

Quick Reference Data Chart

EL-Pak	Tank Size Liters (Gallons)	Pump Flow LPM (GPM) @ 1200 RPM	Pump Flow LPM (GPM) @ 1800 RPM	Electrical Motors Horsepower	Maximum bar (PSI)
L11	416.39 (110)	91.2 (24.1)	134.4 (35.5)	25 HP to 75 HP	207 bar
L16	624.59 (165)	171 (45.5)	252 (67)	25 HP to 100 HP	(3000 PSI)

Performance Data

Standard Features

- Overhead Design
- All Connections SAE Straight Thread
- 1800RPM and 1200RPM option
- 10 Micron, Micro Glass Element In-Tank Mounted Return Filter
- Isolation Mounts Under Manifold and Pump/Motor Assembly
- Temperature/Level Switch
- Ball Valve on Pump Inlet Line
- Top Mounted Clean Out Cover
- Glycerine Filled Pressure Gage with Shut Off
- Integral Safety Relief Valve
- Breather and Fill Cap
- Liquid Level Gage
- Seal-Lok Fittings on all High Pressure Lines
- Siphon Break on all Return Lines
- Sloped Bottom Reservoir
- Integral Drip Pan
- Pump/Motor Assembly Mounted Beside Reservoir

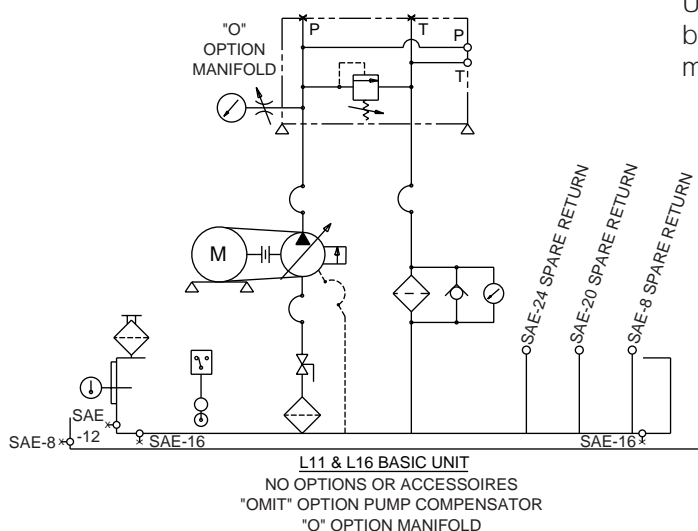
Benefits

- Provides Flooded Suction, Easy Priming
- No Leaks
- Lower Noise Levels with 1200RPM
- Improved Performance, Longer Service Life, Allows Ease of Maintenance
- Dampens Vibration, Reduces Noise
- Improved Diagnostics, Failsafe System Performance
- Allows Ease of Maintenance
- Easy Access To Reservoir While Eliminating Potential Leak Point
- Improved Diagnostics
- Protects Against System Shock and Over Pressurization
- Easy to Fill Reservoir and Control Ingression of Airborne Contaminants
- Visual Indication of Fluid Level
- Better Seal
- Prevents Draining of Tank
- Contaminants Settle on Low Point of Reservoir
- Containment of Fluid
- Easy Access To Pump

B

Schematic Symbol

(Hydraulic Schematic-Basic Unit)

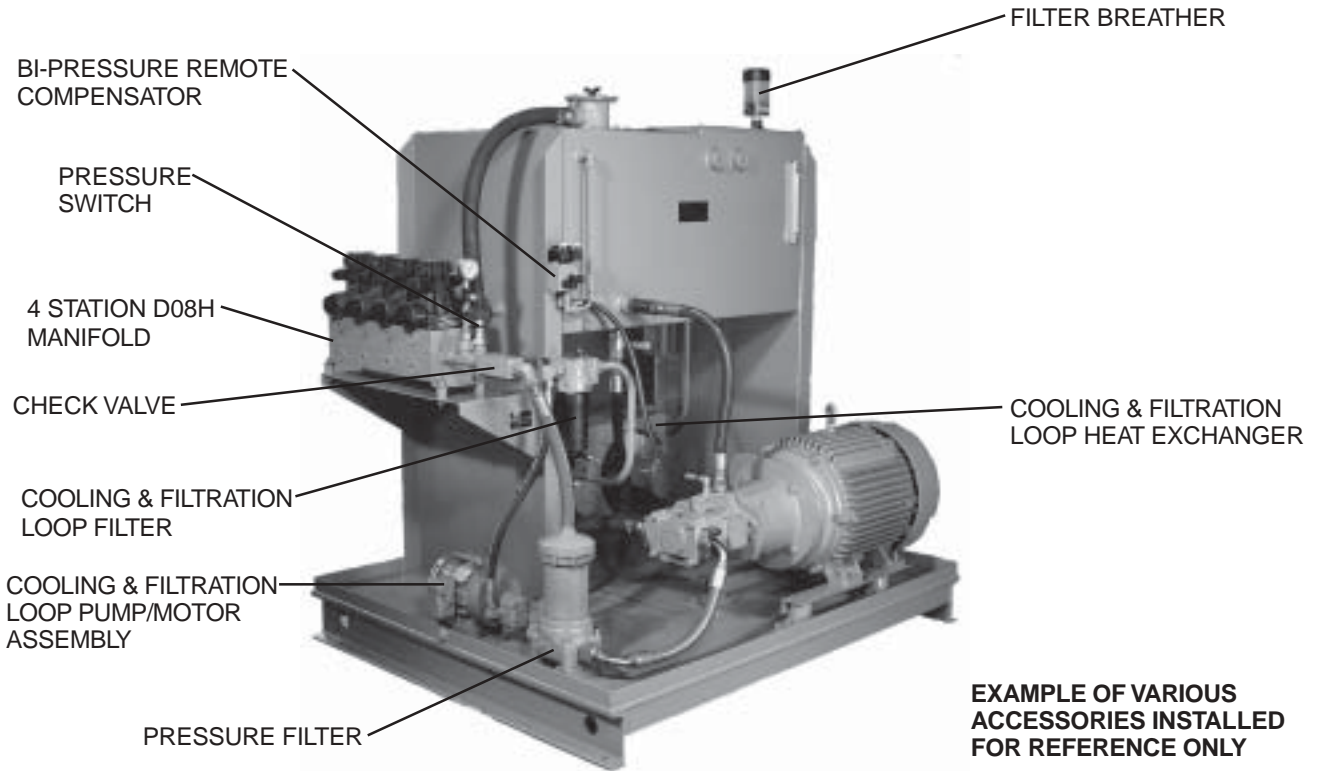


Warranty

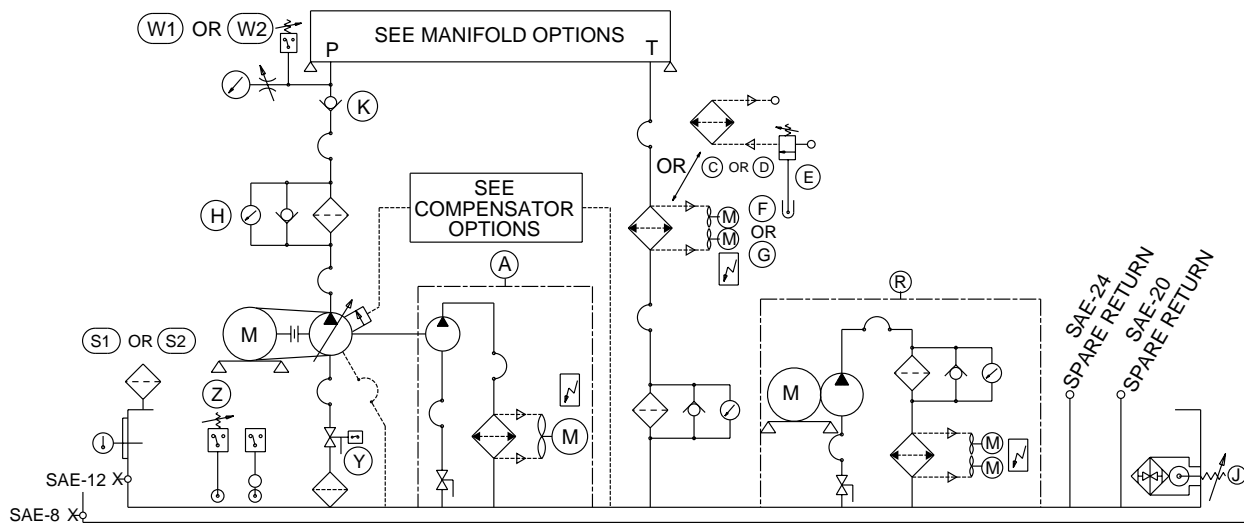
The hydraulic components on these Parker Power Units are warranted for 18 months. This warranty may be extended to three years by using and properly maintaining Parker filters.

Installation Data:

See Installation/Maintenance Manual for specific recommendations pertaining to start-up, system cleanliness, fluids, temperature and other important factors relative to proper installation and use of these power units.



