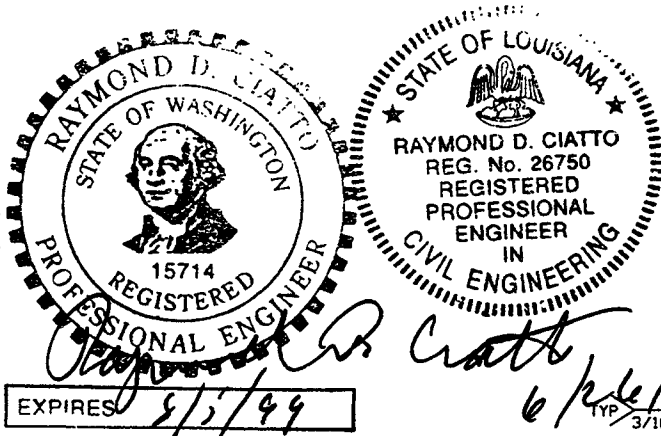


NOTES:

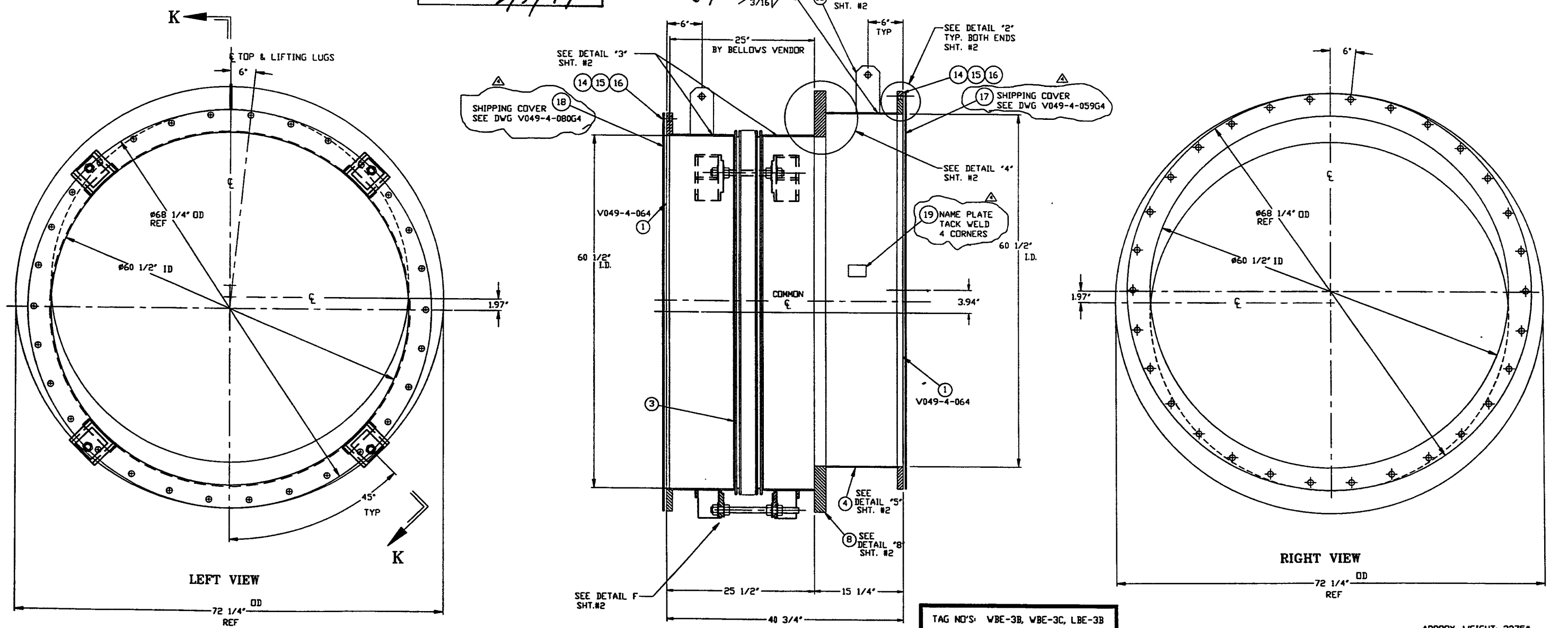
12. WDS NO'S. REFER TO WELD DATA SPEC. V049-2-084
11. EACH FINISHED SHELL IS TO BE MARKED WITH A SEQUENTIAL PSI SERIAL NUMBER. THE NUMBER IS TO BE MADE FROM THE DRAWING PLUS THE SEQUENTIAL NUMBER V0494BE3-01, -02 ETC
10. PLATES PRIOR TO ROLLING MUST HAVE DIAGONAL CORNER TO CORNER DIMENSIONS WITHIN 1/16" OF EACH OTHER
9. MACHINING & ROLLING PER SPEC V049-2-136.
8. TIGHTEN TIE-ROD NUTS WITH BELLOWS IN 'FREE' POSITION TO 100 FT-LBS PRIOR TO LEAK TEST.
7. LEAK TEST & METHOD PER PSI SPEC: V049-2-014
6. CERTIFIED MANUFACTURER'S MATERIAL TEST REPORTS REQUIRED, AS NOTED.
5. BOLT HOLES OF ALL FLANGES TO STRADDLE VERTICAL CENTERLINE ± .015.
4. CLEAN PER SPEC: V049-2-015
3. DO NOT USE CARBON STEEL BRUSHES OR BRUSHES CONTAMINATED WITH CARBON STEEL ON STAINLESS OR ALUMINUM MATERIAL.
2. SPOOL FABRICATION TO BE IN ACCORDANCE WITH SPEC. V049-2-097.
1. FOR FLANGE DETAILS SEE DWG. V049-4-064



