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 208A 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.



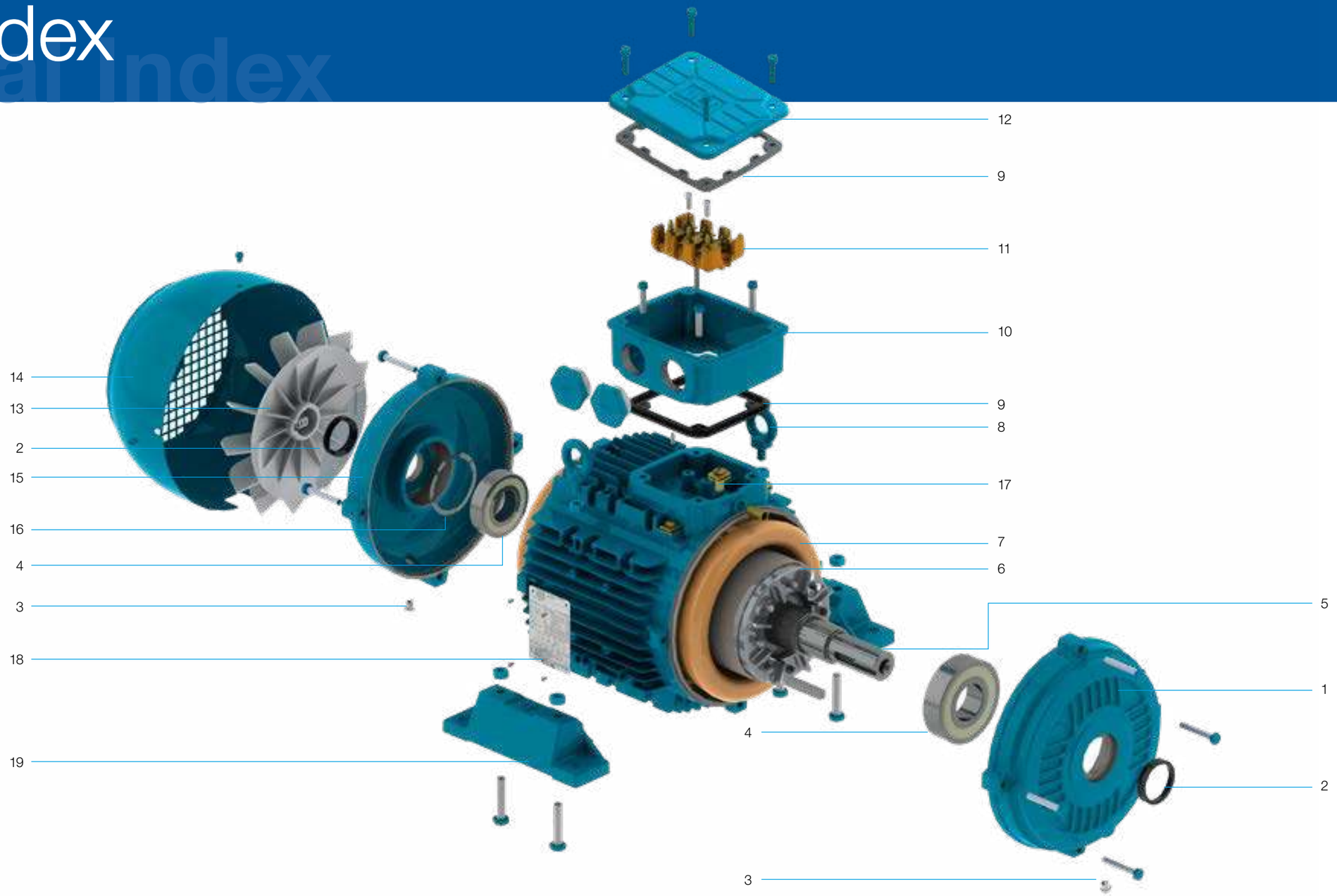
Definite Purpose Designs

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.



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Visual Index



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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	2P	6201	6203	6204	6205	6206	6307	6308	6308	6308	6309	6311	6312
		4 - 12P												
	Non drive end	2P		6202	6203	6204	6205	6206	6207	6207	6207	6209	6211	6212
		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		Plasctic 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 optionals												
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												
Nitrillic rubber lip seal	0	0	0	0	0	0	0	0	0	0	0	0
Nitrillic 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
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 optionals												
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 Il/In	Locked Rotor Torque Tl/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			
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	112M	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	132S	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	160M/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	160M/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	180M/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	200M/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	200M/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	132S	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	132S	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	132S	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	160M/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	180M/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	180M/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	200M/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	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.

