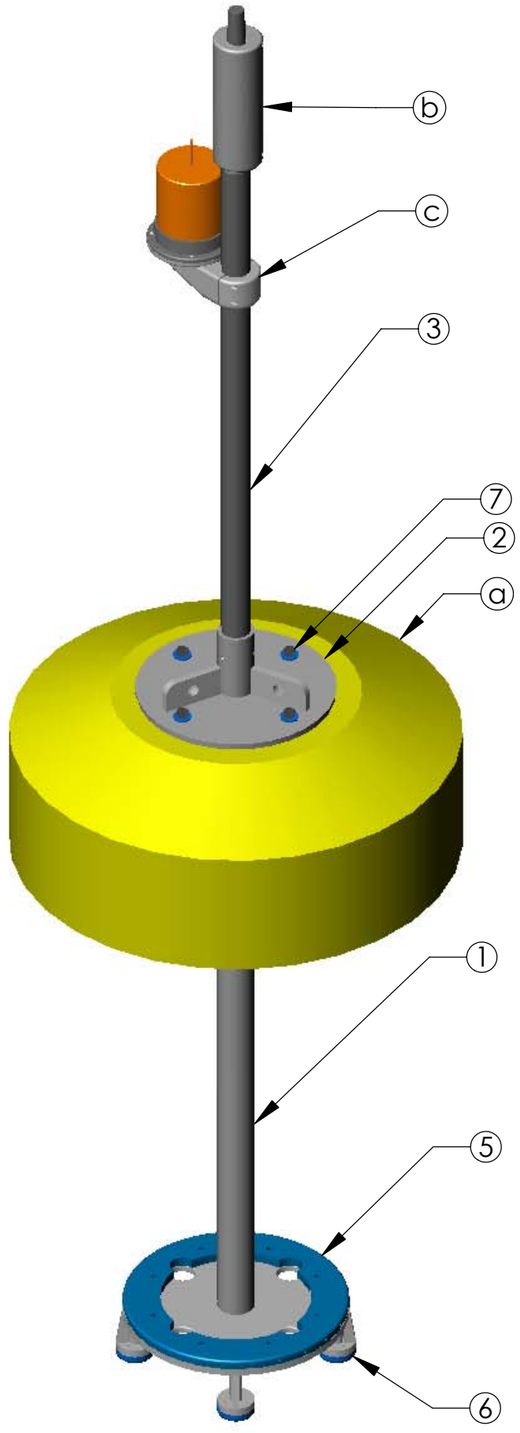
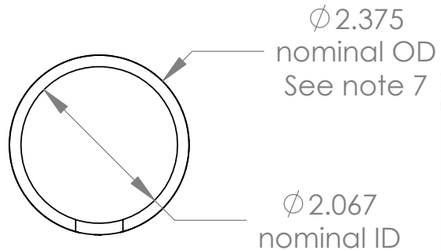
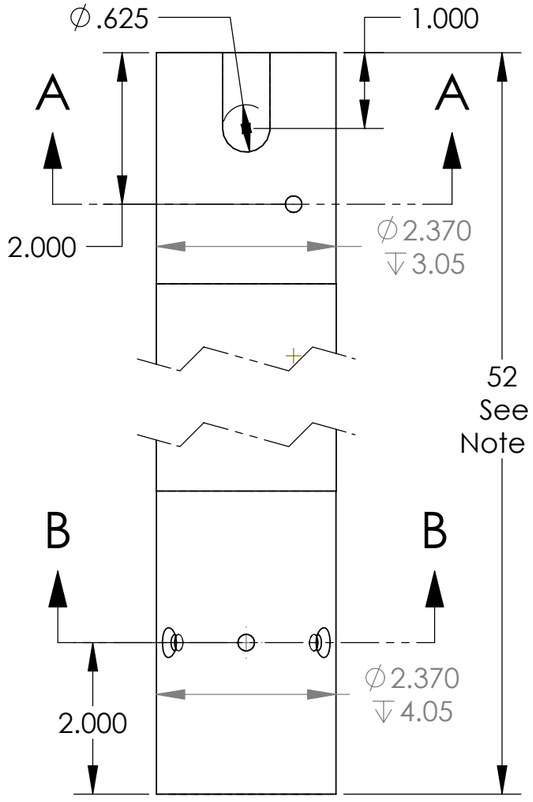
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	4/30/03	JE
2.0	Dec 2003 Modifications	12/28/03	

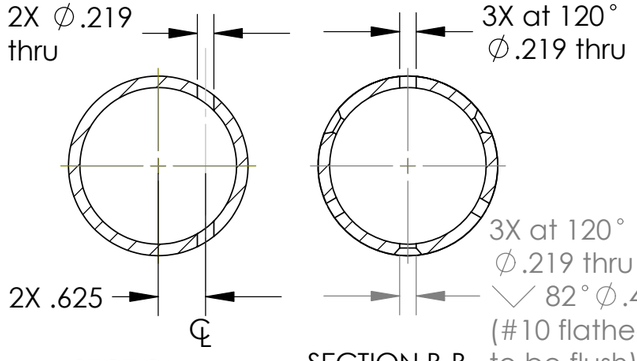


Partial Mooring Assembly
(lettered parts are from other drawings)

