ANEST IWATA
EUROPE

Instruction Manual

FLOW HEATER 32E X 2R

EEx de II BT3
PTB No. EX-94.C.1060

GB Before use, adjustment or maintenance, you must read completely this instruction manual very carefully. This must be kept for any future reference.

IMPORTANT

This equipment should be operated only by an adequately trained operator for safe use and maintenance of the equipment. Any misuse or handling other than those indicated in this Instruction Manual is not covered by guarantee. Anest Iwata disclaims all responsibility for any accident or damage caused by failure to observe the operational and safety procedures contained in this manual.
In the interest of user friendliness, this manual contains information in a brief and concise format.
For any additional information you may require regarding the heater operations, or if any missing parts or any damage during transportation is found, please contact your nearest Anest Iwata Company (see last cover page).

SPECIFICATION

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:	**250 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 °**
Temperature limiter:	**106 °C**

GENERAL INFORMATION:

Type 32EX2R flow heater is explosion protected according to EN-standard No. 50 014, 50 018 and 50 019. Official acceptance in accordance with PTB-Test Specification EEX de II B T3. Conformity certification number is Ex-94.C.1060.
Furthermore, the appliance conforms to the requirements of the EMC-guideline 89/336/EEC. The scope of testing included interference emission according to EN 50081-1, EN 61000-3-2 (IEC 1000-3-2) and EN61000-3-3 (IEC 1000-3-3).

ADVANTAGES OF HOT-SPRAYING:

- By warming up the paint prior to application, substantial reduction of viscosity is attained, whereby substantial amount of solvents is saved.

- Heated paint can be atomised with lower pressure rating. This results in less paint-vapour (over spray), and thus the efficiency (material exploitation) is remarkably improved (paint saving).

- Improved working environment through lower solvent concentration.

- Due to the lower spraying pressure, the wear on nozzles and pump parts is substantially reduced.

- Transition from two- to one-layer painting, because higher material concentration achieves a better coating effect and the required time for spraying is halved.

- Excellent atomisation and flow characteristics of heated paint

- Constant paint temperature even at changing outside temperatures

- Shorter drying time

- Higher production capacity of ovens and drying chambers

- Less danger of paint-run formation

OPERATIVE RANGES:

The flow heaters can be used both for priming as well as for covering paints. Parts of the appliance in contact with paint are made of stainless steel. Paints with solvent content and water paints can be processed. Application in foodstuff or chemical industry is also possible.
Among the main application areas are the steel construction, heavy- and special- vehicle manufacturing sectors, construction machinery industry, furniture and window manufacturing industries.