Schematic-Basic Unit
 With Accessories



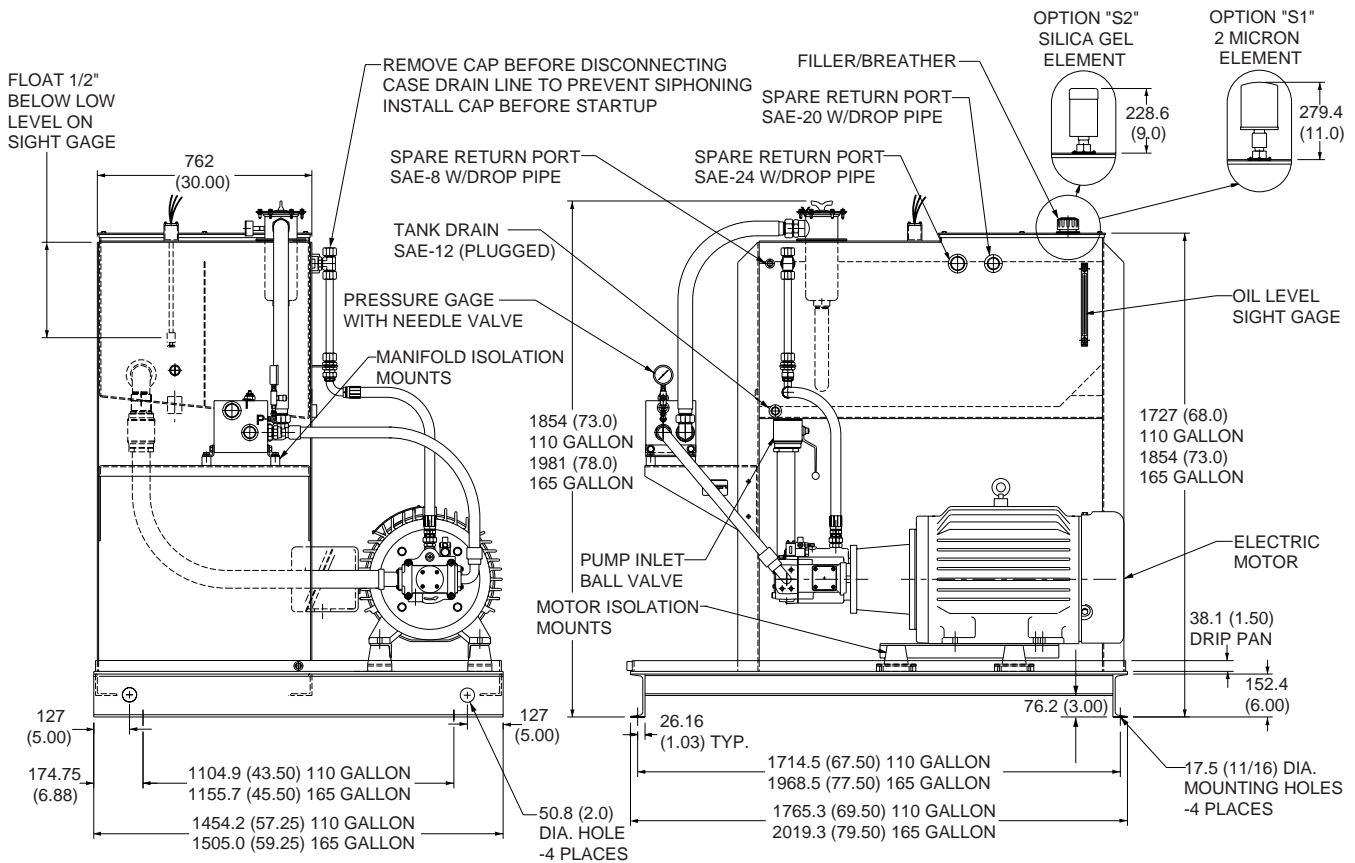
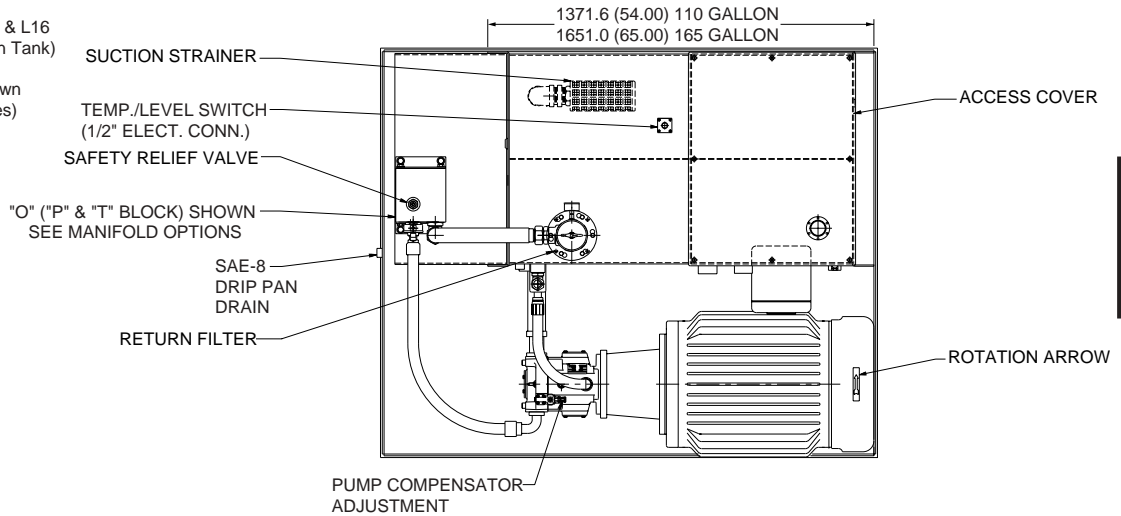
Accessory Options – L11 & L16 EL-PAKS

- | | | | |
|----------|---|-----------|------------------------------------|
| Option A | Compensated Horsepower Removal Cooling Loop | Option K | Check Valve – Pump Outlet |
| Option C | Return Line Water/Oil Heat Exchanger | Option R | Cooling/Filtration Loop |
| Option D | Return Line Water/Oil Heat Exchanger | Option S1 | 2 Micron Breather Element |
| Option E | Water Line Temperature Control Valve | Option S2 | Silica Gel Breather Element |
| Option F | Return Line Air/Oil Heat Exchanger | Option W | Pressure Switch (W1 or W2) |
| Option G | Return Line Air/Oil Heat Exchanger | Option Y | Pump Inlet Ball Valve Limit Switch |
| Option H | Pressure Filter | Option Z | Temperature Switch |
| Option J | Immersion Heater | | |

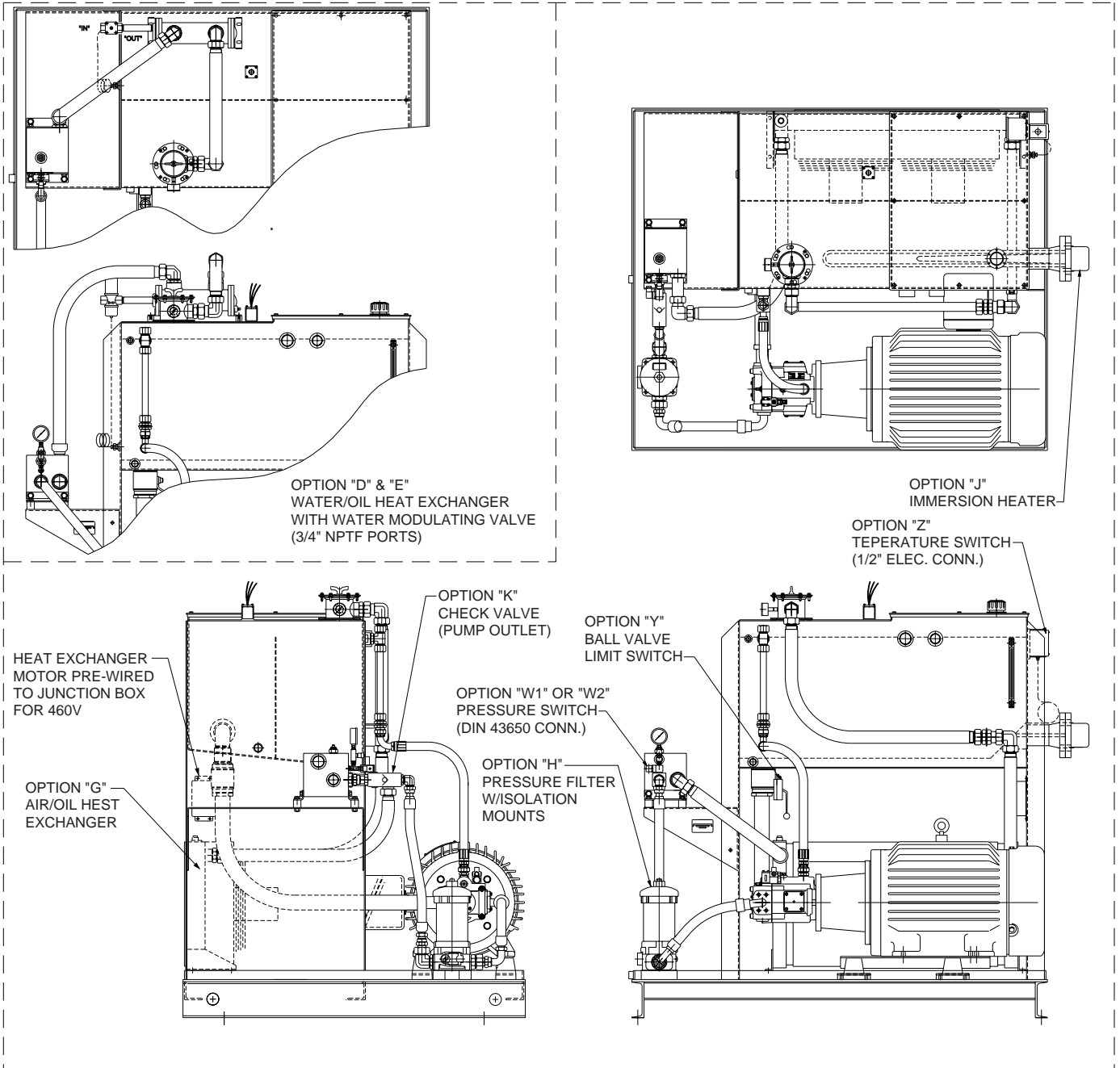
**"O" OPTIONAL MANIFOLD
 BASIC UNIT**

Dimensions - Basic L11 & L16
 (110 Gallon & 165 Gallon Tank)

Dimensions are shown
 in millimeters (inches)

