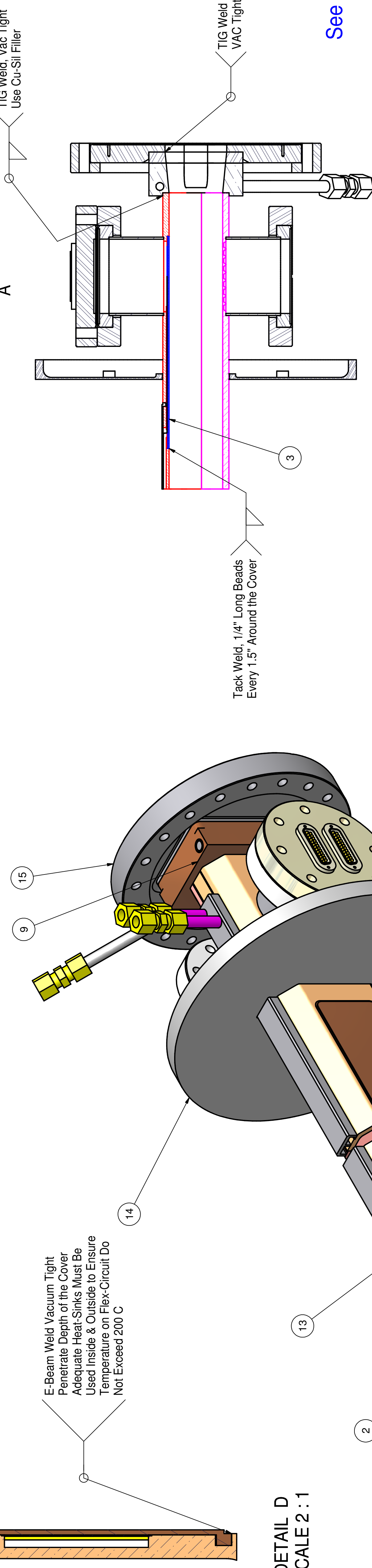
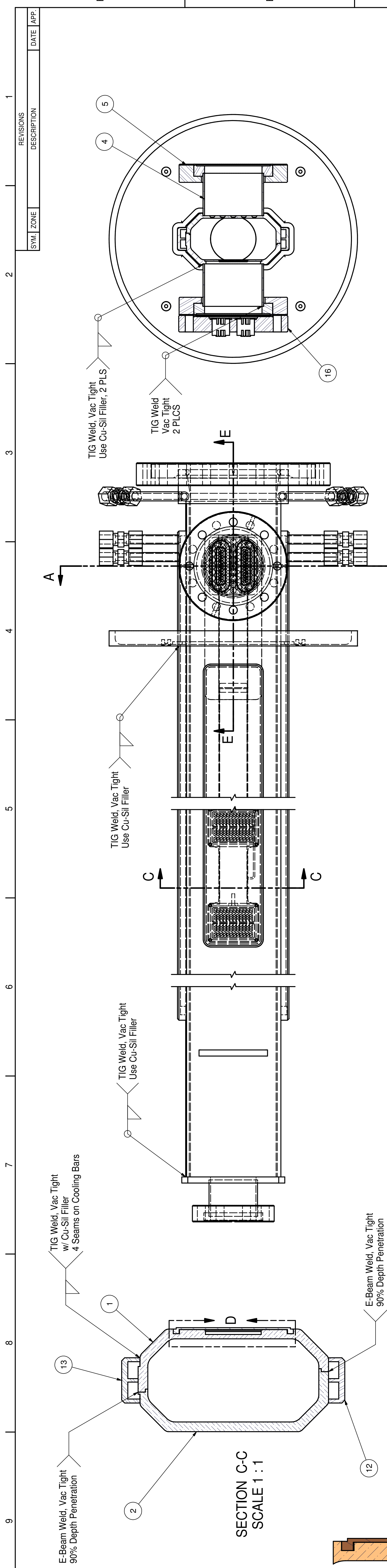
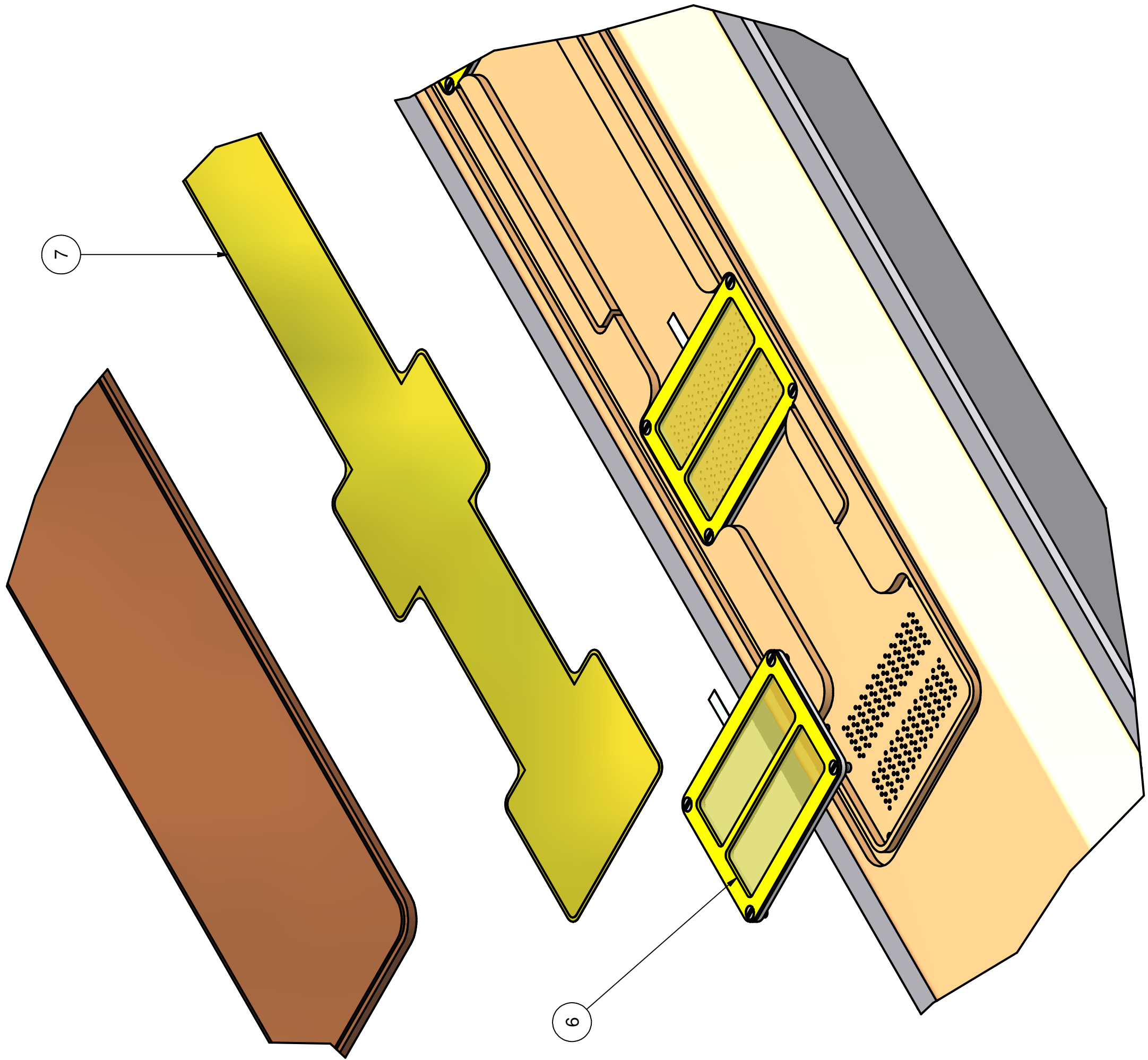


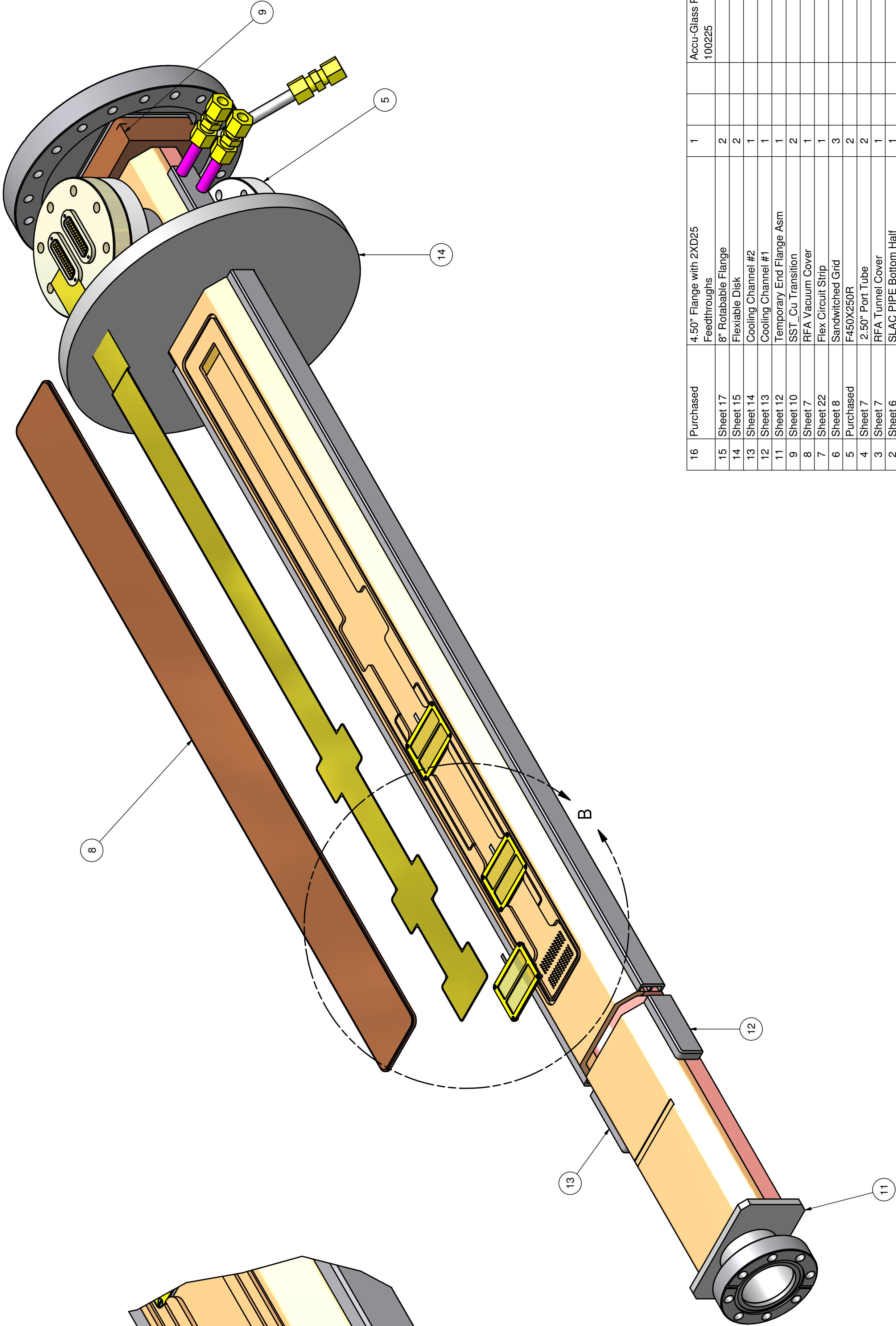


16	Purchased	4.50" Flange with 2XD25 Feedthroughs	1	Accu-Glass P/N 100225
15	Sheet 17	8" Rotatable Flange	2	
14	Sheet 15	Flexible Disk	2	
13	Sheet 14	Cooling Channel #2	1	
12	Sheet 13	Cooling Channel #1	1	
11	Sheet 12	Temporary End Flange Asm	1	
9	Sheet 10	SST Cu Transition	2	
8	Sheet 7	RFA Vacuum Cover	1	
7	Sheet 22	Flex Circuit Strip	1	
6	Sheet 8	Sandwiched Grid	3	
5	Purchased	F450X250R	2	
4	Sheet 7	2.50" Port Tube	2	
3	Sheet 7	RFA Tunnel Cover	1	
2	Sheet 6	SLAC PIPE Bottom Half	1	

	ITEM	DWG. NO.	DESCRIPTION	G1	G2	G3	REMARKS	REV.
	PRINT DISTR.	PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.dwg						
CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES; TOLERANCES ON: .001 ± .010 .000 ± .005 FRACTIONS E 1/64 DECIMALS TO THREE PLACES ALL SURFACES $\sqrt{\text{R}}$							
CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853 CORNELL UNIVERSITY LABORATORY FOR ELEMENTARY PARTICLE PHYSICS CESR Wiggler Chamber with Thin RFA								
CHECKED BY: APPROVED BY:			DRAWN BY Yulin Li	DRAWN FOR Yulin Li	DATE 1/29/2008	SCALE	D	6085-003 SH. NO. 1 OF 22
SH. NO. 1 OF 22								REV.



DETAIL B
SCALE 1 : 1



16	Purchased	4.50" Flange with 2XD25 Feedthroughs	1		Accu-Glass P/N 100225
15	Sheet 17	8" Rotatable Flange	2		
14	Sheet 15	Flexible Disk	2		
13	Sheet 14	Cooling Channel #2	1		
12	Sheet 13	Cooling Channel #1	1		
11	Sheet 12	Temporary End Flange Asm	1		
9	Sheet 10	SST - Cu Transition	2		
8	Sheet 7	RFA Vacuum Cover	1		
7	Sheet 22	Flex Circuit Strip	1		
6	Sheet 8	Sandwiched Grid	3		
5	Purchased	F450X250R	2		
4	Sheet 7	2.50" Port Tube	2		
3	Sheet 7	RFA Tunnel Cover	1		
2	Sheet 6	SLAC PIPE Bottom Half	1		
1	Sheet 4.5	SLAC PIPE TOP Half	1		

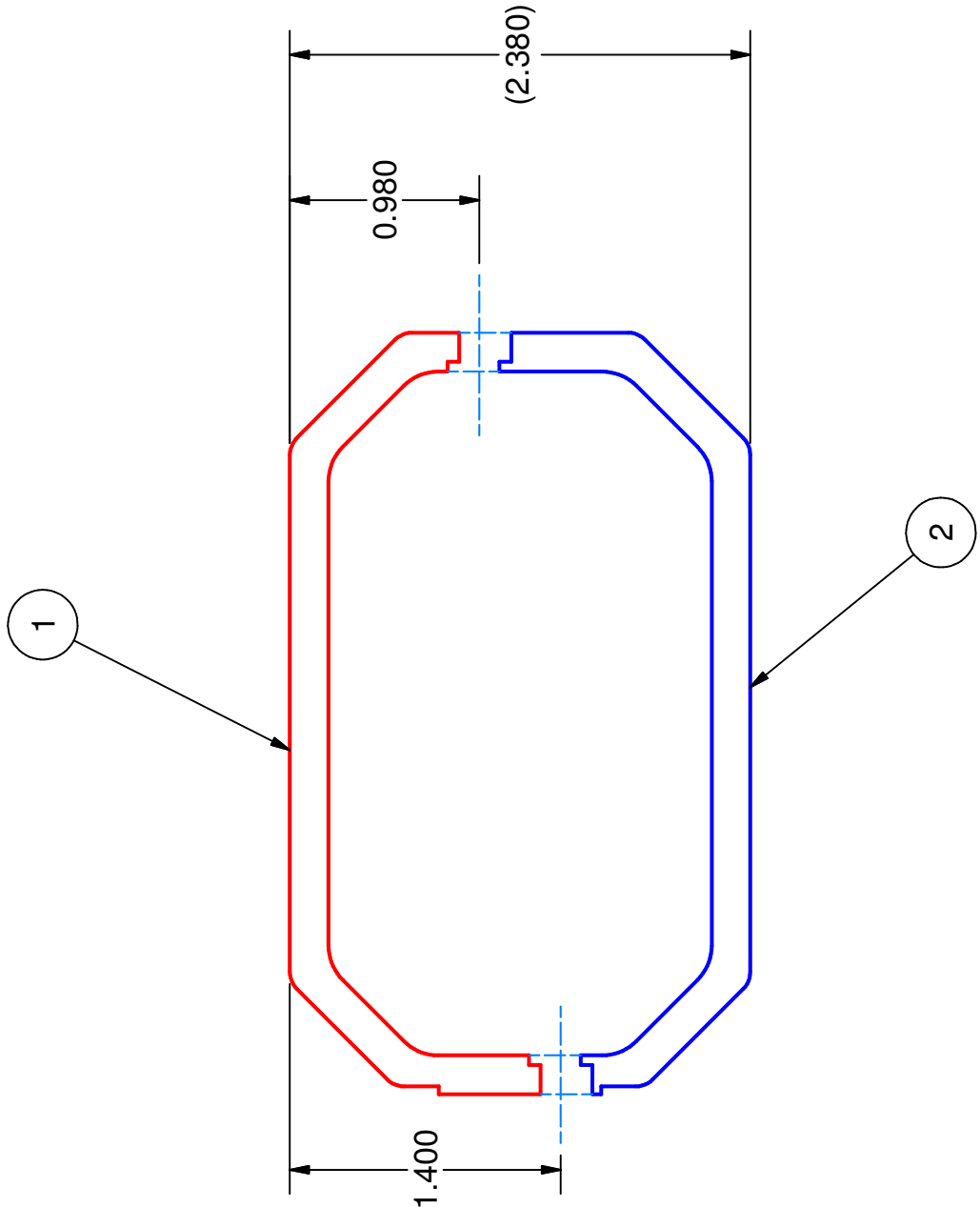
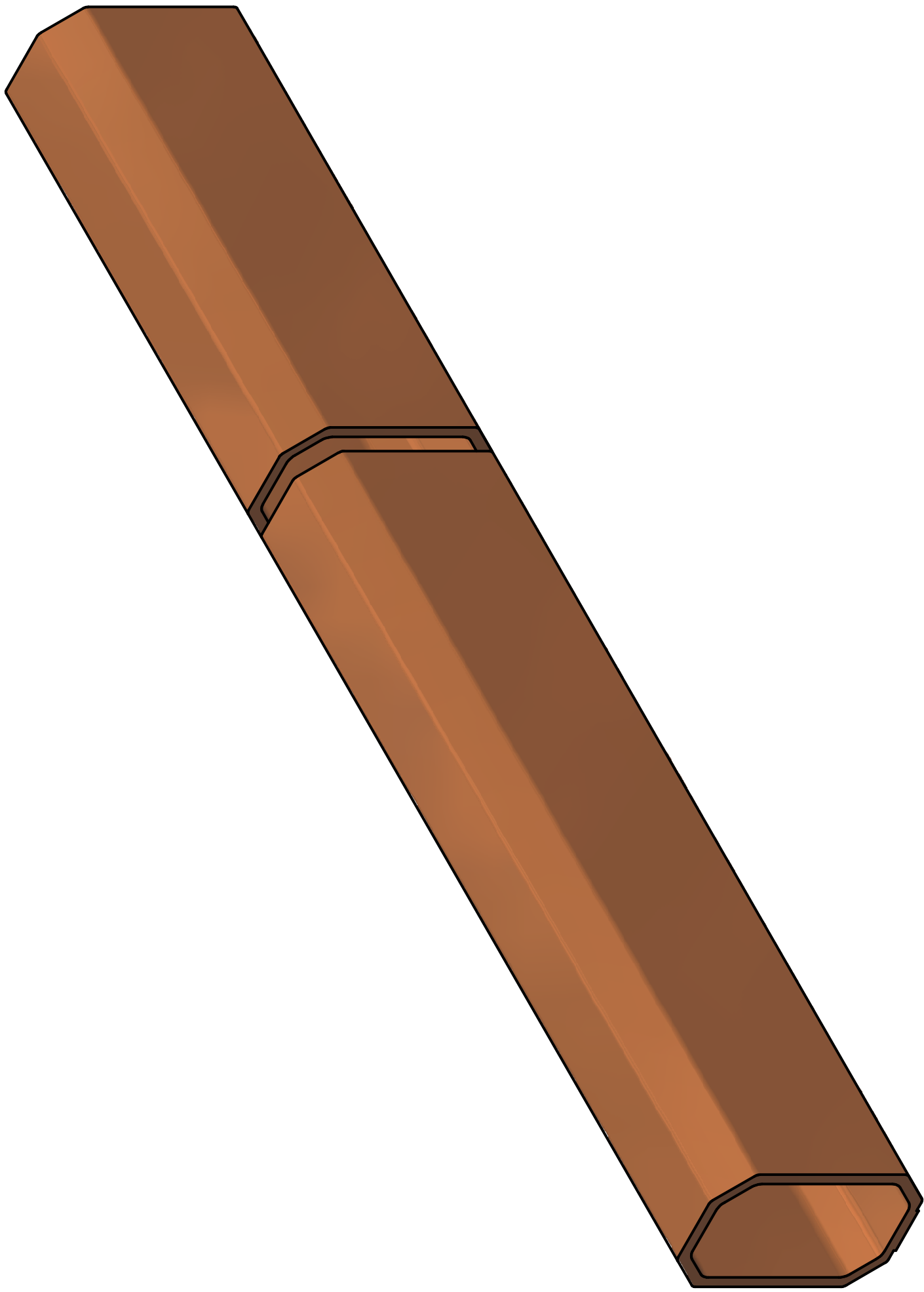
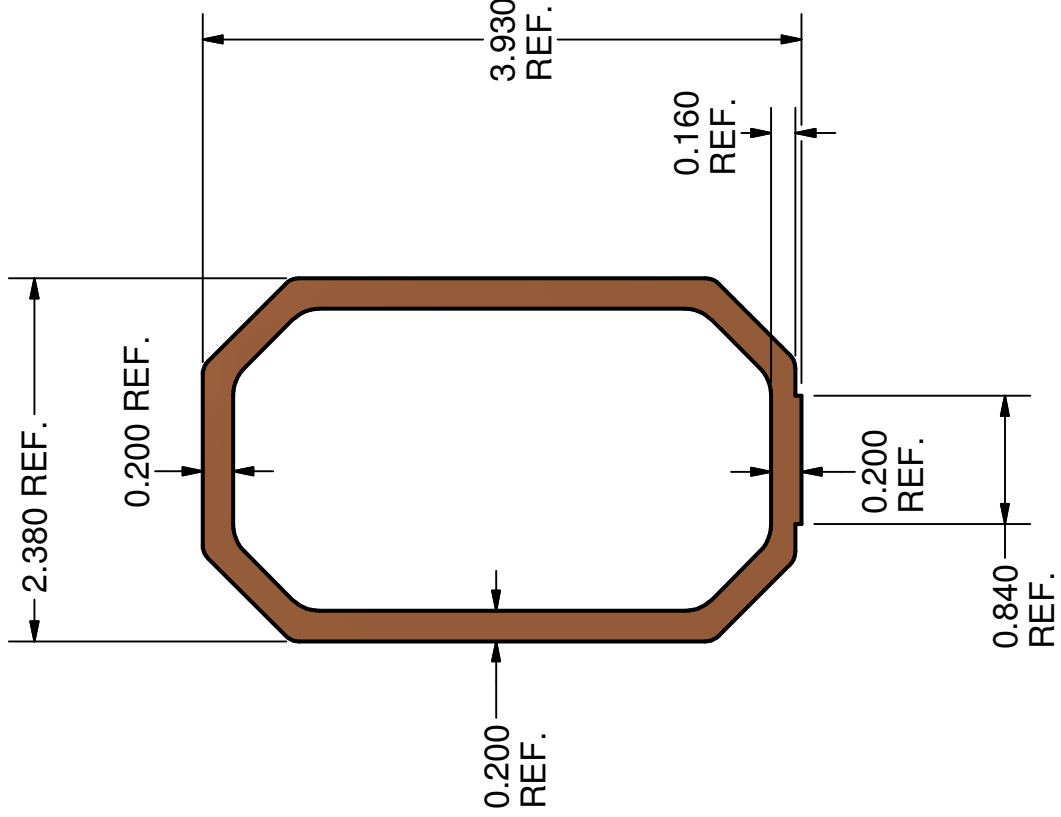
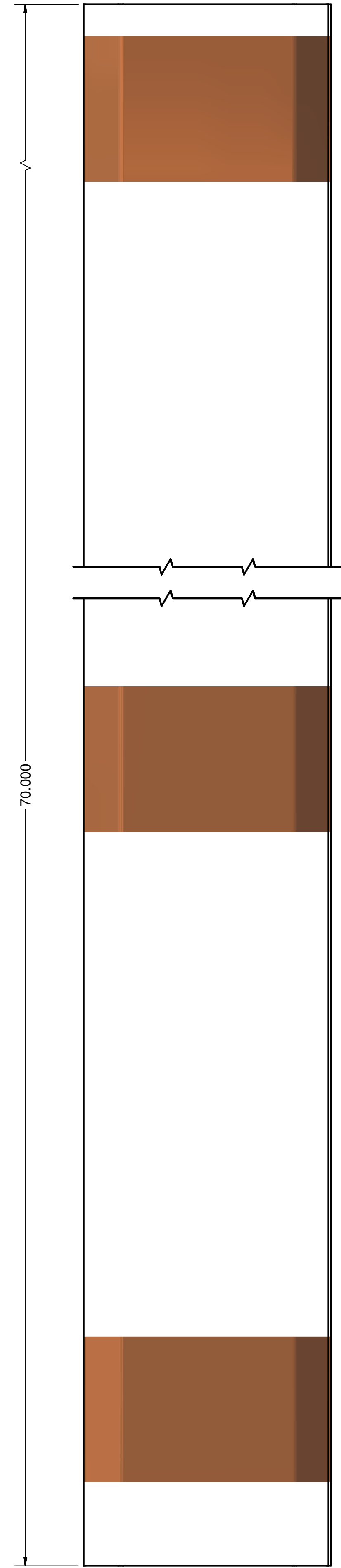
		PRINT DISTR.	D	CR-1	6085-003 SH. NO. 2 OF 22	REV.	
FOR MACHINING LUBRICANT USE ONLY. ALKALINE DETERGENT LUBRICANT OMSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP							
TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION							
DRAFTING (O'Connell):	OK	DATE	N/A				
MACHINE SHOP (Kaminski):							
CHEMISTRY (Conklin):							
ELECTRONICS SHOP (Barry):							
FURNACE BRAZING (Sternwood):							
BEAM WELDING (Gears):							
WELDING OTHER (Gallagher):							
UTILITIES INTEGRATION (Gallagher):							
STOCKROOMS (Lockwood):							

