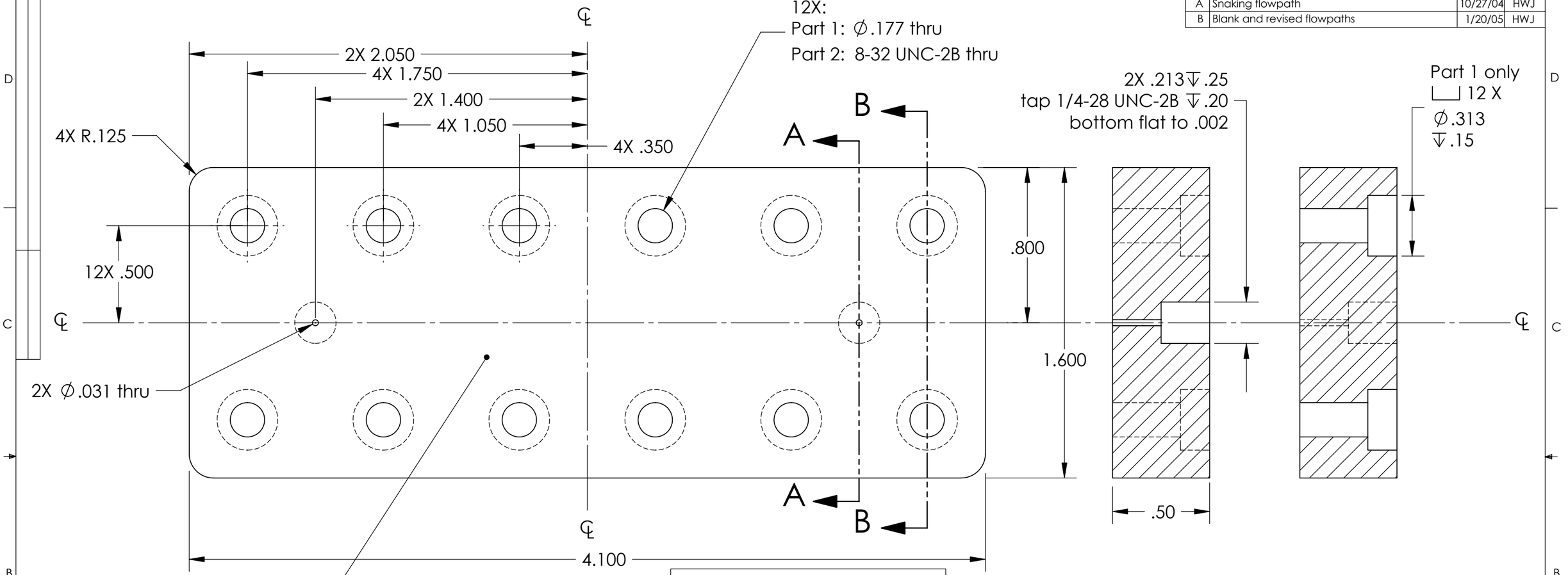
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	Snaking flowpath	10/27/04	HWJ
B	Blank and revised flowpaths	1/20/05	HWJ



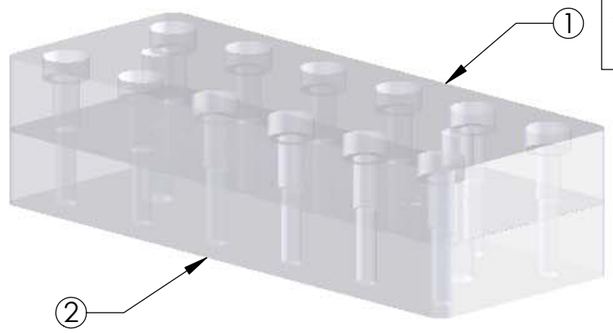
Note 7:
This surface flat to .002
Machine this surface in same setup as flowpath (see following pages for flowpaths).