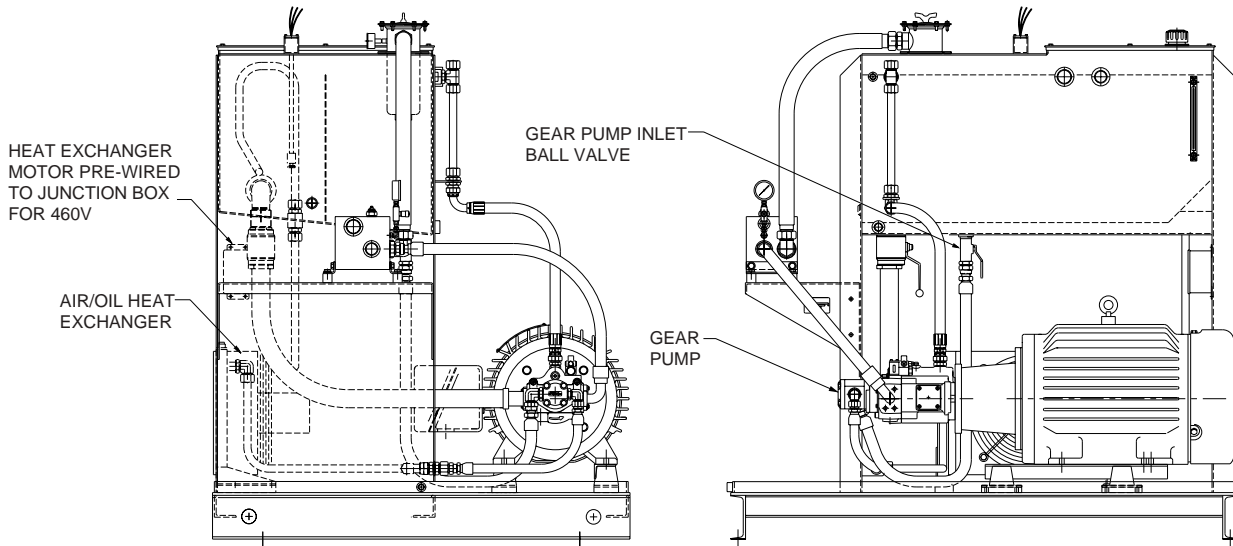


L11 & L16 (110 & 165 GALLON TANK) ACCESSORIES

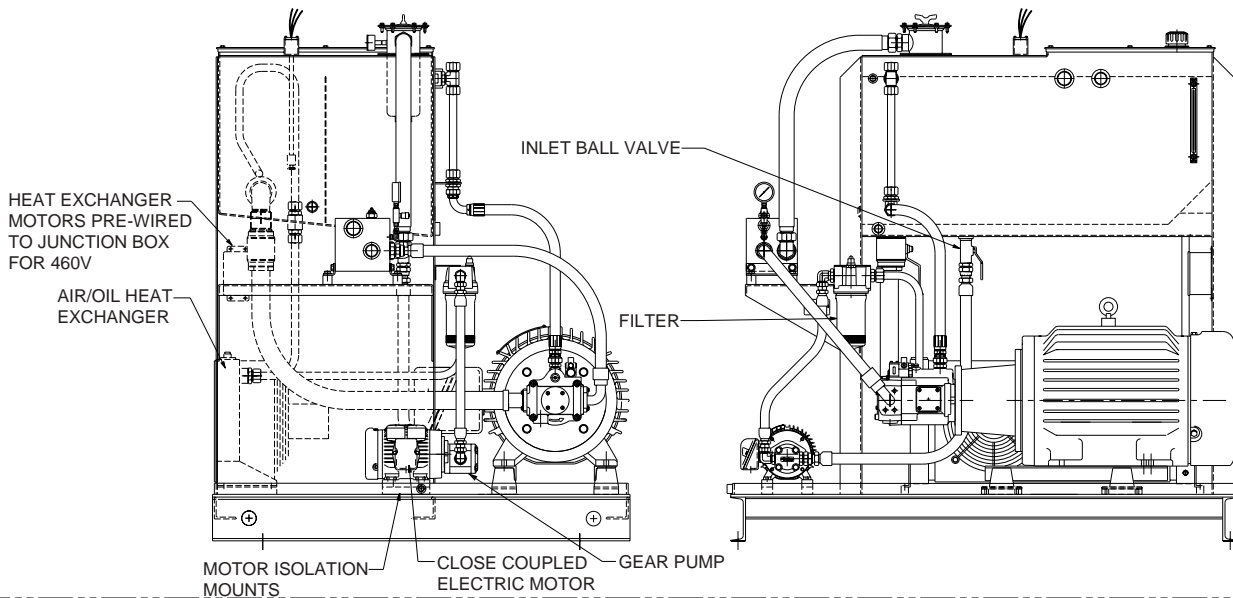


L11 & L16 (110 & 165 GALLON TANK) ACCESSORIES

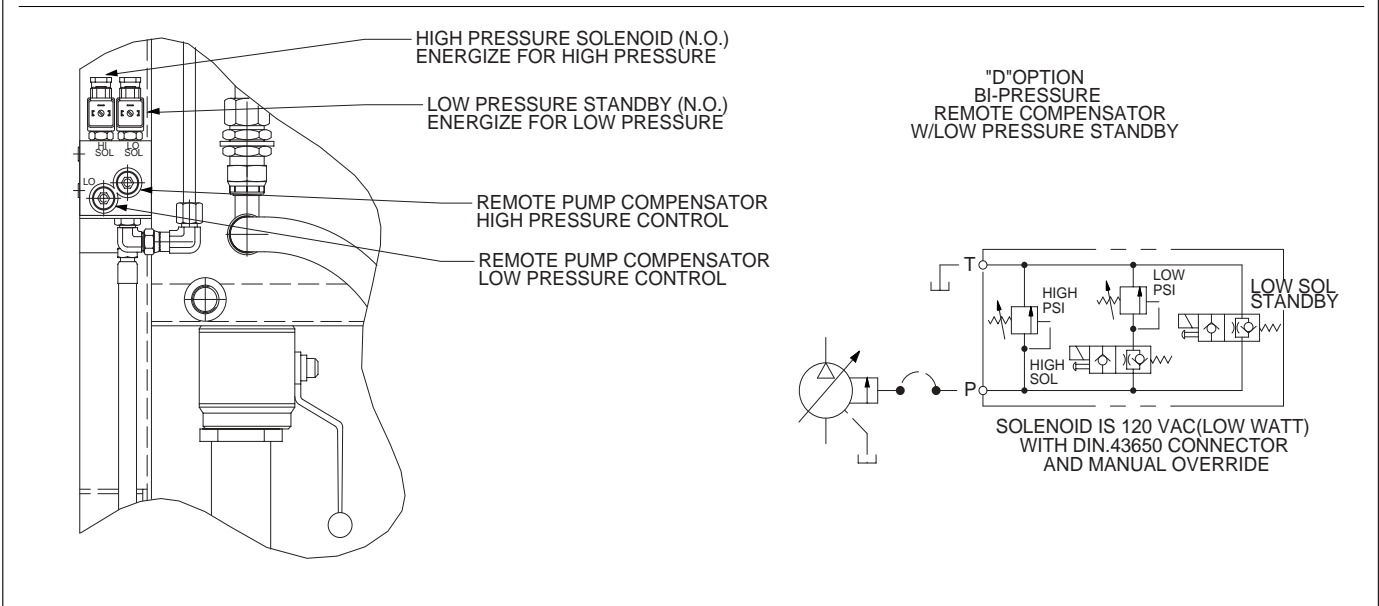
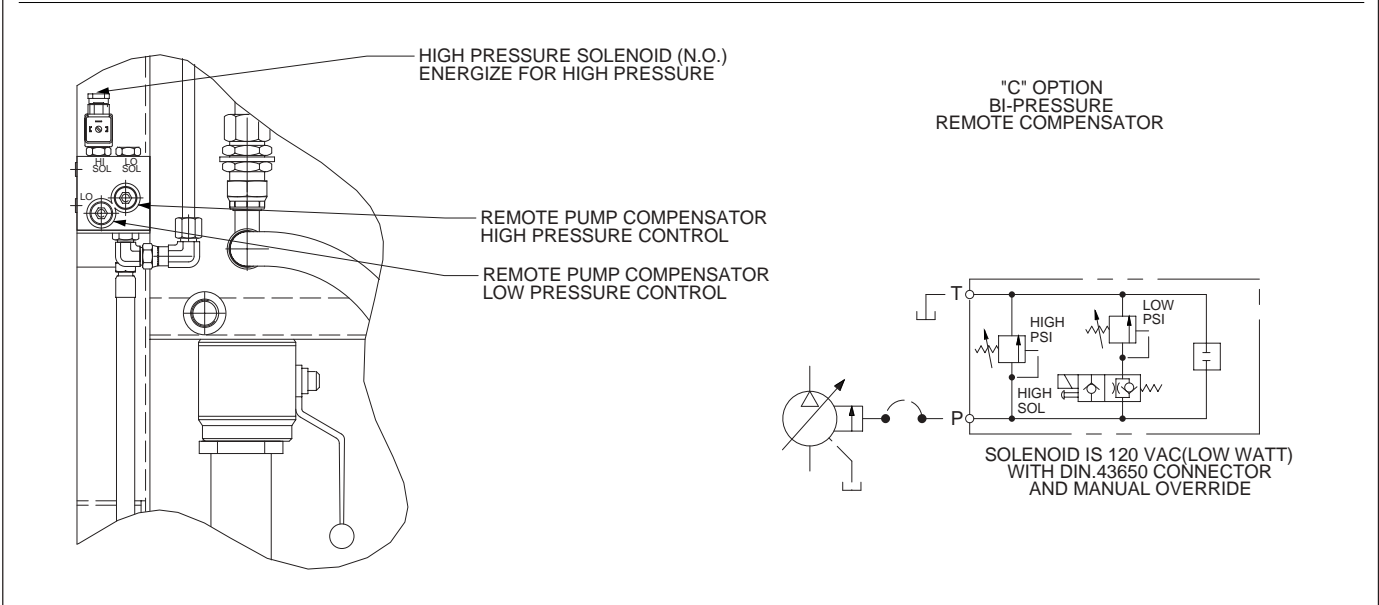
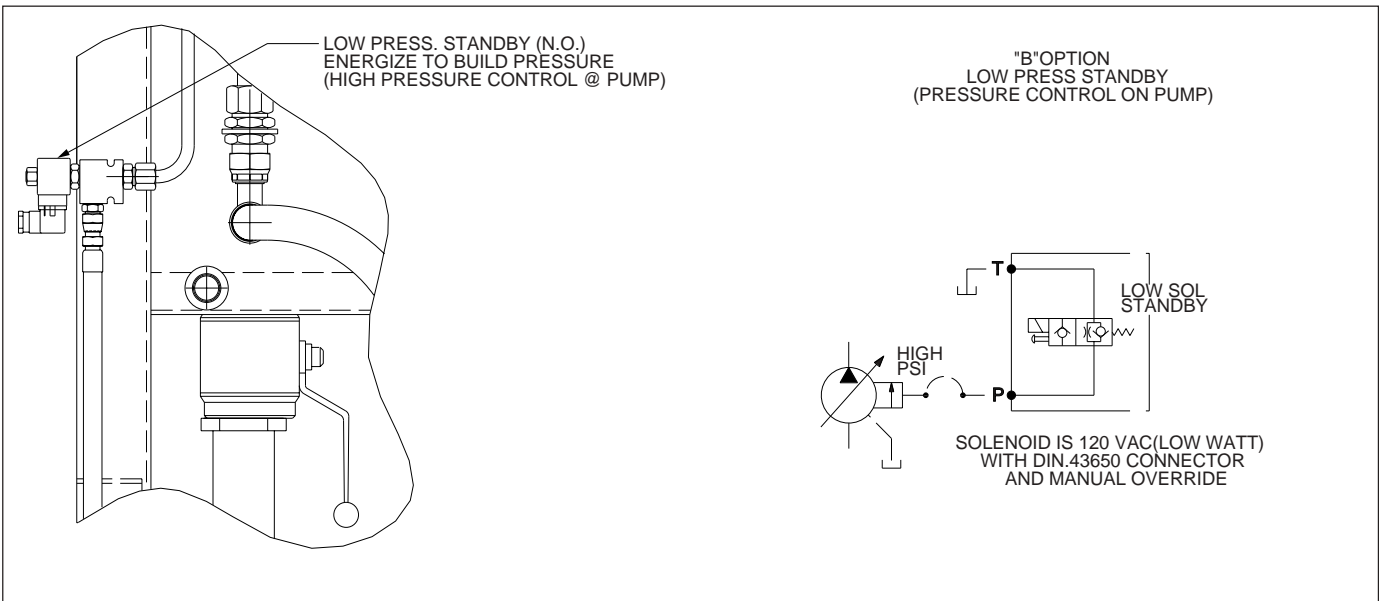
OPTION "A" - Compensated Horsepower Removal Cooling Loop



OPTION "R" - Cooling/Filtration Loop

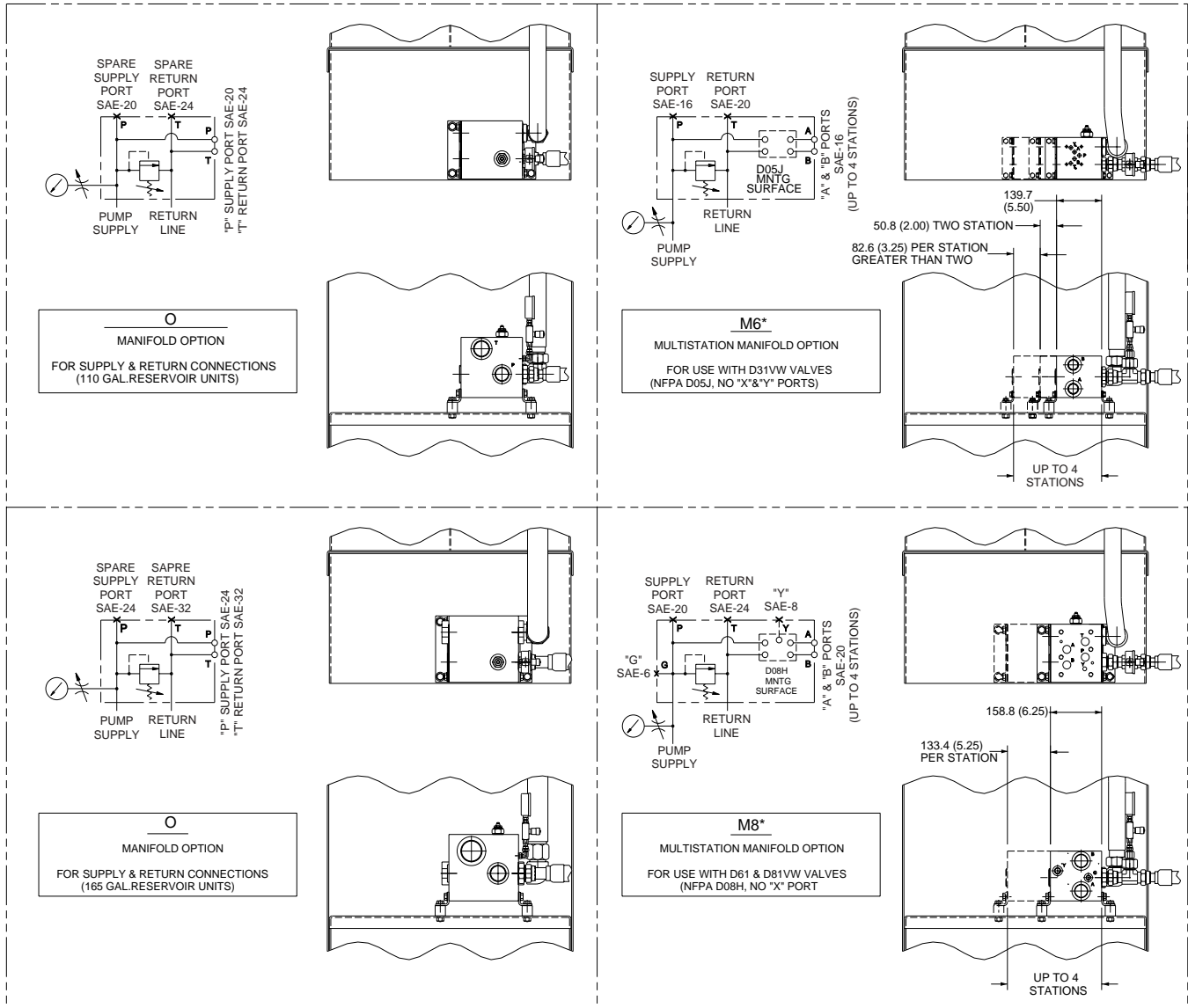


B



DIMENSIONS ARE SHOWN
 IN MILLIMETERS (INCHES)

MANIFOLD OPTIONS



B

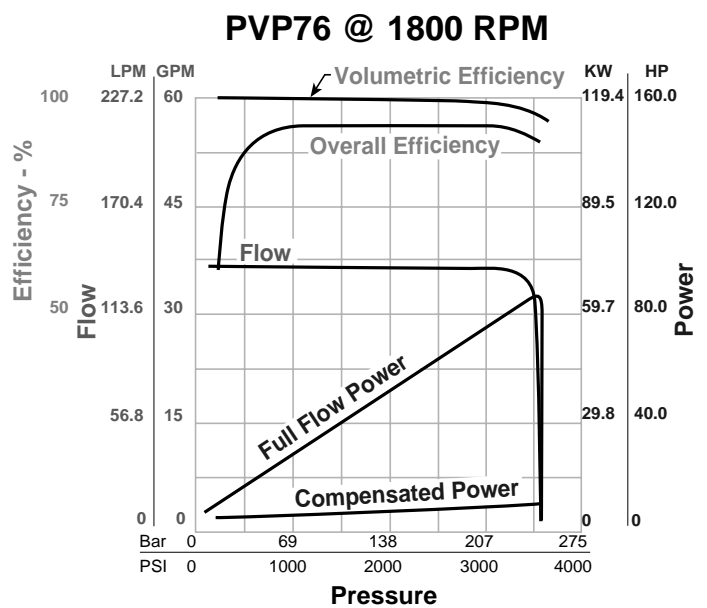
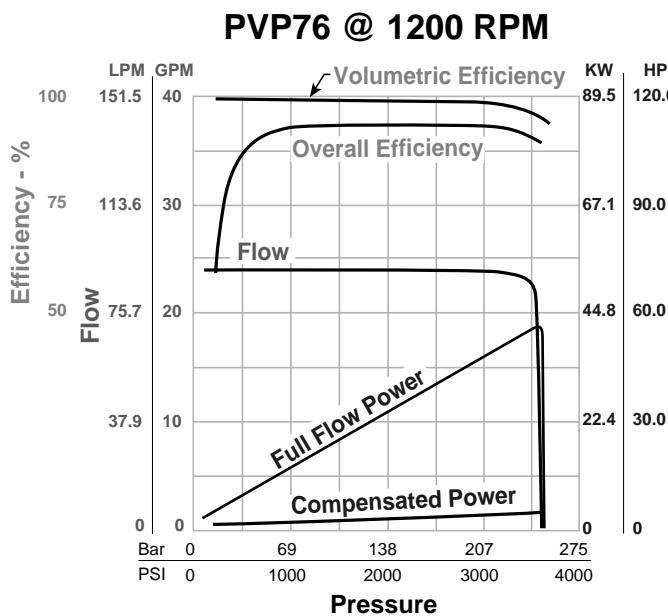
Performance Data

PVP Series Piston Pumps

Pump Model	Displacement CC/REV (IN ³ /REV)	Pump Delivery @ 7 bar (100 PSI) in LPM (GPM)	
		1200 RPM	1800 RPM
PVP76	76 (4.6)	91.2 (24.1)	134.4 (35.5)
PVP100	100 (6.1)	120.0 (31.7)	180 (47.5)
PVP140	140 (8.54)	171 (45.5)	252 (67)

Fluid: Standard Hydraulic Oil 100 SSU @ 120°F (49°C)

Flow, Horsepower and Efficiency Charts



NOTE: The efficiencies and data in the graph are good only for pumps running at 1200 or 1800 RPM and stroked to maximum. To calculate approximate horsepower for the other conditions, use the following formula:

$$HP = \left[\frac{Q \times (PSI)}{1714} \right] + (CHp)$$

Actual GPM is directly proportional to drive speed and maximum volume setting. Flow loss, however, is a function of pressure only.

