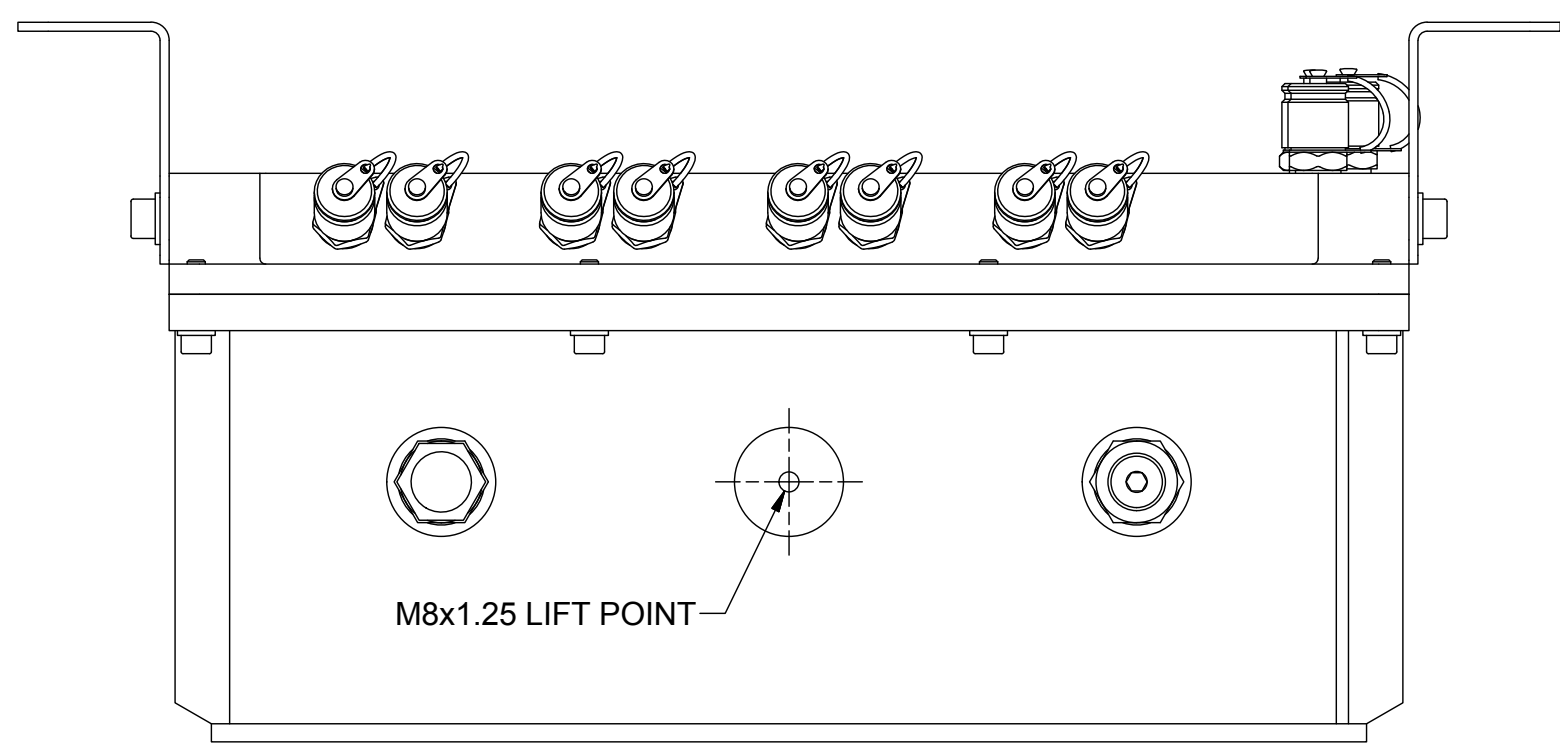
