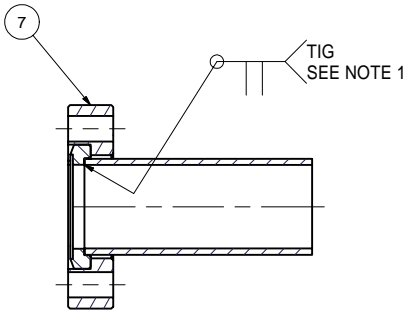
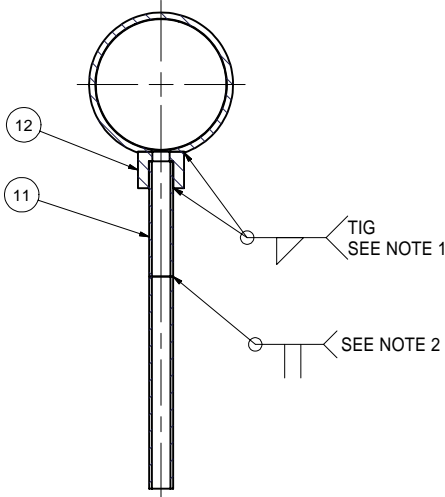


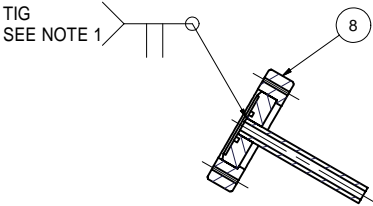
REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A		ADDED ITEM #12 TO P.L. & UPDATED VIEWS TO REFLECT THIS JGL	12/7/06	JOS



