

Catalogue

1. Technical Data	1-29
2. MS Series IE1 Efficiency Motors	30-33
3. MS2 Series IE2 Efficiency Motors	34
4. MSD Series Double-Polarity Motors	35-38
5. MSB Series Brake Motors	39-43
6. ML Series Single-Phase Capacitor Start and Capacitor Run Motors	44-45
7. MY / MYT Series Single-Phase Capacitor Run Motors	46-48
8. MC Series Single-Phase Capacitor Start Motors	49-50
9. "ECOL" Aluminum Housing Motors	
T1A Series IE1 Efficiency Motors	51-54
T2A Series IE2 Efficiency Motors	55-56
T3A Series IE3 Efficiency Motors	57-58
T4A Series IE4 Efficiency Motors	59
T Series NEMA EPACT Efficiency Motors	60
T Series NEMA Premium Efficiency Motors	61
10. "ECOL" Cast Iron Housing Motors	
T1C Series IE1 Efficiency Motors	62-66
T2C Series IE2 Efficiency Motors	67-68
T3C Series IE3 Efficiency Motors	69-70
T4C Series IE4 Efficiency Motors	71-72
11. Fire Pump Motors	73-83
12. Nema Motors	
TSS Series Stainless-steel Housing Motors	84-86
HVAC Resilient Cradle Motors	87-89
SLD Series Single-Phase Rolled Steel Frame ODP Motors	90-92
SLF Series Single-Phase Rolled Steel Frame TEFC Motors	93-94
TXD Series Three-Phase Rolled Steel Frame ODP Motors	95-96
TXF Series Three-Phase Rolled Steel Frame TEFC Motors	97-98
TXA Series Three-Phase Aluminum Housing TEFC Motors	99-102
TXA Series 56J JM JP Pump Aluminum Housing Motors	103-106
TXAB Series Three-Phase Brake Aluminum Housing TEFC Motors	107-108
TDA Series Three-Phase Aluminum Housing ODP Motors	109-110
TLF Series Single-Phase Aluminum Housing TEFC Motors	111-112
TLD Series Single-Phase Aluminum Housing ODP Motors	113-114
TXC Series Three-Phase Cast Iron Housing TEFC Motors	115-120
TXC Series IEEE-841 Cast Iron Housing TEFC Motors	121
TFC Series JM JP Pump Cast Iron Housing Motors	122-123
TDC Series Cast Iron Housing ODP Motors	124
13. Electronically Commutated Motors	125-127
14. VFD consideration	128-130

Efficiency levels

All motors distributed by TEC and manufactured by Techtop are designed with the new European standard for high efficiency. MS range, is designed and manufactured in accordance with the parameters of the new international standard 60034-30-1 for efficiency IE1, IE2. TA and TC lines, are designed and manufactured in accordance with the parameters of the international standard 60034-30-1 for efficiency IE1, IE2, IE3, IE4. The motors are totally enclosed, fan cooled, with squirrel cage rotor. MS and TA lines, from frame 56 to frame 200, are aluminium frame. TC range, from frame 80 to frame 355, are cast iron frame. IEC 60034-30-1 standard defines IE (International Efficiency) efficiency classes of single speed three-phase cage induction motors; 50Hz and 60-Hz; 2/4/6/8 pole; rated voltage up to 1000V; S1 duty in the new standard.

- IE1 standard efficiency 8 pole & brake motors
- IE2 high efficiency from 0.12 to 375 kW for use with VSD only
- IE3 premium efficiency from 0.12 to 375 kW
- IE4 super premium efficiency from 0.12 to 375 kW

New IEC standard regarding efficiency classes (IEC 60034-30-1) and efficiency measurements (IEC 60034-2-1)

The resulting efficiency values differ from those obtained under the previous IEC 60034-2:1996 testing standard. It must be noted that the efficiency values are only comparable if they are obtained using the same measuring method.

EU regulations 640/2009 and 4/2014 adapted on 6 January 2014

Commissions Regulation 640/2009, adapted on 22 July 2009, specifies the requirements regarding the ecodesign of electric motors and the use of electronic speed control (VSD).

IE1

IE2

IE3

Rated Power kW	(IE1) Standard Efficiency				(IE2) High Efficiency				(IE3) Premium Efficiency				(IE4) Super Premium Efficiency			
	Poles				Poles				Poles				Poles			
	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
0.12	45.0	50.0	38.3	31.0	53.6	59.1	50.6	39.8	60.8	64.8	57.7	50.7	66.5	69.8	64.9	62.3
0.18	52.8	57.0	45.5	38.0	60.4	64.7	56.6	45.9	65.9	69.9	63.9	58.7	70.8	74.7	70.1	67.2
0.25	58.2	61.5	52.1	43.4	64.8	68.5	61.6	50.6	69.7	73.5	68.6	64.1	74.3	77.9	74.1	70.8
0.37	63.9	66.0	59.7	49.7	69.5	72.7	67.6	56.1	73.8	77.3	73.5	69.3	78.1	81.1	78.0	74.3
0.55	69.0	70.0	65.8	56.1	74.1	77.1	73.1	61.7	77.8	80.8	77.2	73.0	81.5	83.9	80.9	77.0
0.75	72.1	72.1	70.0	61.2	77.4	79.6	75.9	66.2	80.7	82.5	78.9	75.0	83.5	85.7	82.7	78.4
1.1	75.0	75.0	72.9	66.5	79.6	81.4	78.1	70.8	82.7	84.1	81.0	77.7	85.2	87.2	84.5	80.8
1.5	77.2	77.2	75.2	70.2	81.3	82.8	79.8	74.1	84.2	85.3	82.5	79.7	86.5	88.2	85.9	82.6
2.2	79.7	79.7	77.7	74.2	83.2	84.3	81.8	77.6	85.9	86.7	84.3	81.9	88.0	89.5	87.4	84.5
3	81.5	81.5	79.7	77.0	84.6	85.5	83.3	80.0	87.1	87.7	85.6	83.5	89.1	90.4	88.6	85.9
4	83.1	83.1	81.4	79.2	85.8	86.6	84.6	81.9	88.1	88.6	86.8	84.8	90.0	91.1	89.5	87.1
5.5	84.7	84.7	83.1	81.4	87.0	87.7	86.0	83.8	89.2	89.6	88.0	86.2	90.9	91.9	90.5	88.3
7.5	86.0	86.0	84.7	83.1	88.1	88.7	87.2	85.3	90.1	90.4	89.1	87.3	91.7	92.6	91.3	89.3
11	87.6	87.6	86.4	85.0	89.4	89.8	88.7	86.9	91.2	91.4	90.3	88.6	92.6	93.3	92.3	90.4
15	88.7	88.7	87.7	86.2	90.3	90.6	89.7	88.0	91.9	92.1	91.2	89.6	93.3	93.9	92.9	91.2
18.5	89.3	89.3	88.6	86.9	90.9	91.2	90.4	88.6	92.4	92.6	91.7	90.1	93.7	94.2	93.4	91.7
22	89.9	89.9	89.2	87.4	91.3	91.6	90.9	89.1	92.7	93.0	92.2	90.6	94.0	94.5	93.7	92.1
30	90.7	90.7	90.2	88.3	92.0	92.3	91.7	89.8	93.3	93.6	92.9	91.3	94.5	94.9	94.2	92.7
37	91.2	91.2	90.8	88.8	92.5	92.7	92.2	90.3	93.7	93.9	93.3	91.8	94.8	95.2	94.5	93.1
45	91.7	91.7	91.4	89.2	92.9	93.1	92.7	90.7	94.0	94.2	93.7	92.2	95.0	95.4	94.8	93.4
55	92.1	92.1	91.9	89.7	93.2	93.5	93.1	91.0	94.3	94.6	94.1	92.5	95.3	95.7	95.1	93.7
75	92.7	92.7	92.6	90.3	93.8	94.0	93.7	91.6	94.7	95.0	94.6	93.1	95.6	96.0	95.4	94.2
90	93.0	93.0	92.9	90.7	94.1	94.2	94.0	91.9	95.0	95.2	94.9	93.4	95.8	96.1	95.6	94.4
110	93.3	93.3	93.3	91.1	94.3	94.5	94.3	92.3	95.2	95.4	95.1	93.7	96.0	96.3	95.8	94.7
132	93.5	93.5	93.5	91.5	94.6	94.7	94.6	92.6	95.4	95.6	95.4	94.0	96.2	96.4	96.0	94.9
160	93.8	93.8	93.8	91.9	94.8	94.9	94.8	93.0	95.6	95.8	95.6	94.3	96.3	96.6	96.2	95.1
200	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.3	95.4
250	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.5	95.4
315	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.6	95.4
355-375	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5	95.8	96.0	95.8	94.6	96.5	96.7	96.6	95.4

Standards

Motors MS, TA, TC series are manufactured to the following standards

Ratings and performances

IEC 60034-1 CEI EN 60034-1

Methods for determining losses and efficiency

IEC 60034-2-1 CEI EN 60034-2

Rotating electrical machines, part 30, efficiency classes of single speed, three-phase induction motors (ie code)

IEC 60034-30-1 EDITION 1

Classification of degrees of protection (IP code)

IEC 60034-5 CEI EN 60034-5

Methods of cooling (IC code)

IEC 60034-6 CEI EN 60034-6

Classification of type of construction mounting arrangements (IM code)

IEC 60034-7 CEI EN 60034-7

Terminal markings and direction of rotation

IEC 60034-8 CEI 2-8

Noise limits

IEC 60034-9 CEI EN 60034-9

Built-in thermal protection

IEC 60034-11

Starting performance of rotating electrical machines

IEC 60034-12 CEI EN 60034-12

Mechanical vibrations

IEC 60034-14 CEI EN 60034-14

Dimensions and outputs for electrical machines

CEI EN50347 IEC 60072-1 IEC 60072-2



All the motors are manufactured according to Quality Assurance Systems consistent with ISO 9001.

ISO 9001

The motors covered by the present catalogue comply with the regulations and standards effective in other countries, consistent with IEC standards.

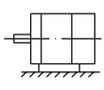
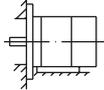
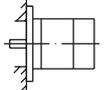
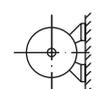
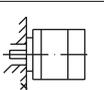
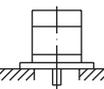
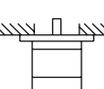
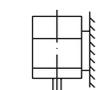
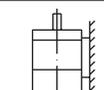
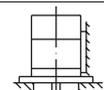
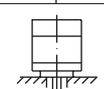
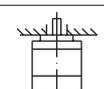
IEC

All the motors described in the present catalogue are provided with CE mark.

CE

Mounting Positions

Frame according to IEC 60034-7, are defined in the following table:

FIGURE	STANDARDS			FRAME SIZES		
	CEI 2-14	Code I	Code II	56-160	180-280	315-355
	B3	IM B3	IM 1001	standard		
	B3/B5	IM B35	IM 2001	standard		
	B5	IM B5	IM 3001	standard	standard	upon request
	B6	IM B6	IM 1051	standard	upon request	upon request
	B7	IM B7	IM 1061	standard	upon request	upon request
	B8	IM B8	IM 1071	standard	upon request	upon request
	B14	IM B14	IM 3601	standard		
	V1	IM V1	IM 3011	standard		
	V3	IM V3	IM 3031	standard	standard	upon request
	V5	IM V5	IM 1011	upon request	upon request	upon request
	V6	IM V6	IM 1031	upon request	upon request	upon request
	V1/V5	IM V15	IM 2011	standard	standard	upon request
	V18	IM V18	IM 3611	standard		
	V19	IM V19	IM 3631	standard		

Protection

Motor protection according to IEC 60034-5 standards, are:

IP55 (standard) totally enclosed motors, fan cooled, protected against penetration of harmful quantities of dust and water sprayed from any direction.

IP56, IP65 & IP66 (upon request) totally enclosed motors, protected against dust penetration for use with on-deck marine applications.

Normally, IP55 and IP56 motors are supplied with an external fan (IC 411 - IC 416 or IC 418). Upon request they can be supplied without fan. (IC410). In this case the features, outputs and technical data can be supplied upon request.

The external fan is covered, in line with safety standards.
Motors for vertical mounting V1, V5, V1/V5, can be supplied with rain cowl (upon request).
The terminal box as standard has an IP55 protection level.

General Construction Features

The motors have been designed and manufactured in compliance with international standards.

TA and MS series are available from frame size 56 to frame size 200
Frame and terminal box are in aluminum, fan cover is sheet steel, flanges and shields are aluminum.

TC series is available from frame size 80 to frame size 355.
Frame and terminal box are cast iron, fan cover is sheet steel, flanges and shields are cast iron.
TC terminal box is steel upto 280 frame.

As standard the terminal box position is on top of the motor, this can be rotated in increments of 90° in order to re-position the cable entry point.

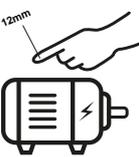
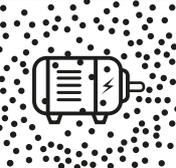
Fans are in nylon, upon request can be supplied with aluminium or steel sheet.
Feet are removable, on all series, from frame size 56 to frame size 280.

Aluminium motors are all multi-mount with removable feet.

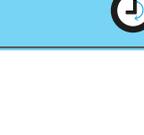
Cast Iron motors up to and including frame size 280, as standard, are multi-mount with removable feet. Fixed feet motors available upon request.

IP (Ingress Protection) Rating Guide

Solids

0		Not protected
1		Protected against solid bodies larger than 50mm such as a hand
2		Protected against solid bodies larger than 12mm such as a finger
3		Protected against solid bodies larger than 2.5mm such as a screwdriver
4		Protected against solid bodies larger than 1mm such as wire
5		Protected against Limited ingress of dust. Two to eight hours
6		Totally protected against deposition of dust

Water

0		Not protected
1		Protected against vertically falling drops of water
2		Protected against vertically falling drops of water up to 15°
3		Protected against rain up to 60°
4		Protected against rain falling from any direction
5		Protected against sprayed water from any direction
6		Water projected from power jets shall not enter enclosure
7		Protected against immersion between 0.15 and 1m
8		Protected against vertically falling drops of water

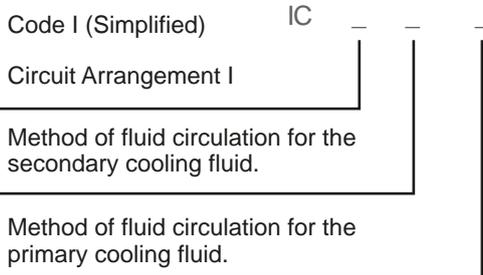
Rating Example:

INGRESS PROTECTION

IP55

Cooling

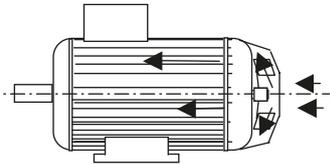
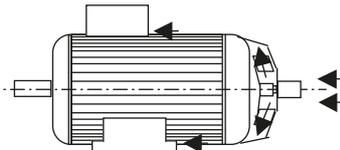
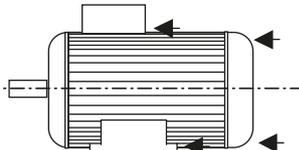
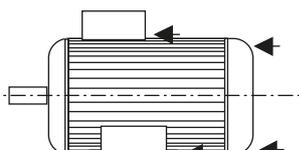
The designation of cooling method is defined by the IC (International Cooling) code, according to IEC 60034-6



Motors in standard frame sizes from 56 to 355 are supplied with IC 411 cooling systems, incorporating a bidirectional fan.

All frame sizes can be supplied with cooling system IC 416 on request.

In this case a fan is fitted inside the fan cover, suitably reinforced, in order to make the ventilation independent of the rotational speed.

IC CODE	FIGURE	DESCRIPTION	NOTE
IC 411		Self ventilating motor. Enclosed machine. Fan mounted on motor shaft end	Standard
IC 416		Motor with forced ventilation. Enclosed machine. Independent external fan mounted inside the fan cover.	Upon request
IC 418		Motor with external ventilation. Enclosed machine. Provided by air flowing from the driven system.	Upon request
IC 410		Non ventilated motor Enclosed machine.	Upon request

Bearings and Oil Seals

All motors up to and including 200 frame have sealed for life pre-lubricated C3 clearance ball bearings at both the DE and NDE.

Cast Iron motors from frame size 200 to 315 (2 pole only at 315) have re-greasable C3 clearance ball bearings at both the DE and NDE.

Cast Iron motors from frame size 315 (4,6,8 pole) to 355, have re-greasable roller bearings at the DE and ball bearings at the NDE.

All non-sealed re-greasable bearings need to be periodically re-lubricated according to the data given in the installation and maintenance manual.

Motors with bearing axial constraints have an arrangement with a spring in order to absorb vibrations. The lifetime of bearings (in accordance with supplier data) is in excess of 40.000 hours, for motors with direct coupling.

Below table details all specifications regarding bearings installed on motors frame size 56-355

MOTOR TYPE	Bearing		Oil seals
	Drive end	Non-drive end	dxDxB
MS 56	6201	6201	12x22x5
MS 63	6201	6201	12x24x5
MS 71	6202	6202	15x25x7
MS 80	6204	6204	20x34x7
MS 90	6205	6205	25x37x7
MS 100	6206	6206	30x44x7
MS 112	6306	6206	30x44x7
MS 132	6308	6208	40x58x7
MS 160	6309	6309	45x65x8
MS 180	6311	6211	55x72x8
MS 200	6312	6212	60x80x8
TA 56	6201	6201	12x22x5
TA 63	6201	6201	12x22x5
TA 71	6202	6202	15x25x7
TA 80	6204	6204	20x34x7
TA 90	6205	6205	25x37x7
TA 100	6206	6206	30x44x7
TA 112	6306	6206	30x44x7
TA 132	6308	6208	40x58x7
TA 160	6309	6209	45x65x8
TA 180	6311	6211	55x72x8
TA 200	6312	6212	60x80x8

MOTOR TYPE	Bearing		Oil seals
	Drive end	Non-drive end	dxDxB
TC 80	6204	6204	20x34x7
TC 90	6205	6205	25x37x7
TC 100	6206	6206	30x44x7
TC 112	6306	6306	30x44x7
TC 132	6308	6308	40x58x7
TC 160	6309	6309	45x65x8
TC 180	6311	6311	55x75x8
TC 200	6312	6312	60x80x8
TC 225	6313	6313	65x90x10
TC 250	6314	6314	70x95x10
TC 280	6316	6316	80x100x10
TC 315-2	6317	6317	85x110x12
TC 315-4/6/8	NU319	6319	95x120x12
TC 355-2	6319	6319	95x120x12
TC 355-4/6/8	NU322	6322	110x130x12

Upon request the following can be fitted retrospectively, roller bearings at DE, where non-standard, insulated bearings at NDE, and reinforced bearings at NDE.

Terminals Box

The terminal board is normally equipped with 6 terminals and is made with non hygroscopic middle resistance material.

Terminal boxes for TA and MS series are produced in aluminium, and in steel for TC series up to 280 frame. 315 frame and above are cast iron.

Terminal box has an IP55 standard protection level.

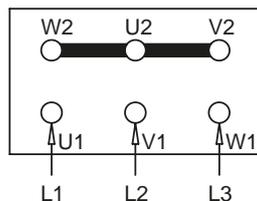
Cable gland information for each frame size can be found in table below:

FRAME	Cable gland	FRAME	Cable gland
TA/MS 56	1-M16x1,5	TC 80	1-M20x1,5
TA/MS 63	1-M16x1,5	TC 90	1-M20x1,5
TA/MS 71	1-M20x1,5	TC 100	2-M20x1,5
TA/MS 80	1-M20x1,5	TC 112	2-M20x1,5
TA/MS 90	1-M20x1,5	TC 132	2-M25x1,5
TA/MS 100	2-M20x1,5	TC 160	2-M32x1,5
TA/MS 112	2-M25x1,5	TC 180	2-M32x1,5
TA/MS 132	2-M25x1,5	TC 200	2-M40x1,5
TA/MS 160	2-M32x1,5	TC 225	2-M50x1,5
TA/MS 180	2-M40x1,5	TC 250	2-M50x1,5
TA/MS 200	2-M40x1,5	TC 280	2-M50x1,5
		TC 315	2-M63x1,5
		TC 355	2-M63x1,5

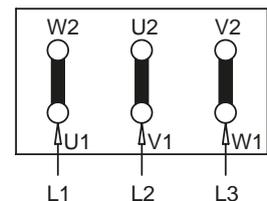
Connection

Single speed motors

Connection star Y
highest voltage on plate

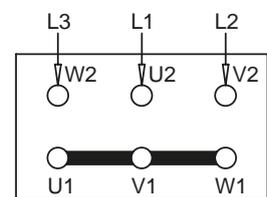
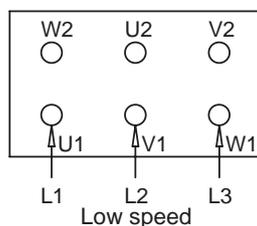


Connection delta
lower voltage on plate

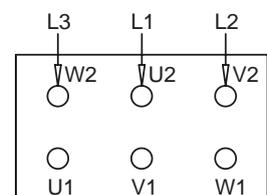
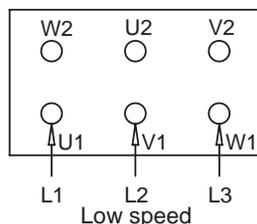


Double speed motors

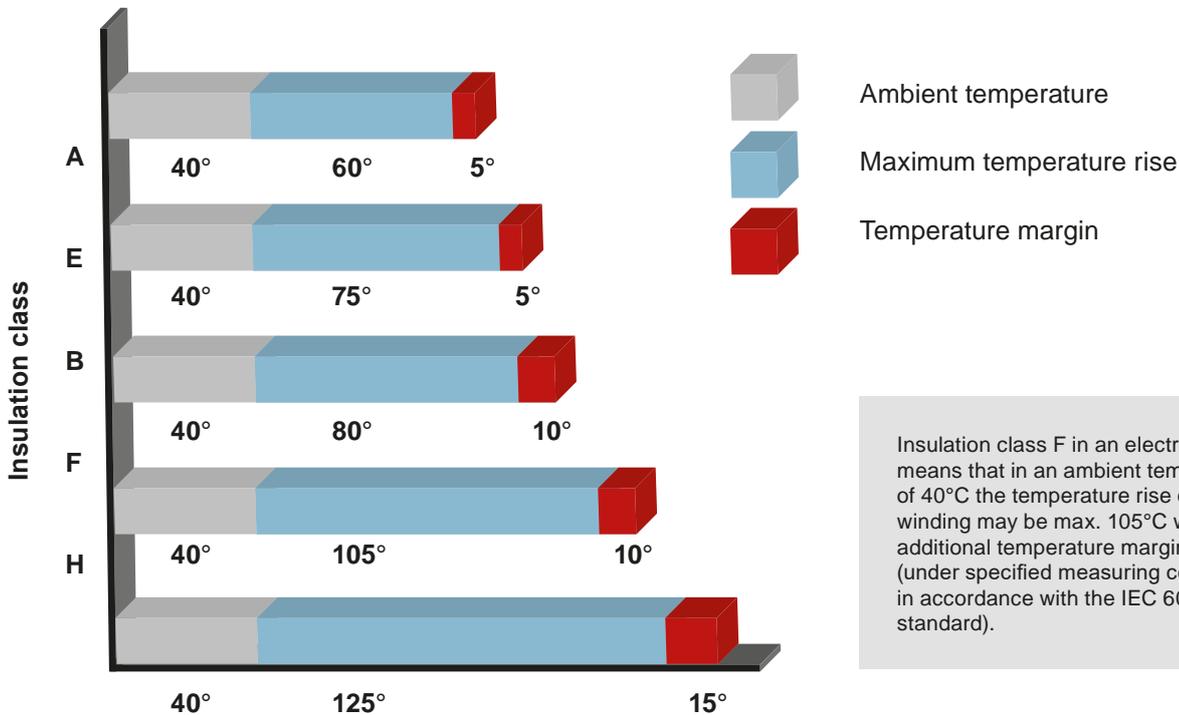
single winding
6 terminals



Two separate windings
6 terminals



Insulation rating



Class F

As standard all motors have Class F insulation, temp rise B. This helps to increase the lifespan of our motors. Upon request we can offer motors equipped with insulation class H for higher ambient temperatures.

Strengthened insulation systems are also available to give extra safety when operating with VSD.

Insulation, Winding

All motors as standard are manufactured with Class F insulation.

The soft copper electrolytic wire is insulated by using a special enamel (double enamel).

All insulating materials used to produce motors are rated to F or H insulation class.

The winding undergoes a treatment as follows: it is impregnated by soaking it in oven-curing F class resins, then tropicalized following a process including spraying of anti-saline enamel, finally, it is coated using a spray with heatproof, humidity-proof, chemical agents and sea-ambient corrosive action resistant material.

The impregnation cycle is carried out under vacuum (VPI)

Ratings and Technical Data

Power and data reported in the technical data tables are for continuous duty operation (S1) at an ambient temperature of 40°C, max. altitude 1000 a.s.l., with supply at 400 V - 50Hz.

In such conditions, the temperature rise reached by the motors is lower than the one provided for by the B insulation class.

The operating characteristics are guaranteed to conform with tolerances defined by the CEI EN 60034-1 Standards and the IEC 60034-1 Recommendations, please see table below:

CHARACTERISTICS	TOLERANCES
Efficiency	Motor power < 50 kW -15% of (1-η) Motor power > 50 kW -10% of (1-η)
Power factor	+1/6 (1- cosφ) Min 0.02 Max 0.07
Locked rotor current	+20% of guaranteed value
Locked rotor torque	-15% + 25% of guaranteed value
Pull out torque	-10% of guaranteed value
Slip	± 20% of guaranteed value

Voltage & Frequency Variations

Motors are designed to work at optimum level based on the below parameters and as stated in the Classification Society Standards.

In particular, motors can run with voltage variations of 10% and frequency variations of 5% with a maximum combined variation of 10% with temperature rise in compliance with the provisions of the Classification Society Standards.

Operation at 60Hz Frequency

All 3 phase motors can run at a frequency of 60 Hz - performances and electrical ratings are calculated by applying the multiplier value as described in the table below.

PLATE VOLTAGE	PLATE VOLTAGE	NOMINAL POWER	NOMINAL CURRENT	NOMINAL TORQUE	RPM	STARTING CURRENT	STARTING TORQUE	MAX TORQUE
50 HZ	60 HZ							
230 +/- 10%	220 +/- 5%	1	1	0.83	1.2	0.83	0.83	0.83
230 +/- 10%	230 +/- 10%	1	0.95	0.83	1.2	0.83	0.83	0.83
230 +/- 10%	254 +/- 5%	1.15	1.02	0.96	1.2	0.93	0.93	0.93
230 +/- 10%	277 +/- 5%	1.2	1	1	1.2	1	1	1
400 +/- 10%	380 +/- 5%	1	1	0.83	1.2	0.83	0.83	0.83
400 +/- 10%	400 +/- 10%	1	0.95	0.83	1.2	0.83	0.83	0.83
400 +/- 10%	440 +/- 5%	1.15	1.02	0.96	1.2	0.93	0.93	0.93
400 +/- 10%	460 +/- 10%	1.15	1	0.96	1.2	0.96	0.96	0.96
400 +/- 10%	480 +/- 5%	1.2	1	1	1.2	1	1	1

De-Rating

The below tables and technical data refer to an ambient temperature of 40°C and an altitude up to 1000 a.s.l. In different environmental conditions output ratings vary, and are calculated by applying the factors as mentioned in the following table, maintaining the temperature rise provided for by the B insulation class.

ALTITUDE M A.S.L	AMBIENT TEMPERATURE (°C)					
	30	30-40	45	50	55	60
<= 1000	1.06	1	0.97	0.94	0.90	0.87
1500	1.04	0.97	0.94	0.91	0.87	0.84
2000	1	0.95	0.92	0.88	0.84	0.81
3000	0.96	0.89	0.86	0.82	0.78	0.74
4000	0.91	0.84	0.80	0.76	0.72	0.67

In cases where the temperature rise permitted for the F insulation class is used, the corrective factors applied are detailed in the following table:

ALTITUDE M A.S.L	AMBIENT TEMPERATURE (°C)					
	30	30-40	45	50	55	60
<= 1000	1.17	1.12	1.09	1.06	1.03	1
1500	1.15	1.10	1.07	1.04	1.01	0.97
2000	1.13	1.07	1.04	1.01	0.98	0.95
3000	1.08	1.02	0.99	0.96	0.93	0.89
4000	1.04	0.97	0.94	0.91	0.87	0.84

All technical data shown in the tables refer to continuous duty operation (S1). Upon request, motors for limited duty (S2 for 30 or 60 minutes) can be supplied.

Overloads

Continuous duty motors can withstand the following overloads

OVERLOAD %	DURATION MINUTES	TIME INTERVAL MINUTES
10	10	15
20	6	15
30	4	15
40	3	15
50	2	15

While operating under these overload conditions, over-temperature is the limiting factor of class F insulation.

Starting

Motors are suitable for the following types of starting:

- Direct (DOL)
- Star - delta
- By autotransformer
- Soft-start (*)
- by inverter (**)

(*) when the starting phase is finished the soft-start should be by-passed, or precautions must be taken when the motor is powered with an inverter

(**) see as recommendations in the paragraph n.23 "Inverter Supply"

Vibration

Motors are dynamically balanced with a half key fitted to the shaft in accordance with standard IEC 60034-14:2007 to vibration severity grade normal (N) in standard execution.

The following table indicates the maximum vibration grades with respect to the different shaft heights.

vibration degree	Frame size (mm)	$56 \leq H \leq 132$	$132 < H \leq 280$	$H > 280$
	Mounting type	Speed/ (mm/s)	Speed/ (mm/s)	Speed/ (mm/s)
A	Suspension	1.5	2.2	2.8
	Rigid mounting	1.3	1.8	2.3

Noise

The below technical features table contains the values of A-sound pressure level (LpA) and A sound power level (LwA), measured at a one meter distance.

Sound levels are measured in no-load conditions and have tolerances of 3 dB(A).

FRAME SIZE	A-sound pressure level (LpA) · A-sound power level (LwA) dB(A)							
	2 POLE		4 POLE		6 POLE		8 POLE	
	LpA	LwA	LpA	LwA	LpA	LwA	LpA	LwA
56	69	78	63	72	58	67	54	63
63	75	84	67	76	61	70	58	67
71	75	84	67	76	61	70	58	67
80	75	84	70	79	63	72	61	70
90	75	85	70	80	66	76	66	76
100	77	87	70	80	66	76	66	76
112	78	88	73	83	66	76	66	76
132	69	78	63	72	58	67	54	63
160	75	84	67	76	61	70	58	67
180	75	84	67	76	61	70	58	67
200	75	84	70	79	63	72	61	70
225	75	85	70	80	66	76	66	76
250	77	87	70	80	66	76	66	76
280	78	88	73	83	66	76	66	76
315	80	90	77	87	73	83	69	79
355	86	97	84	96	82	94	79	91

The values of the noise (LpA) and of the sound power (LwA) in the table are related to operation at 50Hz, frequency changes affect these values as indicated in the following table:

SUPPLY FREQUENCY HZ	% VALUE OF NOISE LEVEL COMPARED TO 50HZ VALUE
10	60%
20	60%
30	70%
40	100%
50	100%
60	100%
80	120%

Thermal Protection

All 3 phase motors are fitted with positive temperature coefficient thermistors PTC. The thermal protections can change the standard resistance value.

Resistance of PTC, for nominal operating temperature (T), have the following values:

- < 250 Ohm at a temperature from -20°C to TK-20°C
- < 550 Ohm at a temperature of TK-5°C
- > 1330 Ohm at a temperature of TK+5°C
- > 4000 Ohm at a temperature of TK+15°C

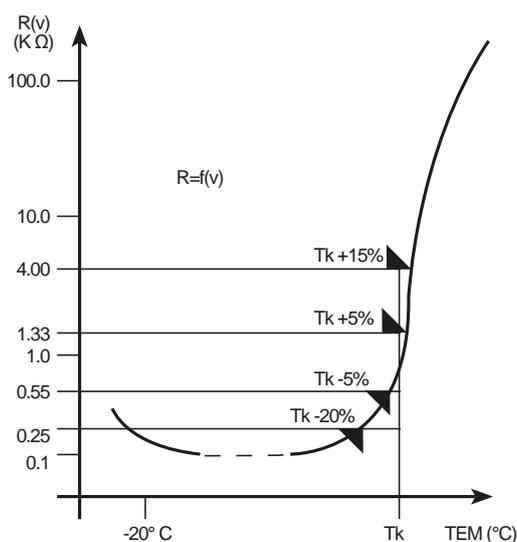
Values of TK related with the class of insulation are the following:

CLASS OF INSULATION	OPERATING TEMPERATURE LIMIT OF THE INSULATION °C	TK °C
A	105	95-100
E	120	110-115
B	130	120-125
F	155	145-150
H	180	170-175

The nominal operating temperature of the thermistors (PTC), mounted cast iron motors is 150°C, or 130°C for aluminium motors.

Maximum supply voltage of the PTC thermistors is 2,5V.

Below are the characteristic /resistance/ temperature figures of the PTC thermistors:



Upon request, the following thermal protection can be installed on the motors:

Bimetallic devices

Motor protection(PTO) with contact normally closed. The contactor opens when the winding temperature reaches limits dangerous to the insulation system of the motor.

Platinum resistance thermometers PT100

Variable linear resistance with the winding temperature. This device is particularly suitable for continuous winding temperature monitoring.

The protection is normally made using 3 sensitive elements, one for each phase, and with two terminals in a specially provided terminal board located in the main terminal box or in a specially provided auxiliary terminal box.

Anti-condensation heaters

Motors subject to atmospheric condensation, either through standing idle in damp environments or due to wide ambient temperature variations, may be fitted with anti-condensation heaters.

They are of tape form and are normally mounted on the stator winding head.

Anti-condensation heaters are normally switched on automatically when the supply to the motor is interrupted, heating the motor to avoid water condensation.

Normal supply voltage is 110 V or 220/240V.

Anti-condensation heater terminals are fed to a specially provided terminal board located in the main terminal box. Upon request they can be led to a terminal board located in an auxiliary terminal box.

The power values normally used are shown in the table:

FRAME SIZE	POWER (W)
132-160	26
180-200	26
225-250	50
280-315	100
355	200

Drainage hole

Motors of series MS, TA, TC are provided with holes for the discharge of condensate closed with a plug to guarantee the degree of protection IP reported on plate.

As a function of the operating conditions such plugs can be removed to allow the discharge of condensate that may form inside the motor.

Inverter Fed Applications

TECHTOP low voltage motors are suitable for pumps, fans, compressors, textile machine and mechanical machine applications where variable or constant speed is required.

In applications where the motor is driven by a Inverter, the degree of electrical interference depends on the type of Inverter used (type, number of IGBTs, interference suppression measures, and manufacturer), cabling, distance and application requirements.

The installation guidelines of the Inverter manufacturer with regards to electromagnetic compatibility must be considered at all times during the design and implementation phases.

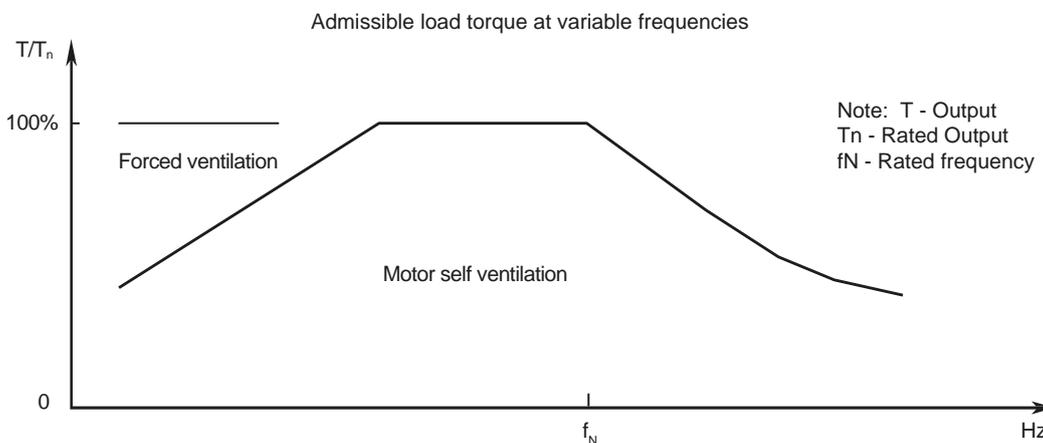
At rated output with inverter fed operation, the motors will be used in temperature class 155 (F). To prevent damage as a result of bearing currents, insulated bearings are recommended to be assembled for motors 110Kw and above.

Please enquire for more detailed information about insulated bearings.

Inverter Operation

The standard insulation of TECHTOP low voltage motors is designed such that operation is possible on the converter at mains voltage up to 480 V.

The load torque characteristics of this series motor is referred in the following diagram:



By usage with permissible torque, the motor can be operated with self cooling; usage outside the permissible torque line requires the motor to be force ventilated.

At operating speeds above rated speed the noise and vibration levels increase and the bearing life reduces. Strict attention should be paid to the re-greasing intervals and the grease service life.

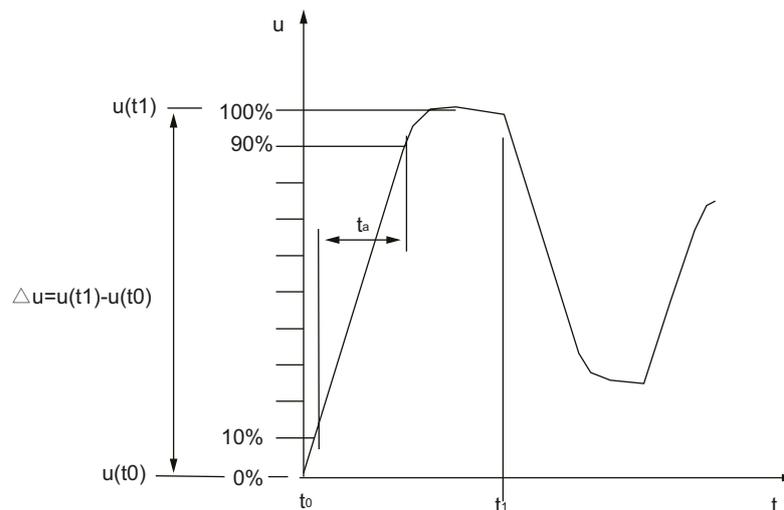
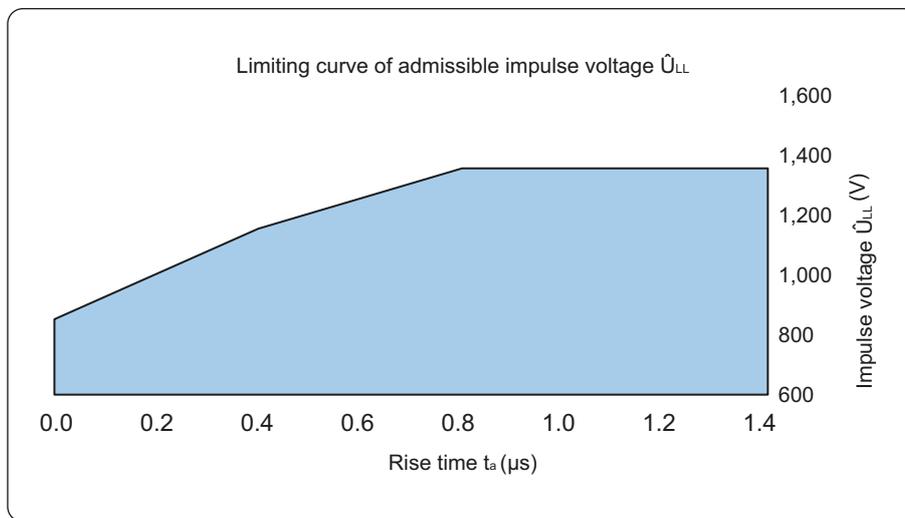
For Inverter-fed operation with frequencies greater than 60 Hz special balancing is required for compliance with the specified limit values.

Voltage Parameter Levels

The dielectric stress of the winding insulation is determined by:

- Peak voltage, rise time and frequency of the impulses produced by the Inverter.
- Characteristics and the length of the connection leads between the inverter and motor.
- Winding construction and other system parameters, especially voltages between the different parts of the winding and the ground that produce dielectric stress at the insulation system.

The standard insulation of 1LE0003 motors are designed to withstand voltage peak and rise time which is shown in the diagram:



The values refer to standard IEC 60034-17 and GB/T 20161-2008.

Forced Ventilation Units

All frame sizes can be supplied with cooling system IC 416 (forced ventilation) on request. Consequently the ventilation is independent of the rotation speed of the motor itself. This solution is particularly suitable for inverter supplied motors.

