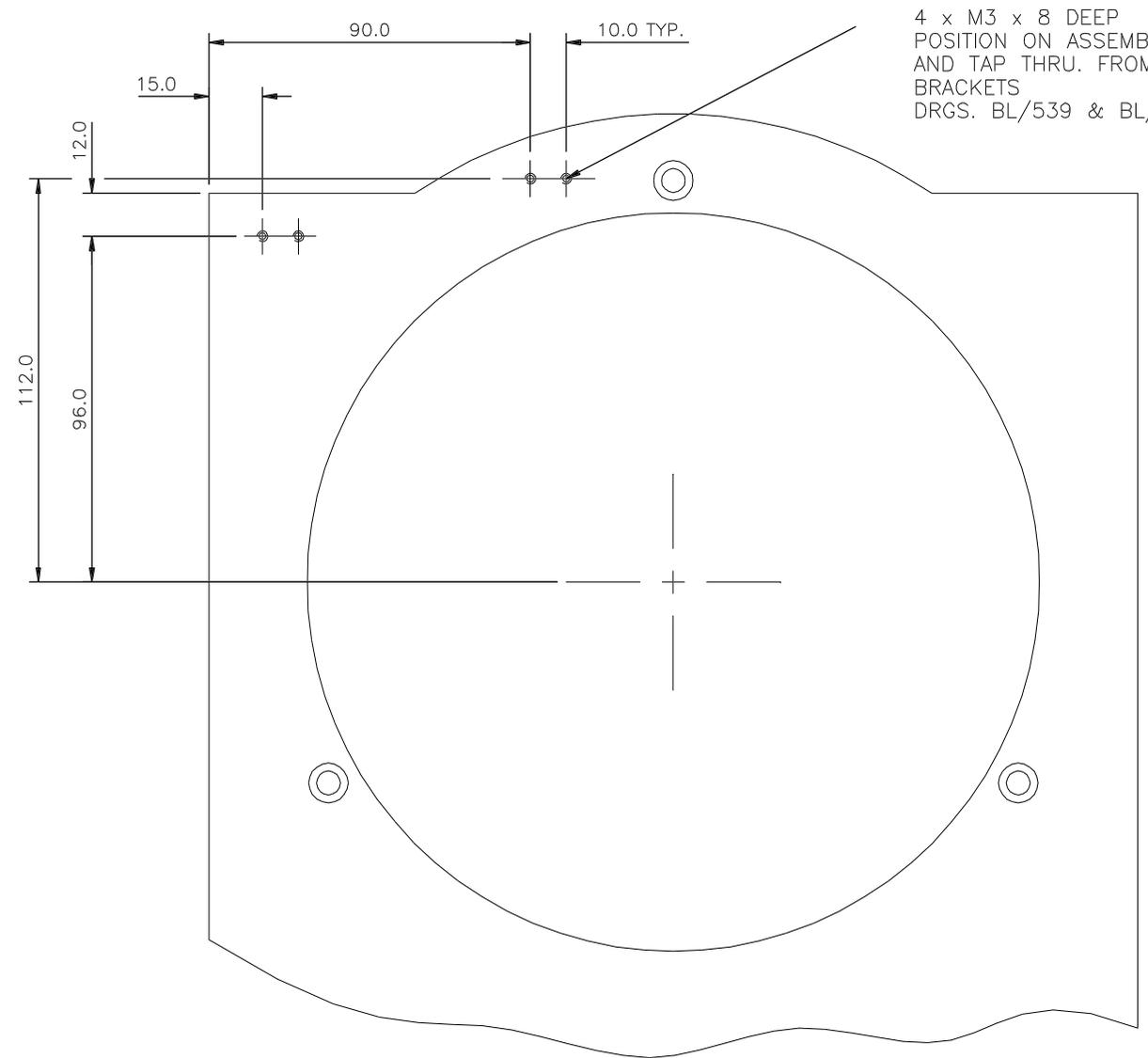


DRG NO.
BL/542

DO NOT SCALE



DIMENSIONS ARE NOMINAL POSITIONS
BUT CHECK ON ASSEMBLY
SPOT THRU.FROM STOP BRACKETS

ALL OTHER DETAILS SEE DRG. W/BL/301

				TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE	ORIGINAL SHEET SIZE A2		G.A. NO.	
				X ±							LOC'N.	BL
				X.X ±					TITLE		SHT.	1
				X.XX ±					ROYAL GREENWICH OBSERVATORY		DRG NO.	
				ANG. ±					MADINGLEY ROAD		BL/542	
1		19/12/96	AJW						CAMBRIDGE CB3 0EZ			
ISSUE	MOD. NO.	DATE	DRAWN BY						MOD TO COLLIMATOR TO SUIT GRATING STOPS			

