

4" 3~ ENCAPSULATED PM MOTOR

SPECIFICATION

- 4" NEMA mounting design
 - Stainless steel splined shaft
 - StatorShield™ - Franklin encapsulation system
 - Factory filled with Franklin's non-toxic water soluble fill solution
 - High-capacity *Kingsbury type* water lubricated thrust bearing
 - Field replaceable lead using Franklin's exclusive *Water Bloc* technology
 - Pressure-equalizing diaphragm
 - High efficiency electrical design for low operation costs
 - All motors manufactured in ISO 9001 & 14001 certified plants and 100% tested
 - Drinking water approvals
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- Ratings: 0,55kW - 3,0kW; Thrust load 4kN
 - Ratings: 3,0kW - 4,0kW; Thrust load 6,5kN
 - Voltage: 220V / 400V
 - Voltage tolerance: -10% / +6% (50 Hz)
 - Nominal ambient temperature: 30°C with 0,08 m/s cooling flow
 - Protection IP68 / insulation class B
 - Frequency of starts: max. 20 ; with 3 min. rest period
 - Special lead lengths on request
 - Vertical and horizontal operation
 - All motors with factory installed leads 1,5 / 2,5 m



3~ 304SS / 316SS MODEL NUMBERS 220V / 100 HZ

P _N [kW]	U _N [V]	Thrust F [N]	Digit 1 - 6	Digit 7 - 10	
				Standard 304SS	Standard 316SS
				Single pack with lead*	Single pack with lead*
0,55 - 1,1	220	4000	234 074	6700L	6800L
1,1 - 2,2	220	4000	234 075	6700L	6800L
2,2 - 3,0	220	4000	234 077	6700L	6800L
3,0 - 4,0	220	6500	234 078	3421L	3521L

3~ 304SS / 316SS MODEL NUMBERS 400V / 100 HZ

P _N [kW]	U _N [V]	Thrust F [N]	Digit 1 - 6	Digit 7 - 10	
				Standard 304SS	Standard 316SS
				Single pack with lead*	Single pack with lead*
1,1 - 2,2	400	4000	234 062	6700L	6800L
2,2 - 3,0	400	4000	234 063	6700L	6800L
3,0 - 4,0	400	6500	234 064	3421L	3521L

3~ PERFORMANCE DATA 220V / 100 HZ

Motor MDL	P_N [kW]	Thrust F [N]	U_N [V]	n [min ⁻¹]	I_N [A]	I_A/I_N [A]	η [%]	$\cos \varphi$ [%]	T_N [Nm]	T_A/T_N [Nm]
234 071	0,55	4000	220	3000	1,8	1	84,7	0,95	1,8	1
	0,75	4000	220	3000	2,4	1	85,0	0,95	2,4	1
	1,1	4000	220	3000	3,8	1	81,0	0,95	3,3	1
234 072	1,1	4000	220	3000	3,4	1	86,4	0,96	3,5	1
	1,5	4000	220	3000	4,8	1	88,0	0,96	4,8	1
	2,2	4000	220	3000	7,0	1	87,0	0,96	6,9	1
234 073	2,2	4000	220	3000	6,8	1	89,4	0,96	7,1	1
	3,0	4000	220	3000	9,4	1	89,0	0,97	9,5	1
234 074	3,0	6500	220	3000	9,0	1	90,0	0,97	11,7	1
	3,7	6500	220	3000	11,0	1	89,7	0,97	12,0	1
	4,0	6500	220	3000	12,0	1	89,4	0,97	12,7	1

3~ PERFORMANCE DATA 400V / 100 HZ

Motor MDL	P_N [kW]	Thrust F [N]	U_N [V]	n [min ⁻¹]	I_N [A]	I_A/I_N [A]	η [%]	$\cos \varphi$ [%]	T_N [Nm]	T_A/T_N [Nm]
234 062	1,1	4000	400	3000	2,2	1	86,4	0,96	3,5	1
	1,5	4000	400	3000	2,6	1	88,0	0,96	4,8	1
	2,2	4000	400	3000	3,8	1	87,0	0,96	6,9	1
234 063	2,2	4000	400	3000	3,5	1	89,4	0,96	7,1	1
	3,0	4000	400	3000	5,2	1	89,0	0,97	9,5	1
234 064	3,0	6500	400	3000	5,0	1	90,0	0,97	11,7	1
	3,7	6500	400	3000	6,0	1	89,7	0,97	12,0	1
	4,0	6500	400	3000	6,5	1	89,4	0,97	12,7	1

