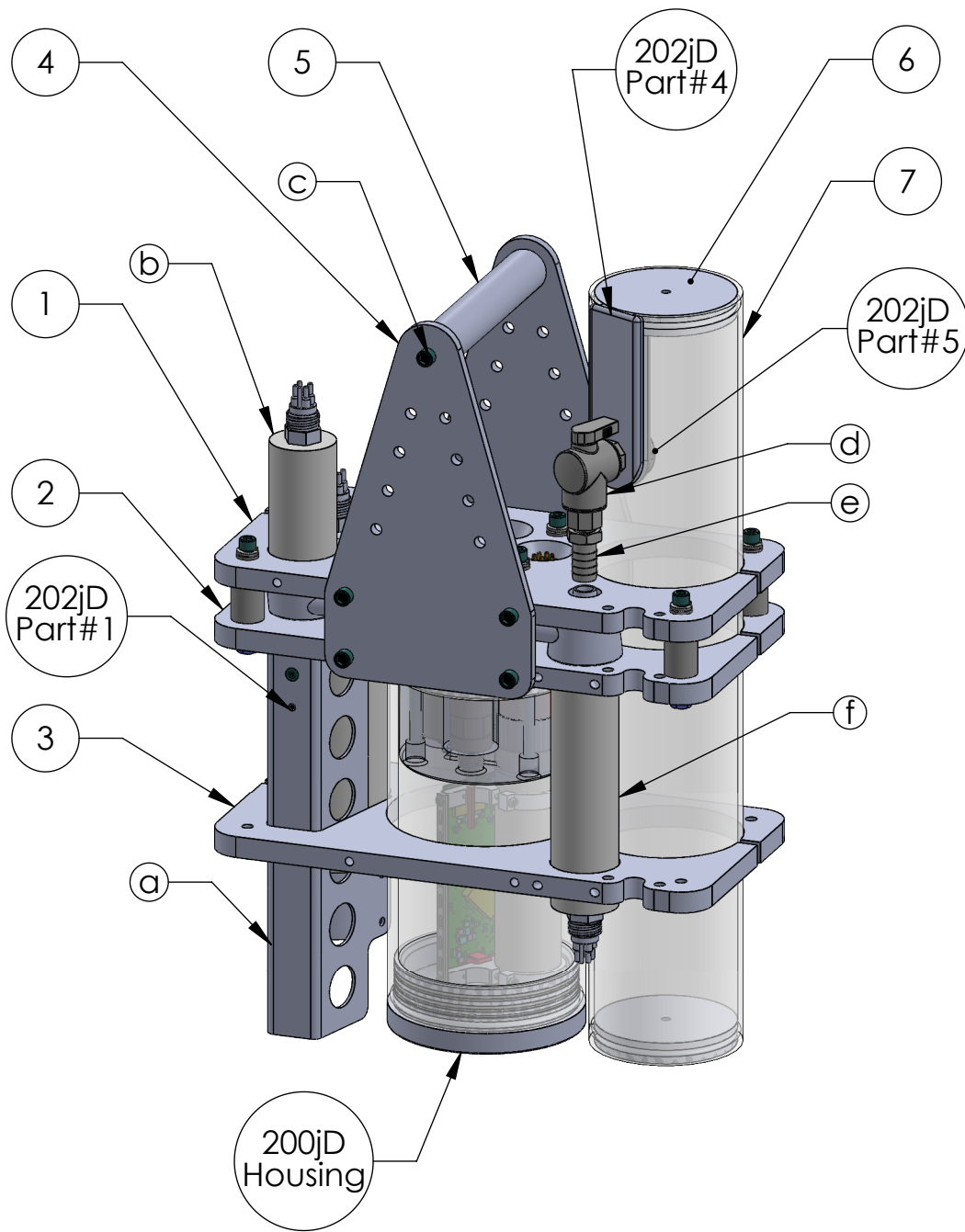
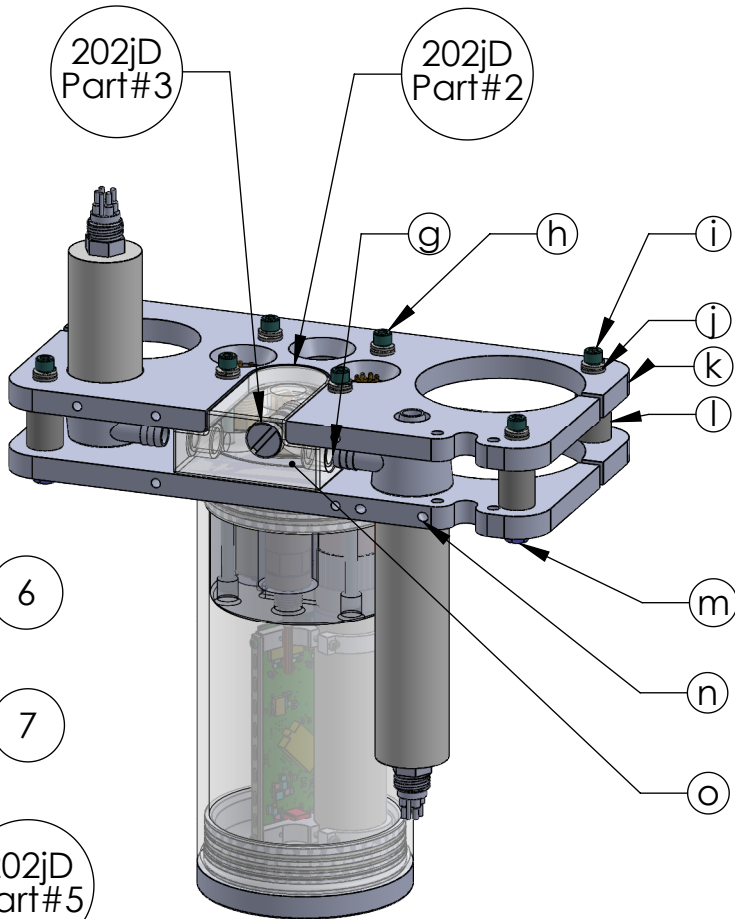


