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Hydraulic Power Units

D, H, V-Pak and V-Pak Low Profile Series

HY28-2661-CD/US

Effective: July 01, 2012



ENGINEERING YOUR SUCCESS.



WARNING - USER RESPONSIBILITY

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OFFER OF SALE

The items described in this document are hereby offered for sale by Parker-Hannifin Corporation, its subsidiaries or its authorized distributor. This offer and its acceptance are governed by the provisions stated in the detailed "Offer of Sale" elsewhere in this document.

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Quick Reference Data Chart

Pump Model No.	Tank Size Liters (Gallon)	Pump Flow LPM (GPM) @ 1725 RPM	Electrical Motors KW (HP)	Maximum* Bar (PSI)
D-Paks	18.9 (5)	3.4 - 10.2 (0.9 - 2.7)	0.37 (0.5) - 2.24 (3)	207 (3000)
H-Paks	37.9 (10), 75.7 (20), 113.6 (30), 151.4 (40)	3.4 - 36.3 (0.9 - 9.6)	0.37 (0.5) - 14.9 (20)	207 (3000)
V-Paks	37.9 (10), 75.7 (20), 113.6 (30), 151.4 (40)	7.6 - 59.1 (2.0 - 15.6)	1.5 (2) - 14.9 (20)	207 (3000)
V8	302.8 (80)	41.6 - 136.7 (11.0 - 36.1)	5.6 - 30 (7 1/2 - 40)	207 (3000)

* See pump/motor combination, maximum pressure charts.

Warranty

The hydraulic components on these Parker Power Units are warranted for one year. This warranty may be extended to two 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.



Standard Features

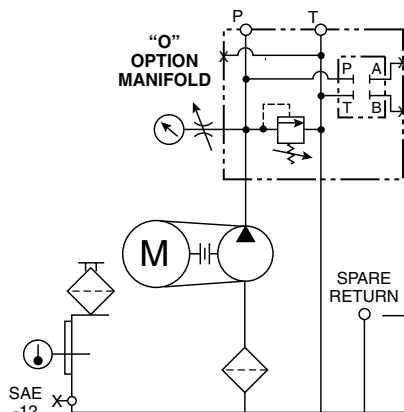
- Vertical Design
- Submerged Pump
- Spare Return Ports
- Precision Pump Mounting Adapters
- Suction Strainer
- Glycerine Filled Pressure Gage with Shut Off
- Oil Level Gage with Thermometer
- Relief Valve
- Breather and Fill Cap
- SAE Drain Plug
- Parker Connector Technology

Benefits

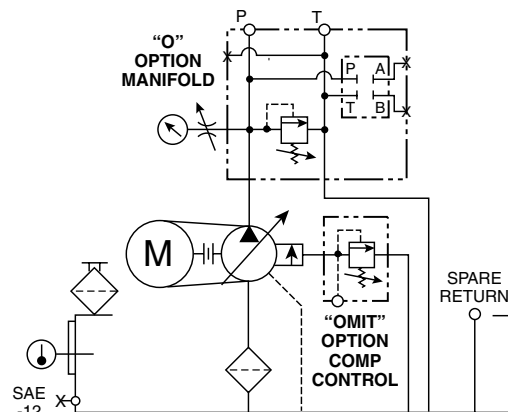
- Saves Floor Space
- Quieter Operation, Elimination of Potential Leak Point
- Longer Pump Life
- Protects Pump from Contamination
- Improved Diagnostics
- Helps to Maintain Trouble-Free Performance
- Protects Against System Shock
- Easy To Fill Reservoir
- Prevents Leaks

Schematic Symbol

(Hydraulic Schematic - Basic Unit)



D & H-PAK BASIC UNIT
 NO OPTIONS OR ACCESSORIES
 "O" OPTION MANIFOLD



V-PAK BASIC UNIT
 NO OPTIONS OR ACCESSORIES
 "OMIT" OPTION PUMP COMPENSATOR
 "O" OPTION MANIFOLD

D-Paks Ordering Information

**Hydraulic Power Units
D-Paks**



D5
Reservoir
18.9 Liters
(5 Gal)



Pressure
Control



Pump Flow



W
No Motor
(See Note
**)



Electric
Motor



Manifold



Directional
Control
Valve



*Manapak
Control
Valves



Options
and
Accessories

Code	Pressure Control
Omit	System Pressure Relief Valve Only
B	System Pressure Relief Valve with Unloading Valve (2-Way 120VAC) N.O. (Energize coil to close)
J	System Pressure Relief Valve with Unloading Valve (2-Way 24VDC) N.O. (Energize coil to close)

Code	Pump Flow Used
0.9	331-9110-267
1.3	331-9110-011
1.8	331-9110-010
2.7	331-9110-101

Code	Electric Motor Description HP (KW) - RPM - Frame - Phase
U1	.5 (.37) - 1725 - 56 C - 1
T1	1 (.75) - 1725 - 56 C - 1
T3	1 (.75) - 1725 - 56 C - 3
G	2 (1.5) - 1725 - 56 C - 3
K	3 (2.2) - 1725 - 56 C - 3

Single phase electric motors are rated as follows:
115/230V, 1PH, TEFC - 60 Hz 1800 RPM

Three phase electric motors are rated as follows:
200-230/460V, 3PH, TEFC - 60 Hz 1800 RPM

Consult factory for other motor speeds (RPM) and voltages.

** Use W prefix when no motor is required on unit.
When ordering, W must be followed by motor model code equivalent. Motor coupling will have interface for a 56C frame motor.

Code	Porting Block/Subplate or Manifold Type	Supply/Return Port or Actuator Port Size	Other
O	Pressure and Return Port Block with Safety Relief Valve	P & T Ports SAE-10 Str. Thr'd	Convertible to S3 Option
S3	D03 Single Station Subplate with Safety Relief Valve	A & B Ports SAE-8 Str. Thr'd	Spare P & T SAE-10 Ports
M33	D03 Multistation Parallel Circuit Manifold with Safety Relief Valve	A & B Ports SAE-8 Str. Thr'd	Spare G Port SAE-6

Manifolds are mounted vertically. Bottom station is number 1.

Code	Directional Control Valve Model Number	NFPA Mounting Pad	Nominal Flow GPM (LPM)	Description	Circuit Symbol
B	D1VW001CN***	D03	7 (26.5)	Double (Spr. Ctr)	
C	D1VW004CN***	D03	7 (26.5)	Double (Spr. Ctr)	
T	D1VW008CN***	D03	7 (26.5)	Double (Spr. Ctr)	

Units less valves will be supplied with station cover plates installed.

Code	Manapak Control Valves Function	Valve Model Number	NFPA Mounting Pad	Nominal Flow GPM (LPM)	Circuit Symbol
1	Flow Control Meter-Out	FM2DDKN	D03	7 (26.5)	
3	Pilot Operator Check	CPOM2DDN	D03	7 (26.5)	

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

Code	Options and Accessories		
	Function	Model Number	Technical Data
B1*	Exchanger	RM-08-2-2	Air/Oil: 0.7 HP (52 kW) Rej. @ 3 GPM (11.4 LPM)
H	Pressure Filter	15P110QXRS	Microglass II Element Vis. Ind. - 50 PSI (3.4 bar) Bypass - 2 PSI (0.14 bar) Diff. @ 3 GPM (11.4 LPM)
K	Check Valve Pump Outlet	DT370MOMF05	5 PSI (0.34 bar) Cracking Pressure 7 PSI (0.48 bar) Diff. @ 3 GPM (11.4 LPM)
L	Bypass Check (on Heat Exch)	C1020S65	65 PSI (4.5 bar) Cracking Pressure
O	Return Filter	12AT10C 45LPM (12 GPM)	Cellulose Element Ind. Gage - 15 PSI (1.03 bar) Bypass Max. Oil Flow
R1	Combination Float/Temp. Switch N.O. Float Up	8767820-1	Fixed Temp at 65°C (149°F) Close @ Low Level and/or 65°C (149°F) (N.O.)
R2	Combination Float/Temp. Switch Float Up	876782-02	Fixed Temp at 65°C (149°F) Open @ Low Level and/or 65°C (149°F) (N.C.)

*Heat rejection based on flow given with a 40°F differential between transfer medium.

= Omit if not required



Reservoir



Pressure Control



Pump Flow



No Motor
(See Note)
**



Electric Motor



Manifold

Code	Reservoir Size Gallons (Liters)
H1*	10 (37.9)
H2	20 (75.7)
H3	30 (113.6)
H4	40 (151.4)

*Available up to 7.5 KW (10 HP) motor only.

Code	Pressure Control*
Omit	System Pressure Relief Valve Only
B	System Pressure Relief Valve with Unloading Valve (2-Way 120VAC) N.O. (Energize coil to close)
J	System Pressure Relief Valve with Unloading Valve (2-Way 24VDC) N.O. (Energize coil to close)

Code	Pump Flow Used
0.9	331-9110-267
1.3	331-9110-011
1.8	331-9110-010
2.7	331-9110-101
3.2	334-9111-069
4.5	334-9111-068
5.1	334-9111-067
6.3	334-9111-048
8.1	334-9111-065
9.6	334-9111-049

Code	Electric Motor Description HP (KW) - RPM - Frame - Phase
U1*	.5 (.37) - 1725 - 56C - 1
T1	1 (.75) - 1725 - 56C - 1
T3	1 (.75) - 1725 - 56C - 3
G	2 (1.5) - 1725 - 56C - 3
K	3 (2.2) - 1725 - 56C - 3
L	5 (37.5) - 1725 - 184TC - 3
M	7.5 (5.6) - 1725 - 213TC - 3
N	10 (7.5) - 1725 - 215TC - 3
P †	15 (11.2) - 1725 - 254TC - 3
S †	20 (14.9) - 1725 - 256TC - 3

* U1 leadtime is 2 weeks

Single phase electric motors are rated as follows:
115/230V, 1PH, TEFC - 60 Hertz 1800 RPM

Three phase electric motors are rated as follows:
208-230/460V, 3PH, TEFC - 60 Hertz 1800 RPM

Consult factory for other motor speeds (RPM) and voltages.

† Available with H2, H3 and H4 tanks only.

** Use W prefix when no motor is required on unit.
When ordering, W must be followed by motor model code equivalent to frame size of motor to be used.

Code	Porting Block/Subplate or Manifold Type	Supply/Return Port or Actuator Port Size	Other
O	Pressure and Return Port Block with Safety Relief Valve	P & T Ports SAE-10 Str. Thr'd	Convertible to S3 Option
S3	D03 Single Station Subplate with Safety Relief Valve	A & B Ports SAE-8 Str. Thr'd	Spare P & T SAE-10 Ports
S5	D05 Single Station Subplate with Safety Relief Valve	A & B Ports SAE-10 Str. Thr'd	Spare P & T SAE-12 Ports
M33 M35	D03 Multistation Parallel Circuit Manifold with Safety Relief Valve	A & B Ports SAE-8 Str. Thr'd	Spare G Port SAE-6
M53 M55	D05 Multistation Parallel Circuit Manifold with Safety Relief Valve	A & B Ports SAE-8 Str. Thr'd	Spare G Port SAE-6

Manifolds are mounted vertically. Bottom station is number 1.

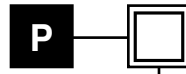
= Omit if not required



Directional Control Valve



***Manapak Control Valves**



Options and Accessories

Code	Valve Model Number	NFPA Mounting Pad	Nominal Flow GPM (LPM)	Description	Circuit Symbol
B	D1VW001CN***	D03	7 (26.5)	Double (Spr. Ctr)	
C	D1VW004CN***	D03	7 (26.5)	Double (Spr. Ctr)	
F	D3W1CN**	D05	20 (75.7)	Double (Spr. Ctr)	
G	D3W4CN**	D05	15 (56.8)	Double (Spr. Ctr)	
T	D1VW008CN***	D03	7 (26.5)	Double (Spr. Ctr)	
W	D3W8CN**	D05	15 (56.8)	Double (Spr. Ctr)	

Units less valves will be supplied with station cover plates installed.

Code	Function	Valve Model Number	NFPA Mounting Pad	Nominal Flow GPM (LPM)	Circuit Symbol
1	Flow Control	FM2DDKN	D03	7 (26.5)	
2	Flow Control	FM3DDKN	D05	12 (45.4)	
3	Pilot Operator Check	CPOM2DDN	D03	7 (26.5)	
4	Pilot Operator Check	CPOM3DDN	D05	12 (45.4)	

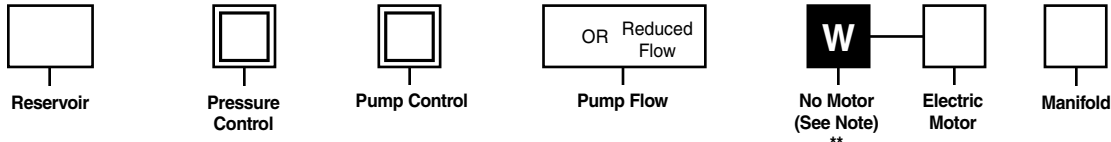
*Manapak valves mounted in order of callout.

First valve will be nearest DCV; last valve will be on manifold.

Code	Function	Model Number	Technical Data
B1*	Return Heat Exchanger	RM-08-1-2	Air/Oil: .7 HP (0.52 kW), Rej. @ 7 GPM (26.5 LPM) 0.37 - 3.7 kW Motors only
B2*	Return Heat Exchanger	RM 190-1-2	Air/Oil: 1.5 HP (1.1 kW), Rej. @ 7 GPM (26.5 LPM) 5.6 - 11.2 kW Motors only
H	Pressure Filter	15P110QXRS	Microglass II Element, Vis. Ind. - 50 PSI (3.49 bar) Bypass - 4 PSI (0.27 bar), Diff. @ 7 GPM (26.5 LPM)
K	Check Valve Pump Outlet	"DT" & "C" Series	5 PSI (0.34 bar) Cracking Pressure 25 PSI (1.72 bar) Diff. @ 15 GPM (56.8 LPM)
L	Bypass Check (on Heat Exch)	C1220S65	(65 PSI) 4.5 bar Cracking Pressure
O	Return Filter	12AT10C 12 GPM (45 LPM)	Cellulose Element, Ind. Gage - 15 PSI (1.03 bar) Bypass
R1	Combination Float/Temp. Switch N.O. Float Up	876782-01	Fixed Temp at 65°C (149°F) Close @ Low Level and/or 65°C (149°F) (N.O.)
R2	Combination Float/Temp. Switch Float Up	876782-02	Fixed Temp at 65°C (149°F) Open @ Low Level and/or 65°C (149°F) (N.C.)

*Heat rejection based on flow given with a 40°F differential between transfer medium.

= Omit if not required



Code	Reservoir Size Gallons (Liters)
V1*	10 (37.9)
V2	20 (75.7)
V3	30 (113.6)
V4	40 (151.4)

*Available up to 10 HP (7.5 kW) motor only.

Code	Pressure Control
Omit	Single Pressure Remote Compensator
B	Single Pressure Remote Compensator with Low Pressure Standby
BJ	Single Pressure Remote Compensator with Low Pressure Standby, 24 VDC
C	Bi-Pressure Remote Compensator
CJ	Bi-Pressure Remote Compensator, 24VDC
D	Bi-Pressure Remote Compensator with Low Pressure Standby
DJ	Bi-Pressure Remote Compensator with Low Pressure Standby, 24VDC
F	Provision for Customer Supplied Remote Control Relief Valve

Code	Pump Control
Omit	Std. Remote Compensator
A*	Load Sense Flow Control
H**	Horsepower Limiting

*A_SAE-6 sense port line will be supplied in topplate.

** Horsepower setting will be at max. flow & pressure obtainable with motor selected. Lead time is four weeks for shaded items.

Code	Pump Flow Rate @1800 RPM	Pump Used and Description
7	7 GPM (29.5 LPM)	PVP16 - Std. Remote Compensator
*	Specify in GPM	Destroyed Max. Volume – 2 GPM Min.
15	15.6 GPM (59 LPM)	PVP33 - Std. Remote Compensator
**	Specify in GPM	Destroyed Max. Volume – 8 GPM Min.

*Unless otherwise specified, units are shipped at max. flow rate 7.8 GPM (29.5 LPM) at 1800 RPM. When reduced flow setting is required, specify pump setting in .5 GPM (1.9 LPM) increments. Example: 5, 5.5, 6, 6.5 with a 2 GPM (7.6 LPM) minimum flow.

**Unless otherwise specified, units are shipped at max. flow rate 15.6 GPM (59 LPM) at 1800 RPM. When reduced flow setting is required, specify pump setting in .5 GPM (1.9 LPM) increments. Example: 11, 11.5, 12, 12.5 with a 8 GPM (30.3 LPM) minimum flow.

Example: V*12**-- = Std. Pump Destroyed to 12 GPM (45.4 LPM)
 V*A11.5***-- = Load Sense Pump Destroyed to 11.5 GPM (43.5 LPM)

= Omit if not required

Code	Electric Motor Description HP (KW) - RPM - Frame - Phase
G	2 (1.5) - 1725 - 56C - 3
K	3 (2.2) - 1725 - 56C - 3
L	5 (37.5) - 1725 - 184TC - 3
M	7.5 (5.6) - 1725 - 213TC - 3
N	10 (7.5) - 1725 - 215TC - 3
P †	15 (11.2) - 1725 - 254TC - 3
S †	20 (14.9) - 1725 - 256TC - 3

Electric motors are 208-230/460V, 60 Hz 3PH 1800 RPM TEFC. Consult factory for other motor speeds (RPM) and voltages.

†Available with V2, V3 and V4 tanks only.

** Use W prefix when no motor is required on unit. When ordering, W must be followed by motor model code equivalent to frame size of motor to be used.

Code	Porting Block/Subplate or Manifold Type	Supply/Return Port or Actuator Port Size	Other
O	Pressure and Return Port Block with Safety Relief Valve	P & T Ports SAE-10 Str. Thr'd	Convertible to S3 Option
S3	D03 Single Station Subplate with Safety Relief Valve	A & B Ports SAE-8 Str. Thr'd	Spare P & T SAE-10 Ports
S5	D05 Single Station Subplate with Safety Relief Valve	A & B Ports SAE-10 Str. Thr'd	Spare P & T SAE-12 Ports
M33 M35	D03 Multistation Parallel Circuit Manifold with Safety Relief Valve	A & B Ports SAE-8 Str. Thr'd	Spare G Port SAE-6
M53 M55	D05 Multistation Parallel Circuit Manifold with Safety Relief Valve	A & B Ports SAE-8 Str. Thr'd	Spare G Port SAE-6

Manifolds are mounted vertically. Bottom station is number 1.



