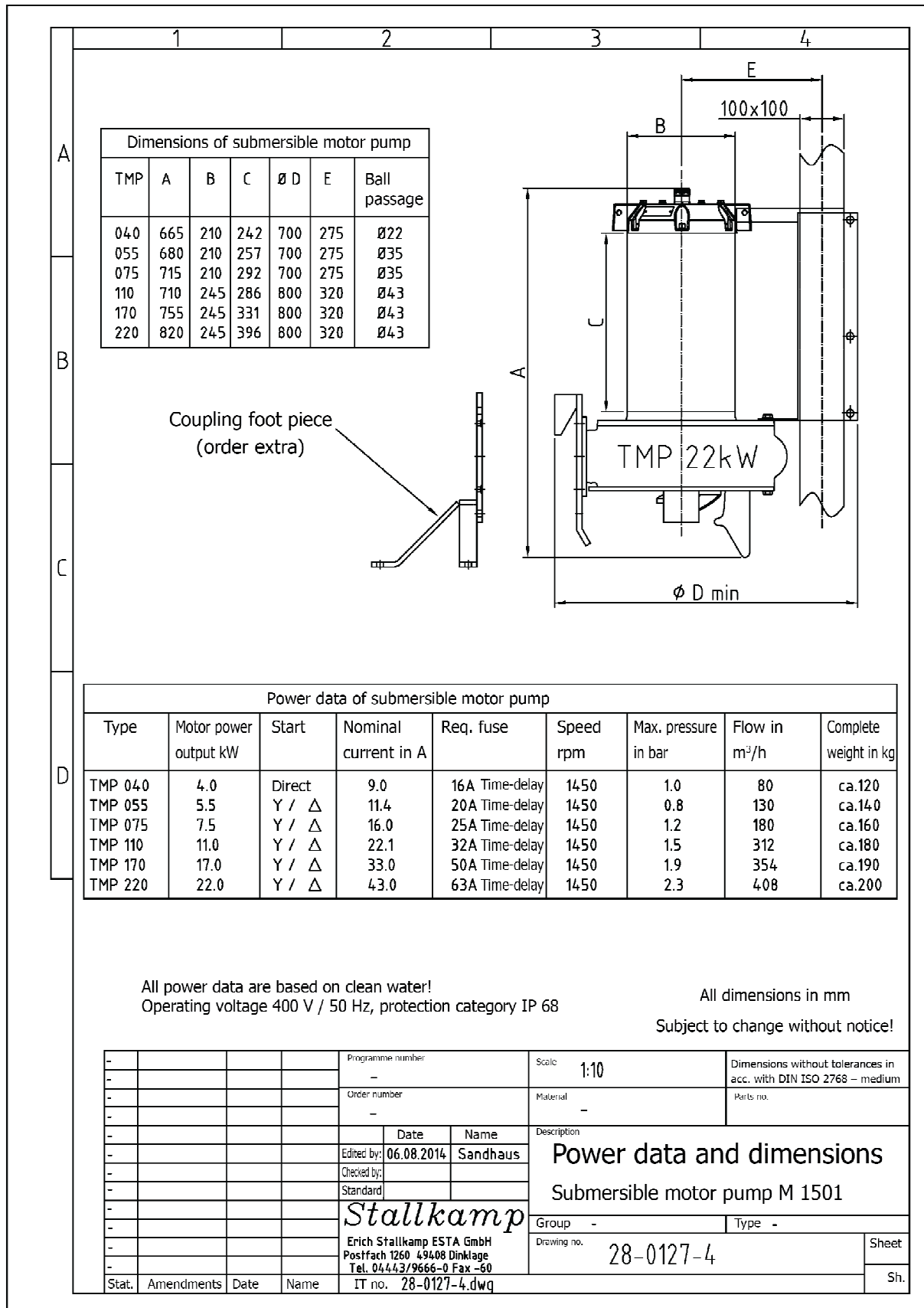


7 POWER DATA AND DIMENSIONS OF TMP TYPE 2 M1501



8 CONSTRUCTION TYPE OF TMP TYPE 2 M1501

8.1 Cable connection

The cable connection compartment is completely sealed off from the surrounding liquid and towards the crankcase.

8.2 Motor

Threephase asynchronous motor as short circuit rotor at 50 Hz.