WINDING RESISTANCE 220V/100HZ

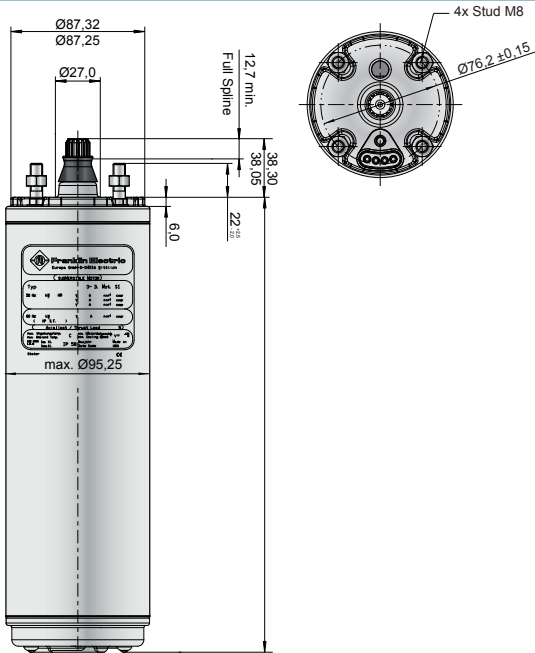
P_N [kW]	U_N [V]	Stator Ref.	U - V (Ohm)	Rotor Ref.
0,55-1,1	220	327 460 945		178 172 901
1,1 - 2,2	220	327 461 945		178 172 903
2,2 - 3,0	220	327 462 945		178 172 904
3,0 - 4,0	220	327 463 902		178 173 921

WINDING RESISTANCE 400V/100HZ

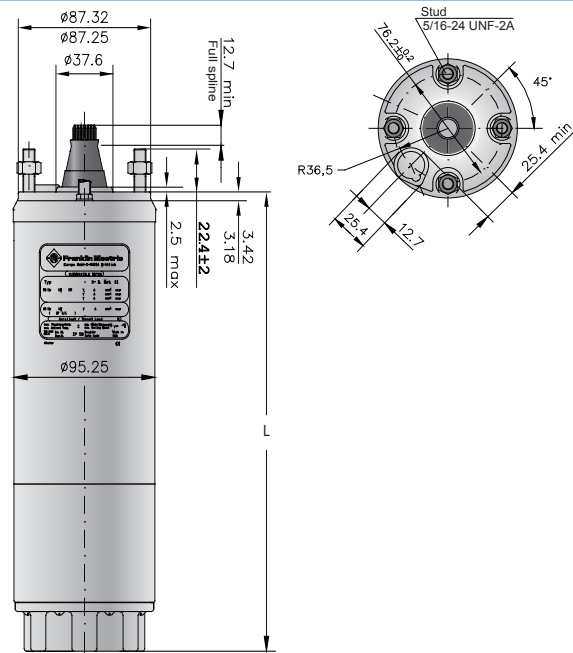
P_N [kW]	U_N [V]	Stator Ref.	U - V (Ohm)	Rotor Ref.
1,1 - 2,2	400	327 451 945		178 172 903
2,2 - 3,0	400	327 452 945		178 172 904
3,0 - 4,0	400	327 453 902		178 173 921

MOTOR DIMENSION

0,55kW - 3,0kW [4000N]



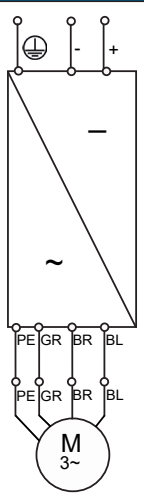
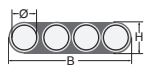
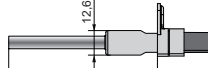



3,0 - 4,0kW [6500N]