Note 8:
Hole pattern symmetrical around both centerlines

Quantity:
1@ Part 1, Flowpath 3 Config A
1@ Part 2, Flowpath 3 Config A
1@ Part 2, Flowpath 3 Config B
1@ Part 1, Flowpath 4 Config A
1@ Part 2, Flowpath 4 Config A
1@ Part 2, Flowpath 4 Config B

SECTION A-A
SCALE 2 : 1

SECTION B-B
SCALE 2 : 1



Assembly

Item No.	Qty.	Part No.	Description	Material Specification
2	4@		Diffusion cell blank Bottom	Polysulfone (translucent)
1	2@		Diffusion cell blank Top	Polysulfone (translucent)

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 .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	9/15/04
ENGINEER	
CHECKED	JE 9/20/04 FS 1/31/05
PROJECT NO.	600144
PROJECT	Chemical Sensors
WEIGHT	

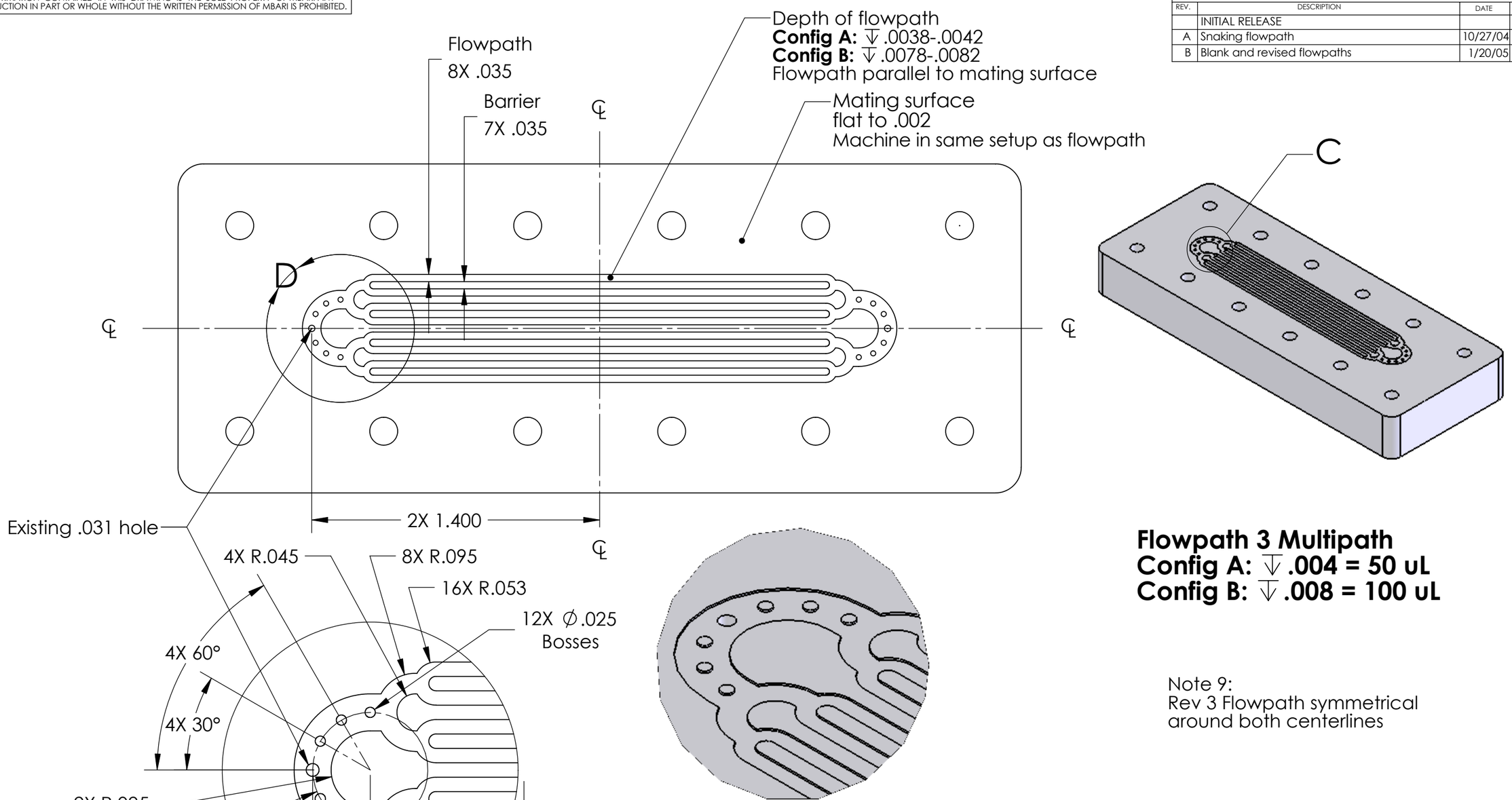
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

