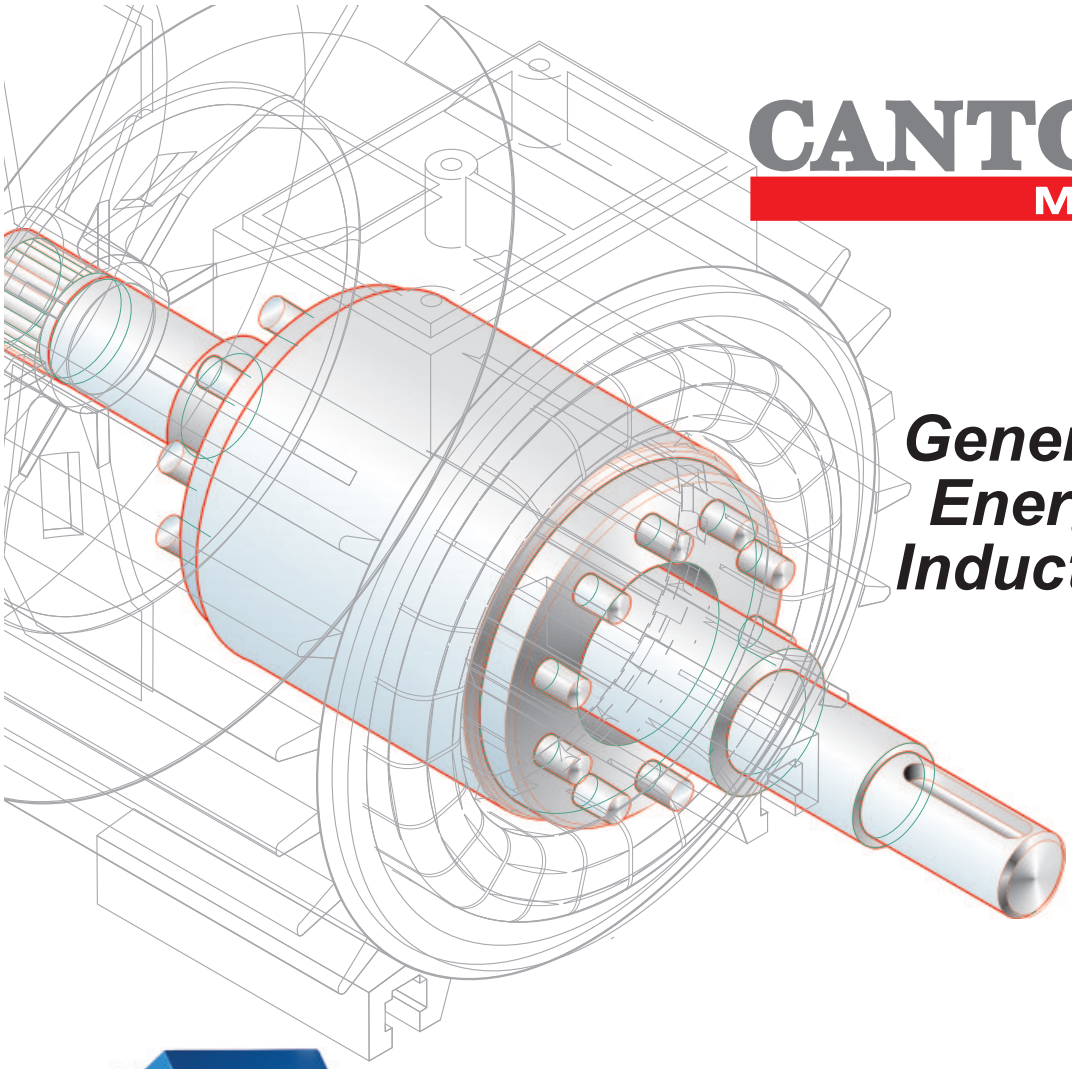
CANTONI MOTOR

ISO 9001



General Purpose Energy Efficient Induction Motors series 2SIE

IE2

Comply with the new efficiency classes for low-voltage three-phase motors

IEC 60034-30 standard and EU Regulation 640/2009

Product Catalogue

Certificates

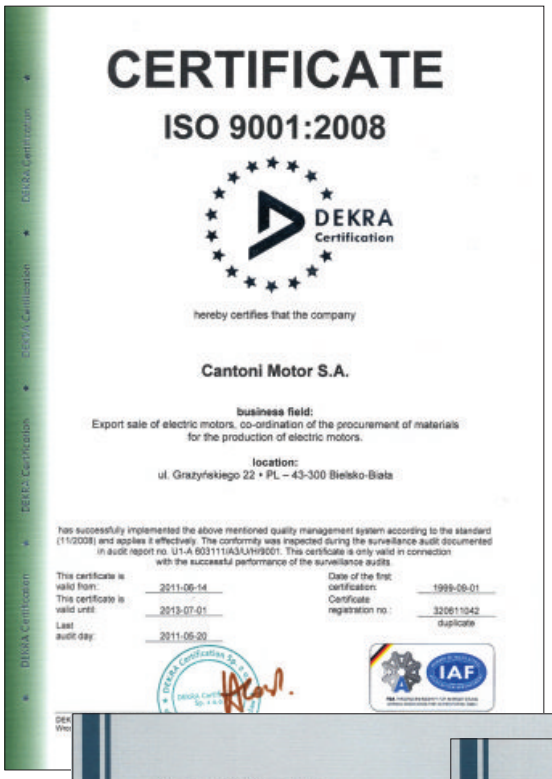
Cantoni Motor SA
ISO 9001
KEMA
Since September 30, 1999
Number 99515

Besel SA
ISO 9001
DQS
Since July 21, 1995
Number 002887Q1

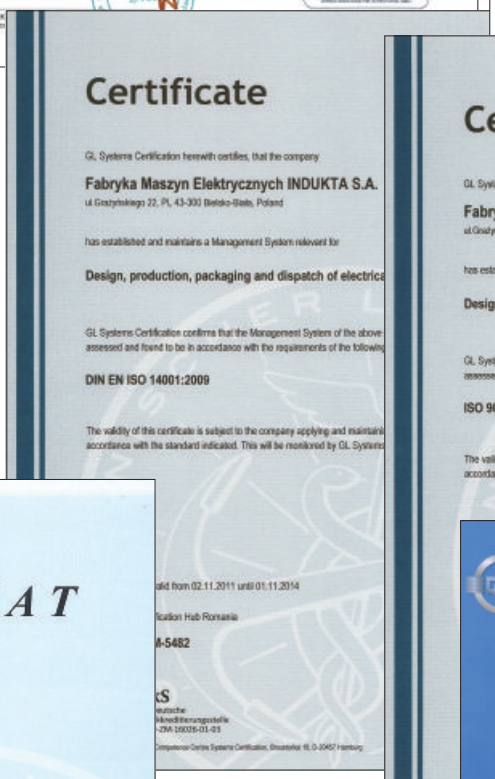
Indukta SA
ISO 9001
KEMA
Since April 1, 1993
ISO 14001
KEMA
Since July 1, 2001
Number 2019916

Celma SA
ISO 9001
Germanischer Lloyd
since June 16, 1995
Number QS-243 HH
ISO 14001
Germanischer Lloyd
Since November 15, 1999
Number EM-1835 HH

Emit SA
ISO 9001
Polski Rejestr Statków
Sine January 23, 1997
Number NC-034/00


CERTIFICATE
ISO 9001:2008
DEKRA Certification
hereby certifies that the company
Cantoni Motor S.A.
business field:
Export sale of electric motors, co-ordination of the procurement of materials for the production of electric motors.
location:
ul. Grazyńskiego 22 • PL – 43-300 Bielsko-Biała
has successfully implemented the above mentioned quality management system according to the standard (11/2008) and applies it effectively. The conformity was inspected during the surveillance audit documented in audit report no. U1-A 603111/A3/UH/9001. This certificate is only valid in connection with the successful performance of the surveillance audits.
This certificate is valid from: 2011-06-14
This certificate is valid until: 2013-07-01
Last audit day: 2011-06-20
Date of the first certification: 1999-09-01
Certificate registration no.: 320611042 duplicate
IAF


CERTYFIKAT
CERTIFICATE
Przyznany organizacji:
Issued for:
Zakład Maszyn Elektrycznych "EMIT" S.A.
ul. Narutowicza 72
99-320 Żychlin
Biuro Certyfikacji Polskiego Rejestru Statków S.A., al. gen. Józefa Hallera 126, 80-416 Gdańsk, zaświadcza, że System Zarządzania Jakością wyżej wymienionej organizacji został oceniony i stwierdzono jego zgodność z wymaganiami:
Certification Bureau of Polski Rejestr Statków S.A., al. gen. Józefa Hallera 126, 80-416 Gdańsk, certifies that the Quality Management System of the above organization has been assessed and found to be in accordance with the requirements of:
ISO 9001:2000
Zakres certyfikacji:
PROJEKTOWANIE I PRODUKCJA:
- SILNIKÓW INDUKCYJNYCH TRÓJFAZOWYCH
- GENERATORÓW SYNCHRONICZNYCH
- MASZYN PRĄDU STAŁEGO
- ZESPOŁÓW PRĄDOTWÓRCZYCH
- CZĘŚCI I PODZESPOŁÓW DO MASZYN ELEKTRYCZNYCH
- KONSTRUKCJI SPAWANYCH
ORAZ REMONTY MASZYN ELEKTRYCZNYCH
Scope of certification:
DESIGN AND MANUFACTURE OF:
- THREE-PHASE INDUCTION MOTORS
- SYNCHRONOUS GENERATORS
- POWER GENERATING SETS
- PARTS AND SUBASSEMBLIES FOR ELECTRIC MACHINES
- WELDED STRUCTURES
AND REPAIRS OF ELECTRIC MACHINES
Pierwsze wydanie Certyfikatu: Certificate first issue: 23.01.1997
Certyfikat jest ważny do: The Certificate is valid until: 21.01.2012
Nr Certyfikatu: NC-034
PCA
Jan Jankowski


Certificate
GL Systems Certification herewith certifies, that the company
Fabryka Maszyn Elektrycznych INDUKTA S.A.
ul.Grazyńskiego 22, PL 43-300 Bielsko-Biała, Poland
has established and maintains a Management System relevant for
Design, production, packaging and dispatch of electrica
GL Systems Certification confirms that the Management System of the above assessed and found to be in accordance with the requirements of the following
DIN EN ISO 14001:2009
The validity of this certificate is subject to the company applying and maintaining accordance with the standard indicated. This will be monitored by GL Systems


Certificate
GL Systems Certification
GL Systems Certification herewith certifies, that the company
Fabryka Maszyn Elektrycznych INDUKTA S.A.
ul.Grazyńskiego 22, PL 43-300 Bielsko-Biała, Poland
has established and maintains a Management System relevant for
Design, production, packaging and dispatch of electrical three-phase machines
GL Systems Certification confirms that the Management System of the above mentioned company has been assessed and found to be in accordance with the requirements of the following standard:
ISO 9001:2008
The validity of this certificate is subject to the company applying and maintaining its Management System in accordance with the standard indicated. This will be monitored by GL Systems Certification.


CERTYFIKAT
Germanischer Lloyd Certification GmbH, 20459 Hamburg, zaświadcza niniejszym, że przedsiębiorstwo
Maszyny Elektryczne CELMA S.A.
ul. 3 Maja 19, PL-43-400 Cieszyn
wraz z
Odlewnia Żeliwa Cieszyn Sp. z o.o.
ul. 3 Maja 19, PL-43-400 Cieszyn
dla zakresu obowiązywania
Projektowanie, produkcja i remonty maszyn elektrycznych
Odlewy żeliwne
wprowadziło i stosuje system zarządzania jakością.
Audit przeprowadzony przez Germanischer Lloyd Certification GmbH wykazał, że system zarządzania jakością spełnia wymagania następującej normy:
ISO 9001:2000
Niniejszy certyfikat zakłada, że przedsiębiorstwo stosuje i utrzymuje system zarządzania jakością zgodny z podaną normą. Jest to nadzorowane przez Germanischer Lloyd Certification GmbH.
Niniejszy certyfikat jest ważny do dnia 03.11.2012
Hamburg, dnia 04.11.2009
Certyfikat nr QS-243 HH
Thore Dabels
Agata Nalewajko
TGA-ZM-07-91-00


CERTYFIKAT
DQS GmbH
Deutsche Gesellschaft zur Zertifizierung von Managementsystemen
poświadcza niniejszym, że przedsiębiorstwo
Fabryka Silników Elektrycznych "BESEL" S.A.
ul. Elektryczna 8
49-300 Brzeg
Polska
wdrożyło i stosuje System Zarządzania Jakością
Zakres:
Projektowanie, produkcja, sprzedaż i serwis silników elektrycznych asynchronicznych, jedno- i trójfazowych małej mocy
Poprzez audit, udokumentowany sprawozdaniem, przedstawiono dowód, że niniejszy system zarządzania spełnia wymagania następującej normy:
ISO 9001 : 2008
Numer rejestracyjny certyfikatu: 002887 QM08
Data certyfikacji: 2010-06-10
Ważny do: 2012-06-18
IAF
TGA-ZM-02-90
Michael Drechsler, Dyrektor
Jan Bilgo, Dyrektor
IQNet
August-Schanz-Straße 21, 60433 Frankfurt am Main

Cantoni GROUP ®

Cantoni Motor S.A.
M. Grażyńskiego 22, 43-300 Bielsko-Biała, Poland
tel.: +48 33 813 87 00
fax: +48 33 813 87 01
motor@cantonigroup.com
www.cantonimotor.com

since 1950

since 1920
since 1878

since 1954

since 1921

Contents

INTRODUCTION

New efficiency classes for the low-voltage three-phase motors (IE = International Efficiency).

