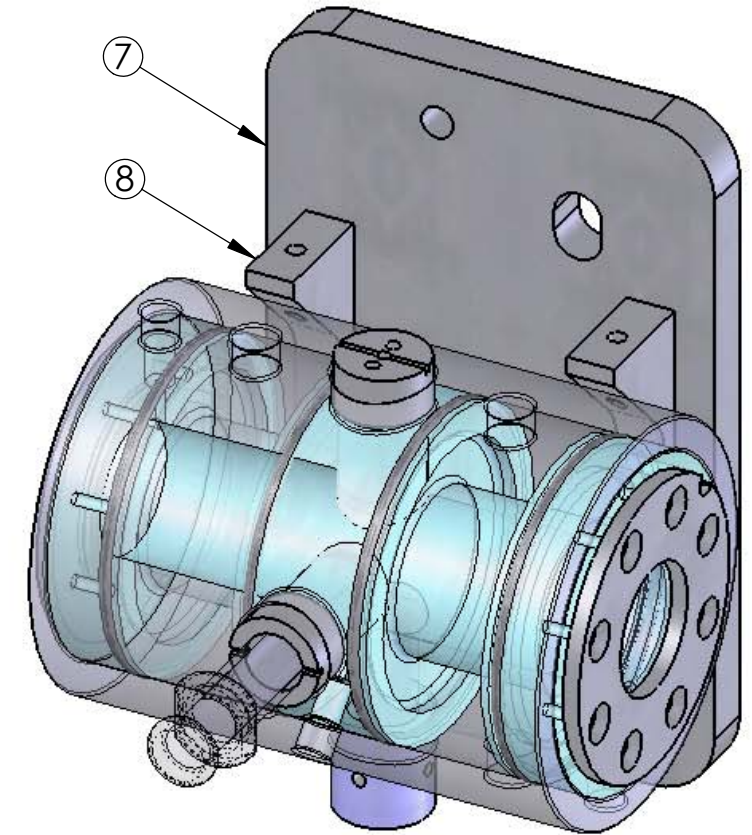
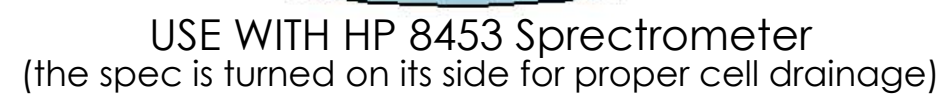