The information contained in this drawing is the sole property of jDesign. Any reproduction in part or whole without the written permission of jDesign is prohibited.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



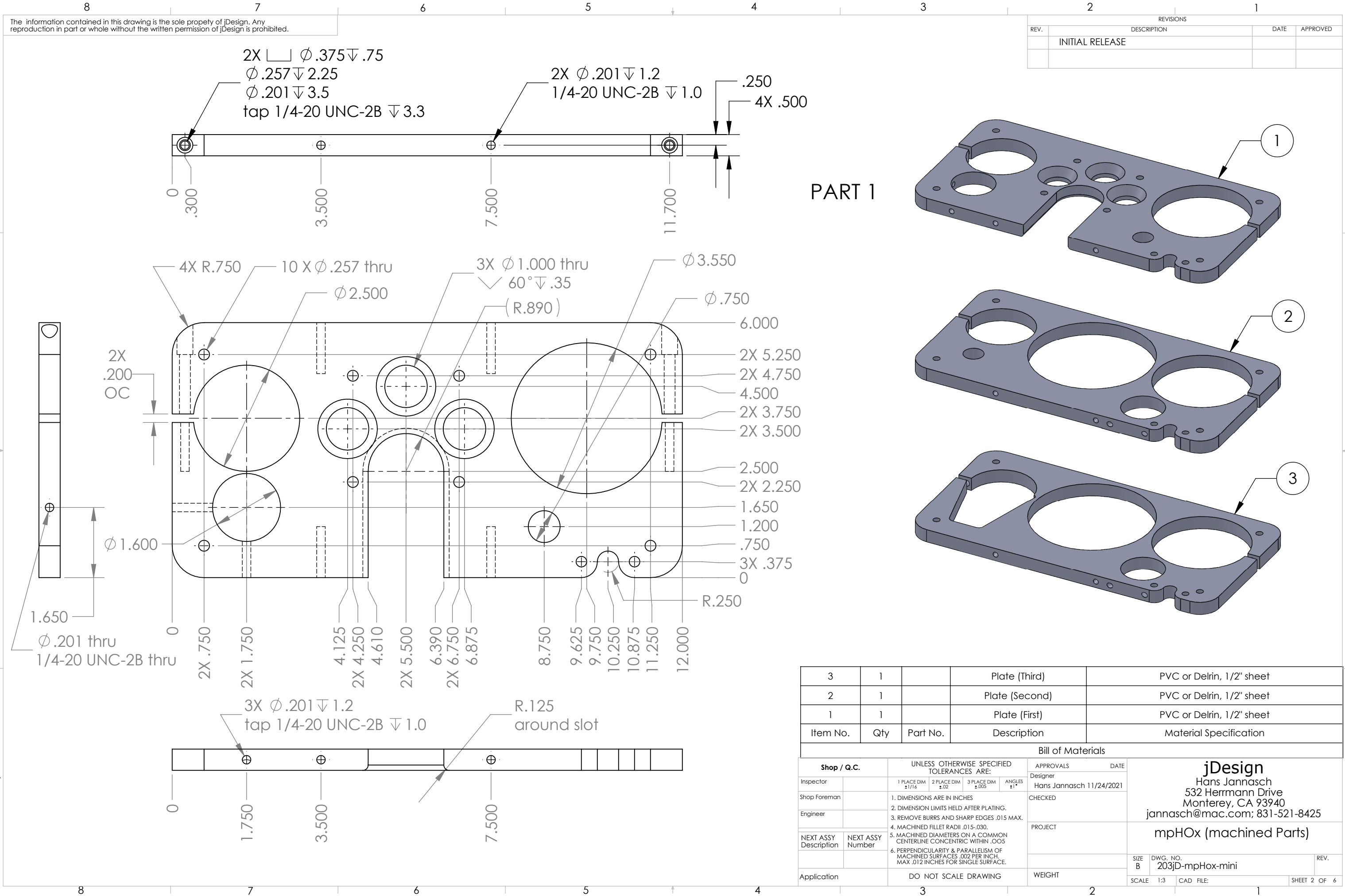
Machined Parts

Item No.	Qty	Part No.	Description	Material Specification
o	1		O-rings	STD fitting needs -014 and -020 O-rings (Silicone)
n	6		Checkvalve (parts)	Mcmaster 47155K71 (use only internal parts)
m	4		soft-tipped setscrews	McMaster 90291A537
l	4		Nuts	1/4-20 SS nuts
k	4		Spacers	McMaster 92825A147
j	4		Clamping screws	1/4-20 x 2.5" SS socket head
i	14		Flat and spring washers	for 1/4" screws (SS)
h	4		Plate screws	1/4-20 x 2.5" SS socket head
g	4		Housing screws	1/4-20 x 2.25" SS socket head
f	4		Connecting tubes	Tygon 1/2" ID, 5/8" OD (1/16" wall)
e	1		STD Pump	Seabird 5P
d	2		Barb fitting	McMaster 5372K123
c	1		STD Valve	McMaster 45975K51
b	10		Handle screws	1/4-20 x 1" Socket heads
a	1		Sample Pump	Seabird 5M
	1		CTD	Seabird 37si
Bill of Materials: Other Parts				