Directional Control Valve



*Manapak Control Valves



Options and Accessories

Code	Directional Control Valve Model Number	NFPA Mounting Pad	Nominal Flow GPM (LPM)	Description	Circuit Symbol
B	D1VW001CN***	D03	7 (26.5)	Double (Spr. Ctr)	
C	D1VW004CN***	D03	7 (26.5)	Double (Spr. Ctr)	
F	D3W1CN**	D05	20 (75.7)	Double (Spr. Ctr)	
G	D3W4CN**	D05	15 (56.8)	Double (Spr. Ctr)	

Units less valves will be supplied with station cover plates installed.

Code	Manapak Control Valves Function	Valve Model Number	NFPA Mounting Pad	Nominal Flow GPM (LPM)	Circuit Symbol
1	Flow Control	FM2DDKN	D03	7 (26.5)	
2	Flow Control	FM3DDKN	D05	12 (45.4)	
3	Pilot Operator Check	CPOM2DDN	D03	7 (26.5)	
4	Pilot Operator Check	CPOM3DDN	D05	12 (45.4)	

*Manapak valves mounted in order of callout.

First valve will be nearest DCV; last valve will be on manifold.

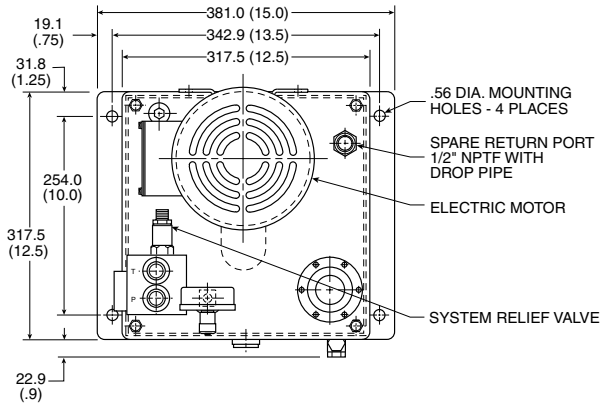
Code	Options and Accessories		
	Function	Model Number	Technical Data
A*	Pump Case Heat Exchanger	RM-08-4-2	Air/Oil: 0.7 HP (0.52 kW), Rej. @ .5 GPM (1.9 LPM) 2-15 HP (1.5 - 11.2 kW) Motors
B1*	Return Heat Exchanger	RM-08-1-2	Air/Oil: 0.7 HP (0.52 kW), Rej. @ 7 GPM (26.5 LPM) 2-5 HP (1.5 - 3.7 kW) Motors only
B2*	Return Heat Exchanger	RM 190-1-2	Air/Oil: 1.5 HP (1.1 kW), Rej. @ 7 GPM (26.5 LPM) 7.5-15 HP (5.6 - 11.2 kW) Motors only
H	Pressure Filter	15P110QXRS	Microglass II Element, Vis. Ind. - 50 PSI (3.49 bar) Bypass - 4 PSI (0.27 bar), Diff. @ 7 GPM (26.5 LPM)
K	Check Valve Pump Outlet	"DT" & "C" Series	5 PSI (0.34 bar) Cracking Pressure 25 PSI (1.72 bar) Diff. @ 15 GPM (56.8 LPM)
L	Bypass Check (on Heat Exch)	C1220S65	(65 PSI) 4.5 bar Cracking Pressure
N	Return Filter	40CN110B	Microglass II Element, Visual 25 PSI (1.72 bar) Indicator 3 PSI (0.21 bar) Diff. @ 7 GPM (26.5 LPM)
O	Return Filter	12AT10C 12 GPM (45 LPM)	Cellulose Element, Ind. Gage - 15 PSI (1.03 bar) Bypass
R1	Combination Float/Temp. Switch N.O. Float Up	876782-01	Fixed Temp at 65°C (149°F) Close @ Low Level and/or 65°C (149°F) (N.O.)
R2	Combination Float/Temp. Switch Float Up	876782-02	Fixed Temp at 65°C (149°F) Open @ Low Level and/or 65°C (149°F) (N.C.)

*Heat rejection based on flow given with a 40°F differential between transfer medium.

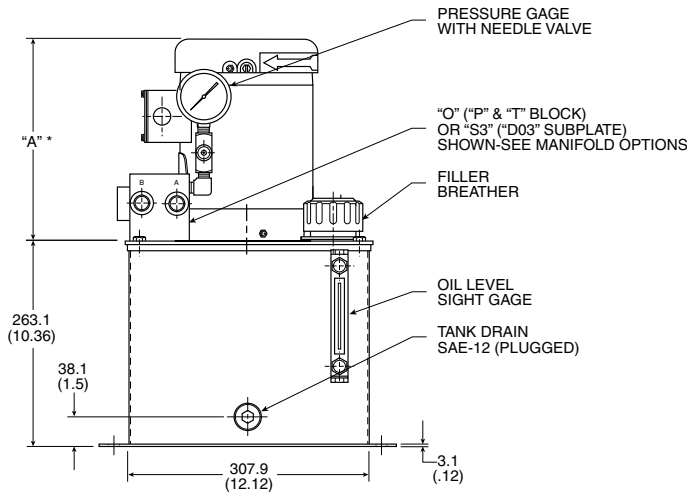
= Omit if not required

Dimensions - Basic D-Pak (18.9 Liter (5 Gallon) Tank)

Inch equivalents for millimeter dimensions are shown in (**).



**"O" & "S3" OPTION MANIFOLD
 (P & T BLOCK & D03 SINGLE STATION)
 BASIC UNIT**

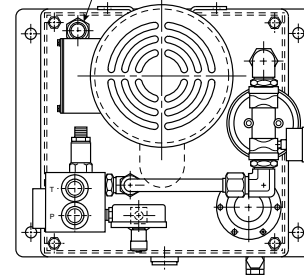


Motor Code	Motor Description KW(HP)-RPM-Frame-Phase	Dimension
		"A" *
U1	.37 (.5)-1725-145TCZ-1	269.75 (10.62)
C1	.56 (.75)-1725-145TCZ-1	295.15 (11.62)
T1	.75 (1)-1725-145TCZ-1	295.15 (11.62)
T3	.75 (1)-1725-145TCZ-3	258.57 (10.18)
F	1.1 (1.5)-1725-145TCZ-3	283.97 (11.18)
G	1.5 (2)-1725-145TCZ-3	306.32 (12.06)
K	2.2 (3)-1725-145TCZ-3	341.37 (13.44)

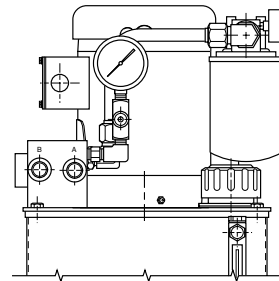
* Reference dimension consult factory if critical to application.

Filter Option Reference

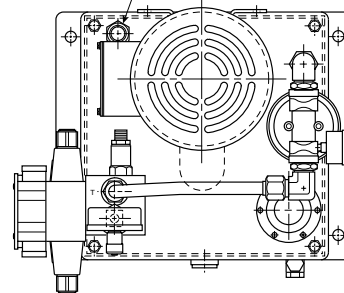
SPARE RETURN PORT
 1/2" NPTF
 WITH DROP PIPE



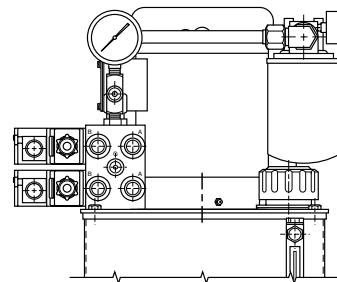
**"O" & "S3" OPTION MANIFOLD
 (P & T BLOCK & D03 SINGLE STATION)
 SHOWN WITH OPTION "O" RETURN FILTER**



SPARE RETURN PORT
 1/2" NPTF
 WITH DROP PIPE

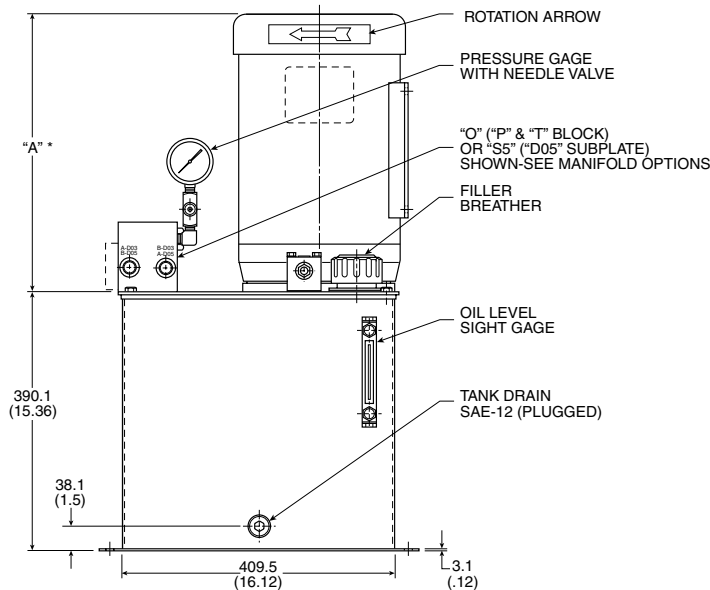
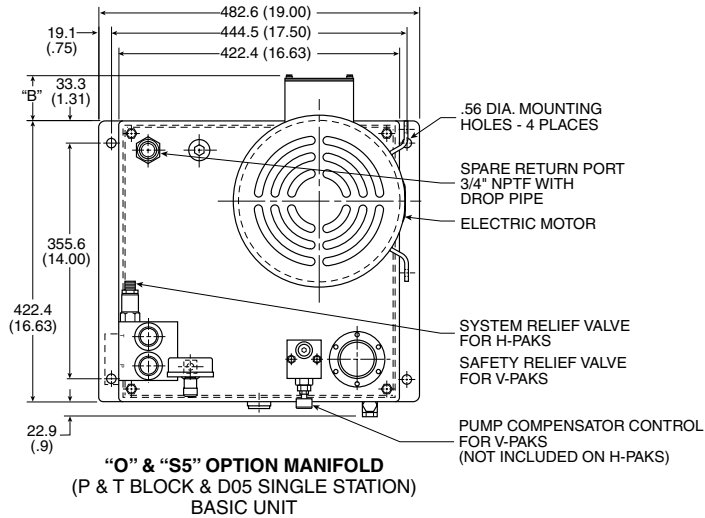


**"M3" & "C3" OPTION MANIFOLD
 (MULTI-STATION D03 MANIFOLD)
 SHOWN WITH OPTION "O" RETURN FILTER**



**Dimensions - Basic H1 & V1
 (10 Gallon Tank)**

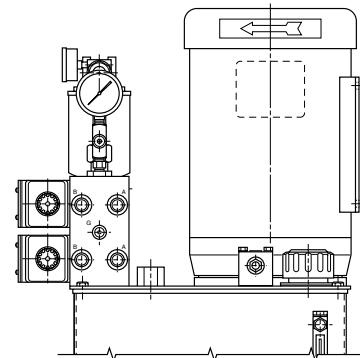
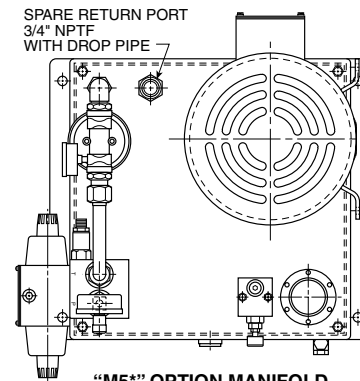
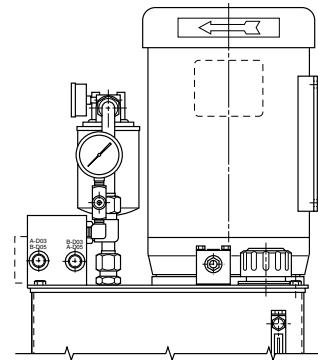
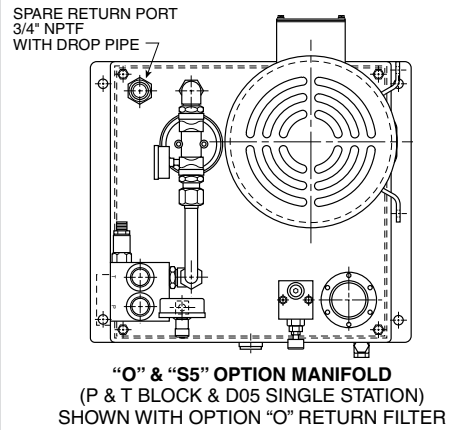
Inch equivalents for millimeter dimensions are shown in (**).



Motor Code	Motor Description KW(HP)-RPM-Frame-Phase	Dimension	
		"A" *	"B"
U1	0.37 (.5)-1725-56C-1	266.70 (10.50)	19.05 (0.75)
C1	0.56 (.75)-1725-56C-1	279.40 (11.00)	19.05 (0.75)
T1	0.75 (1)-1725-56C-1	298.45 (11.75)	19.05 (0.75)
T3	0.75 (1)-1725-56C-3	266.70 (10.50)	19.05 (0.75)
F	1.1 (1.5)-1725-56C-3	273.05 (10.75)	19.05 (0.75)
G	1.5 (2)-1725-56C-3	298.45 (11.75)	19.05 (0.75)
K	2.2 (3)-1725-56C-3	320.55 (12.62)	19.05 (0.75)
L	3.7 (5)-1725-184TC-3	365.25 (14.38)	28.70 (1.13)
M	5.6 (7.5)-1725-213TC-3	406.40 (16.00)	66.80 (2.63)
N	7.5 (10)-1725-215TC-3	413.51 (16.28)	66.80 (2.63)

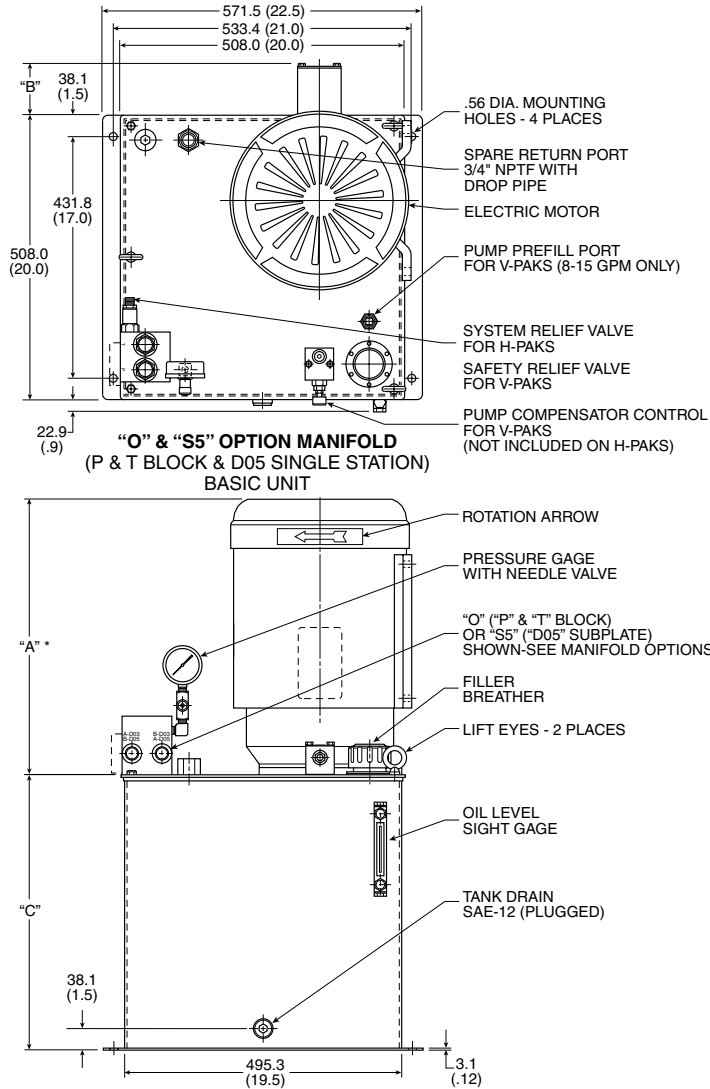
* Reference dimension consult factory if critical to application.

Filter Option Reference



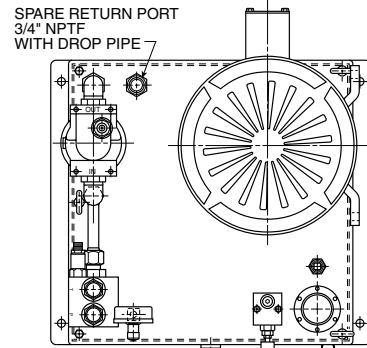
**Dimensions - Basic H2, 3, 4 & V2, 3, 4
 (20, 30, 40 Gallon Tank)**

Inch equivalents for millimeter dimensions are shown in (**).

