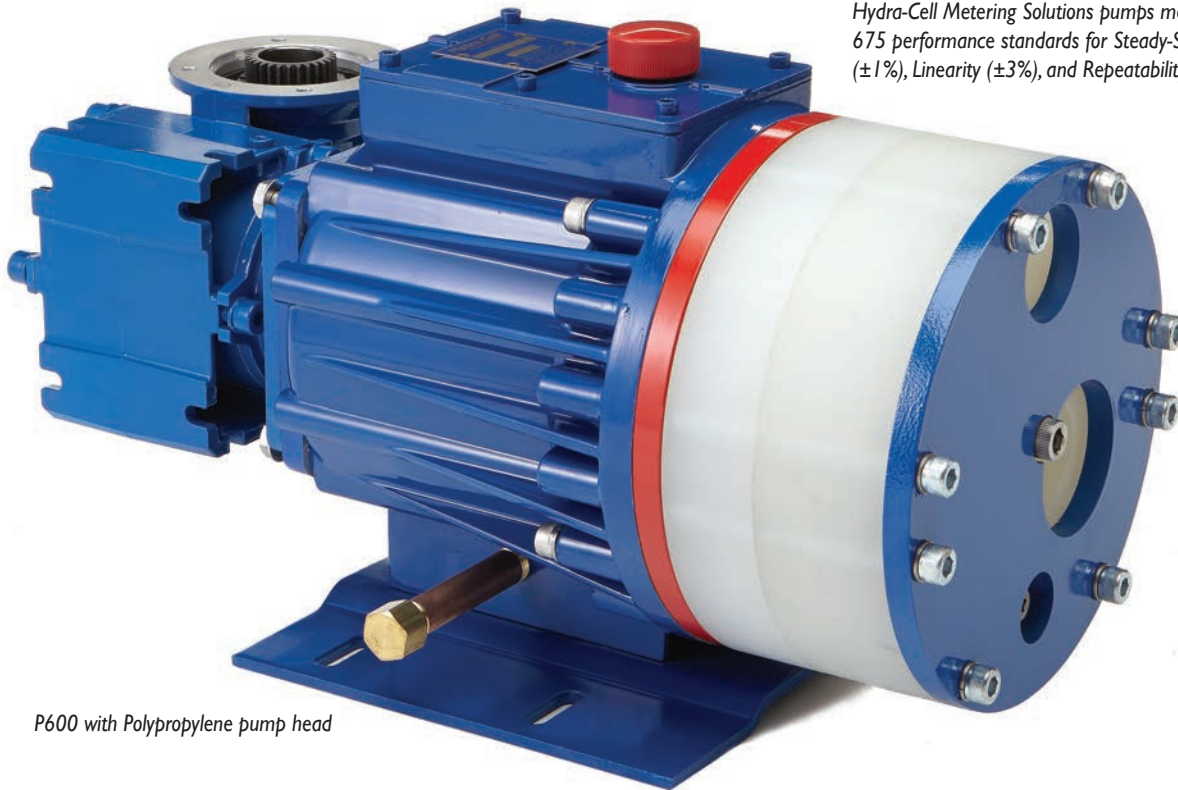


Hydra·Cell[®]

METERING SOLUTIONS™

P600 Series

Maximum Flow Rate: 890.3 gph (2808.0 lph)
Maximum Pressure: 1000 psi (69 bar) for Metallic Pump Heads
350 psi (24 bar) for Non-metallic Pump Heads



P600 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 without doubling equipment cost.
- 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.

Performance

Flows shown are for pumps with elastomeric diaphragms (consult factory for performance characteristics of pumps with PTFE diaphragms) and are based upon lab testing of multiple pumps. However, flows listed are approximate values and pumps must be calibrated once installed into any system. Flow variations will occur, but calibration will ensure proper pump performance.

Maximum Flow (gph) at Designated Pressure (psi)

All Pumps (gph)		Metallic Pump Heads Only (gph)		Pump rpm	Gear Ratio	Motor rpm
100 psi	250 psi	500 psi	1000 psi			
36.49	36.12	35.21	33.25	30	60:1	1800
43.90	43.48	42.49	40.35	36	50:1	
55.00	54.53	53.39	51.17	45	40:1	
73.56	72.97	71.58	68.75	60	30:1	
88.41	87.71	86.12	82.81	72	25:1	
110.7	109.8	107.9	103.9	90	20:1	
147.8	146.7	144.3	139.1	120	15:1	
222.1	220.4	217.0	209.4	180	10:1	
296.3	294.1	289.8	279.7	240	7.5:1	
444.8	441.6	435.2	420.3	360	5:1	
593.3	589.0	580.7	560.9	480	7.5:1	3600
890.3	883.9	871.6	842.1	720	5:1	