Along with the international discussion on energy efficiency a worldwide harmonized energy efficiency classification system has been established for low-voltage three-phase asynchronous motors.
For many years low-voltage three-phase motors in the European Union have been sold in three efficiency classes EFF3, EFF2 and EFF1. Aside from this, many different efficiency classification systems have been introduced and well-proven in many countries all over the world.

This was the reason for the International Electrotechnical Commission IEC to develop and publish an energy efficiency standard which replaces all previous national issues. In parallel IEC developed and issued a new standard for determining motor efficiency. The new standard IEC 60034-30 defines and harmonizes worldwide the efficiency classes IE1, IE2 and IE3 for low-voltage three-phase motors in the power range from 0.75 kW to 375 kW (2p=2, 4, 6):

IE1 = Standard Efficiency
IE2 = High Efficiency
IE3 = Premium Efficiency

From now motors can be offered and sold with the new classes IE1, IE2 and IE3.
In that case the efficiency has to be determined according to the new requirements given in the IEC 60034-2-1 standard.

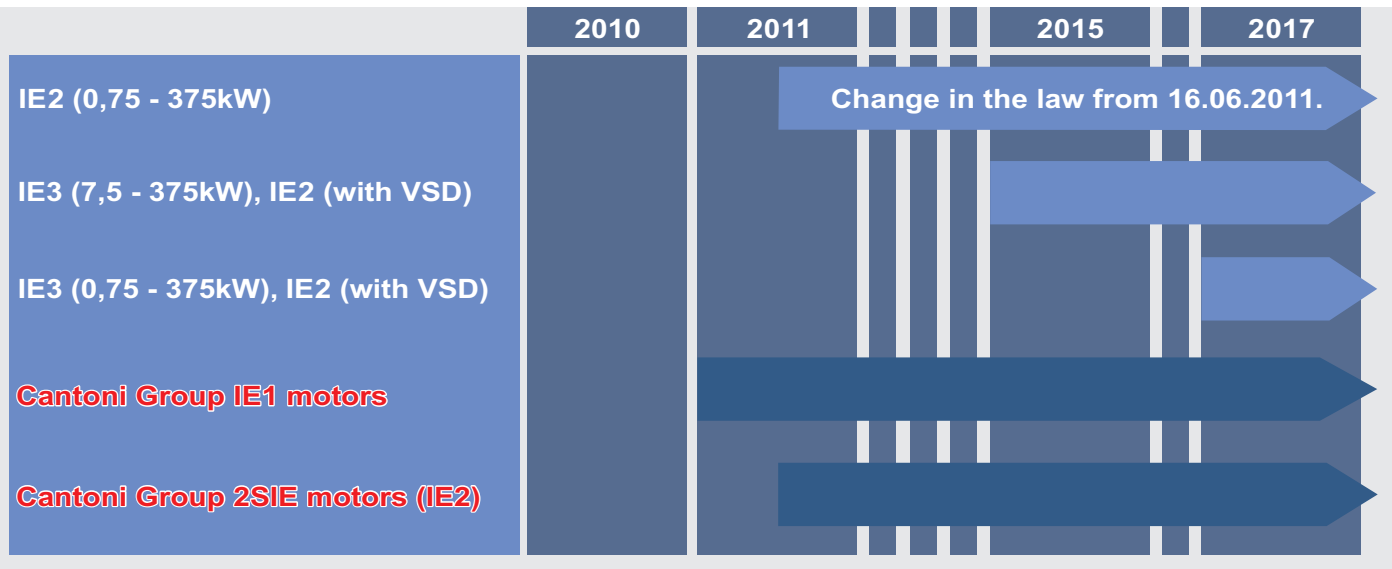
According to the Comission Regulation (EC) No 640/2009 (introduced in July 2009) the required efficiency class of general-purpose motors (introduced to the market in future) will be as follows:

From 16 June 2011, motors placed for the first-time on the market shall have a minimum efficiency class of IE2.

From 1 January 2015: motors with a rated output between 7.5 - 375 kW shall have a minimum efficiency class of IE3, or IE2 if they are operated/equipped with electronic speed control (VSD).

From 1 January 2017: motors with a rated output between 0.75 - 375 kW shall have a minimum efficiency class of IE3, or IE2 if they are operated/equipped with electronic speed control (VSD).

Electronic speed control is carried out using a frequency converter (VSD) that adjusts the speed of the motor - and therefore the torque produced - based on the energy needed.



Cantoni Group has offered energy efficiency motors for several years.
Our motors of SEE series fulfil EFF1 standards according to CEMEP.

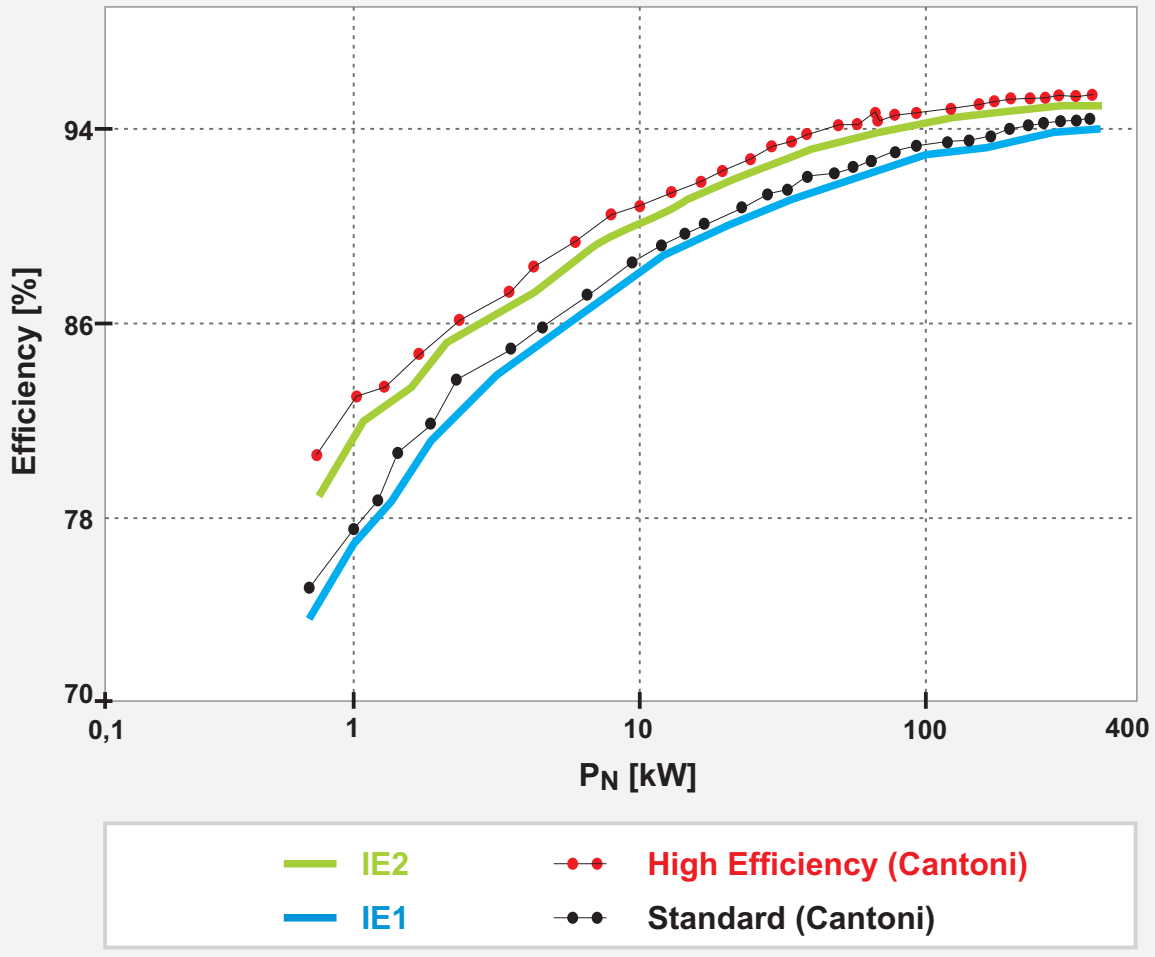
We carry out intensive research and measurement of the motors according to the new standards IEC 60034-30 and IEC 60034-2-1.

EFFICIENCY OF MOTORS

Cantoni Motor has in offer general purpose standard efficiency motors of Sg (Sh) series which fulfil IE1 class requirements according to the IEC 60034-30 standard (General Purpose 3-Phase Induction Motors Product Catalogue).

The present catalogue describes only the electric motors which belong to the efficiency class IE2 (High Efficiency).

Comparison between the efficiency of Cantoni Group motors (for example 2p=4) and efficiency class IE1/IE2 requirements according to the IEC 60034-30.



The efficiency class system specified under IEC 60034-30 is valid for low voltage three phase squirrel cage induction motors with the following specifications:

- Rated voltage up to 1.000 V
- Rated output between 0.75 kW and 375 kW
- Either 2, 4 or 6 poles
- Rated on the basis of continuous duty (S1) or intermittent periodic duty (S3) with cyclic duration factor of 80% or higher
- Capable of operating direct on-line
- Rated for operating conditions in accordance with IEC 60034-1 (temperature, installation altitude, etc.)

Motors with flanges, feet and/or shafts with mechanical dimensions different from IEC 60072-1 are also covered by this standard.

RATINGS - TOLERANCES

Permissible deviations between real values and catalogue values according to the IEC 60034-1:

Power factor cos φ	$\Delta\cos\varphi = -1/6\ (1-\cos\varphi_N)$
Efficiency η	$\Delta\eta = -15\%(100-\eta_N)$ for $P_N \leq 150kW$
	$\Delta\eta = -10\%(100-\eta_N)$ for $P_N > 150kW$
Speed n	$\Delta n = \pm 20\%(n_s-n_N)$ for $P_N > 1kW$
	$\Delta n = \pm 30\%(n_s-n_N)$ for $P_N \leq 1kW$
Locked rotor current I_L/I_N	$\Delta(I_r/I_N) = +20\%\ (I_L/I_N)$
Locked rotor torque T_L/T_N	min $(T_L/T_N) = -15\%\ (T_L/T_N)$
	max $(T_L/T_N) = +25\%\ (T_L/T_N)$
Breakdown torque T_B/T_N	$\Delta(T_B/T_N) = -10\%\ (T_B/T_N)$
Moment of inertia J [kgm²]	$\Delta J = \pm 10\%\ J$
Sound pressure level L_{pA} [dB]	$\Delta L_{pA} = +3$ dB /A/

STANDARDS

The electric motors are manufactured according to the international standards:

Rating and performance	**IEC 60034-1**
Methods for determining losses and efficiency	**IEC 60034-2-1**
Classification of degrees of protection	**IEC 60034-5**
Methods of cooling	**IEC 60034-6**
Symbols of construction and mounting arrangements	**IEC 60034-7**
Terminal markings and direction of rotation	**IEC 60034-8**
Noise limits	**IEC 60034-9**
Dimensions and output of electric machines	**IEC 60072-1**
Vibration limits	**IEC 60034-14**

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

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

IE1
IE2
IE3

EU Regulation 640/2009

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

All the motors are manufactured in Quality Assurance System consistent with ISO 9001. ISO9001

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

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

INSULATION CLASSIFICATION

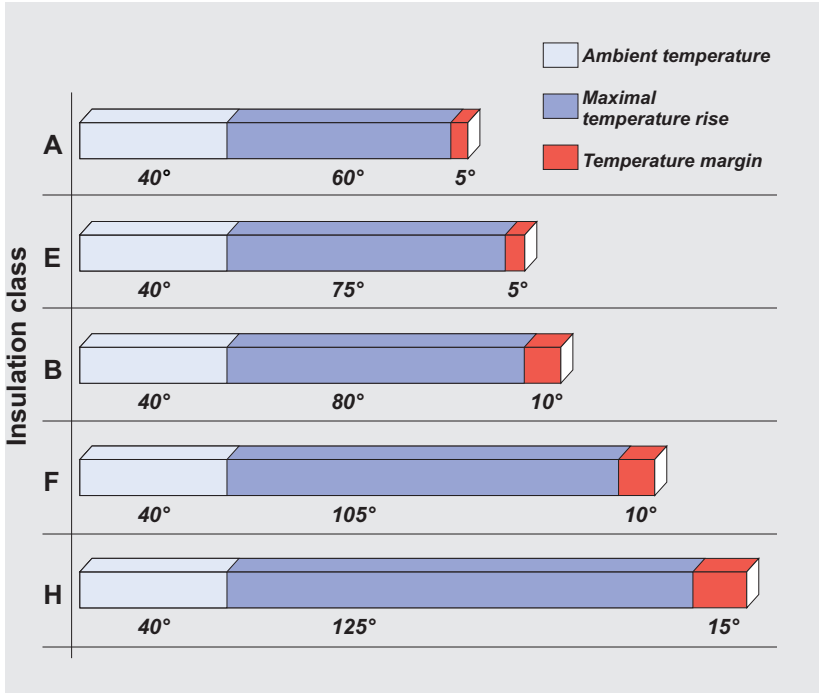
The insulation system of an electric motor is determined by a given insulation class on the basis of its thermal resistance.
This thermal resistance should be guaranteed by the entire set of electric insulating materials used in the motor insulating system.

Thermal resistance classification is related to the temperature of the hotspot in the insulation occurring during rated operating conditions of the electric motor, allowing for the highest permissible rise in average temperature.

This rise should be selected so that at the highest permissible ambient temperature, the temperature of the hotspot in insulation will not exceed the value assigned to a given thermal resistance class.

