

W21

Aluminium Multimounting
Three-phase Electric Motors
European Market



Motors | Automation | Energy | Transmission & Distribution | Coatings

W21 Aluminium Multimounting - Three-Phase Induction Motors

Looking for the optimum solution to satisfy a diversity of requirements and applications, WEG offers its W21 Aluminium Multimounting three phase motor platform. Recognised for their high quality, reliability and flexibility, these motors are utilised throughout the world in a variety of industrial applications.

Standard Features

- Rated output: 0,12 to 37 kW
- Number of poles: 2, 4, 6 and 8
- Frame sizes IEC 63 to 200M/L
- Efficiency levels IE2, IE3 or IE4
- Ambient Temperature Range: -20°C to +40°C
- Frequency: 50 Hz
- Voltage at 50 Hz: 220-240/380-415 V (up to 100 L)
380-415/660 V (from 112M and up);
- Insulation class F (DT 80 K)
- Design N
- Degree of protection: IP55
- Cooling method: IC411 according to DIN EN 60034-6
- Mounting: B3T
- Frame material: Die cast aluminium
- Endshields material: FC-200 cast iron
- Terminal box material: Aluminium
- Terminal block for motor connection
- Grounding: Simple grounding inside the terminal box
- Fan Material: Polypropylene
- Fan Cover Material: Steel plate
- Drain: Plastic drain plug
- V-ring seal on both endshields
- Shaft material: SAE 1040/45
- ZZ Ball bearings
- Eyebolts for frames 112M to 200L
- Painting Plan: WEG internal painting plans 207A semi-matt (frames 63 up to 132) and 203A semi-gloss (frames 160 up to 200), both meeting the 'C2' performance criteria defined in the DIN EN ISO 12944-2 standard
- Thermal Protection: Thermistors PTC (155 °C) in windings for frames 160 up to 200
- WISE® Insulation System - Suitable for frequency inverter operation*

*For further information about frequency inverter operation, please contact WEG.

Optional Features

- Number of poles: 10, 12 or multispeed motors
- Non standard voltages
- Insulation Class H
- Thermal protections: Thermostats, Thermistors (PTC) or Thermoresistances (Pt-100) in windings
- Space Heaters
- Higher degrees of protection, up to IP66
- Forced ventilation, encoders or brakes
- Other mounting configurations, including foot/flange, flange, pad
- Accessories terminal box
- Cable glands
- Canopy for vertical shaft down applications
- Fan material: Conductive plastic, aluminium
- Shaft material: Stainless steel
- Double shaft end
- Painting plans for aggressive environments e.g. C5M / C5I acc. ISO 12944
- Internal anticorrosive epoxy painting

Features and Benefits

Reliability

WEG W21 Aluminium Motors are the result of high technological design, premium quality components and a wide application experience. Recognized for its quality, reliability and efficiency, the W21 Aluminium motor range incorporates the benefits of the W22 General Purpose cast iron line but with a lightweight construction and the with the flexibility offered by its multi-mounting mechanical design.

Flexible Construction

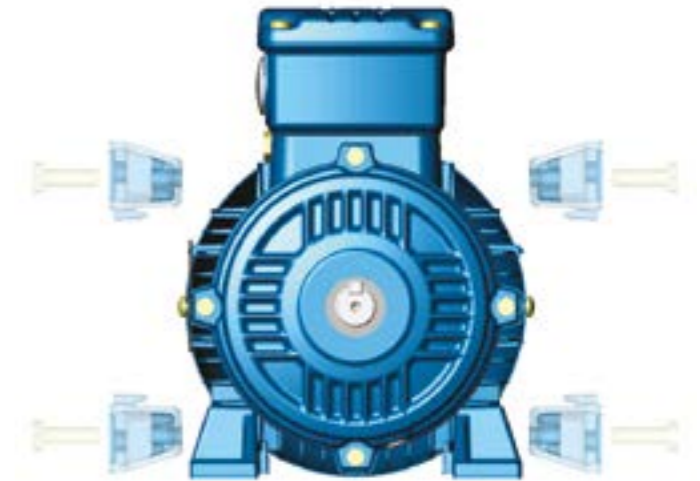
The W21 Aluminium motor line was developed in response to Market requirements regarding mounting flexibility. Consequently, and as its name suggests, the design incorporates a multimount feature which permits the motor to be mounted with the terminal box oriented on the top or on either side. Additionally, the motor terminal box can be rotated in 90° increments, permitting connection of the incoming power cables in any position. This unique system enables the mounting configuration to be easily changed with no machining or modification to the motor feet required.

Furthermore, the innovative design of the W21 Aluminium Multimounting line offers the additional advantage on standardization and stock flexibility, considering that a single motor may be utilised for all mounting possibilities whilst also offering full interchangeability with existing cast iron frame motors.

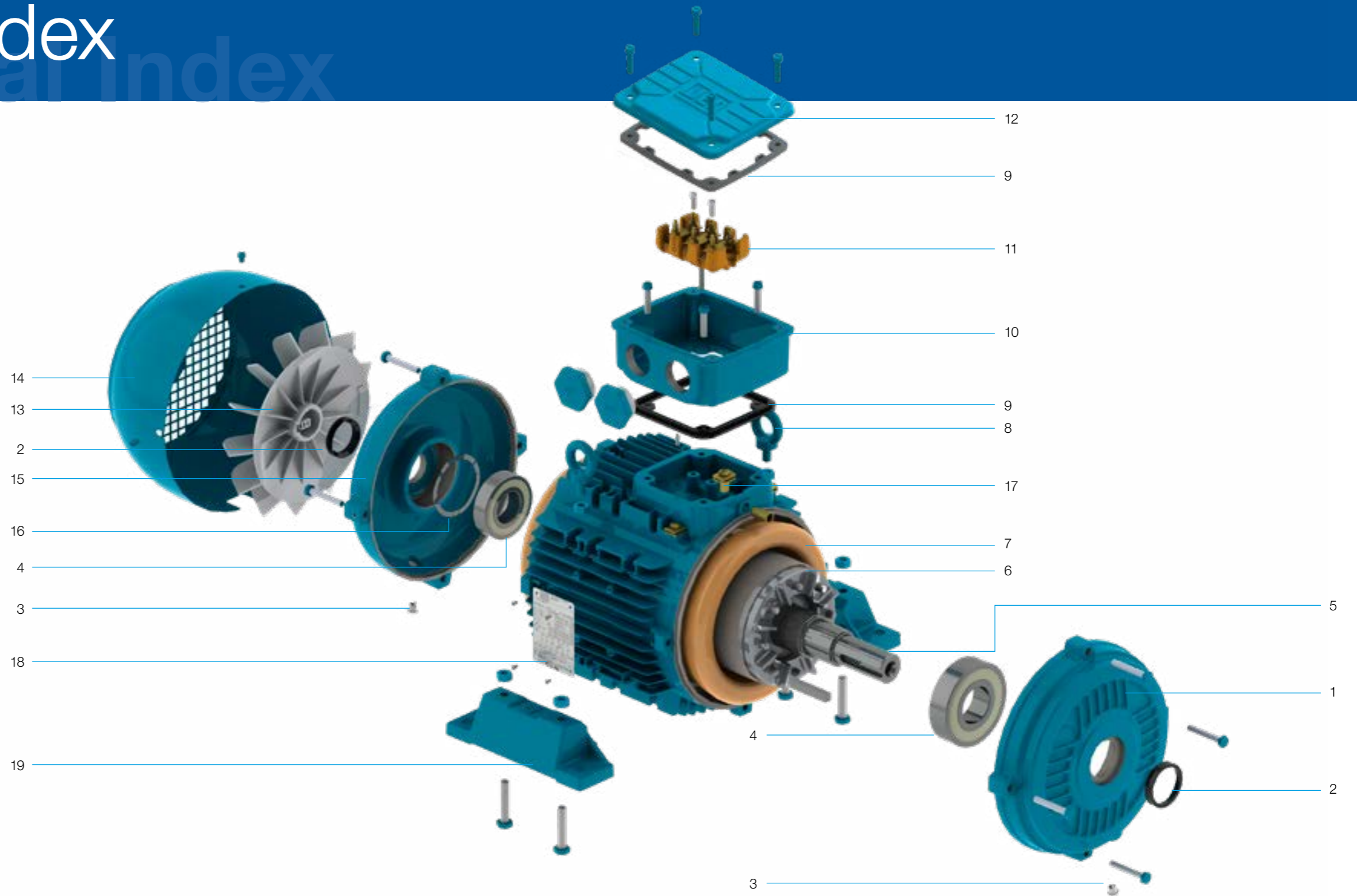
Definite Purpose Designs

Complimenting what is already a comprehensive range of industrial motors, the W21 aluminium multi-mounting line features, besides the standard version, several definite purpose derived designs, such as Brake Motors, Single Phase Motors, Marine Motors and TEAO (IC 418) Motors for Fan & Exhaust applications.

These definite purpose designs are perfectly adapted to suit all application needs, and incorporate the same reliability, easy maintenance, reduced energy consumption and flexibility offered by the standard W21 Aluminium Multi-mounting line.



Visual Index



- 1 - Drive endshield
- 2 - Bearing seal (v'ring)
- 3 - Drain plug
- 4 - Bearings
- 5 - Shaft

- 6 - Squirrel cage rotor
- 7 - Wound stator
- 8 - Eye bolts
- 9 - Rubber gasket
- 10 - Terminal box

- 11 - Terminal block
- 12 - Terminal box cover
- 13 - Cooling Fan
- 14 - Fan cover
- 15 - Non-drive endshield

- 16 - Spring washer
- 17 - Grounding terminal
- 18 - Nameplate
- 19 - Removable feet

