FELM

Electric Motors - www.felm.it

NEMA PREMIUM EFFICENCY

IEC UL Safety Certificate

CC N. 356B

CERTIFICATE OF COMPLIANCE

Certificate Number E481791
Report Reference E481791-20210430
Issue Date 2021-APRIL-30

Issued to: FELM srl
Via MorandiInverunoITMIIT20001

This certificate confirms that representative samples of Motors for Appliance Applications - Component
See Addendum Page

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL 1004-1- Standards for Rotating Electrical Machines - Gene
CSA
gene

Additional Information: See
https

This *Certificate of Compliance* does not prov
the UL Follow-Up Services Procedure provid

Only those products bearing the UL Recogni
and covered under UL's Follow-Up Services.

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Bruce Mahrenholz, Director North American Certification Program
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number E481791
Report Reference E481791-20210430
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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

-80G-2 ,-80G-4 ,***-80K-2 ,***-90L-2 ,***-90L-4 ,***-90L-6 ,***-90S-2 ,***-90S-4 ,***-90S-6 ,***-100L-2 ,***-100L-4 ,***-100L-6 ,***-100LX-4 ,***-112M-2 ,***-112M-4 ,***-112M-6 ,***-132M-4 ,***-132M-6 ,***-132MX-6 ,***-132S-2 ,***-132S-4 ,***-132S-6 ,***-132SX-2 ,***-160L-2 ,***-160L-4 ,***-160L-6 ,***-160LX-2 ,***-160LX-4 ,***-160LX-6 ,***-160LY-2 ,***-180L-4 ,***-180L-6 ,***-180M-2 ,***-180M-4 ,***-200L-2 ,***-200L-4 ,***-200L-6 ,***-200LX-2 ,***-200LX-6 ,***-225M-2 ,***-225M-4 ,***-225M-6 ,***-225S-4 ,***-250M-2 ,***-250M-4 ,***-250M-6 ,***-280M-2 ,***-280M-4 ,***-280M-6 ,***-280S-2 ,***-280S-4 ,***-280S-6 ,***-315L-2 ,***-315L-4 ,***-315L-6 ,***-315LX-2 ,***-315LX-4 ,***-315LX-6 ,***-315M-2 ,***-315M-4 ,***-315M-6 ,***-315S-2 ,***-315S-4 ,***-315S-6 ,***-355L-2 ,***-355L-4 ,***-355L-6 ,***-355LX-2 ,***-355LX-4 ,***-355LX-6 ,***-355LY-2 ,***-355LY-4 ,***-355LY-6 ,***-355M-2 ,***-355M-4 ,***-355M-6 ,***-355MX-6 ,***-355MY-6 ,***-400M-2 ,***-400M-4 ,***-400M-6.

****143T-2 ,****143T-4 ,****145T-2 ,****145T-4 ,****145T-6 ,****182T-2 ,****182T-4 ,****182T-6 ,****184T-2 ,****184T-4 ,****184T-6 ,****213T-2 ,****213T-4 ,****213T-6 ,****215T-2 ,****215T-4 ,****215T-6 ,****254T-2 ,****254T-4 ,****254T-6 ,****256T-2 ,****256T-4 ,****256T-6 ,****284T-4 ,****284T-6 ,****284TS-2 ,****286T-4 ,****286T-6 ,****286TS-2 ,****324T-4 ,****324T-6 ,****324TS-2 ,****326T-4 ,****326T-6 ,****326TS-2 ,****364T-4 ,****364T-6 ,****364TS-2 ,****365T-4 ,****365T-6 ,****365TS-2 ,****404T-6 ,****405T-4 ,****405T-6 ,****405TS-2 ,****444T-4 ,****444T-6 ,****444TS-2 ,****445T-4 ,****445T-6 ,****445TS-2 ,****447T-4 ,****447T-6 ,****447TS-2 ,****449T-4 ,****449T-6 ,****449TS-2 ,****504/5T-4 ,****504/5T-6 ,****586/7T-4 ,****586/7T-6 ,FWMP 400LY-4.

Bruce Mahrenholz, Director North American Certification Program
UL LLC

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FELM UL IEC Electric Motors

GENERAL CHARACTERISTICS

The designing, manufacturing and testing of squirrel cage induction motors made by Felm® *are in according UL NEMA electrical design*, 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 etc..

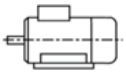
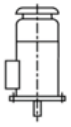
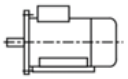
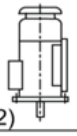
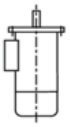
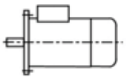
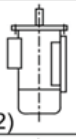
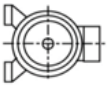
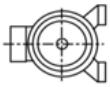
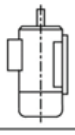
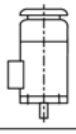
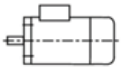
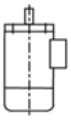
UL MOTORS, F-UL Serie:

Number of Poles: 2-4-6	
Voltage: 460+-10%	
Frequency: 60+-2%	
Service factor: 1.15	
Design: Nema A & B – IEC N	
Frames: 80-355 (mm.)	(Options other frame)
80-132 Aluminium / 160-355 Cast iron housing	
Cooling system: IC411(Inverter use rated 1:1)	(Options IC416)
Die casting Rotor	
Shaft sealing:	O-Ring
Deep & Bake insulation	(option double impregnation VI)
Insulation class F (class B temperature rise)	
Degree of protection IP55	(Options IP56 - IP65 – IP66)
Mounting: B3	(Options B3/B5-V1-B14)
Final colour: RAL 5010	(Options other types of colours)
Painting plan: C2	(Options C3-C4-C5-Marine-Chemical)
Internal epoxy coating	(Options tropicalization - humidity >95%)
Amb. temp.: -20°C/+40°C	(Options amb. up to -55°C)
Sintered drain plug	
Terminal box : Top	(Options right or left)
Shaft Material: C45	(Options other types of materials)
Double grounding (1 inside terminal box + 1 on the frame)	
Grease Caltex SRI-2 or SKF LGHP2	(Different types recommended by Felm)
Re-greasing devices ≥250 frame	

