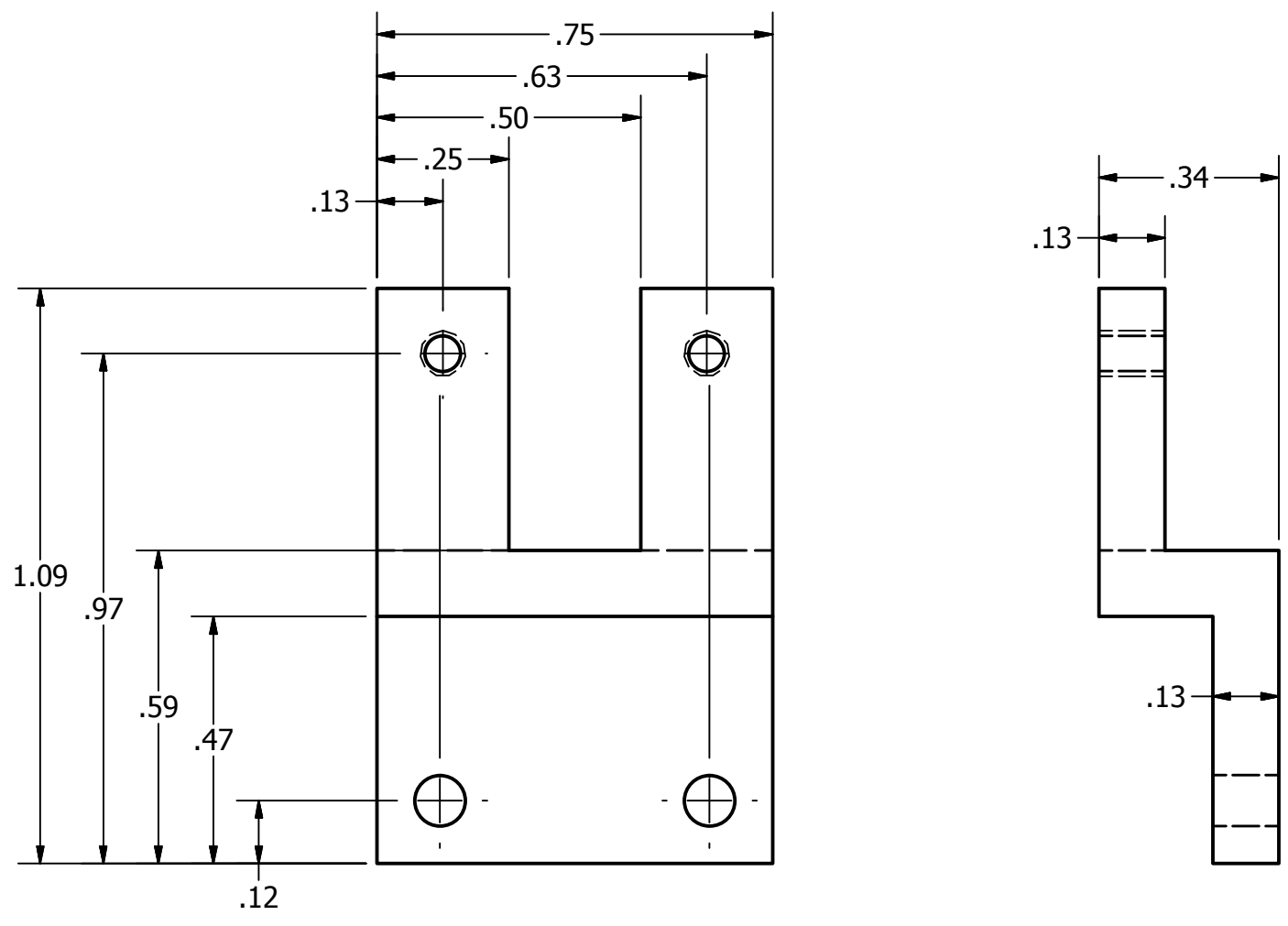
B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