P _N [kW]	U _N [V]	Thrust F [N]	L [mm]	M [kg]	Motor with lead in single pack	
					[mm]	[kg]
0,55 - 1,1	220	4000	208,00	5,20	530 x 100 x 110	6
1,1 - 2,2	220	4000	253,00	7,20	530 x 100 x 110	8
2,2 - 3,0	220	4000	343,00	9,20	560 x 100 x 110	10
3,0 - 4,0	220	6500	455,00	15,20	560 x 100 x 110	16
1,1 - 2,2	400	4000	253,00	7,20	560 x 100 x 110	8
2,2 - 3,0	400	4000	343,00	9,20	560 x 100 x 110	10
3,0 - 4,0	400	6500	455,00	15,20	796 x 100 x 110	16

tolerances according to NEMA MG 1-18.388

ELECTRICAL CONNECTION 3~ MOTORS DOL

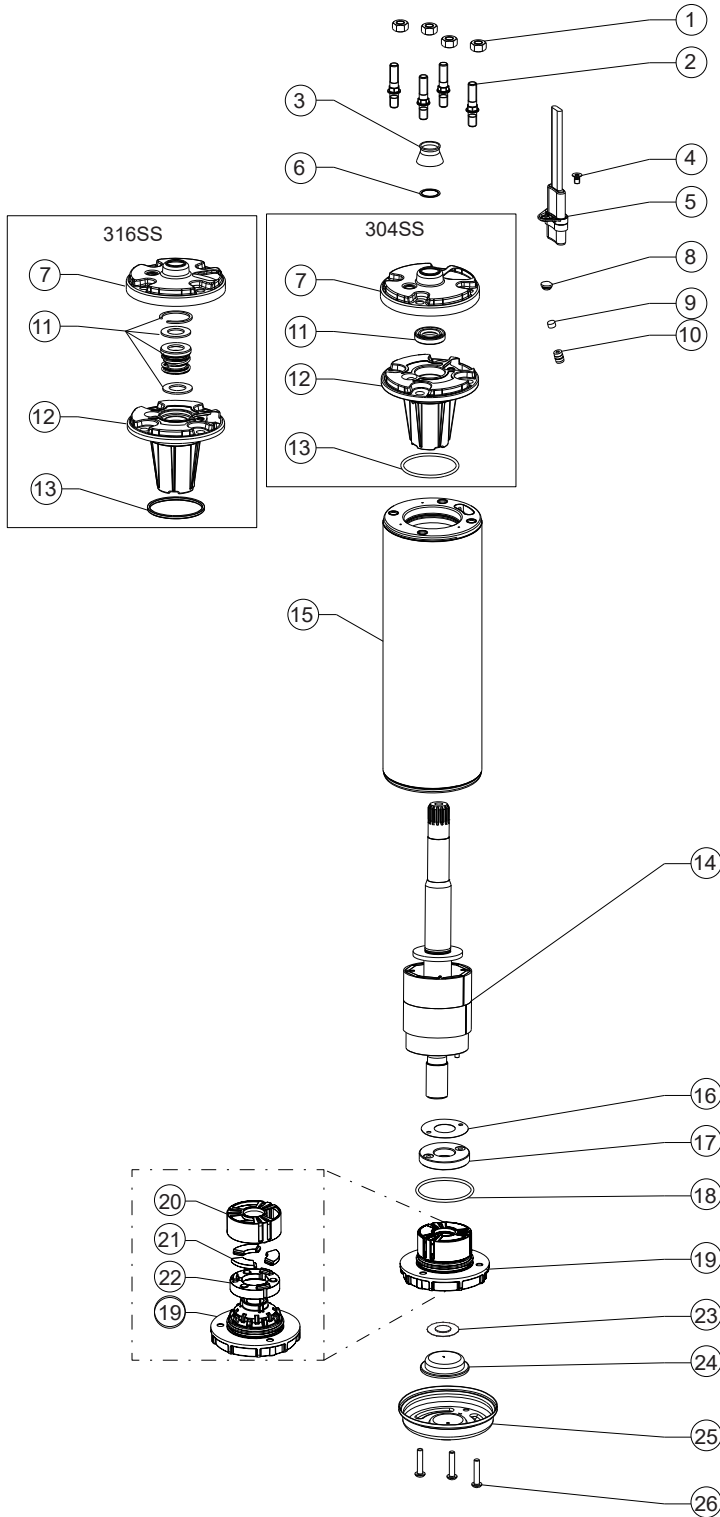
3- PM motors DOL	Motor lead**						
	0,55kW - 3,0kW [4000N]			3,0 - 4,0kW [6500N]			
	Ø [mm ²]	B [mm]	H [mm]	Ø [mm ²]	B [mm]	B1 [mm]	H [mm]
	4 x 1.5	14.6 ± 0.3	5.1 ± 0.3	3X1,5+1G1,5	16,8	10,7	5,0
							
	L [m]*	304SS / 316SS		L [m]*	304SS / 316SS		
	1.5	310 178 501		2.5	310 113 502		
	2.5	310 178 502		5	310 113 505		
	5	310 178 505		10	310 113 510		
	10	310 178 510		15	310 113 515		
	15	310 178 515		20	310 113 520		
	20	310 178 520					

*For special lead lengths, please consult Franklin Electric.