Construction Features

Frame	63	71	80	90S/L	100L	112M	132S	132M	S132S	160M/L	180M/L	200M/L		
Mechanical features														
Nameplate markings	CE, UR, CSA, EAC													
Mounting	B3T													
Frame Material	Aluminum													
Degree of Protection (IP rating)	IP55													
Grounding	Single Grounding													
Cooling Method (IC)	Totally enclosed fan cooled (IC411)													
Fan Material	Plastic													
Fan Cover Material	Steel plate													
Endshields Material	FC-200 Cast Iron													
Drain	Plastic drain plug													
Bearings	Shielded/Clearance (DE)	ZZ										ZZ-C3		
	Shielded/Clearance (NDE)	ZZ										ZZ-C3		
	Locating bearing configuration	None, fitted with spring washer in the NDE												
	Drive End	6201	2P	6203	6204	6205	6206	6307	6308	6308	6308	6309	6311	6312
	4 - 12P		6202	6203	6204	6205	6206	6207	6207	6207	6207	6209	6211	6212
Non drive end	6201	2P												
4 - 12P														
Bearing Seal	V'ring													
Joint Seal	None													
Lubrication	Grease type	Mobil Polyrex EM												
	Grease fitting	Without grease fitting												
Terminal block	BMC - 6-pins													
Terminal box material	Die cast aluminium													
Cable entries	Main	Size	2 x M20 x 1.5			2 x M25 x 1.5			2 x M32 x 1.5			2 x M40 x 1.5	2 x M50 x 1.5	
	Plug		Plastic plug for transport and storage											
Shaft	Material		SAE 1040/45											
	DE Threaded hole	2P	M4	M5	M6	M8	M10		M12		M16	M20		
	4 - 12P													
Vibration level	Grade A													
Balancing	2P	Without balance				With 1/2 key								
	4 - 12P	Without balance				With 1/2 key								
Nameplate material	Stainless steel AISI 304													
Painting	Type	207 A										203 A		
	Performance Criteria	Corrosive category C2 according to DIN EN ISO 12944-2												
	Colour	RAL 5009												
Electrical features														
Design	N													
Voltage / Frequency	220-240/380-415//440-460 V (50 // 60Hz)					380-415/660//440-460 V (50 // 60Hz)								
	380V with 3 terminals (IE4)					380V with 6 terminals (IE4)								
Winding	Impregnation	Dip and bake												
	Insulation class	F (DT 80K)												
Service factor	1.00													
Rotor	Aluminium die cast													
Thermal protection	Without thermal protection										Thermistor PTC, 1 per phase, for tripping at 155 °C			

Optional Features

Frame	63	71	80	90S/L	100L	112M	132S	132M	S132S	160M/L	180M/L	200M/L
Mechanical options												
Cable glands												
Plastic cable gland	0	0	0	0	0	0	0	0	0	0	0	0
Flange												
Flange FF	0	0	0	0	0	0	0	0	0	0	0	0
Flange C-DIN	0	0	0	0	0	0	0	0	0	NA	NA	NA
Cooling fan												
Conductive plastic	0	0	0	0	0	0	0	0	0	0	0	0
Aluminium	0	0	0	0	0	0	0	0	0	0	0	0
Bearings												
2RS ball bearings at both ends	0	0	0	0	0	0	0	0	0	NA	NA	NA
bearing cap	NA	0	0	0	0	0	0	0	0	P	P	P
C3	NA	NA	NA	E	E	E	E	E	E	0	0	0
Shaft sealing												
Nitrilic rubber lip seal	0	0	0	0	0	0	0	0	0	0	0	0
Nitrilic rubber oil seal	0	0	0	0	0	0	0	0	0	0	0	0
Other sealing												
Joints sealing with Loctite 5923 (permatex)	0	0	0	0	0	0	0	0	0	0	0	0
Degree of protection												
IP56	0	0	0	0	0	0	0	0	0	0	0	0
Shaft												
Second shaft end	0	0	0	0	0	0	0	0	0	0	0	0
Grease / Lubrication												
Grease - Aeroshell 22	0	0	0	0	0	0	0	0	0	0	0	0
Polyrea Ester Oil (WT/ENS)	0	0	0	0	0	0	0	0	0	0	0	0
Other options												
Double grounding (1 in terminal box + 1 frame)	0	0	0	0	0	0	0	0	0	0	0	0
Nameplates												
Direction of Rotation plate	0	0	0	0	0	0	0	0	0	0	0	0
Drip cover (recommended for vertical shaft down applications)	0	0	0	0	0	0	0	0	0	E	E	E
Painting Plan												
203A	0	0	0	0	0	0	0	0	0	P	P	P
205E	0	0	0	0	0	0	0	0	0	0	0	0
205P	0	0	0	0	0	0	0	0	0	0	0	0
Internal Tropicalized Painting												
Complete (200h)	0	0	0	0	0	0	0	0	0	0	0	0
According to IEEE 841 (96h)	0	0	0	0	0	0	0	0	0	0	0	0
Only rotor	0	0	0	0	0	0	0	0	0	0	0	0
Key												
C Key	0	0	0	0	0	0	0	0	0	0	0	0
Without key	0	0	0	0	0	0	0	0	0	0	0	0
Without keyway	0	0	0	0	0	0	0	0	0	0	0	0
Electrical options												
Direction of rotation												
Clockwise	0	0	0	0	0	0	0	0	0	0	0	0
Counterclockwise	0	0	0	0	0	0	0	0	0	0	0	0
Thermal Protection												
Bimetal thermal protector - 155°C Tripping	0	0	0	0	0	0	0	0	0	0	0	0
PTC Thermistor - 155°C - Tripping	0	0	0	0	0	0	0	0	0	P	P	P
Space heaters												
220-240 V	0	0	0	0	0	0	0	0	0	0	0	0
110-127 / 220-240 V	NA	NA	NA	NA	NA	0	0	0	0	0	0	0
Service factor												
Service factor 1.15	0	0	0	0	0	0	0	0	0	0	0	0
Insulation class												
F (DT=105K)	0	0	0	0	0	0	0	0	0	0	0	0

Note: P= Standard; O=Optional; E=Special; NA=Not available

IE4 - Super Premium Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current I/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm ²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	380 V						Full load current In (A)
								% of full load											
								Efficiency					Power Factor						
kW	HP	Hot	Cold	50	75	100	50	75	100										
II Poles																			
0.18	0.25	63	0.064	4.2	2.8	2.6	0.0002	47	103	6.6	52	2745	70.0	73.0	70.8	0.59	0.72	0.81	0.477
0.25	0.33	63	0.087	4.9	3.8	3.5	0.0002	34	75	6.8	52	2790	69.2	73.8	74.3	0.49	0.63	0.73	0.700
0.37	0.5	71	0.126	6.8	4.2	4.1	0.0004	35	77	9.5	56	2855	73.4	77.4	78.1	0.59	0.72	0.80	0.900
0.55	0.75	71	0.189	6.2	3.9	3.7	0.0005	29	64	11.5	56	2830	78.7	80.9	81.5	0.63	0.76	0.83	1.24
0.75	1	80	0.256	7.4	4.2	3.8	0.0009	39	86	11.8	59	2855	82.0	83.7	83.5	0.62	0.74	0.81	1.68
1.1	1.5	L80	0.375	7.5	4.7	4.2	0.0011	30	66	19.0	59	2860	83.2	84.7	85.2	0.60	0.72	0.80	2.45
1.5	2	90S/L	0.503	9.1	4.4	4.5	0.0026	20	44	21.5	62	2905	81.6	84.4	86.5	0.63	0.74	0.81	3.25
2.2	3	L90S/L	0.740	9.2	4.8	4.7	0.0033	16	35	31.5	62	2895	83.9	86.0	88.0	0.63	0.75	0.82	4.63
3	4	L100L	0.997	11.0	4.6	5.3	0.0075	18	40	35.3	67	2930	87.1	89.0	89.1	0.65	0.77	0.84	6.09
4	5.5	L12M	1.34	9.0	3.4	4.3	0.0094	26	57	42.6	62	2910	89.0	90.1	90.0	0.67	0.78	0.84	8.04
5.5	7.5	S132S	1.82	9.0	2.9	3.9	0.0216	28	62	56.2	63	2950	88.3	90.0	90.9	0.70	0.80	0.85	10.8
7.5	10	L132S	2.48	9.9	3.3	4	0.0306	22	48	66.0	63	2950	89.9	91.2	91.7	0.74	0.83	0.87	14.3
11	15	L160M/L	3.63	8.1	3.2	4.2	0.0501	24	53	110	70	2950	90.2	91.4	92.6	0.64	0.76	0.82	22.0
15	20	L160M/L	4.95	8.8	3.5	4.3	0.0641	18	40	118	70	2950	91.2	92.1	93.3	0.65	0.77	0.83	29.4
18.5	25	L160M/L	6.11	8.2	3.3	4	0.0722	17	37	125	70	2950	92.5	92.9	93.7	0.70	0.80	0.85	35.3
22	30	L180M/L	7.24	9.3	3.7	3.6	0.1237	21	46	170	70	2960	93.2	93.8	94.0	0.70	0.80	0.84	42.3
30	40	L200M/L	9.84	8.5	3.5	3.5	0.2115	30	66	212	74	2970	92.9	93.9	94.5	0.67	0.78	0.83	58.1
37	50	L200M/L	12.2	8.1	3.3	3.3	0.2368	25	55	242	74	2965	93.6	94.3	94.8	0.71	0.80	0.84	70.6
High-Output Design																			
5.5	7.5	L132S	1.82	9.0	2.9	3.9	0.0216	28	62	56.2	63	2950	88.3	90.0	90.9	0.70	0.80	0.85	10.8
IV Poles																			
0.12	0.16	63	0.084	3.8	2.5	2.5	0.0006	94	207	6.9	44	1400	58.1	63.8	69.8	0.49	0.61	0.70	0.373
0.18	0.25	63	0.125	4.3	2.9	2.8	0.0007	71	156	7.3	44	1405	63.2	68.2	74.7	0.46	0.59	0.69	0.531
0.25	0.33	71	0.173	4.9	3.2	3.1	0.0009	131	288	10.9	43	1405	70.3	74.4	77.9	0.47	0.59	0.67	0.728
0.37	0.5	80	0.249	7.5	3.7	3.8	0.0031	37	81	14.2	44	1445	74.0	77.8	81.1	0.57	0.70	0.78	0.889
0.55	0.75	L80	0.369	7.4	3.1	3.4	0.0037	30	66	18.5	44	1450	81.6	83.6	83.9	0.57	0.70	0.78	1.28
0.75	1	90S/L	0.502	7.0	2.6	3.1	0.0055	33	73	19.4	49	1455	83.2	85.1	85.7	0.58	0.71	0.78	1.70
1.1	1.5	L90S/L	0.734	8.4	3.4	4	0.0077	24	53	24.6	49	1460	84.1	86.3	87.2	0.53	0.67	0.75	2.56
1.5	2	100L	1.00	9.1	4.5	4.2	0.0097	33	73	25.8	53	1455	85.8	87.6	88.2	0.53	0.66	0.74	3.49
2.2	3	L100L	1.47	9.5	5.1	4.7	0.0120	25	55	37.0	53	1455	86.0	87.9	89.5	0.51	0.64	0.73	5.12
3	4	L112M	2.00	8.0	3	3.7	0.0206	36	79	45.5	56	1460	88.0	89.4	90.4	0.52	0.66	0.74	6.81
4	5.5	L132S	2.64	9.7	2.8	4	0.0563	28	62	73.6	56	1475	87.9	89.7	91.1	0.62	0.74	0.81	8.24
5.5	7.5	L132S	3.64	10.0	3	4.2	0.0638	18	40	76.8	56	1470	89.3	90.7	91.9	0.61	0.74	0.81	11.2
7.5	10	L160M/L	4.95	8.5	3.7	4.1	0.1120	26	57	116	67	1475	90.4	91.6	92.6	0.57	0.71	0.78	15.8
11	15	L180M/L	7.26	8.6	3.5	3.7	0.1827	38	84	132	64	1475	91.9	93.0	93.3	0.62	0.74	0.80	22.4
15	20	L180M/L	9.91	8.5	3.6	3.7	0.2088	29	64	142	64	1475	92.3	93.2	93.9	0.62	0.74	0.81	30.0
18.5	25	L180M/L	12.2	8.4	3.5	3.6	0.2437	26	57	170	64	1475	93.0	93.7	94.2	0.64	0.76	0.82	36.4
22	30	L200M/L	14.4	9.0	3.7	3.8	0.3743	28	62	233	69	1485	94.0	94.8	94.5	0.61	0.73	0.79	44.8
30	40	L200M/L	19.7	8.6	3.6	3.7	0.3979	20	44	250	69	1480	94.0	94.6	94.9	0.57	0.70	0.77	62.4
High-Output Design																			
0.75	1	90S/L	0.500	6.8	2.1	3.4	0.0049	16	35	17.5	49.0	1460	78.2	81.8	82.5	0.50	0.63	0.73	1.80
1.5	2	100L	1.01	7.8	2.5	3.4	0.0082	10	22	27.9	53.0	1445	84.0	85.3	85.3	0.54	0.67	0.76	3.34
3	4	L112M	2.01	8.1	2.3	3.1	0.0169	25	55	38.7	56.0	1455	86.3	87.7	87.7	0.56	0.69	0.76	6.50
5.5	7.5	L132M	3.66	8.5	2.4	3.4	0.0528	15	33	56.0	56.0	1465	90.0	90.7	90.7	0.67	0.79	0.85	10.3
7.5	10	L132M	4.99	8.5	2.5	3.4	0.0638	13	29	80.0	56.0	1465	87.5	90.0	90.6	0.67	0.78	0.84	14.2