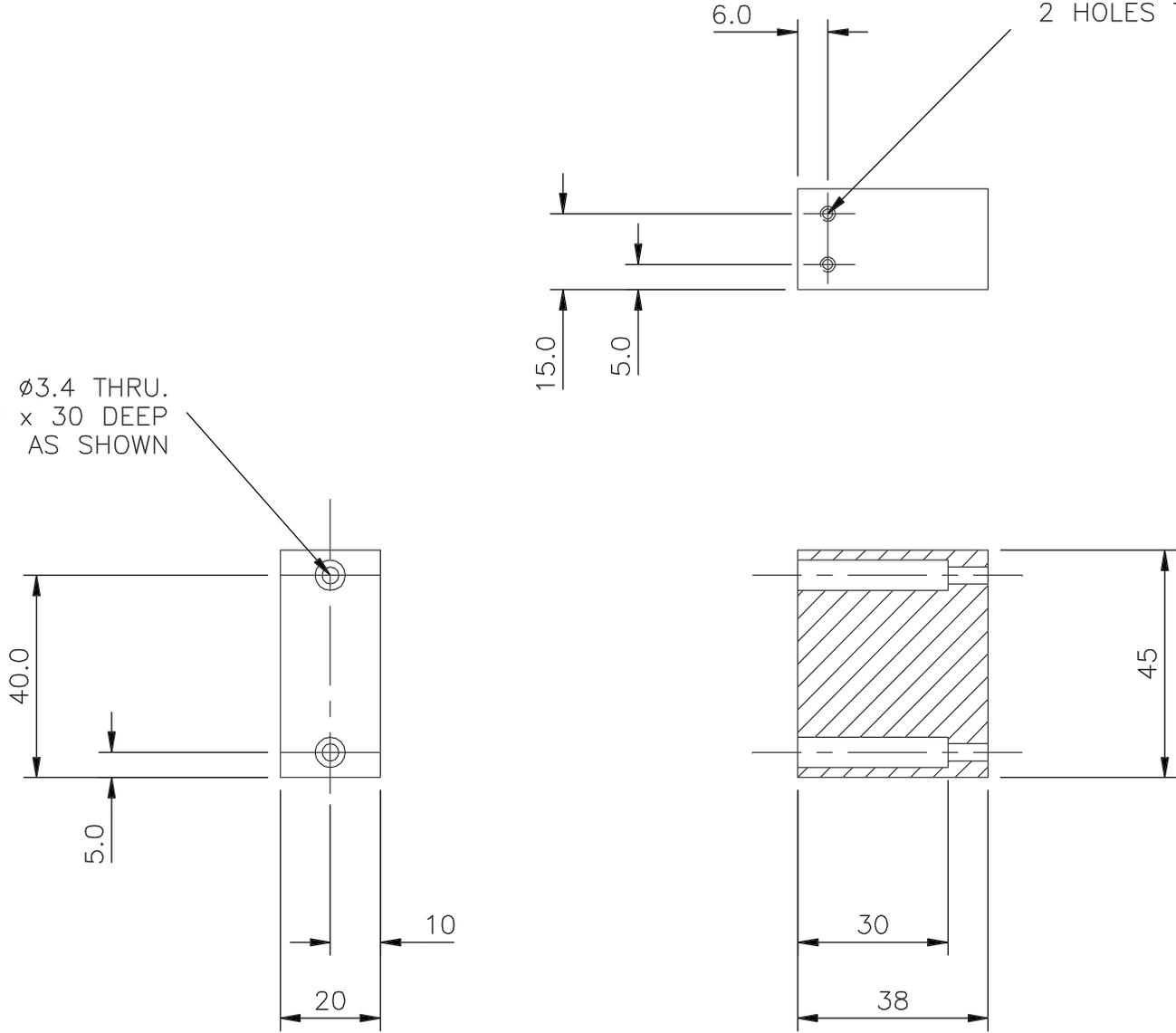
DRG NO.
BL/530

DO NOT SCALE

REMOVE ALL SHARP EDGES

2 HOLES $\phi 3.4$ THRU.
C/BORE $\phi 6.0$ x 30 DEEP
AS SHOWN

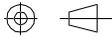
2 HOLES TAP M3 x 10 DEEP

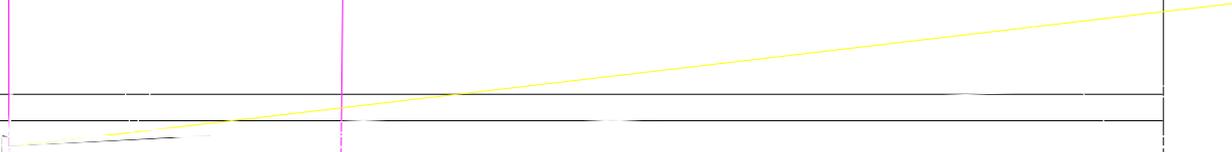
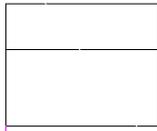
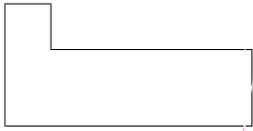


			TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE 1:1	ORIGINAL SHEET SIZE A3	G.A. NO.	V/BL/400		
			X ± 0.3	AL.ALLOY		ROYAL GREENWICH OBSERVATORY	TITLE	WYFFOS GRATING – STOP BRACKET				
1	03/02/95	AJW	X.X ± 0.1	FINISH	No. REQ'D	MADINGLEY ROAD	FITS TO SECOND COLLIMATOR					
ISSUE	DATE	DRAWN	X.XX ±	BLK. ANODISE	1 OFF	CAMBRIDGE CB3 0EZ	DRG NO.	BL/530	SHT.	1	LOC'N	BL

DRG NO.

