

DETAIL "2"  
SCALE: HALF  
LIFTING LUG  
QTY: FOUR (4) REQ'D  
P/N: V0494014P4-3  
MAT'L: 304 SST, 3/4" WIDE X 1/4" THK FLAT BAR, ASTM A479

- NOTES
- DO NOT FINISH MACHINE I.D. OF FLANGE FORGING.
  - DO NOT MACHINE THE BACKSIDE TO THE FINISHED THICKNESS. LEAVE THE #200 RMS FINISH AS SUPPLIED BY THE FLANGE FORGING VENDOR, UNLESS THE BACK SURFACE PARALLELISM EXCEEDS 0.030 AS MEASURED FROM THE FINISHED SEALING SURFACE. IF MACHINING IS REQUIRED, THEN CLEAN OFF MINIMUM MATERIAL COMPLETELY ACROSS THE BACKSIDE AND STOP 1/2" CLEAR OF EXISTING WELD LEG. IF A STEP OCCURS, FINISH WITH 1/8" RADIUS.
  - MACHINING VENDOR TO USE PSI'S CENTER PUNCH MARK LOCATED AT 0° ON EACH HEAD AS THE STARTING POINT FOR THE NATURAL CENTERLINE BOLT PATTERN. BOLT HOLES TO STRADDLE THE VERTICAL CENTERLINE AS SHOWN IN THE ELEVATION.
  - EACH FINISHED COVER IS TO BE MARKED WITH A UNIQUE SEQUENTIAL PSI SERIAL NUMBER. THE NUMBER IS TO BE MADE FROM THE DRAWING NO. PLUS THE SEQUENTIAL NO. V049444-01, -02 ETC.
  - IF FIT UP GAPS OCCUR, INCREASE SIZE OF WELD TO MAINTAIN FULL WELD.
  - DO NOT MACHINE FLANGE O.D., ALL FORGING MFG. NUMBERS TO BE LEFT INTACT.
  - CONFLAT FLANGES ARE TO BE PROTECTED WITH COVERS AT ALL TIMES DURING AND AFTER MACHINING, PER PSI SPEC V049-2-123.
  - MACHINE TOOL LAY TO BE CONCENTRIC ON SURFACE WITH #32 RMS #8RMS FINISH.
  - CERTIFIED MANUFACTURER'S MATERIAL TEST REPORTS REQUIRED.
  - FLANGE BOLT HOLES TO STRADDLE NATURAL CENTERLINES OF VESSEL, UNLESS NOTED.
  - CLEAN PER SPEC: V049-2-015.
  - ALL MATERIAL TO BE 304L (EXCEPT AS NOTED).
  - GRINDING TO INTERNAL VACUUM BOUNDARY SURFACES IS NOT ALLOWED. DO NOT USE CARBON STEEL BRUSHES OR BRUSHES CONTAMINATED WITH CARBON STEEL ON STAINLESS OR ALUMINUM MATERIAL.
  - FABRICATION TO BE IN ACCORDANCE WITH SPEC. V049-2-078.
  - HEADS ARE ASME F&D.
  - PORT LOCATIONS, DIMENSIONS TAKEN FROM OUTER SPHERICAL RADII OF ITEM "1"
  - HELIUM LEAK TEST PER SPEC V049-2-014, BY PSI.

MAKE FLANGE FROM P/N V049M135-1  
WEIGHT ASSEMBLED: 660#

8	REVISED AS NOTED (SH 1 OF 2 ONLY)							REC	0903/97	0546
7	REVISED AS NOTED/I.D. PER RFC V049-051	DMW	RDC	GS	PEF	REC	PV	4/11/97	0464	
6	REVISED PER RFC V049-018 / ISSUED FOR FABRICATION	DMW	RDC	GS	PEF	REC	BAR	11/22/96	0366	
5	REISSUED FOR FABRICATION	REB	RDC		PEF	REC	DA	10/10/96	0299	
4	ISSUED FOR FABRICATION		RDC	GS	PEF	REC	PV	9/6/96	0194	
3	AS NOTED		RDC		PEF	REC	PV	7/10/96		
2	DESIGN UPDATE		RDC		PEF	REC	PV	6/10/96		
1	DESIGN UPDATE		RDC		PEF	REC	MA	5/16/96	0110	
REV	DESCRIPTION	DESCRIPTION					CHKD	DRWN	DATE	DEP#

