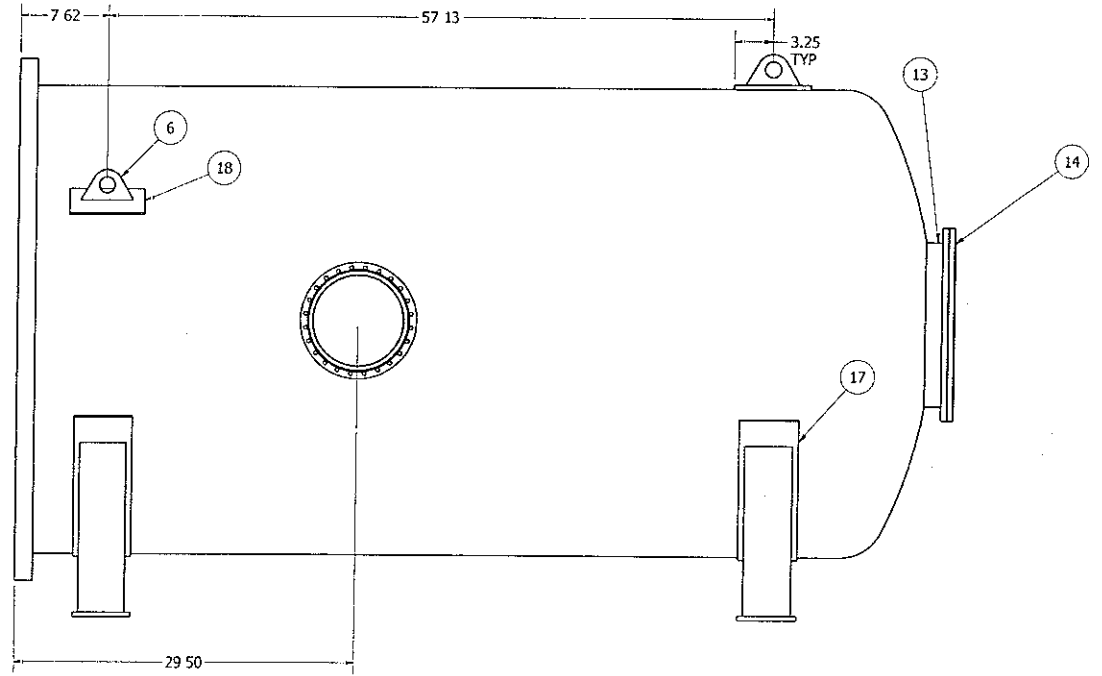


- NOTES:**
- 1) VESSEL TO BE DESIGNED AND FABRICATED PER ASME SECT. VIII DIV 1
  - 2) ALL WELDING PER ASME SECT IX & SHALL BE PERFORMED BY QUALIFIED WELDERS.
  - 3) ALL DOUBLE FILLET WELDS TO BE VENTED ON OUTSIDE
  - 4) VESSEL TO BE PRESSURE TESTED TO 15 PSIG.
  - 5) HMSLT AFTER PRESSURE TEST WITH A MIN DETECTABLE LEAK RATE OF 2.0x10 E-9 STD CC/SEC.
  - 6) ITEM 5 FLANGE TO ALIGN WITH FLANGE ON CHAMBER #2
  - 7) MASK MACHINED SEAL SURFACES & PAINT EXTERIOR SURFACES ONLY

**CHAMBER #1 ASSY**  
Qty 1



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
5	1	4000 Body Flange	DWG.02351-06, SA105, Forged Ring to finish at: 1.50" thk x 44.62"OD x 39.50"ID
6	1	4000 Lifting Eye	DWG.02351-04, SA36, 3/8" thk x 2.63" x 4.55"
8	2	4000 Support Base	DWG.02351-04, SA36, 1/2" thk x 5.00" x 35.00"lg.
9	2	400x400 Angles	DWG.02351-04, SA36, 4"x4"x3/8"thk x 20 ft. RL
11	1	4000 Chamber-v2	DWG.02351-02, SA516 Gr70, 1/4" x laser cut to 68.37" x 125.13"lg.
12	1	4000 F&D Head	DWG.02351-03, SA516 GR.70, ASME F & D Head, 39.50" min ID x .188"min. thk w/ 2"SF
13	1	4000 Head Nozzle	SA312 TP304/304L, Pipe, 14" SCH10S x 3"lg.
14	1	F1650X1400R	SA240 304/304L, 16.5" OD Rotatable CF Flange, 14.0" Nom Bore w/ Cir holes
15	1	4000 Shell Nozzle	SA249 TP304/304L, Tube, 8"OD x .12"wall x 4"
16	1	F1000X800N	SA240 304/304L, 10" OD NON-ROTATABLE CF Flange, 8" Nom bore w/ Cir holes
17	2	4000 Tank Cradel	DWG. 02351-04, SA36, 1/4" x 6" x 120"lg
18	2	4000 Lifting Eye Base	DWG. 02351-04, SA36, 1/4" x 6.50" x 18"lg.

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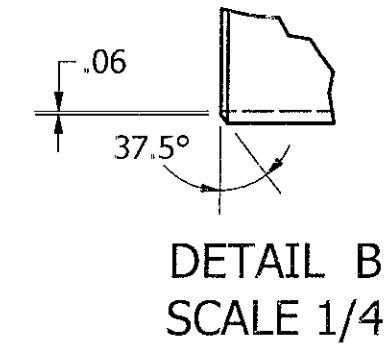
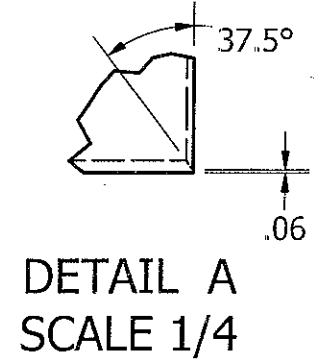
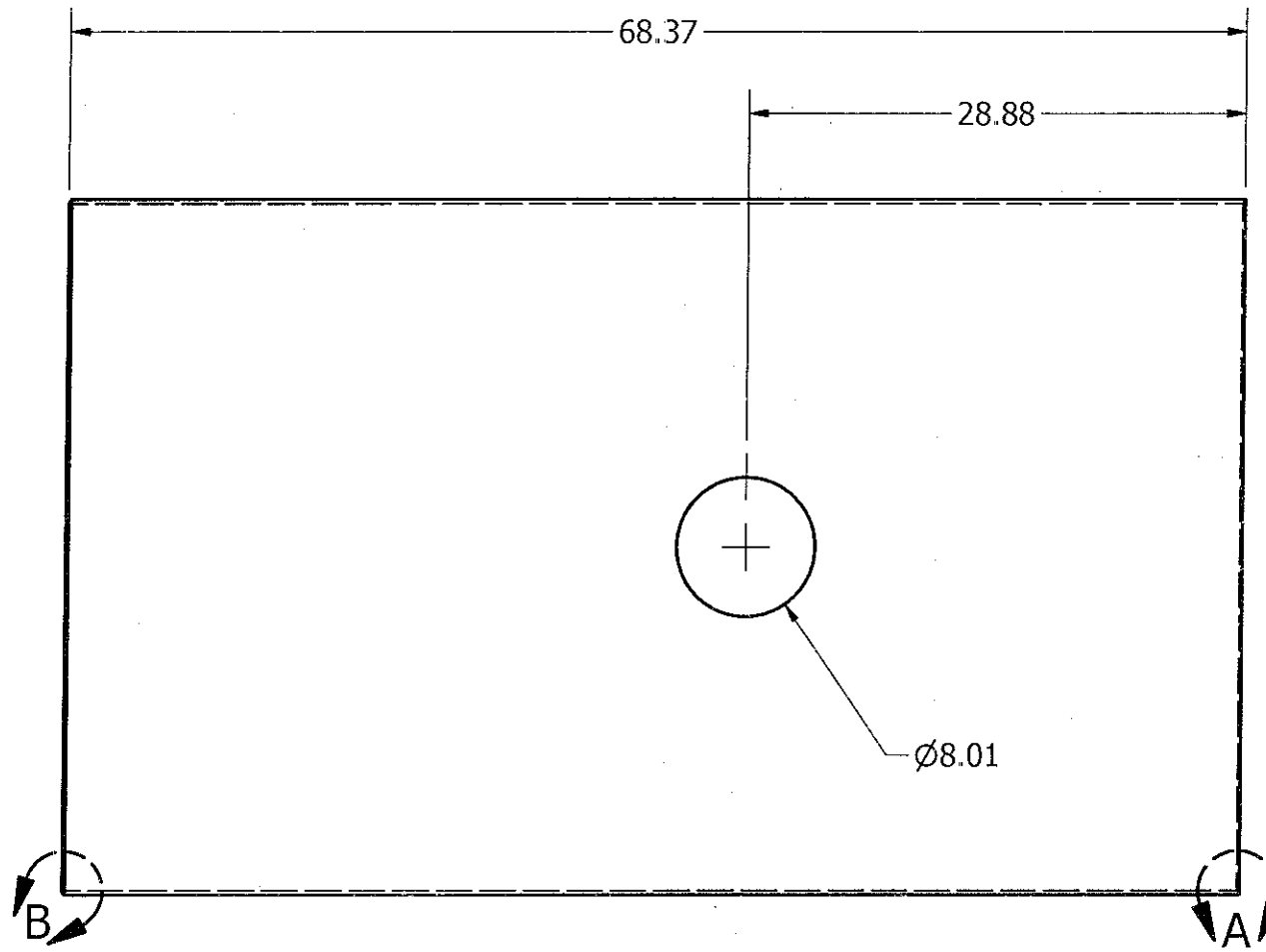
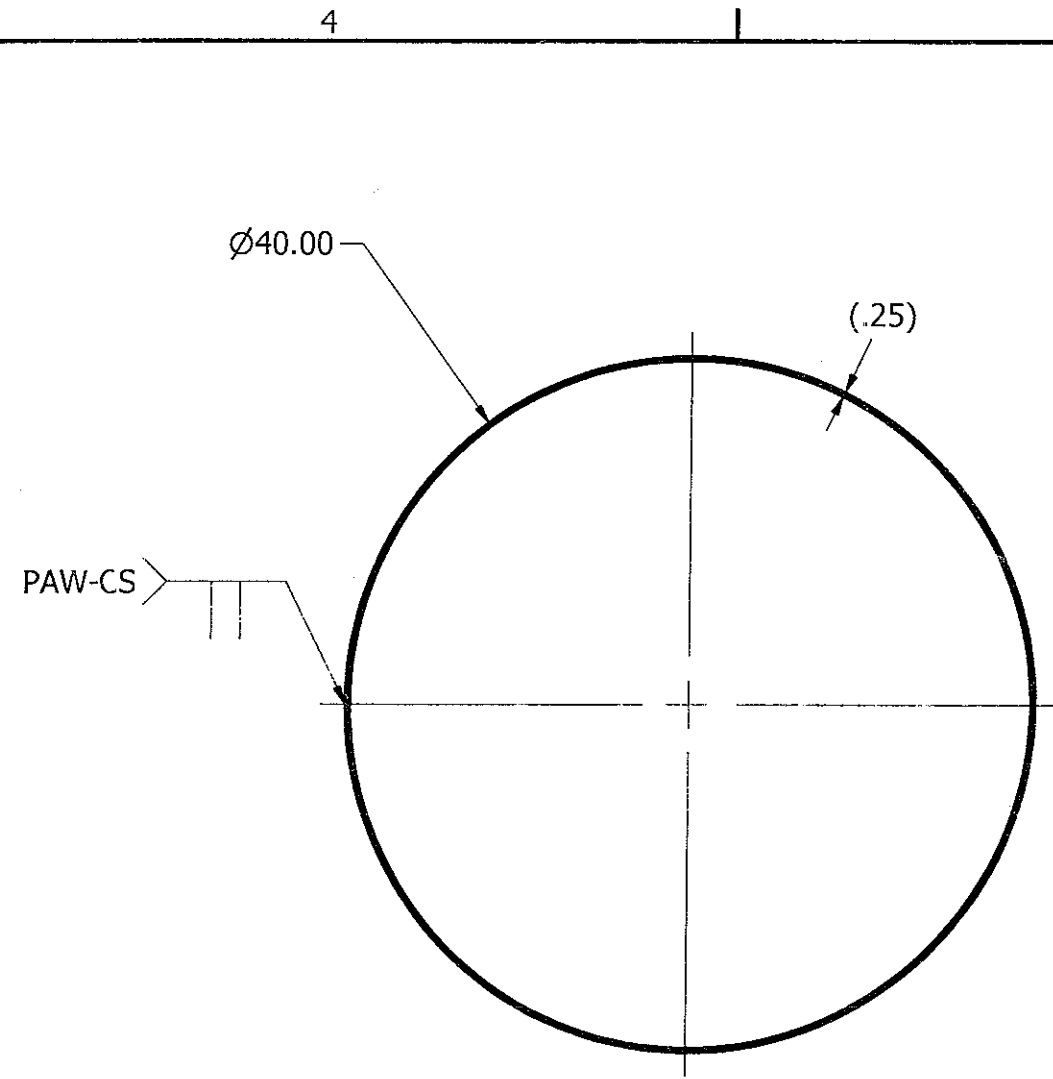
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
TOLERANCES ON:  
DECIMALS .x .03  
.xx .01  
xxx .005

