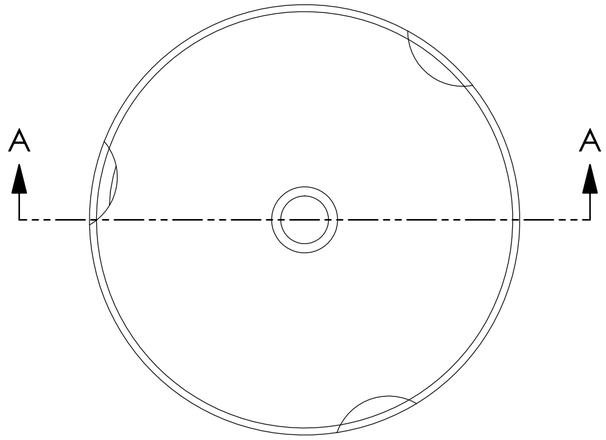
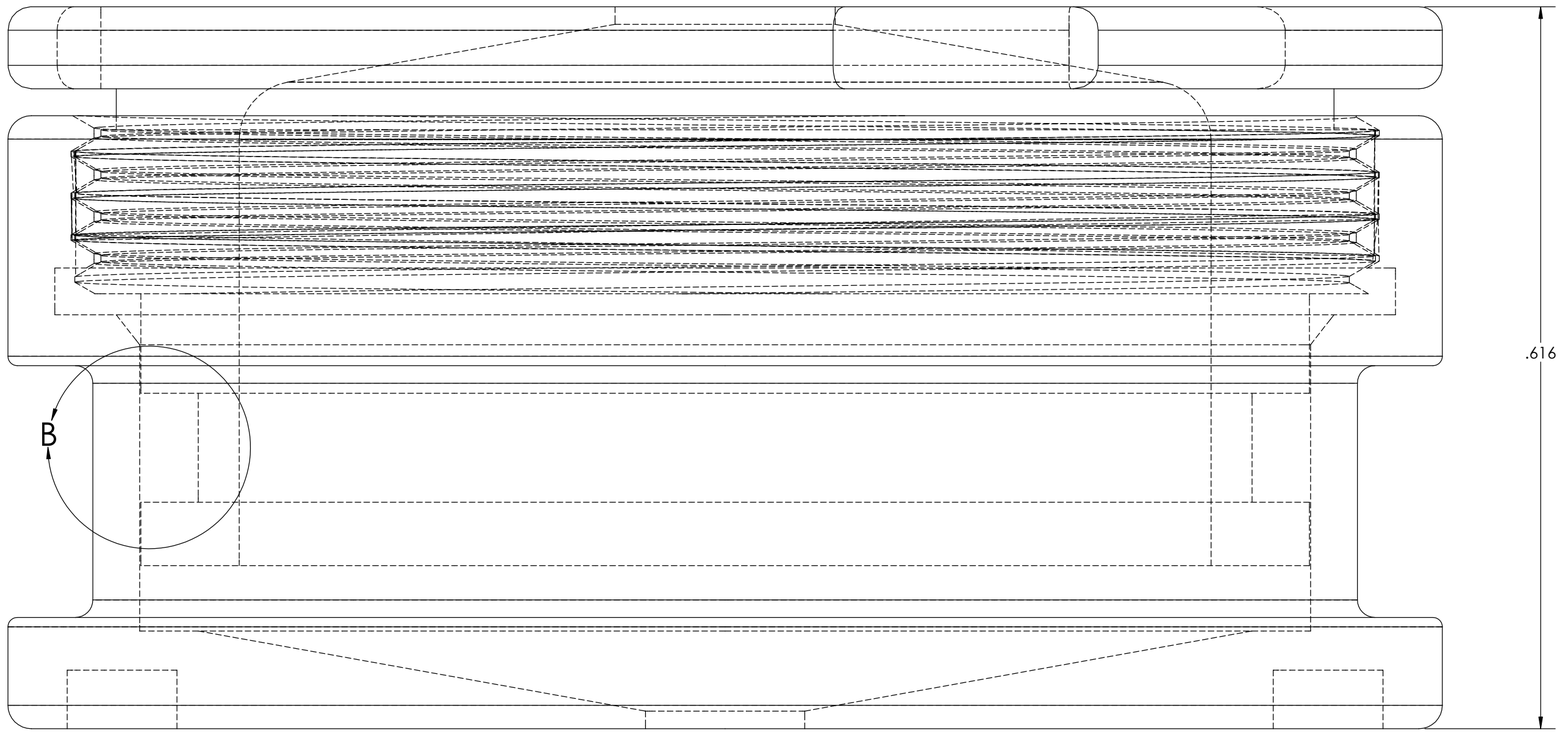
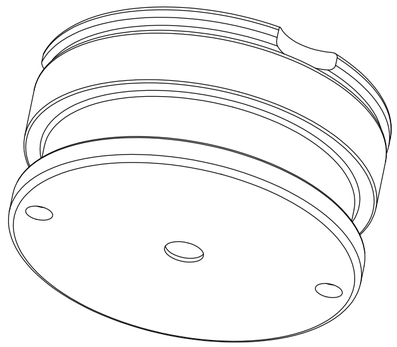
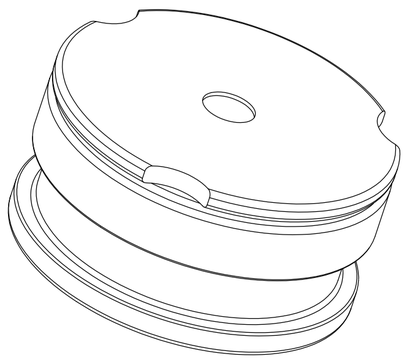
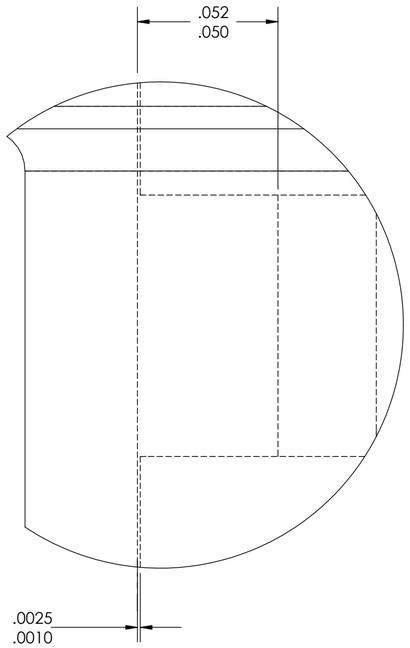




SECTION A-A







DETAIL B

to utilize #2-020 O-ring
1.004 Mean OD x 0.070 Width
material: Buna-N
durometer: 70 Shore A

O-RING COMPRESSION:
MIN: 26%
MAX: 29%

BILL OF MATERIALS

last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.	
Inspector	
Shop Foreman	
Engineer	
NEXT ASSY Description	NEXT ASSY Number
DO NOT SCALE DRAWING	

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

2 PLACE DIM ±.01	3 PLACE DIM ±.005	4 PLACE DIM ±.0005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING
3. REMOVE BURRS & SHARP EDGES .010 MAX
4. MACHINED FILLET RADII .000 TO .003
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH. MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS	DATE
ENGINEER	
Jason Feldman	
831-775-1837	
cell: 831-295-4546	
CHECKED	
PROJECT NUMBER	
701312.00	
PROJECT	
ESP 2G	

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

M B A R I

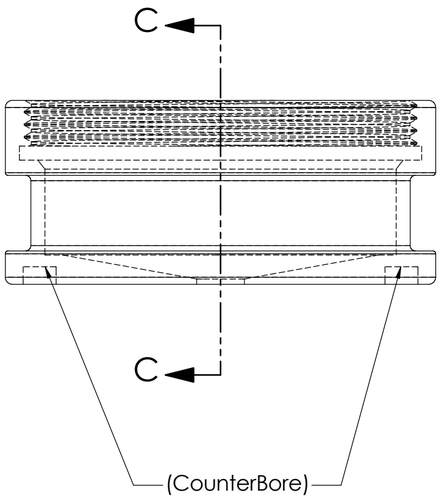
ESP filter holder (puck)