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DWG. NO.	DESCRIPTION	DWG. NO.	DESCRIPTION	DD NOT SCALE THIS DRAWING	USED ON:
		V049-2-040	SPEC. FOR ST.ST. FLANGE FORGINGS.		
		V049-2-039	SPEC. FOR VESSEL HEADS.		
REFERENCE DRAWINGS					

**PROCESS SYSTEMS INTERNATIONAL INC.**  
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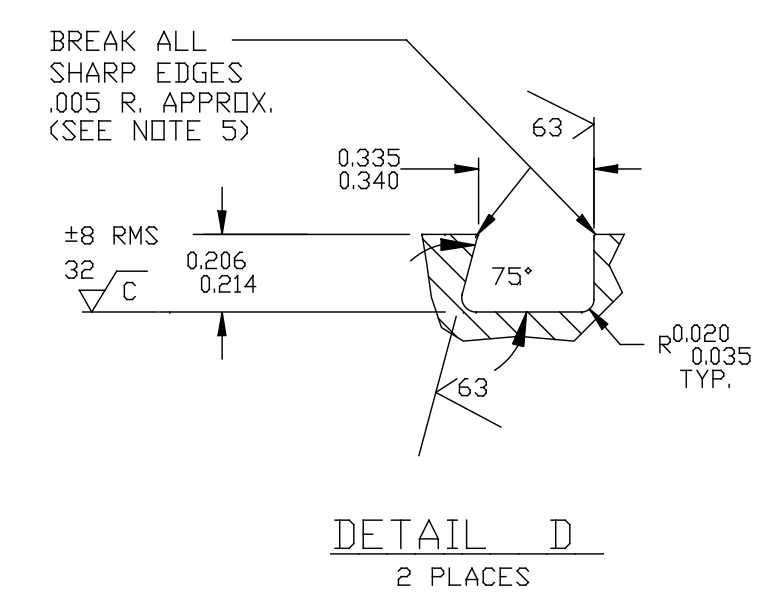
