

DRAWING NUMBER	No. of Sheets	G.A. Item No.	DRAWING TITLE OR COMPONENT NAME	No. off	MATERIAL STOCK OR ORDER No. AND DATE	REMARKS	ISSUE DATE	ISSUED TO	FINISH DATE
/ /		70	STEPPING MOTOR	1					
/ /			SIGMA-20-3A50D200-FI-2						
/ /		71	COGNITE GEARHEAD	1					
/ /			SA-1000 - RATIO 10:1						
/ /		72	INCREMENTAL OPTICAL ENCODER	1					
/ /			MODEL IF 23/500						
/ /		73	COUPLING-RELIANCE-8CM25/10/12	1					
/ /		74	BALLSLIDE - " - MA-1	1					
/ /		75	TIMING BELT-FENNER-322L x 13WIDE	1					
/ /		76	" PULLEY- " - 15LO50-5/8 BORE	1					
/ /		77	" " " - 60L50	1					
/ /		78	TAPERLOCK BUSH " 1610-029G0020	1					
/ /		79	BEARING SKF-7210 B4	2					
/ /		80	" " - 6304-2RS	1					
/ /		81	CAMFOLLOWERS-INA-KR19	3					
/ /		82	SEALING RING-INA-G70x78x5	2					
/ /		83	PROX SWITCH-HETTICH-001TYPE	4					
/ /		84	AIR CYL-SMC-CJPB15-10V6-B	1					
/ /		85	CIRCLIP-ANDERTON-1400-6	2					
/ /		86	SPRING-LEE-LC-045H-14	1					
/ /		87	SOL. VALVE-SML-VZ110-5GS-M5-F	1					
/ /		88	SHUTTER-PRONTOR MAGNETIC E/100	1					
/ /			TYPE 1-177-666-194mm x 194mm						
/ /			25% / 100% ED (LDSS TYPE)						
/ /		89	ELECTRICAL SOCKET-T0 SUIT	1					
/ /		91	KEYSTEEL 6x6 x 24 RAD BOTH ENDS	1					
/ /		92	" 7/8 x 3/8 x 19 RAD ONE END	1					
/ /									
/ /		95	SOC HL CAP SCREW/M2.5x8	32	ST. STL				
/ /		96	GRUB SCREW M2.5x6	24	NYLON				
/ /		97	" " (DOG P1) M5 x 12	24	NYLON				
/ /		98	DOWEL Ø3 x 10	6					
/ /		99	" Ø3 x 30	2					
JOB TITLE					ASSY DRG. No	SHEET No.	DRAWN BY		
GRIM & POLARISER WHEEL ASSY.					VIF/000	3 of 4	PRONEC		
							DATE		
ROYAL GREENWICH OBSERVATORY,					HERSTMONCEUX CASTLE,	HAILSHAM,	SUSSEX		

DRAWING NUMBER	No. of Sheets	GA. Item No.	DRAWING TITLE OR COMPONENT NAME	No. of	MATERIAL STOCK OR ORDER No. AND DATE	REMARKS	ISSUE DATE	ISSUED TO	FINISH DATE
W/IC/031		35	FORK END	1					
/ 1033		36	CYL. PLT	1					
/ 1034		37	LEVER	1					
/ 1035		38	WASHER	2					
/ 1036		39	PIN	1					
/ 1032		40	SHLD'R SCREW	1					
/ 1041		41	BUSH	1					
W/IC/026	1	42	CAM PLATE	6					
/ 1027		43	VEE LOCATOR	6					
W/IE/011	1	44	SPACER	4					
/ 1012		45	"	4					
W/IE/003	1	46	LEVER	1					
/ 1004		47	ROLLER BAR	1					
W/IE/006	1	48	PACKER	1					
/ 1									
/ 1									
W/GX/207	1	51	SUPPORT BRACKET	1					
/ 1208		52	"	1					
W/GX/210	1	53	SWITCH MOUNTING BRACKET	2					
/ 1211		54	SWITCH FLAG	1					
/ 1212		55	KNOB SHAFT	2					
/ 1213		56	KNOB	2					
/ 1214		57	LATCH	1					
/ 1215		58	SHOULDER SCREW	1					
W/GX/216	1	59	OPERATING LEVER	1					
W/IF/030		60	SPRING CLIP	8					
W/IF/020	1	61	GRIP MOUNT CASTING						
W/IF/021	1	62	CELESTIAL BALL (100)	1					
W/IF/022	1	63	" " (100)	2					
W/IF/023	1	64	" " (100)	1					
W/IF/024	1	65	STOP	4					
/ 1025		66	STOP	2					
/ 1026		67	SPRING CLIP	8					
/ 1027		68	SPRING CLIP	8					
/ 1028		69	BACKING PLT	8					
/ 1029		70	BACKING PLT	8					
JOB TITLE	GRISM & POLARISER WHEEL ASSY.				ASSY DRG. No.	SHEET No.	DRAWN BY PROMEC		
					V/IF/000	2 of 4	DATE AUG 89		
ROYAL GREENWICH OBSERVATORY,				HERSTMONCEUX CASTLE,	HAILSHAM,	SUSSEX			

DRAWING NUMBER	No. of Sheets	G.A. Item No.	DRAWING TITLE OR COMPONENT NAME	No. off	MATERIAL STOCK OR ORDER No. AND DATE	REMARKS	ISSUE DATE	ISSUED TO	FINISH DATE
V/IF/0.0	2	-	GENERAL ASSY	1					
/ /									
W/IF/001	1	1	GRISM POLARISER WHEEL	1					
W/IF/002	1	2	GRISM CELL	1		NOT RECD YET.			
W/IF/003	1	3	SOLE PLATE	3					
/ /004		4	KINEMATIC SEAT - CONE	4					
/ /005		5	" " - VEE	4					
/ /006		6	" " - FLAT	4					
/ /007		7	SCREW	12					
/ /008		8	BLOCK	9					
/ /009		9	CLAMP			NOT RECD YET			
/ /010	1	10	BLOCK	1					
/ /011		11	ROLLER PLATE	1					
/ /012		12	STOP			NOT RECD YET			
/ /013		13	BLOCK	2					
/ /014		14	BALL SCREW	1					
W/IF/015	1	15	SHUTTER SUPPORT	1					
/ /016		16	COVER	1					
/ /017		17	WHEEL BALANCE WEIGHTS		SET DRG				
W/IF/018	1	18	GRISM WHEEL SUPPORT PLATE	1					
/ /019		19	SHUTTER PLATE	1					
W/IC/003	1	20	MOUNTING PLATE	1					
/ /004		21	" "	1					
/ /005		22	" "	1					
/ /008		23	WASHER	1					
W/IC/013	1	24	SPINDLE	1					
/ /014		25	SPACER	2					
W/IC/015	1	26	SPECIAL WASHER	1					
/ /016		27	BEARING PLATE	1					
/ /017		28	HOUSING	1					
/ /018		29	SPINDLE	1					
/ /019		30	SPIGOT	1					
/ /020		31	LOCKNUT	1					
W/IC/023	1	32	FLAG	2					
/ /024		33	SWITCH BRKT	1					
W/IC/030	1	34	SPRING ROD	1					

JOB TITLE

GRISM & POLARISER WHEEL ASSY.