WHERE:

- Q** = Actual Output Flow in GPM
- PSI** = Pressure at Pump Outlet
- CHp** = Input Horsepower @ Full Compensation @ 1200 or 1800 RPM (from graph read at operating pressure)

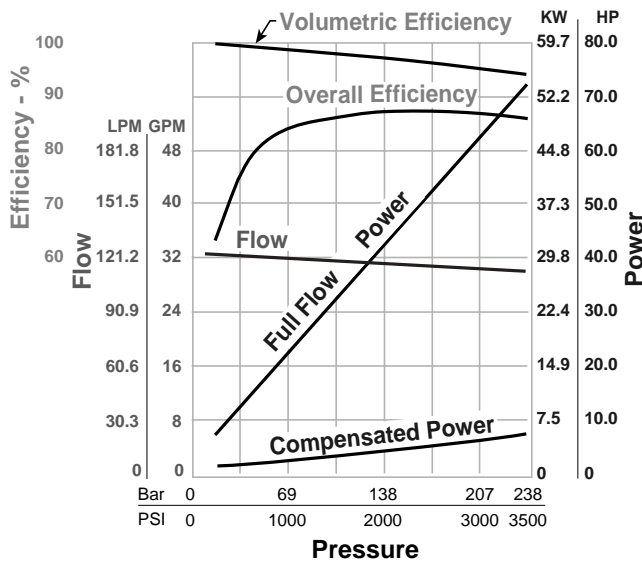
NOTE: Maximum input HP to the pump may exceed electric motor drive capability. Select motor size (HP) to exceed application requirements (HP).

Performance Data

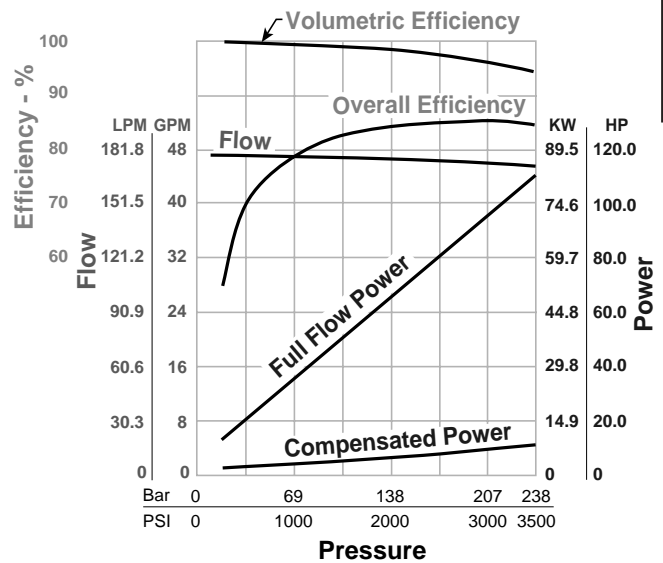
Fluid: Standard Hydraulic Oil 100 SSU @ 120°F (49°C)

Flow, Horsepower and Efficiency Charts

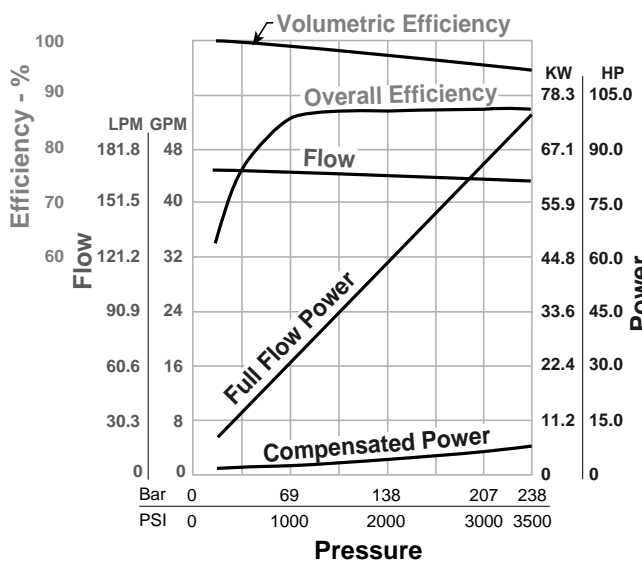
PVP100 @ 1200 RPM



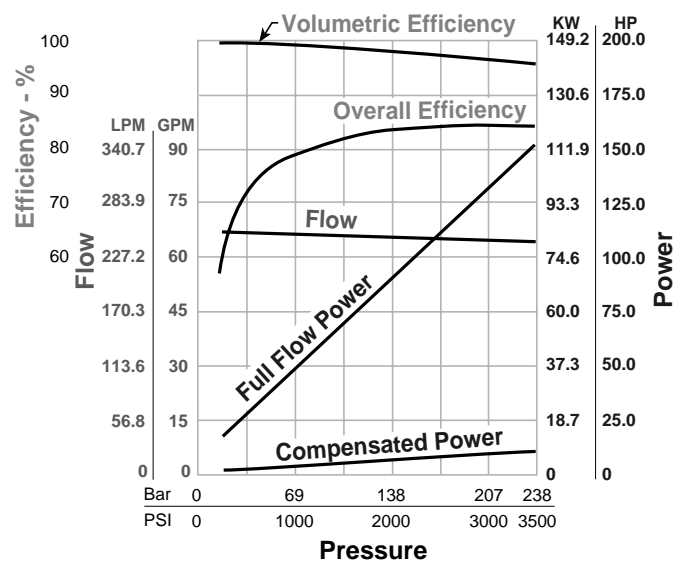
PVP100 @ 1800 RPM



PVP140 @ 1200 RPM



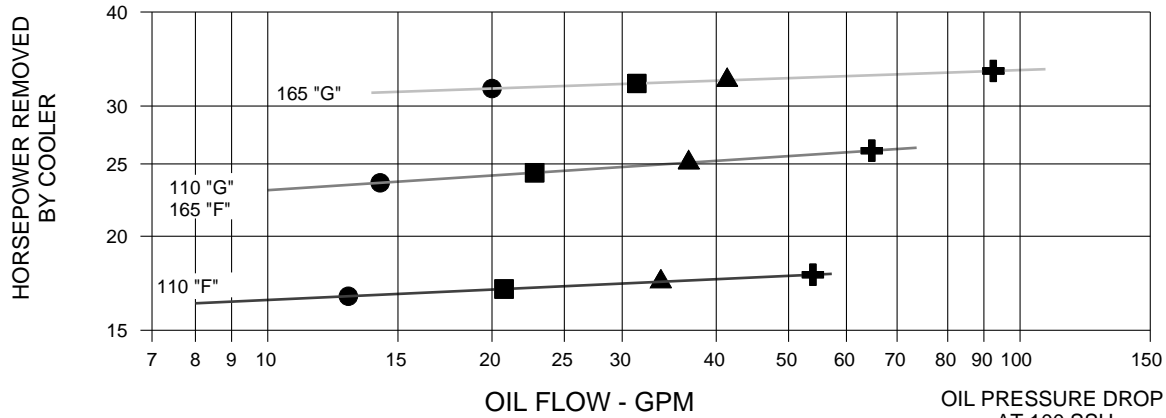
PVP140 @ 1800 RPM



B

Performance Data-Heat Exchangers

AIR/OIL HEAT EXCHANGERS
 110 & 165 GALLON "F"&"G"
 USED WITH 1725 RPM-3PH TEFC MOTORS

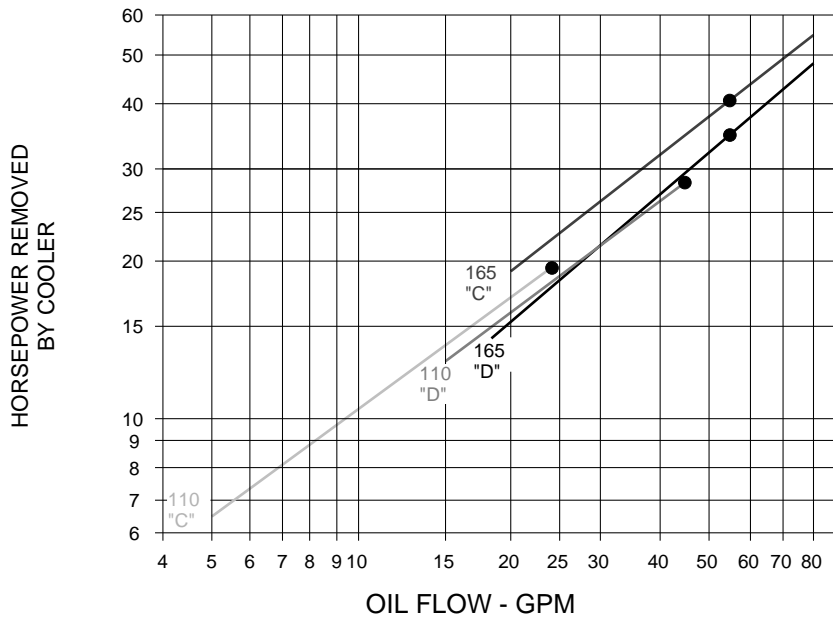


110 GAL. "F" - RETURN LINE HT.EX. (8 GPM MIN.- 55 GPM MAX.)
 110 GAL. "G" & 165 GAL. "F" - RETURN LINE HT.EX. (10 GPM MIN.- 65 GPM MAX.)
 165 GAL. "G" - RETURN LINE HT.EX. (14 GPM MIN.- 90 GPM MAX.)

HEAT REMOVAL IS BASED ON 40°F DIFFERENTIAL BETWEEN TRANSFER MEDIUM.

OIL PRESSURE DROP AT 100 SSU
 ● = 5 PSI
 ■ = 10 PSI
 ▲ = 20 PSI
 + = 40 PSI

WATER/OIL HEAT EXCHANGERS
 110 GAL. "C" (2:1 OIL/WATER RATIO)
 110 GAL. "D" (4:1 OIL/WATER RATIO)
 165 GAL. "C" (4:1 OIL/WATER RATIO)
 165 GAL. "D" (7:1 OIL/WATER RATIO)



110 GAL. "C" - RETURN LINE HT. EX. (6.5 GPM MIN.- 24 GPM MAX.)
 110 GAL. "D" - RETURN LINE HT. EX. (15 GPM MIN.- 45 GPM MAX.)
 165 GAL. "C" - RETURN LINE HT. EX. (20 GPM MIN.- 80 GPM MAX.)
 165 GAL. "D" - RETURN LINE HT. EX. (18 GPM MIN.- 80 GPM MAX.)