A

A



2

1

2

1

X AXIS 360 DEGREE BEARING  
SIDE PLATE  
NUMBER REQUIRED: 1  
MATERIAL: .3125 ALUMINUM PLATE

CBORE THESE HOLES  
OTHERWISE A COLLISION  
WITH MOTOR

4X M4x0.7 - 6H  $\nabla$  .7500

4X  $\varnothing$ .1340

$\varnothing$ .2362

$\varnothing$ .8661  $\nabla$  .0787

4.4528

4.7874

4.0531

2.8327

3.4429

3X  $\varnothing$ .2170 THRU

$\varnothing$ .1340

2X 4-40 UNC THRU

2X  $\varnothing$ .4375

1.7911

1.3658

1.7500

.5000

.1250

1.0461

1.9461

2.9921

8X  $\varnothing$ .0850 THRU

B

B

A

A

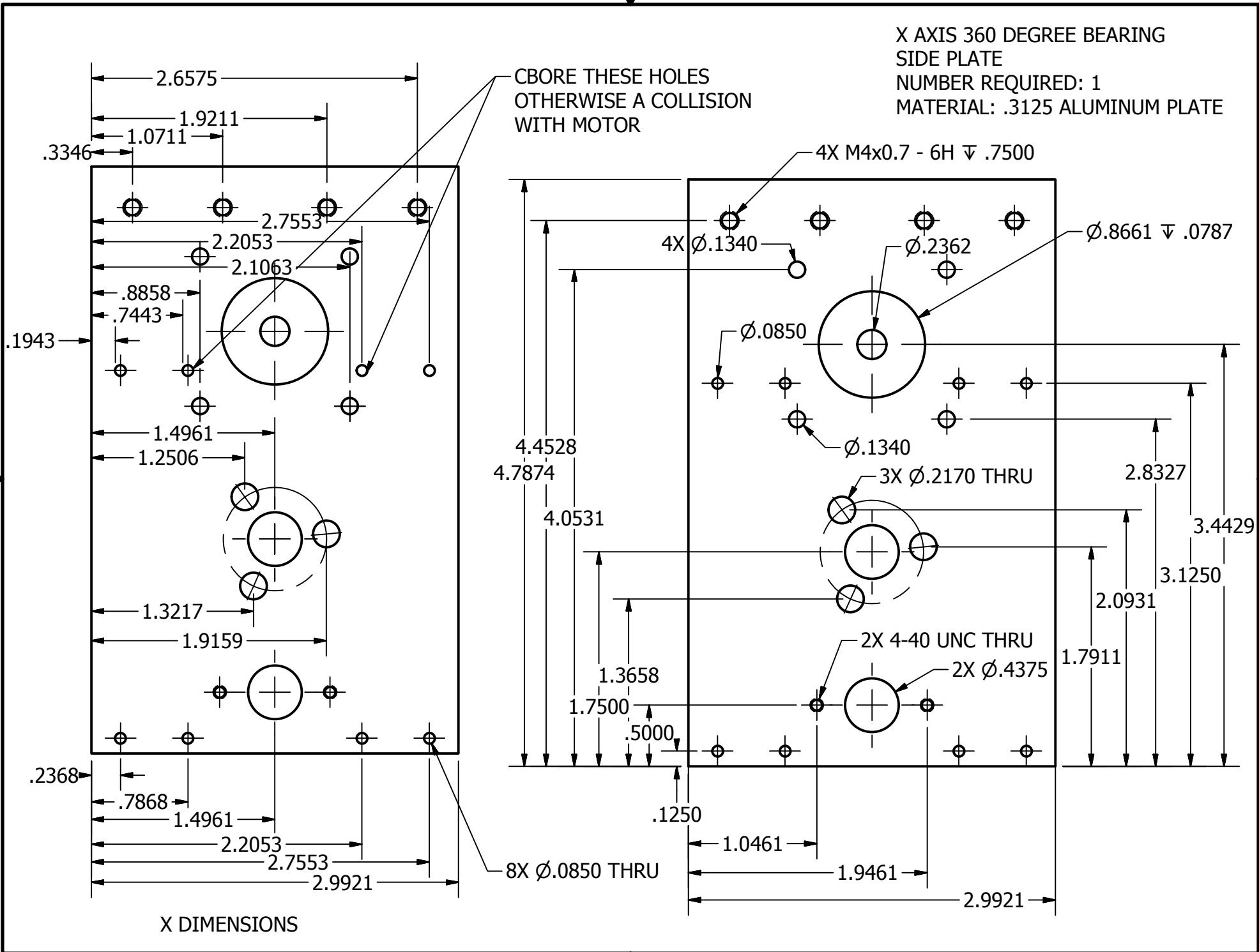
X DIMENSIONS

2

1

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2

