

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.

TEKNISEET 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

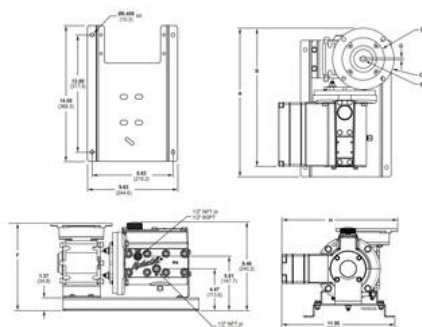
Venttiilin jousen materiaali

Elgiloy

Välityssuhde

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P300 Models with Metallic Pumping Head

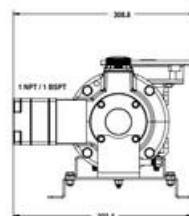
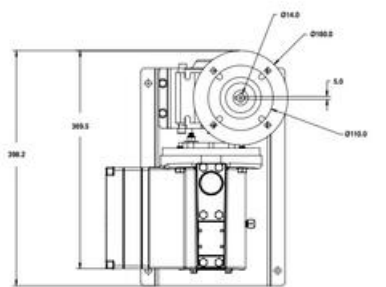


Dimensions in Inches (Millimeters)

Input Feature	A	B	C	D	E	F	G (Square Key)	H
NEMA 50C	16.76 (39.73)	16.50 (37.02)	0.5436 (1.21)	0.4335 (0.96)	0.0420 (0.09)	0.30 (0.67)	0.187 (0.42)	10.35 (23.1)
NEMA 50B	16.76 (39.73)	16.50 (37.02)	0.5436 (1.21)	0.4335 (0.96)	0.0420 (0.09)	0.30 (0.67)	0.187 (0.42)	10.35 (23.1)
REC 63 RB	15.28 (34.0)	14.58 (32.6)	0.21 (0.46)	0.376 (0.84)	0.043 (0.1)	0.43 (0.95)	0.157 (0.35)	14.72 (32.6)
REC 63 RB	15.07 (33.5)	14.58 (32.6)	0.21 (0.46)	0.433 (0.96)	0.043 (0.1)	0.43 (0.95)	0.157 (0.35)	14.72 (32.6)
REC 63 RB	14.88 (33.2)	14.58 (32.6)	0.21 (0.46)	0.433 (0.96)	0.043 (0.1)	0.43 (0.95)	0.157 (0.35)	14.72 (32.6)