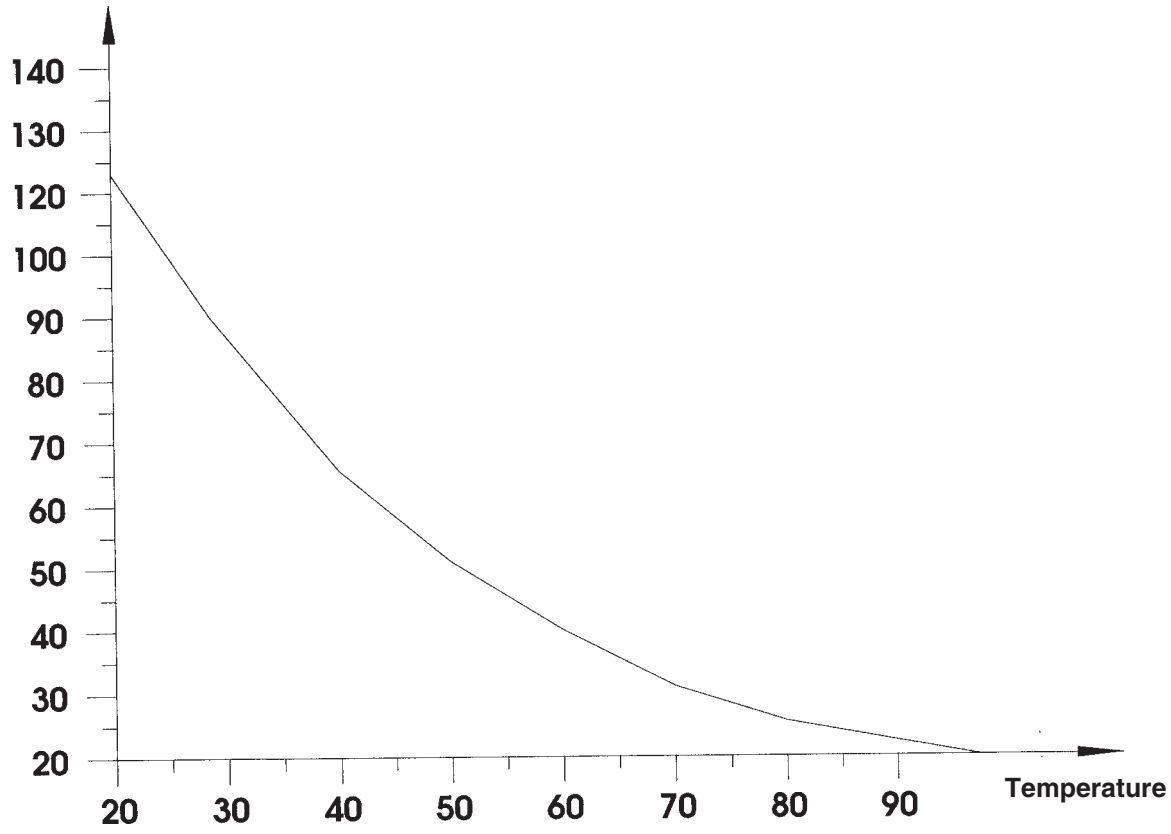
SAFETY REGULATIONS:

- Due to the requirement of explosion protection, connection to power mains within explosion-endangered area is only permissible if an explosion-protected plug-in device is used.
- Heated paints are classified in Danger Class A 1 and must be processed with explosion-protected equipment.
- Heated paints must not be recirculated into the dispensing paint drum.
- Changes and interventions on electrical parts of the flow heater may be carried out only by the manufacturer.
- Since certain components of this flow heater can attain surface temperatures above the burning limit of 43 °C when used for a long time, contact period longer than 1 sec. is not permissible.
- The max. operating pressure, voltage and current should never be exceeded.
- Please observe § 9 of the "Provisions for electrical equipment in explosion threatened rooms" (applies to Germany) when carrying out repairs on the flow heater.

VISCOSITY - TEMPERATURE DIAGRAM

Temperature increase of 50 °C (from 20 °C to 70 °C) causes viscosity reduction of approx. 100 DIN-s. Characteristic for most types of paint and varnishes is the experience fact that temperature increase above 70 °C does not achieve any remarkable viscosity reduction.

Viscosity [DIN-s]
(4 mm # "Ford")

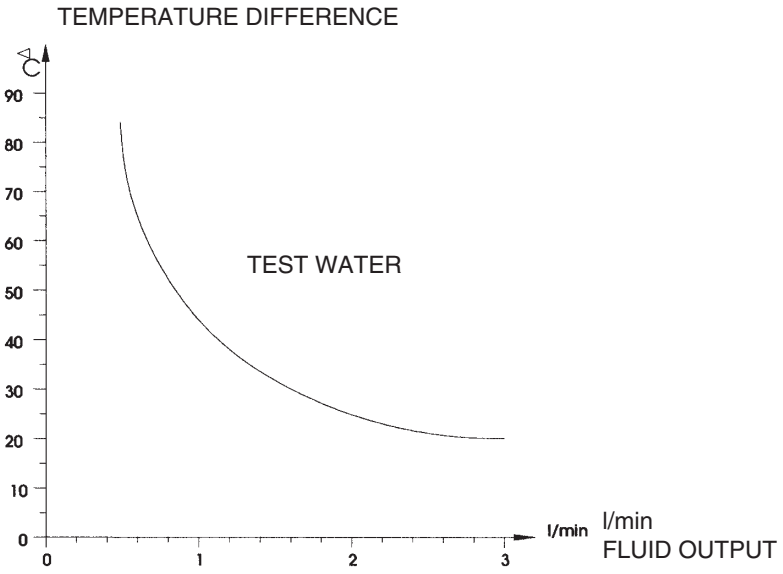


ASSEMBLY AND COMMISSIONING:

