OEM Finland Oy | Puh: 0207 499 499 | info@oem.fi | www.oem.fi
PL 9, 20101 TURKU

HYDRA-CELL KALVOPUMPUT P200

Annostelupumppu

P200MSESSA10S
PUMP WITH GEARBOX AND BASEPLATE



- Virtaus 1 - 300 l/h
- Paine max. 70 bar
- Muovi- ja metallirakenne
- Tiivisteetön rakenne

TUOTEKUVAUS

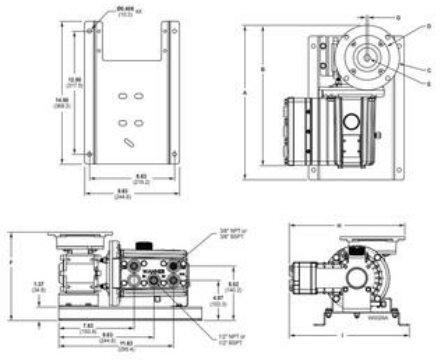
Hydra-Cell Metering Solutions P200 -pumpuissa käytetään kolmea kalvoa yhdessä pumppupäässä. Tämän ainutlaatuisen rakenteen ansiosta Hydra-Cell tuottaa käytännössä "pulssittoman" virtauksen ilman että, on tarvetta käyttää kalliita pulsaationvaimentimia.

TEKNISET TIEDOT

1098_Particle size (mm)	Max. 0,2mm
Akselimitta	Ontto akseli 14 mm
Hydrauliöljyn määrä	0,95 l
Jousipidikkeen materiaali	Hastelloy C
Kalvon materiaali	EPDM
Liitännän sisääntulo	BSPT 1/2"
Liitännän ulostulo	BSPT 3/8"
Max. järjestelmän paine	17 bar
Max. käyttölämpötila	120 °C
Max. paine	70 bar
Max. virtaus	76 l/h
Max. viskositeetti	1000 cP
Paino	19 kg
Pohjalevyn materiaali	Ruostumaton teräs
Pumpun materiaali	SS 316
Pyörimissuunta	Valinnainen
Venttiilien materiaali	Nitronic 50
Venttiilin istukan materiaali	SS 316
Venttiilin jousen materiaali	Elgiloy

Välityssuhde	10:1 - IEC 71-B5

P200 Models: Metallic and Non-Metallic

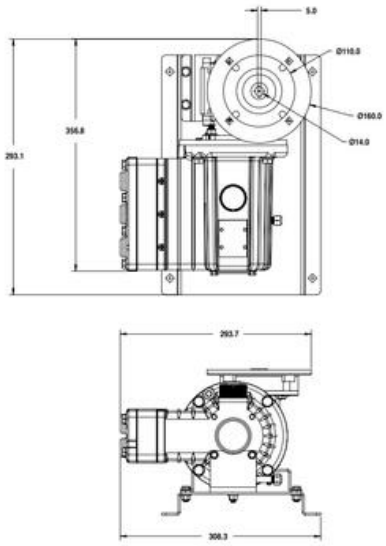


Dimensions in Inches (Millimeters)

Input Frame Size	A	B	C	D	E	F	G (Square Key)	H Metallic Pump Head	H Plastic Pump Head	I Metallic Pump Head	I Plastic Pump Head
NEMA 56C	10.59 (269.1)	14.17 (360.0)	Ø 6.54 (Ø 166)	Ø 4.00 (Ø 101.6)	Ø 0.63 (Ø 15.7)	6.97 (177.0)	0.197 (4.7)	11.68 (296.7)	12.48 (316.7)	12.14 (308.3)	12.91 (327.75)
IEC 63 B5	10.08 (256)	13.65 (346.7)	Ø 5.51 (Ø 140)	Ø 5.19 (Ø 99)	Ø 0.43 (Ø 11)	6.82 (173.3)	0.197 (5)	11.17 (283.7)	11.55 (293.4)	12.14 (308.3)	12.91 (327.75)
IEC 71 B5	10.08 (256)	14.45 (366.7)	Ø 6.30 (Ø 160)	Ø 5.51 (Ø 140)	Ø 0.55 (Ø 14)	6.82 (173.3)	0.196 (5)	11.66 (296.4)	11.69 (297.3)	12.14 (308.3)	12.91 (327.75)
IEC 80 B5	10.28 (261)	14.929 (379.7)	Ø 7.87 (Ø 200)	Ø 5.12 (Ø 130)	Ø 0.75 (Ø 19)	6.82 (173.3)	0.236 (6)	12.55 (318.7)	12.72 (323)	12.14 (308.3)	12.91 (327.75)

Representative Drawings (mm)

Metallic Pump Heads



P200 Specifications (Cont'd)