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

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

US Military: Pump Handle Size				Pump BPM	Gate Ratio	Motor BPM	US Military: Pump Handle Size				Pump BPM	Gate Ratio	Motor BPM		
2 Bar	3 Bar	4 Bar	5 Bar	2 Bar	3 Bar	4 Bar	5 Bar	2 Bar	3 Bar	4 Bar	5 Bar	2 Bar	3 Bar	4 Bar	5 Bar
19.3	16.6	15.5	14.8	75	80	85	90	19.3	16.6	15.5	14.8	75	80	85	90
13.8	11.9	11.1	10.5	55	60	65	70	13.8	11.9	11.1	10.5	55	60	65	70
11.5	10.4	9.6	9.1	45	50	55	60	11.5	10.4	9.6	9.1	45	50	55	60
11.5	10.4	9.6	9.1	35	40	45	50	11.5	10.4	9.6	9.1	35	40	45	50
11.5	10.4	9.6	9.1	25	30	35	40	11.5	10.4	9.6	9.1	25	30	35	40
11.5	10.4	9.6	9.1	15	20	25	30	11.5	10.4	9.6	9.1	15	20	25	30
11.5	10.4	9.6	9.1	10	15	20	25	11.5	10.4	9.6	9.1	10	15	20	25
11.5	10.4	9.6	9.1	5	10	15	20	11.5	10.4	9.6	9.1	5	10	15	20
11.5	10.4	9.6	9.1	2.5	5	7.5	10	11.5	10.4	9.6	9.1	2.5	5	7.5	10
11.5	10.4	9.6	9.1	1.5	3	4.5	6	11.5	10.4	9.6	9.1	1.5	3	4.5	6
11.5	10.4	9.6	9.1	0.75	1.5	2.25	3	11.5	10.4	9.6	9.1	0.75	1.5	2.25	3
11.5	10.4	9.6	9.1	0.375	0.75	1.125	1.5	11.5	10.4	9.6	9.1	0.375	0.75	1.125	1.5
11.5	10.4	9.6	9.1	0.1875	0.375	0.5625	0.75	11.5	10.4	9.6	9.1	0.1875	0.375	0.5625	0.75
11.5	10.4	9.6	9.1	0.09375	0.1875	0.28125	0.375	11.5	10.4	9.6	9.1	0.09375	0.1875	0.28125	0.375
11.5	10.4	9.6	9.1	0.046875	0.09375	0.140625	0.1875	11.5	10.4	9.6	9.1	0.046875	0.09375	0.140625	0.1875
11.5	10.4	9.6	9.1	0.0234375	0.046875	0.0703125	0.09375	11.5	10.4	9.6	9.1	0.0234375	0.046875	0.0703125	0.09375
11.5	10.4	9.6	9.1	0.01171875	0.0234375	0.03515625	0.046875	11.5	10.4	9.6	9.1	0.01171875	0.0234375	0.03515625	0.046875
11.5	10.4	9.6	9.1	0.005859375	0.01171875	0.017578125	0.0234375	11.5	10.4	9.6	9.1	0.005859375	0.01171875	0.017578125	0.0234375
11.5	10.4	9.6	9.1	0.0029296875	0.005859375	0.0087890625	0.01171875	11.5	10.4	9.6	9.1	0.0029296875	0.005859375	0.0087890625	0.01171875
11.5	10.4	9.6	9.1	0.00146484375	0.0029296875	0.00439453125	0.005859375	11.5	10.4	9.6	9.1	0.00146484375	0.0029296875	0.00439453125	0.005859375
11.5	10.4	9.6	9.1	0.000732421875	0.00146484375	0.002197265625	0.0029296875	11.5	10.4	9.6	9.1	0.000732421875	0.00146484375	0.002197265625	0.0029296875
11.5	10.4	9.6	9.1	0.0003662109375	0.000732421875	0.0010986328125	0.00146484375	11.5	10.4	9.6	9.1	0.0003662109375	0.000732421875	0.0010986328125	0.00146484375
11.5	10.4	9.6	9.1	0.00018310546875	0.0003662109375	0.00054931640625	0.000732421875	11.5	10.4	9.6	9.1	0.00018310546875	0.0003662109375	0.00054931640625	0.000732421875
11.5	10.4	9.6	9.1	9.375E-05	0.00018310546875	0.000274658203125	0.0003662109375	11.5	10.4	9.6	9.1	9.375E-05	0.00018310546875	0.000274658203125	0.0003662109375
11.5	10.4	9.6	9.1	4.6875E-05	9.375E-05	0.0001373291015625	0.00018310546875	11.5	10.4	9.6	9.1	4.6875E-05	9.375E-05	0.0001373291015625	0.00018310546875
