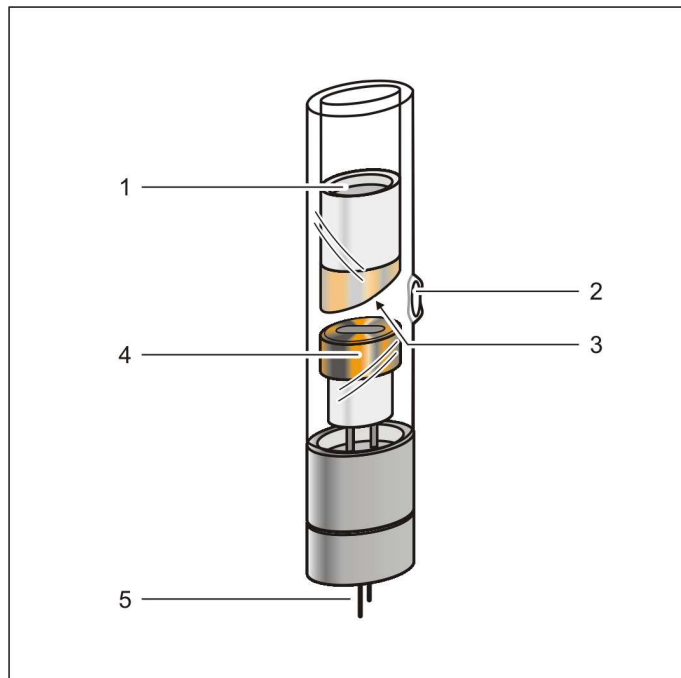


04/07-W2k-Wie



Instruction sheet 554 863

X-ray tube Fe (554 863)

- 1 Thread, for heat sink
- 2 Exit window
- 3 Iron anode
- 4 Hot cathode
- 5 Pin socket base

Administrative requirements

Before putting the X-ray tube Fe into operation for the first time, it is your responsibility to notify all relevant authorities and obtain any permits required by the laws and regulations of your country.

Safety notes

The type approval for school use in Germany BfS 05/07 V/Sch RöV for the X-ray apparatus (554 800) includes also the operation of the X-ray tube Fe.

- Operate the X-ray tube Fe only in the X-ray apparatus (554 800).

Do not remove the lead glass tube from the tube chamber. The mounting screws of the tube are compound-filled to prevent this.

- Never loosen the mounting screws.

Do not allow the anode of the X-ray tube Fe to overheat.

- When putting the X-ray apparatus into operation, make sure that the ventilator in the tube chamber is turning.

1 Description

The X-ray tube Fe is a directly heated hot cathode tube with a 2-pin socket base for mounting in the X-ray apparatus (554 800). The iron anode is seated in a copper block to dissipate heat.

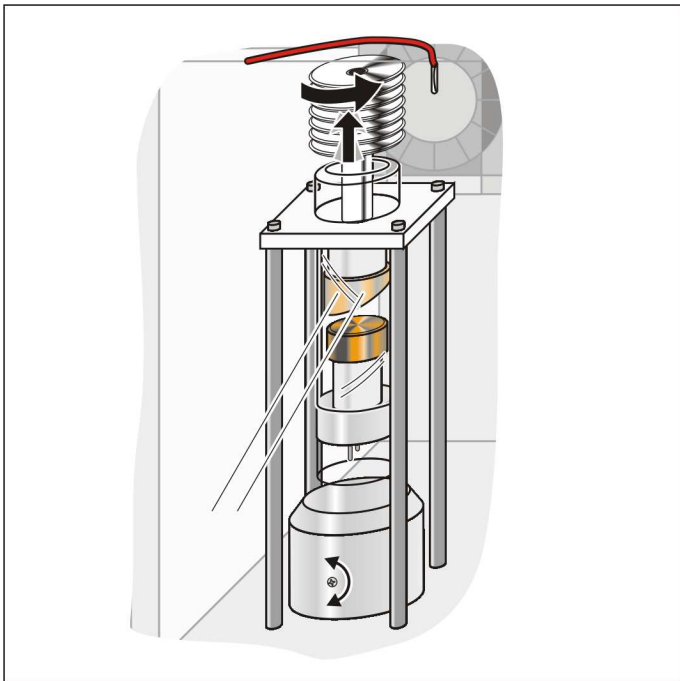
2 Scope of supply

- 1 X-ray tube Fe
- 2 Quality certificates (for X-ray tube Fe, in German)
- 2 Copies of type approval BfS 05/07 V/Sch RöV (for X-ray apparatus 554 800, in German)
- 1 Instruction sheet 554 863

3 Technical data

Anode material:	Iron $K_{\alpha} = 6.40 \text{ keV (194 pm)}$, $K_{\beta} = 7.06 \text{ keV (176 pm)}$
Max. anode voltage:	35 kV
Max. emission current:	1 mA
Size of focal spot approx.	2 mm ²
Minimum service life:	approx. 300 h
Connection for cathode heating:	2-pin plug
Thread:	matches heat sink in tube chamber of X-ray apparatus
Dimensions:	20 cm × 4.5 cm dia.
Weight:	0.3 kg

4 Mounting and demounting



Note:

Always switch off or unplug the X-ray apparatus before mounting or demounting the X-ray tube Fe.

4.1 Mounting:

- Slide the X-ray tube Fe into the lead glass cylinder so that the slanted face of the anode is toward the measuring chamber.
- plug the X-ray tube into its socket
- Tighten the mounting screw at the round tube base securely.
- Screw on the heat sink finger-tight
- Plug the high voltage cable into the heat sink vertically from above so that the insulation also goes into the hole.

4.2 Demounting:

- Allow the X-ray tube Fe to cool down if necessary.
- Withdraw the high-voltage cable vertically upward out of the heat sink.
- Loosen the mounting screw at the round tube base.
- Hold the X-ray tube Fe by the heat sink and take it out of the socket while carefully and gently rocking it from side to side (Take care not to damage the glass bulb).
- Hold the X-ray tube Fe by the glass bulb and unscrew the heat sink (normal clockwise thread).
- Remove the X-ray tube Fe and the heat sink.