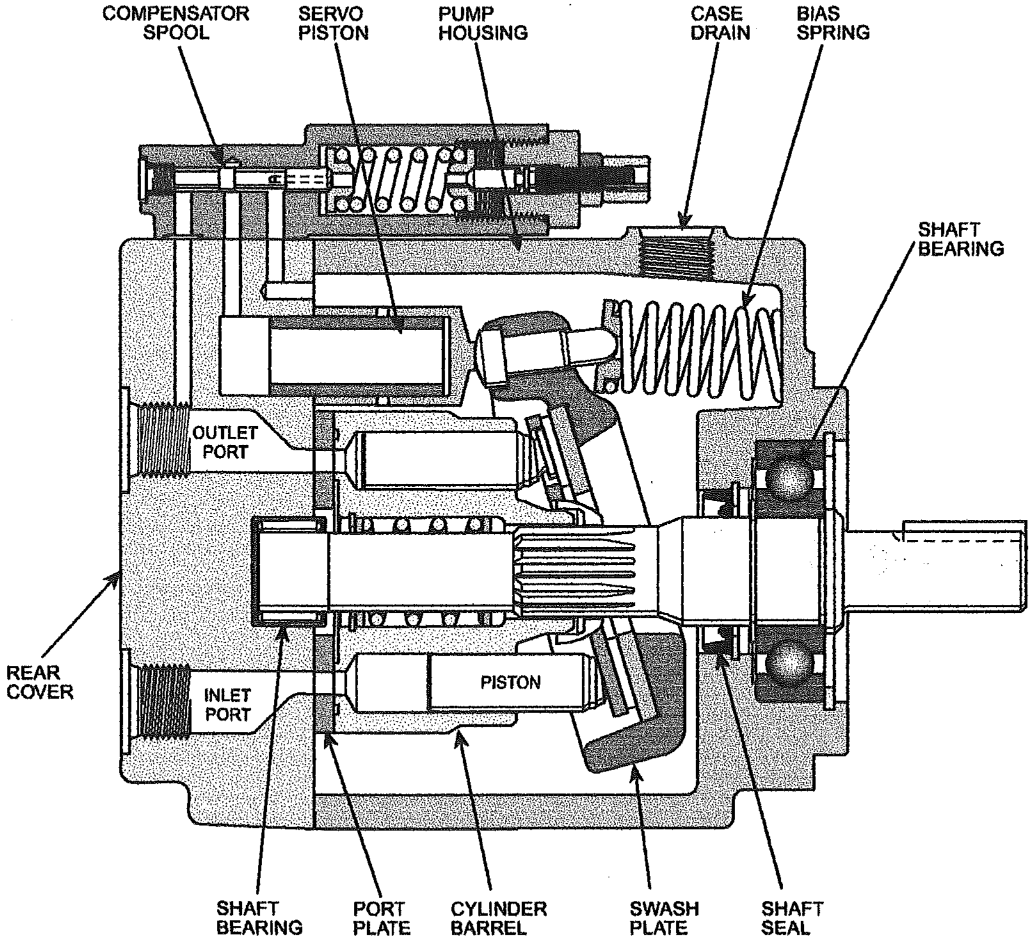


Features

- High Strength Cast-Iron Housing
- Fast Response Times
- Two Piece Housing For Ease of Service
- Metric Pilot, Shaft and Ports Available
- Replaceable Bronze Clad Port Plate
- Thru-Shaft Capability
- Low Noise Levels
- Replaceable Piston Slipper Plate

Controls

- Pressure Compensation
- Load Sensing
- Horsepower Limiting
- Horsepower and Load Sensing
- Remote Pressure Compensation
- Adjustable Maximum Volume Stop
- Hi/Lo Torque (Power) Limiting (PVP 41/48, 60/76, 100/140 Only)
- Low Pressure Standby

General Description

All control is achieved by the proper positioning of the swash plate. This is achieved by a servo piston acting on one end of the swash plate working against the combined effect of the off-setting forces of the pistons and centering spring on the other end. The control spool acts as a metering valve which varies the pressure behind the servo piston.