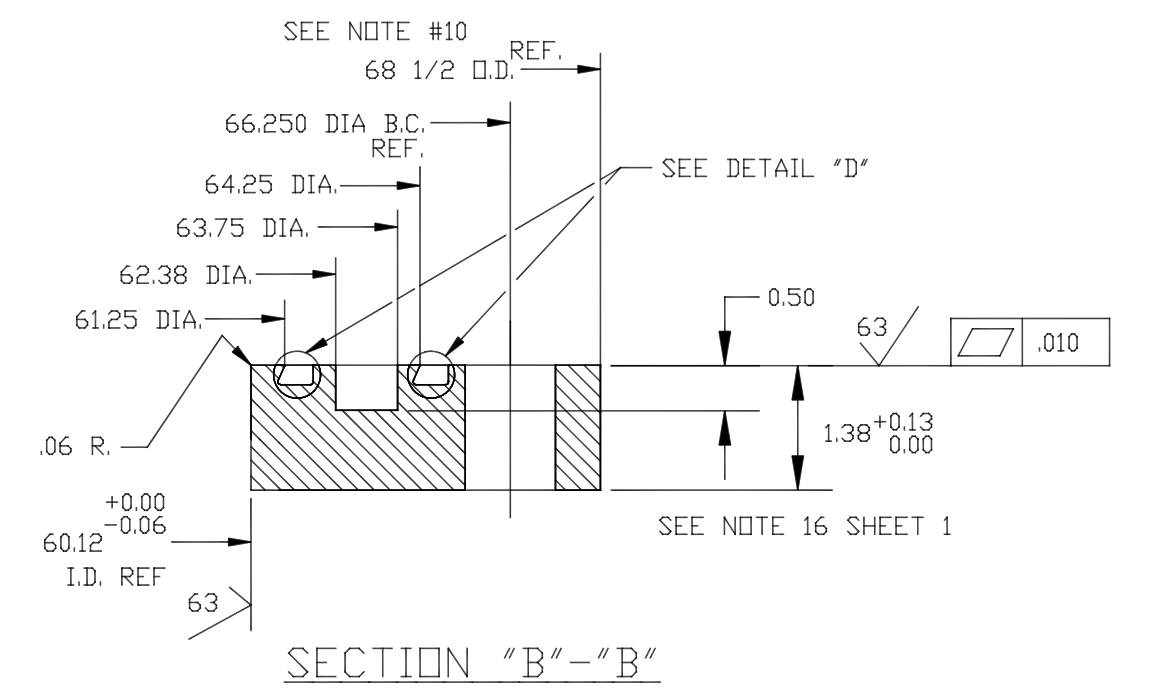
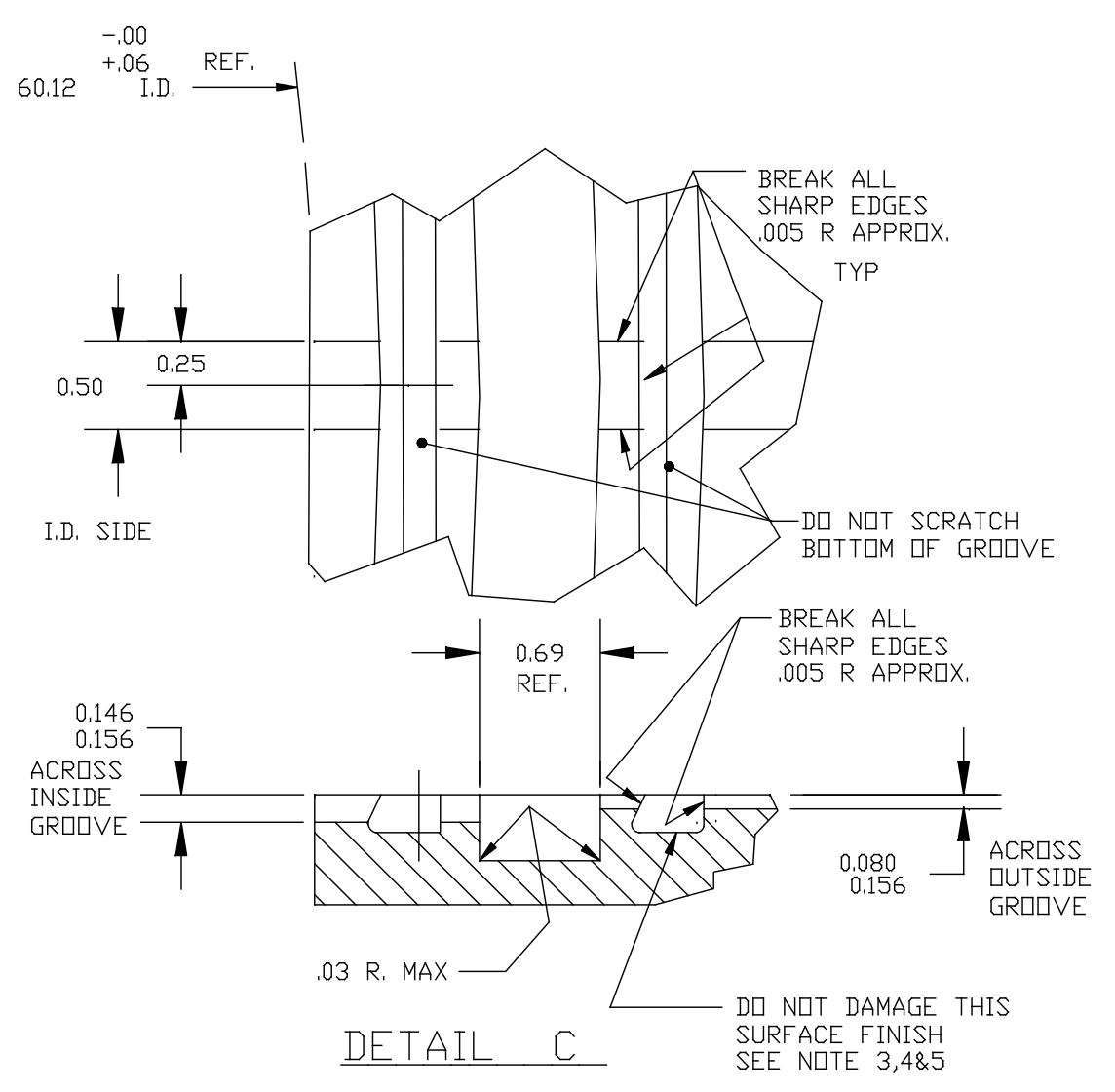
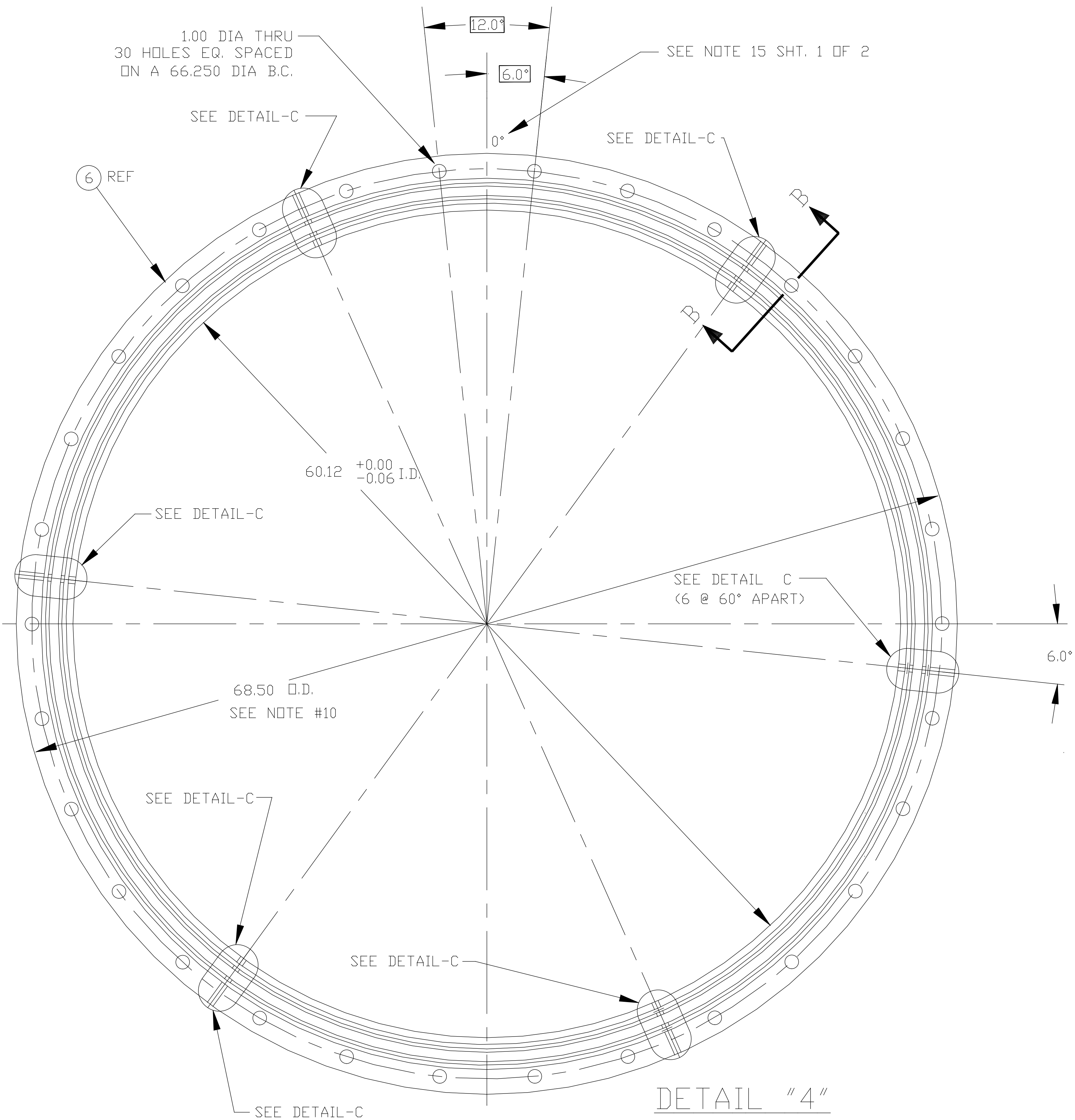
60" HAM COVER, GROOVED, TYPE A-4  
HORIZONTAL ACCESS MODULE  
LIGO VACUUM EQUIPMENT

