

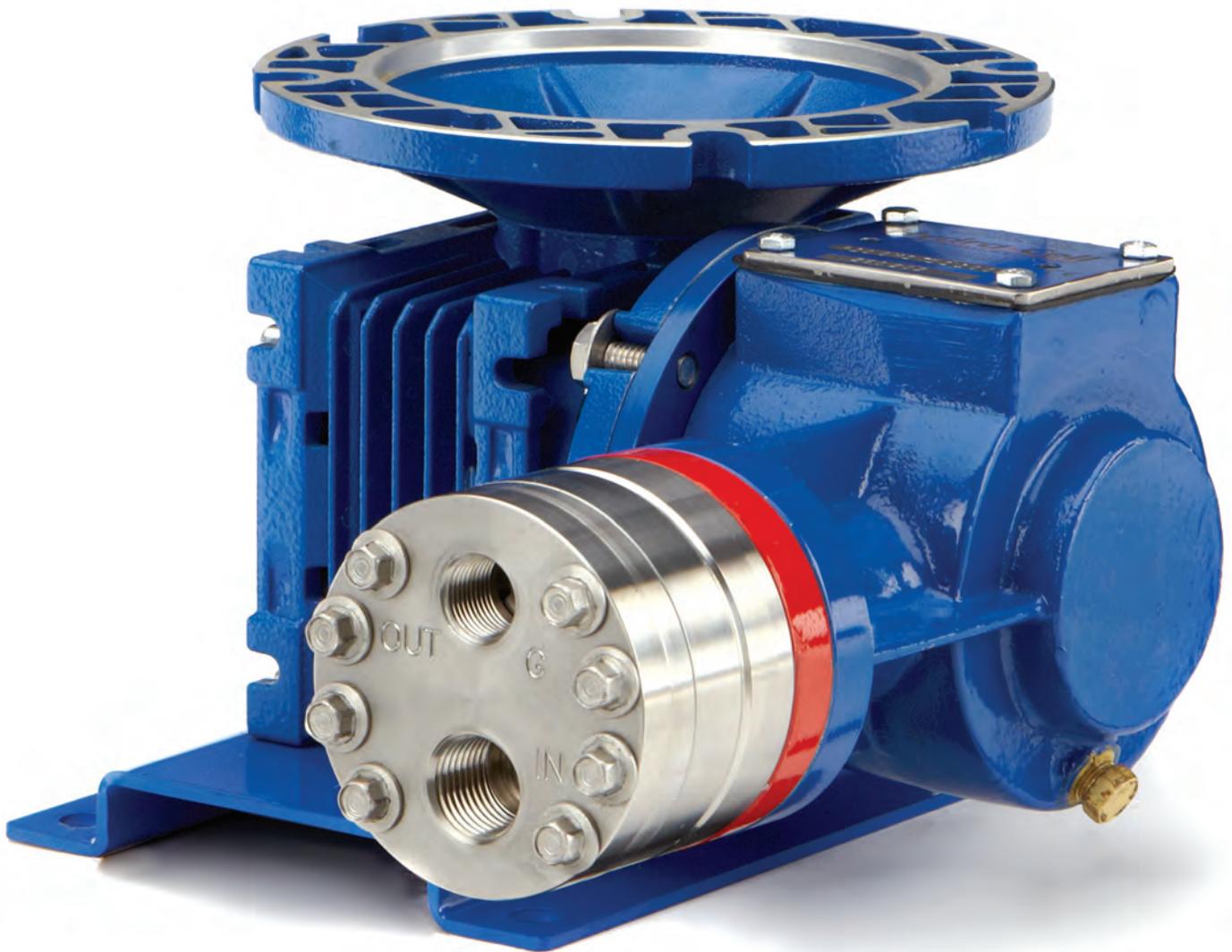


## **P100 Series Electronic Precision Metering Pumps**

Maximum Flow Rate: 78.0l /hr

Maximum Pressure: 103 bar for Metallic Pump Heads

24 bar 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 ( $\pm 3\%$ ).