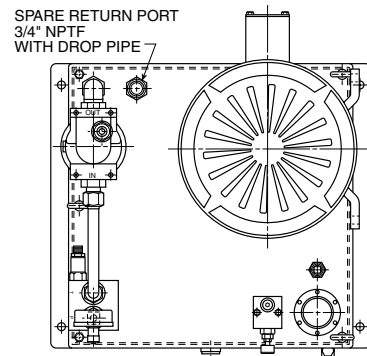
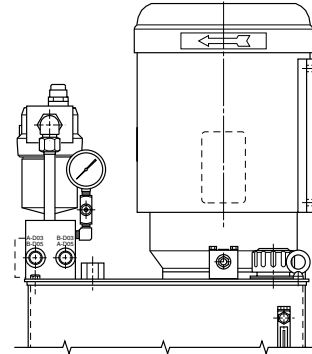


**"O" & "S5" OPTION MANIFOLD
 (P & T BLOCK & D05 SINGLE STATION)
 BASIC UNIT**

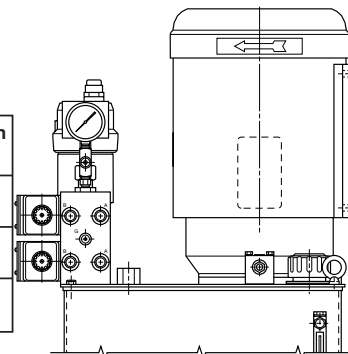
Filter Option Reference



**"O" & "S5" OPTION MANIFOLD
 (P & T BLOCK & D05 SINGLE STATION)
 SHOWN WITH OPTION "N" RETURN FILTER**



**"M5" OPTION MANIFOLD
 (MULTI-STATION D05 MANIFOLD)
 SHOWN WITH OPTION "N" RETURN FILTER**



Motor Code	Motor Description KW(HP)-RPM-Frame-Phase	Dimension	
		"A" **	"B"
U1	.37(.5) -1725-56C-1	266.70 (10.50)	19.05 (.75)
C1	.56(.75) -1725-56C-1	279.40 (11.00)	19.05 (.75)
T1	.75(1) -1725-56C-1	298.45 (11.75)	.75 (19.05)
T3	.75(1) -1725-56C-3	266.70 (10.50)	19.05 (.75)
F	1.1(1.5) -1725-56C-3	273.05 (10.75)	19.05 (.75)
G	1.5(2) -1725-56C-3	298.45 (11.75)	19.05 (.75)
K	2.2(3) -1725-56C-3	320.55 (12.62)	19.05 (.75)
L	3.7(5) -1725-184TC-3	365.25 (14.38)	28.70 (1.13)
M	5.6(7.5) -1725-213TC-3	406.40 (16.00)	35.05 (1.38)
N	7.5(10) -1725-215TC-3	413.51 (16.28)	35.05 (1.38)
P	11.2(15) -1725-254TC-3	447.80 (17.63)	85.09 (3.35)
S	14.9(20) -1725-256TC-3	492.25 (19.3)	85.09 (3.35)

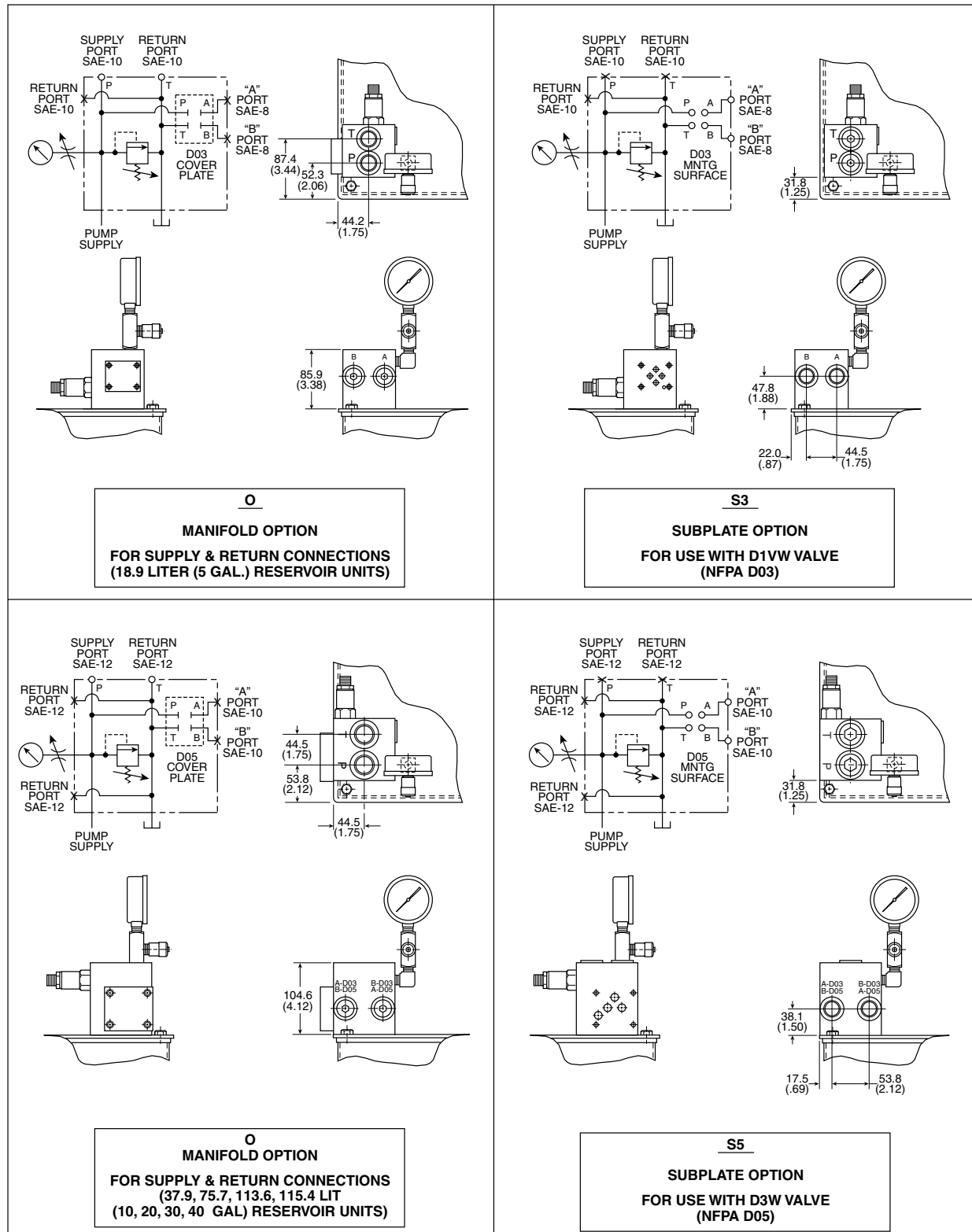
Reservoir Code	Reservoir Size	Dimension "C"
H2 or V2	151.4 Liters (20 Gal)	491.74 (19.36)
H3 or V3	113.6 Liters (30 Gal)	599.95 (23.62)
H4 or V4	75.7 Liters (40 Gal)	733.04 (28.86)

* Reference dimension consult factory if critical to application.



Manifold Options

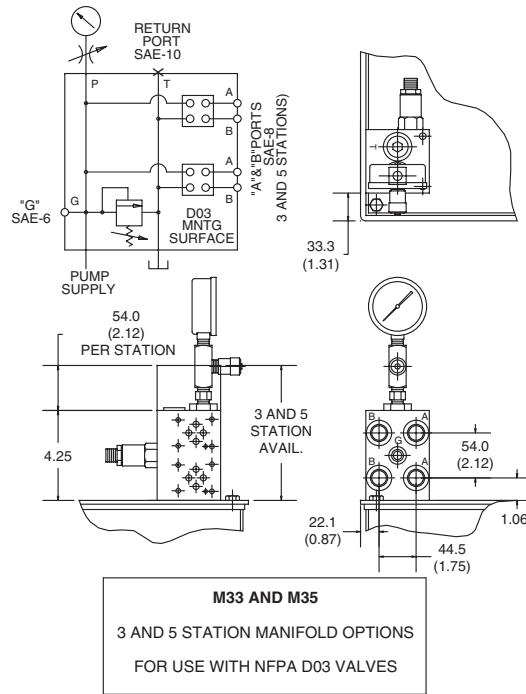
Inch equivalents for millimeter dimensions are shown in (**).



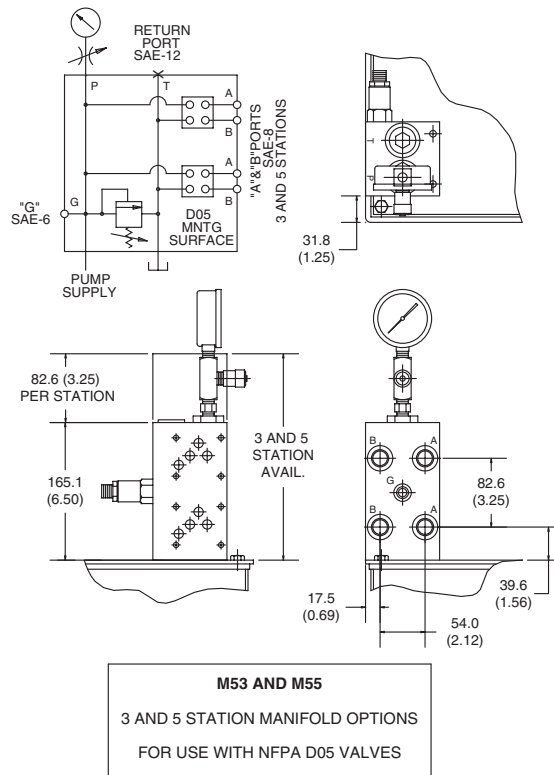
Manifold Options

Inch equivalents for millimeter dimensions are shown in (**).

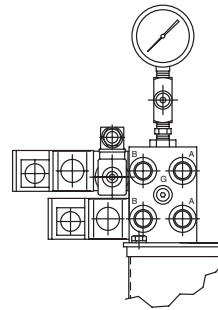
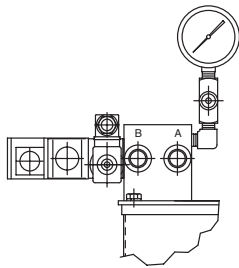
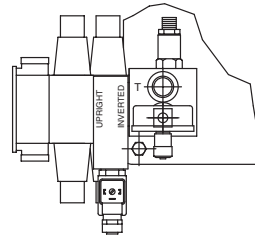
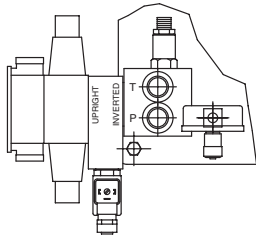
Option M33/M35



Option M53/M55

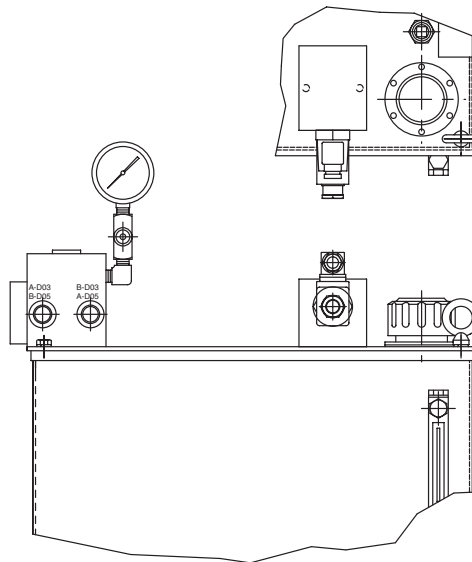
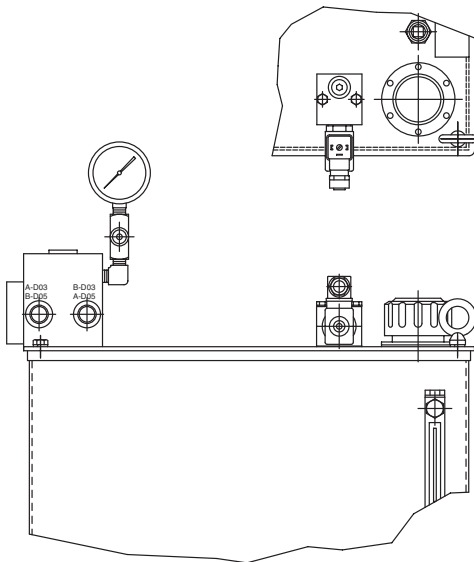


Pressure Control Option "B" - Unloading Valve



"H"PAK WITH
 "S3" MANIFOLD
 3.4-19.3 LPM (0.9-5.1 GPM) FLOW RATES ONLY
 (CONNECTED TO SYSTEM RETURN LINE)

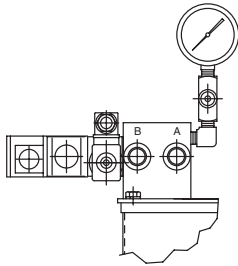
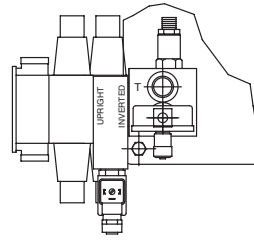
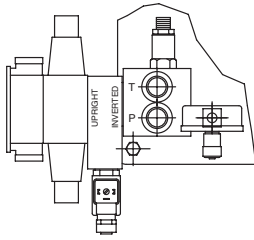
"H"PAK WITH
 "M3" MANIFOLD
 3.4-19.3 LPM (0.9-5.1 GPM) FLOW RATES ONLY
 (CONNECTED TO SYSTEM RETURN LINE)



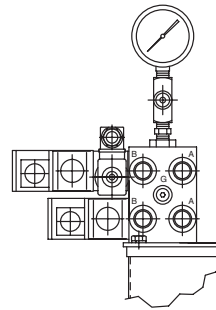
"H"PAK WITH
 "OMIT", "S5", "S6", "M5", "M6" MANIFOLDS
 3.4-19.3 LPM (0.9-5.1 GPM) FLOW RATES ONLY
 (PLUMBED DIRECTLY BACK TO TANK)

"H"PAK WITH
 "OMIT", "S3", "S5", "S6", "M3", "M5", "M6" MANIFOLDS
 23.84-46.56 LPM (6.3-12.3 GPM) FLOW RATES ONLY
 (PLUMBED DIRECTLY BACK TO TANK)

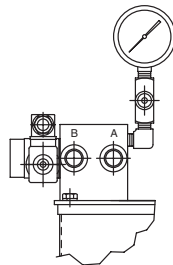
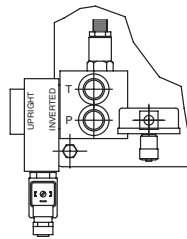
Pressure Control Option "B" - Unloading Valve



"D"PAK WITH
 "S3" MANIFOLD
 (CONNECTED TO SYSTEM RETURN)



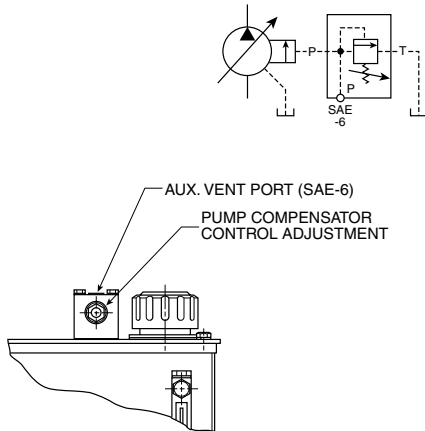
"D"PAK WITH
 "M3" MANIFOLD
 (CONNECTED TO SYSTEM RETURN)



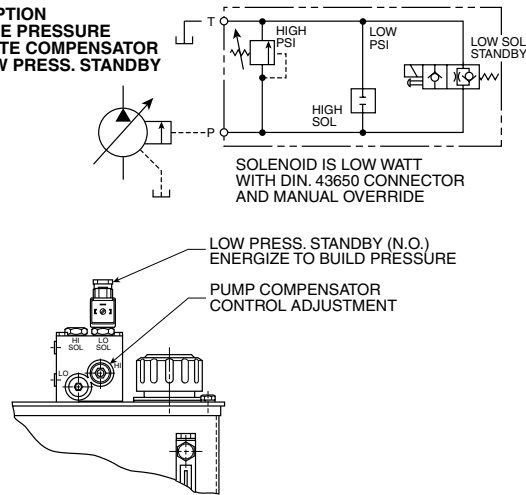
"D"PAK WITH
 "OMIT" MANIFOLD
 (CONNECTED TO SYSTEM RETURN)

