

## P4 Series High Flow Pumps Data Sheet

The P4 series pumps are pneumatically driven, single air drive, double acting, reciprocating positive displacement pumps producing near continuous flows.

P4 Pumps are suitable and commonly used for chemical injection, where continuous injection rates from small to medium flows at high accuracy and or high pressure are required. The higher pressure range of the P4 8.8mm piston makes it ideal for high level pressure testing.

P4 series pumps are manufactured in three different plunger sizes, 8.8mm, 10mm & 14.5mm to provide a wide range of pressures and flows up to 30,000 psig.

The P4 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 8.8mm, 10mm or 14.5mm model for different pressures and flows within a short period of time.

All P4 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:

<b>Air Motor:</b>	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
<b>Air Shuttle Assembly:</b>	Hardened anodised aluminium cylinder, aluminium shuttle, HNBR seals.
<b>Hydraulic Cylinders:</b>	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)
<b>Hydraulic Pistons:</b>	8.8mm, 10mm & 14.5mm OD, 316 SS with high velocity oxy fuel coating for chemical resistance.
<b>Main Hydraulic Seals:</b>	Ultra High Molecular Weight Polyethylene (Tecafine (PE)) UHMWPE-10. (PTFE compound available)
<b>Check Valves:</b>	316 stainless steel cylinder & internal components, ceramic compound ball & seat.
<b>Total Net Weight:</b>	38Kg
<b>Maximum Noise Level:</b>	95 db

### Pump Connection Sizes:

<b>Air Inlet:</b>	1/2" NPT (F)
<b>Pilot Air Supply:</b>	1/4" OD
<b>Air Shuttle Exhaust:</b>	1" NPT (F)
<b>Fluid Inlet:</b>	3/4" BSP (M)
<b>Fluid Outlet:</b>	9/16" MP (F), [3/8" HP (F) on 8.8mm piston unit]

### Pump Performance:

<b>Max Pump Air Supply</b>	100 psig		
<b>Max Pilot Air Supply</b>	100 psig		
<b>Max Air Consumption</b>	105 scfm		
<b>Air Quality Required</b>	Cooled & dry plant air		
<b>Pump Ratio</b>	8.8mm: 321 - 1	10mm: 250 - 1	14.5mm: 118 - 1
<b>Max Discharge Pressure Static</b>	8.8mm: 32,100 psig	10mm: 25,000 psig	14.5mm: 11,800 psig
<b>Discharge Volume per Stroke</b>	8.8mm: 3.5cc	10mm: 7cc	14.5mm: 14cc
<b>Max Discharge Flow @ 0 psig</b>	8.8mm: 1.5 ltr/min	10mm: 3.1 ltr/min	14.5mm: 6.3 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-P4-8-D	8.8mm	321 - 1	6,400	12,800	19,200	25,700	32,000
CP-P4-10-D	10mm	250 - 1	5,000	10,000	15,000	20,000	25,000
CP-P4-14-D	14.5mm	118 - 1	2,300	4,700	7,000	9,400	11,800