

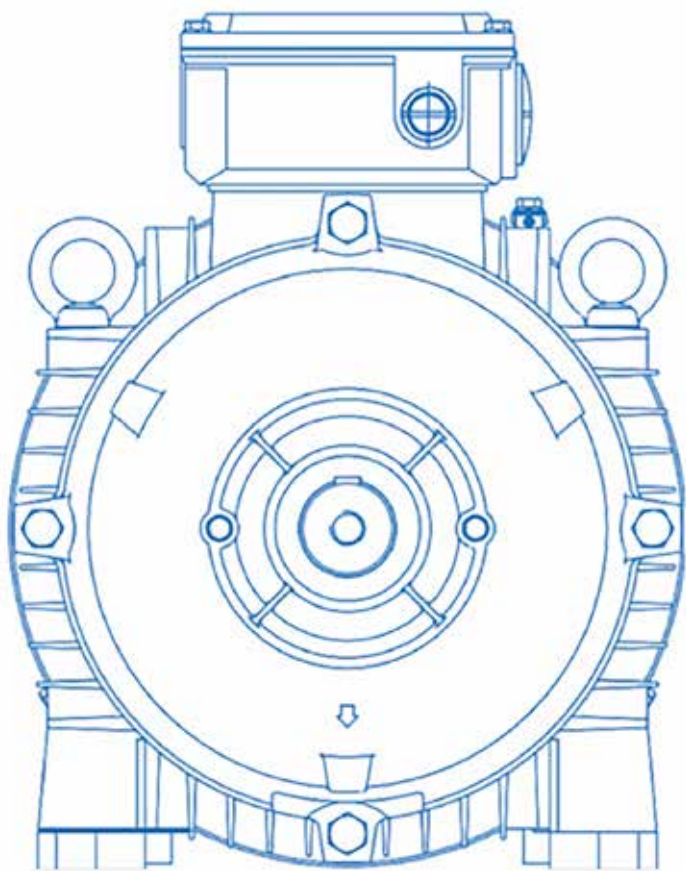


Low voltage Aluminium

IE3 from 0,75 to 37 kW

IE2 from 0,18 to 37 kW

IE1 from 0,18 to 18,5 kW



TECO 

distributed by



MOTOVARIO[®]

HEART OF MOTION

a TECO Group company

AERV AEQV

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TECO General

TECO operates in 45 countries worldwide and affiliates gained a turnover of 1.9 Billion EURO, with approximately 20.000 employees worldwide. More than 50% of the turnover was generated by the Electric Motor business. TECO is listed in the stock exchange in Taipei, TAIWAN. Detailed financial data can be downloaded from the TECO website http://www.teco.com.tw/en_version, under "Investor Relations".

TECO is mainly focused on

- Sustainable development with new competitive advantages
- Enhancing service quality
- Development and education of experienced employees
- Creating outstanding products

TECO has

- Significant Experience in the Motor Industry
- Experienced Engineering and Manufacturing Staff
- State of the art factories in the most important manufacturing markets
- State of the art Testing Facilities for the full power and voltage range of its motors

In Europe, along with well-known TECO-Westinghouse Medium Voltage Motors, TECO manufactures full range Low Voltage Stock Motors to IE3 standard, with cast iron and aluminium cases. With the recently released 510 Series, TECO offers high performance and cost effective wide range of Variable Speed Drives that fit virtually all applications. So whatever your motor and drive requirement our experienced engineering team can help and advise on the correct products to suit your applications.

References in this catalogue:

- TECO Manual "INSTALLATION, OPERATION and MAINTENANCE INSTRUCTIONS FOR TECO LOW VOLTAGE MOTORS Type AESV3E and AESU3E"
- TECO short form safety instructions

1 General information

1.1 Standards and regulations

The standard electric motors conform with the following European and international standards for rotating electrical machines:

TITLE	CEI / EN	IEC
General prescriptions for rotating electrical machines	CEI EN 60034-1	IEC 60034-1
Normalised methods for the determination, by testing, of the loss and efficiency of rotating electrical machines (excluding traction vehicle motors)	CEI EN 60034-2-1	IEC 60034-2-1
Classification of the protection ratings of rotating electrical machines	CEI EN 60034-5	IEC 60034-5
Cooling systems for electrical machines	CEI EN 60034-6	IEC 60034-6
Mounting position and installation type codes	CEI EN 60034-7	IEC 60034-7
Marking terminals and direction of rotation for rotating electrical machines	CEI 2-8	IEC 60034-8
Noise limits	CEI EN 60034-9	IEC 60034-9
Vibration levels for electrical machines	CEI EN 60034-14	IEC 60034-14
Efficiency classes for alternate current motors powered by mains (IE Code)	CEI EN 60034-30-1	IEC 60034-30-1
Dimensions and nominal powers of rotating electrical machines	EN 50347	IEC 60072
Nominal voltage for low voltage public power grids	CEI 8-6	IEC 60038

Figure 1.1 Standards and regulations

1.2 Conformity with community directives

1.2.1 The relevant directives

The standard electric motors are in conformity with the following Directives

- Low Voltage Directive 2014/35/UE;
- Directive EMC 2014/30/UE regarding intrinsic characteristics in relation to emissions and levels of immunity;
- Directive RoHS 2015/863/UE relating to the prohibition or limitation of use of noxious substances in electrical and electronic equipment;
- ErP Directive 2009/125 / EC regarding eco-compatible design and its implementing regulation n ° 640/2009.

The manufacturer of the machine is exclusively responsible for the conformity with the Machinery Directive and EMC Directive of a complete installation. Electric motors may not be commissioned until the machines to which they are coupled have themselves been declared conforming with the Machinery Directive (Certificate of Incorporation – Directive 2006/42/CE).

1.2.2 Efficiency regulation in Europe

- **IEC 60034-2-1** (standard methods for determining losses and efficiency from tests) and
- **IEC 60034-30** (efficiency classes of single-speed, three-phase cage-induction motors; IE-code).

By IEC 60034-2-1 an improved procedure for testing of the efficiency is described. In general the nominal efficiency evaluated by this method is slightly lower than the value based on the formerly used procedure. IEC 60034-30 defines classes of efficiency for standard motors ("International Efficiency"):

- "IE1" (Standard Efficiency),
- "IE2" (High Efficiency),
- "IE3" (Premium Efficiency)
- "IE4" (Super Premium efficiency).

These efficiency class definitions demand a minimum efficiency value depending on power rating and pole number of the motor. (This classification replaces the formerly used efficiency class definitions like e.g. "eff1".) The motors in this catalogue (IE3) fulfil or override these minimum levels.

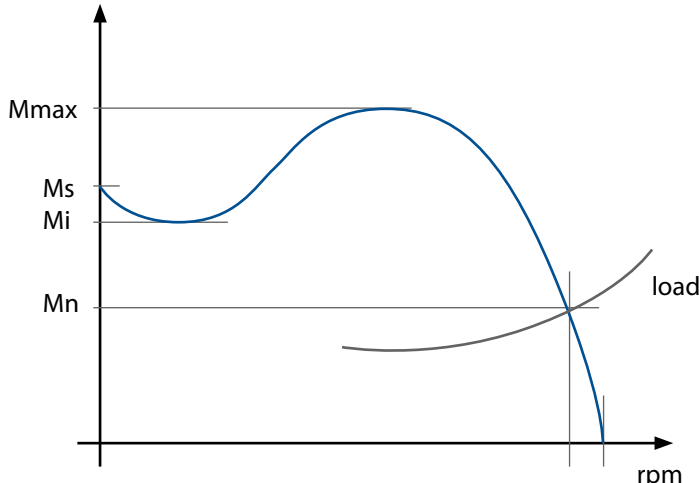
The European Union published on 25 October 2019 the result of the revision of the Commission Regulation (EC) 640/2009 for electric motors. The new Commission Regulation (EU) 2019/1781 will require minimum requirements for a wider scope of motors (0.12 kW - 1000 kW), will also include 8-pole motors and will abolish the former requirement of an IE2 motor plus a converter instead of IE3. Also, maximum losses for converters between 0.12 kW and 1000 kW at IE2 are requested. From 2023, IE4 will be required for motors between 75 kW and 200 kW.

- 01/01 2017: efficiency class IE3 for all motors from 0,75 kW up to 375 kW (or IE2 if inverter operated).
- 01/07/2021: efficiency class IE3 for all motors from 0,75 kW up to 1000 kW
- 01/07/2021: efficiency class IE2 for all motors from 0,12 kW up to 0,55 kW
- 01/07/2023: efficiency class IE4 for all motors from 75 kW up to 200 kW in 2,4,6 pole

2 Nominal characteristics

2.1 Definition of characteristics

Nominal characteristics: total of numerical electrical and mechanical values (power voltage, frequency, current, speed, power delivery,...) together with their duration and sequence in time, attributed to the machine and indicated on the nameplate, in conformity with the specified conditions. In particular, the following values in relation to the operation of the motor; the same symbols are used in the performance tables.

Measurement	Symbols and units of measurement	Description
nominal voltage	V_n [V]	concatenated voltage at the machine's terminals at nominal power
nominal current	I_n [A]	current absorbed by the motor at nominal power
starting current	I_s [A]	line current absorbed by the motor at nominal starting voltage and frequency
nominal torque	M_n [Nm]	torque delivered by motor shaft at nominal conditions
starting torque	M_s [Nm]	torque delivered by the motor shaft at starting
sag torque	M_i [Nm]	minimum asynchronous torque under normal running conditions developed by the motor at speeds from zero to maximum torque speed; this definition does not apply to asynchronous motors whose torque decreases continuously as speed increases
maximum torque	M_{max} [Nm]	<p>maximum torque under normal running conditions developed by the motor without a sudden drop in speed; this definition does not apply to asynchronous motors whose torque decreases continuously as speed increases</p> 

Measurement	Symbols and units of measurement	Description
synchronous speed	ω_s [rad/s] n_s [min ⁻¹]	synchronous motor shaft speed under no load; the following relations apply: $n_s = 120 \times f_n / p$ [rpm] $\omega_s = 4\pi \times f_n / p$ [rad/s] $\omega_s = n_s / 9,55$ [rad/s] where: f_n = nominal power supply frequency [Hz] p = number of motor poles it follows that
nominal speed	n_n [rpm] ω_n [rad/s]	motor shaft speed in nominal conditions at nominal power
creep nominal creep	s s_n	ratio between the deviation of the shaft speed relative to the synchronous speed and the synchronous speed itself; normally declared as a percentage: $s = (\omega_s - \omega) / \omega_s \times 100$ $s_n = (\omega_s - \omega_n) / \omega_s \times 100$
nominal power delivery	P_n [W]	numerical value of the mechanical power delivered to the shaft at nominal conditions P_n (W) = T_n [Nm] $\times \omega_n$ [rad/s]
power factor nominal power factor	$\cos\phi$ $\cos\phi_n$	cosine of the phase angle between the voltage and current, a function of the load characteristics
efficiency	η	ratio between mechanical power delivery and electrical power absorption $\eta = P / P_a$ $\eta\% = P / P_a \times 100$ once we know the efficiency, the power delivered to the shaft can be calculated as follows: asynchronous three-phase motor P [W] = $\sqrt{3}V[V] I[A]\eta\cos\phi$
moment of inertia	J [kgxm ²]	Product of rotating mass m [kg] and the square of the equivalent radius of rotation r [m]: $J = mr^2$ In practice one uses PD ² , the product of the weight [kgp] and the square of the equivalent diameter of rotation D [m]; it follows that: PD^2 [kgp xm ²] = $4J$ [kgxm ²] Note that the weight in the practical system corresponds (numerically) to the mass in the SI system

Figure 2.1 definition of characteristics

2.2 Tolerances

Rating, Performance	
Product Group, Design standard	Low Voltage Squirrel Cage Induction Motor, IEC 60034
Nominal voltages	3 AC; 230 V–690 V
Winding configuration	Star/Delta, 6 winding ends
Winding temperature rise	Less than 80 K acc. Utilization B (by resistance method)
Method of starting	Full Voltage Direct On Line or Star/Delta starting
Nominal frequency	50 Hz or 60 Hz; tolerance according to IEC 60034-1
Inverter Operation	Suitable for inverter operation according to IEC 60034-17
Output range	0,18 kW – 37 kW (50 Hz) or 0,21 kW- 41,6 kW (60 Hz)
Duty type	Continuous (S1); SF 1.0 (data for other duty types on request)
Efficiency	IE3, IE2 and IE1 according to IEC 60034-30
Range of frame size	From 71 up to 200
Pole numbers	2-poles; 4-poles; 6-poles
Rotational speed (synchronous)	1000 rpm–3000 rpm (50 Hz); 1200 rpm–3600 rpm (60 Hz)
Rotational direction	Clockwise acc. IEC definition; suitable for bidirectional operation
Locked rotor torque	Tolerance: –15 %; +25 %
Pull up torque	Tolerance: –15 % (Minimum: 30 % of FLT)
Breakdown torque	>160 % of full load torque; tolerance – 10 % included
Slip	Tolerance: ±30 % for rating < 1 kW; ±20 % for rating ≥ 1 kW
Efficiency η	Tolerance: –0,15 (1– η) for rating < 150 kW
Power factor $\cos \varphi$	Tolerance: (1– $\cos \varphi$)/6 (min. 0,02; max 0,07)
Locked rotor current	Tolerance: +20 %
Acoustic noise level	Tolerance: +3dB(A) acc. to IEC 60034-1
Vibration Level	motor shaft speed in nominal conditions at nominal power

Figure 2.2 tolerances

3 Product information

3.1 Introduction

TECO Aluminum squirrel cage induction motors AERV AEQV are designed, manufactured and tested to meet the latest European and International Standards. The high quality and reliable construction, are ideally suitable for all industrial markets.

3.2 Design conformity

IEC 60034

IEC 60072

Low Voltage Directive 2014/35/EU

EMC Directive 2014/30/EU.

Directive RoHS 2015/863/UE

ErP Directive 2009/125 / EC

3.3 Product efficiency

IEC 60034-2-1 (standard methods for determining losses and efficiency from tests)

IEC 60034-30 (efficiency classes of single-speed, three-phase cage-induction motors; IE-code).

By IEC 60034-2-1 an improved procedure for testing of the efficiency is described. In general the nominal efficiency evaluated by this method is slightly lower than the value based on the formerly used procedure. IEC 60034-30 defines classes of efficiency for standard motors ("International Efficiency")

The motor type provide efficiency class depending on output:

Output ≥ 0.75 kW "IE3" (Premium Efficiency)

Output ≥ 0.18 kW "IE2" (High Efficiency)

Output ≥ 0.18 kW "IE1" (Standard Efficiency)

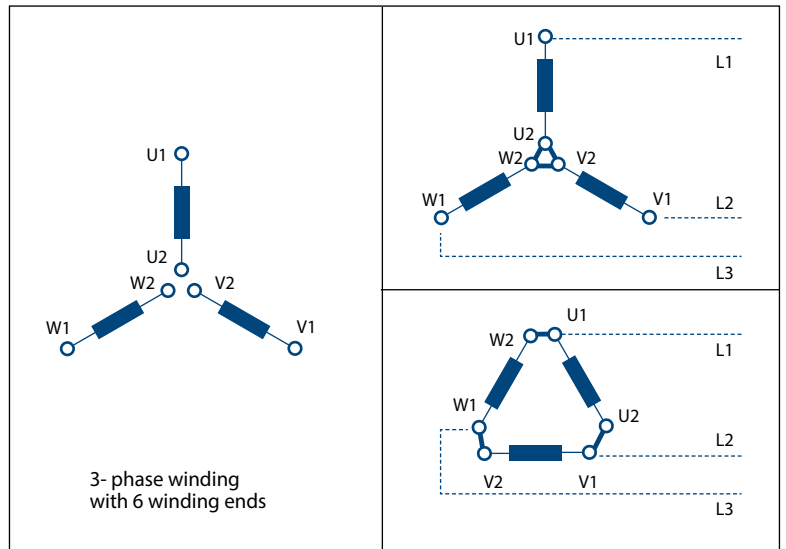
3.4 Electrical design

3.4.1 Voltage supply

All motors work with both Delta or Star configurations

Output $\geq 2.2\text{kW}$ 220/240 Δ 50
 250/280 Δ 60
 380/415 Y 50
 440/480 Y 60

Output $\geq 3.0\text{kW}$ 380/415 Δ 50
 440/480 Δ 60
 660/690 Y 50



3.4.1 voltage supply

3.4.2 Stator winding insulation

The stator winding is carried out as a wire random winding. High quality enamelled wires are used. Insulating sheets provide proper performance for

- insulation phase to ground,
- insulation phase to phase and
- interturn insulation.

An appropriate phase separation and a proper bandage of the winding overhang ensure high electric and mechanical strength. The stator winding is rotating dip impregnated with varnish or resin according to "thermal class F" requirements. According to the classification EN 60085 thermal class F allows a maximum hot spot temperature of 155 °C.

TECO motors covered by this catalogue are utilized (under nominal conditions) according to class "B":

- average temperature rise (by resistance method) is 80 °K;
- maximum spot temperature is 130 °C.

3.4.3 Thermal protection

For thermal protection of the winding as a standard 3 temperature PTC thermistors are embedded in the winding; one for each phase (according to standards IEC 60034-11 and DIN 44081). Their nominal temperature level is 150 °C; when reaching this temperature their resistance suddenly escalates to a high level. They are connected in series and lead to terminals in the terminal box. A suitable monitoring device according to standard DIN 44081 shall be connected by customer and shall be used for tripping the system.

When driven by inverter, the use of this method of thermal protection is mandatory; protection measures based on operating current are not suitable in this case. A warning on the sticker inside the terminal box shows that no voltage higher than 2,5 V must be applied on these terminals.

3.4.4 Rated power

The rated power of the motor is referred to as mechanical power obtained from the motor shaft at nominal current and voltage values printed on the label of the motor.

Electrical power (P_e); is the power drawn from the mains and is greater than the mechanical power obtained from the motor shaft due to losses.

$$P_e = \sqrt{3} \cdot U \cdot I \cdot \cos \varphi$$

The efficiency of the motors refers to the ratio of the mechanical power obtained from the motor shaft with electrical power drawn from the mains. Efficiency rates printed in the motor catalogue are tested by the method specified in IEC 60034-2-1.

Electrical values specified in motor catalogue are valid at ambient temperature of 40 °C, altitude up to 1000 and continuous operation S1 and does not include the special operation conditions. In applications where temperature or altitude values are not met power obtained from motor shaft varies as indicated in the tables.

	Temperature				
	≅ 40°C	45°C	50°C	55°C	60°C
Nominal power kW	100%	95%	90%	85%	80%

	Altitude			
	up to 1000 m	2000m	3000m	4000m
Nominal power kW	100%	95%	90%	80%

Figure 3.4.4 Rated power and factor

3.4.5 Overload capability

A minimum of overload capability is defined in IEC 60034-1 section 9:

- Min. 2 min. at 150 % of nominal current (for motors with power rating up to 315 kW);
- Min. 160 % of full load torque for 15 seconds.

3.4.6 Locked rotor time

The motors are suitable for direct starting; however, the high current during starting causes a high thermal load for the stator winding and especially for the rotor.

A maximum locked rotor time has to be regarded, depending on the type. The table below shows the max. duration when starting at cold machine and at nominal operation temperature:

Frame size	3000 rpm		1500 rpm		1000 rpm	
	Cold [s]	Hot [s]	Cold [s]	Hot [s]	Cold [s]	Hot [s]
71	50	20	75	30	140	55
80	40	15	60	25	90	35
90	35	13	50	20	65	25
100	32	12	40	17	50	20
112	30	11	35	14	40	16
132	28	10	30	12	32	13
160	26	9	27	10	28	10
180	24	8	25	9	25	9
200	22	8	23	8	23	9

Periods in Delta-Star starting should be multiplied by about 3

Figure 3.4.6 Locked rotor time

3.4.7 Terminal box and wiring

Terminal boxes are generously proportioned and rotatable 4 x 90-degree increments and contain a 6 terminal connection block and earth terminal directly connected to the frame in compliance with relevant European Directives. Boxes are with gaskets between frame, box, cover and gland plate for IP55 protection. The terminal box located on the top of the frame as standard. The multi-mount design allows the terminal box to be fixed in three separate positions giving complete user adaptability.

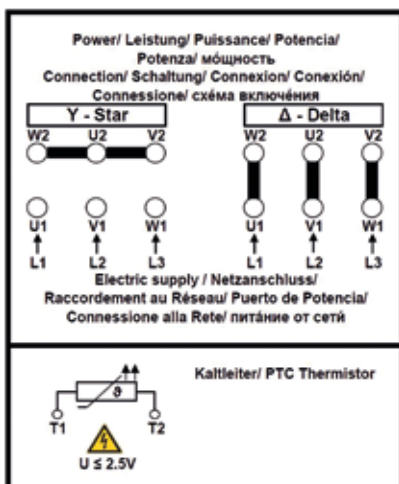


Figure 3.4.7 terminal box and wiring label

The wiring diagram sticker of the accessories shall be placed inside the terminal box lid.

3.5 Degree of protection

The level of protection against environmental conditions like water, dust, etc. is IP55, as defined in IEC 60034-5. The user has to choose a sufficient degree of protection according to the application environmental conditions. It does not account for protection against mechanical damage or special conditions, including humidity (for example, as caused by condensation), corrosive vapors, mould, insects or explosive atmospheres. The code indicating the protection rating is composed of the letters IP followed by two characteristic digits, which indicate conformity with the conditions, indicated in the table.

The first digit indicates the degree of protection against ingress of solid matter and approach to or contact with live components	
0	no protection
1	protection against ingress of solid bodies of diameter greater than 50mm. (e.g. involuntary contact with the hands)
2	protection against ingress of solid bodies of diameter greater than 12mm. (e.g. finger)
3	protection against ingress of solid bodies of diameter greater than 2.5mm
4	protection against ingress of solid bodies of diameter greater than 1mm
5	protection against ingress of dust; penetration by dust is not completely eliminated, but it may not enter in amounts sufficient to compromise the operation of the motor
6	total protection against ingress of dust

The second digit indicates the degree of protection against ingress of water	
0	no protection
1	drops of water falling vertically may not cause damage (e.g. condensation)
2	drops of water falling vertically may not cause damage when the machine is inclined at any angle up to 15° from its normal position
3	water falling at an angle to the vertical of up to 60° may not cause damage
4	water sprayed onto the machine from any direction may not cause damage
5	water sprayed onto the machine with a nozzle from any direction may not cause damage
6	waves or jets of water may not penetrate into the machine in amounts sufficient to cause damage
7	water may not penetrate into the machine in amounts sufficient to cause damage when it is submerged in given conditions of pressure and duration
8	the motor may remain submerged permanently in water in the conditions indicated by the manufacturer

Figure 3.5 degree of protection

3.6 Mounting arrangement

The motors can be delivered in a large variety of possible physical arrangements. In IEC 60034-7 the construction and arrangement is classified, (IM code as e.g. "IM B3"). Mechanical interface dimensions and their tolerances are standardized for each frame size. Table of some typical arrangements:







Mounting	Code acc. IEC 60034-7		Description	
Diagram	Code I	Code II	Feet	Flange
Horizontal use:				
	IM B3	IM 1001	with feet	—
	IM B5	IM 3001	—	with flange (clearance fixing holes)
	IM B14	IM 3601	—	with flange (tapped fixing holes)
	IM B34	IM 2101	with feet	with flange (tapped fixing holes)
	IM B35	IM 2001	with feet	with flange (clearance fixing holes)
Vertical use:				
	IM V1	IM 3011	—	with flange (clearance fixing holes) shaft up

Figure 3.6 Mounting arrangement

3.7 Cooling

TECO Aluminum motor is cooled from the outer surface (IEC/EN 60034-6- IC411), with cooling fan made of Polyamide. The cooling fan is mounted on motor shaft from the rear and motor rotation direction does not prevent the function of the fan. The cooling fan is protected by the housing manufactured from perforated sheet allowing sufficient airflow to the rear surface and in size to prevent fingers to enter the holes.

Motor should be mounted, leaving enough space so that the motor's cooling fan is not blocked.

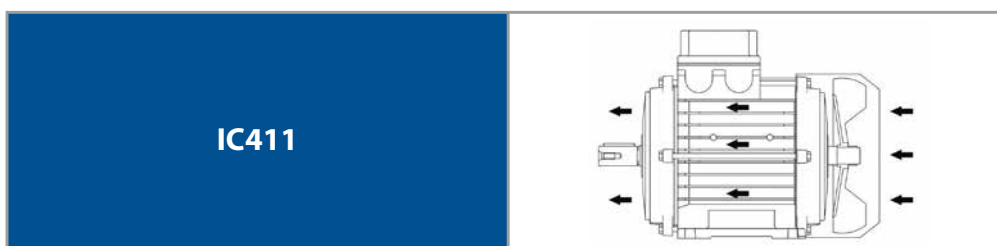


Figure 3.7 Cooling

3.8 Cable access

Cable entries to the terminal box are made using standard couplings in holes drilled in accordance with DIN 42925.

