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RADAR CATHODE-RAY PROJECTION TUBE

<u>SCREEN</u>
For screen properties please refer to front of this section

Useful screen diameter = min. 55 mm
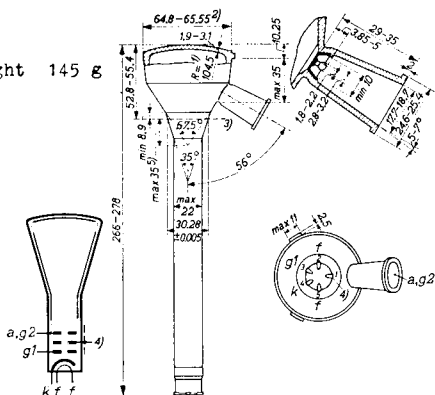
<u>HEATING</u>
Indirect by A.C. or D.C.   Heater voltage V_f = 6.3 V
                                Heater current I_f = 0.3 A

Dimensions in mm

Base: V

Net weight   145 g

The tolerance of the position of the base with respect to
   the tube is ± 10°

¹) Inner radius of curvature of the face plate
    The deviation of the centre of the outer radius of
    curvature with respect to the centre line of the neck
    is max. 2 mm

²) Eccentricity of the face plate with respect to the centre
    line of the neck is max. 0.9 mm

³) Reference line, determined by the diameter of 30.28
    ± 0.005 mm

⁴) Spark trap and outer coating. This connection must be
    earthed

⁵) The distance from the deflection centre to the reference
    line should not exceed 35 mm

MOUNTING POSITION
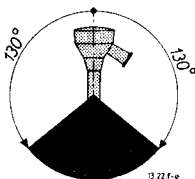
CAPACITANCES

Grid No.1 to all other electrodes	C_{g1}	=	6.3 pF
Cathode to all other electrodes	C_k	=	6.3 pF
Anode and grid No.2 to outer conductive coating	$C_{a,g2-m}$	=	450 pF

FOCUSING   Magnetic

Focusing coil with iron casing

Number of ampere-turns at an anode and grid No.2 voltage of 25 kV   865 [1])

Air gap   11 to 13 mm

Distance from the centre of the the air gap to the reference line   83 to 87 mm

Inner diameter of the inner bush   27.5 mm

For centring it is necessary that the focusing coil can be tilted over 3° to either side

DEFLECTION   Magnetic

UNDEFLECTED SPOT ECCENTRICITY   max. 5 mm

OPERATING CHARACTERISTICS

Anode and grid No.2 voltage	$V_{a,g2}$	= 25 kV
Negative grid No.1 voltage for cut-off	$-V_{g1}(I_\ell=0)$	= 50 to 90 V
Peak beam current (max. duration 10 μsec)	I_ℓ (T=max.10 μsec)	= 1000 μA

[1]) Without saturation of the iron casing
In order to reduce the influence of voltage fluctuations it is, however, advisable to saturate the iron to such an extent that the required number of ampere-turns becomes about 10 % higher

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REMARKS

Measures should be taken for the beam current to be switched
off immediately when one of the time-base circuits becomes
defective
An X-ray radiation shielding with an equivalent lead
thickness of 0.5 mm is required to protect the observer.
When the tube is used in an optical box, the screening
by the box will in general be sufficient

LIMITING VALUES (Design centre limits, unless otherwise specified)

Anode and grid No.2 voltage
(absolute limit) $\quad V_a$ = max. 27 kV [1]

Grid No.1 voltage

negative value $\quad -V_{g1}$ = max. 200 V [2]

positive value $\quad +V_{g1}$ = max. 0 V

peak positive value $\quad +V_{g1\,p}$ = max. 2 V

External grid No.1 resistance $\quad R_{g1}$ = max. 1.5 MΩ

External resistance between
heater and cathode $\quad R_{kf}$ = max. 20 kΩ

Voltage between heater and
cathode $\quad V_{kf}$ = max. 125 V [2]

Current $\quad I_{a,g2}$ = max. 200 μA

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[1]) The total charge of the filter capacitors in the supply
unit should not exceed 130 μC

[2]) During the operation of the security circuit

$$-V_{g1} = \text{max. } 300 \text{ V}$$
$$V_{kf} = \text{max. } 250 \text{ V}$$

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Electronic Tube HANDBOOK

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3	3	1963.03.03
4	FP	1999.09.11