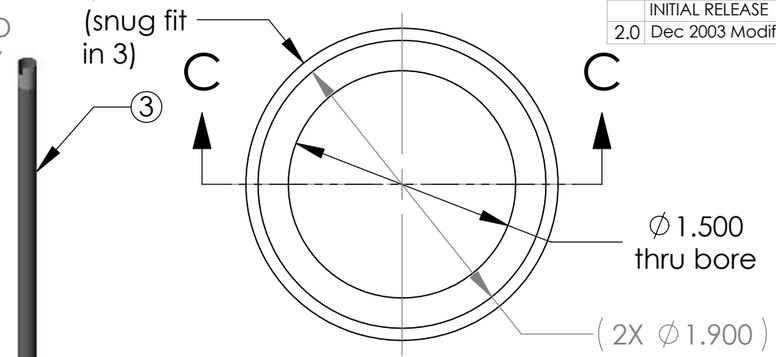


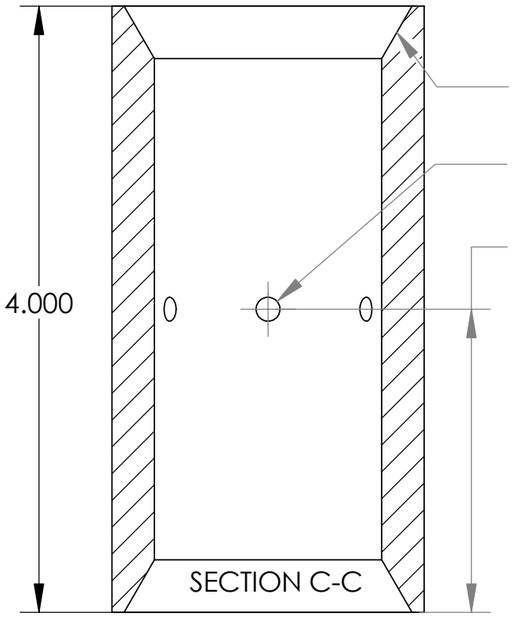


SECTION A-A
SCALE 1 : 2

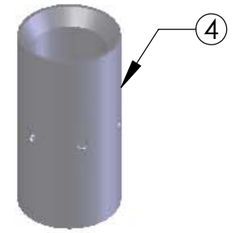


SECTION B-B
SCALE 1 : 2





SECTION C-C



Part 4 located
inside bottom of
radio mast

Additional parts:
a) Float (132jaha.DWG)
b) Radio housing (133jaha.DWG)
c) Light bracket (137jaha.DWG)

Notes:
7) Top 3 in and bottom 4 in should not exceed 2.375
8) This lenth may change, check for additional notes.

Item No.	Qty.	Part No.	Description	Material Specification
7	8@		Float Sleeves	Delrin
6	4@		Feet pads	3/4" PVC plate
5	4@		Instrument mounts	3/4" PVC plate
4	1@		Radio mast insert	PVC rod
3	1@		Radio mast	2" Sched-40 6061-T6 Al pipe
2	1@		Float retainer (welded assembly)	Aluminum 6061-T6
1	1@		Main Frame (welded assembly)	Aluminum 6061-T6