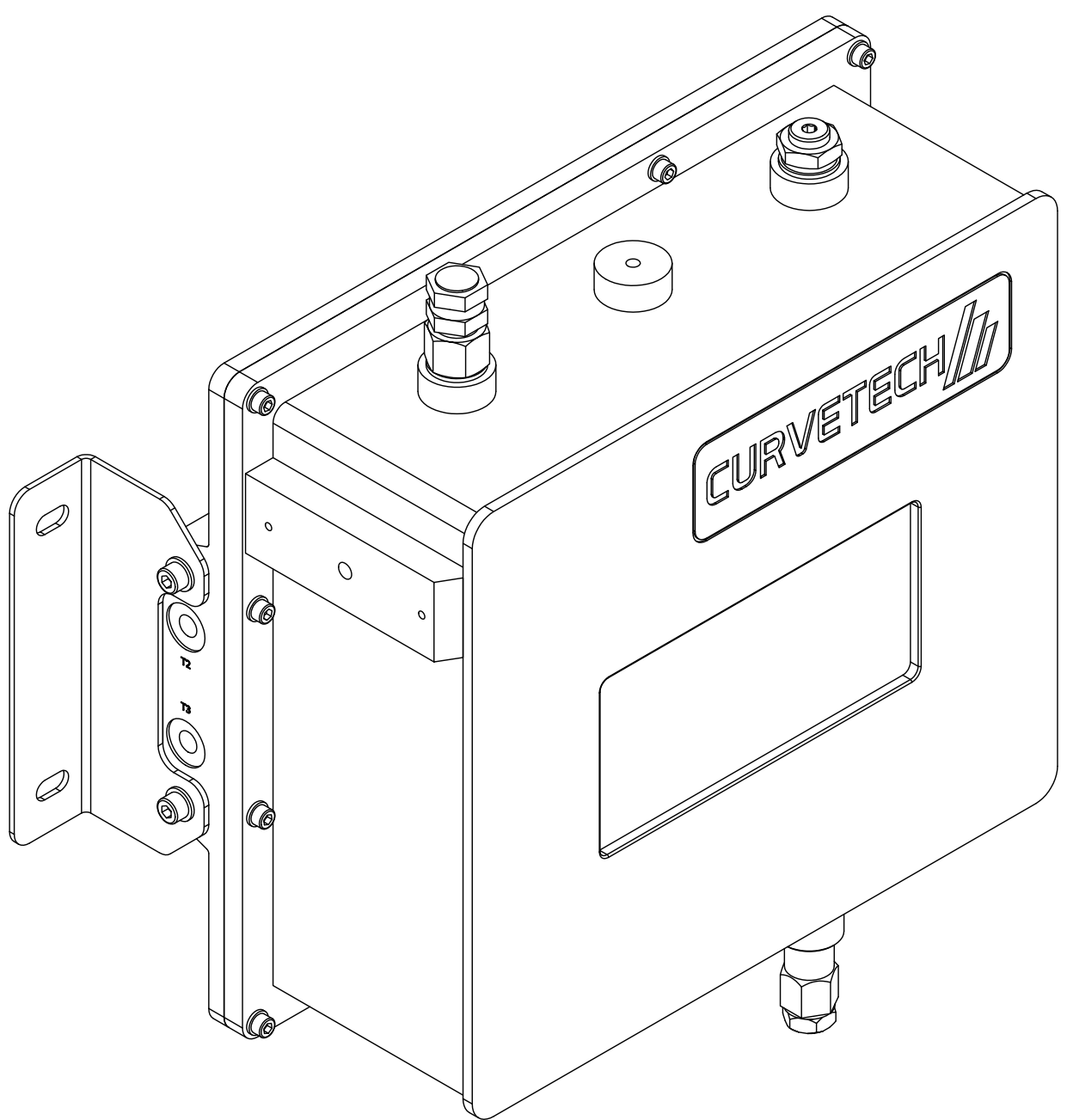