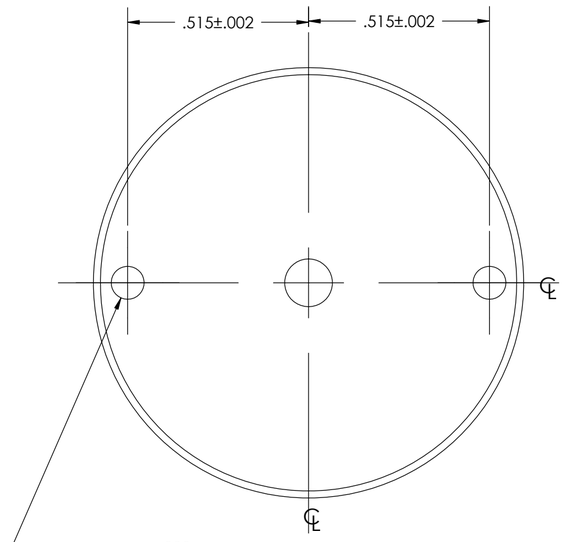
SIZE	DWG. NO.	REV.
C	1002433	B

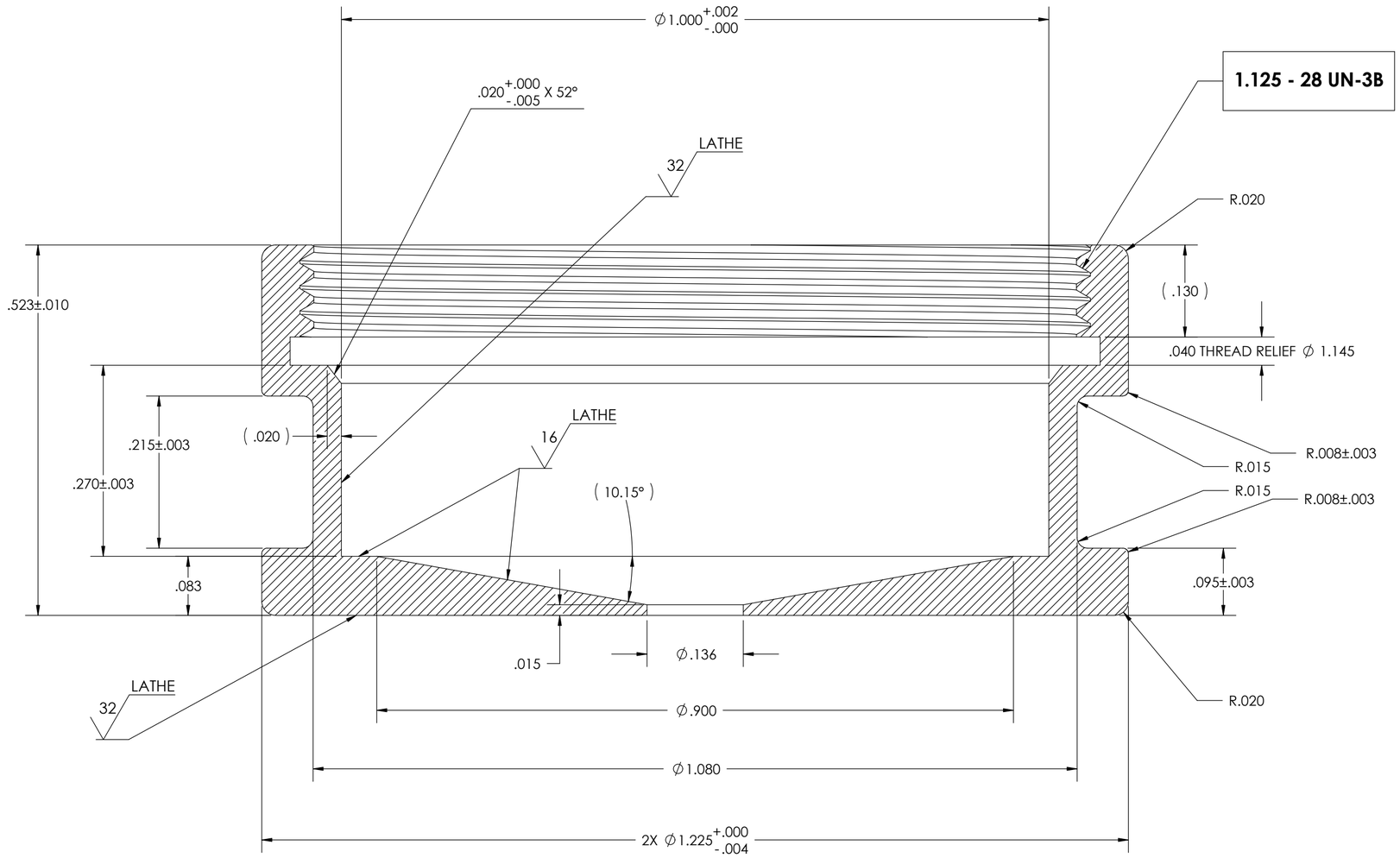
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

1002433-001
SH1 & SH1-HV BOTTOM

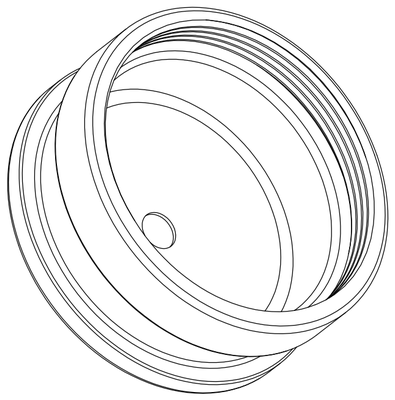
SURFACE FINISH TO BE ACHIEVED ON LATHE - NO ABRASIVE POLISHING

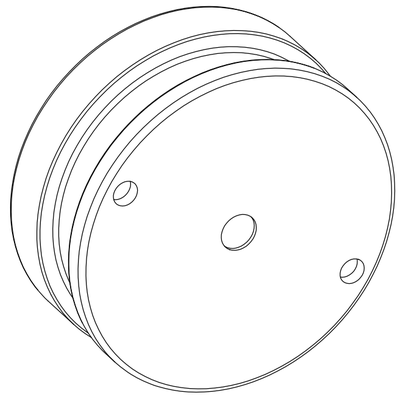






SECTION C-C





ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
1	1002433-001	Puck bottom - SH1	Titanium Grade 2	125

BILL OF MATERIALS — last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.	
Inspector	
Shop Foreman	
Engineer	
NEXT ASSY Description	NEXT ASSY Number
DO NOT SCALE DRAWING	

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

2 PLACE DIM ±.01	3 PLACE DIM ±.005	4 PLACE DIM ±.0005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING
3. REMOVE BURRS & SHARP EDGES .010 MAX
4. MACHINED FILLET RADII .000 TO .003
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH. MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS	DATE
ENGINEER	
Jason Feldman	
831-775-1837	
cell: 831-295-4546	
CHECKED	

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

M B A R I

PROJECT NUMBER 701312.00

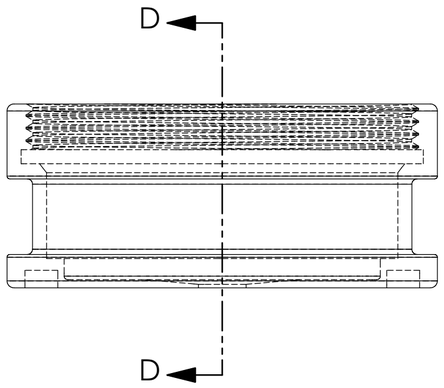
ESP filter holder (puck)

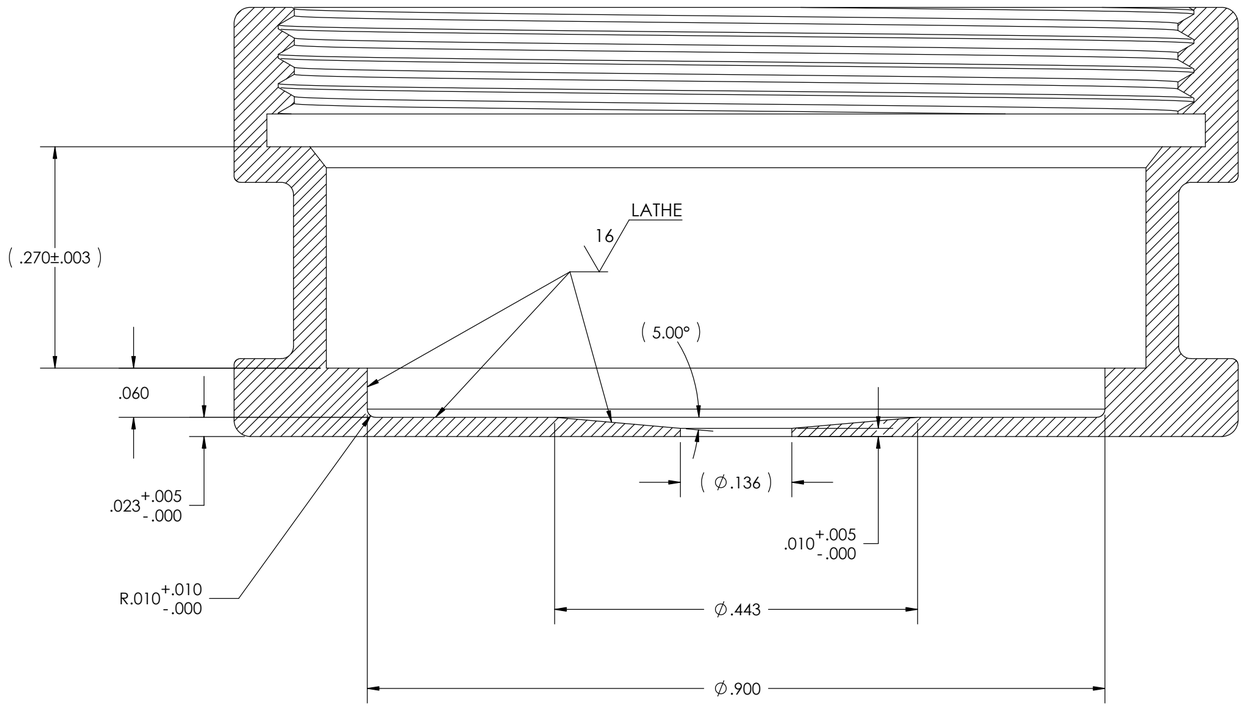
PROJECT ESP 2G | SIZE C | DWG. NO. 1002433 | REV. B

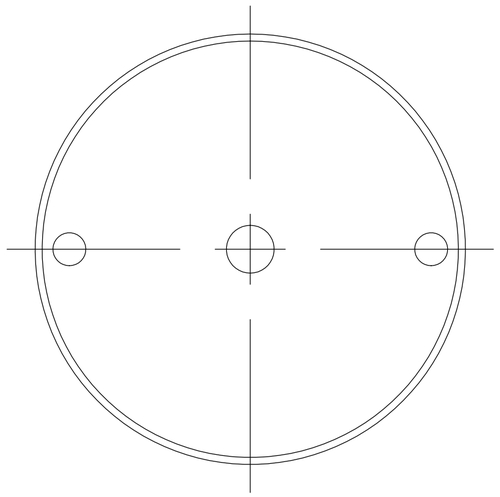
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

