

Application: R.F. Industrial heating.
Power Output: 37.5kW continuous rating.
Frequency: 30Mc/s at full rating.
Construction: External anode, water-cooled.

PRELIMINARY DATA

This data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS – TRANSMITTING VALVES included in this volume of the handbook.

FILAMENT Thoriated tungsten

V_f	8.0	V
$*I_f$	98	A

*The filament current must never exceed a surge value of 210A at any time during the warming-up period.

MOUNTING POSITION

Vertical, with anode down.

CAPACITANCES

C_{a-g}	28	pF
C_{a-f}	0.3	pF
C_{g-f}	33	pF

CHARACTERISTICS

g_m (measured at $V_a=2kV$, $I_a=13A$)	30	mA/V
g_m (measured at $V_a=12kV$, $I_a=2A$)	20	mA/V
μ (measured at $I_a=4A$)	34	

COOLING

Water-cooled

Max. temperature of seals	180	°C
Max. water inlet temperature	50	°C

It is necessary to direct a flow of air on the seals.

Typical values of inlet temperature, rate of flow of water and pressure difference between inlet and outlet housing at various values of anode dissipation are given in the following table:-

Anode dissipation	Inlet temperature	Rate of flow of water	Difference in pressure between inlet and outlet
P_a (kW)	T_{in} (°C)	(Litres/min.)	(atm)
5.0	20	6.0	0.02
5.0	50	15	0.22
10	20	11	0.1
10	50	25	0.7
15	20	16	0.25
15	50	37	1.3
20	20	22	0.5
20	50	49	2.3

At temperatures between 20°C and 50°C the required water flow may be found by interpolation.

TY12-25W

TRIODE

The characteristics, curves, operating conditions and limiting values are identical with those of the TY12-25A with the following exception :-

OPERATION AS SINGLE VALVE R.F. OSCILLATOR (CLASS 'C')

Limiting value (absolute rating)

P_a max.

20 kW

OPERATING NOTE

To ensure a uniform r.f. current distribution in the grid seal, especially at higher frequencies, the grid lead should be connected to the middle wing nut of the grid bracket.

ACCESSORIES

Information on these items can be obtained from the Government and Industrial Valve Division, Mullard Limited.

WEIGHT

Valve only

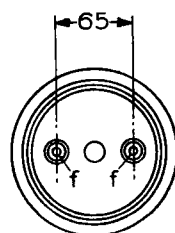
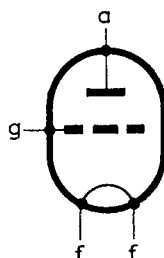
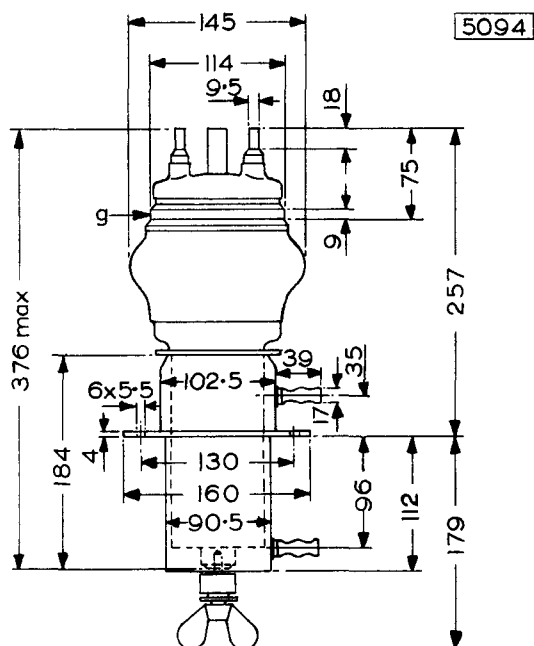
{ 2.8 kg
6.2 lb

Shipping weight

{ 37.5 kg
82.5 lb

TRIODE

TY12-25W



All dimensions in mm