



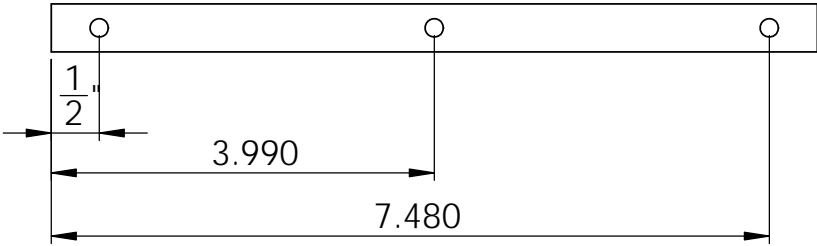
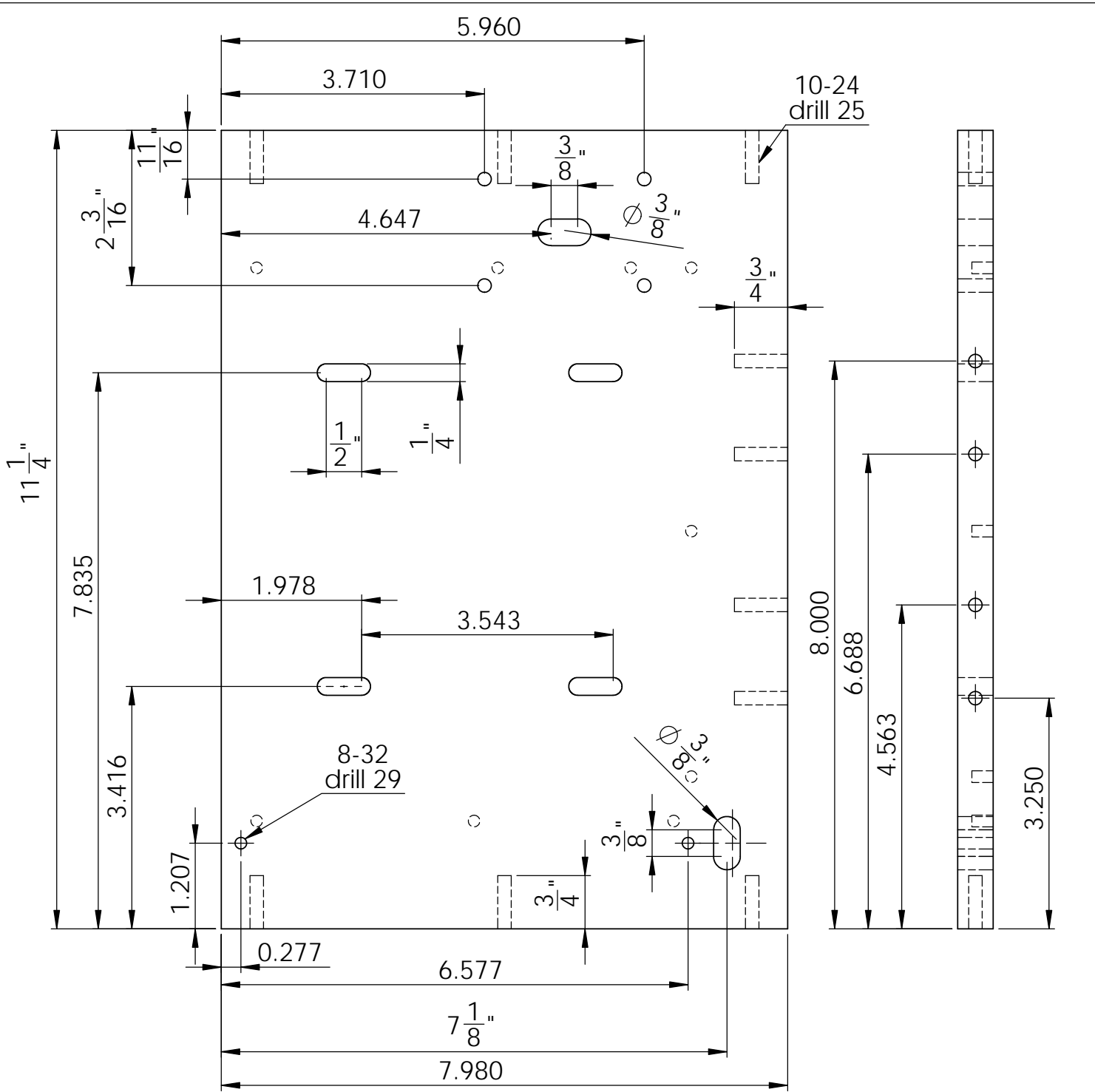
Adjustable Tool Grinder

by Martin Kennedy
July 7, 2014

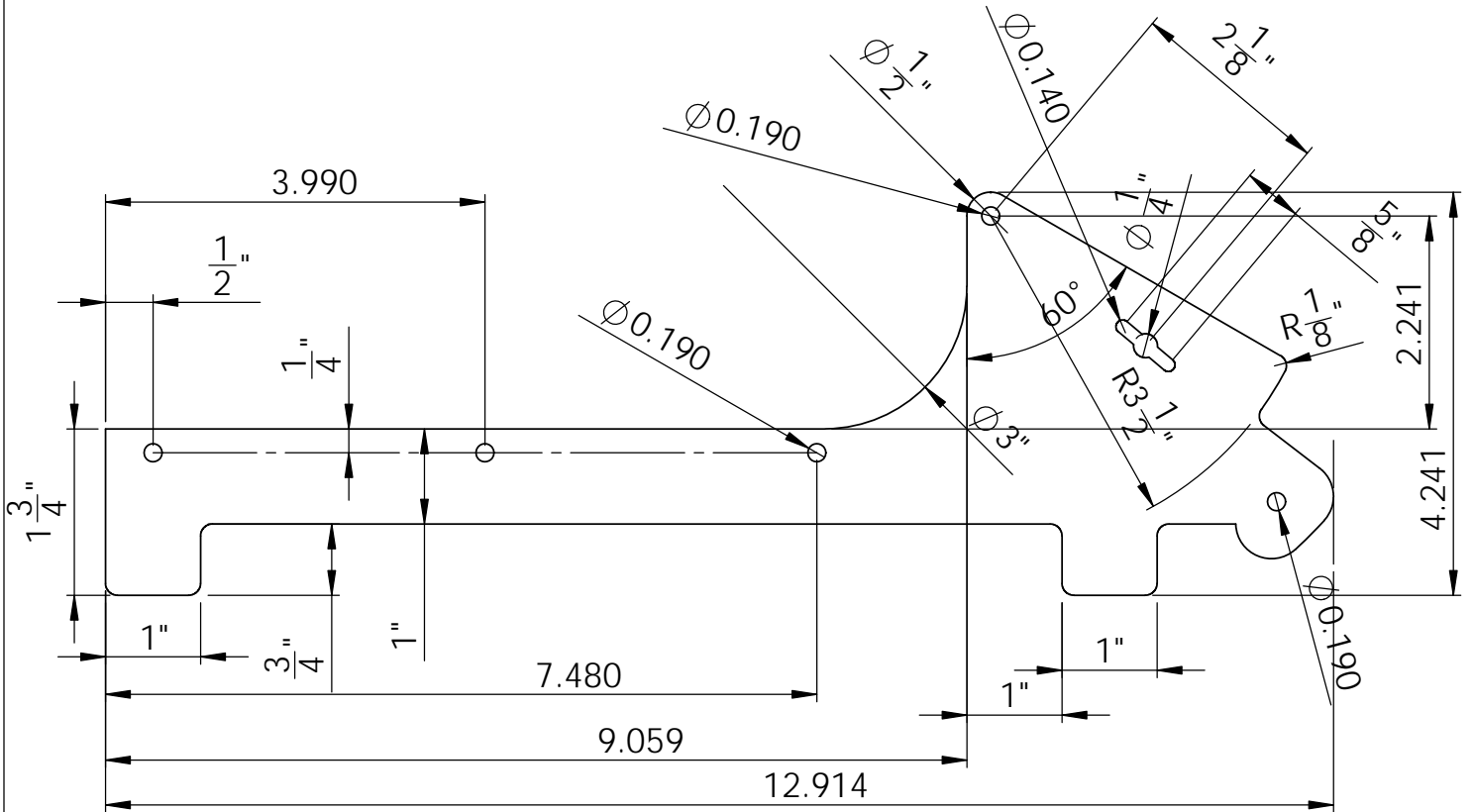
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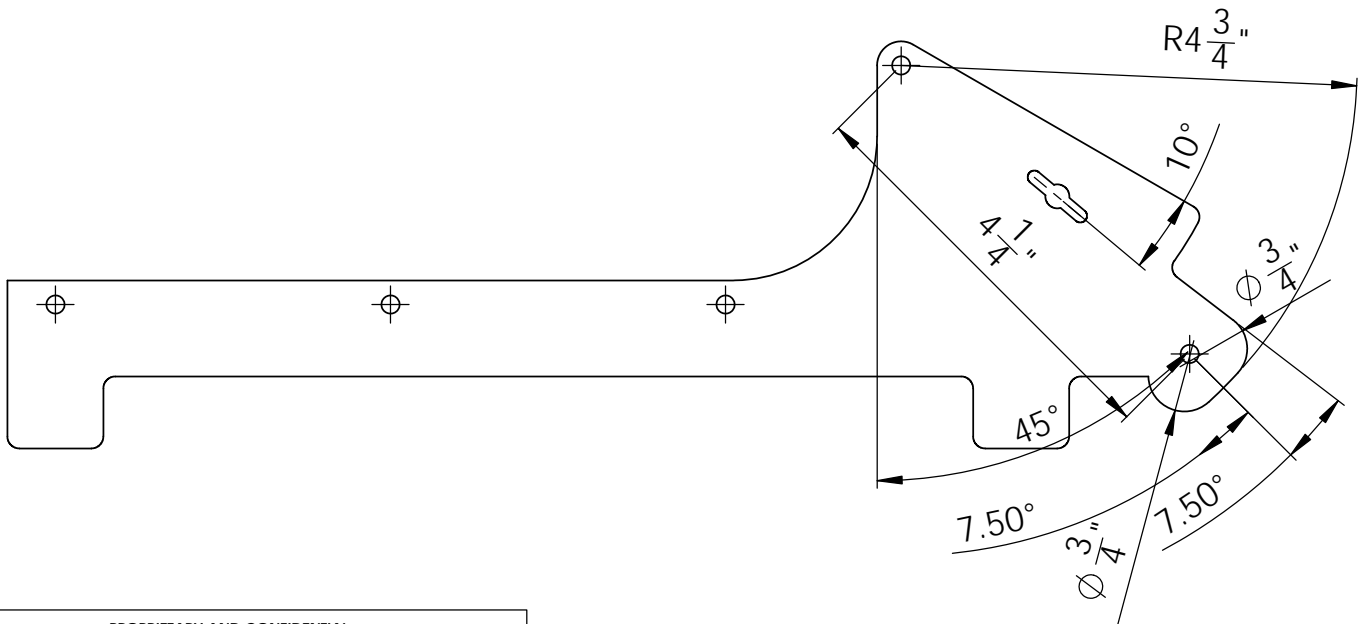
SIZE A	FILE NAME Tool Grinder Drawings	REV. A
SCALE 1:3	Cover	SHEET 1 OF 21