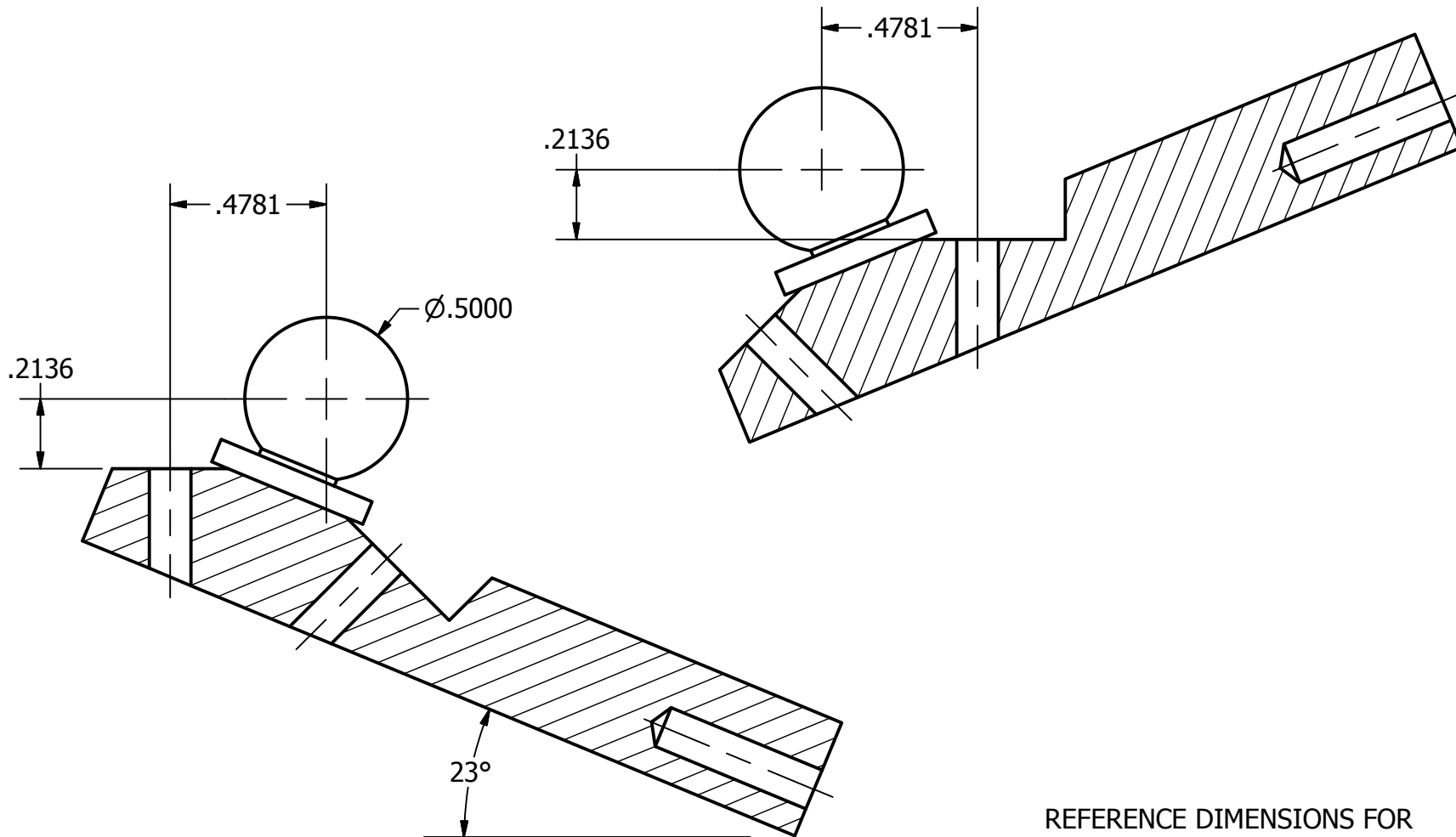
1

B

B

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A

A

REFERENCE DIMENSIONS FOR  
TOOLING BALL USE, X CARRIAGE BOTTOM  
NUMBER REQUIRED: 1  
MATERIAL: ALUMINUM

2

1

2

1

B

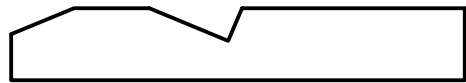
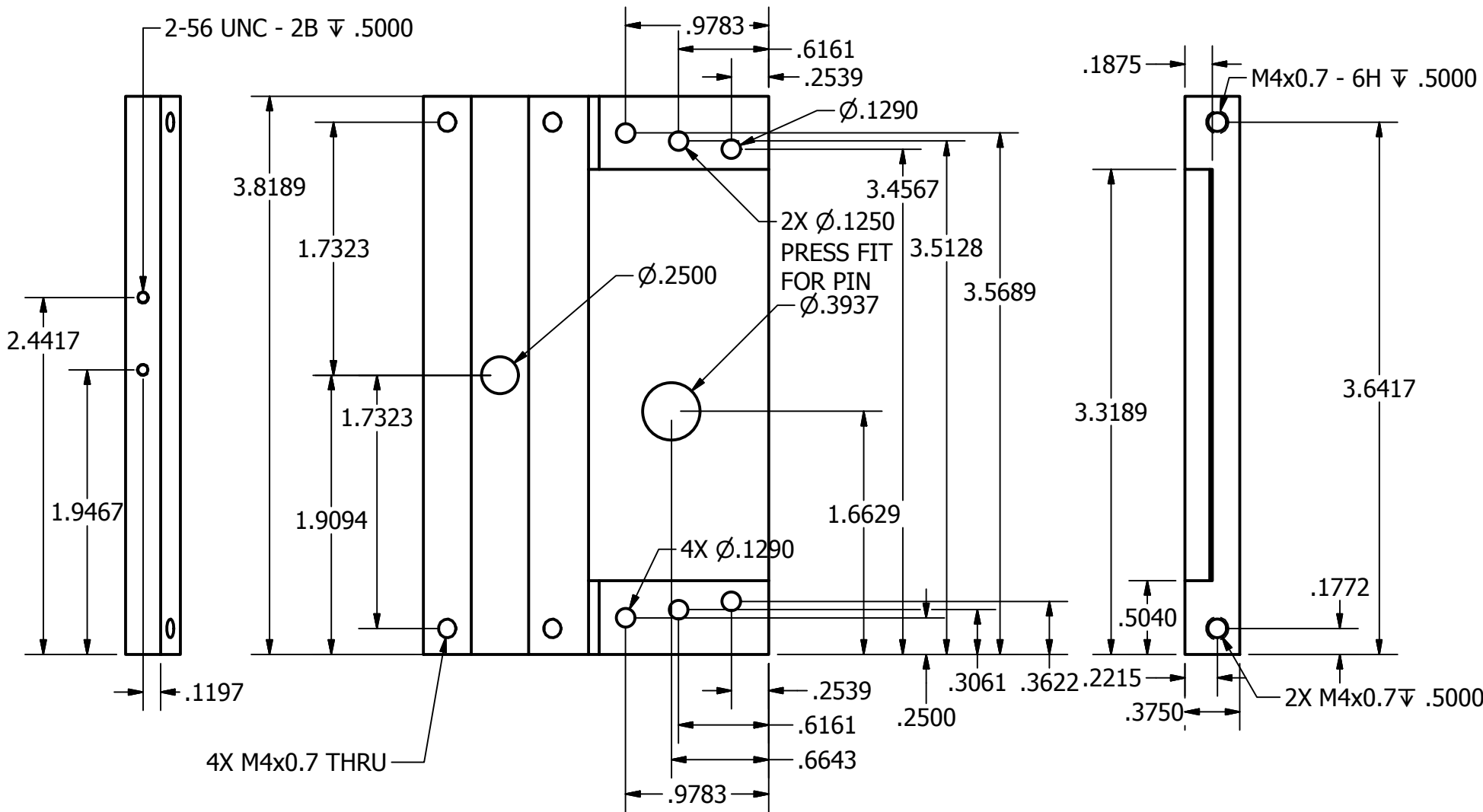
B

A

A

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BOTTOM HALF OF X AXIS CARRIAGE  
 NUMBER REQUIRED: 1  
 MATERIAL: ALUMINUM

2

1

2

1

ALL HOLES THRU UNLESS OTHERWISE STATED

B

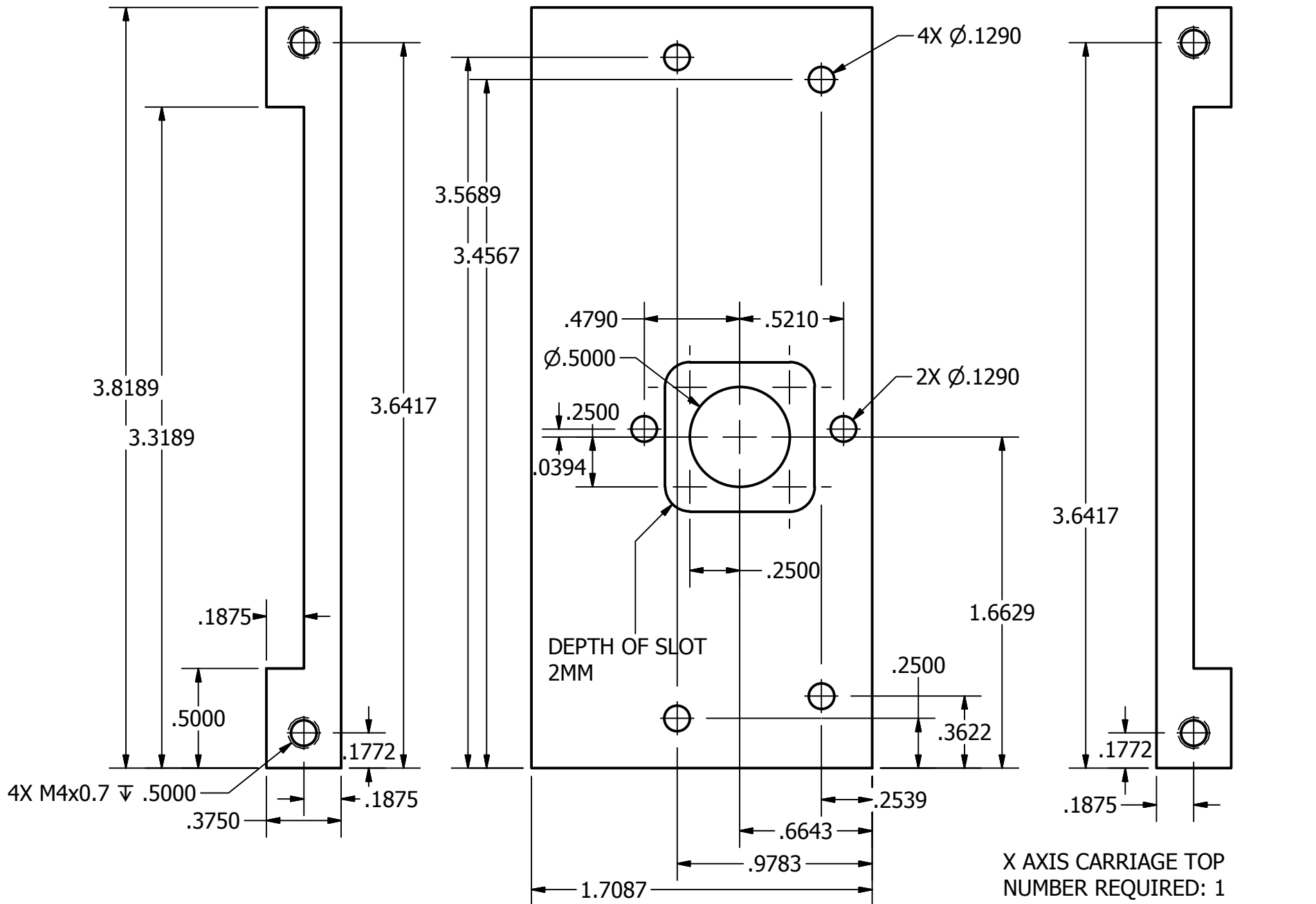
B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

