

MINISTRY OF SUPPLY, - D.L.R.D.(A)/R.A.E.

Specification MOSA/CV2871 Issue 4, Dated 13.1.54 To be read in conjunction with K.1001	<table border="1"> <tr> <th colspan="2">SECURITY</th></tr> <tr> <td>Specification</td><td>Valve</td></tr> <tr> <td>UNCLASSIFIED</td><td>UNCLASSIFIED</td></tr> </table>	SECURITY		Specification	Valve	UNCLASSIFIED	UNCLASSIFIED
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Specification	Valve						
UNCLASSIFIED	UNCLASSIFIED						

—————> Indicates a change

TYPE OF VALVE	- Water cooled, transmitting triode	<u>MARKING</u>
CATHODE	- Directly heated	See K.1001/4.
ENVELOPE	- Metal-glass	Additional markings required (See Notes B & C)
PROTOTYPE	- CAT.6, BW140	Serial No.
		Filament Volts

<u>RATING</u>		Note	<u>DIMENSIONS AND</u> <u>CONNECTIONS</u>
			See drawings on pages 3, 2, 4
Filament Voltage	(V)	As marked	A
Nominal Filament Current	(A)	72	
Max. Anode Voltage	(kV)	12	
Max. Anode Current	(A)	2.0	
Max. Continuous Anode Dissipation	(kW)	12	
Total Emission at 90% Saturation	(A)	10	
Amplification Factor		45	D
Anode Impedance	(Ω)	5000	D
Max. Operating Frequency at Full Ratings	(Mc/s)	2.0	

NOTES

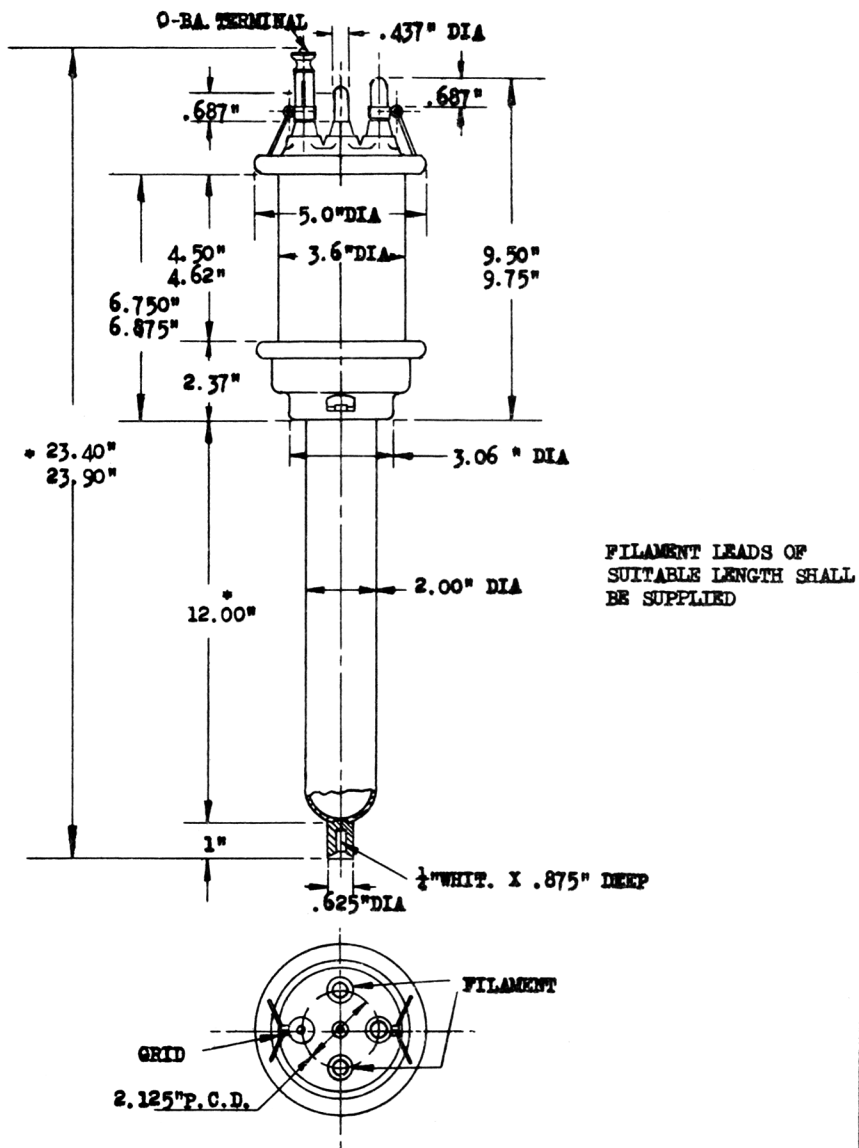
- A. In operation, the anode must be surrounded by a suitable jacket to contain the circulating cooling liquid, whose rate of flow should be between 3 and 4 gallons per minute. The filament seal requires to be cooled with 2 to 3 cu. ft. of air per minute.
- B. The marked voltage is defined in test clause 'g' on page 2.
- C. It is not essential that the additional marking shall appear within the frame.
- D. Measured at $V_a = 10$, $V_g = 0$.