Auxiliary fans three phase

TYPE	SPEED (r/min)	MAXIMUM AIR FLOW (m³/h)	MAXIMUM PRESSURE (pa)	NOISE dB(A)
63	2800	45	40	62
71	2800	52	50	62
80	2800	58	60	62
90	2800	91	80	65
100	2750	142	80	67
112	2600	229	80	67
132	1400	337	35	69
160	1390	609	40	72
180	1330	686	55	72
200	1230	1679	65	72
225	1430	1786	70	74
250	1420	1813	80	75
280	1360	2415	85	78
315	1320	2820	110	81
355	900	3500	800	85

3 PHASE (v)	INPUT CURRENT (A)	Hz	INPUT POWER (w)
230	0,12	50	20
230	0,14	50	25
230	0,14	50	29
230	0,16	50	32
230	0,29	50	58
230	0,31	50	69
230	0,33	50	52
230	0,43	50	70
230	0,43	50	85
230	0,46	50	105
230	0,62	50	75
230	0,66	50	115
230	0,94	50	180
230	1,3	50	480
230	1,65	50	400

TYPE	SPEED (r/min)	MAXIMUM AIR FLOW (m³/h)	MAXIMUM PRESSURE (pa)	NOISE dB(A)
63	2800	45	40	62
71	2800	52	50	62
80	2800	58	60	62
90	2800	91	80	65
100	2750	142	80	67
112	2600	229	80	67
132	1400	337	35	69
160	1390	609	40	72
180	1330	686	55	72
200	1230	1679	65	72
225	1430	1786	70	74
250	1420	1813	80	75
280	1360	2415	85	78
315	1320	2820	110	81
355	900	3500	800	85

3 PHASE (v)	INPUT CURRENT (A)	Hz	INPUT POWER (w)
400	0,07	50	20
400	0,08	50	25
400	0,08	50	29
400	0,09	50	32
400	0,17	50	58
400	0,18	50	69
400	0,19	50	52
400	0,25	50	70
400	0,25	50	85
400	0,26	50	105
400	0,36	50	75
400	0,38	50	115
400	0,54	50	180
400	0,75	50	480
400	0,95	50	400

Forced Ventilation Units

Auxiliary fans three phase

TYPE	SPEED (r/min)	MAXIMUM AIR FLOW (m ³ /h)	MAXIMUM PRESSURE (pa)	NOISE dB(A)
63	2800	45	40	62
71	2800	52	50	62
80	2800	58	60	62
90	2800	91	80	65
100	2750	142	80	67
112	2600	229	80	67
132	1400	337	35	69
160	1390	609	40	72
180	1330	686	55	72
200	1230	1679	65	72
225	1430	1786	70	74
250	1420	1813	80	75
280	1360	2415	85	78
315	1320	2820	110	81
355	900	3500	800	85

3PHASE (v)	INPUT CURRENT (A)	Hz	INPUT POWER (w)
690	0,04	50	20
690	0,05	50	25
690	0,05	50	29
690	0,05	50	32
690	0,1	50	58
690	0,1	50	69
690	0,11	50	52
690	0,14	50	70
690	0,14	50	85
690	0,15	50	105
690	0,21	50	75
690	0,22	50	115
690	0,31	50	180
690	0,43	50	480
690	0,55	50	400

Auxiliary fans single phase

TYPE	SPEED (r/min)	MAXIMUM AIR FLOW (m ³ /h)	MAXIMUM PRESSURE (pa)	NOISE dB(A)
63	2800	45	40	62
71	2800	52	50	62
80	2700	58	60	62
90	2300	91	80	65
100	2700	142	80	67
112	2400	229	80	67
132	1400	337	35	69
160	1400	609	40	72
180	1200	686	55	72
200	1200	1679	65	72
225	1400	1786	70	74
250	1400	1813	80	75
280	1400	2415	85	78

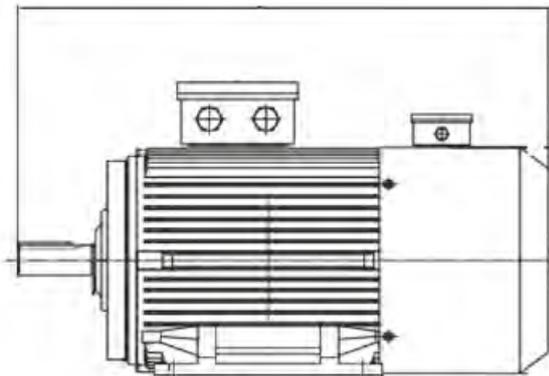
1PHASE (v)	INPUT CURRENT (A)	Hz	INPUT POWER (w)	μF
230	0,12	50	17	1
230	0,17	50	33	2
230	0,18	50	35	2
230	0,2	50	45	3
230	0,3	50	55	2
230	0,37	50	65	2
230	0,35	50	55	3
230	0,28	50	55	4
230	0,4	50	80	4
230	0,4	50	85	4
230	0,5	50	85	6
230	0,9	50	120	6
230	0,95	50	170	10

Forced Ventilation Units

All frame sizes can be supplied with cooling system IC 416 (forced ventilation) on request.
The following table shows the increase of the dimension L when a forced ventilation is fitted.

TYPE	MS SERIES (mm)	TA SERIES (mm)	TC SERIES (mm)
63	92	92	-
71	92	105	-
80	98	110	-
90	97	110	-
100	103	120	-
112	93	125	-
132	109	120	120
160	-	145	130
180	-	-	130
200	-	-	140
225	-	-	160
250	-	-	167
280	-	-	175
315	-	-	205
355	-	-	205

L standard motor+measure indicated in the table



Permissible Load On The Bearings

The theoretical basic fatigue life for bearings is calculated according to the provisions of ISO R 281-1 Standard. Life is calculated assuming that motors are running under normal ambient conditions, without abnormal vibrations, without axial or radial loads beyond the ones mentioned in the following tables and with operating temperatures of the bearings ranging between - 30 and +85 C'.

Life calculated this way is called basic life (L_{10h}) expressed in hours of operation.

50% of bearings reach a life equal to five times the basic life resulting from the calculation.

Table 13 mentions the maximum permitted axial and radial loads for a basic life (L_{10h}), calculated according to the provisions of the ISO Standards, equal to 20000 and 40000 hours of operation.

Values of the radial loads are given both for loads applied to the shaft extension (X_{max}) and in correspondence of the face on the shaft hub (X_0).

Radial loads that can be applied linearly, change with the change of the application point, therefore for loads placed at a distance X from the shaft face (X_0), the maximum load that can be applied is given by the following expression:

$$Fra_x = \frac{C_{x_0} - C_{x_{max}}}{X_{max}} \times X + C_{x_{max}}$$

Where:

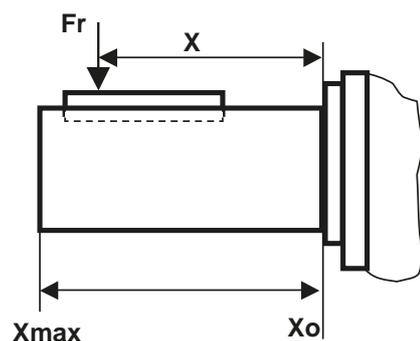
Fra_x = permitted radial load at point X

C_{x_0} = permitted radial load at point X_0

$C_{x_{max}}$ = permitted radial load at point X_{max}

X_{max} = shaft extension

X = distance from the application point of the radial load to the shaft face



To verify that the belt pull does not exceed the maximum value allowed the following formula can be used:

$$F = \frac{19100 \times P \times K}{n \times D}$$

F= radial force in Nm

P= power transmitted in KW

n= numbers of revs. per minute

D= pulley diameter in meters

K= constant

Constant values K:

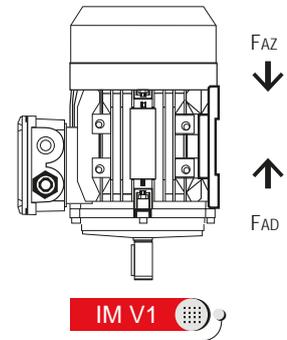
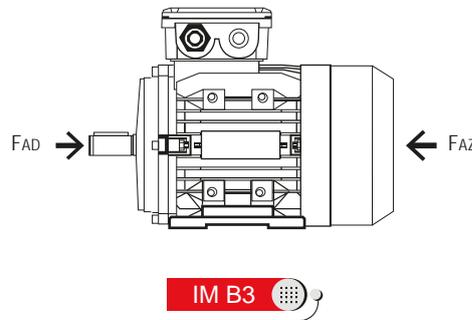
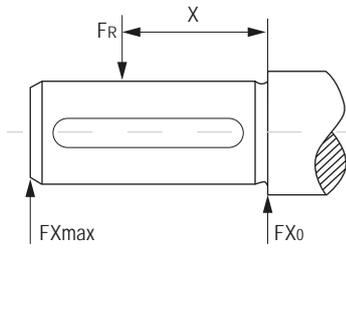
2	for flat pulley with tension roller
2,25	for sheaves with V belt
2,5-3	for flat belts without tension roller, or for heavy duty with any type of pulley

The maximum allowable radial force, at the shaft X_{max} and at the shaft collar X_0 , indicated in the following pages are for motors having the following characteristic: standard construction, horizontal mounting IMB3 or IMB35 only, operating frequency 50Hz, bearing life of 20000 or 40000 hours according to ISO 281:1990, bearing operating temperature between -20°C to +70°C, no external axial forces, motor installed on a rigid base with negligible structural vibrations.

The maximum allowable axial forces, reported in the following pages are, for motors having the following characteristic:

standard construction, horizontal mounting IMB3 or IMB35 only, operating frequency 50Hz, bearing life of 20.000 or 40.000 hours according to ISO281:1990, bearing operating temperature between -20°C to +70°C, no external radial forces, motor installed on a rigid foundation with negligible structural vibrations.

MS axial & radial load



Motor size	Poles	Shaft length (mm)	Ball bearings				M				Mounting IM V1			
			Max.radial forces		Max.radial forces		Max.axial forces		Max.axial forces		Max.axial forces		Max.axial forces	
			L10=20000 hours		L10=40000 hours		L10h=20000 hours		L10h=40000 hours		L10h=20000 hours		L10h=40000 hours	
			FX ₀	FX _{max}	FX ₀	FX _{max}	F _{AZ} (N)							
MS56	2	20	353.8	305.7	280.2	242.1	261.0	261.0	192.6	192.6	269.3	255.9	200.8	187.5
	4	20	445.5	384.8	352.7	304.7	354.7	354.7	260.4	260.4	366.3	347.9	271.8	253.4
MS63	2	23	352.0	302.9	278.5	239.7	260.3	260.3	192.0	192.0	272.1	253.1	203.6	184.6
	4	23	442.5	380.8	349.9	301.1	353.4	353.4	259.2	259.2	371.3	343.0	276.7	248.5
	6	23	506.7	436.1	400.7	344.9	423.5	423.5	310.0	310.0	443.5	411.9	329.7	298.2
MS71	2	30	397.6	334.0	314.4	264.1	283.3	283.3	208.7	208.7	299.2	273.4	224.5	198.6
	4	30	500.2	420.2	395.3	332.1	384.6	384.6	282.0	282.0	407.3	371.1	304.4	268.2
	6	30	571.8	480.3	451.8	379.5	460.8	460.8	337.8	337.8	489.1	444.4	365.7	320.9
	8	30	631.7	530.6	499.6	419.6	520.1	520.1	384.3	384.3	544.3	505.3	408.7	369.7
MS71 (L.H.)*	2	30	400.3	340.7	316.2	269.1	282.5	282.5	208.0	208.0	302.4	270.2	227.6	195.4
	4	30	502.9	428.0	397.0	337.9	383.3	383.3	280.8	280.8	412.6	365.8	309.7	262.9
	6	30	575.1	489.4	453.8	386.2	459.2	459.2	336.3	336.3	494.9	438.6	371.5	315.1
	8	30	636.2	541.4	502.7	427.9	518.6	518.6	383.2	383.2	548.6	501.0	413.1	365.4
MS80	2	40	663.9	545.9	524.2	431.0	464.7	464.7	339.6	339.6	498.5	438.7	375.9	316.1
	4	40	836.1	687.5	660.1	542.7	629.0	629.0	462.9	462.9	677.0	600.2	507.0	430.2
	6	40	957.4	787.2	755.9	621.5	752.0	752.0	551.1	551.1	806.7	720.1	604.8	518.1
	8	40	1052.8	865.6	831.0	683.3	854.8	854.8	626.2	626.2	918.1	818.4	688.5	588.7
MS90S	2	50	726.9	574.8	574.2	454.0	495.4	495.4	362.4	362.4	532.6	472.0	398.9	338.3
	4	50	919.1	726.8	726.6	574.6	671.9	671.9	495.3	495.3	710.3	648.4	533.2	471.4
	6	50	1048.8	829.4	828.5	655.2	801.5	801.5	587.5	587.5	855.0	769.7	640.2	554.9
	8	50	1156.3	914.4	913.8	722.7	912.8	912.8	669.1	669.1	966.7	881.4	722.0	636.7
MS90L	2	50	732.6	593.9	577.7	468.3	493.1	493.1	360.3	360.3	542.7	461.8	409.0	328.1
	4	50	925.9	750.5	730.7	592.3	668.6	668.6	492.1	492.1	724.2	634.6	547.1	457.5
	6	50	1057.4	857.1	834.0	676.0	798.0	798.0	584.3	584.3	869.0	755.6	654.2	540.9
	8	50	1166.4	945.5	920.5	746.1	909.1	909.1	665.8	665.8	980.7	867.3	736.0	622.7
MS90L(L.H.)*	2	50	737.5	612.1	580.6	481.9	490.8	490.8	358.2	358.2	552.9	451.7	419.2	318.0
	4	50	935.5	776.4	737.8	612.3	667.4	667.4	490.9	490.9	729.4	629.3	552.3	452.3
	6	50	1064.3	883.3	837.9	695.4	794.2	794.2	580.7	580.7	884.0	740.6	669.3	525.8
	8	50	1181.6	980.6	932.5	773.9	909.1	909.1	665.8	665.8	980.7	867.3	736.0	622.7
MS100L	2	60	1012.5	805.5	797.4	634.4	673.3	673.3	492.5	492.5	755.6	621.2	573.1	438.7
	4	60	1276.1	1015.2	1005.0	799.6	912.3	912.3	669.6	669.6	1015.9	848.3	772.2	604.6
	6	60	1458.0	1159.9	1147.7	913.1	1091.3	1091.3	801.1	801.1	1216.7	1012.5	921.6	717.3
	8	60	1621.6	1290.1	1280.1	1018.4	1247.1	1247.1	914.4	914.4	1341.3	1191.6	1007.0	857.2

Motor size	Poles	Shaft length (mm)	Ball bearings				Mounting IM B3				Mounting IM V1			
			Max.radial forces		Max.radial forces		Max.axial forces		Max.axial forces		Max.axial forces		Max.axial forces	
			L10=20000 hours		L10=40000 hours		L10h=20000 hours		L10h=40000 hours		L10h=20000 hours		L10h=40000 hours	
			FX ₀	FX _{max}	FX ₀	FX _{max}	F _{AD} (N)	F _{AZ} (N)						
MS100(L.H.)*	2	60	1020.4	823.9	803.6	648.8	673.3	673.3	492.5	492.5	755.6	621.2	573.1	438.7
	4	60	1276.1	1030.3	1002.9	809.7	907.1	907.1	664.8	664.8	1037.8	826.3	794.1	582.6
	6	60	1469.4	1186.3	1156.7	933.9	1091.3	1091.3	801.1	801.1	1216.7	1012.5	921.6	717.3
	8	60	1634.3	1319.5	1290.1	1041.6	1247.1	1247.1	914.4	914.4	1341.3	1191.6	1007.0	857.2
MS112M	2	60	1401.5	1131.5	1104.6	891.8	669.6	949.5	489.1	693.5	772.5	884.6	590.0	626.8
	4	60	1767.0	1426.7	1392.9	1124.6	907.8	1285.4	665.3	945.2	1035.2	1207.0	791.5	865.5
	6	60	2018.7	1629.8	1590.4	1284.1	1085.1	1534.4	795.6	1122.6	1241.7	1439.5	946.5	1025.3
	8	60	2241.4	1809.7	1770.1	1429.1	1241.5	1756.6	909.4	1287.0	1362.7	1685.7	1028.4	1213.9
MS112(L.E.S.)*	2	60	1407.5	1144.8	1109.3	902.3	669.6	949.5	489.1	693.5	772.5	884.6	590.0	626.8
	4	60	1764.4	1435.1	1388.7	1129.5	901.5	1279.9	660.3	940.1	1058.0	1184.3	814.3	842.8
	6	60	2027.4	1649.0	1597.3	1299.2	1085.1	1534.4	795.6	1122.6	1241.7	1439.5	946.5	1025.3
	8	60	2251.1	1831.0	1777.7	1446.0	1241.5	1756.6	909.4	1287.0	1362.7	1685.7	1028.4	1213.9
MS132S	2	80	2092.6	1597.3	1650.4	1259.8	1003.8	1415.8	756.4	1036.3	1144.1	1326.7	872.5	944.5
	4	80	2635.5	2011.7	2078.3	1586.4	1358.2	1917.0	996.7	1408.6	1540.2	1804.6	1176.4	1294.4
	6	80	3025.7	2309.6	2388.0	1822.8	1633.5	2301.5	1199.9	1681.9	1818.7	2184.5	1382.5	1567.5
	8	80	3340.3	2549.7	2638.3	2013.9	1857.8	2615.6	1359.7	1918.5	2034.5	2511.3	1533.8	1811.0
MS132M	2	80	2110.4	1661.4	1660.8	1307.5	995.5	1407.4	749.0	1028.8	1181.7	1289.0	910.1	906.9
	4	80	2658.4	2092.8	2092.1	1646.9	1347.4	1906.2	986.6	1398.3	1586.2	1758.6	1222.4	1248.3
	6	80	3036.1	2390.1	2387.8	1879.7	1610.0	2279.5	1179.8	1672.2	1907.1	2096.1	1470.9	1479.1
	8	80	3377.4	2658.8	2663.8	2097.0	1847.5	2605.1	1350.2	1909.0	2075.0	2470.8	1574.3	1770.5
MS132L	2	80	2108.4	1688.8	1654.8	1325.5	985.4	1397.2	739.8	1019.6	1227.7	1243.1	956.1	860.9
	4	80	2650.8	2123.3	2079.4	1665.6	1331.3	1888.0	971.5	1383.0	1655.3	1689.6	1291.4	1179.3
	6	80	3038.6	2433.9	2384.4	1909.9	1596.8	2266.0	1167.4	1660.2	1961.5	2041.7	1525.3	1424.8
	8	80	3407.6	2729.5	2687.6	2152.8	1847.5	2605.1	1350.2	1909.0	2075.0	2470.8	1574.3	1770.5
MS160M	2	110	2737.7	2156.9	2150.9	1694.6	1798.2	1798.2	1314.3	1314.3	2085.7	1615.1	1596.5	1125.9
	4	110	3458.5	2724.8	2719.1	2142.3	2438.7	2438.7	1789.1	1789.1	2783.1	2230.5	2126.7	1574.1
	6	110	3970.1	3127.8	3123.7	2461.0	2930.2	2930.2	2151.2	2151.2	3294.4	2710.9	2509.3	1925.8
	8	110	4383.0	3453.2	3451.5	2719.2	3329.7	3329.7	2435.1	2435.1	3696.2	3112.8	2798.5	2215.1
MS160L	2	110	2715.9	2139.7	2129.1	1677.4	1787.6	1787.6	1304.6	1304.6	2133.8	1567.0	1644.6	1077.8
	4	110	3382.3	2664.8	2643.0	2082.3	2399.2	2399.2	1752.2	1752.2	2950.8	2062.9	2294.3	1406.4
	6	110	3871.2	3049.9	3024.8	2383.1	2876.2	2876.2	2101.4	2101.4	3512.3	2493.0	2727.2	1707.9
	8	110	4338.0	3417.7	3406.5	2683.8	3304.4	3304.4	2411.7	2411.7	3795.2	3013.8	2897.6	2116.1
MS180M	2	110	3745.1	3052.2	2939.7	2395.7	1383.0	2396.2	1035.7	1805.5	1801.5	2125.8	1451.9	1529.8
	4	110	4720.0	3846.7	3705.2	3019.6	1885.8	3245.3	1365.1	2377.4	2417.5	2913.3	1888.3	2039.0
	6	110	5372.4	4378.3	4210.7	3431.6	2227.6	3871.9	1620.1	2836.4	2924.8	3445.7	2307.0	2402.7
	8	110	5932.4	4834.7	4653.8	3792.7	2542.5	4403.8	1853.0	3212.0	3262.8	3972.2	2561.3	2769.5
MS200L	2	110	4212.9	3448.1	3295.6	2697.4	1496.9	2706.9	1114.8	2035.2	2112.3	2307.8	1727.2	1629.6
	4	110	5323.9	4357.5	4168.2	3411.6	2046.6	3674.0	1477.0	2686.0	2792.1	3207.3	2209.8	2210.3
	6	110	6061.6	4961.3	4738.6	3878.5	2418.4	4384.8	1751.9	3205.1	3368.4	3802.7	2687.3	2612.9
	8	110	6653.3	5445.6	5197.1	4253.8	2740.7	4977.3	1984.1	3632.2	3840.8	4301.7	3068.8	2930.7

Note:

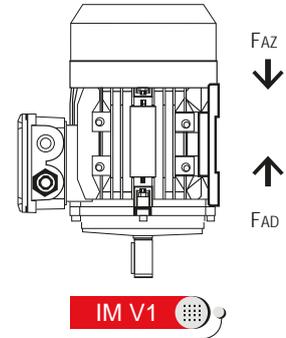
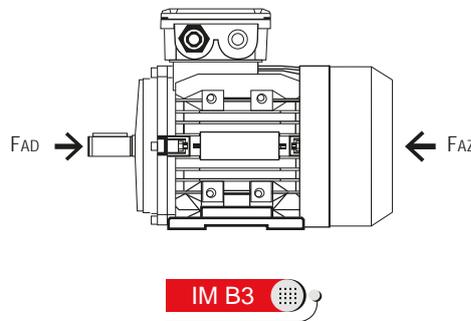
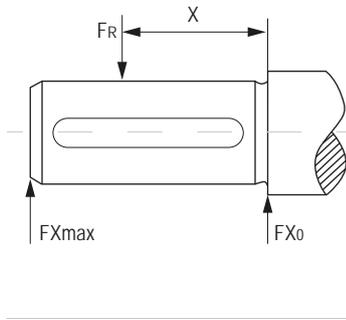
FR=FX0-X/E(FX0-FXmax)

When the motor is running at 60Hz, the permissible force will reduce by 10%.

(L.H.)* = Long housing

(L.E.S.)* = Long End Shield

TA series permissible radial forces (N) & permissible axial forces (deep groove ball bearings)



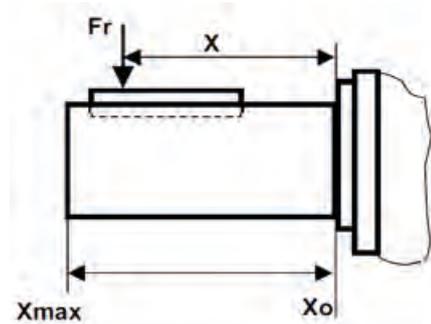
IM B3

IM V1

Motor size	Poles	Shaft length (mm)	Ball bearings				Mounting IM B3				Mounting IM V1			
			Max.radial forces		Max.radial forces		Max.axial forces		Max.axial forces		Max.axial forces		Max.axial forces	
			L10=20000 hours	L10=40000 hours	L10=20000 hours	L10=40000 hours	F _{rad} (N)	F _{ax} (N)	F _{rad} (N)	F _{ax} (N)	F _{rad} (N)	F _{ax} (N)	F _{rad} (N)	F _{ax} (N)
FX ₀	FX _{max}	FX ₀	FX _{max}	F _{rad} (N)	F _{ax} (N)	F _{rad} (N)	F _{ax} (N)	F _{rad} (N)	F _{ax} (N)	F _{rad} (N)	F _{ax} (N)			
TA56	2	20	351.1	303.6	278.0	240.5	261.0	261.0	192.6	192.6	269.3	255.9	200.8	187.5
	4	20	442.0	382.2	350.0	302.7	354.7	354.7	260.4	260.4	366.3	347.9	271.8	253.4
TA63	2	23	352.6	304.1	279.0	240.6	260.3	260.3	192.0	192.0	272.1	253.1	203.6	184.6
	4	23	443.3	382.3	350.6	302.3	353.4	353.4	259.2	259.2	371.3	343.0	276.7	248.5
TA71	2	30	391.9	330.5	309.6	261.1	282.5	282.5	208.0	208.0	302.4	270.2	227.6	195.4
	4	30	492.4	415.3	388.7	327.8	383.3	383.3	280.8	280.8	412.6	365.8	309.7	262.9
TA80	2	40	657.9	538.3	519.6	425.1	464.9	464.9	339.8	339.8	497.6	439.6	375.0	317.0
	4	40	828.8	678.1	654.5	535.5	629.5	629.5	463.1	463.1	675.3	601.9	505.3	431.9
TA90S	2	50	720.1	571.0	568.4	450.7	494.6	494.6	361.6	361.6	536.2	468.3	402.5	334.6
	4	50	910.2	721.8	719.1	570.3	670.7	670.7	494.1	494.1	715.3	643.4	538.3	466.3
TA90L	2	50	1041.0	825.5	822.3	652.0	801.3	801.3	587.4	587.4	855.6	769.0	640.8	554.3
	4	50	1147.7	910.1	907.0	719.2	912.6	912.6	669.0	669.0	967.3	880.7	722.7	636.1
TA100L	2	60	1007.5	808.7	791.9	635.6	669.7	669.7	489.2	489.2	772.1	604.7	589.6	422.3
	4	60	1266.7	1016.7	995.0	798.6	904.9	904.9	663.5	663.5	1043.5	820.7	799.8	577.0
TA112M	2	60	1396.9	1130.8	1098.8	889.5	664.7	944.6	484.8	689.1	794.3	862.7	611.8	604.9
	4	60	1760.2	1425.0	1384.8	1121.0	899.8	1278.3	658.8	938.5	1064.8	1177.4	821.1	835.9
TA132S	2	80	2129.9	1668.2	1679.9	1315.7	1003.9	1415.9	756.5	1036.4	1143.8	1327.0	872.2	944.8
	4	80	2684.1	2102.2	2117.0	1658.1	1359.2	1918.0	997.6	1409.5	1536.2	1808.6	1172.4	1298.4
TA132M	2	80	3085.2	2416.3	2436.1	1907.9	1636.6	2304.7	1202.8	1684.8	1806.1	2197.1	1369.9	1580.2
	4	80	3986.6	2661.7	2684.1	2102.2	1857.2	2615.0	1359.2	1918.0	2036.8	2509.1	1536.1	1808.8
TA160M	2	110	2112.4	1697.2	1656.6	1331.0	982.4	1394.1	737.0	1016.9	1241.5	1229.2	969.9	847.1
	4	110	2665.1	2141.3	2090.9	1679.9	1331.9	1888.7	972.1	1383.6	1652.5	1692.3	1288.7	1182.1
TA160L	2	110	2687.3	2088.3	2111.1	1640.6	1024.2	1797.7	768.2	1313.9	1312.2	1613.1	1054.0	1123.9
	4	110	3403.7	2645.0	2677.7	2080.8	1405.7	2442.8	1019.6	1792.9	1714.6	2247.9	1333.9	1591.4
TA180M	2	110	3914.5	3042.0	3083.5	2396.2	1683.1	2939.2	1231.5	2159.5	1999.6	2747.2	1544.7	1962.1
	4	110	4320.0	3357.1	3405.3	2646.2	1920.2	3338.9	1406.5	2443.6	2239.3	3149.0	1711.1	2251.4
TA200L	2	110	2682.8	2133.7	2099.3	1669.7	1006.3	1779.1	751.0	1335.9	1396.8	1528.5	1138.5	1039.4
	4	110	3349.3	2663.9	2614.3	2079.2	1356.6	2392.2	974.6	1745.8	1929.2	2033.3	1548.5	1376.8
TA200L	2	110	3925.0	3121.7	3083.5	2452.5	1662.9	2918.1	1114.8	2140.0	2084.7	2662.0	1629.8	1877.0
	4	110	4340.3	3452.0	3414.1	2715.4	1901.7	3319.9	1389.4	2426.0	2313.8	3074.5	1785.7	2176.8
TA200L	2	110	3745.1	3052.2	2939.7	2395.7	1383.0	2396.2	1035.7	1805.5	1801.5	2125.8	1451.9	1529.8
	4	110	4720.0	3846.7	3705.2	3019.6	1885.8	3245.3	1365.1	2377.4	2417.5	2913.3	1888.3	2039.0
TA200L	2	110	5372.4	4378.3	4210.7	3431.6	2227.6	3871.9	1620.1	2836.4	2924.8	3445.7	2307.0	2402.7
	4	110	5932.4	4834.7	4653.8	3792.7	2542.5	4403.8	1853.0	3212.0	3262.8	3972.2	2561.3	2769.5
TA200L	2	110	4212.9	3448.1	3295.6	2697.4	1496.9	2706.9	1114.8	2035.2	2112.3	2307.8	1727.2	1629.6
	4	110	5323.9	4357.5	4168.2	3411.6	2046.6	3674.0	1477.0	2686.0	2792.1	3207.3	2209.8	2210.3
TA200L	2	110	6061.6	4961.3	4738.6	3878.5	2418.4	4384.8	1751.9	3205.1	3368.4	3802.7	2687.3	2612.9
	4	110	6653.3	5445.6	5197.1	4253.8	2740.7	4977.3	1984.1	3632.2	3840.8	4301.7	3068.8	2930.7

TC series permissible radial forces (N)

Motor size	Poles	Shaft length mm	Ball bearings				Roller bearings			
			L10=20000 hours		L10=40000 hours		L10=20000 hours		L10=40000 hours	
			X_0	X_{max}	X_0	X_{max}	X_0	X_{max}	X_0	X_{max}
80	2	40	660	540	520	420				
	4		830	680	650	630				
	6		950	760	750	610				
	8		1050	860	830	680				
90	2	50	720	570	570	450				
	4		910	720	720	570				
	6		1040	820	820	650				
	8		1050	910	900	710				
100	2	60	100	800	790	630				
	4		1200	1000	990	800				
	6		1460	1180	1150	930				
	8		1600	1300	1270	1020				
112	2	60	1400	1130	1100	890				
	4		1760	1420	1380	1120				
	6		2030	1640	1600	1300				
	8		2250	1820	1800	1440				
132	2	80	2130	1660	1600	1300				
	4		2600	2100	2100	1660				
	6		3080	2400	2400	1900				
	8		3400	2600	2680	2100				
160	2	110	2680	2130	2100	1670	5900	4200	4800	4200
	4		3350	2660	2610	2080	6800	4200	5800	4200
	6		3900	3100	3050	2450	8200	4200	6800	4200
	8		4300	3360	3400	2650	8600	4200	7500	4200
180	2	110	3800	3050	3100	2400	7700	5300	6700	5300
	4		4100	3380	3450	2820	8500	5300	7200	5300
	6		4300	3450	3500	2880	8800	5300	7400	5300
	8		4500	3600	3650	2950	9200	5300	8200	5300
200	2	110	5000	4180	4200	3500	10200	8600	8900	7300
	4		5400	4500	4430	3680	11600	9500	9800	8200
	6		5800	4880	4750	4000	12500	9500	10600	8800
	8		6300	5200	5240	4370	13000	9500	11000	9300
225S	2	110	6410	5400	5400	4500	13300	10700	11500	9700
	4	140	7300	5900	6100	4900	15300	10200	13200	10200
	6		7600	6200	6300	5100	16400	10200	14000	10200
	8		8500	6800	7100	5700	17800	10200	15200	10200



TC series permissible radial forces (N)

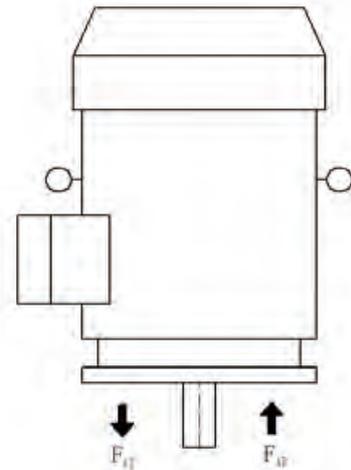
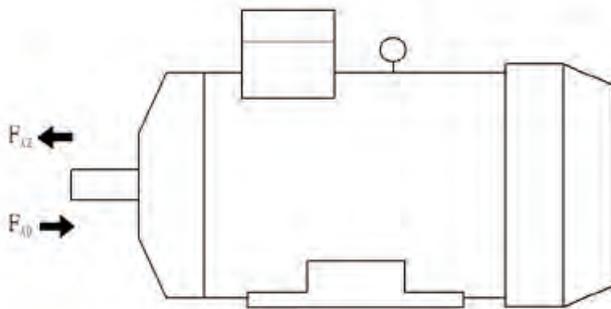
Motor size	Poles	Shaft length mm	Ball bearings				Roller bearings			
			L10=20000 hours		L10=40000 hours		L10=20000 hours		L10=40000 hours	
			X_0	X_{max}	X_0	X_{max}	X_0	X_{max}	X_0	X_{max}
225M	2	110	6100	5100	5100	4300	13000	10600	11200	9500
	4	140	7000	5700	5800	4700	15100	10200	12800	10200
	6		7100	5750	5850	4700	16000	10200	13400	10200
	8		8000	6400	6600	5300	17300	10200	14600	10200
250M	2	140	6800	5500	5600	4600	16300	10800	14000	10800
	4		7400	6000	6000	4900	18000	13800	15300	12000
	6		8200	6600	6600	5400	20200	13800	17200	13800
	8		9500	7700	7800	6300	22600	13800	19200	13800
280S	2	140	7200	5800	5800	4700	16000	10200	13400	10200
	4		8000	6500	6600	5400	22000	14000	15400	13200
	6		10000	8500	8600	7300	27000	14400	23000	14000
	8		10500	8800	8800	7600	29000	14400	23000	14000
280M	2	140	7000	5600	5600	4500	15800	10000	13200	10000
	4		7800	6300	6400	5300	21500	14000	15200	13200
	6		9800	8300	8400	7200	26500	14400	22800	14000
	8		10300	8600	8600	7300	28600	14400	23000	14000
315S	2	140	7500	6100	6000	5000	20500	13600	15000	13000
	4	170	9000	7000	7100	5700	29000	15000	23000	15000
	6		11000	9200	9300	8000	34000	15000	25000	15000
	8		13000	10500	10600	9200	37000	15000	26000	15000
315ML	2	140	7400	6000	6000	4900	20300	13600	14800	13000
	4	170	8900	6900	7000	5600	28600	15000	22800	15000
	6		10500	9100	9200	7900	33800	15000	24700	15000
	8		12800	10200	10300	9000	36800	15000	25800	15000
355M	2	140	7600	6100	6200	5100	23000	13600	18000	13600
	4	210	12300	9300	9400	8300	46000	23000	36000	23000
	6		14600	11000	11100	10000	52000	23000	42000	23000
	8		16400	12000	12200	11000	56000	23000	46000	23000
355L	2	140	7300	6100	6200	5100	23000	13600	18000	13600
	4	210	12000	9100	9200	8200	45500	23000	35500	23000
	6		14100	10800	10900	9900	51300	23000	41200	23000
	8		16000	11600	11800	10800	56000	23000	46000	23000

TC series permissible axial forces(deep groove ball bearings)

Motor size	Poles	Shaft length (mm)	Mounting IM B3				Mounting IM V1			
			L10h=20000 hours		L10h=40000 hours		L10h=20000 hours		L10h=40000 hours	
			F _{AD} (N)	F _{AZ} (N)						
80	2	40	260	420	190	305	270	400	200	288
	4		350	560	250	400	360	530	270	380
	6		450	700	330	500	460	670	345	480
	8		550	830	400	600	560	800	420	570
90	2	50	370	430	270	310	380	400	285	280
	4		510	590	370	430	530	550	400	395
	6		630	710	460	510	640	670	460	480
	8		760	860	555	620	780	820	580	590
100	2	60	370	590	270	430	380	550	280	400
	4		500	810	365	590	520	750	390	540
	6		650	1020	475	450	680	950	510	680
	8		780	1190	570	860	810	1120	600	800
112	2	60	540	1140	395	830	560	1080	420	770
	4		730	1550	530	1130	760	1470	570	1000
	6		960	1940	700	1400	990	1860	740	1300
	8		1070	2150	780	1500	1100	2050	820	1400
132	2	80	720	1320	520	960	760	1210	570	870
	4		990	1810	720	1300	1030	1660	770	1200
	6		1220	2200	890	1600	1270	2050	950	1500
	8		1370	2450	1000	1780	1440	2250	1000	1600
160	2	110	2600	2600	2100	2100	2900	2392	2300	1900
	4		3200	3200	2600	2600	3500	2900	2800	2300
	6		3500	3500	2800	2800	3800	3200	3000	2500
	8		4000	4000	3200	3200	4400	3700	3500	3000
180	2	110	3200	3200	2560	2560	3500	3000	2800	2400
	4		3600	3600	2880	2880	4000	3300	3200	2600
	6		4100	4100	3280	3280	4500	3700	3600	3000
	8		4200	4200	3360	3360	4600	3800	3650	3000
200	2	110	3600	3600	2880	2880	4000	3300	3200	2600
	4		4400	4400	3520	3520	4800	4000	3800	3200
	6		5000	5000	4000	4000	5500	4600	4400	3600
	8		6000	6000	4800	4800	6600	5500	5300	4400
225S	2	110	4000	4000	3200	3200	4400	3700	3500	3000
	4	140	5000	5000	4000	4000	5500	4600	4400	3700
	6		5500	5500	4400	4400	6000	5000	4800	4000
	8		6200	6200	4960	4960	6800	5700	5400	4500
225M	2	110	3900	3900	3120	3120	4300	3600	3400	2900
	4	140	4900	4900	3920	3920	5400	4500	4300	3600
	6		5300	5300	4240	4240	5800	4900	4600	3900
	8		6000	6000	4800	4800	6600	5500	5300	4400
250M	2	140	4300	4300	3400	3400	4800	4000	3800	3200
	4		5500	5500	4400	4400	6000	5000	4800	4000
	6		6000	6000	4800	4800	6600	5500	5200	4400
	8		6900	6900	5500	5500	8600	6300	6800	5000

TC series permissible axial forces(deep groove ball bearings)

Motor size	Poles	Shaft length (mm)	Mounting IM B3				Mounting IM V1			
			L10h=20000 hours		L10h=40000 hours		L10h=20000 hours		L10h=40000 hours	
			$F_{Ax}(N)$	$F_{Az}(N)$	$F_{Ax}(N)$	$F_{Az}(N)$	$F_{Ax}(N)$	$F_{Az}(N)$	$F_{Ax}(N)$	$F_{Az}(N)$
280S	2	140	4200	4200	3350	3350	4600	3800	3700	3000
	4		6000	6000	4800	4800	6600	5500	5300	4400
	6		7200	7200	5700	5700	7900	6600	6300	5300
	8		8000	8000	6400	6400	8800	7300	7000	5800
280M	2	140	4100	4100	3200	3200	4500	3700	3600	3000
	4		5900	5900	4700	4700	6500	5400	5200	4300
	6		7050	7050	5600	5600	7700	6400	6200	5100
	8		7800	7800	6200	6200	8500	7200	6800	5700
315S	2	140	6100	4200	4800	2850	7900	2600	6600	1300
	4	170	8400	6400	6400	4500	10400	4800	8400	2900
	6		9800	7800	7500	5500	12200	5650	9800	3300
	8		11000	9000	8400	6300	14000	7200	11300	4500
315M/L	2	140	6000	4100	4700	2800	7800	2500	6400	1200
	4	170	8200	6200	6200	4400	10200	4700	8200	2800
	6		9400	7400	7100	5100	12200	5500	9600	3200
	8		10400	8500	7900	5600	13600	7000	11000	4400
355M	2	140	4100	3200	2200	2500	9600	5000	7700	3100
	4	210	7700	6800	6000	4800	10200	6600	8100	4500
	6		9400	7800	6300	5500	11600	6700	9000	4400
	8		11000	8600	6600	6000	11900	7700	9600	5500
355L	2	140	3900	3000	2100	2400	9500	4900	7600	3000
	4	210	7500	6600	5900	4700	10100	6500	8000	4400
	6		9200	7700	6200	5400	11500	6600	8900	4300
	8		10800	8500	6500	5900	11800	7600	9500	5400



IEC MOTORS

FIRE PUMP MOTORS

NEMA MOTORS

EC MOTORS

MS Series

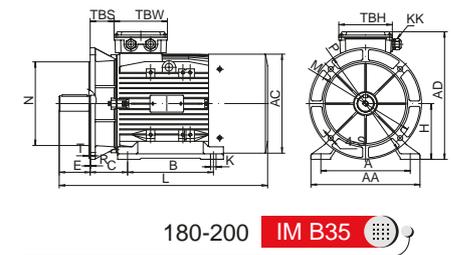
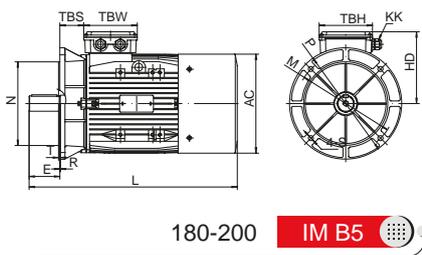
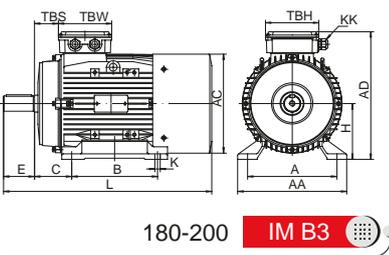
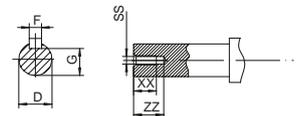
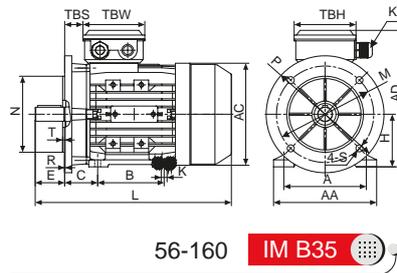
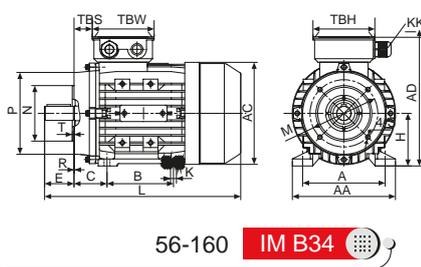
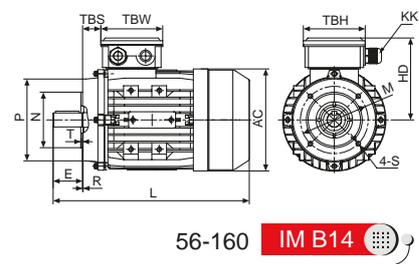
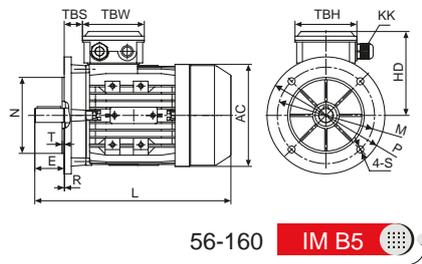
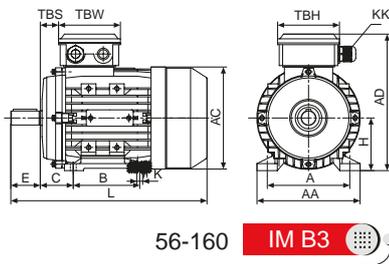
Three-Phase Asynchronous Motors Aluminum Housing

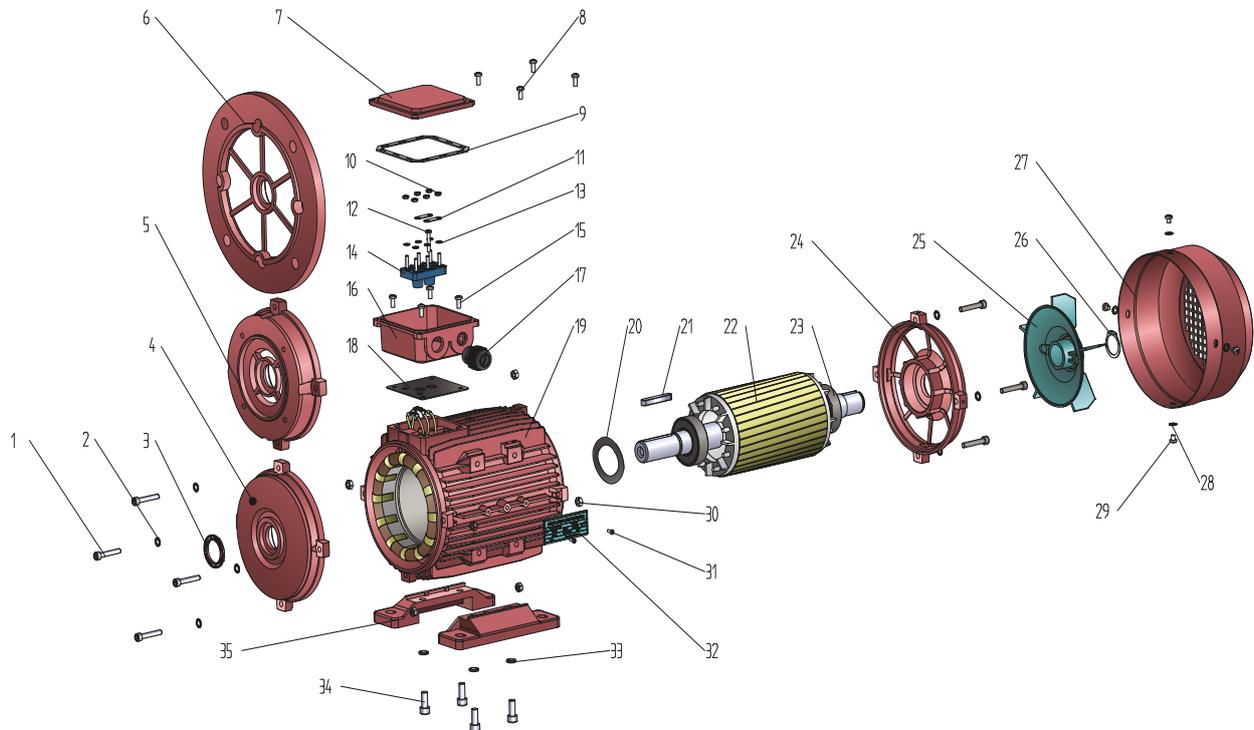
MS series aluminum housing three-phase asynchronous motors with the latest design manufactured using high quality materials and conforming to provide exceptional IEC standard.

