

The following table lists the most important technical specifications. For further information and details, see Catalog D 81.1 part 0 "Introduction".

Technical specifications at a glance

| Type of motor | IEC squirrel-cage motor |
|--|---|
| Connection types | Star connection/delta connection You can establish the connection type used from the Order No. supplements in the selection and ordering data for the required motor. |
| Number of poles | 2, 4, 6, 8, pole-changing for constant load torque (pole-changing for fans, see "Fan motors") |
| Rated speed (synchronous speed) | 750 ... 3000 rpm |
| Rated output | 0.06 ... 200 kW |
| Rated torque | 0.25 ... 1700 Nm |
| Insulation of the stator winding to EN 60034-1 (IEC 60034-1) | Temperature class 155 (F), used acc. to temperature class 130 (B) DURIGNIT IR 2000 insulation system |
| Degree of protection according to EN 60034-5 (IEC 60034-5) | IP55 as standard |
| Cooling according to EN 60034-6 (IEC 60034-6) | Self-ventilated (motor series 1LA, 1LG) Frame sizes 63 to 315 (IC 411), Frame size 56 (IC 410) Self-cooled (motor series 1LP) Frame sizes 63 to 315 (IC 410) |
| Admissible coolant temperature and site altitude | -20 °C ... +40 °C as standard, site altitude 1000 mm above sea level. See "Coolant temperature and site altitude" in Catalog D 81.1 part 0 "Introduction". |
| Standard voltages according to EN 60038 (IEC 60038) | 50 Hz: 230 V, 400 V, 500 V, 690 V The voltage used can be found in the selection and ordering data for the required motor. |
| Type of construction according to EN 60034-7 (IEC 60034-7): | Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6, IM V5 with protective cover With flange: IM B5, IM V1 without protective cover, IM V1 with protective cover, IM V3, IM B35 With standard flange: IM B14, IM V19, IM V18 without protective cover, IM V18 with protective cover, IM B34 With special flange: IM B14, IM V19, IM V18 without protective cover, IM V18 with protective cover, IM B34 |
| Paint finish Suitability of paint finish for climate group according to IEC 60721, Part 2-1 | Standard: Color RAL 7030 stone gray Climate group "worldwide" with special finish Climate group "moderate" with standard finish See "Paint finish" in Catalog D81.1 part 0 "Introduction". |
| Vibration quantity level according to EN 60034-14 (IEC 60034-14) | Level A (standard – without special vibration requirements) Level B (with special vibration requirements) See "Balance and vibration quantity" in Catalog D 81.1 part 0 "Introduction". |
| Shaft extension according to DIN 748 (IEC 60072) | Balance type: Half-key balancing See "Balance and vibration quantity" in Catalog D 81.1 part 0 "Introduction". |
| Sound pressure level to DIN EN ISO 1680 (tolerance +3dB) | The sound pressure level is listed in the selection and ordering data for the required motor. |
| Weights | The weight is listed in the selection and ordering data for the required motor. |
| Mechanical limit speeds | The limit speed for the required motor can be found on "Motors operating with frequency converters". |
| Packaging weights and dimensions | See "Packing weights and packing dimensions" in Catalog D 81.1 part 0 "Introduction". |
| Rating plates | Fixed to the motor See "Rating plate" in Catalog D 81.1 part 0 "Introduction". |
| Connection and connection boxes | See "Connection, circuit and connection box" in Catalog D 81.1 part 0 "Introduction". |
| Bearing design | See "Bearings" in Catalog D 81.1 part 0 "Introduction". |
| Cantilever forces | See "Admissible cantilever forces" in Catalog D 81.1 part 0 "Introduction". |
| Options | See the selection and ordering data for "Special versions" |

General note

All the data listed in the catalog is applicable for a 50 Hz line supply. With converter-fed operation, the reduction factors for constant torque and drives for fans, pumps and compressors must be observed. Noise values for motors operating with a converter at frequencies other than 50 Hz are available on request.

Mechanical limit speeds

When the motor is operated at its rated frequency, it is important to note that the maximum speeds are limited by the limits for the roller bearings, critical rotor speed and rigidity of the rotating parts.

Ventilation/noise generation (converter-fed operation)

The fan noise can increase at speeds that are higher than the rated speed of self-ventilated motors. To increase motor utilization at low speeds it is recommended that forced-ventilated motors are used.

Mechanical stress and grease lifetime (converter-fed operation)

High speeds that exceed the rated speed and the resulting increased vibrations alter the mechanical running smoothness and the bearings are subjected to increased mechanical stress. This reduces the grease lifetime and the bearing lifetime. More detailed information on request.