BILL OF MATERIALS

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 4/23/03

ENGINEER

CHECKED

PROJECT NO. 600144

PROJECT Chemical Sensors

WEIGHT

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

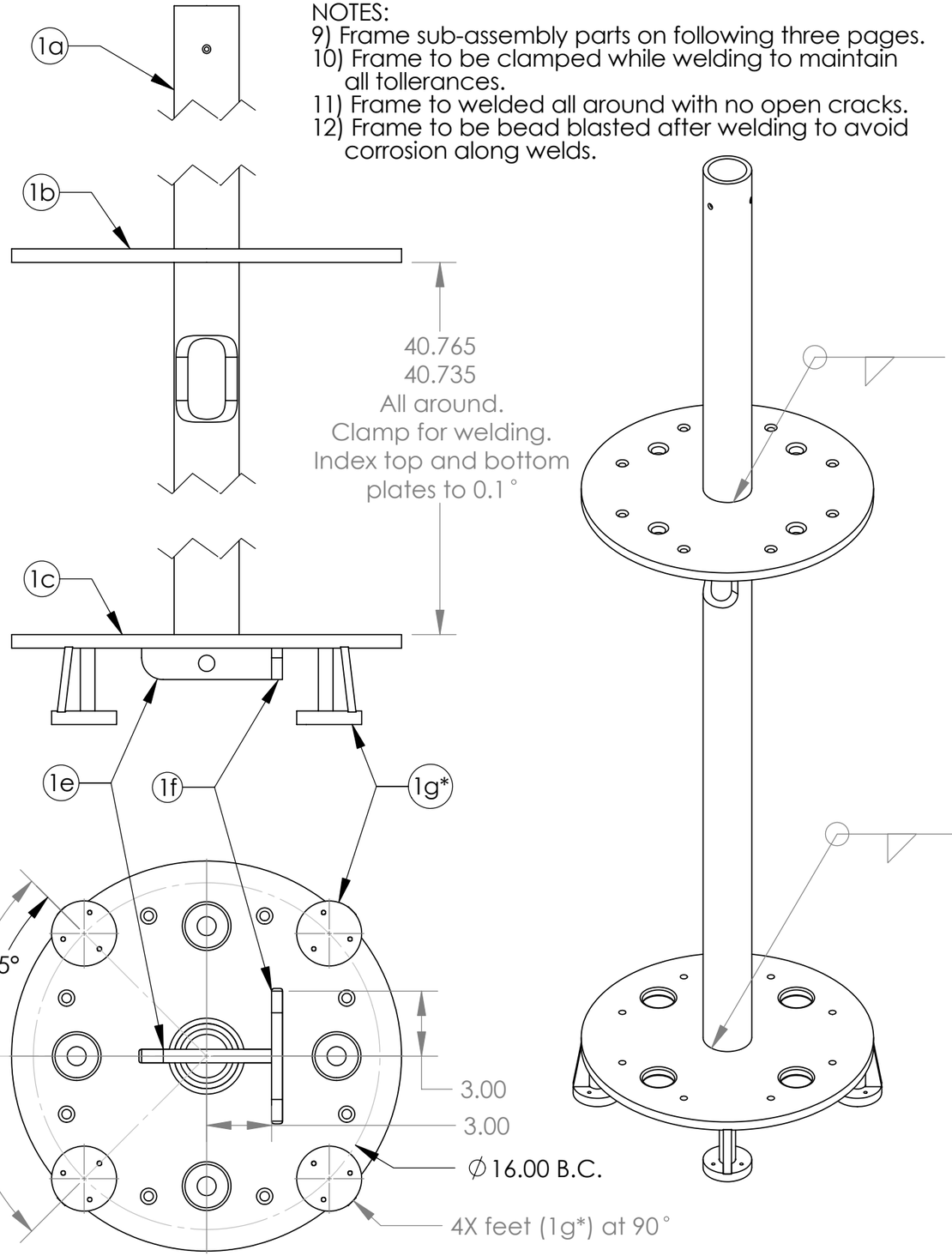
134jaha-ElkhornMooring C
Mooring Frame

SIZE B | DWG. NO. 134jaha.DWG | REV. 2

SCALE 1:1 | CAD FILE: tornado/chem/SWfiles | SHEET 1 OF 6

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	4/30/03	JE
2.0	Dec 2003 Modifications	12/28/03	

NOTES:
9) Frame sub-assembly parts on following three pages.
10) Frame to be clamped while welding to maintain all tollerances.
11) Frame to welded all around with no open cracks.
12) Frame to be bead blasted after welding to avoid corrosion along welds.



Item No.	Qty.	Part No.	Description	Material Specification
7	8@		Float Sleeves	Delrin
6	4@		Feet pads	3/4" PVC plate
5	4@		Instrument mounts	3/4" PVC plate
4	1@		Radio mast insert	PVC rod
3	1@		Radio mast	2" Sched-40 6061-T6 Al pipe
2	1@		Float retainer (welded assembly)	Aluminum 6061-T6
1	1@		Main Frame (welded assembly)	Aluminum 6061-T6

BILL OF MATERIALS

Shop / Q.C.

Inspector

Shop Foreman

Engineer

NEXT ASSY Description | NEXT ASSY Number

Application

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

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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

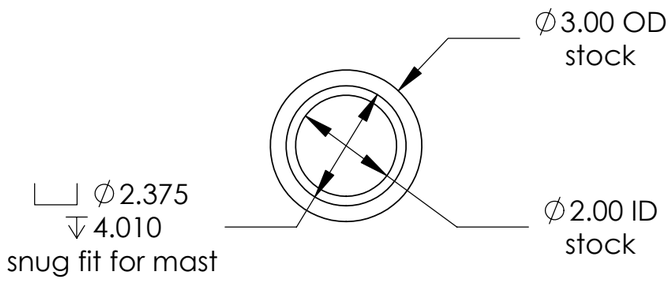
APPROVALS	DATE
DRAWN Hans Jannasch	4/23/03
ENGINEER	
CHECKED	
PROJECT NO. 600144	
PROJECT Chemical Sensors	
WEIGHT	

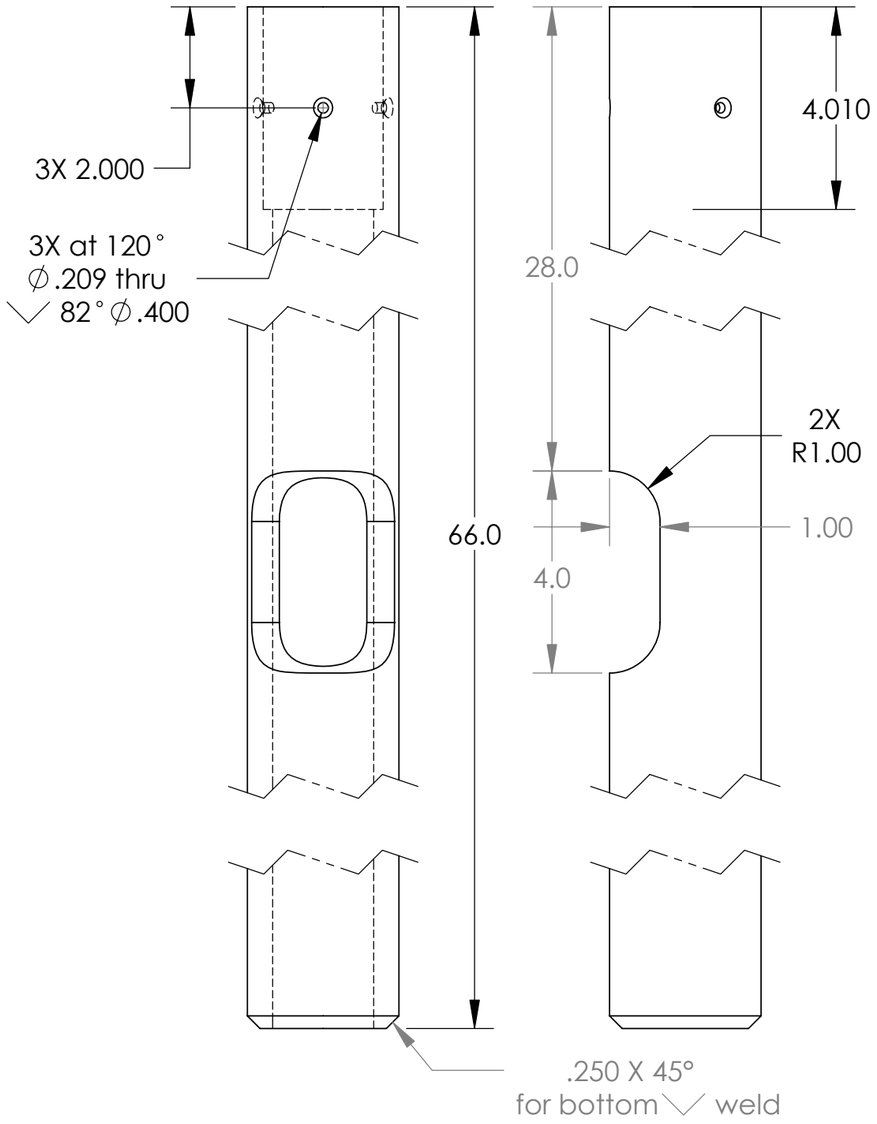
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

