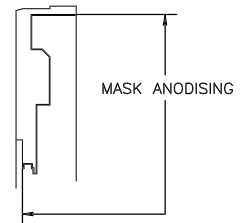


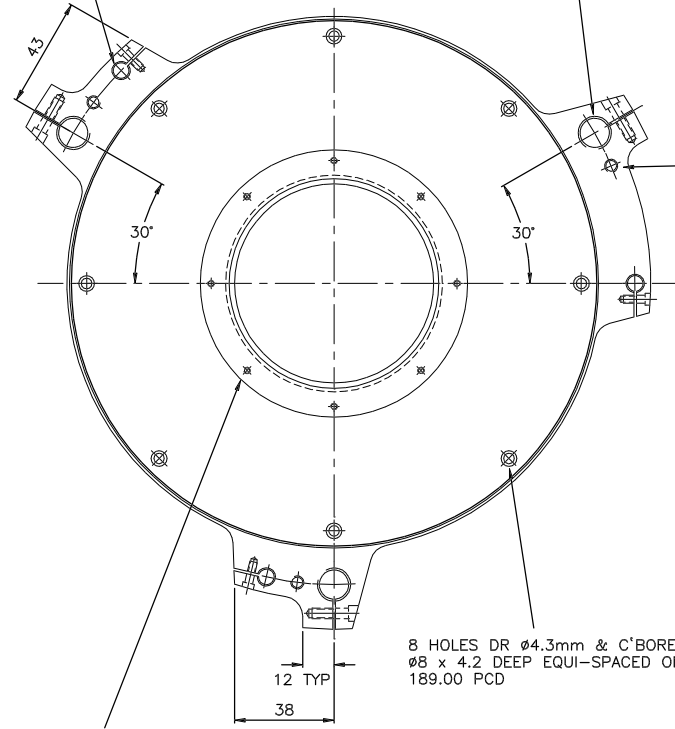
REMOVE ALL SHARP EDGES

3 HOLES  $\phi 6.00/6.02$  THRO  
& C'BORE  $\phi 7.0 \times 4$  DEEP

CLEAN THREADS AFTER ANODISING  
3 HOLES TAP 40 TPI  
1/2 INCH BSW FORM



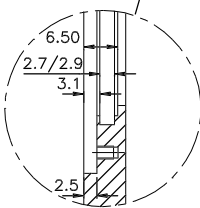
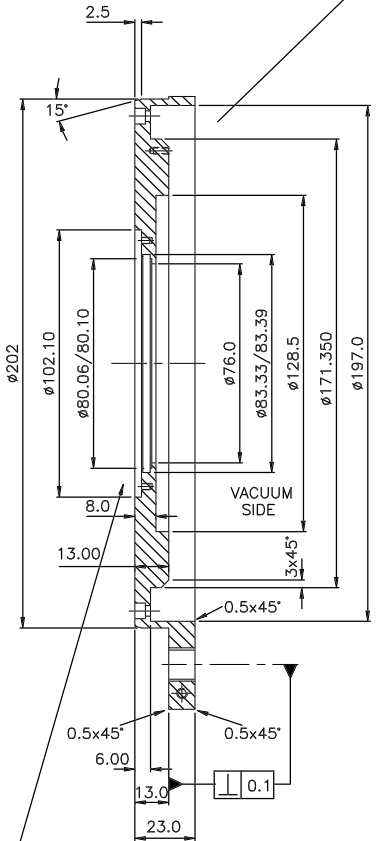
3 HOLES DR,TAP & C'BORE  
2 DEEP FOR M3 CAP SCREW



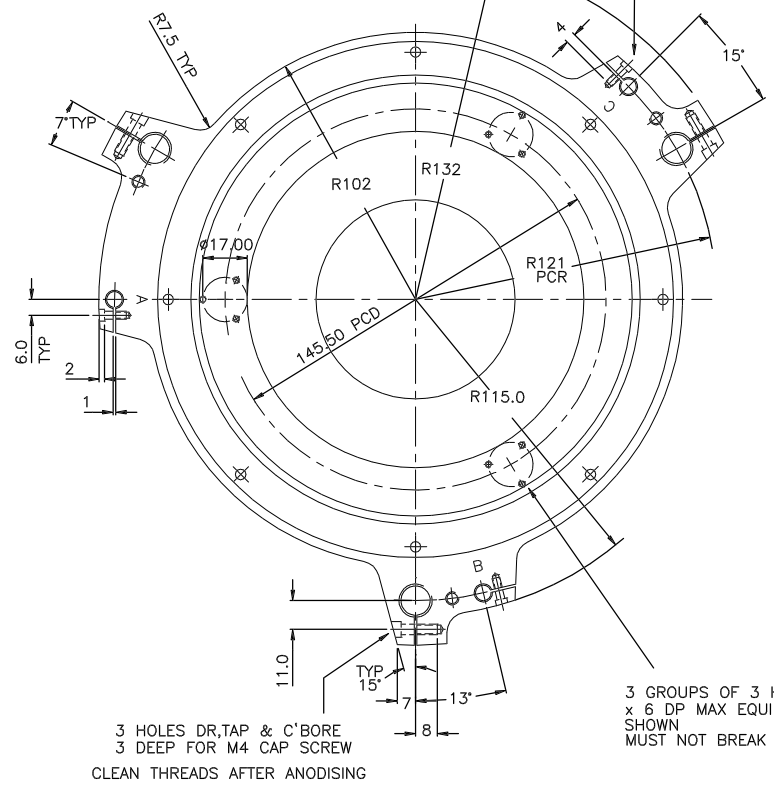
3 HOLES M5

8 HOLES DR  $\phi 4.3\text{mm}$  & C'BORE  
 $\phi 8 \times 4.2$  DEEP EQUI-SPACED ON  
189.00 PCD

8 HOLES DR & TAP M2.5  $\times 3$  DEEP  
EQUI-SPACED ON 94.00 PCD  
MUST NOT BREAK THRO'  
GROUP RADIAL POSITION NOT IMPORTANT