ANGLES ±0.5 deg  
FRACTIONS 1/16

MACHINE FINISH

DRAWN TV 11/20/14  
CHECKED  
APPROVED

Meyer Tool & Mfg., Inc.  
TITLE **CHAMBER #1 WLEDMENT, PROTON-RADIUS VACUUM CHAMBER.**  
SIZE D DWG NO 2351-01 REV 0



ITEM 11  
Qty. 1  
MAT'L: SA516 GR70

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ON:  
DECIMALS             ANGLES  
.x .03                 ± 0.5 deg  
.xx .01                FRACTIONS  
.xxx .005             1/16  
  
MACHINE FINISH

DRAWN TV 11/19/14

CHECKED

APPROVED

Meyer Tool & Mfg., Inc.

TITLE  
CHAMBER #1 ROLLED  
CYLINDER,

SIZE  
B

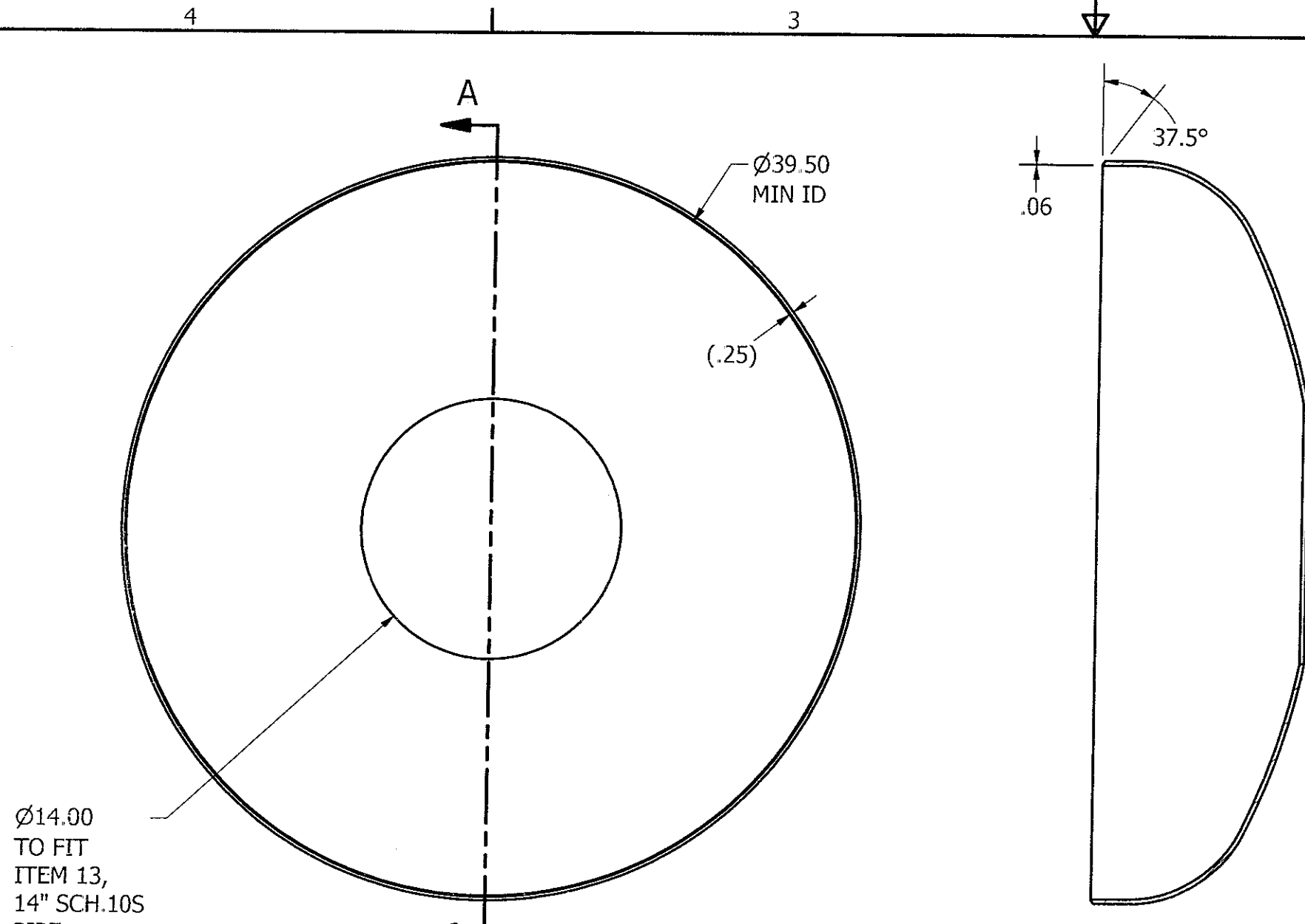
DWG NO

02351-02

REV  
0

SCALE

SHEET 1 OF 1



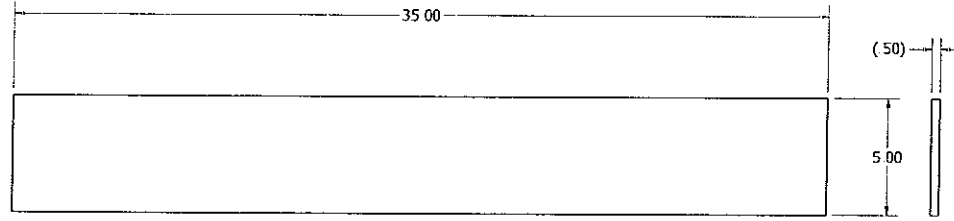
Ø14.00  
TO FIT  
ITEM 13,  
14" SCH.10S  
PIPE

**ITEM 12**

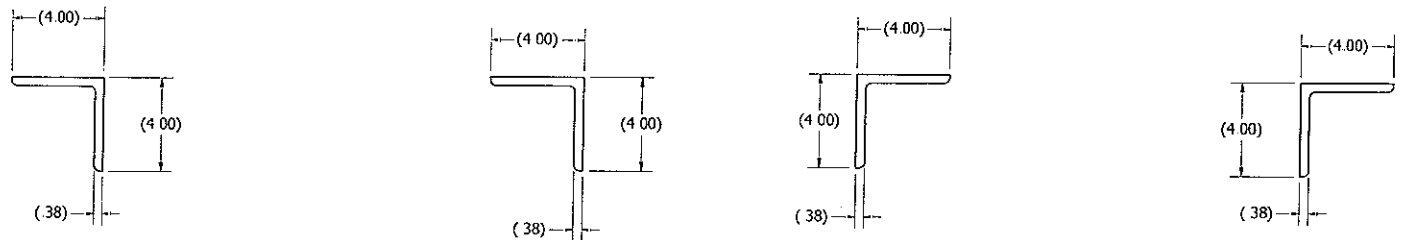
Qty. 1  
MAT'L: SA516 GR.70

**SECTION A-A**  
**SCALE 0.13 : 1**

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	MACHINE FINISH	CHECKED			
			APPROVED	SIZE	DWG NO
				B	02351-03
			SCALE	REV	0
				SHEET 1 OF 1	



