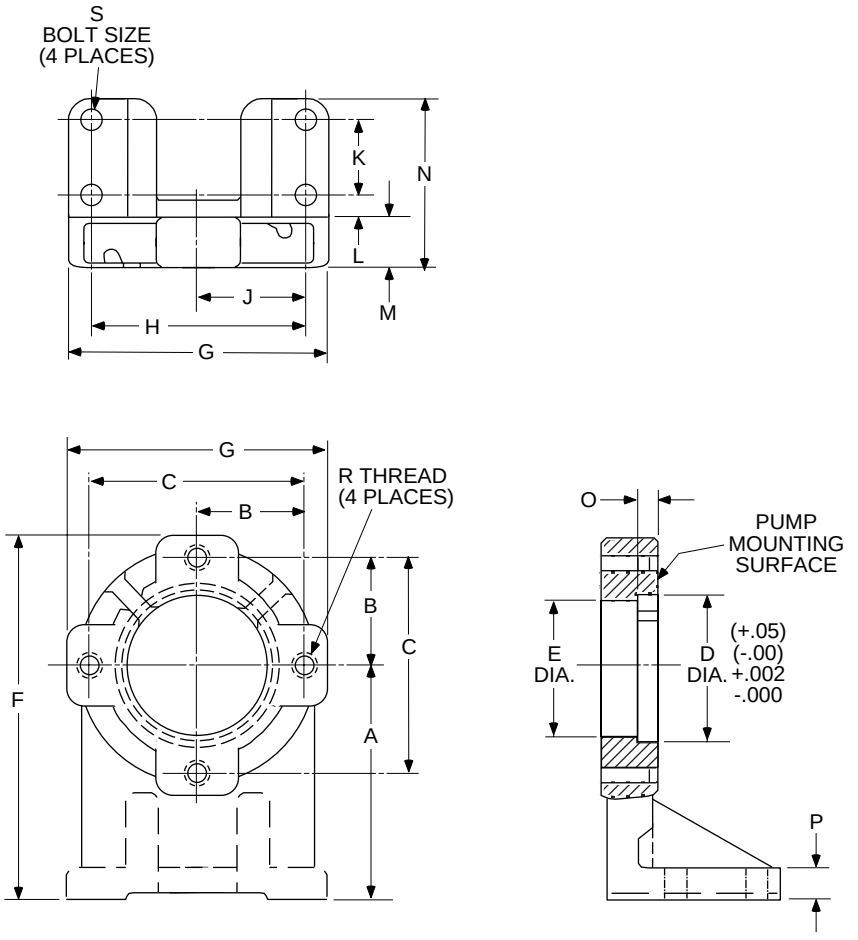
FPVR FOOT MOUNTING BRACKETS DIMENSIONS

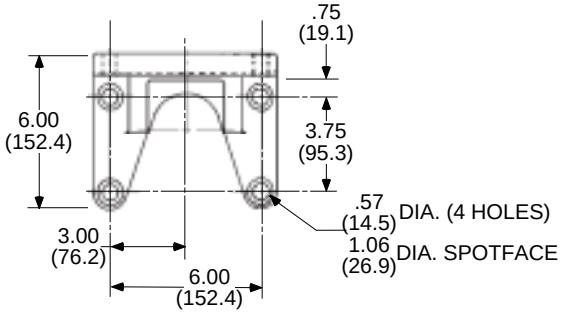
Dimensions shown in: Inches (millimeters)

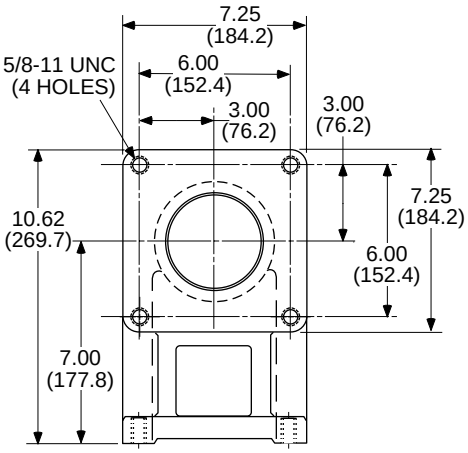


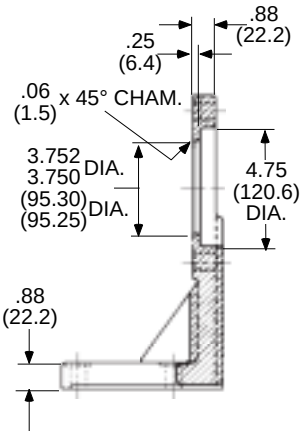
FOOT BRACKET SERIES	SAE FLANGE	DIMENSIONS Inches (millimeters)																
		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R THREAD	S BOLT SIZE
FPVR6	A	5.25 (133.4)	2.09 (53.1)	4.19 (106.4)	3.252 (82.6)	3.00 (76.2)	7.81 (198.4)	5.12 (130.0)	3.50 (88.9)	1.75 (44.4)	2.00 (50.8)	.48 (12.2)	1.00 (25.4)	3.98 (101.1)	.31 (7.9)	.81 (20.6)	3/8-16 UNC	3/8 In.
FPVR15	B	6.25 (158.8)	2.87 (73.0)	5.75 (146.1)	4.00 (101.6)	4.25 (108.0)	9.69 (246.1)	6.85 (174.0)	5.75 (146.1)	2.87 (73.0)	2.01 (51.1)	.59 (15.0)	1.26 (32.0)	4.45 (113.0)	.47 (11.9)	.79 (20.1)	1/2-13 UNC	1/2 In.

