



VM[®] MOTORS
VERNIS

Electric Motors





Catalog 2019



Ref. 2019-1





Since 1975



VM MOTORS
VERNIS

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VERNIS MOTORS, S.L. founded in 1975 by José Ujaque López at Sabadell (Barcelona, Spain), is a company specialized in conception, design and production of electric motors, rotating electric machines and electricity generators as they are currently exporting on three continents.

MISSION:

Help the technological development of different industrial sectors to generate a global environment more efficient and effective.

VISION:

Be a European leader in technological solutions through design and production of electric motors tailored to the particularities of every client.

THE CATALOG

The continuous study of new products, linked to the experience acquired during all the years, has allowed the engines of VERNIS MOTORS, S.L. to be used in a large number of sectors and types of industrial machines. The following pages are a small sample of all engine types that VERNIS MOTORS, S.L. can develop integrally, from asynchronous motors according to IEC standards, through permanent magnet motors with the possibility of incorporating single-phase, three-phase or DC frequency converters for battery power, and even internal or external rotor generators, of high frequency motors, universal motors and DC motors.

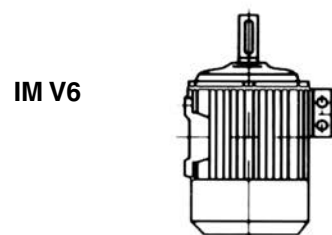
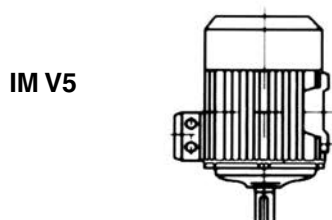
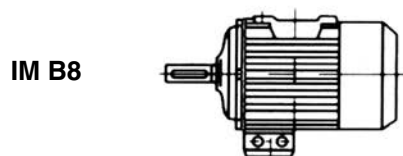
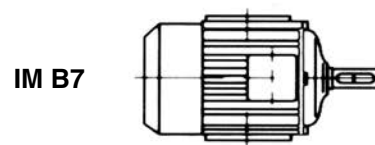
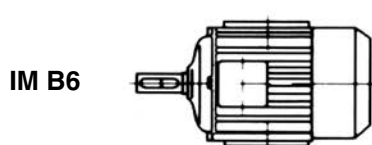
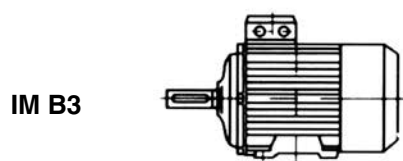
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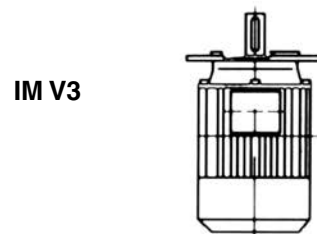
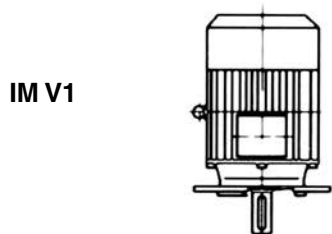
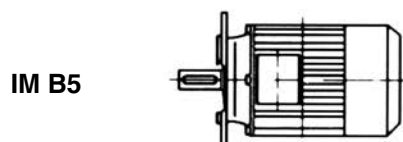
The single-phase and three-phase asynchronous motors presented in this catalog are manufactured according to the efficiency standards IE1 and IE2 in accordance with the EC regulation No. 640/2009 of the commission of July 22, 2009 for which the directive 2005 / 32 / CE of the European Parliament, in addition to the specific conditions of each customer, the engines are manufactured according to the following characteristics:

Constructive forms. Mounting position for electric motors according to IEC 60034-7

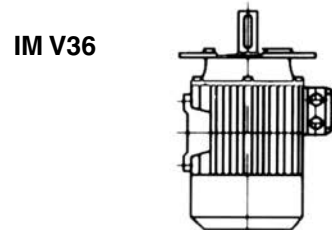
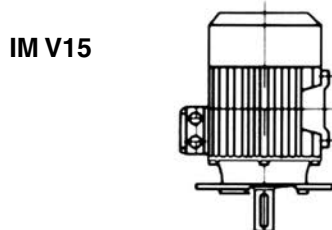
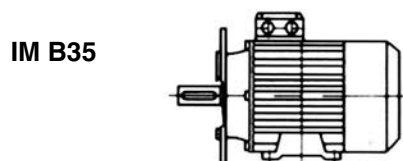
IM B3 = Foot mounted



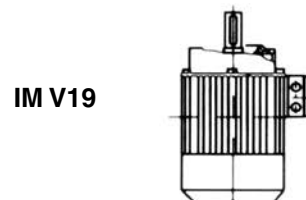
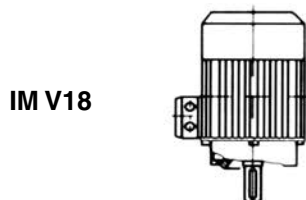
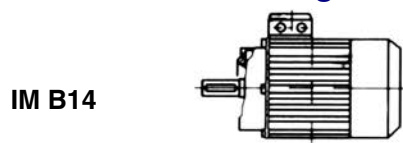
IM B5 = Flange mounted



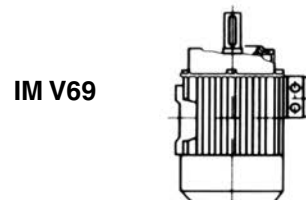
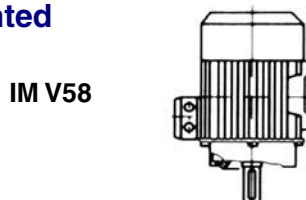
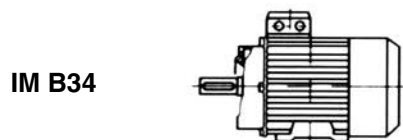
IM B35 = Foot & flange mounted



IM B14 = Reduced flange mounted



IM B34 = Foot & reduced flange mounted





Motor with legs B3



Motor with flange B14



Motor with flange B5

IE1 motors single phase 2 poles / 50Hz. 220-230V

Type	Power		rpm	Rto. %	Cosφ	I [A] 220V	Rated torque. [Nm]	Inertia [Kg.m ²]	Kg
	kW	CV-HP							
56	0,09	1/8	2760	54	0,95	0,80	0,286	0,00008	2,1
56	0,12	1/6	2770	58	0,95	0,99	0,382	0,000098	2,5
63	0,18	1/4	2780	62	0,96	1,40	0,573	0,000128	2,7
63	0,25	1/3	2800	65	0,96	1,82	0,796	0,000171	3,5
63	0,37	1/2	2800	63	0,94	2,80	1,178		
71	0,55	3/4	2830	70	0,98	3,65	1,750	0,000413	5,6
71	0,75	1	2830	72	0,98	4,80	2,388	0,000508	6,7
71	1,1	1.5	2840	81	0,98	6,30	3,500		
80	1,1	1.5	2860	74	0,98	6,90	3,500	0,000991	8,8
80	1,5	2	2850	83	0,99	8,30	4,780	0,001114	9,8

IE1 single-phase motors 4 poles / 50Hz. 220-230V

Type	Power		rpm	Rto. %	Cosφ	I [A] 220V	Rated torque. [Nm]	Inertia [Kg.m ²]	Kg
	kW	CV-HP							
56	0,06	1/12	1350	46	0,95	0,62	0,382	0,000128	2,1
56	0,09	1/8	1360	51	0,95	0,85	0,573	0,000156	2,5
63	0,12	1/6	1370	55	0,96	1,03	0,764	0,000195	2,7
63	0,18	1/4	1380	60	0,96	1,42	1,146	0,00026	3,5
71	0,25	1/3	1380	64	0,97	1,83	1,592	0,00081	5,6
71	0,37	1/2	1390	67	0,97	2,60	2,356	0,00093	6,3
80	0,55	3/4	1400	70	0,98	3,65	3,500	0,00133	8,8
80	0,75	1	1400	73	0,98	4,80	4,780	0,0015	9,8

IE1 single phase motors 6 poles / 50Hz. 220-230V

Type	Power		rpm	Rto. %	Cosφ	I [A] 220V	Rated torque [Nm]	Inertia [Kg.m ²]	Kg
	kW	CV-HP							
63	0,09	1/8	890	46	0,96	0,93	0,860	0,000286	2,7
63	0,12	1/6	900	51	0,96	1,11	1,146	0,000381	3,5
71	0,18	1/4	920	56	0,97	1,50	1,720	0,00100	5,2
71	0,25	1/3	930	61	0,97	1,92	2,388	0,00125	6,3
80	0,37	1/2	940	64	0,98	2,68	3,534	0,00020	7,8
80	0,55	3/4	950	67	0,98	3,80	5,253	0,00256	9,8

IE1 single-phase motors 8 poles / 50Hz. 220-230V

Type	Power		rpm	Rto. %	Cosφ	I [A] 220V	Rated torque. [Nm]	Inertia [Kg.m ²]	Kg
	kW	CV-HP							
71	0,09	1/8	670	43	0,97	0,98	1,146	0,00100	5,2
71	0,12	1/6	680	46	0,97	1,22	1,528	0,00125	6,3
80	0,18	1/4	690	51	0,98	1,64	2,292	0,00200	7,8
80	0,25	1/3	700	56	0,98	2,07	3,184	0,00256	9,8

