

# PVR-6 SERIES VANE PUMPS

VARIABLE DISPLACEMENT, PRESSURE COMPENSATED



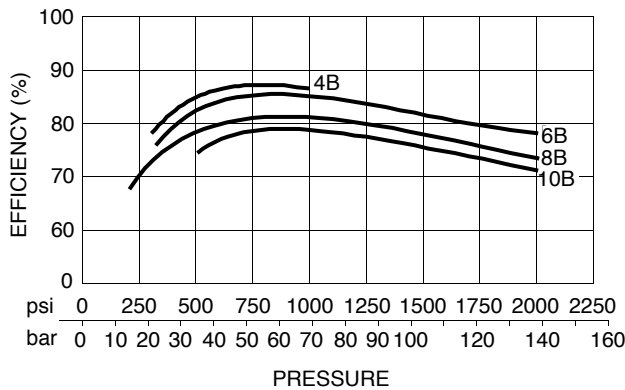
Flanged Mounted  
SAE "A" 2-Bolt

## TYPICAL PERFORMANCE SPECIFICATIONS

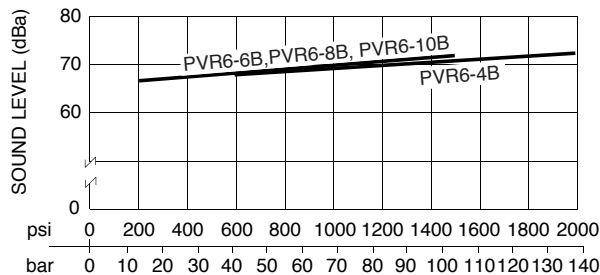
		PUMP SIZE					
		4B	6B	8B	10B		
VOLUMETRIC DISPLACEMENT*	cu. in./rev.	0.7	0.9	1.2	1.4		
	ml/rev.	11.5	14.8	19.7	23.1		
PUMP DELIVERY AT 1750 RPM*	91.5 psi	gpm	5.2	7	9	11	
	6.3 bar	lpm	19.7	26.5	34	41	
	rated pressure	gpm	4	6	8	10	
COMPENSATED PRESSURE RANGES	Max.	psi	2000	2000	2000	1000	
		bar	138	138	138	69	
	Rated	psi	2000	2000	2000	1000	
		bar	138	138	138	69	
	Min.	psi	500	300	200	300	
		bar	35	20	14	20	
OPERATING SPEEDS**	Min. rpm	800			800		
	Rated rpm	1750			1750		
	Max. rpm	3600			1800		
POWER INPUT AT RATED FLOW & PRESSURE (1750 rpm)	hp	7	9	11	8		
	kW	5.2	6.7	8.2	5.9		
SUCTION	PRESSURE	Max.	psi		20	10	
		bar			1.4	0.70	
	Min.	in./Hg		7			
	Specific Grav. < 1		bar				-0.25
	Min.	in./Hg				5	
Specific Grav. > 1		bar				-0.17	
CASE DRAIN	FLUID VELOCITY	Max.	ft./sec.		5		
		m/sec.			1.5		
NOMINAL FLOW AT DEADHEAD PRESSURE	Max.	cipm	31	31	37		
	Pressure	mlpm	500	500	600		
	Min.	cipm	10	10	24		
MAXIMUM CASE PRESSURE	Pressure	mlpm	170	170	390		
		psi			10		
WEIGHT		bar			0.7		
		lbs.			20		
		kg			9		

## OVERALL EFFICIENCY

1750 rpm at Full Displacement



## TYPICAL SOUND LEVEL @ 1750 rpm



### 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  $Q_2$  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.

**6B** - Maximum rpm at full displacement - 2800 rpm. For higher rpms up to 3600 rpm, pump displacement must be reduced to limit flow to 9.5 gpm (36 lpm) maximum.

**8B** - Maximum rpm at full displacement - 2100 rpm. For higher rpms up to 3600 rpm, pump displacement must be reduced to limit flow to 9.5 gpm (36 lpm) maximum.

**10B** - Maximum rpm at full displacement - 1800 rpm. For higher rpms up to 3600 rpm, pump displacement must be reduced to limit flow to 9.5 gpm (36 lpm) maximum.