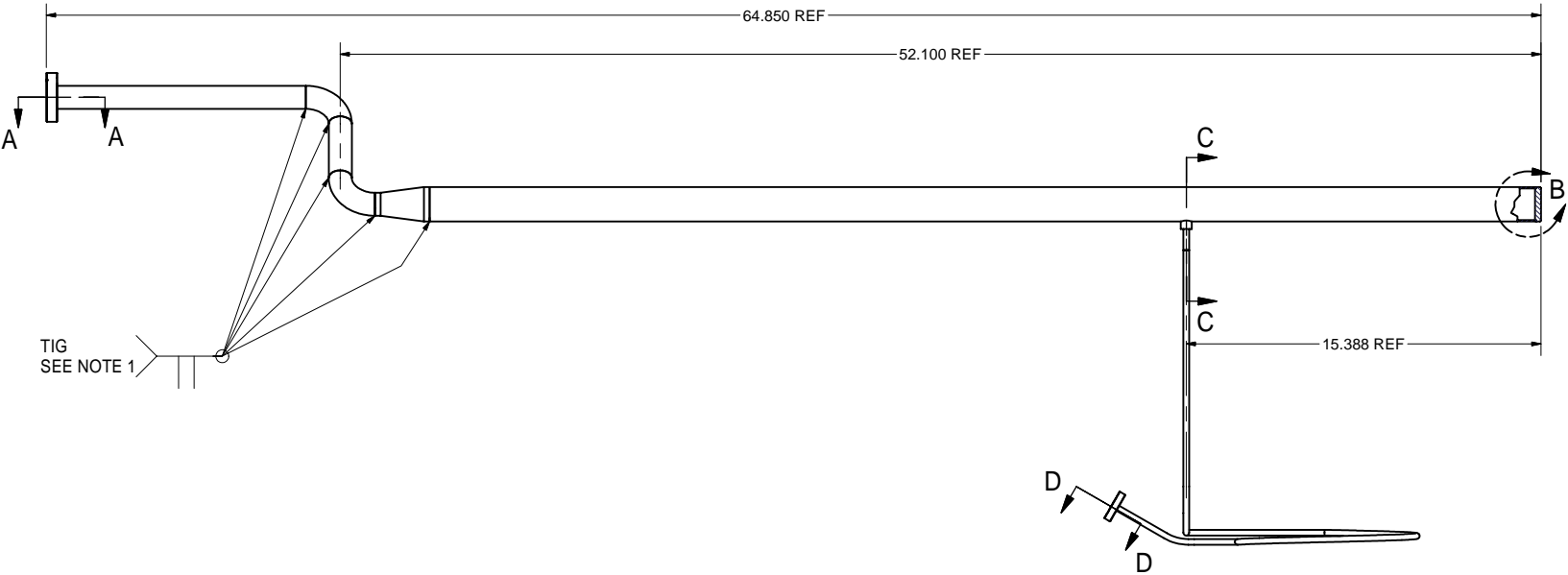
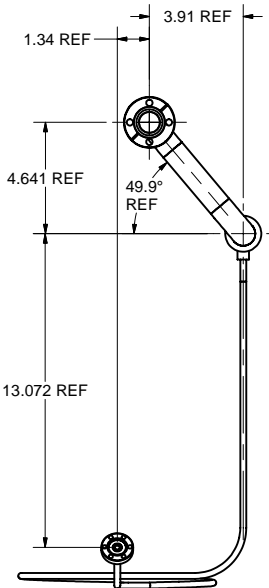
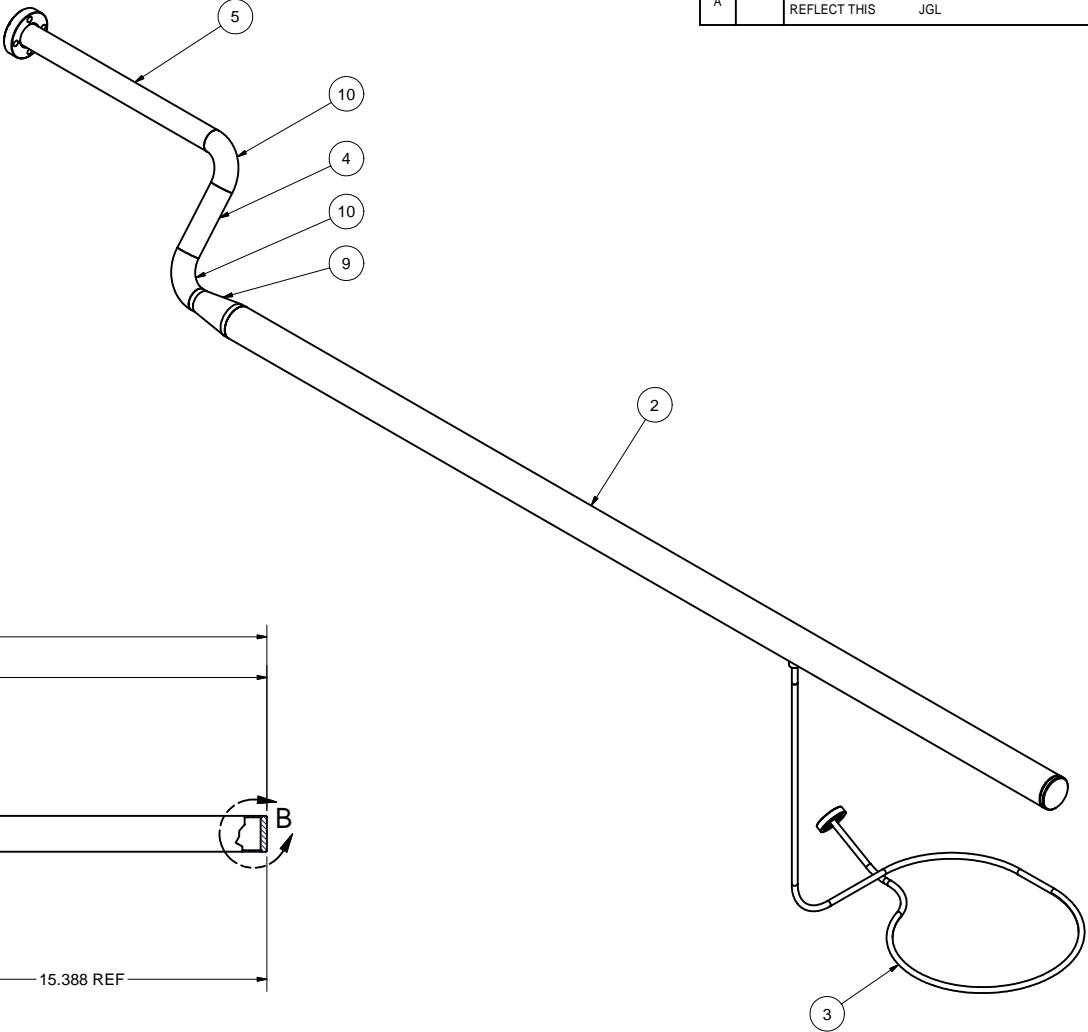
SECTION A-A  
SCALE 1:1



