
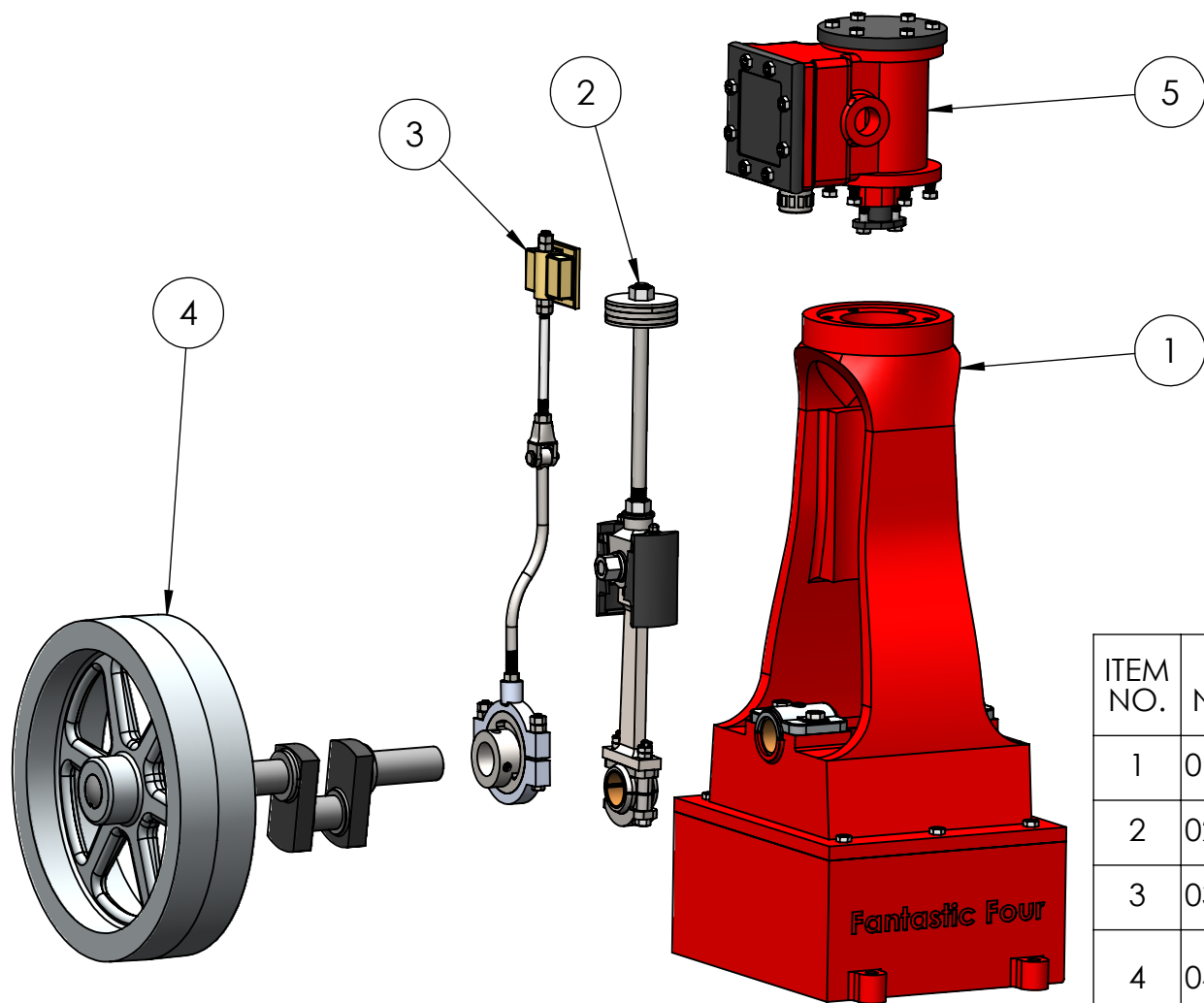



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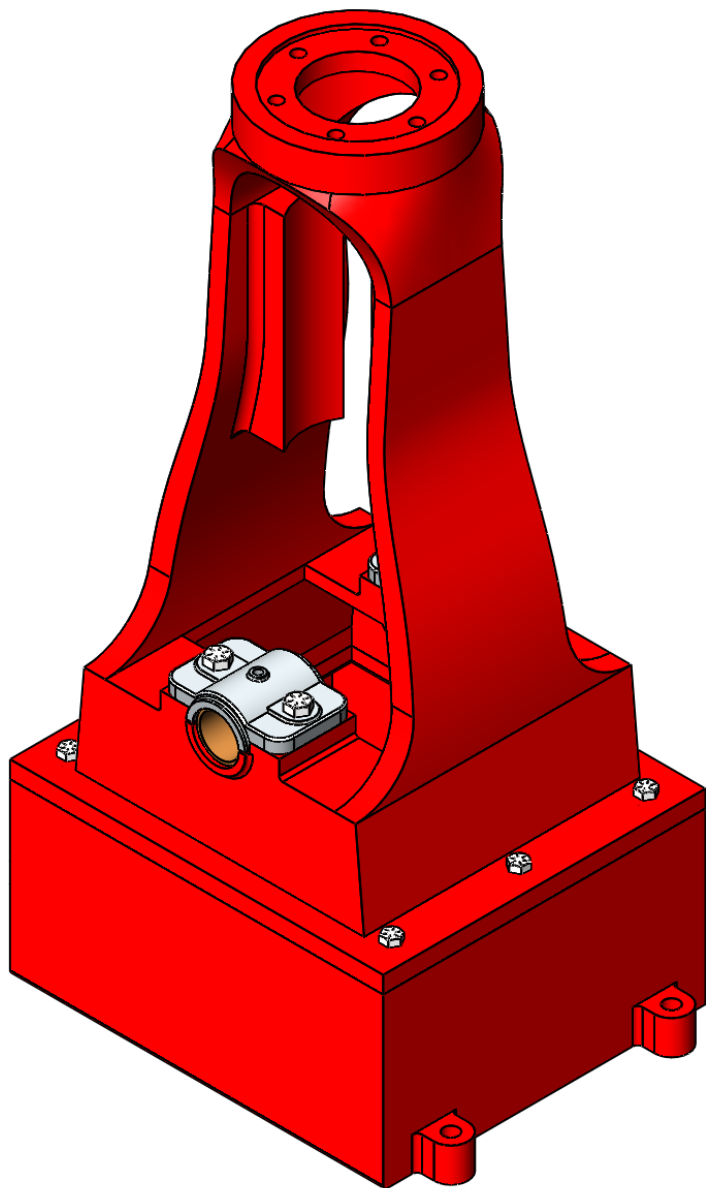
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		MATERIAL: N/A			
DEFAULT TOLERANCES:		DESCRIPTION: 00-00 Main Assembly			
LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002	ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°	CHECKED BY: Charles Krueger	DATE: 5/5/2015	UNIVERSITY OF IDAHO ME DEPARTMENT	
		DRAWN BY: Team Fantastic Four	DATE: 5/7/2015		
		FILE NAME: 00-00.SLDPRT		PART #: 00-00	QTY: 1
				SCALE: 1:9	SHEET: 1 OF 55




ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NUMBER
1	01-00	Frame Assembly	1	3
2	02-00	Piston Assembly	1	11
3	03-00	Eccentric Assembly	1	29
4	04-00	Flywheel/Crankshaft Assembly	1	38
5	05-00	Steam Cylinder Assembly	1	42

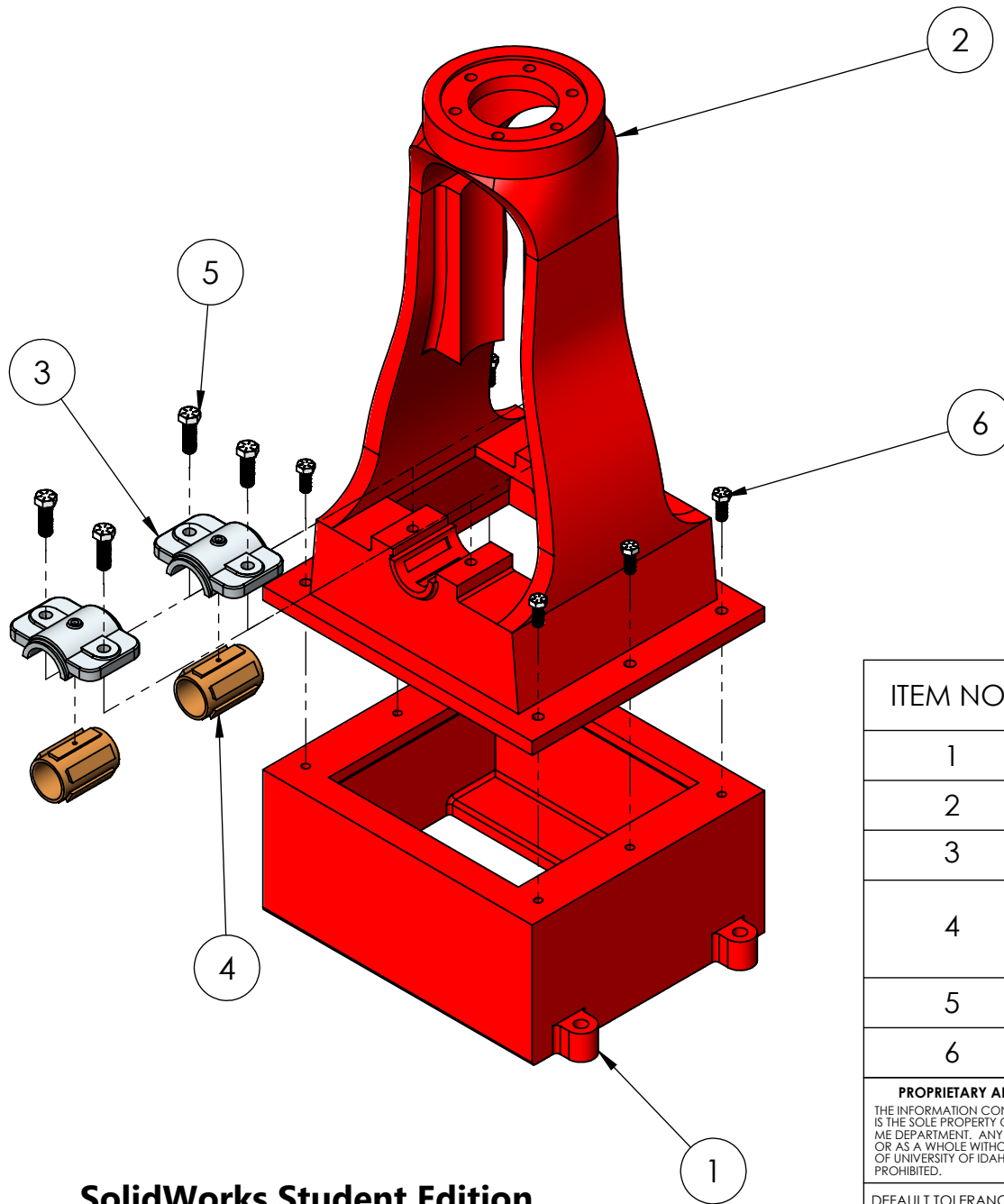
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		MATERIAL: N/A			
DEFAULT TOLERANCES:		DESCRIPTION: 00-00 Main Assembly		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002	ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°	CHECKED BY: Charles Krueger	DATE: 5/5/2015		
		DRAWN BY: Team Fantastic Four	DATE: 5/7/2015	PART #: 00-00	QTY: 1
		FILE NAME: 00-00.SLDPRT		SCALE: 1:13	SHEET: 2 OF 55

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<div>DEFAULT TOLERANCES:</div> <div><div>LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002</div><div>ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°</div></div>		<div>DESCRIPTION: Frame Assembly</div> <div><div>CHECKED BY: Parker Hill</div><div>DATE: 5/3/2015</div><div>DRAWN BY: Charles Krueger</div><div>DATE: 5/7/2015</div><div>FILE NAME: 01-00.SLDPRT</div></div>		<div>PART #: 01-00</div> <div>QTY: 1</div> <div>SCALE: 1:8</div> <div>SHEET: 3 OF 55</div>	

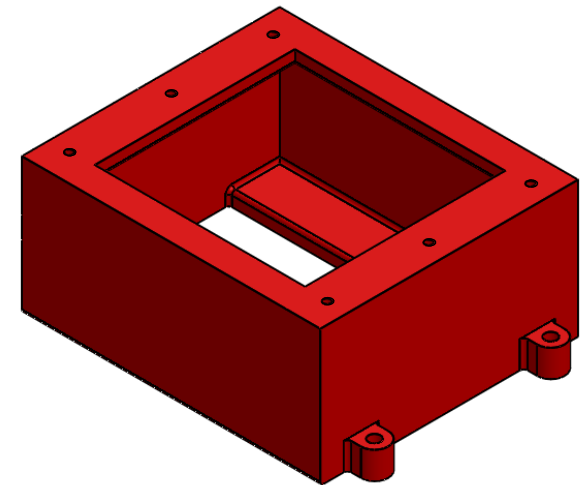
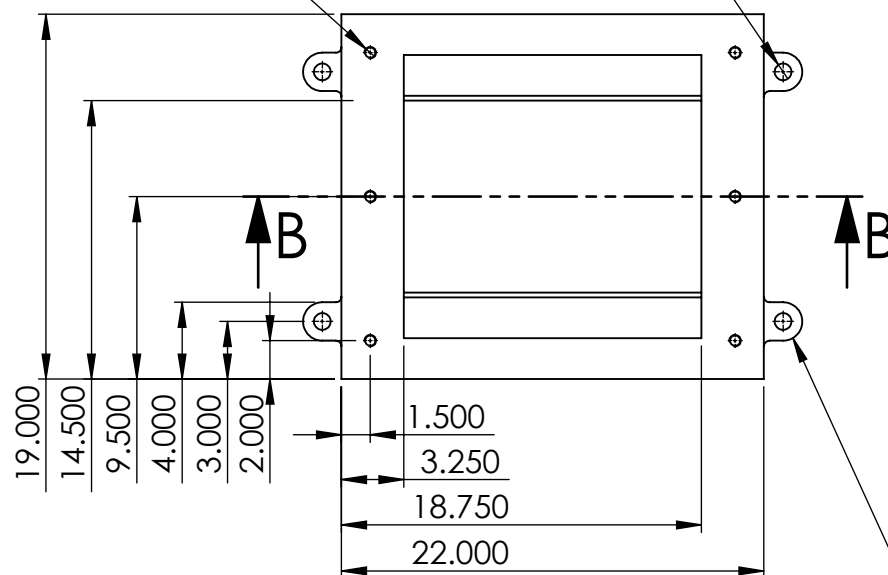


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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NUMBER
1	01-01	Base	1	5
2	01-02	Frame	1	6
3	01-03	Bearing Cap	2	9
4	01-04	Bearing Cap/Frame Babbitt	2	10
5	91286A459	3/4-10 Bolt	4	
6	91286A397	5/8-11 Bolt	6	
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DEFAULT TOLERANCES: LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002		MATERIAL: N/A DESCRIPTION: Frame Assembly CHECKED BY: Parker Hill DATE: 5/3/2015 DRAWN BY: Charles Krueger DATE: 5/7/2015 FILE NAME: 01-00.SLDPR		
<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>			PART #: 01-00 SCALE: 1:10	QTY: 1 SHEET: 4 OF 55

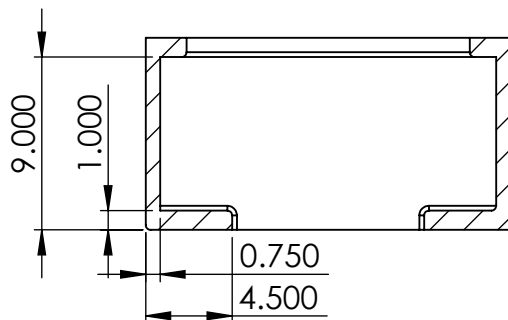
6 x  $\phi$  0.531 THRU  
5/8-11 UNC THRU

4 x  $\phi$  0.875 THRU

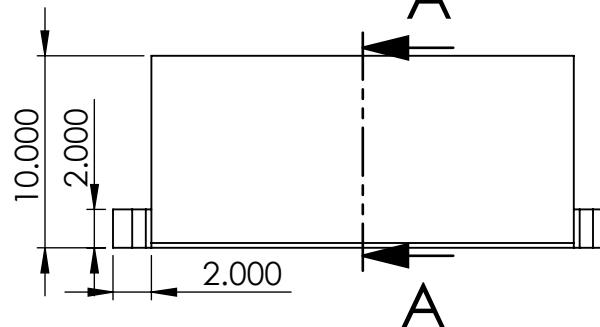


All radius for  
tabs 1"

SECTION A-A

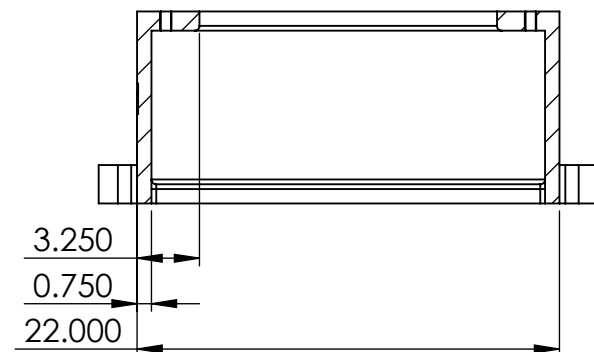


A



A

SECTION B-B



All fillets have a 1/4" radius

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DIMENSIONS ARE IN INCHES  
THIRD ANGLE PROJECTION

MATERIAL: Ductile Iron (SN)

Team Fantastic  
Four

**UNIVERSITY OF IDAHO  
ME DEPARTMENT**

**DEFAULT TOLERANCES:**

LINEAR:  
X.  $\pm$  .25  
X.X  $\pm$  .1  
X.XX  $\pm$  .01  
X.XXX  $\pm$  .002

ANGULAR:  
X.  $\pm$  2  
X.X  $\pm$  1  
X.XX  $\pm$  0.30'

**DESCRIPTION: Base**

CHECKED BY: Parker Hill DATE: 5/3/2015

DRAWN BY: Charles Krueger DATE: 5/6/2015

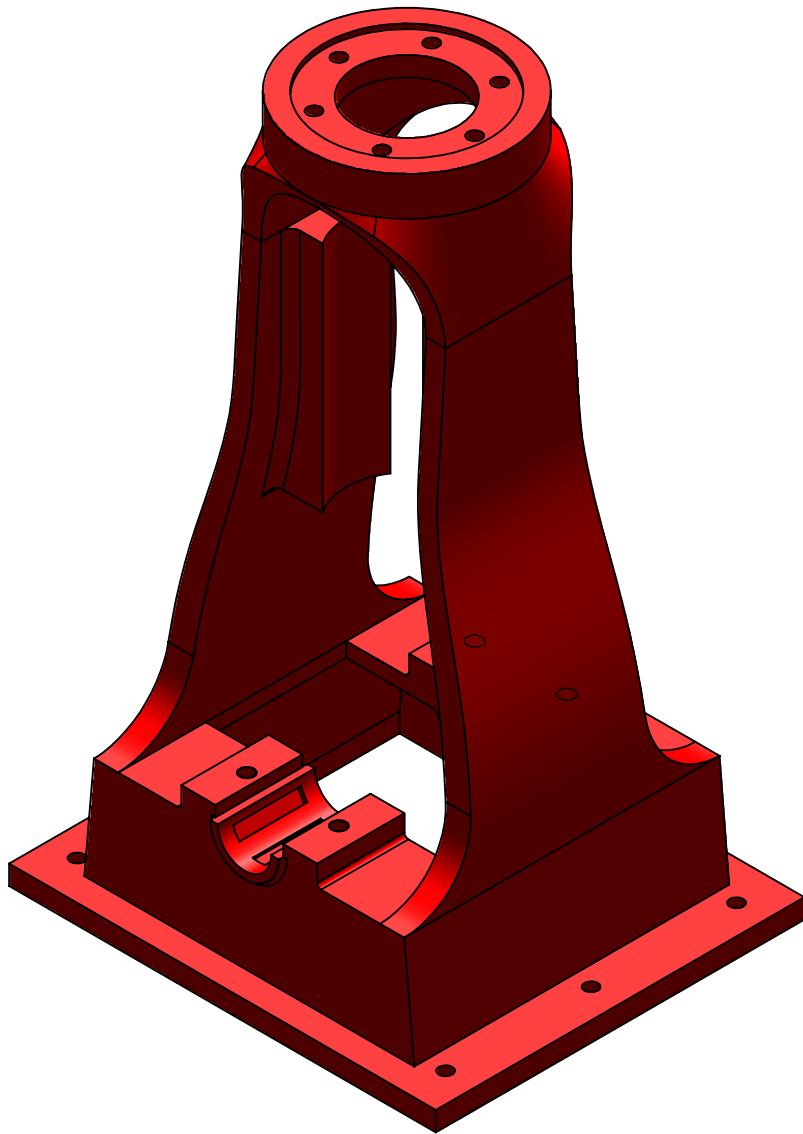
FILE NAME: 01-01.SLDPR

PART #: 01-01


QTY: 1

SCALE: 1:10

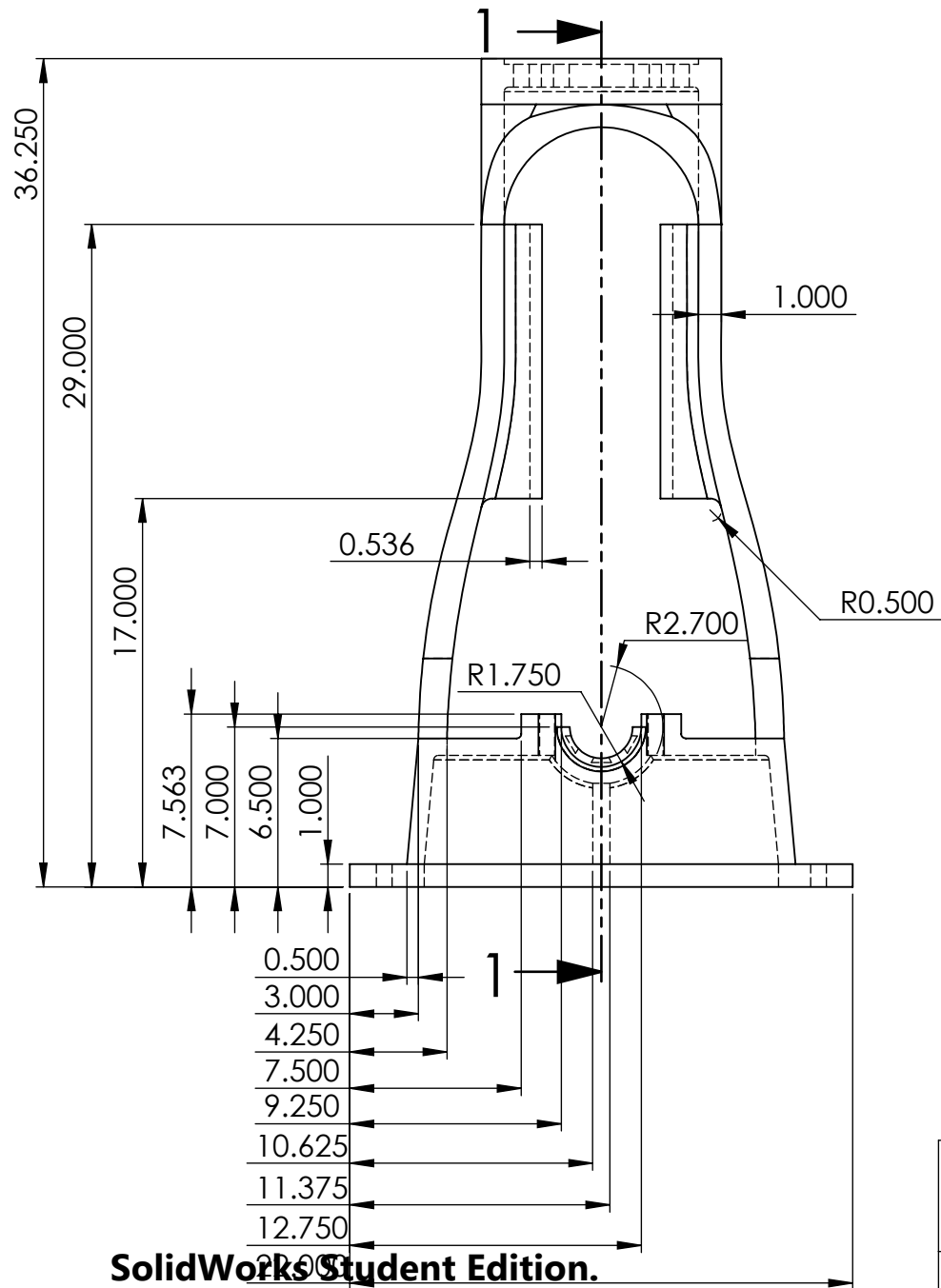
SHEET: 5 OF 55



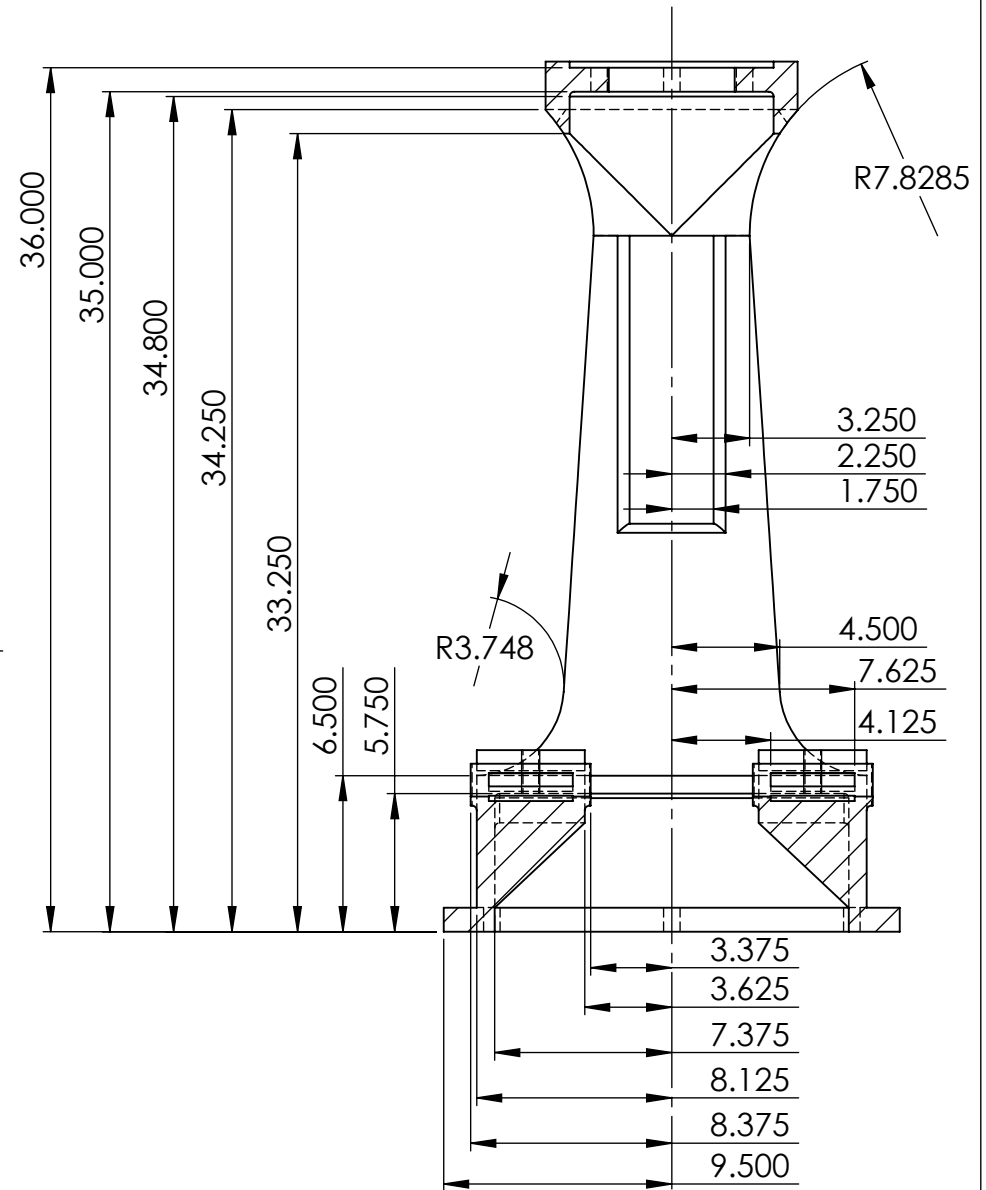
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MATERIAL: Ductile Iron (SN)					
DEFAULT TOLERANCES:		DESCRIPTION: Frame		<div>UNIVERSITY OF IDAHO</div> <div>ME DEPARTMENT</div>	
<div>LINEAR:</div> <div>X. ± .25</div> <div>X.X ± .1</div> <div>X.XX ± .01</div> <div>X.XXX ± .002</div>	<div>ANGULAR:</div> <div>X. ± 2</div> <div>X.X ± 1</div> <div>X.XX ± 0.30°</div>	<div>CHECKED BY:</div> <div>Parker Hill</div>	<div>DATE:</div> <div>5/3/2015</div>		
		<div>DRAWN BY:</div> <div>Charles Krueger</div>	<div>DATE:</div> <div>4/30/2015</div>	<div>PART #:</div> <div>01-02</div>	<div>QTY:</div> <div>1</div>
		<div>FILE NAME:</div> <div>01-02.SLDPRT</div>		<div>SCALE:</div> <div>1:6</div>	<div>SHEET:</div> <div>6 OF 55</div>

Front




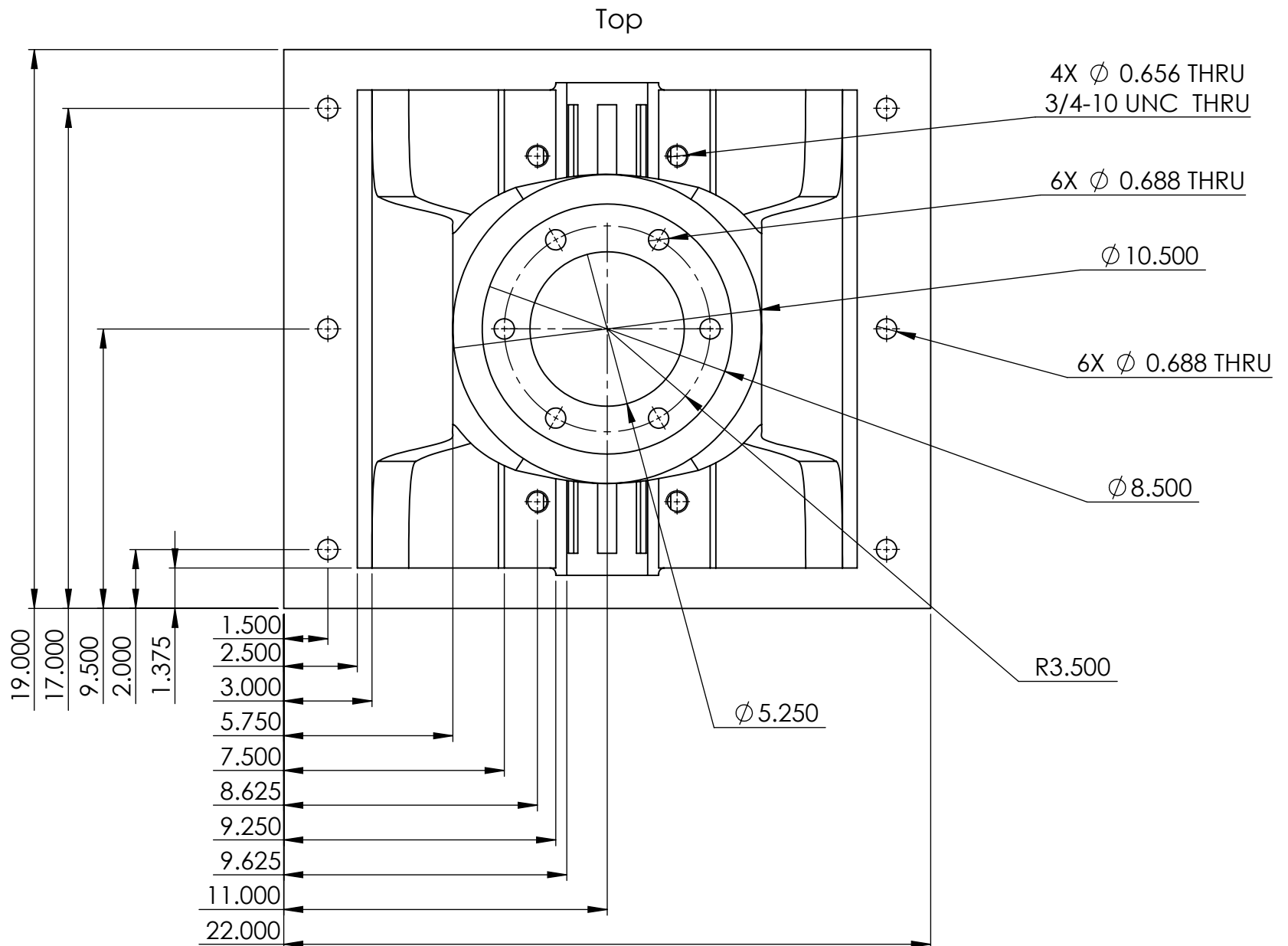
SECTION 1-1



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- Dimensions for babbin mirror bearing cap.
- All undefined fillets are 1/5" radius.

