

P1



- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 280 Bar
- Quiet and efficient control capability
- Low ripple to further reduce noise
- Compact overall package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls

Frame size P1	-060	-075	-100	-140
Displacement (cm ³ /rev) (in ³ /rev)	60 3.7	75 4.6	100 6.0	140 8.5
Max continuous pressure (Bar) (PSI)	280 4060	280 4060	280 4060	280 4060
Self priming speed @ 1 Bar inlet pressure	2500	2300	2100	2000

P2



The newly developed variable displacement piston pumps from Parker Hannifin, designated “P2,” are intended for mobile applications, featuring a very compact design, low noise level and low pressure ripple. Stable and quick to respond to system demands in many different types of mobile

machinery, the P2 is designed for cost effective installation within the limited space available on modern mobile machines.

- Sealed shaft bearing
- High self-priming speed
- Flexible, reliable, service friendly

Frame size P2	-060	-075	-105	-145
Displacement (cm ³ /rev) (in ³ /rev)	60 3.7	75 4.6	105 6.4	145 8.8
Max continuous pressure (Bar) (PSI)	317 4600	317 4600	317 4600	317 4600
Self priming speed @ 1 Bar inlet pressure	2800	2500	2300	2200

P3



P3 piston pumps are ideal for mobile applications that require high self-priming speed and operating pressure up to 4600 PSI. These high performance pumps are suited for mobile applications where inlet fill characteristics are not ideal; i.e. high altitudes, long inlet lines,

cold weather and high pump drive speeds.

- Sealed shaft bearing
- Compact packaging
- Low noise level
- Easy to install
- Flexible, reliable, service friendly

Frame size P3	-075	-105	-145
Displacement (cm ³ /rev) (in ³ /rev)	75 4.6	105 6.4	145 8.8
Max continuous pressure (Bar) (PSI)	317 4600	317 4600	317 4600
Self priming speed @ 1 Bar inlet pressure	3000	2600	2500

PAVC



PAVC piston pumps are ideal for many industrial applications with operating pressure up to 3000 PSI. These compact pumps feature convenient cartridge style controls and carry a full pressure rating on most water glycol fluids.

- High strength cast-iron housing
- Built-in supercharger
- High speed capability - 3000 RPM (2600 RPM PAVC100)
- Sealed shaft bearing
- Two piece design for ease of service

- Cartridge bronze clad port plate
- Airbleed standard for quick priming
- Hydrodynamic cylinder barrel bearing
- Thru-shaft (PAVC100 only)
- Full pressure rating on water glycol fluids
- Pump case and shaft seal - see inlet pressure only
- Filter and/or cool drain line (100 PSI Max.)

Frame size PAVC	-33	-38	-65	-100
Displacement (cm ³ /rev) (in ³ /rev)	33 2.0	38 2.3	65 4.0	100 6.1
Max continuous pressure (Bar) (PSI)	207 3000	207 3000	207 3000	207 3000
Max self priming speed at 0 PSI gauge (RPM)	3000	3000	3000	2600

PVP



PVP piston pumps are ideal for medium duty industrial applications with operating pressure up to 3600 PSI. These service friendly pumps are quiet and respond quickly to flow demand changes.

- High strength cast-iron housing
- Optional inlet/outlet locations

- Replaceable bronze port plate
- Replaceable piston slipper plate
- Low noise levels
- Fast response times
- Metric pilot, shaft and ports available

Frame size PVP	-16	-23	-33	-41	-48
Displacement (cm ³ /rev) (in ³ /rev)	16 1.0	23 1.4	33 2.0	41 2.5	48 2.9
Max continuous pressure (Bar) (PSI)	248 3600	248 3600	248 3600	248 3600	248 3600
Max self priming speed at 0 PSI gauge (RPM)	3000	3000	3000	2800	2400

H3



- Closed loop
- High strength aluminum housing and endcap
- Forged trunnion shaft
- Bi-metal bronze/steel valve plate
- Large area cooling fins

	Frame size H3	-10
Displacement (cm ³ /rev) (in ³ /rev)	10.2	0.62
Max continuous pressure (Bar) (PSI)	69	1000
Max operating speed (RPM)	3600	

H4



- Closed loop
- Robust, higher pressure design
- Heavier drive shaft and radial bearing
- High strength aluminum housing and endcap
- Forged trunnion shaft
- Bi-metal bronze/steel valve plate
- Large area cooling fins

	Frame size H4	-10	-12	-14	-16
Displacement (cm ³ /rev) (in ³ /rev)	10.1	0.62	11.5	14.1	16
Max continuous pressure (Bar) (PSI)	104	1500	90	104	1300
Max operating speed (RPM)	3600	3600	3600	3600	3600

Premier



The open-loop Premier Series pumps are variable displacement piston pumps with emphasis on superior design with few maintenance requirements. Low inlet velocity requirements allow the pumps to run faster than competitive models without the added expense of boosting the inlet. Modified pistons that reduce the amount of trapped fluid volume result in improved efficiency.