FPVR50 FOOT MOUNTING BRACKET DIMENSIONS

Dimensions shown in: Inches (millimeters)



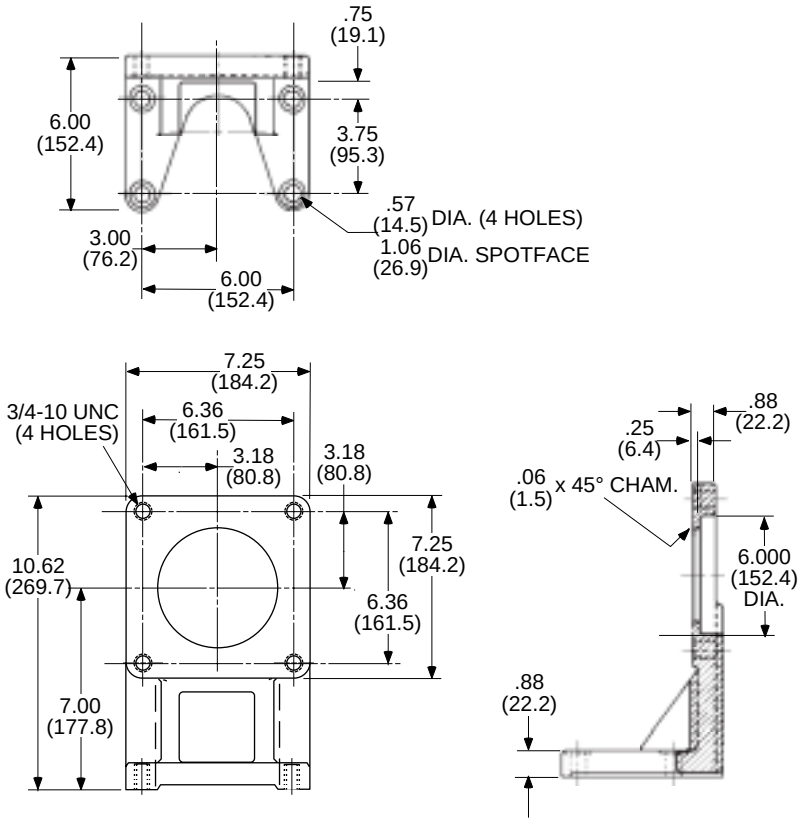




FPVR50D FOOT MOUNTING BRACKET DIMENSIONS

SAE D Mounting

Dimensions shown in: Inches (millimeters)



ORDERING INFORMATION

Foot Mounting Brackets

SELECT ONE — SELECT ONE — DESIGN LETTER

FPVR [ ] – [ ] – [ ]

***NOTE:** Foot Bracket Spacers mount pump to 25 H.P. motor, 1800 rpm, 284 T frame.

SIZE		MOTOR SIZE		KIT INCLUDES		WEIGHT
CODE	**USED WITH MODEL**	**CODE**	**NEMA FRAME SIZE**	**MOTOR SPACERS (In.)**	**BRACKET SPACERS (In.)**	**lbs. / kg**
6	PVR6	**143**	143/145	1.74		10.1 / 4.6
		182	182/183	0.75		8.8 / 4.0
		213	213/215	NONE	NONE	7.9 / 3.6
		254	254/256		1.00	9.8 / 4.4
15	PVR15	**254**	254/256	NONE	NONE	16.8 / 7.6
		284	284/286		0.75	18.8 / 8.5
		324	324/326		1.75	21.5 / 9.8
1524	PVR15 W/ DUAL VOLUME	**254**	254/256	1.75	1.75	24.5 / 11.1
		284	284/286	1.00	1.75	23.2 / 10.5
50	PVR50	**284**	284/286	NONE	NONE	22.8 / 10.3
		324	324/326		1.00	26.7 / 12.1
		364	364/365		2.00	30.6 / 13.9
50D	PVR50 SAE D MOUNTING	**254**	254/256	0.75		24.5 / 11.1
		284	284/286	NONE	NONE	22.8 / 10.3
		324	324/326		1.00	26.7 / 12.1
		364	364/365		2.00	30.6 / 13.9
5024	PVR50 W/ DUAL VOLUME	**254**	254/256	3.50	2.75	35.7 / 16.2
		284	284/286	2.75	2.75	33.8 / 15.3
		324	324/326	1.75	2.75	32.7 / 14.8

TYPICAL ORDERING CODE: **FPVR15-284-**

Bolt Kits for Mounting PVR Series Pumps

SELECT ONE — SELECT ONE — DESIGN LETTER

BPVR [ ] – [ ] – **U** – [ ]

***NOTE:** Mounts a PVR15 manifold pump to a MPVR15-*XX*-C-21 manifold.

CODE	USED WITH MODEL
1	PVR6
6	PVR6
15	PVR15 - RF
	PVR15 - RM
50	PVR50
50D	PVR50 SAE D MTG.