## PRESSURE and VOLUME ADJUSTMENT SENSITIVITY

		PUMP SIZE		S 4B	6B	6B	8B	8B	10B	6B	8B
		20	06								
PRESSURE ADJUSTMENT		PRESSURE CODE	20	06	15	06	15	10	20	20	
PRESSURE ADJUSTMENT	Press Change/Turn	psi (bar)	275 (19.0)	200 (13.7)	260 (17.9)	200 (13.7)	260 (17.9)	235 (16.2)	360 (24.9)	250 (17.2)	
	Max. Torque	ft./lbs.(kg/m)	8.0 (1.10)	4.01 (0.55)	6.0 (0.83)	4.0 (0.55)	6.8 (0.83)	5.0 (0.89)	6.0 (0.83)	6.0 (0.83)	
VOLUME ADJUSTMENT	Flow Change/Turn	gpm (lpm)	3.4 (12.9)	4.6 (17.4)	4.6 (17.4)	4.6 (17.4)	4.6 (17.4)	4.6 (17.4)	4.6 (17.4)	4.6 (17.4)	
	Min. Flow Adjust.	gpm (lpm)	1.25 (3.78)	1.25 (3.78)	1.25 (3.78)	1.25 (3.78)	1.25 (3.78)	1.25 (3.78)	1.25 (3.78)	1.25 (3.78)	
	Max. Torque	ft./lbs. (kg/m)	4.0 (0.55)	2.5 (0.34)	2.5 (0.34)	2.5 (0.34)	2.5 (0.34)	1.0 (0.34)	1.0 (0.34)	1.0 (0.34)	

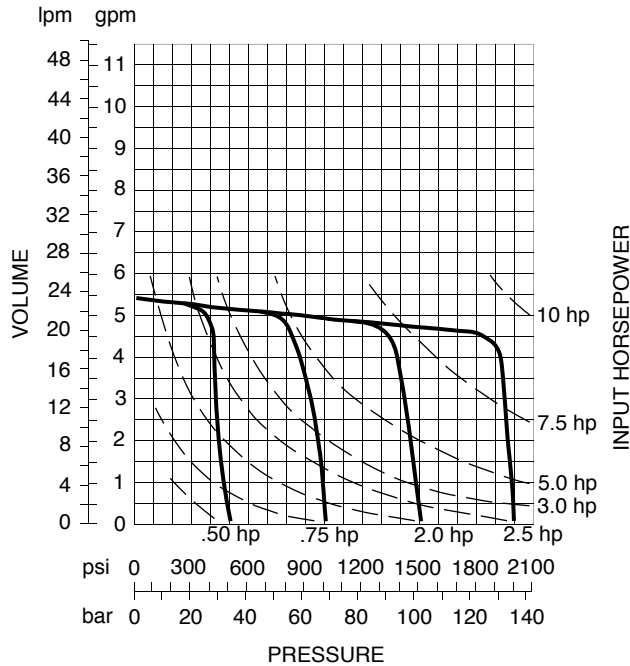
# PVR-6 SERIES VANE PUMPS

VARIABLE DISPLACEMENT, PRESSURE COMPENSATED

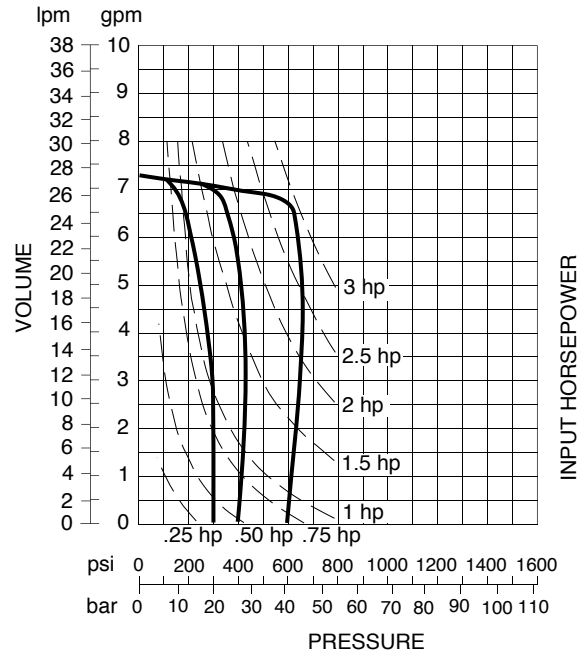
**NOTE:** Typical performance curves are based on ISO VG46 oil at 120° F. (49° C.). Above 400 SUS (84 CS), add 2% hp/100 SUS.

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

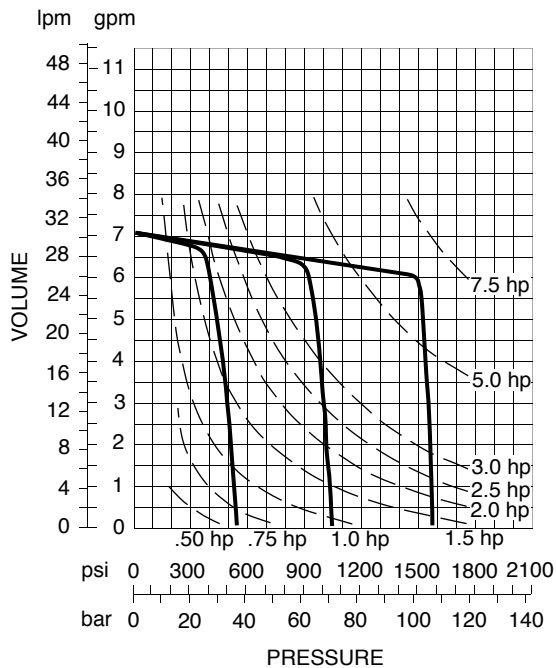
## 4B20 (at 1750 rpm)