Item No.	Qty	Part No.	Description	Material Specification
7	1		STD tube	Clear UV-resistant Acrylic Tube (McMaster 8532K49)
6	2		STD Cap	PVC or Delrin, 1/2" sheet
5	1		Handle	PVC or Delrin, 1" rod
4	2		Handle Plate	PVC or Delrin, 1/4" sheet
3	1		Plate (Third)	PVC or Delrin, 1/2" sheet
2	1		Plate (Second)	PVC or Delrin, 1/2" sheet
1	1		Plate (First)	PVC or Delrin, 1/2" sheet
Bill of Materials: Machined parts				

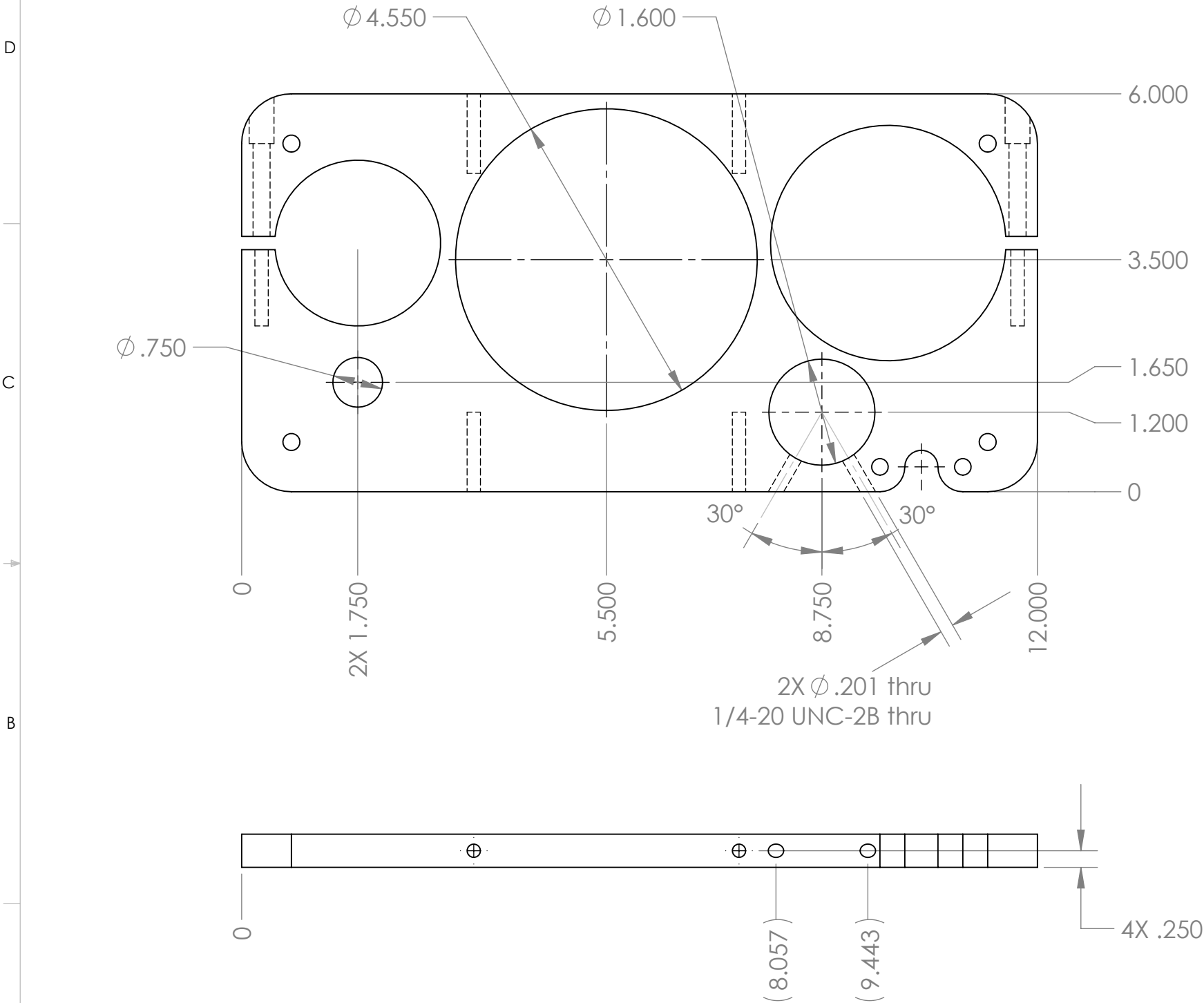
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS		DATE	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	Designer	Hans Jannasch 11/24/2021
Shop Foreman		1. DIMENSIONS ARE IN INCHES				CHECKED	
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.					
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.					
		4. MACHINED FILLET RADII .015-.030.					
NEXT ASSY Description	NEXT ASSY Number	5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005				PROJECT	
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.					
Application		DO NOT SCALE DRAWING		WEIGHT		SIZE B	DWG. NO. 203jD-mpHox-mini
						SCALE 1:3	CAD FILE: SHEET 1 OF 6