Frame size	Number of terminals	Connector nut	Max. conductor cross-section	The largest cable outer diameter	Cable gland
71	6	M4	2.5	16	M20x1.5
80	6	M4	2.5	16	M20x1.5
90	6	M4	2.5	16	M20x1.5
100	6	M5	2.5	16	2xM20x1.5
112	6	M5	2.5	16	2xM20x1.5
132	6	M5	6.0	21	2xM25x1.5
160	6	MB	16.0	29	2xM32x1.5
180	6	M6	16.0	29	2xM32x1.5
200	6	M8	50.0	36	2xM40x1.5 M12x1.5

Figure 3.7 cooling

3.9 Shaft end

Standard motors have only one cylindrical shaft end and they comply with the standard IEC 60072-1. Key seat in sizes specified in the standard is gained on motor shaft and shipped as key installed. Both sides shaft end are threaded as per DIN 332-2. Non-Drive end shaft, to be drilled and tapped for usages such as tacho generators, sensors or encoders mounting, are available as option.

Shaft end runout, the concentricity of the flange face and steepness of surface are in compliance with IEC 60 072-1. Increased accuracy tolerance R [reduced] can be supplied upon request.

Fr#	Centre hole			
	DE		NDE	
	Diameter	Thread	Diameter	Thread
71	14	M5X12.5	14	M5X12.5
80	19	M6X16	19	M6X16
90	24	M8X19	19	M6X16
100	28	M10X22	25	M10X22
112	28	M10X22	25	M10X22
132	38	M12X28	40	M16X36
160	42	M16X36	45	M16X36
180	48	M16X36	45	M16X36
200	55	M20X40	59	M20X40

Figure 3.9 Shaft end

3.10 Permissible shaft force

Fr = radial force

X = distance between the shoulder of shaft and force application point [mm], the largest value of X is the length of shaft. The axis of the pulley must not exceed the maximum value of x.

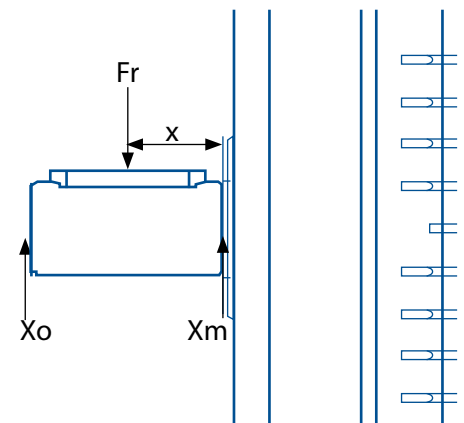


Figure 3.10 permissible shaft force

3.10.1 Permissible radial shaft force

When Axial force = 0

DE	2 pole		4 pole		6 pole	
	X0	Xm	X0	Xm	X0	Xm
	N	N	N	N	N	N
71	410	350	520	440	620	520
80	480	400	625	515	730	600
90	730	610	925	770	1080	900
100	1035	835	1315	1055	1525	1230
112	1030	840	1290	1045	1510	1240
132	1500	1200	1940	1530	2250	1780
160	2600	2230	3340	2610	3740	2890
180	3240	2240	3530	2810	4040	3210
200	4295	3550	5440	4500	6230	5150

Figure 3.10.1 permissible radial shaft force

3.10.2 Permissible axial shaft force

Frame size	HORIZONTAL SHAFT				VERTICAL SHAFT											
	Pull	Push			Shaft Down						Shaft Up					
		Fr=0	Fr		Fr=0	Down Force			Up Force			Down Force			Up Force	
	N		X0	Xm	N	Fr	Fr=0	Fr=0	Fr	Fr=0	Fr=0	Fr	Fr=0	Fr=0	Fr	Fr=0
		N	N	N	N	X0	Xm	N	X0	Xm	N	X0	Xm	N	X0	Xm

3000 rpm																
71	100	190	160	240	90	90	90	200	170	250	170	140	230	110	110	110
80	150	330	280	420	130	130	130	350	290	440	310	260	410	170	170	170
90	170	360	300	440	140	140	140	380	330	480	320	260	420	200	200	200
100	230	500	410	800	180	180	180	530	450	880	440	350	570	280	280	280
112	230	500	420	600	170	170	170	540	460	670	430	350	560	290	290	290
132	370	730	600	840	220	220	220	840	710	1020	550	420	720	520	520	520
160	1670	1110	860	1250	1230	970	1490	1290	1030	1550	810	550	1070	1710	1450	1970
180	1840	1210	940	1320	1270	1000	1570	1480	1210	1780	760	480	1050	2000	1730	2290
200	2610	1930	1610	2110	1850	1510	2250	2290	1960	2690	1350	1010	1750	2790	2460	3190

1500 rpm																
71	100	290	250	380	90	90	90	300	280	370	270	230	340	110	110	110
80	150	500	430	620	130	130	130	520	450	650	470	400	600	170	170	170
90	170	550	470	660	130	130	130	580	500	710	500	420	630	210	210	210
100	230	750	640	890	160	160	160	800	690	980	670	550	840	300	300	300
112	230	760	650	880	140	140	140	820	710	990	650	540	820	320	320	320
132	370	1110	940	1260	200	200	200	1230	1080	1470	900	730	1140	540	540	540
160	2130	1530	1200	1710	1560	1220	1900	1780	1420	2110	1140	800	1480	2180	1840	2530
180	2360	1680	1330	1840	1650	1280	2040	2010	1640	2400	1130	760	1520	2530	2160	2920
200	3390	2630	2200	2890	2460	2010	2990	3040	2590	3580	1960	1510	2490	3540	3090	4080

1000 rpm																
71	140	630	550	770	110	110	110	660	570	810	590	500	740	170	170	170
80	170	690	590	820	120	120	120	720	620	880	630	530	780	220	220	220
90	230	950	810	1110	150	150	150	1010	860	1210	850	710	1060	310	310	310
100	230	950	820	1100	130	130	130	1020	890	1230	820	690	1020	330	330	330
112	360	1380	1180	1570	160	160	160	1530	1320	1610	1140	930	1420	560	560	560
160	2490	1860	1470	2060	1800	1390	2210	2140	1740	2550	1380	970	1790	2560	2160	2970
180	2750	2030	1610	2230	1930	1500	2400	2380	1950	2850	1420	980	1880	2900	2470	3360
200	3940	3150	2640	3440	2830	2310	3470	3630	3100	4260	2330	1810	2970	4130	3600	4760

Figure 3.10.2 Permissible axial shaft force

3.11 Vibration

The motors are dynamically balanced with half key and the shaft end face is marked according to standard DIN ISO 8821 (marking "H" = half key). The balance quality meets DIN ISO 1940, Q2,5.

The mechanical vibrations of the motors meet level A according to EN 60034-14 at synchronous speed; standardized limits see table below (special design like full-key balancing, no-key balancing or vibration grade B on request).

Frame size		Connector nut		Cable gland	
Mounting		Displac.	Veloc.	Displac.	Veloc.
		[µm]	[mm/s] RMS	[µm]	[mm/s] RMS
Vibration Grade A	Free suspension	25	1.6	35	2.2
	Rigid mounting	21	1.3	29	1.8
Vibration Grade B	Free suspension	11	0.7	18	1.1
	Rigid mounting	n.a.	n.a.	14	0.9

Vibration limits according to IEC 60034-14

Figure 3.11 vibration

3.12 Noise levels

Noise measurement of TECO Aluminum motors is taken in an anechoic room as specified in the standard IECEN 60034-9. There are three factors causing noise: magnetic forces, bearings and cooling fan.

Magnetic forces: Noise is from vibration of the stator

Bearings: Noises that occur in balls and rollers

Cooling fan: Noise caused by the airflow

The most active of the three main sources of noise the noise from cooling fan.

3.13 Rating plate and labelling

The material of the rating plate is aluminum Plate and the data indicated are irremovable and clearly engraved. It is irremovably fixed at the motor frame.

Rating plate data comply with IEC 60034-1 and contain e.g. (see sample below):

- name of manufacturer
- serial number (a unique individual identification number) and year of construction
- reference to IEC standard
- efficiency level (efficiency class IE-code according to IEC 60034-30)
- the CE marking
- technical data according to IEC 60034-1.

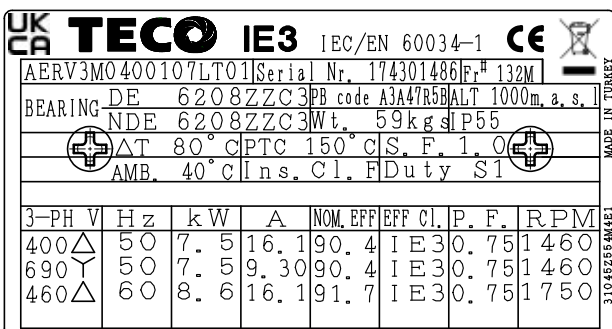
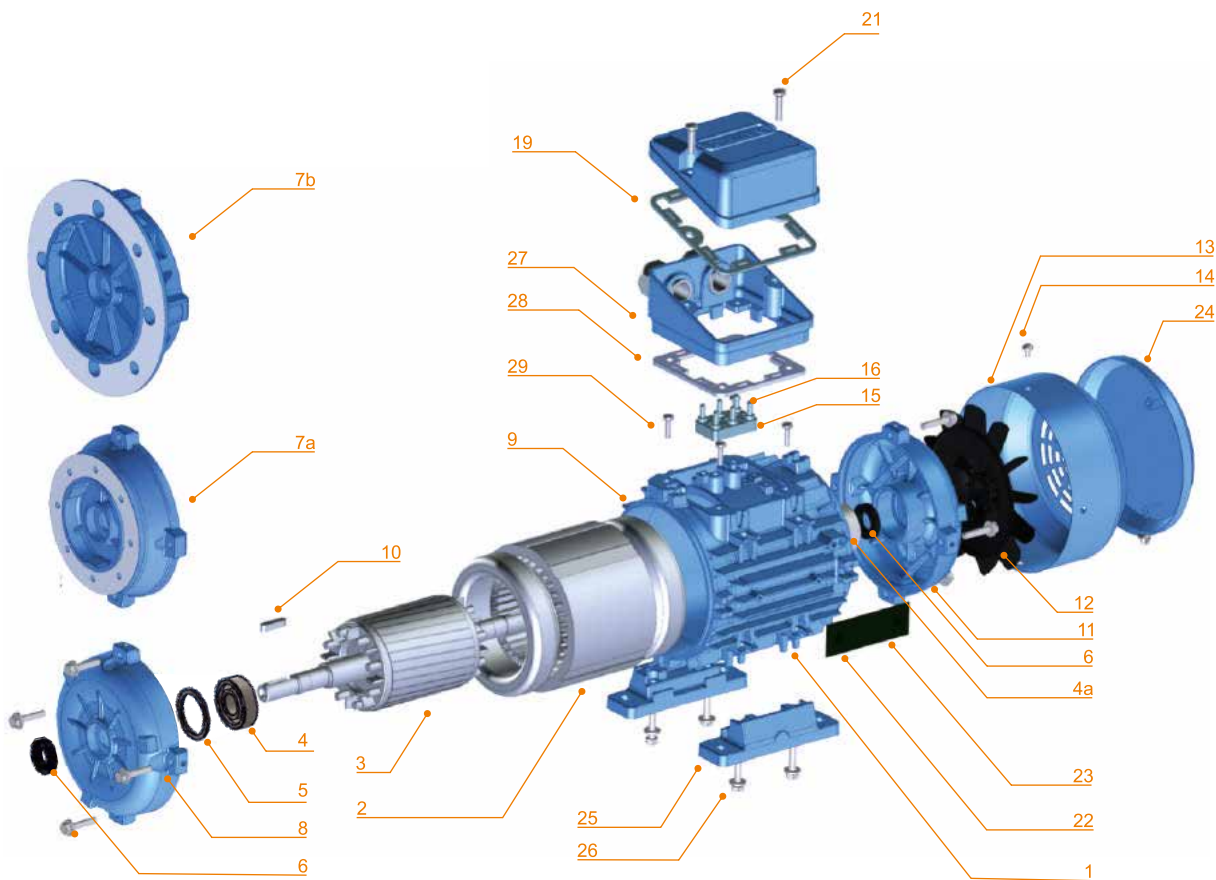


Figure 3.13 Rating plate and labelling

3.14 Exploded drawing



- | | |
|--|---|
| 01 Frame | 14 Cooling fan / Propeller protection cup bolt |
| 02 Complete winding stator [varnished] | 15 Terminals (terminals, bridges, nuts and washers included) |
| 03 Rotor shaft [balanced] | 16 Terminal connection bolt |
| 04 DE Bearing | 17 Earth connection |
| 04a NDE Bearing | 18 Earth connection bolt |
| 05 Bearing tension spring | 19 Gasket |
| 06 Wiper | 20 The terminal box cover / lid |
| 07 DE Shield | 21 The terminal box cover mounting bolt |
| 07a B14 Flange | 22 Nameplate |
| 07b B5 Flange | 23 Nameplate connection bolt |
| 08 Connection bolt | 24 Conopy (rain protection) |
| 09 Connection bolt nut | 25 Feet |
| 10 Shaft end wedge | 26 feet mounting bolt |
| 11 NDE Shield | 27 Terminal box |
| 12 Cooling fan / propeller | 28 Terminal box Seal Ring |
| 13 Cooling fan / Propeller protection cup | 29 Terminal box Mounting Screw |

3.15 product code designation

The type code covers the overall range of TECO induction motors. When placing an order, please state the following minimum data in the order as in the example

3T = IE3

2T = IE2

1T = IE1

AERV (foot mounted) - Aluminum Motors							
Series	Frame	Poles	Power	Voltage	Frequency	Mounting	Options
AERV3T	71	2	0,37 kW	230/400V	50 Hz	B3	*
AERV2T	÷	4	÷	400/690V		B34	
AERV1T	200	6	37 kW	265/460V	60 Hz	B35	

AEQV (flange mounted) - Aluminum Motors							
Series	Frame	Poles	Power	Voltage	Frequency	Mounting	Options
AEQV3T	71	2	0,37 kW	230/400V	50 Hz	B5	*
AEQV2T	÷	4	÷	400/690V		B14	
AEQV1T	200	6	37 kW	265/460V	60 Hz		

Figure 3.15 Product code designation

* upon requests

4. Product specification table

ITEM		STANDARD SPECIFICATION	
RATING	Rotor design	Squirrel - Cage Induction Motor (SCIM)	
	Design Standards	IEC 60034, IEC 60072, Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU	
	Voltages	50Hz 230/400V D/Y, 60Hz 265/460V D/Y 50Hz 400/690V D/Y, 60Hz 460V D	
	Output Range	50Hz: 0.18 kW ~ 37 kW, 60Hz: 50Hz * 1.15	
	R.P.M. (Syn.)	50Hz: 3000 ~ 1000 R.P.M. , 60Hz: 3600~1200 R.P.M. (2 ~ 6 Poles)	
	Time Duty	Continuous. S1 , S.F. 1.0 . (IE3 0,75-37kW ; IE2 0,18-0,55kW) S2-60mins, S.F : 1,0 (IE1 0,18-18,5kW; IE2 0,75-18,5kW)	
	Frame Nos.	71M ~ 200L	
	Protection Enclosure	Totally Enclosed (IP 55)	
	Cooling Method	Self-External Fan, Surface Cooling (IC 411)	
	Mounting	Horizontal Foot Mounted B3 (IM 1001) Horizontal Flange Mounted B5 (IM 3001) Horizontal Foot And Flange Mounted B35 (IM 2001) Vertical Flange Mounted , Shaft Down V1 (IM 3011) Horizontal Flange Mounted B14 (IM 3601) Horizontal Foot And Flange Mounted B34 (IM 2101)	
	APPLICATION	Environment Conditions	Place : Shadow, Non-Hazardous. Ambient Temperature -20 ~ 40°C IE1 0,18-15 kW; IE2 0,18-37 kW for Ambient Temperature -20 ~ 65°C Relative Humidity: Less Than 90% RH (Non-Condensation) Altitude: Less Than 1,000 Meters
Power Source Conditions		Voltage: ±10% , Frequency: ±5% , and 10% Max. of Combined Voltage and Frequency . But Frequency Variation Does Not Exceed ±5%	
Method of Starting		Full Voltage Direct On Line or Y - Δ Starting	
Drive Method		Coupling or Belt Service	
Direction of Rotation		CW According to IEC Definition, Suitable for Bi - Directional Operation	
Frame		Die-Casting Aluminum, Multimount construction	
End Bracket or Flange			The position of Die-Casting Aluminum with Steel Liner are as described Fr#71 does not use steel liner Fr#80-112 has Steel Liner on DE only Fr#132-200L frames have steel liner on both side For some of Fr#160 cast-iron deep shielded is used

	ITEM	STANDARD SPECIFICATION
CONSTRUCTION	Bearing	All bearings to be Grease pre-packed Shielded Ball Bearings, C3 internal clearance of good quality- Non-Drive end bearing to be locked, DE bearing to be preloaded
	Fan Cover	Pressed - Steel Plate
	Shaft	Carbon Steel, Cylindrical Single Extension with Keyway and Key Non-Drive end shaft to be drilled and tapped (for tachogenerators, sensors or encoders mounting). Shaft sleeve used for shaft end protection
	Lubrication	Bearing manufacturers standard on greased for life bearings
	Power Lead Terminals	Solderless Lug Terminals, six outleads marked U1 V1 W1, U2 V2 W2
	PTC Lead Terminals	Two outleads marked T1, T2
	Shaft Seal	Oil Seal On Both End
	Terminal Box	Aluminum Die-Casting, With Terminal Board, Can be Rotated Each 90°, With Conduit Hole for Cable Entrance. The Terminal Box is Usually Placed on The Top of The Frame and The Cables Could be Connected from Four Possible Directions. T-Box cover Blank. The thermistor connection leads shall be terminated to a separate appropriate fixed serial terminal block in the main terminal. A connection diagram and the wiring diagram sticker of the accessories shall be fitted inside terminal box lid.
	Iron Core	High Grade, Insulated, Cold - Rolled Electro-Magnetic Steel Plate
	Stator Winding	Pre - Formed, Random Wound, Made of Heavy, Polyester Enameled Copper Wire, With Built in Thermistors (150° PTC), One Per Phase
	Stator Insulation	Class F Insulation System
	Varnish Treatment	Standard for insulation class
	Rotor Winding	Squirrel Cage, Aluminum Conductor with End - Ring and Water Blades Integrally Cast
	Painting	Phenolic Rust Proof Base Plus Lacquer Surface Finished Painting in Blue - Gray Color RAL 7031, total thickness above 40um
	Name Plate	The main nameplate material is aluminium Plate The address nameplate material is silvermat and stucked on above the motor fan cover
	External Fan	Polypropylene
	Grounding Terminal	Two Terminals . One inside The Terminal Box, Another One on The Outside of Frame
Bolts / Threads / Eyebolts	ISO Metric System. Every motor with weight ≥ 25 kg shall have eyebolt	
PERFORMANCE	Efficiency	IE3 Efficiency values according to IEC 60034-30-1 for $kW \geq 0.75kW$, 50Hz. E2 Efficiency values according to IEC 60034-30-1 kW Efficiency $0,18 \leq kW \leq 0,55 kW$ IE2 Efficiency values according to IEC 60034-30-1 for $kW < 0.75kW$, 50Hz. IE2/IE1 for S2 duty according to IEC 60034-30-1 for 0.18-18,5kW, 50Hz 60Hz Efficiency values as provided in the catalogue
	Temperature Rise	Not to Exceed 80 °C Rise by Resistance Method at S.F 1.0 Operation
	Over Speed	120% Syn. R.P.M. for 2 Minutes
	Over Torque	160% Rated Torque for 15 Sec
	VFD Capability	standard motor for VFD usage CT= 2:1 ; VT=10:1

Figure 4. product specification table

5 Performance data

5.1 Type AERV3T AEQV3T

5.1.1 2 poles IE3 400V 50HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,75	2885	80M	80,7	80,8	78,5	64,9	0,84	0,77	0,63	0,45	1,60	10	2,5	240	230	315	0,001	54	10
1,1	2895	80M	82,7	84,4	82,3	69,0	0,80	0,71	0,58	0,38	2,35	17	3,6	370	360	390	0,001	54	11
1,5	2910	90S	84,2	85,7	82,0	70,4	0,78	0,71	0,55	0,36	3,30	29	4,9	495	410	445	0,001	61	16
2,2	2900	90L	85,9	85,4	83,2	72,8	0,78	0,69	0,55	0,34	4,70	36	7,3	330	255	385	0,002	61	17
3	2910	100L	87,1	85,0	83,0	76,8	0,82	0,77	0,64	0,43	6,10	48	9,9	300	260	345	0,003	62	23
4	2910	112M	88,1	87,3	86,1	78,0	0,86	0,80	0,69	0,44	7,70	66	13,2	235	190	400	0,005	63	27
5,5	2925	132S1	89,2	88,5	86,9	82,3	0,90	0,87	0,80	0,65	10,0	103	18,0	340	230	460	0,013	66	49
7,5	2940	132S2	90,1	91,0	89,2	82,8	0,89	0,85	0,77	0,55	13,4	129	24,4	360	210	325	0,017	66	55
11	2960	160M	91,2	92,0	90,7	84,9	0,89	0,85	0,77	0,56	19,4	164	35,5	230	190	295	0,034	70	82
15	2960	160M	91,9	92,0	90,4	84,7	0,91	0,85	0,77	0,56	25,8	247	48,4	270	245	365	0,046	70	96
18,5	2960	160L	92,4	92,6	91,7	86,6	0,91	0,88	0,81	0,63	31,6	286	59,7	275	250	355	0,056	70	118,0
22	2955	180M	92,7	91,8	90,5	84,9	0,91	0,89	0,82	0,64	38,4	270	71,1	270	250	300	0,075	75	143,0
30	2965	200L	93,3	93,7	93,1	89,7	0,92	0,90	0,84	0,65	51,4	400	96,5	232	220	297	0,150	75	182,0
37	2960	200L	93,7	94,0	94,0	91,1	0,93	0,91	0,86	0,71	61,3	460	119,4	259	235	305	0,170	75	205

5.1.2 4 poles IE3 400V 50HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,75	1430	80M1	82,5	81,0	79,4	69,7	0,70	0,61	0,48	0,28	1,90	11	5,0	250	190	275	0,001	46	14
1,1	1445	90S	84,1	81,6	77,9	67,2	0,73	0,64	0,51	0,32	2,60	16	7,3	260	190	325	0,003	46	16
1,5	1440	90L	85,3	84,6	83,5	70,9	0,75	0,65	0,51	0,32	3,40	24	10,0	340	290	375	0,003	46	17
2,2	1450	100L	86,7	86,7	84,4	75,3	0,74	0,66	0,52	0,32	4,95	33	14,6	275	205	360	0,005	50	25
3	1450	100L1	87,7	87,4	86,2	78,7	0,77	0,69	0,56	0,35	6,40	44	19,8	270	195	350	0,007	50	31
4	1440	112M1	88,6	88,4	87,0	80,0	0,82	0,75	0,63	0,42	8,10	57	26,3	295	200	350	0,012	52	37
5,5	1460	132S1	89,6	90,3	88,2	81,7	0,77	0,69	0,57	0,34	11,5	88	36,0	345	295	375	0,026	54	48
7,5	1460	132M	90,4	89,1	87,4	79,4	0,75	0,66	0,52	0,32	16,1	119	49,1	295	270	355	0,032	54	59
11	1470	160M	91,4	91,7	90,8	86,4	0,76	0,68	0,55	0,33	22,9	159	71,6	285	215	330	0,072	62	102
15	1470	160L	92,1	92,1	91,1	85,7	0,79	0,71	0,60	0,37	29,7	237	97,4	270	235	355	0,092	63	124
18,5	1475	180M	92,6	93,1	92,2	88,2	0,80	0,74	0,63	0,41	35,8	266	119,5	241	215	301	0,170	67	150
22	1475	180L	93,0	92,6	91,7	87,1	0,77	0,70	0,57	0,36	44,5	394	142,6	346	275	323	0,185	67	170
30	1470	200L	93,6	92,9	92,3	89,1	0,89	0,87	0,80	0,60	52,4	404	194,7	270	245	310	0,250	67	205

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages. Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A), Tolerance + 3 dB(A).
5. Data subject to change without notice.