Symbols of thermal resistance classes (permissible insulation temperatures at 40°C ambient temperature)

Symbol	Temperature [° C]
A	105
E	120
B	130
F	155
H	180



Insulation class F in an electric motor means that at ambient temperature of 40°C the temperature rise of the winding may be max. 105°C with the additional temperature margin of 10°C (under specified measuring conditions in accordance with the IEC 60034-1 standard).

Class F

The standard motors made by Cantoni Motor in their basic version have the insulation class F while the temperature rise is for class B.
This means longer life for motors.

For special request we can deliver motors equipped with insulation class H.

Strengthened insulation system gives possibility to safe operation with converters.

MOTOR FEET

Motors with frame size ≤ 112 have screwed feet.
Motors with frame size 132 have screwed feet or feet integrated with the motor housing.
Motors with frame size 160 and 180 have feet integrated with the motor housing.
Motors with frame size > 180 up to 315 have feet integrated with the motor housing.
Motors with frame size 315 have screwed feet or feet integrated with the motor housing.
Motors with frame size 355 have feet integrated with the motor housing.

TERMINAL BOX

The terminal boxes of low voltage motors have threaded inlet holes designed for mounting cable glands.
The box contains a terminal board with marked terminals making possible connection of supply cables.

In addition, terminal boxes may be provided with additional terminals connected to the ends of thermal protection or anticondensation heater circuits and extra glands to connect these circuits.

Low voltage high-power motors contain terminal boxes with cable gland seals.

The circuits of thermal protection and anticondensation heaters are connected to separate terminal boxes.

Inside the boxes there are special clamps used to ground the supply cable armouring.

VIBRATION LEVEL AND NOISE LEVEL

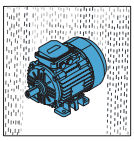
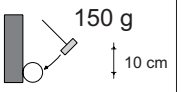
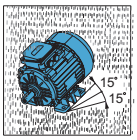
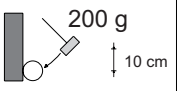
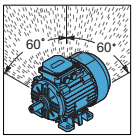
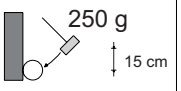
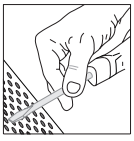
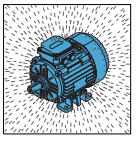
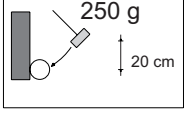
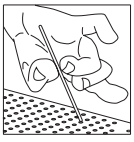
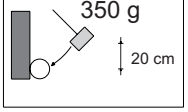
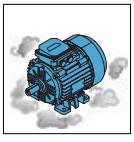
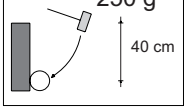
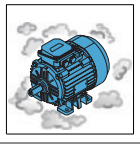
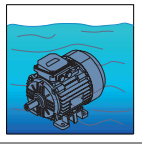
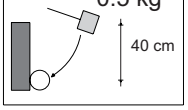
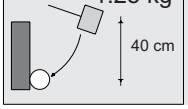
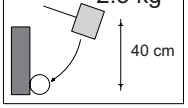
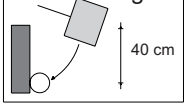
The rotor balancing method guarantees that a standard vibration level A is maintained in accordance with the IEC 60034-14 and a standard sound power level is maintained in accordance with the IEC 60034-9.
On customer's demand the motors can be made with reduced vibration or noise level.

level A

INTERNATIONAL PROTECTION IP

According to the IEC 60034-5 standard the electric motors are provided with IP code which determines the degree of protection (ensured by the housing) against penetration of solid matter and fluids.

IP55

PROTECTION AGAINST PENETRATION OF SOLID MATTER		PROTECTION AGAINST PENETRATION OF FLUIDS		MECHANICAL PROTECTION	
1st digit	DESCRIPTION	2nd digit	DESCRIPTION	3rd digit	DESCRIPTION
				0	No protection
0	 Not protected	0	 Not protected	1	 Striking energy: 0.15 J
		1	Protected against vertically falling drops of water		
1	 Protected against solid bodies larger than 50 mm	2	 Protected against vertically falling drops of water up to 15°	2	 Striking energy: 0.20 J
2	 Protected against solid bodies larger than 12 mm	3	 Protected against rain up to 60°	3	 Striking energy: 0.37 J
3	 Protected against solid bodies larger than 2.5 mm	4	 Protected against rain falling from any direction	4	 Striking energy: 0.50 J
4	 Protected against solid bodies larger than 1 mm	5	 Protected against sprayed water from any direction	5	 Striking energy: 0.70 J
5	 Protected against deposition of dust	6	 Protected against temporary immersion	6	 Striking energy: 1 J
6	 Totally protected against deposition of dust	7	 Protected against immersion between 0.15 and 1 m	7	 Striking energy: 2 J
		8	Protected against immersion at preset pressure and time	8	 Striking energy: 5 J
				9	 Striking energy: 10 J
				10	 Striking energy: 20 J

All Cantoni Group standard motors are manufactured with IP 55 degree of protection according to the standard in force (IEC 60034-5). The following table lists its characteristics.

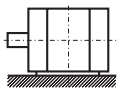
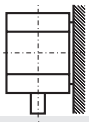
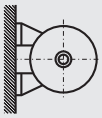
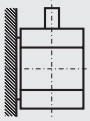
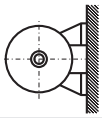
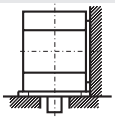
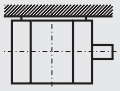
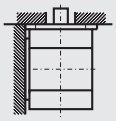
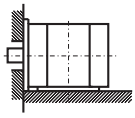
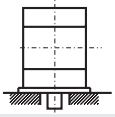
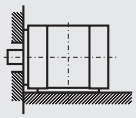
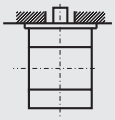
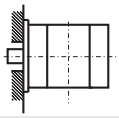
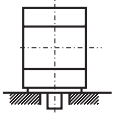
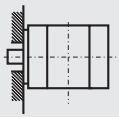
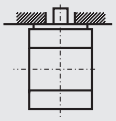
Each size 80 to 180 motor is equipped with seal rings on the control side and on the opposite side. Labyrinth seals protect the motors from size 200 and above.

The terminal board box is sealed with a gasket.

Motors with a higher degree of protection are available on request.

MOUNTING ARRANGEMENTS

According to the IEC 60034-7 standard

Horizontal shaft Designation				Vertical shaft Designation			
	Code II	Code I	Frame size		Code II	Code I	Frame size
	IM 1001	IM B3	80 ÷ 355		IM 1011	IM V5	80 ÷ 315 without 2SIEK 315 M6B,C,D
	IM 1051	IM B6	80 ÷ 280		IM 1031	IM V6	80 ÷ 315 without 2SIEK 315 M6B,C,D
	IM 1061	IM B7	80 ÷ 280		IM 2011 or IM 2111	IM V15	80 ÷ 355
	IM 1071	IM B8	80 ÷ 280		IM 2031 or IM 2131	IM V36	80 ÷ 355
	IM 2001	IM B35	80 ÷ 355		IM 3011	IM V1	80 ÷ 355
	IM 2101	IM B34	80 ÷ 132		IM 3031	IM V3	80 ÷ 280
	IM 3001	IM B5	80 ÷ 315 without 2SIEK 315 MC and 2SIEK 315 M6B,D		IM 3611	IM V18	80 ÷ 180
	IM 3601	IM B14	80 ÷ 132		IM 3631	IM V19	80 ÷ 180

BEARINGS

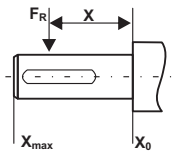
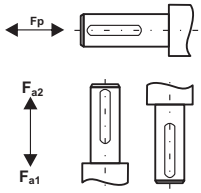
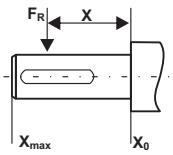
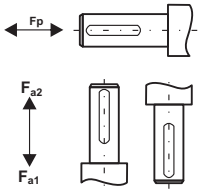
Frame size	Number of poles	Bearings
2SIE 80	2 ÷ 6	6204 2Z C3
2SIE 90	2 ÷ 6	6205 2Z C3
2SIE 100	2 ÷ 6	6206 2Z C3
2SIE 112	2 ÷ 6	6306 2Z C3
2SIE 132	2 ÷ 6	6308 2Z C3
2SIE 160	2 ÷ 6	6309 2Z C3
2SIE 180	2 ÷ 6	6311 2Z C3
2SIE 200	2 ÷ 6	6312 C3
2SIE 225	2 ÷ 6	6313 C3
2SIE 250	2 ÷ 6	6315 C3
2SIE 280	2	6315 C3
2SIE 280	4 ÷ 6	6318 C3
2SIE 315S,MA,MB	2	6315 C3
2SIE 315MC	2	6316 C3
2SIE 315S,MA,MB	4 ÷ 6	6318 C3
2SIE 315MC,MD	4 ÷ 6	6320 C3/6318 C3

The bearings in basic version of motors for horizontal duty.

Mechanical Size	Type of construction	No. of poles, 2p	D.E. bearing	N.D.E. bearing
2SIE 315 ML	IM1001 (B3)	4 ÷ 6	6319 C3	6314 C3
2SIEL 315 ML	IM2001 (B35)	4 ÷ 6	6319 C3	6314 C3
2SIE 355 ML	IM1001 (B3)	2	6217 C3	6217 C3
2SIEL 355 ML	IM2001 (B35)	4 ÷ 6	6222 C3	6222 C3
2SIEK 355 ML	IM3011 (V1)	4 ÷ 6	6322 C3	6322 C3
2SIE 355 H	IM1001 (B3)	2	6217 C3	6217 C3
2SIEL 355 H	IM2001 (B35)	4 ÷ 6	6322 C3	6322 C3
2SIEK 355 H	IM3011 (V1)	4 ÷ 6	6322 C3	6322 C3

The bearings in basic version of motors for horizontal and verical duty.

PERMISSIBLE LOADS ON THE SHAFT END

Frame size	Number of poles	Horizontal operation		Vertical operation			Frame size	Number of poles	Horizontal operation		Vertical operation		
													
		FR(x = 0)	FR(x = max)	Fp	Fa1	Fa2			FR(x = 0)	FR(x = max)	Fp	Fa1	Fa2
		[kN]		[kN]					[kN]		[kN]		
2SIE 80	2	0,33	0,27	0,09	0,06	0,12	2SIE 225 S	4	4,20	3,40	3,20	2,50	4,10
2SIE 80	4	0,44	0,37	0,12	0,09	0,15	2SIE 225 M	2	3,30	2,80	2,50	1,90	3,30
2SIE 90	2	0,68	0,44	0,68	0,35	0,38	2SIE 225 M	4	4,10	3,30	3,20	2,30	4,20
2SIE 90	4	0,78	0,44	0,78	0,35	0,38	2SIE 225 M	6	4,70	3,80	4,00	3,00	5,30
2SIE 90	6	0,96	0,44	0,96	0,35	0,38	2SIE 250 M	2	4,10	3,40	3,10	2,30	4,10
2SIE 100	2	0,88	0,46	0,90	0,28	0,40	2SIE 250 M	4	5,20	4,30	3,90	2,90	5,20
2SIE 100	4	1,06	0,46	0,98	0,38	0,40	2SIE 250 M	6	5,60	4,60	5,00	3,60	6,70
2SIE 100	6	1,20	0,46	1,10	0,38	0,40	2SIE 280 S	2	3,90	3,30	3,10	2,00	4,40
2SIE 112	2	1,00	0,48	1,00	0,40	0,45	2SIE 280 S	4	6,70	5,70	5,00	3,60	6,80
2SIE 112	4	1,45	0,48	1,40	0,40	0,45	2SIE 280 S	6	7,70	6,60	5,80	4,20	7,70
2SIE 112	6	1,62	0,48	1,60	0,40	0,45	2SIE 280 M	2	3,80	3,20	3,00	1,90	4,50
2SIE 132	2	1,82	0,66	1,90	0,43	0,60	2SIE 280 M	4	6,50	5,50	4,90	3,40	6,90
2SIE 132	4	2,10	0,66	2,20	0,45	0,60	2SIE 280 M	6	7,40	6,30	5,70	3,90	7,90
2SIE 132	6	2,80	0,66	2,80	0,50	0,60	2SIE 315 S	2	3,60	3,10	3,00	1,60	4,70
2SIE 160	2	2,22	0,98	2,30	0,92	0,95	2SIE 315 S	4	6,20	5,20	4,90	3,10	7,20
2SIE 160	4	2,40	0,98	2,40	0,92	0,95	2SIE 315 S	6	7,00	5,90	5,60	3,80	7,80
2SIE 160	6	2,85	1,10	2,90	0,98	1,00	2SIE 315 MA	2	3,30	2,80	2,90	1,40	4,80
2SIE 180	2	2,92	1,30	3,00	1,10	1,20	2SIE 315 MB	2	2,90	2,50	2,80	1,10	5,00
2SIE 180	4	3,60	1,30	3,60	1,10	1,30	2SIE 315 MA	4	5,80	4,80	4,70	2,70	7,30
2SIE 180	6	4,00	1,80	4,10	1,40	1,70	2SIE 315 MB	4	5,40	4,50	4,60	2,40	7,50
2SIE 200 LA	2	3,00	2,50	2,30	1,80	2,90	2SIE 315 MA	6	6,20	5,20	5,30	2,70	8,70
2SIE 200 LB	2	3,00	2,50	2,30	1,80	2,90	2SIE 315 MB	6	5,60	4,80	5,20	2,00	9,20
2SIE 200 L	4	3,70	3,10	2,80	2,00	3,90	2SIE 315 MC	2	2,80	2,50	2,70	0,60	5,40
2SIE 200 LA	6	4,30	3,60	3,60	2,90	4,60	2SIE 315 MC	4	6,30	5,30	4,30	1,10	8,50
2SIE 200 LB	6	4,20	3,50	3,60	2,80	4,60	2SIE 315 MC	6	7,50	6,30	5,10	1,80	9,20
							2SIE 315 MD	6	7,50	6,30	5,00	1,80	9,20