As shown in Figure 1, the amount of flow produced by the Parker Piston Pump is dependent upon the length of stroke of the pumping pistons. This length of stroke, in turn, is determined by the position of the swash plate. Maximum flow is achieved at an angle of 15-17 degrees. The rotating barrel, driven by the prime mover, moves the pistons in a circular path and the piston slippers are supported hydrostatically against the face of the swash plate. When the swash plate is in a vertical position, perpendicular to the centerline of the piston barrel, there is no piston stroke and consequently no fluid displacement. When the swash plate is positioned at an angle, the pistons are forced in and out of the barrel and fluid displacement takes place. The greater the angle of the swash plate, the greater the piston stroke.

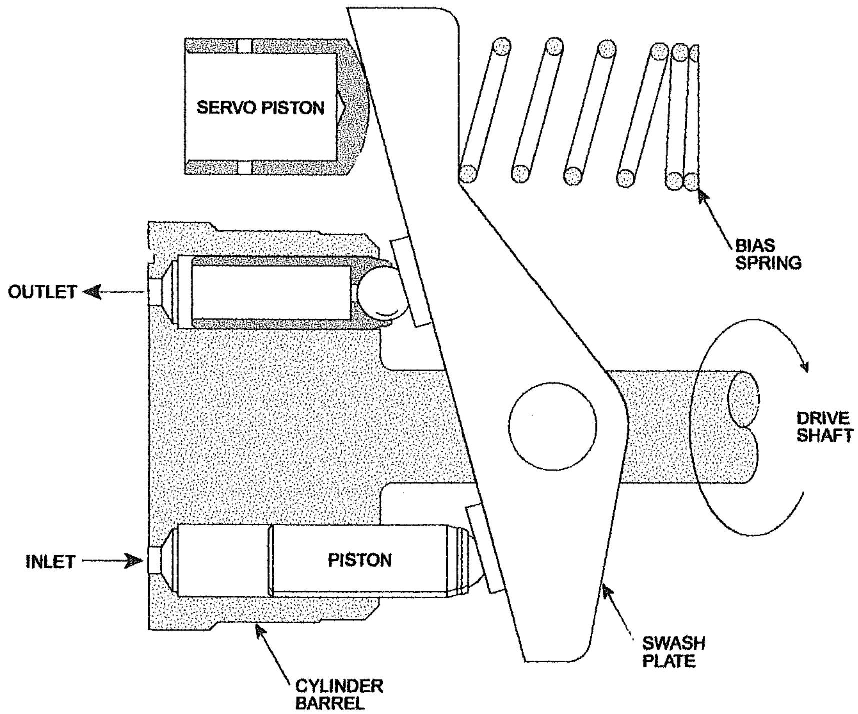


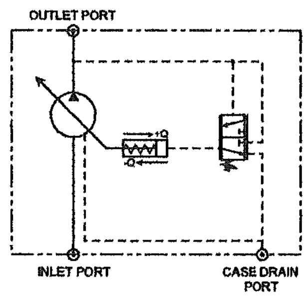
FIGURE 1

Pressure Compensated Control (OMIT)

The swash plate angle controls the output flow of the pump. Swash plate angle is generated by the hydraulic force of the pumping pistons and the mechanical force of the swash plate bias spring.

Control of the pump's outlet flow is obtained by overriding the force of the pumping pistons and bias spring with the hydraulic force of the servo piston by means of internal porting. Pressure is connected from the outlet port to the servo piston via a compensator spool.

The compensator spool is held against the spring guide by the outlet pressure. When the outlet pressure reaches the setting of the compensator control, the compensator spool moves, allowing outlet pressure oil to be metered into the servo piston. This metered oil provides adequate force to power the servo piston and override swash plate forces. The outlet pressure causes the servo piston to move which reduces the angle of the swash plate and thereby reduces the pump's output flow. When flow is again demanded by the system, the outlet pressure will momentarily fall allowing the compensator spool to move. This movement closes off the outlet pressure to the servo piston and vents the servo piston to case. The result of this venting allows the swash plate forces to move the swash plate angle to maximum displacement, thus responding to the demand for additional flow. Note that the compensator spring chamber is vented to the pump case via a hole internal to the compensator spool.