11.5	10.4	9.6	9.1	2.34375E-05	4.6875E-05	6.866455078125E-05	9.375E-05	11.5	10.4	9.6	9.1	2.34375E-05	4.6875E-05	6.866455078125E-05	9.375E-05
11.5	10.4	9.6	9.1	1.171875E-05	2.34375E-05	3.4332275390625E-05	4.6875E-05	11.5	10.4	9.6	9.1	1.171875E-05	2.34375E-05	3.4332275390625E-05	4.6875E-05
11.5	10.4	9.6	9.1	5.859375E-06	1.171875E-05	1.71661376953125E-05	2.34375E-05	11.5	10.4	9.6	9.1	5.859375E-06	1.171875E-05	1.71661376953125E-05	2.34375E-05
11.5	10.4	9.6	9.1	2.9296875E-06	5.859375E-06	8.58306884765625E-06	1.171875E-05	11.5	10.4	9.6	9.1	2.9296875E-06	5.859375E-06	8.58306884765625E-06	1.171875E-05
11.5	10.4	9.6	9.1	1.46484375E-06	2.9296875E-06	4.291534423828125E-06	5.859375E-06	11.5	10.4	9.6	9.1	1.46484375E-06	2.9296875E-06	4.291534423828125E-06	5.859375E-06
11.5	10.4	9.6	9.1	7.32421875E-07	1.46484375E-06	2.1457672119140625E-06	2.9296875E-06	11.5	10.4	9.6	9.1	7.32421875E-07	1.46484375E-06	2.1457672119140625E-06	2.9296875E-06
11.5	10.4	9.6	9.1	3.662109375E-07	7.32421875E-07	1.07288360595703125E-06	1.46484375E-06	11.5	10.4	9.6	9.1	3.662109375E-07	7.32421875E-07	1.07288360595703125E-06	1.46484375E-06
11.5	10.4	9.6	9.1	1.8310546875E-07	3.662109375E-07	5.36441802978515625E-07	7.32421875E-07	11.5	10.4	9.6	9.1	1.8310546875E-07	3.662109375E-07	5.36441802978515625E-07	7.32421875E-07
11.5	10.4	9.6	9.1	9.1526E-08	1.8310546875E-07	2.6822090148925781E-07	3.662109375E-07	11.5	10.4	9.6	9.1	9.1526E-08	1.8310546875E-07	2.6822090148925781E-07	3.662109375E-07
11.5	10.4	9.6	9.1	4.5763E-08	9.1526E-08	1.3411045074462891E-07	1.8310546875E-07	11.5	10.4	9.6	9.1	4.5763E-08	9.1526E-08	1.3411045074462891E-07	1.8310546875E-07
11.5	10.4	9.6	9.1	2.28815E-08	4.5763E-08	6.705522537231445E-08	9.1526E-08	11.5	10.4	9.6	9.1	2.28815E-08	4.5763E-08	6.705522537231445E-08	9.1526E-08
11.5	10.4	9.6	9.1	1.144075E-08	2.28815E-08	3.3527612686157225E-08	4.5763E-08	11.5	10.4	9.6	9.1	1.144075E-08	2.28815E-08	3.3527612686157225E-08	4.5763E-08
11.5	10.4	9.6	9.1	5.720375E-09	1.144075E-08	1.6763806343078613E-08	2.28815E-08	11.5	10.4	9.6	9.1	5.720375E-09	1.144075E-08	1.6763806343078613E-08	2.28815E-08
11.5	10.4	9.6	9.1	2.8601875E-09	5.720375E-09	8.381903171539306E-09	1.144075E-08	11.5	10.4	9.6	9.1	2.8601875E-09	5.720375E-09	8.381903171539306E-09	1.144075E-08
11.5	10.4	9.6	9.1	1.43009375E-09	2.8601875E-09	4.190951585769653E-09	5.720375E-09	11.5	10.4	9.6	9.1	1.43009375E-09	2.8601875E-09	4.190951585769653E-09	5.720375E-09
11.5	10.4	9.6	9.1	7.15046875E-10	1.43009375E-09	2.0954757928848265E-09	2.8601875E-09	11.5	10.4	9.6	9.1	7.15046875E-10	1.43009375E-09	2.0954757928848265E-09	2.8601875E-09
11.5	10.4	9.6	9.1	3.575234375E-10	7.15046875E-10	1.0477378964424132E-09	1.43009375E-09	11.5	10.4	9.6	9.1	3.575234375E-10	7.15046875E-10	1.0477378964424132E-09	1.43009375E-09
11.5	10.4	9.6	9.1	1.7876171875E-10	3.575234375E-10	5.238689482212066E-10	7.15046875E-10	11.5	10.4	9.6	9.1	1.7876171875E-10	3.575234375E-10	5.238689482212066E-10	7.15046875E-10
