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HYDRA-CELL KALVOPUMPUT P300

Annostelupumppu

P300MSGSSA10S
Kalvopumppu P300

- Virtaus 1 - 300 l/h
- Paine max. 172 bar
- Metallirakenne
- Tiivisteetön rakenne

TUOTEKUVAUS

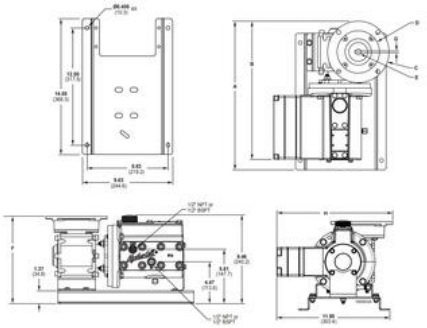
Hydra-Cell Metering Solutions P300 -pumpuissa käytetään kolmea kalvoa yhdessä pumppupäässä. Tämän ainutlaatuisen rakenteen ansiosta Hydra-Cell tuottaa käytännössä "pulssittoman" virtauksen ilman että, on tarvetta käyttää kalliita pulsaationvaimentimia.

TEKNISET TIEDOT

Akselimitta	Ontto akseli 14 mm
Hydrauliöljyn määrä	1,05 l
Jousipidikkeen materiaali	Hastelloy C
Kalvon materiaali	FKM
Liitännän sisääntulo	BSPT 1/2"
Liitännän ulostulo	BSPT 1/2"
Max. järjestelmän paine	34 bar
Max. käyttölämpötila	120 °C
Max. paine	172 bar
Max. virtaus	76 l/h
Max. viskositeetti	1000 cP
Paino	24,7 kg
Particle size	Max. 0,2
Pohjalevyn materiaali	Ruostumaton teräs
Pumpun materiaali	SS 316L
Pyörimissuunta	Valinnainen

Venttiilien materiaali	Nitronic 50
Venttiilin istukan materiaali	SS 316L
Venttiilin jousen materiaali	Elgiloy
Välityssuhde	10:1 - IEC 71-B5

P300 Models with Metallic Pumping Head

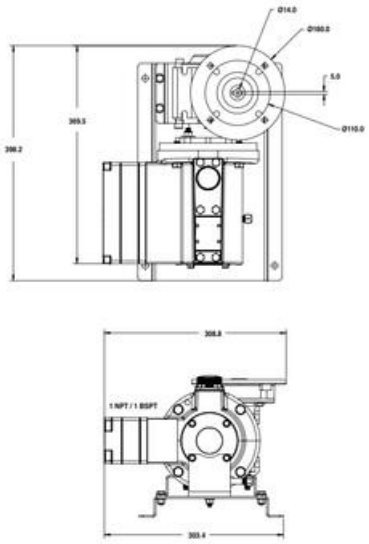


Dimensions in Inches (Millimeters)

Input Frame Size	A	B	C	D	E	F	G (Square Key)	H
NEMA 56C	10.79 (401.2)	14.93 (373.3)	Ø 6.54 (Ø 166)	Ø 6.50 (Ø 114.3)	Ø 0.62 (Ø 15.7)	6.50 (237.4)	0.187 (4.75)	12.25 (311)
NEMA 143/145TC	10.79 (401.2)	14.93 (373.3)	Ø 6.54 (Ø 166)	Ø 6.50 (Ø 114.3)	Ø 0.62 (Ø 15.7)	6.50 (344.4)	0.187 (4.75)	12.25 (311)
IEC 63 B5	15.28 (388.1)	14.19 (360.4)	Ø 5.51 (Ø 140)	Ø 5.79 (Ø 90)	Ø 0.43 (Ø 11)	6.17 (232.9)	0.157 (4)	11.73 (298.1)
IEC 71 B5	15.67 (398)	14.56 (370.1)	Ø 6.30 (Ø 160)	Ø 4.33 (Ø 110)	Ø 0.55 (Ø 14)	6.17 (232.9)	0.196 (5)	12.13 (308.1)
IEC 80 B5	16.46 (418.1)	15.37 (390.4)	Ø 7.87 (Ø 200)	Ø 5.12 (Ø 130)	Ø 0.75 (Ø 19)	6.17 (232.9)	0.236 (6)	12.91 (327.9)