Options:

Re-greasing system <250 frame
Space Heaters
PT100 windings and bearings
Transmitters
Vibration probes
Junction box
Predisposition and supply of all type of Encoder
Special shaft materials
Insulated bearing >280 frame

FRAME AND TYPE OF MOUNITNG (IEC 60034-7)

Code I	Code II		Frame Size 63 ÷112	132	160 ÷250	280 ÷315	355÷400	Code I	Code II		Frame Size 63 ÷112	132	160 ÷250	280 ÷315	355÷400
IM B3	IM 1001	 1)	•	•	•	•	•	IM V1	IM 3011	 2)	•!	•	•	•	•
IM B35	IM 2001	 1) 2)	•	•	•	•	•	IM V15	IM 2011	 1) 2)	•!	•	•	•	•
IM B34	IM 2101	1) 3)	•	•				IM V3	IM 3031	 2)	•	•	•	X	X
IM B5	IM 3001	 2)	•	•	•	X	X	IM V36	IM2031	 1) 2)	•	•	•	X	X
IM B6	IM 1051	 1)	•	•	•	X	X	IM V5	IM 1011	1)	•!	•	•	X	X
IM B7	IM 1061	 1)	•	•	•	X	X	IM V6	IM 1031	 1)	•	•	•	X	X
IM B8	IM 1071	1)	•	•	•	X	X	IM V18	IM 3611	 3)	•!	•			
IM B14	IM 3601	 3)	•	•				IM V19	IM 3631	 3)	•	•			

1. Motors with feet
2. Flanged Motor: unthreaded through holes
3. Flanged Motor: threaded dead holes

•: Available
X: Consult Felm
!: Cast Iron Motors 63 frame without anti-rain canopy

For other mountings refer to IEC 60034-7.

SERIES F-UL - Technical Data @ 60Hz
Electrical part according to NEMA MG1-2014 table 12-12

Motor Type	Rated Power		Rated Speed	Efficiency	Power Factor	Current		Torque			Moment of inertia(J)	Approx WT
						FULL Load 460V	Locked Rotor	Full Load	Locked Rotor	Pull Out		
	KW	(HP)	RPM	%	φ	A	FLC	N·m	FLT	FLT	Kg-m²	Kg
F-UL 80K2	0,75	1,0	3414	77.0	0,89	1.37	7,5	2.09	2,2	2,3	0,0012	9
F-UL 80G2	1,1	1,5	3438	84.0	0,83	1.97	7,4	3.05	2,1	2,2	0,0014	9,5
F-UL 80G4	0,75	1,0	1692	85.5	0,75	1,46	7,3	4.23	2,3	2,3	0,0021	10,8
F-UL 90S2	1,5	2,0	3450	85.5	0,81	2.66	7,5	4.15	2,1	2,2	0,0029	12
F-UL 90L2	2,2	3,0	3438	86.5	0,84	3.8	7,5	6.11	2,2	2,3	0,0029	13,5
F-UL 90S4	1,1	1,5	1698	86.5	0,74	2,16	7,5	6.18	2,3	2,5	0,0023	12
F-UL 90L4	1,5	2,0	1704	86.5	0,77	2.83	7,6	8.04	2,4	2,5	0,0027	13,8
F-UL 90S6	0,75	1,0	1086	82.5	0,66	1.72	6,3	6.59	1,8	2,5	0,0029	12
F-UL 90L6	1,1	1,5	1092	87.5	0,65	2,4	6	9.61	1,8	2,5	0,0035	13,7
F-UL 100L4	2,2	2,9	1704	89.5	0,77	4,0	7,5	12.3	2,4	2,5	0,0054	21
F-UL 100L6	1,5	2,0	1110	88.5	0,69	3,1	6,8	12.9	2,0	2,5	0,0069	23
F-UL 112M2	3.7	5	3444	88.5	0.92	5.8	7,5	10.2	2,2	2,3	0,0126	28
F-UL 112M4	3.7	5	1734	89.5	0.83	6.3	7,6		2,4	2,5	0,0095	29,5
F-UL 112M6	2,2	3,0	1104	89.5	0,67	4.6	6,5	19.0	2,0	2,5	0,014	28,2
F-UL 132S2	5,5	7,5	3468	89.5	0,87	8.8	7,4	15.1	2,1	2,2	0,0377	39
F-UL 132SX2	7,5	10,0	3480	90.2	0,87	11.9	7,5	20.5	2,2	2,4	0,0499	44,5
F-UL 132S4	5,5	7,5	1752	91.7	0,77	9.8	7,5	29.9	2,3	2,5	0,0214	41
F-UL 132M4	7,5	10,0	1760	91.7	0,79	13.0	7,7	40.6	2,4	2,5	0,0296	47,5
F-UL 132M6	3,7	5	1134	89.5	0.71	7.31	6,2		2,1	2,5	0,0357	43
F-UL 132MX6	5.5	7,5	1158	91.0	0,70	10.9	6	45.3	2,0	2,5	0,0449	47,2
F-UL 160L2	11	15,0	3522	91.0	0,89	17.0	7	29,8	2,0	2,5	0,0510	125
F-UL 160LX2	15	20	3522	91.0	0,88	23.4	7,0	40.6	1,8	2,5	0,0637	136
F-UL 160LY2	18,5	25,0	3528	91,7	0,89	28.6	7,5	50.0	2,1	2,5	0,0765	148