V-Pak – Compensator Options

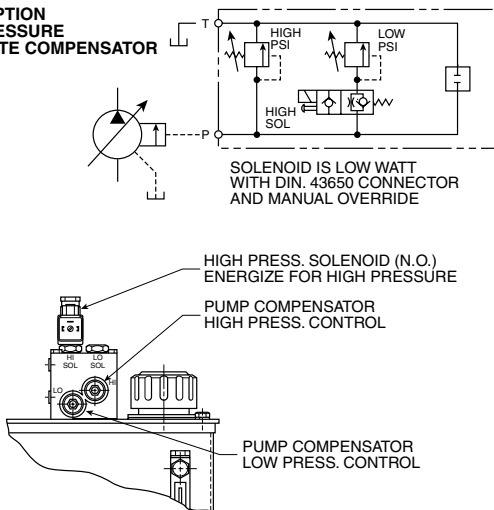
**“OMIT” OPTION
 SINGLE PRESSURE
 REMOTE COMPENSATOR**



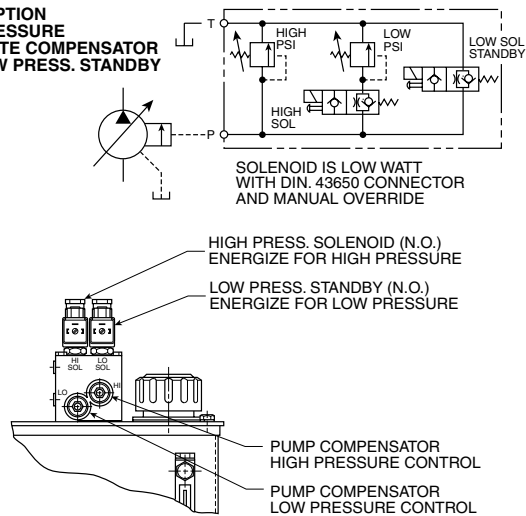
**“B” OPTION
 SINGLE PRESSURE
 REMOTE COMPENSATOR
 W/LOW PRESS. STANDBY**



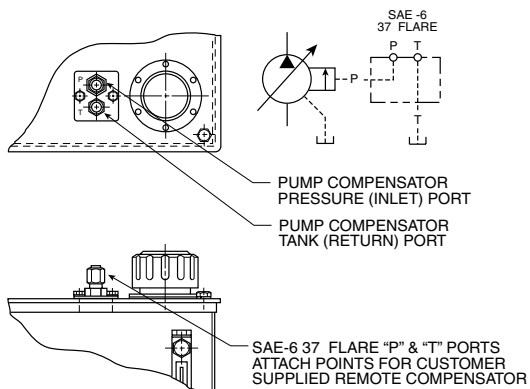
**“C” OPTION
 BI-PRESSURE
 REMOTE COMPENSATOR**



**“D” OPTION
 BI-PRESSURE
 REMOTE COMPENSATOR
 W/LOW PRESS. STANDBY**



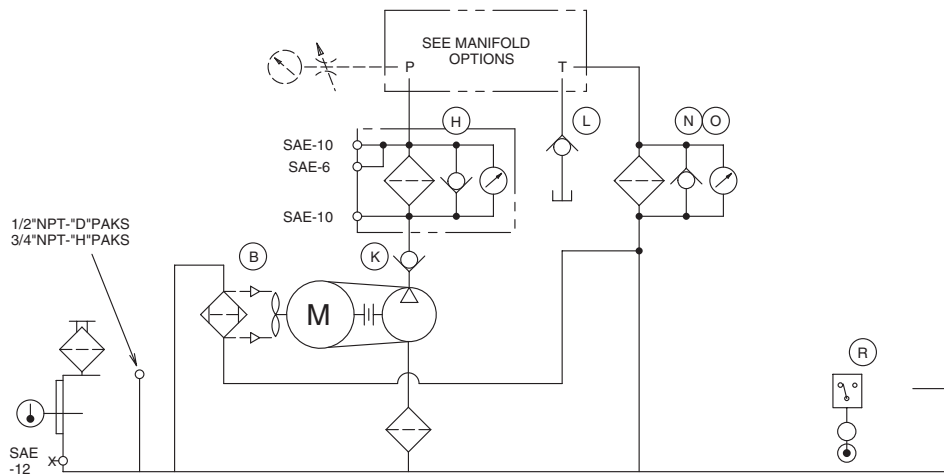
**“F” OPTION
 PROVISION FOR
 CUSTOMER SUPPLIED
 REMOTE COMPENSATOR**



Accessory Options

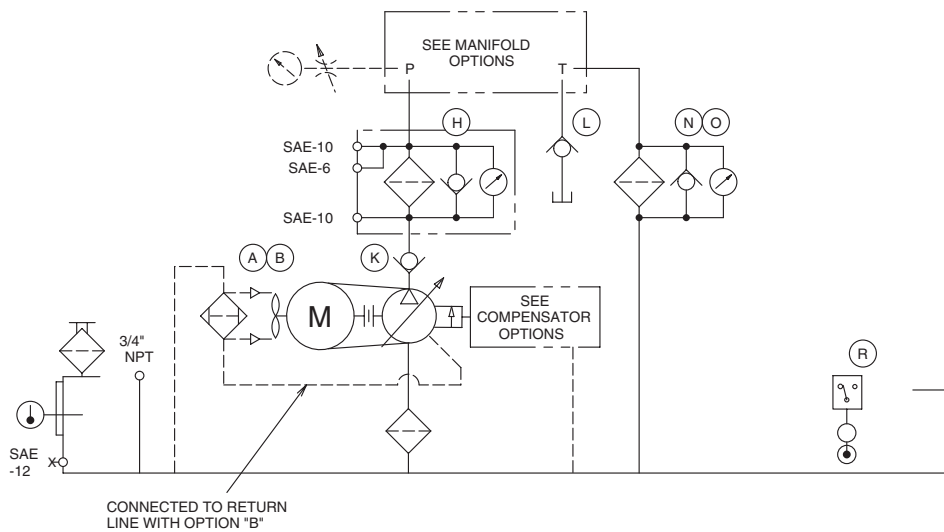
D & H-PAKS

- | | | | |
|----------|---|----------|--|
| Option B | Return Line Air/Oil Heat Exchanger (B1 or B2) | Option N | Return Line Filter |
| Option H | Pressure Filter | Option O | Return Line Filter |
| Option K | Check Valve – Pump Outlet | Option R | Combination Temp/Level Switch (R1 or R2) |
| Option L | Check Valve – Return Line Bypass | | |



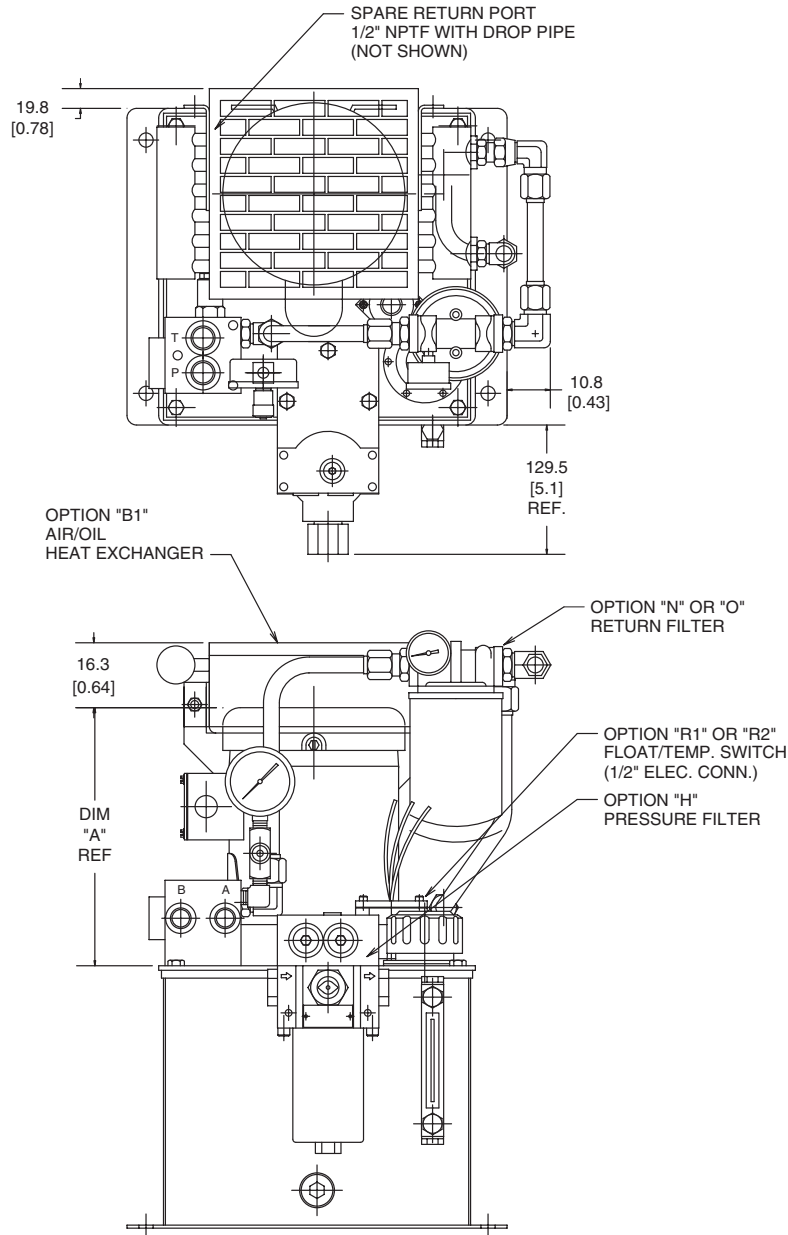
V-PAKS

- | | | | |
|----------|---|----------|--|
| Option A | Pump Case Heat Exchanger | Option L | Check Valve – Return Line Bypass |
| Option B | Return Line Air/Oil Heat Exchanger (B1 or B2) | Option N | Return Line Filter |
| Option H | Pressure Filter | Option O | Return Line Filter |
| Option K | Check Valve – Pump Outlet | Option R | Combination Temp/Level Switch (R1 or R2) |



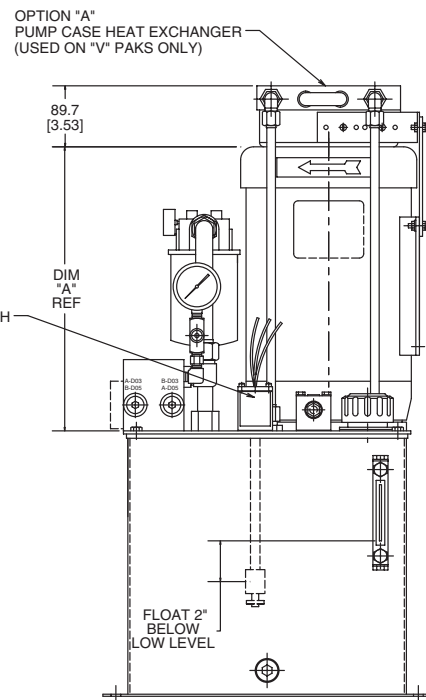
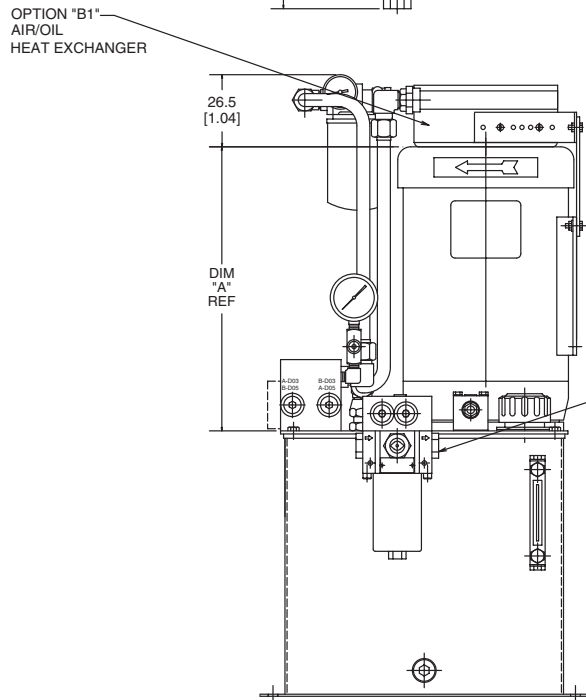
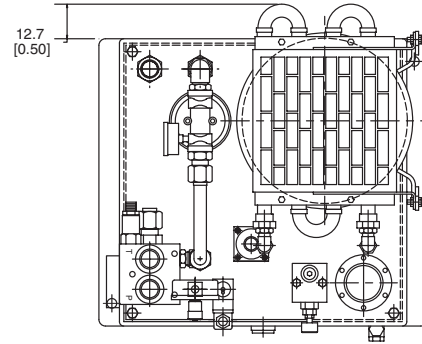
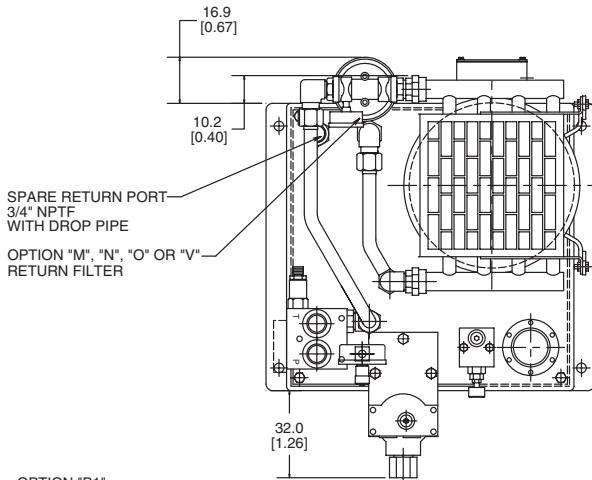
Dimensions - D-Pak (5 Gallon Tank) Accessories

Inch equivalents for millimeter dimensions are shown in (**).



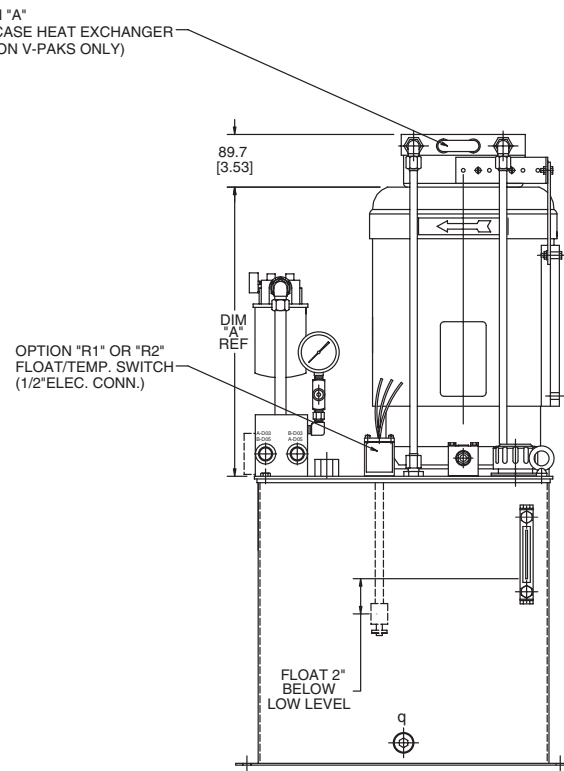
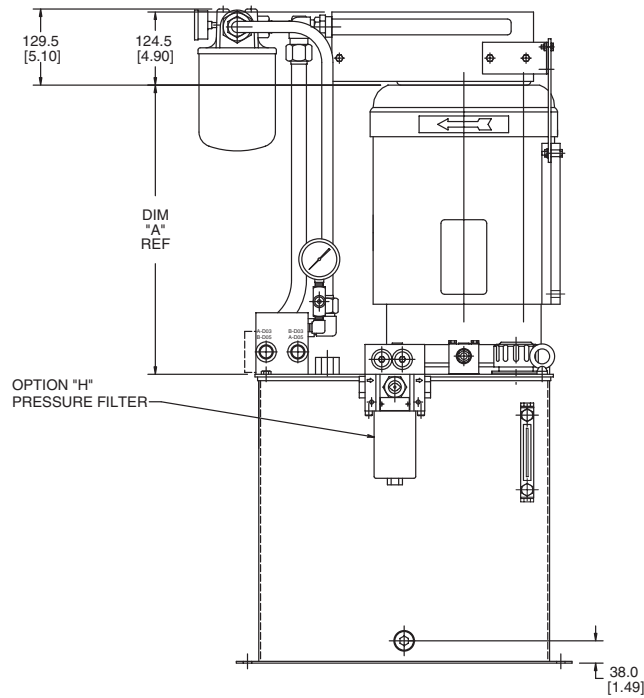
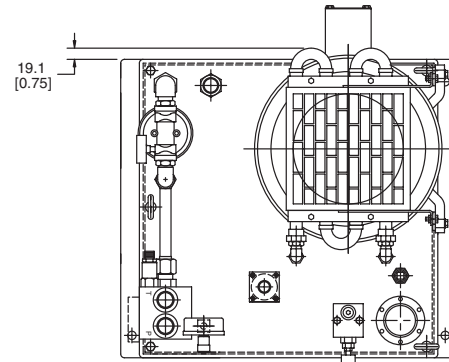
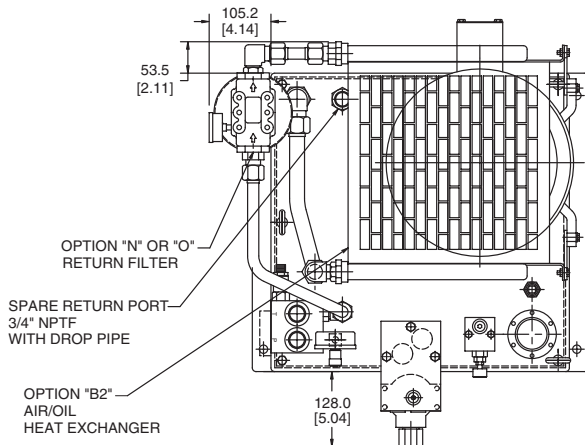
Dimensions - H1 & V1 (10 Gallon Tank) Accessories

Inch equivalents for millimeter dimensions are shown in (**).



Dimensions - H2, 3, 4 & V2, 3, 4 (20, 30, 40 Gallon Tank) Accessories

Inch equivalents for millimeter dimensions are shown in (**).



Performance Data – Maximum Working Pressures

- **** Represents maximum operating pressure with pump/motor combination. This will be the maximum relief valve or compensator setting.
- ***** Represents maximum operating pressure with pump/motor combination. When used on power unit products this will represent a 206.8 Bar (3000 PSI) relief valve or compensator setting.

D & H-Pak - Pump/Motor Combinations Maximum Operating Pressure Bar (PSI)

Pump Code Flow at 1725 RPM LPM (GPM)	Motor KW (HP)										
	.37 (.5)	.60 (.75)	.75 (1)	1.1 (1.5)	1.5 (2)	2.2 (3)	3.7 (5)	5.6 (7.5)	7.5 (10)	11.2 (15)	14.9 (20)
	Max Operating Pressure (Theoretical)										
3.4 (0.9)	55.8(810)	84.1(1220)	111.7(1620)	167.5(2430)	223.4(3240)						
4.9 (1.3)	40.0(580)	60.0(870)	80.0(1160)	119.3(1730)	159.3(2310)	239.2(3470)					
6.8 (1.8)	29.6(430)	44.1(640)	59.3(860)	88.3(1280)	118.6(1720)	177.2(2570)	275.0(3988)				
8.7 (2.3)	22.8(330)	34.5(500)	46.2(670)	69.0(1000)	92.4(1340)	138.6(2010)	231.0(3350)				
10.2 (2.7)	20.0(290)	30.3(440)	40.0(580)	60.0(870)	80.7(1170)	120.7(1750)	201.3(2920)	275.0(3988)			
12.1 (3.2)	15.9(230)	24.1(350)	31.7(460)	48.3(700)	64.1(930)	96.5(1400)	160.6(2330)	241.3(3500)			
17.0 (4.5)	11.0(160)	17.2(250)	22.8(330)	33.8(490)	45.5(660)	69.0(1000)	115.1(1670)	172.4(2500)	228.9(3320)		
19.3 (5.1)	10.3(150)	15.2(220)	20.7(300)	30.3(440)	40.7(590)	61.4(890)	102.0(1480)	153.1(2220)	204.1(2960)	275.0(3988)	
23.8 (6.3)	8.3(120)	12.4(180)	16.5(240)	24.8(360)	33.1(480)	49.6(720)	82.7(1200)	124.1(1800)	165.5(2400)	248.2(3600)	
30.7 (8.1)		9.7(140)	12.4(180)	18.6(270)	24.8(360)	37.2(540)	62.7(910)	93.8(1360)	125.5(1820)	187.5(2720)	251.0(3640)
35.6 (9.4)		8.3(120)	11.0(160)	16.5(240)	21.4(310)	32.4(470)	53.8(780)	81.4(1180)	108.2(1570)	162.0(2350)	215.8(3130)
46.6 (12.3)			8.3(120)	11.7(170)	15.9(230)	24.1(350)	40.0(580)	60.0(870)	80.0(1160)	120.0(1740)	160.0(2320)