5.1.3 6 poles IE3 400V 50HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,75	940	90S	78,9	79,6	76,0	63,7	0,69	0,60	0,45	0,32	1,97	10	7,6	275	140	290	0,004	46	16
1,1	945	90L	81,0	78,9	75,1	64,4	0,67	0,57	0,43	0,28	3,00	14	11,1	230	165	295	0,005	46	20
1,5	960	100L1	82,5	81,7	77,5	66,1	0,67	0,57	0,44	0,28	3,95	24	14,9	260	190	360	0,011	50	30
2,2	970	112M1	84,3	87,7	86,0	77,8	0,72	0,63	0,50	0,31	5,05	32	21,7	225	165	315	0,016	55	38
3	970	132S	85,6	87,4	85,9	78,7	0,72	0,64	0,50	0,31	6,90	38	29,7	215	195	280	0,037	61	43
4	960	132M	86,8	87,5	86,5	80,7	0,74	0,68	0,55	0,34	8,95	43	39,7	210	195	240	0,051	61	53
5,5	960	132M	88,0	87,7	87,1	80,3	0,73	0,65	0,52	0,32	12,5	57	54,7	235	205	230	0,069	61	59
7,5	970	160M	89,1	89,8	87,5	80,8	0,75	0,68	0,54	0,33	16,2	101	73,9	195	135	325	0,110	62	93
11	975	160L	90,3	89,9	88,3	81,0	0,71	0,62	0,49	0,29	24,7	140	107,7	215	130	310	0,140	62	126,0
15	980	180L	91,2	92,2	91,8	88,0	0,81	0,76	0,65	0,42	29,0	207	145,6	254	230	333	0,220	65	152,0
18,5	975	200L	91,7	92,3	91,5	87,2	0,83	0,78	0,68	0,47	35,0	260	180,5	234	210	332	0,260	67	178,0
22	975	200L	92,2	92,8	92,2	89,0	0,83	0,78	0,67	0,45	41,5	236	214,2	150	130	264	0,320	67	192

5.1.4 2 poles IE3 460V 60HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	IE Class	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT				
0,86	3465	80M	81,0	75,8	74,6	71,3	0,84	0,77	0,63	0,45	1,60	10,1	2,4	315	210	295	0,001	58	IE3	10
1,27	3475	80M	84,0	83,2	82,4	80,1	0,80	0,71	0,58	0,38	2,35	16,6	3,5	370	275	365	0,001	58	IE3	11
1,73	3480	90S	85,5	84,7	84,0	83,2	0,74	0,64	0,50	0,29	3,45	24,7	4,9	440	330	425	0,001	63	IE3	16
2,53	3450	90L	86,5	85,0	84,7	82,1	0,81	0,72	0,58	0,37	4,70	38,1	7,2	365	330	350	0,002	63	IE3	17
3,45	3498	100L	87,5 (*)	87,6	86,3	85,5	0,82	0,75	0,63	0,40	6,11	41,1	9,6	305	260	305	0,003	66	IE2	23
4,6	3480	112M	88,5 (*)	86,3	83,1	82,8	0,86	0,81	0,68	0,46	7,84	60,2	13,0	245	215	320	0,005	66	IE2	27
6,3	3535	132S1	89,5	88,1	87,2	86,5	0,90	0,87	0,79	0,63	9,75	103	17,5	340	230	435	0,013	69	IE3	49
8,6	3530	132S2	90,2	88,7	87,3	86,1	0,90	0,87	0,80	0,60	13,5	130	24,0	310	210	400	0,017	69	IE3	55
12,7	3535	160M	91,0	90,6	88,5	87,0	0,88	0,85	0,77	0,56	19,7	168	34,8	230	230	275	0,034	73	IE3	82
17,3	3550	160M	91,7	90,2	89,7	88,1	0,90	0,87	0,80	0,59	26,9	239	47,6	310	195	440	0,046	73	IE3	96
21,3	3550	160L	91,7	90,6	90,0	89,0	0,91	0,88	0,81	0,63	31,8	286	58,6	275	225	330	0,056	73,0	IE3	118,0
25,3	3545	180M	91,7	91,0	90,3	89,7	0,91	0,89	0,82	0,64	38,4	270	68,1	65	247	230	0,075	75,0	IE3	143,0
34,5	3555	200L	93,0	92,6	91,8	90,1	0,92	0,90	0,84	0,65	51,4	400	92,7	89	213	270	0,150	75,0	IE3	182,0
42,5	3550	200L	93,6	93,1	92,4	91,2	0,93	0,91	0,86	0,71	61,3	460	114,5	110	240	280	0,170	75,0	IE3	205

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. (*) Efficiency, per TECO performance standard (Not IE3).
5. Noise : sound pressure level at no - load, dB(A), Tolerance + 3 dB(A)
6. Data subject to change without notice.

5.1.5 4 poles IE3 460V 60HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	IE Class	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT				
0,86	1725	80M1	83,5	84,9	83,6	82,9	0,70	0,61	0,48	0,28	1,90	12,7	4,9	420	190	390	0,001	49	IE3	14
1,27	1750	90S	86,5	85,4	83,0	72,5	0,78	0,71	0,56	0,35	2,36	18,2	6,9	320	190	320	0,003	49	IE3	16
1,73	1735	90L	86,5	85,8	82,2	73,6	0,76	0,67	0,55	0,35	3,31	24,2	9,5	300	285	375	0,003	49	IE3	17
2,53	1755	100L	87,5(*)	86,8	84,5	79,5	0,76	0,68	0,55	0,36	4,75	34,0	13,8	355	280	370	0,005	53	IE2	25
3,45	1740	100L1	89,5	88,1	87,6	86,2	0,77	0,69	0,56	0,35	6,40	44,1	19,4	295	265	330	0,007	54	IE3	31
4,6	1745	112M1	89,5(*)	87,5	86,3	78,6	0,83	0,77	0,66	0,44	7,96	61,3	25,2	320	265	350	0,012	57	IE2	37
6,3	1760	132S1	89,5(*)	90,9	89,6	83,0	0,78	0,71	0,58	0,37	11,2	87,9	34,3	340	230	375	0,026	57	IE2	48
8,6	1750	132M	90,3(*)	90,4	89,6	88,0	0,75	0,66	0,52	0,32	16,1	119	48,1	295	270	330	0,032	57	IE2	59
12,7	1760	160M	92,4	91,2	90,5	90,0	0,80	0,74	0,62	0,40	21,5	151	70,2	270	225	300	0,072	64	IE3	102
17,3	1768	160L	92,4(*)	92,6	91,9	87,9	0,79	0,72	0,59	0,36	29,8	225	93,14	270	235	335	0,092	66,0	IE2	124
21,3	1770	180M	93,6	92,9	92,0	91,4	0,80	0,74	0,63	0,41	35,8	266	114,8	220	200	200	0,170	67,0	IE3	150
25,3	1770	180L	93,6	93,0	92,3	91,3	0,77	0,70	0,57	0,36	44,5	394	136,5	320	250	250	0,185	67,0	IE3	170
34,5	1765	200L	94,6	94,1	93,2	92,7	0,89	0,87	0,80	0,60	52,4	404	186,7	250	225	225	0,250	67,0	IE3	205

5.1.6 6 poles IE3 460V 60HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	IE Class	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT				
0,86	1135	90S	82,5	81,9	81,3	79,9	0,70	0,62	0,48	0,31	2,00	9,3	7,4	225	145	270	0,004	49	IE3	16
1,27	1140	90L	82,5(*)	81,5	78,2	67,6	0,66	0,57	0,44	0,28	2,92	14,6	10,6	300	190	310	0,005	49	IE1	20
1,73	1155	100L1	84,0(*)	81,9	81,7	77,5	0,68	0,59	0,58	0,46	3,85	23,7	14,3	285	200	355	0,011	53	IE1	30
2,53	1165	112M1	86,5(*)	87,2	85,4	77,5	0,72	0,72	0,52	0,34	5,01	33,4	20,7	270	220	325	0,016	58	IE1	38
3,45	1165	132S	89,5	88,7	87,9	87,0	0,72	0,64	0,50	0,31	6,90	38,1	29,1	215	195	260	0,037	64	IE3	43
4,6	1150	132M	89,5(*)	89,3	88,6	87,9	0,74	0,68	0,55	0,34	8,95	42,7	38,9	210	195	225	0,051	64	IE2	53
6,3	1150	132M	89,5(*)	90,8	90,3	89,1	0,73	0,65	0,52	0,32	12,5	57,2	53,6	235	205	215	0,069	64	IE2	59
8,6	1170	160M	91,0	91,0	89,9	88,8	0,74	0,65	0,52	0,31	16,2	101	72,0	195	195	305	0,110	65	IE3	93
12,7	1170	160L	91,7	91,6	90,7	89,5	0,71	0,62	0,49	0,29	25,0	140	105,7	215	215	300	0,140	65,0	IE3	126,0
17,3	1175	180L	93,0	92,7	91,9	90,7	0,81	0,76	0,65	0,42	29,0	207	140,6	230	210	305	0,220	65,0	IE3	152,0
21,3	1170	200L	93,0	92,6	91,4	90,8	0,83	0,78	0,68	0,47	35,0	260	173,7	215	190	305	0,260	67,0	IE3	178,0
25,3	1170	200L	94,1	93,8	92,9	91,5	0,83	0,78	0,67	0,45	41,5	236	206,5	140	120	240	0,320	67,0	IE3	192

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. (*) Efficiency, per TECO performance standard (Not IE3).
5. Noise : sound pressure level at no - load, dB(A), Tolerance + 3 dB(A)
6. Data subject to change without notice.

5.2 Type AERV2T AEQV2T

5.2.1 2 poles IE2 400V 50HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,37	2850	71M	69,5	73,8	70,0	53,4	0,75	0,66	0,52	0,36	0,97	5,2	1,26	280	315	0,0004	58	6,5
0,55	2810	71M	74,1	78,0	73,9	64,9	0,74	0,64	0,49	0,32	1,40	7,1	1,87	280	310	0,0005	58	6,9

5.2.2 4 poles IE2 400V 50HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,25	1390	71M	68,5	69,1	65,4	52,0	0,74	0,65	0,51	0,34	0,70	2,6	1,71	200	220	0,0006	46	6,2
0,37	1400	71M	72,7	76,8	75,0	60,2	0,73	0,62	0,49	0,32	0,98	3,9	2,53	205	235	0,0008	46	7,2
0,55	1400	80M	77,1	76,7	74,0	63,2	0,77	0,68	0,54	0,35	1,37	5,7	3,75	205	220	0,0015	48	8,9

5.2.3 6 poles IE2 400V 50HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,18	865	71M	56,6	62,3	56,1	39,0	0,66	0,55	0,42	0,29	0,64	1,7	1,99	175	225	0,0006	43	6,4
0,25	830	71M	61,6	60,4	57,9	43,1	0,70	0,58	0,43	0,30	0,87	2,3	2,89	210	215	0,0009	43	6,5
0,37	905	80M	67,6	68,5	64,1	48,8	0,69	0,58	0,44	0,29	1,13	3,5	3,91	170	225	0,0015	45	8,2
0,55	925	80M	73,1	71,0	65,8	51,1	0,66	0,56	0,42	0,28	1,69	6,4	5,73	315	255	0,0018	45	9,9

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A)/0.5M, Tolerance + 3 dB(A)
5. Data subject to change without notice.

5.2.4 2 poles IE2 460V 60HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,43	3460	71M	72,0	74,3	68,8	55,8	0,75	0,67	0,54	0,39	0,92	6,0	1,16	360	375	0,0004	60	6,5
0,63	3435	71M	74,0	76,9	72,2	59,6	0,73	0,64	0,51	0,34	1,23	8,3	1,75	425	425	0,0005	60	6,9

5.2.5 4 poles IE2 460V 60HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,29	1685	71M	70,0	71,0	69,0	55,9	0,74	0,65	0,52	0,35	0,69	3,5	1,64	310	285	0,0006	48	6,2
0,43	1700	71M	72,0	75,9	72,5	60,0	0,73	0,63	0,51	0,33	0,97	5,4	2,40	315	315	0,0008	48	7,2
0,63	1700	80M	75,5	80,1	78,0	68,2	0,75	0,67	0,54	0,34	1,34	6,7	3,59	210	260	0,0015	50	8,9

5.2.6 6 poles IE2 460V 60HZ data S1 duty

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,21	1070	71M	55,0	64,6	58,7	44,6	0,64	0,53	0,42	0,28	0,62	1,8	1,85	255	245	0,0006	45	6,4
0,29	1055	71M	59,5	64,7	60,2	45,6	0,66	0,56	0,43	0,29	0,83	2,4	2,60	265	255	0,0009	45	6,5
0,43	1110	80M	64,0	72,9	68,3	54,3	0,68	0,58	0,44	0,29	1,08	3,9	3,65	335	245	0,0015	47	8,2
0,63	1130	80M	68,0	75,2	70,3	58,6	0,65	0,55	0,43	0,27	1,61	6,9	5,34	280	275	0,0018	47	9,9

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A)/0.5M, Tolerance + 3 dB(A)
5. Data subject to change without notice.

5.2.7 2 poles IE2 400V 50HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,75	2825	80M	77,4	78,6	75,5	69,5	0,85	0,77	0,64	0,43	1,65	8,8	2,53	200	185	305	0,0011	60,0	8,4
1,1	2853	80M	79,6	81,1	78,1	66,2	0,83	0,75	0,61	0,41	2,38	13,3	3,67	245	235	280	0,0011	60,0	9,4
1,5	2880	90S	81,3	79,4	74,7	61,0	0,75	0,65	0,50	0,32	3,63	24,7	4,97	440	400	460	0,0020	63,0	15,0
2,2	2855	90L	83,2	83,1	81,3	74,1	0,84	0,76	0,63	0,39	4,63	29,8	7,40	275	255	325	0,0020	63,0	16,0
3	2905	100L	84,6	85,7	83,9	75,5	0,83	0,75	0,65	0,43	6,20	46,0	9,93	365	330	330	0,0046	65,0	22,0
4	2883	112M	85,8	84,9	83,9	76,1	0,85	0,78	0,66	0,45	8,10	49,0	13,4	210	190	275	0,0059	66,0	24,0
5,5	2925	132S	87,0	88,5	87,7	82,0	0,87	0,82	0,71	0,54	10,4	74,2	18,0	220	195	280	0,0190	70,0	37,0
7,5	2910	132S	88,1	88,1	87,8	83,6	0,89	0,86	0,78	0,56	13,9	105	24,6	330	305	315	0,0220	70,0	48,0
11	2950	160M	89,4	90,9	89,6	82,9	0,87	0,82	0,73	0,51	20,1	160	35,6	245	235	335	0,0400	74,0	72,0
15	2950	160M	90,3	91,2	90,7	85,9	0,89	0,86	0,78	0,56	26,5	160	48,6	180	165	245	0,0500	74,0	82,0
18,5	2950	160L	90,9	92,2	91,5	86,6	0,89	0,85	0,77	0,56	32,8	251	59,9	250	230	290	0,0500	74,0	94,0
22	2950	180M	91,3	92,9	92,1	88,8	0,89	0,86	0,78	0,56	38,8	275	71,3	250	230	290	0,1600	75,0	122,0
30	2955	200L	92,0	86,3	83,6	83,0	0,91	0,90	0,85	0,70	54,2	418	96,9	270	230	375	0,1900	75,0	165,0
37	2950	200L	92,5	90,6	89,3	83,3	0,92	0,91	0,86	0,71	64,1	575	119,7	280	240	340	0,2300	75,0	210,0

5.2.8 4 poles IE2 400V 50HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,75	1418	80M	79,6	78,1	73,8	60,9	0,69	0,59	0,45	0,28	2,00	9,5	5,04	265	245	290	0,0018	50,0	10,2
1,1	1423	90S	81,4	79,4	76,8	65,9	0,75	0,66	0,51	0,32	2,61	13,4	7,39	265	230	310	0,0035	52,0	12,4
1,5	1425	90L	82,8	81,4	78,7	68,5	0,76	0,66	0,52	0,32	3,52	19,3	10,10	245	225	295	0,0048	52,0	15,4
2,2	1435	100L	84,3	85,0	83,8	74,2	0,77	0,69	0,55	0,34	4,88	26,5	14,65	215	185	285	0,0058	55,0	21,6
3	1435	100L	85,5	85,5	83,5	75,3	0,74	0,65	0,51	0,31	6,83	38,8	19,96	260	220	320	0,0063	55,0	25,6
4	1430	112M	86,6	86,6	86,3	80,2	0,84	0,78	0,66	0,43	8,16	48,9	26,8	235	205	280	0,0180	57,0	30,0
5,5	1448	132S	87,7	88,0	86,7	80,2	0,80	0,73	0,60	0,38	11,3	70,1	36,3	230	185	295	0,0280	61,0	46,0
7,5	1448	132M	88,7	87,9	86,6	79,1	0,78	0,70	0,56	0,36	15,8	104	49,5	260	230	325	0,0300	61,0	48,0
11	1460	160M	89,8	90,6	90,1	85,2	0,80	0,74	0,62	0,39	22,0	131	71,9	225	185	270	0,0500	65,0	85,0
15	1455	160L	90,6	90,5	90,0	85,0	0,80	0,73	0,61	0,39	30,1	174	98,4	225	190	270	0,0700	65,0	95,0

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A)/0.5M, Tolerance + 3 dB(A)
5. Data subject to change without notice.

5.2.9 6 poles IE2 400V 50HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,75	938	90S	75,9	77,0	73,5	61,3	0,68	0,58	0,44	0,28	2,07	8,8	7,66	210	185	265	0,0036	52,0	13,0
1,1	935	90L	78,1	77,8	74,7	60,4	0,70	0,61	0,47	0,28	2,93	12,8	11,3	195	165	275	0,0040	52,0	16,2
1,5	955	100L	79,8	79,6	76,4	65,2	0,70	0,60	0,47	0,31	3,86	25,7	15,0	350	320	300	0,0090	54,0	22,0
2,2	953	112M	81,8	82,2	79,8	69,9	0,70	0,60	0,46	0,28	5,58	26,0	22,1	205	175	260	0,0130	55,0	33,0
3	960	132S	83,3	85,0	83,2	75,6	0,72	0,63	0,50	0,30	7,12	34,5	29,8	190	170	250	0,0280	59,0	40,0
4	955	132M	84,6	87,3	87,2	82,3	0,78	0,71	0,60	0,38	8,80	38,1	40,0	200	175	205	0,0350	59,0	48,0
5,5	955	132M	86,0	86,8	86,1	83,3	0,75	0,68	0,54	0,42	12,3	59,3	55,0	185	160	235	0,0400	59,0	53,0
7,5	970	160M	87,2	89,0	87,7	81,4	0,75	0,66	0,53	0,32	16,5	96,3	74,0	230	185	320	0,0800	63,0	83,0
11	965	160L	88,7	89,4	88,7	83,0	0,78	0,70	0,57	0,34	23,0	139,0	108,9	220	190	300	0,1000	63,0	87,0
15	965	180L	89,7	90,3	90,3	87,0	0,85	0,82	0,74	0,54	28,7	126	148	220	190	205	0,2200	65,0	150,0

5.2.10 2 poles IE2 460V 60HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,86	3390	80M	75,5	75,0	74,6	73,2	0,85	0,77	0,64	0,43	1,65	8,8	2,42	180	165	280	0,0011	63	8,4
1,27	3325	80M	82,5	81,1	80,6	79,8	0,83	0,75	0,61	0,41	2,38	13,3	3,64	225	215	260	0,0011	63	9,4
1,73	3455	90S	84,0	83,2	82,8	82,0	0,75	0,65	0,50	0,32	3,63	24,7	4,78	400	365	420	0,0020	66	15,0
2,53	3425	90L	85,5	85,0	84,3	82,7	0,84	0,76	0,63	0,39	4,63	29,8	7,05	250	230	300	0,0020	66	16,0
3,45	3485	100L	87,5	87,1	86,4	83,7	0,83	0,75	0,65	0,43	6,20	46,0	9,45	335	300	305	0,0046	68	22,0
4,60	3460	112M	87,5	87,0	86,2	85,7	0,85	0,78	0,66	0,45	8,10	49,0	12,6	190	170	255	0,0059	69	24,0
6,33	3510	132S	88,5	87,9	87,1	86,4	0,87	0,82	0,71	0,54	10,4	74,2	17,2	200	175	255	0,0190	73	37,0
8,63	3490	132S	89,5	88,9	88,1	87,6	0,89	0,86	0,78	0,56	13,9	105	23,6	300	275	290	0,0220	73	48,0
12,7	3540	160M	90,2	89,3	89,0	88,1	0,87	0,82	0,73	0,51	20,1	160	34,2	225	215	305	0,0400	77	72,0
17,3	3540	160M	91,0	89,7	88,6	87,3	0,89	0,86	0,78	0,56	26,5	160	46,6	165	150	225	0,0500	77	82,0
21,3	3540	160L	91,0	90,4	89,7	88,6	0,89	0,85	0,77	0,56	32,8	251	57,4	225	210	265	0,0500	77,0	94,0
25,3	3540	180M	91,0	90,6	89,5	88,7	0,89	0,86	0,78	0,56	38,8	275	68,3	230	210	265	0,1600	77,0	122,0
34,5	3545	200L	92,4	91,7	90,4	88,9	0,91	0,90	0,85	0,70	54,2	477	92,9	245	210	345	0,1600	77,0	165,0
42,6	3540	200L	93,0	92,7	91,9	90,3	0,92	0,91	0,86	0,71	64,1	575	114,9	255	220	310	0,2300	77,0	210,0

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A)/0.5M, Tolerance + 3 dB(A)
5. Data subject to change without notice.

5.2.11 4 poles IE2 460V 60HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,63	1700	80M	75,5	80,1	78,0	68,2	0,75	0,67	0,54	0,34	1,34	6,7	3,59	210	175	260	0,0015	50	8,9
0,86	1700	80M	78,0	77,1	76,5	75,9	0,69	0,59	0,45	0,28	2,00	9,5	4,80	240	220	265	0,0018	53	10,2
1,27	1710	90S	84,0	83,4	82,6	81,7	0,75	0,66	0,51	0,32	2,61	13,4	7,09	240	210	285	0,0035	55	12,4
1,73	1710	90L	84,0	83,4	82,9	82,0	0,76	0,66	0,52	0,32	3,52	19,3	9,66	225	205	270	0,0048	55	15,4
2,53	1720	100L	87,5	86,9	85,2	84,3	0,77	0,69	0,55	0,34	4,88	26,5	14,0	200	165	260	0,0058	58	21,6
3,45	1720	100L	87,5	86,7	85,3	83,9	0,74	0,65	0,51	0,31	6,83	38,8	19,2	235	200	290	0,0063	58	25,6
4,60	1715	112M	87,5	87,0	86,1	85,3	0,84	0,78	0,66	0,43	8,16	48,9	25,6	215	185	255	0,0180	59	30,0
6,33	1735	132S	89,5	89,0	88,4	87,6	0,80	0,73	0,60	0,38	11,3	70,1	34,8	210	165	270	0,0280	64	46,0
8,63	1735	132M	89,5	89,1	88,6	87,3	0,78	0,70	0,56	0,36	15,8	104	47,5	240	210	295	0,0300	64	48,0
12,7	1750	160M	91,0	89,7	89,1	88,3	0,80	0,74	0,62	0,39	22,0	131	69,0	205	165	250	0,0500	68	85,0
17,3	1745	160L	92,4	90,4	89,4	88,7	0,80	0,73	0,61	0,39	30,1	174	94,4	205	170	245	0,0700	68	95,0

5.2.12 6 poles IE2 460V 60HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE				RO-TOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	PULL UP %FLT	BREAK DOWN %FLT			
0,86	1125	90S	73,0	72,3	71,7	69,9	0,68	0,58	0,44	0,28	2,07	8,8	7,30	195	165	245	0,0036	55	13,0
1,27	1120	90L	85,5	85,0	84,3	83,7	0,70	0,61	0,47	0,28	2,93	12,8	10,7	175	150	250	0,0040	55	16,2
1,73	1145	100L	86,5	85,9	84,6	83,1	0,70	0,60	0,47	0,31	3,86	25,7	14,4	320	290	275	0,0090	57	22,0
2,53	1145	112M	87,5	86,7	85,6	84,1	0,70	0,60	0,46	0,28	5,58	26,0	21,1	185	160	240	0,0130	57	33,0
3,45	1150	132S	87,5	87,0	86,3	85,1	0,72	0,63	0,50	0,30	7,12	34,5	28,6	175	155	225	0,0280	62	40,0
4,60	1145	132M	87,5	87,0	86,4	85,1	0,78	0,71	0,60	0,38	8,80	38,1	38,3	180	160	195	0,0350	62	48,0
6,33	1145	132M	89,5	89,0	88,3	87,1	0,75	0,68	0,54	0,42	12,3	59,3	52,7	170	145	215	0,0400	62	53,0
8,63	1165	160M	89,5	89,1	88,3	87,1	0,75	0,66	0,53	0,32	16,5	96,3	70,7	210	165	290	0,0800	66	83,0
12,7	1155	160L	90,2	89,6	89,0	87,6	0,78	0,70	0,57	0,34	23,0	139,0	104,6	200	170	275	0,1000	66,0	87,0
17,3	1155	180L	91,0	90,6	89,7	88,4	0,85	0,82	0,74	0,54	28,7	126	143	200	175	188	0,2200	66,0	150,0

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A)/0.5M, Tolerance + 3 dB(A)
5. Data subject to change without notice.

