

P400 Pump Series

Capacities to 714.9 LPH - Rated to 70 Bar

Electronic Precision Metering

- Designed to handle a wide range of fluids from clear water to thick slurries
- Electronic flow control increases accuracy and reliability
- Multiple diaphragm design provides linear, virtually pulse-less flow
- Smaller footprint saves valuable space
- One pump covers a wide range of flows and pressures - reducing inventory requirements with fast, simple field conversion
- Duplexing option doubles capacity and equipment savings
- Hydraulically-actuated, balanced diaphragms provide superior performance across entire pressure range
- Rugged construction with a variety of affordable choices for liquid end, diaphragm and check valve materials



Hydra-Cell Metering Solutions meet or exceed API 675 performance standards for Steady-State Accuracy ($\pm 1\%$), Linearity ($\pm 3\%$), and Repeatability ($\pm 3\%$).

Performance*

LPH Maximum Flow at Designated Pressure

LPH All Pumps		LPH Metallic Pump Heads Only		Pump RPM	Gear Ratio	Motor RPM
7 Bar	17 Bar	35 Bar	70 Bar			
16.15	15.97	15.79	15.25	14.5	100:1	
20.80	20.61	20.41	19.81	18.13	80:1	
28.53	28.33	28.10	27.38	24.17	60:1	
34.72	34.50	34.25	33.43	29	50:1	
44.01	43.77	43.48	42.52	36.25	40:1	
59.48	59.22	58.85	57.67	48.33	30:1	1450
71.87	71.58	71.16	69.79	58	25:1	
90.44	90.12	89.62	87.97	72.5	20:1	
121.4	121.0	120.4	118.3	96.67	15:1	
183.3	182.8	181.9	178.9	145	10:1	
245.2	244.6	243.4	239.5	193.33	7.5:1	
369.0	368.2	366.5	360.7	290	5:1	
475.7	474.7	472.5	465.1	373.3	7.5:1	2800
714.9	713.4	710.2	699.2	560	5:1	

* Capacity data is shown for pumps with elastomeric diaphragms. Consult factory for performance characteristics of pumps with PTFE diaphragms.

Required Motor kW

0.18	0.37	0.55	0.75
1.1	1.5	2.2	

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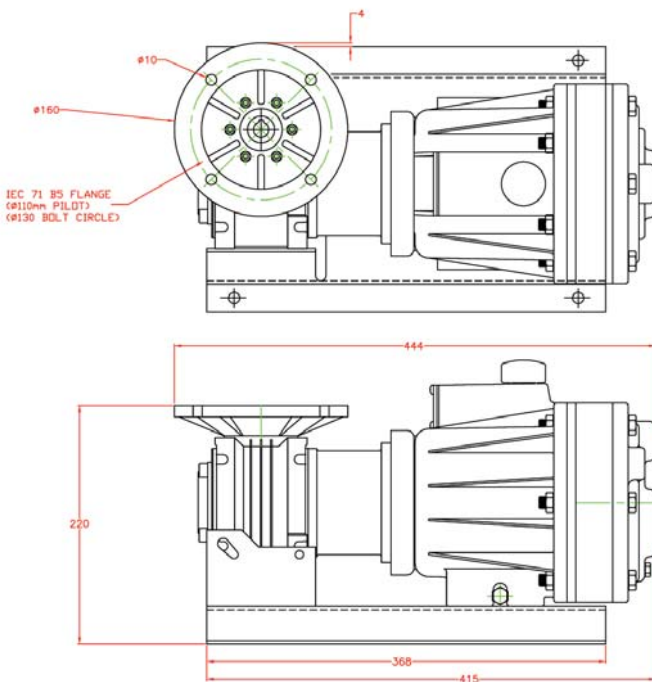
Pump Data

Diaphragms per Liquid End	3
Flow Control	Electronic variable speed drive
Maximum Discharge Pressure	
Metallic Head:	70 bar (1000 PSI)
Non-Metallic Head:	Polypropylene- 17 bar (250 PSI) Kynar- 24 bar (350 PSI)
Maximum Suction Pressure	17 bar (250 PSI)
Maximum Temperature	
Metallic Head:	121 °C (250 °F)*
Non-Metallic Head:	60 °C (140 °F)
Suction Port	1 inch BSPT or NPT
Discharge Port	3/4 inch BSPT or NPT
Weight (less motor)	
Metallic Head:	28.1 kg (62 lbs)
Non-Metallic Head:	22.2 kg (49 lbs)
Dimensions (less motor)**	
Metallic Head:	447 mm W x 251 mm D x 263 mm H (17.59" W x 9.87" D x 10.34" H)
Non-Metallic Head:	462 mm W x 251 mm D x 263 mm H (18.19" W x 9.87" D x 10.34" H)

* Consult factory for correct component selection for fluid temperatures above 71 °C (160 °F).

** For 63 B5 motor frame only. Consult factory for other motor frame sizes.

Representative Dimensional Drawings (in mm)



Hydra-Cell Metering Solutions pump systems are available with back pressure and relief valves, calibration cylinders, pulsation dampeners, manifolds and flanges, suction accumulators, custom controllers, strainers, a variety of actuating oils, witnessed and non-witnessed testing, drawing packages, and OEM paint and nameplate customization.

For information on the complete line of Hydra-Cell Metering Solutions pumps, contact us today.

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Pump Ordering Information

A complete pump order number contains 13 digits based on the specified pump materials listed below. Contact your Hydra-Cell sales representative for accompanying motor drive options.

1	2	3	4	5	6	7	8	9	10	11	12	13
P	4	0	0									

Pump Model Size (Digits 1-4)

P400 For all P400 Pumps

Pump Version (Digit 5)

M BSPT Ports
N NPT Ports

Pump Head Material (Digit 6)

C Cast Iron
M Kynar®
P Polypropylene
S 316 Stainless Steel
T Hastelloy®C

Diaphragm & O-ring Material (Digit 7)

E EPDM
G Viton®-XT
J PTFE
P Neoprene
T Buna-N-XS

Check Valve Material (Digits 8-9)

(Valve Spring / Valve & Seat)

SS 316 SST / 316 SST
TT Hastelloy®C / Hastelloy®C
SC 316 SST / Ceramic
TC Hastelloy®C / Ceramic

Gearbox Ratio (Digits 10-12)

100	100:1	(63 B5 Motor Frame)
080	80:1	(63 B5 Motor Frame)
060	60:1	(63 B5 Motor Frame)
050	50:1	(63 B5 Motor Frame)
040	40:1	(63 B5 Motor Frame)
A30	30:1	(71 B5 Motor Frame)
A25	25:1	(71 B5 Motor Frame)
A20	20:1	(71 B5 Motor Frame)
A15	15:1	(71 B5 Motor Frame)
A10	10:1	(71 B5 Motor Frame)
B10	10:1	(80 B5 Motor Frame)
A07	7.5:1	(71 B5 Motor Frame)
B07	7.5:1	(80 B5 Motor Frame)
C07	7.5:1	(90 B5 Motor Frame)
B05	5:1	(80 B5 Motor Frame)
C05	5:1	(90 B5 Motor Frame)

Base Plate (Digit 13)

C Carbon Steel (Epoxy painted)
S Stainless Steel