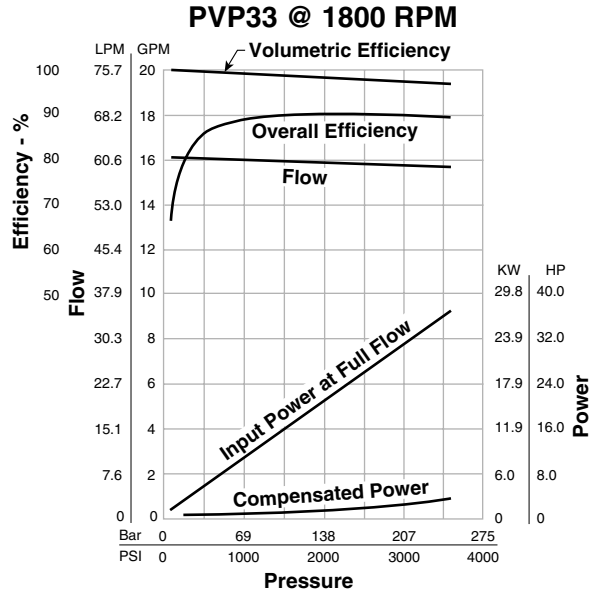
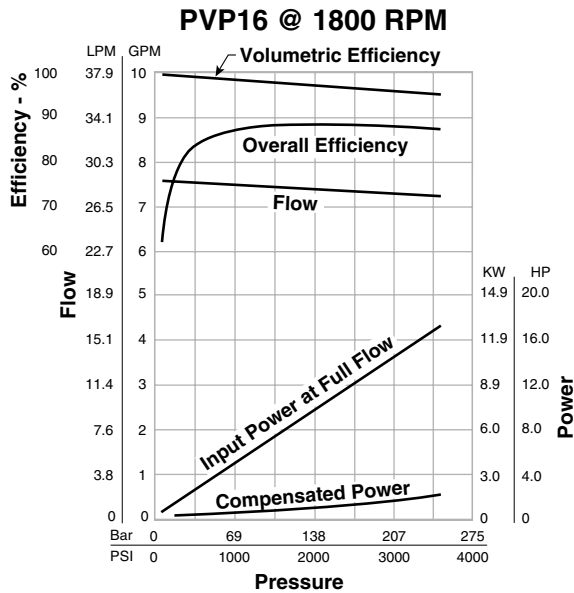
V-Pak - Pump/Motor Combinations Maximum Operating Pressure Bar (PSI)

Pump	LPM (GPM) @ 1725 RPM	Motor KW (HP)						
		1.5 (2)	2.2 (3)	3.7 (5)	5.6 (7.5)	7.5 (10)	11.2 (15)	14.9 (20)
PVP16	7.6 (2.0)	72.4(1050)	108.2(1570)	179.3(2600)	266.1(3860)			
PVP16	9.5 (2.5)	64.1(930)	94.5(1370)	155.1(2250)	232.4(3370)			
PVP16	11.4 (3.0)	57.2(830)	84.8(1230)	137.9(2000)	206.8(3000)			
PVP16	13.2 (3.5)	51.7(750)	75.8(1100)	124.1(1800)	184.8(2680)	246.1(3570)		
PVP16	15.1 (4.0)	46.9(680)	68.9(1000)	113.8(1650)	168.2(2440)	223.4(3240)		
PVP16	17.0 (4.5)	43.4(630)	63.4(920)	103.4(1500)	153.8(2230)	204.8(2970)	305.4(4430)	
PVP16	18.9 (5.0)	40.0(580)	58.6(850)	96.5(1400)	142.0(2060)	188.9(2740)	281.3(4080)	
PVP16	20.8 (5.5)	37.9(550)	55.2(800)	89.6(1300)	132.4(1920)	175.1(2540)	261.3(3790)	
PVP16	22.7 (6.0)	35.2(510)	51.7(750)	83.4(1210)	123.4(1790)	163.4(2370)	244.1(3540)	
PVP16	24.6 (6.5)	33.1(480)	48.3(700)	77.9(1130)	115.8(1680)	153.0(2220)	228.2(3310)	
PVP16	26.5 (7.0)	31.0(450)	45.5(660)	73.8(1070)	108.9(1580)	144.8(2100)	215.1(3120)	
PVP33	30.3 (8.0)		41.4(600)	66.2(960)	97.9(1420)	129.6(1880)	193.1(2800)	255.1(3700)
PVP33	32.2 (8.5)		39.3(570)	64.1(930)	93.1(1350)	123.4(1790)	182.7(2650)	242.7(3520)
PVP33	34.1 (9.0)		37.2(540)	60.7(880)	88.9(1290)	117.2(1700)	174.4(2530)	231.0(3350)
PVP33	36.0 (9.5)		35.9(520)	57.9(840)	84.8(1230)	112.4(1630)	166.2(2410)	220.6(3200)
PVP33	37.9 (10.0)		34.5(500)	55.2(800)	81.4(1180)	106.9(1550)	159.3(2310)	206.8(3000)
PVP33	39.7 (10.5)		33.1(480)	53.1(770)	77.9(1130)	102.7(1490)	152.4(2210)	202.7(2940)
PVP33	41.6 (11.0)		31.7(460)	51.0(740)	75.2(1090)	98.6(1430)	146.9(2130)	194.4(2820)
PVP33	43.5 (11.5)		31.0(450)	49.0(710)	72.4(1050)	95.1(1380)	141.3(2050)	186.8(2710)
PVP33	45.4 (12.0)		29.6(430)	47.6(690)	69.6(1010)	91.7(1330)	135.8(1970)	180.0(2610)
PVP33	47.3 (12.5)		29.0(420)	46.2(670)	66.9(970)	88.3(1280)	131.0(1900)	173.7(2520)
PVP33	49.2 (13.0)		28.3(410)	44.8(650)	64.8(940)	85.5(1240)	126.9(1840)	167.5(2430)
PVP33	51.1 (13.5)		26.9(390)	43.4(630)	62.7(910)	82.7(1200)	122.7(1780)	162.0(2350)
PVP33	53.0 (14.0)		26.2(380)	42.1(610)	60.7(880)	80.0(1160)	118.6(1720)	157.2(2280)
PVP33	54.9 (14.5)		25.5(370)	40.7(590)	59.3(860)	77.9(1130)	115.1(1670)	152.4(2210)
PVP33	56.8 (15.0)		24.8(360)	39.3(570)	57.2(830)	75.2(1090)	111.7(1620)	147.5(2140)



Performance Data – Pumps

Standard Pumps



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

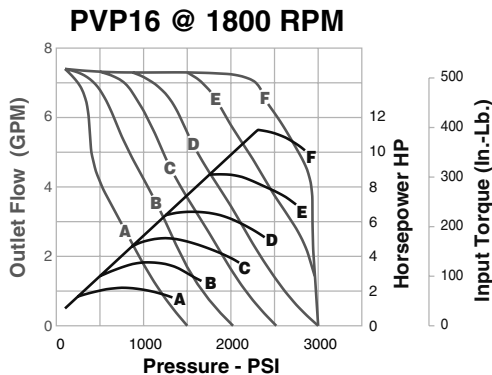
$$HP = \left[\frac{Q \times (PSI)}{1714} \right] + (CHp) \times \frac{N}{1800}$$

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

WHERE:

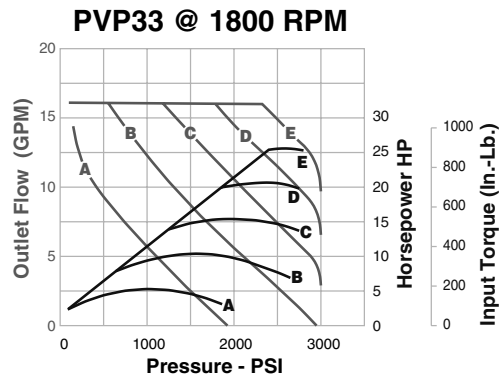
- Q = Actual Output Flow in GPM
- PSI = Pressure At Pump Outlet
- CHp = Input Horsepower @ Full compensation @ 1800 RPM (from graph read at operating pressure)
- N = Drive Speed in RPM

Horsepower Limited Pumps



	MOTOR KW (HP)					
	1.5(2)	2.2(3)	3.7(5)	5.6(7.5)	7.5(10)	11.2(15)
Compensator Setting Bar (PSI)						
PVP16	110.3	151.7	206.8	206.8	206.8	206.8
FULL STROKE	(1600)	(2200)	(3000)	(3000)	(3000)	(3000)

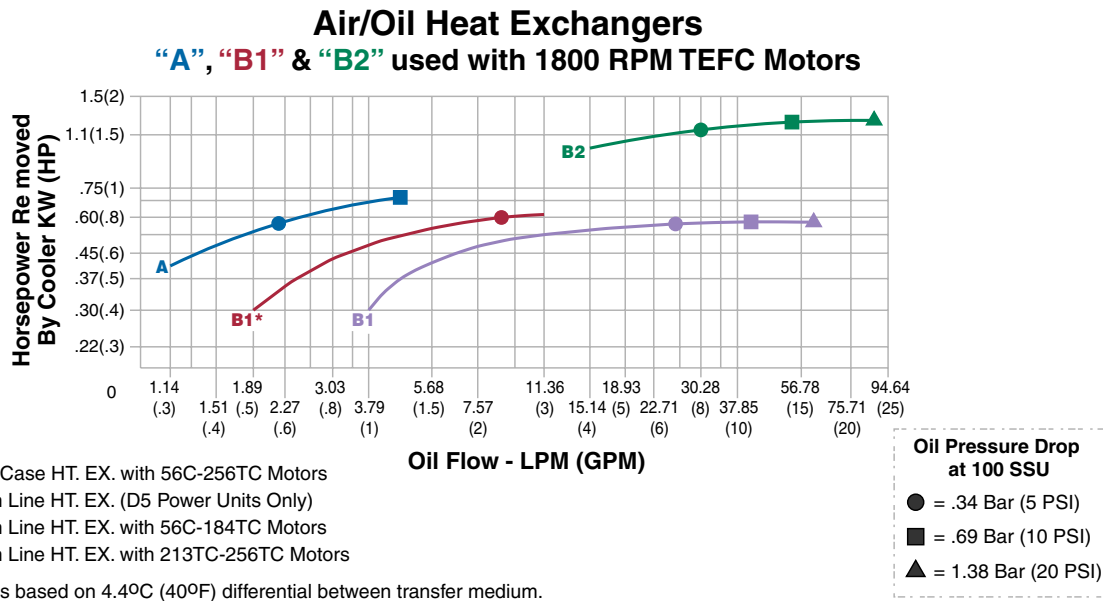
Pump Control Option "H" with PVP16
 Horsepower Limiting
 Factory Compensator Settings



	MOTOR KW (HP)			
	5.6(7.5)	7.5(10)	11.2(15)	14.9(20)
Compensator Setting Bar (PSI)				
PVP33	151.7	186.2	206.8	206.8
FULL STROKE	(2200)	(2700)	(3000)	(3000)

Pump Control Option "H" with PVP33
 Horsepower Limiting
 Factory Compensator Settings

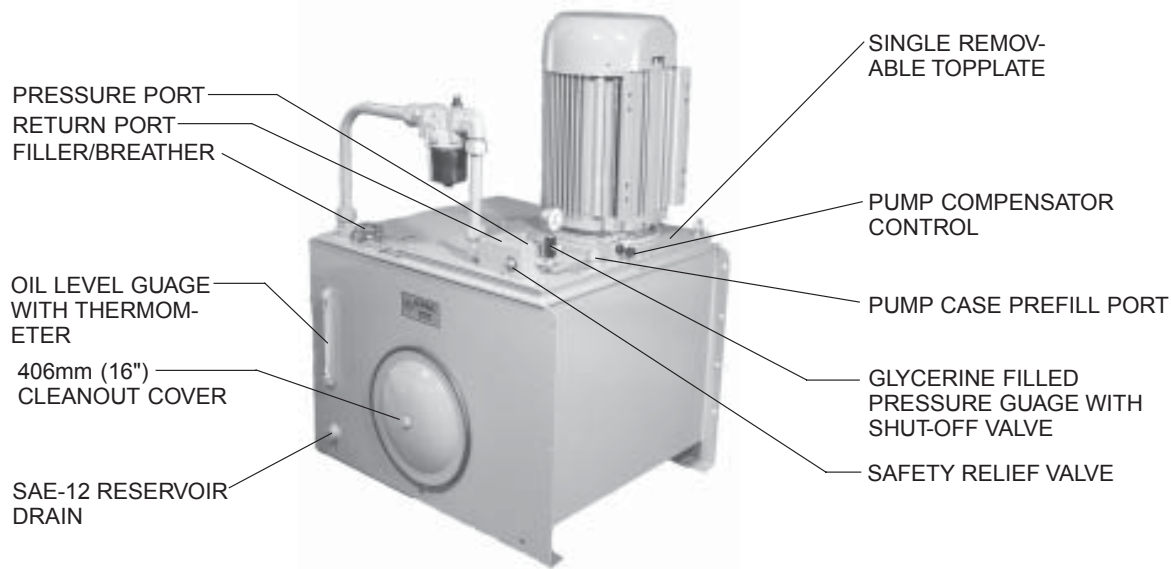
Performance Data – Heat Exchangers



**Horsepower Removed
 By Reservoir**

KW (HP) REMOVAL	RESERVOIR SIZE LITERS (GALLONS)				
	18.9(5)	37.9(10)	75.7(20)	113.6(30)	151.4(40)
	.15(.2)	.28(.38)	.43(.58)	.51(.68)	.60(.81)

Heat removal is based on static ambient air at 29.4°C (85°F) and max. oil temperature of 57.2°C (135°F).



Standard Features

- Vertical Design
- Submerged Pump
- Precision Pump Mounting Adapters
- Suction Strainer
- Glycerine Filled Pressure Gage with Shut Off
- Oil Level Gage with Thermometer
- Remote Compensator and Safety Relief
- Breather and Fill Cap
- 1800 RPM Motor
- Drain Plug
- Clean Out Cover
- Single Removable Topplate
- Extra SAE-20 Return Port
- All Hydraulic Connections SAE Straight Thread

Benefits

- Saves Floor Space
- Positive Pump Inlet
- Longer Pump Life
- Protects Pump from Contamination
- Improved Diagnostics
- Helps to Maintain Trouble-Free Performance
- Protects Against System Shock
- Easy to Fill Tank, Control Ingression of Airborne Contaminants
- More Flow at Less Cost
- Allows Drainage of Fluid
- Easy Access to Inside of Reservoir
- Easy Servicability of Internal Components
- Allows Flexibility for Customer Return Plumbing
- No Leaks

Quick Reference Data Chart

Low Profile V-Pak	Tank Size Liters (Gallon)	Pump Flow LPM (GPM) @ 1800 RPM	Electrical Motors KW (HP)	Maximum BAR (PSI)
V8	302.8 (80)	136.7 (36.1)	5.6 - 30 (7 1/2 - 40)	207 (3000)

Performance Data

Standard Features

- Vertical Design
- Submerged Pump
- Precision Pump Mounting Adapters
- Suction Strainer
- Glycerine Filled Pressure Gage with Shut Off
- Oil Level Gage with Thermometer
- Relief Valve
- External Pump Compensator Control
- Breather and Fill Cap
- 1800 RPM TEFC Motor
- Cleanout Cover
- Pressure and Return Port Block with Safety Relief
- Remote Pump Compensator Control Valve



Options

- D05 (D02) Single Station Manifold with Safety Relief
- D05 (D02), D08 (D06) Multi-Station Manifold with Safety Relief
- Pressure & Return Filters (10 Micron)
- Variety of Manapak Sandwich Valves
- Heat Exchangers (Air/Oil)
- Combination Temp/Float Switch - Temp Fixed
- Single Pressure Remote Compensator
- Single Pressure Remote Compensator with Low Pressure Standby
- Bi-Pressure Remote Compensator
- Bi-Pressure Remote Compensator with Low Pressure Standby
- Load Sensing (Flow Control)-Consult Factory
- Horsepower Limiting-Consult Factory

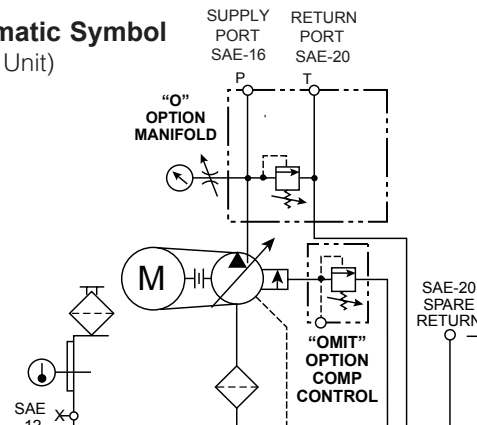
Specifications

Parker “V-Pak” Hydraulic Power Units are vertical design, 303 liter (80 gallon) reservoirs utilizing Parker Variable Volume Piston Pumps.

Warranty

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

Schematic Symbol
 (Basic Unit)



V-PAK BASIC UNIT

NO OPTIONS OR ACCESSORIES
 “OMIT” OPTION PUMP COMPENSATOR
 “O” OPTION MANIFOLD

Installation Data:

See page 19 of this catalog or Parker Installation/ Maintenance Manual for specific recommendations pertaining to start-up, system cleanliness, fluids, temperatures and other important factors relative to proper installation and use of these power units.

Pump Model	Tank Size Liters (Gallon)	Pump Flow LPM (GPM) @ 1800 RPM	Electrical Motors KW (HP)	Maximum BAR (PSI)
V8	302.8 (80)	136.7 (11.0-36.1)	5.6 - 30 (7 1/2 - 40)	207 (3000)



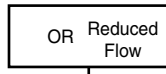
Reservoir Size
80 Gallons
(302.8 Liters)



Pressure Control



Pump Control



Pump Flow



No Motor
(See Note)
**



Electric Motor



Manifold

Code	Pressure Control
Omit	Single Pressure Remote Compensator
B	Single Pressure Remote Compensator with Low Pressure Standby
BJ	Single Pressure Remote Compensator with Low Pressure Standby, 24 VDC
C	Bi-Pressure Remote Compensator
CJ	Bi-Pressure Remote Compensator, 24VDC
D	Bi-Pressure Remote Compensator with Low Pressure Standby
DJ	Bi-Pressure Remote Compensator with Low Pressure Standby, 24VDC
F	Provision for Customer Supplied Remote Control Relief Valve

Code	Pump Control
Omit	Std. Remote Compensator
A*	Load Sense Flow Control

*Unless otherwise specified, a SAE-6 37° flared port will be supplied for customer connection.

**Consult factory for horsepower and hi-lo pump control options. Lead time is four weeks.

Code	Pump Flow Rate @ 1800 RPM	Pump Used and Description
15	15.6 GPM (59 LPM)	PVP33 - Std. Remote Compensator
23	23.0 GPM (87 LPM)	PVP48 - Std. Remote Compensator
36	36.1 GPM (137 LPM)	PVP76 - Std. Remote Compensator
*	Specify in GPM	Destroked (Reduced) Flow

*Unless otherwise specified, units are shipped at max. flow rate (GPM) at 1800 RPM.

