
Manual Paint Heater Type 32Ex1R

Technical data:

Article number:	045a-105
Electric heating capacity:	3200 W
Voltage:	240 V (50/60 Hz)
Current:	13.3 A
Weight:	19.4 kg
Max. operating pressure:	500 bar
Height:	approx. 680 mm
Width:	approx. 150 mm
Depth:	approx. 180 mm
Hose-pipe connection:	M 20x1.5 (outside thread)
Temperature controller:	0 - 82 °C
Temperature limiting:	106 °C

General information:

The paint heater Type 32 Ex 1R is Ex-protected according to EN-Standard No 50 014 (1997), 50 018 (2000) and 50 019 (1987).
EC Type Test Certificate No.: KEMA 03ATEX2165.

As the nominated institute number 0123 according to article 9 of the directive 94/9EC of the Council of the European Community dated to the 23rd of March 1994, the TÜV Product Service certifies the fulfilment of the of the fundamental safety an health requirements for the conception and construction of equipment and protective systems for authorised use in explosion prone areas according to Appendix II of the directive.

The appliance also fulfils the requirements of the EMC directive 89/336/EEC. The scope of testing includes interference transmissions according to EN 50081-1, EN 61000-3-2 (IEC 1000-3-2) and EN 61000-3-3 (IEC 1000-3-3).

Advantages of painting with heated paint:

- By heating up the paint prior to application a definite reduction of viscosity is archived. Due to this a significant amount of solvent may be saved.
- Heated paint can be vaporized at a lower pressure rating. This results in less production of paint mist (over spray) and thus in a significant improve in efficiency (material economy).
- Improved working environment through lower solvent concentration.
- Due to the lower spraying pressure the wear of the nozzles and pump parts is substantially reduced.
- There is no more two-coat painting necessary because due to the higher material concentration a better coverage is archived while the required time for painting is halved.
- Excellent vaporizing- and flow characteristics of the heated paint.
- Constant paint temperature even with changing ambient temperatures.
- Reduced drying time.
- Higher productivity of drying ovens.
- Lower probability of the run of the paint.

Field of application:

The Kern paint heaters can be used for both primers as well as coating lacquers. All parts of the appliance which are in contact with paint are made of stainless steel. Solvent containing- and water-based paints may be processed. An application in the food- or chemical industry is also possible.



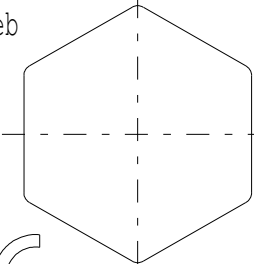


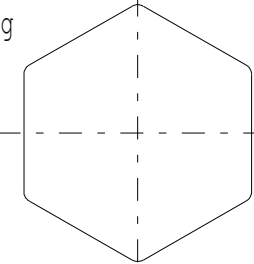
The main fields of application include steel construction, heavy- and special vehicle fabrication, construction machinery industry, furniture- and window fabrication industries.

Safety instructions:



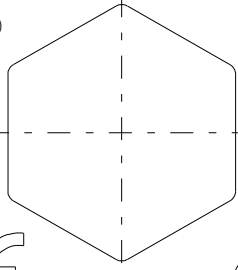


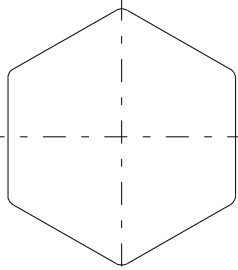
- To ensure a full protection from explosions the power supply in explosion-prone areas has to take place by using an explosion proof plug connection.
- Heated paints are rated as danger class A 1 and must only be processed in explosion proof facilities.
- Heated paints must not be poured back into their repository of removal.
- Modifications and interventions on electrical parts of the flow heater may only be conducted by the manufacturer.
- With long operation time certain components of the paint heater attain a surface temperature above the burning limit of 43 °C, a contact time longer than 1 sec. is impermissible.
- The maximum operating pressure, voltage and current stated on the appliance must not under any circumstances be exceeded.
- Please observe § 9 of the "Provisions for electrical equipment in explosion-prone rooms" (applies to Germany) when conducting any repairs on the paint heater.

