



The HPVR series of inline axial piston variable displacement pumps, are available in five displacements and three compact frame sizes. These pumps feature medium-high working pressure capabilities that will meet most applications. The output flow and pressure is controlled by a variety of control options, and can easily work in conjunction with external control components making them the perfect choice for almost any application. The HPVR series pumps are available in both SAE and ISO mounting 2 bolt patterns. Porting is available in rear and side locations as well as thru-drive

VOLUMETRIC         cu. In./rev.         1.26           DISPLACEMENT         ml/rev.         21.1           PUMP DELIVERY @ 1750 RPM         Theoretical         GPM         9.9           @ 1750 RPM         Theoretical         GPM         9.9           @ 1750 RPM         Theoretical         GPM         9.9           @ 1750 RPM         Intermittent*         PSI         4500           DPERATING PRESSURES         Continuous         BAR         310           OPERATING PRESSURES         Continuous         BAR         200           Minimum**         PSI         200           Maximum RPM         See Below         00           OPERATING SPEEDS         Maximum RPM         See Below           OPERATING SPEEDS         Maximum RPM         See Below           INPUT POWER @ 1750 RPM         HP         27           (Rated Flow and Pressure)         Kw         20.1           CASE DRAIN FLOW @         GPM         0.7           Deadhead & Rated Pressure         LPM         2.6           MOUNTING FLANGE         SAE Type         "B" 2 bolt           DRIVE SHAFT         Keyed Shaft SAE J744 B         .875 in           Spline Shaft SAE B         13 Tooth         39	TYPICAL PERFORMANCE SPECIFICATIONS							
PUMP DELIVERY @ 1750 RPMTheoreticalGPM9.9@ 1750 RPMTheoreticalGPM9.9[Intermittent*PSI4500Marking PRESSURESContinuousBAR310OPERATING PRESSURESContinuousBAR275Minimum**PSI200BAR14OPERATING SPEEDSMaximum RPMSee BelowOPERATING SPEEDSMaximum RPMSee BelowINPUT POWER @ 1750 RPM (Rated Flow and Pressure)HP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @ FLANGEGPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 in Spline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7	VOLUMETRIC		cu. In./rev.	1.26				
IntermittalLPM37.50PERATING PRESSURESIntermittent*PSI45000PERATING PRESSURESContinuousPSI40000PERATING PRESSURESContinuousBAR2750Minimum**PSI2000BAR140PERATING SPEEDSMaximum RPMSee Below0Rated RPM17501Maximum RPMSee Below0Rated RPM17501Minimum RPM5001INPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type0REAR PORTSIbs39kg17.7	DISPLACEMENT		ml/rev.	21.1				
@ 1750 RPM         LPM         37.5           Intermittent*         PSI         4500           OPERATING         Continuous         BAR         310           PRESSURES         Continuous         PSI         4000           PRESSURES         Continuous         BAR         275           Minimum**         PSI         200           BAR         14           OPERATING         Maximum RPM         See Below           SPEEDS         Rated RPM         1750           MINIMUR RPM         See Below         500           INPUT POWER @ 1750 RPM         HP         27           (Rated Flow and Pressure)         Kw         20.1           CASE DRAIN FLOW @         GPM         0.7           Deadhead & Rated Pressure         LPM         2.6           MOUNTING         SAE Type         "B" 2 bolt           FLANGE         Keyed Shaft SAE J744 B         .875 in           DRIVE SHAFT         Keyed Shaft SAE J744 B         .875 in           Spline Shaft SAE B         13 Tooth         39           REAR PORTS         Ibs         39           kg         17.7         Kg         17.7	PUMP DELIVERY	Theoretical	GPM	9.9				
Intermittent*BAR310OPERATING PRESSURESContinuousPSI4000PRESSURESContinuousBAR275Minimum**PSI200BAR14OPERATING SPEEDSMaximum RPMSee BelowSPEEDSMinimum RPMSee BelowINPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7	@ 1750 RPM	medietical	LPM	37.5				
BAR310OPERATING PRESSURESContinuousPSI4000PRESSURESContinuousBAR310PRESSURESContinuousPSI4000BAR275Minimum**PSI200BAR14OPERATING SPEEDSMaximum RPMSee BelowOPERATING SPEEDSRated RPM1750MINIMUR POWER @ 1750 RPMHP277(Rated Flow and Pressure)Kw200INPUT POWER @ 1750 RPMHP277(Rated Flow and Pressure)Kw201CASE DRAIN FLOW @GPM0.77Deadhead & Rated PressureLPM2.66MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7		Intermittent*	PSI	4500				
PRESSURESContinuousBAR275Minimum**PSI200Maximum**PSI200BAR14OPERATING SPEEDSMaximum RPMSee BelowSPEEDSRated RPM1750Minimum RPM500INPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7			BAR	310				
PRESSURESBAR275Minimum**PSI200BAR14OPERATINGMaximum RPMSee BelowSPEEDSRated RPM1750Minimum RPM500INPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTINGSAE Type"B" 2 boltFLANGEKeyed Shaft SAE J744 B.875 inDRIVE SHAFTKeyed Shaft SAE J744 B.375 inREAR PORTSIbs39kg17.7	OPERATING	Continuous	PSI	4000				
Minimum**BAR14OPERATING SPEEDSMaximum RPMSee BelowSPEEDSRated RPM1750Minimum RPM500INPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7	PRESSURES	Continuous	BAR	275				
BAR14OPERATING SPEEDSMaximum RPMSee BelowRated RPM1750Minimum RPM500INPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7		Minimum**	PSI	200				
OPERATING SPEEDSRated RPM1750SPEEDSMinimum RPM500INPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7		WITHTUT	BAR	14				
Rated RPM1750SPEEDSMinimum RPM500INPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTINGSAE Type"B" 2 boltFLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 Tooth39REAR PORTSIbs39kg17.7		Max	kimum RPM	See Below				
Minimum RPM500INPUT POWER @ 1750 RPMHP27(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTINGSAE Type"B" 2 boltFLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7			Rated RPM					
(Rated Flow and Pressure)Kw20.1CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSlbs39kg17.7	SPEEDS	Mir	500					
CASE DRAIN FLOW @GPM0.7Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7	INPUT POWE	R @ 1750 RPM	HP	27				
Deadhead & Rated PressureLPM2.6MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSlbs39kg17.7	(Rated Flow a	and Pressure)	Kw	20.1				
MOUNTING FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7	CASE DRAI	N FLOW @	GPM	0.7				
FLANGESAE Type"B" 2 boltDRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSIbs39kg17.7	Deadhead & R	ated Pressure	LPM	2.6				
FLANGEADRIVE SHAFTKeyed Shaft SAE J744 B.875 inSpline Shaft SAE B13 ToothREAR PORTSkg17.7	MOUNTING			"D" 2 hol+				
DRIVE SHAFT     Spline Shaft SAE B     13 Tooth       REAR PORTS     Ibs     39       kg     17.7	FLANGE		SAE Type	B Z DOIL				
Spline Shaft SAE B 13 Tooth REAR PORTS Ibs 39 kg 17.7		Keyed Shaf	t SAE J744 B	.875 in				
REAR PORTS kg 17.7	DRIVE SHAFT	Spline	Shaft SAE B	13 Tooth				
kg 17.7			lbs	39				
			kg	17.7				
SHIPPING SIDE PORTS Ibs 50	SHIPPING WEIGHTS		lbs	50				
WEIGHTS kg 22.7			kg	22.7				
SIDE PORTS Ibs 52		SIDE PORTS	lbs	52				
TANDEM kg 23.6		TANDEM	kg	23.6				