OIL PRESSURE DROP AT 100 SSU
 ● = 5 PSI

HEAT REMOVAL IS BASED ON 40°F DIFFERENTIAL BETWEEN TRANSFER MEDIUM. USING 85°F COOLING WATER

THE OIL/WATER RATIO OF 2:1 MEANS THAT FOR EVERY 2 GALLONS OF OIL THRU THE COOLER, A MINIMUM OF 1 GAL OF 85°F WATER MUST BE CIRCULATED TO ACHIEVE CURVE RESULTS.

HORSEPOWER REMOVED BY RESERVOIR

	RESERVOIR SIZE(GALLONS)	
	110	165
HP REMOVAL	2.0	2.8

HEAT REMOVAL IS BASED ON
 STATIC AMBIENT AIR OF 85°F
 AND MAX.OIL TEMPERATURE
 OF 135°F.



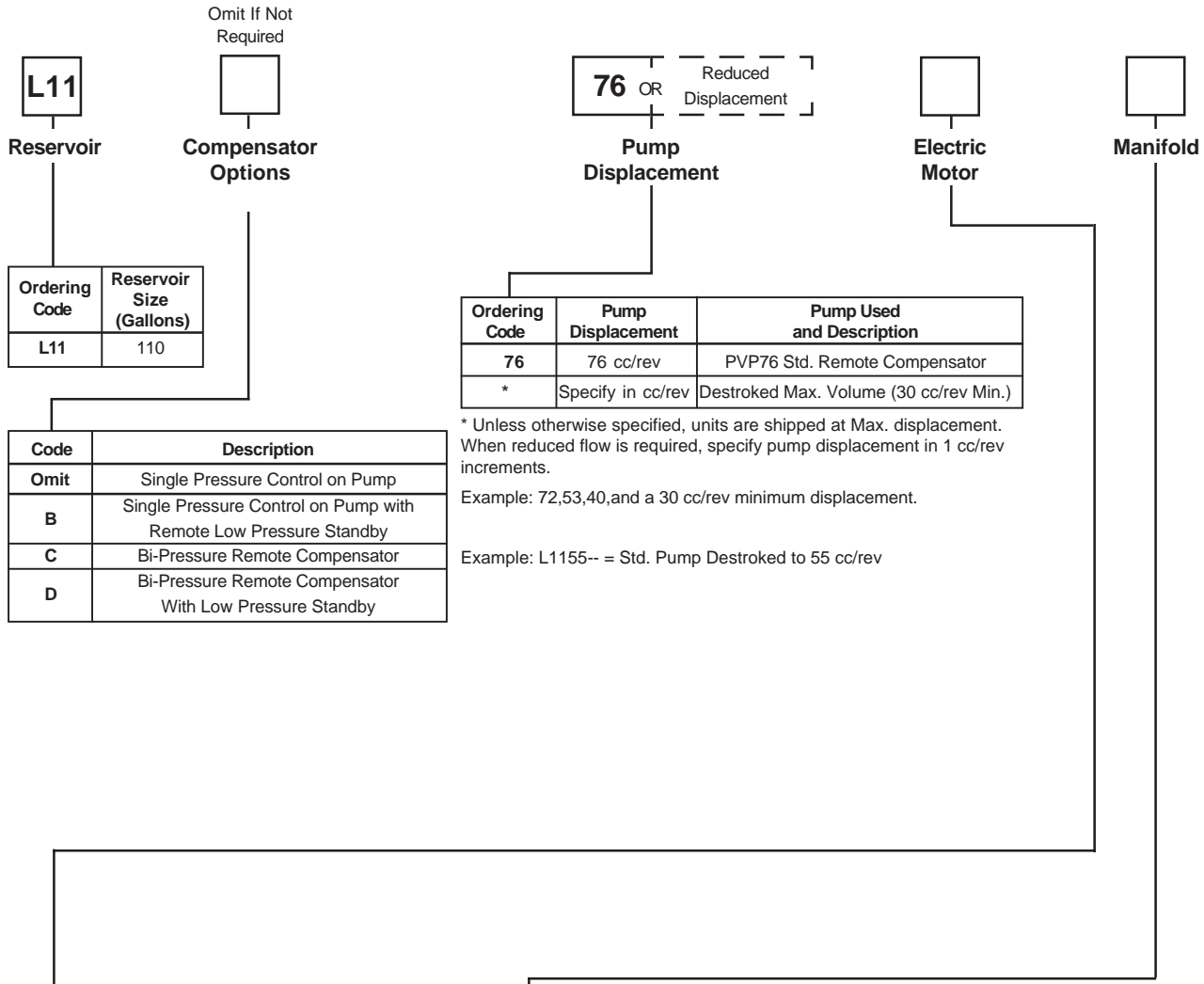
**** REPRESENTS MAX. OPERATING PRESSURE WITH PUMP/MOTOR COMBINATION.
 THIS WILL BE THE MAXIMUM COMPENSATOR SETTING.

**** REPRESENTS MAX. OPERATING PRESSURE WITH PUMP/MOTOR COMBINATION.
 WHEN USED ON POWER UNIT PRODUCTS THIS WILL REPRESENT A 3000 PSI
 COMPENSATOR SETTING.

**L11 & L16 - PUMP/MOTOR COMBINATIONS
 MAXIMUM OPERATING PRESSURES**

PUMP	GPM @ 1160 RPM	MOTOR HP					
		25	30	40	50	60	75
MAX OPERATING PRESSURE(THEORETICAL)							
PVP76	13	2850	3385				
PVP76	14	2750	3250				
PVP76	15	2530	3000				
PVP76	16	2385	2850	3500			
PVP76	17	2250	2750	3500			
PVP76	18	2140	2570	3390			
PVP76	19	2025	2500	3250			
PVP76	20	2000	2340	3100			
PVP76	21	1850	2250	3000			
PVP76	22	1770	2140	2850	3500		
PVP76	23	1750	2050	2750	3400		
PVP76	24	1625	2000	2625	3270		
PVP100	25	1375	1750	2335	3000		
PVP100	27	1275	1600	2165	2785	3340	
PVP100	29	1200	1500	2010	2600	3135	
PVP100	31	1140	1385	1900	2435	2950	3500
PVP140	33	1075	1300	1800	2285	2800	3500
PVP140	35	1025	1250	1750	2150	2650	3340
PVP140	37	1000	1175	1625	2050	2500	3150
PVP140	39	900	1125	1550	1950	2375	3000
PVP140	41	860	1075	1500	1860	2260	2865
PVP140	43	800	1050	1400	1800	2150	2750
PVP140	45	770	1000	1350	1700	2050	2625
PVP140	45.5	760	975	1350	1700	2050	2600

PUMP	GPM @ 1775 RPM	MOTOR HP							
		25	30	40	50	60	75	100	
MAX OPERATING PRESSURE(THEORETICAL)									
PVP76	14	2350	2800	3500					
PVP76	16	2090	2560	3360					
PVP76	18	1900	2800	3050					
PVP76	20	1750	2100	2800	3500				
PVP76	22	1580	1930	2600	3250				
PVP76	24	1470	1785	2435	3000				
PVP76	26	1370	1660	2250	2825	3380			
PVP76	28	1290	1550	2100	2660	3170			
PVP76	30	1210	1500	2000	2510	3000			
PVP76	32	1140	1380	1865	2365	2825	3500		
PVP76	34	1075	1310	1765	2250	2690	3350		
PVP76	35.5	1010	1250	1660	2100	2550	3150		
PVP100	38	770	945	1360	1750	2165	2750	3500	
PVP100	41	720	890	1265	1635	2015	2560	3460	
PVP100	44	670	840	1180	1550	1880	2410	3275	
PVP100	47	630	800	1110	1465	1765	2285	3075	
PVP140	49	605	770	1065	1405	1705	2205	2960	
PVP140	52	570	750	1005	1325	1625	2080	2825	
PVP140	55	540	690	960	1250	1550	1970	2685	
PVP140	58	510	655	915	1190	1480	1870	2550	
PVP140	61	490	625	880	1135	1410	1780	2435	
PVP140	64	465	595	845	1080	1345	1705	2340	
PVP140	67	445	570	810	1035	1285	1640	2250	



* Unless otherwise specified, units are shipped at Max. displacement. When reduced flow is required, specify pump displacement in 1 cc/rev increments.
 Example: 72,53,40, and a 30 cc/rev minimum displacement.

Example: L1155-- = Std. Pump Destroyed to 55 cc/rev

Ordering Code	Motor Description HP-RPM-Frame
Q1	25-1200-324TC
Q2	25-1800-284TC
R1	30-1200-326TC
R2	30-1800-286TC
V1	40-1200-364TC
V2	40-1800-324TC
W1	50-1200-365TC
W2	50-1800-326TC
X2	60-1800-364TC
Y2	75-1800-365TC

Electric Motors are 230/460V, 60HZ, 3 PH, TEFC.
 Consult factory for other motor speeds (RPM) and voltages.
 Standard Lead time is 10 working days.
 Lead time for 1200 RPM motors is 20 working days.

Ordering Code	Porting Block or Manifold Type	Supply/Return Port or Actuator Port Size	Other
O	Pressure and Return Port Block with Safety Relief Valve	"P" Port SAE-20 "T" Port SAE-24	Spare SAE-20 "P" and SAE-24 "T" Port
M61	D05J (1) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-16 Str. Thr'd	Spare SAE-16 "P" and SAE-20 "T" Port
M62	D05J (2) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-16 Str. Thr'd	Spare SAE-16 "P", SAE-20 "T" & SAE-6 "G" Port
M63	D05J (3) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-16 Str. Thr'd	Spare SAE-16 "P", SAE-20 "T" & SAE-6 "G" Port
M64	D05J (4) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-16 Str. Thr'd	Spare SAE-16 "P", SAE-20 "T" & SAE-6 "G" Port
M81	D08H (1) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-20 Str. Thr'd	Spare SAE-20 "P", SAE-24 "T", SAE-6 "G" & SAE-8 "Y" Port
M82	D08H (2) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-20 Str. Thr'd	Spare SAE-20 "P", SAE-24 "T", SAE-6 "G" & SAE-8 "Y" Port
M83	D08H (3) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-20 Str. Thr'd	Spare SAE-20 "P", SAE-24 "T", SAE-6 "G" & SAE-8 "Y" Port
M84	D08H (4) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-20 Str. Thr'd	Spare SAE-20 "P", SAE-24 "T", SAE-6 "G" & SAE-8 "Y" Port

* If valves are to be mounted, specify the valves and sequence. If the model code exceeds 25 digits, utilize the special ordering code X.