A
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E



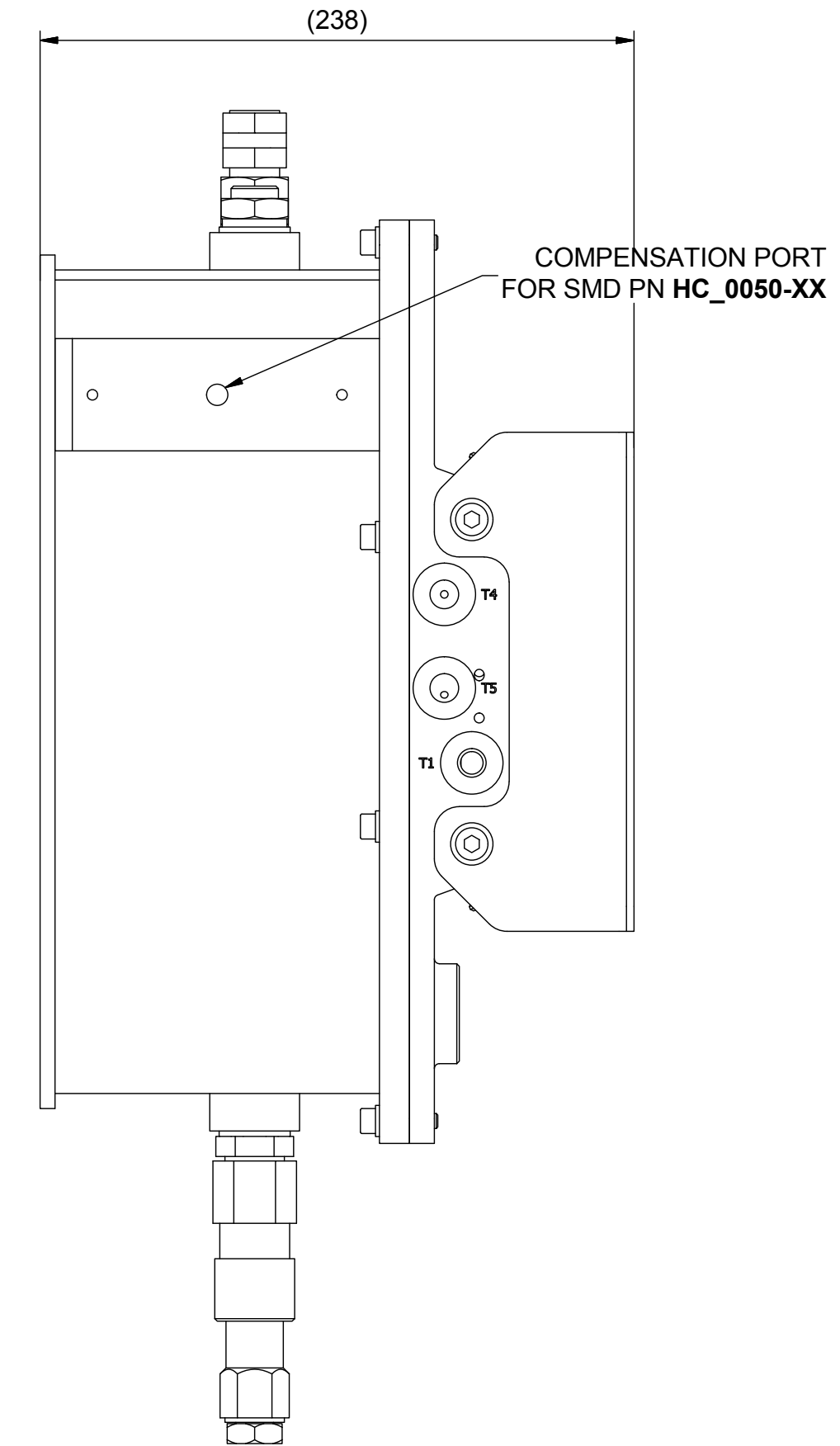
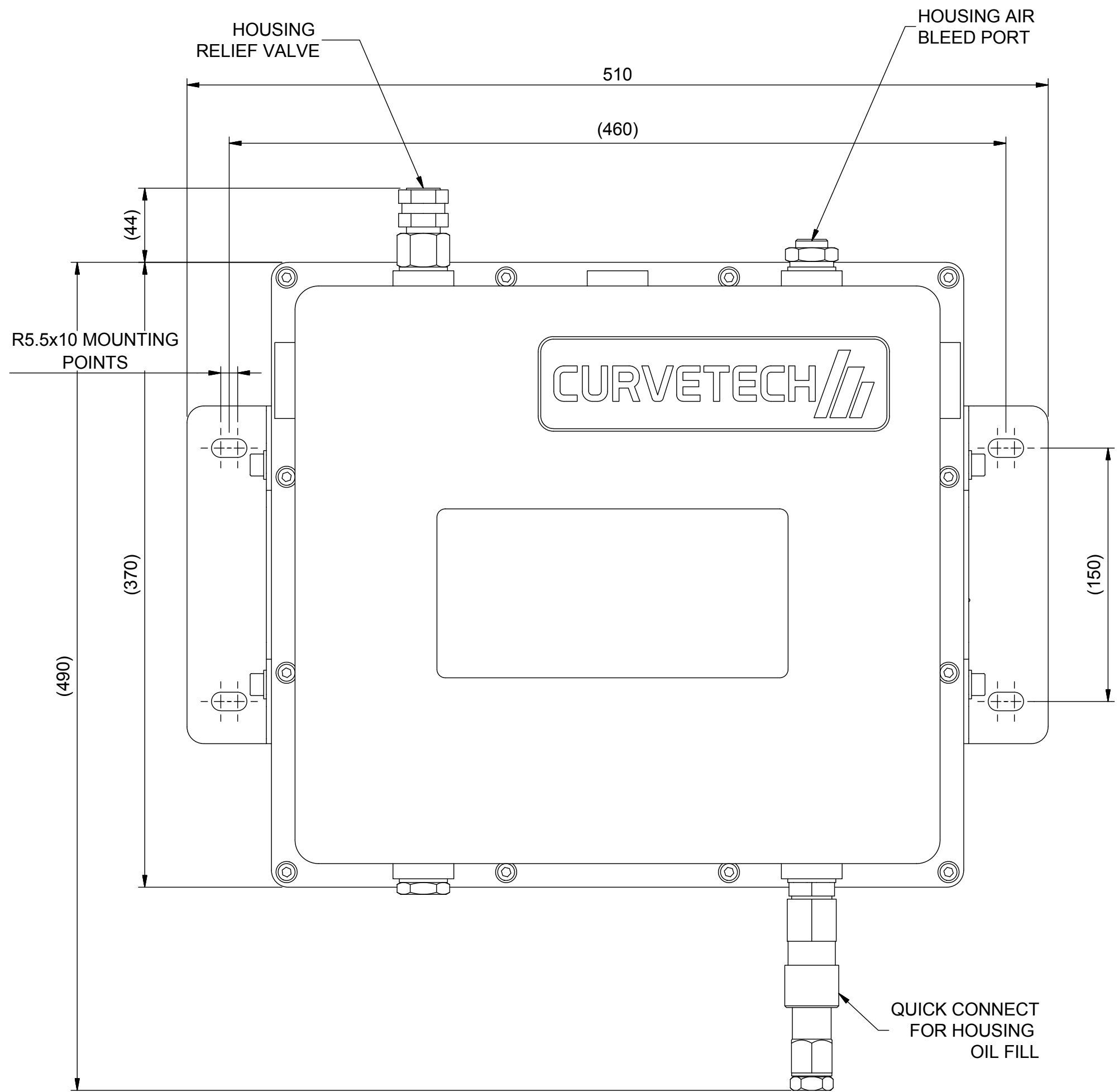
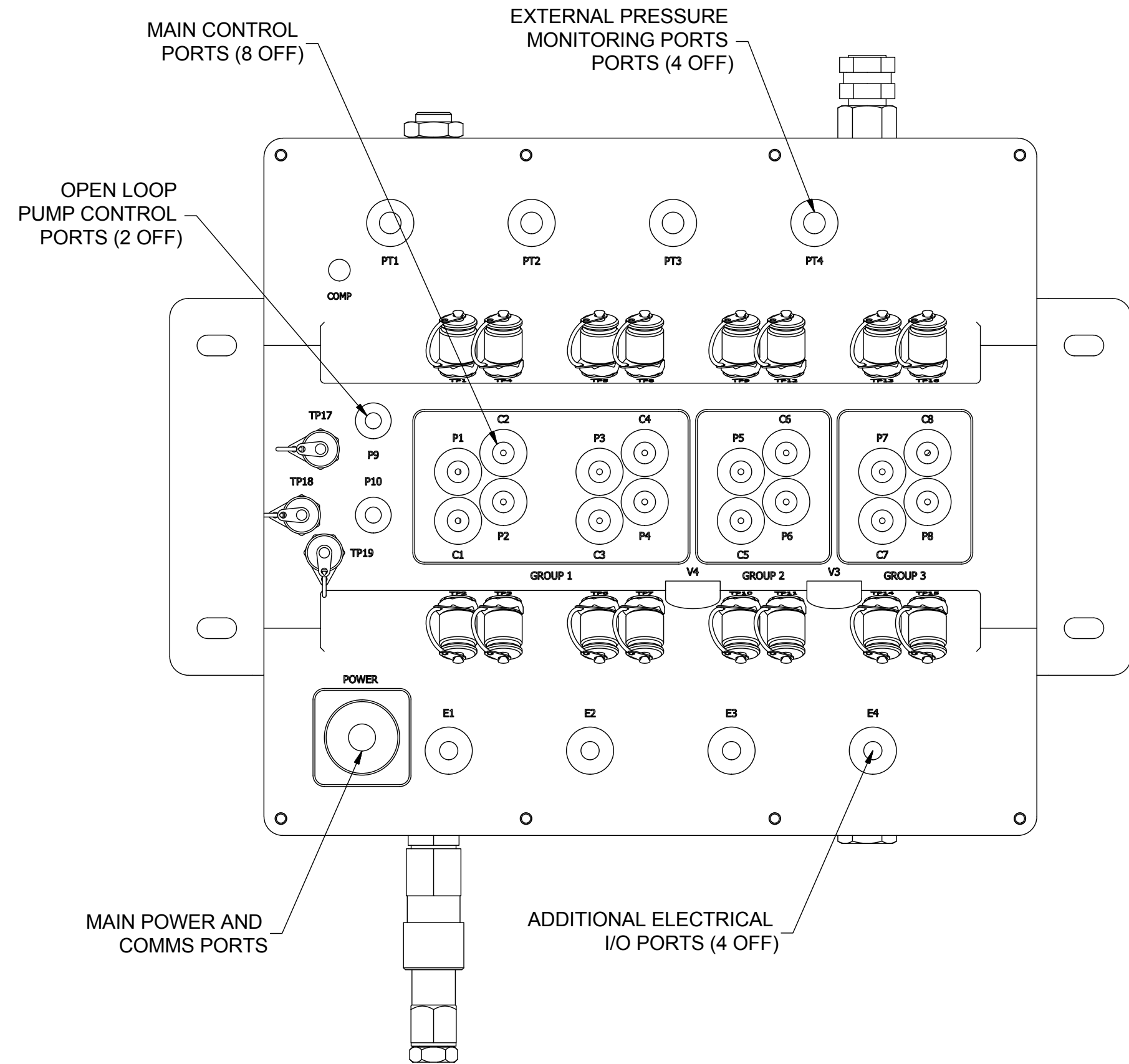
APPLICATION: THE SMD CURVETECH iPCU (INTELLIGENT PROPORTIONAL CONTROL UNIT) IS A VERSATILE HYDRAULIC CONTROL UNIT DESIGNED TO ALLOW ACCURATE CONTROL OF HIGH FLOW HYDRAULIC SYSTEMS VIA PRIMARY ACTUATORS. THE iPCU PROVIDES ACCURATE LOW FLOW PILOT SIGNALS THAT CAN BE USED TO CONTROL CLOSED/OPEN LOOP PUMP CONTROLLERS AND LARGE HYDRAULICALLY PILOTTED VALVES