Performance Maximum Flow at Designated Pressure - Imperial

All Pumps (gph)		Metallic Pump Heads Only (gph)		Pump rpm	Gear Ratio	Motor rpm
100 psi	250 psi	500 psi	1000 psi			
3.378 (¼)	3.321 (¼)	3.249 (¼)	3.128 (¼)	30	60:1	1800
4.059 (¼)	3.994 (¼)	3.911 (¼)	3.776 (¼)	36	50:1	
5.072 (¼)	5.015 (¼)	4.908 (¼)	4.748 (¼)	45	40:1	
6.758 (¼)	6.686 (¼)	6.555 (¼)	6.353 (¼)	60	30:1	
8.107 (¼)	8.022 (¼)	7.873 (¼)	7.637 (¼)	72	25:1	
10.130 (¼)	10.027 (¼)	9.849 (¼)	9.563 (½)	90	20:1	
13.503 (¼)	13.369 (½)	13.14 (½)	12.77 (½)	120	15:1	
20.248 (½)	20.052 (½)	19.73 (½)	19.19 (½)	180	10:1	
26.993 (½)	26.735 (½)	26.32 (½)	25.62 (½)	240	7.5:1	
40.483 (½)	40.101 (½)	39.49 (½)	38.46 (¾)	360	5:1	
53.97 (½)	53.47 (½)	52.66 (¾)	51.30 (1)	480	7.5:1	3600
80.95 (½)	80.20 (½)	79.01 (¾)	76.98 (1.5)	720	5:1	

( ) Required Motor hp

Performance Maximum Flow at Designated Pressure - Metric

All Pumps (lph)		Metallic Pump Heads Only (lph)		Pump rpm	Gear Ratio	Motor rpm
7 bar	17 bar	34 bar	69 bar			
10.65 (0.18)	10.48 (0.18)	10.25 (0.18)	9.868 (0.25)	25	60:1	1500
12.81 (0.18)	12.60 (0.18)	12.34 (0.18)	11.91 (0.37)	30	50:1	
16.00 (0.18)	15.82 (0.18)	15.48 (0.18)	14.98 (0.37)	37.5	40:1	
21.32 (0.18)	21.09 (0.18)	20.68 (0.18)	20.04 (0.37)	50	30:1	
25.57 (0.18)	25.31 (0.18)	24.83 (0.18)	24.09 (0.37)	60	25:1	
31.96 (0.18)	31.63 (0.18)	31.07 (0.18)	30.17 (0.37)	75	20:1	
42.59 (0.18)	42.17 (0.18)	41.46 (0.18)	40.29 (0.37)	100	15:1	
63.87 (0.18)	63.25 (0.18)	62.23 (0.25)	60.55 (0.55)	150	10:1	
85.15 (0.18)	84.34 (0.18)	83.01 (0.25)	80.80 (0.55)	200	7.5:1	
127.7 (0.18)	126.5 (0.18)	124.6 (0.37)	121.3 (0.75)	300	5:1	
170.3 (0.18)	168.7 (0.37)	166.1 (0.55)	161.8 (0.75)	400	7.5:1	3000
255.4 (0.18)	253.0 (0.55)	249.2 (0.55)	242.8 (0.75)	600	5:1	

( ) Required Motor kW

Performance - Flow Capacities and Pressure Ratings

For Synchronous Speed, Self-cooled Motors
L/hr Maximum Flow at Designated Pressure

L/hr All Pumps 2 Bar	L/hr All Pumps 17 Bar	L/hr Metallic Pump Heads Only 34 Bar	L/hr Metallic Pump Heads Only 69 Bar	Pump RPM	Gear Ratio	Motor RPM
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	
25.5	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	63.3	62.2	60.5	150	10:1	
85.1	84.3	83.0	80.8	200	7.5:1	
127.7	126.5	124.6	121.3	300	5:1	
170.3	168.7	166.1	161.8	400	7.5:1	3000
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

For 10:1 Turndown, Self-cooled Motors
L/hr Maximum Flow at Designated Pressure

L/hr All Pumps 2 Bar	L/hr All Pumps 17 Bar	L/hr Metallic Pump Heads Only 34 Bar	L/hr Metallic Pump Heads Only 69 Bar	Pump RPM	Gear Ratio	Motor RPM
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	
25.5	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	63.3	62.2	60.5	150	10:1	
85.1	84.3	83.0	80.8	200	7.5:1	
127.7	126.5	124.6	121.3	300	5:1	
170.3	168.7	166.1	161.8	400	7.5:1	3000
255.4	253.0	249.2	242.8	600	5:1	