On demand:
0,18KW – 0,25KW – 0,37KW – 0,55KW - 3KW – 4KW : Electric part according to IE2@60Hz Nema Epact table 12-11

SERIES F-UL - Technical Data @ 60Hz
Electrical part according to NEMA MG1-2014 table 12-12

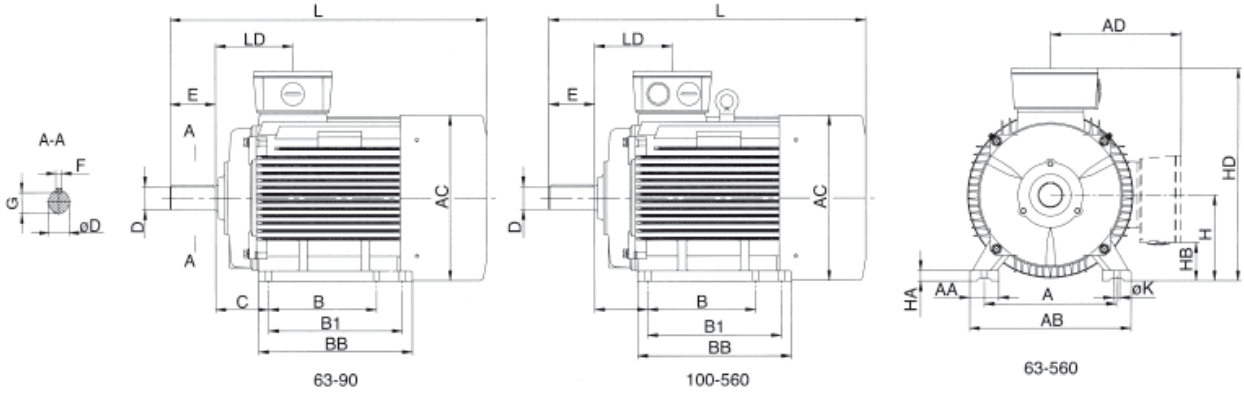
Motor Type	Rated Power		Rated Speed	Efficiency	Power Factor	Current		Torque			Moment of inertia(J)	Approx WT
						FULL Load 460V	Locked Rotor	Full Load	Locked Rotor	Pull Out		
	KW	(HP)	RPM	%	φ	A	FLC	N·m	FLT	FLT	Kg-m²	Kg
F-UL 160L4	11	15	1770	92.4	0.84	17.8	7,5	59.3	2,0	2,5	0,1068	138
F-UL 160LX4	15	20	1770	93.0	0.83	24.3	7,8	80.9	2,0	2,5	0,1287	150
F-UL 160L6	7,5	10	1164	91.0	0.73	14.1	6,5	61.5	1,8	2,5	0,1170	120
F-UL 160LX6	11	15	1164	91.7	0.75	20.1	6,7	90.2	1,9	2,5	0,1775	144
F-UL 180M2	22	30	3540	91.7	0.89	33.7	7,9	59.3	2,3	2,5	0,1170	189
F-UL 180M4	18,5	25	1758	93.6	0.79	30.8	7	100	2,0	2,5	0,1901	186
F-UL 180L4	22	30	1764	93.6	0.81	36.2	7,5	119	2,1	2,5	0,2264	206
F-UL 180L6	15	20	1176	91.7	0.77	26.5	6,5	121	1,7	2,5	0,3158	201
F-UL 200L2	30	40	3552	92.4	0.88	46.4	7,4	80.6	2,0	2,5	0,1737	242
F-UL 200LX2	37	50	3552	93.0	0.87	57.2	7,6	99.4	2,1	2,5	0,2048	270
F-UL 200L4	30	40	1764	94.1	0.81	49.1	7,2	162	2,0	2,5	0,3612	269
F-UL 200L6	18.5	25	1176	93.0	0.77	32.5	7,2	150	1,9	2,5	0,4684	243
F-UL 200LX6	22	30	1176	93.0	0.77	38.5	7,2	178	1,9	2,5	0,5483	259
F-UL 225M2	45	60	3540	93.6	0.88	68.4	7,5	121	2,0	2,5	0,3020	328
F-UL 225S4	37	50	1764	94.5	0.82	59.6	7,6	200	2,2	2,5	0,6300	314
F-UL 225M4	45	60	1776	95.0	0.83	71.4	7,8	242	2,2	2,5	0,7384	356
F-UL 225M6	30	40	1182	94.1	0.80	49.6	7,2	242	2,0	2,3	0,8842	333
F-UL 250M2	55	75	3564	93.6	0.89	82.2	7,8	147	2,2	2,5	0,4077	414
F-UL 250M4	55	75	1776	95.4	0.85	85.2	7,2	296	2,2	2,5	1,0236	473
F-UL 250M6	37	50	1182	94.1	0.83	59.6	7,4	298	2,2	2,5	1,1968	410
F-UL 280S2	75	100	3570	94.1	0.90	112.6	7,5	200	2,0	2,5	0,7988	541
F-UL 280M2	90	125	3570	95.0	0.88	135.1	7,5	240	1,9	2,5	1,0708	645
F-UL 280S4	75	100	1782	95.4	0.84	117.1	7,5	401	2,2	2,5	2,0828	620
F-UL 280M4	90	125	1788	95.4	0.85	138.1	7,5	480	2,2	2,5	2,5457	673
F-UL 280S6	45	60	1188	94.5	0.83	71.4	7,4	362	2,2	2,5	2,3382	586
F-UL 280M6	55	75	1188	94.5	0.84	87.4	7,5	442	2,2	2,5	2,7975	665
F-UL 315S2	110	150	3564	95.0	0.90	160.6	7,5	295	2,0	2,5	2,0314	900
F-UL 315L2	150	200	3564	95.4	0.85	231	7,5	400	2,2	2,5	2,4867	1160