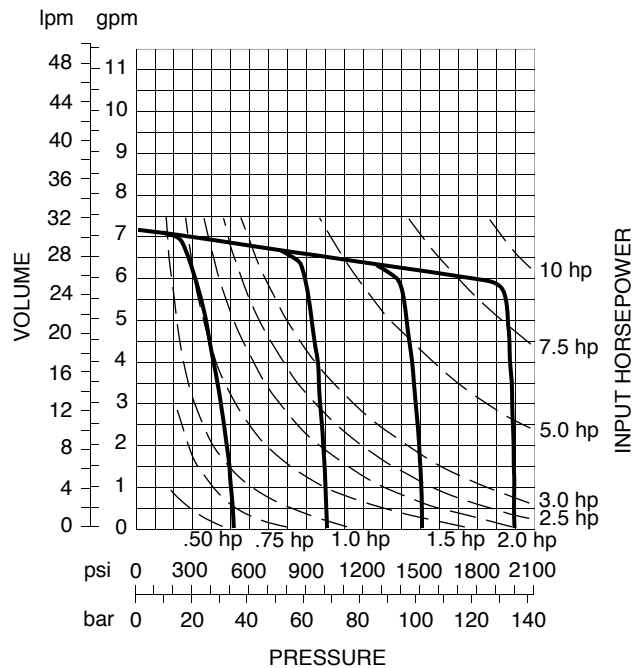
## 6B06 (at 1750 rpm)



## 6B15 (at 1750 rpm)



## 6B20 (at 1750 rpm)



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

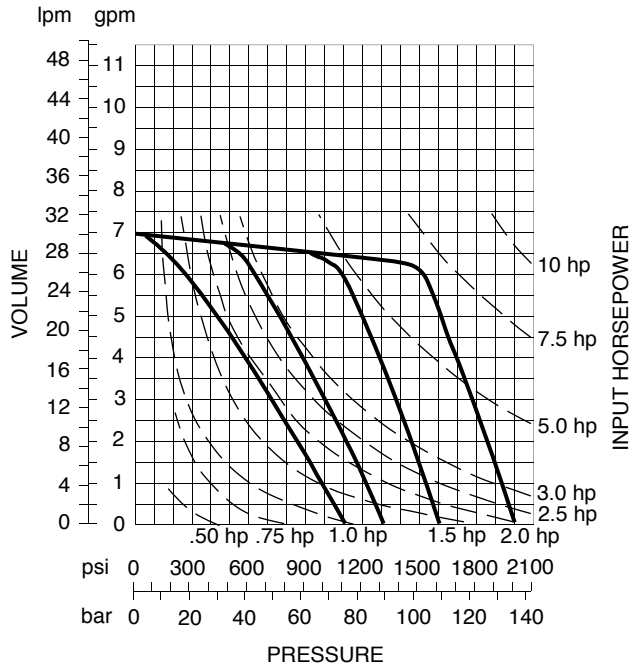
# PVR-6 SERIES VANE PUMPS

VARIABLE DISPLACEMENT, PRESSURE COMPENSATED

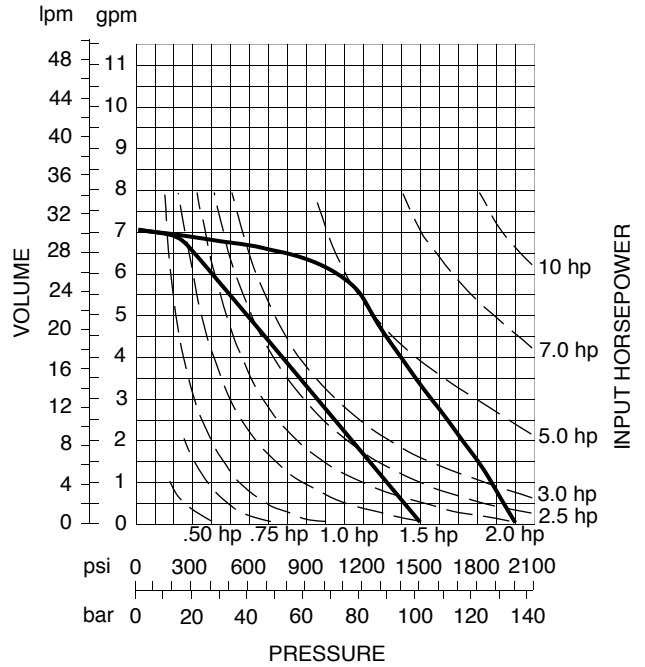
**NOTE:** Typical performance curves are based on ISO VG46 oil at 120° F. (49° C.). Above 400 SUS (84 CS), add 2% hp/100 SUS.