VERSION WITH ROLLER BEARINGS for motors 315 and 355

Mechanical Size	Type of construction	No. of poles, 2p	D.E. bearing	N.D.E. bearing
2SIE 315 ML	IM1001 (B3)	4 ÷ 6	NU319 EM1C3	6314 C3
2SIE 355 ML	IM1001 (B3)	4 ÷ 6	NU222 EM1C3	6222 C3
2SIE 355 H	IM1001 (B3)	4 ÷ 6	NU322 EM1C3	6322 C3

			Horizontal mounting			Vertical operation
			Permissible radial forces		Permissible axial forces	
			FX0	FXmax	FA	
Motor type	Number of poles	Length of shaft extension E(mm)	kN	kN	kN	
2SIE 315 ML	4	170	27	13	3,5	on request
	6	170	29	13	4	on request
2SIE 355 ML	4	210	22	19	5	on request
	6	210	23	19	5,5	on request
2SIE 355 H	4	210	27	17	6	on request
	6	210	29	15	7	on request

Value of radial force F_R acting on the shaft end for a given belt pulley diameter is calculated according to the following formula:

$$F_R = \frac{19600 \times P \times k}{D_K \times n} [N]$$

where:
- P - motor output [kW]
- D_K - belt pulley diameter [m]
- n - speed [rpm]
- k - belt tension factor:
  - for V-belts k=2,2
  - for flat belts k=3

Value of force F_R acting on any point of the shaft end (between points X=max and X=0) may be calculated according to the following formula:

$$F_R = F_{X0} - \frac{X}{E} \times (F_{X0} - F_{XMAX}) [N]$$

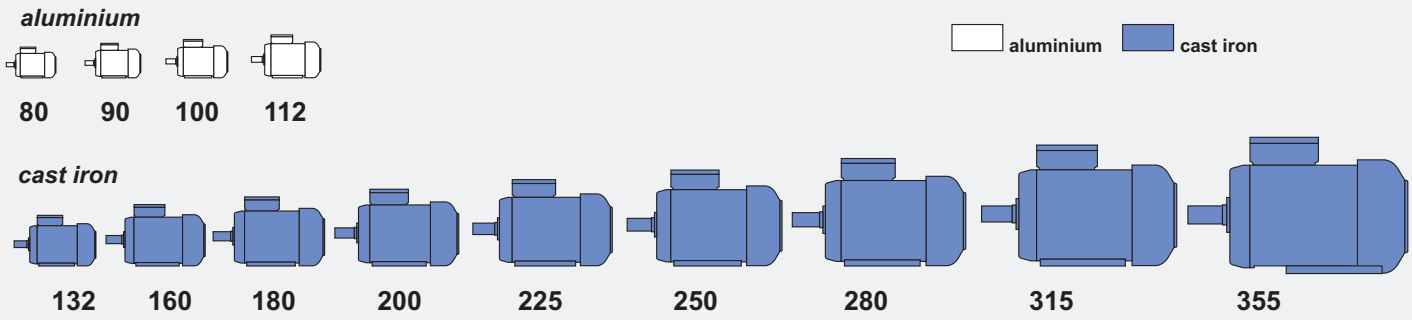
where:
- F_{X0} - value of F_R force acting on the beginning of the shaft end
- F_{XMAX} - value of F_R force acting on the end of the shaft end
- E - lenght of the shaft end

HOUSING, END SHIELDS, FEET

Frame size [mm]	Motor housing	End shields	Feet
80	Aluminium	Aluminium	Aluminium - screwed
90	Aluminium	Aluminium	Aluminium - screwed
100	Aluminium	Aluminium	Aluminium - screwed
112	Aluminium	Cast iron	Aluminium - screwed
132	Cast iron	Cast iron	Cast iron - screwed
160	Cast iron	Cast iron	Cast iron - integrated
180	Cast iron	Cast iron	Cast iron - integrated
200	Cast iron	Cast iron	Cast iron - integrated
225	Cast iron	Cast iron	Cast iron - integrated
250	Cast iron	Cast iron	Cast iron - integrated
280	Cast iron	Cast iron	Cast iron - integrated
315	Cast iron	Cast iron	Cast iron - screwed or integrated
355	Cast iron	Cast iron	Cast iron - integrated

In motors series 2SIE of frame size 80 and 90mm: on request end shields may be made of cast iron.
In motors of frame size 132: feet may be integrated with housing.

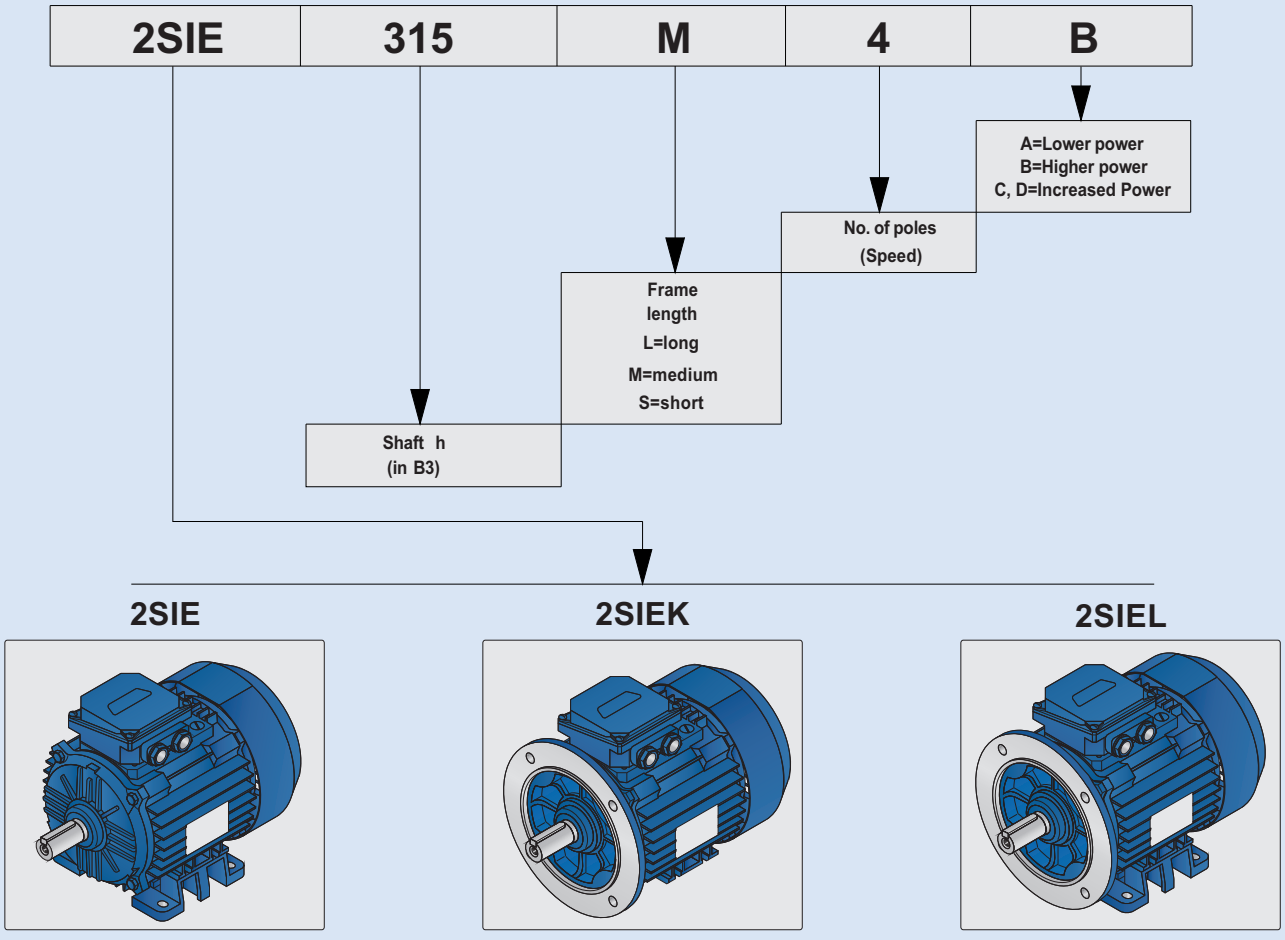
Motor housing



Other specifications dependent on the frame size:

Frame size	Degree of protection	Position of the terminal box	Number of terminals	Number of cable outlets	Optional rotation of the terminal box	Glands	Temperature sensors in winding	Bearing lubrication on the run	Thermal protection of bearings
80	IP 55	top	6	1	180°	M 20	on request	no	no
90	IP 55	top	6	2	180°	M 20	on request	no	no
100	IP 55	top	6	2	180°	M 20	on request	no	no
112	IP 55	top	6	2	180°	M 25	on request	no	no
132	IP 55	top	6	2	180°	M 25	on request	no	no
160	IP 55	top	6	2	180°	M 40	on request	on request	on request
180	IP 55	top	6	2	180°	M 40	on request	on request	on request
200	IP 55	top	6	2	4 × 90°	M 50	PTC	yes	on request
225	IP 55	top	6	2	4 × 90°	M 50	PTC	yes	on request
250	IP 55	top	6	2	4 × 90°	M 63	PTC	yes	on request
280	IP 55	top	6	2	4 × 90°	M 63	PTC	yes	on request
315	IP 55	top	6	2	4 × 90°	M 76	PTC	yes	on request
355ML	IP 55	top	6	2	4 × 90°	M 76	PTC Mark A	yes	on request
355H	IP 55	top	6	2	4 × 90°	M 90	Pt 100	yes	Pt 100

DESCRIPTION OF THE CATALOGUE VERSION



ORDERING INFORMATION

Orders for motors should specify:

- motor type designation,
- rated output,
- rated speed,
- operating duty,
- supply voltage and connection,
- frequency,
- mounting arrangements, end shield material,
- degree of protection,
- type of machine driven,
- other details of regarding special requests,

and information concerning additional accessories e.g.

- thermal protection,
- anticondensation heaters,
- vibration sensors,
- etc.

When ordering high-power or special purpose motors one should also indicate:

- required direction of rotation,
- required degree of interior protection,
- method of start-up,
- method of coupling with the driven unit (gears, dimensions of belt pulleys, etc.),
- type of machine driven (nature of load), including the moment of inertia J or flywheel effect GD^2 brought to the motor shaft,
- other customer's specifications.

When ordering spare parts one should specify:

- full designation of the motor type including its serial number (provided on the nameplate) or catalogue number,
- degree of protection,
- mounting arrangement,
- name of part,
- number of pieces.

As part of our development program, we reserve the right to alter or amend any of the specifications without giving prior notice