SERIES F-UL - Technical Data @ 60Hz
Electrical part according to NEMA MG1-2014 table 12-12

Motor Type	Rated Power		Rated Speed	Efficiency	Power Factor	Current		Torque			Moment of inertia(J)	Approx WT
						FULL Load 460V	Locked Rotor	Full Load	Locked Rotor	Pull Out		
	KW	(HP)	RPM	%	φ	A	FLC	N·m	FLT	FLT	Kg-m²	Kg
F-UL 315LX2	185	250	3558	95.8	0.93	289.2	7,3	537	1,8	2,5	2,9069	1250
F-UL 355M2	220	300	3558	95.8	0.90	326	7,5	596	1,9	2,5	3,0120	1300
F-UL 355L2	260	350	3558	95.8	0.90	380	7,5	696	1,9	2,5	3,213	1336
F-UL 355LX2	330	450	3558	95.8	0.90	480	7,5	885	1,9	2,5	4,463	1750
F-UL 355LY2	375	500	3558	95.8	0.90	546	7,5	1006	1,9	2,5	4,768	1870
F-UL 315S4	110	150	1782	95.8	0.86	166.3	7,0	589	2,1	2,5	3,4904	900
F-UL 315L4	150	200	1788	96.2	0.81	241	7,5	800	2,1	2,5	5,2356	1130
F-UL 315LX4	185	250	1788	96.2	0.91	295.5	7,5	1068	2,2	2,5	5,7010	1190
F-UL 355M4	220	300	1788	96.2	0.88	332	7,5	1194	2,0	2,5	7,456	1660
F-UL 355L4	260	350	1788	96.2	0.88	387	7,5	1397	2,0	2,5	9,297	1780
F-UL 355LX4	330	450	1788	95.8	0.88	492	7,5	1763	2,0	2,5	10,286	1865
F-UL 355LY4	375	500	1788	95.8	0.88	559	7,5	2003	2,0	2,5	11,275	1900
F-UL 315S6	75	100	1188	94.5	0.82	120.3	7,4	603	2,0	2,5	4,7411	860
F-UL 315M6	90	125	1188	95.0	0.84	141.7	7,6	724	2,0	2,5	5,8225	980
F-UL 315L6	110	150	1188	95.0	0.82	176	7,7	884	2,0	2,5	6,6542	1050
F-UL 355M6	150	200	1188	95.8	0.79	248	7,5	1206	1,8	2,5	10,3863	1670
F-UL 355MX6	185	250	1188	95.8	0.84	287	7,5	1478	1,8	2,5	10,8930	1720
F-UL 355L6	220	300	1188	95.8	0.85	308.6	7,5	1675	1,8	2,5	12,4130	1820
F-UL 355LX6	260	350	1188	95.8	0.85	339	7,5	1768	1,8	2,5	13,1729	1860
F-UL 355XA6	330	450	1188	95.8	0.85	509	7,5	2652	1,8	2,5	14,000	2410
F-UL 355XB6	375	500	1188	95.8	0.85	579	7,5	3015	1,8	2,5	15,000	2650

On demand:
132KW – 200KW – 280KW – 315KW - 355KW: Electric part according to IE2@60Hz Nema Epact table 12-11