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

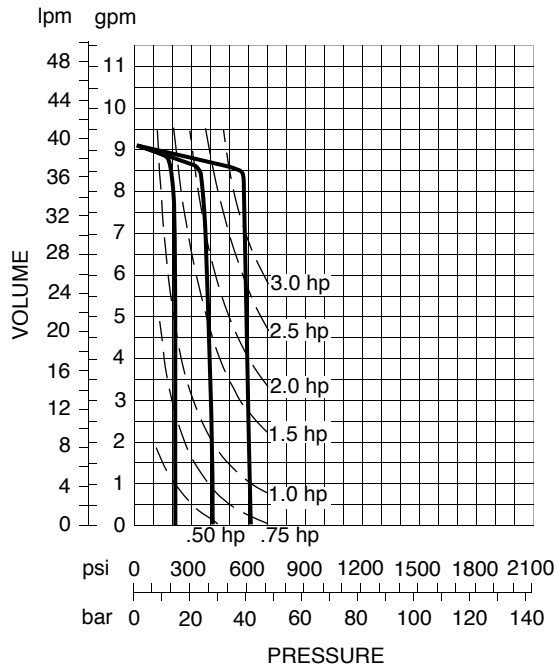
**6B3L (at 1750 rpm)**



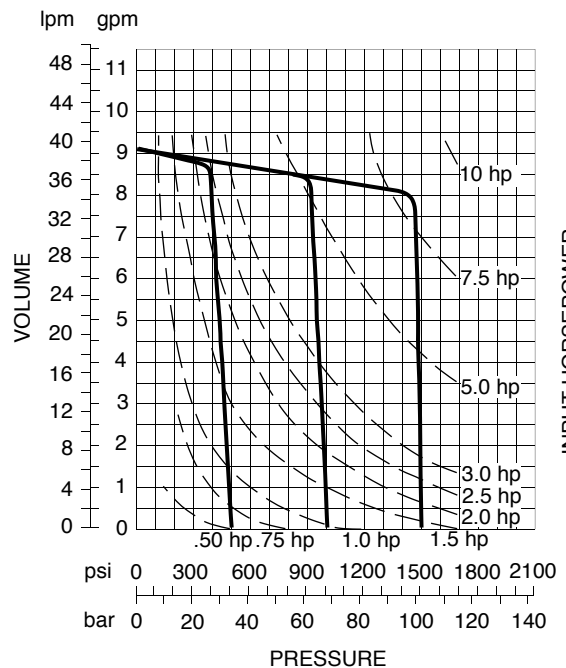
**6B5L (at 1750 rpm)**



**8B06 (at 1750 rpm)**



**8B15 (at 1750 rpm)**



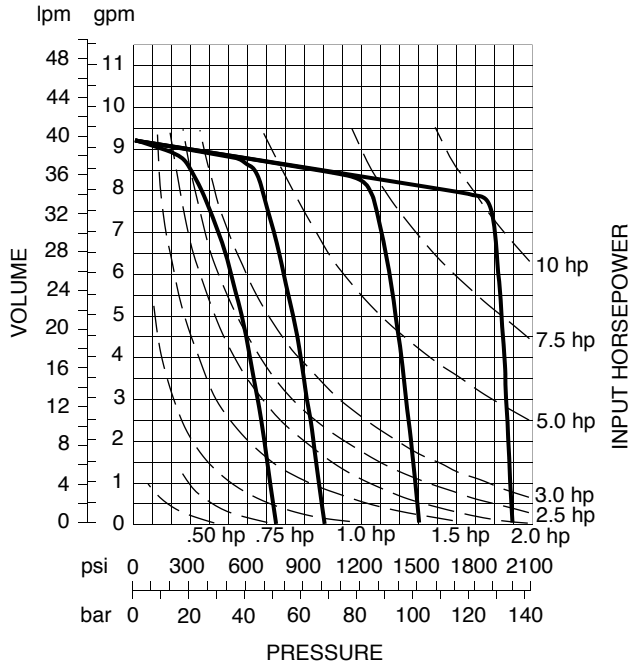
# PVR-6 SERIES VANE PUMPS

## VARIABLE DISPLACEMENT, PRESSURE COMPENSATED

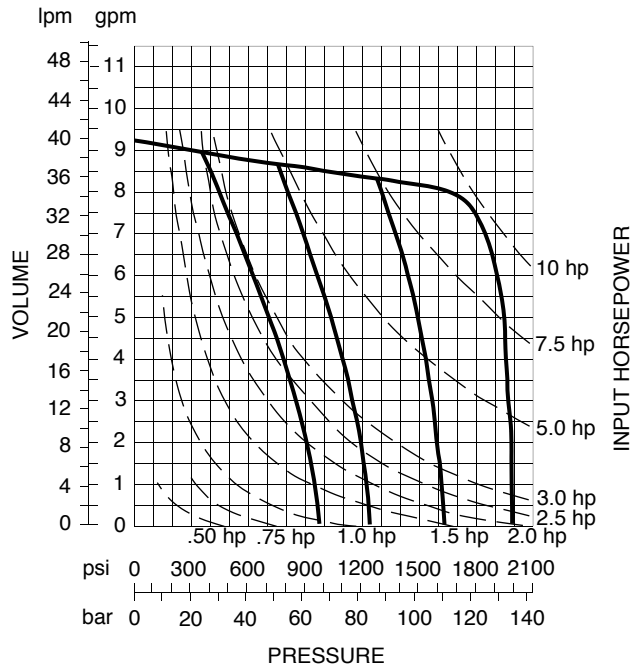
