

PROFILE DETAIL  
SCALE 5:1

2 HOLES  $\phi 2 \times 1DP$   
ON 43 PCD

$\phi 39$

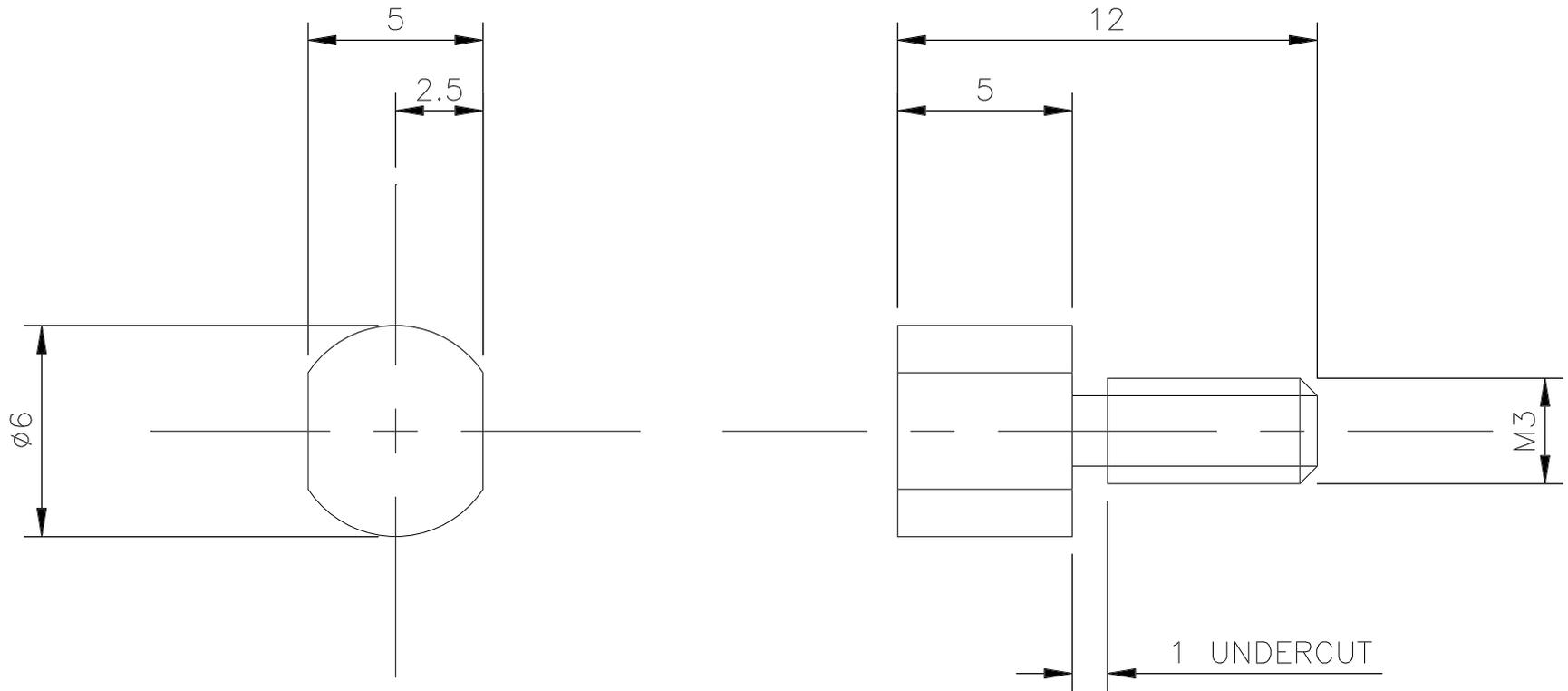
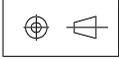
M48X0.5

**PRELIMINARY**  
FOR INFORMATION ONLY  
SUBJECT TO CHANGE  
10/08/98  
PRELIMINARY ISSUE: 1  
DO NOT USE THIS DRAWING FOR  
PROCUREMENT OR MANUFACTURE.

REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE
1	PRELIMINARY DESIGN	PDJ			ST	10/08/98
ISSUE DESCRIPTION						

UNLESS OTHERWISE STATED  
 DIMENSIONS ARE IN mm  
 GENERAL TOLERANCE:  $\pm 0.2$   
 ANGULAR TOLERANCE:  $\pm$   
 SURFACE FINISH: (MICRONS) ✓  
 REMOVE ALL SHARP EDGES  
 DO NOT SCALE THIS DRAWING

MATERIAL	BRASS	 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM		
FINISH	CLEAN	TITLE PUPIL IMAGER RETAINING RING 1 INGRID LENS BARREL ASSEMBLY		
USED ON	ORIGINAL SHEET A3	LOCATION BO	DWG. No. B0249	REV 1
ORIGINAL SCALE		1:1	SHEET 1 OF 1	



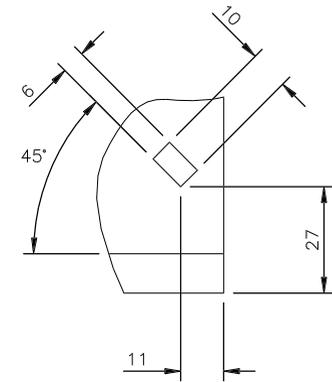
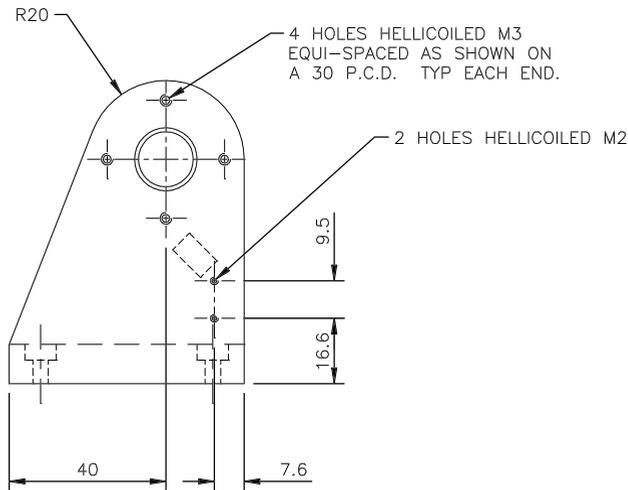
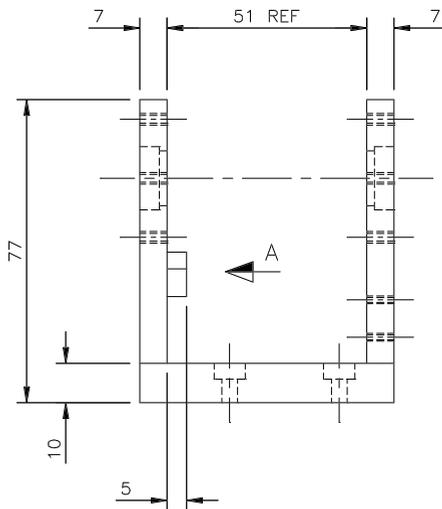
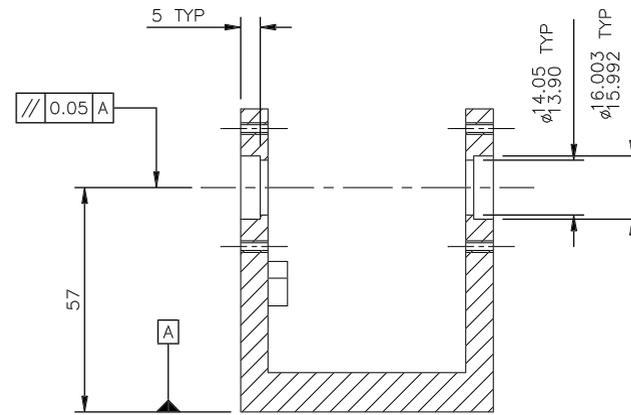
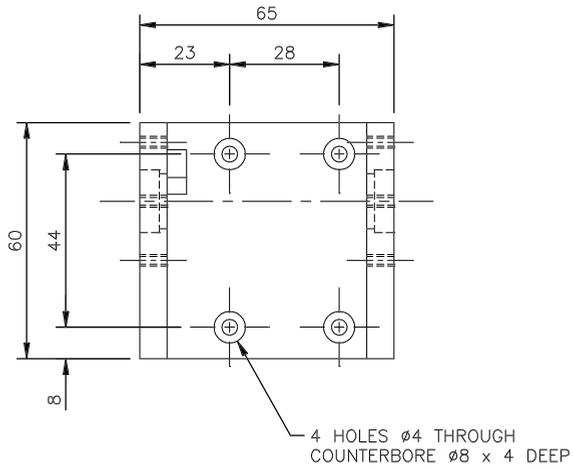
**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 16.01.98  
 PRELIMINARY ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	16.01.98

UNLESS OTHERWISE STATED  
 DIMENSIONS ARE IN mm  
 GENERAL TOLERANCE:  $\pm 0.1$   
 ANGULAR TOLERANCE:  $\pm$   
 SURFACE FINISH: 1.6/  
 (MICRONS) ✓  
 REMOVE ALL SHARP EDGES  
 DO NOT SCALE THIS DRAWING