CAUTION

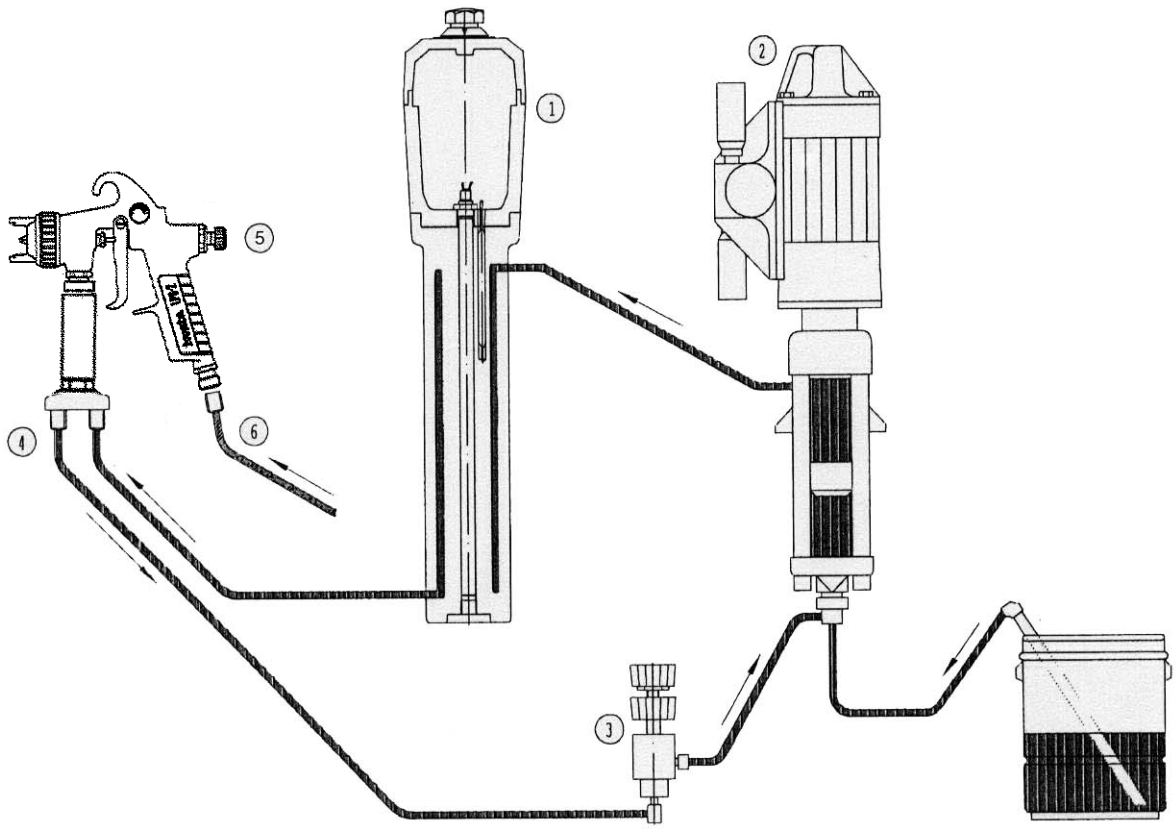
PRIOR TO PUTTING THE APPLIANCE IN OPERATION, PLEASE RINSE THE PAINT COIL WITH A DETERGENT.

