

# PVR15 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED

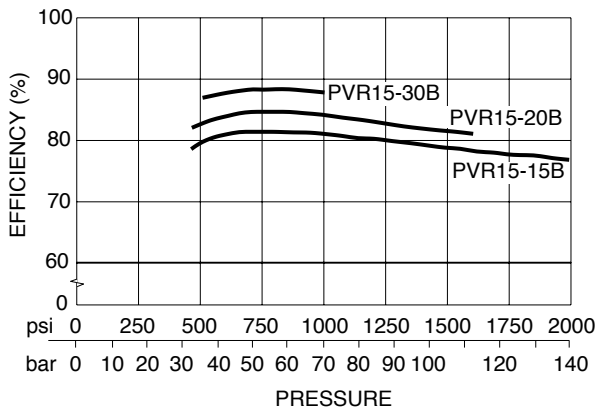


Manifold Mounted

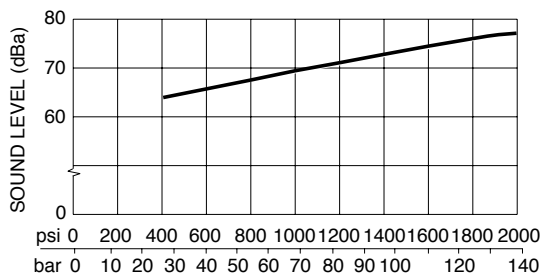
Flanged Mounted  
SAE "B" 2-Bolt

## OVERALL EFFICIENCY

1750 rpm at Full Displacement



## TYPICAL SOUND LEVEL @ 1750 rpm



## TYPICAL PERFORMANCE SPECIFICATIONS

		PUMP SIZE			
		15B	20B	30B	
VOLUMETRIC DISPLACEMENT*	cu. in./rev.	2.4	2.8	4.3	
	ml/rev.	39.3	46	70.5	
PUMP DELIVERY AT 1750 RPM*	91.5 psi	18.7	21.6	32.0	
	6.3 bar	70.8	81.8	121.0	
	gpm	15	19	30	
	lpm	56.8	72	114	
COMPENSATED PRESSURE RANGES	Max.	psi	2000	1500	1000
		bar	160	103	69
	Rated	psi	2000	1500	1000
		bar	138	103	69
	Min.	psi	400	400	500
		bar	28	28	35
OPERATING SPEEDS**	Min. rpm	1400			
	Rated rpm	1750			
	Max. rpm	2400	2400	1800	
POWER INPUT AT RATED FLOW & PRESSURE (1750 rpm)	hp	20	19	20	
	kW	15	14	15	
MAXIMUM POWER INPUT TO DRIVE SHAFT	hp	40			
	kW	30			
SUCTION PRESSURE	Max.	psi	20	10	
		bar	1.40	0.7	
	Min.	in./Hg	7	7	5
	Specific Gravity < 1	bar	-0.25	-0.25	-0.17
	Min.	in./Hg	5	5	4
	Specific Gravity > 1	bar	-0.17	-0.17	-0.13
FLUID VELOCITY	Max.	ft./sec.	5		
		m/sec.	1.5		
CASE CRAN NOMINAL FLOW AT DEADHEAD PRESSURE	1000 psi	gpm	0.5	0.5	0.7
	69 bar	lpm	1.9	1.9	2.7
	1500 psi	gpm	0.8		
	103 bar	lpm	3.0		
	2000 psi	gpm	1.2	1.2	~
	138 bar	lpm	4.5	4.5	~
MAXIMUM CASE PRESSURE	psi	10			
	bar	0.7			
WEIGHT	lbs.	61			
	kg	27.6			

### NOTES:

\* Volumetric displacement is measured displacement at 91.5 psi (6.3 bar) and rated rpm. Volumetric displacement varies with both pressure and rpm. Flow rates at any rpm other than the rated rpm may be approximated as follows:

$$Q_2 = Q_1 (N-142)/1667 \text{ where } Q_1 = \text{Flow (gpm) at rated rpm at 91.5 psi (6.3 bar).}$$

$$Q_2 = \text{Flow (gpm) at N rpm.}$$

N = rpm at which Q<sub>2</sub> is to be determined.

\*\* When operating above 1500 psi (103 bar), it is recommended that a direct-acting differential relief valve be used at the pump to relieve pressure spikes and surges.

**PVR15-20B** - Maximum rpm at full displacement - 2250 rpm. For higher rpms up to 2400 rpm, pump displacement must be reduced to limit flow to 25 gpm (95 lpm) maximum.

