

JOINT SERVICE SPECIFICATION K1001

APPENDIX I

VALVE DIMENSIONS

1. GENERAL

This appendix contains general outline drawings of various types of valves. Wherever possible, Test Specifications will define dimensional requirements by reference to B.S.448.

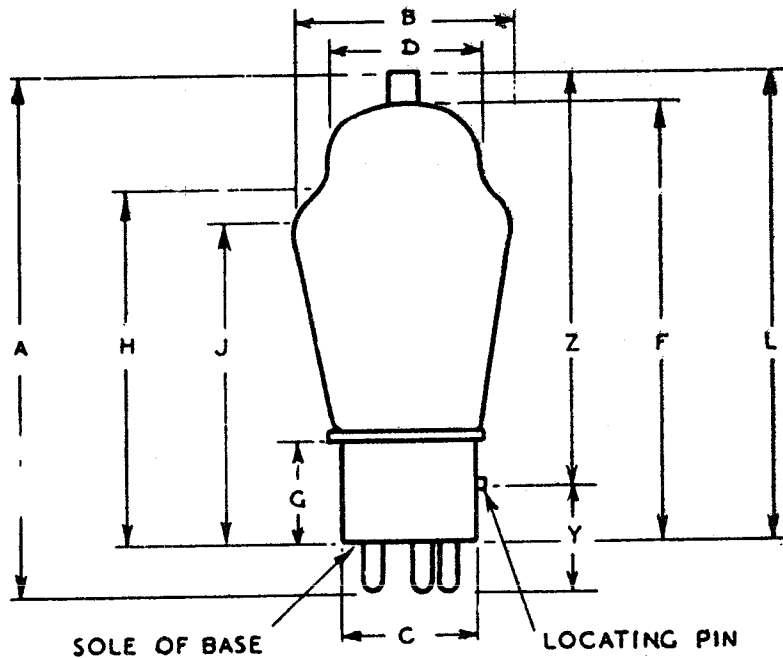
2. INDEX OF DRAWINGS

The Drawings comprising Appendix I are:-

<u>Drawing No.</u>	<u>Drawing Title</u>
1	Conventional Glass Valves
2	Valves fitted with B9G Glass Base
3	Double Ended Glass Valves (Transmitting Type without Base).
4	Outline Dimensions of Valves B7G and B9A.
5	Top Caps
6	Anti-Corona Connector
7	B8B and B8G Glass Base Valves
8	Cartridge Crystal Valves, Dimensions
8A	Concentricity Gauge for Cartridge Crystal Valves
9	Shielded Co-axial Crystal Valves, Dimensions
9A	Concentricity Gauge for Shielded Co-axial Crystal Valves
10	Outline Dimensions of Miniature Valves B5A/F, B5B/F and B8D/F.
11	Outline Dimensions of Miniature Valves Type B7G/F and B9A/F.

