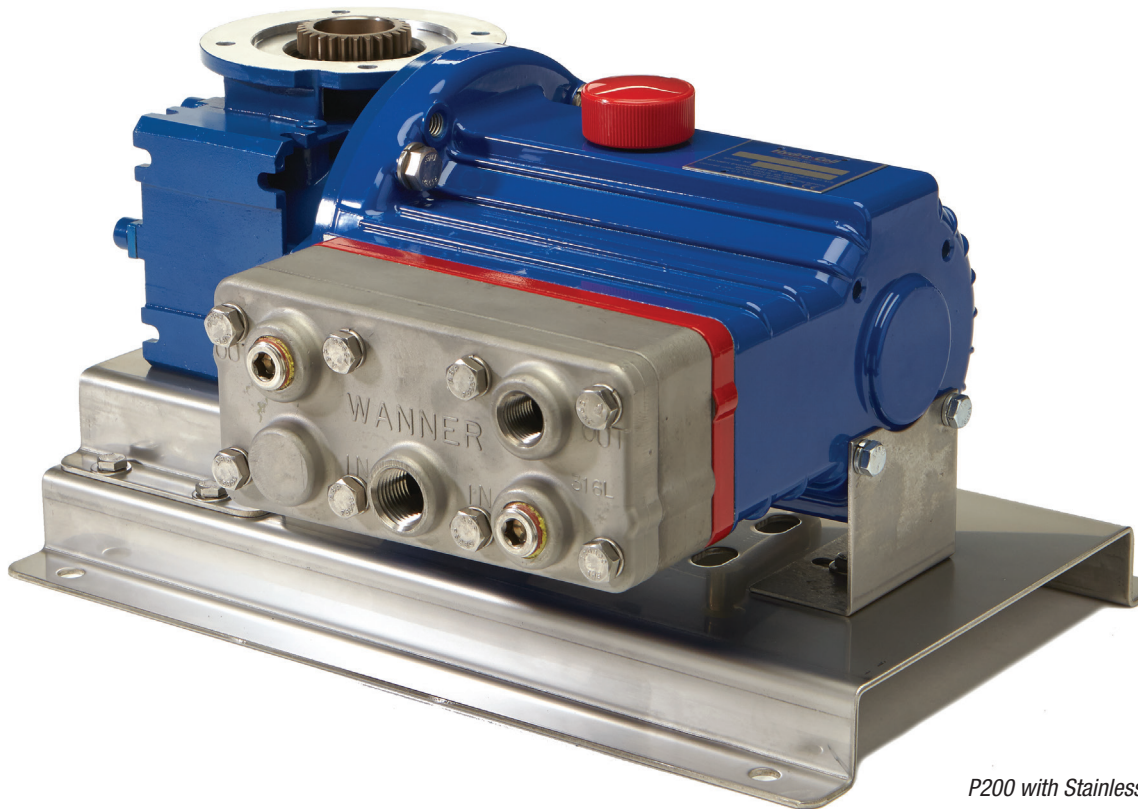


P200 PRO SERIES METERING PUMPS

Maximum Flow Rate: 255 L/hr (81.0 US gph)

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

WANNER™ HYDRA-CELL® PRO
METERING PUMP SOLUTIONS



P200 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.
- 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, for 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)		Metallic Pump Heads Only (L/hr)		Pump rpm	Gear ratio	Motor rpm
7 bar	17 bar	34 bar	69 bar			
10.6	10.5	10.2	9.9	25	60:1	1500
12.8	12.6	12.3	11.9	30	50:1	
16.0	15.8	15.5	15.0	37.5	40:1	
21.3	21.1	20.7	20.0	50	30:1	
25.6	25.3	24.8	24.1	60	25:1	
32.0	31.6	31.1	30.2	75	20:1	
42.6	42.2	41.5	40.3	100	15:1	
63.9	63.2	62.2	60.5	150	10:1	
85.1	84.3	83.0	80.8	200	7.5:1	3000
127.7	126.5	124.6	121.3	300	5:1	
170.3	168.7	166.1	161.8	400	7.5:1	
255.4	253.0	249.2	242.8	600	5:1	