MATERIAL  
 STAINLESS STEEL  
 BS 970 304 S11  
 FINISH  
 NATURAL  
 USED ON  
 B0107

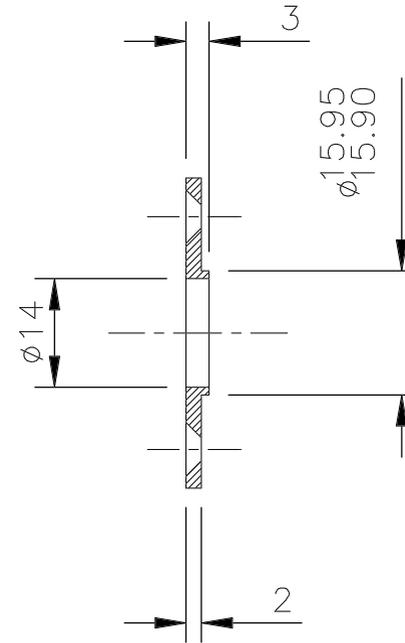
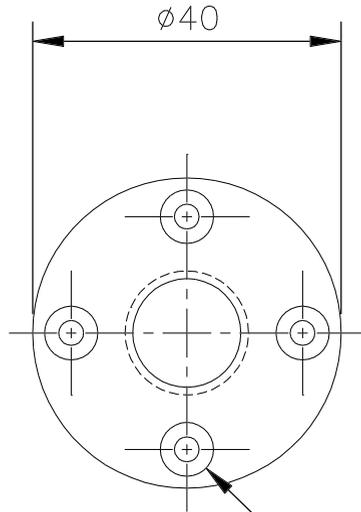
		<b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM			
TITLE SPRING BLOCK PUPIL IMAGER SUB-ASSEMBLY					
ORIGINAL SHEET A4	LOCATION N/A	DWG. No. B0169		REV 1	
ORIGINAL SCALE 5:1				SHEET 1 OF 1	



VIEW ON 'A'  
SPRING BLOCK DETAIL

**PRELIMINARY**  
FOR INFORMATION ONLY  
SUBJECT TO CHANGE  
02.12.97  
PRELIMINARY ISSUE: 2  
DO NOT USE THIS DRAWING FOR  
PROCUREMENT OR MANUFACTURE

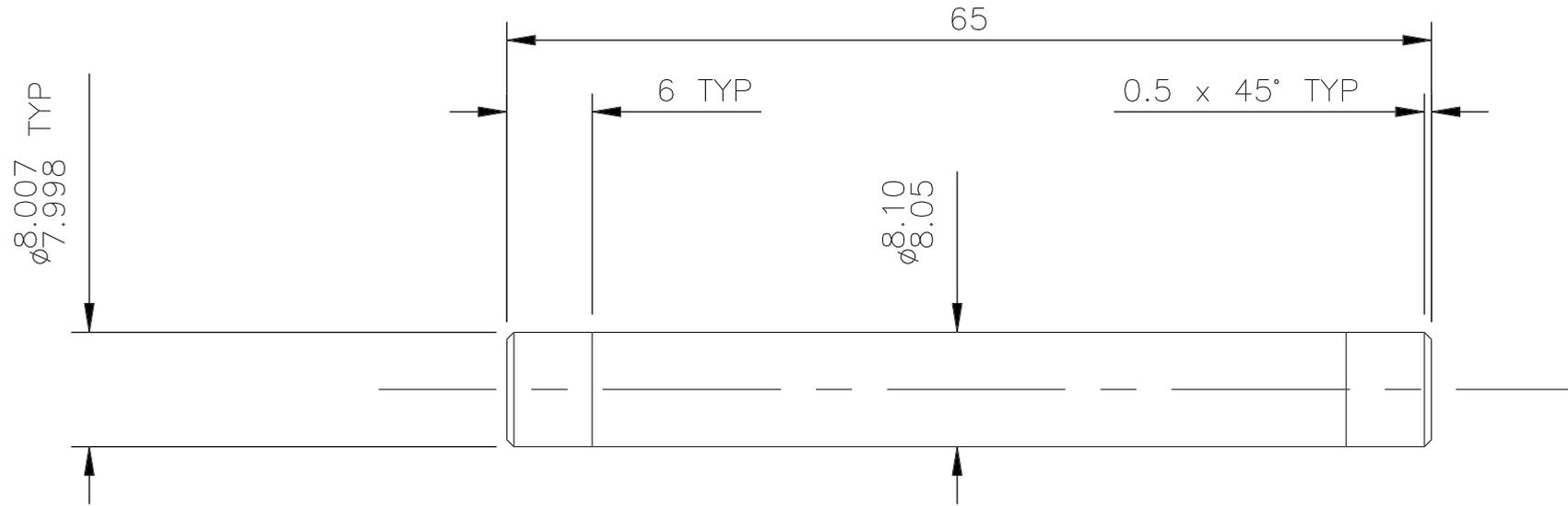
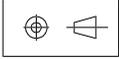
						UNLESS OTHERWISE STATED		MATERIAL ALUMINIUM ALLOY BS 1470 6082 TF		<b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM							
						DIMENSIONS ARE IN mm		FINISH NATURAL		TITLE MOUNTING BLOCK PUPIL IMAGER SUB-ASSEMBLY							
						GENERAL TOLERANCE: $\pm 0.1$		USED ON BO107		ORIGINAL SHEET A2		LOCATION N/A		DWG. No. BO170		REV 1	
						ANGULAR TOLERANCE: $\pm 0$		SURFACE FINISH: 1.6/ (MICRONS)		ORIGINAL SCALE 1:1				SHEET 1 OF 1			
						REMOVE ALL SHARP EDGES		DO NOT SCALE THIS DRAWING									
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	03.11.97											
REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE											
						ISSUE DESCRIPTION											



4 HOLES  $\phi 3.2$  THROUGH  
COUNTERSUNK  $\phi 6.92 \times 90^\circ$   
EQUI-SPACED AS SHOWN ON  
A 30 P.C.D.

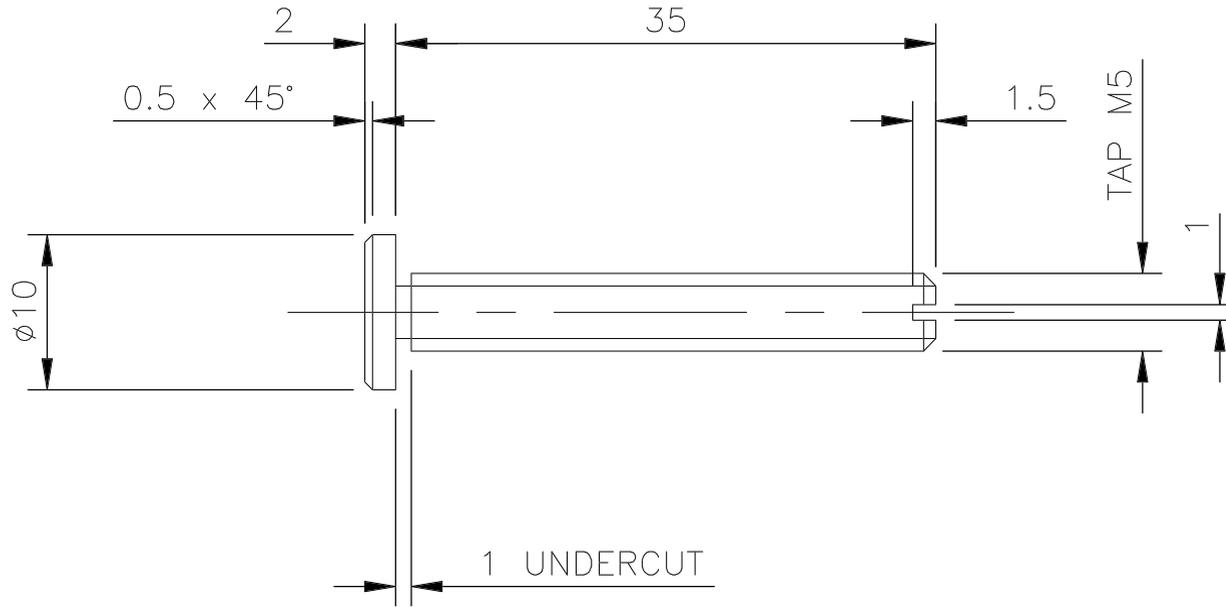
**PRELIMINARY**  
FOR INFORMATION ONLY  
SUBJECT TO CHANGE  
02.12.97  
PRELIMINARY ISSUE: 2  
DO NOT USE THIS DRAWING FOR  
PROCUREMENT OR MANUFACTURE.