SCALE 2/1



3 HOLES DR,TAP & C'BORE  
3 DEEP FOR M4 CAP SCREW  
CLEAN THREADS AFTER ANODISING

3 GROUPS OF 3 HOLES M2.5  
 $\times 6$  DP MAX EQUI-SPACED AS  
SHOWN  
MUST NOT BREAK THRO'

NOTE

ENGRAVE A,B & C IN POSITION SHOWN AFTER ANODISING.  
DO NOT ANODISE ON VACUUM SIDE ie 'INSIDE' OF  $\phi 171.350$   
REF DOWTY 'O' RING 204-080

1				TITLE CRYOSTAT FRONT FLANGE			
MATERIAL	SCALE	TOLERANCES		TOLERANCES			
ALLOY H30-TF	FULL	x.	$\pm 0.5$	xx	$\pm 0.3$	xxx	$\pm 0.1$
FINISH	No. RECD. PER UNIT						
SEE DRG	1						
GA. No.	DRAWING No.						
W/RA/1100	R.G.O.	W/RA/1101					

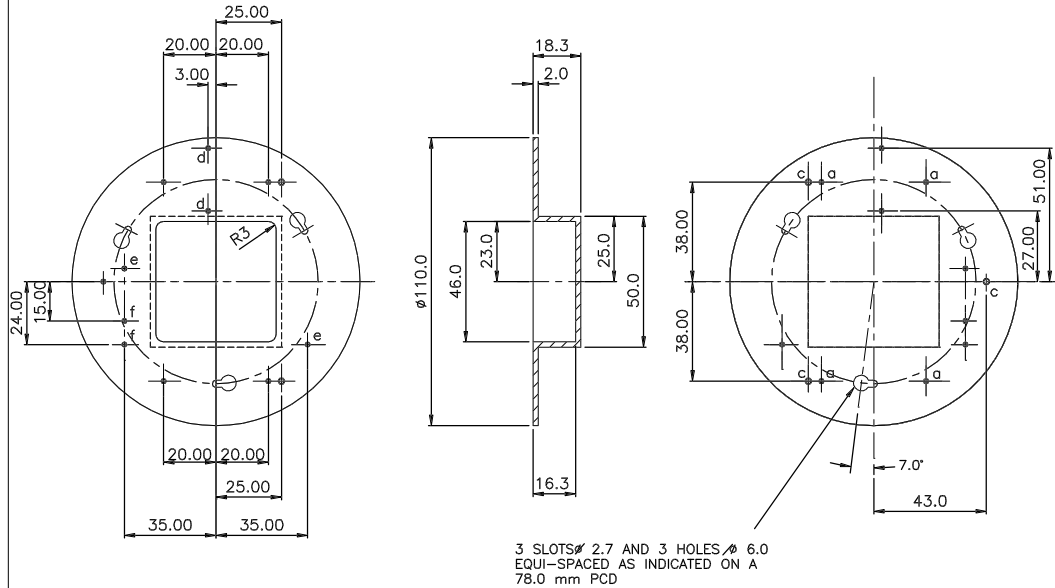
SAME AS 1001

THIRD ANGLE PROJECTION

DETAIL

Tolerance (Unless otherwise stated)				Material		Dimns.in m.m.		Scale		ROYAL GREENWICH OBSERVATORY		Title	
x	+/ -									MADINGLEY ROAD			
x.x	+/ -									CAMBRIDGE		CB3 0EZ	
xxx	+/ -												
ANG.	+/ -												
Issue	Mod.No	Date	Drawn by	Issue	Mod.No	Date	Drawn by	Drng.No.	No.Req.	Used on			GA No.
						04/06/97	PROMECH						Drawing No.
													W/RA/1101

REMOVE ALL SHARP EDGES



3 SLOTS  $\varnothing$  2.7 AND 3 HOLES  $\varnothing$  6.0  
EQUI-SPACED AS INDICATED ON A  
78.0 mm PCD

Hole	Size	No	Use
a	M2.0	4	CHIP RETAINER
c	M2.5	3	PCB MOUNT
d	M2.0	2	TEMP PCB
e	M2.0	2	HEATER RESISTORS
f	M2.0	2	TEMP SENSOR CLAMP

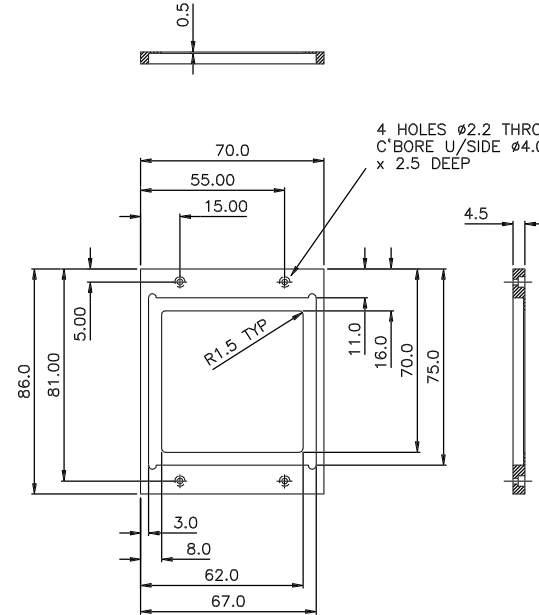
ref: (mp915)

TITLE		
21	CCD COLD BLOCK	
MATERIAL	SCALE	TOLERANCES
OFHC COPPER	FULL	x. $\pm 0.5$
FINISH	No. RECD. PER UNIT	XX $\pm 0.3$
CLEAN & GOLD PLATE	1	XXX $\pm 0.1$
G.A. No.	DRAWING No.	
W/RA/1100	R.G.O.	W/RA/1121

