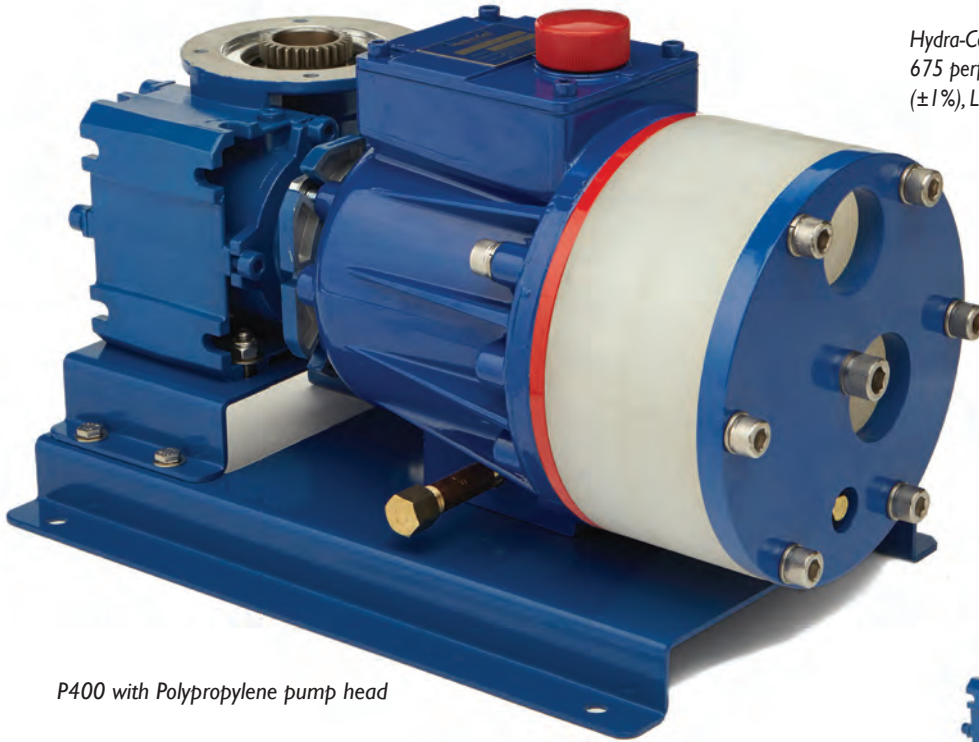


# Hydra•Cell<sup>®</sup>

## METERING SOLUTIONS™

### P400 Series

Maximum Flow Rate: 765.9 lph  
Maximum Pressure: 1000 psi (69 bar) for Metallic Pump Heads  
350 psi (24 bar) for Non-metallic Pump Heads



P400 with Polypropylene pump head

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

### Metering Pumps with “Pulse-Free” Linear Flow

- Handles a wide range of fluids from clear water to thick slurries
- Electronic flow control increases accuracy and reliability
- 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
- Seal-less design means no seals, cups, or packing to leak or replace
- A replenishment valve in every piston assembly ensures optimum actuating oil on every stroke for continuous accuracy



P400 with Brass pump head



P400 with Stainless Steel pump head

## Performance\* Maximum Estimated Flow at Designated Pressure

All Pumps (lph)		Metallic Pump Heads Only (lph)		Pump rpm	Gear Ratio	Motor rpm
7 bar	17 bar	34 bar	69 bar			
30.40	29.27	26.78	20.391	25	60:1	1500
36.76	35.59	32.97	26.09	30	50:1	
46.25	45.10	42.18	35.36	37.5	40:1	
62.24	60.92	57.72	50.33	50	30:1	
75.04	73.58	70.15	62.31	60	25:1	
94.23	92.56	88.80	80.27	75	20:1	
126.21	124.21	119.87	110.21	100	15:1	
190.19	187.50	182.03	170.09	150	10:1	
254.16	250.79	244.18	229.98	200	7.5:1	
382.1	377.4	368.5	349.7	300	5:1	
510.0	503.9	492.8	469.5	400	7.5:1	3000
765.9	757.1	741.4	709.0	600	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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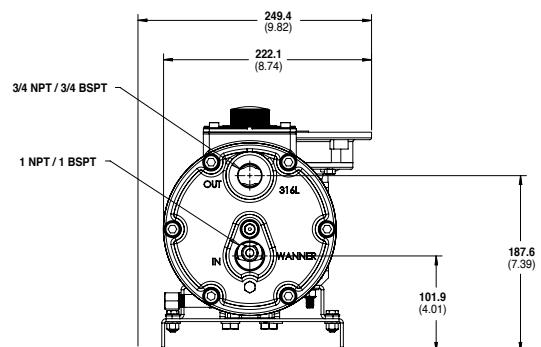
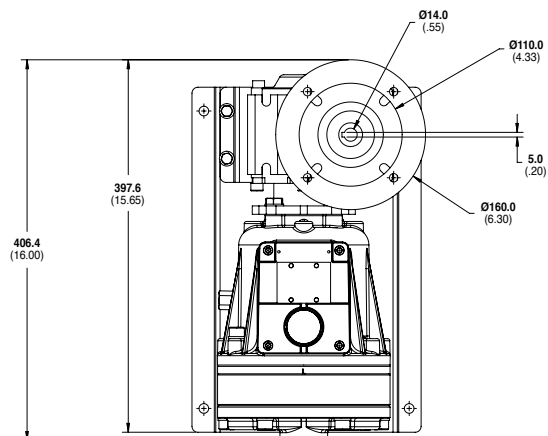
## Pump Data