Required Motor kW

0.18	0.37	0.75
------	------	------

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. Contact factory for performance specifications.
3. Based on using IE3 motors.
4. 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			
10.6	10.5	10.2	9.9	25	60:1	1500
12.8	12.6	12.3	11.9	30	50:1	
16.0	15.8	15.5	15.0	37.5	40:1	
21.3	21.1	20.7	20.0	50	30:1	
25.6	25.3	24.8	24.1	60	25:1	
32.0	31.6	31.1	30.2	75	20:1	
42.6	42.2	41.5	40.3	100	15:1	
63.9	63.2	62.2	60.5	150	10:1	
85.1	84.3	83.0	80.8	200	7.5:1	3000
127.7	126.5	124.6	121.3	300	5:1	
170.3	168.7	166.1	161.8	400	7.5:1	
255.4	253.0	249.2	242.8	600	5:1	

Required Motor kW

0.18	0.25	0.37	0.55	0.75	1.1	1.5
------	------	------	------	------	-----	-----

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. Contact factory for performance specifications.
3. Based on using IE3 motors.
4. For intermittent or reduced pressure duties, please contact Wanner International.

Mechanical Adjustment Controller for ATEX/Explosive Areas All Min/Max flow rates in litres/hour

7 Bar		17 Bar		34 Bar		Min	Max	Pump RPM	Gearbox Ratio	Model Number	Required Motor kW & Frame Sizing
Min	Max	Min	Max	Min	Max						
2.0	10.2	1.9	10.0	1.9	9.8	1.6	9.4	5 - 24	25:1	MEC3 - 71B14	0.25kW / IEC71 / 4-pole
	12.8		12.6		12.3		11.8	5 - 30	20:1		
	17.1		16.9		16.5		16.0	5 - 40	15:1		
	25.6		25.3		24.8		24.1	5 - 60	10:1		
	34.1		33.7		33.1		32.2	5 - 80	7.5:1	MEC3 - 80B14	0.37kW / IEC71 / 4-pole
	51.1		50.6		50.6		48.4	5 - 120	5:1		0.55kW / IEC71 / 2-pole
	68.1		67.5		67.5		64.6	5 - 160	7.5:1		0.75kW / IEC80 / 2-pole
	102.2		101.2		101.2		97.0	5 - 240	5:1		

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

P200 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:	PVDF to 24 bar Polypropylene to 17 bar
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	200 microns
Inlet Port	1/2 inch BSPT
	3/4 inch ANSI RF 300lb
Discharge Port	3/8 inch BSPT
	3/4 inch ANSI RF 600lb
Shaft Rotation	Reverse (bi-directional)
Oil Capacity	0.95 litres
Weight (less motor)	
Metallic Heads:	19.0 kg
Non-metallic Heads:	14.9 kg
Dimensions (less motor)	
Metallic Heads:	396.1 mm W x 296.7 mm D x 227.8 mm H
Non-metallic Heads:	396.1 mm W x 306.3 mm D x 227.8 mm H
Controllers	
Mechanical Adjustment:	220 mm D x 155 mm H for MEC3 (7.2 kg)
Electronic Controller:	215 mm W x 280 mm D x 300 mm H (10 kg)