F-UL SERIES

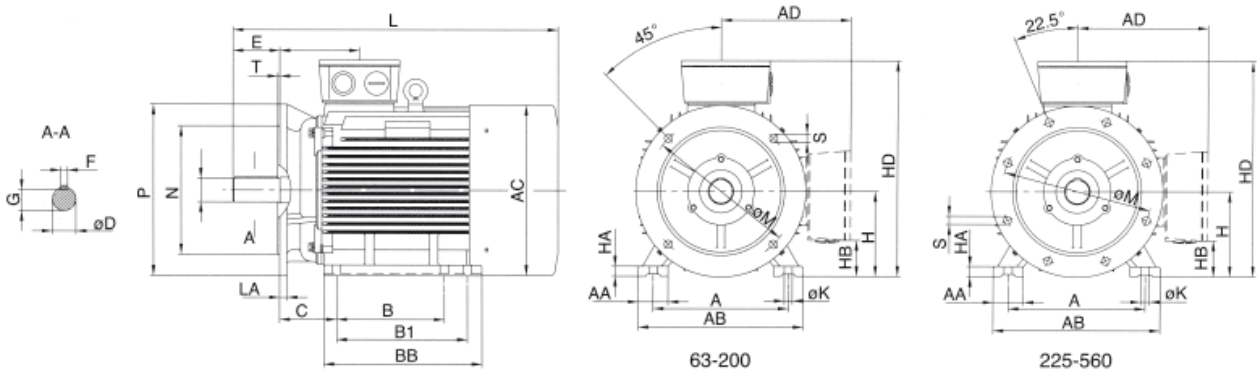


◆ B3

frame	Pole	Dimension							Dimension											
		A	B	B1	C	CA	H	K	AA	AB	AC	AD	BB	HA	HB	HB On top	HB L&R	LD	L	LC
80	2-8	125	100	-	50	98	80° -0,5	10	35	160	160	145	130	12	36	225	160	75	280	336
90S	2-8	140	100	-	56	117	90° -0,5	10	36	180	180	155	140	12	50	245	180	75	315	373
90L	2-8	140	125	-	56	117	90° -0,5	10	36	180	180	155	165	12	50	245	180	75	340	373
100L	2-8	160	140	-	63	120	100° -0,5	12	40	200	200	180	175	14	55	280	200	83	375	443
112M	2-8	190	140	-	70	138	112° -0,5	12	45	230	220	190	180	15	60	305	222	87	400	468
132S	2-8	216	140	-	89	164	132° -0,5	12	55	265	260	220	190	18	65	355	262	102	465	553
132M	2-8	216	178	-	89	146	132° -0,5	12	55	265	260	220	230	18	65	355	262	102	505	593
160M	2-8	254	210	-	108	188	160° -0,5	15	65	315	315	265	260	20	81	425	385	146	608	726
160L	2-8	254	254	-	108	188	160° -0,5	15	65	315	315	265	305	20	81	425	385	146	652	770
180M	2.4	279	241	-	121	226	180° -0,5	15	70	350	360	280	315	22	105	460	420	161	690	808
180L	4-8	279	279	-	121	228	180° -0,5	15	70	350	360	280	350	22	105	460	420	161	730	848
200L	2-8	318	305	-	133	220	200° -0,5	19	70	390	400	310	370	25	85	510	475	186	760	878
225S	4-8	356	286	-	149	243	225° -0,5	19	75	435	450	335	370	28	110	555	535	189	810	928
225M	2	356	311	-	149	243	225° -0,5	19	75	435	450	335	395	28	110	555	535	189	805	923
	4-8	356	311	-	149	198	225° -0,5	19	75	435	450	335	395	28	110	555	535	189	835	953
250M	2	406	349	-	168	261	250° -0,5	24	80	485	485	375	445	30	110	625	570	207	910	1028
	4-8	406	349	-	168	261	250° -0,5	24	80	485	485	375	445	30	120	625	570	207	910	1028
280S	2	457	368	-	190	295	280° -1,0	24	85	545	550	405	490	35	142	685	660	215	985	1103
	4-8	457	368	-	190	315	280° -1,0	24	85	545	550	405	490	35	142	685	660	215	1005	1153
280M	2	457	419	-	190	289	280° -1,0	24	85	545	550	405	540	35	142	685	660	215	1030	1148
	4-8	457	419	-	190	319	280° -1,0	24	85	545	550	405	540	35	142	685	660	215	1060	1208
315S	2	508	406	-	216	426	315° -1,0	28	120	630	625	560	570	45	110	875	780	257	1180	1328
	4-8	508	406	-	216	426	315° -1,0	28	120	630	625	560	570	45	110	875	780	257	1210	1358
315M 315L	2	508	457	508	216	485	315° -1,0	28	120	630	625	560	680	45	110	875	780	257	1290	1438
	4-8	508	457	508	216	485	315° -1,0	28	120	630	625	560	680	45	110	875	780	257	1320	1498
355M	2	610	500	560	254	640	355° -1,0	28	120	730	700	615	750	52	110	970	830	284	1526	1674
	4-8	610	500	560	254	640	355° -1,0	28	120	730	700	615	750	52	110	970	830	284	1556	1734
355L	2	610	560	630	254	580	355° -1,0	28	120	730	700	615	750	52	110	970	830	284	1526	1674
	4-8	610	560	630	254	580	355° -1,0	28	120	730	700	615	750	52	110	970	830	284	1556	1734
400M 400L	2	686	710	-	280	698	400° -1,0	35	120	810	860	-	1100	45	-	1090	-	362	1850	2028
	4-8	686	710	-	280	733	400° -1,0	35	120	810	860	-	1100	45	-	1090	-	362	1925	2143

Dimensions subject to change, please ask dimensional drawing when ordering.

