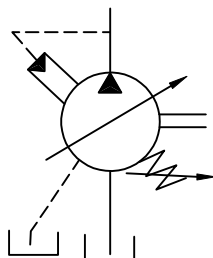


IFP VARIABLE DISPLACEMENT PVB5...PVB45 PISTON PUMPS



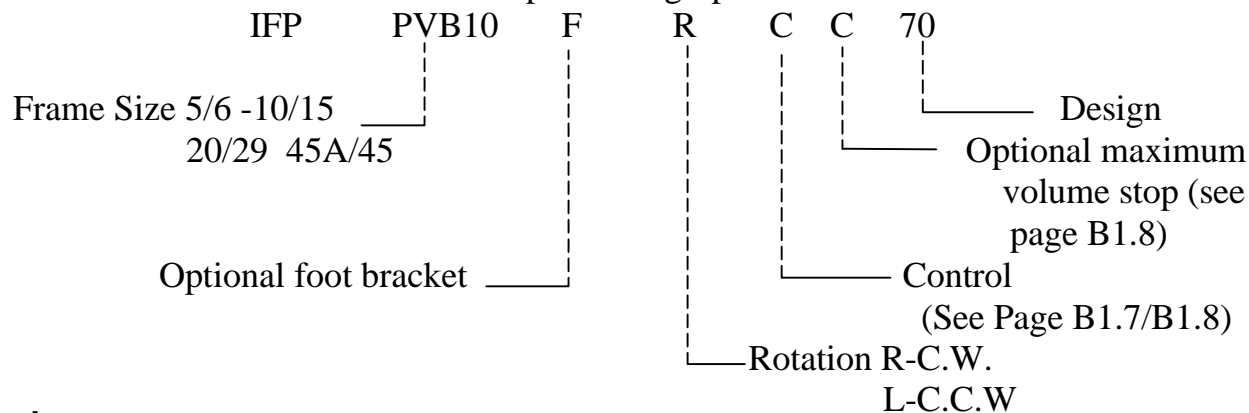
IFP piston pumps are inline, variable volume units available in 4 frame sizes and 8 displacements. The wide variety of controls and overall efficiency make them ideal for the most demanding industrial applications.



Features

- **ECONOMICAL**
PVB series combine quality performance with low overall cost.
- **QUIET**
Noise levels are below the industry standards.
- **EFFICIENT**
High volumetric and overall efficiency for industrial applications.
- **CONTROLS**
Variety of manual and compensating controls provide fast stable control of units.
- **MOUNTING**
Mountings, shafts and port sizes are SAE standard. Metric units available on request.

◆ Piston Pump Ordering Specifications



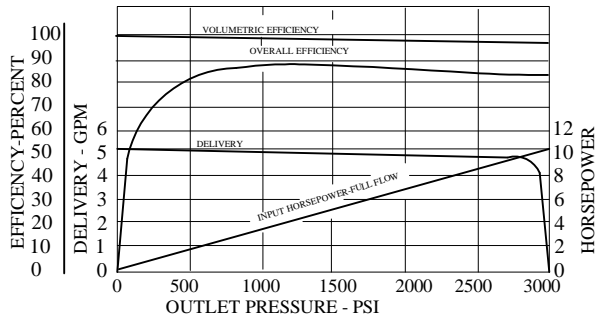
Warning

Before starting fill pump case with system fluid through uppermost drain port. Housing must be kept full at all times to provide internal lubrication.

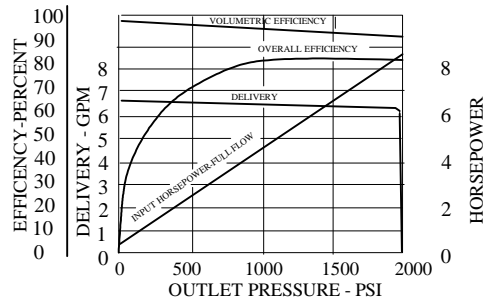
IFF PVB PISTON PUMP PERFORMANCE CURVES



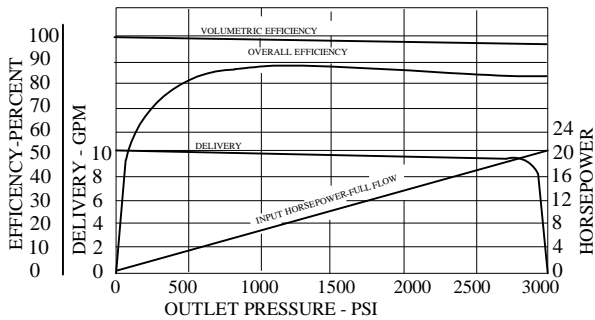
MODEL PVB5
BASED ON OIL TEMPERATURE OF 120° F
(100 SUS)
1800 RPM INPUT-ATMOSPHERIC INLET



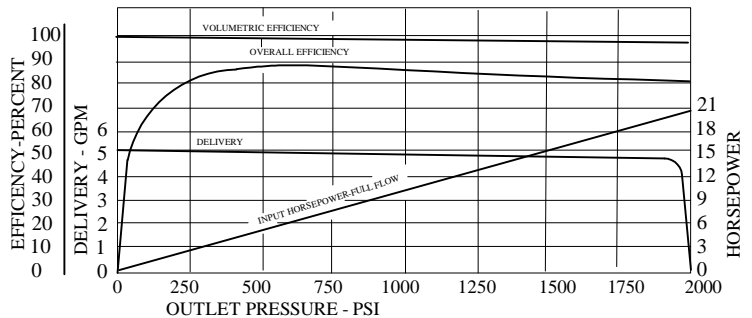
MODEL PVB6
BASED ON OIL TEMPERATURE OF 120° F
(100 SUS)
1800 RPM INPUT-ATMOSPHERIC INLET



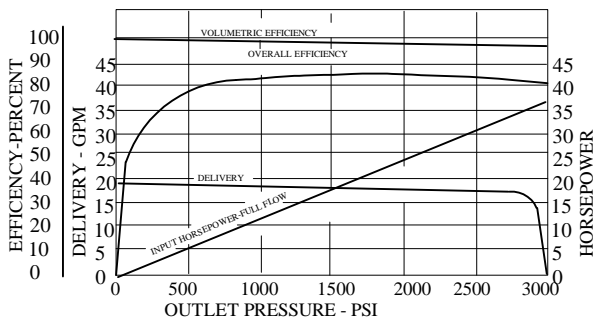
MODEL PVB10
BASED ON OIL TEMPERATURE OF 120° F
(100 SUS)
1800 RPM INPUT-ATMOSPHERIC INLET



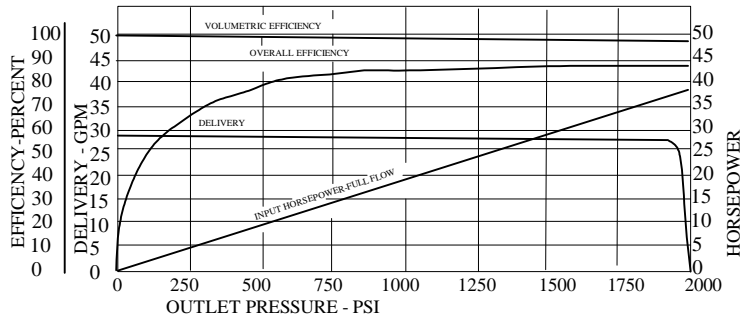
MODEL PVB15
BASED ON OIL TEMPERATURE OF 120° F
(100 SUS)
1800 RPM INPUT-ATMOSPHERIC INLET



MODEL PVB20
BASED ON OIL TEMPERATURE OF 120° F
(100 SUS)
1800 RPM INPUT-ATMOSPHERIC INLET



MODEL PVB29
BASED ON OIL TEMPERATURE OF 120° F
(100 SUS)
1800 RPM INPUT-ATMOSPHERIC INLET



IFP VARIABLE DISPLACEMENT PVB5...PVB45 PISTON PUMPS



APPLICATION GUIDELINES

SHAFT ALIGNMENT

PVB units are designed for "inline drive" with a flexible coupling. Side loading the shaft is not recommended.

FILL PUMP CASING

Before starting, fill case with system fluid through upper most drain port. Pipework must be installed in such a way as to ensure that the case is always full of oil during operation.

Note: -Max. case pressure 5 PSI.

STARTING

During initial starting it may be necessary to bleed air from pump outlet. IFP air bleed valve ABT 02S is available for this purpose.

SYSTEM RELIEF VALVE

Although PVB series pumps have compensator controls, a system relief valve is recommended for safety considerations.

TECHNICAL DATA

Values based on using anti-wear type petroleum oil 150 SUS at 100° F and 0 PSI inlet pressure

MODEL	DISPL.	DELIVERY (GPM) AT		MAX. SPEED RPM		MAX. PRESSURE PSI		WGT. LBS.
		1800 RPM	MAX. RPM	Anti-wear oil	HWBF	Anti-wear oil	HWBF	
PVB5	.643	5	10	3600	1800	3000	1000	16
PVB6	.843	6.5	11.4	3200		2000		16
PVB10	1.29	10	18	3200		3000		30
PVB15	2.01	15	26.2	3000		2000		30
PVB20	2.61	20	26	2400		3000		57
PVB29	3.76	29	38	2400		2000		57
PVB45	5.76	45	55	2200		3000		210

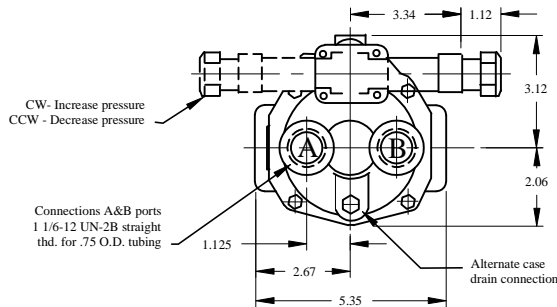
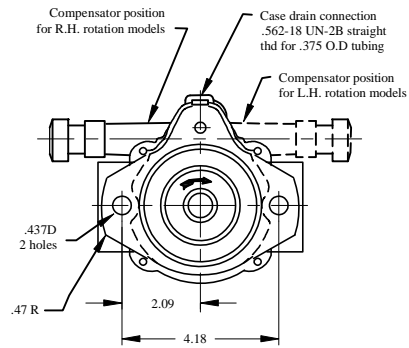
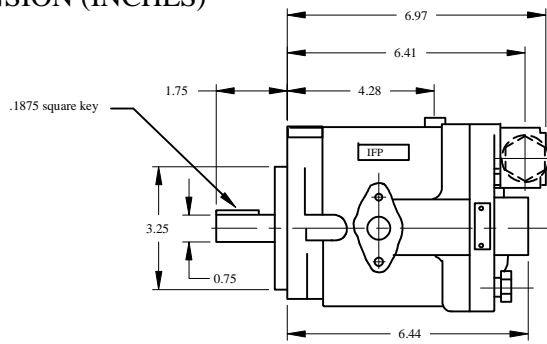
SOUND LEVEL PER ISO 4412

MODEL	REV r/min	OUTLET PSI	NOISE dB(A)	
			CUT-OFF	FULL DISPL.
PVB5/6	1200	1000	56	59
		2000	59	61
		3000	62	
	1800	1000	57	62
		2000	62	63
		3000	64	
PVB10/15	1200	1000	57	57
		2000	62	62
		3000	64	
	1800	1000	62	62
		2000	65	69
		3000	68	
PVB20/29	1200	1000	58	77
		2000	62	77
		3000	65	
	1800	1000	63	64
		2000	68	69
		3000	71	

IFP PVB5/6 INSTALLATION DIMENSIONS



DIMENSION (INCHES)

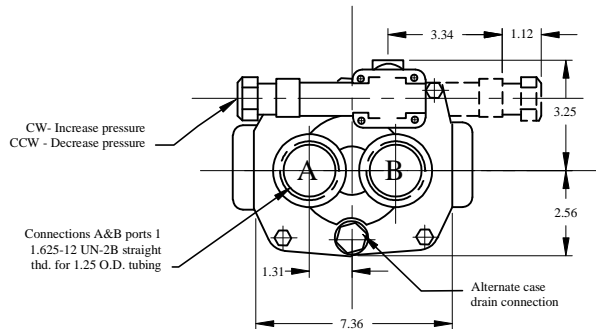
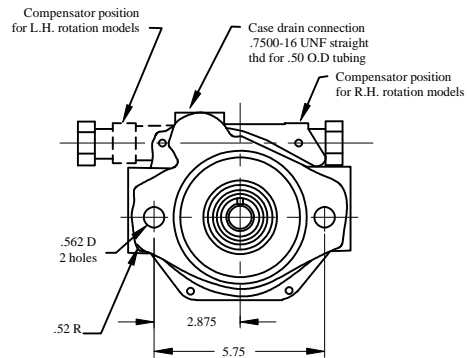
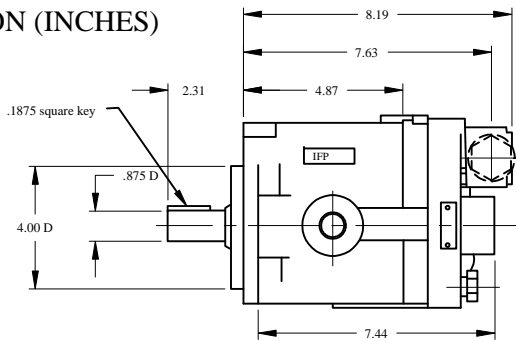


Rotation	Oil port	
	Inlet	Outlet
R.H	A	B
L.H	B	A

Bracket mount available
Part NBR- IFB-A
(See Page J1.1)

PVB 10/15 INSTALATION DIMENSIONS

DIMENSION (INCHES)



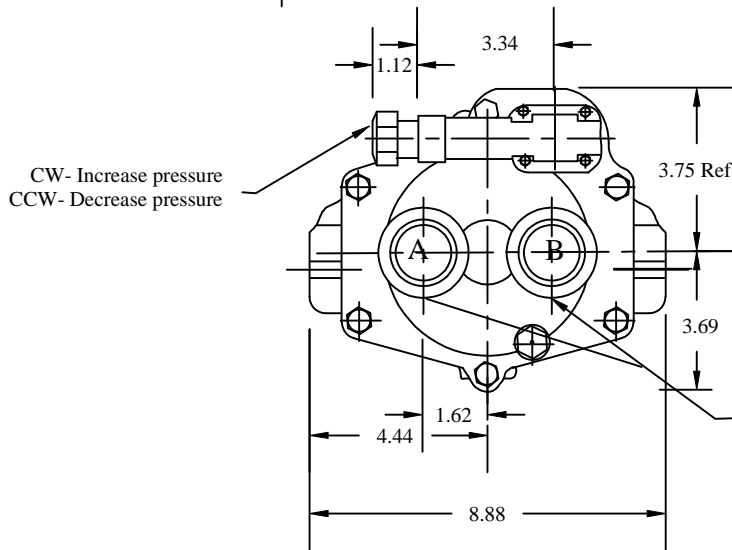
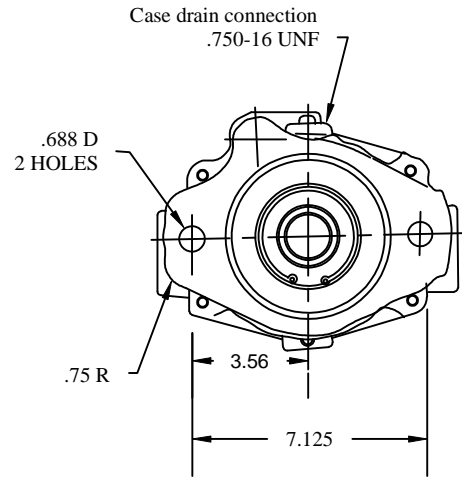
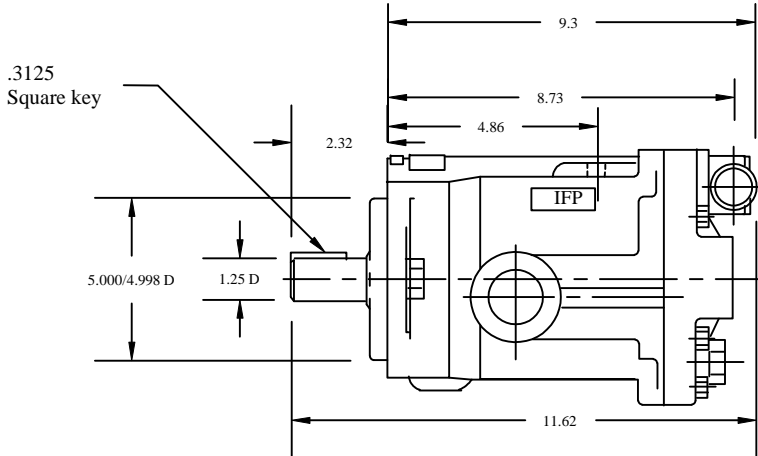
Rotation	Oil port	
	Inlet	Outlet
R.H	A	B
L.H	B	A

Bracket mount available
Part NBR- IFB-B
(See Page J1.1)

IFP PVB20/29 INSTALLATION DIMENSIONS



DIMENSION(INCHES)



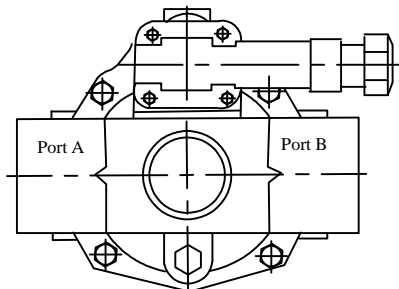
Rotation	Oil port Inlet/Outlet
R.H	A B
L.H	B A

Bracket mount available
Part NBR- IFB-C
(See Page J1.1)

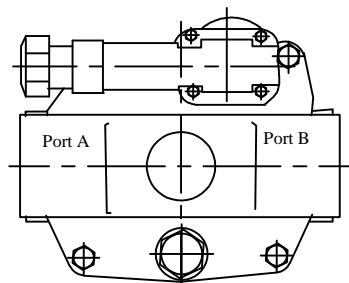
CONNECTION A&B
1.625-12N SAE "O" RING
1.25 "O" D TUBING

SIDE PORT OPTION

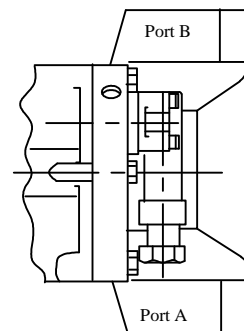
	Connection A & B
PVB5/6	1" O.D Tubing /1.312-12UNF
PVB10/15	1 1/4" O.D Tubing /1.625-16UNF
PVB20/29	1 1/2" SAE 4 Bolt Flange