HIGH EFFICIENCY IE2

Item	Type	Rated output		Rated speed	Rated torque	Efficiency			Power factor	Full load current			Locked rotor torque	Locked rotor current	Breakdown torque	Moment of Inertia	Weight
		P_N		n_N	T_N	η_N [%]			cos φ_N	I_N at rated voltage [A]			T_L/T_N	I_L/I_N	T_B/T_N	J	
		[kW]	[HP]	[min^{-1}]	[Nm]	50%	75%	100%	[-]	230V	380V	400V	[-]	[-]	[-]	[kgm^2]	[kg]
					2p=2		*n_S=3000 rpm*					*f=50Hz*					
1	2SIE 80-2A	0,75	1	2840	2,52	72,0	76,5	79,0	0,74	3,3	2,0	1,9	3,2	5,0	3,0	0,0008	8,5
2	2SIE 80-2B	1,1	1,5	2840	3,7	77,0	80,0	80,0	0,75	4,8	2,8	2,7	3,4	5,5	3,4	0,0011	9,8
3	2SIE 90S2	1,5	2	2880	5	80,0	82,0	81,8	0,81	5,7	3,4	3,3	3,3	7,6	3,4	0,0014	13,9
4	2SIE 90L2	2,2	3	2870	7,3	83,4	84,4	83,5	0,81	8,2	4,9	4,7	3,7	7,3	3,7	0,0016	17,3
5	2SIE 100L2	3	4	2905	9,8	82,1	84,4	84,6	0,83	10,7	6,5	6,2	3,1	8,3	3,3	0,0039	23,0
6	2SIE 112M2	4	5,5	2915	13,1	86,9	87,3	86,3	0,87	13,4	8,1	7,7	2,4	8,5	2,7	0,006	33,5
7	2SIE 132S2A	5,5	7,5	2930	17,9	88,5	89,2	87,5	0,90	17,5	10,6	10,1	2,7	8,8	3,4	0,014	59,5
8	2SIE 132S2B	7,5	10	2920	24,5	88,2	89,1	88,6	0,92	23,1	14,0	13,2	2,7	8,5	3,3	0,017	70,8
9	2SIE 160M2A	11	15	2940	35,7	89,4	90,3	90,0	0,87	35,3	21,3	20,3	2,0	7,2	2,7	0,042	96
10	2SIE 160M2B	15	20	2935	48,8	90,6	91,0	90,3	0,89	46,9	28,4	26,9	2,0	7,0	2,8	0,048	103
11	2SIE 160L2	18,5	25	2935	60,2	92,2	92,3	91,5	0,91	55,8	33,8	32,1	2,3	7,7	2,9	0,059	118
12	2SIE 180M2	22	30	2945	71,3	90,8	91,7	91,3	0,88	68,7	41,6	39,5	2,6	7,5	3,2	0,062	156
13	2SIE 200L2A	30	40	2953	97	92,0	92,5	92,0	0,90	91	55	52	2,1	6,0	2,4	0,15	266
14	2SIE 200L2B	37	50	2954	120	92,7	93,1	92,6	0,91	110	67	63	1,8	6,1	2,6	0,18	290
15	2SIE 225M2	45	60	2964	145	93,3	93,8	93,5	0,88	137	83	79	1,9	6,3	2,5	0,25	374
16	2SIE 250M2	55	75	2963	177	94,0	94,1	93,6	0,91	162	98	93	1,7	6,0	2,2	0,42	492
17	2SIE 280S2	75	100	2978	241	93,4	94,1	94,0	0,91	220	133	127	1,7	6,7	2,4	0,76	655
18	2SIE 280M2	90	125	2978	289	94,0	94,6	94,4	0,91	263	159	151	1,8	7,0	2,8	0,95	688
19	2SIE 315S2	110	150	2978	353	94,5	94,9	94,6	0,92	317	192	182	1,9	6,9	2,9	0,98	860
20	2SIE 315M2A	132	175	2979	423	94,8	95,1	94,9	0,92	380	230	218	2,1	7,8	3,0	1,15	925
21	2SIE 315M2B	160	220	2980	513	94,9	95,4	95,2	0,92	459	278	264	2,4	8,8	3,4	1,40	1005
22	2SIE 315M2C	200	270	2979	641	95,5	95,6	95,4	0,93	-	342	325	2,3	8,4	3,1	1,74	1183
23	2SIE 355ML2	200	270	2987	639	94,0	95,2	95,6	0,90	-	353	336	1,9	8,0	3,4	2,8	1600
24	2SIE 355ML2A	250	340	2982	801	94,7	95,6	95,7	0,91	-	435	414	1,8	7,0	2,8	2,8	1600
25	2SIE 355ML2B	315	430	2982	1009	95,0	95,7	95,7	0,91	-	548	522	1,9	7,3	3,0	3,0	1680
26	2SIE 355H2D	355	480	2985	1136	94,7	95,5	95,7	0,91	-	617	588	1,7	7,4	2,7	4,9	2140
					2p=4		*n_S=1500 rpm*					*f=50Hz*					
27	2SIE 80-4B	0,75	1	1400	5,12	70,0	77,0	80,0	0,65	3,7	2,3	2,2	3,1	4,2	3,2	0,00209	9,6
28	2SIE 90S4	1,1	1,5	1425	7,4	79,1	81,3	81,4	0,76	4,5	2,7	2,6	2,4	5,7	2,8	0,0029	16,3
29	2SIE 90L4	1,5	2	1425	10,1	81,2	83,2	82,8	0,76	6,0	3,6	3,4	2,6	6,2	2,9	0,0036	18
30	2SIE 100L4A	2,2	3	1440	14,6	84,6	85,5	84,7	0,83	7,9	4,8	4,5	2,4	7,3	2,8	0,007	25,5
31	2SIE 100L4B	3	4	1445	19,8	83,7	85,7	85,5	0,75	11,8	7,1	6,8	3,1	8,0	3,2	0,0076	27,5
32	2SIE 112M4	4	5,5	1450	26,3	86,9	87,7	87,0	0,79	14,6	8,8	8,4	2,0	6,7	2,9	0,0115	35,5
33	2SIE 132S4	5,5	7,5	1460	36	87,0	88,2	88,0	0,80	19,6	11,9	11,3	2,4	8,3	3,1	0,031	69
34	2SIE 132M4	7,5	10	1460	49,1	88,5	89,2	88,7	0,80	26,5	16,1	15,3	2,5	7,7	3,3	0,036	73,5
35	2SIE 160M4	11	15	1470	71,5	89,3	90,3	89,8	0,81	38,0	23,0	21,8	2,0	7,1	2,8	0,057	106
36	2SIE 160L4	15	20	1470	97,4	90,7	91,3	90,6	0,81	51,3	31,1	29,5	2,3	7,5	3,3	0,07	127
37	2SIE 180M4	18,5	25	1470	120,2	90,2	91,3	91,2	0,86	59,2	35,8	34,0	2,9	7,8	3,6	0,139	169
38	2SIE 180L4	22	30	1460	143,9	91,4	92,0	91,6	0,86	70,1	42,4	40,3	2,9	7,6	3,3	0,144	180
39	2SIE 200L4	30	40	1474	194	93,3	93,2	92,4	0,89	92	55	53	2,1	5,8	2,5	0,31	284
40	2SIE 225S4	37	50	1484	238	92,7	93,3	93,1	0,86	116	70	67	2,3	7,4	2,8	0,49	368
41	2SIE 225M4	45	60	1484	290	93,1	93,8	93,6	0,86	140	85	81	2,2	7,4	2,7	0,57	404
42	2SIE 250M4	55	75	1482	354	93,2	93,7	93,5	0,90	164	99	94	1,9	5,9	2,4	0,79	478
43	2SIE 280S4	75	100	1488	481	94,7	94,8	94,2	0,90	222	134	128	1,8	6,2	2,2	1,37	678
44	2SIE 280M4	90	125	1488	578	93,8	94,4	94,2	0,89	269	163	155	2,1	7,1	2,7	1,50	700

HIGH EFFICIENCY IE2

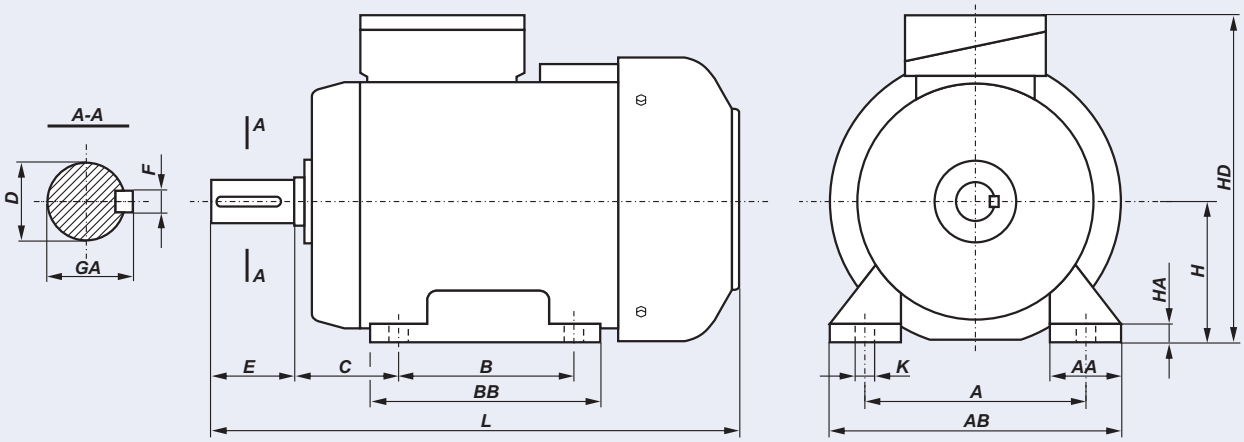
Item	Type	Rated output		Rated speed	Rated torque	Efficiency			Power factor	Full load current			Locked rotor torque	Locked rotor current	Breakdown torque	Moment of Inertia	Weight
		P_N		n_N	T_N	η_N[%]			cos φ_N	I_N at rated voltage [A]			T_L/T_N	I_L/I_N	T_B/T_N	J	
		[kW]	[HP]	[min^{-1}]	[Nm]	50%	75%	100%	[-]	230V	380V	400V	[-]	[-]	[-]	[kgm^2]	[kg]
				2p=4			*n_S=1500 rpm*					*f=50Hz*					
45	2SIE 315S4	110	150	1488	706	94,9	95,1	94,6	0,90	324	196	186	2,0	6,6	2,5	1,85	875
46	2SIE 315M4A	132	175	1487	848	95,5	95,5	95,0	0,91	383	232	220	1,9	6,7	2,4	2,25	957
47	2SIE 315M4B	160	220	1489	1026	95,3	95,5	95,2	0,90	469	284	270	2,7	8,3	3,0	2,59	1012
48	2SIE 315M4C	200	270	1486	1285	95,6	95,6	95,2	0,91	-	351	333	2,1	7,1	2,5	3,24	1198
49	2SIE 315ML4	200	270	1487	1284	95,7	95,8	95,7	0,87	-	365	347	2,3	7,2	2,4	3,3	1198
50	2SIE 355ML4	200	270	1490	1282	95,8	95,8	95,8	0,89	-	357	339	2,0	7,4	2,4	5,3	1680
51	2SIE 355ML4A	250	340	1489	1603	95,9	96,0	95,9	0,89	-	444	423	2,0	7,3	2,4	5,3	1680
52	2SIE 355ML4B	315	430	1489	2020	95,9	96,0	95,9	0,90	-	553	527	2,2	7,6	2,5	6,4	1810
53	2SIE 355H4D	355	480	1488	2278	95,9	96,0	95,9	0,88	-	637	607	1,6	6,5	2,2	7,8	2175
				2p=6			*n_S=1000 rpm*					*f=50Hz*					
54	2SIE 90S6	0,75	1	925	7,7	74,3	76,8	75,9	0,70	3,5	2,1	2,0	2,2	4,2	2,6	0,0028	16,5
55	2SIE 90L6	1,1	1,5	910	11,5	77,8	79,0	78,1	0,71	5,0	3,0	2,9	2,4	4,3	2,7	0,0032	18,2
56	2SIE 100L6	1,5	2	950	15,1	78,4	80,7	80,3	0,73	6,4	3,9	3,7	2,4	5,5	2,6	0,01	22
57	2SIE 112M6	2,2	3	955	22	82,0	83,1	82,3	0,75	8,9	5,4	5,1	2,3	5,9	2,7	0,0177	32
58	2SIE 132S6	3	4	950	30,2	83,1	84,3	83,3	0,79	11,4	6,9	6,6	2,0	5,5	2,7	0,025	50
59	2SIE 132M6A	4	5,5	950	40,2	85,5	85,9	84,6	0,79	15,0	9,1	8,6	2,4	6,3	2,8	0,032	62
60	2SIE 132M6B	5,5	7,5	950	55,3	86,5	86,8	86,0	0,81	19,8	12,0	11,4	2,6	6,6	3,1	0,04	72
61	2SIE 160M6	7,5	10	960	74,6	88,2	88,5	87,4	0,81	26,6	16,1	15,3	2,3	6,7	3,1	0,072	100
62	2SIE 160L6	11	15	960	109,4	89,3	89,6	88,7	0,82	38,0	23,0	21,8	2,5	7,1	3,1	0,096	125
63	2SIE 180L6	15	20	975	146,9	89,1	90,1	89,7	0,82	51,2	31,0	29,4	2,8	6,3	2,4	0,22	170
64	2SIE 200L6A	18,5	25	989	179	89,6	90,8	90,7	0,81	63	38,5	36,5	2,5	6,5	2,5	0,50	283
65	2SIE 200L6B	22	30	986	213	90,1	91,0	90,9	0,82	74	45	42,5	2,4	6,1	2,3	0,57	294
66	2SIE 225M6	30	40	989	290	91,6	92,3	91,9	0,84	98	59	56	2,4	7,1	2,6	0,82	379
67	2SIE 250M6	37	50	992	356	91,8	92,7	92,6	0,83	121	73	69	2,0	6,9	2,7	1,23	436
68	2SIE 280S6	45	60	991	434	92,8	93,5	93,1	0,82	148	90	85	2,3	6,2	2,1	1,52	633
69	2SIE 280M6	55	75	991	530	93,3	93,8	93,5	0,83	178	108	102	2,4	6,5	2,1	1,85	690
70	2SIE 315S6	75	100	991	723	94,4	94,7	94,2	0,84	238	144	137	2,5	6,7	2,1	2,39	895
71	2SIE 315M6A	90	125	991	867	94,9	95,0	94,5	0,84	285	172	164	2,6	6,9	2,2	3,46	1106
72	2SIE 315M6B	110	150	991	1060	95,3	95,3	94,7	0,84	347	210	200	2,5	6,6	2,0	3,46	1106
73	2SIE 315M6C	132	175	990	1273	95,2	95,3	94,9	0,85	-	249	236	2,5	6,6	2,1	4,21	1226
74	2SIE 315M6D	160	220	990	1543	95,3	95,4	95,0	0,83	-	308	293	2,8	7,2	2,4	4,36	1233
75	2SIE 315ML6	160	220	987	1548	94,8	95,0	94,8	0,84	-	305	290	2,1	6,3	2,4	3,5	1240
76	2SIE 355ML6A	200	270	989	1931	95,5	95,6	95,5	0,86	-	369	351	2,1	7,0	2,4	7,2	1720
77	2SIE 355ML6B	250	340	990	2412	95,7	95,9	95,7	0,86	-	461	438	2,2	7,1	2,4	8,6	1920
78	2SIE 355H6C	315	430	992	3033	95,7	95,9	95,7	0,86	-	580	552	1,9	7,0	2,2	12,7	2370
79	2SIE 355H6D	355	480	991	3421	95,7	95,9	95,7	0,86	-	654	623	1,8	6,9	2,3	13,6	2480

As part of our development program the technical specifications indicated may change, and we reserve the right to alert or to amend any of this specifications without giving prior notice.