\* This pressure should not exceed 10% of the duty cycle and not exceed 6 consecutive seconds.

\*\* Pumps operating at less than 150 PSI (10 Bar) may overheat and shorten pump life.

#### CASE AND INLET PORT SPECIFICATIONS

SPEED	Minimum Inlet Pressure						Maximum		
SPEED	Pressure Gauge			Absolute Pressure		Case Pressure			
rpm	psi	bar	inHg	mm-Hg	psi	bar	psi	bar	
1800	-3	-0.21	-6.12	-155.46	11.7	0.81	10	0.69	
2100	-3	-0.21	-6.12	-155.46	11.7	0.81	7	0.48	
2500	-3	-0.21	-6.12	-155.46	11.7	0.81	5	0.34	
2700	-1.03	-0.07	-2.1	-53.44	13.67	0.9	5	0.34	
2800	0.00	0.00	0.00	0.00	14.7	1.01	5	0.34	
3000	2.18	0.15	4.44	112.71	16.88	1.2	5	0.34	

#### PRESSURE AND VOLUME ADJUSTMENT SENSITIVITY

Pressure Adjustment	Pressure Change / Turn	650 PSI	44.8 Bar	
Volume	Flow Change / Turn	1.2 GPM	4.5 LPM	
Adjustment	Maximum Torque	25 inlbs	2.8 Nm	

OIL SOLUTIONS

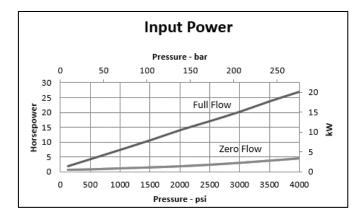
PO Box 38 Strathfieldsaye, VIC, 3551 1800 OIL SOL 1800 645 765