A

A



2

1

2

1

Y AXIS TRIPLET BEARINGS  
NUMBER REQUIRED:  
2 TYPE 1 CLAMPS, 2 TYPE 2

MATERIAL: ALUMINUM

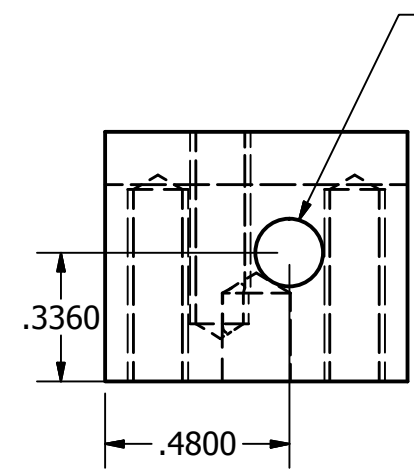
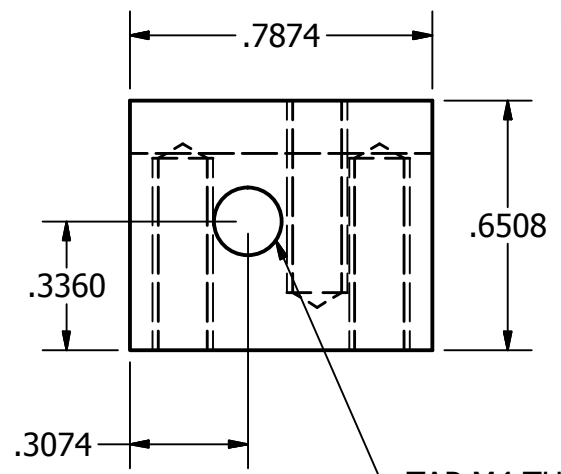
M4 CLEARANCE, CBORE

B

B

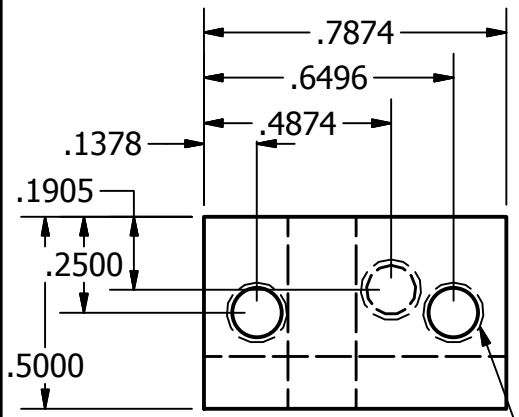
PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

