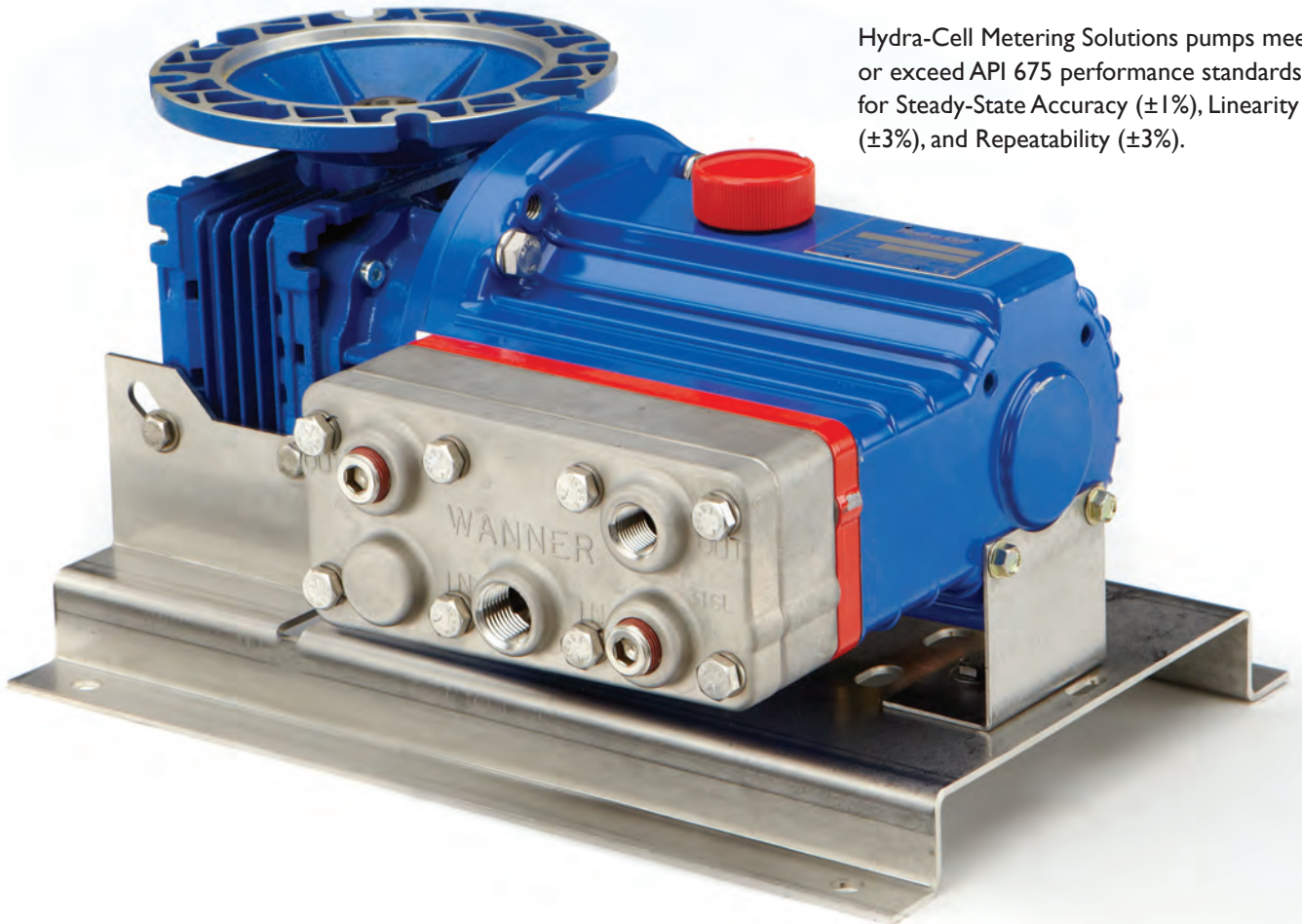


## P200 Series Electronic Precision Metering Pumps

Maximum Flow Rate: 237.4 lph (62.7 gph)

Maximum Pressure: 103 bar (1500 psi) for Metallic Pump Heads  
24 bar (350 psi) for Non-metallic Pump Heads