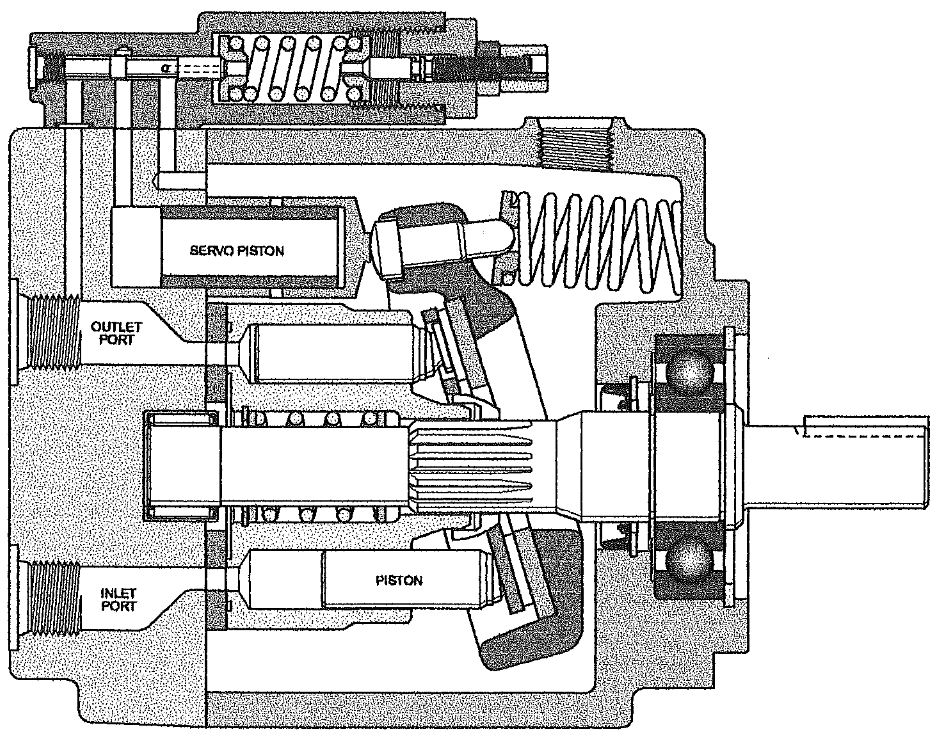


FIGURE 2

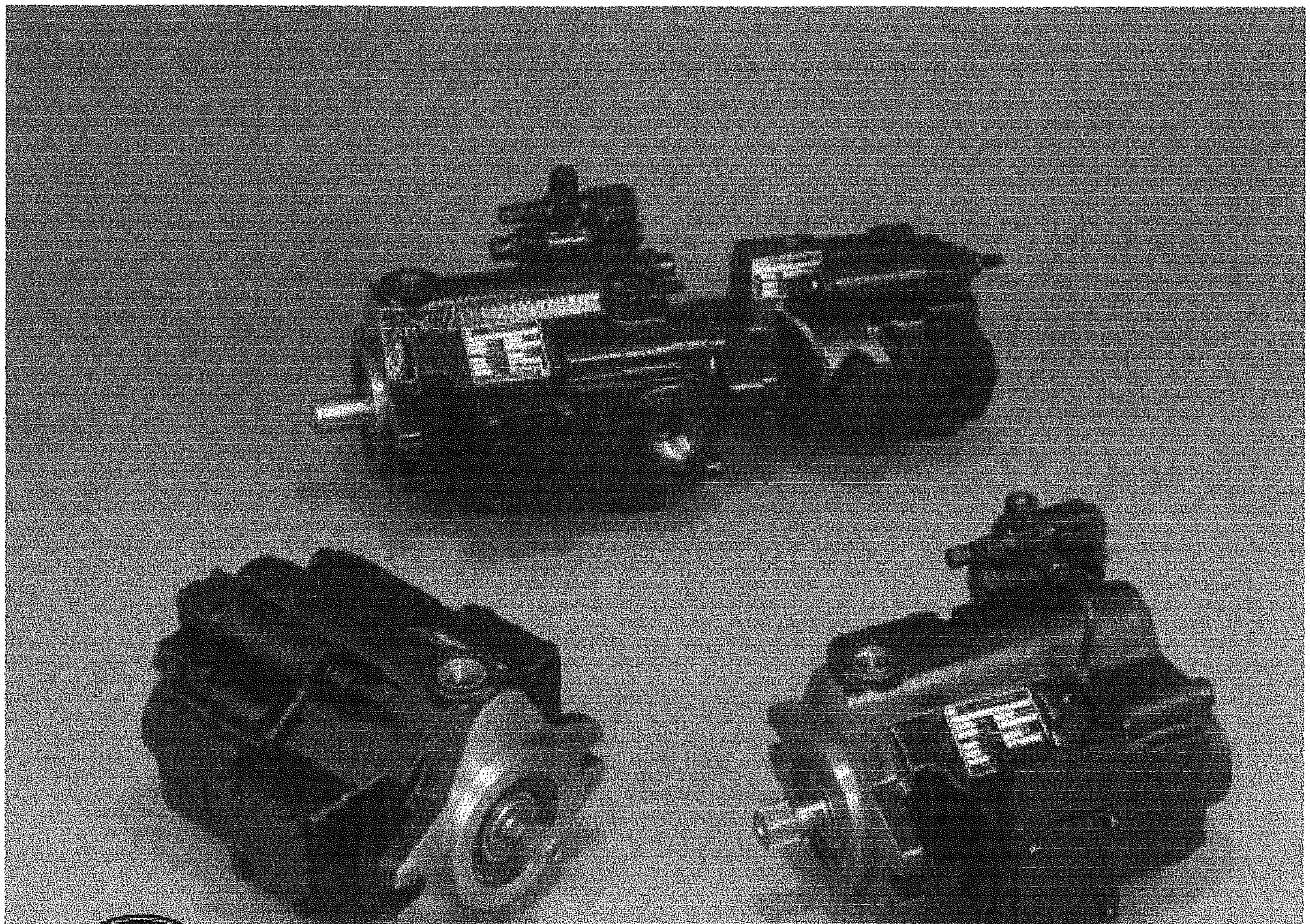
hpm102-1.p65, lw, jk

Parker Hydraulics

Series PVP Variable Volume, Piston Pumps

A

Catalog 2600-102-1/USA

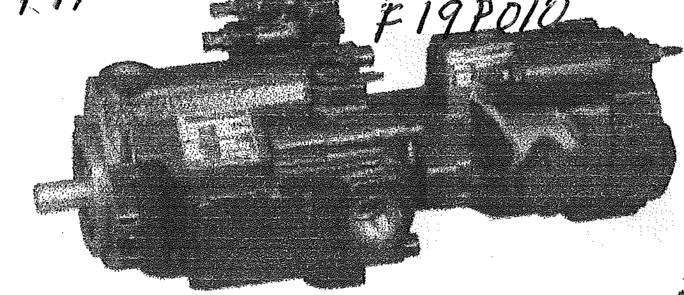


PVP 60302R2 P11
DESING SERIES 11
F19P010

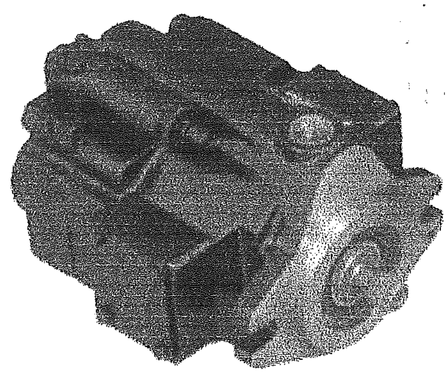
658-8300
BRIAN in shop

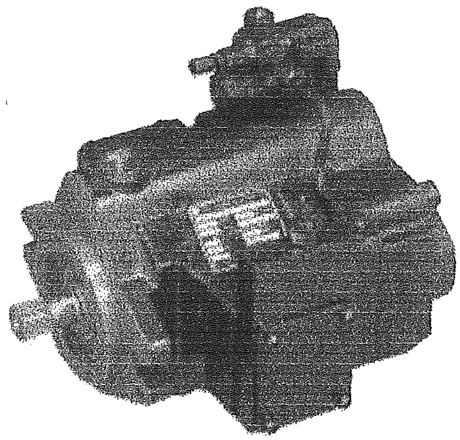
A

F19P010
60CC PREV
1000 PSI



$324.45
ORDER
SERVO VALVE





Quick Reference Data Chart

Pump Model	Displacement cc/rev (In³/rev)	Pump Delivery @ 21 bar (300 PSI) in LPM (GPM)		†Approx. Noise Levels dB(A) @ Full Flow 1800 RPM (1200 RPM)					Input Power At 1800 RPM, Max. Displacement & 248 bar (3600 PSI)	Operating Speed (RPM) (Maximum)	Pressure bar (PSI) Continuous (Maximum)
		1200 RPM	1800 RPM	34 bar (500 PSI)	69 bar (1000 PSI)	138 bar (2000 PSI)	207 bar (3000 PSI)	248 bar (3600 PSI)			
PVP16	16 (.98)	19.7 (5.2)	29.5 (7.8)	53 (47)	55 (50)	59 (54)	62 (56)	65 (59)	13.1 kw (17.5 hp)	3000	248 (3600)