The flow heater is suitable for installation in stationary or mobile equipment. It is mounted by means of 3 M12 x 20mm internal threads located on the rear side.
High pressure hoses are mounted on the connection nipple by means of M20x1.5 and a 60° sealing cone.
Flow direction of the medium to be heated can be freely chosen. Preferred direction should be inlet at the top (appliance's head) and outlet at the bottom of the appliance.
The supply for the appliance must be secured with at least 16A rating.
To put the appliance into operation, nothing else is done other than pressing the thermostat button on the head of the appliance. On the ”0” position, the heating element is electrically switched off. The 1-2-3-4-5 positions as well as each intermediate position correspond to increment of the paint's exit temperature at a constant flow rate. The most suitable thermostatic setting must be respectively tested in practice, because the outlet temperature depends upon the size of the spraying nozzle being used, as well as on the spraying pressure, the heat capacity and the heat conductivity of the medium sprayed, and upon the ambient temperature, besides the value set on the temperature regulator. As guideline, one can use the performance diagram, in which the heating amount is illustrated to depend upon the sprayed quantity, based on water.



MAINTENANCE:

Longer periods of interruption during a hot-spraying process may lead to the paint cooling down inside the flow-heater coil. After use, the pipe system of the flow heater should therefore be rinsed with a suitable detergent, while the appliance is switched-off, until the rest paint is completely washed out. If this cleaning instruction is not observed, the rest of the spray medium can harden inside the coil, and thus reduce the cross-sectional area of the pipe. In the long run this can lead to the destruction of appliance.
Never switch on unclean appliances because the spray medium can burn out.



SCHEMATIC CONNECTION:

1 Heater type 32Ex2R
2 High pressure pneumatic pump
3 Circulation valve
4 Circulation housing
5 Spray gun
6 Cold air

TECHNICAL DATE:

POWER P = 3200 W

TENSION U = 240 V (50/60HZ)