SECTION C-C  
SCALE 1:1

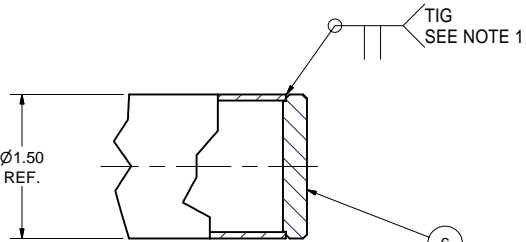


SECTION D-D  
SCALE 1:1




1 WARM-UP/COOL-DOWN PIPE ASSEMBLY

FILE NAME: 7110-020  
SHEET NO.: 1  
DFT. SCALE: 1:4  
MATERIAL:  
QTY: 1  
NOTES: 1. WELDS TO CONFORM TO UHV SPEC.  
2. MAKE THIS WELD DURING FINAL CRYOMODULE ASSEMBLY;  
SHIP WELDED PARTS ITEM 3 AND 8 SEPARATELY.  
3. MAKE LN THERMAL COLD SHOCK AND LEAK TEST. LEAK RATE: <2.0E-10 TORR-L/SEC.



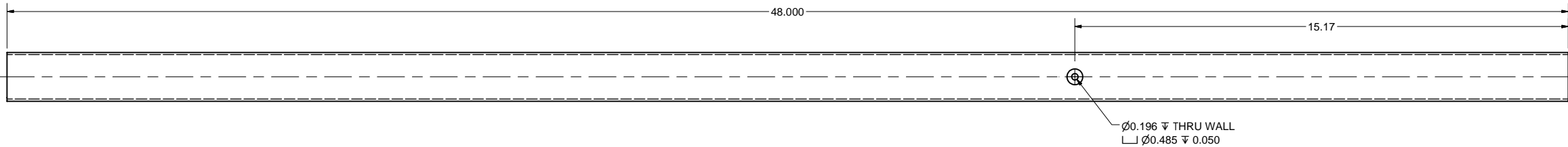
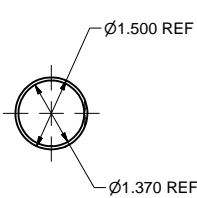
DETAIL B  
SCALE 1:1

12	SEE 7110-007 ITEM 12	1/4" WELD COUPLING (PUR. & MODIFIED)	1						
11	7110-007, item 8	1/4" OD TUBE STUB	1						
10	PUR.	1" OD x 90 DEG. ELBOW, 316L S.S.	2					Varian's WE90100 or equiv.	
9	PUR.	1.5" OD to 1" OD CONICAL REDUCER, 316L S.S.	1					Varian's WRC150100 or equiv.	
8	PUR.	1-1/3" CF 1/4" Tube Rotatable Flange, 316L S.S.	1					Varian's F0133-0025-RC or equiv.	
7	PUR.	2-1/8" CF 1" Tube Rotatable Flange, 316L S.S.	1					Varian's F0212-0100-RC or equiv.	
6	7110-020 (Sh. 2)	1.5" OD END CAP	1						
5	7110-020 (Sh. 2)	1" OD TUBE B	1						
4	7110-020 (Sh. 2)	1" OD TUBE A	1						
3	7110-020 (Sh. 3)	0.25" CURVED TUBE	1						
2	7110-020 (Sh. 2)	1-1/2" OD TUBE	1						
1	7110-020 (Sh. 1)	WARM-UP/COOL-DOWN PIPE ASSEMBLY	X						

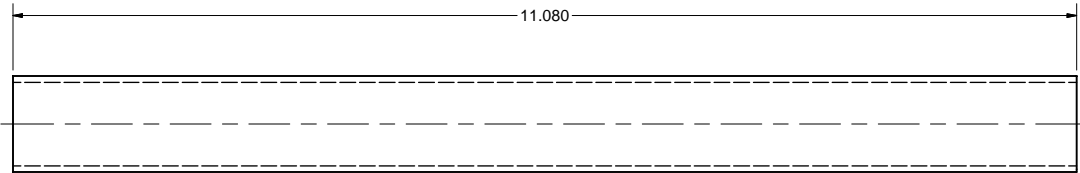
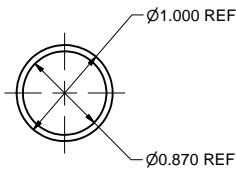
		ITEM		DWG. NO.		DESCRIPTION			G1		G2		G3		REMARKS		REV.	
									QUANTITY									
D		PRINT DISTR.		PLOT DATE: 12/18/2006 CAD FILE NAME: 7110-020.idw														
7110-020 SH. NO. 1 OF 3		CR1		UNLESS OTHERWISE SPECIFIED:  DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES			<div><div><div>CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853</div></div><div>ERL Horizontal Test Cryomodule Warm-Up/Cool-Down Pipe Assembly</div></div>											
REV. A		CHECKED BY: VM APPROVED BY: ML		DRAWN BY applin		DRAWN FOR VM		DATE 8/17/2006		SCALE		D		7110-020 SH. NO. 1 OF 3		REV. A		