jDesign
Hans Jannasch
532 Herrmann Drive
Monterey, CA 93940
jannasch@mac.com; 831-521-8425
mpHox (machined Parts)

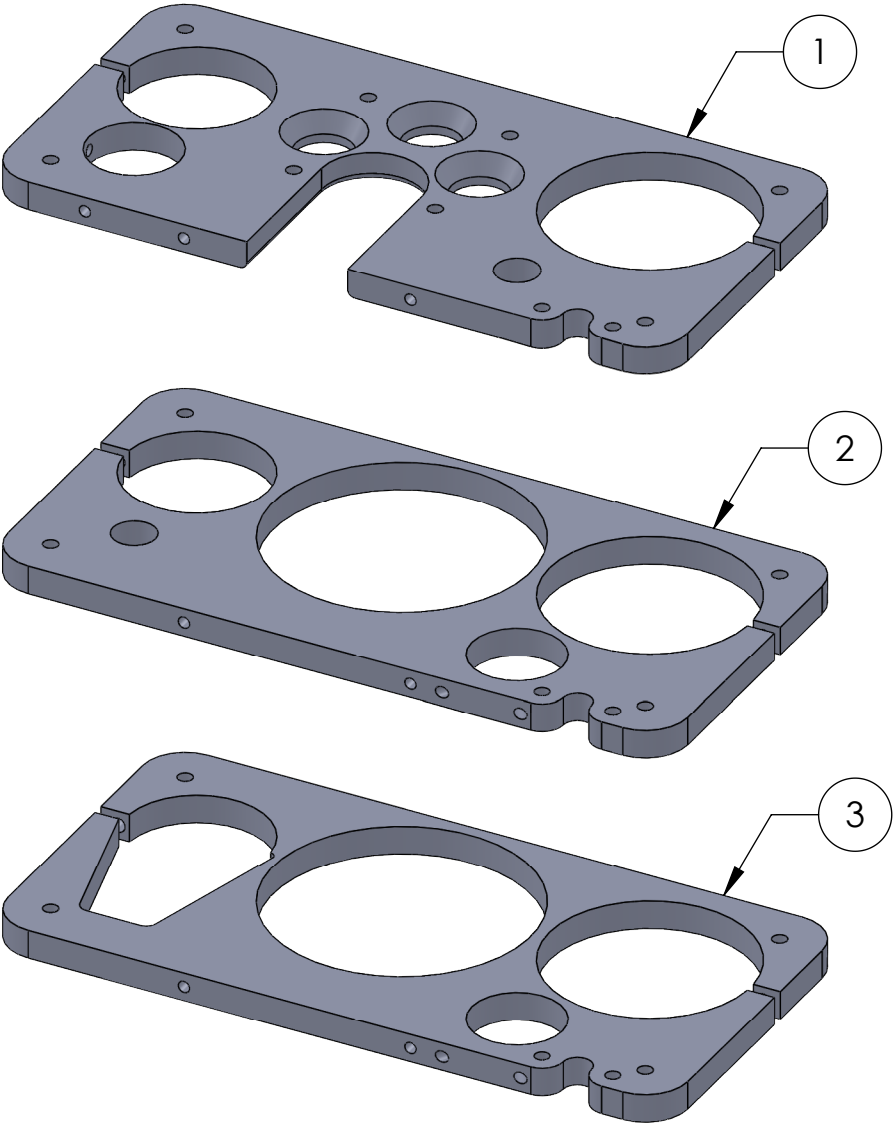


The information contained in this drawing is the sole property of jDesign. Any reproduction in part or whole without the written permission of jDesign is prohibited.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