MS motors offer a high performance level along with safe and reliable low maintenance operation, whilst giving low noise levels and low vibration levels - all within a lightweight and simple construction.



MS/MSD Series Dimensional Drawings





This catalogue is only a reference for users.

The actual data can be amended from time to time due to the design changes & improvements

- | | | |
|-------------------------------|----------------------|-----------------------------|
| 1. Screw | 13. Terminal shim | 25. Cooling fan |
| 2. Gasket | 14. Terminal board | 26. Fan circlip |
| 3. Oil seal | 15. TB fixing screws | 27. Fan cover |
| 4. Front endshield | 16. TB base | 28. Fan cover fixing washer |
| 5. B14 flange | 17. Cable gland | 29. Fan cover fixing screws |
| 6. B5 flange | 18. TB bottom gasket | 30. Endshield fixing nut |
| 7. TB cover | 19. Frame | 31. Rivet |
| 8. TB fixing screws | 20. Washer | 32. Nameplate |
| 9. TB upper gasket | 21. Key | 33. Foot fixing washer |
| 10. Terminal board fixing nut | 22. Rotor | 34. Foot fixing screws |
| 11. Terminal bridge | 23. Bearing | 35. Foot |
| 12. Terminal pin | 24. NDE endshield | |

Overall & Installation Dimensions

FRAME	Foot Mounting				Shaft									General						
	H	A	B	C	D	E	F	G	K	SS	XX	ZZ	AA	AD	HD	AC	L	TBS	TBW	TBH
56	56	90	71	36	Φ9	20	3	7.2	5.8*8.8	M4	10	14	110	152	96	Φ110	196	14	88	88
63	63	100	80	40	Φ11	23	4	8.5	7*10	M4	10	14	120	169	106	Φ121	220	14	94	94
71 ⁺	71	112	90	45	Φ14	30	5	11	7*10	M5	12	17	132	184	113	Φ139	241(255)	20	94	94
80	80	125	100	50	Φ19	40	6	15.5	10*13	M6	16	21	160	211	131	Φ156	290	27	105	105
90S	90	140	100	56	Φ24	50	8	20	10*13	M8	19	25	175	228	138	Φ175	312	30	105	105
90L1/L2	90	140	125	56	Φ24	50	8	20	10*13	M8	19	25	175	228	138	Φ175	337/367	30	105	105
100 ⁺	100	160	140	63	Φ28	60	8	24	12*15	M10	22	30	198	248	148	Φ196	368(386)	26	105	105
112	112	190	140	70	Φ28	60	8	24	12*15	M10	22	30	220	278	166	Φ221	397	32	112	112
132S	132	216	140	89	Φ38	80	10	33	12*15	M12	28	37	252	316	184	Φ256	437	38	112	112
132M/L	132	216	178	89	Φ38	80	10	33	12*15	M12	28	37	252	316	184	Φ256	475/501	38	112	112
160M/L	160	254	210/254	108	Φ42	110	12	37	15*19	M16	36	45	290	382	222	Φ313	641	64	143	143
180M/L	180	279	241/279	121	Φ48	110	14	42.5	15*25	M16	36	45	340	440	260	Φ355	730	73	190	190
200L	200	318	305	133	Φ55	110	16	49	19*29	M20	42	53	390	460	260	Φ355	745	85	190	190

FRAME	KK	B5						B14						B5R						B14B					
		N	M	P	S	T	R	N	M	P	S	T	R	N	M	P	T	S	R	N	M	P	T	S	R
56	1-M16*1.5	Φ80	Φ100	Φ120	Φ7	3	0	Φ50	Φ65	Φ80	M5	2.5	0												
63	1-M16*1.5	Φ95	Φ115	Φ140	Φ10	3	0	Φ60	Φ75	Φ90	M5	2.5	0												
71	1-M20*1.5	Φ110	Φ130	Φ160	Φ10	3.5	0	Φ70	Φ85	Φ105	M6	2.5	0	Φ95	Φ115	Φ140	3	Φ10	0	Φ95	Φ115	Φ140	3	M8	0
80	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ80	Φ100	Φ120	M6	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0
90	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ95	Φ115	Φ140	M8	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0
100	2-M20*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0
112	2-M25*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0
132	2-M25*1.5	Φ230	Φ265	Φ300	Φ15	4	0	Φ130	Φ165	Φ200	M10	3.5	0	Φ180	Φ215	Φ250	4	Φ15	0	Φ180	Φ215	Φ250	4	M12	0
160	2-M32*1.5	Φ250	Φ300	Φ350	Φ19	5	0	Φ180	Φ215	Φ250	M12	4	0												
180	2-M32*1.5	Φ250	Φ300	Φ350	Φ19	5	0																		
200	2-M40*1.5	Φ300	Φ350	Φ400	Φ19	5	0																		

*** This frame size has two housing sizes, the rated output is for normal "L" size, and increased output is for the bigger "L" size (refer to the figures in the bracket "()")

MS Series IE1 Efficiency Motors Technical Data (at 50Hz)

Model	Power (kW)	Current (A)			Current (A)			Current (A)			Speed (r/min)	Eff			Power factor	T _v /T _n (Times)	T _{max} /T _n (Times)	T _{max} /T _n (Times)	I _v /I _n (Times)	Noise dB(A)	W.T (kg)	Moment of inertia (kg·m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
MS561-2	0.09	0.63	0.37	0.21	0.61	0.35	0.20	0.58	0.34	0.19	2800	55.6	49.6	39.2	0.67	2.4	2.6	2.2	3.5	58	2.80	0.000102
MS562-2	0.12	0.68	0.39	0.23	0.65	0.37	0.22	0.62	0.36	0.21	2840	65.6	61.8	53.2	0.71	2.3	2.6	2.1	4.3	58	2.90	0.000128
MS563-2	0.18	0.92	0.53	0.31	0.88	0.51	0.29	0.85	0.49	0.28	2780	66.5	64.2	56.8	0.77	2.3	2.5	2.4	4.1	61	4.00	0.000142
MS631-2	0.18	0.92	0.53	0.31	0.88	0.51	0.29	0.85	0.49	0.28	2780	66.5	64.2	56.8	0.77	2.3	2.5	2.4	4.1	61	4.00	0.000150
MS632-2	0.25	1.19	0.69	0.40	1.14	0.65	0.38	1.09	0.63	0.36	2780	69.8	68.8	62.8	0.79	2.6	2.5	2.4	4.3	61	4.20	0.000171
MS633-2	0.37	1.72	1.00	0.57	1.65	0.95	0.55	1.58	0.91	0.53	2750	71.4	71.2	65.9	0.79	2.8	2.6	2.6	4.7	62	4.70	0.000203
MS711-2	0.37	1.70	0.99	0.57	1.63	0.94	0.54	1.56	0.90	0.52	2830	71.3	70.4	65.2	0.8	2.8	2.9	2	5.9	64	5.20	0.000314
MS712-2	0.55	2.52	1.46	0.84	2.41	1.39	0.80	2.31	1.34	0.77	2815	71.6	71	66.1	0.8	2.7	2.7	1.8	6	64	6.20	0.000384
MS713-2	0.75	3.25	1.88	1.08	3.11	1.79	1.04	2.98	1.72	0.99	2820	73.8	73.9	70.3	0.82	3.0	3.0	2.0	6.6	65	7.20	0.000476
MS800-2	0.55	2.38	1.38	0.79	2.28	1.31	0.76	2.18	1.26	0.73	2810	73.1	73.4	69.7	0.83	2.7	2.5	1.9	5.3	64	7.30	0.000752
MS801-2	0.75	3.15	1.83	1.05	3.02	1.73	1.01	2.89	1.67	0.96	2830	75.2	75.6	72.2	0.83	3	2.8	2	6.2	67	8.70	0.000880
MS802-2	1.1	4.40	2.55	1.47	4.21	2.42	1.40	4.04	2.33	1.35	2840	79	79.8	77.7	0.83	2.6	3.1	2.6	6.1	67	10.50	0.001072
MS803-2	1.5	5.70	3.30	1.90	5.46	3.14	1.82	5.23	3.02	1.74	2820	81.2	82.5	81.3	0.85	3.2	3	2.5	7.2	70	11.20	0.001329
MS90S-2	1.5	5.73	3.32	1.91	5.48	3.15	1.83	5.25	3.04	1.75	2850	80.8	81.2	78.9	0.85	2.8	3.3	2.6	7.7	72	12.00	0.001579
MS90M-2	1.85	7.04	4.08	2.35	6.73	3.87	2.24	6.45	3.73	2.15	2850	82.1	82.6	80.7	0.84	4.2	3.6	2.9	7.8	72	13.30	0.001846
MS90L1-2	2.2	8.19	4.74	2.73	7.84	4.51	2.61	7.51	4.34	2.50	2860	82.9	83.4	81.4	0.85	3.7	3.9	3.3	8.8	72	14.50	0.002123
MS90L2-2	3	11.1	6.43	3.70	10.6	6.11	3.54	10.2	5.89	3.39	2830	82.4	83.5	82.3	0.86	4.4	4.2	3.5	8	74	15.00	0.002491
MS100L1-2	3	10.9	6.32	3.64	10.4	6.00	3.48	10.0	5.78	3.33	2875	83.9	84.5	83	0.86	2.8	3.2	2	8.1	76	20.00	0.003475
MS100L2-2	4	13.8	7.99	4.60	13.2	7.59	4.40	12.6	7.31	4.22	2870	85.5	86.5	85.8	0.89	3.2	3.4	2.2	8.8	77	24.00	0.004247
MS112M-2	4	13.2	7.63	4.40	12.6	7.25	4.20	12.1	6.99	4.03	2870	85.6	87.0	86.8	0.93	2.6	2.85	1.75	8.1	77	26.00	0.005845
MS112L-2	5.5	18.0	10.4	6.00	17.2	9.9	5.74	16.5	9.5	5.50	2890	87.1	88	87.6	0.92	3.1	3.3	2	9.4	78	29.30	0.007429
MS132S1-2	5.5	18.5	10.7	6.17	17.7	10.2	5.90	17.0	9.8	5.65	2900	86.6	87.4	86.5	0.90	2.25	3.1	1.5	7.9	80	38.40	0.011224
MS132S2-2	7.5	24.6	14.2	8.19	23.5	13.5	7.84	22.5	13.0	7.51	2900	88.0	88.8	88.3	0.91	2.4	3.25	1.5	8.5	80	41.30	0.013838
MS132M1-2	9.2	30.8	17.8	10.3	29.5	17.0	9.83	28.3	16.3	9.42	2930	88	88	86.4	0.89	2	2.2	1.2	7.5	81	48.20	0.016551
MS132M2-2	11	36.3	21.0	12.1	34.7	20.0	11.6	33.3	19.2	11.1	2930	88.4	88.6	87.5	0.9	2	2.2	1.2	7.5	83	52.50	0.018641
MS160M1-2	11	36.4	21.1	12.1	34.8	20.0	11.6	33.4	19.3	11.1	2920	88.8	89.4	88.6	0.89	2.6	2.95	1.85	7.1	86	76.00	0.041164
MS160M2-2	15	49.3	28.5	16.4	47.2	27.1	15.7	45.2	26.1	15.1	2910	89.1	90.0	89.6	0.90	2.2	2.8	1.8	6.4	86	83.00	0.048985
MS160L-2	18.5	59.3	34.4	19.8	56.8	32.6	18.9	54.4	31.5	18.1	2930	90.3	90.9	90.3	0.91	2.9	3.05	1.65	8.4	86	92.30	0.059935
MS180M-2	22	71.3	41.3	23.8	68.2	39.2	22.7	65.3	37.8	21.8	2950	90	90.2	89.7	0.9	2	2.2	1.2	7.5	88	121.0	0.090185
MS200L1-2	30	95.9	55.5	32.0	91.8	52.8	30.6	87.9	50.8	29.3	2950	91.2	90.6	88.5	0.9	2	2.2	1.2	7.5	90	144.0	0.114999
MS200L2-2	37	117.3	67.9	39.1	112.2	64.5	37.4	107.5	62.2	35.8	2940	92	92.1	91.4	0.9	2	2.2	1.2	7.5	90	170.0	0.136738

MS Series IE1 Efficiency Motors Technical Data (at 50Hz)

Model	Power (kW)	Current (A)			Current (A)			Current (A)			Speed (r/min)	Eff			Power factor	T _f /T _n (Times)	T _{max} /T _n (Times)	T _{max} /T _n (Times)	I _s /I _n (Times)	Noise dB(A)	W.T (kg)	Moment of inertia (kg·m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
MS561-4	0.06	0.54	0.31	0.18	0.52	0.30	0.17	0.50	0.29	0.17	1400	52.8	47.7	38.7	0.55	3.1	3.2	3	3.2	50	2.90	0.000190
MS562-4	0.09	0.71	0.41	0.24	0.68	0.39	0.23	0.65	0.38	0.22	1400	56.2	51.7	43.1	0.59	2.3	2.5	2.8	3.1	50	3.20	0.000240
MS563-4	0.12	0.89	0.51	0.30	0.85	0.49	0.28	0.81	0.47	0.27	1390	58.5	54.3	45.6	0.61	2.65	2.8	2.7	3.2	52	3.70	0.000265
MS631-4	0.12	0.89	0.51	0.30	0.85	0.49	0.28	0.81	0.47	0.27	1390	58.5	54.3	45.6	0.61	2.65	2.8	2.7	3.2	52	3.70	0.000273
MS632-4	0.18	1.15	0.67	0.38	1.10	0.63	0.37	1.06	0.61	0.35	1365	64.2	62.5	55.9	0.64	2.8	2.55	2.4	3.6	52	4.40	0.000338
MS633-4	0.25	1.45	0.84	0.48	1.39	0.80	0.46	1.33	0.77	0.44	1370	68.3	67.5	62.1	0.66	2.7	2.7	2.4	3.9	54	5.00	0.000408
MS711-4	0.25	1.38	0.80	0.46	1.32	0.76	0.44	1.27	0.73	0.42	1395	65.1	63.1	55.8	0.73	2	2.15	1.6	4.2	55	5.10	0.000561
MS712-4	0.37	1.90	1.10	0.63	1.82	1.05	0.61	1.74	1.01	0.58	1390	68.6	68.2	62.9	0.74	2.25	2.35	1.95	4.6	55	6.10	0.000714
MS713-4	0.55	2.81	1.63	0.94	2.69	1.54	0.90	2.57	1.49	0.86	1390	71.9	71.6	66.8	0.72	2.8	2.8	2.4	4.8	57	7.20	0.000920
MS801-4	0.55	2.74	1.59	0.91	2.62	1.51	0.87	2.51	1.45	0.84	1400	70.9	70.5	65.5	0.74	2.25	2.55	1.95	4.9	58	8.30	0.001350
MS802-4	0.75	3.36	1.94	1.12	3.21	1.85	1.07	3.08	1.78	1.03	1390	74.4	76.0	73.9	0.79	2.5	2.55	2.05	5.4	58	9.70	0.001793
MS803-4	1.1	4.90	2.84	1.63	4.69	2.69	1.56	4.49	2.60	1.50	1390	74.6	75.7	73.3	0.79	2.9	2.9	2.4	5.9	60	11.70	0.002236
MS90S-4	1.1	4.90	2.83	1.63	4.68	2.69	1.56	4.49	2.60	1.50	1400	75.5	76.7	74.4	0.78	2.9	2.7	2.15	6	61	11.70	0.002443
MS90L1-4	1.5	6.48	3.75	2.16	6.20	3.56	2.07	5.94	3.44	1.98	1410	79.6	80.2	78.0	0.76	3.4	3.3	2.7	6.9	61	15.00	0.003152
MS90L2-4	2.2	9.76	5.65	3.25	9.33	5.37	3.11	8.94	5.17	2.98	1410	78.9	79.4	77	0.75	3.8	2.6	3.2	7.2	63	17.60	0.004002
MS100L1-4	2.2	8.71	5.05	2.90	8.34	4.79	2.78	7.99	4.62	2.66	1420	82.0	83.3	82.3	0.81	2.4	2.7	2.15	6.3	64	19.20	0.005977
MS100L2-4	3	11.5	6.64	3.82	11.0	6.31	3.66	10.5	6.08	3.51	1430	83.7	84.8	83.8	0.82	2.6	3	2.15	6.8	64	22.50	0.007591
MS100L3-4	4	15.2	8.80	5.07	14.5	8.36	4.85	13.9	8.06	4.65	1430	84.2	85.5	85.3	0.82	2.2	2.3	1.5	7	65	27.30	0.009626
MS112M-4	4	14.9	8.60	4.95	14.2	8.17	4.74	13.6	7.88	4.54	1440	84.7	86.0	85.4	0.83	2.5	2.9	2.05	7.1	65	29.00	0.012079
MS112L-4	5.5	20.4	11.8	6.81	19.5	11.2	6.51	18.7	10.8	6.24	1435	85.9	87.1	86.6	0.82	2.5	2.95	2.2	7.2	68	35.70	0.014229
MS132S-4	5.5	19.6	11.4	6.54	18.76	10.8	6.25	18.0	10.4	5.99	1445	86.4	87.8	87.7	0.85	2.15	2.85	1.75	7.5	71	39.00	0.024846
MS132M-4	7.5	25.9	15.0	8.62	24.7	14.2	8.24	23.7	13.7	7.90	1450	87.6	88.8	88.5	0.87	2.1	2.9	1.65	8.6	71	48.60	0.033131
MS132L1-4	9.2	31.3	18.1	10.4	30.0	17.2	10.0	28.7	16.6	9.6	1450	88.6	89.5	89.1	0.87	2.8	2.4	2	8.4	74	56.50	0.039339
MS132L2-4	11	37.3	21.6	12.4	35.6	20.5	11.9	34.2	19.8	11.4	1450	90.1	91.1	91	0.86	3	2.5	2	8.9	74	64.00	0.045478
MS160M-4	11	39.7	23.0	13.2	37.9	21.8	12.6	36.4	21.0	12.1	1450	87.7	89.6	90.3	0.83	2.05	2.25	1.55	6.1	75	73.00	0.077369
MS160L1-4	15	51.9	30.1	17.3	49.7	28.5	16.6	47.6	27.5	15.9	1455	88.7	90.0	90.2	0.86	2.2	2.45	1.4	7.3	75	88.50	0.101156
MS160L2-4	18.5	63.1	36.5	21.0	60.4	34.7	20.1	57.9	33.5	19.3	1460	90.5	91	90.6	0.85	2.2	2.2	1.4	7.5	78	97.50	0.127587
MS180M-4	18.5	62.4	36.1	20.8	59.7	34.3	19.9	57.2	33.1	19.1	1460	90.5	90.7	89.9	0.86	2.2	2.2	1.4	7.5	80	118.0	0.155064
MS180L-4	22	73.8	42.7	24.6	70.6	40.6	23.5	67.6	39.1	22.5	1460	91	91.3	90.6	0.86	2.2	2.2	1.4	7.5	80	128.0	0.173293
MS200L-4	30	99.5	57.6	33.2	95.2	54.7	31.7	91.2	52.8	30.4	1470	92	92.2	91.6	0.86	2.2	2.2	1.4	7.5	83	153.0	0.224084
MS631-6	0.09	0.75	0.44	0.25	0.72	0.41	0.24	0.69	0.40	0.23	890	50.7	47.6	39.8	0.62	2	2.2	1.9	2.9	50	4.20	0.000418
MS632-6	0.12	0.97	0.56	0.32	0.93	0.54	0.31	0.89	0.52	0.30	895	53.7	50.9	43.2	0.60	2.3	2.2	2.1	2.8	50	4.50	0.000517
MS711-6	0.18	1.11	0.64	0.37	1.06	0.61	0.35	1.02	0.59	0.34	905	63.0	61.6	55.4	0.67	2.15	2.4	2	3.5	52	5.60	0.000841
MS712-6	0.25	1.56	0.90	0.52	1.49	0.86	0.50	1.43	0.83	0.48	885	62.6	62.0	55.8	0.67	2.05	2.3	2.05	3.2	52	6.10	0.000965
MS713-6	0.37	2.32	1.34	0.77	2.22	1.28	0.74	2.13	1.23	0.71	890	65.4	64.4	58.2	0.64	2.3	2.5	2.3	3.4	54	6.80	0.001151
MS801-6	0.37	2.06	1.19	0.69	1.97	1.13	0.66	1.89	1.09	0.63	920	68.1	67.7	62.2	0.69	1.95	2.25	1.8	3.7	56	8.10	0.001560
MS802-6	0.55	2.74	1.59	0.91	2.62	1.51	0.87	2.51	1.45	0.84	920	72.5	73.0	69.3	0.73	2.25	2.45	2.05	4.3	56	9.60	0.002098
MS803-6	0.75	3.65	2.11	1.22	3.49	2.01	1.16	3.34	1.93	1.11	910	72.9	74.2	71.3	0.74	2.2	2.4	2.1	4.1	58	10.00	0.002635
MS90S-6	0.75	3.83	2.22	1.28	3.67	2.11	1.22	3.52	2.03	1.17	920	72.5	73.3	70.0	0.71	1.8	2.2	1.7	4.1	59	11.30	0.003061
MS90L1-6	1.1	5.47	3.17	1.82	5.23	3.01	1.74	5.01	2.90	1.67	910	73.5	75.2	72.9	0.72	1.95	2.25	1.85	4.2	59	14.40	0.004067
MS90L2-6	1.5	7.12	4.12	2.37	6.81	3.92	2.27	6.53	3.78	2.18	900	74.7	77	75.5	0.74	2.1	2.3	1.9	4.2	60	15.50	0.005147
MS100L1-6	1.5	6.77	3.92	2.26	6.47	3.72	2.16	6.20	3.59	2.07	935	78.5	79.9	78.2	0.74	2.05	2.35	1.8	5	61	18.80	0.007913
MS100L2-6	2.2	9.87	5.71	3.29	9.44	5.43	3.15	9.04	5.23	3.01	950	77	78.4	77.8	0.76	2.2	2.2	1.3	6	63	22.80	0.011194
MS112M-6	2.2	9.3	5.38	3.10	8.89	5.11	2.96	8.52	4.93	2.84	925	79.2	81.8	81.7	0.78	1.9	2.25	1.75	4.7	64	25.00	0.013777
MS112L-6	3	12.9	7.49	4.31	12.4	7.12	4.13	11.9	6.86	3.95	950	79	80.9	80.9	0.77	2.2	2.2	1.3	6	64	30.00	0.018246
MS132S-6	3	12.5	7.22	4.16	11.9	6.86	3.98	11.4	6.61	3.81	955	82.5	84.5	84.3	0.77	1.7	2.15	1.45	5.3	64	35.00	0.029932
MS132M1-6	4	16.2	9.39	5.40	15.5	8.92	5.17	14.9	8.59	4.95	965	85.2	85.8	84.4	0.76	2.3	2.9	1.6	6.6	68	47.60	0.037337
MS132M2-6	5.5	21.5	12.4	7.16	20.6	11.8	6.9	19.7	11.4	6.6	960	85.9	87.2	86.8	0.78	2.5	2.7	1.7	6.7	68	50.70	0.049025
MS132L-6	7.5	30.1	17.4	10.0	28.8	16.5	9.6	27.6	15.9	9.2	960	85	86.4	86.4	0.77	2	2	1.3	6.5	68	57.20	0.060782
MS160M-6	7.5	30.3	17.6	10.1	29.0	16.7	9.7	27.8	16.1	9.3	970	86.8	87.6	86.7	0.75	2.1	2.7	1.65	6.1	68	69.0	0.084476
MS160L-6	11	42.5	24.6	14.2	40.7	23.4	13.6	39.0	22.5	13.0	965	87.2	88.6	88.6	0.78	2.25	2.35	1.5	6.9	73	86.0	0.118152
MS180L-6	15	54.6	31.6	18.2	52.2	30.0	17.4	50.1	28.9	16.7	970	89	89	88.6	0.81	2	2.2	1.3	6.5	77	124.0	0.254063
MS200L1-6	18.5	66.6	38.6	22.2	63.7	36.6	21.2	61.0	35.3	20.3	975	90	90.2	89.5	0.81	2	2.2	1.3	6.5	80	141.0	0.303941
MS200L2-6	22	77.3	44.7	25.8	73.9	42.5	24.6	70.9	41.0	23.6	975	90	90.2	89.4	0.83	2	2.2	1.3	6.5	80	152.0	0.353160
MS711-8	0.09	0.97	0.56	0.32	0.93	0.54	0.31	0.89	0.52	0.30	680	44.9	39.6	31.1	0.54	2.3	2.6	2.2	2.4	50	5.60	0.000717
MS712-8	0.12	1.15	0.67	0.38	1.10	0.63	0.37	1.06	0.61	0.35	680	51.7	47.1	38.4	0.53	2.5	2.75	2.5	2.7	50	6.00	0.000841
MS713-8	0.18	1.51	0.88	0.50	1.45	0.83																

MS2 Series IE2 Efficiency Motors Technical Data (at 50Hz)

Model	Power	Current(A)			Current(A)			Current(A)			Speed (r/min)	Eff.			Power Factor	T _{start} /T _n (Times)	T _{max} /T _n (Times)	T _{max} /T _n (Times)	I _f /I _n (Times)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
MS2 712-2	0.55	2.47	1.43	0.82	2.35	1.36	0.78	2.26	1.31	0.75	2810	74.1	72.3	69.3	0.79	2.8	2.9	2.5	5.3	64	6.2	0.000366947
MS2 713-2	0.75	3.19	1.84	1.06	3.03	1.75	1.01	2.92	1.69	0.97	2830	77.4	76.4	74.3	0.8	3.2	3.3	3.1	6.6	65	7.5	0.000454621
MS2 801-2	0.75	3.27	1.89	1.09	3.11	1.79	1.04	2.99	1.73	1.00	2860	77.4	76.8	72.7	0.78	3.4	3.2	2.4	7.1	67	8.9	0.000852421
MS2 802-2	1.1	4.49	2.59	1.50	4.27	2.46	1.42	4.11	2.37	1.37	2860	79.6	79.7	77	0.81	4.4	3.3	2.6	7.8	67	10.6	0.001044831
MS2 803-2	1.5	5.92	3.42	1.97	5.63	3.25	1.88	5.42	3.13	1.81	2860	81.3	81.2	79.7	0.82	3.5	3.7	3.2	8.4	70	13	0.001301378
MS2 90S-2	1.5	5.92	3.42	1.97	5.63	3.25	1.88	5.42	3.13	1.81	2870	81.3	80.9	79.3	0.82	3.9	3.6	3	8.2	72	13.2	0.001637187
MS2 90L1-2	2.2	8.28	4.78	2.76	7.87	4.54	2.62	7.59	4.38	2.53	2880	83.2	82.9	81.5	0.84	3.8	3.7	2.9	9.2	72	16.1	0.002180747
MS2 90L2-2	3	11.2	6.49	3.75	10.7	6.17	3.56	10.3	5.94	3.43	2890	84.6	83.9	82.4	0.83	5.1	4.4	3.4	10.2	74	20	0.002815241
MS2 100L1-2	3	10.7	6.19	3.58	10.2	5.88	3.40	9.82	5.67	3.27	2880	84.6	85	84	0.87	3	3.5	2.2	8.6	76	22.7	0.003470520
MS2 100L2-2	4	13.8	7.96	4.60	13.1	7.56	4.37	12.6	7.29	4.21	2860	85.8	87.1	86.6	0.89	3.2	3.5	2.3	9.3	77	26	0.004242158
MS2 112M-2	4	13.5	7.78	4.49	12.8	7.39	4.27	12.3	7.13	4.12	2890	85.8	87.1	87	0.91	2.6	3.2	2	8.4	77	26.4	0.006006696
MS2 112L-2	5.5	18.9	10.9	6.30	18.0	10.4	5.99	17.3	9.99	5.77	2920	87	87.4	86.4	0.88	4	4.3	3	11	78	32.1	0.007818571
MS2 132S1-2	5.5	18.7	10.8	6.23	17.8	10.3	5.92	17.1	9.88	5.71	2900	87	87.5	86.7	0.89	2.2	3.2	1.6	8.7	80	42.3	0.011499620
MS2 132S2-2	7.5	24.9	14.4	8.30	23.6	13.7	7.88	22.8	13.2	7.60	2910	88.1	89.3	89	0.9	2.5	3.1	1.8	8.6	80	46.2	0.014112840
MS2 132M1-2	9.2	31.0	17.9	10.3	29.5	17.0	9.82	28.4	16.4	9.47	2900	88.7	89	88	0.88	3.5	3.9	2.4	9.8	81	51.6	0.016303290
MS2 132M2-2	11	37.7	21.7	12.6	35.8	20.7	11.9	34.5	19.9	11.5	2930	89.4	89.4	88	0.86	3.5	3.9	2.4	11.5	83	54.5	0.019439160
MS2 160M1-2	11	36.4	21.0	12.1	34.6	20.0	11.5	33.3	19.2	11.1	2940	89.4	89.6	89	0.89	2.4	3	1.6	7.9	86	79.2	0.048470990
MS2 160M2-2	15	49.1	28.4	16.4	46.7	26.9	15.6	45.0	26.0	15.0	2930	90.3	90.5	89.9	0.89	2.9	2.9	1.7	8.4	86	96.6	0.059420980
MS2 160L-2	18.5	59.5	34.4	19.8	56.5	32.6	18.8	54.5	31.5	18.2	2940	90.9	91.3	90.6	0.9	3.1	3.1	1.5	9.2	86	102.5	0.065678100
MS2 160L2-2	22	70.5	40.7	23.5	66.9	38.6	22.3	64.5	37.2	21.5	2940	91.3	90.8	88.9	0.9	3.6	3.4	1.9	10.4	88	115	0.079756640
MS2 180M-2	22	69.7	40.2	23.2	66.2	38.2	22.1	63.8	36.8	21.3	2950	91.3	90.9	88.8	0.91	2.5	2	1.4	8.1	88	128	0.095015620
MS2 200L1-2	30	95.3	55.1	31.8	90.6	52.3	30.2	87.3	50.4	29.1	2960	92	92.1	91.1	0.9	3.1	3.2	1.4	9.5	90	158	0.122245500
MS2 200L2-2	37	115.7	66.8	38.6	109.9	63.4	36.6	105.9	61.2	35.3	2960	92.5	92.3	91.3	0.91	2.8	3.5	1.4	9.6	90	181.3	0.148815500
MS2 801-4	0.55	2.47	1.43	0.82	2.35	1.35	0.78	2.26	1.31	0.75	1400	77.1	77.5	76.3	0.76	2.2	2.4	2	4.9	58	9.95	0.001411044
MS2 802-4	0.75	3.26	1.88	1.09	3.10	1.79	1.03	2.99	1.72	1.00	1410	79.6	80.8	79.6	0.76	2.2	2.5	2	5.8	58	11.1	0.001952112
MS2 90S-4	1.1	4.87	2.81	1.62	4.63	2.67	1.54	4.46	2.58	1.49	1420	81.4	82.2	81	0.73	2.5	2.5	2	6	61	13.9	0.002734978
MS2 90L-4	1.5	6.44	3.72	2.15	6.12	3.53	2.04	5.90	3.41	1.97	1420	82.8	83.7	82.6	0.74	2.7	3.2	2.7	6.4	61	16.9	0.003571579
MS2 100L1-4	2.2	8.92	5.15	2.97	8.47	4.89	2.82	8.17	4.72	2.72	1440	84.3	83.9	82.5	0.77	2.9	3.5	2	7.2	64	22.4	0.006728579
MS2 100L2-4	3	12.0	6.92	4.00	11.4	6.58	3.80	11.0	6.34	3.66	1440	85.5	85.3	84	0.77	3.2	3.4	2.5	7.9	64	26.4	0.008764313
MS2 112M-4	4	15.0	8.66	5.00	14.3	8.23	4.75	13.7	7.93	4.58	1450	86.6	87	86.1	0.81	3	3.1	2.3	8.4	65	32.3	0.013305300
MS2 132S-4	5.5	19.9	11.5	6.63	18.9	10.9	6.30	18.2	10.5	6.07	1460	87.7	88.4	87.8	0.83	2.7	2.9	1.8	8.5	71	43	0.026732150
MS2 132M-4	7.5	26.8	15.5	8.94	25.5	14.7	8.49	24.5	14.2	8.18	1460	88.7	89.2	88.5	0.83	2.9	3.3	1.8	9.6	71	52.6	0.034860380
MS2 132L-4	9.2	31.9	18.4	10.6	30.3	17.5	10.1	29.2	16.9	9.75	1450	89.2	90	89.5	0.85	2.9	3.2	2	8.8	74	59	0.041953520
MS2 160M-4	11	38.4	22.2	12.8	36.5	21.0	12.2	35.1	20.3	11.7	1460	89.8	90.3	89.6	0.84	2.5	2.9	1.6	7.3	75	83	0.089629630
MS2 160L1-4	15	51.9	29.9	17.3	49.3	28.4	16.4	47.5	27.4	15.8	1460	90.6	90.8	89.8	0.84	2.9	3	1.7	8.2	75	103.5	0.118353700
MS2 160L2-4	18.5	62.8	36.3	20.9	59.7	34.4	19.9	57.5	33.2	19.2	1460	91.2	91.5	91	0.85	2.9	3	1.7	8.1	78	114.5	0.136632600
MS2 180M-4	18.5	61.4	35.4	20.5	58.3	33.7	19.4	56.2	32.4	18.7	1460	91.2	91.6	91.1	0.87	2.4	3	1.8	7.8	80	119	0.155063600
MS2 180L-4	22	71.8	41.5	23.9	68.2	39.4	22.7	65.8	38.0	21.9	1460	91.6	92.2	91.9	0.88	2.4	2.8	1.7	7.7	80	129	0.173293100
MS2 200L-4	30	99.5	57.4	33.2	94.5	54.6	31.5	91.1	52.6	30.4	1470	92.3	92.6	92	0.86	3.2	3.7	2.3	9.5	83	169.2	0.242313300
MS2 90S-6	0.75	3.56	2.06	1.19	3.38	1.95	1.13	3.26	1.88	1.09	930	75.9	75.9	74	0.73	2.3	2.5	2	5	59	13	0.003186311
MS2 90L-6	1.1	5.15	2.97	1.72	4.89	2.82	1.63	4.71	2.72	1.57	930	78.1	78.6	77	0.72	2.6	2.3	1.9	5.7	59	16.4	0.00447236
MS2 100L-6	1.5	6.97	4.02	2.32	6.62	3.82	2.21	6.38	3.68	2.13	950	79.8	79.4	77.6	0.71	2.4	2.8	2	5.6	61	21.6	0.008733458
MS2 100L2-6	2.2	9.83	5.68	3.28	9.34	5.39	3.11	9.00	5.20	3.00	950	81.8	81.8	80.3	0.72	2.5	2.7	1.9	6.1	64	26.7	0.012441140
MS2 112M-6	2.2	9.44	5.45	3.15	8.96	5.18	2.99	8.64	4.99	2.88	940	81.8	82.7	81.7	0.75	2.2	2.5	1.9	5.2	64	27	0.015691900
MS2 132S-6	3	12.5	7.20	4.16	11.8	6.84	3.95	11.4	6.59	3.81	960	83.3	84.4	83.4	0.76	2.2	2.6	1.7	6.1	64	35.2	0.029932380
MS2 132M1-6	4	16.6	9.58	5.53	15.8	9.10	5.25	15.2	8.77	5.06	965	84.6	84.9	83.9	0.75	2.5	2.9	1.8	7	68	45	0.038798280
MS2 132M2-6	5.5	22.4	13.0	7.48	21.3	12.3	7.11	20.5	11.9	6.85	965	86	86.7	85.9	0.75	2.7	2.8	1.6	7.1	68	53.5	0.050486330
MS2 132L-6	7.5	30.2	17.4	10.1	28.7	16.6	9.56	27.6	16.0	9.21	970	87.2	87.5	86.2	0.75	3.7	3.1	2.2	8.2	68	66.2	0.068086740
MS2 160M-6	7.5	30.6	17.7	10.2	29.1	16.8	9.69	28.0	16.2	9.34	970	87.2	87.8	86.7	0.74	2.8	2.9	1.6	7.1	68	72.6	0.089688320
MS2 160L-6	11	43.5	25.1	14.5	41.3	23.9	13.8	39.8	23.0	13.3	970	88.7	89	88.1	0.75	3	2.8	1.6	7.1	73	89.5	0.122729800
MS2 180L-6	15	53.0	30.6	17.7	50.4	29.1	16.8	48.5	28.0	16.2	975	89.7	89.5	88.7	0.83	2.2	2.7	1.2	8	77	130	0.254062800
MS2 200L1-6	18.5	66.5	38.4	22.2	63.2	36.5	21.1	60.9	35.1	20.3	980	90.4	90.7	89.8	0.81	2.5	2.9	1.7	7.6	80	149	0.303941400
MS2 200L2-6	22	76.7	44.3	25.6	72.9	42.1	24.3	70.3	40.6	23.4	980	90.9	91.2	90.5	0.83	2.3	2.6	2.3	7.6	80	167	0.353160100

IEC MOTORS

FIRE PUMP MOTORS

NEMA MOTORS

EC MOTORS

MSD Series

Three-Phase Asynchronous Double-Polarity Motors Aluminum Housing



Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (CosΦ)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P
MSD711-2/4	0.3	0.22	2750	1350	60	55	0.8	0.73	0.90	0.79	1.04	1.56	1.7	1.7	3.5	3.5	1.9	1.9
MSD712-2/4	0.45	0.3	2790	1380	63	58	0.8	0.73	1.29	1.02	1.54	2.08	2	2	4	4	2	2
MSD801-2/4	0.55	0.45	2800	1380	65	64	0.84	0.75	1.45	1.35	1.88	3.11	2	2	4.5	4.5	2.1	2.1
MSD802-2/4	0.75	0.6	2800	1400	67	68	0.86	0.77	1.88	1.65	2.56	4.09	1.8	1.8	4.5	4.5	2	2
MSD90S-2/4	1.25	0.95	2820	1400	72	68	0.86	0.82	2.91	2.46	4.23	6.48	2	2	5	5	2	2
MSD90L-2/4	1.7	1.32	2830	1400	73	70	0.86	0.83	3.91	3.28	5.74	9.00	2	2	5	5	2	2
MSD100L1-2/4	2.4	1.84	2830	1410	73	76	0.86	0.83	5.52	4.21	8.10	12.46	2	2	5.5	5	2	2
MSD100L2-2/4	3.3	2.6	2840	1420	74	78	0.86	0.85	7.48	5.66	11.10	17.19	2	1.9	5.5	5	2	1.9
MSD112M-2/4	4.5	4	2860	1430	77	79	0.85	0.86	9.92	8.50	15.03	26.71	2	1.8	5.5	5	2.2	2
MSD132S-2/4	6	5	2860	1440	79	82	0.84	0.86	13.05	10.23	20.03	33.16	2	1.5	5.5	5.5	2.2	1.9
MSD132M-2/4	8	6.6	2870	1440	82	84	0.84	0.86	16.76	13.09	26.62	43.77	2	2	6	6	2.2	2.2
MSD160M-2/4	11	9	2920	1450	84	84	0.85	0.82	22.23	18.86	35.98	59.28	1.8	1.8	7	6	2	2
MSD160L-2/4	15	12	2920	1450	86	84	0.87	0.83	28.94	24.84	49.06	79.03	2	2	7	7	2.2	2.2

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (CosΦ)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P
MSD801-4/8	0.25	0.15	1380	680	58	40	0.77	0.60	0.81	0.90	1.73	2.11	2	2	4.5	3	2	2
MSD802-4/8	0.45	0.25	1390	685	68	48	0.80	0.60	1.19	1.25	3.09	3.49	1.8	2	4.5	3	2	2
MSD90S-4/8	0.55	0.3	1400	690	68	50	0.83	0.61	1.41	1.42	3.75	4.15	1.8	2	4.5	3.5	2	2
MSD90L-4/8	0.8	0.45	1400	690	68	53	0.83	0.63	2.05	1.95	5.46	6.23	1.8	1.6	4	3	1.9	1.8
MSD100L1-4/8	1.25	0.6	1400	700	69	54	0.82	0.56	3.19	2.86	8.53	8.16	1.8	2	5	3.5	2	2
MSD100L2-4/8	1.76	0.88	1400	700	71	58	0.84	0.56	4.26	3.91	12.00	12.00	1.8	2	5.5	4	2	2
MSD112M-4/8	2.2	1.5	1420	700	75	64	0.82	0.61	5.16	5.54	14.80	20.46	2	2	6	4	2	2
MSD132S-4/8	3.3	2.2	1430	705	78	70	0.84	0.64	7.27	7.09	22.04	29.8	2	2	6	5	2	2
MSD132M-4/8	4.5	3	1430	705	82	77	0.85	0.65	9.32	8.65	30.05	40.64	2	2	6	5	2	2
MSD160M1-4/8	5.5	4	1440	710	82	77	0.81	0.69	11.95	10.87	36.48	53.80	2.1	1.7	7.6	4.6	2.3	2.2
MSD160M2-4/8	7.5	5	1440	710	82	79	0.89	0.78	14.83	11.71	49.74	67.25	1.7	1.6	6.6	4.5	2.3	2.1
MSD160L-4/8	10	7	1450	715	84	82	0.90	0.78	19.09	15.80	65.86	93.50	1.8	1.9	5.5	5	2.3	2.1