F-UL SERIES

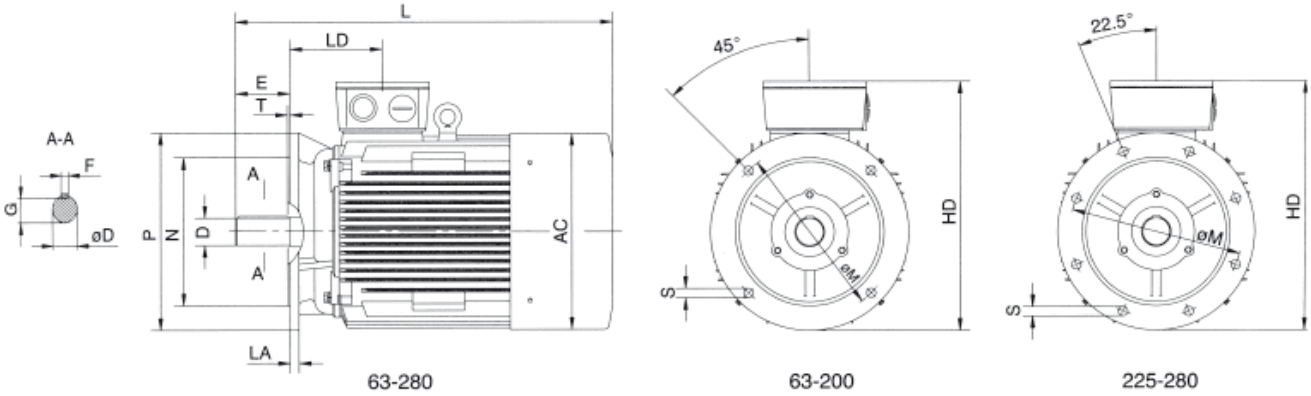


◆ B35

Frame	Poles	Dimension													Dimension												
		A	B	B1	C	CA	H	K	M	N	P	R	S	T	AA	AB	AC	AD	BB	HA	HB	HD		LA	LD	L	LC
																						Top	L&R				
80	2-8	125	100	-	50	98	80° -0,5	10	165	130	200	0	4-Ø12	4	35	160	160	145	130	12	36	225	160	12	75	280	336
90S	2-8	140	100	-	56	117	90° -0,5	10	165	130	200	0	4-Ø12	4	36	180	180	155	140	12	50	245	180	12	75	315	373
90L	2-8	140	125	-	56	117	90° -0,5	10	165	130	200	0	4-Ø12	4	36	180	180	155	165	12	50	245	180	12	75	340	373
100L	2-8	160	140	-	63	120	100° -0,5	12	215	180	250	0	4-Ø15	4	40	200	200	180	175	14	55	280	200	13	83	375	443
112M	2-8	190	140	-	70	138	112° -0,5	12	215	180	250	0	4-Ø15	4	45	230	220	190	180	15	60	305	222	14	87	400	468
132S	2-8	216	140	-	89	164	132° -0,5	12	265	230	300	0	4-Ø15	4	55	265	260	220	190	18	65	355	262	14	102	465	553
132M	2-8	216	178	-	89	146	132° -0,5	12	265	230	300	0	4-Ø15	4	55	265	260	220	230	18	65	355	262	14	102	505	593
160M	2-8	254	210	-	108	188	160° -0,5	15	300	250	350	0	4-Ø19	5	65	315	315	265	260	20	81	425	385	15	146	608	726
160L	2-8	254	254	-	108	188	160° -0,5	15	300	250	350	0	4-Ø19	5	65	315	315	265	305	20	81	425	385	15	146	652	770
180M	2,4	279	241	-	121	226	180° -0,5	15	300	250	350	0	4-Ø19	5	70	350	360	280	315	22	105	460	420	15	161	690	808
180L	4-8	279	279	-	121	228	180° -0,5	15	300	250	350	0	4-Ø19	5	70	350	360	280	350	22	105	460	420	15	161	730	848
200L	2-8	318	305	-	133	220	200° -0,5	19	350	300	400	0	4-Ø19	5	70	390	400	310	370	25	85	510	475	17	186	760	878
225S	4-8	356	286	-	149	243	225° -0,5	19	400	350	450	0	4-Ø19	5	75	435	450	335	370	28	110	555	535	20	189	810	928
225M	2	356	311	-	149	243	225° -0,5	19	400	350	450	0	8-Ø19	5	75	435	450	335	395	28	110	555	535	20	189	805	923
	4-8	356	311	-	149	198	225° -0,5	19	400	350	450	0	8-Ø19	5	75	435	450	335	395	28	110	555	535	20	189	835	953
250M	2	406	349	-	168	261	250° -0,5	24	500	450	550	0	8-Ø19	5	80	485	485	375	445	30	110	625	570	22	207	910	1028
	4-8	406	349	-	168	261	250° -0,5	24	500	450	550	0	8-Ø19	5	80	485	485	375	445	30	120	625	570	22	207	910	1028
280S	2	457	368	-	190	295	280° -1,0	24	500	450	550	0	8-Ø19	5	85	545	550	405	490	35	142	685	660	22	215	985	1103
	4-8	457	368	-	190	315	280° -1,0	24	500	450	550	0	8-Ø19	5	85	545	550	405	490	35	142	685	660	22	215	1005	1153
280M	2	457	419	-	190	289	280° -1,0	24	500	450	550	0	8-Ø19	5	85	545	550	405	540	35	142	685	660	22	215	1030	1148
	4-8	457	419	-	190	319	280° -1,0	24	500	450	550	0	8-Ø19	5	85	545	550	405	540	35	142	685	660	22	215	1060	1208
315S	2	508	406	-	216	426	315° -1,0	28	600	550	660	0	8-Ø24	6	120	630	625	560	570	45	110	875	780	22	257	1180	1328
	4-8	508	406	-	216	426	315° -1,0	28	600	550	660	0	8-Ø24	6	120	630	625	560	570	45	110	875	780	22	257	1210	1358
315M 315L	2	508	457	508	216	485	315° -1,0	28	600	550	660	0	8-Ø24	6	120	630	625	560	680	45	110	875	780	22	257	1290	1438
	4-8	508	457	508	216	485	315° -1,0	28	600	550	660	0	8-Ø24	6	120	630	625	560	680	45	110	875	780	22	257	1320	1498
355M	2	610	500	560	254	640	355° -1,0	28	740	680	800	0	8-Ø24	6	120	730	700	615	750	52	125	970	830	25	284	1526	1674
	4-8	610	500	560	254	640	355° -1,0	28	740	680	800	0	8-Ø24	6	120	730	700	615	750	52	125	970	830	25	284	1556	1734
355L	2	610	560	630	254	580	355° -1,0	28	740	680	800	0	8-Ø24	6	120	730	700	615	750	52	125	970	830	25	284	1526	1674
	4-8	610	560	630	254	580	355° -1,0	28	740	680	800	0	8-Ø24	6	120	730	700	615	750	52	125	970	830	25	284	1556	1734
400M 400L	2	686	710	-	280	698	400° -1,0	35	940	880	1000	0	8-Ø28	6	120	810	860	-	1100	45	-	1090	-	25	362	1850	2028
	4-8	686	710	-	280	733	400° -1,0	35	940	880	1000	0	8-Ø28	6	120	810	860	-	1100	45	-	1090	-	25	362	1925	2143

Dimensions subject to change, please ask dimensional drawing when ordering.

