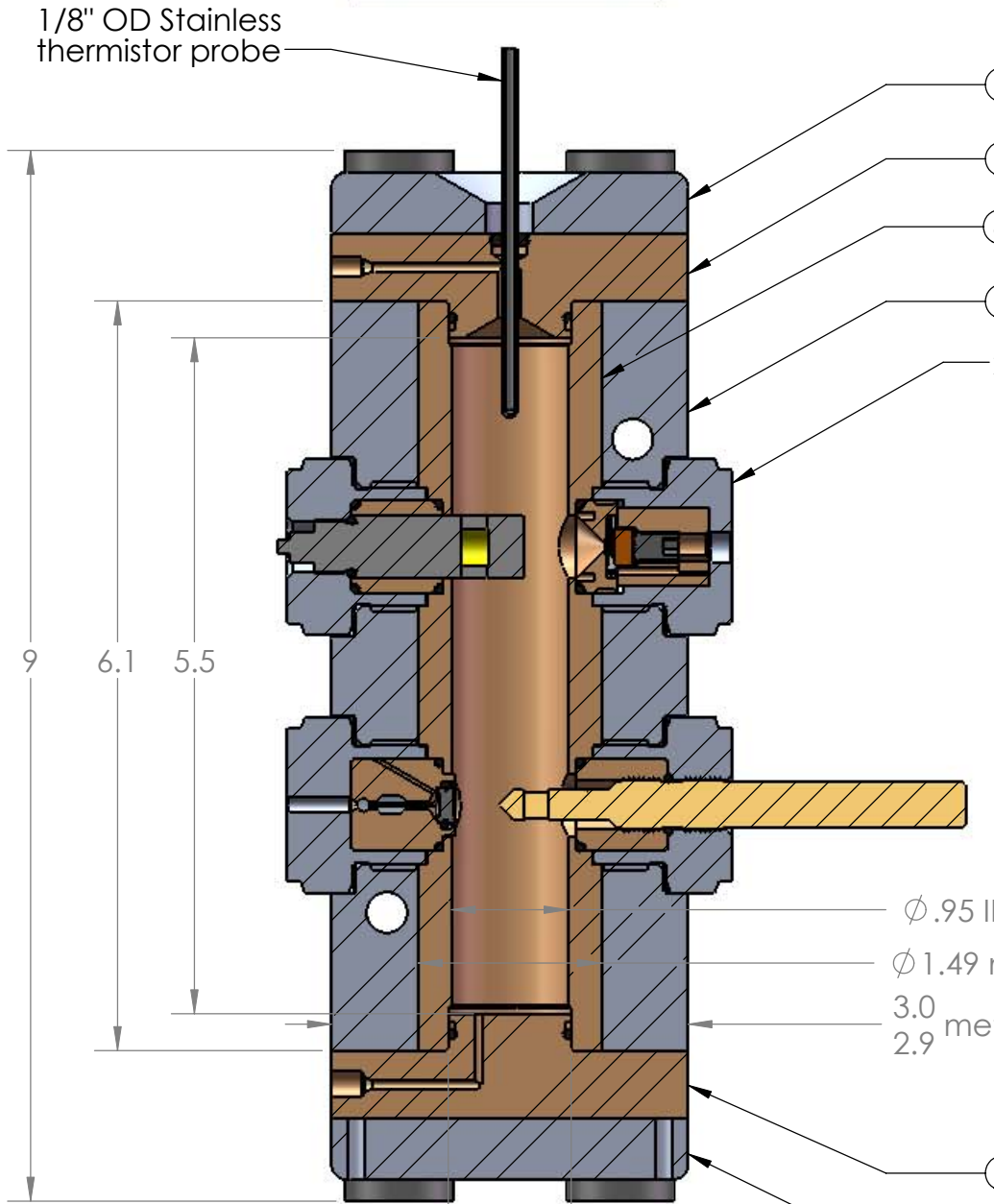
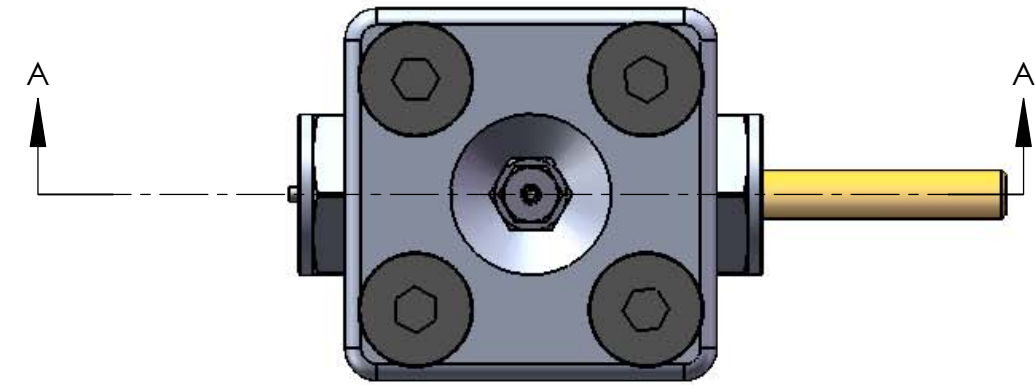


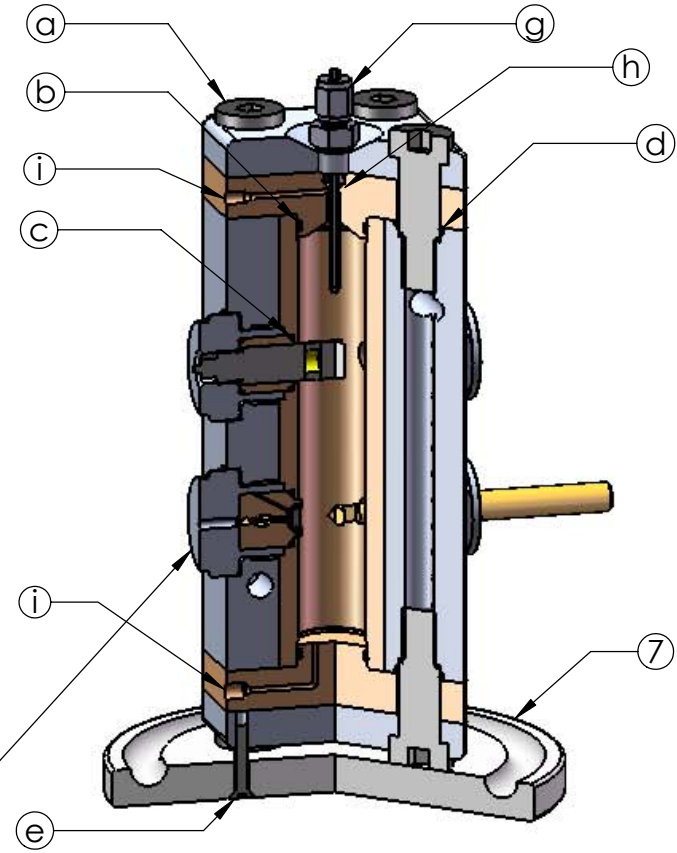
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	For manufacture	7/1/09	HWJ