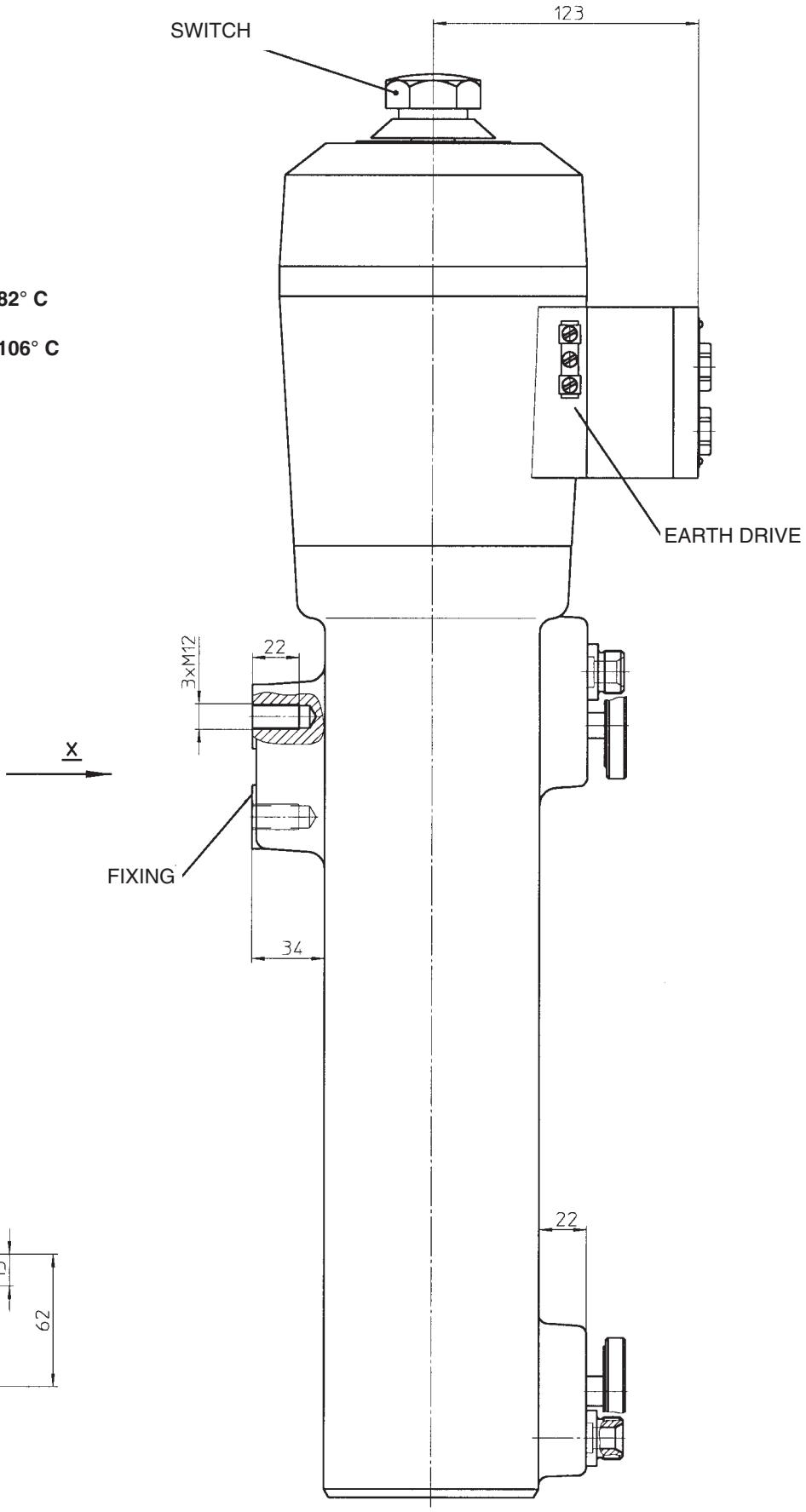
FEEDING = 13.3 A

WEIGHT ca = 19 KG

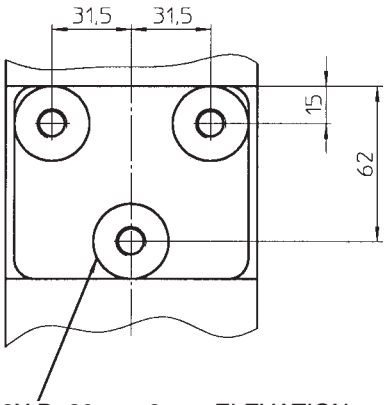