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: FRACTIONS ± .004 ANGLES ± 0.5° ALL SURFACES ✓		CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853		CESR Wiggler Chamber with Thin RFA	
CHECKED BY:		DRAWN BY:	Yulin Li	DATE:	1/29/2008
APPROVED BY:		SCALE:	D	SH. NO. 2	OF 22

SYN	ZONE	REVISIONS	DATE	APP.
		DESCRIPTION		

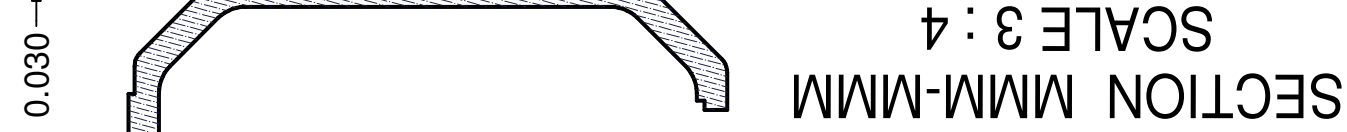
SYM	ZONE	REVISIONS	
		DESCRIPTION	DATE APP.

1	2	3	4	5	6	7	8	9
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1. Parts 1 and 2 are made from SLAC Copper Quad Beam Pipe
2. Recommended slicing lines are shown as above
3. Details of Part 1 are given in Sheets 4 and 5
4. Details of Part 2 are given in Sheet 6

FOR MACHINING LUBRICANT USE ONLY ALKALINE DETERGENT LUBRICANT CIMSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP										ITEM										DWG. NO.										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SECTION F-F
SCALE 3 : 4

FILE NAME: 6085-003

SHEET NO.: 4

DFT. SCALE: 3 : 4

MATERIAL: Copper, See Sheet 2

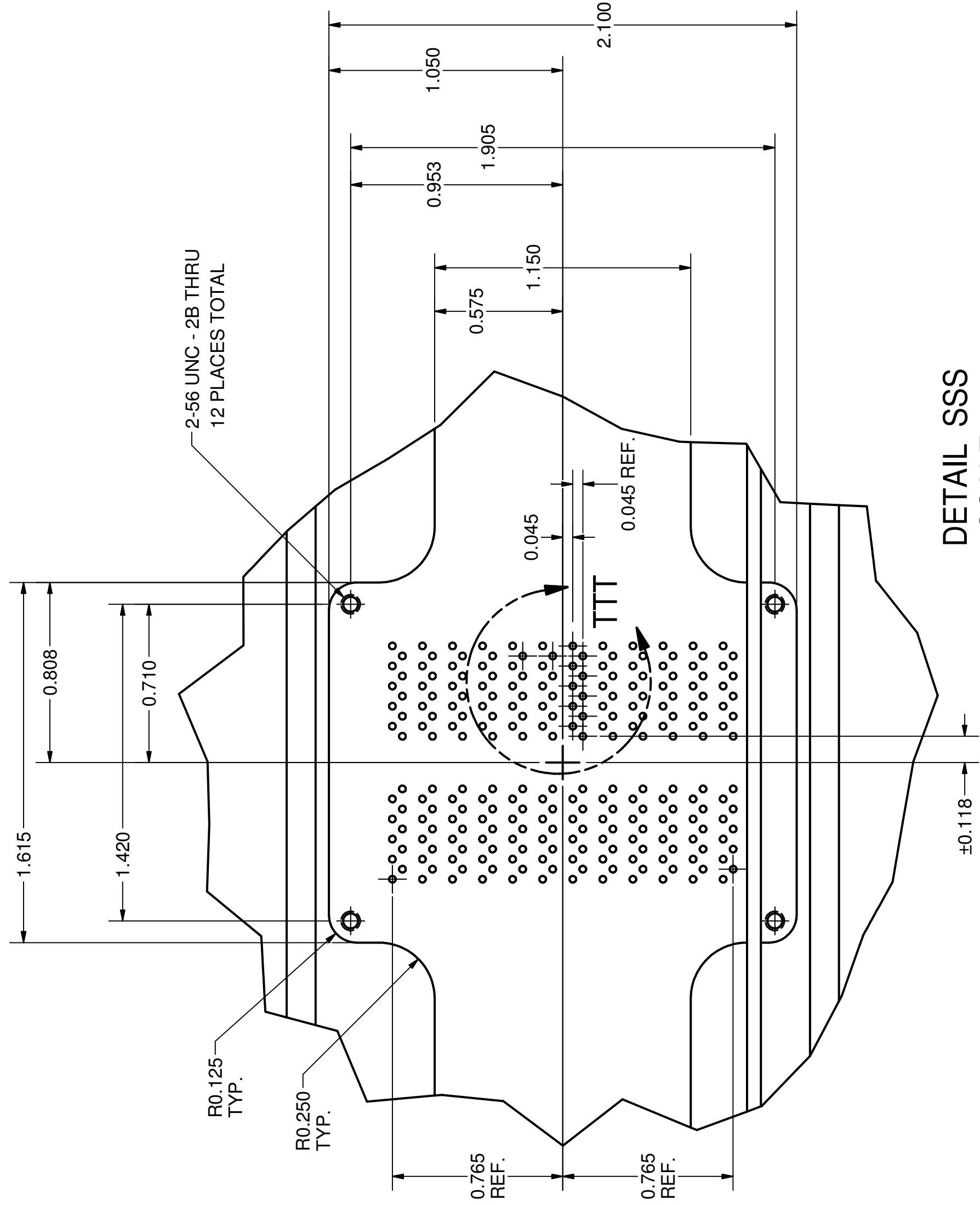
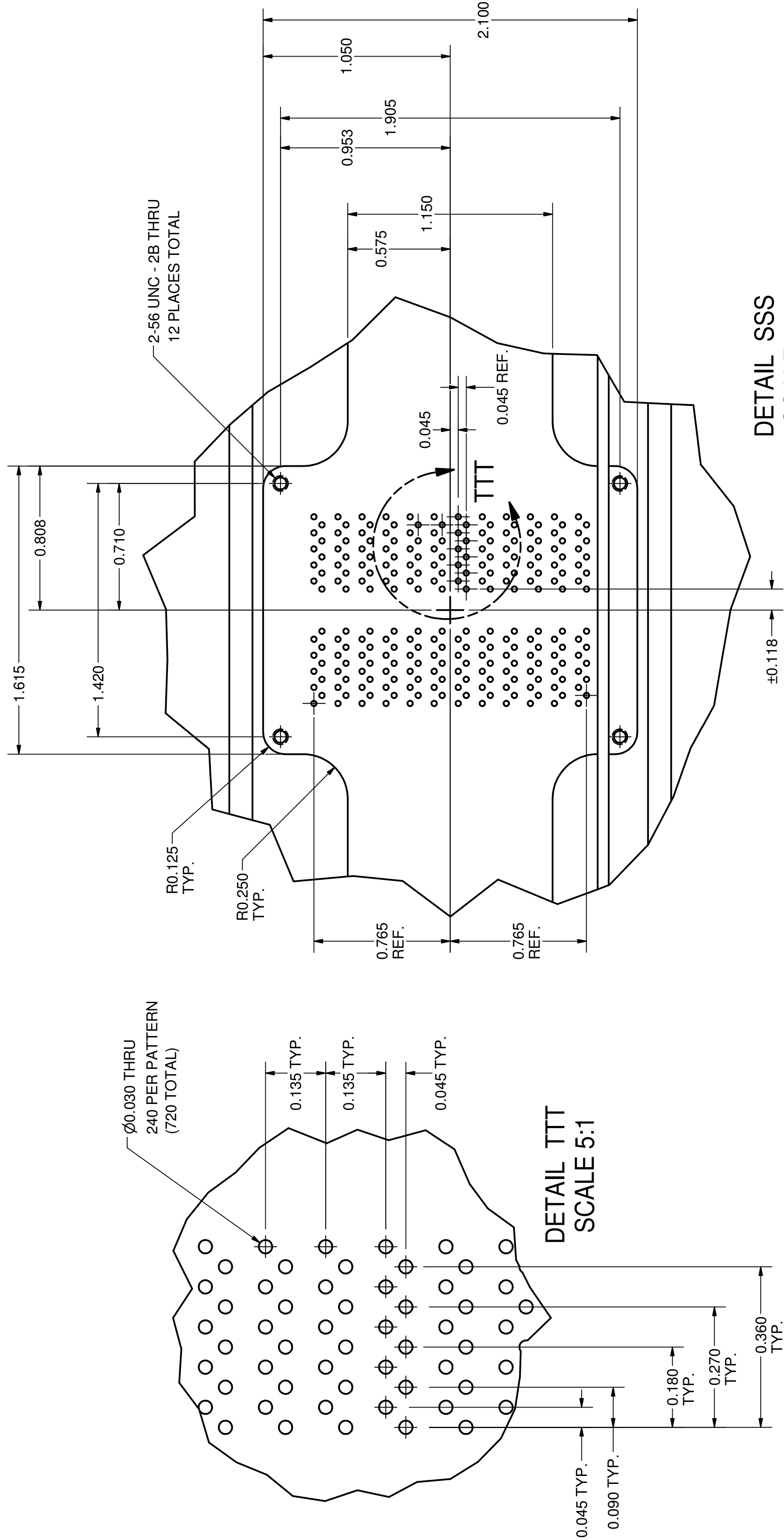
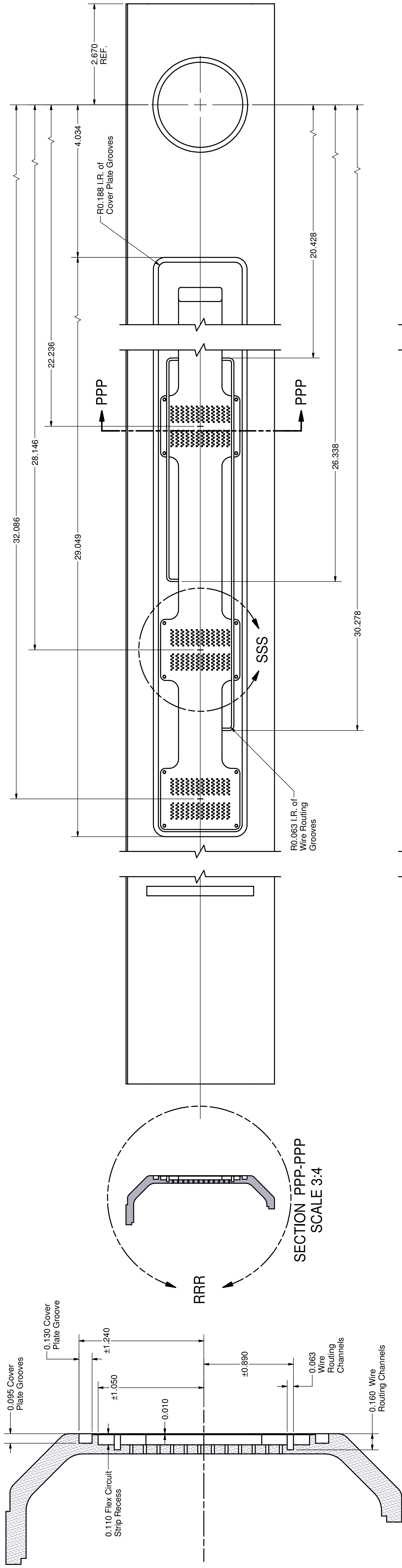
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NOTES: SEE NEXT SH. FOR MORE DIMENSIONS



FOR MACHINING LUBRICANT USE ONLY
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TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION	OK		DATE		N/
DRAFTING (O'Connell)					
MACHINE SHOP (Kaminski)					
CHEMISTRY (Conklin)					
ELECTRONICS SHOP (Barley)					
FURNACE BRAZING (Sherwood)					
BEAM WELDING (Sears)					
WELDING OTHER (Gallagher)					
UTILITIES INTEGRATION (Gallagher)					
STOCKROOMS (Lockwood)					

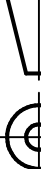
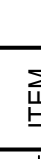


Beam Pipe -- Top Half

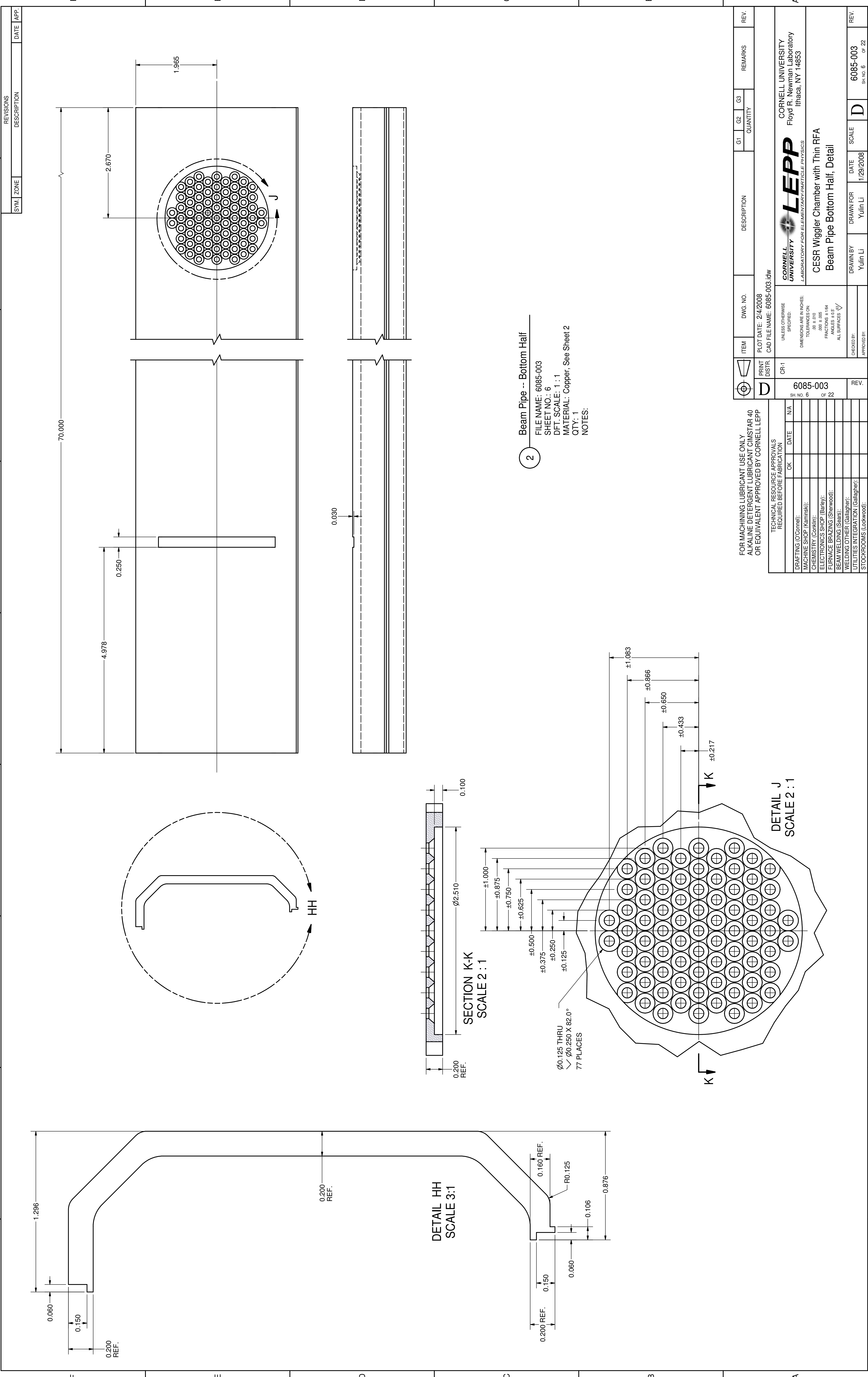
FILE NAME: 6085-003
SHEET NO.: 5
DFT. SCALE: 3 : 4
MATERIAL: Copper, See Sheet 2
QTY: 1
NOTES: SEE PREVIOUS SH. FOR