Representative Drawings (mm)

Metallic Pump Heads



Performance - Flow Capacities and Pressure Ratings

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

L/hr Metallic Pump Heads Only 7 Bar	34 Bar	103 Bar	172 Bar	Pump RPM	Gear Ratio	Motor RPM
10.2	10.0	9.5	8.6	25	60:1	1500
13.3	13.1	11.5	10.8	30	50:1	
15.6	15.4	14.5	13.5	37.5	40:1	
20.9	20.7	19.5	18.2	50	30:1	
25.7	24.9	23.5	22.1	60	25:1	
31.7	31.3	29.8	27.8	75	20:1	
42.4	41.7	39.9	37.4	100	15:1	
63.8	62.3	59.9	56.1	150	10:1	
85.3	83.2	79.8	75.0	200	7.5:1	
128.2	125.8	119.7	113.8	300	5:1	3000
171.1	167.8	159.7	152.0	400	3.5:1	
256.8	251.9	239.8	228.5	600	5:1	

Required Motor kW

0.18	0.37	0.55	0.75	1.1	1.5

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

L/hr Metallic Pump Heads Only 7 Bar	34 Bar	103 Bar	172 Bar	Pump RPM	Gear Ratio	Motor RPM
10.2	10.0	9.5	8.6	25	60:1	1500
13.3	13.1	11.5	10.8	30	50:1	
15.6	15.4	14.5	13.5	37.5	40:1	
20.9	20.7	19.5	18.2	50	30:1	
25.7	24.9	23.5	22.1	60	25:1	
31.7	31.3	29.8	27.8	75	20:1	
42.4	41.7	39.9	37.4	100	15:1	
63.8	62.3	59.9	56.1	150	10:1	
85.3	83.2	79.8	75.0	200	7.5:1	
128.2	125.8	119.7	113.8	300	5:1	3000
171.1	167.8	159.7	152.0	400	3.5:1	
256.8	251.9	239.8	228.5	600	5:1	

Required Motor kW

0.18	0.25	0.37	0.55	0.75	1.1
1.5	2.2	3.0			

Notes:

1. The Motor kW are based on ambient temperature conditions up to 40°C. For ambient temperatures above 40°C, please contact Warren 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 Warren International.

See Page 5 for Electronic Flow Rate Controller.

Mechanical Adjustment Controller for ATEX/Explosive Areas

All Min/Max flow rates in litres/hour

103 bar Min Flow	103 bar Max Flow	172 bar Min Flow	172 bar Max Flow	Pump rpm	Gearbox Ratio	Model Number	Required Motor Size & Frame
1.3	9.0	0.8	8.1	5 - 25	25:1	IMEC - 80B14	0.25kW / IEC 71 / 4 Pole
	11.4		10.4	5 - 30	20:1		
	15.4		14.3	5 - 40	15:1		
	23.4		21.9	5 - 60	10:1	IMES - 71B14	0.37kW / IEC 71 / 4 Pole
	32.4		29.6	5 - 80	7.5:1	IMES - 80B14	0.55kW / IEC 80 / 4 Pole
	47.5		44.8	5 - 120	5:1		0.75kW / IEC 80 / 4 Pole
	63.5		60.1	5 - 160	3.5:1		1.1kW / IEC 80 / 2 Pole
	95.5		90.7	5 - 240	5:1		

P300 Specifications (Cont'd)