When reduced flow setting is required,

Reduced flows from 22.5 to 8.0 GPM (85.2 to 30.3 LPM), specify in 0.5 GPM increments.

Reduced flows from 35.0 to 24.0 GPM (132.5 to 90.8 LPM), specify in 1.0 GPM (3.8 LPM) increments.

Example: V*9.5*-- = PVP33 Pump destroked to 9.5 GPM (36.0 LPM)
V*A31*-- = PVP76 Load Sense Pump destroked to 31.0 GPM (177.3 LPM)

NOTE:

- Manifolds are mounted vertically. Bottom station is number 1.
- M5-3 and 5 station available. M8-2 station available.

= Omit if not required

Code	Electric Motor Description HP (kW) - RPM - Frame - Type
M	7.5 (5.6) - 1800 - 213TC - TEFC
N	10 (7.5) - 1800 - 215TC - TEFC
P	15 (11.2) - 1800 - 254TC - TEFC
S	20 (14.9) - 1800 - 256TC - TEFC
Q	25 (18.6) - 1800 - 284TC - TEFC
R	30 (22.4) - 1800 - 286T - TEFC
V	40 (29.8) - 1800 - 324T - TEFC

Electric motors are 230/460V, 60 Hz 3PH. Consult factory for other motor speeds (RPM) and voltages.

**Use W prefix when no motor is required on unit. When ordering, W must be followed by motor model code equivalent to frame size of motor to be used.

Example: V815WM*** = 302.8 L (80 gal) reservoir, std PVP33 unit to accept a 7.5 HP (5.6KW)/213TC C-face frame motor.

Code	Porting Block/Subplate or Manifold Type	Supply/Return Port or Actuator Port Size	Other
O	Pressure and Return Port Block with Safety Relief Valve	P Port SAE-16 T Port SAE-20	None
S5	D05 Single Station Subplate with Safety Relief Valve	A & B Ports SAE-10 Str. Thr'd	None
M5* ⁽²⁾	D05 Multistation Parallel Circuit Manifold with Safety Relief and Pump Compensator Valves	A & B Ports SAE-8 Str. Thr'd	None
M82 ⁽³⁾	D08 Two Parallel Circuit Manifold with Safety Relief and Pump Compensator Valves	A & B Ports SAE-16 Str. Thr'd	Y Port SAE-8 Str. Thr'd

*When ordering Multi-Station Manifolds, the number of stations must be specified. If valves are to be mounted, specify the valves and sequence, if the model code exceeds 25 digits, call factory.

Example: V815QM53BCB1

3 Station D05 Manifold
Station #1: B
Station #2: C
Station #3: B1

Example: V815QM55B1B1CBC

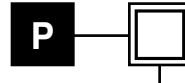
5-Station D05 Manifold
Station #1: B1
Station #2: B1
Station #3: C
Station #4: B
Station #5: C



Directional Control Valve



*Manapak Control Valves



Options and Accessories

Code	Directional Control Valve Model Number	NFPA Mounting Pad	Nominal Flow GPM (LPM)	Description	Circuit Symbol
B	D1VW001CN***	D03	7 (26.5)	Double (Spr. Ctr)	
C	D1VW004CN***	D03	7 (26.5)	Double (Spr. Ctr)	

Code	Manapak Control Valves Function	Valve Model Number	NFPA Mounting Pad	Nominal Flow GPM (LPM)	Circuit Symbol
1	Flow Control	FM2DDKN	D03	7 (26.5)	
3	Pilot Operator Check	CPOM2DDN	D03	7 (26.5)	

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

Code	Options and Accessories		
	Function	Model Number	Technical Data
A*	Continuous Pump Case Cooling	RM-08-2-2	Air/Oil: Max. Oil Flow 4.5 GPM (17 LPM), 0.8 HP (0.6 kW) Heat Rejection
B*	Continuous Pump Case Cooling	RM-19-2-2	Air/Oil: Max. Oil Flow 4.5 GPM (17 LPM) 1.5 HP (1.1 kW) Heat Rejection
C*	Filter/Cooling Loop	ACC-22-2-1PH 40CN205Q	Air Oil w/1 PH Motor: Oil Flow 4.5 GPM (17 LPM), 4.5 HP (3.3 kW) Heat Rejection
H	Pressure Filter	30P210QM250NN1	10 Micron Microglass II Dual Element, Mechanical Indicator
K	Check Valve Pump Outlet	493-16-D1-2	5 PSI (0.3 bar) Cracking Pressure
L	Bypass Check	C2020S65	65 PSI (4.6 bar) Cracking Pressure
N	Return Filter	40CN210Q	10 Micron Microglass II Dual Element, Mechanical Indicator** (8 PSID)
QS	Return Filter	80CN110QE2GS24-4	10 Micron Microglass II Single Element Electrical Indicator (25 PSI)
R1	Combination Float/Temp. Switch N.O. Float Up	877501	Fixed Temp at 65°C (149°F) Close @ Low Level and/or 65°C (149°F) (N.O.)
R2	Combination Float/Temp. Switch N.C. Float Up	877502	Fixed Temp at 65°C (149°F) Open @ Low Level and/or 65°C (149°F) (N.C.)
V	Return Filter	50AT10CN25OOH	10 Micron Spin-On Single Element Mechanical Indicator

*Heat rejection data is based on 100 SSU oil leaving the cooler 22°C (72°F) higher than the ambient air temperature used for cooling.

Option A available from 7.5 HP (0.6 KW) thru 25 HP (18.5 KW).

Option C not available with option A or B.

**Based on max. 36 GPM (136 LPM) w/150 SUS oil.

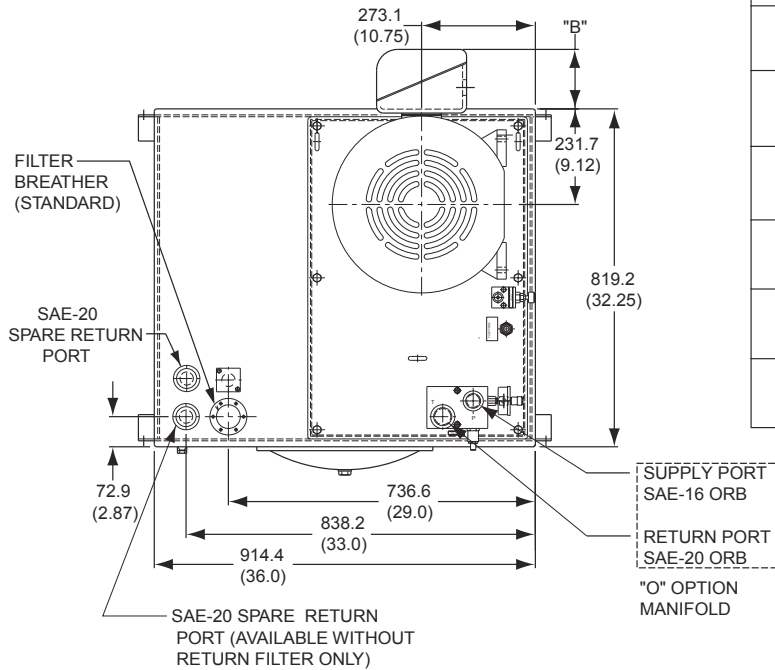
= Omit if not required

Dimensions – Basic V-Pak Low Profile

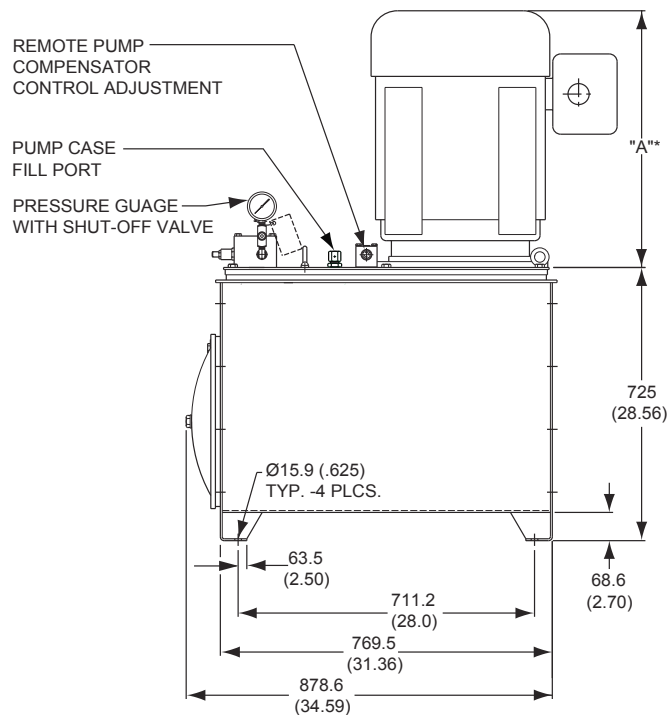
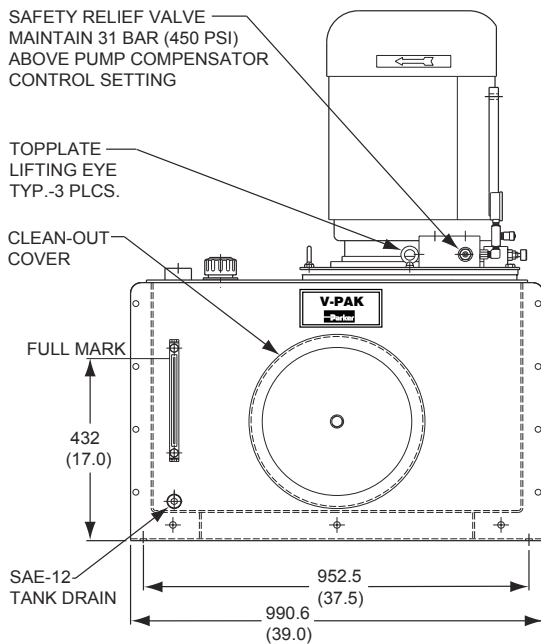
Shown with “Omit” Option Manifold

Inch equivalents for millimeters dimensions are shown in (**)

Motor Code	Motor Description KW(HP)-RPM-Frame-Type	Dimension	
		"A"	"B"
M	5.6(7.5)-1800-213TC-TEFC	451 (16.6)	N/A
N	7.5(10)-1800-215TC-TEFC	451 (17.2)	N/A
P	11.2(15)-1800-254TC-TEFC	451 (20.0)	48 (1.88)
S	14.9(20)-1800-256TC-TEFC	597 (23.5)	48 (1.88)
Q	18.6(25)-1800-284TC-TEFC	579 (22.8)	51 (2.0)
R	22.4(30)-1800-286TC-TEFC	620 (24.4)	51 (2.0)
V	29.8(40)-1800-324TC-TEFC	627 (24.7)	144 (5.69)

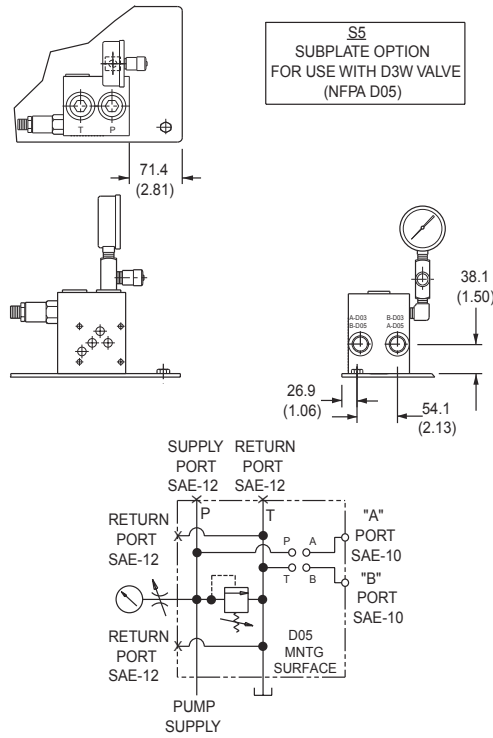


* Reference dimension consult factory if critical to application.



V-Pak Low Profile S5 Manifold Options

Inch equivalents for millimeters dimensions are shown in (**)

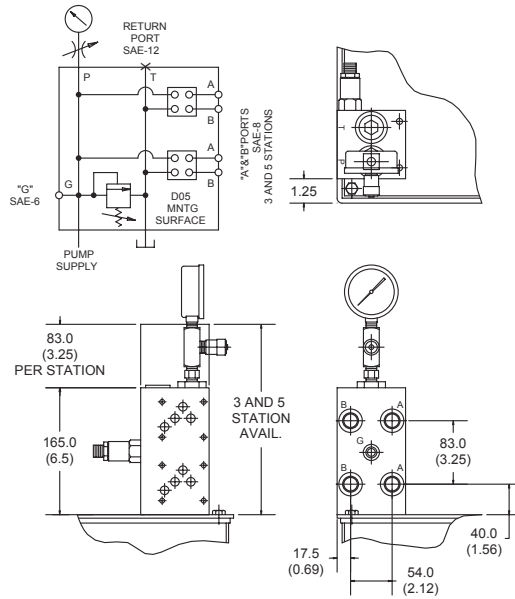


V-Pak Low Profile M53/M55 & M82 Manifold Options

Inch equivalents for millimeters dimensions are shown in (**)

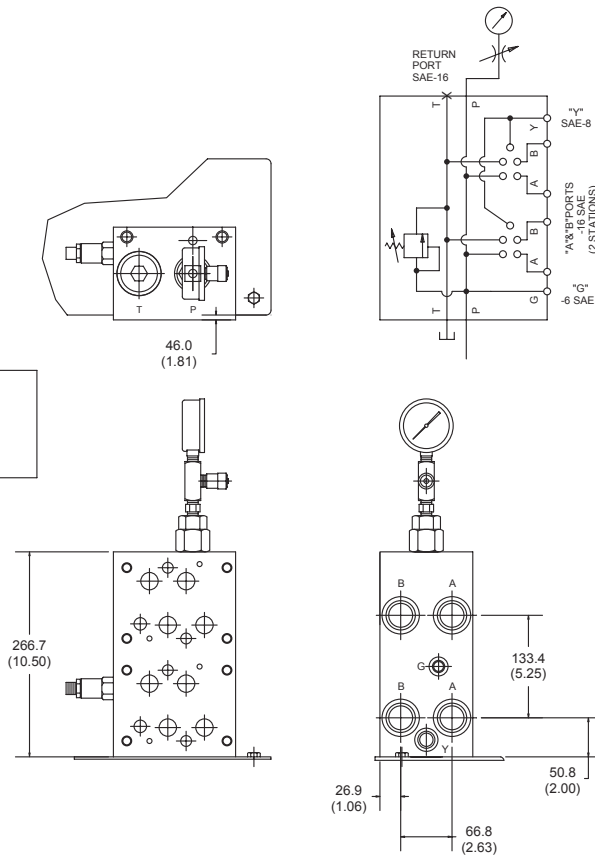
"M53/M55 Option"

M53 AND M55
 3 AND 5 STATION MANIFOLD OPTIONS
 FOR USE WITH NFPA D05 VALVES



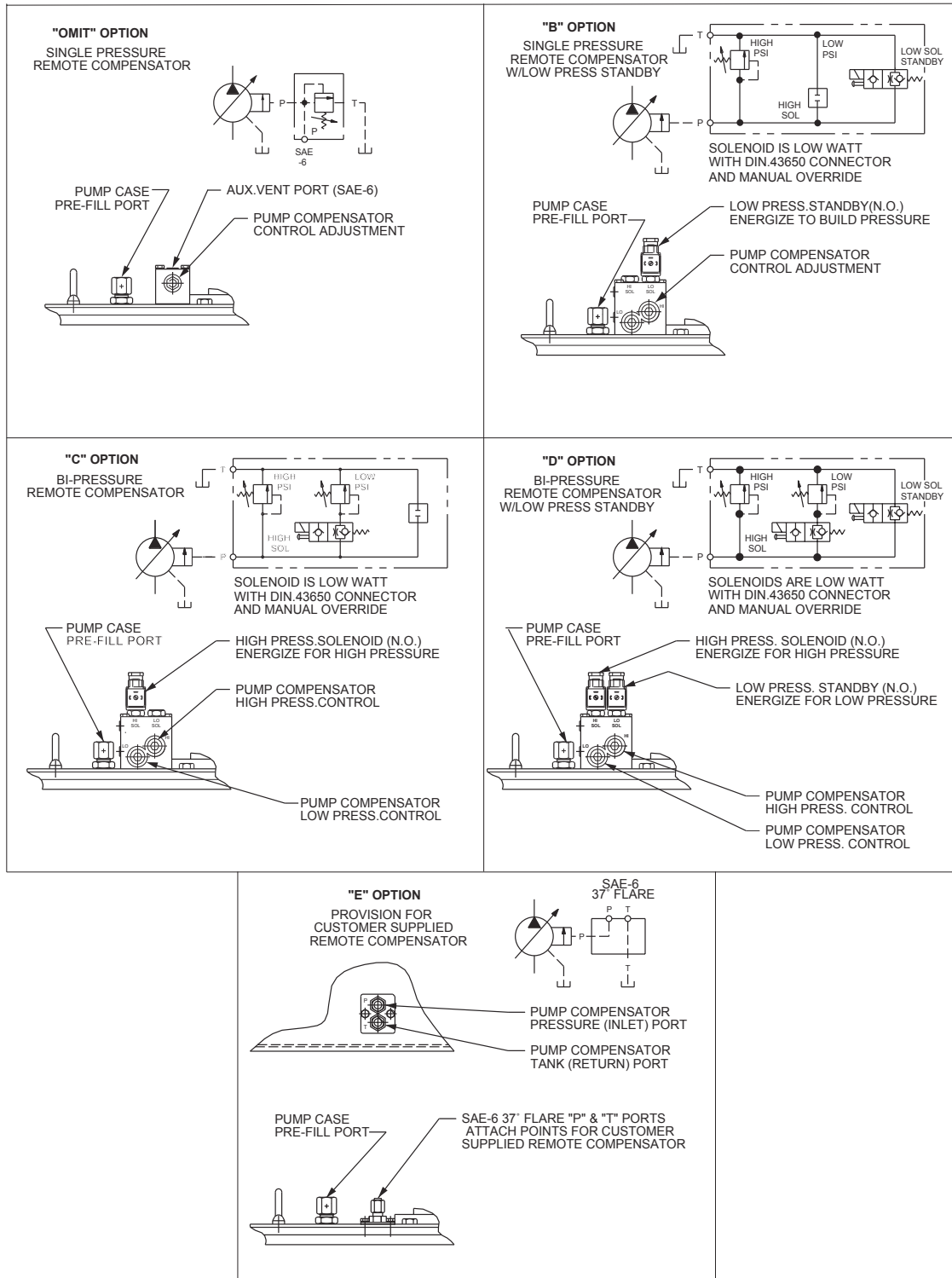
"M82 Option"

