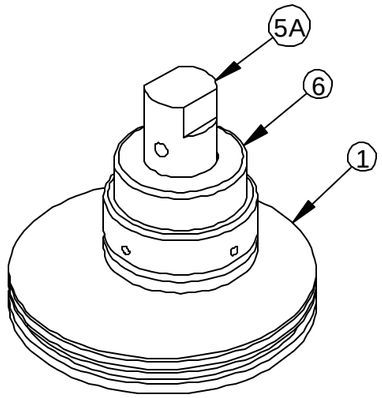
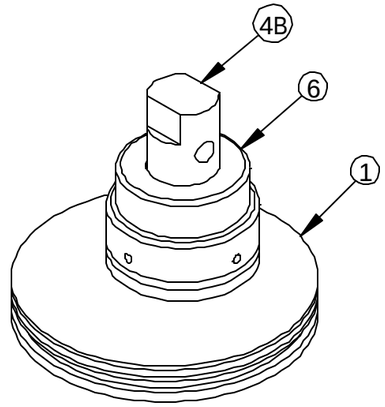
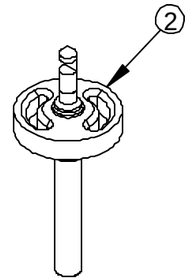
| REVISIONS | | | | |
|---|---|---|---|---|
| REV. | DESCRIPTION | | DATE | APPROVED |
| | INITIAL RELEASE | 128JAHA.DWG | 7/8/02 | |
| A | 3 - C TECH PROBE TIP LENGTHS | J. SCHOLFIELD | 4/8/03 | |
| B | C TECH FLOWCELL TIP RELIEF | J. SCHOLFIELD | 5/23/03 | |




EquiTech Probe
with 1/4-28 connections




C-Tech Probe
with 1/8" NPT connection




C-Tech Probe
Exposed probe




SECTION
EquiTech Probe
with 1/4-28 connections




SECTION
C-Tech Probe
with 1/8" NPT connection

Note 7
O-rings:
EquiTech Probe: -012 and -014
C-Tech Probe: -010 and -013

# SHEET 1 - CROSS SECTIONS

| ITEM NO. | QTY | PART NO. | DESCRIPTION | MATERIAL SPECIFICATION |
|---|---|---|---|---|
| 6 | | | Lock ring | PEEK |
| 5 | | | Equitech flowcell (Config A and B) | PEEK |
| 4 | | | C-tech flowcell (Config A and B) | PEEK |
| 3 | | | Probe riser | PEEK |
| 2 | | | Probe nut (Config A and B) | PEEK |
| 1 | | | Endcap | Polycarbonate (see 123jaha.DWG) |

BILL OF MATERIALS

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 .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

| APPROVALS | DATE |
|---|---|
| DRAWN Hans Jannasch | 7/8/02 |
| ENGINEER | |
| CHECKED | |
| PROJECT NO. 600144 | |
| PROJECT Chemical Sensors | |
| WEIGHT | |

| NEXT ASSY | USED ON |
|---|---|
| APPLICATION | DO NOT SCALE DRAWING |

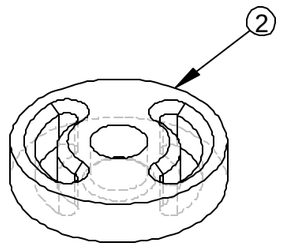
Monterey Bay Aquarium Research Institute
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (408) 775-1700