5.3 Type AERV1T AEQV1T

5.3.1 2 poles IE1 400V 50HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,37	2765	71M	63,9	69	68,5	67,5	0,79	0,76	0,73	0,68	1,02	4,386	1,3	230	230	0,0004	58	5,5
0,55	2800	71M	69	73,5	73	72,3	0,81	0,78	0,71	0,62	1,44	7,056	1,9	230	230	0,0005	58	6,5
0,75	2780	80M	72,1	72	69,8	55,8	0,82	0,72	0,56	0,36	1,81	7,8	2,58	245	280	0,0005	60	7,5
1,1	2840	80M	75	74,2	68,2	53,6	0,72	0,59	0,45	0,31	2,97	15,2	3,73	200	245	0,0007	60	8,5
1,5	2795	90S	77,2	76,6	73,5	60,8	0,82	0,71	0,56	0,35	3,52	15,87	5,16	220	250	0,0011	63	13
2,2	2805	90L	79,7	79,4	77,1	67,1	0,8	0,71	0,56	0,35	5,03	24,91	7,49	310	265	0,0014	63	14
3	2772	100L	81,5	80,1	81,6	76,1	0,88	0,74	0,73	0,49	6,46	23,6	10,3	295	275	0,0024	65	18
4	2838	112M	83,1	84,3	70,8	76,5	0,86	0,79	0,66	0,44	8,09	61,5	13,4	315	365	0,0039	66	22
5,5	2873	132S	84,7	84,8	84,9	76,7	0,88	0,83	0,73	0,52	10,7	63,65	18,3	200	255	0,009	70	35
7,5	2910	132S	86	87,5	86,7	78	0,86	0,83	0,67	0,47	14,5	102,1	24,6	240	330	0,012	70	45
11	2945	160M	87,6	87,2	86,4	85,1	0,87	0,8	0,71	0,63	21	168	36	235	320	0,026	74	68
15	2950	160M	88,7	87,5	87	86,1	0,89	0,78	0,78	0,71	26,5	161,6	48,6	180	240	0,034	74	79
18,5	2950	160L	89,3	89,1	88,2	87,6	0,9	0,88	0,8	0,73	33	250,8	60	250	290	0,041	74	90

5.3.2 4 poles IE1 400V 50HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,25	1365	71M	61,5	63,6	57,8	41,6	0,69	0,59	0,46	0,31	0,8	2,47	1,8	210	220	0,0006	46	6
0,37	1360	71M	66	69,6	67	53,3	0,72	0,62	0,47	0,3	1,1	3,8	2,6	225	230	0,0008	46	6,5
0,55	1378	80M	70	70,6	65	49,4	0,74	0,61	0,47	0,3	1,55	5,75	3,9	200	235	0,0015	48	8
0,75	1360	80M	72,1	72	68,5	54,8	0,74	0,64	0,49	0,31	2,07	8,36	5	225	265	0,0011	50	8,5
1,1	1400	90S	75	74,2	70,6	58	0,76	0,66	0,5	0,31	2,81	11,44	8	200	240	0,0019	52	10,5
1,5	1408	90L	77,2	78,9	76,5	57,3	0,77	0,67	0,52	0,36	3,57	24,7	10	320	350	0,0024	52	13
2,2	1420	100L	79,7	81,8	79,2	69,8	0,75	0,65	0,5	0,32	5,19	26,5	15	230	250	0,004	55	18,5
3	1405	100L	81,5	81,7	80	70,4	0,79	0,7	0,55	0,35	6,86	35,7	20	220	280	0,0052	55	22
4	1430	112M	83,1	82,8	81,7	80,3	0,83	0,76	0,64	0,58	8,15	49	27	240	280	0,0092	57	26,5
5,5	1438	132S	84,7	84,6	82,8	73,7	0,75	0,67	0,52	0,32	12,5	66,98	37	210	270	0,019	61	43
7,5	1438	132M	86	85,5	83,5	75,6	0,78	0,7	0,56	0,42	16	105,6	60	260	280	0,026	61	45,5
11	1440	160M	87,6	89,2	88,6	83,5	0,79	0,74	0,6	0,39	22,9	123,06	73	225	255	0,054	65	83,5
15	1455	160L	88,7	88,1	87,6	85,7	0,78	0,73	0,61	0,52	31	180	98	230	270	0,072	65	93,5

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A)/0.5M, Tolerance + 3 dB(A)
5. Data subject to change without notice.

5.3.3 6 poles IE1 400V 50HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,18	835	71M	45,5	44,6	43,9	41,7	0,69	0,67	0,59	0,48	0,75	1,725	2,0	200	200	0,0006	43	6,3
0,25	855	71M	52,1	61,2	56,1	39,8	0,68	0,56	0,43	0,29	0,86	2,24	2,8	225	215	0,0009	43	6,5
0,37	905	80M	59,7	67,6	62,6	47,8	0,7	0,59	0,45	0,3	1,15	3,79	3,9	200	230	0,0015	45	8,2
0,55	910	80M	65,8	71,9	68,6	55,9	0,75	0,65	0,5	0,33	1,51	5,4	5,8	200	210	0,0018	45	9,8
0,75	893	90S	70	72	69,3	55,1	0,73	0,63	0,48	0,31	2,11	6,05	8,0	180	180	0,0029	52	11
1,1	908	90L	72,9	75,8	74,3	63,1	0,74	0,65	0,51	0,32	2,89	10,5	12	200	250	0,0038	52	13
1,5	950	100L	75,2	74,1	73,7	72,1	0,7	0,6	0,47	0,39	3,9	16	15	200	250	0,0084	54	18,5
2,2	950	112M	77,7	76,8	76,1	75,3	0,69	0,6	0,46	0,37	5,6	26,3	22	200	260	0,013	55	29,5
3	948	132S	79,7	82,3	81,2	72,3	0,73	0,66	0,52	0,32	7,3	29,15	30	160	210	0,022	59	36,5
4	950	132M	81,4	82,5	80,1	70,5	0,71	0,61	0,49	0,3	9,97	42,93	40	195	235	0,028	59	45,5
5,5	953	132M	83,1	84	83,1	74,8	0,72	0,64	0,5	0,31	13,13	59,46	55	185	235	0,043	59	50
7,5	965	160M	84,7	84,4	83,9	80,7	0,75	0,66	0,53	0,42	17	86,7	74	220	260	0,079	63	79,5
11	965	160L	86,4	86,1	85,8	84,7	0,78	0,70	0,57	0,41	23,1	122	109	230	270	0,110	63,0	85,5
15	970	180L	87,7	91,0	90,5	86,5	0,83	0,78	0,69	0,47	29,1	130	148	177	212	0,220	65,0	135,0

5.3.4 2 poles IE1 460V 60HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N·m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,43	3320	71M	70,0	69,6	68,1	66,8	0,79	0,76	0,73	0,68	1,02	4,4	1,25	210	210	0,0004	61,0	5,5
0,63	3360	71M	72,0	71,4	70,3	68,9	0,81	0,78	0,71	0,62	1,44	7,1	1,85	210	210	0,0005	61,0	6,5
0,86	3340	80M	74,0	73,1	72,6	71,9	0,82	0,72	0,56	0,36	1,81	7,8	2,45	220	200	0,0005	63,0	7,5
1,27	3405	80M	78,5	76,9	75,8	74,7	0,72	0,59	0,45	0,31	2,97	15,2	3,56	180	245	0,0007	63,0	8,5
1,73	3355	90S	81,0	78,9	78,0	77,5	0,82	0,71	0,56	0,35	3,52	15,9	4,92	200	225	0,0011	66,0	13,0
2,53	3365	90L	81,5	80,3	79,1	78,5	0,80	0,71	0,56	0,35	5,03	24,9	7,18	280	225	0,0014	66,0	14,0
3,45	3325	100L	84,5	83,4	82,6	81,9	0,88	0,74	0,73	0,49	6,46	23,6	9,90	270	210	0,0024	68,0	18,0
4,60	3405	112M	84,5	83,8	82,4	82,0	0,86	0,79	0,66	0,44	8,09	61,5	12,9	285	220	0,0039	68,0	22,0
6,33	3450	132S	86,0	83,1	82,1	81,6	0,88	0,83	0,73	0,52	10,7	63,7	17,5	185	225	0,0090	73,0	35,0
8,63	3490	132S	87,5	86,2	85,7	84,1	0,86	0,83	0,67	0,47	14,5	102	23,6	220	210	0,0120	73,0	45,0
12,7	3535	160M	87,5	86,7	85,3	84,6	0,87	0,80	0,71	0,63	21,0	168	34,3	215	230	0,0260	77,0	68,0
17,3	3540	160M	89,5	88,1	87,4	87,0	0,89	0,78	0,78	0,71	26,5	162	46,7	165	220	0,0340	77,0	79,0
21,3	3540	160L	89,5	88,3	87,9	87,1	0,90	0,88	0,80	0,73	33,0	251	57,4	225	215	0,0410	77,0	90,0

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A)/0.5M, Tolerance + 3 dB(A)
5. Data subject to change without notice.

5.3.5 4 poles IE1 460V 60HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,29	1690	71M	68,0	69,7	63,0	47,2	0,64	0,53	0,41	0,28	0,79	3,0	1,62	270	260	0,0006	48,0	6,0
0,43	1685	71M	70,0	69,9	63,3	47,1	0,69	0,58	0,46	0,30	1,10	4,2	2,41	210	240	0,0008	48,0	6,5
0,63	1650	80M	74,0	74,8	73,2	61,8	0,77	0,67	0,54	0,34	1,42	5,3	3,65	230	200	0,0015	51,0	8,0
0,86	1630	80M	77,0	76,3	75,8	73,4	0,74	0,64	0,49	0,31	2,07	8,4	5,04	210	245	0,0011	53,0	8,5
1,27	1680	90S	79,0	77,9	76,5	74,9	0,76	0,66	0,50	0,31	2,81	11,4	7,21	200	250	0,0019	55,0	10,5
1,73	1690	90L	81,5	79,9	79,0	78,3	0,77	0,67	0,52	0,36	3,57	24,7	9,77	290	220	0,0024	55,0	13,0
2,53	1705	100L	83,0	82,1	81,1	80,1	0,75	0,65	0,50	0,32	5,19	26,5	14,2	210	255	0,0040	58,0	18,5
3,45	1685	100L	85,0	84,3	83,4	82,2	0,79	0,70	0,55	0,35	6,86	35,7	19,6	205	240	0,0052	58,0	22,0
4,60	1715	112M	85,0	84,1	83,1	82,3	0,83	0,76	0,64	0,58	8,15	49,0	25,6	220	210	0,0092	59,0	26,5
6,33	1725	132S	87,0	86,5	85,9	84,3	0,75	0,67	0,52	0,32	12,5	67,0	35,0	195	270	0,0190	64,0	43,0
8,63	1725	132M	87,5	87,0	86,2	85,7	0,78	0,70	0,56	0,42	16,0	106	47,8	235	205	0,0260	64,0	45,5
12,7	1730	160M	88,5	87,9	87,1	86,1	0,79	0,74	0,60	0,39	22,9	123	69,8	205	225	0,0540	68,0	83,5
17,3	1745	160L	90,5	88,4	87,9	86,3	0,78	0,73	0,61	0,52	31,0	180	94,4	210	210	0,0720	68,0	93,5

5.3.6 6 poles IE1 460V 60HZ data S2-60mins ambient T=65°C

kW	FULL LOAD rpm	FRAME NO.	EFFICIENCY				POWER FACTOR				CURRENT		TORQUE			ROTOR J kg-m ²	NOISE SPL dB(A)	APPROX. WEIGHT kg
			FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	2/4 LOAD (%)	1/4 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD N-m	LOCKED ROTOR %FLT	BREAK DOWN %FLT			
0,21	1050	71M	52,5	51,4	43,9	28,7	0,63	0,52	0,42	0,32	0,76	1,8	1,88	230	215	0,0006	45,0	6,3
0,29	1065	71M	57,5	65,9	59,4	43,8	0,64	0,53	0,40	0,27	0,86	2,4	2,60	220	230	0,0009	45,0	6,5
0,43	1125	80M	62,0	70,3	67,1	50,6	0,66	0,56	0,43	0,28	1,12	4,1	3,61	185	255	0,0015	48,0	8,2
0,63	1115	80M	66,0	76,0	73,1	60,3	0,72	0,63	0,49	0,31	1,46	6,0	5,39	325	235	0,0018	48,0	9,8
0,86	1075	90S	72,0	71,7	70,9	69,2	0,73	0,63	0,48	0,31	2,11	6,1	7,64	185	230	0,0029	55,0	11,0
1,27	1090	90L	75,0	74,5	74,0	73,1	0,74	0,65	0,51	0,32	2,89	10,5	11,1	180	230	0,0038	55,0	13,0
1,73	1140	100L	77,0	76,7	76,1	75,4	0,70	0,60	0,47	0,39	3,90	16,0	14,5	180	195	0,0084	57,0	18,5
2,53	1140	112M	78,5	78,1	77,7	77,0	0,69	0,60	0,46	0,37	5,60	26,3	21,2	180	210	0,0130	58,0	29,5
3,45	1138	132S	83,5	82,4	81,9	80,3	0,73	0,66	0,52	0,32	7,30	29,2	29,0	185	255	0,0220	61,0	36,5
4,60	1140	132M	83,5	82,6	81,7	80,1	0,71	0,61	0,49	0,30	9,97	42,9	38,5	175	275	0,0280	61,0	45,5
6,33	1145	132M	85,0	84,4	84,0	83,3	0,72	0,64	0,50	0,31	13,1	59,5	52,8	170	270	0,0430	61,0	50,0
8,63	1160	160M	86,0	84,3	83,9	83,1	0,75	0,66	0,53	0,42	17,0	86,7	71,0	200	200	0,0790	66,0	79,5
12,7	1160	160L	89	85,7	85,1	84,6	0,78	0,7	0,57	0,41	23,1	122	104	210	205	0,11	66	85,5
17,3	1165	180L	90,2	89,1	87,6	86,3	0,83	0,78	0,69	0,47	29,1	130	142	162	194	0,2200	67,0	135,0

Note

1. The above are typical values based on test according to IEC 60034-2-1:2014.
2. Tolerance according to IEC 60034-1.
3. Efficiency, power factor, speed and torque are the same for other voltages.
Current values vary inversely with voltage.
4. Noise : sound pressure level at no - load, dB(A)/0.5M, Tolerance + 3 dB(A)
5. Data subject to change without notice.

6.1 B3 mounting

6.1.1 Type AERV1T AERV2T F71M, F80M, F90S, F90L, B3

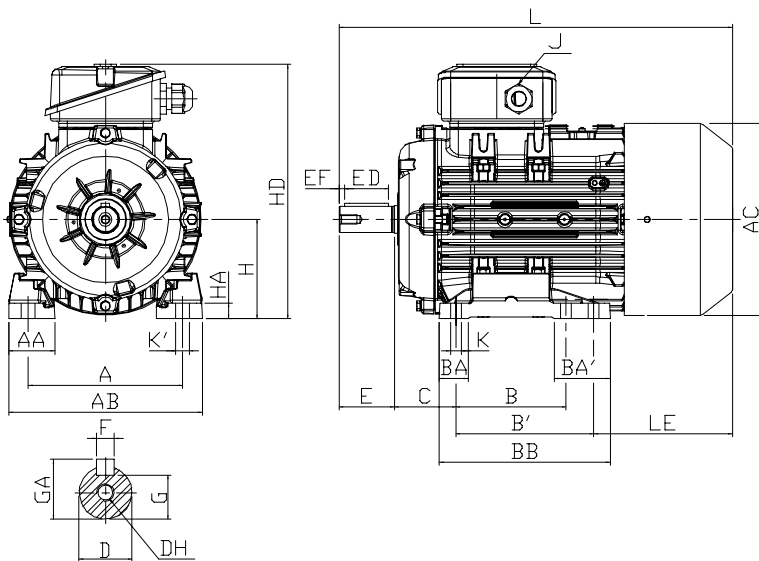


Figure 6.1.2

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	HD	J	I
2P	4P	6P																
0,37 0,55	0,25 0,37	0,18 0,25	71M	112	31	137	139	90	-	23	23	110	45	71	9	194	M20X1,5	-
0,75 1,1	0,55 0,75	0,37 0,55	80M	125	35	150	156	100	-	33	33	125	50	80	11	212		
1,5	1,1	0,75	90S	140	42	175	174	100	125	25	50	155	56	90	14	231		
2,2	1,5	1,1	90L															

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
71M	252	87	7	10	14	30	22	4	5	11	16	M5X12,5	6202ZZC3	6202ZZC3
80M	289,5	99,5	9,5	13	19	40	32	4	6	15,5	21,5	M6X16	6004ZZC3	6004ZZC3
90S	307	76	10	12,5	24	50	40	5	8	20	27	M8X19	6205ZZC3	6004ZZC3
90L	352	121												

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.2 Type AERV1T AERV2T F100L, F112M, B3

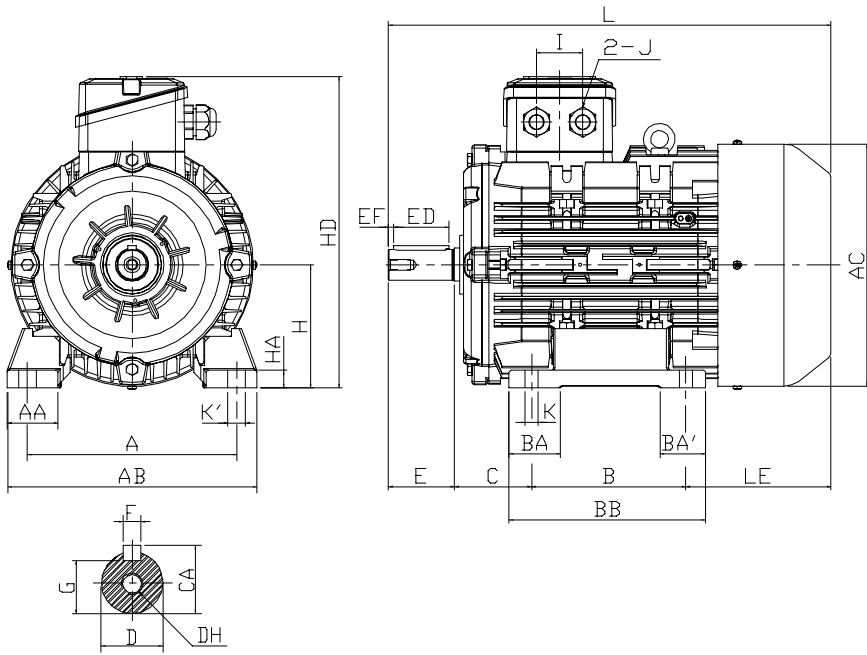


Figure 6.1.3

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	HD	J	I
2P	4P	6P																
3	2,2	1,5	100L	160	40	195	195	140	-	35	35	174	63	100	13	261	M20X1.5	42
-	3	-																
4	4	2,2	112M	190	46	227	220	140	-	45	45	178,5	70	112	16	283		

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	394	131	12	16	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M	401,5	131,5	12	16	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.3 Type AERV1T AERV2T F132S, F132M, B3

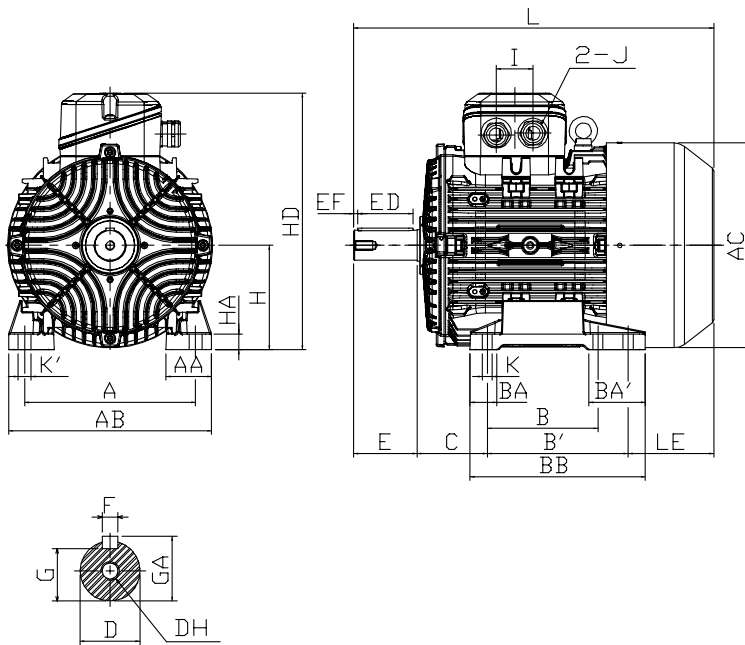


Figure 6.1.4

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	HD	KK	I
2P	4P	6P																
5,5	5,5	3	132S/M	6.1.4	216	58	257	259	140	178	35	70	220	89	132	20	M25X1.5	47
7,5	7,5	4																
-	-	5,5	132M															

FRAME SIZE	L	LE	J	M	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
132S/M	432	85	12,5	16,5	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3
132M	482	135												

Note

1. Tolerance of Shaft End Diameter D: K6.
2. Tolerance of Shaft Center Height H: +0, -0.5.
3. dimensions in mm

6.1.4 Type AERV1T AERV2T F160M, F160L, B3

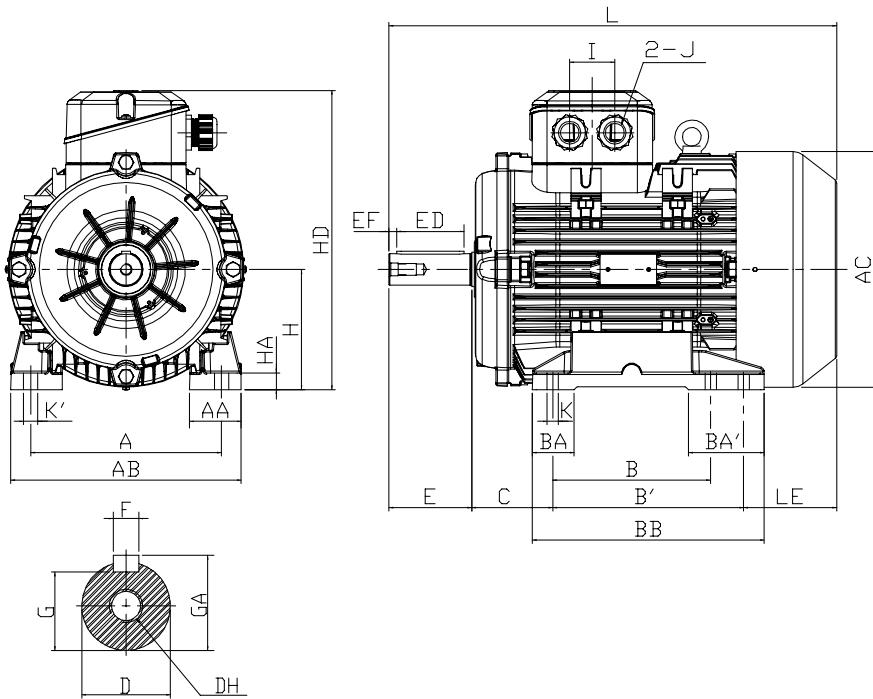


Figure 6.1.5

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	HD	KK	I	
2P	4P	6P																	
11	11	7,5	160M/L	254	69	306	314	210	254	55	100	309	108	160	22	398	M32X1.5	60	
15	15	11																	
18,5	-	-																	

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
160M/L	596	124	15	19	42	110	90	10	12	37	45	M16X36	6309ZZC3	6209ZZC3

Note

1. Tolerance of Shaft End Diameter D: K6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.5 Type AERV1T AERV2T F180M, F180L, B3

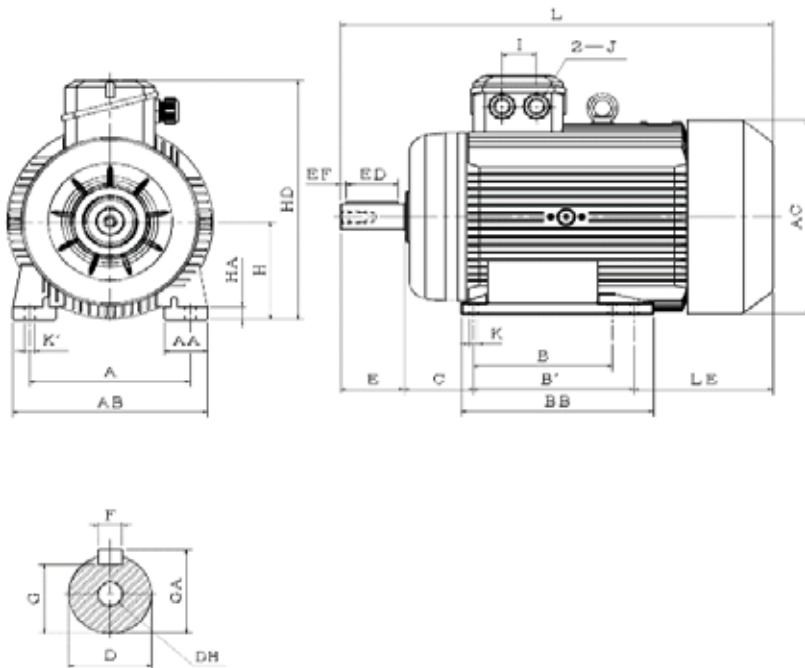


Figure 6.1.5

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BB	C	H	HA	J	HD	I	
2P	4P	6P		180M/L	279	75	338,5	357	241	279	334	121	180	23,5	M32X1.5	440	60
22	-	15															
-	-	-															

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
180M/L	745	235	15	19	48	110	90	10	14	42,5	51,5	M16X36	6310ZZC3	6210ZZC3

Note

1. Tolerance of Shaft End Diameter D: K6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.6 Type AERV1T AERV2T F200L, B3

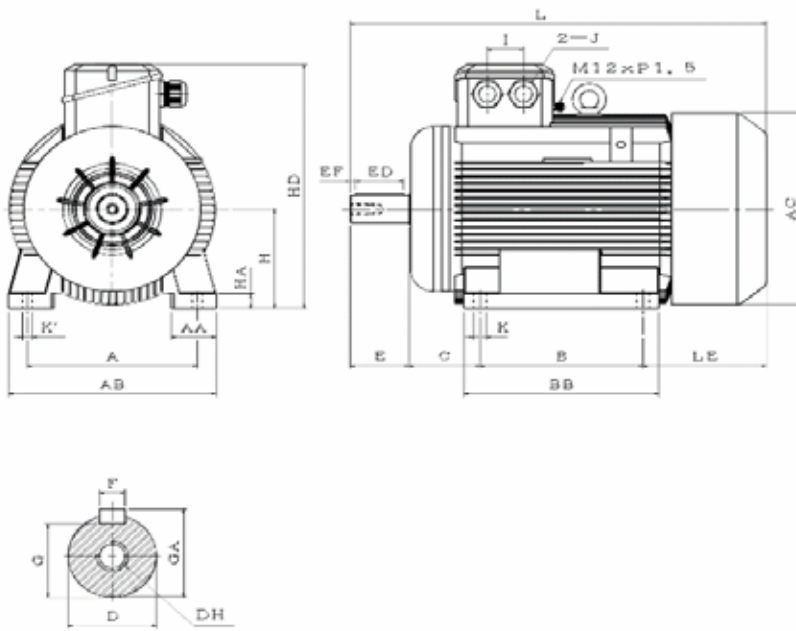


Figure 6.1.6

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BB	C	H	HA	J	HD	I
2P	4P	6P														
30	-	-	200L	318	84	388	385	305	--	365	133	200	30	M40X1.5	491	68
37	-	-														