Performance Maximum Flow at Designated Pressure - Imperial

Metallic Pump Heads (gph) 100 psi	500 psi	1500 psi	2500 psi	Pump rpm	Gear Ratio	Motor rpm
3.221 (⅛)	3.183 (⅛)	3.014 (⅛)	2.741 (⅛)	30	60:1	1800
3.895 (⅛)	3.849 (⅛)	3.655 (⅛)	3.350 (⅛)	36	50:1	
4.939 (⅛)	4.882 (⅛)	4.607 (⅛)	4.272 (⅛)	45	40:1	
6.639 (⅛)	6.548 (⅛)	6.194 (⅛)	5.786 (⅛)	60	30:1	
7.999 (⅛)	7.881 (⅛)	7.463 (⅛)	6.998 (⅛)	72	25:1	
10.04 (⅛)	9.880 (⅛)	9.368 (⅛)	8.815 (⅛)	90	20:1	
13.44 (⅛)	13.21 (⅛)	12.54 (⅛)	11.84 (⅛)	120	15:1	
20.24 (⅛)	19.88 (⅛)	18.89 (⅛)	17.90 (¼)	180	10:1	
27.03 (⅛)	26.54 (⅛)	25.24 (⅛)	23.96 (¼)	240	7.5:1	
40.63 (⅛)	39.87 (⅛)	37.93 (¼)	36.08 (¼)	360	5:1	
54.23 (⅛)	53.20 (⅛)	50.63 (¼)	48.19 (¼)	480	7.5:1	3600
81.42 (⅛)	79.85 (¼)	76.02 (2)	72.43 (3)	720	5:1	

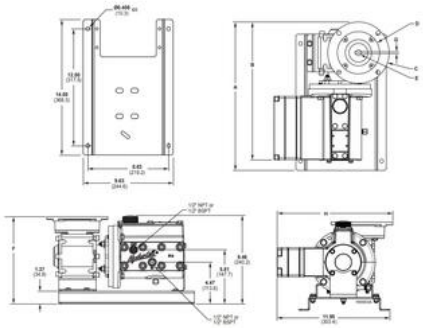
( ) Required Motor hp

Performance Maximum Flow at Designated Pressure - Metric

Metallic Pump Heads (lph) 7 bar	34 bar	103 bar	172 bar	Pump rpm	Gear Ratio	Motor rpm
10.16 (0.18)	10.04 (0.18)	9.51 (0.25)	8.648 (0.55)	25	60:1	1500
12.29 (0.18)	12.14 (0.18)	11.53 (0.25)	10.57 (0.55)	30	50:1	
15.58 (0.18)	15.40 (0.18)	14.53 (0.37)	13.47 (0.55)	37.5	40:1	
20.94 (0.18)	20.66 (0.18)	19.54 (0.37)	18.25 (0.55)	50	30:1	
25.23 (0.18)	24.86 (0.18)	23.54 (0.37)	22.07 (0.75)	60	25:1	
31.66 (0.18)	31.17 (0.18)	29.55 (0.37)	27.81 (0.75)	75	20:1	
42.39 (0.18)	41.68 (0.25)	39.56 (0.55)	37.36 (0.75)	100	15:1	
63.83 (0.18)	62.70 (0.25)	59.59 (0.55)	56.47 (0.75)	150	10:1	
85.28 (0.18)	83.72 (0.25)	79.61 (0.55)	75.58 (1.1)	200	7.5:1	
128.2 (0.18)	125.8 (0.37)	119.7 (0.75)	113.8 (1.5)	300	5:1	
171.1 (0.55)	167.8 (0.75)	159.7 (1.1)	152.0 (1.5)	400	7.5:1	3000
256.8 (0.55)	251.9 (0.75)	239.8 (1.5)	228.5 (1.5)	600	5:1	

( ) Required Motor kW

P300 Models with Metallic Pumping Head

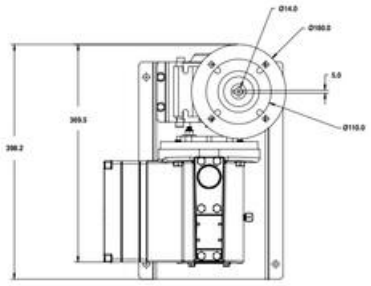


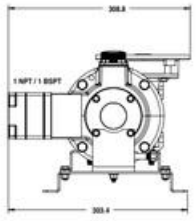
Dimensions in Inches (Millimeters)

