



WATER JACKET

Low Voltage



GENERAL CHARACTERISTICS

The designing, manufacturing and testing of squirrel cage induction motors made by Felm® are in according to IEC standard, Felm® supply high quality steel frame motors with high performance and flexibility to meet the customer request. The motors are widely used in various industries of mining, pumps, compressors, wind machineries, fans ect.

Water Jacket Motors Technical details:

Number of Poles: 4 up to 12	
Frequency: 50 Hz.	(Optional: 60 Hz.)
Voltage: 400/690	(Optional: other rated voltages)
Frames: 355 up to 630	kW 355 ÷ 1700
Steel welded frame	
Cooling system: IC71W	(Inverter use rated 1:10)
Die casting Rotor	
Shaft sealing: O-Ring	
VPI Insulation System	
Insulation class F (class B temperature rise)	(Options: Class H)
Stator windings:	Random windings 355 ÷ 450
	Formed winding 500 ÷ 630
	(Options: IP56 - IP65)
	(Options: B3/B5-V1)
	According to ISO 12944-5
Degree of protection: IP55	
Mounting: B3	
Painting procedure:	
Final color: RAL 5010	
Internal epoxy coating (tropicalized)	
Sintered drain plug	
Terminal box :	Top, Left or Right
Shaft Material: C45	
Double grounding (1 inside terminal box + 2 on the frame)	
Grease Caltex SRI-2 or SKF LGHP2	(Different types recommended by Felm)
Options:	
Regreasing system	
Space Heaters	
PT100 windings and bearings	
Transmitters	
CT's Transformer	
Surge Arrestor & Capacitor & Suppressor	
Vibration probes	
Junction box	
Predisposition and supply of all type of Encoder	
Special shaft materials	
DC or AC Brake	

Water Jacket - Technical data 4 pole

Motor Type FWJ	Rated Power		Rated Speed	Efficiency	Power Factor	Current			Torque			Moment of inertia (J)	Approx WT
	kW	(HP)				RPM	%	%	Full Load 400 V	Full Load 690 V	Locked Rotor		
			A	A	%FLC				kg-m	%FLT	%FLT	kg-m ²	Kg
355-4	355	475	1485	95,4	87,0	617	358	700	233	140	200	8.6	2010
355-4	400	535	1485	95,5	87,0	695	403	700	262	140	200	9.2	2170
355-4	450	605	1485	95,6	87,0	781	453	700	295	140	200	10	2230
355-4	500	670	1485	95,6	87,0	868	503	750	328	140	200	10.6	2410
355-4	560	750	1485	95,7	87,0	971	563	750	367	140	220	11	2530
400-4	560	750	1488	95,7	87,0	971	563	700	367	120	220	16	2920
400-4	630	845	1488	95,7	87,0	1092	633	700	413	120	220	18.3	3125
400-4	710	950	1488	95,8	87,0	1230	713	750	465	120	220	19.5	3380
400-4	800	1070	1488	95,8	87,0	--	803	750	524	120	220	21	3560
450-4	800	1070	1488	95,8	87,0	--	803	750	524	110	220	29	3970
450-4	900	1205	1490	95,9	87,0	--	903	750	589	110	220	25	4190
450-4	1000	1340	1490	96,0	87,0	--	1002	750	654	110	220	29	5575
450-4	1120	1500	1490	96,0	87,0	--	1122	750	733	110	220	33	4725
500-4	1120	1500	1490	95,9	87,0	--	1123	750	733	90	220	40	5400
500-4	1250	1680	1492	96,0	87,0	--	1252	750	816	90	200	45	5818
500-4	1400	1880	1492	96,1	87,0	--	1401	750	914	90	200	49	6450
560-4	1400	1880	1492	96,0	88,0	--	1387	750	914	80	200	59	7030
560-4	1500	2010	1490	96,1	88,0	--	1484	750	981	80	200	63	7410
560-4	1600	2140	1490	96,2	88,0	--	1581	750	1046	80	200	67	7845
560-4	1700	2280	1490	96,2	88,0	--	1680	750	1112	80	200	72	8275

