

HYDRA-CELL KALVOPUMPUT P300

Annostelupumppu

P300MSGSSA10S
Kalvopumppu P300



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

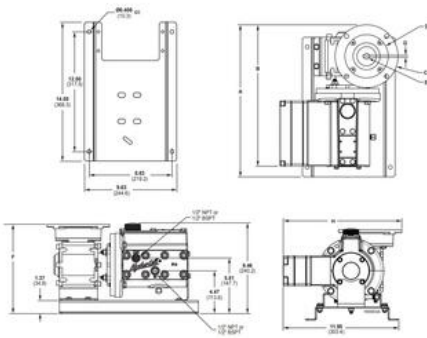
TUOTEKUVAUS

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

TEKNISET TIEDOT

1098_Particle size (mm)	Max. 0,2
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
Pohjalevyn materiaali	Ruostumaton teräs
Pumpun materiaali	SS 316L
Pyörimissuunta	Valinnainen
Venttiilien materiaali	Nitronic 50
Venttiilin istukan materiaali	SS 316L
Venttiilin jousen materiaali	Elgiloy

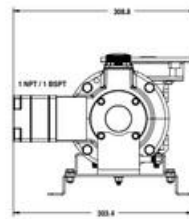
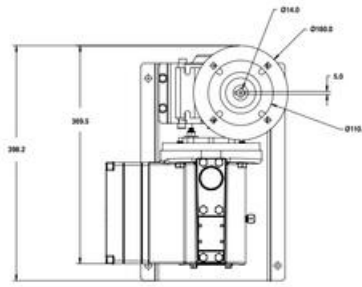
P300 Models with Metallic Pumping Head



Dimensions in Inches (Millimeters)

Motor Frame Size	A	B	C	D	E	F	G (Flange Height)	H
NEMA 143T	15.75 (399.2)	16.75 (425.5)	18.125 (460.3)	18.875 (478.1)	19.625 (498.4)	20.375 (518.7)	0.75 (19.0)	12.25 (311.3)
NEMA 143T/2T	15.75 (399.2)	16.75 (425.5)	18.125 (460.3)	18.875 (478.1)	19.625 (498.4)	20.375 (518.7)	0.75 (19.0)	12.25 (311.3)
IEC 43/48	15.75 (399.2)	16.75 (425.5)	18.125 (460.3)	18.875 (478.1)	19.625 (498.4)	20.375 (518.7)	0.75 (19.0)	12.25 (311.3)
IEC 71/85	15.75 (399.2)	16.75 (425.5)	18.125 (460.3)	18.875 (478.1)	19.625 (498.4)	20.375 (518.7)	0.75 (19.0)	12.25 (311.3)
IEC 90/85	15.75 (399.2)	16.75 (425.5)	18.125 (460.3)	18.875 (478.1)	19.625 (498.4)	20.375 (518.7)	0.75 (19.0)	12.25 (311.3)

Representative Drawings (mm)
Metallic Pump Heads



Performance - Flow Capacities and Pressure Ratings

For Synchronous Speed, Self-cooled Motors
Lhr Maximum Flow at Designated Pressure

1.5 Bar	3.0 Bar	4.5 Bar	6.0 Bar	7.5 Bar	9.0 Bar	10.5 Bar	12.0 Bar	13.5 Bar	15.0 Bar
10.2	16.0	21.5	27.0	32.5	38.0	43.5	49.0	54.5	60.0
15.4	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
20.6	32.0	42.0	52.0	62.0	72.0	82.0	92.0	102.0	112.0
25.8	38.0	50.0	62.0	74.0	86.0	98.0	110.0	122.0	134.0
31.0	44.0	58.0	72.0	86.0	100.0	114.0	128.0	142.0	156.0
36.2	50.0	66.0	82.0	98.0	114.0	130.0	146.0	162.0	178.0
41.4	56.0	74.0	92.0	110.0	128.0	146.0	164.0	182.0	200.0
46.6	62.0	82.0	102.0	122.0	142.0	162.0	182.0	202.0	222.0
51.8	68.0	90.0	112.0	134.0	156.0	178.0	200.0	222.0	244.0
57.0	74.0	98.0	122.0	146.0	170.0	194.0	218.0	242.0	266.0
62.2	80.0	106.0	132.0	158.0	184.0	210.0	234.0	258.0	282.0
67.4	86.0	114.0	142.0	170.0	198.0	226.0	252.0	276.0	302.0
72.6	92.0	122.0	152.0	182.0	210.0	242.0	268.0	294.0	318.0
77.8	98.0	130.0	162.0	194.0	222.0	256.0	282.0	306.0	334.0
83.0	104.0	138.0	172.0	206.0	234.0	270.0	296.0	320.0	340.0

Notes:
1. The motor life span based on ambient temperature conditions up to 40°C. For ambient temperatures above 40°C, please contact Moticon International.
2. Contact Moticon for performance specifications.
3. Based on pump efficiency.
4. Maximum continuous motor speed is 3000 rpm at full pressure.
5. For dimensions in inches, please contact Moticon International.