		ITEM	DWG. NO.	DESCRIPTION	QUANTITY			REMARKS	REV.
					G1	G2	G3		
PRINT DISTR.		PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw							
D		OR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .001 ±.010 .010 ±.005 .060 ±.006 FINISHES: 125 RA ANGLES ±15° ALL SURFACES 		 CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853				
6085-003 SH. NO. 5 OF 22			CESR Wiggler Chamber with Thin RFA Beam Pipe Top Half, Detail						
REV.		CHECKED BY:	DRAWN BY	DATE	SCALE	D	6085-003	REV.	
		APPROVED BY:	Yulin Li	1/29/2008			SH. NO. 5 OF 22		

FOR MACHINING LUBRICANT USE ONLY ALKALINE DETERGENT LUBRICANT CINSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP			
TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION			
	OK	DATE	N/A
DRAFTING (OConnell):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barley):			
FURNACE BRAZING (Sherwood):			
BEAM WELDING (Sears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

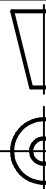
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					G1	G2	G3		
PRINT DISTR.		PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw		 CORNELL UNIVERSITY LEPP LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS					
OR-1		UNLESS OTHERWISE SPECIFIED:							
6085-003 SH. NO. 5 OF 22		DIMENSIONS ARE IN INCHES; TOLERANCES ON: .001 ±.010 .010 ±.005 FINISHES: 125 RA ANGLES ±15° ALL SURFACES 							
REV.		CHECKED BY:	DRAWN BY	DRAWN FOR	DATE	SCALE	D	6085-003 SH. NO. 5 OF 22	REV.
		APPROVED BY:	Yulin Li	Yulin Li	1/29/2008				

FOR MACHINING LUBRICANT USE ONLY ALKALINE DETERGENT LUBRICANT CINSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP			
TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION			
	OK	DATE	N/A
DRAFTING (OConnell):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barley):			
FURNACE BRAZING (Sherwood):			
BEAM WELDING (Sears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

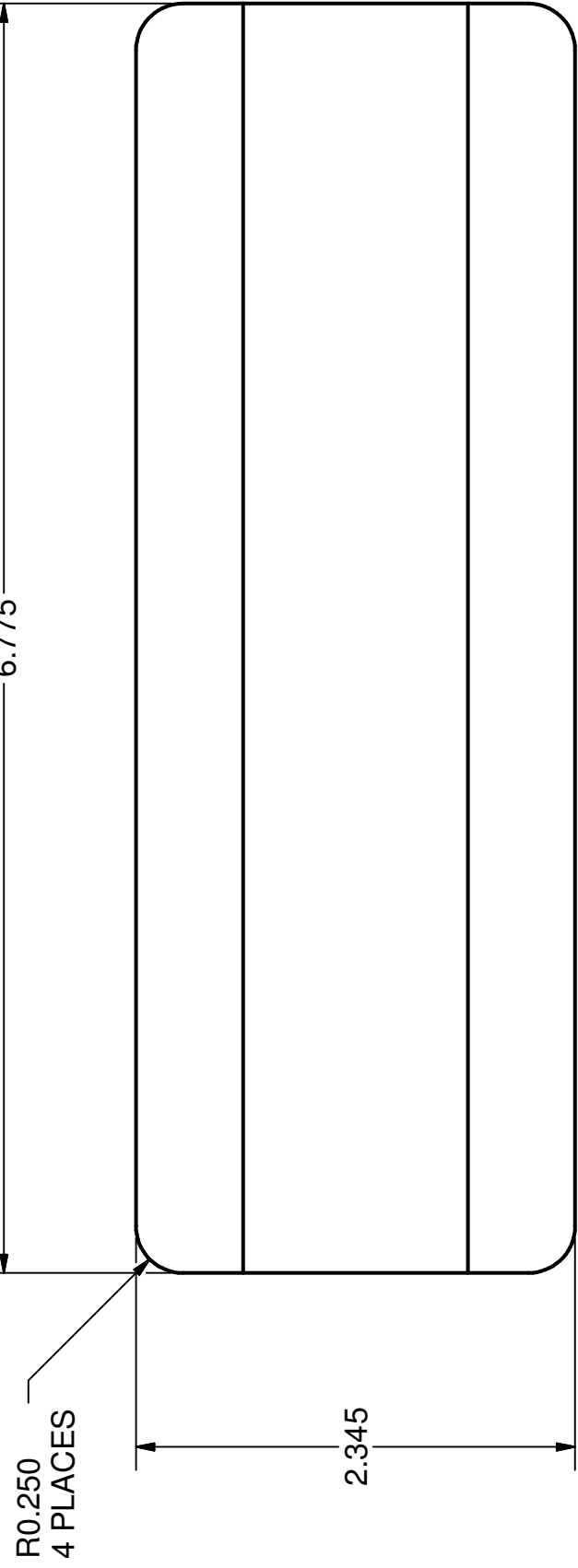


2 Beam Pipe -- Bottom Half

FILE NAME: 6085-003
SHEET NO.: 6
DFT. SCALE: 1 : 1
MATERIAL: Copper, See Sheet 2
QTY: 1
NOTES:

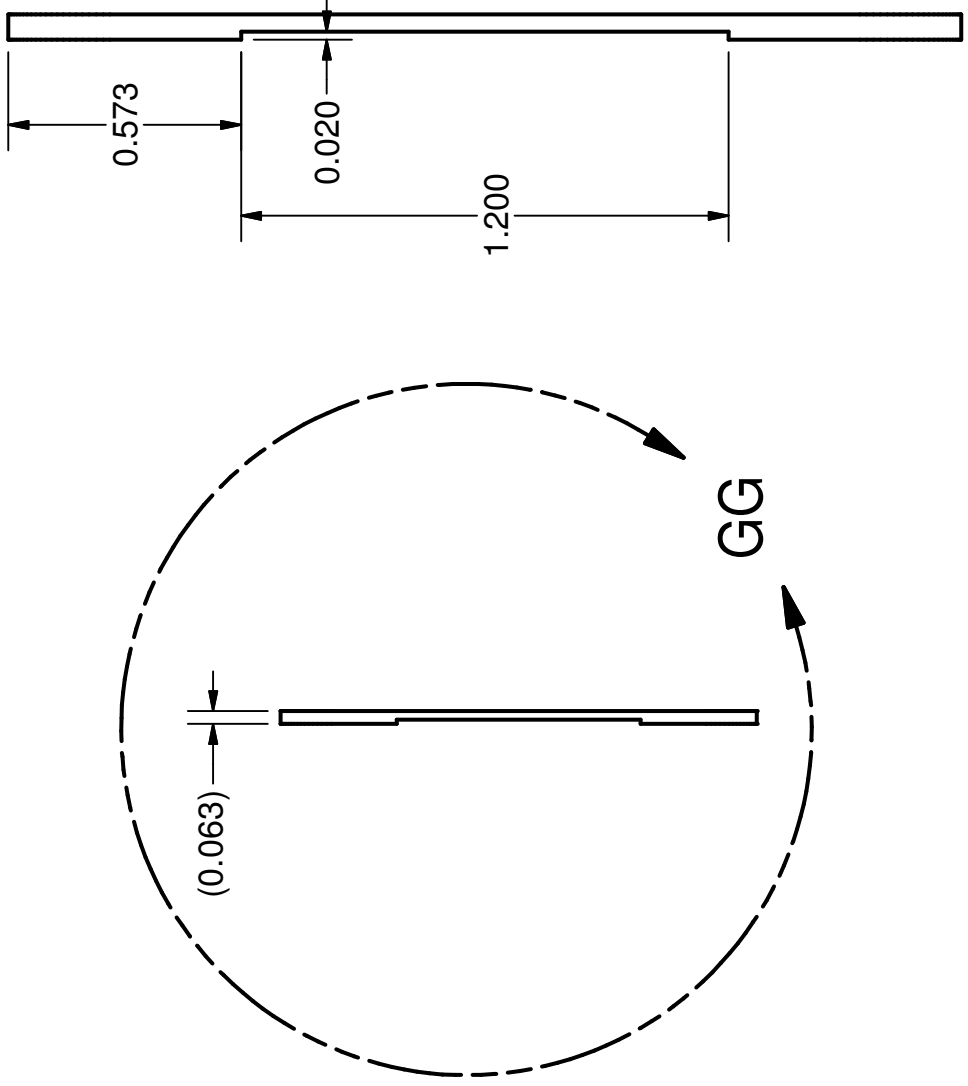
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					G1	G2	G3		
PRINT		PLOT DATE: 2/4/2008							
DISTR.		CAD FILE NAME: 6085-003.idw							
CR-1		CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853							
6085-003		CESR Wiggler Chamber with Thin RFA Beam Pipe Bottom Half, Detail							
SH. NO. 6		UNLESS OTHERWISE SPECIFIED:							
OF 22		DIMENSIONS ARE IN INCHES:							
REV.		TOLERANCES UNLESS OTHERWISE SPECIFIED:							
		TOLERANCES ON:							
		FRACTIONS ± 1/64							
		ANGLES ± 0.5°							
		ALL SURFACES ✓							
		DRAWN BY Yulin Li							
		DRAWN FOR Yulin Li							
		DATE 1/29/2008							
		SCALE							
		D							
		6085-003							
		SH. NO. 6							
		OF 22							
		REV.							
		6085-003							
		SH. NO. 6							
		OF 22							

REVISIONS				1
SYM	ZONE	DESCRIPTION	DATE	APP

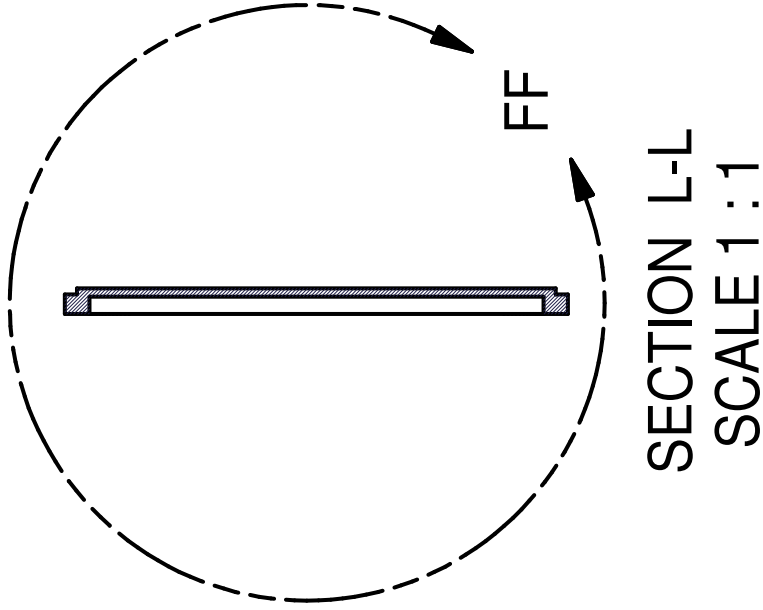
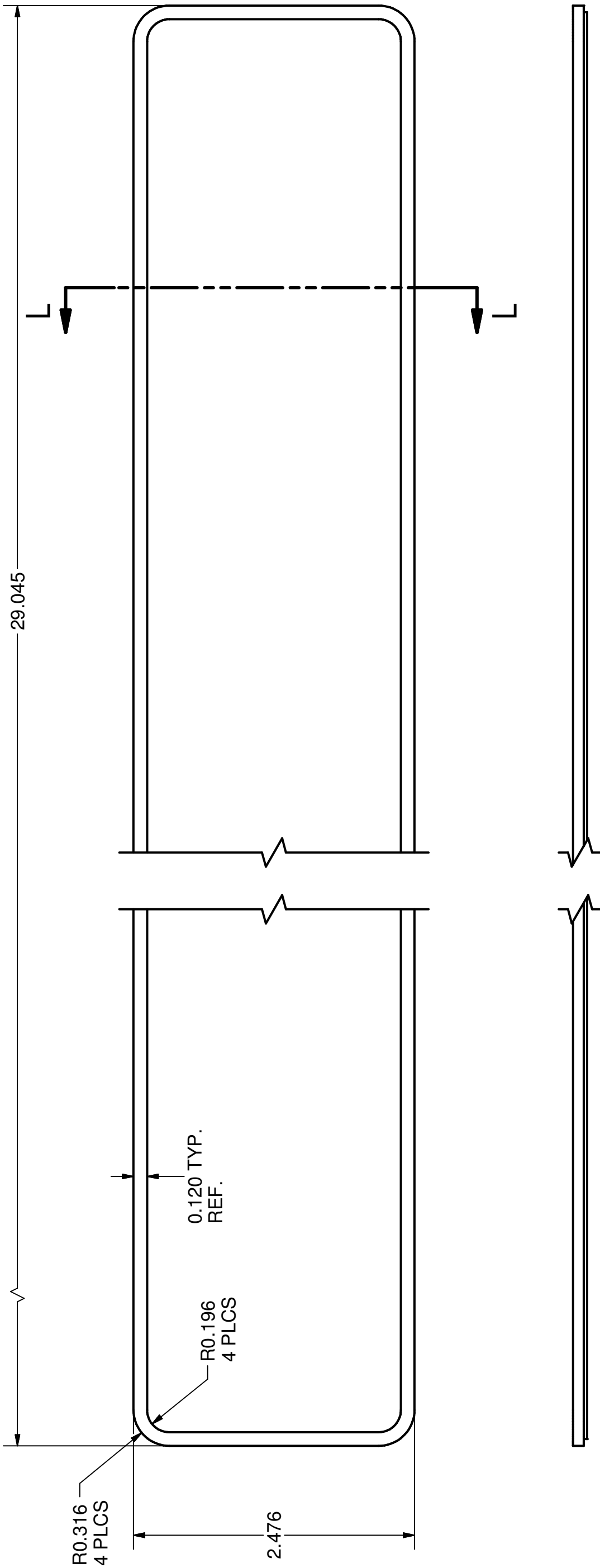


3 Flex-Circuit Tunnel Cover

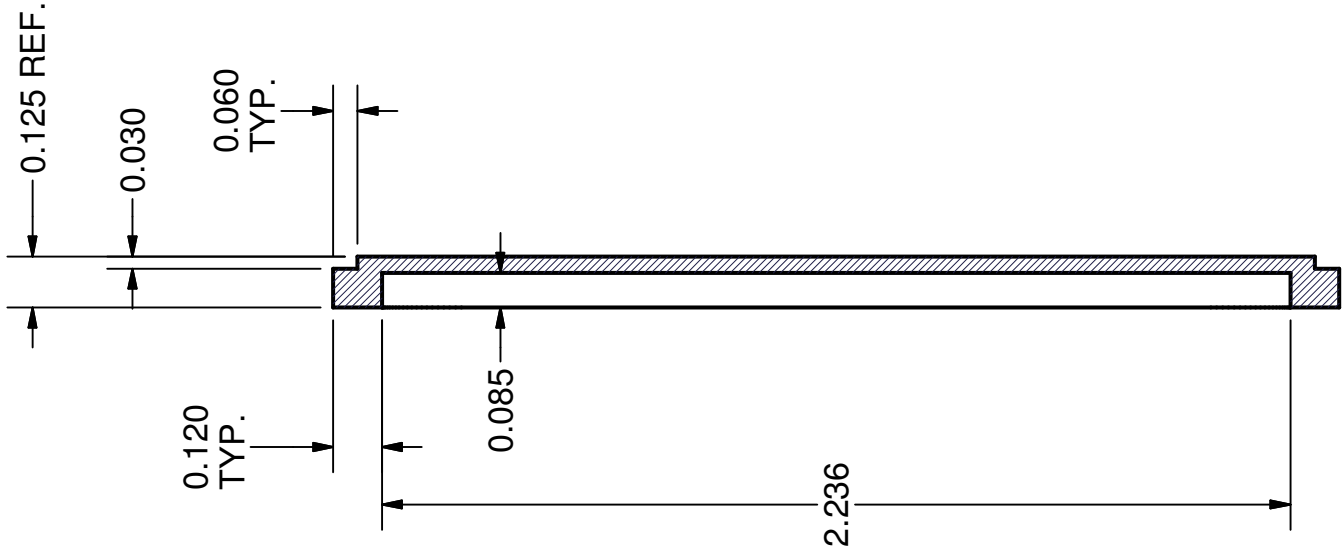
FILE NAME: 6085-003
SHEET NO.: 7
DFT. SCALE: 1 : 1
MATERIAL: OFHC Copper, 0.063" THK
QTY: 1
NOTES:



DETAIL GG
SCALE 2 : 1



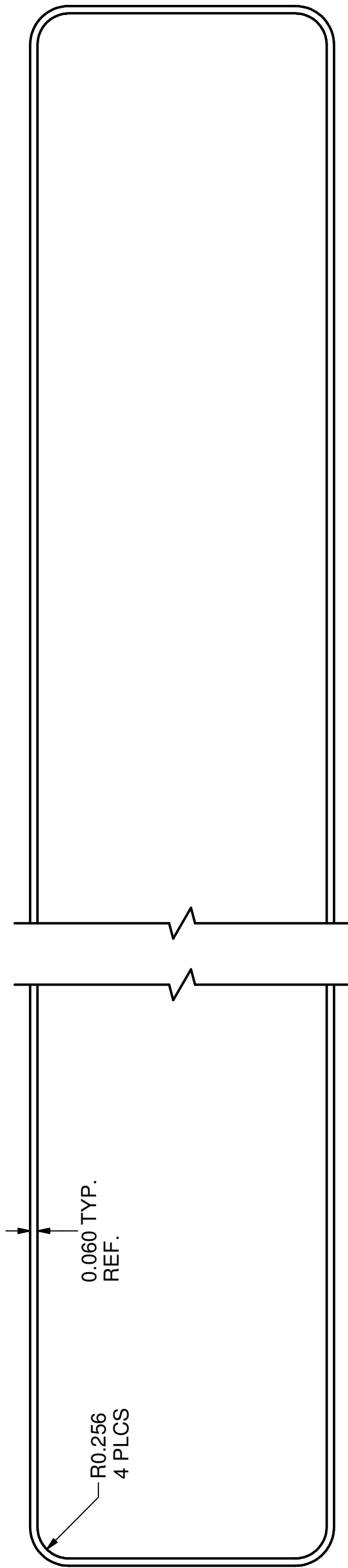
SECTION L-L
SCALE 1 : 1



DETAIL FF
SCALE 2 : 1

8 RFA Vacuum Cover

FILE NAME: 6085-003
SHEET NO.: 7
DFT. SCALE: 1 : 1
MATERIAL: OFHC Copper, 0.125" THK
QTY: 1
NOTES:



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

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION		
OK	DATE	N/A
DRAFTING (O'Connell):		
MACHINE SHOP (Kaminski):		
CHEMISTRY (Conklin):		
ELECTRONICS SHOP (Barney):		
FURNACE BRAZING (Sterwood):		
BEAM WELDING (Gears):		
WELDING OTHER (Gallagher):		
UTILITIES INTEGRATION (Gallagher):		
STOCKROOMS (Lockwood):		

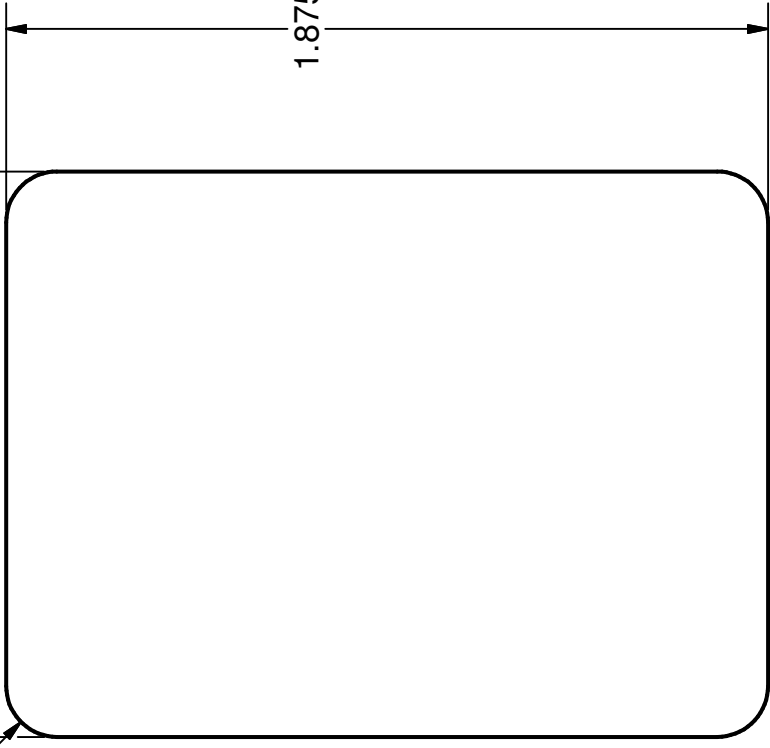
ITEM	DWG. NO.	DESCRIPTION	REMARKS	REV.
PRINT DISTR.	PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw			
CR-1	6085-003 SH. NO. 7 OF 22	REV.		
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓				
DRAWN BY: Yulin Li DATE: 1/29/2008 SCALE: D REV. 6085-003 SH. NO. 7 OF 22				
DRAWN FOR: Yulin Li				
CESR Wiggler Chamber with Thin RFA Cover Plates, Details				
CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853				

SYN		ZONE		REVISIONS	
DESCRIPTION		DATE		APP.	