ASSY DRG. No.

V/IF/000

SHEET No.

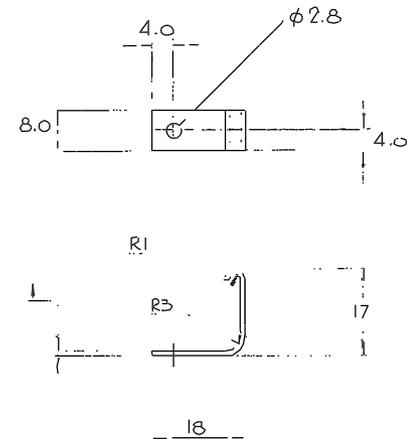
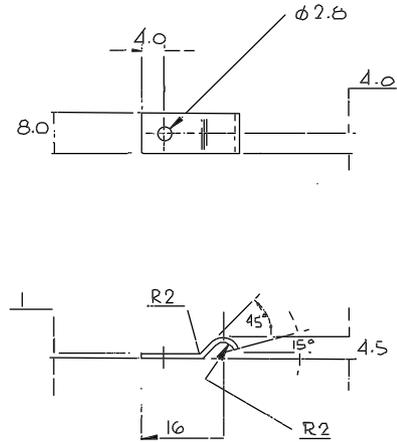
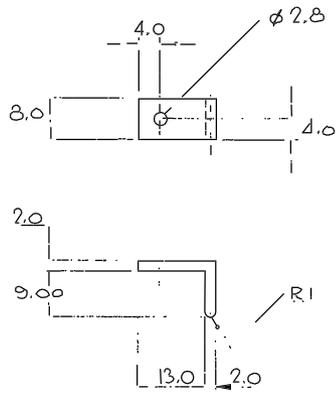
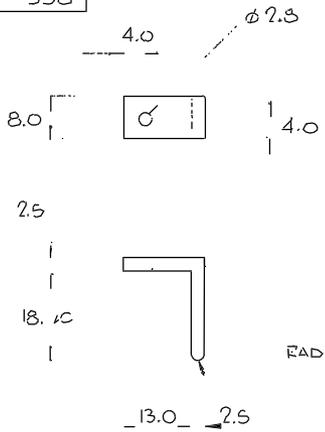
1 of 4

DRAWN BY PRJMEC

DATE 11.1.89

ROYAL GREENWICH OBSERVATORY, HERSTMENCEUX CASTLE, HAILSHAM, SUSSEX

Drawing No. 024
TO
W/IF/030

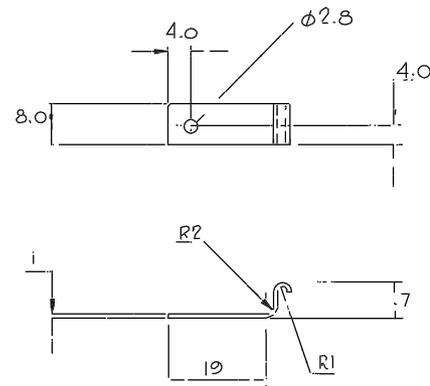
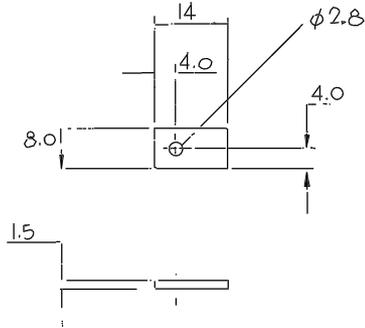
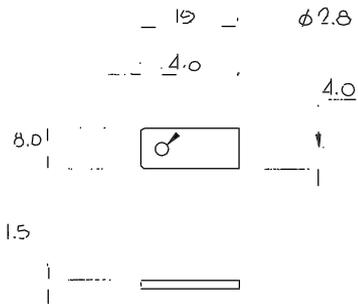


65 STOP			
MATERIAL	SCALE	TOLERANCES	
ALUM ³ ALLOY	2/1	x ±0.1	
FINISH	NO REQ ^d PER UNIT	xx ±0.05	
MATT BLK ANODISE	4	xxx ±0.02	
G.A. No.	DRAWING No.	R.G.O. W/IF/024	

66 STOP			
MATERIAL	SCALE	TOLERANCES	
ALUM ³ ALLOY	2/1	x ±0.1	
FINISH	NO REQ ^d PER UNIT	xx ±0.05	
MATT BLK ANODISE	12	xxx ±0.02	
G.A. No.	DRAWING No.	R.G.O. W/IF/025	

67 SPRING CLIP			
MATERIAL	SCALE	TOLERANCES	
BERYLLIUM COPPER	2/1	x ±0.2	
FINISH	NO REQ ^d PER UNIT	xx ±0.1	
MATT BLK	8	xxx	
G.A. No.	DRAWING No.	R.G.O. W/IF/026	

68 SPRING CLIP			
MATERIAL	SCALE	TOLERANCES	
BERYLLIUM COPPER	2/1	x ±0.2	
FINISH	NO REQ ^d PER UNIT	xx ±0.1	
MATT BLK	8	xxx	
G.A. No.	DRAWING No.	R.G.O. W/IF/027	



69 BACKING PLT			
MATERIAL	SCALE	TOLERANCES	
ALUM ³ ALLOY	2/1	x ±0.2	
FINISH	NO REQ ^d PER UNIT	xx ±0.1	
MATT BLK ANODISE	8	xxx	
G.A. No.	DRAWING No.	R.G.O. W/IF/028	