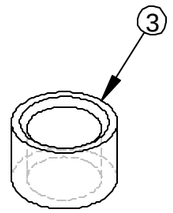
C Tech 2-4cm & Equitech Flowcell

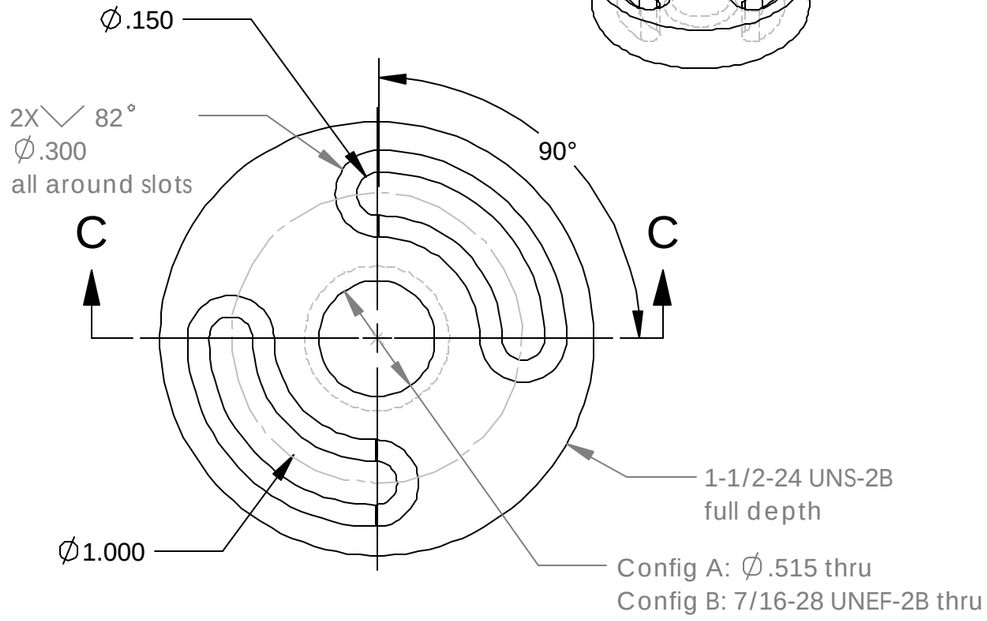
| SIZE | DWG. NO. | REV. |
|---|---|---|
| B | 1001897.DWG | B |

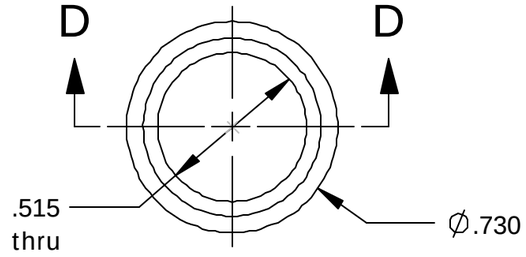
SCALE | CAD FILE: TORNADO/CHEM/SWFILES | SHEET 1 OF 1

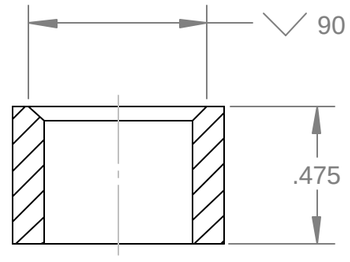
| REVISIONS | | | | |
|---|---|---|---|---|
| REV. | DESCRIPTION | | DATE | APPROVED |
| | INITIAL RELEASE | 128JAHA.DWG | 7/8/02 | |
| A | 3 - C TECH PROBE TIP LENGTHS | J. SCHOLFIELD | 4/8/03 | |
| B | C- TECH FLOWCELL TIP RELIEF | J. SCHOLFIELD | 5/23/03 | |



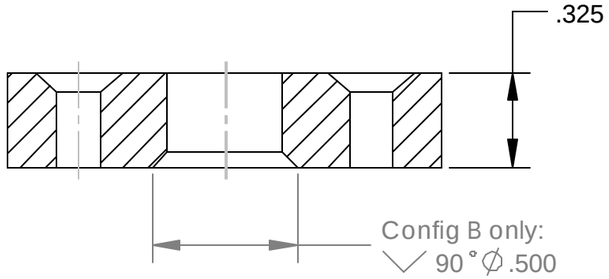




SECTION D-D




SECTION C-C

# SHEET 2 - PROBE NUT

| ITEM NO. | QTY | PART NO. | DESCRIPTION | MATERIAL SPECIFICATION |
|---|---|---|---|---|
| 6 | | | Lock ring | PEEK |
| 5 | | | Equitech flowcell (Config A and B) | PEEK |
| 4 | | | C-tech flowcell (Config A and B) | PEEK |
| 3 | | | Probe riser | PEEK |
| 2 | | | Probe nut (Config A and B) | PEEK |
| 1 | | | Endcap | Polycarbonate (see 123jaha.DWG) |