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NOTE: One required. 1/4" plate



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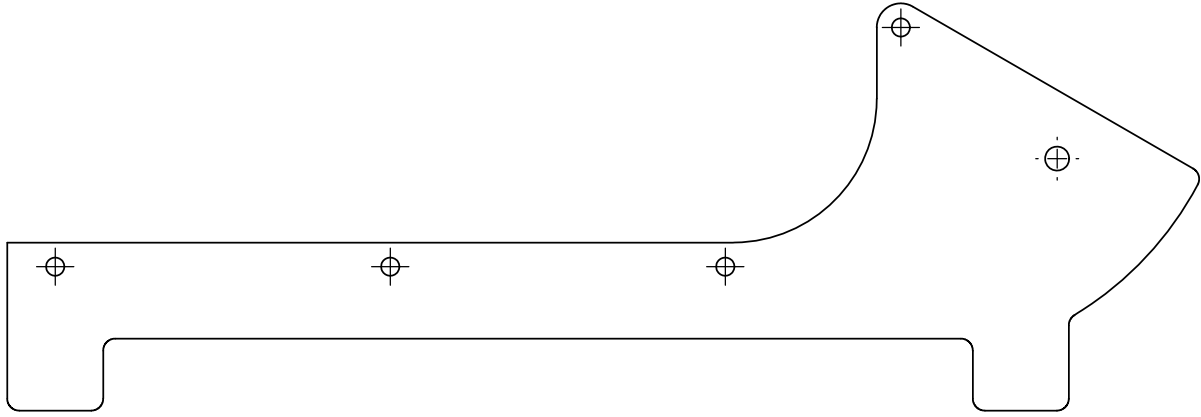
SIZE FILE NAME
A Tool Grinder Drawings

REV.
A

SCALE 1:2

Left Side

SHEET 3 OF 21



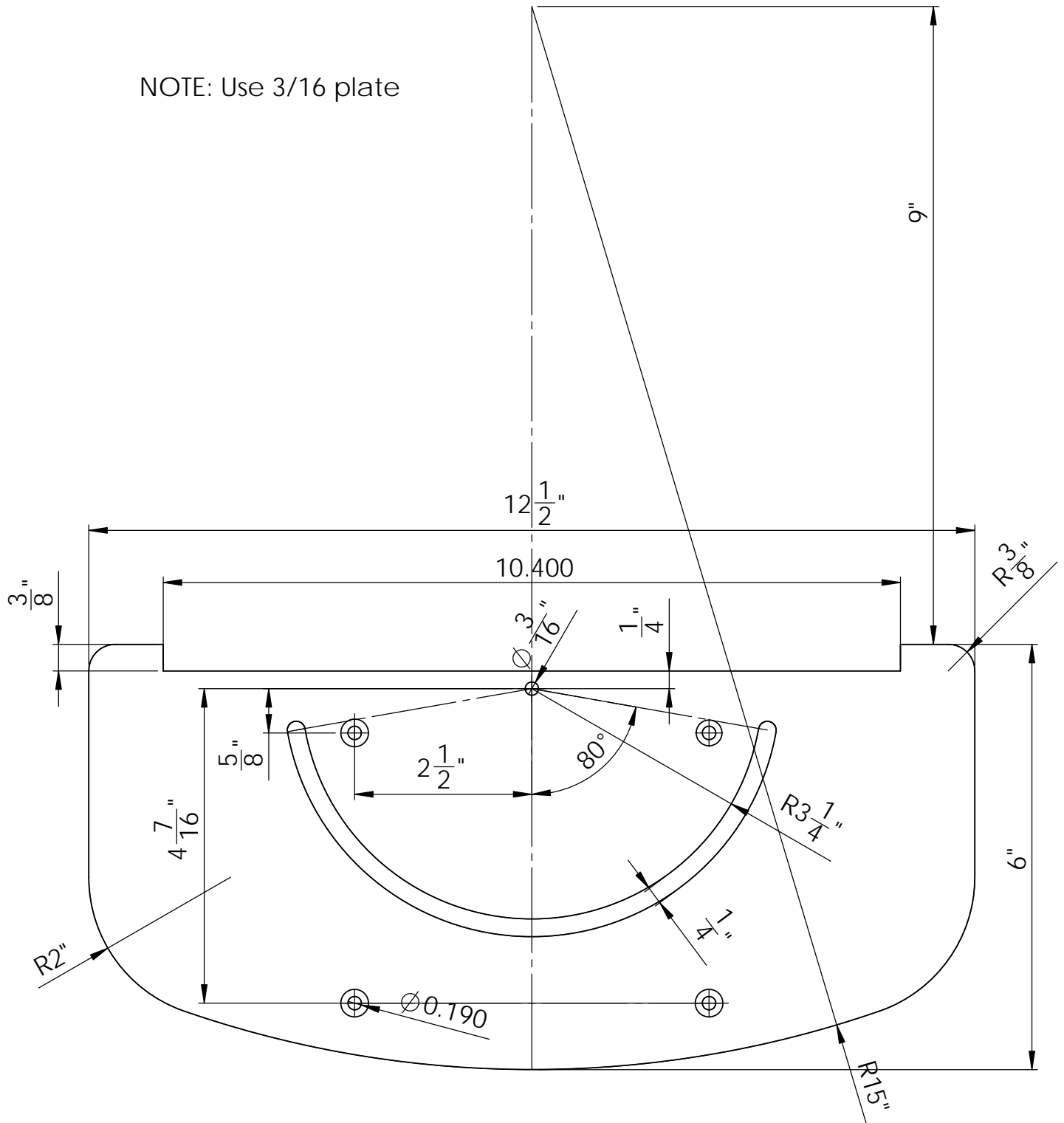
Note: See Left Side for dimensions

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SIZE A	FILE NAME Tool Grinder Drawings	REV. A
SCALE 1:2	Right Side	SHEET 4 OF 21