Input Frame Size	A	B	C	D	E	F	G (Square Key)	H
NEMA 56C	10.79 (401.2)	14.93 (373.3)	Ø 6.54 (Ø 166)	Ø 6.50 (Ø 114.3)	Ø 0.62 (Ø 15.7)	6.50 (237.4)	0.187 (4.75)	12.25 (311)
NEMA 143/145TC	10.79 (401.2)	14.93 (373.3)	Ø 6.54 (Ø 166)	Ø 6.50 (Ø 114.3)	Ø 0.62 (Ø 15.7)	6.50 (344.4)	0.187 (4.75)	12.25 (311)
IEC 63 B5	15.28 (388.1)	14.19 (360.4)	Ø 5.51 (Ø 140)	Ø 5.79 (Ø 90)	Ø 0.43 (Ø 11)	6.17 (232.9)	0.157 (4)	11.73 (298.1)
IEC 71 B5	15.67 (398)	14.56 (370.1)	Ø 6.30 (Ø 160)	Ø 4.33 (Ø 110)	Ø 0.55 (Ø 14)	6.17 (232.9)	0.196 (5)	12.13 (308.1)
IEC 80 B5	16.46 (418.1)	15.37 (390.4)	Ø 7.87 (Ø 200)	Ø 5.12 (Ø 130)	Ø 0.75 (Ø 19)	6.17 (232.9)	0.236 (6)	12.91 (327.9)

Representative Drawings (mm)

Metallic Pump Heads





Performance - Flow Capacities and Pressure Ratings

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

L/hr Metallic Pump Heads Only				Pump RPM	Gear Ratio	Motor RPM
7 Bar	34 Bar	103 Bar	172 Bar			
10.2	10.0	9.5	8.6	25	60:1	1500
12.3	12.1	11.5	10.6	30	50:1	
15.6	15.4	14.5	13.5	37.5	40:1	
20.9	20.7	19.5	18.2	50	30:1	
25.2	24.9	23.5	22.1	60	25:1	
31.7	31.3	29.8	27.8	75	20:1	
42.4	41.7	39.9	37.4	100	15:1	
63.8	62.7	59.9	56.5	150	10:1	
85.1	83.7	79.8	75.4	200	7.5:1	
128.2	125.8	119.7	113.8	300	5:1	
171.1	167.8	159.7	152.0	400	7.5:1	3000
256.8	251.9	239.8	228.5	600	5:1	

Required Motor kW

0.18	0.37	0.55	0.75	1.1	1.5

Notes:

1. The motor kW are based on ambient temperature conditions up to 40°C. For ambient temperatures above 40°C, please contact Warren International.
2. Contact factory for performance specifications.
3. Based on using IE2 motors.
4. Maximum continuous motor speed is 1800 rpm at full pressure.
5. For intermittent or reduced pressure duties, please contact Warren International.

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

L/hr Metallic Pump Heads Only				Pump RPM	Gear Ratio	Motor RPM
7 Bar	34 Bar	103 Bar	172 Bar			
10.2	10.0	9.51	8.65	25	60:1	1500
12.3	12.1	11.53	10.57	30	50:1	
15.6	15.4	14.53	13.5	37.5	40:1	
20.9	20.7	19.54	18.2	50	30:1	
25.2	24.9	23.52	22.1	60	25:1	
31.7	31.3	29.55	27.8	75	20:1	
42.4	41.7	39.36	37.4	100	15:1	
63.8	62.7	59.04	56.5	150	10:1	
85.1	83.7	79.7	75.8	200	7.5:1	
128.2	125.8	119.7	113.8	300	5:1	
171.1	167.8	159.7	152.0	400	7.5:1	3000
256.8	251.9	239.8	228.5	600	5:1	

Required Motor kW

0.18	0.25	0.37	0.55	0.75	1.1
1.5	2.2	3.0			

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 Warren International.
2. Contact factory for performance specifications.
3. Based on using IE2 motors.
4. Maximum continuous motor speed is 1800 rpm at full pressure.
5. For intermittent or reduced pressure duties, please contact Warren International.