FOR MACHINING LUBRICANT USE ONLY  
ALKALINE DETERGENT LUBRICANT CIMSTAR 40  
OR EQUIVALENT APPROVED BY CORNELL LEPP

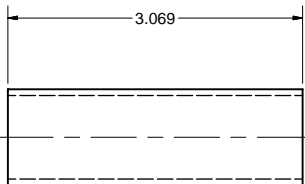
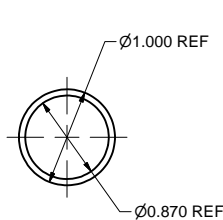
REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A	E-3	ON ITEM #2, CHANGED C'BORE - WAS 0.26 JGL	12/7/06	JOS



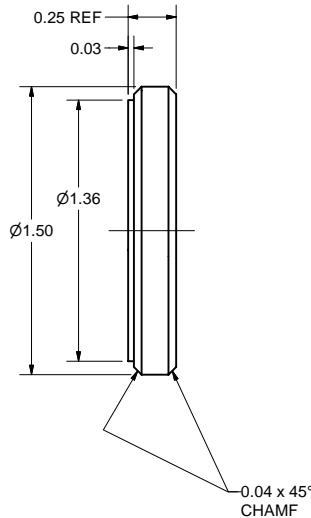
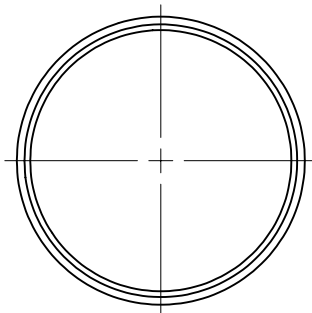
2 1-1/2" OD TUBE  
FILE NAME: 7110-020  
SHEET NO.: 2  
DFT. SCALE: 1 : 2  
MATERIAL: 1.5" OD x 0.065" W, 316L STAINLESS STEEL TUBE  
QTY: 1  
NOTES:



5 1" OD TUBE B  
FILE NAME: 7110-020  
SHEET NO.: 2  
DFT. SCALE: 1 : 1  
MATERIAL: 1" OD x 0.065" W 316L STAINLESS STEEL TUBE  
QTY: 1  
NOTES:






4 1" OD TUBE A  
FILE NAME: 7110-020  
SHEET NO.: 2  
DFT. SCALE: 1 : 1  
MATERIAL: 1" OD x 0.065" W 316L STAINLESS STEEL TUBE  
QTY: 1  
NOTES:

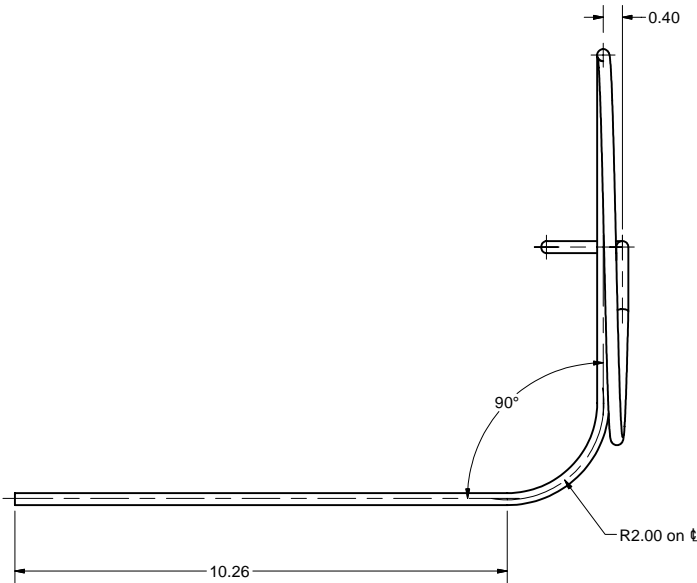
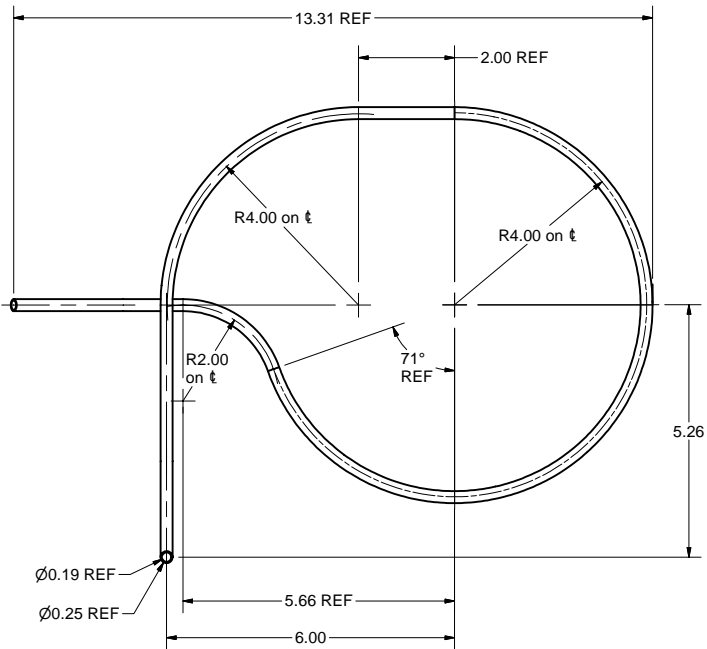
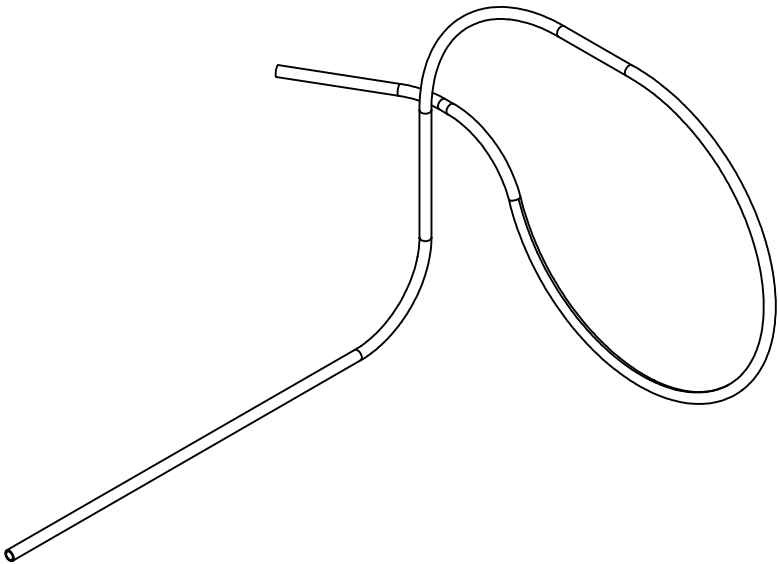
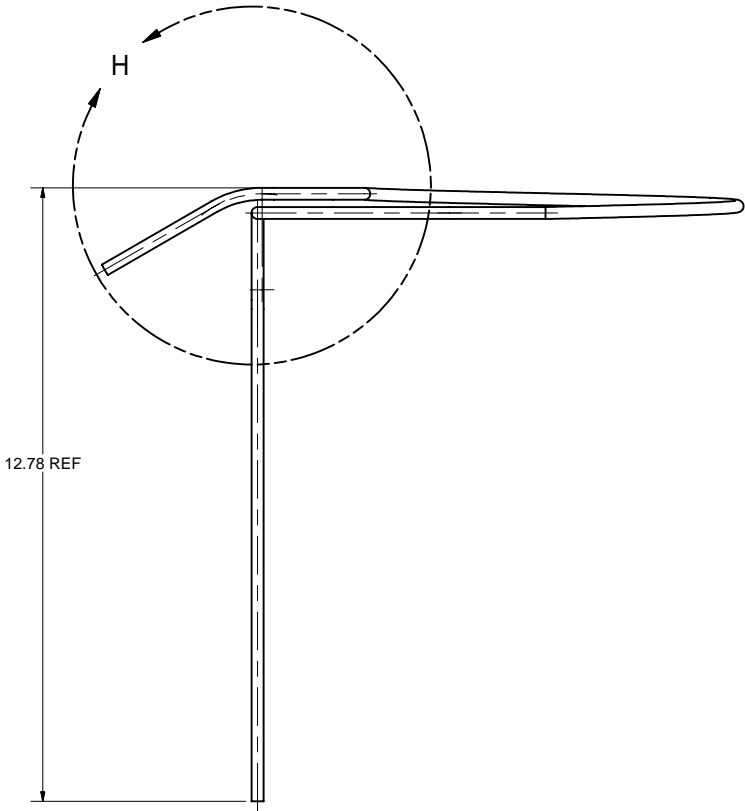
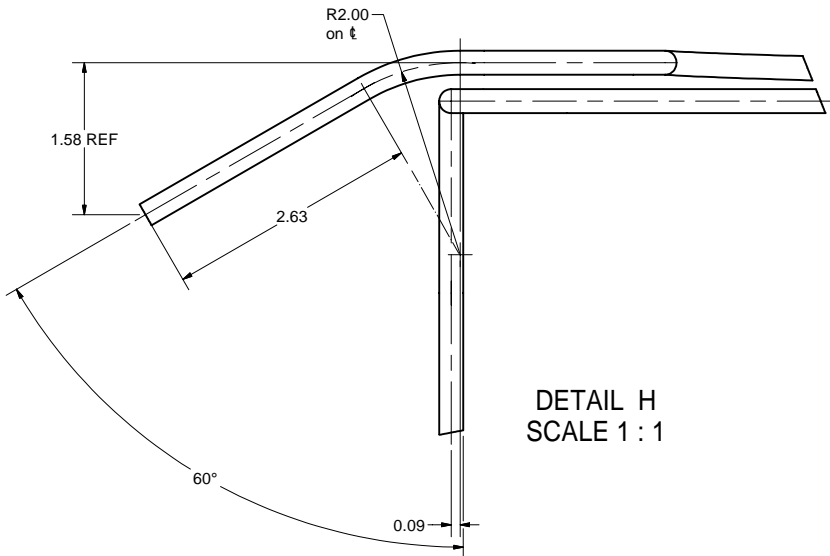