NOTE: Use 3/16 plate



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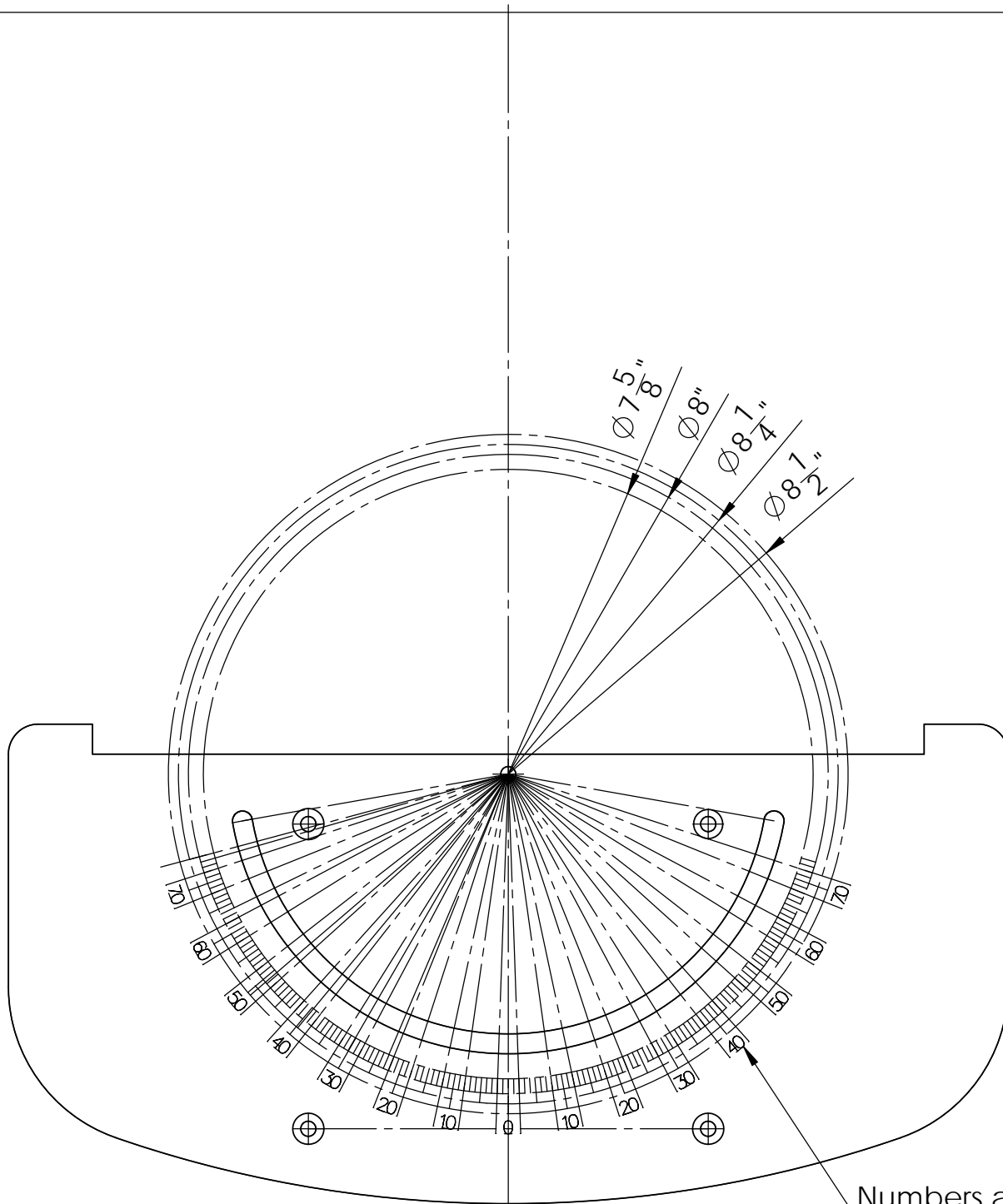
SIZE FILE NAME
A Tool Grinder Drawings

REV.
A

SCALE 1:2

Table

SHEET 5 OF 21

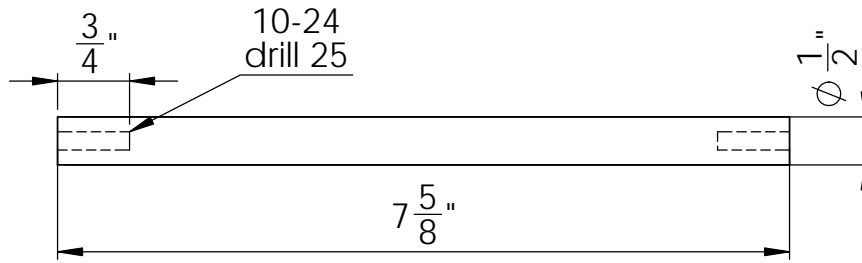


Numbers are 16 point

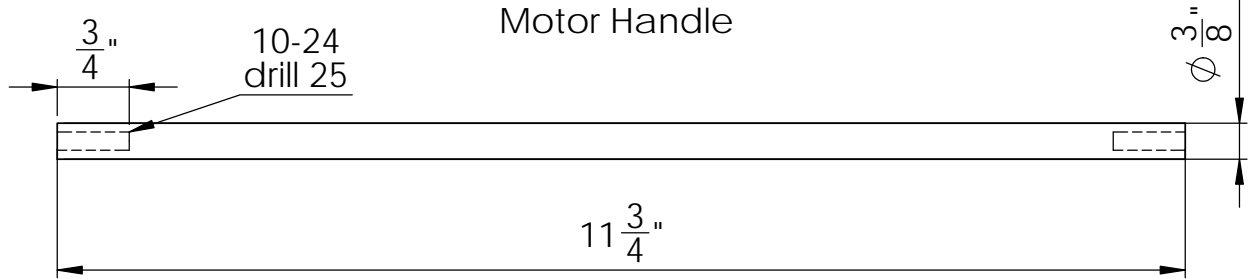
NOTE: Engrave about 0.005" deep

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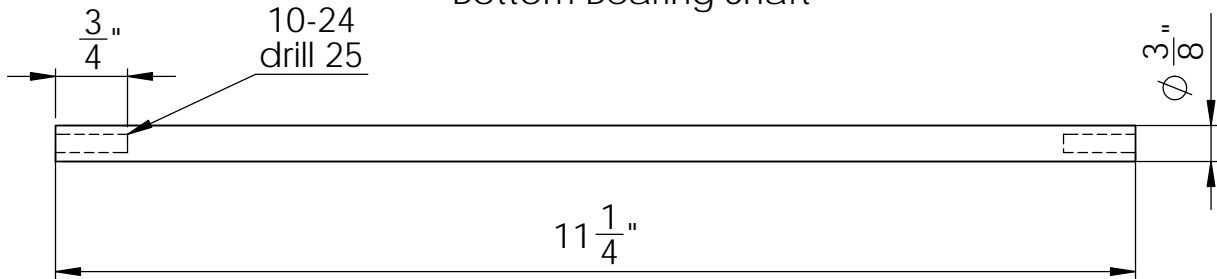
SIZE A	FILE NAME Tool Grinder Drawings	REV. A
SCALE 1:2	Table Text	SHEET 6 OF 21



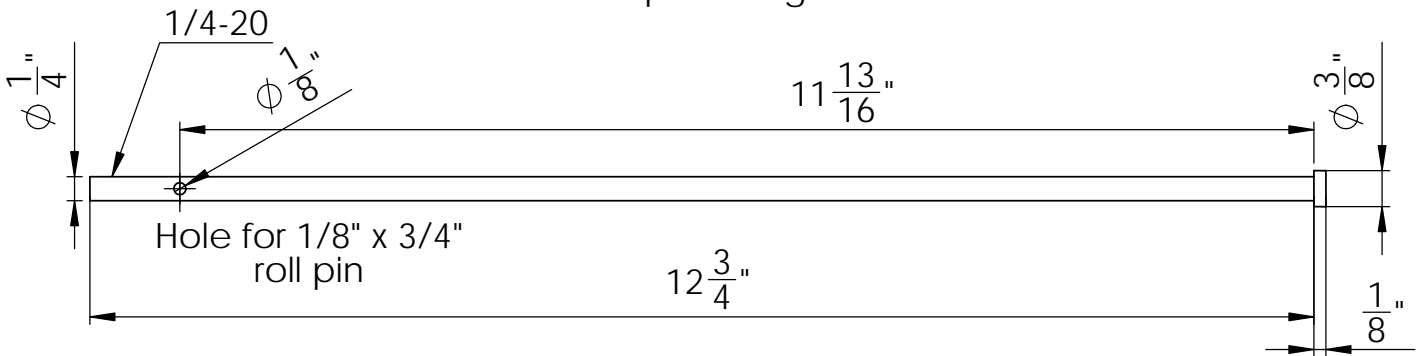
Motor Handle



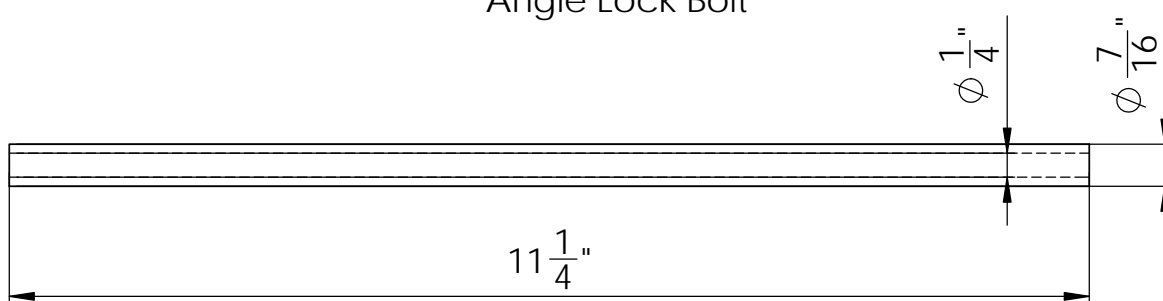
Bottom Bearing Shaft



Top Bearing Shaft



Angle Lock Bolt



Angle Lock Bolt Spacer Shaft

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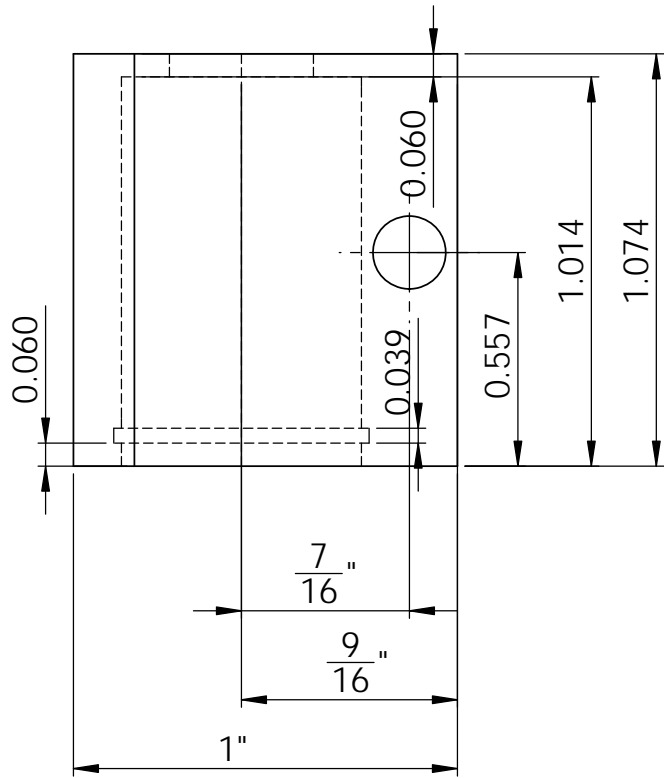
SIZE FILE NAME
A Tool Grinder Drawings