**NOTE:** Typical performance curves are based on ISO VG46 oil at 120° F. (49° C.). Above 400 SUS (84 CS), add 2% hp/100 SUS.

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

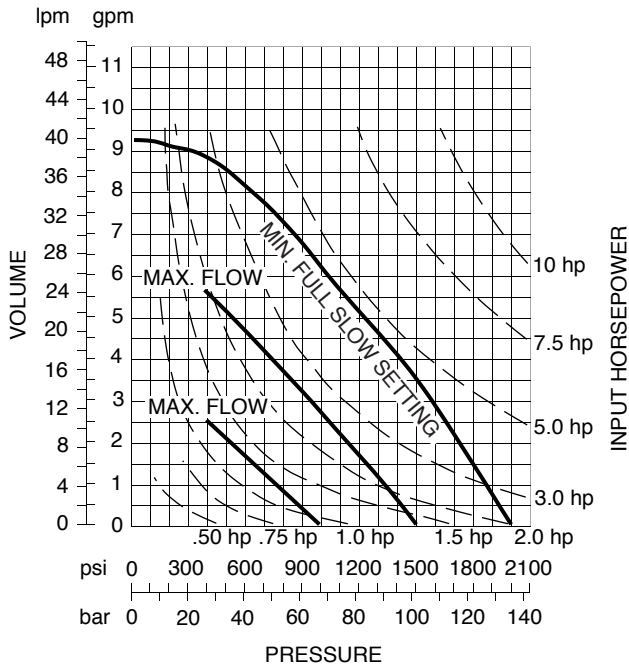
### 8B20 (at 1750 rpm)



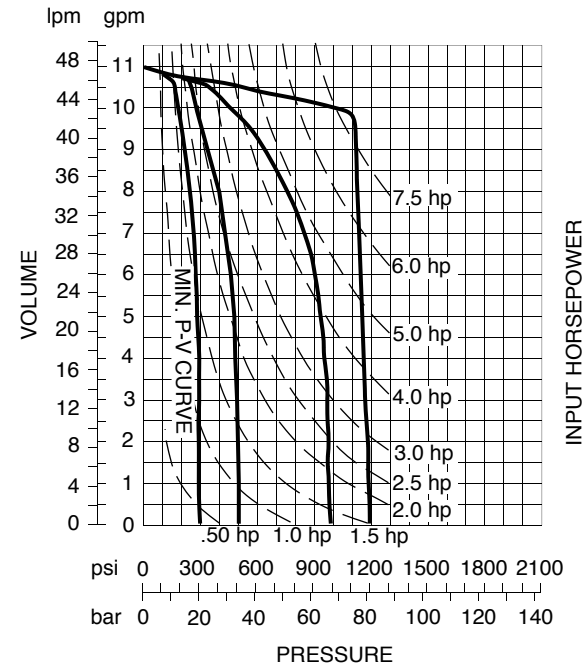
### 8B3L (at 1750 rpm)



### 8B5L (at 1750 rpm)



### 10B10\* (at 1750 rpm)



\* **NOTE:** Not to be used with water, glycol or emulsion fluids.