PVB5/6



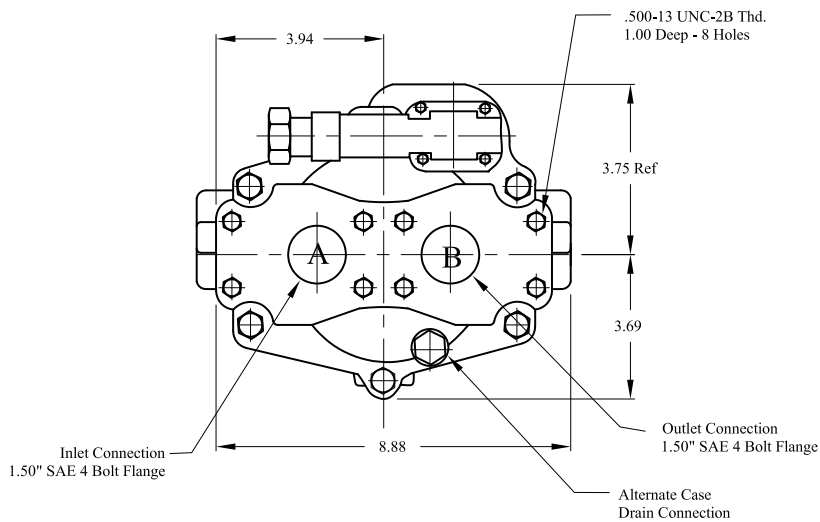
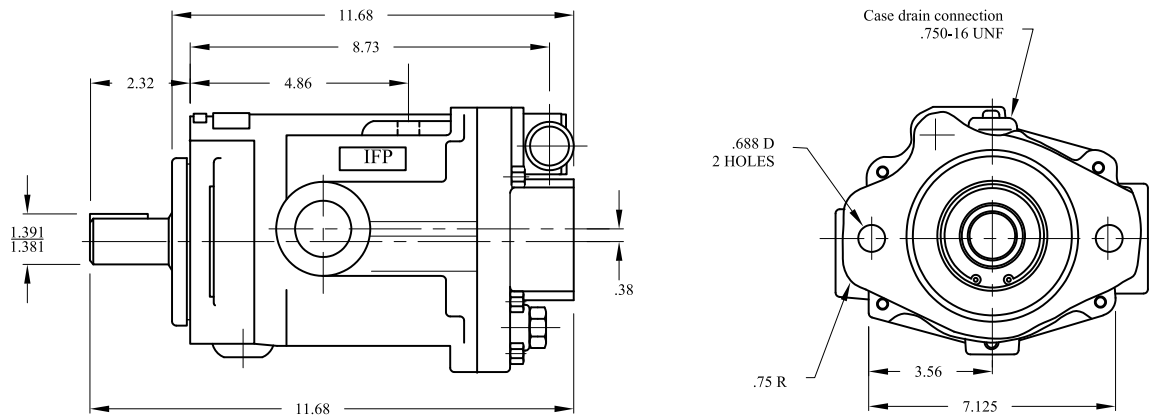
PVB10/15



PVB20/29

IFP PVB 45A INSTALLATION DIMENSIONS

DIMENSION (INCHES)

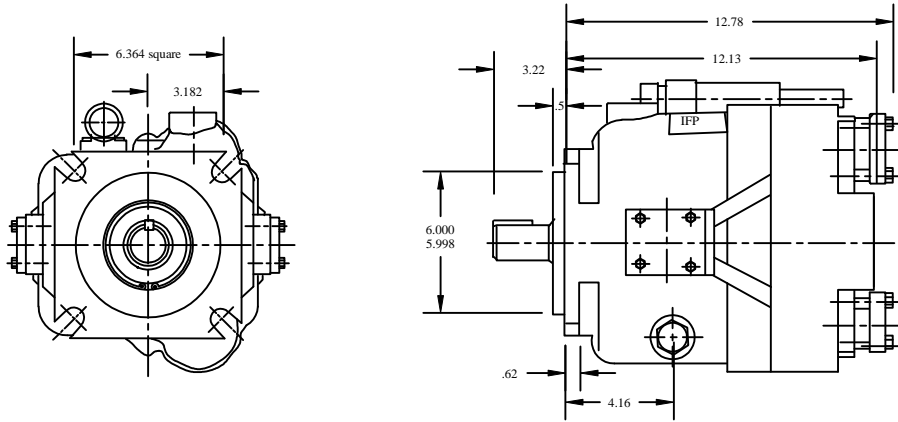


Bracket mount available
Part NBR- IFB-C
(See Page J1.1)

IFP PVB45 INSTALLATION DIMENSIONS

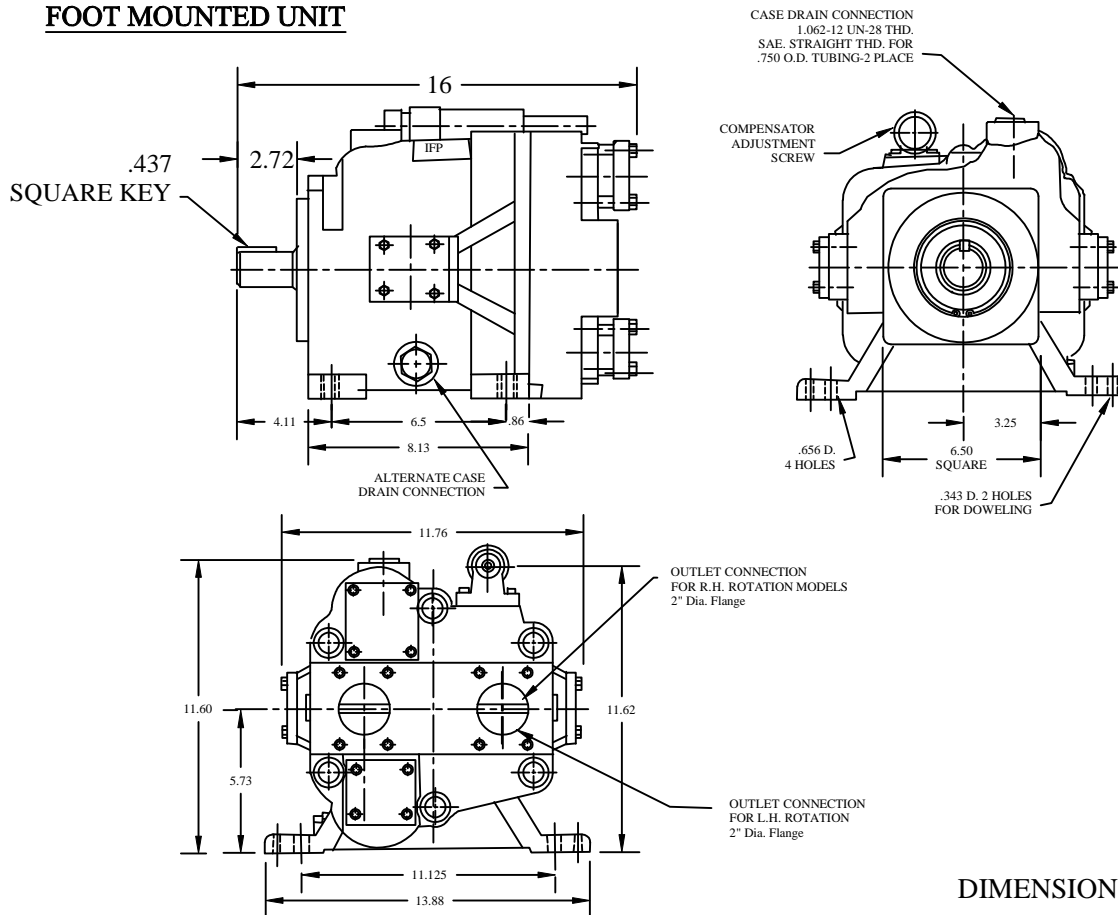


FLANGE MOUNTED UNIT



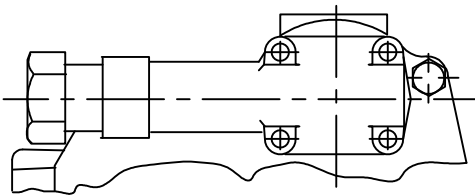
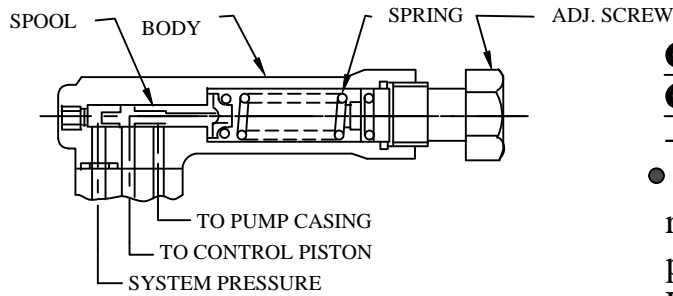
DIMENSION (INCHES)

FOOT MOUNTED UNIT



DIMENSION (INCHES)

OPTIONAL CONTROLS



Control "CM"(942159N)/ Control "C"(942158N)

- Pressure compensator-

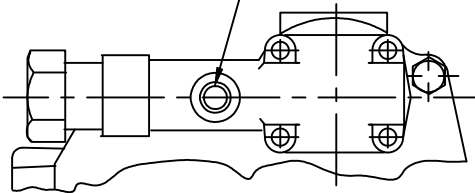
- "C" control maintains pump volume requirements of the system until a preselected operating pressure is reached. Pump displacement is then reduced to zero

"CM" range 250 - 1500 PSI

"C" range 250 - 3000 PSI

Available in frame sizes PVB5 to PVB45

.4375-20 UNF-2B thd.
remote control port

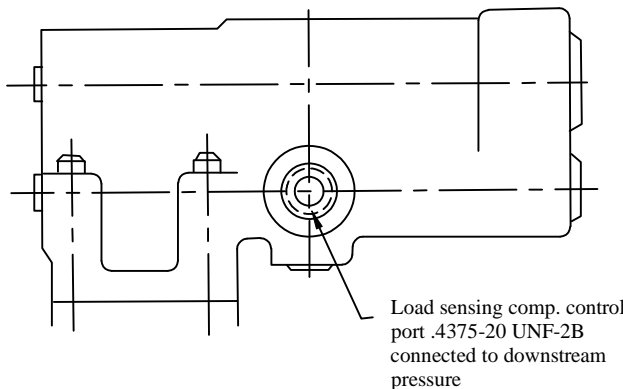


Control "CG"(942480N)

- Remote pressure compensator-

- "CG" control operates same as "C" control except pressure setting can be adjusted using a remote relief valve (IFP-C175-*-70) connected to the remote control port (SEE Page I1.1-I1.2).

Available in frame sizes PVB5 to PVB29



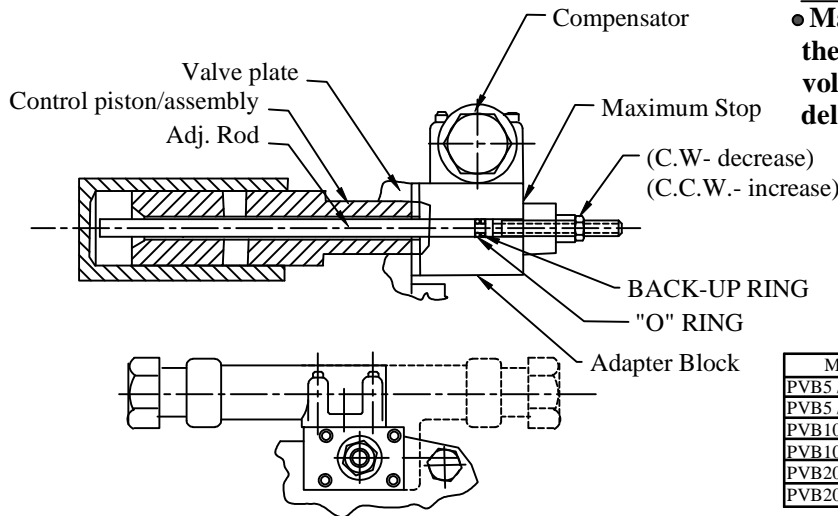
Control "CVP"(924069N)

- Load sensing/pressure limiter-

- "CVP" compensator provides load sensing control to automatically adjust pump flow in response to a remote pressure signal. A compensator control is also incorporated to limit maximum working pressure.

Available in frame sizes PVB5 to PVB29

OPTIONAL CONTROLS

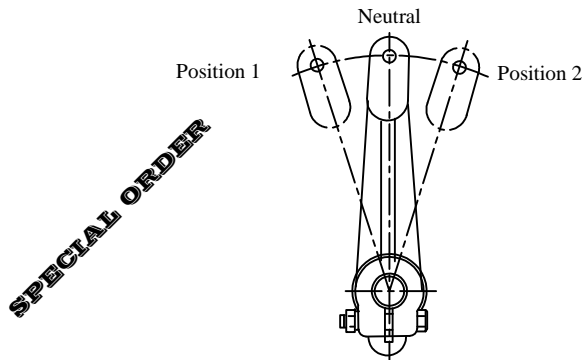


Control "C"

- **Maximum volume stop incorporates the "C" compensator with an adjustable volume stop. The maximum pump delivery is externally adjusted.**

MODEL	Max stop S/A No.	Adj. Rod	Adapter block
PVB5 /6 L.H.-**	942188N	354573N	354578N
PVB5 /6 R.H.-**	942189N	354573N	354579N
PVB10/15 L.H.-**	942190N	354574N	354579N
PVB10/15 R.H.-**	942191N	354574N	354578N
PVB20/29 L.H.-**	942192N	354575N	354578N
PVB20/29 R.H.-**	942192N	354575N	354578N

Available in frame size PVB5 to PVB29



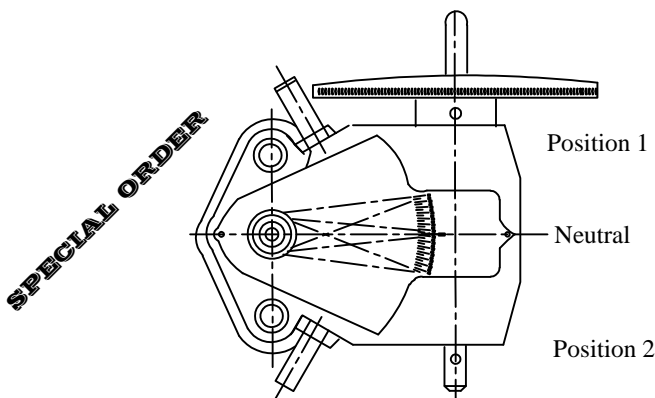
Control "M"

-Level control-

- **"M" control provides manual adjustment of pump flow. Level must be secured in position to maintain respected flow.**

Rotation	Level Position	Outlet Port
R.H	1	A
R.H	2	B
L.H	1	B
L.H	2	A

Available in frame size PVB5 to PVB15



Control "H"

-Handwheel control-

- **Turning handwheel provides over-center control of pump output flow.**

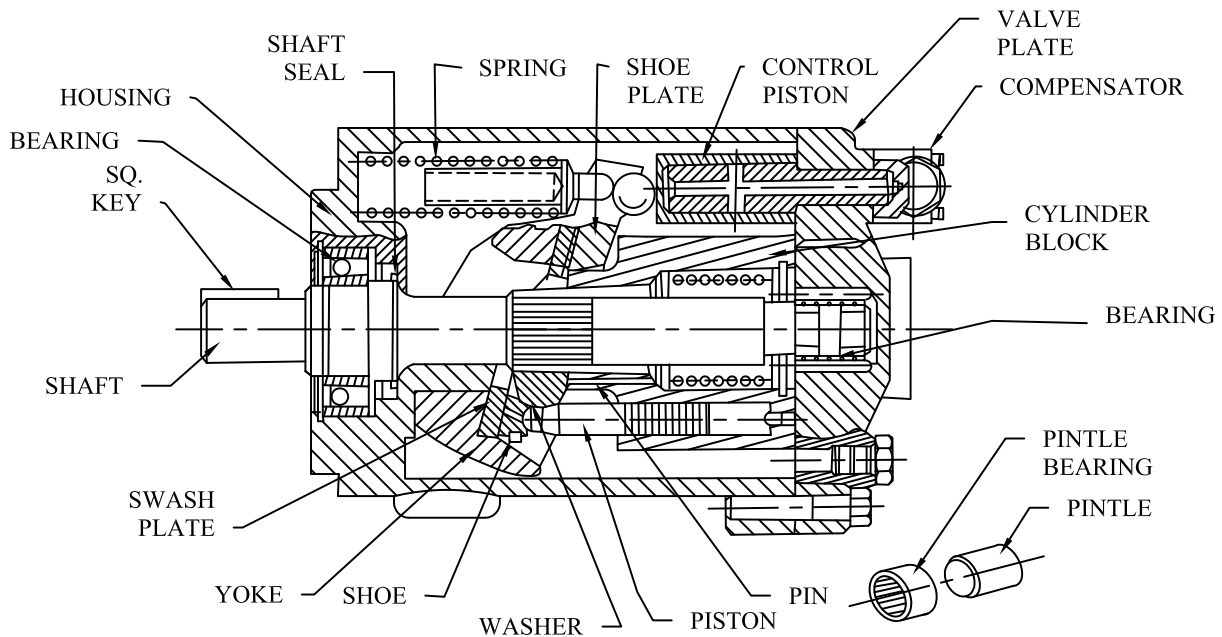
Shaft Rotation	Pointer Position	Outlet Port
R.H	1	A
R.H	2	B
L.H	1	B
L.H	2	A

Available in frame size PVB5 to PVB15

IFP PVB5/PVB6 PISTON PUMPS



SERVICE PARTS INFORMATION



PART #	DESCRIPTION	PART #	DESCRIPTION	PART #	DESCRIPTION
875775N	ROT GROUP PVB5	919191N	SEAL KIT	317572N	PINTLE BEARING
875773N	ROT GROUP PVB6	237014N *	SEAL	273409N	LIFT LIMITER
319245N Δ	SW. PLATE	279615N *	GASKET	165385N	RET. RING
942229N Δ	PISTON PVB5(9)	244956N *	COMP. GASKET	241579N	PISTON
942230N Δ	PISTON PVB6(9)	308334N	HOUSING	241924N	PISTON ROD
274249N Δ	SHOE PLATE	231557N	YOKE	185638N	RET. RING
275485N Δ	SPHER. WASHER	373132N	YOKE SPRING	039465N	PLATE BEARING
274956N Δ	WASHER	373131N	SEAT	942223N	RH PLATE PVB5/6
248203N Δ	PINS(3)	319243N	PINTLE	942224N	LH PLATE PVB5/6
274670N Δ	CYL BLOCK PVB5	283233N	BEARING SHAFT	942158N C	COMPENSATOR
315148N Δ	CYL BLOCK PVB6	266162N	STD KEYED SHAFT	942159N CM	COMPENSATOR
275474N Δ	THRUST WASHER	142843N	SHAFT KEY	942480N CG	COMPENSATOR
274787N Δ	SPRING CYL. BL.	190362N	RETAINER	924059N CVP	COMPENSATOR
				942188N	MAX STOP (CCW)
				942189N	MAX STOP (CW)