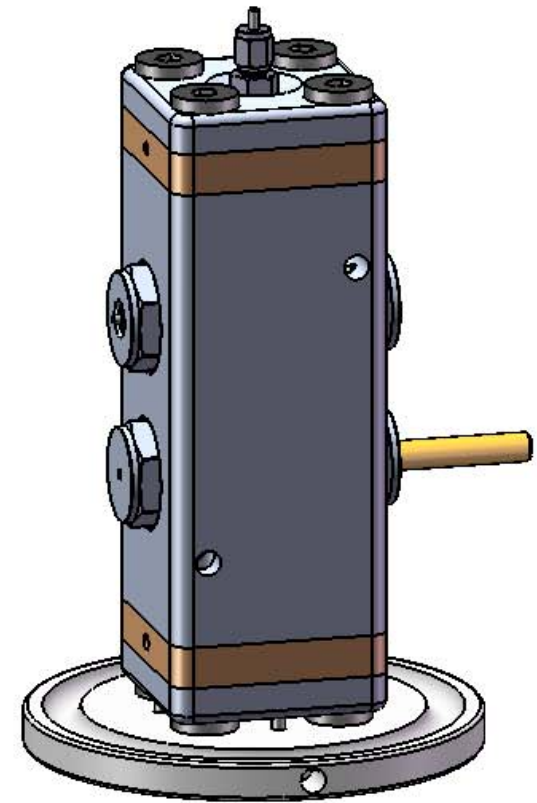


Ø 1.000 sealing surface

SECTION A-A
SCALE 1 : 1.5



Cut-away View



ASSEMBLY

i	2 sets	Upchurch fittings for 1/16" PEEK tubing	LT-110 PEEK nut & LT-135 ferrule
h	1	Viton O-ring (D90) w/Parbak	Viton D90 2-104
g	1	Swagelock fitting	SS-200-1-4ST (bored thru)
f	26	SS 8-32x.25 sealing flathead screw	McMaster PN# 98070A310
e	4	SS Flathead screw	SS 8-32 x 1" flathead screw
d	8	O-ring	2-016
c	4	Viton O-ring (D90)	Viton D90 2-016
b	2	Viton O-ring (D90) w/Parbak	Viton D90 2-020
a	8	SS Shoulder Screw	McMaster PN#90298A794
A1	1	Parts #1 and 6 press fit together	
7	1	Stand	PVC
6	1	PEEK Liner	PEEK Rod
5	1	Endcap (Bottom)	PEEK
4	1	Endcap (Top)	PEEK
3	1	Endcap retainer (Bottom)	Ti Alloy Gr. 5 (6AL-4V)
2	1	Endcap retainer (Top)	Ti Alloy Gr. 5 (6AL-4V)
1	1	SS Housing	Ti Alloy Gr. 5 (6AL-4V)
Item No.	Qty	Part No.	Description
			Material Specification

Bill of Materials			
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	APPROVALS DATE
Inspector		1 PLACE DIM ±.1/16 2 PLACE DIM ±.02 3 PLACE DIM ±.005 ANGLES ±1°	DRAWN HANS JANNASCH 4/22/09
Shop Foreman		1. DIMENSIONS ARE IN INCHES	ENGINEER
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.	CHECKED
NEXT ASSY Description	NEXT ASSY Number	3. REMOVE BURRS AND SHARP EDGES .015 MAX.	PROJECT NO. 900918
		4. MACHINED FILLET RADII .0150-.030.	PROJECT Novel Sensors
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005	WEIGHT
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.	
Application		DO NOT SCALE DRAWING	

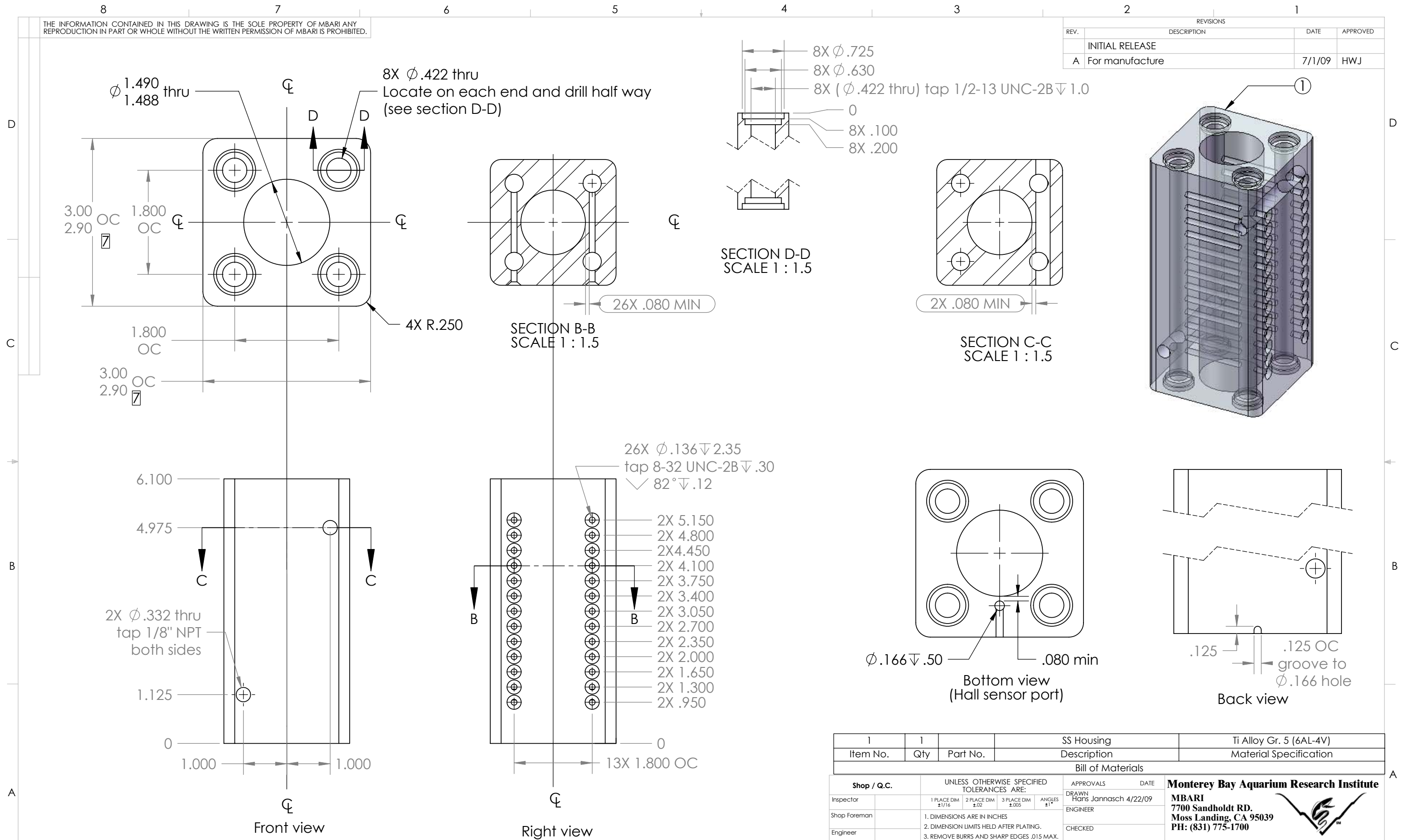
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MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

P/T Test Chamber

SIZE B	DWG. NO. 217jahaPTtestChamber	REV. A
SCALE 1:3	CAD FILE: Tornado/chem/SWfiles	SHEET 1 OF 6

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	INITIAL RELEASE		
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NOTE 7: The OD (2.9 to 3.0") of all parts should be the same, so that the assembly has an even exterior.