Mechanical Adjustment Controller for ATEX/Explosive Areas

All Max/Min flow rates in litres/minute

100 bar	120 bar	140 bar	160 bar	180 bar	200 bar	220 bar	240 bar	260 bar	280 bar	300 bar
11.4	15.8	20.2	24.6	29.0	33.4	37.8	42.2	46.6	51.0	55.4
15.8	21.7	27.6	33.5	39.4	45.3	51.2	57.1	63.0	68.9	74.8
20.2	27.6	35.5	43.4	51.3	59.2	67.1	75.0	82.9	90.8	98.7
24.6	33.5	43.4	53.3	63.2	73.1	83.0	92.9	102.8	112.7	122.6
29.0	39.4	51.3	63.2	75.1	87.0	98.9	110.8	122.7	134.6	146.5
33.4	45.3	59.2	73.1	87.0	100.9	114.8	128.7	142.6	156.5	170.4
37.8	51.2	67.1	83.0	98.9	114.8	130.7	146.6	162.5	178.4	194.3
42.2	57.1	75.0	92.9	110.8	128.7	146.6	164.5	182.4	200.3	218.2
46.6	63.0	82.9	102.8	122.7	142.6	162.5	182.4	202.3	222.2	242.1
51.0	68.9	90.8	112.7	134.6	156.5	178.4	200.3	222.2	244.1	266.0
55.4	74.8	98.7	122.6	146.5	170.4	194.3	218.2	242.1	266.0	290.0
59.8	80.7	106.6	132.5	158.4	184.3	210.2	234.1	258.0	282.0	306.0
64.2	86.6	114.5	142.4	170.3	198.2	226.1	250.0	274.0	298.0	322.0
68.6	92.5	122.4	152.3	182.2	210.1	238.0	262.0	286.0	310.0	334.0
73.0	98.4	130.3	162.2	194.1	222.0	250.0	274.0	298.0	322.0	346.0
77.4	104.3	138.2	172.1	206.0	234.0	262.0	286.0	310.0	334.0	358.0
81.8	110.2	146.1	182.0	217.9	246.0	274.0	298.0	322.0	346.0	380.0
86.2	116.1	154.0	191.9	229.8	258.0	286.0	310.0	334.0	358.0	392.0
90.6	122.0	161.9	201.8	241.7	270.0	298.0	322.0	346.0	370.0	404.0
95.0	127.9	169.8	211.7	253.6	282.0	310.0	334.0	358.0	382.0	416.0

Notes:
1. The motor life span based on ambient temperature conditions up to 40°C. For ambient temperatures above 40°C, please contact Moticon International.
2. Contact Moticon for performance specifications.
3. Based on pump efficiency.
4. Maximum continuous motor speed is 3000 rpm at full pressure.
5. For dimensions in inches, please contact Moticon International.

P300 Specifications (Cont'd)

Performance Maximum Flow at Designated Pressure - Imperial

Motor rpm	7 bar	10 bar	15 bar	20 bar	25 bar	30 bar	35 bar	40 bar	45 bar	50 bar
1800	10.2	16.0	21.5	27.0	32.5	38.0	43.5	49.0	54.5	60.0
1500	15.4	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
1200	20.6	32.0	42.0	52.0	62.0	72.0	82.0	92.0	102.0	112.0
900	25.8	38.0	50.0	62.0	74.0	86.0	98.0	110.0	122.0	134.0
600	31.0	44.0	58.0	72.0	86.0	100.0	114.0	128.0	142.0	156.0
300	36.2	50.0	66.0	82.0	98.0	114.0	130.0	146.0	162.0	178.0
150	41.4	56.0	74.0	92.0	110.0	128.0	146.0	164.0	182.0	200.0
75	46.6	62.0	82.0	102.0	122.0	142.0	162.0	182.0	202.0	222.0
37.5	51.8	68.0	90.0	112.0	134.0	156.0	178.0	200.0	222.0	244.0
18.75	57.0	74.0	98.0	122.0	146.0	170.0	194.0	218.0	242.0	266.0
9.375	62.2	80.0	106.0	132.0	158.0	184.0	210.0	234.0	258.0	282.0
4.6875	67.4	86.0	114.0	142.0	170.0	198.0	226.0	252.0	276.0	302.0
2.34375	72.6	92.0	122.0	152.0	182.0	210.0	242.0	268.0	294.0	318.0
1.171875	77.8	98.0	130.0	162.0	194.0	222.0	256.0	282.0	306.0	334.0
0.5859375	83.0	104.0	138.0	172.0	206.0	234.0	270.0	296.0	320.0	340.0

