

**MERCURY VAPOUR
THYRATRON****Service Type CV5141**

To be read in conjunction with the Rectifier and Thyatron Preamble.

ABRIDGED DATA

Mercury vapour thyatron for high voltage industrial control applications.

Peak forward anode voltage	15	kV max
Peak inverse anode voltage	15	kV max
Peak anode current	12	A max
Average anode current	1.5	A max

GENERAL**Electrical**

Filament	oxide coated
Filament voltage	2.5 V
Filament current	20 A
Filament pre-heating time (minimum)	5.0 min
Inter-electrode capacitances:	
grid to anode	8.0 pF
grid to filament	18 pF

Mechanical

Overall length (excluding flexible leads)	11.000 inches (279.4mm) max
Overall width	4.000 inches (101.6mm) nom
Net weight	1 pound (0.5kg) approx
Mounting position	vertical, base down
Base	flying leads
Top cap	see outline

Cooling	natural
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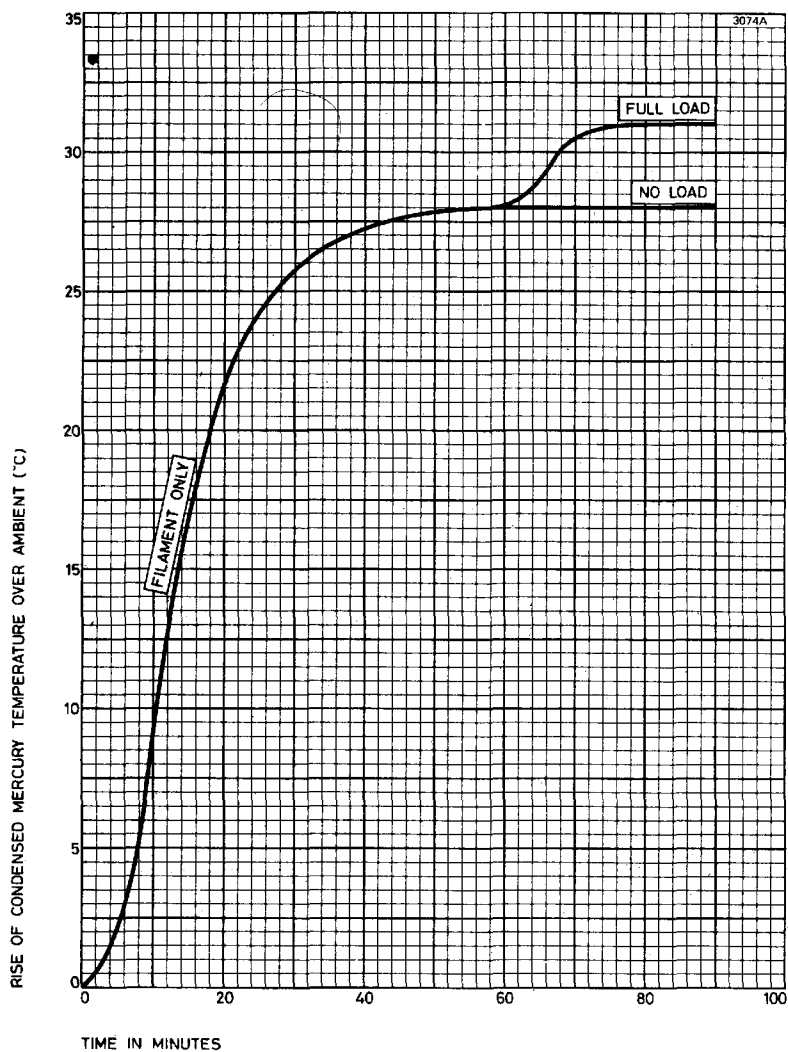
MAXIMUM AND MINIMUM RATINGS (Absolute values)

	Min	Max	Min	Max
Peak forward anode voltage	—	10	—	15 kV
Peak inverse anode voltage	—	10	—	15 kV
Peak anode current	—	16	—	12 A
Average anode current (averaging time 15s max)	—	2.0	—	1.5 A
Fault anode current (peak)	—	200	—	200 A
Duration of fault current	—	0.1	—	0.1 s
Condensed mercury temperature	40	75	40	70 °C
Negative grid voltage:				
before conduction			—	500 V
during conduction			—	10 V
Average grid current			—	250 mA
Recommended grid resistor			5.0	50 kΩ
Filament pre-heating time			5.0	— min