**Cables are designed for submerged operation. For air operation, please consult Franklin Electric.

4" 3~ ENCAPSULATED PM MOTOR SPARE PARTS 0,55 - 3,0KW / 4000N

MOTOR PARTS DESCRIPTION



Pos.	Part Description	Qty.	Part number
1	Nut M8	4	Kit C
2	Stud M8	4	Kit C
3	Protector (Spline)	1	Kit B
4	Screw (Motor lead)	1	Kit C
5	Motor lead	1	see page 67
6	Washer	1	Kit B
7	Top Endbell, Cover	1	Kit
8	Plug	1	Kit B
9	Filter	1	Kit B
10	Valve	1	Kit
11	Shaft Seal	1	Kit B
12	Top Endbell	1	Kit
13	O-Ring	1	Kit B
14	Rotor	1	see page 69
15	Stator	1	see page 69
16	Level washer	1	Kit A
17	Thrust Disc Assy	1	Kit A
18	O-Ring	1	Kit B
19	Bottom Endbell	1	A1
20	Bearing Cage	1	Kit A
21	Segments	3	Kit A
22	Rocking Disc	1	Kit A
23	Diaphragm washer	1	Kit B
24	Diaphragm	1	Kit B
25	Bottom Endbell Cover 304SS	1	156 414 201
	Bottom Endbell Cover 316SS		156 414 301
26	Screw, Cover	3	Kit C

OVERVIEW SPARE PARTS KITS 4000N

P_N [kW]	0,55 - 3,0kW		
Kit A1	Upper end bell 304SS (Pos. 7 -13)	incl. Pos. 7 - 13	308 462 901
	Upper end bell 316SS (Pos. 7 -13)		308 462 951
Kit A2	Lower end bell incl. Thrust Bearing Kit 4000N	incl. Pos. 16 - 22	308 464 911
Kit B	Seal Kit Standard 304SS	incl. Pos. 3, 6, 8, 9, 11, 13, 18, 23	308 650 201
	Seal Kit Standard 316SS		308 650 251
Kit C	Fastener Kit 304SS	incl. Pos. 1, 2, 4, 26	308 656 201
	Fastener Kit 316SS		308 656 251

SPARE PARTS STATOR AND ROTOR 0,55 - 3,0kW / 220V

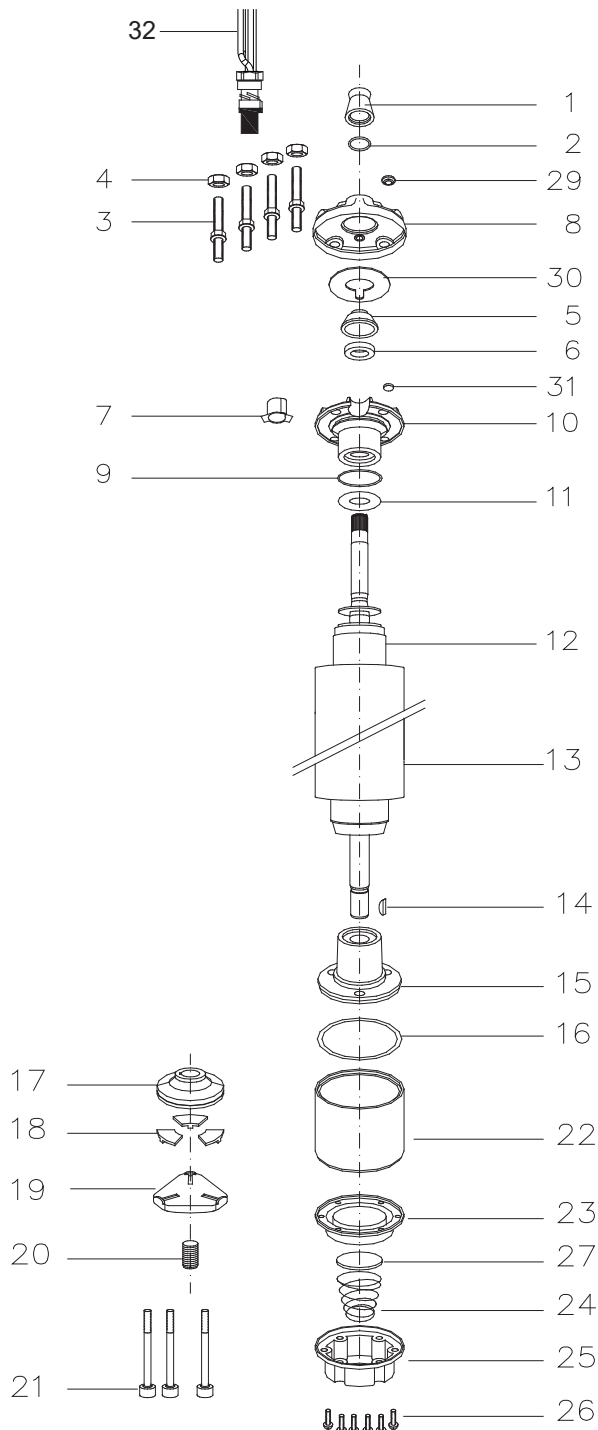
P_N [kW]	U_N [V]	Thrust F [N]	Motor Model No.		Stator Model No.	Rotor
			304SS	316SS		
0,55 - 1,1	220	4000	6700L	6800L	327 460 945	178 172 901
1,1 - 2,2	220	4000	6700L	6800L	327 461 945	178 172 903
2,2 - 3,0	220	4000	6700L	6800L	327 462 945	178 172 904