## PRESSURE and VOLUME ADJUSTMENT SENSITIVITY

		PUMP SIZE			
		15B	20B	30B	
PRESSURE ADJUSTMENT	Press Change/Turn	psi (bar)	230 (16.0)	310 (21.0)	230 (16.0)
	Max. Torque	ft./lbs. (kg/m)	15.0 (2.0)	15.0 (2.0)	9.0 (1.2)
VOLUME ADJUSTMENT	Flow Change/Turn	gpm (lpm)	10.0 (38.0)	10.0 (38.0)	13.0 (49.0)
	Min. Flow Adjust.	gpm (lpm)	2.0 (7.5)	2.0 (7.5)	3.5 (13.0)
	Max. Torque	ft./lbs. (kg/m)	21.0 (3.0)	29.0 (4.0)	21.0 (3.0)

**CAUTION:** Turning the Maximum Volume Control in too far can force the cam ring over-center, causing damage.



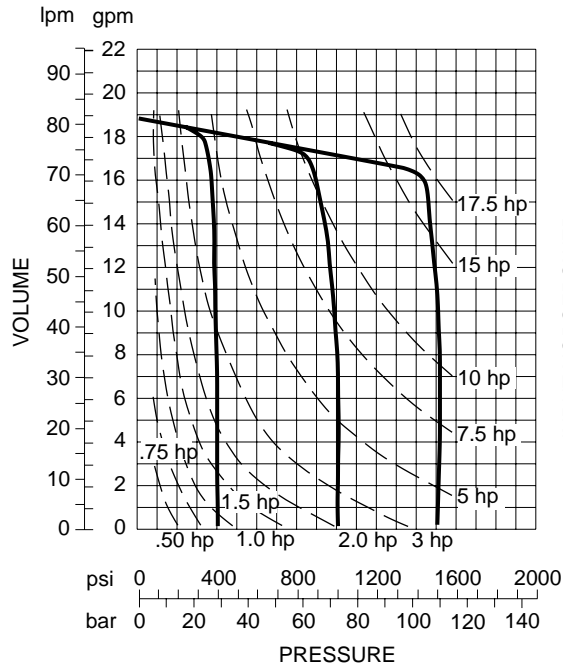
# PVR15 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED

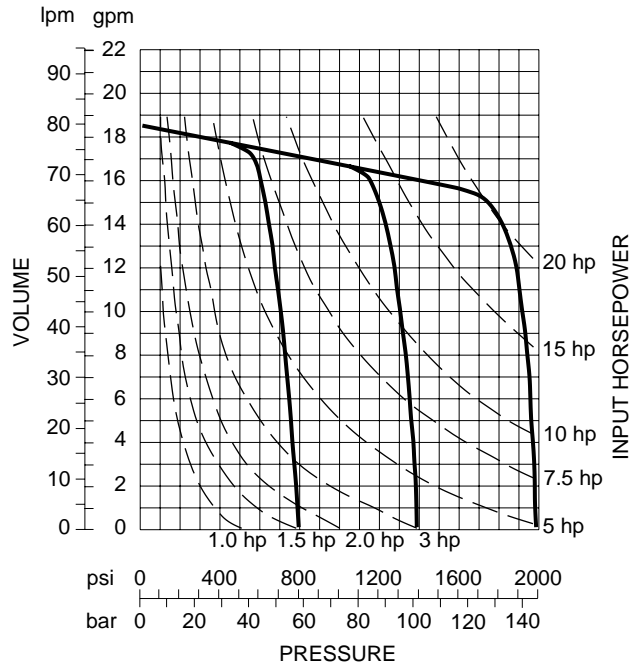
**NOTE:** Typical performance curves are based on ISO VG46 oil at 120° F. (49° C.). Above 400 SUS (84 CS), add 2% hp/100 SUS.