SCALE 1:2

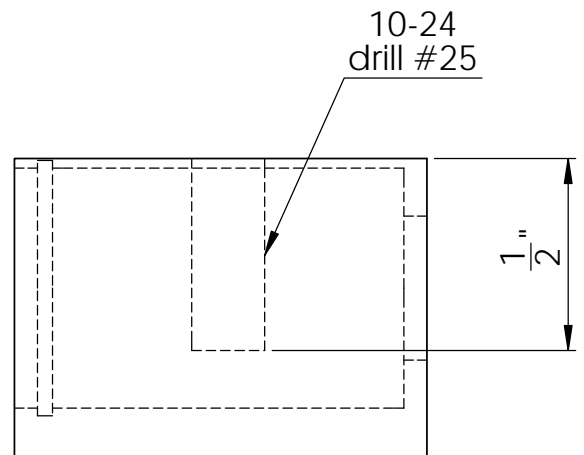
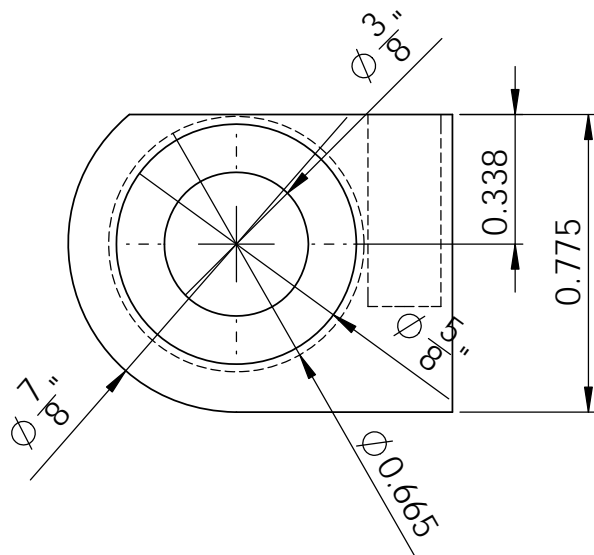
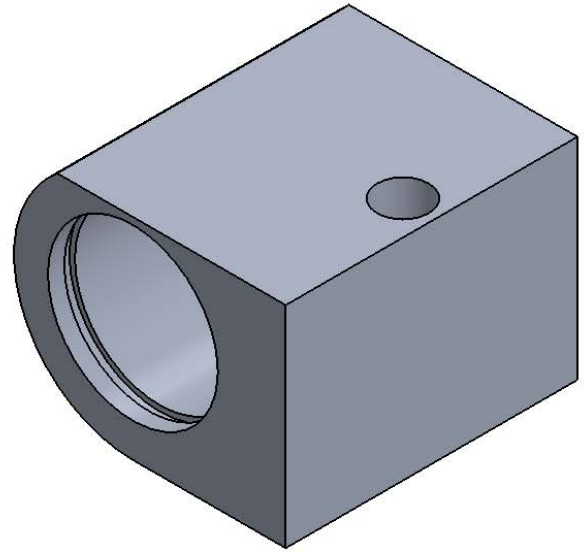
Rods

REV.
A

SHEET 7 OF 21



NOTE: Bearing length includes extra space for felt washers to keep grit out of bearing.



3 required
(including one as mirror image
i.e. circlips face each other)

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SIZE FILE NAME
A Tool Grinder Drawings

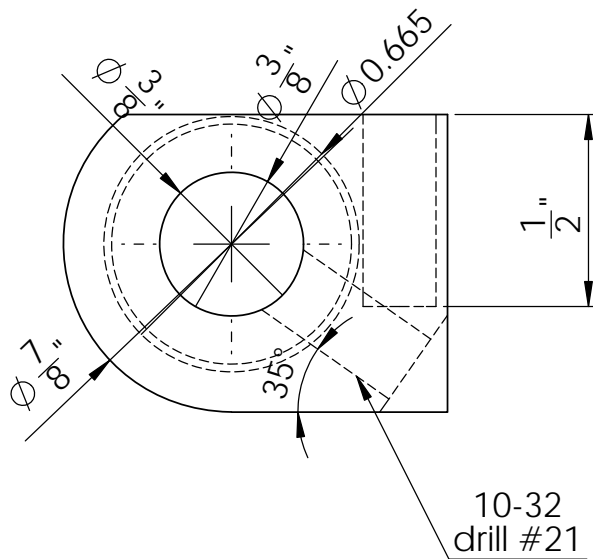
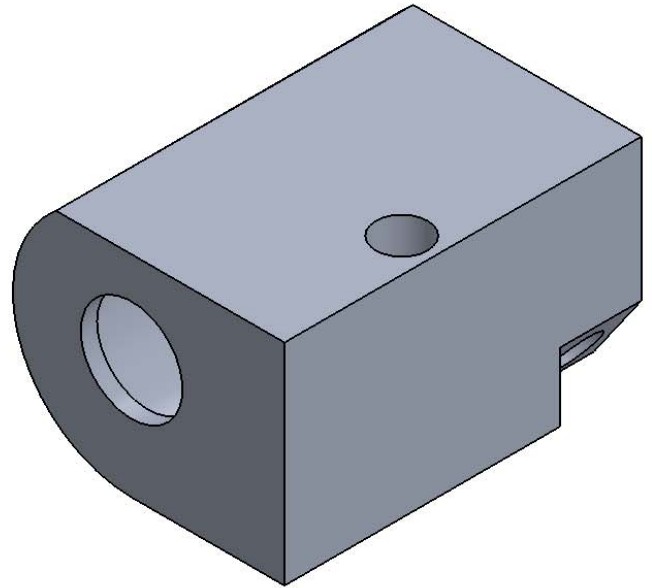
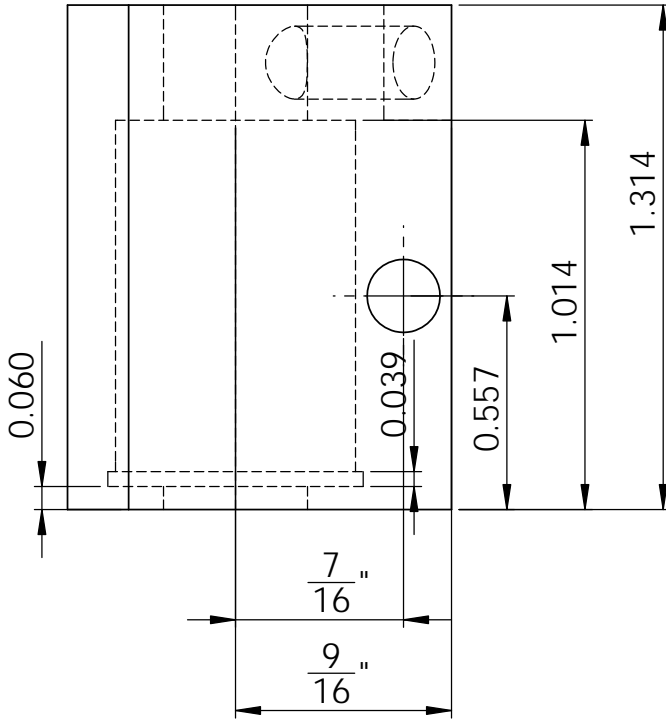
REV.
A

SCALE 2:1

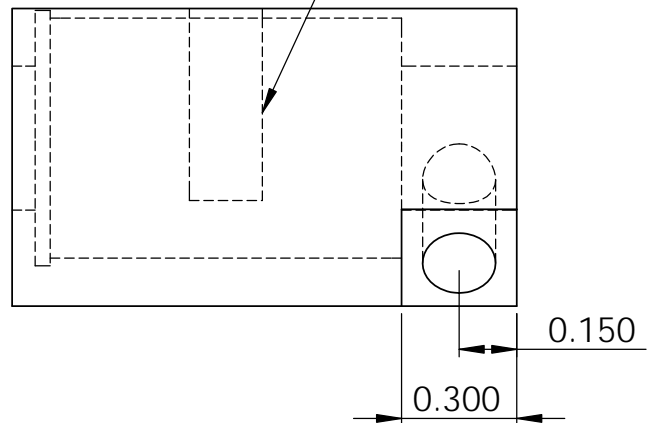
Bearing Block

SHEET 8 OF 21

NOTE: Keep centerline of polished rod as close to table as possible to minimize offset from grinding wheel when tilting table.