* INCLUDED IN SEAL KIT

Δ INCLUDED IN ROTATING GROUP

Bolt Torque 150-181 lb.in

Note:

- Optional side ports, thru-shaft available.
- Optional compensator/controls available. (see page B1.7)
- Optional maximum flow adjustment available. (see page B1.8)
- Optional foot bracket

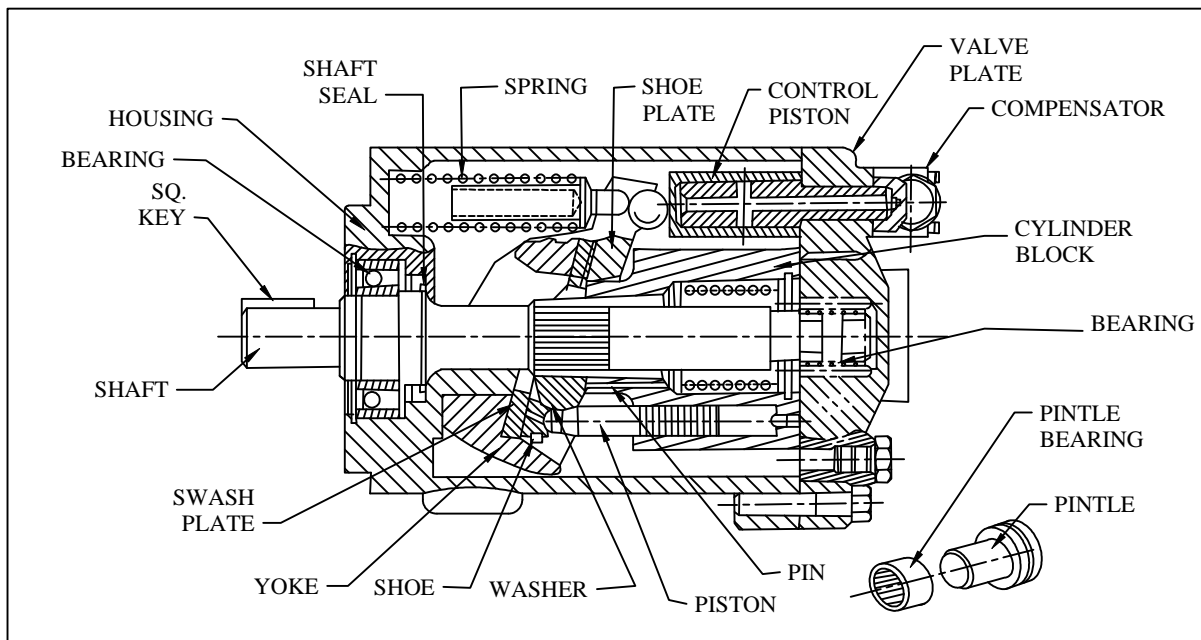
Filtration

For satisfactory service life use full flow filtration to provide fluid which ISO cleanliness code 16/13.

IFP PVB10/15 PISTON PUMPS



SERVICE PARTS INFORMATION



PART #	DESCRIPTION	PART #	DESCRIPTION	PART #	DESCRIPTION
938276N	ROT GROUP PVB10	919682N	SEAL KIT	058303N	Y SHAFT KEY
938273N	ROT GROUP PVB15	343573N *	SEAL	274382N	RETAINER
239077N	Δ SW. PLATE	317162N *	GASKET	265425N	PINTLE
942047N	Δ PISTON PVB10(9)	244956N *	COMP. GASKET	012016N	PINTLE BEARING
941887N	Δ PISTON PVB15(9)	357652N	HOUSING	245223N	LIFT LIMITER
275961N	Δ SHOE PLATE	342743N	YOKE	093509N	RET. RING
423324N	Δ SPHER. WASHER	278634N	YOKE BIG SPRING	942327N	Piston & Rod Ass.
248812N	Δ PINS(3)	317239N	YOKE SM. SPRING	185638N	RET. RING
321703N	Δ CYL BLOCK PVB10	120428N	RET. RING OUT	039465N	PLATE BEARING
260860N	Δ CYL BLOCK PVB15	119982N	RET. RING IN	942165N	RH PLATE PVB10
241954N	Δ THRUST WASHER	284397N	BEARING SHAFT	942166N	LH PLATE PVB10
247294N	Δ SPRING CYL. BL.	261478N	SHAFT SHORT	942167N	RH PLATE PVB15
942158N	C COMPENSATOR	270369N	SHAFT LONG	942168N	LH PLATE PVB15
942159N	CM COMPENSATOR	942190N	MAX STOP (CCW)		
942480N	CG COMPENSATOR	942191N	MAX STOP (CW)		
924059N	CVP COMPENSATOR				

* INCLUDE IN SEAL KIT

Δ INCLUDE IN ROTATING GROUP

Bolt Torque 150-181 lb.in

Note:

- Optional side ports, thru-shaft available.
- Optional compensator/controls available. (see page B1.7)
- Optional maximum flow adjustment available. (see page B1.8)
- Optional foot bracket

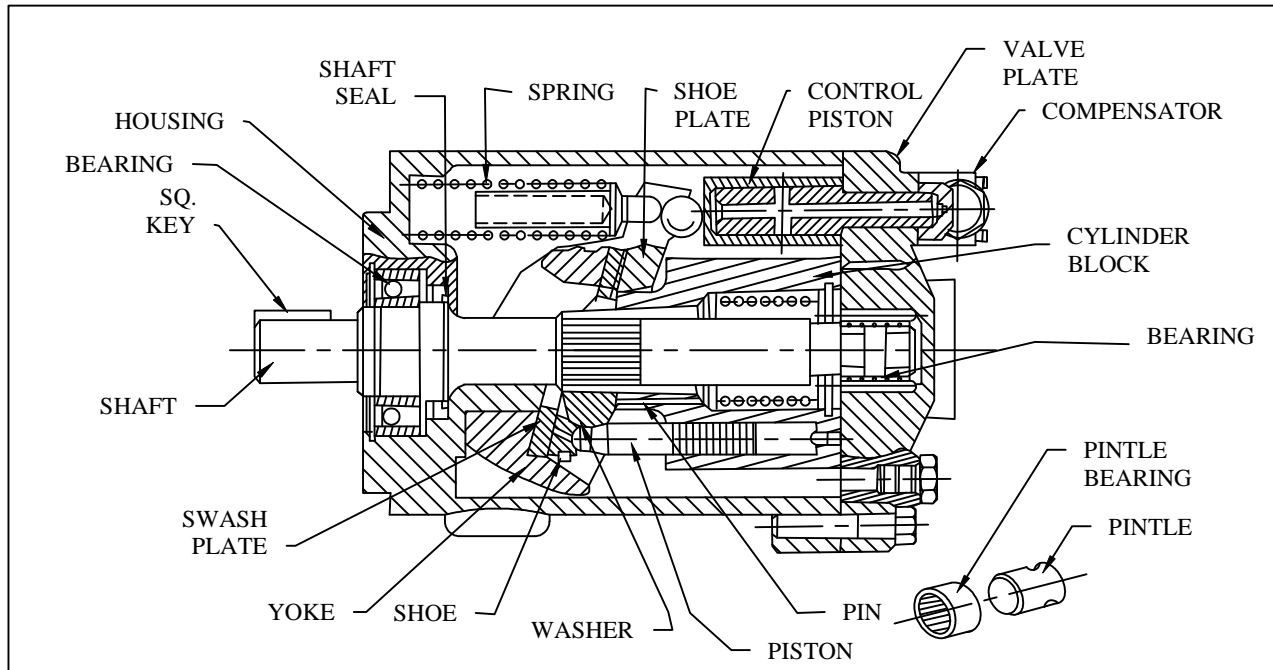
Filtration

For satisfactory service life use full flow filtration to provide fluid which ISO cleanliness code 16/13 .

IFP PVB20/PVB29 PISTON PUMPS



SERVICE PARTS INFORMATION



PART #	DESCRIPTION	PART #	DESCRIPTION	PART #	DESCRIPTION
938274N	ROT GROUP PVB20	919683N	SEAL KIT	353230N	PINTLE BEARING
938275N	ROT GROUP PVB29	295262N *	SEAL	36924N	PINTLE PLUG
239335N Δ	SW. PLATE	245976N *	GASKET	244931N	LIFT LIMITER
941883N Δ	PISTON PVB20(9)	244956N *	COMP. GASKET	194025N	RET. RING
941888N Δ	PISTON PVB29(9)	362029N	HOUSING	379793N	PISTON
248609N Δ	SHOE PLATE	362028N	YOKE	379792N	PISTON ROD
938392N Δ	SPHER. WASHER	294079N	YOKE BIG SPRING	185638N	RET. RING
248836N Δ	PINS(3)	245975N	SEAT	251108N	PLATE BEARING
250688N Δ	CYL BLOCK PVB20	117506N	RET. RING OUT	942169N	RH PLATE PVB20
259458N Δ	CYL BLOCK PVB29	117507N	RET. RING IN	942170N	LH PLATE PVB20
238780N Δ	THRUST WASHER	283090N	BEARING SHAFT	942171N	RH PLATE PVB29
246386N Δ	SPRING CYL. BL.20	362135N	SHAFT	942172N	LH PLATE PVB29
263582N Δ	SPRING CYL. BL.29	246353N	SHAFT KEY	942158N C	COMPENSATOR
194878N	RETAINER	388745N	PINTLE	942159N CM	COMPENSATOR
942192N	MAX STOP			942480N CG	COMPENSATOR
				924059N CVP	COMPENSATOR

* INCLUDE IN SEAL KIT

Δ INCLUDE IN ROTATING GROUP

Bolt Torque 150 - 181 lb.in

Note:

- Optional side ports, thru-shaft available.
- Optional compensator/controls available. (see page B1.7)
- Optional maximum flow adjustment available. (see page B1.8)
- Optional foot bracket

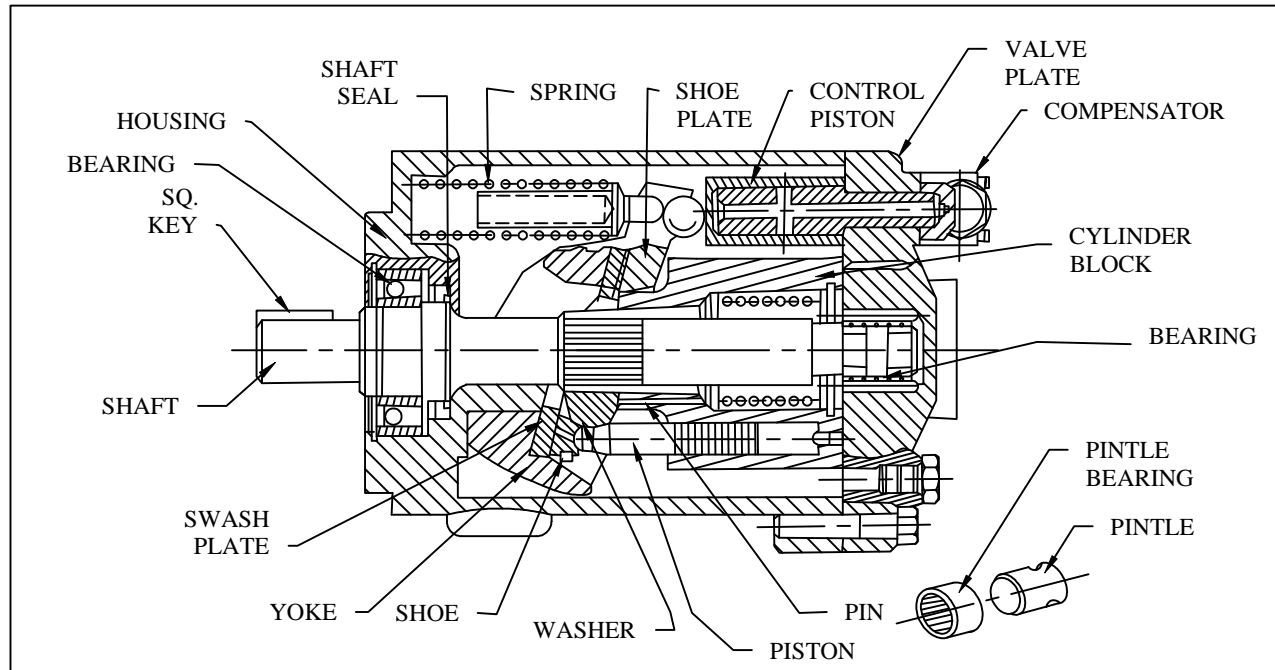
Filtration

For satisfactory service life use full flow filtration to provide fluid which ISO cleanliness code 16/13 .

IFF PVB45A PISTON PUMPS



SERVICE PARTS INFORMATION



PART #		DESCRIPTION	PART #		DESCRIPTION	PART #		DESCRIPTION
938074N		ROT GROUP PVB45A	919683N		SEAL KIT	353230N		PINTLE BEARING
			295262N	*	SEAL	36924N		PINTLE PLUG
239335N	△	SW. PLATE	245976N	*	GASKET	244931N		LIFT LIMITER
942284N	△	PISTON PVB45A (9)	244956N	*	COMP. GASKET	194025N		RET. RING
	△		362029N		HOUSING	379793N		PISTON
248609N	△	SHOE PLATE	387534N		YOKE	379792N		PISTON ROD
938392N	△	SPHER. WASHER	294079N		YOKE BIG SPRING	185638N		RET. RING
248836N	△	PINS(3)	245975N		SEAT	251108N		PLATE BEARING
283501N	△	CYL BLOCK PVB45A	117506N		RET. RING OUT	942285N		RH PLATE PVB45A
	△		117507N		RET. RING IN			
238780N	△	THRUST WASHER	283090N		BEARING SHAFT			
	△		362135N		SHAFT			
263582N	△	SPRING CYL. BL.	246353N		SHAFT KEY	942158N	C	COMPENSATOR
194878N		RETAINER	388745N		PINTLE	942159N	CM	COMPENSATOR
942192N		MAX STOP				942480N	CG	COMPENSATOR
						924059N	CVP	COMPENSATOR

* INCLUDE IN SEAL KIT

△ INCLUDE IN ROTATING GROUP

Bolt Torque 150 - 181 lb.in

Note:

- Optional side ports, thru-shaft available.
- Optional compensator/controls available. (see page B1.7)
- Optional maximum flow adjustment available. (see page B1.8)
- Optional foot bracket

Filtration

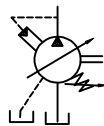
For satisfactory service life use full flow filtration to provide fluid which ISO cleanliness code 16/13 .

IFP HIGH PERFORMANCE PVBQ5...PVBQ29 PISTON PUMPS



FEATURES

- High operating pressures (3500 PSI)
- High operating speeds (3600 RPM)
- Lower noise levels
- Simplified conversions
- Wide variety pressure controls
- Optional seals

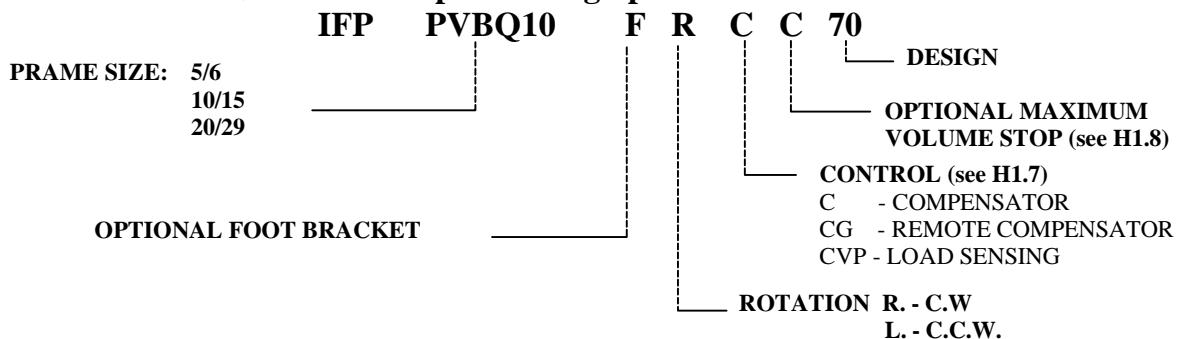


Technical Data

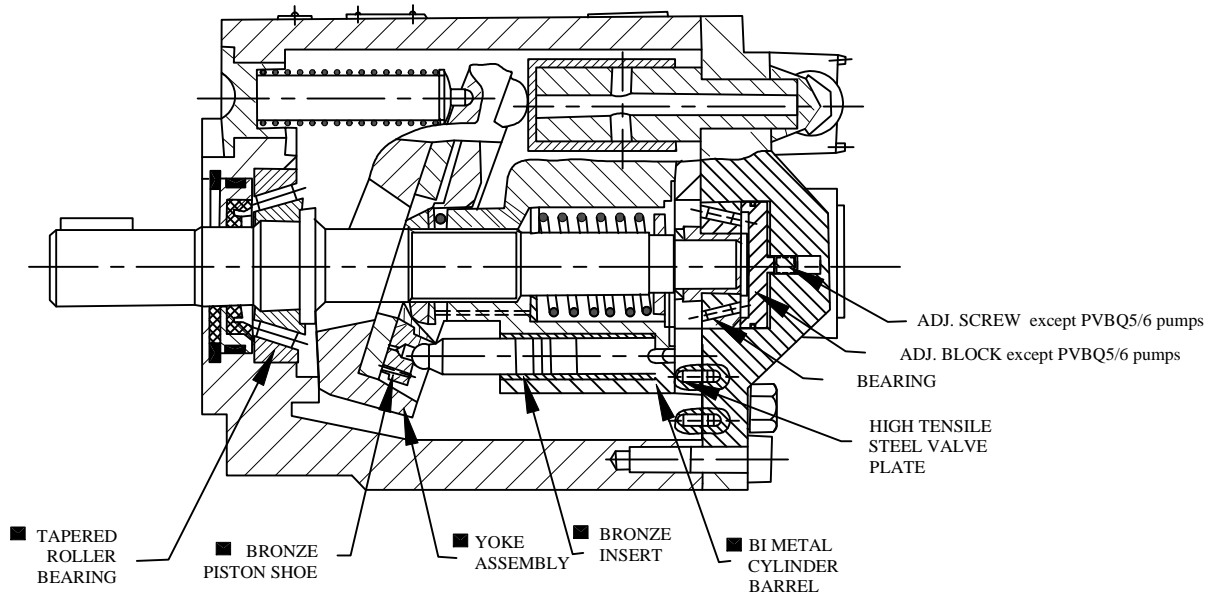
Values based on using anti-wear type petroleum oil 150 SUS at 100°F and 0 PSI inlet pressure