ITEM	PART NUMBER	SUFFIX	QTY	UM	DESCRIPTION
17	V0494059G4		1	EA	SHIPPING COVER ASSY
18	V0494080G4		1	EA	SHIPPING COVER ASSY
20	V049M740		1	EA	PSI NAME PLATE, 2' X 3'
21					
22					
23					
24					
25					
26					

ITEM	PART NUMBER	SUFFIX	QTY	UM	DESCRIPTION
1	V0494064		2	EA	60.5" ID FLANGE DETAIL (FLAT)
2					
3	V0494BE3P1		1	EA	BELLOWS ASSY (PER SPEC V049-2-017)
4	V0494BE3P4		1	EA	60.5" ID SHELL, 304/304L SST, .375" THK
5					
6	***	3	4	EA	ROD, THRD, A36, 1 1/4"-7UNC X 20" LG.
7	***	1	25	FT	8" X 6" X .38" THK RECT. TUBING, 304 SST
8	V0494BE3P8		1	EA	UNION, 1" THK, 304L SST
9	***	3	16	EA	NUT, HEX, 1 1/4"-7UNC A563 GR-A
10	***	3	16	EA	WASHER, 4" X 2 1/2" X 1/4", STL A588
11	***	3	8	EA	WASHER PLATE, 5" X 3" X 1", STL A588
12	***	1	8	EA	PLATE, 304 SST, 6 1/2" X 2" X 1/2" THK.
13	V049H852		3	1	FT BAR, FLAT, 304 SST, 4" X 3/8" THK
14	202678		3	60	EA BOLT, SA193B7, HEX, 7/8"-9UNC X 4" LG.
15	202679		3	60	EA NUT, SA194 2H, HEX, 7/8"-9UNC
16	202581		3	180	EA WASHER, STL, 1 3/4" OD X 15/16" ID X 1/4" THK.

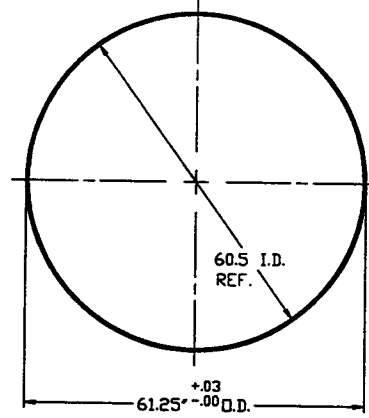
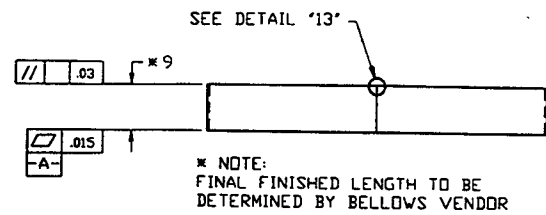
* ELECTROLESS NICKEL PLATE
 *** SUPPLIED BY BELLOWS VENDOR