Example: L1176V2M83X Note: Manifolds are mounted horizontally; far left station is number 1.
 X = 3 Station Manifold
 Station #1 = J3
 Station #2 = K5
 Station #3 = M

Omit If Not
 Required



**Directional
 Control
 Valve**

Omit If Not
 Required



**Manapak Control
 Valves**

Omit If Not
 Required



Accessories

Omit If Not
 Required



**Special
 Modifications**

**"X" Indicates
 Special Modifications
 have been specified**



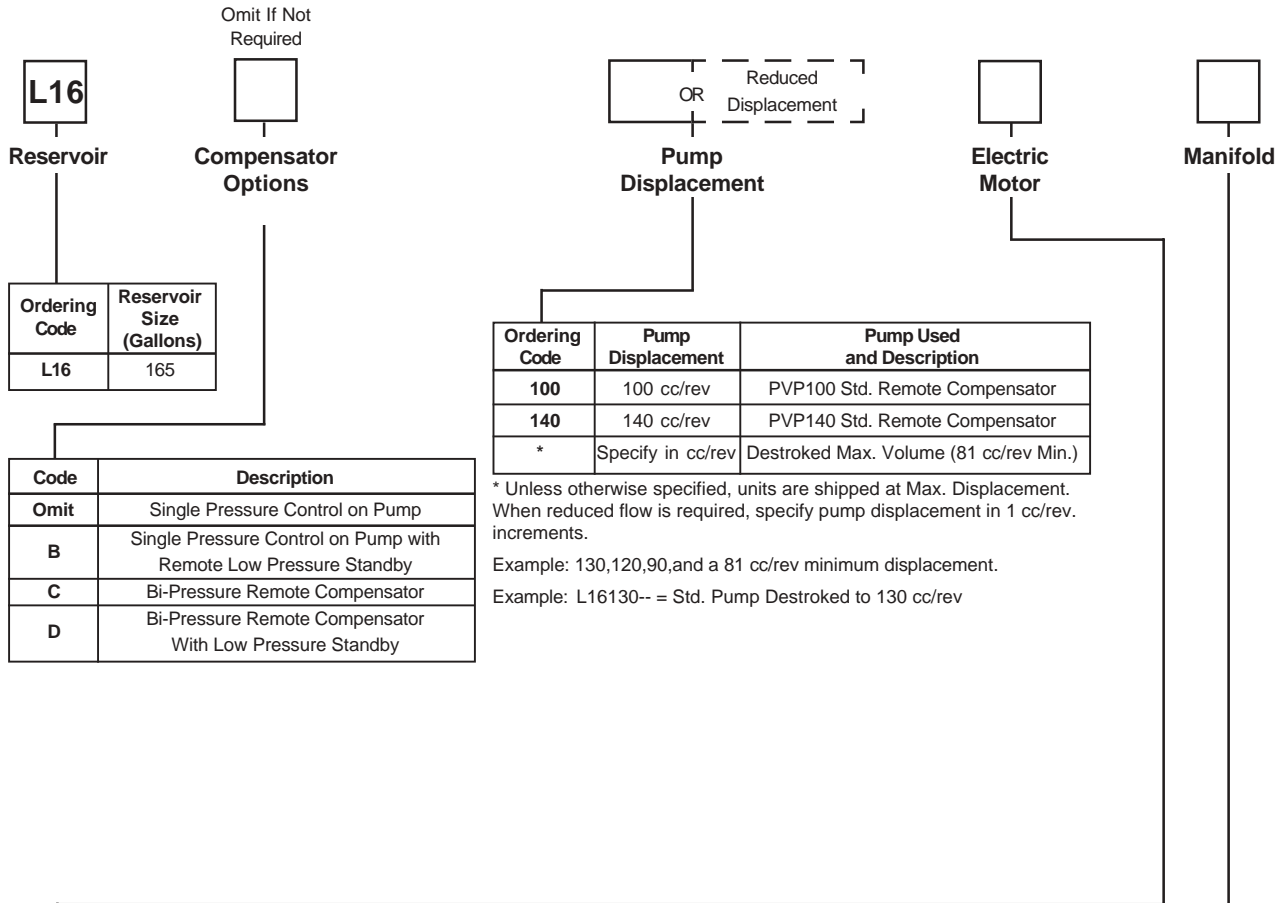
Ordering Code	Function	Valve Model Number	NFPA MNTG PAD	Nominal Flow (GPM)	Circuit Symbol
2	Flow Control (Meter Out)	FM3DDKN	D05	12	
3	Flow Control (Meter Out)	FM6DDKN	D08	40	
4	Pilot Operator Check	CPOM3DDN	D05	12	
5	Pilot Operator Check	CPOM6DDN	D08	40	
6	"P" Port Pressure Reducing	PRM3PA25KN (150-3000 PSI)	D05	12	
7	"P" Port Pressure Reducing	PRM6PA25KN (150-3000 PSI)	D08	40	

* Manapak valves mounted in order of callout. First valve will be nearest DCV; last valve will be on manifold.

Ordering Code	Valve Model Number	NFPA Mounting Pad	Nominal Flow (GPM)	Solenoid Operator 110VAC	Circuit Symbol
E	D31VW20B4NYCF	D05H	20	Single (Spring Return)	
F	D31VW1C4NYCF	D05H	20	Double (Spring Centered)	
G	D31VW4C4NYCF	D05H	20	Double (Spring Centered)	
H	D31VW20D4NYCF	D05H	20	Double (Detent)	
J	D61VW1B4NYCF	D08	50	Single (Spring Return)	
K	D61VW1C4NYCF	D08	50	Double (Spring Centered)	
L	D61VW4C4NYCF	D08	50	Double (Spring Centered)	
M	D61VW1D4NYCF	D08	50	Double (Detent)	

Ordering Code	Function	Model Number	Technical Data
A*	Compensated HP Removal Cooling Loop	PZG2AR140S2 AOC-24-2-3PH	6.3 GPM Gear Pump @1775 RPM Air/Oil Heat Ex. - 3 PH Motor - 5.4 HP Rejection
C*	Return Heat Exchanger	EKS-708-T	Oil/Water (2:1) 15 HP Rej. @ 24 GPM Max.
D*	Return Heat Exchanger	EKS-712-T	Oil/Water (4:1) 21 HP Rej. @ 35.5 GPM, 45 GPM Max.
E	Water Temp. Modulating Valve	V47AC-6	75°-135°F Adj. Range Cross Ambient Sensing 3/4" NPT Inlet
F*	Return Heat Exchanger	AOC-37-2-3PH	Air/Oil-3PH Mtr. 17 HP Rej. @28 GPM, 55 GPM Max.
G*	Return Heat Exchanger	AOC-50-2-3PH	Air/Oil-3 PH Mtr. 25 HP Rej. @35.5 GPM, 65 GPM Max.
H	Pressure Filter	50P110QHM50PP1	Microglass Element Vis. Ind. 50 PSI Bypass (4.5 PSI diff. @ 35.5 GPM)
J	Immersion Heater	K3S-3T2-0036-M1	7.5kW, 480V, 3 PH 0-100°F Thermostat NEMA 1 (22W/sq. in.)
K	Check Valve Pump Outlet	C1620S	5 PSI Cracking Pressure (10 PSI diff. @ 35.5 GPM)
R	Filtration/ Cooling Loop	MEC2P7C PZG2AR178S2 40CN205QM225N4N41 AOC-37-2-3PH	1 HP Close Coupled Motor 8.11 GPM Gear Pump 5Q Microglass II Filter Air/Oil Heat Ex.-3 PH Motor - 10 HP Rej.
S1	Filter Breather	926169	2 Micron Element
S2	Water Removal Breather	934331	Silica Gel, Carbon & Particulate Filter
W1	Pressure Switch 500-1750 PSI	PDCA4A4SWCHC1	N.O. & N.C. Contacts (SPDT Switch) DIN 43650 Connector
W2	Pressure Switch 1000-3500 PSI	PDCA44SWCHC1	5A @ 125/250VAC Induct 5A @ 12/24VDC Induct
Y	Limit Switch on Pump Inlet Ball Valve	LSB	15A, 1/2 HP @ 125 VAC 10A, 1/2 HP @ 250 VAC NEMA 4 Enclosure
Z	Temperature Switch	837-A4A	60° to 190°F Adjustable Diff. N.O. & N.C. Contacts

*Heat rejection based on flows given with a 40°F differential between the transfer medium.
 NOTES: Components are sized using oil with a viscosity of 225 SUS at 100°F.



Ordering Code	Reservoir Size (Gallons)
L16	165

Code	Description
Omit	Single Pressure Control on Pump
B	Single Pressure Control on Pump with Remote Low Pressure Standby
C	Bi-Pressure Remote Compensator
D	Bi-Pressure Remote Compensator With Low Pressure Standby

Ordering Code	Pump Displacement	Pump Used and Description
100	100 cc/rev	PVP100 Std. Remote Compensator
140	140 cc/rev	PVP140 Std. Remote Compensator
*	Specify in cc/rev	Destroyed Max. Volume (81 cc/rev Min.)

* Unless otherwise specified, units are shipped at Max. Displacement. When reduced flow is required, specify pump displacement in 1 cc/rev. increments.

Example: 130,120,90,and a 81 cc/rev minimum displacement.

Example: L16130-- = Std. Pump Destroyed to 130 cc/rev

Ordering Code	Motor Description HP-RPM-Frame
Q1	25-1200-324TC
Q2	25-1800-284TC
R1	30-1200-326TC
R2	30-1800-286TC
V1	40-1200-364TC
V2	40-1800-324TC
W1	50-1200-365TC
W2	50-1800-326TC
X1	60-1200-404TC
X2	60-1800-364TC
Y1	75-1200-404TC
Y2	75-1800-365TC
Z2	100-1800-405TC

Electric Motors are 230/460V, 60HZ, 3 PH, TEFC. Consult factory for other motor speeds (RPM) and voltages. Standard lead time is 10 working days.

Lead time for 1200 RPM motors is 20 working days.

