

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

Specification AD/CV966 Issue No. 4. Dated : 23. 3. 54. To be read in conjunction with K1001.	<u>SECURITY</u>	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

→ Indicates a change

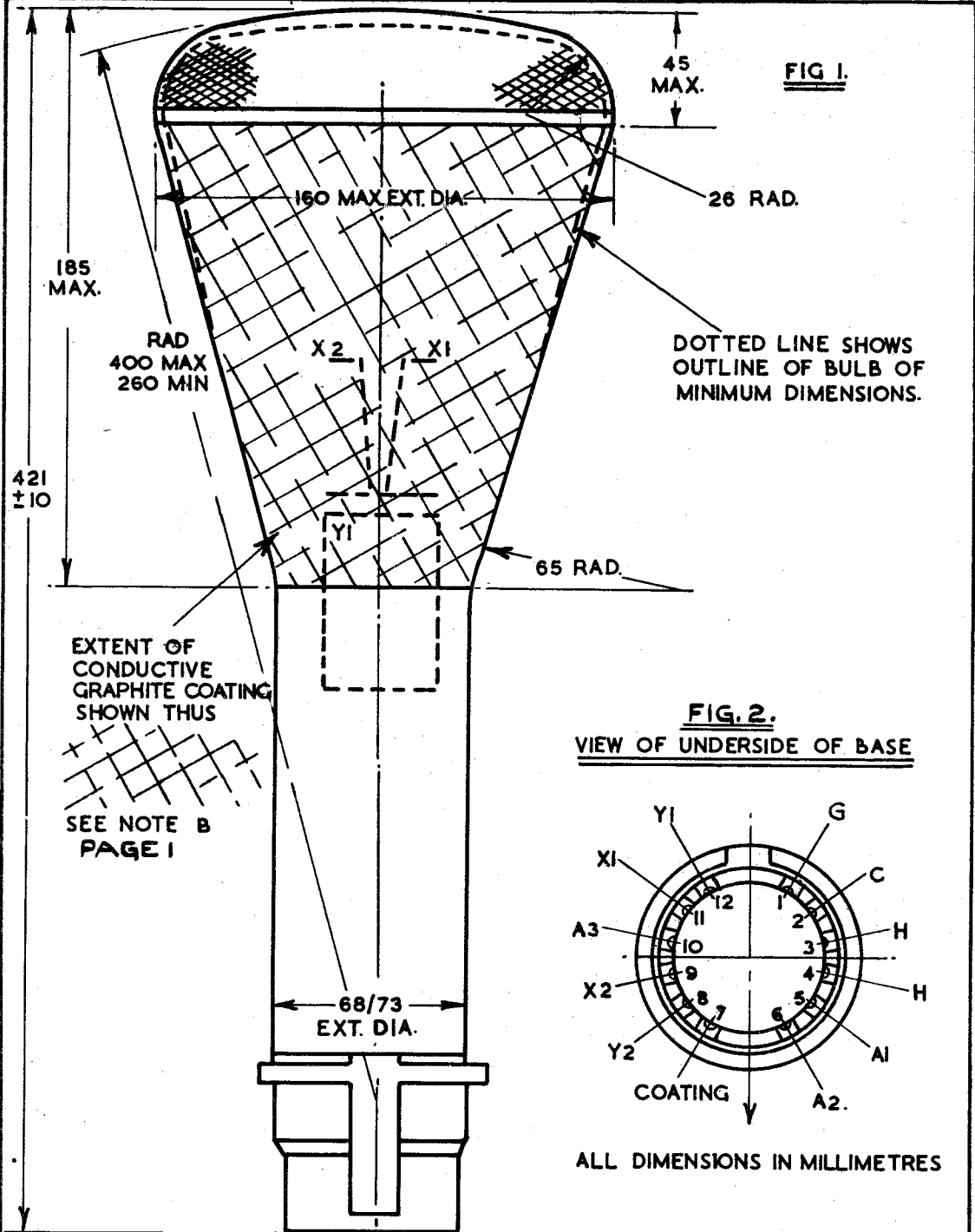
<u>TYPE OF VALVE</u> :- Cathode Ray Tube.  <u>TYPE OF DEFLECTION</u> :- Electrostatic, suitable for asymmetrical or symmetrical voltages.  <u>BULB</u> :- Internally coated with conductive coating.  <u>SCREEN</u> :- BY8 (See Note A).  <u>PROTOTYPE</u> :- ACR13 with AG screen and modified test limits.			<u>MARKING</u>	
			See K1001/4.	
			<u>Additional Marking</u>	
			Serial No. ....	
			<u>BASE</u>	
			B12D	
			<u>Pin</u>	<u>Electrode</u>
			1	Grid
			2	Cathode
			3	Heater
			4	Heater
			5	A1
			6	A2
			7	Coating (See Note 1)
			8	Y2
			9	X2
			10	A3
			11	X1
			12	Y1
			<u>DIMENSIONS</u>	
			See drawing page 4.	
<u>RATING</u>			<u>Note</u>	
Heater Voltage	(V)	4.0		
Heater Current	(A)	1.1		
Max. Third Anode Voltage	(kV)	6.0		
Max. First Anode Voltage	(kV)	2.5		
Sensitivity X Plates	(mm/V)	620		
		Va3		
Sensitivity Y Plates	(mm/V)	1160		
		Va3		
<u>Typical Working Conditions</u>				
Third Anode Voltage	(kV)	5.0		
First Anode Voltage	(kV)	2.0		
Second Anode Voltage	(V)	800		
<u>NOTES</u>				
A. It may be necessary to specify, for each manufacturer individually, a permissible working range of screen thickness, in which case this information will be sent independently of the specification.				
B. The length of the graphite coating is to be sufficient to ensure satisfactory operation of the tube.				

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions				Test	Limits		No. Tested	Note		
	Vh (V)	Va3 (kV)	Va2 (V)	Va1 (kV)		Min.	Max.				
a	See K1001/5A.13.				<u>Capacitances (pF)</u> i. Each X or Y plate to all other electrodes. ii. Grid to all other electrodes. iii. Each X to each Y plate.	-	25	6 per week	1		
b	4.0	0	0	0	Ih (A)	0.9	1.3			100%	
c	4.0	5.0	Adjust to opt. focus	2.0	<u>Cut-off Negative Vg</u> (V)	-	80			100%	1
	Vg adjusted for cut-off.										
d	4.0	5.0	-do-	2.0	i. Vg (V)	To be at least 2V negative to cathode					
	Vg adjusted to obtain a light output of 0.15 candela on a close raster				ii. Change in value of Vg from Test 'c'. (V)	-	45	100%	2		
e	4.0	5.0	-do-	2.0	<u>Line Width</u>						
	With a sine wave time base of frequency 10 Kc/s nom. a line length of 100 mm in X and Y directions successively, the grid will be pulsed positively from cut-off with amplitude equal to the value obtained in test 'd' ii, the nominal values of pulse duration and recurrence being 100 μsecs, and 100 p.p.s. respectively.				i. (mm)	-	0.8	100%			
					ii. Va2 (V)	64.0	96.0	100%			





NOTE:- VIEWING THE SCREEN OF THE TUBE WITH THE BASE KEY UPPERMOST AS SHOWN IN THE VIEW OF THE UNDERSIDE OF THE BASE A POSITIVE POTENTIAL APPLIED TO CONTACT No 11(XI) SHALL DEFLECT THE SPOT TO THE LEFT, AND A POSITIVE POTENTIAL APPLIED TO CONTACT No 12(YI) SHALL DEFLECT THE SPOT UPWARDS.