TITLE		
23	PCB BOARD	
MATERIAL	SCALE	TOLERANCES
	FULL	x. $\pm 0.5$
FINISH	No. RECD. PER UNIT	XX $\pm 0.3$
	1	XXX $\pm 0.1$
G.A. No.	DRAWING No.	
W/RA/1100	R.G.O.	W/RA/1123

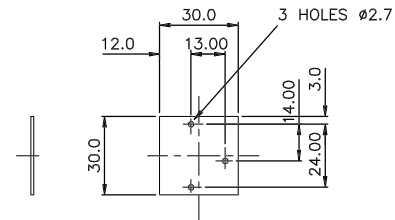
TITLE		
24	CCD RETAINER SPACING POST	
MATERIAL	SCALE	TOLERANCES
PTFE	FULL	x. $\pm 0.5$
FINISH	No. RECD. PER UNIT	XX $\pm 0.3$
BLK	4	XXX $\pm 0.1$
G.A. No.	DRAWING No.	
W/RA/1100	R.G.O.	W/RA/1124

REMOVE ALL SHARP EDGES



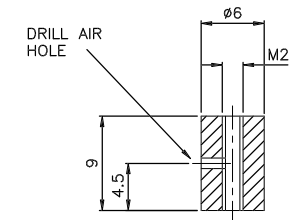
TITLE		
22	CCD RETAINER	
MATERIAL	SCALE	TOLERANCES
ALUM ALLOY	FULL	x. $\pm 0.5$
FINISH	No. RECD. PER UNIT	XX $\pm 0.3$
	1	XXX $\pm 0.1$
G.A. No.	DRAWING No.	
W/RA/1100	R.G.O.	W/RA/1122

REMOVE ALL SHARP EDGES



REF ONLY  
REFER :

REMOVE ALL SHARP EDGES



Issue	Mod.No	Date	Drawn by	Issue	Mod.No	Date	Drawn by

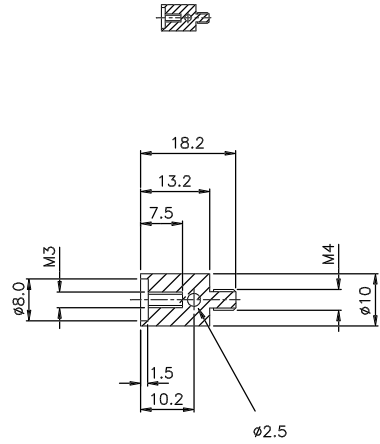
Material		Dimns.in m.m.		Scale	
Finish		Drg.No.		No.Req.	

TITLE		
ROYAL GREENWICH OBSERVATORY		
MADINGLEY ROAD		
CAMBRIDGE CB3 0EZ		

TITLE	
Title	

TITLE	
THIRD ANGLE PROJECTION	
DETAILS	
GA No.	
Drawing No. 1124	
W/RA/1121	

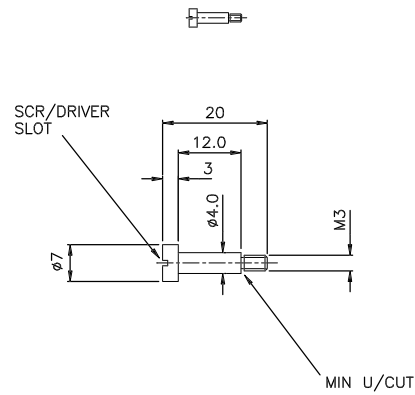
REMOVE ALL SHARP EDGES



14			TITLE		
SPRING SEAT					
MATERIAL	SCALE	TOLERANCES			
HP30 ALLOY	2/1	X. ±0.5			
FINISH	No. RECD. PER UNIT	X.X ±0.3			
CLEAN	3	X.XX ±0.1			
G.A. No.	DRAWING No.				
W/RA/1100	R.G.O. W/RA/1114				

SAME AS 1014

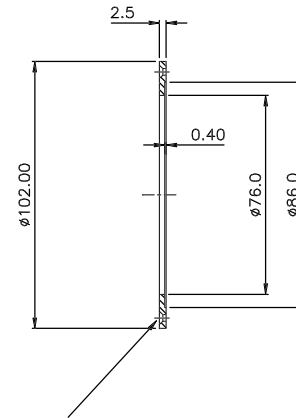
REMOVE ALL SHARP EDGES



15			TITLE		
SHOULDER SCREW					
MATERIAL	SCALE	TOLERANCES			
ST ST 321S12	2/1	X. ±0.5			
FINISH	No. RECD. PER UNIT	X.X ±0.3			
CLEAN	3	X.XX ±0.1			
G.A. No.	DRAWING No.				
W/RA/1100	R.G.O. W/RA/1115				

SAME AS 1015

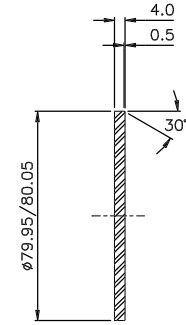
REMOVE ALL SHARP EDGES



8 HOLES DR & C'SINK FOR  
M2.5 CSK SCREW EQUI-  
SPACED ON 94.00 PCD

16			TITLE		
WINDOW RETAINER					
MATERIAL	SCALE	TOLERANCES			
ALUM ALLOY	FULL	X. ±0.5			
FINISH	No. RECD. PER UNIT	X.X ±0.3			
BLK ANODISE	1	X.XX ±0.1			
G.A. No.	DRAWING No.				
W/RA/1100	R.G.O. W/RA/1116				