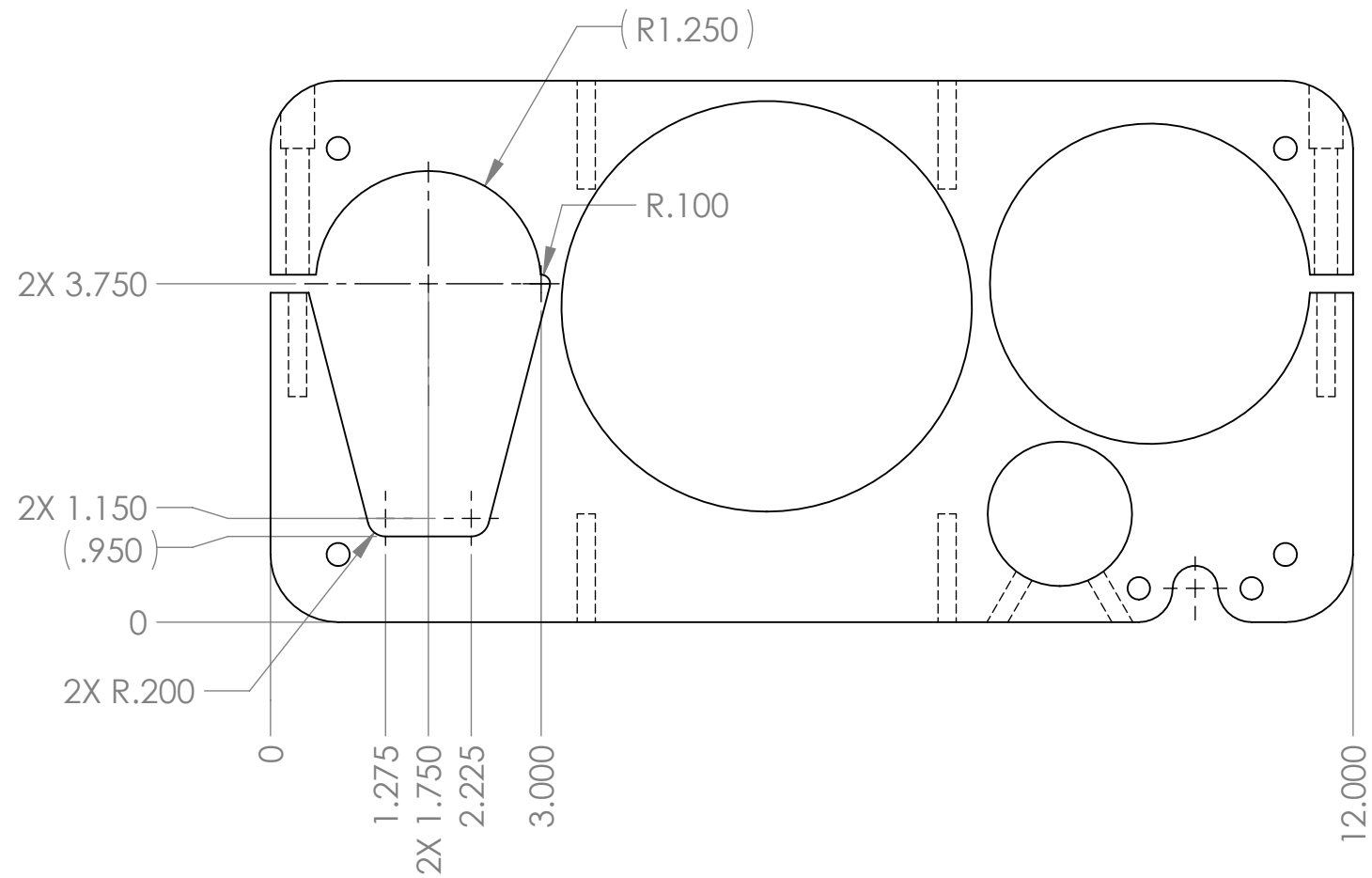
PART 2



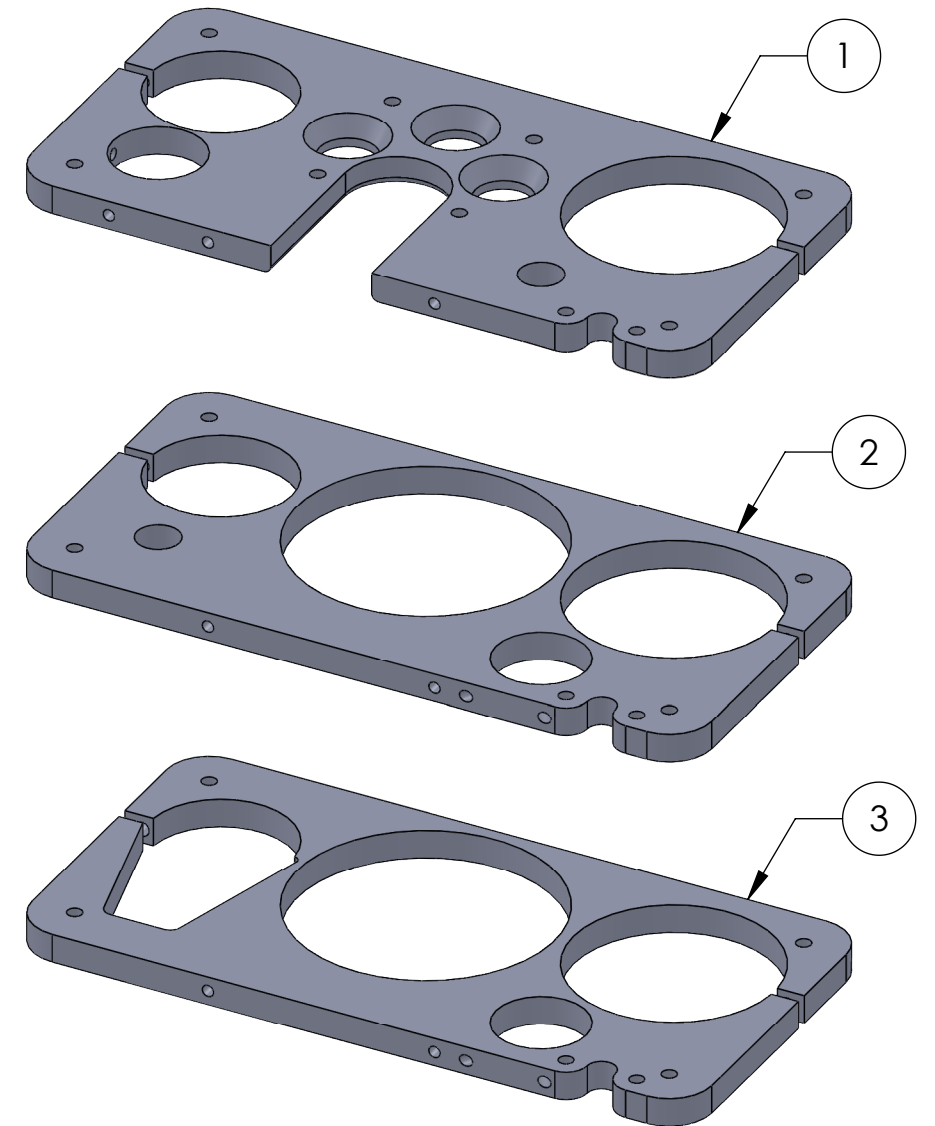
2	1		Plate (Second)	PVC or Delrin, 1/2" sheet				
Item No.	Qty	Part No.	Description	Material Specification				
Bill of Materials								
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		jDesign Hans Jannasch 532 Herrmann Drive Monterey, CA 93940 jannasch@mac.com; 831-521-8425 mpHOx (machined Parts)				
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02		APPROVALS DATE Designer Hans Jannasch 11/24/2021			
Shop Foreman		1. DIMENSIONS ARE IN INCHES			CHECKED			
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.			PROJECT			
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.						
		4. MACHINED FILLET RADII .015-.030.						
NEXT ASSY Description	NEXT ASSY Number	5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005		SIZE B	DWG. NO. 203jD-mpHox-mini	REV.		
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.						
Application		DO NOT SCALE DRAWING		WEIGHT		SCALE 1:3	CAD FILE:	SHEET 3 OF 6
		3		2			1	

The information contained in this drawing is the sole property of jDesign. Any reproduction in part or whole without the written permission of jDesign is prohibited.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



ALL OTHER DIMENSIONS SAME AS PART 1 and 2

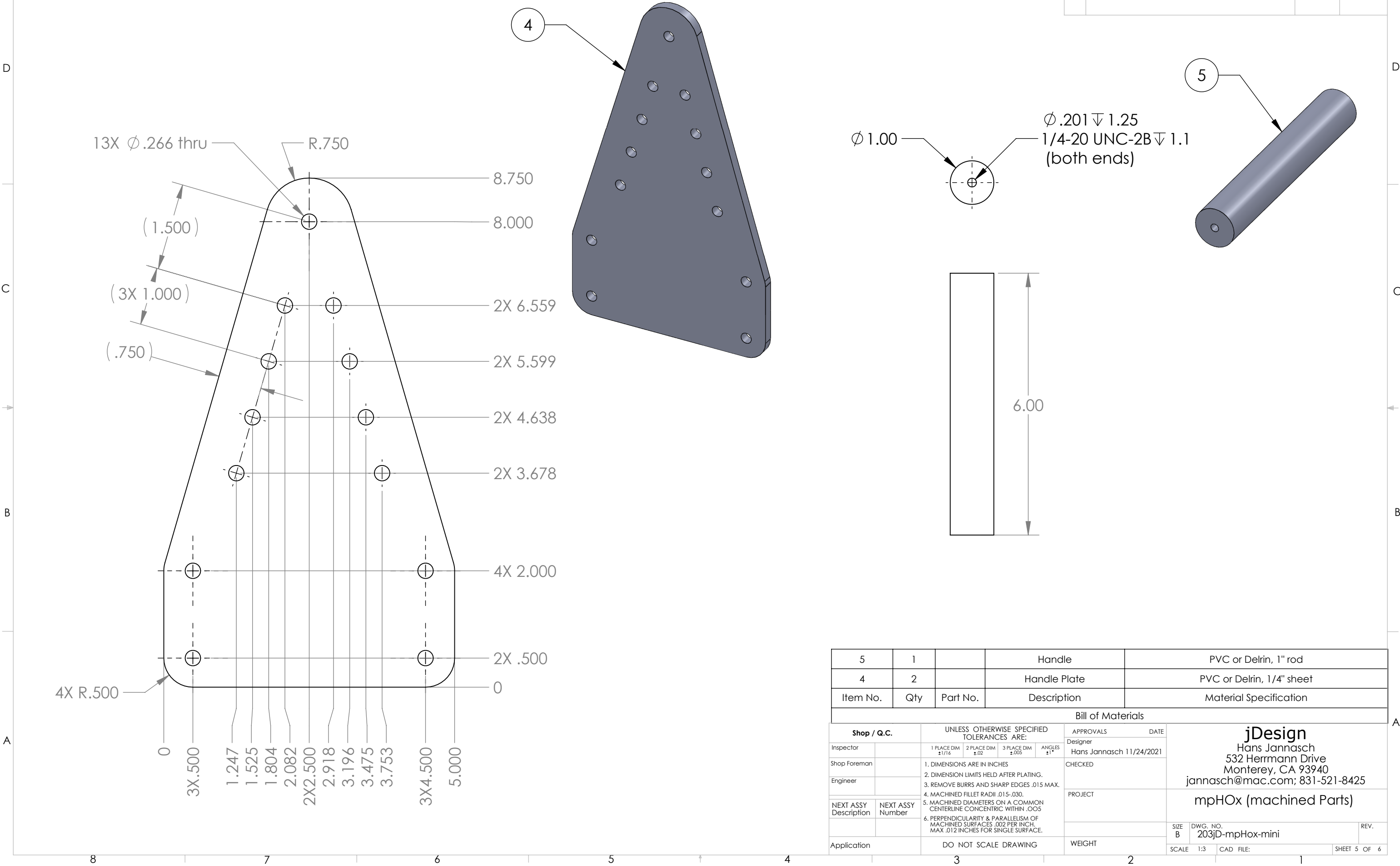


PART 3

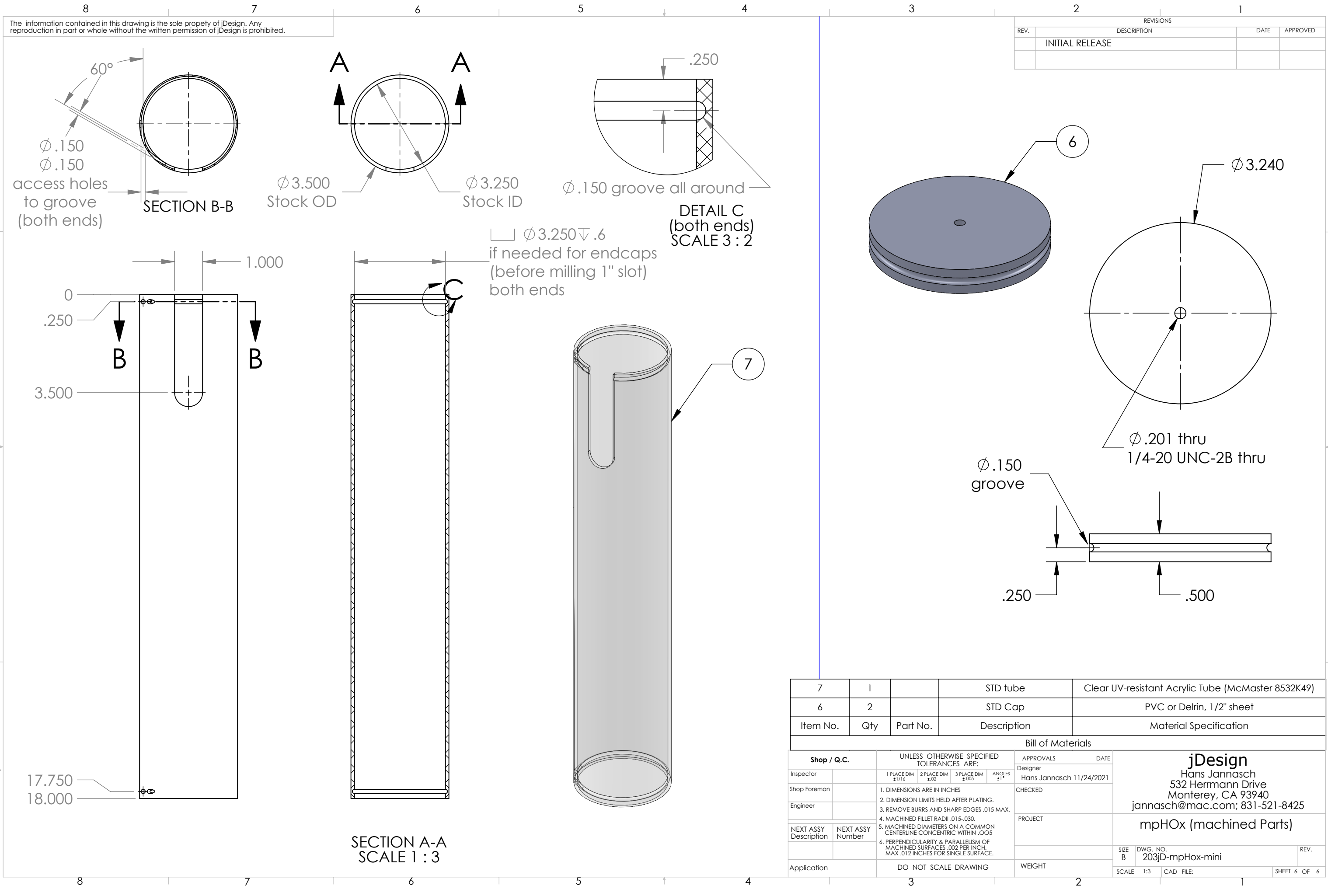
3	1		Plate (Third)	PVC or Delrin, 1/2" sheet
Item No.	Qty	Part No.	Description	Material Specification
Bill of Materials				
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005
Shop Foreman		1. DIMENSIONS ARE IN INCHES		DESIGNER Hans Jannasch 11/24/2021
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.		CHECKED
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		
		4. MACHINED FILLET RADII .015-.030.		PROJECT
NEXT ASSY Description	NEXT ASSY Number	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
		3		2
				1

The information contained in this drawing is the sole property of jDesign. Any reproduction in part or whole without the written permission of jDesign is prohibited.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



5	1		Handle	PVC or Delrin, 1" rod
4	2		Handle Plate	PVC or Delrin, 1/4" sheet
Item No.	Qty	Part No.	Description	Material Specification
Bill of Materials				
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		jDesign Hans Jannasch 532 Herrmann Drive Monterey, CA 93940 jannasch@mac.com; 831-521-8425 mpHOx (machined Parts)
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	