BILL OF MATERIALS

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 .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

| APPROVALS | DATE |
|---|---|
| DRAWN Hans Jannasch | 7/8/02 |
| ENGINEER | |
| CHECKED | |
| PROJECT NO. 600144 | |
| PROJECT Chemical Sensors | |
| WEIGHT | |

| NEXT ASSY | USED ON |
|---|---|
| APPLICATION | |

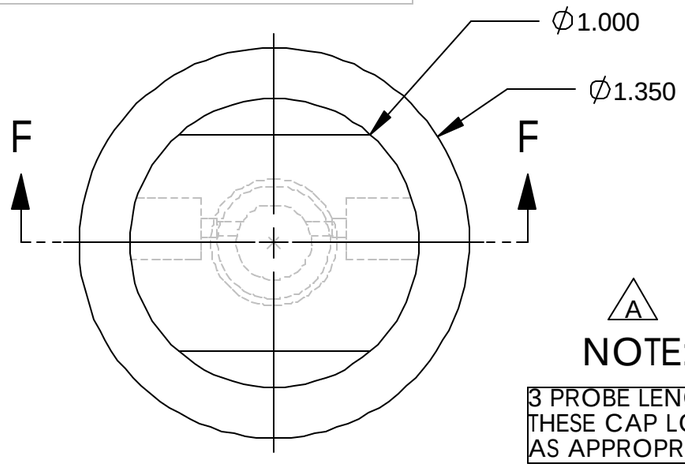
Monterey Bay Aquarium Research Institute
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (408) 775-1700

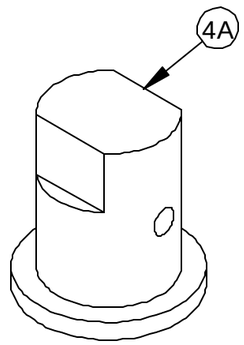
C Tech 2-4cm & Equitech Flowcell

| SIZE | DWG. NO. | REV. |
|---|---|---|
| B | 1001897.DWG | B |

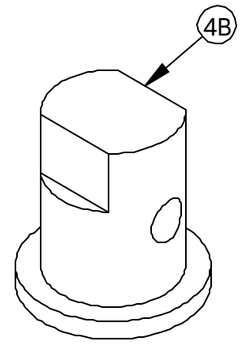
SCALE | CAD FILE: TORNADO/CHEM/SWFILES | SHEET [ ] OF [ ]

| REVISIONS | | | | |
|---|---|---|---|---|
| REV. | DESCRIPTION | | DATE | APPROVED |
| | INITIAL RELEASE | 128JAHA.DWG | 7/8/02 | |
| A | 3 - C TECH PROBE TIP LENGTHS | J. SCHOLFIELD | 4/8/03 | |
| B | C- TECH FLOWCELL TIP RELIEF | J. SCHOLFIELD | 5/23/03 | |