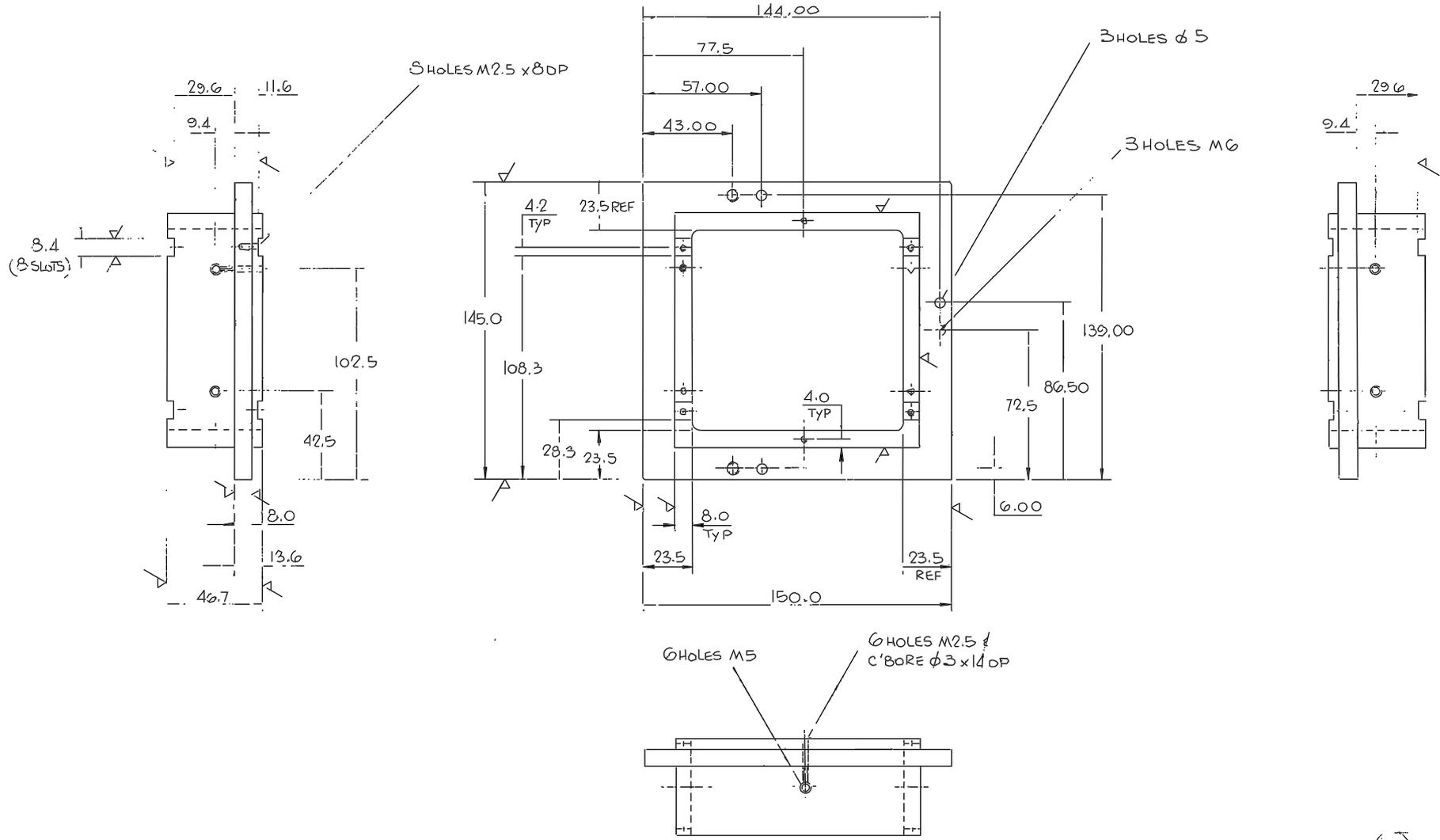
70 BACKING PLT			
MATERIAL	SCALE	TOLERANCES	
ALUM ³ ALLOY	2/1	x ±0.2	
FINISH	NO REQ ^d PER UNIT	xx ±0.1	
MATT BLK ANODISE	8	xxx	
G.A. No.	DRAWING No.	R.G.O. W/IF/029	

60 SPRING CLIP			
MATERIAL	SCALE	TOLERANCES	
BERYLLIUM COPPER	2/1	x ±0.2	
FINISH	NO REQ ^d PER UNIT	xx ±0.1	
MATT BLK	8	xxx	
G.A. No.	DRAWING No.	R.G.O. W/IF/030	

60 SPRING CLIP			
MATERIAL	SCALE	TOLERANCES	
BERYLLIUM COPPER	2/1	x ±0.2	
FINISH	NO REQ ^d PER UNIT	xx ±0.1	
MATT BLK	8	xxx	
G.A. No.	DRAWING No.	R.G.O. W/IF/030	

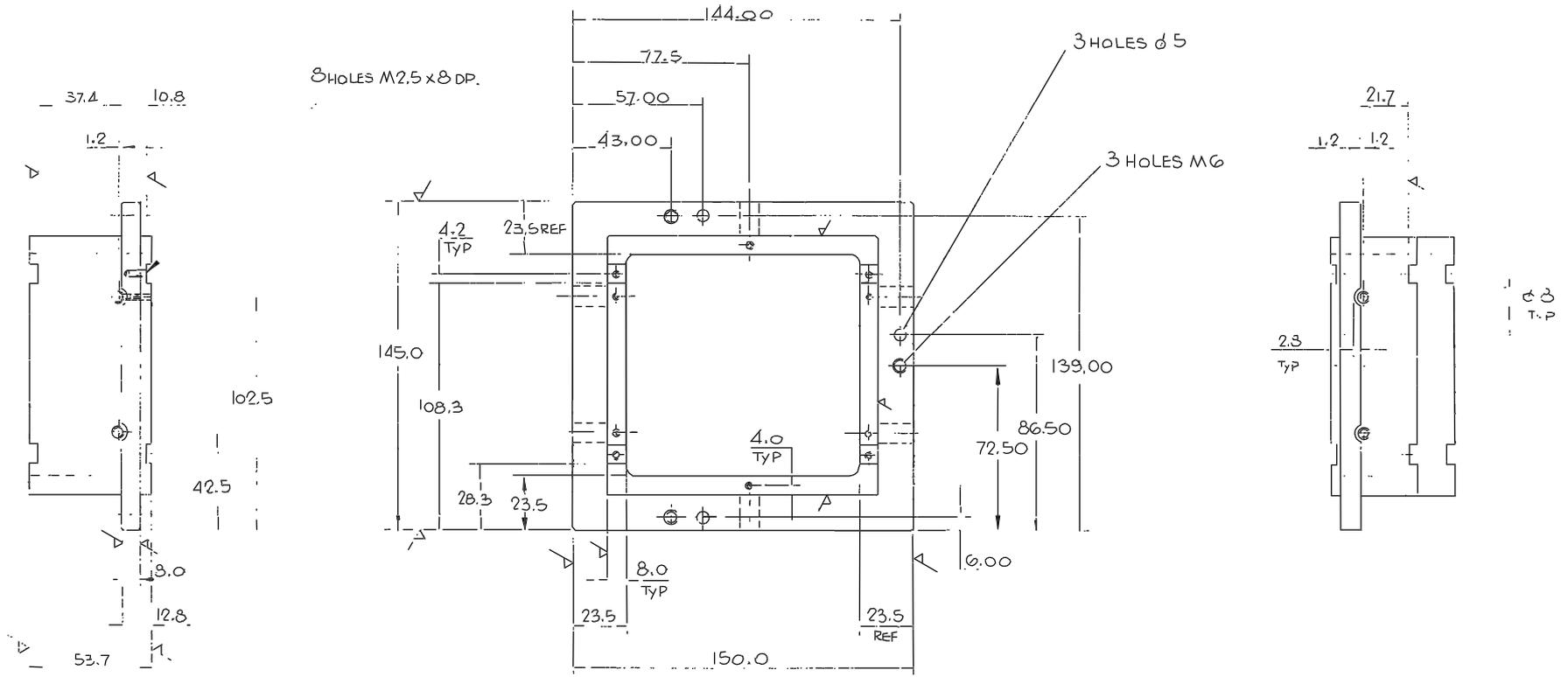
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x ± xx ± xxx ±								Material Finish		Drg. No. No. Rev. Used on		ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX CASTLE, HAILSHAM SUSSEX.		Title DETAIL		Drawing No. 024 W/IF/030	
Issue	Mod. No.	Date	Drawn By	Issue	Mod. No.	Date	Drawn By										