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IE4 - Super Premium Efficiency - 50 Hz [1) 2)]

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/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			
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	132S	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	160M/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	160M/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	180M/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	200M/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	200M/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	88	194	25.5	50	722	65.3	71.5	74.3	0.36	0.47	0.54	1.40
0.55	0.75	100L	0.758	3.4	1.4	1.7	0.0088	104	229	26.8	50	707	73.7	76.6	77.0	0.44	0.57	0.63	1.72
0.75	1	100L	1.03	3.7	1.6	1.8	0.0116	76	167	30.0	50	708	76.0	78.5	78.4	0.44	0.57	0.63	2.31
1.1	1.5	L100L	1.50	4.1	2	2.1	0.0165	70	154	34.8	50	713	77.3	80.2	80.8	0.41	0.53	0.60	3.45
1.5	2	L112M	2.05	5.0	2.9	3	0.0275	57	125	44.8	46	713	79.0	81.5	82.6	0.44	0.56	0.65	4.24
2.2	3	132S	2.98	6.5	2.4	3.1	0.0838	53	117	70.5	48	720	82.8	84.2	84.5	0.48	0.61	0.69	5.73
3	4	160M/L	4.00	4.9	2.3	2.6	0.1053	36	79	82.3	51	730	82.7	84.9	85.9	0.45	0.58	0.67	7.92
4	5.5	160M/L	5.34	5.0	2.4	2.7	0.1404	35	77	99.8	51	730	84.2	86.1	87.1	0.45	0.58	0.67	10.4
5.5	7.5	180M/L	7.31	6.6	2.3	2.8	0.1894	27	59	105	51	733	89.0	89.7	88.3	0.57	0.69	0.77	12.3
7.5	10	180M/L	9.98	6.8	2.5	2.9	0.2299	20	44	120	51	732	89.2	89.9	89.3	0.56	0.69	0.76	16.8
11	15	180M/L	14.7	6.9	2.6	2.8	0.3246	18	40	178	51	730	90.3	90.5	90.4	0.59	0.71	0.78	23.7
15	20	200M/L	19.9	4.8	2.1	2.4	0.5099	41	90	230	53	735	90.4	91.2	91.2	0.51	0.63	0.70	35.7