Exploded view of flowcell parts

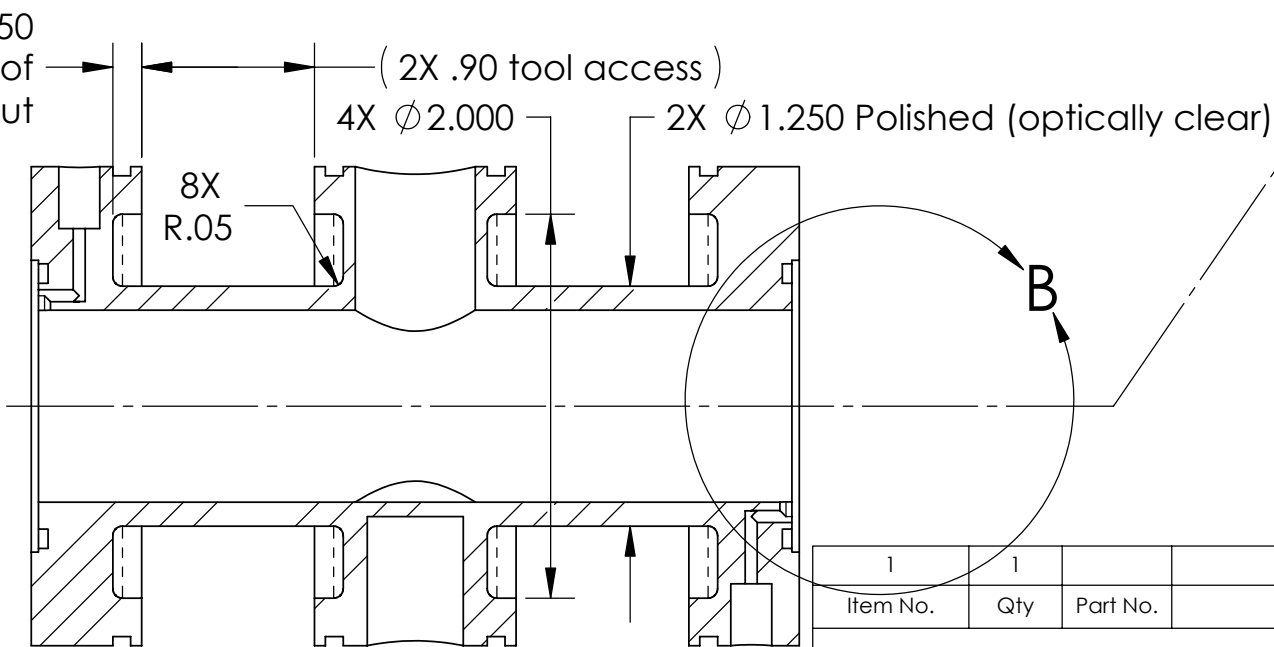
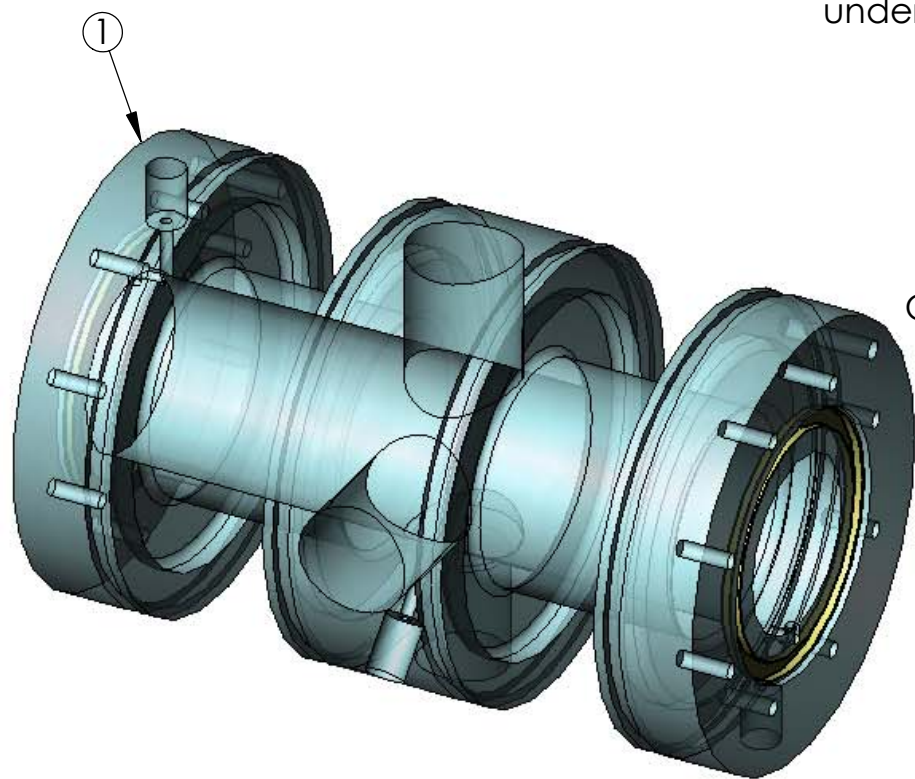
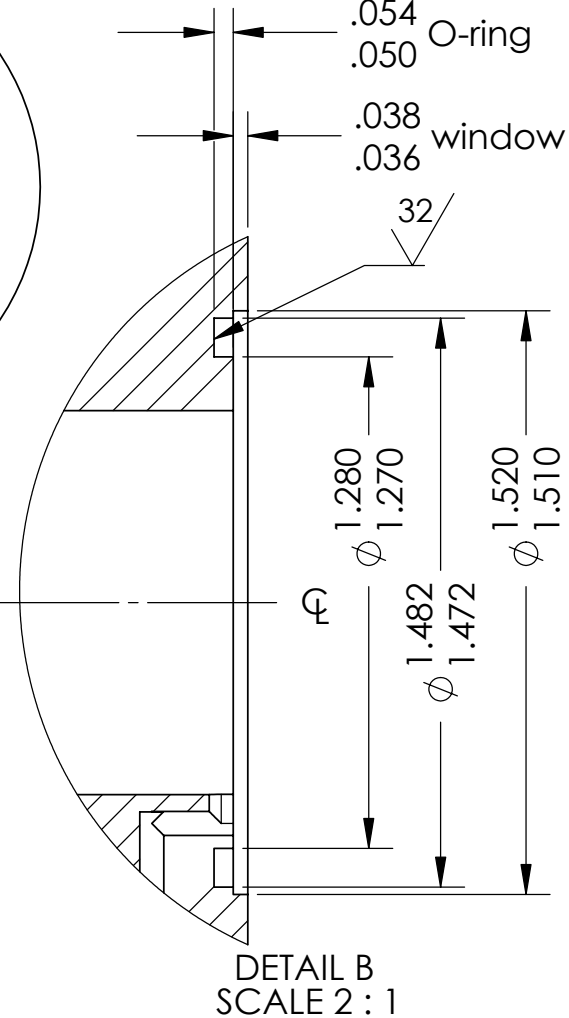