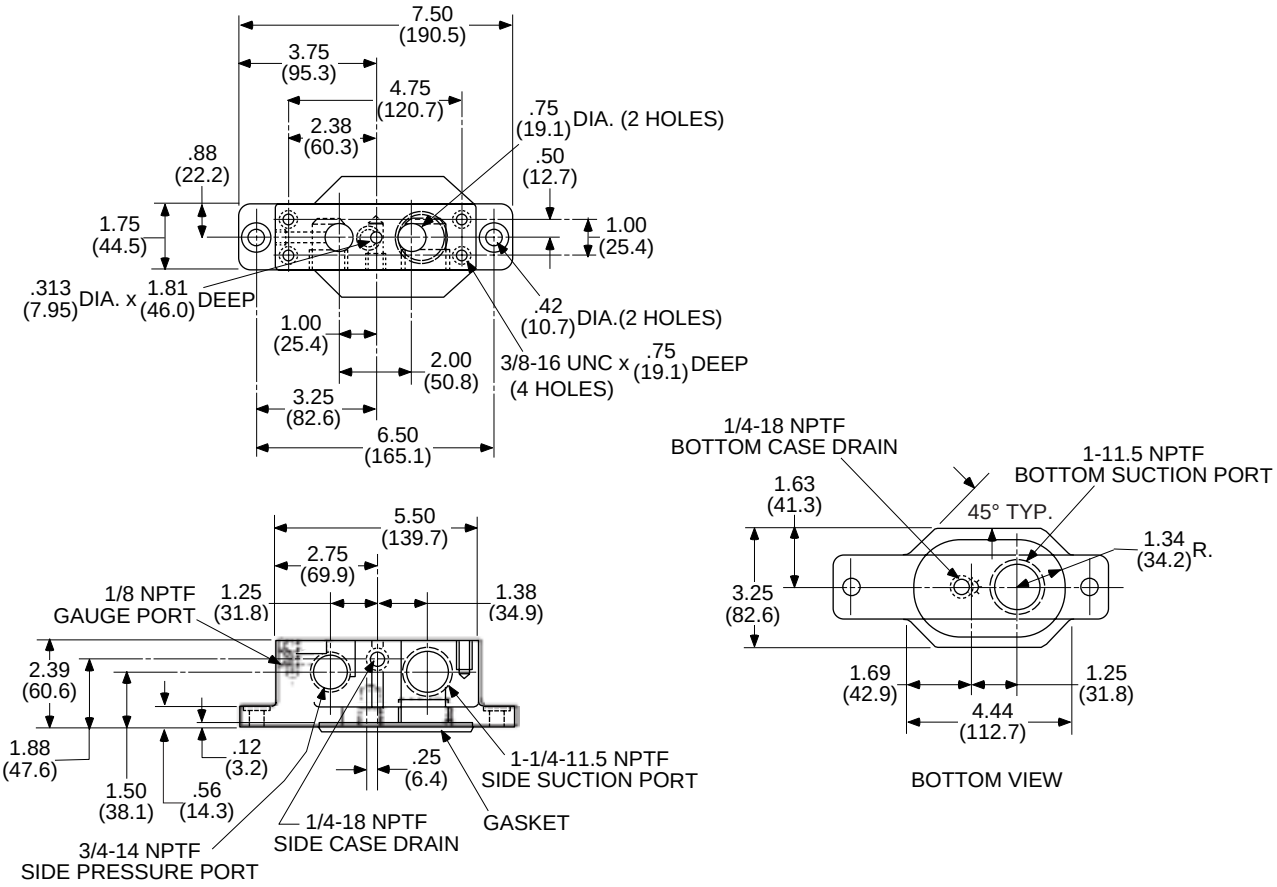
CODE*	BOLT SIZE	QTY. of BOLTS/WASHERS	WEIGHT lbs. / kg
1	3/8-16 UNC x 1.00	4	.21/.10
2	3/8-16 UNC x .88	2	.34/.15
1	7/16-14 UNC x 1.50	4	.10 .05
2	1/2-13 UNC x 1.25	2	.22/.10
2	5/8-11 UNC x 1.75	4	.90/.40
3	3/4-10 UNC x 1.75	4	.90/.40

***NOTE:** Code 1 = Pump to Manifold.
Code 2 = Pump to Foot Bracket, Flange or Front Tandem Pump.
Code 3 = SAE “D” Flange; Pump to Foot Bracket or Tandem Adaptor.

TYPICAL ORDERING CODE: **BPVR15-1-U-**

MANIFOLD DIMENSIONS for PVR1 Pump

Dimensions shown in: Inches (millimeters)