Notes:
 (1) Efficiency values are given according to IEC 60034-2-1. They are calculated according to indirect method, with stray load losses determined by measurement.
 (2) With effect from 1st January 2017, IE2 motors placed onto the European Market and rated at 0.75 kW or above, must be used with a variable speed drive unless their design falls outside of the scope of the European Regulation or their final installation will be outside of the EU / EEA.
 (3) Motor with class F (105K) temperature rise.

IE4 - Super Premium Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current I/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm ²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	Rated speed (rpm)	380 V						Full load current In (A)
								% of full load											
								Efficiency					Power Factor						
kW	HP	Hot	Cold	50	75	100	50	75	100										
VI Poles																			
0.12	0.16	71	0.128	2.8	2.0	2.0	0.0007	216	475	9.5	43	910	54.8	60.6	64.9	0.38	0.48	0.56	0.502
0.18	0.25	71	0.193	3.1	2.3	2.2	0.0009	181	398	12.5	43	910	60.8	65.7	70.1	0.36	0.46	0.54	0.722
0.25	0.33	80	0.258	4.4	2.7	2.8	0.0027	58	128	13.2	43	945	65.9	70.1	74.1	0.46	0.58	0.68	0.754
0.37	0.5	L80	0.381	4.7	2.9	3	0.0037	46	101	15.8	43	945	71.9	74.8	78.0	0.44	0.57	0.67	1.08
0.55	0.75	90S/L	0.560	5.4	2.7	3.2	0.0066	44	97	20.7	45	957	77.2	80.6	80.9	0.45	0.58	0.65	1.59
0.75	1	L90S/L	0.769	5.3	2.6	2.9	0.0077	43	95	23.8	45	950	81.0	83.1	82.7	0.48	0.62	0.68	2.03
1.1	1.5	100L	1.12	5.3	2.5	2.7	0.0143	6	13	25.3	44	960	80.6	83.0	84.5	0.47	0.60	0.68	2.91
1.5	2	L100L	1.52	5.7	2.7	2.8	0.0176	50	110	31.5	44	960	82.0	84.0	85.9	0.47	0.60	0.69	3.85
2.2	3	L112M	2.23	6.2	2.7	2.9	0.0293	39	86	48.0	48	960	84.7	86.0	87.4	0.51	0.63	0.71	5.39
3	4	L132S	3.00	6.5	2.3	2.7	0.0568	68	150	60.8	52	973	85.6	87.0	88.6	0.52	0.64	0.72	7.15
4	5.5	L132S	4.00	7.1	2.6	2.9	0.0757	55	121	70.5	52	975	86.8	88.0	89.5	0.52	0.64	0.71	9.56
5.5	7.5	L160M/L	5.46	7.5	3.5	3.9	0.1544	23	51	119	56	982	87.2	89.6	90.5	0.50	0.64	0.73	12.6
7.5	10	L160M/L	7.44	7.7	3.7	4	0.1895	19	42	125	56	982	87.6	90.0	91.3	0.50	0.63	0.72	17.3
11	15	L180M/L	10.9	9.5	3.3	3.8	0.3381	18	40	172	56	980	91.2	92.0	92.3	0.65	0.77	0.83	21.8
15	20	L200M/L	14.8	6.8	2.6	3	0.4212	39	86	215	58	985	91.7	92.5	92.9	0.60	0.72	0.78	31.5
18.5	25	L200M/L	18.3	6.9	2.8	3.2	0.4896	32	70	230	58	985	92.7	93.3	93.4	0.55	0.68	0.76	39.6
22	30	L200M/L	21.8	6.8	2.7	3.1	0.5246	25	55	248	58	985	92.6	93.2	93.7	0.56	0.69	0.76	46.9
VIII Poles																			
0.12	0.16	80	0.168	2.6	1.9	1.9	0.0030	144	317	14.9	42	695	50.9	56.8	62.3	0.44	0.55	0.64	0.457
0.18	0.25	L80	0.256	2.8	1.8	1.7	0.0037	124	273	16.8	42	685	56.7	61.1	67.2	0.46	0.58	0.67	0.607
0.25	0.33	L90S/L	0.343	3.5	1.8	2.4	0.0071	154	339	22.5	43	710	64.0	69.9	70.8	0.38	0.48	0.56	0.958
0.37	0.5	100L	0.499	3.9	1.9	2.4	0.0077												