10-24
drill #25



1 required

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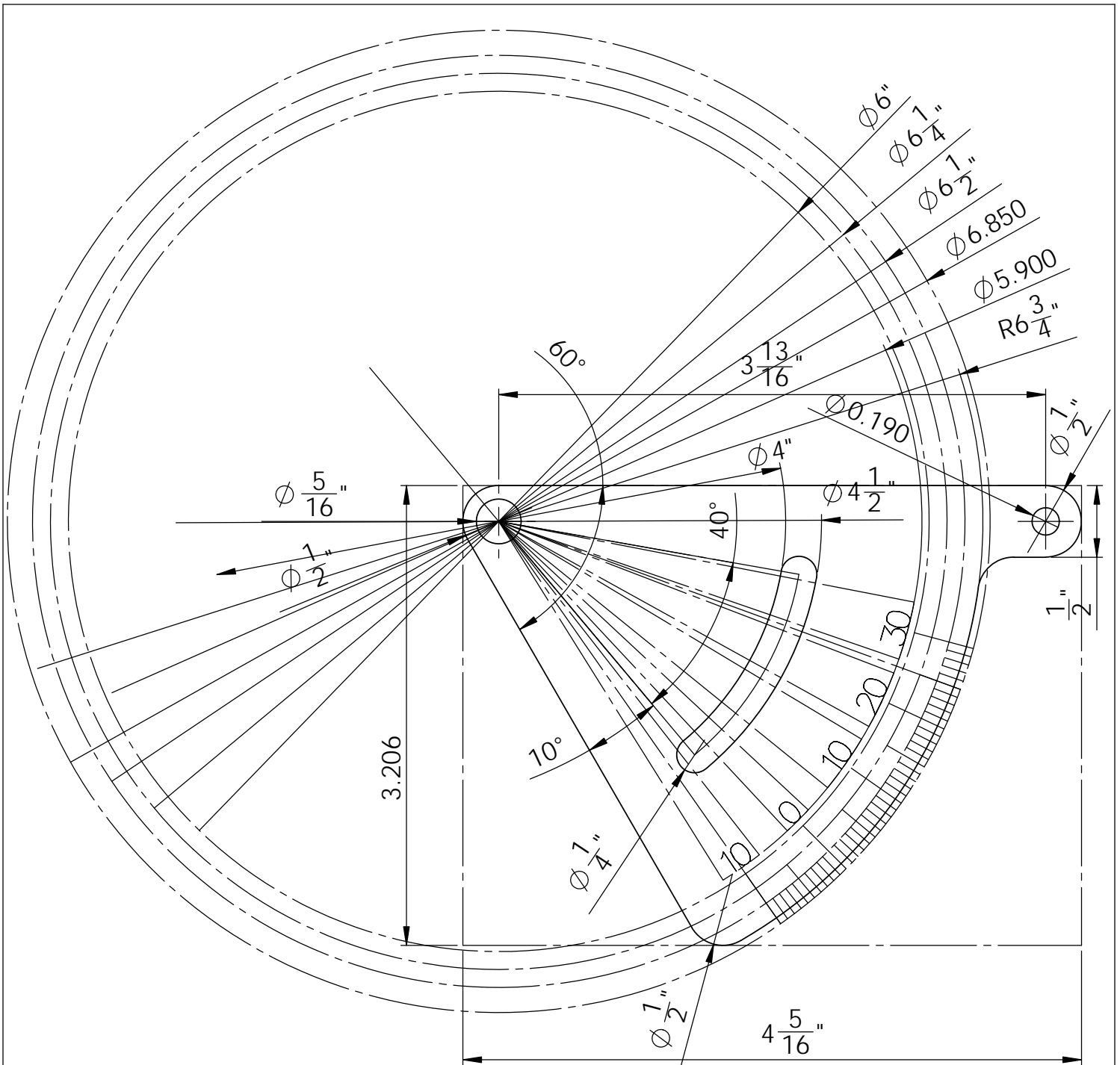
SIZE FILE NAME
A Tool Grinder Drawings

REV.
A

SCALE 2:1

Bearing Block wLock

SHEET 9 OF 21



Note: 1/8" thick
 Make two
 Angle scale on one, other blank

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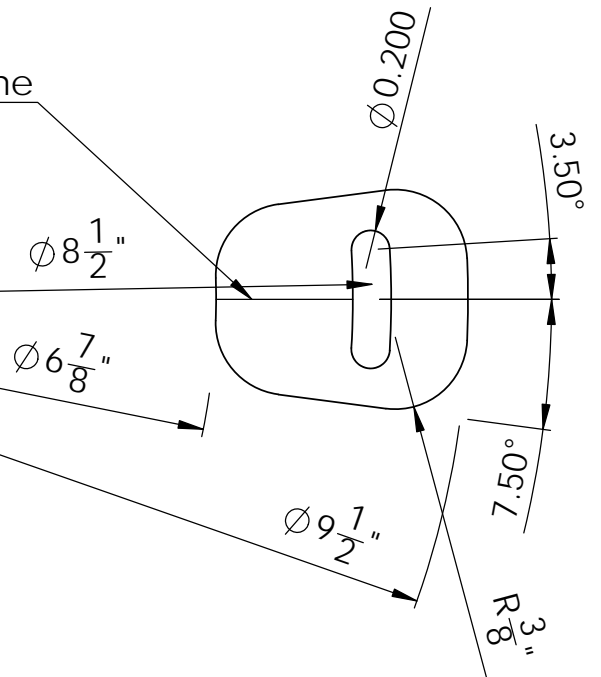
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SIZE **A** FILE NAME **Tool Grinder Drawings**
 SCALE 1:1 Angle Gauge

REV. **A**

SHEET 10 OF 21

Scribe line



Note: 1/8" thick

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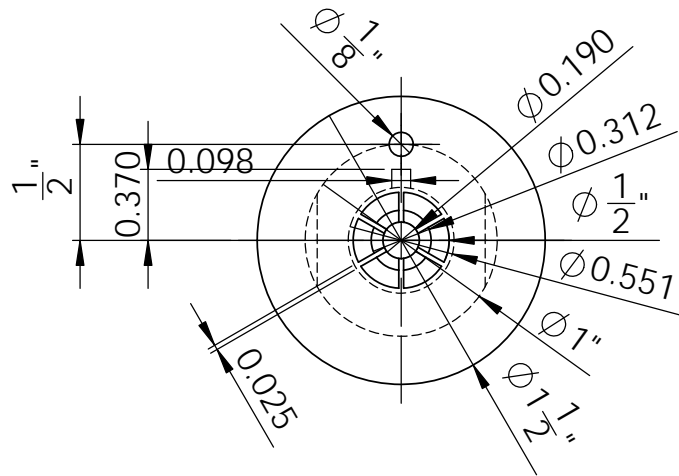
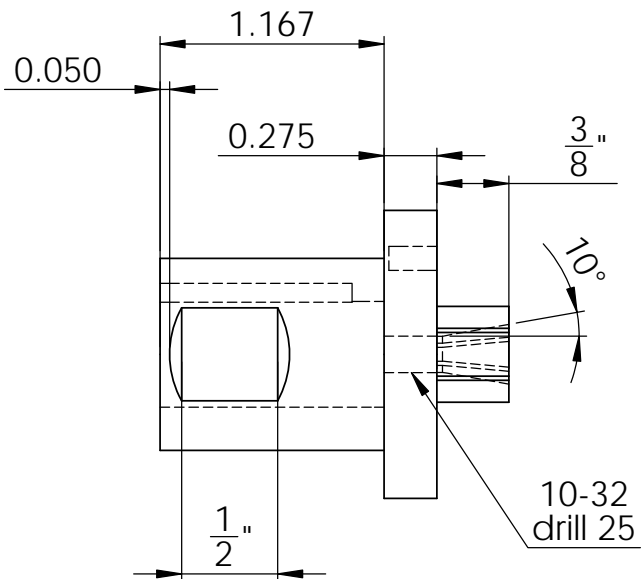
SIZE FILE NAME
A Tool Grinder Drawings