1/4- 28 UNF




1/4 FNPT

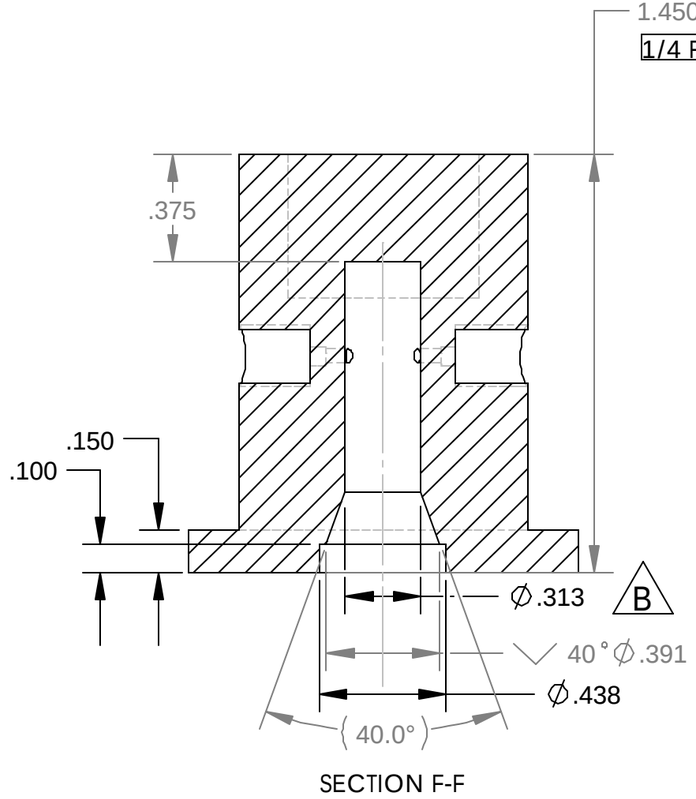
△A

**NOTE:**

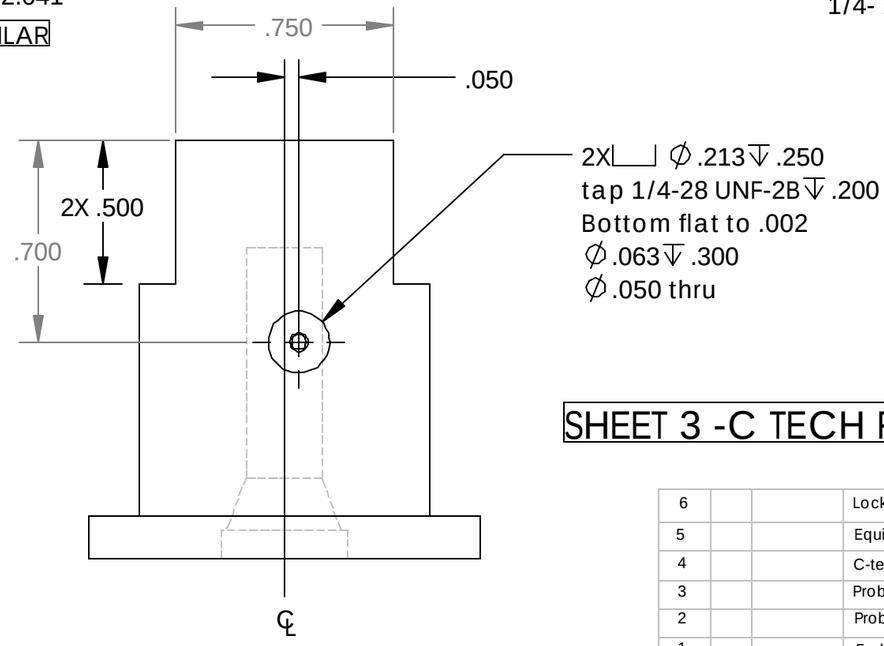
3 PROBE LENGTHS AVAIL. THESE CAP LGTHS REQ'D AS APPROPRIATE

1.450 , 1.647, 2.041

1/4 FNPT SIMILAR




SECTION F-F




## SHEET 3 -C TECH FLOWCELL VARIATIONS

| ITEM NO. | QTY | PART NO. | DESCRIPTION | MATERIAL SPECIFICATION |
|---|---|---|---|---|
| 6 | | | Lock ring | PEEK |
| 5 | | | Equitech flowcell (Config A and B) | PEEK |
| 4 | | | C-tech flowcell (Config A and B) | PEEK |
| 3 | | | Probe riser | PEEK |
| 2 | | | Probe nut (Config A and B) | PEEK |
| 1 | | | Endcap | Polycarbonate (see 123jaha.DWG) |

BILL OF MATERIALS

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 .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.

| APPROVALS | DATE |
|---|---|
| DRAWN Hans Jannasch | 7/8/02 |
| ENGINEER | |
| CHECKED | |
| PROJECT NO. 600144 | |
| PROJECT ChemicalSensors | |
| WEIGHT | |