**NOTE:** Deadhead horsepower is read from curves at 0 gpm flow and pressure compensator setting psi.

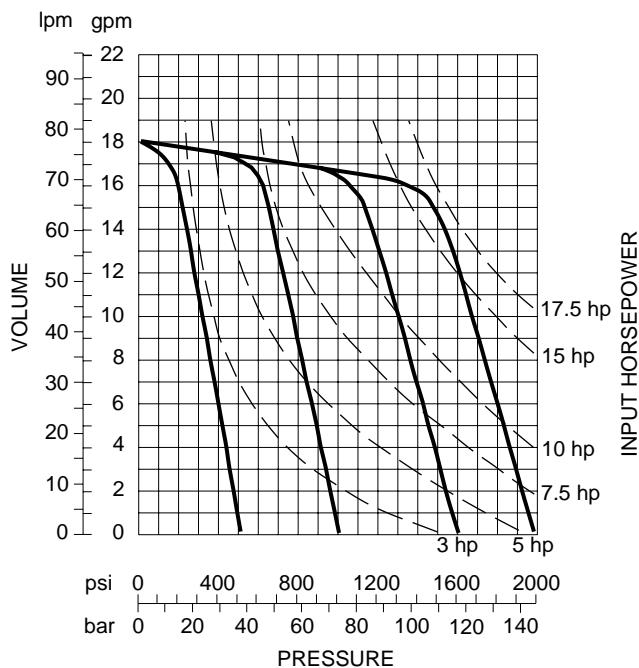
**15B15 (at 1750 rpm)**



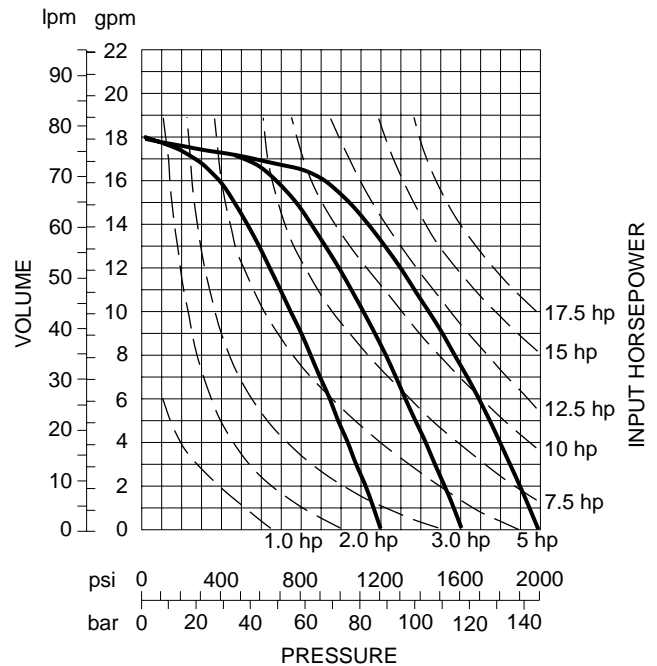
**15B20 (at 1750 rpm)**



**15B3L (at 1750 rpm)**



**15B5L (at 1750 rpm)**



# PVR15 SERIES VANE PUMPS

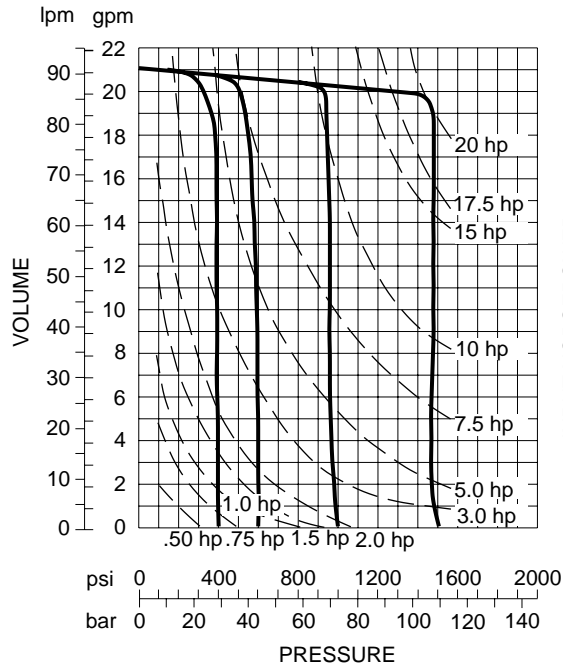
VARIABLE DISPLACEMENT PRESSURE COMPENSATED



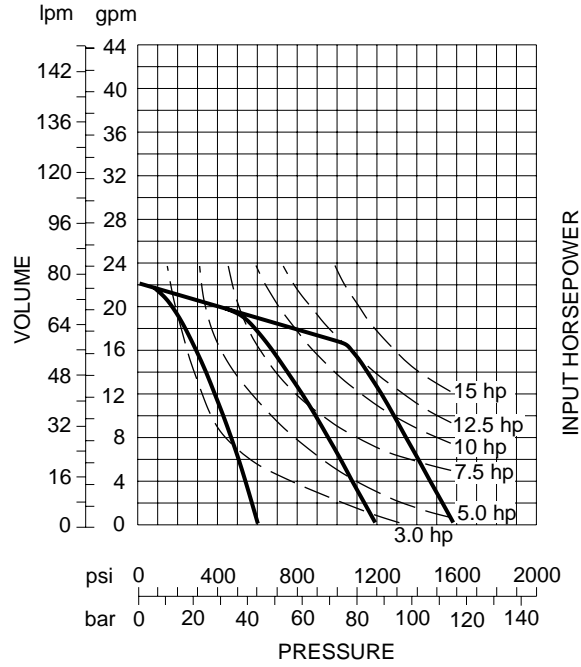
**NOTE:** Typical performance curves are based on ISO VG46 oil at 120° F. (49° C.). Above 400 SUS (84 CS), add 2% hp/100 SUS.

