

Operating Instructions

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Three-phase Roller Table

TRANSLATION

Safety Note

Erection, connection together with setting and service work may only be performed by professional personnell under observation of the safety instructions.

Installation

The roller table motor complies with degree of protection IP65 to EN 60529 and is therefore totally enclosed, dust-proof and hose-proof.
A guard should be installed on site if the motors are subjected to continuous or heavy water impacts, e.g. water jets used for roller cooling or for descaling.
In selecting the location for the motor it is essential to ensure that radiated heat is kept to a minimum within the limits set by local conditions.

Connection to the power supply

The rating plate and the wiring diagram supplied in the motor terminal box shall be noted when the motor is connected to the main lines.
Two main leads must be interchanged if the motor rotates in the wrong direction. Proper sealing must be ensured when the terminal box is closed. If necessary, the joining surfaces will have to be regreased. Blind plugs should be screwed into unused cable entry holes.
If the winding is designed for two nominal voltages (for example 230/400 V), it must be connected in the usual manner on the terminal board, that is to say in delta for the low nominal voltage and in star for the higher nominal voltage.

Motor protection

The design of motor protection for roller table drives is normally based on principles different from those used for continuous operation at nominal load. As there is no actual „nominal current“ it is impossible to protect the motor against „overloading“ in the conventional sense.
However, protection against excessive temperature rise in the event of stalling under full voltage („locked rotor“ conditions for the motor) is possible. Experience has shown that with the thermal overload relay set to a certain percentage of the starting current, the relay will not trip in switching and reversing operation but will come into action in a sufficiently short time in the event of stalling the motor. With high-pole motors for intermittent duty the relay should be set to a maximum of 65 % of the starting current I_A or I_{St} specified on the rating plate.
With low-pole motor for continuous conveying duty the relay should be set for nominal current resp. full load current but not higher than 50 % of the starting current I_A or I_{St} .

Please note

The starting current flows with the rotor locked and with the motor connected to the full nominal voltage (that is to say, under stalling conditions for the motor). This is almost the highest current which is able to flow when the motor is connected to the nominal voltage. The overload relay cannot come into action if it is set to the starting current. The winding may be protected against the effects of continuous stalling and without the relay responding to ordinary switching operation, only if the setting value does not exceed approximately 65 % of the starting current.

Bearing lubrication

The rolling bearings of the gear unit are charged with ball bearing grease and will be lubricated by the gear lubricant during operation. The rolling bearings of the motor part are lubricated with ball bearing grease. Maintenance intervals for the rolling bearings vary depending on rotational speed, ambient temperature, loading etc.

For regreasing it is necessary for the bearings to be thoroughly cleaned after dismantling (for example, with white spirit or clean kerosene) after which they must be thoroughly dried. They should then be lubricated with a high-grade ball bearing grease. Approximately half the air space between the rolling members should be filled with grease. Larger quantities of grease may result in excessive heating of the bearings.