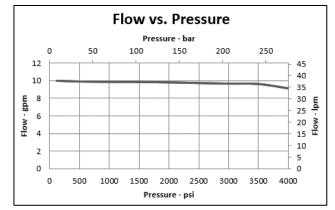
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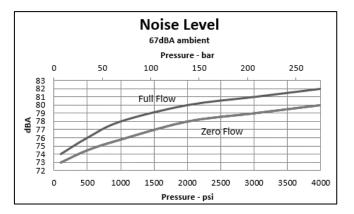
www.oilsolutions.com.au "For All Your Hydraulic Needs"

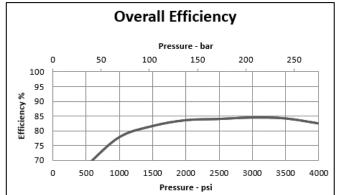
4895 12th Avenue East Shakopee MN 55379 / PH: 952.895.6400 / WWW.CONTINENTALHYDRAULICS.COM







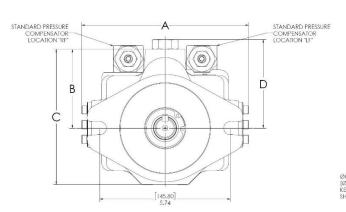


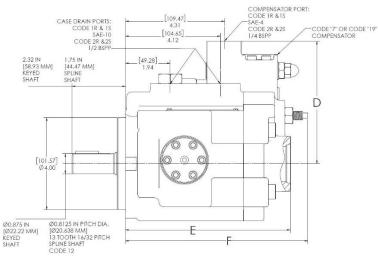


Data taken at 1800 RPM

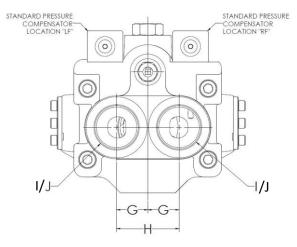


#### **Rear Port Dimension Data**





Dimensional Reference Data	Inch (mm)	
Α	7.35 (186.7)	
В	3.45 (87.6)	
С	5.93 (150.6)	
<b>D</b> (STD Pressure Compensator)	3.90 (99)	
<b>D</b> (Code 7 Remote & Code 19 Load Sense)	5.32 (135.1)	
E	7.15 (181.6)	
F	7.92 (201.2)	

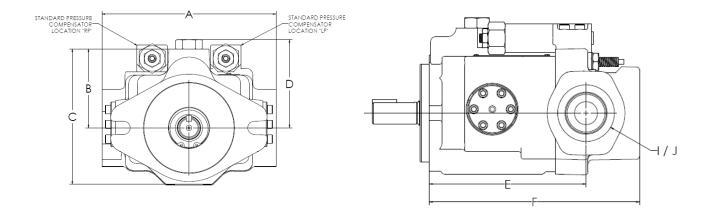


Dimensional Reference Data	Inch (mm)
G	1.18 (29.9)
Н	2.36 (59.9)
I Code 1R - Rear SAE Porting	SAE-20
I Code 2R- Rear BSPP Porting	1-1/4 BSPP
J Code 1R - Rear SAE Porting	SAE-20
J Code 2R- Rear BSPP Porting	1-1/4 BSPP

NOTE: I = Inlet Port, J = Outlet Port



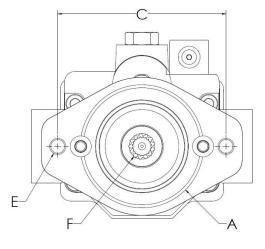
**Side Port Dimension Data** 

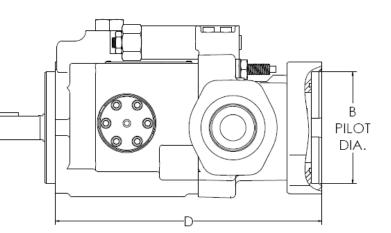


Dimensional Reference Data	Inch (mm)	
A	7.64 (194)	
B	3.47 (88.1)	
С	5.95 (151)	
D (std Pressure Compensator)	3.88 (99)	
D (Code 7 Remote & Code 19 Load Sense)	5.32 (135.1)	
E	6.37 (161.8)	
F	8.55 (217.2)	
Code 1S (SAE Ports)	SAE-20	
I Code 2S (BSPP Ports)	1-1/4 BSPP	
I Code 4S (4 Bolt Metric Ports)	1-1/4" SF	
I Code 5S (4 Bolt UNC Ports)	1-1/4" SF	
J Code 1S (SAE Ports)	SAE- 12	
J Code 2S (BSPP Ports)	3/4 BSPP	
J Code 4S (4 Bolt Metric Ports)	3/4" SF	
J Code 5S (4 Bolt UNC Ports)	3/4" SF	