DRAWING N°1

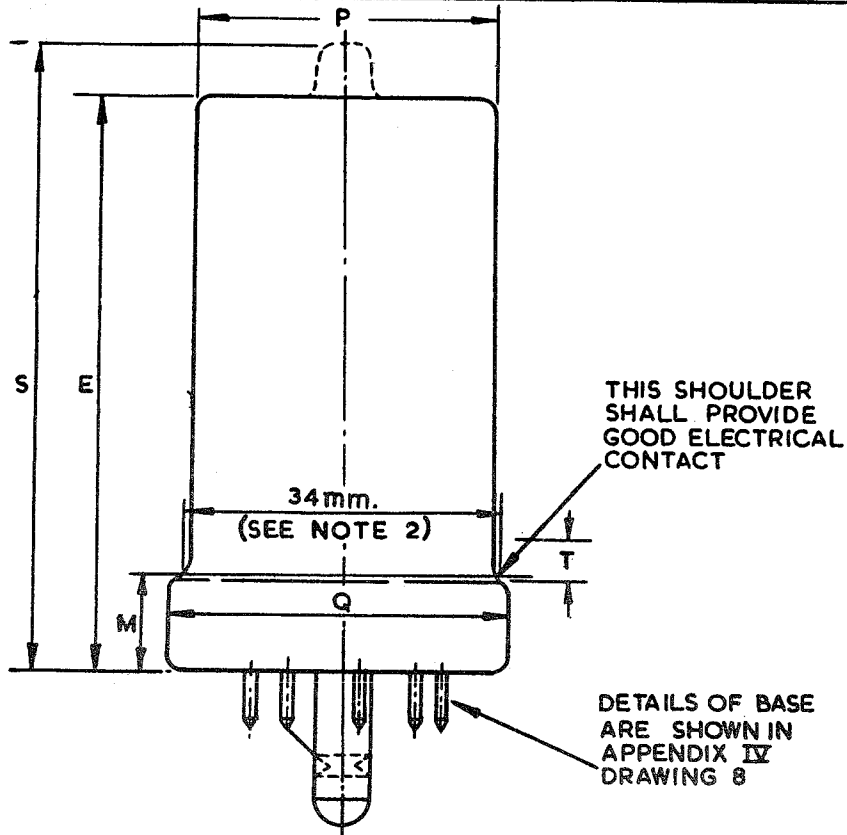
CONVENTIONAL GLASS VALVES



- A. OVERALL LENGTH OF VALVE INCLUDING PINS, SPIGOT AND TOP CAP OR TERMINAL (SCREWED DOWN) IF PRESENT
- B. DIAMETER OF VALVE AT PART OF MAXIMUM DIAMETER.
- C. DIAMETER OF VALVE BASE AT PART OF MAXIMUM DIAMETER, EXCLUDING LIP IF ANY.
- D. DIAMETER OF DOME OF VALVE
- F. LENGTH, EXCLUDING PINS AND TOP CAP
- G. HEIGHT OF BASE FROM SOLE OVER WHICH DIMENSION "C" APPLIES
- H. HEIGHT FROM SOLE TO PART WHERE DIMENSION "D" APPLIES
- J. HEIGHT FROM SOLE TO PART OF MAXIMUM DIAMETER.
- L. HEIGHT FROM SOLE TO TOP OF VALVE, INCLUDING TOP CAP, IF ANY
- Y. HEIGHT OF LOCATING PIN FROM END OF CONTACT PINS
- Z. HEIGHT FROM LOCATING PIN TO TOP OF VALVE, INCLUDING TOP CAP IF ANY.

DRAWING No. 2.