IE1 three-phase motors 2 poles / 50Hz. 220-230V / 380-400V, D / Y connection

Type	Power		rpm	Rto. %	Cosφ	I [A] 380V	Rated torque. [Nm]	Inertia [Kg.m ²]	Kg
	kW	CV-HP							
56	0,09	1/8	2760	54,5	0,67	0,37	0,286	0,000080	2,1
56	0,12	1/6	2770	58	0,69	0,47	0,382	0,000098	2,5
56 (*)	0,18	1/4	2770				0,573		
63	0,18	1/4	2780	62,5	0,72	0,61	0,573	0,000128	2,7
63	0,25	1/3	2800	62,5	0,74	0,78	0,796	0,000171	3,5
63 (*)	0,37	1/2	2800				1,178		
71	0,37	1/2	2820	68	0,77	1,08	1,178	0,000317	4,5
71	0,55	3/4	2830	70,5	0,79	1,50	1,750	0,000413	5,6
71 (*)	0,75	1	2830	78	0,8	1,83	2,388	0,000508	6,7
80	0,75	1	2850	72	0,80	1,98	2,388	0,000743	6,9
80	1,1	1,5	2860	74,5	0,81	2,77	3,500	0,000991	8,8
80 (*)	1,5	2	2860	72	0,80	3,96	4,780	0,001114	9,8
90	1,5	2	2870	77	0,82	3,60	4,780	0,00100	8,1
90	2,2	3	2880	80	0,83	5,03	7	0,00125	9,8
90 (*)	2,6	3,5	2880	85	0,84	5,53	8,28	0,00167	12,7
100	3	4	2900	82	0,85	6,60	9,550	0,00256	14,7
100	3,3	4,5	2900	85	0,85	6,94	10,5	0,00341	19
100 (*)	4	5,5	2900	86	0,85	8,32	12,74		
112	4	5,5	2850	83	0,85	8,60	12,74	0,00500	23

(*) NON standard sizes with increased power

IE1 three-phase motors 4 poles / 50Hz. 220-230V / 380-400V, D / Y connection

Type	Power		rpm	Rto. %	Cosφ	I [A] 380V	Rated torque. [Nm]	Inertia [Kg.m ²]	Kg
	kW	CV-HP							
56	0,06	1/12	1350	46	0,58	0,34	0,382	0,000128	2,1
56	0,09	1/8	1360	51	0,60	0,45	0,573	0,000156	2,5
56 (*)	0,12	1/6	1360				0,764		
63	0,12	1/6	1370	55	0,62	0,53	0,764	0,000195	2,7
63	0,18	1/4	1380	60	0,66	0,69	1,146	0,000260	3,5
63 (*)	0,25	1/3	1380				1,592		
71	0,25	1/3	1380	64	0,68	0,87	1,592	0,000620	4,5
71	0,37	1/2	1390	67	0,70	1,20	2,356	0,000810	5,6
71 (*)	0,55	3/4	1390	0,69	0,72	1,68	3,500		
80	0,55	3/4	1400	70,5	0,73	1,63	3,500	0,00100	6,9
80	0,75	1	1400	73	0,74	2,10	4,780	0,00133	8,8
80 (*)	0,95	1,3	1400	74	0,74	2,64	6,050	0,00150	9,8
90	1,1	1,5	1410	76	0,75	2,94	7	0,00170	8,1
90	1,5	2	1420	78	0,77	3,80	9,550	0,00213	9,8
90 (*)	1,85	2,5	1420	79	0,78	4,56	11,78	0,00284	12,7
100	2,2	3	1430	81	0,79	5,22	14	0,00410	14,7
100 (*)	2,6	3,5	1430	82	0,80	6,8	16,56	0,00546	19
100	3	4	1430	83	0,81	7,46	19,10		
112	4	5,5	1435	84	0,82	8,82	25,47	0,00110	28,5

(*) NON standard sizes with increased power

Three-phase IE1 motors 6 poles / 50Hz. 220-230V / 380-400V, D / Y connection

Type	Power		rpm	Rto. %	Cosφ	I [A] 380V	Rated torque. [Nm]	Inertia [Kg.m ²]	Kg
	kW	CV-HP							
63	0,09	1/8	890	46	0,53	0,56	0,860	0,000286	2,7
63	0,12	1/6	900	51	0,55	0,65	1,146	0,000381	3,5
63 (*)	0,15	1/5	880	53	0,57	0,76			
71	0,18	1/4	920	56,5	0,59	0,82	1,720	0,00100	5,2
71	0,25	1/3	930	61	0,61	1,02	2,388	0,00125	6,3
80	0,37	1/2	940	64,5	0,63	1,38	3,534	0,00200	7,8
80	0,55	3/4	950	67,5	0,63	1,90	5,253	0,00256	9,8
90	0,75	1	930	70	0,66	2,50	7,163	0,00273	8,1
90	1,1	1,5	930	73	0,68	3,40	10,500	0,00340	9,8
90 (*)	1,3	1,8	910	73	0,68	4,00	12,420	0,00450	12,7
100	1,2	2	950	76	0,70	4,30	14,325	0,00700	14,7
100 (*)	2,2	3	940	76	0,70	6,30	21,000	0,00940	19
112	2,2	3	940	79	0,72	5,90	21,000	0,01700	28,5

(*) NON standard sizes with increased power

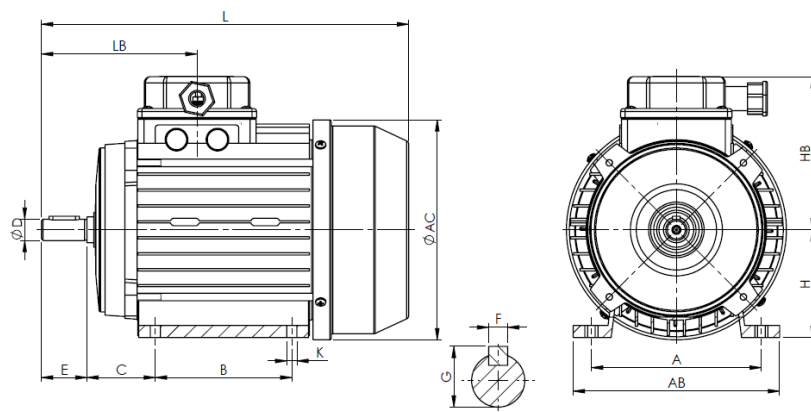
Three-phase IE1 motors 8 poles / 50Hz. 220-230V / 380-400V, D / Y connection

Type	Power		rpm	Rto. %	Cosφ	I [A] 380V	Rated torque. [Nm]	Inertia [Kg.m ²]	Kg
	kW	CV-HP							
71	0,09	1/8	670	43	0,47	0,68	1,146	0,00100	5,2
71	0,12	1/6	680	48	0,49	0,77	1,528	0,00125	6,3
80	0,18	1/4	690	54	0,52	0,97	2,292	0,00200	7,8
80	0,25	1/3	700	58	0,55	1,18	3,184	0,00256	9,8
90	0,37	1/2	700	62	0,57	1,60	4,720	0,00273	8,1
90	0,55	3/4	690	65	0,59	2,20	7,000	0,00340	9,8
90 (*)	0,75	1	680	65	0,59	3,00	9,550	0,00700	12,7
100	0,75	1	700	67	0,60	2,80	9,550	0,00700	14,7
100	1,1	1,5	700	70	0,63	3,80	14,00	0,00940	19
100 (*)	1,5	2	685	70	0,63	5,20	19,10		
112	1,5	2	695	73	0,64	4,90	19,10	0,01700	28,5

(*) NON standard sizes with increased power

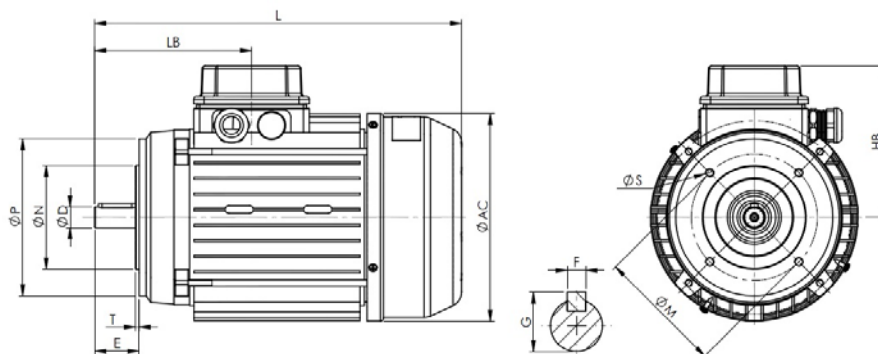
At **VERNIS MOTORS, S.L.** In addition to the motors indicated in this catalog and at the request of the customer we can manufacture an important range of powers. All our motors are marked with the CE mark on the rating plate, indicating that they are manufactured according to the safety guidelines imposed by the European community. The certificate of conformity is provided by the client's request.

Assembly dimensions for B3 motors



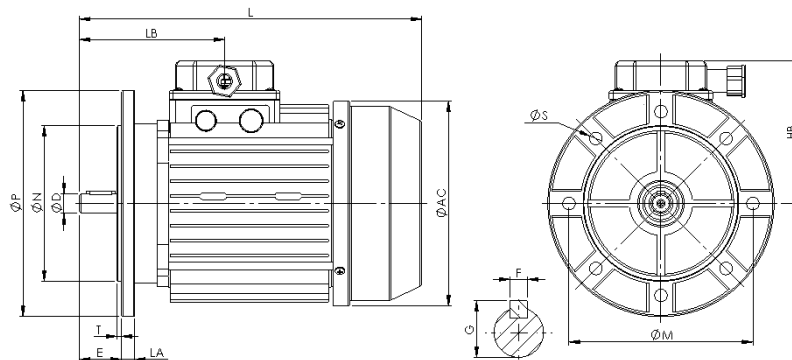
Type	H	A	B	C	K	D	E	F	G	L	LB	AB	AC	HB
56	56	90	71	36	6	Ø9	20	3	10,3	196	80	108	Ø117	96
63	63	100	80	40	7	Ø11	23	4	12,6	214	85	120	Ø126	104
71	71	112	90	45	7	Ø14	30	5	16,1	240	100	136	Ø141	111,5
80	80	125	100	50	9	Ø19	40	6	21,5	272	120	154	Ø157	155
90S	90	140	100	56	9	Ø24	50	8	26,9	306	130	174	Ø180	132
90L	90	140	125	56	9	Ø24	50	8	26,9	331	130	174	Ø180	132
100	100	160	140	63	12	Ø28	60	8	30,9	374	147	192	Ø206	142
112	112	190	140	70	12	Ø28	60	8	30,9	383	155	224	Ø233	154
132S	132	216	140	89	12	Ø38	80	10	43	437	174	260	Ø265	186
132M/L	132	216	178	89	12	Ø38	80	10	43	475/501	174	260	Ø265	186
160M/L	160	254	210/254	108	15	Ø42	110	12	49	640	245,5	290	Ø325	224

Assembly dimension for B14 motors



Type	P	N	M	T	D	E	S	F	G	L	LB	AC	HB
56	Ø80	Ø50	Ø65	2,5	Ø9	20	M5	3	10,3	196	80	Ø117	96
63	Ø90	Ø60	Ø75	2,5	Ø11	23	M5	4	12,6	214	85	Ø126	104
71	Ø105	Ø70	Ø85	3	Ø14	30	M6	5	16,1	240	100	Ø141	111,5
80	Ø120	Ø80	Ø100	3	Ø19	40	M6	6	21,5	272	120	Ø157	155
90S	Ø140	Ø95	Ø115	3	Ø24	50	M8	8	26,9	306	130	Ø180	132
90L	Ø140	Ø95	Ø115	3	Ø24	50	M8	8	26,9	331	130	Ø180	132
100	Ø160	Ø110	Ø130	3,5	Ø28	60	M8	8	30,9	374	147	Ø206	142
112	Ø160	Ø110	Ø130	3,5	Ø28	60	M8	8	30,9	383	155	Ø233	154
132S	Ø200	Ø130	Ø165	4	Ø38	80	M10	10	43	437	174	Ø265	186
132M/L	Ø200	Ø130	Ø165	4	Ø38	80	M10	10	43	475/501	174	Ø265	186
160M/L	Ø250	Ø180	Ø215	4	Ø42	110	M12	12	49	640	245,5	Ø325	224

Assembly dimensions for B5 motors



Type	P	N	M	LA	T	D	E	S	F	G	L	LB	AC	HB
56	Ø120	Ø80	Ø100	8	3	Ø9	20	Ø7	3	10,3	196	80	Ø117	96
63	Ø140	Ø95	Ø115	10	3	Ø11	23	Ø9	4	12,6	214	85	Ø126	104
71	Ø160	Ø110	Ø120	10	3,5	Ø14	30	Ø9	5	16,1	240	100	Ø141	111,5
80	Ø200	Ø130	Ø165	10	3,5	Ø19	40	Ø11	6	21,5	272	120	Ø157	155
90S	Ø200	Ø130	Ø165	10	3,5	Ø24	50	Ø11	8	26,9	306	130	Ø180	132
90L	Ø200	Ø130	Ø165	10	3,5	Ø24	50	Ø11	8	26,9	331	130	Ø180	132
100	Ø250	Ø180	Ø215	12	4	Ø28	60	Ø13	8	30,9	374	147	Ø206	142
112	Ø250	Ø180	Ø130	12	4	Ø28	60	Ø13	8	30,9	383	155	Ø233	154
132S	Ø300	Ø20	Ø265	12	4	Ø38	80	Ø15	10	43	437	174	Ø265	186
132M/L	Ø300	Ø230	Ø265	12	4	Ø38	80	Ø15	10	43	475/501	174	Ø265	186
160M/L	Ø350	Ø250	Ø300	13	5	Ø42	110	Ø19	12	49	640	245,5	Ø325	224

VERNIS MOTORS, S.L. guarantees that the assembly dimensions indicated in this catalog correspond to the IEC standard.

VERNIS MOTORS, S.L. also has reduced flanges from size 71 to 112 and increased flanges from size 63 to 112, in addition to these dimensions **VERNIS MOTORS, SL.** can manufacture according to customer's specifications other sizes of flange, shaft outlet, housing design or working conditions. All measures and conditions which are not subject to the IEC standard will be subject to study after consultation and approval by the client.

Samples Motors C.C .. Other configurations available



DC motor / 64 special flange, shaft output with helical gear



CC / 100 motor with magnetic brake



CC / 80 motor with extruded housing

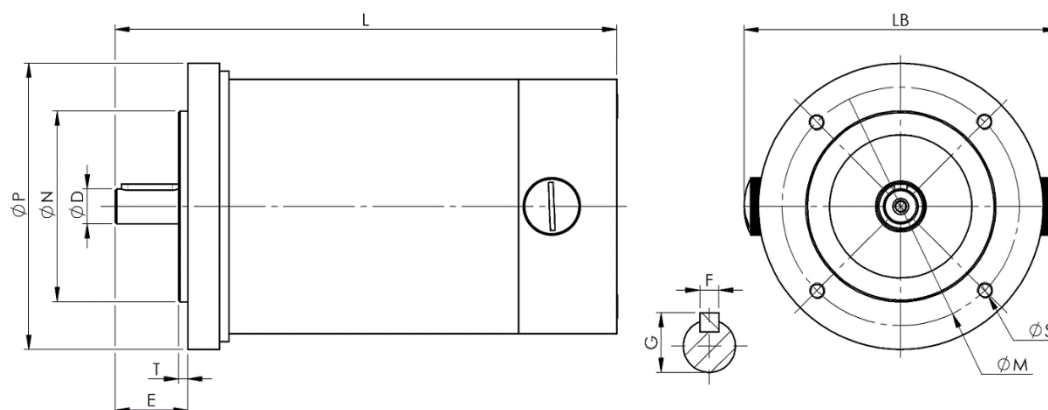


DC / 100 motor with B5 flange and electromagnetic brake

4-pole motor, cooling IC 01, IP23

Type	W	rpm	Motor current (A), V, De						Torque [Nm]	Rto n%	Inertia [Kg.m ²]	Kg
			12V	24V	48V	110V	170V	200V				
110/65	110	630	12,8	6,40	3,20	1,4	0,9	0,76	1,667	72	0,00199	5,68
	150	850	17,4	8,70	4,30	1,9	1,2	1,04	1,685	72	"	"
	200	1100	22,8	11,4	5,70	2,5	1,6	1,37	1,736	73	"	"
	270	1500	30,8	15,4	7,70	3,4	2,2	1,85	1,719	73	"	"
	360	2000	40,6	20,3	10,1	4,4	2,9	2,43	1,719	74	"	"
	480	2700	54	27	13,5	5,9	3,8	3,24	1,698	74	"	"
	640	3600	71	35,5	17,8	7,8	5	4,2	1,698	75	"	"

Assembly dimensions motors C.C. # Other powers, please consult



Type	P	N	M	T	D	E	S	F	G	L	LB
CC-64/50	Ø64	Ø30	Ø38	2	Ø7	16	M4	2	7,9	141	84
CC-64/80	Ø64	Ø30	Ø38	2	Ø7	16	M4	2	7,9	171	84
CC-80/50	Ø80	Ø50	Ø65	2	Ø9	20	M4	3	10,3	156	100
CC-80/60	Ø80	Ø50	Ø65	2	Ø9	20	M4	3	10,3	166	100
CC-80/75	Ø80	Ø50	Ø65	2	Ø9	20	M4	3	10,3	181	100
CC-110/65	Ø104	Ø60	Ø75	2	Ø11	23	M4	4	12,6	189	138

2 poles motor, cooling IC 01, IP23

Type	W	rpm	Motor Current (A), V, De						Torq [Nm]	Rto n%	Inertia [Kg.m ²]	Kg
			12V	24V	48V	110V	170V	200V				
64/50	22	850	2,74	1,37	0,68	0,30	0,19	0,16	0,247	67	0,000095	1,93
	30	1100	3,73	1,87	0,93	0,41	0,26	0,22	0,260	67	"	"
	40	1500	4,90	2,45	1,22	0,53	0,35	0,29	0,254	68	"	"
	53	2000	6,50	3,25	1,62	0,71	0,46	0,39	0,253	68	"	"
	70	2700	8,45	4,20	2,11	0,92	0,60	0,51	0,247	69	"	"
	95	3600	11,50	5,70	2,86	1,25	0,81	0,69	0,252	69	"	"
	125	4800	14,90	7,40	3,72	1,62	1,05	0,89	0,248	70	"	"
64/80	33	850	4	2	1	0,43	0,28	0,24	0,370	69	0,00015	2,8
	45	1100	5,40	2,70	1,35	0,59	0,38	0,33	0,390	69	"	"
	60	1500	7,14	3,57	1,78	0,78	0,50	0,43	0,382	70	"	"
	80	2000	9,52	4,76	2,38	1,04	0,67	0,57	0,382	70	"	"
	110	2700	12,90	6,46	3,23	1,41	0,91	0,77	0,389	71	"	"
	145	3600	17	8,5	4,25	1,86	1,20	1,02	0,384	71	"	"
	190	4800	22	11	5,50	2,40	1,55	1,32	0,378	72	"	"
80/50	53	850	6,50	3,30	1,60	0,71	0,46	0,39	0,595	68	0,000353	2,13
	70	1100	8,60	4,30	2,10	0,94	0,60	0,51	0,607	68	"	"
	95	1500	11,5	5,70	2,80	1,25	0,81	0,69	0,605	69	"	"
	125	2000	15,1	7,60	3,80	1,65	1,07	0,91	0,597	69	"	"
	165	2700	19,6	9,80	4,90	2,14	1,39	1,18	0,584	70	"	"
	225	3600	26,8	13,4	6,70	2,92	1,89	1,60	0,597	70	"	"
	300	4800	35,2	17,6	8,80	3,84	2,48	2,11	0,597	71	"	"
80/60	63	850	7,60	3,80	1,90	0,83	0,54	0,46	0,707	69	0,000424	2,71
	80	1100	10,2	5,10	2,50	1,12	0,72	0,62	0,738	69	"	"
	115	1500	13,7	6,80	3,40	1,49	0,97	0,82	0,732	70	"	"
	150	2000	17,9	8,90	4,50	1,95	1,26	1,07	0,716	70	"	"
	200	2700	23,5	11,7	5,90	2,56	1,66	1,41	0,707	71	"	"
	270	3600	31,7	15,8	7,90	3,46	2,24	1,90	0,716	71	"	"
	360	4800	41,7	20,8	10,4	4,55	2,94	2,50	0,716	72	"	"
80/75	80	850	9,50	4,70	2,4	1,04	0,67	0,57	0,899	70	0,000523	3,36
	105	1100	12,5	6,20	3,10	1,36	0,88	0,75	0,911	70	"	"
	140	1500	16,4	8,20	4,10	1,79	1,16	0,99	0,891	71	"	"
	190	2000	22,3	11,1	5,60	2,43	1,57	1,34	0,907	71	"	"
	255	2700	29,5	14,7	7,40	3,22	2,08	1,77	0,902	72	"	"
	340	3600	39,3	16,9	9,80	4,29	2,78	2,36	0,902	72	"	"
	450	4800	51,4	25,7	12,8	5,60	3,63	3,06	0,895	73	"	"

Universal Motor Samples. Other configurations available



Universal motor without housing IP-00



Universal motor with ON-OFF selector



Universal motor with double shaft output



Universal motor IEC housing with special anchors



Stator for universal motor



Rotor for universal motor

Universal motors 2 poles, cooling IC 01, IP 00

Type	W	rpm	Motor current (A), Voltage		Torque [Nm]	Rto n%	Cos Φ	Inertia [Kg.m²]	Kg
			115V	230V					
MU221 40,7/12*25	90	5600	1,59	0,80	0,153	54	0,91	0,000075	1,62
	120	7500	1,94	0,97	0,153	59	"	"	"
	160	10000	2,43	1,21	0,153	63	"	"	"
	215	13300	3,16	1,58	0,154	65	"	"	"
MU221 40,7/12*40	130	5600	1,89	0,95	0,222	65	0,92	0,00012	2,6
	185	7500	2,61	1,30	0,235	67	"	"	"
	250	10000	3,42	1,71	0,239	69	"	"	"
	330	13300	4,46	2,23	0,237	70	"	"	"
MU221 40,7/12*50	180	5600	2,52	1,26	0,37	67	0,93	0,00015	3,24
	240	7500	3,21	1,60	0,306	70	"	"	"
	320	10000	4,21	2,11	0,306	71	"	"	"
	430	13300	5,58	2,79	0,309	72	"	"	"
MU267 44,5/12*70	275	5600	3,67	1,84	0,469	70	0,93		
	370	7500	4,74	2,34	0,471	73	"		
	500	10000	6,32	3,16	0,478	74	"		
	665	13300	8,40	4,20	0,478	74	"		
MU279 52,2/12*50	275	5600	3,73	1,86	0,469	69	0,93		
	370	7500	4,80	2,40	0,471	72	"		
	500	10000	6,40	3,20	0,478	73	"		
	665	13300	8,52	4,26	0,478	73	"		
MU279 52,2/12*58	335	5600	4,42	2,21	0,571	70	0,94		
	450	7500	5,70	2,85	0,573	73	"		
	600	10000	7,50	3,75	0,573	74	"		
	800	13300	10,0	5,00	0,574	74	"		
MU279 52,2/12*63	365	5600	4,76	2,38	0,622	71	0,94		
	490	7500	6,12	3,06	0,624	74	"		
	650	10000	8,02	4,01	0,621	75	"		
	865	13300	10,66	5,33	0,621	75	"		
MU300 52,2/12*35	180	5600	2,55	1,27	0,307	66	0,93		
	240	7500	3,30	1,65	0,306	68	"		
	320	10000	4,27	2,14	0,306	70	"		
	430	13300	5,66	2,83	0,309	71	"		
MU300 52,2/12*74	370	5600	4,77	2,39	0,631	71	0,95		
	500	7500	6,18	3,09	0,637	74	"		
	680	10000	8,30	4,15	0,649	75	"		
	900	13300	10,98	5,49	0,646	75	"		

The dimensions of the universal motors will depend on the conditions requested by the customer, in **VERNIS MOTORS, S.L.** we also have our own models developed in our laboratories to meet the needs of our customers.

High frequency motor samples. Other configurations available



AC-42 model with standard connection box.



AC-52 model with quick connector and output shaft with coupling ER-20

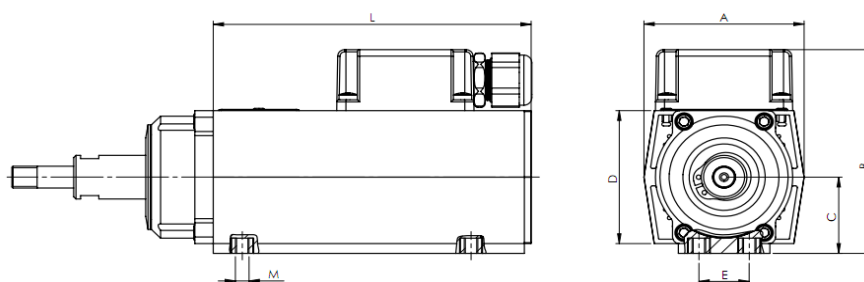


AC-56 model with standard connection box.

AC-56 model

L	POWER (W)	FREQUENCY Hz)	REVOLUTIONS (rpm)	VOLTAGE e ~3(V)
139	160	100	6000	220 or 400
	260	200	12000	220 or 400
	290	250	15000	220 or 400
	310	300	18000	220 or 400
169	240	100	6000	220 or 400
	390	200	12000	220 or 400
	435	250	15000	220 or 400
	460	300	18000	220 or 400
	600	300	18000	220 or 400

Assembly dimensions



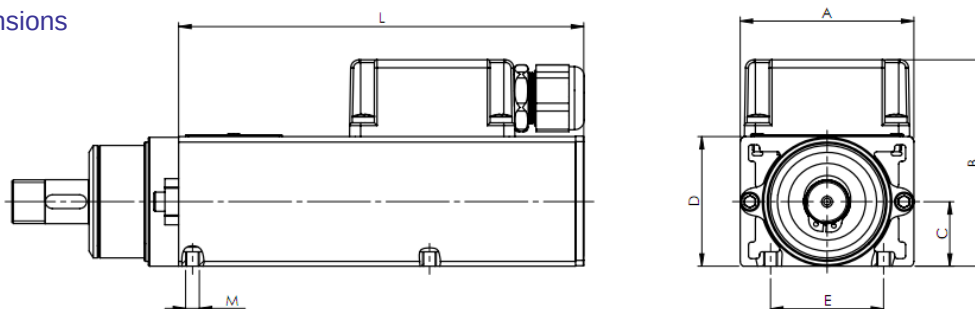
A	B	C	D	E	L	M
70	93	35	61	22	139	M6
70	93	35	61	22	169	M6

For powers, sizes and required features, please call VERNIS MOTORS S.L.

AC-42 model

L	Power (W)	Frequency (Hz)	Speed (rpm)	Voltage ~3 (V)
147	80	100	6000	220 / 400
	130	200	12000	220 / 400
	150	250	15000	220 / 400
	160	300	18000	220 / 400
187	135	100	6000	220 / 400
	220	200	12000	220 / 400
	250	250	15000	220 / 400
	300	300	18000	220 / 400

Assembly dimensions

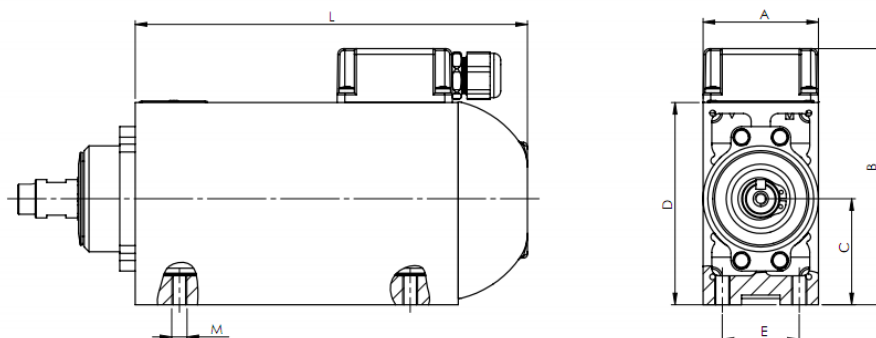


A	B	C	D	E	L	M
63	75,5	23,5	47,5	41	147	M5
63	75,5	23,5	47,5	41	187	M5

AC-52 model

L	Power (W)	Frequency (Hz)	Speed (rpm)	Voltage ~3 (V)
164	130	100	6000	220 / 400
	215	200	12000	220 / 400
	245	250	15000	220 / 400
	260	300	18000	220 / 400
	350	300	18000	220 / 400
204	270	100	6000	220 / 400
	550	200	12000	220 / 400
	410	250	15000	220 / 400
	600	300	18000	220 / 400

Assembly dimensions



A	B	C	D	E	L	M
63	75,5	23,5	47,5	41	147	M5
63	75,5	23,5	47,5	41	187	M5



Motors for low pressure fans, according to NORMA: "ERP"
Single-phase motors, 220-230 V, 50Hz. / TECHNICAL DATA

2-poles motors, 3000 RPM

Type	Power		Speed Rpm	Rto –Eff. %	Cosφ	I [A] 220V	Torque [Nm]	[Kg.m ²] Inertia	[Kg] Weight
	kW	CV-HP							
63	0,18	1/4	2780	62	0,96	1,40	0,573	0,000128	2,7
63	0,25	1/3	2800	65	0,96	1,82	0,796	0,000171	3,5
63	0,37	1/2	2800	63	0,94	2,80	1,178		
80	1,1	1.5	2860	74	0,98	6,90	3,500	0,000991	8,8
80	1,5	2	2850	83	0,99	8,30	4,780	0,001114	9,8

4 poles motors, 1500 rpm

Type	Power		Speed rpm	Rto –Eff. %	Cosφ	I [A] 220V	Torque [Nm]	[Kg.m ²] Inertia	[Kg] Weight
	kW	CV-HP							
63	0,12	1/6	1370	55	0,96	1,03	0,764	0,000195	2,7
63	0,18	1/4	1380	60	0,96	1,42	1,146	0,00026	3,5
80	0,55	3/4	1400	70	0,98	3,65	3,500	0,00133	8,8
80	0,75	1	1400	73	0,98	4,80	4,780	0,0015	9,8

6 poles motors, 1000 RPM

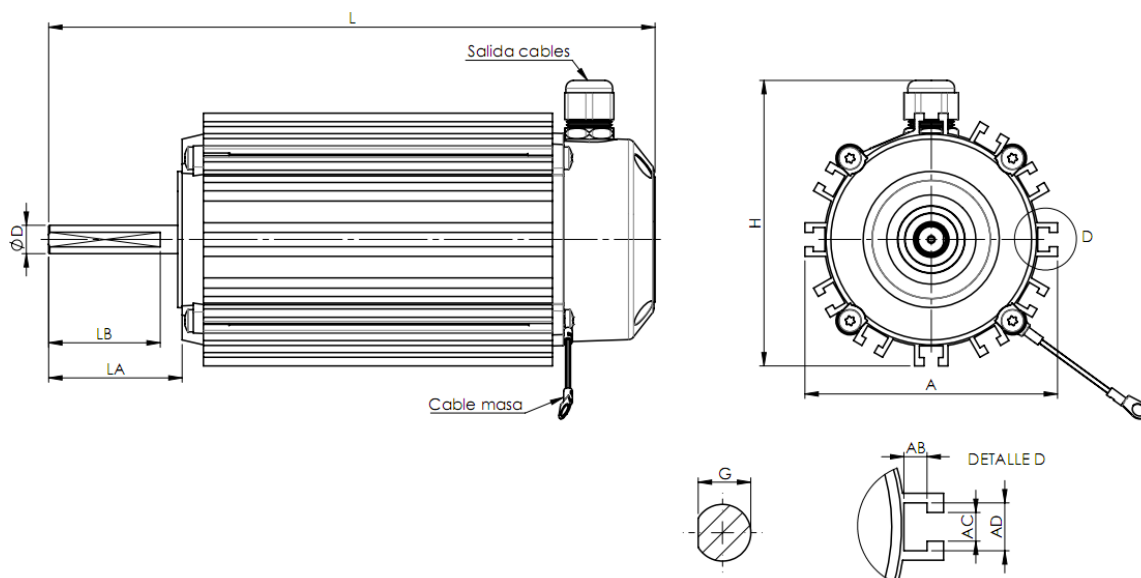
Type	Power		Speed Rpm	Rto –Eff. %	Cosφ	I [A] 220V	Torque [Nm]	[Kg.m ²] Inertia	[Kg] Weight
	kW	CV-HP							
63	0,09	1/8	890	46	0,96	0,93	0,860	0,000286	2,7
63	0,04	1/6	800	32		0,50	48		
63	0,12	1/6	900	51	0,96	1,11	1,146	0,000381	3,5
63	0,18	1/4	900	54		1,70	200		
80	0,37	1/2	940	64	0,98	2,68	3,534	0,00020	7,8
80	0,55	3/4	950	67	0,98	3,80	5,253	0,00256	9,8
90	0,80	1,10	915	70		4,9	835		
90	0,80	1,15	910	70		5,3	890		

8 poles motors, 750 RPM

Type	Power		Speed rpm	Rto –Eff. %	Cosφ	I [A] 220V	Torque [Nm]	[Kg.m ²] Inertia	[Kg] Weight
	kW	CV-HP							
80	0,18	1/4	690	51	0,98	1,64	2,292	0,00200	7,8
80	0,25	1/3	700	56	0,98	2,07	3,184	0,00256	9,8



Assembly dimensions



Type	Power (kW)	L	A	H	LA	LB	D	G	AB	AC	AD
63	0,04	207	113	128	60	50	12,7	11,8	5,2	6,4	10,7
	0,12	252									
	0,19	272									
80	0,37	261	148	163	60	50	12,7	11,8	5,2	6,4	10,7
	0,55	276									
90	0,8	319	159	168	84,5	50	15,8	14,3	5,2	6,4	10,7

The length of the low pressure / ventilation motors varies according to the power. If you want powers not shown in this catalog, consult with our commercial agents.
Low pressure motors can be supplied with built-in electronics.

Brushless / sensor less / high efficiency PMSM motor, 4 poles.

Type	Pow.(W)	Speed(rpm)	Freq. (Hz)	Torque(Nm)	Rto. (%)	Fan
T.63/4-20	65	1000	33,33	0,60	86	No
	100	1500	50	0,60	88	No
	200	3000	100	0,60	92	No
	300	3000	100	0,95	89,5	Yes
T.63/4-40	120	1000	33,33	1,15	86	No
	180	1500	50	1,15	89	No
	360	3000	100	1,15	92	No
	540	3000	100	1,70	89,5	Yes
T.63/4-60	195	1000	33,33	1,85	89	No
	290	1500	50	1,85	91	No
	580	3000	100	1,85	92	No
	870	3000	100	2,80	89,5	Yes
T.63/4-70	230	1000	33,33	2,20	89	No
	350	1500	50	2,20	91	No
	695	3000	100	2,20	92	No
	1040	3000	100	3,30	89,5	Yes
T.63/4-80	240	1000	33,33	2,30	89	No
	360	1500	50	2,30	91	No
	720	3000	100	2,30	92	No
	1100	3000	100	3,50	89,5	Yes
T.90/4-30	295	1000	33,33	2,80	88,5	No
	442	1500	50	2,80	90	No
	880	3000	100	2,80	93	No
	1330	3000	100	4,25	90	Yes
T.90/4-40	390	1000	33,33	3,70	89	No
	580	1500	50	3,70	90	No
	1160	3000	100	3,70	92,5	No
	1750	3000	100	5,55	90	Yes
T.90/4-60	570	1000	33,33	5,50	89	No
	860	1500	50	5,50	90	No
	1730	3000	100	5,50	93	No
	2600	3000	100	8,25	90	Yes
T.90/4-80	730	1000	33,33	7	89	No
	1100	1500	50	7	90	No
	2200	3000	100	7	91	No
	3300	3000	100	10,5	90	Yes
T.90/4-100	890	1000	33,33	8,50	89	No
	1330	1500	50	8,50	90	No
	2670	3000	100	8,50	93	No
	4000	3000	100	12,75	90	Yes

Brushless / sensor less / high efficiency PMSM motor, 8 poles.