1002433-002
WCR BOTTOM

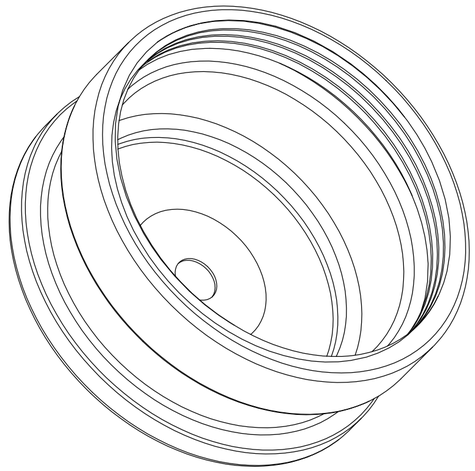
DIMENSIONS NOT SHOWN SAME AS PER 1002433-001 (Sheet 2)







SECTION D-D



ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
2	1002433-002	Puck bottom - WCR	Titanium Grade 2	65

BILL OF MATERIALS — last updated on: Tuesday, March 14, 2006 4:41:00 PM

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

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

2 PLACE DIM ±.01	3 PLACE DIM ±.005	4 PLACE DIM ±.0005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING
3. REMOVE BURRS & SHARP EDGES .010 MAX
4. MACHINED FILLET RADII .000 TO .003
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH. MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS — DATE

ENGINEER
Jason Feldman
831-775-1837
cell: 831-295-4546

CHECKED

PROJECT NUMBER
701312.00

PROJECT
ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

M B A R I

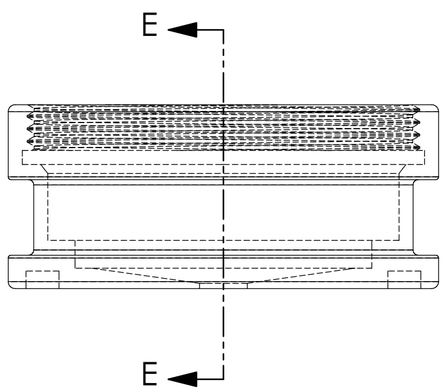
ESP filter holder (puck)

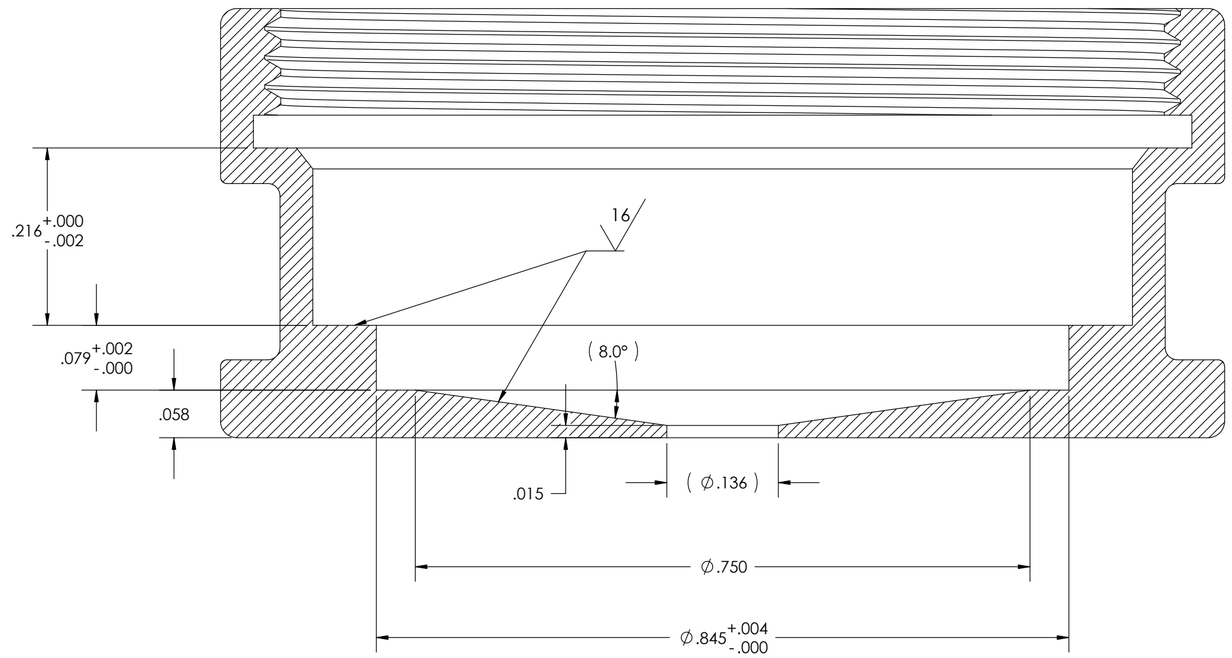
SIZE C | DWG. NO. 1002433 | REV. B

CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

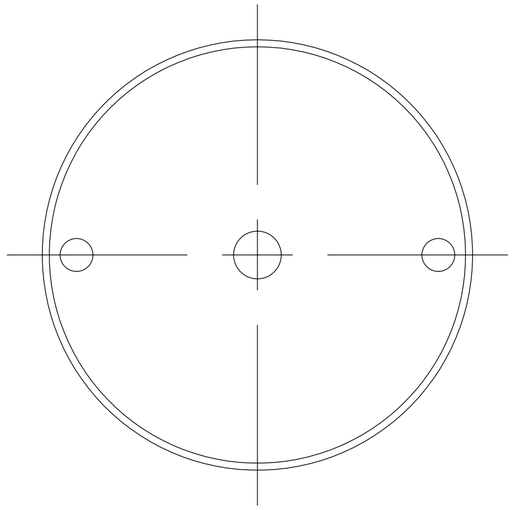
1002433-003
SH2 BOTTOM

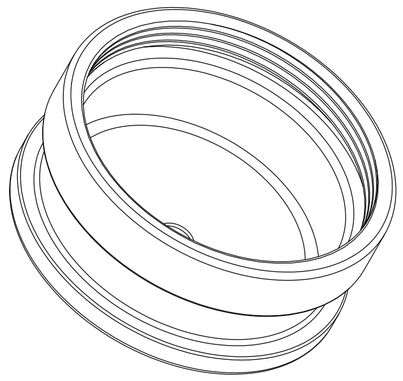
ALL DIMENSIONS AND SPECIFICATIONS NOT SHOWN AS PER 1002433-001 (Sheet 2)





SECTION E-E





Magnaplate HCR - all dimensions & tolerances to be held after plating
CLASS 3B Thread tolerance to be held after plating as per specification

ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
3	1002433-003	SH2 Bottom	6061-T6 Aluminum	40

BILL OF MATERIALS — last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.

