



# PVR50 SERIES VANE PUMPS

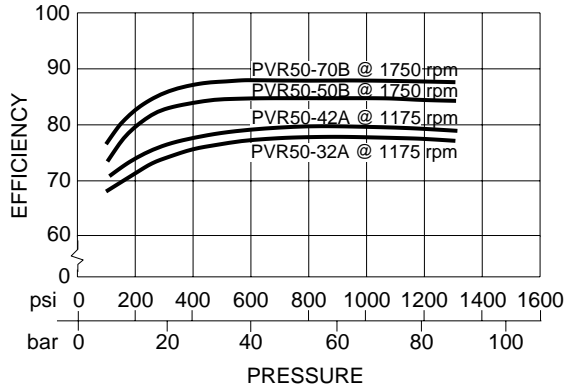
VARIABLE DISPLACEMENT PRESSURE COMPENSATED



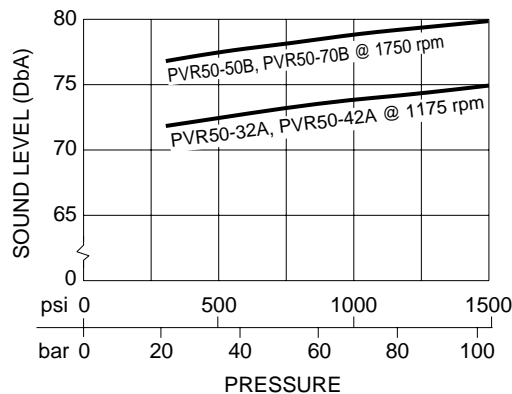
**4-Bolt  
Flange Mounted**

## OVERALL EFFICIENCY

At Maximum Displacement, Fluid Viscosity 130 SUS



## TYPICAL SOUND LEVEL



## TYPICAL PERFORMANCE SPECIFICATIONS

		PUMP SIZE				
		32A15	42A15	50B15	70B15	
VOLUMETRIC DISPLACEMENT*	cu. in./rev.	7.7	9.9	7.7	9.9	
	ml/rev.	126	162	126	162	
PUMP DELIVERY AT 1750 RPM*	91.5 psi	gpm	39	182	223	284
	6.3 bar	lpm	148	26.5	34	41
	rated	gpm	32	42	50	70
	pressure	lpm	121	159	189	265
COMPENSATED PRESSURE RANGES	Max.	psi	1500	1500	1500	1500
		bar	103	103	103	103
	Rated	psi	1500	1500	1500	1500
		bar	103	103	103	103
	Min.	psi	350	400	350	400
		bar	24	27.6	24	27.6
OPERATING SPEEDS**	Min. rpm	800				
	Rated rpm	1200	1200	1800	1800	
	Max. rpm	2200	1500	2200	1800	
POWER INPUT AT RATED FLOW & PRESSURE (1750 rpm)	hp	36	42	50	60	
	kW	27	31	37	45	
MAXIMUM POWER INPUT TO DRIVE SHAFT	Max. hp	100				
	Max. kW	75				
SUCTION PRESSURE	Max.	in./Hg	5		3	
		bar	-0.17		-0.10	
	Min.	psi	20	10	20	10
		Specific Grav. < 1	bar	1.4	.07	1.4
	Min.	in./Hg	5		3	
		Specific Grav. > 1	bar	-0.17		-0.10
FLUID VELOCITY	Max.	ft./sec.	5			
		m/sec.	1.5			
CASE CRACK NOMINAL FLOW AT DEADHEAD PRESSURE	Max.	gpm	3			
		Pressure mlpm	11			
	Min.	gpm	2.5			
		Pressure mlpm	9.5			
MAXIMUM CASE PRESSURE	psi	10				
	bar	0.7				
WEIGHT	lbs.	119				
	kg	54				

### NOTES:

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

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

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

$$N = \text{rpm at which } Q_2 \text{ is to be determined.}$$

\*\* 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.

Maximum rpm at full displacement - 1900 rpm. For higher rpms up to 2000 rpm, pump displacement must be reduced to limit flow to 60 gpm (227 lpm) maximum.