MODEL	DISPL.	DELIVERY GPM at		MAXIMUM RPM		MAXIMUM PRESSURE		WGT. lbs.
		1800 RPM	MAX RPM	Anti-wear oil	HWBF	PSI Anti-wear oil	PSI HWBF	
PVBQ5	.643	5	10	3600	1800	3500	1000	14
PVBQ6	.843	6.5	11.4	3200		3000		
PVBQ10	1.29	10	18	3200		3500		
PVBQ15	2.01	15	26.2	3000		3000		24
PVBQ20	2.61	20	26	2400		3000		
PVBQ29	3.76	29	38	2400		3000		

◆ Piston Pump Ordering Specification



IFP HIGH PERFORMANCE PVBQ5...PVBQ29 PISTON PUMPS

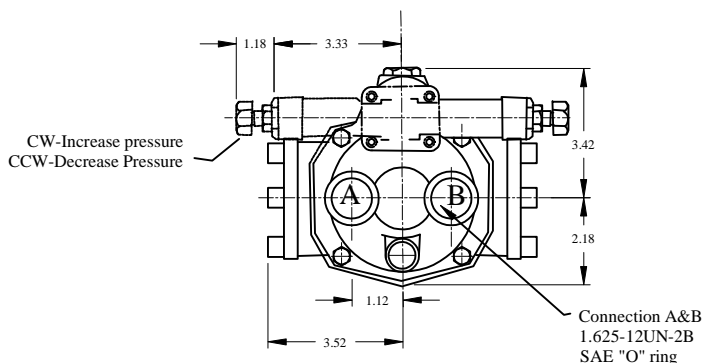
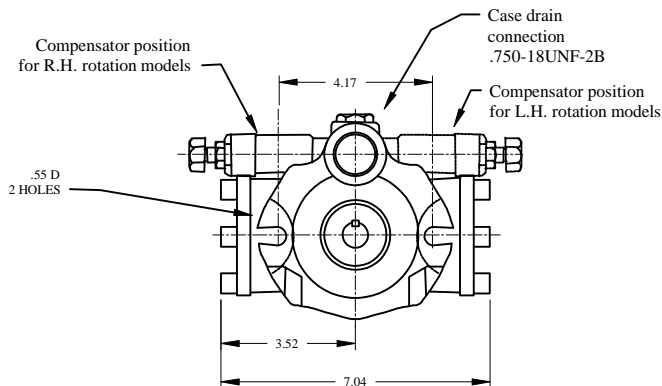
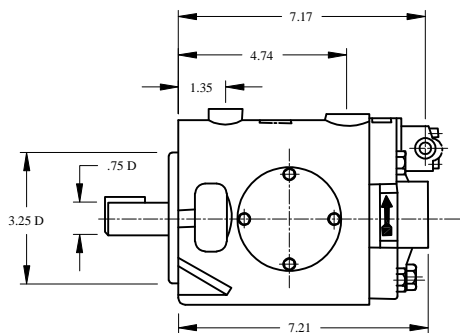


■ INCLUDES SPECIAL DESIGN FEATURES

Design Improvements:

- Bi-metal cylinder barrel with bronze inserts on piston bores. Provides improved wear surface for higher speeds and longer service life.
- Steel bearing plate for easy conversion of pump rotation. Improved wear surface for higher speeds and longer service life. Economical repair by lapping or replacement after long service life.
- Bronze piston shoes for improved performance.
- High load tapered roller bearings for improved shaft support.
- Re-designed yoke assembly with low friction bushing support for higher pressures and improved pump performance.
- Pintle cover and gasket to eliminate leaking from pintle assembly.

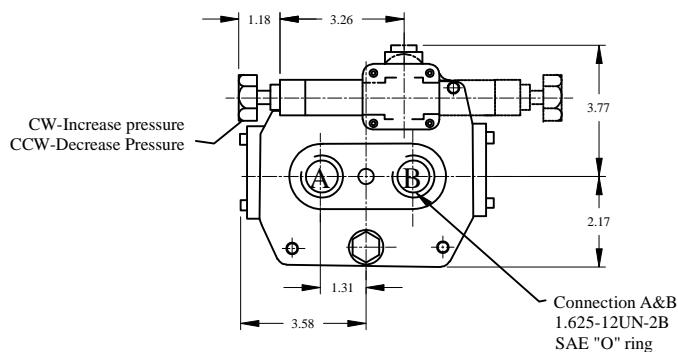
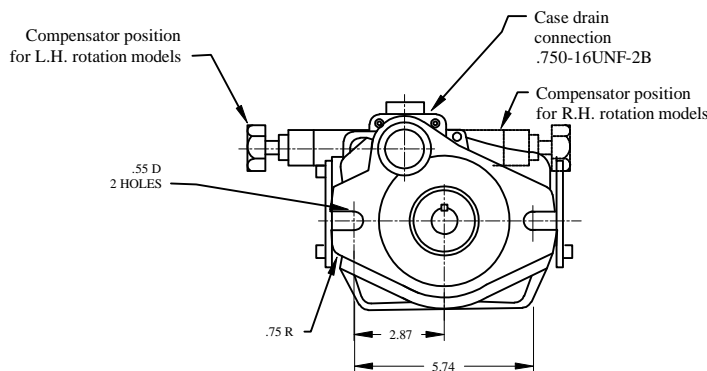
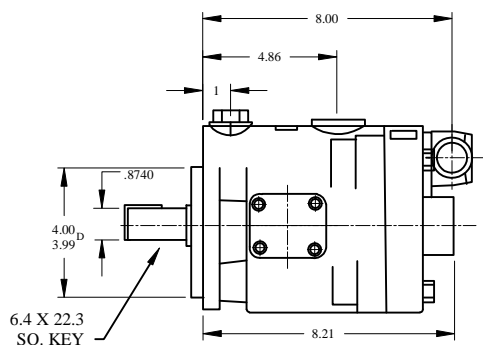
PVBQ5/6 INSTALLATION DIMENSIONS



Rotation	Oil port	
	Inlet	Outlet
R.H	A	B
L.H	B	A

Bracket mount available
Part Nbr- IFB-A
(See Page J1.1)

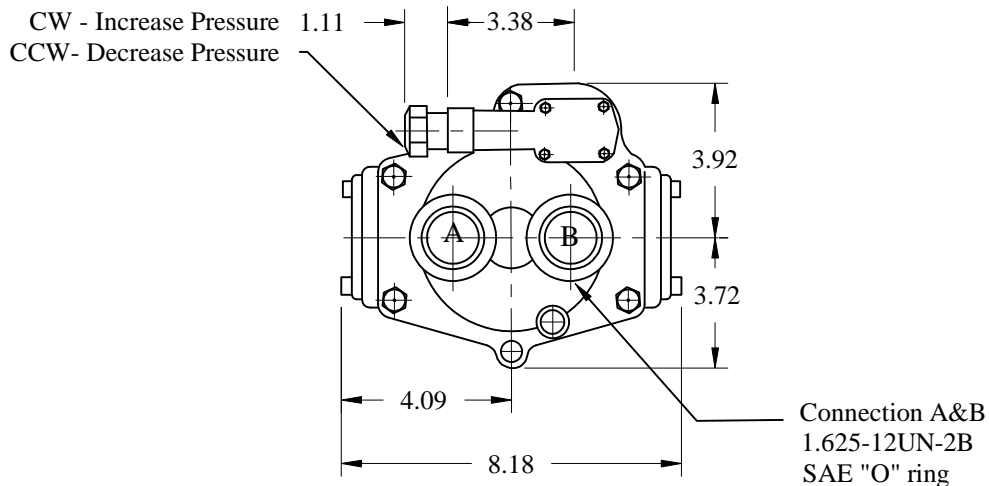
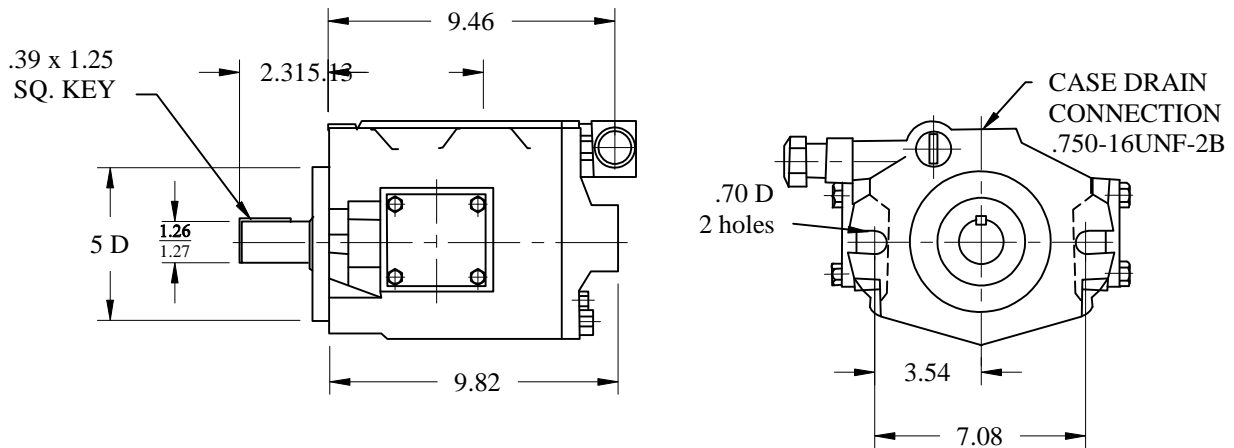
PVBQ10/15 INSTALLATION DIMENSIONS



Rotation	Oil port	
	Inlet	Outlet
R.H	A	B
L.H	B	A

Bracket mount available
Part Nbr- IFB-B
(See Page J1.1)

IFP PVBQ20/PVBQ29 INSTALLATION DIMENSIONS



Rotation	Oil port	
	Inlet/Outlet	
R.H	A	B
L.H	B	A

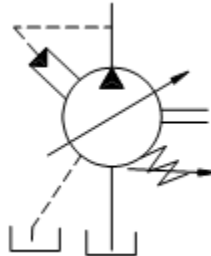
Bracket mount available
Part Nbr- IFB-C
(See Page J1.1)

IFP A10VSO VARIABLE AXIAL PISTON PUMPS



Available sizes:

- 18 — 1.10 in³/rev [18 cm³/rev]
- 28 — 1.71 in³/rev [28 cm³/rev]
- 45 — 2.75 in³/rev [45 cm³/rev]
- 71 — 4.33 in³/rev [71 cm³/rev]
- 100—6.10 in³/rev [100 cm³/rev]
- 140—8.45 in³/rev [140 cm³/rev]



NOMINAL PRESSURE

4000 psi [280 bar]

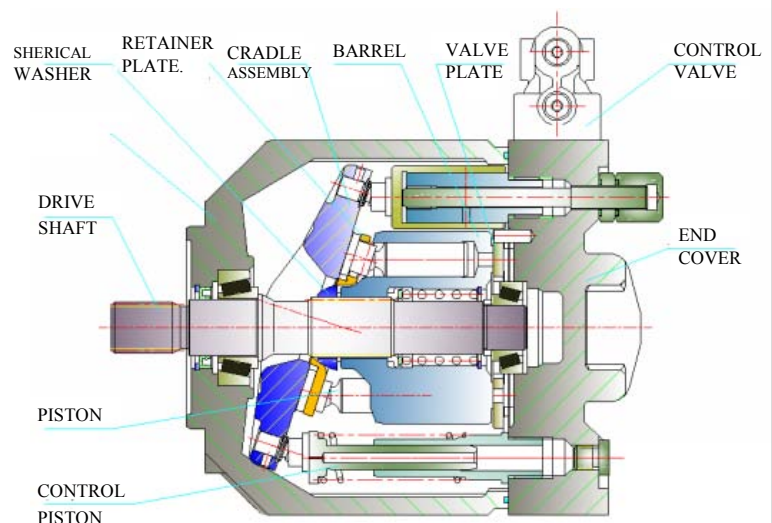
PEAK PRESSURE

5100 psi [350 bar]

FEATURES

- Variable volume piston pumps.
- Applied in open loop circuits
- Low noise level.
- Variety SAE & Metric mounting flanges.
- Good suction characteristics.
- Low noise level.
- High Power—Weight ratio
- Wide range of controls.
- Short Response time.
- Units can be piggybacked for multiple section assemblies
- Through drive available to adapt secondary pump.

SECTIONAL VIEW



IFP A10VSO PISTON PUMP ORDERING CODE



IFP A10VSO ORDERING CODE

SAMPLE CODE:	IFP	A10V	S	O	28	DR	/	31	R	P	S	C	62	NOO
Legend	(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1)	IFP - INTERNATIONAL FLUID POWER PRODUCTION													
(2)	A10V - HIGH PRESSURE / VARIABLE VOLUME AXIAL PISTON PUMP													
(3)	S - MAXIMUM VOLUME STOP													
(4)	O - OPEN LOOP													
(5)	FRAME SIZE - 18 / 28 / 45 / 71 / 100 / 140													
(6)	PUMP CONTROL: (DR) PRESSURE CONTROL (DRG) REMOTE CONTROL (DG) TWO POINT, DIRECT CONTROL (DFR) PRESSURE & FLOW CONTROL (DFR1) PRESSURE AND FLOW CONTROL (ORIFICE X CHANNEL CLOSED) (DFLR) PRESSURE, FLOW AND TORQUE CONTROL													
(7)	31 - DESIGN													
(8)	ROTATION: (R) C.W./RIGHT HAND (L) C.C.W./LEFT HAND													
(9)	SEALS: (P) Nitril / (V) Viton													
(10)	SHAFTS: (P) - METRIC PARALLEL WITH KEY (S) - SAE-SPLINE (K) - SAE- PARALLEL WITH KEY (U) - SAE SPLINE / REDUCED DIAMETER													
(11)	MOUNTING FLANGE: (C) - SAE 2 HOLE (size 18 - 100) (D) - SAE 4 HOLE (size 140)													
(12)	PORTING: (61) - SAE FLANGE REAR CONNECTIONS / UNC BOLTS (62) - SAE FLANGE SIDE CONNECTIONS / UNC BOLTS (11) - SAE FLANGE REAR CONNECTIONS / METRIC BOLTS (12) - SAE FLANGE SIDE CONNECTIONS / METRIC BOLTS <i>Note: Code 61/11 can only be used with NOO STANDARD COVER - Not with through drive</i>													
(13)	OPTIONAL THROUGH DRIVE: (NOO) - STANDARD COVER/NO THROUGH DRIVE ** OPTIONAL THROUGH DRIVES ** (K01) - SAE-A MOUNT / SAE-A COUPLING (Sizes 18-140) (K52) - SAE-A MOUNT / SAE-B COUPLING (Sizes 18-140) (K68) - SAE-B MOUNT / SAE-B COUPLING (Sizes 28-140) (K04) - SAE-B MOUNT / SAE-BB COUPLING (Sizes 45-100) (K07) - SAE-C MOUNT / SAE-C COUPLING (Sizes 71-140) (K24) - SAE-C MOUNT / SAE-CC COUPLING (Sizes 100-140) (K17) - SAE-D MOUNT / SAE-D COUPLING (Sizes 140)													

IFP A10VSO PISTON PUMPS OPERATING SPECIFICATIONS



Application Guidelines

SHAFT ALIGNMENT:

A10VSO units are designed for “inline drive” with a flexible coupling.
Side loading of shaft is possible contact factory for applications other than direct drive.

FILLING PUMP CASING:

Before operating fill pump casing with clean system fluid through upper most drain port. Drain line hose and piping must be installed in such a way as that the case is always full of oil during operation
(Note: Maximum case pressure 5 PSI / .5 BAR)

STARTING:

During initial starting it may be necessary to bleed air from outlet. IFP ABT20S air bleed valves are available for this purpose.

SYSTEM RELIEF VALVE:

Although the A10VSO series of pumps have compensator controls to limit maximum pressure a system relief adjusted 200 PSI higher than the compensator pressure is recommended for safety considerations.