Rating plate data:

Versions with an operating voltage of 110 V / AC and 240 V / AC

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Version with an operating voltage of 400 V / AC

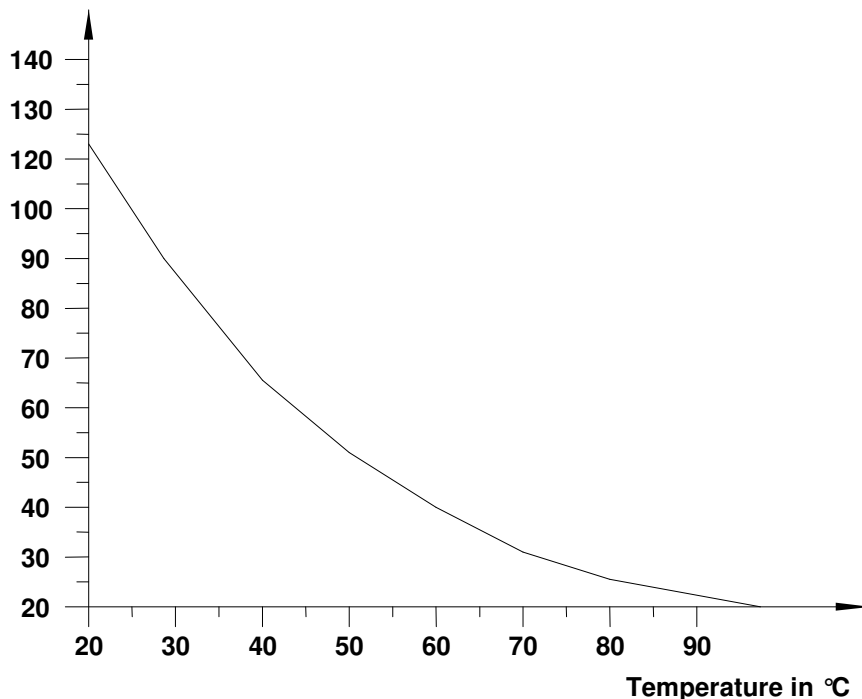
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		Made in Germany
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Instructions for operation:

All paint heaters have to be equipped with a fuse suitable for their rated nominal current (max. 3xIB according to IEC 60127-2-1) or with a motor circuit breaker with short-circuit- and thermal instantaneous release (adjusted to the nominal current). With very small nominal currents a fuse with the lowest current value according to the ICE-standard is sufficient. The fuse may be placed in the associated power supply unit or it has to be slotted in ahead of the paint heater separately. The nominal voltage of the fuse has to be equal or greater than the nominal voltage of the paint heater. The braking capacity of the fuse has to be equal or greater than the maximum possible short-circuit current which may occur at the place of installation (usually 1500 Ampere).

Viscosity - temperature diagram:

**Viscosity in DIN-Units
(4mm Cup)**



An increase in temperature by 50 °C (from 20 °C to 70 °C) causes a reduction in viscosity of approximately 100 DIN-Units.
Further heating up to more than 70 °C is not necessary because this does not cause a notable further reduction in viscosity.

Installation and commissioning:

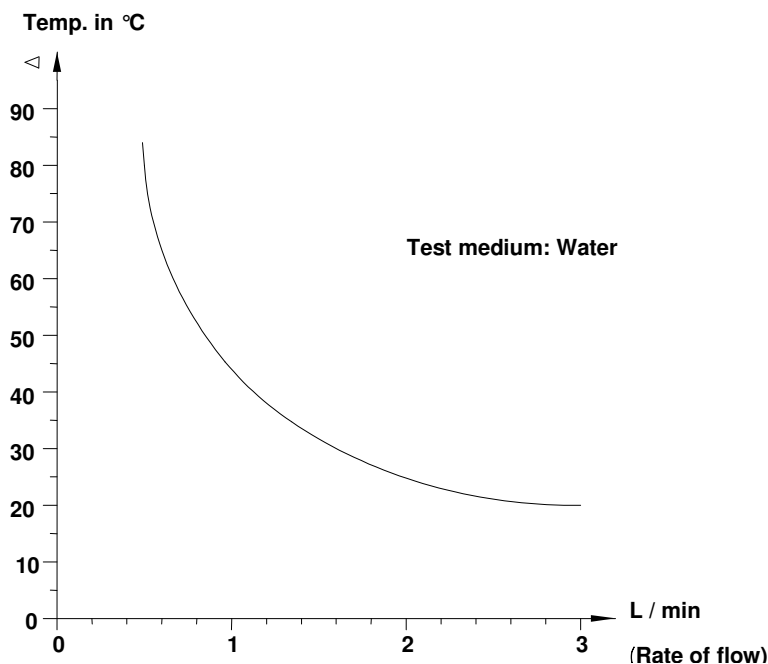
!! Caution !!