TAG NO'S: WBE-3B, WBE-3C, LBE-3B

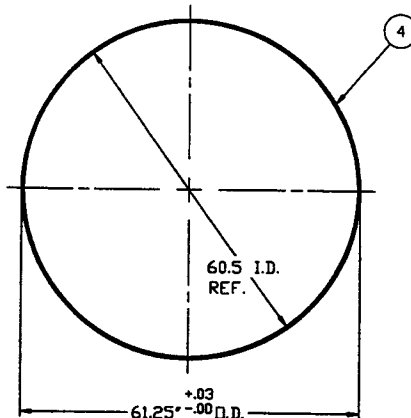
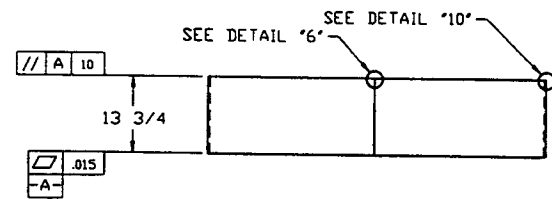
APPROX. WEIGHT: 2275#

<p>SECRETARY AND CONFIDENTIAL</p> <p>THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION BELONGING TO PROCESS SYSTEMS INTERNATIONAL, INC. OR ITS AFFILIATED COMPANIES AND SHALL BE USED ONLY FOR THE PURPOSE FOR WHICH IT WAS SUPPLIED. IT SHALL NOT BE REPRODUCED OR OTHERWISE DISCLOSED IN WHOLE OR IN PART TO OTHERS EXCEPT IN ACCORDANCE WITH THE TERMS OF ANY AGREEMENT UNDER WHICH IT WAS SUPPLIED OR WITH THE PRIOR WRITTEN CONSENT OF PROCESS SYSTEMS INTERNATIONAL, INC. AND SHALL BE RETURNED UPON REQUEST.</p>		<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</p> <p>TOLERANCES: FRACTIONAL ± .3 DECIMAL APPROX ±.02 HOLE ±.01 TWO PLACE DECIMAL ± .02 THREE PLACE DECIMAL ± .015 FINISHED SURFACE DIMS BREAK CORNERS BY .015 REMOVE ALL BURRS</p> <p>DO NOT SCALE THIS DRAWING</p> <p>USED ON: _____</p> <p>NEXT ASSY: _____</p>		<table border="1"> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>ISSUE DESCRIPTION</th> </tr> <tr> <td>4</td> <td>REISSUED FOR FAB/SHIPPING AS NOTED</td> <td></td> </tr> <tr> <td>3</td> <td>DESIGN UPDATE/ISSUED FOR FABRICATION</td> <td></td> </tr> <tr> <td>2</td> <td>FABRICATION (SHELL ONLY)</td> <td></td> </tr> <tr> <td>1</td> <td>DESIGN UPDATE/FABRICATION (BELLOWS ASSY. ONLY)</td> <td></td> </tr> <tr> <td>0</td> <td>ISSUED FOR FDR</td> <td></td> </tr> </table>		REV	DESCRIPTION	ISSUE DESCRIPTION	4	REISSUED FOR FAB/SHIPPING AS NOTED		3	DESIGN UPDATE/ISSUED FOR FABRICATION		2	FABRICATION (SHELL ONLY)		1	DESIGN UPDATE/FABRICATION (BELLOWS ASSY. ONLY)		0	ISSUED FOR FDR		<p>PROCESS SYSTEMS INTERNATIONAL, INC. 20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA</p> <p>OFFSET SPOOL BE-3 60 1/2" ID X 60 1/2" ID LIGO VACUUM EQUIPMENT</p> <p>CAD FILE: V0494BE3S1 SIZE: D DWG. NO.: V049-4-BE3 REV: 4</p> <p>SCALE: NONE SHEET: 1 OF 2</p>	
REV	DESCRIPTION	ISSUE DESCRIPTION																							
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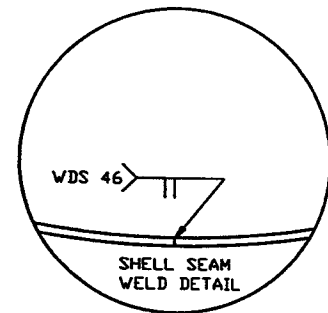
DETAIL '3'
QTY. 2

