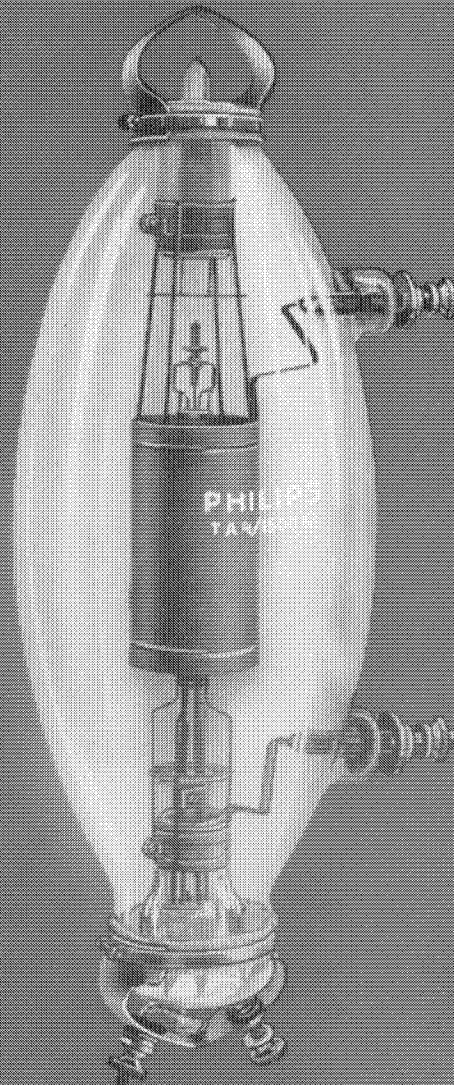


## TRANSMITTING VALVE

# TA 4/1500K

**T**his valve has the same characteristics as the Philips transmitting valve TA 4/1500, but its special construction makes it very suitable for working on wavelengths down to 5 metres. If the valve is used as an H.F. class C amplifier in a telegraphy transmitter the output will be 1,000 watts\*) and the efficiency 77%, the anode voltage being



4,000 volts; at an anode voltage of 3,000 volts these values will be 700 watts\*) and 72% respectively.

In a telephony transmitter a TA 4/1500 K connected as an H.F. class B amplifier will give an output of 250 watts\*) in the carrier at an efficiency of 40%, if an anode voltage of 4,000 volts is applied. At an anode voltage of 3,000 volts the output in the carrier will be 200 watts\*).

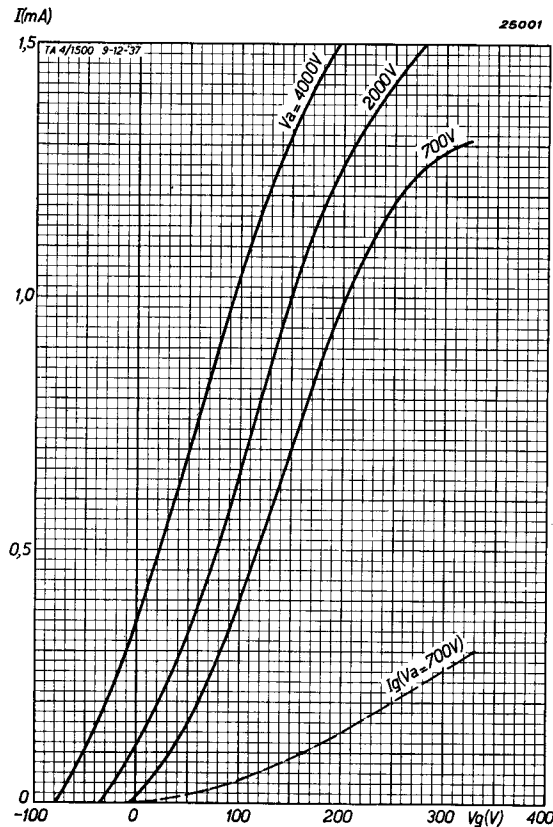
When the TA 4/1500 K is used as an H.F. class C amplifier with anode modulation the output in the carrier will amount to 525 watts\*) and the efficiency to 79.5 % at an anode voltage of 4,000 volts; these values will be 375 watts\*) and 76% respectively at an anode voltage of 3,000 volts.

For excitation of the TA 4/1500 K the TC 1/75 will be found very suitable. One or two valves TA 4/1500 K can, in turn, be used for the excitation of a water-cooled valve TA 12/20.

\*) Circuit losses must be deducted.



# TRANSMITTING VALVE TA<sup>4</sup>/1500 K



Filament voltage .....	$V_f$	= 16.0 V
Filament current .....	$I_f$	= appr. 16 A
Total emission .....	$I_s$	= appr. 1.5 A
Anode voltage .....	$V_a$	= max. 4,000 V
Anode dissipation .....	$W_a$	= 750 W
Anode dissipation during test .....	$W_{at}$	= 1,000 W
Amplification factor .....	$\mu$	= appr. 40
Mutual conductance at $V_a = 4,000$ V, $I_a = 200$ mA .....	$S$	= appr. 4.0 mA/V
Max. mutual conductance .....	$S_{max}$	= appr. 6.5 mA/V
Internal resistance at $V_a = 4,000$ V, $I_a = 200$ mA .....	$R_i$	= appr. 10,000 $\Omega$
Anode/cathode capacity .....	$C_{af}$	= appr. 1.5 pF
Control-grid/cathode capacity .....	$C_{gf}$	= appr. 11 pF
Anode/control-grid capacity .....	$C_{ag}$	= appr. 7.5 pF
Max. diameter of bulb .....	$d$	= 182 mm
Max. diameter .....	$d'$	= appr. 231 mm
Total length .....	$l$	= appr. 535 mm