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
200L	779	231	24	19	55	110	90	10	16	49	59	M20X40	6312ZZC3	6212ZZC3

Note

1. Tolerance of Shaft End Diameter D: K6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.7 Type AERV3T F80M, F90S, F90L, B3

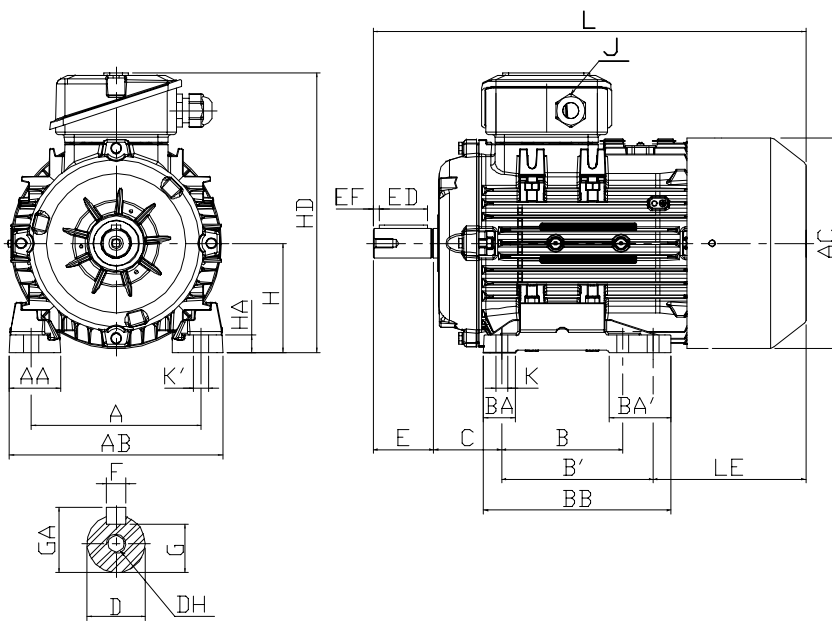


Figure 6.1.7

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	HD	J	I
2P	4P	6P																
0,75	0,55	0,37	80M	125	35	150	156	100	-	33	33	125	50	80	11	212	M20X1.5	-
-	0,75	-	80M1															
1,5	1,1	0,75	90S	140	42	175	174	100	125	25	50	155	56	90	14	231		
2,2	1,5	1,1	90L															

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
80M	289,5	99,5	9,5	13	19	40	32	4	6	15,5	21,5	M6X16	6004ZZC3	6004ZZC3
80M1	312,5	122,5												
90S	352	121	10	12,5	24	50	40	5	8	20	27	M8X19	6205ZZC3	6004ZZC3
90L	357	126												

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.8 Type AERV3T F100L, F112M, B3

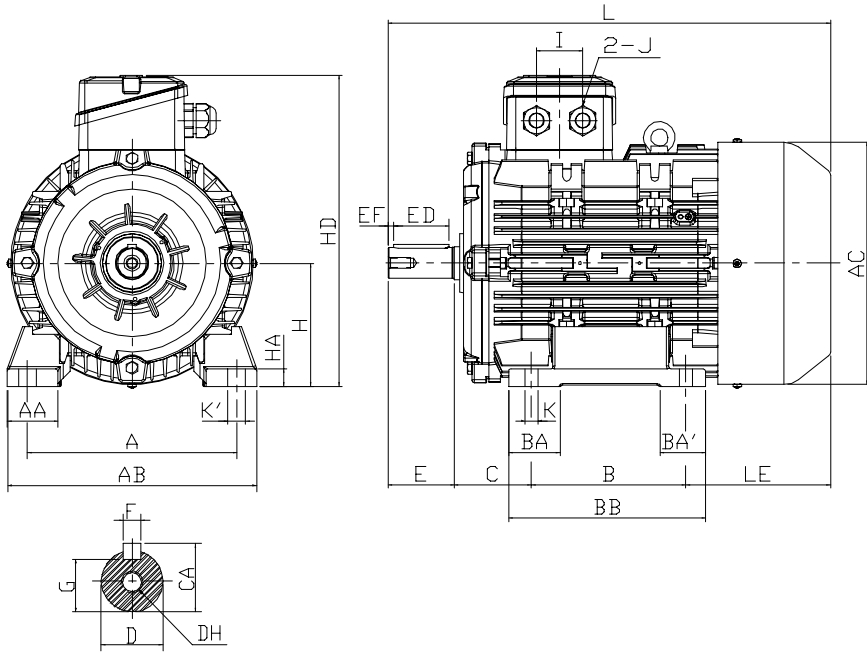


Figure 6.1.8

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	HD	J	I
2P	4P	6P																
3	2,2	1,5	100L	160	40	195	195	140	-	35	35	174	63	100	13	261	M20X1.5	42
-	3	-	100L1															
4	-	-	112M															
-	4	2,2	112M1															

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	394	131	12	16	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
100L1	444	181												
112M	401,5	131,5	12	16	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M1	357	126												

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.9 Type AERV3T F132S, F132M, B3

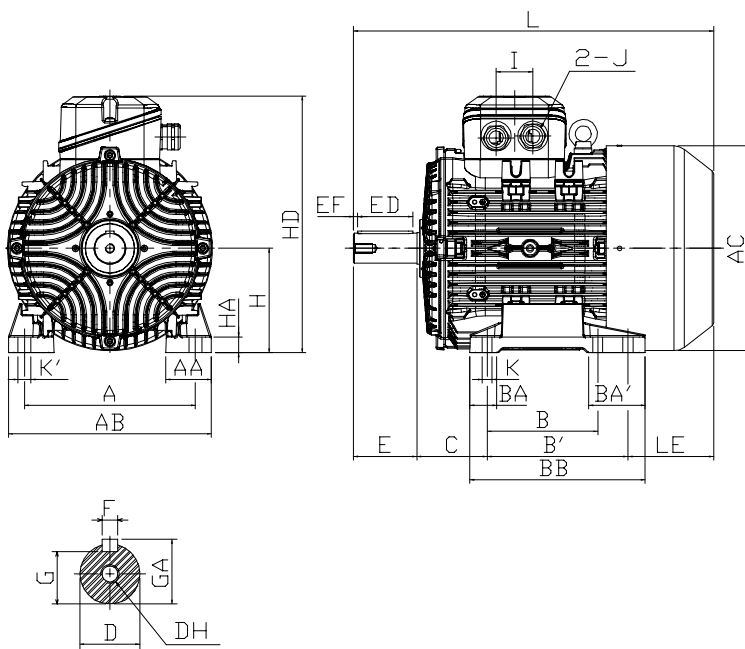


Figure 6.1.9

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	HD	J	I
2P	4P	6P																
-	-	3	132S															
5,5	5,5	-	132S1															
7,5	-	-	132S2	216	58	257	259	140	178	35	70	220	89	132	20	327	M25X1.5	47
-	7,5	4	132M															
-	-	5,5																

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
132S	432	85	12,5	16,5	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3
132S1	444	97												
132S2	482	135												
132M	482	135												

Note

1. Tolerance of Shaft End Diameter D: k6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.10 Type AERV3T F160M, F160L, B3

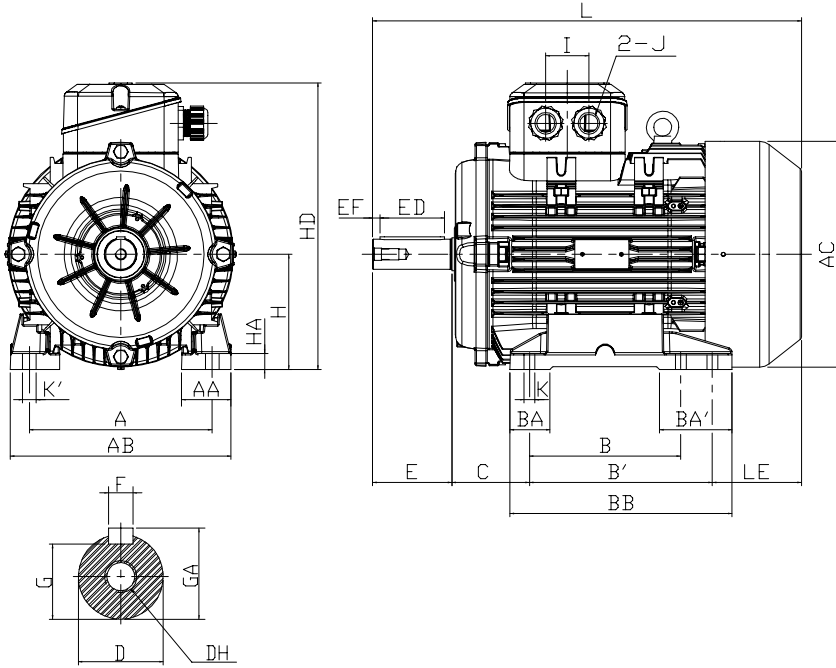


Figure 6.1.10

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	HD	J	I
2P	4P	6P																
11	11	7,5	160M	254	69	306	314	210	254	55	100	309	108	160	22	398	M32X1.5	60
18,5	15	11	160L															

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
160M	596	124	15	19	42	110	90	10	12	37	45	M16X36	6309ZZC3	6209ZZC3
160L	660	188												

Note

1. Tolerance of Shaft End Diameter D: k6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.11 Type AERV3T F180M, F180L, B3

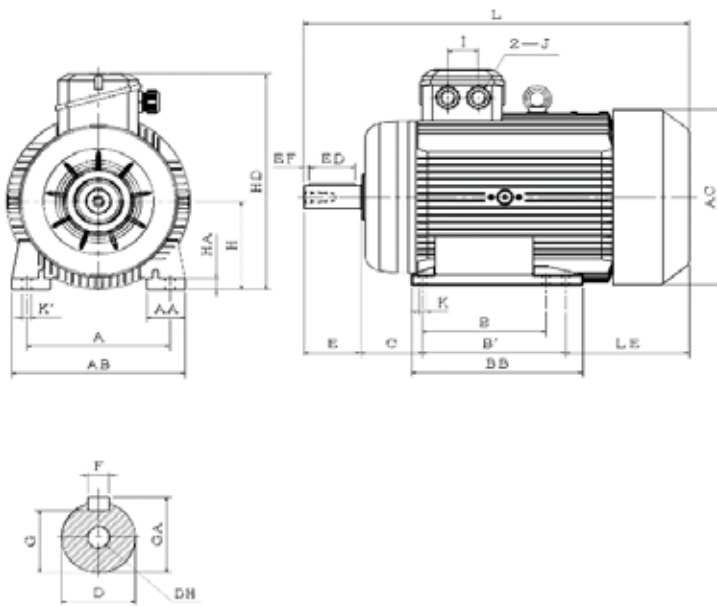


Figure 6.1.11

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BB	C	H	HA	J	HD	I	
2P	4P	6P		180M/L	279	75	338,5	357	241	279	334	121	180	23,5	M32X1.5	440	60
-	22	18,5															

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
180M/L	745	235	15	19	48	110	90	10	14	42,5	51,5	M16X36	6310ZZC3	6210ZZC3

Note

1. Tolerance of Shaft End Diameter D: K6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.1.12 Type AERV3T, F200L, B3

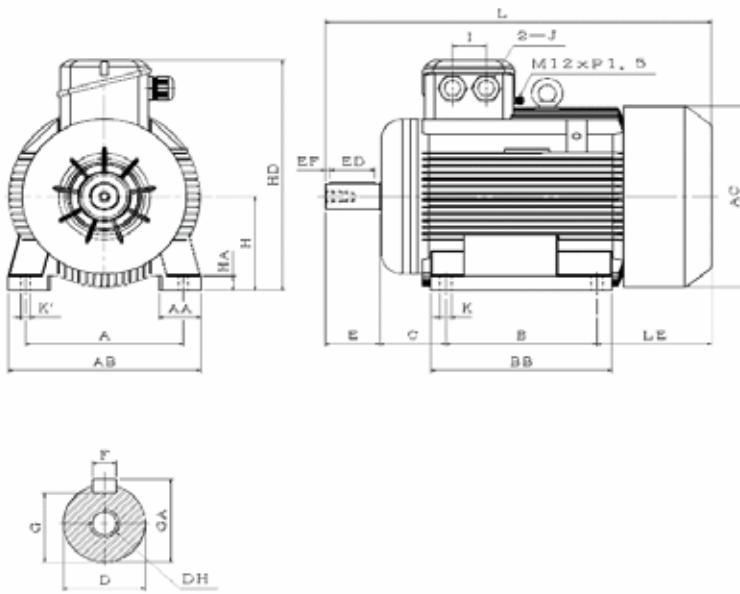


Figure 6.1.12

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BB	C	H	HA	J	HD	I
2P	4P	6P														
30	30	22	200L	318	84	388	385	305	--	365	133	200	30	M40X1.5	491	68
37	-	-														

FRAME SIZE	L	LE	K	K'	SHAFT EXTENSION								BEARING	
					D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
200L	779	231	24	19	55	110	90	10	16	49	59	M20X40	6312ZZC3	6212ZZC3

Note

1. Tolerance of Shaft End Diameter D: K6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. dimensions in mm

6.2 B5 mounting

6.2.1 Type AEQV1T AEQV2T F71M F80M, F90S, F90L, B5

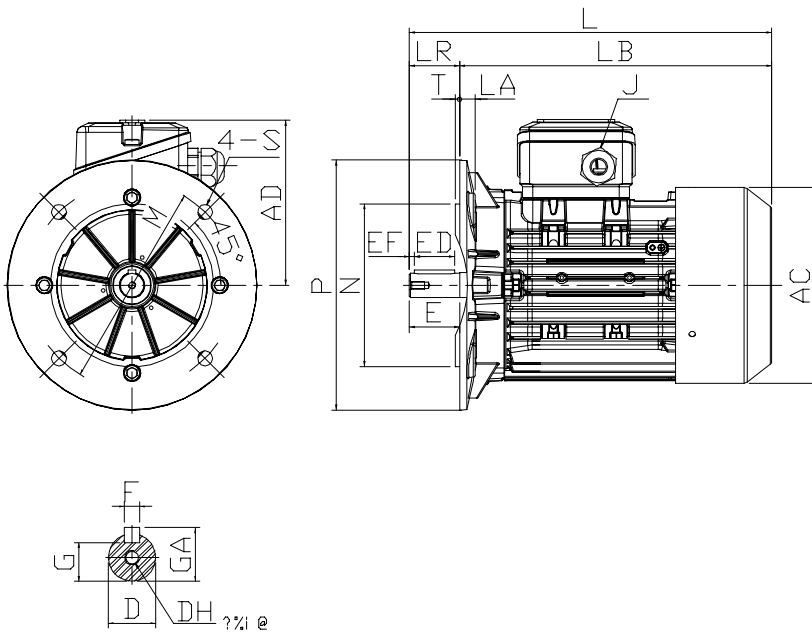


Figure 6.2.1

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
0,37 0,55	0,25 0,37	0,18 0,25	71M	139	123	9	252	222	30	130	110	160	ψ10	3,5	M20X1.5	-
0,75 1,1	0,55 0,75	0,37 0,55	80M	156	132	10	289,5	250	40	165	130	200	ψ12	3,5		
1,5	1,1	0,75	90S	174	141	10	307	257	50	165	130	200	ψ12	3,5		
2,2	1,5	1,1	90L				352	302								

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
71M	14	30	22	4	5	11	16	M5X12.5	6202ZZC3	6202ZZC3
80M	19	40	32	4	6	15,5	21,5	M6X16	6004ZZC3	6004ZZC3
90S	24	50	40	5	8	20	27	M8X19	6205ZZC3	6204ZZC3
90L										

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.2.2 Type AEQV1T AEQV2T F100L, F112M, B5

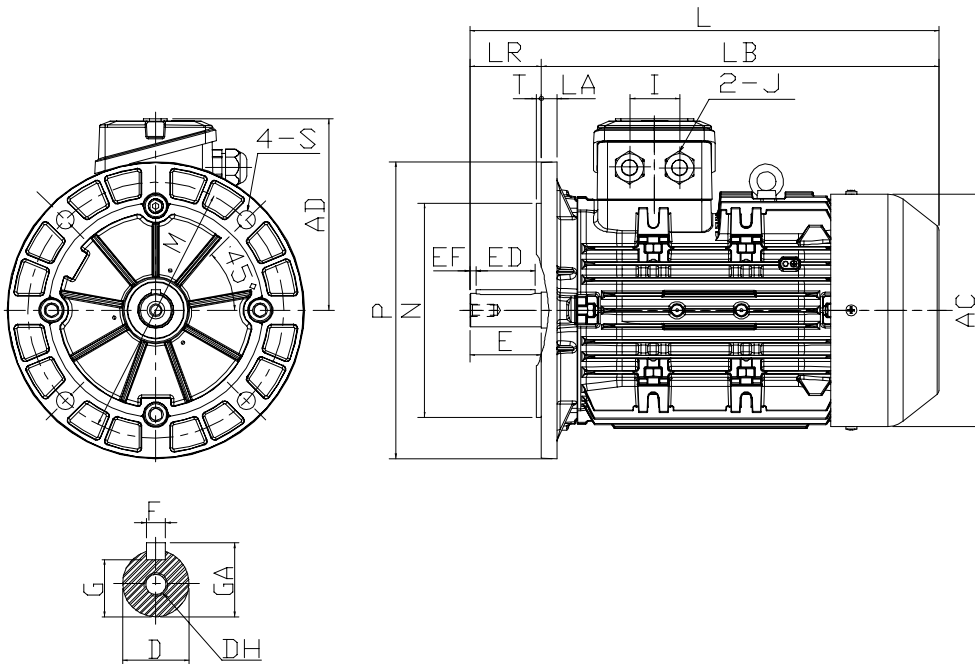


Figure 6.2.2

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
3	2,2	1,5	100L	195	161	11	394	334	60	215	180	250	ψ15	4	M20X1.5	42
-	3	-														
4	4	2,2	112M	220	171	11	401,5	342	60	215	180	250	ψ15	4		

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.2.3 Type AEQV1T AEQV2T F132S, F132M, 160M, 160L, B5

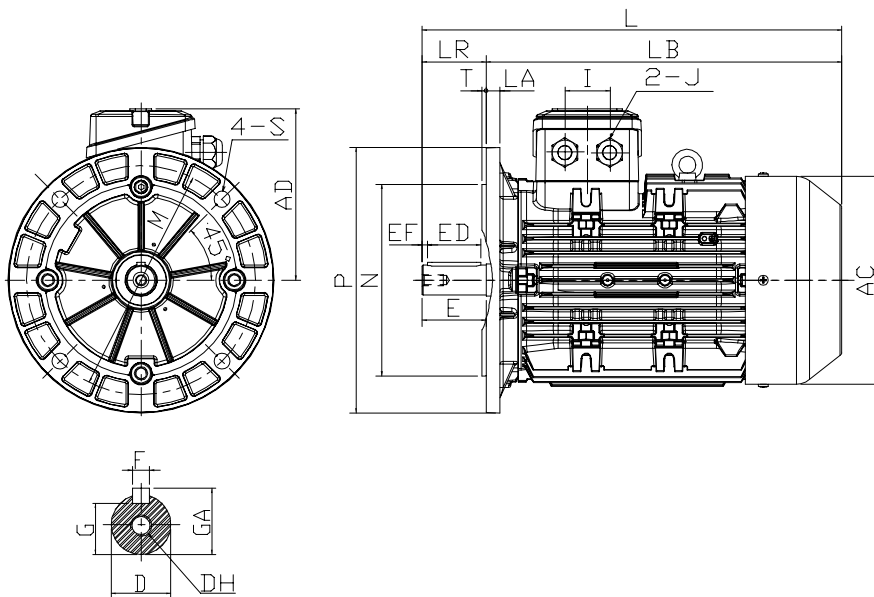


Figure 6.2.3

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
5,5	5,5	3	132S/M	259	195	12	432	352	80	265	230	300	ψ15	4	M25X1.5	47
7,5	7,5	4					482	402								
-	-	5,5	132M													
11 15 18,5	11 - 15	7,5 - 11	160M/L	313,5	238	13	596	486	110	300	250	350	ψ19	4	M32X1.5	60

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
132S/M	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3
132M										
160M/L	42	110	90	10	12	37	45	M16X36	6309ZZC3	6209ZZC3

Note

1. Tolerance of Shaft End Diameter D: k6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.2.4 Type AEQV1T AEQV2T F180M, F180L, B5

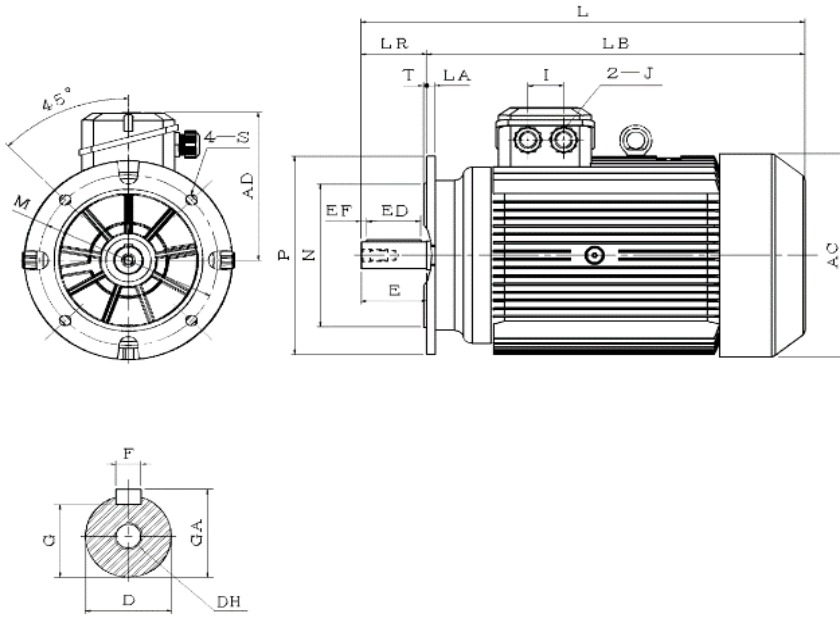


Figure 6.2.4

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
22	-	15	180M/L	357	280	14	745	635	110	300	250	350	19	5	M32X1.5	60
-	-	-														

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
180M/L	48	110	90	10	14	42,5	51,5	M16X36	6310ZZC3	6210ZZC3

Note

1. Tolerance of Shaft End Diameter D: K6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. Tolerance of N: j6 .
4. dimensions in mm

6.2.5 Type AEQV1T AEQV2T F200L, B5

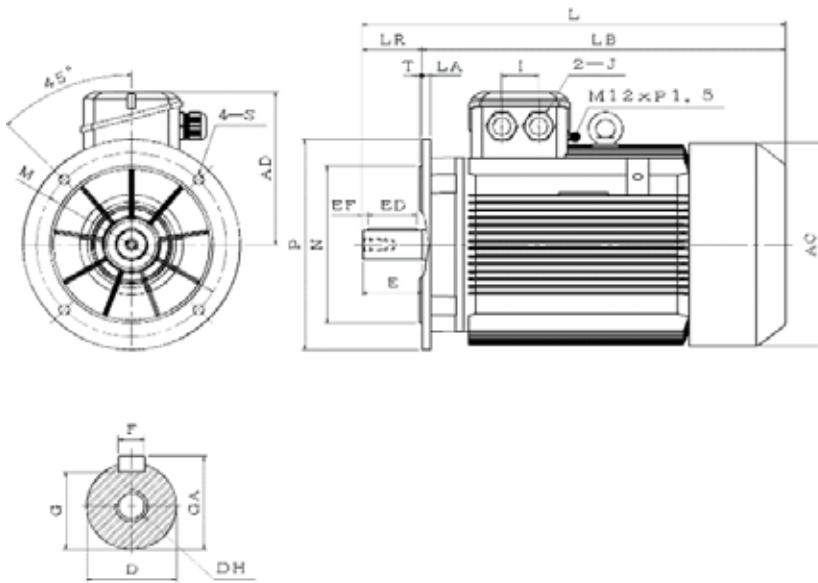


Figure 6.2.5

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
30	-	-	200L	385	291	15	779	669	110	350	300	400	19	5	M40X1.5	68
37	-	-														

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
200L	55	110	90	10	16	49	59	M20X40	6312ZZC3	6212ZZC3

Note

1. Tolerance of Shaft End Diameter D: K6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. Tolerance of N: j6 .
4. dimensions in mm

6.2.6 Type AEQV3T F80M, F90S, F90L, B5

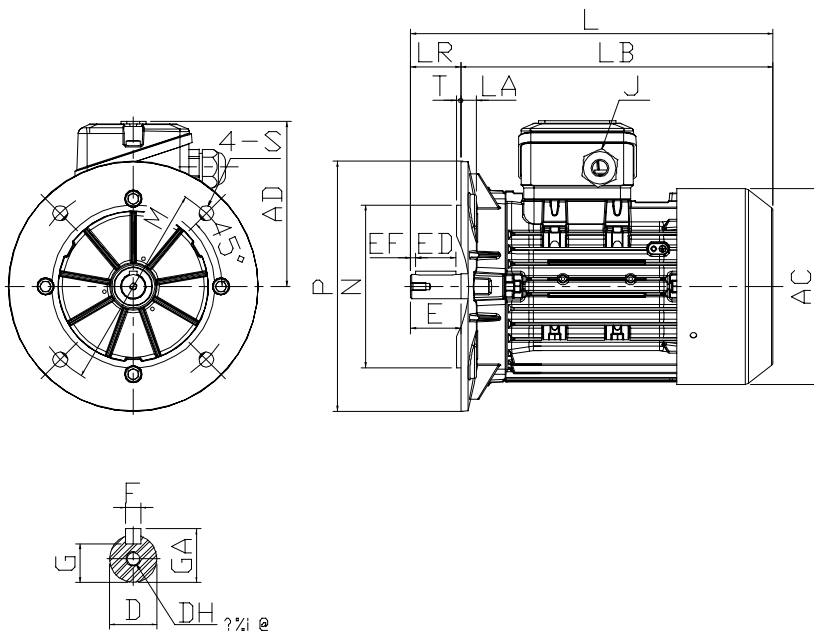


Figure 6.2.6

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
0,75 1,1	0,55 -	0,37 0,55	80M	156	132	10	289,5	249,5	40	165	130	200	ψ12	3,5	M20X1.5	-
-	0,75	-	80M1				312,5	272,5								
1,5	1,1	0,75	90S	174	141	10	352	302	50	165	130	200	ψ12	3,5		
2,2	1,5	1,1	90L				357	307								

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
80M	19	40	32	4	6	15,5	21,5	M6X16	6004ZZC3	6004ZZC3
80M1										
90S	24	50	40	5	8	20	27	M8X19	6205ZZC3	6204ZZC3
90L										

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.2.7 Type AEQV3T F100L, F112M, B5

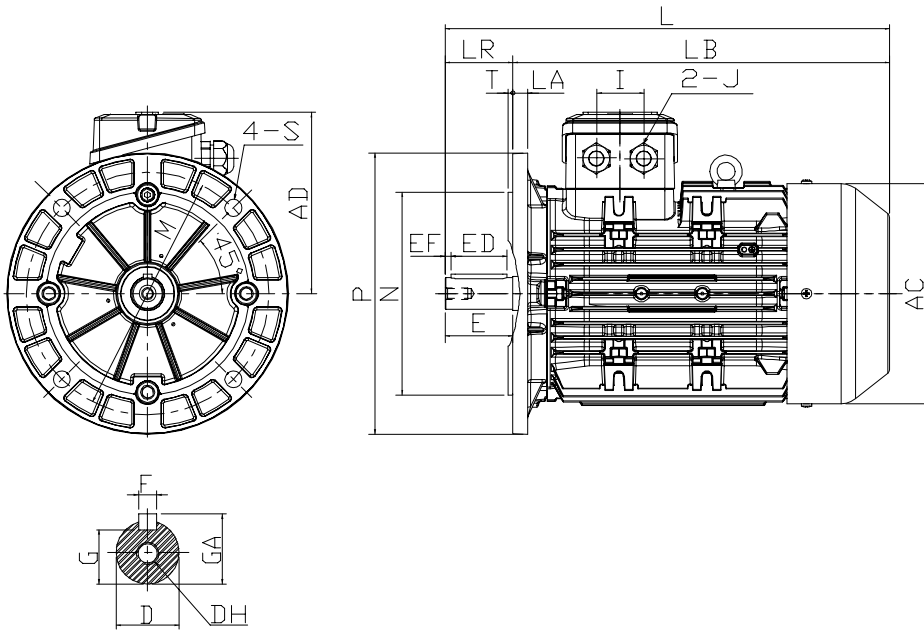


Figure 6.2.7

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
3	2,2	1,5	100L	195	161	11	394	334	60	215	180	250	ψ15	4	M20X1.5	42
-	3	-	100L1				444	384								
4	-	-	112M	220	171	11	401,5	341,5	60	215	180	250	ψ15	4		
-	4	2,2	112M1				444	384								

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
100L1										
112M	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M1										

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.2.8 Type AEQV3T F132S, F132M, F160M, F160L, B5

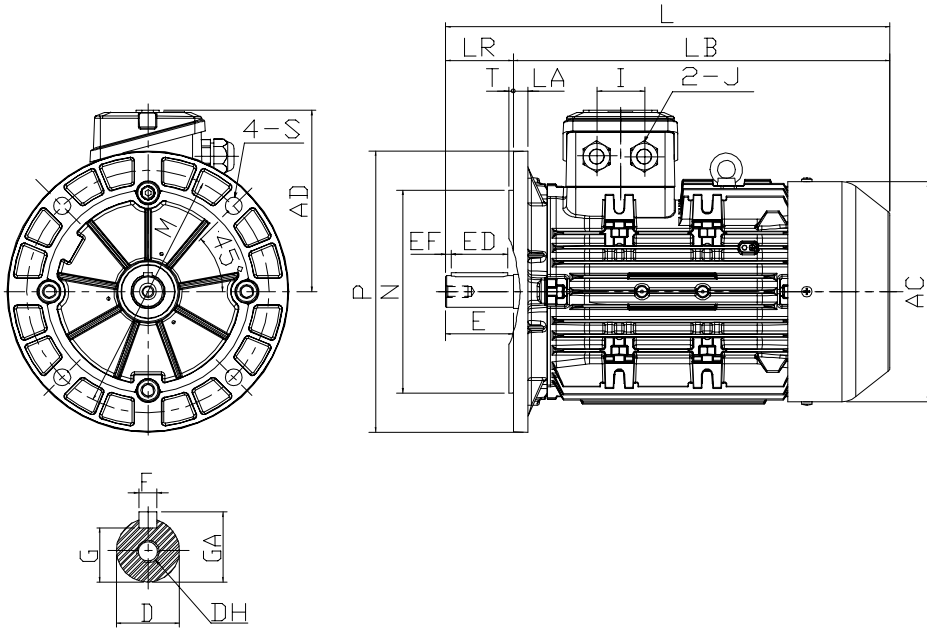


Figure 6.2.8

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
-	-	3	132S	259	195	12	432	352	80	265	230	300	ψ15	4	M25X1.5	47
5,5	5,5	-	132S1				444	364								
7,5	-	-	132S2				482	402								
-	7,5	4	132M				482	402								
-	-	5,5														
11 15	11 -	7,5 -	160M	313,5	238	13	596	486	110	300	250	350	ψ19	4	M32X1.5	60
18,5	15	11	160L				660	550								

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
132S	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3
132S1										
132S2										
132M										
160M	42	110	90	10	12	37	45	M16X36	6309ZZC3	6209ZZC3
160L										

Note

1. Tolerance of Shaft End Diameter D: k6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.2.9 Type AEQV3T F180M, F180L, B5

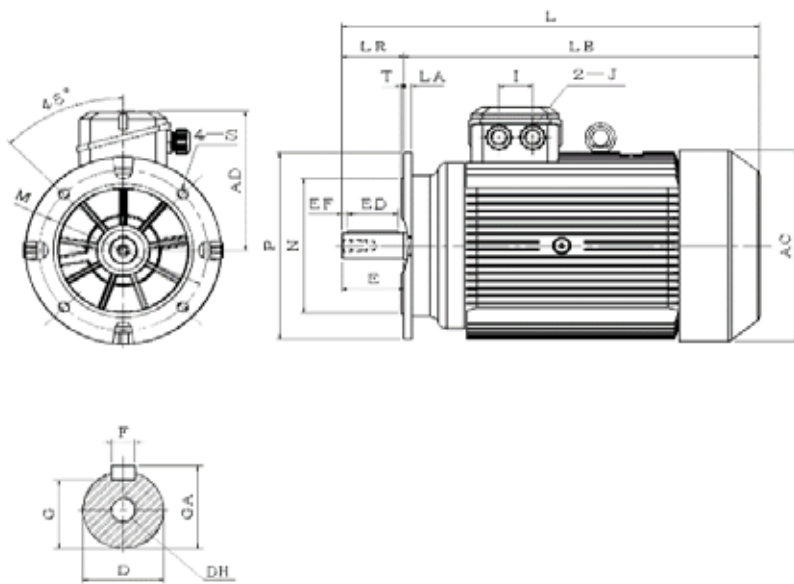


Figure 6.2.9

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
22	18,5	15	180M/L	357	280	14	745	635	110	300	250	350	19	5	M32X1.5	60
-	22	18,5														

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
180M/L	48	110	90	10	14	42,5	51,5	M16X36	6310ZZC3	6210ZZC3

Note

1. Tolerance of Shaft End Diameter D: k6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.2.10 Type AEQV3T F200L, B5

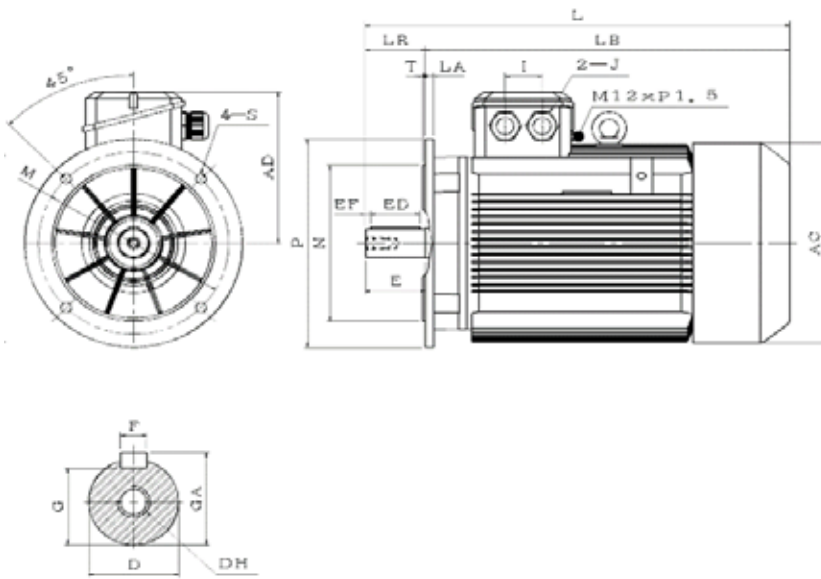


Figure 6.2.10

Output (kW)			FRAME SIZE	AC	AD	LA	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P														
30	30	22	200L	385	291	15	779	669	110	350	300	400	19	5	M40X1.5	68
37	-	-														

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
200L	55	110	90	10	16	49	59	M20X40	6312ZZC3	6212ZZC3

Note

1. Tolerance of Shaft End Diameter D: K6 .
2. Tolerance of Shaft Center Height H: +0, -0.5 .
3. Tolerance of N: j6 .
4. dimensions in mm

6.3 B14 mounting

6.3.1 Type AEQV1T AEQV2T F71M, F80M, 90S, 90M, B14

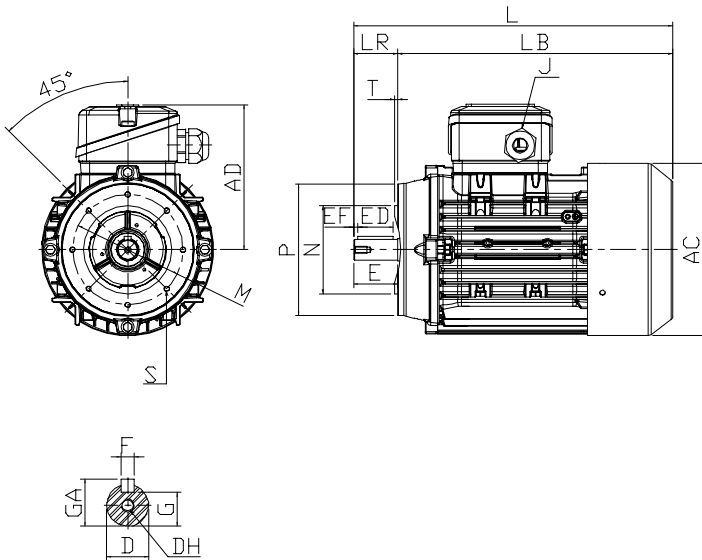


Figure 6.3.1

Output (kW)			FRAME SIZE	AC	AD	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P													
0,37 0,55	0,25 0,37	0,18 0,25	71M	139	123	252	222	30	85	70	105	8-M6	2,5	M20X1.5	-
0,75 1,1	0,55 0,75	0,37 0,55	80M	156	132	290	250	40	100	80	120	8-M6	3		
1,5	1,1	0,75	90S	174	141	307	257	50	115	95	140	4-M8	3		
2,2	1,5	1,1	90L			352	302								

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
71M	14	30	22	4	5	11	16	M5X12.5	6202ZZC3	6202ZZC3
80M	19	40	32	4	6	15,5	21,5	M16X16	6004ZZC3	6004ZZC3
90S	24	50	40	5	8	20	27	M8X19	6205ZZC3	6204ZZC3
90L										

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.3.2 Type AEQV1T AEQV2T F100L, 112M, B14

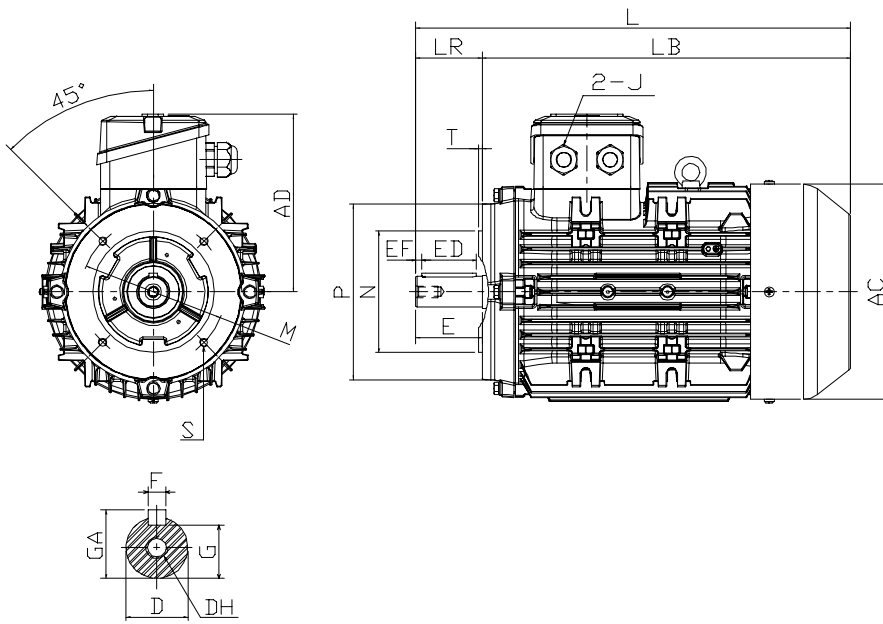


Figure 6.3.2

Output (kW)			FRAME SIZE	AC	AD	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P													
3	2,2	1,5	100L	195	161	394	334	60	130	110	160	4-M8	3,5	M20X1.5	42
4	-	-	112M	220	171	402	342	60	130	110	160	4-M8	3,5		

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.3.3 Type AEQV1T AEQV2T F132S, 132M, 160M, 160L B14

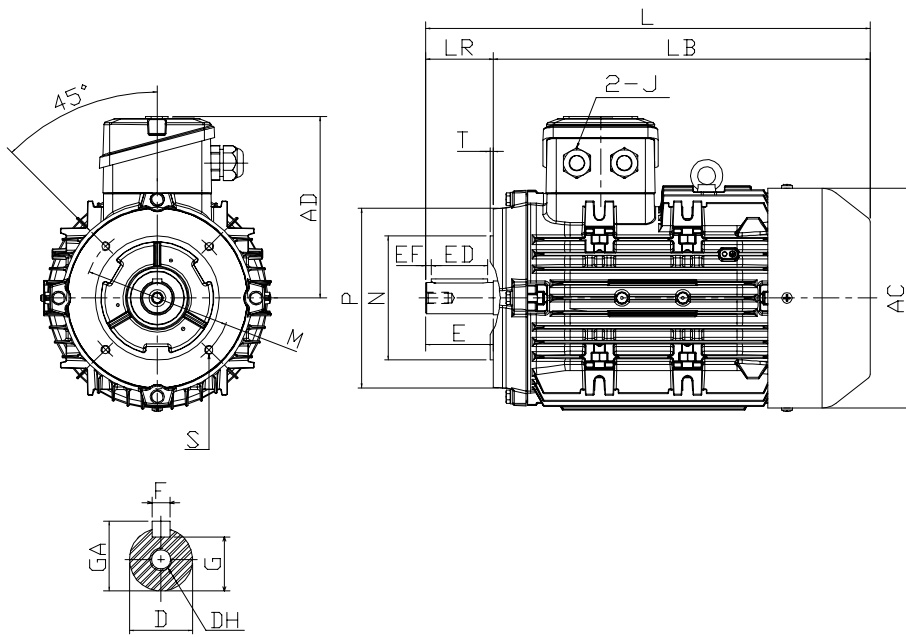


Figure 6.3.3

Output (kW)			FRAME SIZE	AC	AD	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P													
5,5	5,5	3	132S/M	259	195	432	352	80	165	130	200	4-M10	3,5	M25X1.5	47
7,5	7,5	4				482	402								
-	-	5,5	132M												
11	11	7,5	160M/L	314	238	596	486	110	165	130	200	4-M10	3,5	M32X1.5	60
15	-	-													
18,5	15	11													

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
132S/M	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3
132M										
160M/L	42	110	90	10	12	37	45	M16X36	6309ZZC3	6209ZZC3

Note

1. Tolerance of Shaft End Diameter D: k6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.3.4 Type AEQV3T F80M, 90S, 90L, B14

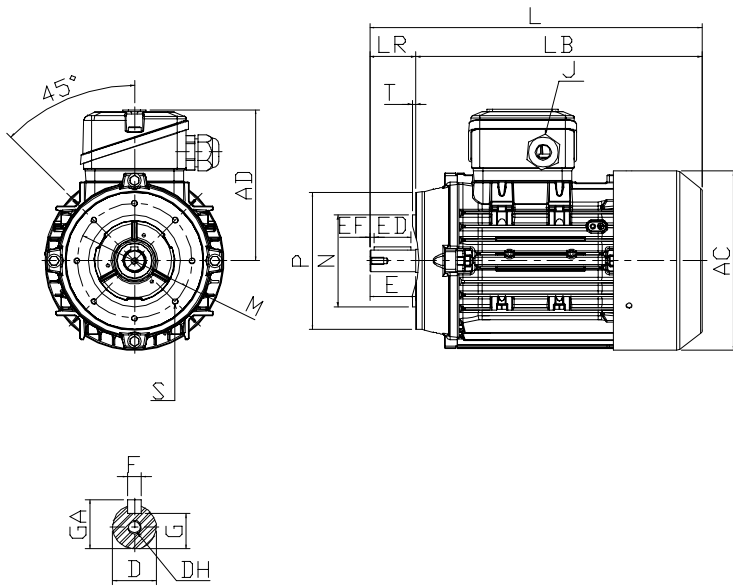


Figure 6.3.4

Output (kW)			FRAME SIZE	AC	AD	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P													
0,75	0,55	0,37	80M	156	132	290	250	40	100	80	120	8-M6	3	M20X1.5	42
1,1	-	0,55	80M1			313	273								
-	0,75	-	90S	174	141	352	302	50	115	95	140	4-M8	3		
1,5	1,1	0,75	90L			357	307								
2,2	1,5	1,1													

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
80M	19	40	32	4	6	15,5	21,5	M16X16	6004ZZC3	6004ZZC3
80M1										
90S	24	50	40	5	8	20	27	M8X19	6205ZZC3	6204ZZC3
90L										

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.3.5 Type AEQV3T F100L, F112M, B14

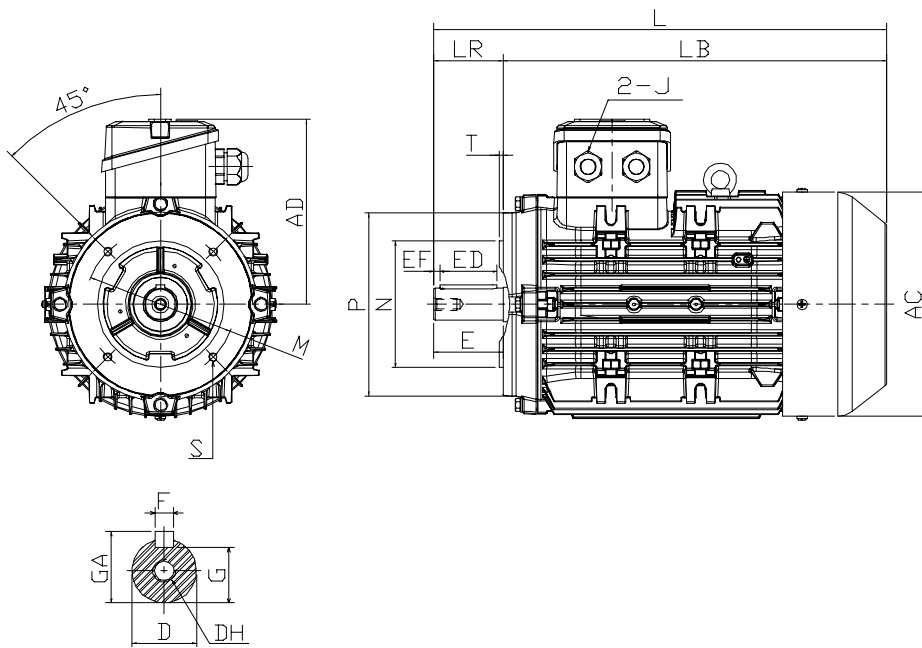


Figure 6.3.5

Output (kW)			FRAME SIZE	AC	AD	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P													
3	2,2	1,5	100L	195	161	394	334	60	130	110	160	4-M8	3,5	M20X1.5	42
-	3	-	100L1			444	384								
4	-	-	112M	220	171	402	342	60	130	110	160	4-M8	3,5		
-	4	2,2	112M1			444	384								

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
100L1										
112M	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M1										

Note

1. Tolerance of Shaft End Diameter D: j6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.3.6 Type AEQV3T F132S, F132M, F160M, F160L, B14

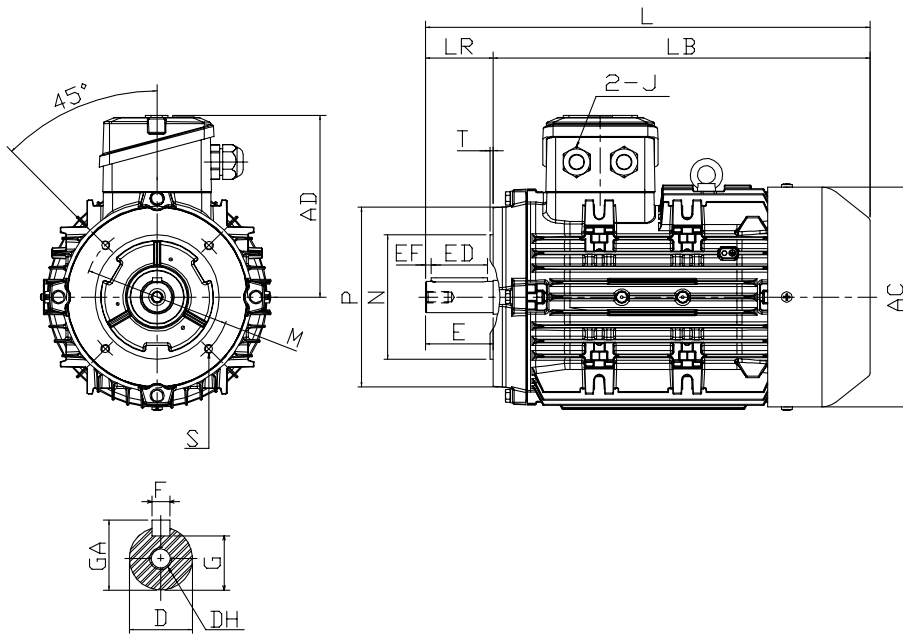


Figure 6.3.6

Output (kW)			FRAME SIZE	AC	AD	L	LB	LR	M	N	P	S	T	J	I
2P	4P	6P													
-	-	3	132S	259	195	432	352	80	165	130	200	4-M10	3,5	M25X1.5	47
5,5	5,5	-	132S1			444	364								
7,5	-	-	132S2			482	402								
-	7,5	4	132M			482	402								
-	-	5,5													
11	11	7,5	160M	314	238	596	486	110	165	130	200	4-M10	3,5	M32X1.5	60
15	-	-				660	550								
18,5	15	11	160L												

FRAME SIZE	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
132S	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3
132S1										
132S2										
132M										
160M	42	110	90	10	12	37	45	M16X36	6309ZZC3	6209ZZC3
160L										