							UNLESS OTHERWISE STATED	MATERIAL ALUMINIUM ALLOY BS 1470 6082 TF	 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM			
							DIMENSIONS ARE IN mm	FINISH NATURAL	TITLE BEARING KEEP PLATE PUPIL IMAGER SUB-ASSEMBLY			
							GENERAL TOLERANCE: $\pm 0.1$	USED ON B0107	ORIGINAL SHEET A4	LOCATION N/A	DWG. No. B0171	REV 1
							ANGULAR TOLERANCE: $\pm$	DO NOT SCALE THIS DRAWING				
							SURFACE FINISH: 1.6/ (MICRONS)	ORIGINAL SCALE 1:1				
							REMOVE ALL SHARP EDGES	SHEET 1 OF 1				
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	03.11.97						
REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE						
ISSUE DESCRIPTION												



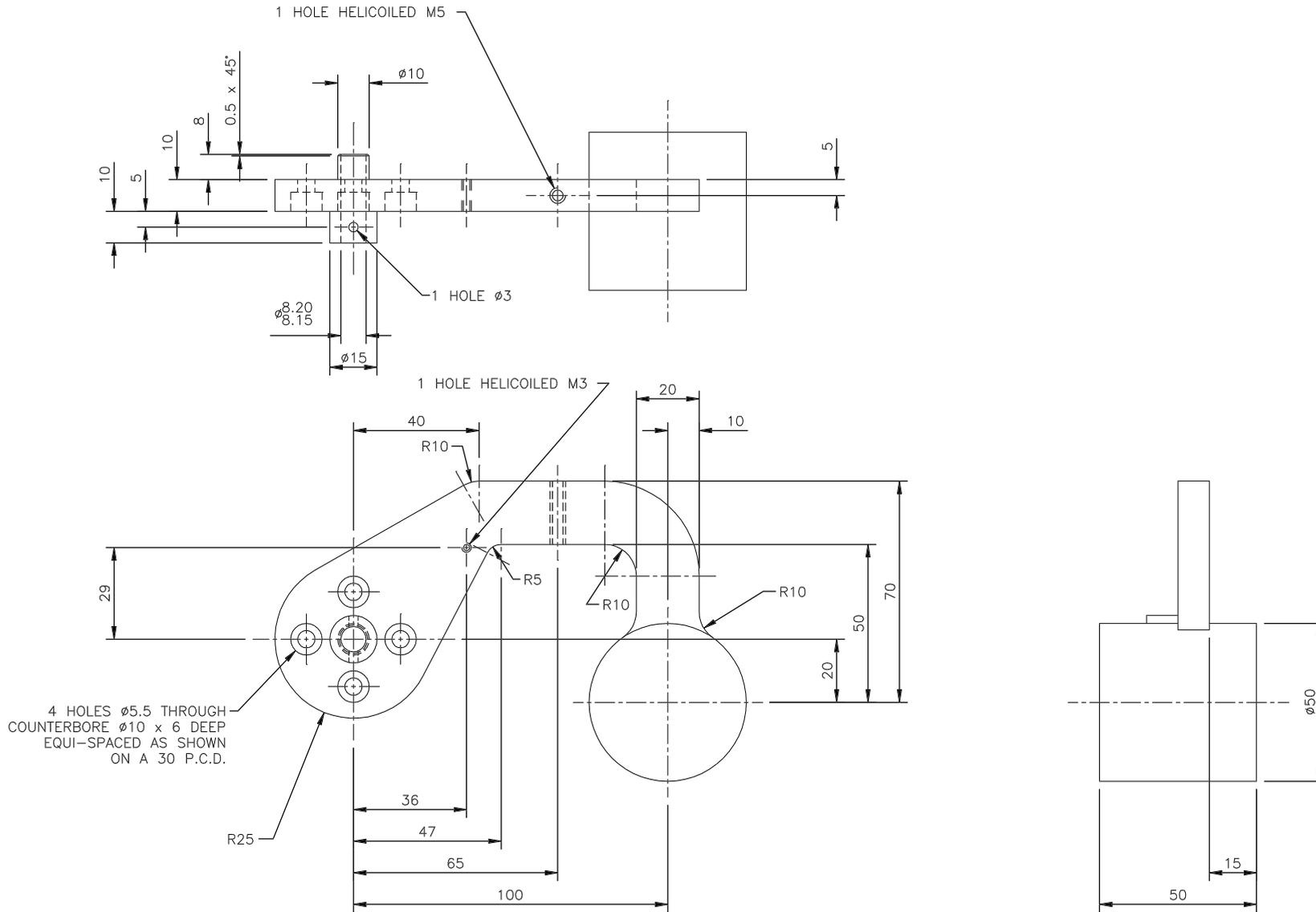
**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 02.12.97  
 PRELIMINARY ISSUE: 2  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

							UNLESS OTHERWISE STATED	MATERIAL STAINLESS STEEL BS 970 304 S11	<b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM			
							DIMENSIONS ARE IN mm	FINISH NATURAL	TITLE AXLE			
							GENERAL TOLERANCE: $\pm 0.1$	PUPIL IMAGER SUB-ASSEMBLY				
							ANGULAR TOLERANCE: $\pm$	USED ON B0107	ORIGINAL SHEET A4	LOCATION N/A	DWG. No. B0172	REV 1
							SURFACE FINISH: 1.6/ (MICRONS) ✓	ORIGINAL SCALE 2:1		SHEET 1 OF 1		
							REMOVE ALL SHARP EDGES					
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	03.11.97						
REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE						
ISSUE DESCRIPTION							DO NOT SCALE THIS DRAWING					



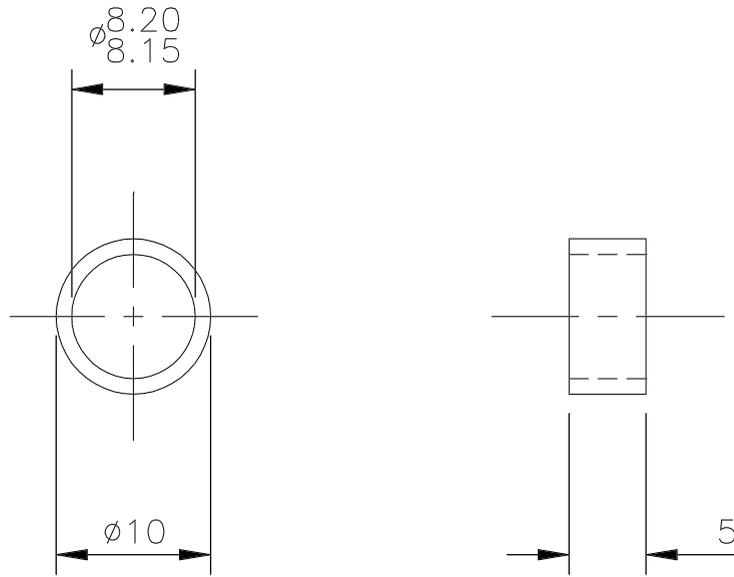
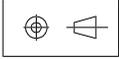
**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 02.12.97  
 PRELIMINARY ISSUE: 2  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

							UNLESS OTHERWISE STATED	MATERIAL	 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM			
							DIMENSIONS ARE IN mm	ALUMINIUM ALLOY				
							GENERAL TOLERANCE: $\pm 0.1$	BS 1470 6082 TF				
							ANGULAR TOLERANCE: $\pm$	FINISH	TITLE			
							SURFACE FINISH: 1.6/ (MICRONS)	NATURAL	END STOP			
							REMOVE ALL SHARP EDGES		PUPIL IMAGER SUB-ASSEMBLY			
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	03.11.97	USED ON	ORIGINAL SHEET	LOCATION	DWG. No.	REV	
REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE	B0107	A4	N/A	B0173	1	
ISSUE DESCRIPTION							DO NOT SCALE THIS DRAWING	ORIGINAL SCALE	2:1		SHEET 1 OF 1	



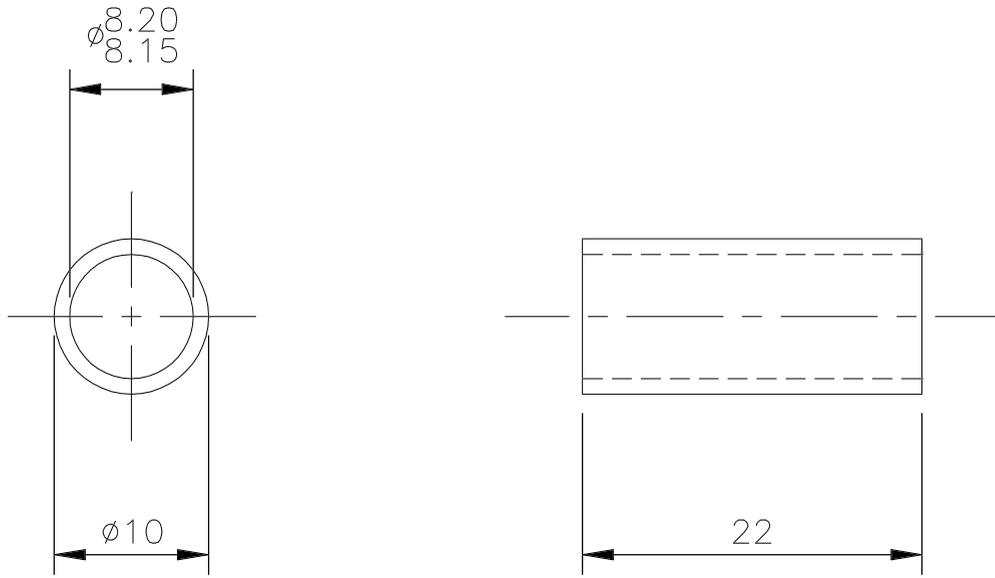
**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 13.02.98  
 PRELIMINARY ISSUE: 3  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE

						UNLESS OTHERWISE STATED		MATERIAL ALUMINIUM ALLOY BS 1470 6082 TF		 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM			
						DIMENSIONS ARE IN mm		FINISH NATURAL		TITLE MAIN PUPIL IMAGER LENS ARM PUPIL IMAGER SUB-ASSEMBLY			
						GENERAL TOLERANCE: ± 0.1		USED ON B0107		ORIGINAL SHEET A2		LOCATION N/A	
						ANGULAR TOLERANCE: ±		REMOVE ALL SHARP EDGES		DWG. No. BO174		REV 1	
						SURFACE FINISH: 1.6 (MICRONS)				ORIGINAL SCALE 1:1		SHEET 1 OF 1	
						1 PRELIMINARY ISSUE							
						R.M.T							
						N/A							
						N/A							
						N/A							
						03.11.97							
						DATE							
						ISSUE DESCRIPTION							
						DO NOT SCALE THIS DRAWING							



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 02.12.97  
 PRELIMINARY ISSUE: 2  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