1	1		SS Housing	Ti Alloy Gr. 5 (6AL-4V)		
Item No.	Qty	Part No.	Description	Material Specification		
Bill of Materials						
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS DATE		
Inspector		1 PLACE DIM ±.1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Hans Jannasch 4/22/09
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030.				ENGINEER
Engineer		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.				CHECKED
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO. 900918
						PROJECT Novel Sensors
Application		DO NOT SCALE DRAWING		WEIGHT		

Monterey Bay Aquarium Research Institute

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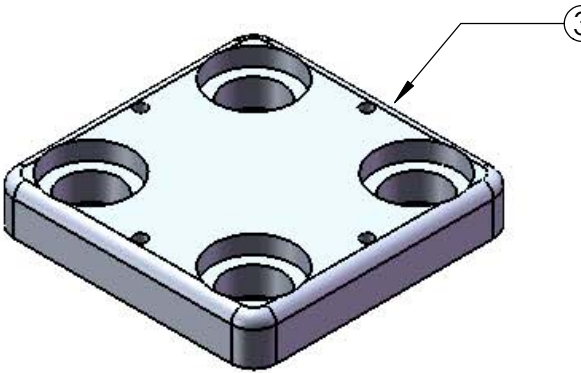
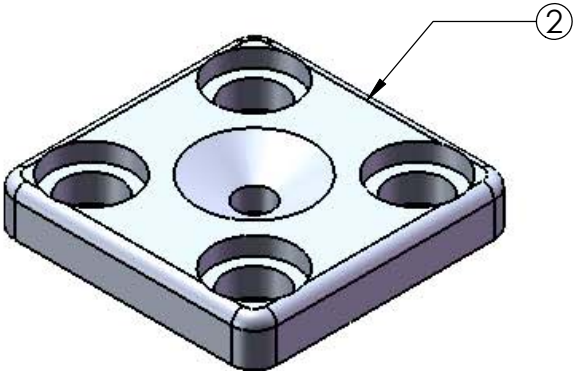
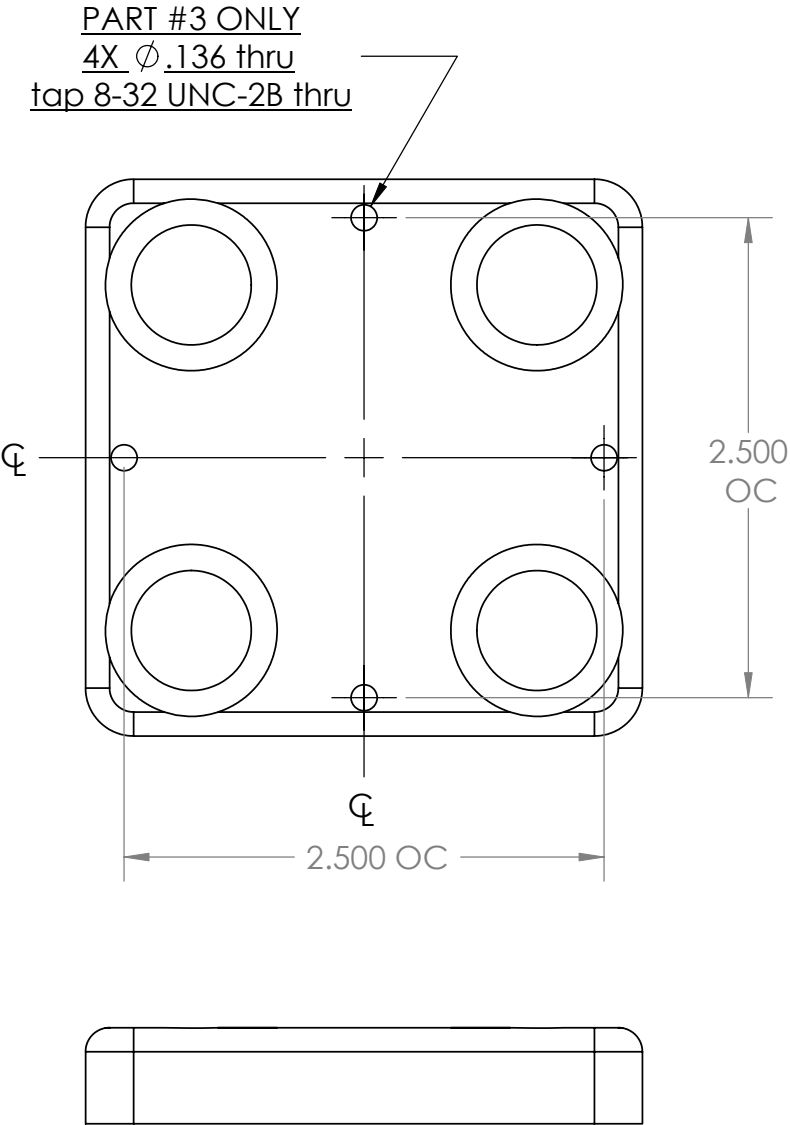
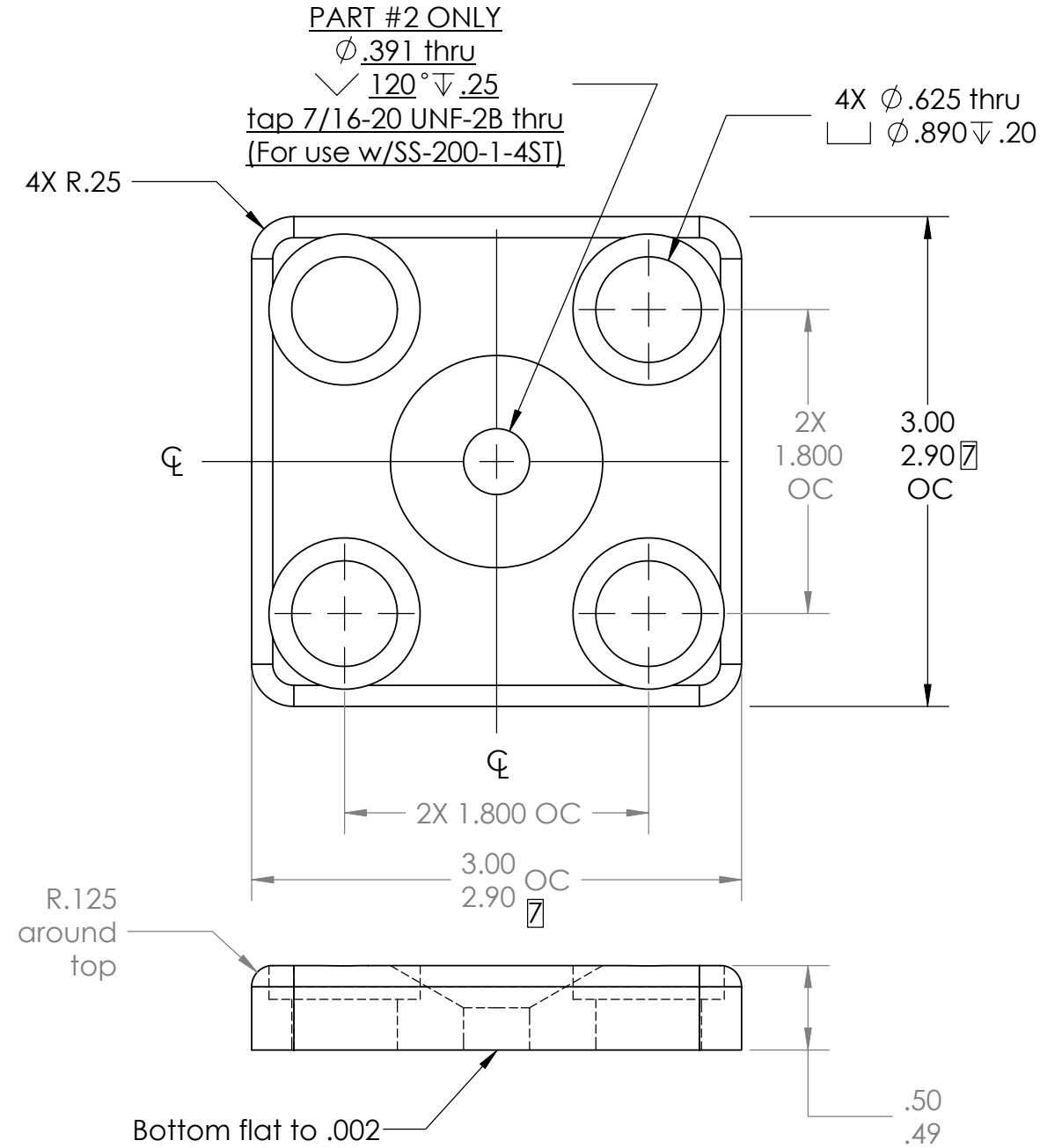