F-UL SERIES



◆ B5

Frame	Pole	Dimension						Dimension					
		M	N	P	R	S	T	AC	AD	LA	LD	L	LC
80	2-8	165	130	200	0	4-ø12	4	160	145	12	75	280	336
90S	2-8	165	130	200	0	4-ø12	4	180	155	12	75	315	373
90L	2-8	165	130	200	0	4-ø12	4	180	155	12	75	340	373
100L	2-8	215	180	250	0	4-ø15	4	200	180	13	83	375	443
112M	2-8	215	180	250	0	4-ø15	4	220	193	14	87	400	468
132S	2-8	265	230	300	0	4-ø15	4	260	223	14	102	465	553
132M	2-8	265	230	300	0	4-ø15	4	260	223	14	102	505	593
160M	2-8	300	250	350	0	4-ø19	5	315	265	15	146	608	726
160L	2-8	300	250	350	0	4-ø19	5	315	265	15	146	652	770
180M	2.4	300	250	350	0	4-ø19	5	360	280	15	161	690	808
180L	4-8	300	250	350	0	4-ø19	5	360	280	15	161	730	848
200L	2-8	350	300	400	0	4-ø19	5	400	310	17	186	760	878
225S	4-8	400	350	450	0	8-ø19	5	450	330	20	189	810	928
225M	2	400	350	450	0	8-ø19	5	450	330	20	189	805	923
	4-8	400	350	450	0	8-ø19	5	450	330	20	189	835	953
250M	2	500	450	550	0	8-ø19	5	485	375	22	207	910	1028
	4-8	500	450	550	0	8-ø19	5	485	375	22	207	910	1028
280S	2	500	450	550	0	8-ø19	5	550	405	22	215	985	1103
	4-8	500	450	550	0	8-ø19	5	550	405	22	215	1005	1153
280M	2	500	450	550	0	8-ø19	5	550	405	22	215	1030	1148
	4-8	500	450	550	0	8-ø19	5	550	405	22	215	1060	1208

Dimensions subject to change, please ask dimensional drawing when ordering.

BEARINGS

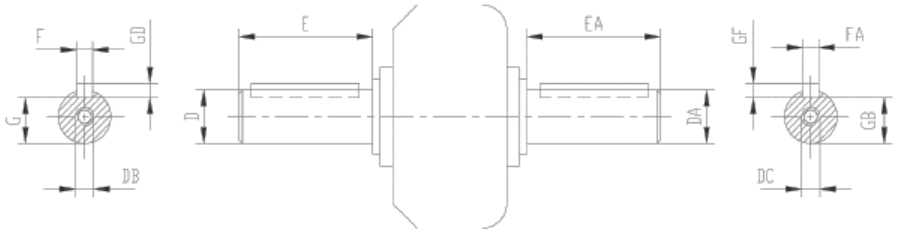
B3 B35 B5 V1						
Frame size	Driving End			Non-driving End		
	2 pole	4 pole	>6 pole	2 pole	4 pole	>6 pole
80	6204ZZ	6204ZZ	6204ZZ	6204ZZ	6204ZZ	6204ZZ
90	6205ZZ/C3	6205ZZ/C3	6205ZZ	6205ZZ/C3	6205ZZ/C3	6205ZZ
100	6206ZZ/C3	6206ZZ/C3	6206ZZ/C3	6206ZZ/C3	6206ZZ/C3	6206ZZ/C3
112	6306ZZ/C3	6306ZZ/C3	6306ZZ/C3	6306ZZ/C3	6306ZZ/C3	6306ZZ/C3
132	6308ZZ/C3	6308ZZ/C3	6308ZZ/C3	6308ZZ/C3	6308ZZ/C3	6308ZZ/C3
160	6309ZZ/C3	6309ZZ/C3	6309ZZ/C3	6309ZZ/C3	6309ZZ/C3	6309ZZ/C3
180	6311ZZ/C3	6311ZZ/C3	6311ZZ/C3	6311ZZ/C3	6311ZZ/C3	6311ZZ/C3
200	6312ZZ/C3	6312ZZ/C3	6312ZZ/C3	6312ZZ/C3	6312ZZ/C3	6312ZZ/C3
225	6313ZZ/C3	6313ZZ/C3	6313ZZ/C3	6313ZZ/C3	6313ZZ/C3	6313ZZ/C3
250	6314C3	6314C3	6314C3	6314C3	6314C3	6314C3
280	6314C3	6317C3	6317C3	6314C3	6317C3	6317C3
315	6317C3	6319C3	6319C3	6317C3	6319C3	6319C3
355	6317C3	6322C3	6322C3	6317C3	6320C3	6320C3
400	6317C3	6326C3	6326C3	6317C3(7317B)	6326C3(7319B)	6326C3(7319B)

V1						
Frame size	Driving End			Non-driving End		
	2 pole	4 pole	>6 pole	2 pole	4 pole	>6 pole
315	6317C3	6319C3(NU319)	6319C3(NU319)	6317 (7317)	6319 (7317)	6319 (7319)
355	6319C3	6322C3(NU322)	6322C3(NU322)	6319 (7317)	6320 (7317)	6320 (7320)
400	6317C3	6326C3(NU326)	6326C3(NU326)	6319 (7317)	6326 (7317)	6326 (7326)

