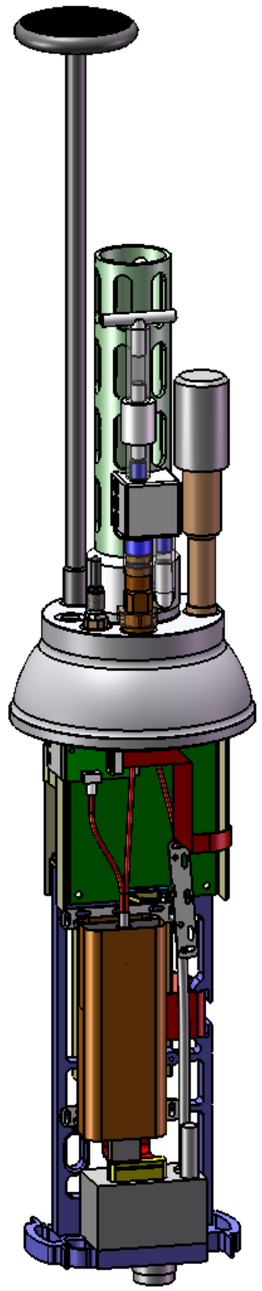
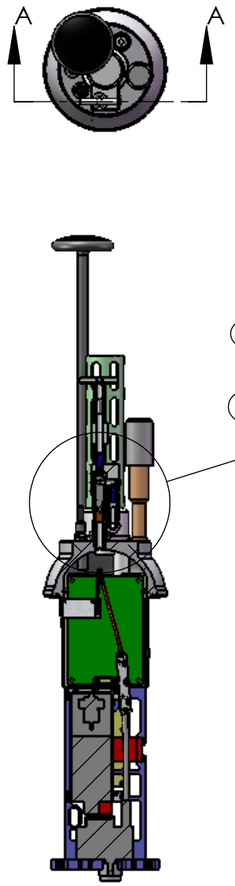
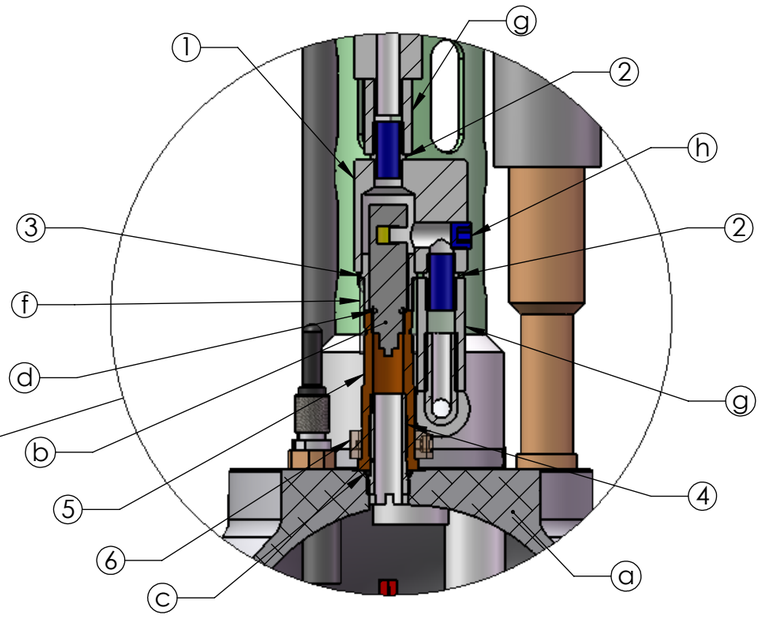
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	Enlarged Flowcell	12/10/08	HWJ
B	Modified EquiTech Stem Connector etc...	8/24/10	HWJ