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (Cos)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P
MSD801-4/6	0.3	0.22	1400	910	60	55	0.74	0.69	0.98	0.84	2.05	2.31	2	1.8	4.5	4	2	2
MSD802-4/6	0.45	0.3	1410	920	63	58	0.75	0.7	1.37	1.07	3.05	3.11	2	1.8	4.5	4	2	2
MSD90S-4/6	0.66	0.45	1410	920	66	61	0.76	0.65	1.9	1.64	4.47	4.67	1.7	1.7	5	4.5	2	2
MSD90L-4/6	0.88	0.6	1420	930	70	64	0.77	0.67	2.36	2.02	5.92	6.16	1.7	1.7	5	4.5	2	2
MSD100L1-4/6	1.32	0.88	1420	940	72	67	0.85	0.75	3.11	2.3	8.88	8.94	1.8	1.8	6	5	2	2
MSD100L2-4/6	1.76	1.2	1430	950	74	70	0.85	0.75	4.04	3.3	11.75	12.06	1.8	1.8	6	5	2	2
MSD112M-4/6	2.2	1.5	1430	950	76	70	0.8	0.70	5.22	4.42	14.69	15	2	1.8	6	5	2.2	2.2
MSD132S-4/6	3.3	2.2	1440	960	82	78	0.81	0.72	7.17	5.65	21.9	21.9	2	2	7	6	2.2	2.2
MSD132M-4/6	4.5	3	1450	970	83	80	0.82	0.74	9.54	7.31	29.6	29.5	2	2	7	6	2.3	2.3
MSD160M-4/6	6.6	4.5	1460	970	84	81	0.84	0.78	13.5	10.3	43.2	44.3	1.8	1.8	7	6	2.3	2.3
MSD160L-4/6	8.8	6	1460	970	84	81	0.85	0.79	17.8	13.5	57.6	59.1	1.8	1.8	7	6	2.3	2.3

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (Cos)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P
MSD801-6/8	0.18	0.11	900	680	50	42	0.69	0.65	0.75	0.58	1.91	1.54	1.5	1.5	3.5	3	1.5	1.5
MSD802-6/8	0.25	0.18	920	700	54	46	0.7	0.66	0.95	0.86	2.60	2.46	1.7	1.5	3.5	3	1.5	1.7
MSD90S-6/8	0.37	0.25	930	680	58	50	0.72	0.68	1.28	1.06	3.80	3.51	1.5	1.4	4	3	1.8	1.7
MSD90L-6/8	0.55	0.37	940	685	63	54	0.73	0.69	1.73	1.43	5.59	5.16	1.5	1.4	4	3	1.8	1.7
MSD100L1-6/8	0.75	0.55	950	700	69	63	0.74	0.74	2.12	1.70	7.54	7.50	1.5	1.4	5	4	2	1.8
MSD100L2-6/8	1.03	0.75	955	705	71	65	0.76	0.76	2.76	2.19	10.30	10.16	1.5	1.4	5	4	2	1.8
MSD112M-6/8	1.25	0.95	960	710	72	64	0.71	0.71	3.53	3.02	12.43	12.78	1.5	1.5	5	4	2	1.8
MSD132S-6/8	2.2	1.5	970	720	76	70	0.71	0.7	5.88	4.42	21.66	19.90	1.6	1.4	6	5.5	2.3	2
MSD132M-6/8	3	1.85	970	720	78	74	0.71	0.7	7.82	5.01	29.54	24.37	1.6	1.4	6	5.5	2.3	2
MSD160M1-6/8	3.7	2.6	970	720	78	75	0.74	0.71	9.25	7.05	36.43	34.49	1.8	1.5	6	5.5	2.5	1.9
MSD160M2-6/8	4.5	3.3	970	720	79	76	0.78	0.72	10.54	8.70	44.30	43.77	1.8	1.7	6	5.5	2.5	2
MSD160L-4/6	6	4.5	973	720	80	77	0.79	0.73	13.70	11.55	59.89	59.69	1.8	1.7	6	5.5	2.5	2

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (Cos)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	2P	8P	2P	8P	2P	8P	2P	8P	2P	8P	2P	8P	2P	8P	2P	8P	2P	8P
MSD801-2/8	0.37	0.08	2760	660	65	33	0.76	0.48	1.08	0.73	1.28	1.16	1.7	2	3.5	2.5	1.9	2.1
MSD802-2/8	0.55	0.11	2780	670	67	35	0.78	0.50	1.52	0.91	1.89	1.57	1.7	2	4	3	1.9	2.2
MSD90S-2/8	0.75	0.18	2800	670	67	43	0.79	0.52	2.05	1.16	2.56	2.57	1.8	2	4	3	2	2.3
MSD90L-2/8	1.1	0.3	2810	680	67	45	0.8	0.54	2.96	1.78	3.74	4.21	1.8	2	4	3.5	2	2.3
MSD100L1-2/8	1.5	0.37	2820	700	67	50	0.84	0.56	3.85	1.91	5.08	5.05	1.7	2.1	5	3.5	2	2.6
MSD100L2-2/8	2.2	0.55	2820	710	68	51	0.85	0.58	5.49	2.68	7.45	7.40	1.8	2.2	5	3.5	2	2.6
MSD112M1-2/8	2.6	0.75	2840	710	71	58	0.86	0.6	6.15	3.11	8.74	10.09	1.8	1.8	5.5	4	1.9	1.9
MSD112M2-2/8	3	0.9	2850	710	75	63	0.86	0.58	6.71	3.56	10.05	12.1	1.7	2	6.5	4.5	1.9	2.2
MSD132S-2/8	3.7	1.1	2890	710	81	65	0.83	0.57	7.94	4.29	12.22	14.80	1.7	1.7	7	5	1.9	1.9
MSD132M-2/8	5.5	1.5	2900	720	82	66	0.85	0.57	11.39	5.75	18.11	19.90	1.8	1.8	7	5	1.9	1.9
MSD160M-2/8	7.5	2.2	2900	720	80	73	0.87	0.58	15.55	7.50	24.70	29.18	2.3	2.5	7	5	2.3	2.5
MSD160L-2/8	9.5	3	2920	720	82	73	0.87	0.58	19.22	10.23	31.07	39.79	2.3	2.5	7	5	2.3	2.5

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (CosΦ)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P	2P	4P
MSD712-2/4	0.55	0.12	2850	1410	75	57	0.78	0.55	1.5	0.7	1.8	0.8	2.7	3.3	6	4	2.7	3.2
MSD802-2/4	0.75	0.19	2860	1430	75	59	0.82	0.6	2	1	2.4	1.2	3.3	2.8	7	4	2.6	2.8
MSD802-2/4	1.1	0.28	2870	1430	79	64	0.82	0.59	2.8	1.5	3.6	1.8	3.4	2.5	7.5	4.6	2.8	2.8
MSD90S-2/4	1.5	0.38	2880	1440	82	71	0.84	0.6	3.5	1.5	4.9	2.5	2.6	3.2	7.5	5.5	3.3	3.5
MSD90L-2/4	2.2	0.55	2880	1440	83	73	0.86	0.62	4.5	2	7.2	3.5	3.6	3.6	8	5.8	3.3	3.2
MSD100L1-2/4	3	0.8	2850	1430	81	77	0.9	0.72	6	2.2	10	5.2	2.1	1.9	8	5.5	2.8	2.5
MSD112M-2/4	4	1	2910	1450	85	80	0.86	0.67	8	3	13	6	3.2	3.2	10.5	8	3.4	3.7
MSD112M-2/4	4.5	1.3	2900	1440	84	81	0.93	0.81	8.5	3	14	8	2.3	1.9	9.5	6.5	2.9	2.6
MSD132S-2/4	5.5	1.4	2900	1450	85	82	0.9	0.73	10.5	3.5	18	9	2.7	2.1	9.5	6.5	3	3
MSD132S-2/4	6	1.6	2890	1440	83	80	0.92	0.79	11.5	3.9	19	10	2.5	1.8	9	6	2.9	2.7
MSD132M-2/4	9	2.5	2920	1450	86	82	0.91	0.79	17	6	29	16	2.5	1.8	10.3	6.8	2.5	2.7
MSD160M-2/4	15	3.7	3930	1460	86	86	0.91	0.76	28	8.5	48	24	2.5	2.3	8	6.4	2.9	2.6
MSD160L-2/4	18.5	4.4	2940	1470	88	87	0.91	0.74	34	10.5	59	58	3	2.7	9.5	7	3.2	3

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (CosΦ)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P	4P	8P
MSD711-4/8	0.25	0.03	1370	710	53	30	0.67	0.44	1.2	0.5	1.7	0.4	2.4	2.5	3.5	2.8	2.5	4.8
MSD712-4/8	0.33	0.04	1360	710	58	34	0.71	0.45	1.5	0.5	2.3	0.5	2.2	4.1	4	3	2.5	4.6
MSD712-4/8	0.37	0.09	1360	650	58	45	0.69	0.61	1.5	0.5	2.5	1.3	2.4	2	3.5	2.5	2.5	2
MSD801-4/8	0.55	0.09	1410	710	64	43	0.7	0.49	2	1	3.7	1.1	2	2.6	4.5	3.5	2.5	3.6
MSD802-4/8	0.75	0.19	1430	710	76	59	0.82	0.6	1.8	0.8	2.4	1.2	3.3	2.8	7	4	2.6	2.8
MSD90S-4/8	1.1	0.18	1400	710	75	53	0.79	0.47	3	1.5	7.4	2.4	2.3	3	5.8	3.6	2.5	3.5
MSD90L-4/8	1.5	0.25	1380	700	75	57	0.83	0.49	4	1.5	10	3	2.2	2.8	5.8	3.6	2.4	3.3
MSD100L1-4/8	2.2	0.37	1430	720	79	62	0.8	0.46	4	2	14	4.5	2.1	2.5	7	4.5	2.7	3.5
MSD100L2-4/8	3	0.55	1420	710	80	67	0.82	0.5	6.6	2.5	20	7.3	2	2.3	6.9	4	2.5	3
MSD112M-4/8	4	0.75	1440	720	82	72	0.84	0.53	8.5	3	26.5	9.9	1.9	1.9	7.5	4.5	2.5	2.8
MSD132S-4/8	5.5	1.1	1450	720	84	74	0.85	0.54	11	4	36	14	2.1	1.5	8.5	5	2.5	2.8
MSD132M-4/8	7.5	1.5	1450	720	85	75	0.83	0.51	15	5.8	49	19	2.2	2	9.2	5	3	3
MSD160M-4/8	8.9	2	1460	730	87	79	0.83	0.53	18	7	58	26	2.4	1.7	8.7	4.5	3	2.6
MSD160L-4/8	11	2.8	1460	720	88	81	0.83	0.58	22	8.5	71	36	2.3	1.4	8	4	2.7	1.8
MSD160L-4/8	15	3.5	1460	720	89	82	0.83	0.56	12.5	11.5	97	45	2.2	1.6	7.5	4	2.9	2
MSD180M-4/8	18.5	4.6	1470	730	90	84	0.84	0.55	35	14	119	59	2.5	2.3	9	5.5	3	2.8
MSD180L-4/8	22	5.5	1470	730	90	83	0.85	0.6	40	16	142	71	2.4	2.1	9.5	5.5	3	2.8

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (CosΦ)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P
MSD71S-4/6	0.25	0.09	1380	950	48	41	0.68	0.64	1.3	0.5	1.7	0.9	2.4	2	3	2.5	2.2	2.1
MSD801-4/6	0.37	0.12	1420	960	59	47	0.68	0.58	1.5	0.7	2.4	1.1	2	2.2	4.5	4	2.3	2.9
MSD802-4/6	0.55	0.16	1420	960	64	53	0.72	0.56	1.8	0.8	3.6	1.5	1.7	2.4	4.5	4.2	2.2	3.2
MSD90S-4/6	0.75	0.25	1410	950	65	59	0.74	0.65	2.5	0.9	5	2.4	1.8	1.6	4.5	4.2	2.1	2.3
MSD90L1-4/6	1.1	0.37	1410	950	68	64	0.74	0.68	3.2	1.5	7.4	3.7	1.9	2	4.5	4.2	2.1	2.2
MSD90L2-4/6	1.5	0.5	1420	950	73	68	0.77	0.7	4	1.6	10	4.8	1.9	1.9	5.5	5	2.1	2.3
MSD100L1-4/6	1.7	0.6	1430	960	75	68	0.77	0.73	4.5	2	11	5.5	1.9	1.6	5.5	5	2.2	2.1
MSD100L2-4/6	2.2	0.75	1430	950	80	69	0.83	0.69	5	2.4	14.5	7.5	2.4	1.7	6.5	4.3	2.5	2.2
MSD100L2-4/6	3	0.9	1430	950	77	68	0.77	0.7	7.5	3	19	8	2.7	1.7	6	4.6	2.5	2.2
MSD112M-4/6	3	1	1440	950	82	72	0.84	0.72	6.5	3	19.5	9.5	2.2	1.3	7.5	4.5	2.5	2.1
MSD132S-4/6	4	1.3	1440	960	80	73	0.81	0.73	9	4	26	12.5	2.3	1.3	3.8	5.5	2.4	2.1
MSD132M1-4/6	5.5	1.6	1450	970	83	75	0.81	0.71	12	4.5	36	15	2.4	1.4	7.8	6	2.4	2.2
MSD132M1-4/6	6	2	1450	970	84	77	0.8	0.74	13	5.5	39	19	2.5	1.5	7.8	6	2.8	2.2
MSD132M1-4/6	7.5	2.2	1450	970	85	72	0.86	0.74	15	6.2	49	21	2.2	1.4	8	5.5	2.7	2.2
MSD160M-4/6	11	3.3	1460	970	86	77	0.85	0.75	22	8.5	71	32	2.5	1.3	8	4.8	3	1.9
MSD160L-4/6	15	5	1450	970	88	80	0.86	0.73	29	12.5	98	48	2.2	1.9	9	6	2.3	2.3

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (CosΦ)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P	6P	8P
MSD802-6/8	0.37	0.18	940	710	64	53	0.67	0.57	1.3	0.9	3.7	2.4	2.3	2.4	4.5	3.5	2.5	2.7
MSD90S-6/8	0.75	0.32	940	710	70	57	0.73	0.61	2.1	1.4	7.5	4.2	1.9	1.6	4.6	3.3	2.5	2.2
MSD90L-6/8	1.1	0.46	940	710	67	52	0.67	0.63	4	2.4	11	6	1.8	1.6	4	3.5	2.2	1.9
MSD100L-6/8	1.5	0.63	950	710	75	62	0.72	0.66	4.3	2.5	14.5	8	2.1	1.7	5.2	4	2.3	2
MSD112M-6/8	2.2	0.93	950	720	79	68	0.75	0.62	5.5	3.5	21	12	2.6	1.7	6	4.2	2.5	2.3
MSD132S-6/8	3	1.3	970	730	83	72	0.76	0.6	7	4.5	29	16	2.4	1.8	7	4.6	2.6	2.4
MSD132M-6/8	4	1.7	970	730	83	74	0.77	0.6	9.3	5.8	39	22	2.4	1.9	7	5	2.5	2.5

Technical Data (at 400V/50Hz)

Model	Power (kW)		Speed (r/min)		Eff. (%)		Power Factor (CosΦ)		Current (A)		Rated Torque (N.M)		T _{st} /T _n (Times)		I _{st} /I _n (Times)		T _{max} /T _n (Times)	
	6P	12P	6P	12P	6P	12P	6P	12P	6P	12P	6P	12P	6P	12P	6P	12P	6P	12P
MSD802-6/12	0.37	0.06	930	450	59	30	0.71	0.57	1.3	0.5	3.7	1.2	1.6	1.9	3.5	2	1.9	2
MSD802-6/12	0.55	0.08	930	450	64	38	0.74	0.57	1.7	0.53	5.6	1.7	1.6	1.8	4	2	2	2
MSD90S-6/12	0.75	0.1	930	460	66	41	0.75	0.47	2.2	0.8	7	2	1.4	1.8	3.6	2	1.9	2.2
MSD90L-6/12	1.1	0.15	930	460	67	42	0.73	0.46	3.2	1.2	11	3	1.7	2.1	3.8	2	2	2.3
MSD100L-6/12	1.5	0.2	940	470	73	48	0.75	0.44	4	1.5	15	4	2.1	3.2	4.8	1.5	2.4	3.1
MSD112M-6/12	2.2	0.3	950	470	77	54	0.74	0.41	5.5	2	22	6	2.2	3	5.3	2.7	2.5	3.2
MSD132S-6/12	3	0.4	960	480	77	51	0.7	0.39	8	2.9	29	7	2.6	3.4	6	3.5	3	3.9
MSD132M1-6/12	4	0.55	970	480	80	57	0.72	0.39	10	3.6	39	10	2.7	3.4	6.5	3.6	3.2	4.2
MSD132M2-6/12	5.5	0.75	970	480	81	59	0.73	0.39	13.5	4.7	54	14	2.9	3.5	7	3.5	2.7	3.9

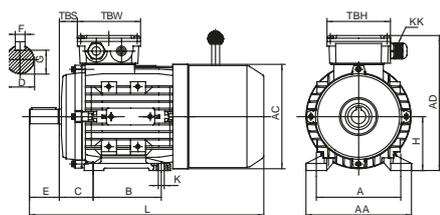
MSBCCL Series

Asynchronous Three-Phase Brake Motors With Squirrel Cage Rotor - Direct Current Brake

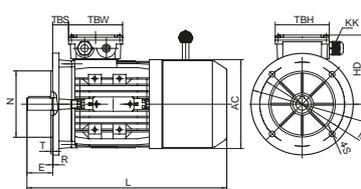
• MSBCCL series-enclosed construction externally ventilated-sizes 63~200

The brake-motors of the MSBCCL series result from coupling an asynchronous three-phase motor and an electromagnetic D.C. brake unit. Due to their reliability and operating safety, as well as their quick braking time (connection & disconnection time = 5~80 milliseconds) they are suitable for a great variety of applications, such as:

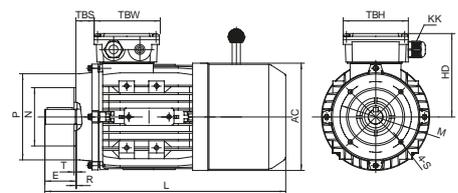
- Braking of loads or torques on the driving shaft.
- Braking of rotating masses to reduce any lost-time.
- Braking operations to increase the set-up precision.
- Braking of machine parts, according to safely rules.



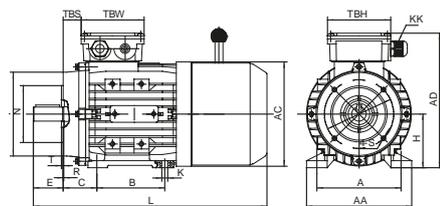
IM B3



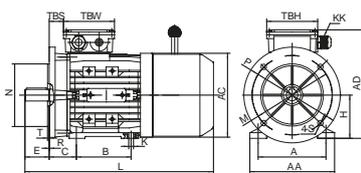
IM B5



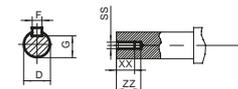
IM B14



IM B34



IM B35



Overall & Installation Dimensions

FRAME	Foot Mounting				Shaft								General							
	H	A	B	C	D	E	F	G	K	SS	XX	ZZ	AA	AD	HD	AC	L	TBS	TBW	TBH
56	56	90	71	36	Φ9	20	3	7.2	5.8*8.8	M4	10	14	110	152	96	Φ110	233	14	88	88
63	63	100	80	40	Φ11	23	4	8.5	7*10	M4	10	14	120	169	106	Φ121	265	14	94	94
71**	71	112	90	45	Φ14	30	5	11	7*10	M5	12	17	132	184	113	Φ139	287/301	20	94	94
80	80	125	100	50	Φ19	40	6	15.5	10*13	M6	16	21	160	211	131	Φ156	340	27	105	105
90S	90	140	100	56	Φ24	50	8	20	10*13	M8	19	25	175	228	138	Φ175	356	30	105	105
90L1/L2	90	140	125	56	Φ24	50	8	20	10*13	M8	19	25	175	228	138	Φ175	381/411	30	105	105
100**	100	160	140	63	Φ28	60	8	24	12*15	M10	22	30	198	248	148	Φ196	434/452	26	105	105
112	112	190	140	70	Φ28	60	8	24	12*15	M10	22	30	220	278	166	Φ221	465	32	112	112
132S	132	216	140	89	Φ38	80	10	33	12*15	M12	28	37	252	316	184	Φ256	518	38	112	112
132M/L	132	216	178	89	Φ38	80	10	33	12*15	M12	28	37	252	316	184	Φ256	556/582	38	112	112
160M/L	160	254	210/254	108	Φ42	110	12	37	15*19	M16	36	45	290	382	222	Φ313	701	64	143	143

FRAME	KK	B5						B14						B5R						B14B					
		N	M	P	S	T	R	N	M	P	S	T	R	N	M	P	T	S	R	N	M	P	T	S	R
56	1-M16*1.5	Φ80	Φ100	Φ120	Φ7	3	0	Φ50	Φ65	Φ80	M5	2.5	0												
63	1-M16*1.5	Φ95	Φ115	Φ140	Φ10	3	0	Φ60	Φ75	Φ90	M5	2.5	0												
71	1-M20*1.5	Φ110	Φ130	Φ160	Φ10	3.5	0	Φ70	Φ85	Φ105	M6	2.5	0	Φ95	Φ115	Φ140	3	Φ10	0	Φ95	Φ115	Φ140	3	M8	0
80	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ80	Φ100	Φ120	M6	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0
90	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ95	Φ115	Φ140	M8	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0
100	2-M20*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0
112	2-M25*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0
132	2-M25*1.5	Φ230	Φ265	Φ300	Φ15	4	0	Φ130	Φ165	Φ200	M10	3.5	0	Φ180	Φ215	Φ250	4	Φ15	0	Φ180	Φ215	Φ250	4	M12	0
160	2-M32*1.5	Φ250	Φ300	Φ350	Φ19	5	0	Φ180	Φ215	Φ250	M12	4	0												

REACH brake data (fitted as standard)

Frame size	Brake type	Brake torque (Speed 100r/min) (Nm)	Brake rated power(20°C) (W)	Delay time when power on (ms)	Brake time (ms)	Pick in time when power off (ms)
56-71	06	4	20	15	30	40
80	08	8	25	15	32	50
90	10	16	30	25	45	69
100	12	32	40	26	56	108
112	14	60	50	27	57	190
132	16	80	55	30	60	200
160	18	150	85	35	78	260

INTORQ brake data

Frame size	Brake type	Brake torque (Speed 100r/min) (Nm)	Brake rated power (20°C) (W)	Delay time when power on (ms)	Brake time (ms)	Pick in time when power off (ms)
56-71	06	4	20	10	23	52
80	08	8	25	15	31	60
90	10	16	30	31	50	65
100	12	32	40	39	64	145
112	14	60	50	26	51	205
132	16	80	55	40	70	258

MSB Series Motors Technical Data (at 50Hz)

Model	Power (kW)	Current (A)			Current (A)			Current (A)			Speed (r/min)	Eff			Power factor	T _g /T _n (Times)	T _{max} /T _n (Times)	T _{max} /T _n (Times)	I _g /I _n (Times)	Noise dB(A)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%						
MSB 631-2	0.18	0.92	0.53	0.31	0.88	0.51	0.29	0.85	0.49	0.28	2780	66.5	64.2	56.8	0.77	2.3	2.5	2.4	4.1	61
MSB 632-2	0.25	1.19	0.69	0.40	1.14	0.65	0.38	1.09	0.63	0.36	2780	69.8	68.8	62.8	0.79	2.6	2.5	2.4	4.3	61
MSB 633-2	0.37	1.72	1.00	0.57	1.65	0.95	0.55	1.58	0.91	0.53	2750	71.4	71.2	65.9	0.79	2.8	2.6	2.6	4.7	62
MSB 711-2	0.37	1.70	0.99	0.57	1.63	0.94	0.54	1.56	0.90	0.52	2830	71.3	70.4	65.2	0.8	2.8	2.9	2	5.9	64
MSB 712-2	0.55	2.52	1.46	0.84	2.41	1.39	0.80	2.31	1.34	0.77	2815	71.6	71	66.1	0.8	2.7	2.7	1.8	6	64
MSB 713-2	0.75	3.25	1.88	1.08	3.11	1.79	1.04	2.98	1.72	0.99	2820	73.8	73.9	70.3	0.82	3.0	3.0	2.0	6.6	65
MSB 801-2	0.75	3.15	1.83	1.05	3.02	1.73	1.01	2.89	1.67	0.96	2830	75.2	75.6	72.2	0.83	3	2.8	2	6.2	67
MSB 802-2	1.1	4.40	2.55	1.47	4.21	2.42	1.40	4.04	2.33	1.35	2840	79	79.8	77.7	0.83	2.6	3.1	2.6	6.1	67
MSB 803-2	1.5	5.70	3.30	1.90	5.46	3.14	1.82	5.23	3.02	1.74	2820	81.2	82.5	81.3	0.85	3.2	3	2.5	7.2	70
MSB 90S-2	1.5	5.73	3.32	1.91	5.48	3.15	1.83	5.25	3.04	1.75	2850	80.8	81.2	78.9	0.85	2.8	3.3	2.6	7.7	72
MSB 90L1-2	2.2	8.19	4.74	2.73	7.84	4.51	2.61	7.51	4.34	2.50	2860	82.9	83.4	81.4	0.85	3.7	3.9	3.3	8.8	72
MSB 90L2-2	3	11.1	6.43	3.70	10.6	6.11	3.54	10.2	5.89	3.39	2830	82.4	83.5	82.3	0.86	4.4	4.2	3.5	8	74
MSB 100L1-2	3	10.9	6.32	3.64	10.4	6.00	3.48	10.0	5.78	3.33	2875	83.9	84.5	83	0.86	2.8	3.2	2	8.1	76
MSB 100L2-2	4	13.8	7.99	4.60	13.2	7.59	4.40	12.6	7.31	4.22	2870	85.5	86.5	85.8	0.89	3.2	3.4	2.2	8.8	77
MSB 112M-2	4	13.2	7.63	4.40	12.6	7.25	4.20	12.1	6.99	4.03	2870	85.6	87.0	86.8	0.93	2.6	2.85	1.75	8.1	77
MSB 112L-2	5.5	18.0	10.4	6.00	17.2	9.9	5.74	16.5	9.5	5.50	2890	87.1	88	87.6	0.92	3.1	3.3	2	9.4	78
MSB 132S1-2	5.5	18.5	10.7	6.17	17.7	10.2	5.90	17.0	9.8	5.65	2900	86.6	87.4	86.5	0.90	2.25	3.1	1.5	7.9	80
MSB 132S2-2	7.5	24.6	14.2	8.19	23.5	13.5	7.84	22.5	13.0	7.51	2900	88.0	88.8	88.3	0.91	2.4	3.25	1.5	8.5	80
MSB 132M1-2	9.2	30.8	17.8	10.3	29.5	17.0	9.83	28.3	16.3	9.42	2930	88	88	86.4	0.89	2	2.2	1.2	7.5	81
MSB 132M2-2	11	36.3	21.0	12.1	34.7	20.0	11.6	33.3	19.2	11.1	2930	88.4	88.6	87.5	0.9	2	2.2	1.2	7.5	83
MSB 160M1-2	11	36.4	21.1	12.1	34.8	20.0	11.6	33.4	19.3	11.1	2920	88.8	89.4	88.6	0.89	2.6	2.95	1.85	7.1	86
MSB 160M2-2	15	49.3	28.5	16.4	47.2	27.1	15.7	45.2	26.1	15.1	2910	89.1	90.0	89.6	0.90	2.2	2.8	1.8	6.4	86
MSB 160L-2	18.5	59.3	34.4	19.8	56.8	32.6	18.9	54.4	31.5	18.1	2930	90.3	90.9	90.3	0.91	2.9	3.05	1.65	8.4	86
MSB 631-4	0.12	0.89	0.51	0.30	0.85	0.49	0.28	0.81	0.47	0.27	1390	58.5	54.3	45.6	0.61	2.65	2.8	2.7	3.2	52
MSB 632-4	0.18	1.15	0.67	0.38	1.10	0.63	0.37	1.06	0.61	0.35	1365	64.2	62.5	55.9	0.64	2.8	2.55	2.4	3.6	52
MSB 633-4	0.25	1.45	0.84	0.48	1.39	0.80	0.46	1.33	0.77	0.44	1370	68.3	67.5	62.1	0.66	2.7	2.7	2.4	3.9	54
MSB 711-4	0.25	1.38	0.80	0.46	1.32	0.76	0.44	1.27	0.73	0.42	1395	65.1	63.1	55.8	0.73	2	2.15	1.6	4.2	55
MSB 712-4	0.37	1.90	1.10	0.63	1.82	1.05	0.61	1.74	1.01	0.58	1390	68.6	68.2	62.9	0.74	2.25	2.35	1.95	4.6	55
MSB 713-4	0.55	2.81	1.63	0.94	2.69	1.54	0.90	2.57	1.49	0.86	1390	71.9	71.6	66.8	0.72	2.8	2.8	2.4	4.8	57
MSB 801-4	0.55	2.74	1.59	0.91	2.62	1.51	0.87	2.51	1.45	0.84	1400	70.9	70.5	65.5	0.74	2.25	2.55	1.95	4.9	58
MSB 802-4	0.75	3.36	1.94	1.12	3.21	1.85	1.07	3.08	1.78	1.03	1390	74.4	76.0	73.9	0.79	2.5	2.55	2.05	5.4	58
MSB 803-4	1.1	4.90	2.84	1.63	4.69	2.69	1.56	4.49	2.60	1.50	1390	74.6	75.7	73.3	0.79	2.9	2.9	2.4	5.9	60
MSB 90S-4	1.1	4.90	2.83	1.63	4.68	2.69	1.56	4.49	2.60	1.50	1400	75.5	76.7	74.4	0.78	2.9	2.7	2.15	6	61
MSB 90L1-4	1.5	6.48	3.75	2.16	6.20	3.56	2.07	5.94	3.44	1.98	1410	79.6	80.2	78.0	0.76	3.4	3.3	2.7	6.9	61
MSB 90L2-4	2.2	9.76	5.65	3.25	9.33	5.37	3.11	8.94	5.17	2.98	1410	78.9	79.4	77	0.75	3.8	2.6	3.2	7.2	63
MSB 100L1-4	2.2	8.71	5.05	2.90	8.34	4.79	2.78	7.99	4.62	2.66	1420	82.0	83.3	82.3	0.81	2.4	2.7	2.15	6.3	64
MSB 100L2-4	3	11.5	6.64	3.82	11.0	6.31	3.66	10.5	6.08	3.51	1430	83.7	84.8	83.8	0.82	2.6	3	2.15	6.8	64
MSB 100L3-4	4	15.2	8.80	5.07	14.5	8.36	4.85	13.9	8.06	4.65	1430	84.2	85.5	85.3	0.82	2.2	2.3	1.5	7	65
MSB 112M-4	4	14.9	8.60	4.95	14.2	8.17	4.74	13.6	7.88	4.54	1440	84.7	86.0	85.4	0.83	2.5	2.9	2.05	7.1	65
MSB 112L-4	5.5	20.4	11.8	6.81	19.5	11.2	6.51	18.7	10.8	6.24	1435	85.9	87.1	86.6	0.82	2.5	2.95	2.2	7.2	68
MSB 132S-4	5.5	19.6	11.4	6.54	18.76	10.8	6.25	18.0	10.4	5.99	1445	86.4	87.8	87.7	0.85	2.15	2.85	1.75	7.5	71
MSB 132M-4	7.5	25.9	15.0	8.62	24.7	14.2	8.24	23.7	13.7	7.90	1450	87.6	88.8	88.5	0.87	2.1	2.9	1.65	8.6	71
MSB 132L1-4	9.2	31.3	18.1	10.4	30.0	17.2	10.0	28.7	16.6	9.6	1450	88.6	89.5	89.1	0.87	2.8	2.4	2	8.4	74
MSB 132L2-4	11	37.3	21.6	12.4	35.6	20.5	11.9	34.2	19.8	11.4	1450	90.1	91.1	91	0.86	3	2.5	2	8.9	74
MSB 160M-4	11	39.7	23.0	13.2	37.9	21.8	12.6	36.4	21.0	12.1	1450	87.7	89.6	90.3	0.83	2.05	2.25	1.55	6.1	75
MSB 160L1-4	15	51.9	30.1	17.3	49.7	28.5	16.6	47.6	27.5	15.9	1455	88.7	90.0	90.2	0.86	2.2	2.45	1.4	7.3	75
MSB 160L2-4	18.5	63.1	36.5	21.0	60.4	34.7	20.1	57.9	33.5	19.3	1460	90.5	91	90.6	0.85	2.2	2.2	1.4	7.5	78

MSB Series Motors Technical Data (at 50Hz)

Model	Power (kW)	Current (A)			Current (A)			Current (A)			Speed (r/min)	Eff			Power factor	T _{st} /T _n (Times)	T _{max} /T _n (Times)	T _{max} /T _n (Times)	I _{st} /I _n (Times)	Noise dB(A)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%						
MSB 631-6	0.09	0.75	0.44	0.25	0.72	0.41	0.24	0.69	0.40	0.23	890	50.7	47.6	39.8	0.62	2	2.2	1.9	2.9	50
MSB 632-6	0.12	0.97	0.56	0.32	0.93	0.54	0.31	0.89	0.52	0.30	895	53.7	50.9	43.2	0.60	2.3	2.2	2.1	2.8	50
MSB 711-6	0.18	1.11	0.64	0.37	1.06	0.61	0.35	1.02	0.59	0.34	905	63.0	61.6	55.4	0.67	2.15	2.4	2	3.5	52
MSB 712-6	0.25	1.56	0.90	0.52	1.49	0.86	0.50	1.43	0.83	0.48	885	62.6	62.0	55.8	0.67	2.05	2.3	2.05	3.2	52
MSB 713-6	0.37	2.32	1.34	0.77	2.22	1.28	0.74	2.13	1.23	0.71	890	65.4	64.4	58.2	0.64	2.3	2.5	2.3	3.4	54
MSB 801-6	0.37	2.06	1.19	0.69	1.97	1.13	0.66	1.89	1.09	0.63	920	68.1	67.7	62.2	0.69	1.95	2.25	1.8	3.7	56
MSB 802-6	0.55	2.74	1.59	0.91	2.62	1.51	0.87	2.51	1.45	0.84	920	72.5	73.0	69.3	0.73	2.25	2.45	2.05	4.3	56
MSB 803-6	0.75	3.65	2.11	1.22	3.49	2.01	1.16	3.34	1.93	1.11	910	72.9	74.2	71.3	0.74	2.2	2.4	2.1	4.1	58
MSB 90S-6	0.75	3.83	2.22	1.28	3.67	2.11	1.22	3.52	2.03	1.17	920	72.5	73.3	70.0	0.71	1.8	2.2	1.7	4.1	59
MSB 90L1-6	1.1	5.47	3.17	1.82	5.23	3.01	1.74	5.01	2.90	1.67	910	73.5	75.2	72.9	0.72	1.95	2.25	1.85	4.2	59
MSB 90L2-6	1.5	7.12	4.12	2.37	6.81	3.92	2.27	6.53	3.78	2.18	900	74.7	77	75.5	0.74	2.1	2.3	1.9	4.2	60
MSB 100L1-6	1.5	6.77	3.92	2.26	6.47	3.72	2.16	6.20	3.59	2.07	935	78.5	79.9	78.2	0.74	2.05	2.35	1.8	5	61
MSB 100L2-6	2.2	9.87	5.71	3.29	9.44	5.43	3.15	9.04	5.23	3.01	950	77	78.4	77.8	0.76	2.2	2.2	1.3	6	63
MSB 112M-6	2.2	9.3	5.38	3.10	8.89	5.11	2.96	8.52	4.93	2.84	925	79.2	81.8	81.7	0.78	1.9	2.25	1.75	4.7	64
MSB 112L-6	3	12.9	7.49	4.31	12.4	7.12	4.13	11.9	6.86	3.95	950	79	80.9	80.9	0.77	2.2	2.2	1.3	6	64
MSB 132S-6	3	12.5	7.22	4.16	11.9	6.86	3.98	11.4	6.61	3.81	955	82.5	84.5	84.3	0.77	1.7	2.15	1.45	5.3	64
MSB 132M1-6	4	16.2	9.39	5.40	15.5	8.92	5.17	14.9	8.59	4.95	965	85.2	85.8	84.4	0.76	2.3	2.9	1.6	6.6	68
MSB 132M2-6	5.5	21.5	12.4	7.16	20.6	11.8	6.9	19.7	11.4	6.6	960	85.9	87.2	86.8	0.78	2.5	2.7	1.7	6.7	68
MSB 132L-6	7.5	30.1	17.4	10.0	28.8	16.5	9.6	27.6	15.9	9.2	960	85	86.4	86.4	0.77	2	2	1.3	6.5	68
MSB 160M-6	7.5	30.3	17.6	10.1	29.0	16.7	9.7	27.8	16.1	9.3	970	86.8	87.6	86.7	0.75	2.1	2.7	1.65	6.1	68
MSB 160L-6	11	42.5	24.6	14.2	40.7	23.4	13.6	39.0	22.5	13.0	965	87.2	88.6	88.6	0.78	2.25	2.35	1.5	6.9	73
MSB 711-8	0.09	0.97	0.56	0.32	0.93	0.54	0.31	0.89	0.52	0.30	680	44.9	39.6	31.1	0.54	2.3	2.6	2.2	2.4	50
MSB 712-8	0.12	1.15	0.67	0.38	1.10	0.63	0.37	1.06	0.61	0.35	680	51.7	47.1	38.4	0.53	2.5	2.75	2.5	2.7	50
MSB 713-8	0.18	1.51	0.88	0.50	1.45	0.83	0.48	1.39	0.80	0.46	670	55.8	52.5	44.4	0.56	2.3	2.5	2.4	2.8	52
MSB 801-8	0.18	1.24	0.72	0.41	1.18	0.68	0.39	1.13	0.66	0.38	705	64.4	61.3	53.9	0.59	2.2	2.65	2	3.6	52
MSB 802-8	0.25	1.64	0.95	0.55	1.57	0.90	0.52	1.51	0.87	0.50	700	66.3	64.3	57.8	0.60	2.1	2.5	2.05	3.5	52
MSB 90S-8	0.37	2.37	1.37	0.79	2.26	1.30	0.75	2.17	1.25	0.72	690	66.3	65.4	59.6	0.62	1.55	2	1.5	3.2	56
MSB 90L-8	0.55	3.26	1.89	1.09	3.12	1.79	1.04	2.99	1.73	1.00	680	69.0	69.9	65.8	0.64	1.6	1.95	1.6	3.3	56
MSB 100L1-8	0.75	3.88	2.24	1.29	3.71	2.13	1.24	3.55	2.06	1.18	700	75.2	74.8	70.8	0.68	2.1	2.55	1.95	4.4	59
MSB 100L2-8	1.1	5.16	2.99	1.72	4.94	2.84	1.65	4.73	2.74	1.58	685	74.6	76.7	75.1	0.75	1.8	2.15	1.65	4.1	59
MSB 112M-8	1.5	7.24	4.19	2.41	6.93	3.98	2.31	6.64	3.84	2.21	700	78.3	78.9	76.4	0.69	2.2	2.5	2.1	4.5	61
MSB 132S-8	2.2	10.0	5.81	3.35	9.6	5.52	3.20	9.20	5.32	3.07	705	78.8	80.7	79.6	0.73	1.8	2.25	1.65	4.5	64
MSB 132M-8	3	13.0	7.51	4.33	12.4	7.14	4.14	11.9	6.88	3.96	705	80.9	82.6	81.9	0.75	2.1	2.5	1.8	5.1	64
MSB 160M1-8	4	18.0	10.4	5.99	17.2	9.88	5.73	16.5	9.53	5.49	710	81.7	83.0	82.0	0.72	1.8	2.25	1.5	4.7	68
MSB 160M2-8	5.5	23.4	13.5	7.79	22.4	12.9	7.45	21.4	12.4	7.14	715	84.6	85.7	84.9	0.73	2.15	2.55	1.6	5.2	68
MSB 160L-8	7.5	30.3	17.5	10.1	29.0	16.67	9.66	27.8	16.1	9.26	715	85.8	87.1	86.7	0.76	2.15	2.45	1.4	5.4	68

MSBCCL Series Brake Motors

Operating Principle

The direct current is fed by means of electronic circuit with diode bridge (rectifier) situated inside the terminal-box. When feeding the electromagnet (5), the movable anchor (4) is attracted towards the same, thus loading the braking torque springs (9) and allowing the disk (2), equipped with friction packing and fitted on the groove hub (6) to turn separately to the motor shaft (1) by means of a key (7). By interrupting the feeding, the movable anchor (4), pushed by the braking torque springs (9), exerts a pressure upon the friction surface of the disk (2), thus causing it to stop.

Adjustment Of The Air Gap

The air gap (11) is the distance between the electromagnet (5) and the movable anchor (9).

The air gap should be regularly checked, due to the wear of the friction pad (2). Act on the brake adjusters (3) after having tightened the screws (8) to bring the air gap to the required value.

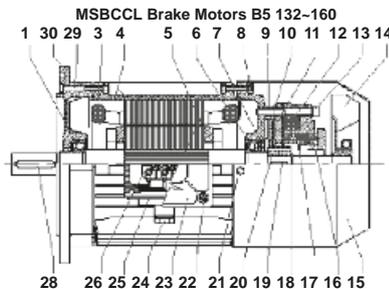
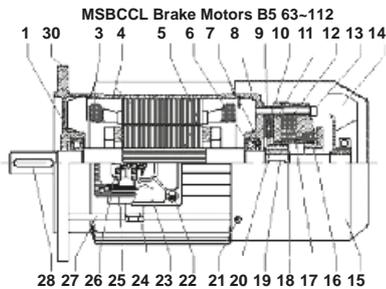
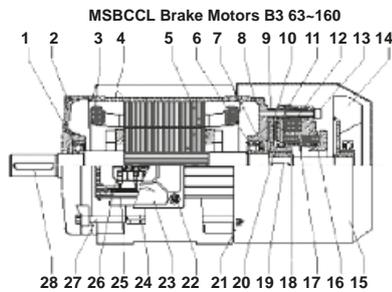
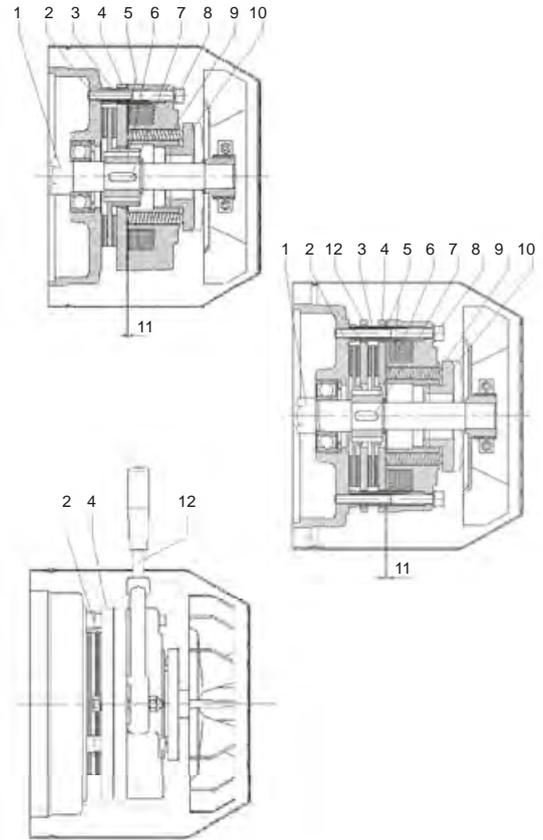
Act on the ring nut (10) which acts on the braking torque springs (9) to adjust the braking torque.