REV.
A

SCALE 1:1

Zero Tab

SHEET 11 OF 21

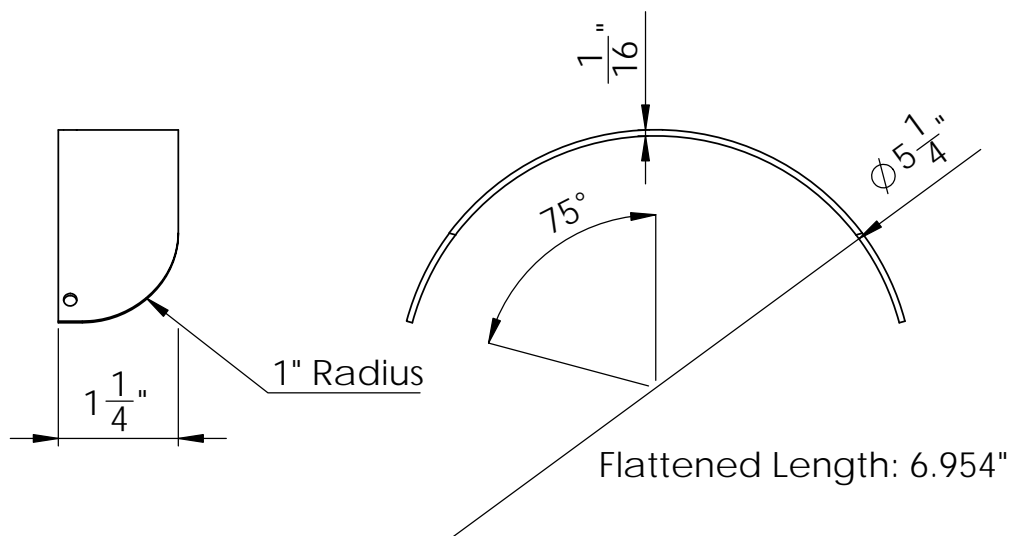
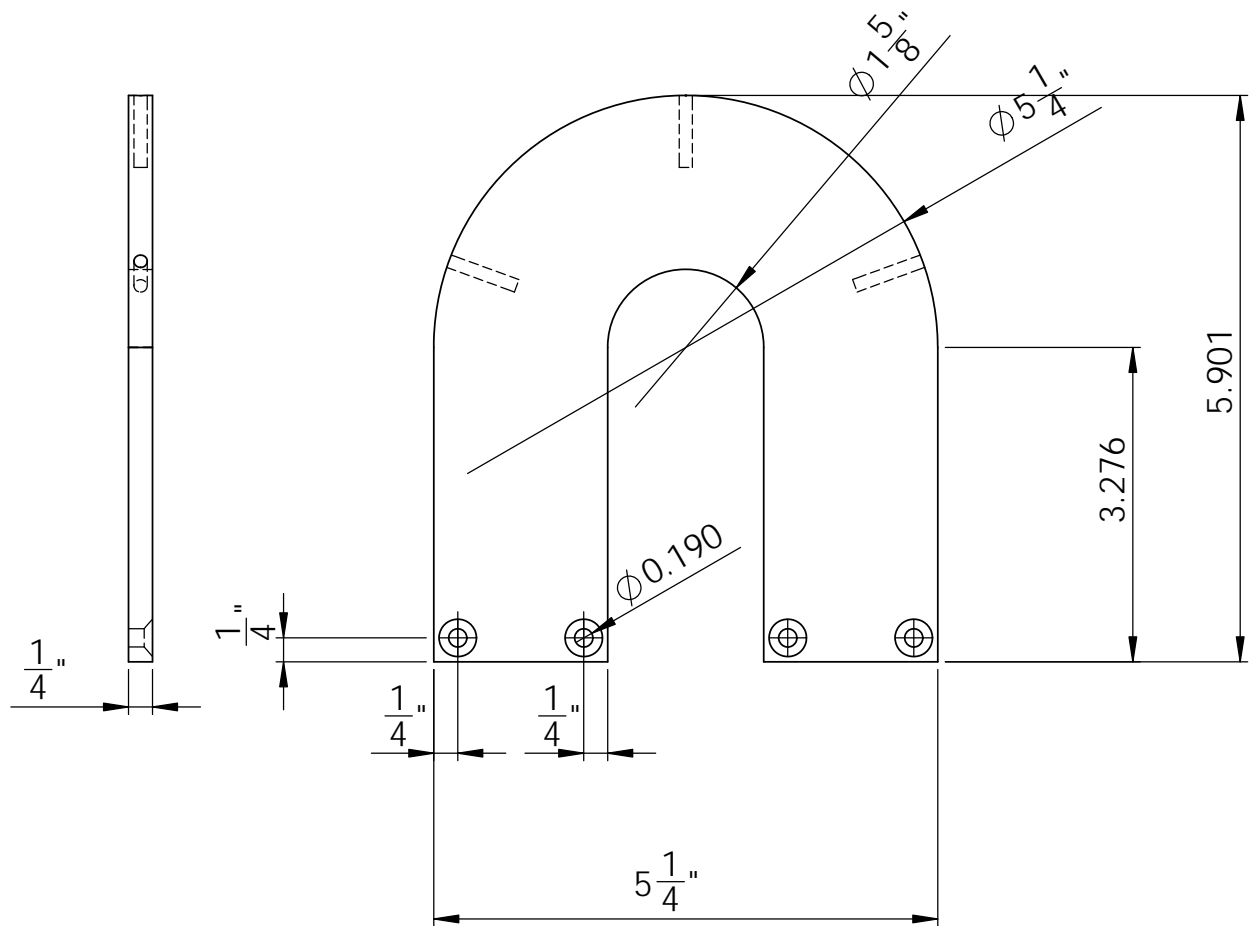


NOTE: Modify to fit your motor
 Cut 10 degree taper on 10 -32
 cap screw to fit hub

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SIZE A	FILE NAME Tool Grinder Drawings	REV. A
SCALE 1:1	Mounting Hub	SHEET 12 OF 21



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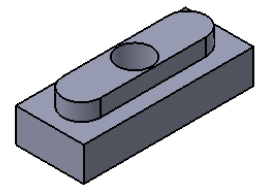
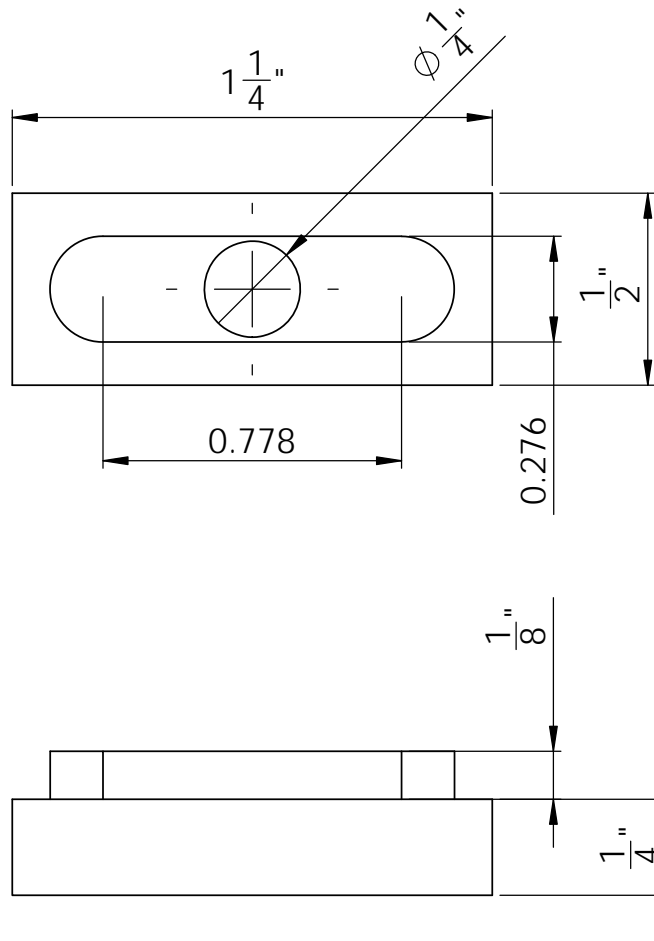
SIZE **A** FILE NAME
Tool Grinder Drawings