ORDERING INFORMATION

SELECT ONE — DESIGN LETTER

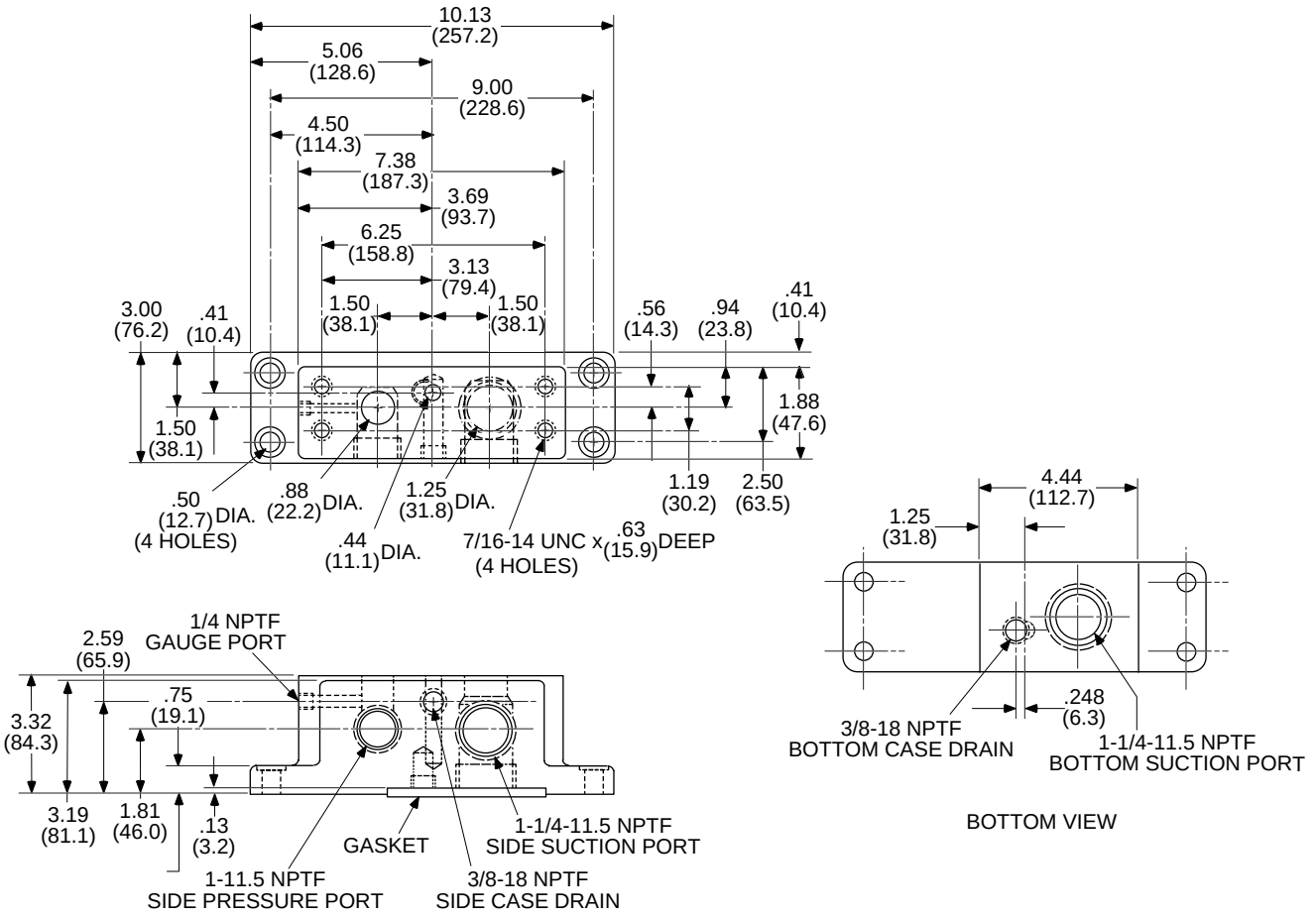
MPVR1 – [ ] – C – 6 – [ ]

CODE	NEMA MOTOR FRAME	KIT INCLUDES*	WEIGHT lbs. / kg
143	143/145	1" MOTOR SPACERS	7.3 / 3.3
182	182/184	MANIFOLD ONLY	6.3 / 2.9

***NOTE:** Kit also includes Gasket, and Plugs for gauge, suction and case drain ports.

MANIFOLD DIMENSIONS for PVR15 Pump - Code RM

Dimensions shown in: Inches (millimeters)



ORDERING INFORMATION

SELECT ONE — DESIGN LETTER

MPVR15 – [ ] – C – 21 – [ ]

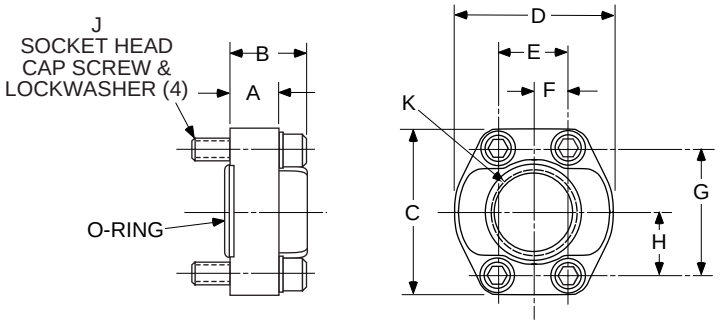
CODE	NEMA MOTOR FRAME	KIT INCLUDES*	WEIGHT lbs. / kg
182	182/184	1.75” MOTOR SPACERS	19.6 / 8.3
213	213/215	1” MOTOR SPACERS	18.4 / 8.3
254	254/256	MANIFOLD ONLY	17.5 / 7.9

***NOTE:** Kit also includes Gasket, and Plugs for gauge, suction and case drain ports.

STRAIGHT FLANGES DIMENSIONS

Flange Codes 9 through 33

For Pumps Requiring SAE 4-Bolt Threaded Flanges
(Mounting Bolts and Viton Seals Includes)