CAD FILE: V049444/44A51  
SIZE: D  
DWG. NO.: V049-4-A4  
REV: 8

SCALE: 1"=1'-0"

SHEET: 1 OF 2

APR 17, 1997 - 133339



- NOTE:**
- 1: FLANGES WILL BE USED IN ULTRA HIGH VACUUM SERVICE SEE SPECIFICATION V049-2-040 FOR MATERIAL REQUIREMENTS SEE SPECIFICATION V049-2-136 FOR MACHINING REQUIREMENTS
  - 2: ALL MATERIAL TO BE 304L STAINLESS STEEL
  - 3: FLANGES MUST BE PACKAGED, HANDLED, AND SHIPPED IN SUCH A MANNER AS TO MAINTAIN SPECIFIED SURFACE FINISHES AND FLATNESS TOLERANCES.
  - 4: MACHINE TOOL LAY TO BE CONCENTRIC ON ALL SURFACES THAT REQUIRE A #32 RMS FINISH
  - 5: NO ABRASIVE STONES, CLOTHS OR GRINDING WHEELS MAY BE USED.
  - 6: NO OIL BASED OR HYDROCARBON BASED CUTTING FLUIDS TO BE USED.
  - 7: NO CARBON STEEL OR OTHER SOURCE OF IRON CONTAMINATION ARE TO COME IN CONTACT WITH FLANGES DURING MANUFACTURING OR HANDLING.
  - 8: FLANGE FINAL FACE CUTS AND O-RING GROOVES MUST BE MACHINED DURING THE SAME SETUP.
  - 9: STEAM CLEAN & WRAP IN POLYETHYLENE TO PREVENT CONTAMINATION DURING SHIPPING.
  - 10: DO NOT MACHINE FLANGE OD. ALL FORGING MFG. NDS. TO BE LEFT INTACT.

INNER O-RING (P/N V049M023) .275 DIA. STOCK x 191 1/4" LG. VULCANIZED - BAKED VITON  
 OUTER O-RING (P/N V049M022) .275 DIA. STOCK x 200 5/8" LG. VULCANIZED - BAKED VITON  
 MAKE FLANGE FROM P/N V049M135-1

SEE SHEET 1 FOR REVISIONS

<b>PROCESS SYSTEMS INTERNATIONAL, INC.</b> <small>20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA</small>			
<b>63-600 HAM COVER, GROOVED, TYPE A-4</b> <b>HORIZONTAL ACCESS CHAMBER</b> <b>LIGD VACUUM EQUIPMENT</b>			
CAD FILE V0494A4/4A4S2	SIZE D	DWG. NO. V049-4-A4	REV. 8
SCALE 3"=1'-0"		SHEET 2 OF 2	