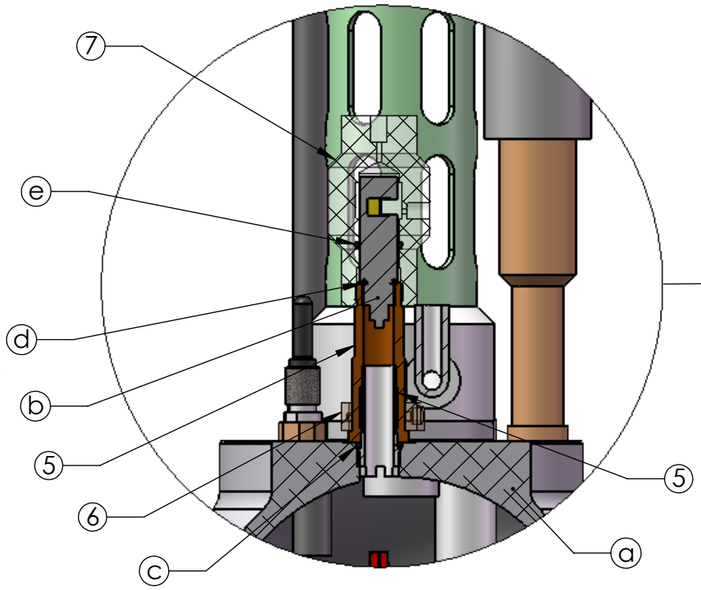


SECTION A-A



DEPLOYMENT MODE

DETAIL B
SCALE 1 : 2



CALIBRATION MODE

DETAIL C
SCALE 1 : 2

EquiTech Probe

Item No.	Qty	Part No.	Description	Material Specification
7	1		Calibration cell: C-Tech	PEEK
6	1		Probe nut lock	Delrin
5	1		EquiTeck stem	PEEK
4	1		EquiTech stem connector	316 Stainless
3	1		Fowcell Tube Fitting: EquiTech	PVC-Grey
2	2		Fowcell Tube Fitting: Small	PVC-Grey
1	1		Flow cell (EquiTech)	PVC-Grey

Bill of Materials

Item No.	Qty	Description	Specifications
h	1	Nylon 1/8" NPT socket head plug	Olander 12RNPTR
g	~6"	Tygon tube	3/8"ID x 1/8" wall
f	1.5"	Tygon tube	5/8" ID x 1/16" wall
e	1	O-ring	Viton 2-014
d	1	O-ring	Kalrez D90 2-011
c	1	O-ring	Viton D90 2-906
b	1	EquiTech ISUS probe	
a	1	Modified APEX Top Endcap	per DWGs Webb#2583 and 208jaha
Item No.	Qty	Description	Specifications
Other Required Parts			

Shop / Q.C.
Inspector
Shop Foreman
Engineer
NEXT ASSY Description
NEXT ASSY Number
Application

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

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.

DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN Hans Jannasch	10/23/08
ENGINEER	
CHECKED Jon Erickson	10/28/08
PROJECT NO. 701818	
PROJECT NSF Floats	
WEIGHT	

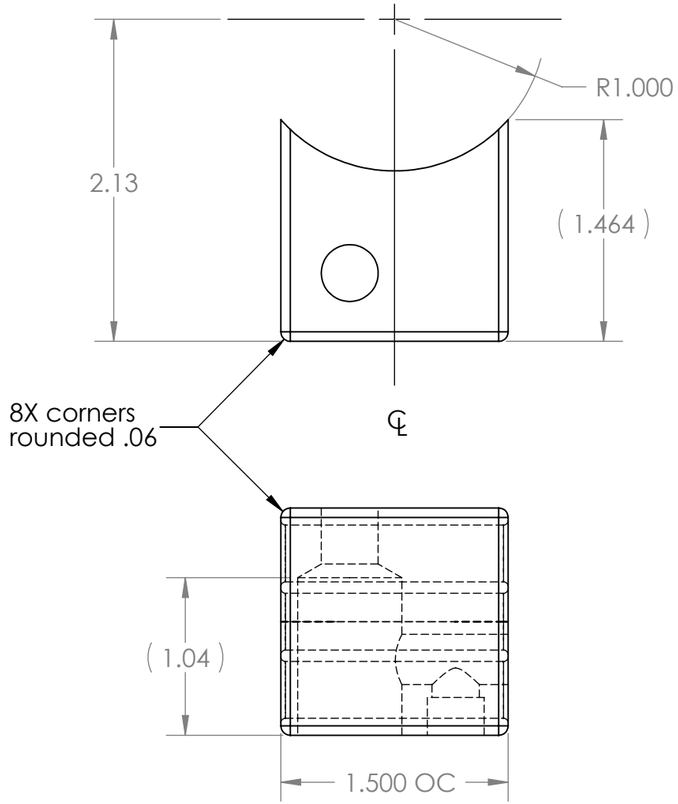
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