Required Motor kW

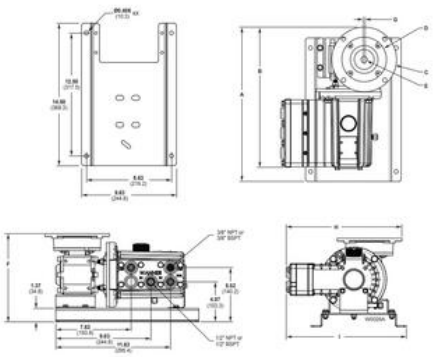
0.18	0.25	0.37	0.55	0.75	1.1

Mechanical Adjustment Controller for ATEX/Explosive Areas

All Min/Max flow rates in litres/hour

7 bar Min	7 bar Max	17 bar Min	17 bar Max	34 bar Min	34 bar Max	69 bar Min	69 bar Max	Pump rpm	Gearbox Ratio	Model Number	Required Motor Size & Frame
2.0	10.2	1.9	10.0	1.9	9.8	1.6	9.4	5 - 24	25:1	MEC3 - 71B14	0.25kW / IEC 71 / 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		0.37kW / IEC 71 / 4 Pole
	34.1		33.7		33.1		32.2	5 - 80	7.5:1		
	51.1		50.6		49.8		48.4	5 - 120	5:1		
	68.1		67.5		66.4		64.6	5 - 160	7.5:1	MEC5 - 80B14	0.55kW / IEC 80 / 2 Pole
	102.2		101.2		99.6		97.0	5 - 240	5:1		0.75kW / IEC 80 / 2 Pole

P200 Models: Metallic and Non-Metallic

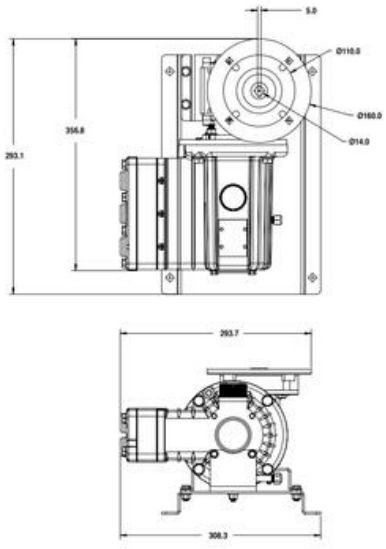


Dimensions in Inches (Millimeters)

Input Frame Size	A	B	C	D	E	F	G (Square Key)	H Metallic Pump Head	H Plastic Pump Head	I Metallic Pump Head	I Plastic Pump Head
NEMA 56C	10.59 (269.1)	14.17 (360.0)	Ø 6.54 (Ø 166)	Ø 4.00 (Ø 101.6)	Ø 0.63 (Ø 15.7)	6.97 (177.0)	0.197 (4.7)	11.68 (296.7)	12.48 (316.7)	12.14 (308.3)	12.91 (327.75)
IEC 63 B5	10.08 (256)	13.65 (346.7)	Ø 5.51 (Ø 140)	Ø 5.19 (Ø 99)	Ø 0.43 (Ø 11)	6.82 (173.3)	0.197 (5)	11.17 (283.7)	11.55 (293.4)	12.14 (308.3)	12.91 (327.75)
IEC 71 B5	10.08 (256)	14.45 (366.7)	Ø 6.30 (Ø 160)	Ø 5.51 (Ø 140)	Ø 0.55 (Ø 14)	6.82 (173.3)	0.196 (5)	11.66 (296.4)	11.69 (297.3)	12.14 (308.3)	12.91 (327.75)
IEC 80 B5	10.28 (261)	14.929 (379.7)	Ø 7.87 (Ø 200)	Ø 5.12 (Ø 130)	Ø 0.75 (Ø 19)	6.82 (173.3)	0.236 (6)	12.55 (318.7)	12.72 (323)	12.14 (308.3)	12.91 (327.75)

Representative Drawings (mm)

Metallic Pump Heads



P200 Specifications (Cont'd)

Performance Maximum Flow at Designated Pressure - Imperial

All Pumps (gph)		Metallic Pump Heads Only (gph)		Pump rpm	Gear Ratio	Motor rpm
100 psi	250 psi	500 psi	1000 psi			
3.378 (¼)	3.321 (¼)	3.249 (¼)	3.128 (¼)	30	60:1	1800
4.059 (¼)	3.994 (¼)	3.911 (¼)	3.776 (¼)	36	50:1	
5.072 (¼)	5.015 (¼)	4.908 (¼)	4.748 (¼)	45	40:1	
6.758 (¼)	6.686 (¼)	6.555 (¼)	6.353 (¼)	60	30:1	
8.107 (¼)	8.022 (¼)	7.873 (¼)	7.637 (¼)	72	25:1	
10.130 (¼)	10.027 (¼)	9.849 (¼)	9.563 (¼)	90	20:1	
13.503 (¼)	13.369 (¼)	13.14 (¼)	12.77 (½)	120	15:1	
20.248 (¼)	20.052 (¼)	19.73 (½)	19.19 (½)	180	10:1	
26.993 (½)	26.735 (¼)	26.32 (½)	25.62 (½)	240	7.5:1	
40.483 (½)	40.101 (½)	39.49 (½)	38.46 (½)	360	5:1	
53.97 (½)	53.47 (½)	52.66 (¾)	51.30 (1)	480	7.5:1	3600
80.95 (½)	80.20 (½)	79.01 (¾)	76.98 (1.5)	720	5:1	