Water Jacket - Technical data 6 pole

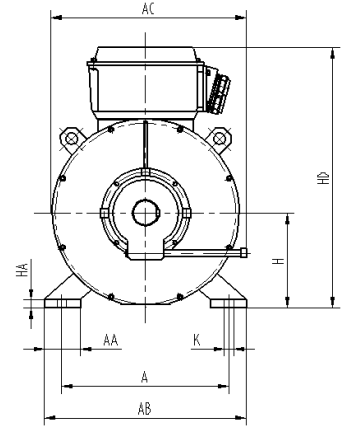
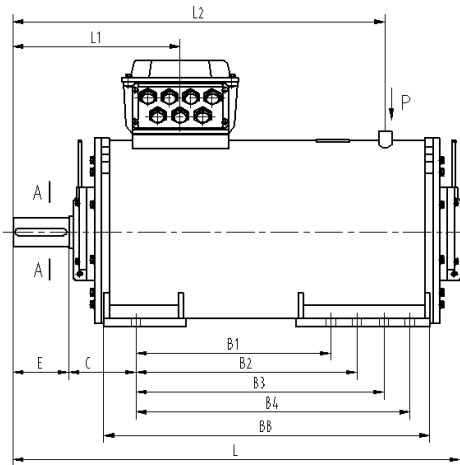
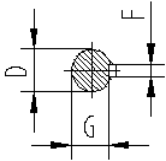
Motor Type FWJ	Rated Power		Rated Speed	Efficiency	Power Factor	Current			Torque			Moment of inertia (J) kg-m ²	Approx WT Kg
						Full Load 400 V	Full Load 690 V	Locked Rotor	Full Load	Locked Rotor	Break down		
	kW	(HP)	RPM	%	%	A	A	%FLC	kg-m	%FLT	%FLT		
355-6	400	535	990	95,2	84,0	722	419	700	394	130	200	13	2500
400-6	450	605	990	95,2	84,0	812	471	680	443	120	200	19	3075
400-6	500	670	990	95,3	84,0	902	523	680	492	120	200	21	3280
400-6	560	750	990	95,3	84,0	1010	585	680	551	120	200	22	3485
400-6	630	845	990	95,4	84,0	1135	658	700	620	120	200	24	3690
450-6	630	845	990	95,3	85,0	1123	651	700	620	110	200	31	4090
450-6	710	950	990	95,4	85,0	1264	733	700	699	110		35	4380
450-6	800	1070	990	95,4	85,0	--	826	700	787	110		39	4690
450-6	900	1205	990	95,5	85,0	--	928	700	886	110		43	4975
500-6	900	1205	990	95,4	85,0	--	929	700	886	100		45	5230
500-6	1000	1340	990	95,6	85,0		1030	700	984	100		50	5520
500-6	1120	1500	990	95,6	85,0		1153	700	1102	100		53	5980
500-6	1250	1680	990	95,7	85,0		1286	700	1230	100		58	6350
560-6	1250	1680	992	95,7	86,0	--	1271	700	1228	90		65	6900
560-6	1400	1880	992	95,7	86,0		1423	700	1375	90		70	7300
560-6	1500	2010	992	95,8	86,0		1523	700	1474	90		76	7800
560-6	1600	2140	992	95,9	86,0		1623	700	1572	90		82	8305