Permanent operation or intermittent operation with max. 6 evenly distributed activations per hour. The stator is insulated according to class F (155°C). The motor has been designed in such a way that in the case of nominal voltage deviations up to +/- 5% it can still attain an unchanged nominal output. With regard to the danger of overheating, +/- 10% deviations in the nominal voltage are allowed, provided that the motor is not running at full load the whole time. The difference between the individual phases must not exceed 2%.

8.3 Monitoring device

Three series-connected temperature sensors are installed in the stator winding. These will start reacting at 150°C.

ATTENTION! The temperature sensing switches must always be connected.

The device can be equipped with detectors: namely with a leakage detector for the detection of water in the oil.

8.4 Oil chamber

The device is equipped with an oil chamber between the motor and the pump impeller. This oil chamber contains an oil filling, which must be checked once annually.

8.5 Pump impeller

The devices are equipped with tungsten carbide-plated steel impellers. The size of the impeller depends on the construction size and the power consumption of the motors. In special cases when a pump is continuously running in the overload range, a smaller impeller is required.

9 TRANSPORT AND STORAGE REGULATIONS OF TMP TYPE 2 M1501

The device must be transported in a lying position. Ensure that the machine is not unable to roll.

If the device is not used for a long period of time, it must be protected against moisture and heat. The impeller should be turned from time to time (approx. every two months) to ensure that the sealing surfaces do not adhere to each another. This is absolutely essential when the device is not in use.

The device must be inspected before being recommissioned after not being used for a long period of time. It is particularly important to verify that the cable entry points and seals are not damaged in any way.

The directions under point 4 "Safety" must be observed.

10 INSTALLATION OF TMP TYPE 2 M1501

10.1 Prior to commissioning: Safety instructions

The following rules should fundamentally be observed to prevent accidents during maintenance and installation work:

- (1) Never work alone. The danger of drowning and suffocation must not be underestimated.
- (2) Check whether sufficient oxygen is available and that no poisonous gases exist.
- (3) Before welding work or using electrical tools, check whether there is a danger of explosion.
- (4) Pay attention to the danger of electrical accidents.
- (5) Examine lifting gear to ensure its fully satisfactory condition.
- (6) Ensure an adequate shutoff at the place of work, e.g., cordoning trellis
- (7) Wear a hardhat, safety glasses and safety footwear.
- (8) Keep a first-aid kit ready.

Otherwise observe the health and safety regulations as well as the prevailing governmental regulations.

10.2 Commissioning the submersible motor pump

- (1) The device can only be operated with a suitable bracket (see: lifting gear from the Stallkamp range). Lower the device completely into the liquid manure, making sure that the rope of the lifting gear is taut at all times and that the electrical cable does not come into contact with the impeller.
- (2) Connect the pump's pressure connector up to the pressure main tightly so no pressure is lost.
- (3) Commission the device with the delta-wye motor protection switch. Attention: turn through to "Delta"!

The impeller turns clockwise when viewed from the pump inlet (from below) (see 11.2 Impeller direction test).

- (4) As standard, the device is protected by:
 - a) an overload protection in the switch box
 - b) an overheating protection.

In case of an overload or of overheating, the device is switched off by a motor protection switch. If the device was switched off as a result of overheating, under no circumstances should you try to restart it by pressing the switch repeatedly.

A cooling phase of approx. half an hour must be maintained in order to avoid damage occurring to the motor winding. In some cases, it may be possible to restart the device after approx. 5 minutes, although the motor winding is still partly hot. Even in these cases, it is still important to maintain the cooling phase of approx. half an hour.

ATTENTION: The motor of the device must always remain fully immersed in the liquid to ensure that sufficient cooling is guaranteed at all times.

- (5) The secure positioning of all screws and connections must be verified.

10.3 Leakage display – special equipment –

In the cases of leaks, i.e., if liquid manure or other foreign liquid enters the device, the control lamp on the switch box lights up. The unit switches off after approx. half an hour. If this is the case, lift the device out of the liquid and ascertain the reason for the disturbance.

10.4 Securing the electrical cable

The electrical cable must be affixed to the rope with cable clips so that it is protected against damage from the impeller.

Important: When raising and lowering the device, always pay attention to the correct guidance of the electrical cable as it could otherwise be damaged by the impeller or the cable screw connections.

10.5 Cleaning the device

- (1) Pressure washers must not be used to clean the device.
- (2) The delta-wye motor protection switch must be fastened so that it is protected against moisture.