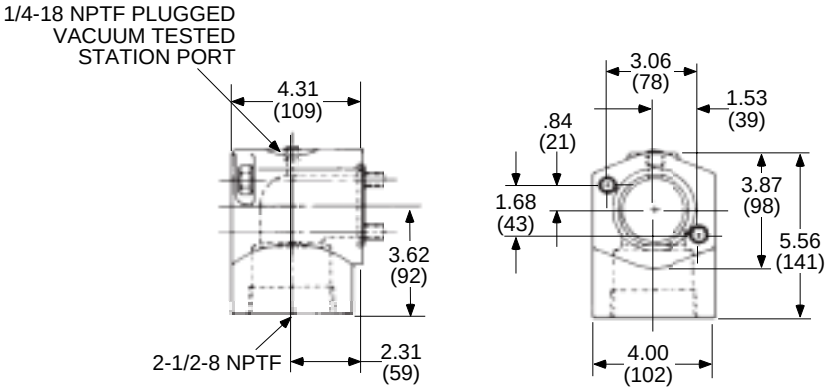


FLANGE SIZE	CODE	DIMENSIONS Inches (millimeters) A	B	C	D	E	F	G	H	J	K
1 In.	9	.97 (24.6)	1.38 (35.1)	2.75 (69.9)	2.31 (58.7)	1.03 (26.2)	.52 (13.2)	1.03 (26.2)	2.06 (52.3)	3/8-16 UNC x 1.75	1' NPTF
	11										1-5/16-12 UN SAE #16
1-1/2 In.	21	1.09 (27.7)	1.82 (46.2)	3.69 (93.7)	3.25 (82.6)	1.41 (35.8)	.70 (17.8)	1.38 (35.1)	2.75 (69.9)	1/2-13 UNC x 2.00	1-1/4" NPTF
	25										1-1/2" NPTF
	27										1-7/8-12 NC SAE #24
2 In.	33	1.09 (27.7)	1.82 (46.2)	4.00 (101.6)	3.81 (96.8)	1.68 (42.7)	.84 (21.3)	1.53 (38.9)	3.08 (78.2)	1/2-13 UNC x 1-3/4	2" NPTF

90° SUCTION FLANGE DIMENSIONS

PVR50 Pump - Flange Code 37

Dimensions shown in: Inches (millimeters)



ORDERING INFORMATION

Flanges

SELECT ONE

SPVR – ☐ – G

CODE	SAE 4-BOLT PAD	THREAD SIZE	PUMP USED ON	OUTLET	INLET	WEIGHT lbs. / kg
9	1”	1” NPTF	PVR15	X		1.5 / 0.7
11	1”	1-15/16-12 UN 1” TUBE SIZE SAE #16	PVR15	X		
21	1-1/2”	1-1/4” NPTF	PVR50	X		3.0 / 1.4
25	1-1/2:”	1-1/2” NPTF	PVR50	X	X	
27	1-1/2”	1-7/8-12 UN 1-1/2” TUBE SIZE SAE #24	PVR15 PVR50	X	X	
33	2”	2” NPTF	PVR50		X	3.6 / 1.6
37	2”	2-1/2” NPTF 30° ANGLE (PVR50 INLET ONLY)	PVR50-70B		X	13.4 / 6.1

TYPICAL ORDERING CODE: **SPVR-9-G**

ORDERING INFORMATION

Pump Mechanical Accessories

SELECT ONE — DESIGN LETTER

PMA – ☐ – ☐

CODE	DESCRIPTION	PUMP MODEL (DESIGN LETTER INDICATED)*						WEIGHT lbs. / kg
		PVR1	PVR6	PVR15 - RF 15 & 20B	PVR15 - RF 30B	PVR15 - RM	PVR50	
6	Volume Screw Assembly	I	A	Standard	Standard	Standard	Standard	0.3 / 0.14
15	Handwheel Pressure Assembly	N/A	N/A	A	A	A	A	0.8 / 0.36
1536	Handwheel Pressure Assembly	H	A	N/A	N/A	N/A	N/A	0.9 / 0.41
1536	Handwheel Volume Assembly	I	A	D	B	Note 1	Note 1	0.9 / 0.41
17	Remote Dual Pressure Control	Note 1	Note 1	C	A	I	I	3.6 / 1.63
24	Remote Dual Volume Control	Note 1	Note 1	A	A	Note 1	Note 1	1.9 / 0.86

***NOTE:** The Design Letter listed is the earilest version that the assembly is physically compatible with all later models.

N/A Not Applicable.

NOTE 1: Not Available. Please consult the factory.

IMPORTANT !
Check the appropriate pump design code with the above chart list before ordering to insure installation compatability.

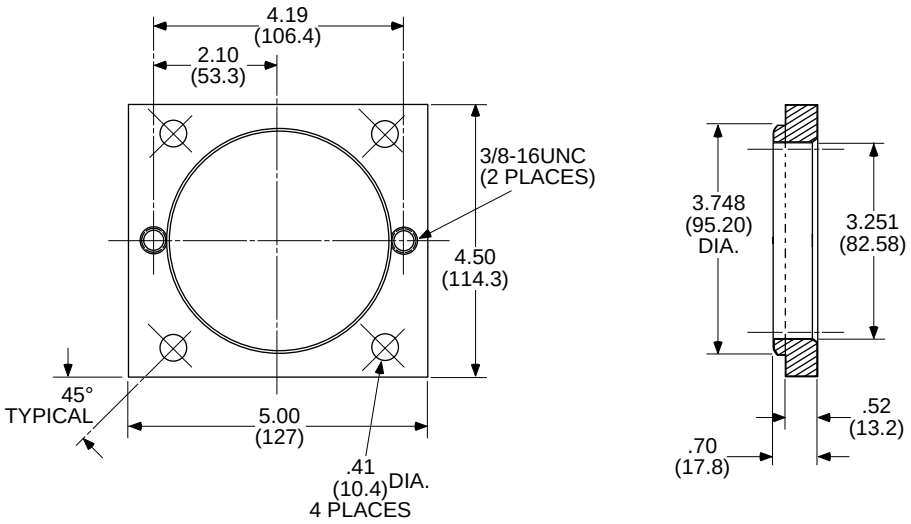
NOTES: **(a)** Handwheel Accessory Kits contain the handwheel and a spring pin for installation on an existing Adjustment Screw. If a pump has a plug only at the volume adjustment screw location, a Volume Screw Assembly must be ordered seperately.
(b) For installation dimensions and product references, refer to the appropriate option modification in the PVR Vane Pump Section.

TYPICAL ORDERING CODE: **PMA-17-**

TRANSITION PLATE

For Mounting a PVR6 SAE 2-Bolt Flange to a PVR1-RF 4-Bolt Flange Pump Existing Mounting Surface.