Required Motor hp

1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15
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Maximum Flow (lph) at Designated Pressure (bar)

All Pumps (lph)		Metallic Pump Heads Only (lph)		Pump rpm	Gear Ratio	Motor rpm
7 bar	17 bar	34 bar	69 bar			
115.1	113.9	111.1	104.9	25	60:1	1500
138.5	137.2	134.0	127.3	30	50:1	
173.5	172.0	168.4	161.4	37.5	40:1	
232.0	230.2	225.8	216.9	50	30:1	
278.9	276.7	271.7	261.2	60	25:1	
349.2	346.5	340.5	327.8	75	20:1	
466.3	462.7	455.2	438.6	100	15:1	
700.5	695.3	684.7	660.4	150	10:1	
934.7	927.9	914.1	882.2	200	7.5:1	
1403	1393	1373	1326	300	5:1	
1872	1858	1832	1769	400	7.5:1	3000
2808	2788	2750	2656	600	5:1	

Required Motor kW

0.37	0.55	0.75	1.1	1.5	2.2
3	3.7	4	5.5	7.5	

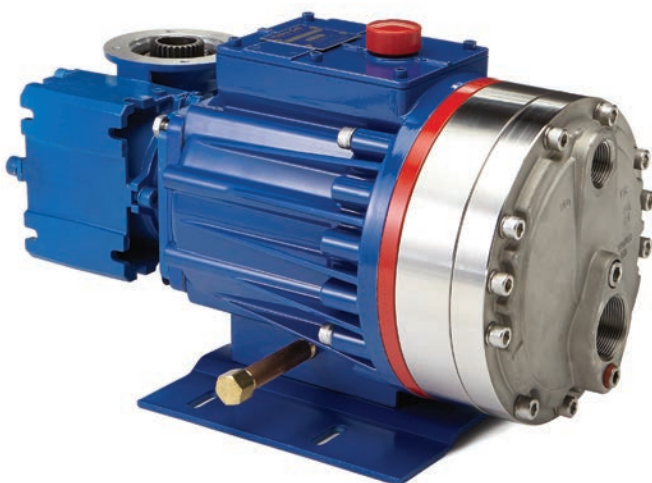
Pump Data

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	
<i>Consult factory for correct metallic head component selection for temperatures from 160 °F (71 °C) to 250 °F (121 °C).</i>	
Metallic Heads:	250 °F (121 °C)
Non-metallic Heads:	140 °F (60 °C)
Maximum Solids Size	500 microns
Inlet Port	1-1/2 inch NPT or BSPT
Discharge Port	1 inch NPT or BSPT
Shaft Rotation	Bi-directional
Oil Capacity	2.5 US quarts (2.4 liters)
Weight (less motor)	
Metallic Heads:	146.0 lbs (66.2 kg)
Non-metallic Heads:	111.0 lbs (50.3 kg)
Dimensions (less motor)	
<i>For NEMA 56 motor frames only; see page 6 for other motor frame sizes.</i>	
Metallic Heads:	10.74" W x 20.64" D x 11.57" H (272.7 mm W x 524.3 mm D x 293.9 mm H)
Non-metallic Heads:	10.74" W x 21.56" D x 11.57" H (272.7 mm W x 547.6 mm D x 293.9 mm H)

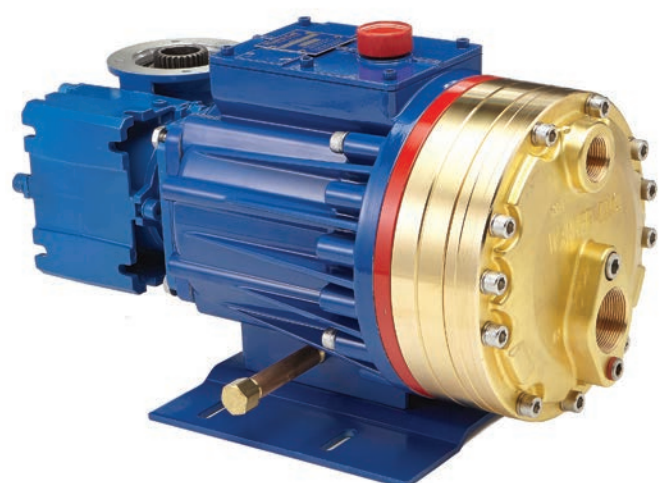
Accessories, Options and Services

Consult Wanner Engineering for complete details about available accessories and options as well as special services.

