



Käfigläufermotoren Q-Serie *squirrel-cage motors Q-series*

Liebe Kundinnen, lieber Kunde, *dear client,*

seit 1946 dreht sich bei uns alles um das, was für Sie am wichtigsten ist: Qualität. Um diesem Anspruch gerecht zu werden, bieten wir Ihnen ein abgerundetes Leistungsspektrum und realisieren sämtliche mechanischen und elektrischen Bearbeitungsschritte bei uns im Haus. Mit dieser Vollstufigkeit sind wir Ihr zuverlässiger Partner in allen Fragen moderner Antriebstechnik. Wir möchten Ihnen zeigen, welche Qualitätsansprüche wir an unsere Arbeit stellen, auf welche Weise wir sie erfüllen und welche Vorteile Sie davon haben. Unsere Leistungsfähigkeit in den Bereichen Sonderantriebe, Handel, Wartung und Instandhaltung ebenso wie unsere einzigartige Dienstleistung ZOI© – ZustandsOrientierte Instandhaltung werden Sie überzeugen.

Als größter Fachbetrieb für Antriebstechnik in der Region nehmen wir unsere Verantwortung für Ihre Produktionsanlagen, Produkte und Antriebe sehr ernst. Als Arbeitgeber kümmern wir uns um unsere Verantwortung für die Mitarbeiter und den Standort. Das belegen zum Beispiel unsere hohe Ausbildungsquote und unsere kontinuierlichen Schulungen. Damit die Fähigkeiten unserer Mitarbeiter und unsere technischen Ressourcen optimal ineinandergreifen, haben wir unseren Betrieb konsequent nach den Maßgaben von Effizienz und Effektivität aufgebaut. Kurze Wege, klare Verantwortlichkeiten und optimierte Prozesse bilden das starke Fundament für langjährige vertrauensvolle Kooperationen. Qualität ist für uns Antrieb und Verpflichtung zugleich. Dieses Prinzip verfolgen wir entschlossen weiter – heute, morgen und in Zukunft.

Anwendungsbereiche

Nach Komplettierung des Options- und Motorspektrums sind die Antriebe von Lammers durch ihre Vielzahl von Optionen in allen Industriebereichen und Branchen einsetzbar. Sie sind sowohl für besondere Umgebungsbedingungen, wie sie beispielsweise bei Anwendungen in der chemischen bzw. petrochemischen Industrie vorherrschen, als auch für die meisten klimatischen Anforderungen, wie etwa bei Offshore-Anwendungen, geeignet. Der große Netzspannungsbereich ermöglicht zudem einen weltweiten Einsatz.

Zu dem breiten Feld der Anwendungen gehören folgende Applikationen:

- Pumpen
- Ventilatoren
- Kompressoren
- Fördertechnik wie Kräne, Bänder und Hebezeuge
- Hochregallager
- Verpackungsmaschinen
- Automatisierungs- und Antriebstechnik

Since 1946 everything in our company has revolved around what is most important for you, quality. To do this requirement justice, we offer a complete range of services and carry out all the mechanical and electrical steps in processing on our premises. Given this full cover, we are your reliable partner for all questions relating to modern drive technology. We want to show you what quality we demand of our work, how we meet this and what the advantages for you are. Our efficiency in the fields of special drives, trade, maintenance and repair along with our unique service ZOI© – condition geared repair will convince you.

As the biggest specialist company for drive technology in the region, we take our responsibility for your production plant, products and drives very seriously. As employers, we are concerned about our responsibility for our colleagues and the site. This is proven, for instance, by our high rate of training and our continuous training courses. We have built up our business logically in accordance with efficiency and effectiveness so that our employee's abilities and our technical resources mesh together optimally. Short paths, clear responsibilities and optimized processes create a strong foundation for longstanding co-operation based on trust. Quality is both a driving force and a duty for us. We continue to pursue this principle resolutely, today, tomorrow and in the future.

Range of application

After completion of options and product range the electrical drives from Lammers are prepared through its variety of options for all industries and sectors. They are suitable for specific environmental conditions as they exist, for example, in applications in the chemical and petrochemical industry, as well as for the most climatic requirements, such as in offshore applications. The large supply voltage range also allows worldwide use.

The fields of application include:

- motor pumps
- motor fans
- compressors
- handling technology like cranes, band-conveyor and hoisting devices
- high bay rackings
- packaging machines
- automation, drive systems and components



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Inhaltsverzeichnis allgemeiner Teil *content general part*

| | |
|--|----|
| Normen und Vorschriften <i>standards and regulations</i> | 4 |
| Wirkungsgradklassen und Wirkungsgrade <i>efficiency classes and efficiencies</i> | 4 |
| Informationen zu EuP <i>information on EuP</i> | 5 |
| Abkürzungen <i>abbreviations</i> | 5 |
| Typenschildangaben <i>name plate data</i> | 5 |
| Leitfaden zur Antriebsauswahl <i>guide to selecting motors</i> | 6 |
| Allgemeine Technische Daten <i>general technical specifications</i> | 6 |
| Bauformen DIN IEC 60034 Teil 7 <i>types of construction DIN IEC 60034 Part 7</i> | 7 |
| Abmaße der Flansche <i>dimensions of flanges</i> | 8 |
| Abmaße der Wellenenden <i>dimensions of shafts</i> | 9 |
| Drehmomente <i>torque @ 50 Hz</i> | 9 |
| Allgemeine Vorschriften <i>general instructions</i> | 10 |
| Allgemeine Vorschriften Lagerung <i>general instructions bearings</i> | 10 |
| Lagergrößen <i>bearing sizes</i> | 11 |
| Fettgebrauchsdauern / Schmierfristen <i>service life / relubrication</i> | 11 |
| Anschlussschemata <i>connections</i> | 12 |
| Kabeleinführungen am Anschlusskasten <i>terminal box - cable lead-in</i> | 12 |

Inhaltsverzeichnis elektrischer Teil *content electrical part*

| | |
|--|----|
| IE1 - 50 Hz - 2-6 pol - elektrische Daten - <i>electrical data</i> | 16 |
| IE2 - 50 Hz - 2 pol - elektrische Daten - <i>electrical data</i> | 17 |
| IE2 - 50 Hz - 4 pol - elektrische Daten - <i>electrical data</i> | 18 |
| IE2 - 50 Hz - 6 pol - elektrische Daten - <i>electrical data</i> | 19 |
| IE3 - 50 Hz - 2 pol - elektrische Daten - <i>electrical data</i> | 20 |
| IE3 - 50 Hz - 4 pol - elektrische Daten - <i>electrical data</i> | 21 |
| IE3 - 50 Hz - 6 pol - elektrische Daten - <i>electrical data</i> | 22 |
| IE4 - 50 Hz - 2 pol - elektrische Daten - <i>electrical data</i> | 24 |
| IE4 - 50 Hz - 4 pol - elektrische Daten - <i>electrical data</i> | 25 |
| IE4 - 50 Hz - 6 pol - elektrische Daten - <i>electrical data</i> | 26 |

Übersicht

Inhaltsverzeichnis mechanischer Teil *content mechanical part*

| | |
|--|----|
| Maße Baugröße 63 <i>dimensions frame size 63</i> | 28 |
| Maße Baugröße 71 <i>dimensions frame size 71</i> | 30 |
| Maße Baugröße 80 <i>dimensions frame size 80</i> | 32 |
| Maße Baugröße 90 <i>dimensions frame size 90</i> | 34 |
| Maße Baugröße 100 <i>dimensions frame size 100</i> | 36 |
| Maße Baugröße 112 <i>dimensions frame size 112</i> | 38 |
| Maße Baugröße 132 <i>dimensions frame size 132</i> | 40 |
| Maße Baugröße 160 <i>dimensions frame size 160</i> | 42 |
| Maße Baugröße 180 <i>dimensions frame size 180</i> | 44 |
| Maße Baugröße 200 <i>dimensions frame size 200</i> | 46 |
| Maße Baugröße 225 <i>dimensions frame size 225</i> | 48 |
| Maße Baugröße 250 <i>dimensions frame size 250</i> | 50 |
| Maße Baugröße 280 <i>dimensions frame size 280</i> | 52 |
| Maße Baugröße 315 <i>dimensions frame size 315</i> | 54 |
| Maße Baugröße 355 <i>dimensions frame size 355</i> | 56 |

Normen und Vorschriften *standards and regulations*

| Titel <i>title</i> | IEC/EN | DIN EN |
|---|--------------------------|-----------------|
| Allgemeine Bestimmungen, drehende elektrische Maschinen <i>general specifications for rotating electrical machines</i> | IEC 60034-1 IEC 60085 | DIN EN 60034-1 |
| Bestimmung der Verluste und des Wirkungsgrades, drehende elektrische Maschinen <i>specification of the losses and efficiency of rotating electrical machines</i> | IEC 60034-2 | DIN EN 60034-2 |
| Drehstromasynchronmotoren für den Allgemeingebrauch mit standardisierten Abmessungen und Leistungen <i>asynchronous AC motors for general use with standardized dimensions and outputs</i> | EC 60072 | DIN EN 50347 |
| Anlaufverhalten, drehende elektrische Maschinen <i>restart characteristics for rotating electrical machines</i> | IEC 60034-12 | DIN EN 60034-12 |
| Anschlussbezeichnungen und Drehsinn, drehende elektrische Maschinen <i>terminal designations and direction of rotation for electrical machines</i> | IEC 60034-8 | DIN EN 60034-8 |
| Bezeichnung für Bauformen, Aufstellung und Anschlusskastenlage <i>designation for type of construction, installation and terminal box position</i> | IEC 60034-7 | DIN EN 60034-7 |
| Einführung in den Anschlusskasten <i>entry to terminal box</i> | - | DIN 42925 |
| Eingebauter thermischer Schutz <i>built-in thermal protection</i> | IEC 60034-11 | DIN EN 60034-11 |
| Geräuschgrenzwerte, drehende elektrische Maschinen <i>noise limit values for rotating electrical machines</i> | IEC 60034-9 | DIN EN 60034-9 |
| IEC-Normspannungen <i>IEC standard voltages</i> | IEC 60038 | DIN IEC 60038 |
| Kühlarten, drehende elektrische Maschinen <i>cooling methods for rotating electrical machines</i> | IEC 60034-6 | DIN EN 60034-6 |
| Mechanische Schwingungen, drehende elektrische Maschinen <i>vibration severity of rotating electrical machines</i> | IEC 60034-14 | DIN EN 60034-14 |
| Schwingungsgrenzwerte <i>vibration limits</i> | - | DIN ISO 10816-3 |
| Schutzarten umlaufender elektrischer Maschinen <i>degrees of protection of rotating electrical machines</i> | IEC 60034-5 | DIN EN 60034-5 |

Die Motoren entsprechen den einschlägigen Normen und Vorschriften, insbesondere denen in der obigen Tabelle in relevanten Teilen

The motors comply with the appropriate standards and regulations, especially those listed in the table above in relevant parts

Mindestwirkungsgradklassen

minimum efficiency classes

ab Januar 2017

Mindestwirkungsgrade nach EuP (EG)640/2009
 - Mindestwirkungsgrad IE3 für Motoren von 2-6 pol, Leistung 0,75 kw – 375 kw
 - IE2 darf in Verbindung mit Frequenzumrichtern weiter genutzt werden
 - ATEX ausgenommen

from january 2017

Minimum efficiencies according to EuP (EG)640/2009
 - Minimum efficiency IE3 for motors from 2-6 pole, power 0.75 kw - 375 kw
 - IE2 may continue to be used in conjunction with frequency converter
 - ATEX excluded

ab Juli 2021

Mindestwirkungsgrade nach EuP (EG)2019/1781
 Änderungen für Standard-, Ex db/ec/tb/tc, Betriebsarten S1, S3/S6 >80%,
 Brems- und TEAO-Motoren
 - Mindestwirkungsgrad IE3 von 2-8 pol, Leistung 0,75 kw bis 1000 kw
 - Mindestwirkungsgrad IE2 von 2-8 pol, Leistung 0,12 kw bis <0,75 kw
 - Mindestwirkungsgrade gelten auch bei FU-Betrieb

from Juli 2021

Minimum efficiencies according to EuP (EG)2019/1781
 changes for standard-, Ex db/ec/tb/tc, duty S1, S3/S6 >80%, brake- and TEAO-motors
 - Minimum efficiency IE3 from 2-8 pole, power 0.75 kw to 1000 kw
 - Minimum efficiency IE2 from 2-8 pole, power 0.12 kw to <0.75 kw
 - Minimum efficiencies also apply for frequency converter operation

ab Juli 2023

Erweiterung nach EuP (EG)2019/1781
 - Mindestwirkungsgrad IE2 für Ex eb Motoren von 2-8 pol, 0,12 kw bis 1000 kw
 - Mindestwirkungsgrad IE2 für Wechselstrommotoren, Leistung >= 0,12 kw
 - Mindestwirkungsgrad IE4 für Standardmotoren 2-6 pol, 75 kw bis 200 kw

from Juli 2023

extension according to EuP (EG)2019/1781
 Minimum efficiency IE2 for Ex eb motors from 2-8 pole, power 0.12 kw to 1000 kw
 Minimum efficiency IE2 for single phase motors, power >= 0.12 kw
 Minimum efficiency IE4 for standard motors from 2-6 pole, power 75 kw to 200 kw

Allgemeine Informationen *general information*

Informationen zu EuP *information on EuP* Abkürzungen *abbreviations*

Ausgeschlossen: Explosionsgeschützte Motoren nach ATEX, Bremsmotoren, Brandgasmotoren

Excluded: Explosion-proof motors according to ATEX, brake motors, smoke-extraction motors

CEMEP – Comité Européen de Constructeurs de Machines Électriques et d'Électronique de Puissance

CEMEP – Comité Européen de Constructeurs de Machines Électriques et d'Électronique de Puissance (European sector committee of manufacturers of electrical machines)

Termin 16.06.2011: IE2 Mindestwirkungsgrad für Motoren von 0,75 kW – 375 kW

Deadline 16 June 2011: IE2 minimum efficiency for motors from 0.75 kW to 375 kW

EISA 2007 – Energy Independence and Security Act of 2007

EISA 2007 – Energy Independence and Security Act of 2007

Termin 01.01.2015: IE3 Mindestwirkungsgrad für Motoren von 7,5 kW – 375 kW oder die Kombination aus IE2-Motor und Frequenzumrichter

Deadline 01 January 2015: IE3 minimum efficiency for motors from 7.5 kW to 375 kW or a combination of IE2 motor and frequency converter

EPACT – Energy Policy Act

EPACT – Energy Policy Act

Termin 01.01.2017: IE3 Mindestwirkungsgrad für alle Motoren von 0,75 kW – 375 kW oder die Kombination aus IE2-Motor und Frequenzumrichter

Deadline 01 January 2017: IE3 minimum efficiency for all motors from 0.75 kW to 375 kW or a combination of IE2 motor and frequency converter

NEMA – National Electrical Manufacturers Association

EPACT – Energy Policy Act

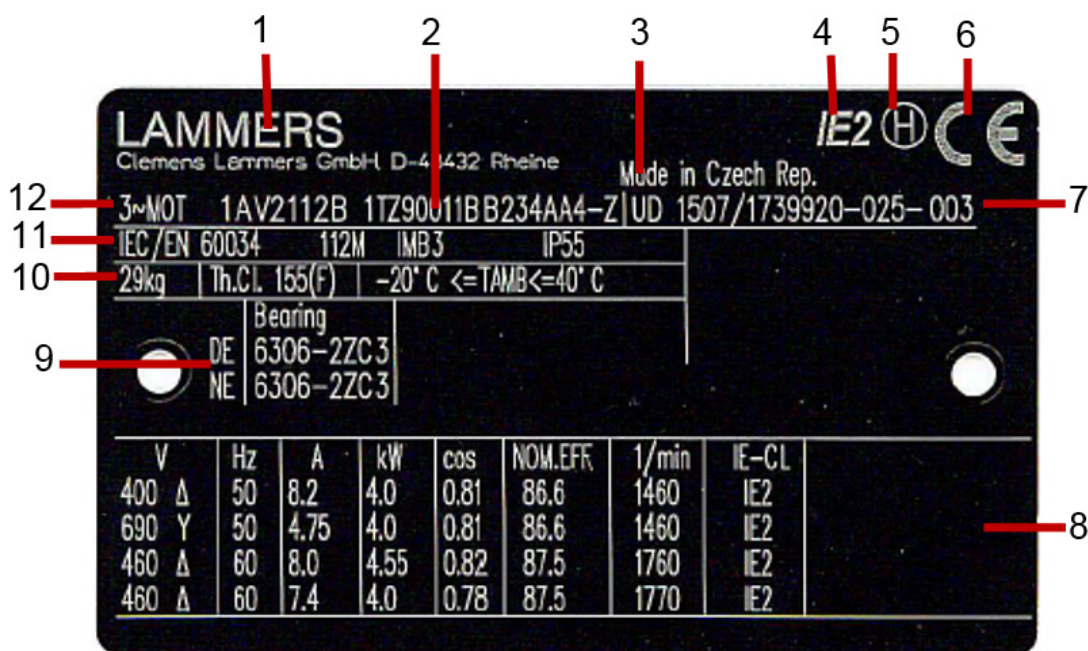
IEC – International Electrotechnical Commission

IEC – International Electrotechnical Commission

IE – International Efficiency

IE – International Efficiency

Typenschildangaben *name plate data*



Übersicht

| | |
|--|---|
| 1. Hersteller | <i>manufacturer</i> |
| 2. Motorbezeichnung | <i>motor type</i> |
| 3. Herkunftsland | <i>country of origin</i> |
| 4. Wirkungsgradklasse | <i>efficiency class</i> |
| 5. Wuchtung | <i>balancing</i> |
| 6. CE-Zeichen | <i>CE mark</i> |
| 7. Seriennummer mit Herstellungsjahr: JJMM/..... | <i>serial number with production year (yymm)</i> |
| 8. Motornennenden | <i>motor data</i> |
| 9. Lagerung | <i>bearings</i> |
| 10. Gewicht / Isoklasse / Temperaturbereich | <i>weight / temperature class / temperature range</i> |
| 11. Normen / Baugröße / Bauform / Schutzart | <i>standard / frame size / type of construction</i> |
| 12. Phasenzahl | <i>phases</i> |

Leitfaden zur Antriebsauswahl *guide to selecting motors*

1. Technische Anforderungen an den Motor

1. technical requirements for the motor

| | |
|---|--|
| Bemessungsfrequenz und Bemessungsspannung <i>rated frequency and rated voltage</i> | 3 AC 50/60 Hz, 230, 400, 500 oder 690 V <i>3 AC 50/60 Hz, 230, 400, 500 or 690 V</i> |
| Betriebsart <i>duty</i> | Normalbetrieb (Dauerbetrieb S1 nach DIN EN 60034-1) <i>standard duty (continuous duty S1 according to DIN EN 60034-1)</i> |
| Schutzart oder Ex-Schutz erforderlich <i>degree of protection or type of explosion protection required</i> | IP .. <i>IP ..</i> |
| Bemessungsdrehzahl (Polzahl) <i>rated speed (no. of poles)</i> | $N = \dots \dots \text{ min}^{-1}$ <i>N = \dots \dots \text{ rpm}</i> |
| Bemessungsleistung <i>rated output</i> | $P = \dots \dots \text{ kW}$ <i>P = \dots \dots \text{ kW}</i> |
| Bemessungsdrehmoment <i>rated torque</i> | $M = P \cdot 9550 / n = \dots \dots \text{ Nm}$ <i>M = P \cdot 9550 / n = \dots \dots \text{ Nm}</i> |
| Bauform <i>type of construction</i> | IM .. <i>IM ..</i> |

2. Anforderungen durch die Umgebung an den Motor

2. range of possible motors

| | |
|---|--|
| Umgebungstemperatur <i>ambient temperature</i> | $\leq 40^\circ\text{C} > 40^\circ\text{C}$ <i>\leq 40^\circ\text{C} > 40^\circ\text{C}</i> |
| Aufstellungshöhe <i>site altitude</i> | $\leq 1000 \text{ m} > 1000 \text{ m}$ <i>\leq 1000 \text{ m} > 1000 \text{ m}</i> |
| Faktoren für die Leistungsänderung <i>factors for derating</i> | Ermitteln des Faktors für Leistungsänderung <i>determine the factor for derating</i> |

3. Vorauswahl des Motors

3. range of possible motors

Baugröße und die damit möglichen Motoren nach den Parametern Kühlart, Schutzart, Bemessungsleistung, -drehzahl- und -drehmomentbereich auswählen.
Hinweis: Der Standardtemperaturbereich der Motoren ist von -20°C bis $+40^\circ\text{C}$.

*Select the frame size and therefore the possible motors on the basis of the following parameters: cooling method, degree of protection, rated output, rated speed and rated torque range.
Note: The standard temperature range of the motors is from -20 to $+40$ °C*

Hinweis zur Benutzung des Kataloges: Auf Grund der Vielzahl möglicher Ausführungen der Niederspannungsmotoren wird in diesem Katalog nicht in jedem Fall detailliert auf die Besonderheiten der unterschiedlichen Motorreihen eingegangen.

Note on using this catalog: Due to the wide range of possible versions of low-voltage motors, the special features of the various motor series are not explained in detail in each case in this catalog.

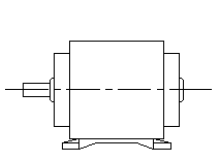
Allgemeine Technische Daten *general technical specifications*

| | | | |
|--|--|---|--|
| Schaltungsarten <i>connection types</i> | Sternschaltung / Dreieckschaltung <i>star connection / delta connection</i> | Isolierung der Ständerwicklung <i>insulation of the stator winding</i> | Iso 155 (F), Ausnutzung nach Iso 130 (B) <i>class 155 (F), used acc. to class 130 (B)</i> |
| Polzahlen <i>number of poles</i> | 2, 4, 6 | Schutzart <i>degree of protection</i> | Standard: IP55 |
| Baugrößen <i>frame sizes</i> | 63 ... 355 | Kühlung <i>cooling</i> | Eigengekühlt <i>self-ventilated</i> |
| Material <i>material</i> | Aluminium und Grauguss <i>Aluminum and cast iron</i> | Zulässige Kühlmitteltemperatur <i>admissible coolant temperature</i> | $-20^\circ\text{C} \dots +40^\circ\text{C}$ |
| Bemessungsleistung <i>rated output</i> | 0,04 ... 355 kW | Normspannungen <i>voltages</i> | 50 Hz: 230 V, 400 V, 500 V, 690 V |
| Frequenzen <i>frequency</i> | 50 Hz / 60 Hz | Bauform <i>type of construction</i> | Fuß, Flansch und kombinierte Varianten <i>foot, flange and combined variants</i> |
| Ausführungen <i>design</i> | Eigengekühlte IEC Motoren <i>self-ventilated IEC motors</i> | Anstrich <i>paint finish</i> | Standardfarbton RAL 7030 steingrau, C2 <i>standard: Color RAL 7030 stone gray, C2</i> |
| Kennzeichnung <i>marking</i> | IE1, IE2, IE3 | Schwingstärkestufe <i>vibration quantity</i> | Stufe A <i>level A</i> |
| Bemessungsdrehzahl <i>synchronous speed</i> | 1000 ... 3000 min ⁻¹ | Auswuchtart <i>balance type</i> | Standard: Halbkeilwuchtung <i>standard: half-key balancing</i> |
| Bemessungsdrehmoment <i>rated torque</i> | ca. 10 ... 2400 Nm | | |

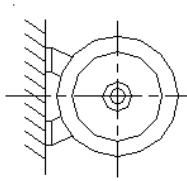
Allgemeine Informationen *general information*

Bauformen DIN IEC 60034- 7 *types of construction DIN IEC 60034-7*

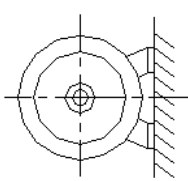
IM B3, IM 1001



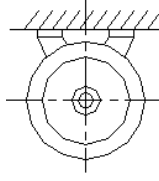
IM B6, IM1051



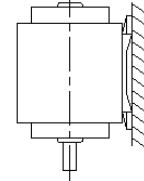
IM B7, IM1061



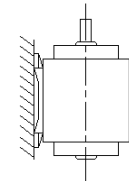
IM B8, IM1071



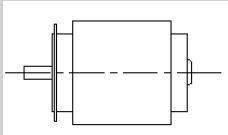
IM V5, IM1011



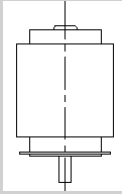
IM V6, IM1031



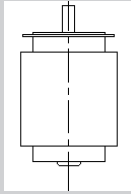
IM B5, IM3001



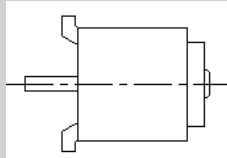
IM V1, IM3011



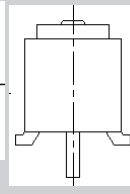
IM V3, IM3031



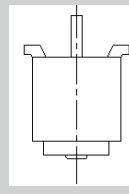
IM B9, IM9131



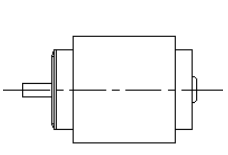
IM V8, IM9111



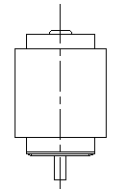
IM V9, IM9131



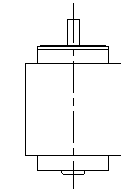
IM B14, IM3601



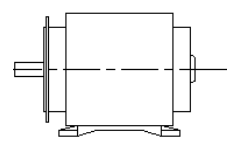
IM V18, IM3611



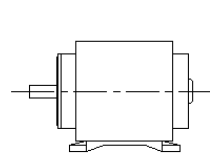
IM V19, IM3631



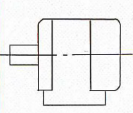
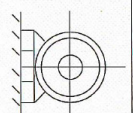
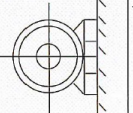

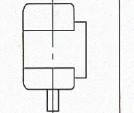
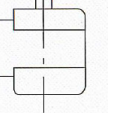
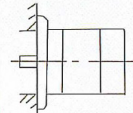
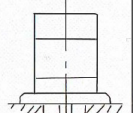
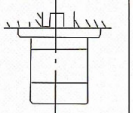
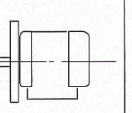
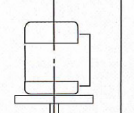
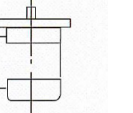
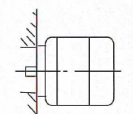
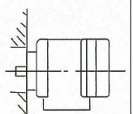
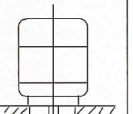
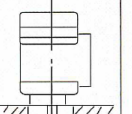
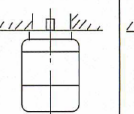
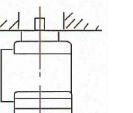
IM B35, IM2001



IM B34, IM2101

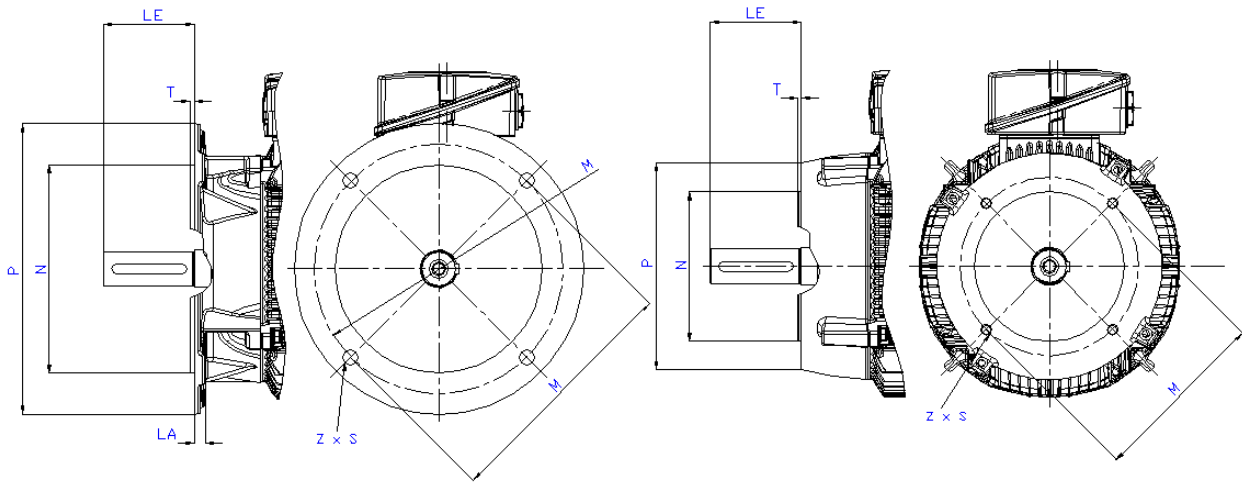


Mögliche Bauformen bei Achshöhen *types of construction regarding frame sizes*

| B3 | | | | | |
|--|---|---|---|---|---|
| B3 | B6 | B7 | B8 | V5 | V6 |
|  |  |  |  |  |  |
| 80-355 | 80-160 | | | | |
| B5 | | | B35 | | |
| B5 | V1 | V3 | B35 | V15 | V36 |
|  |  |  |  |  |  |
| 80-280 | 80-355 | 80-160 | 80-355 | 80-160 | |
| B14 | | | | | |
| B14 | B34 | V18 | V58 | V19 | V69 |
|  |  |  |  |  |  |
| 80-132 | | | | | |

Übersicht

Abmaße der Flansche *dimensions of flanges*



Bauform B5
type B5

Bauform B14
type B14

Übersicht

| Baugröße <i>frame size</i> | Bauform <i>type of construction</i> | Durchgangsbohrungen (FF/A) Gewindebohrungen (FT/C) | | Maßbezeichnung nach IEC | | | | | | |
|-------------------------------|--|---|------------------|-------------------------------------|----------|----------|----------|----------|----------|----------|
| | | <i>through- (FF/A) and tap-(FT/C) hole</i> | | <i>declaration according to IEC</i> | | | | | | |
| | | <i>DIN EN 50347</i> | <i>DIN 42948</i> | <i>LA</i> | <i>M</i> | <i>N</i> | <i>P</i> | <i>S</i> | <i>T</i> | <i>Z</i> |
| 63 M | IM B5 | FF 115 | A 140 | 8 | 115 | 95 | 140 | 10 | 3 | 4 |
| | IM B14a | FT 75 | C 90 | - | 75 | 60 | 90 | M5 | 2,5 | 4 |
| | IM B14b | FT 100 | C 120 | - | 100 | 80 | 120 | M6 | 3 | 4 |
| 71 M | IM B5 | FF 130 | A 160 | 9 | 130 | 110 | 160 | 10 | 3,5 | 4 |
| | IM B14a | FT 85 | C 105 | - | 85 | 70 | 105 | M6 | 2,5 | 4 |
| | IM B14b | FT 115 | C 140 | - | 115 | 95 | 140 | M8 | 3 | 4 |
| 80 M | IM B5 | FF 165 | A 200 | 10 | 165 | 130 | 200 | 12 | 3,5 | 4 |
| | IM B14a | FT 100 | C 120 | - | 100 | 80 | 120 | M6 | 3 | 4 |
| | IM B14b | FT 130 | C 160 | - | 130 | 110 | 160 | M8 | 3,5 | 4 |
| 90 S, L | IM B5 | FF 165 | A 200 | 10 | 165 | 130 | 200 | 12 | 3,5 | 4 |
| | IM B14a | FT 115 | C 140 | - | 115 | 95 | 140 | M8 | 3 | 4 |
| | IM B14b | FT 130 | C 160 | - | 130 | 110 | 160 | M8 | 3,5 | 4 |
| 100 L | IM B5 | FF 215 | A 250 | 11 | 215 | 180 | 250 | 14,5 | 4 | 4 |
| | IM B14a | FT 130 | C 160 | - | 130 | 110 | 160 | M8 | 3,5 | 4 |
| | IM B14b | FT 165 | C 200 | - | 165 | 130 | 200 | M10 | 3,5 | 4 |
| 112 M | IM B5 | FF 215 | A 250 | 11 | 215 | 180 | 250 | 14,5 | 4 | 4 |
| | IM B14a | FT 130 | C 160 | - | 130 | 110 | 160 | M8 | 3,5 | 4 |
| | IM B14b | FT 165 | C 200 | - | 165 | 130 | 200 | M10 | 3,5 | 4 |
| 132 S, M | IM B5 | FF 265 | A 300 | 12 | 265 | 230 | 300 | 14,5 | 4 | 4 |
| | IM B14a | FT 165 | C 200 | - | 165 | 130 | 200 | M10 | 3,5 | 4 |
| | IM B14b | FT 215 | C 250 | - | 215 | 180 | 250 | M12 | 4 | 4 |
| 160 M, L | IM B5 | FF 300 | A 350 | 13 | 300 | 250 | 350 | 18,5 | 5 | 4 |
| | IM B14a | FT 215 | C 250 | - | 215 | 180 | 250 | M12 | 4 | 4 |
| 180 M, L | IM B5 | FF 300 | A 350 | 13 | 300 | 250 | 350 | 18,5 | 5 | 4 |
| 200 L | IM B5 | FF 350 | A 400 | 15 | 350 | 300 | 400 | 18,5 | 5 | 4 |
| 225 S, M | IM B5 | FF 400 | A 450 | 16 | 400 | 350 | 450 | 18,5 | 5 | 8 |
| 250 M | IM B5 | FF 500 | A 550 | 18 | 500 | 450 | 550 | 18,5 | 5 | 8 |
| 280 S, M | IM B5 | FF 500 | A 550 | 18 | 500 | 450 | 550 | 18,5 | 5 | 8 |
| 315 S, M, L | IM B5 | FF 600 | A 660 | 22 | 600 | 550 | 660 | 24 | 6 | 8 |
| 355 M, L | IM B5 | FF740 | A800 | 25 | 740 | 680 | 800 | 24 | 6 | 8 |

Allgemeine Informationen *general information*

Abmaße der Wellenenden *dimensions of shafts*

| Baugröße <i>frame size</i> | Welle <i>shaft</i> | Gewinde <i>thread</i> |
|-------------------------------|-----------------------|--------------------------|
| 63 | 11x23 | M4 |
| 71 | 14x30 | M5 |
| 80 | 19x40 | M6 |
| 90 | 24x50 | M8 |
| 100 | 28x60 | M10 |
| 112 | 28x60 | M10 |
| 132 | 38x80 | M12 |
| 160 | 42x110 | M16 |
| 180 | 48x110 | M16 |
| 200 | 55x110 | M20 |
| 225-2 | 55x110 | M20 |
| 225-4, 225-6, 225-8 | 60x140 | M20 |
| 250-2 | 60x140 | M20 |
| 250-4, 250-6, 250-8 | 65x140 | M20 |
| 280-2 | 65x140 | M20 |
| 280-4, 280-6, 280-8 | 75x140 | M20 |
| 315-2 | 65x140 | M20 |
| 315-4, 315-6, 315-8 | 80x170 | M20 |
| 355-2 | 80x170 | M20 |
| 355-4, 355-6, 355-8 | 100x210 | M24 |