**ITEM 8**  
Qty. 2  
MAT'L: SA516 GR 70

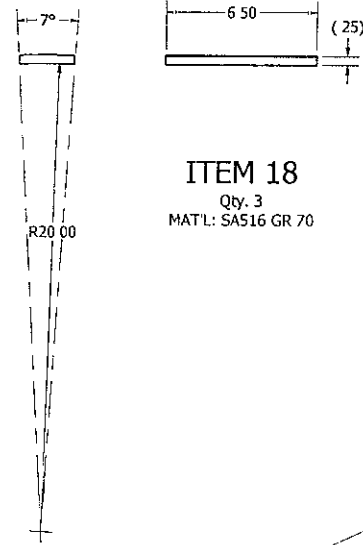


**ITEM 9A**  
Qty. 2  
MAT'L: SA36

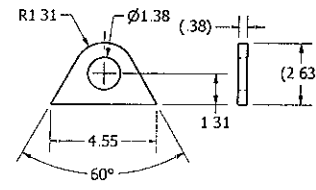
**ITEM 9B**  
Qty. 2  
MAT'L: SA36

**ITEM 9C**  
Qty. 2  
MAT'L: SA36

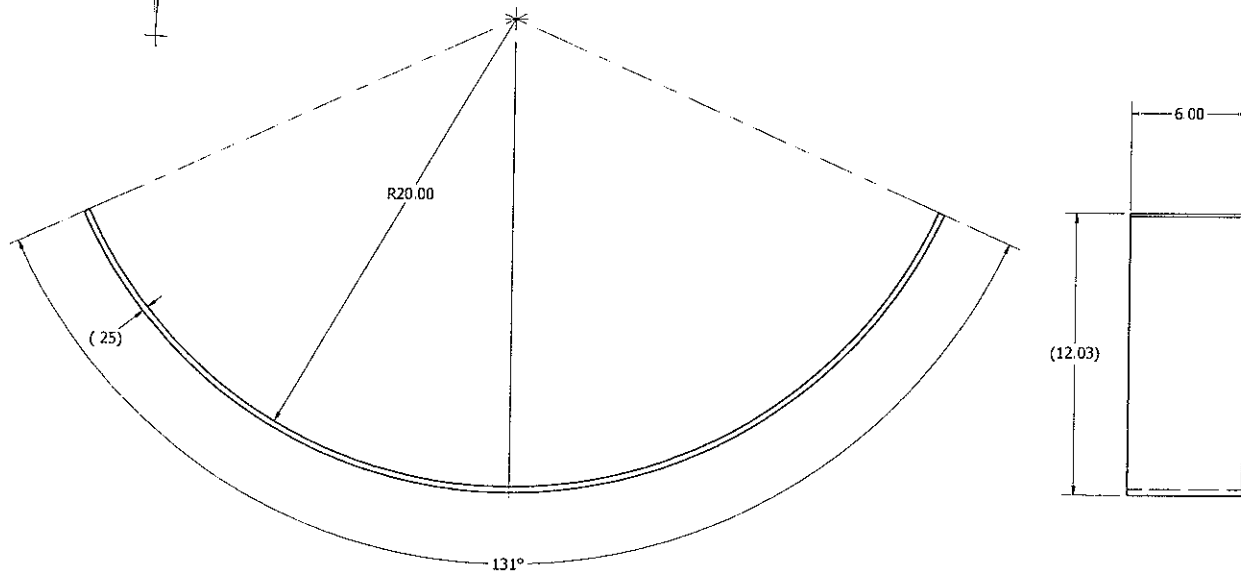
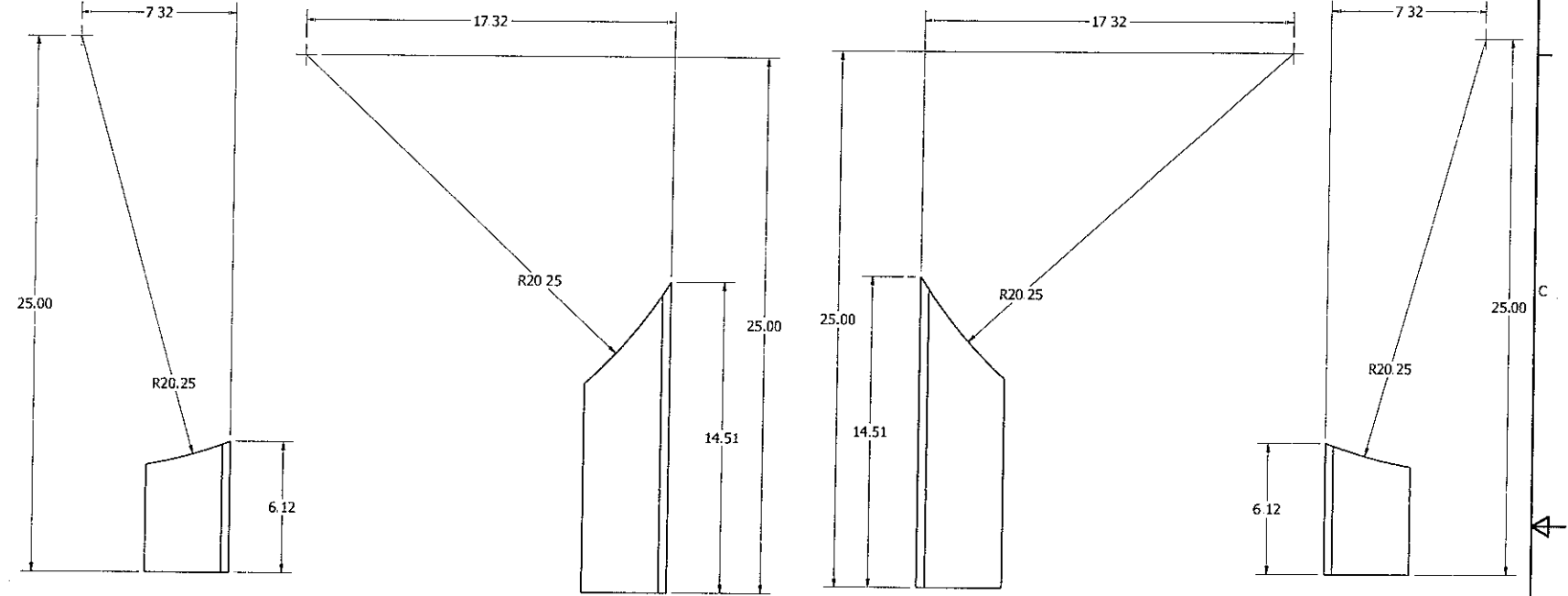
**ITEM 9D**  
Qty. 2  
MAT'L: SA36



**ITEM 18**  
Qty. 3  
MAT'L: SA516 GR 70

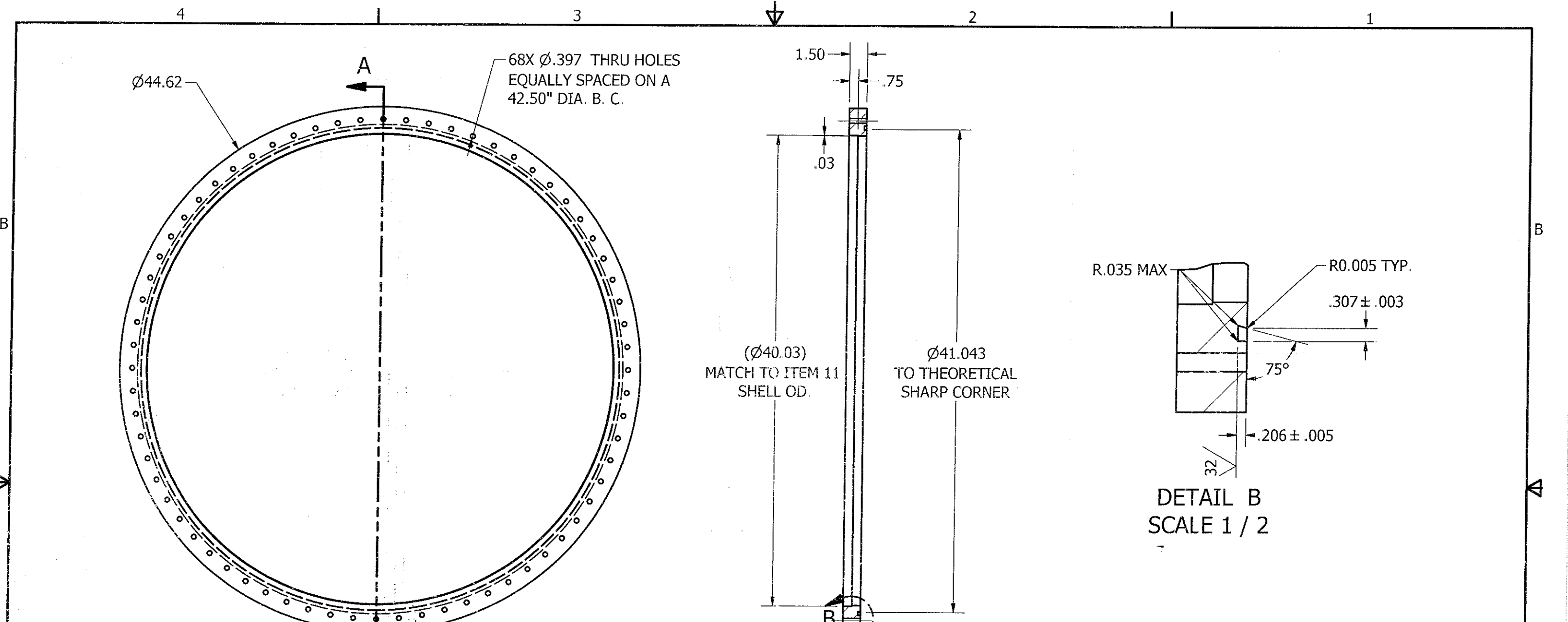


**ITEM 6**  
Qty. 3  
MAT'L: SA516 GR 70



**ITEM 17**  
Qty. 2  
MAT'L: SA516 GR 70

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		CHECKED	
		APPROVED	SIZE D
		DWG NO <b>02351-04</b> SCALE SHEET 1 OF 1	REV 0