VALVES FITTED WITH B9G GLASS BASE

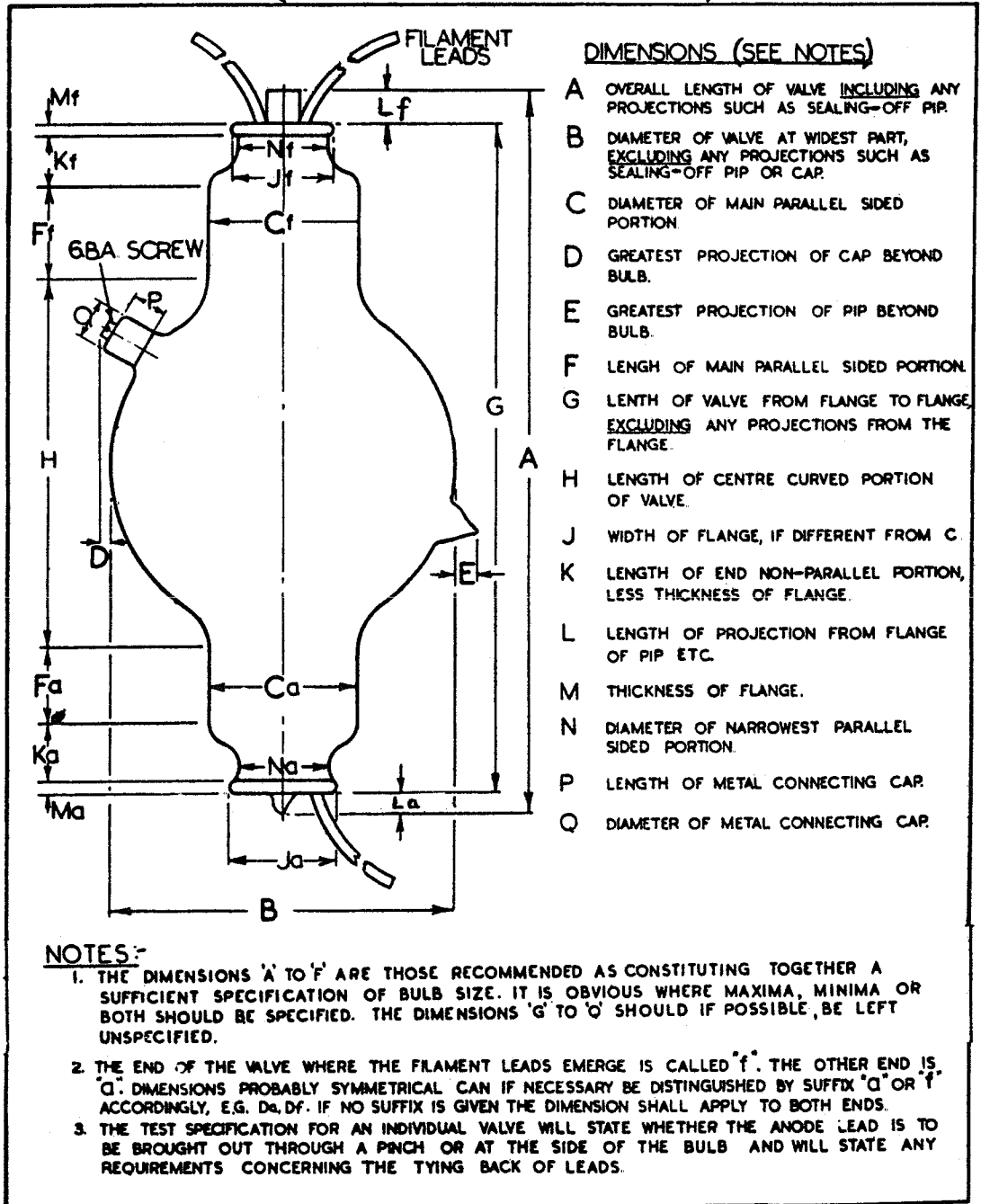


DIMENSION	LIMITS IN mm. (SEE NOTE 1)		
	MIN.	MAX.	NOTES
E	56.5	62	
M	8.5	11.5	2
P		34	
Q	36.1	37.2	
T		9.5	3
S	-	-	4

1. The dimensions stated above are mandatory unless the test specification for an individual valve states otherwise.
2. A 34 mm. ring gauge may be used.
3. Extent of metal in valves not completely camed.
4. This dimension will be specified, where applicable, on an individual test specification.

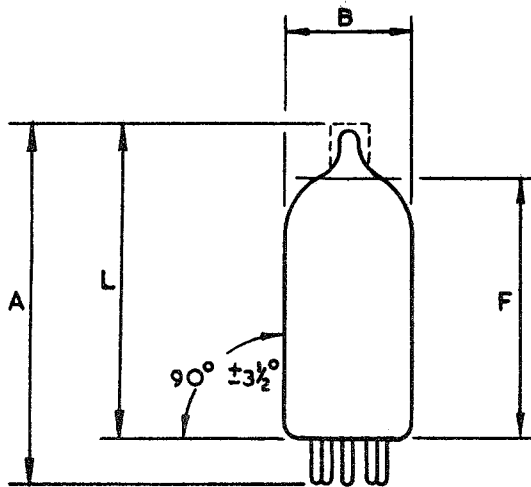
DRAWING No. 3

DOUBLE ENDED GLASS VALVES (TRANSMITTING TYPE WITHOUT BASE)



DRAWING No. 4.

OUTLINE DIMENSIONS OF VALVES B7G AND B9A



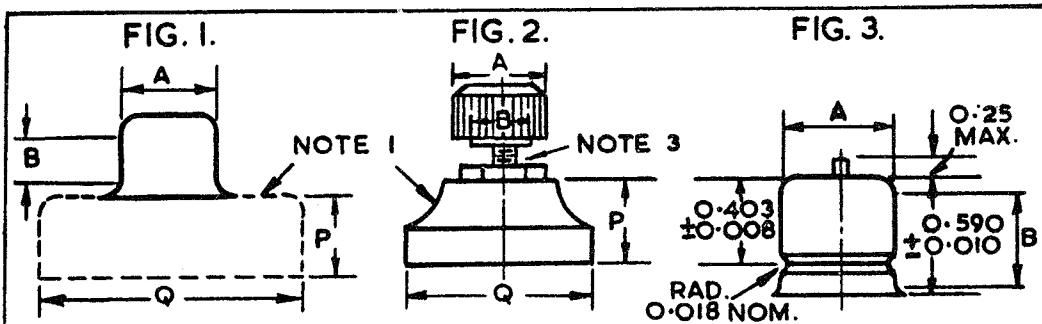
- A Normal overall length of valve including pins and top cap where applicable.
- B Max. diameter of bulb.
- L Seated height including top cap if fitted.
- F Seated height (retainer reference position)

NOTE

For details of bases and valve outlines see Appendix IV and B.S. 448, Sections B7G and B9A.

DRAWING No. 5.