11.5	10.4	9.6	9.1	8.9380859375E-11	1.7876171875E-10	2.619344741106033E-10	3.575234375E-10	11.5	10.4	9.6	9.1	8.9380859375E-11	1.7876171875E-10	2.619344741106033E-10	3.575234375E-10
11.5	10.4	9.6	9.1	4.46904296875E-11	8.9380859375E-11	1.3096723705530165E-10	1.7876171875E-10	11.5	10.4	9.6	9.1	4.46904296875E-11	8.9380859375E-11	1.3096723705530165E-10	1.7876171875E-10
11.5	10.4	9.6	9.1	2.234521484375E-11	4.46904296875E-11	6.5483618527650825E-11	8.9380859375E-11	11.5	10.4	9.6	9.1	2.234521484375E-11	4.46904296875E-11	6.5483618527650825E-11	8.9380859375E-11
11.5	10.4	9.6	9.1	1.1172607421875E-11	2.234521484375E-11	3.2741809263825413E-11	4.46904296875E-11	11.5	10.4	9.6	9.1	1.1172607421875E-11	2.234521484375E-11	3.2741809263825413E-11	4.46904296875E-11
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11.5	10.4	9.6	9.1	2.79315185546875E-12	5.5863037109375E-12	8.185452315956353E-12	1.1172607421875E-11	11.5	10.4	9.6	9.1	2.79315185546875E-12	5.5863037109375E-12	8.185452315956353E-12	1.1172607421875E-11
11.5	10.4	9.6	9.1	1.396575927734375E-12	2.79315185546875E-12	4.0927261579781765E-12	5.5863037109375E-12	11.5	10.4	9.6	9.1	1.396575927734375E-12	2.79315185546875E-12	4.0927261579781765E-12	5.5863037109375E-12
11.5	10.4	9.6	9.1	6.982879638671875E-13	1.396575927734375E-12	2.0463630789890882E-12	2.79315185546875E-12	11.5	10.4	9.6	9.1	6.982879638671875E-13	1.396575927734375E-12	2.0463630789890882E-12	2.79315185546875E-12
11.5	10.4	9.6	9.1	3.4914398193359375E-13	6.982879638671875E-13	1.0231815394945441E-12	1.396575927734375E-12	11.5	10.4	9.6	9.1	3.4914398193359375E-13	6.982879638671875E-13	1.0231815394945441E-12	1.396575927734375E-12
11.5	10.4	9.6	9.1	1.7457199096679687E-13	3.4914398193359375E-13	5.1159076974727205E-13	6.982879638671875E-13	11.5	10.4	9.6	9.1	1.7457199096679687E-13	3.4914398193359375E-13	5.1159076974727205E-13	6.982879638671875E-13
11.5	10.4	9.6	9.1	8.728599548339844E-14	1.7457199096679687E-13	2.5579538487363602E-13	3.4914398193359375E-13	11.5	10.4	9.6	9.1	8.728599548339844E-14	1.7457199096679687E-13	2.5579538487363602E-13	3.4914398193359375E-13
11.5	10.4	9.6	9.1	4.364299774169922E-14	8.728599548339844E-14	1.2789769243681801E-13	1.7457199096679687E-13	11.5	10.4	9.6	9.1	4.364299774169922E-14	8.728599548339844E-14	1.2789769243681801E-13	1.7457199096679687E-13
11.5	10.4	9.6	9.1	2.182149887084961E-14	4.364299774169922E-14	6.3948846218409005E-14	8.728599548339844E-14	11.5	10.4	9.6	9.1	2.182149887084961E-14	4.364299774169922E-14	6.3948846218409005E-14	8.728599548339844E-14
11.5	10.4	9.6	9.1	1.0910749435424805E-14	2.182149887084961E-14	3.1974423109204502E-14	4.364299774169922E-14	11.5	10.4	9.6	9.1	1.0910749435424805E-14	2.182149887084961E-14	3.1974423109204502E-14	4.364299774169922E-14
11.5	10.4	9.6	9.1	5.4553747177124025											