Drawing No
W,IF/023

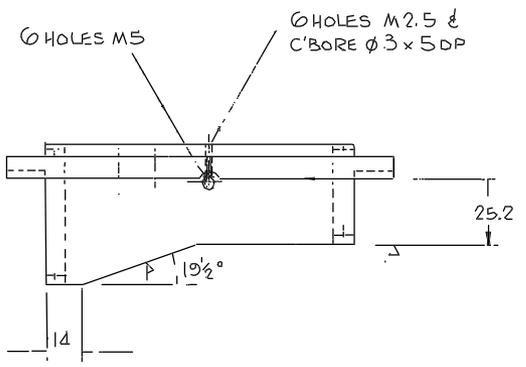


(64) GRISM CELL (S.G.)
 (W/IF/020) ALUM. CASTING 1/1 ±0.2
 ANTI BLK ANODISE 1/1 ±0.1
 DRAWING W/IF/023
 RGO

						Tolerances (Unless otherwise stated)		Material		Dim's in m.m.		Scale		THIRD ANGLE PROJECTION		G.A. No.	
						X 1		Finish		Drwg. No.		No. Req.		ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX CASTLE, HALLSHAM SUSSEX.		Title	
						X.X 2		Used on						DETAIL		W/IF/23	
						X.XX 2											
Issue	Mod. No.	Date	Drawn By	Issue	Mod. No.	Date	Drawn By										



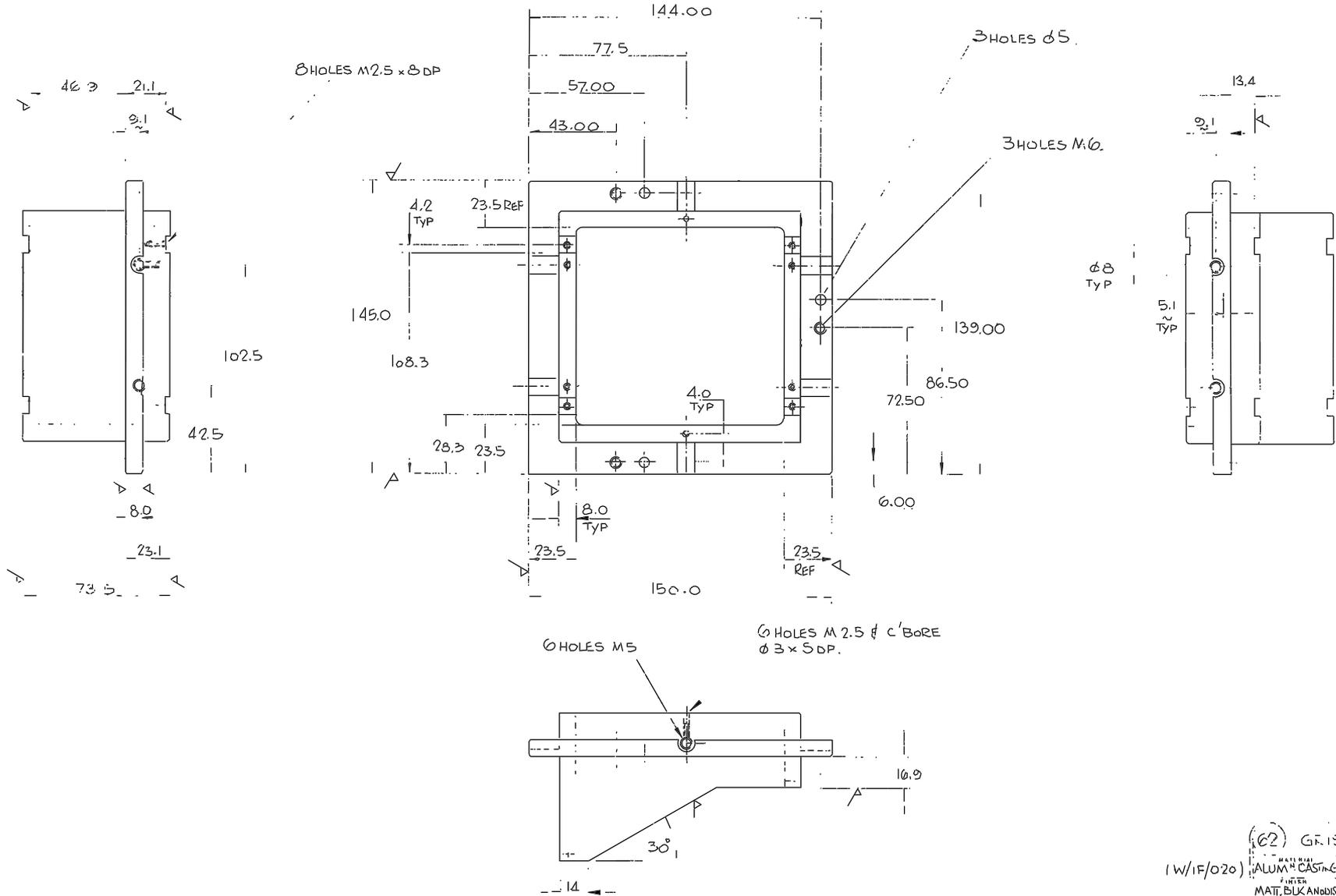
8.1
18 SWP



(63) GRISM CELL (1:1)
 (W/IF/020) MATERIAL ALUM. CASTING
 FINISH MAT. BLK/NO. 50
 R.G.O. W/IF/022

Tolerances (Unless otherwise stated)								Material		Dimns in m.m		Scale		THIRD ANGLE PROJECTION		G.A. No.	
X ± XX ± XXX ±								Finish		DRG. No. No. Req. Used on		ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX CASTLE, HAILSHAM SUSSEX.		Title		Drawing No. W/IF/022	
Issue	Mod. No.	Date	Drawn By	Issue	Mod. No.	Date	Drawn By					DETAIL					