TOP CAPS



DIMENSIONS

(In inches except where otherwise stated)

B.S.448 REF.	TEST SPEC. REF.	FIG	A		B
			MIN	MAX	MIN
CT2	5.1	1	0.355	0.365	0.30
CT1	5.2	1	0.245	0.255	0.21
	5.3	2		9mm.	
CT6	5.4	2		0.47	0.30
CT3	5.5	1	0.559	0.573	0.38
CT4	5.6	1	0.740	0.760	0.63
CT9	5.7	1	0.373	0.377	0.50
	5.8	1	20.3mm.	20.6mm.	19.5mm.
	5.9	1	15.5mm.	16.2mm.	20.0mm.
	5.10	1	14.9mm.	15.1mm.	12.5mm.
CT5	5.11	3	0.585	0.595	0.47

NOTES

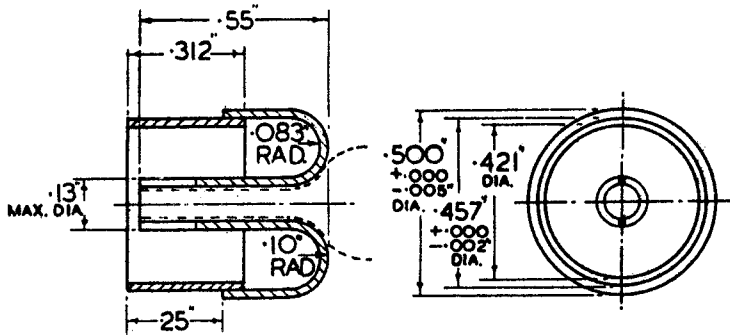
1. Caps may be fitted either with or without a skirt. The skirt may be of any convenient shape or material but the dimensions 'P' and 'Q' will be specified when necessary.
2. Dimension 'B' represents the length of the contact surface. It must be substantially cylindrical for Caps Fig. 1 and Fig. 3.
3. The screw for Cap 5.3 is 4mm. metric thread. The screw for Cap CT6 is 6BA thread, formally 5BA.
4. Specification B.S.448 shall apply where shewn in the table of dimensions.

DRAWING No. 6.

ANTI-CORONA CONNECTOR.

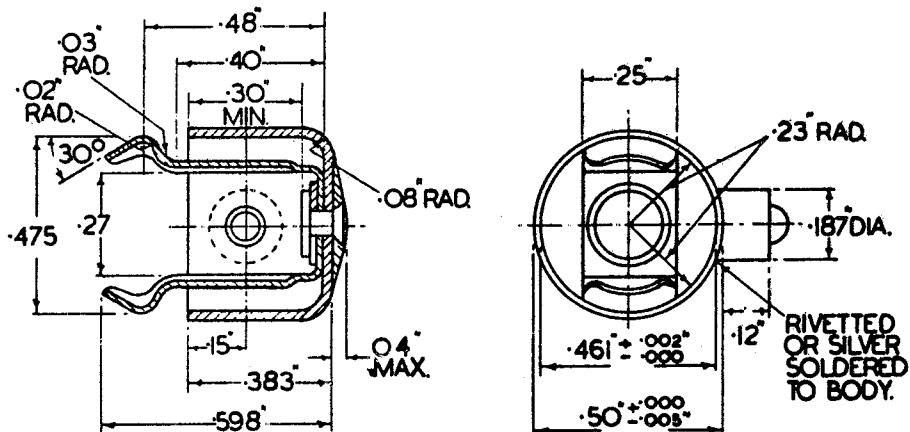
6-1

(THIS PART IS FIXED TO THE VALVE).



6-2

(THIS PART WHICH FITS 6-1 ABOVE, IS SHEWN FOR INFORMATION ONLY).

