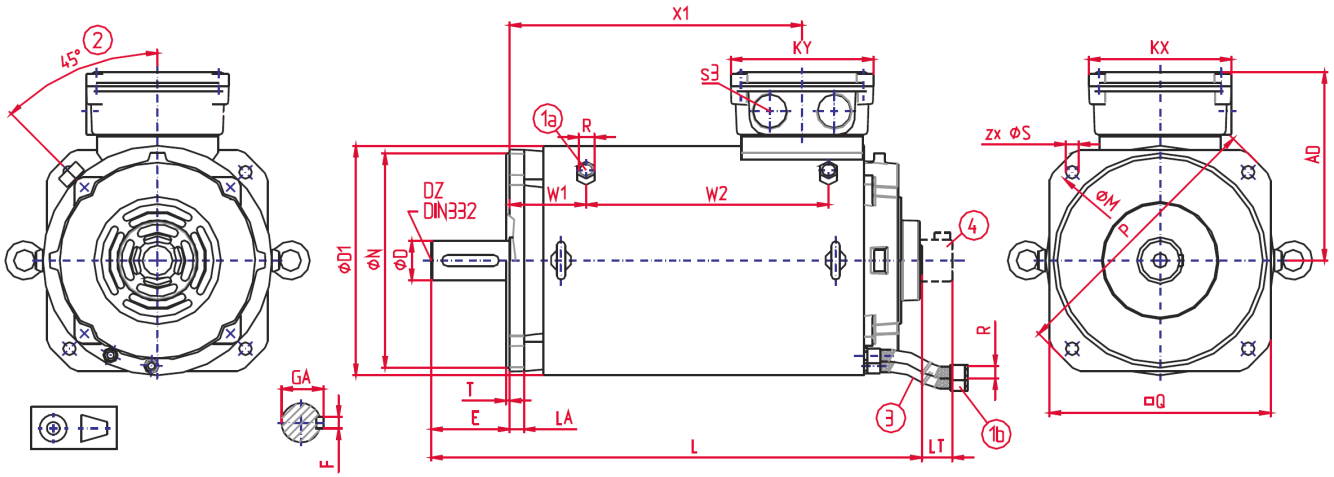

1a FQD09 with radial water connection
1b FQD11 .. FQD22 with axial water connection
2 Position water connection depends on terminal box position
3 flexible hoses for water connection, length 300 mm
4 Standard Encoder Heidenhain ROD420-TTL / ROD430-HTL

1a FQD09 mit radialem Wasseranschluß
1b FQD11 .. FQD22 mit axialem Wasseranschluß
2 Position Wasseranschluß abhängig von Klemmkastenlage
3 flexible Panzerschläuche zum Wasseranschluß, Länge 300mm
4 Standardgeber Heidenhain ROD420-TTL / ROD430-HTL

Liquid-cooled OSWALD asynchronous motors and generators series FQD 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 4-pole FQD motors in power ranges from 1kW to 700kW are characterized by a high power density with small space requirements. The totally enclosed FQD 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. FQD motors are suitable best for controlled drives with frequency inverters. The installation of an encoder allows field oriented speed control. The FQD 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.

Typical Applications

The asynchronous motors of the FQD-series are best suited for extruding and injection moulding machines, machine tools, vehicle drives, testing systems, packaging machines, extruder, textile machines, wire drawing mills, printing machines, hydro-electric power plants, etc...

Features

· High maximum speed
· Wide range of field weakening
· Extremely low noise

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 at S1 duty cycle: 50-1000 Nm
· Power: 5-600 kW

Tel 815 962-5600 | Fax 815 962-4600
www.tac.us | info@tac.us
304 North Main Street | Suite 104 | Rockford, IL 61101 USA

· Speed: up to 20,000 rpm
· Cooling: fluid
· Protection class: IP54· IP65

Design

The motors are designed acc. 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 50Hz and 70Hz. The motors can be controlled up to the specified nominal speed nN at constant torque and up to speed nF at constant power. At speed higher than nF the power is reduced. Rating power PN 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 FQD the liquid flows through an integrated cooling jacket.
The cooling system of OSWALD FQD 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 avoid by installing filter systems (filtering <100micro-m). Any accumulation of silting up or furling must be prevented. The inlet temperature of cooling water is 25°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 name plate.

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

Tel 815 962-5600 | Fax 815 962-4600
www.tac.us | info@tac.us
304 North Main Street | Suite 104 | Rockford, IL 61101 USA