

## WATER COOLED R.F. POWER TRIODE WITH INTEGRAL HELICAL COOLER

QUICK REFERENCE DATA									
General purposes									
$\lambda$ (m)	Freq. (MHz)	C telegr.		B teleph.		C <sub>a</sub> mod.		B mod. 1)	
		V <sub>a</sub> (kV)	W <sub>o</sub> (kW)	V <sub>a</sub> (kV)	W <sub>o</sub> (kW)	V <sub>a</sub> (kV)	W <sub>o</sub> (kW)	V <sub>a</sub> (kV)	W <sub>o</sub> (kW)
4	75	6	6.9	6	1.9			6	13.3
		5	5.6	5	1.45	5	4.7	5	6.6
		4	4			4.5	4.1	4.5	6.0
						4	3.5	4	5.3
						3.5	3	3.5	4.6
						3	2.2	3	3.3
Television service									
Freq. (MHz)	Neg. mod.		Pos. sync.		Pos. mod.		Neg. sync.		
	V <sub>a</sub> (kV)	W <sub>o</sub> sync (kW)	W <sub>o</sub> black (kW)	V <sub>a</sub> (kV)	W <sub>o</sub> white (kW)				
75	5	9	5.35	5	9				

**HEATING:** direct, filament thoriated tungsten

Filament voltage	V <sub>f</sub>	12.6 V
Filament current	I <sub>f</sub>	33 A

### CAPACITANCES

Anode to all other elements except grid	C <sub>a</sub>	0.3 pF
Grid to all other elements except anode	C <sub>g</sub>	16 pF
Anode to grid	C <sub>ag</sub>	11 pF

1) Two tubes

**TYPICAL CHARACTERISTICS**

Anode voltage	$V_a$	4 kV
Anode current	$I_a$	1 A
Amplification factor	$\mu$	32
Mutual conductance	S	17 mA/V

**COOLING :** Water and low velocity air flow

**TEMPERATURE LIMITS** (Absolute limits)

Water inlet temperature	$t_i$	max. 50 °C
Temperature of filament seals		max. 210 °C
Temperature of anode and grid seals		max. 180 °C

**WATER COOLING CHARACTERISTICS**

$W_a$ (kW)	$t_i$ (°C)	$q_{min}$ (l/min)	$P_i$ (atm)	$t_o$ (°C)
2	20	1.5	0.06	44
	50	3	0.22	62
4	20	3	0.22	42
	50	6	0.73	61
6	20	5	0.54	39
	50	10	1.8	59

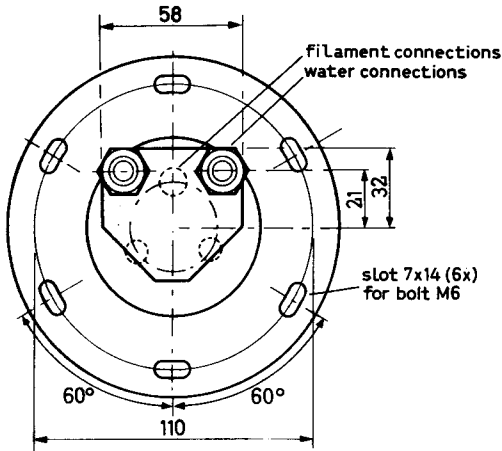
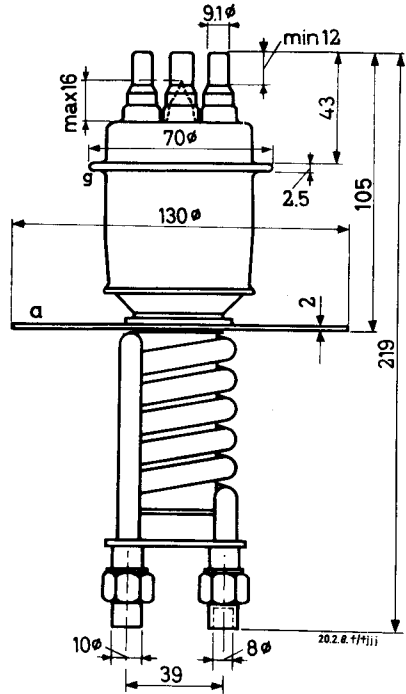
At water inlet temperatures between 20 °C and 50 °C the required quantity of water can be found by linear interpolation.

In general no air cooling will be required at ambient temperatures below 35 °C. At higher temperatures a low velocity air flow to the grid and filament seals will be necessary.

## MECHANICAL DATA

Filament connectors	40634
Grid connector	40622
Net weight	0.8 kg

Dimensions in mm



The use of wing nuts for connecting the water connections should be avoided

The centre tap  $f_c$  must not be used for filament current supply. The connectors 40634, however, must be used for the cooling of all three filament pins, thus also of pin  $f_c$ .

Mounting position: vertical with anode down

For further data except cooling curves, please refer to type TBW6/6000