

4" SUPER STAINLESS MOTOR – PSC DESIGN



FEATURES & BENEFITS

- 4" NEMA mounting design with metric studs
- Stainless steel splined shaft
- Stator shell in 316SS
- Factory filled with Franklin's non-toxic water soluble fill solution
- Max. storage temperature -15°C - + 50°C
- Liquid lubricated radial bearings and High capacity Kingsbury type thrust bearing for 100 % maintenance free operation
- Field replaceable lead using Franklin's exclusive Water Bloc technology with extended jam nut in Stainless steel
- High efficiency electrical design for low operation costs
- Drinking water approvals
- Suitable for use in water with increased salinity

SPECIFICATION

- Ratings: 0.25 - 2,2 kW
- Frequency: 50 Hz
- Thrust load: 4 kN
- Nominal ambient temperature: 30 °C with 0.08 m/s cooling flow
- Voltage tolerance: -10 % / +6 % (50 Hz)
- Protection IP68, insulation class B
- Frequency of starts: 20 starts/ hour (with min. 3 minutes resting time)
- All motors with factory installed leads (1.50 m / 2.50 m)
- Installation orientation: Vertical / horizontal (shaft end heightened)
- Rotation counter clock wise facing shaft end (1 phase motors CW upon request)

Pollution Recovery version:

- Fluorelastomere (Viton®) rubber parts
- Special Polyuretane (PUR) lead assemblies
- 304SS (316SS Stator) graded Stainless Steel as Standard



OPTIONS

- Built in lightning arrestors
- Special lead lenghts
- PSC motor sets with accessories



Hydrodynamic liquid lubricated radial bearings

100 % maintenance free operation

StatorSHIELD™ - Franklin encapsulation system

Franklin Electric encapsulated motors are equipped with hermetically-sealed windings. The Anti track stator resin mechanically supports the winding and provides fast heat dissipation.

Kingsbury type thrust bearing

High capacity 4 kN Kingsbury type thrust bearing for 100 % maintenance free operation

Pressure-equalizing diaphragm



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MOTOR MODEL NUMBERS 50 HZ - PSC DESIGN

P_N [kW]	U_N [V]	Digit 1 - 6	Digit 7 - 10		
			Single pack, with lead*	Motors in 40 motors packing unit	Pollution Recovery Motors (Single pack, with lead)*
0,25	220-230	254 803	6721L	6721	6723L
	230-240	254 813	6721L	6721	6723L
0,37	220-230	254 805	6721L	6721	6723L
	230-240	254 815	6721L	6721	6723L
0,55	220-230	254 807	6721L	6721	6723L
	230-240	254 817	6721L	6721	6723L
0,75	220-230	254 808	6721L	6721	6723L
	230-240	254 818	6721L	6721	6723L
1,1	220-230	254 809	6721L	6721	6723L
	230-240	254 819	6721L	6721	6723L
1,5	220-230	254 810	6721L	6721	6723L
	230-240	254 820	6721L	6721	6723L
2,2	220-230	254 811	6721L	6721	6723L
	230-240	254 821	6721L	6721	6723L

MOTOR PERFORMANCE DATA 220-230V / 50 HZ - PSC DESIGN

P_N [kW]	Thrust F [N]	U_N [V]	n_N [min ⁻¹]	I_N [A]	I_A [A]	η (Eff.) [%] at % load			$\cos \phi$ (Pf.) at % load			T_N [Nm]	T_A [Nm]	Capacitor μF ($U_c=450V$)
						50	75	100	50	75	100			
0,25	4000	220	2865	2,3	9,0	33	45	51	0,91	0,93	0,96	0,82	0,73	12,5
		230	2875	2,4	9,4	28	42	50	0,80	0,88	0,92	0,83	0,80	
0,37	4000	220	2850	3,2	12,1	36	47	54	0,86	0,92	0,97	1,21	1,07	16
		230	2860	3,3	12,6	35	46	54	0,78	0,85	0,91	1,24	1,17	
0,55	4000	220	2840	4,2	16,9	46	57	63	0,94	0,97	0,98	1,85	1,50	20
		230	2850	4,3	17,7	45	57	63	0,86	0,91	0,94	1,90	1,63	
0,75	4000	220	2825	5,7	21,7	44	54	61	0,97	0,99	0,99	2,5	2,3	35
		230	2845	5,7	22,7	41	52	59	0,92	0,96	0,98	2,5	2,5	
1,1	4000	220	2830	8,1	32,5	47	59	65	0,86	0,94	0,97	3,7	2,9	40
		230	2845	8,4	33,9	43	56	63	0,77	0,86	0,92	3,7	3,1	
1,5	4000	220	2820	10,4	39,9	52	63	68	0,90	0,95	0,98	5,1	3,6	50
		230	2830	10,7	41,7	48	59	66	0,82	0,90	0,95	5,1	3,9	
2,2	4000	220	2825	14,7	59,2	55	65	70	0,93	0,98	0,99	7,4	5,0	70
		230	2840	14,7	61,8	51	62	68	0,86	0,93	0,97	7,4	5,5	

