

P3 Series High Flow Pumps Data Sheet

The P3 series pumps are heavy duty pneumatically driven, single air drive, double acting, reciprocating positive displacement pumps producing near continuous flows.

P3 Pumps are suitable and commonly used for chemical injection, pressure testing, flushing or simply transferring a very wide variety of fluids and chemicals.

P3 series pumps are manufactured in three different plunger sizes, 20mm, 28mm & 40mm to provide a wide range of pressures and flows up to 20,000 psig.

The P3 pump utilises a common air motor, shuttle valve assembly, hydraulic section housings and check valves and has been designed to be modular using interchangeable inserts, pistons and components permitting the pump to be economically reconfigured to either the 40mm, 28mm or 20mm model for different pressures and flows within a short period of time.

All P3 series pumps are CE marked, ATEX compliant (94/9/EC) II 2 Gc T6 & NACE compliant as standard and suitable for H2S fluid service.

Pump Overview:

Air Motor:	Single air drive motor, hardened anodised aluminium air chamber, 306mm aluminium air motor piston, 316 stainless steel air motor end flanges, nitrile seals. Auto moisture drain system for improved pump life.
Air Shuttle Assembly:	Hardened anodised aluminium cylinder, aluminium shuttle, nitrile seals.
Hydraulic Cylinders:	316 stainless steel cylinders & internal components. (The Hydraulic cylinders are isolated from the main air motor to ensure no fluids can be transferred to the motor and exhausted to atmosphere)
Hydraulic Pistons:	20mm, 28mm, 40mm OD 316 SS with high velocity oxy fuel coating providing better chemical resistance.
Main Hydraulic Seals:	Ultra High Molecular Weight Polyethylene (Tecafine (PE)) UHMWPE-10. (PTFE compound available)
Check Valves:	316 stainless steel cylinder & internal components, ceramic compound ball & seat.
Total Net Weight:	97Kg
Maximum Noise Level:	95 db

Pump Connection Sizes:

Air Inlet:	1" NPT (F)
Pilot Air Supply:	1/4" OD
Air Shuttle Exhaust:	1-1/4" NPT (F)
Fluid Inlet:	3/4" BSP (m)
Fluid Outlet:	9/16" MP (F)

Pump Performance:

Max Pump Air Supply	100 psig		
Max Pilot Air Supply	100 psig		
Max Air Consumption	250 scfm		
Air Quality Required	Cooled & dry plant air		
Pump Ratio	20mm: 233 - 1	28mm: 118.4 - 1	40mm: 57.5 - 1
Max Discharge Pressure Static	20mm: 23,300 psig	28mm: 11,850 psig	40mm: 5,750 psig
Discharge Volume per Stroke	20mm: 61.5cc	28mm: 120.6cc	40mm: 246.2cc
Max Discharge Flow @ 0 psig	20mm: 8.6 ltr/min	28mm: 16.0 ltr/min	40mm: 32.5 ltr/min

Air input to hydraulic discharge pressure static/stall values:

Pump Model	Hydraulic Piston Diameter	Pump Ratio	20 psig Air Supply	40 psig Air Supply	60 psig Air Supply	80 psig Air Supply	100 psig Air Supply
CP-P3-20-D	20mm	233 - 1	4,660	9,320	13,980	18,640	23,300
CP-P3-28-D	28mm	118.5 - 1	2,370	4,740	7,110	9,480	11,850
CP-P3-40-D	40mm	57.5 - 1	1,150	2,300	3,450	4,600	5,750