- Manifolds and Flanges
- Multiplexing Capability
- Different Gearbox Ratios
- Oil Cooler Systems
- Actuating Oils
- Magnetic Drain Plug
- Motors (Standard/Hazardous-duty)
- 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



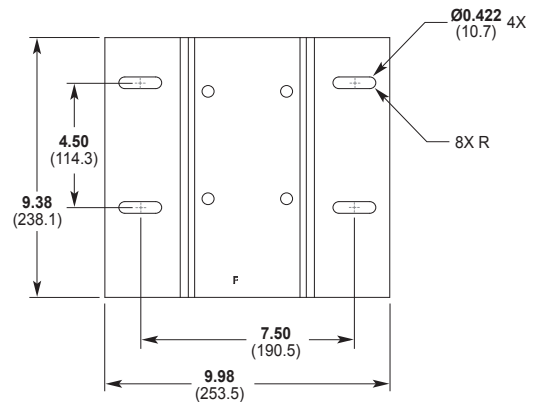
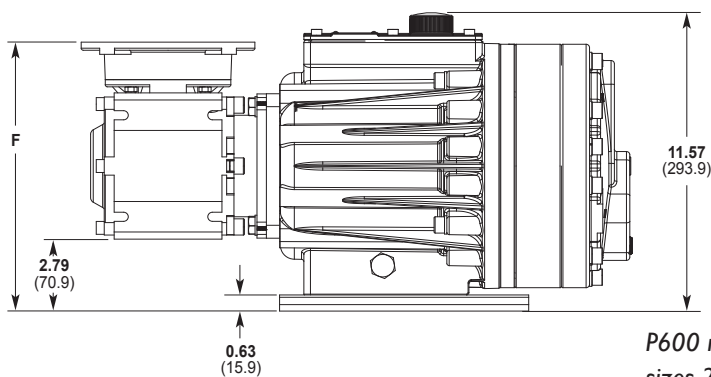
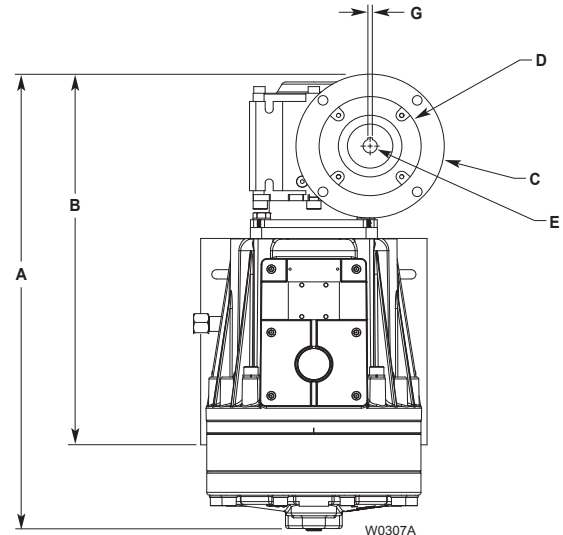
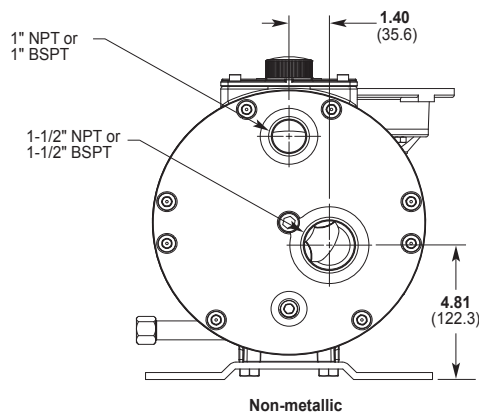
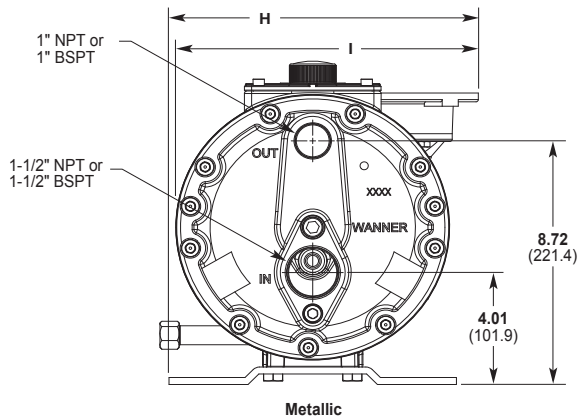
P600 with Stainless Steel pump head.



P600 with Brass pump head.

Representative Drawings

Metallic and Non-metallic Pump Heads Inches (mm)



P600 representative drawings for C and D reducers (NEMA motor sizes 213/215TC and 254/256TC), please visit www.Hydra-Cell.com.