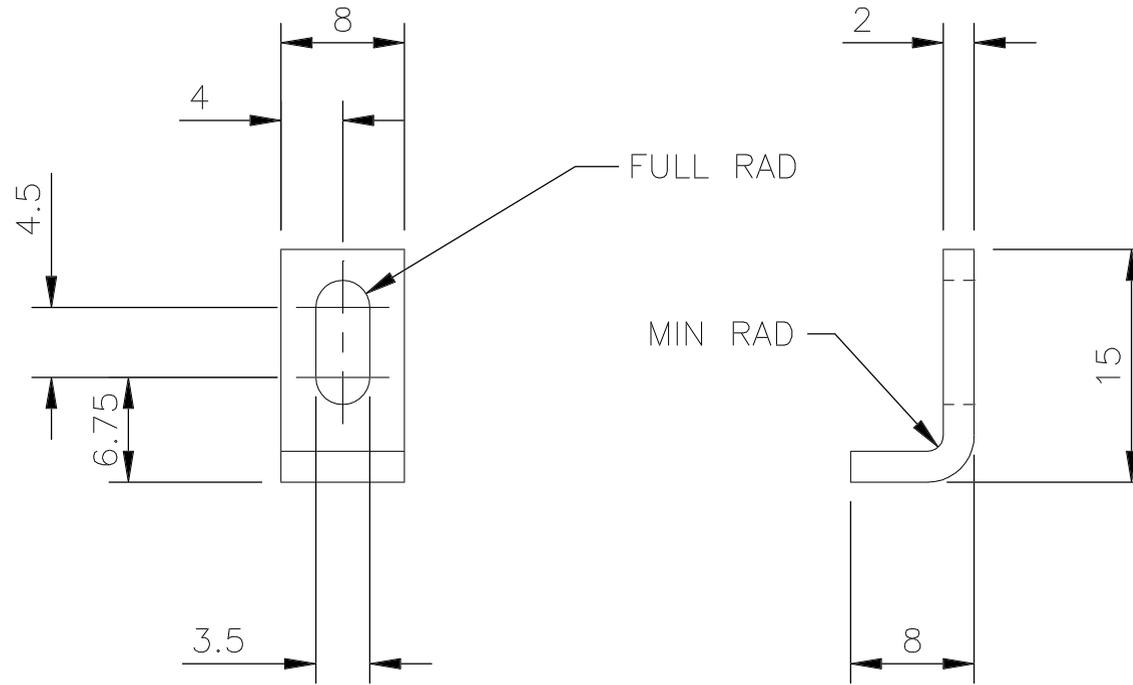
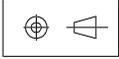
							UNLESS OTHERWISE STATED	MATERIAL ALUMINIUM ALLOY BS 1470 6082 TF	 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM 			
							DIMENSIONS ARE IN mm GENERAL TOLERANCE: ± 0.1 ANGULAR TOLERANCE: ± SURFACE FINISH: 1.6/ (MICRONS)	FINISH NATURAL	TITLE AXLE SPACER (SMALL) PUPIL IMAGER SUB-ASSEMBLY			
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	03.11.97	REMOVE ALL SHARP EDGES	USED ON B0107	ORIGINAL SHEET A4	LOCATION N/A	DWG. No. B0175	REV 1
REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE			ORIGINAL SCALE	2:1		SHEET 1 OF 1
ISSUE DESCRIPTION							DO NOT SCALE THIS DRAWING					



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 02.12.97  
 PRELIMINARY ISSUE: 2  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

							UNLESS OTHERWISE STATED	MATERIAL ALUMINIUM ALLOY BS 1470 6082 TF	 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM 			
							DIMENSIONS ARE IN mm GENERAL TOLERANCE: ± 0.1 ANGULAR TOLERANCE: ± SURFACE FINISH: 1.6/ (MICRONS) ✓	FINISH NATURAL		TITLE AXLE SPACER (LARGE) PUPIL IMAGER SUB-ASSEMBLY		
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	03.11.97	REMOVE ALL SHARP EDGES	USED ON B0107	ORIGINAL SHEET A4	LOCATION N/A	DWG. No. B0176	REV 1
REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE			ORIGINAL SCALE 2:1			SHEET 1 OF 1
ISSUE DESCRIPTION							DO NOT SCALE THIS DRAWING					





**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 02.12.97  
 PRELIMINARY ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

							UNLESS OTHERWISE STATED	MATERIAL ALUMINIUM ALLOY BS 1470 6082 TF	 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM 			
							DIMENSIONS ARE IN mm	FINISH NATURAL	TITLE SWITCH BRACKET PUPIL IMAGER SUB-ASSEMBLY			
							GENERAL TOLERANCE: ± 0.1	USED ON B0107	ORIGINAL SHEET A4	LOCATION N/A	DWG. No. B0179	REV 1
							ANGULAR TOLERANCE: ±	REMOVE ALL SHARP EDGES				
							SURFACE FINISH: 1.6/ (MICRONS) ✓	ORIGINAL SCALE 2:1				
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	02.12.97	SHEET 1 OF 1					
REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE	DO NOT SCALE THIS DRAWING					
ISSUE DESCRIPTION												

Drawing No:

BO242

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



A

B

C

D

E

F

A

B

C

D

E

F

M3 CAP HD

WORM BO259

SPRING SEAT & MICROSWITCH RAMP (FINAL DETAILS TBD)

THRUST WASHER BO254

THRUST WASHER BO258

BEARING END CAP BO256

SHAFT BO257

**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 18/02/99  
 ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED  
 ALL DIMENSIONS IN mm  
 GENERAL TOL: ±  
 ANGULAR TOL: ±  
 SURFACE FINISH (MICRONS) ✓  
 REMOVE ALL SHARP EDGES

This document belongs to the ISAAC NEWTON GROUP of TELESCOPES and may not be copied, reproduced or displayed in whole or in part without the express written consent of the ISAAC NEWTON GROUP of TELESCOPES

TITLE: PUPIL IMAGER COMPLIANT DRIVE SUB ASSEMBLY			
MATERIAL:	ORIGINAL SCALE 2:1	MAIN SYSTEM INGRID	DWG TYPE PART
FINISH:	SHEET SIZE A3	SUB-SYSTEM PUPIL IMAGER DRIVE	LOCATION BO
		ITEM PART	USED ON BO107
		ENG DISCIPLINE MECHANICAL	

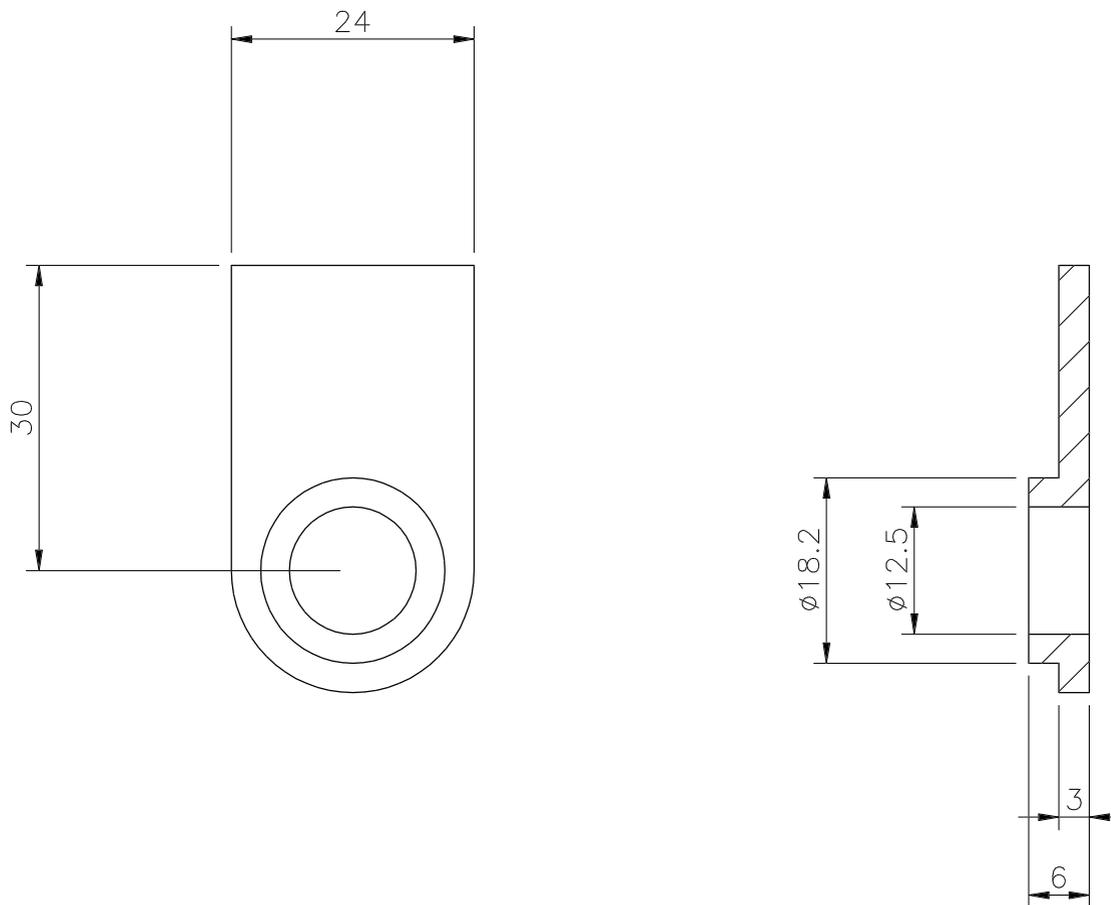
ISSAAC NEWTON GROUP Apartado de Correos, 321 38780 S/C de La Palma Canary Islands SPAIN Tel: +34 922 425 400			
DRAWING NUMBER	BO242	SHEET 1 of 1	