The Premier Series pumps have been designed to operate in a wide range of industries where variable flow, high pressure and/or high speeds are required; such as: presses, construction machinery, injection molding, wood, aircraft, drilling, mining, steel and cranes.

	Frame Size P	05/080	07/110	09/140	12/200	16/260
Displacement (cm ³ /rev) (in ³ /rev)	80.3	109.8	140.9	200.0	262.2	
	4.9	6.7	8.6	12.2	16.0	
Max. continuous pressure (Bar) (PSI)	414	414	414	414	414	
	6000	6000	6000	6000	6000	
Max. intermittent pressure (Bar) (PSI)	500	500	500	500	500	
	7250	7250	7250	7250	7250	
Max. rated drive speed (RPM)	2550	2450	2300	2100	1850	

VP1



The VP1 is the world's first variable displacement pump for truck applications. It can be close-coupled to a gearbox PTO (power take-off) or to a coupling independent PTO (e.g. an engine PTO) which meets ISO standard 7653-1985.

- Variable, Load Sense Control
- Low noise level
- High power-to-weight ratio
- Compact and lightweight
- Withstands low temperatures
- Sturdy design
- Highly efficient

Frame size VP1	-45	-75	-120
Displacement (cm ³ /rev) (in ³ /rev)	45 2.75	75 4.58	120 7.32
Max continuous pressure (Bar) (PSI)	300 4350	300 4350	300 4350
Self priming speed* (RPM)	2400	2100	1800

*2½" suction line

F1/F2



F1 fixed displacement piston pumps are widely used on truck applications with operating pressure up to 5000 PSI. These lightweight, efficient pumps were designed specifically for truck applications including cargo cranes, hook loaders, forest cranes and concrete mixers.

- Pressures up to 350 Bar (5000 PSI)
- High power capability
- Twin flow version available
- High self-priming speed
- Easy to install
- Easy to service

Series F1	25	41	51	61	81	101
Displacement (cm ³ /rev) (in ³ /rev)	25.6 1.59	40.9 2.50	51.1 3.11	59.5 3.66	81.6 5.00	102.9 6.29
Max. operating pressure (Bar) (PSI)	350 5000	350 5000	350 5000	350 5000	350 5000	350 5000
Shaft speed (RPM): unloaded at 350 Bar ²	2700 2600	2700 2400	2700 2200	2700 2200	2300 2000 ³	2300 1800 ³
Torque ¹ at 350 Bar (Nm) (lb-in)	142 1261	227 2016	284 2522	331 2939	453 4023	572 5079
Input power, continuous (kW) (hp)	31 39	46 57	52 67	61 84	76 102	86 115

¹ Theoretical value

² Valid at an inlet pressure of 1.0 Bar (abs.) when operating on mineral oil at a viscosity of 30 mm²/s (cSt).

³ Valid with 2½" inlet (suction) line. With 2" suction line: F1-80 – max 1400 RPM. F1-101 – max 1200 RPM.

Series F2	42/42	55/28	53/53	70/35	70/70
Displacement, Port A/Port B (cm ³ /rev) (in ³ /rev)	43/41 2.62/2.50	55/28 3.36/1.71	54/52 3.30/3.17	69/36 4.27/2.14	68/68 4.15/4.15
Max. operating pressure (Bar) (PSI)	350 5000	350 5000	350 5000	350 5000	300 4350
Max. shaft speed, unloaded (RPM)	2550	2550	2550	2550	2550
Max. self-priming speed (RPM): Ports A ^{1,2} and B ^{1,2} pressurized Port A ² unloaded, pressure in Port B	1800 2100	1800 2100	1800 2100	1800 2100	1650 2100
Input power, continuous (kW) (hp)	70 118	70 118	88 147	88 147	112 150

¹ Valid with 2½" inlet line, q = 120 l/min. With 2" inlet line: max 1400 RPM.

² Measured at 1.0 bar abs. inlet pressure.