Diaphragms per Liquid End	3
Flow Control	Electronic variable speed drive
Maximum Discharge Pressure	
Metallic Heads:	1000 psi (69 bar)
Non-metallic Heads:	PVDF- 350 psi (24 bar) Polypropylene- 250 psi (17 bar)
Maximum Inlet Pressure	250 psi (17 bar)
Maximum Operating Temperature	
Metallic Heads:	250 °F (121 °C)*
Non-metallic Heads:	140 °F (60 °C)
Inlet Port	1 inch NPT or BSPT
Discharge Port	3/4 inch NPT or BSPT
Weight (less motor)**	
Metallic Heads:	65.5 lbs (29.7 kg)
Non-metallic Heads:	52.5 lbs (23.8 kg)
Dimensions (less motor)**	
Metallic Heads:	9.94" W x 16.12" D x 10.29" H (252.4 mm W x 409.4 mm D x 261.3 mm H)
Non-metallic Heads:	9.94" W x 17.29" D x 10.29" H (252.4 mm W x 439.2 mm D x 261.3 mm H)

\* Consult factory for correct component selection for temperatures from 160 °F (71 °C) to 250 °F (121 °C).

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

## Representative Drawings mm (Inches)



**Metallic Pump Heads**

## How to Order

A complete pump order number contains 13 digits based on the specified pump materials listed below.

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 (Kel-Cell)

### Pump Version (Digit 5)

**N** NPT or ANSI Ports (NEMA motors only)  
**M** BSPT or ANSI Ports (IEC motors only)  
**X** ATEX BSPT Ports (IEC motors only)

### Pump Head / Retainer Material (Digit 6)

**B** Brass / Hastelloy C  
**C** Cast Iron / Hastelloy C  
**M** PVDF / PVDF  
**P** Polypropylene / Polypropylene  
**R** 316L Stainless Steel (ANSI flange weldment) / Hastelloy C  
**S** 316L Stainless Steel (NPT or BSPT) / Hastelloy C  
**T** Hastelloy C / Hastelloy C

### Diaphragm & O-ring Material / Oil (Digit 7)<sup>▲</sup>

**A** Aflas / PTFE O-rings (Synthetic oil)  
**E** EPDM (EPDM-compatible oil)  
**X** FKM (Synthetic oil)  
**J** PTFE (Food-contact oil)  
**P** Neoprene (Synthetic oil)  
**T** Buna-N (Synthetic oil)

<sup>▲</sup> See price list for different actuating oils available with these materials.

### Check Valve Material (Digits 8-9)

#### (Valve Spring / Valve Seat / Valve)

**SS** Elgiloy / 316L SST / Nitronic 50  
**TT** Hastelloy C / Hastelloy C / Hastelloy C  
**SC** Elgiloy / Ceramic / Ceramic  
**TC** Hastelloy C / Ceramic / Ceramic  
**SD** Elgiloy / Tungsten Carbide / Tungsten Carbide  
**TD** Hastelloy C / Tungsten Carbide / Tungsten Carbide

### Gearbox Ratio (Digits 10-12) IEC Motors

<b>060</b>	60:1	(63 B5 Motor Frame)
<b>050</b>	50:1	(63 B5 Motor Frame)
<b>040</b>	40:1	(63 B5 Motor Frame)
<b>A30</b>	30:1	(71 B5 Motor Frame)
<b>A25</b>	25:1	(71 B5 Motor Frame)
<b>A20</b>	20:1	(71 B5 Motor Frame)
<b>A15</b>	15:1	(71 B5 Motor Frame)
<b>A10</b>	10:1	(71 B5 Motor Frame)
<b>B10</b>	10:1	(80 B5 Motor Frame)
<b>C10</b>	10:1	(90 B5 Motor Frame)
<b>A07</b>	7.5:1	(71 B5 Motor Frame)
<b>B07</b>	7.5:1	(80 B5 Motor Frame)
<b>C07</b>	7.5:1	(90 B5 Motor Frame)
<b>B05</b>	5:1	(80 B5 Motor Frame)
<b>C05</b>	5:1	(90 B5 Motor Frame)

### Base Plate (Digit 13)

**C** Carbon Steel (Epoxy painted)  
**S** 316L Stainless Steel

## Accessories, Options & Services

Consult the Hydra-Cell Metering Solutions catalog for complete details about available accessories and options as well as special services.

- Manifolds and Flanges
- Multiplexing Capability
- Different Gearbox Ratios
- Oil Systems and Kits
- Actuating Oils
- Motors (Standard/Explosion-proof)
- Controllers
- Control Freak Touch-screen Metering Controller
- SmartDrive Motor-Controller
- Calibration Cylinders
- Back Pressure Valves
- Pressure Relief Valves
- Pulsation Dampeners
- Demonstration (Cutaway) Units
- Testing Services
- System Components, Priming Kits and Plugs
- Replacement Part Kits and Tool Kits
- Customization Services



Hydra-Cell Metering Solutions demonstration unit complete with the Control Freak™ touch-screen metering controller.

# Hydra•Cell<sup>®</sup>

## METERING SOLUTIONS™

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