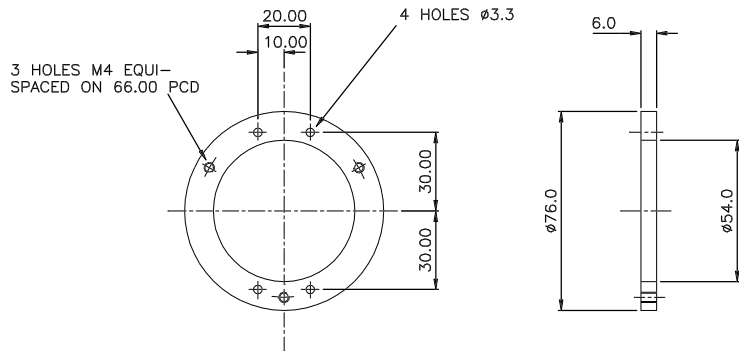
REMOVE ALL SHARP EDGES



REF  
'O' RING 204-080

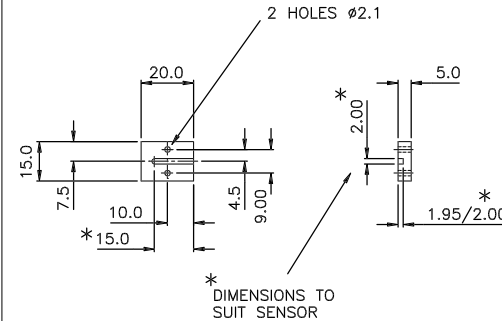
17			TITLE		
WINDOW					
MATERIAL	SCALE	TOLERANCES			
SPECTROSIL 'B'	FULL	X. ±0.5			
FINISH	No. RECD. PER UNIT	X.X ±0.3			
SEE DRG	1	X.XX ±0.1			
G.A. No.	DRAWING No.				
W/RA/1100	R.G.O. W/RA/1117				

REMOVE ALL SHARP EDGES



18			TITLE		
RING					
MATERIAL	SCALE	TOLERANCES			
COPPER	FULL	X. ±0.5			
FINISH	No. RECD. PER UNIT	X.X ±0.3			
CLEAN	1	X.XX ±0.1			
G.A. No.	DRAWING No.				
W/RA/1100	R.G.O. W/RA/1118				

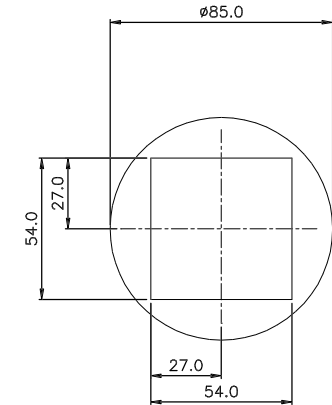
REMOVE ALL SHARP EDGES



REF  
SOUTHERN TEMPERATURE SENSOR  
BS1904 TYPE 'A'  
ø2mm NOM  
6mm LENGTH NOM

19			TITLE		
TEMP. SENSOR CLAMP					
MATERIAL	SCALE	TOLERANCES			
OFHC Cu	FULL	X. ±0.5			
FINISH	No. RECD. PER UNIT	X.X ±0.3			
CLEAN/SELF	1	X.XX ±0.1			
G.A. No.	DRAWING No.				
W/RA/1100	R.G.O. W/RA/1119				

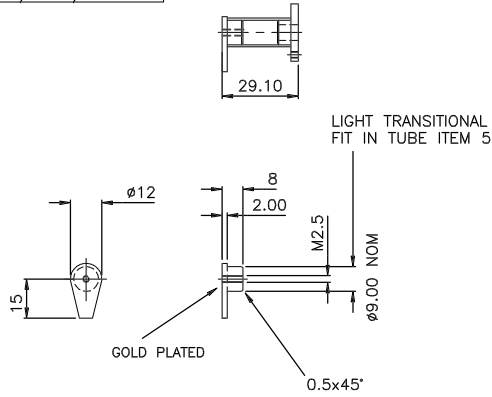
REMOVE ALL SHARP EDGES



0.50 mm THICK  
MATT BLACK BOTH SIDES

20			TITLE		
MASK					
MATERIAL	SCALE	TOLERANCES			
BERL COPPER	FULL	X. ±0.5			
FINISH	No. RECD. PER UNIT	X.X ±0.3			
PAINT	1	X.XX ±0.1			
G.A. No.	DRAWING No.				
W/RA/1100	R.G.O. W/RA/1120				

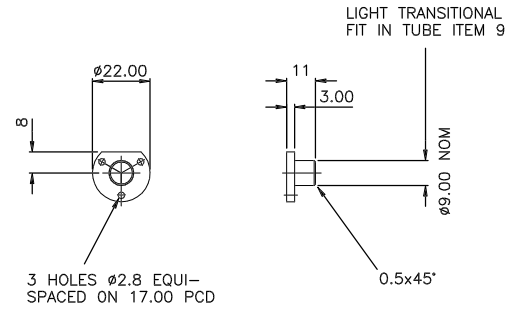
Drawing No. 1113  
W/RA/1106 REMOVE ALL SHARP EDGES



6 COOLING POST END			
MATERIAL	SCALE	TOLERANCES	
OHFC	FULL	x.	±0.5
FINISH	No. RECD. PER UNIT	x.x	±0.3
SEE DRG	3	x.xx	±0.1
G.A. No.	DRAWING No.		
W/RA/1100	R.G.O. W/RA/1106		

SAME AS 1006

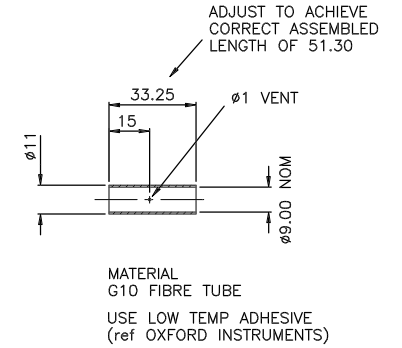
REMOVE ALL SHARP EDGES



8 KINE FOOT			
MATERIAL	SCALE	TOLERANCES	
ST ST 321S12	FULL	x.	±0.5
FINISH	No. RECD. PER UNIT	x.x	±0.3
CLEAN	3	x.xx	±0.1
G.A. No.	DRAWING No.		
W/RA/1100	R.G.O. W/RA/1108		

