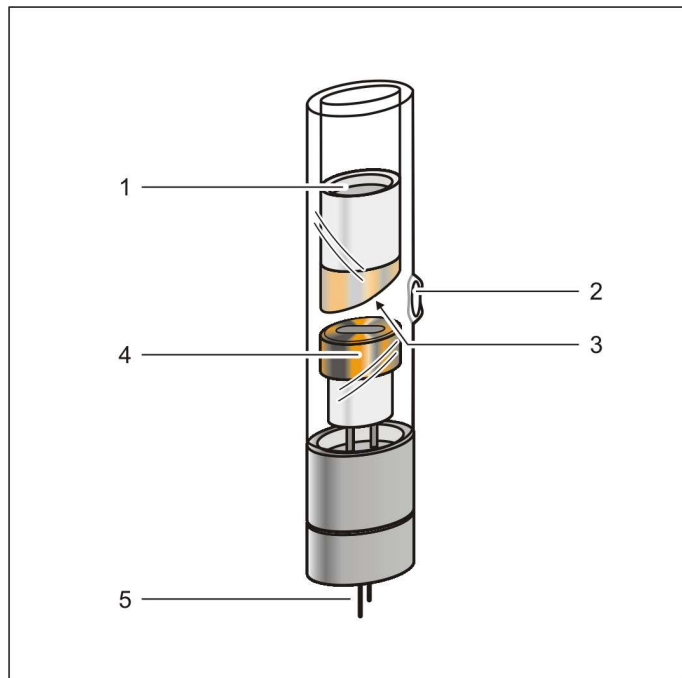


04/07-W2k-Wie



## Instruction sheet 554 862

### X-ray tube Cu (554 862)

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

## Administrative requirements

Before putting the X-ray tube Cu 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 Mo.

- Operate the X-ray tube Mo 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 Mo 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 Cu is a directly heated hot cathode tube with a 2-pin socket base for mounting in the X-ray apparatus (554 800).

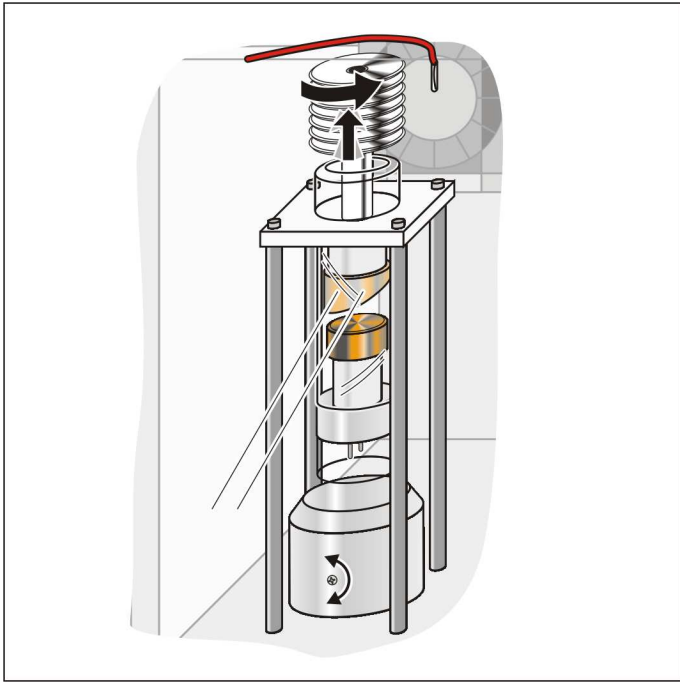
## 2 Scope of supply

- 1 X-ray tube Cu
- 2 Quality certificates (for X-ray tube Cu, in German)
- 2 Copies of type approval BfS 05/07 V/Sch RöV (for X-ray apparatus 554 800, in German)
- 1 Instruction sheet 554 862
- 1 Nickel filter

## 3 Technical data

|                                 |   |
|---------------------------------|---|
| Anode material:                 | Copper<br>$K_{\alpha} = 8.04 \text{ keV (154 pm)}$ ,<br>$K_{\beta} = 8.91 \text{ keV (139 pm)}$ |
| Max. anode voltage:             | 35 kV   |
| Max. emission current:          | 1 mA  |
| Size of focal spot approx.      | 2 mm <sup>2</sup>   |
| 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 Cu.

#### 4.1 Mounting:

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