## PRESSURE and VOLUME ADJUSTMENT SENSITIVITY

		PUMP SIZE				
		32A15	42A15	50B15	70B15	
PRESSURE ADJUSTMENT	Press Change/Turn	psi (bar)		115 (8.0)		
	Max. Torque	ft./lbs. (kg/m)		26.5 (13.7)		
VOLUME ADJUSTMENT	Flow Change/Turn	gpm (lpm)		14 (53.0)		
	Min. Flow Adjust.	gpm (lpm)	6.0 (22.7)	8.0 (30.3)	9.5 (36.0)	12.5 (47.0)
		gpm (lpm)	6.0 (22.7)	8.0 (30.3)	9.5 (36.0)	12.5 (47.0)
		Max. Torque	ft./lbs. (kg/m)		28 (3.9)	

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VARIABLE DISPLACEMENT PRESSURE COMPENSATED

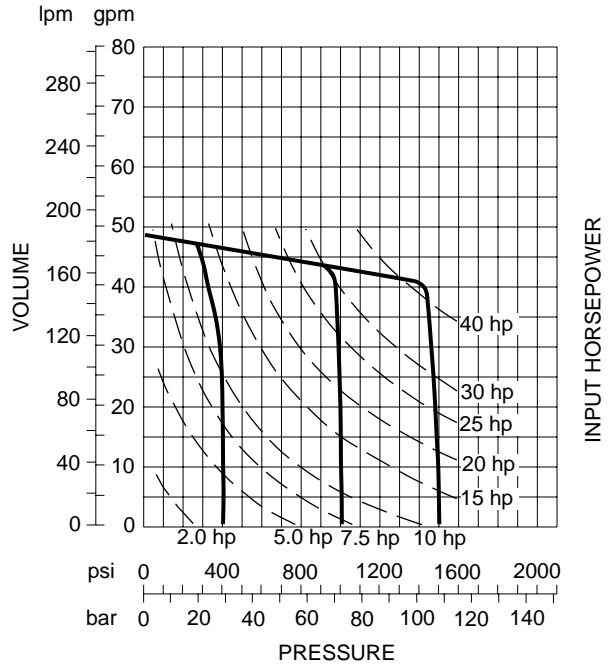
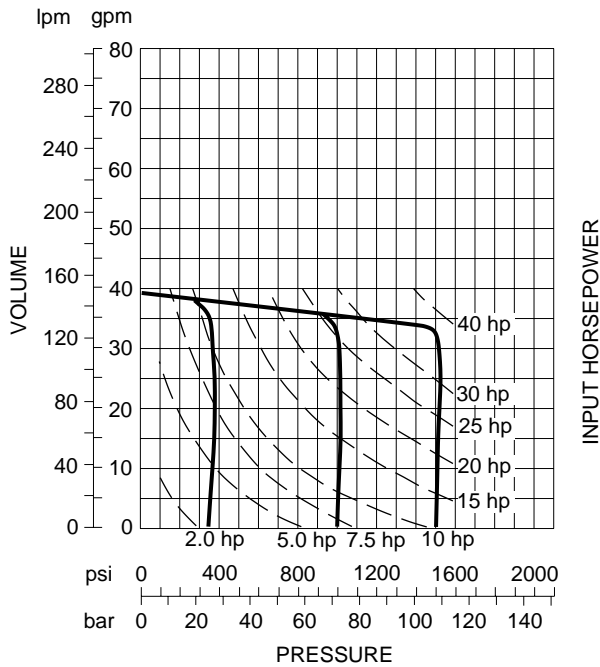


**NOTE:** Typical performance curves are based on ISO VG46 oil at 120° F. (49° C.). Above 400 SUS (84 CS), add 2% hp/100 SUS.

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

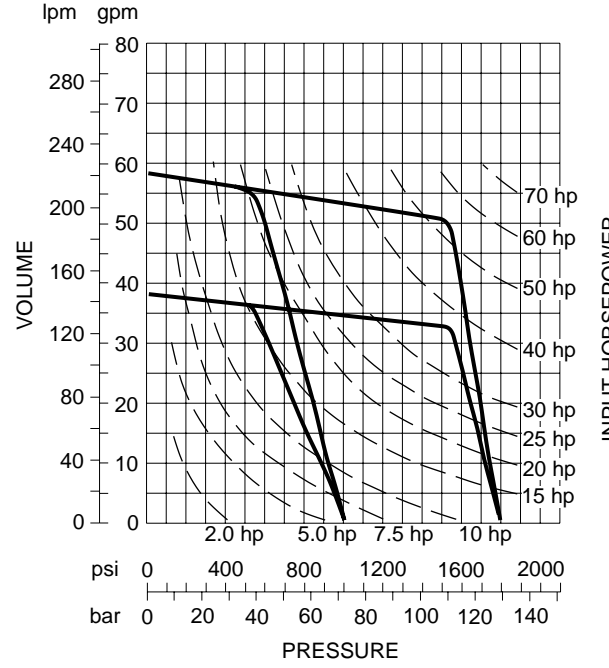
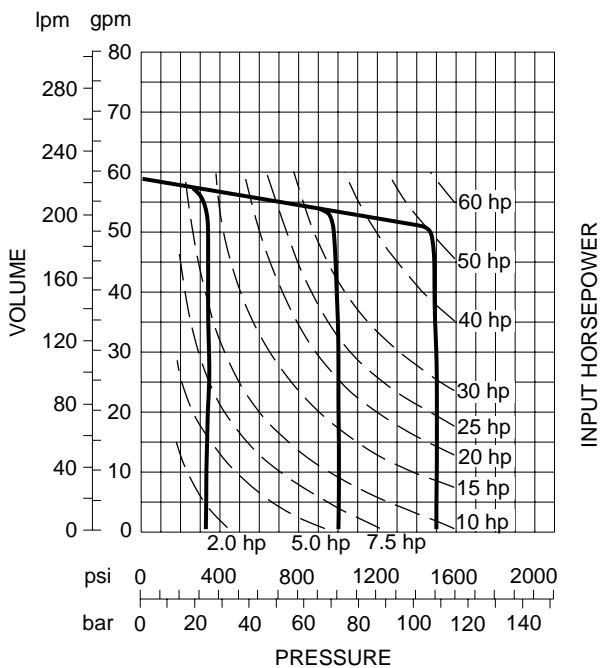
**32A15 (at 1175 rpm)**

