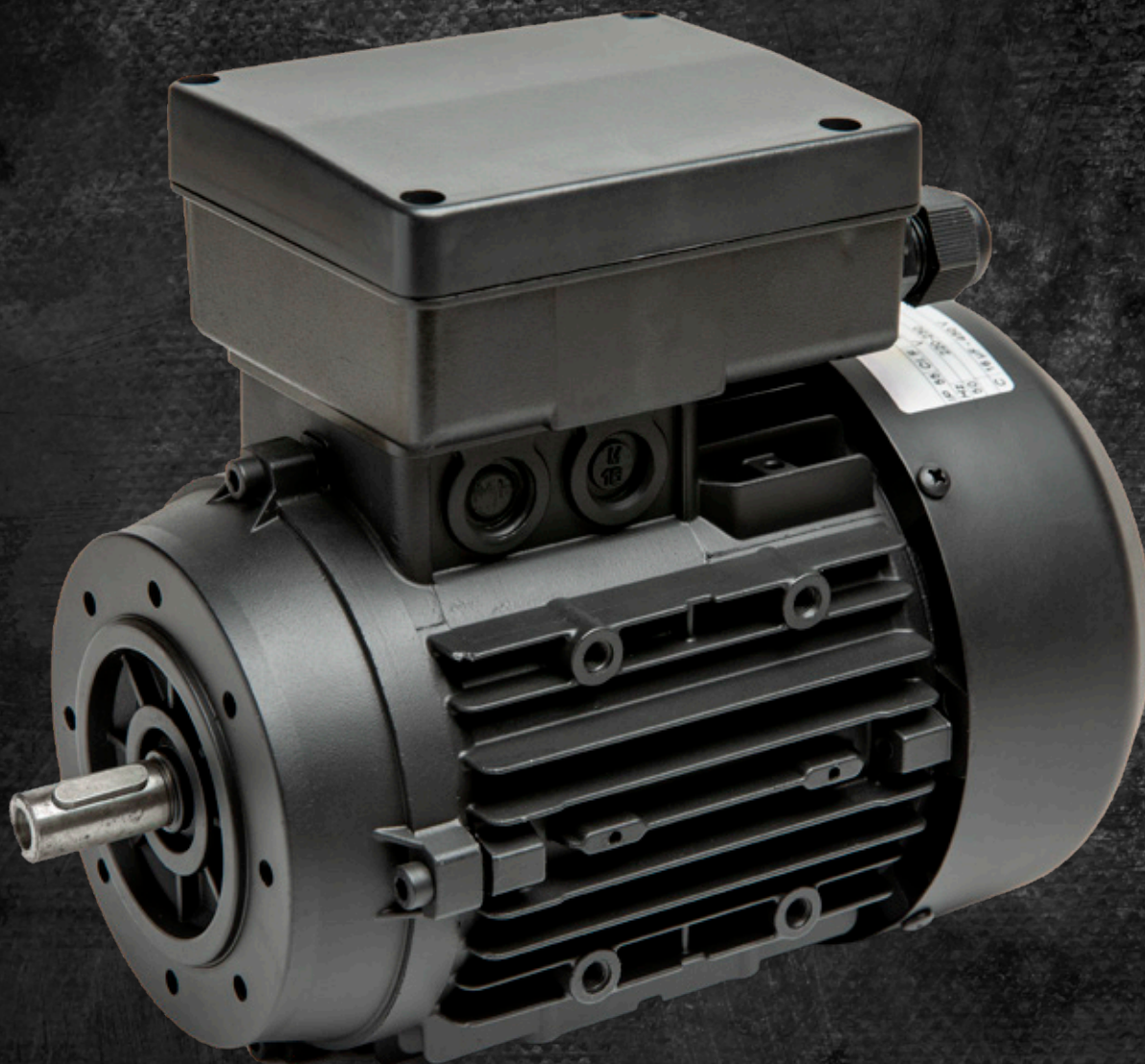




**HIGH EFFICIENCY SINGLE PHASE
IE2 MOTORS**

Industrial Applications



A dynamic, strong and ambitious Group

Orange1 Holding is an international renown Group, one of the most important European manufacturers of single-phase and three-phase asynchronous electric motors. It has an annual capacity of more than 1 million motors and 5 million electric stators. The group, established in 1971 by Leone Donazzan, chaired today by his son Armando Donazzan, is strongly focused on technological innovation, performance and customization to meet individual clients requirements.





Elettromeccanica Leone Donazzan was established on 1971 in Bassano del Grappa. In 1983 the company turned into Eld Spa. In 1998 Armando Donazzan took over the running of the company; thanks to his determination and intuition he applied new financial and commercial policies which increased the level of reliability and visibility. In March 2006 the company changed its name to EME Spa and finally become Orange1 Electric Motors in 2018. The aim of O1EM is to manufacture custom made motors to meet clients and market expectations. The actual production covers a large range of AC and DC motors, as well as brushless motors and Variable Frequency Drives , to provide total solution.

PRODUCTION PLANTS

LOCATION	MOTORS PRODUCTION
ARSIÈ - ITALY 32030 (BL) Via A. Messedaglia 4	SINGLE AND THREE PHASE MOTORS HOLLOW SHAFT MOTORS IE2 AND IE3 MOTORS INVERTER AND MOTORINVERTER
S. MAURO PASCOLI - ITALY 47030 (FC) Via A. Grandi 23	GRADUAL BRAKE MOTORS HIGH TORQUE BRAKE MOTORS LOW CENTER MOTORS MOTORS FOR BURNERS
PARMA - ITALY 43122 (PR) Via Mantova 93	ATEX MOTORS HYDRAULIC MOTORS ENCAPSULATED WATERPROOF MOTORS OIL SUBMERGED MOTORS

High Efficiency Single Phase IE2 Motors

The Orange1 Group is always attentive to energy saving with choices driven by the desire to preserve the environment that surrounds us and this is why the electric motors are also protagonists to reduce the emission of greenhouse gases.

Thanks to a careful energy saving philosophy to protect the environment around us, Orange1 Holding produces electric motors in order to reduce the emission of greenhouse gases.