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 Il/In	Locked Rotor Torque Tl/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			
kW	HP							Hot	Cold				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		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current In (A)	Rated speed (rpm)	% of full load						Full load current In (A)
			Efficiency			Power Factor					Efficiency			Power Factor			
kW	HP		50	75	100	50	75	100			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	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
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	2935	88.7	90.0	90.7	0.69	0.80	0.86	17.9	2945	87.0	89.0	90.7	0.56	0.69	0.78	18.1
11	15	2950	89.5	90.5	91.2	0.75	0.84	0.87	21.1	2960	88.5	90.5	91.2	0.66	0.78	0.83	20.2
15	20	2945	90.0	91.0	91.9	0.74	0.83	0.86	28.8	2955	88.0	90.0	91.9	0.62	0.74	0.80	28.4
18.5	25	2935	91.0	91.5	92.4	0.77	0.85	0.88	34.6	2945	89.5	91.0	92.4	0.66	0.77	0.83	33.6
22	30	2955	92.0	92.7	92.7	0.73	0.82	0.86	41.9	2965	91.5	92.7	92.7	0.66	0.77	0.83	39.8
30	40	2960	92.0	93.0	93.3	0.80	0.86	0.88	55.5	2970	92.0	93.0	93.3	0.73	0.82	0.86	52.0
37	50	2955	93.0	93.5	93.7	0.78	0.85	0.87	69.0	2965	92.0	93.5	93.7	0.69	0.79	0.84	65.4
High-Output Design																	
0.75	1	2910	76.1	79.4	80.7	0.68	0.78	0.84	1.68	2925	74.8	79.0	80.7	0.60	0.72	0.79	1.64
1.1	1.5	2895	79.8	81.7	82.7	0.68	0.79	0.84	2.41	2915	78.7	81.6	82.7	0.59	0.72	0.80	2.31
4	5.5	2935	85.4	87.3	88.1	0.73	0.82	0.87	7.93	2950	84.1	86.8	88.1	0.63	0.75	0.82	7.70
4	5.5	2935	85.4	87.3	88.1	0.73	0.82	0.87	7.93	2950	84.1	86.8	88.1	0.63	0.75	0.82	7.70
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
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
11	15	2920	89.0	90.0	91.2	0.75	0.84	0.88	20.8	2940	89.0	90.0	91.2	0.66	0.78	0.84	20.0
IV Poles																	
0.12	0.16	1405	55.0	61.0	64.8	0.50	0.62	0.71	0.396	1420	52.0	59.0	64.8	0.45	0.56	0.65	0.396
0.18	0.25	1360	65.0	67.0	69.9	0.57	0.67	0.75	0.522	1390	65.0	67.0	69.9	0.50	0.61	0.70	0.512
0.25	0.33	1375	67.0	69.1	73.5	0.56	0.69	0.75	0.689	1400	65.1	68.6	73.5	0.50	0.62	0.69	0.686
0.37	0.5	1380	76.3	76.8	77.3	0.49	0.64	0.72	1.01	1405	76.3	76.8	77.3	0.42	0.57	0.67	0.994
0.55	0.75	1430	78.0	79.1	80.8	0.65	0.77	0.83	1.25	1445	76.0	78.9	80.8	0.57	0.71	0.77	1.23
0.75	1	1425	80.8	82.0	82.5	0.62	0.75	0.81	1.71	1435	79.1	81.8	82.5	0.53	0.67	0.78	1.62
1.1	1.5	1450	84.0	84.7	84.3	0.62	0.74	0.81	2.45	1460	82.0	84.1	84.8	0.55	0.67	0.75	2.41
1.5	2	1440	85.0	85.3	85.3	0.63	0.76	0.81	3.30	1450	83.1	85.0	85.7	0.54	0.68	0.77	3.16
2.2	3	1425	86.0	86.5	86.7	0.60	0.72	0.80	4.82	1440	84.0	85.8	86.7	0.51	0.65	0.75	4.71
3	4	1430	87.7	88.0	87.7	0.63	0.75	0.81	6.42	1445	86.3	87.7	88.1	0.54	0.68	0.76	6.23
4	5.5	1445	89.3	89.0	88.6	0.65	0.76	0.81	8.47	1455	88.2	88.9	89.3	0.57	0.70	0.77	8.09
5.5	7.5	1460	90.4	90.7	90.3	0.71	0.82	0.87	10.6	1470	89.6	90.7	90.8	0.64	0.76	0.83	10.2
5.5	7.5	1460	90.4	90.7	90.3	0.71	0.82	0.87	10.6	1470	89.6	90.7	90.8	0.64	0.76	0.83	10.2
7.5	10	1460	88.5	90.0	90.6	0.71	0.81	0.86	14.6	1470	86.5	90.0	90.6	0.63	0.75	0.83	13.9
11	15	1470	89.3	90.3	91.4	0.62	0.75	0.81	22.6	1475	87.5	89.3	91.4	0.53	0.67	0.75	22.3
15	20	1460	90.0	90.4	92.1	0.69	0.80	0.84	29.5	1465	88.5	90.0	92.1	0.60	0.73	0.80	28.3
18.5	25	1470	91.0	92.2	92.6	0.67	0.79	0.84	36.1	1476	91.0	92.2	92.6	0.60	0.72	0.80	34.7
22	30	1465	92.0	92.5	93.0	0.70	0.80	0.84	42.8	1475	91.0	92.5	93.0	0.61	0.73	0.79	41.7
30	40	1475	92.5	93.6	93.6	0.68	0.79	0.84	58.0	1480	92.0	93.6	93.6	0.58	0.71	0.79	56.4
High-Output Design																	
0.75	1	1455	79.2	82.2	82.5	0.54	0.67	0.76	1.82	1465	77.2	81.4	82.5	0.47	0.60	0.70	1.81
1.5	2	1440	84.0	85.3	85.3	0.58	0.71	0.79	3.38	1450	83.0	85.3	85.3	0.51	0.64	0.73	3.35
3	4	1450	86.9	87.0	87.7	0.60	0.73	0.79	6.58	1460	85.7	87.4	87.7	0.59	0.66	0.74	6.43
5.5	7.5	1460	90.4	90.7	90.3	0.71	0.82	0.87	10.6	1470	89.6	90.7	90.8	0.64	0.76	0.83	10.2
7.5	10	1460	88.5	90.0	90.6	0.71	0.81	0.86	14.6	1470	86.5	90.0	90.6	0.63	0.75	0.83	13.9