Note

1. Tolerance of Shaft End Diameter D: k6 .
2. Tolerance of N: j6 .
3. dimensions in mm

6.4 B35 mounting

6.4.1 Type AERV1T AERV2T F71M, F80M, 90S, F90L, B35

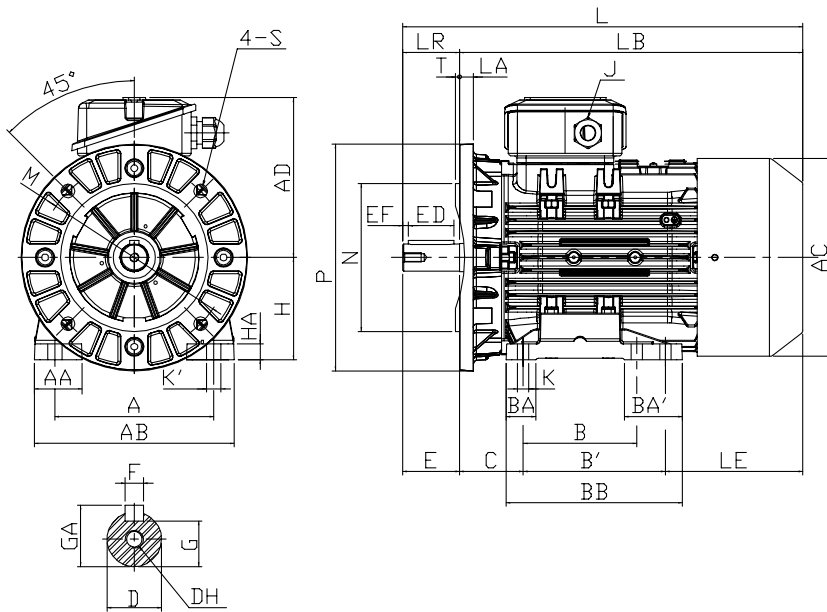


Figure 6.4.1

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
0,37 0,55	0,25 0,37	0,18 0,25	71	112	31	137	139	90	-	23	23	110	45	71	9	123	M20X1.5	-	252	222	87
0,75 1,1	0,55 0,75	0,37 0,55	80M	125	35	150	156	100	-	33	33	125	50	80	11	132			289,5	250	100
1,5	1,1	0,75	90S	140	42	175	174	100	125	25	50	155	56	90	14	141			307	257	76
2,2	1,5	1,1	90L																352	302	121

FRAME SIZE	M	P	N	LA	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
										D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
71	130	160	110	9	3,5	7	10	10	30	14	30	22	4	5	11	16	M5X12.5	6202ZZC3	6202ZZC3
80M	165	200	130	10	3,5	9,5	13	12	40	19	40	32	4	6	15,5	21,5	M6X16	6004ZZC3	6004ZZC3
90S	165	200	130	10	3,5	10	12,5	12	50	24	50	40	5	8	20	27	M8X19	6205ZZC3	6004ZZC3
90L																			

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.4.2 Type AERV1T AERV2T F100L, F112M, B35

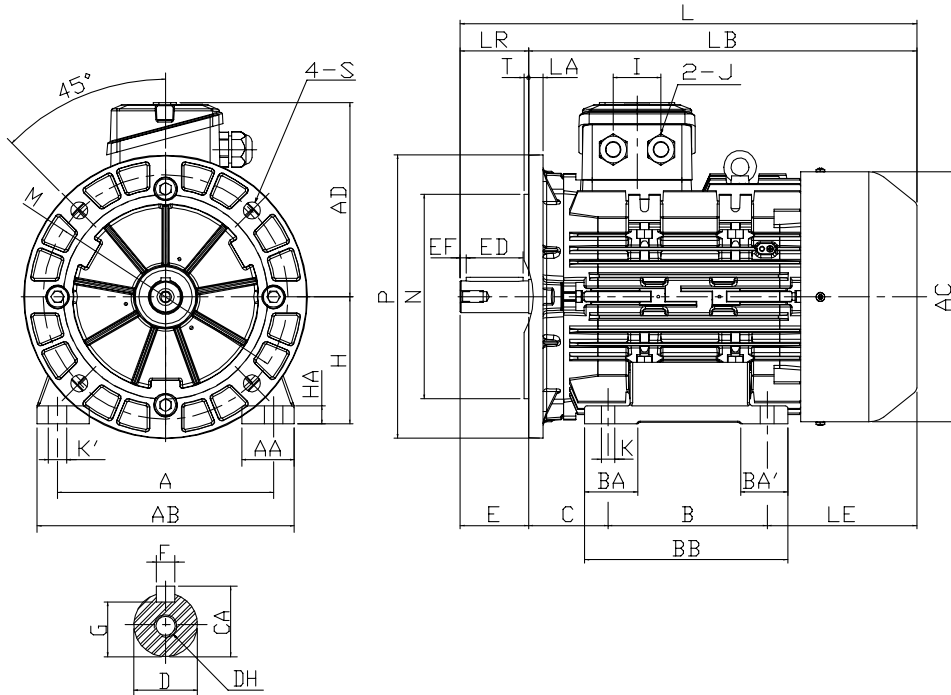


Figure 6.4.2

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
3	2,2	1,5	100L	160	40	195	195	140	-	35	35	174	63	100	13	161	M20X1.5	42	394	334	131
-	3	-																			
4	4	2,2	112M	190	46	227	220	140	-	45	45	178,5	70	112	16	171			401,5	342	132

FRAME SIZE	M	P	N	LA	T	K	K'	S	LR	SHAFT EXTENSION							BEARING		
										D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	215	250	180	11	4	12	16	15	60	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M	215	250	180	11	4	12	16	15	60	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6 .
4. Dimension in mm

6.4.3 Type AERV1T AERV2T F132S, F132M, B35

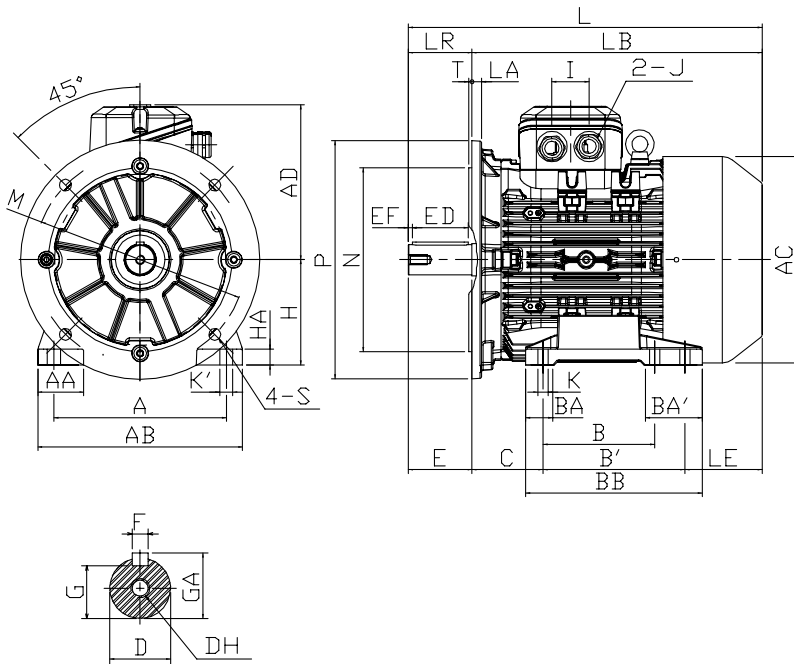


Figure 6.4.3

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
5.5	5.5	3	132S/M	216	58	257	259	140	178	35	70	220	89	132	20	195	M25X1.5	47	432	85	352
7,5	7.5	4																			
-	-	5,5	132M																482	402	135

FRAME SIZE	M	P	N	LA	T	K	K'	S	LR	SHAFT EXTENSION								BEARING		
										D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END	
132S/M	265	300	230	12	4	12,5	16,5	15	80	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3	
132M																				

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6 .
4. Dimension in mm

6.4.4 Type AERV1T AERV2T F160M, F160L, B35

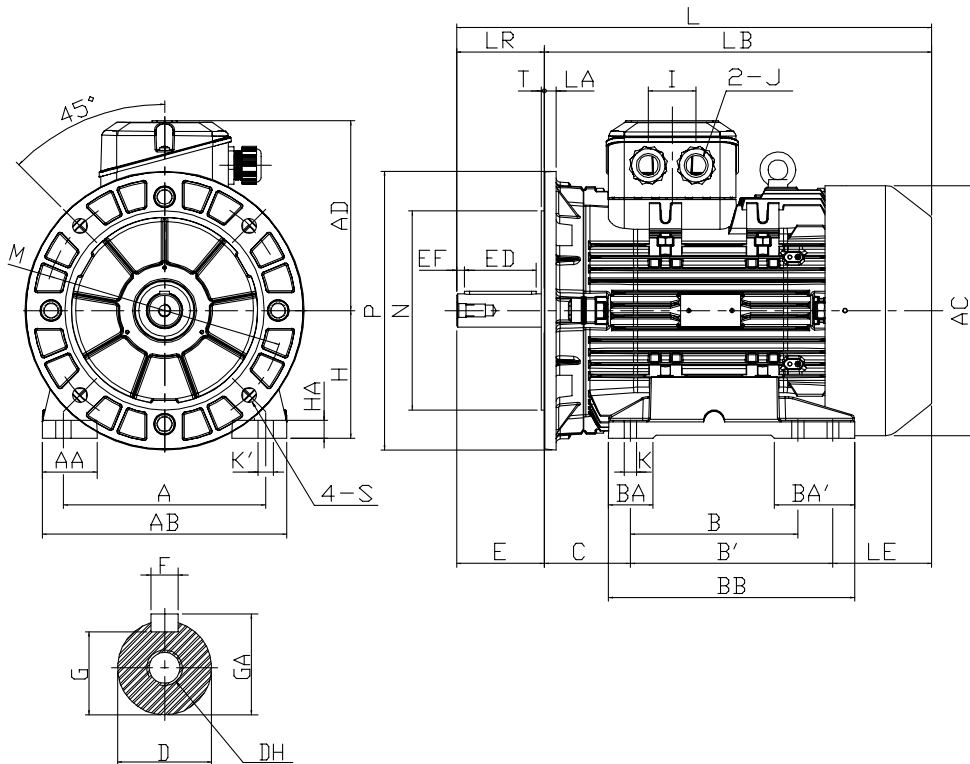


Figure 6.4.4

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE		
2P	4P	6P																					
11	11	7,5	160M/L	254	69	306	314	210	254	55	100	309	108	160	22	238	M32X1.5	60	596	486	124		
15	-	-																					
18,5	15	11																					

FRAME SIZE	M	P	N	LA	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END									
160M/L	300	350	250	13	4	15	19	19	110	42	110	90	10	12	37	45	M16X36	6309ZCC3	6209ZCC3

Note

1. Tolerance of shaft end diameter k: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.4.5 Type AERV1T-TDF AERV2T-TDF F180M, F180L, B35

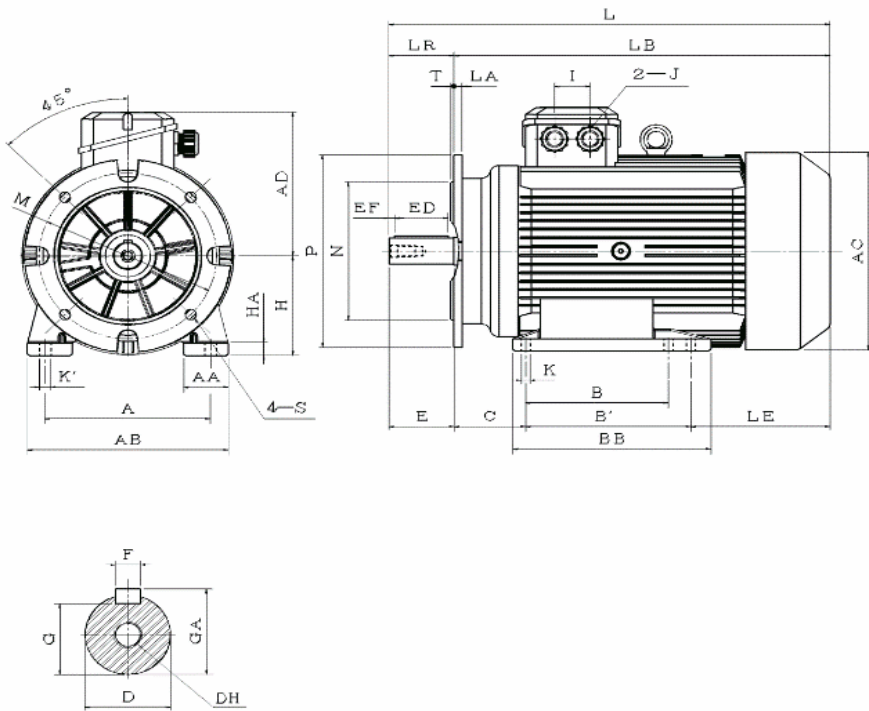


Figure 6.4.5

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BB	C	H	HA	AD	I	J	L	LR	LB	LE				
2P	4P	6P		22	-	15	180M/L	279	75	338,5	357	241	279	334	121	180	23,5	280	60	M32X1.5	745	110	635	235
-	-	-																						

FRAME SIZE	M	P	N	LA	T	K	K'	S	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
180M/L	300	350	250	14	5	15	19	19	48	110	90	10	14	42,5	51,5	M16X36	6310ZZC3	6210ZZC3

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.4.6 Type AERV1T-TDF AERV2T-TDF F200L, B35

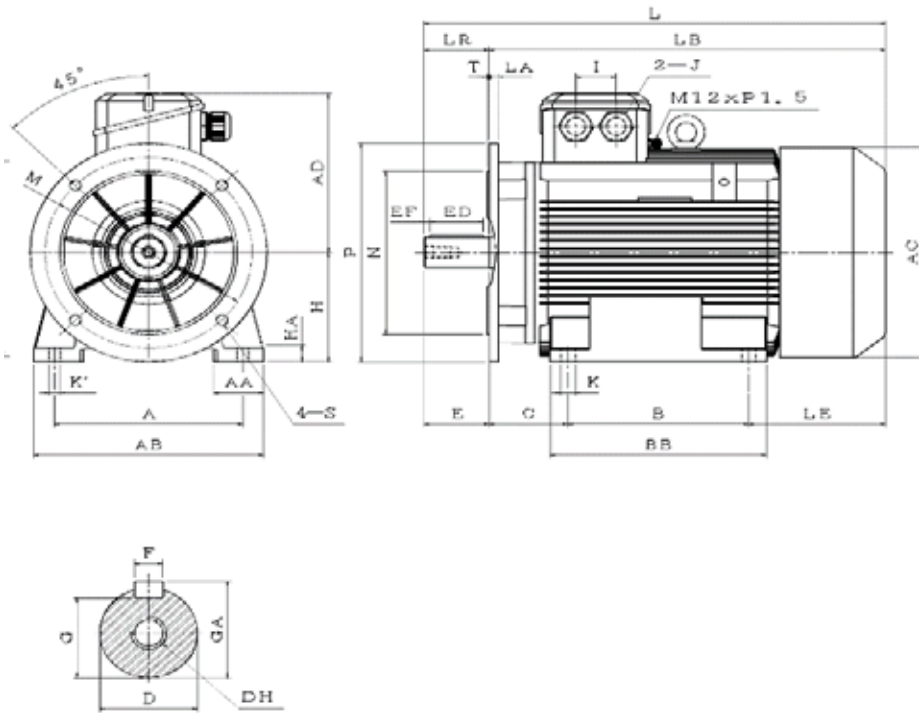


Figure 6.4.6

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BB	C	H	HA	AD	I	J	L	LR	LB	LE
2P	4P	6P																		
30	-	-	200L	318	84	388	385	305	--	365	133	200	30	291	68	M40X1.5	779	110	669	231
37	-	-																		

FRAME SIZE	M	P	N	LA	T	K	K'	S	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
200L	350	400	300	15	5	24	19	19	55	110	90	10	16	49	59	M20X40	6312ZZC3	6212ZZC3

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6 .
4. Dimension in mm

6.4.7 Type AERV3T F80M, F90S, F90M, B35

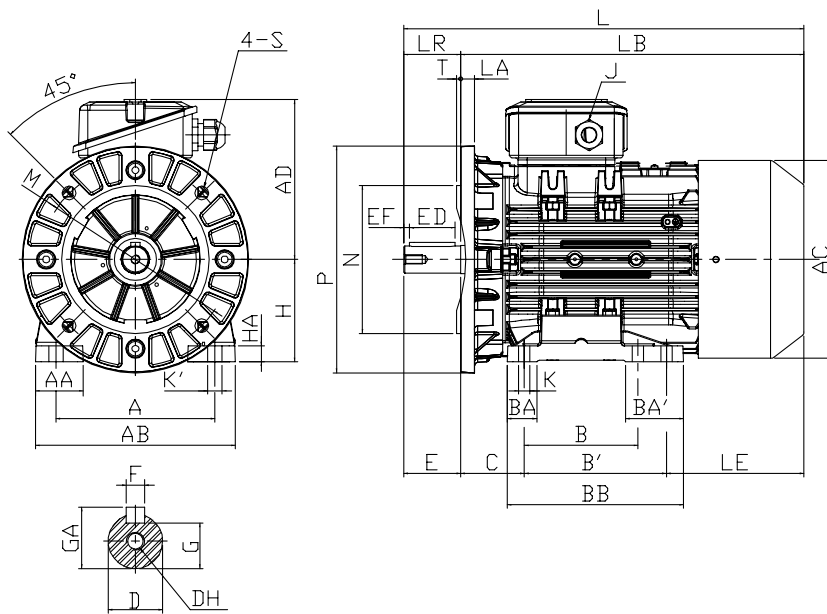


Figure 6.4.7

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
0,75	0,55	0,37	80M	125	35	150	156	100	-	33	33	125	50	80	11	132	M20X1.5	-	289,5	250	100
-	0,75	-																	80M1	312,5	273
1,5	1,1	0,75	90S	140	42	175	174	100	125	25	50	155	56	90	14	141				352	302
2,2	1,5	1,1																	90L	357	307

FRAME SIZE	M	P	N	LA	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
										D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
80M	165	200	130	10	3,5	9,5	13	12	40	19	40	32	4	6	15,5	21,5	M6X16	6004ZZC3	6004ZZC3
80M1																			
90S	165	200	130	10	3,5	10	12,5	12	50	24	50	40	5	8	20	27	M8X19	6205ZZC3	6004ZZC3
90L																			

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.4.8 Type AERV3T F100L, F112M, B35

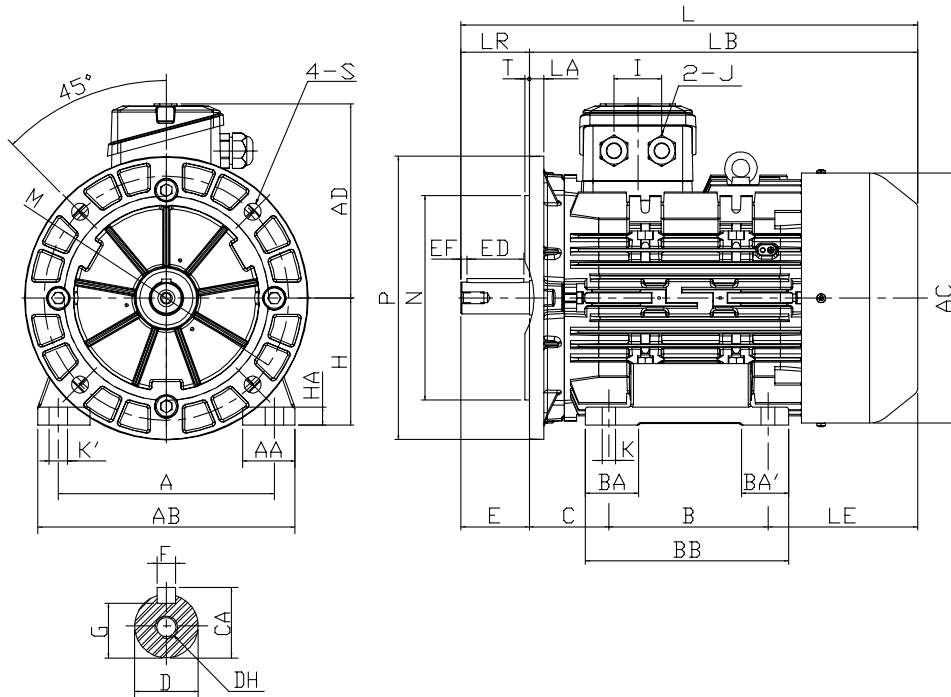


Figure 6.4.8

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE		
2P	4P	6P																					
3	2,2	1,5	100L	160	40	195	195	140	-	35	35	174	63	100	13	161	M20X1.5	42	394	334	131		
-	3	-	100L1																	444	384	181	
4	-	-	112M	190	46	227	220	140	-	45	45	178,5	70	112	16	171					401,5	342	132
-	4	2,2	112M1																		444	384	174

FRAME SIZE	M	P	N	LA	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
										D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	215	250	180	11	4	12	16	15	60	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
100L1																			
112M	215	250	180	11	4	12	16	15	60	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M1																			

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.4.9 Type AERV3T F132S, F132M, B35

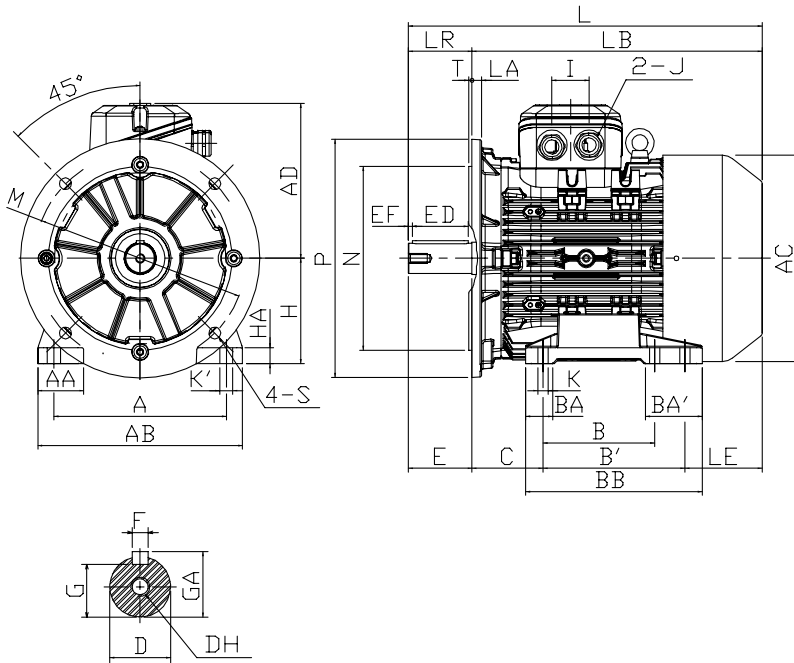


Figure 6.4.9

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE		
2P	4P	6P																					
-	-	3	132S																		432	352	85
5,5	5,5	-	132S1																		444	364	97
7,5	-	-	132S2	6.4.7	216	58	257	259	140	178	35	70	220	89	132	20	M25X1.5	47	482	402	135		
-	7,5	4	132M																		482	402	135
-	-	5,5																			482	402	135

FRAME SIZE	M	P	N	LA	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
										D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
132S	265	300	230	12	4	12,5	16,5	15	80	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3
132S1																			
132S2																			
132M																			

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.4.10 Type AERV3T F160M, F160L, B35

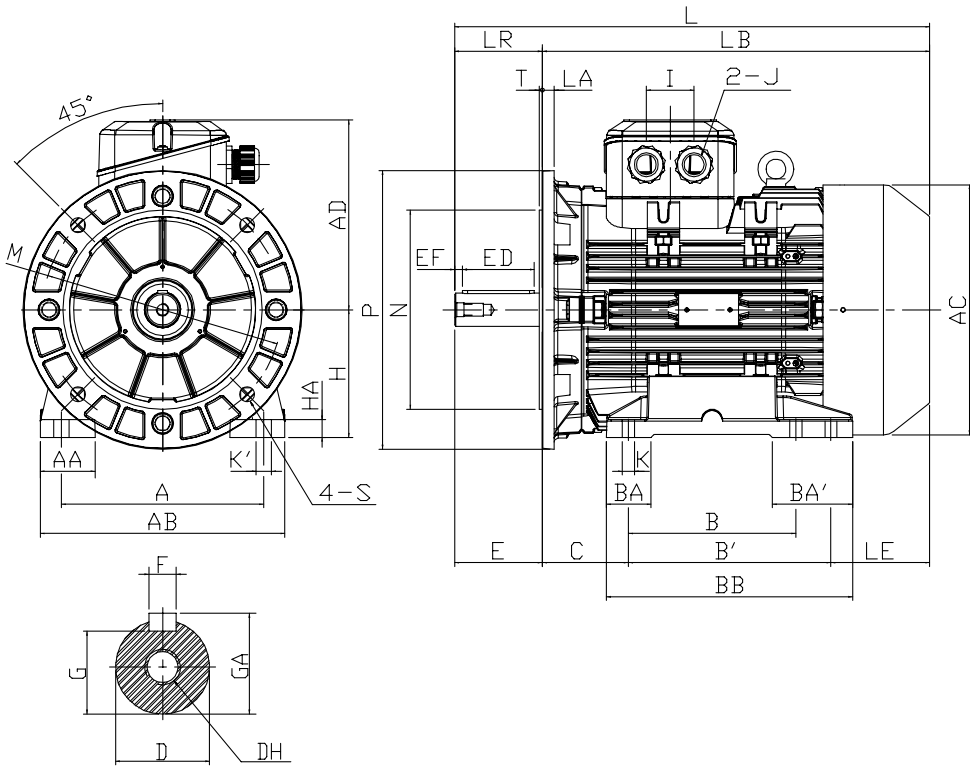


Figure 6.4.10

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE				
2P	4P	6P																							
11	11	7,5	160M	254	69	306	314	210	254	55	100	309	108	160	22	238	M32X1.5	60	596	486	124				
18,5	15	11	160L																				660	550	188