**Monterey Bay Aquarium Research Institute**
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (408) 775-1700

MBARI

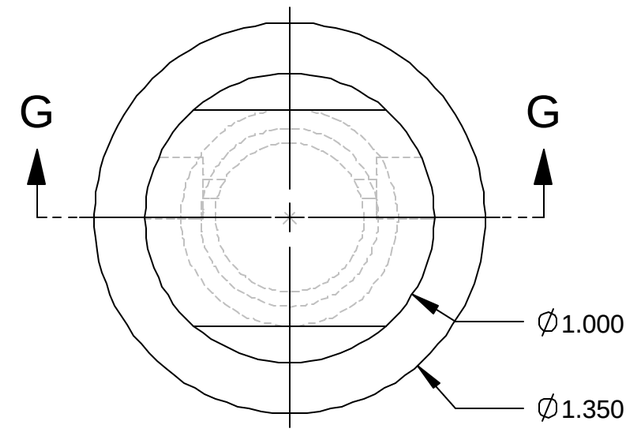
C Tech 2-4cm & Equitech Flowcell

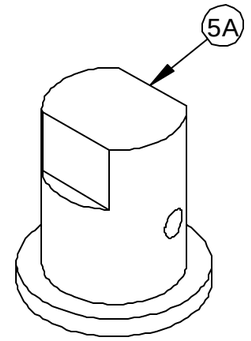
| NEXT ASSY | USED ON |
|---|---|
| APPLICATION | DO NOT SCALE DRAWING |

SIZE B | DWG. NO. 1001897.DWG | REV. B

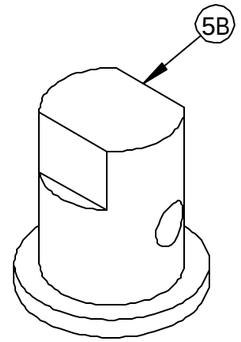
SCALE | CAD FILE: TORNADO/CHEM/SWFILES | SHEET [ ] OF [ ]

| REVISIONS | | | | |
|---|---|---|---|---|
| REV. | DESCRIPTION | | DATE | APPROVED |
| | INITIAL RELEASE | 128JAHA.DWG | 7/8/02 | |
| A | 3 - C TECH PROBE TIP LENGTH | J. SCHOLFIELD | 4/8/03 | |
| B | C TECH FLOWCELL TIP RELIEF | J. SCHOLFIELD | 5/23/03 | |