Type	Pow.(W)	Speed(rpm)	Freq. (Hz)	Torque (Nm)	Rto. (%)	Fan
T.90/8-30	1250	1500	100	8	89	Yes
	1670	2000	133,3	8	89,5	Yes
	2080	2500	166,6	8	90	Yes
	2500	3000	200	8	90,5	Yes
	3000	3600	240	8	91	Yes
T.90/8-60	2375	1500	100	15,1	89,5	Yes
	3165	2000	133,3	15,1	90	Yes
	3960	2500	166,6	15,1	90,5	Yes
	4750	3000	200	15,1	91	Yes
	5700	3600	240	15,1	91,5	Yes
T.90/8-90	3380	1500	100	21,5	90	Yes
	4510	2000	133,3	21,5	90,5	Yes
	5640	2500	166,6	21,5	91	Yes
	6770	3000	200	21,5	91,5	Yes
	8125	3600	240	21,5	92	Yes
T.112/8-75	4800	1500	100	30,5	89,5	Yes
	6400	2000	133,3	30,5	90	Yes
	8000	2500	166,6	30,5	90,5	Yes
	9600	3000	200	30,5	91	Yes
	11520	3600	240	30,5	91,5	Yes
T.112/8-100	6080	1500	100	38,7	90	Yes
	8100	2000	133,3	38,7	90,5	Yes
	10130	2500	166,6	38,7	91	Yes
	12160	3000	200	38,7	91,5	Yes
	14600	3600	240	38,7	92	Yes
T.112/8-125	7220	1500	100	46	90,5	Yes
	9626	2000	133,3	46	91	Yes
	12033	2500	166,6	46	91,5	Yes
	14440	3000	200	46	92	Yes
	17328	3600	240	46	92,5	Yes

Brushless, sensor less or PMSM 4 and 8 pole motors with permanent magnet rotor manufactured by VERNISMOTORS S.L guarantee a high power with low weight, the pair of reluctance (cogging) is minimum, ideal for motors of traction and with high pairs of peak during all the range of speeds. The anchoring measures of the brushless range correspond to the IEC standard.

Brushless motors - Mobility application



**Motor PMSM T.90 / 8 8kW 4500rpm
with reductive**



**Motor PMSM T.90/8 1.5kW 4500rpm
B5 with brake**



**Motor PMSM T.112 / 8 15kW 3750rpm
with forced ventilation**



**Motor PMSM T.112 / 8 15kW 3750rpm
with forced and reducing ventilation**



Motor PMSM T.90/8 8kW 4500rpm



**Motor T.56/4 500W 30Nm 200rpm
Includes epicyclic reducer**



High efficiency brushless motor with permanent magnets and fixing with flange B5 standard IEC, governed by built-in electronics.



High efficiency brushless motor with permanent magnets mounted in extruded clamping housing with flange B14

Brushless / sensor less / high efficiency PMSM motor, 8 poles.

Battery	Type	Pow.(W)	Speed.(rpm)	Rated Torque (Nm)	Fan
48V _{DC}	T.90/8-30	3000	4500	6,40	No
		4000	4500	8,50	Yes
	T.90/8-60	5500	4500	11,7	No
		7300	4500	15,6	Yes
	T.90/8-90	8000	4500	17,0	No
		10700	4500	22,7	Yes
	T.112/8-75	8400	3500	22,9	No
		11200	3500	30,6	Yes
72V _{DC}	T.90/8-30	3300	5000	6,40	No
		4500	5000	8,50	Yes
	T.90/8-60	6000	5000	11,5	No
		8000	5000	15,3	Yes
	T.112/8-100	11200	3750	28,6	No
		15000	3750	38,2	Yes
120V _{DC}	T.90/8-30	3300	5000	6,40	No
		4500	5000	8,50	Yes
	T.112/8-75	10000	4250	22,5	No
		13500	4250	30,3	Yes
	T.112/8-150	15000	4000	35,8	No
		20000	4000	47,8	Yes

The permanent magnet synchronous motors (PMSM or PMAC) manufactured by VERNIS MOTORS S.L. They are ideal for traction and mobility applications because, compared to classic induction engines, they offer great power with a very low weight, as well as being able to offer a much higher maximum torque.

- Light. Low weight and high power density is an important focus in electric mobility
- High torque (greater than induction motors with the same power).
- High density of torque
- Wide range of power and battery voltages. Directed by frequency converters
- Free of maintenance

TECHNICAL CHARACTERISTICS

Electric connection: With 1 mt cable

Encoder connection With 1 mt cable

Temperature sensor: Sonda KTY84.

Ventilation: External Ventilation (EV) generated independently of the engine. Air speed> 5 m / s

APPLICATIONS



ELECTRIC CAR



ELECTRICAL TAXI



POST CAR



ELECTRIC GOLF CART



ELECTRIC ELEVATOR

Gear motor AC / DC



Worm-gear reduction gears and standard execution: In both the standard worm gear and the combined execution, the assembly is carried out with special manufacturing motors requested by the customer or according to the IEC standard. Mounts made in VERNIS MOTORS S.L. they are delivered with flange B14 or B5. (Check other flanges)

Combined worm-gear motors:
According to our customer's instructions, at VERNIS MOTORS S.L. We make special assemblies as combined worm gear-geared motors that consist of two speed reducers that are coupled to achieve higher speed reductions. It is a very simple and economical solution, however in this type of assembly should be expected a decrease in performance



Gear motor DC with tach electric dynamo:
Due to the great demand in the market, VERNIS MOTORS S.L. has developed engines with speed regulated by tachometer dynamos. Also and on demand from our customers, we develop applications with hall or encoders

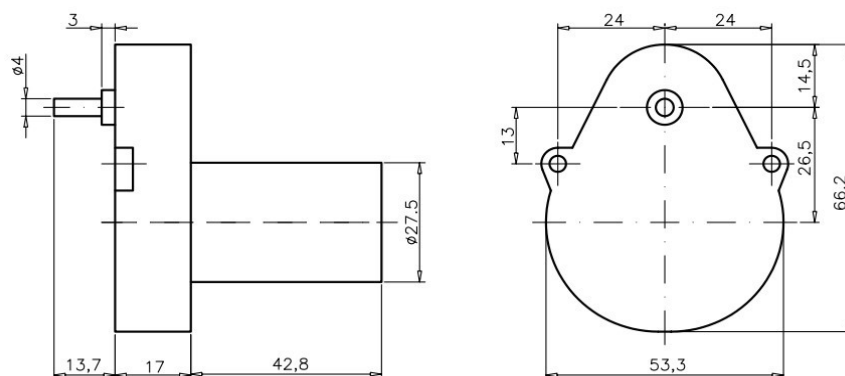


Note: In applications with high reductions, the output performance must be reduced by 10% due to the reduction of the performance of the reducer itself.

Powered by DC motor; Maximum torque of the gearbox: 80Ncm.

	RM900.../ CCmotor Power: 3,3W Frequency: 50Hz Speed: 6800rpm			RM900...CCmotor Power: 6,6W Frequency: 50Hz Speed: 7000rpm		
	n2 (rpm)	P1 (W)	M2(Nm)	n2 (rpm)	P1 (W)	M2 (Nm)
5	1360	3,3	0,023	1400	6,6	0,045
10	680	3,3	0,046	700	6,6	0,090
15	453	3,3	0,070	467	6,6	0,135
20	340	3,3	0,093	350	6,6	0,180
25	272	3,3	0,116	280	6,6	0,225
30	227	3,3	0,139	233	6,6	0,271
50	136	3,3	0,232	140	6,6	0,450
60	113	3,3	0,279	117	6,6	0,539
75	91	3,3	0,346	93	6,6	0,678
80	85	3,3	0,371	88	6,6	0,716
100	68	3,3	0,463	70	5,8	0,900
125	54	3,3	0,584	56	4,7	1,126
150	45	3,3	0,700	47	3,9	1,341
200	34	2,8	0,927	35	2,9	1,801
250	27	2,2	1,167	28	2,3	2,251
300	23	1,9	1,370	23	1,9	2,740