P/T Test Chamber

SIZE B	DWG. NO. 217jahaPTtestChamber	REV. A
SCALE 1:3	CAD FILE: Tornado/chem/SWfiles	SHEET 2 OF 2

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REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
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All dimensions for both parts
except as noted

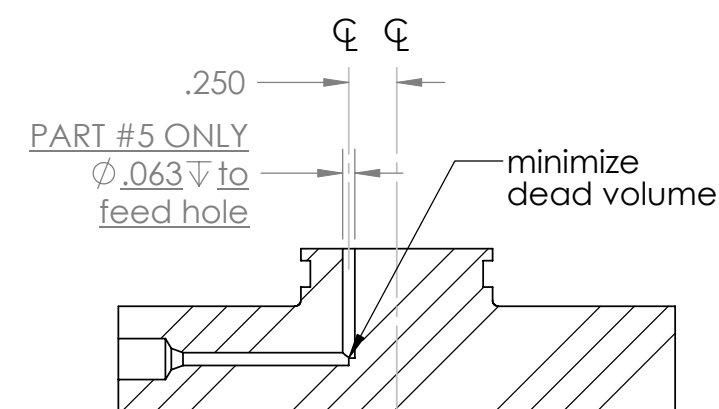
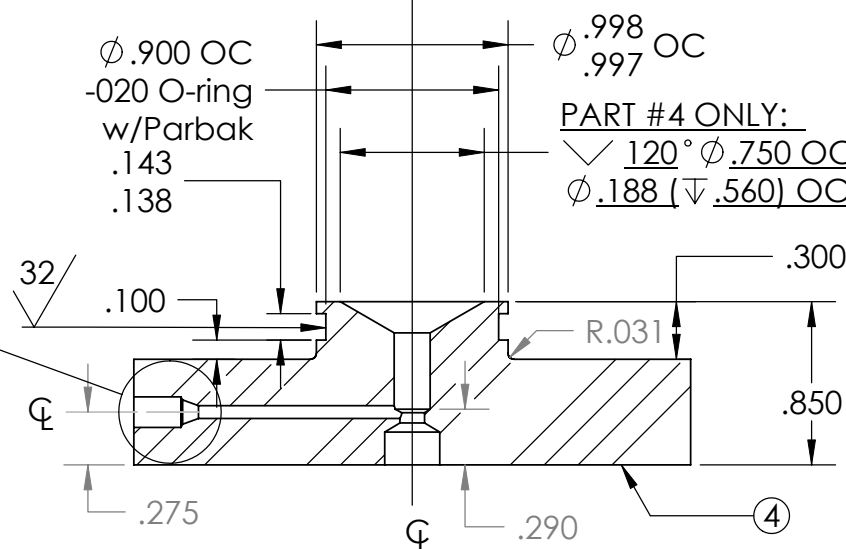
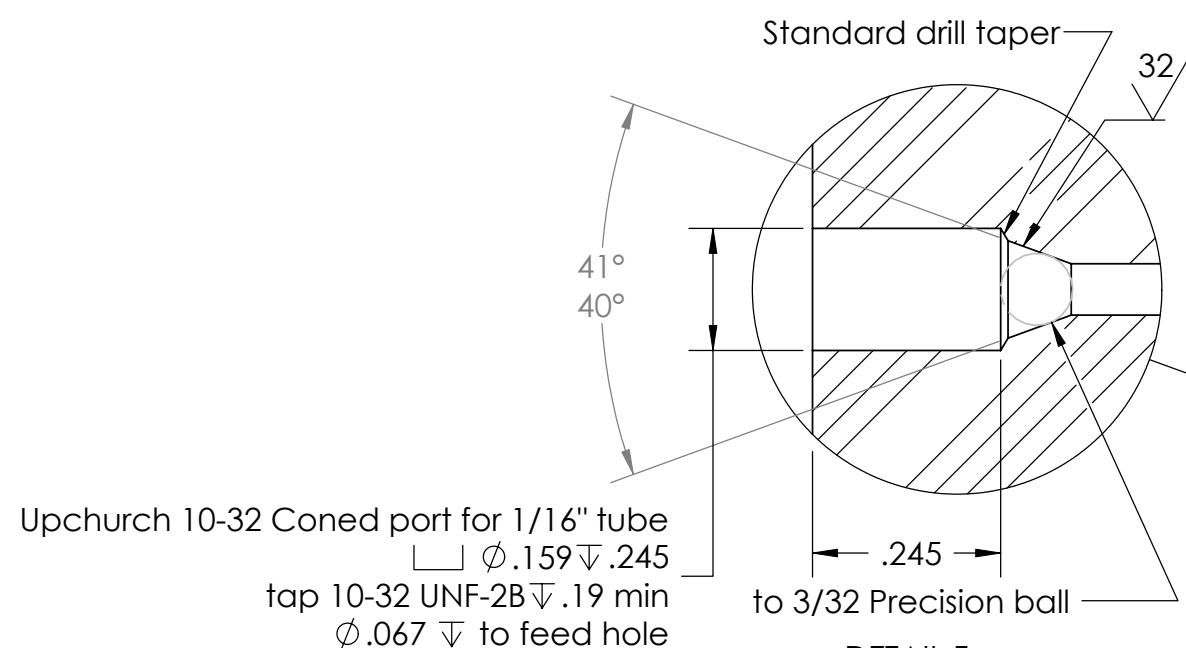
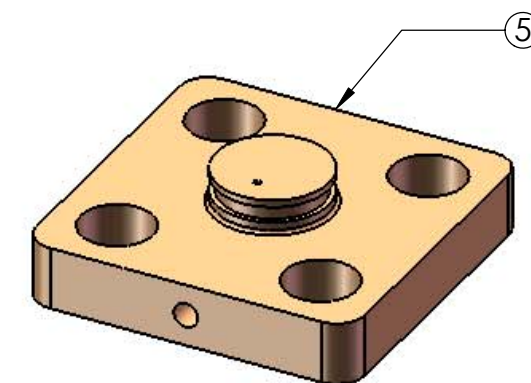
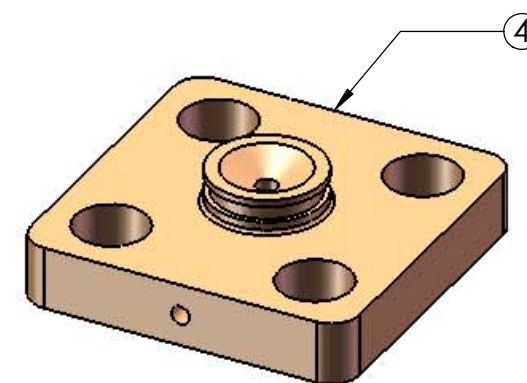
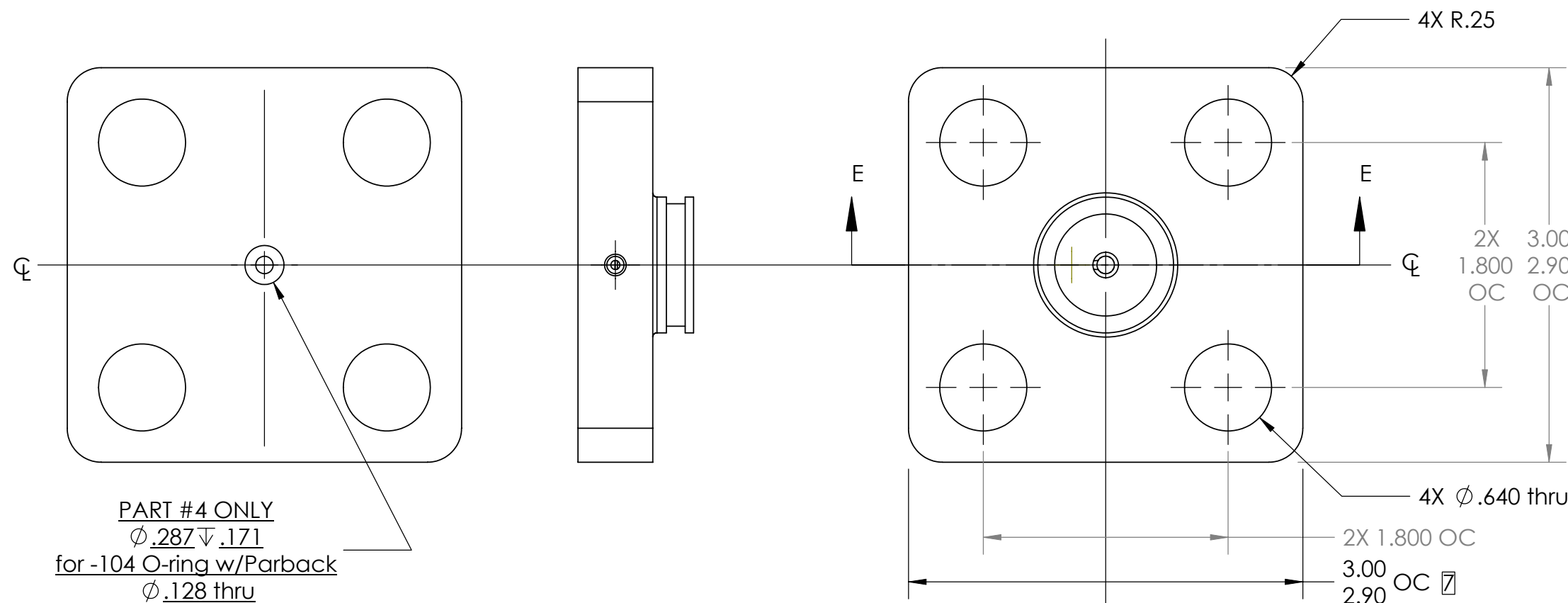
NOTE:
The only difference between Parts #2 and #3 are:
1) The center countersunk thru-hole (only in Part #2) and
2) The 4X #8 mounting holes (only in Part #3).
The dimensions for these features are underlined.

NOTE 7: The OD (2.9 to 3.0") of all parts should be the same, so that
the assembly has an even exterior.

3	1	Endcap retainer (Bottom)			Ti Alloy Gr. 5 (6AL-4V)							
2	1	Endcap retainer (Top)			Ti Alloy Gr. 5 (6AL-4V)							
Item No.	Qty	Part No.	Description			Material Specification						
Bill of Materials												
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS		DATE	Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700 			
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Hans Jannasch 4/22/09						
Shop Foreman		1. DIMENSIONS ARE IN INCHES				ENGINEER						
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED						
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.				PROJECT NO.		900918		P/T Test Chamber		