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 Il/In	Locked Rotor Torque Tl/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			
kW	HP							Hot	Cold				50	75	100	50	75	100	
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		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current In (A)	Rated speed (rpm)	% of full load						Full load current In (A)
			Efficiency			Power Factor					Efficiency			Power Factor			
kW	HP		50	75	100	50	75	100			50	75	100	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	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
3	4	705	82.7	83.0	83.5	0.56	0.68	0.75	7.28	715	81.5	83.2	83.7	0.48	0.61	0.70	7.12
4	5.5	730	82.0	83.5	84.8	0.52	0.65	0.73	9.82	735	80.0	83.0	84.8	0.46	0.59	0.68	9.65
5.5	7.5	725	85.0	86.0	86.2	0.53	0.66	0.73	13.3	730	83.0	85.5	86.2	0.46	0.59	0.68	13.1
7.5	10	720	86.5	87.0	87.3	0.58	0.70	0.76	17.2	730	85.5	87.0	87.3	0.51	0.64	0.72	16.6
11	15	725	88.5	88.6	88.6	0.59	0.71	0.77	24.5	730	88.0	88.6	88.6	0.52	0.65	0.74	23.3
15	20	735	89.5	90.0	90.6	0.56	0.67	0.73	34.5	735	89.0	90.0	90.9	0.50	0.63	0.69	33.3

IE2 - High 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			
kW	HP							Hot	Cold				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
0.75	1	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
1.1	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	14	31	50.5	56.0	1475	86.5	87.0	87.2	0.58	0.72	0.80	8.28
4	5.5	S132S	2.64	7.5	1.9	3.0	0.0341	14	31	50.5	56.0	1475	86.5	87.0	87.2	0.58	0.72	0.80	8.28
5.5	7.5	132S	3.67	7.3	1.9	3.0	0.0528	8	18	57.8	56.0	1460	86.5	87.3	87.7	0.68	0.80	0.86	10.5
5.5	7.5	L112M	3.72	7.1	2.7	3.0	0.0208	11	24	52.0	56.0	1440	87.0	87.7	87.7	0.55	0.68	0.76	11.6
7.5	10	132S	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
7.5	10	160M/L	4.97	6.7	2.3	2.6	0.0783	8	18	104	67.0	1470	86.5	88.0	88.7	0.65	0.77	0.84	14.5

IE2 - High Efficiency - 50 Hz [1) 2)]