Drehmomente *torque @ 50 Hz*

| P [kW] | Pole <i>poles</i> | M [Nm] | Pole <i>poles</i> | M [Nm] | Pole <i>poles</i> | M [Nm] | Pole <i>poles</i> | M [Nm] |
|--------|----------------------|--------|----------------------|--------|----------------------|--------|----------------------|--------|
| 0,04 | | | | | | | 8 | 0,51 |
| 0,06 | | | | | 6 | 0,57 | | |
| 0,09 | | | | | 6 | 0,86 | 8 | 1,15 |
| 0,12 | | | 4 | 0,76 | | | 8 | 1,53 |
| 0,18 | 2 | 0,57 | 4 | 1,15 | 6 | 1,72 | 8 | 2,29 |
| 0,25 | 2 | 0,8 | 4 | 1,59 | 6 | 2,39 | 8 | 3,18 |
| 0,37 | 2 | 1,18 | 4 | 2,36 | 6 | 3,53 | 8 | 4,71 |
| 0,55 | 2 | 1,75 | 4 | 3,5 | 6 | 5,25 | 8 | 7 |
| 0,75 | 2 | 2,39 | 4 | 4,78 | 6 | 7,16 | 8 | 9,55 |
| 1,1 | 2 | 3,5 | 4 | 7 | 6 | 10,5 | 8 | 14 |
| 1,5 | 2 | 4,78 | 4 | 9,55 | 6 | 14,3 | 8 | 19,1 |
| 2,2 | 2 | 7 | 4 | 14 | 6 | 21 | 8 | 28 |
| 3 | 2 | 9,55 | 4 | 19,1 | 6 | 28,7 | 8 | 38,2 |
| 4 | 2 | 12,7 | 4 | 25,5 | 6 | 38,2 | 8 | 50,9 |
| 5,5 | 2 | 17,5 | 4 | 35 | 6 | 52,5 | 8 | 70 |
| 7,5 | 2 | 23,9 | 4 | 47,8 | 6 | 71,6 | 8 | 95,5 |
| 11 | 2 | 35 | 4 | 70 | 6 | 105 | 8 | 140 |
| 15 | 2 | 47,8 | 4 | 95,5 | 6 | 143 | 8 | 191 |
| 18,5 | 2 | 58,9 | 4 | 118 | 6 | 177 | 8 | 236 |
| 22 | 2 | 70 | 4 | 140 | 6 | 210 | 8 | 280 |
| 30 | 2 | 95,5 | 4 | 191 | 6 | 287 | 8 | 382 |
| 37 | 2 | 118 | 4 | 236 | 6 | 353 | 8 | 471 |
| 45 | 2 | 143 | 4 | 287 | 6 | 430 | 8 | 573 |
| 55 | 2 | 175 | 4 | 350 | 6 | 525 | 8 | 700 |
| 75 | 2 | 239 | 4 | 478 | 6 | 716 | 8 | 955 |
| 90 | 2 | 287 | 4 | 573 | 6 | 860 | 8 | 1146 |
| 110 | 2 | 350 | 4 | 700 | 6 | 1051 | 8 | 1401 |
| 132 | 2 | 420 | 4 | 840 | 6 | 1261 | | |
| 160 | 2 | 509 | 4 | 1019 | | | | |
| 200 | 2 | 637 | 4 | 1273 | | | | |
| 250 | 2 | 796 | 4 | 1592 | | | | |
| 315 | 2 | 1003 | 4 | 2006 | | | | |
| 355 | 2 | 1130 | 4 | 2260 | | | | |
| 400 | 2 | 1273 | 4 | 2547 | | | | |
| 500 | 2 | 1592 | 4 | 3183 | | | | |

Übersicht

Allgemeine Vorschriften *general instructions*

| | |
|-----------------------------------|--|
| Sicherheit | Alle Anschlussarbeiten sind nur im spannungslosen Zustand auszuführen. Das Anschließen ist von einer Fachkraft, die mit den VDE-Sicherheitsbestimmungen vertraut ist, vorzunehmen. Der Hersteller haftet nicht für Schäden, die auf unfachmännische Installation bzw. Benutzung zurückzuführen sind. |
| <i>safety</i> | <i>All connection work is to be performed in a voltage-free condition. The connecting is to be made by a specialist that is familiar with the VDE safety regulations. The manufacturer is not liable for damage caused by improper installation or usage.</i> |
| Installation und Aufstellung | Die Aufstellung und Montage des Motors muss der auf dem Motortypenschild angegebenen Bauform entsprechen. Achten Sie hierbei darauf, dass Kühlluft in ausreichender Menge ungehindert zuströmen kann. Bei Flanschmotoren mit FT (B14)- Flanschen ist die maximale Eindrehlänge der Montagebolzen auf 2,5 x Bolzendurchmesser begrenzt (um zu vermeiden, dass die Wicklung beschädigt wird). |
| <i>placement and installation</i> | <i>The placement and mounting of the motor must correspond to the construction form given on the motor nameplate. Take care that cooling air can flow unrestricted in adequate quantities. For flange motors with FT (B14) flanges, the maximum screw-in length of the mounting bolts is limited to 2.5 times the bolt diameter (to prevent the winding from being damaged).</i> |
| Elektrischer Anschluss | Die Aufstellung und Montage des Motors muss der auf dem Motortypenschild angegebenen Bauform entsprechen. Achten Sie hierbei darauf, dass Kühlluft in ausreichender Menge ungehindert zuströmen kann. Bei Flanschmotoren mit FT (B14)- Flanschen ist die maximale Eindrehlänge der Montagebolzen auf 2,5 x Bolzendurchmesser begrenzt (um zu vermeiden, dass die Wicklung beschädigt wird). |
| <i>placement and installation</i> | <i>The placement and mounting of the motor must correspond to the construction form given on the motor nameplate. Take care that cooling air can flow unrestricted in adequate quantities. For flange motors with FT (B14) flanges, the maximum screw-in length of the mounting bolts is limited to 2.5 times the bolt diameter (to prevent the winding from being damaged).</i> |
| Wartung Allgemein | Unsere Motoren bedürfen außer dem, was im Abschnitt "Schmierung" ausgesagt ist, keiner besonderen Wartung. Die Gehäuseoberfläche und die Lufteintrittsöffnung sollten jedoch stets sauber gehalten werden, damit die Wärmeabgabe nicht durch Staub- und Schmutzablagerungen beeinträchtigt wird. |
| <i>general maintenance</i> | <i>The motors require no special maintenance with the exception of that given in the section "Lubrication". The housing surface and the air inlet openings should always be kept clean, however, so that the heat dissipation is not degraded by dust and dirt deposits.</i> |
| Lagerhaltung | Motoren müssen trocken und schwingungsfrei gelagert werden. Öffnungen für Kabeleinführungen und durchgehende Befestigungslöcher in FT (B14)-Flanschen müssen vorübergehend abgedichtet werden. Wenn die Motoren längere Zeit außer Betrieb gewesen sind, empfiehlt es sich, vor dem Einschalten den Isolationswiderstand zu messen. Bei einem Isolationswiderstand von weniger als 0,6 M-Ohm (gemessen bei einer Spannung von 500 Volt) ist es notwendig, zuerst die Motorwicklung trocknen zu lassen. |
| <i>storage</i> | <i>Motors must be stored in dry and vibration-free locations. Openings for cable feed-through and through-holes for attachment in FT (B14) flanges must be temporarily sealed. When the motors have been out of operation for a longer time, the measuring of the insulation resistance is recommended before switching on. For an insulation resistance of less than 0.6 M-Ohm (measured with 500 volts), it is first necessary to allow the motor winding to dry.</i> |
| Garantie | Garantieansprüche werden gemäß unserer "Allgemeinen Lieferungs- und Zahlungsbedingungen" in der zum Zeitpunkt der Lieferung gültigen Fassung bearbeitet |
| <i>guarantee</i> | <i>Guarantee claims will be processed according to our "General Delivery and Payment Conditions" in the version valid at the time of the delivery.</i> |

Bei ATEX Motoren ist die ATEX Betriebsanleitung zu beachten
For ATEX motors the ATEX operating instructions has to be considered

Allgemeine Vorschriften Lagerung *general instructions bearings*

| | |
|---|--|
| Lagerung allgemein | In der Standardausführung sind die Motoren mit C3-Lagern ausgerüstet. Für Motoren, bei denen die Lager extrem niedrigen oder extrem hohen Temperaturen ausgesetzt sind, müssen Spezialfett und/oder Speziallager verwendet werden. |
| <i>general bearing information</i> | <i>In the standard configuration, the motors are equipped with C3 bearings. For motors whose bearings are subjected to extremely low or extremely high temperatures, special grease and/or special bearings must be used.</i> |
| Lagerschmierung | Die Motoren der Baugröße 63 - 160 sind mit geschlossenen Lagern ausgestattet und können somit nicht nachgeschmiert werden. Daher müssen diese Lager nach Ablauf der Ermüdungslebensdauer oder Fettlebensdauer ausgetauscht werden (siehe Tabelle) Standardmäßig werden unsere Motoren mit 2Z-Lagern mit einem Schmiermittel mit einer Referenztemperatur von 85°C geliefert. Auch mit Hinblick auf andere Faktoren, etwa Verschmutzung und Einwirkung von Luftfeuchtigkeit, empfiehlt es sich, 2Z-Lager mindestens alle 4 Jahre zu erneuern. |
| <i>bearing lubrication</i> | <i>The motors of the frame size 63 to 160 are equipped with closed bearings and therefore cannot be relubricated. For this reason, these bearings must be replaced after the fatigue service life or grease service life expires (see table). In the standard configuration, our motors are delivered with 2Z bearings with a lubricant with a reference temperature of 85 °C. Also with regard to other factors such as contamination and the effects of humidity, the renewal of 2Z bearings is recommended at least every four years.</i> |
| Nachschmierperiode | Die Nachschmierperiode hängt im starken Maße von der Drehzahl, der Lagerbelastung, Umgebungsfaktoren und der Aufstellung des Motors ab. Beim Nachschmieren sind die Empfehlungen des Lager- und Fettherstellers zu beachten. Bei Motoren mit einer vertikalen Aufstellung muss die Nachschmierperiode halbiert werden. Bei Lagertemperaturen, die höher liegen als die Referenztemperatur des benutzten Fettes, muss die Nachschmierperiode jeweils pro 15 °C Erhöhung halbiert werden. Bei niedrigeren Lagertemperaturen reicht eine längere Nachschmierperiode, die jedoch nicht länger als das Doppelte des angegebenen Wertes sein sollte. |
| <i>relubrication intervals</i> | <i>The relubrication intervals depend in a large degree on the speed, the bearing loading, the environmental factors and the mounting of the motor. For relubricating, the recommendations of the bearing and grease manufacturers are to be observed. For motors with vertical mounting, the relubrication interval must be halved. For bearing temperatures that are higher than the reference temperature of the grease used, the relubrication interval must be halved for each 15 °C of temperature increase. For lower bearing temperatures, a longer relubrication period is adequate, however, should not be longer than double the value given.</i> |
| Fettsorte | Unsere Motoren, die mit offenen Lagern ausgerüstet sind, werden standardmäßig mit lithiumverseiften Fetten als Schmiermittel geliefert. Für die Nachschmierung können Fettsorten auf Lithiumseifenbasis mit einem mineralischen Basisöl benutzt werden. |
| <i>types of grease</i> | <i>Our motors that are equipped with open bearings are delivered in the standard configuration with lithium based grease as the lubricant. For relubricating, grease types of a lithium soap base with a mineral based oil can be used.</i> |
| Offene Lager mit Schmutzfettkammer | Bei den Motoren der Baugröße 180 – 355 werden offene Lager benutzt, die mit einem Kugellagerfett auf der Grundlage von Lithiumseife mit einem mineralischen Öl geschmiert sind. Diese Lager können mehrmals nachgeschmiert werden, wobei das alte Fett in der Schmutzfettkammer des Lagerdeckels aufgenommen wird. Diese Lager müssen bei laufendem Motor nachgeschmiert werden. Bei der ersten Nachschmierung ist zu berücksichtigen, dass der vom Fettnippel zur Lagerkammer verlaufende Fettkanal noch ganz leer ist. Nach mehrmaligem Nachschmieren muss die Schmutzfettkammer gereinigt und die Lager eventuell ausgetauscht werden. |
| <i>open bearings with contaminated grease chamber</i> | <i>For motors of the frame size 180 to 355, open bearings are used that are lubricated with ball bearing grease on the basis of lithium soap with a mineral oil. These bearings can be relubricated several times whereby the old grease is taken up in the contaminated grease chamber of the bearing cover. These bearings must be relubricated while the motor is running. For the first relubrication, it must be taken into account that the grease canal running from the grease nipple to the bearing chamber is still completely empty. After several relubrications, the contaminated grease chamber must be cleaned and the bearing possibly replaced.</i> |

Allgemeine Informationen *general information*

Lagergrößen *bearing sizes*

| Baugröße <i>frame size</i> | Polzahl <i>number of poles</i> | AS-Lager <i>DE-bearing</i> | BS-Lager <i>NDE-bearing</i> |
|-------------------------------|-----------------------------------|-------------------------------|--------------------------------|
| 63 | 2, 4, 6, 8 | 6201 2Z C3 | 6201 2Z C3 |
| 71 | 2, 4, 6, 8 | 6202 2Z C3 | 6202 2Z C3 |
| 80 | 2, 4, 6, 8 | 6204 2Z C3 | 6004 2Z C3 |
| 90 | 2, 4, 6, 8 | 6205 2Z C3 | 6004 2Z C3 |
| 100 | 2, 4, 6, 8 | 6206 2Z C3 | 6206 2Z C3 |
| 112 | 2, 4, 6, 8 | 6306 2Z C3 | 6306 2Z C3 |
| 132 | 2, 4, 6, 8 | 6308 2Z C3 | 6308 2Z C3 |
| 160 | 2, 4, 6, 8 | 6309 2Z C3 | 6309 2Z C3 |
| 180 | 2, 4, 6, 8 | 6311 C3 | 6311 C3 |
| 200 | 2, 4, 6, 8 | 6312 C3 | 6312 C3 |
| 225 | 2 | 6313 C3 | 6313 C3 |
| | 4, 6, 8 | 6313 C3 | 6313 C3 |
| 250 | 2 | 6314 C3 | 6314 C3 |
| | 4, 6, 8 | 6314 C3 | 6314 C3 |
| 280 | 2 | 6314 C3 | 6314 C3 |
| | 4, 6, 8 | 6317 C3 | 6314 C3 |
| 315 | 2 | 6317 C3 | 6317 C3 |
| | 4, 6, 8 | 6319 C3 | 6319 C3 |
| 355 | 2 | 6319 C3 | 6319 C3 |
| | 4, 6, 8 | 6322 C3 | 6322 C3 |

Übersicht

Die nominelle Lagerlebensdauer für Motoren in waagerechter Bauform beträgt bei Kupplungsabtrieb ohne axiale Zusatzlasten mind. 40.000 h, unter Ausnutzung der maximal zulässigen Belastungen mind. 20.000 h. Dabei ist ein Betrieb des Motors bei 50 Hz zu Grunde gelegt.

The bearing lifetime of motors with horizontal type of construction is at least 40,000 hours if there is no additional axial loading at the coupling output and at least 20,000 hours with the admissible permitted loads. This assumes that the motor is operated at 50 Hz.

Alle Läufer sind mit eingelegerter halber Passfeder dynamisch ausgewuchtet entsprechend Schwingstärkestufe A (normal), DIN EN 60 034 - 14 regelt das Schwingungsverhalten von Maschinen. Hier ist in Anlehnung an DIN ISO 8821 die Auswuchtart "Halbkeilwuchtung" vorgeschrieben.

All rotors are dynamically balanced with inserted half feather keys in accordance with the vibration amplitude step A (normal). The vibration quality level of machines are regulated by DIN EN 60 034 - 14. Here is the balancing type "half-wedge balancing" prescribed based on DIN ISO 8821.

Fettgebrauchsdauern / Schmierfristen *service life / relubrication*

| Art der Schmierung <i>type of lubrication</i> | Baugröße <i>frame size</i> | Polzahl <i>number of poles</i> | Fettgebrauchsdauer <=40°C <i>grease life and/or relubrication interval at CT 40°C</i> | Schmiermenge [g] <i>grease quantity</i> |
|--|-------------------------------|-----------------------------------|--|--|
| Dauerschmierung permanent lubrication | <=160 | 2 | 20.000 | - |
| | | 4-8 | 40.000 | - |
| Nachschmierung relubrication | >160 | 2 | Siehe Schmierschild | Siehe Schmierschild |
| | | 4-8 | see lubrication plate | see lubrication plate |

Die Lager der Motoren bis Baugröße 160 haben Dauerschmierung. Ab Baugröße 180 ist eine Nachschmiereinrichtung vorhanden. Entsprechend der Fettgebrauchsdauer müssen die Lager rechtzeitig nachgeschmiert werden, damit die nominelle Lebensdauer erreicht werden kann. Gültige Nachschmierdaten sind auf dem Nachschmierschild auf den Motoren zu finden.

The bearings of the motors up to the frame size 160 have permanent lubrication. Starting with the frame size 180, relubricating are present. Depending on the service life of the grease, the bearings must be relubricated regularly so that the nominal service life can be achieved. Valid relubricating data can be found on the relubrication plate on the motor

The stated life of the grease is valid for normal bearing configurations..

Anschlussschemata *connections*

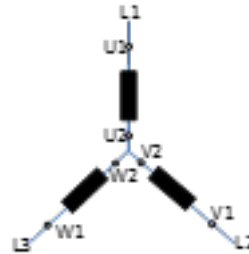
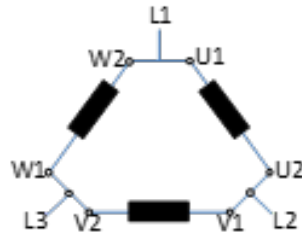
Dreieckschaltung
delta connection

Sternschaltung
star connection

Y/D- Anlauf
Y/D- start

Schaltung der Wicklungsstränge

connection of the winding legs

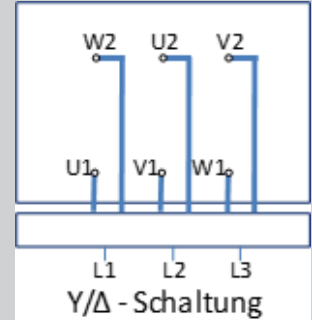
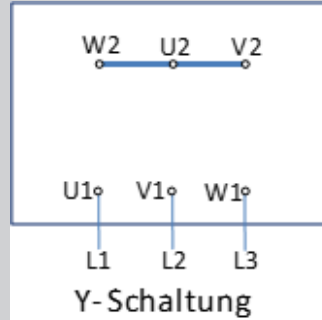
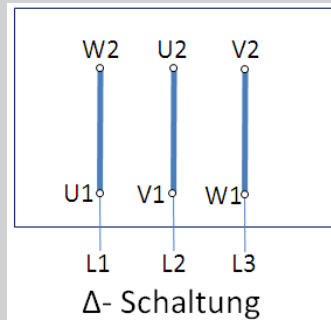


Die Enden der Wicklungsstränge gehen zum Y/Δ – Schalter

The ends of the winding legs go to a Y/Δ-switch

Schaltung am Klemmbrett

connection of the terminal board



Grundsätzlich können Motoren am Umrichter betrieben werden. Bei einigen Motoren sind Sondermaßnahmen erforderlich.
In principle motors are suitable for inverter operation. Some motors require special modification.

| Wicklungsausführung <i>winding design</i> | Betriebsspannung <i>operating voltage</i> | direktes Einschalten <i>direct on line (DOL)</i> | Y/Δ Anlauf <i>Y/D- start</i> |
|--|--|---|---------------------------------|
| [V] | [V] | [V] | [V] |
| 230 Δ / 400 Y | 230 / 400 | 230 Δ / 400 Y | 230 |
| 400 Y | 400 | 400 Δ | - |
| 500 Y | 500 | 500 Y | - |
| 500 Δ | 500 | 500 Δ | 500 |
| 400 Δ / 690 Y | 400 / 690 | 400 Δ / 690 Y | 400 |
| 690 Y | 690 | 690 Y | - |

Kabeleinführungen am Anschlusskasten *terminal box - cable lead-in*

| Baugröße <i>frame size</i> | Kabeleinführung <i>cable lead-in</i> |
|-------------------------------|---|
| 63, 71, 80 | 2 x M20 x 1,5 |
| 90, 100 | 2 x M25 x 1,5 |
| 112, 132 | 2 x M32 x 1,5 |
| 160, 180 | 2 x M40 x 1,5 |
| 200, 225 | 2 x M50 x 1,5 |
| 250, 280, 315, 355 | 2 x M63 x 1,5 |



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Allgemeine Informationen *general information*

Umgebungsbedingungen *ambient conditions*

Die Motoren sind in Wärmeklasse F ausgeführt, die Ausnutzung entspricht Wärmeklasse B. Soll diese Ausnutzung beibehalten werden, muss bei abweichenden Bedingungen die zulässige Leistung entsprechend den nachstehenden Tabellen bestimmt werden.

The motors are designed for temperature class 155 (F) and used in temperature class 130 (B). Under non-standard operating conditions, if they are to be used in class 130 (B), the admissible output must be determined from the tables below.

| Aufstellhöhe [m] <i>site altitude [m]</i> | Kühlmitteltemperatur [°C] <i>coolant temperature [°C]</i> | | | | | |
|--|--|---------|------|------|------|------|
| | <30 | 30 - 40 | 45 | 50 | 55 | 60 |
| 1000 | 1,07 | 1,00 | 0,96 | 0,92 | 0,87 | 0,82 |
| 1500 | 1,04 | 0,97 | 0,93 | 0,89 | 0,84 | 0,79 |
| 2000 | 1,00 | 0,94 | 0,90 | 0,86 | 0,82 | 0,77 |
| 2500 | 0,96 | 0,90 | 0,86 | 0,83 | 0,78 | 0,74 |
| 3000 | 0,92 | 0,86 | 0,82 | 0,79 | 0,75 | 0,70 |
| 3500 | 0,88 | 0,82 | 0,79 | 0,75 | 0,71 | 0,67 |
| 4000 | 0,82 | 0,77 | 0,74 | 0,71 | 0,67 | 0,63 |

Schutzarten *type of protection*

Standardmäßig sind die Motoren in IP55 ausgeführt. Wahlweise kann auch die Schutzart IP56 oder IP65 bestellt werden. Genauere Angaben zu den Schutzarten sind in der EN60529 zu finden. Die Bestellung erfolgt über einen Klartext.

The standard type of protection for the motors is IP55. Additional the motors can be ordered in protection class IP56 or IP65. Further information about protection types you can find in EN 60529. Protection types have to be ordered by clear text.

Isolationsklassen *isolation classes*

Standardmäßig ist die Wicklung der Motoren in Isoklasse F(155°C) ausgeführt und die Ausnutzung entspricht bei Netzbetrieb, Nennspannung und Bemessungsleistung der Isoklasse B(130°C). Wahlweise können die Motoren auch mit einer Wicklung in Isoklasse H(180°C) ausgeführt werden. Die Bestellung erfolgt über einen Klartext.

The standard isolation class for the winding in the motor is isoclass F(155°C) and the utilization at DOL, nominal power and voltage is isoclass B(130°C). Optional the motor can be equipped with a winding in isolation class H(180°C). Isolation classes have to be ordered by clear text.

Betriebsarten *operating methods*

Standardmäßig sind die Motoren für die Betriebsart S1 ausgelegt (Dauerbetrieb). Auf Wunsch können die Antriebe auch in den Betriebsarten S2-S9 bestellt und betrieben werden. Bei Frequenzumrichterbetrieb müssen die Antriebe mit einem Kaltleiter Temperaturfühler und ggf. mit einem isolierten Lager ausgestattet werden. Die Wicklung ist geeignet für Frequenzumrichterbetrieb bis 500 V. Die Bestellung erfolgt über einen Klartext. Bei FU-Betrieb kann sich ggf. die Leistung des Antriebes reduzieren

In standard the motors are designed for S1 duty (continuous duty). The layout can also be changed to short time duty S2-S9. For frequency converter use the motors have to be equipped with PTCs for tripping and maybe with a isolated bearing. The isolation is suitable for frequency converter use up to 500 V. Isolation classes have to be ordered by clear text. At frequency converter use the power is may be decreased.

Notizen
notes

Übersicht

Blank area for notes, consisting of 13 horizontal grey bars.



Inhaltsverzeichnis elektrischer Teil *content electrical part*

| | |
|--|--------------------|
| IE1 - 50 Hz - 2-6 pol - elektrische Daten - <i>electrical data</i> | 16 |
| IE2 - 50 Hz - 2 pol - elektrische Daten - <i>electrical data</i> | 17 |
| IE2 - 50 Hz - 4 pol - elektrische Daten - <i>electrical data</i> | 18 |
| IE2 - 50 Hz - 6 pol - elektrische Daten - <i>electrical data</i> | 19 |
| IE3 - 50 Hz - 2 pol - elektrische Daten - <i>electrical data</i> | 20 |
| IE3 - 50 Hz - 4 pol - elektrische Daten - <i>electrical data</i> | 21 |
| IE3 - 50 Hz - 6 pol - elektrische Daten - <i>electrical data</i> | 22 |

Inhaltsverzeichnis mechanischer Teil *content mechanical part*

| | |
|--|--------------------|
| Maße Baugröße 63 <i>dimensions frame size 63</i> | 24 |
| Maße Baugröße 71 <i>dimensions frame size 71</i> | 26 |
| Maße Baugröße 80 <i>dimensions frame size 80</i> | 28 |
| Maße Baugröße 90 <i>dimensions frame size 90</i> | 30 |
| Maße Baugröße 100 <i>dimensions frame size 100</i> | 32 |
| Maße Baugröße 112 <i>dimensions frame size 112</i> | 34 |
| Maße Baugröße 132 <i>dimensions frame size 132</i> | 36 |
| Maße Baugröße 160 <i>dimensions frame size 160</i> | 38 |
| Maße Baugröße 180 <i>dimensions frame size 180</i> | 40 |
| Maße Baugröße 200 <i>dimensions frame size 200</i> | 42 |
| Maße Baugröße 225 <i>dimensions frame size 225</i> | 44 |
| Maße Baugröße 250 <i>dimensions frame size 250</i> | 46 |
| Maße Baugröße 280 <i>dimensions frame size 280</i> | 48 |
| Maße Baugröße 315 <i>dimensions frame size 315</i> | 50 |
| Maße Baugröße 355 <i>dimensions frame size 355</i> | 52 |

| IE1 2-6p | IE1 - 50 Hz - 2-6 pol - elektrische Daten - <i>electrical data</i> | | | | | | | | | | | | | | | | |
|----------------|--|---|--------------------|---|---|--|---|----------------|----------------|--|---|---|---|---------------------------------------|--|---------------------------------------|--|
| | Leistung <i>Power</i> | Bau- größe <i>frame- size</i> | Typ <i>type</i> | Dreh- zahl <i>rated speed</i> | Dreh- moment <i>reted tourque</i> | Strom (400 V) <i>current (400 V)</i> | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor <i>power factor</i> | Anzugs- moment <i>locked rotor torque</i> | Anzugs- strom <i>locked rotor current</i> | Kipp- moment <i>break down torque</i> | Träg- heits- moment <i>J</i> | Schall- druck- pegel <i>Lp(A)</i> | Ge- wicht <i>m_{B3}</i> | |
| P _N | - | - | n _N | M _N | I _N | IE | η _N | η _N | η _N | cosφ _N | M _A /M _N | I _A /I _N | M _K /M _N | J | Lp(A) | m _{B3} | |
| kW | - | - | min ⁻¹ | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg | |

2-pol 2 pole

Aluminiumgehäuse / *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|------|--------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|---|
| 0,18 | 63 M | 12AA 63 M1-2 | 2720 | 0,63 | 0,50 | IE1 | 64,0 | 60,0 | 65,0 | 0,80 | 2,3 | 5,5 | 2,3 | 0,00031 | 61 | 4 |
| 0,25 | 63 M | 12AA 63 M2-2 | 2720 | 0,88 | 0,66 | IE1 | 68,5 | 66,0 | 68,0 | 0,81 | 2,3 | 5,5 | 2,3 | 0,00040 | 61 | 5 |
| 0,37 | 71 M | 12AA 71 M1-2 | 2755 | 1,28 | 0,96 | IE1 | 71,0 | 68,5 | 69,0 | 0,81 | 2,2 | 6,1 | 2,3 | 0,00055 | 64 | 6 |
| 0,55 | 71 M | 12AA 71 M2-2 | 2790 | 1,88 | 1,36 | IE1 | 73,0 | 69,5 | 71,0 | 0,82 | 2,3 | 6,1 | 2,3 | 0,00060 | 64 | 6 |

4-pol 4 pole

Aluminiumgehäuse / *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|------|--------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|----|
| 0,12 | 63 M | 12AA 63 M1-4 | 1310 | 0,87 | 0,42 | IE1 | 57,0 | 59,0 | 56,0 | 0,72 | 2,2 | 4,4 | 2,1 | 0,00050 | 52 | 4 |
| 0,18 | 63 M | 12AA 63 M2-4 | 1310 | 1,31 | 0,59 | IE1 | 60,0 | 61,6 | 57,5 | 0,73 | 2,2 | 4,4 | 2,1 | 0,00060 | 52 | 5 |
| 0,25 | 71 M | 12AA 71 M1-4 | 1345 | 1,78 | 0,75 | IE1 | 65,0 | 69,3 | 60,1 | 0,74 | 2,2 | 5,2 | 2,1 | 0,00080 | 55 | 6 |
| 0,37 | 71 M | 12AA 71 M2-4 | 1340 | 2,64 | 1,06 | IE1 | 67,0 | 71,0 | 68,4 | 0,75 | 2,2 | 5,2 | 2,1 | 0,00130 | 55 | 6 |
| 0,55 | 80 M | 12AA 80 M1-4 | 1380 | 3,81 | 1,47 | IE1 | 71,0 | 72,6 | 69,0 | 0,76 | 2,4 | 5,2 | 2,3 | 0,00180 | 58 | 15 |

6-pol 6 pole

Aluminiumgehäuse / *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|------|--------------|-----|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|----|
| 0,18 | 71 M | 12AA 71 M1-6 | 870 | 1,98 | 0,70 | IE1 | 56,0 | 57,0 | 53,1 | 0,66 | 2,0 | 4,0 | 1,9 | 0,00110 | 52 | 6 |
| 0,25 | 71 M | 12AA 71 M2-6 | 870 | 2,74 | 0,90 | IE1 | 59,0 | 59,9 | 55,2 | 0,68 | 2,0 | 4,0 | 1,9 | 0,00140 | 52 | 6 |
| 0,37 | 80 M | 12AA 80 M1-6 | 880 | 4,02 | 1,23 | IE1 | 62,0 | 67,7 | 64,2 | 0,70 | 1,9 | 4,7 | 2,0 | 0,00160 | 54 | 15 |
| 0,55 | 80 M | 12AA 80 M2-6 | 880 | 5,97 | 1,70 | IE1 | 65,0 | 68,4 | 64,1 | 0,72 | 1,9 | 4,7 | 2,1 | 0,00190 | 54 | 16 |



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

IE2
2p

IE2 - 50 Hz - 2 pol - elektrische Daten - *electrical data*

| Leistung | Bau- größe | Typ | Dreh- zahl | Dreh- moment | Strom (400 V) | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor | Anzugs- moment | Anzugs- strom | Kipp- moment | Trägheits- moment | Schall- druck- pegel | Ge- wicht | |
|--------------|------------------------|-------------|------------------------|--------------------------|----------------------------|---|----------|----------|---------------------------|------------------------------------|-------------------------------------|----------------------------------|----------------------|----------------------------|--------------|----------|
| <i>Power</i> | <i>frame- size</i> | <i>type</i> | <i>rated speed</i> | <i>reted tourque</i> | <i>current (400 V)</i> | <i>4/4 3/4 2/4</i> | | | <i>power factor</i> | <i>locked rotor torque</i> | <i>locked rotor current</i> | <i>break down torque</i> | | | | |
| P_N | - | - | n_N | M_N | I_N | IE | η_N | η_N | η_N | $\cos\phi_N$ | M_A/M_N | I_A/I_N | M_K/M_N | J | LpfA | m_{B3} |
| kW | - | - | min-1 | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse / *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|-----|
| 0,18 | 63 M | 13AA 63 M 1-2 | 2720 | 0,63 | 0,50 | IE2 | 66,0 | 64,0 | 60,0 | 0,80 | | | | 0,00031 | 61 | 3,8 |
| 0,25 | 63 M | 13AA 63 M 2-2 | 2720 | 0,88 | 0,66 | IE2 | 69,0 | 68,5 | 66,0 | 0,81 | | | | 0,00060 | 61 | 4 |
| 0,37 | 71 M | 13AA 71 M1-2 | 2755 | 1,28 | 0,96 | IE2 | 71,0 | 71,0 | 68,5 | 0,81 | | | | 0,00078 | 64 | 6,5 |
| 0,55 | 71 M | 13AA 71 M2-2 | 2790 | 1,88 | 1,30 | IE2 | 74,3 | 73,4 | 69,7 | 0,82 | | | | 0,00090 | 64 | 6,7 |
| 0,75 | 80 M | 13AA 80 M1-2 | 2850 | 2,51 | 1,71 | IE2 | 77,4 | 87,5 | 77,3 | 0,82 | 2,3 | 6,8 | 2,3 | 0,00101 | 62 | 11 |
| 1,1 | 80 M | 13AA 80 M2-2 | 2870 | 3,66 | 2,40 | IE2 | 79,6 | 80,0 | 78,5 | 0,83 | 2,3 | 7,3 | 2,3 | 0,00132 | 62 | 12 |
| 1,5 | 90 S | 13AA 90 S-2 | 2880 | 4,97 | 3,17 | IE2 | 81,3 | 81,8 | 80,0 | 0,84 | 2,3 | 7,6 | 2,3 | 0,00202 | 67 | 14 |
| 2,2 | 90 L | 13AA 90 L-2 | 2880 | 7,30 | 4,49 | IE2 | 83,2 | 84,0 | 82,5 | 0,85 | 2,3 | 7,8 | 2,3 | 0,00263 | 67 | 18 |
| 3 | 100 L | 13AA 100 L-2 | 2880 | 9,95 | 5,88 | IE2 | 84,6 | 85,8 | 84,1 | 0,87 | 2,3 | 8,1 | 2,3 | 0,00425 | 74 | 21 |
| 4 | 112 M | 13AA 112 M-2 | 2900 | 13,2 | 7,65 | IE2 | 85,8 | 87,0 | 85,5 | 0,88 | 2,3 | 8,3 | 2,3 | 0,00587 | 77 | 28 |
| 5,5 | 132 S | 13AA 132 S1-2 | 2910 | 18,0 | 10,4 | IE2 | 87,0 | 88,0 | 86,0 | 0,88 | 2,2 | 8,0 | 2,3 | 0,01295 | 79 | 40 |
| 7,5 | 132 S | 13AA 132 S2-2 | 2910 | 24,6 | 13,8 | IE2 | 88,1 | 88,6 | 86,3 | 0,89 | 2,2 | 7,8 | 2,3 | 0,01528 | 79 | 49 |