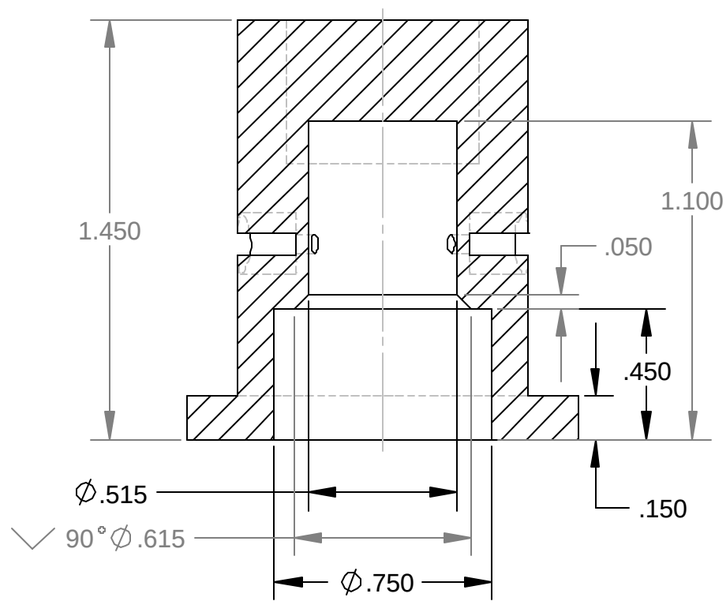


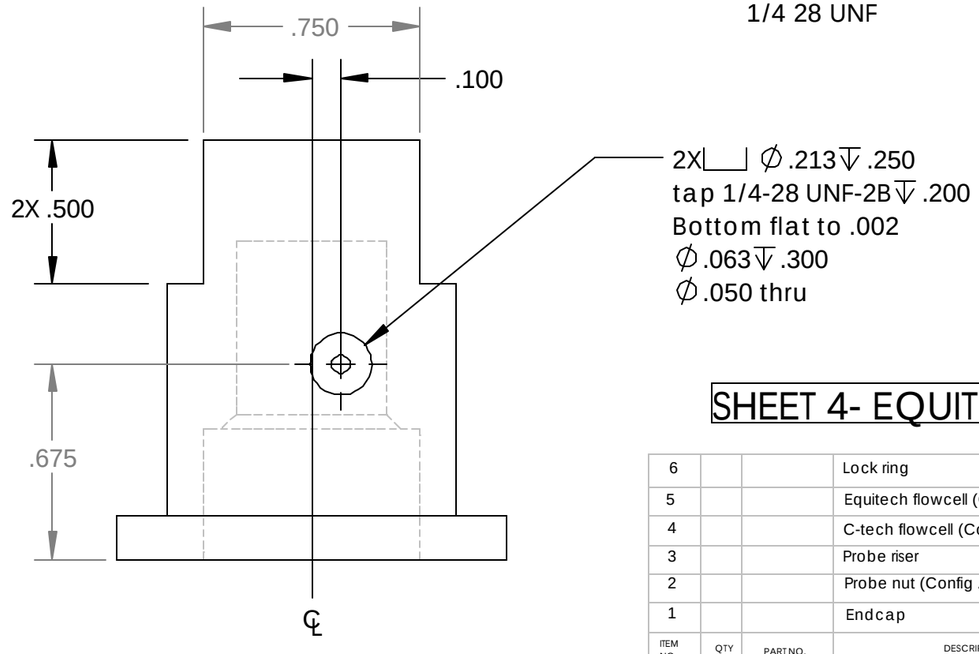

1/4 28 UNF




1/4 FNPT




SECTION G-G




# SHEET 4- EQUITECH FLOWCELL TOP

| ITEM NO. | QTY | PART NO. | DESCRIPTION | MATERIAL SPECIFICATION |
|---|---|---|---|---|
| 6 | | | Lock ring | PEEK |
| 5 | | | Equitech flowcell (Config A and B) | PEEK |
| 4 | | | C-tech flowcell (Config A and B) | PEEK |
| 3 | | | Probe riser | PEEK |
| 2 | | | Probe nut (Config A and B) | PEEK |
| 1 | | | Endcap | Polycarbonate (see 123jaha.DWG) |

BILL OF MATERIALS

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.

| APPROVALS | DATE |
|---|---|
| DRAWN Hans Jannasch | 7/8/02 |
| ENGINEER | |
| CHECKED | |
| PROJECT NO. 600144 | |
| PROJECT ChemicalSensors | |
| WEIGHT | |

Monterey Bay Aquarium Research Institute
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (408) 775-1700

C Tech 2-4cm & Equitech Flowcell

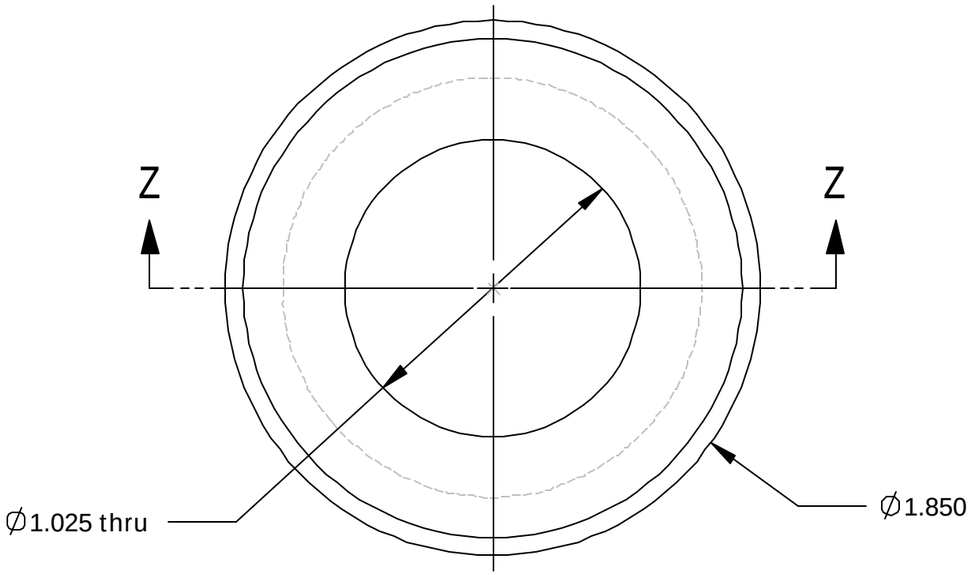
| SIZE | DWG. NO. | REV. |
|---|---|---|
| B | 1001897.DWG | B |