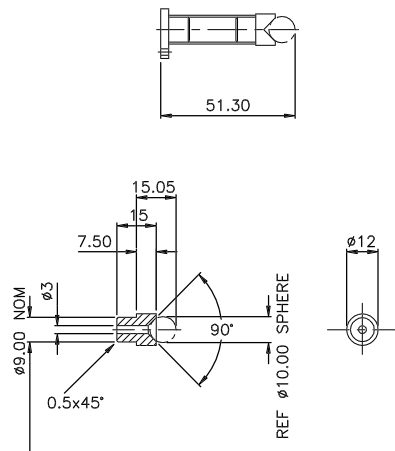
SAME AS 1008

REMOVE ALL SHARP EDGES



9 KINE TUBE			
MATERIAL	SCALE	TOLERANCES	
SEE DRG	FULL	x.	±0.5
FINISH	No. RECD. PER UNIT	x.x	±0.3
NATURAL	3	x.xx	±0.1
G.A. No.	DRAWING No.		
W/RA/1100	R.G.O. W/RA/1109		

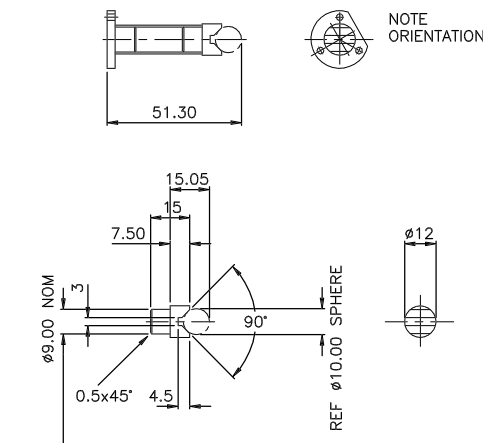
REMOVE ALL SHARP EDGES



10 KINE SEAT CONE			
MATERIAL	SCALE	TOLERANCES	
ST ST 321S12	FULL	x.	±0.5
FINISH	No. RECD. PER UNIT	x.x	±0.3
CLEAN	1	x.xx	±0.1
G.A. No.	DRAWING No.		
W/RA/1100	R.G.O. W/RA/1110		

SAME AS 101006

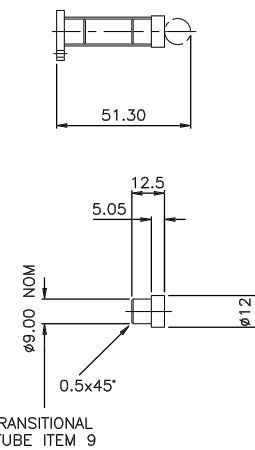
REMOVE ALL SHARP EDGES



11 KINE SEAT VEE			
MATERIAL	SCALE	TOLERANCES	
ST ST 321S12	FULL	x.	±0.5
FINISH	No. RECD. PER UNIT	x.x	±0.3
CLEAN	1	x.xx	±0.1
G.A. No.	DRAWING No.		
W/RA/1100	R.G.O. W/RA/1111		

SAME AS 1011

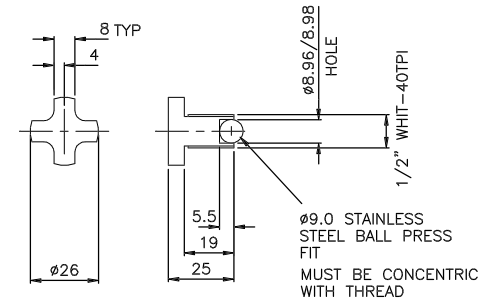
REMOVE ALL SHARP EDGES



12 KINE SEAT FLAT			
MATERIAL	SCALE	TOLERANCES	
ST ST 321S12	FULL	x.	±0.5
FINISH	No. RECD. PER UNIT	x.x	±0.3
CLEAN	1	x.xx	±0.1
G.A. No.	DRAWING No.		
W/RA/1100	R.G.O. W/RA/1112		

SAME AS 1012

REMOVE ALL SHARP EDGES



13 FOCUS SCREW			
MATERIAL	SCALE	TOLERANCES	
BRASS	FULL	x.	±0.5
FINISH	No. RECD. PER UNIT	x.x	±0.3
CLEAN	3	x.xx	±0.1
G.A. No.	DRAWING No.		
W/RA/1100	R.G.O. W/RA/1113		

SAME AS 1013

Issue	Mod.No	Date	Drawn by	Issue	Mod.No	Date	Drawn by

Tolerance (Unless otherwise stated)  
x. +/-  
x.x +/-  
x.xx +/-  
ANG. +/-

Material  
Finish  
Used on

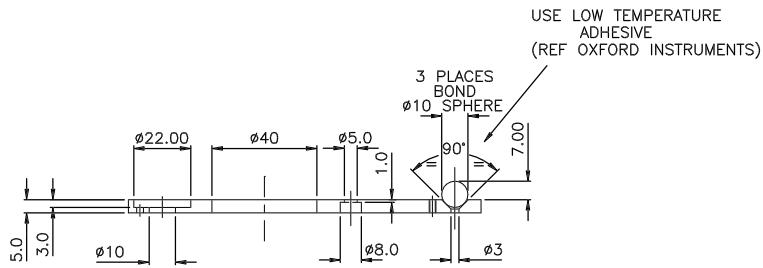
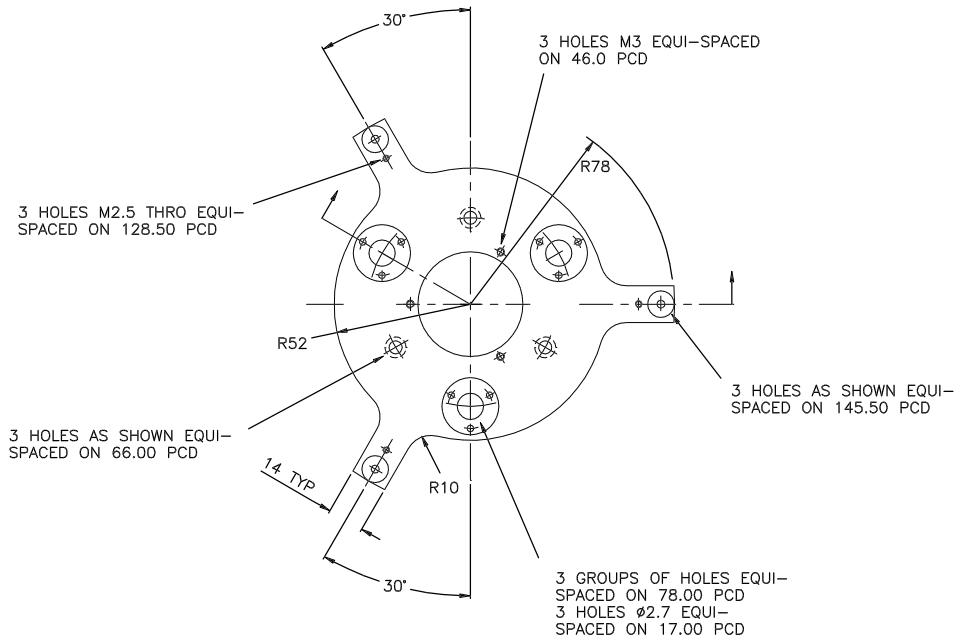
Dimns.in m.m. Scale  
ROYAL GREENWICH OBSERVATORY  
MADINGLEY ROAD  
CAMBRIDGE CB3 0EZ

Title

THIRD ANGLE PROJECTION  
DETAILS

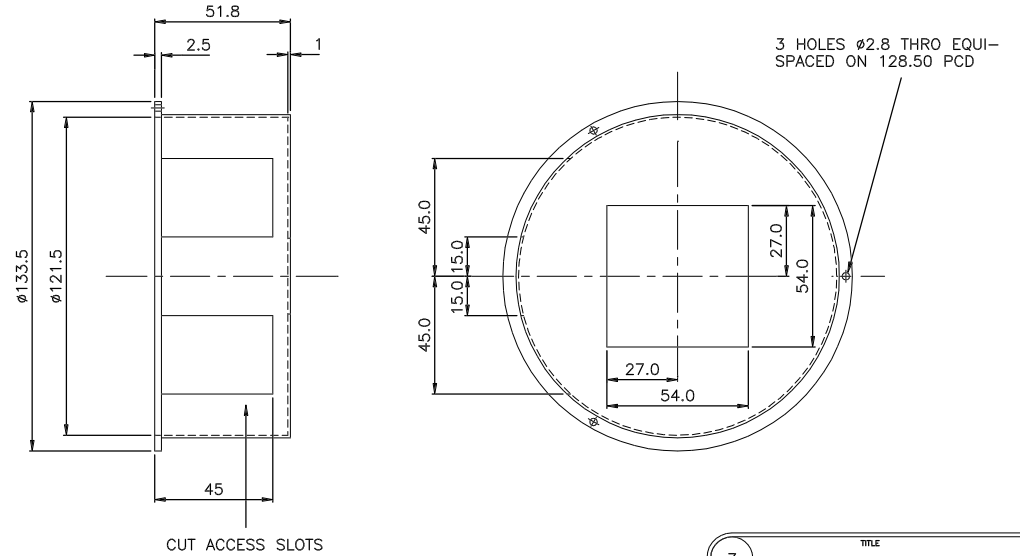
GA No.  
Drawing No. 1113  
W/RA/1106  
FILE RA1106

REMOVE ALL SHARP EDGES

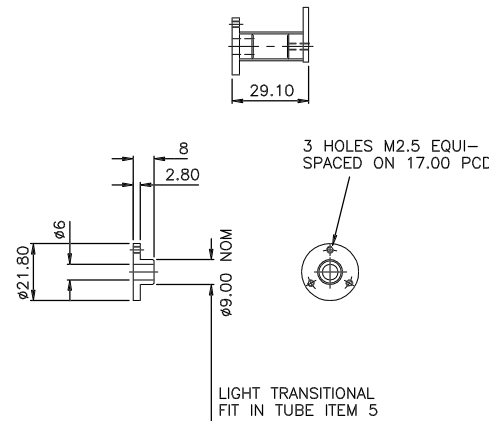


TITLE		
2 KINEMATIC PLATE		
MATERIAL	SCALE	TOLERANCES
ST ST 321S12	FULL	x. ±0.5 x.x ±0.3 x.xx ±0.1
FINISH	No. RECD. PER UNIT	
BRIGHT/POLISH	1	
G.A. No.	DRAWING No.	
W/RA/1100	R.G.O. W/RA/1102	

REMOVE ALL SHARP EDGES

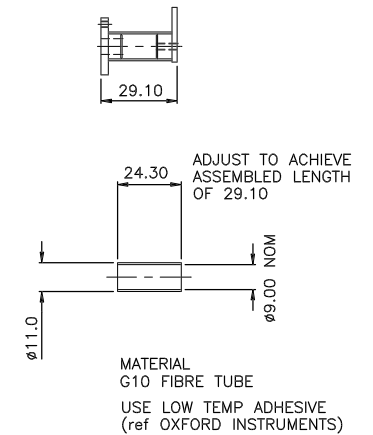


REMOVE ALL SHARP EDGES



TITLE		
4 COOLING POST FLANGE		
MATERIAL	SCALE	TOLERANCES
ST ST 321S12	FULL	x. ±0.5 x.x ±0.3 x.xx ±0.1
FINISH	No. RECD. PER UNIT	
CLEAN	3	
G.A. No.	DRAWING No.	
W/RA/1100	R.G.O. W/RA/1104	