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		MATERIAL: Ductile Iron (SN)			
DEFAULT TOLERANCES:		DESCRIPTION: Frame			
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.± 2 X.X± 1 X.XX± 0.30°	CHECKED BY: Parker Hill		DATE: 5/3/2015	
		DRAWN BY: Charles Krueger		DATE: 4/30/2015	
		FILE NAME: 01-02.SLDPRT		PART #: 01-02	
				QTY: 1	
				SCALE: 1:8	SHEET: 7 OF 55



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DIMENSIONS ARE IN INCHES  
THIRD ANGLE PROJECTION

MATERIAL: Ductile Iron (SN)

**Team Fantastic  
Four**

**UNIVERSITY OF IDAHO  
ME DEPARTMENT**

**DEFAULT TOLERANCES:**

LINEAR:  
X.  $\pm$  .25  
X.X  $\pm$  .1  
X.XX  $\pm$  .01  
X.XXX  $\pm$  .002

ANGULAR:  
X.  $\pm$  2  
X.X  $\pm$  1  
X.XX  $\pm$  0.30'

**DESCRIPTION: Frame**

CHECKED BY: Parker Hill

DATE: 5/3/2015

DRAWN BY: Charles Krueger

DATE: 4/30/2015

FILE NAME: 01-02.SLDPRT

PART #: 01-02

QTY: 1

SCALE: 1:5

SHEET: 8 OF 55

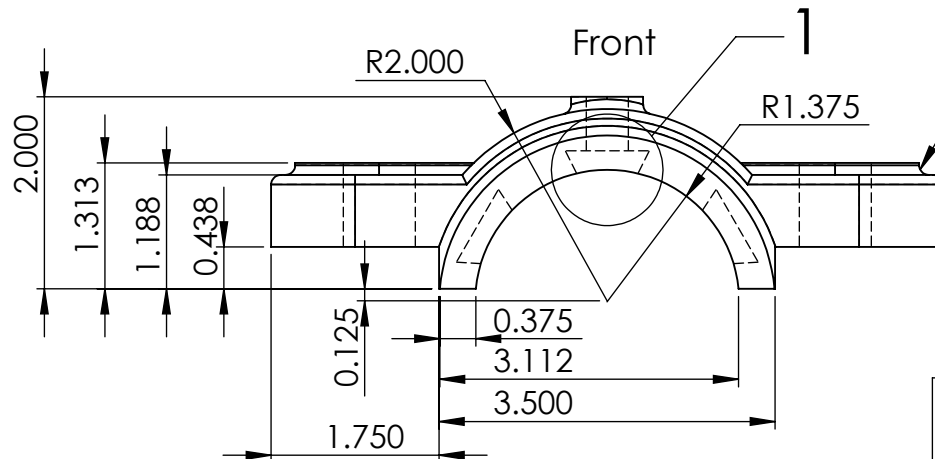
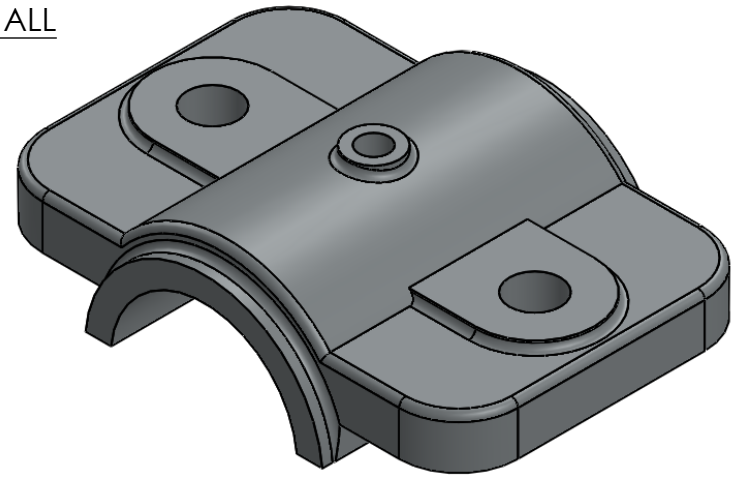
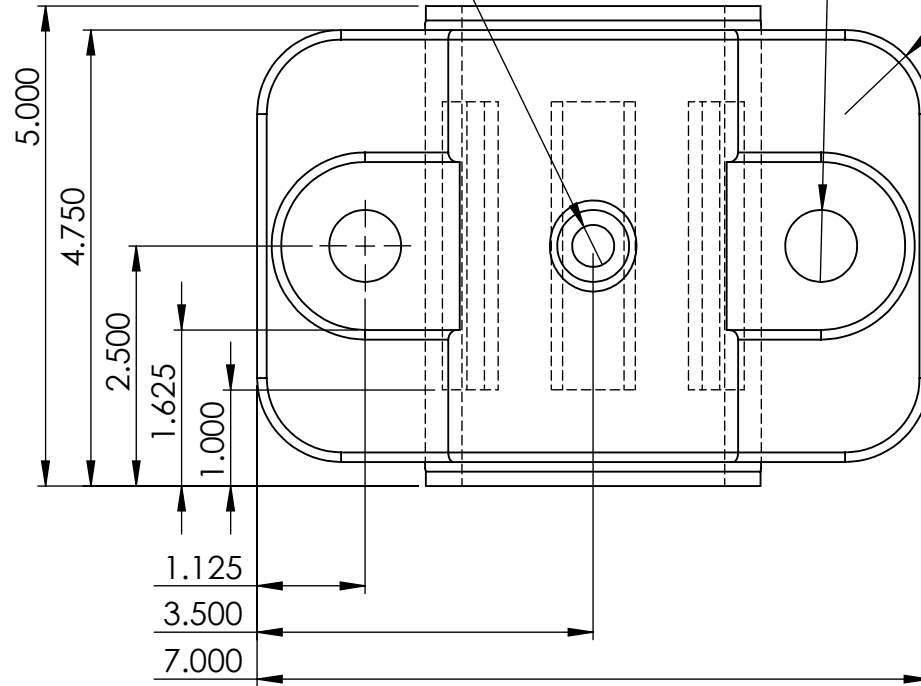


Ø Pipe Tap Drill for 1/4 Tap  
THRU ALL

Top

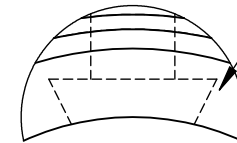
2 x Ø 0.750 THRU ALL

R0.875



All fillets on part are 1/10" radius

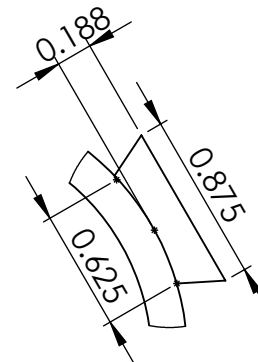
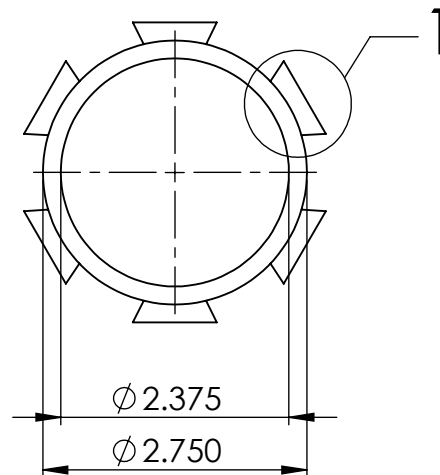
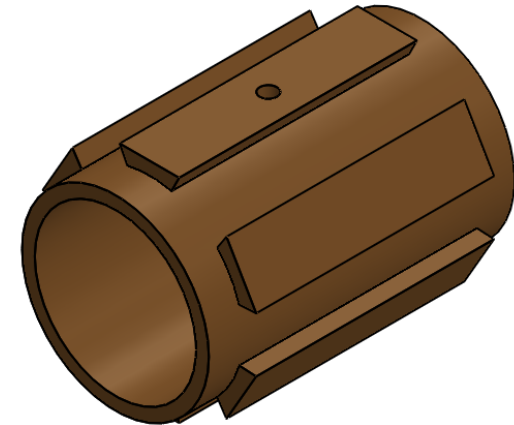
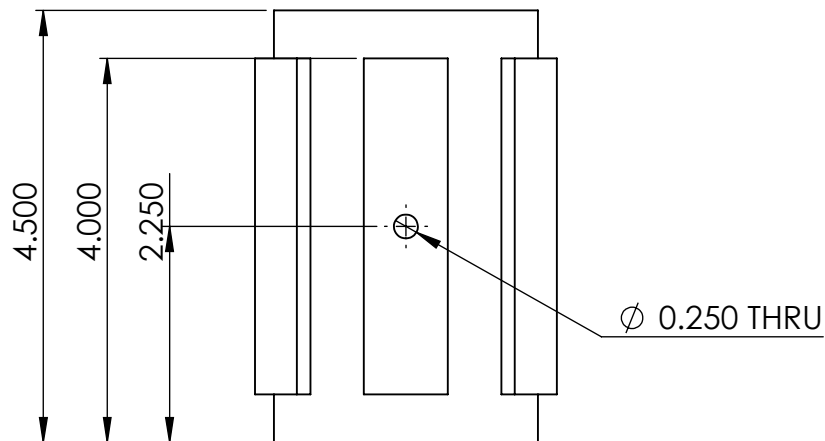
Babbitt fitting:  
Top width: 7/8"  
Bottom width: 5/8"  
Center height: 3/16"



DETAIL 1  
SCALE 1 : 1

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
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MATERIAL: Ductile Iron (SN)		DESCRIPTION: Bearing Cap		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
DEFAULT TOLERANCES: LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30'		CHECKED BY: Parker Hill DATE: 5/3/2015	
DRAWN BY: Charles Krueger		DATE: 4/28/2015		PART #: 01-03 QTY: 2	
FILE NAME: 01-03.SLDPR		SCALE: 1:2		SHEET: 9 OF 55	

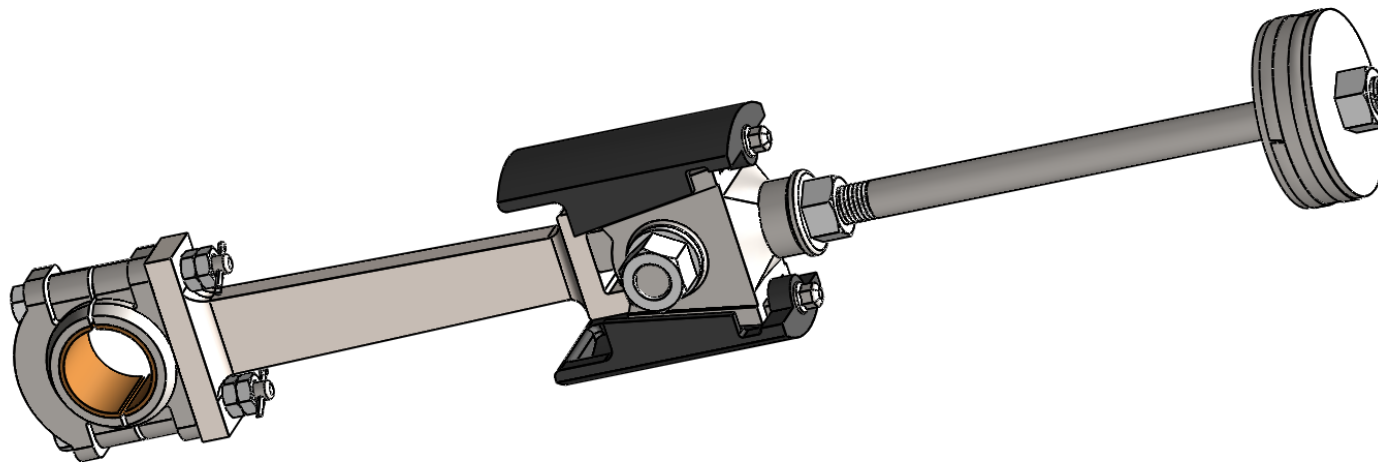


DETAIL 1  
SCALE 1 : 1


Top width: 7/8"  
Bottom width: 5/8"  
Height: 3/16"  
Evenly Spaced

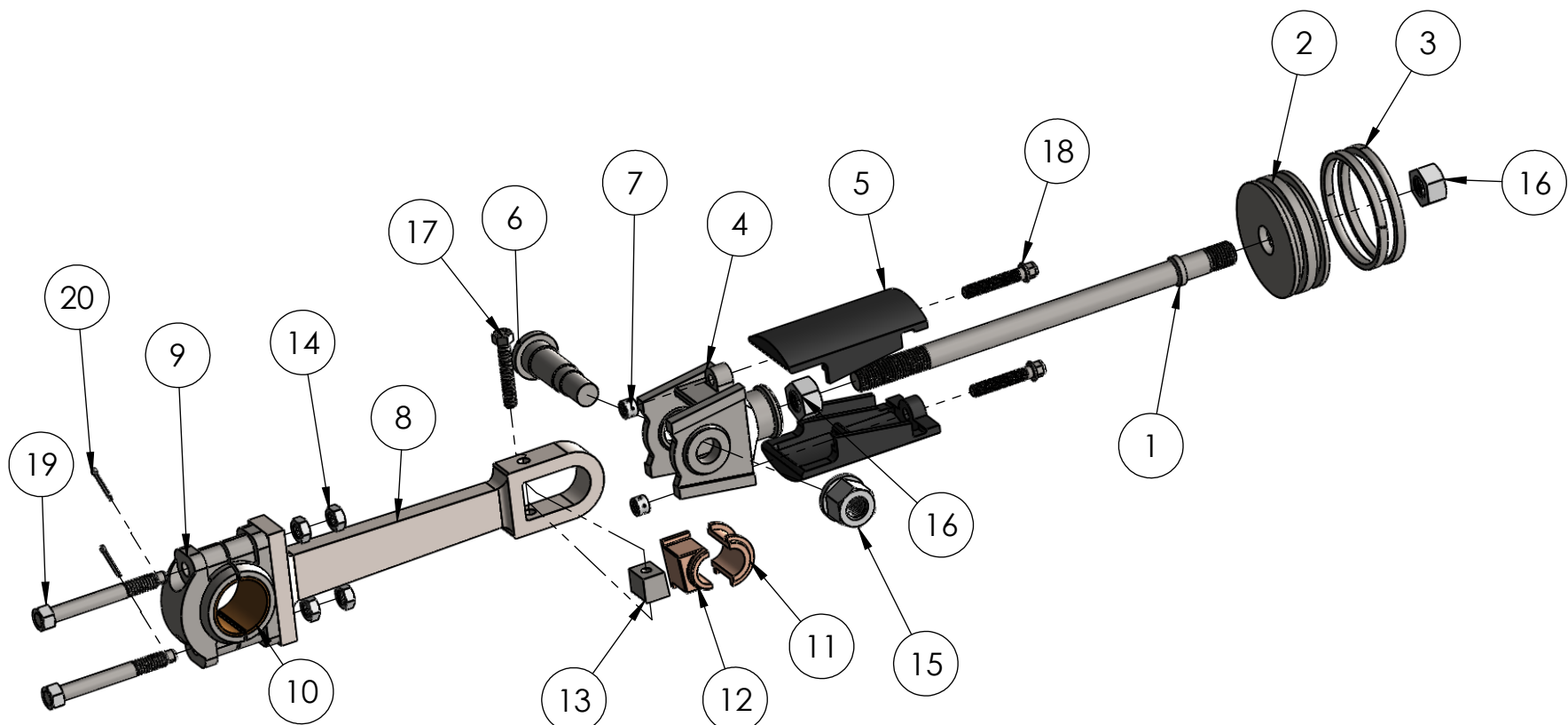
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<div>DEFAULT TOLERANCES:</div> <div>LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002</div> <div>ANGULAR: X.± 2 X.X± 1 X.XX± 0 30'</div>		<div>DESCRIPTION: Bearing Cap/Frame Babbitt</div> <div>CHECKED BY: Parker Hill</div> <div>DRAWN BY: Charles Krueger</div> <div>FILE NAME: 01-04.SLDPRT</div>		<div>UNIVERSITY OF IDAHO ME DEPARTMENT</div> <div>PART #: 01-04</div> <div>QTY: 2</div> <div>SCALE: 1:2</div> <div>SHEET: 10 OF 55</div>	
		<div>DATE: 5/3/2015</div> <div>DATE: 4/21/2015</div>			




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		MATERIAL: N/A					
DEFAULT TOLERANCES:		DESCRIPTION: Piston Assembly				UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002		ANGULAR: X.±2 X.X±1 X.XX±0.30°		CHECKED BY: Charles Krueger DATE: 5/5/2015			
		DRAWN BY: Parker Hill		DATE: 5/7/2015		PART #: 02-00 QTY: 1	
		FILE NAME: 02-00.SLDPRT				SCALE: 1:20 SHEET: 11 OF 55	




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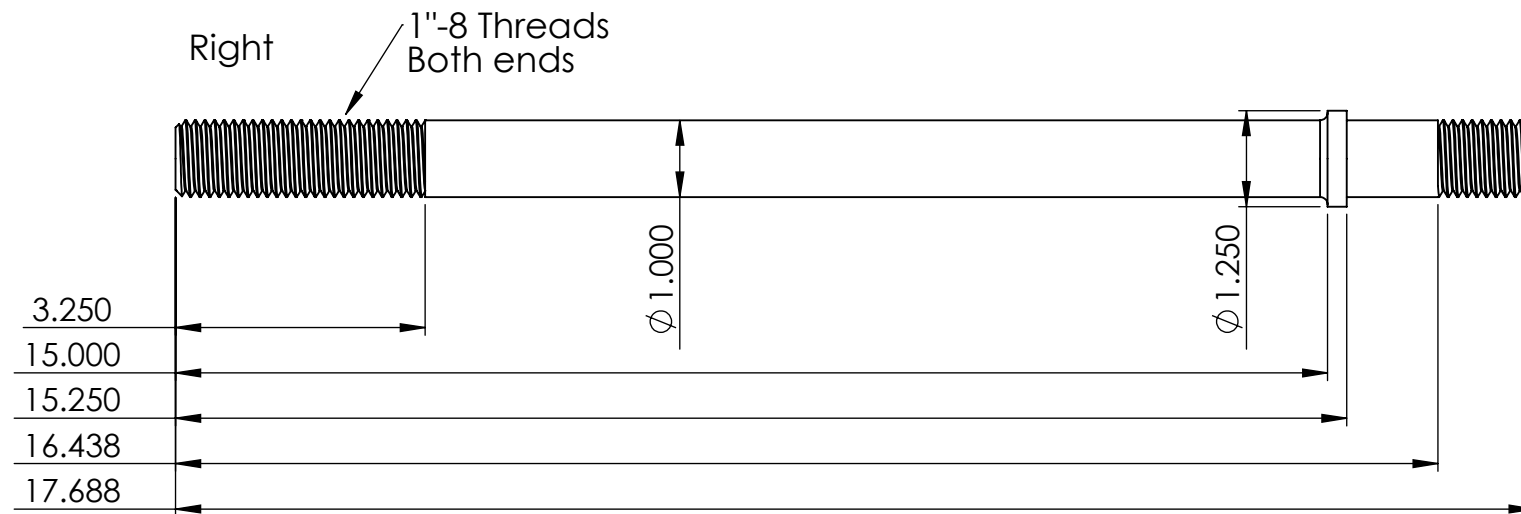
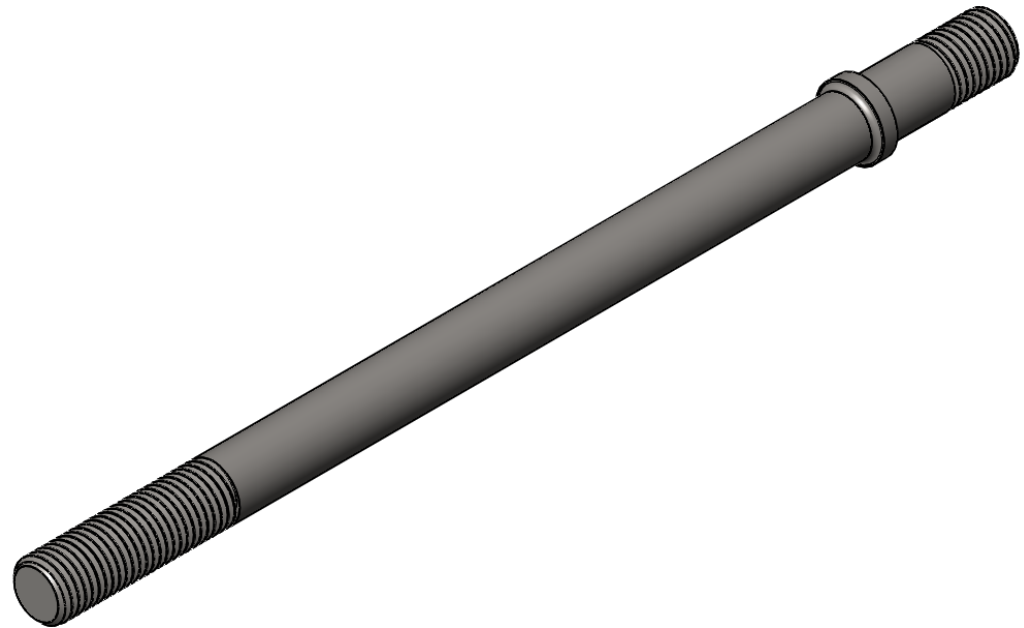
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		MATERIAL: N/A			
DEFAULT TOLERANCES:		DESCRIPTION: Piston Assembly			
<div>LINEAR:</div> <div>X. ± .25</div> <div>X.X ± .1</div> <div>X.XX ± .01</div> <div>X.XXX ± .002</div> <div>ANGULAR:</div> <div>X. ± 2</div> <div>X.X ± 1</div> <div>X.XX ± 0.30°</div>		CHECKED BY: Charles Krueger		DATE: 5/7/2015	
		DRAWN BY: Parker Hill		DATE: 5/7/2015	
		FILE NAME: 02-00.SLDPRT			
		SCALE: 1:20		PART #: 02-00	QTY: 1
				SHEET: 12 OF 55	

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NUMBER
1	02-01	Piston Rod	1	14
2	02-02	Piston	1	15
3	02-03	Piston Ring	2	16
4	02-04	Crosshead Body	1	17
5	02-05	Crosshead Shoe	2	20
6	02-06	Crosshead Pin	1	21
7	02-07	Crosshead Adjusting Nut	2	22
8	02-08	Connecting rod	1	23
9	02-09	Crank End Boxes	1	24
10	02-10	Crank End Babbitt	2	25
11	02-11	Bronze Box 1	1	26
12	02-12	Bronze Box 2	1	27
13	02-13	Wedge Block	1	28
14	93827A255	5/8-18" Thin Hex Nut	4	
15	94758A038	1"-8 Hex Flange Nut For Cross. Pin	1	
16	93827A277	1"-8 Hex Nut	2	
17	90201A418	1/2-13x3" Hex Bolt	1	
18	97972A519	1/2-13x2.75" Hex Flange Bolt	2	
19	94622A250	5/8-11x4.5" Hex Bolt W/Pin Hole	2	
20	98401A491	5/32x1-3/4" Cotter Pin	2	


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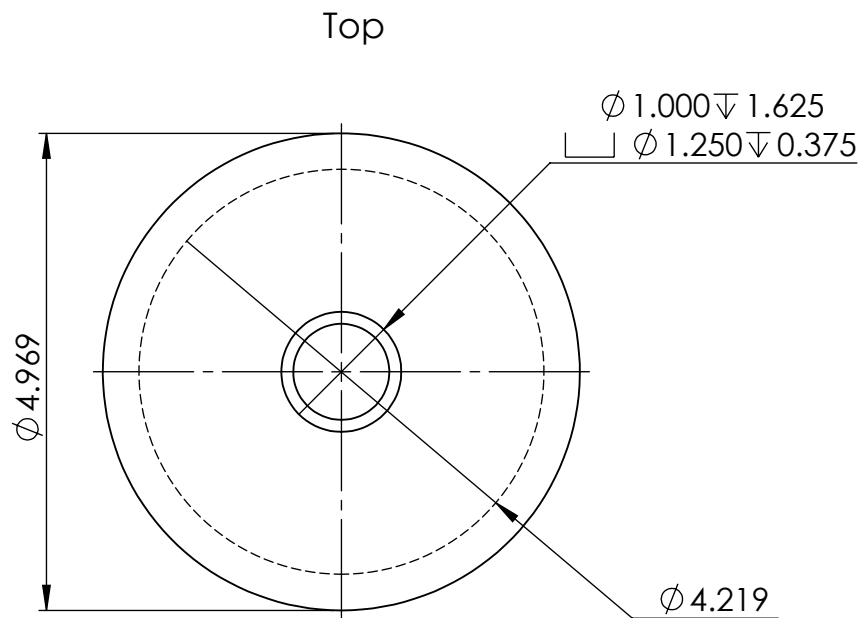
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		MATERIAL: N/A			
<b>DEFAULT TOLERANCES:</b>		<b>DESCRIPTION:</b> Piston Assembly		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
<b>LINEAR:</b> X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	<b>ANGULAR:</b> X.±2 X.X±1 X.XX±0.30°	<b>CHECKED BY:</b> Charles Krueger	<b>DATE:</b> 5/5/2015		
		<b>DRAWN BY:</b> Parker Hill	<b>DATE:</b> 5/5/2015	<b>PART #:</b> 02-00	<b>QTY:</b> 1
		<b>FILE NAME:</b> 02-00.SLDPRT		<b>SCALE:</b> 1:20	<b>SHEET:</b> 13 OF 55

Fillet Radii 0.1"