A10VSO OPERATING SPECIFICATIONS

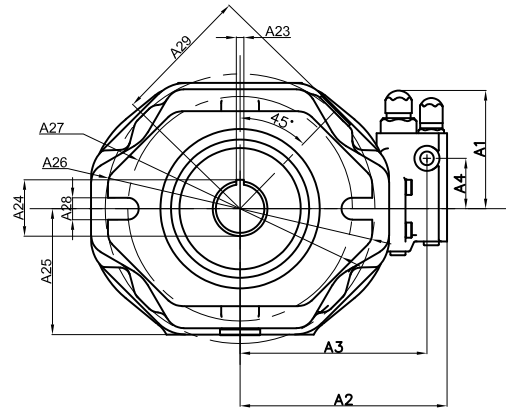
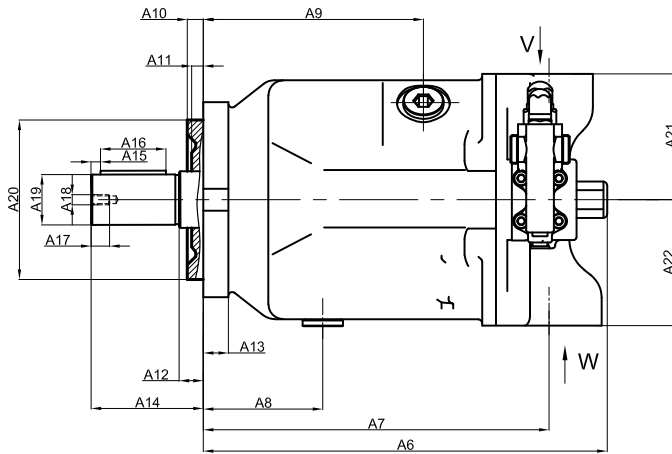
Based on using oil at 120 F (49 C) viscosity 150 SUS at 100 F (32 cSt at 38 C) and 0 psi inlet pressure

IFP MODEL SERIES	DISPLACEMENT in ³ /rev (cm ³ /rev)	DELIVERY GPM (LPM)		MAX. SPEED RPM	MAXIMUM PRESSURE PSI (BAR)		WEIGHT LBS (KG)
		1800 RPM	MAX. SPEED		OPERATING	PEAK	
IFP A10VSO-18	1.10 (18)	8.4 (32)	15.5 (59)	3300	4000 (280)	4600 (350)	21 (12)
IFP A10VSO-28	1.71 (28)	13.2 (50)	22.2 (84)	3000	4000 (280)	4600 (350)	33 (15)
IFP A10VSO-45	2.75 (45)	21.1 (81)	30.9 (117)	2600	4000 (280)	4600 (350)	46 (21)
IFP A10VSO-71	4.33 (45)	33.5 (127)	41.2 (156)	2200	4000 (280)	4600 (350)	72 (33)
IFP A10VSO-100	8.10 (100)	47.5 (180)	52.8 (200)	2000	4000 (280)	4600 (350)	99 (45)
IFP A10VSO-140	8.54 (140)	66.5 (252)	66.5 (252)	1800	4000 (280)	4600 (350)	132 (60)

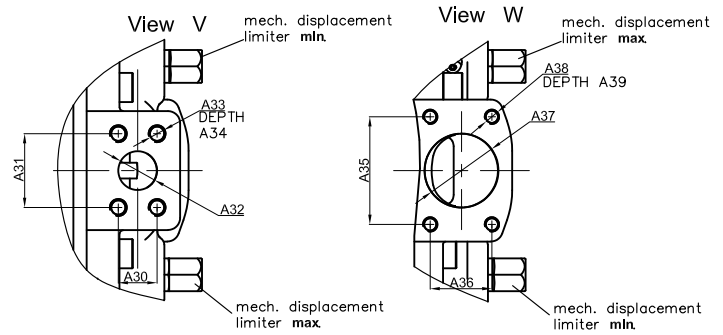
SOUND LEVEL PER ISO 4412			NOISE dB(A)	
MODEL	RPM	PSI	CUT-OFF	FULL DIPL.
IFP A10VSO-18	1800	2500	64 dB	65 dB
		4000		67 dB
IFP A10VSO-28	1800	2500	67 dB	69 dB
		4000		68 dB
IFP A10VSO-45	1800	2500	70 dB	72.5 dB
		4000		71.5 dB
IFP A10VSO-71	1800	2500	69 dB	74.5 dB
		4000		72.5 dB
IFP A10VSO-100	1800	2500	71 dB	75 dB
		4000		77 dB
IFP A10VSO-140	1800	2500	76 dB	82.5 dB
		4000		80.5 dB

IFP A10VSO PISTON PUMPS DIMENSIONAL DRAWINGS

(SIDE PORTED UNITS)



	INLET PORT - W	OUTLET PORT - V	CASE DRAIN PORT - L / L1
A10V18	1" SAE S. FLG	3/4" SAE S. FLG	9/16-18 SAE
A10V28	1 1/4" SAE S. FLG	3/4" SAE S. FLG	3/4-16 SAE
A10V45	1 1/2" SAE S. FLG	1" SAE S. FLG	7/8-14 SAE
A10V71	2" SAE S. FLG	1" SAE S. FLG	7/8-14 SAE
A10V100	2 1/2" SAE S. FLG	1" SAE S. FLG	7/8-14 SAE
A10V140	2 1/2" SAE S. FLG	1 1/4" SAE S. FLG	1 1/16-12 SAE



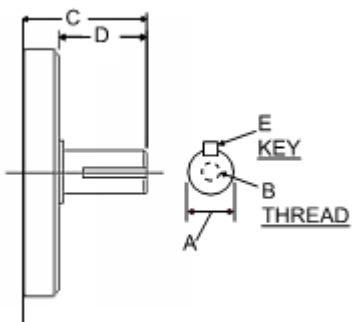
	18	28	45	71	100	140
A1	4.11 (104.5)	4.13 (105)	4.13 (105)	4.13 (105)	4.13 (105)	4.92 (125)
A2	4.94 (125.5)	5.33 (135.5)	5.72 (145.5)	6.27 (159.5)	6.46 (164.5)	8.22 (209)
A3	4.68 (119)	4.68 (119)	5.07 (129)	5.62 (143)	5.82 (148)	7.20 (183)
A4	1.57 (40)	1.57 (40)	1.57 (40)	1.57 (40)	1.57 (40)	1.02 (40)
A5	5.11 (130)	4.68 (119)	5.27 (162)	6.37 (162)	9.01 (229)	9.6 (244)
A6	7.67 (195)	8.11 (206)	8.81 (224)	10.11 (257)	12.83 (326)	13.26 (337)
A7	5.71 (145)	6.47 (164.5)	7.24 (184)	8.54 (217)	10.82 (275)	10.82 (275)
A8	1.69 (43)	1.57 (40)	1.77 (45)	2.08 (53)	3.74 (95)	3.07 (78)
A9	3.26 (83)	3.54 (90)	3.27 (96)	4.52 (115)	6.88 (175)	6.81 (173)
A10	.24 (6.3)	.35 (9)	.35 (9)	.35 (9)	.35 (9)	.35 (9)
A11	.24 (6.3)	.24 (6.3)	.24 (6.3)	.23 (6)	.23 (6)	.23 (6)
A12	.31 (8)	.39 (10)	.39 (10)	.39 (10)	.39 (10)	.39 (10)
A13	.45 (11.5)	.51 (13)	.51 (13)	.78 (20)	.67 (17)	.83 (21)
A14	1.02 (26)	1.81 (46)	2.05 (52)	2.36 (60)	3.15 (80)	3.62 (92)
A15	.08 (2)	.08 (2)	.12 (3)	.09 (2.5)	.06 (1.5)	.06 (1.5)
A16	.98 (25)	1.25 (32)	1.41 (36)	1.77 (45)	2.67 (68)	3.14 (80)
A17	.63 (16)	.63 (16)	.75 (19)	.87 (22)	1.1 (28)	1.41 (36)
A18	1/4-20UNC	1/4-20UNC	1/4-20UNC	1/4-20UNC	1/4-20UNC	1/4-20UNC
A19	.750 (19.05)	.875 (22.225)	1.00 (25.4)	1.25 (35)	1.50 (104.5)	1.75 (44.45)
A20	3.25 (82.5)	4.00 (101)	4.00 (101)	5.00 (127)	5.00 (127)	6.00 (152)

	18	28	45	71	100	140
A21	4.68 (119)	4.68 (119)	5.07 (129)	5.62 (143)	5.82 (148)	7.20 (183)
A22	2.48 (63)	3.15 (80)	3.54 (90)	4.09 (104)	3.94 (100)	4.33 (110)
A23	*	*	*	*	*	*
A24	*	*	*	*	*	*
A25	2.67 (68)	2.95 (75)	3.19 (81)	3.62 (92)	3.74 (95)	4.25 (108)
A26	4.11 (104.5)	6.85 (174)	6.96 (177)	8.27 (210)	8.27 (210)	*
A27	4.29 (109)	5.51 (140)	5.51 (140)	7.09 (180)	7.09 (180)	8.81 (224)
A28	.43 (11)	.55 (14)	.55 (14)	.71 (18)	.69 (17.5)	.71 (18)
A29	2.60 (66)	2.91 (74)	3.27 (83)	3.86 (98)	4.17 (106)	4.66 (118.5)
A30	.87 (22.2)	.87 (22.2)	1.03 (26.2)	1.19 (30.22)	1.25 (31.8)	1.25 (31.8)
A31	1.87 (47.6)	1.87 (47.6)	2.06 (52.4)	2.06 (52.4)	2.63 (66.7)	2.63 (66.7)
A32	.79 (20)	.79 (20)	.98 (25)	.98 (25)	1.33 (33)	1.26 (32)
A33	3/8-16UNC	3/8-16UNC	3/8-16UNC	3/8-16UNC	1/2-13UNC	1/2-13UNC
A34	.79 (20)	.67 (17)	.67 (17)	.79 (20)	.94 (24)	.79 (20)
A35	2.06 (52.4)	2.31 (58.47)	2.75 (69.9)	3.06 (77.8)	3.50 (88.9)	3.50 (88.9)
A36	1.03 (26.2)	1.16 (30.2)	1.41 (35.7)	1.69 (42.9)	2.00 (50.8)	2.00 (50.8)
A37	.98 (25)	1.26 (32)	1.57 (40)	1.97 (50)	2.40 (61)	2.48 (63)
A38	3/8-16UNC	7/16-16UNC	1/2-13UNC	1/2-13UNC	1/2-13UNC	1/2-13UNC
A39	.79 (20)	.67 (17)	.79 (20)	.79 (20)	.79 (20)	.79 (20)
A40						

IFP A10VSO PISTON PUMPS SHAFT SPECIFICATIONS

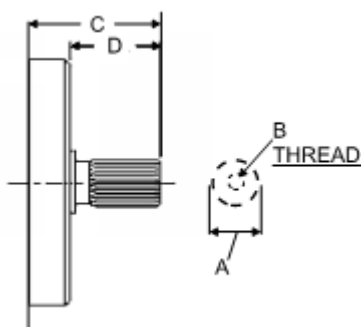


SHAFT CODE ** K ** PARALLEL WITH KEY



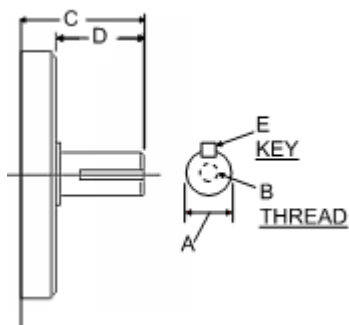
	A	B	C	D	E
SIZE: 18	DIA: 0.750 ~ 0.7492 [19.05 (-0.002)]	1/4"~20UNC.2B	1.61 (41)	1.30 (33.1)	.18 SQ X1.125 (4.76 X 28.6)
SIZE: 28	DIA: 0.875 ~ 0.874 [22.225 (-0.002)]	1/4"~20UNC.2B	1.61 (41)	1.61 (41)	.25 SQ X1.37 (6.38 X 35)
SIZE: 45	DIA: 1.00 ~ 0.9988 [25.4 (-0.002)]	1/4"~20UNC.2B	1.61 (41)	1.61 (41)	.25 SQ X1.37 (6.38 X 35)
SIZE: 71	DIA: 1.2500 ~ 1.2488 [31.75 (-0.003)]	5/16"~18UNC.2B	1.61 (41)	1.61 (41)	.312 SQ X1.62 (7.94 X 41.3)
SIZE: 100	DIA: 1.5000 ~ 1.4988 [38.1 (-0.003)]	7/16"~20UNC.2B	1.61 (41)	1.61 (41)	.375 SQ X1.96 (9.52 X 50)
SIZE: 140					

SHAFT CODE ** S ** SAE - SPLINE



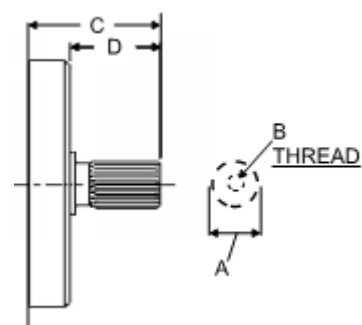
	A	B	C	D	E
SIZE: 18	3/4" DIA. 11 TOOTH 16/32 DP	1/4"~20UNC.2B	1.50 (38)	.87 (22)	
SIZE: 28	7/8" DIA. 13 TOOTH 16/32 DP	1/4"~20UNC.2B	1.64 (41)	.98 (25)	
SIZE: 45	1" DIA. 15 TOOTH 16/32 DP	1/4"~20UNC.2B	1.81 (45.9)	1.18 (30)	
SIZE: 71	1 1/4" DIA. 14 TOOTH 16/32 DP	5/16"~18UNC.2B	2.18 (55.4)	1.56 (39.5)	
SIZE: 100	1 1/2" DIA. 17 TOOTH 12/24 DP	7/16"~20UNC.2B	2.44 (61.9)	1.72 (43.6)	
SIZE: 140	1 3/4" DIA. 13 TOOTH 8/16 DP	5/8"~11UNC.2B	2.95 (75)	2.16 (55)	

SHAFT CODE ** P ** METRIC PARALLEL WITH KEY



	A	B	C	D	E
SIZE: 18	DIA: 18 mm		38	30	6mm SQ X 25
SIZE: 28	DIA: 22 mm		41	33.1	6mm SQ X 25
SIZE: 45	DIA: 25 mm		45.9	38	6mm SQ X 25
SIZE: 71	DIA: 32 mm		55.4	47.5	6mm SQ X 25
SIZE: 100	DIA: 40 mm		61.9	54	6mm SQ X 25
SIZE: 140	DIA: 45 mm		75	67	6mm SQ X 25

SHAFT CODE ** U ** SAE - SPLINE / REDUCED DIAMETER



	A	B	C	D	E
SIZE: 18	5/8" DIA. 9 TOOTH 16/32 DP		1.24 (31.8)	.62 (15.8)	
SIZE: 28					
SIZE: 45	7/8" DIA. 13 TOOTH 16/32 DP	1/4"~20UNC.2B	1.64 (41)	.98 (25)	
SIZE: 71					
SIZE: 100	1 1/4" DIA. 14 TOOTH 16/32 DP	5/16"~18UNC.2B	2.18 (55.4)	1.56 (39.5)	
SIZE: 140					

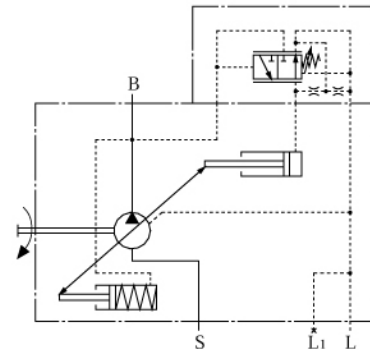
IFP A10VSO PISTON PUMPS PRESSURE CONTROLS



DR - PRESSURE CONTROL

DR pressure control maintains a constant system pressure at the outlet of the pump. The pump supplies flow until the the preset adjustment pressure setting is reached. Pressure setting may be steplessly set at the pilot valve .

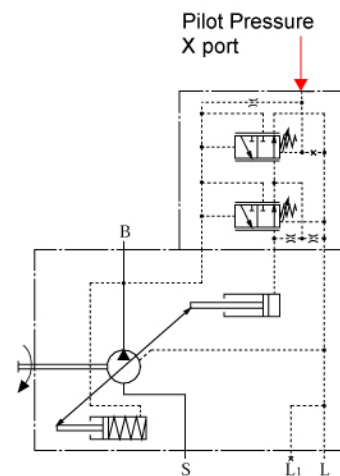
Setting range: 290 PSI (20 bar) ~ 4000 PSI (280 bar)



DRG - PRESSURE CONTROL REMOTE

DRG pressure control function and design are the same as DR control with the added feature of remote adjustment of the control pressure with the use of an external relief valve. External relief is connected to the X port on the pressure control and the differential pressure at the control spool is set as standard to 290 PSI (20 bar) pilot flow will be .4 gpm (1.5 L/min).

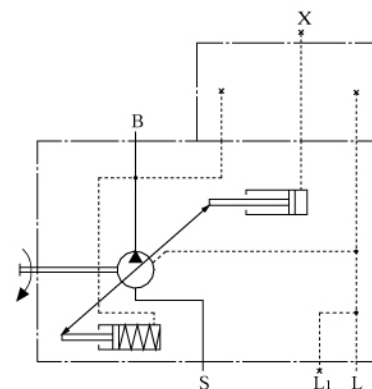
Setting range: 290 PSI (20 bar) ~ 4000 PSI (280 bar)



DG - TWO POINT, DIRECT CONTROL

DG pressure control allows pump flow to be switched from maximum flow to minimum flow by supplying an external pilot switching pressure at port X.

Pump can only be switched between maximum & minimum flow , a minimum pilot pressure of 725 PSI is required. The actual switching pilot pressure required will be dependent on the system operating pressure at the outlet of the pump



Ports B - Pressure port
S - Inlet port
L L1 - Case drain ports
X - Pilot pressure port

IFP A10VSO PISTON PUMPS PRESSURE CONTROLS

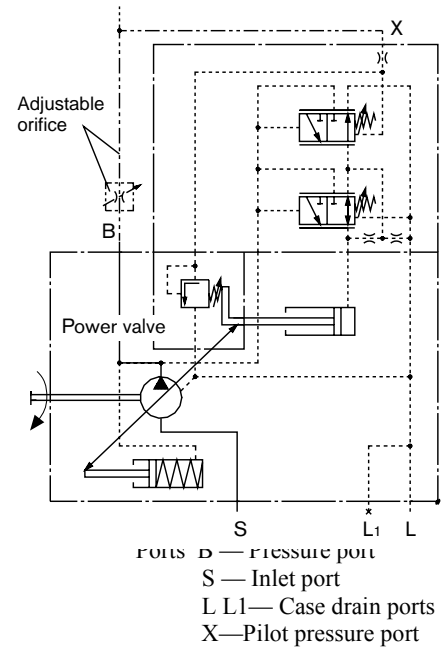


DFR / DFR1 —PRESSURE FLOW CONTROL

DFR pressure provides a pressure control function along with the means to control pump flow by varying a Differential pressure across an orifice (fixed orifice, adjustable flow control, directional control). The pump supplies only the amount of system flow as controlled by the adjustable orifice.

In the DFR1 control the orifice between the X port and tank is plugged

Setting range: 290 PSI (20 bar) ~ 4000 PSI (280 bar)



DFLR—PRESSURE / FLOW / POWER CONTROL

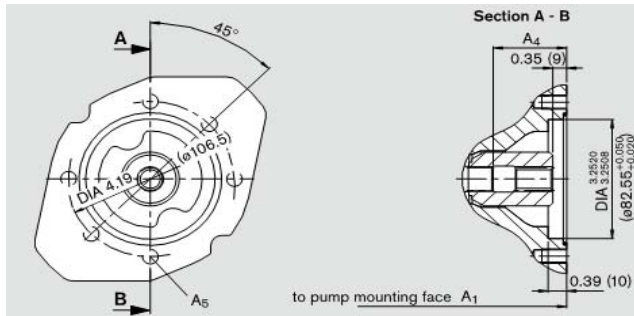
** CONTACT FACTORY FOR DFLR CONTROL **

IFP A10VSO PISTON PUMPS THROUGH DRIVE SPECIFICATIONS



K01 FLANGE: SAE-A

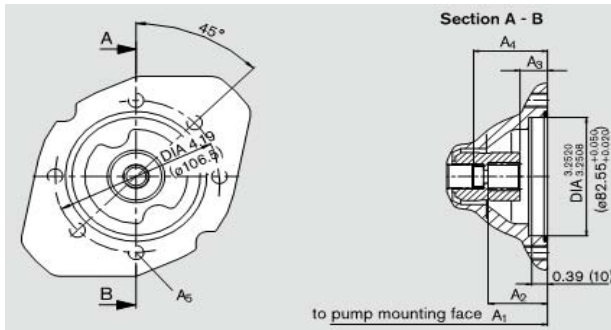
Coupling to adapt spline shaft = 5/8 - 9 teeth 16/32 DP (SAE-A)



	A1	A4	A5
A10VSO18	7.17 (182)	1.65 (42)	M10
A10VSO28	8.03 (204)	1.85 (47)	M10
A10VSO45	9.02 (229)	2.09 (53)	M10
A10VSO71	10.51(267)	2.09 (61)	M10
A10VSO100	13.31(338)	2.56 (65)	M10
A10VSO140	13.78(350)	3.03 (77)	M10

K52 FLANGE: SAE-A

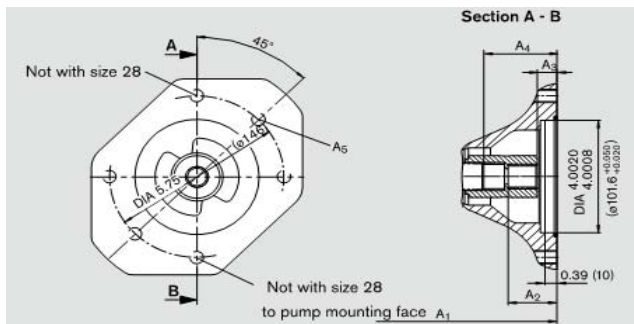
Coupling to adapt spline shaft = 3/4 - 11 teeth 16/32 DP



	A1	A2	A3	A4	A5
A10VSO18	7.17 (182)	1.57 (40)	.74 (18.8)	1.69 (43)	M10
A10VSO28	8.03 (204)	1.53 (39)	.74 (18.8)	1.85 (47)	M10
A10VSO45	9.02 (229)	1.57 (40)	.75 (18.9)	2.09 (53)	M10
A10VSO71	10.51(267)	1.57 (40)	.84 (21.3)	2.40 (61)	M10
A10VSO100	13.31(338)	1.57 (40)	.75 (18.9)	2.56 (65)	M10
A10VSO140	13.78(350)	1.61 (41)	.75 (18.9)	3.03 (77)	M10

K68 FLANGE: SAE-B

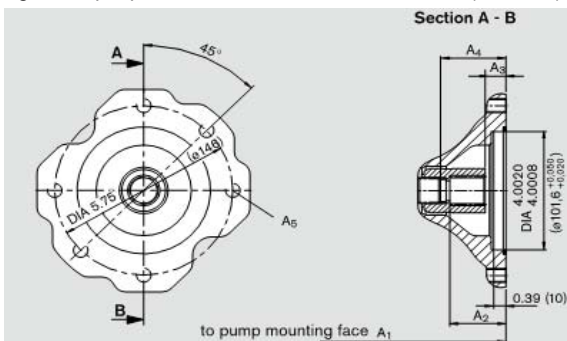
Coupling to adapt spline shaft = 7/8 - 13 teeth 16/32 DP (SAE-B)



	A1	A2	A3	A4	A5
A10VSO28	8.03 (204)	1.69 (43)	.74 (18.8)	1.85 (47)	M12
A10VSO45	9.02 (229)	1.65 (42)	.75 (18.9)	2.09 (53)	M12
A10VSO71	10.51(267)	1.69 (43)	.84 (21.3)	2.40 (61)	M12
A10VSO100	13.31(338)	1.61 (41)	.75 (18.9)	2.56 (65)	M12
A10VSO140	13.78(350)	1.73 (44)	.75 (18.9)	3.03 (77)	M12

K04 FLANGE: SAE-B

Coupling to adapt spline shaft = 1" - 15 teeth 16/32 DP (SAE-BB)



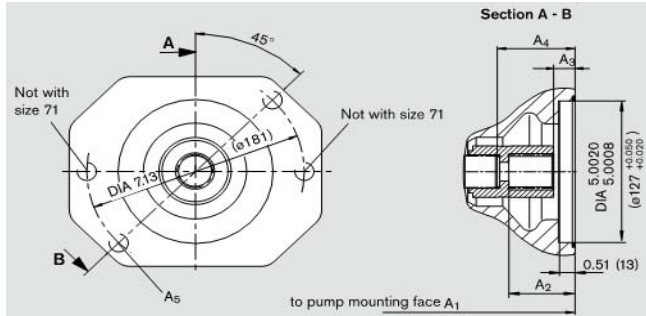
	A1	A2	A3	A4	A5
A10VSO45	9.02 (229)	1.87 (47.5)	.73 (18.4)	2.09 (53)	M10
A10VSO71	10.51(267)	1.87 (47.5)	.82 (20.8)	2.40 (61)	M10
A10VSO100	13.31(338)	1.87 (47.5)	.72 (18.2)	2.56 (65)	M10
A10VSO140	13.78(350)	1.87 (47.5)	.73 (18.4)	3.03 (77)	M10

IFP A10VSO PISTON PUMPS THROUGH DRIVE SPECIFICATIONS



K07 FLANGE: SAE-C

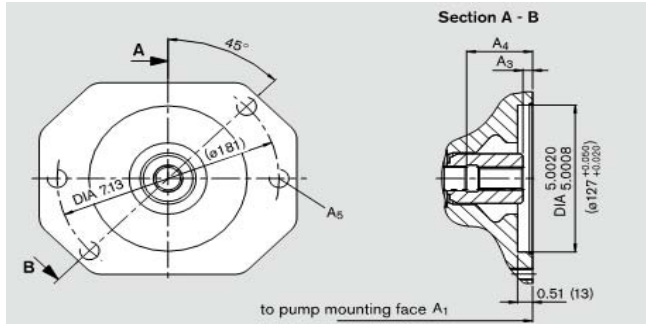
Coupling to adapt spline shaft = 11/4 - 14 teeth 12/24 DP (SAE-C)



	A1	A2	A3	A4	A5
A10VSO71	10.51(267)	2.18 (55.5)	.87 (22)	2.40 (61)	M16
A10VSO100	13.31(338)	2.24 (57)	.75 (18.9)	2.56 (65)	M16
A10VSO140	13.78(350)	2.36 (60)	.75 (18.9)	3.03 (77)	M16

K24 FLANGE: SAE-C

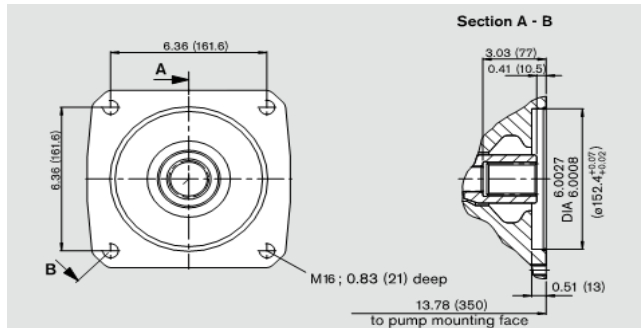
Coupling to adapt spline shaft = 11/2 - 17 teeth 12/24 DP(SAE-CC)



	A1	A2	A3	A4	A5
A10VSO100	13.31(338)		.31 (8)	2.56 (65)	M16
A10VSO140	13.78(350)		.35 (9)	3.03 (77)	M16

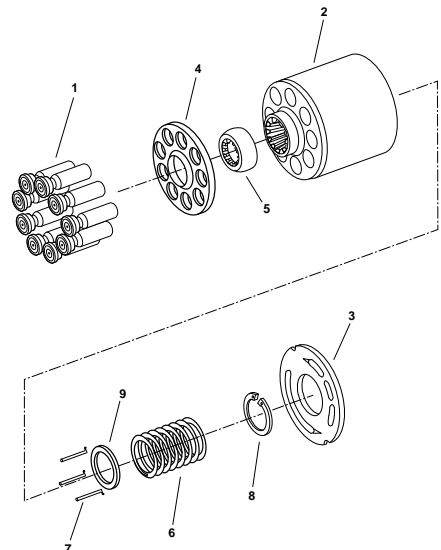
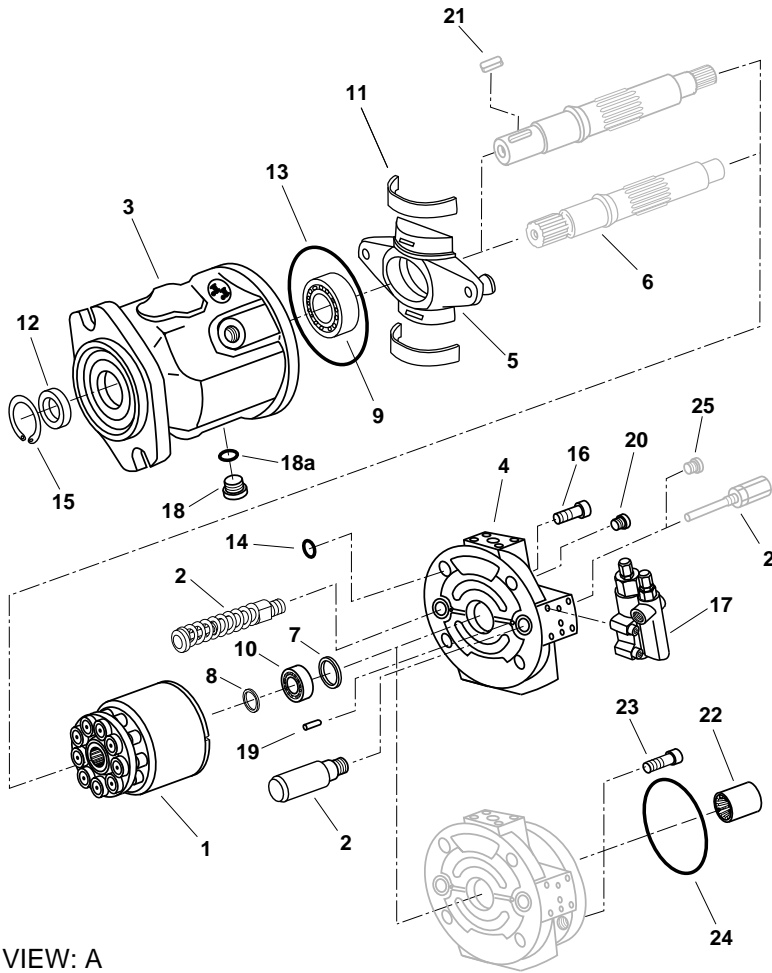
K17 FLANGE: SAE-D

Coupling to adapt spline shaft = 13/4 - 13 teeth 8/16 DP (SAE-D)

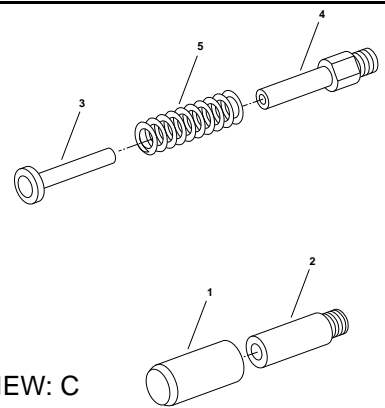


	A1	A2	A3	A4	A5
A10VSO140	NOTE: K17 USED A10VSO140 ONLY				

IFP A10VSO PISTON PUMPS PARTS DRAWINGS



VIEW: B



VIEW: C

VIEW: A

ITEM # 1: ROTARY GROUP	ITEM # 2: CONTROL-ASS.	ITEM # 3: PUMP HOUSING	ITEM # 4: END COVER-PORTS
ITEM # 5: CRADEL ASS.	ITEM # 6: SHAFT - DRIVE	ITEM # 7: WASHER	ITEM # 8: ADJUSTING DISC
ITEM # 9: TAPERED BRG	ITEM # 10: TAPERED BRG	ITEM # 11: BEARING CRADLE	ITEM # 12: SEAL - SHAFT
ITEM # 13: O - RING	ITEM # 14: O - RING	ITEM # 15: SNAP RING	ITEM # 16: CAP SCREWS
ITEM # 17: CONTROL ASS.	ITEM # 18: PLUG	ITEM # 19: DOWEL PINS	ITEM # 20: PLUG
ITEM # 21: KEY	ITEM # 22: COUPLING	ITEM # 23: O - RING	ITEM # 24: O - RING
ITEM # 25: PLUG			

VIEW: B

ITEM # 1: PISTONS	ITEM # 2: BARREL	ITEM # 3: LENS PLATE	ITEM # 4: RETAINER PLATE
ITEM # 5: RETAINING BALL	ITEM # 6: SPRING	ITEM # 7: PRESSURE PINS	ITEM # 8: RETAINING RING
ITEM # 9: RETAINING CLIP			

VIEW: C

ITEM # 1: CONTROL PISTON	ITEM # 2: PISTON GUIDE	ITEM # 3: COUNTER PISTON	ITEM # 4: PISTON GUIDE
ITEM # 5: SPRING	ITEM # 6: LOCK NUT	ITEM # 7: ACCORN NUT	ITEM # 8: SCREW MAX. ADJ.
ITEM # 9: O-RING			

IFP PVH57 / 74 / 98 / 131 VARIABLE AXIAL PISTON PUMPS



Available sizes:

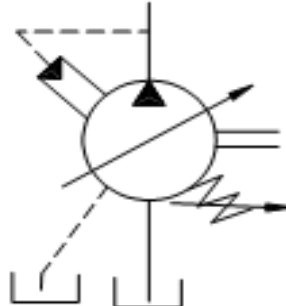
- 57 - 3.5 in³/rev [57.4 cm³/rev]
- 74 - 4.5 in³/rev [73.7 cm³/rev]
- 98 - 6.0 in³/rev [98.3 cm³/rev]
- 131 - 8.0 in³/rev [131.1 cm³/rev]

Nominal Pressure:

3625 psi [250 bar]

Peak Pressure:

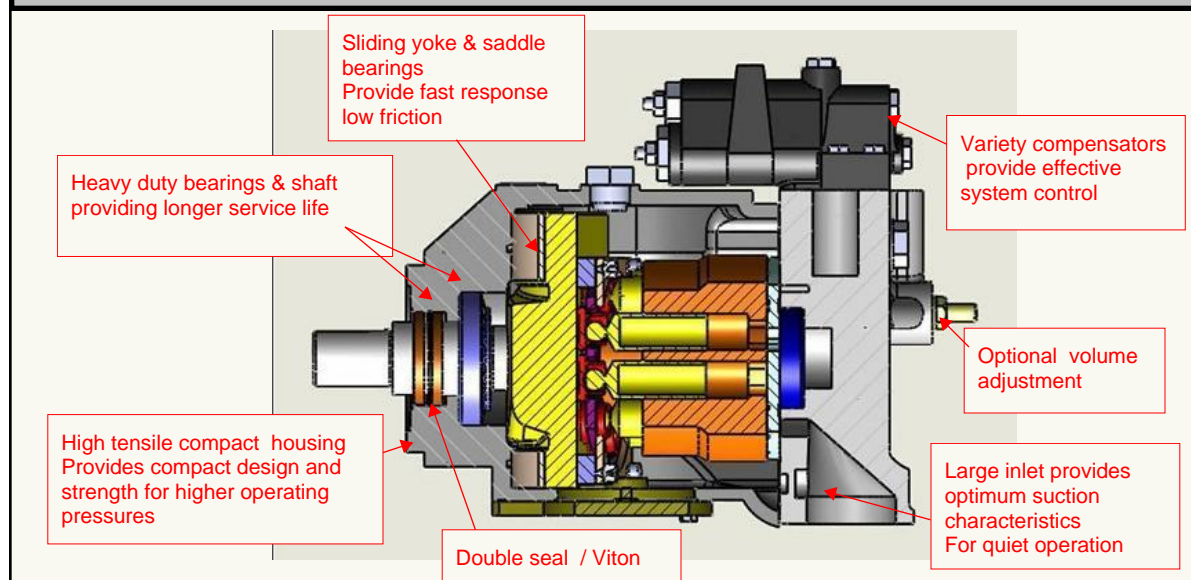
4050 psi [280 bar]



FEATURES

- * Variable volume piston pumps
- * Low noise level
- * Good suction characteristics
- * Industrial & Mobile applications
- * Thru-drive available to adapt secondary pump
- * Applied in open loop circuits
- * High Power / Weight ratio
- * Wide range of controls
- * Long service life
- * Units can be piggybacked for multiple section assemblies

SECTIONAL VIEW



IFP PVH PISTON PUMP ORDERING CODE



IFP PVH ORDERING CODE OPTIONS

SAMPLE CODE:	IFP	PVH	131	C	R	*	F	1	S	10	C	25	*	*	31
Legend	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1)	IFP - INTERNATIONAL FLUID POWER PRODUCTION														
(2)	PVH - HIGH PRESSURE / VARIABLE VOLUME AXIAL PISTON PUMP														
(3)	FRAME SIZE - 57 / 74 / 98 / 131														
(4)	MOUNTING FLANGE - C SAE "C" 4 BOLT TYPE														
(5)	ROTATION: R - RIGHT HAND / L - LEFT HAND														
(6)	THROUGH DRIVE OPTIONS: (BLANK) - NO THROUGH DRIVE (A) SAE-A 2 BOLT REAR FLANGE MOUNT (B) SAE-B 2 & 4 BOLT REAR FLANGED MOUNTING (C) SAE-C 2 & 4 BOLT REAR FLANGED MOUNTING (S) ADJUSTABLE MAXIMUM STOP (NON THROUGH DRIVE UNITS ONLY)														
(7)	CONNECTING PORTS: (F) SAE 4-BOLT FLANGED PORTS (M) 4 BOLT FLANGED PORTS / WITH METRIC BOLT THREADS														
(8)	DRIVE SHAFTS: (N) SHORT STRAIGHT KEYED (1) SAE-C STRAIGHT KEYED (2) SAE-C SPLINED 14 TOOTH (3) SAE-CC SPLINED 17 TOOTH (12) SAE-D SPLINED 13 TOOTH (13) SAE-CC STRAIGHT KEYED (16) SAE-D STRAIGHT KEYED														
(9)	SHAFT SEAL: (S) SINGLE (D) DOUBLE														
(10)	ROTATION: R - RIGHT HAND / L - LEFT HAND														
(11)	PRESSURE ADJUSTMENT RANGE: (C) 1015 - 3625 PSI (70-250 BAR) (CM) 580 - 1885 PSI (40-130 BAR)														
(12)	PRESSURE SETTINGS FACTORY: (25) 3625 PSI (250 BAR) FOR MODEL "C" (7) 1015 PSI (70 BAR) FOR MODEL "CM"														
(13)	ADDITIONAL CONTROL FUNCTIONS: (BLANK) - NO ADDITIONAL CONTROL (V) LOAD SENCING (T) TORQUE LIMITER (VT) LOAD SENCING AND TORQUE LIMITER														
(14)	TORQUE LIMITER FACTORY SETTINGS: (BLANK) NO TORQUE LIMITER CONTROL (**) CUSTOMERS TORQUE LIMITER SETTING IN 145 PSI (10 BAR) INCREMENTS														
(15)	CONTROL DESIGN NUMBER: (31) C, CM, C**V OR IC CONTROL (13) C**T CONTROLS (14) C**VT CONTROLS														

IFP PVH PISTON PUMP OPERATING SPECIFICATIONS



Application Guidelines

SHAFT ALIGNMENT:

IFP PVH Piston Pumps are designed for “inline drive” with a flexible coupling. Side loading of shaft is possible, contact the factory for applications other than direct drive.