Output		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current In (A)	Rated speed (rpm)	% of full load						Full load current In (A)
			Efficiency			Power Factor					Efficiency			Power Factor			
kW	HP		50	75	100	50	75	100			50	75	100	50	75	100	
II Poles																	
0.12	0.16	2765	54.7	60.7	60.7	0.57	0.71	0.79	0.380	2805	51.4	59.0	60.6	0.50	0.63	0.72	0.383
0.18	0.25	2720	57.0	62.0	64.0	0.52	0.66	0.77	0.555	2755	57.0	62.0	64.0	0.45	0.58	0.70	0.559
0.25	0.33	2685	65.0	66.0	66.0	0.55	0.71	0.82	0.702	2730	63.0	66.0	66.0	0.48	0.62	0.74	0.712
0.37	0.5	2805	69.0	70.1	70.3	0.66	0.79	0.87	0.919	2845	66.9	69.7	71.2	0.57	0.72	0.82	0.882
0.55	0.75	2750	70.8	71.9	74.1	0.73	0.85	0.91	1.24	2795	68.9	71.7	74.1	0.63	0.79	0.86	1.20
0.75	1	2770	77.7	78.0	78.0	0.66	0.81	0.87	1.68	2810	75.0	78.5	79.5	0.64	0.77	0.84	1.56
1.1	1.5	2775	78.9	79.2	79.6	0.73	0.83	0.87	2.41	2815	77.1	80.2	80.2	0.62	0.75	0.82	2.33
1.5	2	2865	80.5	81.6	81.6	0.68	0.79	0.85	3.29	2890	79.3	81.9	82.5	0.58	0.73	0.81	3.12
2.2	3	2860	82.2	82.7	83.2	0.70	0.81	0.87	4.62	2890	82.2	82.7	83.2	0.59	0.73	0.82	4.49
3	4	2885	83.9	84.5	85.0	0.71	0.83	0.88	6.09	2910	82.1	84.1	85.0	0.61	0.75	0.83	5.92
4	5.5	2865	86.6	86.0	85.8	0.78	0.87	0.90	7.87	2890	85.3	85.9	86.3	0.69	0.80	0.86	7.50
5.5	7.5	2935	86.0	87.0	87.0	0.73	0.82	0.87	11.0	2950	85.0	87.0	87.0	0.60	0.73	0.81	10.9
7.5	10	2935	87.5	88.0	88.1	0.73	0.83	0.88	14.7	2950	86.0	88.0	88.1	0.63	0.76	0.83	14.3
9.2	12.5	2935	87.5	88.0	88.9	0.71	0.82	0.87	18.1	2950	87.0	88.0	88.9	0.61	0.74	0.82	17.6
11	15	2935	89.0	89.4	89.4	0.77	0.85	0.88	21.2	2945	88.0	89.4	89.4	0.67	0.78	0.84	20.4
15	20	2935	89.5	90.3	90.3	0.78	0.85	0.88	28.7	2945	89.5	90.3	90.3	0.69	0.79	0.85	27.2
18.5	25	2930	90.5	90.9	90.9	0.77	0.85	0.88	35.1	2945	89.5	90.9	90.9	0.64	0.76	0.82	34.5
22	30	2955	91.2	91.5	91.5	0.72	0.82	0.86	42.5	2965	91.5	91.6	91.6	0.64	0.76	0.83	40.3
30	40	2955	91.5	92.0	92.0	0.75	0.83	0.86	57.6	2965	90.5	91.8	92.0	0.65	0.77	0.82	55.3
37	50	2960	92.2	92.5	92.5	0.79	0.85	0.88	69.1	2965	92.0	92.5	92.5	0.69	0.79	0.84	66.2
High-Output Design																	
0.37	0.5	2705	65.0	67.6	69.5	0.62	0.76	0.83	0.975	2760	61.1	66.2	69.5	0.52	0.66	0.77	0.962
0.75	1	2780	77.0	77.4	77.4	0.73	0.84	0.90	1.64	2830	76.0	77.6	77.6	0.62	0.76	0.85	1.58
0.75	1	2865	77.0	78.0	78.0	0.67	0.78	0.84	1.74	2890	77.0	78.0	78.0	0.58	0.71	0.79	1.69
1.1	1.5	2850	80.7	80.3	79.6	0.70	0.80	0.85	2.47	2870	79.2	80.4	81.0	0.60	0.74	0.81	2.33
1.5	2	2750	81.0	81.5	81.3	0.71	0.83	0.88	3.19	2790	80.0	81.0	81.7	0.59	0.74	0.82	3.11
2.2	3	2890	80.0	82.5	83.2	0.72	0.82	0.87	4.62	2905	80.0	82.5	83.2	0.62	0.75	0.82	4.49
2.2	3	2820	83.7	83.5	83.2	0.69	0.80	0.85	4.75	2855	82.2	83.4	83.9	0.59	0.72	0.80	4.56
3	4	2830	84.5	84.5	84.6	0.67	0.79	0.85	6.34	2860	84.0	84.7	84.7	0.57	0.71	0.79	6.24
4	5.5	2860	85.5	85.8	85.8	0.73	0.83	0.88	8.05	2880	85.0	86.0	86.0	0.63	0.76	0.83	7.80
5.5	7.5	2865	87.0	86.9	87.0	0.76	0.86	0.89	10.8	2885	85.9	86.8	87.2	0.67	0.79	0.85	10.3
5.5	7.5	2935	86.0	87.0	87.0	0.73	0.82	0.87	11.0	2950	85.0	87.0	87.0	0.60	0.73	0.81	10.9