NEXT ASSY Description	NEXT ASSY Number	4. MACHINED FILLET RADII .0150-.030.				PROJECT		Novel Sensors				
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005										
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.										
Application		DO NOT SCALE DRAWING				WEIGHT		SIZE B		DWG. NO. 217jahaPTtestChamber		REV. A
								SCALE 1:3		CAD FILE: Tornado/chem/SWfiles		SHEET 3 OF 6

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	INITIAL RELEASE		
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SECTION E-E

5	1		Endcap (Bottom)	PEEK
4	1		Endcap (Top)	PEEK
Item No.	Qty	Part No.	Description	Material Specification
Bill of Materials				

Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS	DATE	Monterey Bay Aquarium Research Institute				
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Hans Jannasch	4/22/09	 MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700				
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.				ENGINEER						
Engineer						CHECKED						
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO.					900918	
						PROJECT		Novel Sensors		P/T Test Chamber		
Application		DO NOT SCALE DRAWING				WEIGHT		SIZE B	DWG. NO. 217jahaPTtestChamber	REV. A		
								SCALE 1:3	CAD FILE: Toronado/chem/SWfiles	SHEET 4 OF 4		

NOTE:
The only difference between Parts #4 and #5 are:
1) The center 1/4-28 port and thru-hole (only in Part #4)
2) The debubbling 120° countersink (only in Part #4)
3) The off-center fill port (only in Part #5).
The dimensions for these features are underlined.