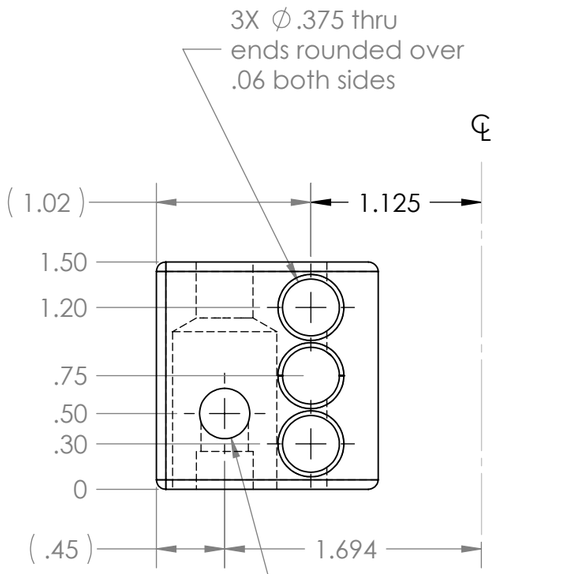
APEX+ISUS Ver 2:
EquiTech parts

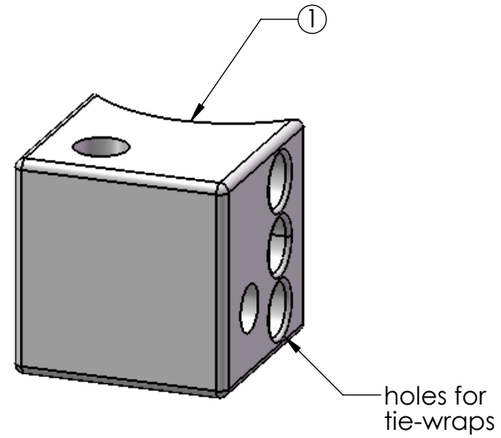
SIZE	DWG. NO.	REV.
B	212jahaAPEX+ISUSv2-EquiTech	B

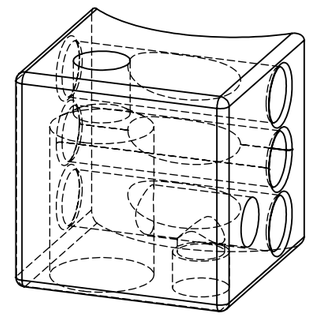
SCALE 1:3 | CAD FILE: Tornado/chem/SWfiles | SHEET 1 OF 5

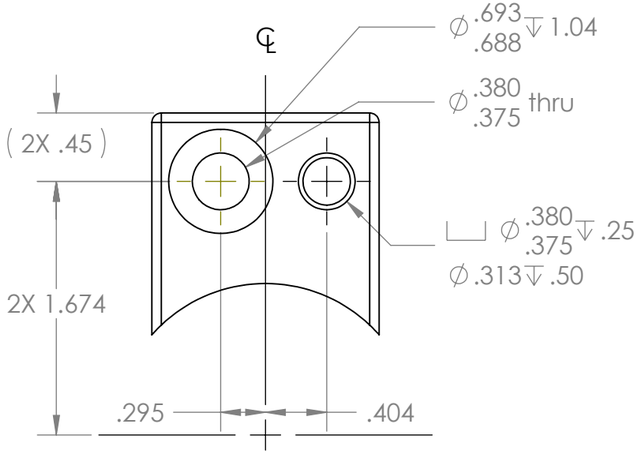
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	Enlarged Flowcell	12/10/08	HWJ
B	Modified EquiTech Stem Connector etc...	8/24/10	HWJ











1	1		Flow cell (EquiTech)	PVC-Grey
Item No.	Qty	Part No.	Description	Material Specification

Bill of Materials

Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°
Shop Foreman		1. DIMENSIONS ARE IN INCHES		
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.		
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		
NEXT ASSY Description	NEXT ASSY Number	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.		
Application		DO NOT SCALE DRAWING		

APPROVALS	DATE
DRAWN Hans Jannasch	10/23/08
ENGINEER	
CHECKED Jon Erickson	10/28/08
PROJECT NO. 701818	
PROJECT NSF Floats	
WEIGHT	

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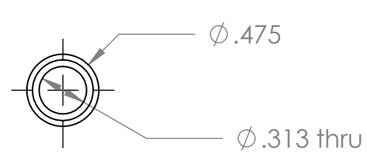
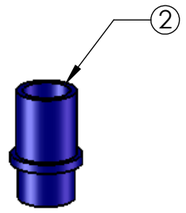
APEX+ISUS Ver 2: EquiTech parts