5.5	7.5	2935	86.0	87.0	87.0	0.73	0.82	0.87	11.0	2950	85.0	87.0	87.0	0.60	0.73	0.81	10.9
7.5	10	2935	87.5	88.0	88.1	0.73	0.83	0.88	14.7	2950	86.0	88.0	88.1	0.63	0.76	0.83	14.3
7.5	10	2935	87.5	88.0	88.1	0.73	0.83	0.88	14.7	2950	86.0	88.0	88.1	0.63	0.76	0.83	14.3
7.5	10	2860	87.5	88.1	88.1	0.72	0.83	0.88	14.7	2885	87.0	88.1	88.1	0.62	0.75	0.83	14.3
11	15	2920	89.0	90.0	90.7	0.75	0.84	0.88	20.9	2940	89.0	90.0	90.7	0.66	0.78	0.84	20.1
IV Poles																	
0.12	0.16	1385	55.0	58.0	59.1	0.48	0.60	0.70	0.441	1405	52.0	58.0	59.1	0.43	0.54	0.64	0.441
0.18	0.25	1380	60.4	61.3	64.7	0.52	0.65	0.74	0.571	1410	57.7	60.6	64.7	0.40	0.51	0.60	0.645
0.25	0.33	1400	60.0	65.0	68.5	0.53	0.66	0.74	0.749	1420	57.8	64.5	68.5	0.46	0.59	0.69	0.736
0.37	0.5	1380	66.0	68.5	72.7	0.55	0.66	0.76	1.02	1405	63.0	68.0	72.7	0.46	0.58	0.69	1.03
0.55	0.75	1430	73.0	73.1	77.1	0.51	0.66	0.78	1.39	1445	69.0	73.8	77.1	0.45	0.59	0.71	1.40
0.75	1	1400	80.1	79.9	79.8	0.68	0.80	0.84	1.70	1415	77.9	79.2	80.1	0.60	0.73	0.79	1.65
1.1	1.5	1450	80.0	81.5	81.5	0.59	0.71	0.78	2.63	1460	76.5	80.0	81.4	0.51	0.64	0.73	2.58
1.5	2	1450	79.1	81.7	82.8	0.59	0.73	0.81	3.40	1460	75.3	79.4	82.8	0.50	0.64	0.74	3.41
2.2	3	1420	83.5	84.3	84.3	0.65	0.77	0.83	4.78	1435	82.3	84.5	84.9	0.56	0.71	0.79	4.56
3	4	1435	84.0	84.5	85.5	0.59	0.72	0.80	6.66	1450	82.5	84.0	85.5	0.49	0.64	0.73	6.69
4	5.5	1440	85.5	86.0	86.6	0.65	0.78	0.83	8.46	1455	85.5	86.0	86.7	0.58	0.71	0.79	8.12
5.5	7.5	1455	88.1	87.7	87.7	0.73	0.83	0.88	10.8	1460	86.5	87.3	87.7	0.65	0.77	0.84	10.4
7.5	10	1465	87.0	88.2	88.7	0.59	0.71	0.81	15.9	1470	85.3	87.5	88.7	0.50	0.64	0.77	15.3
9.2	12.5	1450	89.6	89.4	89.3	0.71	0.80	0.85	18.4	1460	88.7	89.5	89.8	0.62	0.75	0.82	17.4
9.2	12.5	1470	88.0	89.0	89.5	0.68	0.79	0.84	18.6	1475	87.0	88.5	89.5	0.60	0.73	0.80	17.9
11	15	1465	88.5	89.0	89.8	0.68	0.79	0.84	22.2	1475	87.0	88.5	89.8	0.60	0.72	0.80	21.3
15	20	1465	90.0	90.6	90.6	0.70	0.80	0.85	29.6	1470	88.5	90.3	90.6	0.60	0.73	0.80	28.8
18.5	25	1465	90.5	91.2	91.2	0.71	0.81	0.85	36.3	1470	89.5	91.2	91.2	0.62	0.75	0.81	34.8
22	30	1465	91.0	91.6	91.6	0.72	0.82	0.86	42.4	1470	91.0	91.6	91.6	0.64	0.76	0.82	40.7
30	40	1465	92.0	92.3	92.3	0.74	0.83	0.86	57.4	1475	92.0	92.3	92.3	0.65	0.77	0.83	54.5
37	50	1470	93.1	92.9	92.7	0.74	0.83	0.85	71.3	1475	92.5	93.0	93.2	0.67	0.78	0.81	68.2
High-Output Design																	
0.75	1	1460	79.1	79.9	79.6	0.55	0.68	0.77	1.86	1465	76.9	79.6	80.4	0.48	0.61	0.71	1.83
1.1	1.5	1395	81.0	81.0	81.4	0.71	0.82	0.86	2.39	1410	80.0	81.0	81.4	0.62	0.75	0.83	2.27
1.5	2	1430	80.0	82.5	82.8	0.60	0.72	0.79	3.48	1445	78.0	82.5	82.8	0.51	0.65	0.74	3.41
1.5	2	1430	82.8	83.2	82.8	0.63	0.77	0.83	3.32	1445	80.1	82.3	83.1	0.53	0.68	0.78	3.22
2.2	3	1455	85.0	84.8	84.3	0.67	0.78	0.83	4.78	1465	83.9	84.9	85.4	0.59	0.72	0.79	4.54
2.2	3	1420	84.0	84.3	84.3	0.62	0.75	0.81	4.90	1440	83.4	84.4	84.4	0.53	0.67	0.75	4.84
3	4	1410	85.4	85.5	85.5	0.67	0.78	0.84	6.35	1425	84.3	85.5	86.0	0.58	0.72	0.80	6.07
4	5.5	1435	86.5	86.6	86.6	0.67	0.78	0.82	8.56	1445	85.3	86.6	87.0	0.58	0.71	0.78	8.20
4	5.5	1470	86.0	86.5	86.6	0.63