SPARE PARTS STATOR AND ROTOR 1,1 - 3,0kW / 400V

P_N [kW]	U_N [V]	Thrust F [N]	Motor Model No.		Stator Model No.	Rotor
			304SS	316SS		
1,1 - 2,2	400	4000	6700L	6800L	327 451 945	178 172 903
2,2 - 3,0	400	4000	6700L	6800L	327 452 945	178 172 904

4" 3~ ENCAPSULATED PM MOTOR SPARE PARTS 3,0 - 4,0kW / 6500N

MOTOR PARTS DESCRIPTION



Pos.	Part Description	Qty.	Part No.
1	Protector, Spline	1	Kit B
2	Washer	1	Kit B
3	Stud	4	Kit C
4	Nut	4	Kit C
5	Seal cover	1	Kit D
6	Shaft Seal	1	Kit B+D
7	Connector boss	1	Kit D
8	Top Endbell, Cover	1	Kit D
9	O-Ring	1	Kit B+D
10	Top Endbell	1	Kit D
11	Uphrust washer	1	Kit
12	Rotor	1	see page 71
13	Stator	1	see page 71
14	Woodruff key	1	275 250 104
15	Bottom Endbell	1	Kit
16	O-Ring	1	Kit B
17	Thrust disc	1	Kit A
18	Segment	1	Kit A
19	Leveling disc	1	155 660 101
20	Screw, adj.	1	151 048 102
21	Screw	3	Kit C
22	Thrust housing	1	177 378 901
23	Diaphragm	1	Kit B
24	Spring	1	151 449 101
25	Cover, Diaphragm	1	155 647 101
26	Screw	6	Kit C
27	Cup spring, Diaphragm	1	151 448 101
29	Sealing stopper	1	Kit B+D
30	Seal	1	Kit D
31	Filter	1	Kit B+D
32	Motor lead	1	see page 67

OVERVIEW SPARE PARTS KITS MOTORS 6500N

P_N [kW]	End bell upper (Pos. 10)	End bell, lower (Pos. 15)	Upthrust washer (Pos. 11)
3,0 - 4,0	308 233 509	177 379 921	308 268 104
Kit A	Thrust Bearing Kit 6500N	incl. Pos.: 17, 18	308 700 301
Kit B	Seal Kit	incl. Pos.: 1, 2, 6, 9, 16, 23, 29, 31	308 900 352
Kit D	Screw Kit	incl. Pos.: 3, 4, 21, 26	308 658 351

SPARE PARTS STATOR AND ROTOR 3,0 - 4,0kW / 220V

P_N [kW]	U_N [V]	Thrust F [N]	Motor Model No.		Stator Model No.	Rotor
			304SS	316SS		
3,0 - 4,0	220	6500	3421L	3521L	327 463 902	178 173 921

SPARE PARTS STATOR AND ROTOR 3,0 - 4,0kW / 400V

P_N [kW]	U_N [V]	Thrust F [N]	Motor Model No.		Stator Model No.	Rotor
			304SS	316SS		
3,0 - 4,0	400	6500	3421L	3521L	327 453 902	178 173 921