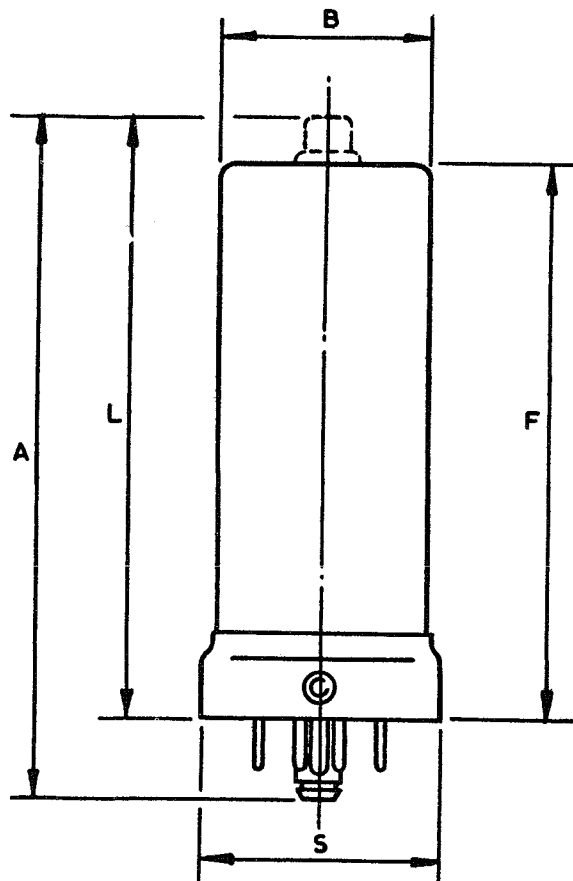


NOTES:-

1. ALL SHARP EDGES AND BURRS TO BE REMOVED
2. ALL PARTS ARE TO BE SILVER PLATED.
3. UNLESS OTHERWISE STATED TOLERANCES ON DIMENSIONS ARE TO BE WITHIN THE LIMITS ± 0.005

DRAWING No. 7.

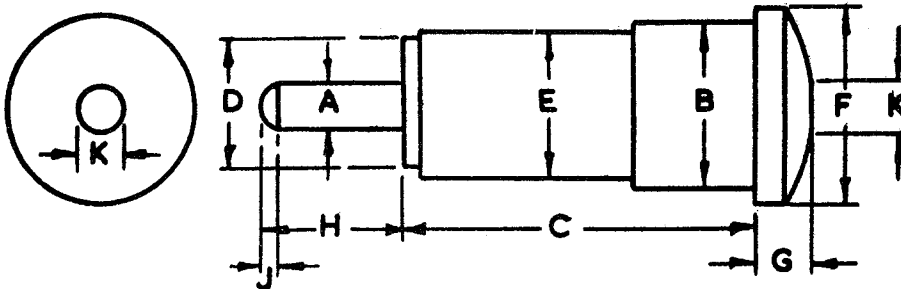
B8B & B8G GLASS BASE VALVES



- A Normal overall length of valve including pins and spigot and top cap when applicable.
- B Diameter of bulb or can if fitted.
- F Seated-height excluding top cap.
- L Seated height including top cap when applicable.
- S Diameter of shell.

For further details see Drawing No.12, Appendix IV and B.S.448.

DRAWING No. 8.
CARTRIDGE CRYSTAL VALVES.
DIMENSIONS.

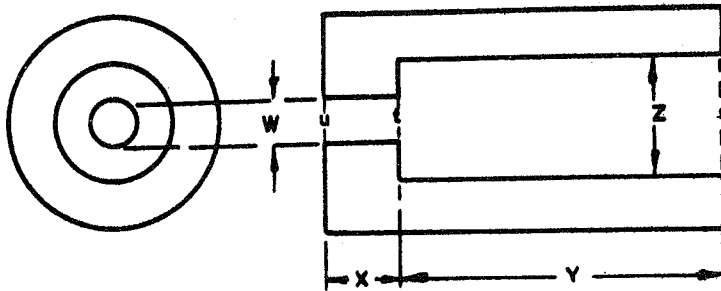


DIMENSION	INCHES.		NOTE
	MIN.	MAX.	
A	0.093	0.096	
B	0.247	0.250	
C	0.535	0.575	
D	0.210	0.228	
E	-	0.240	
F	0.285	0.315	
G	0.050	0.080	
H	0.195	0.205	
J	0.015 NOMINAL		(iii)
K	0.125		(i)
OVERALL LENGTH WITH ABOVE TOLERANCES	0.780	0.840	

- NOTES (i) K IS THE APPROX. MIN. DIAMETER OF A CIRCULAR FLAT ON THE ASSEMBLY. THERE MUST BE SOME CHAMFER AROUND THIS FLAT, AS SHEWN.
- (ii) A HOLE IS TO BE MADE IN THE CENTRE OF THE FLAT, AS SHEWN, (WITH $1/16$ IN. DRILL OR 12 B.A. TAP) OF APPROX. DIAMETER _____ 0.06 IN. AND NOMINAL DEPTH _____ 0.01 IN.
- (iii) J IS THE NOMINAL LENGTH OF THE CHAMFERED PORTION.
- (iv) CONCENTRICITY MUST BE CHECKED BY USE OF GAUGE AS DETAILED IN DRAWING No. 8A.