2 POL REGULATION

TEMPERATURE ADJUSTMENT 0-82° C

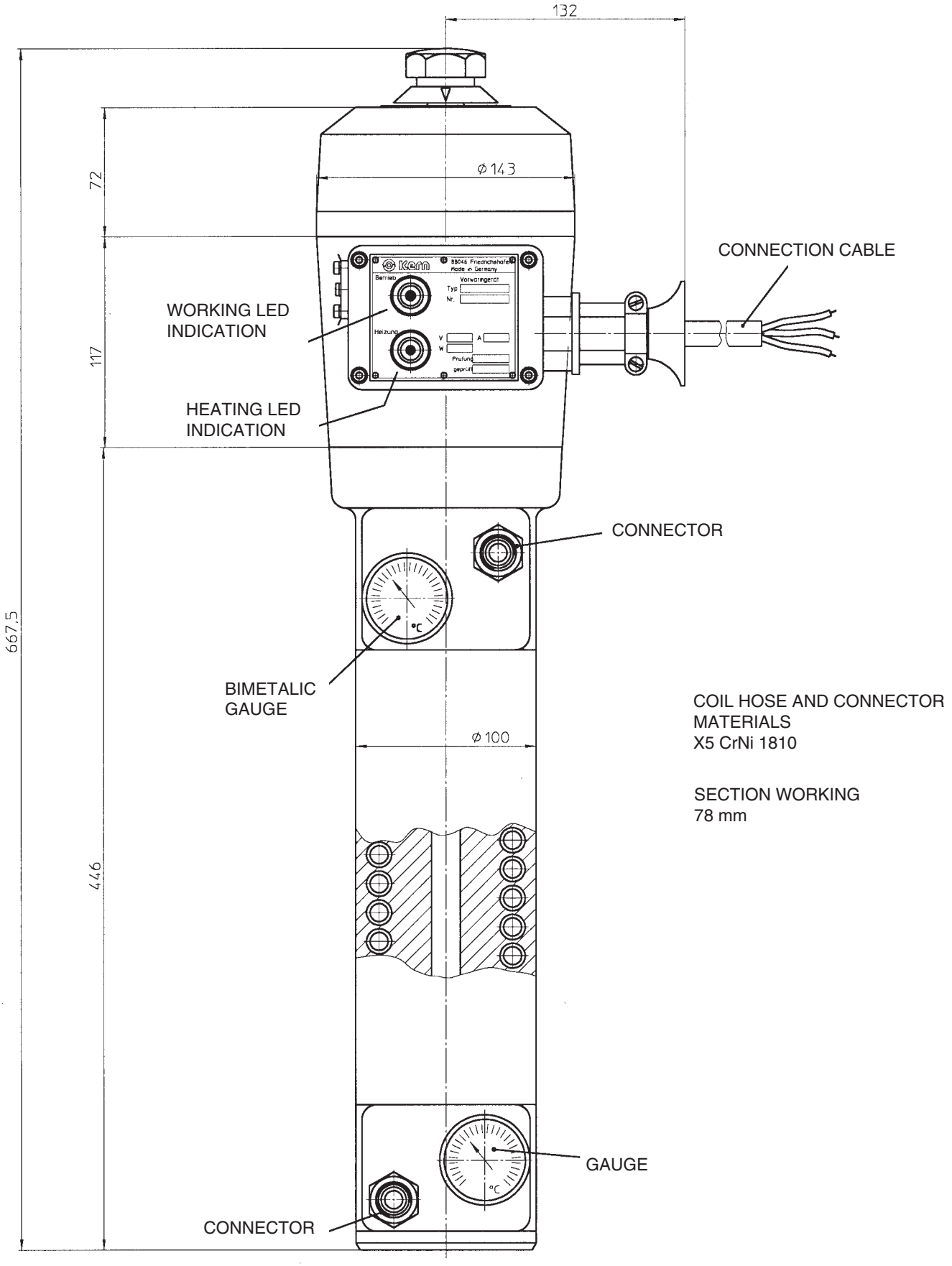
MAX. WORKING TEMPERATURE 106° C