Dimensions shown in: Inches (millimeters)



The Kit Includes:

1 - Transition Plate
4 - Hex. Hd. Bolts 3/8-16UNC x 1-1/4
4 - Lockwashers 3/8
1 - 3/16 x 1/8 x 1Llong Step Key

NOTE: PVR6 Pump Bolts are ordered seperately.

ORDERING INFORMATION

Transition Plate

DESIGN LETTER

TPVR – 6 – [ ]

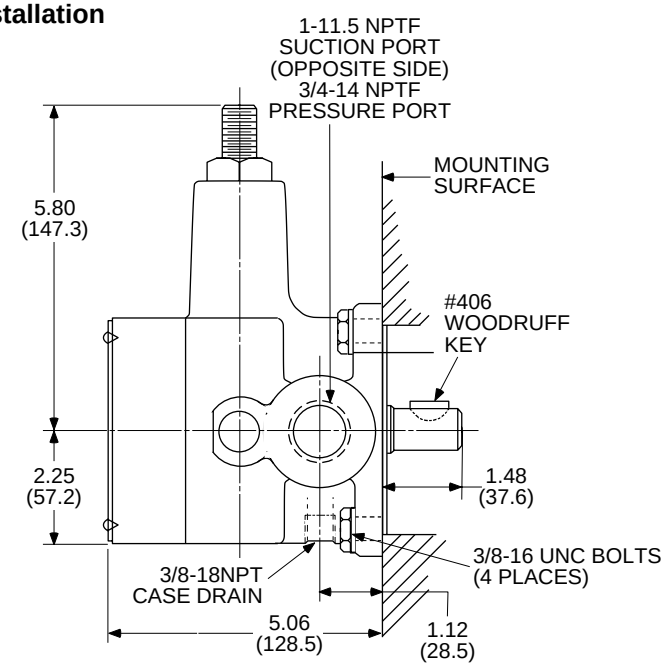
Weight: 1.0 lbs. (0.45 kg)

TRANSITION PLATE

Dimensions shown in: Inches (millimeters)

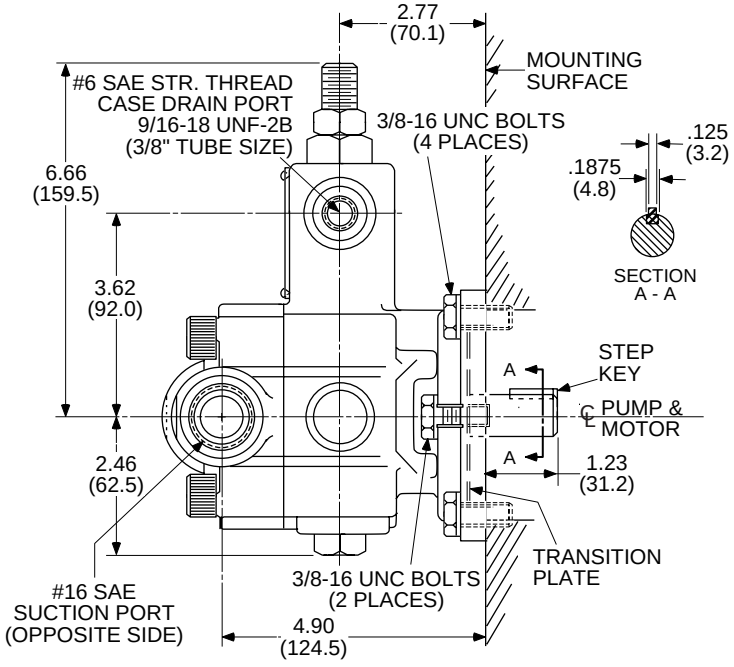
For Mounting a PVR6 SAE 2-Bolt Flange to a PVR1-RF 4-Bolt Flange Pump Existing Mounting Surface.

Existing PVR1-*XXX*-RF-*X*-*X* Installation



TRANSITION PLATE

Existing PVR6-*XXX*-RF-*X*-*X* Installed With a TPVR Transition Plate on an Existing Mounting Surface.

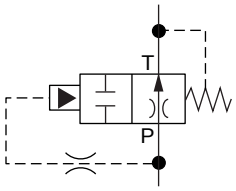


AIR BLEED VALVE

DESCRIPTION

The air bleed valve permits easier pump priming and/or start-up under deadhead conditions. This valve is normally open to permit oil and air (if present) to pass from inlet to outlet and directly back to the tank. Pressure in the spool center section is bled via spool clearance to the no-spring end of the spool. As pressure builds, it overcomes the spring, shifts the spool to close the inlet port and allows full pump flow to the circuit.

VALVE SCHEMATIC

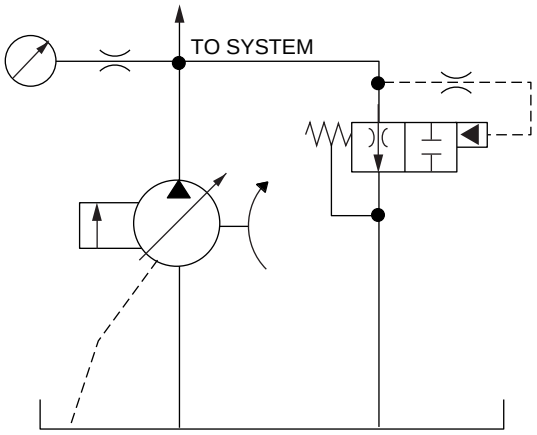


TYPICAL PERFORMANCE SPECIFICATIONS

MINIMUM FLOW RATE		8 gpm
MINIMUM	@ 8 gpm	500 psi
OPERATING	@ 15 gpm	350 psi
PRESSURE	@ 50 gpm	200 psi
MAX. OPERATING PRESSURE		3500 psi
MINIMUM PRESSURE TO HOLD CLOSE		150 psi
TYPICAL	@ 500 psi	30 sec.
CLOSING TIMES	@1500 psi	10 sec.
SEALS		VITON

NOTE: Data is based on ISO VG 46 oil at 120° F. (49° C.).