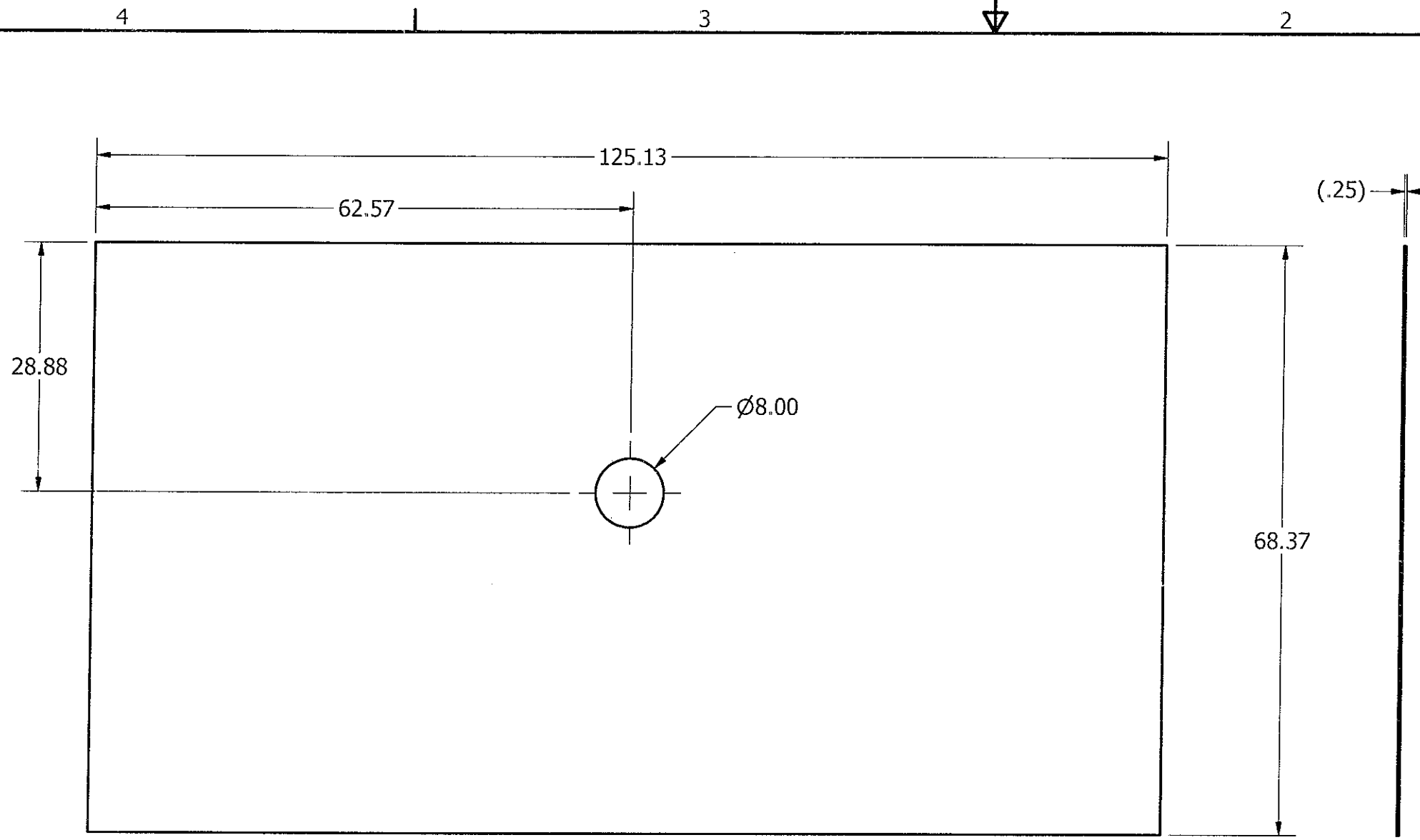


**ITEM 5**  
Qty: 2  
MAT'L: SA105

**SECTION A-A**  
SCALE 1/8

**DETAIL B**  
SCALE 1/2

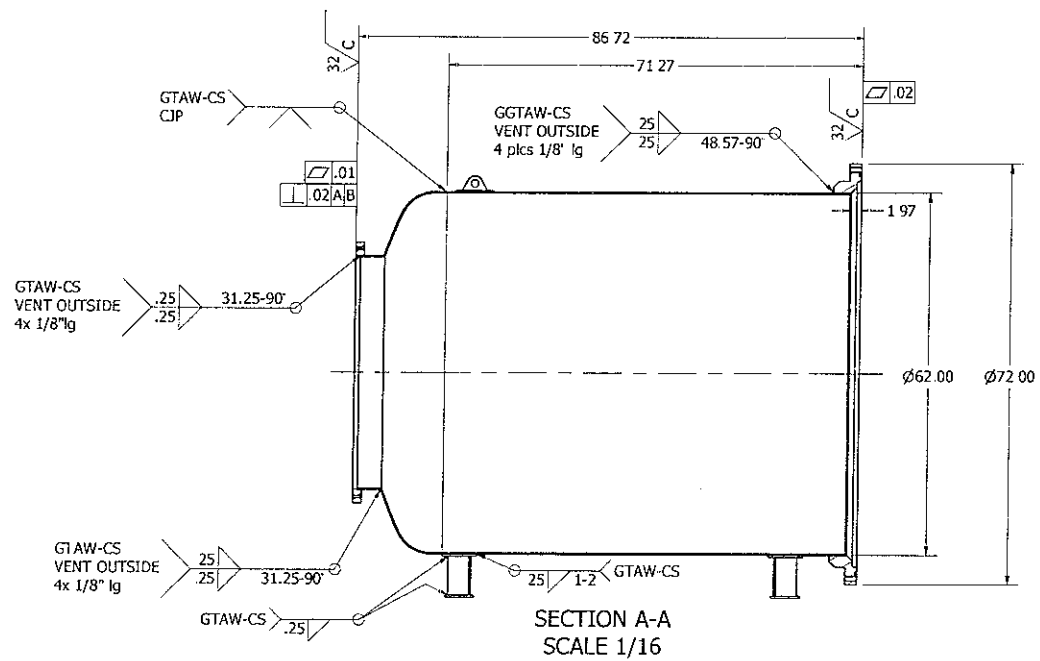
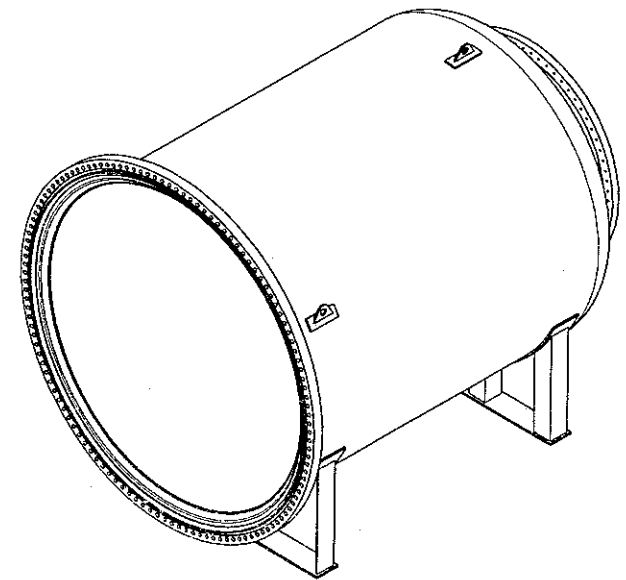
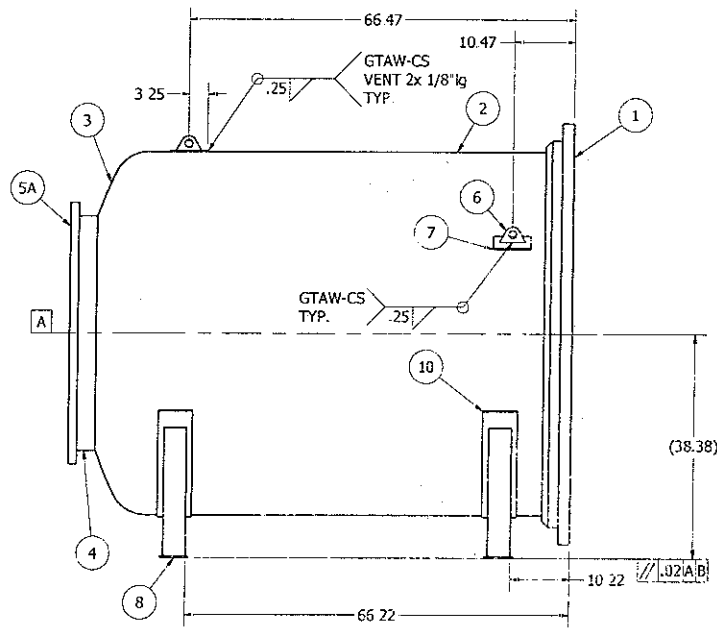
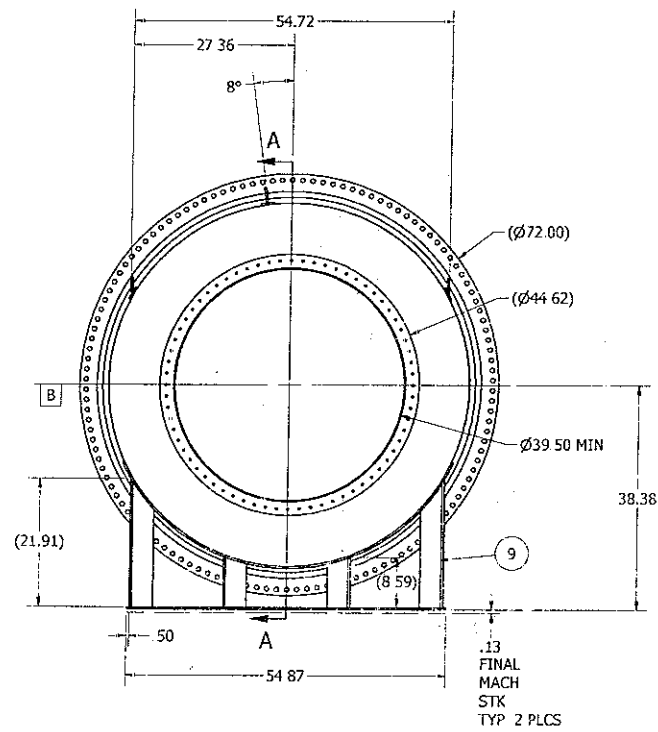
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	<p>DECIMALS</p>	<p>ANGLES</p>	<p>CHECKED</p>	<p>TITLE CHAMBER #1 BODY FLANGE DETAILS</p>		
	<p>.x .03</p>	<p>± 0.5 deg</p>	<p>APPROVED</p>	<p>SIZE B</p>	<p>DWG NO 02351-06</p>	<p>REV 0</p>
	<p>.xx .01</p>	<p>FRACTIONS 1/16</p>		<p>SCALE</p>	<p>SHEET 1 OF 1</p>	
	<p>.xxx .005</p>	<p>MACHINE FINISH</p>				