Graugussgehäuse / *grey cast iron housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|-----|------|
| 11 | 160 M | 13BA 160 M1-2 | 2940 | 35,7 | 20,0 | IE2 | 89,4 | 90,2 | 88,9 | 0,89 | 2,2 | 7,9 | 2,3 | 0,04930 | 81 | 116 |
| 15 | 160 M | 13BA 160 M2-2 | 2940 | 48,7 | 26,9 | IE2 | 90,3 | 91,0 | 90,0 | 0,89 | 2,2 | 8,0 | 2,3 | 0,05640 | 81 | 123 |
| 18,5 | 160 L | 13BA 160 L-2 | 2940 | 60,1 | 33,0 | IE2 | 90,9 | 91,6 | 90,3 | 0,89 | 2,2 | 8,1 | 2,3 | 0,06540 | 81 | 140 |
| 22 | 180 M | 13BA 180 M-2 | 2950 | 71,2 | 39,1 | IE2 | 91,3 | 91,8 | 91,1 | 0,89 | 2,2 | 8,2 | 2,3 | 0,08150 | 83 | 180 |
| 30 | 200 L | 13BA 200 L1-2 | 2960 | 96,8 | 52,9 | IE2 | 92,0 | 92,4 | 91,1 | 0,89 | 2,2 | 7,5 | 2,3 | 0,16440 | 84 | 243 |
| 37 | 200 L | 13BA 200 L2-2 | 2960 | 119 | 64,9 | IE2 | 92,5 | 92,9 | 91,5 | 0,89 | 2,2 | 7,5 | 2,3 | 0,17350 | 84 | 263 |
| 45 | 225 M | 13BA 225 M-2 | 2960 | 145 | 78,6 | IE2 | 92,9 | 93,3 | 92,6 | 0,89 | 2,2 | 7,6 | 2,3 | 0,30460 | 86 | 312 |
| 55 | 250 M | 13BA 250 M-2 | 2970 | 177 | 95,7 | IE2 | 93,2 | 93,9 | 92,8 | 0,89 | 2,2 | 7,6 | 2,3 | 0,42360 | 89 | 407 |
| 75 | 280 S | 13BA 280 S-2 | 2975 | 241 | 130 | IE2 | 93,8 | 94,3 | 93,1 | 0,89 | 2,0 | 6,9 | 2,3 | 0,99440 | 91 | 536 |
| 90 | 280 M | 13BA 280 M-2 | 2975 | 289 | 155 | IE2 | 94,1 | 94,3 | 93,4 | 0,89 | 2,0 | 7,0 | 2,3 | 1,04900 | 91 | 609 |
| 110 | 315 S | 13BA 315 S-2 | 2975 | 353 | 187 | IE2 | 94,3 | 94,5 | 93,4 | 0,90 | 2,0 | 7,1 | 2,2 | 1,34100 | 92 | 875 |
| 132 | 315 M | 13BA 315 M-2 | 2975 | 424 | 224 | IE2 | 94,6 | 94,8 | 93,2 | 0,90 | 2,0 | 8,1 | 2,2 | 1,89300 | 92 | 940 |
| 160 | 315 L | 13BA 315 L1-2 | 2975 | 514 | 268 | IE2 | 94,8 | 95,1 | 94,0 | 0,91 | 2,0 | 7,1 | 2,2 | 2,14700 | 92 | 1004 |
| 200 | 315 L | 13BA 315 L2-2 | 2975 | 642 | 334 | IE2 | 95,0 | 95,4 | 94,2 | 0,91 | 2,0 | 7,1 | 2,2 | 2,38000 | 92 | 1080 |
| 250 | 355 M | 13BA 355 M-2 | 2980 | 801 | 418 | IE2 | 95,0 | 95,4 | 94,2 | 0,91 | 2,0 | 7,1 | 2,2 | 3,00000 | 100 | |
| 315 | 355 L | 13BA 355 L1-2 | 2980 | 1009 | 526 | IE2 | 95,0 | 95,4 | 94,2 | 0,91 | 2,0 | 7,1 | 2,2 | 3,50000 | 100 | |
| 355 | 355 L | 13BA 355 L2-2 | 2980 | 1138 | 593 | IE2 | 95,7 | 95,4 | 94,2 | 0,91 | 2,0 | 7,2 | 2,2 | 3,76000 | 100 | 2470 |

Übersicht

**IE2
4p**

IE2 - 50 Hz - 4 pol - elektrische Daten - *electrical data*

| Leistung <i>Power</i> | Bau- größe <i>frame- size</i> | Typ <i>type</i> | Dreh- zahl <i>rated speed</i> | Dreh- moment <i>reted tourque</i> | Strom (400 V) <i>current (400 V)</i> | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor <i>power factor</i> | Anzugs- moment <i>locked rotor torque</i> | Anzugs- strom <i>locked rotor current</i> | Kipp- moment <i>break down torque</i> | Trägheits- moment <i>J</i> | Schall- druck- pegel <i>Lp(A)</i> | Ge- wicht <i>m_{B3}</i> | |
|--------------------------|---|--------------------|---|---|--|---|----------------|----------------|--|---|---|---|----------------------------------|--|---------------------------------------|-----------------|
| P _N | - | - | n _N | M _N | I _N | IE | η _N | η _N | η _N | cosφ _N | M _A /M _N | I _A /I _N | M _K /M _N | J | Lp(A) | m _{B3} |
| kW | - | - | min-1 | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse / *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|-----|
| 0,12 | 63 M | 13AA 63 M 1-4 | 1310 | 0,87 | 0,41 | IE2 | 59,3 | 59,1 | 56,6 | 0,72 | | | | 0,00055 | 52 | 4,1 |
| 0,18 | 63 M | 13AA 63 M 2-4 | 1310 | 1,31 | 0,55 | IE2 | 64,9 | 63,8 | 58,1 | 0,73 | | | | 0,00066 | 52 | 4,6 |
| 0,25 | 71 M | 13AA 71 M1-4 | 1340 | 1,78 | 0,71 | IE2 | 68,6 | 68,8 | 60,9 | 0,74 | | | | 0,00087 | 55 | 6,3 |
| 0,37 | 71 M | 13AA 71 M2-4 | 1340 | 2,64 | 0,98 | IE2 | 72,9 | 73,0 | 68,9 | 0,75 | | | | 0,00160 | 55 | 6,8 |
| 0,55 | 80 M | 13AA 80 M1-4 | 1420 | 3,70 | 1,80 | IE2 | 80,2 | 80,3 | 79,2 | 0,76 | | | | 0,00251 | 56 | 13 |
| 0,75 | 80 M | 13AA 80 M2-4 | 1420 | 5,04 | 1,79 | IE2 | 79,6 | 80,3 | 79,2 | 0,75 | 2,3 | 6,5 | 2,3 | 0,00251 | 56 | 13 |
| 1,1 | 90 S | 13AA 90 S-4 | 1420 | 7,40 | 2,60 | IE2 | 81,4 | 82,7 | 81,4 | 0,75 | 2,3 | 6,6 | 2,3 | 0,00304 | 59 | 16 |
| 1,5 | 90 L | 13AA 90 L-4 | 1420 | 10,1 | 3,50 | IE2 | 82,8 | 83,5 | 82,0 | 0,75 | 2,3 | 6,9 | 2,3 | 0,00385 | 59 | 20 |
| 2,2 | 100 L | 13AA 100 L1-4 | 1440 | 14,6 | 4,71 | IE2 | 84,3 | 85,3 | 84,0 | 0,81 | 2,3 | 7,5 | 2,3 | 0,00779 | 64 | 24 |
| 3 | 100 L | 13AA 100 L2-4 | 1440 | 19,9 | 6,20 | IE2 | 85,5 | 86,6 | 85,3 | 0,82 | 2,3 | 7,6 | 2,3 | 0,00941 | 64 | 28 |
| 4 | 112 M | 13AA 112 M-4 | 1445 | 26,4 | 8,10 | IE2 | 86,6 | 87,3 | 86,0 | 0,82 | 2,3 | 7,7 | 2,3 | 0,01295 | 65 | 36 |
| 5,5 | 132 S | 13AA 132 S-4 | 1450 | 36,2 | 11,1 | IE2 | 87,7 | 88,3 | 87,5 | 0,82 | 2,0 | 7,5 | 2,3 | 0,02884 | 71 | 48 |
| 7,5 | 132 M | 13AA 132 M-4 | 1450 | 49,4 | 14,7 | IE2 | 88,7 | 89,4 | 88,5 | 0,83 | 2,0 | 7,4 | 2,3 | 0,03704 | 71 | 59 |

Graugussgehäuse / *grey cast iron housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|------|
| 11 | 160 M | 13BA 160 M1-4 | 1470 | 71,5 | 21,3 | IE2 | 89,8 | 90,3 | 89,4 | 0,83 | 2,2 | 7,5 | 2,3 | 0,07780 | 73 | 122 |
| 15 | 160 L | 13BA 160 L-4 | 1470 | 97,4 | 28,4 | IE2 | 90,6 | 91,2 | 90,6 | 0,84 | 2,2 | 7,5 | 2,3 | 0,10190 | 73 | 146 |
| 18,5 | 180 M | 13BA 180 M-4 | 1470 | 120 | 34,4 | IE2 | 91,2 | 91,7 | 90,8 | 0,85 | 2,2 | 7,7 | 2,3 | 0,15330 | 76 | 191 |
| 22 | 180 L | 13BA 180 L-4 | 1470 | 143 | 40,8 | IE2 | 91,6 | 92,1 | 91,5 | 0,85 | 2,2 | 7,8 | 2,3 | 0,18860 | 76 | 214 |
| 30 | 200 L | 13BA 200 L-4 | 1470 | 195 | 55,2 | IE2 | 92,3 | 92,7 | 90,0 | 0,85 | 2,2 | 7,2 | 2,3 | 0,28740 | 76 | 265 |
| 37 | 225 S | 13BA 225 S-4 | 1480 | 239 | 67,0 | IE2 | 92,7 | 93,0 | 92,5 | 0,86 | 2,2 | 7,3 | 2,3 | 0,47710 | 78 | 322 |
| 45 | 225 M | 13BA 225 M-4 | 1480 | 290 | 81,1 | IE2 | 93,1 | 93,3 | 92,7 | 0,86 | 2,2 | 7,4 | 2,3 | 0,55870 | 78 | 344 |
| 55 | 250 M | 13BA 250 M-4 | 1480 | 355 | 99,0 | IE2 | 93,5 | 94,0 | 93,4 | 0,86 | 2,2 | 7,4 | 2,3 | 0,75740 | 79 | 450 |
| 75 | 280 S | 13BA 280 S-4 | 1480 | 484 | 132 | IE2 | 94,0 | 94,5 | 93,5 | 0,87 | 2,2 | 6,7 | 2,3 | 1,93600 | 80 | 589 |
| 90 | 280 M | 13BA 280 M-4 | 1480 | 581 | 157 | IE2 | 94,2 | 94,7 | 93,6 | 0,88 | 2,2 | 6,9 | 2,2 | 2,34100 | 80 | 682 |
| 110 | 315 S | 13BA 315 S-4 | 1480 | 710 | 188 | IE2 | 94,5 | 95,0 | 93,8 | 0,89 | 2,2 | 6,9 | 2,2 | 3,25200 | 88 | 898 |
| 132 | 315 M | 13BA 315 M-4 | 1480 | 852 | 226 | IE2 | 94,7 | 95,2 | 93,8 | 0,89 | 2,2 | 6,9 | 2,2 | 3,77600 | 88 | 984 |
| 160 | 315 L | 13BA 315 L1-4 | 1480 | 1032 | 270 | IE2 | 94,9 | 95,4 | 94,0 | 0,90 | 2,2 | 6,9 | 2,2 | 4,13000 | 88 | 1053 |
| 200 | 315 L | 13BA 315 L2-4 | 1480 | 1291 | 337 | IE2 | 95,1 | 95,4 | 94,0 | 0,90 | 2,2 | 6,9 | 2,2 | 4,73000 | 88 | 1150 |
| 250 | 355 M | 13BA 355 M-4 | 1490 | 1602 | 422 | IE2 | 95,1 | 95,4 | 94,0 | 0,90 | 2,2 | 6,9 | 2,2 | 6,50000 | 95 | |
| 315 | 355 L | 13BA 355 L1-4 | 1490 | 2019 | 531 | IE2 | 95,1 | 95,4 | 94,0 | 0,90 | 2,2 | 6,9 | 2,2 | 8,20000 | 95 | |
| 355 | 355 L | 13BA 355 L2-4 | 1480 | 2291 | 599 | IE2 | 95,5 | 95,4 | 94,0 | 0,90 | 2,0 | 6,9 | 2,2 | 9,34000 | 95 | 2040 |

Übersicht

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| IE2 - 50 Hz - 6 pol - elektrische Daten - <i>electrical data</i> | | | | | | | | | | | | | | | IE2 6p | |
|--|------------------------|-------------|------------------------|--------------------------|----------------------------|---|----------------|----------------|---------------------------|------------------------------------|-------------------------------------|----------------------------------|--------------------------------|----------------------------|-----------|--------------|
| Leistung | Bau- größe | Typ | Dreh- zahl | Dreh- moment | Strom (400 V) | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor | Anzugs- moment | An- zugs- strom | Kipp- moment | Trägheits- moment | Schall- druck- pegel | | Ge- wicht |
| <i>Power</i> | <i>frame- size</i> | <i>type</i> | <i>rated speed</i> | <i>reted tourque</i> | <i>current (400 V)</i> | 4/4 3/4 2/4 | | | <i>power factor</i> | <i>locked rotor torque</i> | <i>locked rotor current</i> | <i>break down torque</i> | | | | |
| P _N | - | - | n _N | M _N | I _N | IE | η _N | η _N | η _N | cosφ _N | M _A /M _N | I _A /I _N | M _K /M _N | J | | LpfA |
| kW | - | - | min-1 | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse / *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|-----|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|-----|
| 0,12 | 63 M | 13AA 63 M 2-6 | 930 | 1,23 | 0,54 | IE2 | 50,8 | 51,1 | 47,8 | 0,63 | | | | 0,00089 | 50 | 4,7 |
| 0,18 | 71 M | 13AA 71 M1-6 | 930 | 1,85 | 0,70 | IE2 | 57,1 | 57,2 | 53,9 | 0,66 | | | | 0,00125 | 52 | 6,8 |
| 0,25 | 71 M | 13AA 71 M2-6 | 930 | 2,57 | 0,86 | IE2 | 61,8 | 61,9 | 56,1 | 0,68 | | | | 0,00150 | 52 | 7,1 |
| 0,37 | 80 M | 13AA 80 M1-6 | 930 | 3,80 | 1,11 | IE2 | 67,3 | 67,7 | 66,3 | 0,71 | | | | 0,00193 | 54 | 12 |
| 0,55 | 80 M | 13AA 80 M2-6 | 930 | 5,65 | 1,53 | IE2 | 68,2 | 68,5 | 67,4 | 0,71 | | | | 0,00238 | 54 | 13 |
| 0,75 | 90 S | 13AA 90 S-6 | 930 | 7,70 | 2,00 | IE2 | 75,9 | 76,6 | 75,3 | 0,72 | 2,1 | 5,8 | 2,1 | 0,00385 | 57 | 16 |
| 1,1 | 90 L | 13AA 90 L-6 | 930 | 11,3 | 2,80 | IE2 | 78,1 | 78,9 | 77,5 | 0,73 | 2,1 | 5,9 | 2,1 | 0,00536 | 57 | 21 |
| 1,5 | 100 L | 13AA 100 L-6 | 930 | 15,4 | 3,70 | IE2 | 79,8 | 80,6 | 78,6 | 0,74 | 2,1 | 6,0 | 2,1 | 0,01083 | 61 | 23 |
| 2,2 | 112 M | 13AA 112 M-6 | 945 | 22,2 | 5,20 | IE2 | 81,8 | 82,5 | 80,9 | 0,74 | 2,1 | 6,0 | 2,1 | 0,01528 | 65 | 32 |
| 3 | 132 S | 13AA 132 S-6 | 960 | 29,8 | 7,10 | IE2 | 83,3 | 83,9 | 82,6 | 0,74 | 2,0 | 6,2 | 2,1 | 0,03218 | 69 | 40 |
| 4 | 132 M | 13AA 132 M1-6 | 965 | 39,6 | 9,20 | IE2 | 84,6 | 85,1 | 83,5 | 0,74 | 2,0 | 6,8 | 2,1 | 0,03987 | 69 | 49 |
| 5,5 | 132 M | 13AA 132 M2-6 | 965 | 54,4 | 12,3 | IE2 | 86,0 | 86,5 | 85,1 | 0,75 | 2,0 | 7,1 | 2,1 | 0,04999 | 69 | 62 |

Graugussgehäuse / *grey cast iron housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|-----|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|------|
| 7,5 | 160 M | 13BA 160 M6 | 970 | 73,8 | 15,9 | IE2 | 87,2 | 87,6 | 86,3 | 0,78 | 2,1 | 6,7 | 2,1 | 0,09720 | 73 | 118 |
| 11 | 160 M | 13BA 160 L-6 | 970 | 108 | 22,7 | IE2 | 88,7 | 89,1 | 88,2 | 0,79 | 2,1 | 6,9 | 2,1 | 0,12810 | 73 | 148 |
| 15 | 180 L | 13BA 180 L-6 | 980 | 146 | 29,8 | IE2 | 89,7 | 90,1 | 89,1 | 0,81 | 2,0 | 7,2 | 2,1 | 0,22870 | 73 | 195 |
| 18,5 | 200 L | 13BA 200 L1-6 | 980 | 180 | 36,5 | IE2 | 90,4 | 90,9 | 90,1 | 0,81 | 2,1 | 7,2 | 2,1 | 0,33780 | 73 | 234 |
| 22 | 200 L | 13BA 200 L2-6 | 980 | 214 | 43,1 | IE2 | 90,9 | 91,3 | 90,5 | 0,81 | 2,1 | 7,3 | 2,1 | 0,38420 | 73 | 253 |
| 30 | 225 M | 13BA 225 M-6 | 980 | 292 | 57,6 | IE2 | 91,7 | 92,0 | 91,4 | 0,82 | 2,0 | 7,1 | 2,1 | 0,56950 | 74 | 288 |
| 37 | 250 M | 13BA 250 M-6 | 980 | 361 | 69,8 | IE2 | 92,2 | 92,6 | 91,9 | 0,83 | 2,1 | 7,1 | 2,1 | 0,88450 | 76 | 405 |
| 45 | 280 S | 13BA 280 S-6 | 980 | 439 | 82,4 | IE2 | 92,7 | 93,0 | 92,4 | 0,85 | 2,1 | 7,2 | 2,0 | 1,74600 | 78 | 521 |
| 55 | 280 M | 13BA 280 M-6 | 980 | 536 | 100 | IE2 | 93,1 | 93,5 | 92,8 | 0,85 | 2,1 | 7,2 | 2,0 | 2,13800 | 78 | 602 |
| 75 | 315 S | 13BA 315 S-6 | 990 | 723 | 135 | IE2 | 93,7 | 94,0 | 93,4 | 0,85 | 2,0 | 6,7 | 2,0 | 4,11000 | 83 | 833 |
| 90 | 315 M | 13BA 315 M-6 | 990 | 868 | 162 | IE2 | 94,0 | 94,3 | 93,7 | 0,85 | 2,0 | 6,7 | 2,0 | 4,78000 | 83 | 897 |
| 110 | 315 L | 13BA 315 L1-6 | 990 | 1061 | 198 | IE2 | 94,3 | 94,5 | 93,9 | 0,85 | 2,0 | 6,7 | 2,0 | 5,45000 | 83 | 1004 |
| 132 | 315 L | 13BA 315 L2-6 | 990 | 1273 | 234 | IE2 | 94,6 | 94,9 | 94,0 | 0,86 | 2,0 | 6,7 | 2,0 | 6,12000 | 83 | 1111 |
| 160 | 355 M | 13BA 355 M1-6 | 990 | 1543 | 283 | IE2 | 94,8 | 95,1 | 94,1 | 0,86 | 2,0 | 6,7 | 2,0 | 9,50000 | 85 | |
| 200 | 355 M | 13BA 355 M3-6 | 990 | 1929 | 353 | IE2 | 95,0 | 95,3 | 94,3 | 0,86 | 2,0 | 6,7 | 2,0 | 10,4000 | 85 | |
| 250 | 355 L | 13BA 355 L2-6 | 990 | 2412 | 441 | IE2 | 95,0 | 95,3 | 94,3 | 0,86 | 2,0 | 6,7 | 2,0 | 12,4000 | 85 | |

Übersicht

**IE3
2p**

IE3 - 50 Hz - 2 pol - elektrische Daten - *electrical data*

| Leistung | Bau- größe | Typ | Dreh- zahl | Dreh- moment | Strom (400 V) | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor | Anzugs- moment | Anzugs- strom | Kipp- moment | Trägheits- moment | Schall- druck- pegel | Ge- wicht | |
|----------------|------------------------|-------------|------------------------|--------------------------|----------------------------|---|----------------|----------------|---------------------------|------------------------------------|-------------------------------------|----------------------------------|--------------------------------|----------------------------|--------------|-----------------|
| <i>Power</i> | <i>frame- size</i> | <i>type</i> | <i>rated speed</i> | <i>reted tourque</i> | <i>current (400 V)</i> | | | | <i>power factor</i> | <i>locked rotor torque</i> | <i>locked rotor current</i> | <i>break down torque</i> | | | | |
| P _N | - | - | n _N | M _N | I _N | IE | η _N | η _N | η _N | cosφ _N | M _A /M _N | I _A /I _N | M _K /M _N | J | LpfA | m _{B3} |
| kW | - | - | min-1 | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse / *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|------|
| 0,75 | 80 M | 15AA 80 M1-2 | 2890 | 2,48 | 1,64 | IE3 | 80,7 | 81,3 | 79,6 | 0,82 | 2,3 | 7,0 | 2,3 | 0,00109 | 62 | 9,5 |
| 1,1 | 80 M | 15AA 80 M2-2 | 2890 | 3,63 | 2,30 | IE3 | 82,7 | 83,5 | 82,1 | 0,83 | 2,2 | 7,3 | 2,3 | 0,00142 | 62 | 10,5 |
| 1,5 | 90 S | 15AA 90 S-2 | 2890 | 4,96 | 3,06 | IE3 | 84,2 | 85,5 | 83,8 | 0,84 | 2,2 | 7,6 | 2,3 | 0,00217 | 67 | 16 |
| 2,2 | 90 L | 15AA 90 L-2 | 2890 | 7,27 | 4,35 | IE3 | 85,9 | 86,7 | 85,4 | 0,85 | 2,2 | 7,6 | 2,3 | 0,00283 | 67 | 20 |
| 3 | 90 L | 15AA 90 LC-2 | 2895 | 9,90 | 5,70 | IE3 | 87,1 | 87,9 | 86,6 | 0,87 | | | | 0,00503 | | 21 |
| 3 | 100 L | 15AA 100 L-2 | 2895 | 9,90 | 5,71 | IE3 | 87,1 | 87,9 | 86,6 | 0,87 | 2,2 | 7,8 | 2,3 | 0,00457 | 74 | 26 |
| 4 | 100 L | 15AA 100 LC-2 | 2910 | 13,1 | 7,80 | IE3 | 89,4 | 89,7 | 88,6 | 0,88 | | | | 0,00695 | 77 | 27 |
| 4 | 112 M | 15AA 112 M-2 | 2910 | 13,1 | 7,45 | IE3 | 88,1 | 88,6 | 87,4 | 0,88 | 2,2 | 8,3 | 2,3 | 0,00631 | 77 | 33,5 |
| 5,5 | 112 M | 15AA 112 MC-2 | 2940 | 17,9 | 10,1 | IE3 | 89,4 | 89,7 | 88,6 | 0,88 | | | | 0,00695 | 77 | 35,5 |
| 5,5 | 132 S | 15AA 132 S1-2 | 2940 | 17,9 | 10,1 | IE3 | 89,2 | 89,7 | 88,6 | 0,88 | 2,0 | 8,3 | 2,3 | 0,01392 | 79 | 45 |
| 7,5 | 132 S | 15AA 132 S2-2 | 2940 | 24,4 | 13,7 | IE3 | 80,1 | 90,9 | 89,6 | 0,88 | 2,0 | 7,9 | 2,3 | 0,01643 | 79 | 51 |
| 9,2 | 132 M | 15AA 132 MB-2 | 2940 | 29,9 | 16,6 | IE3 | 90,3 | 90,9 | 89,6 | 0,89 | | | | | 79 | 53 |
| 11 | 132 M | 15AA 132 MC-2 | 2950 | 35,6 | 19,6 | IE3 | 91,3 | 91,5 | 89,9 | 0,89 | | | | | 79 | 55 |
| 11 | 160 M | 15AA 160 M1-2 | 2950 | 35,6 | 19,6 | IE3 | 91,3 | 91,5 | 89,9 | 0,89 | 2,0 | 8,1 | 2,3 | 0,05400 | 81 | |
| 15 | 160 M | 15AA 160 M2-2 | 2950 | 48,6 | 26,5 | IE3 | 92,0 | 92,3 | 91,2 | 0,89 | 2,0 | 8,1 | 2,3 | 0,06180 | 81 | |
| 18,5 | 160 L | 15AA 160 L-2 | 2950 | 59,9 | 32,5 | IE3 | 92,6 | 92,8 | 91,6 | 0,89 | 2,0 | 8,2 | 2,3 | 0,07160 | 81 | |

Graugussgehäuse / *grey cast iron housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|-----|------|
| 11 | 160 M | 15BA 160 M1-2 | 2950 | 35,6 | 19,6 | IE3 | 91,3 | 91,5 | 89,9 | 0,89 | 2,0 | 8,1 | 2,3 | 0,05400 | 81 | 126 |
| 15 | 160 M | 15BA 160 M2-2 | 2950 | 48,6 | 26,5 | IE3 | 92,0 | 92,3 | 91,2 | 0,89 | 2,0 | 8,1 | 2,3 | 0,06180 | 81 | 136 |
| 18,5 | 160 L | 15BA 160 L-2 | 2950 | 59,9 | 32,5 | IE3 | 92,6 | 92,8 | 91,6 | 0,89 | 2,0 | 8,2 | 2,3 | 0,07160 | 81 | 161 |
| 22 | 180 M | 15BA 180 M-2 | 2960 | 71,0 | 38,5 | IE3 | 92,7 | 92,9 | 91,8 | 0,89 | 2,0 | 8,2 | 2,3 | 0,08920 | 83 | 202 |
| 30 | 200 L | 15BA 200 L1-2 | 2970 | 96,5 | 52,1 | IE3 | 93,4 | 93,6 | 92,2 | 0,89 | 2,0 | 7,6 | 2,3 | 0,18000 | 84 | 259 |
| 37 | 200 L | 15BA 200 L2-2 | 2970 | 119 | 64,0 | IE3 | 93,7 | 93,9 | 92,6 | 0,89 | 2,0 | 7,6 | 2,3 | 0,19000 | 84 | 276 |
| 45 | 225 M | 15BA 225 M-2 | 2970 | 145 | 76,8 | IE3 | 94,1 | 94,0 | 92,7 | 0,90 | 2,0 | 7,7 | 2,3 | 0,33350 | 86 | 359 |
| 55 | 250 M | 15BA 250 M-2 | 2980 | 176 | 93,5 | IE3 | 94,3 | 94,5 | 92,9 | 0,90 | 2,0 | 7,7 | 2,3 | 0,46380 | 89 | 394 |
| 75 | 280 S | 15BA 280 S-2 | 2980 | 240 | 127 | IE3 | 94,7 | 94,5 | 93,6 | 0,90 | 1,8 | 7,1 | 2,3 | 1,08890 | 91 | 537 |
| 90 | 280 M | 15BA 280 M-2 | 2980 | 288 | 152 | IE3 | 95,0 | 95,2 | 94,3 | 0,90 | 1,8 | 7,1 | 2,3 | 1,14870 | 91 | 583 |
| 110 | 315 S | 15BA 315 S-2 | 2980 | 353 | 185 | IE3 | 95,2 | 95,3 | 94,5 | 0,90 | 1,8 | 7,1 | 2,3 | 1,49500 | 92 | 861 |
| 132 | 315 M | 15BA 315 M-2 | 2980 | 423 | 222 | IE3 | 95,4 | 95,5 | 94,6 | 0,90 | 1,8 | 7,1 | 2,3 | 2,11100 | 92 | 948 |
| 160 | 315 L | 15BA 315 L1-2 | 2980 | 513 | 265 | IE3 | 95,7 | 95,6 | 94,8 | 0,91 | 1,8 | 7,2 | 2,3 | 2,39400 | 92 | 1020 |
| 200 | 315 L | 15BA 315 L2-2 | 2980 | 641 | 331 | IE3 | 95,9 | 95,8 | 94,9 | 0,91 | 1,8 | 7,2 | 2,2 | 2,65400 | 92 | 1112 |
| 250 | 355 M | 15BA 355 M-2 | 2980 | 801 | 414 | IE3 | 95,9 | 95,8 | 94,9 | 0,91 | 1,6 | 7,2 | 2,2 | 3,34500 | 100 | 1650 |
| 315 | 355 L | 15BA 355 L1-2 | 2980 | 1009 | 522 | IE3 | 95,9 | 95,8 | 94,9 | 0,91 | 1,6 | 7,2 | 2,2 | 3,90300 | 100 | 1843 |
| 355 | 355 L | 15BA 355 L2-2 | 2980 | 1138 | | IE3 | | | | | | | | | | |

Übersicht



IEC Käfigläufermotoren IEC squirrel-cage-motors

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

**IE3
4p**

IE3 - 50 Hz - 4 pol - elektrische Daten - *electrical data*

| Leistung | Bau- größe | Typ | Dreh- zahl | Dreh- moment | Strom (400 V) | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor | Anzugs- moment | Anzugs- strom | Kipp- moment | Trägheits- moment | Schall- druck- pegel | Ge- wicht | |
|--------------|------------------------|-------------|------------------------|--------------------------|----------------------------|---|----------|----------|---------------------------|------------------------------------|-------------------------------------|----------------------------------|----------------------|----------------------------|--------------|----------|
| <i>Power</i> | <i>frame- size</i> | <i>type</i> | <i>rated speed</i> | <i>reted tourque</i> | <i>current (400 V)</i> | <i>4/4 3/4 2/4</i> | | | <i>power factor</i> | <i>locked rotor torque</i> | <i>locked rotor current</i> | <i>break down torque</i> | | | | |
| P_N | - | - | n_N | M_N | I_N | IE | η_N | η_N | η_N | $\cos\phi_N$ | M_A/M_N | I_A/I_N | M_K/M_N | J | LpfA | m_{B3} |
| kW | - | - | min-1 | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse | *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|------|
| 0,75 | 80 M | 15AA 80 M2-4 | 1430 | 5,01 | 1,75 | IE3 | 82,5 | 82,9 | 81,5 | 0,75 | 2,2 | 6,6 | 2,3 | 0,00270 | 56 | 12,5 |
| 1,1 | 90 S | 15AA 90 S-4 | 1440 | 7,30 | 2,48 | IE3 | 84,1 | 84,9 | 83,0 | 0,76 | 2,2 | 6,8 | 2,3 | 0,00327 | 59 | 15,5 |
| 1,5 | 90 L | 15AA 90 L-4 | 1440 | 9,95 | 3,30 | IE3 | 85,3 | 86,2 | 84,8 | 0,77 | 2,3 | 7,0 | 2,3 | 0,00414 | 59 | 19 |
| 2,2 | 90 L | 15AA 90 LC-4 | 1445 | 14,5 | 4,50 | IE3 | 86,9 | 87,4 | 85,9 | 0,81 | | | | 0,00457 | 59 | 20 |
| 2,2 | 100 L | 15AA 100 L1-4 | 1455 | 14,4 | 4,52 | IE3 | 86,7 | 87,4 | 85,9 | 0,81 | 2,3 | 7,6 | 2,3 | 0,00837 | 64 | 27,5 |
| 3 | 100 L | 15AA 100 L2-4 | 1455 | 19,7 | 6,02 | IE3 | 87,7 | 88,2 | 87,1 | 0,82 | 2,3 | 7,6 | 2,3 | 0,01012 | 64 | 32 |
| 4 | 100 L | 15AA 100 LC-4 | 1460 | 26,2 | 7,90 | IE3 | 88,7 | 89,4 | 87,9 | 0,82 | | | | | 64 | 34 |
| 4 | 112 M | 15AA 112 M-4 | 1460 | 26,2 | 7,95 | IE3 | 88,6 | 89,4 | 87,9 | 0,82 | 2,2 | 7,8 | 2,3 | 0,01392 | 65 | 39 |
| 5,5 | 112 M | 15AA 112 MC-4 | 1470 | 35,7 | 10,4 | IE3 | 89,6 | 89,5 | 89,0 | 0,83 | | | | | 77 | 41 |
| 5,5 | 132 S | 15AA 132 S-4 | 1470 | 35,7 | 10,7 | IE3 | 89,6 | 90,2 | 89,1 | 0,83 | 2,0 | 7,9 | 2,3 | 0,03100 | 71 | 55 |
| 7,5 | 132 M | 15AA 132 M-4 | 1470 | 48,7 | 14,3 | IE3 | 90,4 | 91,0 | 90,0 | 0,84 | 2,0 | 7,5 | 2,3 | 0,03982 | 71 | 65 |
| 9,2 | 132 M | 15AA 132 MB-4 | 1470 | 59,8 | 18,9 | IE3 | 91,4 | | | 0,85 | | | | | | 72 |
| 11 | 132 M | 15AA 132 MC-4 | 2950 | 35,6 | 19,6 | IE3 | 91,3 | 91,5 | 89,9 | 0,89 | 2,0 | 8,1 | 2,3 | 0,05400 | 81 | |
| 11 | 160 M | 15AA 160 M-4 | 1470 | 71,5 | 20,4 | IE3 | 91,4 | 91,7 | 90,8 | 0,85 | 2,2 | 7,7 | 2,3 | 0,08520 | 73 | |
| 15 | 160 L | 15AA 160 L-4 | 1470 | 97,4 | 27,3 | IE3 | 92,2 | 92,5 | 91,5 | 0,86 | 2,2 | 7,8 | 2,3 | 0,11160 | 73 | |