The European Commission has drawn up the new edition of the Regulations EC 1781/2019 and amendment 241/2021, laying down rules for the application of directive 2009/125 /EC on the specific ecodesign requirements for electric motors. The new European regulations defines Minimum Efficiency Performance Standards, called MEPS. The single phase range of Orange1 Electric Motors compliant with the IE regulation, delivering the best performance for their range of use with better electric efficiency.



IE2 Nominal efficiency levels
and amendment 241/2021

Pn kW	Number of Poles / Speed	
	min ⁻¹	
	2/3000	4/1500
0,12	53,6	59,1
0,18	60,4	64,7
0,20	61,9	65,9
0,25	64,8	68,5
0,37	69,5	72,7
0,40	70,4	73,5
0,55	74,1	77,1
0,75	77,4	79,6
1,1	79,6	81,4
1,5	81,3	82,8
2,2	83,2	84,3
3	84,6	85,5

DETAILS



Induction Motors & VSD: Efficiency levels - IE code - Update 2019

EU Directive & Regulations

The European directive 2009/125/CE (Eco Design) and the international standards IEC 60034-30-1:2014 and IEC 60034-30-2:2016 defines the specification to design the electrical motors and VSD (Variable speed Drives) in a eco-friendly way.

They have defined the levels (IE code) in order to get the harmonization in the efficiency standards – MEPS (Minimum Energy Performance Standard).

The test method of measurement has been defined in IEC 60034-2-1:2007 (Motor directly from main) and IEC 60034-2-3:2013 (Motor driven by VSD)

Main additions/modifications of 2019/1781 (last update):

- Added 8 poles motors
- Added Single phase motors ($\geq 0,12$ kW)
- Brake motors
- Added increase safety motors ('Ex eb', 'Ex db', etc)
- Added 60Hz motors (not only 50 and 50/60Hz)
- Extended the power range (0,12-1000kW)
- Defined min. nominal voltage: new range 50-1000Vac
- Included duty cycles S3 and S6 if $\geq 80\%$ (*)

(*) CEMEP interpretation: motors that are marked with a duty different from the ones listed on the directive but potentially able to work in continuous duty at the rated power have to be considered included in the directive 2019/1781/CE and so it respect the minimum request of efficiency.

Deadlines & Motors Covered

Deadline	Applications Field	Min. efficiency
 From 1 st July 2023	Variable speed drives for motors with $P_N \geq 0,12$ kW and $\leq 1\,000$ kW three-phase motors with or without brake which are not increased safety motors 'Ex db' or other explosion-protected motors; With $P_N \geq 75$ kW and ≤ 200 kW and 2, 4, 6 poles;	IE4
	three-phase increased safety motors with or without brake 'Ex eb' with $P_N \geq 0,12$ kW to < 1000 kW and 2, 4, 6, 8 poles;	IE2
	All single-phase motor $\geq 0,12$ kW with or without brake (included increased safety motors 'Ex eb' and other explosion-protected motors)	IE2
 From 1 st July 2021	three-phase motors with or without brake which are not increased safety motors 'Ex eb' (but other types are included: 'Ex ec', 'Ex db', etc...) with 2, 4, 6 or 8 poles, equipped or not with a VSD and - $P_N \geq 0,12$ kW and $< 0,75$ kW - $P_N \geq 0,75$ kW and $\leq 1\,000$ kW	IE2 IE3
 From 1 st January 2017	Only three-phase motors; $\geq 0,75$ kW e ≤ 375 kW; 2, 4, 6 poles If with VSD (declared on nameplate)	IE2 IE3
 From 1 st January 2015	Only three-phase motors; $\geq 7,5$ kW e ≤ 375 kW; 2, 4, 6 poles If with VSD (declared on nameplate)	IE2 IE3

Motor excluded

- 1) TENV version
- 2) brake motors where brake and motor are integrated magnetically and structurally, therefore it is not possible to evaluate the efficiency of the motor separately
- 3) explosion proof for mining duty
- 4) for above 4000m sea level
- 5) multi-speed (dahlander)
- 6) for ambient temperature $< -30^\circ\text{C}$ and $> 60^\circ\text{C}$



IE2 Application

PRESSURE WATER PUMPS



IE2 Application

INDUSTRIAL VENTILATION



IE2 Application

LIFTING WINCHES



IE2 Application

PRESSURE CLEANERS



IE2 Application

AIR COMPRESSORS



IE2 Application

WOODWORKING TOOLS



IE2 Application

HOME APPLIANCES



IE2 Application

GARAGE EQUIPMENT

Single Phase Motors - IE2 Efficiency Level

Running Capacitor According to EN 60034-30-1; 2014

3000rpm , 2 poles, 230V; 50Hz, S1 - Thermal class F; temperature rise class B

Type	Rated Power		Rated current at 230V	Rated speed	Rated Torque	efficiency full load	efficiency 3/4 load	efficiency 1/2 load	Power factor	Starting current / Rated current	Starting torque / Rated torque	Breakdown torque / Rated torque	Running capacitor	Moment of inertia	Weight
	P _n		I _n	n	M _n	h	h	h	COS φ	I _s /I _n	M _s / M _n	M _b /M _n	C _r	J	kg
	kW	HP	A	min ⁻¹	Nm	%	%	%							
ME 63M A2	0,18	0,25	1,26	2820	0,61	64,5	57,8	45,8	0,970	3,5	0,6	2,1	12,5	0,230	4,2
ME 63M B2	0,25	0,35	1,68	2720	0,88	66,5	65,2	56,3	0,980	2,7	0,4	1,5	12,5	0,230	4,2
ME 63M C2	0,37	0,50	2,40	2820	1,25	70,0	65,9	55,9	0,960	3,9	0,5	1,9	12,5	0,300	5,2
ME 71M A2	0,37	0,50	2,37	2800	1,26	69,5	66,8	56,8	0,970	3,5	0,4	1,7	12,5	0,490	6,6
ME 71M B2	0,55	0,75	3,50	2850	1,85	74,1	70,3	61,6	0,920	4,8	0,7	2,3	20,0	0,600	8,0
ME 80M A2	0,75	1,00	4,45	2880	2,45	77,4	74,7	67,7	0,940	5,4	0,4	2,3	20,0	1,236	10,5
ME 80M B2	1,10	1,50	6,20	2860	3,67	79,6	75,3	68,8	0,970	5,3	0,4	2,0	30,0	1,280	11,4
ME 80M C2	1,50	2,00	8,35	2830	5,06	81,3	81,4	76,2	0,960	4,0	0,4	1,8	40,0	1,520	13,1
ME 90S A2	1,50	2,00	8,00	2860	5,00	81,9	80,8	75,7	0,990	5,0	0,4	2,1	40,0	2,160	14,7
ME 90L C2	2,20	3,00	12,10	2820	7,45	83,2	81,7	77,6	0,950	4,9	0,3	1,7	50,0	2,360	18,5
ME 100L A2	3,00	4,00	15,70	2900	9,88	84,6	83,8	79,3	0,980	5,6	0,3	2,1	90,0	7,200	23,7