IE2 - High Efficiency - 50 Hz [1) 2)]

Output		Frame	Full Load Torque (kgfm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/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			
kW	HP							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

IE2 - High Efficiency - 50 Hz [1) 2)]

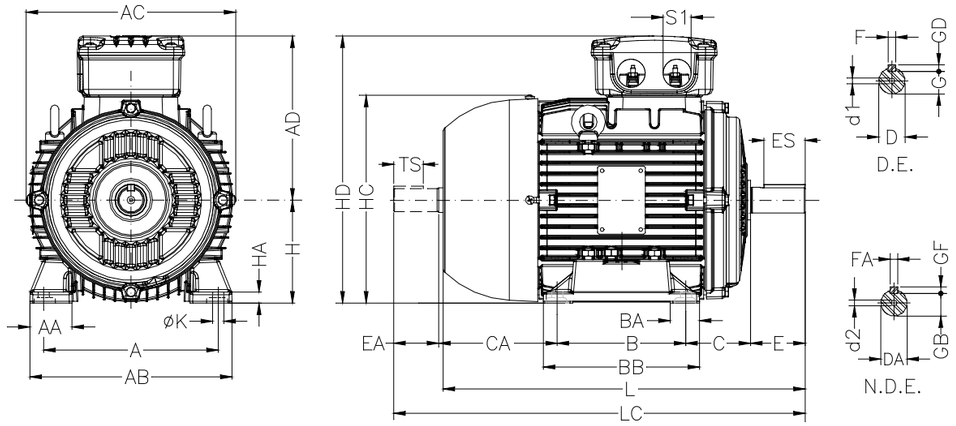
Output		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current In (A)	Rated speed (rpm)	% of full load						Full load current In (A)
			Efficiency			Power Factor					Efficiency			Power Factor			
kW	HP		50	75	100	50	75	100			50	75	100	50	75	100	
VI Poles																	
0.12	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
2.2	3	695	81.8	81.5	79.9	0.57	0.69	0.75	5.58	705	80.1	81.4	81.4	0.49	0.62	0.70	5.37
3	4	705	82.7	82.4	80.8	0.57	0.68	0.75	7.52	715	81.1	82.4	82.5	0.50	0.62	0.70	7.23
4	5.5	730	81.0	81.9	81.9	0.52	0.65	0.73	10.2	735	78.5	81.9	81.9	0.45	0.58	0.68	10.0
5.5	7.5	730	80.5	82.0	83.8	0.51	0.64	0.72	13.8	735	77.0	80.5	83.8	0.44	0.57	0.67	13.6
7.5	10	725	85.0	85.3	85.3	0.54	0.66	0.74	18.1	730	83.0	85.0	85.3	0.46	0.59	0.68	18.0
9.2	12.5	730	85.0	86.3	86.3	0.58	0.71	0.78	20.8	735	85.0	86.0	86.3	0.51	0.65	0.73	20.3
11	15	730	85.0	86.3	86.9	0.58	0.71	0.78	24.7	735	85.0	86.0	86.9	0.51	0.65	0.73	24.1
15	20	730	87.5	88.0	88.0	0.58	0.70	0.76	34.1	735	85.5	87.5	88.0	0.50	0.62	0.70	33.9
High-Output Design																	
2.2	3	695	81.8	81.5	79.9	0.57	0.69	0.75	5.58	705	80.1	81.4	81.4	0.49	0.62	0.70	5.37