**NOTE:** Deadhead horsepower is read from curves at 0 gpm flow and pressure compensator setting psi.

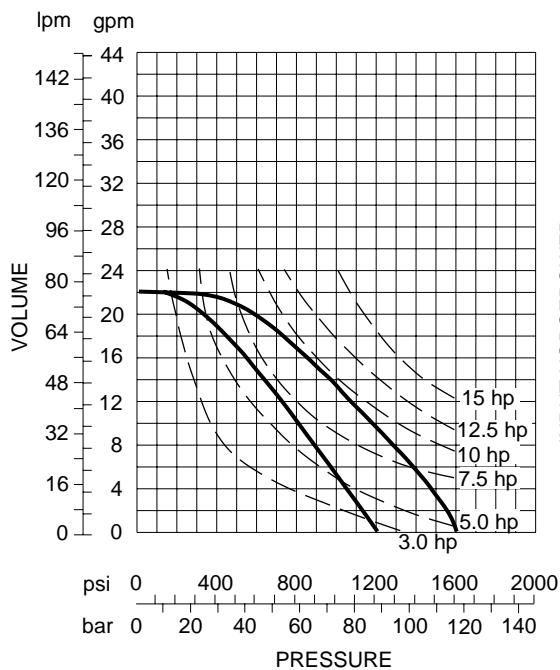
**20B15 (at 1750 rpm)**



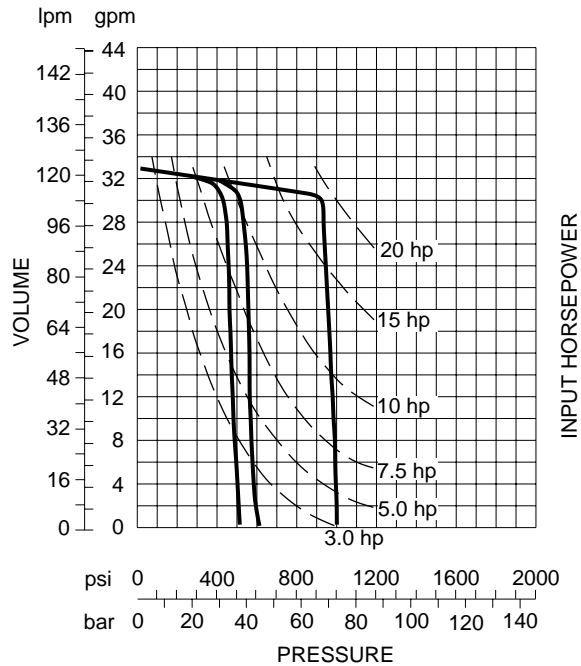
**20B3L (at 1750 rpm)**



**20B4L (at 1750 rpm)**



**30B10 (at 1750 rpm)**





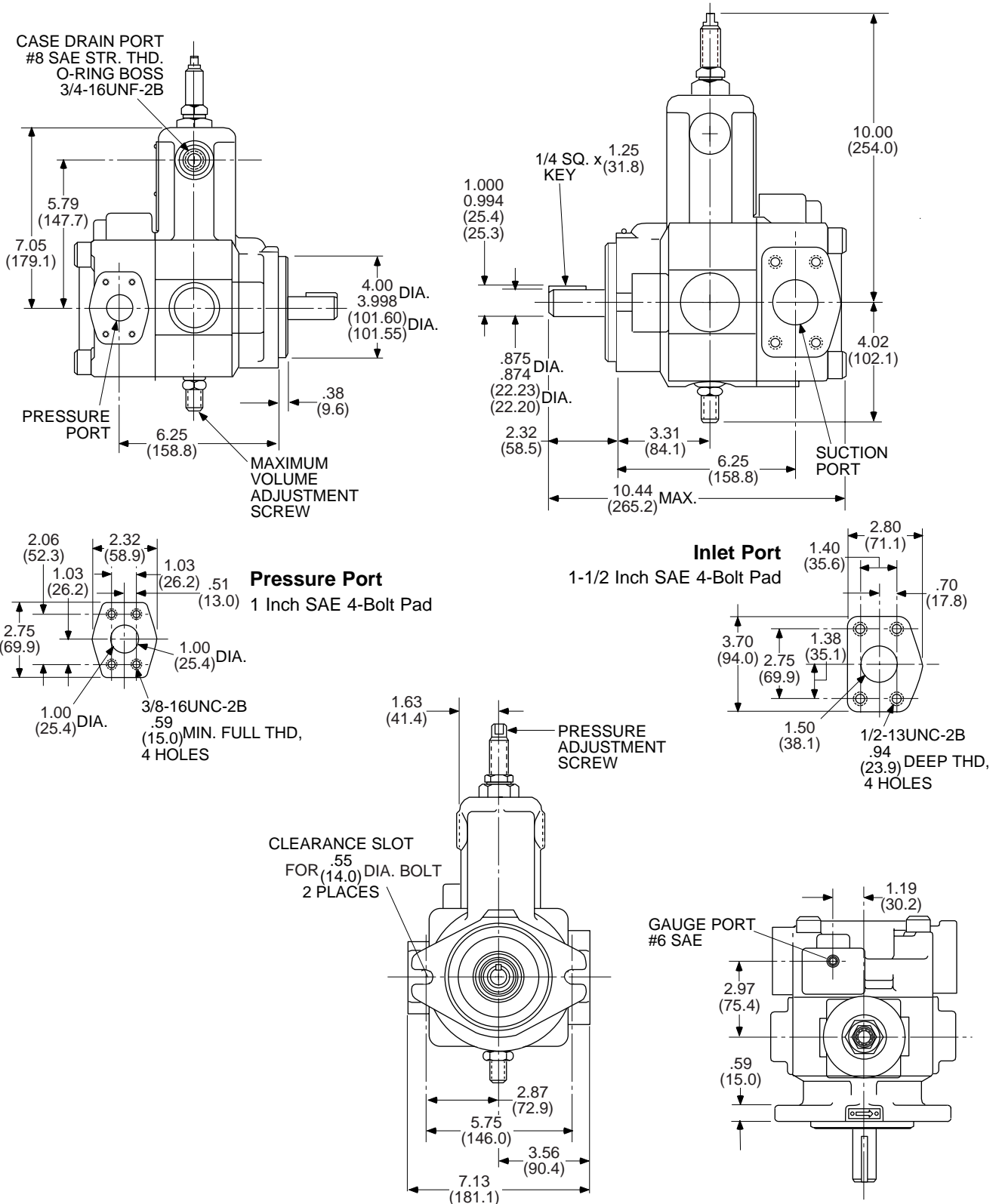
# PVR15 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED

## PUMP DIMENSIONS

Flange Mounted - Code RF

Dimensions shown in: Inches  
(millimeters)



# PVR15 SERIES VANE PUMPS

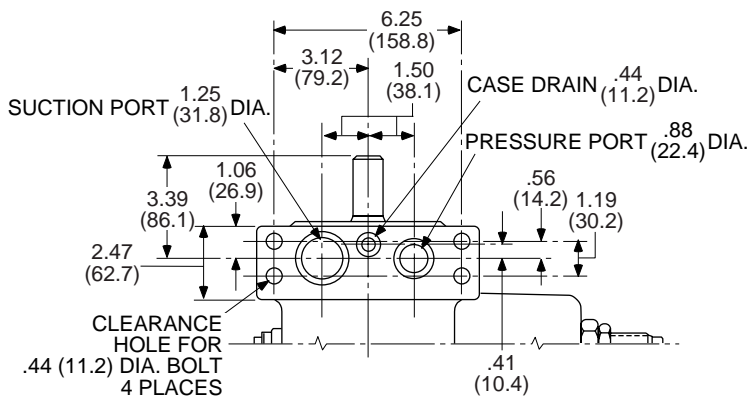
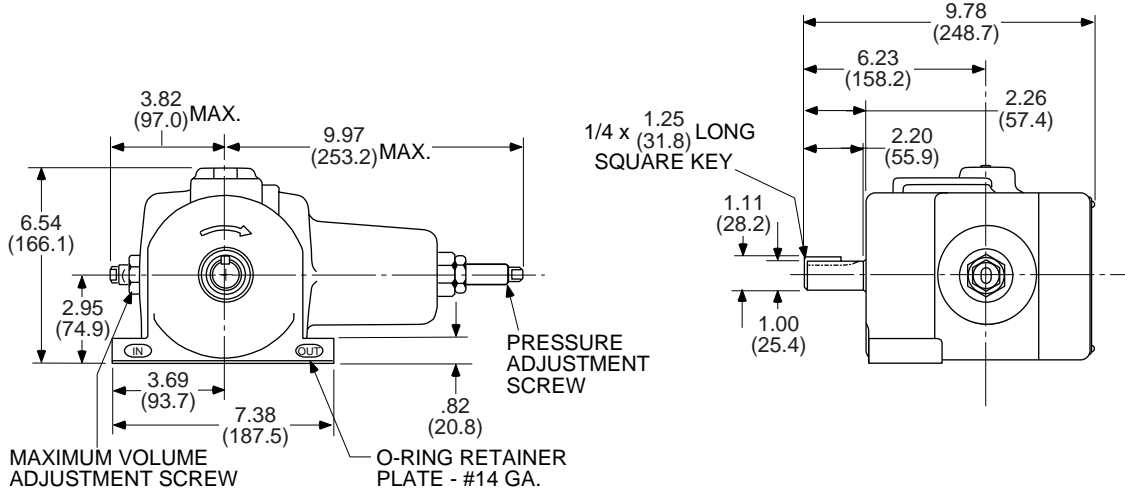
VARIABLE DISPLACEMENT PRESSURE COMPENSATED



## PUMP DIMENSIONS

Manifold Mounted - Code RM

Dimensions shown in: Inches  
(millimeters)



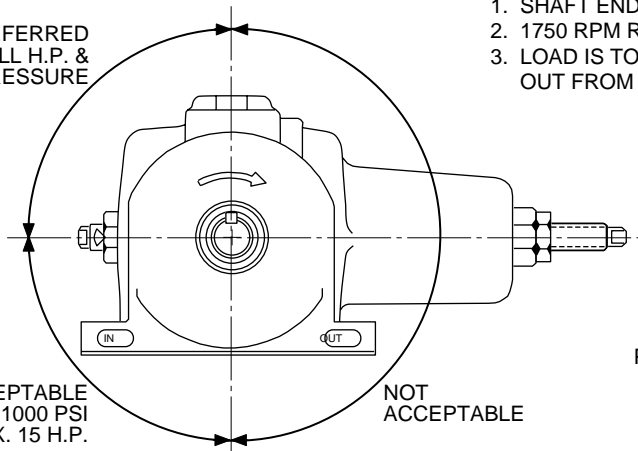
## SIDE LOAD DRIVES

i.e. Belt, Chain, Gear for Flange or Manifold Mounted

### NOTES:

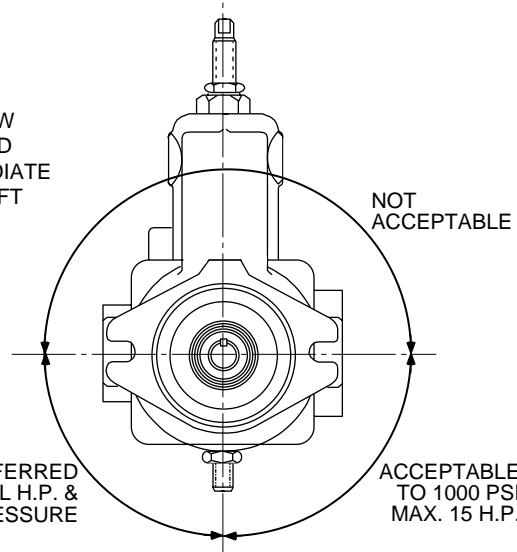
1. SHAFT END VIEW
2. 1750 RPM RATED
3. LOAD IS TO RADIATE OUT FROM SHAFT

PREFERRED  
FULL H.P. &  
PRESSURE



NOT  
ACCEPTABLE

PREFERRED  
FULL H.P. &  
PRESSURE



NOT  
ACCEPTABLE

ACCEPTABLE  
TO 1000 PSI  
MAX. 15 H.P.