Graugussgehäuse | *grey cast iron housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|------|
| 11 | 160 M | 15BA 160 M-4 | 1470 | 71,5 | 20,4 | IE3 | 91,4 | 91,7 | 90,8 | 0,85 | 2,2 | 7,7 | 2,3 | 0,08520 | 73 | 136 |
| 15 | 160 L | 15BA 160 L-4 | 1470 | 97,4 | 27,3 | IE3 | 92,2 | 92,5 | 91,5 | 0,86 | 2,2 | 7,8 | 2,3 | 0,11160 | 73 | 160 |
| 18,5 | 180 M | 15BA 180 M-4 | 1475 | 120 | 33,5 | IE3 | 92,7 | 93,0 | 92,1 | 0,86 | 2,0 | 7,8 | 2,3 | 0,16790 | 76 | 195 |
| 22 | 180 L | 15BA 180 L-4 | 1475 | 142 | 39,7 | IE3 | 93,0 | 93,3 | 92,4 | 0,86 | 2,0 | 7,8 | 2,3 | 0,20650 | 76 | 220 |
| 30 | 200 L | 15BA 200 L-4 | 1480 | 194 | 53,8 | IE3 | 93,6 | 93,4 | 92,4 | 0,86 | 2,0 | 7,8 | 2,3 | 0,31470 | 76 | 278 |
| 37 | 225 S | 15BA 225 S-4 | 1485 | 238 | 66,1 | IE3 | 93,9 | 94,0 | 93,2 | 0,86 | 2,0 | 7,4 | 2,3 | 0,52240 | 78 | 343 |
| 45 | 225 M | 15BA 225 M-4 | 1485 | 289 | 80,2 | IE3 | 94,3 | 94,6 | 93,4 | 0,86 | 2,0 | 7,4 | 2,3 | 0,61180 | 78 | 373 |
| 55 | 250 M | 15BA 250 M-4 | 1485 | 354 | 97,6 | IE3 | 94,6 | 94,8 | 93,6 | 0,86 | 2,0 | 7,4 | 2,3 | 0,82940 | 79 | 433 |
| 75 | 280 S | 15BA 280 S-4 | 1485 | 482 | 129 | IE3 | 95,0 | 95,1 | 94,2 | 0,88 | 2,0 | 6,9 | 2,3 | 2,11990 | 80 | 600 |
| 90 | 280 M | 15BA 280 M-4 | 1485 | 579 | 155 | IE3 | 95,2 | 95,4 | 94,5 | 0,88 | 2,0 | 6,9 | 2,3 | 2,56340 | 80 | 683 |
| 110 | 315 S | 15BA 315 S-4 | 1485 | 707 | 187 | IE3 | 95,5 | 95,4 | 94,7 | 0,89 | 2,0 | 7,0 | 2,2 | 3,62600 | 88 | 922 |
| 132 | 315 M | 15BA 315 M-4 | 1485 | 849 | 224 | IE3 | 95,7 | 95,6 | 94,8 | 0,89 | 2,0 | 7,0 | 2,2 | 4,21000 | 88 | 1020 |
| 160 | 315 L | 15BA 315 L1-4 | 1485 | 1029 | 271 | IE3 | 95,9 | 95,8 | 94,9 | 0,89 | 2,0 | 7,1 | 2,2 | 4,60500 | 88 | 1120 |
| 200 | 315 L | 15BA 315 L2-4 | 1485 | 1286 | 334 | IE3 | 96,0 | 95,9 | 94,9 | 0,90 | 2,0 | 7,1 | 2,2 | 5,27400 | 88 | 1194 |
| 250 | 355 M | 15BA 355 M-4 | 1490 | 1602 | 418 | IE3 | 96,0 | 95,9 | 95,0 | 0,90 | 2,0 | 7,1 | 2,2 | 7,24800 | 88 | 1630 |
| 315 | 355 L | 15BA 355 L1-4 | 1490 | 2019 | 526 | IE3 | 96,0 | 95,9 | 95,0 | 0,90 | 2,0 | 7,1 | 2,2 | 9,14300 | 95 | 1780 |
| 355 | 355 L | 15BA 355 L2-4 | 1490 | 2275 | 593 | IE3 | 96,0 | 95,9 | 95,0 | 0,90 | | | | 9,14300 | 95 | 1990 |

Übersicht

**IE3
6p**

IE3 - 50 Hz - 6 pol - elektrische Daten - *electrical data*

| Leistung | Bau- größe | Typ | Dreh- zahl | Dreh- moment | Strom (400 V) | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor | Anzugs- moment | Anzugs- strom | Kipp- moment | Trägheits- moment | Schall- druck- pegel | Ge- wicht | |
|--------------|------------------------|-------------|------------------------|--------------------------|----------------------------|---|-----------------|-----------------|---------------------------|------------------------------------|-------------------------------------|----------------------------------|----------------------|----------------------------|--------------|----------|
| <i>Power</i> | <i>frame- size</i> | <i>type</i> | <i>rated speed</i> | <i>reted tourque</i> | <i>current (400 V)</i> | | | | <i>power factor</i> | <i>locked rotor torque</i> | <i>locked rotor current</i> | <i>break down torque</i> | | | | |
| P_N | - | - | n_N | M_N | I_N | IE | $\eta_{N, 4/4}$ | $\eta_{N, 3/4}$ | $\eta_{N, 2/4}$ | $\cos\phi_N$ | M_A/M_N | I_A/I_N | M_K/M_N | J | LpfA | m_{B3} |
| kW | - | - | min-1 | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse / *aluminum housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|-----|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|------|
| 0,75 | 90 S | 15AA 90 S-6 | 955 | 7,50 | 1,93 | IE3 | 78,9 | 79,8 | 77,9 | 0,71 | 2,0 | 6,0 | 2,1 | 0,00414 | 57 | 16 |
| 1,1 | 90 L | 15AA 90 L-6 | 955 | 11,0 | 2,69 | IE3 | 81,0 | 81,8 | 79,8 | 0,73 | 2,0 | 6,0 | 2,1 | 0,00576 | 57 | 20,5 |
| 1,5 | 100 L | 15AA 100 L-6 | 955 | 15,0 | 3,60 | IE3 | 82,0 | 83,4 | 81,7 | 0,73 | 2,0 | 6,5 | 2,1 | 0,01164 | 61 | 26,5 |
| 2,2 | 112 M | 15AA 112 M-6 | 970 | 21,7 | 5,09 | IE3 | 84,3 | 84,7 | 83,0 | 0,74 | 2,0 | 6,6 | 2,1 | 0,01643 | 65 | 32 |
| 3 | 132 S | 15AA 132 S-6 | 970 | 29,5 | 6,84 | IE3 | 85,6 | 86,4 | 84,9 | 0,74 | 2,0 | 6,8 | 2,1 | 0,03459 | 69 | 45 |
| 4 | 132 M | 15AA 132 M1-6 | 970 | 39,4 | 8,99 | IE3 | 86,8 | 87,5 | 86,2 | 0,74 | 2,0 | 6,8 | 2,1 | 0,04286 | 69 | 56,5 |
| 5,5 | 132 M | 15AA 132 M2-6 | 970 | 54,1 | 12,0 | IE3 | 88,0 | 88,5 | 87,5 | 0,75 | 2,0 | 7,0 | 2,1 | 0,05374 | 69 | 63 |
| 7,5 | 160 M | 15AA 160 M-6 | 980 | 73,1 | 15,4 | IE3 | 89,2 | 89,6 | 88,4 | 0,79 | 2,0 | 7,0 | 2,1 | 0,10640 | 73 | |
| 11 | 160 L | 15AA 160 L-6 | 980 | 107 | 22,0 | IE3 | 90,4 | 90,9 | 89,6 | 0,80 | 2,0 | 7,2 | 2,1 | 0,14030 | 73 | |

Graugussgehäuse / *grey cast iron housing*

| | | | | | | | | | | | | | | | | |
|------|-------|---------------|-----|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|------|
| 7,5 | 160 M | 15BA 160 M-6 | 980 | 73,1 | 15,4 | IE3 | 89,2 | 89,6 | 88,4 | 0,79 | 2,0 | 7,0 | 2,1 | 0,10640 | 73 | 124 |
| 11 | 160 L | 15BA 160 L-6 | 980 | 107 | 22,0 | IE3 | 90,4 | 90,9 | 89,6 | 0,80 | 2,0 | 7,2 | 2,1 | 0,14030 | 73 | 160 |
| 15 | 180 L | 15BA 180 L-6 | 980 | 146 | 29,3 | IE3 | 91,3 | 91,5 | 90,3 | 0,81 | 2,0 | 7,3 | 2,1 | 0,25040 | 73 | 211 |
| 18,5 | 200 L | 15BA 200 L1-6 | 985 | 179 | 36,0 | IE3 | 91,7 | 92,0 | 90,7 | 0,81 | 2,0 | 7,3 | 2,1 | 0,36990 | 73 | 260 |
| 22 | 200 L | 15BA 200 L2-6 | 985 | 213 | 42,5 | IE3 | 92,3 | 92,6 | 91,2 | 0,81 | 2,0 | 7,4 | 2,1 | 0,42070 | 73 | 282 |
| 30 | 225 M | 15BA 225 M-6 | 985 | 291 | 56,2 | IE3 | 92,9 | 93,2 | 92,2 | 0,83 | 2,0 | 6,9 | 2,1 | 0,62360 | 74 | 392 |
| 37 | 250 M | 15BA 250 M-6 | 990 | 357 | 68,1 | IE3 | 93,4 | 93,5 | 92,7 | 0,84 | 2,0 | 7,1 | 2,1 | 0,96850 | 76 | 416 |
| 45 | 280 S | 15BA 280 S-6 | 990 | 434 | 81,6 | IE3 | 93,8 | 93,7 | 92,9 | 0,85 | 2,0 | 7,3 | 2,0 | 1,91190 | 78 | 522 |
| 55 | 280 M | 15BA 280 M-6 | 990 | 531 | 98,1 | IE3 | 94,1 | 94,2 | 93,2 | 0,86 | 2,0 | 7,3 | 2,0 | 2,34110 | 78 | 585 |
| 75 | 315 S | 15BA 315 S-6 | 990 | 723 | 136 | IE3 | 94,7 | 94,6 | 93,4 | 0,84 | 2,0 | 6,6 | 2,0 | 4,58300 | 83 | 791 |
| 90 | 315 M | 15BA 315 M-6 | 990 | 868 | 161 | IE3 | 95,0 | 94,9 | 93,6 | 0,85 | 2,0 | 6,7 | 2,0 | 5,33000 | 83 | 901 |
| 110 | 315 L | 15BA 315 L1-6 | 990 | 1061 | 196 | IE3 | 95,1 | 95,0 | 93,9 | 0,85 | 2,0 | 6,7 | 2,0 | 6,07700 | 83 | 1009 |
| 132 | 315 L | 15BA 315 L2-6 | 990 | 1273 | 232 | IE3 | 95,5 | 95,4 | 94,1 | 0,86 | 2,0 | 6,8 | 2,0 | 6,82400 | 83 | 1102 |
| 160 | 355 M | 15BA 355 M1-6 | 990 | 1543 | 281 | IE3 | 95,6 | 95,5 | 94,2 | 0,86 | 1,8 | 6,8 | 2,0 | 10,593 | 85 | 1492 |
| 200 | 355 M | 15BA 355 M2-6 | 990 | 1929 | 346 | IE3 | 95,8 | 95,7 | 94,5 | 0,87 | 1,8 | 6,8 | 2,0 | 11,596 | 85 | 1630 |
| 250 | 355 L | 15BA 355 L1-6 | 990 | 2412 | 433 | IE3 | 95,8 | 95,7 | 94,6 | 0,87 | 1,8 | 6,8 | 2,0 | 13,826 | 85 | 1810 |

Übersicht

Notizen *notes*

Blank area for notes, consisting of 12 horizontal grey bars.

Übersicht

**IE4
2p**

IE4 - 50 Hz - 2 pol - elektrische Daten - *electrical data*

| Leistung <i>Power</i> | Bau- größe <i>frame- size</i> | Typ <i>type</i> | Dreh- zahl <i>rated speed</i> | Dreh- moment <i>reted tourque</i> | Strom (400 V) <i>current (400 V)</i> | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor <i>power factor</i> | Anzugs- moment <i>locked rotor torque</i> | Anzugs- strom <i>locked rotor current</i> | Kipp- moment <i>break down torque</i> | Trägheits- moment <i>J</i> | Schall- druck- pegel <i>LpfA</i> | Ge- wicht <i>m_{B3}</i> | |
|--------------------------|---|--------------------|---|---|--|---|--------------|--------------|--|---|---|---|----------------------------------|---|---------------------------------------|----------|
| P_N | - | - | n_N | M_N | I_N | IE | $\eta_{4/4}$ | $\eta_{3/4}$ | $\eta_{2/4}$ | $\cos\phi_N$ | M_A/M_N | I_A/I_N | M_K/M_N | J | LpfA | m_{B3} |
| kW | - | - | min ⁻¹ | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse | *aluminum housing*

| | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|
| 0,75 | 80 M | 17AA 80 M1-2 | 2910 | 2,46 | 1,60 | IE4 | 83,5 | 93,0 | 92,5 | 0,82 | 2,3 | 7,5 | 2,3 | 0,00111 | 24 |
| 1,1 | 80 M | 17AA 80 M2-2 | 2920 | 3,60 | 2,20 | IE4 | 85,2 | 84,7 | 84,2 | 0,83 | 2,3 | 7,5 | 2,3 | 0,00144 | 25 |
| 1,5 | 90 S | 17AA 90 S-2 | 2930 | 4,89 | 3,00 | IE4 | 86,5 | 86,0 | 85,5 | 0,84 | 2,2 | 7,6 | 2,3 | 0,00221 | 27 |
| 2,2 | 90 L | 17AA 90 L-2 | 2930 | 7,17 | 4,20 | IE4 | 88,0 | 87,5 | 87,0 | 0,85 | 2,2 | 7,6 | 2,3 | 0,00288 | 32 |
| 3 | 100 L | 17AA 100 L-2 | 2935 | 9,76 | 5,60 | IE4 | 89,1 | 88,6 | 88,1 | 0,87 | 2,2 | 7,8 | 2,3 | 0,00466 | 40 |
| 4 | 112 M | 17AA 112 M-2 | 2940 | 13,0 | 7,30 | IE4 | 90,0 | 89,5 | 89,0 | 0,88 | 2,2 | 7,8 | 2,3 | 0,00644 | 63 |
| 5,5 | 132 S | 17AA 132 S1-2 | 2945 | 17,8 | 9,90 | IE4 | 90,9 | 90,4 | 89,9 | 0,88 | 2,0 | 7,8 | 2,3 | 0,01420 | 75 |
| 7,5 | 132 S | 17AA 132 S2-2 | 2950 | 24,3 | 13,4 | IE4 | 91,7 | 91,2 | 90,7 | 0,88 | 2,0 | 7,8 | 2,3 | 0,01675 | 81 |

Graugussgehäuse | *grey cast iron housing*

| | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|------|
| 11 | 160 M | 17BA 160 M1-2 | 2960 | 35,5 | 19,3 | IE4 | 92,6 | 92,1 | 91,6 | 0,89 | 2,0 | 8,0 | 2,3 | 0,05506 | 129 |
| 15 | 160 M | 17BA 160 M2-2 | 2960 | 48,4 | 26,1 | IE4 | 93,3 | 92,8 | 92,3 | 0,89 | 2,0 | 8,0 | 2,3 | 0,06299 | 139 |
| 18,5 | 160 L | 17BA 160 L-2 | 2960 | 59,7 | 32,0 | IE4 | 93,7 | 93,2 | 92,7 | 0,89 | 2,0 | 8,0 | 2,3 | 0,07350 | 165 |
| 22 | 180 M | 17BA 180 M-2 | 2965 | 70,9 | 38,0 | IE4 | 94,0 | 93,5 | 93,0 | 0,89 | 2,0 | 8,0 | 2,3 | 0,09103 | 206 |
| 30 | 200 L | 17BA 200 L1-2 | 2970 | 96,5 | 51,5 | IE4 | 94,5 | 94,0 | 93,5 | 0,89 | 2,0 | 7,7 | 2,3 | 0,18362 | 264 |
| 37 | 200 L | 17BA 200 L2-2 | 2970 | 119 | 63,3 | IE4 | 94,8 | 94,3 | 93,8 | 0,89 | 2,0 | 7,7 | 2,3 | 0,19378 | 282 |
| 45 | 225 M | 17BA 225 M-2 | 2975 | 144 | 76,0 | IE4 | 95,0 | 94,5 | 94,0 | 0,90 | 2,0 | 7,8 | 2,3 | 0,34021 | 366 |
| 55 | 250 M | 17BA 250 M-2 | 2975 | 177 | 92,6 | IE4 | 95,3 | 94,8 | 94,3 | 0,90 | 2,0 | 7,8 | 2,3 | 0,47312 | 401 |
| 75 | 280 S | 17BA 280 S-2 | 2980 | 240 | 126 | IE4 | 95,6 | 95,1 | 94,6 | 0,90 | 1,8 | 7,6 | 2,3 | 1,11065 | 548 |
| 90 | 280 M | 17BA 280 M-2 | 2982 | 288 | 151 | IE4 | 95,8 | 95,3 | 94,8 | 0,90 | 1,8 | 7,6 | 2,3 | 1,17163 | 595 |
| 110 | 315 S | 17BA 315 S-2 | 2980 | 353 | 184 | IE4 | 96,0 | 95,5 | 95,0 | 0,90 | 1,8 | 7,5 | 2,3 | 1,52512 | 878 |
| 132 | 315 M | 17BA 315 M-2 | 2980 | 423 | 220 | IE4 | 96,2 | 95,7 | 95,2 | 0,90 | 1,8 | 7,5 | 2,3 | 2,15291 | 967 |
| 160 | 315 L | 17BA 315 L1-2 | 2980 | 513 | 264 | IE4 | 96,3 | 95,8 | 95,3 | 0,91 | 1,8 | 7,5 | 2,3 | 2,44178 | 1040 |
| 200 | 315 L | 17BA 315 L2-2 | 2980 | 641 | 329 | IE4 | 96,5 | 96,0 | 95,5 | 0,91 | 1,8 | 7,5 | 2,2 | 2,70677 | 1134 |
| 250 | 355 M | 17BA 355 M-2 | 2985 | 800 | 411 | IE4 | 96,5 | 96,0 | 95,5 | 0,91 | 1,6 | 7,5 | 2,2 | 3,41190 | 1683 |
| 315 | 355 L | 17BA 355 L1-2 | 2982 | 1009 | 518 | IE4 | 96,5 | 96,0 | 95,5 | 0,91 | 1,6 | 7,5 | 2,2 | 3,98055 | 1880 |

Übersicht



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| IE4 - 50 Hz - 4 pol - elektrische Daten - <i>electrical data</i> | | | | | | | | | | | | | | | | IE4 4p |
|--|------------------------|-------------|------------------------|--------------------------|----------------------------|---|----------|----------|---------------------------|------------------------------------|-------------------------------------|----------------------------------|----------------------|----------------------------|--------------|-----------|
| Leistung | Bau- größe | Typ | Dreh- zahl | Dreh- moment | Strom (400 V) | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor | Anzugs- moment | Anzugs- strom | Kipp- moment | Trägheits- moment | Schall- druck- pegel | Ge- wicht | |
| <i>Power</i> | <i>frame- size</i> | <i>type</i> | <i>rated speed</i> | <i>reted tourque</i> | <i>current (400 V)</i> | | | | <i>power factor</i> | <i>locked rotor torque</i> | <i>locked rotor current</i> | <i>break down torque</i> | | | | |
| P_N | - | - | n_N | M_N | I_N | IE | η_N | η_N | η_N | $\cos\phi_N$ | M_A/M_N | I_A/I_N | M_K/M_N | J | LpfA | |
| kW | - | - | min ⁻¹ | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse | aluminum housing

| | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|
| 0,75 | 80 M | 17AA 80 M2-4 | 1430 | 5,01 | 1,70 | IE4 | 95,7 | 95,2 | 94,7 | 0,75 | 2,3 | 7,0 | 2,3 | 0,00275 | 26 |
| 1,1 | 90 S | 17AA 90 S-4 | 1445 | 7,27 | 2,40 | IE4 | 87,2 | 86,7 | 86,2 | 0,76 | 2,3 | 7,5 | 2,3 | 0,00333 | 27 |
| 1,5 | 90 L | 17AA 90 L-4 | 1450 | 9,88 | 3,20 | IE4 | 88,2 | 87,7 | 87,2 | 0,77 | 2,3 | 7,5 | 2,3 | 0,00422 | 30 |
| 2,2 | 100 L | 17AA 100 L1-4 | 1455 | 14,4 | 4,40 | IE4 | 89,5 | 89,0 | 88,5 | 0,81 | 2,3 | 7,6 | 2,3 | 0,00854 | 41 |
| 3 | 100 L | 17AA 100 L2-4 | 1455 | 19,7 | 5,80 | IE4 | 90,4 | 89,9 | 89,4 | 0,82 | 2,3 | 7,6 | 2,3 | 0,01032 | 46 |
| 4 | 112 M | 17AA 112 M-4 | 1460 | 26,2 | 7,70 | IE4 | 91,1 | 90,6 | 90,1 | 0,82 | 2,2 | 7,8 | 2,3 | 0,01420 | 62 |
| 5,5 | 132 S | 17AA 132 S-4 | 1470 | 35,7 | 10,4 | IE4 | 91,9 | 91,4 | 90,9 | 0,83 | 2,2 | 7,8 | 2,3 | 0,03162 | 86 |
| 7,5 | 132 M | 17AA 132 M-4 | 1470 | 48,7 | 13,9 | IE4 | 92,6 | 92,1 | 91,6 | 0,84 | 2,2 | 7,8 | 2,3 | 0,04061 | 96 |

Graugussgehäuse | grey cast iron housing

| | | | | | | | | | | | | | | | |
|------|-------|---------------|------|------|------|-----|------|------|------|------|-----|-----|-----|---------|------|
| 11 | 160 M | 17BA 160 M-4 | 1475 | 71,2 | 20,0 | IE4 | 93,3 | 92,8 | 92,3 | 0,85 | 1,2 | 7,8 | 2,3 | 0,08689 | 139 |
| 15 | 160 L | 17BA 160 L-4 | 1475 | 97,1 | 26,8 | IE4 | 93,9 | 93,4 | 92,9 | 0,86 | 2,2 | 7,8 | 2,3 | 0,11381 | 163 |
| 18,5 | 180 M | 17BA 180 M-4 | 1475 | 120 | 33,0 | IE4 | 94,2 | 93,7 | 93,2 | 0,86 | 2,2 | 7,8 | 2,3 | 0,17122 | 199 |
| 22 | 180 L | 17BA 180 L-4 | 1475 | 142 | 39,1 | IE4 | 94,5 | 94,0 | 93,5 | 0,86 | 2,2 | 7,8 | 2,3 | 0,21065 | 224 |
| 30 | 200 L | 17BA 200 L-4 | 1480 | 194 | 53,1 | IE4 | 94,9 | 94,4 | 93,9 | 0,86 | 2,2 | 7,6 | 2,3 | 0,32100 | 284 |
| 37 | 225 S | 17BA 225 S-4 | 1485 | 238 | 65,2 | IE4 | 95,2 | 94,7 | 94,2 | 0,86 | 2,2 | 7,6 | 2,3 | 0,53287 | 350 |
| 45 | 225 M | 17BA 225 M-4 | 1485 | 289 | 79,2 | IE4 | 95,4 | 94,9 | 94,4 | 0,86 | 2,2 | 7,6 | 2,3 | 0,62401 | 380 |
| 55 | 250 M | 17BA 250 M-4 | 1485 | 354 | 96,5 | IE4 | 95,7 | 95,2 | 94,7 | 0,88 | 2,2 | 7,6 | 2,3 | 0,84594 | 442 |
| 75 | 280 S | 17BA 280 S-4 | 1490 | 481 | 128 | IE4 | 96,0 | 95,5 | 95,0 | 0,88 | 2,0 | 7,5 | 2,3 | 2,16232 | 612 |
| 90 | 280 M | 17BA 280 M-4 | 1490 | 577 | 154 | IE4 | 96,1 | 95,6 | 95,1 | 0,89 | 2,0 | 7,5 | 2,3 | 2,61466 | 697 |
| 110 | 315 S | 17BA 315 S-4 | 1490 | 705 | 185 | IE4 | 96,3 | 95,8 | 95,3 | 0,89 | 2,0 | 7,5 | 2,2 | 3,69850 | 940 |
| 132 | 315 M | 17BA 315 M-4 | 1490 | 846 | 222 | IE4 | 96,4 | 95,9 | 95,4 | 0,89 | 2,0 | 7,5 | 2,2 | 4,29444 | 1040 |
| 160 | 315 L | 17BA 315 L1-4 | 1490 | 1026 | 269 | IE4 | 96,6 | 96,1 | 95,6 | 0,89 | 2,0 | 7,5 | 2,2 | 4,69705 | 1142 |
| 200 | 315 L | 17BA 315 L2-4 | 1490 | 1282 | 339 | IE4 | 96,7 | 96,2 | 95,7 | 0,88 | 2,0 | 7,5 | 2,2 | 5,37943 | 1218 |
| 250 | 355 M | 17BA 355 M-4 | 1490 | 1602 | 424 | IE4 | 96,7 | 96,2 | 95,7 | 0,88 | 2,0 | 7,5 | 2,2 | 7,39545 | 1663 |
| 315 | 355 L | 17BA 355 L1-4 | 1490 | 2019 | 534 | IE4 | 96,7 | 96,2 | 95,7 | 0,88 | 2,0 | 7,5 | 2,2 | 9,32586 | 1816 |

Übersicht

**IE4
6p**

IE4 - 50 Hz - 6 pol - elektrische Daten - *electrical data*

| Leistung <i>Power</i> | Bau- größe <i>frame- size</i> | Typ <i>type</i> | Dreh- zahl <i>rated speed</i> | Dreh- moment <i>reted tourque</i> | Strom (400 V) <i>current (400 V)</i> | Wirkungsgrad 60034-30 <i>efficiency 60034-30</i> | | | Leis- tungs- faktor <i>power factor</i> | Anzugs- moment <i>locked rotor torque</i> | Anzugs- strom <i>locked rotor current</i> | Kipp- moment <i>break down torque</i> | Trägheits- moment <i>J</i> | Schall- druck- pegel <i>Lp(A)</i> | Ge- wicht <i>m_{B3}</i> | |
|--------------------------|---|--------------------|---|---|--|---|--------------|--------------|--|---|---|---|----------------------------------|--|---------------------------------------|----------|
| P_N | - | - | n_N | M_N | I_N | IE | $\eta_{4/4}$ | $\eta_{3/4}$ | $\eta_{2/4}$ | $\cos\phi_N$ | M_A/M_N | I_A/I_N | M_K/M_N | J | Lp(A) | m_{B3} |
| kW | - | - | min-1 | Nm | A | - | % | % | % | - | - | - | - | Kg m ² | dB(A) | kg |

Aluminiumgehäuse | *aluminum housing*

| | | | | | | | | | | | | | | | |
|------|-------|---------------|-----|------|------|-----|------|------|------|------|-----|-----|-----|---------|----|
| 0,75 | 90 S | 17AA 90 S-6 | 950 | 7,54 | 1,80 | IE4 | 82,7 | 82,2 | 81,7 | 0,71 | 2,0 | 6,5 | 1,8 | 0,00422 | 26 |
| 1,1 | 90 L | 17AA 90 L-6 | 955 | 11,0 | 2,60 | IE4 | 84,5 | 84,0 | 83,5 | 0,73 | 2,0 | 6,5 | 1,8 | 0,00588 | 32 |
| 1,5 | 100 L | 17AA 100 L-6 | 960 | 14,9 | 3,50 | IE4 | 85,9 | 85,4 | 84,9 | 0,73 | 2,0 | 6,8 | 1,8 | 0,01188 | 40 |
| 2,2 | 112 M | 17AA 112 M-6 | 965 | 21,8 | 4,90 | IE4 | 87,4 | 86,9 | 86,4 | 0,74 | 2,0 | 6,8 | 1,8 | 0,01675 | 50 |
| 3 | 132 S | 17AA 132 S-6 | 970 | 29,5 | 6,60 | IE4 | 88,6 | 88,1 | 87,6 | 0,74 | 2,0 | 7,0 | 1,8 | 0,03529 | 66 |
| 4 | 132 M | 17AA 132 M1-6 | 975 | 39,2 | 8,60 | IE4 | 89,5 | 89,0 | 88,5 | 0,75 | 2,0 | 7,0 | 1,8 | 0,04372 | 75 |
| 5,5 | 132 M | 17AA 132 M2-6 | 975 | 53,9 | 11,5 | IE4 | 90,5 | 90,0 | 89,5 | 0,76 | 2,0 | 7,0 | 1,8 | 0,05481 | 83 |

Graugussgehäuse | *grey cast iron housing*

| | | | | | | | | | | | | | | | |
|------|-------|---------------|-----|------|------|-----|------|------|------|------|-----|-----|-----|---------|------|
| 7,5 | 160 M | 17BA 160 M-6 | 980 | 73,1 | 15,0 | IE4 | 91,3 | 90,8 | 90,3 | 0,79 | 2,0 | 7,2 | 1,8 | 0,10856 | 126 |
| 11 | 160 L | 17BA 160 L-6 | 980 | 107 | 21,5 | IE4 | 92,3 | 91,8 | 91,3 | 0,80 | 2,0 | 7,2 | 1,8 | 0,14307 | 163 |
| 15 | 180 L | 17BA 180 L-6 | 985 | 145 | 28,8 | IE4 | 92,9 | 92,4 | 91,9 | 0,81 | 2,0 | 7,3 | 1,8 | 0,25544 | 215 |
| 18,5 | 200 L | 17BA 200 L1-6 | 985 | 179 | 35,3 | IE4 | 93,4 | 92,9 | 92,4 | 0,81 | 2,0 | 7,5 | 1,8 | 0,37729 | 265 |
| 22 | 200 L | 17BA 200 L2-6 | 985 | 213 | 41,8 | IE4 | 93,7 | 93,2 | 92,7 | 0,81 | 2,0 | 7,5 | 1,8 | 0,42911 | 288 |
| 30 | 225 M | 17BA 225 M-6 | 990 | 289 | 55,4 | IE4 | 94,2 | 93,7 | 93,2 | 0,83 | 2,0 | 7,3 | 1,8 | 0,63607 | 400 |
| 37 | 250 M | 17BA 250 M-6 | 990 | 357 | 67,3 | IE4 | 94,5 | 94,0 | 93,5 | 0,84 | 2,0 | 7,3 | 1,8 | 0,98790 | 424 |
| 45 | 280 S | 17BA 280 S-6 | 990 | 434 | 80,6 | IE4 | 94,8 | 94,3 | 93,8 | 0,85 | 2,0 | 7,5 | 2,0 | 1,95011 | 532 |
| 55 | 280 M | 17BA 280 M-6 | 990 | 531 | 97,0 | IE4 | 95,1 | 94,6 | 94,1 | 0,86 | 2,0 | 7,5 | 2,0 | 2,38793 | 597 |
| 75 | 315 S | 17BA 315 S-6 | 990 | 723 | 132 | IE4 | 95,4 | 94,9 | 94,4 | 0,86 | 2,0 | 7,5 | 2,0 | 4,67430 | 807 |
| 90 | 315 M | 17BA 315 M-6 | 990 | 868 | 158 | IE4 | 95,6 | 95,1 | 94,6 | 0,86 | 2,0 | 7,5 | 2,0 | 5,43629 | 919 |
| 110 | 315 L | 17BA 315 L1-6 | 990 | 1061 | 193 | IE4 | 95,8 | 95,3 | 94,8 | 0,86 | 2,0 | 7,5 | 2,0 | 6,19829 | 1029 |
| 132 | 315 L | 17BA 315 L2-6 | 990 | 1273 | 231 | IE4 | 96,0 | 95,5 | 95,0 | 0,86 | 2,0 | 7,5 | 2,0 | 6,96028 | 1124 |
| 160 | 355 M | 17BA 355 M1-6 | 990 | 1543 | 279 | IE4 | 95,2 | 94,7 | 94,2 | 0,86 | 1,8 | 7,5 | 2,0 | 10,8044 | 1522 |
| 200 | 355 M | 17BA 355 M2-6 | 990 | 1929 | 345 | IE4 | 96,3 | 95,8 | 95,3 | 0,87 | 1,8 | 7,5 | 2,0 | 11,8279 | 1663 |
| 250 | 355 L | 17BA 355 L1-6 | 990 | 2412 | 430 | IE4 | 96,5 | 96,0 | 95,5 | 0,87 | 1,8 | 7,5 | 2,0 | 14,1025 | 1846 |

Übersicht

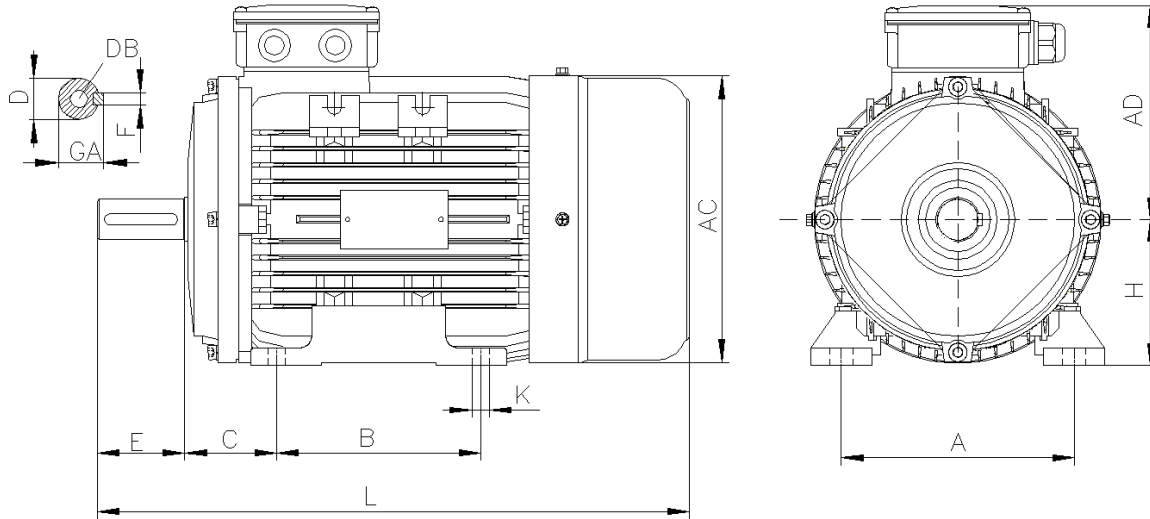
Notizen *notes*

Blank area for notes, consisting of 12 horizontal grey bars.