R0.125
TYP.

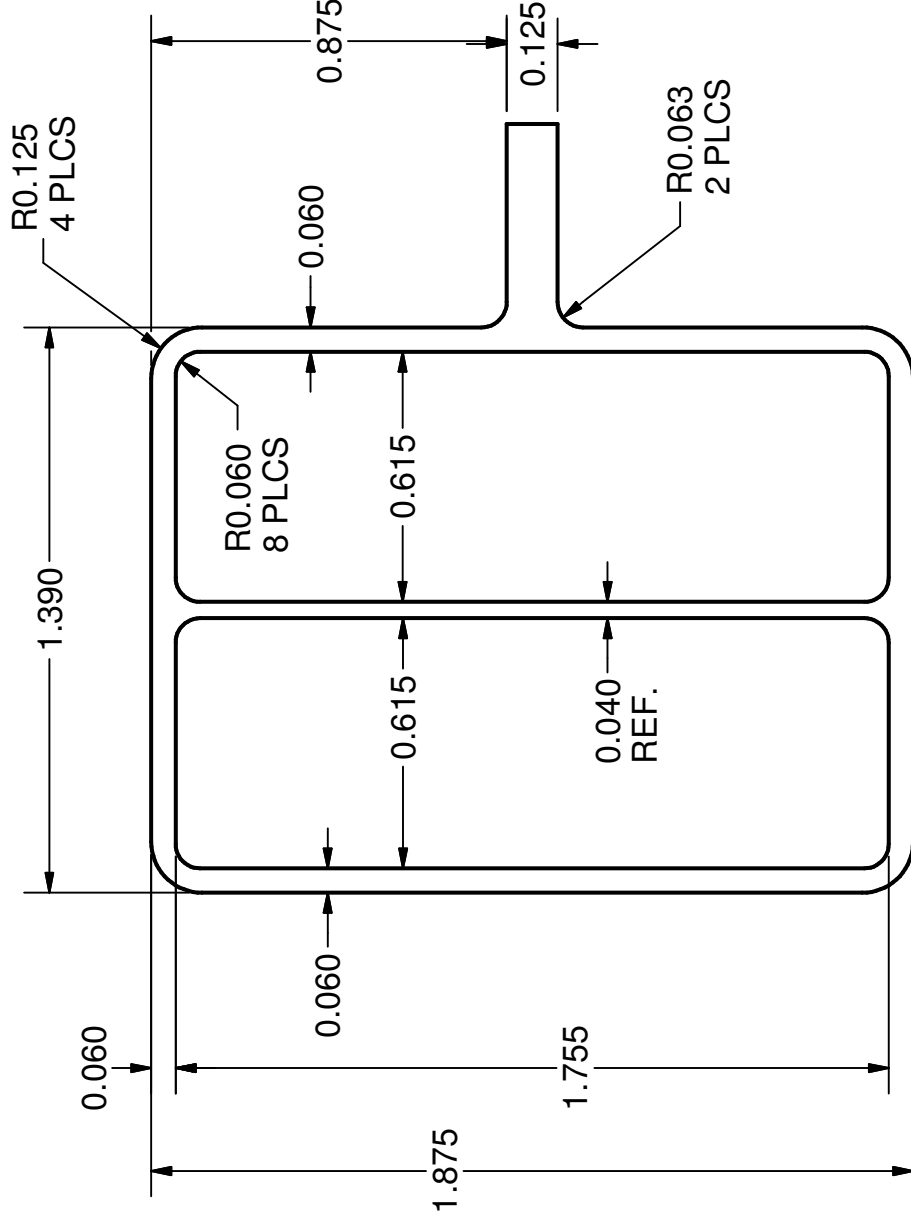
1.390

0.006 REF.



6.3.1 Stainless Steel Mesh

FILE NAME: 6085-003
SHEET NO.: 9
DFT. SCALE: 2 : 1
MATERIAL: Make from P/N BE0600 SST Mesh
QTY: 3
NOTES: Purchase the mesh from InterNet Netting for Industry



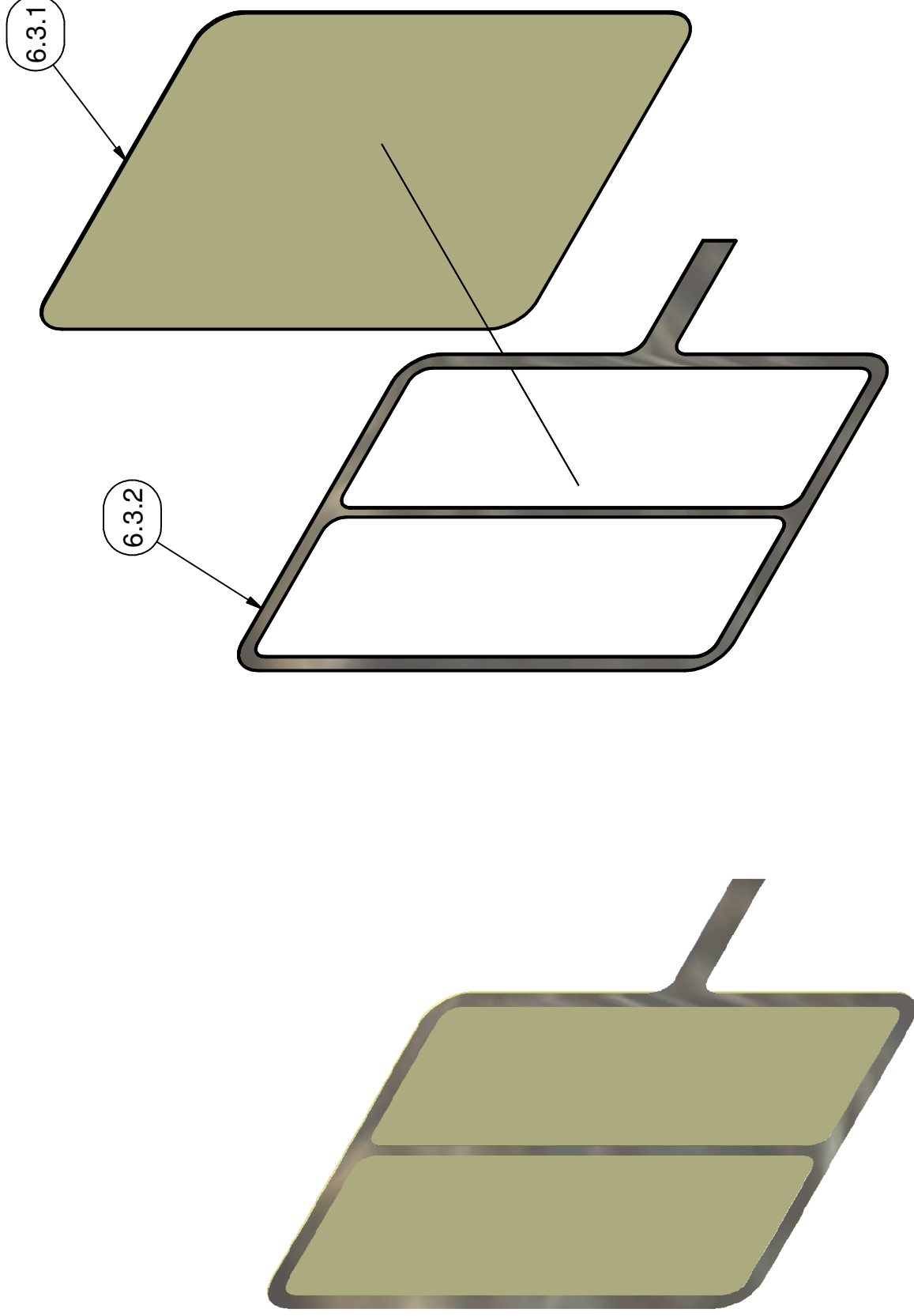
0.002 REF.

6.3.2 Shim Frame

FILE NAME: 6085-003
SHEET NO.: 9
DFT. SCALE: 2 : 1
MATERIAL: 0.002" SST Shim Stock
QTY: 3
NOTES:

6.2 Reinforced Grid

FILE NAME: 6085-003
SHEET NO.: 9
DFT. SCALE: 2 : 1
MATERIAL: As Noted
QTY: 3
NOTES:



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

PRINT
DISTR.

PLOT DATE: 2/4/2008
CAD FILE NAME: 6085-003.idw

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION		OK		DATE		N/A	
DRAFTING (O'Connell):							
MACHINE SHOP (Kaminski):							
CHEMISTRY (Conklin):							
ELECTRONICS SHOP (Barney):							
FURNACE BRAZING (Sterwood):							
BEAM WELDING (Gears):							
WELDING OTHER (Gallagher):							
UTILITIES INTEGRATION (Gallagher):							
STOCKROOMS (Lockwood):							

6085-003
SH. NO. 9 OF 22

REV.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES:
TOLERANCES UNLESS NOTED:
FRACTIONS ± 1/64
ANGLES ± 0.5°
ALL SURFACES ✓

CHECKED BY:
APPROVED BY:

DRAWN BY
Yulin Li

DATE
1/29/2008

SCALE
D

REV.
6085-003
SH. NO. 9 OF 22

CORNELL UNIVERSITY
FLOYD R. NEWMAN LABORATORY
ITHACA, NY 14853

CESR Wiggler Chamber with Thin RFA
Reinforced Grid, Sub-Asm

CORNELL UNIVERSITY
FLOYD R. NEWMAN LABORATORY
ITHACA, NY 14853

CESR Wiggler Chamber with Thin RFA
Reinforced Grid, Sub-Asm

SYM	ZONE	REVISIONS	
		DESCRIPTION	DATE APP.

1	2	3	4	5	6	7	8	9
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1	2	3	4	5	6	7	8	9
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1	2	3	4	5	6	7	8	9
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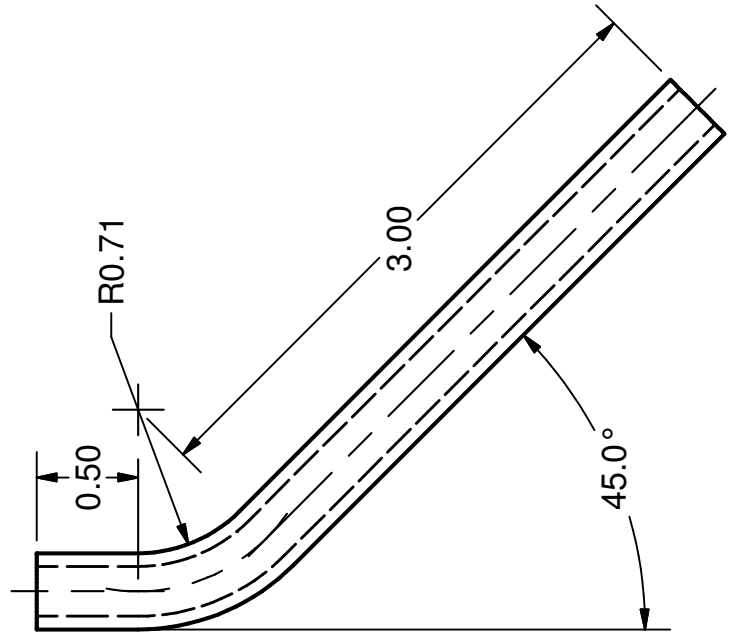
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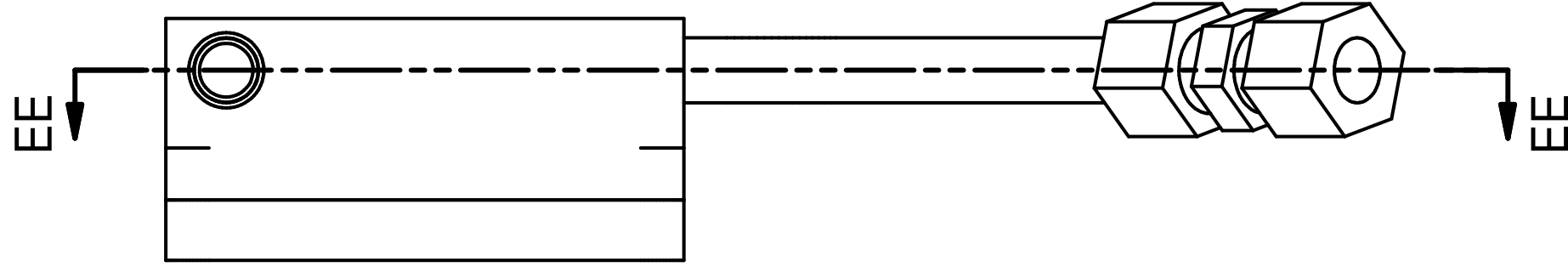
1	2	3	4	5	6	7	8	9
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0.065 REF.
Ø0.375
REF.



9.2 Cooling Tube

FILE NAME: 6085-003
SHEET NO.: 10
DFT. SCALE: 1 : 1
MATERIAL: 3/8" SST Tube, 0.065" Wall
QTY: 2 PER SUB-ASM (4 TOTAL)
NOTES:



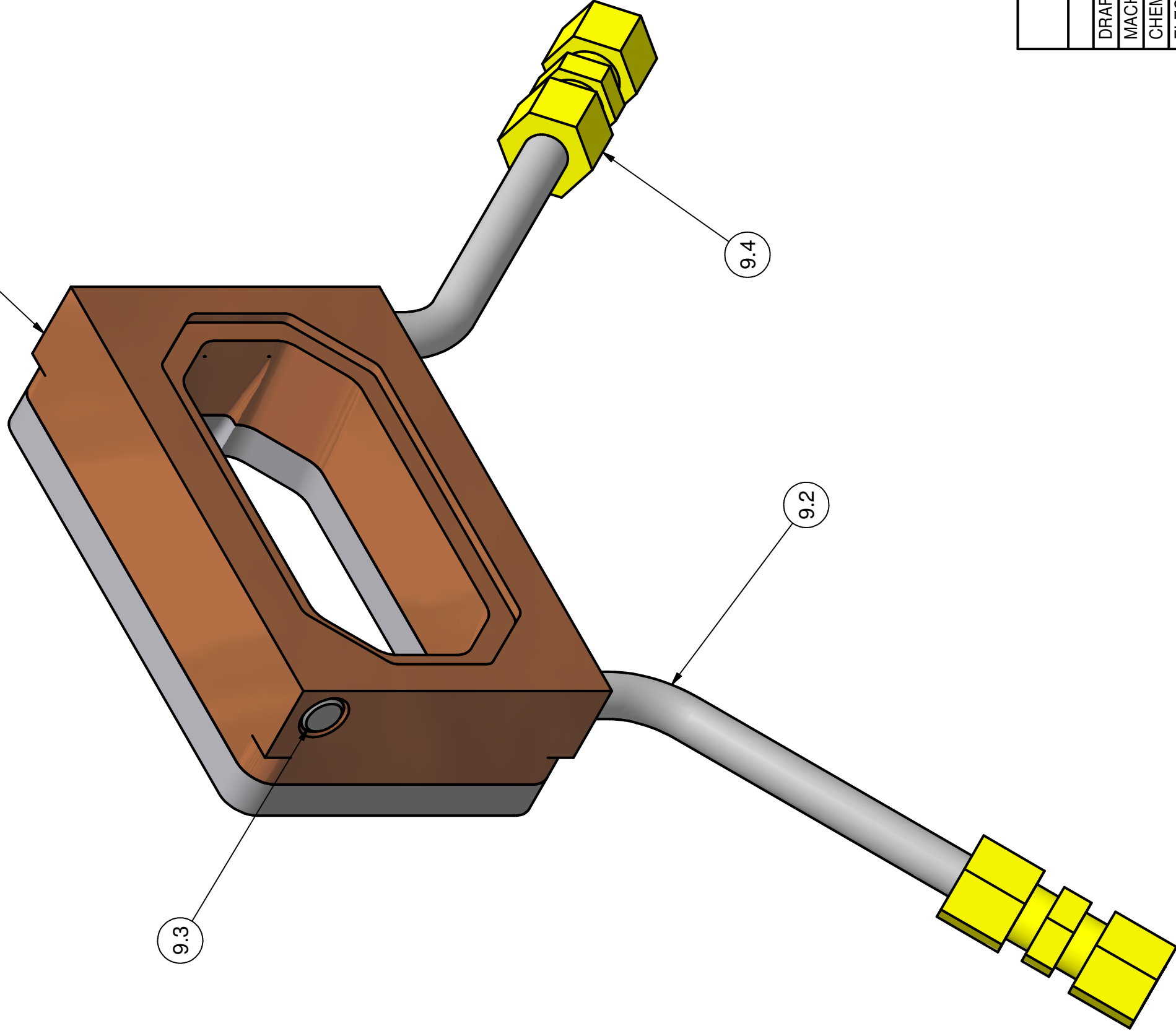
TIG WELD
WATER
TIGHT

SECTION EE-EE
SCALE 1 : 1

TIG WELD
WATER
TIGHT
TYP

2.50
TYP.

9.1



0.03 X 45.0° Chamfer

0.125

Ø0.370

9.3 Plug

FILE NAME: 6085-003
SHEET NO.: 10
DFT. SCALE: 4 : 1
MATERIAL: 304L SST
QTY: 1
NOTES:

9 SST-Cu Transition, Sub-Asm

FILE NAME: 6085-003
SHEET NO.: 10
DFT. SCALE: 1 : 1
MATERIAL: As Noted
QTY: 2

NOTES: Only one transition will be used in this assembly
The second will be used in final assembly at Cornell

9.4	LEPP Stock	0375 Swage	2			Purchase
9.3	Sheet 10	SST Plug	1			
9.2	Sheet 10	3/8" SST Tube	2			
9.1	Sheet 11	SST-Cu Transition	1			

ITEM	DWG. NO.	DESCRIPTION	QUANTITY			REV.
			G1	G2	G3	

PLOT DATE: 2/4/2008	CAD FILE NAME: 6085-003.idw
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PRINT DISTR.	CR-1
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FOR MACHINING LUBRICANT USE ONLY. ALKALINE DETERGENT LUBRICANT OMSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP

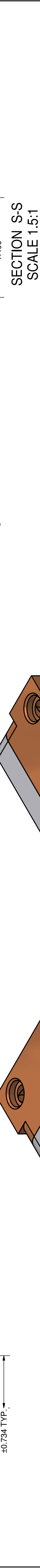
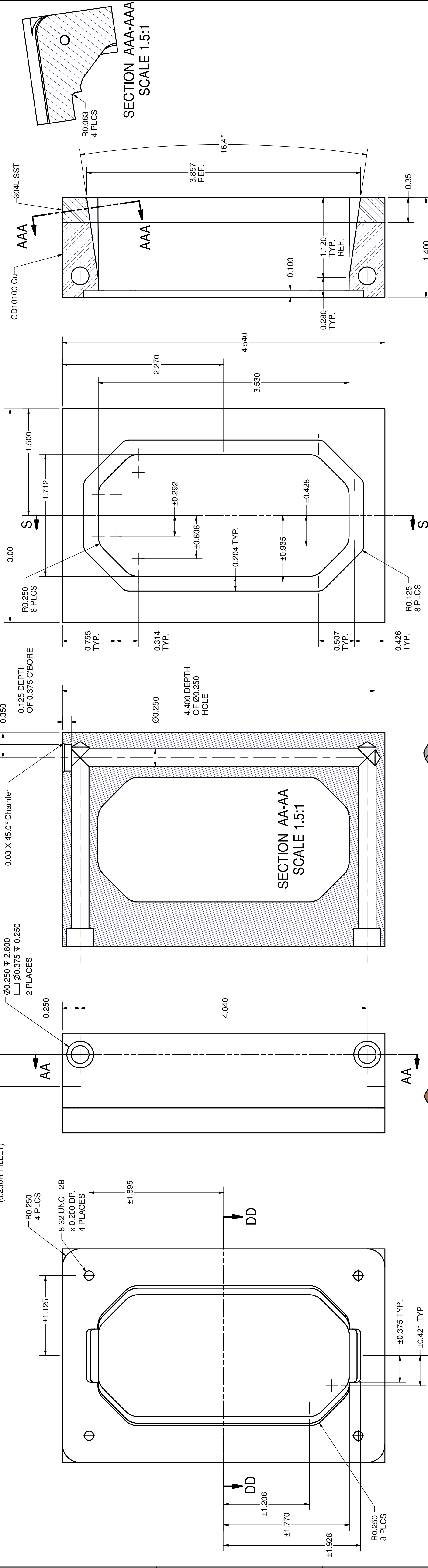
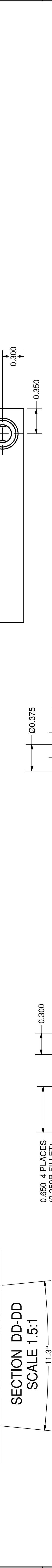
TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION		
OK	DATE	N/A
DRAFTING (O'Connell):		
MACHINE SHOP (Kaminski):		
CHEMISTRY (Conklin):		
ELECTRONICS SHOP (Barney):		
FURNACE BRAZING (Sterwood):		
BEAM WELDING (Gears):		
WELDING OTHER (Gallagher):		
UTILITIES INTEGRATION (Gallagher):		
STOCKROOMS (Lockwood):		

6085-003	SH. NO. 10	OF 22
REV.		