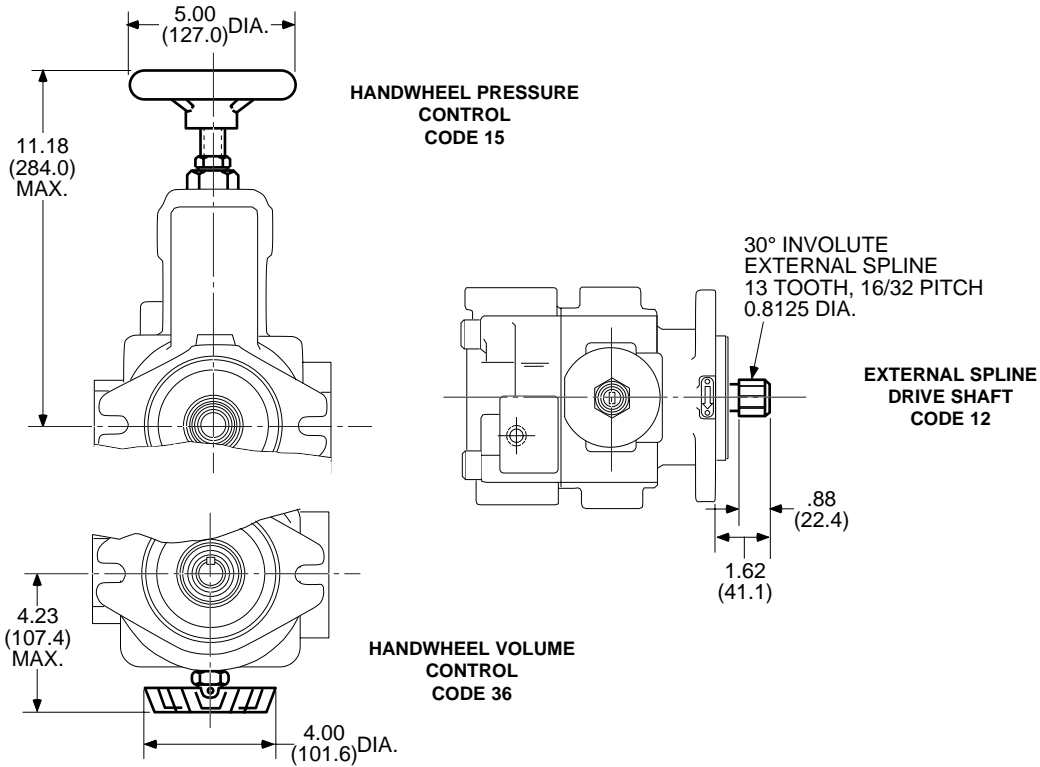
# PVR15 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED

## MECHANICAL OPTIONS

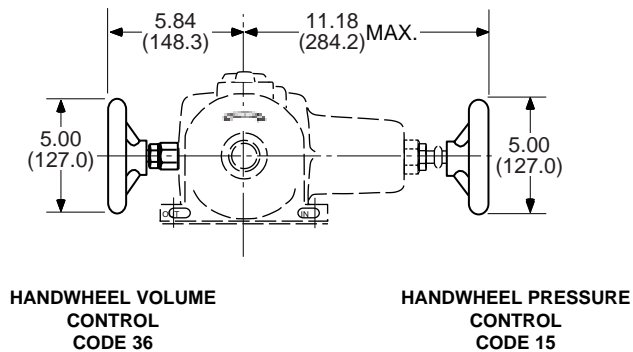
Flange Mounted Pump - Code RF

Dimensions shown in: Inches  
(millimeters)