Prior to the commissioning of the appliance please rinse the paint coil with a detergent!

The paint heater is suitable for installation in stationary or mobile facilities. The appliance is mounted by the three internal threads (M12 x 20mm) on the backside. The high pressure hoses are connected to the paint heater via the connecting fittings by a M20 x 1.5 thread and a 60° stuffing cone. The flow direction of the medium to be heated may be chosen arbitrary. But preferably the inflow should take place at the head of the appliance and the emission at the bottom. The power supply lead has to be fused with at least 16 Ampere.

To put the paint heater into operation the thermostat switch at the head of the appliance has to be actuated. In the switch position 0 the heating element turned off. The switch position 1-2-3-4-5 as well as every switch position inbetween correspond to an increase in paint outlet temperature with the rate of flow is kept constant. The most favourable thermostat setting has to be proved in practice because the outlet temperature also depends on the size of the used spray nozzle, the spraying pressure, the ambient temperature and also on the heat capacity and -conductivity of the sprayed medium. The performance chart shows the dependency of the amount of the sprayed medium, in this case water, compared to the temperature.

(Difference in temperature)

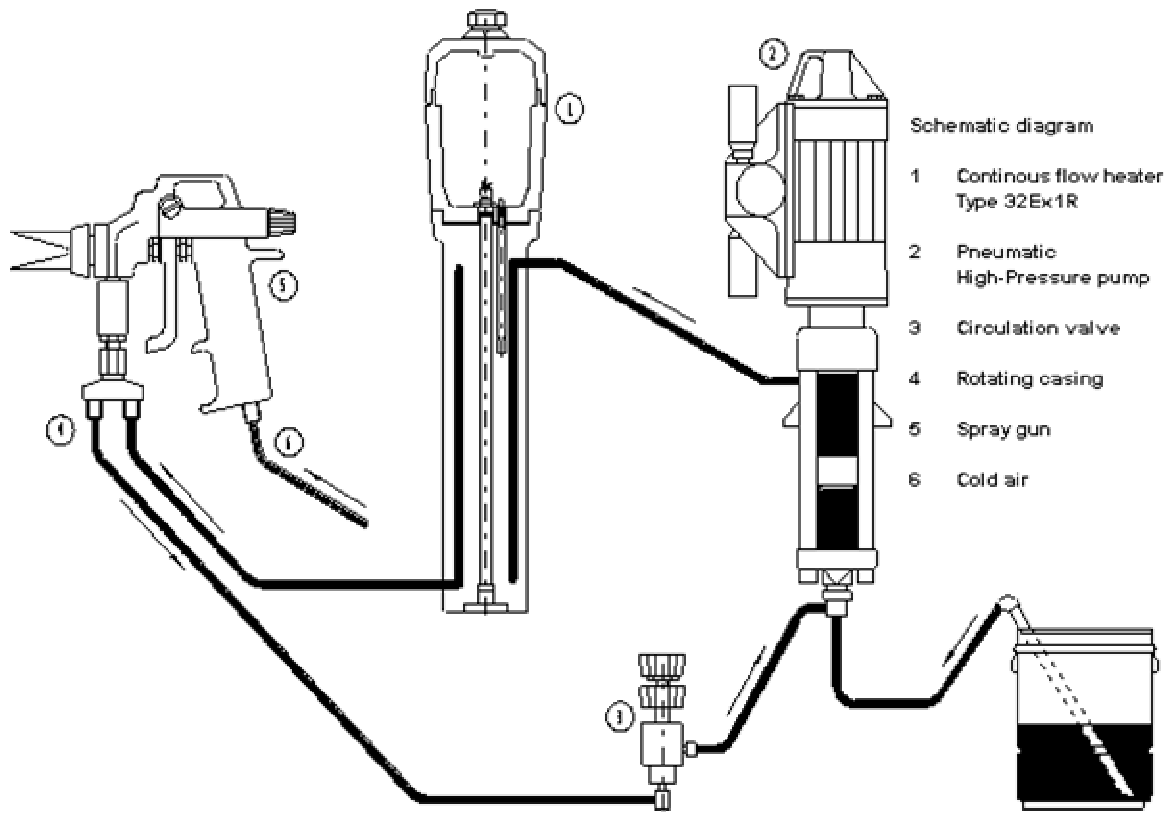


Maintenance:

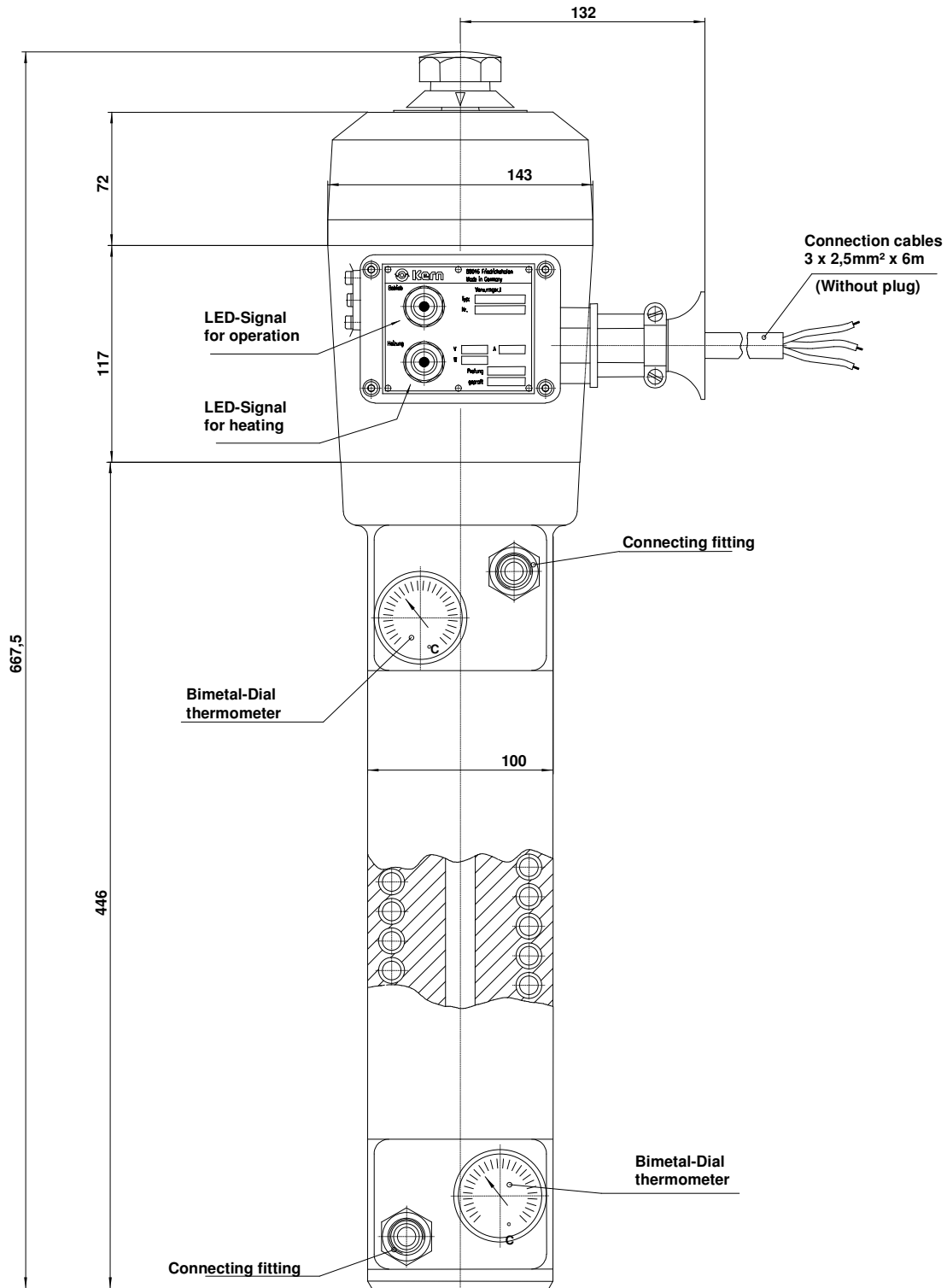
If the paint heater is not in use over a longer period of time the spraying medium inside the coil of the continuous flow heater may cool down. Thus the pipe system of the continuous flow heater should be scoured with a suitable detergent until any remaining paint is rinsed; while the appliance is turned off. If this service is not done the residues of the spraying medium might cure inside the coil what again may reduce the cross-section of the pipe. This may lead to the destruction of the pain heater.