TYPICAL APPLICATIONS SCHEMATIC



ELECTRIC MOTOR PRIME MOVER

In this circuit, the valve is used to automatically purge the air in the circuit. It will automatically block flow through it in a short period of time.

ENGINE PRIME MOVER

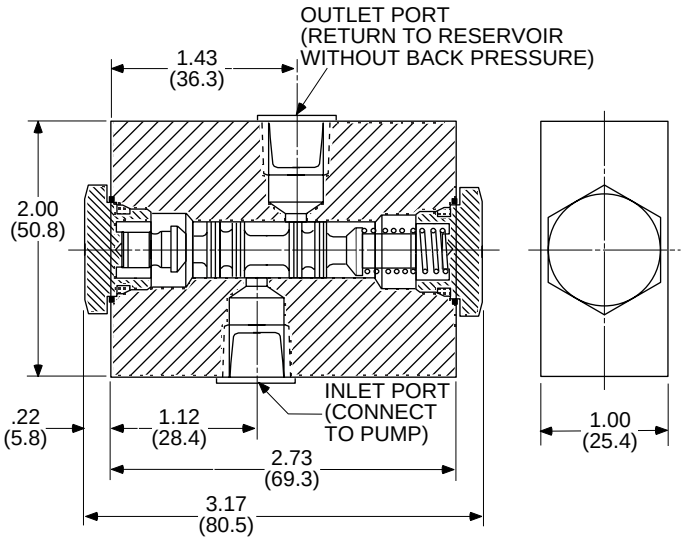
Here the valve passes flow for a short time allowing an internal combustion engine to come up to speed. This would eliminate using a seperate open center valve for this purpose.

NOTE:

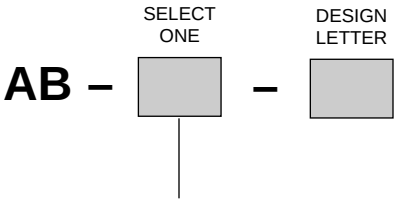
The outlet line should be piped below the oil level to prevent foaming of the oil.

VALVE DIMENSIONS

Dimensions shown in: Inches
(millimeters)



ORDERING INFORMATION



PORTS

CODE	DESCRIPTION
1	1/4” NPTF
2	SAE #6

WEIGHT: 0.6 lbs. / 0.27 kg

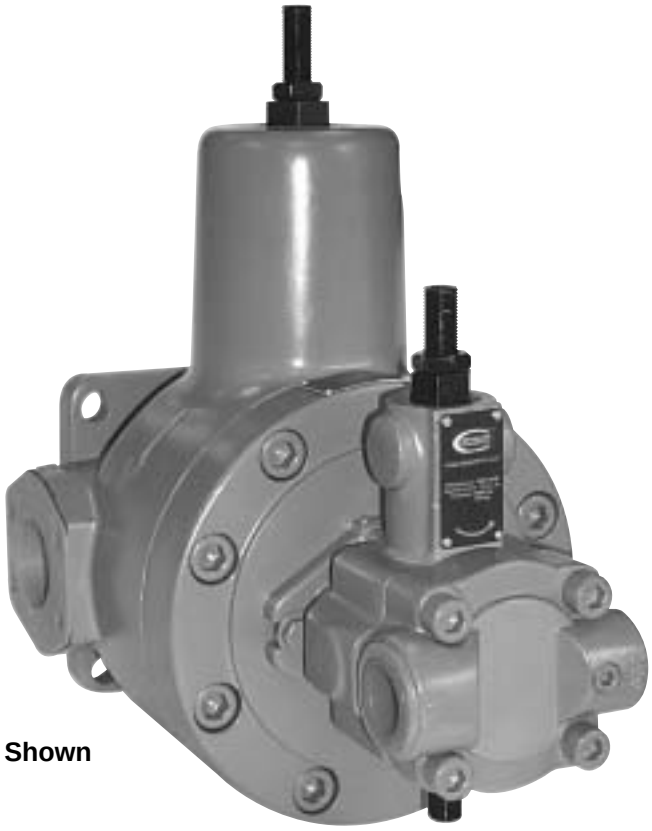
TYPICAL ORDERING CODE:

AB-1-

TANDEM PUMP OPTIONS

BENEFITS

- Permits multiple pump operation without additional mounting flanges and couplings.
- Reduce system costs. Space saver -- one power unit where two or more were necessary. Smaller elecreic motor.
- Reduce operating costs. More efficient in high-low system than single pressure compensated pump.



PVR50/PVR6 Tandem Mounting Shown

TANDEM PUMP COMBINATIONS

FRONT PUMP				REAR PUMP WITH OPTION CODE 12						
BASIC CODE		OPTION CODE*	MAXIMUM H.P.**	VANE		PISTON				
				PVR6	PVR15	HPV6	HPV10	HPV15	HPV20	HPV29
VANE	PVR6	21	8.5		N/A	N/A	N/A	N/A	N/A	N/A
	PVR15-RF	21	8.5		N/A	N/A	N/A	N/A	N/A	N/A
		22	30	N/A		N/A			N/A	N/A
		31	30	N/A	N/A		N/A	N/A	N/A	N/A
	PVR50	21	7.5		N/A	N/A	N/A	N/A	N/A	N/A
		22	20	N/A		N/A			N/A	N/A
		23	43	N/A	N/A	N/A	N/A	N/A		
		31	20	N/A	N/A	N/A		N/A	N/A	N/A

***NOTE:** Option Code 12 is a male spline shaft.
Option Code 21 is a SAE A mounting pad.
Option Code 22 is a SAE B mounting pad.
Option Code 23 is a SAE C mounting pad.
Option Code 31 is a SAE A mounting pad with a SAE B spline shaft.