NOTES:  
 1) LASER CUT PERIMETER & HOLE.  
 2) CMTRS REQUIRED

**ITEM 11**  
 QTY. 1  
 MAT'L: SA516 GR.70

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					TITLE <b>SHELL CUT DETAILS, PROTON -          RADIUS VAC. CHAMBER #1</b>		
					SIZE B	DWG NO 2351-08	REV 0
					SCALE	SHEET 1 OF 1	



**CHAMBER #2 ASSY**  
Qty 1

- NOTES:
- 1) VESSEL TO BE DESIGNED & FABRICATED PER ASME SECT VIII DIV. 1
  - 2) ALL WELDING PER ASME SECT IX & SHALL BE PERFORMED BY QUALIFIED WELDERS.
  - 3) ALL DOUBLE FILLET WELD TO BE VENTED ON OUTSIDE
  - 4) VESSEL TO BE PRESSURE TESTED TO 15 PSIG.
  - 5) HMS LEAK TEST AFTER PRESSURE TESTING WITH A MIN. DETECTABLE LEAK RATE OF 2.0 x 10E-9 STD CC/Sec.
  - 6) ITEM 5 FLANGE TO ALIGN WITH BODY FLANGE ON CHAMBER #1.
  - 7) MASK MACHINED SEAL SURFACES & PAINT EXTERNAL SURFACE ONLY.

		PARTS LIST	
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	Ch2 Do6200 x 8500L - Inlet Flange	SA105, Forged Ring to Finish at 4.75"thk x 72.00"OD x 62.00"ID
2	1	Ch2 Do6200 x 8500L - Shell	SA516 GR70, 1/4" PL x 69.43" x 194.03" Lg.
3	1	Ch2 Do6200 x 8500L - ASME F&D Head	SA516 GR70, ASME F&D Head, .188" min. thk x 62.00"OD w/ 2" SF
4	2	Ch2 Do6200 x 8500L - Head Nozzle	SA516 GR70, 1/4" PL x 4.25" x 125.13" Lg.
5	1	2014-08 V8-2 Output Flange	SA105, Forged Ring to Finish at 1.50"thk x 44.62"OD x 39.50"ID
6	3	Ch2 Do6200 x 8500L - Lifting Eye Eyelet	SA36, Plate, Laser cut shape, 3/8" thk x 2.63" x 4.55"
7	3	Ch2 Do6200 x 8500L - Lifting Eye Base	SA36, Plate, 1/4" thk x 6.50" x 18.00" Lg.
8	2	Ch2 Do6200 x 8500L - Base	SA36, Flat, 1/2" x 5.00" x 54.88" Lg.
9	1	Ch2 Do6200 x 8500L - Legs	SA36, Angle, 3/8"thk x 4" x 4" x 20 ft. RL
10	1	Ch2 Do6200 x 8500L - Reinf Pad	SA36, Flat, 1/4" thk x 6" x 160.00" Lg.

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
TOLERANCES ON:  
DECIMALS .x .03  
.xx .01  
xxx .005  
MACHINE FINISH

DRAWN TV 11/21/14

CHECKED

APPROVED

Meyer Tool & Mfg., Inc.

TITLE  
**CHAMBER #2 WELDMENT,  
PROTON-RADIUS VACUUM  
CHAMBER**

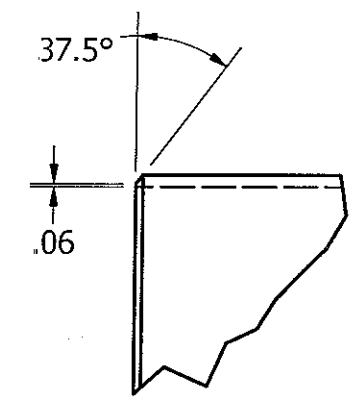
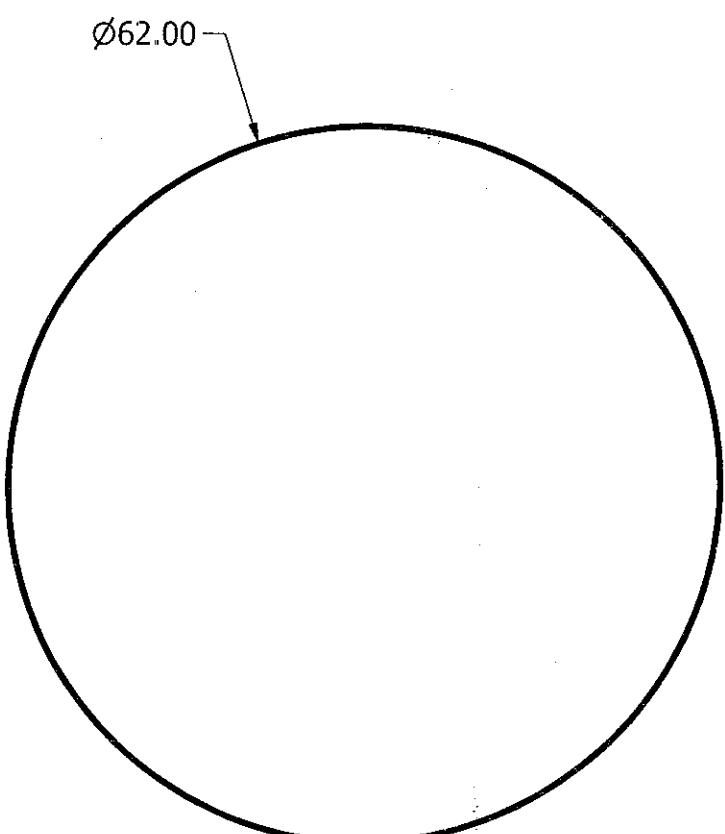
SIZE  
D