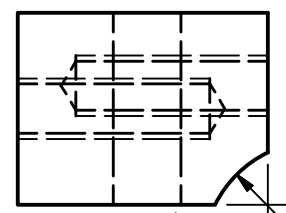


A

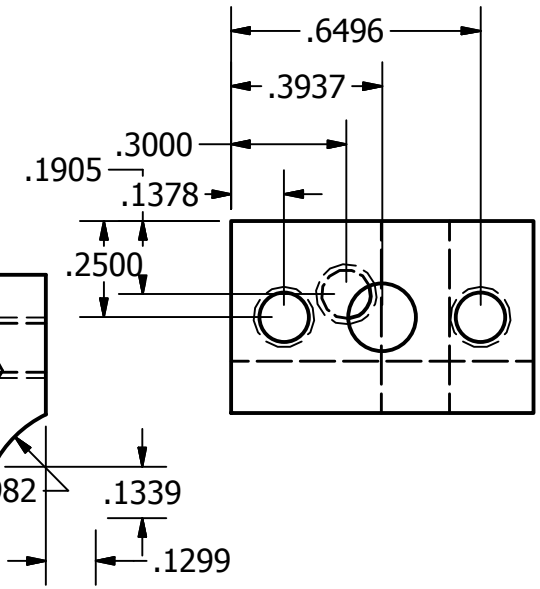
A



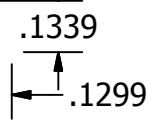
CLAMP 1



TAP SAME AS 180 CLAMPS



CLAMP 2



2

1

2

1

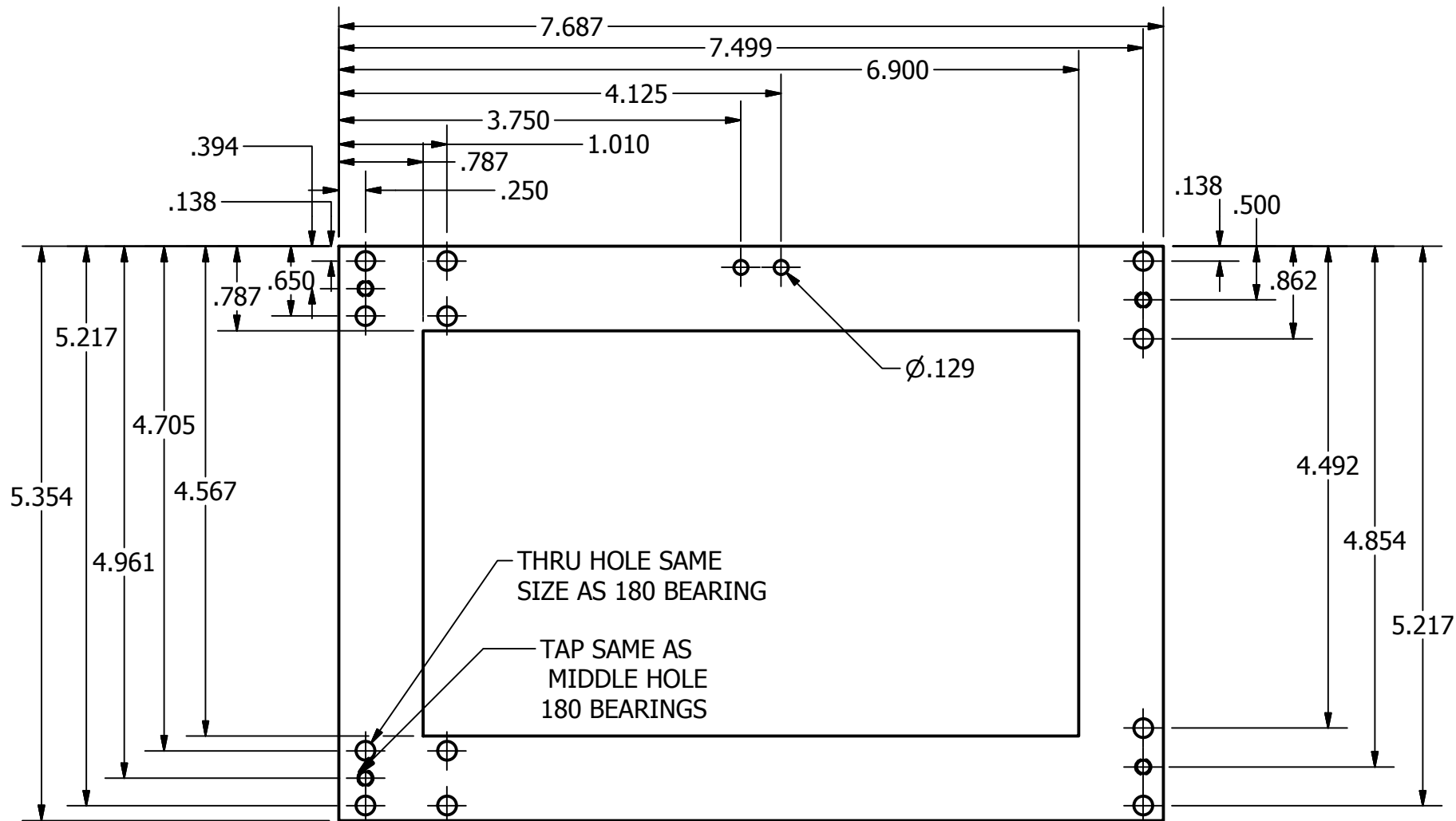
PRINT BED BOTTOM  
NUMBER REQUIRED: 1  
MATERIAL: .200 ALUMINUM PLATE

B

B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

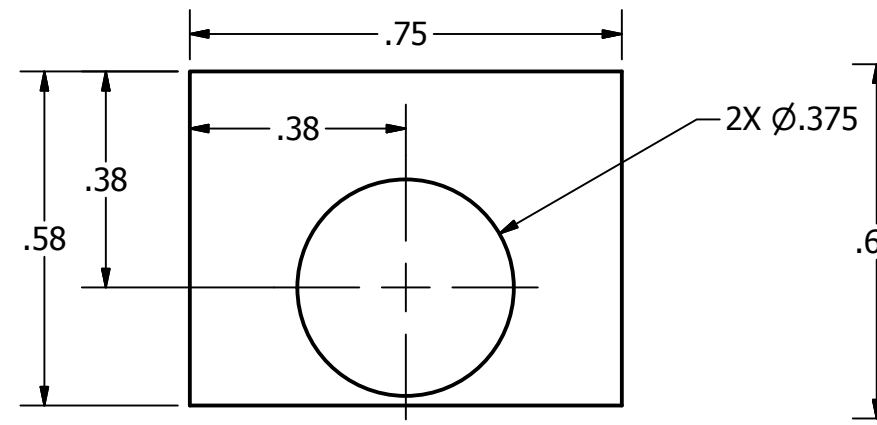
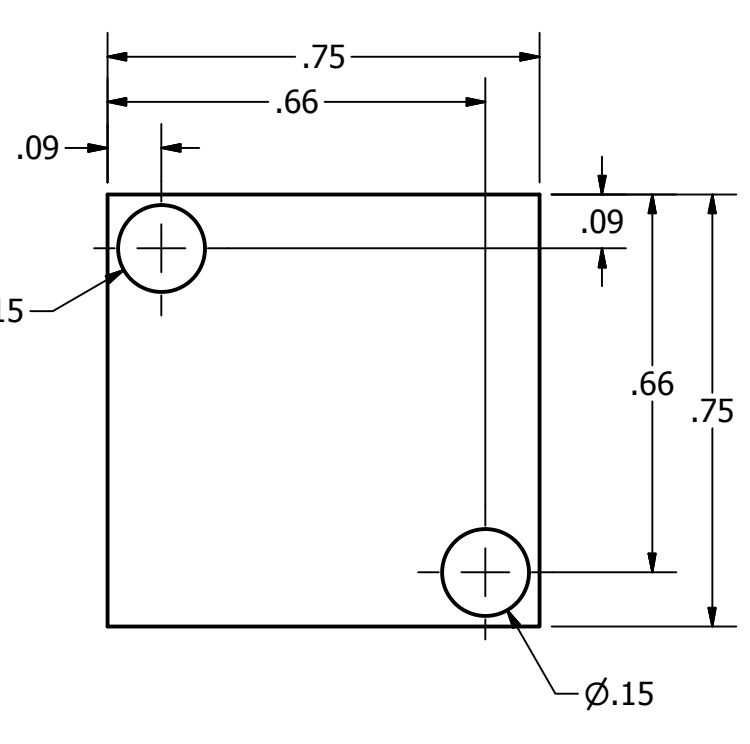
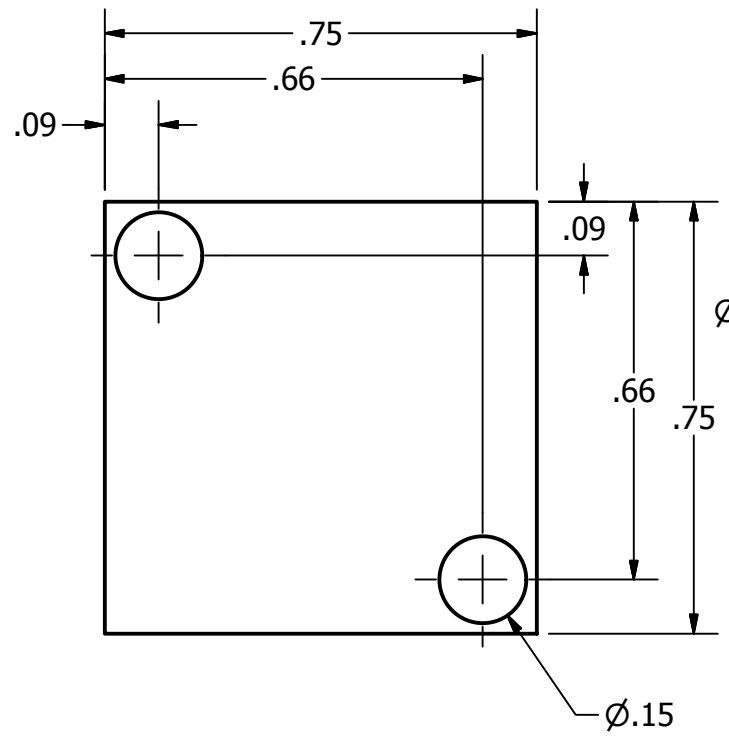


2

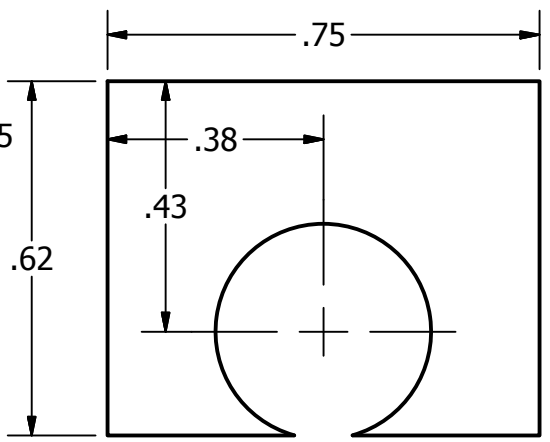
1

2

1



CLAMP BOTTOM



CLAMP TOP

Y AXIS BAR CLAMP  
 NUMBER REQUIRED:  
 4 TOPS, 4 BOTTOMS  
 MATERIAL: ALUMINUM  
 TAP 2 SETS 4-40, DRILL  
 2 SETS #4 CLEARANCE