FILLING PUMP CASING:

Before operating fill pump casing with clean system fluid through upper most drain port. Drain line hose and piping must be installed in such a way as that the case is always full of oil during operation
(Note: Maximum case pressure 5 PSI / .5 BAR)

STARTING:

During initial starting it may be necessary to bleed air from outlet. IFP ABT20S air bleed valves are available for this purpose.

SYSTEM RELIEF VALVE:

Although the PVH series of pumps have compensator controls to limit maximum pressure a system relief adjusted 200 PSI higher than the compensator pressure is recommended for safety considerations.

IFP PVH PISTON PUMP OPERATING SPECIFICATIONS								
Based on using oil at 120 F (49 C) viscosity 150 SUS at 100 F (32 cSt at 38 C) and 0 psi inlet pressure								
IFP MODEL SERIES	DISPLACEMENT in ³ /rev (cm ³ /rev)	DELIVERY GPM (LPM)		MAX. SPEED RPM	RATED PRESSURE PSI (BAR)	FLUID CONNECTIONS SAE-4 BOLT FLANGE		WEIGHT LBS (KG)
		1800 RPM	MAX. SPEED			PRESSURE PORT	SUCTION PORT	
IFP PVH57	3.5 (57.4)	26 (98)	35 (134)	2400	3625 (250)	1" S.Fl _g (code 61)	2" S.Fl _g (code 61)	79 (36)
IFP PVH74	4.5 (73.7)	33 (125)	41 (156)	2200	3625 (250))	1" S.Fl _g (code 61)	2" S.Fl _g (code 61)	99 (45)
IFP PVH98	6.0 (98.3)	45 (170)	53 (202)	2100	3625 (250)	1" S.Fl _g (code 61)	2 1/2" S.Fl _g (code 61)	108 (49)
IFP PVH131	8.0 (131.1)	59 (223)	66 (249)	2000	3625 (250)	1 1/4" S.Fl _g (code 62)	2 1/2" S.Fl _g (code 61)	145 (66)

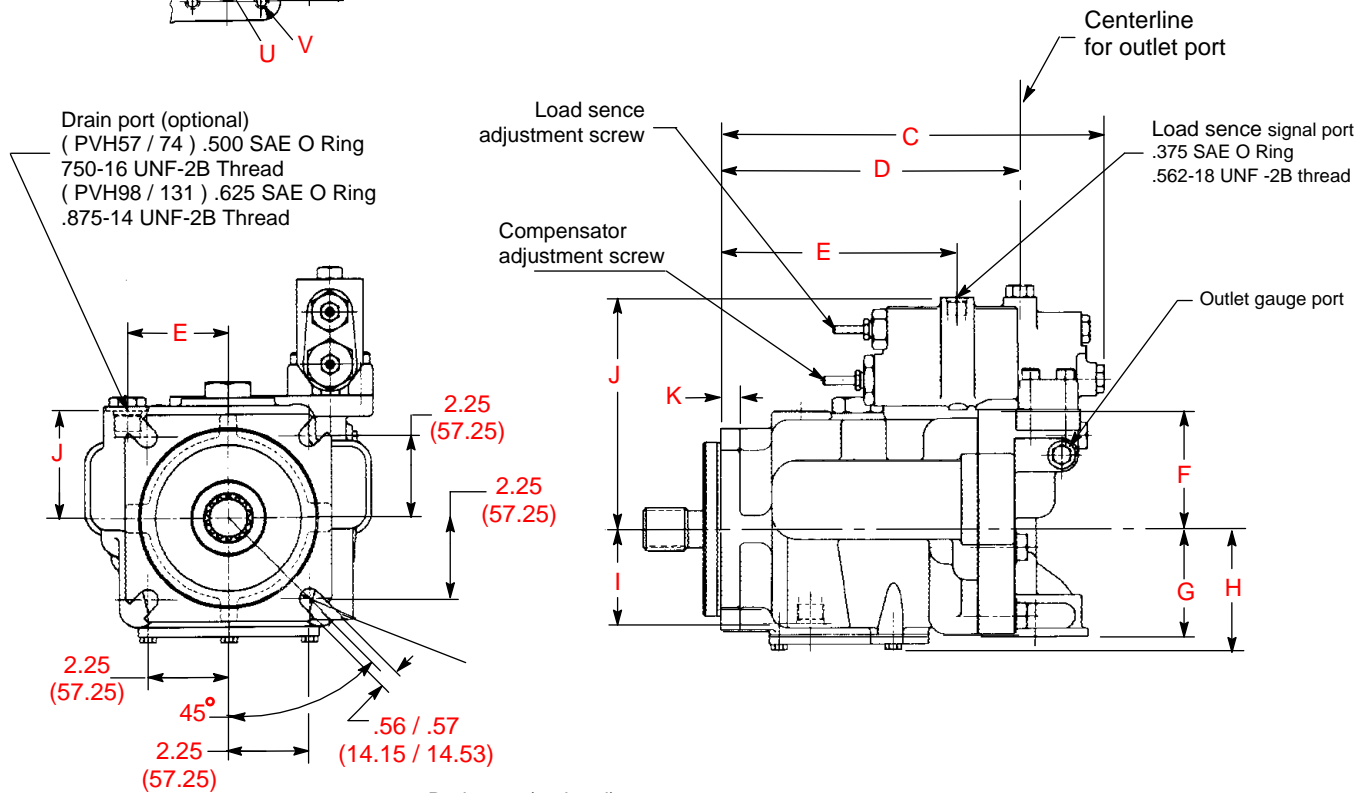
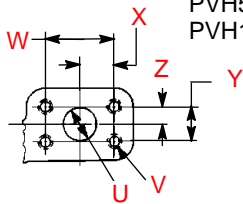
SOUND LEVEL dB PER ISO 4412					
MODEL	RPM	dB @ 1015 PSI (70 BAR)	dB @ 2030 PSI (140 BAR)	dB @ 3025 PSI (210 BAR)	dB @ 3625 PSI (250 BAR)
IFP PVH57	1200	69 dB	74 dB	75 dB	75 dB
	1800	75 dB	76 dB	79 dB	79 dB
IFP PVH74	1200	69 dB	74 dB	75 dB	75 dB
	1800	74 dB	76 dB	79 dB	79 dB
IFP PVH98	1200	69 dB	71 dB	75 dB	76 dB
	1800	73 dB	76 dB	80 dB	82 dB
IFP PVH131	1200	74 dB	79 dB	81 dB	81 dB
	1800	78 dB	85 dB	87 dB	88 dB

IFP PVH PISTON PUMP DIMENSIONAL DRAWINGS

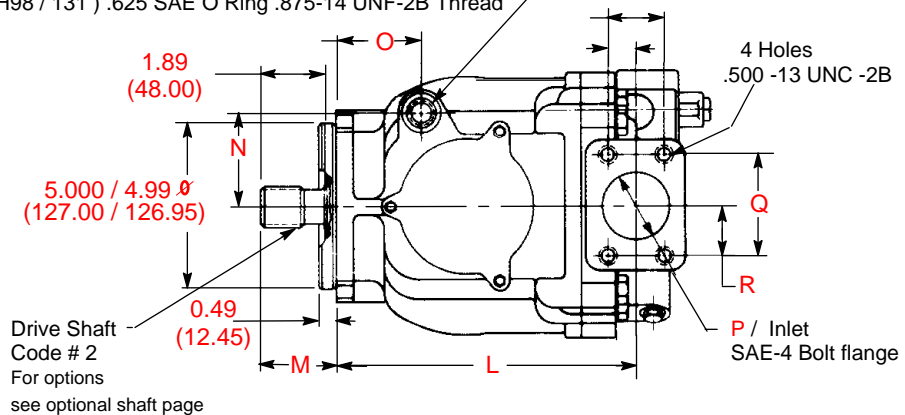


Dimensions shown for PVH Pump with a "C*V"
Pressure Compensated and Load Sense Control

Outlet Port:
PVH57 / 74 / 98 - Code 61
PVH131 - Code 62



Drain port (optional)
(PVH57 / 74) .500 SAE O Ring 750-16 UNF-2B Thread
(PVH98 / 131) .625 SAE O Ring .875-14 UNF-2B Thread



Dimensions shown - inch (mm)

IFP PVH PISTON PUMP DIMENSIONS



	A	B	C	D	E	F	G	H	I
PVH57	2.99 (76.0)	2.79 (71.0)	10.86 (275.8)	8.52 (216.4)	6.68 (169.6)	3.39 (86.0)	3.11 (79.0)	3.46 (88.0)	2.71 (69.0)
PVH74	3.46 (88.0)	2.75 (70.0)	11.83 (300.5)	9.50 (241.2)	7.65 (194.3)	3.62 (92.0)	3.70 (94.0)	3.74 (95.0)	3.19 (81.0)
PVH98	3.67 (93.1)	3.35 (85.0)	12.31 (312.7)	9.89 (251.3)	8.11 (206.1)	3.72 (94.5)	3.44 (87.5)	3.82 (97.1)	3.15 (80.1)
PVH131	4.31 (109.4)	3.50 (88.8)	13.27 (337.0)	11.04 (280.4)	9.07 (230.4)	4.72 (120.0)	4.29 (109.0)	4.29 (107.4)	3.34 (84.8)

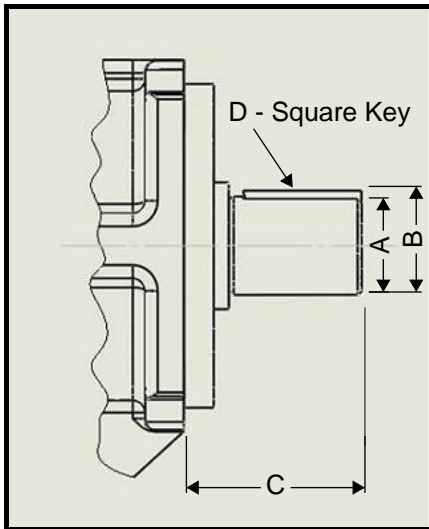
	J	K	L	M	N	O	P	Q	R
PVH57	6.60 (168.0)	0.55 (14.0)	8.95 (227.4)	2.21 (56.1)	2.80 (71.0)	2.55 (71.0)	2.0 (50.8)	3.06 (77.76)	1.53 (38.88)
PVH74	6.85 (174.0)	0.59 (15.0)	9.85 (250.1)	2.44 (62.0)	2.75 (70.0)	2.68 (68.1)	2.0 (50.8)	3.06 (77.76)	1.53 (38.88)
PVH98	6.95 (176.5)	0.63 (16.0)	10.60 (269.3)	2.18 (55.5)	3.35 (55.5)	2.92 (74.2)	2.5 (63.5)	3.50 (88.9)	1.75 (44.45)
PVH131	7.83 (199.1)	0.59 (15.0)	11.75 (289.6)	2.44 (62.0)	3.50 (88.8)	2.78 (70.6)	2.5 (63.5)	3.50 (88.9)	1.75 (44.45)

	S	T	U	V	W	X	Y	Z
PVH57	1.69 (42.88)	0.84 (21.44)	1.0 (25.4)	3/8-16 (M10X1.5)	2.06 (52.37)	1.03 (26.19)	1.03 (26.19)	0.52 (13.10)
PVH74	1.69 (42.88)	0.84 (21.44)	1.0 (25.4)	3/8-16 (M10X1.5)	2.06 (52.37)	1.03 (26.19)	1.03 (26.19)	0.52 (13.10)
PVH98	2.0 (50.8)	1.0 (25.4)	1.0 (25.4)	3/8-16 (M10X1.5)	2.06 (52.37)	1.03 (26.19)	1.03 (26.19)	0.52 (13.10)
PVH131	1.75 (50.8)	1.0 (25.4)	1.25 (31.75)	1/2-13 (M14X2)	2.63 (66.68)	1.31 (33.34)	1.25 (31.75)	0.630 (15.88)

Dimensions: in. (mm)

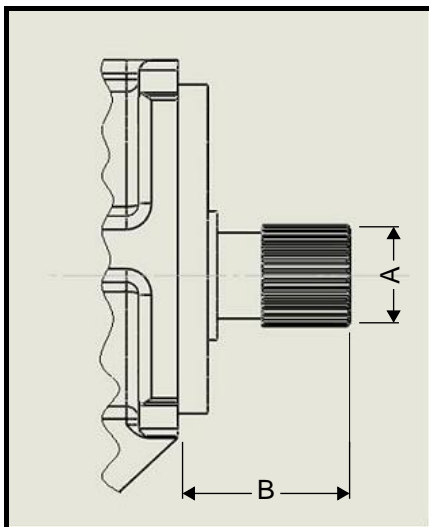
PVH57 / 74 / 98 / 131

DRIVE SHAFTS



Straight Keyed Shafts

Shaft Code	Shaft Description	A	B	C	D
1	SAE "C" Straight Keyed	1.25 (31.75)	1.38 (35.32)	2.20 (56.0)	.312 (7.93)
13	SAE "CC" Straight Keyed	1.50 (38.1)	1.67 (42.39)	2.44 (62.0)	.375 (9.52)
16	SAE "D" Straight Keyed	1.75 (44.45)	1.95 (49.46)	2.95 (75.0)	.438 (11.11)
N	Short Straight Keyed	1.26 (32.00)	1.38 (35.00)	2.68 (68.1)	.393 (10.00)



Spline Shafts

Shaft Code	Shaft Description	Number of teeth	A	B
2	SAE "C" 14 T 12/24 DP	14	1.25 (31.75)	2.18 (55.4)
3	SAE "CC" 17 T 12/24 DP	17	1.50 (31.75)	2.44 (38.10)
12	SAE "D" 13 T 8/16 DP	13	1.75 (31.75)	2.95 (44.45)

Shafts torque limits

Shaft Code	Shaft description	Pump series no thru-drive	Pump series with thru-drive	Maximum input torque lb.in (Nm)	Maximum thru-drive output torque lb.in (Nm)
N	ISO 3019/2 Short Straight keyed	PVH57 PVH74	-- --	3,980 (450) 3,980 (450)	-- --
1	SAE "C" Straight keyed	PVH57 PVH74 PVH98	PVH57 -- --	3,980 (450) 3,980 (450) 3,980 (450)	2,965 (335) -- --
2	SAE "C" 14T 12/24 DP spline	PVH57 PVH74 PVH98	PVH57 -- --	5,660 (640) 5,660 (640) 5,660 (640)	2,965 (335) -- --
3	SAE "CC" 17T 12/24 DP spline	-- -- PVH131	PVH74 PVH98 PVH131	10,750 (1215) 10,750 (1215) 10,750 (1215)	4,070 (460) 5,660 (640) 5,660 (640)
12	SAE "D" 13T 8/16 DP Spline	PVH131	PVH131	10,750 (1215)	5,660 (640)
13	SAE "CC" Straight keyed	-- -- PVH131	PVH74 PVH74 --	6,770 (765) 6,770 (765) 6,770 (765)	4,070 (460) 4,070 (460) --
16	SAE "D" Straight keyed	--	PVH131	10,620 (1200)	5,660 (640)

IFP PVH PISTON PUMP PRESSURE CONTROLS



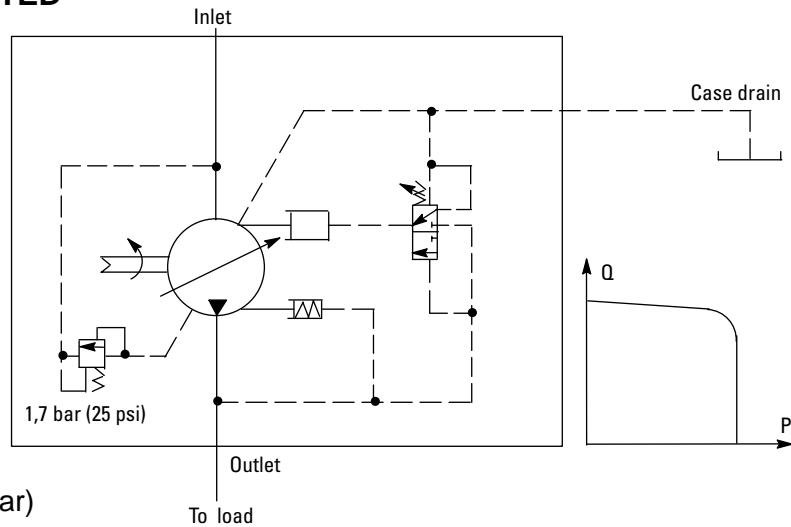
C*CM - PRESSURE COMPENSATED

C / CM pressure control maintains a constant system pressure at the outlet of the pump. The pump supplies flow at maximum displacement until the preset adjustment pressure setting is reached. Pressure setting may be steplessly set at the pilot valve. The compensator is available in two pressure ranges

Setting range:

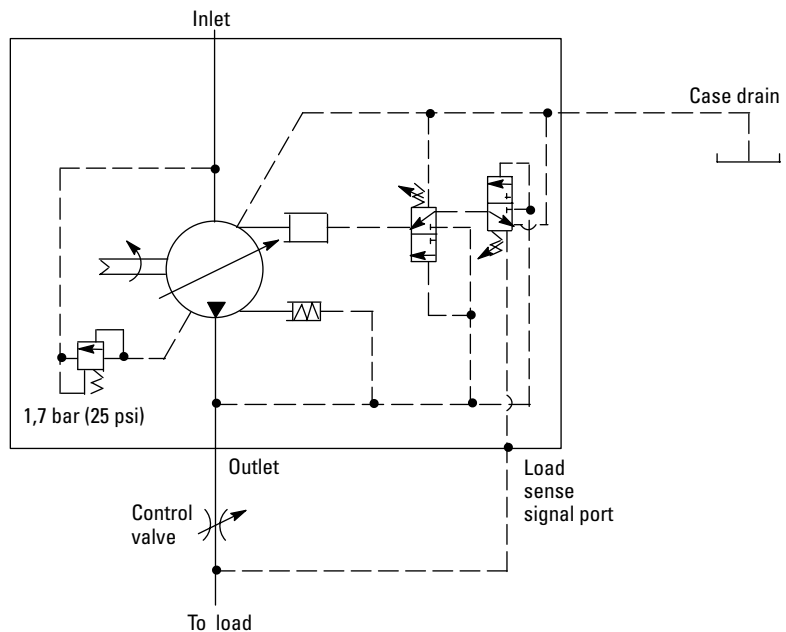
C = 1015 PSI ~ 3625 PSI (70 - 250 bar)

CM = 580 PSI ~ 1885 PSI (40 - 135 bar)



C*V - LOAD SENSING AND PRESSURE COMPENSATED

C*V pressure control provides power matching of the pump pressure and output flow to the systems load demand. Load sensing ensures the pump always provides only the amount of flow required by the load. The pump operating pressure adjusts to the actual load pressure demand plus a pressure differential required for the control action. If the load pressure exceeds the system pressure setting, the pressure compensator de-strokes the pump. When system is not demanding power, the load sense control will operate in an energy saving stand-by mode.