Drawing No
W/IF/021

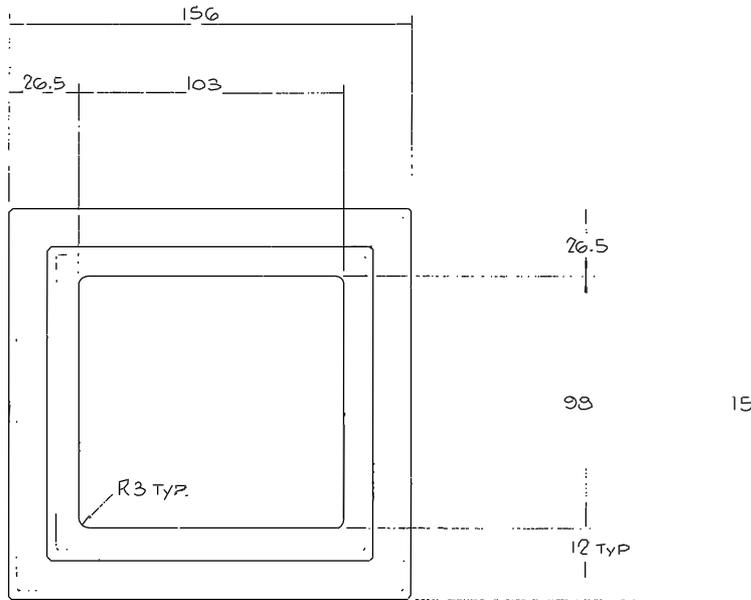
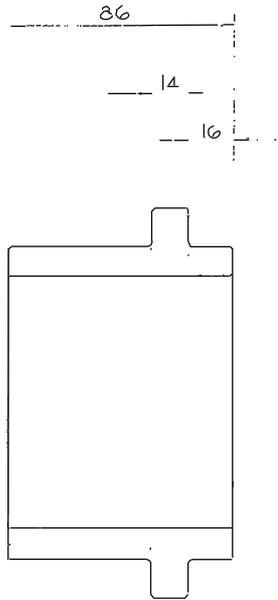


(62) GRISM IELL (50.00)
 (W/IF/020) ALUM. CASTING
 FINISH: MAT. BLK ANODISE
 GA No: RGO
 DRAWING No: W/IF/021

Tolerances (Unless otherwise stated)								Material		Dimms in m.m.		Scale		THIRD ANGLE PROJECTION		G.A. No.			
X X I								Finish		Drg. No.		No. Rev		ROYAL GREENWICH OBSERVATORY, HERSTMONGEUX CASTLE, HAILSHAM SUSSEX.		Title		Drawing No.	
XXX I								Used on						DETAIL		W/IF/021			

Drawing No

W / IF 020

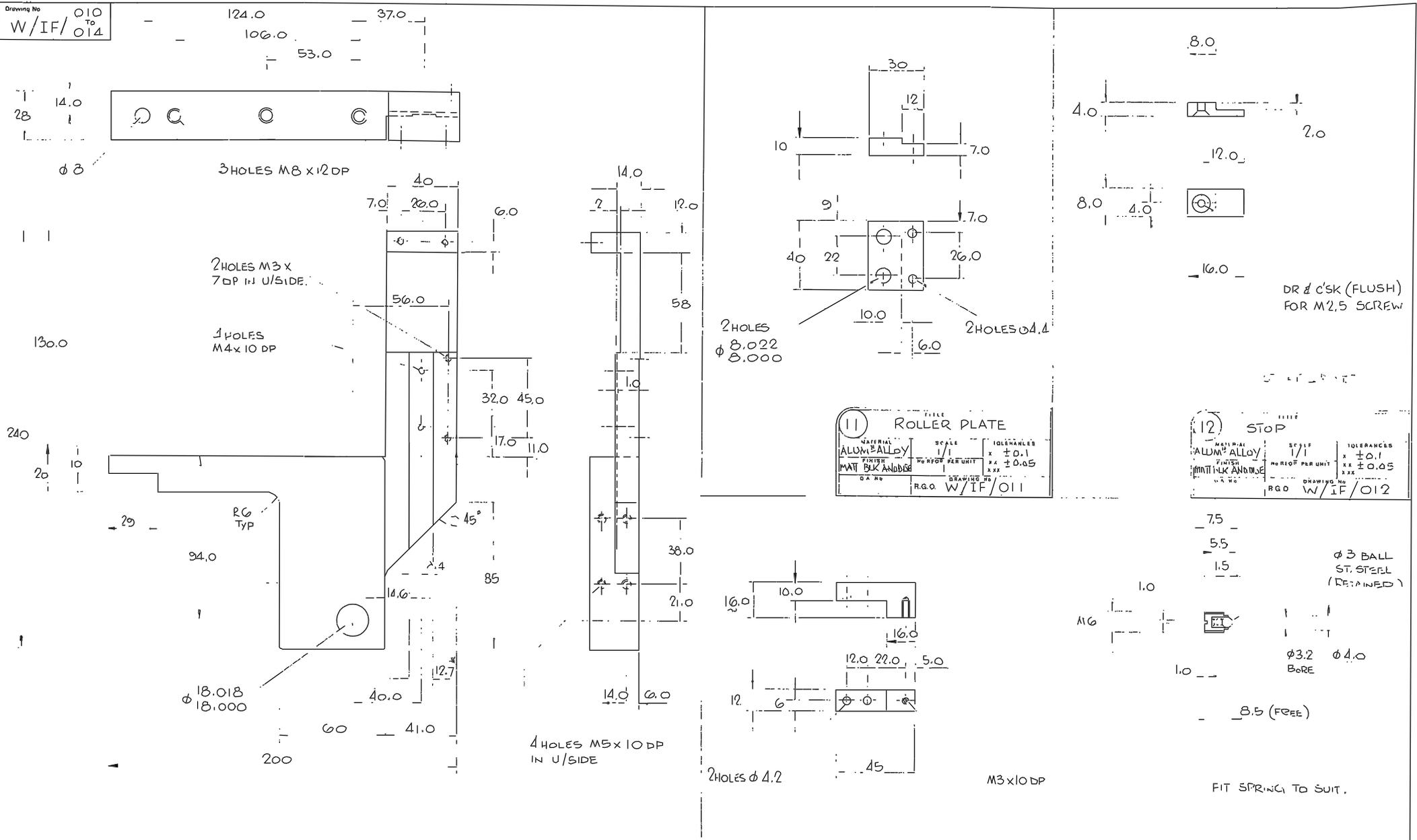


ROYAL GREENWICH OBSERVATORY
 HERSTMONCEUX CASTLE
 SUSSEX.