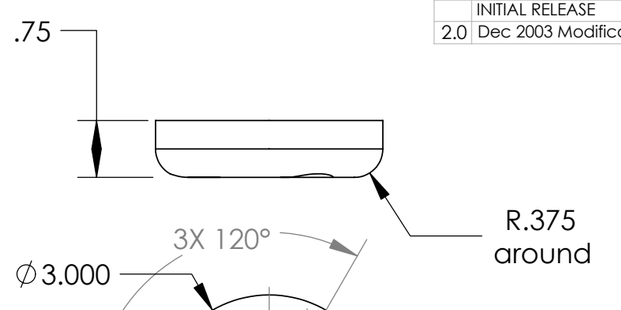
134jaha-ElkhornMooring C
Mooring Frame

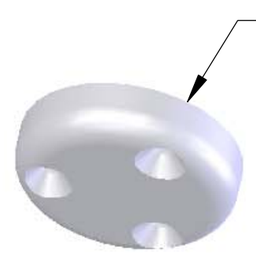
SIZE B | DWG. NO. 134jaha.DWG | REV. 2
SCALE 1:1 | CAD FILE: tornado/chem/SWfiles | SHEET 2 OF 6

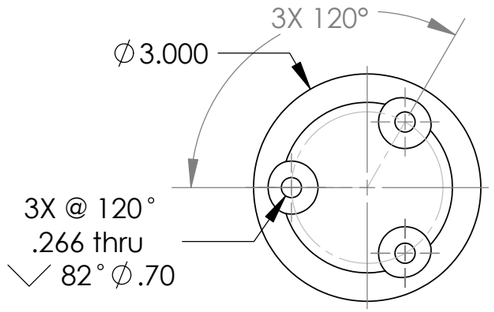
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	4/30/03	JE
2.0	Dec 2003 Modifications	12/28/03	

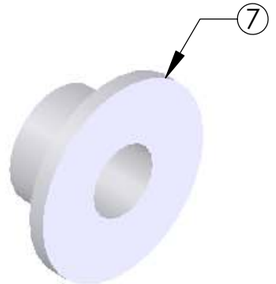


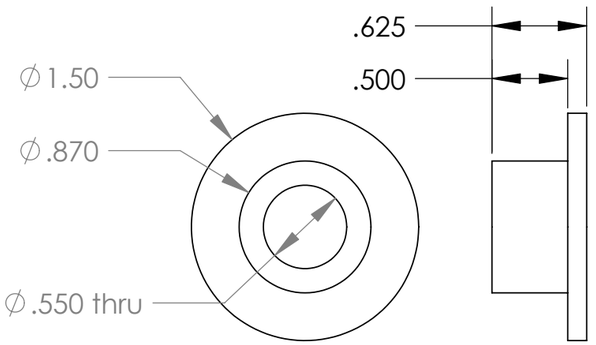












Item No.	Qty.	Part No.	Description	Material Specification
7	8@		Float Sleeves	Delrin
6	4@		Feet pads	3/4" PVC plate
5	4@		Instrument mounts	3/4" PVC plate
4	1@		Radio mast insert	PVC rod
3	1@		Radio mast	2" Sched-40 6061-T6 Al pipe
2	1@		Float retainer (welded assembly)	Aluminum 6061-T6
1	1@		Main Frame (welded assembly)	Aluminum 6061-T6

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 4/23/03
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. 600144
			PROJECT Chemical Sensors
Application		DO NOT SCALE DRAWING	WEIGHT

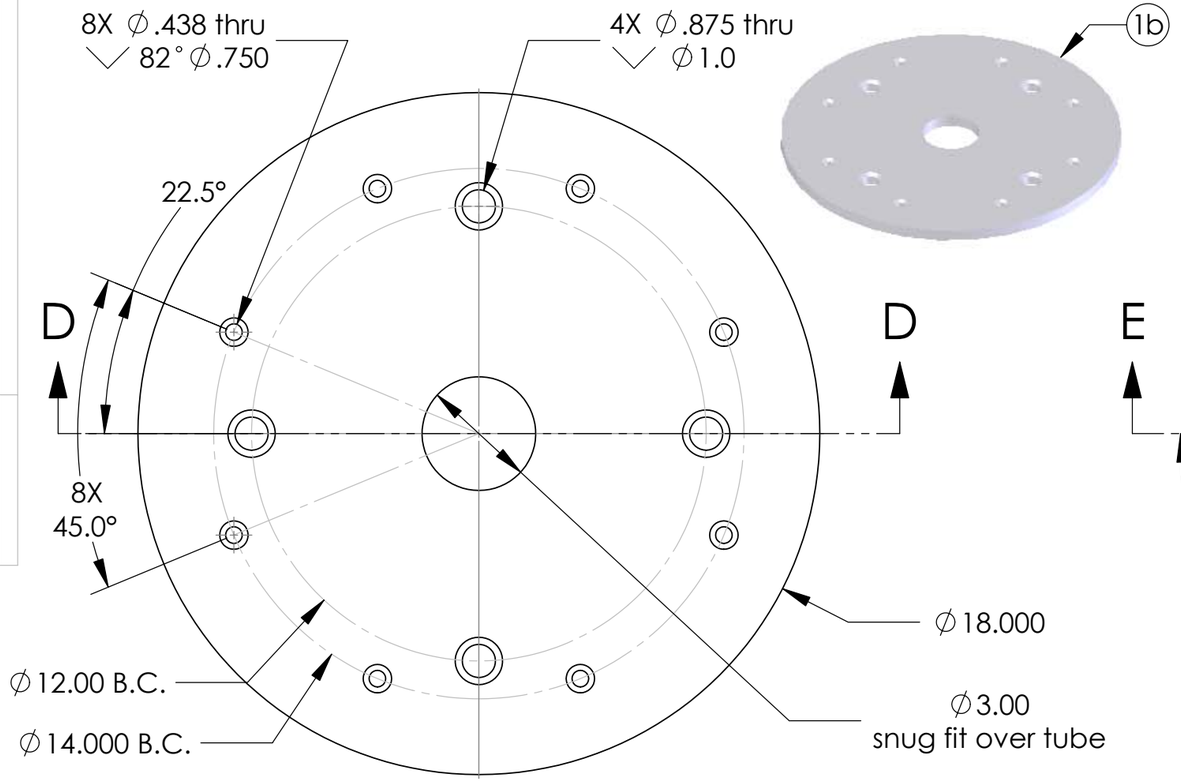
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

