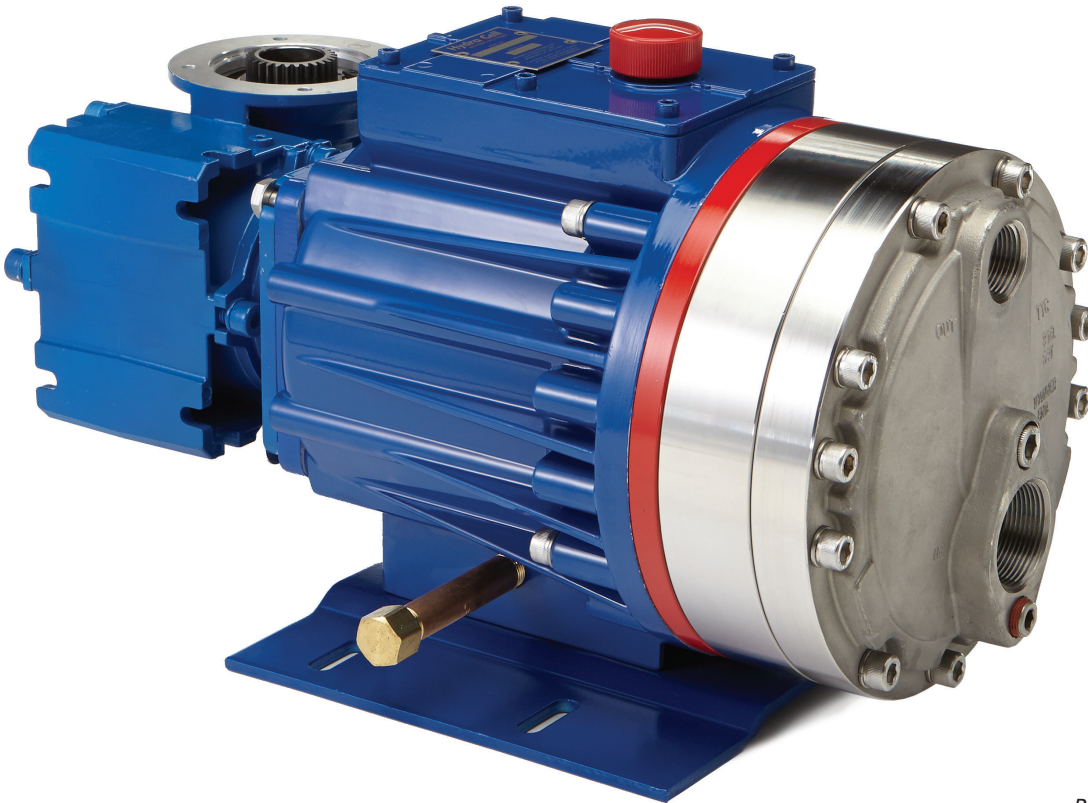


P600 PRO SERIES METERING PUMPS

Maximum Flow Rate: 2808 L/hr (890.3 US gph)

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

WANNER™ HYDRA-CELL® PRO
METERING PUMP SOLUTIONS



P600 with Stainless Steel pump head

A higher standard of metering performance and energy efficiency.

- Integrates **Wanner Hydra-Cell® Pro** seal-less pump technologies for the highest levels of volumetric and energy efficiencies across the full turndown – 0 to max flow – for accurate metering performance.
- Patented ADPC (Advanced Diaphragm Position Control) technology protects diaphragms under closed or restricted inlet conditions.
- Seal-less design with no mechanical dynamic seals, packing, or cups to leak, wear or replace
- Compact design with multiple diaphragms in a single pump head.
- Virtually pulse-free flow – eliminates pulsation dampeners in most applications, reduces pipe strain and acceleration head losses.
- Exceeds API 675 standards for steady-state accuracy ($\pm 1\%$), linearity ($\pm 3\%$), and repeatability ($\pm 3\%$) over a wide adjustable range.
- Hydraulic oil management system replenishes on every back stroke, ensuring superior accuracy and reliable operation at low- and high-suction pressures.
- Unique valve design and material options reliably handles a wide range of viscosities and shear sensitivities, plus corrosive liquids, abrasives, slurries and suspended solids.
- Pumped liquid is 100% contained, preventing degradation, contamination and emissions.
- Lower total cost of ownership in acquisition, operation, service, maintenance, and energy use.