4" SUPER STAINLESS MOTOR - PSC DESIGN

MOTOR PERFORMANCE DATA 230-240V / 50 HZ - PSC DESIGN

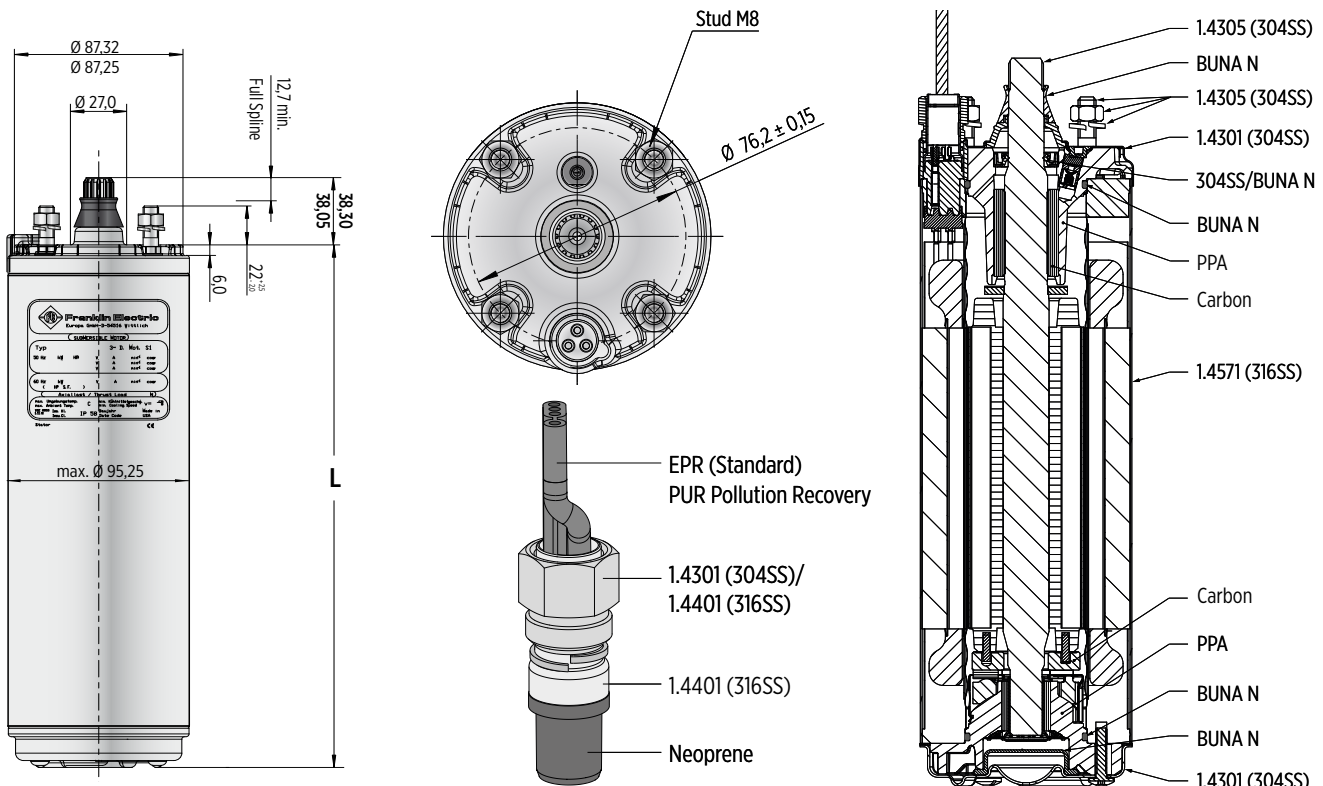
P _N [kW]	Thrust F [N]	U _N [V]	n _N [min ⁻¹]	I _N [A]	I _A [A]	η (Eff.) [%] at % load			cos φ (Pf.) at % load			T _N [Nm]	T _A [Nm]	Capacitor μF (U _C =450V)
						50	75	100	50	75	100			
0,25	4000	230	2865	2,2	8,6	33	45	51	0,91	0,93	0,96	0,82	0,73	12,5
		240	2875	2,3	9,0	28	42	50	0,80	0,88	0,92	0,83	0,80	
0,37	4000	230	2850	3,1	11,6	36	47	54	0,86	0,92	0,97	1,21	1,07	16
		240	2860	3,2	12,1	35	46	54	0,78	0,85	0,91	1,24	1,17	
0,55	4000	230	2840	4,0	16,2	46	57	63	0,94	0,97	0,98	1,85	1,50	20
		240	2850	4,1	16,9	45	57	63	0,86	0,91	0,94	1,90	1,63	
0,75	4000	230	2825	5,5	20,8	44	54	61	0,97	0,99	0,99	2,5	2,3	35
		240	2845	5,5	21,8	41	52	59	0,92	0,96	0,98	2,5	2,5	
1,1	4000	230	2830	7,8	31,1	47	59	65	0,86	0,94	0,97	3,7	2,9	40
		240	2845	8,1	32,5	43	56	63	0,77	0,86	0,92	3,7	3,1	
1,5	4000	230	2820	10,0	38,3	52	63	68	0,90	0,95	0,98	5,1	3,6	50
		240	2830	10,2	40,0	48	59	66	0,82	0,90	0,95	5,1	3,9	
2,2	4000	230	2825	14,0	56,7	55	65	70	0,93	0,98	0,99	7,4	5,0	70
		240	2840	14,1	59,3	51	62	68	0,86	0,93	0,97	7,4	5,5	