P200 with Brass pump head

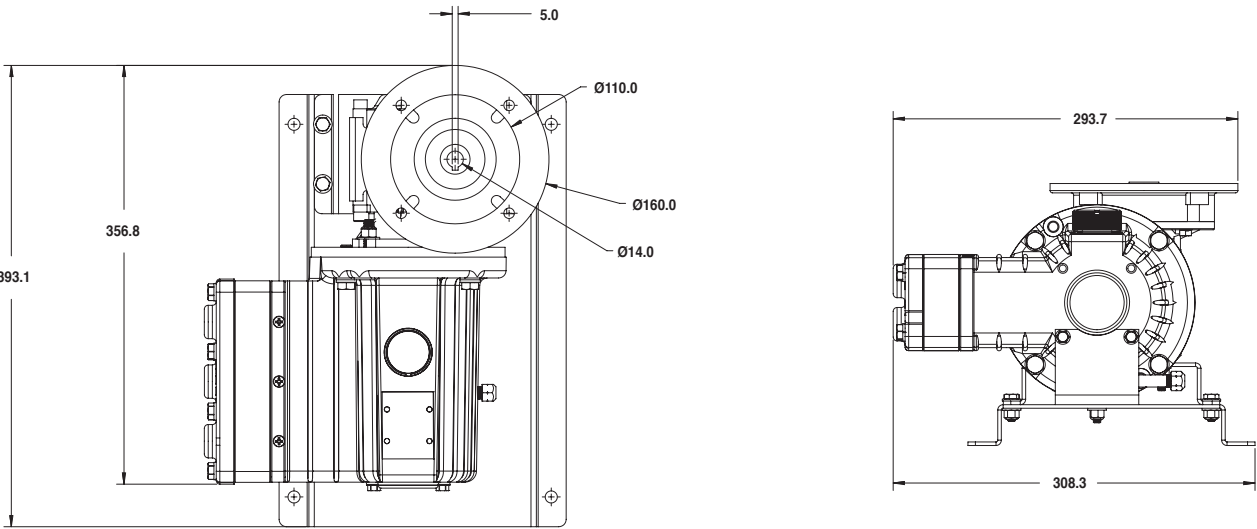


P200 with Polypropylene pump head

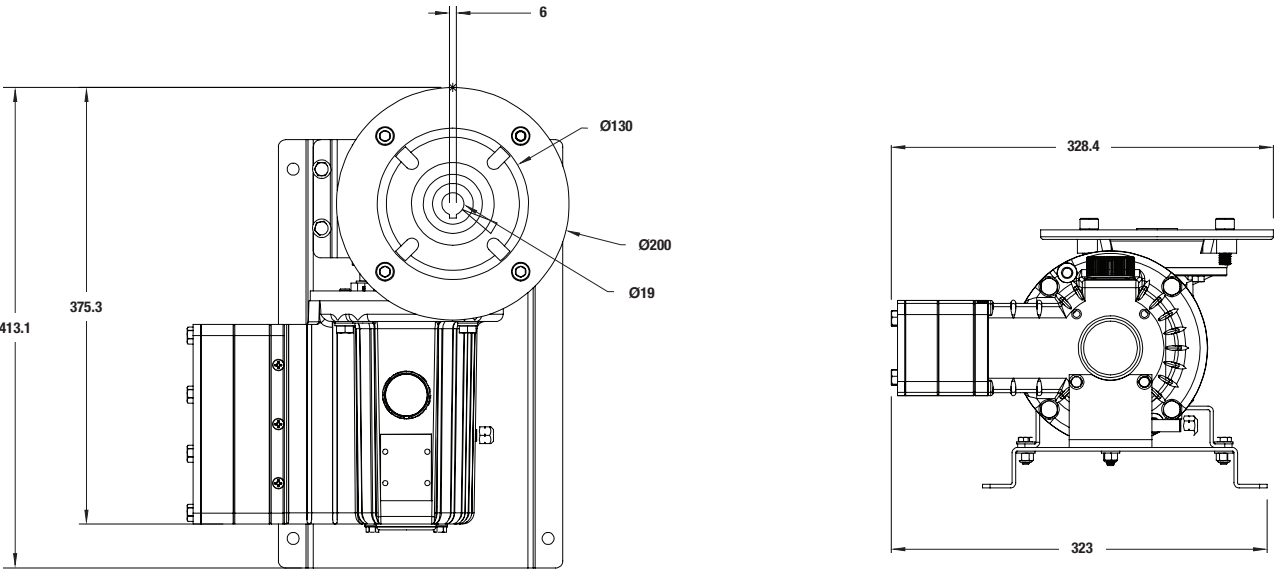
Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

Pump Heads (mm)

Metallic Pump Heads



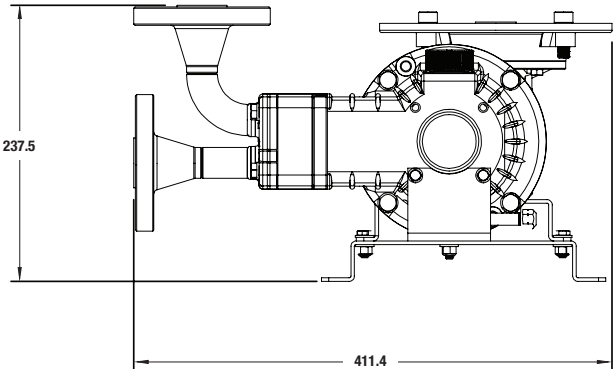
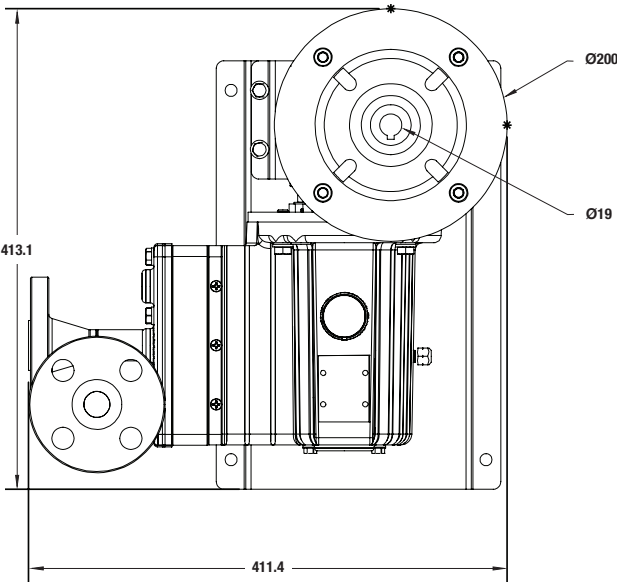
Non-Metallic Pump Heads