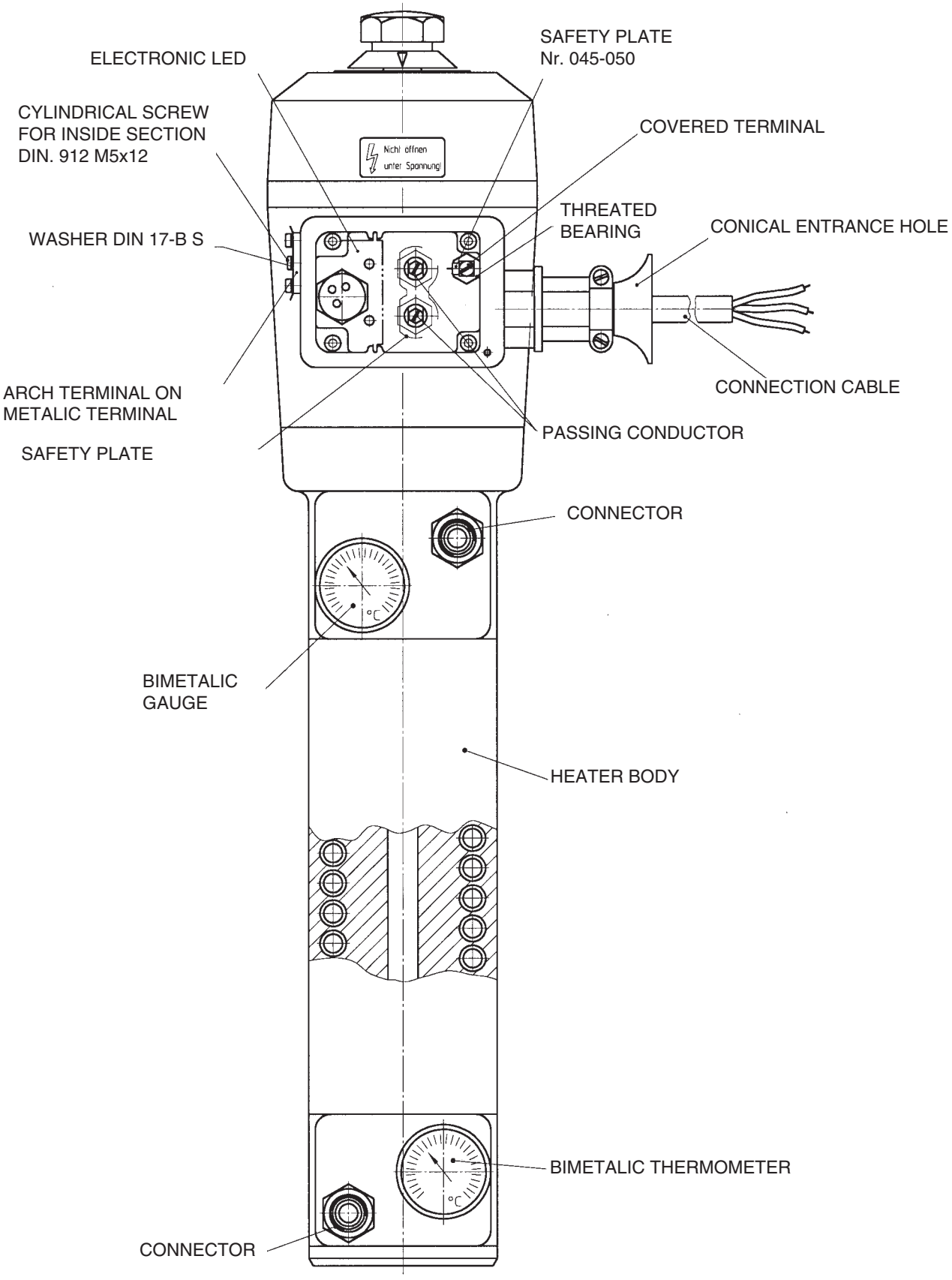


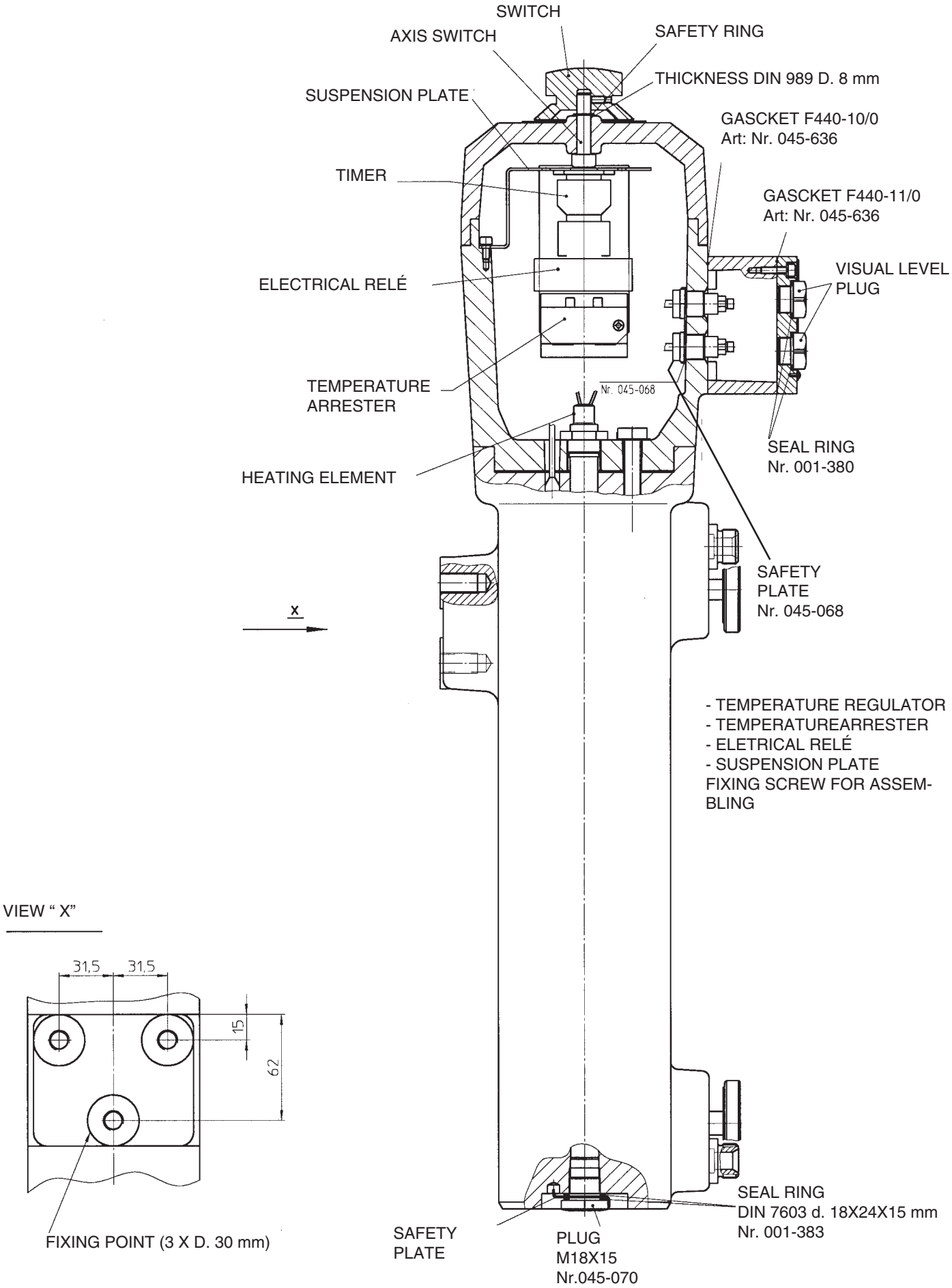
VIEW " X"



