

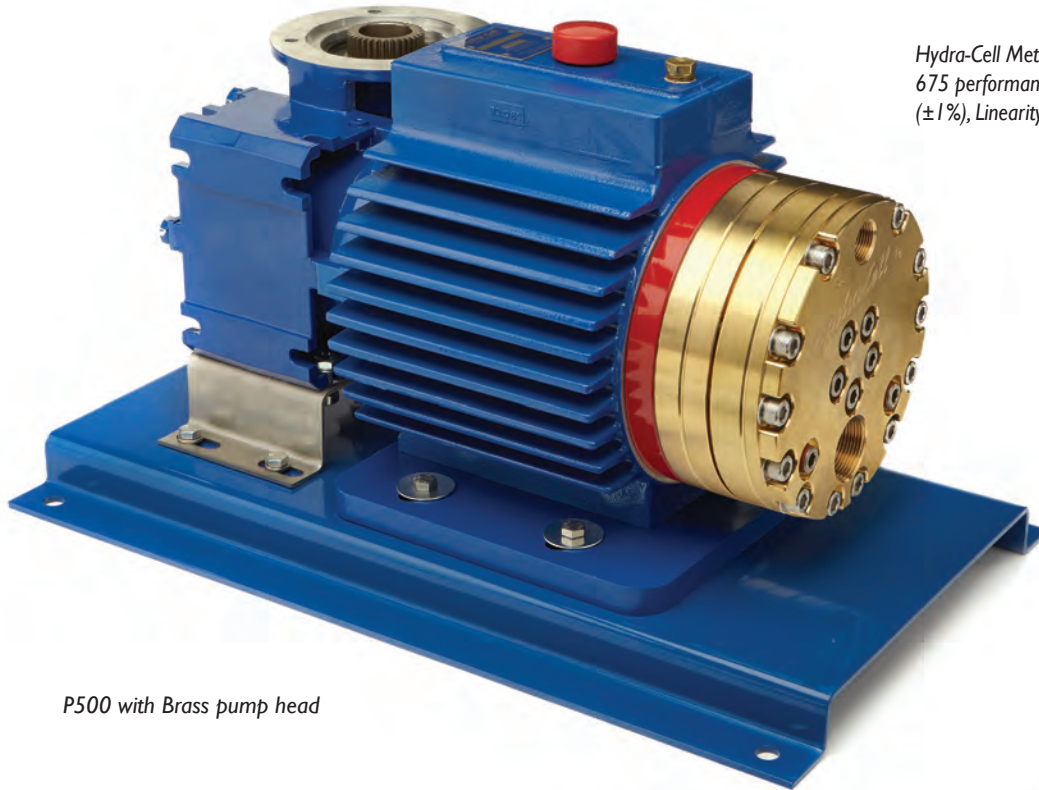
Hydra·Cell[®]

METERING SOLUTIONS™

P500 Series

Maximum Flow Rate: 425.9 gph

Maximum Pressure: 2500 psi (172 bar) for Metallic Pump Heads



P500 with Brass 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



P500 with Stainless Steel pump head

P500 Series

Performance Maximum Flow at Designated Pressure

| 100 psi | Metallic Pump Heads Only (gph) | | | Pump rpm | Gear Ratio | Motor rpm |
|---------|--------------------------------|----------|----------|----------|------------|-----------|
| | 500 psi | 1500 psi | 2500 psi | | | |
| 17.48 | 16.96 | 15.74 | 14.47 | 30 | 60:1 | 1800 |
| 20.97 | 20.43 | 19.11 | 17.71 | 36 | 50:1 | |
| 26.39 | 25.73 | 24.20 | 22.67 | 45 | 40:1 | |
| 35.27 | 34.47 | 32.63 | 30.80 | 60 | 30:1 | |
| 42.37 | 41.47 | 39.37 | 37.31 | 72 | 25:1 | |
| 53.03 | 51.97 | 49.49 | 47.07 | 90 | 20:1 | |
| 70.78 | 69.46 | 66.35 | 63.34 | 120 | 15:1 | |
| 106.3 | 104.4 | 100.1 | 95.88 | 180 | 10:1 | |
| 141.8 | 139.4 | 133.8 | 128.4 | 240 | 7.5:1 | |
| 212.8 | 209.4 | 201.2 | 193.5 | 360 | 5:1 | |
| 283.9 | 279.4 | 268.7 | 258.6 | 480 | 7.5:1 | 3600 |
| 425.9 | 419.3 | 403.6 | 388.7 | 720 | 5:1 | |

Required Motor hp

| | | | | | | | | | | | |
|-----|-----|-----|---|-------|---|---|---|-------|----|----|----|
| 1/4 | 1/2 | 3/4 | 1 | 1-1/2 | 2 | 3 | 5 | 7-1/2 | 10 | 15 | 20 |
|-----|-----|-----|---|-------|---|---|---|-------|----|----|----|