EIGHT (8) CONTROL STATIONS ARE AVAILABLE WITHIN THE ONE UNIT EACH OF WHICH CAN BE SET-UP, OR BLANKED, AS REQUIRED. HYDRAULIC PLUGS ALLOW UPTO 3 SEPERATE HYDRAULIC CIRCUITS TO BE CONTROLLED FROM A SINGLE iPCU. A FURTHER 2 RELIEF STAGES ARE PROVIDED FOR CONTROL OF OPEN LOOP PUMP SWASH AND LOAD.

THE CORE OF THE iPCU IS SMD'S INNOVATIVE MVPE PCB (MULTI-FUNCTION VALVE PACK ENHANCED PCB). THIS ALLOWS THE iPCU TO BE MULTI-PURPOSED BY ALSO ACTING AS A DISTRIBUTED I/O HUB ON THE VEHICLE MONITORING ADDITIONAL ELECTRICAL AND PRESSURE READINGS AS REQUIRED

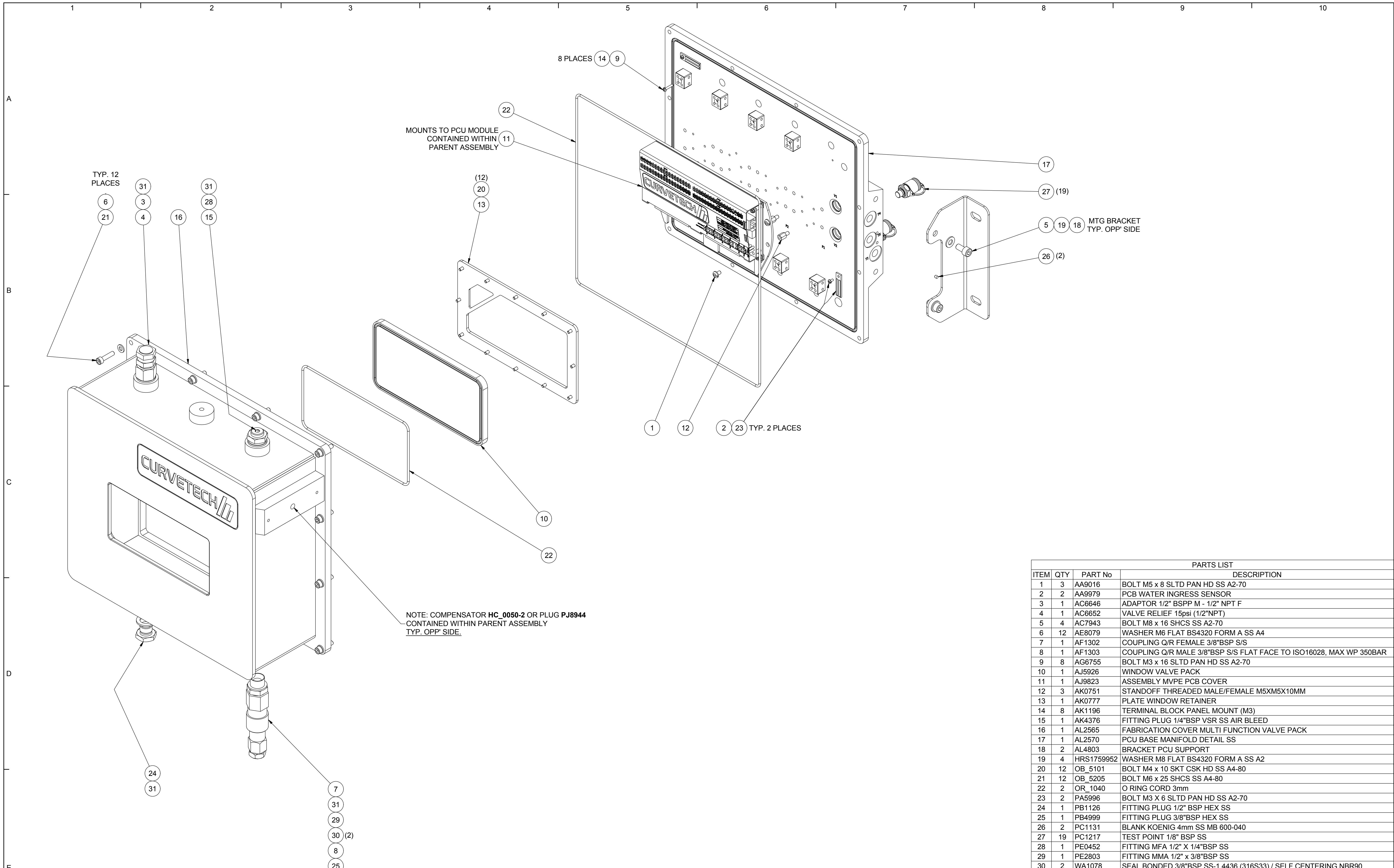
GENERAL SPECIFICATION - 8 STATION iPCU	
ITEM	VALUE
LAYOUT	OIL FILLED VALVE TANK. ALL EXTERNAL PARTS EN10088 1.4404/4401 (STAINLESS STEEL) 8 STATION - SMD iPCU INTERFACE
DEPTH RATING	6000m - STANDARD
OPERATING TEMPERATURE	-10°C to +50°C AMBIENT
STORAGE TEMPERATURE	-20°C to +50°C AMBIENT
PRESSURE RATING	350bar MAX. WORKING PRESSURE (MANIFOLD) 1bar MAX. WORKING PRESSURE (OIL FILLED VALVE TANK)
CONNECTION PORT SIZES (HYDRAULIC)	ALL PORTS 1/4" BSP ALL TEST POINTS 1/8" BSP
ADDITIONAL VALVE PACK I/O	4 OFF ELECTRICAL I/O CONNECTIONS - 7/16" UNF 4 OFF EXTERNAL PRESSURE PORTS - 1/4" BSP 1 OFF 5/8" UNF (FOR MAIN POWER/COMMS CONNECTOR)
COMPENSATION	iPCU MOUNTED OR EXTERNALLY CONNECTED. (APPROX. 10L VOLUME FOR COMPENSATION)

THE CORE VALVE PACK HERE IS UNPOPULATED.
SEE THE iPCU MANUAL FOR VALVING OPTIONS AND ADDITIONAL INFORMATION TO ALLOW FULL CONFIGURATION OF THE UNIT
FOR ASSEMBLY INFORMATION SEE SHEET 2.