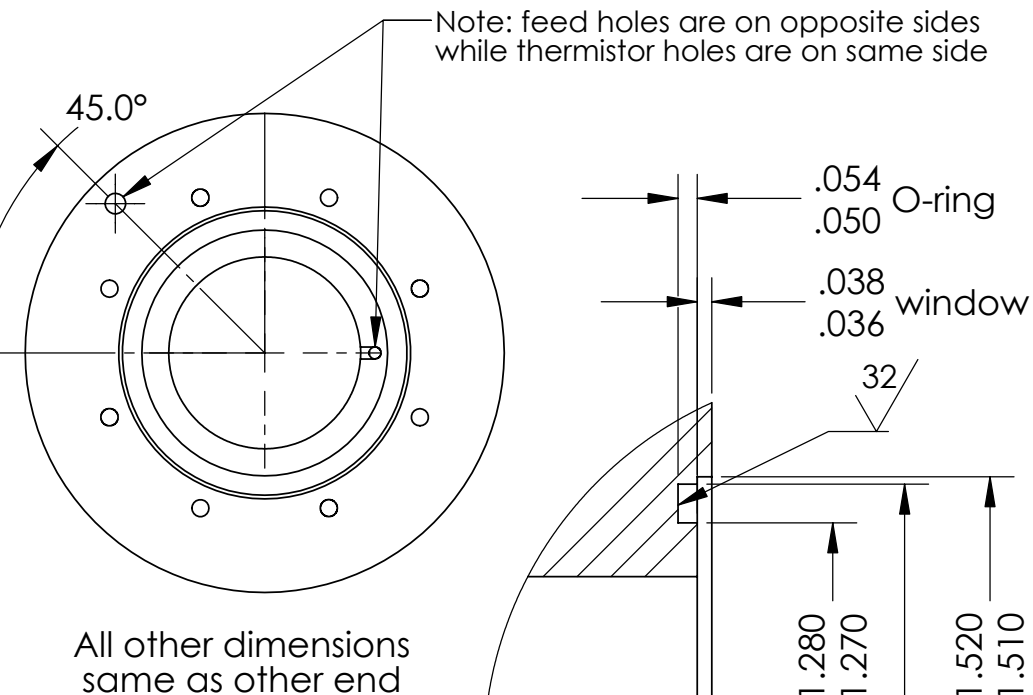
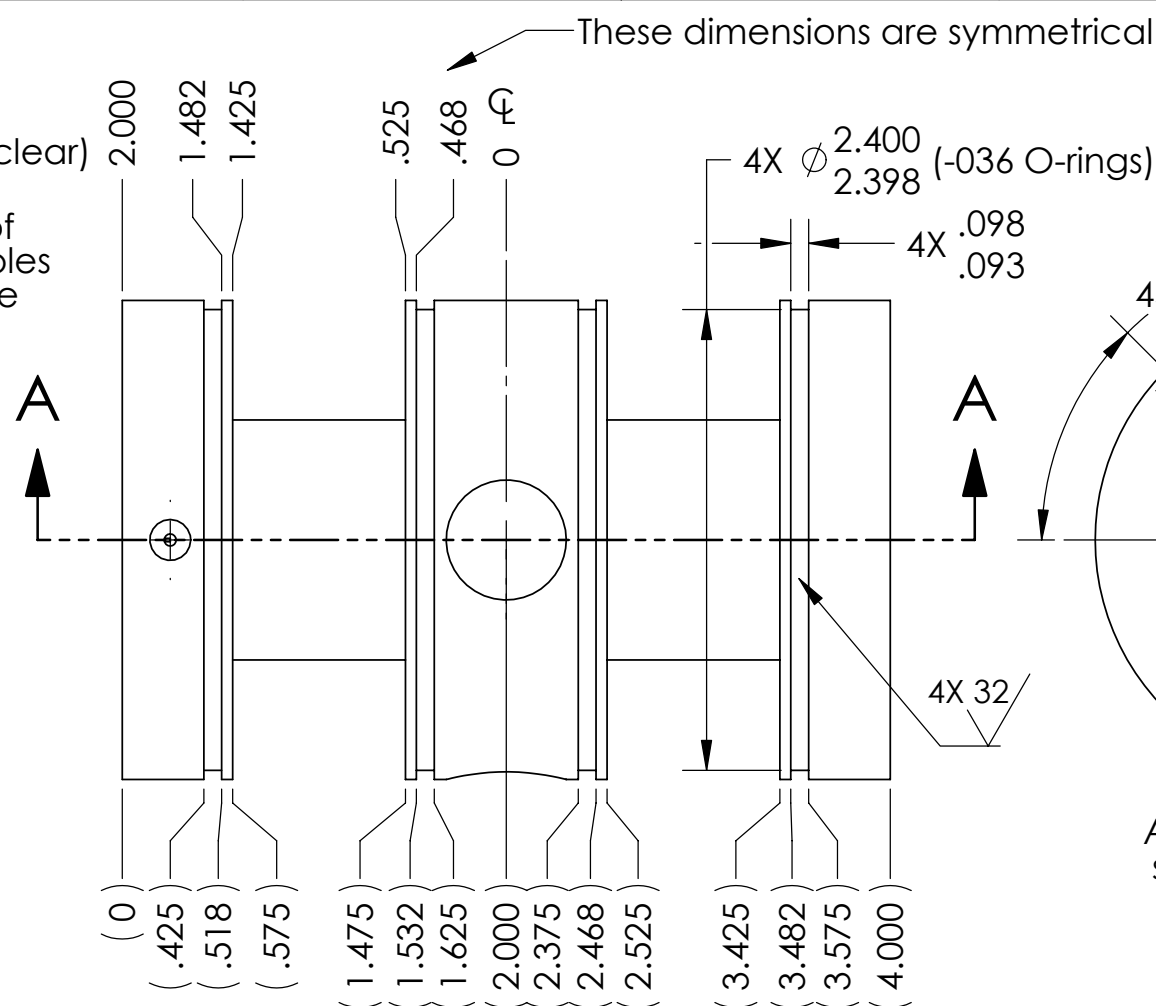
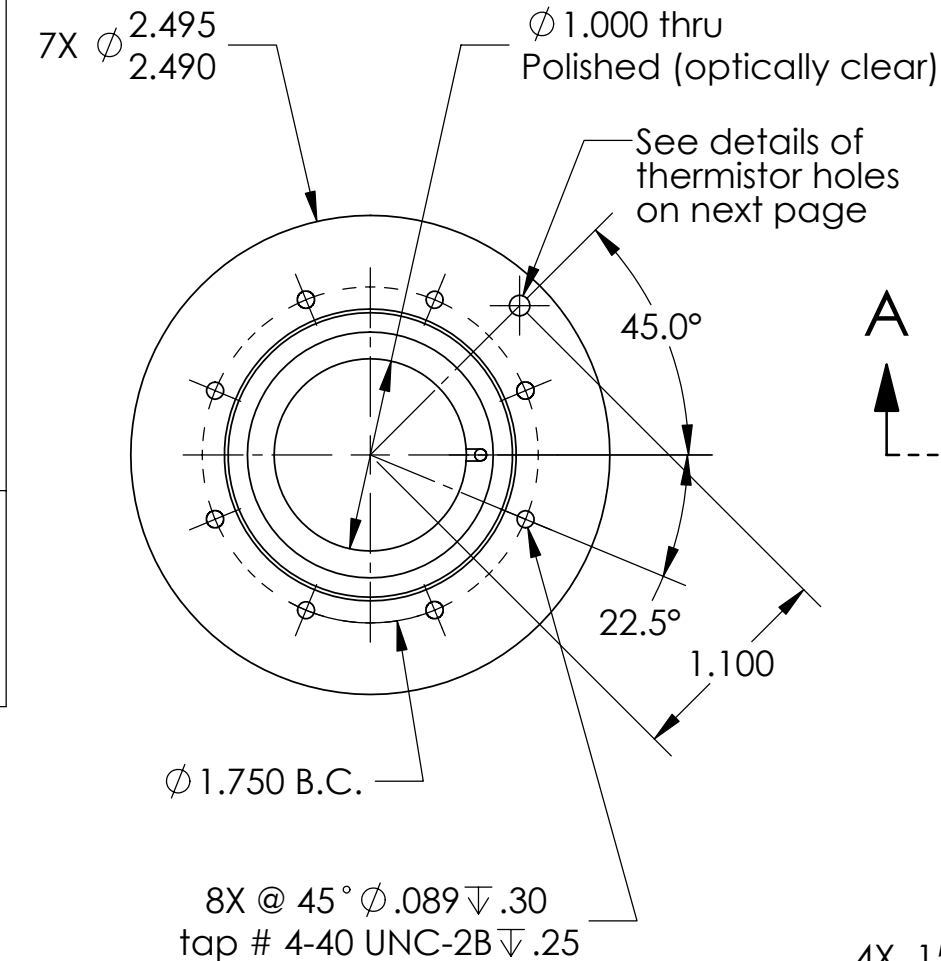