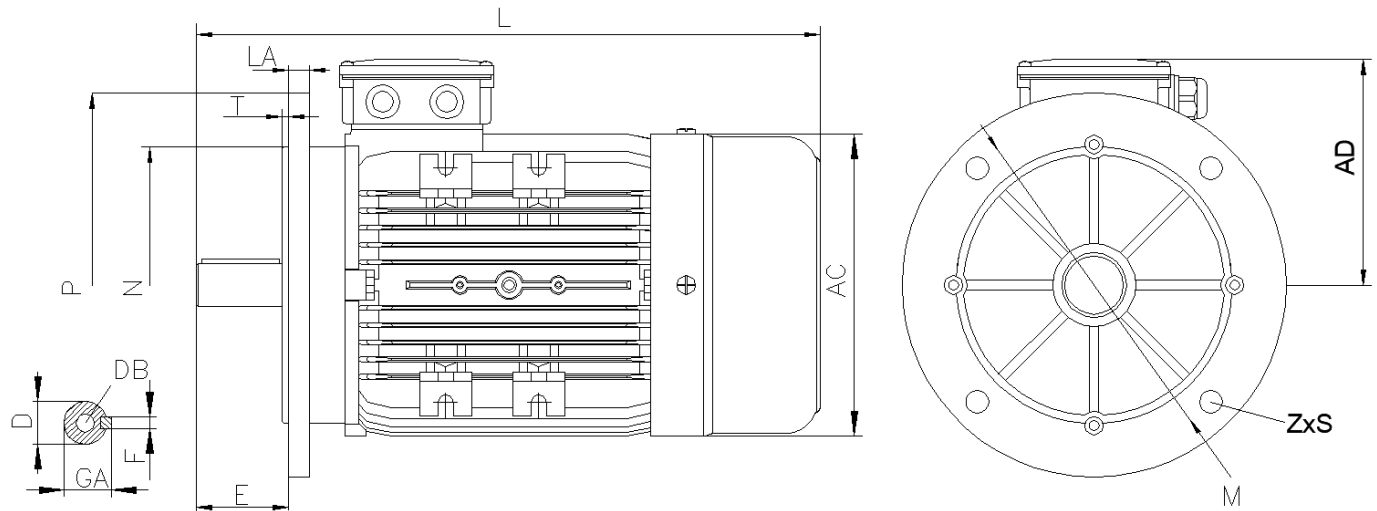
[Übersicht](#)

DIM 63 Maße Baugröße 63 *dimensions frame size 63*

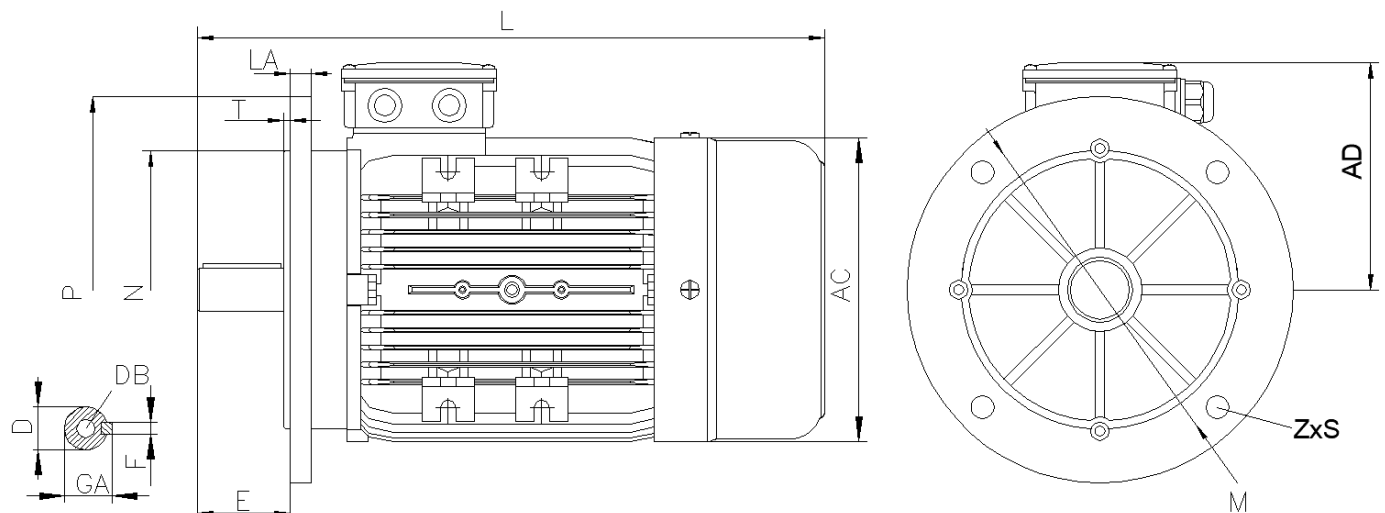
Fußbauformen *feet type of construction*



Flanschbauformen *flange type of construction*



Fuß- Flanschbauformen *feet / flange type of construction*



Übersicht

IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | | B | | C | K |
|------------------|-----|--|----|--|----|---|
| 63 M | 100 | | 80 | | 40 | 7 |

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|-----|-----|----|-----|----|-----|---|
| B5 | 8,5 | 115 | 95 | 140 | 10 | 3 | 4 |
| B14a | - | 75 | 60 | 90 | M5 | 2,5 | 4 |
| B14b | - | 100 | 80 | 120 | M6 | 3 | 4 |

| Welle <i>shaft</i> | D | DB | E | F | GA |
|--------------------|-------|----|----|---|----|
| A-Seite DE | 11 J6 | M4 | 23 | 4 | 13 |

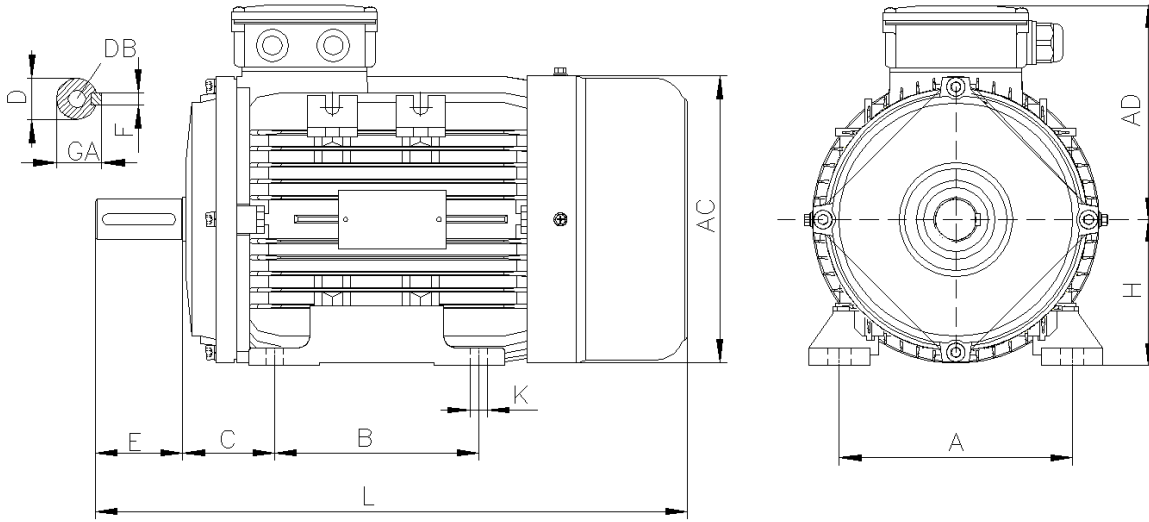
| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|---------------|-----|-----|-----|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 0,18 | 63 M | IE1 | 12AA 63 M 1-2 | 230 | 130 | 115 |
| 2 | 0,18 | 63 M | IE2 | 13AA 63 M 1-2 | 230 | 130 | 115 |
| 2 | 0,25 | 63 M | IE1 | 12AA 63 M 2-2 | 230 | 130 | 115 |
| 2 | 0,25 | 63 M | IE2 | 13AA 63 M 2-2 | 230 | 130 | 115 |
| 4 | 0,12 | 63 M | IE1 | 12AA 63 M 1-4 | 230 | 130 | 115 |
| 4 | 0,12 | 63 M | IE2 | 13AA 63 M 1-4 | 230 | 130 | 115 |
| 4 | 0,18 | 63 M | IE1 | 12AA 63 M 2-4 | 230 | 130 | 115 |
| 4 | 0,18 | 63 M | IE2 | 13AA 63 M 2-4 | 230 | 130 | 115 |
| 6 | 0,12 | 63 M | IE2 | 13AA 63 M 2-6 | 230 | 130 | 115 |

DIM
63

Übersicht

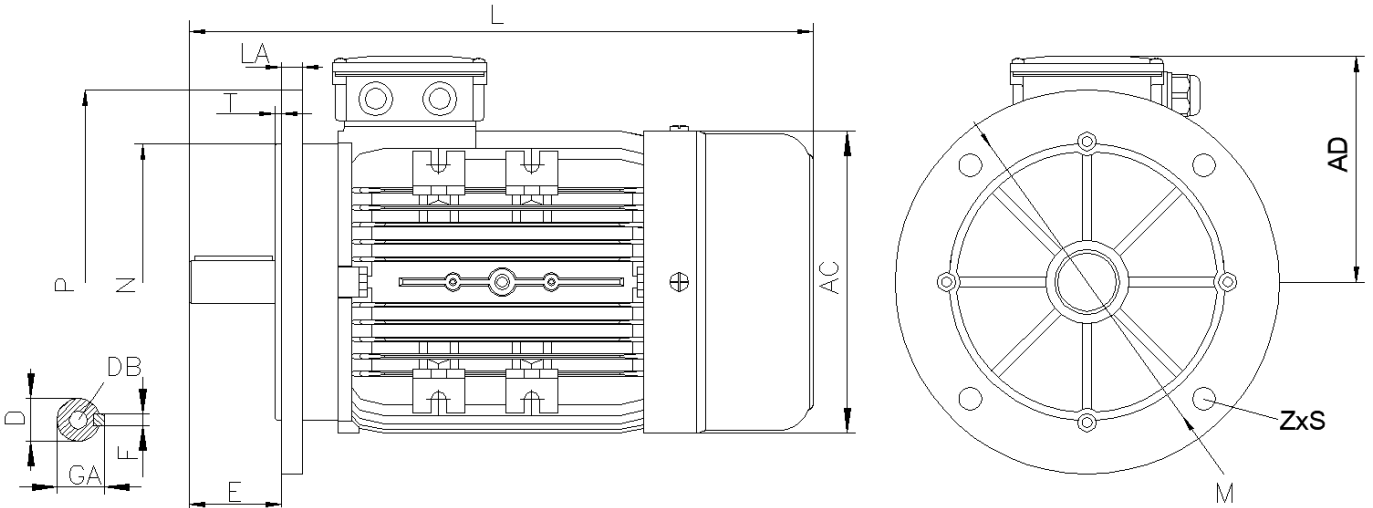
DIM 71 Maße Baugröße 71 *dimensions frame size 71*

Fußbauformen *feet type of construction*

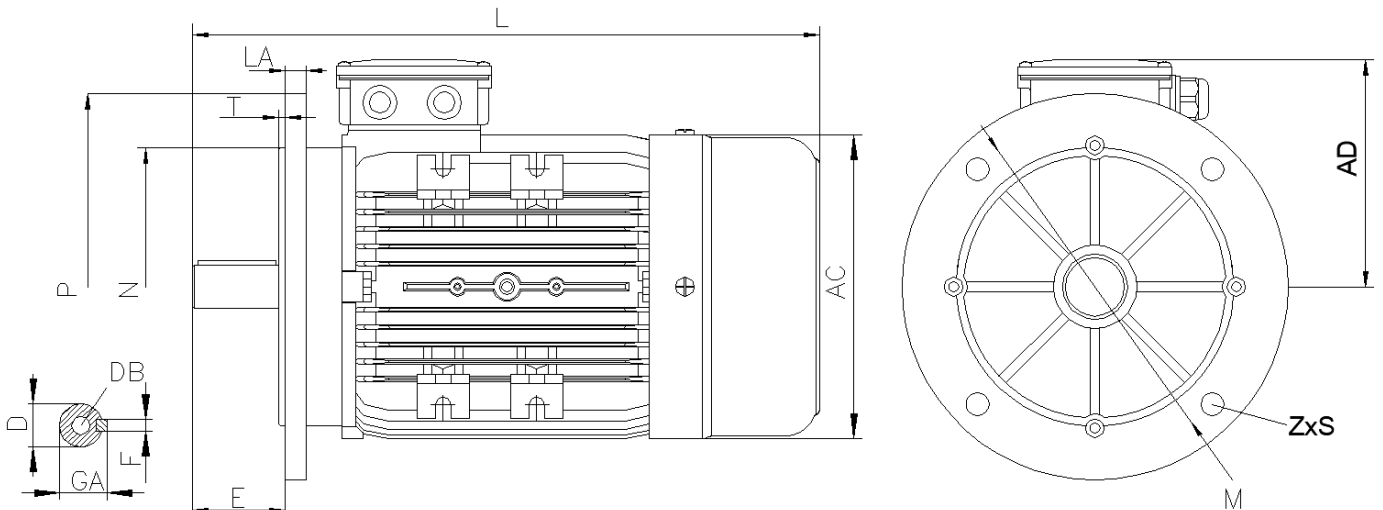


Flanschbauformen *flange type of construction*

Übersicht



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|----|----|---|
| 71 M | 112 | 90 | 45 | 7 |

DIM
71

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|----|-----|---|
| B5 | 10 | 130 | 110 | 160 | 10 | 3,5 | 4 |
| B14a | - | 85 | 70 | 105 | M6 | 2,5 | 4 |
| B14b | - | 115 | 95 | 140 | M8 | 3 | 4 |

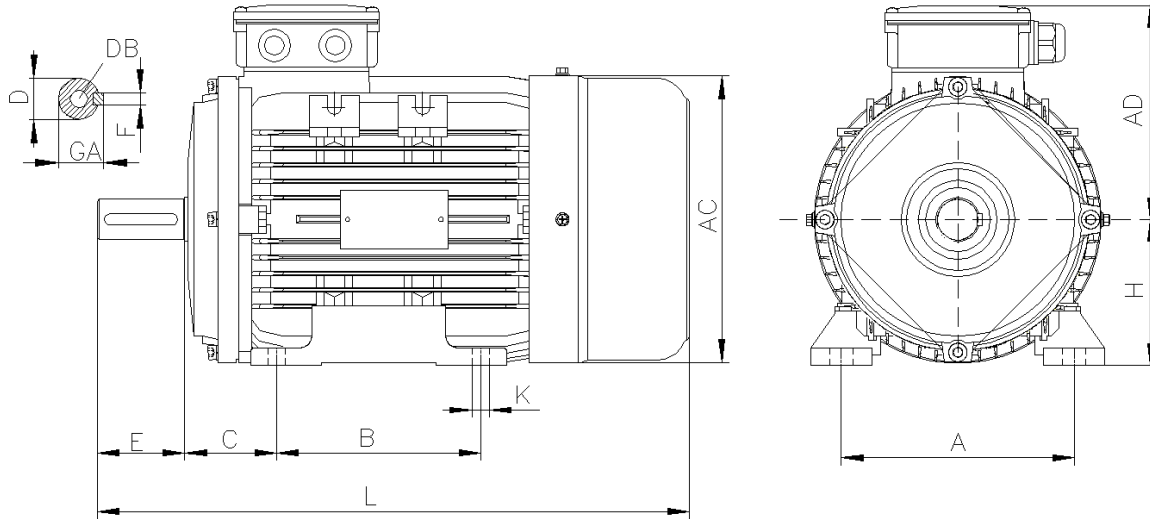
| Welle <i>shaft</i> | D | DB | E | F | GA |
|--------------------|-------|----|----|---|----|
| A-Seite DE | 14 J6 | M5 | 30 | 4 | 16 |

| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|---------------|-----|-----|-----|
| Pole | Leistung | BaugröÙe | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 0,37 | 71 M | IE1 | 12AA 71 M 1-2 | 255 | 145 | 127 |
| 2 | 0,37 | 71 M | IE2 | 13AA 71 M 1-2 | 255 | 145 | 127 |
| 2 | 0,55 | 71 M | IE1 | 12AA 71 M 2-2 | 255 | 145 | 127 |
| 2 | 0,55 | 71 M | IE2 | 13AA 71 M 2-2 | 255 | 145 | 127 |
| 4 | 0,25 | 71 M | IE1 | 12AA 71 M 1-4 | 255 | 145 | 127 |
| 4 | 0,25 | 71 M | IE2 | 13AA 71 M 1-4 | 255 | 145 | 127 |
| 4 | 0,37 | 71 M | IE1 | 12AA 71 M 2-4 | 255 | 145 | 127 |
| 4 | 0,37 | 71 M | IE2 | 13AA 71 M 2-4 | 255 | 145 | 127 |
| 6 | 0,18 | 71 M | IE1 | 12AA 71 M 1-6 | 255 | 145 | 127 |
| 6 | 0,18 | 71 M | IE2 | 13AA 71 M 1-6 | 255 | 145 | 127 |
| 6 | 0,25 | 71 M | IE1 | 12AA 71 M 2-6 | 255 | 145 | 127 |
| 6 | 0,25 | 71 M | IE2 | 13AA 71 M 2-6 | 255 | 145 | 127 |

Übersicht

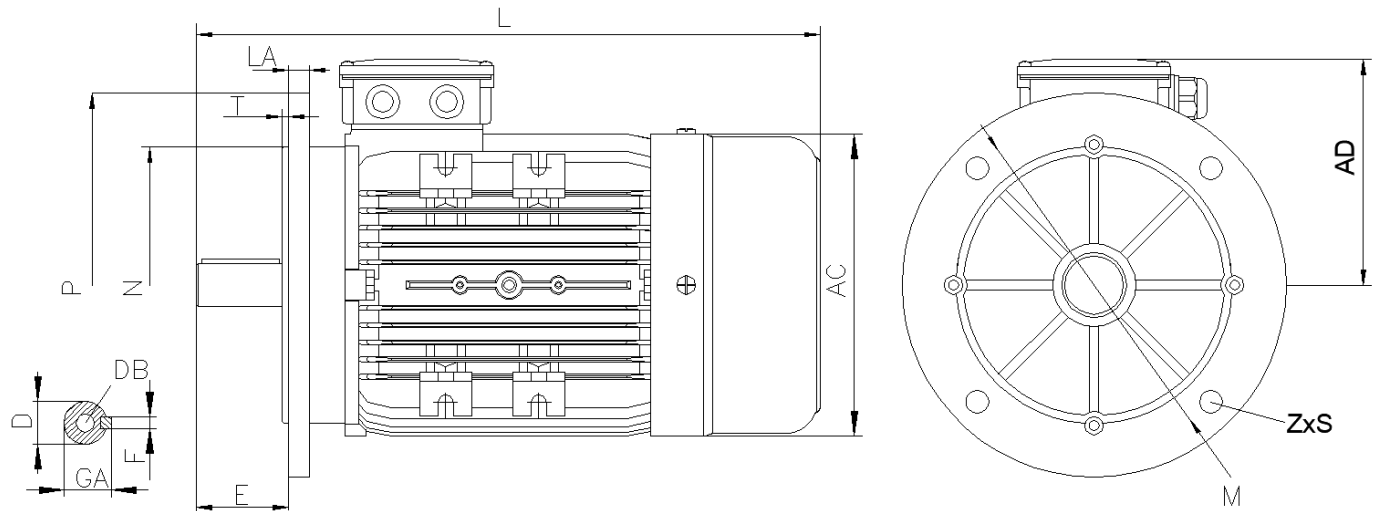
DIM 80 Maße Baugröße 80 *dimensions frame size 80*

Fußbauformen *feet type of construction*

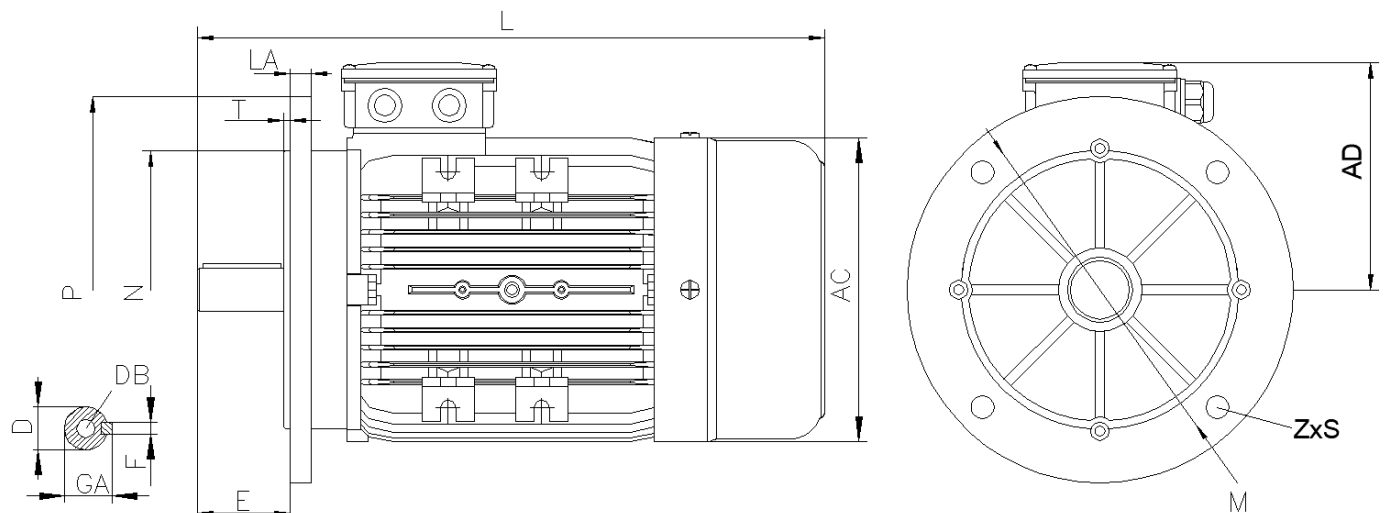


Flanschbauformen *flange type of construction*

Übersicht



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|----|----|
| 80 M | 125 | 100 | 50 | 10 |

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|------|-----|-----|-----|----|-----|---|
| B5 | 12,5 | 165 | 130 | 200 | 12 | 3,5 | 4 |
| B14a | - | 100 | 80 | 120 | M6 | 3 | 4 |
| B14b | - | 130 | 110 | 160 | M8 | 3,5 | 4 |

| Welle <i>shaft</i> | D | DB | E | F | GA |
|--------------------|-------|----|----|---|------|
| A-Seite DE | 19 j6 | M6 | 40 | 6 | 21,5 |

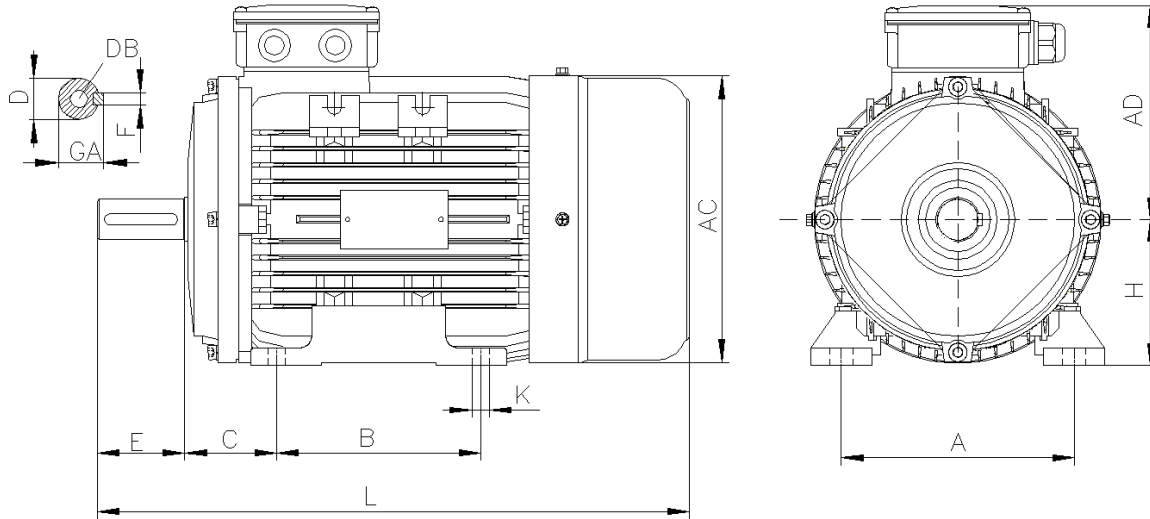
| LängenmaÙe <i>length dimensions</i> | | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|---------------|-----|-----|-----|--|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD | |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | | |
| 2 | 0,75 | 80 M | IE2 | 13AA 80 M 1-2 | 300 | 158 | 140 | |
| 2 | 0,75 | 80 M | IE3 | 15AA 80 M 1-2 | 300 | 158 | 140 | |
| 2 | 0,75 | 80 M | IE4 | 17AA 80 M 1-2 | 300 | 158 | 140 | |
| 2 | 1,1 | 80 M | IE2 | 13AA 80 M 2-2 | 300 | 158 | 140 | |
| 2 | 1,1 | 80 M | IE3 | 15AA 80 M 2-2 | 300 | 158 | 140 | |
| 2 | 1,1 | 80 M | IE4 | 17AA 80 M 2-2 | 300 | 158 | 140 | |
| 4 | 0,55 | 80 M | IE1 | 12AA 80 M 1-4 | 295 | 158 | 140 | |
| 4 | 0,55 | 80 M | IE2 | 13AA 80 M 1-4 | 295 | 158 | 140 | |
| 4 | 0,75 | 80 M | IE2 | 13AA 80 M 2-4 | 300 | 158 | 140 | |
| 4 | 0,75 | 80 M | IE3 | 15AA 80 M 2-4 | 300 | 158 | 140 | |
| 4 | 0,75 | 80 M | IE4 | 17AA 80 M 2-4 | 300 | 158 | 140 | |
| 6 | 0,37 | 80 M | IE1 | 12AA 80 M 1-6 | 295 | 158 | 140 | |
| 6 | 0,37 | 80 M | IE2 | 13AA 80 M 1-6 | 295 | 158 | 140 | |
| 6 | 0,55 | 80 M | IE1 | 12AA 80 M 2-6 | 295 | 158 | 140 | |
| 6 | 0,55 | 80 M | IE2 | 13AA 80 M 2-6 | 295 | 158 | 140 | |

DIM
80

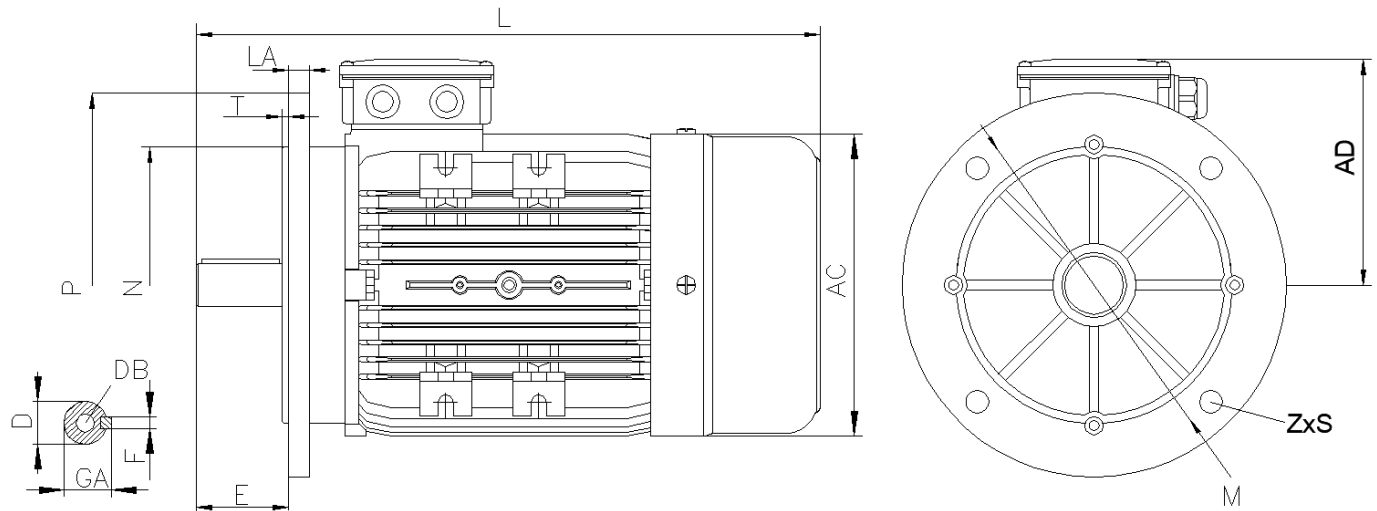
Übersicht

DIM 90 Maße Baugröße 90 *dimensions frame size 90*

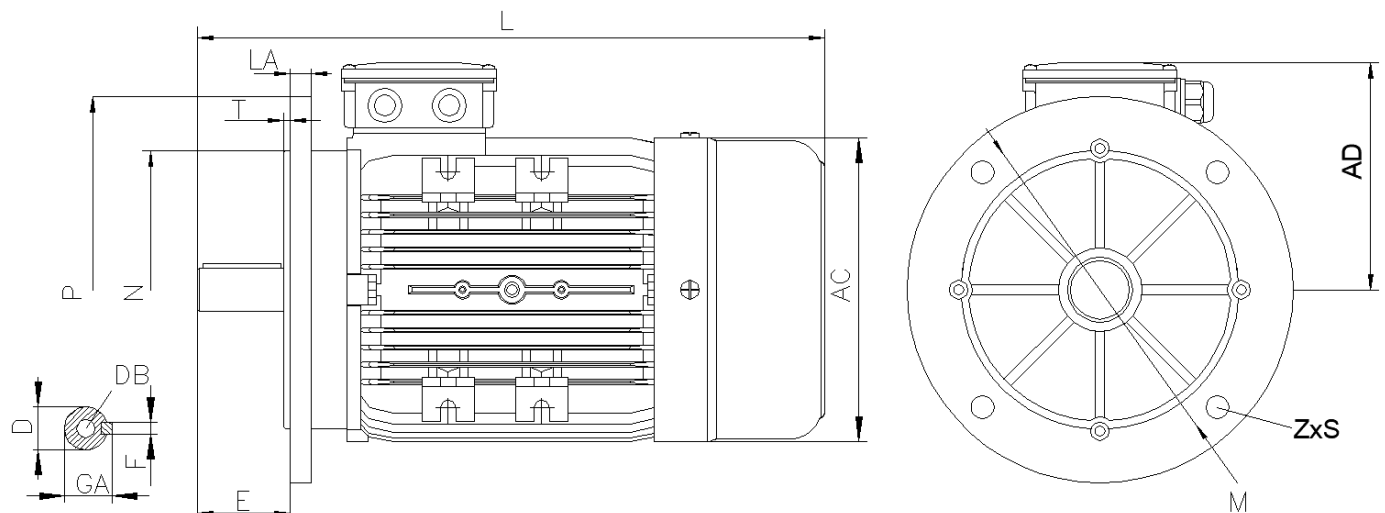
Fußbauformen *feet type of construction*



Flanschbauformen *flange type of construction*



Fuß- Flanschbauformen *feet / flange type of construction*



Übersicht

IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|----|----|
| 90 S | 140 | 100 | 56 | 10 |
| 90 L | | 125 | | |

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|----|-----|---|
| B5 | 11 | 165 | 130 | 200 | 12 | 3,5 | 4 |
| B14a | - | 115 | 95 | 140 | M8 | 3 | 4 |
| B14b | - | 130 | 110 | 160 | M8 | 3,5 | 4 |

| Welle <i>shaft</i> | D | DB | E | F | GA |
|--------------------|-------|----|----|---|----|
| A-Seite DE | 24 j6 | M6 | 50 | 8 | 27 |

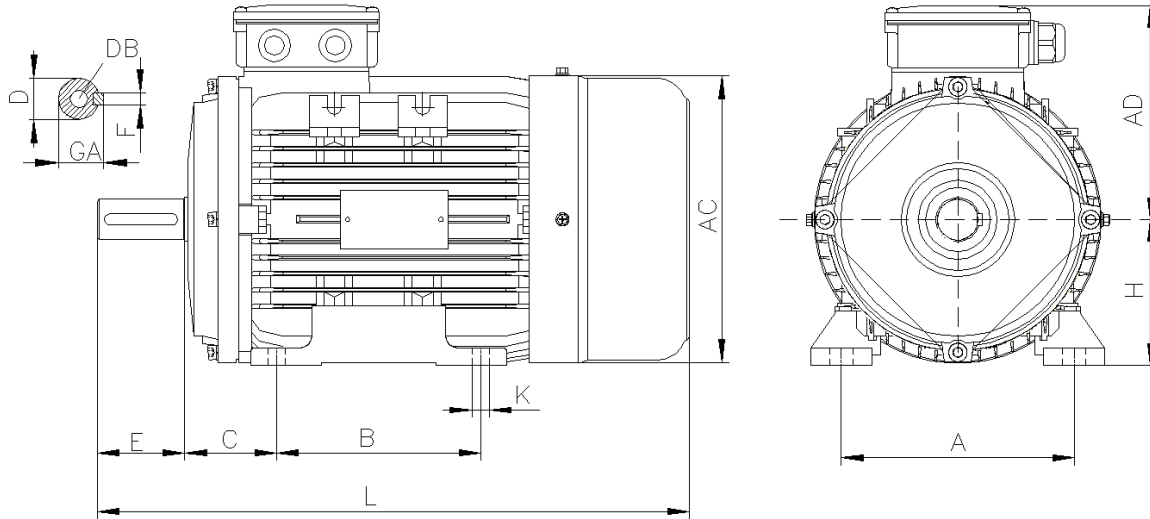
| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|--------------|-----|-----|-----|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 1,5 | 90 S | IE2 | 13AA 90 S-2 | 330 | 177 | 155 |
| 2 | 1,5 | 90 S | IE3 | 15AA 90 S-2 | 350 | 177 | 155 |
| 2 | 1,5 | 90 S | IE4 | 17AA 90 S-2 | 350 | 177 | 155 |
| 2 | 2,2 | 90 L | IE2 | 13AA 90 L-2 | 360 | 177 | 155 |
| 2 | 2,2 | 90 L | IE3 | 15AA 90 L-2 | 385 | 177 | 155 |
| 2 | 2,2 | 90 L | IE4 | 17AA 90 L-2 | 385 | 177 | 155 |
| 2 | 3 | 90 L | IE3 | 15AA 90 LC-2 | 385 | 177 | 155 |
| 4 | 1,1 | 90 S | IE2 | 13AA 90 S-4 | 330 | 177 | 155 |
| 4 | 1,1 | 90 S | IE3 | 15AA 90 S-4 | 350 | 177 | 155 |
| 4 | 1,1 | 90 S | IE4 | 17AA 90 S-4 | 350 | 177 | 155 |
| 4 | 1,5 | 90 L | IE2 | 13AA 90 L-4 | 360 | 177 | 155 |
| 4 | 1,5 | 90 L | IE3 | 15AA 90 L-4 | 385 | 177 | 155 |
| 4 | 1,5 | 90 L | IE4 | 17AA 90 L-4 | 385 | 177 | 155 |
| 4 | 2,2 | 90 L | IE3 | 15AA 90 LC-4 | 385 | 177 | 155 |
| 6 | 0,75 | 90 S | IE2 | 13AA 90 S-6 | 330 | 177 | 155 |
| 6 | 0,75 | 90 S | IE3 | 15AA 90 S-6 | 350 | 177 | 155 |
| 6 | 0,75 | 90 S | IE4 | 17AA 90 S-6 | 350 | 177 | 155 |
| 6 | 1,1 | 90 L | IE2 | 13AA 90 L-6 | 360 | 177 | 155 |
| 6 | 1,1 | 90 L | IE3 | 15AA 90 L-6 | 385 | 177 | 155 |
| 6 | 1,1 | 90 L | IE4 | 17AA 90 L-6 | 385 | 177 | 155 |