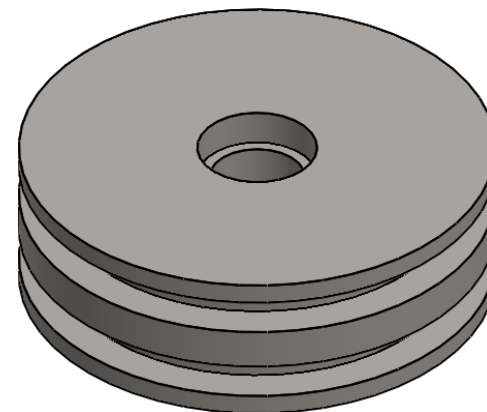
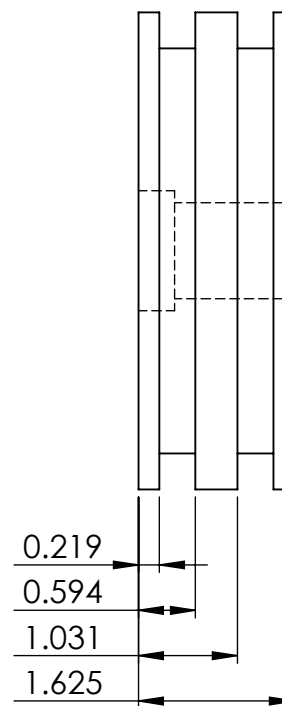


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		MATERIAL: Cast Alloy Steel			
DEFAULT TOLERANCES:		UNIVERSITY OF IDAHO ME DEPARTMENT			
DESCRIPTION: Piston Rod					
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.± 2 X.X± 1 X.XX± 0.30°	CHECKED BY: Charles Krueger	DATE: 5/5/2015		
		DRAWN BY: Parker Hill	DATE: 5/7/2015	PART #: 02-01	QTY: 1
		FILE NAME: 02-01.SLDPRT		SCALE: 1:2.5	SHEET: 14 OF 55

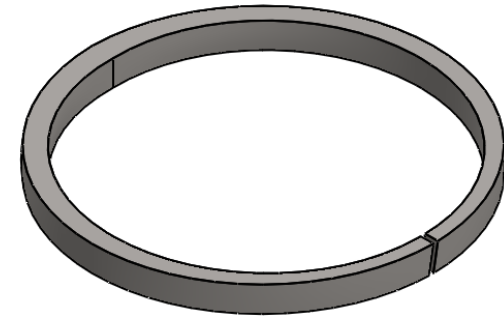


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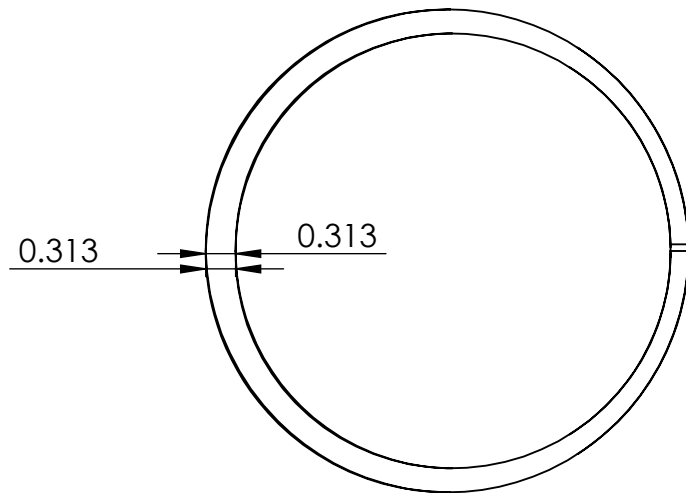


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		<div>MATERIAL: Cast Alloy Steel</div>			
<div>DEFAULT TOLERANCES:</div> <div><div>LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002</div><div>ANGULAR: X.±2 X.X±1 X.XX±0.30'</div></div>		<div>DESCRIPTION: Piston</div> <div><div>CHECKED BY: Michael Botterbusch</div><div>DATE: 5/4/2015</div></div> <div><div>DRAWN BY: Parker Hill</div><div>DATE: 4/30/2015</div></div> <div><div>FILE NAME: 02-02.SLDPRT</div></div>		<div>UNIVERSITY OF IDAHO</div> <div>ME DEPARTMENT</div> <div><div>PART #: 02-02</div><div>QTY: 1</div></div> <div><div>SCALE: 1:2</div><div>SHEET: 15 OF 55</div></div>	

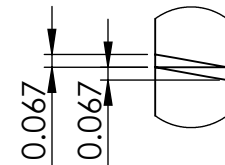
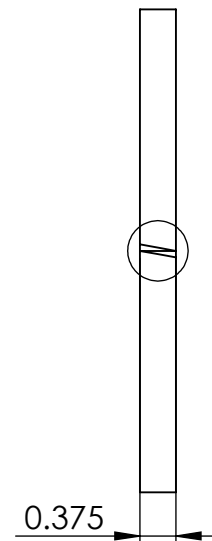


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
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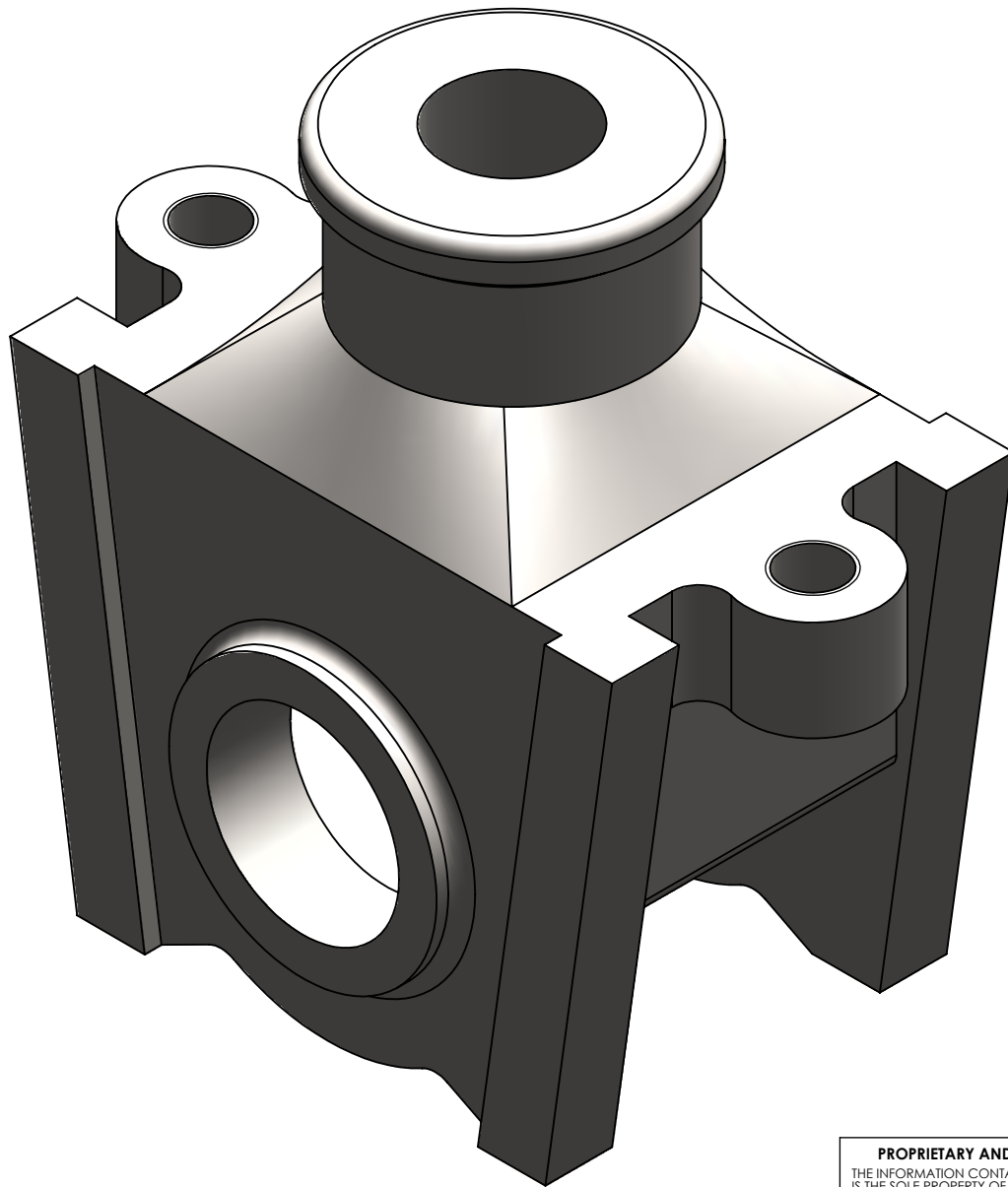


DETAIL 1  
SCALE 1 : 1


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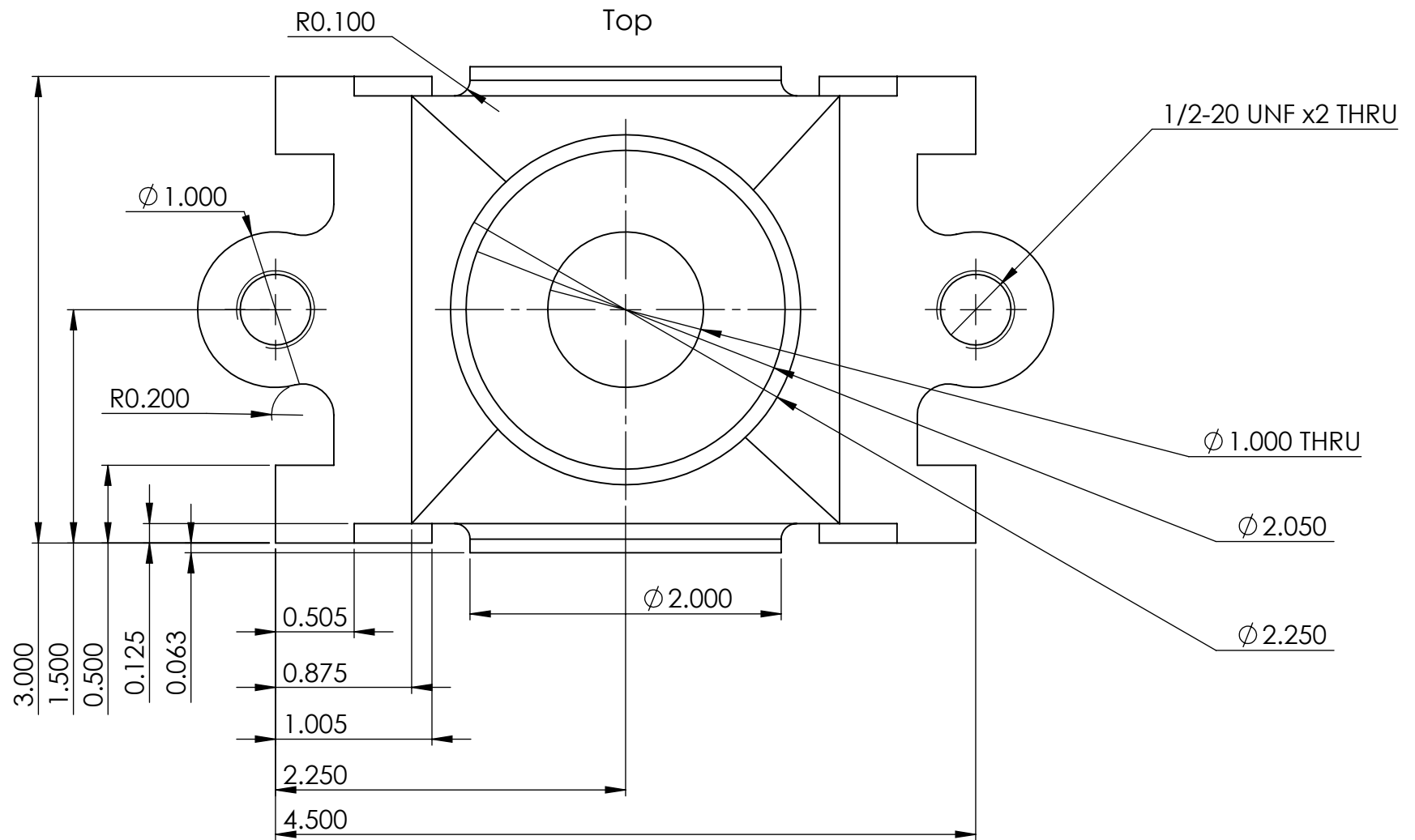
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		MATERIAL: Cast Alloy Steel			
DEFAULT TOLERANCES:		DESCRIPTION: Piston Ring			
LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°		UNIVERSITY OF IDAHO ME DEPARTMENT	
		CHECKED BY: Michael Botterbusch		DATE: 5/4/2015	
		DRAWN BY: Parker Hill		DATE: 5/7/2015	
FILE NAME: 02-03.SLDPRT		PART #: 02-03		QTY: 1	
		SCALE: 1:2		SHEET: 16 OF 55	






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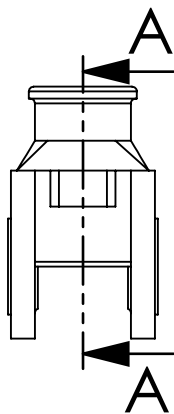
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		MATERIAL: Cast Alloy Steel					
DEFAULT TOLERANCES:		DESCRIPTION: Crosshead Body				UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.± 2 X.X± 1 X.XX± 0.30°						
		CHECKED BY: Charles Krueger	DATE: 5/5/2015				
		DRAWN BY: Parker Hill	DATE: 4/30/2015		PART #: 02-04	QTY: 1	
		FILE NAME: 02-04.SLDPRT				SCALE: 1:1	SHEET: 17 OF 55



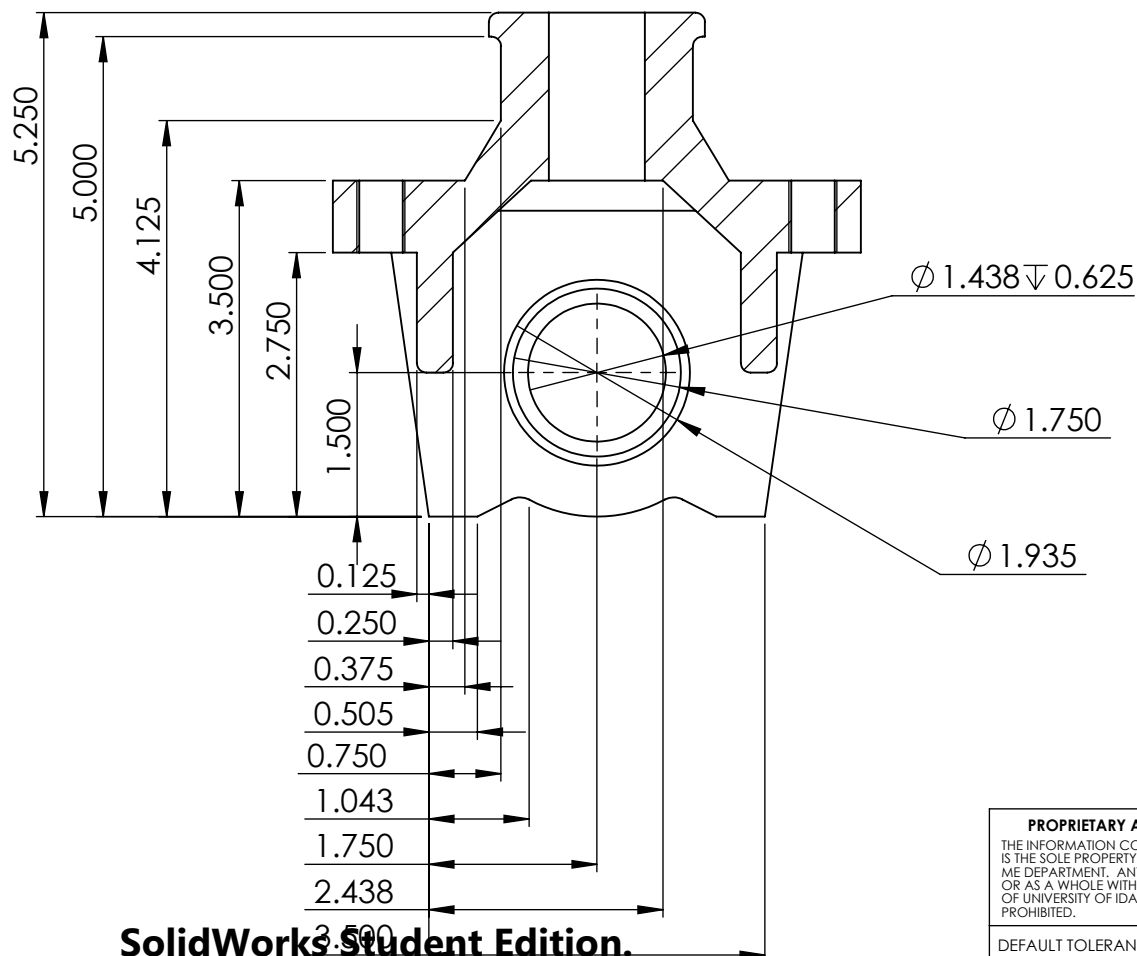
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		MATERIAL: Cast Alloy Steel					
DEFAULT TOLERANCES:		DESCRIPTION: Crosshead Body				UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.± 2 X.X± 1 X.XX± 0.30°	CHECKED BY: Michael Botterbusch		DATE: 5/4/2015			
		DRAWN BY: Parker Hill		DATE: 4/30/2015		PART #: 02-04	
		FILE NAME: 02-04.SLDPRT				QTY: 1	
						SCALE: 1:1	
						SHEET: 18 OF 55	

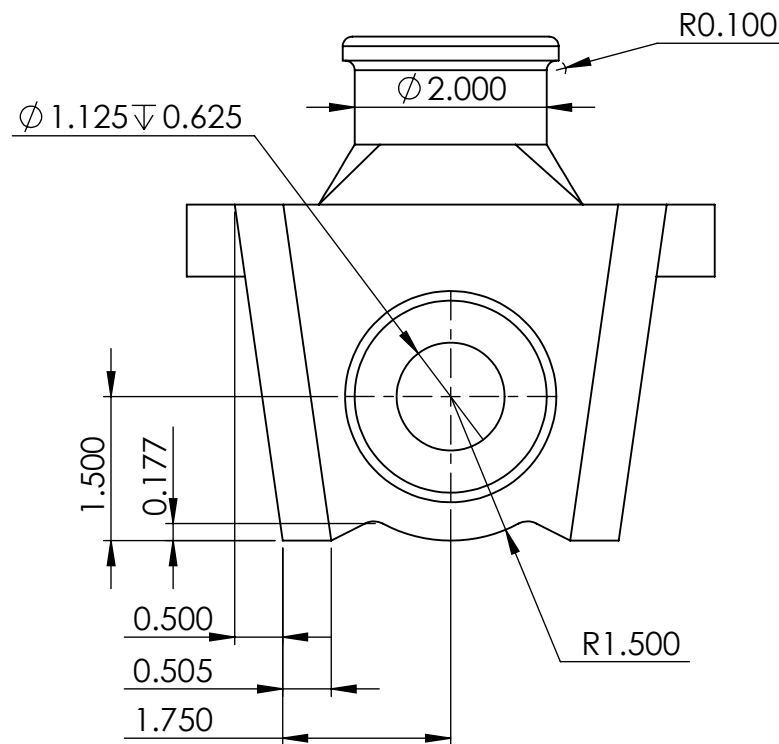
Right



## SECTION A-A

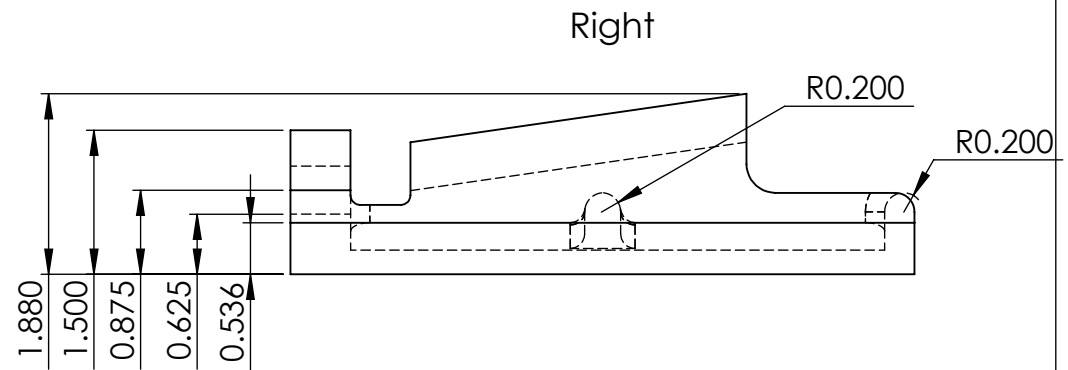
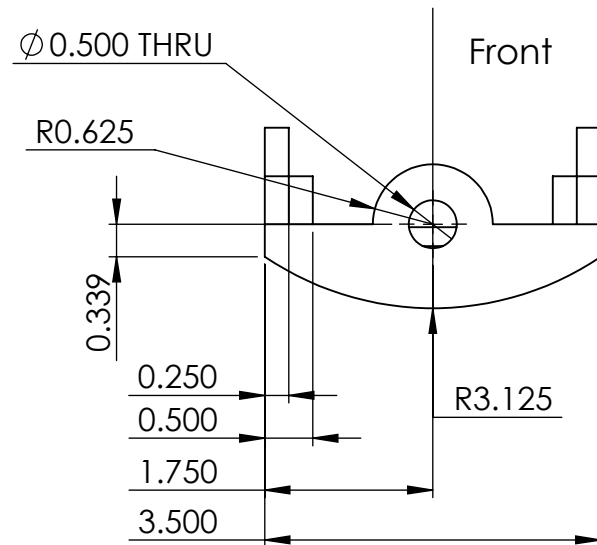
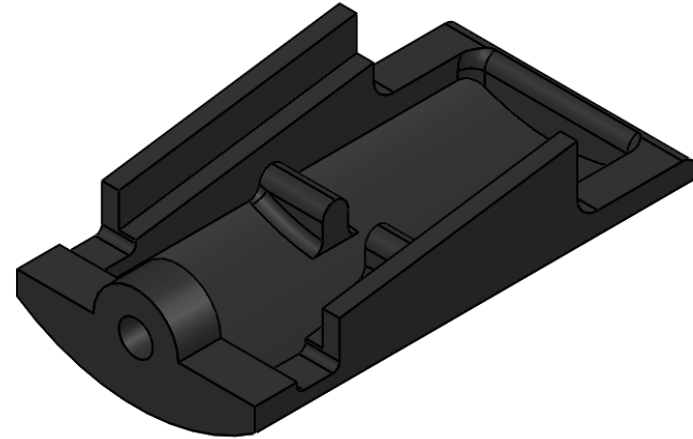
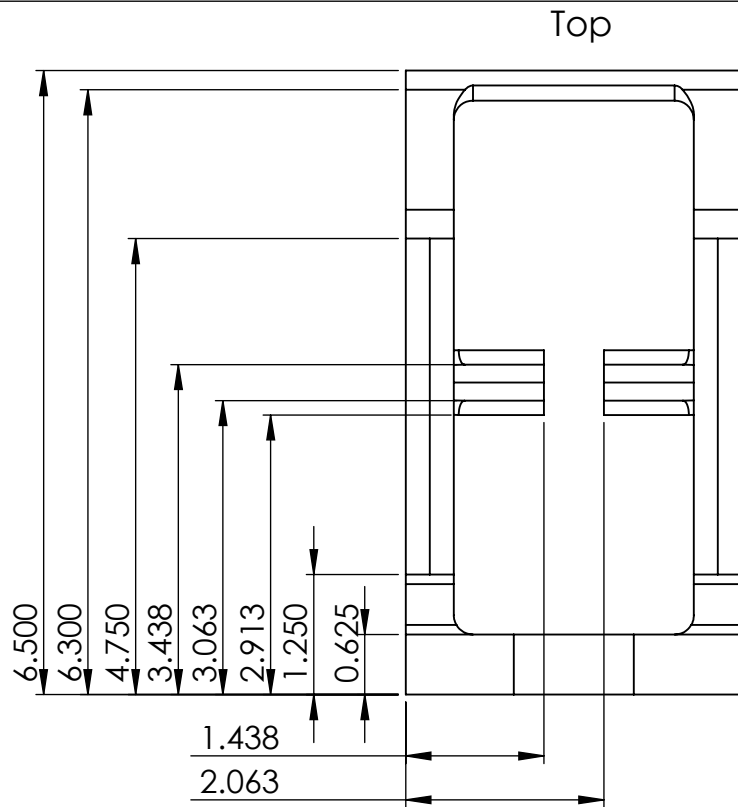


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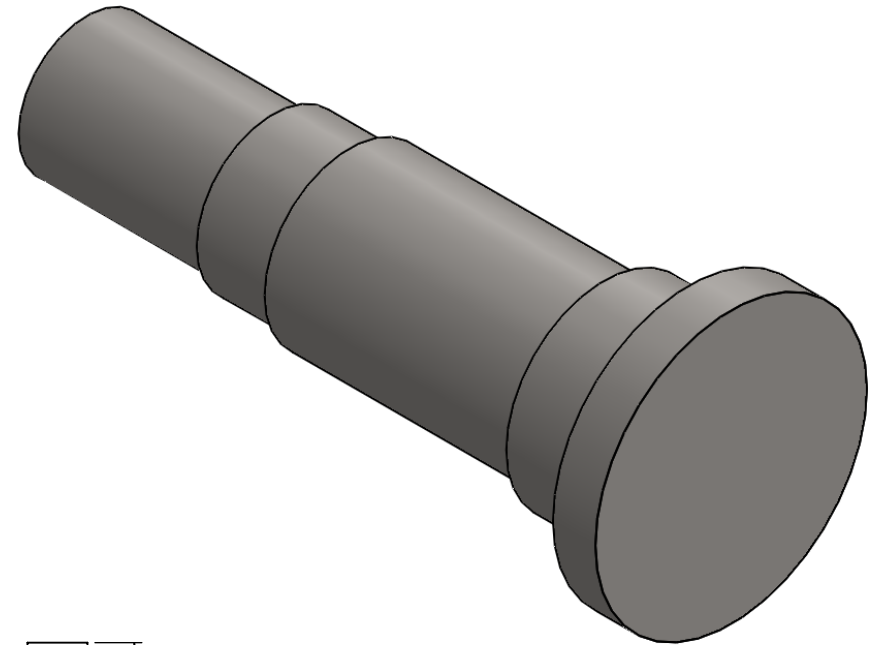
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MATERIAL: Cast Alloy Steel		DESCRIPTION: Crosshead Body		UNIVERSITY OF IDAHO ME DEPARTMENT	
DEFAULT TOLERANCES: LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002		ANGULAR: X.± 2 X.X± 1 X.XX± 0.30'		PART #: 02-04	
CHECKED BY: Charles Krueger		DATE: 5/5/2015		QTY: 1	
DRAWN BY: Parker Hill		DATE: 4/30/2015		SCALE: 1:2	
FILE NAME: 02-04.SLDPRT		SHEET: 19 OF 55			

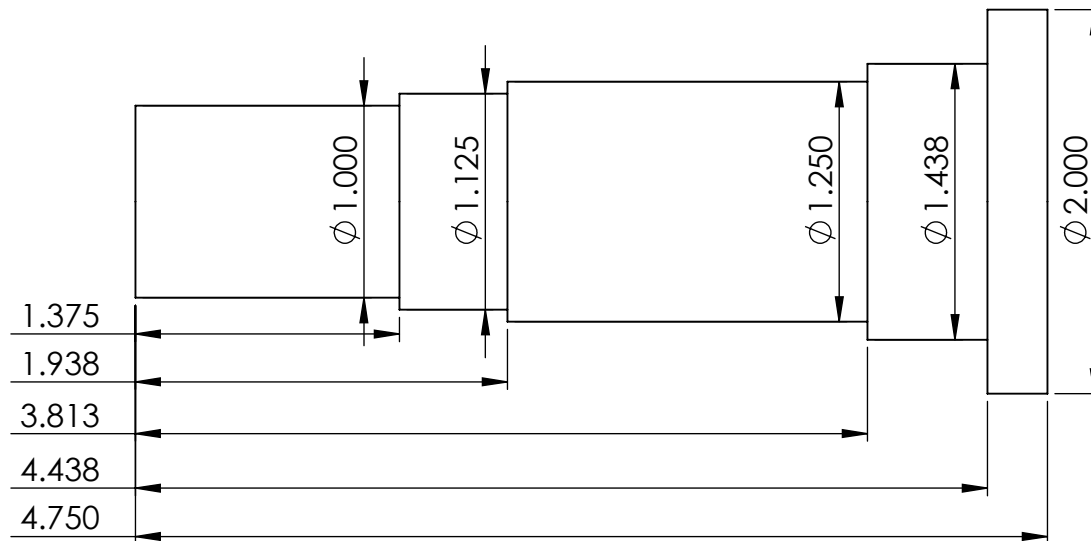


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MATERIAL: Cast Alloy Steel		DESCRIPTION: Crosshead Shoe		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
DEFAULT TOLERANCES: LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°		CHECKED BY: Charles Krueger DATE: 5/5/2015	
DRAWN BY: Michael Botterbusch FILE NAME: 02-05.SLDPR		DATE: 5/5/2015		PART #: 02-05 QTY: 2	
		SCALE: 1:2		SHEET: 20 OF 55	

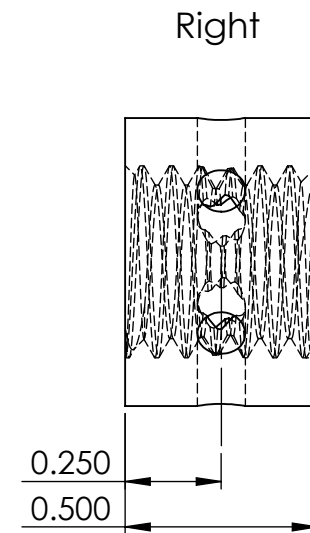
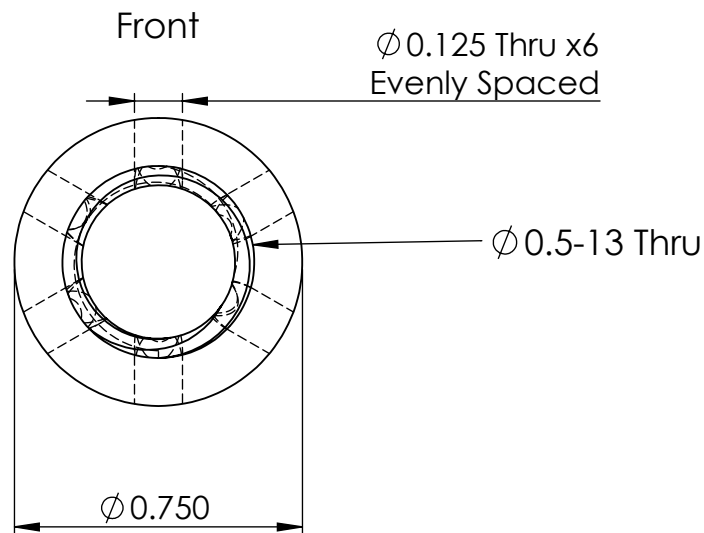
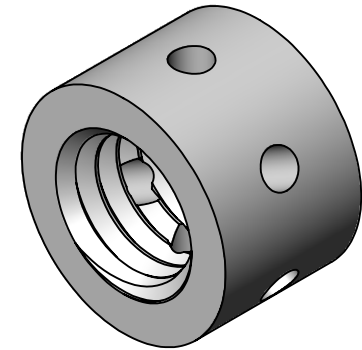


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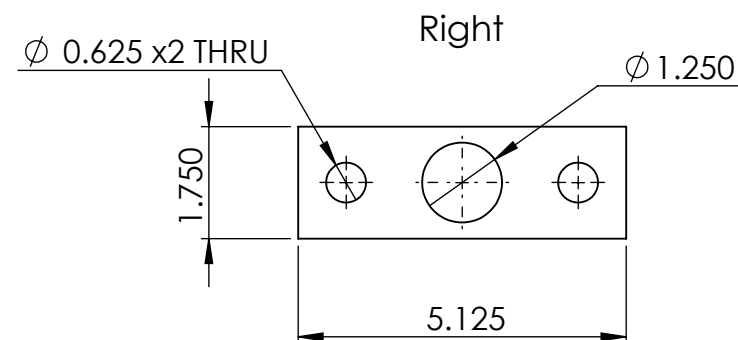
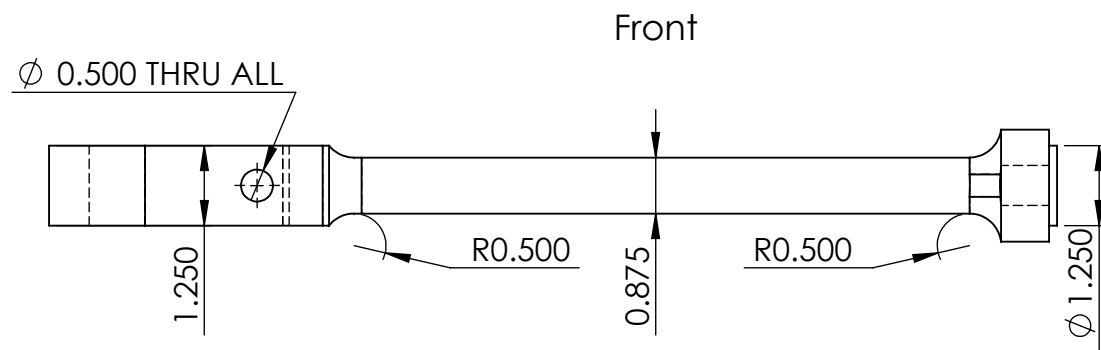
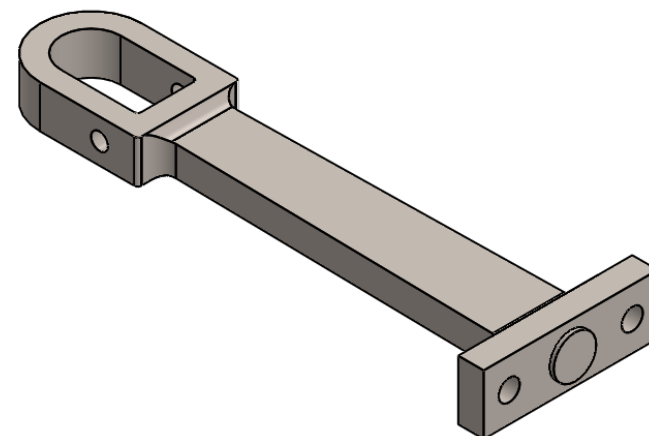
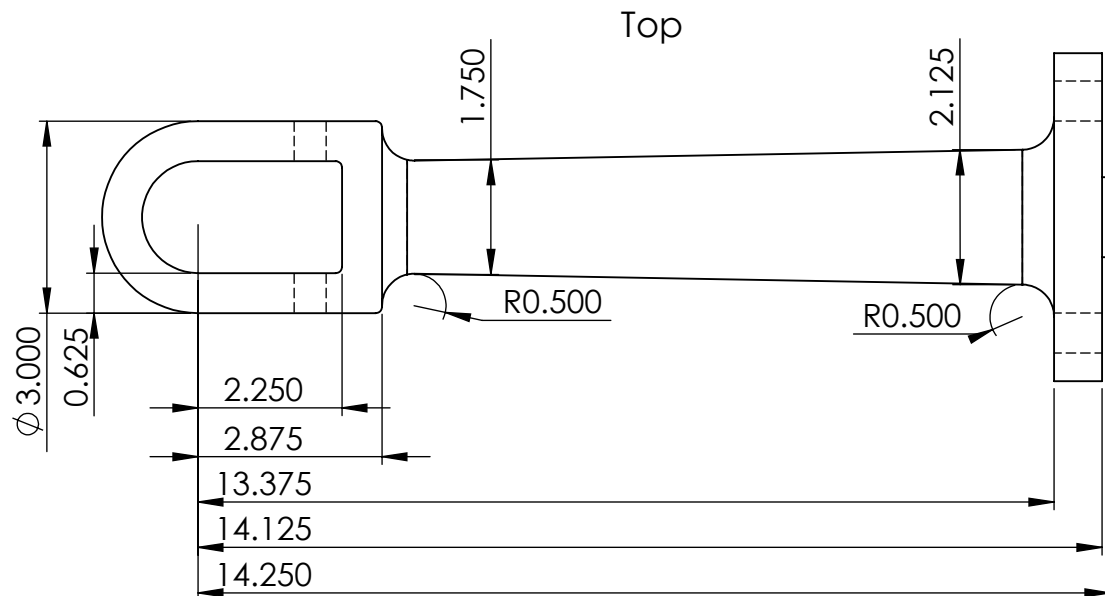
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		MATERIAL: Cast Alloy Steel			
DEFAULT TOLERANCES:		DESCRIPTION: Crosshead Pin		UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.± 2 X.X± 1 X.XX± 0 30'	CHECKED BY: Charles Krueger	DATE: 5/5/2015		
		DRAWN BY: Michael Botterbusch	DATE: 4/30/2015	PART #: 02-06	QTY: 1
		FILE NAME: 02-06.SLDPRT		SCALE: 1:1	SHEET: 21 OF 55



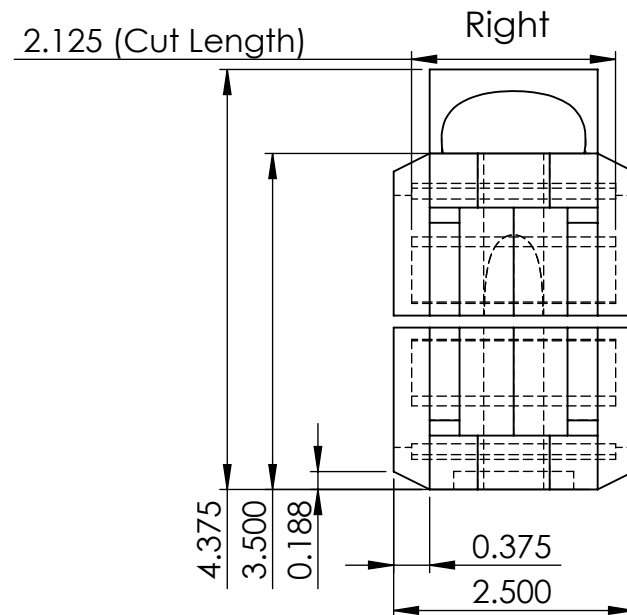
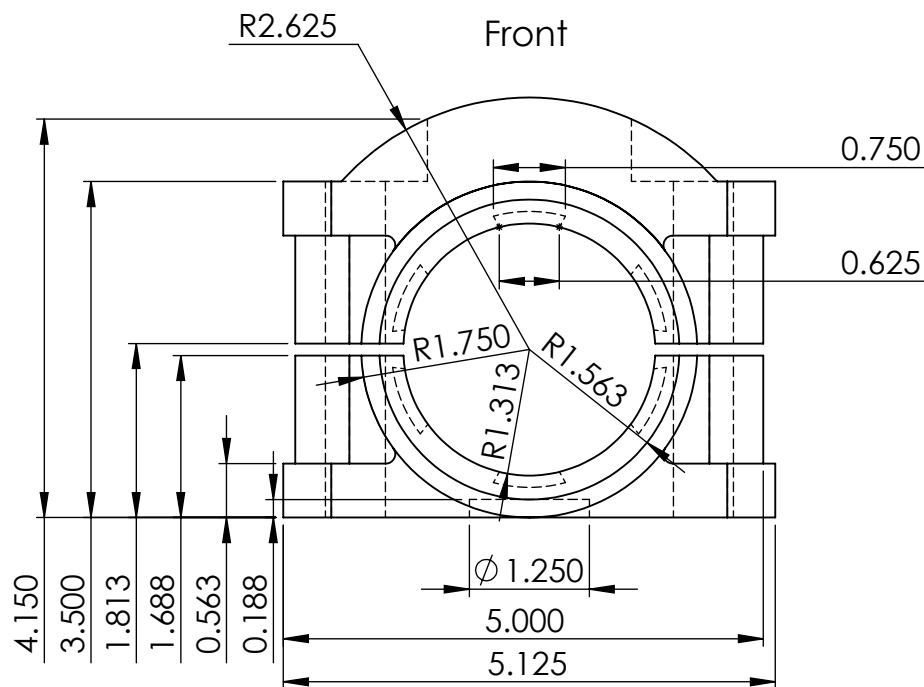
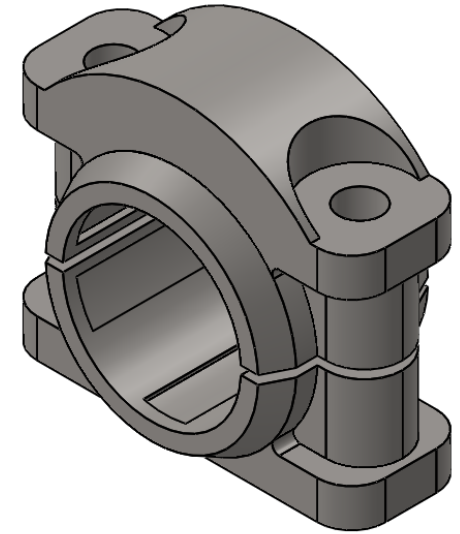
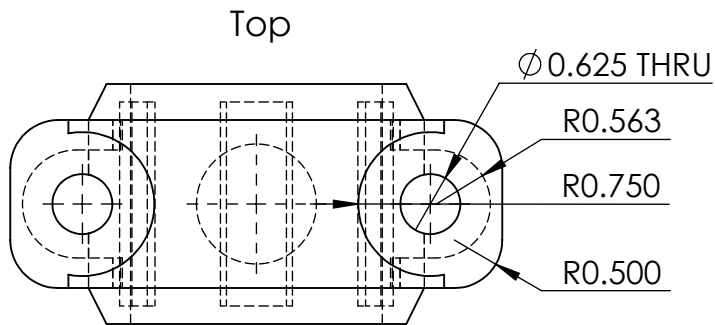
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		MATERIAL: Cast Alloy Steel			
DEFAULT TOLERANCES:		DESCRIPTION: Crosshead Adjusting Nut		UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002	ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°	CHECKED BY: Michael Botterbusch	DATE: 5/4/2015		
		DRAWN BY: Parker Hill	DATE: 5/5/2015	PART #: 02-07	QTY: 1
		FILE NAME: 02-07.SLDPRT		SCALE: 2:1	SHEET: 22 OF 55



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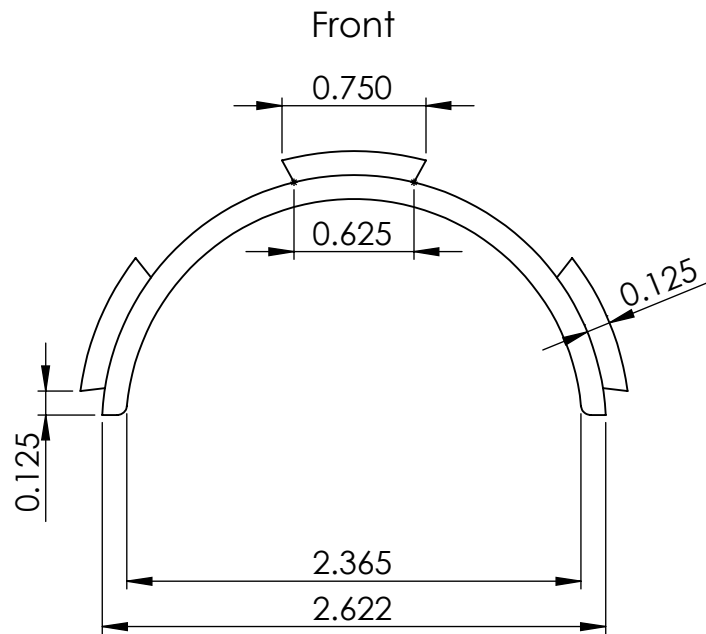
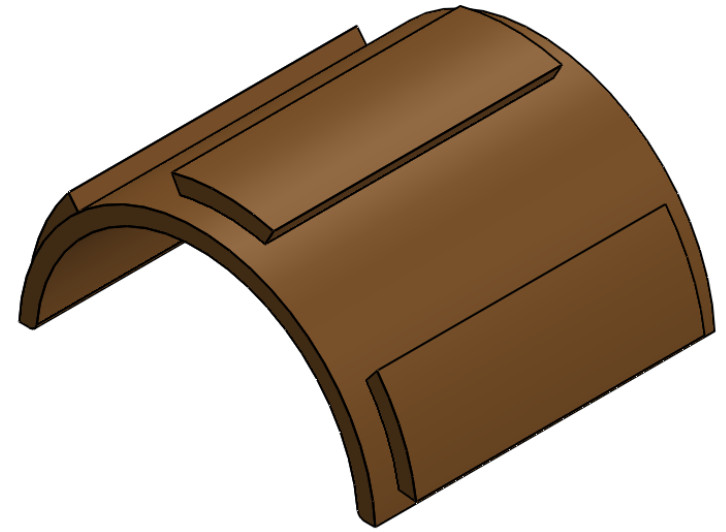
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		MATERIAL: Cast Alloy Steel			
DEFAULT TOLERANCES:		DESCRIPTION: Connecting rod		UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002		CHECKED BY: Charles Krueger DATE: 5/5/2015			
ANGULAR: X.± 2 X.X± 1 X.XX± 0.30'		DRAWN BY: Michael Botterbusch DATE: 5/5/2015		PART #: 02-08	QTY: 1
		FILE NAME: 02-08.SLDPRT		SCALE: 1:3	SHEET: 23 OF 55



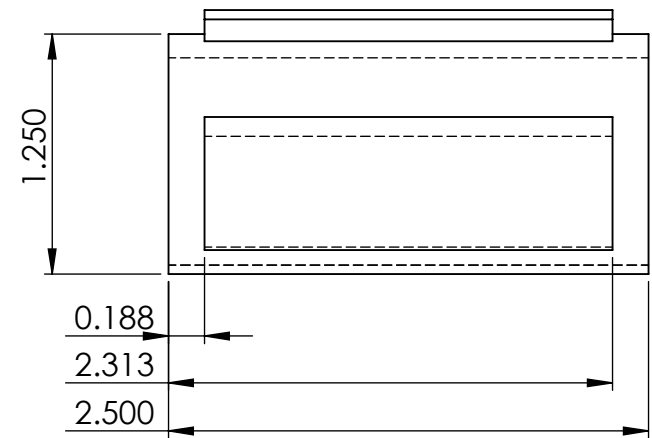
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DEFAULT TOLERANCES: LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002		DESCRIPTION: Crank End Boxes CHECKED BY: Charles Krueger DATE: 5/5/2015 DRAWN BY: Parker Hill DATE: 5/7/2015 FILE NAME: 02-09.SLDPRT		MATERIAL: Cast Alloy Steel	
ANGLAR: X.± 2 X.X± 1 X.XX± 0.30'		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>		PART #: 02-09	QTY: 1
		SCALE: 1:2		SHEET: 24 OF 55	




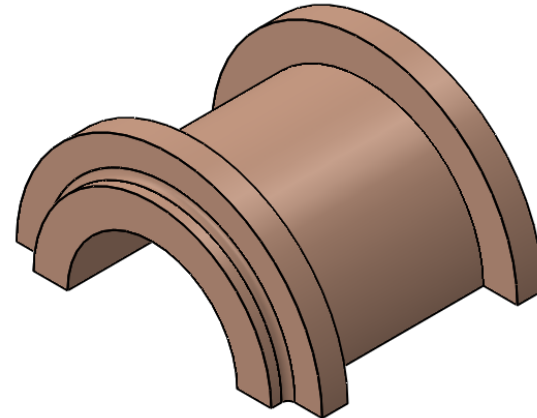


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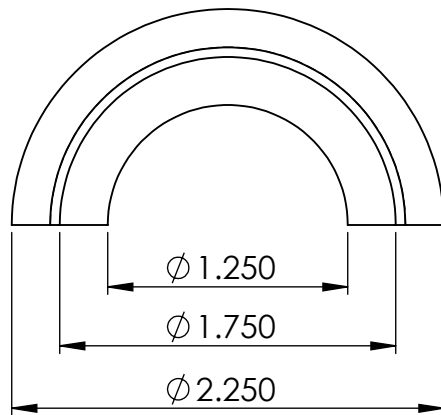
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		MATERIAL: Tin Bearing Bronze			
DEFAULT TOLERANCES:		DESCRIPTION: Crank End Babbitt			
LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		CHECKED BY: Michael Botterbusch		DATE: 5/4/2015	
ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°		DRAWN BY: Parker Hill		DATE: 4/30/2015	
		FILE NAME: 02-10.SLDPRT		PART #: 02-10	
				QTY: 2	
				SCALE: 1:1	
				SHEET: 25 OF 55	
		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>			

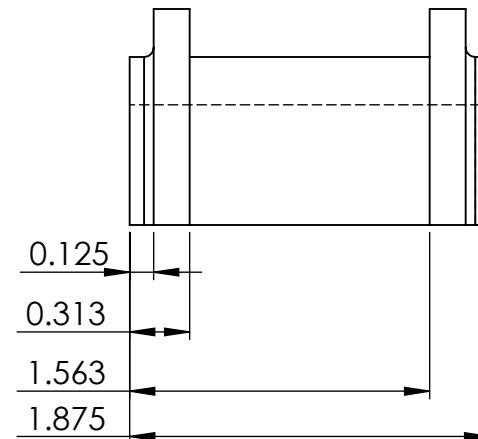


All fillets .05" radius

Front

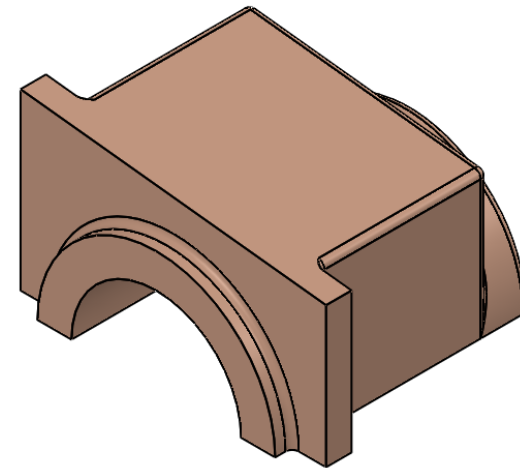


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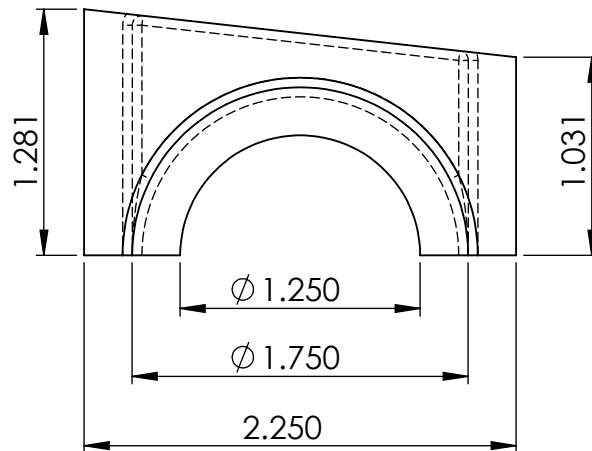
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		MATERIAL: Commercial Bronze, UNS C22000 (90-10 Bronze)		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>
DEFAULT TOLERANCES: LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002		DESCRIPTION: Bronze Box 1		PART #: 02-11
ANGULAR: X.± 2 X.X± 1 X.XX± 0.30°		CHECKED BY: Michael Botterbusch DATE: 5/4/2015		QTY: 1
FILE NAME: 02-11.SLDPRT		DRAWN BY: Parker Hill DATE: 5/6/2015		SCALE: 1:1
				SHEET: 26 OF 55

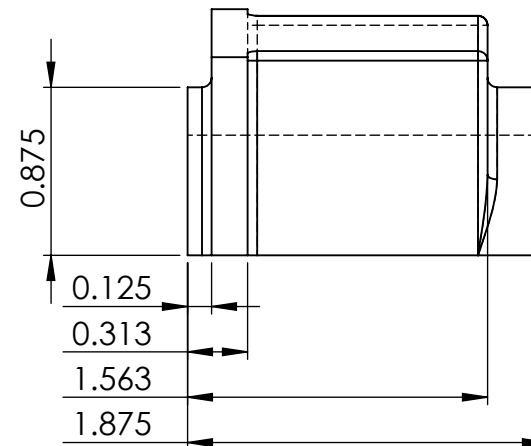


All fillets .05" radius

Front



Right

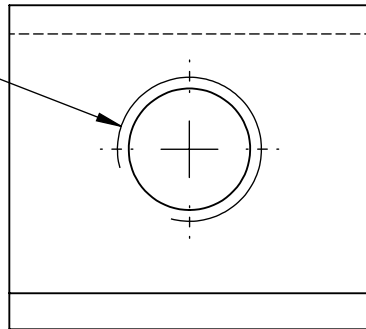


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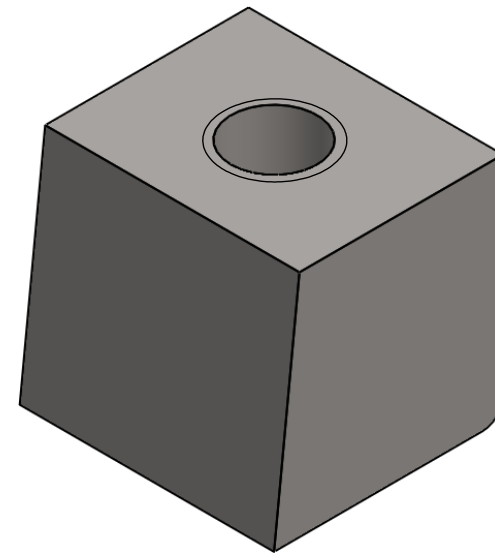
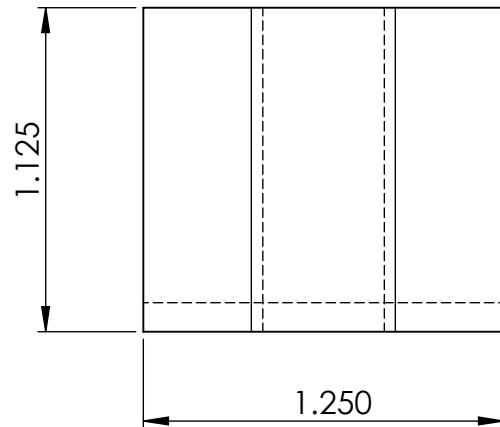
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DEFAULT TOLERANCES: LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		MATERIAL: Commercial Bronze, UNS C22000 (90-10 Bronze)		UNIVERSITY OF IDAHO ME DEPARTMENT	
DESCRIPTION: Bronze Box 2		CHECKED BY: Charles Krueger		DATE: 5/5/2015	
DRAWN BY: Parker Hill		DATE: 5/6/2015		PART #: 02-12	
FILE NAME: 02-12.SLDPRT		SCALE: 1:1		QTY: 1	
				SHEET: 27 OF 55	