164jahaNH4manifoldRevB
Ammonia Diffusion Cell

SIZE	DWG. NO.	REV.
B	164jahaRevB.DWG	B

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

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	Snaking flowpath	10/27/04	HWJ
B	Blank and revised flowpaths	1/20/05	HWJ



DETAIL D
SCALE 4 : 1

DETAIL C
SCALE 6 : 1

Flowpath 3 Multipath
Config A: ⏬ .004 = 50 uL
Config B: ⏬ .008 = 100 uL

Note 9:
Rev 3 Flowpath symmetrical around both centerlines

Item No.	Qty.	Part No.	Description	Material Specification
2	4@		Diffusion cell blank Bottom	Polysulfone (translucent)
1	2@		Diffusion cell blank Top	Polysulfone (translucent)

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	9/15/04
Shop Foreman		1. DIMENSIONS ARE IN INCHES				ENGINEER	
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED	JE 9/20/04 FS 1/31/05
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	

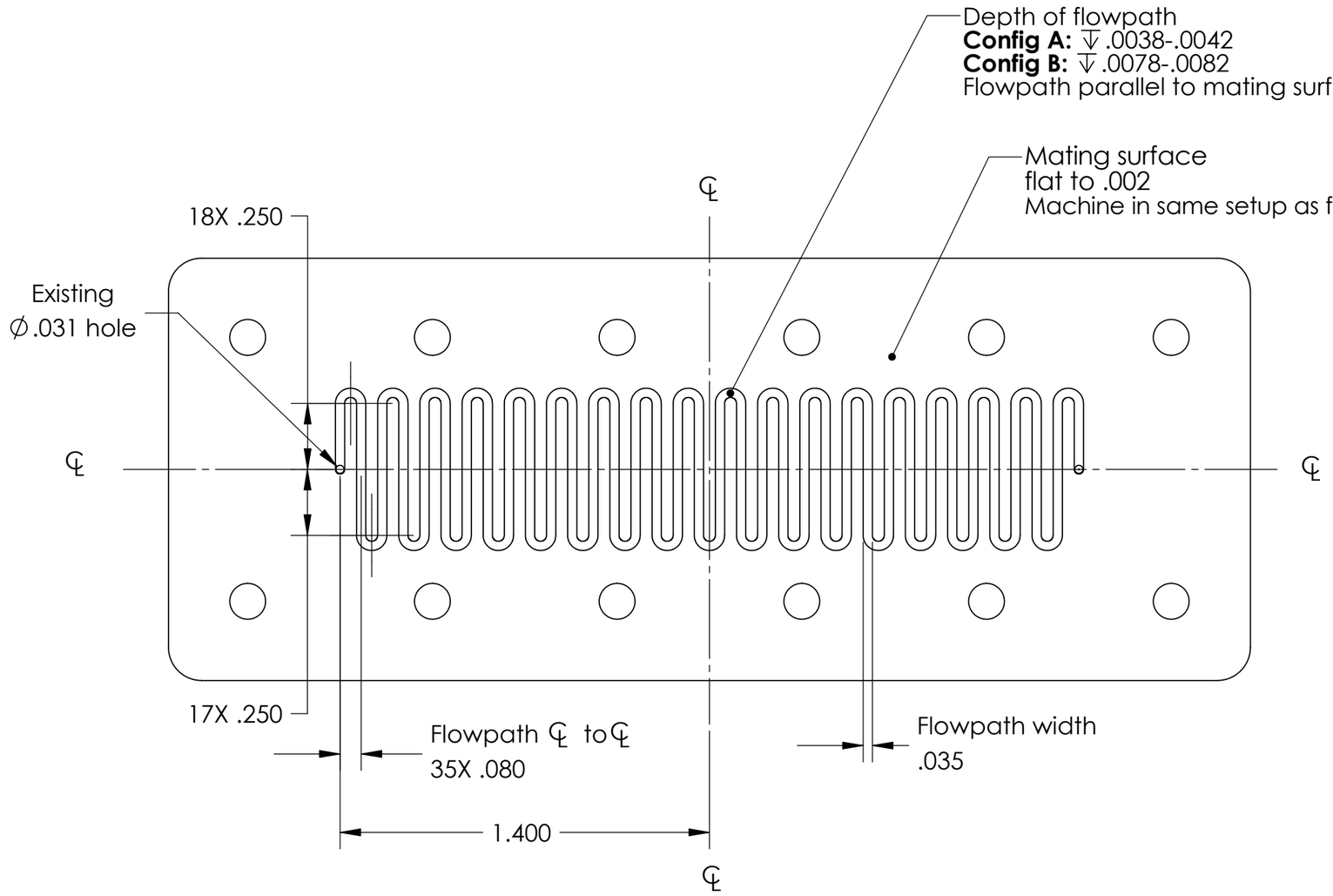
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