Inspector	
Shop Foreman	
Engineer	

NEXT ASSY Description	NEXT ASSY Number

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

2 PLACE DIM ±.01	3 PLACE DIM ±.005	4 PLACE DIM ±.0005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING
3. REMOVE BURRS & SHARP EDGES .010 MAX
4. MACHINED FILLET RADII .000 TO .003
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH, MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS DATE

ENGINEER
Jason Feldman
831-775-1837
cell: 831-295-4546

CHECKED

PROJECT NUMBER
701312.00

PROJECT
ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

M B A R I

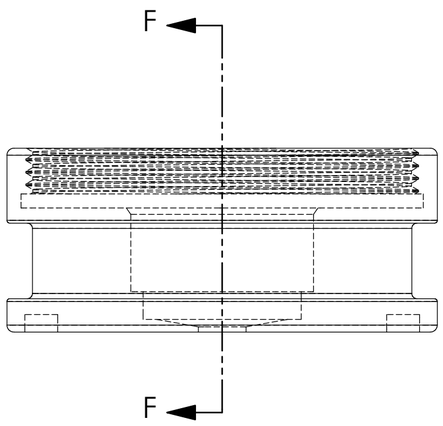
ESP filter holder (puck)

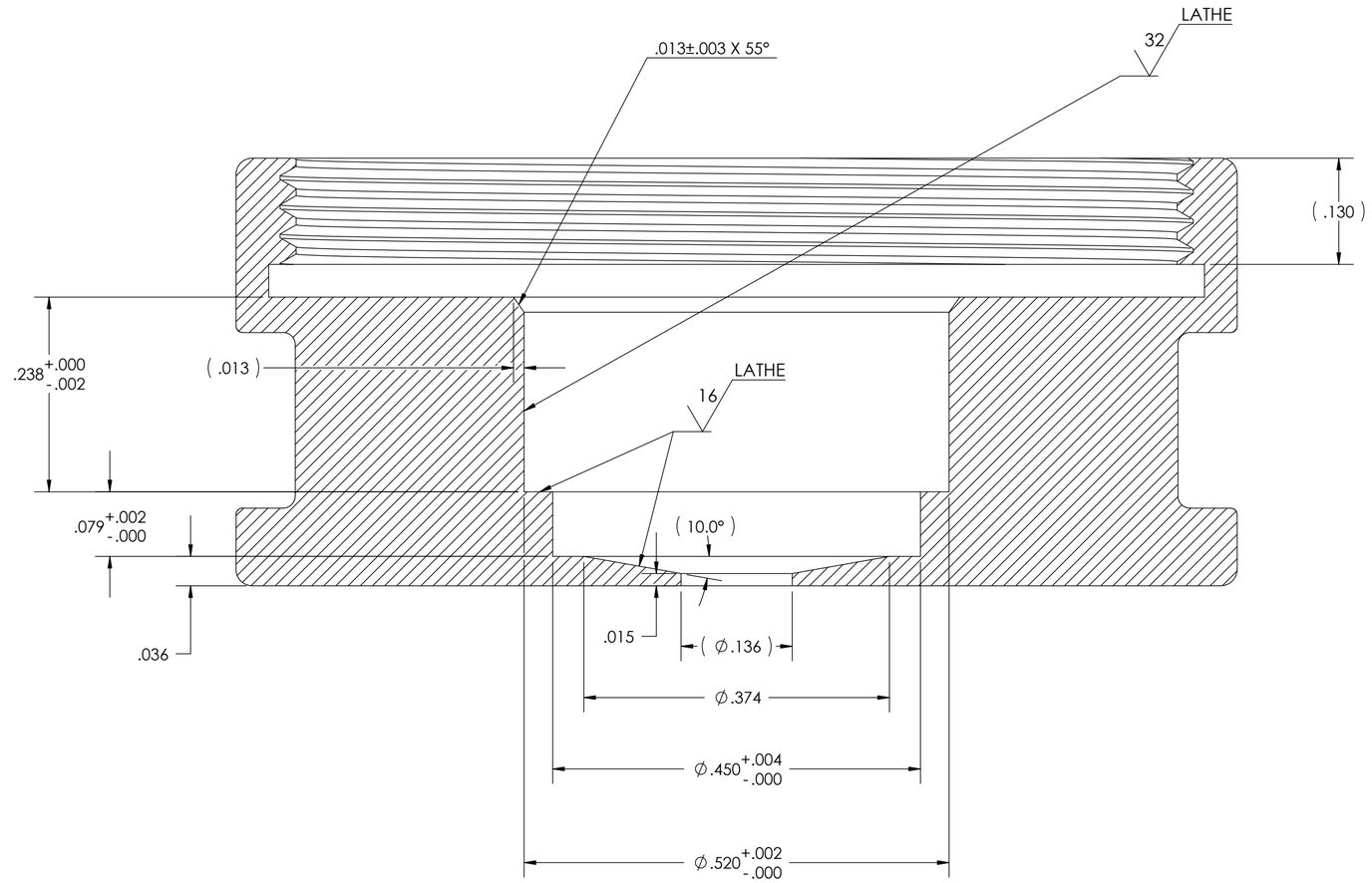
SIZE	DWG. NO.	REV.
C	1002433	B

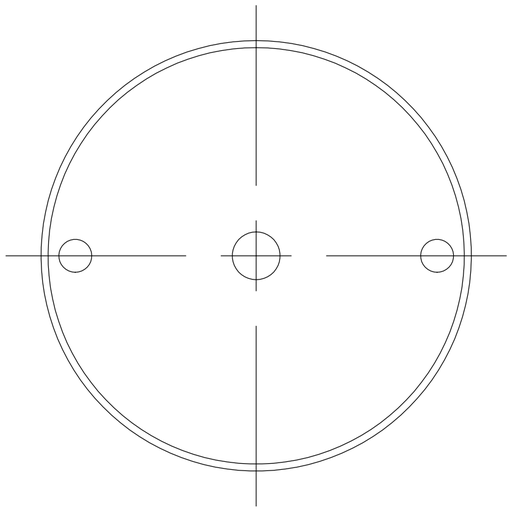
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

1002433-004
TOX - Array BOTTOM

ALL DIMENSIONS AND SPECIFICATIONS NOT SHOWN AS PER 1002433-001 (Sheet 2)

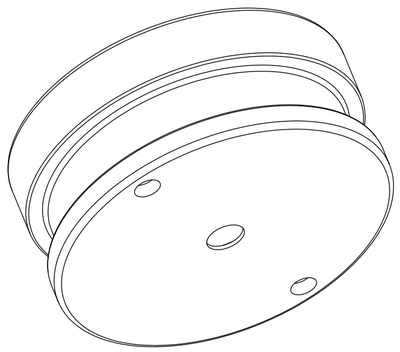


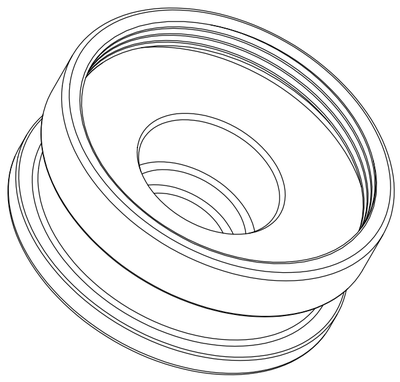




SECTION F-F

Magnaplate HCR - all dimensions & tolerances to be held after plating
CLASS 3B Thread tolerance to be held after plating as per specification





ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
4	1002433-004	TOXARRAY BOTTOM	6061-T6 Aluminum	25

BILL OF MATERIALS — last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.

Inspector	
Shop Foreman	
Engineer	
NEXT ASSY Description	NEXT ASSY Number

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

2 PLACE DIM ±.01	3 PLACE DIM ±.005	4 PLACE DIM ±.0005	ANGLES ±1°

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5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH. MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS DATE

ENGINEER
Jason Feldman
831-775-1837
cell: 831-295-4546

CHECKED

PROJECT NUMBER 701312.00

PROJECT ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

M B A R I

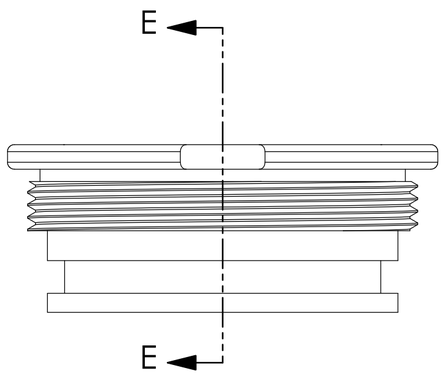
ESP filter holder (puck)