DIM
90

Übersicht

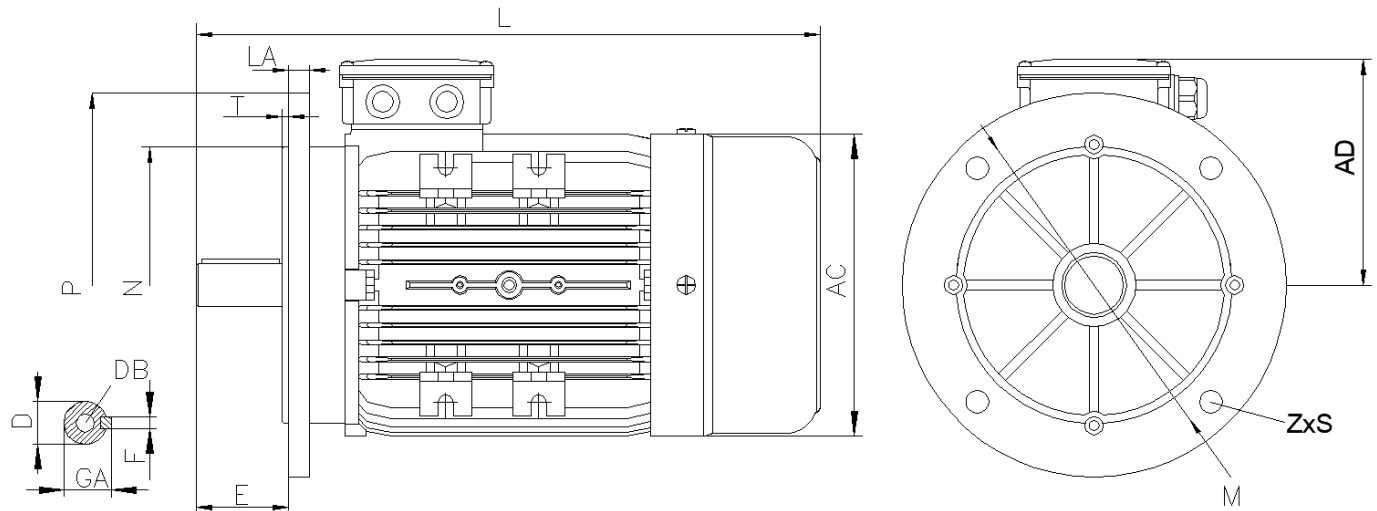
DIM 100 Maße Baugröße 100 *dimensions frame size 100*

Fußbauformen *feet type of construction*

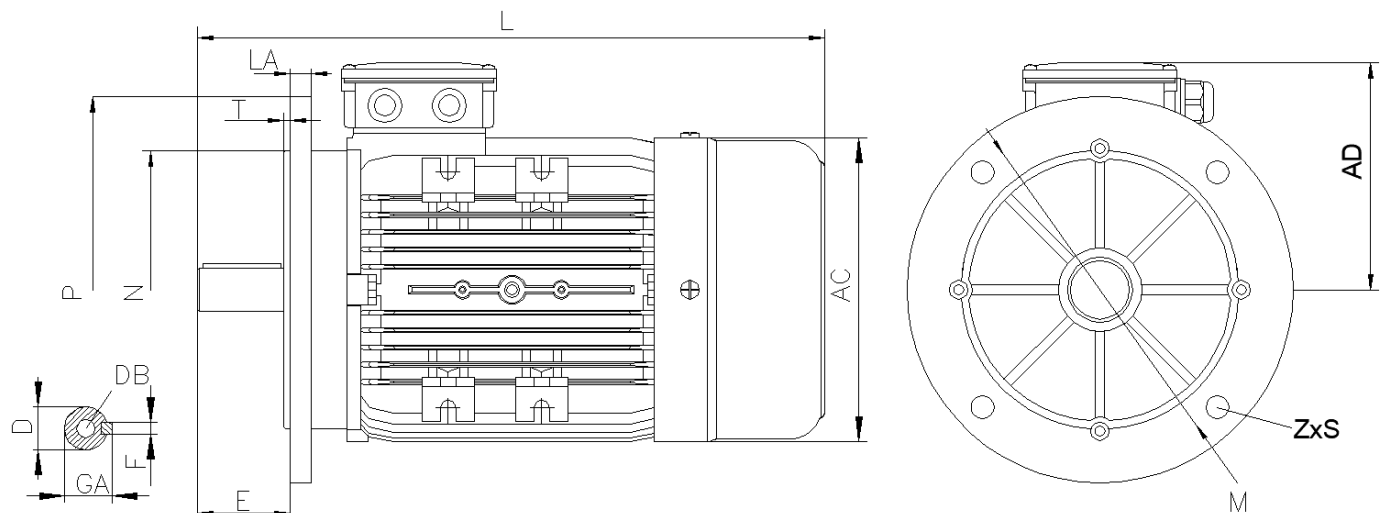


Flanschbauformen *flange type of construction*

Übersicht



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|----|----|
| 100 L | 160 | 140 | 63 | 12 |

DIM
100

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|------|-----|-----|-----|------|-----|---|
| B5 | 14,5 | 215 | 180 | 250 | 14,5 | 4 | 4 |
| B14a | - | 130 | 110 | 160 | M8 | 3,5 | 4 |
| B14b | - | 165 | 130 | 200 | M10 | 3,5 | 4 |

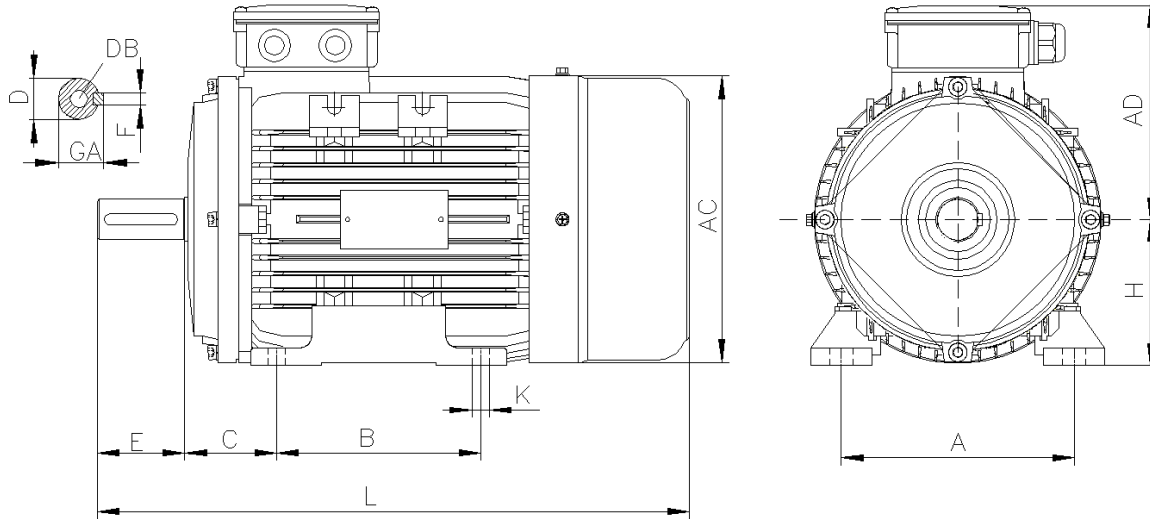
| Welle <i>shaft</i> | D | DB | E | F | GA |
|--------------------|-------|-----|----|---|----|
| A-Seite DE | 28 j6 | M10 | 60 | 8 | 31 |

| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|---------------|-----|-----|-----|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 3 | 100 L | IE2 | 13AA 100 L-2 | 400 | 198 | 180 |
| 2 | 3 | 100 L | IE3 | 15AA 100 L-2 | 433 | 198 | 180 |
| 2 | 3 | 100 L | IE4 | 17AA 100 L-2 | 433 | 198 | 180 |
| 2 | 4 | 100 L | IE3 | 15AA 100 LC-2 | 433 | 198 | 180 |
| 4 | 2,2 | 100 L | IE2 | 13AA 100 L1-4 | 400 | 198 | 180 |
| 4 | 2,2 | 100 L | IE3 | 15AA 100 L1-4 | 433 | 198 | 180 |
| 4 | 2,2 | 100 L | IE4 | 17AA 100 L1-4 | 433 | 198 | 180 |
| 4 | 3 | 100 L | IE2 | 13AA 100 L2-4 | 400 | 198 | 180 |
| 4 | 3 | 100 L | IE3 | 15AA 100 L2-4 | 433 | 198 | 180 |
| 4 | 3 | 100 L | IE4 | 17AA 100 L2-4 | 433 | 198 | 180 |
| 4 | 4 | 100 L | IE3 | 15AA 100 LC-4 | 433 | 198 | 180 |
| 6 | 1,5 | 100 L | IE2 | 13AA 100 L-6 | 400 | 198 | 180 |
| 6 | 1,5 | 100 L | IE3 | 15AA 100 L-6 | 433 | 198 | 180 |
| 6 | 1,5 | 100 L | IE4 | 17AA 100 L-6 | 433 | 198 | 180 |

Übersicht

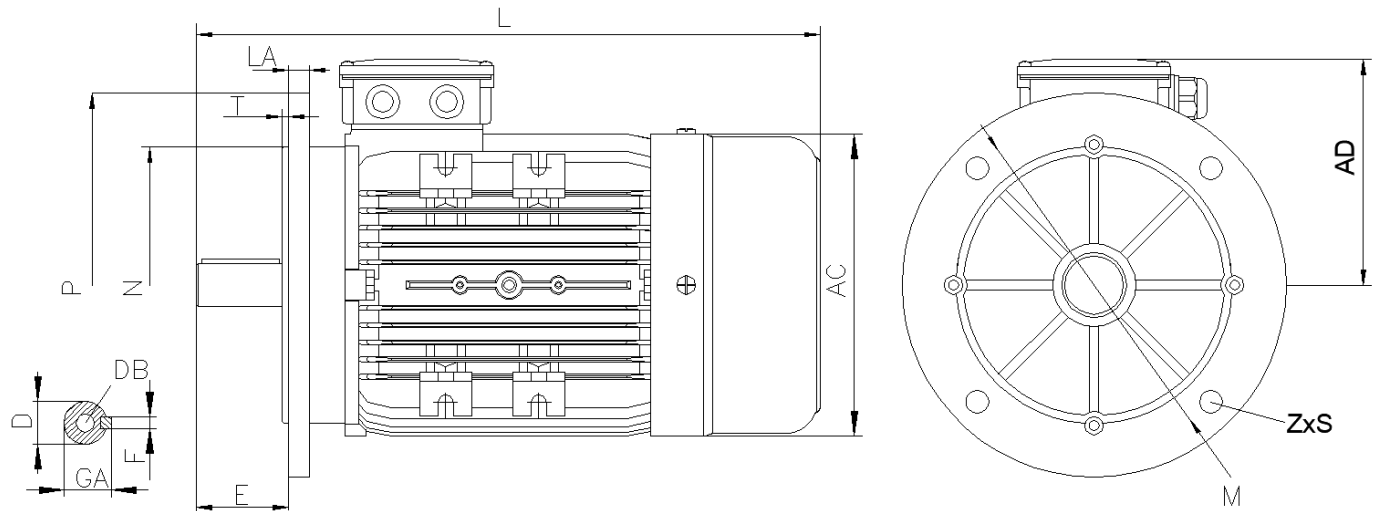
DIM 112 Maße Baugröße 112 *dimensions frame size 112*

Fußbauformen *feet type of construction*

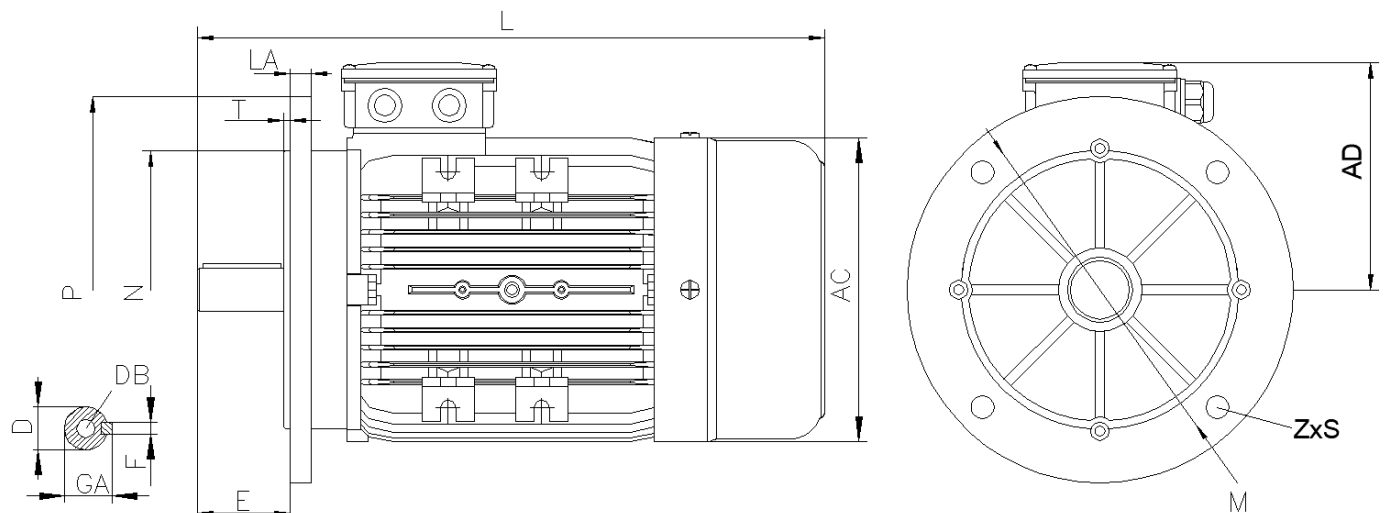


Flanschbauformen *flange type of construction*

Übersicht



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|----|----|
| 112 M | 190 | 140 | 70 | 12 |

DIM
112

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|------|-----|-----|-----|------|-----|---|
| B5 | 15,5 | 215 | 180 | 250 | 14,5 | 4 | 4 |
| B14a | - | 130 | 110 | 160 | M8 | 3,5 | 4 |
| B14b | - | 165 | 130 | 200 | M10 | 3,5 | 4 |

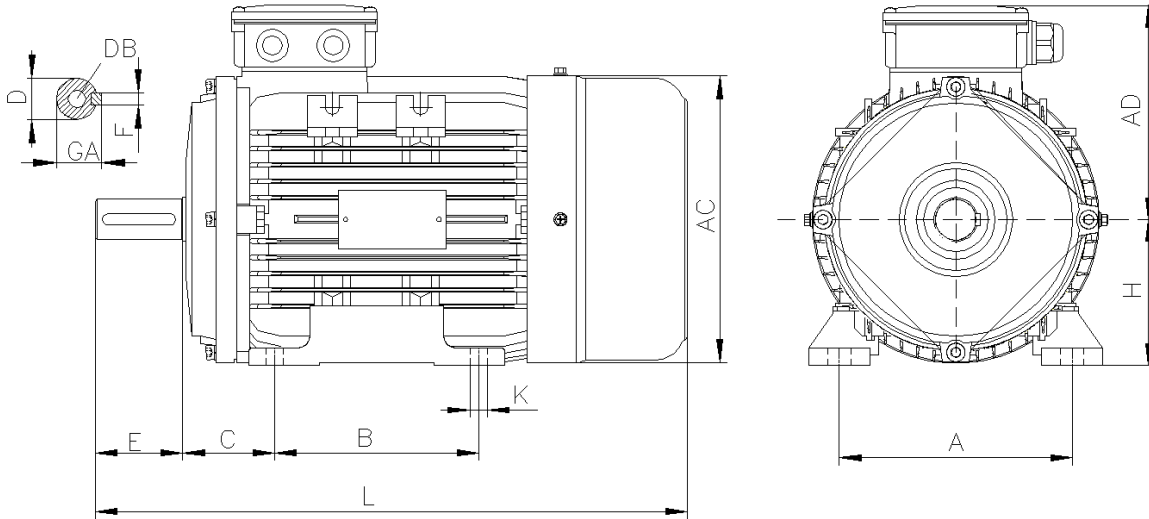
| Welle <i>shaft</i> | D | DB | E | F | GA |
|--------------------|-------|-----|----|---|----|
| A-Seite DE | 28 j6 | M10 | 60 | 8 | 31 |

| LängenmaÙe <i>length dimensions</i> | | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|---------------|-----|-----|-----|--|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD | |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | | |
| 2 | 4 | 112 M | IE2 | 13AA 112 M-2 | 435 | 220 | 190 | |
| 2 | 4 | 112 M | IE3 | 15AA 112 M-2 | 461 | 235 | 190 | |
| 2 | 4 | 112 M | IE4 | 17AA 112 M-2 | 461 | 235 | 190 | |
| 2 | 5,5 | 112 M | IE3 | 15AA 112 MC-2 | 461 | 220 | 190 | |
| 4 | 4 | 112 M | IE2 | 13AA 112 M-4 | 435 | 220 | 190 | |
| 4 | 4 | 112 M | IE3 | 15AA 112 M-4 | 461 | 235 | 190 | |
| 4 | 4 | 112 M | IE4 | 17AA 112 M-4 | 461 | 235 | 190 | |
| 4 | 5,5 | 112 M | IE3 | 15AA 112 MC-4 | 461 | 235 | 190 | |
| 6 | 2,2 | 112 M | IE2 | 13AA 112 M-6 | 435 | 220 | 190 | |
| 6 | 2,2 | 112 M | IE3 | 15AA 112 M-6 | 461 | 235 | 190 | |
| 6 | 2,2 | 112 M | IE4 | 17AA 112 M-6 | 461 | 235 | 190 | |

Übersicht

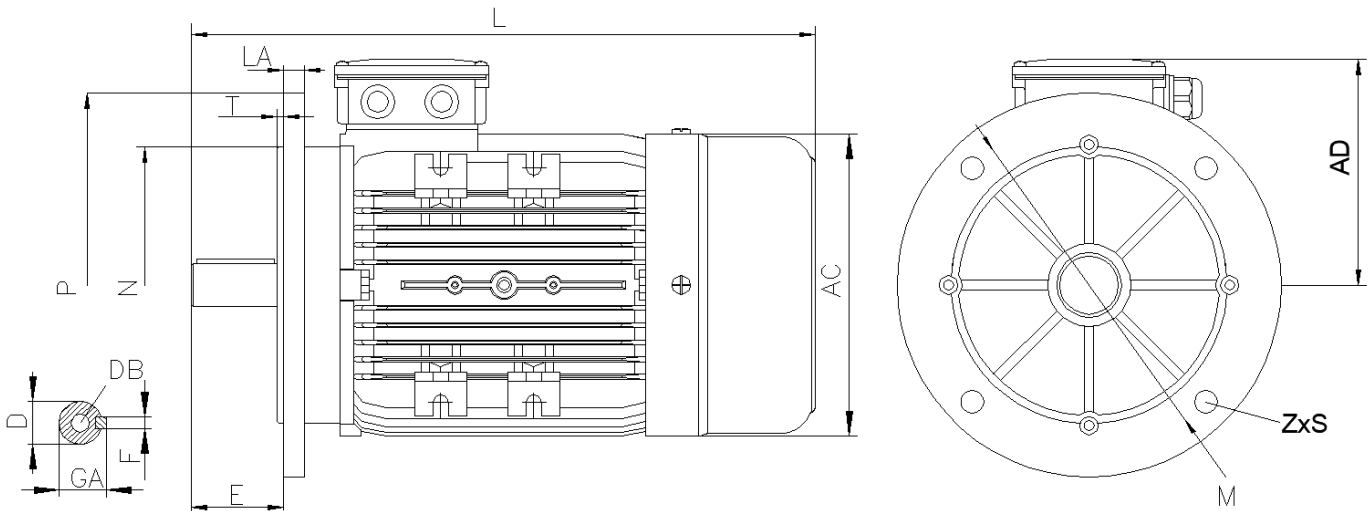
DIM 132 Maße Baugröße 132 *dimensions frame size 132*

Fußbauformen *feet type of construction*

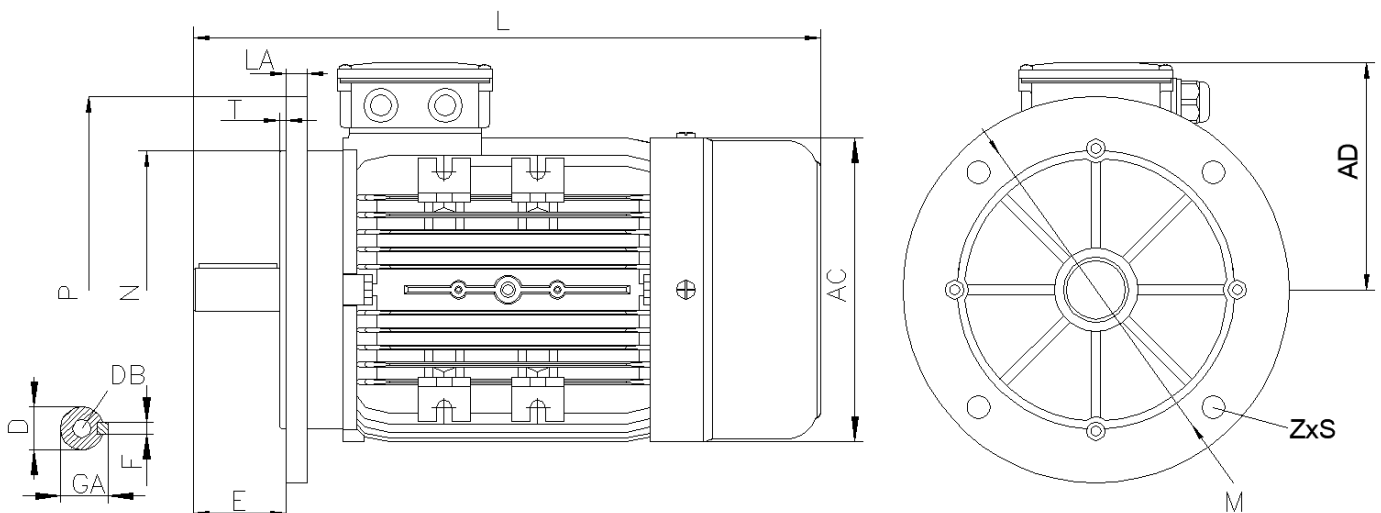


Flanschbauformen *flange type of construction*

Übersicht



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| Füße <i>feet</i> | A | B | C | K |
|------------------|-----|-----|----|----|
| 132 S | 216 | 140 | 89 | 12 |
| 132 M | | 178 | | |

DIM
132

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|------|-----|-----|-----|------|-----|---|
| B5 | 15,5 | 265 | 230 | 300 | 14,5 | 4 | 4 |
| B14a | - | 165 | 130 | 200 | M10 | 3,5 | 4 |
| B14b | - | 215 | 180 | 250 | M12 | 4 | 4 |

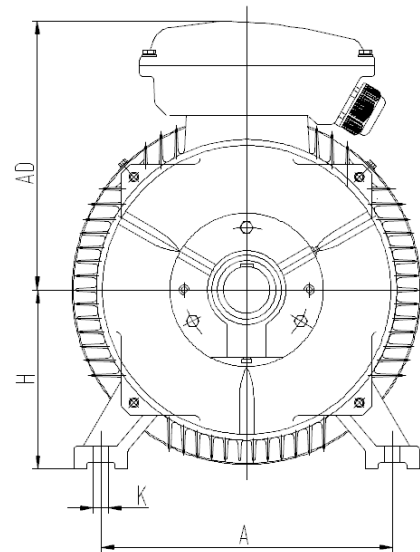
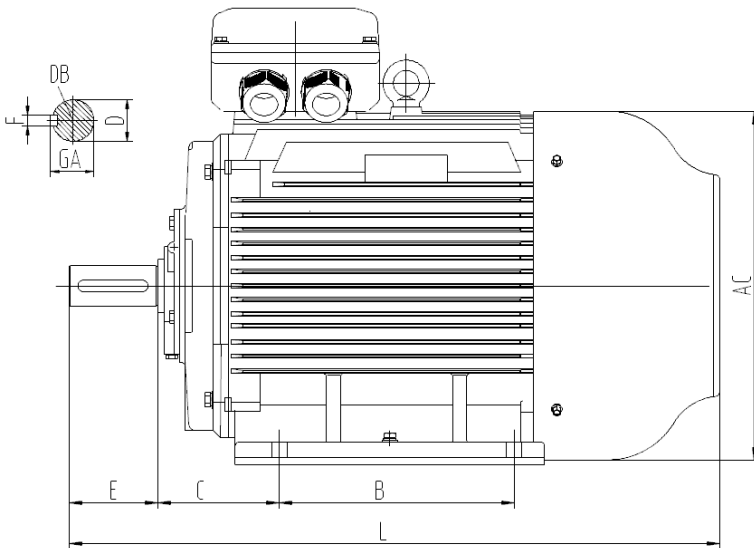
| Welle <i>shaft</i> | D | DB | E | F | GA |
|--------------------|-------|-----|----|----|----|
| A-Seite DE | 38 k6 | M12 | 80 | 10 | 41 |

| Längenmaße <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|--------------|-----|-----|-----|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 5,5 | 132 S | IE2 | 13AA132 S1-1 | 470 | 259 | 215 |
| 2 | 5,5 | 132 S | IE3 | 15AA132 S1-2 | 502 | 293 | 215 |
| 2 | 5,5 | 132 S | IE4 | 17AA132 S1-2 | 502 | 293 | 215 |
| 2 | 7,5 | 132 S | IE2 | 13AA132 S1-2 | 470 | 259 | 215 |
| 2 | 7,5 | 132 S | IE3 | 15AA132 S2-2 | 502 | 293 | 215 |
| 2 | 7,5 | 132 S | IE4 | 17AA132 S2-2 | 502 | 293 | 215 |
| 2 | 9,2 | 132 M | IE3 | 15AA132 MB-2 | 520 | 259 | 215 |
| 2 | 11 | 132 M | IE3 | 15AA132 MC-2 | 520 | 293 | 215 |
| 4 | 5,5 | 132 S | IE2 | 13AA132 S-4 | 470 | 259 | 215 |
| 4 | 5,5 | 132 S | IE3 | 15AA132 S-4 | 502 | 293 | 215 |
| 4 | 5,5 | 132 S | IE4 | 17AA132 S-4 | 502 | 293 | 215 |
| 4 | 7,5 | 132 M | IE2 | 13AA132 M-4 | 510 | 259 | 215 |
| 4 | 7,5 | 132 M | IE3 | 15AA132 M-4 | 533 | 293 | 215 |
| 4 | 7,5 | 132 M | IE4 | 17AA132 M-4 | 533 | 293 | 215 |
| 4 | 9,2 | 132 M | IE3 | 15AA132 MB-4 | 520 | 259 | 215 |
| 4 | 11 | 132 M | IE3 | 15AA132 MC-4 | 520 | 293 | 215 |
| 6 | 3 | 132 S | IE2 | 13AA132 S-6 | 470 | 259 | 215 |
| 6 | 3 | 132 S | IE3 | 15AA132 S-6 | 502 | 293 | 215 |
| 6 | 3 | 132 S | IE4 | 17AA132 S-6 | 502 | 293 | 215 |
| 6 | 4 | 132 M | IE2 | 13AA132 M1-6 | 510 | 259 | 215 |
| 6 | 4 | 132 M | IE3 | 15AA132 M1-6 | 533 | 293 | 215 |
| 6 | 4 | 132 M | IE4 | 17AA132 M1-6 | 533 | 293 | 215 |
| 6 | 5,5 | 132 M | IE2 | 13AA132 M2-6 | 510 | 259 | 215 |
| 6 | 5,5 | 132 M | IE3 | 15AA132 M2-6 | 533 | 293 | 215 |
| 6 | 5,5 | 132 M | IE4 | 17AA132 M2-6 | 533 | 293 | 215 |

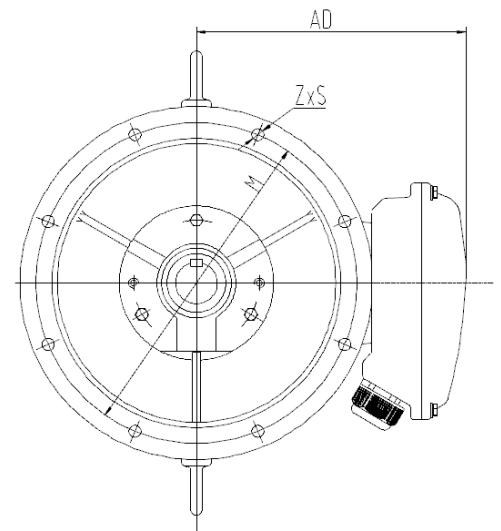
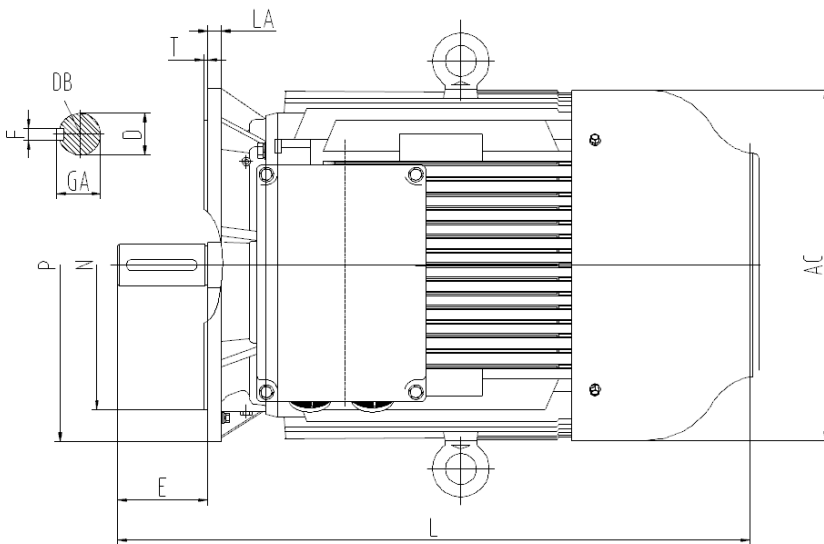
Übersicht

DIM Maße Baugröße 160 *dimensions frame size 160*

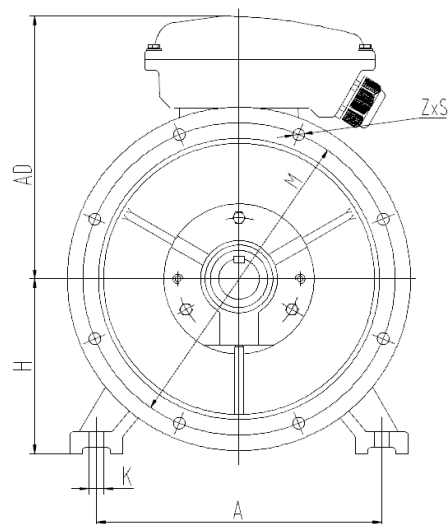
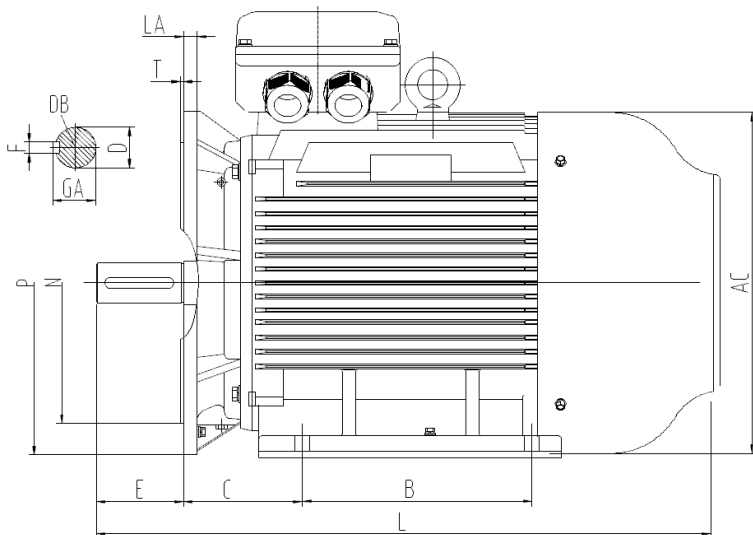
160 Fußbauformen *feet type of construction*



Flanschbauformen *flange type of construction*



Fuß- Flanschbauformen *feet / flange type of construction*



Übersicht

IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|-----|----|
| 160 M | 254 | 210 | 108 | 15 |
| 160 L | | 254 | | |

DIM
160

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|------|---|---|
| B5 | 15 | 300 | 250 | 350 | 18,5 | 5 | 4 |
| B14a | - | 215 | 180 | 250 | M12 | 4 | 4 |
| B14b | - | - | - | - | - | - | - |

| Welle <i>shaft</i> | D | DB | E | EB | ED | F | GA |
|--------------------|-------|-----|-----|----|----|----|----|
| A-Seite DE | 42 k6 | M16 | 110 | 90 | 10 | 12 | 45 |