IE3 - Premium Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current II/In	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V								
								Rated speed (rpm)	% of full load						Full load current In (A)					
									Efficiency			Power Factor								
									50			75	100	50		75	100			
II Poles																				
0.18	0.25	63	0.060	5.5	2.6	3.0	0.0002	20	44	7.0	52.0	2730	64.0	66.0	66.0	0.54	0.68	0.78	0.505	
0.25	0.33	63	0.090	4.8	2.3	2.8	0.0002	15	33	7.2	52.0	2710	66.0	69.0	69.7	0.56	0.70	0.81	0.639	
0.37	0.5	71	0.130	6.3	3.0	3.5	0.0004	12	26	9.5	56.0	2840	73.0	74.5	74.5	0.63	0.70	0.79	0.907	
0.55	0.75	71	0.190	5.9	2.7	2.7	0.0005	15	33	11.2	56.0	2830	75.0	76.0	77.8	0.68	0.80	0.86	1.19	
0.75	1	80	0.250	7.5	3.3	3.4	0.0008	25	55	12.1	59.0	2870	80.0	82.0	81.0	0.61	0.74	0.82	1.63	
1.1	1.5	80	0.380	7.4	3.6	3.6	0.0009	23	51	13.5	59.0	2830	81.0	83.5	83.5	0.63	0.76	0.82	2.32	
1.5	2	90S/L	0.500	8.0	2.6	3.5	0.0020	15	33	19.5	62.0	2900	83.0	84.2	84.2	0.64	0.75	0.82	3.14	
2.2	3	90S/L	0.750	7.5	3.4	3.5	0.0026	12	26	22.0	62.0	2870	86.0	86.5	86.3	0.65	0.77	0.83	4.43	
3	4	100L	1.01	7.9	2.5	3.3	0.0064	9	20	32.7	67.0	2905	85.0	86.5	87.1	0.65	0.78	0.85	5.85	
4	5.5	112M	1.34	7.7	2.5	3.5	0.0080	14	31	42.6	62.0	2900	87.0	88.0	88.3	0.69	0.80	0.86	7.60	
5.5	7.5	132S	1.82	7.9	2.3	3.4	0.0216	14	31	59.3	63.0	2945	86.4	88.5	89.2	0.68	0.79	0.85	10.5	
5.5	7.5	S132S	1.82	7.9	2.3	3.4	0.0216	14	31	59.3	63.0	2945	86.4	88.5	89.2	0.68	0.79	0.85	10.5	
7.5	10	132S	2.48	8.8	2.8	3.9	0.0252	10	22	66.0	63.0	2950	87.0	89.0	90.1	0.63	0.76	0.83	14.5	
9.2	12.5	132M	3.05	8.5	3.0	3.8	0.0306	12	26	70.2	63.0	2940	88.2	90.0	90.7	0.62	0.75	0.82	17.9	
11	15	160M/L	3.63	9.2	3.1	3.8	0.0506	12	26	115	70.0	2955	88.5	90.5	91.2	0.70	0.80	0.85	20.5	
15	20	160M/L	4.95	9.0	2.8	3.4	0.0565	8	18	118	70.0	2950	89.0	90.5	91.9	0.67	0.78	0.83	28.4	
18.5	25	160M/L	6.12	8.8	3.1	3.4	0.0650	11	24	126	70.0	2945	90.0	91.0	92.4	0.71	0.81	0.85	34.0	
22	30	180M/L	7.24	8.3	2.5	3.2	0.1192	10	22	161	70.0	2960	92.0	92.7	92.7	0.69	0.80	0.85	40.3	
30	40	200M/L	9.85	7.6	2.4	2.7	0.2063	14	31	219	74.0	2965	92.0	93.0	93.3	0.76	0.84	0.87	53.3	
37	50	200M/L	12.2	7.3	2.2	2.8	0.2114	18	40	231	74.0	2960	92.5	93.5	93.7	0.74	0.82	0.85	67.1	
High-Output Design																				
0.75	1	90S/L	0.250	8.2	2.4	3.4	0.0015	15	33	15.0	62.0	2920	75.5	79.3	80.7	0.63	0.75	0.82	1.64	
1.1	1.5	90S/L	0.370	7.8	2.2	3.3	0.0018	12	26	17.1	62.0	2910	79.4	81.8	82.7	0.63	0.75	0.82	2.34	
4	5.5	132S	1.32	7.2	2.1	3.3	0.0180	19	42	56.2	63.0	2945	84.7	87.1	88.1	0.67	0.79	0.85	7.71	
4	5.5	S132S	1.32	7.2	2.1	3.3	0.0180	19	42	56.2	63.0	2945	84.7	87.1	88.1	0.67	0.79	0.85	7.71	
5.5	7.5	132M	1.82	7.9	2.3	3.4	0.0216	14	31	59.3	63.0	2945	86.4	88.5	89.2	0.68	0.79	0.85	10.5	
7.5	10	132M	2.48	8.8	2.8	3.9	0.0252	10	22	66.0	63.0	2950	87.0	89.0	90.1	0.63	0.76	0.83	14.5	
11	15	132M	3.65	7.7	2.8	3.4	0.0306	12	26	74.1	63.0	2935	89.3	90.0	91.2	0.70	0.81	0.86	20.2	
IV Poles																				
0.12	0.16	63	0.080	5.5	2.8	3.5	0.0004	20	44	7.3	44.0	1415	53.0	60.0	64.8	0.47	0.58	0.68	0.393	
0.18	0.25	63	0.130	4.3	2.2	2.2	0.0006	30	66	7.6	44.0	1380	65.0	67.0	69.9	0.53	0.63	0.72	0.516	
0.25	0.33	71	0.180	4.8	2.3	2.3	0.0007	30	66	10.7	43.0	1390	69.0	72.0	73.5	0.52	0.65	0.72	0.682	
0.37	0.5	71	0.260	4.8	2.9	3.0	0.0008	30	66	10.9	43.0	1395	76.3	76.8	77.3	0.45	0.60	0.69	1.00	
0.55	0.75	80	0.370	8.5	2.8	3.2	0.0026	18	40	16.2	44.0	1440	77.0	79.0	80.8	0.61	0.70	0.80	1.23	
0.75	1	80	0.510	7.0	3.2	3.4	0.0032	18	40	13.8	44.0	1430	80.0	82.0	82.5	0.59	0.71	0.80	1.64	
1.1	1.5	90S/L	0.740	7.6	2.5	3.3	0.0055	15	33	19.4	49.0	1455	83.0	84.5	84.8	0.57	0.70	0.78	2.40	
1.5	2	90S/L	1.01	7.4	2.6	3.0	0.0066	13	29	20.9	49.0	1445	84.0	85.0	85.5	0.58	0.72	0.79	3.21	
2.2	3	100L	1.49	7.6	2.5	3.0	0.0090	16	35	32.4	53.0	1435	85.0	86.5	86.7	0.55	0.68	0.78	4.70	
3	4	L100L	2.03	7.8	3.5	3.7	0.0120	15	33	37.0	53.0	1440	87.0	88.0	88.0	0.58	0.71	0.78	6.31	
4	5.5	112M	2.69	7.0	2.3	3.1	0.0182	15	33	39.9	56.0	1450	88.7	89.1	89.1	0.60	0.72	0.79	8.20	
5.5	7.5	132S	3.66	8.5	2.4	3.4	0.0528	15	33	56.0	56.0	1465	90.0	90.7	90.7	0.67	0.79	0.85	10.3	
5.5	7.5	S132S	3.66	8.5	2.4	3.4	0.0528	15	33	56.0	56.0	1465	90.0	90.7	90.7	0.67	0.79	0.85	10.3	
7.5	10	132M	4.99	8.5	2.5	3.4	0.0642	13	29	76.8	56.0	1465	87.5	90.0	90.6	0.67	0.78	0.84	14.2	
11	15	160M/L	7.29	8.0	3.2	3.4	0.1071	12	26	111	67.0	1470	88.3	90.0	91.4	0.57	0.70	0.78	22.3	
15	20	160M/L	9.97	7.1	2.6	2.8	0.1263	8	18	120	67.0	1465	89.2	90.2	92.1	0.64	0.76	0.82	28.7	
18.5	25	180M/L	12.2	8.3	3.0	3.2	0.2088	12	26	168	64.0	1474	91.0	92.2	92.6	0.63	0.75	0.82	35.2	
22	30	180M/L	14.6	8.5	3.2	3.6	0.2393	11	24	181	64.0	1470	91.5	92.5	93.0	0.64	0.76	0.82	41.6	
30	40	200M/L	19.8	7.0	3.2	3.4	0.3743	8	18	233	69.0	1475	92.5	93.6	93.6	0.63	0.75	0.81	57.1	
High-Output Design																				
0.75	1	90S/L	0.500	6.8	2.1	3.4	0.0049	16	35	17.5	49.0	1460	78.2	81.8	82.5	0.50	0.63	0.73	1.80	
1.5	2	100L	1.01	7.8	2.5	3.4	0.0082	10	22	27.9	53.0	1445	84.0	85.3	85.3	0.54	0.67	0.76	3.34	
3	4	112M	2.01	8.1	2.3	3.1	0.0169	25	55	38.7	56.0	1455	86.3	87.7	87.7	0.56	0.69	0.76	6.50	
5.5	7.5	132M	3.66	8.5	2.4	3.4	0.0528	15	33	56.0	56.0	1465	90.0	90.7	90.7	0.67	0.79	0.85	10.3	
7.5	10	L132M	4.99	8.5	2.5	3.4	0.0638	13	29	80.0	56.0	1465	87.5	90.0	90.6	0.67	0.78	0.84	14.2	

Notes:
 (1) Efficiency values are given according to IEC 60034-2-1. They are calculated according to indirect method, with stray load losses determined by measurement.
 (2) With effect from 1st January 2017, IE2 motors placed onto the European Market and rated at 0.75 kW or above, must be used with a variable speed drive unless their design falls outside of the scope of the European Regulation or their final installation will be outside of the EU / EEA.
 (3) Motor with class F (105K) temperature rise.

IE3 - Premium Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current II/In	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	380 V								
								Rated speed (rpm)	% of full load						Full load current In (A)					
									Efficiency			Power Factor								
									50			75	100	50		75	100			
II Poles																				
0.18	0.25	2705	65.0	66.0	66.0	0.58	0.72	0.82	0.505	2745	62.0	66.0	66.0	0.51	0.65	0.76	0.499			
0.25	0.33	2680	67.0	69.0	69.7	0.60	0.75	0.84	0.649	2730	64.0	68.0	69.7	0.53	0.68	0.78	0.640			
0.37	0.5	2825	73.6	74.3	73.8	0.68	0.79	0.81	0.940	2850	72.4	74.5	75.0	0.60	0.67	0.77	0.891			
0.55	0.75	2805	75.6	75.7	77.8	0.73	0.83	0.88	1.22	2845	74.4	76.0	77.8	0.64	0.77	0.84	1.17			
0.75	1	2855	80.0	80.5	80.7	0.66	0.78	0.85	1.66	2880	79.1	81.0	81.1	0.57	0.71	0.79	1.63			
1.1	1.5	2810	82.0	83.7	83.1	0.69	0.80	0.85	2.37	2840	80.0	83.0	83.4	0.58	0.72	0.79	2.32			
1.5	2	2885	83.7	84.2	84.2	0.69	0.79	0.84	3.22	2910	82.2	84.2	84.2	0.59	0.71	0.79	3.14			
2.2	3	2855	86.5	86.4	85.9	0.70	0.81	0.86	4.52	2880	85.3	86.4	86.5	0.61	0.74	0.81	4.37			
3	4	2895	84.5	86.0	87.1	0.71	0.82	0.88	5.95	2915	84.5	86.5	87.1	0.60	0.74	0.82	5.84			
4	5.5	2890	87.0	88.0	88.3	0.73	0.83	0.88	7.82	2910	87.0	88.0	88.3	0.65	0.77	0.84	7.50			
5.5	7.5	2940	86.9	88.0	89.2	0.73	0.83	0.88	10.6	2950	86.2	88.3	89.2	0.64	0.76	0.83	10.3			
5.5	7.5	S2940	86.9	88.0	89.2	0.73	0.83	0.88	10.6	2950	86.2	88.3	89.2	0.64	0.76	0.83	10.3			
7.5	10	2945	87.5	89.0	90.1	0.70	0.80	0.86	14.7	2955	86.0	88.5	90.1	0.59	0.72	0.80	14.5			
9.2	12.5																			