Performance - Flow Capacities and Pressure Ratings

For Synchronous Speed, Self-cooled Motors

L/hr Maximum Flow at Designated Pressure

All Pumps (L/hr)		All Pumps (L/hr) Metallic		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	941.1	882.2	200	7.5:1	
1403	1393	1373	1326	300	5:1	
1872	1858	1832	N/A	400	7.5:1	3000
2808	2788	N/A	N/A	600	5:1	

Required Motor kW

0.18	0.37	0.55	0.75	1.1	1.5	2.2
4.0						

Notes:

1. The motor kW are based on ambient temperature conditions up to 40°C. For ambient temperatures above 40°C, please contact Wanner International.
2. Capacity data is shown for pumps with elastomeric diaphragms. Contact factory for performance characteristics of pumps with PTFE diaphragms.
3. Contact factory for performance specifications.
4. Based on using IE2 motors.
5. For intermittent or reduced pressure duties, please contact Wanner International.

For 10:1 Turndown, Self-cooled Motors

L/hr Maximum Flow at Designated Pressure

All Pumps (L/hr)		Metallic Pump Heads Only (L/hr)		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	N/A	150	10:1	
934.7	927.9	914.1	N/A	200	7.5:1	
1403	1393	1373	N/A	300	5:1	
1872	1858	N/A	N/A	400	7.5:1	3000
2808	N/A	N/A	N/A	600	5:1	

Required Motor kW

0.37	0.55	0.75	1.1	1.5	2.2	3.0
4.0						

Notes:

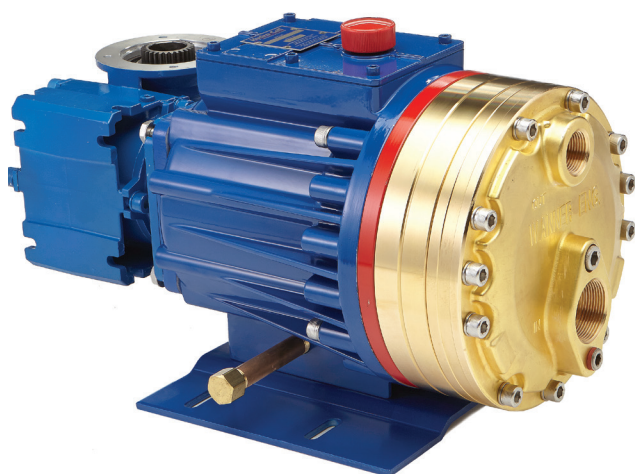
1. The motor kW are based on ambient temperature conditions up to 25°C. For ambient temperatures above 25°C, Force-cooled Motors may be required. Please contact Wanner International.
2. Capacity data is shown for pumps with elastomeric diaphragms. Contact factory for performance characteristics of pumps with PTFE diaphragms.
3. Contact factory for performance specifications.
4. Based on using IE2 motors.
5. For intermittent or reduced pressure duties, please contact Wanner International.

Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

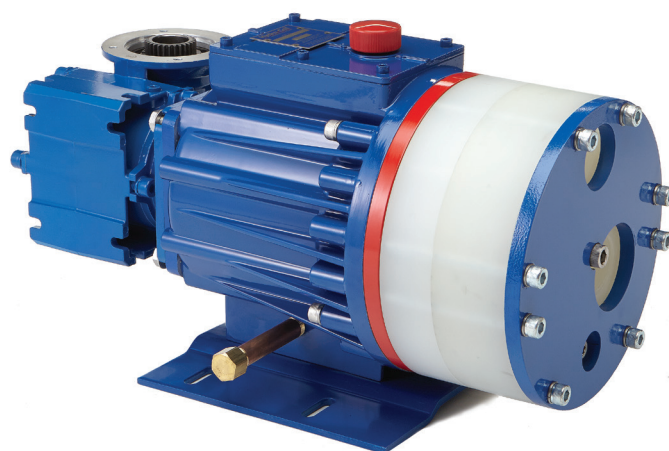
P600 Pro Series | Features & Specifications