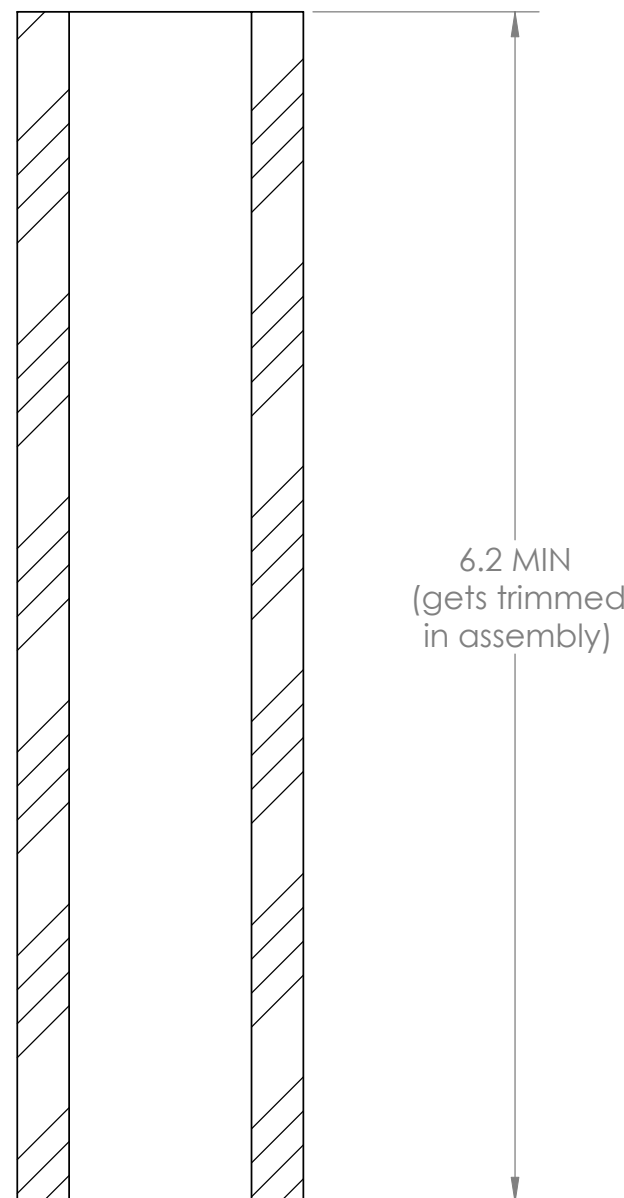
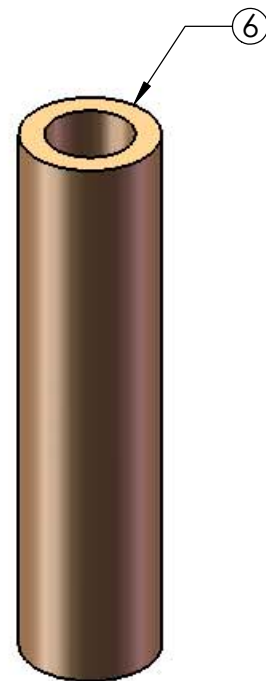
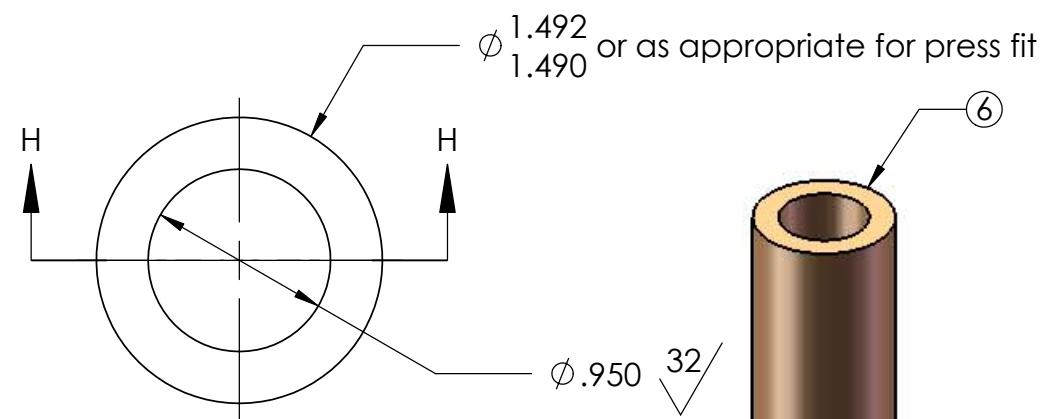
NOTE 7: The OD (2.9 to 3.0") of all parts should be the same, so that the assembly has an even exterior.