1	PDJ	18/02/99		
ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD

Drawing No: B0243

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE 



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 15/02/99  
 ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED  
 ALL DIMENSIONS IN mm  
 GENERAL TOL: ± 0.1  
 ANGULAR TOL: ±  
 SURFACE FINISH (MICRONS) ✓  
 REMOVE ALL SHARP EDGES

This document belongs to the ISAAC NEWTON GROUP of TELESCOPES and may not be copied, reproduced or displayed in whole or in part without the express written consent of the ISAAC NEWTON GROUP of TELESCOPES

TITLE:  
**SPRING SEAT  
 INGRID PUPIL IMAGER DRIVE**

MATERIAL: ALUMINIUM ALLOY  
 BS1470 6082 TF

FINISH:  
 CLEAN

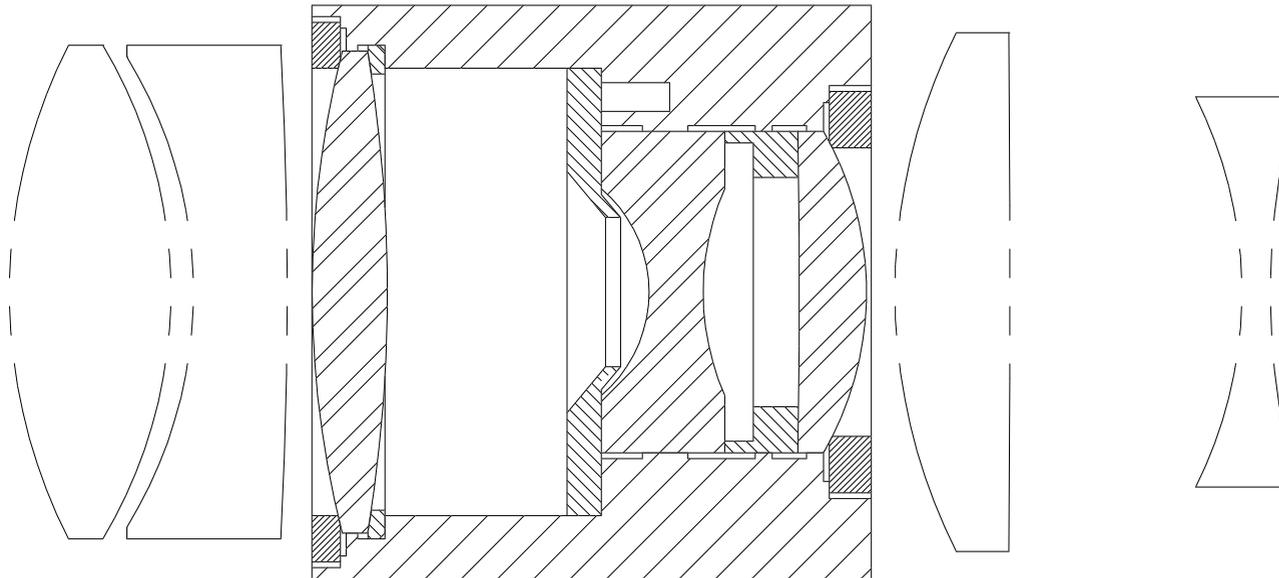
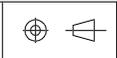
ORIGINAL SCALE	2:1	MAIN SYSTEM	INGRID	DWG TYPE	PART
SUB-SYSTEM	PUPIL IMAGER DRIVE	LOCATION	BO	USED ON	BO107
SHEET SIZE	A3	ITEM	PART	ENG DISCIPLINE	MECHANICAL

**ISAAC NEWTON GROUP**  
 Apartado de Correos, 321  
 38780 S/C de La Palma  
 Canary Islands  
 SPAIN  
 Tel: +34 922 425 400

DRAWING NUMBER: B0243  
 SHEET 1 of 1

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	PDJ	15/02/99		

DWG. No. B0244

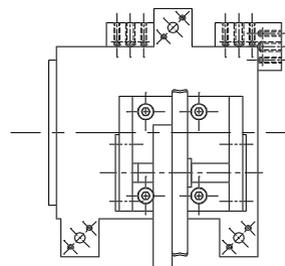
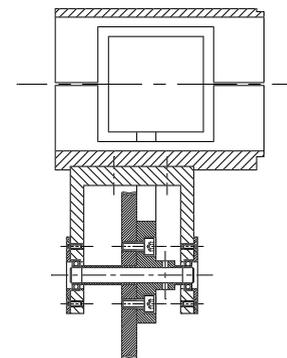
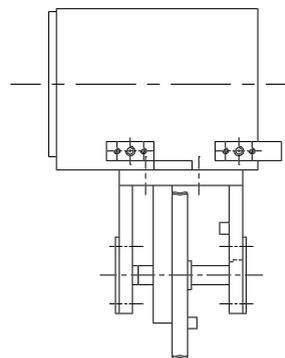
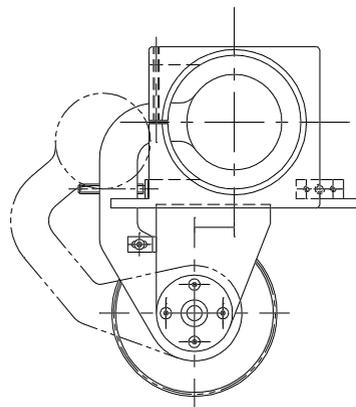
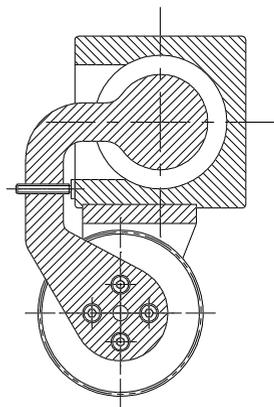


**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 27/07/98  
 PRELIMINARY ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

							UNLESS OTHERWISE STATED	MATERIAL	 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM			
							DIMENSIONS ARE IN mm GENERAL TOLERANCE: ± 0.1 ANGULAR TOLERANCE: ± SURFACE FINISH: (MICRONS) ✓ REMOVE ALL SHARP EDGES	ALUMINIUM ALLOY BS 1470 6082 TF				
								FINISH	TITLE			
								CLEAN	PUPIL IMAGER LENS ASSEMBLY DETECTOR MOUNT SUB ASSEMBLY			
								USED ON	ORIGINAL SHEET	LOCATION	DWG. No.	REV
									A3	BO	B0244	1
									ORIGINAL SCALE	2:1	SHEET 1 OF 1	
ISSUE DESCRIPTION							DO NOT SCALE THIS DRAWING					

REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE
1	PRELIMINARY DESIGN	PDJ			ST	27/07/98





**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 05.11.97  
 PRELIMINARY ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE

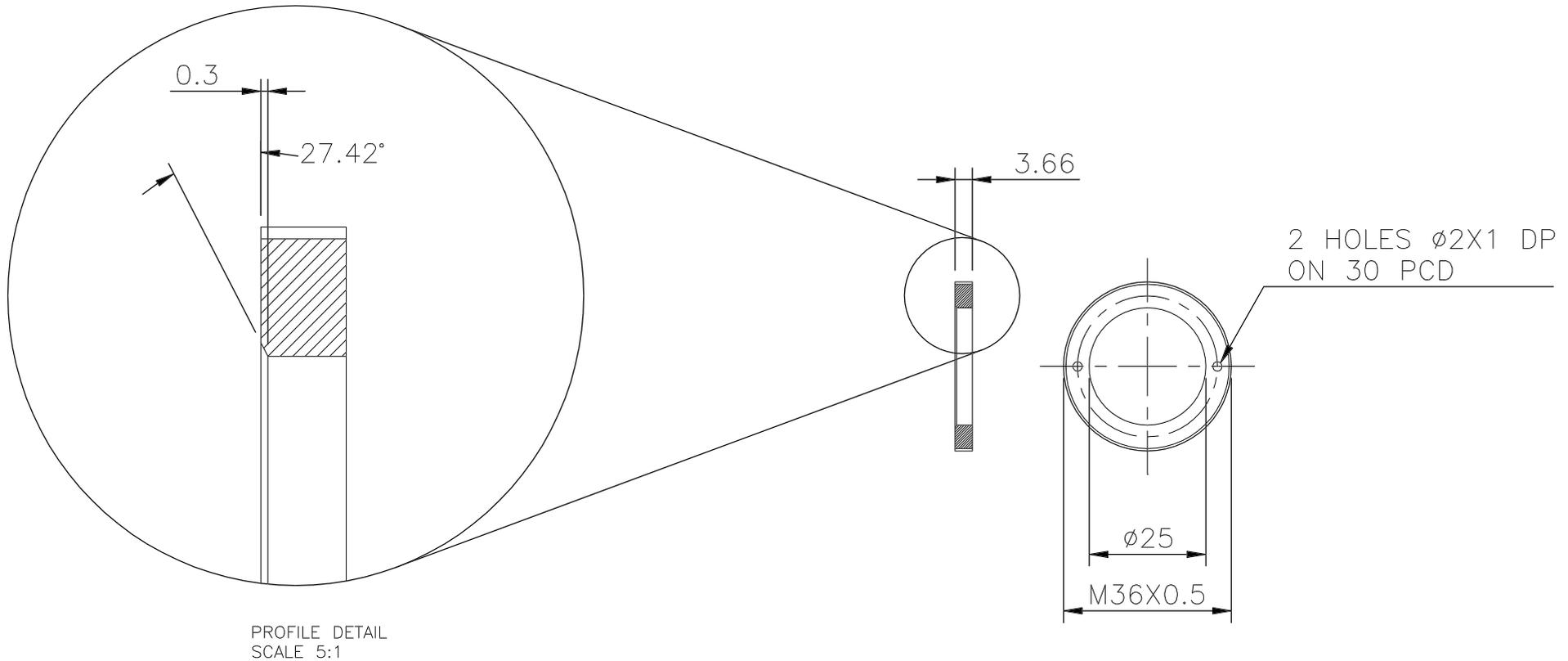
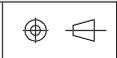
REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE
1	PRELIMINARY ISSUE	R.M.T	N/A	N/A	N/A	05.11.97