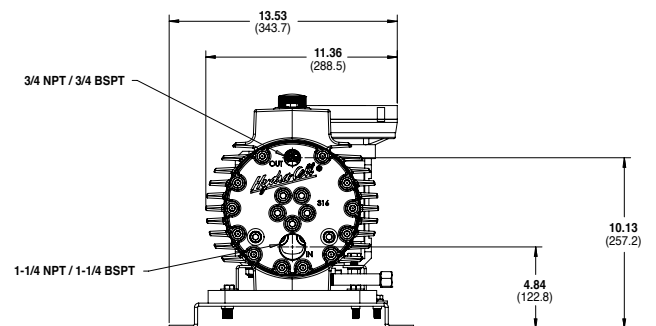
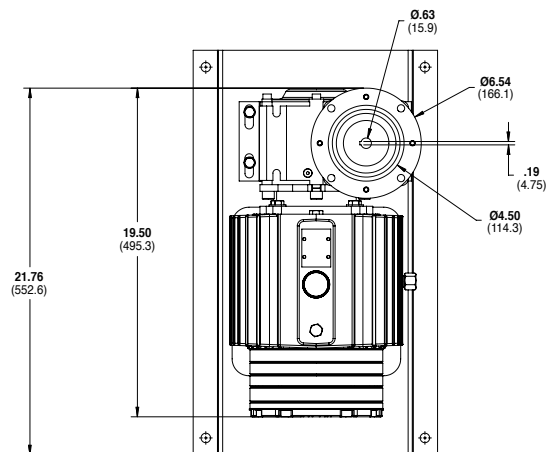
Pump Data

| | |
|-------------------------------|---|
| Diaphragms per Liquid End | 5 |
| Flow Control | Electronic variable speed drive |
| Maximum Discharge Pressure | |
| Metallic Heads: | 2500 psi (172 bar) |
| Maximum Inlet Pressure | 500 psi (34 bar) |
| Maximum Operating Temperature | |
| Metallic Heads: | 250 °F (121 °C)* |
| Inlet Port | 1-1/4 inch NPT or BSPT |
| Discharge Port | 3/4 inch NPT or BSPT |
| Weight (less motor)** | |
| Metallic Heads: | 192.1 lbs (88.5 kg) |
| Dimensions (less motor)** | |
| Metallic Heads: | 14.5" W x 24.0" D x 13.9" H (368.3 mm W x 609.6 mm D x 353.1 mm H) |

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

** For 56C motor frame only. Consult factory for other motor frame sizes.

Representative Drawings Inches (mm)



Metallic Pump Heads

P500 Series

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 | 5 | 0 | 0 | | | | | | | | | |

Pump Model Size (Digits 1-4)

P500 For all P500 Pumps (Non Kel-Cell)

Pump Version (Digit 5)

N NPT Ports (NEMA motors only)
M BSPT Ports (IEC motors only)

Pump Head / Retainer Material (Digit 6)

B Brass / Hastelloy C
S 316L Stainless Steel / Hastelloy C
T Hastelloy C / Hastelloy C

Diaphragm & O-ring Material / Oil (Digit 7)[▲]

A Aflas / PTFE O-rings (Synthetic oil)
X FKM (Synthetic oil)
T Buna-N (Synthetic oil)

[▲] See price list for different actuating oils available with these materials.

Check Valve Material (Digits 8-9)

(Valve Spring / Valve Seat / Valve)

SS Elgiloy / Nitronic 50 / Nitronic 50
TT Hastelloy C / Hastelloy C / Hastelloy C
SD Elgiloy / Tungsten Carbide / Tungsten Carbide
TD Hastelloy C / Tungsten Carbide / Tungsten Carbide

Gearbox Ratio (Digits 10-12) NEMA Motors

| | | |
|------------|-------|-------------------------|
| 060 | 60:1 | (56C Motor Frame) |
| 050 | 50:1 | (56C Motor Frame) |
| 040 | 40:1 | (56C Motor Frame) |
| A40 | 40:1 | (143/145TC Motor Frame) |
| 030 | 30:1 | (56C Motor Frame) |
| A30 | 30:1 | (143/145TC Motor Frame) |
| 025 | 25:1 | (56C Motor Frame) |
| A25 | 25:1 | (143/145TC Motor Frame) |
| 020 | 20:1 | (56C Motor Frame) |
| A20 | 20:1 | (143/145TC Motor Frame) |
| 015 | 15:1 | (56C Motor Frame) |
| A15 | 15:1 | (143/145TC Motor Frame) |
| B15 | 15:1 | (182/184TC Motor Frame) |
| 010 | 10:1 | (56C Motor Frame) |
| A10 | 10:1 | (143/145TC Motor Frame) |
| B10 | 10:1 | (182/184TC Motor Frame) |
| 007 | 7.5:1 | (56C Motor Frame) |
| A07 | 7.5:1 | (143/145TC Motor Frame) |
| B07 | 7.5:1 | (182/184TC Motor Frame) |
| C07 | 7.5:1 | (213/215TC Motor Frame) |
| 005 | 5:1 | (56C Motor Frame) |
| A05 | 5:1 | (143/145TC Motor Frame) |
| B05 | 5:1 | (182/184TC Motor Frame) |
| C05 | 5:1 | (213/215TC Motor Frame) |
| D05 | 5:1 | (254/256TC Motor Frame) |

Base Plate (Digit 13)

H Carbon Steel (Epoxy painted) for O, A & B reducers, size 75
G Carbon Steel (Epoxy painted) for C & D reducers

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[®]

METERING SOLUTIONS™

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