Pump Data

Diaphragms per Liquid End	3
Flow Control	Electronic variable speed drive
Maximum Discharge Pressure	
Metallic Heads:	69 bar
Non-Metallic Heads:	17 bar - Polypropylene 24 bar - PVDF
Maximum Inlet Pressure	17 bar
Maximum Liquid Operating Temperature	
Metallic Heads:	121°C to 71°C
Non-Metallic Heads:	PVDF to 80°C Polypropylene to 60°C
<i>Consult factory for temperatures outside this range</i>	
Maximum Solids Size	800 microns
Inlet Port	1 - 1/2 inch BSPT
	1/2 inch ANSI RF 150lb
Discharge Port	1 inch BSPT
	1 inch ANSI RF 500lb
Shaft Rotation	Reverse (bi-directional)
Oil Capacity	3.1 litres
Weight (less motor)	
Metallic Heads:	66.2 kg
Non-Metallic Heads:	50.3 kg
Dimensions (less motor)	
Metallic Heads:	272.7 mm W x 524.3 mm D x 293.8 mm H
	272.7 mm W x 547.6 mm D x 293.8 mm H



P600 with Brass pump head



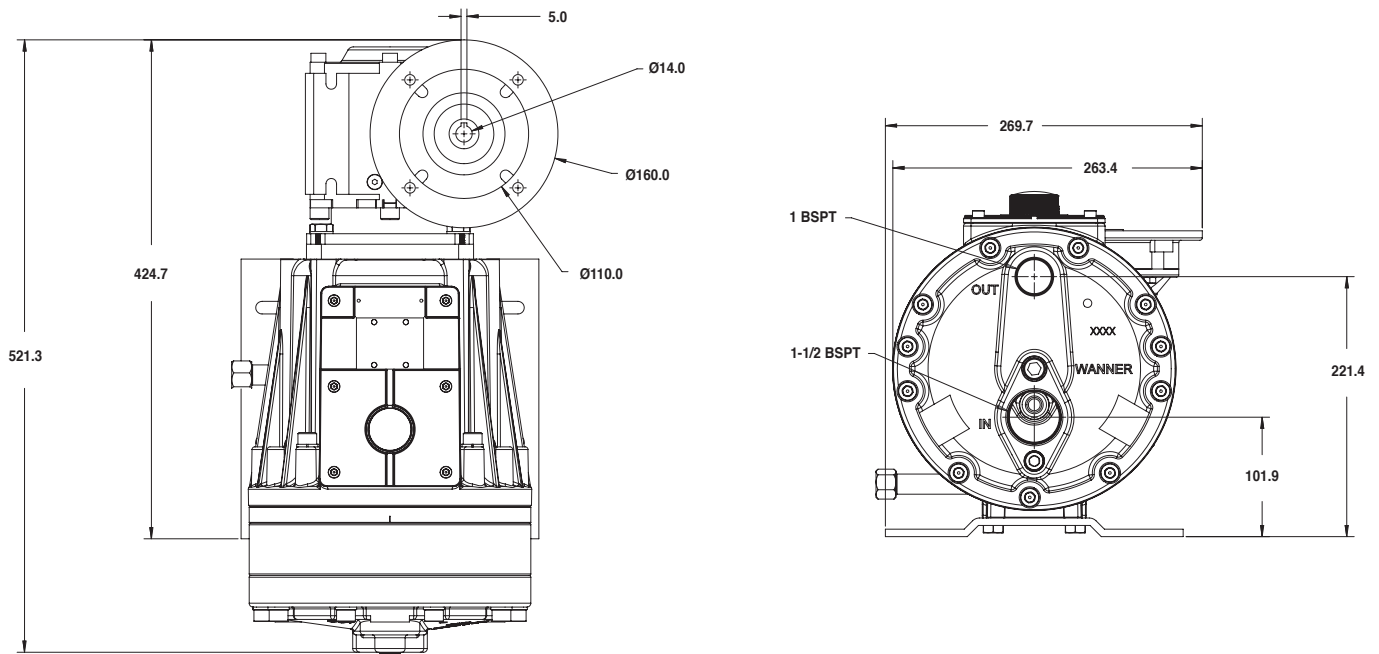
P600 with Polypropylene pump head

Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

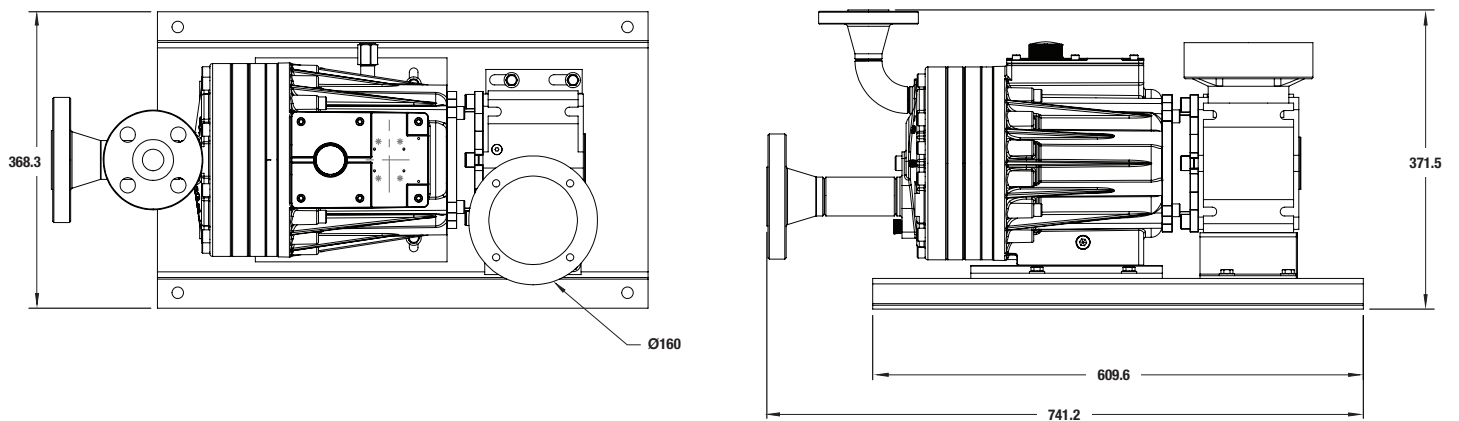
P600 Pro Series | Representative Drawings

Metallic Pump Heads mm

Metallic Pump Heads



Metallic Pump Head with ANSI Flanges



Note: Dimensions are for reference only. Contact factory for certified drawings.

Metering and Dosing Control Options

Electronic Flow Rate Adjustment for Local Control

- Force-cooled Drives supplied as standard
- IP66 Standard
- Various flow rate adjustments options including:
 1. On-board potentiometer(s).
 2. On-board key-pad controller with flow rate display.
 3. Removable, hand-held key-pad controller for authorised personnel only.
 4. Use the 10:1 Turndown table on Page 2 to select the correct motor kW for ambient temperatures up to 25°C.



Maximum Flow at Designated Pressure (see table on Page 2)



On-board keypad control



Hand-held keypad control

Accessories, Options and Services

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

- | | |
|------------------------------------|--|
| • Manifolds and Flanges | • Back Pressure Valves |
| • Multiplexing Capability | • Pressure Relief Valves |
| • Different Gearbox Ratios | • Pulsation Dampeners |
| • Oil Cooler Systems | • Demonstration (Cutaway) Units |
| • Actuating Oils | • Testing Services |
| • Magnetic Drain Plug | • System Components, Priming Kits and Plugs |
| • Motors (Standard/Hazardous-duty) | • Replacement Part Kits and Tool Kits |
| • Controllers | • Customisation Services |
| • SmartDrive Motor-Controller | • Process liquid end built with NACE and 3.1 traceability material certification |
| • Calibration Cylinders | |