M82
 2 STATION MANIFOLD OPTION
 FOR USE WITH NFPA D08 VALVES
 SAE-8 "Y" PORT, NO "X" PORT

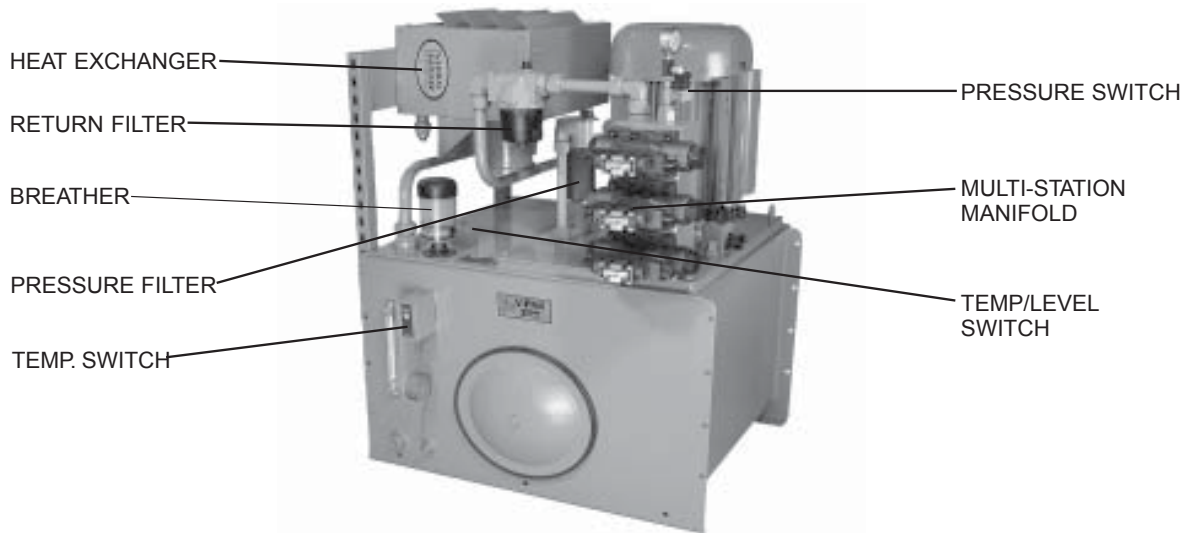


V-Pak Low Profile - Compensator Options

Inch equivalents for millimeters dimensions are shown in (**)

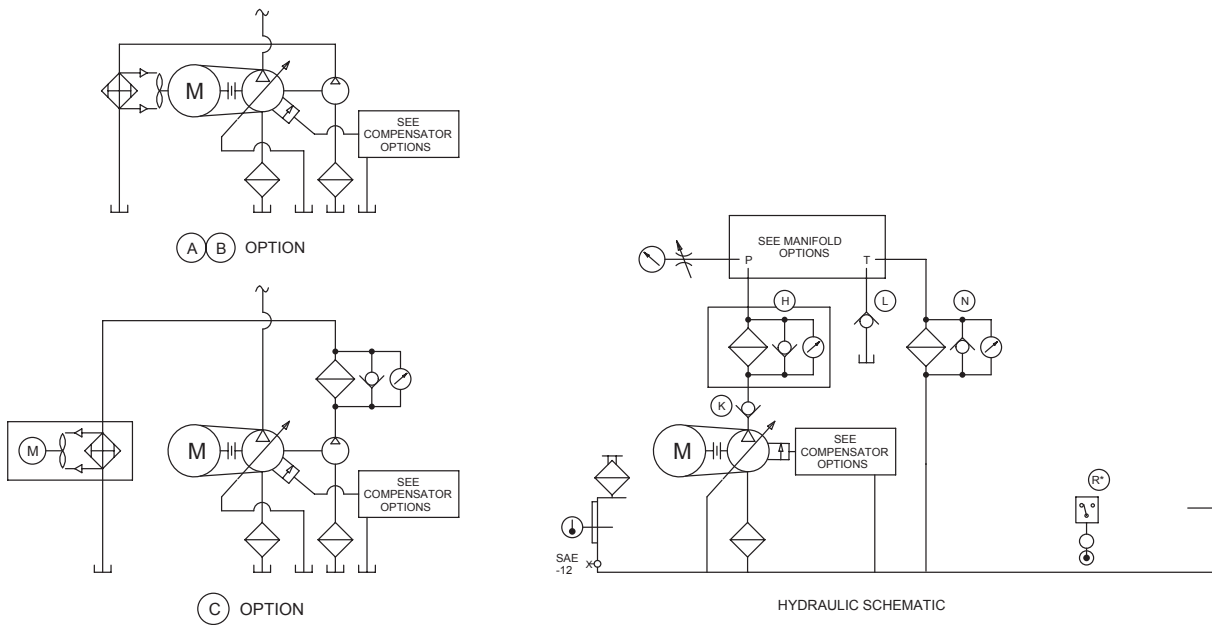


**Accessory Options
V-PAK LOW PROFILE**



EXAMPLE OF VARIOUS ACCESSORIES INSTALLED FOR REFERENCE ONLY

SCHEMATIC - BASIC UNIT WITH ACCESSORIES



- Option A Cooling Loop (0.6 KW (0.8 HP) Removal)
- Option B Cooling Loop (1.1 KW (1.5 HP) Removal)
- Option C System Cooling/Filter Loop (3.4 KW (4.5 HP) Removal)
- Option H Pressure Filter

- Option K Pump Outlet Check Valve
- Option L Bypass Check-Return Ht. Ex. Only
- Option N Return Filter - Dual Element
- Option R* Combination Level/Temperature Switch

Dimensions - Accessories

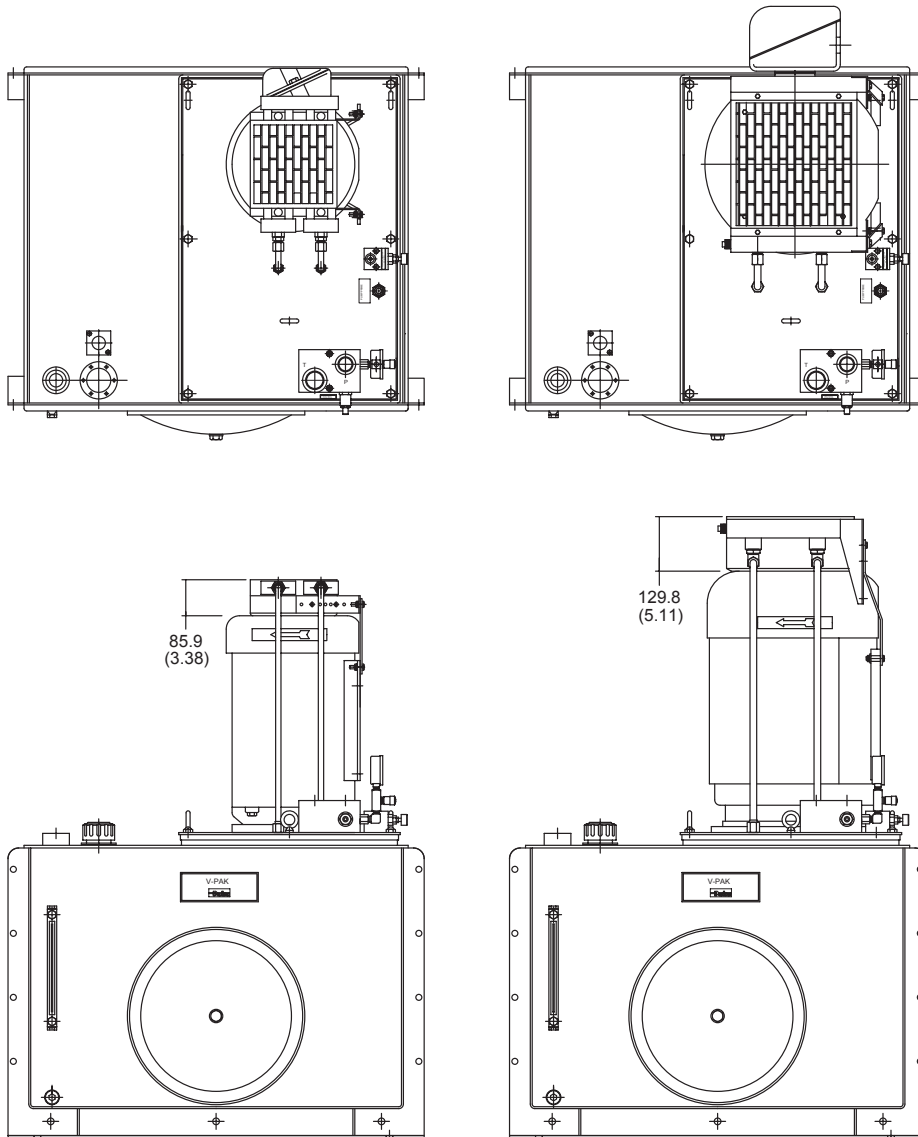
V8 reservoir with "Omit" manifold shown

Inch equivalents for millimeters dimensions are shown in (**)

Ordering Note: Units with PVP76 pumps and requiring options "A", "B" or "C" can only be ordered with V8 (302.8 L/80 Gal.) reservoir.

HEAT REMOVAL	OPTION A	.6 KW (.80 HP*)
HEAT REMOVAL	OPTION B	1.1 KW (1.5 HP*)

*Performance data are based on 100SSU oil leaving the cooler 4°C (40°F) higher than the ambient air temperature used for cooling.



Option "A" Cooling Loop
5.6 KW - 18.6 KW (7.5 HP - 25 HP) ONLY

Option "B" Cooling Loop

Dimensions - Accessories

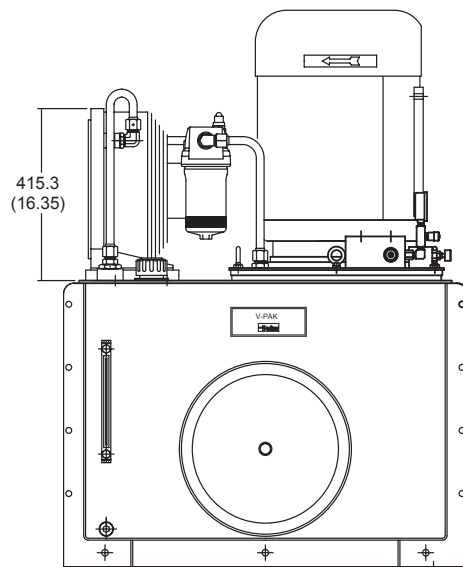
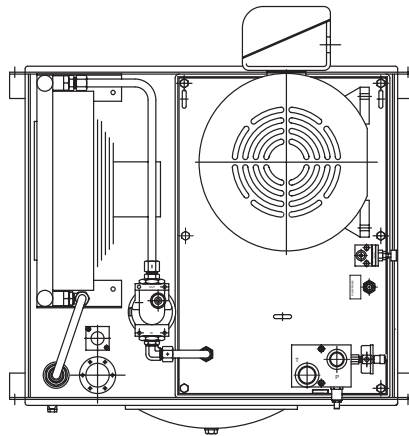
V8 reservoir with "Omit" manifold shown

Inch equivalents for millimeters dimensions are shown in (**)

Ordering Note: Units with PVP76 pumps and requiring options "A", "B" or "C" can only be ordered with V8 (302.8 L/80 Gal.) reservoir.

HEAT REMOVAL	OPTION C	3.4 KW (4.5 HP*)
--------------	----------	------------------

*Performance data are based on 100SSU oil leaving the cooler 4°C (40°F) higher than the ambient air temperature used for cooling.

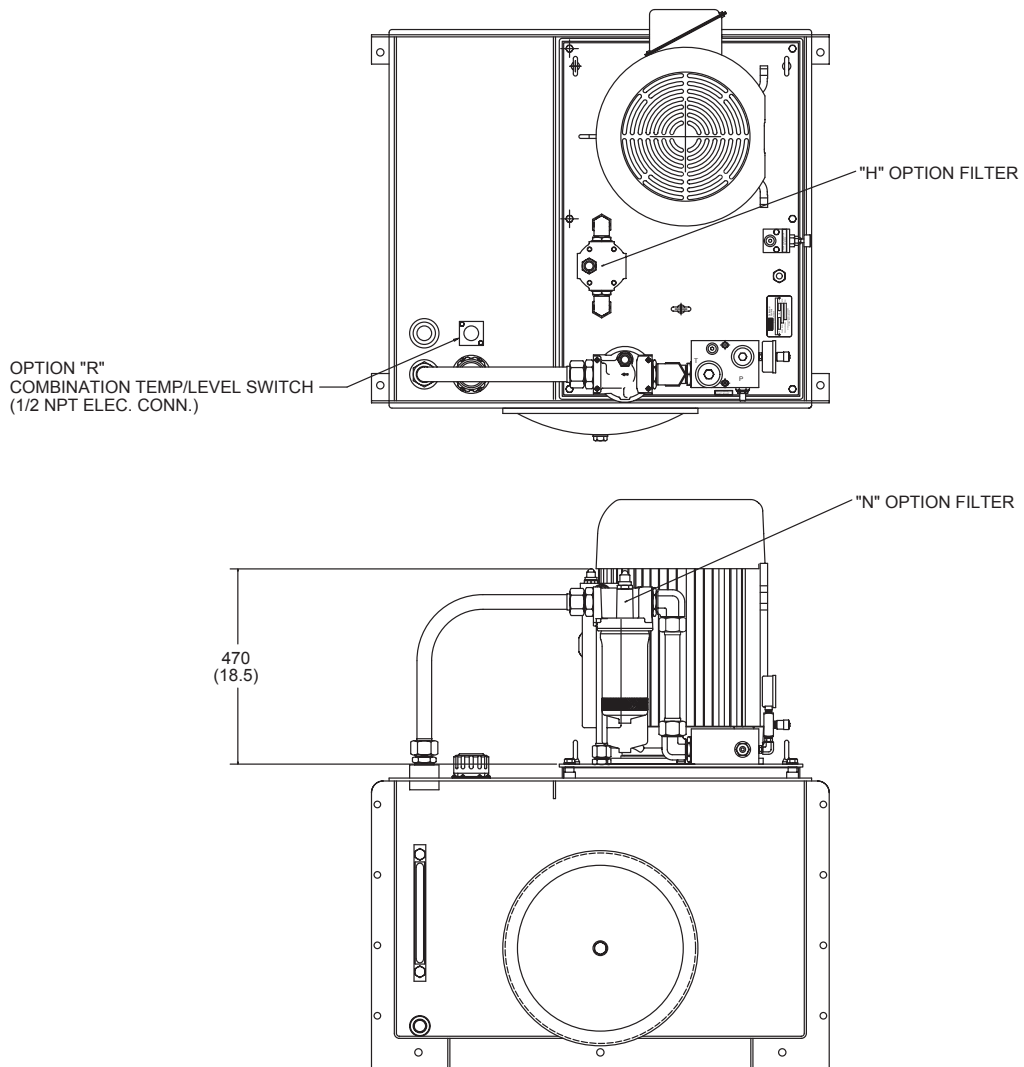


Option "C" System Cooling/Filter Loop

Dimensions - Accessories

V8 reservoir with H, N & R Options shown

Inch equivalents for millimeters dimensions are shown in (**)



Performance Data- Maximum Working Pressure

**** Represents maximum operating pressure with pump/motor combination. This will be the maximum relief valve or compensator setting.

**** Represents maximum operating pressure with pump/motor combination. When used on power unit products this will represent a 207 bar (3000 psi) relief valve or compensator setting.

**V-Pak Low Profile - Pump/Motor Combinations Maximum Operating Pressure
Bar (PSI)**

PUMP	FLOW LPM (GPM) @ 1725 RPM	5.6 KW (7.5 HP)	7.5 KW (10 HP)	11.2 KW (15 HP)	14.9 KW (20 HP)	18.6 KW (25 HP)	22.3 KW (30 HP)	29.8 KW (40 HP)
PVP33	41.6 (11.0)	75.2 (1090)	98.6 (1430)	146.9 (2130)	194.4 (2820)	239.2 (3470)		
PVP33	43.5 (11.5)	72.4 (1050)	95.1 (1380)	141.3 (2050)	186.8 (2710)	230.3 (3340)		
PVP33	45.4 (12.0)	69.6 (1010)	91.7 (1330)	135.8 (1970)	180 (2610)	222 (3220)		
PVP33	47.3 (12.5)	66.9 (970)	88.3 (1280)	131 (1900)	173.7 (2520)	213.7 (3100)		
PVP33	49.2 (13.0)	64.8 (940)	85.5 (1240)	126.9 (1840)	167.5 (2430)	206.8 (3000)	247.5 (3590)	
PVP33	51.1 (13.5)	62.7 (910)	82.7 (1200)	122.7 (1780)	162 (2350)	200 (2900)	239.2 (3470)	
PVP33	52.9 (14.0)	60.7 (880)	80 (1160)	118.6 (1720)	157.2 (2280)	193.7 (2810)	232.4 (3370)	
PVP33	54.8 (14.5)	59.3 (860)	77.9 (1130)	115.1 (1670)	152.4 (2210)	188.2 (2730)	224.8 (3260)	
PVP33	56.7 (15.0)	57.2 (830)	75.2 (1090)	111.7 (1620)	147.5 (2140)	182.7 (2650)	218.6 (3170)	

Performance Data- Maximum Working Pressure

☐ Represents maximum operating pressure with pump/motor combination. This will be the maximum relief valve or compensator setting.

*** Represents maximum operating pressure with pump/motor combination. When used on power unit products this will represent a 207 bar (3000 psi) relief valve or compensator setting.