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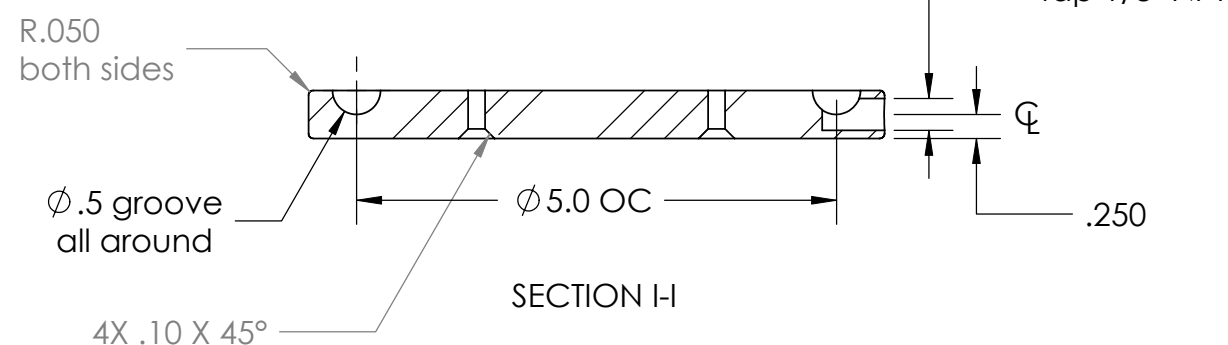
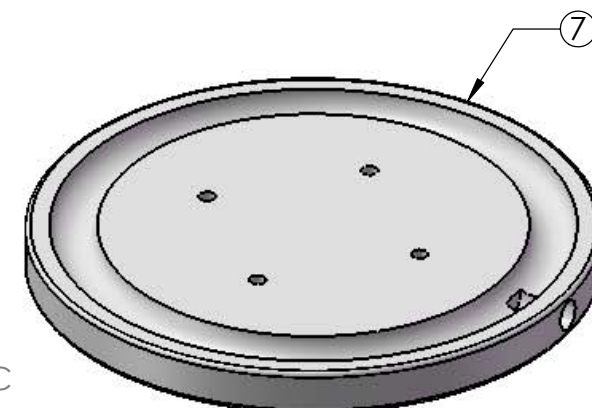
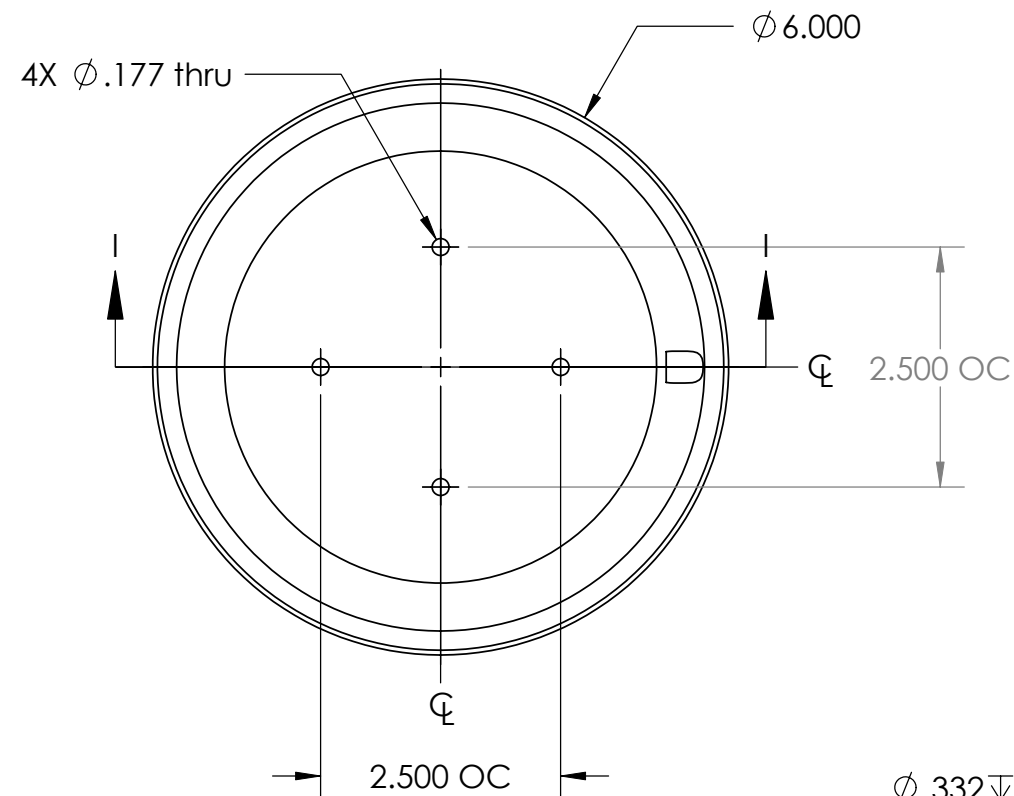
P/T Test Chamber

SIZE B	DWG. NO. 217jahaPTtestChamber	REV. A
SCALE 1:3	CAD FILE: Tornado/chem/SWfiles	SHEET 4 OF 6