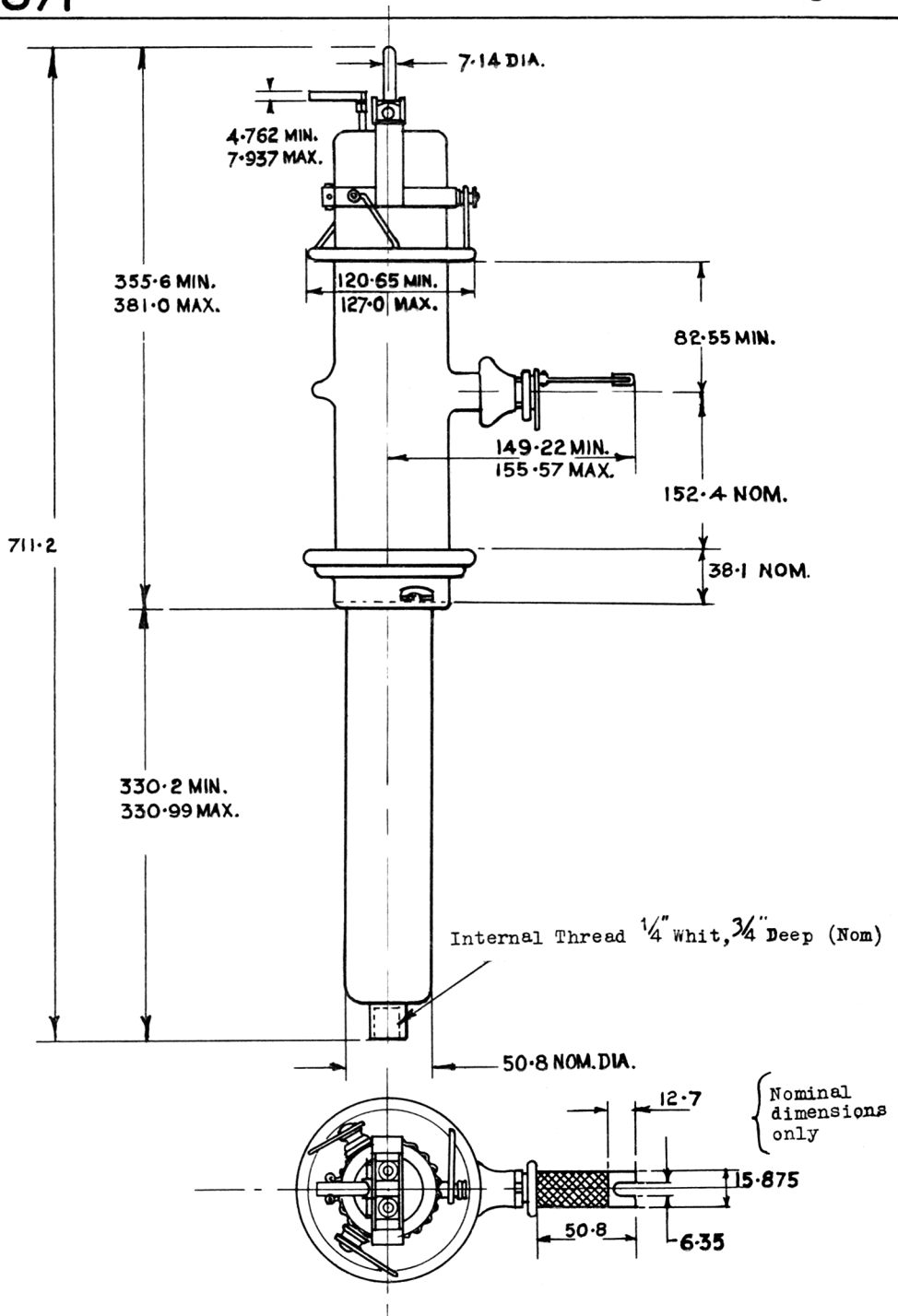
To be performed in addition to those applicable in K1001.

	Test Conditions				Test	Limits		No. Tested	Notes
	Vf(V)A.C.	Va(kV)	Ia(A)	Vg(V)		Min.	Max.		
a	18.5	0	0	0	If (A)	68.0	75.0	100%	
b	18.5	13.0	1.5	Adjust	1. Record Vg 2. Ig(μ A) initially 3. Ig(μ A) after conditions have been maintained for 10 mins.	-	200 150	100% 100%	1
c	18.5	14.0	-	-	Oscillation	-	-	100%	1 & 2
d	18.5	13.0	1.5	Adjust	1. Difference in value between Vg here and as recorded in test (b). 2. Ig(μ A) initially 3. Ig(μ A) after conditions have been maintained for 10 mins.	-	4 175 150	100% 100% 100%	1
e	18.5	read	1.0	0	μ	40	50	100%	
		read	1.0	-100					
f	18.5	9.0	read	0	Ra (Ω)	4250	5750	100%	
		11.0	read	0					
g	Read	400 Volts applied to anode and grid strapped Vf adjusted to give emission current of 1.5A.			Recorded Vf x 1.26 (V) This is the "marked voltage"	18.1	19.7	100%	3

NOTES

- Tests (b), (c) and (d) must be performed in the order in which they appear in the test schedule i.e. test (b) shall be followed by test (c) and test (c) shall be followed immediately by test (d).
- The oscillation test shall be performed in a suitable circuit with wavelength of oscillation not greater than 450 metres. The input power shall be approximately 17 kW., and the duration of the test shall be 20 minutes. During the test the valve shall be free of flash arcs and hot spot heating of the glass and the output shall be steady.
- This "marked voltage" is the minimum value for 10 Amps emission at 90% saturation.





ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED