

ITEM	PART NUMBER	SUFFIX	QTY	UH	DESCRIPTION
1	V0494018		2	EA	FLANGE 48 1/4" I.D. GROOVED
2	V0494B4P2		1	EA	SHELL, 304/304L SST. 1/4"
3	V049H308		3	EA	HALF NIPPLE, SST, 304L CONFLAT, 16 1/2" O.D.x14" O.D. TUBEx1/4" WT
4	V0494080G3		1	EA	SHIPPING COVER ASSY
5	V0494159		2	EA	LIFTING LUG
6	202666		3	EA	BLANK CONFLAT, SST 304L, 16 1/2" O.D.
7	202670		3	EA	GASKET, COP COPM, CONFLAT, 16 1/2" O.D.
8	V049M780		36	EA	BOLT, 18-8 SST, HEX HD, 3/8"-16x3" LG
9	202678		24	EA	BOLT, SA 193 B7, HEX, 7/8-9UNCx4" LG
10	202679		24	EA	NUT, SA 194 B7, HEX, 7/8-9UNC
11	202581		3	EA	WASHER, STL, 1 3/4 O.D.x15/16 I.D.x1/4 THK
12	V049M024		2	EA	O-RING, VITRON, (PER SPEC V049-2-045)
13	V049M025		2	EA	O-RING, VITRON, (PER SPEC V049-2-045)
14	V049M783		36	EA	NUT, SILICON BRZ HEX HD 3/8"-16x3" LG
15	V049M786		72	EA	WASHER, 18-8 SST, FLAT 3/8"
16	V0494061		2	EA	ELBOW ASSY
17	V049M742		1	EA	PSI NAME PLATE, 2" X 3"

* ELECTROLESS NICKEL PLATE

NOTES:

14. WDS NO'S. REFER TO WELD DATA SPEC. V049-2-084.
13. CONFLAT FLANGES ARE TO HAVE PROTECTIVE COVERS AT ALL TIMES DURING & AFTER MANUFACTURING.
12. EACH FINISHED SHELL IS TO BE MARKED WITH A SEQUENTIAL PSI SERIAL NUMBER. THE NUMBER IS TO BE MADE FROM THE DRAWING PLUS THE SEQUENTIAL NUMBER. V0494B4-01, 02 ETC.
11. PLATES PRIOR TO ROLLING MUST HAVE DIAGONAL CORNER TO CORNER DIMENSIONS WITHIN 1/16" OF EACH OTHER.
10. MACHINING & ROLLING PER SPEC V049-2-136.
9. LEAK TEST & METHOD PER SPEC V049-2-014
8. CERTIFIED MANUFACTURER'S MATERIAL TEST REPORTS REQUIRED, AS NOTED.
7. BOLT HOLES OF ALL FLANGES TO STRADDLE VERTICAL CENTERLINE, +/- .015
6. CLEAN PER SPEC V049-2-015
5. DO NOT USE CARBON STEEL BRUSHES OR BRUSHES CONTAMINATED WITH CARBON STEEL ON STAINLESS OR ALUMINUM MATERIAL.
4. THE CENTER LINES OF ALL SHELLS AND FLANGES ARE TO LIE ON THE COMMON CENTER LINE WITHIN +/- 1/16.
3. SPOOL FABRICATION TO BE IN ACCORDANCE WITH SPEC V049-2-097.
2. FOR FLANGE DETAILS SEE DWG V049-4-018
1. THESE FLANGES EACH INCLUDE AN ANNULAR CHANNEL BETWEEN O-RINGS, MANIFOLD TO A SINGLE PUMPOUT PORT ON EACH CHAMBER, SEE DWG V049-4-061

RAYMOND D. CIATTO
 REG. No. 26750
 REGISTERED
 PROFESSIONAL
 ENGINEER
 CIVIL ENGINEERING
 STATE OF MASSACHUSETTS
 EXPIRES 5/1/97
 5/28/97

TAG NO'S: B-4, WB-4A

APPROX. WEIGHT: 1195#

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DWG NO	DESCRIPTION	DWG NO	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL: ± .01
 ANGULAR: ± 10°-30° BEND ± 2°
 TWO PLACE DECIMAL: ± .03
 THREE PLACE DECIMAL: ± .015
 FINISHED SURFACE RMS
 BREAK CORNERS IN
 REMOVE ALL BURRS

DO NOT SCALE THIS DRAWING
 USED ON:
 NEXT ASSY:

REV	DESCRIPTION	CHKD	DRWN	DATE	DESN
4	REISSUED FOR FAB/SHIPPING AS NOTED				
3	REISSUED FOR FABRICATION				
2	DESIGN UPDATE/ISSUED FOR FABRICATION				
1	DESIGN UPDATE / FABRICATION (SHELL ONLY)				
0	ISSUED FOR FDR				
P1	PRELIMINARY DESIGN UPDATE				

PROCESS SYSTEMS INTERNATIONAL, INC.
 20 WALKUP DR WESTBOROUGH, MASSACHUSETTS 01581 USA

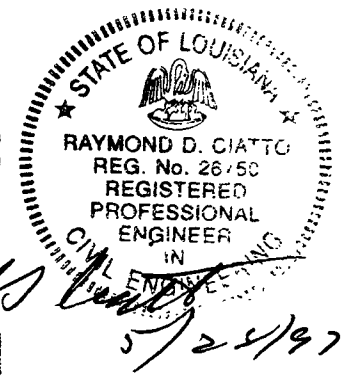
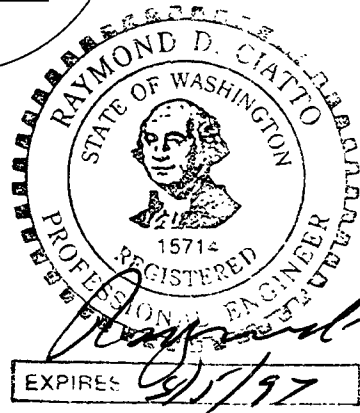
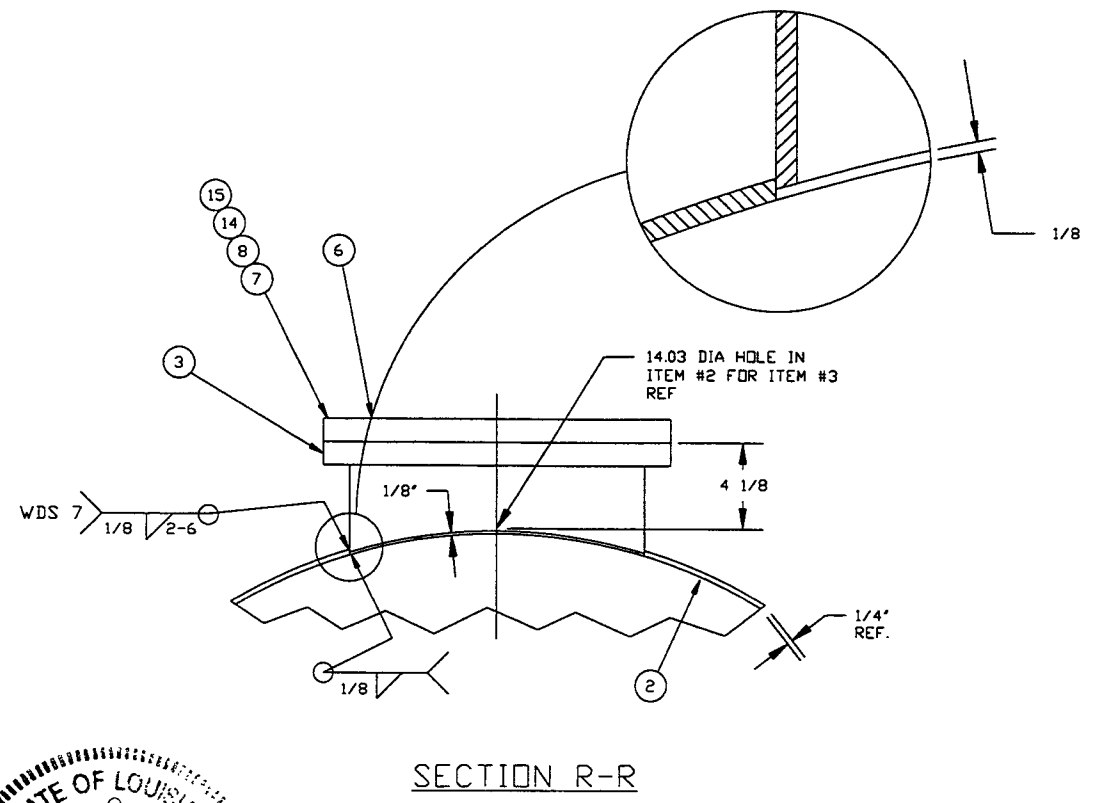
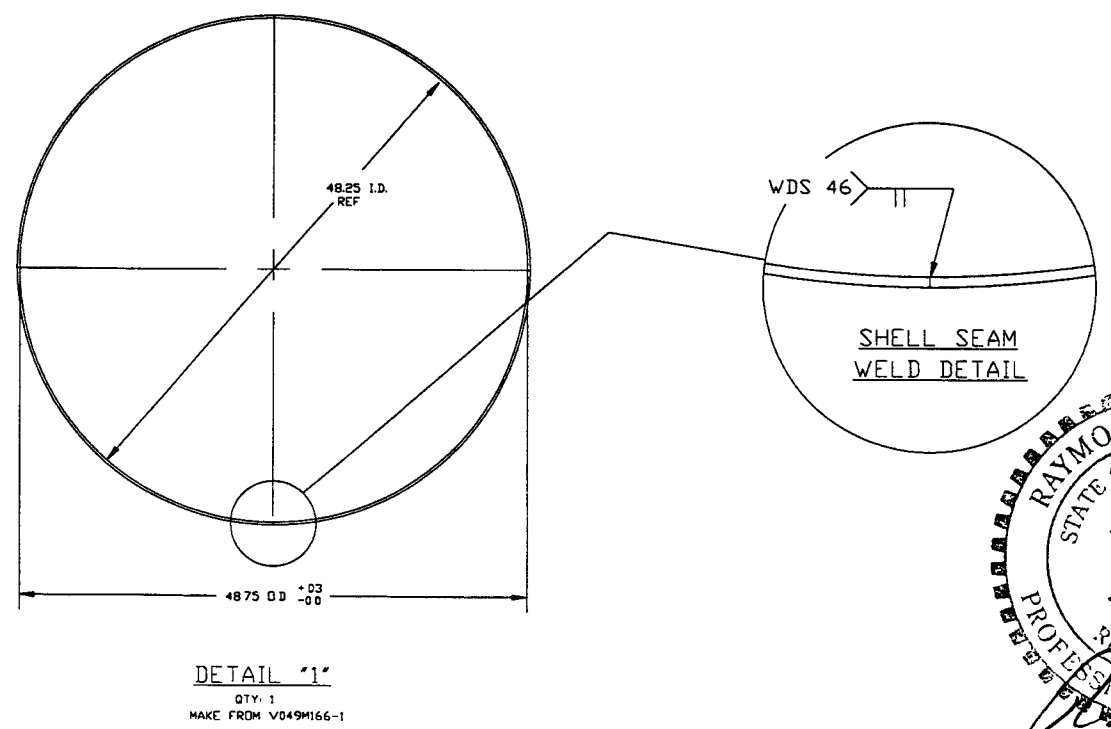
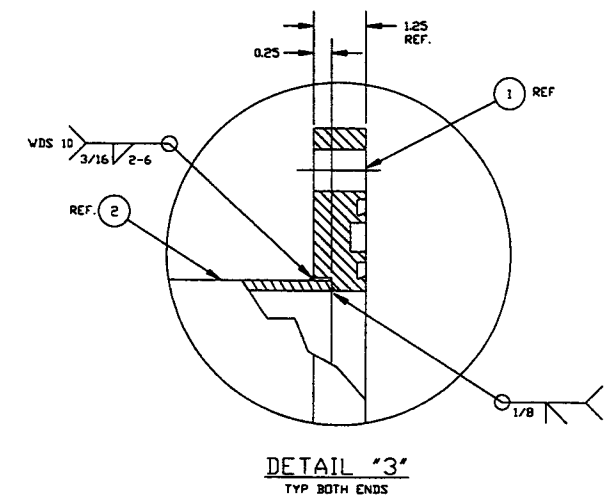
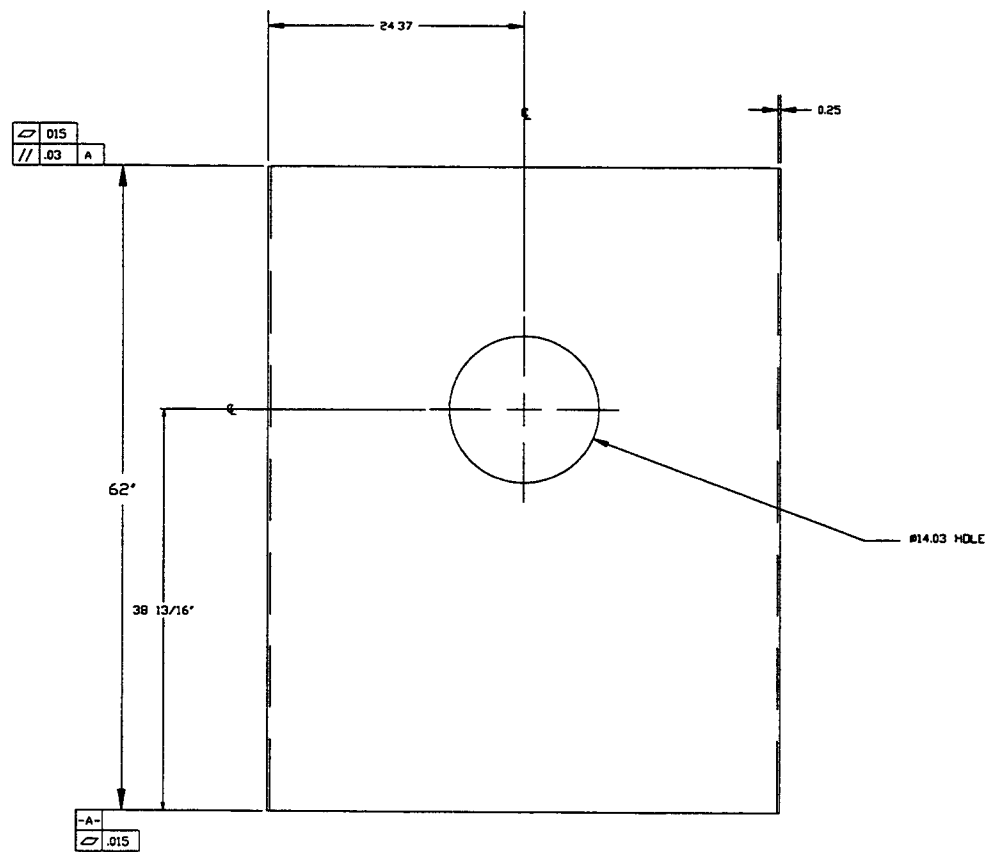
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 PV 11/18/96 0180
 PV 10/9/96 0339
 PV 10/1/96 0283
 DA 4/29/96 0146
 PV 3/20/96

CAD FILE 484S1
 SIZE D
 DWG NO. V049-4-B4
 REV 4

SCALE 1 1/2"=1'-0"
 SHEET 1 OF 2

LIGO-D961154-04-V

May 27, 1997 - 10:43:51



PROCESS SYSTEMS INTERNATIONAL INC. 20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA			
SPOOL B-4 48.25" I.D. LIGD VACUUM EQUIPMENT			
CAD FILE 4B4S2	SIZE D	ENG. NO. V049-4-B4	REV 4
SCALE AS NOTED		SHEET 2 OF 2	

EXPIRES 5/24/97

MAY 27 1997 - 10 4448