CORNELL UNIVERSITY LABORATORY FOR ELEMENTARY PARTICLE PHYSICS	CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853
CESR Wiggler Chamber with Thin RFA SST-Cu Transition, Sub-Asm	
CHECKED BY:	DRAWN BY: Yulin Li
APPROVED BY:	DATE: 1/29/2008
	SCALE: D
	REV. 6085-003
	SH. NO. 10 OF 22

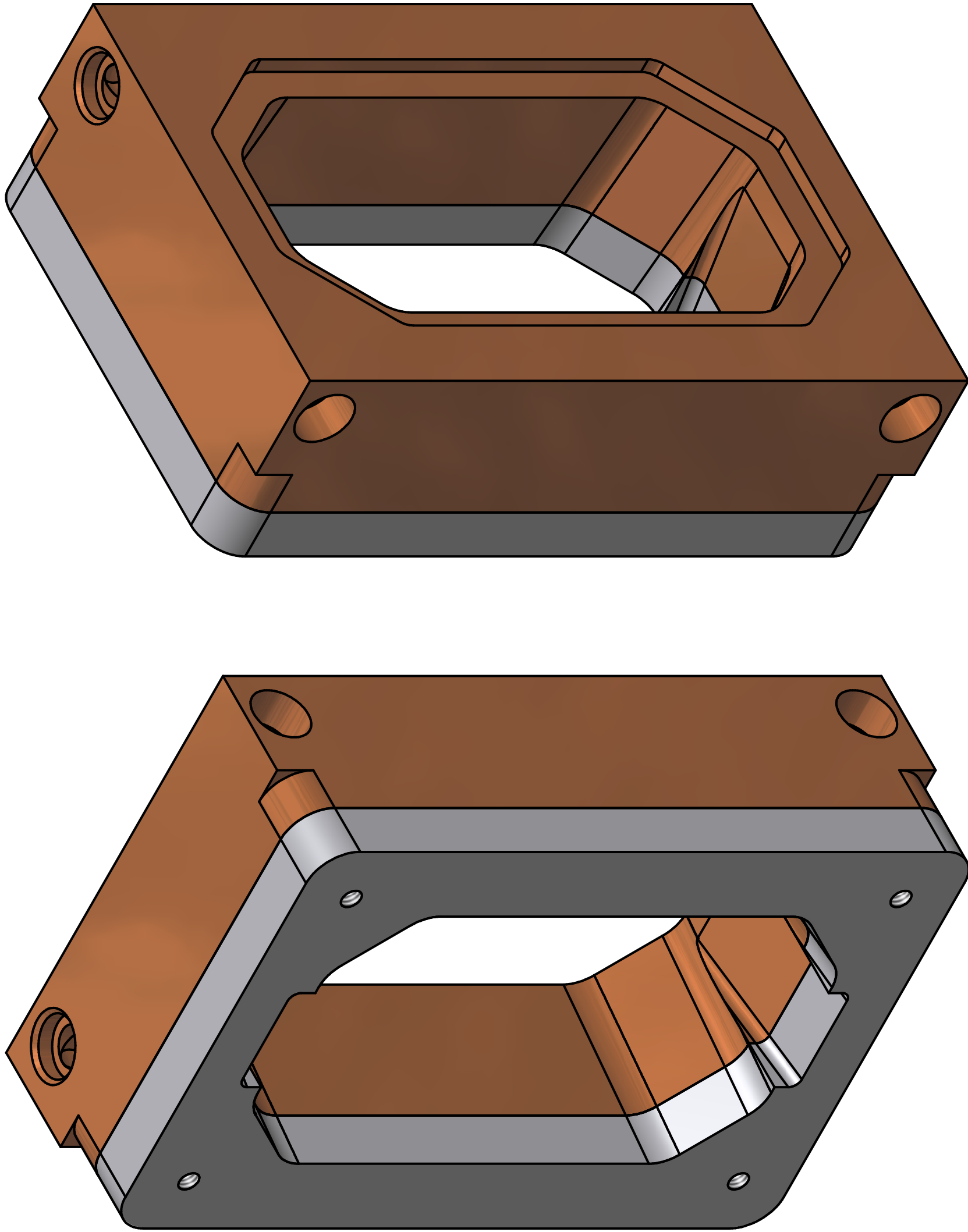
1	2	3	4	5	6	7	8	9
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SYN	ZONE	REVISIONS	
		DESCRIPTION	DATE APP.



9.1 SST/Cu Transition

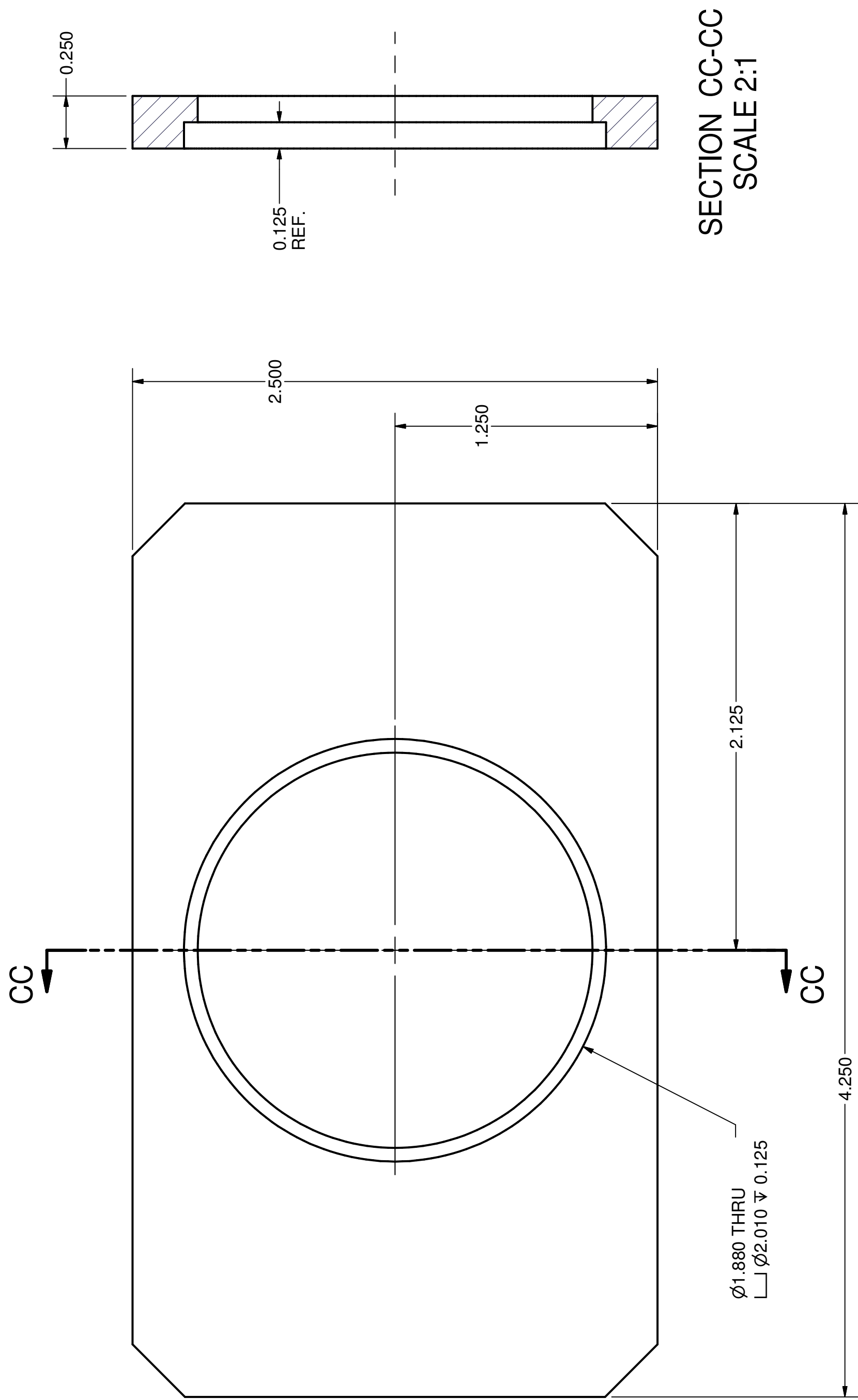
FILE NAME: 6085-003
SHEET NO.: 11
DFT. SCALE: 1.5:1
MATERIAL: Explosion Bonded SST-Cu Plate
QTY: 2
NOTES:



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

ITEM	DWG. NO.	DESCRIPTION	REV.
PRINT DISTR.	6085-003	CR-1	REV.
TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION			
DRAFTING (O'Connell):	OK	DATE	N/A
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barney):			
FURNACE BRAZING (Sternwood):			
BEAM WELDING (Gears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES UNLESS NOTED: FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓			
CHECKED BY: APPROVED BY:			
DRAWN BY: Yulin Li DATE: 1/29/2008 SCALE: D 6085-003 SH. NO. 11 OF 22			
REMARKS			
PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw			
CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853			
CESR Wiggler Chamber with Thin RFA SST/Cu Transition, Detail			

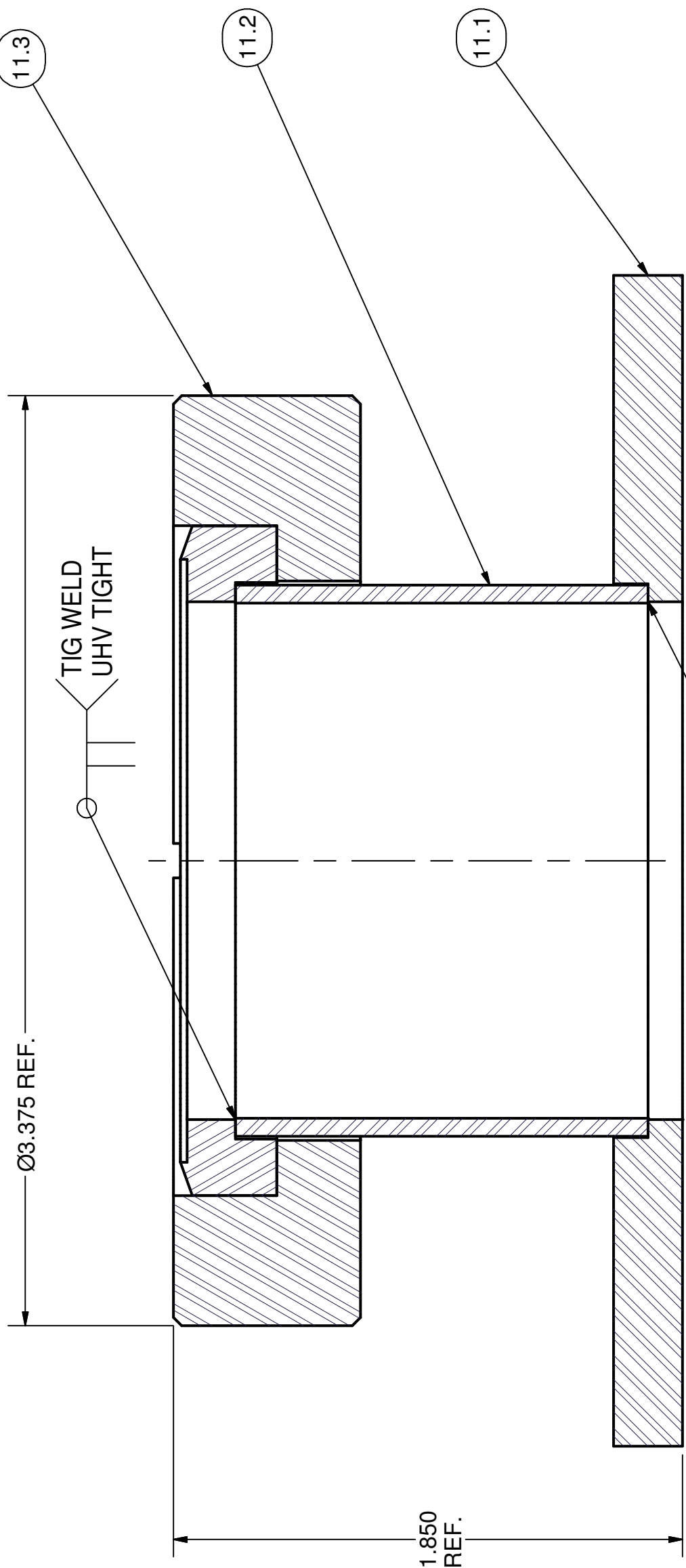
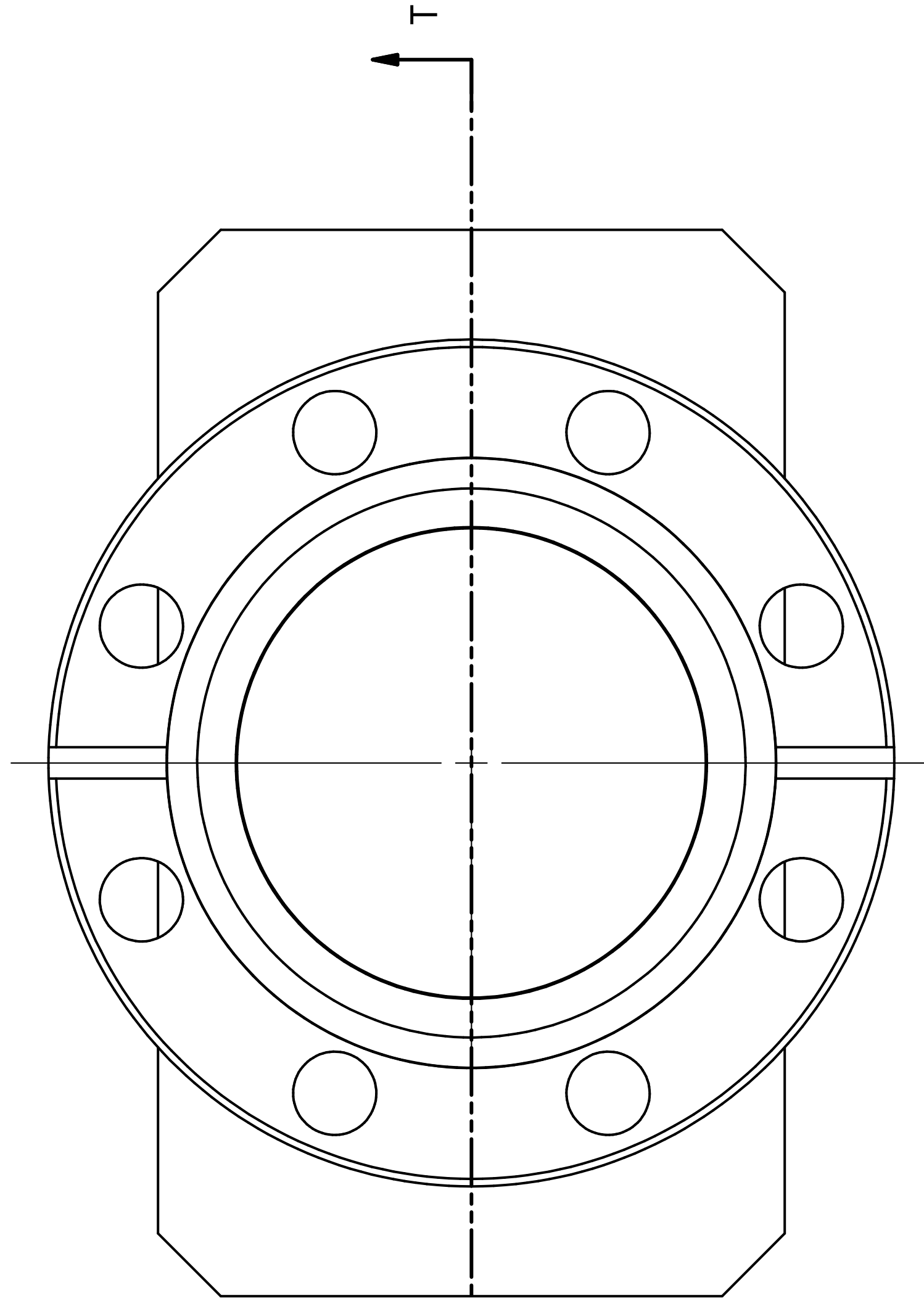
SYN		ZONE		REVISIONS		DESCRIPTION		DATE		APP	



SECTION CC-CC
SCALE 2:1

11.1 TEMP END PLATE

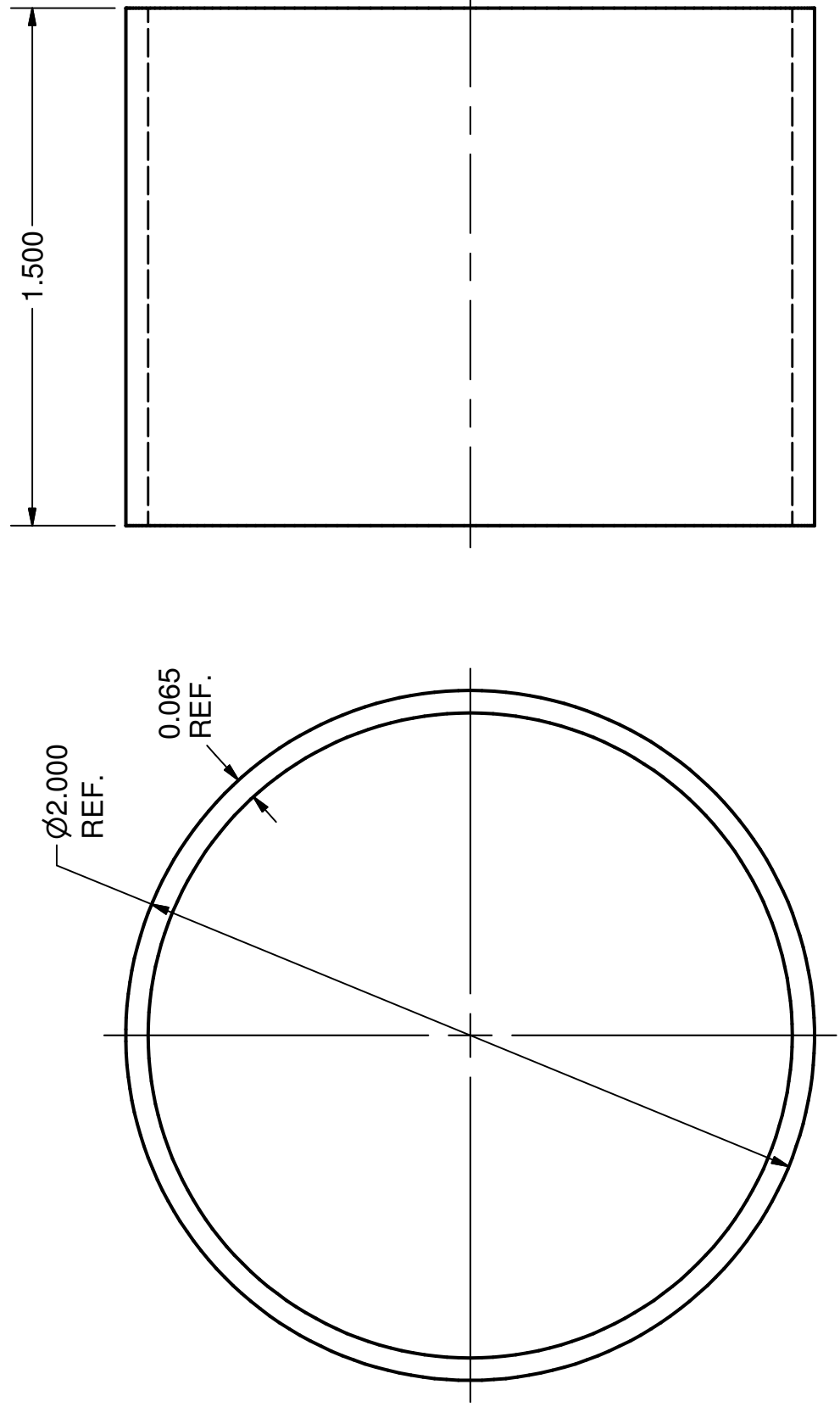
FILE NAME: 6085-003
SHEET NO.: 12
DFT. SCALE: 2:1
MATERIAL: 304L STN STL
QTY: 1 PER SUB-ASM
NOTES:



SECTION T-T
SCALE 2:1

11 TEMP END, SUB-ASM

FILE NAME: 6085-003
SHEET NO.: 12
DFT. SCALE: 2:1
MATERIAL: AS NOTED
QTY: 1 PER ASM
NOTES:



11.2 2.00\" O.D. TUBE

FILE NAME: 6085-003
SHEET NO.: 12
DFT. SCALE: 2:1
MATERIAL: 2.00 O.D. x 0.065\" WALL STN STL TUBE
QTY: 1 PER SUB-ASM
NOTES: UHV GRADE

11.3	Sheet 12	F0338X200RCE	1			Purchase
11.2	Sheet 12	2.00\"O.D. Tube	1			
11.1	Sheet 12	Temp End Plate	1			

ITEM	DWG. NO.	DESCRIPTION	QUANTITY	REMARKS	REV.
			G1	G2	G3

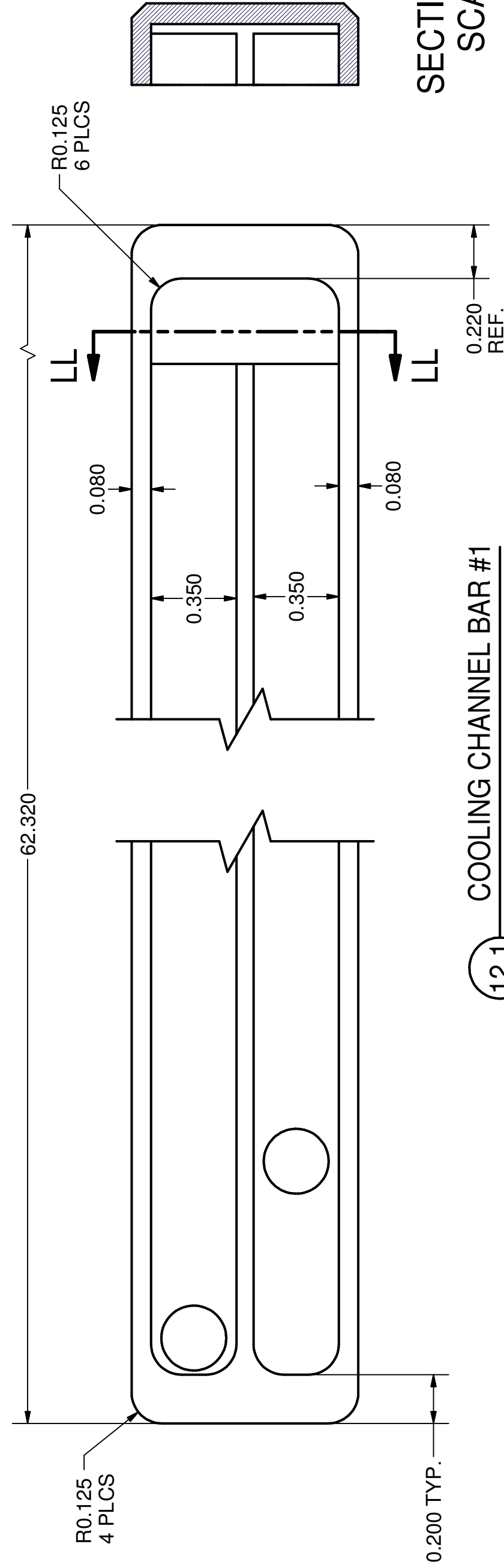
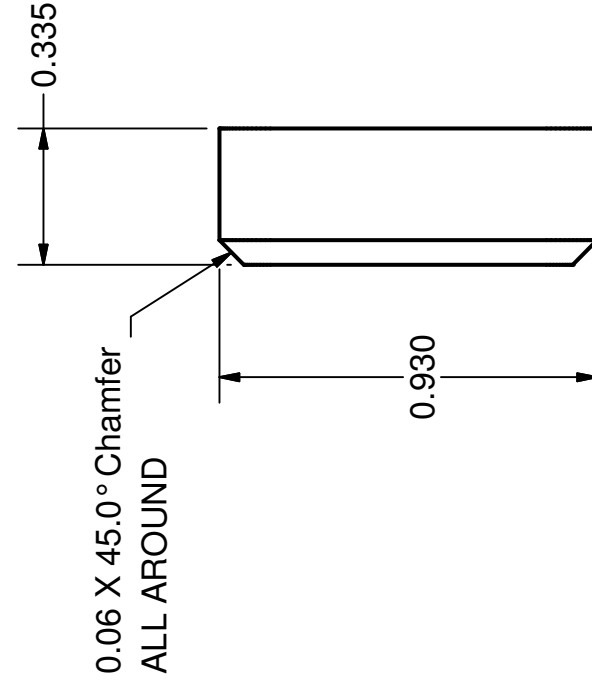
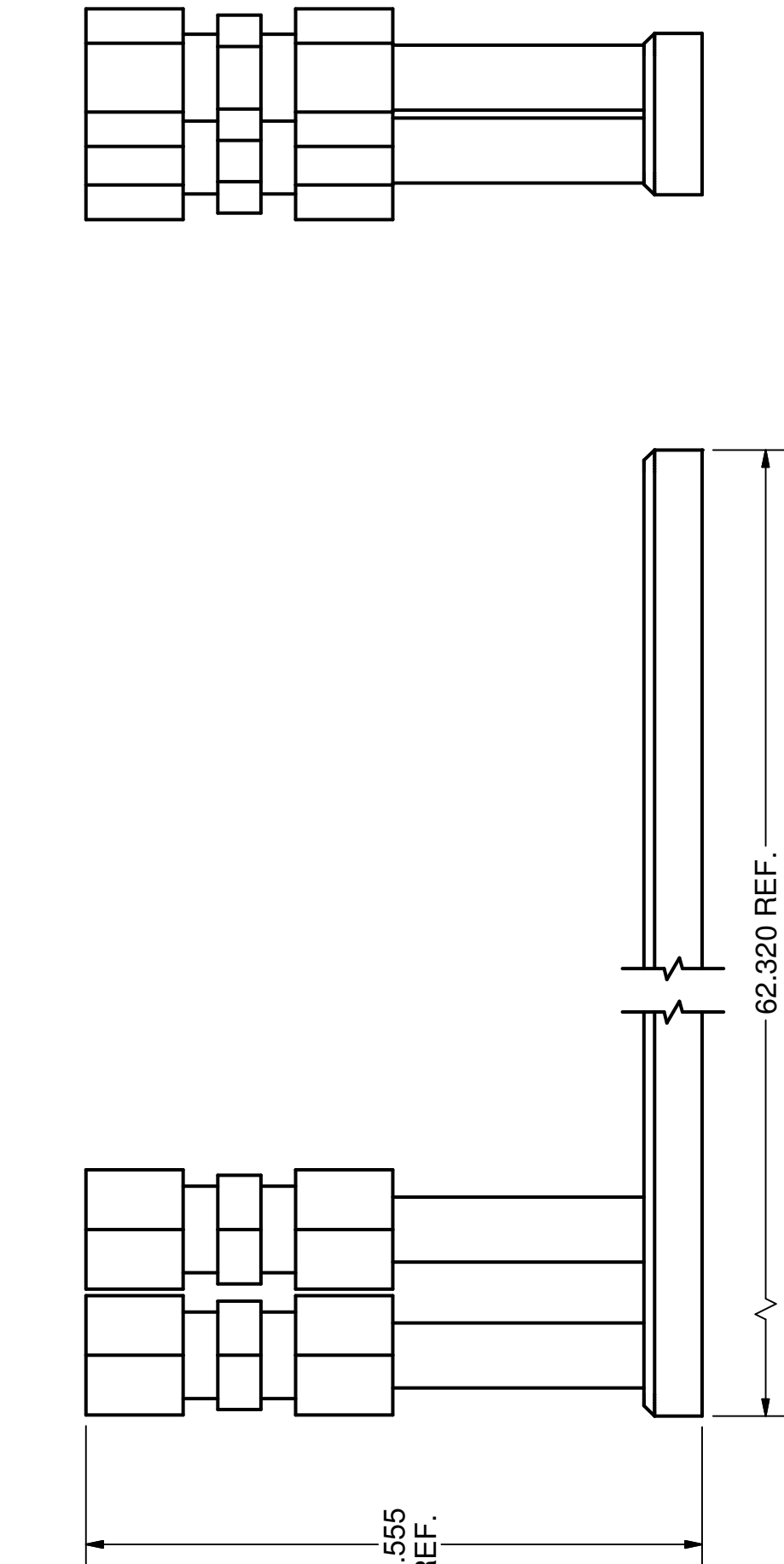
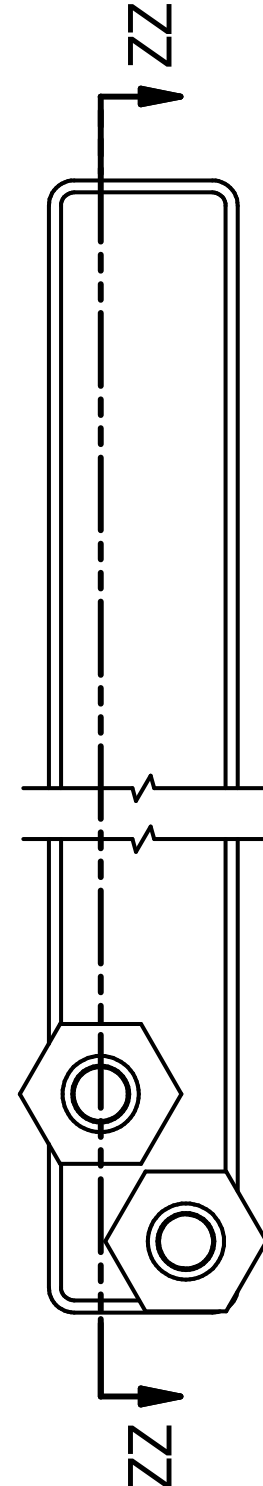
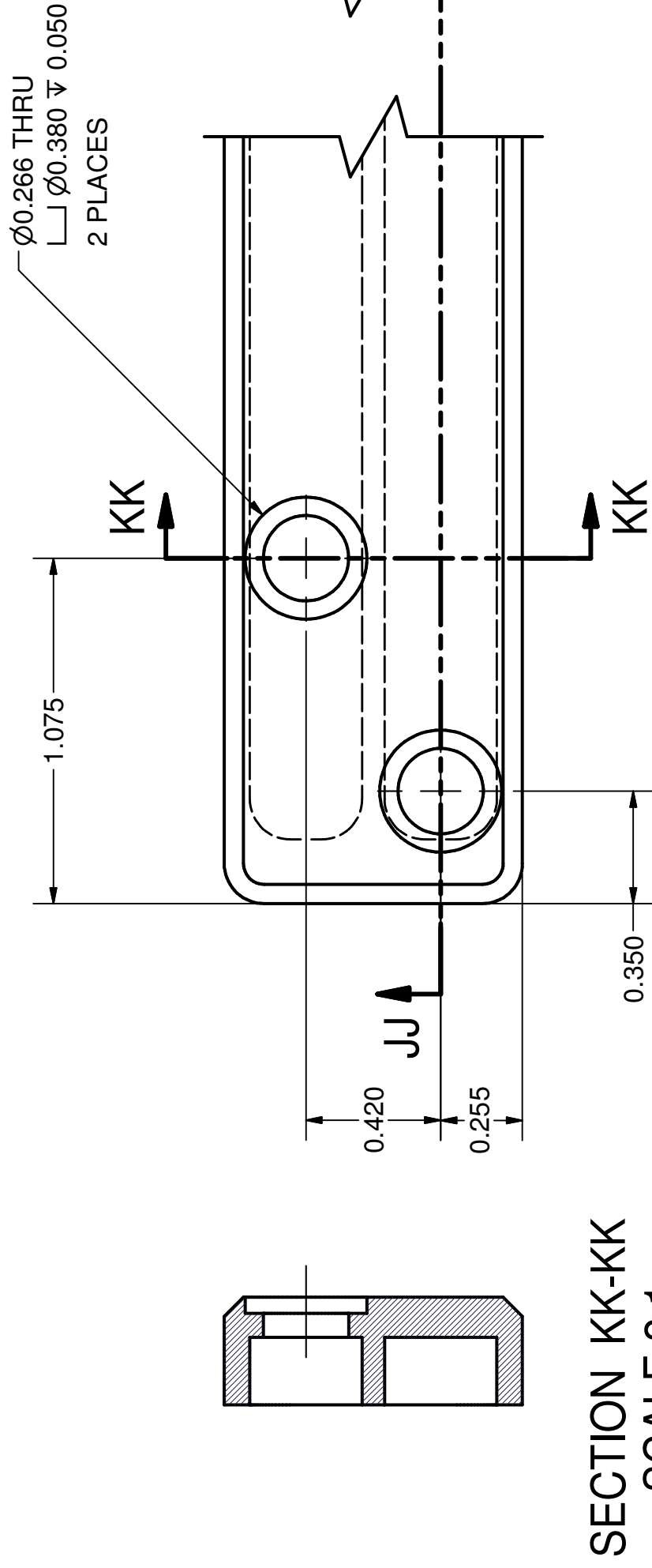
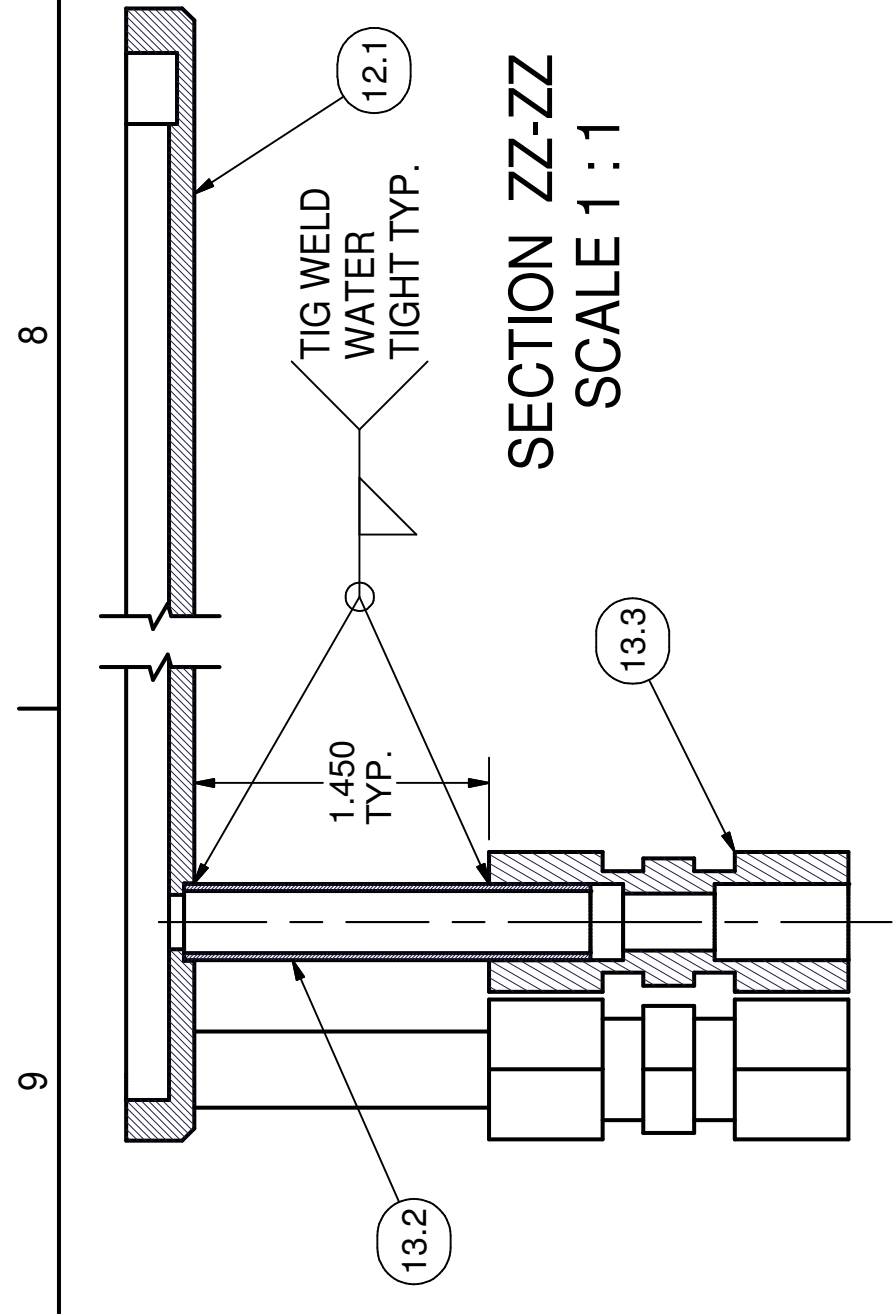
PLOT DATE: 2/4/2008
CAD FILE NAME: 6085-003.idw

FOR MACHINING LUBRICANT USE ONLY ALKALINE DETERGENT LUBRICANT OMSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP	PRINT DISTR.	CR-1
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TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION	OK	DATE	N/A
DRAFTING (O'Connell):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barney):			
FURNACE BRAZING (Sterwood):			
BEAM WELDING (Gears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

CORNELL UNIVERSITY
FLOYD R. NEWMAN LABORATORY
ITHACA, NY 14853

CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853	CESR Wiggler Chamber with Thin RFA Temp End, Sub-Asm	DRAWN BY Yulin Li	DATE 1/29/2008	SCALE D	6085-003 SH. NO. 12 OF 22	REV.
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13.3	LEPP STock	3/8" Swage-Lok Fitting	2		
13.2	Sheet 14	0.375 O.D. x 2.00 Lg. Tube	2		
12.1	Sheet 13	Cooling Channel Bar #1	1		

COOLING CHANNEL BAR #1, SUB-ASM

FILE NAME: 6085-003
SHEET NO.: 13
DFT. SCALE: 1:1
MATERIAL: AS NOTED
QTY: 1 PER SUB-ASM
NOTES:

COOLING CHANNEL BAR #1

FILE NAME: 6085-003
SHEET NO.: 13
DFT. SCALE: 1:1
MATERIAL: 304L STN STL
QTY: 1 PER SUB-ASM
NOTES:

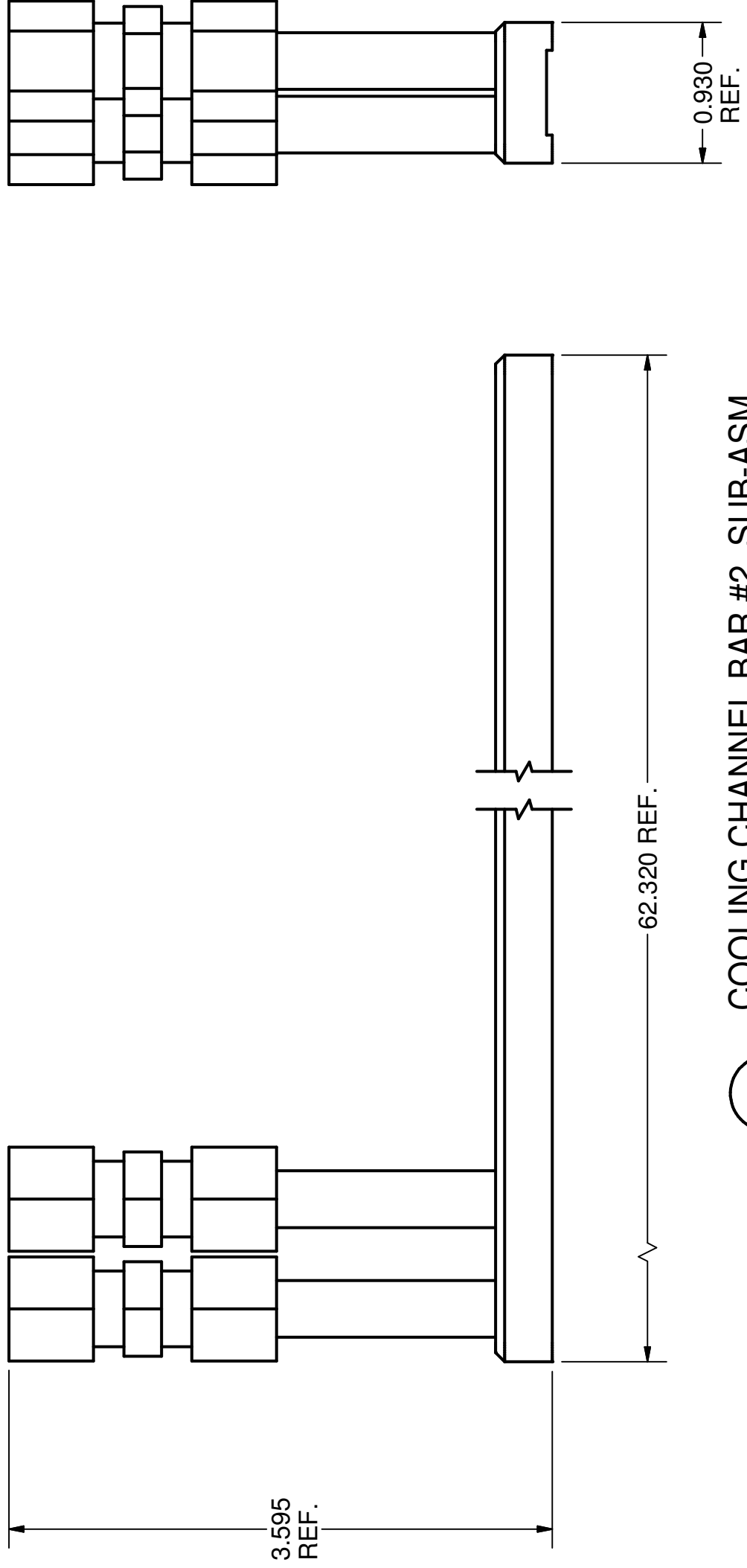
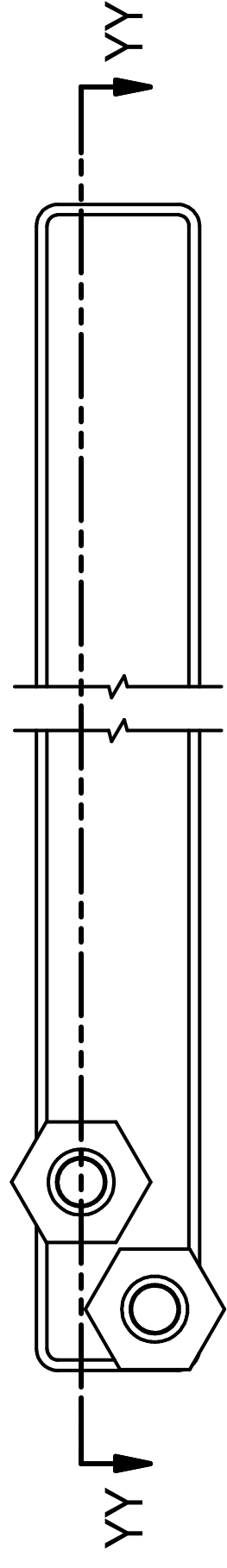
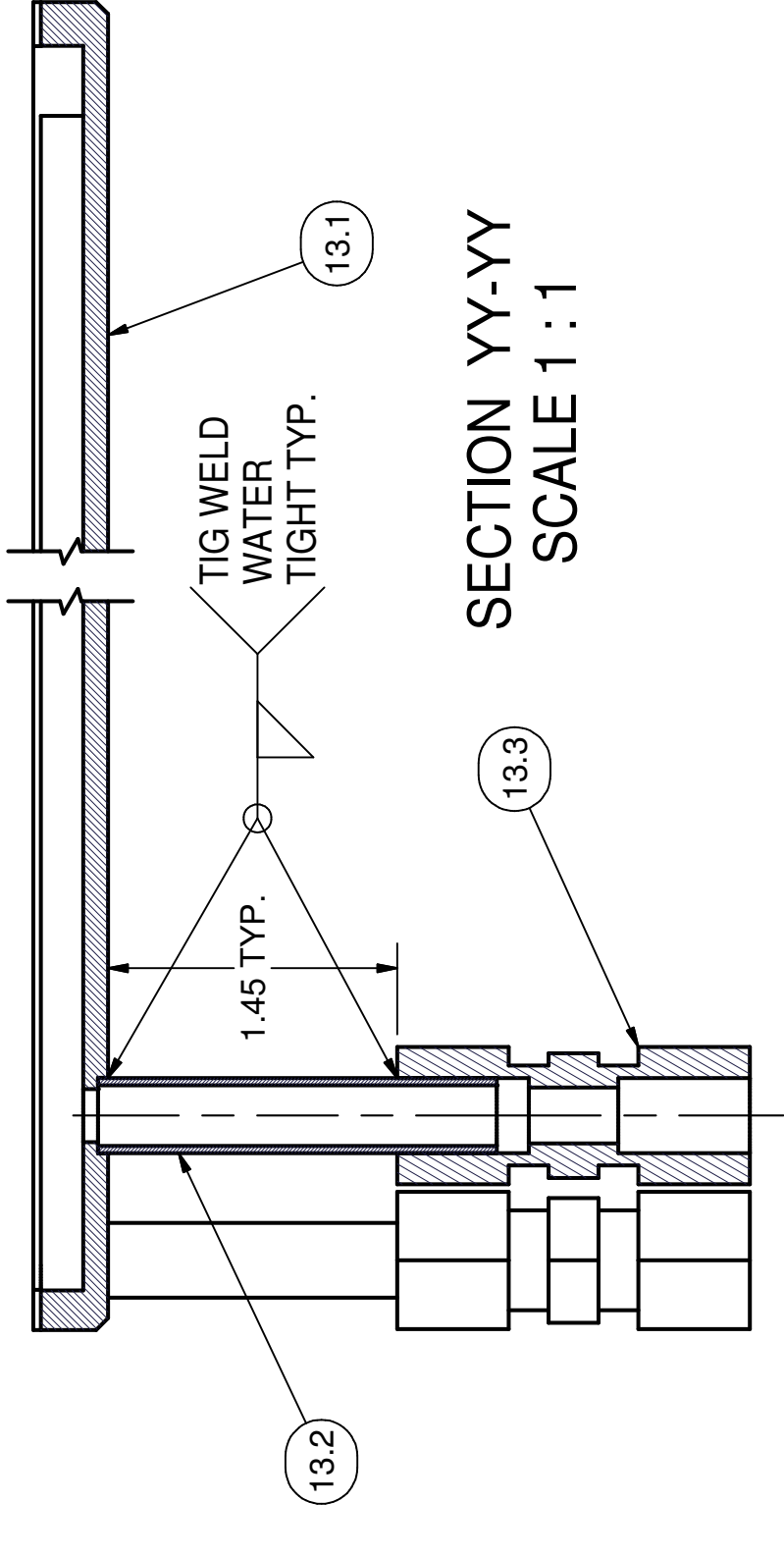
FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL I EPP

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION				N/A
		OK	DATE	
DRAFTING (O'Connell):				
MACHINE SHOP (Kaminski):				
CHEMISTRY (Conlin):				
ELECTRONICS SHOP (Barbey):				
FURNACE BRAZING (Sherwood):				
BEAM WELDING (Gears):				
WELDING OTHER (Gallagher):				
UTILITIES INTEGRATION (Gallagher):				
STOCKROOMS (Lockwood):				

		ITEM	DWG. NO.	DESCRIPTION	G1	G2	G3	REMARKS	REV.
PRINT DISTR.			PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.dwg						
CR-1			CORNELL UNIVERSITY LEPP LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853						
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES; TOLERANCES ON: .001 ± .005 .003 ± .005 FRACTIONS ± 1/64 UNLESS OTHERWISE SPECIFIED ALL SURFACES ∇			CESR Wiggler Chamber with Thin RFA Cooling Channel Bar, Sub-Asm						
CHECKED BY: APPROVED BY:			DRAWN BY Yulin Li	DRAWN FOR Yulin Li	DATE 1/29/2008	SCALE	D	6085-003 SH. NO. 13 OF 22	REV.
6085-003 SH. NO. 13 OF 22			REV.						

CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY Ithaca, NY 14853			CERN Wiggler Chamber with Thin RFA		Cooling Channel Bar, Sub-Asm		REV.	
	DRAWN BY Yulin Li	DRAWN FOR Yulin Li	DATE 1/29/2008	SCALE	D		6085-003	SH. NO. 13 OF 22

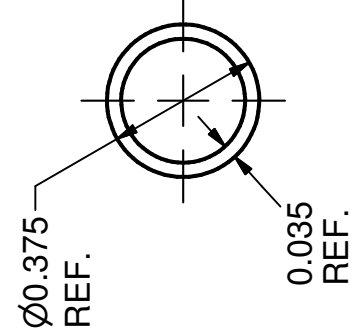
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F		E		D		C		B		A							



13 COOLING CHANNEL BAR #2, SUB-ASM

FILE NAME: 6085-003
SHEET NO.: 14
DFT. SCALE: 1:1
MATERIAL: AS NOTED
QTY: 1 PER SUB-ASM
NOTES:

13.3	LEPP Stock	3/8" Swag-Lok Fitting	2				
13.2	Sheet 14	0.375 O.D. x 2.00 Lg. Tube	2				
13.1	Sheet 14	Cooling Channel Bar #2	1				



13.2 0.375 O.D. x 2.00 LG TUBE

FILE NAME: 6085-003
SHEET NO.: 14
DFT. SCALE: 2:1
MATERIAL: 0.375 O.D. x 0.035 WALL STN STL TUBE
QTY: 2 PER SUB-ASM
NOTES:

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ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION		
OK	DATE	N/A

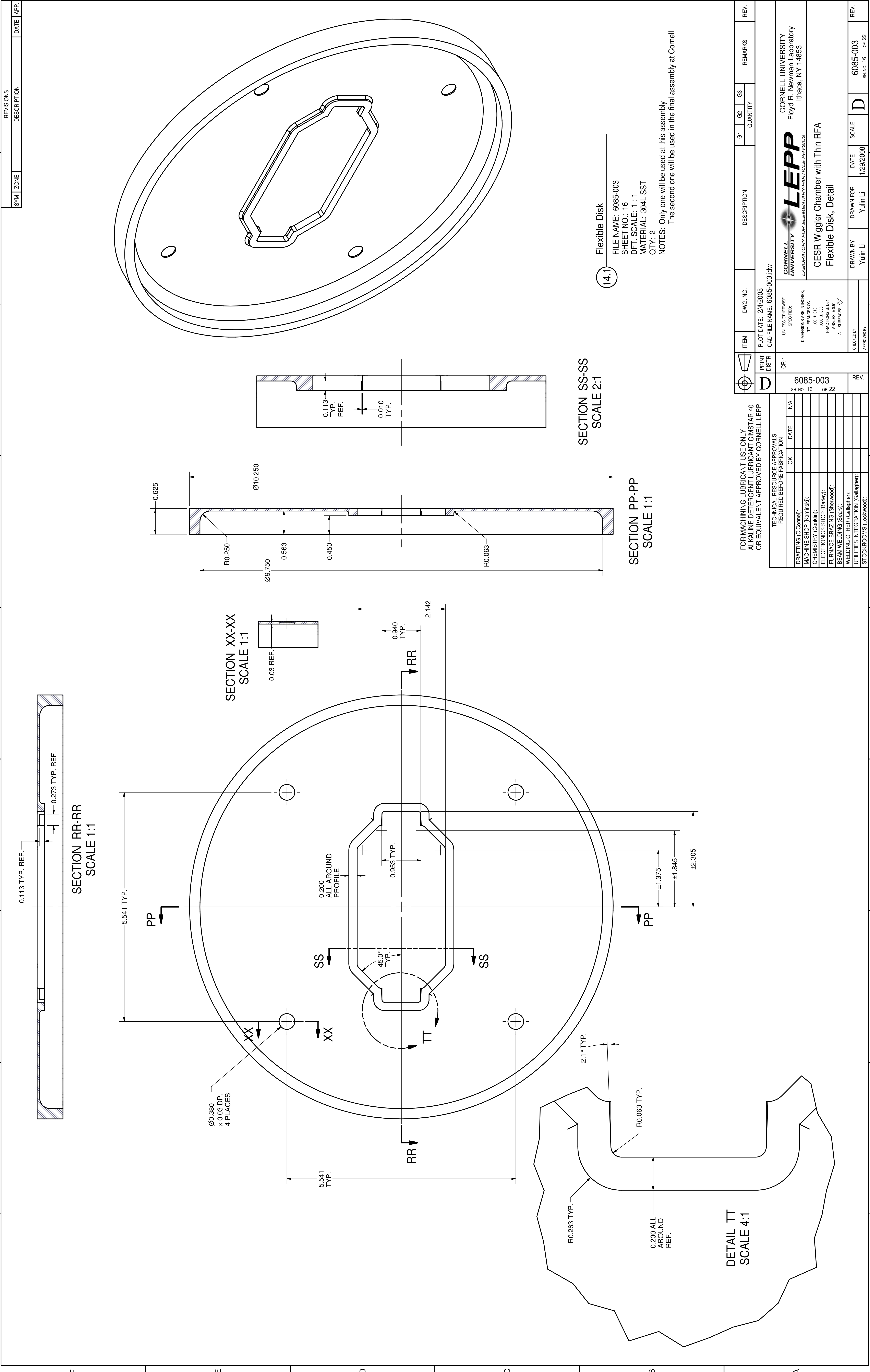
6085-003
SH. NO. 14 OF 23

PRINT	ITEM	DWG. NO.	DESCRIPTION	REV.
D	CR-1	6085-003	6085-003	1
PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw				
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓				
CHECKED BY: Yulin Li APPROVED BY: Yulin Li				
DRAWN BY: Yulin Li DATE: 1/29/2008 SCALE: D REV. 6085-003 SH. NO. 14 OF 22				
REMARKS				

CORNELL UNIVERSITY
FLOYD R. NEWMAN LABORATORY
ITHACA, NY 14853

CESR Wiggler Chamber with Thin RFA
Cooling Channel Bar #2, Sub-ASM

13.3	LEPP Stock	3/8" Swag-Lok Fitting	2				
13.2	Sheet 14	0.375 O.D. x 2.00 Lg. Tube	2				
13.1	Sheet 14	Cooling Channel Bar #2	1				



REVISIONS		DATE	
SYM	ZONE	DESCRIPTION	APP

14.1 Flexible Disk

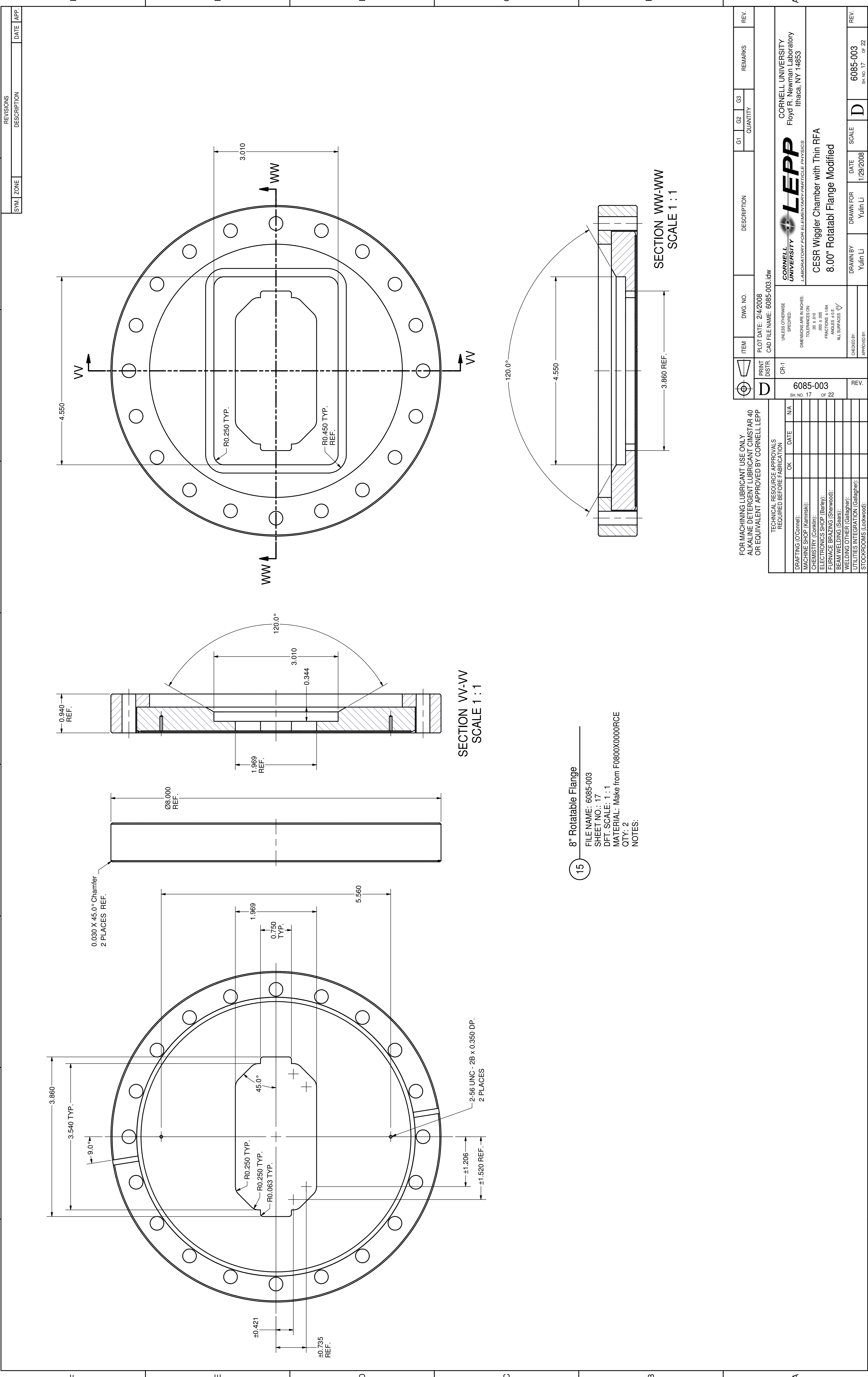
FILE NAME: 6085-003
SHEET NO.: 16
DFT. SCALE: 1 : 1
MATERIAL: 304L SST
QTY: 2

NOTES: Only one will be used at this assembly
The second one will be used in the final assembly at Cornell

		ITEM	DWG. NO.	DESCRIPTION	QUANTITY			REMARKS	REV.
					G1	G2	G3		
PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw									
CR-1	CORNELL UNIVERSITY  CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853								
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES; TOLERANCES ON: FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓								
	CESR Wiggler Chamber with Thin RFA Flexible Disk, Detail								
	CHECKED BY:	DRAWN BY		DRAWN FOR	DATE	SCALE	REV.		
	APPROVED BY:	Yulin Li		Yulin Li	1/29/2008	D	6085-003 SH NO 16 OF 22		
D		6085-003 SH. NO. 16 OF 22							REV.