PVP23	23 (1.4)	28.0 (7.4)	42.0 (11.1)	61 (57)	64 (59)	67 (63)	69 (65)	70 (65)	19.7 kw (26.5 hp)	3000	248 (3600)
PVP33	33 (2.0)	39.4 (10.4)	59.0 (15.6)	64 (59)	66 (59)	68 (62)	70 (64)	71 (65)	27.2 kw (36.5 hp)	3000	248 (3600)
PVP41	41 (2.5)	49.2 (13.0)	73.8 (19.5)	68 (60)	70 (61)	73 (65)	74 (67)	75 (69)	33.2 kw (44.5 hp)	2800	248 (3600)
PVP48	48 (2.9)	57.6 (15.2)	86.4 (22.8)	69 (60)	71 (62)	73 (65)	75 (68)	76 (69)	40.3 kw (54.0 hp)	2400	248 (3600)

† Measured in an anechoic chamber to DIN 45635, measuring error ± 2 dB(A).
Fluid used: petroleum oil to ISO VG 46; temperature = 50°C (122°F).
Since many variables such as mounting, tank style, plant layout, etc., effect noise levels, it cannot be assumed that the above readings will be equal to those in the field. The above values are for guidance in selecting the proper pump.

Pump Model	Displacement cc/rev (In³/rev)	Pump Delivery @ 21 bar (300 PSI) in LPM (GPM)		*Approx. Noise Levels dB(A) @ Full Flow 1800 RPM (1200 RPM)					Input Power At 1800 RPM, Max. Displacement & 248 bar (3600 PSI)	Operating Speed (RPM) (Maximum)	Pressure bar (PSI) Continuous (Maximum)