Ordering Code	Porting Block or Manifold Type	Supply/Return Port or Actuator Port Size	Other
O	Pressure and Return Port Block with Safety Relief Valve	"P" Port SAE-24 "T" Port SAE-32	Spare SAE-24 "P" and SAE-32 "T" Port
M61	D05J (1) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-16 Str. Thr'd	Spare SAE-16 "P" and SAE-20 "T" Port
M62	D05J (2) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-16 Str. Thr'd	Spare SAE-16 "P", SAE-20 "T" & SAE-6 "G" Port
M63	D05J (3) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-16 Str. Thr'd	Spare SAE-16 "P", SAE-20 "T" & SAE-6 "G" Port
M64	D05J (4) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-16 Str. Thr'd	Spare SAE-16 "P", SAE-20 "T" & SAE-6 "G" Port
M81	D08H (1) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-20 Str. Thr'd	Spare SAE-20 "P", SAE-24 "T", SAE-6 "G" & SAE-8 "Y" Port
M82	D08H (2) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-20 Str. Thr'd	Spare SAE-20 "P", SAE-24 "T", SAE-6 "G" & SAE-8 "Y" Port
M83	D08H (3) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-20 Str. Thr'd	Spare SAE-20 "P", SAE-24 "T", SAE-6 "G" & SAE-8 "Y" Port
M84	D08H (4) Station Parallel Circuit Manifold with Safety Relief Valve	"A" & "B" Ports SAE-20 Str. Thr'd	Spare SAE-20 "P", SAE-24 "T", SAE-6 "G" & SAE-8 "Y" Port

* If valves are to be mounted, specify the valves and sequence. If the model code exceeds 25 digits, utilize the special ordering code X.

Example: L16100V2M83X NOTE: Manifolds are mounted horizontally; far left station is number 1.

X = 3 Station Manifold
 Station #1 = J3
 Station #2 = K5
 Station #3 = M

Omit If Not
 Required



**Directional
 Control Valve**

Omit If Not
 Required



**Manapak Control
 Valves**

Omit If Not
 Required



Accessories

Omit If Not
 Required



**Special
 Modifications**

**"X" Indicates
 Special Modifications
 have been specified**



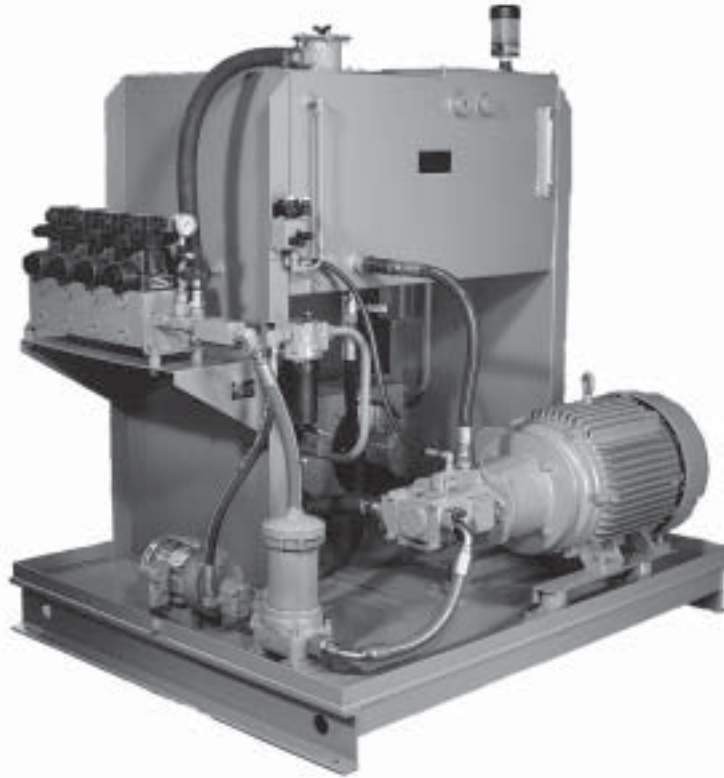
Ordering Code	Function	Valve Model Number	NFPA MNTG PAD	Nominal Flow (GPM)	Circuit Symbol
2	Flow Control (Meter Out)	FM3DDKN	D05	12	
3	Flow Control (Meter Out)	FM6DDKN	D08	40	
4	Pilot Operator Check	CPOM3DDN	D05	12	
5	Pilot Operator Check	CPOM6DDN	D08	40	
6	"P" Port Pressure Reducing	PRM3PA25KN (150-3000 PSI)	D05	12	
7	"P" Port Pressure Reducing	PRM6PA25KN (150-3000 PSI)	D08	40	

* Manapak valves mounted in order of callout. First valve will be nearest DCV; last valve will be on manifold.

Ordering Code	Valve Model Number	NFPA Mounting Pad	Nominal Flow (GPM)	Solenoid Operator 110VAC	Circuit Symbol
E	D31VW20B4NYCF	D05H	20	Single (Spring Return)	
F	D31VW1C4NYCF	D05H	20	Double (Spring Centered)	
G	D31VW4C4NYCF	D05H	20	Double (Spring Centered)	
H	D31VW20D4NYCF	D05H	20	Double (Detent)	
J	D61VW1B4NYCF	D08	50	Single (Spring Return)	
K	D61VW1C4NYCF	D08	50	Double (Spring Centered)	
L	D61VW4C4NYCF	D08	50	Double (Spring Centered)	
M	D61VW1D4NYCF	D08	50	Double (Detent)	
P	D81VW1B4NYCF	D08	80	Single (Spring Return)	
Q	D81VW1C4NYCF	D08	80	Double (Spring Centered)	
S	D81VW4C4NYCF	D08	80	Double (Spring Centered)	
T	D81VW20D4NYCF	D08	80	Double (Detent)	

Ordering Code	Function	Model Number	Technical Data
A*	Compensated HP Removal Cooling Loop	PZGAR208S2 AOC-33-2-3PH	9.8 GPM Gear Pump @ 1775 RPM Air/Oil Heat Ex. - 3 PH Motor -8.9 HP Rejection
C*	Return Heat Exchanger	EKS-1012-T	Oil/Water (4:1) 40 HP Rej. @ 67 GPM, 80 GPM Max
D*	Return Heat Exchanger	EKS-1012-F	Oil/Water (7:1) 37 HP Rej. @ 67 GPM, 80 GPM Max
E	Water Temp. Modulating Valve	V47AC-6	75°-135°F Adj. Range Cross Ambient Sensing 3/4" NPT Inlet
F*	Return Heat Exchanger	AOC-50-2-3PH	Air/Oil-3 PH Mtr. 25 HP Rej. @31.7 GPM, 65 GPM Max
G*	Return Heat Exchanger	AOC-54-2-3PH	Air/Oil-3 PH Mtr. 34 HP Rej. @67 GPM, 90 GPM Max.
H	Pressure Filter	50P110QHM50PP1	Microglass Element Vis. Ind. 50 PSI Bypass (11 PSI diff. @ 67 GPM)
J	Immersion Heater	K3S-3T2-0036-M1	7.5kW, 480V, 3 PH 0-100°F Thermostat NEMA 1 (22W/sq. in.)
K	Check Valve Pump Outlet	C2020S	5 PSI Cracking Pressure (10 PSI diff. @ 67 GPM)
R	Filtration/ Cooling Loop	MED2P7C PZGAR279S2 40CN205QM225N4N41 AOC-50-2-3PH	1.5 HP Close Coupled Motor 12.7 GPM Gear Pump 5Q Microglass II Filter Air/Oil Heat Ex.-3PH Motor - 15 HP Rej.
S1	Filter Breather	926169	2 Micron Element
S2	Water Removal Breather	934331	Silica Gel, Carbon & Particulate Filter
W1	Pressure Switch 500-1750 PSI	PDCA4A4SWCHC1	N.O. & N.C. Contacts (SPDT Switch) DIN 43650 Connector 5A @ 125/250VAC Induct 5A @ 12/24VDC Induct
W2	Pressure Switch 1000-3500 PSI	PDCA44SWCHC1	
Y	Limit Switch on Pump Inlet Ball Valve	LSB	15A, 1/2 HP @ 125 VAC 10A, 1/2 HP @ 250 VAC NEMA 4 Enclosure
Z	Temperature Switch	837-A4A	60° to 190°F Adjustable Diff. N.O. & N.C. Contacts

*Heat rejection based on flows given with a 40°F differential between the transfer medium.
 NOTES: Components are sized using oil with a viscosity of 225 SUS at 100°F.



Operating Notes

- Jog the electric motor once and verify that the electric motor is rotating in the same direction as the arrow on the electric motor housing. If direction is incorrect, reverse two of the three leads on a 3-phase electric motor.
- EL-Pak power units are tested and pressure control valves are factory preset. If adjustments are needed, follow the procedure below: Begin adjusting relief valve and pump compensator control valve to increase pressure gradually. (**NOTE:** Always set relief valve 400-450 PSI higher than pump compensator pressure control valve or severe overheating will occur.)
- If pump fails to prime, vent pump discharge to atmosphere to establish fluid flow.
- Reservoir temperature should not exceed 150°F. System reliability and component service life will be reduced when system is operated at higher temperature.
- Clean fluid = improved system reliability and longer component service life, change filter elements whenever filter indicators indicate a dirty element condition.
- It is recommended that every 4,000 operating hours or once a year, whichever occurs first, the filler/breather cap and suction strainer should be replaced.

Fluid Recommendations

Premium quality hydraulic oil with a viscosity range between 150-250 SSU (30-50 cst.) at 100°F (38°C). Normal operating viscosity range between 80-1000 SSU (17-180 cst.). Maximum start-up viscosity is 4000 SSU (1000 cst.).

NOTE: Consult Parker when exceeding 160°F (71°C) operation. Oil should have maximum anti-wear properties, rust and oxidation treatment.

Filtration

For maximum pump and system component life, the system should be protected from contamination at a level not to exceed 125 particles greater than 10 microns per milliliter of fluid. (SAE Class 4 / ISO 16/13.) Due to the nature of variable displacement pumps, variations in pump inlet conditions, fluid acceleration losses, system aeration, and duty cycle must be carefully considered before specifying suction line filtration. Contact your Parker representative for assistance.