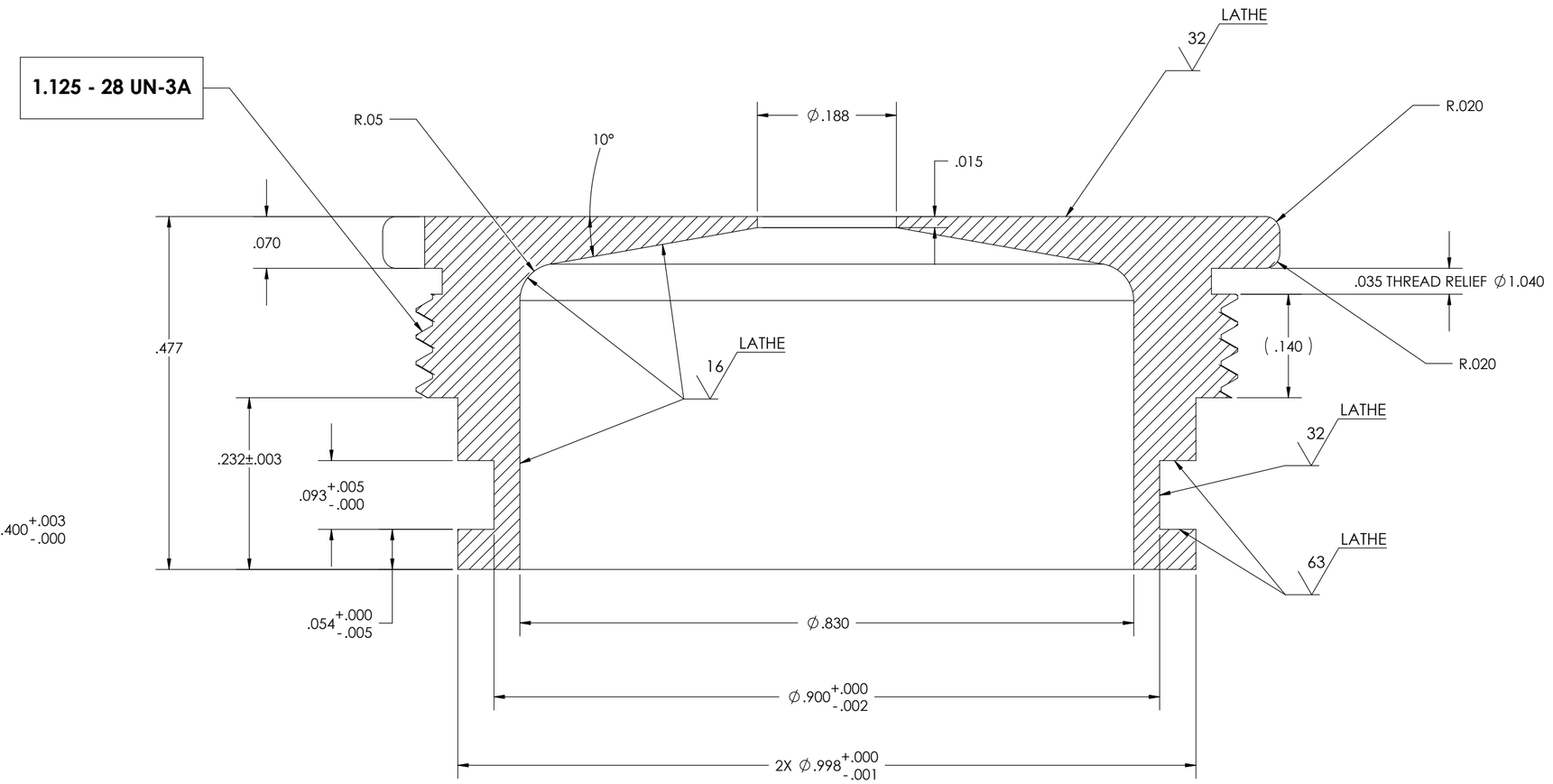
SIZE	DWG. NO.	REV.
C	1002433	B

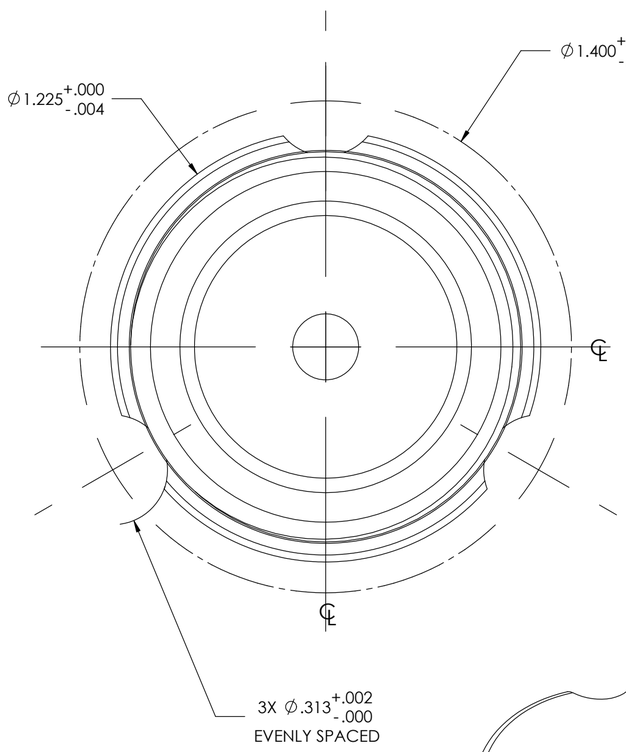
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

1002433-005
SH1 TOP

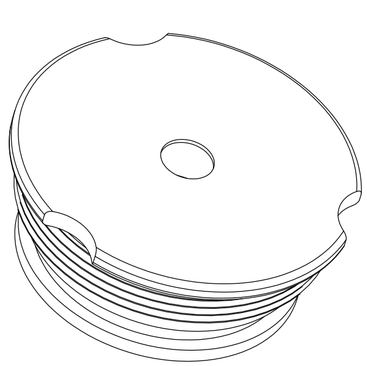
SURFACE FINISH TO BE ACHIEVED ON LATHE - NO ABRASIVE POLISHING

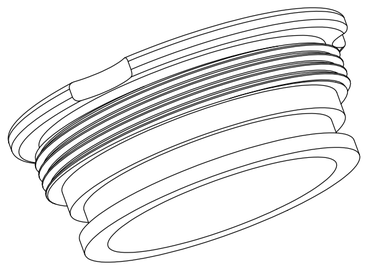






SECTION E-E





ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
5	1002433-005	Puck top - SH1 & TOXR	Titanium Grade 2	100

BILL OF MATERIALS — last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.

Inspector	
Shop Foreman	
Engineer	
NEXT ASSY Description	NEXT ASSY Number

DO NOT SCALE DRAWING

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5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH. MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS DATE

ENGINEER
Jason Feldman
831-775-1837
cell: 831-295-4546

CHECKED

PROJECT NUMBER 701312.00

PROJECT ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

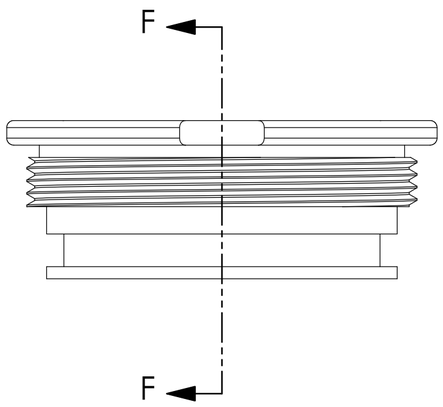
ESP filter holder (puck)

SIZE C | DWG. NO. 1002433 | REV. B

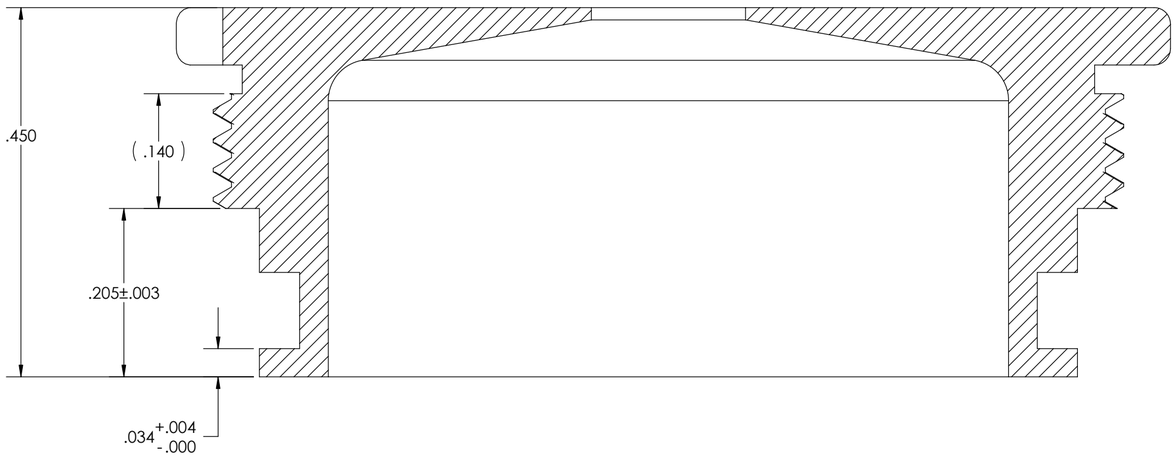
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

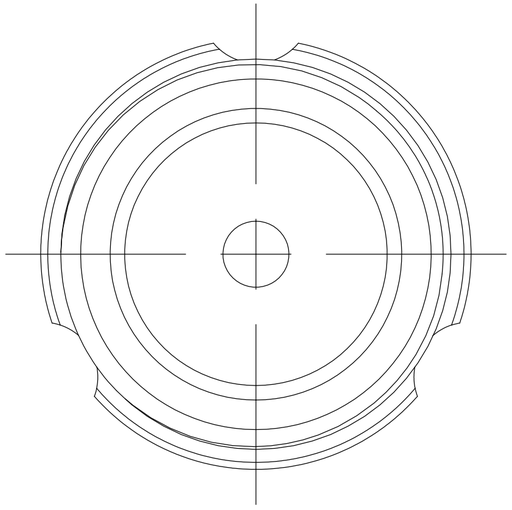
SHEET 6 OF 11

1002433-006
SH1 - High Volume TOP

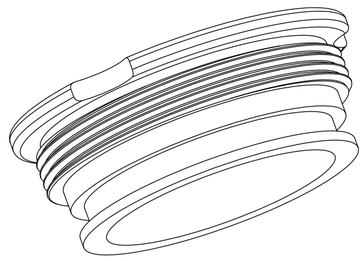


DIMENSIONS NOT SHOWN PER 1002433-005 (Sheet 6)





SECTION F-F



ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
6	1002433-006	Puck top - SH1-HV	Titanium Grade 2	25

BILL OF MATERIALS

last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.