B

B

A

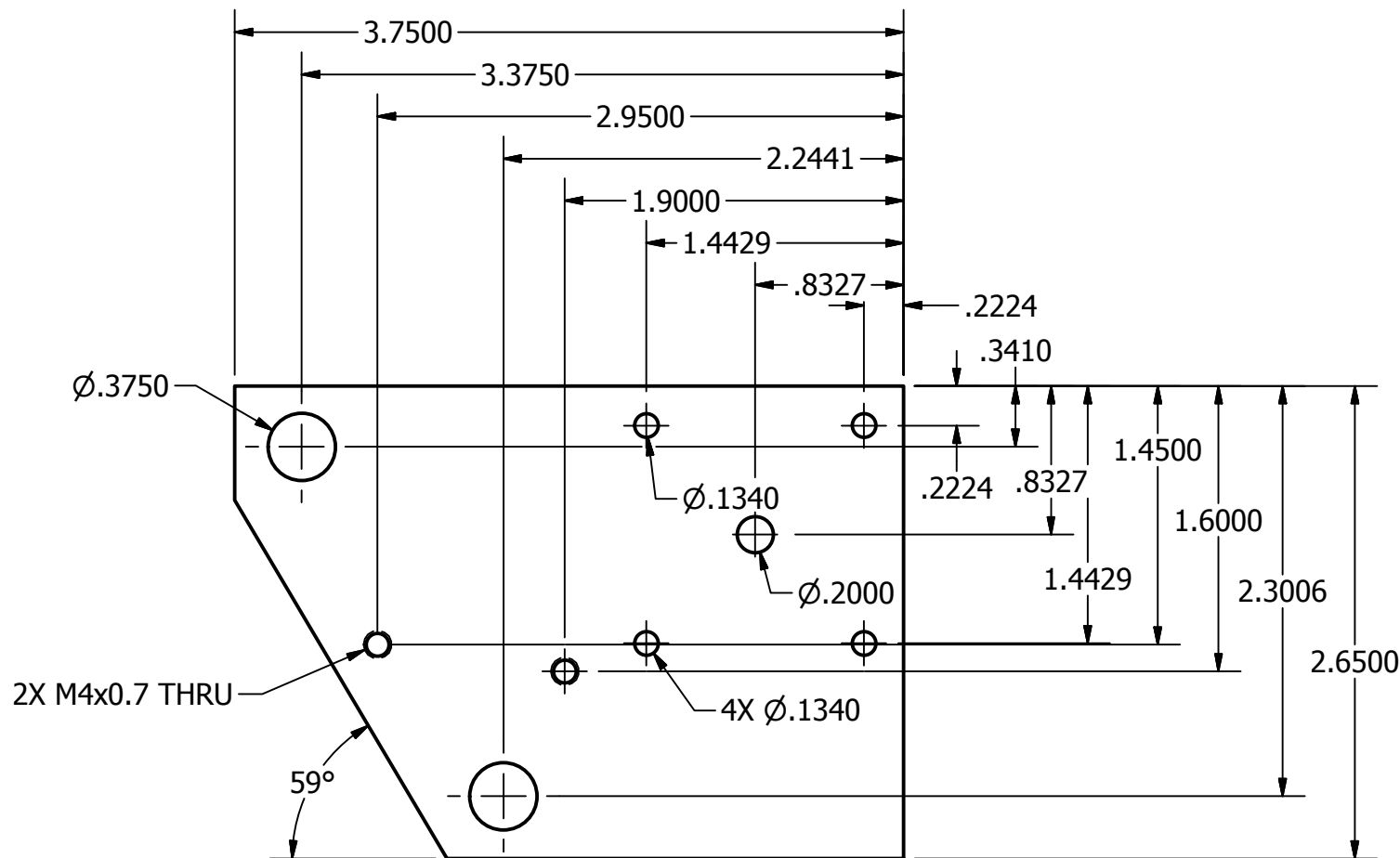
A

2

1

2

1



B

B

A

A

MATERIAL .3125 PLATE

Y AXIS MOTOR MOUNT  
 NUMBER REQUIRED: 1  
 MATERIAL: ALUMINUM PLATE

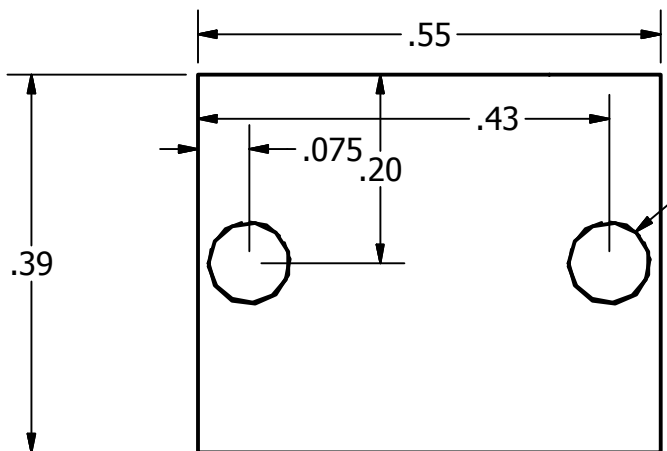
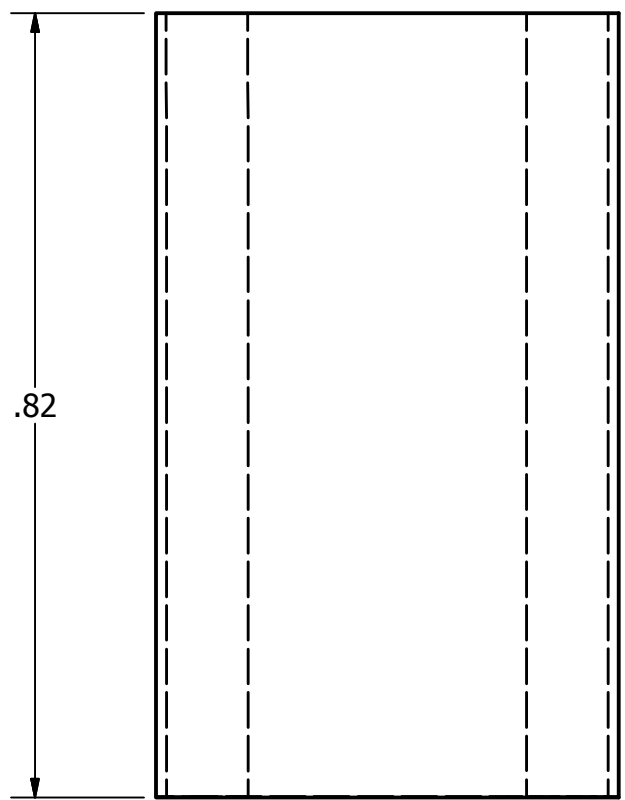
2