IE3 - Premium Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current II/In	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm ²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V						Full load current In (A)	
								Hot	Cold			Rated speed (rpm)	% of full load			Efficiency	Power Factor		
													50	75	100				50
VI Poles																			
0.12	0.16	63	0.130	3.1	2.1	2.3	0.0007	30	66	7.8	43.0	925	50.0	55.0	57.7	0.40	0.50	0.59	0.509
0.18	0.25	71	0.190	3.2	2.0	2.1	0.0009	30	66	10.5	43.0	900	56.0	62.0	63.9	0.38	0.48	0.57	0.713
0.25	0.33	80	0.250	4.3	1.7	2.4	0.0029	25	55	12.0	43.0	955	63.6	68.5	68.8	0.47	0.60	0.71	0.739
0.37	0.5	80	0.390	4.5	1.9	2.1	0.0025	25	55	13.9	43.0	925	66.0	69.5	73.5	0.51	0.65	0.75	0.969
0.55	0.75	L80	0.570	5.1	2.9	3.1	0.0034	20	44	18.0	43.0	945	70.5	75.2	77.2	0.45	0.58	0.69	1.49
0.75	1	90S/L	0.780	5.2	2.5	2.8	0.0066	31	68	21.4	45.0	940	76.5	79.0	79.0	0.49	0.62	0.71	1.93
1.1	1.5	100L	1.12	6.0	2.1	3.2	0.0110	18	40	25.3	44.0	960	77.0	80.0	81.0	0.50	0.62	0.70	2.80
1.5	2	112M	1.52	6.0	2.1	2.8	0.0202	28	62	35.8	49.0	960	84.5	85.5	85.5	0.51	0.63	0.71	3.57
2.2	3	S132S	2.20	6.5	2.2	2.6	0.0491	30	66	55.7	53.0	975	84.0	84.3	84.3	0.49	0.61	0.69	5.46
3	4	132S	3.01	6.0	1.9	2.5	0.0566	28	62	62.4	53.0	970	85.0	85.8	85.8	0.52	0.65	0.73	6.91
4	5.5	132M	4.06	6.5	2.2	2.5	0.0566	30	66	66.0	53.0	960	86.0	86.8	86.8	0.53	0.66	0.74	8.99
5.5	7.5	L132M	5.52	7.3	2.1	2.5	0.0755	26	57	73.2	53.0	970	86.0	87.0	88.0	0.50	0.64	0.72	12.5
7.5	10	160M/L	7.49	6.6	2.5	2.9	0.1614	19	42	117	54.0	975	86.0	88.5	89.1	0.61	0.74	0.80	15.2
11	15	160M/L	11.0	7.0	3.2	3.2	0.1689	13	29	123	54.0	977	87.5	89.4	90.3	0.54	0.68	0.76	23.1
15	20	180M/L	14.9	8.4	3.1	3.7	0.3310	8	18	174	56.0	980	90.0	91.2	91.2	0.61	0.74	0.81	29.3
18.5	25	200M/L	18.5	6.3	2.3	2.5	0.3861	17	37	206	58.0	975	90.5	91.8	92.0	0.67	0.78	0.82	35.4
22	30	200M/L	22.0	6.2	2.3	2.6	0.4388	15	33	219	58.0	975	90.4	92.0	92.2	0.65	0.75	0.82	42.0
High-Output Design																			
1.1	1.5	112M	1.10	7.5	2.2	3.7	0.0220	20	44	32.2	49.0	970	79.0	82.0	82.5	0.43	0.55	0.64	3.01
3	4	132M	3.01	6.0	1.9	2.5	0.0566	28	62	62.4	53.0	970	85.0	85.8	85.8	0.52	0.65	0.73	6.91
5.5	7.5	160M/L	5.47	6.7	2.2	2.9	0.1264	15	33	112	54.0	980	87.0	88.0	88.0	0.58	0.70	0.77	11.7
VIII Poles																			
0.12	0.16	71	0.180	2.4	1.6	1.8	0.0009	30	66	11.5	41.0	650	44.0	50.0	50.7	0.35	0.43	0.50	0.683
0.18	0.25	80	0.260	3.3	2.0	2.2	0.0029	30	66	15.0	42.0	680	51.0	57.0	58.7	0.45	0.55	0.65	0.681
0.25	0.33	80	0.350	3.5	2.0	2.2	0.0034	30	66	15.5	42.0	695	53.0	60.0	64.1	0.42	0.52	0.63	0.894
0.37	0.5	90S/L	0.520	3.7	2.1	2.4	0.0055	30	66	19.0	44.0	690	61.0	66.0	69.3	0.41	0.53	0.62	1.24
0.55	0.75	90S/L	0.780	3.6	1.8	2.1	0.0066	29	64	23.0	44.0	685	63.0	72.5	73.0	0.44	0.57	0.67	1.62
0.75	1	100L	1.03	4.6	1.9	2.3	0.0127	30	66	28.8	50.0	710	72.5	75.5	75.5	0.41	0.53	0.62	2.31
1.1	1.5	100L	1.51	4.6	1.9	2.0	0.0143	30	66	30.8	50.0	710	73.0	76.0	77.7	0.41	0.53	0.62	3.30
1.5	2	112M	2.07	5.0	2.5	2.8	0.0238	28	62	37.4	46.0	705	79.0	80.5	80.5	0.45	0.59	0.68	3.96
2.2	3	132S	3.02	6.2	2.3	2.5	0.0690	27	59	58.9	48.0	710	82.0	82.6	82.6	0.51	0.65	0.72	5.34
2.2	3	S132S	3.02	6.2	2.3	2.5	0.0690	27	59	58.9	48.0	710	82.0	82.6	82.6	0.51	0.65	0.72	5.34
3	4	132M	4.12	6.4	2.4	2.6	0.0838	21	46	66.2	48.0	710	82.5	83.5	83.5	0.51	0.64	0.72	7.20
4	5.5	160M/L	5.34	5.6	2.1	3.1	0.1221	15	33	97.3	53.0	730	81.0	83.0	84.8	0.48	0.61	0.70	9.73
5.5	7.5	160M/L	7.34	5.7	2.4	3.2	0.1652	20	44	112	53.0	730	84.0	86.0	86.2	0.49	0.62	0.71	13.0
7.5	10	160M/L	10.1	5.3	2.2	2.8	0.1652	19	42	121	53.0	725	86.0	87.0	87.3	0.54	0.66	0.73	17.0
11	15	180M/L	14.7	6.5	2.3	2.7	0.3034	13	29	158	51.0	730	88.6	88.6	88.6	0.55	0.68	0.76	23.6
15	20	200M/L	19.9	5.0	2.0	2.2	0.5023	28	62	228	56.0	735	89.5	90.5	90.9	0.53	0.65	0.71	33.5

Notes:
 (1) Efficiency values are given according to IEC 60034-2-1. They are calculated according to indirect method, with stray load losses determined by measurement.
 (2) With effect from 1st January 2017, IE2 motors placed onto the European Market and rated at 0.75 kW or above, must be used with a variable speed drive unless their design falls outside of the scope of the European Regulation or their final installation will be outside of the EU / EEA.
 (3) Motor with class F (105K) temperature rise.

IE3 - Premium Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current II/In	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm ²)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	380 V						Full load current In (A)
								Hot	Cold			Rated speed (rpm)	% of full load			Efficiency	Power Factor	
													50	75	100			
VI Poles																		
0.12	0.16	910	48.7	54.7	57.7	0.40	0.53	0.63	0.502	930	50.0	55.0	57.7	0.39	0.47	0.56	0.517	
0.18	0.25	885	57.7	62.8	63.9	0.43	0.55	0.64	0.669	910	54.5	61.2	63.9	0.38	0.48	0.57	0.688	
0.25	0.33	950	65.9	68.0	68.6	0.51	0.64	0.74	0.748	960	61.7	68.2	68.8	0.45	0.57	0.68	0.743	
0.37	0.5	915	67.6	69.9	73.5	0.55	0.69	0.79	0.968	930	64.3	68.8	73.5	0.48	0.62	0.72	0.973	
0.55	0.75	940	73.4	76.7	77.2	0.49	0.63	0.73	1.48	950	67.9	75.0	77.2	0.42	0.55	0.65	1.52	
0.75	1	930	77.5	79.2	78.9	0.53	0.66	0.74	1.95	945	75.3	78.6	79.1	0.46	0.59	0.69	1.91	
1.1	1.5	955	77.0	80.0	81.0	0.53	0.66	0.74	2.79	965	76.0	80.0	81.0	0.46	0.59	0.68	2.78	
1.5	2	955	85.1	85.4	84.9	0.54	0.66	0.74	3.63	960	84.0	85.4	85.8	0.48	0.60	0.69	3.52	
2.2	3	970	80.0	84.3	84.3	0.53	0.65	0.72	5.51	975	86.4	84.3	84.3	0.50	0.62	0.70	5.19	
3	4	965	85.0	85.8	85.8	0.56	0.69	0.76	6.99	975	85.0	85.8	85.8	0.49	0.62	0.71	6.85	
4	5.5	955	86.6	86.9	86.8	0.57	0.70	0.76	9.21	965	85.4	86.6	86.9	0.50	0.63	0.71	9.02	
5.5	7.5	965	85.5	87.0	88.0	0.55	0.68	0.75	12.7	970	86.0	87.0	88.0	0.47	0.61	0.69	12.6	
7.5	10	970	86.5	88.5	89.1	0.65	0.76	0.82	15.6	975	85.5	88.5	89.1	0.58	0.71	0.79	14.8	
11	15	974	88.3	89.6	90.3	0.59	0.71	0.79	23.4	979	86.7	89.0	90.3	0.51	0.64	0.73	23.2	
15	20	975	90.7	91.0	91.2	0.65	0.76	0.83	30.1	980	89.0	91.0	91.2	0.57	0.71	0.79	29.0	
18.5	25	970	90.5	91.8	92.0	0.72	0.81	0.84	36.4	980	90.0	91.8	92.0	0.64	0.75	0.80	35.0	
22	30	970	91.0	92.0	92.2	0.70	0.78	0.84	43.2	980	89.5	91.5	92.2	0.60	0.72	0.80	41.5	
High-Output Design																		
1.1	1.5	970	80.0	82.5	82.5	0.47	0.59	0.68	2.98	975	78.0	81.0	82.5	0.40	0.52	0.61	3.04	
3	4	965	85.0	85.8	85.8	0.56	0.69	0.76	6.99	975	85.0	85.8	85.8	0.49	0.62	0.71	6.85	
5.5	7.5	975	87.0	88.0	88.0	0.61	0.73	0.79	12.0	980	87.0	88.0	88.0	0.55	0.67	0.75	11.6	
VIII Poles																		
0.12	0.16	640	46.6	51.7	50.7	0.38	0.46	0.54	0.666	660	41.8	48.2	50.7	0.34	0.41	0.48	0.686	
0.18	0.25	670	52.8	58.0	58.7	0.48	0.59	0.69	0.675	685	49.3	56.0	58.7	0.43	0.53	0.62	0.688	
0.25	0.33	685	54.0	60.0	64.1	0.44	0.57	0.67	0.884	705	56.0	62.0	64.3	0.39	0.50	0.60	0.902	
0.37	0.5	680	62.9	66.9	69.3	0.44	0.56	0.66	1.23	695	59.0	64.7	69.3	0.39	0.50	0.59	1.26	
0.55	0.75	675	64.8	70.0	73.0	0.48	0.61	0.70	1.64	690	61.4	72.5	73.0	0.42	0.54	0.64	1.64	
0.75	1	705	73.9	76.1	75.1	0.44	0.57	0.66	2.30	715	71.1	74.8	75.5	0.38	0.50	0.59	2.34	
1.1	1.5	700	74.9	76.8	77.7	0.45	0.58	0.66	3.26	710	71.1	76.0	77.7	0.38	0.50	0.59	3.34	
1.5	2	700	79.9	80.6	79.8	0.49	0.63	0.71	4.02	710	77.9	80.2	80.8	0.42	0.56	0.65	3.97	
2.2	3	705	82.9	82.6	81.9	0.57	0.68	0.76	5.37	715	81.2	82.3	82.9	0.48	0.62	0.70	5.27	
2.2	3																	