NOTE: I = Inlet Port, J = Outlet Port







CODE	MOUNTING PAD Inches (mm)		Thread	30° Involute Internal Spline	Maximum H.P. Ratting* (at 1750 RPM)	Maximum Torque Rating* (in-Ibs)		
	Α	B C D E F		F		(11-103)		
21	SAE "A"	3.25 (82.6)	4.18 (106.2)	9.40 (238.7)	3/8-16 UNC	9 Tooth 16/32 Pitch 0.5625 Dia.	8.5	306
22	SAE "B"	4.00 (101.6)	5.75 (146.1)	9.56 (242.8)	1/2-13 UNC	13 Tooth 16/32 Pitch 0.8125 Dia.	16.8	586
31	SAE "A"	3.25 (82.6)	4.18 (106.2)	9.56 (242.8)	3/8-16 UNC	13 Tooth 16/32 Pitch 0.8125 Dia.	16.8	586
21D	SAE "A"	3.25 (82.6)	4.18 (106.2)	9.40 (238.7)	M10	9 Tooth 16/32 Pitch 0.5625 Dia.	8.5	306
22D	SAE "B"	4.00 (101.6)	5.75 (146.1)	9.56 (242.8)	M12	13 Tooth 16/32 Pitch 0.8125 Dia.	16.8	586
31D	SAE "A"	3.25 (82.6)	4.18 (106.2)	9.56 (242.8)	M10	13 Tooth 16/32 Pitch 0.8125 Dia.	16.8	586
* This is the maximum horsepower or torque that can be transmitted through the shaft coupling to the rear pump								



SELECT OPTIONS AS REQUIRED **HPVR** -DESIGN LETTER CONTROL OPTIONS SIZE FLOW AT MAXIMUM CODE DISPLACEMENT CODE DESCRIPTION 1750 RPM PRESSURE OMIT in<sup>3</sup>/rev 1.26 PRESSURE COMPENSATOR (STD) 10 GPM 4000 PSI 10B40 cm<sup>3</sup>/rev 21.1 7 REMOTE COMPENSATOR 19 LOAD SENSING COMPENSATOR ROTATION CODE DESCRIPTION TANDEM RF (STD) CW ROTATION CODE DESCRIPTION CCW ROTATION LF OMIT NO TANDEM OPTION (STD) SEALS SAE "A" FLANGE PUMP MOUNT (UNC THREADS) 21 SAE A SPLINE SHAFT COUPLING CODE DESCRIPTION SAE "B" FLANGE PUMP MOUNT (UNC THREADS) 22 O (STD) BUNA-N SAE B SPLINE SHAFT COUPLING VITON SAE "A" FLANGE PUMP MOUNT (UNC THREADS) Ρ 31 SAE B SPLINE SHAFT COUPLING SAE "A" FLANGE PUMP MOUNT (METRIC THREADS) 21D PORT OPTIONS SAE A SPLINE SHAFT COUPLING SAE "B" FLANGE PUMP MOUNT (METRIC THREADS) CODE DESCRIPTION 22D SAE B SPLINE SHAFT COUPLING SAE B 2 BOLT MOUNTING FLANGE SAE "A" FLANGE PUMP MOUNT (METRIC THREADS) 31D 1R (STD) SAE O-RING THREAD CASE DRAIN SAE B SPLINE SHAFT COUPLING REAR SAE O-RING THREAD PORTS SAE B 2 BOLT MOUNTING FLANGE 2R BRITISH STD PIPE (BSPP) THREAD CASE DRAIN SHAFT REAR BSPP THREAD PORTS CODE DESCRIPTION SAE B 2 BOLT MOUNTING FLANGE STRAIGHT KEY SAE O-RING THREAD CASE DRAIN 15 OMIT SIDE SAE O-RING THREAD SIDE PORTS (STD) SAE J744 B .875 inch SHAFT SAE B 2 BOLT MOUNTING FLANGE FRONT MALE SPLINE 12 28 BRITISH STD PIPE (BSPP) THREAD CASE DRAIN SAE B: 13 TOOTH 16/32 Pitch SIDE BSPP THREAD PORTS SAE B 2 BOLT MOUNTING FLANGE BRITISH STD PIPE (BSPP) THREAD CASE DRAIN **4S** SIDE SAE 4 BOLT FLANGE (METRIC THREADS) SAE B 2 BOLT MOUNTING FLANGE SAE O-RING THREAD CASE DRAIN 58

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SIDE SAE 4 BOLT FLANGE (UNC THREADS)