1

2

1

Y AXIS BELT CLAMP  
NUMBER REQUIRED: 1  
MATERIAL: ALUMINUM



TAP 4-40 THRU

B

B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

A

A

2

1



2

1

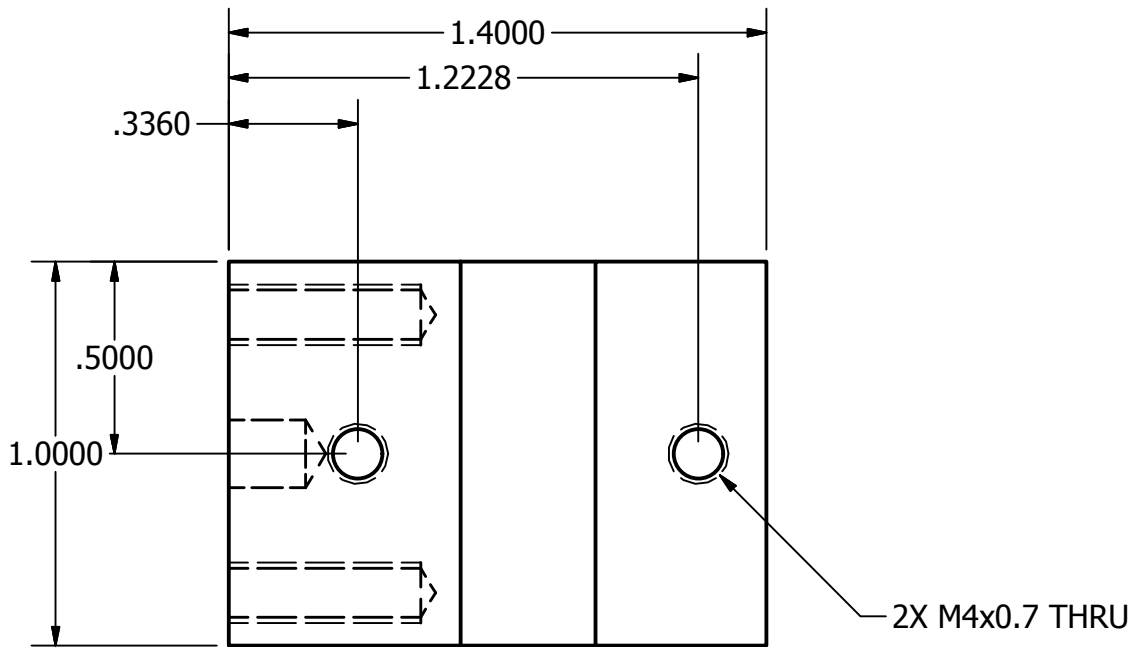
Y AXIS 180 DEGREE BEARING  
NUMBER REQUIRED: 2  
MATERIAL: ALUMINUM

B

B

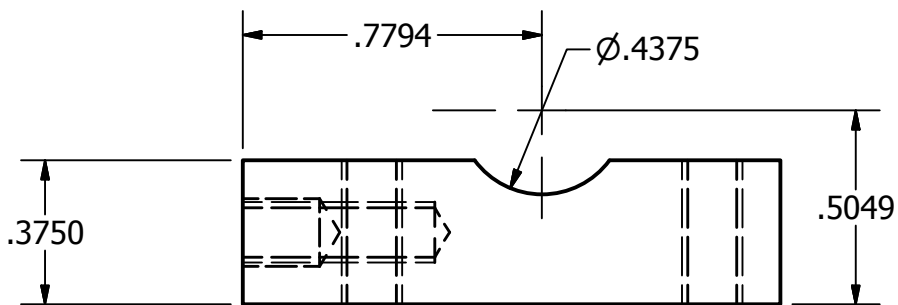
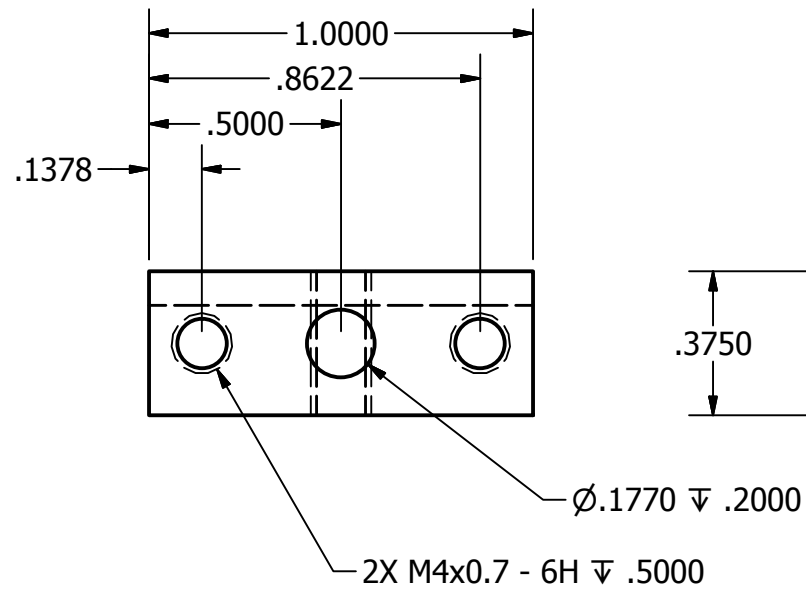
PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT