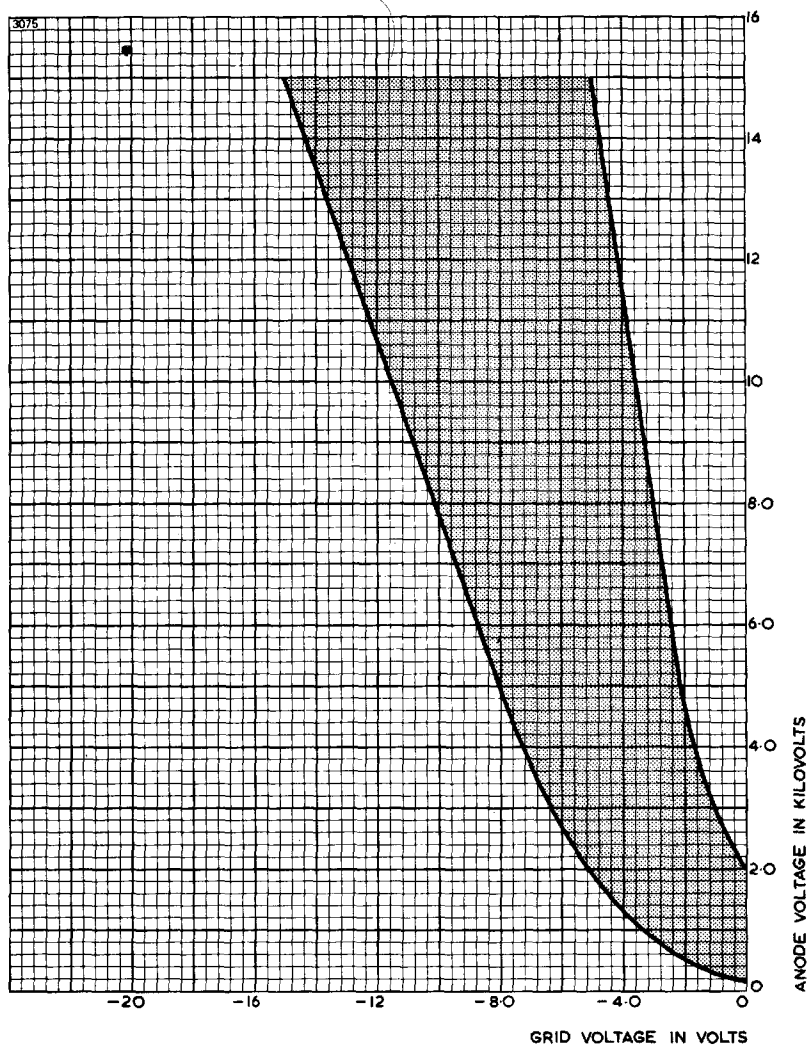
CHARACTERISTICS

Voltage drop (approx)	16	V
Ionization time (approx)	10	μs
Recovery time (approx)	1.0	ms
Condensed mercury temperature rise:		
at no load (approx)	28	°C
at full load (approx)	31	°C