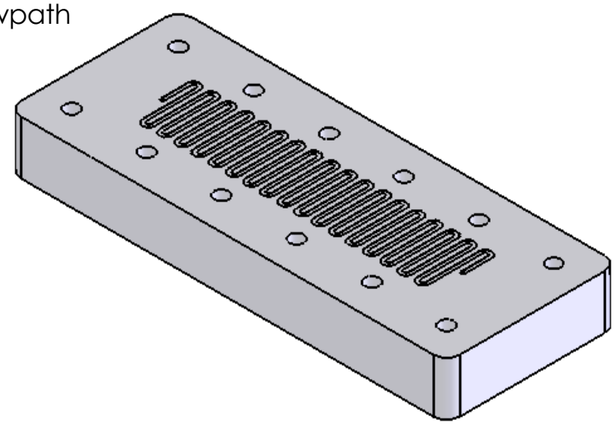
164jahaNH4manifoldRevB
Ammonia Diffusion Cell

SIZE	DWG. NO.	REV.
B	164jahaRevB.DWG	B

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

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		
A	Snaking flowpath	10/27/04	HWJ
B	Blank and revised flowpaths	1/20/05	HWJ





Flowpath 4 Single path
Config A: ⏬ .004 = 50 uL
Config B: ⏬ .008 = 100 uL

Note 10:
Rev 4 Flowpath symmetrical
around vertical centerline

Item No.	Qty.	Part No.	Description	Material Specification
2	4@		Diffusion cell blank Bottom	Polysulfone (translucent)
1	2@		Diffusion cell blank Top	Polysulfone (translucent)

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 .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	9/15/04
ENGINEER	
CHECKED	JE 9/20/04 FS 1/31/05
PROJECT NO.	600144
PROJECT	Chemical Sensors
WEIGHT	

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164jahaNH4manifoldRevB
Ammonia Diffusion Cell

SIZE	DWG. NO.	REV.
B	164jahaRevB.DWG	B

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