FOR MACHINING LUBRICANT USE ONLY: ALKALINE DETERGENT LUBRICANT CIMSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP		TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION	
OK		DATE	
N/A		N/A	
DRAFTING (O'Connell):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barney):			
FURNACE BRAZING (Sherwood):			
BEAM WELDING (Gears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

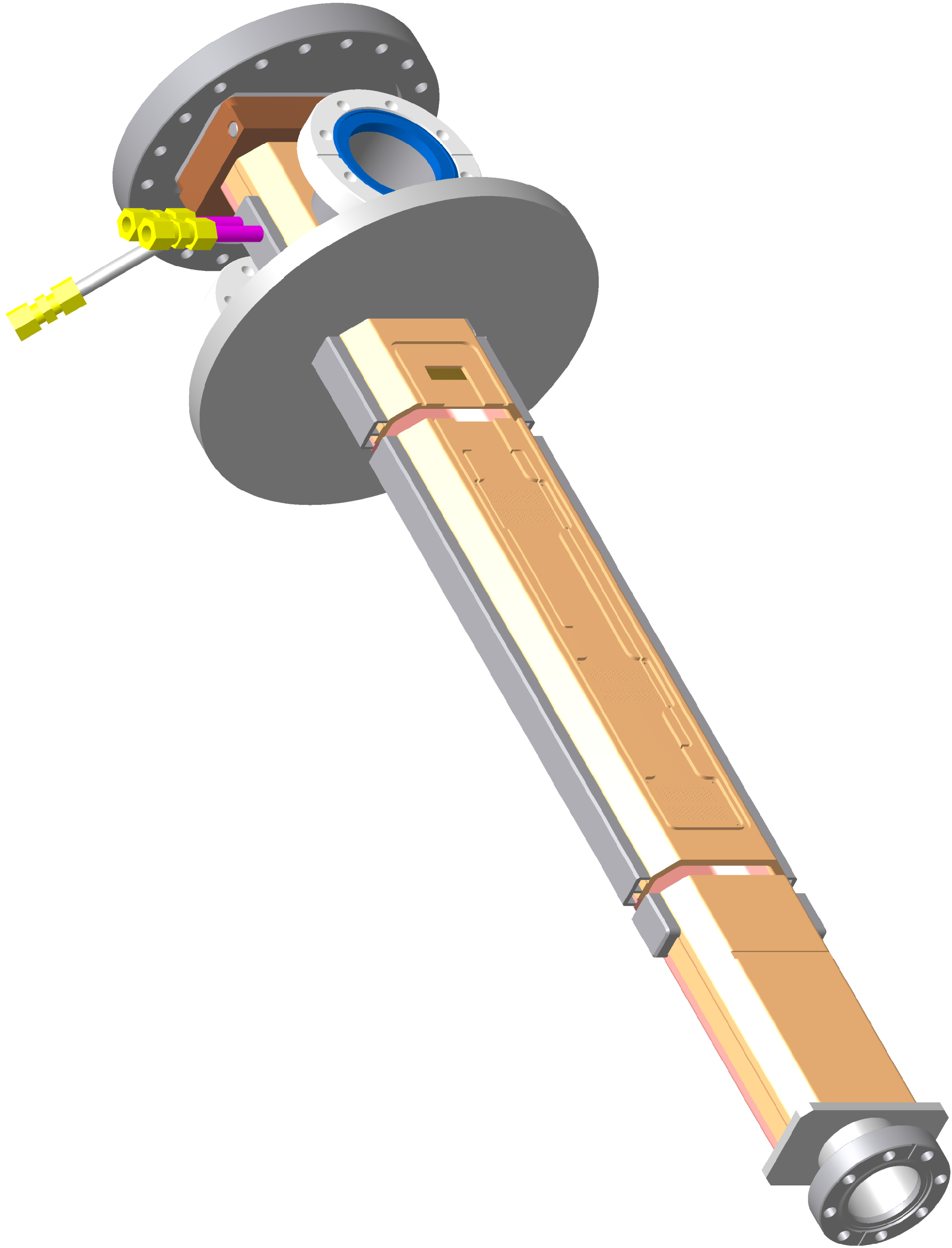
CORNELL UNIVERSITY LABORATORY FOR ELEMENTARY PARTICLE PHYSICS		CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853	
CESR Wiggler Chamber with Thin RFA Flexible Disk, Detail			



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

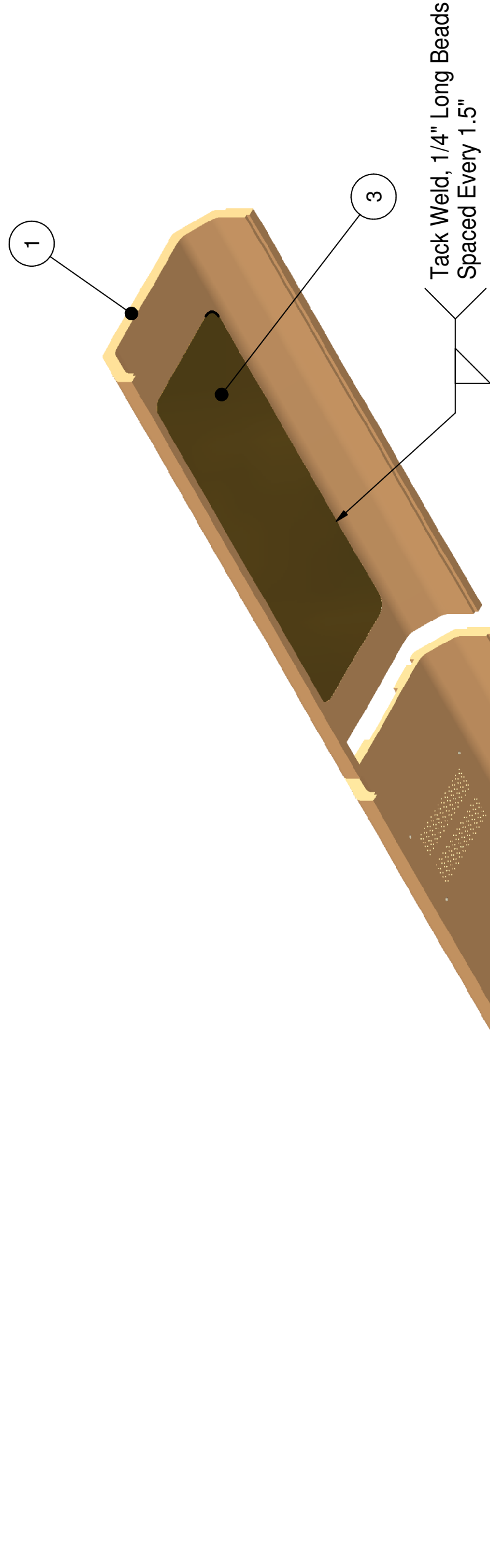
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PRINT DISTR.		D	PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw									
CR-1			UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES; TOLERANCES ON: FRACTIONS ± 1/64 DECIMALS ± 0.005 ANGLES ± 0.5 ALL SURFACES									
			CORNELL UNIVERSITY LABORATORY FOR ELEMENTARY PARTICLE PHYSICS								CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853	
		CESR Wiggler Chamber with Thin RFA 8.00" Rotatable Flange Modified										
		DECKED BY:	DRAWN BY	DRAWN FOR	DATE	SCALE		D	6085-003	REV.		
		APPROVED BY:	Yulin Li	Yulin Li	1/29/2008				SH. NO. 17	OF 22		

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SYM	ZONE	DESCRIPTION	DATE	APP



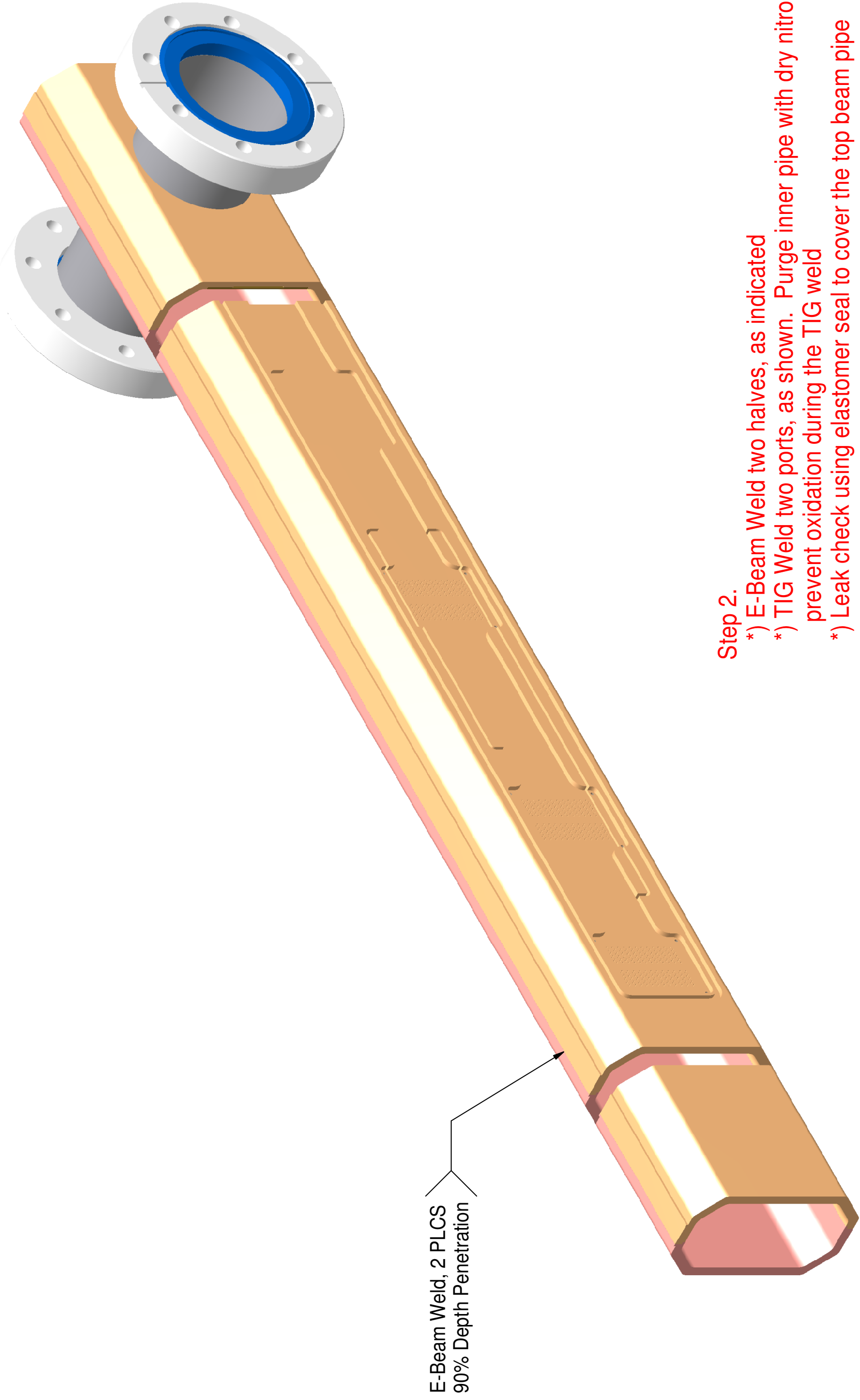
Step 3.

- *)Ensure to have dry nitrogen purging through the pipe to prevent oxidation of the inner surfaces
- *)TIG weld SST/Cu Transition and then the 8" flange
- *)TIG weld both cooling bars, and pressure test the cooling bar welds to 90 PSI
- *)TIG weld the flexible disk.
- *)TIG weld the temporary end flange assembly
- *)Leak check the beam pipe vacuum joints
- *)Leak check the flexible disk weld joint, with a fixture



Step 1.

Tack Weld Tunnel Cover as Indicated. Minimize the weld beads

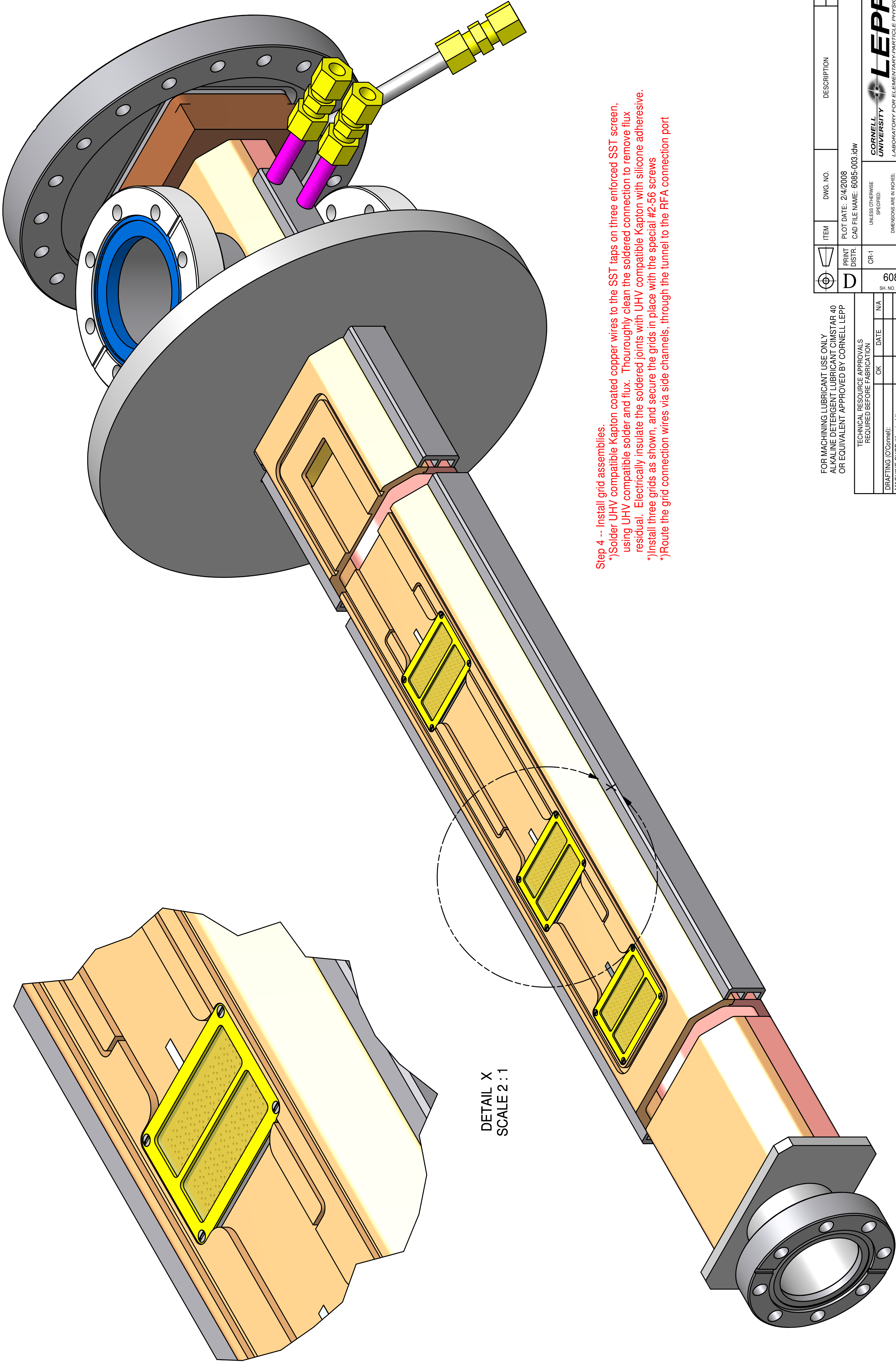


Step 2.

- *) E-Beam Weld two halves, as indicated
- *) TIG Weld two ports, as shown. Purge inner pipe with dry nitrogen to prevent oxidation during the TIG weld
- *) Leak check using elastomer seal to cover the top beam pipe

FOR MACHINING LUBRICANT USE ONLY ALKALINE DETERGENT LUBRICANT CIMSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP										5										6										7										8										9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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NEWMAN LABORATORY										ITHACA, NY 14853										LABORATORY FOR ELEMENTARY PARTICLE PHYSICS										CORNELL UNIVERSITY										FLOYD R. NEWMAN LABORATORY										ITHACA, NY 14853										LABORATORY FOR ELEMENTARY PARTICLE PHYSICS										CORNELL UNIVERSITY										FLOYD R. NEWMAN LABORATORY									

REVISIONS		SYM	ZONE	DESCRIPTION	DATE	APP.
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Step 4 -- Install grid assemblies.

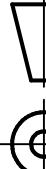
*)Solder UHV compatible Kapton coated copper wires to the SST taps on three enforeed SST screen, using UHV compatible solder and flux. Thouroughly clean the soldered connection to remove flux residual. Electrically insulate the soldered joints with UHV compatible Kapton with silicone adhesive.

*)Install three grids as shown, and secure the grids in place with the special #2-56 screws

*)Route the grid connection wires via side channels, through the tunnel to the RFA connection port

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

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION		OK		DATE		N/A	
DRAFTING (O'Connell):							
MACHINE SHOP (Kaminski):							
CHEMISTRY (Conklin):							
ELECTRONICS SHOP (Barney):							
FURNACE BRAZING (Sterwood):							
BEAM WELDING (Gears):							
WELDING OTHER (Gallagher):							
UTILITIES INTEGRATION (Gallagher):							
STOCKROOMS (Lockwood):							

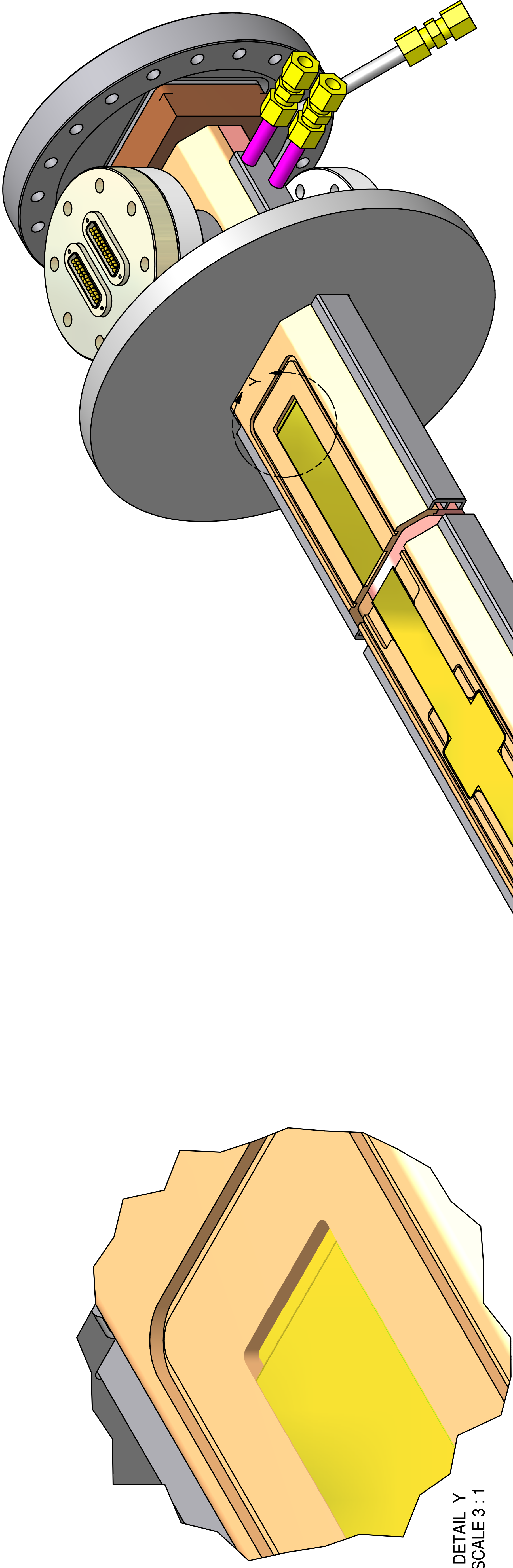
		ITEM	DWG. NO.	DESCRIPTION	QUANTITY			REMARKS	REV.	
PRINT DISTR.					G1	G2	G3			
D			PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw							
CR-1			CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853							
UNLESS OTHERWISE SPECIFIED:			 CORNELL UNIVERSITY LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS							
DIMENSIONS ARE IN INCHES;										
TOLERANCES ON:										
.00 ± .010										
.00 ± .006										
FRACTIONS TO 1/64			CESR Wiggler Chamber with Thin RFA							
ANGLES ± 0.5°										
ALL SURFACES $\sqrt{\text{R}}$										
CHECKED BY:			DRAWN BY		DATE		SCALE	D	6085-003	
APPROVED BY:			Yulin Li		1/29/2008				SH. NO. 19 OF 22	
			Yulin Li						REV.	

CORNELL UNIVERSITY
FLOYD R. NEWMAN LABORATORY
ITHACA, NY 14853

CORNELL UNIVERSITY
LEPP
LABORATORY FOR ELEMENTARY PARTICLE PHYSICS

CESR Wiggler Chamber with Thin RFA

SYM	ZONE	REVISIONS	
		DESCRIPTION	DATE APP.



Step 5 -- Install Flex-Circuit collector stripe.

*)Feed the flex-circuit stripe through the tunnel to the RFA connection port

*)Make soldering connection of the flex-circuit stripe to the UHV cable assemblies, per Cornell specification

*)Locate the flex-circuit stripe to location as shown, and secure the stripe in location using UHV-compatible Kapton tapes with silicone adhesive

FOR MACHINING LUBRICANT USE ONLY. ALKALINE DETERGENT LUBRICANT OMSTAR 40 OR EQUIVALENT APPROVED BY CORNELL LEPP		ITEM	DWG. NO.	DESCRIPTION	REV.
TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION		PRINT DISTR.			
DRAFTING (O'Connell):		CR-1			
MACHINE SHOP (Kaminski):					
CHEMISTRY (Conklin):					
ELECTRONICS SHOP (Barney):					
FURNACE BRAZING (Sterwood):					
BEAM WELDING (Gears):					
WELDING OTHER (Gallagher):					
UTILITIES INTEGRATION (Gallagher):					
STOCKROOMS (Lockwood):					
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES UNLESS NOTED: FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓					
CHECKED BY:					
APPROVED BY:					
PLOT DATE: 2/4/2008 CAD FILE NAME: 6085-003.idw					
6085-003 SH. NO. 20 OF 22					
REV.					
CORNELL UNIVERSITY FLOYD R. NEWMAN LABORATORY ITHACA, NY 14853					
CESR Wiggler Chamber with Thin RFA					
DRAWN BY: Yulin Li					
DATE: 1/29/2008					
SCALE:					
D					
6085-003 SH. NO. 20 OF 22					
REV.					

[illegible]