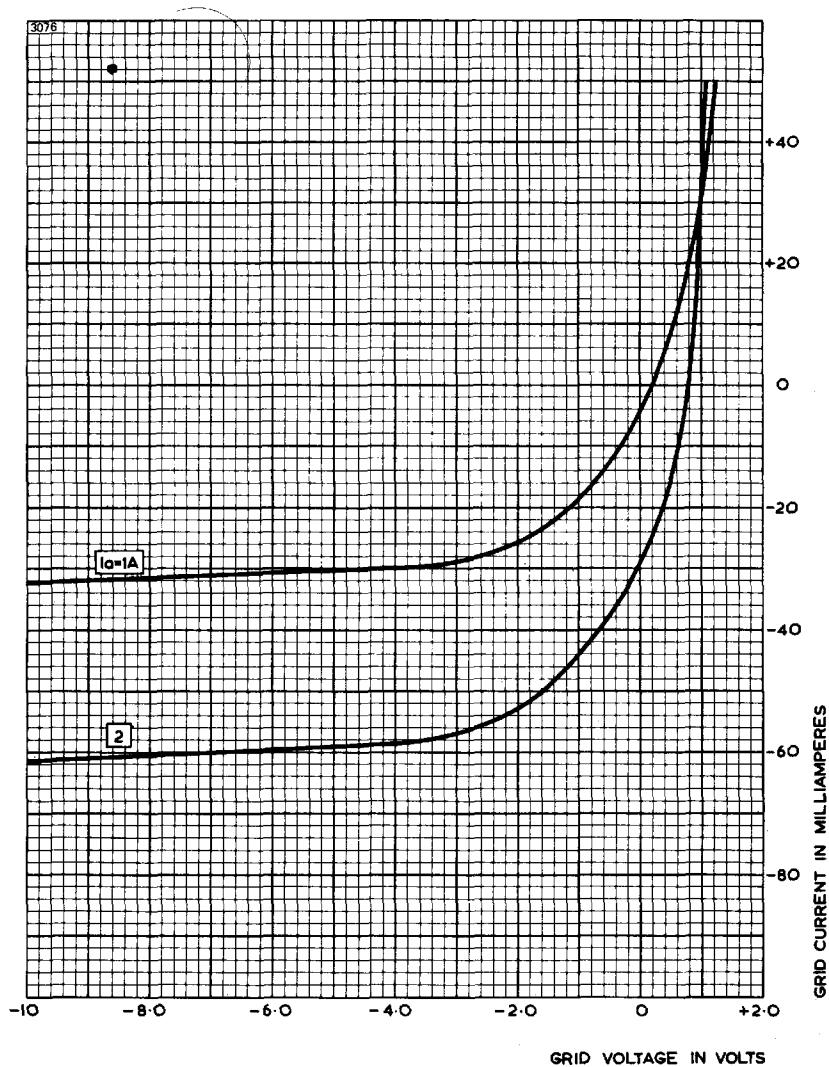
TYPICAL HEATING CHARACTERISTIC



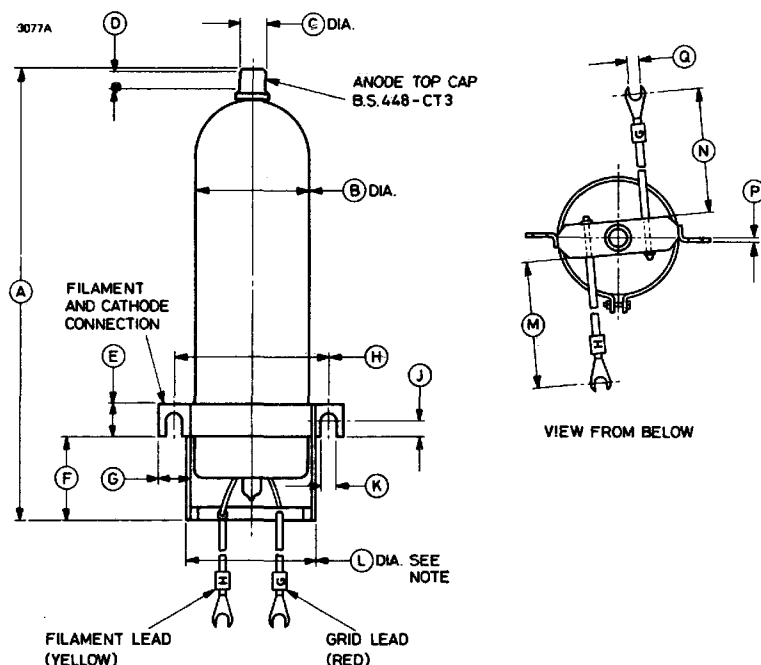
CONTROL CHARACTERISTIC



TYPICAL GRID CURRENT CHARACTERISTICS



OUTLINE (All dimensions without limits are nominal)



Ref	Inches	Millimetres	Ref	Inches	Millimetres
A	9.750 ± 0.500	247.7 ± 12.7	J	0.375	9.53
B	2.500	63.50	K	0.250	6.35
C	0.566 ± 0.015	14.38 ± 0.38	L	2.875	73.03
D	0.380 min	9.65 min	M	4.312 ± 0.250	109.5 ± 6.4
E	0.750 ± 0.031	19.05 ± 0.79	N	4.562 ± 0.250	115.9 ± 6.4
F	1.750	44.45	P	0.080	2.03
G	0.750	19.05	Q	0.265	6.73
H	3.406 ± 0.062	86.51 ± 1.57			

Millimetre dimensions have been derived from inches.

Note The base will pass through a hole of this diameter up to the terminal lugs.