DRAWING No.8A

CONCENTRICITY GAUGE FOR CRYSTAL VALVES

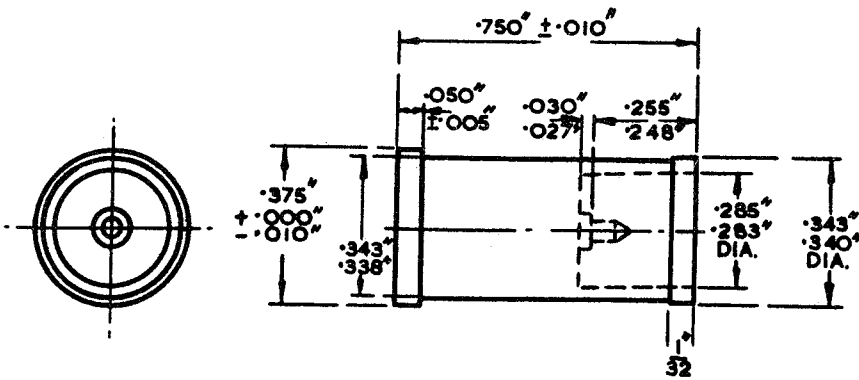
MATERIAL.HARDENED
STEELDIMENSIONS (INCHES)

W	0.136
X	0.205
Y	0.575
Z	0.251

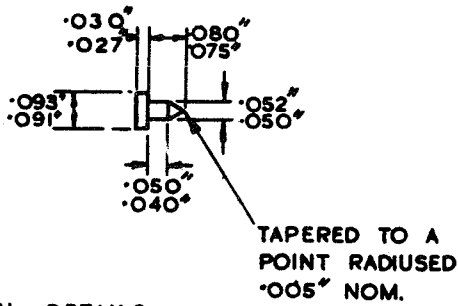
TOLERANCES.0.001 IN. MAX. ON DIAMETERS.
0.005 IN. MAX. ON LENGTHS.FINISH :- EDGES SLIGHTLY
CHAMFERED.OPERATION :- INSERT CRYSTAL VALVE INTO GAUGE.

- (a) PART OF DIMENSION A (TIP) MUST FIT EASILY INTO PART "tu" OF GAUGE.
- (b) PART OF DIMENSION B MUST FIT EASILY INTO PART "st" OF GAUGE.
- (c) PART OF DIMENSION F MUST BUTT AGAINST SURFACE "s" OF GAUGE.

DRAWING No. 9.
SHIELDED COAXIAL CRYSTAL VALVES
DIMENSIONS.