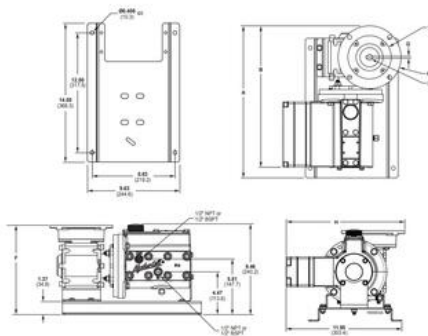
1) Required Motor hp

Performance Maximum Flow at Designated Pressure - Metric

Motor rpm	7 bar	10 bar	15 bar	20 bar	25 bar	30 bar	35 bar	40 bar	45 bar	50 bar
1800	10.2	16.0	21.5	27.0	32.5	38.0	43.5	49.0	54.5	60.0
1500	15.4	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
1200	20.6	32.0	42.0	52.0	62.0	72.0	82.0	92.0	102.0	112.0
900	25.8	38.0	50.0	62.0	74.0	86.0	98.0	110.0	122.0	134.0
600	31.0	44.0	58.0	72.0	86.0	100.0	114.0	128.0	142.0	156.0
300	36.2	50.0	66.0	82.0	98.0	114.0	130.0	146.0	162.0	178.0
150	41.4	56.0	74.0	92.0	110.0	128.0	146.0	164.0	182.0	200.0
75	46.6	62.0	82.0	102.0	122.0	142.0	162.0	182.0	202.0	222.0
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9.375	62.2	80.0	106.0	132.0	158.0	184.0	210.0	234.0	258.0	282.0
4.6875	67.4	86.0	114.0	142.0	170.0	198.0	226.0	252.0	276.0	302.0
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1) Required Motor kW

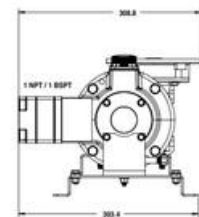
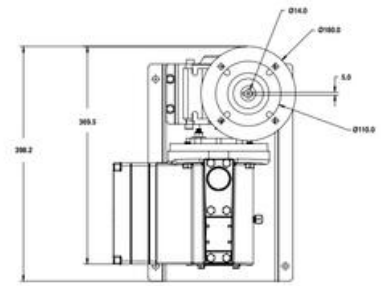
P300 Models with Metallic Pumping Head



Dimensions in Inches (Millimeters)

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NEMA 143T	15.75 (399.2)	16.75 (425.5)	18.125 (460.3)	18.875 (478.1)	19.625 (498.4)	20.375 (518.7)	0.75 (19.0)	12.25 (311.3)
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Representative Drawings (mm)
Metallic Pump Heads



Performance - Flow Capacities and Pressure Ratings

For Synchronous Speed, Self-cooled Motors
Lhr Maximum Flow at Designated Pressure

Lhr Metallic Pump Heads Only	Pump RPM	Gear Ratio	Motor RPM
10.2	18.0	0.5	90
18.0	18.0	1.0	180
36.0	18.0	2.0	90
54.0	18.0	3.0	60
72.0	18.0	4.0	45
90.0	18.0	5.0	36
108.0	18.0	6.0	30
126.0	18.0	7.0	26
144.0	18.0	8.0	23
162.0	18.0	9.0	20
180.0	18.0	10.0	18
200.0	18.0	11.0	16
225.0	18.0	12.0	15
250.0	18.0	13.0	14
270.0	18.0	14.0	13
290.0	18.0	15.0	12
315.0	18.0	16.0	11
340.0	18.0	17.0	10
360.0	18.0	18.0	10
380.0	18.0	19.0	9
400.0	18.0	20.0	9
420.0	18.0	21.0	8
440.0	18.0	22.0	8
460.0	18.0	23.0	7
480.0	18.0	24.0	7
500.0	18.0	25.0	7
520.0	18.0	26.0	6
540.0	18.0	27.0	6
560.0	18.0	28.0	6
580.0	18.0	29.0	5
600.0	18.0	30.0	5
620.0	18.0	31.0	5
640.0	18.0	32.0	5
660.0	18.0	33.0	5
680.0	18.0	34.0	5
700.0	18.0	35.0	5
720.0	18.0	36.0	5
740.0	18.0	37.0	5
760.0	18.0	38.0	5
780.0	18.0	39.0	5
800.0	18.0	40.0	5
820.0	18.0	41.0	5
840.0	18.0	42.0	5
860.0	18.0	43.0	5
880.0	18.0	44.0	5
900.0	18.0	45.0	5
920.0	18.0	46.0	5
940.0	18.0	47.0	5
960.0	18.0	48.0	5
980.0	18.0	49.0	5
1000.0	18.0	50.0	5