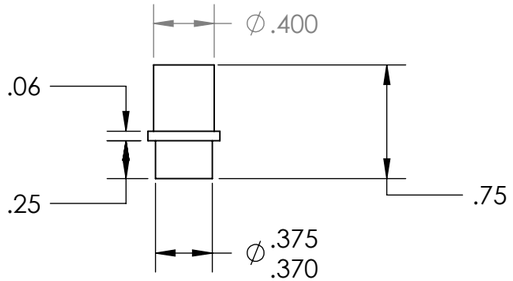
SIZE	DWG. NO.	REV.
B	212jahaAPEX+ISUSv2-EquiTech	B

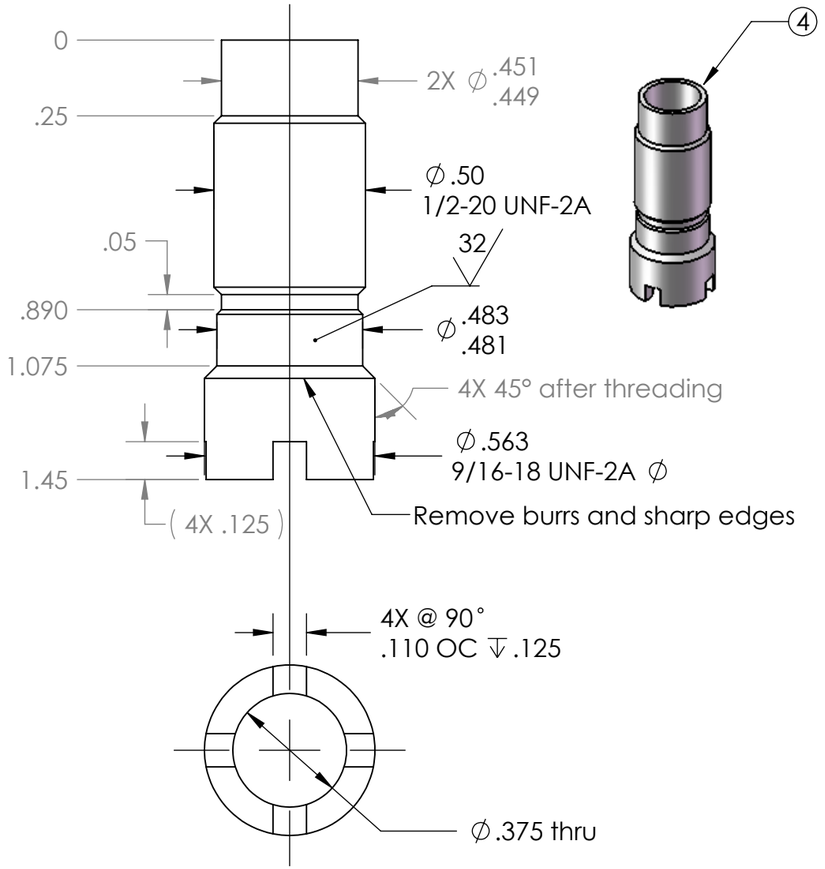
SCALE 1:3 | CAD FILE: Tornado/chem/SWfiles | SHEET 2 OF 5

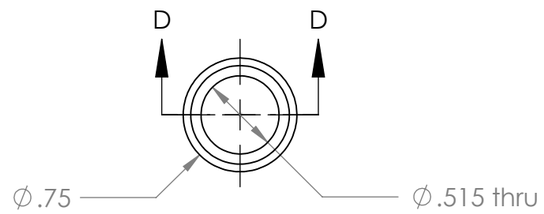
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	Enlarged Flowcell	12/10/08	HWJ
B	Modified EquiTech Stem Connector etc...	8/24/10	HWJ

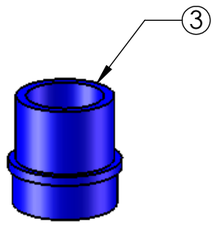


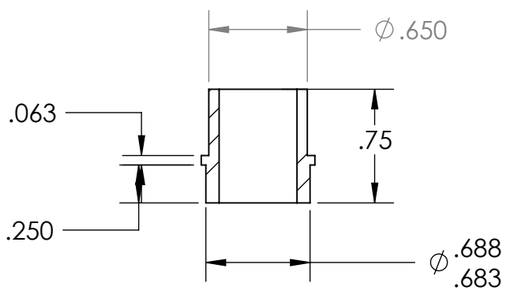












SECTION D-D
SCALE 1 : 1

Item No.	Qty	Part No.	Description	Material Specification
4	1		EquiTech stem connector	316 Stainless
3	1		Fowcell Tube Fitting: EquiTech	PVC-Grey
2	2		Fowcell Tube Fitting: Small	PVC-Grey