LängenmaÙe Aluminiumgehäuse *length dimensions aluminum housing*

| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
|-------------|--------------|-------------------|------------|---------------|-----|-----|-----|
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 11 | 160 M | IE3 | 15AA 160 M1-2 | 632 | 314 | 255 |
| 2 | 15 | 160 M | IE3 | 15AA 160 M2-2 | 632 | 314 | 255 |
| 2 | 18,5 | 160 L | IE3 | 15AA 160 L-2 | 677 | 314 | 255 |
| 4 | 11 | 160 M | IE3 | 15BA 160 M-4 | 632 | 314 | 255 |
| 4 | 15 | 160 L | IE3 | 15BA 160 L-4 | 677 | 314 | 255 |
| 6 | 7,5 | 160 M | IE3 | 15BA 160 M-6 | 632 | 314 | 255 |
| 6 | 11 | 160 L | IE3 | 15BA 160 L-6 | 677 | 314 | 255 |

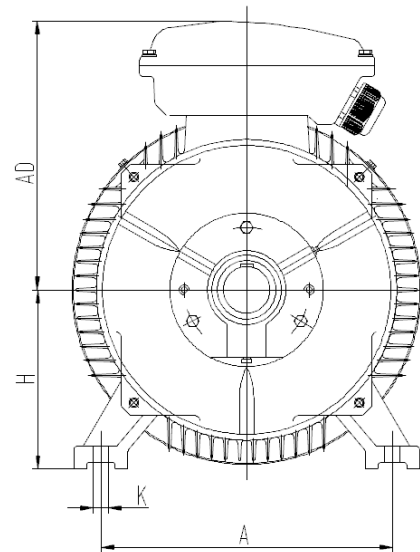
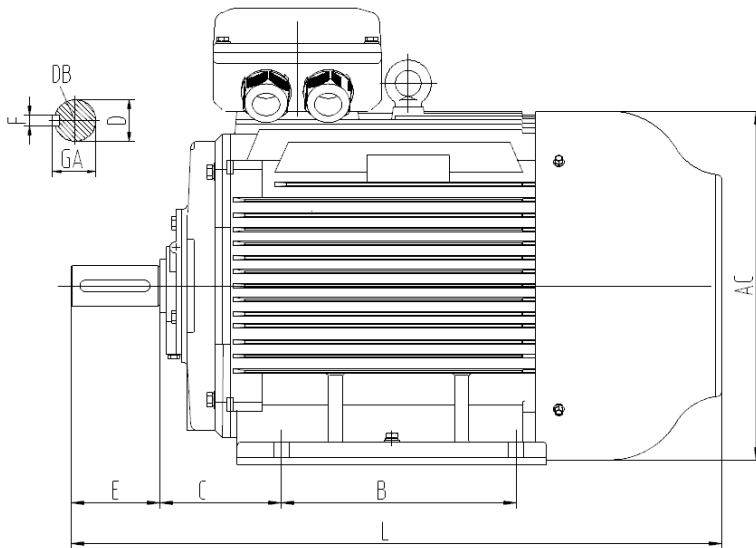
LängenmaÙe Graugussgehäuse *length dimensions grey cast iron housing*

| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
|-------------|--------------|-------------------|------------|---------------|-----|-----|-----|
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 11 | 160 M | IE2 | 13BA 160 M1-2 | 615 | 314 | 255 |
| 2 | 11 | 160 M | IE3 | 15BA 160 M1-2 | 660 | 314 | 255 |
| 2 | 11 | 160 M | IE4 | 17BA 160 M1-2 | 660 | 314 | 255 |
| 2 | 15 | 160 M | IE2 | 13BA 160 M2-2 | 615 | 314 | 255 |
| 2 | 15 | 160 M | IE3 | 15BA 160 M2-2 | 660 | 314 | 255 |
| 2 | 15 | 160 M | IE4 | 17BA 160 M2-2 | 660 | 314 | 255 |
| 2 | 18,5 | 160 L | IE2 | 13BA 160 L-2 | 660 | 314 | 255 |
| 2 | 18,5 | 160 L | IE3 | 15BA 160 L-2 | 726 | 314 | 255 |
| 2 | 18,5 | 160 L | IE4 | 17BA 160 L-2 | 726 | 314 | 255 |
| 4 | 11 | 160 M | IE2 | 13BA 160 M1-4 | 615 | 314 | 255 |
| 4 | 11 | 160 M | IE3 | 15BA 160 M-4 | 660 | 314 | 255 |
| 4 | 11 | 160 M | IE4 | 17BA 160 M-4 | 660 | 314 | 255 |
| 4 | 15 | 160 L | IE2 | 13BA 160 L-4 | 615 | 314 | 255 |
| 4 | 15 | 160 L | IE3 | 15BA 160 L-4 | 726 | 314 | 255 |
| 4 | 15 | 160 L | IE4 | 17BA 160 L-4 | 726 | 314 | 255 |
| 6 | 7,5 | 160 M | IE2 | 13BA 160 M6 | 615 | 314 | 255 |
| 6 | 7,5 | 160 M | IE3 | 15BA 160 M-6 | 660 | 314 | 255 |
| 6 | 7,5 | 160 M | IE4 | 17BA 160 M-6 | 660 | 314 | 255 |
| 6 | 11 | 160 M | IE2 | 13BA 160 L-6 | 660 | 314 | 255 |
| 6 | 11 | 160 L | IE3 | 15BA 160 L-6 | 726 | 314 | 255 |
| 6 | 11 | 160 L | IE4 | 17BA 160 L-6 | 726 | 314 | 255 |

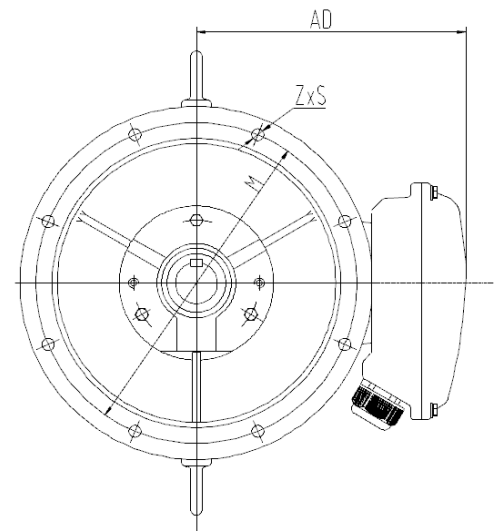
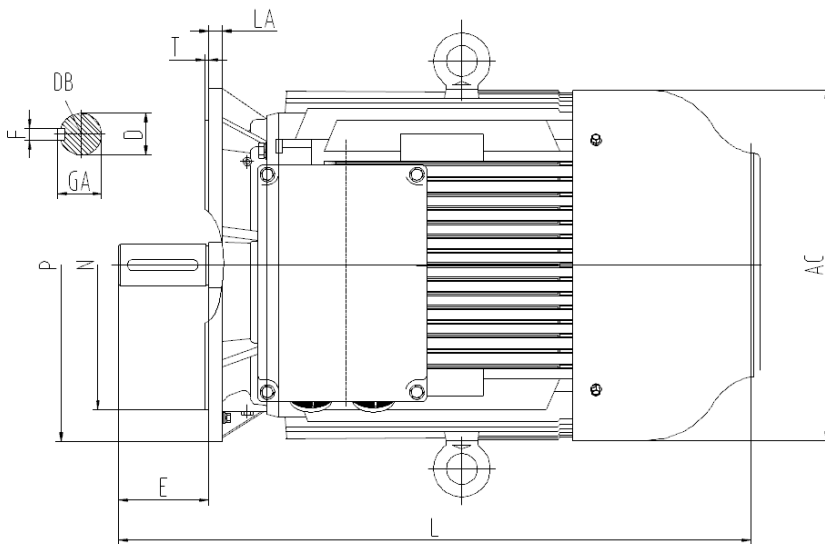
Übersicht

DIM 180 Maße Baugröße 180 *dimensions frame size 180*

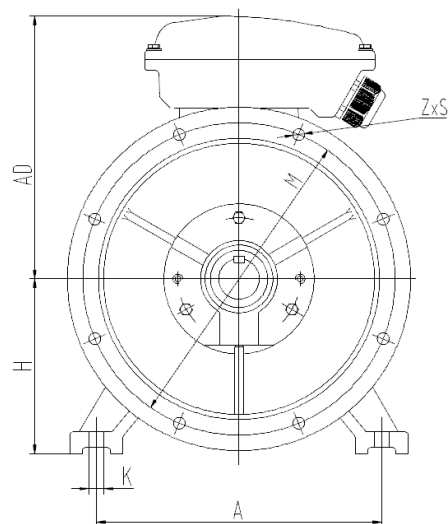
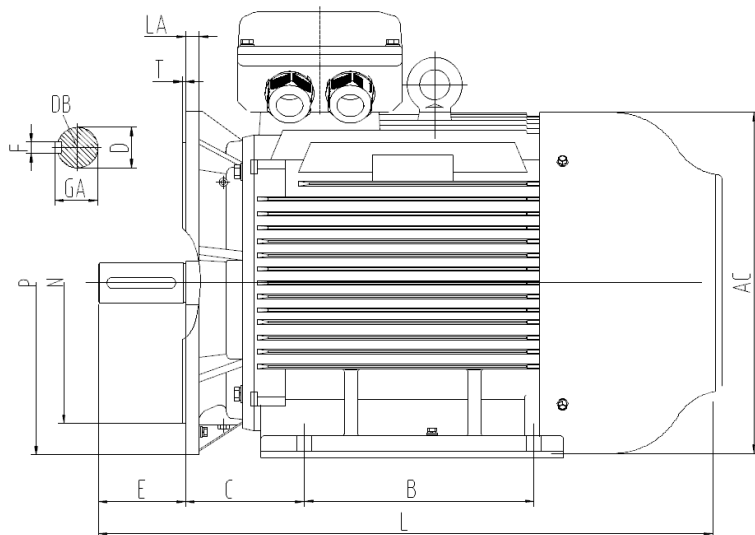
Fußbauformen *feet type of construction*



Flanschbauformen *flange type of construction*



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| Füße <i>feet</i> | A | B | C | K |
|------------------|-----|-----|-----|----|
| 180 M | 279 | 241 | 121 | 15 |
| 180 L | | 279 | | |

DIM
180

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|------|---|---|
| B5 | 15 | 300 | 250 | 350 | 18,5 | 5 | 4 |
| B14a | - | - | - | - | - | - | - |
| B14b | - | - | - | - | - | - | - |

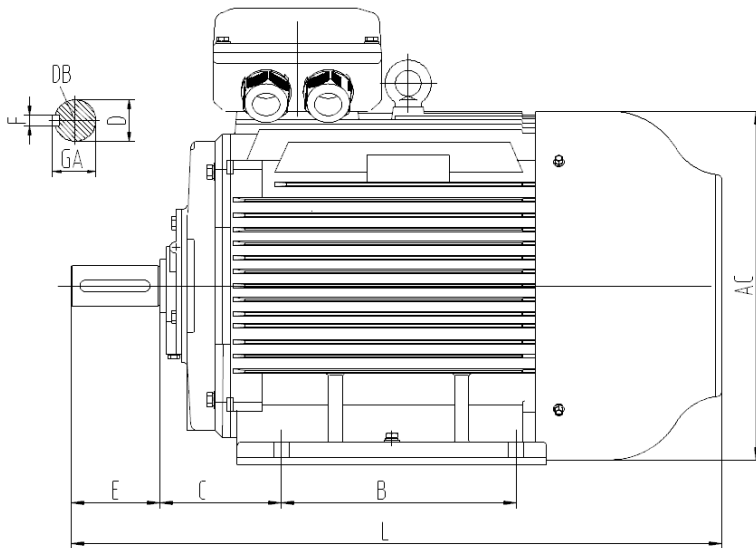
| Welle <i>shaft</i> | D | DB | E | EB | ED | F | GA |
|--------------------|-------|-----|-----|----|----|----|----|
| A-Seite DE | 48 k6 | M16 | 110 | | | 14 | 52 |

| Längenmaße <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|--------------|-----|-----|-----|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 22 | 180 M | IE2 | 13BA 180 M-2 | 700 | 356 | 270 |
| 2 | 22 | 180 M | IE3 | 15BA 180 M-2 | 732 | 356 | 270 |
| 2 | 22 | 180 M | IE4 | 17BA 180 M-2 | 732 | 356 | 270 |
| 4 | 18,5 | 180 M | IE2 | 13BA 180 M-4 | 700 | 356 | 270 |
| 4 | 18,5 | 180 M | IE3 | 15BA 180 M-4 | 732 | 356 | 270 |
| 4 | 18,5 | 180 M | IE4 | 17BA 180 M-4 | 732 | 356 | 270 |
| 4 | 22 | 180 L | IE2 | 13BA 180 L-4 | 740 | 356 | 270 |
| 4 | 22 | 180 L | IE3 | 15BA 180 L-4 | 810 | 356 | 270 |
| 4 | 22 | 180 L | IE4 | 17BA 180 L-4 | 810 | 356 | 270 |
| 6 | 15 | 180 L | IE2 | 13BA 180 L-6 | 740 | 356 | 270 |
| 6 | 15 | 180 L | IE3 | 15BA 180 L-6 | 810 | 356 | 270 |
| 6 | 15 | 180 L | IE4 | 17BA 180 L-6 | 810 | 356 | 270 |

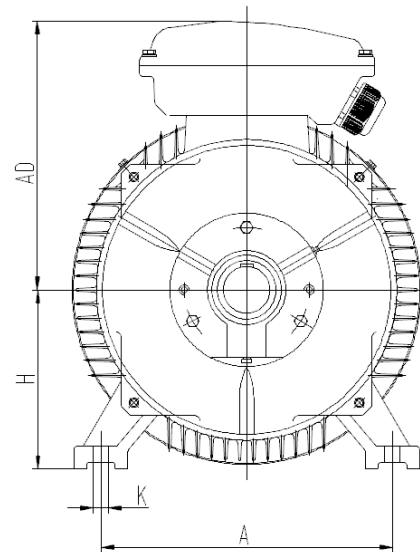
Übersicht

DIM 200 Maße Baugröße 200 *dimensions frame size 200*

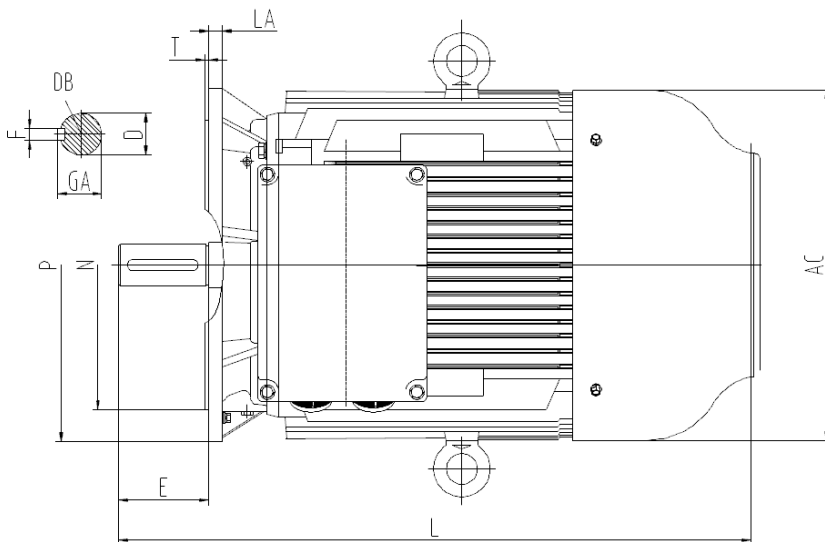
Fußbauformen *feet type of construction*



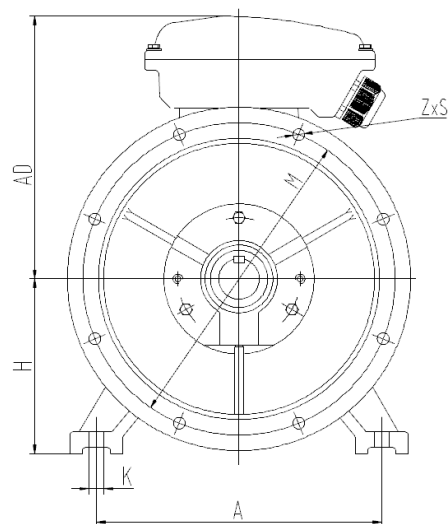
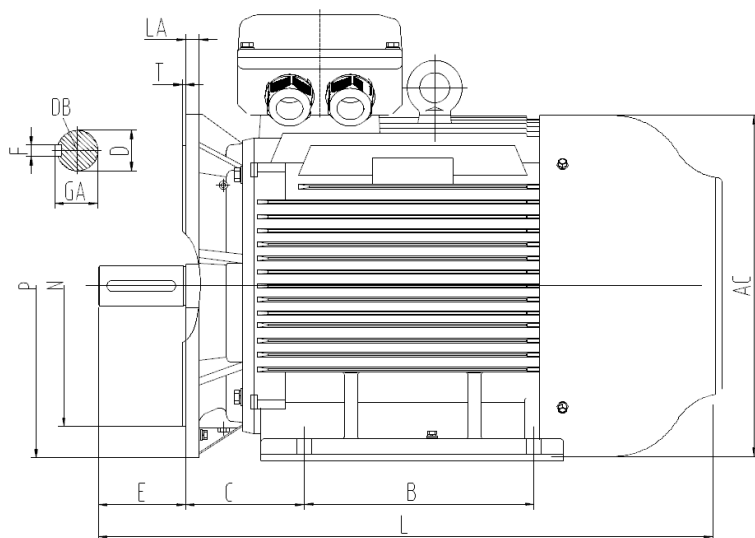
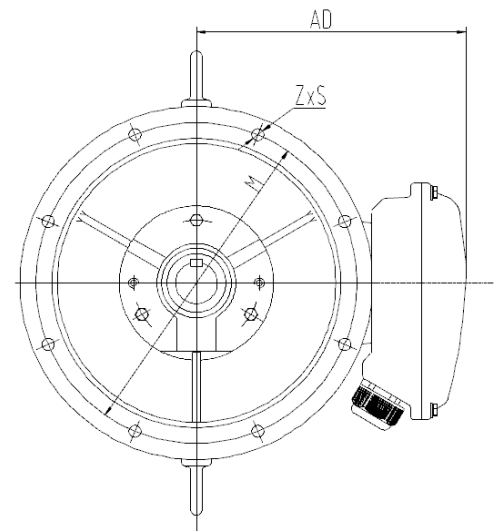
Flanschbauformen *flange type of construction*



Übersicht



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|-----|----|
| 200 L | 318 | 305 | 133 | 19 |

DIM
200

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|------|---|---|
| B5 | 16 | 350 | 300 | 400 | 18,5 | 5 | 4 |
| B14a | - | - | - | - | - | - | - |
| B14b | - | - | - | - | - | - | - |

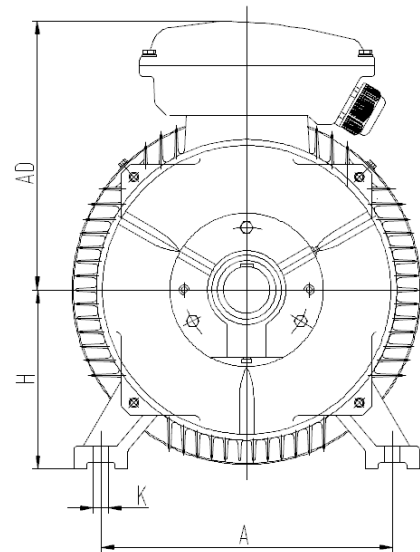
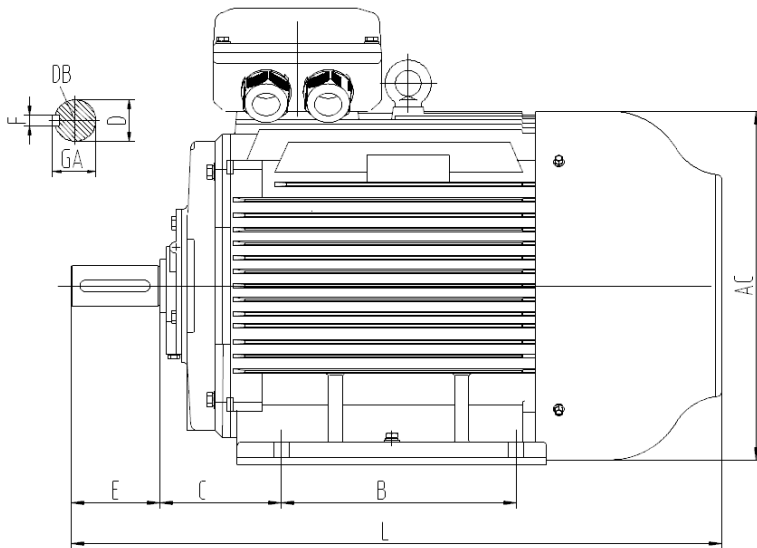
| Welle <i>shaft</i> | D | DB | E | EB | ED | F | GA |
|--------------------|-------|-----|-----|----|----|----|----|
| A-Seite DE | 55 m6 | M20 | 110 | | | 16 | 59 |

| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|---------------|-----|-----|-----|
| Pole | Leistung | BaugröÙe | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 30 | 200 L | IE2 | 13BA 200 L1-2 | 770 | 397 | 302 |
| 2 | 30 | 200 L | IE3 | 15BA 200 L1-2 | 852 | 397 | 302 |
| 2 | 30 | 200 L | IE4 | 17BA 200 L1-2 | 852 | 397 | 302 |
| 2 | 37 | 200 L | IE2 | 13BA 200 L2-2 | 770 | 397 | 302 |
| 2 | 37 | 200 L | IE3 | 15BA 200 L2-2 | 852 | 397 | 302 |
| 2 | 37 | 200 L | IE4 | 17BA 200 L2-2 | 852 | 397 | 302 |
| 4 | 30 | 200 L | IE2 | 13BA 200 L-4 | 770 | 397 | 302 |
| 4 | 30 | 200 L | IE3 | 15BA 200 L-4 | 852 | 397 | 302 |
| 4 | 30 | 200 L | IE4 | 17BA 200 L-4 | 852 | 397 | 302 |
| 6 | 18,5 | 200 L | IE2 | 13BA 200 L1-6 | 770 | 397 | 302 |
| 6 | 18,5 | 200 L | IE3 | 15BA 200 L1-6 | 852 | 397 | 302 |
| 6 | 18,5 | 200 L | IE4 | 17BA 200 L1-6 | 852 | 397 | 302 |
| 6 | 22 | 200 L | IE2 | 13BA 200 L2-6 | 770 | 397 | 302 |
| 6 | 22 | 200 L | IE3 | 15BA 200 L2-6 | 852 | 397 | 302 |
| 6 | 22 | 200 L | IE4 | 17BA 200 L2-6 | 852 | 397 | 302 |

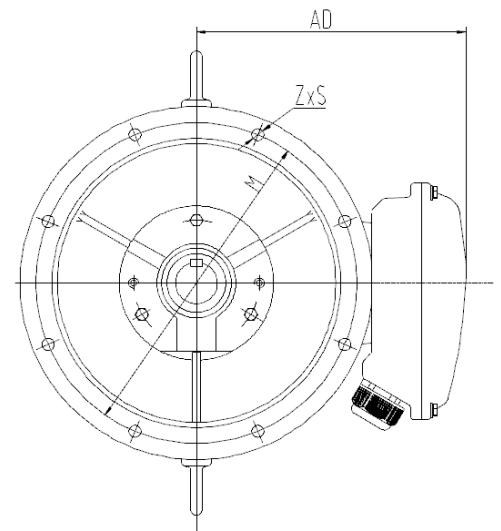
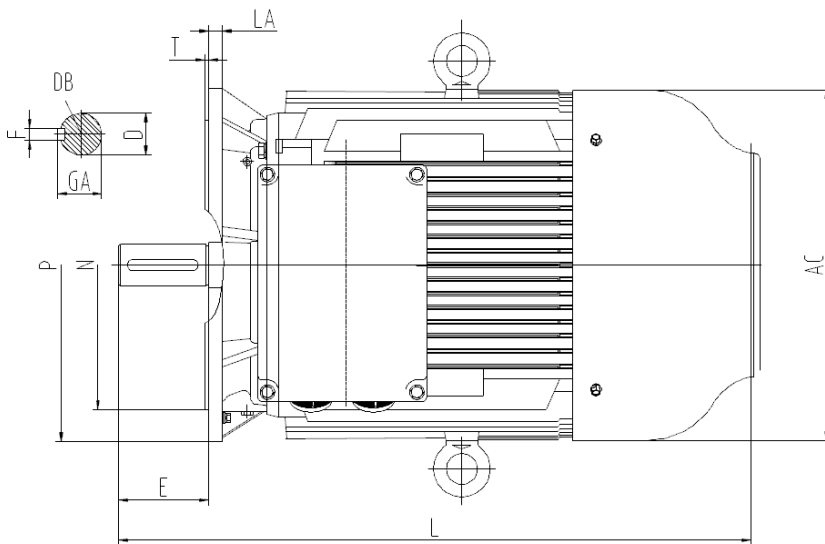
Übersicht

DIM Maße Baugröße 225 *dimensions frame size 225*

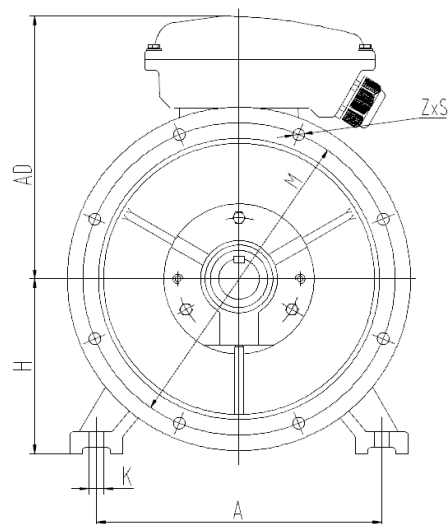
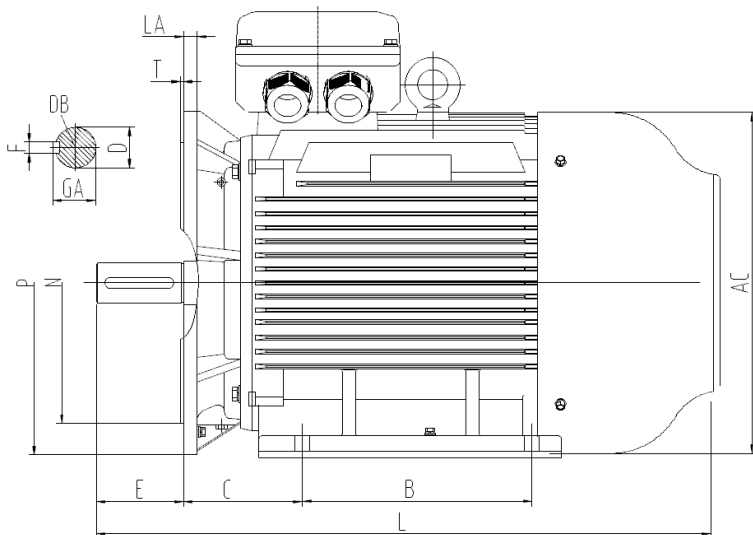
225 Fußbauformen *feet type of construction*



Flanschbauformen *flange type of construction*



Fuß- Flanschbauformen *feet / flange type of construction*



Übersicht

IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|-----|----|
| 225 S | 356 | 286 | 149 | 19 |
| 225 M | | 311 | | |

DIM
225

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|----|---|---|
| B5 | 20 | 400 | 350 | 450 | 19 | 5 | 4 |
| B14a | - | - | - | - | - | - | - |
| B14b | - | - | - | - | - | - | - |

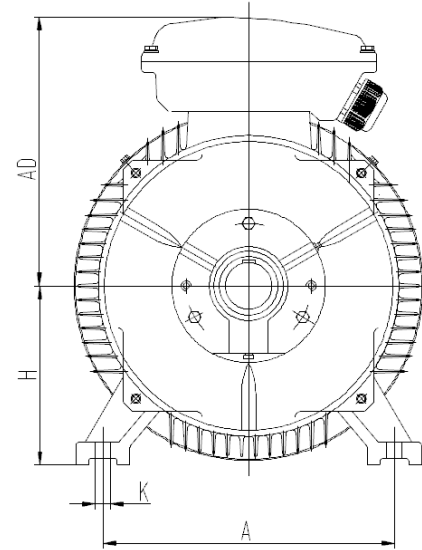
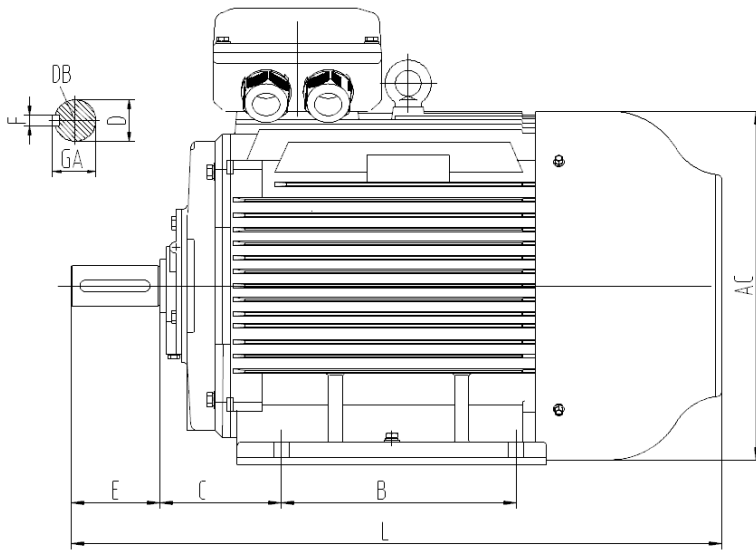
| Welle <i>shaft</i> | Pole | D | DB | E | F | GA |
|--------------------|-------|-------|-----|-----|----|----|
| A-Seite DE | 2 | 55 m6 | M20 | 110 | 16 | 59 |
| | 4,6,8 | 60 m6 | M20 | 140 | 18 | 64 |

| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|--------------|-----|-----|-----|
| Pole | Leistung | BaugröÙe | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 45 | 225 M | IE2 | 13BA 225 M-2 | 820 | 445 | 323 |
| 2 | 45 | 225 M | IE3 | 15BA 225 M-2 | 890 | 445 | 323 |
| 2 | 45 | 225 M | IE4 | 17BA 225 M-2 | 890 | 445 | 323 |
| 4 | 37 | 225 S | IE2 | 13BA 225 S-4 | 815 | 445 | 323 |
| 4 | 37 | 225 S | IE3 | 15BA 225 S-4 | 874 | 445 | 323 |
| 4 | 37 | 225 S | IE4 | 17BA 225 S-4 | 874 | 445 | 323 |
| 4 | 45 | 225 M | IE2 | 13BA 225 M-4 | 850 | 445 | 323 |
| 4 | 45 | 225 M | IE3 | 15BA 225 M-4 | 920 | 445 | 323 |
| 4 | 45 | 225 M | IE4 | 17BA 225 M-4 | 920 | 445 | 323 |
| 6 | 30 | 225 M | IE2 | 13BA 225 M-6 | 920 | 445 | 323 |
| 6 | 30 | 225 M | IE3 | 15BA 225 M-6 | 920 | 445 | 323 |
| 6 | 30 | 225 M | IE4 | 17BA 225 M-6 | 920 | 445 | 323 |

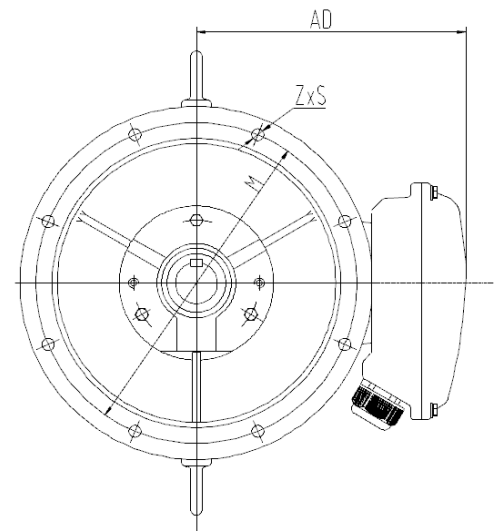
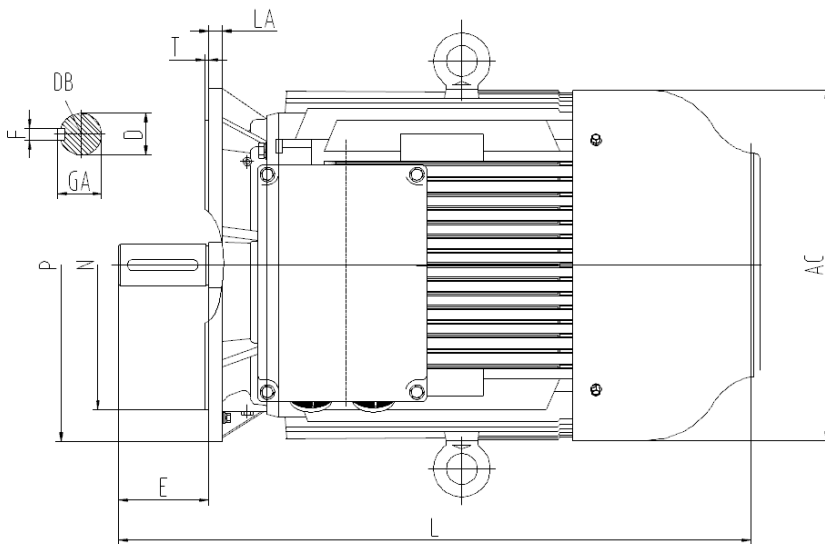
Übersicht