REMOVE ALL SHARP EDGES

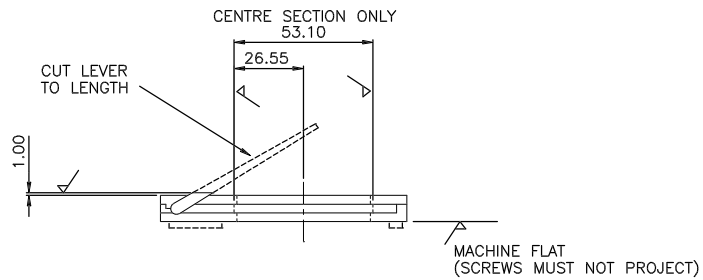
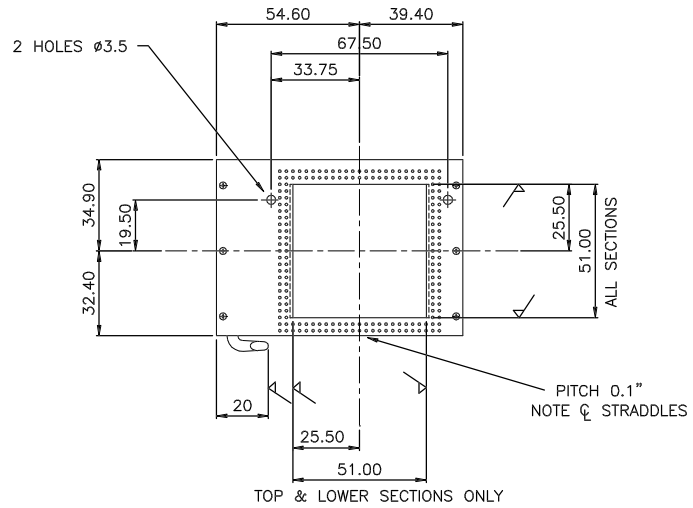


TITLE		
5 COOLING POST		
MATERIAL	SCALE	TOLERANCES
SEE DRG	FULL	x. ±0.5 x.x ±0.3 x.xx ±0.1
FINISH	No. RECD. PER UNIT	
NATURAL	3	
G.A. No.	DRAWING No.	
W/RA/1100	R.G.O. W/RA/1105	

Issue	Mod.No	Date	Drawn by	Issue	Mod.No	Date	Drawn by

Material		Dimns.in m.m.		Scale	
Finish		Drq.No.	No.Req.	Title	
				ROYAL GREENWICH OBSERVATORY MADINGLEY ROAD CAMBRIDGE CB3 0EZ	