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 10/23/08
Shop Foreman		1. DIMENSIONS ARE IN INCHES	ENGINEER
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.	CHECKED Jon Erickson 10/28/08
NEXT ASSY Description	NEXT ASSY Number	3. REMOVE BURRS AND SHARP EDGES .015 MAX.	PROJECT NO. 701818
		4. MACHINED FILLET RADII .0150-.030.	PROJECT NSF Floats
Application		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5	WEIGHT
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.	
		DO NOT SCALE DRAWING	

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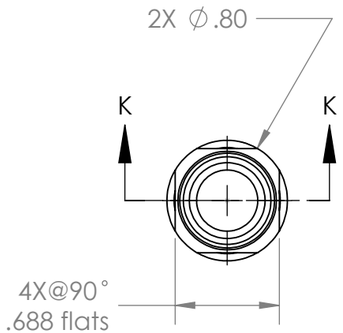
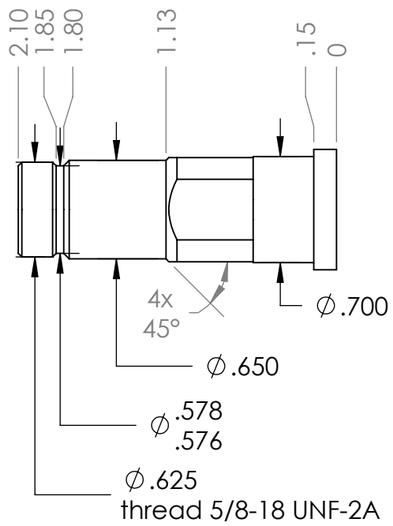
APEX+ISUS Ver 2: EquiTech parts

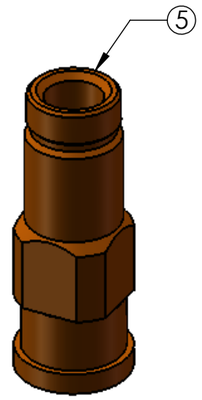
SIZE	DWG. NO.	REV.
B	212jahaAPEX+ISUSv2-EquiTech	B

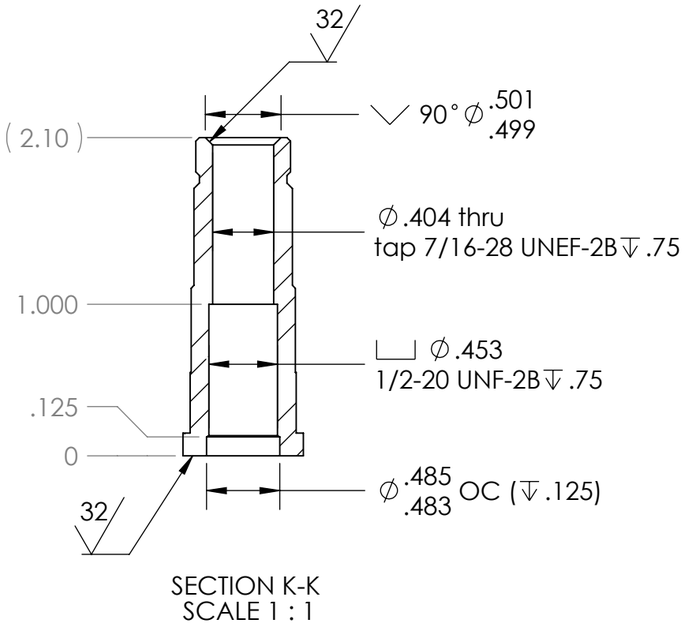
SCALE 1:3 · CAD FILE: Tornado/chem/SWfiles · SHEET 3 OF 5

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	Enlarged Flowcell	12/10/08	HWJ
B	Modified EquiTech Stem Connector etc...	8/24/10	HWJ