Inspector	
Shop Foreman	
Engineer	
NEXT ASSY Description	NEXT ASSY Number

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

2 PLACE DIM ±.01	3 PLACE DIM ±.005	4 PLACE DIM ±.0005	ANGLES ±1°

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4. MACHINED FILLET RADII .000 TO .003
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH, MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS DATE

ENGINEER
Jason Feldman
831-775-1837
cell: 831-295-4546

CHECKED

PROJECT NUMBER
701312.00

PROJECT
ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

M B A R I

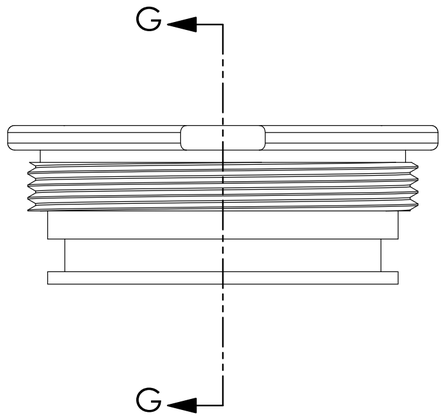
ESP filter holder (puck)

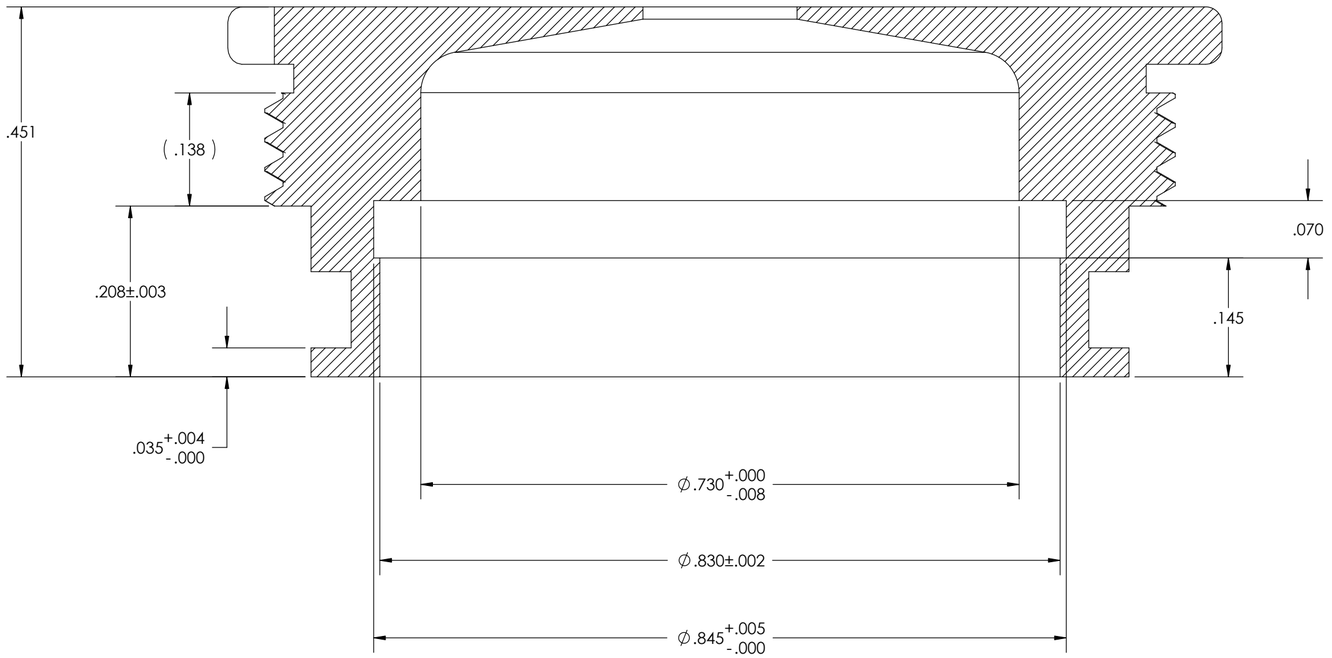
SIZE	DWG. NO.	REV.
C	1002433	B

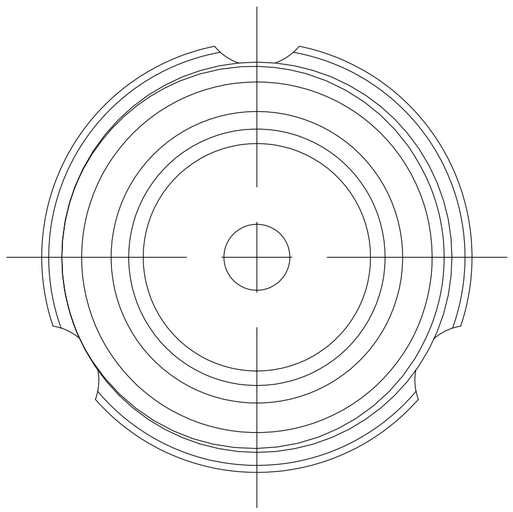
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

1002433-007
WCR TOP

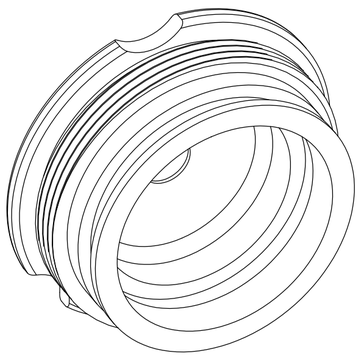
DIMENSIONS NOT SHOWN PER 1002433-005 (Sheet 6)

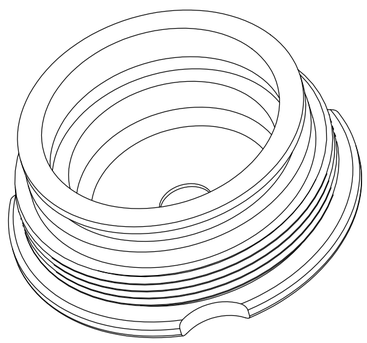






SECTION G-G





ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
7	1002433-007	WCR TOP	Titanium Grade 2	65

BILL OF MATERIALS

last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.

Inspector	
Shop Foreman	
Engineer	
NEXT ASSY Description	NEXT ASSY Number

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

2 PLACE DIM ±.01	3 PLACE DIM ±.005	4 PLACE DIM ±.0005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING
3. REMOVE BURRS & SHARP EDGES .010 MAX
4. MACHINED FILLET RADII .000 TO .003
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH. MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS DATE

ENGINEER
Jason Feldman
831-775-1837
cell: 831-295-4546

CHECKED

PROJECT NUMBER
701312.00

PROJECT
ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039
M B A R I

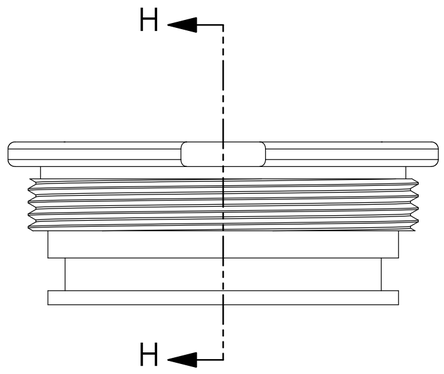
ESP filter holder (puck)