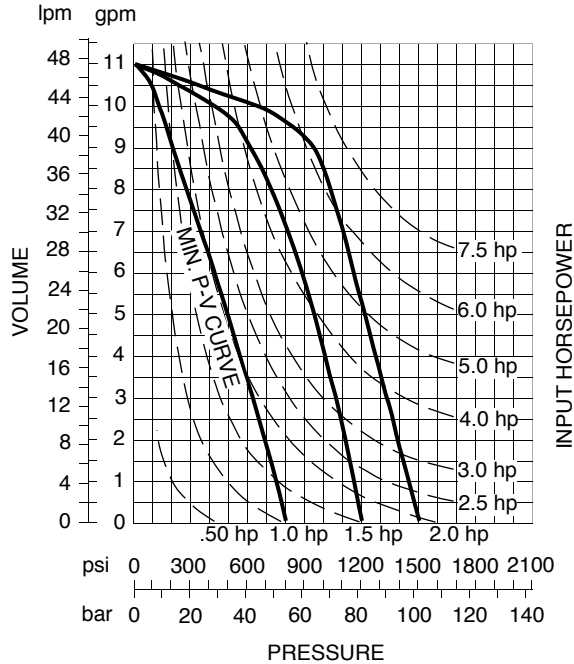
# PVR-6 SERIES VANE PUMPS

VARIABLE DISPLACEMENT, PRESSURE COMPENSATED

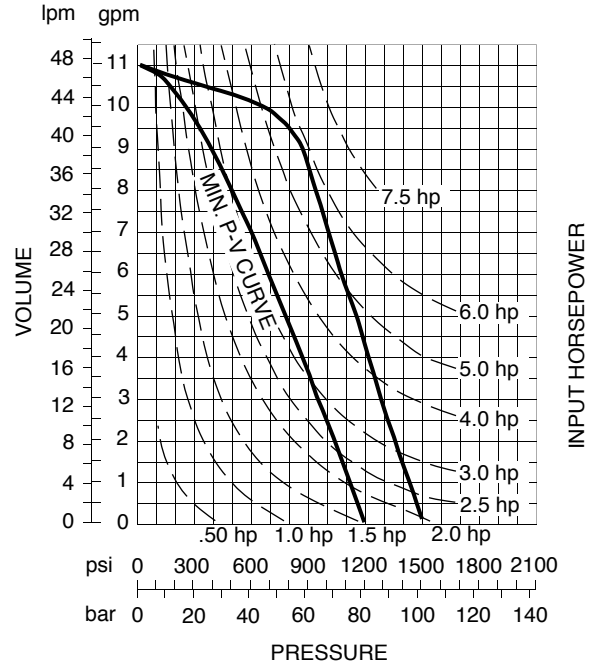
**NOTE:** Typical performance curves are based on ISO VG46 oil at 120° F. (49° C.). Above 400 SUS (84 CS), add 2% hp/100 SUS.

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

## 10B3L (at 1750 rpm)



## 10B5L (at 1750 rpm)

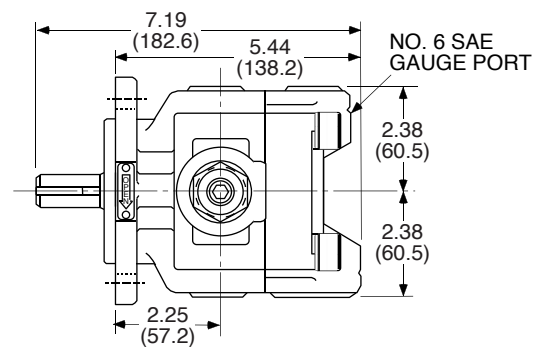
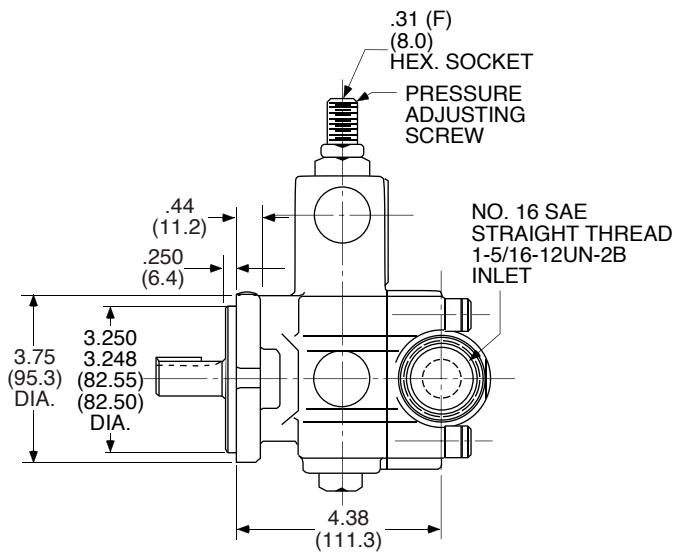
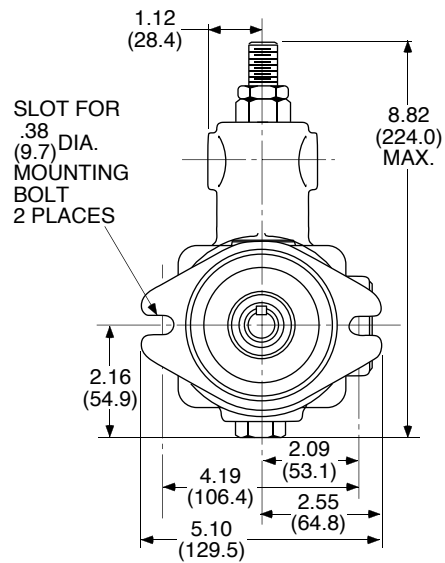
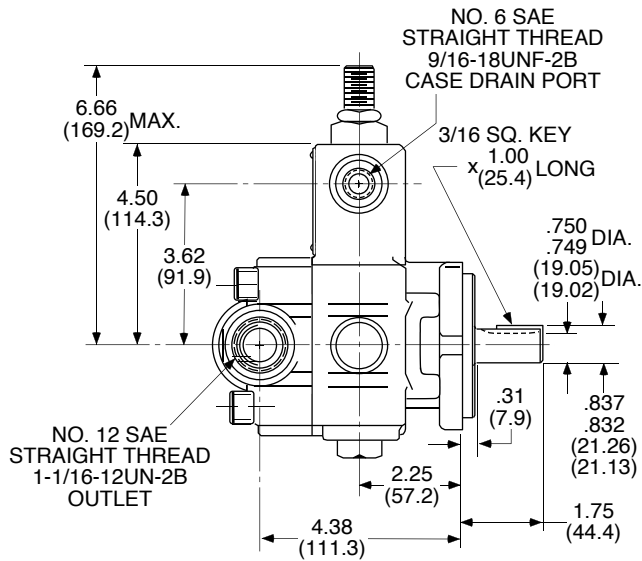