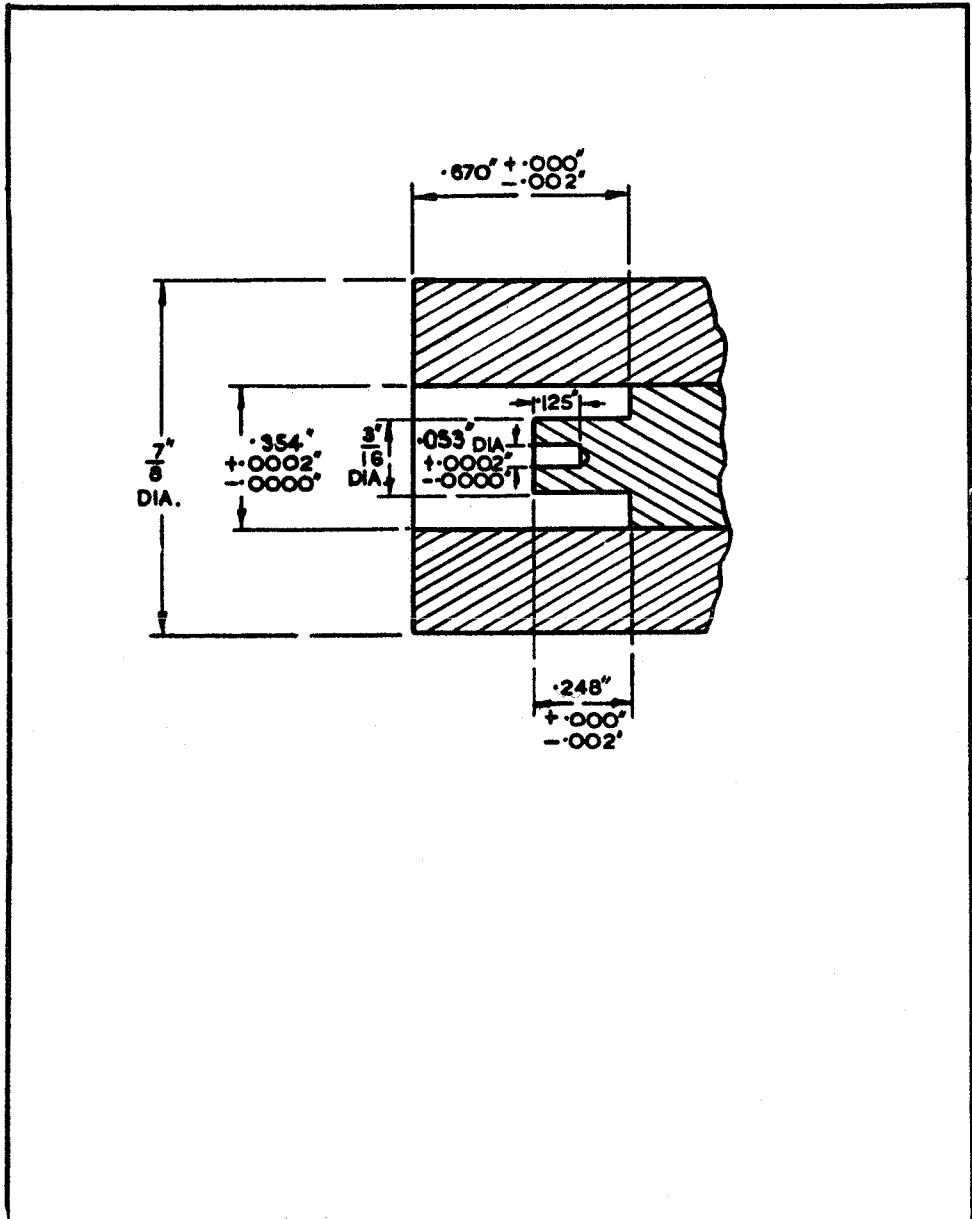


PIN DETAILS



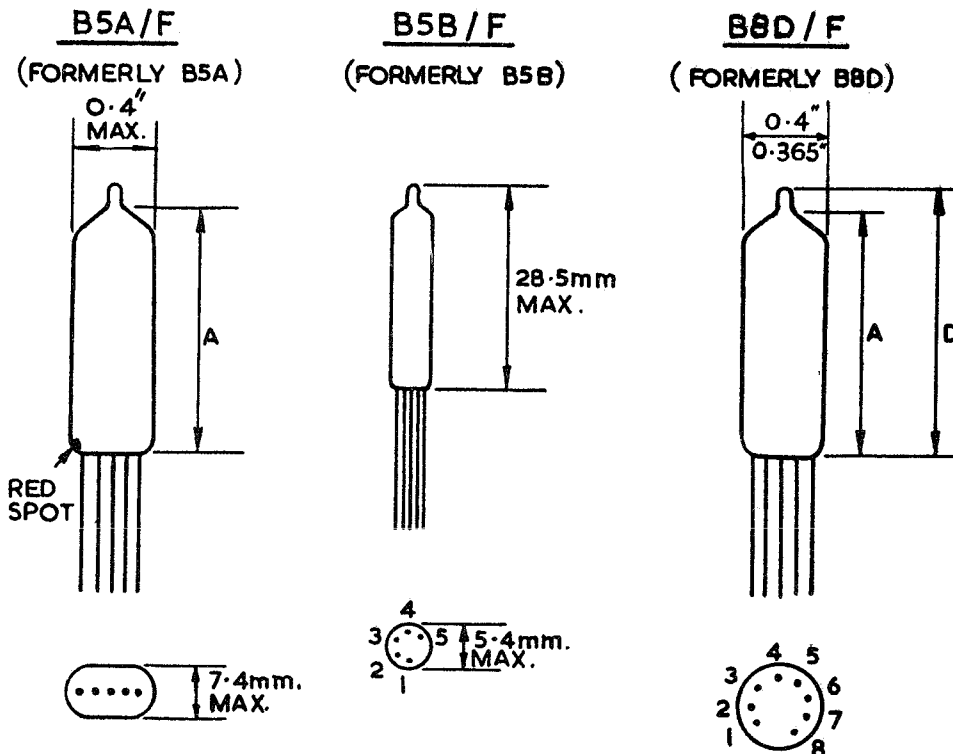
NOTE :- CONCENTRICITY SHALL BE CHECKED BY THE USE OF A GAUGE AS DETAILED IN DRAWING No. 9A.

DRAWING No.9A.
CONCENTRICITY GAUGE
FOR SHIELDED COAXIAL CRYSTAL VALVES.



DRAWING No. 10.