V-Pak Low Profile - Pump/Motor Combinations Maximum Operating Pressure Bar (PSI)

PUMP	FLOW LPM (GPM) @1725 RPM	5.6 KW (7.5 HP)	7.5 KW (10 HP)	11.2 KW (15 HP)	14.9 KW (20 HP)	18.6 KW (25 HP)	22.3 KW (30 HP)	29.8 KW (40 HP)
PVP48	58.6 (15.5)	53.8 (780)	70.3 (1020)	103.4 (1500)	137.9 (2000)	170.3 (2470)	203.4 (2950)	270.2 (3920)
PVP48	60.5 (16.0)	53.1 (770)	68.9 (1000)	101.4 (1470)	133.8 (1940)	166.2 (2410)	198.6 (2880)	263.4 (3820)
PVP48	62.4 (16.5)	57.1 (750)	67.6 (980)	98.6 (1430)	130.3 (1890)	162 (2350)	193.1 (2800)	256.5 (3720)
PVP48	64.3 (17.0)	50.3 (730)	65.5 (950)	96.5 (1400)	126.9 (1840)	157.9 (2290)	188.2 (2730)	249.6 (3620)
PVP48	66.2 (17.5)	49 (710)	64.1 (930)	93.8 (1360)	124.1 (1800)	153.8 (2230)	183.4 (2660)	243.4 (3530)
PVP48	68.1 (18.0)	48.3 (700)	62.8 (910)	91.7 (1330)	121.3 (1760)	150.3 (2180)	179.3 (2600)	237.9 (3450)
PVP48	70.0 (18.5)	46.9 (680)	61.4 (890)	89.6 (1300)	118.6 (1720)	146.9 (2130)	175.1 (2540)	232.4 (3370)
PVP48	71.9 (19.0)	46.2 (670)	60 (870)	87.6 (1270)	115.8 (1640)	143.4 (2080)	171 (2480)	226.8 (3290)
PVP48	73.8 (19.5)	45.5 (660)	58.6 (850)	86.2 (1250)	113.1 (1640)	140 (2030)	167.5 (2430)	222 (3220)
PVP48	75.7 (20.0)	44.1 (640)	57.2 (830)	84.1 (1220)	110.3 (1600)	137.2 (1990)	163.4 (2370)	216.5 (3140)
PVP48	77.6 (20.5)	43.4 (630)	56.5 (820)	82 (1190)	108.2 (1570)	134.4 (1950)	160 (2320)	212.4 (3080)
PVP48	79.4 (21.0)	42.7 (620)	55.2 (800)	80.7 (1170)	106.2 (1540)	131.7 (1910)	157.2 (2280)	206.8 (3000)
PVP48	81.3 (21.5)	42.1 (610)	54.5 (790)	79.3 (1150)	104.1 (1510)	128.9 (1870)	153.8 (2230)	203.4 (2950)
PVP48	83.2 (22.0)	41.4 (600)	53.8 (780)	77.9 (1130)	102 (1480)	126.2 (1830)	151 (2190)	199.3 (2890)
PVP48	85.1 (22.5)	40.7 (590)	52.4 (760)	75.8 (1100)	100 (1450)	124.1 (1800)	147.5 (2140)	195.8 (2840)
PVP48	87.0 (23.0)	40 (580)	51.7 (750)	74.5 (1080)	97.9 (1420)	121.3 (1760)	144.8 (2100)	191.7 (2780)

Performance Data- Maximum Working Pressure

**** Represents maximum operating pressure with pump/motor combination. This will be the maximum relief valve or compensator setting.

**** Represents maximum operating pressure with pump/motor combination. When used on power unit products this will represent a 207 bar (3000 psi) relief valve or compensator setting.

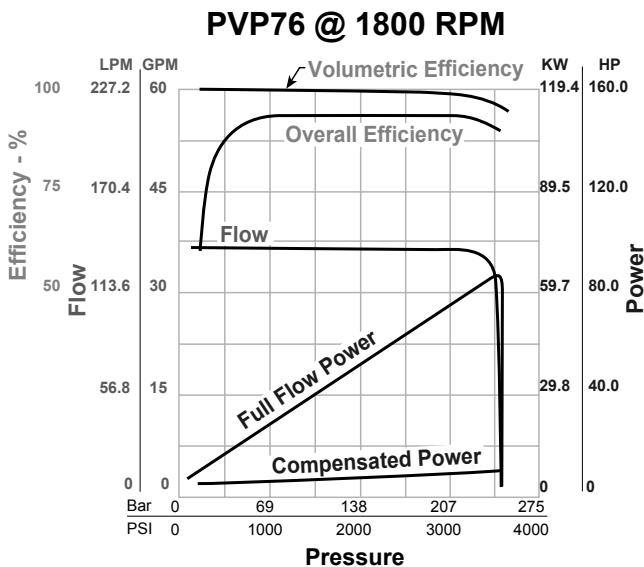
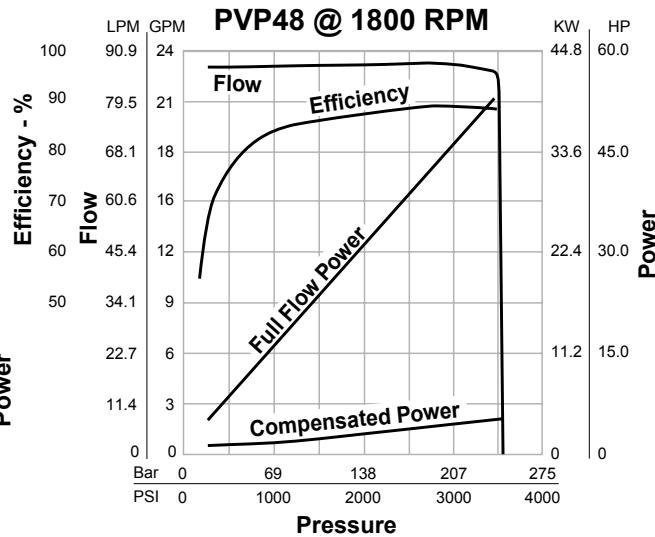
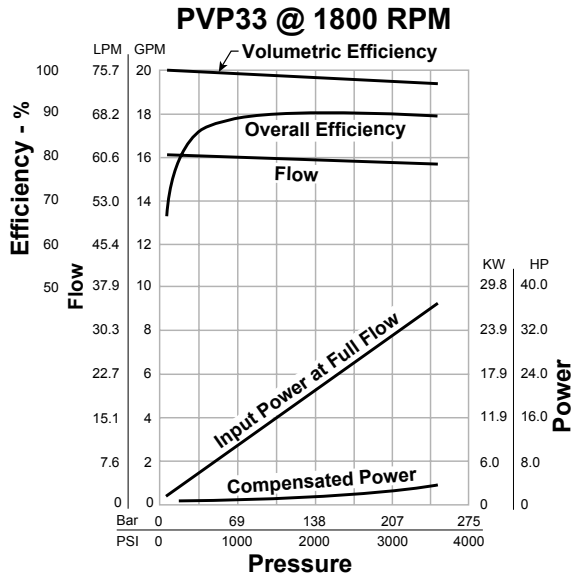
**V-Pak Low Profile - Pump/Motor Combinations Maximum Operating Pressure
Bar (PSI)**

PUMP	FLOW LPM (GPM) @ 1725 RPM	5.6 KW (7.5 HP)	7.5 KW (10 HP)	11.2 KW (15 HP)	14.9 KW (20 HP)	18.6 KW (25 HP)	22.3 KW (30 HP)	29.8 KW (40 HP)
PVP76	90.8 (24.0)	20.7 (300)	31.7 (460)	55.2 (800)	78.6 (1140)	100 (1450)	121.3 (1760)	167.2 (2425)
PVP76	94.6 (25.0)	20 (290)	31 (450)	53.4 (775)	75.8 (1100)	96.5 (1400)	117.2 (1700)	160.3 (2325)
PVP76	98.4 (26.0)	18.6 (270)	29.6 (430)	52.4 (760)	73.8 (1070)	94.5 (1370)	113.8 (1650)	155.8 (2260)
PVP76	102.2 (27.0)	17.9 (260)	29.3 (425)	50.3 (730)	71 (1030)	91.4 (1325)	113.8 (1650)	155.8 (2260)
PVP76	106.0 (28.0)	17.6 (255)	27.6 (400)	48.3 (700)	68.3 (990)	88.3 (1280)	106.5 (1545)	144.1 (2090)
PVP76	109.8 (29.0)	17.2 (250)	26.9 (390)	46.5 (675)	65.5 (950)	86.9 (1260)	104.5 (1515)	140.7 (2040)
PVP76	113.6 (30.0)	-	26.9 (390)	45.5 (660)	63.8 (925)	83.4 (1210)	103.4 (1500)	137.9 (2000)
PVP76	117.3 (31.0)	-	25.9 (375)	43.8 (635)	61.4 (890)	80.7 (1170)	97.9 (1420)	132.4 (1920)
PVP76	121.1 (32.0)	-	24.8 (360)	42.7 (620)	60.3 (875)	78.6 (1140)	95.1 (1380)	128.6 (1865)
PVP76	124.9 (33.0)	-	23.4 (340)	41.4 (600)	57.9 (840)	75.8 (1100)	92.4 (1340)	124.8 (1840)
PVP76	128.7 (34.0)	-	22.4 (325)	39.6 (575)	56.9 (825)	74.1 (1075)	90.3 (1310)	121.7 (1765)
PVP76	132.5 (35.0)	-	21.4 (310)	36.5 (530)	55.2 (800)	70.7 (1025)	87.9 (1275)	118.9 (1725)
PVP76	136.7 (36.0)	-	20.7 (300)	35.2 (510)	53.1 (770)	68.9 (1000)	84.8 (1230)	111 (1610)

V-Pak Low Profile Performance Data

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

Flow, Horsepower and Efficiency Charts



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

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

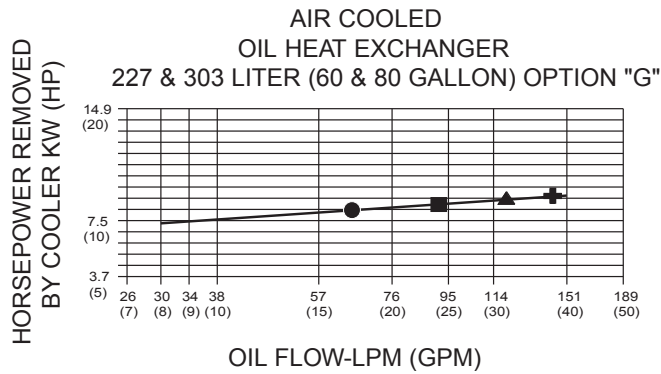
Actual GPM is directly proportional to drive speed and maximum volume setting. Flow loss, however, is a function of pressure only.

WHERE:

- Q = Actual Output Flow in GPM
- PSI = Pressure at Pump Outlet
- CHp = Input Horsepower @ Full Compensation @ 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).

V-Pak Low Profile Performance Data – Heat Exchangers



OIL PRESSURE DROP
AT 100 SSU

- = .34 BAR (5 PSI)
- = .69 BAR (10 PSI)
- ▲ = 1.0 BAR (15 PSI)
- ⊕ = 1.4 BAR (20 PSI)

"G" - Return Line HT. EX. 30 LPM - 136 LPM (8 GPM - 36 GPM MAX.)

Performance data is based on 100 SSU oil leaving the cooler
4.4°C (40°F) higher than the ambient air temperature used for cooling.

RESERVOIR SIZE LITERS (GALLONS)	
	303 (80)
KW (HP) REMOVAL	.89 (1.2)

Heat removal is based on static
ambient air of 29°C (85°F) and max. oil
temperature of 57°C (135°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.
- D & H-Pak power units are tested and relief valve is set at maximum pressure of the pump/motor combination.
- V-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 250 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 66°C (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.).

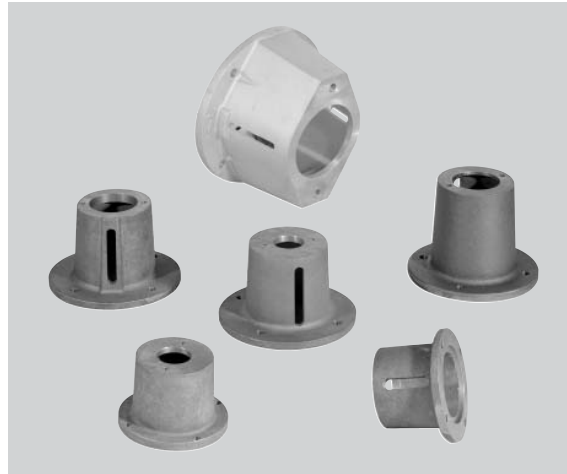
NOTE: Consult Parker when exceeding 160°F (71°C) operation. Oil should have maximum anti-wear properties, rust and oxidation treatment.

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.

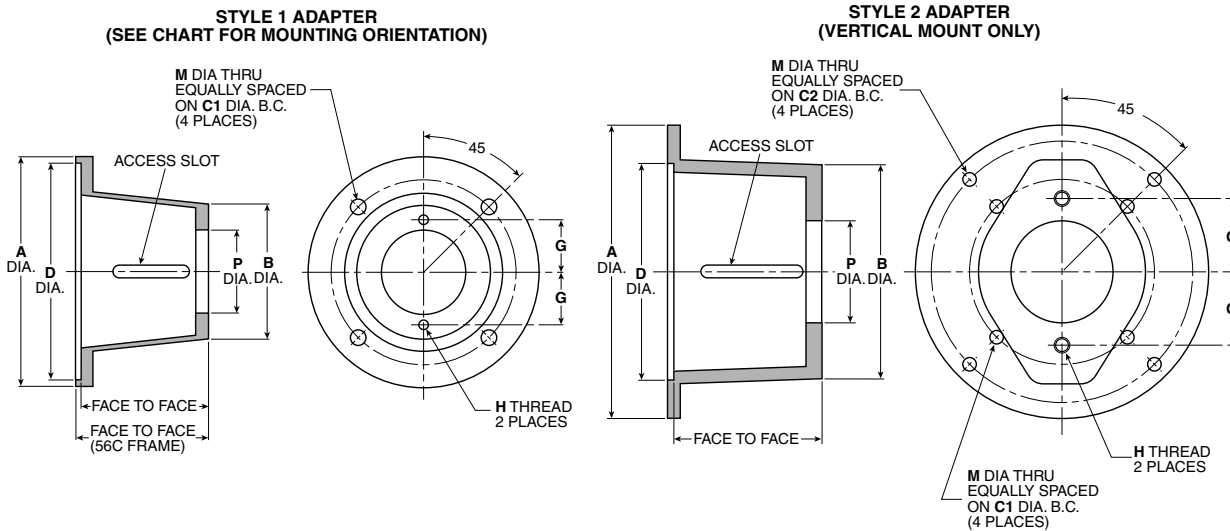
NOTE: For additional information refer to latest edition of Bulletin No. HY13-2600-550-xxx..

The totally enclosed pump mounting bracket offers precision shaft alignment and safety from the rotating shafts and coupling. The bracket is designed to mount on the motor face with the motor coupling half secure to the shaft. Then the pump, with its coupling half secure on the pump shaft, is mounted and the coupling halves are engaged. This will require proper spacing of the coupling prior to installation and a coupling with an outside diameter less than "P" dimension. If the coupling selected cannot be assembled this way, both coupling halves must be installed on the motor shaft. Next, mount the adapter on the motor. Then the pump can be mounted and the coupling secured to the pump by using the access slot to tighten the pump shaft coupling set screw.



Dimensions*

Pump Mounting Adapter



Model Number	Pump Mounting	Motor Mounting	A	B	C1	C2	D	Face to Face	G	H	M	P	Vertical Mounting	Horizontal Mounting	Style	Weight
876631	SAE AA	56C	6.7	5.0	5.88	N/A	4.50	3.50	1.63	3/8-16	0.44	2.00	YES	YES	1	3 lb.
876632	SAE AA	182TC/256TC	9.0	5.3	7.25	N/A	8.50	5.00	1.63	3/8-16	0.56	2.00	YES	YES	1	4 lb.
876633	SAE A	56C	6.7	5.0	5.88	N/A	4.50	4.25	2.10	3/8-16	0.44	3.25	YES	YES	1	4 lb.
876634	SAE A	182TC/256TC	9.0	5.3	7.25	N/A	8.50	5.00	2.10	3/8-16	0.56	3.25	YES	YES	1	4 lb.
876635	SAE A	182TC/256TC	9.0	5.3	7.25	N/A	8.50	5.88	2.10	3/8-16	0.56	3.25	YES	YES	1	5 lb.
875343	SAE B	182TC/256TC	11.4	9.0	7.25	10.25	8.50	5.75	2.88	1/2-13	0.53	4.00	YES	NO	2	7 lb.
875344	SAE B	182TC/256TC	11.4	9.0	7.25	10.25	8.50	6.81	2.88	1/2-13	0.53	4.00	YES	NO	2	8 lb.
876683	SAE B	182TC/256TC	9.0	8.8	7.25	N/A	8.50	6.38	2.88	1/2-13	0.53	4.00	NO	YES	1	7 lb.
876684	SAE C	182TC/256TC	9.0	9.3	7.25	N/A	8.50	6.69	3.56	5/8-11	0.53	5.00	NO	YES	1	20 lb.

* All dimensions are in inches.

NOTE: It is the responsibility of the user to check the listed dimensions to ensure suitability of mounting adapter with pump/coupling/motor combination.



Application Formulas

- 1 GPM at 1500 PSI = 1 HP (General Rule)
- 1 Gallon = 231 Cubic Inches (3.7854 Liters)
- 1 Gallon Oil = 7.08 Lbs.
- 1 bar = 14.5 PSI
- 25.4mm = 1 Inch
- 1 HP = 42.4 BTU/Min.
- 1 Gallon = 3.7854 Liters

$$\text{HP} = \frac{\text{GPM} \times \text{PSI}}{1714 \times \text{Pump Efficiency}}$$

$$\text{PSI} = \frac{1714 \times \text{Pump Efficiency} \times \text{HP}}{\text{GPM}}$$

$$\text{GPM} = \frac{1714 \times \text{Pump Efficiency} \times \text{HP}}{\text{PSI}}$$

$$\text{HP} = \frac{\text{Torque (in.-lbs.)} \times \text{RPM}}{63025}$$

$$\text{Torque} = \frac{\text{HP} \times 63025}{\text{RPM}}$$

$$\text{RPM} = \frac{\text{HP} \times 63025}{\text{Torque}}$$

Motor Information

- At 440V — 3-Phase Motor Draws 1.25 AMP/HP
- At 220V — 3-Phase Motor Draws 2.5 AMP/HP
- At 110V — Single Phase Motor Draws 10 AMP/HP