VIBRATION

Frame size	≤132		>132~225		>225~400	
Synchronous Speed r/min	600~1800	>1800~3600	600~1800	>1800~3600	500~1800	>1800~3600
Vibration Class	Effective Value of speed mm/s					
N	1.8		2.8		3.5	
R	0.71	1.12	1.12	1.80	1.80	2.80
S	0.45	0.71	0.71	1.12	1.12	1.80

SHAFT DIMENSION



Frame	Pole	D	DA	E	EA	F	FA	G	GB	GD	GF	DB	DC
56	2-4	9 $j6(^{+0.007}_{-0.002})$	9 $j6(^{+0.007}_{-0.002})$	20	20	3	3	7	7	3	3	M3	M3
63	2-4	11 $j6(^{+0.008}_{-0.003})$	11 $j6(^{+0.008}_{-0.003})$	23	23	4	4	8.5	8.5	4	4	M4	M4
71	2-4-6	14 $j6(^{+0.008}_{-0.003})$	14 $j6(^{+0.008}_{-0.003})$	30	30	5	5	11	11	5	5	M5	M5
80	2-4-6-8	19 $j6(^{+0.009}_{-0.004})$	19 $j6(^{+0.009}_{-0.004})$	40	40	6	6	15.5	15.5	6	6	M6	M6
90S	2-4-6-8	24 $j6(^{+0.009}_{-0.004})$	24 $j6(^{+0.009}_{-0.004})$	50	50	8	8	20	20	7	7	M8	M8
90L	2-4-6-8												
100L	2-4-6-8	28 $k6(^{+0.009}_{-0.004})$	28 $k6(^{+0.009}_{-0.004})$	60	60	8	8	24	24	7	7	M10	M10
112M	2-4-6-8												
132S	2-4-6-8	38 $k6(^{+0.018}_{-0.002})$	38 $k6(^{+0.018}_{-0.002})$	80	80	10	10	33	33	8	8	M12	M12
132M	2-4-6-8												
160M	2-4-6-8	42 $k6(^{+0.018}_{-0.002})$	42 $k6(^{+0.018}_{-0.002})$	110	110	12	12	37	37			M16	M16
160L	2-4-6-8												
180M	2-4	48 $k6(^{+0.018}_{-0.002})$	48 $k6(^{+0.018}_{-0.002})$			14	14	42.5	42.5	9	9		
180L	4-6-8												
200L	2	55 $m6(^{+0.03}_{-0.011})$	48 $k6(^{+0.018}_{-0.002})$			16	14	49	42.5	10	9	M20	M20
	4-6-8		55 $m6(^{+0.03}_{-0.011})$			16	16		49		10		
225S	4-6-8	60 $m6(^{+0.03}_{-0.011})$	55 $m6(^{+0.03}_{-0.011})$	140		18	16	53	49	11	10		
225M	2	55 $m6(^{+0.03}_{-0.011})$	48 $k6(^{+0.018}_{-0.002})$	110		16	14	49	42.5	10	9		
	4-6-8	60 $m6(^{+0.03}_{-0.011})$	60 $m6(^{+0.03}_{-0.011})$	140		18	16	53	49	11	10		
250M	2	60 $m6(^{+0.03}_{-0.011})$						53	49	11	10		
	4-6-8	65 $m6(^{+0.03}_{-0.011})$						58	49				
280S	2	65 $m6(^{+0.03}_{-0.011})$			110			58	49	11	10		
	4-6-8	75 $m6(^{+0.03}_{-0.011})$	65 $m6(^{+0.03}_{-0.011})$		140	20	18	67.5	53	12	11		
280M	2	65 $m6(^{+0.03}_{-0.011})$	55 $m6(^{+0.03}_{-0.011})$		110	18	16	58	49	11	10		
	4-6-8	75 $m6(^{+0.03}_{-0.011})$	65 $m6(^{+0.03}_{-0.011})$		140	20	18	67.5	53	12	11		
315S	2	65 $m6(^{+0.03}_{-0.011})$	65 $m6(^{+0.03}_{-0.011})$	140	140	18	18	58	58	11	11		
	4-6-8	80 $m6(^{+0.03}_{-0.011})$	80 $m6(^{+0.03}_{-0.011})$	170	170	22	22	71	71	14	14		
315M	2	65 $m6(^{+0.03}_{-0.011})$	65 $m6(^{+0.03}_{-0.011})$	140	140	18	18	58	58	11	11		
315L	4-6-8	80 $m6(^{+0.03}_{-0.011})$	80 $m6(^{+0.03}_{-0.011})$	170	170	22	22	71	71	14	14		
355M	2	75 $m6(^{+0.03}_{-0.011})$	75 $m6(^{+0.03}_{-0.011})$	140	140	20	20	67.5	67.5	12	12		
	4-6-8	100 $m6(^{+0.035}_{-0.013})$	95 $m6(^{+0.035}_{-0.013})$	210	170	28	25	90	90	14	14		
355L	2	75 $m6(^{+0.03}_{-0.011})$	75 $m6(^{+0.03}_{-0.011})$	140	140	20	20	67.5	67.5	12	12		
	4-6-8	100 $m6(^{+0.035}_{-0.013})$	95 $m6(^{+0.035}_{-0.013})$	210	170	28	25	90	90	14	14		
400M	2	80 $m6(^{+0.03}_{-0.011})$	80 $m6(^{+0.03}_{-0.011})$	170	170	22	22	71	71	14	14	M24	M24
400L	4-6-8	110 $m6(^{+0.035}_{-0.013})$	110 $m6(^{+0.035}_{-0.013})$	210	210	28	28	100	100	16	16		

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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