Water Jacket - Technical data 8 pole

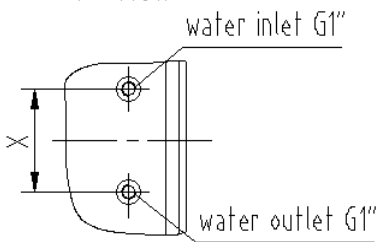
Motor Type FWJ	Rated Power		Rated Speed	Efficiency	Power Factor	Current			Torque			Moment of inertia (J)	Approx WT
	kW	(HP)				RPM	%	%	Full Load 400 V	Full Load 690 V	Locked Rotor		
			A	A	%FLC				kg-m	%FLT	%FLT	kg-m ²	Kg
355-8	355	475	740	94,7	80,0	676			467	120	14	2670	
400-8	355	475	742	94,8	81,0	667			466	120	20	3410	
400-8	400	535	742	95,8	81,0	744			525	120	22	3540	
400-8	450	605	742	94,9	81,0	845			591	120	23	3745	
400-8	500	670	742	95,0	81,0	938			657	120	25	4000	
450-8	500	670	742	95,1	81,0	937			657	120	32	4630	
450-8	560	750	742	95,2	81,0	1048			735	120	38	4945	
450-8	630	845	742	95,3	81,0	1178			827	120	45	5260	
500-8	630	845	743	95,3	81,0	1178			826	110	50	5680	
500-8	710	950	743	95,4	81,0	--			931	110	56	6050	
500-8	800	1070	743	95,5	81,0	--			1049	110	62	6385	
500-8	900	1205	743	95,6	81,0	--			1180	110	65	6720	
560-8	900	1205	744	95,6	82,0	--			1179	100	75	7120	
560-8	1000	1340	744	95,7	82,0	--			1310	100	81	7630	
560-8	1120	1500	744	95,8	82,0	--			1467	100	88	8120	
560-8	1250	1680	744	95,9	82,0	--			1637	100	95	8780	

MOUNTING DIMENSIONS INSTALLATION B3

A-A



P View



● OUTLINE DIMENSIONS FOR INSTALLATION

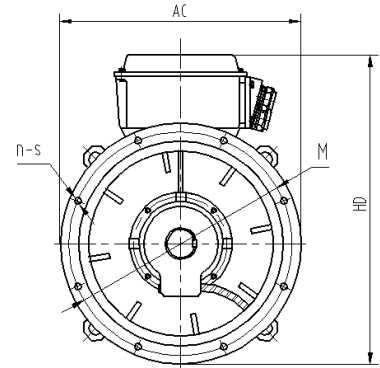
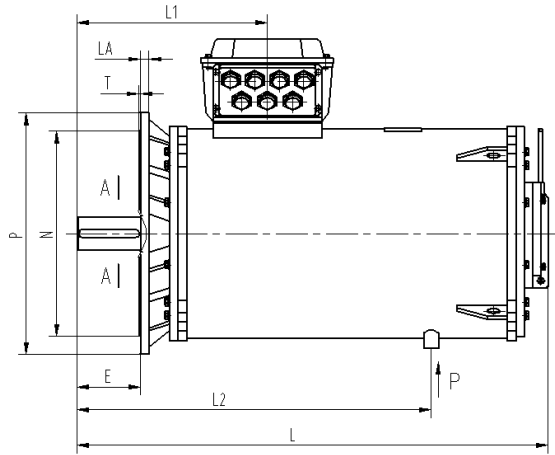
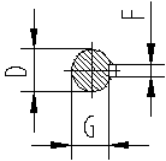
Frames	Poles	MOUNTING											
		A	B1	B2	B3	B4	C	D	E	F	G	H	K
355	4~8	630±1.4	630	710	800	-	254±4	100 ^{+0.035} _{+0.013}	210±0.5	28	90 ⁰ _{-0.2}	355 ⁰ ₋₁	35 ^{+0.52} ₀
400	4~8	710±1.6	710	800	900	-	280±4	110 ^{+0.035} _{+0.013}	210±0.57	28	100 ⁰ _{-0.2}	400 ⁰ ₋₁	35*47
450	4~8	800±1.75	900	1000	1120	1250	280±4	120 ^{+0.035} _{+0.013}	210±0.57	32	109 ⁰ _{-0.2}	450 ⁰ ₋₁	35*75
500	4~8	900±2.1	1250±2.1				315±4	140 ^{+0.04} _{+0.015}	250±0.57	36	128 ⁰ _{-0.3}	500 ⁰ ₋₁	42*60
560	4~8	1000±2.1	1400±2.1				355±4	160 ^{+0.04} _{+0.015}	300±0.65	40	147 ⁰ _{-0.3}	560 ⁰ ₋₁	42*60