In any such instance, you will find any possible change on our web-site: www.cantonigroup.com

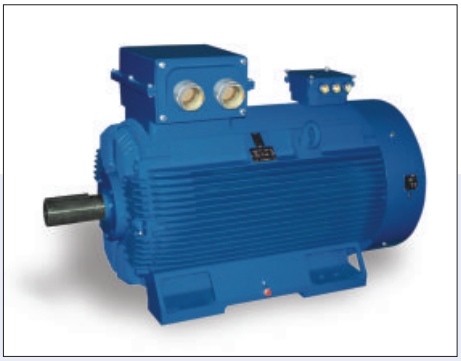
FOOT MOUNTED MOTORS - IM B3

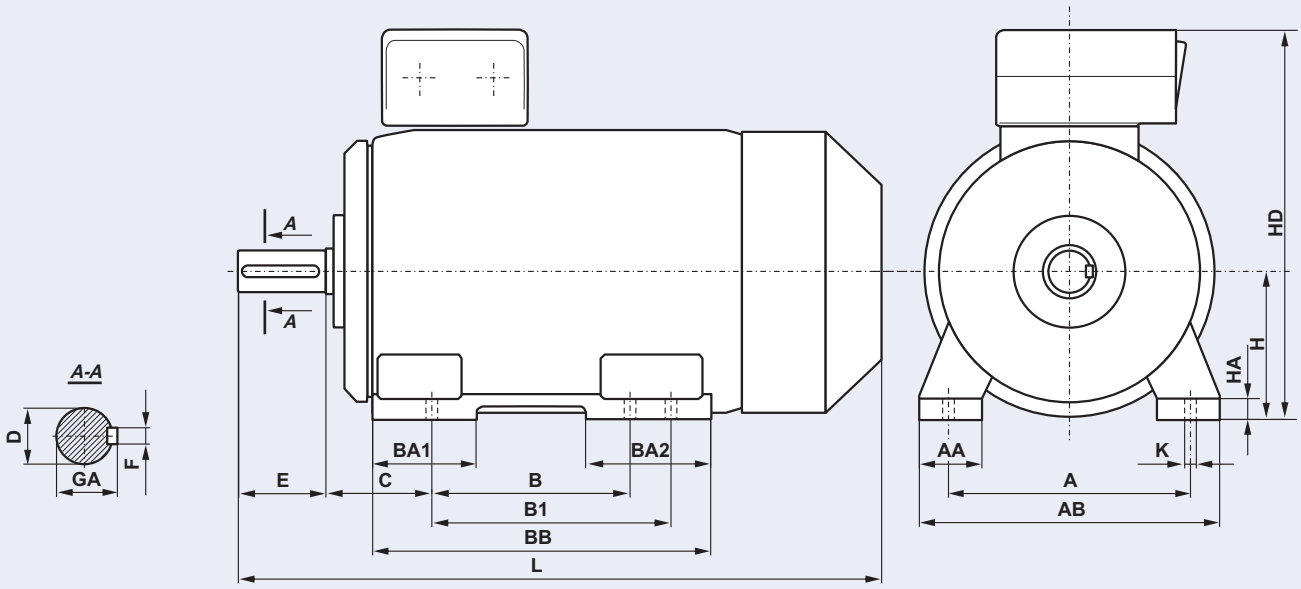
DIMENSIONAL DRAWINGS



Motor type	A	B	C	D	E	F	GA	H	K	AA	AB	BB	HA	HD	L
2SIE 80-.A	125	100	50	19j6	40	6h9	21,5	80	10	55	160	130	9	200	266
2SIE 80-.B	125	100	50	19j6	40	6h9	21,5	80	10	55	160	130	9	200	278
2SIE 90S-2,4,6	140	100	56	24j6	50	8h9	27	90	10	41	170	153	10	228	331
2SIE 90L-2	140	125	56	24j6	50	8h9	27	90	10	41	170	153	10	228	331
2SIE 90L-4,6	140	125	56	24j6	50	8h9	27	90	10	41	170	153	10	228	356
2SIE 100L-2,6	160	140	63	28j6	60	8h9	31	100	12	44	197	174	14	250	377
2SIE 100L-4A,4B	160	140	63	28j6	60	8h9	31	100	12	44	197	174	14	250	421
2SIE 112M-2,6	190	140	70	28j6	60	8h9	31	112	12	49	230	174	14	276	389
2SIE 112M-4	190	140	70	28j6	60	8h9	31	112	12	49	230	174	14	276	416
2SIE 132S-2A,6	216	140	89	38k6	80	10h9	41	132	12	62	274	182	17	310	461
2SIE 132S-2B,4	216	140	89	38k6	80	10h9	41	132	12	62	274	182	17	310	499
2SIE 132M-4,6A,6B	216	178	89	38k6	80	10h9	41	132	12	62	274	220	17	310	499
2SIE 160M-2A,2B,4,6	254	210	108	42k6	110	12h9	45	160	15	60	305	256	22	365	611
2SIE 160L-2,4,6	254	254	108	42k6	110	12h9	45	160	15	60	305	300	22	365	655
2SIE 180M-2,4	279	241	121	48k6	110	14h9	51,5	180	15	70	350	315	23	403	701
2SIE 180L-4,6	279	279	121	48k6	110	14h9	51,5	180	15	70	350	315	23	403	701

FOOT MOUNTED MOTORS - IM B3

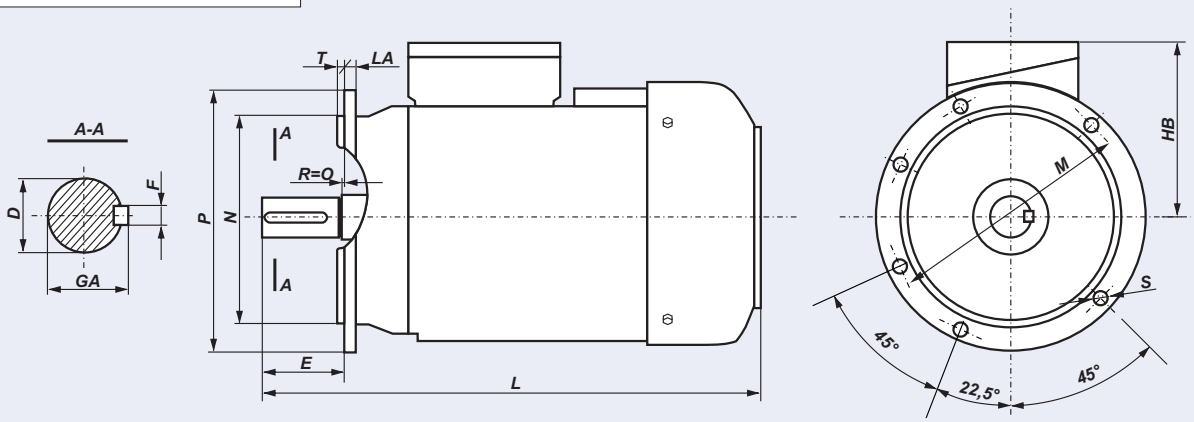




DIMENSIONAL DRAWINGS

Motor type	A	B	B1	C	D	E	F	GA	H	HA	K	AA	AB	BA1	BA2	BB	HD	L
2SIE200	318	305	-	133	55	110	16	59	200	32	19	80	400	113	113	380	520	850
2SIE225S4	356	286	311	149	60	140	18	64	225	34	19	85	440	115	115	380	570	930
2SIE225M2	356	286	311	149	55	110	16	59	225	34	19	85	440	115	115	380	570	900
2SIE225M4-6	356	286	311	149	60	140	18	64	225	34	19	85	440	115	115	380	570	930
2SIE250M2	406	349	-	168	60	140	18	64	250	37	24	90	480	135	135	445	635	1010
2SIE250M4-6	406	349	-	168	65	140	18	69	250	37	24	90	480	135	135	445	635	1040
2SIE280S2	457	368	419	190	65	140	18	69	280	40	24	105	550	130	165	520	720	1135
2SIE280S4-6	457	368	419	190	75	140	20	79,5	280	40	24	105	550	130	165	520	720	1135
2SIE280M2	457	368	419	190	65	140	18	69	280	40	24	105	550	130	165	520	720	1135
2SIE280M4-6	457	368	419	190	75	140	20	79,5	280	40	24	105	550	130	165	520	720	1135
2SIE315S2	508	406	457	216	65	140	18	69	315	48	28	135	610	135	205	600	805	1235
2SIE315S4-6	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	1265
2SIE315M2A;B	508	406	457	216	65	140	18	69	315	48	28	135	610	135	205	600	805	1235
2SIE315M4A;B;6A	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	1365
2SIE280M6B	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	1355
2SIE315M2C	508	406	457	216	70	140	20	74,5	315	48	28	135	610	135	205	600	805	1290
2SIE315M4C	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	1320
2SIE315M6C	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	1320
2SIE315M6D	508	406	457	216	90	170	25	95	315	48	28	135	610	135	205	600	805	1320
2SIE 315 ML (4, 6)	508	457	508	216	80	170	22	85	315	40	28	120	620	150	180	637	865	1345
2SIE 355 ML (2)	610	560	630	254	80	170	22	85	355	50	28	150	720	250	300	890	935	1580
2SIE 355 ML (4, 6)	610	560	630	254	100	210	28	106	355	50	28	150	720	250	300	890	935	1620
2SIE 355 H (2)	610	900	-	200	70	140	20	74.5	355	45	28	160	730	265	265	1045	995	1800
2SIE 355 H (4, 6)	610	900	-	200	100	210	28	106	355	45	28	160	730	265	265	1045	995	1870

FLANGE MOUNTED MOTORS - IM B5, IM V1

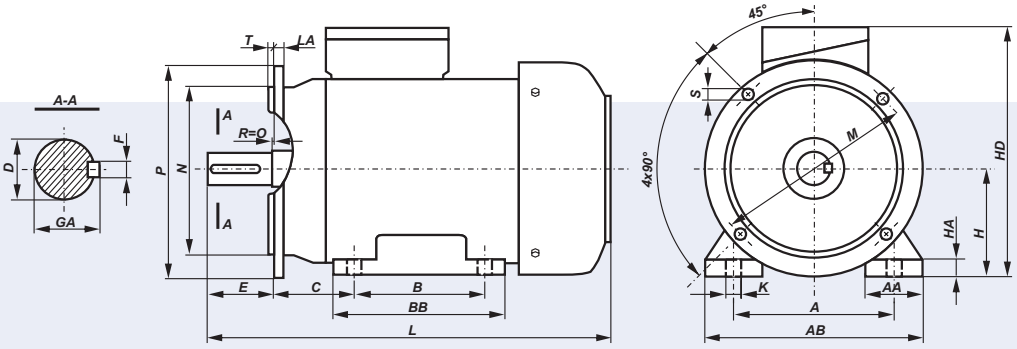


DIMENSIONAL DRAWINGS

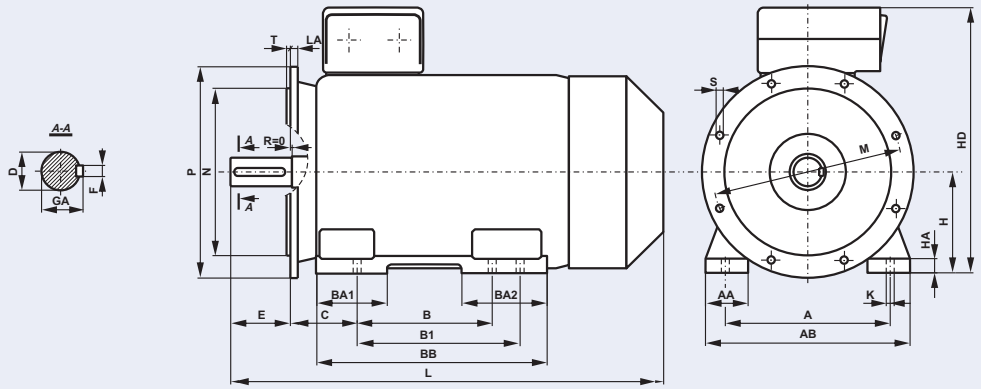
Motor type	D	E	F	GA	M	N	P	LA	T	HB	L	S (ϕ)	S (holes)
2SIEK 80-.A	19j6	40	6h9	21,5	165	130j6	200	10	3,5	120	266	12	4
2SIEK 80-.B	19j6	40	6h9	21,5	165	130j6	200	10	3,5	120	278	12	4
2SIEK 90S-2,4,6	24j6	50	8h9	27	165	130j6	200	8	3,5	139	331	12	4
2SIEK 90L-2	24j6	50	8h9	27	165	130j6	200	8	3,5	139	331	12	4
2SIEK 90L-4,6	24j6	50	8h9	27	165	130j6	200	8	3,5	139	356	12	4
2SIEK 100L-2,6	28j6	60	8h9	31	215	180j6	250	11	4	150	377	15	4
2SIEK 100L-4A,4B	28j6	60	8h9	31	215	180j6	250	11	4	150	421	15	4
2SIEK 112M-2,6	28j6	60	8h9	31	215	180j6	250	12	4	165	385	15	4
2SIEK 112M-4	28j6	60	8h9	31	215	180j6	250	12	4	165	416	15	4
2SIEK 132S-2A,6	38k6	80	10h9	41	265	230j6	300	12	4	178	461	15	4
2SIEK 132S-2B,4	38k6	80	10h9	41	265	230j6	300	12	4	178	499	15	4
2SIEK 132M-4,6A,6B	38k6	80	10h9	41	265	230j6	300	12	4	178	499	15	4
2SIEK 160M-2A,2B,4,6	42k6	110	12h9	45	300	250j6	350	13	5	205	611	19	4
2SIEK 160L-2,4,6	42k6	110	12h9	45	300	250j6	350	13	5	205	655	19	4
2SIEK 180M-2,4	48k6	110	14h9	51,5	300	250j6	350	13	5	224	701	19	4
2SIEK 180L-4,6	48k6	110	14h9	51,5	300	250j6	350	13	5	224	701	19	4
2SIEK 200	55	110	16	59	350	300	400	16,5	5	320	850	19	4
2SIEK 225S4	60	140	18	64	400	350	450	18	5	345	930	19	8
2SIEK 225M2	55	110	16	59	400	350	450	18	5	345	900	19	8
2SIEK 225M4-6	60	140	18	64	400	350	450	18	5	345	930	19	8
2SIEK 250M2	60	140	18	64	500	450	550	23	5	385	1010	19	8
2SIEK 250M4-6	65	140	18	69	500	450	550	23	5	385	1040	19	8
2SIEK 280S2	65	140	18	69	500	450	550	23	5	440	1135	19	8
2SIEK 280S4-6	75	140	20	79,5	500	450	550	23	5	440	1135	19	8
2SIEK 280M2	65	140	18	69	500	450	550	23	5	440	1135	19	8
2SIEK 280M4-6	75	140	20	79,5	500	450	550	23	5	440	1135	19	8
2SIEK 315S2	65	140	18	69	600	550	660	23	6	490	1235	24	8
2SIEK 315S4-6	80	170	22	85	600	550	660	23	6	490	1265	24	8
2SIEK 315M2A;B*	65	140	18	69	600	550	660	23	6	490	1235	24	8
2SIEK 315M4A;B;6A*	80	170	22	85	600	550	660	23	6	490	1265	24	8
2SIEK 315M6B*	80	170	22	85	600	550	660	23	6	490	1355	24	8
2SIEK 315M2C*	70	140	20	74,5	600	550	660	23	6	490	1290	24	8
2SIEK 315M4C*	80	170	22	85	600	550	660	23	6	490	1320	24	8
2SIEK 315M6C*	80	170	22	85	600	550	660	23	6	490	1320	24	8
2SIEK 315M6D*	90	170	22	95	600	550	660	23	6	490	1320	24	8
2SIEK 355 ML (4 - 6)*	100m6	210	28h9	106	740	680	800	24	6	580	1620	22	8
2SIEK 355 H (4 - 6)*	100m6	210	28h9	106	740	680	800	24	6	638	1955	22	8