Pls. contact our technical department for information on the air gap adjustment values.

Hand Release With Lever

Upon request a hand release lever can be supplied.

In case of a loss of supply voltage, acting on the lever (12), the release, connected to the movable anchor (4) overcomes the spring pressure, in turn detaching the movable anchor from the disc friction pad (2) allowing the shaft to turn.



Spare Parts

1. Front bearing
2. Front shield
3. Winding
4. Frame with stator package
5. Shaft with rotor
6. Rear bearing
7. Spring
8. Rear shield
9. Adjusting bush
10. Brake disc
11. Moving anchor
12. Electromagnet coil with diode
13. Fixing screws for brake
14. Cooling fan
15. Fan hood
16. Ring nut
17. Spring
18. See gearing
19. Key brake side
20. Toothed pinion
21. Fixing screw for fan hood
22. Fixing crew for terminal-box
23. Terminal-box
24. Able-holder
25. Packing
26. Terminal-block
27. Tie-bolt
28. Coupling side key
29. Fixing screw for shield
30. Flange shield

ML Series

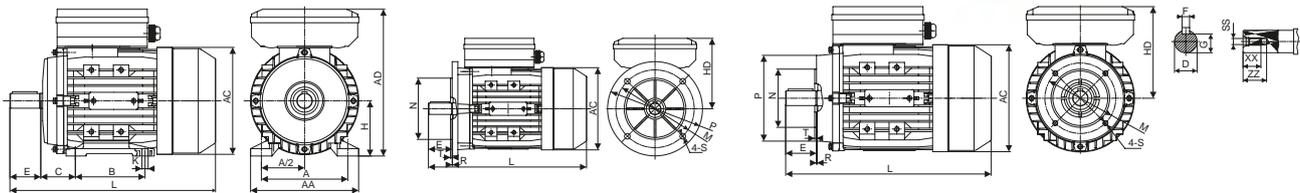
Single-Phase Capacitor Start and Capacitor Run Asynchronous Motors Aluminum Housing

ML series aluminum housing single-phase dual-capacitor asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard.

ML motors have good performance, safety and reliable operation, the multiple of starting torque is up to 2.5.

These motors are typically used on applications where a high starting torque and high overload are required - such as air compressors, pumps, and many other small machines.

Capable of 15 times/hour Start/Stops.



Overall & Installation Dimensions

FRAME	Mounting Dimensions									Overall Dimensions					Shaft End Screw Dimensions		
	H	A	B	C	D	E	F	G	K	AA	AD	HD	AC	L	SS	XX	ZZ
ML 63	63	100	80	40	Φ11	23	4	8.5	7×10	120	179	116	Φ121	220	M4	10	14
ML 71	71	112	90	45	Φ14	30	5	11	7×10	132	194	123	Φ139	255	M5	12	17
ML 80	80	125	100	50	Φ19	40	6	15.5	10×13	160	223	143	Φ156	290	M6	16	21
ML 90S	90	140	100	56	Φ24	50	8	20	10×13	175	240	150	Φ175	337	M8	19	25
ML 90L	90	140	125	56	Φ24	50	8	20	10×13	175	240	150	Φ175	367	M8	19	25
ML 100L	100	160	140	63	Φ28	60	8	24	12×15	198	271	171	Φ196	403(421)	M10	22	30
ML 112M	112	190	140	70	Φ28	60	8	24	12×15	220	297	185	Φ221	431	M10	22	30

FRAME	KK	B5						B14						B5R						B14B					
		N	M	P	S	T	R	N	M	P	S	T	R	N	M	P	T	S	R	N	M	P	T	S	R
ML 63	1-M20*1.5	Φ95	Φ115	Φ140	Φ10	3	0	Φ60	Φ75	Φ90	M5	2.5	0												
ML 71	1-M20*1.5	Φ110	Φ130	Φ160	Φ10	3.5	0	Φ70	Φ85	Φ105	M6	2.5	0	Φ95	Φ115	Φ140	3	Φ10	0	Φ95	Φ115	Φ140	3	M8	0
ML 80	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ80	Φ100	Φ120	M6	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0
ML 90	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ95	Φ115	Φ140	M8	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0
ML 100	1-M20*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0
ML 112	1-M25*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0

Technical Data (at 230V/50Hz)

Model	Power (kW)	Current (A)	Speed (r/min)	Eff (%)	Power factor (cos φ)	T _{st} /T _n (Times)	T _{max} /T _n (Times)	Starting Current(A)	Run Capacitor (μf/V)	Start Capacitor (μf/V)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
ML631-2	0.18	1.36	2820	62	0.93	1.9	1.8	7	8μf/450V	30μf/250V	70	3.9	0.000141
ML632-2	0.25	1.71	2800	67.5	0.94	2.3	1.8	8	10μf/450V	30μf/250V	70	4.4	0.000168
ML711-2	0.37	2.40	2780	70.5	0.95	2.5	1.6	12	12μf/450V	40μf/250V	75	6.2	0.000330
ML712-2	0.55	3.31	2790	74.5	0.97	2.5	1.8	20	16μf/450V	50μf/250V	75	7	0.000437
ML801-2	0.75	4.25	2840	77.5	0.99	2.5	1.8	30	20μf/450V	75μf/250V	75	9	0.000781
ML802-2	1.1	6.08	2850	79.5	0.99	2.3	1.8	40	30μf/450V	120μf/250V	78	10.3	0.000938
ML90S-2	1.5	8.23	2860	80	0.99	2.5	1.8	56	40μf/450V	200μf/300V	80	13.8	0.001512
ML90M-2	1.8	9.76	2860	81	0.99	2.5	1.8	65	40μf/450V	200μf/300V	80	15.1	0.001752
ML90L-2	2.2	11.9	2850	81	0.99	2.5	1.75	15	50μf/450V	250μf/300V	80	16.8	0.001995
ML100L-2	3	17.7	2830	75	0.98	2.5	1.63	110	60μf/450V	300μf/300V	83	25	0.004803
ML112M1-2	3.7	19.9	2900	82.5	0.98	2.5	1.8	155	60μf/450V	400μf/300V	84	31	0.007170
ML112M2-2	4	21.3	2900	83.5	0.98	2.5	1.8	165	60μf/450V	400μf/300V	84	33	0.007453
ML631-4	0.12	1.01	1380	54.5	0.95	2.5	1.65	6	8μf/450V	30μf/250V	65	4.1	0.000291
ML632-4	0.18	1.36	1340	60	0.96	2.3	1.43	6	10μf/450V	30μf/250V	65	4.5	0.000340
ML711-4	0.25	1.78	1415	63	0.97	2.5	1.7	10	12μf/450V	40μf/250V	65	5.9	0.000598
ML712-4	0.37	2.53	1410	65.5	0.97	2.3	1.6	15	16μf/450V	50μf/250V	68	6.9	0.000760
ML800-4	0.37	2.52	1420	66.5	0.96	2.5	1.8	15	16μf/450V	50μf/250V	68	8.5	0.001105
ML801-4	0.55	3.52	1420	71.5	0.95	2.5	1.8	20	20μf/450V	75μf/250V	70	9.6	0.001380
ML802-4	0.75	4.56	1420	73	0.98	2.5	1.75	27	25μf/450V	100μf/250V	70	10.9	0.001656
ML90S-4	1.1	6.62	1420	76	0.95	2.5	1.7	40	35μf/450V	150μf/250V	73	13.8	0.002510
ML90L-4	1.5	8.56	1420	78.5	0.97	2.5	1.75	55	40μf/450V	200μf/300V	75	16.7	0.003252
ML100L0-4	1.84	10.3	1440	79.5	0.98	2.3	1.62	60	50μf/450V	200μf/300V	77	21	0.006804
ML100L1-4	2.2	12.1	1440	80.5	0.98	2.5	1.65	80	50μf/450V	250μf/300V	78	22.8	0.008045
ML100L2-4	3	16.4	1445	83	0.96	2.4	1.75	110	60μf/450V	300μf/300V	78	28.7	0.010543
ML112M1-4	3.7	19.7	1430	83.5	0.98	2.4	1.75	130	60μf/450V	400μf/300V	79	31	0.013608
ML112M2-4	4	21.3	1435	83.5	0.98	2.5	1.75	140	60μf/450V	400μf/300V	79	32.8	0.014485
ML711-6	0.18	1.3	930	60	0.97	2.3	1.72	7	10μf/450V	40μf/250V	68	6.7	0.000965
ML801-6	0.37	2.5	935	67	0.97	2.2	1.55	13	16μf/450V	50μf/250V	68	10.1	0.001829
ML802-6	0.55	3.5	935	71	0.97	2.2	1.45	20	20μf/450V	75μf/250V	70	10.8	0.002366
ML90S-6	0.75	4.7	945	71	0.97	2.1	1.45	35	30μf/450V	150μf/250V	70	14.2	0.003534
ML90L-6	1.1	6.7	945	74	0.96	2.5	1.45	45	45μf/450V	200μf/300V	70	17.3	0.004792
ML100L-6	1.5	8.73	960	77	0.97	2.3	1.55	60	45μf/450V	200μf/300V	72	23.8	0.010784
ML112M-6	2.2	12.0	965	82	0.97	2.5	1.7	100	60μf/450V	400μf/300V	75	31.2	0.019523

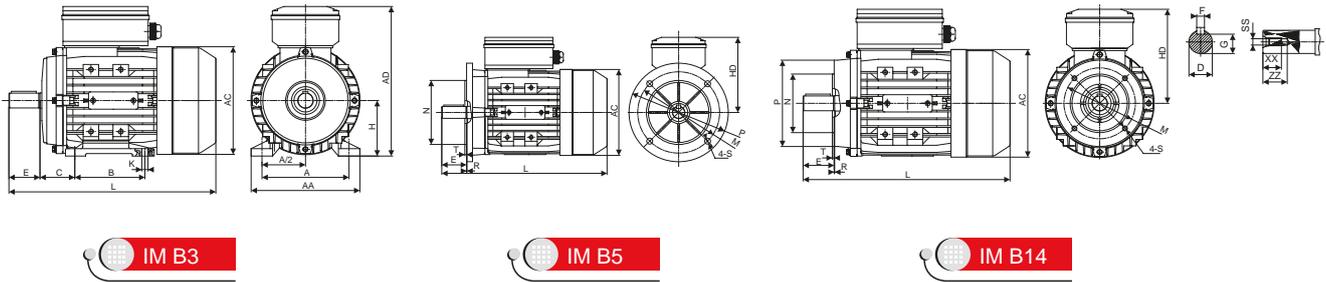
MY/MYT Series

Single-Phase Capacitor Run Asynchronous Motors

Aluminum Housing

MY/MYT series aluminum housing single-phase capacitor-run asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard.

MY motors offer a high performance level along with safe and reliable low maintenance operation, whilst giving low noise levels and low vibration levels - all within a lightweight and simple construction. These motors are suitable for applications with low starting torque requirements and long-term continuous operation - such as home electric appliances, pumps, fans, and recording meters, etc.



IM B3

IM B5

IM B14

Overall & Installation Dimensions

FRAME	Mounting Dimensions									Overall Dimensions					Shaft End Screw Dimensions		
	H	A	B	C	D	E	F	G	K	AA	AD	HD	AC	L	SS	XX	ZZ
MY 56	56	90	71	36	Φ9	20	3	7.2	5.8×8.8	110	144	88	Φ110	196	M4	9	12
MY 63	63	100	80	40	Φ11	23	4	8.5	7×10	120	181	118	Φ121	220	M4	10	14
MY 71	71	112	90	45	Φ14	30	5	11	7×10	132	196	125	Φ139	241/255	M5	12	17
MY 80	80	125	100	50	Φ19	40	6	15.5	10×13	160	226	146	Φ156	290	M6	16	21
MY 90S	90	140	100	56	Φ24	50	8	20	10×13	175	243	153	Φ175	312	M8	19	25
MY 90L	90	140	125	56	Φ24	50	8	20	10×13	175	243	153	Φ175	337/367	M8	19	25
MY 100L	100	160	140	63	Φ28	60	8	24	12×15	198	265	165	Φ196	368/386	M10	22	30

FRAME	KK	B5						B14						B5R						B14B						
		N	M	P	S	T	R	N	M	P	S	T	R	N	M	P	T	S	R	N	M	P	T	S	R	
MY 56	1-M16*1.5	Φ80	Φ100	Φ120	Φ7	3	0	Φ50	Φ65	Φ80	M5	2.5	0													
MY 63	1-M20*1.5	Φ95	Φ115	Φ140	Φ10	3	0	Φ60	Φ75	Φ90	M5	2.5	0							Φ80	Φ100	Φ120	3	M6	0	
MY 71	1-M20*1.5	Φ110	Φ130	Φ160	Φ10	3.5	0	Φ70	Φ85	Φ105	M6	2.5	0	Φ95	Φ115	Φ140	3	Φ10	0	Φ95	Φ115	Φ140	3	M8	0	
MY 80	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ80	Φ100	Φ120	M6	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0	
MY 90	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ95	Φ115	Φ140	M8	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0	
MY 100	1-M20*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0	

Technical Data (at 230V/50Hz)

Model	Power (kW)	Current (A)	Speed (r/min)	Eff (%)	Power factor (cos Φ)	T _s /T _n (Times)	T _{max} /T _n (Times)	Starting Current(A)	Run Capacitor (μf/V)	Noise dB(A)	W.t. (Kg)	Inertia (kg*m ²)
MY561-2	0.09	0.81	2750	51	0.95	0.7	1.7	2	5μf/450V	67	3	0.000093
MY562-2	0.12	0.89	2800	61	0.96	0.7	1.8	3.1	6μf/450V	67	3.2	0.000120
MY631-2	0.18	1.31	2770	62	0.96	0.55	1.8	4.5	8μf/450V	70	3.8	0.000141
MY632-2	0.25	1.65	2780	68	0.97	0.55	1.8	6	10μf/450V	70	4.5	0.000168
MY633-2	0.37	2.51	2780	67.5	0.95	0.46	1.65	8	12μf/450V	75	5	0.000216
MY634-2	0.55	3.52	2740	70	0.97	0.46	1.55	12	16μf/450V	75	5.5	0.000249
MY711-2	0.37	2.54	2780	68	0.93	0.5	1.64	9.5	12μf/450V	75	5.5	0.000330
MY712-2	0.55	3.45	2800	73	0.95	0.5	1.8	14.5	16μf/450V	75	6.7	0.000356
MY713-2	0.75	4.45	2840	75.5	0.97	0.48	1.8	20	25μf/450V	75	7	0.000436
MY801-2	0.75	4.51	2810	73	0.99	0.45	1.75	19	25μf/450V	75	8.9	0.000789
MY802-2	1.1	6.30	2810	77.5	0.98	0.45	1.8	30	35μf/450V	78	11	0.001174
MY803-2	1.5	8.48	2820	78.5	0.98	0.34	1.68	40	40μf/450V	80	12.7	0.001430
MY90S-2	1.5	8.45	2820	78	0.99	0.33	1.72	35	45μf/450V	80	12.2	0.001512
MY90L-2	2.2	12.08	2850	80	0.99	0.29	1.8	61	60μf/450V	80	15.5	0.001983
MY100L-2	3	16.7	2860	79	0.99	0.35	1.8	73	80μf/450V	83	23.1	0.004803
MY561-4	0.06	0.55	1410	49	0.97	0.7	1.8	1.5	4μf/450V	63	2.9	0.000215
MY562-4	0.09	0.78	1390	51	0.99	0.7	1.65	8	6μf/450V	63	3.4	0.000240
MY631-4	0.12	0.97	1400	55	0.98	0.7	1.75	2.5	8μf/450V	65	3.4	0.000298
MY632-4	0.18	1.35	1380	59	0.98	0.6	1.65	3.5	10μf/450V	65	4.4	0.000373
MY633-4	0.25	1.77	1380	62.5	0.98	0.55	1.6	5	12μf/450V	65	5	0.000448
MY710-4	0.18	1.33	1420	60.5	0.97	0.48	1.65	4	10μf/450V	65	5.2	0.000538
MY711-4	0.25	1.70	1410	64.5	0.99	0.5	1.6	5	12μf/450V	65	5.8	0.000641
MY712-4	0.37	2.43	1410	67.5	0.98	0.44	1.65	7.5	16μf/450V	68	6.9	0.000846
MY713-4	0.55	3.45	1385	70	0.99	0.45	1.47	10.5	20μf/450V	70	8.3	0.001052
MY800-4	0.37	2.38	1420	69	0.98	0.45	1.8	9	16μf/450V	68	8	0.001285
MY801-4	0.55	3.34	1420	73	0.98	0.45	1.78	13	20μf/450V	70	9.5	0.001618
MY802-4	0.75	4.42	1420	74.5	0.99	0.44	1.71	16.5	30μf/450V	70	10.5	0.002061
MY90S-4	1.1	6.30	1420	77.5	0.98	0.35	1.75	24	40μf/450V	73	13.1	0.002500
MY90L-4	1.5	8.55	1420	79.5	0.96	0.33	1.8	36	45μf/450V	75	16.5	0.003240
MY100L1-4	2.2	13.0	1450	79	0.93	0.31	1.8	65	70μf/450V	78	23.4	0.008045
MY100L2-4	3	16.8	1450	81	0.96	0.31	1.8	91	90μf/450V	78	28.7	0.010853
MY631-6	0.09	0.9	900	44.5	0.97	0.38	1.53	2	8μf/450V	63	4.4	0.000550
MY632-6	0.12	1.1	875	47.5	0.98	0.25	1.23	2	11μf/450V	63	5.5	0.000649
MY711-6	0.18	1.5	920	55.5	0.97	0.5	1.5	3.5	11μf/450V	68	6.2	0.000585
MY712-6	0.25	2.0	930	56	0.98	0.45	1.5	5	16μf/450V	68	7.3	0.001151
MY801-6	0.37	2.5	960	66	0.96	0.35	1.6	8.5	20μf/450V	68	9	0.002232
MY802-6	0.55	3.5	955	70.5	0.97	0.35	1.6	12	25μf/450V	70	11.6	0.002903
MY90S-6	0.75	5.0	905	67	0.98	0.35	1.6	13	35μf/450V	70	13.5	0.003523
MY90L-6	1.1	6.6	940	74	0.98	0.35	1.5	25	50μf/450V	70	16.2	0.004957

Technical Data (at 230V/50Hz)

Model	Power (kW)	Current (A)	Speed (r/min)	Eff (%)	Power Factor (cos ϕ)	T_{st}/T_n (Times)	T_{max}/T_n (Times)	Starting Current(A)	Run Capacitor (μ f/V)	Noise dB(A)	W.t. (Kg)	Inertia ($kg\cdot m^2$)
MYT631-2	0.18	1.29	2750	62	0.98	0.7	1.8	4	10 μ f/450V	70	3.8	0.000141
MYT632-2	0.25	1.71	2750	65	0.98	0.65	1.75	5.5	12 μ f/450V	70	4.5	0.000168
MYT633-2	0.37	2.39	2740	68	0.99	0.7	1.8	8	16 μ f/450V	75	5	0.000216
MYT711-2	0.37	2.59	2640	66	0.94	0.7	1.65	8	14 μ f/450V	75	6	0.000356
MYT712-2	0.55	3.52	2760	71.5	0.95	0.7	1.8	14	20 μ f/450V	75	7.4	0.000489
MYT801-2	0.75	4.87	2760	69	0.97	0.7	1.8	17.5	25 μ f/450V	75	9	0.001007
MYT802-2	1.1	6.53	2780	74	0.99	0.7	1.8	25	40 μ f/450V	78	11.6	0.001238
MYT90S-2	1.5	8.56	2755	77	0.99	0.65	1.8	31	50 μ f/450V	80	13	0.001665
MYT90L-2	2.2	12.39	2765	78	0.99	0.65	1.8	51	70 μ f/450V	80	17.8	0.002136
MYT90L2-2	3	16.68	2800	79	0.99	0.48	1.8	85	90 μ f/450V	83	22.3	0.002686
MYT100L0-2	2.2	12.68	2825	77	0.98	0.55	1.8	13	70 μ f/450V	80	21	0.004803
MYT100L-2	3	17.11	2765	77	0.99	0.55	1.75	64	90 μ f/450V	83	23.7	0.005383
MYT561-4	0.06	0.55	1410	49	0.97	0.7	1.8	1.5	4 μ f/450V	63	3.3	0.000215
MYT562-4	0.09	0.78	1390	51	0.99	0.7	1.65	8	6 μ f/450V	63	3.6	0.000240
MYT631-4	0.12	0.97	1400	55	0.98	0.7	1.75	2.5	8 μ f/450V	65	4.4	0.000298
MYT632-4	0.18	1.35	1380	59	0.98	0.6	1.65	3.5	10 μ f/450V	65	5.1	0.000373
MYT633-4	0.25	1.76	1380	62.5	0.99	0.63	1.57	5	14 μ f/450V	65	5.4	0.000448
MYT711-4	0.25	1.81	1310	60.5	0.99	0.7	1.55	4.5	14 μ f/450V	65	6	0.000692
MYT712-4	0.37	2.48	1325	65.5	0.99	0.7	1.52	6.5	20 μ f/450V	68	7.1	0.000898
MYT800-4	0.37	2.63	1350	63	0.97	0.7	1.7	7.5	16 μ f/450V	68	8.5	0.001396
MYT801-4	0.55	3.70	1330	66	0.98	0.7	1.57	10.5	25 μ f/450V	73	10	0.001728
MYT802-4	0.75	4.82	1355	69	0.98	0.67	1.65	16	35 μ f/450V	73	11.4	0.002393
MYT90S-4	1.1	6.94	1355	72.5	0.95	0.68	1.8	22	40 μ f/450V	75	14.3	0.002743
MYT90L-4	1.5	9.28	1360	74	0.95	0.68	1.8	32	50 μ f/450V	78	17.3	0.003483
MYT100L1-4	2.2	12.64	1390	78	0.97	0.48	1.75	49	70 μ f/450V	80	24.5	0.008665
MYT100L2-4	3	16.57	1380	79.5	0.99	0.45	1.6	61	90 μ f/450V	80	32	0.010853
MYT711-6	0.18	1.52	930	52	0.99	0.65	1.7	3.5	14 μ f/450V	68	6.2	0.000585
MYT712-6	0.25	2.12	925	54	0.95	0.58	1.7	5	16 μ f/450V	68	7.3	0.001151
MYT801-6	0.37	2.63	925	63	0.97	0.67	1.7	7.5	20 μ f/450V	68	9	0.002232
MYT802-6	0.55	3.71	915	66.5	0.97	0.63	1.7	11	30 μ f/450V	70	11.6	0.002903
MYT90S-6	0.75	4.93	890	67.5	0.98	0.65	1.5	12	40 μ f/450V	70	13.5	0.003523
MYT90L-6	1.1	7.15	905	69	0.97	0.55	1.7	21	50 μ f/450V	70	16.2	0.004957

* Note: MYT is high starting torque series single phase capacitor-run motors

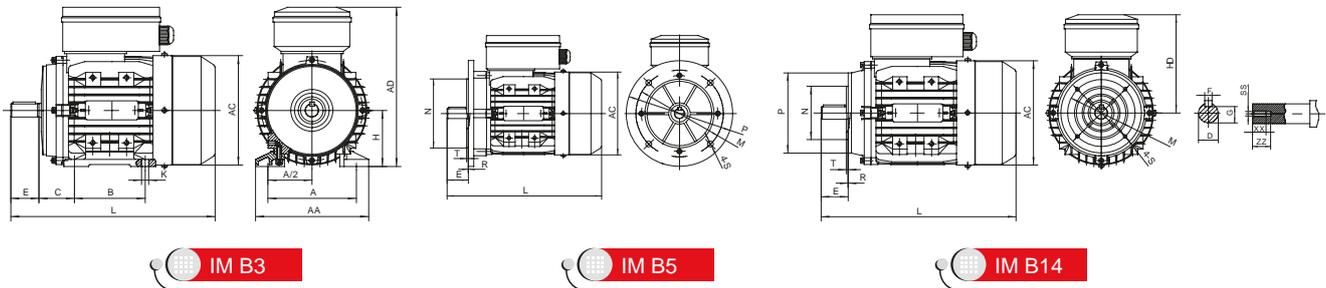
MC Series

Single-Phase Capacitor Start Asynchronous Motors

Aluminum Housing

MC Series aluminum housing single-phase capacitor-start asynchronous motors, with latest design in entirety, are made of selected quality materials and conform to the IEC standard.

MC motors offer a high performance level along with safe and reliable low maintenance operation, whilst giving low noise levels and low vibration levels - all within a lightweight and simple construction. High starting torque, perfect starting performance, generally the multiple of the starting torque can up to 3.0 times. These motors are suitable for applications with a large starting torque requirement and low starting current requirement - such as air compressors, pumps, refrigerators, medical apparatus, and many other machines needing full-load start.



Overall & Installation Dimensions

FRAME	Mounting Dimensions									Overall Dimensions					Shaft End Screw Dimensions		
	H	A	B	C	D	E	F	G	K	AA	AD	HD	AC	L	SS	XX	ZZ
MC 63	63	100	80	40	Φ11	23	4	8.5	7×10	120	181	118	Φ121	217	M4	10	14
MC 71	71	112	90	45	Φ14	30	5	11	7×10	132	196	125	Φ139	255	M5	12	17
MC 80	80	125	100	50	Φ19	40	6	15.5	10×13	160	226	146	Φ156	290	M6	16	21
MC 90S	90	140	100	56	Φ24	50	8	20	10×13	175	243	153	Φ174	337	M8	19	25
MC 90L	90	140	125	56	Φ24	50	8	20	10×13	175	243	153	Φ174	367	M8	19	25
MC 100L	100	160	140	63	Φ28	60	8	24	12×15	198	265	165	Φ196	403(421)	M10	22	30
MC 112M	112	190	140	70	Φ28	60	8	24	12×15	220	297	185	Φ221	431	M10	22	30

FRAME	KK	B5						B14						B5R						B14B					
		N	M	P	S	T	R	N	M	P	S	T	R	N	M	P	T	S	R	N	M	P	T	S	R
MC 63	1-M20*1.5	Φ95	Φ115	Φ140	Φ10	3	0	Φ60	Φ75	Φ90	M5	2.5	0												
MC 71	1-M20*1.5	Φ110	Φ130	Φ160	Φ10	3.5	0	Φ70	Φ85	Φ105	M6	2.5	0	Φ95	Φ115	Φ140	3	Φ10	0	Φ95	Φ115	Φ140	3	M8	0
MC 80	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ80	Φ100	Φ120	M6	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0
MC 90	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ95	Φ115	Φ140	M8	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0
MC 100	1-M20*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0
MC 112	1-M25*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0

Technical Data (at 230V/50Hz)

Model	Power (kW)	Current (A)	Speed (r/min)	Eff (%)	Power factor (cos ϕ)	T _{start} /T _n (Times)	T _{max} /T _n (Times)	Starting Current (A)	Start Capacitor (μ f/V)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
MC631-2	0.09	1.22	2650	44	0.73	3	1.6	5	30 μ F/250V	67	3.66	0.000131
MC632-2	0.12	1.36	2730	52	0.74	3	1.8	6	40 μ F/250V	67	4.18	0.000157
MC711-2	0.18	1.86	2750	60	0.70	3.0	2.2	12	75 μ F/250V	70	5.8	0.000330
MC712-2	0.25	2.43	2780	62	0.72	3.0	2.2	15	75 μ F/250V	70	6.75	0.000410
MC801-2	0.37	3.46	2800	62	0.75	2.8	2.2	21	100 μ F/250V	75	9	0.000779
MC802-2	0.55	4.78	2800	65	0.77	2.8	2.2	29	150 μ F/250V	75	10.3	0.000936
MC90S-2	0.75	6.15	2810	68	0.78	2.5	2.2	37	200 μ F/300V	75	13	0.001366
MC90L-2	1.1	8.76	2820	70	0.78	2.5	2.2	60	250 μ F/300V	78	16	0.001838
MC100L1-2	1.5	11.5	2830	72	0.79	2.5	2.0	80	300 μ F/300V	83	22	0.004126
MC100L2-2	2.2	16.6	2840	73	0.79	2.2	2.0	120	400 μ F/300V	83	26	0.005672
MC112M-2	3.0	22.0	2850	74	0.8	2.2	1.9	150	600 μ F/300V	87	35.3	0.007972
MC631-4	0.06	1.22	1400	39	0.55	3	2	5	30 μ F/250V	63	4.1	0.000292
MC632-4	0.09	1.80	1390	39.5	0.55	3	2	6	30 μ F/250V	63	4.5	0.000340
MC711-4	0.12	1.86	1360	50	0.56	3.0	2.2	9	50 μ F/250V	65	5.6	0.000558
MC712-4	0.18	2.46	1380	53	0.6	2.8	2.2	12	75 μ F/250V	65	6.7	0.000729
MC801-4	0.25	3.07	1390	58	0.61	2.8	2.2	15	100 μ F/250V	65	9.6	0.001379
MC802-4	0.37	4.18	1400	62	0.62	2.5	2.2	21	100 μ F/250V	70	10.4	0.001563
MC90S-4	0.55	5.49	1400	66	0.66	2.5	2.0	29	150 μ F/250V	70	13	0.002266
MC90L-4	0.75	6.85	1410	68	0.7	2.5	2.0	37	150 μ F/250V	70	15	0.003009
MC100L1-4	1.1	9.49	1420	71	0.71	2.5	2.0	60	250 μ F/300V	73	20.7	0.006727
MC100L2-4	1.5	12.4	1430	73	0.72	2.5	2.0	80	400 μ F/300V	78	24.5	0.009225
MC112M-4	2.2	17.7	1440	74	0.73	2.2	1.9	120	600 μ F/300V	78	33.8	0.013404

TA Series

Three-Phase Asynchronous Motors Aluminum Housing

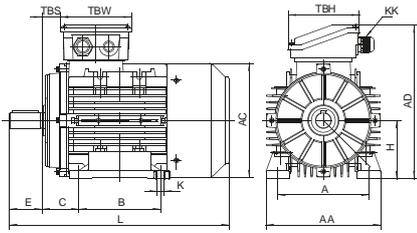
FEATURES

- Energy savings, high efficiency
- High starting torque, lower starting current
- Versatile and easy to modify design adapts to a variety of applications
- Removable feet
- Option of terminal box location (top, left or right)
- Option of IE2, IE3, MEPS High and Premium Efficiency for IEC standards + NEMA EPACT and Premium Efficiency
- Contained total length is the same as or shorter than the current market standard
- Full use of the magnetization properties of cold rolled silicone steel in which the stator laminations are magnetized evenly to reduce temperature rise of the winding

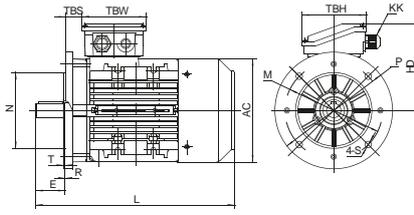
APPLICATIONS

- Pumps
- Waste water treatment plants
- Air compressors, fans
- Gear reducers and power transmission
- Pulp and paper mills
- Steel mill
- Conveyors, elevators
- "Material handling equipment"
- Agricultural application
- Mining equipment
- Hydraulic equipment

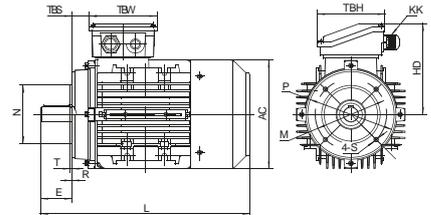




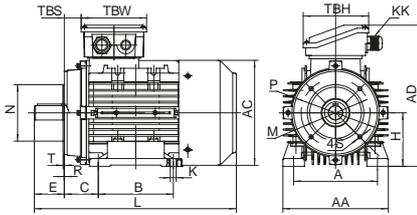
56-160 IM B3



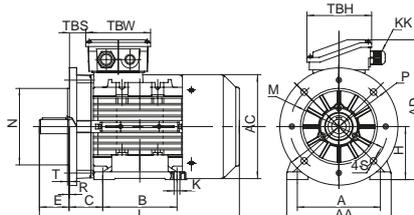
56-160 IM B5



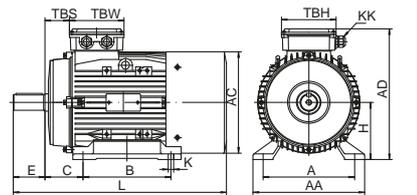
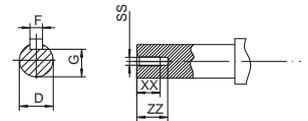
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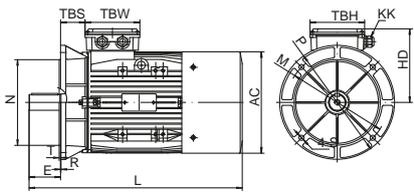
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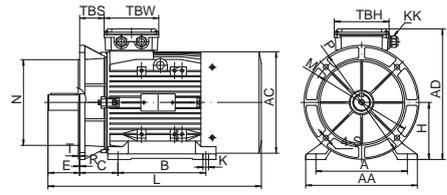
56-160 IM B35



180-200 IM B3



180-200 IM B5



180-200 IM B35

Overall & Installation Dimensions

FRAME	Foot Mounting						Shaft						General							
	H	A	B	C	D	E	F	G	K	SS	XX	ZZ	AA	AD	HD	AC	L	TBS	TBW	TBH
TA 56	56	90	71	36	Φ9	20	3	7.2	6×9	M4	10	14	112	151	95	Φ110	195	16.5	83	83
TA 63	63	100	80	40	Φ11	23	4	8.5	7×10	M4	10	14	124	172	109	Φ122	217	10	98	98
TA 71	71	112	90	45	Φ14	30	5	11	7×10	M5	12	17	140	189	118	Φ138	245	16	98	98
TA 80	80	125	100	50	Φ19	40	6	15.5	10×15	M6	16	21	160	214	134	Φ157	227/304*	26.5	109	109
TA 90S	90	140	100	56	Φ24	50	8	20	10×15	M8	19	25	176	235	145	Φ177	315/340*	28.5	109	109
TA 90L	90	140	125	56	Φ24	50	8	20	10×15	M8	19	25	176	235	145	Φ177	340/365*	28.5	109	109
TA 100	100	160	140	63	Φ28	60	8	24	12×16	M10	22	30	200	260	160	Φ199	376/411*	32	118	118
TA 112	112	190	140	70	Φ28	60	8	24	12×16	M10	22	30	224	283	171	Φ220	398	33	118	118
TA 132S/M	132	216	140/178	89	Φ38	80	10	33	12×16	M12	28	37	260	323	191	Φ261	460/498	36.5	118	118
TA 160M/L	160	254	210/254	108	Φ42	110	12	37	15×21	M16	36	45	314	391	231	Φ314	616/660	64	148	148
TA 180	180	279	241/279	121	Φ48	110	14	42.5	15×25	M16	36	45	340	440	260	Φ355	730	73	190	190
TA200	200	318	305	133	Φ55	110	16	49	19×29	M20	42	53	390	460	260	Φ355	745	85	190	190

FRAME	KK	B5						B14						B5R						B14B						
		N	M	P	S	T	R	N	M	P	S	T	R	N	M	P	T	S	R	N	M	P	T	S	R	
TA 56	1-M16*1.5	Φ80	Φ100	Φ120	Φ7	3	0	Φ50	Φ65	Φ80	M5	2.5	0													
TA 63	1-M16*1.5	Φ95	Φ115	Φ140	Φ10	3	0	Φ60	Φ75	Φ90	M5	2.5	0													
TA 71	1-M20*1.5	Φ110	Φ130	Φ160	Φ10	3.5	0	Φ70	Φ85	Φ105	M6	2.5	0	Φ95	Φ115	Φ140	3	Φ10	0	Φ95	Φ115	Φ140	3	M8	0	
TA 80	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ80	Φ100	Φ120	M6	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0	
TA 90S/L	1-M20*1.5	Φ130	Φ165	Φ200	Φ12	3.5	0	Φ95	Φ115	Φ140	M8	3	0	Φ110	Φ130	Φ160	3.5	Φ10	0	Φ110	Φ130	Φ160	3.5	M8	0	
TA 100	2-M20*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0	
TA 112	2-M25*1.5	Φ180	Φ215	Φ250	Φ15	4	0	Φ110	Φ130	Φ160	M8	3.5	0	Φ130	Φ165	Φ200	3.5	Φ12	0	Φ130	Φ165	Φ200	3.5	M10	0	
TA 132S/M	2-M25*1.5	Φ230	Φ265	Φ300	Φ15	4	0	Φ130	Φ165	Φ200	M10	3.5	0	Φ180	Φ215	Φ250	4	Φ15	0	Φ180	Φ215	Φ250	4	M12	0	
TA 160M/L	2-M32*1.5	Φ250	Φ300	Φ350	Φ19	5	0	Φ180	Φ215	Φ250	M12	4	0													
TA 180	2-M32*1.5	Φ250	Φ300	Φ350	Φ19	5	0																			
TA200	2-M40*1.5	Φ300	Φ350	Φ400	Φ19	5	0																			

T1A Series IE1 Efficiency Motors Technical Data (at 50Hz)