● OUTLINE DIMENSIONS FOR INSTALLATION

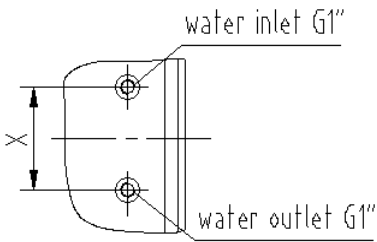
Frames	Poles	OUTLINE									
		AC	AA	AB	BB	HA	HD	L1	L2	X	L
355	4~8	750	135	760	1150	40	1020	630	1400	240	1650
400	4~8	830	160	870	1320	40	1120	670	1600	240	1860
450	4~8	920	210	980	1480	42	1280	710	1800	240	2070
500	4~8	1010	225	1080	1620	45	1350	760	2000	240	2260
560	4~8	1100	250	1170	1780	45	1450	810	2150	240	2470

MOUNTING DIMENSIONS INSTALLATION V1

A-A



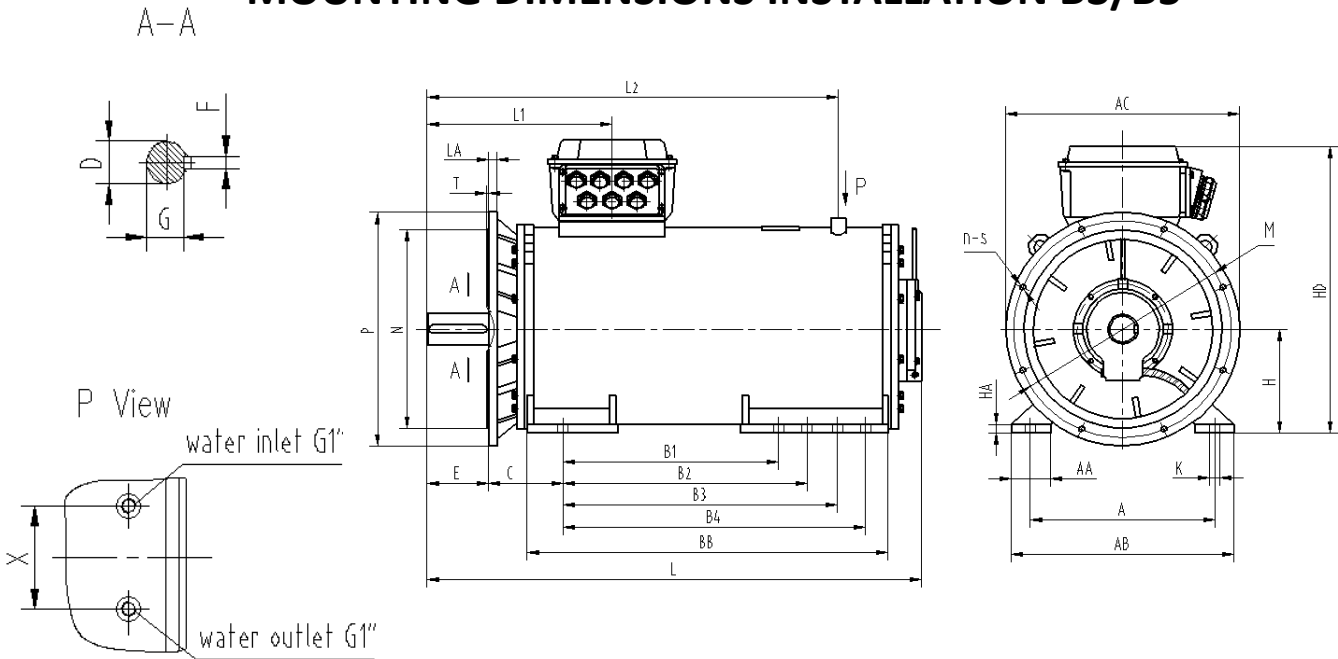
P View



● MOUNTING DIMENSIONS FOR INSTALLATION

Frames	Poles	MOUNTING														
		D	E	F	G	M	N	P	n-S	T	LA	HD	X	L1	L2	L
355	4~8	100 ^{+0.035} _{+0.013}	210	28 ⁰ ₋	90 ⁰ _{-0.2}	740	680	800	8-24	6	25	1065	240	630	1300	1550
400	4~8	110 ^{+0.035} _{+0.013}	210	28 ⁰ ₋	100 ⁰ _{-0.2}	940	880	1000	8-28	6	25	1220	240	670	1500	1750
450	4~8	120 ^{+0.035} _{+0.013}	210	32 ⁰ ₋	109 ⁰ _{-0.2}	1080	1000	1150	8-28	6	30	1410	240	710	1700	1950

MOUNTING DIMENSIONS INSTALLATION B3/B5



● MOUNTING DIMENSIONS FOR INSTALLATION

Frames	Poles	MOUNTING											
		A	B1	B2	B3	B4	C	D	E	F	G	H	K
355	4~8	630±1.4	630	710	800	-	254±4	100 ^{+0.035} / _{+0.013}	210±0.5	28	90 ⁰ / ₋	355 ⁰ / ₋₁	35 ^{+0.5} / ₀
400	4~8	686/710	710	800	900	-	280±4	110 ^{+0.035} / _{+0.013}	210±0.57	28	100 ⁰ / ₋	400 ⁰ / ₋₁	35*47
450	4~8	800±1.75	900	1000	1120	1250	280±4	120 ^{+0.035} / _{+0.013}	210±0.57	32	109 ⁰ / ₋	450 ⁰ / ₋₁	35*75