Top

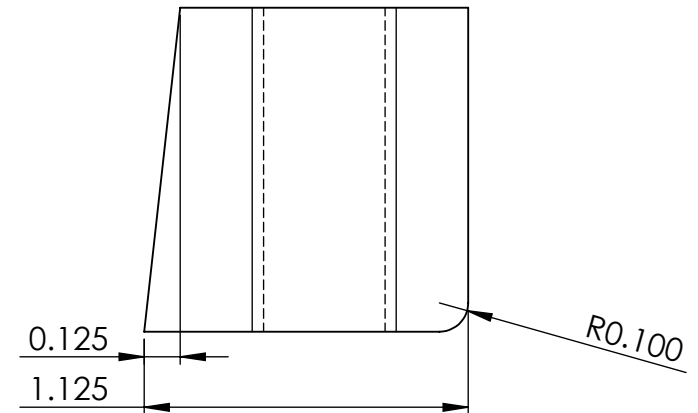
1/2-13 Tapped Hole




Front

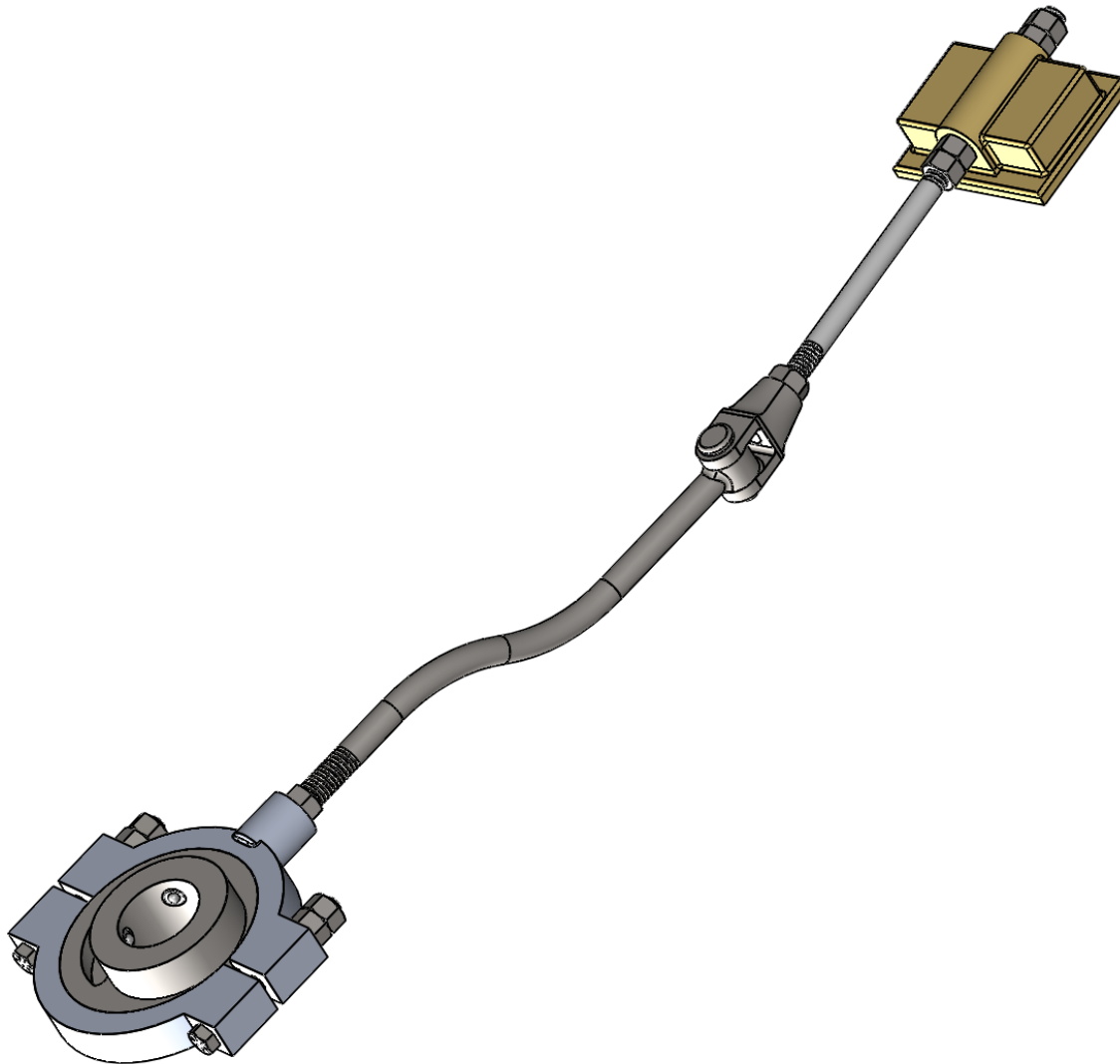


Right




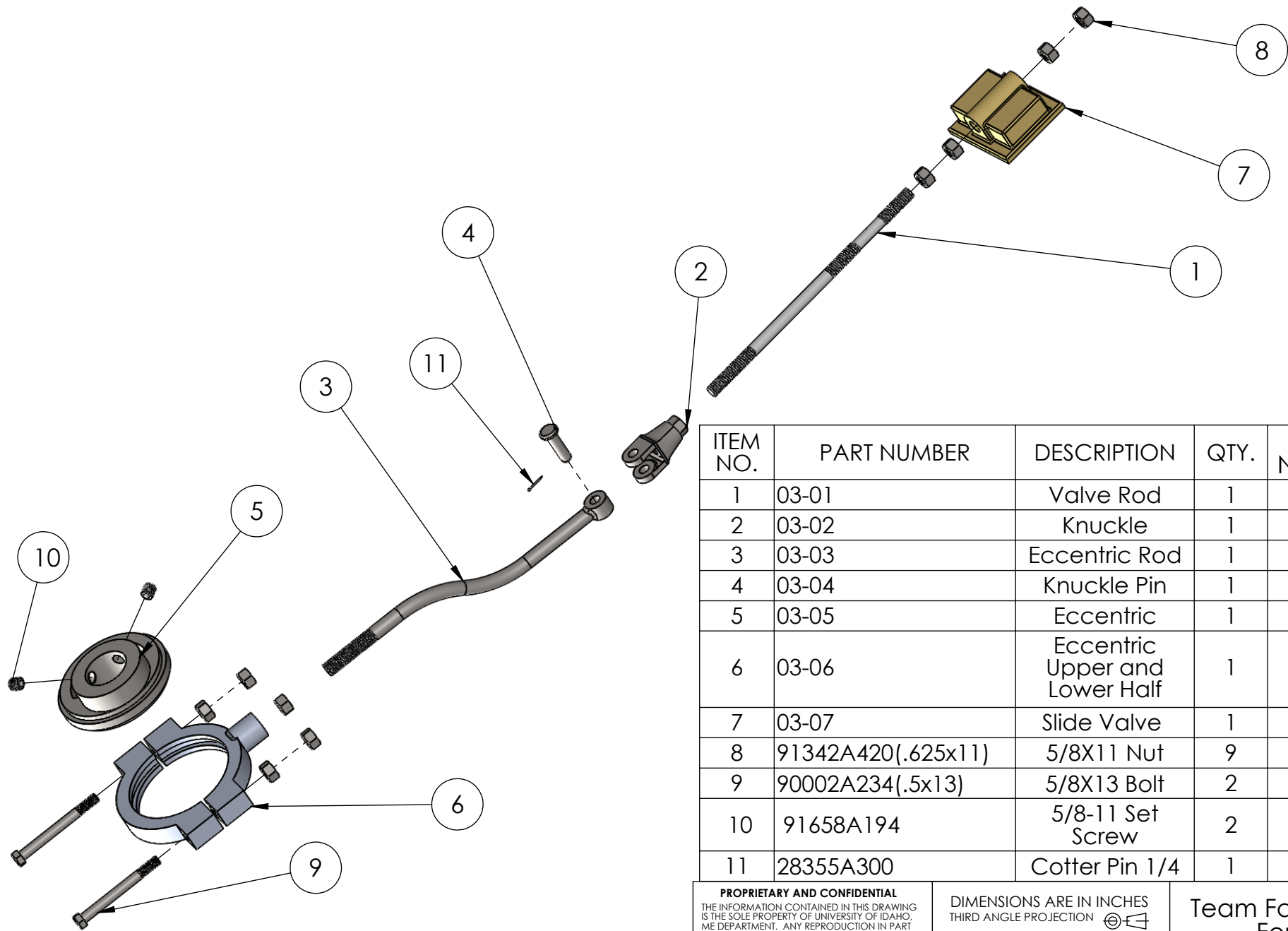
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		MATERIAL: Cast Alloy Steel			
<div>DEFAULT TOLERANCES:</div> <div>LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002</div>		<div>DESCRIPTION: Wedge Block</div> <div>CHECKED BY: Charles Krueger</div> <div>DRAWN BY: Parker Hill</div> <div>FILE NAME: 02-13.SLDPRT</div>		<div>UNIVERSITY OF IDAHO ME DEPARTMENT</div>	
<div>ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°</div>		<div>DATE: 5/5/2015</div> <div>DATE: 5/7/2015</div>		<div>PART #: 02-13</div> <div>QTY: 1</div>	
				<div>SCALE: 2:1</div> <div>SHEET: 28 OF 55</div>	




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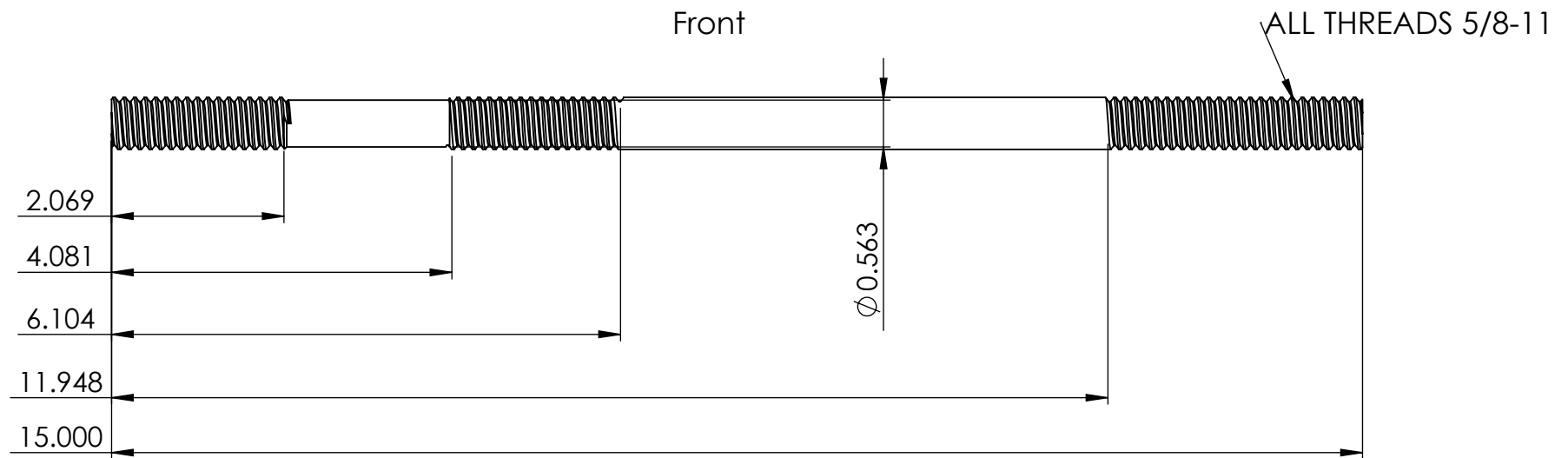
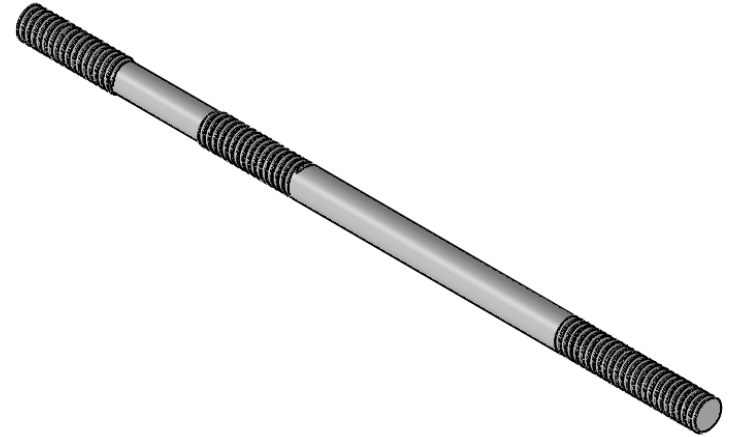
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		MATERIAL: N/A			
DEFAULT TOLERANCES:		DESCRIPTION: Eccentric Assembly		UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002	ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0 30'	CHECKED BY: Charles Krueger	DATE: 4/30/2015		
		DRAWN BY: Caleb Jo	DATE: 5/7/2015	PART #: 03-00	QTY: 1
		FILE NAME: 03-00.SLDPRT		SCALE: 1:20	SHEET: 29 OF 55




ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NUMBER
1	03-01	Valve Rod	1	31
2	03-02	Knuckle	1	32
3	03-03	Eccentric Rod	1	33
4	03-04	Knuckle Pin	1	34
5	03-05	Eccentric	1	35
6	03-06	Eccentric Upper and Lower Half	1	36
7	03-07	Slide Valve	1	37
8	91342A420(.625x11)	5/8X11 Nut	9	
9	90002A234(.5x13)	5/8X13 Bolt	2	
10	91658A194	5/8-11 Set Screw	2	
11	28355A300	Cotter Pin 1/4	1	

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		MATERIAL: N/A			
DEFAULT TOLERANCES:		DESCRIPTION: Eccentric Assembly		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.± 2 X.X± 1 X.XX± 0 30'	CHECKED BY: Charles Krueger	DATE: 4/30/2015		
		DRAWN BY: Caleb Jo	DATE: 5/7/2015	PART #: 03-00	QTY: 1
		FILE NAME: 03-00.SLDPRT		SCALE: 1:7	SHEET: 30 OF 55

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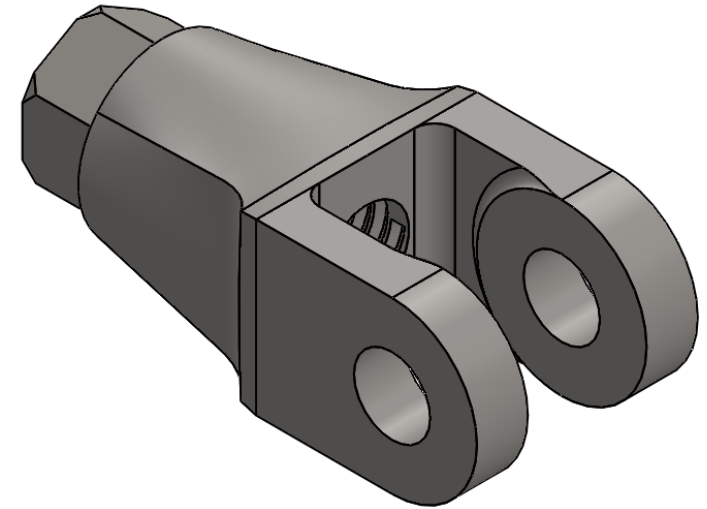
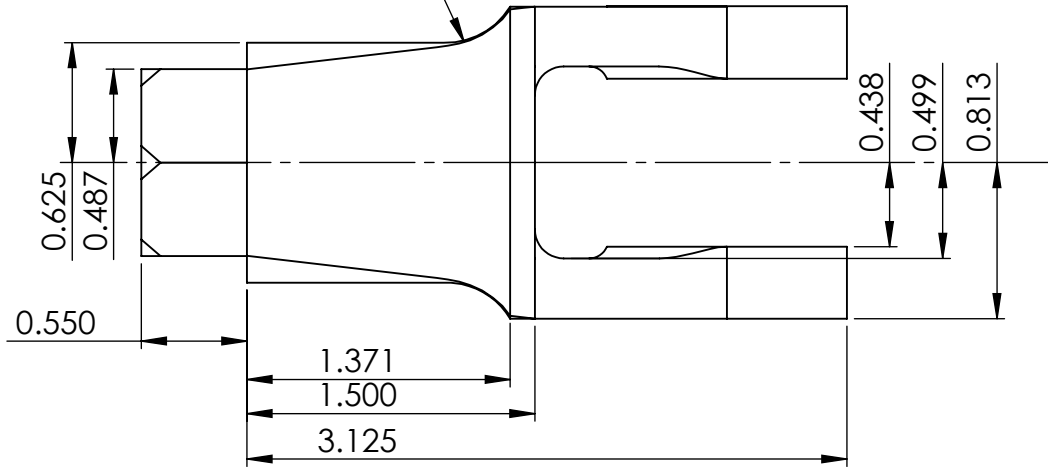


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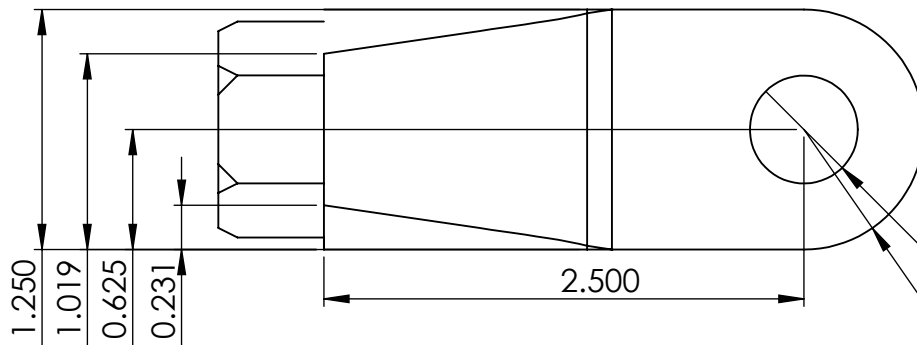
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		MATERIAL: Cast Alloy Steel			
DEFAULT TOLERANCES:		DESCRIPTION: Valve Rod		UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.±2 X.X±1 X.XX±0.30'	CHECKED BY: Charles Krueger	DATE: 4/30/2015		
		DRAWN BY: Caleb Jo	DATE: 4/30/2015	PART #: 03-01	QTY: 1
		FILE NAME: 03-01.SLDPRT		SCALE: 1:2	SHEET: 31 OF 55

.5" Radius for visual effect

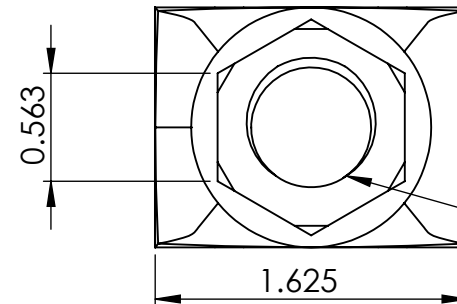
Top



Front



Left



5/8 x 13 thread

Ø0.563 THRU

R0.625

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DIMENSIONS ARE IN INCHES  
THIRD ANGLE PROJECTION

MATERIAL: Cast Alloy Steel

**Team Fantastic  
Four**

**UNIVERSITY OF IDAHO  
ME DEPARTMENT**

**DEFAULT TOLERANCES:**

LINEAR:  
X. ± .25  
X.X ± .1  
X.XX ± .01  
X.XXX ± .002

ANGULAR:  
X. ± 2  
X.X ± 1  
X.XX ± 0.30°

DESCRIPTION: Knuckle

CHECKED BY: Charles Krueger

DATE: 4/30/2015

DRAWN BY: Caleb Jo

DATE: 4/30/2015

FILE NAME: 03-02.SLDPRT

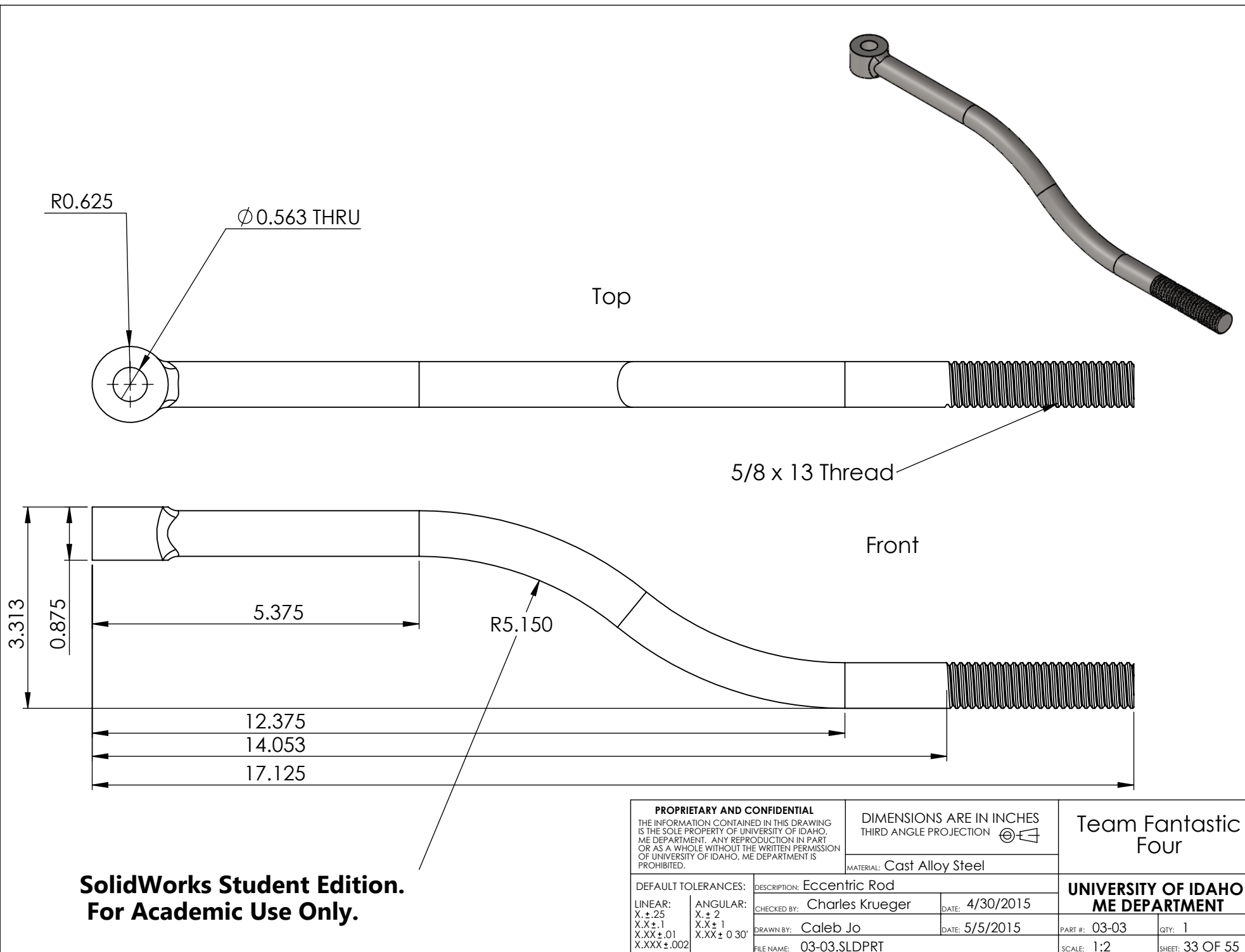
PART #: 03-02

QTY: 1


SCALE: 1:1

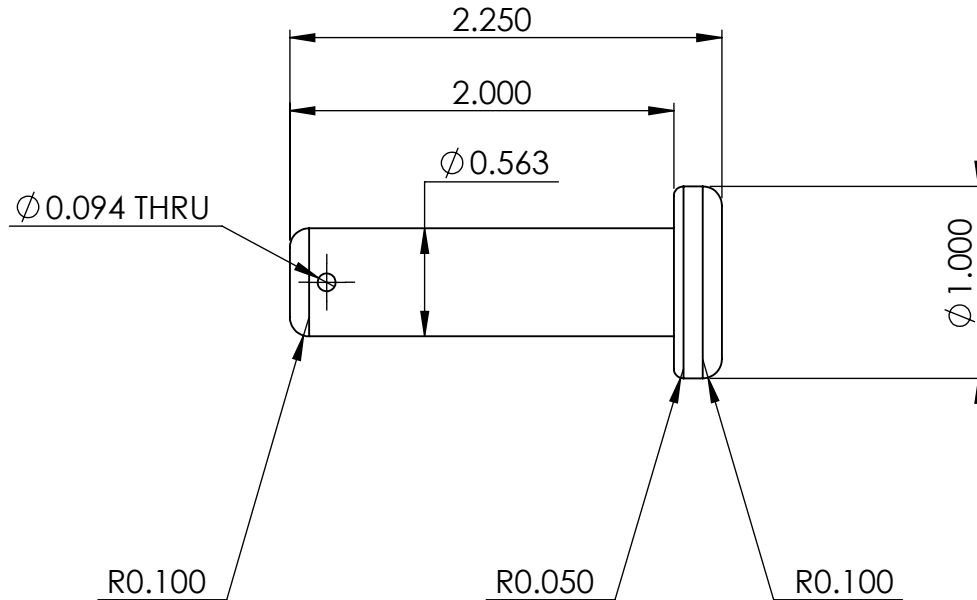
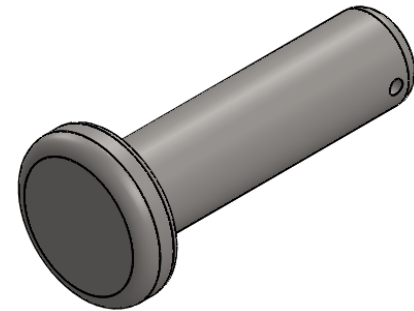
SHEET: 32 OF 55






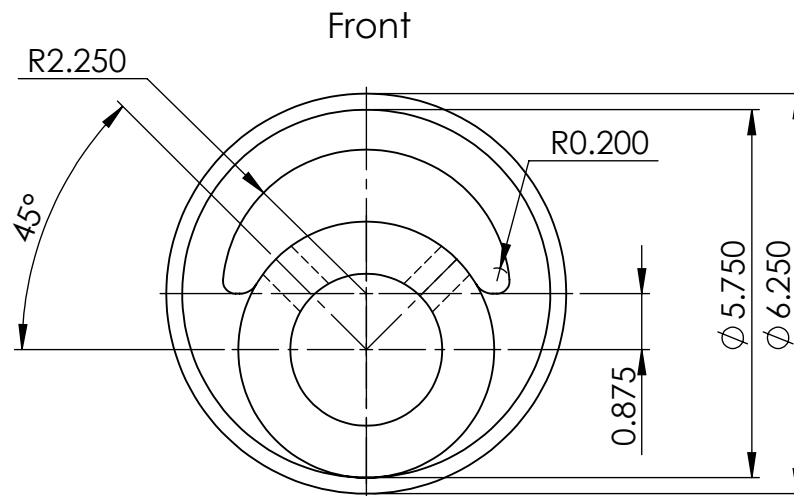
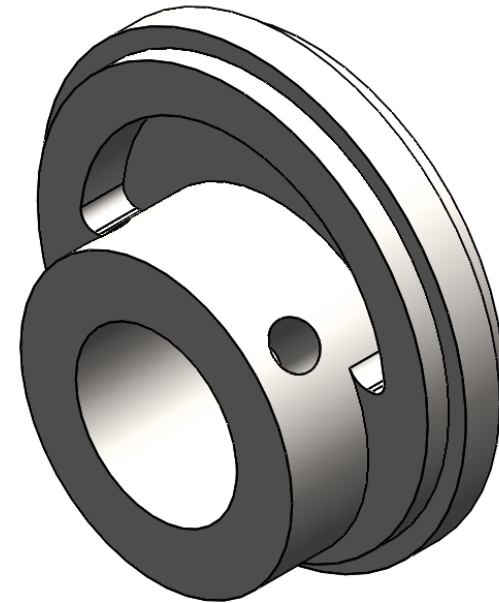
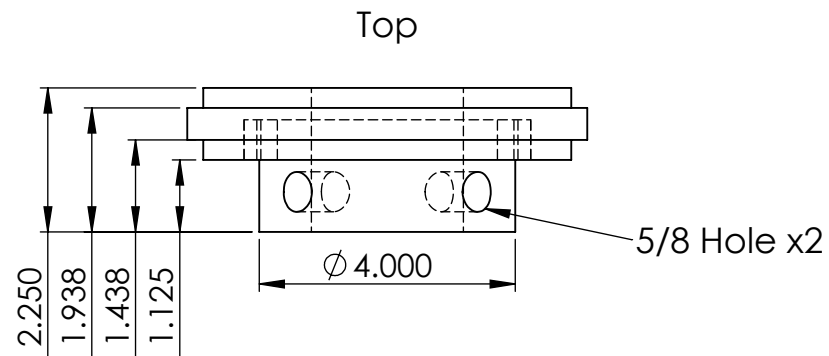
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		MATERIAL: Cast Alloy Steel			
DEFAULT TOLERANCES:		DESCRIPTION: Eccentric Rod		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.±2 X.X±1 X.XX±0.30'	CHECKED BY: Charles Krueger			
		DRAWN BY: Caleb Jo		DATE: 5/5/2015	
		FILE NAME: 03-03.SLDPRT		PART #: 03-03	
				SCALE: 1:2	SHEET: 33 OF 55




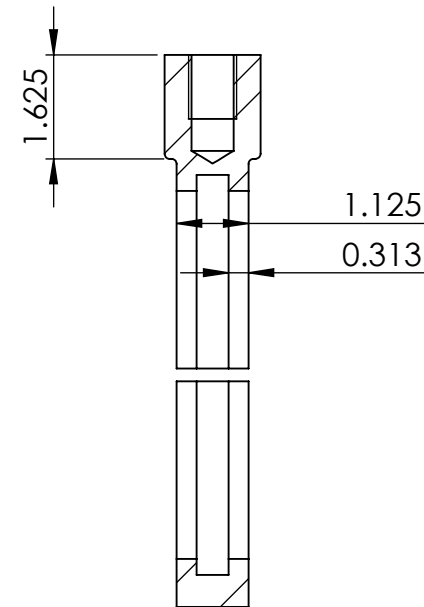
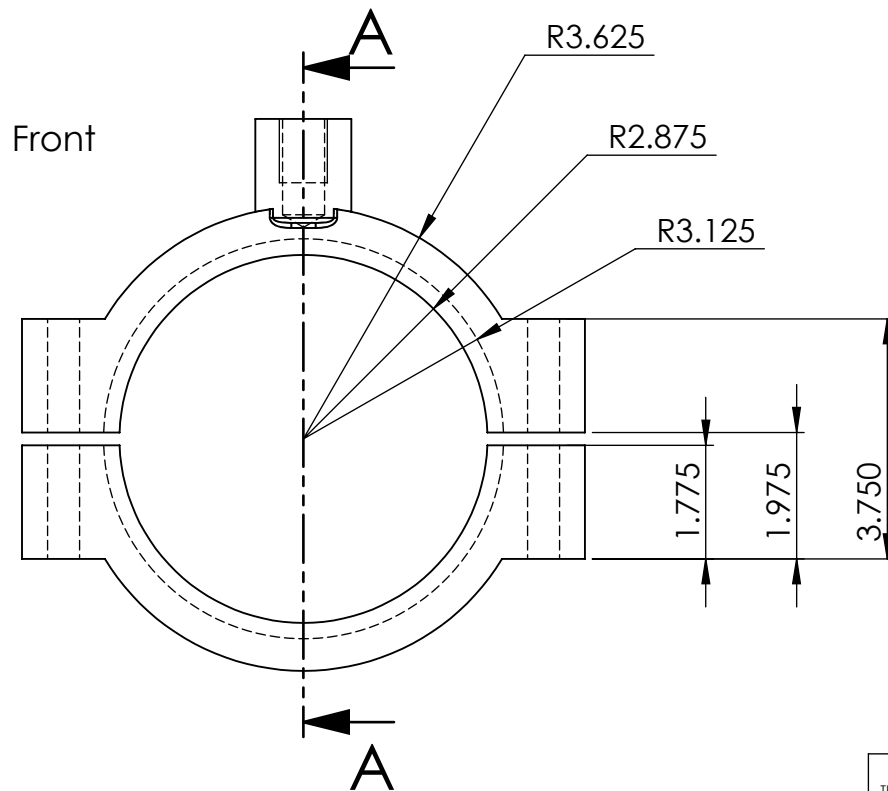
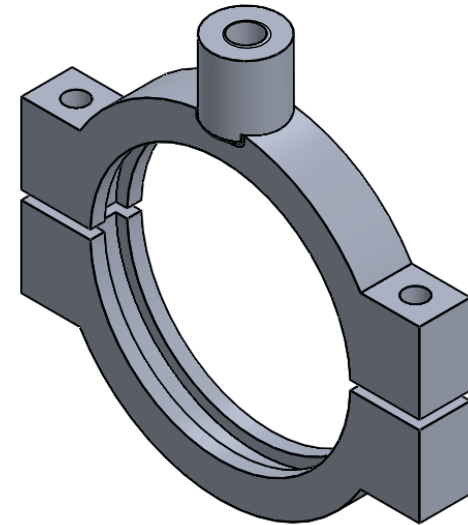
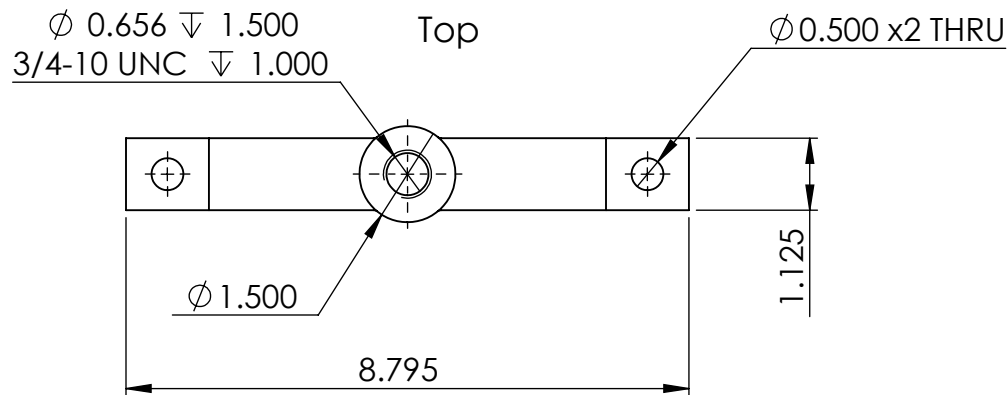
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		MATERIAL: Cast Alloy Steel					
DEFAULT TOLERANCES:		DESCRIPTION: Knuckle Pin				UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		CHECKED BY: Charles Krueger		DATE: 4/30/2015			
ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30'		DRAWN BY: Caleb Jo		DATE: 4/30/2015		PART #: 03-04	
		FILE NAME: 03-04.SLDPRT		SCALE: 1:1		QTY: 1	
						SHEET: 34 OF 55	