Model	Power	Current(A)			Current(A)			Current(A)			Speed (r/min)	Eff.			Power Factor	T _{st} /T _n (Times)	T _{max} /T _n (Times)	T _{min} /T _n (Times)	L _d /h (Times)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
T1A 561-2	0.09	0.64	0.37	0.21	0.60	0.35	0.20	0.58	0.34	0.19	2800	55.6	49.6	39.2	0.67	2.4	2.6	2.2	3.5	58	2.80	0.00010173
T1A 562-2	0.12	0.68	0.39	0.23	0.64	0.37	0.21	0.62	0.36	0.21	2840	65.6	61.8	53.2	0.71	2.3	2.6	2.1	4.3	58	3.00	0.00012837
T1A 563-2	0.18	0.93	0.53	0.31	0.88	0.51	0.29	0.85	0.49	0.28	2780	66.5	64.2	56.8	0.77	2.3	2.5	2.4	4.1	61	3.50	0.00014170
T1A 631-2	0.18	0.95	0.55	0.32	0.90	0.52	0.30	0.87	0.50	0.29	2840	66.5	64.3	56.5	0.75	2	2.5	1.7	4.7	61	3.70	0.00014970
T1A 632-2	0.25	1.21	0.70	0.40	1.15	0.66	0.38	1.11	0.64	0.37	2840	69.8	66.2	56.8	0.78	2.5	2.7	2	5.2	61	4.10	0.00017102
T1A 633-2	0.37	1.79	1.03	0.60	1.70	0.98	0.57	1.64	0.95	0.55	2840	69.8	65.6	61.2	0.78	2	2.4	1.8	5.1	62	4.60	0.00020300
T1A 711-2	0.37	1.66	0.96	0.55	1.58	0.91	0.53	1.52	0.88	0.51	2840	71.5	70.9	65.8	0.82	2	2.2	1.4	5.1	64	5.34	0.00031368
T1A 712-2	0.55	2.41	1.39	0.80	2.29	1.32	0.76	2.21	1.27	0.74	2850	73.2	73.4	69.1	0.82	1.8	2.3	1.4	5.1	64	6.14	0.00038379
T1A 713-2	0.75	3.05	1.76	1.02	2.90	1.67	0.97	2.79	1.61	0.93	2840	77.1	77.5	74.8	0.84	2.6	2.6	1.7	6	65	7.10	0.00047547
T1A 801-2	0.75	3.35	1.93	1.12	3.18	1.84	1.06	3.07	1.77	1.02	2870	73.7	71.7	65.4	0.8	2.1	2.5	1.5	5.7	67	8.15	0.00089634
T1A 802-2	1.1	4.41	2.55	1.47	4.19	2.42	1.40	4.04	2.33	1.35	2870	79	78.8	75.4	0.83	2.6	2.8	1.8	6.5	67	9.70	0.00112377
T1A 803-2	1.5	5.87	3.39	1.96	5.58	3.22	1.86	5.38	3.10	1.79	2870	81	81.1	78.5	0.83	2.7	3	2.1	6.8	70	11.00	0.00135120
T1A 90S-2	1.5	5.94	3.43	1.98	5.65	3.26	1.88	5.44	3.14	1.81	2880	80	79.8	76.7	0.83	2.3	2.8	1.4	6.6	72	12.30	0.00185573
T1A 90L1-2	2.2	8.25	4.77	2.75	7.84	4.53	2.61	7.56	4.36	2.52	2880	83.5	84	82.2	0.84	2.6	2.7	1.8	7.1	72	14.90	0.00230595
T1A 90L2-2	3	10.8	6.24	3.60	10.3	5.92	3.42	9.89	5.71	3.30	2900	86	86.5	85.2	0.85	2.9	3	1.9	8.1	74	17.10	0.00296596
T1A 100L1-2	3	11.3	6.54	3.77	10.8	6.21	3.59	10.4	5.99	3.46	2900	83	82.7	80	0.84	2.7	3.2	2.1	7.7	76	20.10	0.00377615
T1A 100L2-2	4	15.0	8.67	5.00	14.3	8.23	4.75	13.7	7.93	4.58	2890	84.5	84.4	82.1	0.83	3.1	3.6	2.8	8.1	77	23.00	0.00466405
T1A 100L3-2	5.5	18.7	10.8	6.23	17.8	10.25	5.92	17.1	9.88	5.70	2900	88	88.6	87.7	0.88	3.3	3.6	2.5	10.1	78	26.00	0.00590710
T1A 112M1-2	4	14.2	8.2	4.75	13.5	7.81	4.51	13.0	7.53	4.34	2910	85	85	83.6	0.87	2.8	3.6	1.7	9.2	77	26.15	0.00631057
T1A 112M2-2	5.5	19.0	11.0	6.34	18.1	10.4	6.02	17.4	10.1	5.80	2900	86.5	87	86	0.88	3	3.8	2.2	9.8	78	31.20	0.00779613
T1A 112M3-2	7.5	25.8	14.9	8.59	24.5	14.1	8.16	23.6	13.6	7.87	2910	88	88	86.4	0.87	3.8	4.2	2.7	10.3	80	37.00	0.00983332
T1A 132S1-2	5.5	18.8	10.9	6.27	17.9	10.3	5.95	17.2	9.9	5.74	2900	86.5	87.2	86.1	0.89	2.1	2.9	1.7	7.8	80	37.60	0.01205798
T1A 132S2-2	7.5	25.7	14.8	8.55	24.4	14.1	8.13	23.5	13.6	7.83	2890	88.4	89.1	88.4	0.87	2.7	3.2	2.5	8.2	80	45.00	0.01521165
T1A 132M1-2	9.2	30.6	17.6	10.2	29.0	16.8	9.68	28.0	16.2	9.33	2910	88	88.1	86.5	0.9	3.1	3.8	1.7	9.7	81	51.00	0.01783446
T1A 132M2-2	11	36.5	21.1	12.2	34.7	20.0	11.6	33.5	19.3	11.2	2920	89	89	87.3	0.89	3.3	4	1.8	10.7	83	56.50	0.02035740
T1A 132M3-2	15	50.4	29.1	16.8	47.9	27.7	16.0	46.2	26.7	15.4	2940	91	90.7	89.1	0.86	4	4.5	2.5	14	86	73.00	0.02855696
T1A 160M1-2	11	38.3	22.1	12.8	36.4	21.0	12.1	35.1	20.2	11.7	2940	90	90	88.6	0.84	2.6	3.1	1.5	7.9	86	72.00	0.04437972
T1A 160M2-2	15	49.3	28.5	16.4	46.9	27.1	15.6	45.2	26.1	15.1	2940	89.9	90.4	89.6	0.89	2.6	2.9	1.4	8.5	86	82.00	0.05580496
T1A 160L1-2	18.5	62.9	36.3	21.0	59.8	34.5	19.9	57.6	33.3	19.2	2950	91	91.2	89.7	0.85	2.8	3.5	1.7	9.4	86	94.10	0.06559287
T1A 160L2-2	22	72.3	41.8	24.1	68.7	39.7	22.9	66.2	38.2	22.1	2950	92	92	90.9	0.87	3.4	3.2	1.9	9.4	91	104.50	0.07701810
T1A 180M-2	22	71.5	41.3	23.8	67.9	39.2	22.6	65.4	37.8	21.8	2950	90	90.2	89.7	0.9	2	2.2	1.2	7.5	88	121.00	0.09018470
T1A 200L1-2	30	96.2	55.5	32.1	91.4	52.8	30.5	88.1	50.8	29.4	2950	91.2	90.6	88.5	0.9	2	2.2	1.2	7.5	90	144.00	0.11499920
T1A 200L2-2	37	117.6	67.9	39.2	111.7	64.5	37.2	107.7	62.2	35.9	2940	92	92.1	91.4	0.9	2	2.2	1.2	7.5	90	170.00	0.13673820
T1A 561-4	0.06	0.54	0.31	0.18	0.52	0.30	0.17	0.50	0.29	0.17	1400	52.8	47.7	38.7	0.55	3.1	3.2	3	3.2	50	2.90	0.00018990
T1A 562-4	0.09	0.71	0.41	0.24	0.68	0.39	0.23	0.65	0.38	0.22	1400	56.2	51.7	43.1	0.59	2.3	2.5	2.8	3.1	50	3.20	0.00023991
T1A 563-4	0.12	0.89	0.51	0.30	0.84	0.49	0.28	0.81	0.47	0.27	1390	58.5	54.3	45.6	0.61	2.65	2.8	2.7	3.2	52	3.70	0.00026491
T1A 631-4	0.12	0.81	0.47	0.27	0.77	0.44	0.26	0.74	0.43	0.25	1395	60.1	56.7	48.4	0.65	2.1	2.3	1.7	3.5	52	3.70	0.00027304
T1A 632-4	0.18	1.06	0.61	0.35	1.01	0.58	0.34	0.97	0.56	0.32	1370	64.7	60.4	55.8	0.69	2.2	2.3	2.1	3.5	52	4.40	0.00033806
T1A 633-4	0.25	1.30	0.75	0.43	1.23	0.71	0.41	1.19	0.69	0.40	1360	68.5	68.8	65.1	0.74	2.1	2.3	2	3.9	54	5.00	0.00040807
T1A 711-4	0.25	1.40	0.81	0.47	1.33	0.77	0.44	1.28	0.74	0.43	1390	69	67.9	62.4	0.68	2.2	2.3	1.8	4.1	55	5.06	0.00056066
T1A 712-4	0.37	1.85	1.07	0.62	1.76	1.02	0.59	1.70	0.98	0.57	1385	70	70.5	66.2	0.75	2	2.2	1.7	4.3	55	5.96	0.00071439
T1A 713-4	0.55	2.92	1.69	0.97	2.78	1.60	0.93	2.68	1.55	0.89	1380	66	66.5	63	0.75	2.2	2.3	1.8	4.7	57	7.06	0.00091936
T1A 801-4	0.55	2.64	1.53	0.88	2.51	1.45	0.84	2.42	1.40	0.81	1420	73	72.2	67.1	0.75	2	2.3	1.6	4.8	57	8.25	0.00145276
T1A 802-4	0.75	3.39	1.96	1.13	3.22	1.86	1.08	3.11	1.79	1.04	1410	76.5	77.8	75.4	0.76	2.1	2.3	1.7	4.8	58	9.75	0.00169042
T1A 803-4	1.1	4.91	2.84	1.64	4.67	2.70	1.56	4.50	2.60	1.50	1390	77.5	79	77.4	0.76	2.3	2.4	2	5	61	11.20	0.00216574
T1A 90S-4	1.1	4.76	2.75	1.59	4.52	2.61	1.51	4.36	2.52	1.45	1410	79	79.4	76.5	0.77	2.5	2.7	2.2	5.5	61	12.30	0.00267500
T1A 90L1-4	1.5	6.26	3.62	2.09	5.95	3.44	1.98	5.74	3.31	1.91	1410	80.8	81.7	79.7	0.78	2.9	3	2.5	6.2	61	15.10	0.00351865
T1A 90L1-4B	1.85	7.57	4.37	2.52	7.19	4.15	2.40	6.93	4.00	2.31	1415	81.4	82.3	80.6	0.79	3.1	3	2.5	6.5	62	16.60	0.00418540
T1A 90L2-4	2.2	8.84	5.10	2.95	8.39	4.85	2.80	8.09	4.67	2.70	1410	81.9	83.2	82	0.8	3.2	3.1	2.6	6.7	64	17.78	0.00468546
T1A 100L1-4	2.2	8.88	5.13	2.96	8.44	4.87	2.81	8.13	4.70	2.71	1430	82.5	83.5	82.1	0.79	2.2	2.7	1.9	6.3	64	19.75	0.00677509
T1A 100L2-4	3	11.4	6.58	3.80	10.8	6.25	3.61	10.4	6.02	3.48	1430	84.5	85.4	84.4	0.82	2.5	2.8	2.1	6.7	64	23.10	0.00842419
T1A 100L3-4	4	16.6	9.61	5.55	15.8	9.13	5.27	15.2	8.80	5.08	1440	84.3	84.3	81.9	0.75	3	3.5	2.6	7.1	65	28.20	0.01073293
T1A 112M1-4	4	15.8	9.11	5.26	15.0	8.66	5.00	14.5	8.34	4.82	1440	85.5	85.6	83.7	0.78	2.3	3.3	2.1	7.8	65	29.80	0.01322838
T1A 112M2-4	5.5	20.4	11.8	6.81	19.4	11.2	6.47	18.7	10.8	6.23	1440	87.5	88.4	87.8	0.81	2.6	3.5	2.4	7.9	71	36.00	0.01683909
T1A 132S-4	5.5	20.5	11.9	6.84	19.5	11.3	6.50	18.8	10.9	6.26	1450	86	86.4	84.8	0.82	1.8	2.9	1.7	7.1	71	42.20	0.02801223
T1A 132M1-4	7.5	26.6	15.4	8.87	25.3	14.6	8.43	24.4	14.1	8.12	1460											

T1A Series IE1 Efficiency Motors Technical Data (at 50Hz)

Model	Power	Current(A)			Current(A)			Current(A)			Speed (r/min)	Eff.			Power Factor	T _v /T _n (Times)	T _{max} /T _n (Times)	T _{min} /T _n (Times)	L _d /h _n (Times)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
T1A 160M-4	11	40.7	23.5	13.6	38.6	22.3	12.9	37.2	21.5	12.4	1460	89	89.2	87.8	0.8	2.3	2.8	1.4	6.8	75	77.50	0.08025397
T1A 160L1-4	15	51.6	29.8	17.2	49.0	28.3	16.4	47.3	27.3	15.8	1450	88.9	90.5	90.9	0.86	2.1	2.1	1.1	6.8	75	96.00	0.10563970
T1A 160L2-4	18.5	64.5	37.3	21.5	61.3	35.4	20.4	59.1	34.1	19.7	1460	90.9	91.4	91.1	0.83	2.4	2.5	1.4	7.6	78	104.00	0.12761860
T1A 160L3-4	22	74.0	42.7	24.7	70.3	40.6	23.4	67.8	39.1	22.6	1470	92	92.3	91.5	0.85	2.6	2.9	1.4	9	80	118.50	0.14959750
T1A 180M-4	18.5	62.6	36.1	20.9	59.4	34.3	19.8	57.3	33.1	19.1	1460	90.5	90.7	89.9	0.86	2.2	2.2	1.4	7.5	80	118.00	0.15506360
T1A 180L-4	22	74.0	42.7	24.7	70.3	40.6	23.4	67.7	39.1	22.6	1460	91	91.3	90.6	0.86	2.2	2.2	1.4	7.5	80	128.00	0.17329310
T1A 200L-4	30	99.8	57.6	33.3	94.8	54.7	31.6	91.4	52.8	30.5	1470	92	92.2	91.6	0.86	2.2	2.2	1.4	7.5	83	153.00	0.22408390
T1A 631-6	0.09	0.74	0.42	0.25	0.70	0.40	0.23	0.67	0.39	0.22	870	51.1	49.2	42.5	0.63	1.8	2	1.9	2.6	50	4.20	0.00041778
T1A 632-6	0.12	0.91	0.53	0.30	0.87	0.50	0.29	0.84	0.48	0.28	850	51.6	51.2	43.1	0.67	1.8	2	1.8	2.7	50	4.50	0.00051688
T1A 633-6	0.18	1.33	0.77	0.44	1.26	0.73	0.42	1.22	0.70	0.41	850	54	52	47.6	0.66	2	2.1	1.9	3	52	4.80	0.00059864
T1A 711-6	0.18	1.25	0.72	0.42	1.19	0.69	0.40	1.14	0.66	0.38	890	56.6	54.4	46.3	0.67	1.9	2.2	1.8	3.1	52	5.60	0.00084095
T1A 712-6	0.25	1.62	0.93	0.54	1.54	0.89	0.51	1.48	0.86	0.49	910	61.6	59.7	52.2	0.66	2.1	2.3	1.9	3.4	52	6.00	0.00096467
T1A 713-6	0.37	2.23	1.28	0.74	2.11	1.22	0.70	2.04	1.18	0.68	900	66.3	65.5	59.7	0.66	2.4	2.5	2.3	3.7	54	6.80	0.00115024
T1A 801-6	0.37	2.42	1.40	0.81	2.30	1.33	0.77	2.21	1.28	0.74	910	61	58.6	50.7	0.66	1.9	2.2	1.8	3.2	56	8.00	0.00159634
T1A 802-6	0.55	2.99	1.73	1.00	2.84	1.64	0.95	2.74	1.58	0.91	920	71.2	71.1	66	0.68	1.9	2.3	1.8	3.8	56	9.25	0.00204109
T1A 803-6	0.75	3.86	2.23	1.29	3.67	2.12	1.22	3.54	2.04	1.18	910	72	73.1	69.6	0.71	1.9	2.2	1.8	3.9	58	10.60	0.00263409
T1A 90S-6	0.75	4.06	2.34	1.35	3.86	2.23	1.29	3.72	2.15	1.24	940	71.5	70.9	65.8	0.68	1.8	2.2	1.5	4.1	59	11.80	0.00326564
T1A 90L1-6	1.1	5.97	3.45	1.99	5.67	3.27	1.89	5.46	3.15	1.82	930	73.5	73.4	69	0.66	1.9	2.3	1.8	4.1	59	14.20	0.00428110
T1A 90L2-6	1.5	6.98	4.03	2.33	6.63	3.83	2.21	6.39	3.69	2.13	925	77.5	78.7	76.6	0.73	2.2	2.5	1.9	4.8	61	15.50	0.00548739
T1A 100L1-6	1.5	7.22	4.17	2.41	6.86	3.96	2.29	6.61	3.82	2.20	940	77	77.9	75.3	0.71	1.7	2.2	1.6	4.5	61	18.70	0.00754254
T1A 100L2-6	2.2	9.71	5.61	3.24	9.22	5.33	3.07	8.89	5.13	2.96	940	79.5	81	79.8	0.75	1.9	2.3	1.7	5	64	22.80	0.00993467
T1A 112M1-6	2.2	10.6	6.11	3.53	10.1	5.80	3.35	9.69	5.59	3.23	945	79.3	79.5	76.5	0.69	1.9	2.3	1.8	4.8	64	24.50	0.01395044
T1A 112M2-6	3	12.5	7.21	4.17	11.9	6.85	3.96	11.4	6.61	3.81	940	81	84	84.6	0.78	1.6	2.1	1.5	4.8	64	28.50	0.01767543
T1A 132S-6	3	12.5	7.20	4.16	11.8	6.84	3.95	11.4	6.59	3.81	965	84.4	85.7	85.1	0.75	1.7	2.2	1.3	5.6	64	36.40	0.03045714
T1A 132M1-6	4	17.1	9.85	5.69	16.2	9.36	5.40	15.6	9.02	5.21	965	84.5	85.1	83.6	0.73	2	2.6	1.5	5.9	68	42.20	0.03725132
T1A 132M2-6	5.5	23.4	13.5	7.79	22.2	12.8	7.40	21.4	12.4	7.13	965	86	87.6	87.7	0.72	2.1	2.4	1.6	5.8	68	51.40	0.04896639
T1A 132M3-6	7.5	30.2	17.5	10.1	28.7	16.6	9.58	27.7	16.0	9.23	965	87	87.3	85.8	0.75	2.7	2.9	2	7.3	68	62.60	0.06235504
T1A 160M-6	7.5	30.2	17.5	10.1	28.7	16.6	9.58	27.7	16.0	9.23	965	87	87.8	87.1	0.75	2.4	2.9	1.7	6.7	68	71.40	0.08622631
T1A 160L1-6	11	44.5	25.7	14.8	42.2	24.4	14.1	40.7	23.5	13.6	965	86.8	88.1	87.9	0.75	2.4	2.1	1.2	6.2	73	89.40	0.11687380
T1A 160L2-6	15	56.9	32.8	19.0	54.0	31.2	18.0	52.1	30.1	17.4	970	89	88.2	87.9	0.78	2.6	2.6	1.1	7.7	79	105.00	0.15484950
T1A 180L-6	15	54.8	31.6	18.3	52.0	30.0	17.3	50.1	28.9	16.7	970	89	89	88.6	0.81	2	2.2	1.3	6.5	77	124.00	0.25406280
T1A 200L1-6	18.5	66.8	38.6	22.3	63.4	36.6	21.1	61.1	35.3	20.4	975	90	90.2	89.5	0.81	2	2.2	1.3	6.5	80	141.00	0.30394140
T1A 200L2-6	22	77.5	44.7	25.8	73.6	42.5	24.5	71.0	41.0	23.7	975	90	90.2	89.4	0.83	2	2.2	1.3	6.5	80	152.00	0.35316010
T1A 711-8	0.09	1.05	0.61	0.35	1.00	0.58	0.33	0.96	0.56	0.32	680	38.2	28.8	24.1	0.59	1.8	2.2	1.7	2.3	50	5.60	0.00071723
T1A 712-8	0.12	1.20	0.70	0.40	1.14	0.66	0.38	1.10	0.64	0.37	690	42.3	36.6	27.7	0.62	1.8	2.2	1.7	2.5	50	6.00	0.00084095
T1A 801-8	0.18	1.48	0.86	0.49	1.41	0.81	0.47	1.36	0.79	0.45	690	55	51.5	43.4	0.58	2.2	2.4	2	3	52	8.30	0.00202145
T1A 802-8	0.25	1.94	1.12	0.65	1.84	1.06	0.61	1.78	1.03	0.59	690	58.5	55.5	47.9	0.58	2.3	2.4	2	3.1	52	9.30	0.00232255
T1A 803-8	0.37	2.46	1.42	0.82	2.34	1.35	0.78	2.26	1.30	0.75	700	67	62.5	58.3	0.59	2	2.5	2	3.5	56	9.96	0.00262366
T1A 90S-8	0.37	2.58	1.49	0.86	2.45	1.42	0.82	2.36	1.37	0.79	710	65	62.2	54.8	0.58	1.7	2.2	1.6	3.2	56	11.38	0.00326564
T1A 90L1-8	0.55	3.84	2.22	1.28	3.65	2.11	1.22	3.52	2.03	1.17	705	65	62.6	55.6	0.58	1.9	2.3	1.7	3.4	56	13.94	0.00428110
T1A 90L2-8	0.75	4.69	2.71	1.56	4.45	2.57	1.49	4.29	2.48	1.43	700	69	67.5	61.8	0.61	1.8	2.1	1.8	3.5	59	15.50	0.00488424
T1A 100L1-8	0.75	4.43	2.56	1.48	4.21	2.43	1.40	4.06	2.34	1.35	685	68.5	68	62.7	0.65	1.9	2.2	1.8	3.6	59	17.60	0.00634648
T1A 100L2-8	1.1	5.85	3.38	1.95	5.56	3.21	1.85	5.35	3.09	1.79	700	75	75	71.3	0.66	1.8	2.4	1.8	4.2	59	20.00	0.00833992
T1A 112M-8	1.5	7.87	4.54	2.62	7.48	4.32	2.49	7.21	4.16	2.40	700	76	76.5	73.4	0.66	1.8	2.3	1.8	4	61	25.30	0.01395044
T1A 132S-8	2.2	10.6	6.13	3.54	10.1	5.83	3.36	9.73	5.62	3.24	715	79	79	76	0.69	1.9	2.4	1.7	4.9	64	39.60	0.03213071
T1A 132M-8	3	13.7	7.89	4.55	13.0	7.49	4.33	12.5	7.22	4.17	715	81.4	82	80	0.71	2	2.5	1.8	5.1	64	47.40	0.04059848
T1A 160M1-8	4	18.3	10.6	6.11	17.4	10.1	5.81	16.8	9.70	5.60	715	82	82.6	80.7	0.7	1.8	2.3	1.6	4.6	68	59.80	0.07103601
T1A 160M2-8	5.5	24.8	14.3	8.25	23.5	13.6	7.84	22.7	13.1	7.56	710	83.5	84.4	83.1	0.7	1.9	2.4	1.8	4.8	68	69.00	0.08622631
T1A 160L-8	7.5	33.0	19.0	11.0	31.3	18.1	10.4	30.2	17.4	10.1	715	85.5	86	84.5	0.7	2.5	2.8	2	5.7	68	84.80	0.11307620
T1A 180L-8	11	45.4	26.2	15.1	43.1	24.9	14.4	41.5	24.0	13.8	715	87.4	87.2	85.7	0.73	1.9	2.2	1.2	6	76	124.00	0.26109400
T1A 200L1-8	15	59.0	34.1	19.7	56.1	32.4	18.7	54.0	31.2	18.0	725	88	88	86.9	0.76	1.9	2.2	1.2	6	79	154.00	0.33909760
T1A 200L2-8	18.5	71.2	41.1	23.7	67.6	39.0	22.5	65.2	37.6	21.7	730	90.0	90.0	88.8	0.76	1.9	2.2	1.2	6	79	175.00	0.40941010

T2A Series IE2 Efficiency Motors Technical Data (at 50Hz)

Model	Power	Current(A)			Current(A)			Current(A)			Speed (r/min)	Eff.			Power Factor	T _{stab} /T _n (Times)	T _{max} /T _n (Times)	T _{max} /T _n (Times)	I _s /I _n (Times)	Noise dB(A)	W.T (kg)	Inertia (kg*m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
T2A 631-2	0.18	0.95	0.55	0.32	0.90	0.52	0.30	0.87	0.50	0.29	2840	66.5	64.3	56.5	0.75	2	2.5	1.7	4.7	61	3.6	0.00023100
T2A 632-2	0.25	1.21	0.70	0.40	1.15	0.66	0.38	1.11	0.64	0.37	2840	69.8	68.5	62.6	0.78	2.5	2.7	2	5.2	61	3.9	0.00025500
T2A 633-2	0.37	1.79	1.03	0.60	1.70	0.98	0.57	1.64	0.95	0.55	2840	69.8	68.5	62.6	0.78	2	2.4	1.8	5.1	62	4.6	0.00030304
T2A 711-2	0.37	1.64	0.95	0.55	1.56	0.90	0.52	1.50	0.87	0.50	2840	71.5	70.9	65.8	0.83	2	2.2	1.4	5.1	64	4.9	0.00034600
T2A 712-2	0.55	2.32	1.34	0.77	2.21	1.27	0.74	2.13	1.23	0.71	2860	75.1	75.2	71.4	0.83	2.3	2.4	1.5	5.9	64	5.8	0.00045800
T2A 713-2	0.75	3.04	1.75	1.01	2.88	1.67	0.96	2.78	1.60	0.93	2840	77.4	78	75.1	0.84	2.6	2.6	1.7	6	65	7.1	0.00056896
T2A 801-2	0.75	3.15	1.82	1.05	2.99	1.73	1.00	2.88	1.66	0.96	2840	77.4	78	75.2	0.81	2.6	2.8	2.2	6.1	67	8.4	0.00089634
T2A 802-2	1.1	4.43	2.56	1.48	4.21	2.43	1.40	4.06	2.34	1.35	2860	79.6	79.9	77.5	0.82	2.6	2.6	1.8	7	67	9.8	0.00112377
T2A 803-2	1.5	5.78	3.34	1.93	5.49	3.17	1.83	5.29	3.06	1.76	2880	81.3	82	80.4	0.84	2.9	3.1	2	7.4	70	11.3	0.00142701
T2A 90S-2	1.5	5.92	3.42	1.97	5.63	3.25	1.88	5.42	3.13	1.81	2880	81.3	81.6	79.5	0.82	2.8	3	2	7.2	72	12.4	0.00185573
T2A 90L1-2	2.2	8.38	4.84	2.79	7.96	4.60	2.66	7.68	4.43	2.56	2890	83.2	83.8	82.1	0.83	2.8	3.1	1.4	7.6	72	14.95	0.00230595
T2A 90L2-2	3	11.0	6.34	3.66	10.4	6.02	3.48	10.1	5.80	3.35	2880	84.6	85.8	85.2	0.85	3.4	3.3	2.3	7.9	74	17.2	0.00296596
T2A 100L1-2	3	11.1	6.41	3.70	10.6	6.09	3.52	10.2	5.87	3.39	2890	84.6	84.9	83.2	0.84	3	3.6	2.7	7.6	76	21.7	0.00413131
T2A 100L2-2	4	14.1	8.14	4.70	13.4	7.73	4.47	12.9	7.46	4.30	2910	85.8	86	84.7	0.87	3.7	4.2	3.8	9.9	77	25.8	0.00519679
T2A 112M1-2	4	13.8	7.96	4.60	13.1	7.56	4.37	12.6	7.29	4.21	2920	85.8	86.2	85	0.89	3.3	3.6	2	9.6	77	26.7	0.00631057
T2A 112M2-2	5.5	19.1	11.0	6.37	18.2	10.5	6.06	17.5	10.1	5.84	2920	87	87.3	86.1	0.87	3.4	4.1	2.8	10.2	78	32.5	0.00805674
T2A 112M3-2	7.5	24.9	14.4	8.30	23.6	13.7	7.88	22.8	13.2	7.60	2920	88.1	88.6	87.5	0.9	3.7	4	2.6	11.3	80	37	0.00983332
T2A 132S1-2	5.5	18.7	10.8	6.23	17.8	10.3	5.92	17.1	9.88	5.71	2920	87	87.6	86.6	0.89	2.4	3.4	1.9	8.3	80	39.7	0.01331945
T2A 132S2-2	7.5	24.6	14.2	8.21	23.4	13.5	7.80	22.5	13.0	7.51	2930	88.1	88.6	87.9	0.91	2.5	3.5	1.4	9.8	80	47.3	0.01647312
T2A 132M1-2	9.2	30.0	17.3	10.0	28.5	16.5	9.50	27.5	15.9	9.16	2920	88.7	89.7	89.6	0.91	2.5	3.3	1.9	9.5	81	52	0.01783446
T2A 132M2-2	11	36.0	20.8	12.0	34.2	19.7	11.4	32.9	19.0	11.0	2930	89.4	89.6	88.7	0.9	4	3.9	1.7	12.7	83	58.5	0.02161887
T2A 132M3-2	15	48.6	28.0	16.2	46.1	26.6	15.4	44.5	25.7	14.8	2940	90.3	90.5	89.6	0.9	3.7	4.3	1.7	13.6	86	74	0.02855696
T2A 160M1-2	11	36.4	21.0	12.1	34.6	20.0	11.5	33.3	19.2	11.1	2950	89.4	89.5	88.2	0.89	2.6	3.4	1.5	8.4	86	77	0.05009234
T2A 160M2-2	15	48.6	28.0	16.2	46.1	26.6	15.4	44.5	25.7	14.8	2950	90.3	90.5	89.7	0.9	2.6	3.4	1.8	9.4	86	91	0.06532599
T2A 160L1-2	18.5	58.2	33.6	19.4	55.3	31.9	18.4	53.3	30.8	17.8	2940	90.9	91.8	91.9	0.92	2.5	2.9	1.2	8.7	86	101	0.07701810
T2A 160L2-2	22	69.7	40.2	23.2	66.2	38.2	22.1	63.8	36.8	21.3	2950	91.3	91.5	90.8	0.91	3.1	3.6	1.8	10.6	91	112.5	0.09034755
T2A 180M-2	22	69.7	40.2	23.2	66.2	38.2	22.1	63.8	36.8	21.3	2950	91.3	90.9	88.8	0.91	2.5	2	1.4	8.1	88	128	0.09501562
T2A 200L1-2	30	95.3	55.1	31.8	90.6	52.3	30.2	87.3	50.4	29.1	2960	92	92.1	91.1	0.9	3.1	3.2	1.4	9.5	90	158	0.12224550
T2A 200L2-2	37	115.7	66.8	38.6	109.9	63.4	36.6	105.9	61.2	35.3	2960	92.5	92.3	91.3	0.91	2.8	3.5	1.4	9.6	90	181	0.14881550
T2A 631-4	0.12	0.81	0.47	0.27	0.77	0.44	0.26	0.74	0.43	0.25	1395	60.1	56.7	48.2	0.65	2.2	2.3	1.7	3.5	52	3.5	0.00027400
T2A 632-4	0.18	1.00	0.58	0.33	0.95	0.55	0.32	0.92	0.53	0.31	1350	64.7	64.9	60.3	0.73	2	2.1	1.9	3.6	52	4	0.00033600
T2A 633-4	0.25	1.30	0.75	0.43	1.23	0.71	0.41	1.19	0.69	0.40	1360	68.5	67.7	62.7	0.74	2.1	2.3	2	4	54	5	0.00039876
T2A 711-4	0.25	1.41	0.81	0.47	1.34	0.77	0.45	1.29	0.75	0.43	1400	69.6	68.5	62.9	0.67	2.2	2.3	1.8	4.1	55	5.2	0.00059300
T2A 712-4	0.37	1.83	1.06	0.61	1.74	1.01	0.58	1.68	0.97	0.56	1400	72.7	73	69.2	0.73	2.4	2.5	2	4.7	55	6.3	0.00081600
T2A 801-4	0.55	2.68	1.55	0.89	2.55	1.47	0.85	2.46	1.42	0.82	1420	77.1	77.1	73.9	0.7	2.4	2.8	2.1	5.4	57	8.95	0.00145276
T2A 802-4	0.75	3.49	2.02	1.16	3.32	1.92	1.11	3.20	1.85	1.07	1420	79.6	79.8	77.1	0.71	2.7	2.9	2.4	5.7	58	10.4	0.00192808
T2A 803-4	1.1	4.94	2.85	1.65	4.69	2.71	1.56	4.52	2.61	1.51	1420	81.4	81.9	79.7	0.72	3.1	3.1	2.5	5.9	61	12.3	0.00252222
T2A 90S-4	1.1	4.74	2.74	1.58	4.50	2.60	1.50	4.34	2.51	1.45	1430	81.4	81.9	79.7	0.75	2.9	3.1	2.2	6.8	61	13.85	0.00334175
T2A 90L1-4	1.5	6.27	3.62	2.09	5.96	3.44	1.99	5.74	3.32	1.91	1430	82.8	83.4	81.6	0.76	3.1	3.2	2.2	6.5	61	16.45	0.00418540
T2A 90L2-4	2.2	9.04	5.22	3.01	8.58	4.96	2.86	8.27	4.78	2.76	1430	84.3	84.5	82.3	0.76	4.2	4	3.4	7.7	64	18.8	0.00535221

IEC MOTORS

FIRE PUMP MOTORS

NEMA MOTORS

EC MOTORS

T2A Series IE2 Efficiency Motors Technical Data (at 50Hz)

Model	Power	Current(A)			Current(A)			Current(A)			Speed (r/min)	Eff.			Power Factor	T_{start}/T_n (Times)	T_{max}/T_n (Times)	T_{min}/T_n (Times)	I_f/I_n (Times)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
T2A 100L1-4	2.2	8.38	4.84	2.79	7.96	4.59	2.65	7.67	4.43	2.56	1440	84.3	85.2	84.3	0.82	2.4	2.9	2	6.6	64	22.2	0.00776455
T2A 100L2-4	3	11.5	6.66	3.85	11.0	6.33	3.66	10.6	6.10	3.52	1450	85.5	86.1	84.9	0.8	2.3	3.2	2.4	7.6	64	25.9	0.00974347
T2A 100L3-4	4	15.2	8.77	5.06	14.4	8.33	4.81	13.9	8.03	4.64	1440	86.6	87.4	86.5	0.8	2.8	3.2	2.3	7.2	65	28.6	0.01106275
T2A 112M1-4	4	14.8	8.56	4.94	14.1	8.13	4.69	13.6	7.84	4.52	1440	86.6	87.7	87.2	0.82	2.5	3.3	2.3	7.9	65	31.4	0.01374420
T2A 112M2-4	5.5	20.6	11.9	6.88	19.6	11.3	6.53	18.9	10.9	6.30	1440	87.7	88.6	88.1	0.8	3.7	3.6	3.1	8.3	71	36.7	0.01735491
T2A 132S-4	5.5	19.9	11.5	6.63	18.9	10.9	6.30	18.2	10.5	6.07	1460	87.7	88.1	87	0.83	2.1	3.5	1.9	8.6	71	44.3	0.03059302
T2A 132M1-4	7.5	26.8	15.5	8.94	25.5	14.7	8.49	24.5	14.2	8.18	1460	88.7	89.4	88.6	0.83	2.7	3.2	1.7	8.9	71	54.5	0.03972562
T2A 132M2-4	9.2	31.9	18.4	10.6	30.3	17.5	10.1	29.2	16.9	9.75	1460	89.2	90.1	89.9	0.85	2.9	3.2	1.7	8.7	74	56.6	0.04617758
T2A 132M3-4	11	37.9	21.9	12.6	36.0	20.8	12.0	34.7	20.0	11.6	1460	89.8	90.5	90.1	0.85	3.3	3.6	1.4	9.3	75	66.2	0.05391993
T2A 160M-4	11	38.8	22.4	12.9	36.9	21.3	12.3	35.6	20.5	11.9	1460	89.8	90.4	90	0.83	2.5	2.7	1.7	7	75	82	0.08967352
T2A 160L1-4	15	51.9	29.9	17.3	49.3	28.4	16.4	47.5	27.4	15.8	1470	90.6	91.2	90.6	0.84	2.5	2.8	1.6	8.3	75	103.2	0.11819900
T2A 160L2-4	18.5	63.5	36.7	21.2	60.4	34.9	20.1	58.2	33.6	19.4	1470	91.2	91.4	90.7	0.84	2.7	3	1.7	8.8	78	115	0.13703810
T2A 180M-4	18.5	61.4	35.4	20.5	58.3	33.7	19.4	56.2	32.4	18.7	1460	91.2	91.6	91.1	0.87	2.4	3	1.8	7.8	80	119	0.15506360
T2A 180L-4	22	71.8	41.5	23.9	68.2	39.4	22.7	65.8	38.0	21.9	1460	91.6	92.2	91.9	0.88	2.4	2.8	1.7	7.7	80	129	0.17329310
T2A 200L-4	30	99.5	57.4	33.2	94.5	54.6	31.5	91.1	52.6	30.4	1470	92.3	92.6	92	0.86	3.2	3.7	2.3	9.5	83	169	0.24231330
T2A 632-6	0.12	0.93	0.54	0.31	0.88	0.51	0.29	0.85	0.49	0.28	850	50.6	50.2	42.4	0.67	1.8	2	1.8	2.7	50	4.5	0.00052145
T2A 711-6	0.18	1.25	0.72	0.42	1.19	0.69	0.40	1.14	0.66	0.38	850	56.6	54.4	46.3	0.67	1.9	2.2	1.8	3.1	52	5.05	0.00071300
T2A 712-6	0.25	1.62	0.93	0.54	1.54	0.89	0.51	1.48	0.86	0.49	910	61.6	59.7	52.2	0.66	2.1	2.3	1.9	3.3	52	6	0.00094300
T2A 801-6	0.37	2.18	1.26	0.73	2.07	1.20	0.69	2.00	1.15	0.67	935	67.6	63.8	59.6	0.66	1.9	2.2	1.7	3.8	56	8.9	0.00174459
T2A 802-6	0.55	2.91	1.68	0.97	2.77	1.60	0.92	2.67	1.54	0.89	935	73.1	71.6	69.7	0.68	2	2.4	2	4	56	10.2	0.00233759
T2A 803-6	0.75	3.88	2.24	1.29	3.69	2.13	1.23	3.55	2.05	1.18	920	75.9	75.4	71.3	0.67	2.7	2.6	2.5	4.2	58	11.7	0.00307884
T2A 90S-6	0.75	4.00	2.31	1.33	3.80	2.19	1.27	3.66	2.11	1.22	940	75.9	75.3	71.1	0.65	2.2	2.5	1.9	4.5	59	12.55	0.00346669
T2A 90L1-6	1.1	5.37	3.10	1.79	5.10	2.95	1.70	4.92	2.84	1.64	950	78.1	78.4	75.6	0.69	2	2.4	1.8	4.9	59	15.2	0.00488424
T2A 90L2-6	1.5	7.27	4.20	2.42	6.91	3.99	2.30	6.66	3.85	2.22	945	79.8	80.1	77.5	0.68	2.7	3	2.5	5.1	61	18.2	0.00629158
T2A 100L1-6	1.5	6.68	3.86	2.23	6.35	3.67	2.12	6.12	3.53	2.04	950	79.8	81.7	81.2	0.74	1.7	2.2	1.6	4.8	61	20.65	0.00833992
T2A 100L2-6	2.2	9.83	5.68	3.28	9.34	5.39	3.11	9.00	5.20	3.00	950	81.8	82.6	81.1	0.72	2.5	2.7	2.1	5.5	64	25	0.01152942
T2A 112M-6	2.2	9.70	5.60	3.23	9.21	5.32	3.07	8.88	5.13	2.96	955	81.8	82.9	81.8	0.73	2.1	2.7	1.8	5.5	64	26	0.01544044
T2A 112M2-6	3	13.2	7.60	4.39	12.5	7.22	4.17	12.1	6.96	4.02	955	83.3	84.4	83.3	0.72	2.3	2.8	2.1	5.7	64	31	0.01916542
T2A 132S-6	3	12.5	7.20	4.16	11.8	6.84	3.95	11.4	6.59	3.81	960	83.3	84.8	84.4	0.76	1.6	2.4	1.5	5.6	64	37.8	0.03213071
T2A 132M1-6	4	16.8	9.71	5.61	16.0	9.22	5.32	15.4	8.89	5.13	965	84.6	85.6	84.8	0.74	2	2.6	1.6	5.9	68	43.8	0.03892490
T2A 132M2-6	5.5	22.4	13.0	7.48	21.3	12.3	7.11	20.5	11.9	6.85	965	86	87.2	86.8	0.75	2.4	2.6	1.8	6.6	68	51.8	0.04896639
T2A 132M3-6	7.5	29.8	17.2	9.93	28.3	16.3	9.43	27.3	15.7	9.09	970	87.2	87.8	87	0.76	3.1	3.2	1.9	7.9	68	66	0.06570220
T2A 160M-6	7.5	29.4	17.0	9.80	27.9	16.1	9.31	26.9	15.5	8.97	965	87.2	88.1	87.7	0.77	2.5	2.9	1.8	6.9	68	74	0.09382144
T2A 160L1-6	11	42.9	24.8	14.3	40.8	23.6	13.6	39.3	22.7	13.1	970	88.7	89.4	88.7	0.76	2.2	2.3	1.3	6.5	73	93	0.12826650
T2A 160L2-6	15	57.2	33.0	19.1	54.3	31.3	18.1	52.3	30.2	17.4	965	89.7	90	90.4	0.77	3.1	3	2.2	8.3	79	116	0.17003980
T2A 180L-6	15	53.0	30.6	17.7	50.4	29.1	16.8	48.5	28.0	16.2	975	89.7	89.5	88.7	0.83	2.2	2.7	1.2	8	77	130	0.25406280
T2A 200L1-6	18.5	66.5	38.4	22.2	63.2	36.5	21.1	60.9	35.1	20.3	980	90.4	90.7	89.8	0.81	2.5	2.9	1.7	7.6	80	149	0.30394140
T2A 200L2-6	22	76.7	44.3	25.6	72.9	42.1	24.3	70.3	40.6	23.4	980	90.9	91.2	90.5	0.83	2.3	2.6	2.3	7.6	80	167	0.35316010

T3A Series IE3 Efficiency Motors Technical Data (at 50Hz)

Model	Power	Current(A)			Current(A)			Current(A)			Speed (r/min)	Eff.			Power Factor	T _{start} /T _n (Times)	T _{max} /T _n (Times)	T _{mf} /T _n (Times)	I _s /I _n (Times)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
T3A 631-2	0.18	0.96	0.55	0.32	0.91	0.53	0.30	0.88	0.51	0.29	2850	65.9	63.5	56.2	0.75	2	2.5	1.6	4.7	61	3.6	0.00023100
T3A 632-2	0.25	1.21	0.70	0.40	1.15	0.66	0.38	1.11	0.64	0.37	2840	69.7	68.4	62.5	0.78	2.5	2.7	2	5.2	61	3.9	0.00025500
T3A 711-2	0.37	1.74	1.00	0.58	1.65	0.95	0.55	1.59	0.92	0.53	2860	73.8	72.4	66.5	0.76	2.5	2.8	1.8	5.6	64	5.2	0.00036900
T3A 712-2	0.55	2.33	1.34	0.78	2.21	1.28	0.74	2.13	1.23	0.71	2860	77.8	63.5	56.2	0.8	3.1	3.1	2	6.5	64	6.2	0.00049500
T3A 713-2	0.75	2.98	1.72	0.99	2.83	1.64	0.94	2.73	1.58	0.91	2870	80.7	80.8	78.2	0.82	3	3.2	2.2	7.1	65	7.1	0.00060600
T3A 801-2	0.75	3.02	1.74	1.01	2.87	1.66	0.96	2.76	1.60	0.92	2890	80.7	80.3	77.2	0.81	3.1	3.2	2.3	7.4	67	8.9	0.00097215
T3A 802-2	1.1	4.27	2.46	1.42	4.06	2.34	1.35	3.91	2.26	1.30	2900	82.7	82.5	79.9	0.82	3.2	3.2	2.2	7.8	67	10.6	0.00127539
T3A 803-2	1.5	5.79	3.34	1.93	5.50	3.17	1.83	5.30	3.06	1.77	2910	84.2	83.9	81.5	0.81	4	4	2.2	9.6	70	12.5	0.00165443
T3A 90S-2	1.5	5.72	3.30	1.91	5.43	3.14	1.81	5.24	3.02	1.75	2900	84.2	83.8	81.4	0.82	3.5	3.7	2.1	8.3	72	14	0.00218574
T3A 90L1-2	2.2	8.02	4.63	2.67	7.62	4.40	2.54	7.35	4.24	2.45	2910	85.9	86.1	84.7	0.84	3.3	3.7	1.5	9	72	16.3	0.00263595
T3A 90L2-2	3	11.3	6.54	3.78	10.8	6.21	3.59	10.4	5.99	3.46	2910	87.1	87.1	84.2	0.8	4	4.1	2.6	9.6	74	18.5	0.00340596
T3A 100L1-2	3	10.2	5.88	3.39	9.68	5.59	3.23	9.33	5.38	3.11	2910	87.1	87.5	86.3	0.89	3.2	3.6	2.6	9.4	76	23.7	0.00484163
T3A 100L2-2	4	13.0	7.50	4.33	12.3	7.12	4.11	11.9	6.87	3.96	2910	88.1	88.8	88.1	0.92	2.8	3.3	2.1	9.1	77	27.6	0.00590710
T3A 112M1-2	4	13.1	7.58	4.38	12.5	7.20	4.16	12.0	6.94	4.01	2920	88.1	88.2	87	0.91	3.4	3.9	2.4	10.5	77	30.1	0.00750510
T3A 112M2-2	5.5	17.8	10.3	5.94	16.9	9.78	5.65	16.3	9.43	5.44	2920	89.2	89.6	89.1	0.91	3.3	4.2	2.9	11.9	78	35.7	0.00925127
T3A 112M3-2	7.5	23.8	13.7	7.94	22.6	13.1	7.54	21.8	12.6	7.27	2920	90.1	91.0	90.0	0.92	3.5	3.8	2.1	11.4	80	40	0.01128847
T3A 132S1-2	5.5	18.2	10.5	6.08	17.3	10.0	5.77	16.7	9.64	5.56	2930	89.2	89.4	88.2	0.89	3.2	4	2.5	10	80	43.4	0.01521165
T3A 132S2-2	7.5	23.8	13.7	7.94	22.6	13.1	7.54	21.8	12.6	7.27	2930	90.1	90.9	90.7	0.92	2.6	3.6	1.9	10.1	80	51.7	0.01899607
T3A 132M1-2	9.2	29.4	17.0	9.79	27.9	16.1	9.30	26.9	15.5	8.96	2930	90.6	91.2	90.5	0.91	3.2	4.2	2.6	11.6	81	58.3	0.02161887
T3A 132M2-2	11	34.5	19.9	11.5	32.8	18.9	10.9	31.6	18.2	10.5	2930	91.2	91.5	91.2	0.92	3.6	4.1	2.4	12.2	83	63.5	0.02414181
T3A 132M3-2	15	47.7	27.6	15.9	45.3	26.2	15.1	43.7	25.2	14.6	2940	91.9	92.1	91.2	0.9	4.9	4.9	2	14.4	86	75	0.02855696
T3A 160M1-2	11	36.1	20.8	12.0	34.3	19.8	11.4	33.0	19.1	11.0	2960	91.2	91	89.6	0.88	3.2	4	1.4	10.3	86	85.5	0.05961337
T3A 160M2-2	15	48.3	27.9	16.1	45.8	26.5	15.3	44.2	25.5	14.7	2960	91.9	91.5	89.9	0.89	3.9	4.2	1.4	11.4	86	104	0.07675122
T3A 160L1-2	18.5	57.9	33.4	19.3	55.0	31.8	18.3	53.0	30.6	17.7	2950	92.4	92.8	91.8	0.91	3	3	1.5	9.1	86	121	0.09225175
T3A 160L2-2	22	68.6	39.6	22.9	65.2	37.6	21.7	62.8	36.3	20.9	2960	92.7	92.8	92.5	0.91	3.8	4	1.6	12.7	88	132	0.10748540
T3A 180M-2	22	68.6	39.6	22.9	65.2	37.6	21.7	62.8	36.3	20.9	2960	92.7	93	92.4	0.91	2.7	3.3	1.7	9	88	130.6	0.10467740
T3A 200L1-2	30	94.0	54.3	31.3	89.3	51.6	29.8	86.1	49.7	28.7	2960	93.3	93.2	92.2	0.9	3.5	3.8	1.8	10.2	90	158	0.13673820
T3A 200L2-2	37	115.5	66.7	38.5	109.7	63.3	36.6	105.7	61.0	35.2	2960	93.7	93.6	92.6	0.9	3.6	3.7	1.7	9.8	90	173.1	0.16330820
T3A 631-4	0.12	0.70	0.40	0.23	0.66	0.38	0.22	0.64	0.37	0.21	1360	64.8	63.7	57.6	0.7	2.2	2.3	2	3.5	52	3.8	0.00030500
T3A 632-4	0.18	0.97	0.56	0.32	0.92	0.53	0.31	0.89	0.51	0.30	1400	69.9	69.6	65.4	0.7	2.2	2.5	2.1	4.1	52	4.5	0.00039900
T3A 633-4	0.25	1.27	0.73	0.42	1.21	0.70	0.40	1.16	0.67	0.39	1395	75	75.1	71.5	0.69	2.9	3	2.7	4.7	55	5.3	0.00052391
T3A 711-4	0.25	1.30	0.75	0.43	1.23	0.71	0.41	1.19	0.69	0.40	1410	73.5	73.2	69	0.69	2.3	2.5	2.1	4.5	55	5.8	0.00071700
T3A 712-4	0.37	1.85	1.07	0.62	1.76	1.02	0.59	1.70	0.98	0.57	1420	77.3	77.1	73.6	0.68	2.8	3	2.5	5.2	55	7	0.00096500
T3A 801-4	0.55	2.80	1.62	0.93	2.66	1.54	0.89	2.56	1.48	0.85	1440	80.8	79.9	76	0.64	3.1	3.3	2.4	6.2	57	9.5	0.00169042
T3A 802-4	0.75	3.47	2.00	1.16	3.29	1.90	1.10	3.17	1.83	1.06	1440	82.5	82.5	80.1	0.69	3.1	3.1	2.5	6.3	58	11.7	0.00228457
T3A 803-4	1.1	4.65	2.69	1.55	4.42	2.55	1.47	4.26	2.46	1.42	1430	84.1	84.9	83.7	0.74	3	3.1	2.6	6.6	61	13.8	0.00299754
T3A 90S-4	1.1	4.65	2.69	1.55	4.42	2.55	1.47	4.26	2.46	1.42	1440	84.1	84.1	81.8	0.74	3.7	3.8	3.1	7.7	61	15.1	0.00384181