Bill of Materials

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		1/12/2007		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		Jon E. 2/21/2007					
NEXT ASSY Description	NEXT ASSY Number	DO NOT SCALE DRAWING				PROJECT NO.		900601		188jahaSpecFlowcell			
Application						PROJECT		Novel Sensors		ISUS Thermal Flowcell			
						WEIGHT							
						SIZE B	DWG. NO.		188jaha.DWG		REV.		
						SCALE	1:2	CAD FILE: tornado/chem/SWfiles		SHEET 1 OF 7			

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	INITIAL RELEASE	2/23/07	HWJ



SECTION A-A

EXTERIOR DIMENSIONS

The purpose of the XX.X angular dimensions is to ensure alignment of holes in Parts 1 and 2.

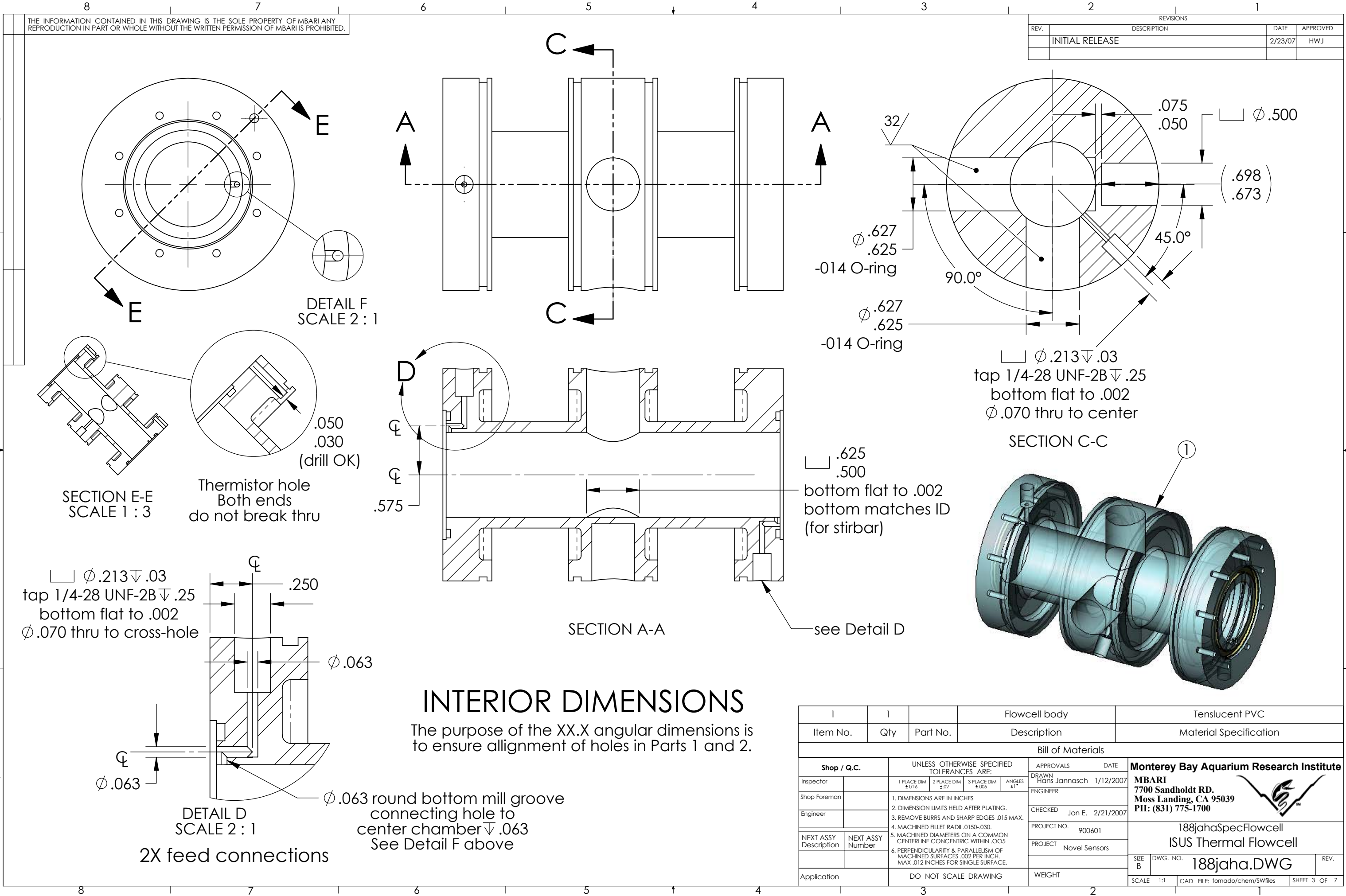
1		1	Flowcell body		Tenslucet PVC	
Item No.		Qty	Part No.	Description	Material Specification	
Bill of Materials						
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			APPROVALS DATE	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Hans Jannasch 1/12/2007
Shop 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 Jon E. 2/21/2007
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO. 900601
						PROJECT Novel Sensors
Application		DO NOT SCALE DRAWING		WEIGHT		SIZE B DWG. NO. 188jaha.DWG REV.
						SCALE 1:1 CAD FILE: tornado/chem/SWfiles SHEET 2 OF 7