# PVR-6 SERIES VANE PUMPS

VARIABLE DISPLACEMENT, PRESSURE COMPENSATED

## PUMP DIMENSIONS

Dimensions shown in: Inches  
(millimeters)

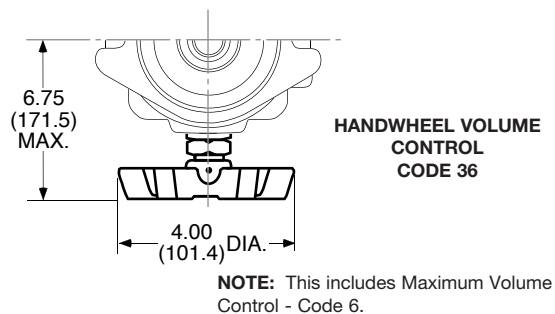
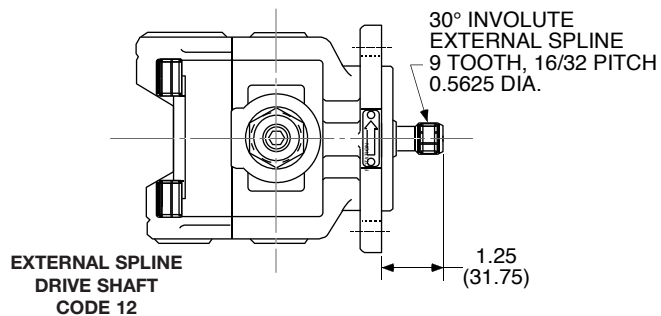
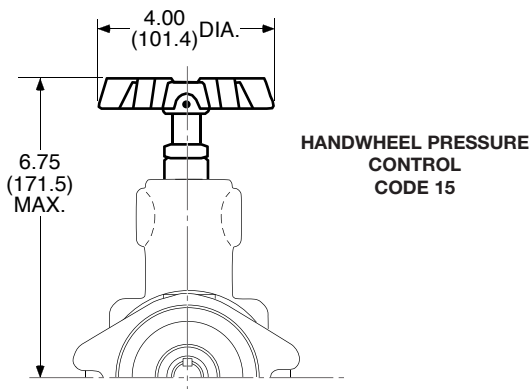
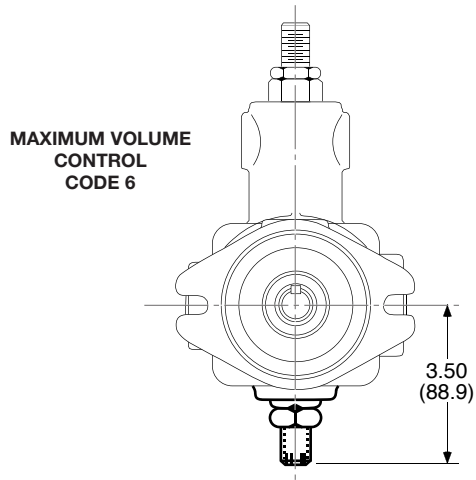


# PVR-6 SERIES VANE PUMPS

VARIABLE DISPLACEMENT, PRESSURE COMPENSATED

## MECHANICAL OPTIONS

Dimensions shown in: Inches  
(millimeters)