6 1.5" OD END CAP  
FILE NAME: 7110-020  
SHEET NO.: 2  
DFT. SCALE: 2 : 1  
MATERIAL: 1/4" 316L STAINLESS STEEL SHEET  
QTY: 1  
NOTES:

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ALKALINE DETERGENT LUBRICANT CIMSTAR 40  
OR EQUIVALENT APPROVED BY CORNELL LEPP



		ITEM	DWG. NO.	DESCRIPTION	G1	G2	G3	REMARKS	REV.		
D		PRINT DISTR.	PLOT DATE: 12/18/2006 CAD FILE NAME: 7110-020.idw			QUANTITY					
7110-020 SH. NO. 2 OF 3		CR1	<div>UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES; TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS: ± 1/64 ANGLES: ± 0.5° ALL SURFACES: </div> <div> CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY Ithaca, NY 14853</div> <div>ERL Horizontal Test Cryomodule Large Tubes and Cap, Details</div>								
REV. A		CHECKED BY: VM APPROVED BY: ML	DRAWN BY applin	DRAWN FOR VM	DATE 8/17/2006	SCALE	D	7110-020 SH. NO. 2 OF 3	REV. A		

REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A		PART ITEM 10: DIM. 10.26 WAS 10.37.	12/18/06	VM



10 0.25" CURVED TUBE  
FILE NAME: 7110-020  
SHEET NO.: 3  
DFT. SCALE: 1 : 2  
MATERIAL: 0.25" OD x 0.028" W 316L STAINLESS STEEL TUBE  
QTY: 1  
NOTES:

FOR MACHINING LUBRICANT USE ONLY  
ALKALINE DETERGENT LUBRICANT CIMSTAR 40  
OR EQUIVALENT APPROVED BY CORNELL LEPP

		ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS		REV.
								QUANTITY				
D	PRINT DISTR.	PLOT DATE: 12/18/2006 CAD FILE NAME: 7110-020.idw										
7110-020 SH. NO. 3 OF 3	CR1	UNLESS OTHERWISE SPECIFIED:		<div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div></div>								
		DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES 										
				ERL Horizontal Test Cryomodule Small Curved Tube, Details								
A	REV.	CHECKED BY: VM		DRAWN BY	DRAWN FOR	DATE	SCALE	D	7110-020		REV. A	
		APPROVED BY: ML		applin	VM	8/17/2006			SH. NO. 3 OF 3			