REMOVE ALL SHARP EDGES

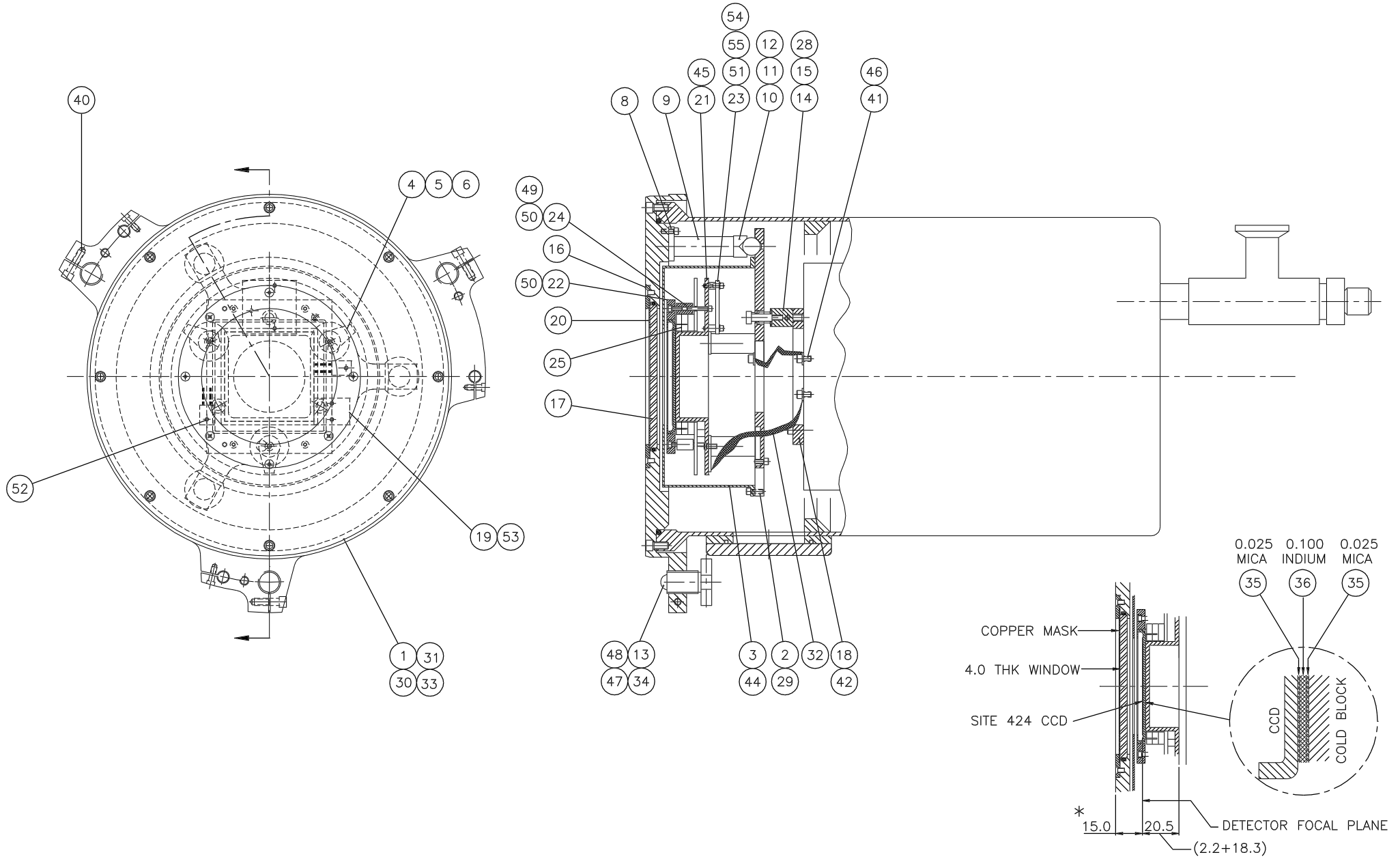


PART No. 3M 200 6325 70 1900

TITLE		
21 ZIF SOCKET MOD. DRAWING		
MATERIAL	SCALE	TOLERANCES
SEE DRG	FULL	x. ±0.5
BLK FINISH	No. RECD. PER UNIT	XX ±0.3
	1	XXX ±0.1
GA. No.	DRAWING No.	
W/RA/1100	R.G.O. W/RA/1125	

								Dimns.in m.m.		Scale		THIRD ANGLE PROJECTION		GA No.	
												ROYAL GREENWICH OBSERVATORY		Drawing No.	
								Finish		Drg.No. No.Req.		MADINGLEY ROAD		Title	
Issue Mod.No Date Drawn by Issue Mod.No Date Drawn by				04/06/97 PROMECH				Used on				CAMBRIDGE CB3 0EZ		DETAILS	
														W/RA/1125	

REMOVE ALL SHARP EDGES



FUNDAMENTAL DIMENSIONS  
\*NB. DEPARTURE FROM PREVIOUS NOMINAL ING DIMENSION

Tolerance (Unless otherwise stated)				Material		Dimns.in m.m.		Scale		THIRD ANGLE PROJECTION				GA No.	
X	+	-								GENERAL ASSEMBLY				Drawing No.	
X.X	+	-		Finish		Drq.No.	No.Req.	ROYAL GREENWICH OBSERVATORY				W/RA/1100			
X.XX	+	-				Used on		MADINGLEY ROAD				FILE RA1100S1			
ANG.	+	-						CAMBRIDGE CB3 0EZ							
Issue	Mod.No	Date	Drawn by	Issue	Mod.No	Date	Drawn by								
		04/06/97	PROMECH												

GENERAL ASSEMBLY  
SITE 424 CCD & CRYOSTAT





DRAWING NUMBER	No. OF SHEETS	GA ITEM No.	DRAWING TITLE OR COMPONENT NAME	No. OFF	MATERIAL STOCK OR ORDER No. AND DATE	REMARKS	ISSUE DATE	ISSUED TO	FINISH DATE
W/ RA /1100	1		GENERAL ASSY.						
W/ RA /1101	1	1	CRYOSTAT FRONT FLANGE	1		SAME AS 1001			
W/ RA /1102	1	2	KINEMATIC PLATE	1					
/ /1103		3	RADIATION SHIELD	1					
/ /1104		4	COOLING POST FLANGE	3					
/ /1105		5	COOLING POST	3					
W/ RA /1106	1	6	COOLING POST END	3		SAME AS 1006			
/ /									
/ /1108		8	KINE FOOT	3		SAME AS 1008			
/ /1109		9	KINE TUBE	3					
/ /1110		10	KINE SEAT CONE	1		SAME AS 1010			
/ /1111		11	KINE SEAT VEE	1		SAME AS 1011			
/ /1112		12	KINE SEAT FLAT	1		SAME AS 1012			
/ /1013		13	FOCUS SCREW	3		SAME AS 1013			
W/ RA /1014A	1	14	SPRING SEAT	3		SAME AS 1014			
/ /1015		15	SHOULDER SCREW	3		SAME AS 1015			
/ /1016		16	WINDOW RETAINER	1					
/ /1017		17	WINDOW	1					
/ /1018		18	RING	1					
/ /1119		19	TEMP. SENSOR CLAMP	1					
/ /1120		20	MASK	1					
W/ RA /1121	1	21	COLD BLOCK	1					
/ /1122		22	CCD RETAINER	1					
/ /1123		23	PCB BOARD	1		CHECK REF (DS)			
/ /1124		24	CCD RETAINER SPACING POST	4	PTFE (DELTRIN)				
W/ RA /1125	1	25	ZIF SOCKET MOD. DRAWING	1	3M 2006325 70 1900				
/ /		26	SITE-424AB CCD	1		S1424PKG.bmp			
/ /		27							
/ /		28	COMPRESSION SPRING	3	TERRY D22100				
/ /		28	BALL $\phi 10$	3	ST ST				
/ /		30	'O' RING (WINDOW)	1	DOWTY 204-080				
/ /		31	'O' RING (FLANGE)	1	AS SUPPLIED				
/ /		32	COPPER BRAID 350mm	1	RS 358-012				
/ /		33	MICROMETER	3	MITUTOYO 148-201				
/ /		34	BALL $\phi 9$	3	ST ST				
/ /		35	MICA 0.025 THK 50x50	2	GOODFELLOWS				
/ /		36	INDIUM 0.100 THK 48x48	1	GOODFELLOWS				
/ /		37							
JOB TITLE						ASS'Y DRG No.	SHEET No.	DRAWN BY PROMECH	
SITE 424 CCD & CRYOSTAT ASSY.						W/RA/1100	1 of 2	DATE 04/06/97	
ROYAL GREENWICH OBSERVATORY, MADINGLEY ROAD, CAMBRIDGE									