UNLESS OTHERWISE STATED  
 DIMENSIONS ARE IN mm  
 GENERAL TOLERANCE: ± 0.1  
 ANGULAR TOLERANCE: ±  
 SURFACE FINISH: 1.6/  
 (MICRONS)  
 REMOVE ALL SHARP EDGES  
 DO NOT SCALE THIS DRAWING

MATERIAL  
 SEE DETAILS  
 FINISH  
 SEE DETAILS  
 USED ON  
 B0101

 <b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM		<b>PPARC</b>	
TITLE		PUPIL IMAGER SUB-ASSEMBLY	
CASTING SUB-ASSEMBLY		ORIGINAL SHEET	LOCATION
A0	N/A	DWG. No.	B0107
ORIGINAL SCALE	1:1		SHEET 1 OF 1

DWG. No. B0250



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 11/08/98  
 PRELIMINARY ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

REV	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	STATUS	DATE
1	PRELIMINARY DESIGN	PDJ			ST	11/08/98
ISSUE DESCRIPTION						

UNLESS OTHERWISE STATED

DIMENSIONS ARE IN mm  
 GENERAL TOLERANCE:  $\pm 0.2$   
 ANGULAR TOLERANCE:  $\pm$   
 SURFACE FINISH: (MICRONS) ✓  
 REMOVE ALL SHARP EDGES

DO NOT SCALE THIS DRAWING

MATERIAL: BRASS

FINISH: CLEAN

USED ON:

		<b>ROYAL GREENWICH OBSERVATORY</b> MADINGLEY ROAD, CAMBRIDGE CB3 0EZ, UNITED KINGDOM			
TITLE		PUPIL IMAGER RETAINING RING 2 INGRID LENS BARREL ASSEMBLY			
ORIGINAL SHEET A3	LOCATION BO	DWG. No. B0250		REV 1	
ORIGINAL SCALE	1:1				SHEET 1 OF 1

Drawing No:

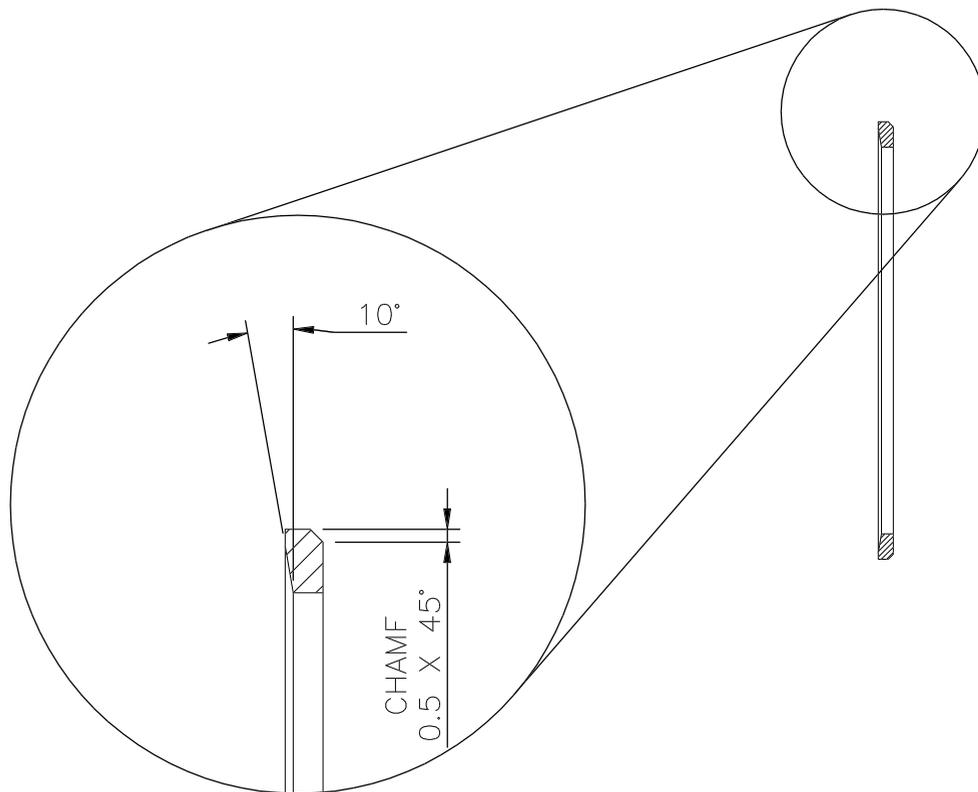
BO251

DO NOT SCALE IF IN DOUBT ASK

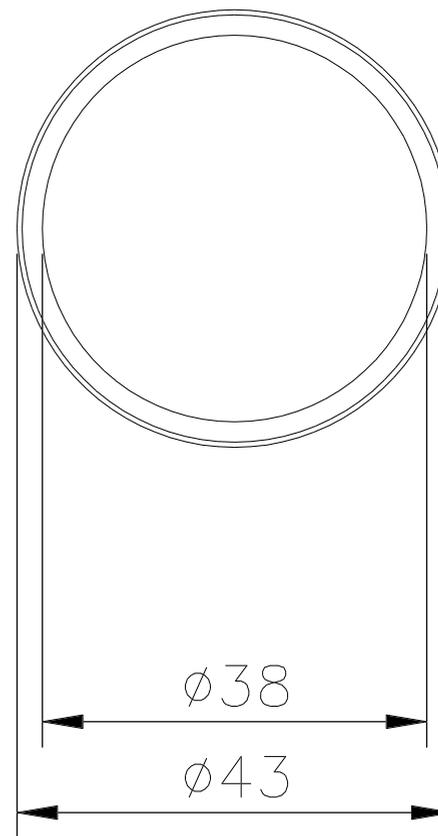
THIRD ANGLE

A  
B  
C  
D  
E  
F

A  
B  
C  
D  
E  
F



PROFILE DETAIL  
SCALE 5:1



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 17/02/99  
 ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED  
 ALL DIMENSIONS IN mm  
 GENERAL TOL: ± 0.1  
 ANGULAR TOL: ± 0.1  
 SURFACE FINISH 3.2 ✓  
 (MICRONS)  
 REMOVE ALL SHARP EDGES

TITLE:

PUPIL IMAGER SPACER 1

MATERIAL:

DELRIN

ORIGINAL SCALE

2:1

MAIN SYSTEM

INGRID

DWG TYPE

PART

SUB-SYSTEM

PUPIL IMAGER

LOCATION

BO

FINISH:

CLEAN

SHEET SIZE

A3

ITEM

PART

USED ON

BO244

ENG DISCIPLINE

MECHANICAL

DRAWING NUMBER

BO251

SHEET 1 of 1

1	PDJ	17/02/99		
ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD

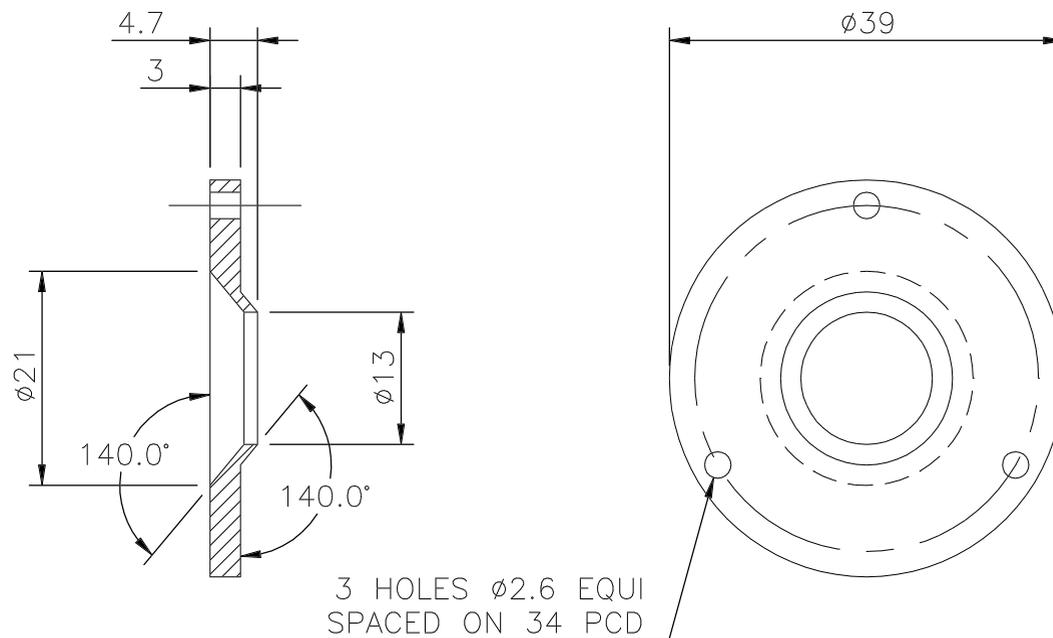
**ISAAC NEWTON GROUP**  
 Apartado de Correos, 321  
 38780 S/C de La Palma  
 Canary Islands  
 SPAIN  
 Tel: +34 922 425 400