500	4~8	900±2.1	1250±2.1				315±4	140 ^{+0.04} / _{+0.015}	250±0.57	36	128 ⁰ / ₋	500 ⁰ / ₋₁	42*60
560	4~8	1000±2.1	1400±2.1				355±4	160 ^{+0.04} / _{+0.015}	300±0.65	40	147 ⁰ / ₋	560 ⁰ / ₋₁	42*60

● OUTLINE DIMENSIONS FOR INSTALLATION

Frames	Poles	OUTLINE						OUTLINE									
		M	N	P	n-S	T	LA	AA	AB	AC	BB	HA	HD	X	L1	L2	L
355	4~8	740	680	800	8-24	6	25	135	760	800	1150	40	1020	240	630	1400	1650
400	4~8	940	880	1000	8-28	6	25	160	870	1000	1320	40	1120	240	670	1600	1860
450	4~8	1080	1000	1150	8-28	6	30	210	980	1150	1480	42	1280	240	710	1800	2070
500	4~8	1180	1120	1250	8-28	7	32	225	1080	1250	1620	45	1350	240	760	2000	2260
560	4~8	1180	1120	1250	8-28	7	32	250	1170	1250	1780	45	1450	240	810	2150	2470

Note:

Tutti i dati (tecnici, dimensionali, ecc.) riportati nelle tabelle sono indicativi e non impegnativi. I valori garantiti vengono rilasciati su richiesta. Con l'obiettivo di un continuo sviluppo del Prodotto Motore Elettrico, FELM srl si riserva il diritto di modificare il progetto, le caratteristiche tecniche e dimensionali in qualsiasi momento senza preavviso.

All data (technical, dimensions, etc..) listed in the tables are indicative and not binding. The guaranteed values are upon request. Felm srl reserves the right to change the project, the technical characteristics and dimensions at any time without previous notice.



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