

- 1a MF09 with radial water connection
1b MF11 .. MF22 with axial water connection
2 Position water connection depends on terminal box position
3 flexible hoses for water connection, length 300 mm
4 Standard Resolver or SinCos encoder

- 1a MF09 mit radialem Wasseranschluß
1b MF11 .. MF22 mit axialem Wasseranschluß
2 Position Wasseranschluß abhängig von Klemmkastenlage
3 flexible Panzerschläuche zum Wasseranschluß, Länge 300mm
4 Standard Resolver oder SinCos-Geber

Liquid-cooled OSWALD synchronous motors and generators series M are particularly suitable when heavy demands are placed on a drive system. The motors are designed for wide speed range and high dynamic operation. OSWALD 6-pole MF motors in power ranges from 1kW to 175kW are characterized by highest power density with small space requirements. The totally enclosed MF motors are cooled over the integrated cooling jacket by water or oil. A high degree of reliability and low maintenance requirements result from use of prelubricated bearings as well as stable housing and bearing plates.

MF motors are designed for controlled drives with frequency inverters. Mounting of resolver or SinCos encoder is standard, other encoders on demand. The M series is the result of many years of experience with frequency controlled 3-phase squirrel cage motors. During development special attention was paid to low noise, high acceleration and break down torque, low rotor inertia and high maximum speed with a minimum of vibration.

Features

- High maximum speed
- Extremely low noise
- No rotor losses
- With NdFeB magnets
- Optional integrated planetary gear
- Optional integrated axial thrust bearing

Features of Oswald Motors

- Compact, robust, high force density
- Maintenance-free or low maintenance
- Low inertia, dynamical
- Long life
- Made in Germany

Technical Specifications

- Torque: 100-2,000 Nm
- Power: 10-300 kW
- Speed: up to 9000 rpm



- Cooling: fluid
- Protection class: IP23- IP65

Design

The motors are designed according to relevant standards and regulations, particularly DIN EN 60034/VDE 0530-1, DIN42676/42677/42948. An exception to this is the arrangement of shaft dimensions and partially the flange dimensions; on this please see detailed dimension sheets. Mechanical mountings: B5, V1, B3, B35.

Power

The power ratings in the tables are valid for rating 100Hz and 150Hz. The motors can be controlled up to the specified nominal speed n_N at constant torque and up to speed n_F at constant power. At speed higher than n_F the power is reduced. Rating power P_N for continuous operation S1 with corresponding data frequency, torque and current are specified. S3-power: $P(S3-x\%ED) = P / \sqrt{x\% / 100\%}$. If desired other voltage, nominal speed and speed range can be offered. For inverter size please see nominal and overload current.

Cooling System

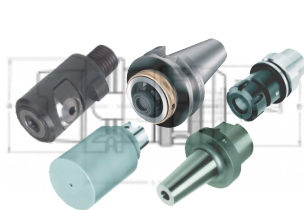
The losses of liquid-cooled motors are carried off by means of the cooling medium (mostly water). In the series MF the liquid flows through an integrated cooling jacket. The cooling system of OSWALD MF motors is resistant to aggressive mediums due to the use of stainless steel or copper, therefore the water needs no corrosion preventive. In open cooling systems clear cooling water must be used. The pollution by dirt particles should be avoided by installing filter systems (filtering <100micro-m). Any accumulation of silting up or furring must be prevented. The inlet temperature of cooling water is 25 degrees C. At higher temperature, power has to be reduced. Condensing water must be avoided; when cooling water temperature is below room temperature the water flow has to be stopped when motor stops for longer time. Please see the detailed data on motor nameplate.

Contact us to adapt the electrical and mechanical design to your specific requirements.

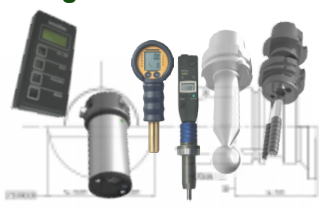
TAC Rockford Product Line

Machine Tool Gauges, Tool Changer Alignment, Runout Test Arbors, Workholding Systems, Tool Holders, Adapters and Extensions, Tool Holder Blanks, Machine Tool Accessories, Coolant Tubes and Gauges, Heat Shrink Systems, Rapid Prototyping

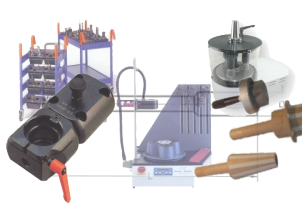
Tool Holders



Gauges



Accessories



Rapid Prototyping