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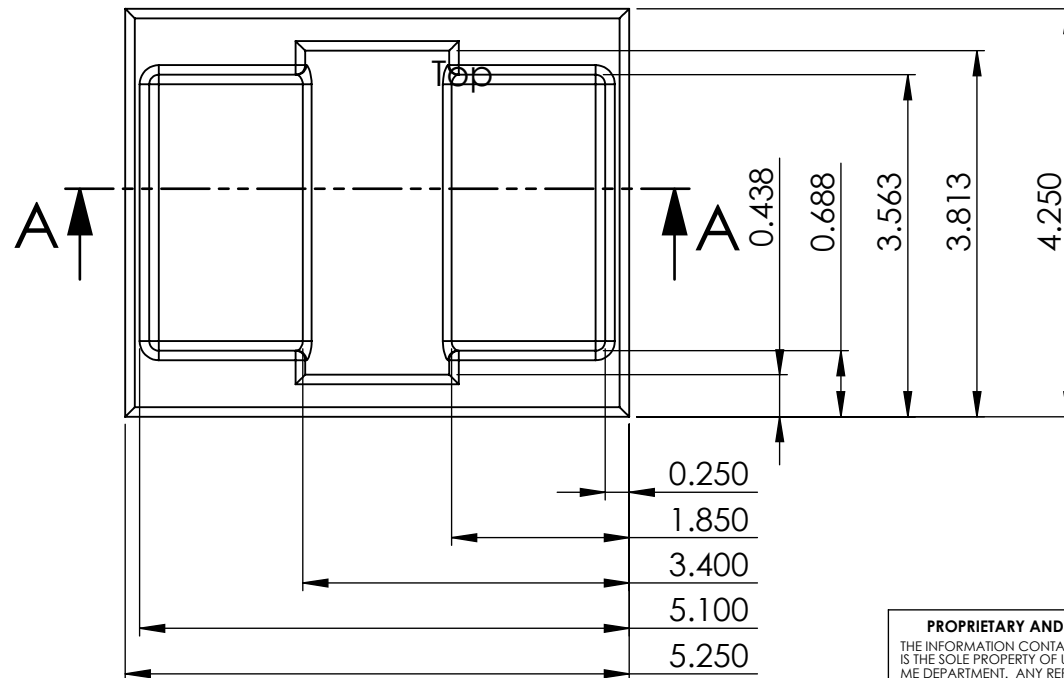
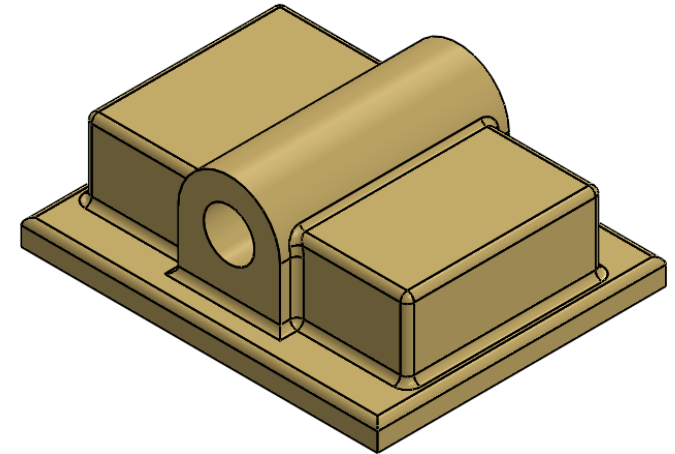
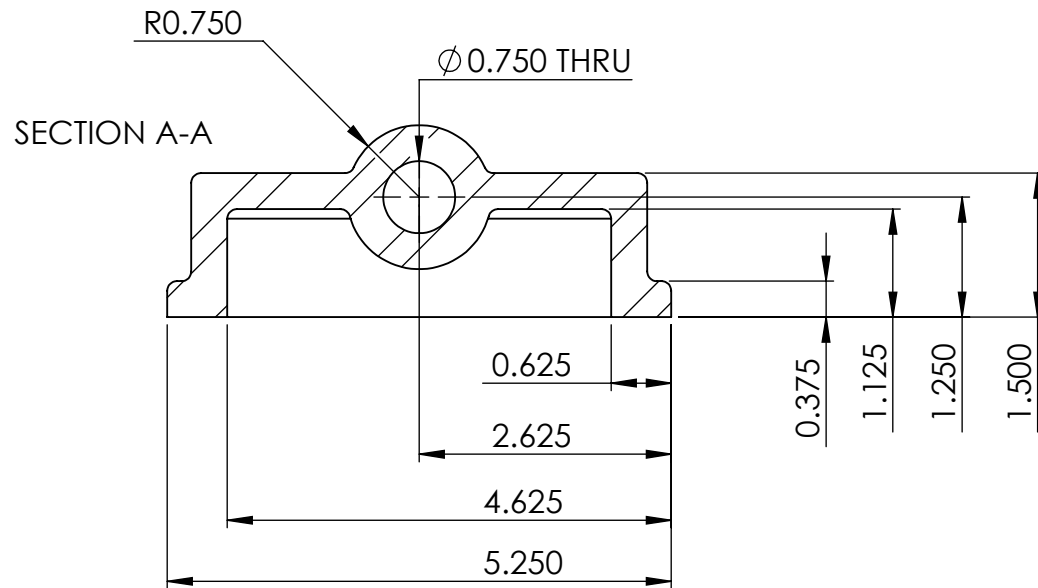
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<div>DEFAULT TOLERANCES:</div> <div><div>LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002</div><div>ANGULAR: X.± 2 X.X± 1 X.XX± 0.30'</div></div>		<div>DESCRIPTION: Eccentric</div> <div><div>CHECKED BY: Charles Krueger</div><div>DATE: 4/30/2015</div></div> <div><div>DRAWN BY: Michael Botterbusch</div><div>DATE: 4/30/2015</div></div> <div>FILE NAME: 03-05.SLDPR</div>		<div>PART #: 03-05</div> <div>QTY: 1</div> <div>SCALE: 1:3</div> <div>SHEET: 35 OF 55</div>	



SECTION A-A

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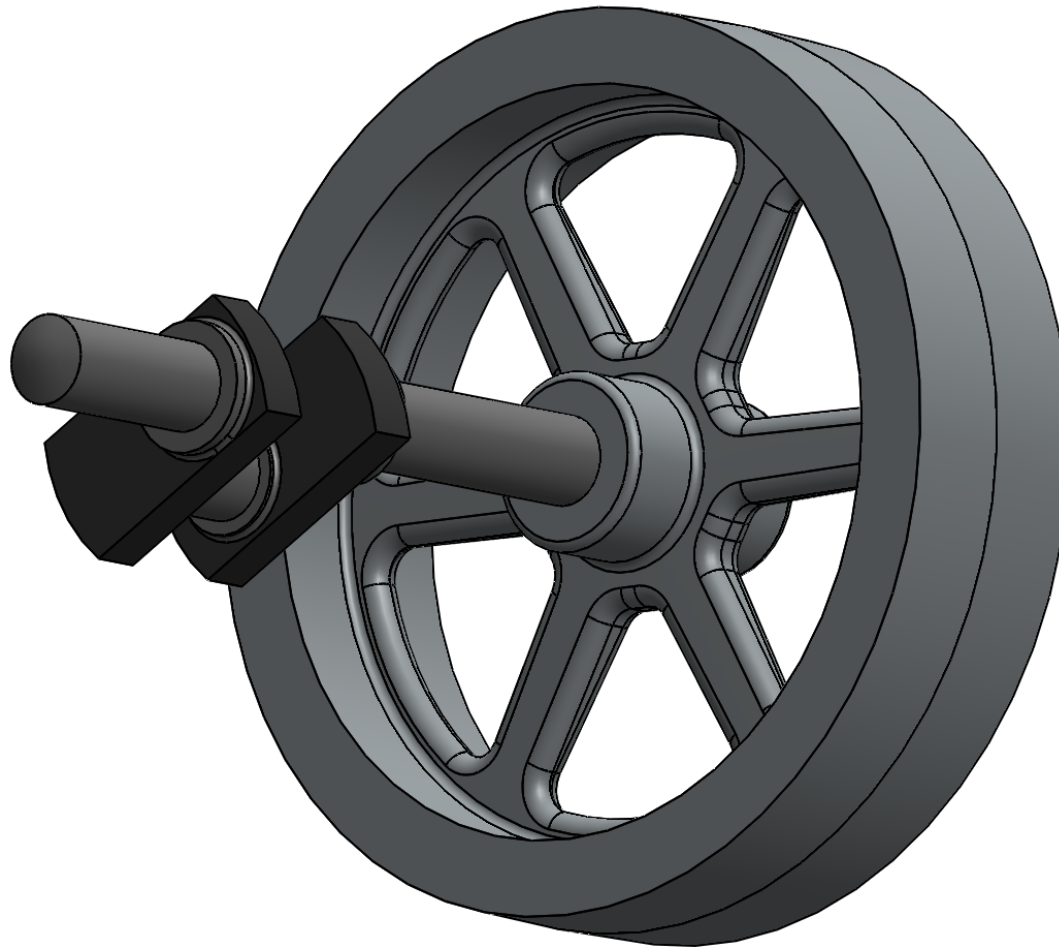
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		MATERIAL: Cast Alloy Steel			
DEFAULT TOLERANCES:		DESCRIPTION: Eccentric Upper and Lower Half		UNIVERSITY OF IDAHO ME DEPARTMENT	
LINEAR: X. $\pm .25$ X.X $\pm .1$ X.XX $\pm .01$ X.XXX $\pm .002$	ANGULAR: X. $\pm 2$ X.X $\pm 1$ X.XX $\pm 0.30^\circ$	CHECKED BY: Charles Krueger	DATE: 4/30/2015		
		DRAWN BY: Michael Botterbusch	DATE: 5/5/2015	PART #: 03-06	QTY: 1
		FILE NAME: 03-06.SLDPRT		SCALE: 1:3	SHEET: 36 OF 55




All fillets are 0.10" radius

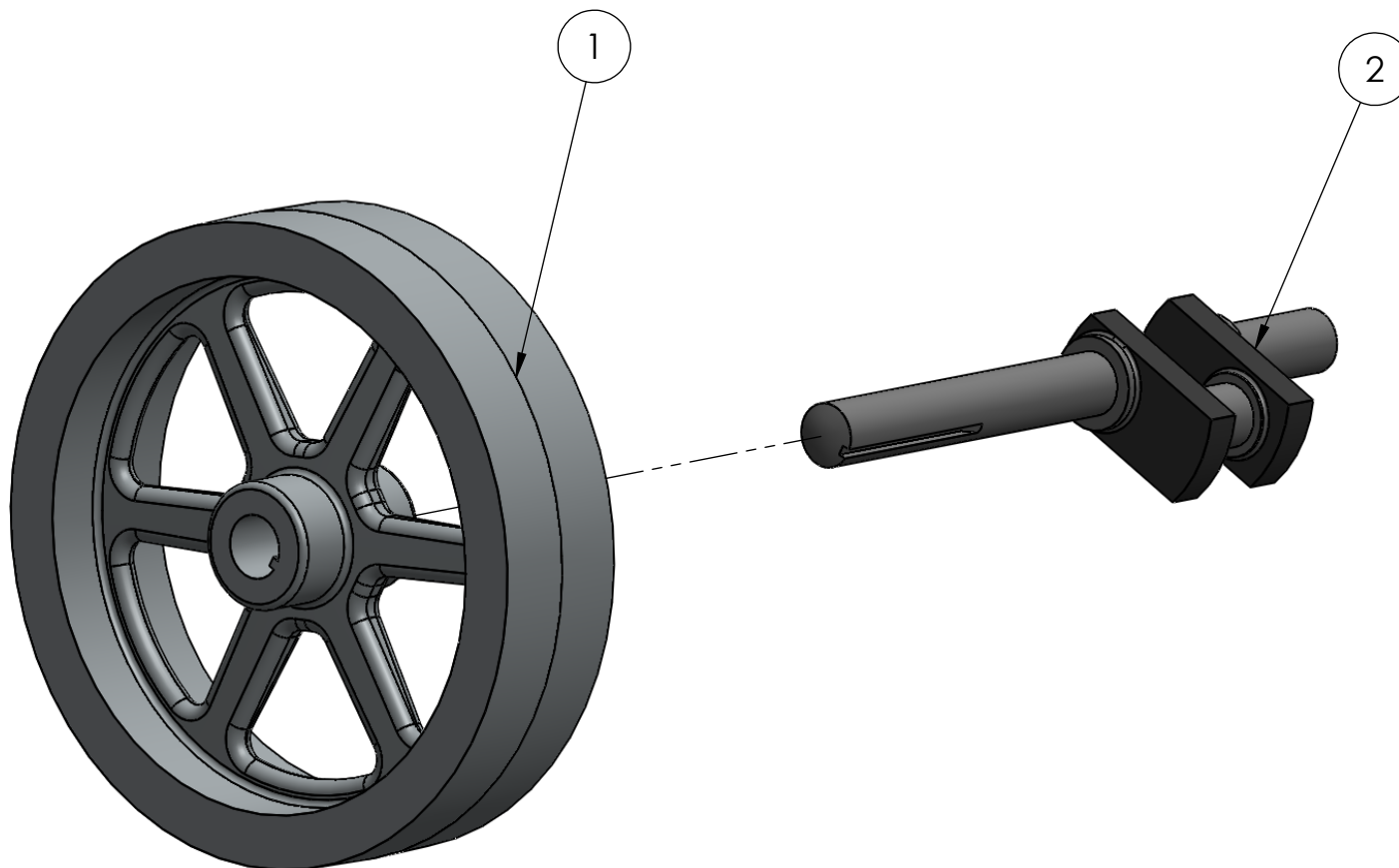
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
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		MATERIAL: Cast Alloy Steel		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
DEFAULT TOLERANCES: LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		DESCRIPTION: Slide Valve		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°		CHECKED BY: Charles Krueger	DATE: 4/30/2015	PART #: 03-07	QTY: 1
		DRAWN BY: Caleb Jo	DATE: 4/30/2015	SCALE: 1:2	SHEET: 37 OF 55
		FILE NAME: 03-07.SLDPR			



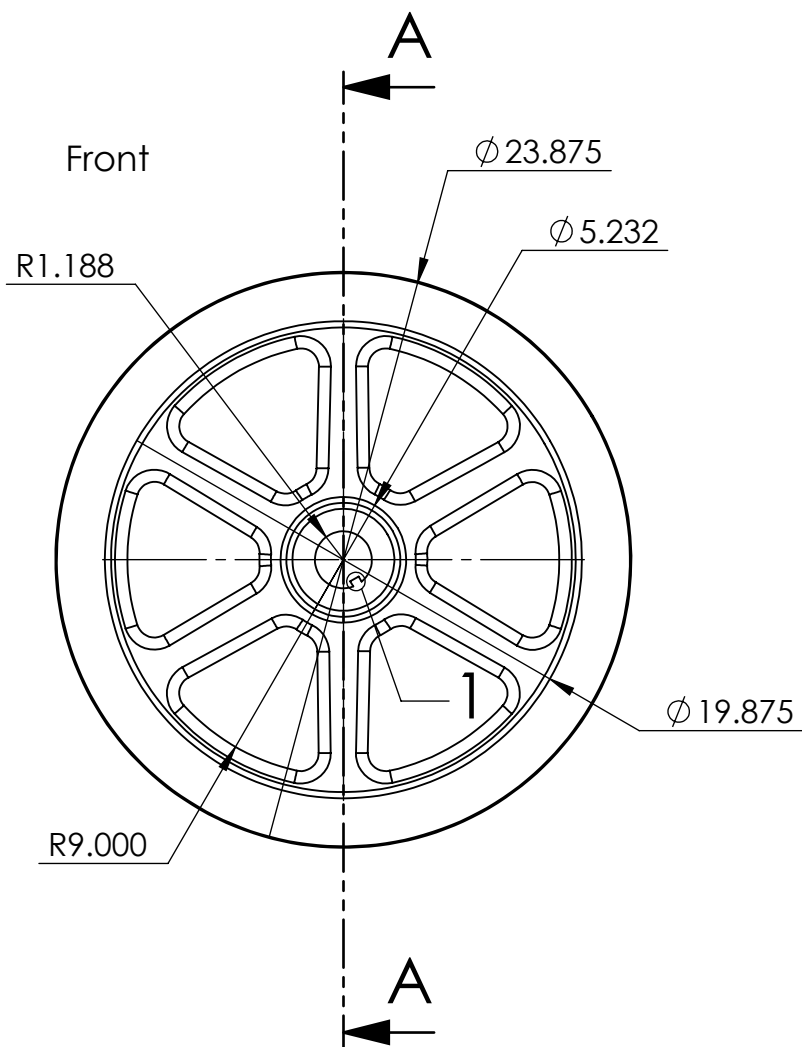
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<div>DEFAULT TOLERANCES:</div> <div>LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002</div> <div>ANGULAR: X.±2 X.X±1 X.XX±0.30°</div>		<div>DESCRIPTION: Flywheel/Crankshaft Assembly</div> <div>CHECKED BY: Charles Krueger</div> <div>DRAWN BY: Michael Botterbusch</div> <div>FILE NAME: 04-00.SLDPRT</div>		<div>DATE: 4/30/2015</div> <div>DATE: 4/30/2015</div> <div>PART #: 04-00</div> <div>QTY: 1</div> <div>SCALE: 1:5</div> <div>SHEET: 38 OF 55</div>	

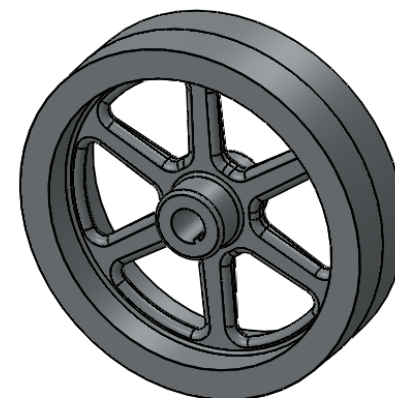
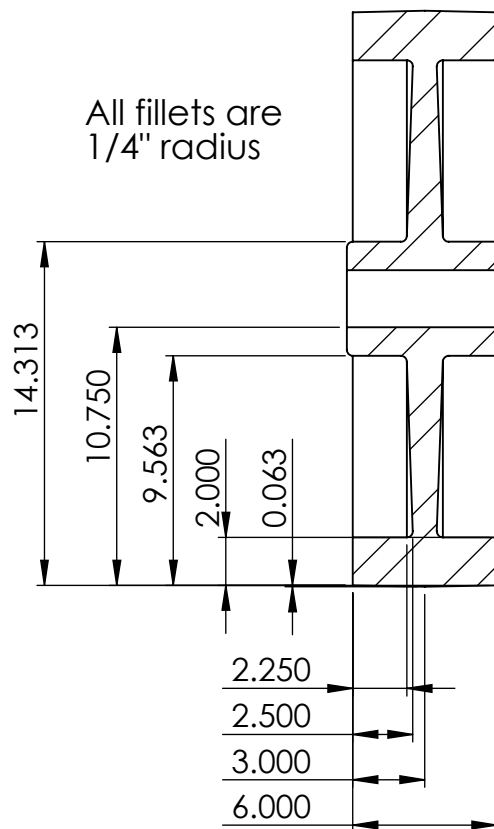


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NUMBER
1	04-01	Flywheel	1	40
2	04-02	Crank Shaft	1	41
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		MATERIAL: Cast Alloy Steel		
		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>		
DEFAULT TOLERANCES: LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		DESCRIPTION: Flywheel/Crankshaft Assembly		
ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0 30'		CHECKED BY: Charles Krueger	DATE: 4/30/2015	
		DRAWN BY: Michael Botterbusch	DATE: 4/30/2015	PART #: 04-00
		FILE NAME: 04-00.SLDPR	SCALE: 1:7	QTY: 1
				SHEET: 39 OF 55

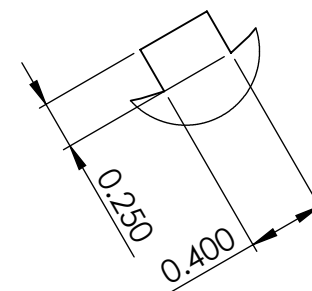
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SECTION A-A  
SCALE 1 : 8



DETAIL 1  
SCALE 1 : 1



Key runs the full width of flywheel

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DIMENSIONS ARE IN INCHES  
THIRD ANGLE PROJECTION

MATERIAL: Cast Alloy Steel

**Team Fantastic  
Four**

DEFAULT TOLERANCES:

LINEAR:  
X. ± .25  
X.X ± .1  
X.XX ± .01  
X.XXX ± .002

ANGULAR:  
X. ± 2  
X.X ± 1  
X.XX ± 0.30°

DESCRIPTION: Flywheel

CHECKED BY: Charles Krueger

DATE: 4/30/2015

DRAWN BY: Michael Botterbusch

DATE: 4/30/2015

FILE NAME: 04-01.SLDPR

**UNIVERSITY OF IDAHO  
ME DEPARTMENT**

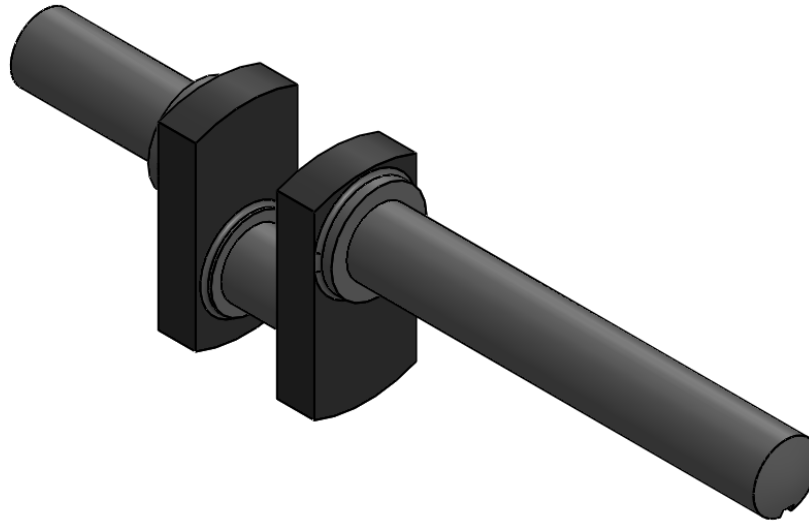
PART #: 04-01

QTY: 1

SCALE: 1:8

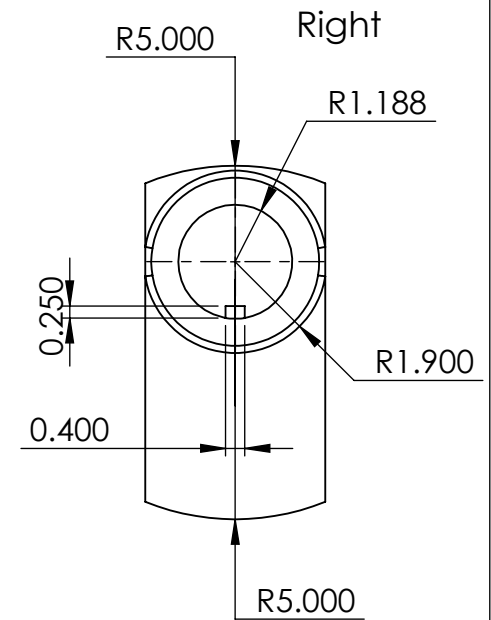
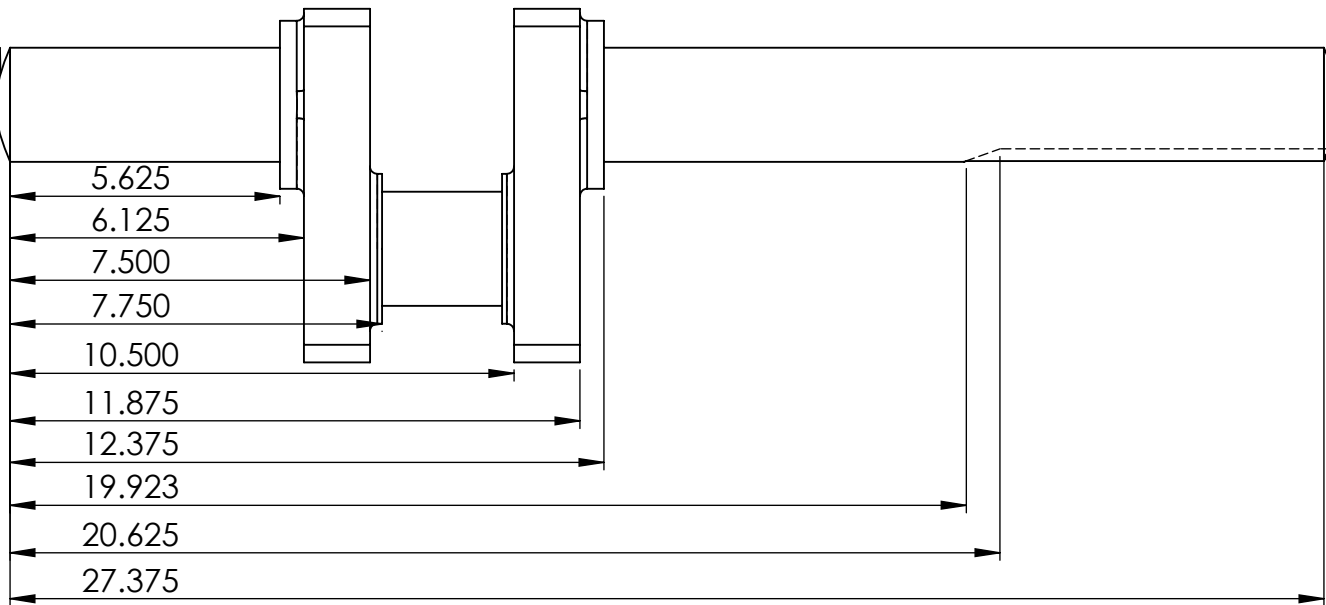
SHEET: 40 OF 55





Front

End caps are domes with 0.3" depth at center.



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DIMENSIONS ARE IN INCHES  
THIRD ANGLE PROJECTION

MATERIAL: Cast Alloy Steel

**Team Fantastic  
Four**

**DEFAULT TOLERANCES:**

LINEAR:  
X. ± .25  
X.X ± .1  
X.XX ± .01  
X.XXX ± .002

ANGULAR:  
X. ± 2  
X.X ± 1  
X.XX ± 0.30'

DESCRIPTION: Crank Shaft

CHECKED BY: Charles Krueger

DATE: 4/30/2015

DRAWN BY: Michael Botterbusch

DATE: 4/30/2015

FILE NAME: 04-02.SLDPR

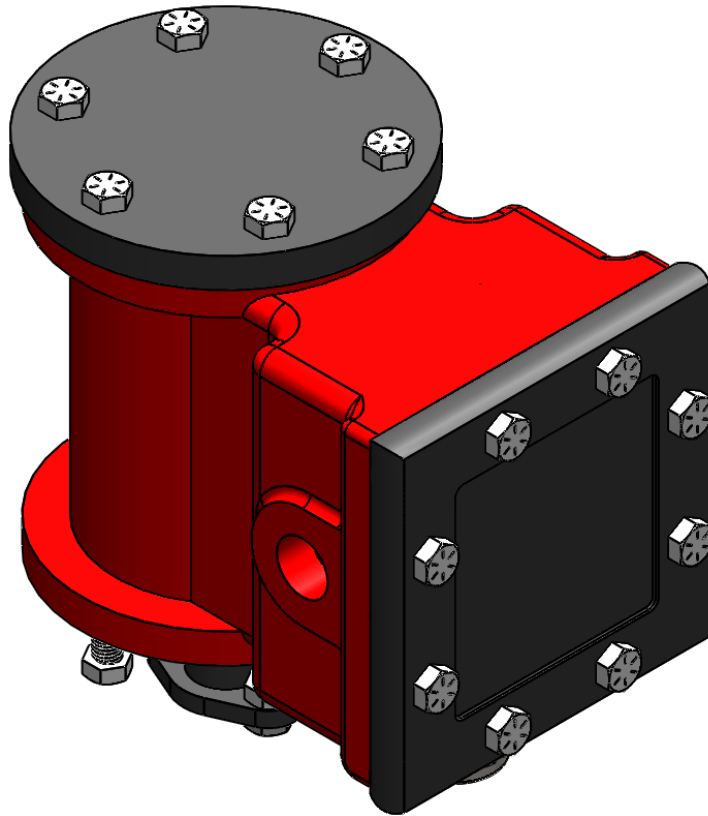
**UNIVERSITY OF IDAHO  
ME DEPARTMENT**

PART #: 04-02


QTY: 1

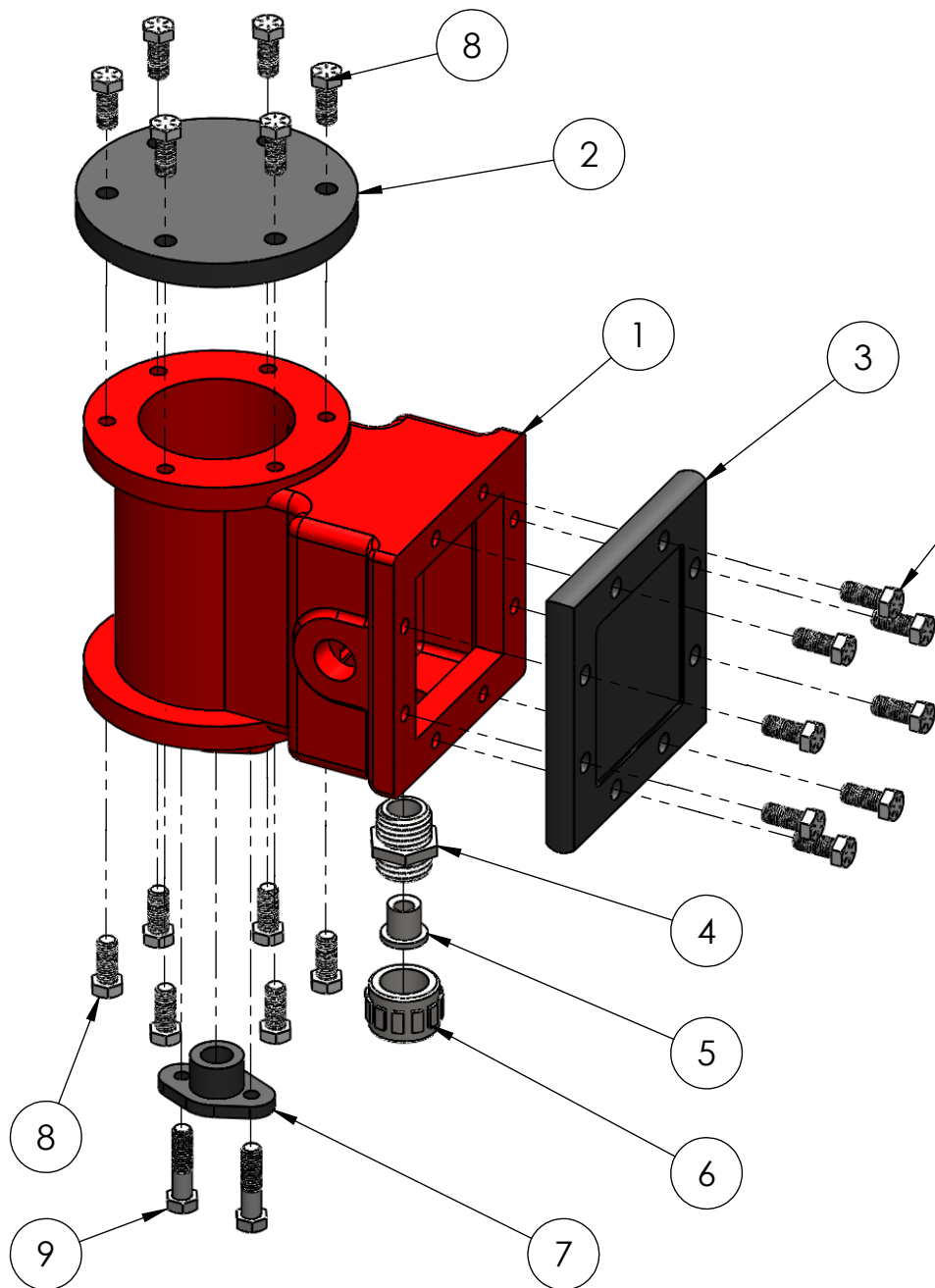
SCALE: 1:4

SHEET: 41 OF 55



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<div>DEFAULT TOLERANCES:</div> <div><div>LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002</div><div>ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°</div></div>		<div>DESCRIPTION: Steam Cylinder Assembly</div> <div><div>CHECKED BY: Parker Hill</div><div>DATE: 5/3/2015</div><div>DRAWN BY: Charles Krueger</div><div>DATE: 5/7/2015</div><div>FILE NAME: 05-00.SLDPRT</div></div>		<div>UNIVERSITY OF IDAHO ME DEPARTMENT</div> <div><div>PART #: 05-00</div><div>QTY: 1</div><div>SCALE: 1:4</div><div>SHEET: 42 OF 55</div></div>	



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	SHEET NUMBER
1	05-01	Steam Cylinder	1	44
2	05-02	Cylinder Head	1	50
3	05-03	Steam Chest Cover	1	51
4	05-04	Valve Rod Stuffing Box	1	52
5	05-05	Valve Rod Gland	1	53
6	05-06	Valve Rod Gland Nut	1	54
7	05-07	Piston Rod Gland	1	55
8	91286A397	5/8-11 Bolt	20	
9	90002A132	5/8x11x2.5	2	

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DIMENSIONS ARE IN INCHES  
 THIRD ANGLE PROJECTION

MATERIAL: N/A

Team Fantastic  
 Four

**UNIVERSITY OF IDAHO  
 ME DEPARTMENT**

DEFAULT TOLERANCES:

LINEAR:  
 X.±.25  
 X.X±.1  
 X.XX±.01  
 X.XXX±.002

ANGULAR:  
 X.± 2  
 X.X± 1  
 X.XX± 0.30'

DESCRIPTION: Steam Cylinder Assembly

CHECKED BY: Parker Hill

DATE: 5/3/2015

DRAWN BY: Charles Krueger

DATE: 5/7/2015

FILE NAME: 05-00.SLDPRT

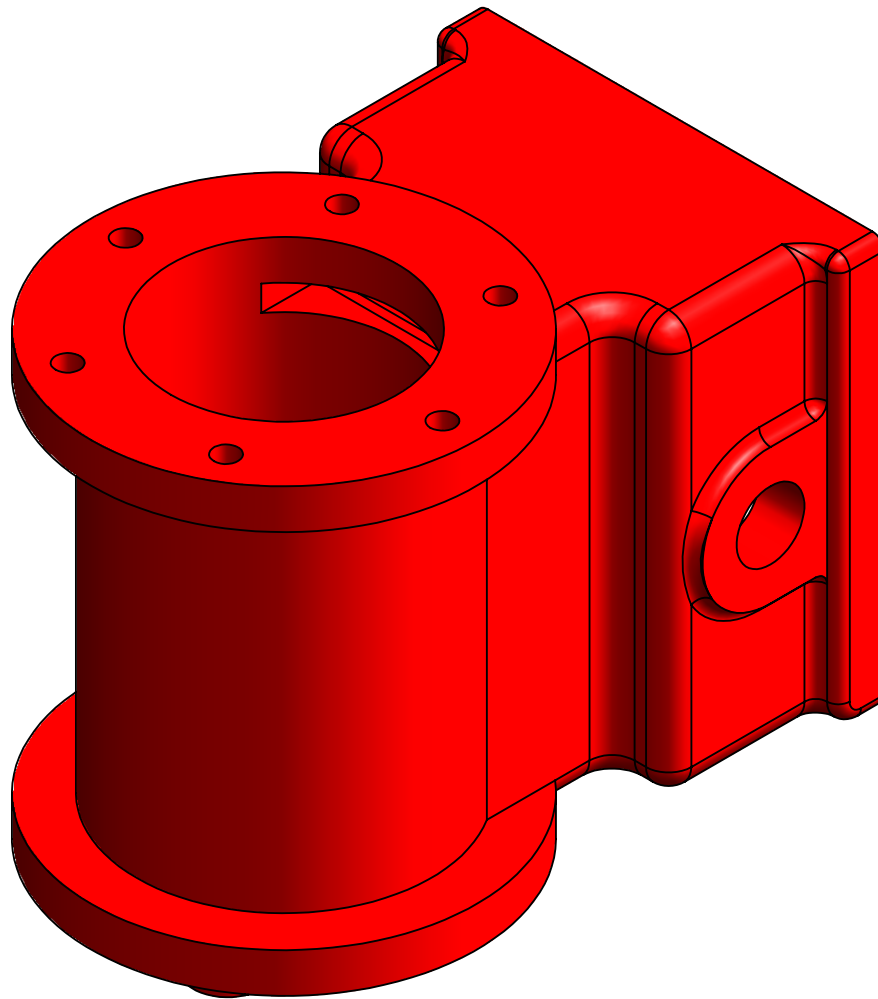
PART #: 05-00

QTY: 1


SCALE: 1:6

SHEET: 43 OF 55

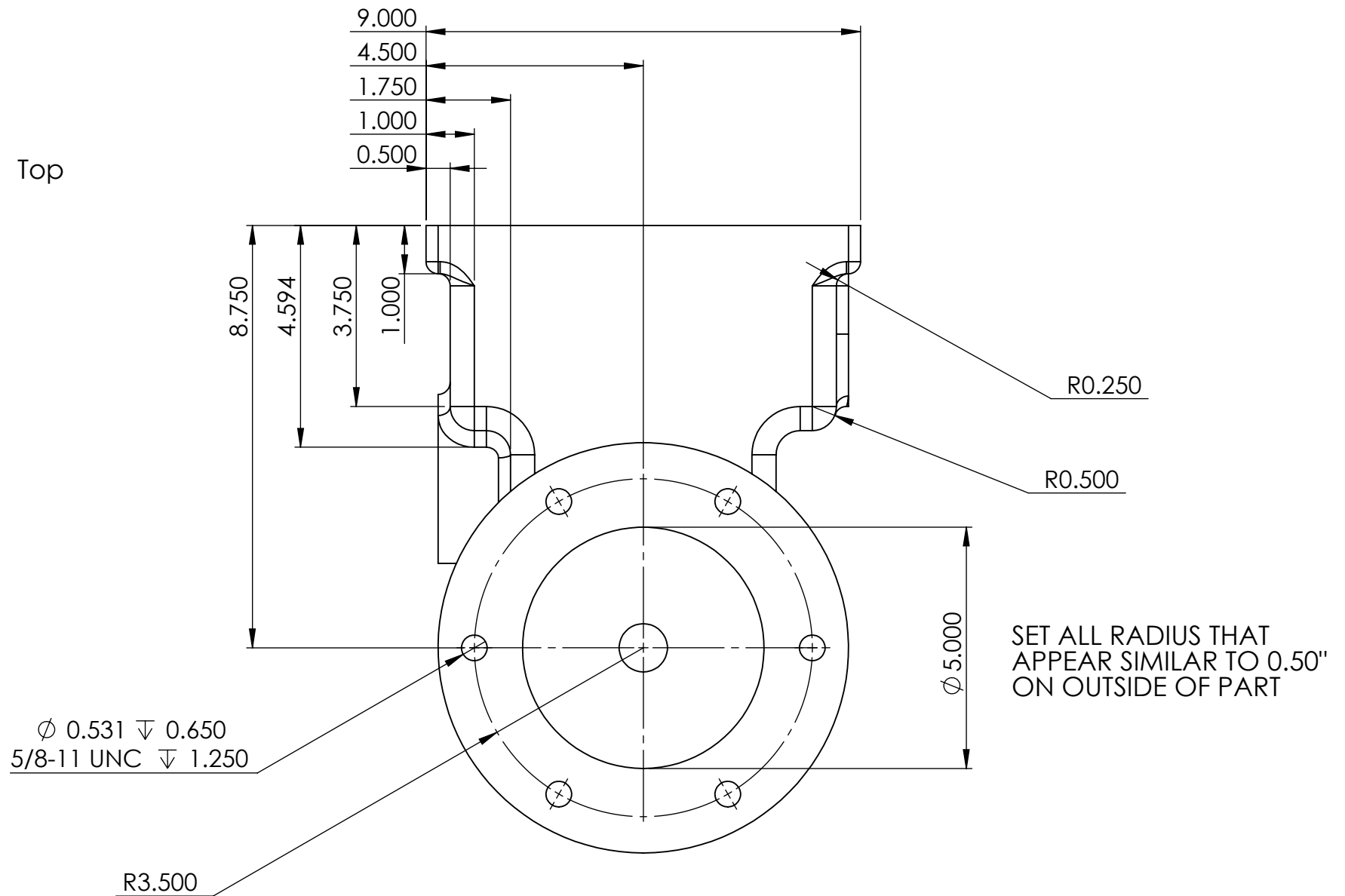
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		<div>MATERIAL: Ductile Iron (SN)</div>			
<div>DEFAULT TOLERANCES:</div> <div>LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002</div> <div>ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°</div>		<div>DESCRIPTION: Steam Cylinder</div> <div>CHECKED BY: Charles Krueger</div> <div>DATE: 4/30/2015</div> <div>DRAWN BY: Caleb Jo</div> <div>DATE: 5/7/2015</div> <div>FILE NAME: 05-01.SLDPRT</div>		<div>UNIVERSITY OF IDAHO</div> <div>ME DEPARTMENT</div> <div>PART #: 05-01</div> <div>QTY: 1</div> <div>SCALE: 1:3</div> <div>SHEET: 44 OF 55</div>	

Top



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DEFAULT TOLERANCES: LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		DESCRIPTION: Steam Cylinder CHECKED BY: Charles Krueger DATE: 4/30/2015 DRAWN BY: Caleb Jo DATE: 5/7/2015 FILE NAME: 05-01.SLDPRT		MATERIAL: Ductile Iron (SN)	
ANGLAR: X. ± 2 X.X ± 1 X.XX ± 0.30°		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>		PART #: 05-01	QTY: 1
		SCALE: 1:3		SHEET: 45 OF 55	


Technical drawing of a mechanical part, showing a side view and a cross-section.

**Side View Dimensions:**

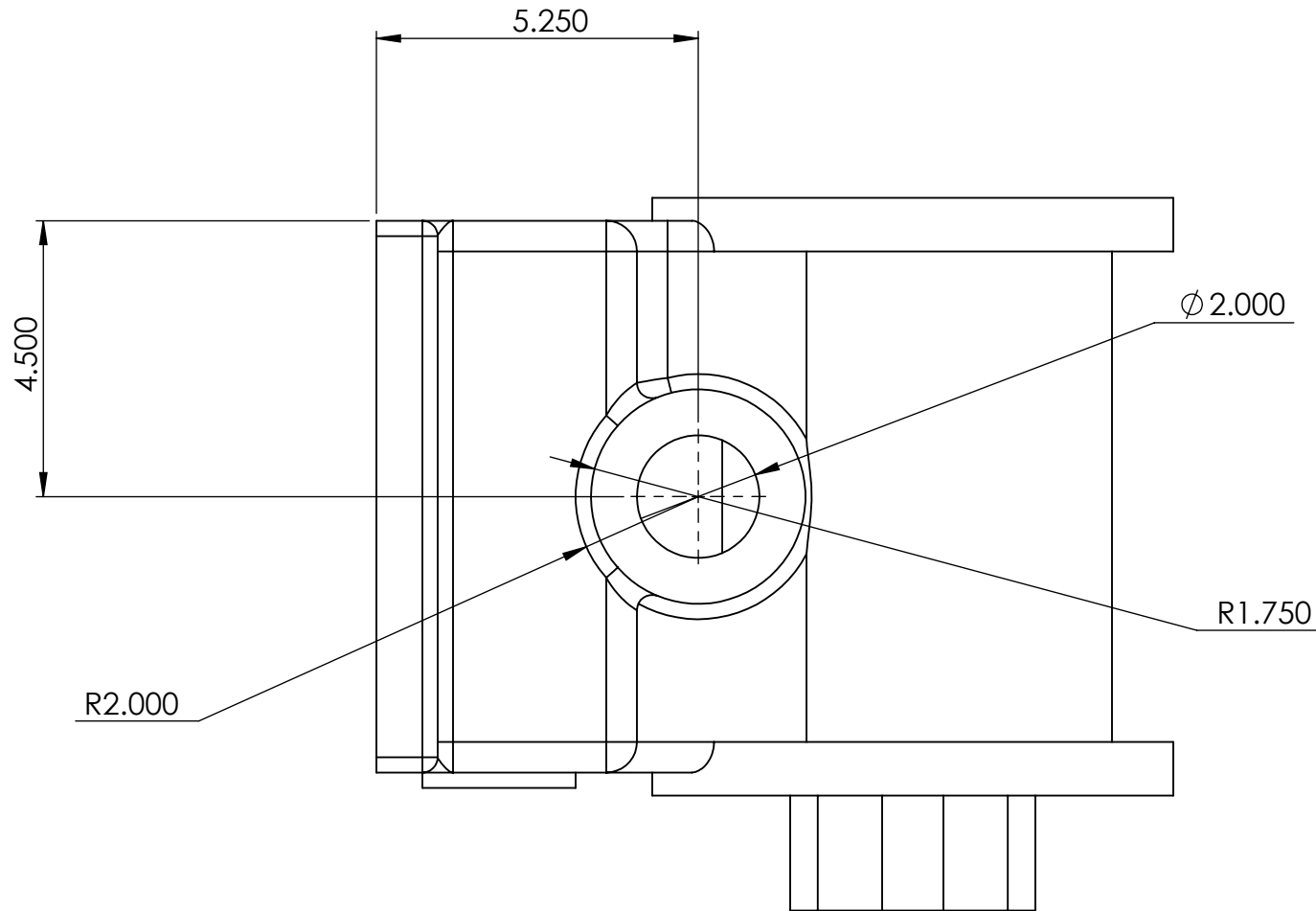
- Overall height: 11.625
- Height from top to first step: 9.750
- Height from top to second step: 8.875
- Height from top to third step: 0.875
- Radius of the first step: R1.500
- Radius of the second step: 2XR0.250
- Height from top to fourth step: 0.375
- Height from top to fifth step: 4.875
- Height from top to sixth step: 9.375
- Height from top to seventh step: 9.625

**Cross-Section Dimensions:**


- Radius of the circular hole: R1.750
- Diameter of the circular hole:  $\varnothing 1.500$  THRU

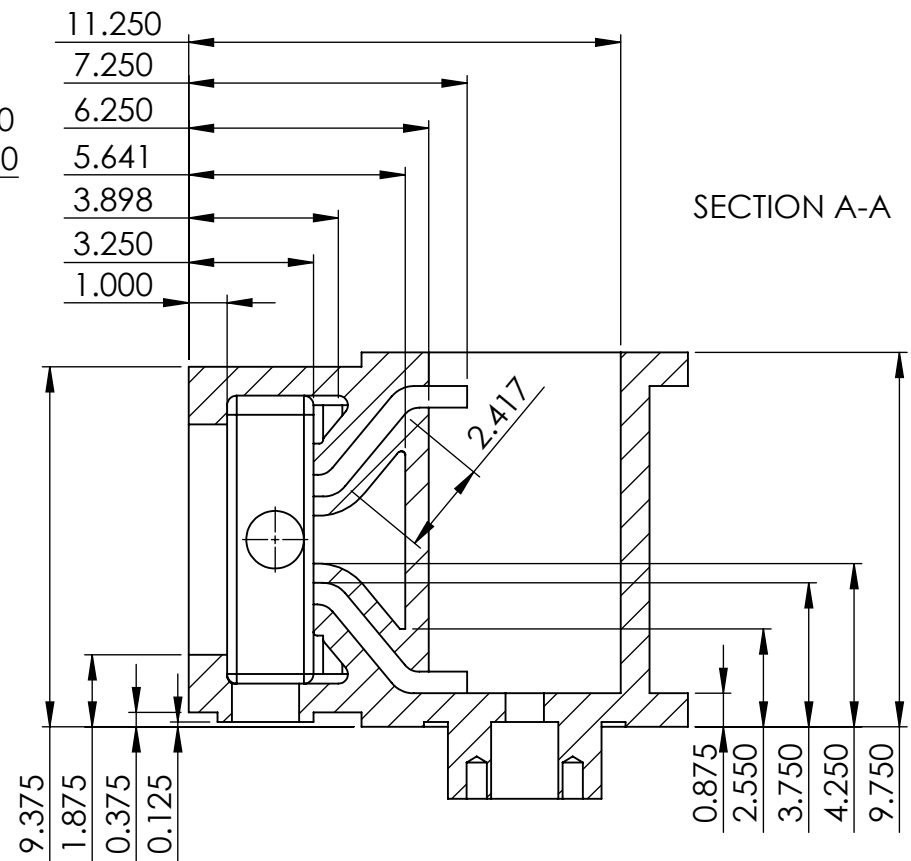
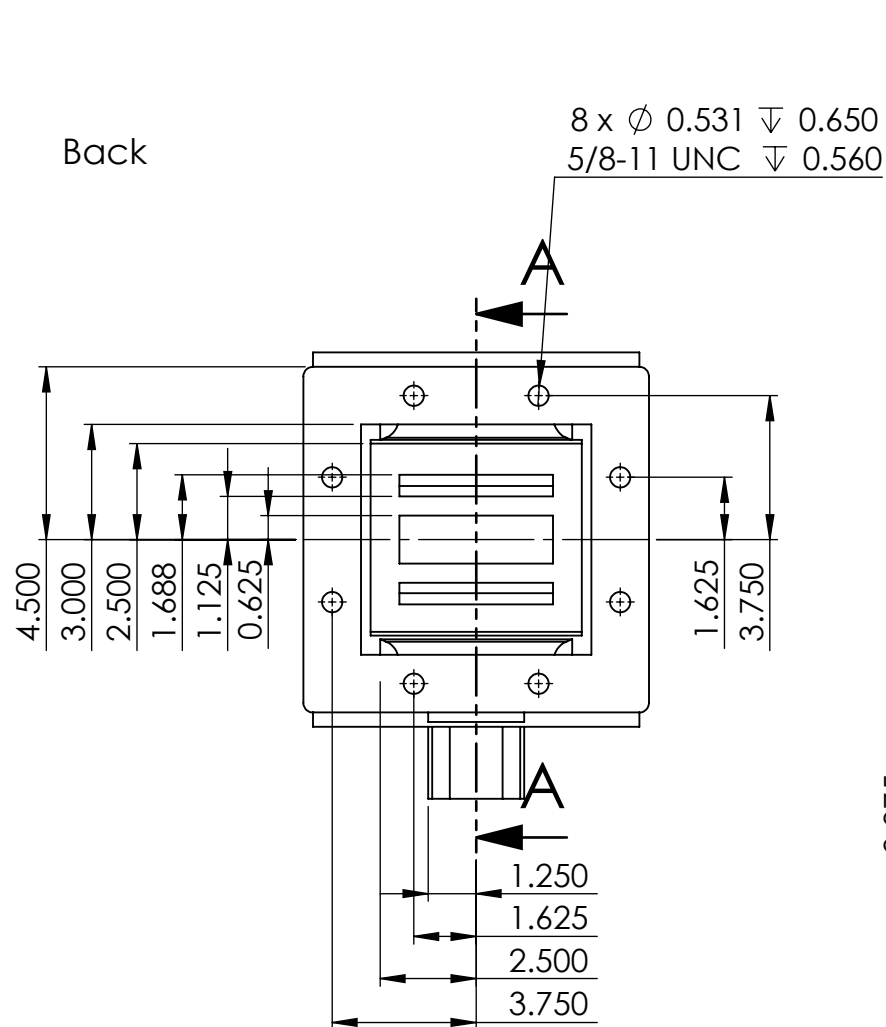
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		MATERIAL: Ductile Iron (SN)			
DEFAULT TOLERANCES:  LINEAR: X ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		DESCRIPTION: Steam Cylinder  CHECKED BY: Charles Krueger DATE: 4/30/2015 DRAWN BY: Caleb Jo DATE: 5/7/2015 FILE NAME: 05-01.SLDPRT		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>  PART #: 05-01 QTY: 1 SCALE: 1:3 SHEET: 46 OF 55	
ANGULAR: X ± 2 X.X ± 1 X.XX ± 0.30°					

Left



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		MATERIAL: Ductile Iron (SN)			
DEFAULT TOLERANCES:		DESCRIPTION: Steam Cylinder			
LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002  ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30'		CHECKED BY: Charles Krueger		DATE: 4/30/2015	
		DRAWN BY: Caleb Jo		DATE: 5/7/2015	
		FILE NAME: 05-01.SLDPRT		PART #: 05-01 QTY: 1	
				UNIVERSITY OF IDAHO ME DEPARTMENT	
				SCALE: 1:3 SHEET: 47 OF 55	



RADIUS ON STEAM  
CHANNEL CORNERS  
AND STEAM BULB  
ARE 0.75"

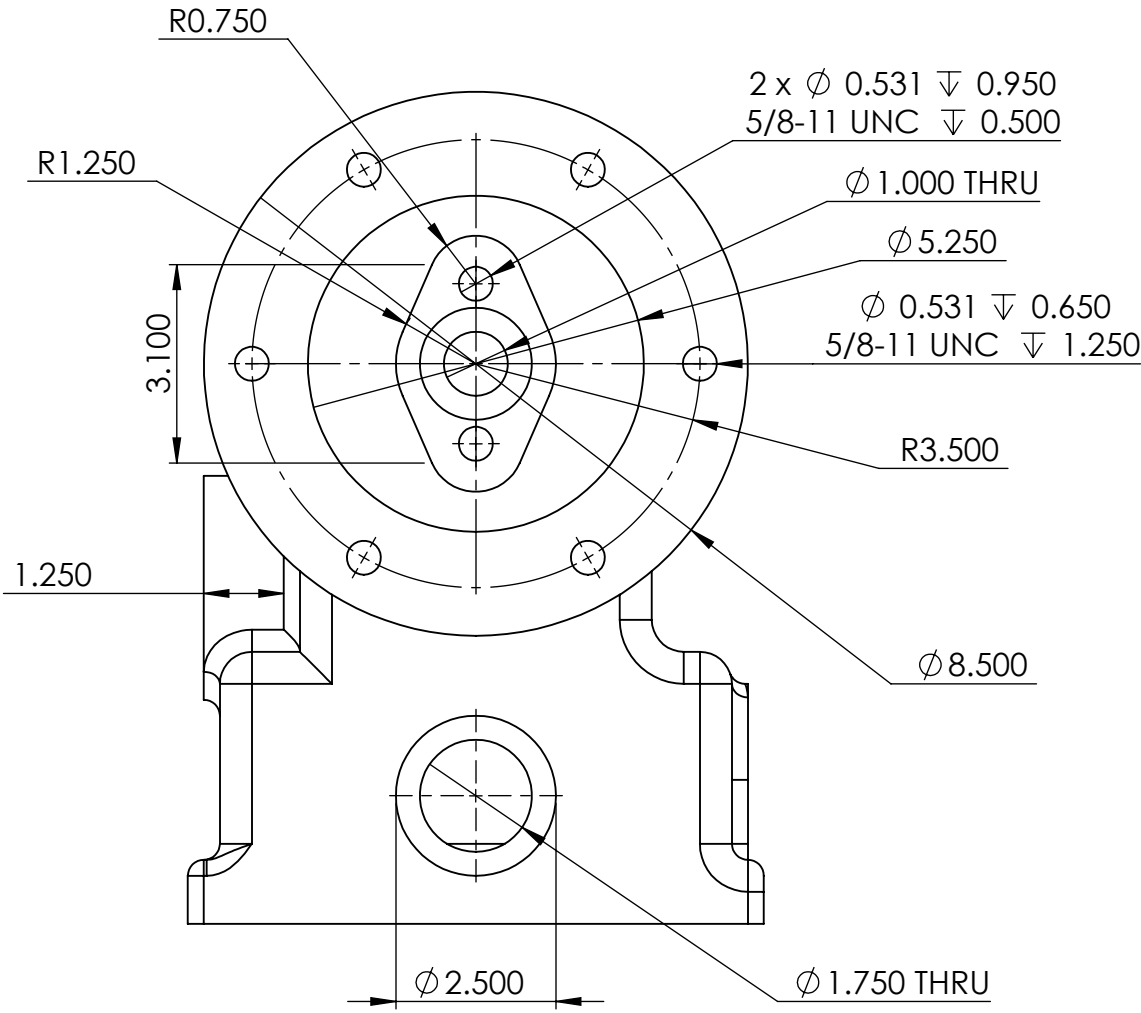
Fillets on inside of steam cylinder are  
0.25" unless otherwise specified.