IE2 - High Efficiency - 50 Hz ^{1) 2)}

IE2 - High Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current In	Locked Rotor Torque Tl/Tn	Break-down Torque Td/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V										Full load current In (A)
								Rated speed (rpm)	% of full load					Power Factor								
									Hot			Cold	50	75	100	50	75	100	50	75	100	
II Poles																						
0.12	0.16	63	0.040	4.8	3.0	2.9	0.0001	37	81	6.2	52.0	2790	53.0	60.0	60.7	0.53	0.66	0.75	0.380			
0.18	0.25	63	0.060	5.0	2.6	3.4	0.0001	18	40	6.5	52.0	2745	57.0	62.0	64.0	0.48	0.62	0.73	0.556			
0.25	0.33	63	0.090	5.0	2.3	2.9	0.0002	15	33	6.5	52.0	2710	64.0	66.0	66.0	0.51	0.66	0.78	0.701			
0.37	0.5	71	0.130	5.8	2.5	2.6	0.0004	12	26	8.4	56.0	2830	68.0	70.0	71.0	0.60	0.75	0.84	0.895			
0.55	0.75	71	0.190	5.8	2.4	2.4	0.0005	9	20	9.2	56.0	2780	70.0	72.0	74.1	0.68	0.82	0.88	1.22			
0.75	1	80	0.260	6.5	2.8	2.8	0.0008	14	31	11.2	59.0	2800	76.0	78.5	79.5	0.67	0.80	0.86	1.58			
1.1	1.5	80	0.380	6.5	2.8	2.8	0.0009	10	22	11.9	59.0	2800	78.0	80.0	80.0	0.67	0.79	0.85	2.33			
1.5	2	90S/L	0.510	7.0	2.6	3.1	0.0021	7	15	18.0	62.0	2880	80.0	82.0	82.0	0.63	0.76	0.83	3.18			
2.2	3	L90S/L	0.750	8.4	3.2	3.2	0.0035	5	11	22.8	62.0	2875	82.2	82.7	83.2	0.64	0.77	0.84	4.54			
3	4	100L	1.01	7.5	2.3	3.0	0.0051	7	15	26.3	67.0	2900	83.0	84.5	85.0	0.66	0.78	0.86	5.92			
4	5.5	112M	1.35	7.0	2.0	2.8	0.0088	10	22	34.1	64.0	2880	86.0	86.0	86.0	0.73	0.83	0.88	7.63			
5.5	7.5	S132S	1.82	7.5	2.2	3.4	0.0197	13	29	50.8	67.0	2945	86.0	87.0	87.0	0.65	0.77	0.84	10.9			
7.5	10	S132S	2.48	8.1	2.4	3.4	0.0251	10	22	58.2	67.0	2945	87.0	88.0	88.1	0.68	0.79	0.85	14.5			
9.2	12.5	132M	3.04	8.5	2.6	3.6	0.0234	8	18	64.7	67.0	2945	88.2	89.5	89.9	0.65	0.78	0.85	17.4			
11	15	160M/L	3.64	7.9	2.7	3.2	0.0421	10	22	95.0	70.0	2940	88.5	89.4	89.4	0.71	0.81	0.86	20.7			
15	20	160M/L	4.97	8.1	2.8	3.2	0.0506	7	15	105	70.0	2940	89.5	90.3	90.3	0.73	0.82	0.87	27.6			
18.5	25	160M/L	6.13	8.4	3.0	3.3	0.0590	8	18	110	70.0	2940	90.0	90.9	90.9	0.70	0.80	0.85	34.6			
22	30	180M/L	7.24	8.3	2.5	3.0	0.0975	8	18	150	70.0	2960	91.5	91.6	91.6	0.68	0.79	0.84	41.3			
30	40	200M/L	9.87	7.2	2.4	2.8	0.1532	10	22	188	74.0	2960	91.2	92.0	92.0	0.70	0.80	0.84	56.0			
37	50	200M/L	12.1	7.8	2.4	2.7	0.1703	8	18	197	74.0	2965	92.0	92.5	92.5	0.74	0.83	0.86	67.1			
High-Output Design																						
0.37	0.5	63	0.130	5.0	2.2	2.2	0.0002	7	15	7.2	52.0	2740	64.0	67.0	69.5	0.56	0.71	0.81	0.949			
0.75	1	71	0.260	5.8	2.8	2.8	0.0005	14	31	9.6	56.0	2800	77.0	77.5	77.6	0.67	0.80	0.87	1.60			
1.1	1.5	90S/L	0.250	7.0	2.0	3.5	0.0012	15	33	14.9	62.0	2880	77.0	78.0	78.0	0.62	0.74	0.81	1.71			
1.5	1.5	90S/L	0.370	6.1	2.5	2.6	0.0014	12	26	17.0	62.0	2860	80.0	80.5	80.5	0.65	0.77	0.83	2.38			
1.5	2	80	0.530	6.5	3.1	3.0	0.0009	15	33	12.4	59.0	2770	80.0	81.0	81.5	0.65	0.78	0.85	3.13			
2.2	3	100L	0.740	7.8	2.4	3.0	0.0043	8	18	24.9	67.0	2900	80.0	82.5	83.2	0.66	0.78	0.84	4.54			
2.2	3	90S/L	0.750	6.6	3.0	3.0	0.0022	9	20	19.4	62.0	2840	83.0	83.6	83.6	0.63	0.76	0.83	4.58			
3	4	L90S/L	1.03	7.1	3.4	3.4	0.0030	9	20	29.5	62.0	2840	84.0	84.6	84.6	0.61	0.75	0.82	6.24			
4	5.5	100L	1.36	7.8	2.8	3.3	0.0064	9	20	27.7	67.0	2870	85.2	85.8	85.8	0.67	0.80	0.86	7.82			
5.5	7.5	112M	1.86	7.3	2.7	3.0	0.0088	11	24	39.0	64.0	2880	86.5	87.0	87.0	0.72	0.82	0.87	10.5			
5.5	7.5	132M	1.82	7.5	2.2	3.4	0.0197	13	29	51.0	67.0	2945	86.0	87.0	87.0	0.65	0.77	0.84	10.9			
5.5	7.5	132S	1.82	7.5	2.2	3.4	0.0197	13	29	51.0	67.0	2945	86.0	87.0	87.0	0.65	0.77	0.84	10.9			
7.5	10	132M	2.48	8.1	2.4	3.4	0.0251	10	22	58.9	67.0	2945	87.0	88.0	88.1	0.68	0.79	0.85	14.5			
7.5	10	132S	2.48	8.1	2.4	3.4	0.0251	10	22	58.2	67.0	2945	87.0	88.0	88.1	0.68	0.79	0.85	14.5			
7.5	10	L112M	2.55	7.9	3.0	3.4	0.0109	10	22	52.5	64.0	2870	87.3	88.1	88.1	0.67	0.79	0.85	14.5			
11	15	132M	3.65	7.7	2.8	3.4	0.0270	12	26	67.8	67.0	2935	89.3	90.0	90.7	0.70	0.81	0.86	20.4			
IV Poles																						
0.12	0.16	63	0.080	5.0	2.8	3.5	0.0004	20	44	6.1	44.0	1395	53.0	58.0	59.1	0.45	0.56	0.67	0.437			
0.18	0.25	63	0.130	4.1	2.0	2.0	0.0006	20	44	7.1	44.0	1400	53.0	59.0	64.7	0.47	0.60	0.68	0.591			
0.25	0.33	71	0.170	4.5	2.0	2.2	0.0007	68	150	8.5	43.0	1410	59.0	65.0	68.5	0.49	0.62	0.71	0.742			
0.37	0.5	71	0.260	4.3	2.0	2.0	0.0008	48	106	10.7	43.0	1400	63.0	68.0	72.7	0.50	0.62	0.72	1.02			
0.55	0.75	80	0.370	5.8	1.9	3.0	0.0029	12	26	13.7	44.0	1440	71.0	73.8	77.1	0.47	0.62	0.74	1.39			
0.75	1	80	0.520	6.0	2.6	2.6	0.0029	15	33	12.8	44.0	1410	79.0	79.6	79.8	0.63	0.76	0.81	1.67			
1.1	1.5	90S/L	0.740	6.5	2.0	2.9	0.0060	9	20	18.3	49.0	1455	80.0	81.6	81.6	0.53	0.67	0.76	2.56			
1.5	2	L90S/L	1.00	6.7	1.7	2.7	0.0074	8	18	21.3	49.0	1460	77.2	80.6	82.8	0.54	0.68	0.77	3.40			
2.2	3	100L	1.50	7.0	2.9	3.0	0.0105	11	24	29.8	53.0	1430	83.0	84.5	84.5	0.60	0.73	0.81	4.64			
3	4	L100L	2.02	8.1	3.5	3.8	0.0120	6	13	29.5	53.0	1445	83.0	84.5	85.5	0.54	0.68	0.76	6.66			
4	5.5	L112M	2.69	6.9	2.1	2.8	0.0207	9	20	41.0	56.0	1450	85.5	86.0	86.7	0.61	0.74	0.81	8.24			
5.5	7.5	S132S	3.67	7.3	1.9	3.0	0.0528	8	18	56.1	56.0	1460	86.5	87.3	87.7	0.68	0.80	0.86	10.5			
7.5	10	132M	4.97	7.8	2.1	3.0	0.0528	7	15	61.0	56.0	1470	86.5	88.0	88.7	0.55	0.69	0.80	15.3			
9.2	12.5	132M	6.16	7.5	2.4	3.0	0.0604	7	15	68.6	56.0	1455	89.2	89.5	89.5	0.65	0.76	0.83	17.9			
9.2	12.5	160M/L	6.10	7.1	2.6	2.8	0.0638	8	18	105	67.0	1470	87.5	89.0	89.5	0.63	0.76	0.82	18.1			
11	15	160M/L	7.29	6.9	2.5	2.7	0.0828	8	18	109	67.0	1470	87.5	89.0	89.8	0.63	0.76	0.82	21.6			
15	20	160M/L	9.94	7.4	2.7	3.0	0.1069	8	18	111	67.0	1470	89.5	90.6	90.6	0.64	0.76	0.82	29.1			
18.5	25	180M/L	12.3	8.0	2.9	3.3	0.1573	8	18	150	64.0	1470	90.5	91.2	91.2	0.67	0.78	0.83	35.3			
22	30	180M/L	14.6	8.0	3.0	3.3	0.2010	8	18	165	64.0	1470	91.0	91.6	91.6	0.68	0.79	0.84	41.3			
30	40	200M/L	19.9	7.0	2.5	2.8	0.2941	8	18	206	69.0	1470	92.0	92.3	92.3	0.69	0.80	0.84	55.8			
37	50	200M/L	24.4	6.0	2.4	2.7	0.3721	14	31	228	69.0	1475	92.8	93.0	93.0	0.70	0.80	0.83	69.2			
High-Output Design																						
0.75	1	90S/L	0.500	6.2	2.1	2.6	0.0038	14	31	15.5	49.0	1465	78.0	80.0	80.0	0.50	0.64	0.74	1.83			
1.1	1.5	L80	0.770	6.6	2.6	2.8	0.0037	11	24	14.9	44.0	1400	80.5	81.4	81.4	0.66	0.79	0.84	2.32			
1.5	2	100L	1.01	7.5	2.8	3.2	0.0067	10	22	25.0	53.0	1440	79.0	82.5	82.8	0.55	0.68	0.76	3.44			
1.5	2	90S/L	1.01	6.3	2.4	2.8	0.0055	10	22	20.3	49.0	1440	81.5	83.0	83.0	0.57	0.71	0.80	3.26			
2.2	3	112M	1.47	7.0	1.9	2.6	0.0117	23	51	34.5	56.0	1460	84.5	85.0	85.0	0.63	0.75	0.81	4.61			
2.2	3	L90S/L	1.50	7.4	2.4	2.9	0.0077	9	20	22.6	49.0	1430	83.8	84.3	84.3	0.56	0.70	0.79	4.77			
3	4	100L	2.06	6.5	3.2	3.3	0.0097	14	31	33.8	53.0	1420	85.0	85.6	85.6	0.63	0.75	0.82	6.17			
4	5.5	112M	2.71	6.6	2.0	2.6	0.0156	13	29	35.3	56.0	1440	86.0	86.7	86.7	0.62	0.74	0.80	8.32			
4	5.5	132S	2.64	7.5	1.9	3.0	0.0341</															