MAKE FROM V049M177-1

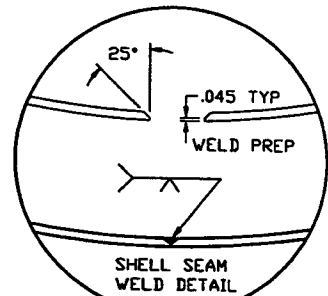


DETAIL '5'
QTY. 1

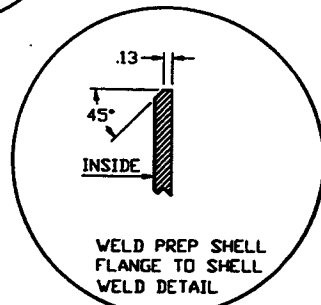
MAKE FROM V049M177-1



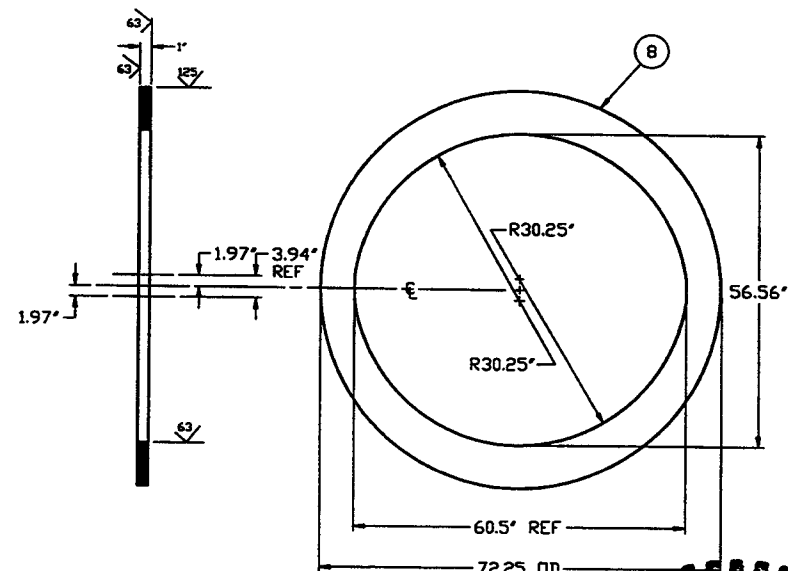
DETAIL '6'



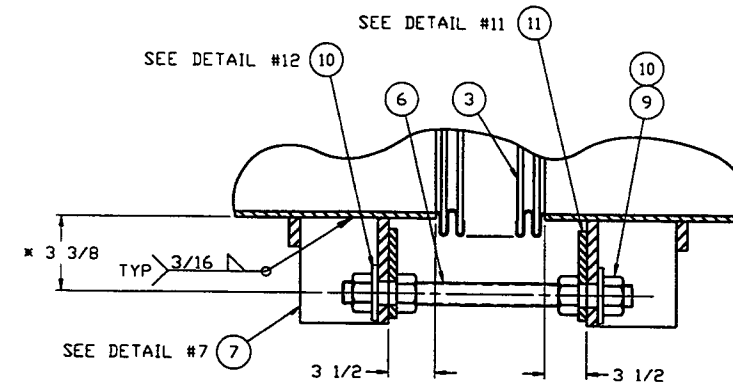
DETAIL '13'



DETAIL '10'

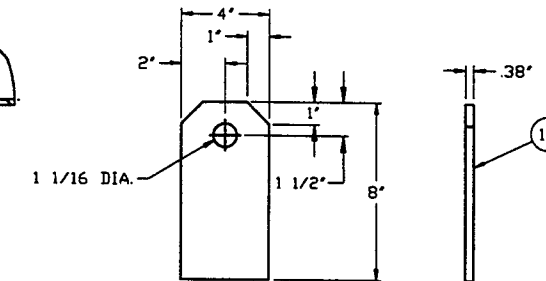


DETAIL '8'
QTY. 1
MAKE FROM V049M255

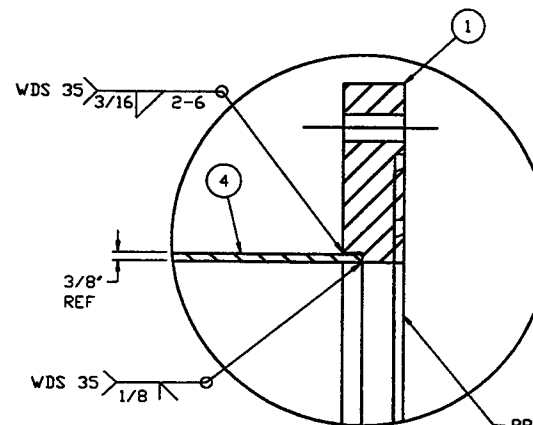


* NOTE:
THIS DIMENSION TO BE HELD
WHEN BELLOWS IS ACTIVE.