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

Mechanical Adjustment Controller for ATEX/Explosive Areas

All Min/Max flow rates in litres/hour

103 bar		172 bar		Pump rpm	Gearbox Ratio	Model Number	Required Motor Size & Frame
Min Flow	Max Flow	Min Flow	Max Flow				
1.3	9.2	0.8	8.1	5 - 24	25:1	80E3 - 80E14	0.25kW / IEC 71 / 4 Pole
	11.4		10.4	5 - 30	20:1		
	15.4		14.3	5 - 40	15:1		
	23.4		21.9	5 - 60	10:1	80E5 - 71B14	0.37kW / IEC 71 / 4 Pole
	31.4		29.4	5 - 80	7.5:1		0.55kW / IEC 80 / 4 Pole
	47.5		44.8	5 - 120	5:1	80E5 - 80B14	0.75kW / IEC 80 / 4 Pole
	63.5		60.1	5 - 160	7.5:1		1.1kW / IEC 80 / 2 Pole
	95.5		90.7	5 - 240	5:1		

P300 Specifications (Cont'd)

Performance Maximum Flow at Designated Pressure - Imperial

Metallic Pump Heads (gph)				Pump	Gear	Motor
100 psi	500 psi	1500 psi	2500 psi	rpm	Ratio	rpm
3.221 (¼)	3.183 (¼)	3.014 (¼)	2.741 (¼)	30	60:1	1800
3.895 (¼)	3.849 (¼)	3.655 (¼)	3.350 (¼)	36	50:1	
4.939 (¼)	4.882 (¼)	4.607 (¼)	4.272 (¼)	45	40:1	
6.639 (¼)	6.548 (¼)	6.194 (¼)	5.786 (¼)	60	30:1	
7.999 (¼)	7.881 (¼)	7.463 (¼)	6.998 (¼)	72	25:1	
10.04 (¼)	9.880 (¼)	9.368 (¼)	8.815 (¼)	90	20:1	
13.44 (¼)	13.21 (¼)	12.54 (½)	11.84 (¾)	120	15:1	
20.24 (¼)	19.88 (¼)	18.89 (¾)	17.90 (1)	180	10:1	
27.03 (¼)	26.54 (½)	25.24 (¾)	23.96 (1½)	240	7.5:1	
40.63 (¼)	39.87 (½)	37.93 (1)	36.08 (1½)	360	5:1	
54.23 (½)	53.20 (¾)	50.63 (1½)	48.19 (1½)	480	7.5:1	3600
81.42 (½)	79.85 (1)	76.02 (2)	72.43 (3)	720	5:1	

( ) Required Motor hp

Performance Maximum Flow at Designated Pressure - Metric

Metallic Pump Heads (lph)				Pump	Gear	Motor
7 bar	34 bar	103 bar	172 bar	rpm	Ratio	rpm
10.16 (0.18)	10.04 (0.18)	9.51 (0.25)	8.648 (0.55)	25	60:1	1500
12.29 (0.18)	12.14 (0.18)	11.53 (0.25)	10.57 (0.55)	30	50:1	
15.58 (0.18)	15.40 (0.18)	14.53 (0.37)	13.47 (0.55)	37.5	40:1	
20.94 (0.18)	20.66 (0.18)	19.54 (0.37)	18.25 (0.55)	50	30:1	
25.23 (0.18)	24.86 (0.18)	23.54 (0.37)	22.07 (0.75)	60	25:1	
31.66 (0.18)	31.17 (0.18)	29.55 (0.37)	27.81 (0.75)	75	20:1	
42.39 (0.18)	41.68 (0.25)	39.56 (0.55)	37.36 (0.75)	100	15:1	
63.83 (0.18)	62.70 (0.25)	59.59 (0.55)	56.47 (0.75)	150	10:1	
85.28 (0.18)	83.72 (0.25)	79.61 (0.55)	75.58 (1.1)	200	7.5:1	
128.2 (0.18)	125.8 (0.37)	119.7 (0.75)	113.8 (1.5)	300	5:1	
171.1 (0.55)	167.8 (0.75)	159.7 (1.1)	152.0 (1.5)	400	7.5:1	3000
256.8 (0.55)	251.9 (0.75)	239.8 (1.5)	228.5 (1.5)	600	5:1	

( ) Required Motor kW