FRAME SIZE	M	P	N	LA	T	K	K'	S	LR	SHAFT EXTENSION								BEARING		
										D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END	
160M	300	350	250	13	4	15	19	19	110	42	110	90	10	12	37	45	M16X36	6309ZCC3	6209ZCC3	
160L																				

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.4.11 Type AERV3T-TDF F180M, F180L, B35

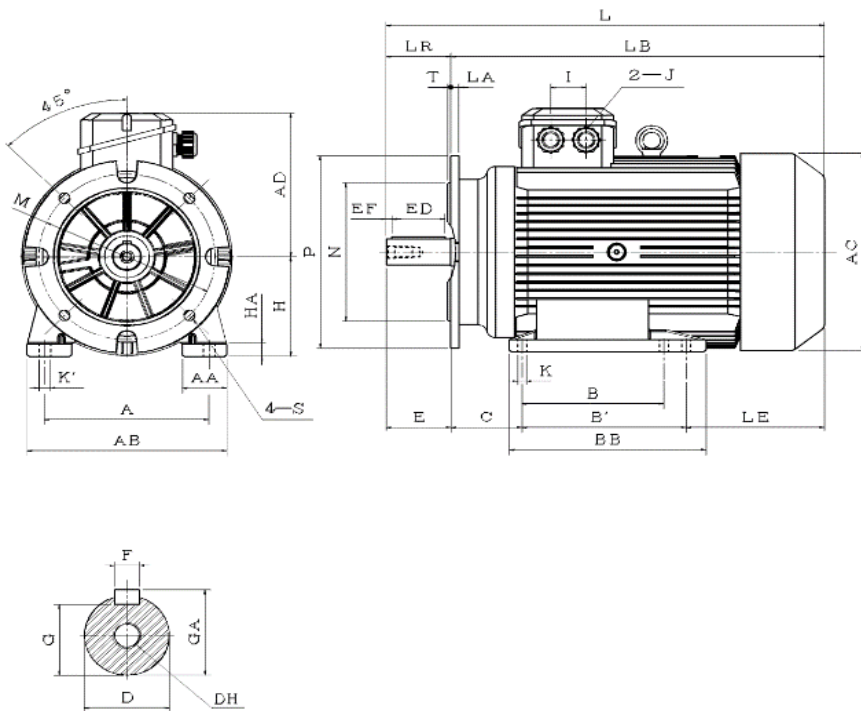


Figure 6.4.11

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BB	C	H	HA	AD	I	J	L	LR	LB	LE
2P	4P	6P		22	18,5	15	-	22	18,5											
			180M/L	279	75	338,5	357	241	279	334	121	180	23,5	280	60	M32X1.5	745	110	635	235

FRAME SIZE	M	P	N	LA	T	K	K'	S	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
180M/L	300	350	250	14	5	15	19	19	48	110	90	10	14	42,5	51,5	M16X36	6310ZZC3	6210ZZC3

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.4.12 Type AERV3T-TDF F200L, B35

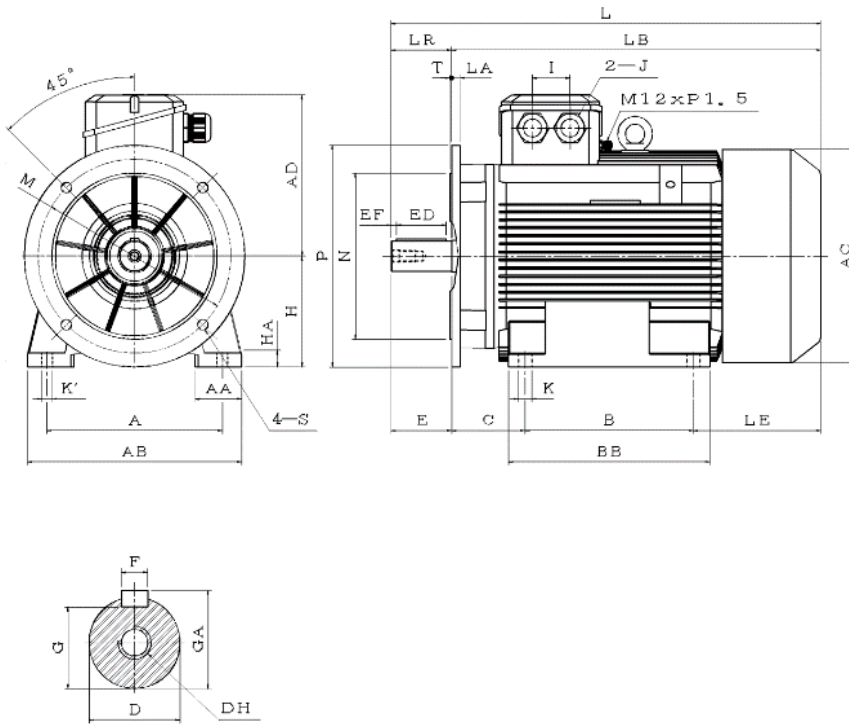


Figure 6.4.12

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BB	C	H	HA	AD	I	J	L	LR	LB	LE
2P	4P	6P																		
30	30	22	200L	318	84	388	385	305	--	365	133	200	30	291	68	M40X1.5	779	110	669	231
37	-	-																		

FRAME SIZE	M	P	N	LA	T	K	K'	S	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
200L	350	400	300	15	5	24	19	19	55	110	90	10	16	49	59	M20X40	6312ZZC3	6212ZZC3

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.5 B34 mounting

6.5.1 Type AERV1T AERV2T F71M, F80M, F90S, F90L, B34

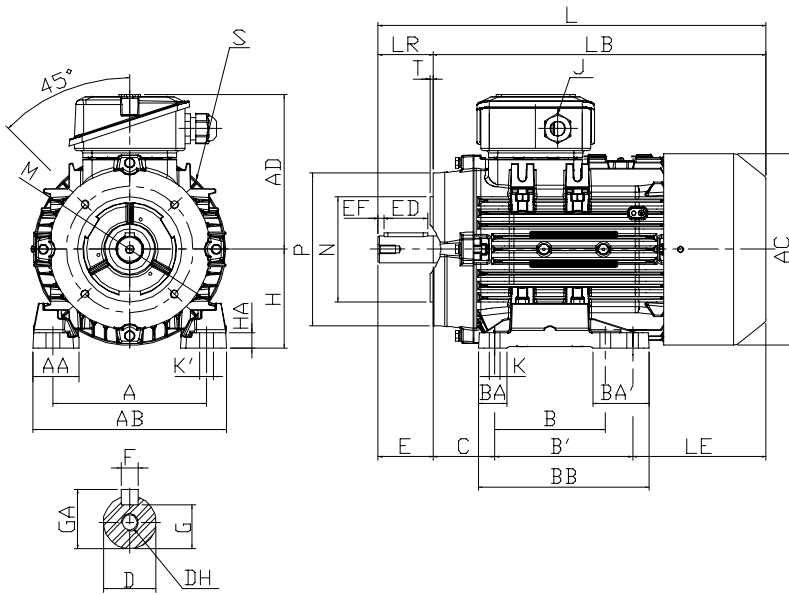


Figure 6.5.1

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
0,37 0,55	0,25 0,37	0,18 0,25	71M	112	31	137	139	90	-	23	23	110	45	71	9	123	M20X1.5	-	252	222	87
0,75 1,1	0,55 0,75	0,37 0,55	80M	125	35	150	156	100	-	33	33	125	50	80	11	132			289,5	250	100
1,5	1,1	0,75	90S	140	42	175	174	100	125	25	50	155	56	90	14	141			307	257	76
2,2	1,5	1,1	90L																352	302	121

FRAME SIZE	M	P	N	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
71M	85	105	70	2,5	7	10	8-M5	30	14	30	22	4	5	11	16	M5X12.5	6202ZZC3	6202ZZC3
80M	100	120	80	3	9,5	13	8-M6	40	19	40	32	4	6	15,5	21,5	M6X16	6004ZZC3	6004ZZC3
90S	115	140	95	3	10	12,5	4-M8	50	24	50	40	5	8	20	27	M8X19	6205ZZC3	6004ZZC3
90L																		

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.5.2 Type AERV1T AERV2T F100L, 112M, B34

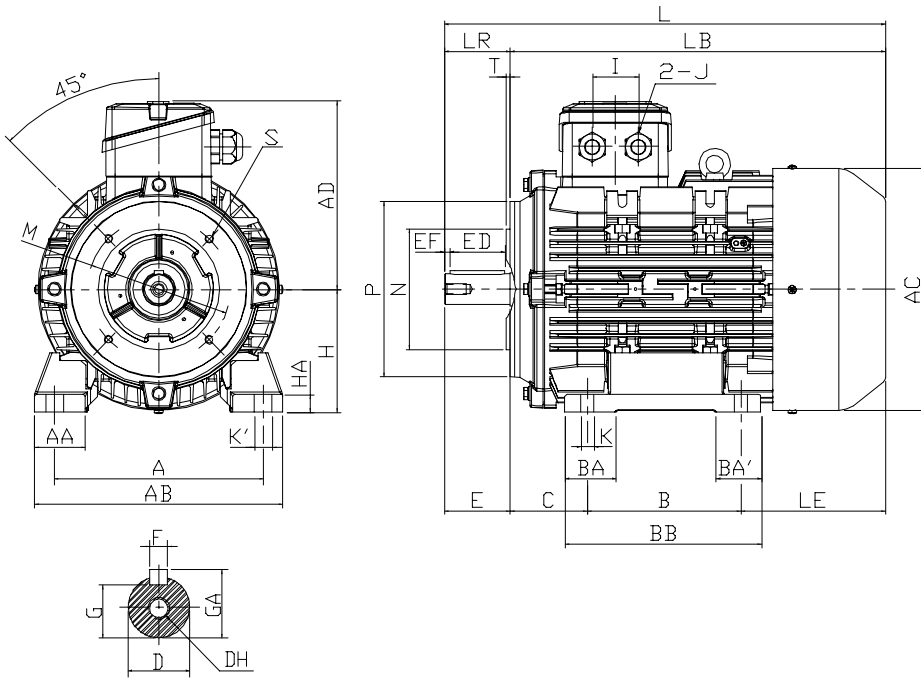


Figure 6.5.2

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
3	2,2	1,5	100L	160	40	195	195	140	-	35	35	174	63	100	13	161	M20X1.5	42	394	334	131
-	3	-		190	46	227	220	140	-	45	45	178,5	70	112	16	171			401,5	342	131,5
4	4	2,2	112M	190	46	227	220	140	-	45	45	178,5	70	112	16	171					

FRAME SIZE	M	P	N	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	130	160	110	3,5	12	16	4-M8	60	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M	130	160	110	3,5	12	16	4-M8	60	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.5.3 Type AERV1T AERV2T F132S, 132M, B34

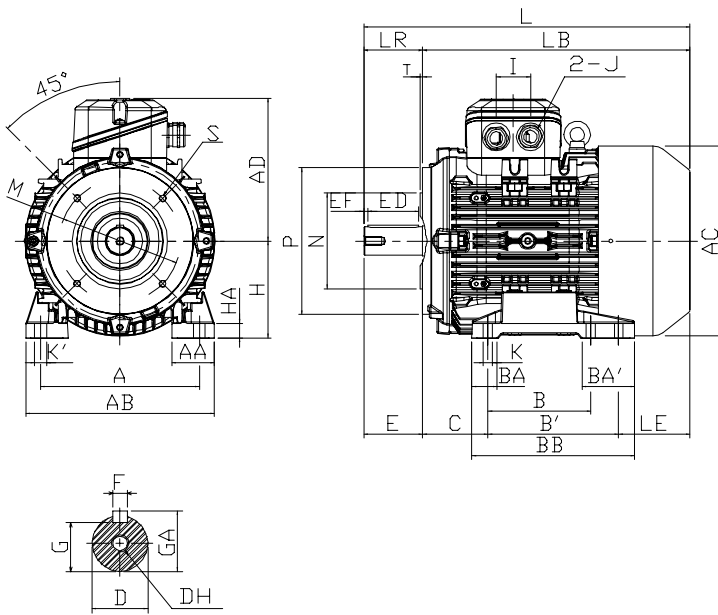


Figure 6.5.3

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
5.5	5.5	3	132S/M	216	58	257	259	140	178	35	70	220	89	132	20	195	M25X1.5	47	432	85	352
7,5	7,5	4		132M															482	135	402

FRAME SIZE	M	P	N	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	16,5	200	130	3,5	12,5	16,5	4-M10	80	38	80	70	5	10	33	41	M12X28	6208ZCC3	6208ZCC3
112M																		

Note

1. Tolerance of shaft end diameter k: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.5.4 Type AERV1T AERV2T F160M, 160L, B34

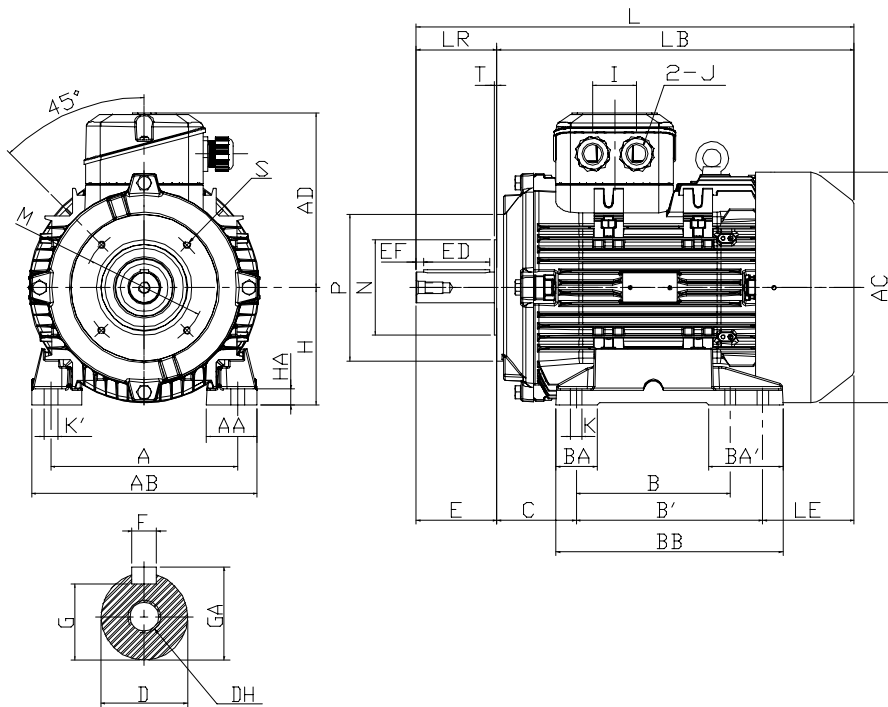


Figure 6.5.4

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE	
2P	4P	6P																				
11	11	7,5	160M/L	254	69	306	314	210	254	55	100	309	108	160	22	238	M32X1.5	60	596	124	486	
15	15	11																				
18,5	-	-																				

FRAME SIZE	M	P	N	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
160M/L	19	200	130	3,5	15	19	4-M10	110	42	110	90	10	12	37	45	M16X36	6309ZZC3	6209ZZC3

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6 .
4. Dimension in mm

6.5.5 Type AERV3T F80M, F90S, F90L, B34

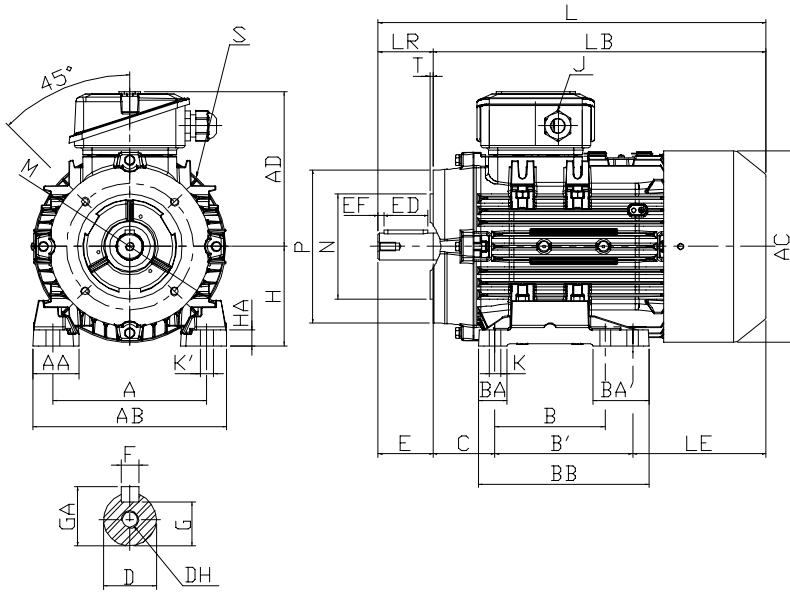


Figure 6.5.5

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
0,75	0,55	0,37	80M	125	35	150	156	100	-	33	33	125	50	80	11	132	M20X1.5	-	289,5	250	99,5
-	0,75	-	80M1																312,5	273	123
1,5	1,1	0,75	90S	140	42	175	174	100	125	25	50	56	90	14	141	352			302	121	
2,2	1,5	1,1	90L													357			307	126	

FRAME SIZE	M	P	N	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
80M	100	120	80	3	9,5	13	8-M6	40	19	40	32	4	6	15,5	21,5	M6X16	6004ZZC3	6004ZZC3
80M1									24	50	40	5	8	20	27	M8X19	6205ZZC3	6004ZZC3
90S	115	140	95	3	10	12,5	4-M8	50	24	50	40	5	8	20	27	M8X19	6205ZZC3	6004ZZC3
90L									24	50	40	5	8	20	27	M8X19	6205ZZC3	6004ZZC3

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.5.6 Type AERV3T F100L, F112M, B34

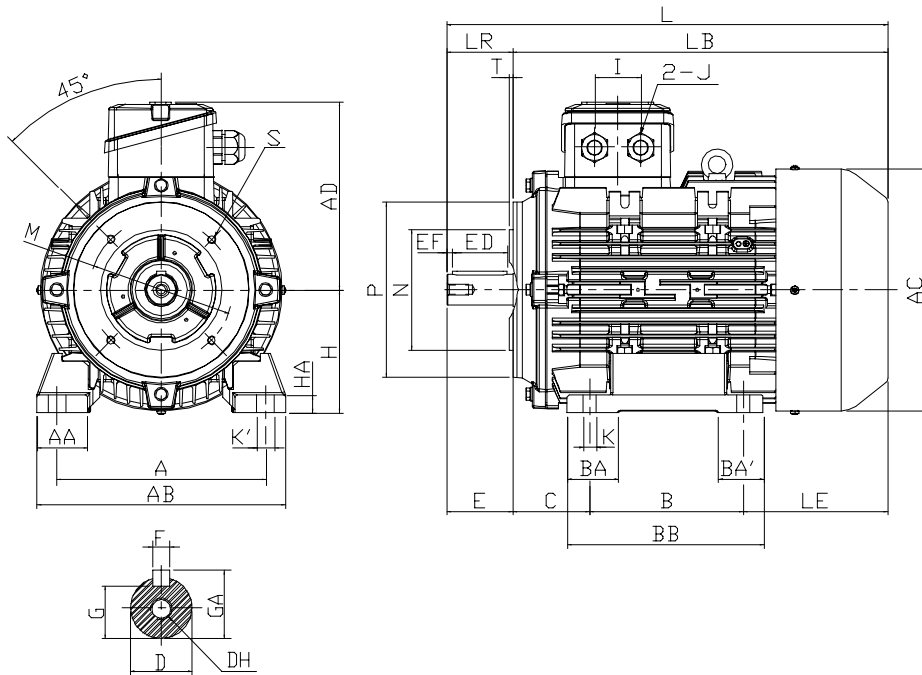


Figure 6.5.6

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
3	2,2	1,5	100L	160	40	195	195	140	-	35	35	174	63	100	13	161	M20X1.5	42	394	334	131
-	3	-	100L1																444	384	181
4	-	-	112M	190	46	227	220	140	-	45	45	178,5	70	112	16	171			401,5	342	132
-	4	2,2	112M1																444	384	174

FRAME SIZE	M	P	N	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
100L	130	160	110	3,5	12	16	4-M8	60	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
100L1																		
112M	130	160	110	3,5	12	16	4-M8	60	28	60	50	5	8	24	31	M10X22	6206ZZC3	6205ZZC3
112M1																		

Note

1. Tolerance of shaft end diameter D: j6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.5.7 Type AERV3T F132S, F132M, B34

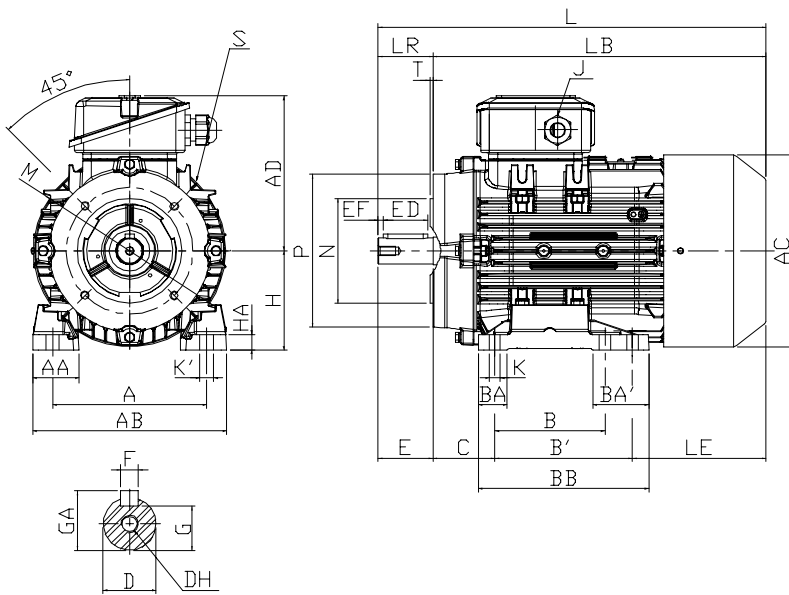


Figure 6.5.7

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE			
2P	4P	6P																						
-	-	3	132S																			432	85	352
5,5	5,5	-	132S1																			444	97	364
7,5	-	-	132S2	216	58	257	259	140	178	35	70	220	89	132	20	195	M25X1.5	47	482	135	402			
-	7,5	4	132M																			482	135	402
-	-	5,5																				482	135	402

FRAME SIZE	M	P	N	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
									D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END
132S	16,5	200	130	3,5	12,5	16,5	4-M10	80	38	80	70	5	10	33	41	M12X28	6208ZZC3	6208ZZC3
132S1																		
132S2																		
132M																		

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6.
4. Dimension in mm

6.5.8 Type AERV3T F160M, F160L, B34

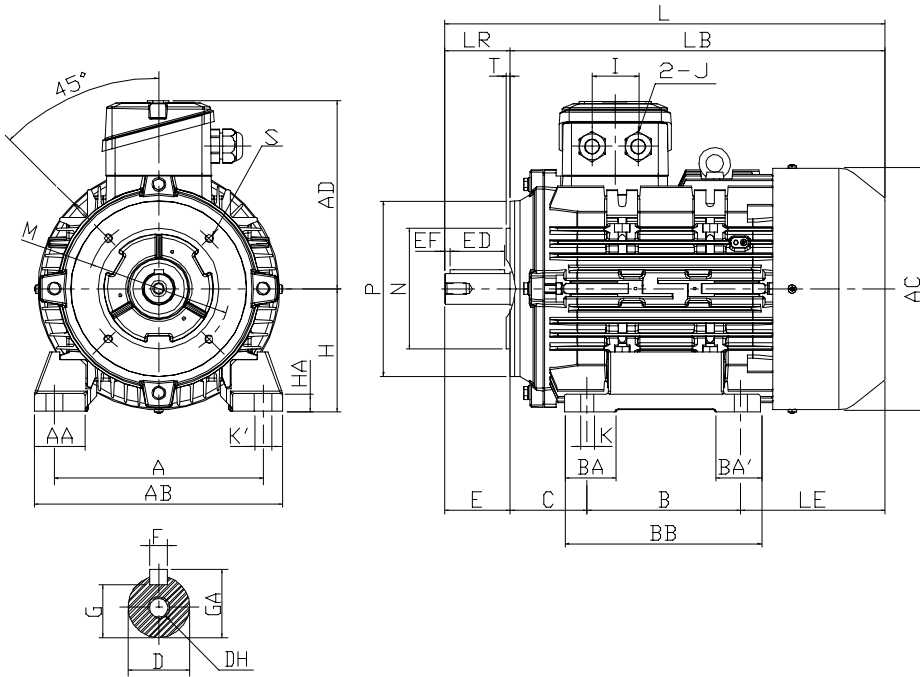


Figure 6.5.8

Output (kW)			FRAME SIZE	A	AA	AB	AC	B	B'	BA	BA'	BB	C	H	HA	AD	J	I	L	LB	LE
2P	4P	6P																			
11	11	7,5	160M	254	69	306	314	210	254	55	100	309	108	160	22	238	M32X1.5	60	596	124	486
18,5	15	11																	160L	660	188

FRAME SIZE	M	P	N	T	K	K'	S	LR	SHAFT EXTENSION								BEARING	
	D	E	ED	EF	F	G	GA	DH	DRIVE END	OPPOSITE DRIVE END								
160M	19	200	130	3,5	15	19	4-M10	110	42	110	90	10	12	37	45	M16X36	6309ZZC3	6209ZZC3
160L																		

Note

1. Tolerance of shaft end diameter D: k6.
2. Tolerance of shaft center high H: +0, -0.5.
3. Tolerance of N: j6 .
4. Dimension in mm

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