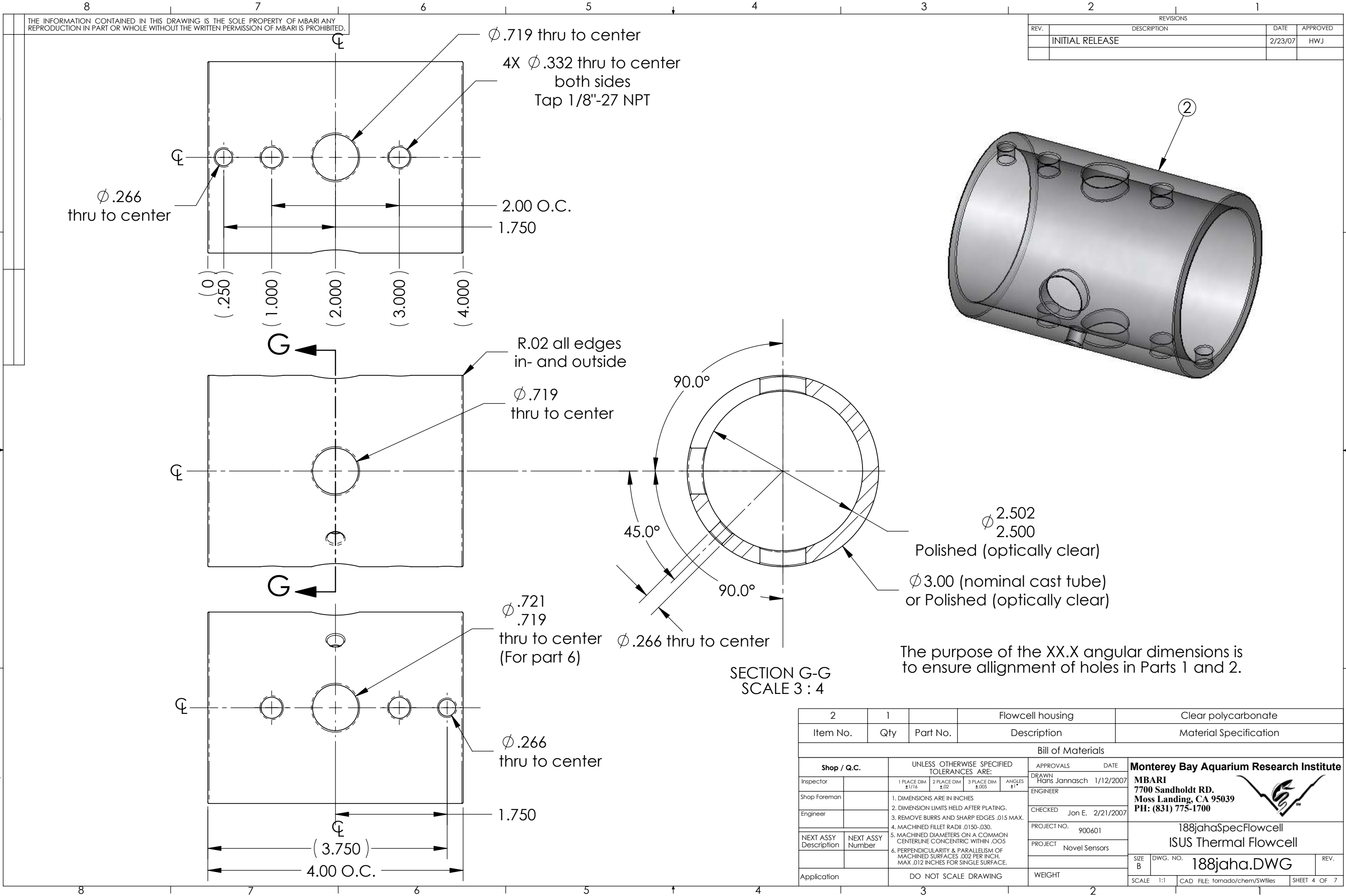
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700



188jahaSpecFlowcell
ISUS Thermal Flowcell

SIZE B DWG. NO. 188jaha.DWG REV.





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	INITIAL RELEASE	2/23/07	HWJ

The purpose of the XX.X angular dimensions is to ensure alignment of holes in Parts 1 and 2.