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SECTION H-H
SCALE 1 : 1

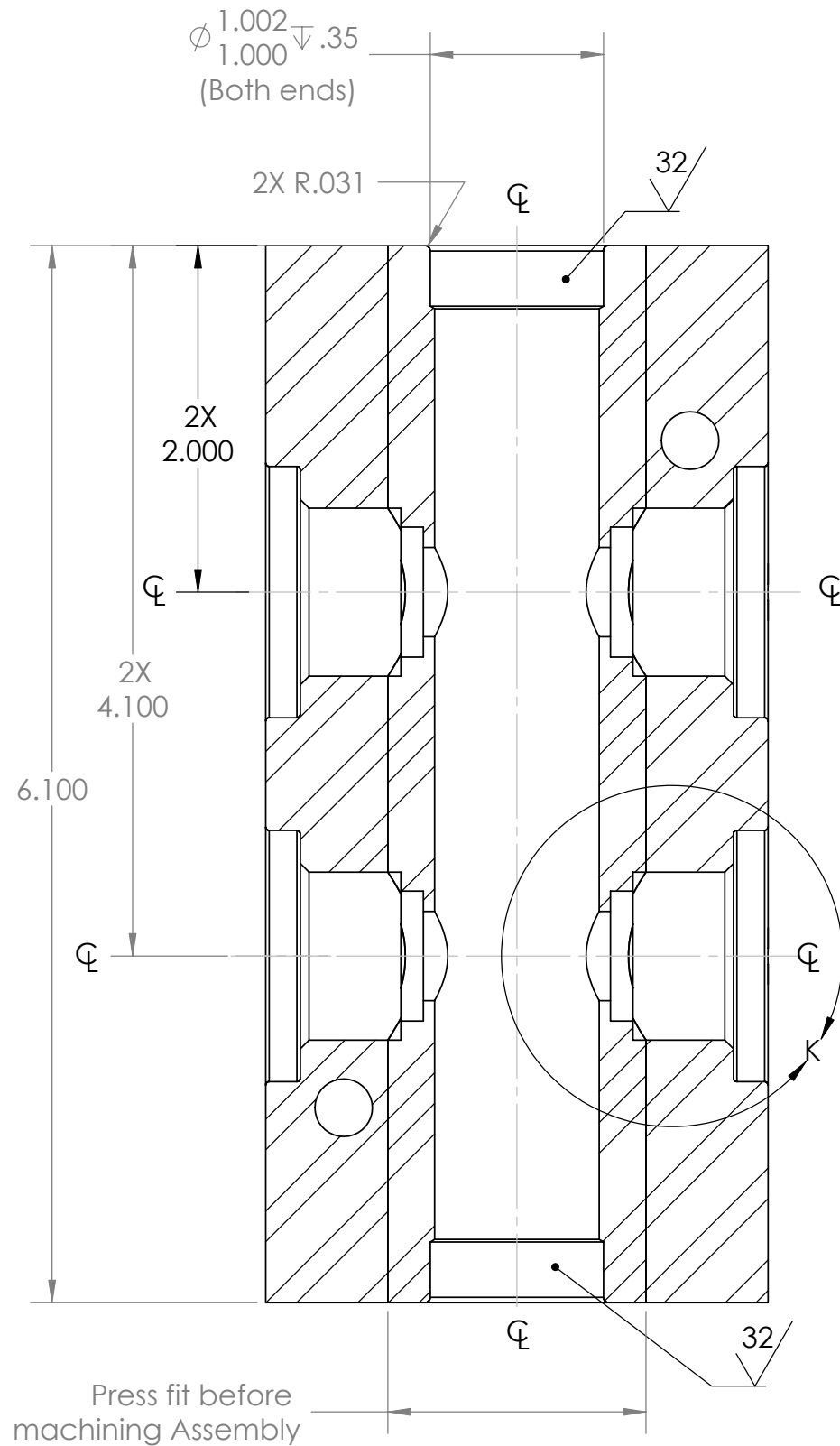


7			Stand	PVC
6			PEEK Liner	PEEK Rod
Item No.	Qty	Part No.	Description	Material Specification
Bill of Materials				

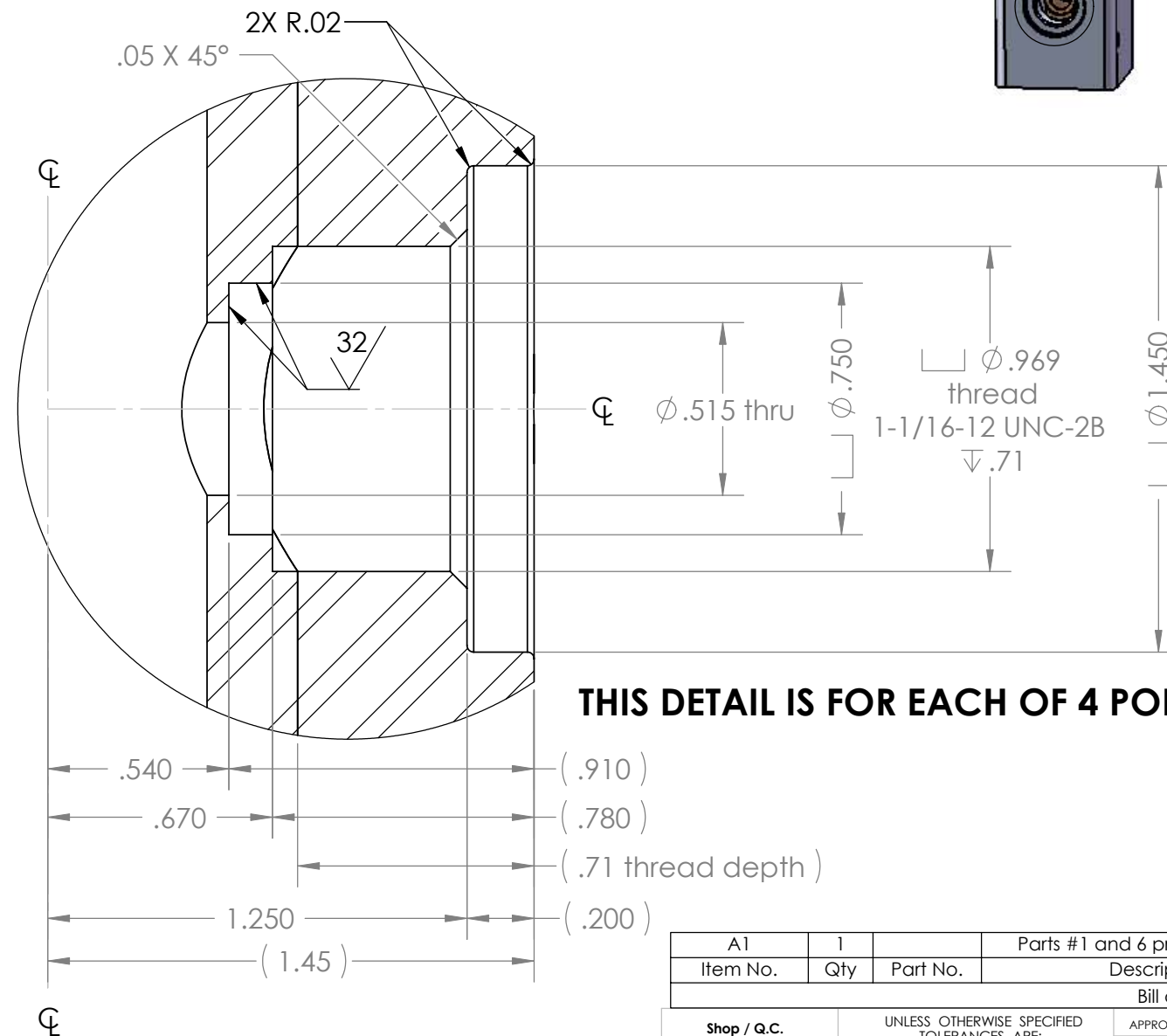
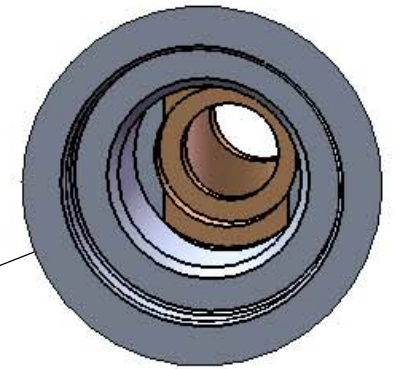
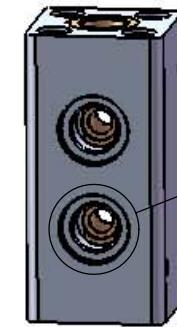
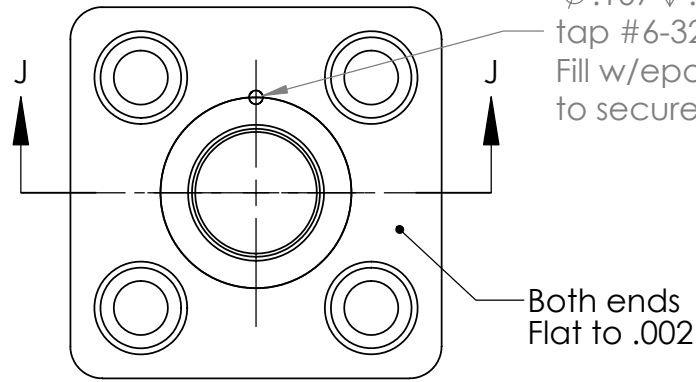
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS DATE		Monterey Bay Aquarium Research Institute 		
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Hans Jannasch 4/22/09		MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700		
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH MAX .012 INCHES FOR SINGLE SURFACE.				ENGINEER		P/T Test Chamber		
Engineer						CHECKED				
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO. 900918				
						PROJECT Novel Sensors				
Application		DO NOT SCALE DRAWING				WEIGHT		SIZE B DWG. NO. 217jahaPTtestChamber SCALE 1:3 CAD FILE: Tornado/chem/SWfiles	REV. A SHEET 5 OF 6	

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REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	For manufacture	7/1/09	HWJ



Optional: Both ends clocked 180°:
 $\phi .107 \nabla .5$
 – tap #6-32 UNC-2B $\nabla .4$
 Fill w/epoxy and install #6x3/8 SS setscrew
 to secure PEEK liner before machining ports



THIS DETAIL IS FOR EACH OF 4 PORTS

A1		1		Parts #1 and 6 press fit together							
Item No.		Qty		Part No.		Description		Material Specification			
Bill of Materials											
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS		DATE			
Inspector		1 PLACE DIM ±1/16		2 PLACE DIM ±.02		3 PLACE DIM ±.005		ANGLES ±1°			
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.				DRAWN Hans Jannasch 4/22/09		Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700 			
Engineer						ENGINEER					
						CHECKED					
NEXT ASSY Description		NEXT ASSY Number				PROJECT NO.		900918			
						PROJECT		Novel Sensors			
Application		DO NOT SCALE DRAWING				WEIGHT					
						SIZE B		DWG. NO. 217JahaPTestChamber		REV. A	
						SCALE 1:3		CAD FILE: Tornado/chem/SWfiles		SHEET 6 OF 6	