DIM Maße Baugröße 250 *dimensions frame size 250*

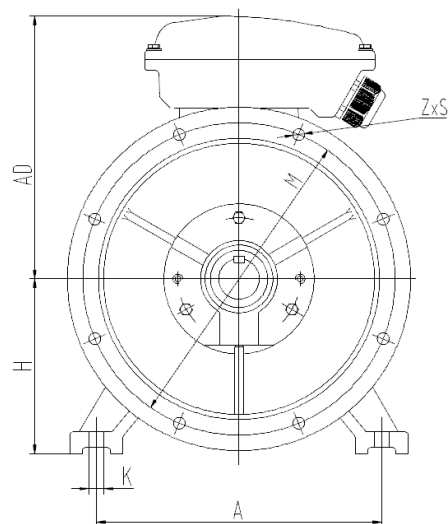
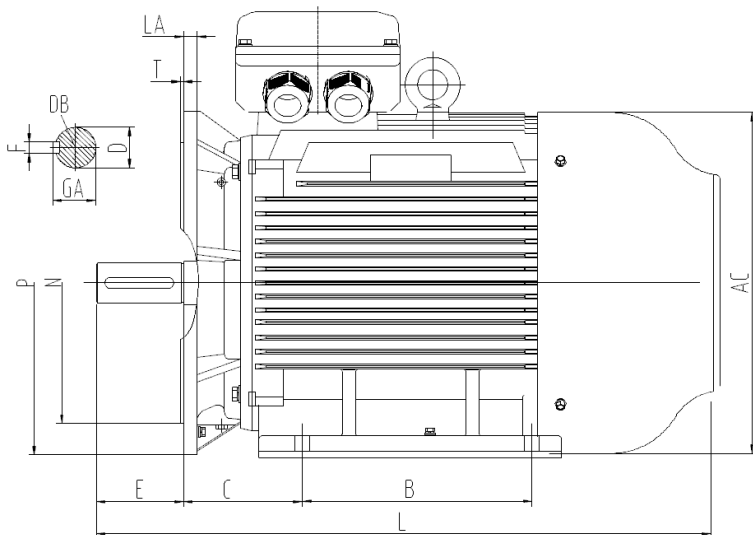
250 Fußbauformen *feet type of construction*



Flanschbauformen *flange type of construction*



Fuß- Flanschbauformen *feet / flange type of construction*



Übersicht

IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|-----|----|
| 250 M | 406 | 349 | 168 | 24 |

DIM
250

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|------|---|---|
| B5 | 24 | 500 | 450 | 550 | 18,5 | 5 | 8 |
| B14a | - | - | - | - | - | - | - |
| B14b | - | - | - | - | - | - | - |

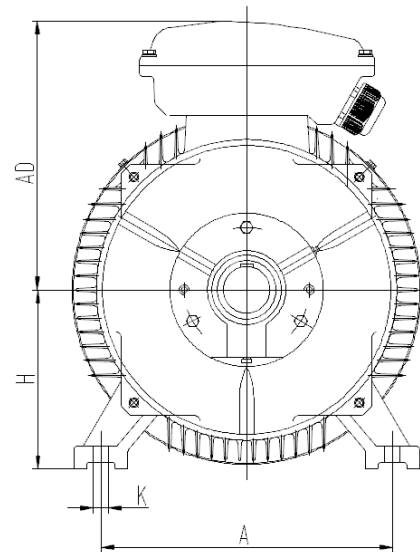
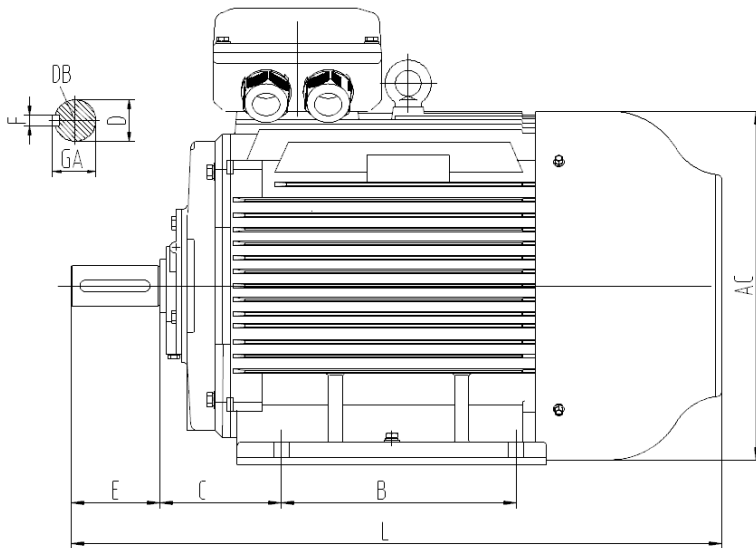
| Welle <i>shaft</i> | Pole | D | DB | E | EB | ED | F | GA |
|--------------------|-------|----|-----|-----|-----|----|----|----|
| A-Seite DE | 2 | 60 | M20 | 140 | 125 | 10 | 18 | 64 |
| | 4,6,8 | 65 | M20 | 140 | 125 | 10 | 18 | 69 |

| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|--------------|-----|-----|-----|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 55 | 250 M | IE2 | 13BA 250 M-2 | 920 | 485 | 372 |
| 2 | 55 | 250 M | IE3 | 15BA 250 M-2 | 985 | 485 | 372 |
| 2 | 55 | 250 M | IE4 | 17BA 250 M-2 | 985 | 485 | 372 |
| 4 | 55 | 250 M | IE2 | 13BA 250 M-4 | 920 | 485 | 372 |
| 4 | 55 | 250 M | IE3 | 15BA 250 M-4 | 985 | 485 | 372 |
| 4 | 55 | 250 M | IE4 | 17BA 250 M-4 | 985 | 485 | 372 |
| 6 | 37 | 250 M | IE2 | 13BA 250 M-6 | 920 | 485 | 372 |
| 6 | 37 | 250 M | IE3 | 15BA 250 M-6 | 985 | 485 | 372 |
| 6 | 37 | 250 M | IE4 | 17BA 250 M-6 | 985 | 485 | 372 |

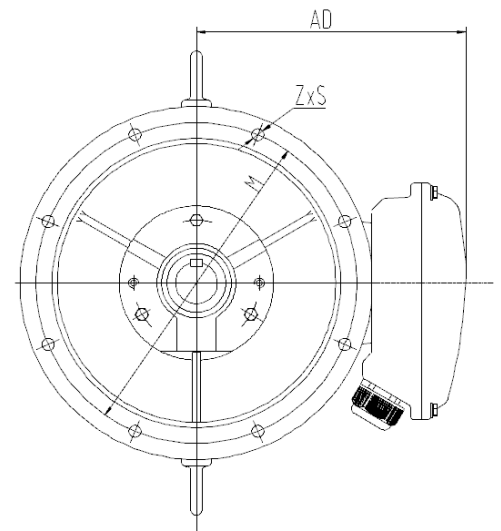
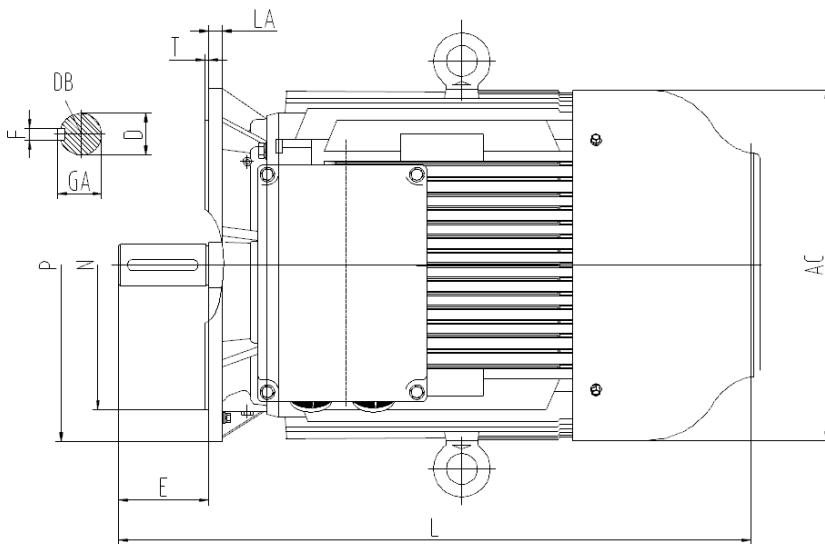
Übersicht

DIM 280 Maße Baugröße 280 *dimensions frame size 280*

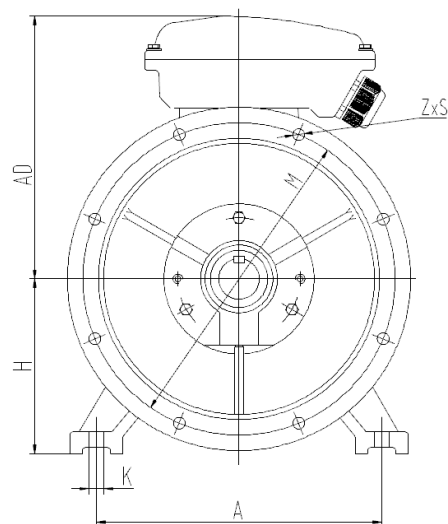
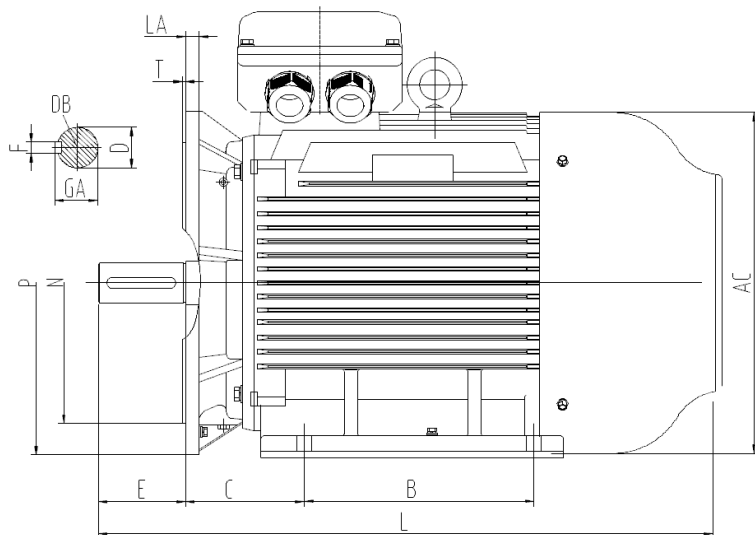
Fußbauformen *feet type of construction*



Flanschbauformen *flange type of construction*



Fuß- Flanschbauformen *feet / flange type of construction*



Übersicht

IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|-----|----|
| 280 S | 457 | 368 | 190 | 24 |
| 280 M | | 419 | | |

DIM
280

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|------|---|---|
| B5 | 22 | 500 | 450 | 550 | 18,5 | 5 | 8 |
| B14a | - | - | - | - | - | - | - |
| B14b | - | - | - | - | - | - | - |

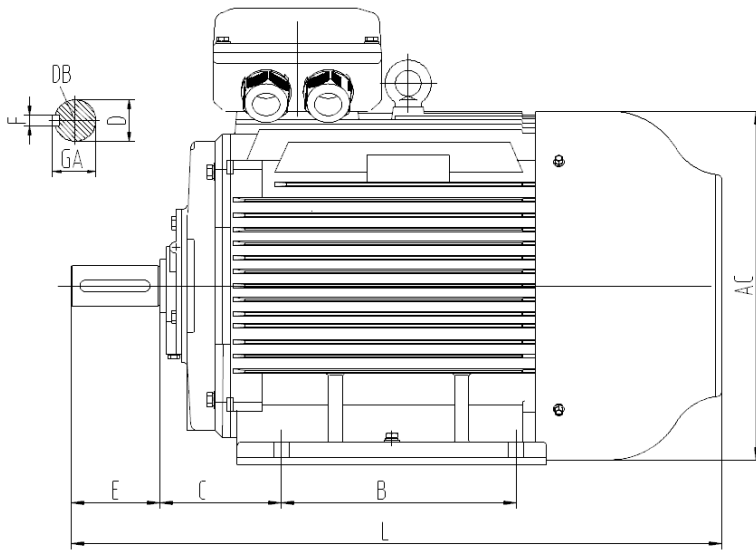
| Welle <i>shaft</i> | Pole | D | DB | E | F | GA |
|--------------------|-------|----|-----|-----|----|------|
| A-Seite DE | 2 | 65 | M20 | 140 | 18 | 69 |
| | 4,6,8 | 75 | M20 | 140 | 20 | 79,5 |

| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|--------------|------|-------|-----|
| Pole | Leistung | Baugröße | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 75 | 280 S | IE2 | 13BA 280 S-2 | 995 | 545,4 | 390 |
| 2 | 75 | 280 S | IE3 | 15BA 280 S-2 | 1045 | 545,4 | 390 |
| 2 | 75 | 280 S | IE4 | 17BA 280 S-2 | 1045 | 545,4 | 390 |
| 2 | 90 | 280 M | IE2 | 13BA 280 M-2 | 1045 | 545,4 | 390 |
| 2 | 90 | 280 M | IE3 | 15BA 280 M-2 | 1095 | 545,4 | 390 |
| 2 | 90 | 280 M | IE4 | 17BA 280 M-2 | 1095 | 545,4 | 390 |
| 4 | 75 | 280 S | IE2 | 13BA 280 S-4 | 995 | 545,4 | 390 |
| 4 | 75 | 280 S | IE3 | 15BA 280 S-4 | 1045 | 545,4 | 390 |
| 4 | 75 | 280 S | IE4 | 17BA 280 S-4 | 1045 | 545,4 | 390 |
| 4 | 90 | 280 M | IE2 | 13BA 280 M-4 | 1045 | 545,4 | 390 |
| 4 | 90 | 280 M | IE3 | 15BA 280 M-4 | 1095 | 545,4 | 390 |
| 4 | 90 | 280 M | IE4 | 17BA 280 M-4 | 1095 | 545,4 | 390 |
| 6 | 45 | 280 S | IE2 | 13BA 280 S-6 | 995 | 545,4 | 390 |
| 6 | 45 | 280 S | IE3 | 15BA 280 S-6 | 1045 | 545,4 | 390 |
| 6 | 45 | 280 S | IE4 | 17BA 280 S-6 | 1045 | 545,4 | 390 |
| 6 | 55 | 280 M | IE2 | 13BA 280 M-6 | 1045 | 545,4 | 390 |
| 6 | 55 | 280 M | IE3 | 15BA 280 M-6 | 1095 | 545,4 | 390 |
| 6 | 55 | 280 M | IE4 | 17BA 280 M-6 | 1095 | 545,4 | 390 |

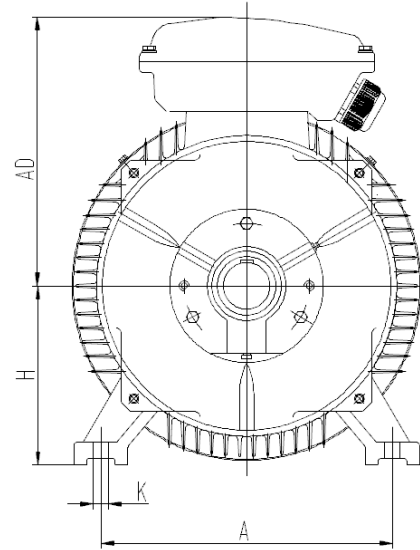
Übersicht

DIM 315 Maße Baugröße 315 *dimensions frame size 315*

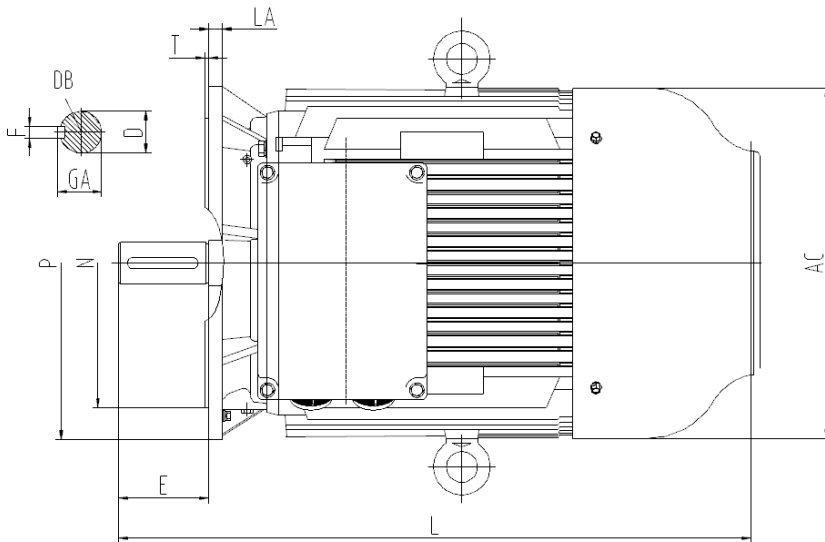
315 Fußbauformen *feet type of construction*



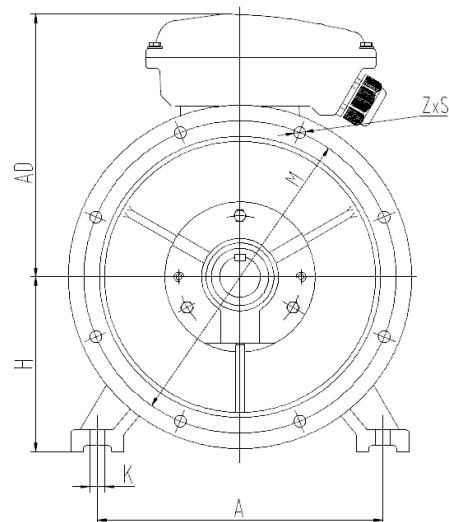
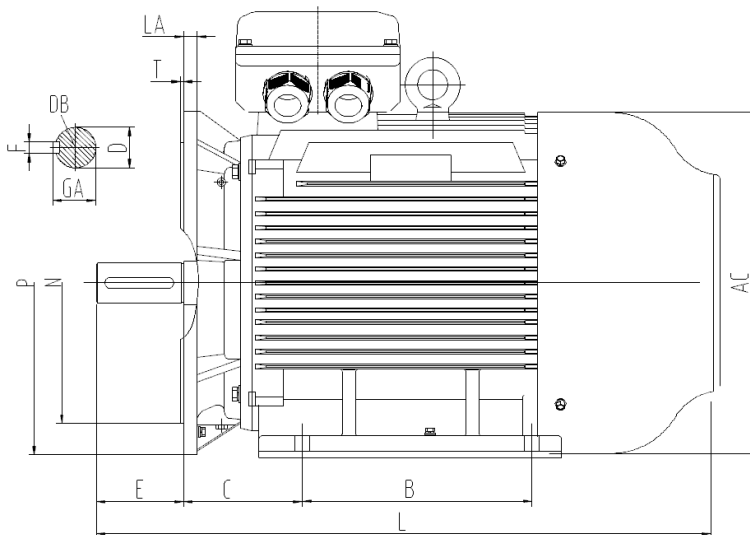
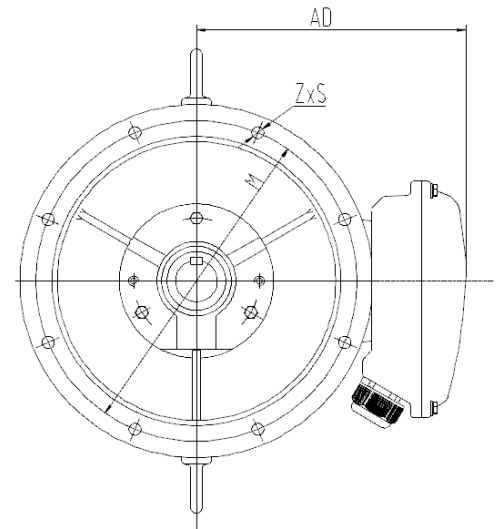
Flanschbauformen *flange type of construction*



Übersicht



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|-----|----|
| 315 S | 508 | 406 | 216 | 28 |
| 315 M | 508 | 457 | 216 | 28 |
| 315 L | 508 | 508 | 216 | 28 |

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|----|---|---|
| B5 | 22 | 600 | 550 | 660 | 24 | 6 | 8 |
| B14a | - | - | - | - | - | - | - |
| B14b | - | - | - | - | - | - | - |

| Welle <i>shaft</i> | Pole | D | DB | E | F | GA |
|--------------------|-------|----|-----|-----|----|----|
| A-Seite DE | 2 | 65 | M20 | 140 | 18 | 69 |
| | 4,6,8 | 80 | M20 | 170 | 22 | 85 |

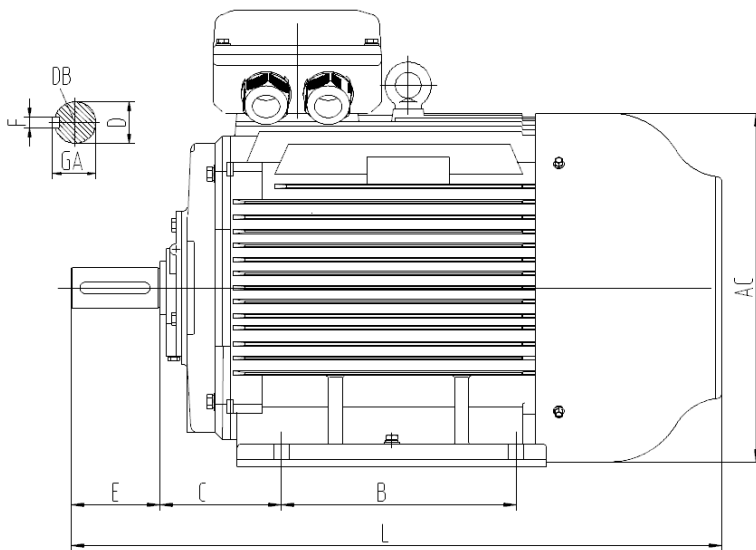
| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|---------------|------|-----|-----|
| Pole | Leistung | BaugröÙe | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 110 | 315 S | IE2 | 13BA 315 S-2 | 1185 | 620 | 540 |
| 2 | 110 | 315 S | IE3 | 15BA 315 S-2 | 1185 | 620 | 540 |
| 2 | 110 | 315 S | IE4 | 17BA 315 S-2 | 1185 | 620 | 540 |
| 2 | 132 | 315 M | IE2 | 13BA 315 M-2 | 1290 | 620 | 540 |
| 2 | 132 | 315 M | IE3 | 15BA 315 M-2 | 1290 | 620 | 540 |
| 2 | 132 | 315 M | IE4 | 17BA 315 M-2 | 1290 | 620 | 540 |
| 2 | 160 | 315 L | IE2 | 13BA 315 L1-2 | 1290 | 620 | 540 |
| 2 | 160 | 315 L | IE3 | 15BA 315 L1-2 | 1290 | 620 | 540 |
| 2 | 160 | 315 L | IE4 | 17BA 315 L1-2 | 1290 | 620 | 540 |
| 2 | 200 | 315 L | IE2 | 13BA 315 L2-2 | 1290 | 620 | 540 |
| 2 | 200 | 315 L | IE3 | 15BA 315 L2-2 | 1290 | 620 | 540 |
| 2 | 200 | 315 L | IE4 | 17BA 315 L2-2 | 1290 | 620 | 540 |
| 4 | 110 | 315 S | IE2 | 13BA 315 S-4 | 1220 | 620 | 540 |
| 4 | 110 | 315 S | IE3 | 15BA 315 S-4 | 1220 | 620 | 540 |
| 4 | 110 | 315 S | IE4 | 17BA 315 S-4 | 1220 | 620 | 540 |
| 4 | 132 | 315 M | IE2 | 13BA 315 M-4 | 1325 | 620 | 540 |
| 4 | 132 | 315 M | IE3 | 15BA 315 M-4 | 1325 | 620 | 540 |
| 4 | 132 | 315 M | IE4 | 17BA 315 M-4 | 1325 | 620 | 540 |
| 4 | 160 | 315 L | IE2 | 13BA 315 L1-4 | 1325 | 620 | 540 |
| 4 | 160 | 315 L | IE3 | 15BA 315 L1-4 | 1325 | 620 | 540 |
| 4 | 160 | 315 L | IE4 | 17BA 315 L1-4 | 1325 | 620 | 540 |
| 4 | 200 | 315 L | IE2 | 13BA 315 L2-4 | 1325 | 620 | 540 |
| 4 | 200 | 315 L | IE3 | 15BA 315 L2-4 | 1325 | 620 | 540 |
| 4 | 200 | 315 L | IE4 | 17BA 315 L2-4 | 1325 | 620 | 540 |
| 6 | 75 | 315 S | IE2 | 13BA 315 S-6 | 1220 | 620 | 540 |
| 6 | 75 | 315 S | IE3 | 15BA 315 S-6 | 1220 | 620 | 540 |
| 6 | 75 | 315 S | IE4 | 17BA 315 S-6 | 1220 | 620 | 540 |
| 6 | 90 | 315 M | IE2 | 13BA 315 M-6 | 1325 | 620 | 540 |
| 6 | 90 | 315 M | IE3 | 15BA 315 M-6 | 1325 | 620 | 540 |
| 6 | 90 | 315 M | IE4 | 17BA 315 M-6 | 1325 | 620 | 540 |
| 6 | 110 | 315 L | IE2 | 13BA 315 L1-6 | 1325 | 620 | 540 |
| 6 | 110 | 315 L | IE3 | 15BA 315 L1-6 | 1325 | 620 | 540 |
| 6 | 110 | 315 L | IE4 | 17BA 315 L1-6 | 1325 | 620 | 540 |
| 6 | 132 | 315 L | IE2 | 13BA 315 L2-6 | 1325 | 620 | 540 |
| 6 | 132 | 315 L | IE3 | 15BA 315 L2-6 | 1325 | 620 | 540 |
| 6 | 132 | 315 L | IE4 | 17BA 315 L2-6 | 1325 | 620 | 540 |

DIM
315

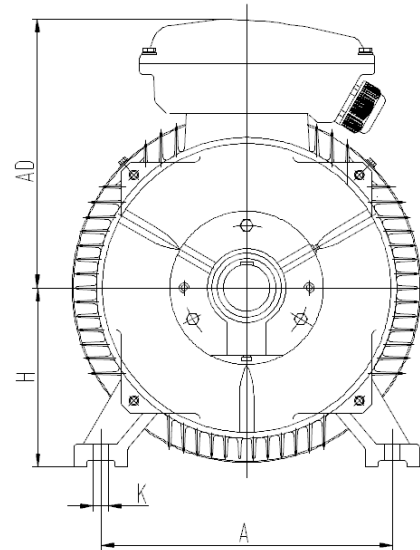
Übersicht

DIM Maße Baugröße 355 *dimensions frame size 355*

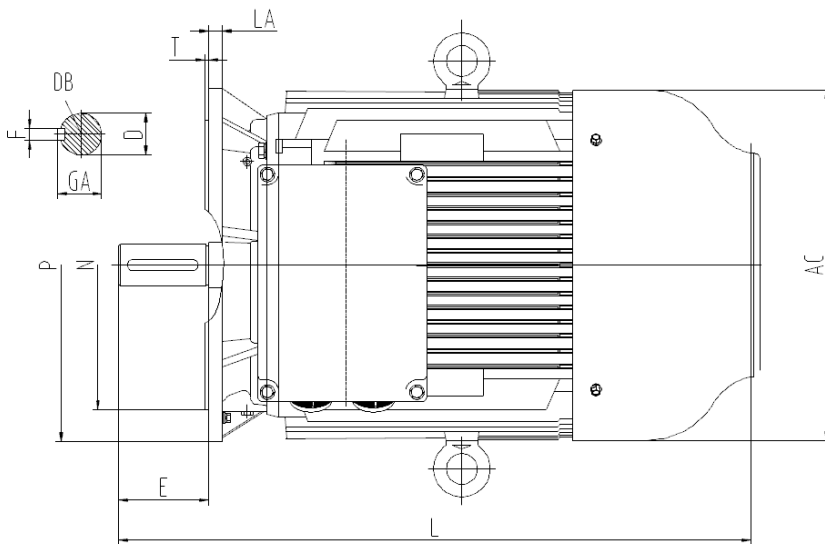
355 Fußbauformen *feet type of construction*



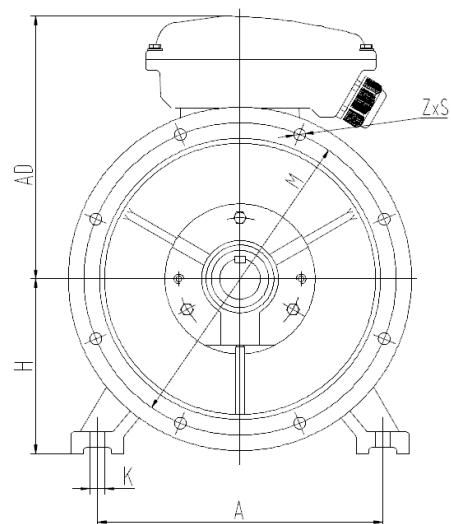
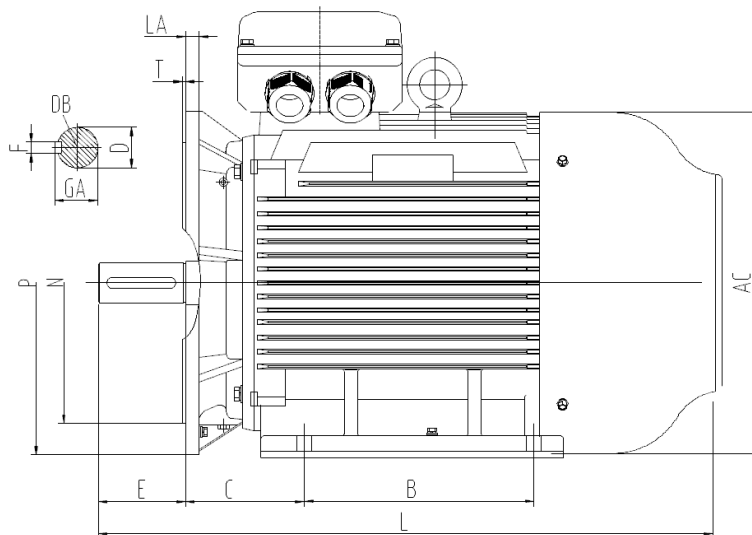
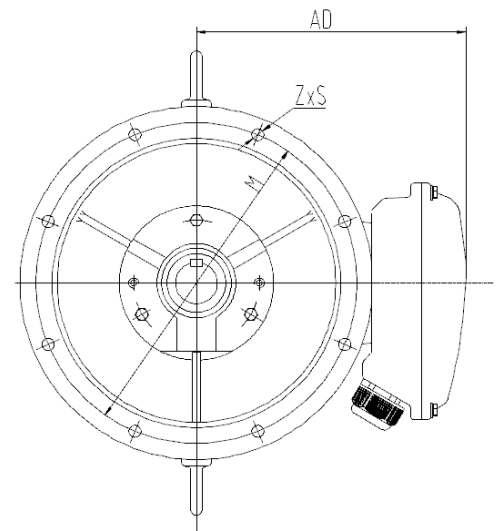
Flanschbauformen *flange type of construction*



Übersicht



Fuß- Flanschbauformen *feet / flange type of construction*



IEC Käfigläufermotoren *IEC squirrel-cage-motors*

Eigengekühlte Energiespartmotoren *self-ventilated energy saving motors*

| FüÙe <i>feet</i> | A | B | C | K |
|------------------|-----|-----|-----|----|
| 355 M | 610 | 560 | 254 | 28 |
| 355 L | 610 | 630 | 254 | 28 |

DIM
355

| Flansch <i>flange</i> | LA | M | N | P | S | T | Z |
|-----------------------|----|-----|-----|-----|----|---|---|
| B5 | 25 | 740 | 680 | 800 | 24 | 6 | 8 |
| B14a | - | - | - | - | - | - | - |
| B14b | - | - | - | - | - | - | - |

| Welle <i>shaft</i> | Pole | D | DB | E | F | GA |
|--------------------|-------|-----|-----|-----|----|-----|
| A-Seite DE | 2 | 80 | M20 | 170 | 22 | 85 |
| | 4,6,8 | 100 | M20 | 210 | 28 | 106 |

| LängenmaÙe <i>length dimensions</i> | | | | | | | |
|-------------------------------------|--------------|-------------------|------------|---------------|------|-----|-----|
| Pole | Leistung | BaugröÙe | Eff | Type | L | AC | AD |
| <i>pole</i> | <i>power</i> | <i>frame size</i> | <i>eff</i> | <i>type</i> | | | |
| 2 | 250 | 355 M | IE2 | 13BA 355 M-2 | 1530 | 700 | 647 |
| 2 | 250 | 355 M | IE3 | 15BA 355 M-2 | 1530 | 700 | 647 |
| 2 | 250 | 355 M | IE4 | 17BA 355 M-2 | 1530 | 700 | 647 |
| 2 | 315 | 355 L | IE2 | 13BA 355 L1-2 | 1530 | 700 | 647 |
| 2 | 315 | 355 L | IE3 | 15BA 355 L1-2 | 1530 | 700 | 647 |
| 2 | 315 | 355 L | IE4 | 17BA 355 L1-2 | 1530 | 700 | 647 |
| 2 | 355 | 355 L | IE2 | 13BA 355 L2-2 | 1530 | 700 | 647 |
| 2 | 355 | 355 L | IE3 | 15BA 355 L2-2 | | | |
| 2 | 355 | 355 L | IE4 | 17BA 355 L2-2 | | | |
| 4 | 250 | 355 M | IE2 | 13BA 355 M-4 | 1570 | 700 | 647 |
| 4 | 250 | 355 M | IE3 | 15BA 355 M-4 | 1570 | 700 | 647 |
| 4 | 250 | 355 M | IE4 | 17BA 355 M-4 | 1570 | 700 | 647 |
| 4 | 315 | 355 L | IE2 | 13BA 355 L1-4 | 1570 | 700 | 647 |
| 4 | 315 | 355 L | IE3 | 15BA 355 L1-4 | 1570 | 700 | 647 |
| 4 | 315 | 355 L | IE4 | 17BA 355 L1-4 | 1570 | 700 | 647 |
| 4 | 355 | 355 L | IE2 | 13BA 355 L2-4 | 1570 | 700 | 647 |
| 4 | 355 | 355 L | IE3 | 15BA 355 L2-4 | 1570 | 700 | 647 |
| 4 | 355 | 355 L | IE4 | 17BA 355 L2-4 | 1570 | 700 | 647 |
| 6 | 160 | 355 M | IE2 | 13BA 355 M1-6 | 1570 | 700 | 647 |
| 6 | 160 | 355 M | IE3 | 15BA 355 M1-6 | 1570 | 700 | 647 |
| 6 | 160 | 355 M | IE4 | 17BA 355 M1-6 | 1570 | 700 | 647 |
| 6 | 200 | 355 M | IE2 | 13BA 355 M3-6 | 1570 | 700 | 647 |
| 6 | 200 | 355 M | IE3 | 15BA 355 M2-6 | 1570 | 700 | 647 |
| 6 | 200 | 355 M | IE4 | 17BA 355 M2-6 | 1570 | 700 | 647 |
| 6 | 250 | 355 L | IE2 | 13BA 355 L2-6 | 1570 | 700 | 647 |
| 6 | 250 | 355 L | IE3 | 15BA 355 L1-6 | 1570 | 700 | 647 |
| 6 | 250 | 355 L | IE4 | 17BA 355 L1-6 | 1570 | 700 | 647 |

Übersicht



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