161 GREAT MOUNT CASTING
 ALUM. CASTING FULL ±0.5
 DRAWING NO. W/IF/020

								Tolerances (Unless otherwise stated)		Material		Dimes in mm.		Scale		THIRD ANGLE PROJECTION		G.A. No.	
								X		Finish		Dwg No.		No. Req.		Title		Drawing No.	
								X.X		Used on		ROYAL GREENWICH OBSERVATORY. HERSTMONCEUX CASTLE. HAILSHAM		SUSSEX.		DETAIL		W, IF, 020	
								X.XX											
Issue	Mod. No	Date	Drawn By	Issue	Mod. No.	Date	Drawn By												

DRAWING NUMBER	No. of Sheets	G.A. Item No.	DRAWING TITLE OR COMPONENT NAME	No. of	MATERIAL STOCK OR ORDER No. AND DATE	REMARKS	ISSUE DATE	ISSUED TO	FINISH DATE
/ /		100	Soc HD CAP SCREW	M2 x 6	4	ST. S. EEL			
/ /		101	"	M3 x 3	2	"			
/ /		102	"	M3 x 18	12	"			
/ /		103	"	M4 x 10	6	"			
/ /		104	"	M4 x 12	8	"			
/ /		105	"	M6 x 25	8	"			
/ /		106	"	M5 x 12	6	"			
/ /		107	"	M6 x 20	6	"			
/ /		108	"	M6 x 12	8	"			
/ /		109	"	M8 x 40	3	"			
/ /		110	"	M2.5 x 6	4	"			
/ /		111	"	M2.5 x 3	2	"			
/ /		112	"	M3 x 16	36	"			
/ /		113	"	M4 x 16	3	"			
/ /		114	"	M4 x 8	6	"			
/ /		115	CSK HD SCREW	M6 x 20	6	"			
/ /		116	"	M1.6 x 8	4	"			
/ /		117	"	M2.5 x 10	18	"			
/ /		118	"	M3 x 16	4	"			
/ /		119	"	M3 x 12	2	"			
/ /		120	RD HD SCREW	M3 x 6	4	"			
/ /		121	HEX. HD SCREW	M4 x 18	3	"			
/ /		122	"	M4 x 16	9	"			
/ /		123	"	M5 x 40	4	"			
/ /		124	"	M8 x 12	1	"			
/ /		125	GRUB SCREW	M4 x 20	18	"			
/ /		126	"	M5 x 18	18	"			
/ /		127	HEX. LOCK NUT	M5	18	"			
/ /		128	"	M4	18	"			
/ /		129	"	M6	11	"			
/ /		130	"	M8	6	"			
/ /		131	"	M10	1	"			
/ /		132	WASHER	3	6	"			
/ /		133	"	φ 10	1	"			
/ /		134	"	φ 4	7	"			
/ /		135	HEX HD SCREW	M4 x 12	1	"			



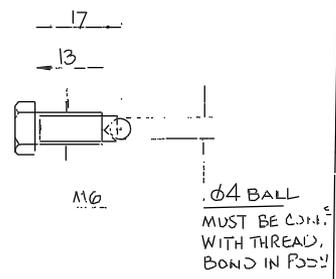
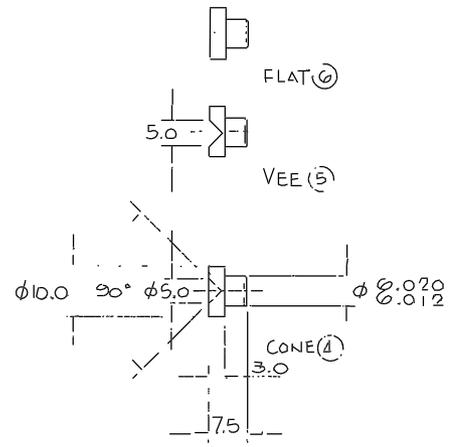
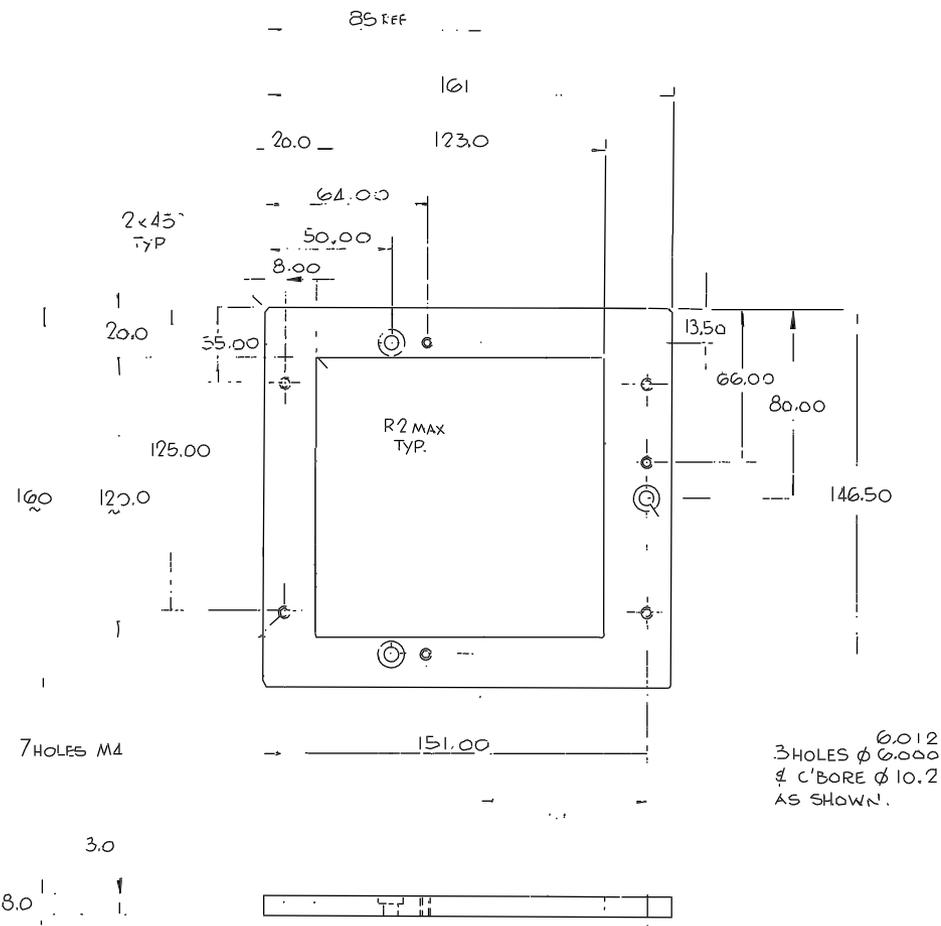
* DIM'D TO LOCATE BALL SLIDE BASE

10		BLOCK	
MATERIAL	SCALE	TOLERANCES	
ALUM ³ ALLOY	1/1	x ±0.1	xx ±0.05
FINISH	NO REQS PER UNIT	xxx	
MAT BK ANDDISE			
EX No	DRAWING No	R.G.O. W/IF/O10	

13		BLOCK	
MATERIAL	SCALE	TOLERANCES	
ALUM ³ ALLOY	1/1	x ±0.1	xx ±0.05
FINISH	NO REQS PER UNIT	xxx	
MAT BK ANDDISE			
EX No	DRAWING No	R.G.O. W/IF/O13	

14		BALL SCREW	
MATERIAL	SCALE	TOLERANCES	
ST. STEEL	2/1	x ±0.1	xx ±0.05
FINISH	NO REQS PER UNIT	xxx	
BK NICK PLT			
EX No	DRAWING No	R.G.O. W/IF/O14	

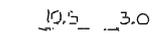
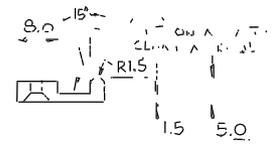
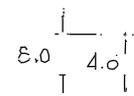
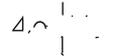
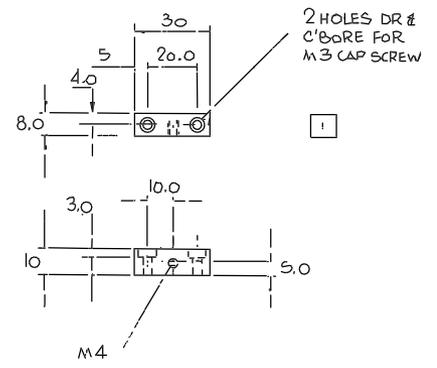
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												DETAILS				Drawing No.	
																W/IF/O10	
																T	
																O14	



04 05 06 KINEMATIC SEAT			
MATERIAL	SCALE	TOLERANCES	
ST. STL	2/1	x ± 0.1	
FINISH	NO REQ PER UNIT	xx ± 0.05	xxx
BLK NIC, PLT	4 OFF EACH		
G.A. No	DRAWING No	R.G.O. W/IF/004, 5 & 6	

MODIFY STD.
 HEX. SCREW

07 SCREW			
MATERIAL	SCALE	TOLERANCES	
ST. STL	2/1	x ± 0.1	
FINISH	NO REQ PER UNIT	xx ± 0.05	xxx
BLK NIC, PLT	12		
G.A. No	DRAWING No	R.G.O. W/IF/007	



DR & CSK (FLUSH)
 FOR M2.5 SCREW



03 SOLE PLATE			
MATERIAL	SCALE	TOLERANCES	
ALUM ³ ALLOY	1/1	x ± 0.1	
FINISH	NO REQ PER UNIT	xx ± 0.05	xxx
MAT BLK ANODISE	3		
G.A. No	DRAWING No	R.G.O. W/IF/003	

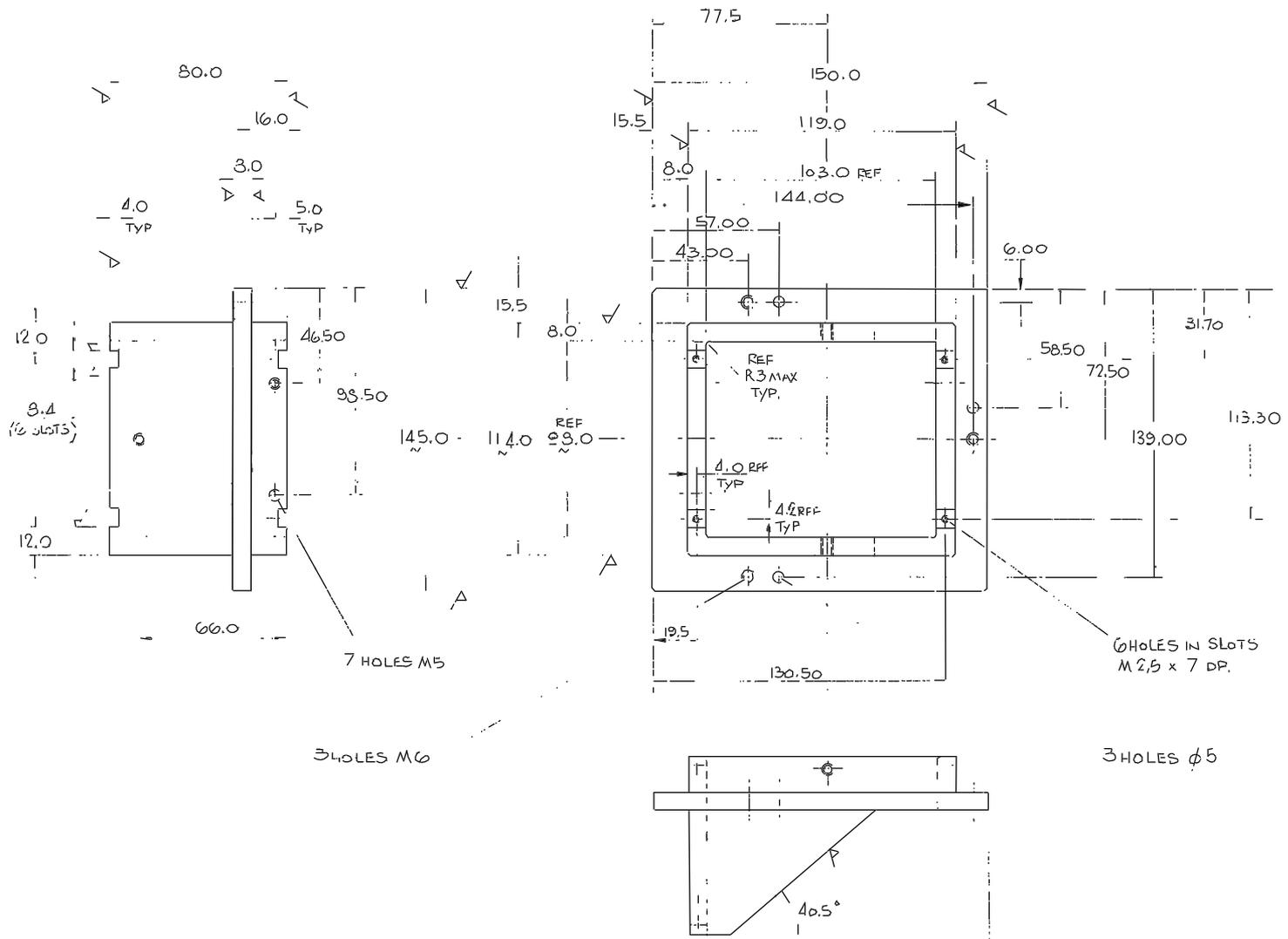
08 BLOCK			
MATERIAL	SCALE	TOLERANCES	
ALUM ³ ALLOY	1/1	x ± 0.1	
FINISH	NO REQ PER UNIT	xx ± 0.05	xxx
MAT BLK ANODISE	3		
G.A. No	DRAWING No	R.G.O. W/IF/008	

09 CLAMP			
MATERIAL	SCALE	TOLERANCES	
BERYL COPPER	2/1	x ± 0.1	
FINISH	NO REQ PER UNIT	xx ± 0.05	xxx
MAT BLK	3		
G.A. No	DRAWING No	R.G.O. W/IF/009	

Issue		Date		Drawn By		Issue		Date		Drawn By		Material		Dim in m.m.		Scale		THIRD ANGLE PROJECTION		G.A. No.	
																				W/IF/003	
																				003	
																				003	

DETAILS

Drawing No
W/IF/002



ROYAL GREENWICH OBSERVATORY

(W/IF/020) 02 GRISM CELL

MATERIAL ALUMINUM CASTING	SCALE 1/1	TOLERANCES X ± 0.2 XX ± 0.1 XXX ± 0.05
FINISH MATT BLK ANODISE	NO. REQD PER UNIT	REVISED BY
EX. NO.	R.G.O. W/IF/0.2	

Issue				Author				Tolerances (Unless otherwise stated)		Material		Units in mm.		Scale		THIRD ANGLE PROJECTION		G.A. No.	
Issue				Author				X XX XXX		Finish		Drq. No.		No. Req.		ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX CASTLE, HAILSHAM		Title	
Issue				Author						Used on						DETAIL		W/IF/002	

8.0
ALCOA PLT - SELECT FOR FLATNESS
& MAINTAIN SAME

4.0

50.025
50.000
CSK U/SIDE
2 x 45°

6 GROUPS OF HOLES
2 HOLES Ø 3.2

Ø 620.0
120.0
90.0
45.0
54.0
45.0
22.5

Ø HOLES Ø 3.010/3.000
EQUI-SPACED ON 204.0 PCD

Ø 8.2
Ø 8.1 (Ø SLOTS)

302.0
REF

151.0
KFF

73.1
TYP

15° REF
TYP

15 HOLES Ø 9 SPACED
AS SHOWN ON 560 PCD.
(F.R. BENCHING)

R2 MAX
TYP

143.0
123.0
135.0
123.0

3 HOLES Ø 100.05
EQUI-SPACED ON 400.0 PCD

Ø HOLES DR & CSK
FOR M6 SCREW
EQUI-SPACED ON
124.0 PCD.

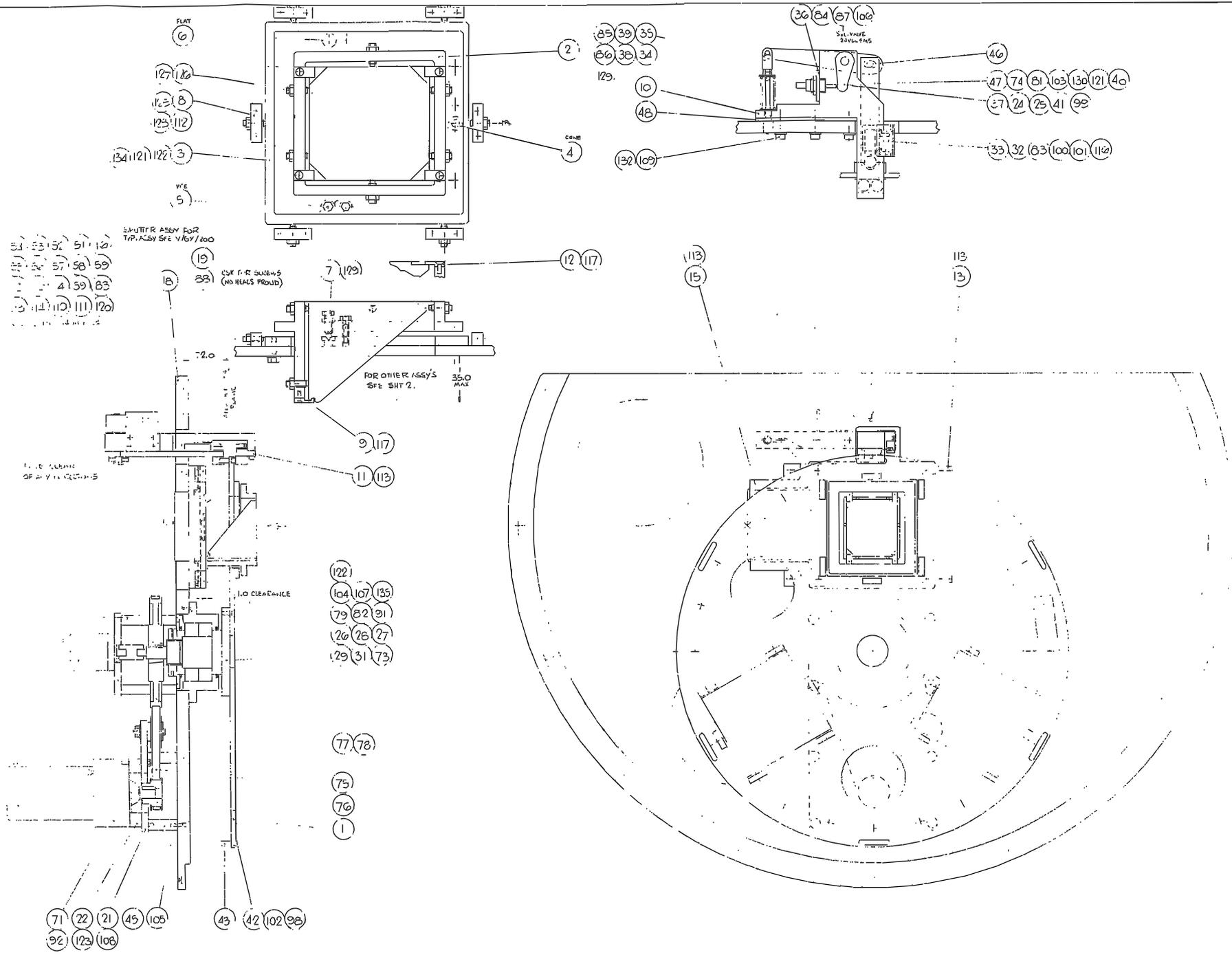
261.54
REF

3 GROUPS OF HOLES
12 HOLES EACH
M3 THRU

20.0
TYP
172.0

Ø1 GRISM/POLARISER WHEEL			
MATERIAL	SCALE	TOLERANCES	
ALCOA PLT	1/2	3	± 0.2
FINISH	NO HOLE PER UNIT	XX	± 0.1
MAT BLK ANDISE		XXX	
G.A. No	DRAWING No		
	R.G.O. W/IF/001		

				Tolerances (Unless otherwise stated)		Material		Dimens in mm		Scale		THIRD ANGLE PROJECTION		G.A. No.	
				X		Finish		ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX CASTLE, HAILSHAM				Title		Drawing No.	
				XXX		Drig No. No Req		SUSSEX.				DETAIL		W/IF/001	
Issue	Mod. No	Date	Drawn By	Issue	Mod. No.	Date	Drawn By	Used on							



Issue	Mod No.	Date	Drawn By	Issue	Mod No.	Date	Drawn By	Tolerances (Unless otherwise stated)	Material	Dim's in m.m	Seals	THIRD ANGLE PROJECTION	GA No	SHT 1 OF 2	
						MAY 89	a								
						APRIL 89	"								
						15/3/89	VRO/EC	X ±							
								XX ±							
								XXX ±							
										Dig No.	Mod No.				
										Used on					
										ROYAL GREENWICH OBSERVATORY, HERSTMONCEUX CASTLE, HAILSHAM SUSSEX		Title GRISM & POLARIZER WHEEL ASSY.		Drawing No V IF 000	

(17)
BALANCE WTS
AS REQD