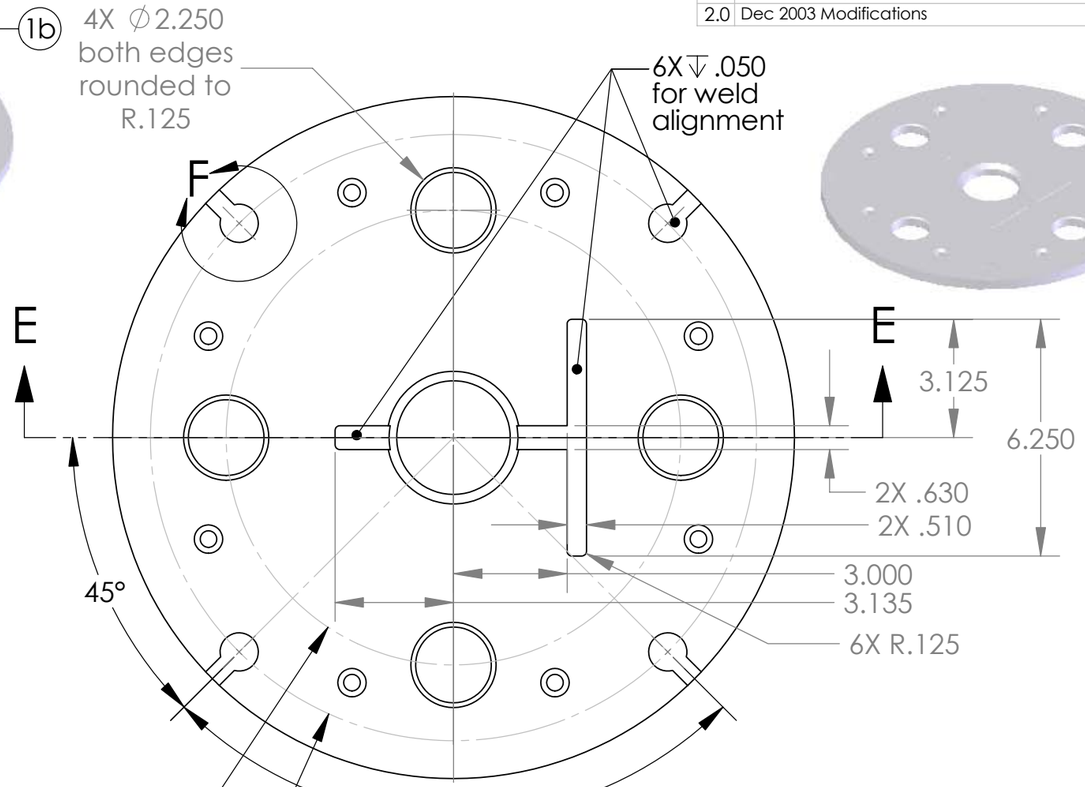
134jaha-ElkhornMooring C
Mooring Frame

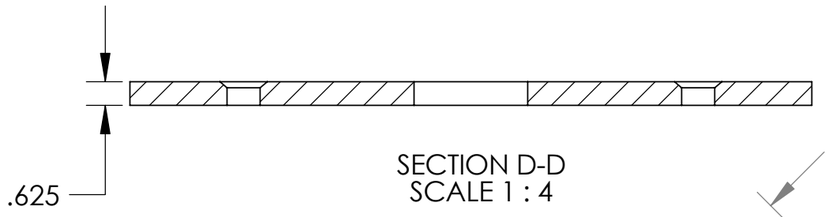
SIZE	DWG. NO.	REV.
B	134jaha.DWG	2

SCALE 1:1 · CAD FILE: tornado/chem/SWfiles · SHEET 3 OF 6

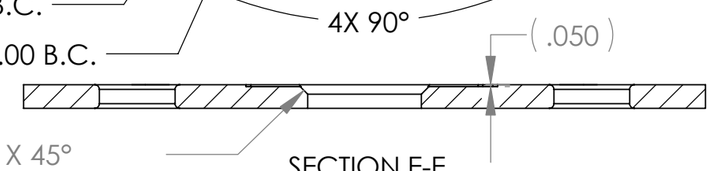
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	4/30/03	JE
2.0	Dec 2003 Modifications	12/28/03	







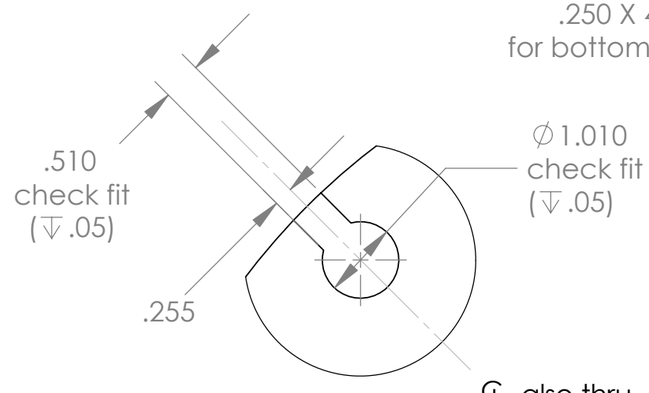
SECTION D-D
SCALE 1 : 4



.250 X 45°
for bottom ⌵ weld

SECTION E-E
SCALE 1 : 4

All other features
and dimensions
same as part 1b.