* only in vertical position IM V1

FOOT/FLANGE MOUNTED MOTORS - IM B35

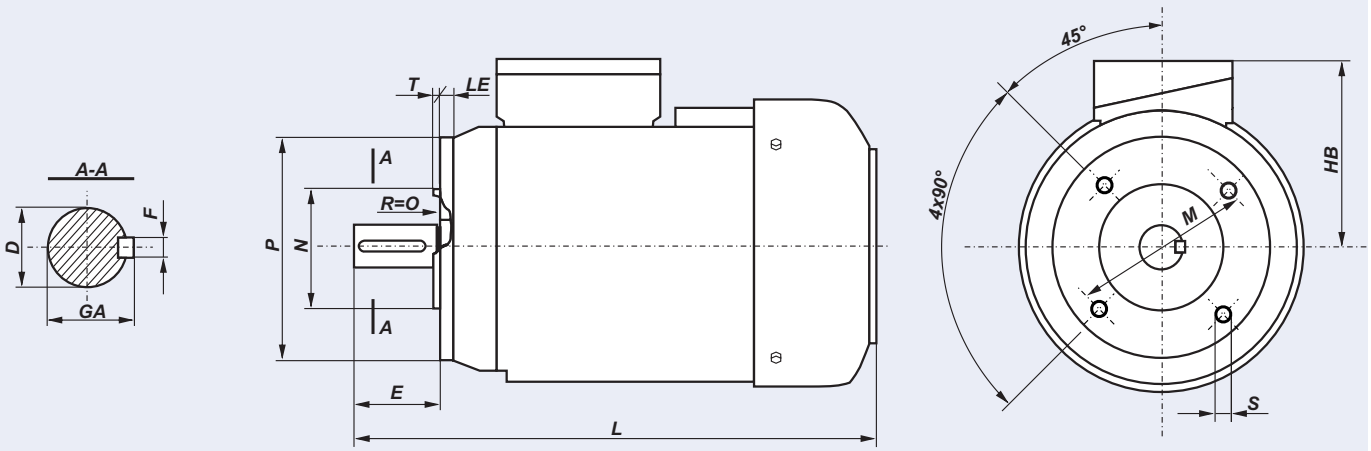


Motor type	A	B	C	D	E	F	GA	H	K	M	N	P	S	LA	T	AA	AB	BB	HA	HD	L
2SIE 80-.A	125	100	50	19j6	40	6h9	21,5	80	10	165	130j6	200	12	10	3,5	55	160	130	9	200	266
2SIE 80-.B	125	100	50	19j6	40	6h9	21,5	80	10	165	130j6	200	12	10	3,5	55	160	130	9	200	278
2SIEL 90S-2,4,6	140	100	56	24j6	50	8h9	27	90	10	165	130j6	200	12	8	3,5	41	170	153	10	228	331
2SIEL 90L-2	140	125	56	24j6	50	8h9	27	90	10	165	130j6	200	12	8	3,5	41	170	153	10	228	331
2SIEL 90L-4,6	140	125	56	24j6	50	8h9	27	90	10	165	130j6	200	12	8	3,5	41	170	153	10	228	356
2SIEL 100L-2,6	160	140	63	28j6	60	8h9	31	100	12	215	180j6	250	15	11	4	44	197	174	14	250	377
2SIEL 100L-4A,4B	160	140	63	28j6	60	8h9	31	100	12	215	180j6	250	15	11	4	44	197	174	14	250	421
2SIEL 112M-2,6	190	140	70	28j6	60	8h9	31	112	12	215	180j6	250	15	12	4	49	230	174	14	276	389
2SIEL 112M-4	190	140	70	28j6	60	8h9	31	112	12	215	180j6	250	15	12	4	49	230	174	14	276	416
2SIEL 132S-2A,6	216	140	89	38k6	80	10h9	41	132	12	265	230j6	300	15	12	4	62	274	182	17	310	461
2SIEL 132S-2B,4	216	140	89	38k6	80	10h9	41	132	12	265	230j6	300	15	12	4	62	274	182	17	310	499
2SIEL 132M-4,6A,6B	216	178	89	38k6	80	10h9	41	132	12	265	230j6	300	15	12	4	62	274	220	17	310	499
2SIEL 160M-2A,2B,4,6	254	210	108	42k6	110	12h9	45	160	15	300	250j6	350	19	13	5	60	305	256	22	370	611
2SIEL 160L-2,4,6	254	254	108	42k6	110	12h9	45	160	15	300	250j6	350	19	13	5	60	305	300	22	370	655
2SIEL 180M-2,4	279	241	121	48k6	110	14h9	51,5	180	15	300	250j6	350	19	13	5	70	350	315	23	408	701
2SIEL 180L-4,6	279	279	121	48k6	110	14h9	51,5	180	15	300	250j6	350	19	13	5	70	350	315	23	408	701



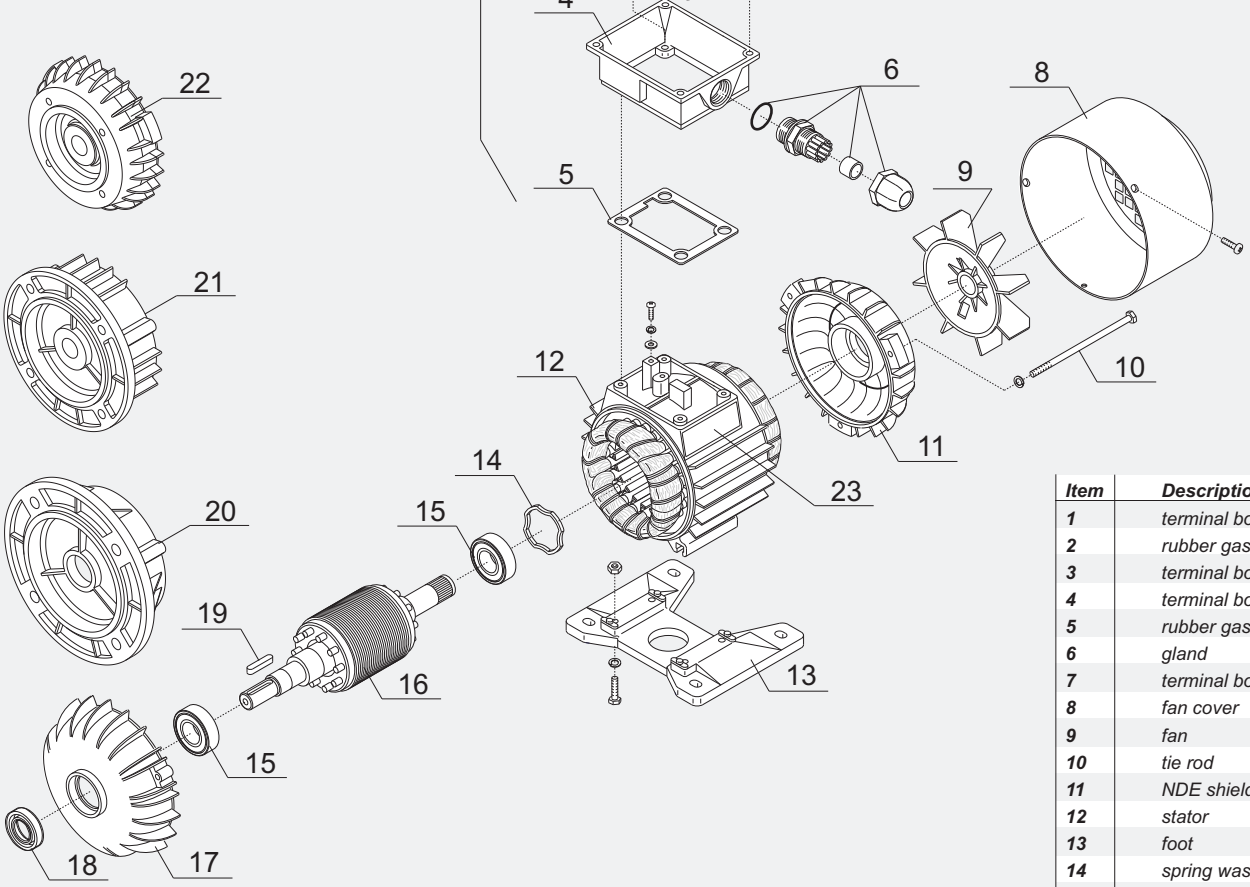
Motor type	A	B	B1	C	D	E	F	GA	H	HA	K	AA	AB	BA1	BA2	BB	HD	LA	P	M	N	T	L	S (ϕ)	S (holes)
2SIEL 200	318	305	-	133	55	110	16	59	200	32	19	80	400	113	113	380	520	16,5	400	350	300	5	850	19	4
2SIEL 225S4	356	286	311	149	60	140	18	64	225	34	19	85	440	115	115	380	570	18	450	400	350	5	930	19	8
2SIEL 225M2	356	286	311	149	55	110	16	59	225	34	19	85	440	115	115	380	570	18	450	400	350	5	900	19	8
2SIEL 225M4-6	356	286	311	149	60	140	18	64	225	34	19	85	440	115	115	380	570	18	450	400	350	5	930	19	8
2SIEL 250M2	406	349	-	168	60	140	18	64	250	37	24	90	480	135	135	445	635	23	550	500	450	5	1010	19	8
2SIEL 250M4-6	406	349	-	168	65	140	18	69	250	37	24	90	480	135	135	445	635	23	550	500	450	5	1040	19	8
2SIEL 280S2	457	368	419	190	65	140	18	69	280	40	24	105	550	130	165	520	720	23	550	500	450	5	1135	19	8
2SIEL 280S4-6	457	368	419	190	75	140	20	79,5	280	40	24	105	550	130	165	520	720	23	550	500	450	5	1135	19	8
2SIEL 280M2	457	368	419	190	65	140	18	69	280	40	24	105	550	130	165	520	720	23	550	500	450	5	1135	19	8
2SIEL 280M4-6	457	368	419	190	75	140	20	79,5	280	40	24	105	550	130	165	520	720	23	550	500	450	5	1135	19	8
2SIEL 315S2	508	406	457	216	65	140	18	69	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1235	24	8
2SIEL 315S4-6	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1265	24	8
2SIEL 315M2A;B	508	406	457	216	65	140	18	69	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1265	24	8
2SIEL 315M4A;B;6A	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1265	24	8
2SIEL 315M6B	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1355	24	8
2SIEL 315M2C	508	406	457	216	70	140	20	74,5	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1290	24	8
2SIEL 315M4C	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1320	24	8
2SIEL 315M6C	508	406	457	216	80	170	22	85	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1320	24	8
2SIEL 315M6D;8C;8D	508	406	457	216	90	170	25	95	315	48	28	135	610	135	205	600	805	23	660	600	550	6	1320	24	8
2SIEL 315 ML (4,6)	508	457	508	216	80	170	22	85	315	40	28	120	620	150	180	637	865	22	660	600	550	6	1345	24	8
2SIEL 355 ML (2)	610	560	630	254	80	170	22	85	355	50	28	150	720	250	300	890	935	24	800	740	680	6	1580	24	8
2SIEL 355 ML (4,6)	610	560	630	254	100	210	28	106	355	50	28	150	720	250	300	890	935	24	800	740	680	6	1620	24	8
2SIEL 355 H (2)	610	900	-	254	70	140	20	74.5	355	45	28	160	730	265	265	1045	995	24	800	740	680	6	1854	24	8
2SIEL 355 H (4,6)	610	900	-	254	100	210	28	106	355	45	28	160	730	265	265	1045	995	24	800	740	680	6	1924	24	8