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
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DEFAULT TOLERANCES: LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002		DESCRIPTION: Steam Cylinder CHECKED BY: Charles Krueger DATE: 4/30/2015 DRAWN BY: Caleb Jo DATE: 5/7/2015 FILE NAME: 05-01.SLDPRT		MATERIAL: Ductile Iron (SN)	
ANGULAR: X.± 2 X.X± 1 X.XX± 0.30°		UNIVERSITY OF IDAHO ME DEPARTMENT		PART #: 05-01	QTY: 1
		SCALE: 1:5		SHEET: 48 OF 55	

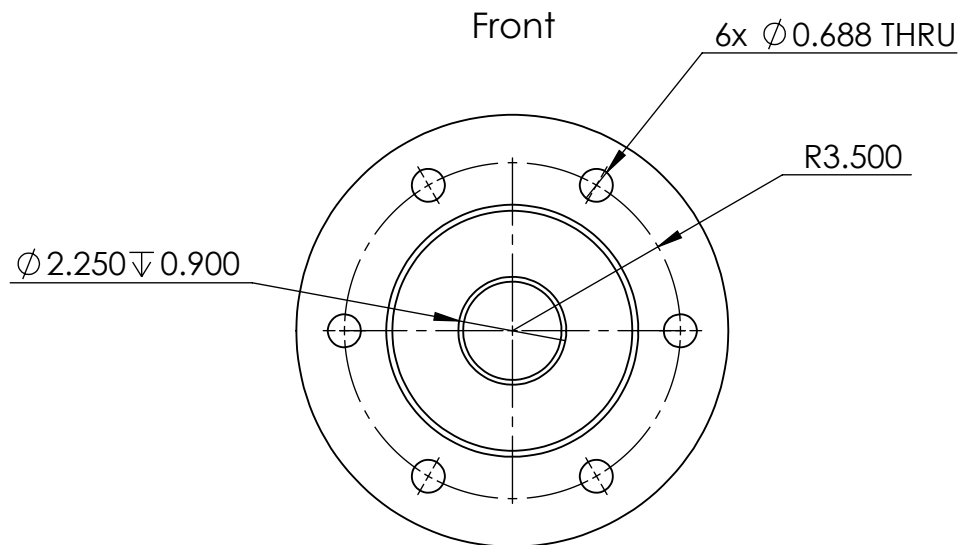
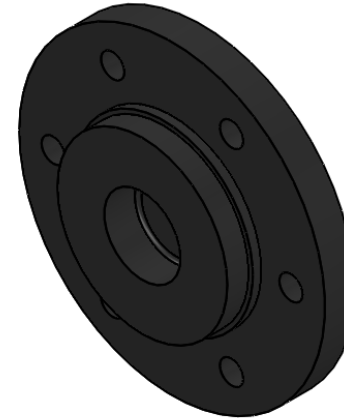
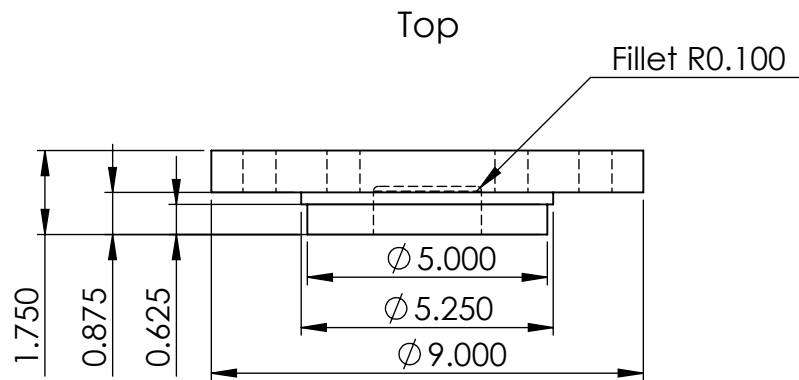


Bottom




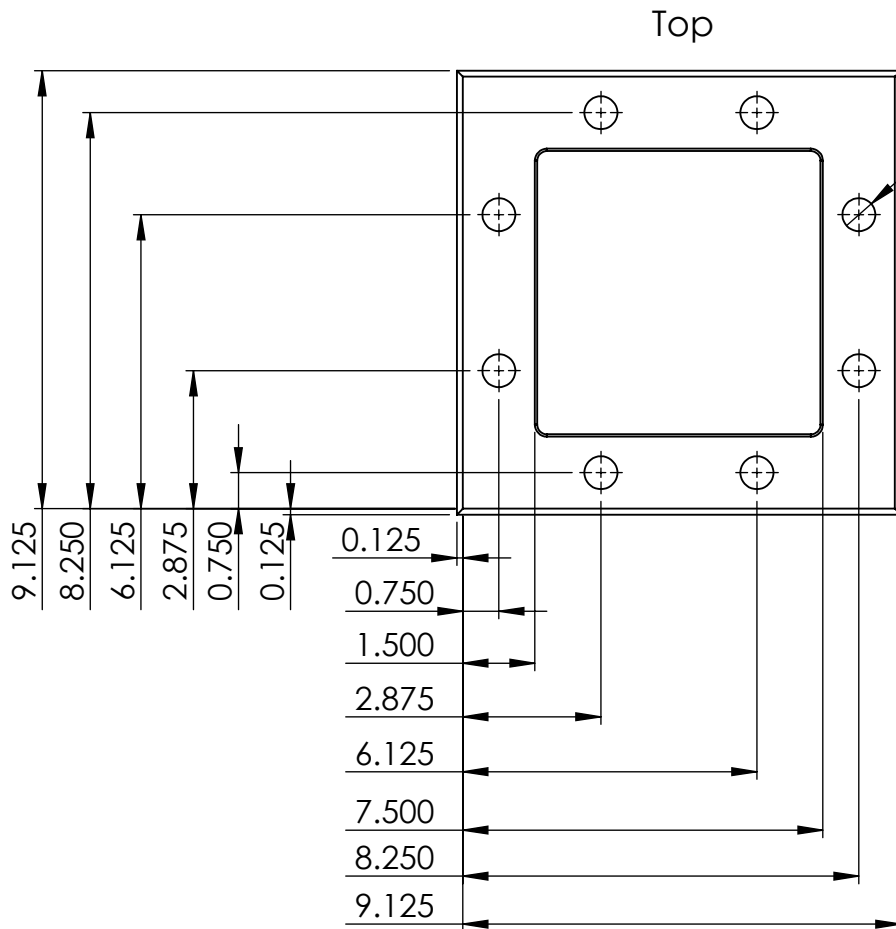
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		MATERIAL: Ductile Iron (SN)			
DEFAULT TOLERANCES:		DESCRIPTION: Steam Cylinder		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002	ANGULAR: X.±2 X.X±1 X.XX±0.30'	CHECKED BY: Charles Krueger	DATE: 4/30/2015		
		DRAWN BY: Caleb Jo	DATE: 5/7/2015	PART #: 05-01	QTY: 1
		FILE NAME: 05-01.SLDPRT		SCALE: 1:3	SHEET: 49 OF 55

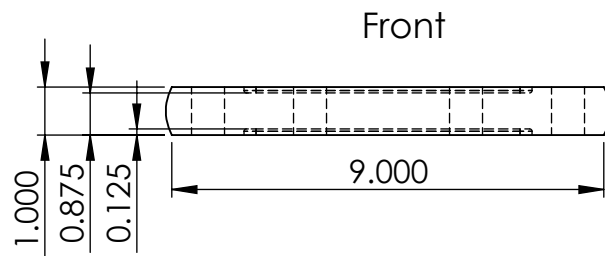
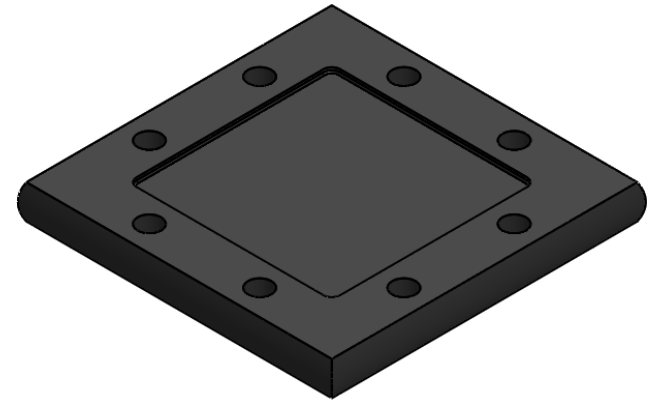


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
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		<b>MATERIAL:</b> Ductile Iron (SN)			
<b>DEFAULT TOLERANCES:</b>		<b>DESCRIPTION:</b> Cylinder Head			
<b>LINEAR:</b> X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002  <b>ANGULAR:</b> X. ± 2 X.X ± 1 X.XX ± 0.30'		<b>CHECKED BY:</b> Parker Hill		<b>DATE:</b> 5/4/2015	
		<b>DRAWN BY:</b> Michael Botterbusch		<b>DATE:</b> 4/30/2015	
		<b>FILE NAME:</b> 05-02.SLDPRT			
				<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
				<b>PART #:</b> 05-02	
				<b>QTY:</b> 1	
				<b>SCALE:</b> 1:4	
				<b>SHEET:</b> 50 OF 55	

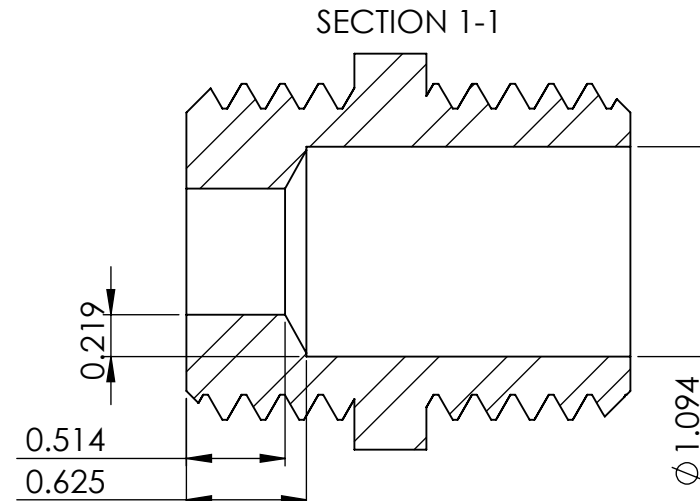
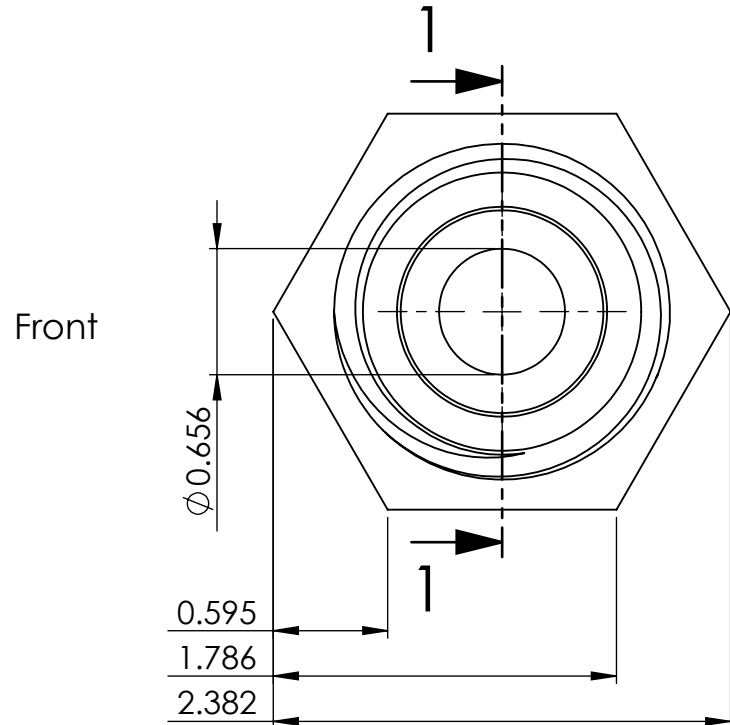
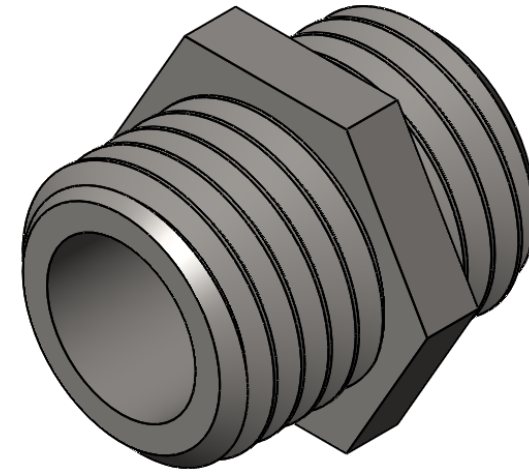
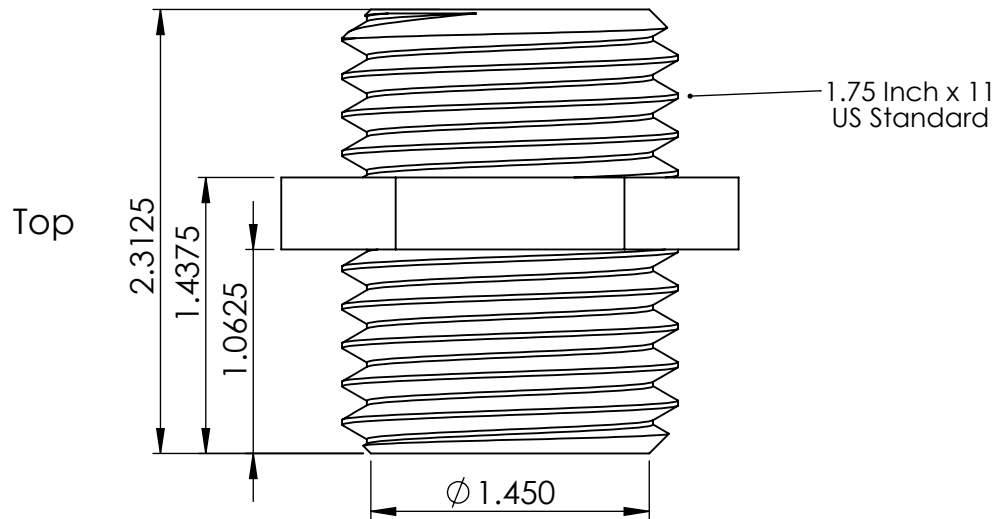


8 x  $\varnothing$  0.6875 THRU ALL



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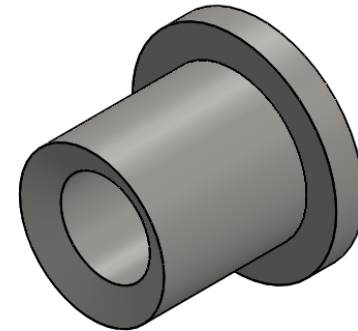
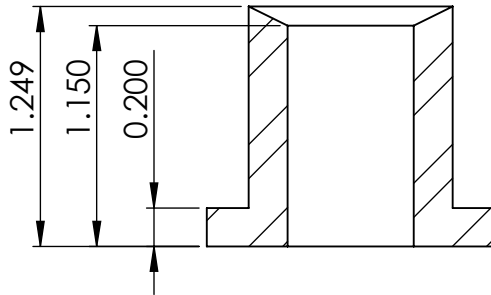
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		MATERIAL: Ductile Iron (SN)			
DEFAULT TOLERANCES:		DESCRIPTION: Steam Chest Cover		UNIVERSITY OF IDAHO ME DEPARTMENT	
<div>LINEAR:</div> <div>X.±.25</div> <div>X.X±.1</div> <div>X.XX±.01</div> <div>X.XXX±.002</div>	<div>ANGULAR:</div> <div>X.± 2</div> <div>X.X± 1</div> <div>X.XX± 0.30'</div>	CHECKED BY: Parker Hill	DATE: 5/4/2015		
		DRAWN BY: Charles Krueger	DATE: 4/30/2015	PART #: 05-03	QTY: 1
		FILE NAME: 05-03.SLDPRT	SCALE: 1:4	SHEET: 51 OF 55	



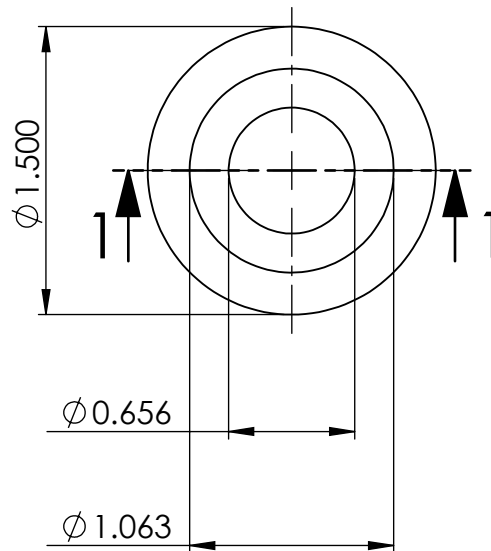
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		MATERIAL: Cast Alloy Steel		<b>UNIVERSITY OF IDAHO ME DEPARTMENT</b>	
DEFAULT TOLERANCES: LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		DESCRIPTION: Valve Rod Stuffing Box CHECKED BY: Parker Hill DRAWN BY: Charles Krueger FILE NAME: 05-04.SLDPR		DATE: 5/3/2015 DATE: 4/30/2015 SCALE: 1:1	
ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°		PART #: 05-04 QTY: 1		SHEET: 52 OF 55	

# SECTION 1-1



# Front



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DIMENSIONS ARE IN INCHES  
THIRD ANGLE PROJECTION

MATERIAL: Cast Alloy Steel

Team Fantastic  
Four

## DEFAULT TOLERANCES:

LINEAR:  
X. ± .25  
X.X ± .1  
X.XX ± .01  
X.XXX ± .002

ANGULAR:  
X. ± 2  
X.X ± 1  
X.XX ± 0.30'

## DESCRIPTION: Valve Rod Gland

CHECKED BY: Parker Hill

DATE: 5/4/2015

DRAWN BY: Charles Krueger

DATE: 4/30/2015

FILE NAME: 05-05.SLDPR

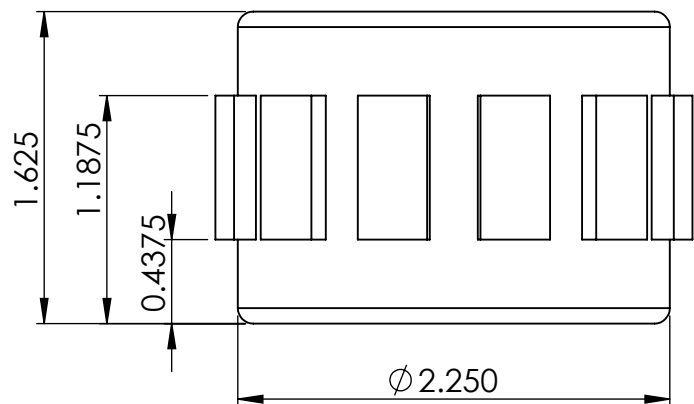
UNIVERSITY OF IDAHO  
ME DEPARTMENT

PART #: 05-05

QTY: 1

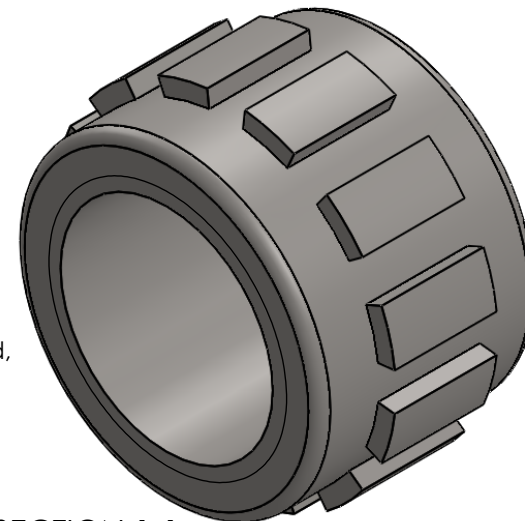
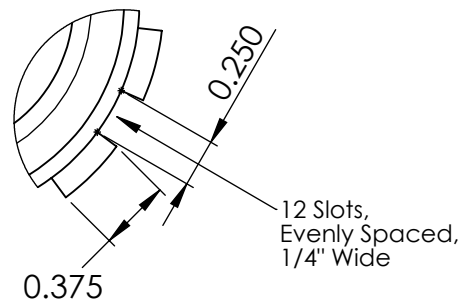
SCALE: 1:1

SHEET: 53 OF 55

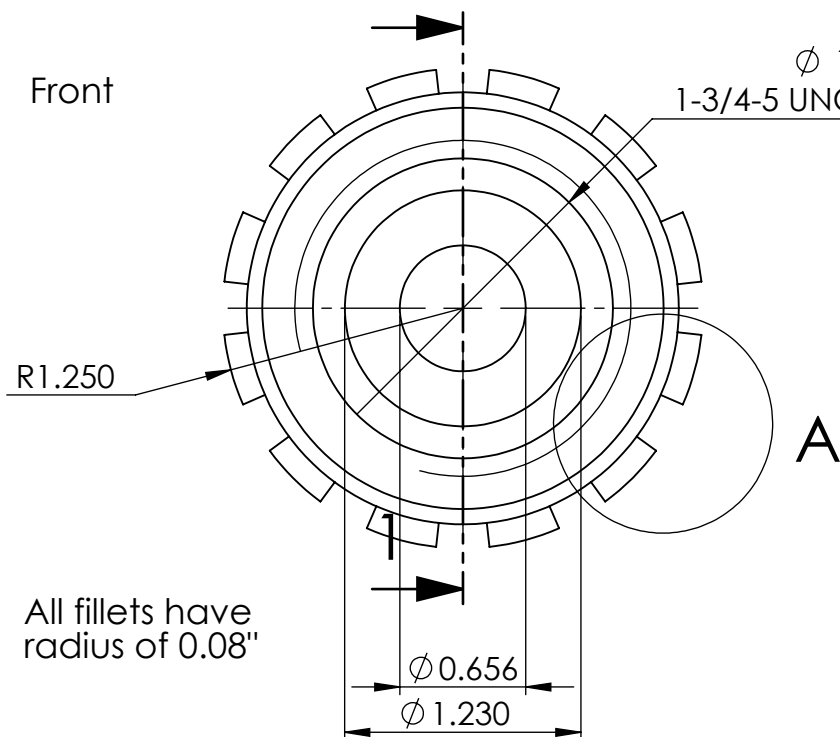


Top

DETAIL A

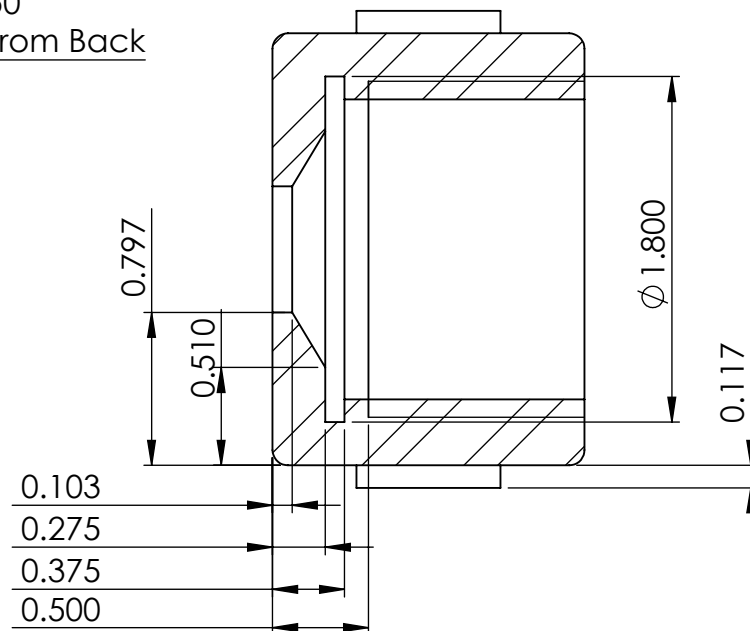


Front



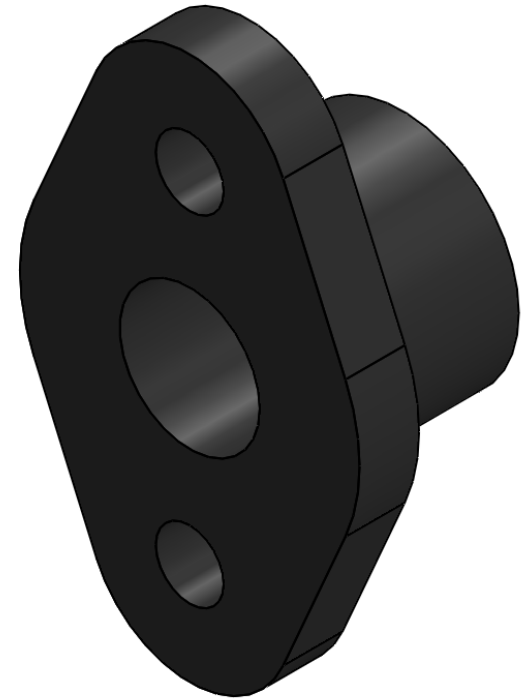
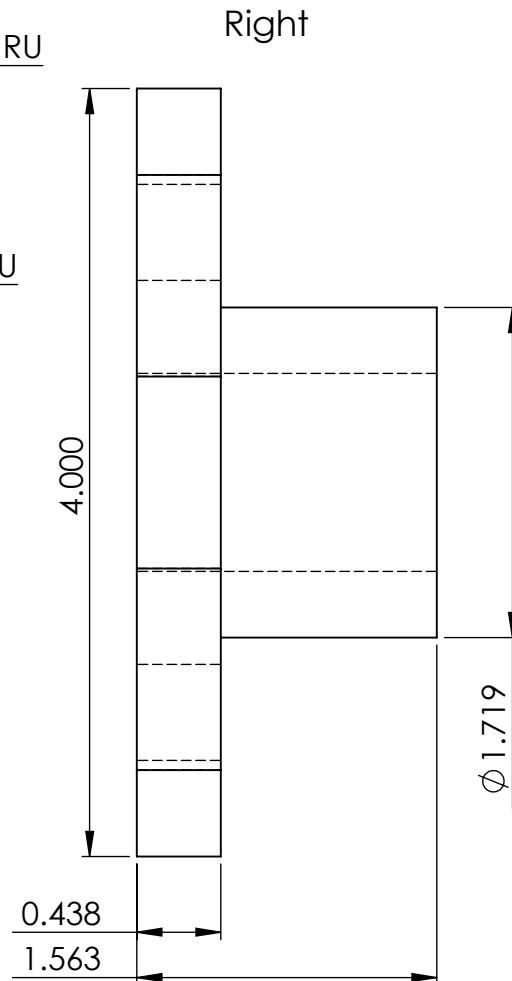
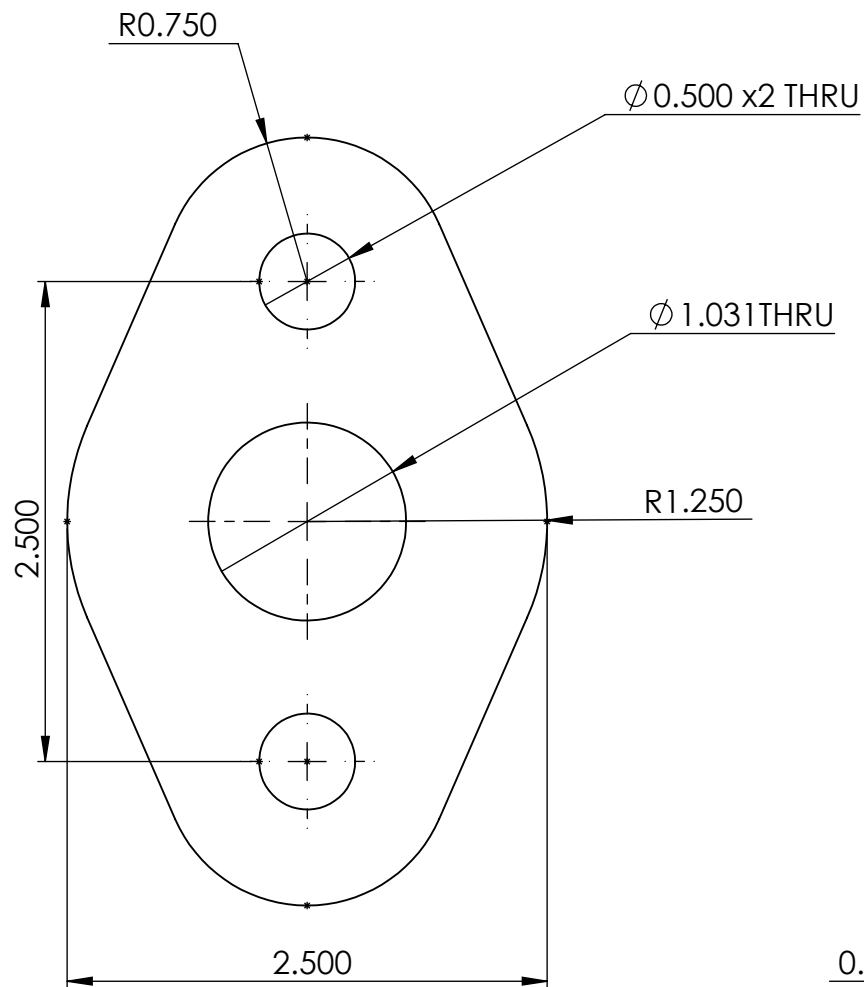
All fillets have radius of 0.08"

SECTION 1-1



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<div>DEFAULT TOLERANCES:</div> <div>LINEAR: X.±.25 X.X±.1 X.XX±.01 X.XXX±.002</div> <div>ANGULAR: X.± 2 X.X± 1 X.XX± 0.30°</div>		<div>DESCRIPTION: Valve Rod Gland Nut</div> <div>CHECKED BY: Parker Hill</div> <div>DATE: 5/4/2015</div> <div>DRAWN BY: Charles Krueger</div> <div>DATE: 4/30/2015</div> <div>FILE NAME: 05-06.SLDPRT</div>		<div>UNIVERSITY OF IDAHO ME DEPARTMENT</div> <div>PART #: 05-06</div> <div>QTY: 1</div> <div>SCALE: 1:1</div> <div>SHEET: 54 OF 55</div>	



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MATERIAL: Ductile Iron (SN)		DESCRIPTION: Piston Rod Gland		UNIVERSITY OF IDAHO ME DEPARTMENT	
DEFAULT TOLERANCES: LINEAR: X. ± .25 X.X ± .1 X.XX ± .01 X.XXX ± .002		ANGULAR: X. ± 2 X.X ± 1 X.XX ± 0.30°		CHECKED BY: Parker Hill DATE: 5/4/2015	
DRAWN BY: Charles Krueger FILE NAME: 05-07.SLDPR		DATE: 4/30/2015		PART #: 05-07 QTY: 1	
		SCALE: 1:1		SHEET: 55 OF 55	