High Efficiency Permanent magnet-synchronous-submersible motors 6 / 8 / 10 inches

Applications

The **oddesse** submersible motors of the series **po-mo-s** are designed to drive submersible pumps. They are also applicable for other submersible machines and offshore operation.

Design

The **oddesse** submersible motor is a Permanent magnet-synchronous motor and is designed as a wet-running motor with a watertight insulated winding. All motors are rewindable. The motor connection for 6- and 8-inch motors are according to NEMA-standard, 10- inch motors are according to international standards. The connection between motors and pumps are realized by a rigid coupling.
The bearings are lubricated by the motor filling. It is a mixture of glycerine and water. Glycerine is biodegradable and secures the anti freeze protection up to -25 °C. If necessary, it can be changed with pure drinking water.
Axial down thrusts will be absorbed by the axial thrust bearing with individual tilting pads.
Motors are encapsulated by a high quality mechanical seal. A reliable balance system grant the pressure compensation between motor and its environment.
The motors are completed with pressure-water tide cable. They are inside earthed.
Construction complies with VDE-regulations and the motors are conform to the EC declaration of conformity.
Motors are usable in horizontal and diagonal position depending of the nominal power. **oddesse** motors are working electrical clock- and anticlockwise.
A high efficiency guarantees lowest operating costs..

For the operation of the motor it is necessary to use a suitable frequency converter programmed with special software. Additionally it is advisable to use a sine-wave filter or du/dt-filter.

For all the motors **oddesse** hold a detailed supply of control and monitoring equipment available.

Operating data

- Nominal power: up to 350 kW
- Voltage : 400 V to 500 V; other voltages optional
- Kind of currency: 3 ~
- Frequency : 50 Hz and 60 Hz
- Degree of protection: IP 68
- Ambient temperature: up to 50 °C
- Switching frequency: max. 20/h
- Nominal speed: 3000 1/min and 3600 1/min with 50 Hz frequency power feed

Special design (on request)

- special voltage
- power supply cable
- pump connection
- higher temperatures
- suction jacket
- other quality of pumped medium, for example sea water or chemically polluted liquids
- temperature monitoring with PTC / Pt100 including reporting device
- microprocessor controlled motor monitoring

Operating conditions

All **oddesse** Permanent magnet-synchronous-submersible motors have to run with a suitable frequency converter programmed with special software. Following items should be considered:

- the frequency transformer must be conform to the nominal currency of the submersible motor, see data sheets
- the maximal working range from 1.740 up to 3.600 1/min
- the using of a sine-wave filter or du/dt-filter protect against high voltage peaks
- the minimum rate of flow must be guaranteed

All output data refer to the measurement of oddesse original equipment.

Material of construction

Submersible motor po-mo-s6.1 / po-mo-s8.1 / po-mo-s10.1

According to DIN

components	design		
	C-version (AISI 304)	**X-version (AISI 316)**	**Y-version (AISI 904L)**
shaft	stainless steel / 1.4313	stainless steel / 1.4462	
motor flange	stainless steel / 1.4571		stainless steel / 1.4539
motor jacket	stainless steel / 1.4306	stainless steel / 1.4571	stainless steel / 1.4539
radial bearing	stainless steel / carbon		
thrust bearing	stainless steel / carbon		
screws, nuts and bolts	stainless steel A2 / 1.4301/1.4303	stainless steel A4 / 1.4401	stainless steel / 1.4539
mechanical seal	carbon / ceramic	SiC / SiC	
	optional: SiC / SiC available for all motors		

According to AISI

components	design		
	C-version (AISI 304)	**X-version (AISI 316)**	**Y-version (AISI 904L)**
shaft	stainless steel / AISI 304	duplex steel	
motor flange	stainless steel / AISI 316Ti		stainless steel / AISI 904L
motor jacket	stainless steel / AISI 304	stainless steel / AISI 316 Ti	stainless steel / AISI 904L
radial bearing	stainless steel / carbon		
thrust bearing	stainless steel / carbon		
screws, nuts and bolts	stainless steel / AISI 304 / 305	stainless steel / AISI 316	stainless steel / AISI 904L
mechanical seal	carbon / ceramic	SiC / SiC	
	optional: SiC / SiC available for all motors		

Subject to alterations