4X DETAIL F
SCALE 1 : 2

Item No.	Qty.	Part No.	Description	Material Specification
6	4@		Feet pads	3/4" PVC plate
5	4@		Instrument mounts	3/4" PVC plate
4	1@		Radio mast insert	PVC rod
3	1@		Radio mast	2" Sched-40 6061-T6 Al pipe
2	1@		Float retainer	Aluminum 6061-T6
1	1@		Main Frame (welded assembly)	Aluminum 6061-T6

BILL OF MATERIALS

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

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

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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	4/23/03
ENGINEER	
CHECKED	
PROJECT NO. 600144	
PROJECT Chemical Sensors	
WEIGHT	

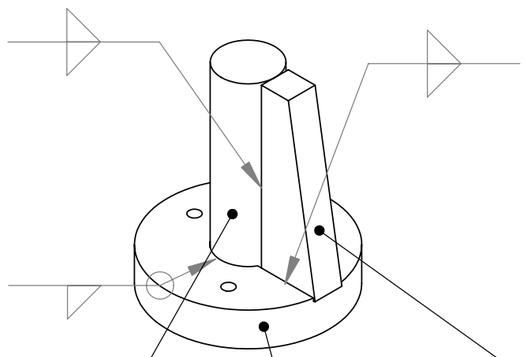
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

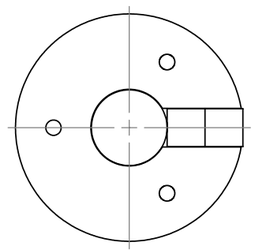
134jaha-ElkhornMooring C
Mooring Frame

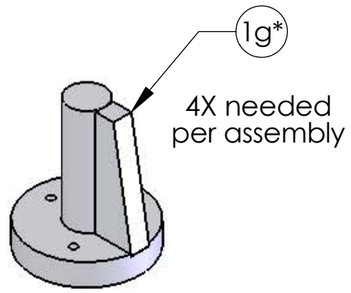
SIZE	DWG. NO.	REV.
B	134jaha.DWG	2

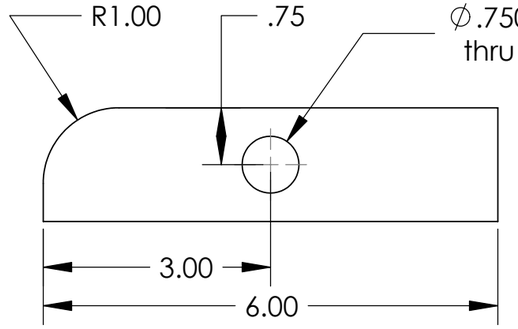
SCALE 1:1	CAD FILE: tornado/chem/SWfiles	SHEET 4 OF 6

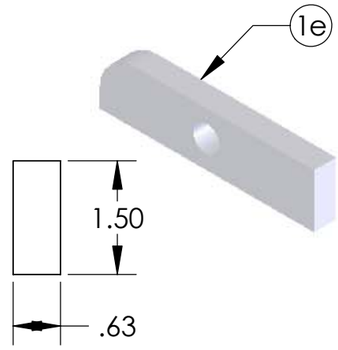
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	4/30/03	JE
2.0	Dec 2003 Modifications	12/28/03	

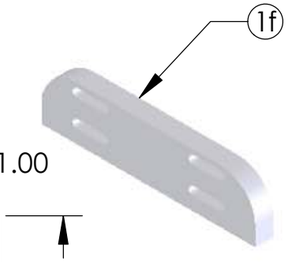


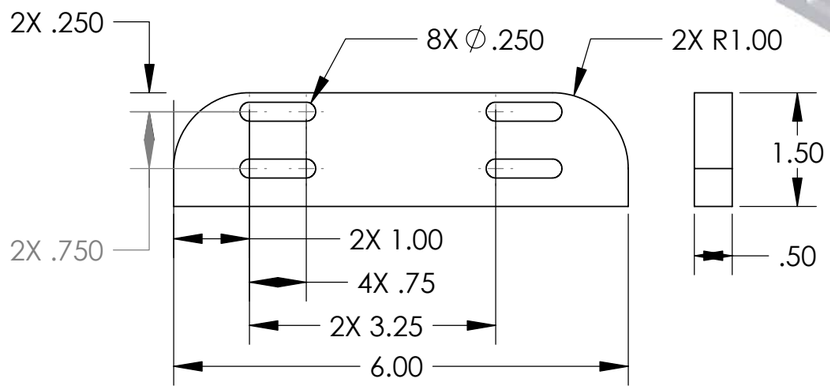


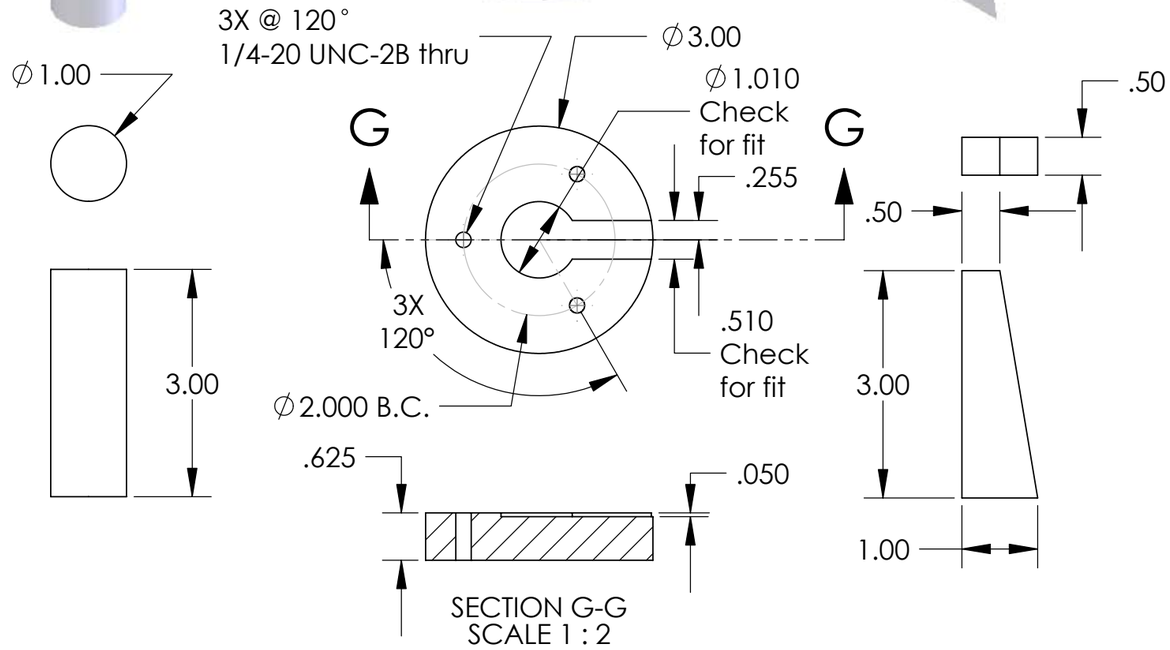












Item No.	Qty.	Part No.	Description	Material Specification
6	4@		Feet pads	3/4" PVC plate
5	4@		Instrument mounts	3/4" PVC plate
4	1@		Radio mast insert	PVC rod
3	1@		Radio mast	2" Sched-40 6061-T6 Al pipe
2	1@		Float retainer	Aluminum 6061-T6
1	1@		Main Frame (welded assembly)	Aluminum 6061-T6

BILL OF MATERIALS

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

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

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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	4/23/03
ENGINEER	
CHECKED	
PROJECT NO. 600144	
PROJECT Chemical Sensors	
WEIGHT	

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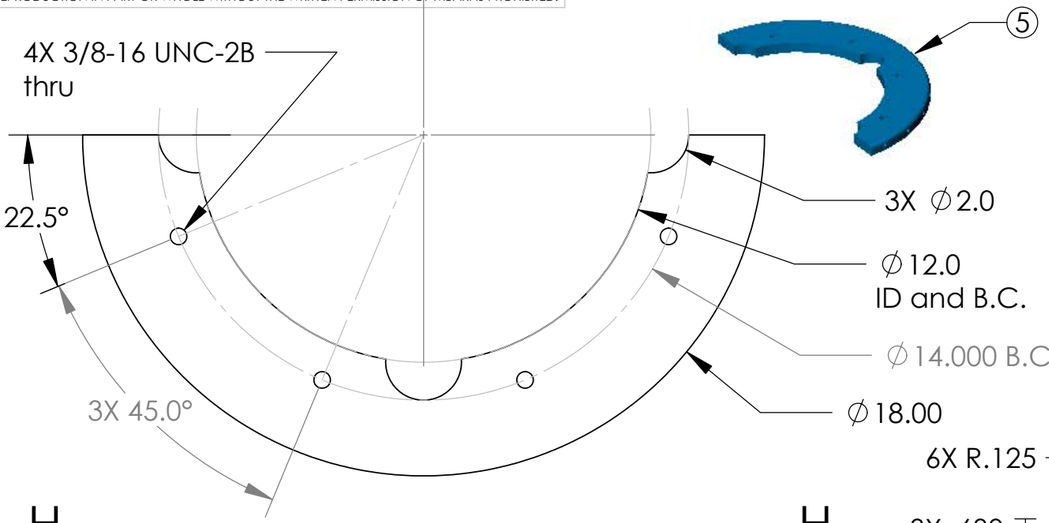
Moss Landing, CA 95039
PH: (831) 775-1700