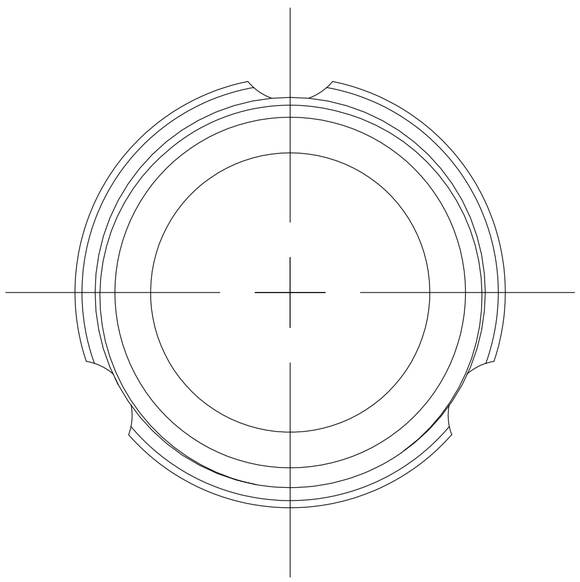
SIZE C | DWG. NO. 1002433 | REV. B

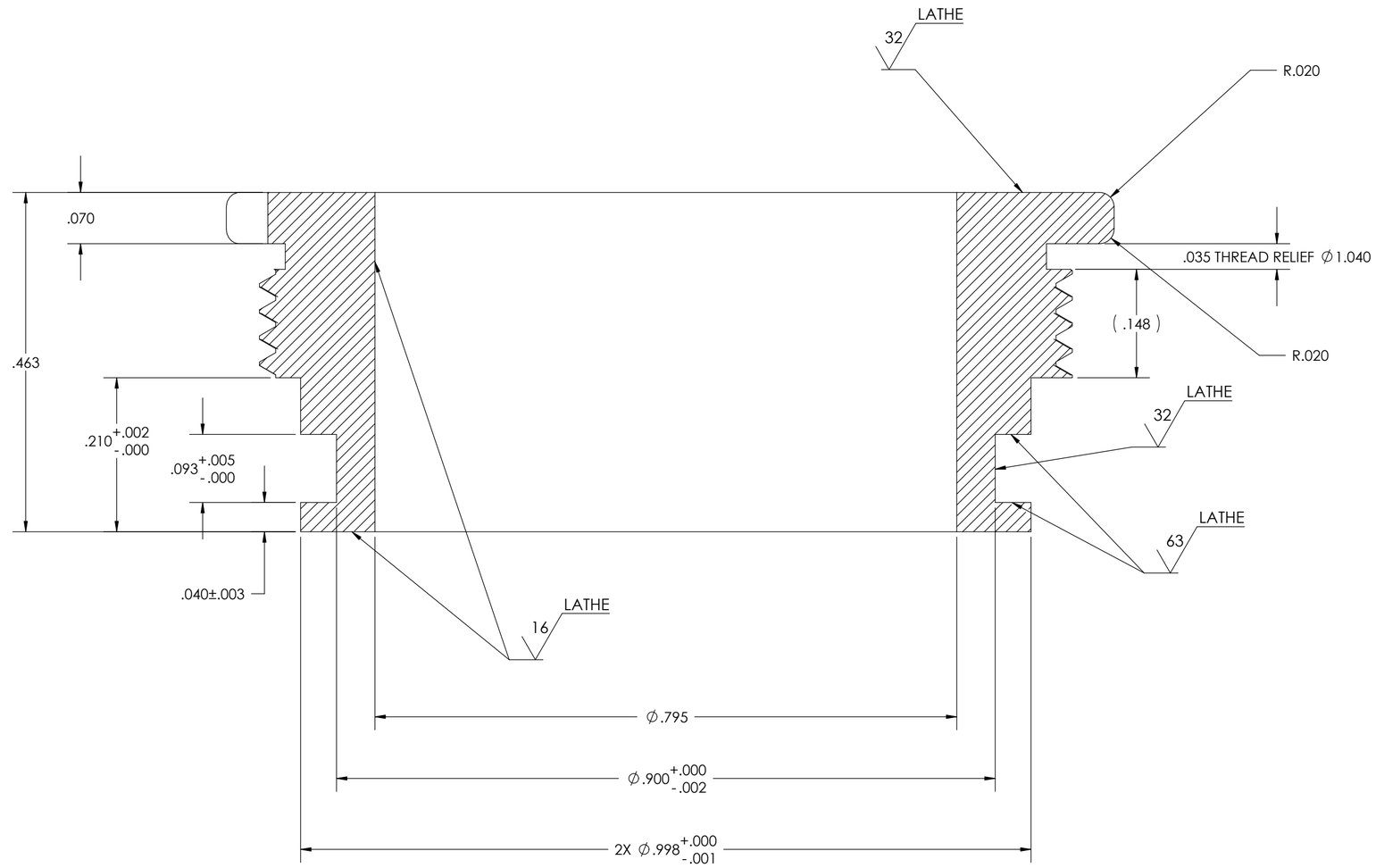
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

1002433-008
SH2 TOP

DIMENSIONS NOT SHOWN PER 1002433-005 (Sheet 6)

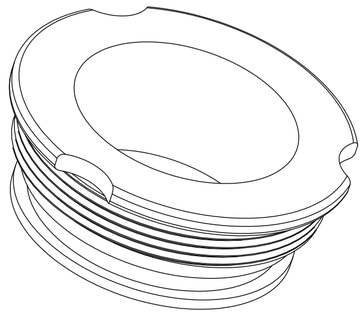


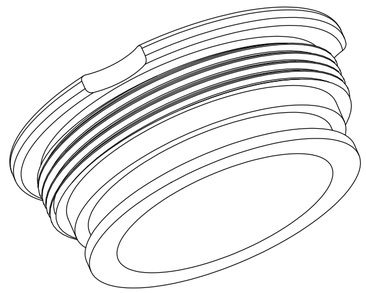




SECTION H-H

Magnaplate HCR - all dimensions & tolerances to be held after plating
CLASS 3A Thread tolerance to be held after plating as per specification





ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
8	1002433-008	SH2 Top	6061-T6 Aluminum	40

BILL OF MATERIALS — last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.

Inspector	
Shop Foreman	
Engineer	
NEXT ASSY Description	NEXT ASSY Number
DO NOT SCALE DRAWING	

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

2 PLACE DIM ±.01	3 PLACE DIM ±.005	4 PLACE DIM ±.0005	ANGLES ±1°

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5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .0005 PER INCH. MAX .001 INCHES FOR SINGLE SURFACE.
7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS DATE

ENGINEER
Jason Feldman
831-775-1837
cell: 831-295-4546

CHECKED

PROJECT NUMBER 701312.00

PROJECT ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

M B A R I

ESP filter holder (puck)

SIZE C | DWG. NO. 1002433 | REV. B

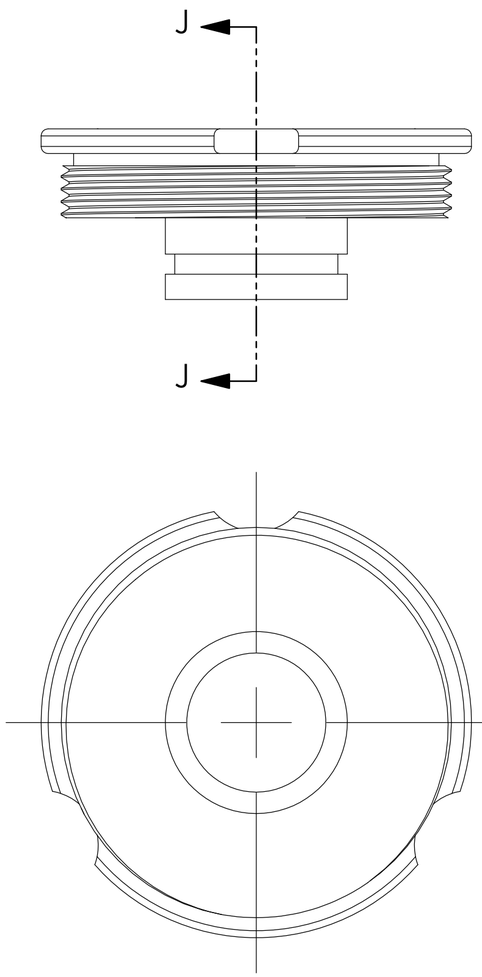
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209)

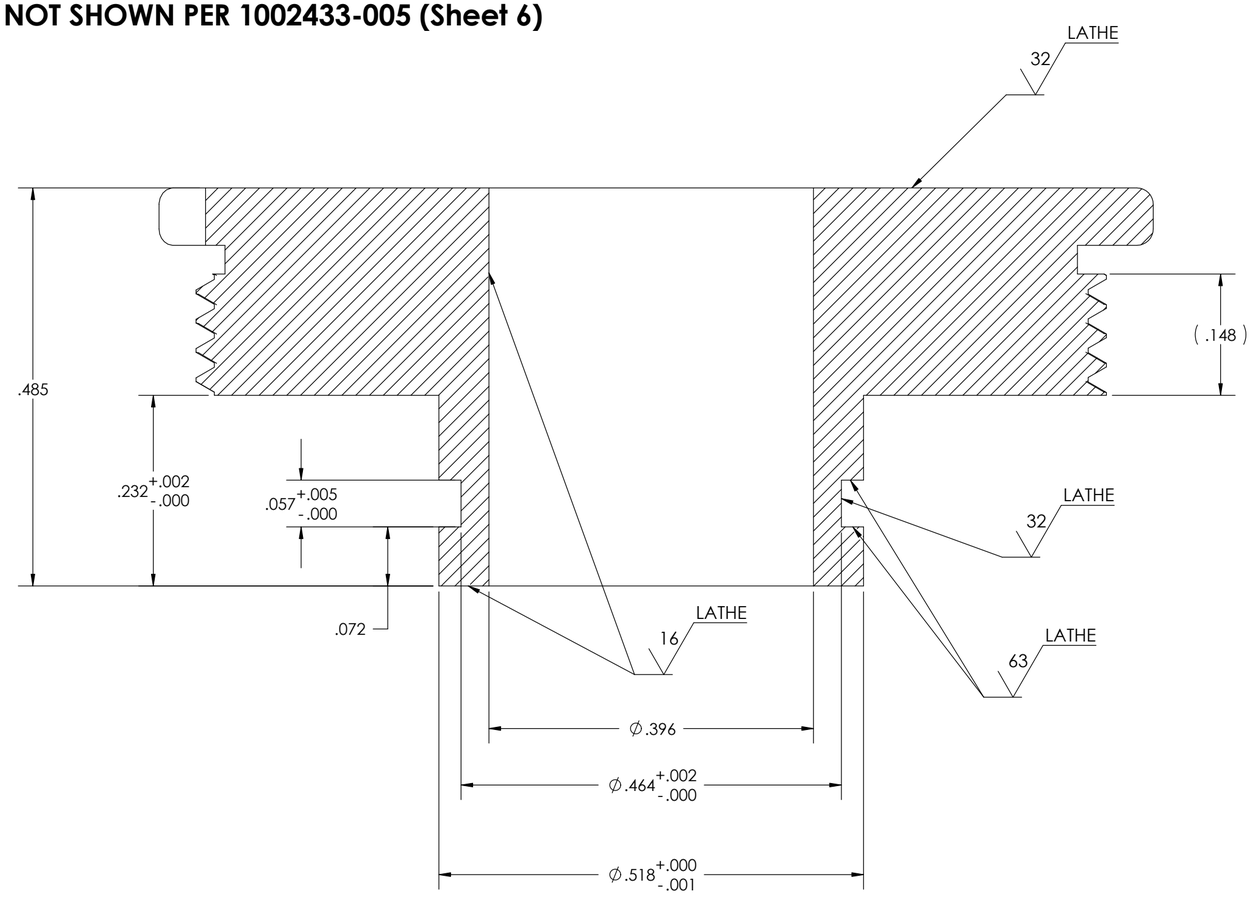
1002433-009
TOX - Array TOP

DIMENSIONS NOT SHOWN PER 1002433-005 (Sheet 6)

to utilize APPLE O-ring
0.453 I.D. x 0.039 Width
material: Buna-N
durometer: 60 Shore A