Drawing No:

B0252

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 17/02/99  
 ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED  
 ALL DIMENSIONS IN mm  
 GENERAL TOL: ± 0.1  
 ANGULAR TOL: ± 0.1  
 SURFACE FINISH (MICRONS) ✓  
 REMOVE ALL SHARP EDGES  
This document belongs to the ISAAC NEWTON GROUP of TELESCOPES and may not be copied, reproduced or displayed in whole or in part without the express written consent of the ISAAC NEWTON GROUP of TELESCOPES

TITLE: PUPIL IMAGER SPACER 2			
MATERIAL: DELTRIN	ORIGINAL SCALE: 2:1	MAIN SYSTEM: INGRID	DWG TYPE: PART
FINISH: CLEAN	SHEET SIZE: A3	SUB-SYSTEM: PUPIL IMAGER	LOCATION: BO
		ITEM: PART	USED ON: BO244
		ENG DISOPUNE: MECHANICAL	

**ISAAC NEWTON GROUP**  
 Apartado de Correos, 321  
 38780 S/C de La Palma  
 Canary Islands  
 SPAIN  
 Tel: +34 922 425 400

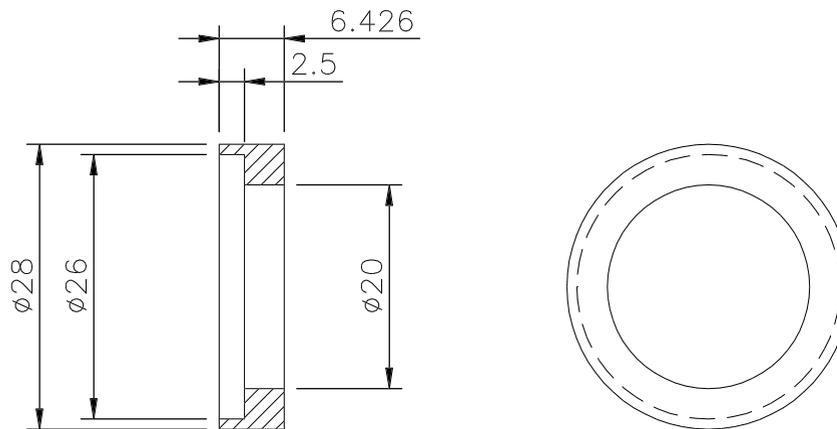
DRAWING NUMBER: B0252  
 SHEET 1 of 1

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	PDJ	17/02/99		

Drawing No: B0253

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE 



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 17/02/99  
 ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED ALL DIMENSIONS IN mm GENERAL TOL: ± 0.1 ANGULAR TOL: ± 0.1 SURFACE FINISH (MICRONS) ✓ REMOVE ALL SHARP EDGES		TITLE: PUPIL IMAGER SPACER 3			<b>ISAAC NEWTON GROUP</b> Apartado de Correos, 321 38780 S/C de La Palma Canary Islands SPAIN Tel: +34 922 425 400		
MATERIAL: DELRIN	ORIGINAL SCALE 2:1	MAIN SYSTEM INGRID	DWG TYPE PART				
FINISH: CLEAN	SHEET SIZE A3	SUB-SYSTEM PUPIL IMAGER	LOCATION BO	USED ON BO244	DRAWING NUMBER B0253	SHEET 1 of 1	
<small>This document belongs to the ISAAC NEWTON GROUP of TELESCOPES and may not be copied, reproduced or displayed in whole or in part without the express written consent of the ISAAC NEWTON GROUP of TELESCOPES</small>		ENG DISCIPLINE MECHANICAL					

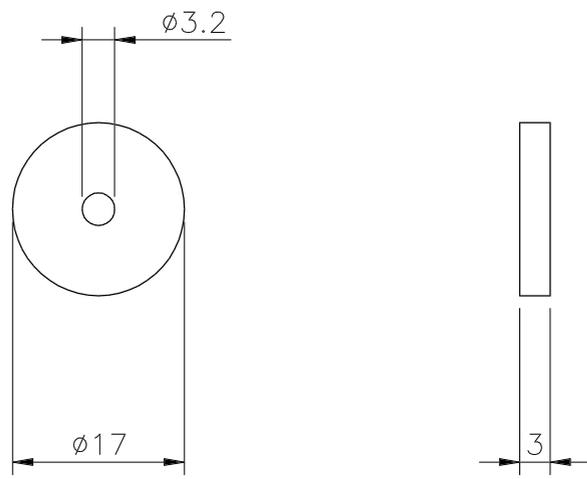
ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	PDJ	17/02/99		

Drawing No:

B0254

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



**PRELIMINARY**  
FOR INFORMATION ONLY  
SUBJECT TO CHANGE  
15/02/99  
ISSUE: 1  
DO NOT USE THIS DRAWING FOR  
PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED  
ALL DIMENSIONS IN mm  
GENERAL TOL:  $\pm 0.1$   
ANGULAR TOL:  $\pm$   
SURFACE FINISH (MICRONS) ✓  
REMOVE ALL SHARP EDGES  
This document belongs to the ISAAC NEWTON GROUP of TELESCOPES and may not be copied, reproduced or displayed in whole or in part without the express written consent of the ISAAC NEWTON GROUP of TELESCOPES

TITLE: THRUST WASHER INGRID PUPIL IMAGER DRIVE			
MATERIAL: PTFE	ORIGINAL SCALE 2:1	MAIN SYSTEM INGRID	DWG TYPE PART
FINISH: CLEAN	SHEET SIZE A3	SUB-SYSTEM PUPIL IMAGER DRIVE	LOCATION BO
		ITEM PART	USED ON BO107
		ENG DISCIPLINE MECHANICAL	

**ISAAC NEWTON GROUP**  
Apartado de Correos, 321  
38780 S/C de La Palma  
Canary Islands  
SPAIN  
Tel: +34 922 425 400

DRAWING NUMBER: B0254  
SHEET 1 of 1

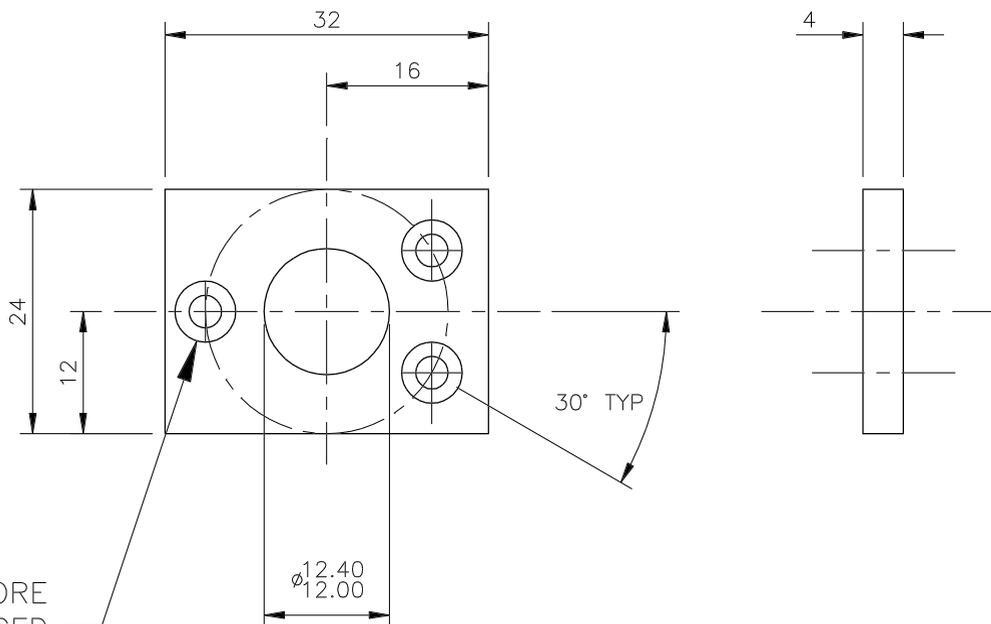
ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	PDJ	15/02/99		

Drawing No:

B0256

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



3 HOLES  $\phi 3.2$  C'BORE  
TO  $\phi 6$  X 3 DP SPACED  
AS SHOWN ON A 24 PCD

**PRELIMINARY**  
FOR INFORMATION ONLY  
SUBJECT TO CHANGE  
18/02/99  
ISSUE: 1  
DO NOT USE THIS DRAWING FOR  
PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED ALL DIMENSIONS IN mm GENERAL TOL: $\pm 0.1$ ANGULAR TOL: $\pm 0.1$ SURFACE FINISH 3.2/ $\sqrt{\quad}$ (MICRONS) REMOVE ALL SHARP EDGES		TITLE: <b>BEARING END PLATE INGRID PUPIL IMAGER</b>		<b>ISAAC NEWTON GROUP</b> Apartado de Correos, 321 38780 S/C de La Palma Canary Islands SPAIN Tel: +34 922 425 400	
MATERIAL: ALUMINIUM ALLOY BS 1470 6082 TF		ORIGINAL SCALE 2:1	MAIN SYSTEM INGRID	DWG TYPE PART	DRAWING NUMBER B0256 SHEET 1 of 1
FINISH: CLEAN		SHEET SIZE A3	SUB-SYSTEM PUPIL IMAGER DRIVE	LOCATION BO	
<small>This document belongs to the ISAAC NEWTON GROUP of TELESCOPES and may not be copied, reproduced or displayed in whole or in part without the express written consent of the ISAAC NEWTON GROUP of TELESCOPES</small>		ITEM PART	USED ON BO107	ENG DISCIPLINE MECHANICAL	