## MECHANICAL OPTIONS

Manifold Mounted Pump - Code RM



# PVR15 SERIES VANE PUMPS

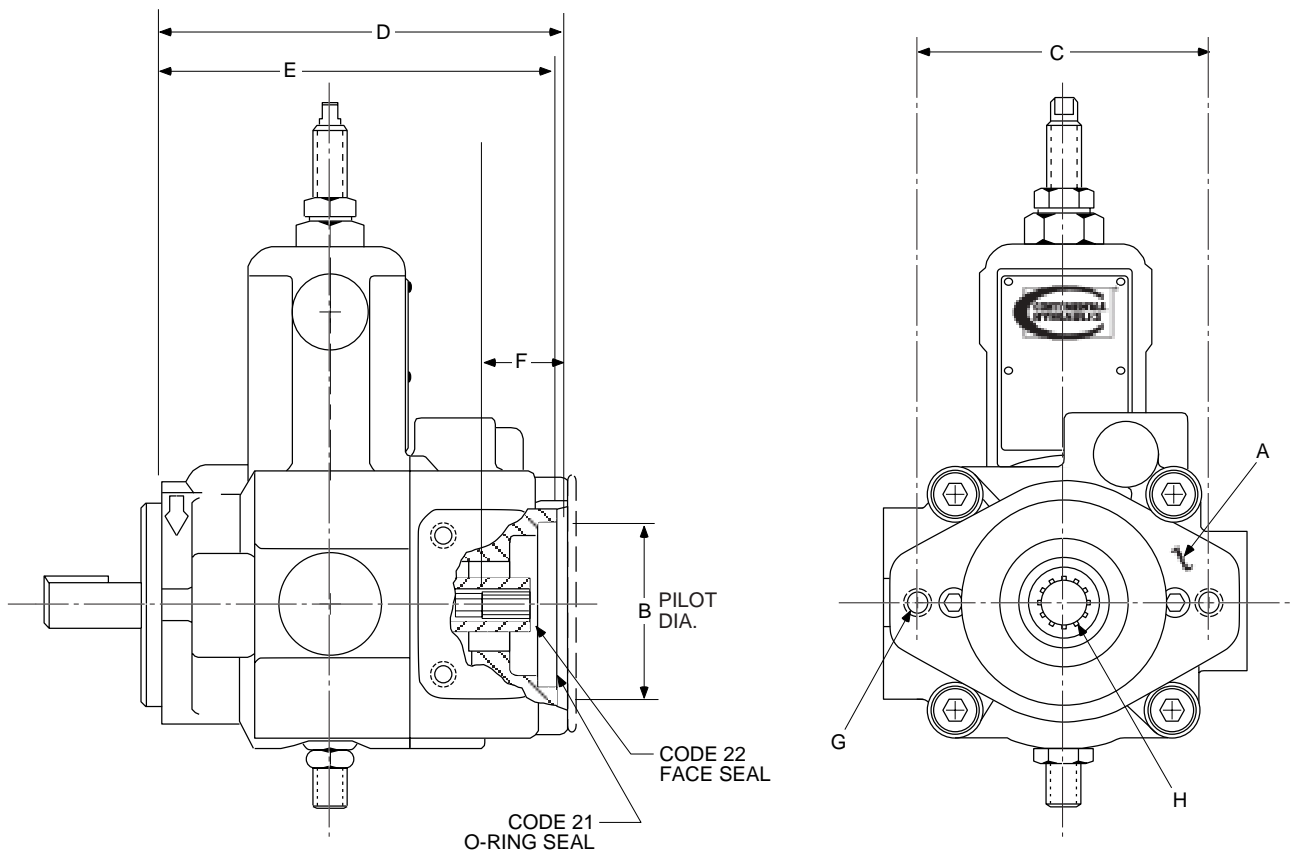
VARIABLE DISPLACEMENT PRESSURE COMPENSATED



## CODES 21 and 22 - TANDEM OPTIONS

Flange Mounted Pump - Code RF Only

Dual Pump Operation Without Additional Mounting  
Flanges and Couplings



CODE	SAE 2-BOLT MOUNTING PAD	DIMENSIONS						Inches (millimeters)	30° INVOLUTE INTERNAL SPLINE 16/32 PITCH	MAXIMUM H.P. RATING OF INTERNAL SPLINE*
		A	B	C	D	E	F	G		
21	"A" Flange	3.25 (82.6)	4.18 (106.2)	8.12 (206.2)	7.80 (198.1)	1.27 (32.3)	3/8-16 UNC x .56 (14.3)	9 Tooth 0.5625 Dia.	8.5	
22	"B" Flange	4.00 (101.8)	5.75 (146.1)	9.06 (230.1)	9.06 (230.1)	1.79 (45.5)	1/2-13 UNC x 1.00 (25.4)	13 Tooth 0.8125 Dia.	30	
31	"A" Flange	3.25 (82.6)	4.18 (106.2)	8.90 (226.1)	8.90 (226.1)	1.63 (41.4)	3/8-16 UNC x .56 (14.3)	13 Tooth 0.8125 Dia.	30	

\*Rating at 1750 rpm



# PVR15 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED

## ORDERING INFORMATION

Flange Mounted - Code RF

**PVR15** – SELECT ONE – SELECT ONE – **RF** – SELECT ONE – **5** SELECT AS REQUIRED SELECT AS REQUIRED SELECT AS REQUIRED – DESIGN LETTER

**SIZE**

CODE	FLOW @ 1750 rpm
15B	15 gpm
20B	20 gpm
30B	30 gpm

**PRESSURE**

CODE	PRESSURE RANGE
15	400 - 1500 psi
20	800 - 2000 psi
3L	500 - 2000 psi
5L	1200 - 2000 psi
15	400 - 1500 psi
3L	600 - 1600 psi
4L	1200 - 1600 psi
10	500 - 1000 psi