REV	DATE	CHANGE COMMENT	ZONE	DRAWN	CHECKED	APPD	DATE	EST. MASS	DIMENSIONS	SCALE	PROJECTION 3RD	TITLE	
	15 JAN 19						15 JAN 19	45 kg	mm	1:2.5		ASSEMBLY PCU VALVE TANK SS EMPTY	
DESIGNED	DRAWN	TOLERANCES UNLESS OTHERWISE STATED						MATERIAL:- SEE PARTS LIST					
JSW	JSW	DIMENSIONS mm						UP TO 100	100 TO 300	300 TO 1000	OVER 1000	DO NOT SCALE IF IN DOUBT ASK	
CHECKED	APPROVED	FABRICATION	± 1.0	± 1.5	± 2.0	± 3.0	± 1.0	± 1.5	± 2.0	± 3.0	DRAWING No	REV No.	SIZE
ADC	MvZ	MACHINED PART	± 0.15	± 0.4	± 0.8	± 1.0					AL7747	0	A1

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NOTE: COMPENSATOR HC_0050-2 OR PLUG PJ8944
CONTAINED WITHIN PARENT ASSEMBLY
TYP. OPP' SIDE.

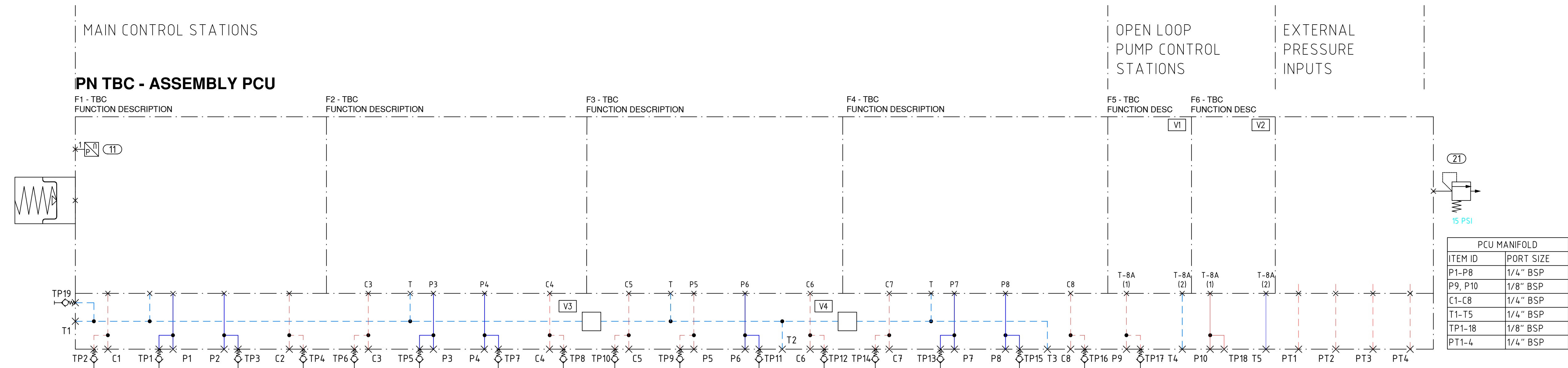
PARTS LIST			
ITEM	QTY	PART No	DESCRIPTION
1	3	AA9016	BOLT M5 x 8 SLTD PAN HD SS A2-70
2	2	AA9979	PCB WATER INGRESS SENSOR
3	1	AC6646	ADAPTOR 1/2" BSPP M - 1/2" NPT F
4	1	AC6652	VALVE RELIEF 15psi (1/2"NPT)
5	4	AC7943	BOLT M8 x 16 SHCS SS A2-70
6	12	AE8079	WASHER M6 FLAT BS4320 FORM A SS A4
7	1	AF1302	COUPLING Q/R FEMALE 3/8"BSP S/S
8	1	AF1303	COUPLING Q/R MALE 3/8"BSP S/S FLAT FACE TO ISO16028, MAX WP 350BAR
9	8	AG6755	BOLT M3 x 16 SLTD PAN HD SS A2-70
10	1	AJ5926	WINDOW VALVE PACK
11	1	AJ9823	ASSEMBLY MVPE PCB COVER
12	3	AK0751	STANDOFF THREADED MALE/FEMALE M5X5X10MM
13	1	AK0777	PLATE WINDOW RETAINER
14	8	AK1196	TERMINAL BLOCK PANEL MOUNT (M3)
15	1	AK4376	FITTING PLUG 1/4"BSP VSR SS AIR BLEED
16	1	AL2565	FABRICATION COVER MULTI FUNCTION VALVE PACK
17	1	AL2570	PCU BASE MANIFOLD DETAIL SS
18	2	AL4803	BRACKET PCU SUPPORT
19	4	HRS1759952	WASHER M8 FLAT BS4320 FORM A SS A2
20	12	OB_5101	BOLT M4 x 10 SKT CSK HD SS A4-80
21	12	OB_5205	BOLT M6 x 25 SHCS SS A4-80
22	2	OR_1040	O RING CORD 3mm
23	2	PA5996	BOLT M3 X 6 SLTD PAN HD SS A2-70
24	1	PB1126	FITTING PLUG 1/2" BSP HEX SS
25	1	PB4999	FITTING PLUG 3/8"BSP HEX SS
26	2	PC1131	BLANK KOENIG 4mm SS MB 600-040
27	19	PC1217	TEST POINT 1/8" BSP SS
28	1	PE0452	FITTING MFA 1/2" X 1/4"BSP SS
29	1	PE2803	FITTING MMA 1/2" x 3/8"BSP SS
30	2	WA1078	SEAL BONDED 3/8"BSP SS-1.4436 (316S33) / SELF CENTERING NBR90
31	4	WA1079	SEAL BONDED 1/2"BSP SS-1.4436 (316S33) SELF CENTERING NBR90

- NOTES :-
1. ASSEMBLE IN ACCORDANCE WITH SMD SPECIFICATION SMDW100.
 2. VALVES AND FITTINGS CONTAINED WITHIN PARENT ASSEMBLY.