Calibration Cylinders

Port Size	Cylinder Size (mL)	Cylinder Capacity (L/h)	Maximum Shaft (rpm)	Part Number BSPT Ports	Dimensions - mm	
					Height	Diameter
PVC Cylinders						
1/2"	200	24	75	111-001-B	482.6	38.1
3/4"	1000	120	300	111-003-B	558.8	63.5
1 "	2000	240	600	111-004-B	508.0	94.0
2"	10000	1200	--	111-006-B	635.0	176.5.0
Glass Cylinders						
1/4"	30	3.6	36	111-010-B	355.6	35.6
1/2"	200	24	75	111-011-B	533.4	63.5
3/4"	1000	120	300	111-013-B	685.8	88.9
1 "	2000	240	600	111-014-B	685.8	127.0



Back Pressure & Pressure Relief Valves

Port Size	Maximum Flow (L/h) Pulsating	Wetted* Materials	Pressure Adjustment Range (bar)	Maximum Temp (°C)	Part Number Back Pressure (BSPT Ports)	Part Number Back Pressure Valves (BSPT Ports)
3/8" (DN 10)	757	Polypropylene	0.7 - 10.3	90	111-101-B	111-401-B
	757	PVDF	0.7 - 10.3	149	111-103-B	111-403-B
	757	316 SST	0.7 - 10.3	149	111-106-B	111-406-B
	757	Hastelloy C	0.7 - 10.3	149	111-110-B	111-410-B
3/8" (DN 10)	757	316 SST	3.5 - 24	149	111-107-B	111-407-B
	757	Hastelloy C	3.5 - 24	149	111-111-B	111-411-B
3/8" High Pressure	2650	316 SST	24 - 172	149		111-706-B



* Diaphragm material is PTFE on all models. Other materials available on request.
Hastelloy® C is a registered trademark of Haynes International, Inc.

Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

Ordering Information

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									

Digit	Order Code	Description
1-4	P600	For all P600 Pumps (ADPC)
5		Pump Version
	N	NPT Ports or ANSI Flanges
	M	BSPT Ports or ANSI Flanges
6		Pump Head / Retainer Material
	B	Brass / Hastelloy C
	C	Cast Iron / Hastelloy C
	M	PVDF / PVDF
	P	Polypropylene / Polypropylene
	R	316L Stainless Steel with ANSI RF Flanges, Class 300lb x 600lb / Hastelloy C
	S	316L Stainless Steel (NPT or BSPT) / Hastelloy C
	T	Hastelloy C / Hastelloy C
7		Diaphragm & O-ring Material / Oil
	A	Aflas / PTFE o-ring (Synthetic oil)
	E	EPDM (EPDM-compatible oil)
	G	FKM (Standard oil)
	S	FKM (Food-contact oil)
	X	FKM (Synthetic oil)
	J	PTFE (Food-contact oil)
	W	PTFE (Synthetic oil)
		<i>Note: PTFE diaphragms require a minimum suction pressure of 1 bar.</i>
	P	Neoprene (Standard oil)
	R	Neoprene (Food-contact oil)
	Z	Neoprene (Synthetic oil)
	T	Buna-N (Standard oil)
	F	Buna-N (Food-contact oil)
	Y	Buna-N (Synthetic oil)
8-9		Check Valve Material (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

10-12	Gearbox Ratio / 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)
	<i>Note: Largest motor rating: 2kW 4-pole motor. These are Wanner standard options. Other flange sizes are available upon request.</i>	
13		Baseplate
	C	Carbon Steel (Epoxy painted) for A & B reducers, size 63
	H	Carbon Steel (Epoxy painted) for A & B reducers, size 75

Notes:

1. Please consult factory for rpm below 6.
2. Constant torque drives are required to meet API 675 performance standards.
3. Ensure that the motor chosen is capable of delivering the torque and power required over the full range of adjustment. (Consult factory for values.)
4. IEC motor size has been calculated assuming IE2 performance as defined by IEC 60034-30.

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