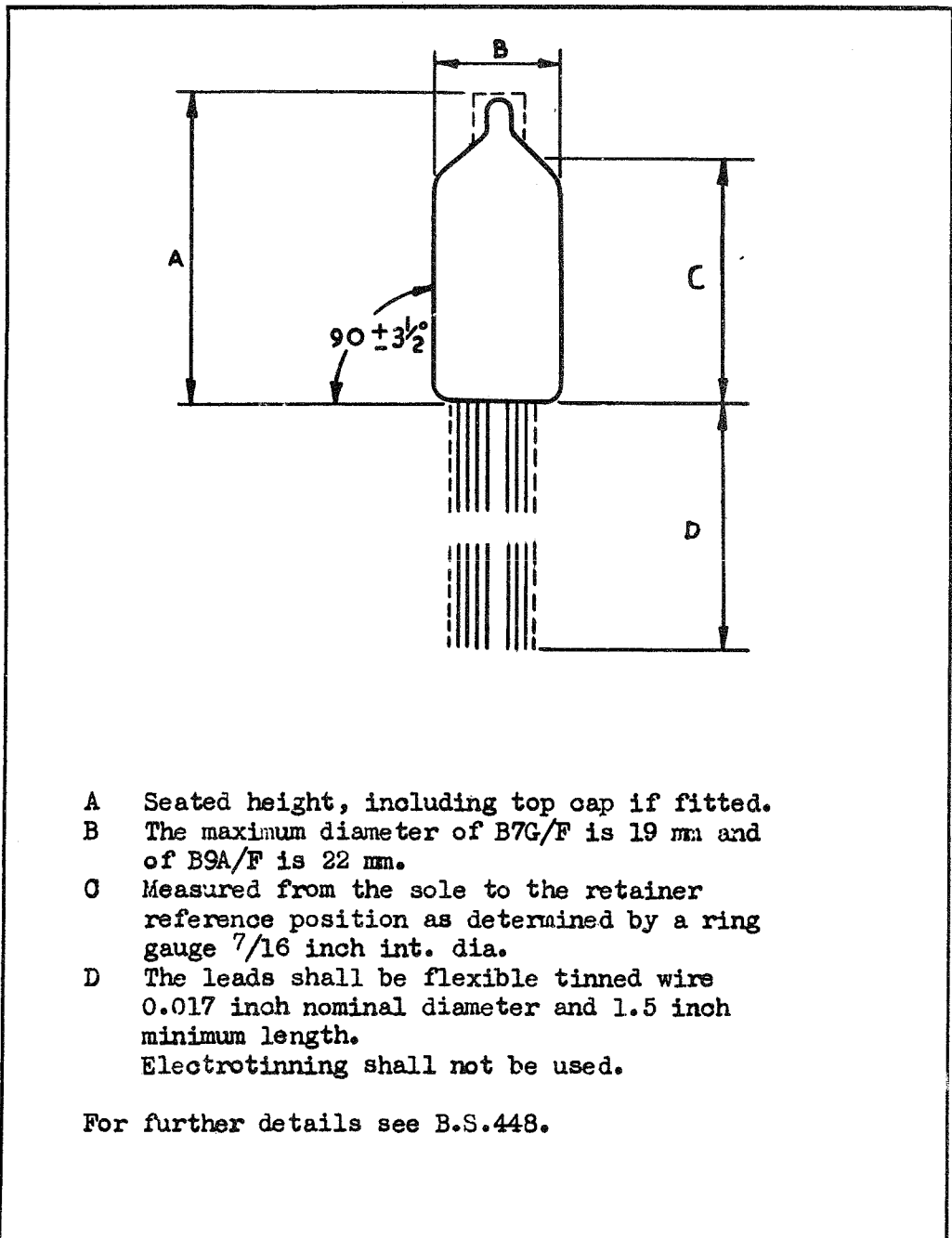
OUTLINE DIMENSIONS OF SUB-MINIATURE VALVES

NOTES

1. The leads shall be flexible tinned wire, 0.017 inch nom. dia. Electroplating shall not be used.
2. The minimum length of all leads shall be 1.5 inches.
3. The dimension A is measured from the sole to the retainer reference position as determined by ring gauges.
4. The names B5A, B5B and B8D are now reserved for the valves when the leads are cut short to fit in holders.
5. For further details see B.S.448.

DRAWING No. II.

OUTLINE DIMENSIONS OF MINIATURE VALVES TYPE B7G/F & B9A/F



- A Seated height, including top cap if fitted.
B The maximum diameter of B7G/F is 19 mm and of B9A/F is 22 mm.
C Measured from the sole to the retainer reference position as determined by a ring gauge $\frac{7}{16}$ inch int. dia.
D The leads shall be flexible tinned wire 0.017 inch nominal diameter and 1.5 inch minimum length.
Electrotinning shall not be used.

For further details see B.S.448.