1500rpm , 4 poles, 230V; 50Hz, S1 - Thermal class F; temperature rise class B

Type	Rated Power		Rated current at 230V	Rated speed	Rated Torque	efficiency full load	efficiency 3/4 load	efficiency 1/2 load	Power factor	Starting current / Rated current	Starting torque / Rated torque	Breakdown torque / Rated torque	Running capacitor	Moment of inertia	Weight
	P _n		I _n	n	M _n	h	h	h	COS φ	I _s /I _n	M _s / M _n	M _b /M _n	C _r	J	kg
	kW	HP	A	min ⁻¹	Nm	%	%	%							
ME 63M B4	0,12	0,15	1,05	1390	0,82	59,1	52,1	41,5	0,850	2,4	0,5	1,7	5,0	0,280	3,9
ME 63M C4	0,18	0,25	1,26	1370	1,25	65,8	62,3	52,3	0,940	2,5	0,6	1,4	8,0	0,407	5,0
ME 71M A4	0,18	0,25	1,22	1420	1,21	67,7	62,2	51,9	0,940	3,6	0,6	2,0	10,0	0,970	6,3
ME 71M B4	0,25	0,35	1,60	1420	1,68	70,6	66,2	56,3	0,960	3,7	0,5	1,8	12,5	1,200	7,4
ME 71M C4	0,37	0,50	2,31	1410	2,51	72,7	68,1	58,6	0,960	3,8	0,4	1,7	16,0	1,260	8,2
ME 80M A4	0,55	0,75	3,15	1430	3,67	77,1	72,6	67,9	0,990	3,1	0,4	1,9	16,0	2,830	10,7
ME 80M B4	0,75	1,00	4,25	1420	5,04	79,6	76,5	69,4	0,960	3,9	0,3	1,6	20,0	3,450	12,0
ME 90S A4	0,75	1,00	4,10	1420	5,04	79,6	78,6	70,8	0,960	3,5	0,4	1,7	35,0	3,330	14,4
ME 90L B4	1,10	1,50	6,00	1420	7,40	81,4	80,9	72,8	0,980	3,5	0,4	1,6	40,0	4,100	15,6
ME 100L A4	1,50	2,00	8,65	1430	10,01	82,8	81,8	78,1	0,910	4,3	0,3	2,1	40,0	6,351	25,0

Single Phase Motors - IE2 Efficiency Level

Running and starting capacitor - High starting torque According to EN 60034-30-1; 2014

3000rpm , 2 poles, 230V; 50Hz, S1 - Thermal class F; temperature rise class B

Type	Rated Power		Rated current at 230V	Rated speed	Rated Torque	efficiency full load	efficiency 3/4 load	efficiency 1/2 load	Power factor	Starting current / Rated current	Starting torque / Rated torque	Breakdown torque / Rated torque	Running capacitor	Starting capacitor	Moment of inertia	Weight
	P _n		I _n	n	M _n	h	h	h	COS φ	I _s /I _n	M _s /M _n	M _b /M _n	C _r	C _r	J	
	kW	HP	A	min ⁻¹	Nm	%	%	%								
MEH 63M A2	0,18	0,25	1,26	2820	0,61	64,5	57,8	45,8	0,970	4,0	2,0	2,1	12,5	40	0,230	4,2
MEH 63M B2	0,25	0,35	1,68	2720	0,88	66,5	65,2	56,3	0,980	3,1	1,5	1,5	12,5	40	0,230	4,2
MEH 63M C2	0,37	0,50	2,40	2820	1,25	70,0	65,9	55,9	0,960	4,3	1,5	1,9	12,5	40	0,300	5,2
MEH 71M A2	0,37	0,50	2,37	2800	1,26	69,5	66,8	56,8	0,970	3,8	1,5	1,7	12,5	40	0,490	6,6
MEH 71M B2	0,55	0,75	3,50	2850	1,85	74,1	70,3	61,6	0,920	4,8	0,7	2,3	20,0	60	0,600	8,0
MEH 71M C2	0,75	1,00	4,68	2860	2,50	77,4	72,5	64,9	0,900	5,3	1,5	2,8	25,0	80-100	0,710	9,3
MEH 80M A2	0,75	1,00	4,45	2880	2,45	77,4	74,7	67,7	0,940	5,5	1,5	2,3	20,0	60	1,236	10,7
MEH 80M B2	1,10	1,50	6,20	2860	3,67	79,6	75,3	68,8	0,970	5,6	1,5	2,0	30,0	80-100	1,280	11,4
MEH 80M C2	1,50	2,00	8,35	2830	5,06	81,3	81,4	76,2	0,960	4,5	1,5	1,8	40,0	100-125	1,520	13,1
MEH 90S A2	1,50	2,00	8,00	2860	5,00	81,9	80,8	75,7	0,990	5,1	1,4	2,1	40,0	100-125	2,160	15,7
MEH 90L C2	2,20	3,00	12,10	2820	7,45	83,2	81,7	77,6	0,950	5,3	1,5	1,7	50,0	100-125	2,360	18,5
MEH 100L A2	3,00	4,00	15,70	2900	9,88	84,6	83,8	79,3	0,980	6,5	1,2	2,1	90,0	250-300	7,200	23,7