**42A15 (at 1175 rpm)**



**50B15 (at 1750 rpm)**

**50B3L (at 1750 rpm)**





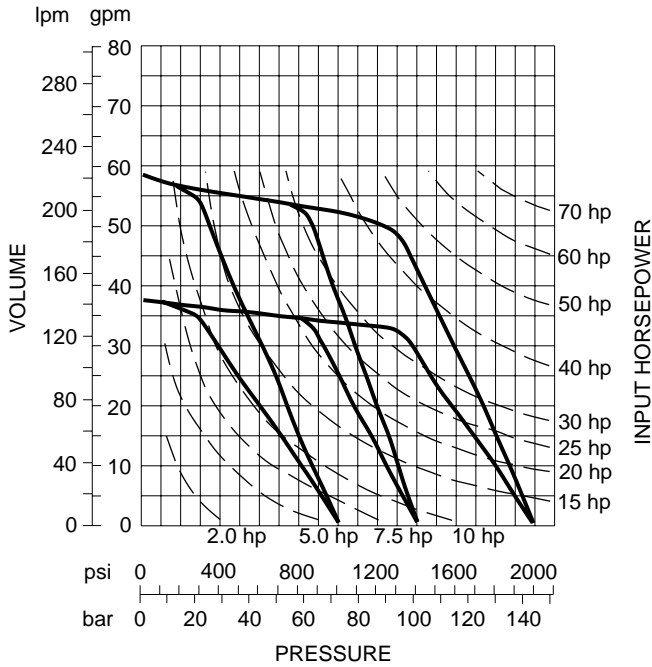
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VARIABLE DISPLACEMENT PRESSURE COMPENSATED

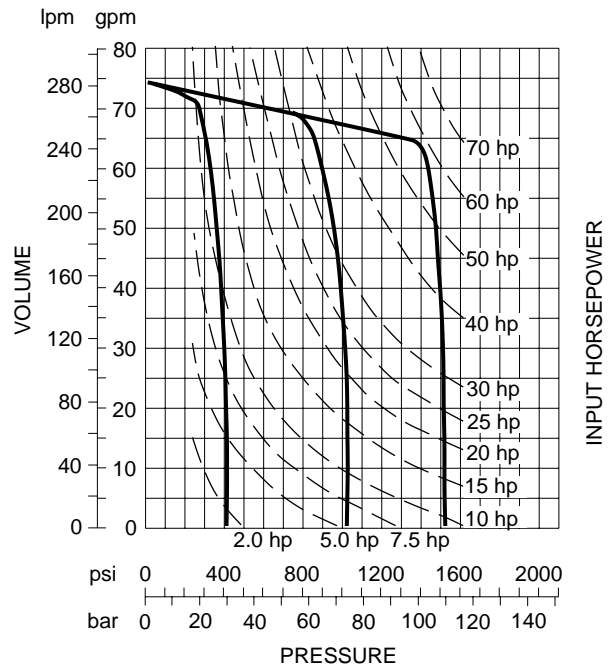
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**NOTE:** Deadhead horsepower is read from curves at 0 gpm flow and pressure compensator setting psi.