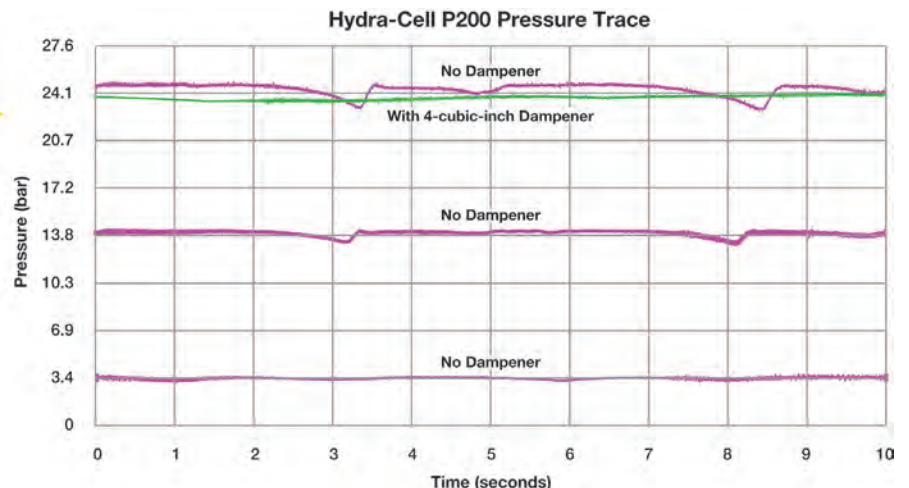
Hydra-Cell Metering Solutions pumps meet or exceed API 675 performance standards for Steady-State Accuracy ( $\pm 1\%$ ), Linearity ( $\pm 3\%$ ), and Repeatability ( $\pm 3\%$ ).

### Unique Multiple Diaphragm Design for Linear, Pulse-free Flow

Hydra-Cell Metering Solutions P200 pumps feature three diaphragms in one pump head. This unique design enables Hydra-Cell to provide virtually “pulse-free” flow without the need to buy expensive pulsation dampeners.

- Minimises pipe strain and other maintenance; enhances operator safety
- Reduces acceleration/friction losses in the suction line
- Provides accurate metering with linear, constant flow

*Hydra-Cell can eliminate the need for expensive pulsation dampeners because, as the graph shows, it provides virtually pulse-less flow.*

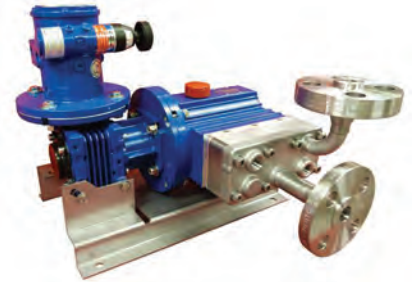


## Performance - Maximum Flow at Designated Pressure\*

All Pumps (lph)		Metallic Pump Heads Only (lph)		Pump rpm	Gear-box Ratio	Motor rpm
7 bar	17 bar	34 bar	69 bar			
4.95	4.57	3.84	2.00	14.50	100	1450
6.49	6.11	5.36	3.46	18.13	80	
9.07	8.67	7.89	5.89	24.17	60	
11.12	10.72	9.91	7.83	29.00	50	
14.21	13.79	12.95	10.75	36.25	40	
19.36	18.92	18.01	15.61	48.33	30	
23.48	23.02	22.06	19.50	58.00	25	
29.66	29.17	28.14	25.33	72.50	20	
39.96	39.42	38.27	35.06	96.67	15	
60.55	59.92	58.52	54.50	145.00	10	
81.15	80.41	78.78	73.95	193.33	7.5	
122.3	121.4	119.3	112.90	290.00	5	
157.8	156.7	154.2	146.40	373.30	7.5	
237.4	235.9	232.4	221.50	560.00	5	2800

### Mechanical Adjustment Controller

- ATEX Zone I
- Linear fine adjustment scale on hand-wheel
- High reliability due to frictionless design



### Electronic Adjustment Controller

- ATEX Dust Zone 2I (Ex tb III CTI25c Db)
- IP55 Standard
- Flow adjustment scale via hand-wheel



### Required Motor kW

0.18	0.37	0.55	0.75
------	------	------	------

\* Capacity data is shown for pumps with elastomeric diaphragms. Consult factory for performance characteristics with PTFE diaphragms.

### Mechanical Adjustment Controller - all flow rates in litres/hour

7 bar		17 bar		34 bar		69 bar		103 bar		Pump rpm	Gearbox Code	Model Number	Required Motor Size
Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
3.03	15.81	2.66	15.39	1.95	14.49	0.19	12.26	0.00	9.27	10 - 40	A15	MR3-71B14-71B5	0.37kW 4-Pole (1450 rpm)
	24.33		23.88		22.87		20.30		16.80	10 - 60	A10		
	32.86		32.36		31.25		28.35		24.34	10 - 80	A07		
	49.90		49.33		48.00		44.44		39.42	10 - 120	A05		
	66.94		66.30		64.76		60.54		54.49	10 - 160	A07		
	101.03		100.23		98.27		92.72		84.63	10 - 240	A05		