Dimensions: Inches (mm)

Input Frame Size	A		B	C	D	E	F	G (Square Key)	H	I
	Metallic Pump Head	Plastic Pump Head								
NEMA 56C	20.64 (524.3)	21.56 (547.6)	16.84 (427.7)	Ø 6.54 (Ø 166)	Ø 4.50 (Ø 114.3)	Ø 0.62 (Ø 15.7)	10.43 (264.9)	0.187 (4.75)	10.74 (272.7)	10.49 (266.4)
NEMA 143/145 TC	20.64 (524.3)	21.56 (547.6)	16.84 (427.7)	Ø 6.54 (Ø 166)	Ø 4.50 (Ø 114.3)	Ø 0.87 (Ø 22.2)	10.90 (276.9)	0.187 (4.75)	10.74 (272.7)	10.49 (266.4)
NEMA 182/184 TC	21.95 (557.5)	22.88 (581.2)	18.16 (461.3)	Ø 9.17 (Ø 233)	Ø 8.50 (Ø 215.9)	Ø 1.12 (Ø 28.4)	12.03 (305.6)	0.25 (6.35)	12.06 (306.3)	11.81 (300)
IEC 63 B5	20.13 (511.3)	21.04 (534.4)	16.33 (414.8)	Ø 5.51 (Ø 140)	Ø 3.74 (Ø 95)	Ø 0.43 (Ø 11)	10.25 (260.4)	0.157 (4)	10.22 (259.6)	9.97 (253.3)
IEC 71 B5	20.52 (521.2)	21.44 (544.6)	16.72 (424.7)	Ø 6.30 (Ø 160)	Ø 4.33 (Ø 110)	Ø 0.55 (Ø 14)	10.25 (260.4)	0.196 (5)	10.62 (269.7)	10.37 (263.4)
IEC 80 B5	21.30 (541)	22.23 (564.7)	17.5 (444.5)	Ø 7.87 (Ø 200)	Ø 5.12 (Ø 130)	Ø 0.75 (Ø 19)	10.25 (260.4)	0.236 (6)	11.40 (289.6)	11.15 (283.3)
IEC 90 B5	21.30 (541)	22.23 (564.7)	17.5 (444.5)	Ø 7.87 (Ø 200)	Ø 5.12 (Ø 130)	Ø 0.94 (Ø 24)	10.25 (260.4)	0.314 (8)	11.40 (289.6)	11.15 (283.3)

P600 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	6	0	0									

Pump Configuration (Digits 1-4)

P600 For all P600 Pumps (Kel-Cell)

Pump Version (Digit 5)

N NPT Ports or ANSI Flanges (NEMA motors only)
M BSPT Ports or ANSI Flanges (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 class 150 x 600) / Hastelloy C
S 316L Stainless Steel (NPT or BSPT) / Hastelloy C
T Hastelloy CW12MW / Hastelloy C

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

A Aflas / PTFE O-rings (Synthetic oil)
E EPDM (EPDM-compatible oil)
X FKM (Synthetic oil)
J PTFE (Food-contact oil)
(Note: PTFE diaphragms require a minimum suction pressure of 15 psi/1 bar.)
P Neoprene (Standard oil)
T Buna-N (Standard 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
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) 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)
D07 7.5:1 (254/256TC 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) NEMA Motors

C Carbon Steel (Epoxy painted) for 0 reducers, size 63
H Carbon Steel (Epoxy painted) for A & B reducers, size 75
G Carbon Steel (Epoxy painted) for C & D reducers

Gearbox Ratio (Digits 10-12) IEC Motors

A60 60:1 (71 B5 Motor Frame)
B60 60:1 (80 B5 Motor Frame)
A50 50:1 (71 B5 Motor Frame)
B50 50:1 (80 B5 Motor Frame)
A40 40:1 (71 B5 Motor Frame)
B40 40:1 (80 B5 Motor Frame)
A30 30:1 (71 B5 Motor Frame)
B30 30:1 (80 B5 Motor Frame)
B25 25:1 (80 B5 Motor Frame)
C25 25:1 (90 B5 Motor Frame)
B20 20:1 (80 B5 Motor Frame)
C20 20:1 (90 B5 Motor Frame)
B15 15:1 (80 B5 Motor Frame)
C15 15:1 (90 B5 Motor Frame)
B10 10:1 (80 B5 Motor Frame)
C10 10:1 (90 B5 Motor Frame)
D10 10:1 (100/112 B14 Motor Frame)
B07 7.5:1 (80 B5 Motor Frame)
C07 7.5:1 (90 B5 Motor Frame)
D07 7.5:1 (100/112 B14 Motor Frame)
B05 5:1 (80 B5 Motor Frame)
C05 5:1 (90 B5 Motor Frame)
D05 5:1 (100/112 B14 Motor Frame)

Base Plate (Digit 13) IEC Motors

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

Hydra·Cell[®]

METERING SOLUTIONS[™]

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