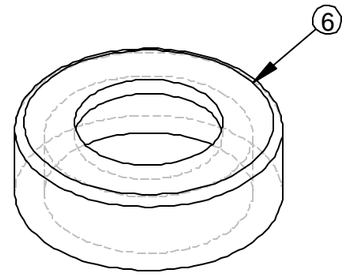
SCALE | CAD FILE: TORNADO/CHEM/SWFILES | SHEET [ ] OF [ ]

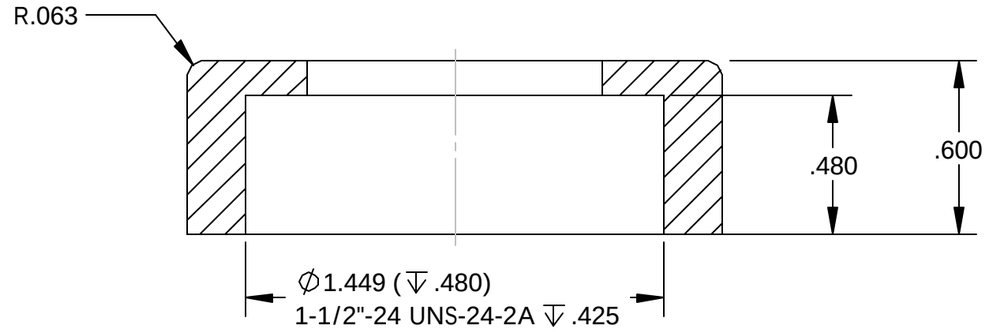
| NEXT ASSY | USED ON |
|---|---|
| APPLICATION | DO NOT SCALE DRAWING |

REVISIONS

| REV. | DESCRIPTION | | DATE | APPROVED |
|---|---|---|---|---|
| | INITIAL RELEASE | 128JAHA.DWG | 7/8/02 | |
| A | 3 - CTECH PROBE TIP LENGTH | J. SCHOLFIELD | 4/8/03 | |
| B | CTECH FLOWCELL TIP RELIEF | J. SCHOLFIELD | 5/23/03 | |




SECTION Z-Z

# SHEET 5 - LOCKRING

| ITEM NO. | QTY | PART NO. | DESCRIPTION | MATERIAL SPECIFICATION |
|---|---|---|---|---|
| 6 | | | Lock ring | PEEK |
| 5 | | | Equitech flowcell (Config A and B) | PEEK |
| 4 | | | C-tech flowcell (Config A and B) | PEEK |
| 3 | | | Probe riser | PEEK |
| 2 | | | Probe nut (Config A and B) | PEEK |
| 1 | | | Endcap | Polycarbonate (see 123jaha.DWG) |

BILL OF MATERIALS

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.

| APPROVALS | DATE |
|---|---|
| DRAWN Hans Jannasch | 7/8/02 |
| ENGINEER | |
| CHECKED | |
| PROJECT NO. 600144 | |
| PROJECT ChemicalSensors | |
| WEIGHT | |

**Monterey Bay Aquarium Research Institute**
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (408) 775-1700

C Tech 2-4cm & Equitech Flowcell

| NEXT ASSY | USED ON |
|---|---|
| APPLICATION | DO NOT SCALE DRAWING |

SIZE B | DWG. NO. 1001897.DWG | REV. B

SCALE | CAD FILE: TORNADO/CHEM/SWFILES | SHEET [ ] OF [ ]