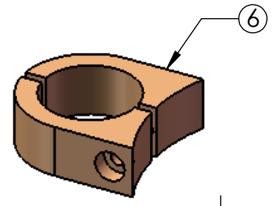


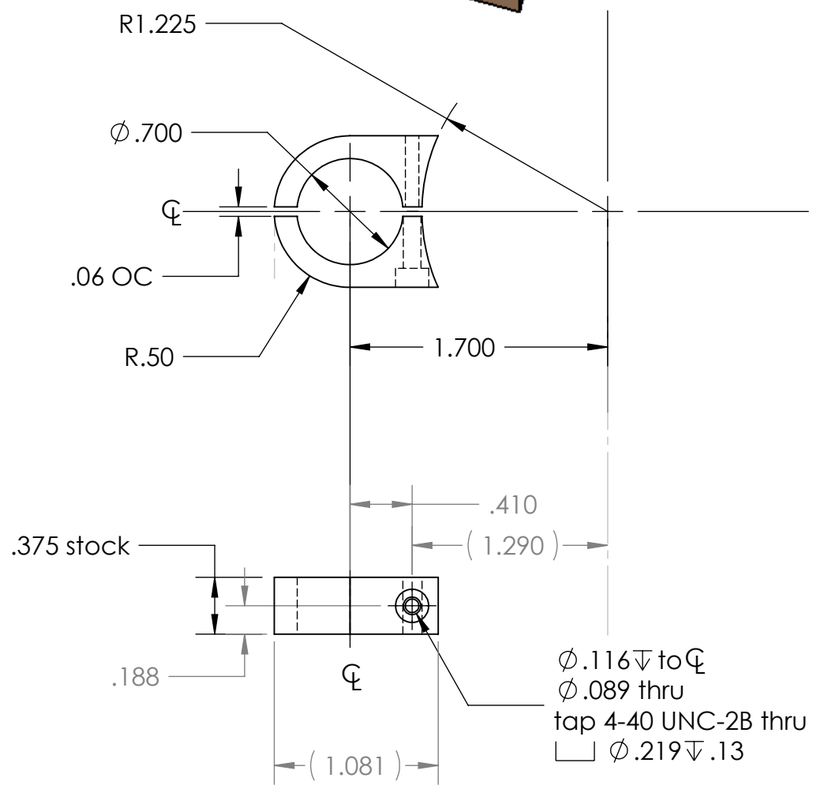






SECTION K-K
SCALE 1 : 1





Item No.	Qty	Part No.	Description	Material Specification
6	1		Probe nut lock	Delrin
5	1		EquiTeck stem	PEEK

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 10/23/08
Shop Foreman		1. DIMENSIONS ARE IN INCHES	ENGINEER
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.	CHECKED Jon Erickson 10/28/08
NEXT ASSY Description	NEXT ASSY Number	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.	PROJECT NO. 701818
			PROJECT NSF Floats
Application		DO NOT SCALE DRAWING	WEIGHT