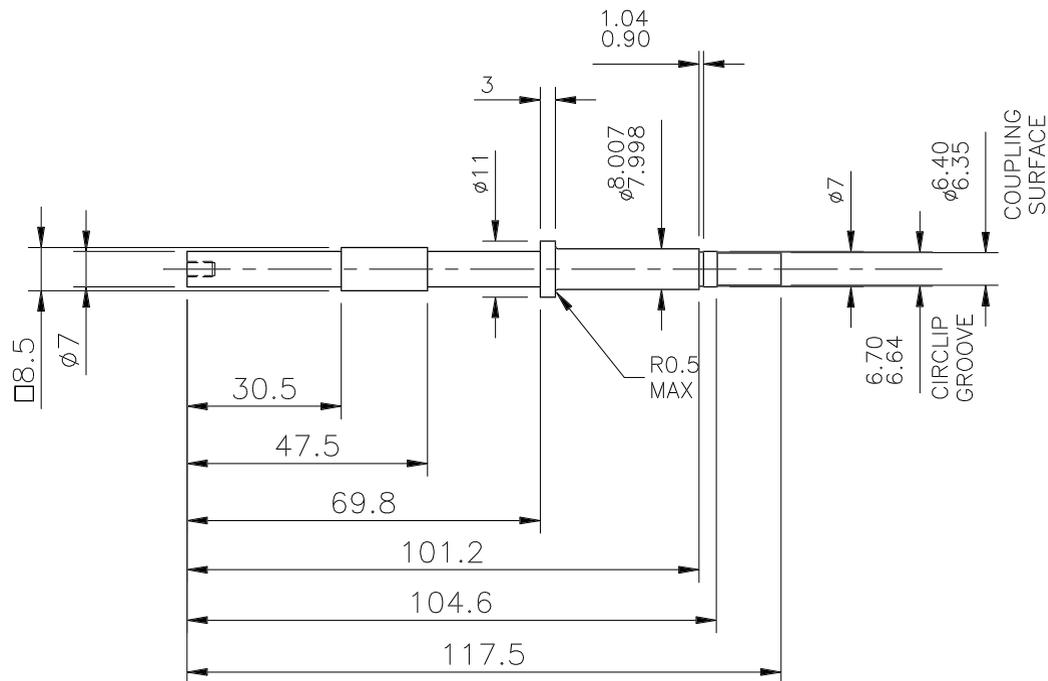
ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	PDJ	18/02/99		

Drawing No:

B0257

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 16/02/99  
 ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED  
 ALL DIMENSIONS IN mm  
 GENERAL TOL:  $\pm 0.1$   
 ANGULAR TOL:  $\pm$   
 SURFACE FINISH (MICRONS) ✓  
 REMOVE ALL SHARP EDGES

TITLE:  
**MOTOR SHAFT**  
**INGRID PUPIL IMAGER DRIVE**

MATERIAL: **STAINLESS STEEL**  
**BS 970 304 S11**

FINISH:  
**NATURAL**

ORIGINAL SCALE: **1:1**

SHEET SIZE: **A3**

MAIN SYSTEM: **INGRID**

SUB-SYSTEM: **PUPIL IMAGER**

ITEM: **PART**

ENG DISCIPLINE: **MECHANICAL**

DWG TYPE: **PART**

LOCATION: **BO**

USED ON: **BO107**

**ISAAC NEWTON GROUP**  
 Apartado de Correos, 321  
 38780 S/C de La Palma  
 Canary Islands  
 SPAIN  
 Tel: +34 922 425 400

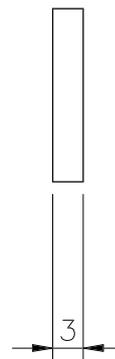
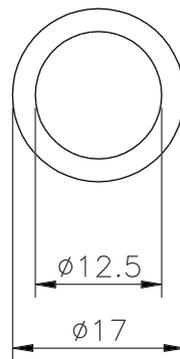
ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	PDJ	16/02/99		

DRAWING NUMBER: **B0257** SHEET 1 of 1

Drawing No: B0258

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE 



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 15/02/99  
 ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED  
 ALL DIMENSIONS IN mm  
 GENERAL TOL:  $\pm 0.1$   
 ANGULAR TOL:  $\pm$   
 SURFACE FINISH (MICRONS)   
 REMOVE ALL SHARP EDGES

This document belongs to the ISAAC NEWTON GROUP of TELESCOPES and may not be copied, reproduced or displayed in whole or in part without the express written consent of the ISAAC NEWTON GROUP of TELESCOPES

TITLE:  
**THRUST WASHER  
 INGRID PUPIL IMAGER DRIVE**

MATERIAL: PTFE

FINISH: CLEAN

ORIGINAL SCALE: 2:1

SHEET SIZE: A3

MAIN SYSTEM	INGRID	DWG TYPE	PART
SUB-SYSTEM	PUPIL IMAGER DRIVE	LOCATION	BO
ITEM	PART	USED ON	BO107
ENG DISCIPLINE	MECHANICAL		

**ISAAC NEWTON GROUP**  
 Apartado de Correos, 321  
 38780 S/C de La Palma  
 Canary Islands  
 SPAIN  
 Tel: +34 922 425 400

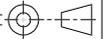
DRAWING NUMBER: B0258

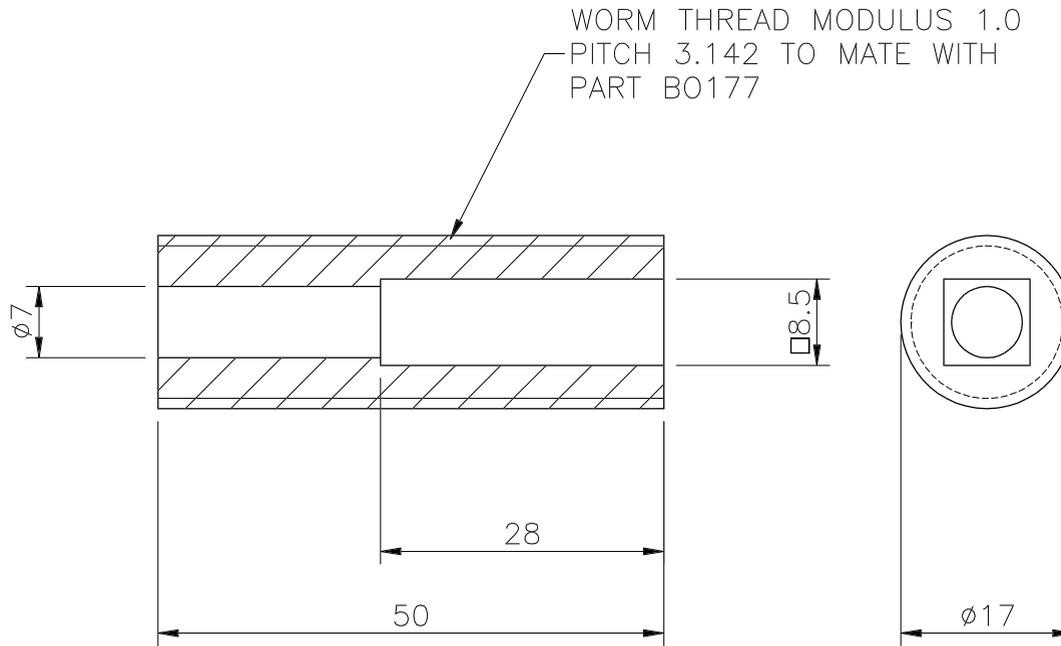
SHEET 1 of 1

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	PDJ	15/02/99		

Drawing No: B0259

DO NOT SCALE IF IN DOUBT ASK

THIRD ANGLE 



**PRELIMINARY**  
 FOR INFORMATION ONLY  
 SUBJECT TO CHANGE  
 15/02/99  
 ISSUE: 1  
 DO NOT USE THIS DRAWING FOR  
 PROCUREMENT OR MANUFACTURE.

UNLESS OTHERWISE STATED ALL DIMENSIONS IN mm GENERAL TOL: ± 0.1 ANGULAR TOL: ± SURFACE FINISH (MICRONS) ✓ REMOVE ALL SHARP EDGES		TITLE: <b>DRIVE WORM INGRID PUPIL IMAGER DRIVE</b>			<b>ISAAC NEWTON GROUP</b> Apartado de Correos, 321 38780 S/C de La Palma Canary Islands SPAIN Tel: +34 922 425 400		
MATERIAL: VESPEL SP3	ORIGINAL SCALE: 2:1	MAIN SYSTEM: INGRID	DWG TYPE: PART	USED ON: BO107			
FINISH: CLEAN	SHEET SIZE: A3	SUB-SYSTEM: PUPIL IMAGER DRIVE	LOCATION: BO				
<small>This document belongs to the ISAAC NEWTON GROUP of TELESCOPES and may not be copied, reproduced or displayed in whole or in part without the express written consent of the ISAAC NEWTON GROUP of TELESCOPES</small>		ITEM: PART	DRAWING NUMBER: B0259				SHEET 1 of 1
		ENG DISCIPLINE: MECHANICAL					

ISS	DRAWN By	DATE DRAWN	APPROVED By	DATE APPRVD
1	PDJ	15/02/99		