2		1		Flowcell housing		Clear polycarbonate	
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 1/12/2007	
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADI .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 Jon E. 2/21/2007	
NEXT ASSY Description		NEXT ASSY Number		PROJECT NO. 900601		PROJECT Novel Sensors	
Application		DO NOT SCALE DRAWING		WEIGHT		SIZE B DWG. NO. 188jaha.DWG REV.	
						SCALE 1:1 CAD FILE: tornado/chem/SWfiles SHEET 4 OF 7	

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Moss Landing, CA 95039

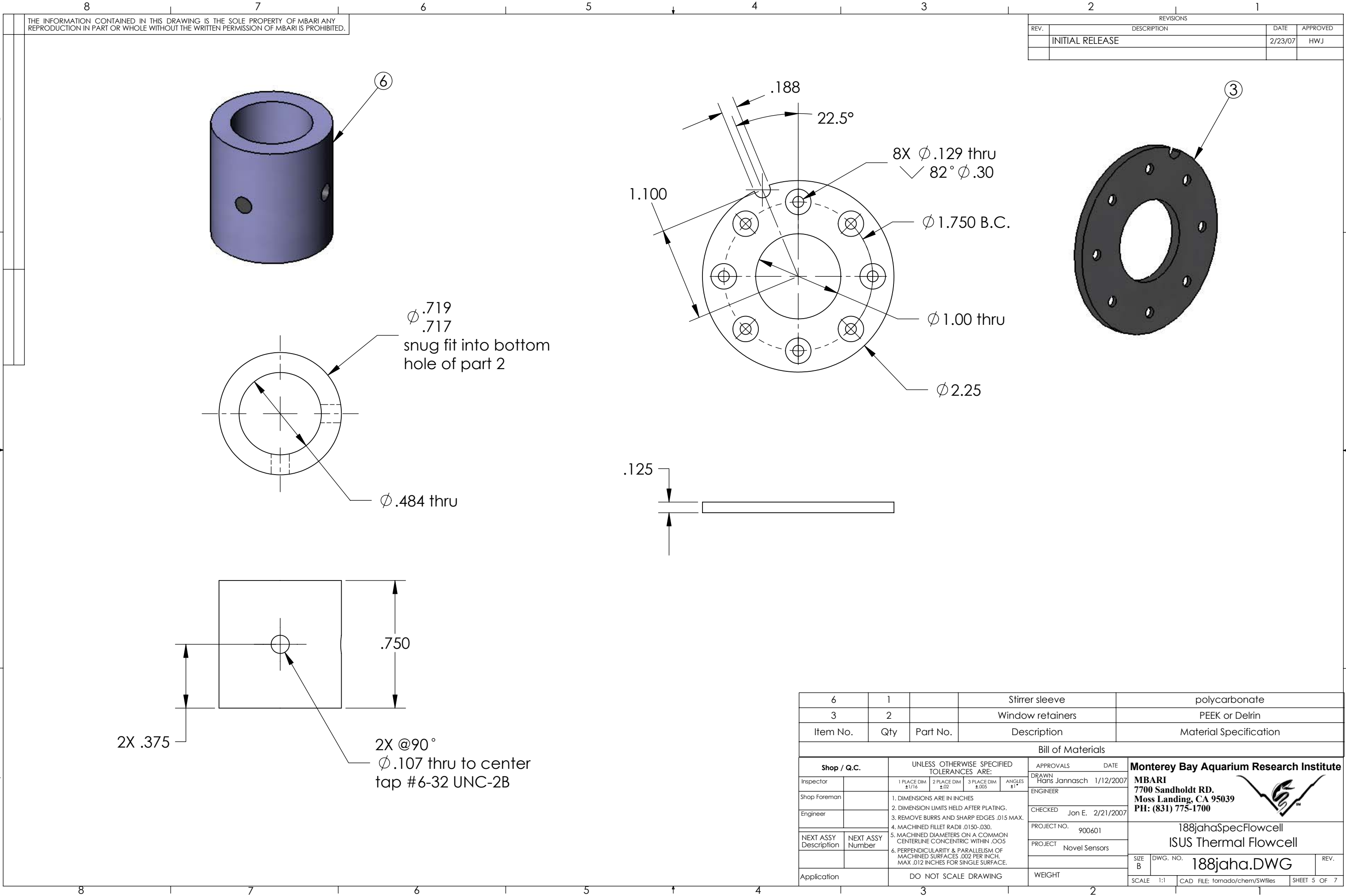
PH: (831) 775-1700



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188jahaSpecFlowcell
ISUS Thermal Flowcell



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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	2/23/07	HWJ