FLANGE MOUNTED MOTORS - IM B14



Motor type	Flange	D	E	F	GA	M	N	P	S	T	LE	HB	L
2SIEK 80- .A1	B14/C1	19j6	40	6h9	21,5	130	110j6	160	M8	3,5	14	120	266
2SIEK 80- .A2	B14/C2	19j6	40	6h9	21,5	100	80j6	120	M6	3	12	120	266
2SIEK 80- .B1	B14/C1	19j6	40	6h9	21,5	130	110j6	160	M8	3,5	14	120	278
2SIEK 80- .B2	B14/C2	19j6	40	6h9	21,5	100	80j6	120	M6	3	12	120	278
2SIEK 90S 2,4,6	B14/C1	24j6	50	8h9	27	130	110j6	160	M8	3,5	10	139	331
2SIEK 90S 2,4,6	B14/C2	24j6	50	8h9	27	115	95j6	140	M8	3	10	139	331
2SIEK 90L 2	B14/C1	24j6	50	8h9	27	130	110j6	160	M8	3,5	10	139	331
2SIEK 90L 2	B14/C2	24j6	50	8h9	27	115	95j6	140	M8	3	10	139	331
2SIEK 90L 4,6	B14/C1	24j6	50	8h9	27	130	110j6	160	M8	3,5	10	139	356
2SIEK 90L 4,6	B14/C2	24j6	50	8h9	27	115	95j6	140	M8	3	10	139	356
2SIEK 100L2,6	B14/C1	28j6	60	8h9	31	165	130j6	200	M10	3,5	12	150	377
2SIEK 100L2,6	B14/C2	28j6	60	8h9	31	130	110j6	160	M8	3,5	12	150	377
2SIEK 100L4A,4B	B14/C1	28j6	60	8h9	31	165	130j6	200	M10	3,5	12	150	421
2SIEK 100L4A,4B	B14/C2	28j6	60	8h9	31	130	110j6	160	M8	3,5	12	150	421
2SIEK 112M2,6	B14/C1	28j6	60	8h9	31	165	130j6	200	M10	3,5	12	165	389
2SIEK 112M2,6	B14/C2	28j6	60	8h9	31	130	110j6	160	M8	3,5	12	165	389
2SIEK 112M4	B14/C1	28j6	60	8h9	31	165	130j6	200	M10	3,5	12	165	416
2SIEK 112M4	B14/C2	28j6	60	8h9	31	130	110j6	160	M8	3,5	12	165	416
2SIEK 132S2A,6	B14/C1	38k6	80	10h9	41	215	180j6	250	M12	4	12	178	461
2SIEK 132S2A,6	B14/C2	38k6	80	10h9	41	165	130j6	200	M10	3,5	12	178	461
2SIEK 132S2B,4	B14/C1	38k6	80	10h9	41	215	180j6	250	M12	4	12	178	499
2SIEK 132S2B,4	B14/C2	38k6	80	10h9	41	165	130j6	200	M10	3,5	12	178	499
2SIEK 132M4,6A,6B	B14/C1	38k6	80	10h9	41	215	180j6	250	M12	4	12	178	499
2SIEK 132M4,6A,6B	B14/C2	38k6	80	10h9	41	165	130j6	200	M10	3,5	12	178	499

Frame Size: 80



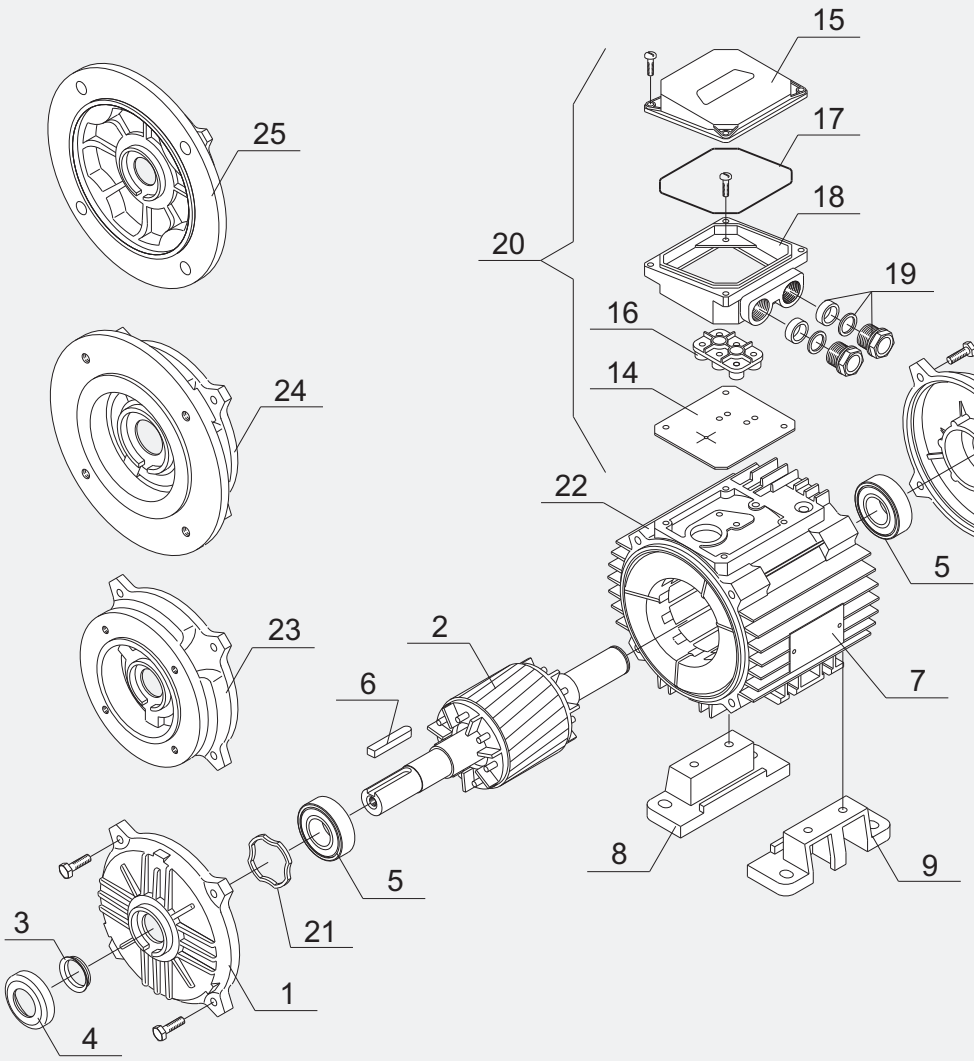
LIST OF MOTOR PARTS

Item	Description
1	terminal box cover
2	rubber gasket
3	terminal board
4	terminal box
5	rubber gasket
6	gland
7	terminal box complete
8	fan cover
9	fan
10	tie rod
11	NDE shield
12	stator
13	foot
14	spring washer
15	bearing
16	rotor
17	DE shield
18	shaft seal
19	key
20	flange B5
21	flange B14/C1
22	flange B14/C2
23	name plate

DE - drive end
NDE - non drive end

Frame Size: 90÷180

LIST OF MOTOR PARTS

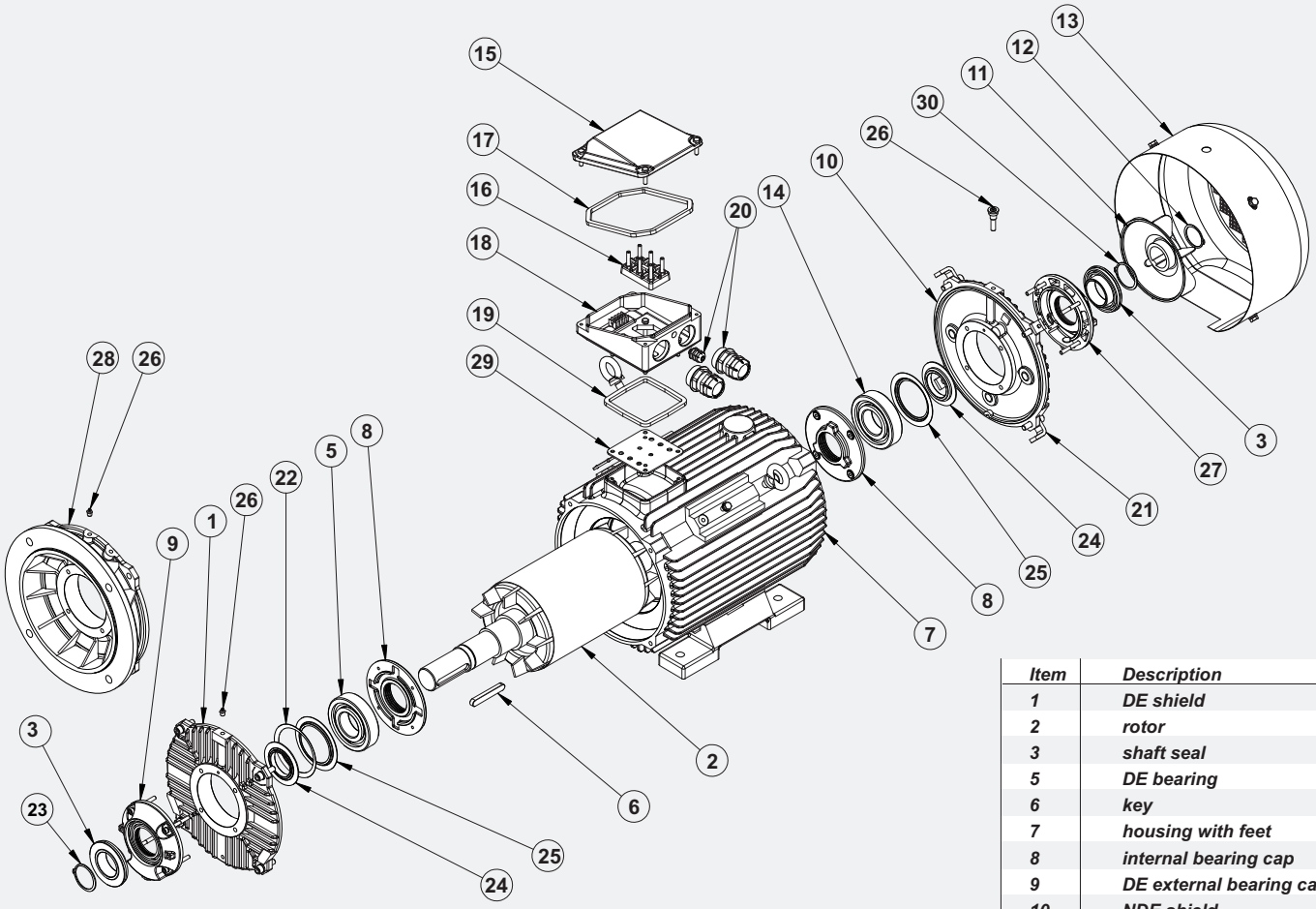


Item	Description
1	DE shield
2	rotor
3	shaft seal
4	shaft seal cover
5	bearing
6	key
7	name plate
8[1]	sx foot
9[1]	dx foot
10	NDE shield
11	fan
12	seeger ring
13	fan cover
14	rubber gasket
15	terminal box cover
16	terminal board
17	rubber gasket
18	terminal box
19	glands
20	terminal box complete
21	spring washer
22	stator
23[2]	flange B14/C2
24[2]	flange B14/C1
25	flange B5

DE - drive end
NDE - non drive end

[1] - for frame size 132 feet can be screwed or integrated with the motor housing, for frame size 160 -180 feet are integrated with the motor housing.
[2] - only for frame size 90 - 132.

Frame Size: 200÷355



Item	Description
1	DE shield
2	rotor
3	shaft seal
5	DE bearing
6	key
7	housing with feet
8	internal bearing cap
9	DE external bearing cap
10	NDE shield
11	fan
12	seeger ring
13	fan cover
14	NDE bearing
15	terminal box cover
16	terminal board
17	rubber gasket
18	terminal box housing
19	rubber gasket
20	cable glands
21	fan cover support
22	spring washer
23	seeger ring
24	grease shield
25	bearing internal ring
26	grease nipple
27	NDE external bearing cap
28	flange B5
29	rubber gasket
30	seeger ring

LIST OF MOTOR PARTS

DE - drive end
NDE - non drive end

PRODUCTION PROGRAM

PRODUCTION PROGRAM

MULTI-SPEED MOTORS

- General purpose 2-speed motors
- General purpose multi-speed motors

MARINE MOTORS

- General purpose marine motors
- Marine motors for pumps
- Marine motors for axial-flow fans
- Marine motors for boat davits
- Marine motors for tubular rudders
- General purpose explosion-proof marine motors
- Explosion-proof marine motors for pumps
- Explosion-proof marine motors for axial-flow fans

SLIP RING INDUCTION MOTORS

- Totally enclosed (IP 54, 55) wound rotor induction motors
- Open drip proof (IP 23) wound rotor induction motors

CRANE MOTORS

- Squirrel cage crane motors
- Slip ring rotor crane motors
- Two-speed crane motors with brake

SPECIAL PURPOSE INDUCTION MOTORS

- Motors with increased slip
- Roller table motors for iron and steel industry
- 1-phase motors with shaft height 65 mm
- 3-phase motors with shaft height 65 mm

MOTORS ACCORDING TO EPACT AND PREMIUM REQUIREMENTS

ACCESSORIES

- DC electromagnetic disc brakes
- AC electromagnetic disc brakes
- Powder brakes and clutches
- Thrustors

notes

notes

CANTONI MOTOR

ISO 9001

CANTONI MOTOR S.A.
M. Grażyńskiego 22
43-300 Bielsko-Biała, Poland
tel.: +48 33 813 87 00
fax: +48 33 813 87 01
motor@cantonigroup.com
www.cantonimotor.com

1-EN/SIE_VB