REV	DATE	CHANGE COMMENT	ZONE	DRAWN	CHECKED	APPD	DATE	EST. MASS	DIMENSIONS	SCALE	PROJECTION 3RD	TITLE	
	15 JAN 19						15 JAN 19	45 kg	mm	1:2.5		ASSEMBLY PCU VALVE TANK SS EMPTY	
DESIGNED	DRAWN	TOLERANCES UNLESS OTHERWISE STATED											
JSW	JSW	DIMENSIONS mm						UP TO 100 TO 100 TO 300 TO 300 TO 1000 OVER 1000					
CHECKED	APPROVED	FABRICATION	± 1.0	± 1.5	± 2.0	± 3.0	DO NOT SCALE						
ADC	MvZ	MACHINED PART	± 0.15	± 0.4	± 0.8	± 1.0	IF IN DOUBT ASK						
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SMD Soil Machine Dynamics Ltd										DRAWING No		REV No.	SIZE
										AL7747		0	A1
SHEET 2 OF 2													

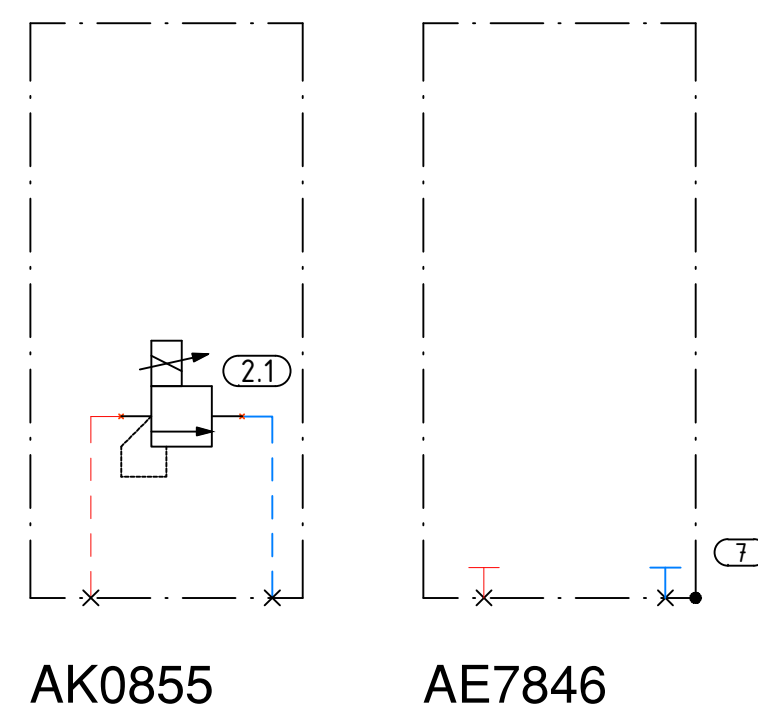
UNPOPULATED iPCU VALVE PACK

STAINLESS STEEL HOUSING - AL7747
ALUMINIUM HOUSING - AAXXXX



VALVE OPTIONS TO POPULATE UNIT

OPEN LOOP CONTROL OPTIONS V1 & V2

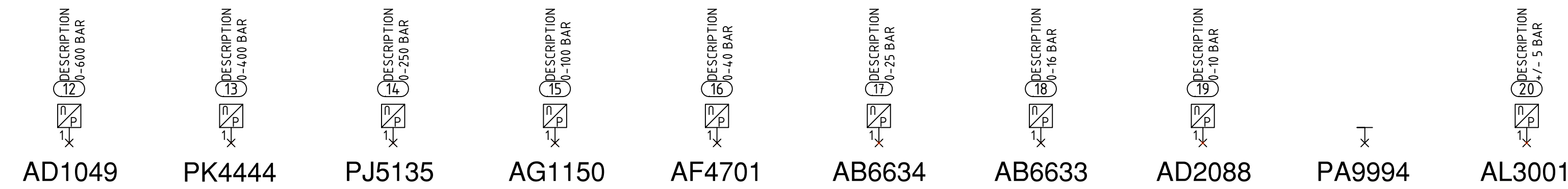


MAIN GALLERY OPTIONS V3 & V4

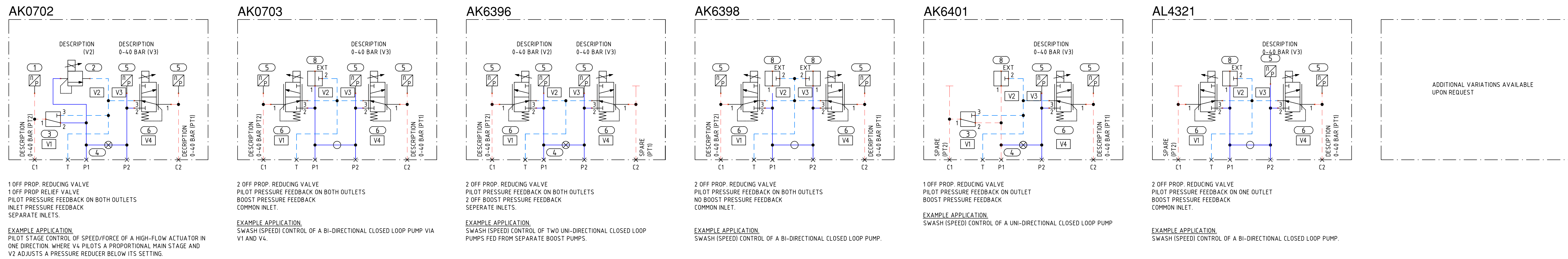
USE PH0607 ON A SINGLE HYDRAULIC RESERVOIR SYSTEM
USE PG8057 TO SEPARATE RETURN GALLERIES WHERE MULTIPLE RESERVOIRS ARE USED ON A SYSTEM



EXTERNAL PRESSURE SENSOR OPTIONS



MAIN CONTROL STATION BLOCKS



ITEM ID	PART NUMBER	DESCRIPTION	MODEL CODE	MANUFACTURER	PRESSURE (MINIBAR)	PRESSURE (MAXIBAR)
1	AK4444	PRESSURE SENSOR 0-400 BAR 4-20MA (M12)	R252.84.25.42.32.19.61	TRAFAG	0	400
2	AK0855	VALVE RBAP-XXN PILOT STAGE RELIEF	RBAP-XXN	SUN HYDRAULICS	35	350
3	PC2244	VALVE CAVITY PLUG XEDA-XXN/V	XEDA-XXN/V	SUN HYDRAULICS	-	-
4	OB_1079	GRUB SCREW M4 X 8 CONE POINT SS	OB_1079	-	-	-
5	AK1023	PRESSURE SENSOR 0-40 BAR 4-20MA (M12)	R252.81.25.42.32.19.61	TRAFAG	0	40
6	AJ8928	VALVE VALVE PROP. PRESSURE REDUCING/RELIEVING	PROL-HEN/V	SUN HYDRAULICS	17	18