Assembly dimensions

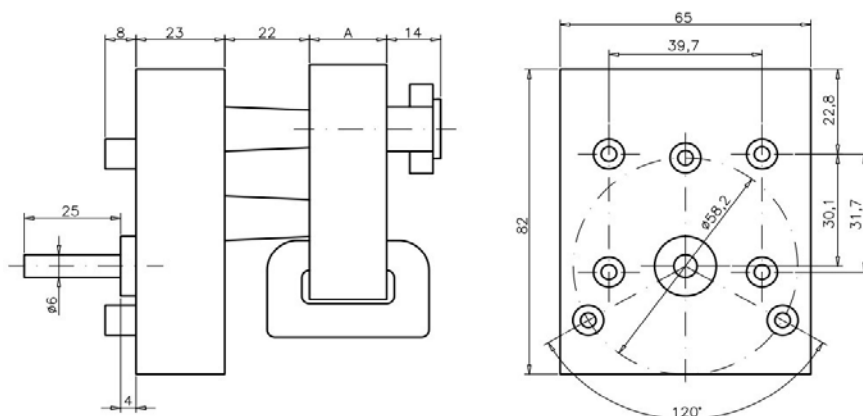




Powered by AC motor; Maximum torque of the reducer: 300Ncm.

i	RC 920...ACmotor Power: 9W; Frequency: 50Hz Speed: 2750rpm			RC 940...ACmotor Power: 15W Frequency: 50Hz Speed: 2800rpm			RC 960... ACmotor. Power: 18W Frequency: 50Hz Speed: 2800rpm		
	n2 (rpm)	P1 (W)	M2(Nm)	n2 (rpm)	P1 (W)	M2 (Nm)	n2 (rpm)	P1 (W)	M2 (Nm)
10	275	9	0,313	280	15	0,512	280	18	0,614
15	183	9	0,470	187	15	0,766	187	18	0,919
17,6	156	9	0,551	159	15	0,901	159	18	1,081
26	106	9	0,811	108	15	1,326	108	18	1,592
31,3	88	9	0,977	90	15	1,592	90	18	1,910
40,7	68	9	1,264	69	15	2,076	69	18	2,491
50	55	9	1,563	56	15	2,558	56	18	3,070
60	46	9	1,868	47	15	3,048	47	18	3,657
80	34	9	2,528	35	15	4,093	35	18	4,911
100	28	8,6	3,070	28	15	5,116	28	18	6,139
129	21	6,7	4,093	22	15	6,511	22	18	7,814
150	18	5,7	4,775	19	15	7,539	19	18	9,047
200	14	4,3	6,139	14	15	10,232	14	18	12,279

Assembly dimensions



MOTOR	A
RC920...	20
RC940...	40
RC960...	60

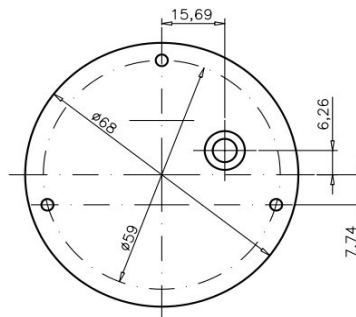
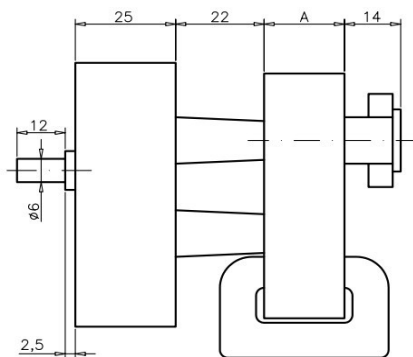
Note: In applications with high reductions, the output performance must be reduced by 10% due to the reduction of the performance of the reducer itself.



Powered by C.A engine .; Maximum torque of the gearbox: 150Ncm.

i	RD915...ACmotor Power: 7W Frequency: 50Hz Speed: 2700rpm			RD920... ACmotor Power: 9W Frequency: 50Hz Speed: 2750rpm		
	n2 (rpm)	P1 (W)	M2(Nm)	n2 (rpm)	P1 (W)	M2 (Nm)
50	54	7	0,619	55	9	1,563
60	45	7	0,743	46	9	1,868
80	34	7	0,983	34	9	2,528
100	27	7	1,238	28	9	3,070
125	22	7	1,519	22	9	3,907
151,8	18	7	1,857	18	9	4,775
168,6	16	7	2,089	16	9	5,372
200	14	7	2,388	14	9	6,139
250	11	7	3,039	11	9	7,814
300	9	7	3,714	9	9	9,550
383,9	7	7	4,775	7	9	12,279
400	8	7	4,178			

Assembly dimensions



MOTOR	A
RD915...	15
RD920...	20

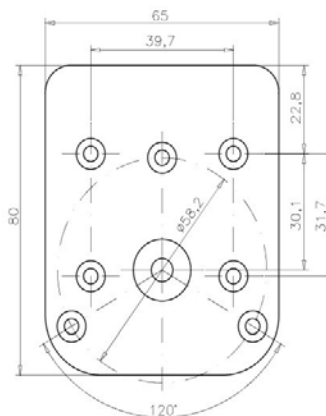
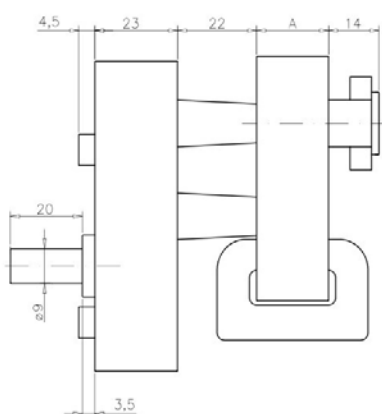
Note: In applications with high reductions, the output performance must be reduced by 10% due to the reduction of the performance of the reducer itself.



Powered by C.A engine.; Maximum torque of the reducer: 300Ncm.

i	RR920...ACmotor Power: 9W Frequency: 50Hz Speed: 2750rpm			RR940... ACmotor Power: 15W Frequency: 50Hz Speed: 2800rpm			RR960...AC Motor Power: 18W Frequency: 50Hz Speed: 2800rpm		
	n2 (rpm)	P1 (W)	M2(Nm)	n2 (rpm)	P1 (W)	M2 (Nm)	n2 (rpm)	P1 (W)	M2 (Nm)
10	275	9	0,313	280	15	0,512	280	18	0,614
15	183	9	0,470	187	15	0,766	187	18	0,919
16,25	169	9	0,509	172	15	0,833	172	18	0,999
20	138	9	0,623	140	15	1,023	140	18	1,228
25	110	9	0,781	112	15	1,279	112	18	1,535
30	92	9	0,934	93	15	1,540	93	18	1,848
32,6	84	9	1,023	86	15	1,666	86	18	1,999
44,9	61	9	1,409	62	15	2,310	62	18	2,773
50	55	9	1,563	56	15	2,558	56	18	3,070
60	46	9	1,868	47	15	3,048	47	18	3,657
80	34	9	2,528	35	15	4,093	35	18	4,911
100	28	9	3,070	28	15	5,116	28	18	6,139
125	22	9	3,907	22	15	6,511	22	18	7,814
150	18	9	4,775	19	15	7,539	19	18	9,047
200	14	9	6,139	14	15	10,232	14	18	12,279

Assembly dimensions



MOTOR	A
RR920...	20
RR940...	40
RR960...	60

Note: In applications with high reductions, the output performance must be reduced by 10% due to the reduction of the performance of the reducer itself.

Electric generators / High efficiency alternators and permanent magnets, 8 poles.



Type	Pow.(VA)	Speed(rpm)	Freq. (Hz)	Rto. (%)
T.90/8-30	250	750	50	84
	500	1500	100	84
	1000	3000	200	84
	1200	3600	240	84
T.90/8-60	500	750	50	84,5
	1000	1500	100	84,5
	2000	3000	200	84,5
	2400	3600	240	84,5
T.90/8-90	750	750	50	85
	1500	1500	100	85
	3000	3000	200	85
	3600	3600	240	85
T.112/8-75	900	750	50	85,5
	1800	1500	100	85,5
	3600	3000	200	85,5
	4320	3600	240	85,5
T.112/8-100	1200	750	50	86
	2400	1500	100	86
	4800	3000	200	86
	5760	3600	240	86
T.112/8-125	1500	750	50	86,5
	3000	1500	100	86,5
	6000	3000	200	86,5
	7200	3600	240	86,5

The assembly dimensions are taken as a reference of the IEC standard, the AC generators designed by VERNIS MOTORS S.L. They are manufactured with rotor of permanent magnets without brushes for which they require a minimum maintenance. Ideal for the assembly of wind turbines and hydraulic turbines.

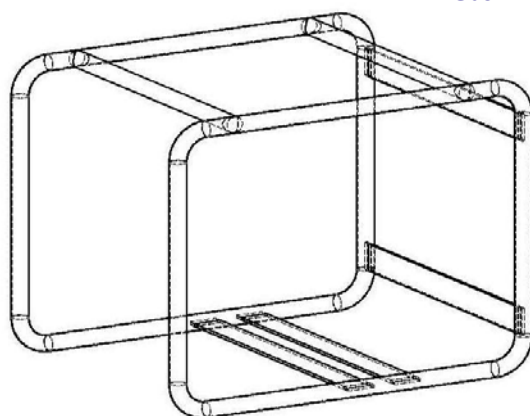
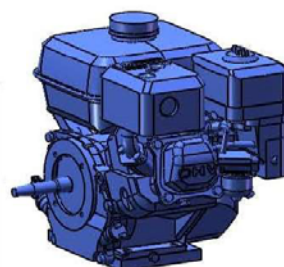
Check availability of generators in 2 and 4 pole versions.