SCALE

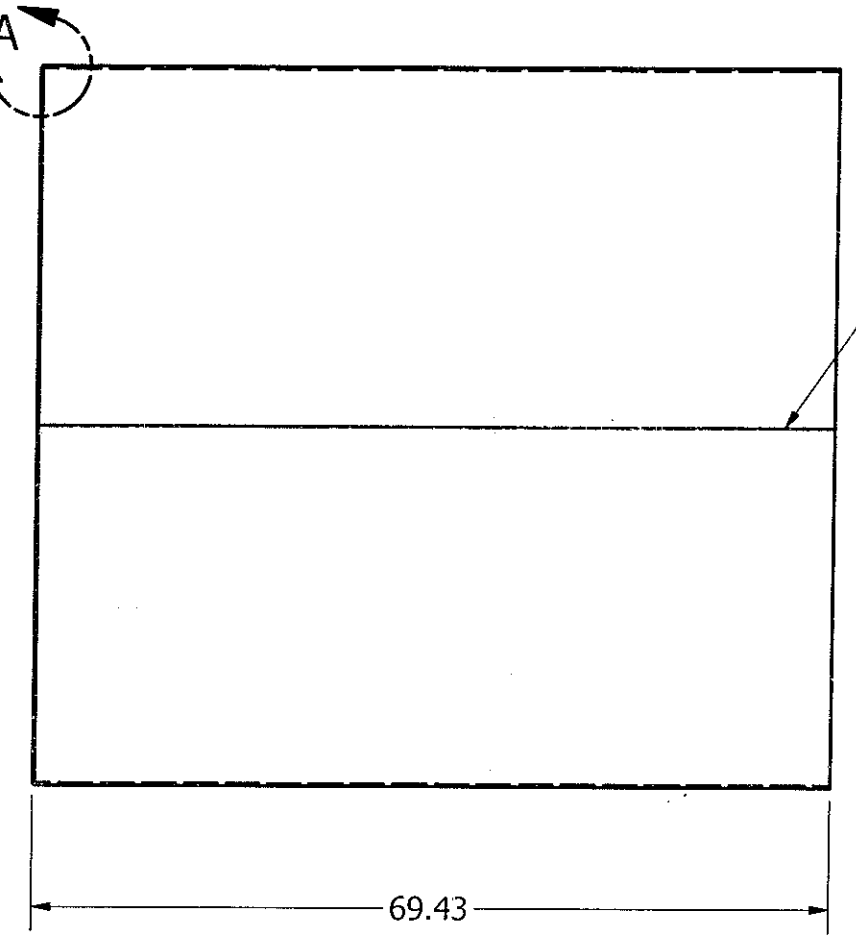
DWG NO **02351-10**

REV  
0

SHEET 1 OF 1



DETAIL A  
SCALE 1 / 4

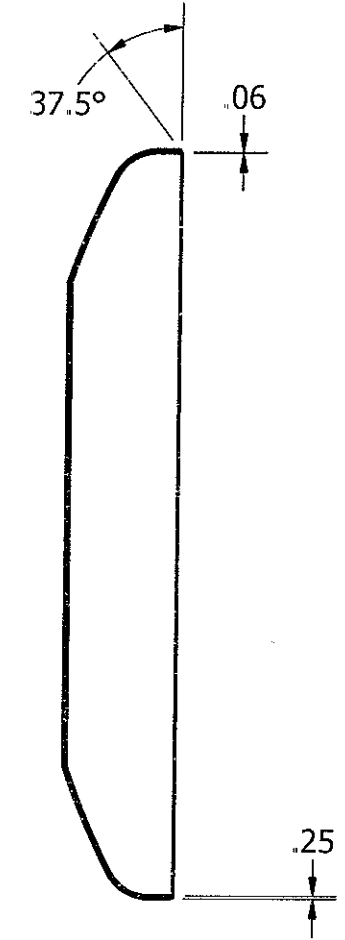
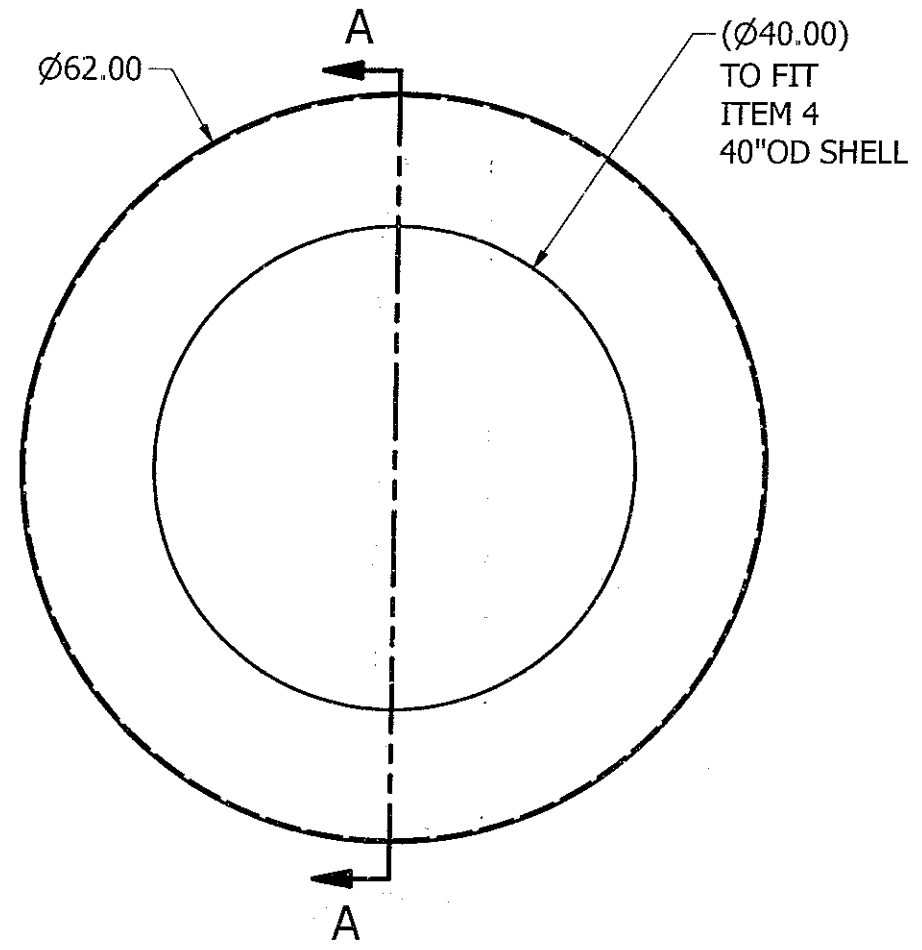


**ITEM 2**  
Qty. 1  
MAT'L: SA516 GR70

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	DECIMALS .x .03 .xx .01 .xxx .005	ANGLES ± 0.5 deg FRACTIONS 1/16	CHECKED		TITLE <b>CHAMBER #2 ROLLED CYLINDER</b>			
	MACHINE FINISH		APPROVED					
	SIZE B		DWG NO <b>02351-11</b>		REV 0			
SCALE		SHEET 1 OF 1						



4 | 3 | 2 | 1

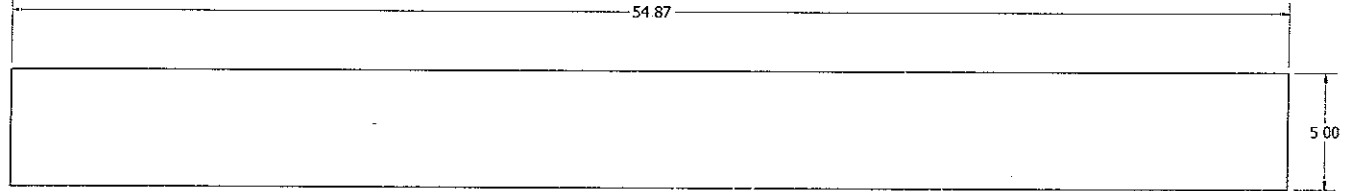


SECTION A-A  
SCALE 1/16

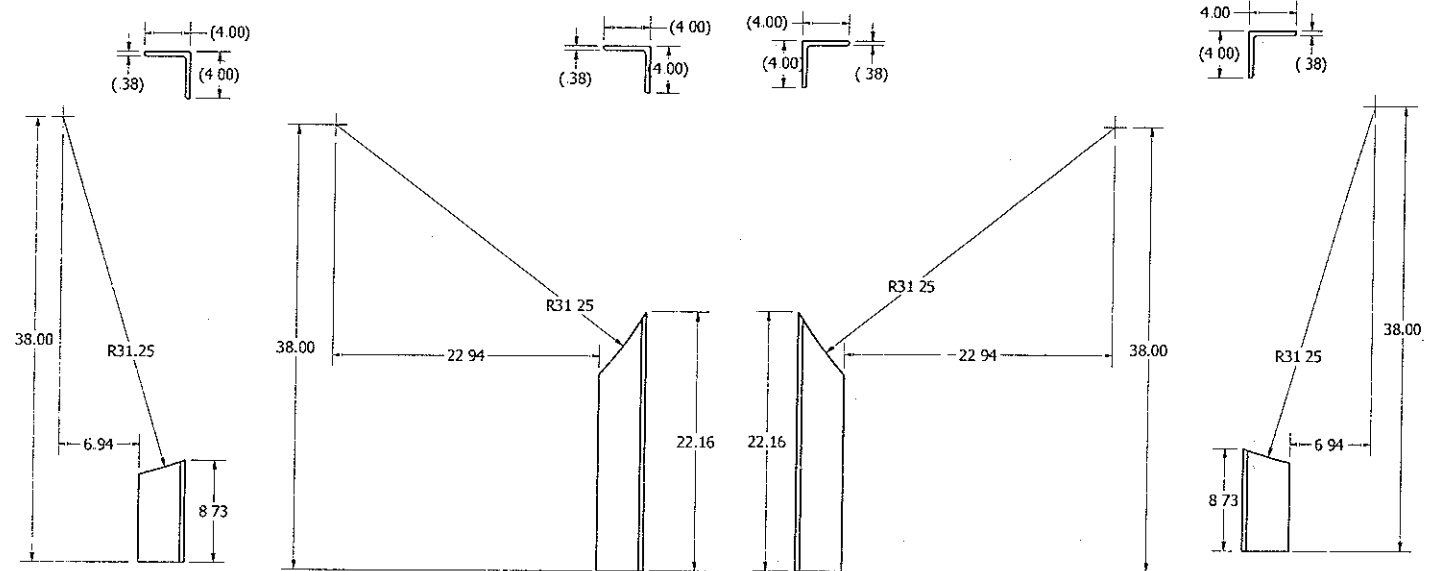
**ITEM 3**  
Qty. 1  
MAT'L: SA516 GR.70

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	<p>DECIMALS            ANGLES</p> <p>.x .03                ± 0.5 deg</p> <p>.xx .01                FRACTIONS</p> <p>.xxx .005             1/16</p>		<p>CHECKED</p>					<p>TITLE <b>CHAMBER #2 ASME F&amp;D HEAD DETAILS</b></p>
	<p>MACHINE FINISH</p>		<p>APPROVED</p>		<p>SIZE B</p>	<p>DWG NO <b>02351-12</b></p>		
					<p>SCALE</p>	<p>SHEET 1 OF 1</p>		