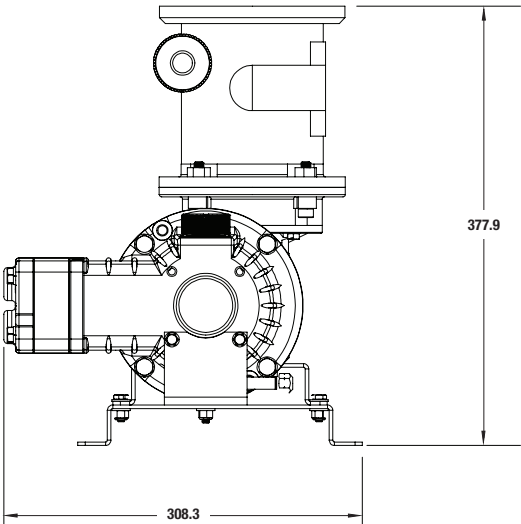
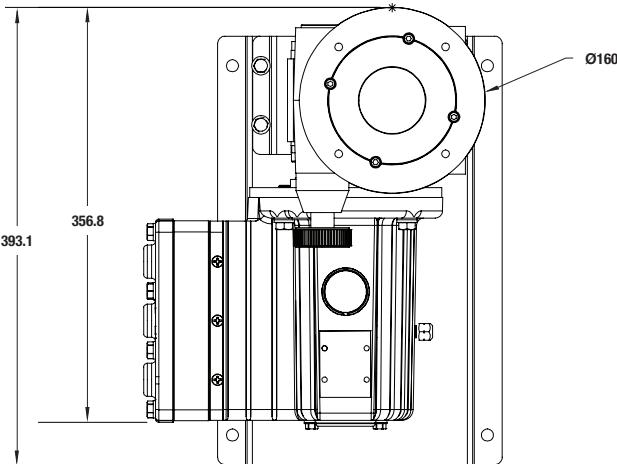
Note: Dimensions are for reference only. Contact factory for certified drawings.

Pump Heads (mm)

Metallic Pump Head with ANSI Flanges



Metallic Pump Head with Manual Adjustment



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)

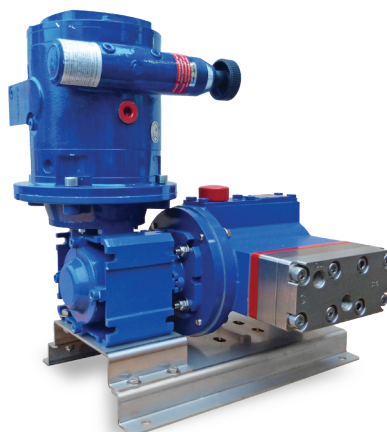


On-board keypad control

Hand-held keypad control

Mechanical Flow Rate Adjustment for Local Control

- ATEX Zone 1
- Linear fine adjustment scale on hand-wheel
- High reliability due to frictionless design
- Option to fit a mechanical lock to prevent unauthorised flow rate change



Accessories, Options and Services

Consult Wanner International 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
- 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
- Customisation Services
- Process liquid end built with NACE and 3.1 traceability material certification

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
3/8" (DN 10)	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.

P200 Pro Series | How to Order

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	2	0	0									

Digit	Order Code	Description
1-4	P200	For all P200 Pumps (Non Kel-Cell)
5		Pump Version
	N	NPT Ports (NEMA motors only)
	M	BSPT Ports (IEC motors only)
	A	ATEX BSPT Ports (IEC motors only)

ATEX Certification Kit Option

As a separate line on your order, please add the required ATEX Certification Kit Option.

Category 2, Zone 1

Part Number	Description
ATEX-Z1-G03/P200	Kit-ATEX Category 2, Zone 1 IIB T4 G03/P200

Category 3, Zone 2

Part Number	Description
ATEX-Z2-G03/P200	Kit-ATEX Category 3, Zone 2 IIC T4 G03/P200

Notes:

1. All options include Certificate, Oil Level Monitor, Earth Stud & Secondary ATEX Label.
2. Extra oil is required to fill the oil bowl during installation of ATEX pump. This oil is not included and must be ordered separately.
3. ATEX is not available with non-metallic pump heads.