**MECHANICAL OPTIONS**

CODE	DESCRIPTION
OMIT	KEYED SHAFT (STANDARD)
12	EXTERNAL SPLINE SHAFT
15	HANDWHEEL PRESSURE CONTROL
16	50 HZ OPERATION
21*	"A" FLANGE TANDEM PUMP MOUNTING
22*	"B" FLANGE TANDEM PUMP MOUNTING
31	"A" - "B" FLANGE TANDEM PUMP MOUNTING (HPV-6)
36	HANDWHEEL VOLUME CONTROL

**\*NOTE:** Consult the factory for a Code 12 pump with:

- Code 21 or 22 on a 30B pump
- Code 22 on all pumps

**INTEGRAL OPERATOR**

CODE	DESCRIPTION
OMIT	NO OPTIONS

**\*NOTE:** For electrical options, see the PVR Control Options Section later in this catalog.

**SEALS**

CODE	TYPE
O	BUNA-N
P	VITON

**CONTROL OPTIONS**

CODE	DESCRIPTION
OMIT	NO OPTIONS
8	DUAL PRESSURE RATE CONTROL VALVE
9	DUAL VOLUME RATE CONTROL VALVE
17	DUAL PRESSURE REMOTE OPERATED
18	DUAL PRESSURE WITH INTEGRAL OPERATOR
24	DUAL VOLUME WITH INTEGRAL OPERATOR
25	DUAL PRESSURE/ DUAL VOLUME WITH INTEGRAL OPERATOR
2400	DUAL VOLUME REMOTE OPERATED
2500	DUAL PRESSURE/ DUAL VOLUME REMOTE OPERATED

**\*NOTE:** For detail information, see the PVR Control Options Section later in this catalog.

TYPICAL ORDERING CODE:  
**PVR15-15B15-RF-0-521-F**

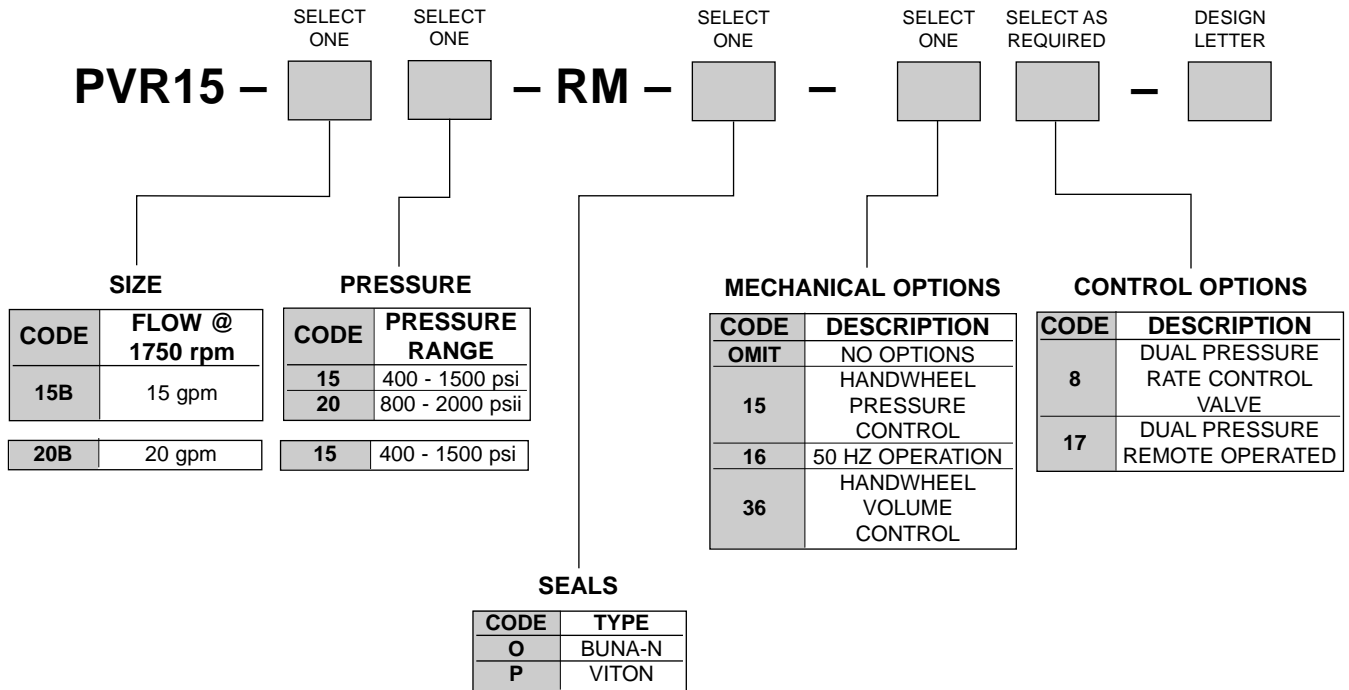
# PVR15 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED



## ORDERING INFORMATION

Manifold Mounted - Code RM



TYPICAL ORDERING CODE:  
**PVR15-15B15-RM-0-17-J**

**For more information please contact:**



**2 Swallow Drive, Alsager, Stoke on Trent, Staffs, ST7 2GJ**

You can telephone or fax us in the UK on:

**Tel: 08450 043440**

**Fax: 01270 876281**



**Web: <http://www.continentalhydraulics.co.uk>**