# PVR-6 SERIES VANE PUMPS

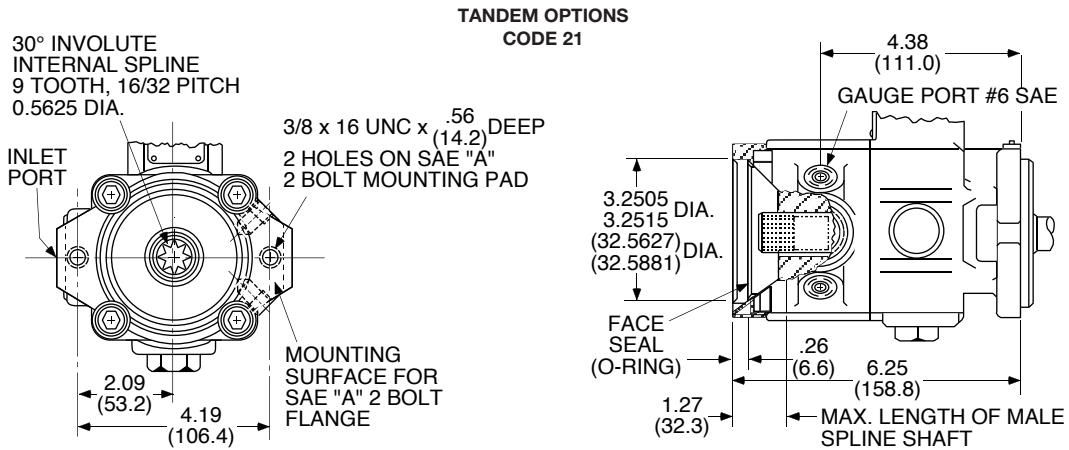
VARIABLE DISPLACEMENT, PRESSURE COMPENSATED

## MECHANICAL OPTIONS

Dual pump operation without additional mounting flanges and couplings.

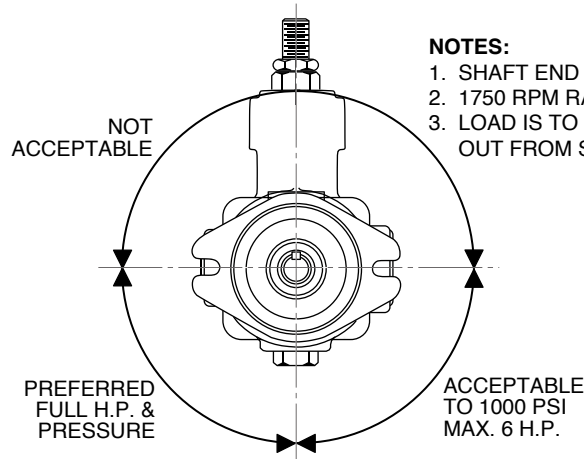
Dimensions shown in: Inches  
(millimeters)

Permits mounting of another PVR6 pump (with Code 12\*) or any SAE "A" -bolt flange mount pump incorporating a 30° involute, 16/32 pitch, 9 tooth external spline drive shaft. Maximum rating of internal spline is 8-1/2 hp at 1750 rpm.



## SIDE LOAD DRIVES

i.e. Belt, Chain, Gear



**NOTES:**

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



# PVR-6 SERIES VANE PUMPS

VARIABLE DISPLACEMENT, PRESSURE COMPENSATED

## ORDERING INFORMATION

Right Hand (CW) Rotation

PVR6 -  SELECT ONE  SELECT ONE - RF -  SELECT ONE -  SELECT ONE -  DESIGN LETTER

**SIZE**

CODE	FLOW @ 1750 rpm
4B	4 gpm
6B	6 gpm
8B	8 gpm
10B*	10 gpm

**PRESSURE**

CODE	COMPENSATING PRESSURE RANGE
20	500 - 2000 psi
06	200 - 600 psi
15	500 - 1500 psi
20	500 - 2000 psi
3L	1100 - 2000 psi
5L	1300 - 2000 psi
06	200 - 600 psi
15	500 - 1500 psi
20	750 - 2000 psi
3L	1000 - 2000 psi
5L	1700 - 2000 psi
10	300 - 1000 psi
3L	800 - 1500 psi
5L	1200 - 1500 psi

**SEALS**

CODE	TYPE
O	BUNA-N
P	VITON

**MECHANICAL OPTIONS**

CODE	DESCRIPTION	AVAILABLE ON:
OMIT	NO OPTIONS	
6	MAXIMUM VOLUME CONTROL	ALL MODELS
12*	EXTERNAL SPLINE SHAFT	
15	HANDWHEEL PRESSURE CONTROL	
21*	"A" FLANGE TANDEM PUMP MOUNTING	6B, 8B, 10B ONLY
36	HANDWHEEL VOLUME CONTROL	ALL MODELS

\*NOTE: Do not use water, glycol or emulsion fluids with the PVR6-10B pump.

\*NOTE: For PVR6-4B Code 21 or 1221, consult the factory for price and delivery.

TYPICAL ORDERING CODE:  
**PVR6-8B15-RF-O-1-H**