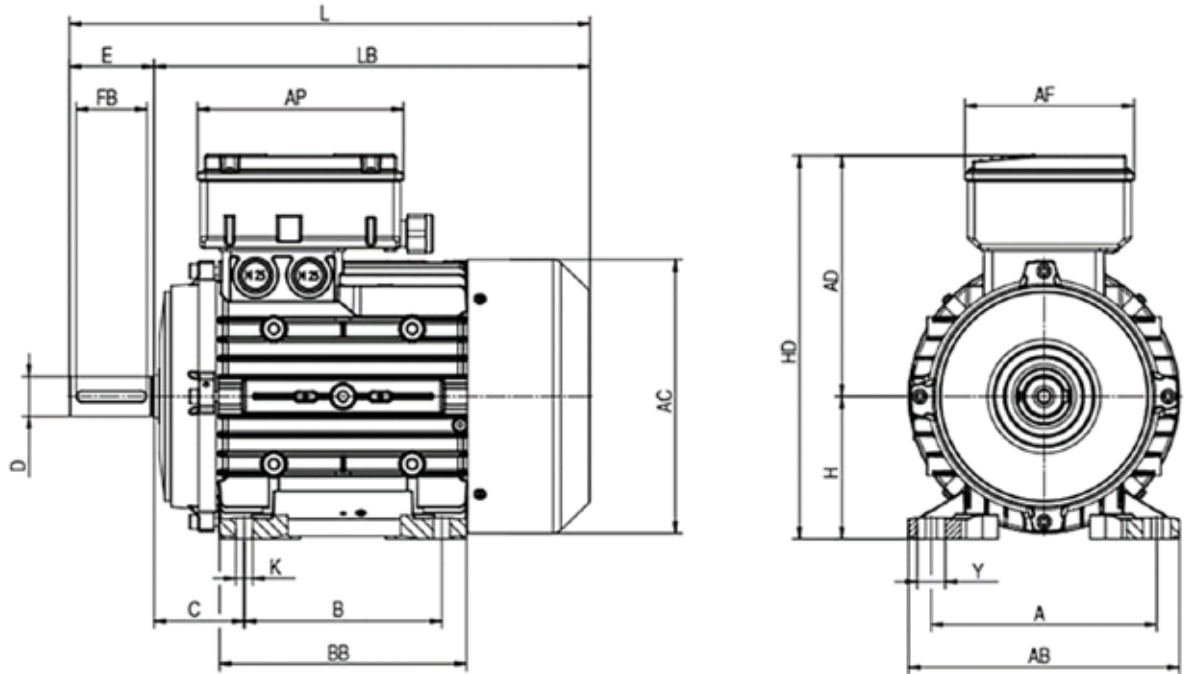
1500rpm , 4 poles, 230V; 50Hz, S1 - Thermal class F; temperature rise class B

Type	Rated Power		Rated current at 230V	Rated speed	Rated Torque	efficiency full load	efficiency 3/4 load	efficiency 1/2 load	Power factor	Starting current / Rated current	Starting torque / Rated torque	Breakdown torque / Rated torque	Running capacitor	Starting capacitor	Moment of inertia	Weight
	P _n		I _n	n	M _n	h	h	h	COS φ	I _s /I _n	M _s /M _n	M _b /M _n	C _r	C _r	J	
	kW	HP	A	min ⁻¹	Nm	%	%	%								
ME 63M B4	0,12	0,15	1,05	1390	0,82	59,1	52,1	41,5	0,850	2,4	1,5	1,7	5,0	16	0,280	4,3
ME 63M C4	0,18	0,25	1,26	1370	1,25	65,8	62,3	52,3	0,940	2,6	1,6	1,4	8,0	25	0,407	5,1
ME 71M A4	0,18	0,25	1,22	1420	1,21	67,7	62,2	51,9	0,940	3,4	1,6	2,0	10,0	30	0,970	6,7
ME 71M B4	0,25	0,35	1,60	1420	1,68	70,6	66,2	56,3	0,960	3,4	1,8	1,8	12,5	40	1,200	7,8
ME 71M C4	0,37	0,50	2,31	1410	2,51	72,7	68,1	58,6	0,960	3,2	1,5	1,7	16,0	50	1,260	8,6
ME 80M A4	0,55	0,75	3,15	1430	3,67	77,1	72,6	67,9	0,990	3,5	1,5	1,9	16,0	50	2,830	11,1
ME 80M B4	0,75	1,00	4,25	1420	5,04	79,6	76,5	69,4	0,960	4,1	1,5	1,6	20,0	60	3,450	12,2
ME 90S A4	0,75	1,00	4,10	1420	5,04	79,6	78,6	70,8	0,960	3,2	1,4	1,7	35,0	80-100	3,330	14,4
ME 90L B4	1,10	1,50	6,00	1420	7,40	81,4	80,9	72,8	0,980	3,0	1,2	1,6	40,0	100-125	4,100	16,0
ME 100L A4	1,50	2,00	8,65	1430	10,01	82,8	81,8	78,1	0,910	4,2	1,0	2,1	40,0	100-125	6,351	25,0

Single Phase Motors Dimensions TYPE ME (Running capacitor)

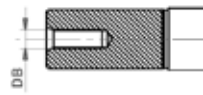
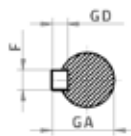
Capacitor into the terminal box

B3



Tolerances (DIN 748 - 7160 - 7161 - 42948)

D	≤ 28 mm	j6
	38 ÷ 50 mm	k6
	> 50 mm	m6
N	≤ 230 mm	j6
	> 230 mm	h6
H	≤ 250 mm	+0 / -0,5 mm
	> 250 mm	+0 / -1 mm



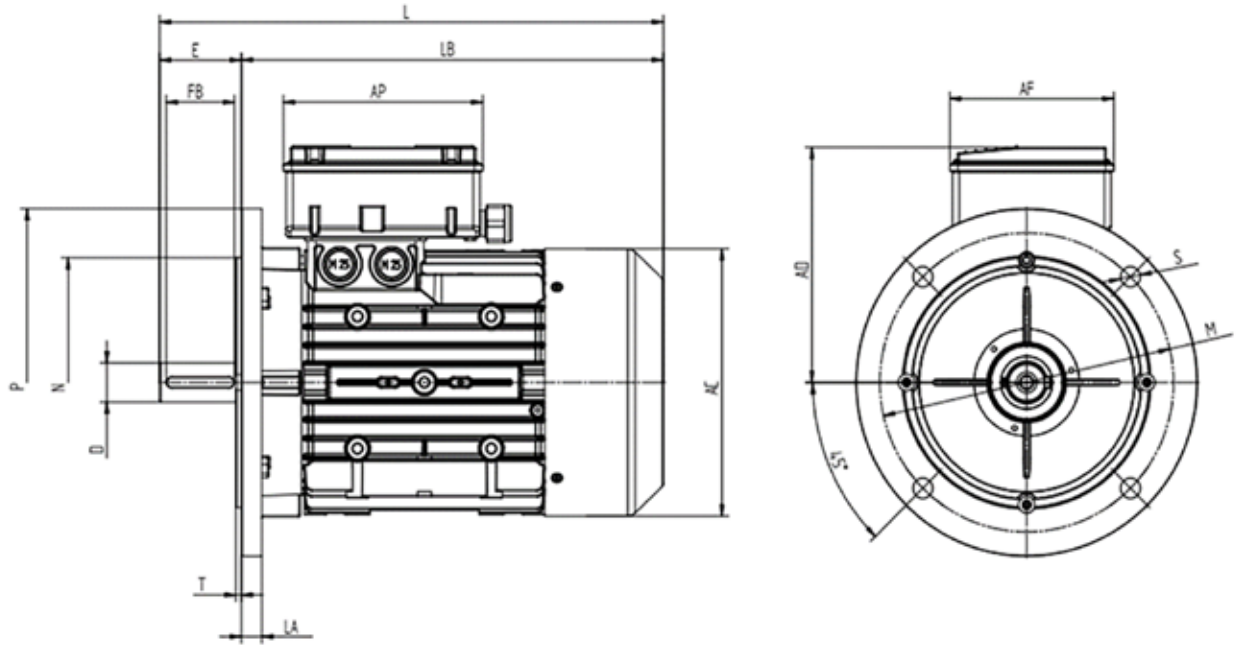
Dimensions in mm

IEC Frame	A	AB	B	BB	C	D	E	H	HD	L	K	Y	AC	AD	AF	AP	F	FB	GA	GD	DB	LB
56M	90	108	71	90	36	9	20	56	172	188	6	11	115	116	92	121	3	15	10,2	3	M3	168
63M	100	120	80	105	40	11	23	63	184	210	7	12	123	121	92	121	4	15	12,5	4	M4	187
71M	112	136	90	108	45	14	30	71	201	242	7	12	141	130	92	121	5	20	16	5	M5	212
80M	125	155	100	125	50	19	40	80	233	280	10	17,5	158	153	120	146	6	30	21,5	6	M6	240
90S	140	170	100	130	56	24	50	90	246	304	10	17,5	176	156	120	146	8	40	27	7	M8	254
90L	140	170	125	155	56	24	50	90	246	330	10	17,5	176	156	120	146	8	40	27	7	M8	280
100L	160	192	140	175	63	28	60	100	270	370	12	20	192	170	120	146	8	50	31	7	M10	310

Single Phase Motors Dimensions TYPE ME (Running capacitor)

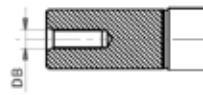
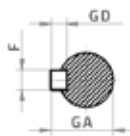
Capacitor into the terminal box

B5



Tolerances (DIN 748 - 7160 - 7161 - 42948)

D	≤ 28 mm	j6
	38 ÷ 50 mm	k6
	> 50 mm	m6
N	≤ 230 mm	j6
	> 230 mm	h6
H	≤ 250 mm	+0 / -0,5 mm
	> 250 mm	+0 / -1 mm



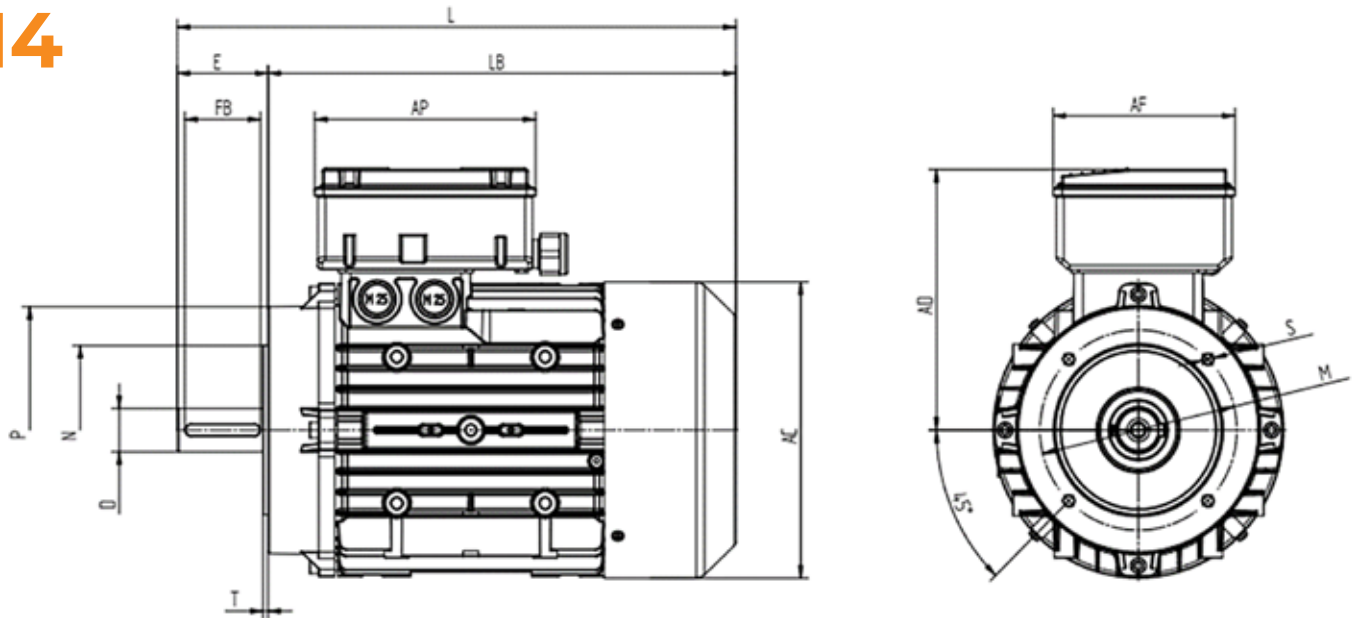
Dimensions in mm

IEC Frame	A	AB	B	BB	C	D	E	H	HD	L	K	Y	AC	AD	AF	AP	F	FB	GA	GD	DB	LB	P_B5	N_B5	M_B5	T_B5	S_B5	LA_B5
56M	90	108	71	90	36	9	20	56	172	188	6	11	115	116	92	121	3	15	10,2	3	M3	168	120	80	100	3	7	8
63M	100	120	80	105	40	11	23	63	184	210	7	12	123	121	92	121	4	15	12,5	4	M4	187	140	95	115	3	8,5	10
71M	112	136	90	108	45	14	30	71	201	242	7	12	141	130	92	121	5	20	16	5	M5	212	160	110	130	3	10	9,5
80M	125	155	100	125	50	19	40	80	233	280	10	17,5	158	153	120	146	6	30	21,5	6	M6	240	200	130	165	3,5	12	10,5
90S	140	170	100	130	56	24	50	90	246	304	10	17,5	176	156	120	146	8	40	27	7	M8	254	200	130	165	3	12	11,5
90L	140	170	125	155	56	24	50	90	246	330	10	17,5	176	156	120	146	8	40	27	7	M8	280	200	130	165	3	12	11,5
100L	160	192	140	175	63	28	60	100	270	370	12	20	192	170	120	146	8	50	31	7	M10	310	250	180	215	4	14,5	15

Single Phase Motors Dimensions TYPE ME (Running capacitor)

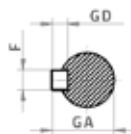
Capacitor into the terminal box

B14



Tolerances (DIN 748 - 7160 - 7161 - 42948)

D	≤ 28 mm	j6
	38 ÷ 50 mm	k6
	> 50 mm	m6
N	≤ 230 mm	j6
	> 230 mm	h6
H	≤ 250 mm	+0 / -0,5 mm
	> 250 mm	+0 / -1 mm



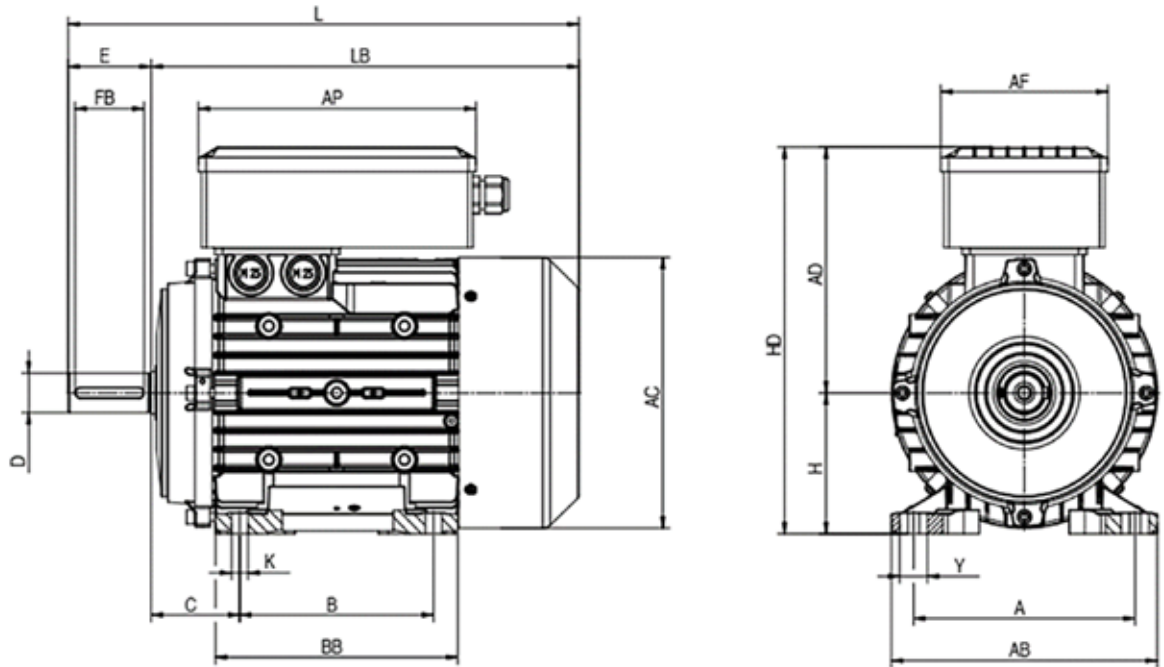
Dimensions in mm

IEC Frame	A	AB	B	BB	C	D	E	H	HD	L	K	Y	AC	AD	AF	AP	F	FB	GA	GD	DB	LB	P_B14	N_B14	M_B14	T_B14	S_B14
56M	90	108	71	90	36	9	20	56	172	188	6	11	115	116	92	121	3	15	10,2	3	M3	168	80	50	65	2,5	M5
63M	100	120	80	105	40	11	23	63	184	210	7	12	123	121	92	121	4	15	12,5	4	M4	187	90	60	75	2,5	M5
71M	112	136	90	108	45	14	30	71	201	242	7	12	141	130	92	121	5	20	16	5	M5	212	105	70	85	2,5	M6
80M	125	155	100	125	50	19	40	80	233	280	10	17,5	158	153	120	146	6	30	21,5	6	M6	240	120	80	100	3	M6
90S	140	170	100	130	56	24	50	90	246	304	10	17,5	176	156	120	146	8	40	27	7	M8	254	140	95	115	3	M8
90L	140	170	125	155	56	24	50	90	246	330	10	17,5	176	156	120	146	8	40	27	7	M8	280	140	95	115	3	M8
100L	160	192	140	175	63	28	60	100	270	370	12	20	192	170	120	146	8	50	31	7	M10	310	160	110	130	3,5	M8

Single Phase Motors Dimensions TYPE MEH (Running and starting capacitor, high starting torque)

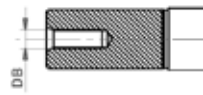
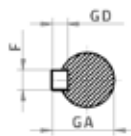
Capacitor into the terminal box

B3



Tolerances (DIN 748 - 7160 - 7161 - 42948)

D	≤ 28 mm	j6
	38 ÷ 50 mm	k6
	> 50 mm	m6
N	≤ 230 mm	j6
	> 230 mm	h6
H	≤ 250 mm	+0 / -0,5 mm
	> 250 mm	+0 / -1 mm



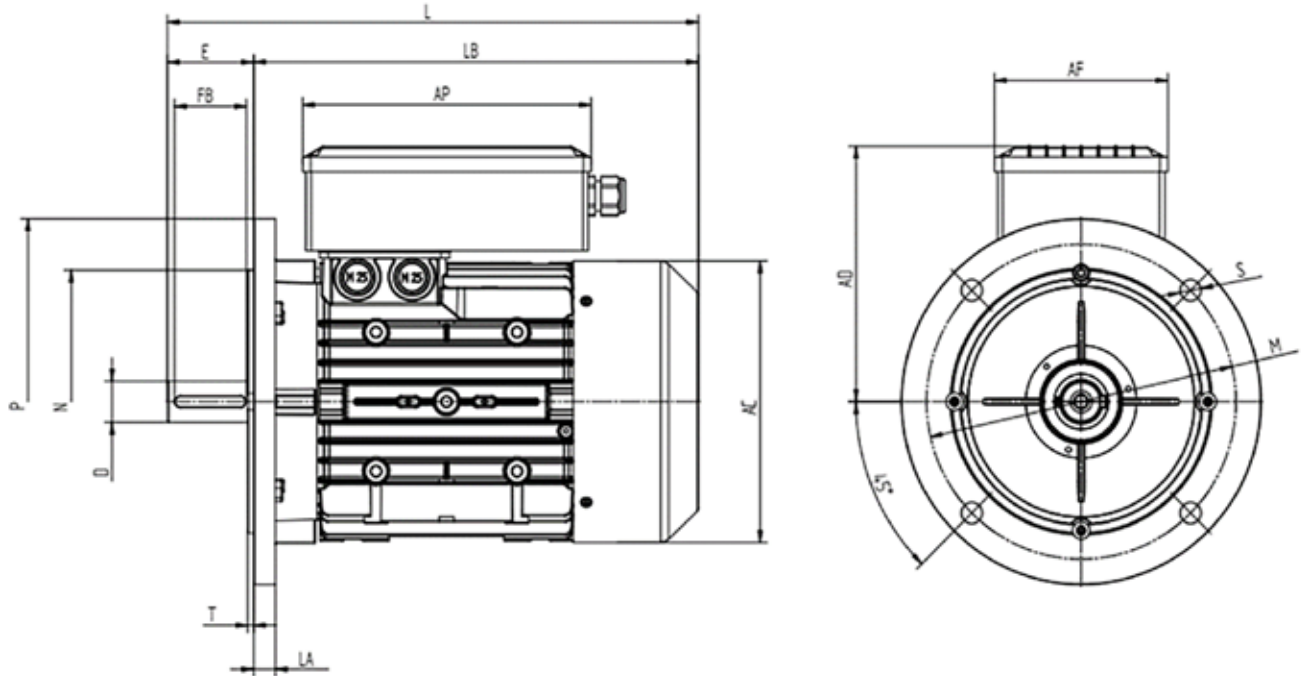
Dimensions in mm

IEC Frame	A	AB	B	BB	C	D	E	H	HD	L	K	Y	AC	AD	AF	AP	F	FB	GA	GD	DB	LB
56M	90	108	71	90	36	9	20	56	186	188	6	11	115	130	120	146	3	15	10,2	3	M3	168
63M	100	120	80	105	40	11	23	63	198	210	7	12	123	135	120	146	4	15	12,5	4	M4	187
71M	112	136	90	108	45	14	30	71	215	242	7	12	141	144	120	146	5	20	16	5	M5	212
80M	125	155	100	125	50	19	40	80	240	280	10	17,5	158	160	121	201	6	30	21,5	6	M6	240
90S	140	170	100	130	56	24	50	90	254	304	10	17,5	176	164	121	201	8	40	27	7	M8	254
90L	140	170	125	155	56	24	50	90	254	330	10	17,5	176	164	121	201	8	40	27	7	M8	280
100L	160	192	140	175	63	28	60	100	275	370	12	20	192	175	121	201	8	50	31	7	M10	310

Single Phase Motors Dimensions TYPE MEH (Running and starting capacitor, high starting torque)

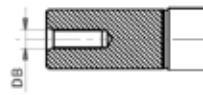
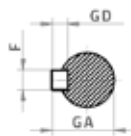
Capacitor into the terminal box

B5



Tolerances (DIN 748 - 7160 - 7161 - 42948)

D	≤ 28 mm	j6
	38 ÷ 50 mm	k6
	> 50 mm	m6
N	≤ 230 mm	j6
	> 230 mm	h6
H	≤ 250 mm	+0 / -0,5 mm
	> 250 mm	+0 / -1 mm