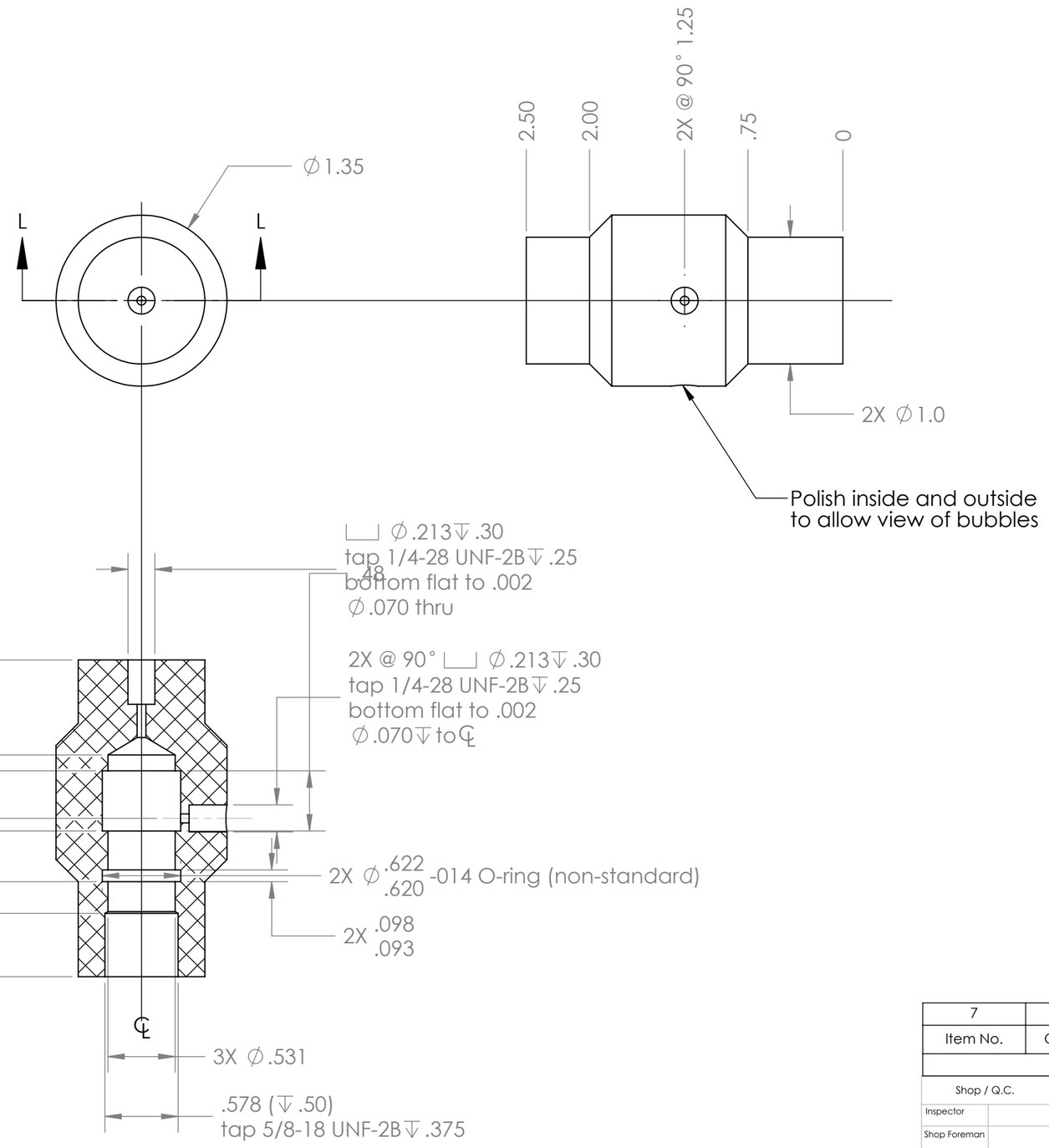
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

APEX+ISUS Ver 2: EquiTech parts

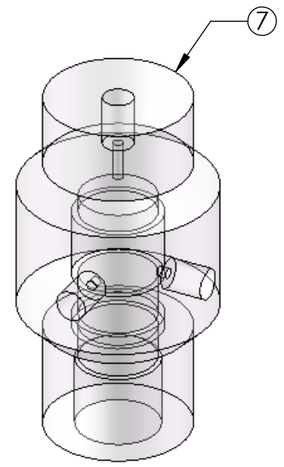
SIZE	DWG. NO.	REV.
B	212jahaAPEX+ISUSv2-EquiTech	B

SCALE 1:3 | CAD FILE: Tornado/chem/SWfiles | SHEET 4 OF 5

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	Enlarged Flowcell	12/10/08	HWJ
B	Modified EquiTech Stem Connector etc...	8/24/10	HWJ



SECTION L-L
SCALE 1 : 1



Item No.	Qty	Part No.	Description	Material Specification
7	1		Calibration cell: EquiTech	Clear Acrylic

Bill of Materials

Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	
Inspector		1 PLACE DIM ±1/16 | 2 PLACE DIM ±.02 | 3 PLACE DIM ±.005 | ANGLES ±1°	
Shop Foreman		1. DIMENSIONS ARE IN INCHES	
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.	
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.	
NEXT ASSY Description	NEXT ASSY Number	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.	
Application		DO NOT SCALE DRAWING	

APPROVALS	DATE
DRAWN Hans Jannasch	10/23/08
ENGINEER	
CHECKED Jon Erickson	10/28/08
PROJECT NO. 701818	
PROJECT NSF Floats	
WEIGHT	

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Moss Landing, CA 95039
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APEX+ISUS Ver 2: EquiTech parts

SIZE	DWG. NO.	REV.
B	212jahaAPEX+ISUSv2-EquiTech	B

SCALE 1:3 | CAD FILE: Tornado/chem/SWfiles | SHEET 5 OF 5