3X D. 30 mm 2 mm ELEVATION
BEARING POINT


132
72
ø 143
117
667,5
446
ø 100
CONNECTION CABLE
WORKING LED
INDICATION
HEATING LED
INDICATION
CONNECTOR
BIMETALIC
GAUGE
GAUGE
CONNECTOR
COIL HOSE AND CONNECTOR
MATERIALS
X5 CrNi 1810
SECTION WORKING
78 mm


ELECTRONIC LED
SAFETY PLATE
Nr. 045-050
CYLINDRICAL SCREW
FOR INSIDE SECTION
DIN. 912 M5x12
COVERED TERMINAL
Nicht öffnen
unter Spannung!
THREATED
BEARING
CONICAL ENTRANCE HOLE
WASHER DIN 17-B S
CONNECTION CABLE
ARCH TERMINAL ON
METALIC TERMINAL
PASSING CONDUCTOR
SAFETY PLATE
CONNECTOR
°C
BIMETALIC
GAUGE
HEATER BODY
BIMETALIC THERMOMETER
°C
CONNECTOR


SWITCH
AXIS SWITCH
SAFETY RING
THICKNESS DIN 989 D. 8 mm
SUSPENSION PLATE
GASCKET F440-10/0
Art: Nr. 045-636
TIMER
GASCKET F440-11/0
Art: Nr. 045-636
VISUAL LEVEL
PLUG
ELECTRICAL RELÉ
TEMPERATURE
ARRESTER
Nr. 045-068
SEAL RING
Nr. 001-380
HEATING ELEMENT
SAFETY
PLATE
Nr. 045-068
X
- TEMPERATURE REGULATOR
- TEMPERATUREARRESTER
- ELETRICAL RELÉ
- SUSPENSION PLATE
FIXING SCREW FOR ASSEM-
BLING
VIEW " X"
31,5
31,5
15
62
FIXING POINT (3 X D. 30 mm)
SEAL RING
DIN 7603 d. 18X24X15 mm
Nr. 001-383
SAFETY
PLATE
PLUG
M18X15
Nr.045-070

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