7	AE7846	VALVE XACA-XXN/V CAVITY PLUG	XACA-XXN	SUN HYDRAULICS	-	-
8	AJ8937	VALVE CAVITY ADAPTER T-8A (I-EXT1)	XACA-EXN	SUN HYDRAULICS	-	-
9	PH0607	VALVE XZ0A-XXN/V CAVITY PLUG	XZ0A-XXN/V	SUN HYDRAULICS	-	-
10	PG8057	VALVE XZCA-XXN/V CAVITY PLUG	XZCA-XXN	SUN HYDRAULICS	-	-
11	AK2220	SENSOR PRESSURE - REVERSE DIFFERENTIAL 0 TO -2.5 BAR 4-20MA - TRAFAG	070220IT-001	TRAFAG	0	2.5
12	AD0649	SENSOR PRESS 0-800 BAR 4-20MA H/DUTY	R251 - NAT100.0A	TRAFAG	0	600
13	PK4444	SENSOR PRESS 0-400 BAR 4-20MA H/DUTY	R251 - NAT100.0A	TRAFAG	0	400
14	PJ5135	SENSOR PRESS 0-250BAR 4-20M	R251 - NAT250.0A	TRAFAG	0	250
15	AG1150	SENSOR PRESS 0-100 BAR 4-20MA H/DUTY	R251 - NAT100.0A	TRAFAG	0	100
16	AF4701	SENSOR PRESS 0-40 BAR 4-20MA H/DUTY	R251 - NAT40.0A	TRAFAG	0	40
17	AB6634	SENSOR PRESS 0-25 BAR	R251.80.2517.01.19.34.4.3	TRAFAG	0	25
18	AB6633	SENSOR PRESS 0-18 BAR	R251 - NAT16.0A	TRAFAG	0	16
19	AD2088	SENSOR PRESS 0-10 BAR 4-20MA H/DUTY	R251.78.2517.01.19.34.4.3	TRAFAG	0	10
20	AL3001	PRESSURE SENSOR - / - 5 BAR 4-20MA	R251.38.2517.01.19.34.01.01	TRAFAG	5	5
21	AC6652	VALVE RELIEF 15PSI (1/2"NPT)	VRV-500SS-V-15	HEROSE	-	-

REV NO	DATE	CHANGE	ZONE	DRAWN	CHECK	APPD	DATE	EST. MASS	DIMENSIONS	SCALE	PROJECTION	TITLE		
DESIGNED	AD	DRAWN	ADC	CHECKED	JSW	APPROVED	23.10.2018	N/A	mm	1:1	1ST ANGLE	DRAWING HYDRAULIC SCHEMATIC - iPCU & OPTIONS		
								TOLERANCES UNLESS OTHERWISE STATED						
								UP TO 100	±0.1	300 TO 3000	±0.2	OVER 3000	±0.3	
								FABRICATION	±0.15	±0.2	±0.3	DO NOT SCALE		
								MACHINED PART	±0.15	±0.2	±0.3	IF IN DOUBT ASK		
												DRAWING NO.	REV NO.	SIZE
												AL8078	0	A0
												SHEET 1 OF 1		

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