Gasoline / diesel generator groups.

Generating group



Gasoline or diesel motor group

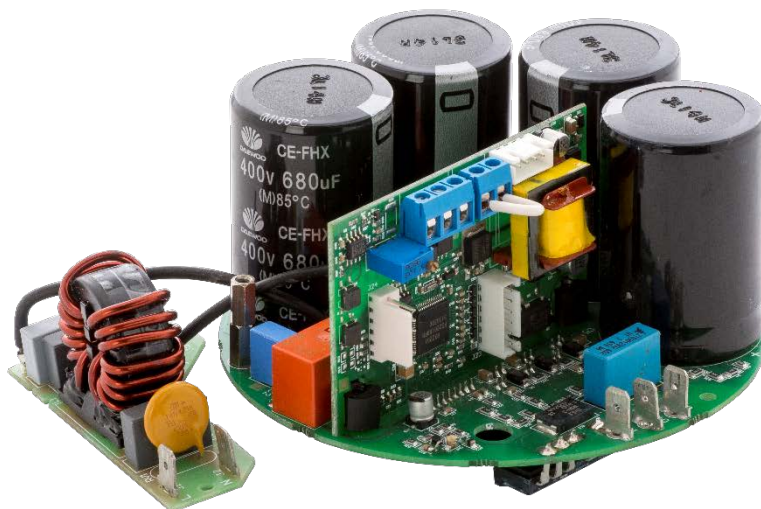


Tubular support to be defined by the customer

Type	Pow.(VA)	Speed(rpm)	Freq. (Hz)	Rto. (%)
T.90/8-30	250	750	50	84
	500	1500	100	84
	1000	3000	200	84
	1200	3600	240	84
T.90/8-60	500	750	50	84,5
	1000	1500	100	84,5
	2000	3000	200	84,5
	2400	3600	240	84,5
T.90/8-90	750	750	50	85
	1500	1500	100	85
	3000	3000	200	85
	3600	3600	240	85
T.112/8-75	900	750	50	85,5
	1800	1500	100	85,5
	3600	3000	200	85,5
	4320	3600	240	85,5
T.112/8-100	1200	750	50	86
	2400	1500	100	86
	4800	3000	200	86
	5760	3600	240	86
T.112/8-125	1500	750	50	86,5
	3000	1500	100	86,5
	6000	3000	200	86,5
	7200	3600	240	86,5

Alternating current generators with rotor of permanent magnets without brushes (minimum maintenance).
Check availability of generators in 2 and 4-pole versions and multi frequency versions.

Controllers and electronic shifters



Plates for DC power:

P_{out} [W]	U_{in} [V _{DC}]	I_{in} [A _{DC}]
370	12	34
370	24	17
740	12	67
740	24	34
1500	24	67

Plates for AC power:

P_{out} [W]	U_{in} [V _{AC}]	f [Hz]	Analog input
1100 2200	230	50/60	0 a 10V

VERNS MOTORS, S.L. has controllers for 230V 50 / 60Hz alternating current power, as well as 12 and 24V DC power supply for synchronous and asynchronous motor control and power up to 2.2kW. The plates for power supply in alternating current have an analog 0-10V input and communication option through an auxiliary circuit, in addition to an input for the temperature reading of the motor, allowing total control over the motor.

All of them are designed with protection over current, short circuit and over voltage to ensure the correct operation and protection of the equipment.

Consult with our commercials for electric motors controlled with electronics.

Vibrating motor for vibrating screeds



Among other applications VERNIS MOTORS S.L. has designed the vibrator motor for use and assembly in vibrating screeds for concrete, its innovative design, compact and robust, allows its assembly in the minimum space and with the maximum guarantees.

The level of vibration is easily adjustable by repositioning the counterweights in the opposite direction of the eccentric counterweights, dismantling the protective cups.

The motor for vibrating screeds manufactured by VERNIS MOTORS S.L. It is served with cable and connection box with built-in stop and capacitor switch.

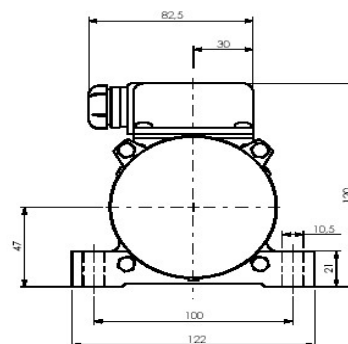
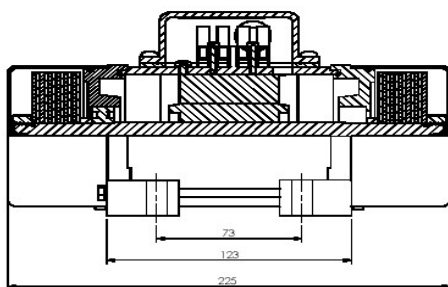
Voltage	230V
Current	0,7A
Frequency	50Hz
Power	100W
Weight	4,5Kg
Protection type	IP65
Insulation	F class
Centrifugal force	86Kg

In addition to the standard configuration and at the customer's request we can manufacture special configurations, among others:

- Three-phase network
- Different voltages
- Different colors. (Standard color aluminum)

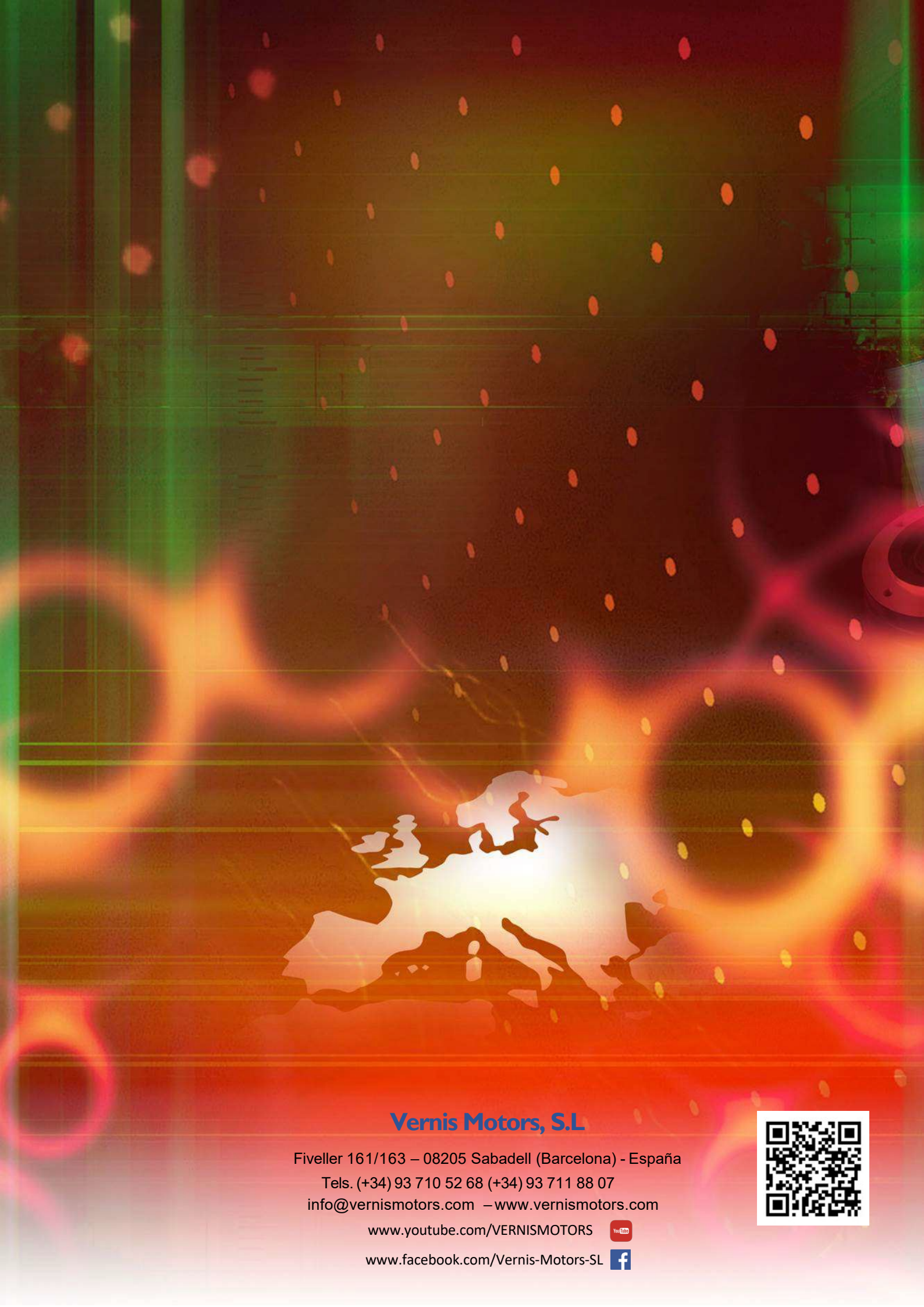


Assembly dimensions





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