WINDING RESISTANCE DATA 50 HZ - PSC DESIGN

P _N [kW]	U _N [V]	Stator-Ref.	Main phase [Ohm]	Start phase [Ohm]
0,25	220 - 230	326 738 ***	8,2 - 10,0	31,1 - 38,1
	230 - 240	326 800 ***	8,9 - 10,9	26,7 - 32,6
0,37	220 - 230	326 739 ***	6,7 - 8,1	21,7 - 26,5
	230 - 240	326 801 ***	7,2 - 8,8	20,8 - 25,4
0,55	220 - 230	326 740 ***	4,4 - 5,4	13,6 - 16,6
	230 - 240	326 802 ***	4,8 - 5,8	13,1 - 16,0
0,75	220 - 230	326 741 ***	3,3 - 4,1	8,1 - 9,9
	230 - 240	326 803 ***	3,7 - 4,6	7,7 - 9,4
1,1	220 - 230	326 742 ***	2,3 - 2,8	6,8 - 8,3
	230 - 240	326 804 ***	2,5 - 3,0	6,5 - 7,9
1,5	220 - 230	326 743 ***	1,8 - 2,2	4,7 - 5,7
	230 - 240	326 805 ***	1,9 - 2,4	4,4 - 5,4
2,2	220 - 230	326 744 ***	1,2 - 1,5	3,2 - 3,9
	230 - 240	326 806 ***	1,3 - 1,6	3,0 - 3,6

MOTORDESIGN, DIMENSION AND LEADS

PSC MOTORDESIGN 304SS 0,25 - 2,2 KW

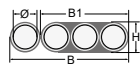
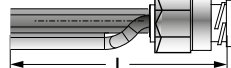


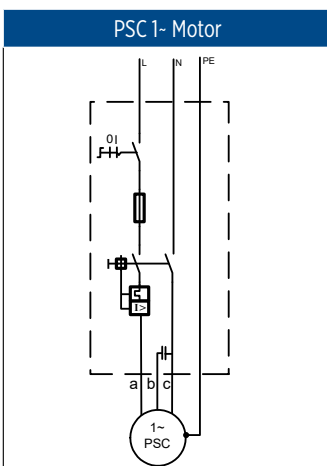
Tolerances according to NEMA MG 1-18.388

LENGTHS AND WEIGHTS - PSC DESIGN

P _N		L [mm]	M [kg]	motor with lead in single pack	
[kW]	[HP]			[mm]	[kg]
0,25	0,33	237,2	6,55	400 x 100 x 110	7,25
0,37	0,50	251,1	7,20	400 x 100 x 110	7,9
0,55	0,75	276,2	8,35	530 x 100 x 110	9,05
0,75	1,00	297,2	9,30	530 x 100 x 110	10,0
1,10	1,50	321,2	10,45	530 x 100 x 110	11,15
1,50	2,0	353,2	11,90	796 x 100 x 110	12,6
2,20	3,0	451,2	16,65	796 x 100 x 110	17,35