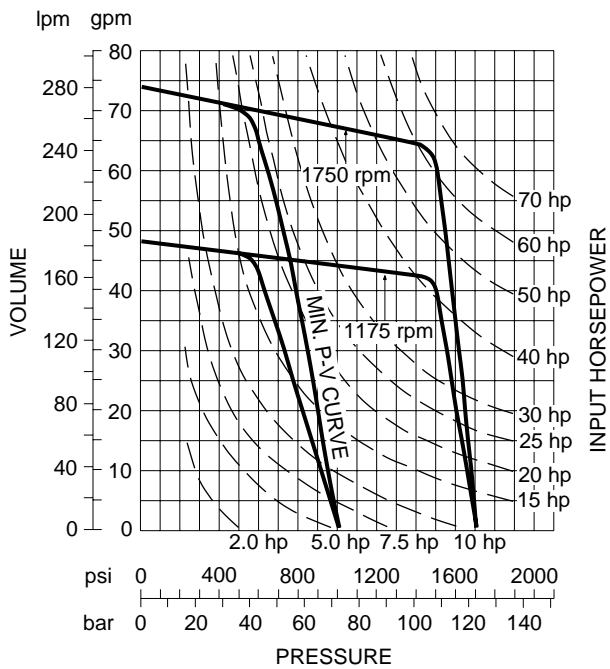
**50B5L (at 1750 rpm)**



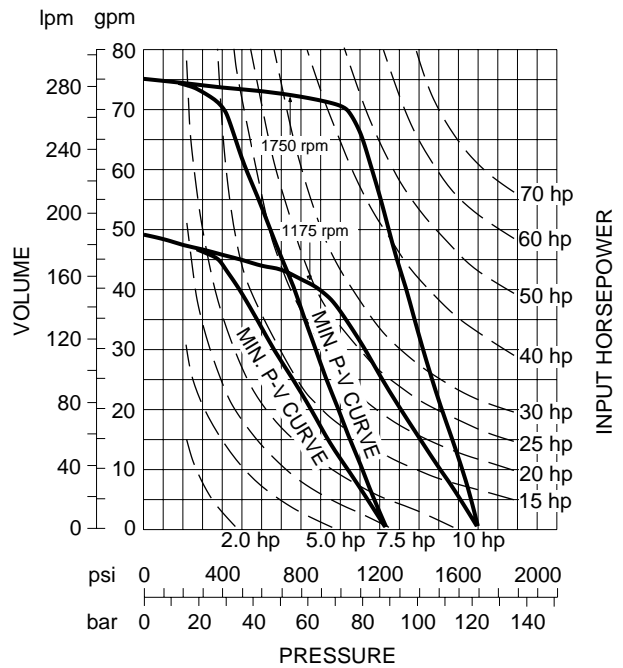
**70B15 (at 1750 rpm)**



**70B3L (at 1750 rpm)**



**70B5L (at 1750 rpm)**



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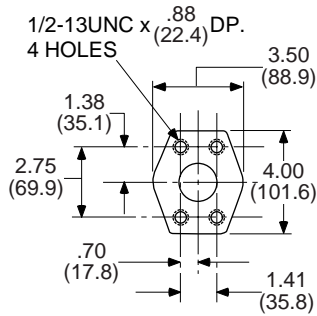
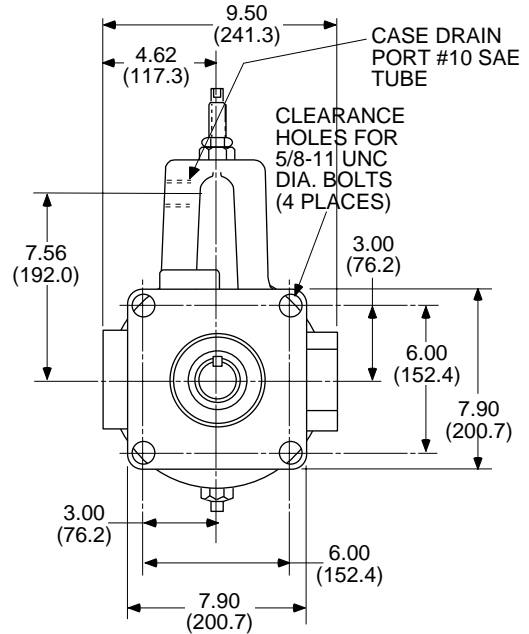
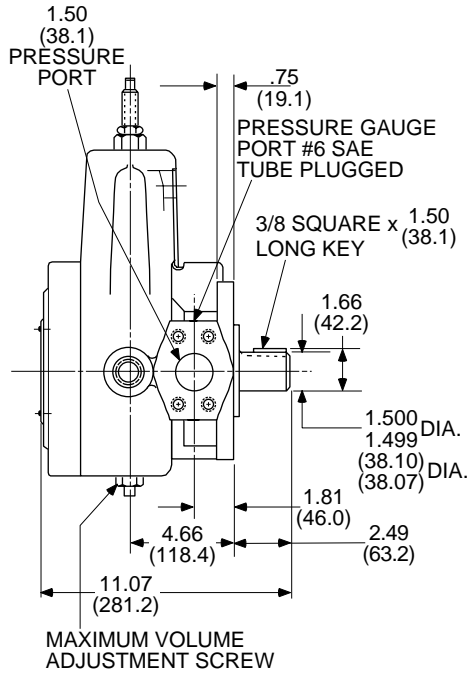
VARIABLE DISPLACEMENT PRESSURE COMPENSATED