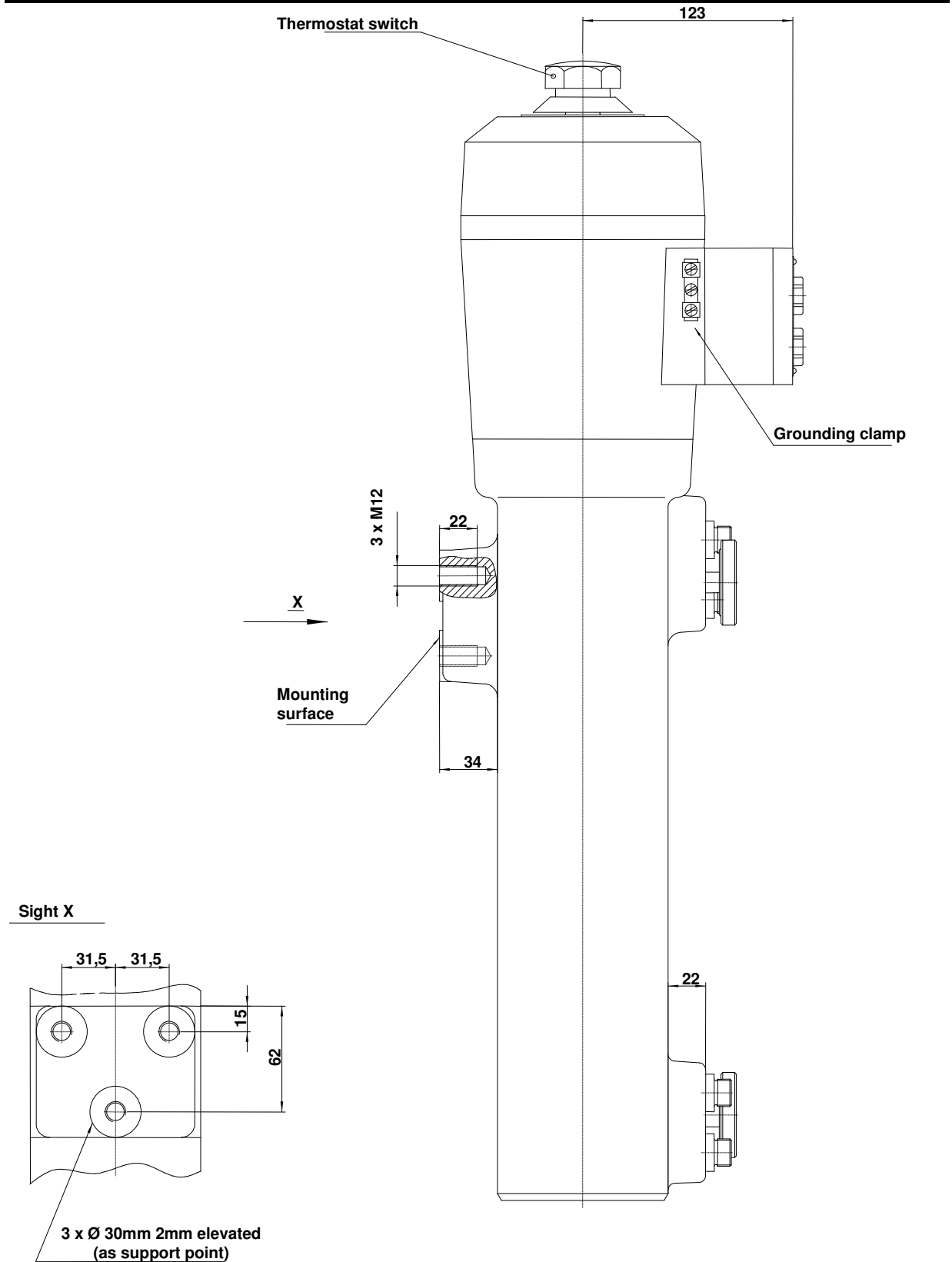
Do never switch on an uncleaned paint heater as the residues of the spraying medium may burn in.