MOTOR LEADS - PSC DESIGN

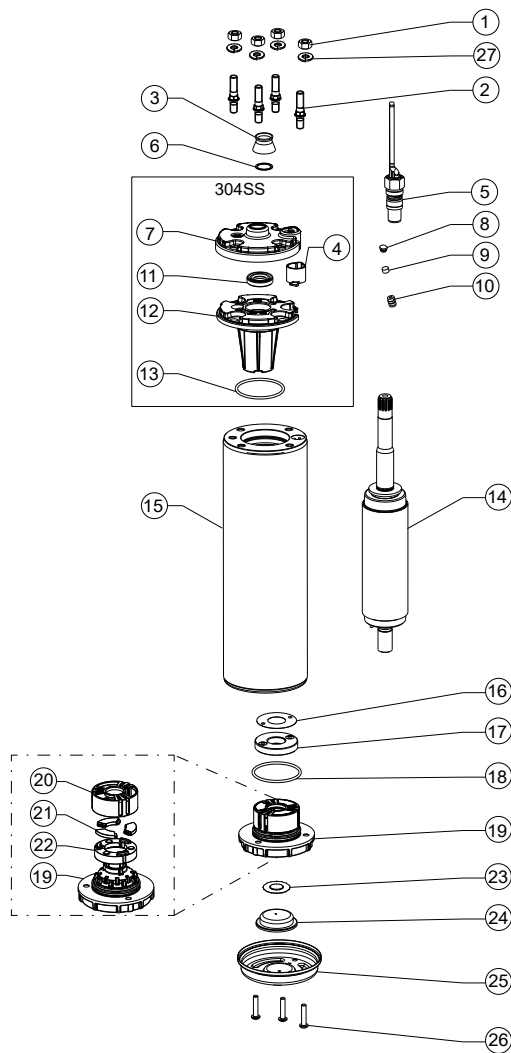
PSC motor leads			
0,25 - 2,2 kW			
Ø [mm ²]	B [mm]	B1 [mm]	H [mm]
3X1,5 + 1G1,5	16,8	10,7	5,0
  			
L [m]	Model numbers 304SS	Model numbers 316SS	
1,5	310 113 401	310 113 501	
2,5	310 113 402	310 113 502	
5	310 113 405	310 113 505	
10	310 113 410	310 113 510	
15	310 113 415	310 113 515	
20	310 113 420	310 113 520	
30	310 113 430	310 113 530	
40	310 113 440	310 113 540	
50	310 113 450	310 113 550	



a = black | b = brown | c = grey | PE = yellow/green

MOTOR PART DESCRIPTION

MOTOR DESIGN 0.25 - 2,2 KW



Pos.	Part Description	Qty.	Part No.
1	Nut	4	Kit C
2	Stud	4	Kit C
3	Protector, Spline	1	Kit B
4	Connector boss	1	151 820 103
5	Motor Lead	1	Page 7
6	Washer	1	Kit B
7	Top Endbell, Cover 304SS	1	150 262 151
8	Filter plug	1	Kit
9	Filter	1	Kit
10	Valve	1	Kit
11	Shaft Seal	1	Kit B
12	Top Endbell	1	Kit
13	O-Ring	1	Kit B
14	Rotor	1	Page 9
15	Stator	1	Page 9
16	Level washer	1	Kit A2
17	Thrust disk assy	1	Kit A2
18	O-Ring	1	Kit B / Kit A2
19	Bottom Endbell	1	Kit A2
20	Bearing cage	1	Kit A2
21	Segments	3	Kit A2
22	Gasket	1	Kit A2
23	Diaphragm washer	1	151 314 101 / Kit A2
24	Diaphragm	1	Kit B / KitA2
25	Bottom Endbell Cover 304SS	1	156 414 201 / Kit A2
26	Screw, Cover	3	Kit C
27	Lock washer	4	Kit C

MOTOR SPARE PARTS

SPARE PARTS KITS

P_N [kW]	0.25 - 2,2 kW		
Kit A1	Top Endbell 304SS	incl. pos. 4, 7, 8, 9, 10, 11, 12, 13	308 462 902
	Top Endbell 316SS*		308 462 952
Kit A2	Bottom Endbell 304SS 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, 24	308 650 201
	Seal Kit Pollution Recovery 304SS		308 650 202
Kit C	Fastener Kit 304SS	incl. pos. 1, 2, 26, 27	308 656 202

SPARE PARTS PSC DESIGN - STATOR AND ROTOR 50HZ 0.25 - 2,2 kW

P_N [kW]	U_N [V]	Model no. stator 304SS	Model no. rotor 304SS
0,25	220 / 230	305 491 801	178 165 901K
	230 / 240	305 491 821	
0,37	220 / 230	305 491 802	178 165 902K
	230 / 240	305 491 822	
0,55	220 / 230	305 491 803	178 165 903K
	230 / 240	305 491 823	
0,75	220 / 230	305 491 804	178 165 904K
	230 / 240	305 491 824	
1,1	220 / 230	305 491 805	178 165 905K
	230 / 240	305 491 825	
1,5	220 / 230	305 491 806	178 165 906K
	230 / 240	305 491 826	
2,2	220 / 230	305 491 807	178 165 907K
	230 / 240	305 491 827	