Keywords

1. The motor **EM** will operate in 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 **EM** motor.
4. Maximum continuous motor speed is also set at full pressure.
5. For information on reduced pressure duties, please contact Wanner International.

Contents

1. The motor life are based on ambient temperature conditions up to 25 °C, for ambient temperatures above 25 °C, forced-cooled Motors may be required. Please contact Wamtec International.
2. Contact factory for performance specifications.
3. Based on using VFA motor.
4. Maximum continuous motor speed is 1500 rpm at full pressure.
5. For intermittent or reduced pressure duties, please contact Wamtec International.

Mechanical Adjustment Controller for ATEX/Explosive Areas

All Min/Max flow rates in litres/hour

102 lbs		172 lbs		Pump gpm	Gearless Ratio	Model Number	Required Riser & Fittings
Min Flow	Max Flow	Min Flow	Max Flow				
1.3	0.0	0.0	5.25	25.1			
	11.6	30.4	5.30	20.1	HO3-10014	0.5W/1 EC 11 / 4 Pds	
	15.6	14.3	5.40	15.1			
	22.6	21.0	5.60	10.1	HO3-17014	0.5W/1 EC 14 / 4 Pds	
	30.6	29.6	5.80	7.5		0.5W/1 EC 10 / 4 Pds	
	40.6		5.70	5.1	HO3-10014	0.5W/1 EC 10 / 4 Pds	
	47.6	40.1	5.50	7.5		1.0W/1 EC 10 / 2 Pds	
	57.6		5.40				
	67.6		5.30				
	77.6		5.20				

P300 Specifications (Cont'd)

Performance Maximum Flow at Designated Pressure - Imperial

Metallum Mass (g)				Pump rpm	Gear Ratio	Motor rpm
100 psi	800 psi	1500 psi	2000 psi			
3.221 [95]	3.183 [95]	3.614 [95]	2.741 [95]	30	60:1	1500
3.895 [95]	3.849 [95]	3.655 [95]	3.350 [95]	36	50:1	
4.939 [95]	4.882 [95]	4.607 [95]	4.272 [95]	45	40:1	
6.630 [95]	6.548 [95]	6.104 [95]	5.788 [95]	60	30:1	
7.599 [95]	7.481 [95]	6.933 [95]	6.599 [95]	72	25:1	
10.04 [95]	9.880 [95]	9.368 [95]	8.815 [95]	90	20:1	
13.44 [95]	13.21 [95]	12.54 [95]	11.84 [95]	120	15:1	3600
17.00 [95]	16.88 [95]	16.89 [95]	17.00 [95]	180	10:1	
27.03 [95]	26.54 [95]	25.24 [95]	23.96 [95]	240	7.5:1	
40.63 [95]	39.87 [95]	37.93 [95]	36.08 [95]	360	5:1	
54.23 [95]	52.75 [95]	50.25 [95]	48.0 [95]	480	4:1	
84.73 [95]	78.85 [95]	76.02 [95]	72.43 [95]	720	5:1	

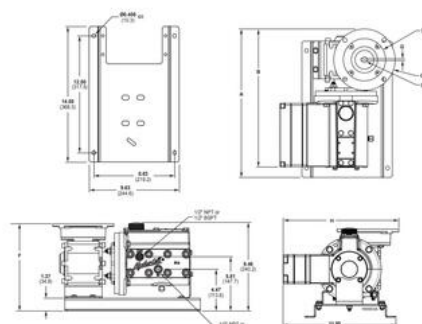
() Required Motor hp

Performance Maximum Flow at Designated Pressure - Metric

Metallic Pump Heads (gph)			Pump rpm	Gear Ratio	Motor rpm
7 bar	10 bar	172 bar			
10.16 (0.16)	10.14 (0.16)	9.51 (0.25)	8.646 (0.50)	25	60.1
12.29 (0.18)	12.04 (0.18)	11.53 (0.25)	10.57 (0.50)	30	70.1
15.68 (0.18)	15.40 (0.18)	14.54 (0.37)	13.47 (0.55)	37.5	40.0
20.94 (0.22)	20.06 (0.18)	19.63 (0.37)	18.25 (0.50)	50	30.1
25.23 (0.18)	24.68 (0.18)	23.56 (0.37)	22.07 (0.75)	60	25.1
31.77 (0.18)	31.17 (0.18)	30.16 (0.37)	27.41 (0.75)	75	20.1
39.28 (0.18)	38.46 (0.25)	35.94 (0.55)	37.36 (0.76)	100	15.1
63.63 (0.18)	63.72 (0.25)	59.55 (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
128.2 (0.18)	125.8 (0.37)	119.7 (0.75)	115.8 (1.50)	300	5.0
171.4 (0.55)	169.6 (0.75)	160.7 (1.1)	156.1 (1.5)	400	7.5
214.1 (0.55)	212.9 (0.75)	206.1 (1.1)	202.1 (1.5)	500	6.0
256.8 (0.55)	255.6 (0.75)	248.1 (1.1)	242.1 (1.5)	600	5.0