6		Pump Head / Retainer Material
	B	Brass / Hastelloy C
	M	PVDF / PVDF
	P	Polypropylene / Polypropylene
	1	316L Stainless Steel with ANSI RF Flanges, Class 300lb x 600lb / Hastelloy C
	-	316L Stainless Steel with DIN Flanges, Class PN40 DN20 x PN100 DN15w
	S	316L Stainless Steel / Hastelloy C
	-	316L Stainless Steel with Tri-clamp (1" Inlet & 3/4" discharge) Flanges polished to 0.8 Ra*
	-	316L Stainless Steel with Tri-clamp (1" Inlet & 3/4" discharge) Flanges polished to 0.4 Ra*
		<i>Tri-clamp options include polishing of Pump Head, Valve Plate, Valves, Valve Seats, Springs & Retainers to 0.8 Ra or 0.4 Ra per above, Sanitary Drain along with TSE, Passivation, Surface Finish & Weld Procedure Certificates</i>
	T	Hastelloy CW12MW / Hastelloy C
		<i>*Selecting this option will result in a Wanner International generated Pump Code, stamped onto the pump.</i>

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. (Contact Wanner International for values.)
4. IEC motor size has been calculated assuming IE3 performance as defined by IEC 60034-30.

7		Diaphragm & O-ring Material / Oil
	A	Aflas / PTFE o-ring (Synthetic oil)
	M	Aflas / PTFE o-ring & FKM drive case elastomers (Mesamoll 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)
	B	PTFE (EPDM oil)
		<i>Note: PTFE diaphragms require flooded suction.</i>
	P	Neoprene (Standard oil)
	R	Neoprene (Food-contact oil)
	Z	Neoprene (Synthetic oil)
	T	Buna-N (Synthetic oil)
	F	Buna-N (Food-contact oil)
	Y	Buna-N (Synthetic oil)

8-9		Check Valve Material (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

10-12		Gearbox Ratio / IEC Motors
	060	60:1 (63 B5 Motor Frame)
	050	50:1 (63 B5 Motor Frame)
	040	40:1 (63 B5 Motor Frame)
	B40	40:1 (80 B5 Motor Frame)
	030	30:1 (63 B5 Motor Frame)
	B30	30:1 (80 B5 Motor Frame)
	025	25:1 (63 B5 Motor Frame)
	020	20:1 (63 B5 Motor Frame)
	B20	20:1 (80 B5 Motor Frame)
	015	15:1 (63 B5 Motor Frame)
	A15	15:1 (71 B5 Motor Frame)
	010	10:1 (63 B5 Motor Frame)
	A10	10:1 (71 B5 Motor Frame)
	B10	10:1 (80 B5 Motor Frame)
	007	7.5:1 (63 B5 Motor Frame)
	A07	7.5:1 (71 B5 Motor Frame)
	B07	7.5:1 (80 B5 Motor Frame)
	005	5:1 (63 B5 Motor Frame)
	A05	5:1 (71 B5 Motor Frame)
	B05	5:1 (80 B5 Motor Frame)

Note: These are Wanner standard options. Other flange sizes are available upon request.

13		Baseplate
	C	Carbon Steel (Epoxy painted)
	S	304 Stainless Steel (This Base Plate must be selected for ATEX pumps)

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WANNER ENGINEERING, INC.

WORLD HEADQUARTERS & MANUFACTURING

Minneapolis, Minnesota USA
t: 612-332-5681
e: sales@wannereng.com
Hydra-Cell.com

REGIONAL OFFICE

Wichita Falls, Texas USA
t: 940-322-7111
e: sales@wannereng.com

LATIN AMERICAN OFFICE

São Paulo, Brazil
t: +55 (11) 99582-1969
e: mmagoni@wannereng.com
Hydra-Cell-Pumps.com.br

WANNER INTERNATIONAL, LTD.

UNITED KINGDOM

Church Crookham,
Hampshire UK GU52 8BF
t: +44 (0) 1252 816847
e: support@wannerint.com
Hydra-Cell.co.uk

WANNER PUMPS, LTD.

Kowloon, HONG KONG
t: +852 3428 6534
e: sales@wannerpumps.com
WannerPumps.com

Shanghai, CHINA
t: +86-21-6876 3700
e: sales@wannerpumps.com
WannerPumps.com

WANNER INDIA PVT. LTD.

Mumbai, INDIA
t: +91 (22) 22044766
e: support@wannerindia.com
WannerIndia.com



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