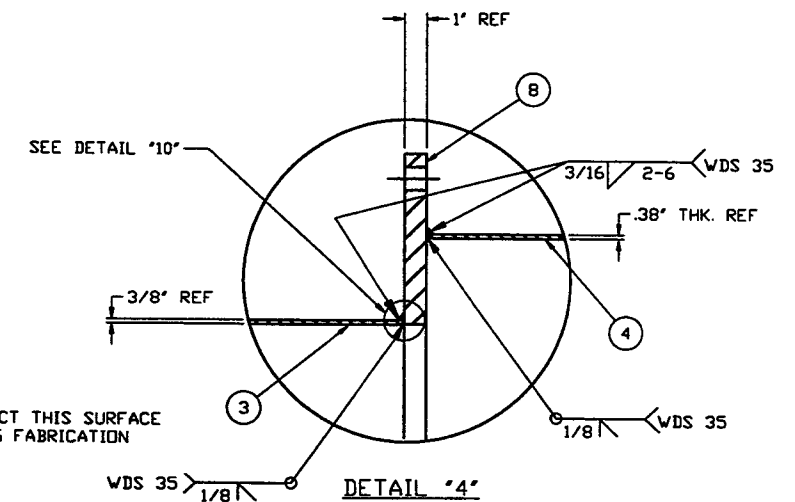
DETAIL 'F'
EXPANSION JOINT &
TIE ROD ASSEMBLY
TYP 4 PLCS
(BY BELLOWS MANUF.)



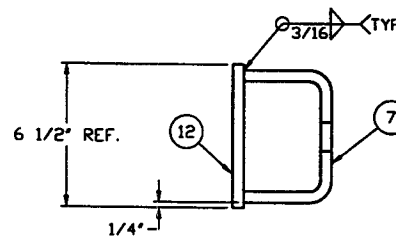
DETAIL '9'
QTY. 2



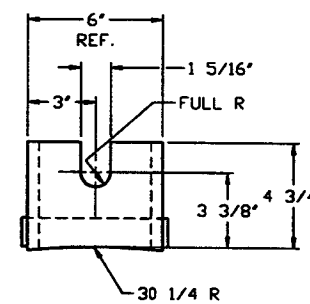
DETAIL '2'
TYP 2 PLCS.



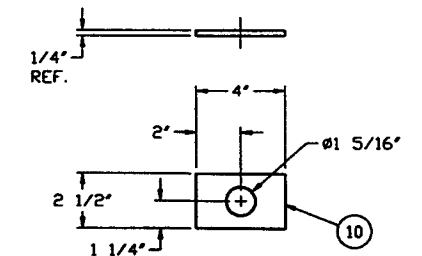
DETAIL '4'



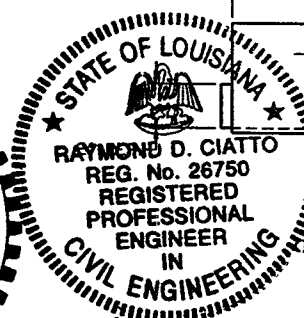
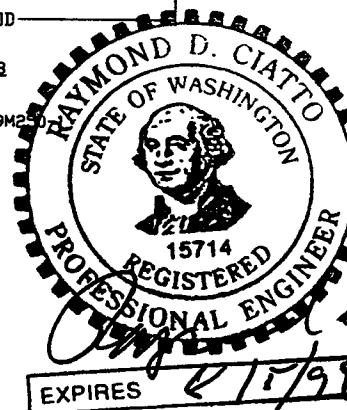
DETAIL '7'
QTY. 4
(BY BELLOWS MANUF.)



DETAIL '11'
QTY. 8



DETAIL '12'
QTY. 8



EXPIRES 6/15/99

6/26/97

PROCESS SYSTEMS INTERNATIONAL, INC. 20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA			
OFFSET SPOOL BE-3 60.50"ID x 60.50"ID LIGO VACUUM EQUIPMENT			
CAD FILE 494BE352	SIZE D	ENG. NO. V049-4-BE3	REV. 4
SCALE NONE	SHEET 2 OF 2		