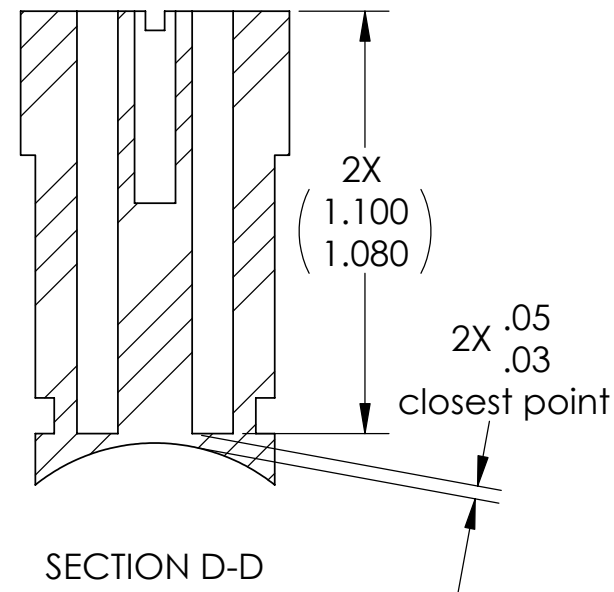
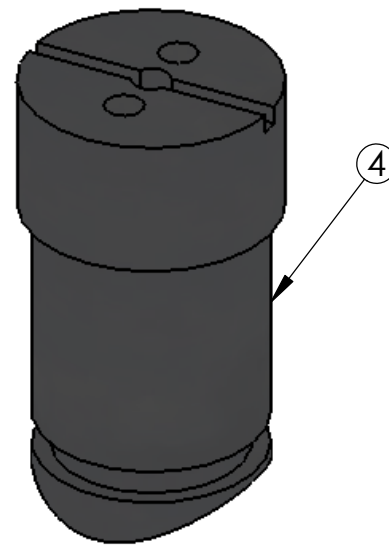
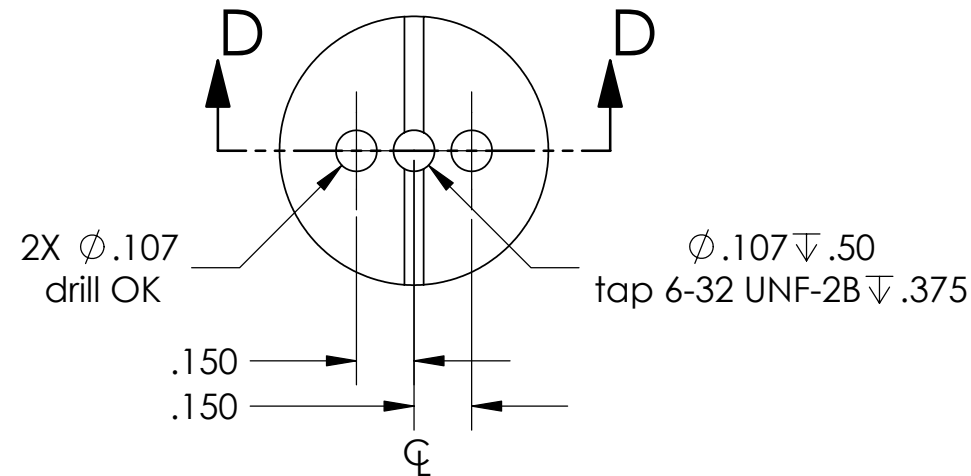
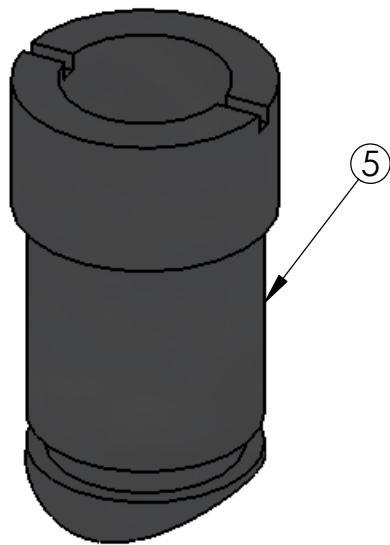
6	1		Stirrer sleeve	polycarbonate
3	2		Window retainers	PEEK or Delrin
Item No.	Qty	Part No.	Description	Material Specification
Bill of Materials				
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADI .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 1/12/2007
Engineer				ENGINEER
				CHECKED Jon E. 2/21/2007
NEXT ASSY Description	NEXT ASSY Number			PROJECT NO. 900601
				PROJECT Novel Sensors
				SIZE B DWG. NO. 188jaha.DWG REV.
Application		DO NOT SCALE DRAWING		WEIGHT
				SCALE 1:1 CAD FILE: tornado/chem/SWfiles SHEET 5 OF 7

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Moss Landing, CA 95039
PH: (831) 775-1700



188jahaSpecFlowcell
ISUS Thermal Flowcell

SIZE B DWG. NO. 188jaha.DWG REV.