REV.
A

SCALE 1:2

Wheel Guard

SHEET 13 OF 21

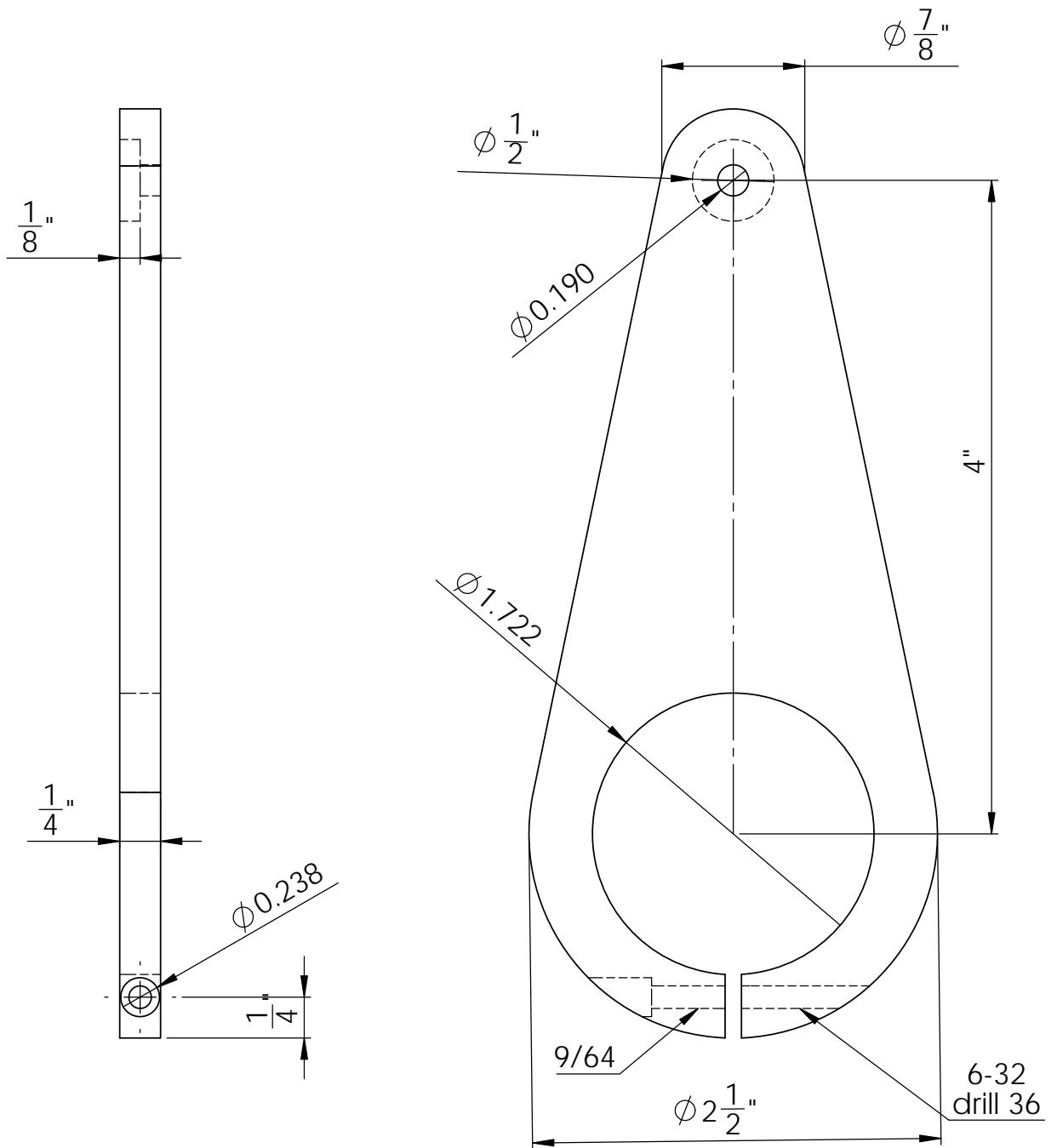


SCALE 1 : 1

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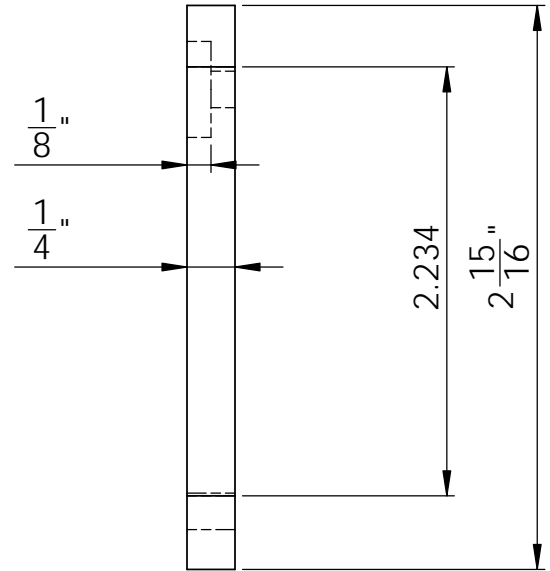
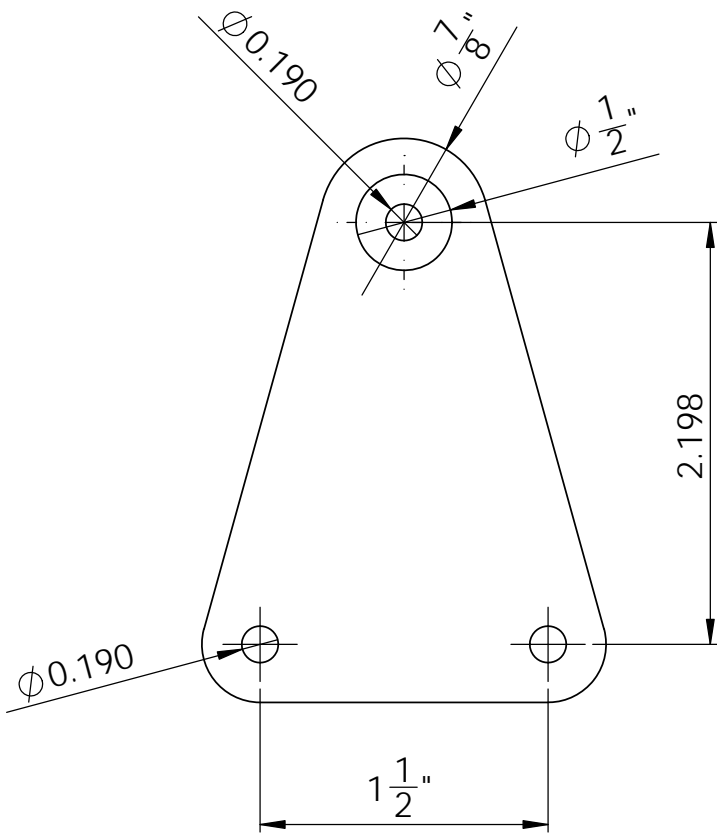
SIZE A	FILE NAME Tool Grinder Drawings	REV. A
SCALE 2:1	Motor Nut	SHEET 14 OF 21



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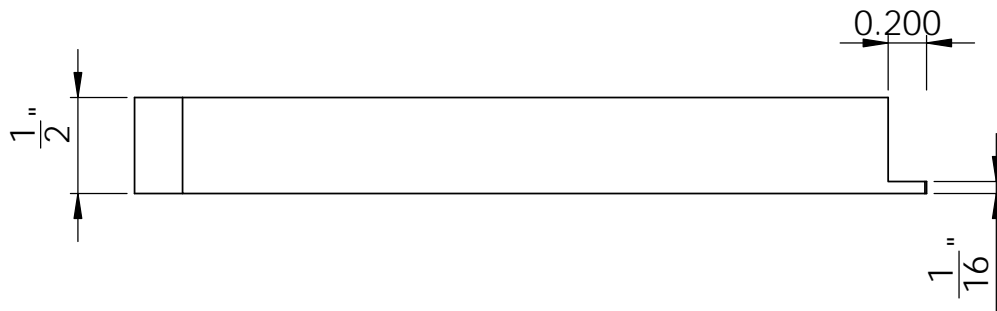
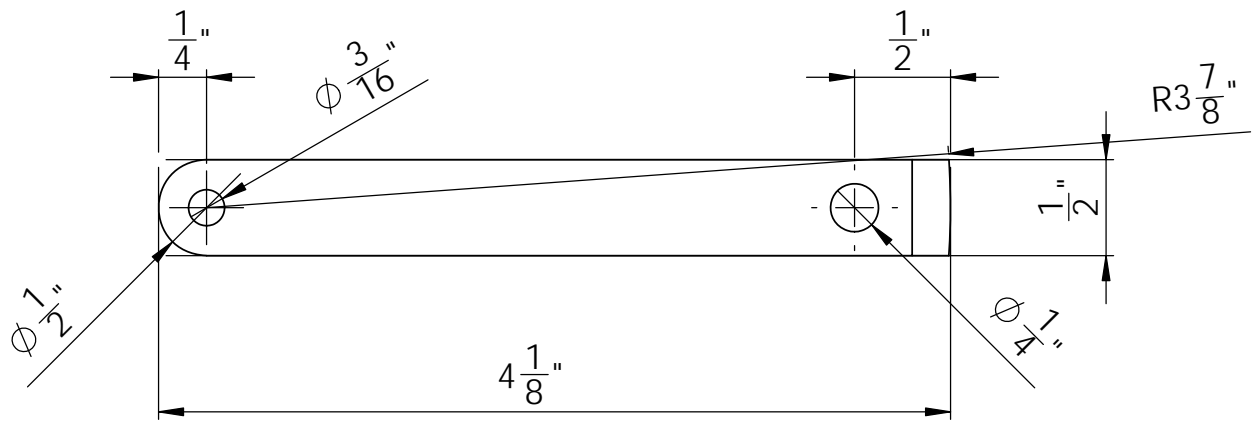
SIZE A	FILE NAME Tool Grinder Drawings	REV. A
SCALE 1:1	Motor Handle Front	SHEET 15 OF 21



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SIZE A	FILE NAME Tool Grinder Drawings	REV. A
SCALE 1:1	Motor Handle Rear	SHEET 16 OF 21