## Performance - Maximum Flow at Designated Pressure\*

All Pumps (lph)		Metallic Pump Heads Only (lph)			Pump rpm	Gearbox Ratio	Motor rpm	
7 Bar	17 Bar	34 Bar	69 Bar	103 Bar				
1.99	1.68	1.44	0.76	**	14.5	100:1	1450	
2.50	2.18	1.93	1.23	**	18.13	80:1		
3.39	3.01	2.74	2.01	**	24.17	60:1		
4.01	3.67	3.39	2.64	**	29	50:1		
5.02	4.67	4.36	3.58	**	36.25	40:1		
6.71	6.33	5.99	5.15	1.75	48.33	30:1		
8.05	7.65	7.29	6.40	2.98	58	25:1		
10.07	9.65	9.24	8.28	4.82	72.5	20:1		
13.44	12.97	12.48	11.42	7.89	96.67	15:1		
20.18	19.60	18.98	17.69	14.03	145	10:1		
26.91	26.24	25.47	23.96	20.16	193.33	7.5:1		
40.39	39.52	38.46	36.50	32.43	290	5:1		
51.99	50.96	49.65	47.31	43.01	373.3	7.5:1		2800
78.01	76.60	74.73	71.54	66.71	560	5:1		

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

\*\* Consult factory for performance specifications.

### Required Motor kW

0.18   0.37   0.55

## Pulsation Dampeners

### Plastic Construction (4 cubic inch)

Bladder	Maximum bar	Polypropylene Part No.	Min./Max. Temperature Range*	PVDF Part No.	Min./Max. Temperature Range
Buna-N	10	110-000-B	0° to 79° C	110-020-B	-12° to 88° C
Neoprene	10	110-002-B	0° to 79° C	110-022-B	-12° to 93° C
EPDM	10	110-003-B	0° to 79° C	110-023-B	-12° to 121° C
FKM	10	110-005-B	0° to 79° C	110-025-B	-12° to 121° C
PTFE	10	110-008-B	5° to 79° C	110-028-B	5° to 121° C



### Metallic Construction (4 cubic inch)

Bladder	Maximum bar	CS Part No.	SST Part No.	Hastelloy C Part No.	Min./Max. Temperature Range*	Maximum bar	SST Part No.
Buna-N	69	110-040-B	110-060-B	110-090-B	-12° to 88° C	276	110-360-B
Neoprene	69	110-042-B	110-062-B	110-092-B	-18° to 93° C		N/A
EPDM	69	110-043-B	110-063-B	110-093-B	-40° to 140° C	276	110-363-B
FKM	69	110-045-B	110-065-B	110-095-B	-23° to 177° C	276	110-365-B
PTFE	41	110-048-B	110-068-B	110-098-B	5° to 121° C	138	110-368-B

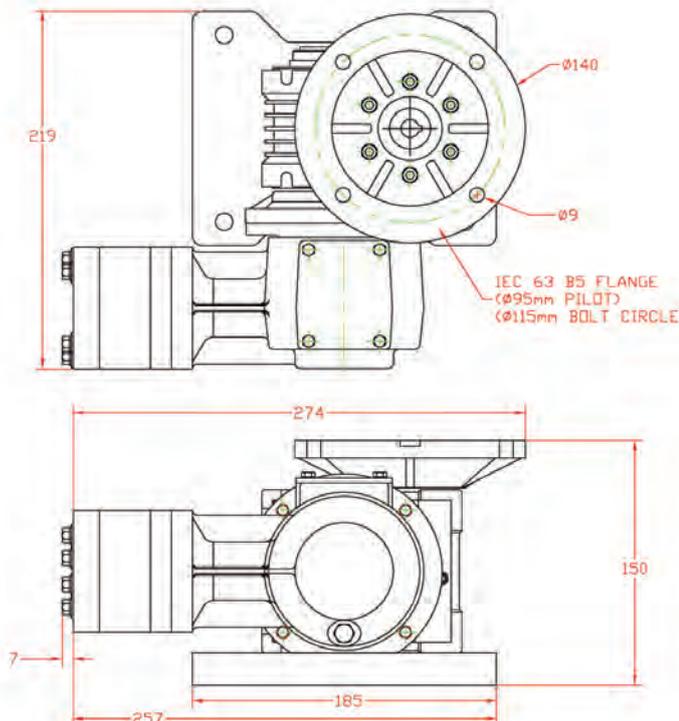
### (12 cubic inch)

\* Applies to 4-cu-in. and 12-cu-in. metallic models.