****NOTE:** Maximum horsepower transfer to rear pump at 1750 rpm.

NOTE: See the PVR Vane Pump section for product information and codes.
Pump mounting bolts are ordered seperately. See the Mounting Accessories section for information and codes.

PowrFlow™ Vane Pumps - Just What You Need!

Continental Hydraulics PowrFlow™ PVR Vane Pumps give you all of what you need, and less of what you don't want - such as heat and complexity..

Variable volume, pressure compensated design maintains constant pressure, while matching system flow demands.

Pressure relief valves are eliminated, which simplifies circuit design. There's less heat build-up, so heat exchangers can be smaller - or eliminated entirely. PVR Vane Pumps use smaller electric motors than fixed displacement vane pumps, which reduces the cost of installation and operation.

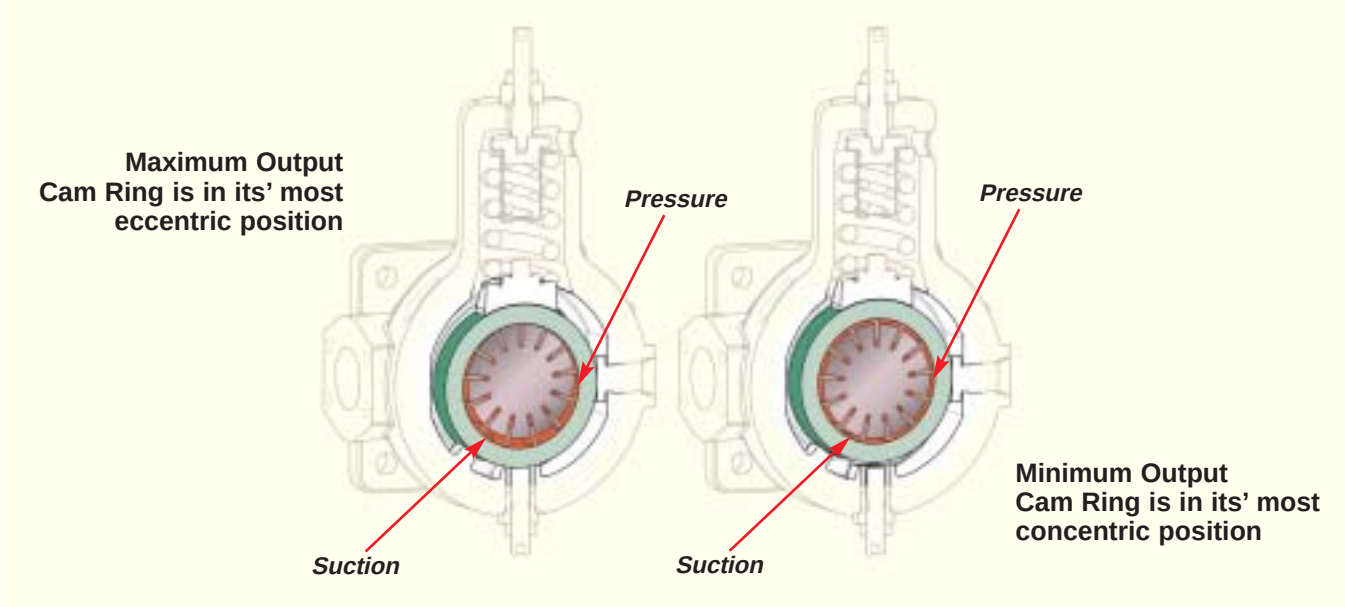
The result is a simpler, more energy efficient system, that accurately matches fluid power volume to the job, while maintaining constant pressure.

How Does Pressure Compensation Work?

As the PVR Vane Pump rotor turns clockwise, the volume between two vanes (a segment) increases at the suction porting. When segments enter the pressure port area, volume is reduced, forcing fluid through the pressure port.

Maximum output occurs when the pressure ring is at its' most eccentric position, as shown in the illustration below. When system requirements are less than maximum pump output, system pressure forces the pressure ring up against the spring, reducing eccentricity, which reduces flow.

When system volume demand falls to zero, system pressure drives the ring to a concentric position. This changes the displacement to zero, while system presure is unchanged. Constant pressure is maintained whether at zero or full displacement, so system response is fast.



Exclusive 3 Year Warranty

Continental Hydraulics Division warrants all vane pumps supplied by Continental Hydraulics against defects in material and workmanship under normal use and service for three years from the date of shipment.

This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, use of improper fluid, or use of materials not of Continental Hydraulics manufacture or supply.

Why settle for "close enough" when you need hydraulics?

Continental Hydraulics offers a complete line of products to meet your need for reliable, precise fluid power. In addition to the Vane Pumps shown in this catalog, Continental also offers piston pumps, a full line of control valves, modular stack valves, integrated hydraulic circuits, and hydraulic power units.

Continental's products are used in diverse applications such as plastic molding machinery, machine tools, pulp and paper machines, marine auxiliary power controls and deck handling equipment, and masonry product production equipment.

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Our Distributors work hand-in-hand with our Engineers to select components and build systems that will meet your toughest specifications. And they'll suggest creative solutions that can help save money or enhance performance.

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