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

Lhr Metallic Pump Heads Only	Pump RPM	Gear Ratio	Motor RPM
10.2	18.0	0.5	90
18.0	18.0	1.0	180
36.0	18.0	2.0	90
54.0	18.0	3.0	60
72.0	18.0	4.0	45
90.0	18.0	5.0	36
108.0	18.0	6.0	30
126.0	18.0	7.0	26
144.0	18.0	8.0	23
162.0	18.0	9.0	20
180.0	18.0	10.0	18
200.0	18.0	11.0	16
225.0	18.0	12.0	15
250.0	18.0	13.0	14
270.0	18.0	14.0	13
290.0	18.0	15.0	12
315.0	18.0	16.0	11
340.0	18.0	17.0	10
360.0	18.0	18.0	10
380.0	18.0	19.0	9
400.0	18.0	20.0	9
420.0	18.0	21.0	8
440.0	18.0	22.0	8
460.0	18.0	23.0	7
480.0	18.0	24.0	7
500.0	18.0	25.0	7
520.0	18.0	26.0	6
540.0	18.0	27.0	6
560.0	18.0	28.0	6
580.0	18.0	29.0	5
600.0	18.0	30.0	5
620.0	18.0	31.0	5
640.0	18.0	32.0	5
660.0	18.0	33.0	5
680.0	18.0	34.0	5
700.0	18.0	35.0	5
720.0	18.0	36.0	5
740.0	18.0	37.0	5
760.0	18.0	38.0	5
780.0	18.0	39.0	5
800.0	18.0	40.0	5
820.0	18.0	41.0	5
840.0	18.0	42.0	5
860.0	18.0	43.0	5
880.0	18.0	44.0	5
900.0	18.0	45.0	5
920.0	18.0	46.0	5
940.0	18.0	47.0	5
960.0	18.0	48.0	5
980.0	18.0	49.0	5
1000.0	18.0	50.0	5

Notes:
1. The motor RPM are based on published performance conditions only at 75 °F. For ambient temperatures above or below 75 °F, motor output may be affected.
2. Contact factory for performance specifications.
3. Based on single 80° motor.
4. Maximum continuous motor speed is 1800 rpm at full pressure.
5. For applications in reduced pressure status, please contact Hammer International.

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1. The motor RPM are based on published performance conditions only at 75 °F. For ambient temperatures above or below 75 °F, motor output may be affected. Motor output may be affected.
2. Contact factory for performance specifications.
3. Based on single 80° motor.
4. Maximum continuous motor speed is 1800 rpm at full pressure.
5. For applications in reduced pressure status, please contact Hammer International.

P300 Specifications (Cont'd)

Performance Maximum Flow at Designated Pressure - Imperial

Metallic Pump Heads (gph)				Pump rpm	Gear Ratio	Motor rpm
100 psi	500 psi	1500 psi	2500 psi			
3,221 (5)	3,183 (5)	3,014 (5)	2,741 (5)	30	60:1	
3,959 (5)	3,849 (5)	3,655 (5)	3,350 (5)	36	50:1	
4,939 (5)	4,882 (5)	4,607 (5)	4,272 (5)	45	40:1	
6,039 (5)	6,548 (5)	6,194 (5)	5,780 (5)	60	30:1	
7,999 (5)	7,881 (5)	7,463 (5)	6,990 (5)	72	25:1	
10,04 (5)	9,880 (5)	9,368 (5)	8,815 (5)	90	20:1	1500
13,44 (5)	13,21 (5)	12,54 (5)	11,88 (5)	120	15:1	
20,24 (5)	19,88 (5)	18,89 (5)	17,90 (5)	180	10:1	
27,03 (5)	26,54 (5)	25,24 (5)	23,96 (5)	240	7.5:1	
40,63 (5)	39,87 (5)	37,93 (5)	36,08 (5)	360	5:1	
54,23 (5)	53,20 (5)	50,63 (5)	48,19 (5)	480	7.5:1	3600
81,42 (5)	79,85 (5)	76,02 (5)	72,43 (5)	720	5:1	

