



Maintenance, operating and installation instructions (three phase motors)

Mechanical testing and installation

Before installing the motor must be checked for mechanical damage. For flange-motors with B 14 (FT) flanges, the maximum length to screw in the bolts is limited to 2.5 * Bolt diameter to avoid winding damage.

Installation

When setting up, in principle make sure that all operating conditions, for example: mode, protection, altitude, coolant temperature, etc. are adhered to.

Safety and qualified personnel

Before starting any work on the motor, be sure to isolate it from the power supply! This may only be done by qualified personnel. The manufacturer is not liable for damage caused by unprofessionell installation or improper operation of the electric motor.

Electrical connection

Before connecting the motor, check to see that the system voltage and frequency agree with the data on the rating plate. Connect the terminal links as shown in the diagram inside the terminal box. An insulation test is carried out with 500 V DC before handling. This should be at least 10 MΩ with new, cleaned and repaired windings. It is not allowed to operate the engine at values below 0.5 MΩ.

Transport and storage

The motor must kept dry and free of vibration. All openings for cables and screws must be temporarily sealed. To transport the engines, only the ring or eyebolts or hooks shall be used.

Excluded are additionally attached parts such as gears, fans, pumps, etc. If the eyelets removed after the installation, the vacant screw holes must be sealed and closed according to their degree of protection. For motors with roller bearings, the bearing must be secured during transport to prevent damage to the rollers and the inner ring.

Maintenance and Re-lubrication

All engines are equipped as standard with C3 bearings and ball bearing grease to DIN 51825 .In difficult operating conditions, special lubricants and bearings are required.

Motors of construction group 63-160 are equipped with closed 2Z bearings with a reference temperature of 85 °C. and cannot be re-lubricated. The motors of construction group 180-315 have open bearings with ball bearing grease on the basis of lithium soap with mineral oil. This can be used for re-lubrication.

Lubricant Type	frame size	number of poles	grease service life at 40°C in h	quantity in gram
Permanent lubrication	to 160	2	20.000	---
	to 160	4 - 8	40.000	---
Re-lubrication	180 - 280	2	4.000	25
	180 - 280	4 - 8	8.000	25 - 30
Re-lubrication	315	2	3.000	30
	315	4 - 8	6.000	40

Under severe conditions, such as high humidity, high coolant temperature, contamination by water, oil, dust, load changes, belt drive, unbalance, frequency converter, the interval is shortened..

From frame size 160 operating with a frequency converter, a current-insulated bearing is recommended on the N-site .

Fit and remove of drive components

Always use a suitable jig to fit and remove the drive components. Avoid any hard blows (e.g. with a hammer or other tools), or more than the maximum radial or axial forces are transmitted to the motor bearings on the shaft end.

Special models and design variants may differ technically in some details. In case of uncertainty, you are urgently recommended to contact the manufacturer, specifying type designation and serial number.

Subject to change without prior notice.