		1200 RPM	1800 RPM	34 bar (500 PSI)	69 bar (1000 PSI)	138 bar (2000 PSI)	207 bar (3000 PSI)	248 bar (3600 PSI)			
PVP60	60 (3.7)	71.9 (19.0)	106.0 (28.0)	72 (68)	73 (69)	75 (70)	77 (70)	77 (70)	47.7 kw (64.0 hp)	2200	248 (3600)
PVP76	76 (4.6)	91.2 (24.1)	134.4 (35.5)	75 (70)	75 (69)	75 (70)	77 (70)	78 (72)	61.9 kw (83.0 hp)	2200	248 (3600)
PVP100	100 (6.1)	120.0 (31.7)	180.0 (47.5)	73 (67)	75 (69)	78 (72)	79 (75)	81 (75)	83.5 kw (112.0 hp)	1800	248 (3600)
PVP140	140 (8.54)	171.0 (45.5)	252.0 (67.0)	80 (71)	80 (72)	80 (75)	82 (76)	84 (77)	117.8 kw (158.0 hp)	1800	248 (3600)

* Since many variables such as mounting, tank style, plant layout, etc., effect noise levels, it cannot be assumed that the above readings will be equal to those in the field. The above values are for guidance in selecting the proper pump. Noise levels are A-weighted, mean sound pressure levels at 1 meter from the pump, measured and recorded in accordance with applicable ISO and NFPA standards.