4 | 3 | 2 | 1



**ITEM 8**  
Qty 2  
MAT'L: SA36

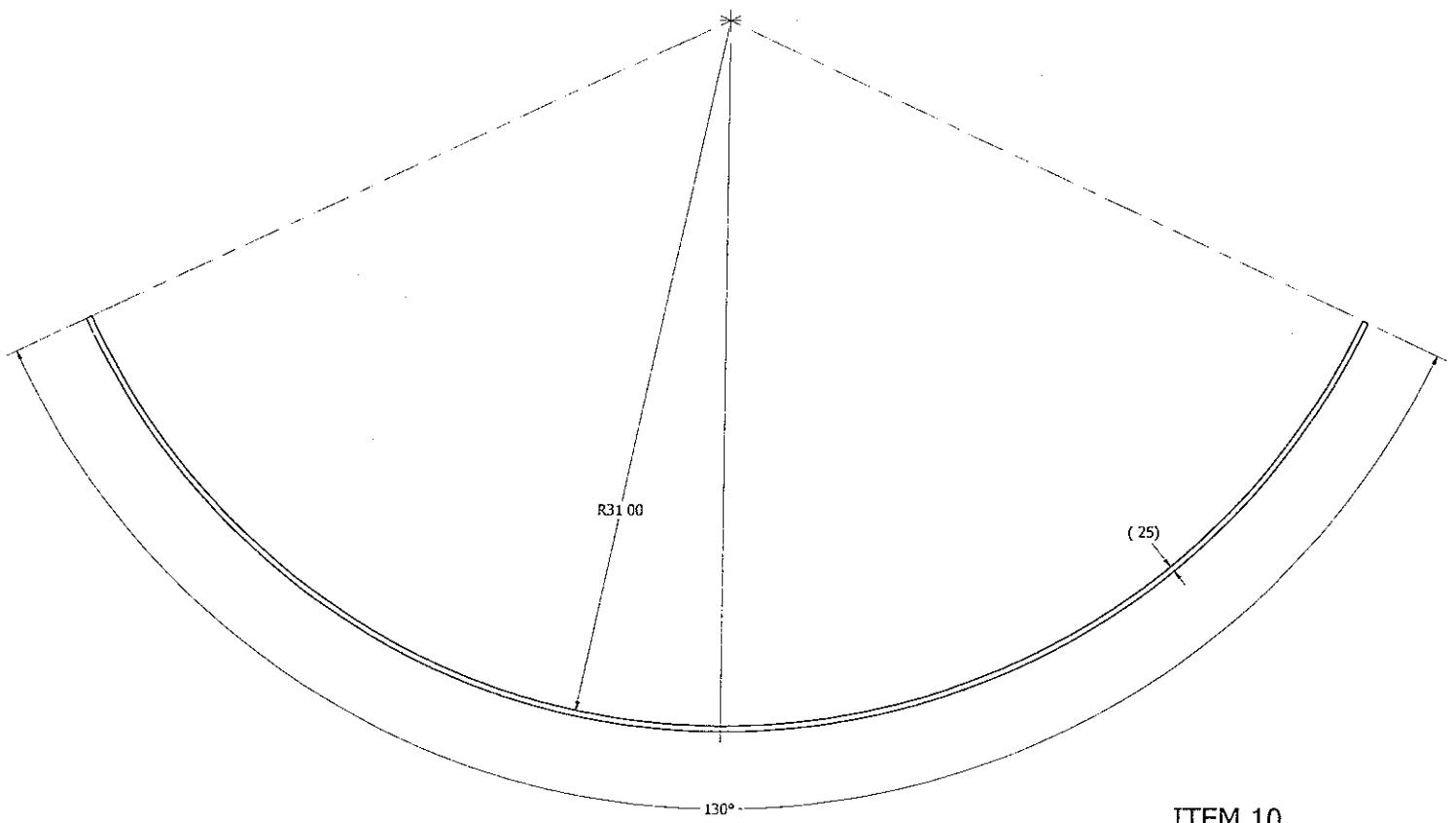


**ITEM 9A**  
Qty 2  
MAT'L: SA36

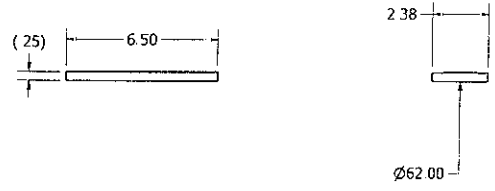
**ITEM 9B**  
Qty 2  
MAT'L: SA36

**ITEM 9C**  
Qty 2  
MAT'L: SA36

**ITEM 9D**  
Qty 2  
MAT'L: SA36

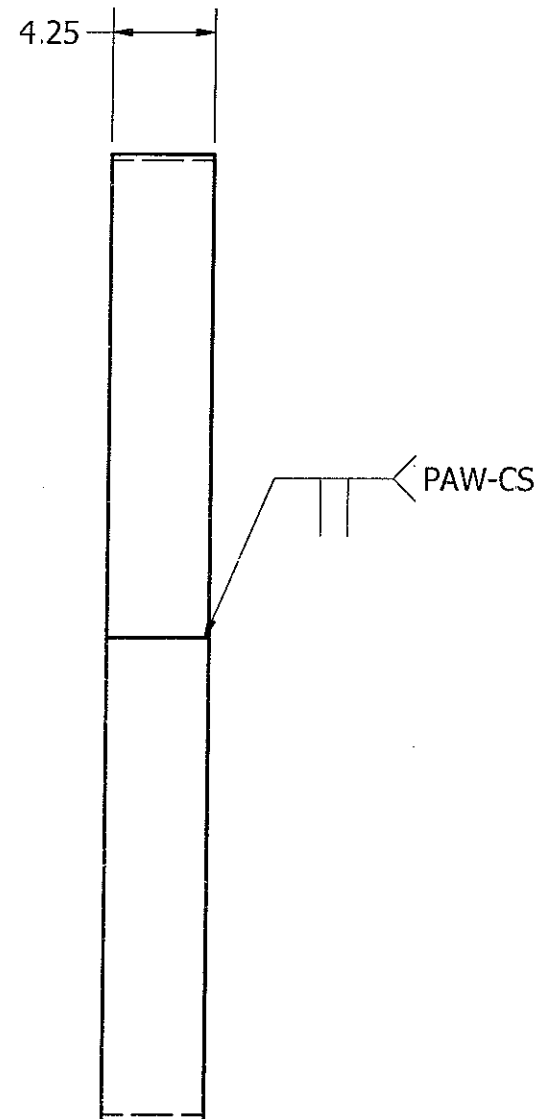
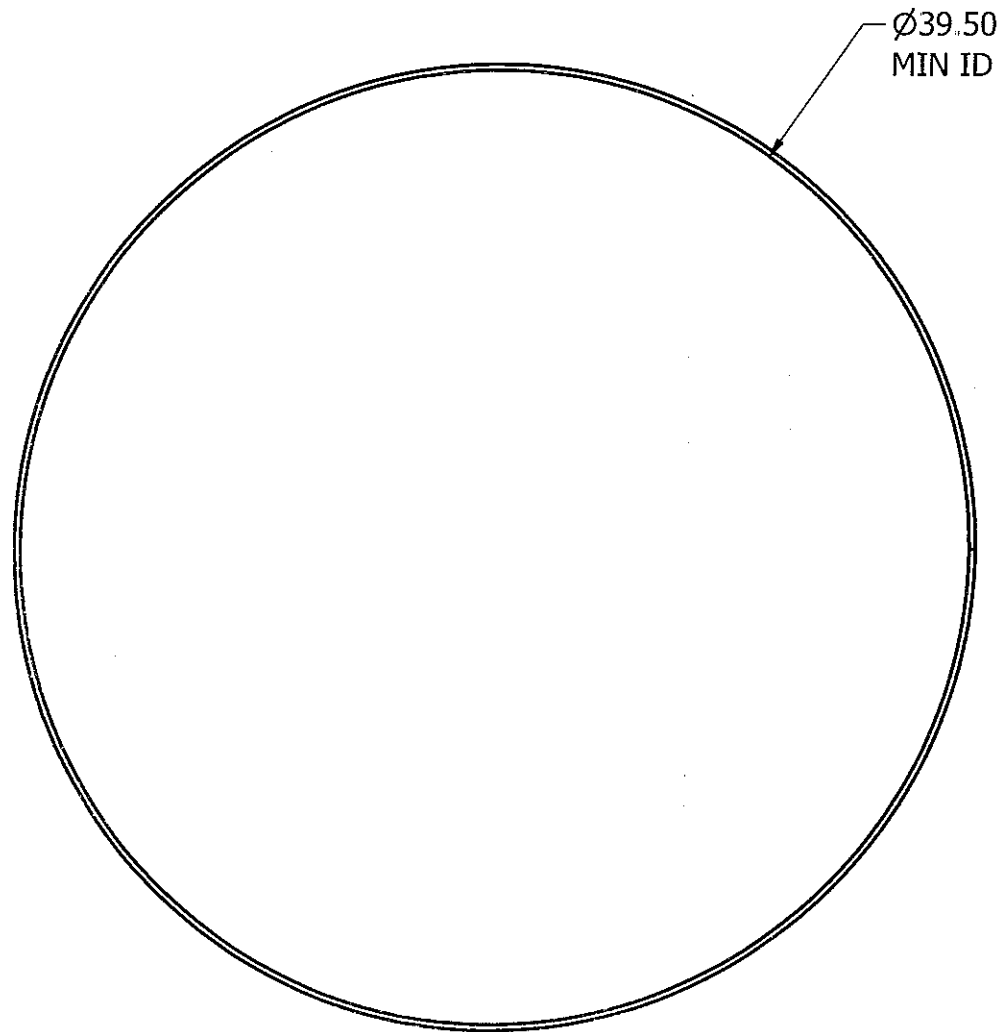


**ITEM 10**  
Qty 2  
MAT'L: SA36



**ITEM 7**  
Qty 3  
MAT'L: SA36

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	SIZE D	DWG NO <b>02351-13</b>	REV 0			
	SCALE	SHEET 1 OF 1				



**ITEM 4**

QTY. 1

MAT'L: SA516 GR.70

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ON:

DECIMALS	ANGLES
.x .03	± 0.5 deg
.xx .01	FRACTIONS
.xxx .005	1/16

MACHINE FINISH

DRAWN TV 11/21/14

CHECKED

APPROVED

Meyer Tool & Mfg., Inc.