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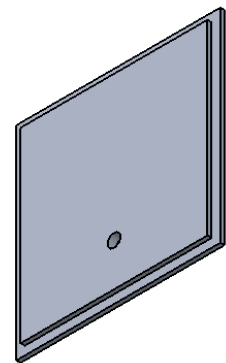
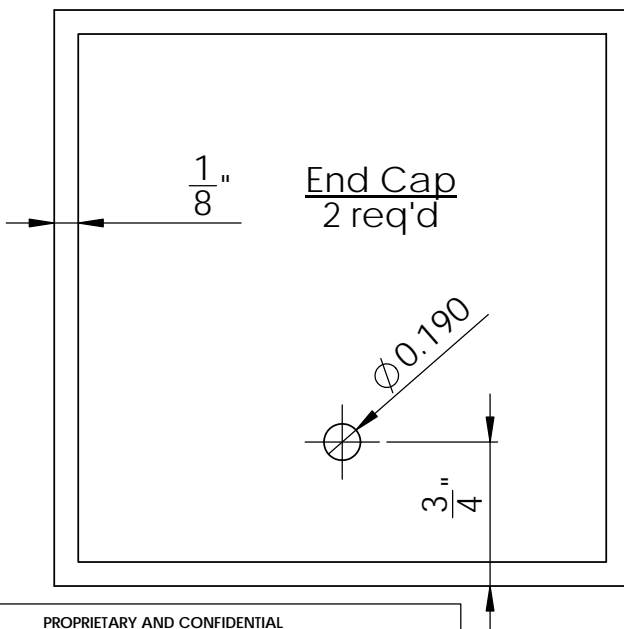
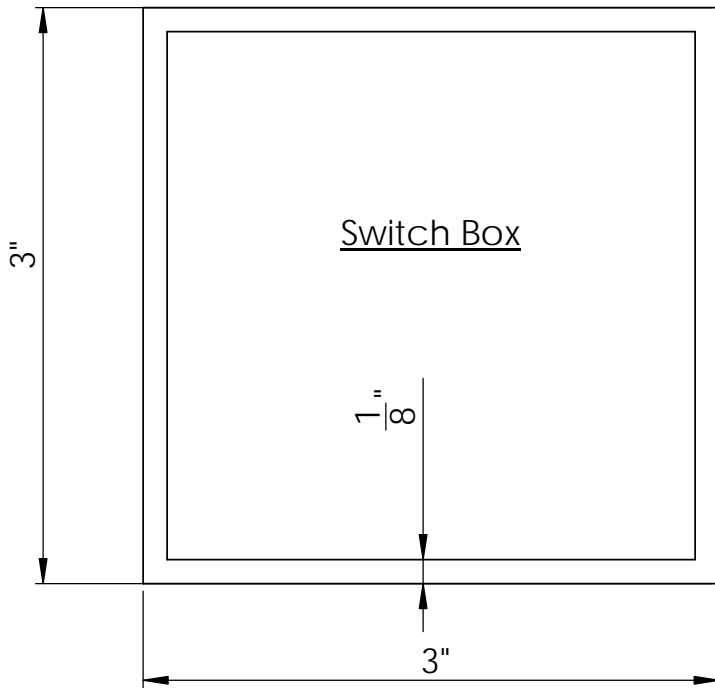
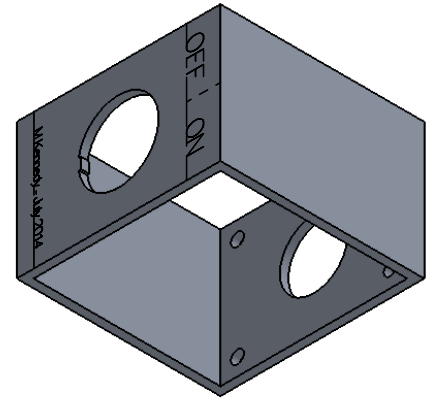
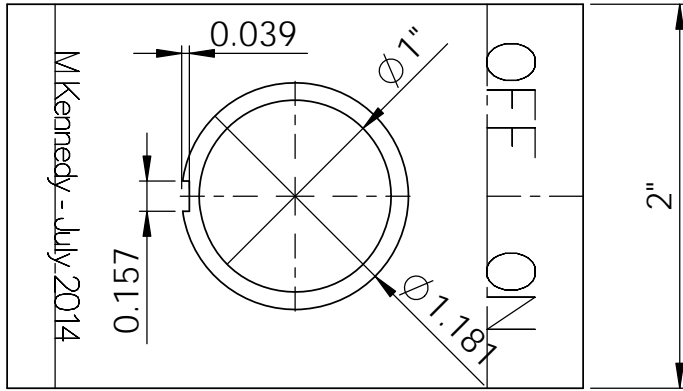
SIZE FILE NAME
A Tool Grinder Drawings

REV.
A

SCALE 1:1

Tool Guide

SHEET 17 OF 21



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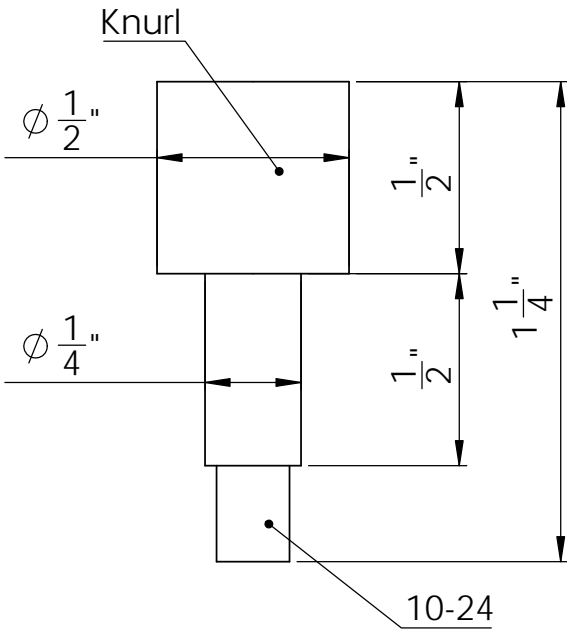
SIZE FILE NAME
A Tool Grinder Drawings

REV.
A

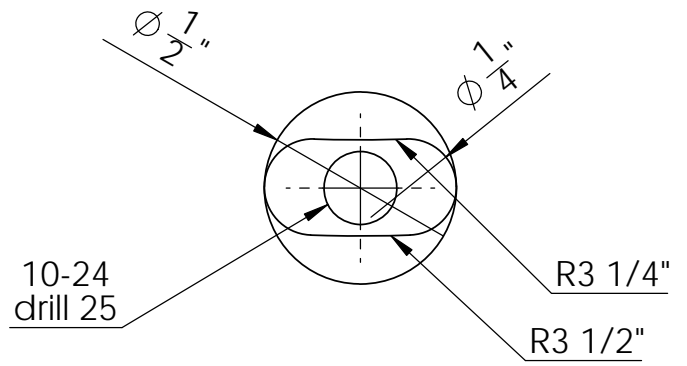
SCALE 1:1

Switch Box

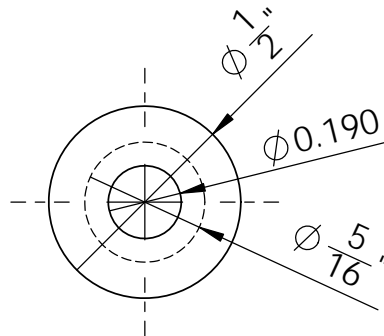
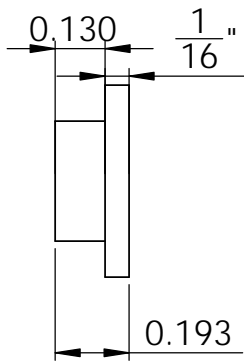
SHEET 18 OF 21



Knurled Screw



T-Nut



Pivot Bushing
2 req'd

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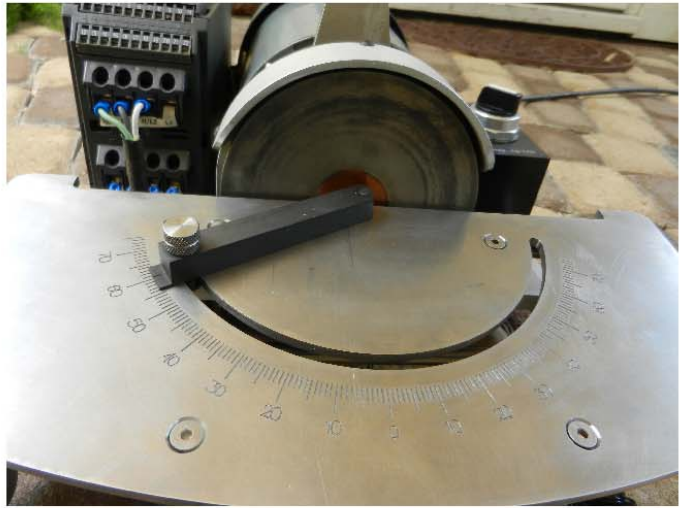
SIZE **A** FILE NAME **Tool Grinder Drawings**

REV. **A**

SCALE 2:1

Misc

SHEET 19 OF 21



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SIZE FILE NAME
A Tool Grinder Drawings

REV.
A

SCALE 1:2

Pictures

SHEET 20 OF 21

NOTES:

Materials of Construction

- Table Stainless Steel or use other material that does not get grit embedded, such as cast iron. Do not use Aluminum!
- Most other material - Aluminum
- Linear bearings and polished rods were on-hand. Can also use parts from discarded printers.
- 1745 RPM 220V 1/2HP 3 phase motor and Siemens Micromaster Vector VFD were on-hand. Can also use reversible 120V motor.
- Abrasive wheel is Glendo / GRS 5", 600 grit medium. Available on eBay.
- Parts designed for CNC mill. Many parts can be simplified for conventional mill.

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SIZE A	FILE NAME Tool Grinder Drawings	REV. A
SCALE 1:2	Notes	SHEET 21 OF 21