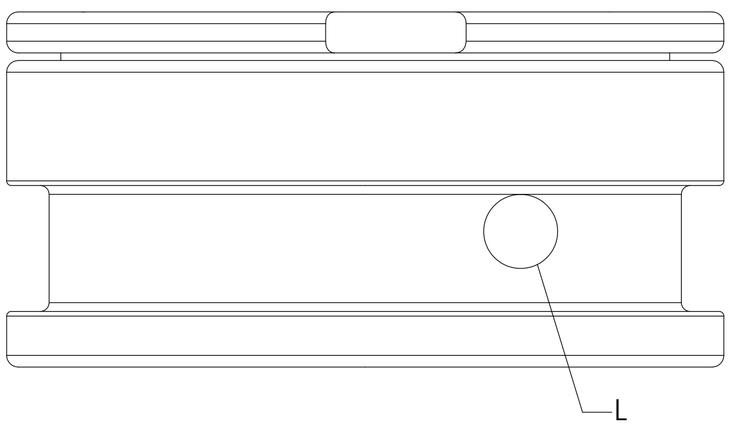
O-RING COMPRESSION:
MIN: 26%
MAX: 31%
O-Ring I.D. 2.4% less than groove



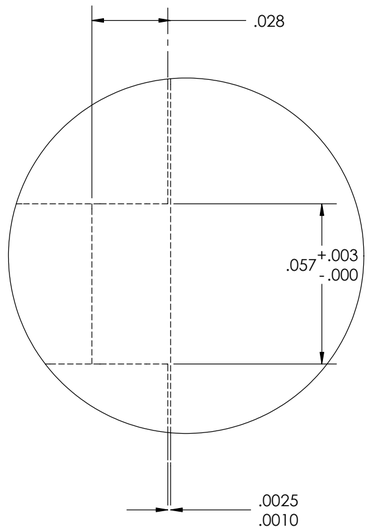


SECTION J-J

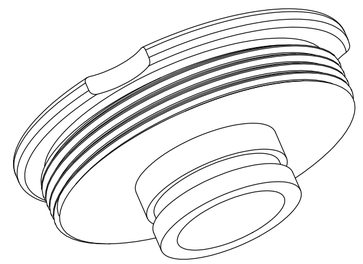
Magnaplate HCR - all dimensions & tolerances to be held after plating
CLASS 3A Thread tolerance to be held after plating as per specification

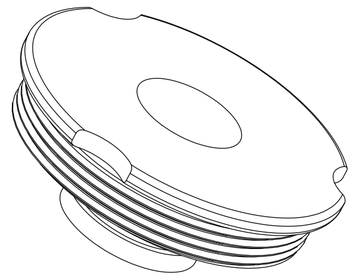


SECTION (assembly)



DETAIL L





ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
9	1002433-009	TOXARRAY TOP	6061-T6 Aluminum	25

BILL OF MATERIALS — last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.	
Inspector	
Shop Foreman	
Engineer	
NEXT ASSY Description	NEXT ASSY Number
DO NOT SCALE DRAWING	

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7. SURFACE FINISH TO BE 32 MICRON UNLESS OTHERWISE SPECIFIED

APPROVALS DATE

ENGINEER
Jason Feldman
831-775-1837
cell: 831-295-4546

CHECKED

PROJECT NUMBER 701312.00

PROJECT ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

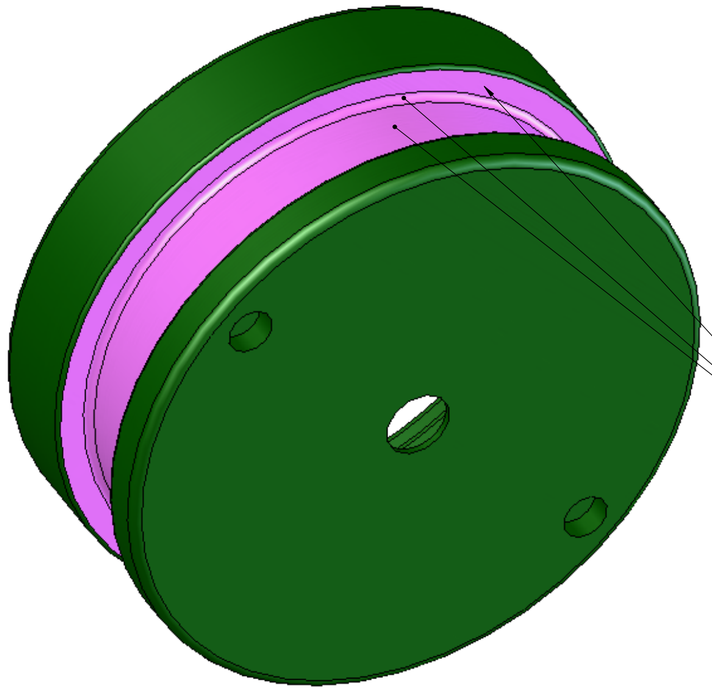
M B A R I

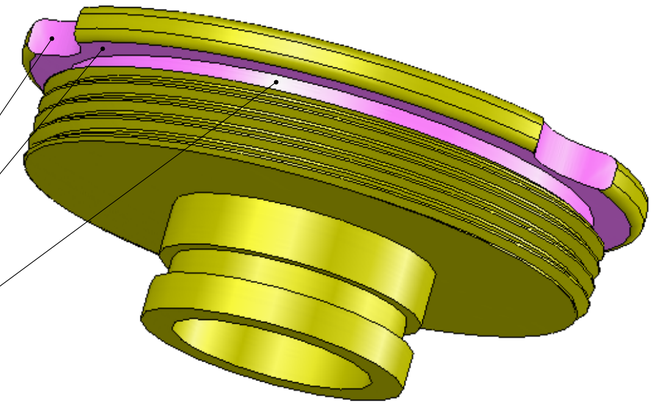
ESP filter holder (puck)

SIZE	DWG. NO.	REV.
C	1002433	B

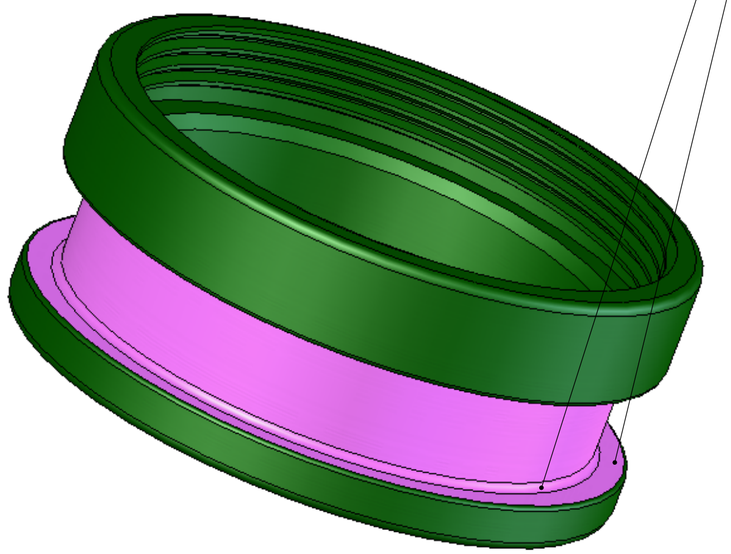
CAD FILE: X:\701312 ESP 2G\SolidWorks files\internal structure (1002209) — SHEET 10 OF 11

FIXTURE NOTES FOR RACKING PARTS FOR MAGNAPLATE HCR PROCESSING





MAGNAPLATE HCR NOT REQUIRED IN PINK AREAS



BILL OF MATERIALS

last updated on: Tuesday, March 14, 2006 4:41:00 PM

Shop / Q.C.	
Inspector	
Shop Foreman	
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PROJECT ESP 2G

Monterey Bay Aquarium Research Institute
7700 Sandholdt Road
Moss Landing, CA
95039

M B A R I

ESP filter holder (puck)

SIZE	DWG. NO.	REV.
C	1002433	B

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