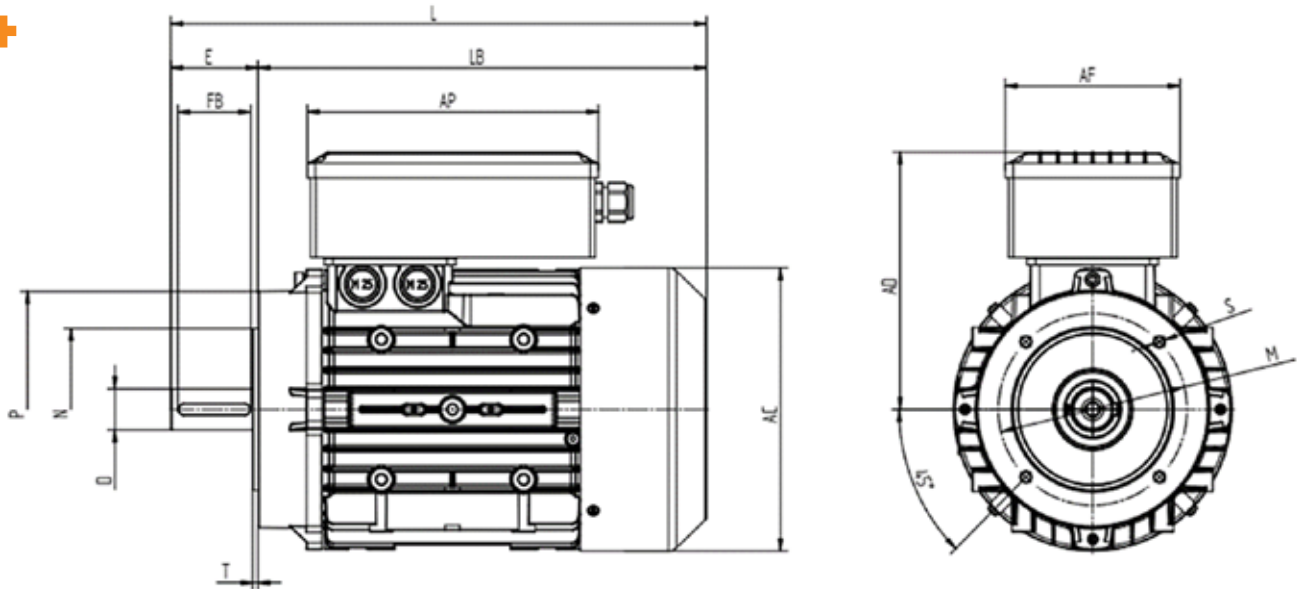
Dimensions in mm

IEC Frame	A	AB	B	BB	C	D	E	H	HD	L	K	Y	AC	AD	AF	AP	F	FB	GA	GD	DB	LB	P_B5	N_B5	M_B5	T_B5	S_B5	LA_B5
56M	90	108	71	90	36	9	20	56	186	188	6	11	115	130	120	146	3	15	10,2	3	M3	168	120	80	100	3	7	8
63M	100	120	80	105	40	11	23	63	198	210	7	12	123	135	120	146	4	15	12,5	4	M4	187	140	95	115	3	8,5	10
71M	112	136	90	108	45	14	30	71	215	242	7	12	141	144	120	146	5	20	16	5	M5	212	160	110	130	3	10	9,5
80M	125	155	100	125	50	19	40	80	240	280	10	17,5	158	160	121	201	6	30	21,5	6	M6	240	200	130	165	3,5	12	10,5
90S	140	170	100	130	56	24	50	90	254	304	10	17,5	176	164	121	201	8	40	27	7	M8	254	200	130	165	3	12	11,5
90L	140	170	125	155	56	24	50	90	254	330	10	17,5	176	164	121	201	8	40	27	7	M8	280	200	130	165	3	12	11,5
100L	160	192	140	175	63	28	60	100	275	370	12	20	192	175	121	201	8	50	31	7	M10	310	250	180	215	4	14,5	15

Single Phase Motors Dimensions TYPE MEH (Running and starting capacitor, high starting torque)

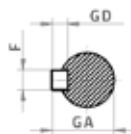
Capacitor into the terminal box

B14



Tolerances (DIN 748 - 7160 - 7161 - 42948)

D	≤ 28 mm	j6
	38 ÷ 50 mm	k6
	> 50 mm	m6
N	≤ 230 mm	j6
	> 230 mm	h6
H	≤ 250 mm	+0 / -0,5 mm
	> 250 mm	+0 / -1 mm



Dimensions in mm

IEC Frame	A	AB	B	BB	C	D	E	H	HD	L	K	Y	AC	AD	AF	AP	F	FB	GA	GD	DB	LB	P B14	N B14	M B14	T B14	S B14
56M	90	108	71	90	36	9	20	56	186	188	6	11	115	130	120	146	3	15	10,2	3	M3	168	80	50	65	2,5	M5
63M	100	120	80	105	40	11	23	63	198	210	7	12	123	135	120	146	4	15	12,5	4	M4	187	90	60	75	2,5	M5
71M	112	136	90	108	45	14	30	71	215	242	7	12	141	144	120	146	5	20	16	5	M5	212	105	70	85	2,5	M6
80M	125	155	100	125	50	19	40	80	240	280	10	17,5	158	160	121	201	6	30	21,5	6	M6	240	120	80	100	3	M6
90S	140	170	100	130	56	24	50	90	254	304	10	17,5	176	164	121	201	8	40	27	7	M8	254	140	95	115	3	M8
90L	140	170	125	155	56	24	50	90	254	330	10	17,5	176	164	121	201	8	40	27	7	M8	280	140	95	115	3	M8
100L	160	192	140	175	63	28	60	100	275	370	12	20	192	175	121	201	8	50	31	7	M10	310	160	110	130	3,5	M8



ORANGE1
Electric Motors Spa

Administrative Headquarter

Piazza della Repubblica 28
20124 - Milano Italy

Production plants

Via Angelo Messedaglia 4
32030 - Arsìè (BL) Italy
T. +39 0439 750067
F. +39 0439 750070

Via A. Grandi. 23
47030 - San Mauro Pascoli (FC) Italy
T. +39 0541 815611
F. +39 0541 815684

Via Mantova nr. 93
43122 Parma (PR) Italy
T. +39 0521 272383
F. +39 0521 272686

info@orange1.eu
www.orange1.eu

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