T3A Series IE3 Efficiency Motors Technical Data (at 50Hz)

Model	Power	Current(A)			Current(A)			Current(A)			Speed (r/min)	Eff.			Power Factor	T _{start} /T _n (Times)	T _{max} /T _n (Times)	T _{mf} /T _n (Times)	I _s /I _n (Times)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
		220V	380V	660V	230V	400V	690V	240V	415V	720V		100%	75%	50%								
T3A 90L1-4	1.5	6.34	3.66	2.11	6.02	3.48	2.01	5.80	3.35	1.93	1440	85.3	85.3	83.1	0.73	4.1	4.1	3.4	8.1	61	18	0.00468546
T3A 100L1-4	2.2	8.14	4.70	2.71	7.74	4.47	2.58	7.46	4.31	2.49	1450	86.7	87.2	86.2	0.82	2.9	3.5	2.4	8	64	23.9	0.00875401
T3A 100L2-4	3	11.5	6.66	3.85	11.0	6.33	3.65	10.6	6.10	3.52	1450	87.7	88	86.9	0.78	3.3	3.4	2.7	8.1	64	28.3	0.01106275
T3A 112M1-4	4	14.5	8.37	4.83	13.8	7.95	4.59	13.3	7.66	4.42	1450	88.6	88.8	88.2	0.82	3.1	3.7	2.6	8.6	65	33.9	0.01529165
T3A 112M2-4	5.5	20.2	11.7	6.73	19.2	11.1	6.39	18.5	10.7	6.16	1450	89.6	89.9	89.1	0.8	3.8	3.7	2.5	9.1	71	39.1	0.04875837
T3A 132S-4	5.5	19.2	11.1	6.41	18.3	10.5	6.09	17.6	10.2	5.87	1460	89.6	89.8	89.4	0.84	2.3	3.5	1.9	9	71	47.4	0.03446419
T3A 132M1-4	7.5	26.0	15.0	8.66	24.7	14.3	8.23	23.8	13.7	7.93	1460	90.4	90.9	90.3	0.84	2.6	3.4	2.2	8.9	71	57.4	0.04359680
T3A 132M2-4	9.2	32.5	18.8	10.8	30.9	17.8	10.3	29.8	17.2	9.93	1460	90.8	91.3	90.7	0.82	3.2	3.6	2	10	74	60	0.05133916
T3A 132M3-4	11	37.7	21.8	12.6	35.8	20.7	11.9	34.5	19.9	11.5	1460	91.4	92	91.6	0.84	3.5	3.7	2.1	10.5	75	67	0.06037189
T3A 160M-4	11	38.2	22.0	12.7	36.3	20.9	12.1	34.9	20.2	11.6	1470	91.4	91.7	89.8	0.83	2.6	2.8	1.8	7.6	75	89	0.10537280
T3A 160L1-4	15	50.4	29.1	16.8	47.9	27.7	16.0	46.2	26.7	15.4	1470	92.1	92.3	91.3	0.85	3	3	2	9.2	75	110.5	0.13703810
T3A 180M-4	18.5	61.1	35.3	20.4	58.1	33.5	19.4	56.0	32.3	18.7	1470	92.6	92.8	92.1	0.86	2.8	3.3	1.9	8.8	80	130	0.17329310
T3A 180L-4	22	72.4	41.8	24.1	68.8	39.7	22.9	66.3	38.3	22.1	1470	93	93.1	92.3	0.86	3	3.5	2.1	9.3	80	145.4	0.20063720
T3A 200L-4	30	95.8	55.3	32.0	91.1	52.6	30.4	87.8	50.7	29.3	1470	93.6	93.7	92.9	0.88	3.2	3.7	2.1	9.7	83	180	0.26510010
T3A 711-6	0.18	1.20	0.69	0.40	1.14	0.66	0.38	1.09	0.63	0.36	930	63.9	61	53.4	0.62	2.4	2.6	2.3	3.5	52	5.4	0.00079000
T3A 712-6	0.25	1.48	0.85	0.49	1.40	0.81	0.47	1.35	0.78	0.45	920	68.6	67.2	61.2	0.65	2.2	2.5	2.2	3.7	52	6.3	0.00102000
T3A 801-6	0.37	1.95	1.12	0.65	1.85	1.07	0.62	1.78	1.03	0.59	930	73.5	73.8	70.5	0.68	2.2	2.5	2.1	4.1	56	9.3	0.00218934
T3A 802-6	0.55	2.64	1.52	0.88	2.51	1.45	0.84	2.42	1.40	0.81	930	77.2	78.1	75.7	0.71	2.3	2.4	2.1	4.3	56	10.9	0.00293059
T3A 803-6	0.75	3.97	2.29	1.32	3.77	2.18	1.26	3.64	2.10	1.21	935	78.9	78.2	74.4	0.63	2.8	3.1	2.6	4.9	59	12.5	0.00322709
T3A 90S-6	0.75	3.73	2.16	1.24	3.55	2.05	1.18	3.42	1.97	1.14	950	78.9	80.1	78.1	0.67	2.3	2.6	2.1	4.7	59	13.8	0.00406984
T3A 90L-6	1.1	5.33	3.08	1.78	5.07	2.93	1.69	4.88	2.82	1.63	950	81	81.1	78.4	0.67	2.7	2.9	2.5	5.2	59	16.2	0.00548739
T3A 90L2-6	1.5	7.14	4.12	2.38	6.78	3.92	2.26	6.54	3.78	2.18	950	82.5	82.7	80.5	0.67	2.9	3	2.5	5.6	61	21.3	0.00689472
T3A 100L1-6	1.5	6.84	3.95	2.28	6.49	3.75	2.16	6.26	3.61	2.09	955	82.5	83	81.8	0.7	2.4	2.9	2.2	5.5	61	22.1	0.00913729
T3A 100L2-6	2.2	9.54	5.51	3.18	9.06	5.23	3.02	8.73	5.04	2.91	955	84.3	85.1	83.9	0.72	2.5	3	2.2	6.2	64	27.7	0.01272548
T3A 112M1-6	2.2	10.1	5.83	3.37	9.59	5.54	3.20	9.25	5.34	3.08	965	84.3	84.5	83.2	0.68	2	2.5	1.9	5.5	64	27.1	0.01767543
T3A 112M2-6	3	13.4	7.72	4.46	12.7	7.33	4.23	12.2	7.07	4.08	965	85.6	86.2	84.8	0.69	2.5	2.9	1.9	6.3	64	33.1	0.02140041
T3A 132S-6	3	12.5	7.20	4.15	11.8	6.84	3.95	11.4	6.59	3.80	965	85.6	86	85.1	0.74	2	2.7	1.7	6	64	38.6	0.03380429
T3A 132M1-6	4	16.4	9.46	5.46	15.6	8.99	5.19	15.0	8.66	5.00	970	86.8	87.1	86.2	0.74	2.3	3	1.8	6.8	68	47.6	0.04394565
T3A 132M2-6	5.5	23.2	13.4	7.72	22.0	12.7	7.34	21.2	12.2	7.07	975	88	88.3	87.1	0.71	2.9	3.5	2.2	7.4	68	55.7	0.05398713
T3A 132M3-6	7.5	30.8	17.8	10.3	29.2	16.9	9.74	28.2	16.3	9.39	970	89.1	89.6	88.6	0.72	3.3	3.2	2	8.3	68	67.6	0.07072295
T3A 160M-6	7.5	29.1	16.8	9.72	27.7	16.0	9.23	26.7	15.4	8.90	975	89.1	89.5	88.5	0.76	2.2	2.9	1.8	7.3	68	79.6	0.10901170
T3A 160L-6	11	41.1	23.7	13.7	39.0	22.5	13.0	37.6	21.7	12.5	975	90.3	90.8	89.9	0.78	2.7	2.9	1.2	8.4	73	105	0.15484950
T3A 180L-6	15	52.1	30.1	17.4	49.5	28.6	16.5	47.7	27.6	15.9	980	91.2	91	89.8	0.83	2.5	3.3	2.1	8.2	77	125.2	0.27515650
T3A 200L1-6	18.5	67.2	38.8	22.4	63.8	36.9	21.3	61.5	35.5	20.5	980	91.7	91.3	90	0.79	2.5	3.3	2	8.5	80	143	0.33206640
T3A 200L2-6	22	79.5	45.9	26.5	75.5	43.6	25.2	72.8	42.0	24.3	980	92.2	92	90.9	0.79	2.8	3.5	2.2	8.8	80	162	0.38831630

T4A Series IE4 Efficiency Motors Technical Data (at 50Hz)

Model	Power	Eff.(%)			Power factor (cos Φ)	Current(A)			Speed (r/min)	T _n (Nm)	T _{star} /T _n (Times)	T _{max} /T _n (Times)	T _{max} /T _n (Times)	I _s /I _n (Times)	Noise dB(A)	W.T (kg)	Inertia (kg·m ²)
		100%	75%	50%		230V	400V	690V									
T4A631-2	0.18	70.8	68.8	63.6	0.75	0.85	0.49	0.28	2870	0.624	2.6	2.9	2	5.5	61	3.8	0.000245
T4A631-2	0.25	74.3	73.1	68.7	0.77	1.1	0.63	0.37	2880	0.8637	2.7	3.2	2.4	6.3	61	4.5	0.000303
T4A711-2	0.37	78.1	77.3	73.4	0.78	1.52	0.88	0.51	2890	1.2739	2.8	3.3	2.3	6.7	64	5.7	0.000421
T4A712-2	0.55	81.5	81.1	77.9	0.79	2.14	1.23	0.71	2890	1.8936	2.9	3.5	2.5	6.8	64	6.7	0.000569
T4A801-2	0.75	83.5	83.6	81.5	0.8	2.82	1.62	0.94	2900	2.5733	3.7	3.9	2.5	8.8	67	9.5	0.001124
T4A802-2	1.1	85.2	85.2	83.3	0.82	3.95	2.27	1.32	2910	3.7612	4	4.2	2.6	10	67	12	0.001508
T4A90S-2	1.5	86.5	86.5	84.6	0.81	5.37	3.09	1.79	2910	5.1289	3.6	2.8	4	9.6	72	14.5	0.002296
T4A90L-2	2.2	88	88.2	86.9	0.83	7.56	4.35	2.52	2900	7.5483	4	4.2	3	10.5	72	18.5	0.003086
T4A100L-2	3	89.1	89.4	88.4	0.9	9.39	5.4	3.13	2910	10.258	3.7	2.9	3.9	11	76	28	0.005939
T4A112M-2	4	90	90.4	89.7	0.91	12.3	7.05	4.09	2920	13.63	3.5	2.6	3.9	10.5	77	35	0.00927
T4A132S1-2	5.5	90.9	90.9	89.5	0.9	17.3	9.93	5.63	2940	18.614	3.4	2.3	4	10.5	80	49	0.017735
T4A132S2-2	7.5	91.7	91.7	90.7	0.91	23.1	13.3	7.52	2940	25.383	3.8	2.3	4.1	10	80	59	0.02288
T4A160M1-2	11	92.6	93.2	92.1	0.91	32.6	18.8	10.9	2950	37.102	3.5	2.5	3.8	10	86	95	0.069134
T4A160M2-2	15	93.3	93.8	92.8	0.92	43.9	25.2	14.6	2960	50.422	3.6	2.5	3.8	10	86	116	0.090348
T4A160L-2	18.5	93.7	94.2	93.1	0.93	53.3	30.6	17.8	2960	62.188	3.8	2.5	4	10.3	86	136	0.107485
T4A631-4	0.12	69.8	68.2	66.5	0.66	0.65	0.38	0.22	1400	0.8529	2.3	2.7	2.3	4	52	4	0.000336
T4A632-4	0.18	74.7	74.1	69.7	0.67	0.9	0.53	0.3	1400	1.2793	2.6	2.8	2.4	4.3	52	4.8	0.00043
T4A711-4	0.25	77.9	77	72.9	0.65	1.24	0.71	0.41	1430	1.7395	3	3.4	2.8	5.6	55	6.5	0.000841
T4A712-4	0.37	81.1	80.5	77.2	0.66	1.74	1	0.58	1430	2.5745	3.4	3.6	3	6.2	55	8	0.001188
T4A801-4	0.55	83.9	83.3	80.6	0.67	2.46	1.41	0.82	1440	3.8003	3.4	3.7	3	6.8	57	11	0.002047
T4A802-4	0.75	85.7	85.3	82.8	0.67	3.28	1.97	1.09	1450	5.1466	3.7	4	3.1	7.3	58	13	0.002646
T4A90S-4*	1.1	87.2	87.1	84.4	0.69	4.59	2.64	1.53	1435	7.6272	4.8	3.8	4.1	8.2	61	18	0.004685
T4A90L-4*	1.5	88.2	88.1	86.1	0.71	6.01	3.46	2	1455	10.258	4.8	3.8	4.2	9.2	61	21.5	0.005696
T4A100L-4	2.2	89.5	89.6	88.2	0.76	8.12	4.67	2.71	1460	14.993	3.5	3	4.3	9.5	64	26	0.010435
T4A100L2-4*	3	90.4	89.7	88.1	0.75	11.1	6.41	3.7	1460	20.445	3.8	3.4	4.5	9.5	64	33	0.013074
T4A112M-4*	4	91.1	91	90	0.8	14	8.08	4.59	1460	27.26	4	3	4.5	9.8	65	41	0.019436
T4A132S-4	5.5	91.9	92.2	91.5	0.8	18.8	10.9	6.26	1470	37.228	3.4	2.1	4.1	10	71	56	0.043597
T4A132M-4	7.5	92.6	92.8	92.2	0.81	25.1	13.9	8.37	1470	50.765	4.4	2.2	4	10.2	71	74	0.05521
T4A160M-4	11	93.3	93.5	92.8	0.82	36.1	20.7	12	1475	74.203	2.8	2.2	3.2	9.1	75	100	0.127619
T4A160L-4	15	93.9	94.1	93.7	0.83	48.3	27.9	16.1	1475	101.19	3.2	2.2	3.5	9.2	75	126	0.165297
T4A711-6	0.18	70.1	66.8	60.2	0.6	1.07	0.62	0.36	940	1.9053	2.7	2.3	2.9	4.1	52	6.3	0.00102
T4A712-6	0.25	74.1	71.5	65.3	0.6	1.41	0.81	0.47	940	2.6463	2.8	2.4	2.9	4.5	52	7.4	0.00125
T4A801-6	0.37	78	76.7	72.2	0.61	1.95	1.12	0.65	950	3.8753	2.7	3.1	2.5	4.8	56	11	0.002634
T4A802-6*	0.55	80.9	80	76.3	0.61	2.8	1.61	0.93	950	5.7605	3.2	3.5	2.8	5.3	56	14	0.003677
T4A90S-6*	0.75	82.7	81.6	77.7	0.63	3.61	2.08	1.2	960	7.7734	2.8	2.4	3.2	5.7	59	15.5	0.004683
T4A90L-6*	1.1	84.5	83.5	80.5	0.65	5.03	2.89	1.68	960	11.401	3.1	2.5	3.3	5.9	59	20	0.006503
T4A100L-6	1.5	85.9	86.2	84.5	0.72	6.09	3.5	2.03	965	15.466	2.7	1.9	3	6.5	61	28	0.012757
T4A112M-6	2.2	87.4	87.2	85.4	0.69	9.16	4.98	3.05	970	22.567	3	2.6	3.8	7.5	64	35	0.02289
T4A132S-6	3	88.6	88.7	87.4	0.71	12	6.88	3.99	975	30.615	2.5	1.9	3.2	7.1	64	47	0.043846
T4A132M1-6	4	89.5	89.8	88.8	0.74	15.2	8.72	5.05	975	40.821	2.8	1.8	3.4	8	68	55	0.053987
T4A132M2-6	5.5	90.5	90.7	89.7	0.75	20.3	11.7	6.78	975	56.128	3.3	1.8	3.3	8.2	68	68	0.070723
T4A160M-6	7.5	91.3	91.5	90.3	0.77	26.7	15.4	8.89	980	76.148	3.3	1.8	3.3	8.5	68	92	0.128267
T4A160L-6	11	92.3	92.6	91.2	0.77	38.9	22.3	12.9	980	111.68	3.4	1.8	3.4	8.5	73	120	0.18523
T4A712-8	0.12	62.3	59.8	52.6	0.6	0.81	0.47	0.27	690	1.7304	2.2	2.3	2	2.9	50	7.5	0.001327
T4A801-8	0.18	67.2	64.1	56.8	0.52	1.29	0.74	0.43	710	2.5225	2.3	2.7	2	3.4	52	10	0.002323
T4A802-8	0.25	70.8	67.9	61	0.52	1.7	0.98	0.57	710	3.5035	2.7	3.1	2.4	3.7	52	12	0.00308
T4A90S-8	0.37	74.3	71.9	65.7	0.52	2.4	1.38	0.8	715	5.149	2.5	2.2	2.9	3.9	56	14	0.00407
T4A90L-8	0.55	77	75.4	70.1	0.52	3.45	1.98	1.15	710	7.7077	2.5	2.2	2.9	4	56	17.5	0.005498
T4A100L1-8	0.75	78.4	77.9	74.4	0.64	3.75	2.16	1.25	710	10.511	2.1	2.1	2.8	4.3	59	20.5	0.00834
T4A100L2-8	1.1	80.8	80.7	78.1	0.64	5.34	3.07	1.78	710	15.415	2.3	1.8	2.6	4.5	59	26	0.011561
T4A112M-8	1.5	82.6	82.3	79.5	0.63	7.24	4.16	2.41	715	20.874	2.5	2.3	3	5.1	61	33	0.0214
T4A132S-8	2.2	84.5	85.5	82.5	0.64	10.2	5.87	3.4	725	30.193	2.3	2	3	5.6	64	50	0.048867
T4A132M-8	3	85.9	86	84.2	0.67	13.1	7.52	4.36	725	41.172	2.5	2.1	3.1	6.3	64	61	0.062355
T4A160M1-8	4	87.1	87.5	86.3	0.69	16.7	9.61	5.57	725	54.9	2.2	1.7	2.8	5.6	68	76	0.101417
T4A160M2-8	5.5	88.3	88.7	87.8	0.7	22.3	12.8	7.45	725	75.483	2.5	1.8	3	6.1	68	94	0.135595
T4A160L-8	7.5	89.3	89.7	89	0.71	29.7	17.1	9.9	725	102.93	2.6	1.6	3	6.6	68	116	0.177635

Note: Model with * Will be Longer Non-drive Endshield & Fan Cover.

IEC Frame-NEMA EPACT Efficiency Motors Technical Data (at 60Hz)

Model	Power		Current(A)		Current(A)	Speed (r/min)	Eff. (%)	Power factor (cos φ)	T _s /T _n (Times)	T _{max} /T _n (Times)	T _{min} /T _n (Times)	I _s /I _n (Times)	Inertia (kg·m ²)
	(HP)	(kW)	230V	460V	575V								
TAF 801-2	1	0.75	3.24	1.62	1.30	3480	75.5	0.77	2.2	3.2	2.2	5.9	0.000896
TAF 802-2	1.5	1.1	4.13	2.07	1.65	3480	82.5	0.81	3.5	3.6	2.6	8.4	0.001124
TAF 90S-2	2	1.5	5.47	2.73	2.19	3510	84	0.82	3.3	3.7	1.7	9.2	0.001856
TAF 90L-2	3	2.2	7.78	3.89	3.11	3510	85.5	0.83	3.3	3.8	2.3	9.6	0.002306
TAF 100L1-2	4	3	9.78	4.89	3.91	3510	87.5	0.88	4.1	4.7	3.1	10.8	0.004842
TAF 112M1-2	5.5	4	12.8	6.38	5.10	3500	87.5	0.9	2.9	3.9	2.2	9.5	0.006311
TAF 132S1-2	7.5	5.5	17.1	8.57	6.86	3520	88.5	0.91	2.2	3.6	1.4	9	0.013950
TAF 132S2-2	10	7.5	22.9	11.4	9.15	3530	89.5	0.92	3.1	4.1	1.7	10.8	0.017735
TAF 160M1-2	15	11	34.4	17.2	13.8	3550	90.2	0.89	3	3.4	1.7	9.4	0.050092
TAF 160M2-2	20	15	46.4	23.2	18.6	3550	90.2	0.9	2.9	3.1	1.6	8.9	0.059613
TAF 160L-2	25	18.5	56.1	28.0	22.4	3550	91	0.91	3	3.3	1.8	9.6	0.069401
TAF 802-4	1	0.75	3.36	1.68	1.34	1740	82.5	0.68	3.4	3.7	2.9	7.1	0.001928
TAF 90S-4	1.5	1.1	4.63	2.31	1.85	1740	84	0.71	3.2	3.6	2.7	7.2	0.003342
TAF 90L1-4	2	1.5	5.98	2.99	2.39	1730	84	0.75	3	3.1	2.3	7.2	0.003852
TAF 100L1-4	3	2.2	7.79	3.90	3.12	1750	87.5	0.81	2.3	3.7	2.3	9.1	0.009084
TAF 100L2-4	4	3	10.37	5.18	4.15	1750	87.5	0.83	2.7	3.7	2.2	9	0.010403
TAF 112M1-4	5.5	4	13.8	6.91	5.53	1740	87.5	0.83	2.3	3.3	2.2	8.3	0.012197
TAF 132S-4	7.5	5.5	18.4	9.18	7.35	1760	89.5	0.84	2	3.5	1.9	9.1	0.030593
TAF 132M1-4	10	7.5	24.5	12.2	9.78	1760	89.5	0.86	2.7	3.4	1.6	9.3	0.037145
TAF 160M-4	15	11	36.1	18.1	14.4	1760	91	0.84	2.6	2.8	1.6	7.8	0.089674
TAF 160L1-4	20	15	48.7	24.3	19.5	1760	91	0.85	2.7	2.7	1.6	7.8	0.105640
TAF 90S-6	1	0.75	3.51	1.76	1.41	1145	80	0.67	2.2	2.6	2.1	5	0.003668
TAF 100L0-6	1.5	1.1	5.47	2.74	2.19	1170	85.5	0.59	3.3	4	2.6	7	0.009137
TAF 100L1-6	2	1.5	6.50	3.25	2.60	1160	86.5	0.67	3.3	3.8	3	6.9	0.011529
TAF 112M-6	3	2.2	9.02	4.51	3.61	1170	87.5	0.7	2.6	3.2	2	6.9	0.019910
TAF 132S-6	4	3	12.0	5.98	4.78	1170	87.5	0.72	2	2.8	1.7	6.3	0.035478
TAF 132M1-6	5.5	4	15.7	7.86	6.29	1170	87.5	0.73	2.2	2.8	1.7	6.6	0.038925
TAF 132M2-6	7.5	5.5	20.8	10.4	8.34	1170	89.5	0.74	2.4	3	1.9	7.3	0.059008
TAF 160M-6	10	7.5	27.0	13.5	10.8	1160	89.5	0.78	2.2	2.8	1.8	7	0.101417
TAF 160L-6	15	11	39.2	19.6	15.7	1170	90.2	0.78	2.3	2.9	1.8	7.2	0.128267

IEC Frame-NEMA Premium Efficiency Motors Technical Data (at 60Hz)

Model	Power		Current(A)		Current(A)	Speed (r/min)	Eff. (%)	Power factor (cos φ)	T _s /T _n (Times)	T _{max} /T _n (Times)	T _{min} /T _n (Times)	I _s /I _n (Times)	Inertia (kg·m ²)
	(HP)	(kW)	230V	460V	575V								
T 801-2	1	0.75	3.13	1.57	1.25	3490	77	0.78	2.7	3.1	1.5	7.3	0.000896
T 802-2	1.5	1.1	4.11	2.05	1.64	3510	84	0.8	3.8	4.1	2.6	9.7	0.001275
T 90S-2	2	1.5	5.18	2.59	2.07	3500	85.5	0.85	2.9	3.3	2	9.1	0.001966
T 90L-2	3	2.2	7.34	3.67	2.94	3490	86.5	0.87	2.7	3.3	1.6	8.4	0.002416
T 100L1-2	4	3	9.56	4.78	3.82	3520	88.5	0.89	4.9	4.7	2.4	11.9	0.005197
T 112M1-2	5.5	4	12.6	6.30	5.04	3520	88.5	0.9	3.2	4	2.4	10.9	0.006893
T 132S1-2	7.5	5.5	17.0	8.48	6.78	3520	89.5	0.91	2.6	3.6	1.7	9.6	0.015212
T 132S2-2	10	7.5	22.7	11.3	9.08	3520	90.2	0.92	2.5	3.5	1.4	8.7	0.018996
T 132M-2	15	11	33.0	16.5	13.2	3530	91	0.92	3.5	4.7	0.8	11.5	0.023511
T 160M1-2	15	11	33.7	16.9	13.5	3550	91	0.9	2.7	3.3	0.9	8.8	0.053901
T 160M2-2	20	15	45.5	22.7	18.2	3550	91	0.91	3	3.3	1.4	9.6	0.065326
T 160L-2	25	18.5	55.7	27.8	22.3	3550	91.7	0.91	3.3	3.4	1.5	10.2	0.077018
T 802-4	1	0.75	3.06	1.53	1.22	1740	85.5	0.72	2.7	3	2.3	6.7	0.002285
T 90S-4	1.5	1.1	4.37	2.19	1.75	1740	86.5	0.73	3.6	3.7	2.6	7.7	0.003842
T 90L-4	2	1.5	5.65	2.83	2.26	1740	86.5	0.77	3	3.2	2.1	7.8	0.004685
T 100L1-4	3	2.2	7.71	3.86	3.09	1760	89.5	0.8	3	4	2.4	9.5	0.009743
T 100L2-4	4	3	10.65	5.33	4.26	1750	89.5	0.79	3.4	4.1	2.9	9.3	0.011063
T 112M1-4	5.4	4	13.2	6.60	5.28	1750	89.5	0.85	2.8	3.5	2.2	8.9	0.015292
T 132S-4	7.5	5.5	17.9	8.96	7.17	1770	91.7	0.84	2.6	4	1.9	10.1	0.038335
T 132M1-4	10	7.5	23.9	11.9	9.55	1760	91.7	0.86	3.1	3.8	1.7	10.3	0.046178
T 160M-4	15	11	36.0	18.0	14.4	1770	92.4	0.83	3.1	3.1	2	9	0.105373
T 160L1-4	20	15	47.6	23.8	19.1	1770	93	0.85	3.2	3	2	8.9	0.137038
T 90S-6	1	0.75	3.26	1.63	1.30	1145	82.5	0.7	2.3	2.7	2.1	5.2	0.004472
T 100L0-6	1.5	1.1	4.93	2.47	1.97	1175	87.5	0.64	3	3.6	2.4	7.1	0.011529
T 100L1-6	2	1.5	6.65	3.32	2.66	1170	88.5	0.64	2.9	3.9	2.8	7.2	0.013124
T 112M-6	3	2.2	8.94	4.47	3.58	1175	89.5	0.69	3.2	3.7	2.2	7.9	0.025870
T 132S-6	4	3	12.0	6.01	4.81	1175	89.5	0.7	2.6	3.2	1.9	7.1	0.048867
T 132M1-6	5.5	4	14.8	7.38	5.90	1170	89.5	0.76	2.3	2.9	1.6	7.3	0.053987
T 132M2-6	7.5	5.5	20.2	10.1	8.09	1170	91	0.75	3.4	3.5	1.9	8.8	0.079091
T 160M-6	10	7.5	27.6	13.8	11.0	1180	91	0.75	3.1	3.7	1.7	8.4	0.128267
T 160L-6	15	11	40.7	20.3	16.3	1180	91.7	0.74	3.1	3.7	1.7	8.5	0.177635

TC Series

Three-Phase Asynchronous Motors Cast Iron Housing

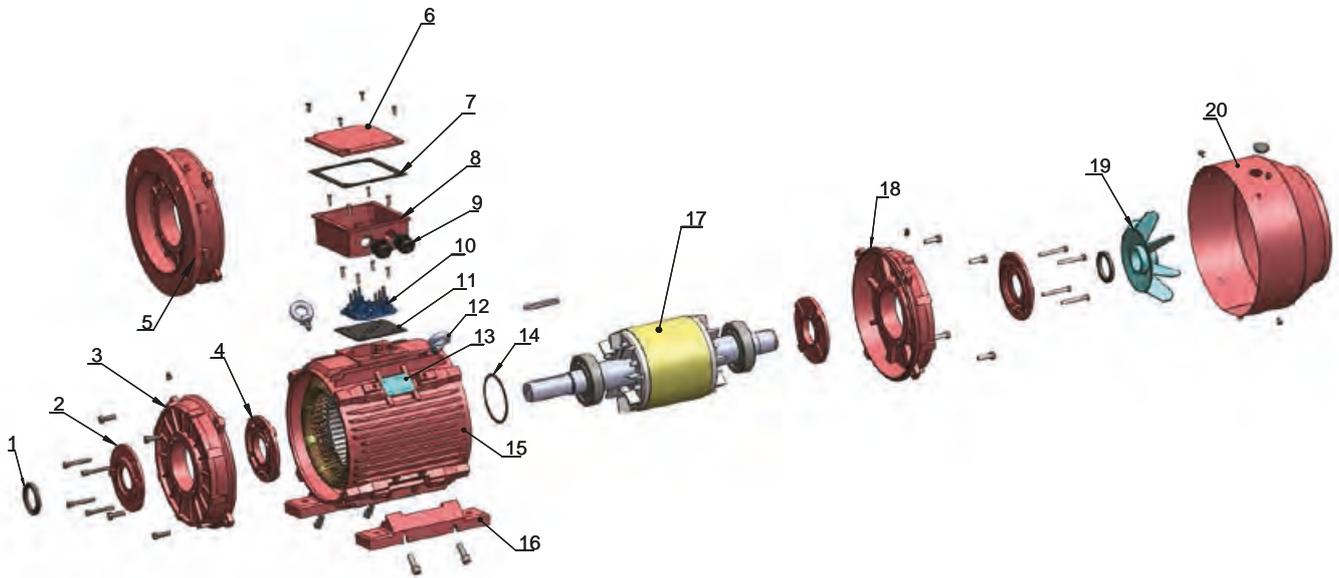
FEATURES

- Energy savings, high efficiency
- High starting torque, lower starting current
- Versatile and easy to modify design adapts to a variety of applications
- Option of integrated or removable feet
- Option of terminal box location (top, left or right) up to and including 280 frames.
- Option of IE2, IE3, MEPS High and Premium Efficiency for IEC standards + NEMA EPACT and Premium Efficiency
- Contained total length is the same as or shorter than the current market standard
- Full use of the magnetization properties of cold rolled silicone steel in which the stator laminations are magnetized evenly to reduce temperature rise of the winding

APPLICATIONS

- Pumps
- Waste water treatment plants
- Air compressors, fans HVAC
- Gear reducers and power transmission
- Pulp and paper mills
- Steel mill
- Conveyors, elevators
- Should be "Material handling equipment"
- Agricultural application
- Mining equipment
- Hydraulic equipment

Motor Spare Part List "Exploded Drawing"



- | | | | |
|--------------------------|--------------------|----------------------|-------------------|
| 1. Oil seal | 6. TB cover | 11. TB bottom gasket | 16. Foot |
| 2. Outer bearing cap D.E | 7. TB upper gasket | 12. Eye bolt | 17. Rotor |
| 3. DE endshield | 8. TB base | 13. Nameplate | 18. NDE endshield |
| 4. Inner bearing cap D.E | 9. Cable gland | 14. Thrust washer | 19. Cooling fan |
| 5. B5 flange | 10. Terminal board | 15. Frame | 20. Fan cover |

T1C Series IE1 Efficiency Motors Technical Data (400V/50Hz)

Model	Output (kW)	Rated current (A)	Rotation speed (r/min)	Efficiency 100% load (%)	Efficiency 75% load (%)	Efficiency 50% load (%)	Power factor (Φ)	Rated torque (N.m)	T ₅₀ /T _n (Times)	T _{min} /T _n (Times)	T _{max} /T _n (Times)	I ₅₀ /I _n (Times)	Noise (dB)	Net weight (kg)	Moment of inertia(kg·m ²)
T1C 801-2	0.75	2.06	2840	72.1	73.3	69.0	0.73	2.52	2.2	1.8	2.3	6	67	14.3	0.00093
T1C 802-2	1.1	2.90	2840	75	77.7	74.8	0.73	3.70	2.2	1.8	2.3	7	67	16.0	0.00110
T1C 90S-2	1.5	3.79	2840	77.2	78.5	75.1	0.74	5.04	2.2	1.8	2.3	7	72	18.5	0.00184
T1C 90L-2	2.2	5.04	2840	79.7	80.9	78.8	0.79	7.40	2.2	1.8	2.3	7.5	72	22.0	0.00239
T1C 100L-2	3	6.56	2840	81.5	82.8	80.1	0.81	10.09	2.2	1.8	2.3	7.5	76	32.0	0.00368
T1C 112M-2	4	8.58	2900	83.1	84.9	82.6	0.81	13.17	2.2	1.8	2.3	7.5	77	41.0	0.01613
T1C 132S1-2	5.5	11.16	2900	84.7	85.5	82.8	0.84	18.11	2.2	1.8	2.3	7.5	80	57.5	0.01106
T1C 132S2-2	7.5	14.81	2900	86	87.1	84.7	0.85	24.70	2.2	1.8	2.3	7.5	80	62.0	0.01468
T1C 132M1-2	9.2	17.75	2900	87	88.2	86.1	0.86	30.30	2.2	1.4	2.3	7.5	80	68.5	0.01767
T1C 160M1-2	11	20.14	2945	87.6	88.9	86.6	0.90	35.67	2.2	1.4	2.3	8.5	86	111.0	0.04150
T1C 160M2-2	15	27.74	2945	88.7	90.0	88.1	0.88	48.64	2.2	1.4	2.3	9	86	122.0	0.05384
T1C 160L-2	18.5	35.18	2945	89.3	91.0	89.5	0.85	59.99	2.2	1.4	2.3	10	86	140.0	0.06436
T1C 180M-2	22	39.25	2945	89.9	89.9	87.6	0.90	71.34	2.2	1.3	2.3	8	89	153.0	0.08110
T1C 200L1-2	30	53.0	2950	90.7	91.4	89.7	0.90	97.12	2.0	1.3	2.3	7.5	92	218.0	0.15138
T1C 200L2-2	37	65.1	2950	91.2	92.7	91.5	0.90	119.8	2.0	1.3	2.3	7.5	92	230.0	0.17351
T1C 225M-2	45	78.7	2955	91.7	91.4	89.7	0.90	145.4	2.0	1.3	2.3	7.5	92	303.0	0.24178
T1C 250M-2	55	95.8	2970	92.1	92.5	90.7	0.90	176.9	2.0	1.3	2.3	9	93	391.0	0.38903
T1C 280S-2	75	129.7	2970	92.7	92.9	91.1	0.90	241.2	2.0	1.3	2.3	9	94	530.0	0.69871
T1C 280M-2	90	155.2	2970	93	92.8	90.9	0.90	289.4	2.0	1.3	2.3	9	94	572.0	0.79539
T1C 315S-2	110	189.1	2970	93.3	94.0	92.5	0.90	353.7	2.0	1.5	2.2	7	96	900.0	1.41216
T1C 315M-2	132	223.9	2970	93.5	94.1	92.8	0.91	424.4	2.0	1.5	2.2	7	96	970.0	1.55013
T1C 315L1-2	160	273.6	2970	93.8	94.2	93.0	0.90	514.5	2.0	1.5	2.2	7	99	1010.0	1.71199
T1C 315L2-2	200	341.2	2970	94	94.3	93.1	0.90	643.1	2.0	1.5	2.2	7	99	1070.0	1.90623
T1C 355M1-2	220	375.3	2980	94	94.3	93.1	0.90	705.0	2.0	1.2	2.2	7	103	1590.0	2.95585
T1C 355M2-2	250	426.5	2980	94	94.4	93.2	0.90	801.2	2.0	1.2	2.2	7	103	1650.0	3.14272
T1C 355L1-2	280	477.7	2980	94	94.5	93.2	0.90	897.3	2.0	1.2	2.2	7	103	1715.0	3.47911
T1C 355L2-2	315	537.4	2980	94	94.5	93.2	0.90	1009.5	2.0	1.2	2.2	7	103	1780.0	3.85287
T1C 801-4	0.55	1.51	1420	70	72.5	70.2	0.75	3.70	2.3	2.0	2.6	6	58	13.5	0.00141
T1C 802-4	0.75	2.00	1420	72.1	79.2	76.8	0.75	5.04	2.3	2.0	2.6	6	58	14.6	0.00168
T1C 90S-4	1.1	2.82	1430	75	77.8	74.5	0.75	7.35	2.3	2.0	2.6	6.5	61	18.0	0.00238
T1C 90L-4	1.5	3.69	1430	77.2	80.0	77.3	0.76	10.02	2.3	2.0	2.6	6.5	61	23.0	0.00335
T1C 100L1-4	2.2	4.98	1430	79.7	79.3	75.6	0.80	14.69	2.2	2.0	2.6	6.5	64	32.0	0.00688
T1C 100L2-4	3	6.64	1435	81.5	82.6	79.9	0.80	19.97	2.2	2.0	2.6	7.5	64	35.0	0.00883
T1C 112M-4	4	8.47	1435	83.1	86.2	84.7	0.82	26.62	2.2	2.0	2.6	7.5	65	44.0	0.01311
T1C 132S-4	5.5	11.29	1440	84.7	87.5	85.6	0.83	36.48	2.2	1.6	2.6	7.5	71	61.0	0.02679
T1C 132M-4	7.5	14.81	1440	86	88.6	86.9	0.85	49.74	2.2	1.6	2.6	7.5	71	76.0	0.03694
T1C 132M2-4	9.2	18.17	1440	86	88.6	85.8	0.85	61.01	2.2	1.6	2.6	7.5	71	79.0	0.04412
T1C 160M-4	11	21.58	1465	87.6	89.7	88.8	0.84	71.71	2.2	1.6	2.6	8.5	75	115.0	0.07659
T1C 160L-4	15	28.06	1465	88.7	90.8	90.2	0.87	97.78	2.2	1.6	2.6	8	75	137.0	0.10379
T1C 180M-4	18.5	33.98	1465	89.3	90.6	89.3	0.88	120.6	2.2	1.6	2.6	8	76	149.5	0.14084
T1C 180L-4	22	40.14	1465	89.9	90.7	89.3	0.88	143.4	2.2	1.6	2.6	8	76	165.0	0.16541
T1C 200L-4	30	56.16	1475	90.7	92.3	91.6	0.85	194.2	2.2	1.6	2.6	8	79	216.5	0.26594
T1C 225S-4	37	68.9	1480	91.2	90.9	88.8	0.85	238.8	2.2	1.3	2.6	7	81	293.0	0.50439
T1C 225M-4	45	83.3	1480	91.7	92.6	91.0	0.85	290.4	2.2	1.3	2.6	7	81	335.0	0.57909
T1C 250M-4	55	100.2	1480	92.1	92.4	90.7	0.86	354.9	2.2	1.3	2.6	8	83	397.0	0.69098
T1C 280S-4	75	131.2	1480	92.7	93.1	93.2	0.89	484.0	2.2	1.3	2.6	9	86	540.0	1.41285
T1C 280M-4	90	155.2	1480	93	93.4	93.5	0.90	580.7	2.2	1.3	2.6	9	86	620.0	1.74607
T1C 315S-4	110	189.1	1480	93.3	93.8	93.2	0.90	709.8	2.0	1.3	2.3	7	93	915.0	2.90486
T1C 315M-4	132	226.4	1480	93.5	94.0	93.6	0.90	851.8	2.0	1.3	2.3	7	93	1005.0	3.29579
T1C 315L1-4	160	273.6	1480	93.8	94.0	93.5	0.90	1032.4	2.0	1.3	2.3	7	97	1068.0	3.73367
T1C 315L2-4	200	341.2	1480	94	94.3	93.9	0.90	1290.5	2.0	1.3	2.3	7	97	1210.0	4.67201
T1C 355M1-4	220	379.6	1480	94	94.5	94.0	0.89	1419.6	2.0	1.2	2.3	7	101	1560.0	6.87200
T1C 355M2-4	250	431.3	1480	94	94.5	94.0	0.89	1613.2	2.0	1.2	2.3	7	101	1600.0	7.63820
T1C 355L1-4	280	483.1	1480	94	94.5	94.0	0.89	1806.8	2.0	1.2	2.3	7	101	1650.0	8.31927
T1C 355L2-4	315	537.4	1485	94	94.6	94.1	0.90	2025.8	2.0	1.2	2.3	7	101	1700.0	9.08547
T1C 355L3-4	355	605.7	1485	94	94.6	94.1	0.90	2283.0	2.0	1.2	2.3	7	101	1780.0	10.10708