Required Motor KW

Performance Maximum Flow at Designated Pressure - Metric

Metallic Pump Heads (lph)				Pump rpm	Gear Ratio	Motor rpm
7 bar	34 bar	103 bar	172 bar			
10,16 (0.18)	10,04 (0.18)	9,51 (0.25)	8,648 (0.55)	25	60:1	
12,29 (0.18)	12,14 (0.18)	11,53 (0.25)	10,57 (0.50)	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)	29,56 (0.37)	27,81 (0.75)	75	20:1	1500
42,39 (0.18)	41,68 (0.25)	39,56 (0.55)	37,36 (0.75)	100	15:1	
63,63 (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

Mechanical Adjustment Controller for ATEX/Explosive Areas

All Min/Max Flow rates in litres/hour

100 bar	500 bar	1500 bar	Pump rpm	Gear Ratio	Model Number	Required Motor Size & Frame
10.2	18.0	36.0	18.0	0.5	HEC-8004	0.75kW / EC 11 / 4 Nm
18.0	36.0	72.0	18.0	1.0	HEC-8004	0.75kW / EC 11 / 4 Nm
36.0	72.0	144.0	18.0	2.0	HEC-7004	0.75kW / EC 11 / 4 Nm
54.0	108.0	216.0	18.0	3.0	HEC-8004	0.75kW / EC 11 / 4 Nm
72.0	144.0	288.0	18.0	4.0	HEC-8004	0.75kW / EC 11 / 4 Nm
90.0	180.0	360.0	18.0	5.0	HEC-8004	0.75kW / EC 11 / 4 Nm
108.0	216.0	432.0	18.0	6.0	HEC-8004	0.75kW / EC 11 / 4 Nm
126.0	252.0	504.0	18.0	7.0	HEC-8004	0.75kW / EC 11 / 4 Nm
144.0	288.0	576.0	18.0	8.0	HEC-8004	0.75kW / EC 11 / 4 Nm
162.0	324.0	648.0	18.0	9.0	HEC-8004	0.75kW / EC 11 / 4 Nm
180.0	360.0	720.0	18.0	10.0	HEC-8004	0.75kW / EC 11 / 4 Nm
200.0	400.0	800.0	18.0	11.0	HEC-8004	0.75kW / EC 11 / 4 Nm
225.0	450.0	900.0	18.0	12.0	HEC-8004	0.75kW / EC 11 / 4 Nm
250.0	500.0	1000.0	18.0	13.0	HEC-8004	0.75kW / EC 11 / 4 Nm
270.0	540.0	1080.0	18.0	14.0	HEC-8004	0.75kW / EC 11 / 4 Nm
290.0	580.0	1160.0	18.0	15.0	HEC-8004	0.75kW / EC 11 / 4 Nm
315.0	630.0	1260.0	18.0	16.0	HEC-8004	0.75kW / EC 11 / 4 Nm
340.0	680.0	1360.0	18.0	17.0	HEC-8004	0.75kW / EC 11 / 4 Nm
360.0	720.0	1440.0	18.0	18.0	HEC-8004	0.75kW / EC 11 / 4 Nm
380.0	760.0	1520.0	18.0	19.0	HEC-8004	0.75kW / EC 11 / 4 Nm
400.0	800.0	1600.0	18.0	20.0	HEC-8004	0.75kW / EC 11 / 4 Nm
420.0	840.0	1680.0	18.0	21.0	HEC-8004	0.75kW / EC 11 / 4 Nm
440.0	880.0	1760.0	18.0	22.0	HEC-8004	0.75kW / EC 11 / 4 Nm
460.0	920.0	1840.0	18.0	23.0	HEC-8004	0.75kW / EC 11 / 4 Nm
480.0	960.0	1920.0	18.0	24.0	HEC-8004	0.75kW / EC 11 / 4 Nm
500.0	1000.0	2000.0	18.0	25.0	HEC-8004	0.75kW / EC 11 / 4 Nm
520.0	1040.0	2080.0	18.0	26.0	HEC-8004	0.75kW / EC 11 / 4 Nm
540.0	1080.0	2160.0	18.0	27.0	HEC-8004	0.75kW / EC 11 / 4 Nm
560.0	1120.0	2240.0	18.0	28.0	HEC-8004	0.75kW / EC 11 / 4 Nm
580.0	1160.0	2320.0	18.0	29.0	HEC-8004	0.75kW / EC 11 / 4 Nm
600.0	1200.0	2400.0	18.0	30.0	HEC-8004	0.75kW / EC 11 / 4 Nm