Shop Foreman		3 PLACE DIM ±.005	ANGLES ±1°	
Engineer		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .015-.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.		
NEXT ASSY Description	NEXT ASSY Number			
Application		DO NOT SCALE DRAWING		
APPROVALS		DATE		SCALE 1:3 CAD FILE: SHEET 5 OF 6
Designer		Hans Jannasch 11/24/2021		
CHECKED				
PROJECT				
WEIGHT				
SIZE B		DWG. NO. 203jD-mpHox-mini		REV.



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		

7	1		STD tube	Clear UV-resistant Acrylic Tube (McMaster 8532K49)
6	2		STD Cap	PVC or Delrin, 1/2" sheet
Item No.	Qty	Part No.	Description	Material Specification

Bill of Materials											
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS		DATE		jDesign Hans Jannasch 532 Herrmann Drive Monterey, CA 93940 jannasch@mac.com; 831-521-8425 mpHOx (machined Parts)	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	Designer Hans Jannasch 11/24/2021					
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 .015-.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.				CHECKED					
Engineer						PROJECT					
NEXT ASSY Description	NEXT ASSY Number										
Application		DO NOT SCALE DRAWING				WEIGHT		SIZE B	DWG. NO. 203jD-mpHox-mini	REV.	
								SCALE 1:3	CAD FILE:	SHEET 6 OF 6	