IEC MOTORS

FIRE PUMP MOTORS

NEMA MOTORS

EC MOTORS

T1C Series IE1 Efficiency Motors Technical Data (400V/50Hz)

Model	Output (kW)	Rated current (A)	Rotation speed (r/min)	Efficiency 100% load (%)	Efficiency 75% load (%)	Efficiency 50% load (%)	Power factor (Φ)	Rated torque (N.m)	T _{sf} /T _n (Times)	T _{min} /T _n (Times)	T _{max} /T _n (Times)	I _s /I _n (Times)	Noise (dB)	Net weight (kg)	Moment of inertia(kg·m ²)
T1C 801-6	0.37	1.49	900	59.7	60.5	55.7	0.60	3.93	2.0	1.8	2.2	5.5	54	14.0	0.00231
T1C 802-6	0.55	1.95	900	65.8	66.1	62.3	0.62	5.84	2.0	1.8	2.2	5.5	54	15.0	0.00284
T1C 90S-6	0.75	2.34	935	70	70.4	65.8	0.66	7.66	2.0	1.8	2.2	5.5	57	19.0	0.00335
T1C 90L-6	1.1	3.20	935	72.9	74.2	70.8	0.68	11.24	2.0	1.8	2.2	5.5	57	21.6	0.00461
T1C 100L-6	1.5	3.94	940	75.2	75.7	72.4	0.73	15.24	2.0	1.8	2.2	5.5	61	29.5	0.00783
T1C 112M-6	2.2	5.68	940	77.7	79.3	76.2	0.72	22.35	2.0	1.8	2.2	6	65	38.0	0.01383
T1C 132S-6	3	7.24	940	79.7	80.2	76.8	0.75	30.48	2.0	1.8	2.2	6	69	49.6	0.02855
T1C 132M1-6	4	9.58	950	81.4	82.8	80.1	0.74	40.21	2.0	1.8	2.5	6	69	59.4	0.03601
T1C 132M2-6	5.5	12.91	950	83.1	83.0	80.6	0.74	55.29	2.0	1.8	2.5	7.5	69	65.0	0.04890
T1C 160M-6	7.5	16.82	965	84.7	87.0	85.2	0.76	74.22	2.0	1.3	2.5	7.5	73	112.0	0.08726
T1C 160L-6	11	24.18	970	86.4	86.7	84.4	0.76	108.3	2.0	1.3	2.5	7.5	73	122.4	0.10963
T1C 180L-6	15	29.74	970	87.7	89.1	87.8	0.83	147.7	1.8	1.2	2.2	8	73	161.5	0.24936
T1C 200L1-6	18.5	34.25	970	88.6	90.9	90.3	0.88	182.1	1.8	1.2	2.2	8	76	208.3	0.36147
T1C 200L2-6	22	40.45	970	89.2	91.0	90.5	0.88	216.6	1.8	1.2	2.2	8	76	218.2	0.39445
T1C 225M-6	30	55.2	975	90.2	91.2	89.9	0.87	293.8	1.8	1.2	2.2	7	76	289.0	0.55616
T1C 250M-6	37	70.0	980	90.8	90.7	88.6	0.84	360.6	2.0	1.3	2.2	7.5	78	380.0	0.96477
T1C 280S-6	45	83.6	980	91.4	92.6	91.6	0.85	438.5	2.0	1.3	2.2	7.5	80	489.5	1.68116
T1C 280M1-6	55	100.4	980	91.9	93.3	92.5	0.86	536.0	2.0	1.3	2.2	7.5	80	560.0	1.99928
T1C 315S-6	75	135.9	985	92.6	93.4	92.2	0.86	727.2	2.0	1.3	2.3	7	85	806.0	3.25976
T1C 315M-6	90	162.6	985	92.9	93.5	92.5	0.86	872.6	2.0	1.3	2.3	7	85	912.0	3.90933
T1C 315L1-6	110	197.9	985	93.3	93.5	92.3	0.86	1066.5	2.0	1.3	2.3	7	85	965.0	4.54331
T1C 315L2-6	132	236.9	985	93.5	93.6	92.5	0.86	1279.8	2.0	1.3	2.3	7	85	1070.0	5.44899
T1C 355M1-6	160	276.6	990	93.8	93.5	92.7	0.89	1543.4	2.0	1.2	2.2	8	92	1537.0	8.97637
T1C 355M2-6	200	341.2	990	94	93.5	92.8	0.90	1929.3	2.0	1.2	2.2	8	92	1720.0	11.00175
T1C 355L-6	250	426.5	990	94	93.6	92.8	0.90	2411.6	2.0	1.2	2.2	8	92	1880.0	13.56011
T1C 801-8	0.18	0.8	680	51	52.5	48.5	0.61	3.5	1.5	1.3	1.7	2.8	52	15	0.00214
T1C 802-8	0.25	1.1	680	56	58.2	52.5	0.61	3.5	1.6	1.3	2	2.7	52	16.1	0.00249
T1C 90S-8	0.37	1.3	680	63	63.8	58.5	0.63	5.2	1.6	1.3	1.8	2.8	56	19.2	0.00335
T1C 90L-8	0.55	1.9	680	66	67.2	62.3	0.65	7.7	1.6	1.3	1.8	3	56	21.8	0.00461
T1C 100L1-8	0.75	2.4	710	66	67.5	62.5	0.67	10.1	1.7	1.3	2.1	3.5	59	27.9	0.00688
T1C 100L2-8	1.1	3.2	710	72	72.8	67.7	0.69	14.8	1.7	1.3	2.1	3.5	59	32	0.00925
T1C 112M-8	1.5	4.3	710	74	73.2	68.6	0.68	20.2	1.8	1.2	2.1	4.2	61	39.1	0.01552
T1C 132S-8	2.2	6.0	720	75	75.5	71.1	0.71	29.2	2	1.2	2	5.5	64	58	0.03408
T1C 132M-8	3	7.7	720	77	77.2	72.6	0.73	39.8	2	1.2	2	5.5	64	64	0.04522
T1C 160M1-8	4	11.1	730	80	79.5	75.6	0.65	52.33	1.6	1.2	2.2	6	68	108	0.07620
T1C 160M2-8	5.5	14.63	730	83.5	81.6	77.7	0.65	71.95	1.6	1.2	2.2	6	68	124	0.09095
T1C 160L-8	7.5	19.6	730	85	82.8	79.5	0.65	98.12	1.6	1.2	2.2	6	68	136	0.10594
T1C 180L-8	11	24.1	730	88	87.3	84.9	0.75	143.9	2	1.4	2	6	70	174	0.25695
T1C 200L-8	15	29.7	730	89	89.3	88	0.82	196.2	1.6	1.3	2.2	7	73	220	0.36147
T1C 225S-8	18.5	37.1	735	90	88.8	87.2	0.80	240.4	1.6	1.3	2	6	73	285	0.49078
T1C 225M-8	22	43.9	735	90.5	90.4	89.1	0.80	285.9	1.6	1.3	2	6	73	310	0.58885
T1C 250M-8	30	59.5	735	91	91.9	90.8	0.80	389.8	1.6	1.0	1.8	6	75	395	1.02008
T1C 280S-8	37	74.8	740	91.5	91.2	90.5	0.78	477.5	1.9	1.2	2	6.5	76	523	1.88979
T1C 280M-8	45	90.5	740	92	92.3	90.8	0.78	580.7	1.9	1.2	2	6.5	76	575	2.26008
T1C 315S-8	55	106.9	740	92.8	92.5	91.2	0.80	709.8	2	1.3	2	6.5	82	842	3.89374
T1C 315M-8	75	145.5	740	93	92.6	91.1	0.80	967.9	2	1.3	2	6.5	82	998.8	5.26785
T1C 315L1-8	90	173.1	740	93.8	93.9	92.3	0.80	1161.5	2	1.3	2	6.5	82	1096.8	6.26411
T1C 315L2-8	110	211.1	740	94	93.2	92.2	0.80	1419.6	2	1.3	2	6.5	82	1191.2	7.44150
T1C 355M1-8	132	254.2	740	93.7	93.6	92.5	0.80	1703.5	1.8	1.3	2	6.5	90	1496.8	8.86978
T1C 355M2-8	160	306.4	740	94.2	93.6	92.3	0.80	2064.9	1.8	1.3	2	6.5	90	1592	10.04236
T1C 355L-8	200	381.8	740	94.5	93.1	92.5	0.80	2581.1	1.8	1.3	2	6.5	90	1752	12.28093

T2C Series IE2 Efficiency Motors Technical Data (400V/50Hz)

Model	Output (kW)	Rated current (A)	Rotation speed (r/min)	Efficiency 100% load (%)	Efficiency 75% load (%)	Efficiency 50% load (%)	Power factor (Φ)	Rated torque (N.m)	T _{st} /T _n (Times)	T _{min} /T _n (Times)	T _{max} /T _n (Times)	I _{st} /I _n (Times)	Noise (dB)	Net weight (kg)	Moment of inertia(kg·m ²)
T2C 801-2	0.75	1.73	2840	77.4	77.5	73.8	0.81	2.52	2.5	2.1	2.6	6	67	14.5	0.00084
T2C 802-2	1.1	2.43	2880	79.6	80.5	78.6	0.82	3.65	2.5	1.8	2.6	7.5	67	16.5	0.00119
T2C 90S-2	1.5	3.25	2880	81.3	81.9	81.0	0.82	4.97	2.5	1.8	2.6	7	72	18.5	0.00184
T2C 90L-2	2.2	4.60	2880	83.2	83.6	82.5	0.83	7.30	2.5	1.4	2.6	7.5	72	22.0	0.00239
T2C 100L-2	3	6.17	2890	84.6	85.5	84.0	0.83	9.91	2.5	2.0	2.8	7.5	76	33.0	0.00410
T2C 112M-2	4	7.65	2910	85.8	85.3	82.7	0.88	13.13	2.5	1.8	2.8	9.5	77	41.0	0.00607
T2C 132S1-2	5.5	10.37	2910	87	88.1	86.0	0.88	18.05	2.4	1.8	2.8	8.5	80	59.5	0.01251
T2C 132S2-2	7.5	13.96	2920	88.1	89.0	87.3	0.88	24.53	2.5	1.8	2.8	10	80	64.0	0.01613
T2C 132M1-2	9.2	17.13	2920	88.1	88.9	87.0	0.88	30.09	2.5	1.4	3.0	10	80	71.0	0.01758
T2C 160M1-2	11	19.73	2930	89.4	89.5	89.0	0.90	35.85	2.5	1.4	2.8	8.5	86	113.0	0.04561
T2C 160M2-2	15	26.64	2940	90.3	90.0	88.8	0.90	48.72	2.5	1.3	2.8	9	86	124.0	0.06206
T2C 160L-2	18.5	32.64	2940	90.9	91.3	90.0	0.90	60.09	2.5	1.4	2.8	9.5	86	140.0	0.07528
T2C 180M-2	22	38.6	2945	91.3	91.2	89.8	0.90	71.34	2.5	1.4	2.8	9	89	168.0	0.08110
T2C 200L1-2	30	52.3	2945	92	92.1	90.9	0.90	97.3	2.0	1.3	2.5	7	92	235.0	0.14253
T2C 200L2-2	37	64.2	2945	92.5	91.5	92.3	0.90	120.0	2.5	1.5	2.5	7.5	92	246.0	0.16466
T2C 225M-2	45	77.7	2950	92.9	92.4	91.6	0.90	145.7	2.5	1.3	2.4	7.5	92	321.0	0.24906
T2C 250M-2	55	94.6	2960	93.2	93.5	92.0	0.90	177.4	2.3	1.4	2.6	8.5	93	419.0	0.43328
T2C 280S-2	75	128.2	2960	93.8	93.7	92.4	0.90	242.0	2.5	1.8	2.6	9	94	571.0	0.79186
T2C 280M-2	90	153.4	2960	94.1	94.3	93.2	0.90	290.4	2.5	1.8	2.6	9.5	94	638.0	0.90716
T2C 315S-2	110	187.1	2960	94.3	94.5	93.2	0.90	354.9	2.0	1.4	2.3	6	96	927.0	1.50928
T2C 315M-2	132	223.8	2960	94.6	94.8	93.4	0.90	425.9	2.0	1.4	2.3	6	96	1006.0	1.67962
T2C 315L1-2	160	270.7	2960	94.8	95.0	93.7	0.90	516.2	2.0	1.4	2.3	6	99	1060.0	1.87385
T2C 315L2-2	200	337.6	2960	95	95.3	93.9	0.90	645.3	1.8	1.3	2.3	5.5	99	1130.0	2.13283
T2C 355M1-2	220	371.4	2960	95	95.5	93.8	0.90	709.8	1.8	1.3	2.3	5.5	103	1590.0	2.95585
T2C 355M2-2	250	422.0	2960	95	95.5	93.9	0.90	806.6	1.8	1.3	2.3	5.5	103	1650.0	3.14272
T2C 355L1-2	280	472.7	2960	95	95.6	93.9	0.90	903.4	1.8	1.3	2.3	5.5	103	1715.0	3.47911
T2C 355L2-2	315	531.8	2960	95	95.6	93.9	0.90	1016.3	1.8	1.3	2.3	5.5	103	1780.0	3.85287
T2C 802-4	0.75	1.92	1420	79.6	79.8	77.5	0.71	5.04	2.5	2.1	2.6	5.7	58	16.0	0.00128
T2C 90S-4	1.1	2.75	1430	81.4	81.9	79.1	0.71	7.35	2.5	2.1	2.6	6.1	61	20.0	0.00315
T2C 90L-4	1.5	3.53	1430	82.8	83.4	80.4	0.74	10.02	2.5	2.0	2.6	6.5	61	24.0	0.00411
T2C 100L1-4	2.2	4.71	1430	84.3	85.5	83.6	0.80	14.69	2.2	2.0	2.6	6.6	64	34.0	0.00883
T2C 100L2-4	3	6.33	1435	85.5	85.7	83.9	0.80	19.97	2.2	2.0	3.0	7.6	64	35.0	0.01039
T2C 112M-4	4	8.23	1435	86.6	87.2	85.5	0.81	26.62	2.2	2.0	3.0	7.9	65	45.0	0.01369
T2C 132S-4	5.5	10.91	1440	87.7	89.2	87.1	0.83	36.48	2.2	1.8	3.0	8.8	71	63.0	0.02966
T2C 132M-4	7.5	14.70	1440	88.7	89.8	87.5	0.83	49.74	2.2	1.6	3.0	9	71	77.5	0.03981
T2C 132M2-4	9.2	17.82	1440	88.7	89.9	87.5	0.84	61.01	2.2	1.6	3.0	8.8	71	85.0	0.04700
T2C 160M-4	11	21.30	1440	89.8	91.7	91.0	0.83	72.95	2.5	1.6	2.5	7.1	75	119.0	0.08670
T2C 160L-4	15	27.47	1450	90.6	91.3	90.5	0.87	98.79	2.5	1.6	2.5	8.9	75	146.0	0.11272
T2C 180M-4	18.5	34.05	1450	91.2	91.8	90.8	0.86	121.8	2.5	1.6	2.8	8.6	76	161.0	0.14084
T2C 180L-4	22	39.4	1460	91.6	92.2	91.6	0.88	143.9	2.5	1.6	2.8	8.1	76	176.0	0.16541

T2C Series IE2 Efficiency Motors Technical Data (400V/50Hz)

Model	Output (kW)	Rated current (A)	Rotation speed (r/min)	Efficiency 100% load (%)	Efficiency 75% load (%)	Efficiency 50% load (%)	Power factor (Φ)	Rated torque (N.m)	T_{50}/T_n (Times)	T_{min}/T_n (Times)	T_{max}/T_n (Times)	I_{50}/I_n (Times)	Noise (dB)	Net weight (kg)	Moment of inertia(kg·m ²)
T2C 200L-4	30	53.3	1460	92.3	92.8	91.9	0.88	196.2	2.5	2.1	3.0	8.5	79	242.0	0.27306
T2C 225S-4	37	65.5	1470	92.7	93.9	92.6	0.88	240.4	2.2	1.3	2.3	7.6	81	315.0	0.50439
T2C 225M-4	45	78.4	1480	93.1	94.2	92.8	0.89	290.4	2.2	1.3	2.3	7.7	81	340.0	0.59389
T2C 250M-4	55	98.7	1480	93.5	94.4	93.6	0.86	354.9	2.5	1.5	2.5	8.6	83	420.0	0.70950
T2C 280S-4	75	128.0	1480	94	94.9	93.7	0.90	484.0	2.5	2.0	2.5	9	86	580.0	1.59510
T2C 280M-4	90	153.2	1480	94.2	94.9	93.7	0.90	580.7	2.5	2.0	2.5	8.7	86	650.0	1.89187
T2C 315S-4	110	190.9	1480	94.5	94.8	93.2	0.88	709.8	2.0	1.3	2.8	7.4	93	938.0	3.09253
T2C 315M-4	132	226.1	1480	94.7	95.0	93.6	0.89	851.8	2.0	1.3	2.6	7	93	1030.0	3.48345
T2C 315L1-4	160	273.4	1480	94.9	95.0	93.5	0.89	1032.4	2.0	1.3	2.6	6	97	1106.0	3.98390
T2C 315L2-4	200	341.1	1480	95.1	95.3	93.9	0.89	1290.5	2.0	1.3	2.3	6	97	1220.0	4.67201
T2C 355M1-4	220	375.2	1480	95.1	95.9	94.1	0.89	1419.6	1.8	1.3	2.3	5.5	101	1560.0	6.87200
T2C 355M2-4	250	426.3	1480	95.1	95.8	94.0	0.89	1613.2	1.8	1.3	2.3	5.5	101	1600.0	7.63820
T2C 355L1-4	280	477.5	1480	95.1	95.9	94.3	0.89	1806.8	1.8	1.3	2.3	5.5	101	1650.0	8.31927
T2C 355L2-4	315	531.2	1480	95.1	96.0	94.2	0.90	2032.6	1.8	1.3	2.3	5.5	101	1700.0	9.08547
T2C 355L3-4	355	598.7	1480	95.1	96.0	94.2	0.90	2290.7	1.8	1.3	2.3	5.5	101	1780.0	10.10708
T2C 90S-6	0.75	2.23	935	75.9	76.4	73.8	0.64	7.66	2.0	1.8	2.2	5	57	19.6	0.00360
T2C 90L-6	1.1	2.99	935	78.1	78.6	77.6	0.68	11.24	2.0	1.8	2.2	5	57	23.5	0.00536
T2C 100L-6	1.5	3.72	940	79.8	80.2	78.3	0.73	15.24	1.6	1.6	2.2	5	61	32.0	0.00877
T2C 112M-6	2.2	5.39	940	81.8	82.5	79.0	0.72	22.35	2.0	1.8	2.5	6	65	39.0	0.01468
T2C 132S-6	3	6.93	940	83.3	84.0	82.2	0.75	30.48	1.6	1.5	2.2	6	69	54.0	0.03039
T2C 132M1-6	4	9.22	950	84.6	85.1	83.5	0.74	40.21	2.0	1.6	2.5	6	69	65.0	0.03785
T2C 132M2-6	5.5	12.47	950	86	86.8	85.4	0.74	55.29	2.0	1.8	2.5	7	69	66.0	0.04890
T2C 160M-6	7.5	17.5	960	87.2	88.3	86.7	0.71	74.6	2.5	1.8	2.8	9	73	112.0	0.08726
T2C 160L-6	11	23.9	960	88.7	88.6	87.5	0.75	109.4	2.5	1.4	2.8	9	73	132.6	0.12069
T2C 180L-6	15	30.9	960	89.7	90.8	89.3	0.78	149.2	2.5	1.5	2.8	9	73	179.0	0.25695
T2C 200L1-6	18.5	36.9	970	90.4	91.0	89.8	0.80	182.1	2.0	1.4	2.8	9	76	221.4	0.36147
T2C 200L2-6	22	42.6	970	90.9	91.5	90.1	0.82	216.6	2.5	1.8	2.8	10	76	240.6	0.42742
T2C 225M-6	30	55.6	975	91.7	92.3	91.2	0.85	293.8	2.5	1.5	2.2	9	76	335.0	0.67058
T2C 250M-6	37	69.0	975	92.2	93.0	91.8	0.84	362.4	1.8	1.3	2.2	7	78	391.4	0.99243
T2C 280S-6	45	82.4	980	92.7	92.7	91.9	0.85	438.5	2.3	1.4	2.3	8.5	80	514.0	1.78548
T2C 280M1-6	55	99.2	980	93.1	93.2	92.2	0.86	536.0	2.5	1.7	2.8	9	80	584.0	2.20792
T2C 315S-6	75	135.9	980	93.7	94	92.3	0.85	730.9	2.0	1.3	2.3	7	85	807.0	3.25976
T2C 315M-6	90	162.6	980	94	94.6	92.3	0.85	877.0	2.0	1.3	2.3	7	85	913.0	3.90933
T2C 315L1-6	110	198.1	980	94.3	94.8	92.4	0.85	1071.9	2.0	1.3	2.3	7	85	966.0	4.54331
T2C 315L2-6	132	236.9	980	94.6	94.9	92.4	0.85	1286.3	2.0	1.3	2.3	6.5	85	1080.0	5.53956
T2C 355M1-6	160	286.6	980	94.8	94.9	92.5	0.85	1559.2	2.0	1.3	2.3	6.5	92	1537.0	8.97637
T2C 355M2-6	200	357.5	980	95	95	92.6	0.85	1949.0	2.0	1.3	2.3	6.5	92	1720.0	11.00175
T2C 355L-6	250	446.9	980	95	95.2	92.6	0.85	2436.2	2.0	1.3	2.3	6.5	92	1880.0	13.56011

T3C Series IE3 Efficiency Motors Technical Data (400V/50Hz)

Model	Output (kW)	Rated current (A)	Rotation speed (r/min)	Efficiency 100% load (%)	Efficiency 75% load (%)	Efficiency 50% load (%)	Power factor (Φ)	Rated torque (N.m)	T _s /T _n (Times)	T _{max} /T _n (Times)	T _{max} /T _s (Times)	I _s /I _n (Times)	Noise (dB)	Net weight (kg)	Moment of inertia (kg·m ²)
T3C 801-2	0.75	1.68	2880	80.7	81.0	76.2	0.80	2.49	2.5	2.1	2.8	7.5	67	15.20	0.00093
T3C 802-2	1.1	2.40	2880	82.7	83.5	81.6	0.80	3.65	2.5	1.8	2.8	8	67	17.10	0.00128
T3C 90S-2	1.5	3.06	2880	84.2	84.9	84.0	0.84	4.97	2.5	1.8	2.8	8.5	72	21.5	0.00224
T3C 90L-2	2.2	4.45	2880	85.9	86.4	84.7	0.83	7.30	2.5	1.8	2.8	8.6	72	24.6	0.00279
T3C 100L-2	3	5.65	2900	87.1	88.5	86.8	0.88	9.88	2.5	2.0	2.8	9.5	76	35.5	0.00496
T3C 112M-2	4	7.28	2910	88.1	88.5	87.1	0.90	13.13	2.5	2.0	2.8	10.5	77	44.5	0.00744
T3C 132S1-2	5.5	10.11	2910	89.2	90.2	88.6	0.88	18.05	2.5	2.0	3.0	10	80	63.2	0.01468
T3C 132S2-2	7.5	13.50	2920	90.1	90.8	89.3	0.89	24.53	2.5	1.5	3.0	10	80	70.2	0.01903
T3C 132M1-2	9.2	16.47	2920	90.6	91.2	89.5	0.89	30.09	2.5	1.5	3.0	10	80	76.8	0.02048
T3C 160M1-2	11	19.34	2930	91.2	93.8	93.0	0.90	35.85	2.5	1.4	3.0	9.5	86	118.0	0.05178
T3C 160M2-2	15	26.18	2940	91.9	93.1	92.9	0.90	48.72	2.5	1.4	3.0	10	86	128.0	0.06206
T3C 160L-2	18.5	31.76	2940	92.4	93.5	93.3	0.91	60.09	2.5	1.4	3.0	9.5	86	144.00	0.07669
T3C 180M-2	22	38.5	2945	92.7	94.1	93.6	0.89	71.34	2.5	1.4	3.0	9	89	183.40	0.09665
T3C 200L1-2	30	52.1	2945	93.3	93.8	93.2	0.89	97.3	2.5	1.5	2.5	8.5	92	247.00	0.17351
T3C 200L2-2	37	64.0	2945	93.7	94.4	94.2	0.89	120.0	2.5	1.5	2.5	8.5	92	268.00	0.20008
T3C 225M-2	45	75.9	2950	94	94.6	94.1	0.91	145.7	2.5	1.4	2.5	8.5	92	369.00	0.34366
T3C 250M-2	55	93.5	2960	94.3	94.5	93.1	0.90	177.4	2.5	1.4	2.6	10	93	428.00	0.44434
T3C 280S-2	75	125.6	2960	94.7	94.9	93.7	0.91	242.0	2.5	1.8	2.6	10	94	587.30	0.82911
T3C 280M-2	90	150.3	2960	95	95.2	94.3	0.91	290.4	2.5	1.8	2.6	10	94	655.00	0.98168
T3C 315S-2	110	185.3	2960	95.2	95.5	94.6	0.90	354.9	2.0	1.4	2.3	7	96	980.00	1.70352
T3C 315M-2	132	221.9	2960	95.4	95.5	94.7	0.90	425.9	2.0	1.4	2.3	7	96	1100.00	1.93860
T3C 315L1-2	160	267.8	2960	95.8	95.8	94.5	0.90	516.2	2.0	1.4	2.3	7	99	1155.00	2.19758
T3C 315L2-2	200	334.8	2960	95.8	96.0	94.7	0.90	645.3	2.0	1.4	2.3	7	99	1260.00	2.55368
T3C 355M1-2	220	394.6	2960	95.8	96.2	94.8	0.84	709.8	2.0	1.5	2.3	6.5	103	1590.00	2.95585
T3C 355M2-2	250	448.4	2960	95.8	96.2	94.8	0.84	806.6	2.0	1.5	2.3	6.5	103	1650.00	3.14272
T3C 355L1-2	280	502.2	2960	95.8	96.2	94.8	0.84	903.4	2.0	1.5	2.3	6.5	103	1715.00	3.47911
T3C 355L2-2	315	558.3	2960	95.8	96.2	94.8	0.85	1016.3	2.0	1.5	2.3	6.5	103	1780.00	3.85287
T3C 802-4	0.75	1.90	1420	82.5	82.8	80.6	0.69	5.04	2.8	2.2	2.8	6.3	58	18.20	0.00155
T3C 90S-4	1.1	2.62	1430	84.1	84.6	83.2	0.72	7.35	2.8	2.2	2.8	6.8	61	23.00	0.00372
T3C 90L-4	1.5	3.63	1430	85.3	86.1	85.2	0.70	10.02	2.8	2.2	3.0	7.3	61	26.30	0.00469
T3C 100L1-4	2.2	4.52	1430	86.7	87.8	85.2	0.81	14.69	2.8	2.2	3.0	8	64	35.50	0.00922
T3C 100L2-4	3	6.33	1435	87.7	88.0	85.9	0.78	19.97	2.5	2.2	3.0	8.2	64	38.50	0.01195
T3C 112M-4	4	7.95	1440	88.6	88.9	87.5	0.82	26.53	2.5	2.2	3.0	8.6	65	47.00	0.01545
T3C 132S-4	5.5	10.67	1440	89.6	90.9	88.9	0.83	36.48	2.5	1.8	3.0	9	71	68.30	0.03397
T3C 132M-4	7.5	14.09	1440	90.4	91.3	91.2	0.85	49.74	2.5	1.6	3.0	9	71	79.00	0.04412
T3C 132M2-4	9.2	17.19	1440	90.9	91.8	90.5	0.85	61.01	2.5	1.6	3.0	9	71	87.50	0.04700
T3C 160M-4	11	20.68	1450	91.4	92.2	91.7	0.84	72.45	2.5	1.3	3.0	10	75	127.00	0.10355
T3C 160L-4	15	27.33	1450	92.1	92.9	92.2	0.86	98.8	2.5	1.3	2.8	8.5	75	160.00	0.13750
T3C 180M-4	18.5	33.5	1460	92.6	93.6	93.0	0.86	121.0	2.5	1.8	3.0	9	76	169.40	0.15530
T3C 180L-4	22	39.2	1460	93	93.7	92.9	0.87	143.9	2.5	1.8	3.0	10	76	196.00	0.19433

T3C Series IE3 Efficiency Motors Technical Data (400V/50Hz)

Model	Output (kW)	Rated current (A)	Rotation speed (r/min)	Efficiency 100% load (%)	Efficiency 75% load (%)	Efficiency 50% load (%)	Power factor (Φ)	Rated torque (N.m)	T _s /T _n (Times)	T _{min} /T _n (Times)	T _{max} /T _n (Times)	I _s /I _n (Times)	Noise (dB)	Net weight (kg)	Moment of inertia (kg·m ²)
T3C 200L-4	30	57.1	1470	93.6	93.7	93.2	0.81	194.9	2.5	1.8	2.8	9	79	252.00	0.29441
T3C 225S-4	37	65.4	1470	93.9	95.2	94.3	0.87	240.4	2.5	1.4	2.5	9.2	81	324.50	0.57838
T3C 225M-4	45	79.3	1470	94.2	95.2	94.5	0.87	292.3	2.5	1.5	2.5	9	81	352.90	0.65309
T3C 250M-4	55	95.4	1470	94.6	95.2	94.5	0.88	357.3	2.5	1.8	2.5	8.5	83	427.40	0.76504
T3C 280S-4	75	131.0	1480	95	95.1	94.8	0.87	484.0	2.5	1.8	2.8	10	86	673.30	1.99603
T3C 280M-4	90	160.5	1480	95.2	95.1	95.0	0.85	580.7	2.5	1.8	2.8	10	86	692.00	2.18345
T3C 315S-4	110	189.1	1480	95.4	95.7	94.6	0.88	709.8	2.2	1.5	2.6	9	93	1027.00	3.71808
T3C 315M-4	132	226.5	1480	95.6	95.8	95.0	0.88	851.8	2.2	1.5	2.6	9	93	1155.00	4.29667
T3C 315L1-4	160	273.9	1480	95.8	96.0	95.1	0.88	1032.4	2.2	1.5	2.6	9	97	1240.00	5.10990
T3C 315L2-4	200	337.9	1480	96	96.2	95.3	0.89	1290.5	2.2	1.5	2.6	9	97	1400.00	6.17334
T3C 355M1-4	220	371.7	1480	96	96.2	95.3	0.89	1419.6	2.0	1.3	2.3	8	101	1560.00	7.04227
T3C 355M2-4	250	422.3	1480	96	96.3	95.4	0.89	1613.2	2.0	1.3	2.3	8	101	1600.00	7.63820
T3C 355L1-4	280	473.0	1480	96	96.4	95.4	0.89	1806.8	2.0	1.3	2.3	8	101	1650.00	8.31927
T3C 355L2-4	315	532.1	1480	96	96.3	95.5	0.89	2032.6	2.0	1.3	2.3	8	101	1700.00	9.34080
T3C 90S-6	0.75	2.05	935	78.9	79.6	77.2	0.67	7.66	2.0	1.8	2.2	5	57	21.50	0.00435
T3C 90L-6	1.1	2.97	940	81	81.5	80.2	0.66	11.18	2.3	1.8	2.2	5.2	57	25.50	0.00611
T3C 100L-6	1.5	3.55	940	82.5	83.0	81.6	0.74	15.24	2.0	1.7	2.2	5.2	61	33.50	0.00972
T3C 112M-6	2.2	5.38	940	84.3	85.0	83.2	0.70	22.35	2.0	1.8	2.2	6.2	65	40.00	0.01637
T3C 132S-6	3	6.84	940	85.6	86.1	84.5	0.74	30.48	2.0	1.7	2.2	6	69	59.00	0.03223
T3C 132M1-6	4	8.99	950	86.8	87.6	85.2	0.74	40.21	2.0	1.6	2.5	7	69	75.50	0.04338
T3C 132M2-6	5.5	12.71	950	88	88.8	86.9	0.71	55.29	2.3	1.8	2.5	7.5	69	76.30	0.05443
T3C 160M-6	7.5	16.2	960	89.1	90.3	88.0	0.75	74.6	2.3	1.4	2.8	7.5	73	112.00	0.08726
T3C 160L-6	11	23.1	960	90.3	91.2	88.5	0.76	109.4	2.5	1.4	2.8	8.5	73	134.00	0.13544
T3C 180L-6	15	30.1	960	91.2	92.0	90.3	0.79	149.2	2.5	1.4	2.8	8	73	184.50	0.27973
T3C 200L1-6	18.5	36.4	970	91.7	92.3	90.6	0.80	182.1	2.5	1.4	2.8	9.5	76	231.00	0.38345
T3C 200L2-6	22	42.5	970	92.2	93.0	91.3	0.81	216.6	2.5	1.5	2.8	10	76	249.00	0.44941
T3C 225M-6	30	53.0	975	92.9	93.8	90.9	0.88	293.8	1.8	1.5	2.2	7	76	339.00	0.67058
T3C 250M-6	37	67.3	975	93.3	94.0	91.8	0.85	362.4	1.8	1.3	2.0	7	78	399.40	0.99243
T3C 280S-6	45	83.5	980	93.7	94.6	92.7	0.83	438.5	2.5	1.8	2.8	10	80	551.00	2.20274
T3C 280M1-6	55	99.3	980	94.1	95.0	93.4	0.85	536.0	2.5	1.8	2.8	10	80	624.30	2.57302
T3C 315S-6	75	139.6	980	94.6	94.8	93.2	0.82	730.9	2.0	1.3	2.3	7.5	85	860.00	3.80317
T3C 315M-6	90	166.9	980	94.9	95	93.4	0.82	877.0	2.0	1.3	2.3	7.5	85	970.00	4.45274
T3C 315L1-6	110	203.6	980	95.1	95.4	94	0.82	1071.9	2.0	1.3	2.3	7.5	85	1070.00	5.53956
T3C 315L2-6	132	243.6	980	95.4	95.7	94.2	0.82	1286.3	2.0	1.3	2.3	7.5	85	1196.00	6.62638
T3C 355M1-6	160	294.6	980	95.6	95.8	94.3	0.82	1559.2	2.0	1.3	2.3	7.5	92	1537.00	8.97637
T3C 355M2-6	200	367.5	980	95.8	95.8	94.3	0.82	1949.0	2.0	1.3	2.3	7.5	92	1720.00	11.00175
T3C 355L1-6	220	404.2	980	95.8	96	94.2	0.82	2143.9	2.0	1.3	2.3	7.5	92	1800.00	11.64134
T3C 355L-6	250	459.3	980	95.8	96	94.3	0.82	2436.2	2.0	1.3	2.3	7.5	92	1880.00	13.56011

T4C Series IE4 Efficiency Motors Technical Data (400V/50Hz)

Model	Output (kW)	Rated current (A)	Rotation speed (r/min)	Efficiency 100% load (%)	Efficiency 75% load (%)	Efficiency 50% load (%)	Power factor (Φ)	Rated torque (N.m)	T_e/T_n (Times)	T_{max}/T_n (Times)	T_{max}/T_e (Times)	I_e/I_n (Times)	Noise (dB)	Net weight (kg)	Moment of inertia (kg·m ²)
T4C 801-2	0.75	1.56	2920	83.5	83.7	82	0.83	2.45	2.2	1.5	2.3	8.5	62	16	0.00138
T4C 802-2	1.1	2.25	2920	85.2	85.4	84.5	0.83	3.6	2.2	1.5	2.3	8.5	62	17	0.00179
T4C 90S-2	1.5	2.94	2940	86.5	86.7	86.4	0.85	4.87	2.2	1.5	2.3	9	67	23	0.00264
T4C 90L-2	2.2	4.20	2940	88	88.3	87.8	0.86	7.15	2.2	1.4	2.3	9	67	26	0.00358
T4C 100L-2	3	5.59	2945	89.1	89.3	88.9	0.87	9.73	2.2	1.4	2.3	9.5	74	36	0.00576
T4C 112M-2	4	7.29	2945	90	90.2	89.8	0.88	13	2.2	1.4	2.3	9.5	77	50	0.00973
T4C 132S1-2	5.5	9.92	2950	90.9	91.2	90.7	0.88	17.8	2	1.2	2.3	9.5	79	67	0.0284
T4C 132S2-2	7.5	13.26	2950	91.7	92	91.5	0.89	24.3	2	1.2	2.3	9.5	79	72	0.0349
T4C 160M1-2	11	19.27	2960	92.6	92.8	92.5	0.89	35.5	2	1.2	2.3	9.5	81	129	0.0695
T4C 160M2-2	15	26.07	2960	93.3	93.5	93.1	0.89	48.42	2	1.2	2.3	9.5	81	155	0.0848
T4C 160L-2	18.5	32.02	2965	93.7	93.9	93.6	0.89	59.6	2	1.1	2.3	9.5	81	176	0.102
T4C 180M-2	22	37.96	2965	94	94.2	93.8	0.89	70.9	2	1.1	2.3	9.5	83	220	0.163
T4C 200L1-2	30	51.48	2970	94.5	94.7	94.3	0.89	96.5	2	1.1	2.3	9	84	278	0.267
T4C 200L2-2	37	63.30	2970	94.8	95	94.7	0.89	119	2	1.1	2.3	9	84	292	0.303
T4C 225M-2	45	76.82	2975	95	95.2	94	0.89	144.5	2	1	2.3	9	86	387	0.393
T4C 250M-2	55	93.60	2980	95.3	95.5	94.3	0.89	176.3	2	1	2.3	9	89	531	1.044
T4C 280S-2	75	127.23	2980	95.6	95.8	95	0.89	240.46	1.8	0.9	2.3	8.5	91	625	1.267
T4C 280M-2	90	152.36	2980	95.8	95.9	95.2	0.89	288.55	1.8	0.9	2.3	8.5	91	700	1.495
T4C 315S-2	110	185.83	2980	96	96.1	95.6	0.89	352.67	1.8	0.9	2.3	8.5	92	1110	2.036
T4C 315M-2	132	222.53	2980	96.2	96.2	95.7	0.89	423.2	1.8	0.9	2.3	8.5	92	1228	2.352
T4C 315L1-2	160	269.45	2980	96.3	96.3	95.8	0.89	513	1.8	0.9	2.2	8.5	92	1321	2.720
T4C 315L2-2	200	336.12	2980	96.5	96.5	96	0.89	641.2	1.8	0.8	2.2	8.5	92	1450	3.273
T4C 355M-2	250	420.15	2980	96.5	96.5	96	0.89	801.5	1.6	0.8	2.2	8.5	97	1700	4.481
T4C 355L-2	315	529.39	2980	96.5	96.5	96	0.89	1009.9	1.6	0.8	2.2	8.5	97	2030	5.604
T4C 802-4	0.75	1.71	1435	85.7	85.9	83.9	0.74	4.99	2.3	1.6	2.3	8.5	56	19	0.00301
T4C 90S-4	1.1	2.43	1445	87.2	87.4	85.7	0.75	7.27	2.3	1.6	2.3	8.5	59	25	0.00487
T4C 90L-4	1.5	3.23	1445	88.2	88.4	87.1	0.76	9.92	2.3	1.6	2.3	9	59	31	0.00646
T4C 100L1-4	2.2	4.49	1450	89.5	89.7	88.4	0.79	14.5	2.3	1.5	2.3	9	64	39	0.0132
T4C 100L2-4	3	5.99	1450	90.4	90.6	90	0.8	19.77	2.3	1.5	2.3	9.5	64	45	0.0183
T4C 112M-4	4	7.92	1465	91.1	91.3	90.9	0.8	26.1	2.3	1.5	2.3	9.5	65	61	0.0236
T4C 132S-4	5.5	10.80	1470	91.9	92.1	91.5	0.8	35.75	2	1.4	2.3	9.5	71	75	0.0627
T4C 132M-4	7.5	14.43	1470	92.6	92.8	92	0.81	48.75	2	1.4	2.3	9.5	71	83	0.0716
T4C 160M-4	11	20.50	1475	93.3	93.5	92.8	0.83	71.25	2	1.4	2.3	9.5	73	160	0.144
T4C 160L-4	15	27.45	1475	93.9	94.1	92.8	0.84	97.16	2	1.4	2.3	9.5	73	179	0.184
T4C 180M-4	18.5	33.35	1475	94.2	94.4	93.6	0.85	119.83	2	1.2	2.3	9.5	76	218	0.266
T4C 180L-4	22	39.53	1475	94.5	94.7	93.8	0.85	142.5	2	1.2	2.3	9.5	76	249	0.303
T4C 200L-4	30	53.68	1480	94.9	95.2	94	0.85	193.67	2	1.2	2.3	9	76	295	0.566
T4C 225S-4	37	66.00	1480	95.2	95.4	94.6	0.85	238.85	2	1.2	2.3	9	78	403	0.794
T4C 225M-4	45	80.10	1480	95.4	95.6	95	0.85	290.5	2	1.1	2.3	9	78	425	0.869
T4C 250M-4	55	96.46	1480	95.7	95.9	95.3	0.86	355	2	1.1	2.3	9	79	550	1.435
T4C 280S-4	75	129.61	1485	96	96.1	95.4	0.87	482.5	2	1	2.3	8.5	80	644	2.149
T4C 280M-4	90	153.61	1485	96.1	96.1	95.8	0.88	579	2	1	2.3	8.5	80	714	2.377
T4C 315S-4	110	185.25	1485	96.3	96.3	95.9	0.89	707.7	1.8	1	2.2	8.5	88	1130	3.943
T4C 315M-4	132	222.07	1485	96.4	96.4	96.2	0.89	849.3	1.8	1	2.2	8.5	88	1260	4.471
T4C 315L1-4	160	265.63	1485	96.6	96.6	96.3	0.9	1029.4	1.8	1	2.2	8.5	88	1377	5.267
T4C 315L2-4	200	331.70	1485	96.7	96.7	96.3	0.9	1286.8	1.8	0.9	2.2	8.5	88	1558	6.291
T4C 355M-4	250	414.62	1485	96.7	96.7	96.3	0.9	1608.4	1.8	0.9	2.2	8.5	92	1740	10.212
T4C 355L-4	315	522.42	1485	96.7	96.7	96.4	0.9	2026.6	1.8	0.8	2.2	8.5	92	1933	11.374

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