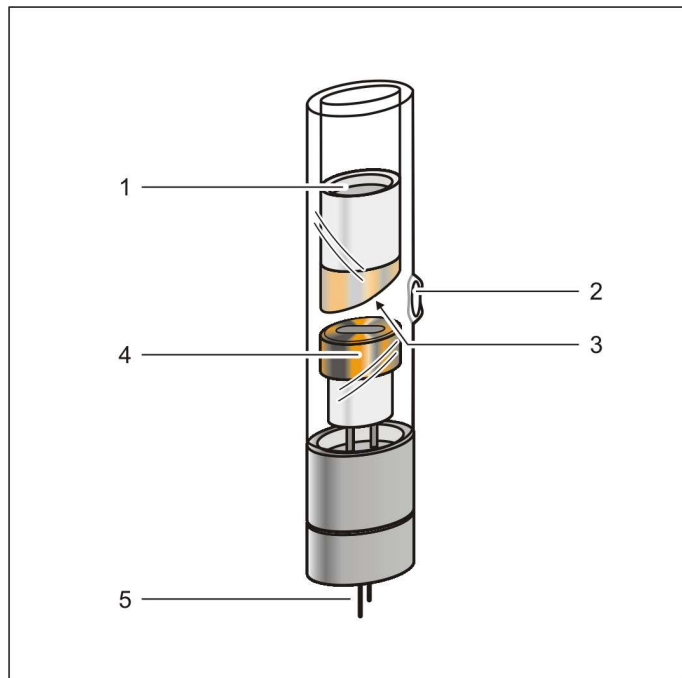


04/07-W2k-Wie



Instruction sheet 554 864

X-ray tube W (554 864)

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

Administrative requirements

Before putting the X-ray tube W 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 W.

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

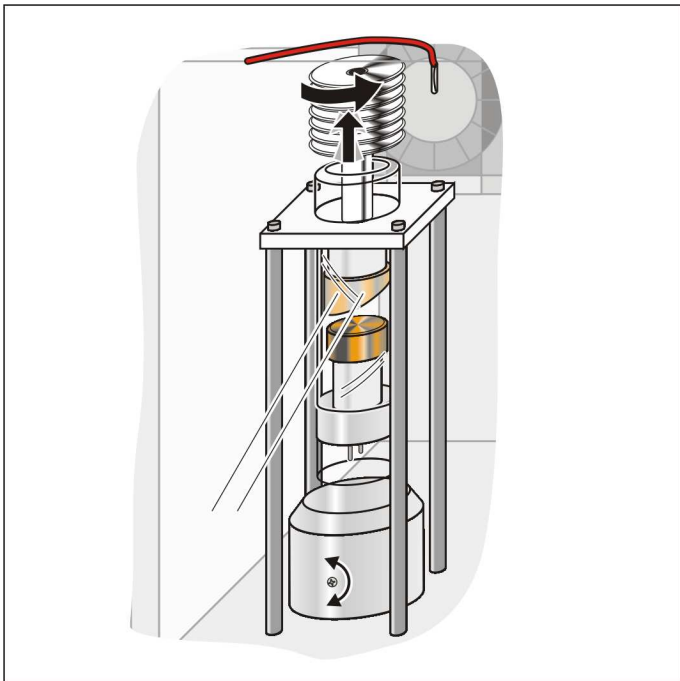
2 Scope of supply

- 1 X-ray tube W
- 2 Quality certificates (for X-ray tube W, in German)
- 2 Copies of type approval BfS 05/07 V/Sch RöV (for X-ray apparatus 554 800, in German)
- 1 Instruction sheet 554 864

3 Technical data

Anode material:	Tungsten K Lines are not excited $L_{\alpha} = 8.39 \text{ keV (148 pm)}$, $L_{\beta} = 9.67 \text{ keV (128 pm)}$
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:	$20 \text{ cm} \times 4.5 \text{ cm dia.}$
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 W.

4.1 Mounting:

- Slide the X-ray tube W 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 W 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 W 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 W by the glass bulb and unscrew the heat sink (normal clockwise thread).
- Remove the X-ray tube W and the heat sink.