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.

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	6	216	241	2xM20x1.5	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		139	198		248	276		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	10	276	313		DM6	DM4	6204-ZZ	6203-ZZ
90S/L	140	35	170	179	155	125	24	146	56	129	24j6	50	36	8	20	7	16j6	40	28		13		90	9	177	245		330	375	2xM25x1.5	DM8	DM6	6205-ZZ	6204-ZZ
100L	160	40	196	200	165		30		63	104					24		22j6	50	36	6	18.5	6	100		198	265		376	431		DM10	DM8	6206-ZZ	6205-ZZ
112M	190	46	220	223	184	140	50	170	70	118	28j6	60	45				24j6			8	20	7	112	12	235	296	12	393	448	2xM32x1.5			6307-ZZ	6206-ZZ
S132S	216	44	248	270	212		40		89	128					33		28j6	60	45		24		132		274	344		452	519		DM12	DM10	6308-ZZ	6207-ZZ
132S	216	44	248	270	212		40		89	150	38k6	80	63	10	33	8	28j6	60	45		24		132	12	274	344		490	557		DM12	DM10	6308-ZZ	6207-ZZ
132M						178	32	210		188																								
160M/L	254	62	308	347	255	210	60	298	108	218	42k6			12	37	8	42k6	110	80	12	37	8	160	18	313	414	14.5	634	756	2xM40x1.5	DM16	DM16	6309-C3	6209-Z-C3
180M/L	279	68	350	306	274	254	49	322	121	174	48k6	110	80	14	42.5	9	48k6	110	80	14	42.5	9	180	20	354	454		694	820	2xM40x1.5			6311-C3	6211-Z-C3
200M/L	318	73	385	386	300	241	60	370	133	238	55m6			16	49	10		110	80	14			200	25	393	500	18.5	758	880	2xM50x1.5	DM20	DM20	6312-C3	6212-Z-C3
						267				200																								
						305				222																								

**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

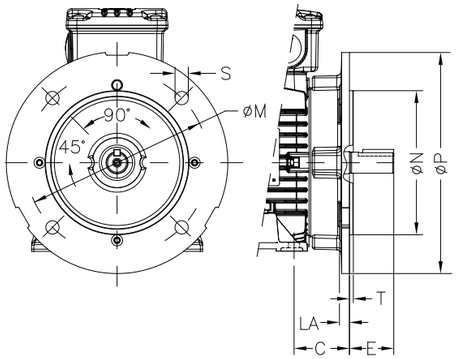
Optional frames:

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

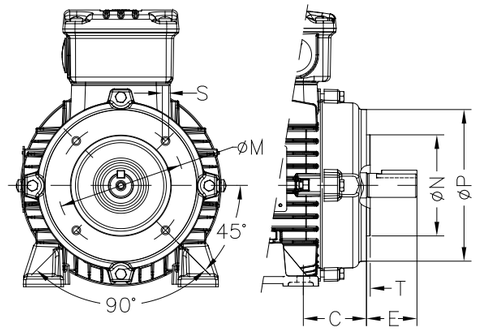
"FF" Flange

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		130	110	160	3.5			
80	FF-165	50	10	165	130	200		12		
90S/L		56								
100L	FF-215	63	11	215	180	250	4	15		
112M		70								
S132S	FF-265	89	12	265	230	300				
132S/M	FF-265	89	12	265	230	300				
160M/L	FF-300	108	18	300	250	350	5	19		
180M/L		121								
200M/L	FF-350	133		350	300	400				



"C-DIN" Flange

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



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