IE2 - High Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgm)	Locked Rotor Current II/In	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V									Full load current In (A)
kW	HP							Rated speed (rpm)	% of full load												
									Efficiency			Power Factor									
									Hot			Cold	50	75	100	50	75	100			
VI Poles																					
0.12	0.16	63	0.130	3.0	1.9	2.0	0.0006	52	114	7.2	43.0	905	42.0	50.0	52.0	0.43	0.53	0.63	0.529		
0.18	0.25	71	0.190	3.2	2.0	2.0	0.0008	96	211	9.9	43.0	915	52.0	58.0	59.0	0.40	0.51	0.58	0.759		
0.25	0.33	71	0.270	3.2	1.9	2.1	0.0008	70	154	11.9	43.0	890	53.0	60.0	61.6	0.37	0.48	0.58	1.01		
0.37	0.5	80	0.390	4.1	2.0	2.4	0.0022	24	53	12.0	43.0	925	65.0	67.0	67.6	0.47	0.62	0.72	1.10		
0.55	0.75	80	0.580	4.5	2.3	2.5	0.0030	21	46	13.6	43.0	930	65.0	71.0	73.1	0.50	0.62	0.72	1.51		
0.75	1	90S/L	0.790	4.5	2.0	2.1	0.0055	23	51	18.5	45.0	925	74.5	76.0	76.0	0.51	0.64	0.73	1.95		
1.1	1.5	90S/L	1.16	4.7	2.3	2.2	0.0066	17	37	20.9	45.0	925	76.0	78.1	78.1	0.50	0.63	0.73	2.78		
1.5	2	100L	1.54	6.0	2.0	2.4	0.0110	15	33	29.0	44.0	950	76.0	79.8	79.8	0.52	0.65	0.73	3.72		
2.2	3	112M	2.24	6.0	2.0	2.4	0.0257	10	22	38.0	49.0	955	80.0	81.8	81.8	0.52	0.65	0.73	5.32		
3	4	S132S	3.04	5.7	2.0	2.4	0.0359	31	68	53.0	53.0	960	82.5	83.6	83.6	0.50	0.63	0.71	7.30		
4	5.5	132M	4.04	6.0	2.1	2.5	0.0453	21	46	57.4	53.0	965	84.0	84.8	84.8	0.51	0.64	0.72	9.46		
5.5	7.5	132M	5.55	6.4	2.5	2.8	0.0604	19	42	67.0	53.0	965	85.5	86.1	86.1	0.51	0.64	0.72	12.8		
7.5	10	160M/L	7.45	6.6	2.2	2.9	0.1055	10	22	90.0	56.0	980	86.6	87.2	87.2	0.58	0.71	0.78	15.9		
9.2	12.5	160M/L	9.14	6.8	2.3	3.0	0.1266	10	22	109	57.0	980	86.5	87.5	88.1	0.55	0.69	0.77	19.6		
11	15	160M/L	11.1	6.5	2.4	2.8	0.1689	10	22	116	57.0	970	88.0	88.7	88.7	0.63	0.75	0.81	22.1		
15	20	180M/L	14.9	8.4	2.5	3.7	0.2705	6	13	160	56.0	980	87.0	89.0	89.7	0.61	0.73	0.81	29.8		
18.5	25	200M/L	18.4	7.5	2.7	2.7	0.3335	8	18	178	58.0	980	89.0	90.4	90.4	0.62	0.74	0.80	36.9		
22	30	200M/L	21.9	8.0	3.0	3.1	0.3868	8	18	199	58.0	980	88.5	90.0	90.9	0.59	0.71	0.78	44.8		
High-Output Design																					
3	4	132M	3.04	5.7	2.0	2.4	0.0359	31	68	53.0	53.0	960	82.5	83.6	83.6	0.50	0.63	0.71	7.30		
3	4	132S	3.04	5.7	2.0	2.4	0.0359	31	68	53.0	53.0	960	82.5	83.6	83.6	0.50	0.63	0.71	7.30		
VIII Poles																					
0.12	0.16	71	0.180	2.2	1.6	1.9	0.0008	60	132	10.3	41.0	660	40.0	48.0	50.0	0.33	0.41	0.50	0.693		
0.18	0.25	80	0.250	3.1	1.9	2.0	0.0024	27	59	12.8	42.0	690	34.8	43.9	45.9	0.44	0.55	0.65	0.871		
0.25	0.33	80	0.360	3.3	1.9	2.2	0.0029	32	70	13.2	42.0	675	47.0	52.5	55.0	0.43	0.55	0.66	0.994		
0.37	0.5	90S/L	0.520	3.5	1.8	2.0	0.0044	23	51	16.6	44.0	690	46.1	53.2	56.1	0.41	0.52	0.62	1.54		
0.55	0.75	90S/L	0.780	3.5	1.9	2.0	0.0060	31	68	18.7	44.0	685	61.0	64.0	64.0	0.44	0.56	0.66	1.88		
0.75	1	100L	1.01	5.0	2.0	2.5	0.0110	18	40	27.4	50.0	720	60.0	68.0	70.0	0.40	0.49	0.58	2.67		
1.1	1.5	100L	1.50	5.0	2.0	2.4	0.0127	14	31	22.5	50.0	715	62.0	69.0	70.8	0.40	0.51	0.59	3.80		
1.5	2	112M	2.09	4.7	2.4	2.3	0.0202	12	26	45.0	46.0	700	77.0	79.0	79.0	0.44	0.57	0.67	4.09		
2.2	3	S132S	3.06	5.5	2.2	2.4	0.0592	12	26	66.0	48.0	700	81.0	81.5	81.0	0.52	0.65	0.72	5.44		
3	4	132M	4.12	6.2	2.4	2.9	0.0740	19	42	66.0	48.0	710	82.0	82.5	82.0	0.54	0.65	0.72	7.33		
4	5.5	160M/L	5.34	5.5	2.1	3.0	0.0985	13	29	85.8	51.0	730	80.0	81.9	81.9	0.48	0.61	0.70	10.1		
5.5	7.5	160M/L	7.34	5.5	2.1	3.0	0.1266	9	20	102	51.0	730	79.0	81.5	83.8	0.47	0.60	0.69	13.7		
7.5	10	160M/L	10.0	5.6	2.4	3.1	0.1555	15	33	109	53.0	730	84.0	85.3	85.3	0.50	0.63	0.71	17.9		
9.2	12.5	180M/L	12.2	7.0	2.1	2.9	0.2308	8	18	133	51.0	735	85.0	86.0	86.3	0.55	0.68	0.76	20.2		
11	15	180M/L	14.6	7.4	2.3	3.1	0.3259	8	18	178	51.0	735	85.0	86.0	86.9	0.55	0.68	0.76	24.0		
15	20	200M/L	19.9	6.0	2.3	2.3	0.4228	12	26	225	53.0	735	86.5	87.5	88.0	0.53	0.66	0.73	33.7		
High-Output Design																					
2.2	3	132S	3.06	5.5	2.2	2.4	0.0592	12	26	53.2	48.0	700	81.0	81.5	81.0	0.52	0.65	0.72	5.44		

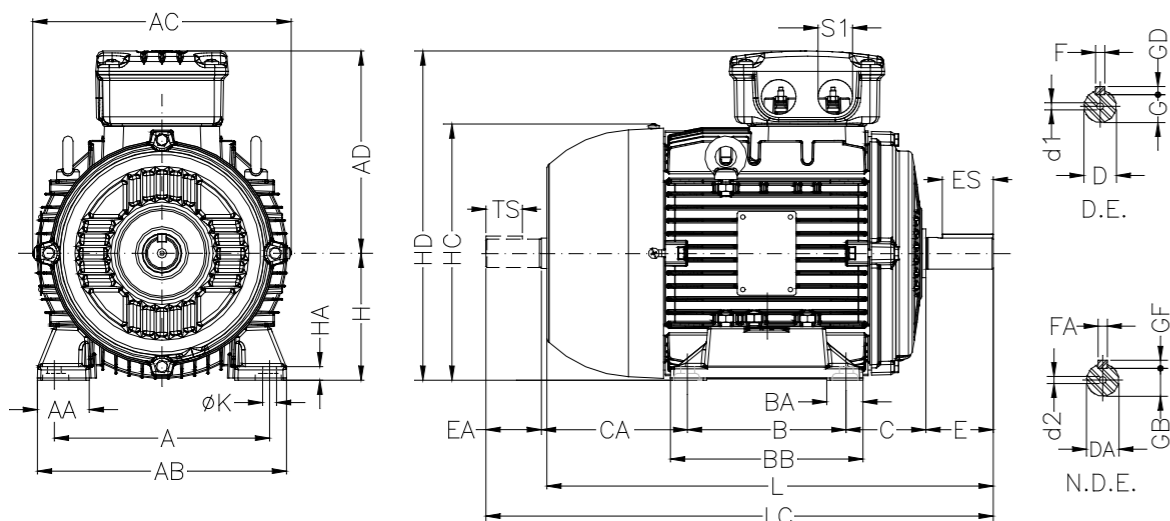
Notes:
 (1) Efficiency values are given according to IEC 60034-2-1. They are calculated according to indirect method, with stray load losses determined by measurement.
 (2) With effect from 1st January 2017, IE2 motors placed onto the European Market and rated at 0.75 kW or above, must be used with a variable speed drive unless their design falls outside of the scope of the European Regulation or their final installation will be outside of the EU / EEA.
 (3) Motor with class F (105K) temperature rise.