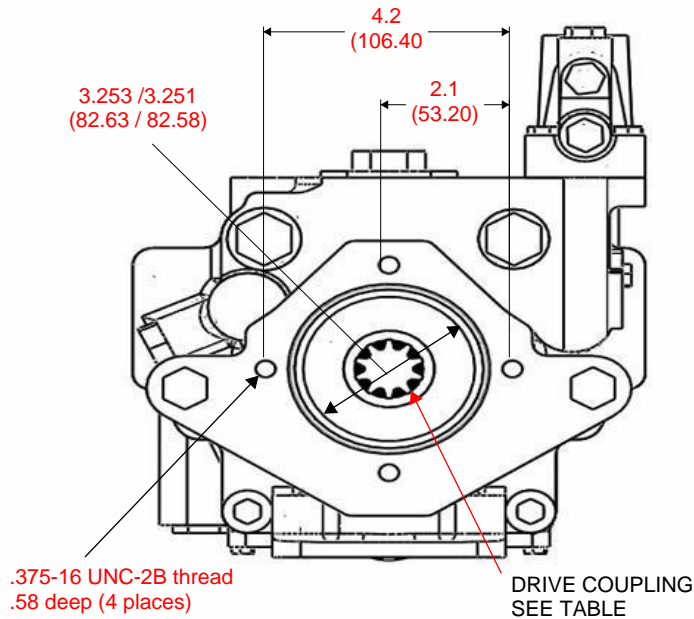


Note contact factory for
other compensator controls

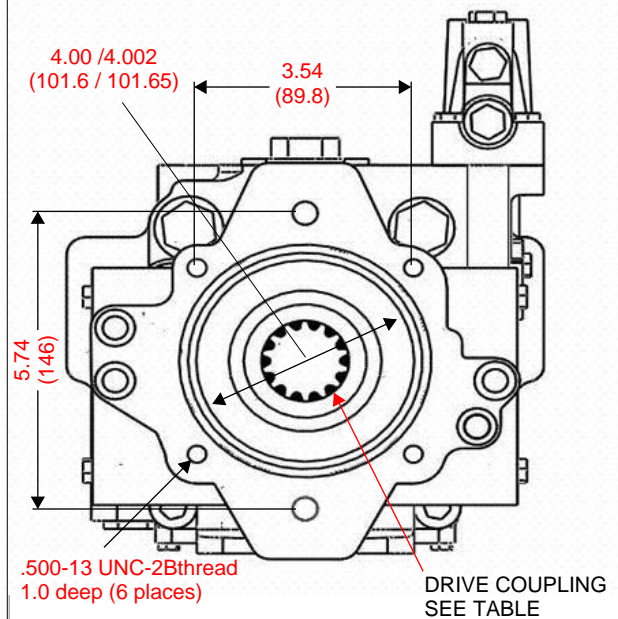
IFP PVH PISTON PUMPS THROUGH DRIVE SPECIFICATIONS



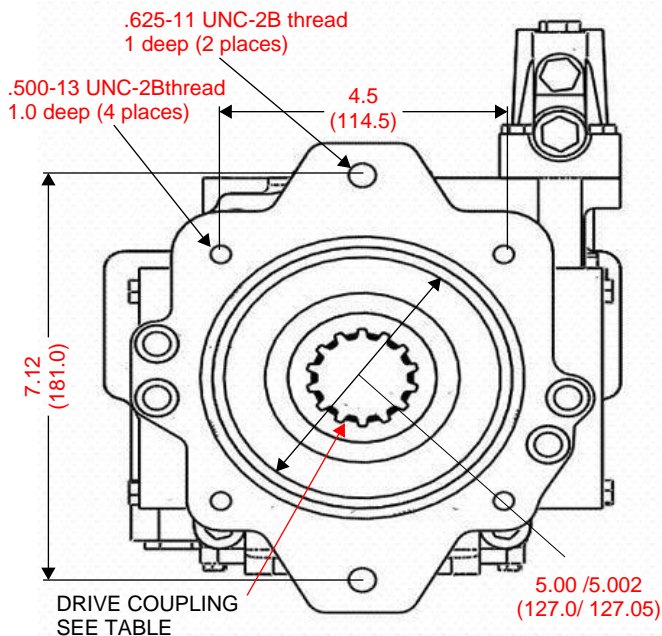
THRU-DRIVE WITH SAE "A" REAR PAD



THRU-DRIVE WITH SAE "B" REAR PAD



THRU-DRIVE WITH SAE "C" REAR PAD



OPTIONAL COUPLINGS

PUMP SERIES WITH SAE-A PAD

PVH57 PVH74 PVH98 PVH131
COUPLING - 526682 864460 877039 877039
(SAE "A " Internal spline 9 Teeth 16/32 pitch)

PUMP SERIES WITH SAE-B PAD

PVH57 PVH74 PVH98 PVH131
COUPLING - 526694 864457 877040 877040
(SAE "B " Internal spline 13 Teeth 16/32 pitch)
COUPLING - 526695 864459 877044 877044
(SAE "BB" Internal spline 15 Teeth 16/32 pitch)

PUMP SERIES WITH SAE-C PAD

PVH57 PVH74 PVH98 PVH131
COUPLING - 526696 864458 877045 877045
(SAE "C " Internal spline 14 Teeth 12/24 pitch)
COUPLING - 526695 864461 877046 877046
(SAE "CC" Internal spline 17 Teeth 12/24 pitch)

Note:

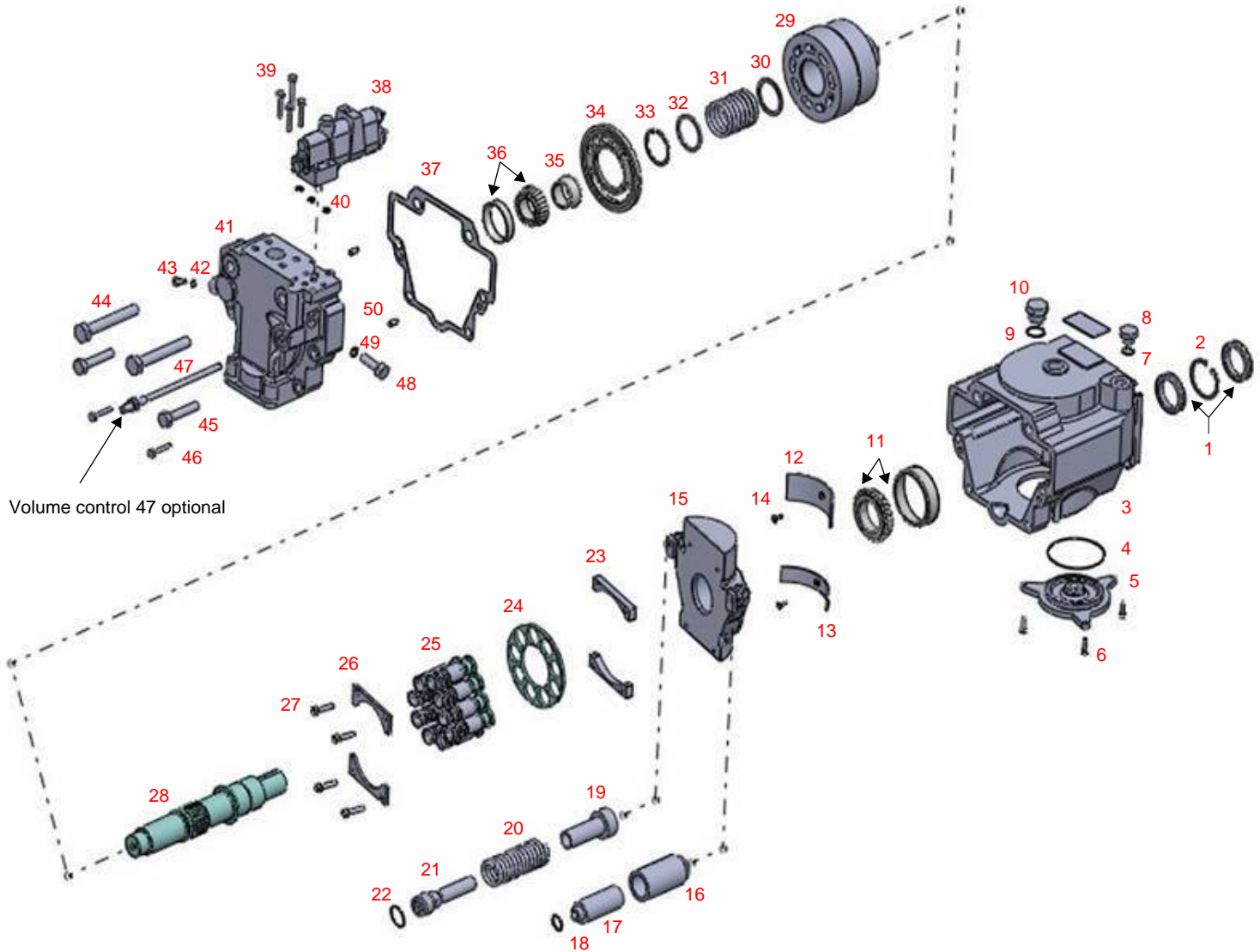
PVH thru-drive pumps have an SAE-A pad mount
SAE- B & SAE-C pad mounts require a flange
adapter to be mounted to the SAE-A pad of the
PVH thru-drive pump

FLANGE ADAPTERS

SAE-B 4" PILOT - 876390
SAE-C 5" PILOT - 876389

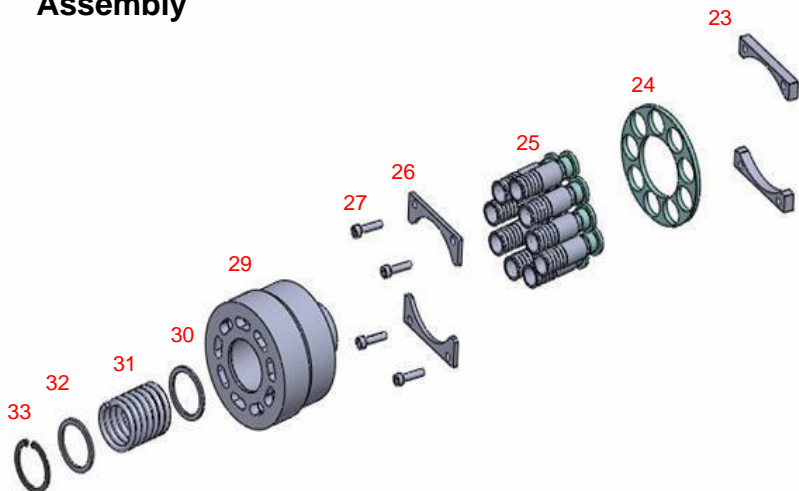
Dimensions - inch (mm)

PVH PISTON PUMP PARTS DRAWING

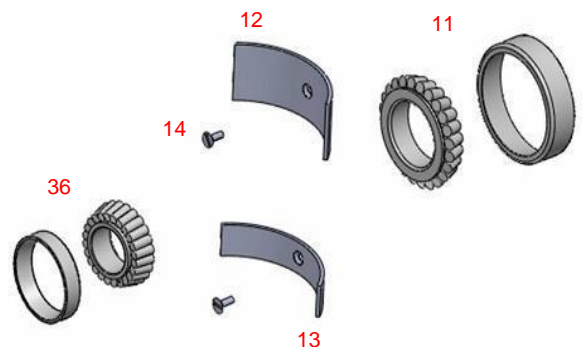


Volume control 47 optional

Rotating Group Assembly



Bearing Kit



PVH PISTON PUMP PARTS LISTING



PVH PARTS LIST

	PVH57	PVH74	PVH98	PVH131
Item #1 Shaft Seal	513439N	589332N	589332N	864200N
Item #2 Snap Ring	103834N	126911N	126911N	194030N
Item #3 Body Casting	864204N	864498N	864341N	692944N
Item #4 O Ring	576601N	411575N	335659N	335659N
Item #5 Cover	526616N	526637N	513347N	692946N
Item #6 Screws (3 pcs)	470793N	470794N	470793N	470794N
Item #7 O Ring	396098N	396098N	396100N	396100N
Item #8 Plug	186580N	186580N	181792N	181792N
Item #9 O Ring	396102N	396102N	396102N	396102N
Item #10 Plug	513602N	513602N	513602N	513602N
Item #11 Shaft Bearing	513433N	589093N	388154N	388206N
Item #12 Saddle Bearing	513886N	513927N	513912N	692949N
Item #13 Saddle Bearing	513885N	513926N	513911N	692948N
Item #14 Screws (2 pcs)	690339N	690339N	690339N	690339N
Item #15 Yoke Assembly	690832N	526651N	513629N	692941N
Item #16 Control Piston	690211N	690804N	526627N	526753N
Item #17 Control Rod	690210N	690805N	526628N	526754N
Item #18 O Ring	262355N	262355N	262355N	262355N
Item #19 Bias Piston	526668N	690816N	526689N	692152N
Item #20 Spring	526665N	526667N	526686N	526690N
Item #21 Bias Rod	526685N	690806N	513600N	526752N
Item #22 O Ring	262355N	262355N	262355N	262355N
Item #23 Spacers (2 pcs)	690801N	526639N	513625N	526757N
Item #24 Shoe Plate	584512N	584774N	584539N	683791N
Item #25 Piston Kit (9 pcs)	02-306362N	02-305857N	02-152400N	02-159749N
Item #26 Limiters (2 pcs)	690218N	690796N	513626N	526758N
Item #27 Screws (4 pcs)	473741N	473741N	473764N	473764N
Item #28 Drive Shaft for Pumps without thru-drive	114516N Code # 1 Keyed	692567N Code # 1 Keyed	527167N Code # 1 Keyed	860682N Code # 2 Splined
	513839N Code # 2 Splined	513865N Code # 2 Splined	513627N Code # 2 Splined	877042N Code # 3 Splined
	883083N Code # N Keyed	864344N Code # N Keyed		860593N Code #12 Splined
				876175N Code # 13 Keyed
Item #28 Drive Shaft for Pumps with thru-drive	864342N Code # 1 Keyed / Thru Drive	883229N Code # 2 Splined / Thru Drive	860679N Code # 2 Splined / Thru Drive	876177N Code # 3 Splined / Thru Drive
	526684N Code # 2 Splined / Thru Drive	864343N Code # 3 Splined / Thru Drive	864453N Code # 3 Splined / Thru Drive	860594N Code # 12 Splined / Thru Drive
		864344N Code # 13 Keyed / Thru Drive	864454N Code # 13 Keyed / Thru Drive	876176N Code # 16 Keyed / Thru Drive
Item #29 Cylinder Barrel	937023N	937025N	680627N	680628N
Item #30 Spring Guide	680624N	584483N	584546N	417667N
Item #31 Spring	627524N	584454N	627192N	626111N
Item #32 Spring Guide	584524N	631568N	584547N	581104N
Item #33 Retainer	85560N	91365N	102038N	135066N
Item #34 Valve Plate - RH	680630N	627438N	627371N	584540N
Item #34 Valve Plate Q - RH	"Q" 514128N	"Q" 513889N	"Q" 514122N	"Q" 514120N
Item #34 Valve Plate - LH	680631N	627437N	584540N	527163N
Item #34 Valve Plate Q- LH	"Q" 514121N	"Q" 513890N	"Q" 514120N	"Q" 876045N

PVH PISTON PUMP PARTS LISTING



PVH PARTS LIST

	PVH57	PVH74	PVH98	PVH131
Item #35 Shaft Spacer kit	926258N	941441N	924082N	02-142690N
Item #36 Valve block bearing	513436N	388153N	413603N	513433N
Item #37 Gasket	513846N	526631N	513631N	526760N
Item #38 Compensator "C"	02-125160N	02-125160N	02-125160N	02-125160N
Item #38 Compensator "CV"	02-125161N	02-125161N	02-125161N	02-125161N
Item #39 Screws (4 pcs)	473765N	473765N	473765N	473765N
Item #40 O Rings (3 pcs)	177969N	177969N	177969N	177969N
Item #41 Valve Block for pumps without tru-drive	928631N - RH	928633N - RH	928635N - RH	928637N - RH
	928679N - LH	928681N - LH	928684N - LH	928687N - LH
	628618N - RH c/w Volume adj.	628620N - RH c/w Volume adj.	628622N - RH c/w Volume adj.	928624N - RH c/w Volume Adj.
	628667N - LH c/w Volume adj.	628669N - LH c/w Volume adj.	628671N - LH c/w Volume adj.	928673N - LH c/w Volume Adj.
Item #41 Valve Block for pumps with "A" mount	928730N - RH	928732N - RH	928710N - RH	928736N
	928705N - LH	928707N - LH	928711N - LH	938713N
Item #41A Coupling 9 tooth SAE-A	526682N	864460N	877039N	877039N
Item 41B Adapter Pad SAE-B Mount	876390N	876390N	876390N	876390N
Item #41B Coupling 13 tooth SAE-B	526694N	864457N	877040N	877040N
Item 41C Adapter Pad SAE-C Mount	876389N	876389N	876389N	876389N
Item #41C Coupling 14 tooth SAE-C	526696N	864458N	877045N	877045N
Item #42 O Ring	396093N	396093N	396093N	396093N
Item #43 Plug	689461N	689461N	689461N	689461N
Item #44 Bolts	474753N 47 - 57 lb.ft.	474753N 47 - 57 lb.ft.	514574N 61 - 75 lb.ft.	473806N 76 - 94 lb.ft.
	470871N 47 - 57 lb.ft.	474746N 47 - 57 lb.ft.	690406N 61 - 75 lb.ft.	473833N 76 - 94 lb.ft.
Item #46 Bolts	470866N 47 - 57 lb.ft.		514573N 61 - 75 lb.ft.	
Item #47 Adj. Screw	860741N	860741N	860740N	860739N
Item #47 Lock Nut	913341N	913341N	913341N	913341N
Item #48 Plug	689461N	689461N	689461N	689461N
Item #49 O Ring	396093N	396093N	396093N	396093N
	PVH57	PVH74	PVH98	PVH131
Seal Kit Assembly Includes: #1 #4 #7 #9 #37 #40 #42 #49	02-102244N	02-1202262N	02-102264N	02-102266N
Rotating Group Assembly Includes: #23 #24 #25 #26 #27 #29 #30 #31 #32 #33	877420N	877421N	877422N	877419N
Bearing Kit Assembly Includes: #1 #4 #7	877423N	877424N	877425N	877426N