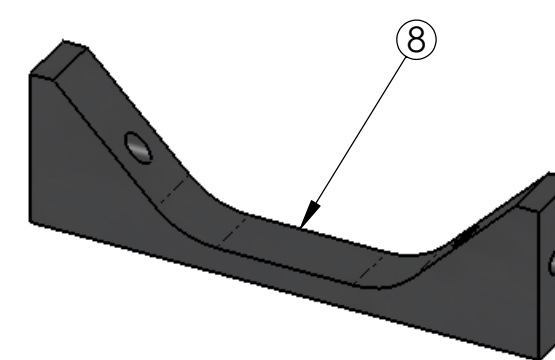
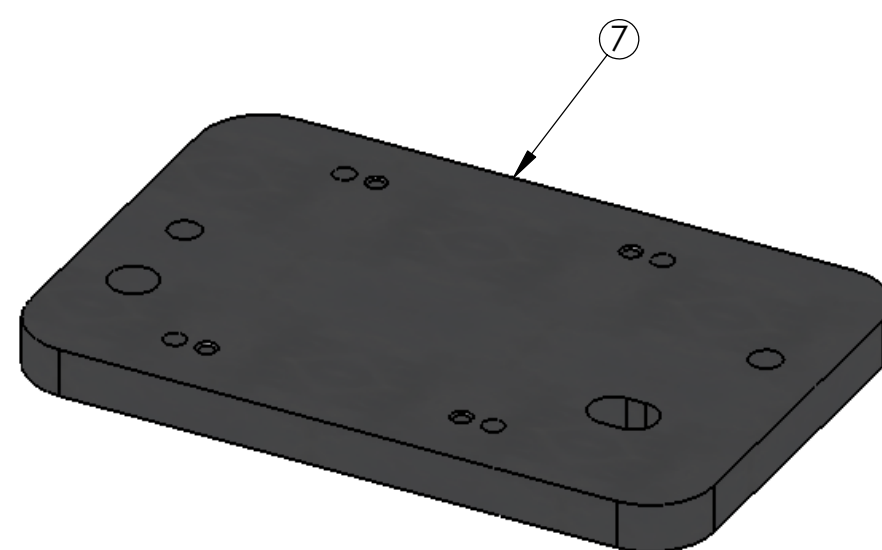
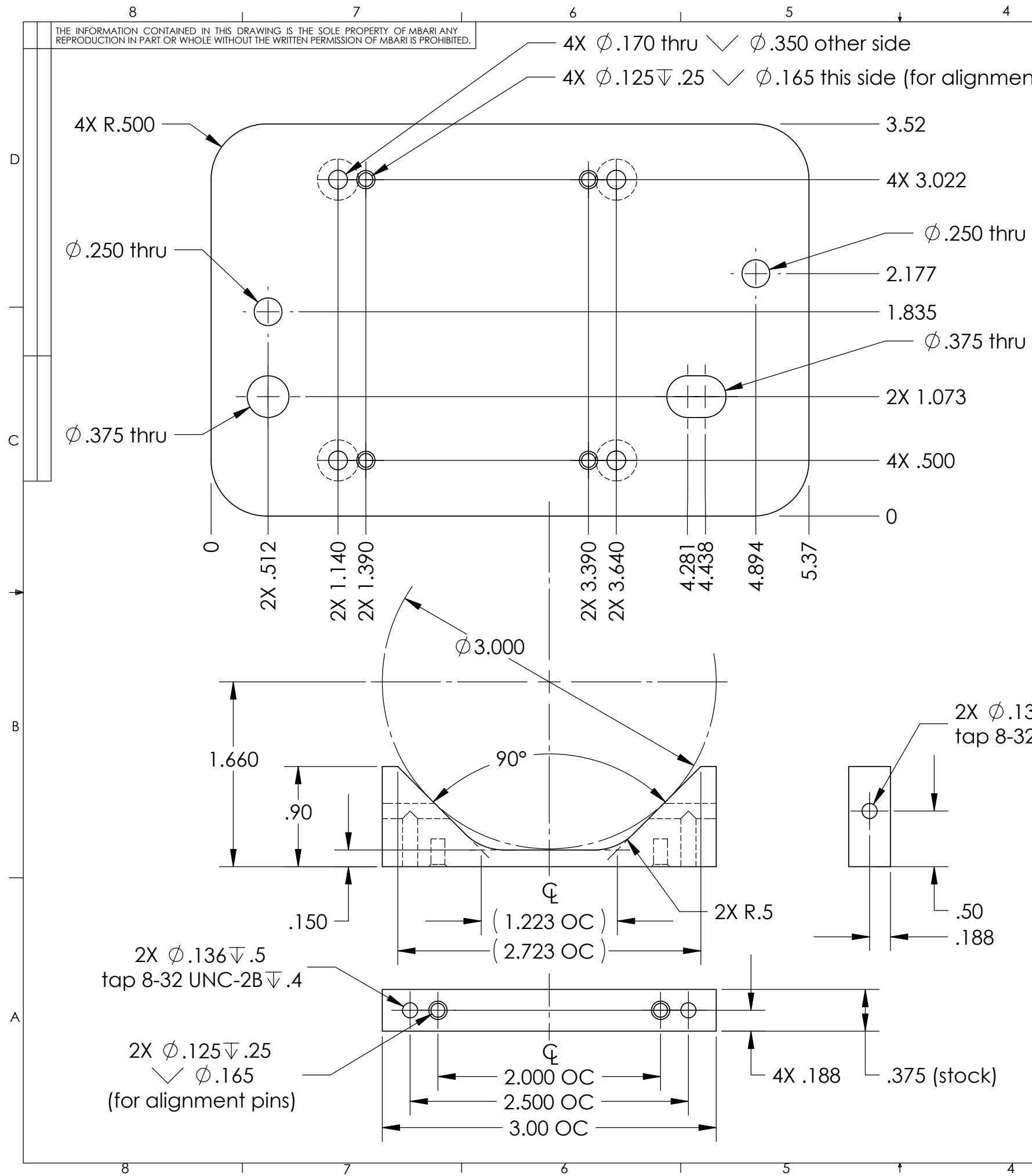


SECTION D-D

5	2		Syringe plug	PEEK
4	4		Thermistor plug	PEEK
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
Shop Foreman		1. DIMENSIONS ARE IN INCHES		DRAWN Hans Jannasch 1/12/2007
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.		ENGINEER
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		CHECKED Jon E. 2/21/2007
		4. MACHINED FILLET RADII .0150-.030.		PROJECT NO. 900601
NEXT ASSY Description	NEXT ASSY Number	5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005		PROJECT Novel Sensors
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.		
Application		DO NOT SCALE DRAWING		WEIGHT
				 Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700
				188jahaSpecFlowcell ISUS Thermal Flowcell SIZE B DWG. NO. 188jaha.DWG SCALE 2:1 REV. CAD FILE: tornado/chem/SWfiles SHEET 6 OF 7

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8	2		Cell mount "V"	Delrin or similar
7	1		Cell mount base	Delrin or similar
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	DRAWN Hans Jannasch 1/12/2007
Shop Foreman		3 PLACE DIM ±.005	ANGLES ±1°	ENGINEER
Engineer		CHECKED Jon E. 2/21/2007		
NEXT ASSY Description	NEXT ASSY Number	PROJECT NO. 900601		
Application		PROJECT Novel Sensors		
		WEIGHT		
		SIZE B DWG. NO. 188jaha.DWG REV.		
		SCALE 1:1 CAD FILE: tornado/chem/SWfiles SHEET 7 OF 7		