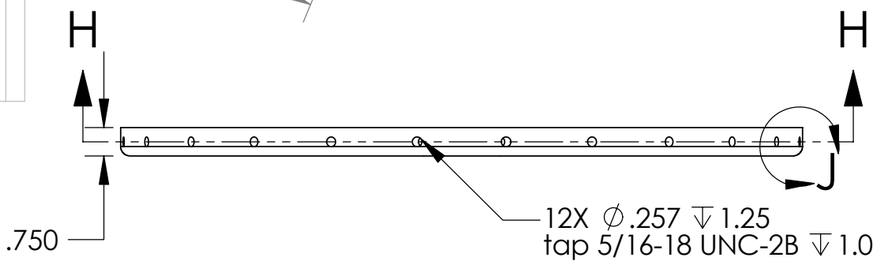
134jaha-ElkhornMooring C
Mooring Frame

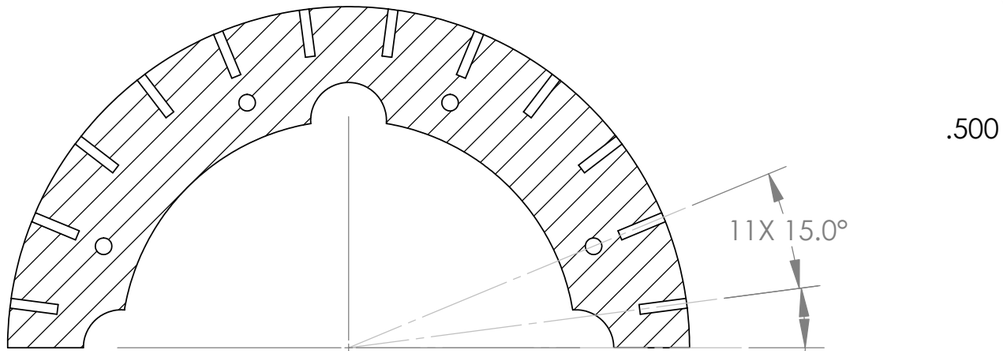
SIZE	DWG. NO.	REV.
B	134jaha.DWG	2

SCALE 1:1 | CAD FILE: tornado/chem/SWfiles | SHEET 5 OF 6

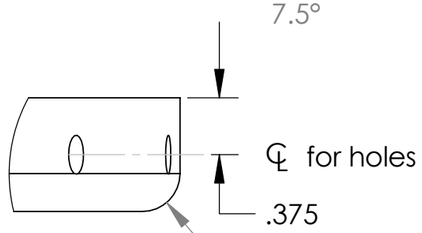
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	4/30/03	JE
2.0	Dec 2003 Modifications	12/28/03	



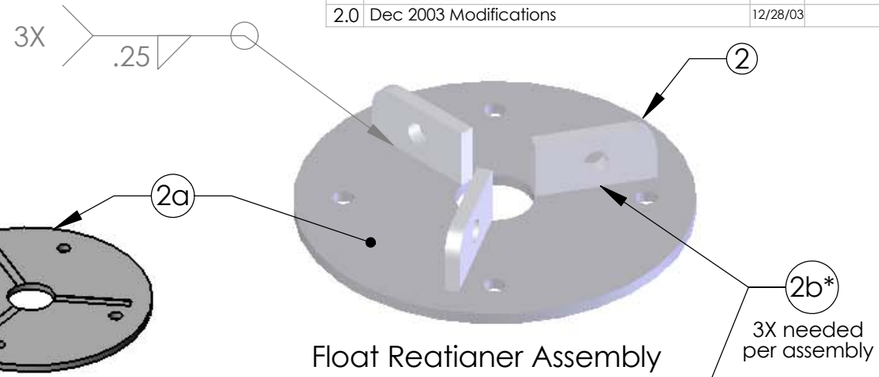




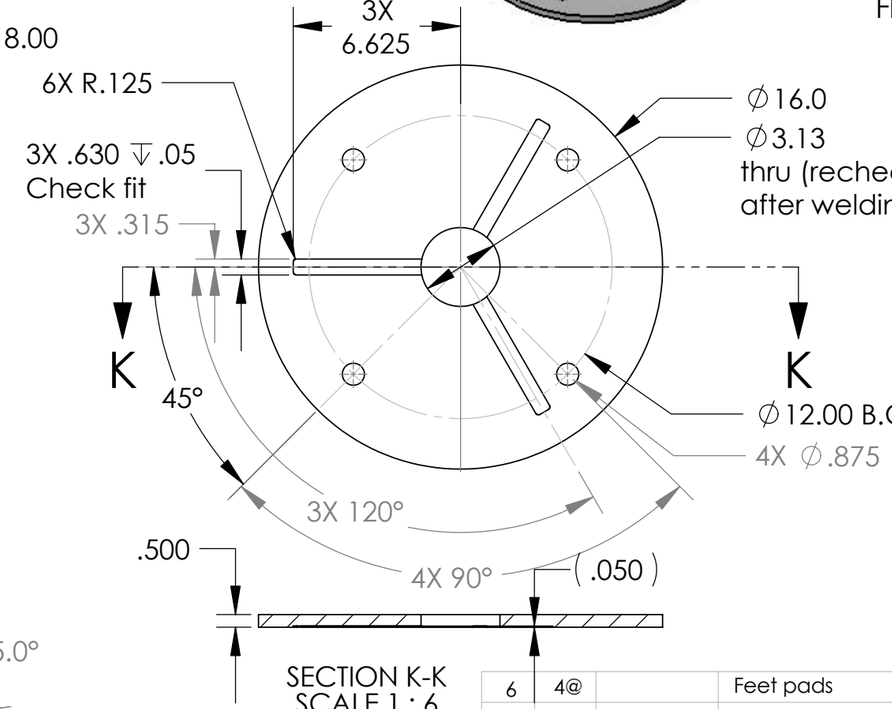
SECTION H-H
SCALE 1 : 4



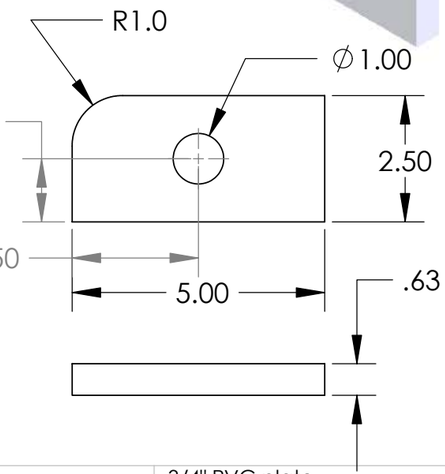
DETAIL J



Float Reatianer Assembly



SECTION K-K
SCALE 1 : 6



Item No.	Qty.	Part No.	Description	Material Specification
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1	1@		Main Frame (welded assembly)	Aluminum 6061-T6

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	4/23/03
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. 600144	
		4. MACHINED FILLET RADII .0150-.030.				PROJECT Chemical 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	

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Moss Landing, CA 95039
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134jaha-ElkhornMooring C
Mooring Frame

SIZE	DWG. NO.	REV.
B	134jaha.DWG	2
SCALE 1:1	CAD FILE: tornado/chem/SWfiles	SHEET 6 OF 6