( ) Required Motor hp

Performance Maximum Flow at Designated Pressure - Metric

All Pumps (lph)		Metallic Pump Heads Only (lph)		Pump rpm	Gear Ratio	Motor rpm
7 bar	17 bar	34 bar	69 bar			
10.65 (0.18)	10.48 (0.18)	10.25 (0.18)	9.868 (0.25)	25	60:1	1500
12.81 (0.18)	12.60 (0.18)	12.34 (0.18)	11.91 (0.37)	30	50:1	
16.00 (0.18)	15.82 (0.18)	15.48 (0.18)	14.98 (0.37)	37.5	40:1	
21.32 (0.18)	21.09 (0.18)	20.68 (0.18)	20.04 (0.37)	50	30:1	
25.57 (0.18)	25.31 (0.18)	24.83 (0.18)	24.09 (0.37)	60	25:1	
31.96 (0.18)	31.63 (0.18)	31.07 (0.18)	30.17 (0.37)	75	20:1	
42.59 (0.18)	42.17 (0.18)	41.46 (0.18)	40.29 (0.37)	100	15:1	
63.87 (0.18)	63.25 (0.18)	62.23 (0.25)	60.55 (0.55)	150	10:1	
85.15 (0.18)	84.34 (0.18)	83.01 (0.25)	80.80 (0.55)	200	7.5:1	
127.7 (0.18)	126.5 (0.18)	124.6 (0.37)	121.3 (0.75)	300	5:1	
170.3 (0.18)	168.7 (0.37)	166.1 (0.55)	161.8 (0.75)	400	7.5:1	3000
255.4 (0.18)	253.0 (0.55)	249.2 (0.55)	242.8 (0.75)	600	5:1	

( ) Required Motor kW

Performance - Flow Capacities and Pressure Ratings

For Synchronous Speed, Self-cooled Motors
L/hr Maximum Flow at Designated Pressure

L/hr All Pumps 2 Bar	L/hr All Pumps 17 Bar	L/hr Metallic Pump Heads Only 34 Bar	L/hr Metallic Pump Heads Only 69 Bar	Pump RPM	Gear Ratio	Motor RPM
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	63.3	62.2	60.5	150	10:1	
85.1	84.4	83.0	80.8	200	7.5:1	
127.7	126.5	124.6	121.3	300	5:1	
170.3	168.7	166.1	161.8	400	7.5:1	3000
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 Watson-Marlow International.
2. Contact factory for performance specifications.
3. Based on using IEC motors.
4. Maximum continuous motor speed is 1800 rpm at full pressure.
5. For intermittent or reduced pressure duties, please contact Watson-Marlow International.

For 10:1 Turndown, Self-cooled Motors
L/hr Maximum Flow at Designated Pressure

L/hr All Pumps 2 Bar	L/hr All Pumps 17 Bar	L/hr Metallic Pump Heads Only 34 Bar	L/hr Metallic Pump Heads Only 69 Bar	Pump RPM	Gear Ratio	Motor RPM
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	63.3	62.2	60.5	150	10:1	
85.1	84.4	83.0	80.8	200	7.5:1	
127.7	126.5	124.6	121.3	300	5:1	
170.3	168.7	166.1	161.8	400	7.5:1	3000
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 Watson-Marlow International.
2. Contact factory for performance specifications.
3. Based on using IEC motors.
4. Maximum continuous motor speed is 1800 rpm at full pressure.
5. For intermittent or reduced pressure duties, please contact Watson-Marlow International.

See Page 6 for **Electronic Flow Rate Controller.**

Mechanical Adjustment Controller for ATEX/Explosive Areas

All Min/Max flow rates in litres/hour

7 bar		17 bar		34 bar		69 bar		Pump rpm	Gearbox Ratio	Model Number	Required Motor Size & Frame
Min	Max	Min	Max	Min	Max	Min	Max				
3.0	10.2	7.9	10.0	1.9	9.8	1.6	9.4	5 - 24	25:1	M013 - 71B14	0.25kW / IEC 71 / 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		
	51.1		50.6		49.8		48.4	5 - 120	5:1		0.37kW / IEC 71 / 4 Pole
	68.1		67.5		66.4		64.6	5 - 160	7.5:1	M013 - 80B14	0.55kW / IEC 71 / 2 Pole
	102.2		101.2		99.6		97.0	5 - 240	5:1		0.75kW / IEC 80 / 2 Pole