### Electronic Adjustment Controller - all flow rates in litres/hour

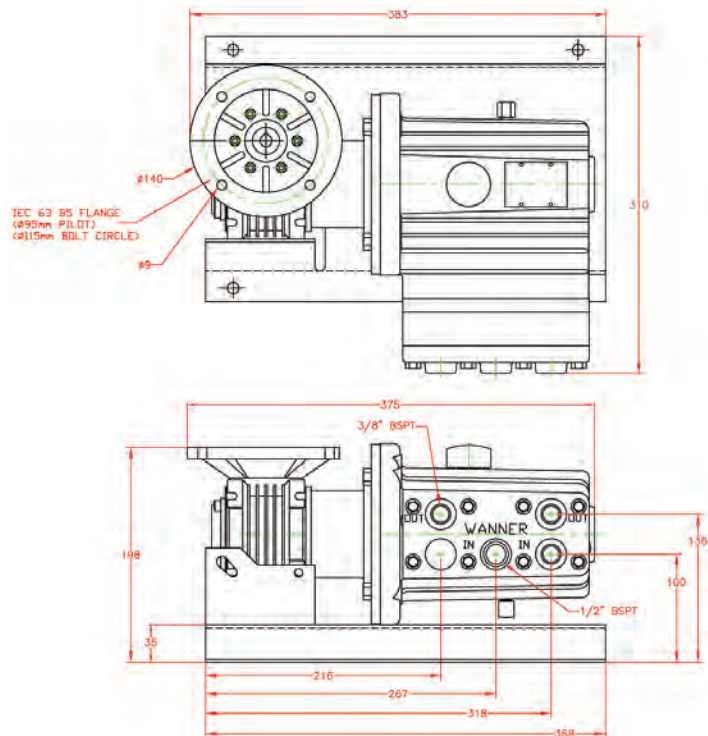
7 bar		17 bar		34 bar		69 bar		Pump rpm	Gearbox Code	Model Number	Motor Size (Included)
Min	Max	Min	Max	Min	Max	Min	Max				
3.03	21.77	2.66	21.32	1.95	20.38	0.19	17.89	10 - 54	040	LS71L-0.55	0.55kW 4-Pole (1450 rpm)
	29.44		28.95		27.93		25.13	10 - 72	030		
	35.84		35.31		34.21		31.16	10 - 87	025		
	45.21		44.64		43.43		40.02	10 - 109	020		
	60.55		59.91		58.52		54.50	10 - 145	A15		
	91.23		90.45		88.70		83.47	10 - 217	A10		
	122.33		121.41		119.28		112.84	10 - 290	A07		
	184.12		182.91		180.05		N/A	10 - 435	A05		

# P200 Series

## Specifications

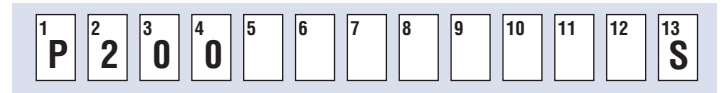
<b>Diaphragms per Liquid End</b>	3
<b>Flow Control</b>	Electronic variable speed drive
<b>Maximum Discharge Pressure</b>	
Metallic Heads:	103 bar (1500 psi)
Non-metallic Heads:	PVDF to 24 bar (350 psi) Polypropylene to 17 bar (250 psi)
<b>Maximum Inlet Pressure</b>	17 bar
<b>Maximum Liquid Operating Temperature</b>	
Metallic Heads:	121 °C - Consult factory for correct component selection for temperatures greater 71 °C.
Non-metallic Heads:	PVDF to 80 °C Polypropylene to 60 °C
<b>Maximum Solids Size</b>	100 microns
<b>Inlet Port</b>	1/2 inch BSPT
<b>Discharge Port</b>	3/8 inch BSPT
<b>Shaft Rotation</b>	Reverse (bi-directional)
<b>Oil Capacity</b>	0.95 liters
<b>Weight (less motor)</b>	
Metallic Heads:	17.7 kg
Non-metallic Heads:	13.6 kg
<b>Dimensions (less motor)</b>	
Metallic Heads:	395 mm W x 311 mm D x 205 mm H
Non-metallic Heads:	395 mm W x 320 mm D x 205 mm H
<b>Controllers</b>	
Mechanical Adjustment:	220 mm D x 155 mm H for <b>MR3</b> (7.2 kg)
Electronic Controller:	230 mm W x 250 mm D x 280 mm H (9.0 kg)

## Representative Drawings (in mm)



## Pump Ordering Information

A complete pump order number contains 13 digits based on the specified pump materials listed below. Contact your Hydra-Cell sales representative for accompanying motor drive options.



