



- NOTES:**
1. EACH PUMP/OUT PORT LOCATION HAS BOTH POWER & CONTROL PLUG-IN CONNECTIONS.
  2. ALL VACUUM GAUGES TO BE BAKED OUT AT 250 C DURING PUMPDOWN, USING A REMOVABLE BLANKET TYPE HEATER. ALL VACUUM SECTIONS SHALL ALSO BE BAKED OUT AT 150 C DURING PUMPDOWN USING A REMOVABLE BLANKET TYPE HEATER. SEE DWG. V049-0-043 FOR BAKEDOUT SYSTEM.
  3. DIMENSIONS IN ( ) ARE IN MILLIMETERS.
  4. BEAM MANIFOLD DIMENSIONS INDICATE INSIDE DIAMETERS.
  5. ATMOSPHERIC AIR INTAKE SHALL BE LOCATED AWAY FROM SOURCES OF CONTAMINATION.
  6. BEAM MANIFOLD FLANGE ANNULUS IDN PUMP DETAILS LATER.
  7. ON 12\"/>

DWG. NO.	DESCRIPTION	DWG. NO.	DESCRIPTION	EQUIP. THIS DWG.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS INDICATED OTHERWISE	REV	DESCRIPTION	CHKD	DRWN	DATE	DESD			
V049-0-041	P & ID TURBO PUMP CART			LBSCS LGV9	5 REISSUED FOR FDR UPDATE 4 REVISED 3 REVISED 2 ISSUE FOR FDR UPDATE 1 ISSUE FOR FDR	5	REISSUED FOR FDR UPDATE			6/11/97	0499			
V049-0-021	P & ID LEFT & RIGHT MID JOINTS			LIPS LGV10		4	REVISED	SH	IMCV	RJV	02.14.97	0435		
V049-0-006	P & ID 80K CRYOPUMP			LTC3 LCP3		3	REVISED	SH	IMCV	RJV	01.03.97	0394		
V049-0-002	P & ID BEAM SPLITTER CHAMBER					2	ISSUE FOR FDR UPDATE	TS	RT	SH	IMCV	RJV	10.25.96	0309
V049-0-001	P & ID LEGEND					1	ISSUE FOR FDR	REB	TS	RT	SH	IMCV	RJV	04.26.96
V049-0-001	P & ID LEGEND				0	ISSUE FOR DESIGN	REB	TS	RT	SH	IMCV	RJV	01.03.96	0031

**PROCESS SYSTEMS INTERNATIONAL INC.**  
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**PIPING & INSTRUMENTATION DIAGRAM**  
 LIGO VACUUM EQUIPMENT  
 LOUISIANA SITE  
 LEFT END STATION

CAD FILE: V0490020  
 SHEET: D  
 DWG. NO.: V049-0-020  
 REV: 5

SCALE: NONE  
 SHEET: 1 OF 1