() Required Motor kW

P300 Models with Metallic Pumping Head

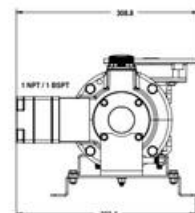
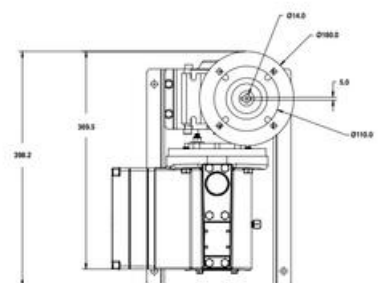


Dimensions in Inches (Millimeters)

Input Frame Size	A	B	C	D	E	F	G (Typical Key)	H
NEMA 50C	16.79 (16.79)	16.10 (16.10)	0.54.56 (0.1600)	0.43.36 (0.1600)	0.42.62 (0.1614)	0.35 (0.1614)	0.197 (0.1614)	10.35 (10.35)
NEMA 50C+MTC	16.79 (16.79)	16.10 (16.10)	0.54.56 (0.1600)	0.43.36 (0.1600)	0.42.62 (0.1614)	0.35 (0.1614)	0.197 (0.1614)	12.01 (12.01)
EC 63.88	15.28 (15.28)	14.19 (14.19)	0.37.27 (0.1600)	0.37.76 (0.1600)	0.37.43 (0.1600)	0.17 (0.1600)	0.157 (0.1600)	11.52 (11.52)
EC 70.93	16.07 (16.07)	14.58 (14.58)	0.56.30 (0.1600)	0.45.30 (0.1600)	0.45.30 (0.1600)	0.17 (0.1600)	0.156 (0.1600)	12.13 (12.13)
EC 80.88	16.48 (16.48)	15.37 (15.37)	0.12.87 (0.1600)	0.45.12 (0.1600)	0.45.16 (0.1600)	0.17 (0.1600)	0.156 (0.1600)	12.13 (12.13)

Representative Drawings (mm)

Metallic Pump Heads



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

For 10:1 Turndown, Self-cooled Motors
Ltr Maximum Flow at Designated Pressure

Notes:

1. The motor EM is 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 50 Motors.
4. Maximum continuous motor speed is 1500 rpm at full power.
5. For information on reduced pressure duties, please contact Wanner International.

Notes:

1. The motor belt is based on ambient temperature conditions up to 45 °C. For ambient temperatures above 45 °C, forced-cooled motors may be required. Please contact Warner International.
2. Contact Warner for performance specifications.
3. Based on 400 V, 50 Hz motor.
4. Maximum continuous motor speed is 1500 rpm at full pressure.
5. For dimensions or reduced pressure duties, please contact Warner International. See Page 3 for Electronic Flow Rate Controller.

Performance Maximum Flow at Designated Pressure - Imperial

Performance Maximum Flow at Designated Pressure - Imperial

() Required Motor hp

Performance Maximum Flow at Designated Pressure - Metric

() Required Motor kW

Mechanical Adjustment Controller for ATEX/Explosive Areas

All Min/Max flow rates in litres/hour

102 bar		172 bar		Pump size	Gearbox Ratio	Model Number	Required Motor Size & Frame
Min Flow	Max Flow	Min Flow	Max Flow				
13	9.5	0.8	8.1	5-24	25:1	0015-10014	0.25kW / EC 71 / 4 pole
	11.6		10.4	5-30	20:1		0.37kW / EC 71 / 4 pole
	15.6		14.3	5-40	15:1		0.55kW / EC 80 / 4 pole
	22.6		21.6	5-60	10:1	0015-11014	0.75kW / EC 71 / 4 pole
	31.6		29.6	5-90	7.5:1		0.95kW / EC 80 / 4 pole
	47.6		44.6	5-120	5:1		0.95kW / EC 80 / 4 pole
	63.6		60.6	5-140	7.5:1	0015-10014	1.5kW / EC 80 / 4 pole
80.6	76.6	5-160	6:1	1.5kW / EC 80 / 4 pole			

() Required Motor kW