<b>Pump Model Size (Digits 1-4)</b>			
P200	For all P200 Pumps		
<b>Pump Version (Digit 5)</b>			
M	BSPT Ports		
A	ATEX Zone 1 (BSPT Ports)		
<b>Pump Head Material (Digit 6)</b>			
M	PVDF		
P	Polypropylene		
R	316L Stainless Steel with ANSI Flanges		
-	316L Stainless Steel with DIN Flange Class PN40 DN20 x PN100 DN15♦		
S	316L Stainless Steel		
-	316L Stainless Steel with Tri-clamp flanges polished to 0.8 Ra (Includes polishing of Pump Head, Valve Plate, Valves, Valve Seats, Springs & Retainers to 0.8 Ra)♦		
-	316L Stainless Steel with Tri-clamp flanges polished to 0.4 Ra (Includes polishing of Pump Head, Valve Plate, Valves, Valve Seats, Springs & Retainers to 0.4 Ra)♦		
T	Hastelloy CW12MW		
<b>Diaphragm &amp; O-ring Material (Digit 7)</b>			
A	Aflas		
M	Aflas (Mesamoll II oil)		
E	EPDM (EPDM-compatible oil)		
G	FKM (Mineral 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 (Mineral oil)		
R	Neoprene (Food-contact oil)		
Z	Neoprene (Synthetic oil)		
T	Buna-N (Mineral oil)		
F	Buna-N (Food-contact oil)		
Y	Buna-N (Synthetic oil)		
<b>Check Valve Material (Digits 8-9) (Valve Spring / Valve &amp; Seat)</b>			
SS	316L SST / 316L SST		
TT	Hastelloy C / Hastelloy C		
SC	316L SST / Ceramic		
TC	Hastelloy C / Ceramic		
<b>Gearbox Ratio (Digits 10-12)</b>			
100	100:1	A15	15:1
080	80:1	A10	10:1
060	60:1	A07	7.5:1
050	50:1	A05	5:1
040	40:1		(71 B5 Motor Frame)
030	30:1		
025	25:1	B05	5:1
020	20:1		(80 B5 Motor Frame)
015	15:1		
010	10:1		
007	7.5:1		
005	5:1		
<i>(63 B5 Motor Frame)</i>			
<b>Base Plate (Digit 13)</b>			
S	316L Stainless Steel		

♦ Selecting this option will result in a Wanner International generated Pump Code, stamped onto the pump.



## Calibration Cylinders

Port Size	Cylinder Size (mL)	Cylinder Capacity (lph)	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	1750	111-006-B	660.4	184.2
Glass Cylinders						
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 (lph)	Wetted* Materials	Pressure Adjustment Range (bar)	Maximum Temp. (°C)	Part Number	
					Back Pressure Valves (BSPT Ports)	Pressure Relief Valves (BSPT Ports)
3/8"	450	Polypropylene	0.7 - 10.3	60	111-101-B	111-401-B
3/8"	450	PVDF	0.7 - 10.3	60	111-103-B	111-403-B
3/8"	450	316 SST	0.7 - 10.3	149	111-106-B	111-406-B
3/8"	450	Hastelloy C	0.7 - 10.3	149	111-110-B	111-410-B
3/8"	450	316 SST	3.5 - 24	149	111-107-B	111-407-B
3/8"	450	Hastelloy C	3.5 - 24	149	111-111-B	111-411-B
3/8"	2650	316 SST	13.8 - 138	149		111-706-B
High Pressure	2650	Hastelloy C	13.8 - 138	149		111-710-B



\* Diaphragm material is PTFE on all models. Other materials available on request.

Hastelloy® C is a registered trademark of Haynes International, Inc.

## Standards Compliance



- API 675 performance testing, both witnessed and non-witnessed available (consult your local Wanner office for further details)

**Hydra-Cell® Seal-less Pumps from Wanner: Partners in more than 70 Countries Worldwide.**

### WANNER ENGINEERING - WORLD HEADQUARTERS & MANUFACTURING

**Minneapolis USA**  
t: (612) 332-5681  
e: sales@wannereng.com

**WANNER INTERNATIONAL  
Hampshire UK**  
t: +44 (0) 1252 816847  
e: sales@wannerint.com

**WANNER PUMPS  
Shanghai CHINA**  
t: +86-21-6876 3700  
e: sales@wannerpumps.com

**WANNER PUMPS  
Kowloon HONG KONG**  
t: +852 3428 6534  
e: sales@wannerpumps.com

**WANNER**  
*Hydra-Cell*  
Seal-less Pumping Technology

[www.hydra-cell.eu](http://www.hydra-cell.eu)