A

A



2

1

2

1

2X 6-32 .5000

.3750

Z AXIS MOTOR MOUNT  
NUMBER REQUIRED: 1  
MATERIAL: ALUMINUM PLATE

.5749

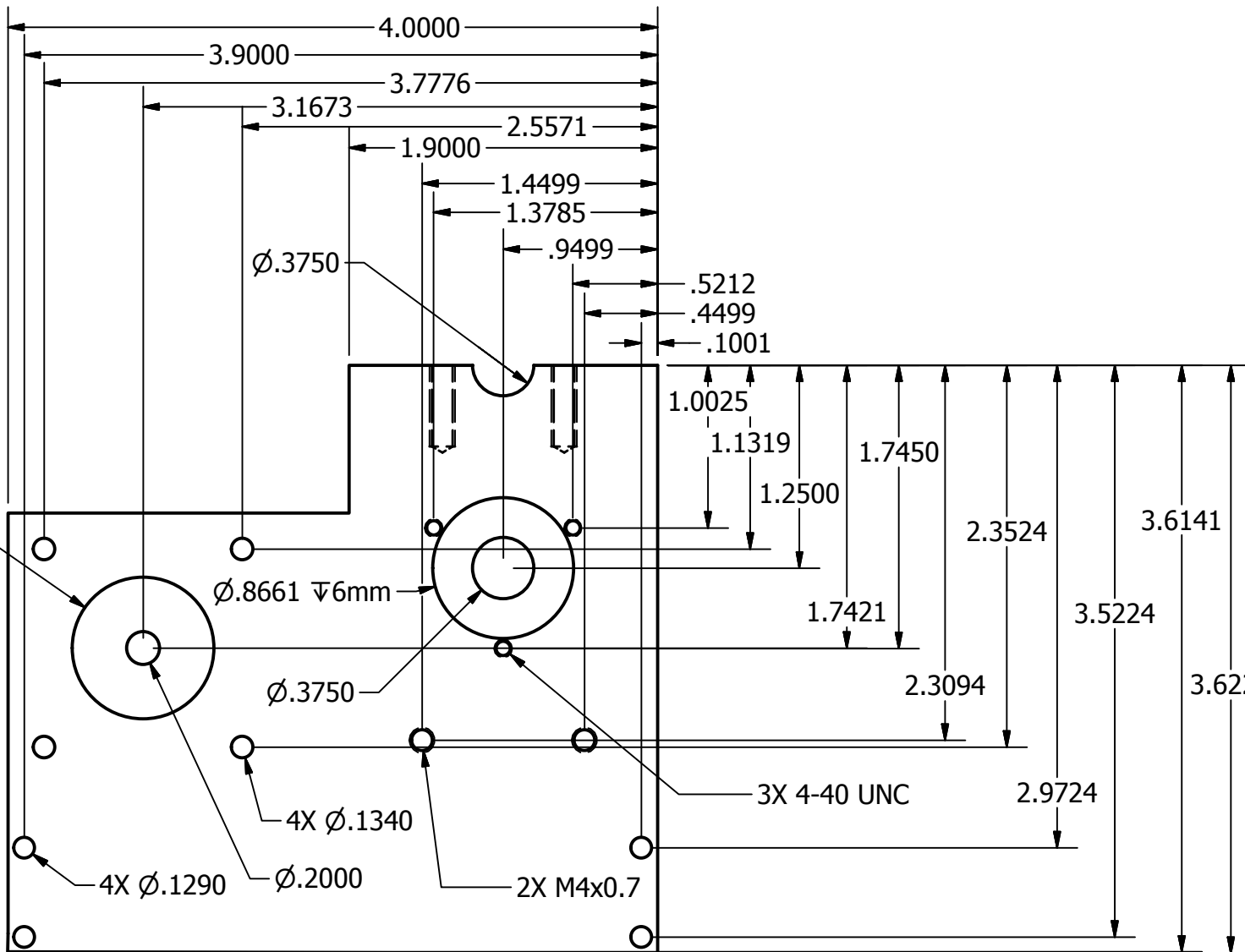
1.3249

B

B

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$\phi .8700 \nabla 2mm$

$\phi .8661 \nabla 6mm$

$\phi .3750$

4X  $\phi .1340$

4X  $\phi .1290$

$\phi .2000$

2X M4x0.7

3X 4-40 UNC

.5212

.4499

.1001

1.0025

1.1319

1.2500

1.7450

1.7421

2.3524

2.3094

3.6141

3.5224

3.6224

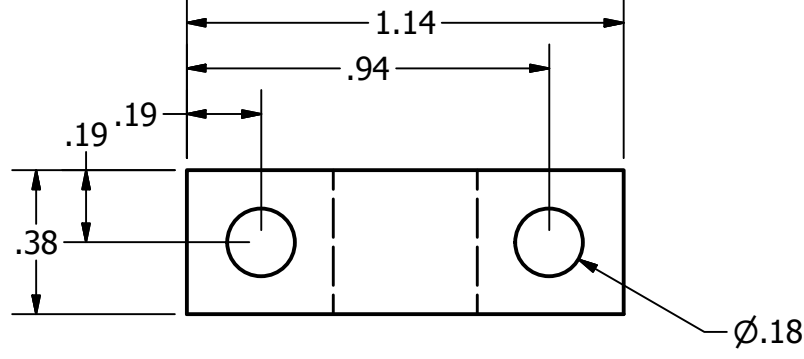
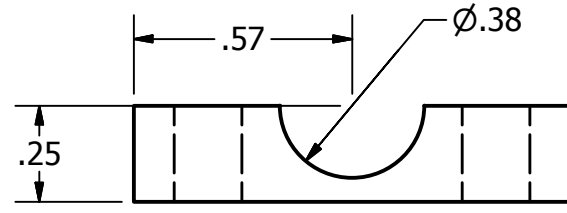
A

A

2

1

Z BAR CLAMP  
NUMBER REQUIRED: 2  
MATERIAL: ALUMINUM



2

1

B

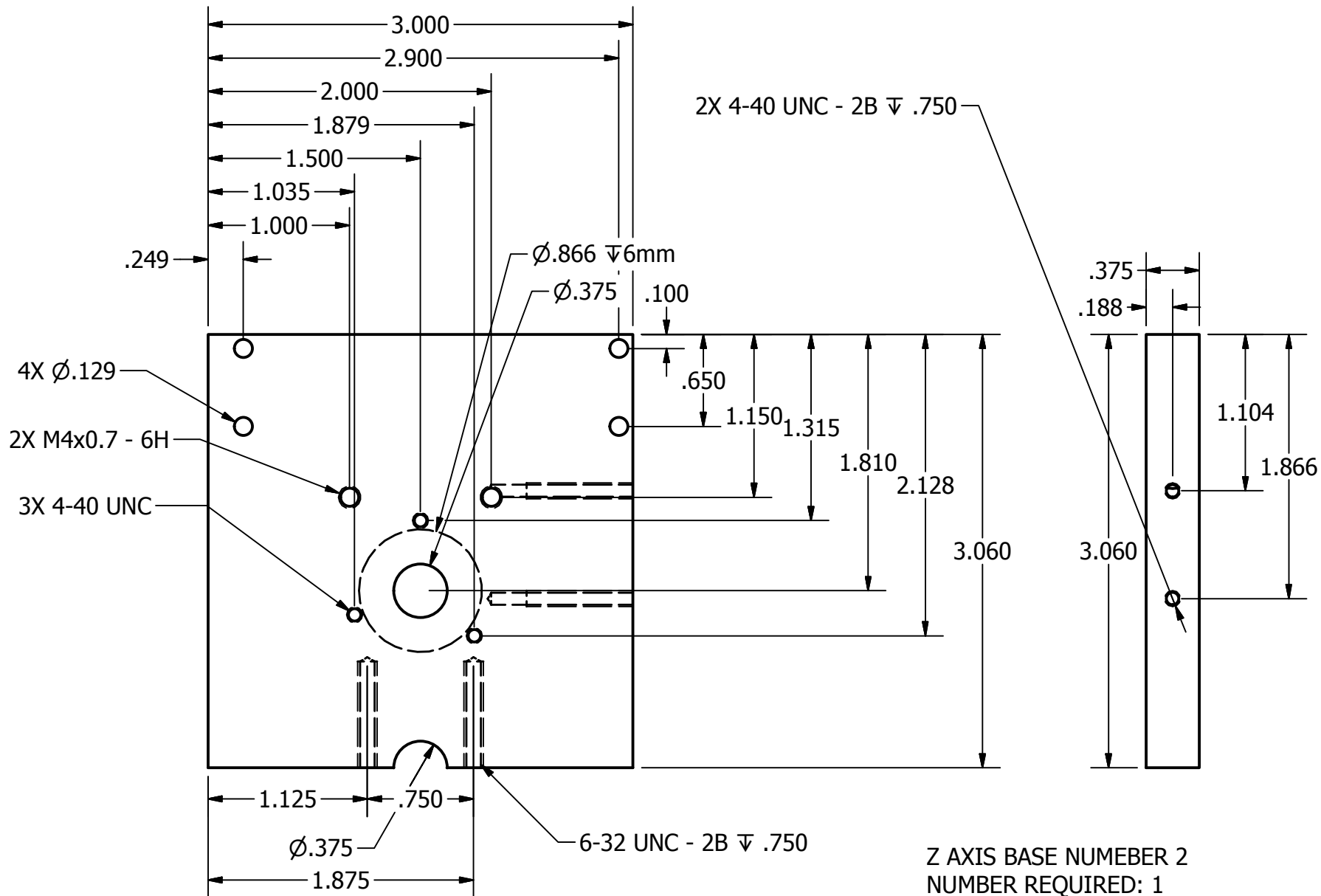
B

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PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

A

A



Z AXIS BASE NUMEBER 2  
 NUMBER REQUIRED: 1  
 MATERIAL: ALUMINUM  
 SORRY ABOUT DIMENSIONING  
 THE HIDDEN LINES

2

1