## PUMP DIMENSIONS

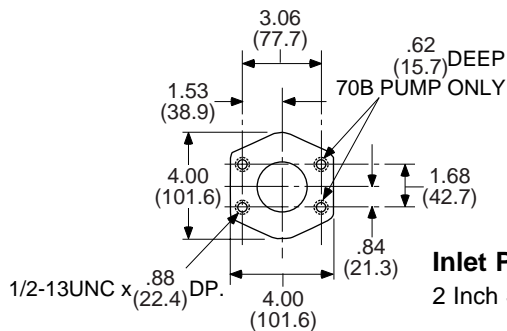
Right Hand Rotation (CW) - Code RF

Dimensions shown in: Inches  
(millimeters)



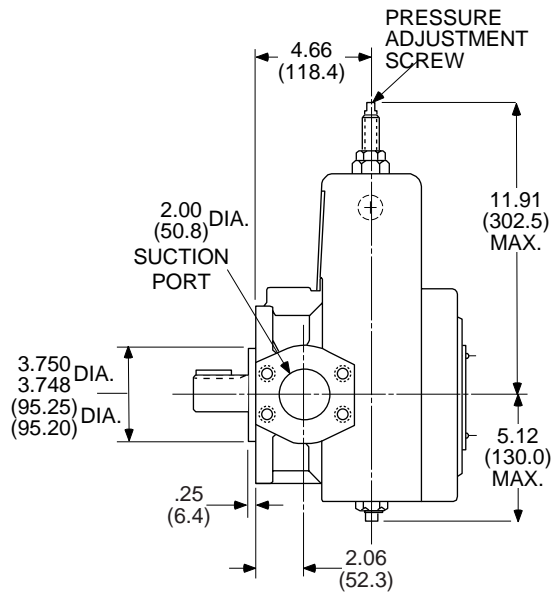
### Pressure Port

1-1/2 Inch SAE 4-Bolt Connection Pad



### Inlet Port

2 Inch SAE 4-Bolt Connection Pad





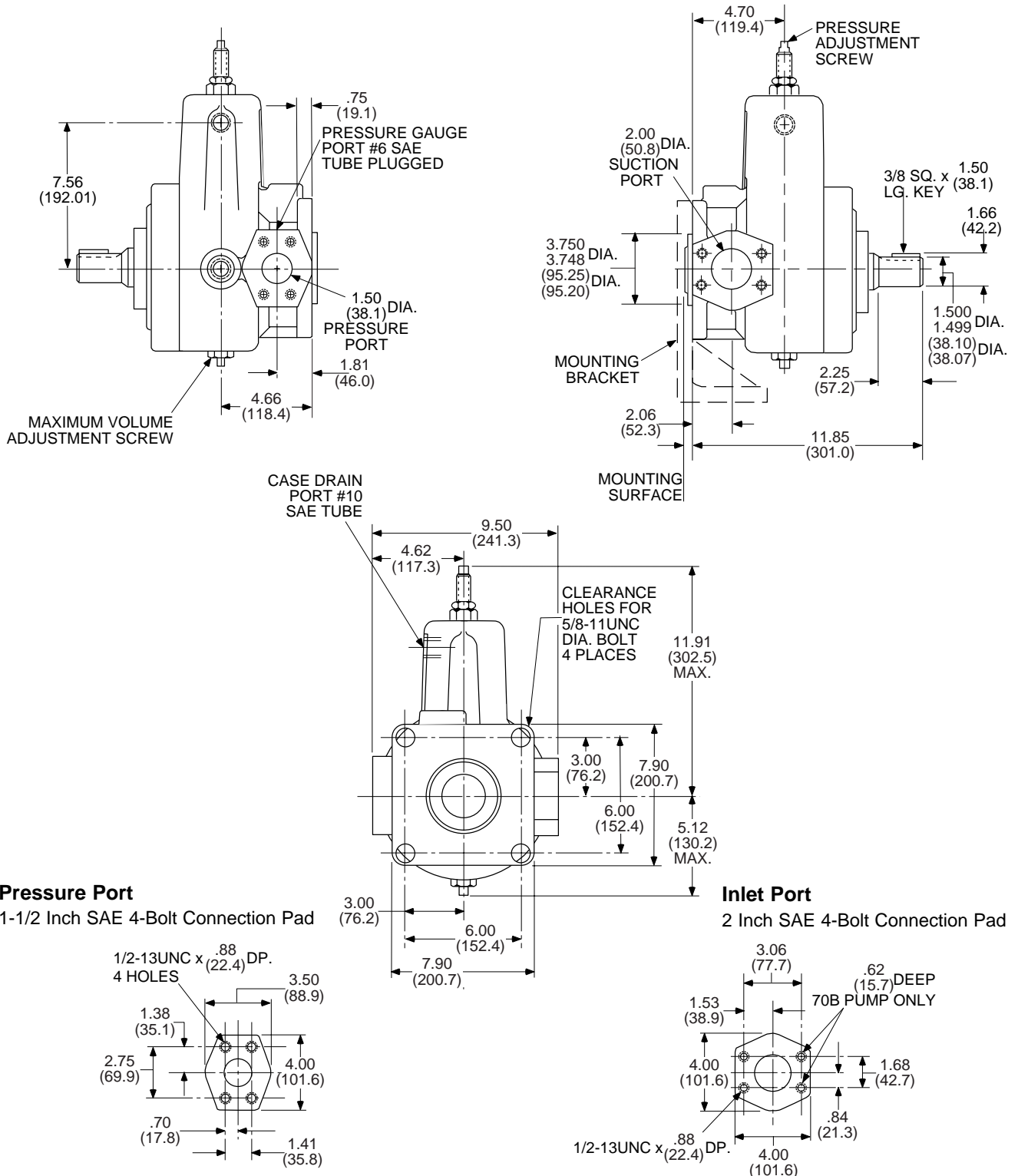
# PVR50 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED

## PUMP DIMENSIONS

Left Hand Rotation (CCW) - Code LF

Dimensions shown in: Inches  
(millimeters)



**NOTE:** Inlet pipe size is 2-1/2" (63.5 mm) dia. minimum; reduce at suction port only.

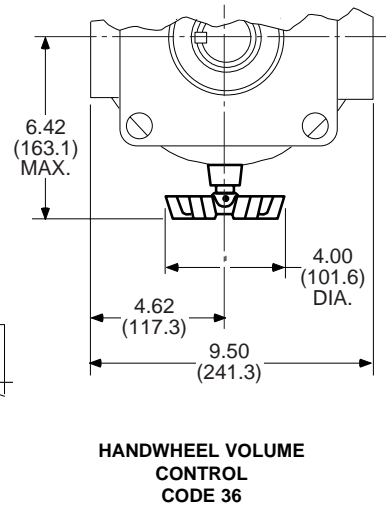
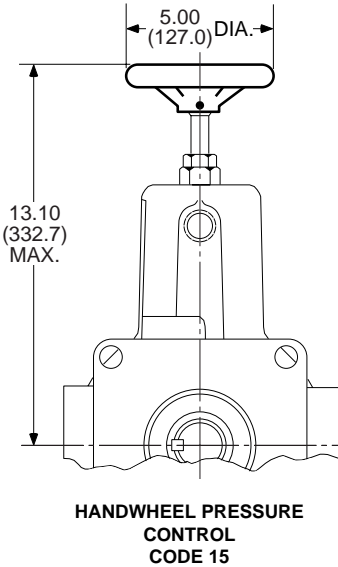
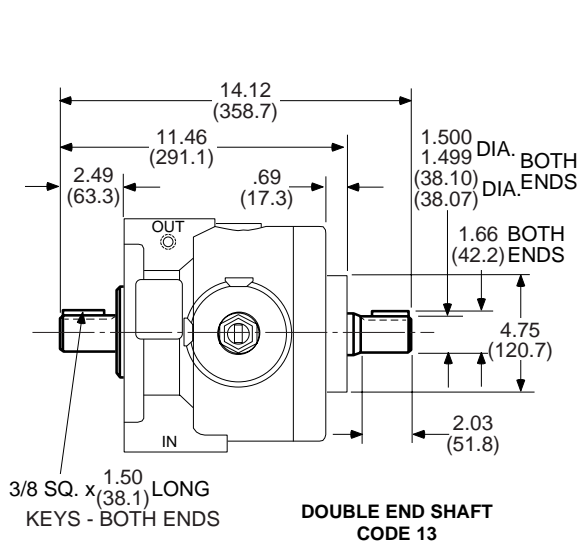
# PVR50 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED



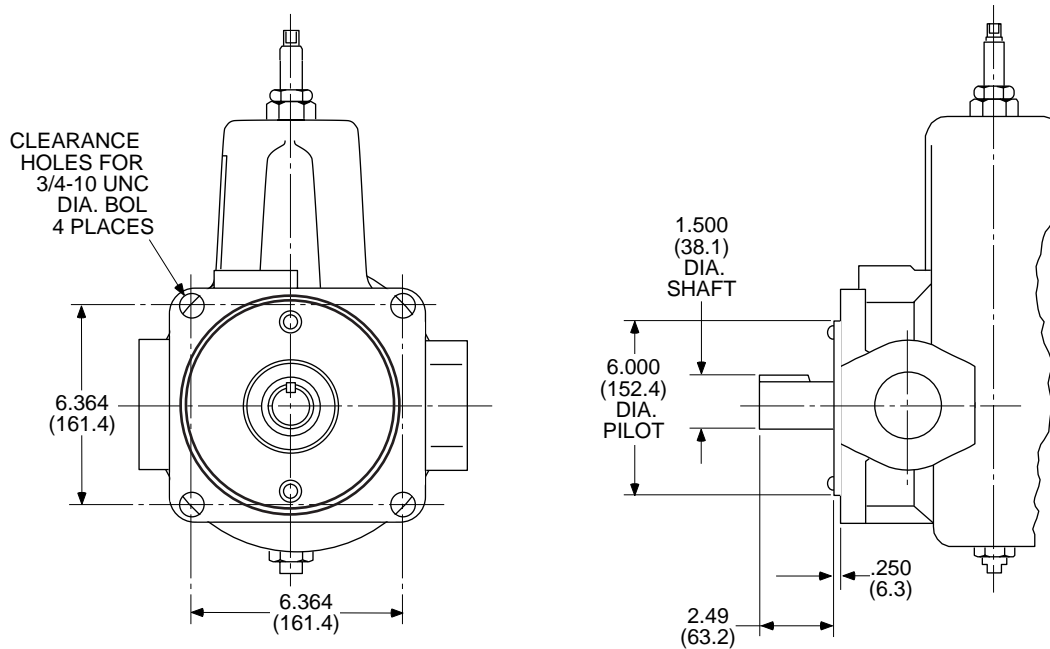
## MECHANICAL OPTIONS

Dimensions shown in: Inches  
(millimeters)



**NOTE:** Maximum input horsepower for double end shaft:  
Primary pump: 100 hp at rated rpm.  
Secondary pump: 50 hp at rated rpm.

## SAE D Mount - Code RFD (Right Hand Rotation Only)





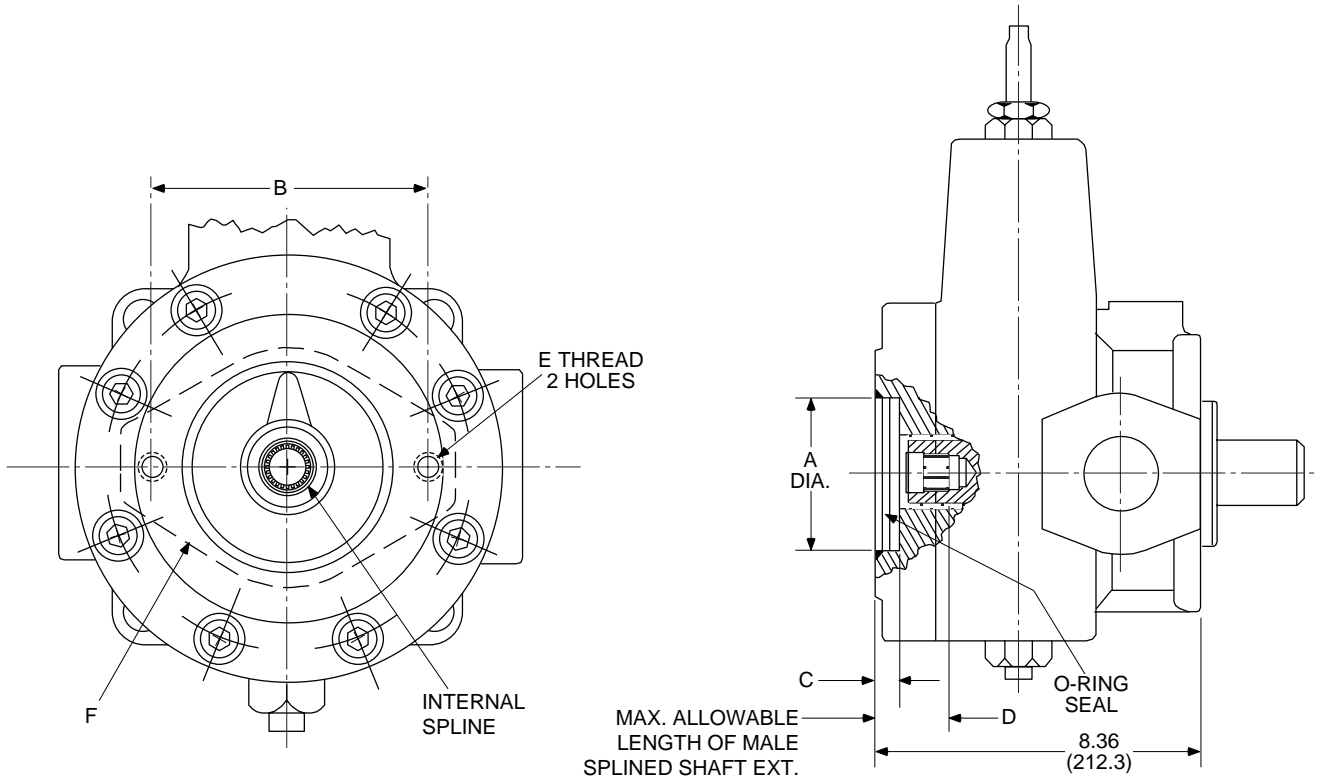
# PVR50 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED

## CODES 21, 22, 23 and 31 - TANDEM OPTIONS

Flange Mounted Pump - Code RF Only

Dual Pump Operation Without Additional Mounting Flanges and Couplings

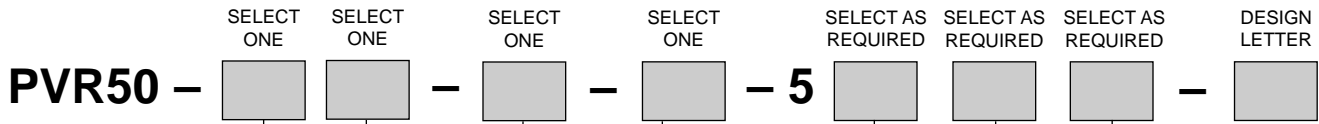


CODE	SAE 2-BOLT MOUNTING PAD F	DIMENSIONS				Inches (millimeters)	30° INVOLUTE INTERNAL SPLINE	MAXIMUM H.P. RATING OF INTERNAL SPLINE*
		A	B	C	D	E Thread		
21	"A" Flange	3.25 (82.6)	4.18 (106.2)	.291 (7.4)	1.27 (32.3)	3/8-16 UNC x .81 (20.6)	9 Tooth 16/32 Pitch 0.5625 Dia.	8.5
22	"B" Flange	4.00 (101.6)	5.75 (146.1)	.50 (12.7)	1.64 (41.7)	1/2-13 UNC x .88 (22.4)	9 Tooth 16/32 Pitch 0.5625 Dia.	30
23	"C" Flange	5.00 (127.0)	7.13 (181.1)	.55 (14.0)	1.65 (41.9)	5/8-11 UNC	14 Tooth 12/24 Pitch 1.1667 Dia.	43
31	"A" Flange	3.25 (82.6)	4.18 (106.2)	.50 (12.7)	1.64 (41.7)	3/8-16 UNC x .81 (20.6)	13 Tooth 16/32 Pitch 0.8125 Dia.	30

\*Rating at 1750 rpm

# PVR50 SERIES VANE PUMPS

VARIABLE DISPLACEMENT PRESSURE COMPENSATED



### SIZE

CODE	FLOW RATED rpm
32A	32 gpm
42A	42 gpm
50B	50 gpm
70B	70 gpm

### ROTATION & MOUNTING

CODE	DESCRIPTION
RF	RIGHT HAND ROTATION (CW) FLANGE MOUNT
LF	LEFT HAND ROTATION (CCW) FLANGE MOUNT
RFD	RIGHT HAND ROTATION (CW) SAE D 4-BOLT FLANGE MOUNT

### MECHANICAL OPTIONS

CODE	DESCRIPTION
13	DOUBLE END DRIVE SHAFT HANDWHEEL
15	PRESSURE CONTROL
16	50 HZ OPERATION
21	"A" FLANGE TANDEM PUMP MOUNTING
22	"B" FLANGE TANDEM PUMP MOUNTING
23	"C" FLANGE TANDEM PUMP MOUNTING
31	"A" - "B" FLANGE TANDEM PUMP MOUNTING (HPV-6)
36	HANDWHEEL VOLUME CONTROL

### INTEGRAL OPERATOR\*

CODE	DESCRIPTION
OMIT	NO OPTIONS

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

### PRESSURE

CODE	PRESSURE RANGE	USED ON MODEL
15	300 - 1500 psi	ALL
3L*	1000 - 1800 psi	50B
	1000 - 1700 psi	70B
5L*	1000 - 2000 psi	50B
	1000 - 1700 psi	70B

NOTE: Power limiting curves.

### SEALS

CODE	TYPE
O	BUNA-N
P	VITON

### CONTROL OPTIONS\*

CODE	DESCRIPTION
OMIT	NO OPTIONS
8	RATE CONTROL VALVE FOR DUAL PRESSURE
9	RATE CONTROL VALVE FOR DUAL VOLUME
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:

**PVR50-50B15-RF-0-521-L**



**S  
N  
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C**

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