Schematic diagram of the connections:

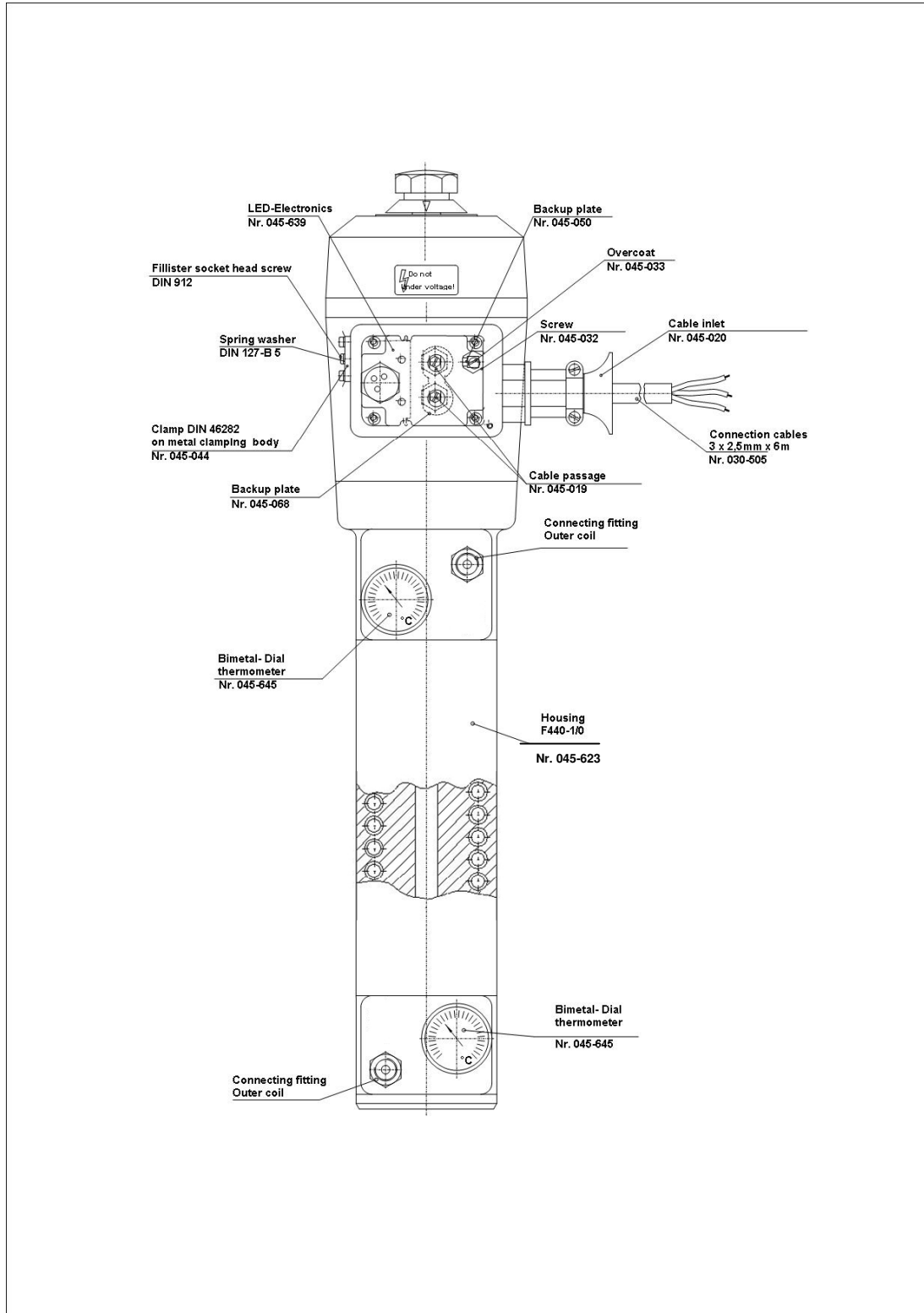


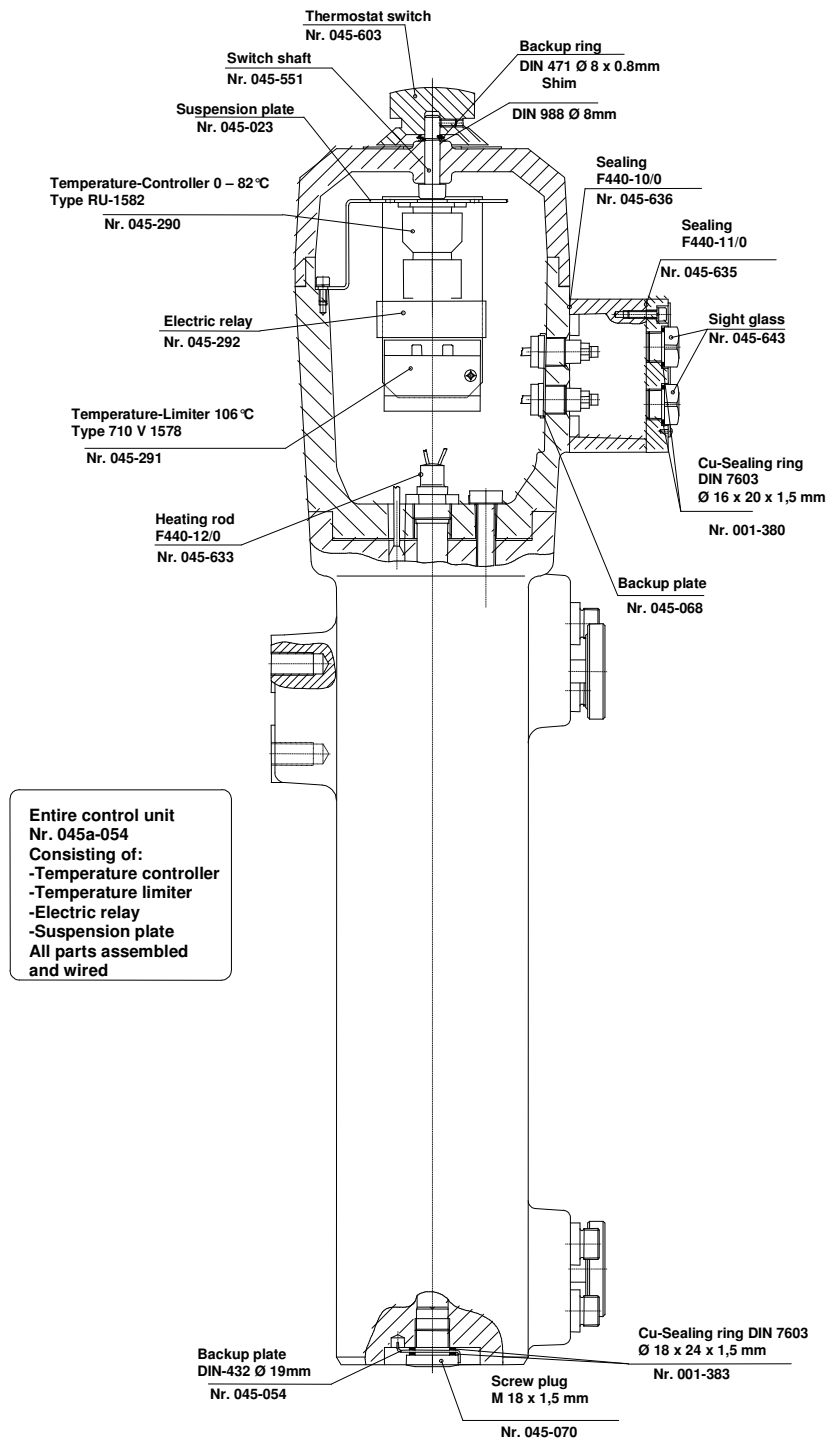
Installation drawing:





Spare parts drawing:





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