IE2 - High Efficiency - 50 Hz ^{1) 2)}

Output		Frame	Full Load Torque (kgm)	Locked Rotor Current II/In	Locked Rotor Torque TI/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	380 V									415 V						Full load current In (A)
kW	HP							Rated speed (rpm)	% of full load																		
									Efficiency			Power Factor															
									50			75	100	50	75	100	50	75	100	50	75	100					
VI Poles																											
0.12	0.16	895	45.4	52.1	52.9	0.46	0.57	0.67	0.514	910	39.1	47.5	50.7	0.41	0.50	0.59	0.558										
0.18	0.25	905	54.2	59.0	58.7	0.37	0.50	0.57	0.817	920	50.1	56.8	58.6	0.38	0.48	0.57	0.750										
0.25	0.33	875	56.3	61.6	61.6	0.41	0.52	0.62	0.995	900	50.1	60.0	61.6	0.35	0.45	0.54	1.05										
0.37	0.5	920	65.0	67.0	67.6	0.52	0.66	0.76	1.09	935	62.0	67.0	67.6	0.45	0.58	0.67	1.14										
0.55	0.75	920	67.5	71.8	73.1	0.55	0.66	0.76	1.50	935	62.5	69.6	73.1	0.47	0.61	0.72	1.45										
0.75	1	915	75.8	75.9	75.9	0.55	0.68	0.76	1.98	930	73.2	75.6	76.4	0.48	0.61	0.71	1.92										
1.1	1.5	915	77.9	78.5	78.5	0.55	0.67	0.77	2.76	930	74.3	77.3	78.1	0.46	0.59	0.70	2.80										
1.5	2	945	76.0	79.8	79.8	0.57	0.69	0.76	3.76	955	75.0	79.8	79.8	0.48	0.62	0.70	3.74										
2.2	3	945	81.0	81.8	81.8	0.57	0.69	0.76	5.38	955	79.0	81.8	81.8	0.50	0.62	0.71	5.27										
3	4	955	83.4	83.8	83.3	0.54	0.67	0.74	7.39	960	81.4	83.1	83.6	0.46	0.59	0.68	7.34										
4	5.5	965	84.9	85.0	84.6	0.55	0.68	0.74	9.71	970	83.0	84.4	84.9	0.47	0.61	0.69	9.50										
5.5	7.5	960	86.4	86.3	86.0	0.56	0.68	0.75	13.0	970	84.6	85.7	86.2	0.47	0.61	0.69	12.9										
7.5	10	975	86.8	87.2	87.2	0.62	0.75	0.81	16.1	980	86.0	87.2	87.2	0.55	0.69	0.76	15.7										
9.2	12.5	975	87.2	87.7	88.1	0.60	0.73	0.80	19.8	980	85.5	87.1	88.1	0.52	0.66	0.75	19.4										
11	15	965	88.0	88.7	88.7	0.67	0.78	0.83	22.7	975	86.8	88.1	88.7	0.59	0.72	0.79	21.8										
15	20	980	87.0	89.0	89.7	0.66	0.78	0.84	30.2	985	87.0	89.0	89.7	0.57	0.70	0.79	29.4										
18.5	25	975	89.0	90.4	90.4	0.66	0.77	0.83	37.5	980	88.0	90.4	90.4	0.58	0.71	0.78	36.5										
22	30	980	88.5	90.0	90.9	0.64	0.76	0.81	45.4	980	88.5	89.5	90.9	0.55	0.68	0.75	44.9										
High-Output Design																											
3	4	955	83.4	83.8	83.3	0.54	0.67	0.74	7.39	960	81.4	83.1	83.6	0.46	0.59	0.68	7.34										
3	4	955	83.4	83.8	83.3	0.54	0.67	0.74	7.39	960	81.4	83.1	83.6	0.46	0.59	0.68	7.34										
VIII Poles																											
0.12	0.16	650	42.9	50.1	50.6	0.35	0.44	0.53	0.680	670	37.1	45.7	48.8	0.31	0.38	0.47	0.728										
0.18	0.25	680	37.2	45.7	45.9	0.47	0.59	0.69	0.864	695	33.0	42.2	45.9	0.42	0.53	0.59	0.925										
0.25	0.33	665	49.0	53.0	55.0	0.47	0.59	0.70	0.987	680	45.0	52.0	55.0	0.42	0.53	0.63	1.00										
0.37	0.5	680	49.0	54.9	56.1	0.44	0.56	0.67	1.50	695	43.7	51.5	56.1	0.39	0.49	0.55	1.67										
0.55	0.75	675	63.3	65.1	63.5	0.47	0.61	0.70	1.88	690	58.5	62.8	63.9	0.41	0.53	0.63	1.90										
0.75	1	715	65.0	70.0	72.0	0.43	0.54	0.62	2.55	720	56.0	64.0	68.0	0.38	0.46	0.54	2.84										
1.1	1.5	710	66.0	70.0	70.8	0.44	0.55	0.64	3.69	715	59.0	67.0	70.8	0.38	0.48	0.56	3.86										
1.5	2	695	78.8	79.6	78.5	0.49	0.61	0.70	4.15	705	75.3	78.2	78.9	0.41	0.53	0.63	4.20										

Mechanical Data

Foot Mounted Motors



Frame	A	AA	AB	AC	AD	B	BA	BB	C	CA	Shaft Dimensions														H	HA	HC	HD	K	L	LC	S1	d1	d2	Bearings	
											D	E	ES	F	G	GD	DA	EA	TS	FA	GB	GF	D.E.	N.D.E.												
63	100	19	116	125	119	80	23	95	40	78	11j6	23	14	4	8.5	4	9j6	20	12	3	7.2	3	63	6	124	182	216	241	EM4	EM3	6201-ZZ					
71	112	28	134	141	127	90	24.5	108	45	88	14j6	30	18	5	11	5	11j6	23	14	4	8.5	4	71	6	139	198	248	276	2xM20x1.5	DM5	EM4	6203-ZZ 6202-ZZ				
80	125	32	155	159	136	100	28	124	50	93	19j6	40	28	6	15.5	6	14j6	30	18	5	11	5	80	8	157	216	276	313	DM6	DM4	6204-ZZ 6203-ZZ					
90S/L	140	35	170	179	155	110	30	146	56	104	24j6	50	36	8	20	7	16j6	40	28	5	13	5	90	9	177	245	330	375	2xM25x1.5	DM8	DM6	6205-ZZ 6204-ZZ				
100L	160	40	196	200	165	120	30	170	63	118	28j6	60	45	8	24	7	22j6	50	36	6	18.5	6	100	10	198	265	376	431	DM10	DM8	6206-ZZ 6205-ZZ					
112M	190	46	220	223	184	140	40	170	70	128	30j6	70	50	8	24	7	24j6	60	45	8	20	112	12	274	344	452	519	DM12	DM10	6307-ZZ 6206-ZZ						
S132S	216	44	248	270	212	140	40	170	89	150	38k6	80	63	10	33	8	28j6	60	45	8	24	7	132	12	274	344	490	557	2xM32x1.5	DM12	DM10	6308-ZZ 6207-ZZ				
132S	216	44	248	270	212	140	40	170	89	150	38k6	80	63	10	33	8	28j6	60	45	8	24	7	132	12	274	344	490	557	DM12	DM10	6308-ZZ 6207-ZZ					
132M	216	44	248	270	212	140	40	170	89	150	38k6	80	63	10	33	8	28j6	60	45	8	24	7	132	12	274	344	490	557	DM12	DM10	6308-ZZ 6207-ZZ					
160M/L	254	62	308	347	255	160	50	210	108	174	42k6	100	80	12	37	8	42k6	110	80	12	37	8	160	18	313	414	634	756	2xM40x1.5	DM16	DM16	6309-C3 6209-Z-C3				
180M/L	279	68	350	306	274	180	50	210	121	200	48k6	110	80	14	42.5	9	48k6	110	80	14	42.5	9	180	20	354	454	694	820	2xM40x1.5	DM16	DM16	6311-C3 6211-Z-C3				
200M/L	318	73	385	386	300	200	60	222	133	222	55m6	120	80	16	49	10	55m6	110	80	14	42.5	9	200	25	393	500	758	880	2xM50x1.5	DM20	DM20	6312-C3 6212-Z-C3				

*The following motors have longer lamination core length, and consequently, a larger frame.

Standard frames:

Motor	Frame	L	LC
IE2 - 2.2kW 2P	L90S/L	360	405
IE2 - 1.5kW 2P	L90S/L	360	405
IE2 - 3kW 4P	L100L	420	475
IE2 - 4kW 4P	L112M	425	480
IE3 - 3kW 4P	L100L	420	475

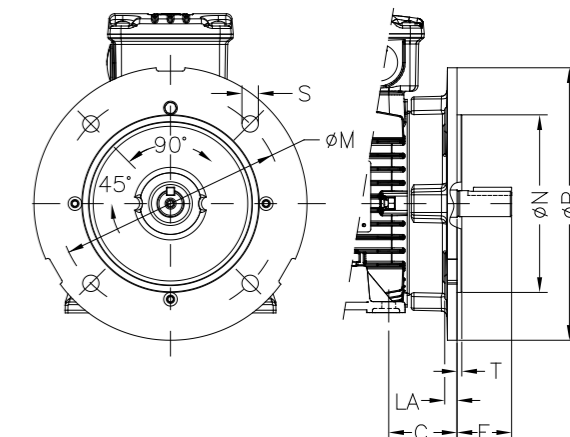
Optional frames:

Motor	Frame	L	LC
IE2 - 1.1kW 4P	80	325	362
IE2 - 3kW 2P	90S/L	360	406
IE2 - 2.2kW 4P	90S/L	360	406
IE2 - 7.5kW 2P	112M	423	478
IE2 - 5.5kW 4P	112M	423	478

Flange mounted motors

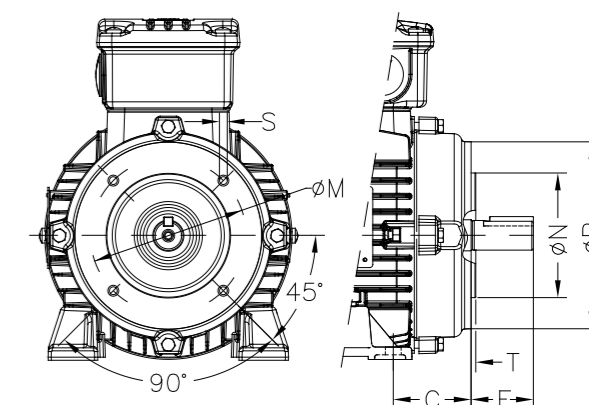
"FF" Flange

Frame	"FF" Flange Dimensions									N° of Holes
	Flange	C	LA	M	N	P	T	S	a	
63	FF-115	40	9	115	95	140	3	10	45°	4
71	FF-130	45	9	130	110	160	3	10		
80	FF-165	50	10	165	130	200	3.5	12	45°	4
90S/L		56	10	165	130	200	3.5	12		
100L	FF-215	63	11	215	180	250	4	15	45°	4
112M		70	11	215	180	250	4	15		
S132S	FF-265	89	12	265	230	300	4	15	45°	4
132S/M	FF-265	89	12	265	230	300	4	15		
160M/L	FF-300	108	18	300	250	350	5	19	45°	4
180M/L		121	18	300	250	350	5	19		
200M/L	FF-350	133	18	350	300	400	5	19	45°	4



"C-DIN" Flange

Frame	"C" DIN Flange Dimensions								N° of Holes
	Flange	C	M	N	P	S	T	a	
63	C-90	40	75	60	90	M5	2.5	45°	4
71	C-105	45	85	70	105	M6	2.5		
80	C-120	50	100	80	120	M6	3	45°	4
90S/L	C-140	56	115	95	140	M8	3		
100L	C-160	63	130	110	160	M8	3.5	45°	4
112M		70	130	110	160	M8	3.5		
S132S	C-200	89	165	130	200	M10	3.5	45°	4
132S/M	C-200	89	165	130	200	M10	3.5		



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The values shown are subject to change without prior notice.
The information contained is reference values.