TITLE

HEAD NOZZLE, CHAMBER #2

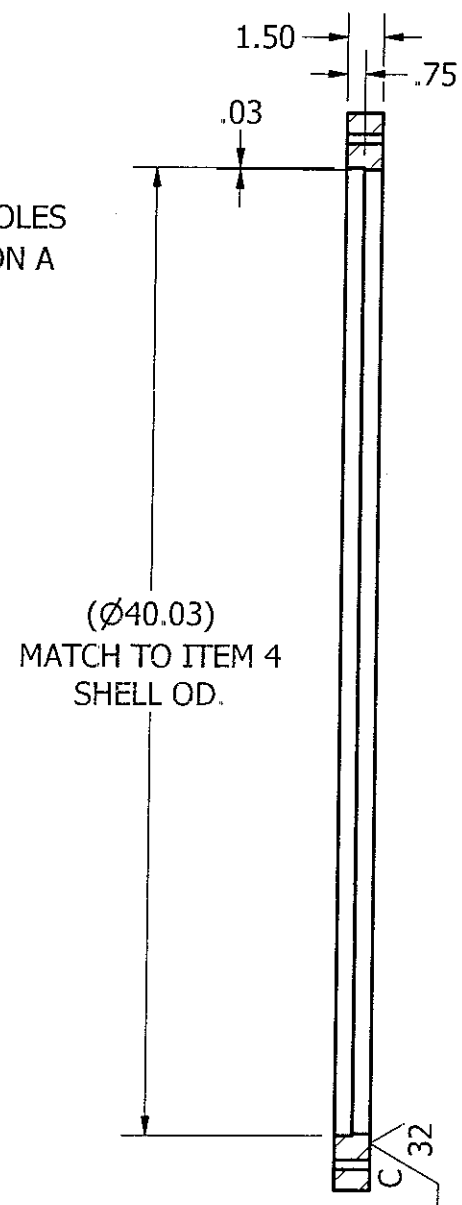
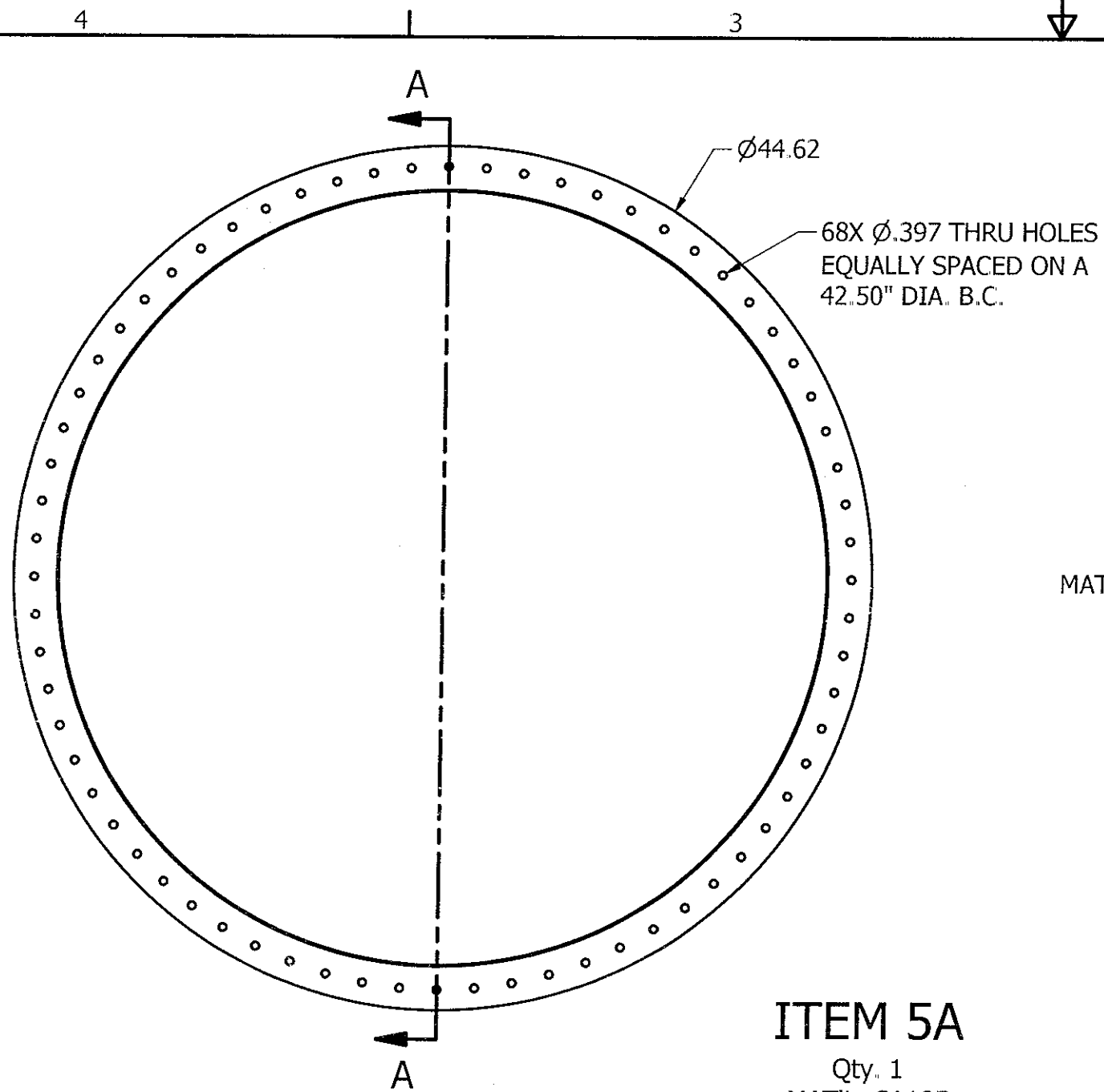
SIZE  
B

DWG NO 02351-14

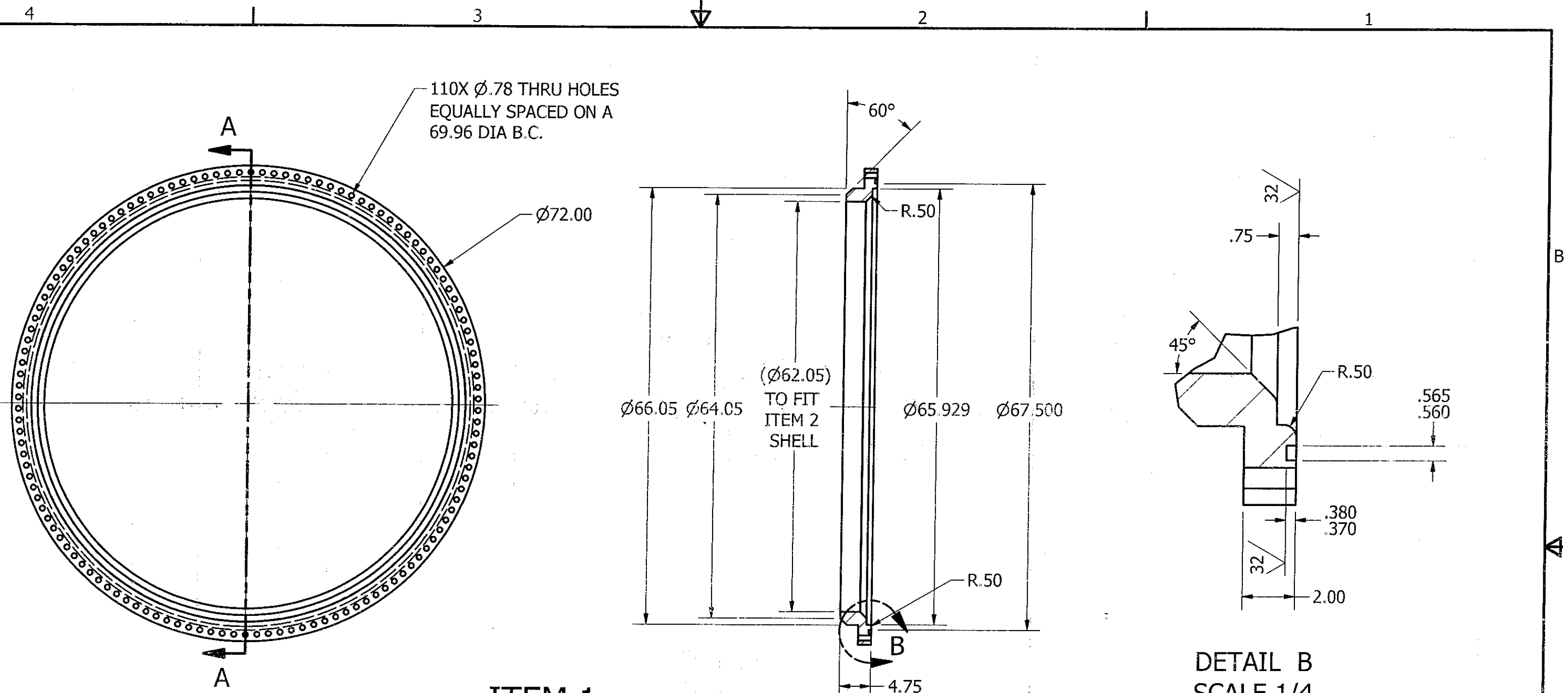
REV  
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SCALE

SHEET 1 OF 1



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	DECIMALS .x .03 .xx .01 .xxx .005	ANGLES ± 0.5 deg FRACTIONS 1/16	CHECKED				TITLE <b>CHAMBER #2 NOZZLE          FLANGE DETAILS</b>
	MACHINE FINISH		APPROVED		SIZE B	DWG NO <b>02351-15</b>	
					SCALE	SHEET 1 OF 1	



**ITEM 1**  
Qty. 1  
MAT'L: SA105

**SECTION A-A**  
SCALE 1/16

**DETAIL B**  
SCALE 1/4

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ON:  
DECIMALS            ANGLES  
.x .03                ± 0.5 deg  
.xx .01               FRACTIONS  
.xxx .005             1/16  
MACHINE FINISH

DRAWN TV 11/21/14  
CHECKED  
APPROVED

<b>Meyer Tool &amp; Mfg., Inc.</b>			
<b>BODY FLANGE DETAILS, CHAMBER #2</b>			
SIZE B	DWG NO <b>02351-16</b>	REV 0	
SCALE	SHEET 1 OF 1		