## Specifications

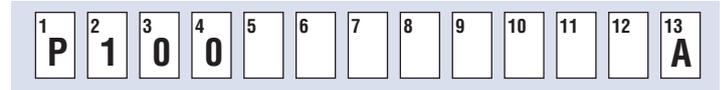
<b>Diaphragms per Liquid End</b>	1
<b>Flow Control</b>	Electronic variable speed drive
<b>Maximum Discharge Pressure</b>	
Metallic Heads:	103 bar
Non-metallic Heads:	PVDF to 24 bar Polypropylene to 17 bar
<b>Maximum Inlet Pressure</b>	17 bar
<b>Maximum Liquid Operating Temperature</b>	
Metallic Heads:	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>	500 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>	0.12 liters
<b>Weight (less motor)</b>	
Metallic Heads:	8.4 kg
Non-metallic Heads:	7.4 kg
<b>Dimensions (less motor)</b>	
Metallic Heads:	230 mm W x 294 mm D x 150 mm H
Non-metallic Heads:	230 mm W x 300 mm D x 150 mm H

## 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.



### Pump Model Size (Digits 1-4)

**P100** For all P100 Pumps

### Pump Version (Digit 5)

**M** BSPT Ports  
**A** ATEX Zone 1 (BSPT Ports)

### Pump Head Material (Digit 6)

**M** PVDF  
**P** Polypropylene  
**S** 316L Stainless Steel  
**T** Hastelloy C

### Diaphragm & O-ring Material (Digit 7)

**E** EPDM (EPDM-compatible oil)  
**G** FKM (Synthetic oil)  
**S** FKM (Food-contact oil)  
**J** PTFE (Food-contact oil)  
**W** PTFE (Synthetic oil)  
*(Note: PTFE diaphragms require a minimum suction pressure of 1 bar.)*  
**P** Neoprene (Synthetic oil)  
**R** Neoprene (Food-contact oil)  
**T** Buna-N (Synthetic oil)  
**F** Buna-N (Food-contact oil)

### Check Valve Material (Digits 8-9)

#### (Valve Spring / Valve & Seat)

**SS** 316L SST / 316L SST  
**TT** Hastelloy C / Hastelloy C  
**SC** 316L SST / Ceramic  
**TC** Hastelloy C / Ceramic

### Gearbox Ratio (Digits 10-12)

**100** 100:1 (63 B5 Motor Frame)  
**080** 80:1 (63 B5 Motor Frame)  
**060** 60:1 (63 B5 Motor Frame)  
**050** 50:1 (63 B5 Motor Frame)  
**A40** 40:1 (71 B14 Motor Frame)  
**A30** 30:1 (71 B14 Motor Frame)  
**A25** 25:1 (71 B14 Motor Frame)  
**A20** 20:1 (71 B14 Motor Frame)  
**A15** 15:1 (71 B14 Motor Frame)  
**A10** 10:1 (71 B14 Motor Frame)  
**A07** 7.5:1 (71 B14 Motor Frame)  
**A05** 5:1 (71 B14 Motor Frame)

### Base Plate (Digit 13)

**A** Carbon Steel (Epoxy painted)

## Calibration Cylinders

Port Size	Cylinder Size (mL)	Cylinder Capacity (lph)	Maximum Shaft (rpm)	Part Number BSPT Ports	Dimensions - mm	
					Height	Diameter
<b>PVC Cylinders</b>						
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
<b>Glass Cylinders</b>						
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.**

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