DO NOT SCALE

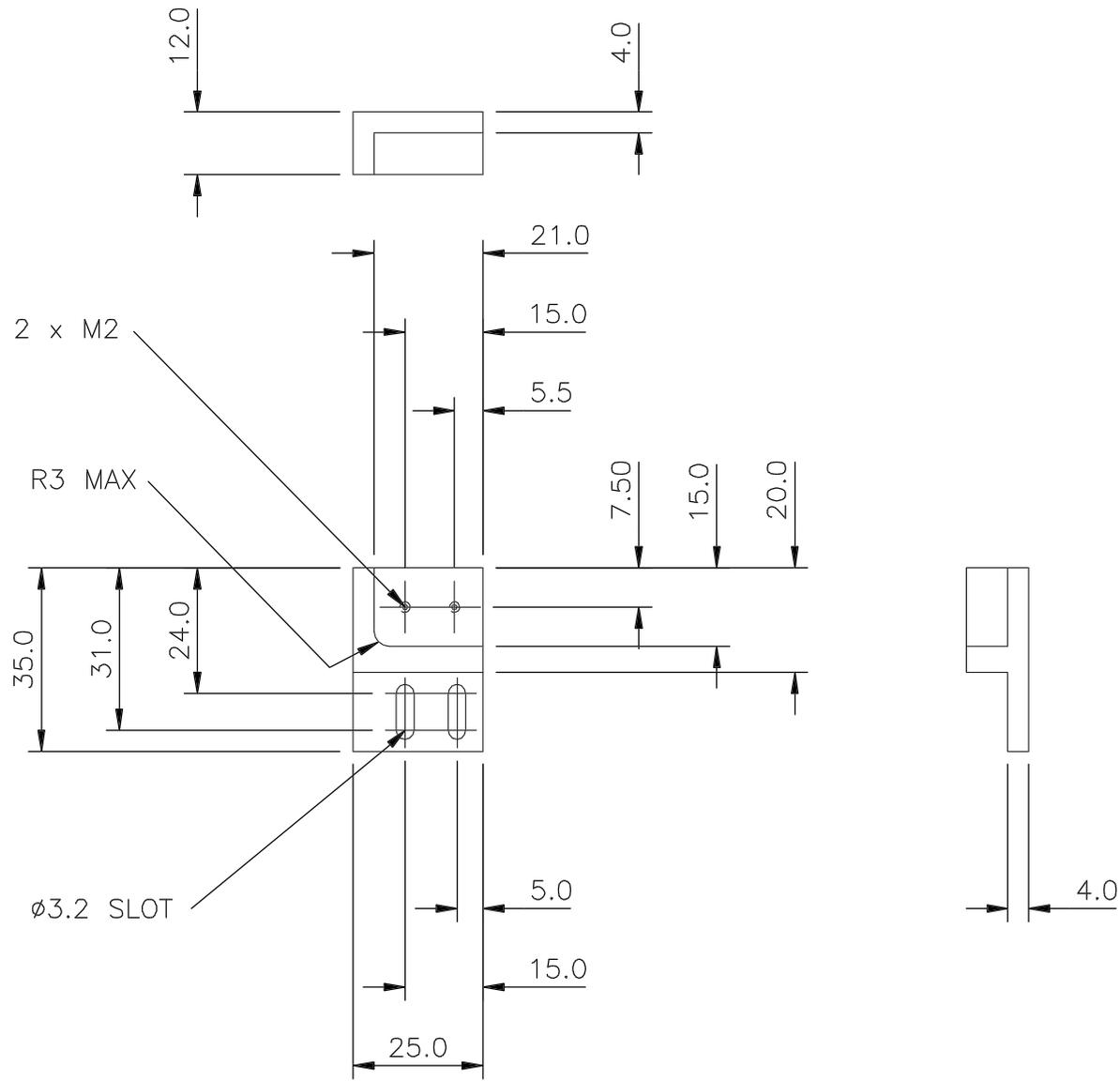
			TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION 	DIMS IN mm	ORIGINAL SCALE	ORIGINAL SHEET SIZE A3	G.A. NO.
1	oc		X ± X.X ± X.XX ± ANG. ±	FINISH	No. REQ'D	ROYAL GREENWICH OBSERVATORY MADINGLEY ROAD CAMBRIDGE CB3 0EZ	TITLE	DRG NO.	SHT.
ISSUE	DATE	DRAWN							LOC'N



DRG NO.
BL/538

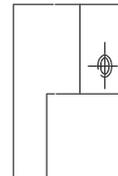
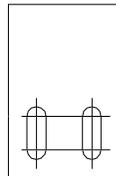
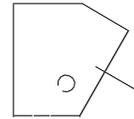
DO NOT SCALE

REMOVE ALL SHARP EDGES



			TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE 1:1	ORIGINAL SHEET SIZE A3	G.A. NO.	
			X ±	AL.ALLOY		ROYAL GREENWICH OBSERVATORY	TITLE	WYFFOS GRATING – MICROSWITCH BRACKET MOUNTED TO YOKE		
1	19/12/96	AJW	X.X ± 0.1	FINISH BLK.	No. REQ'D	MADINGLEY ROAD				
ISSUE	DATE	DRAWN	X.XX ±	ANODISE	1 OFF	CAMBRIDGE CB3 0EZ	DRG NO.	BL/538	SHT. 1	LOC'N BL
			ANG. ±							

DO NOT SCALE



ISSUE	DATE	D

TOLERANCES (UNLESS OTHERWISE STATED)
X

ORIGINAL SCALE

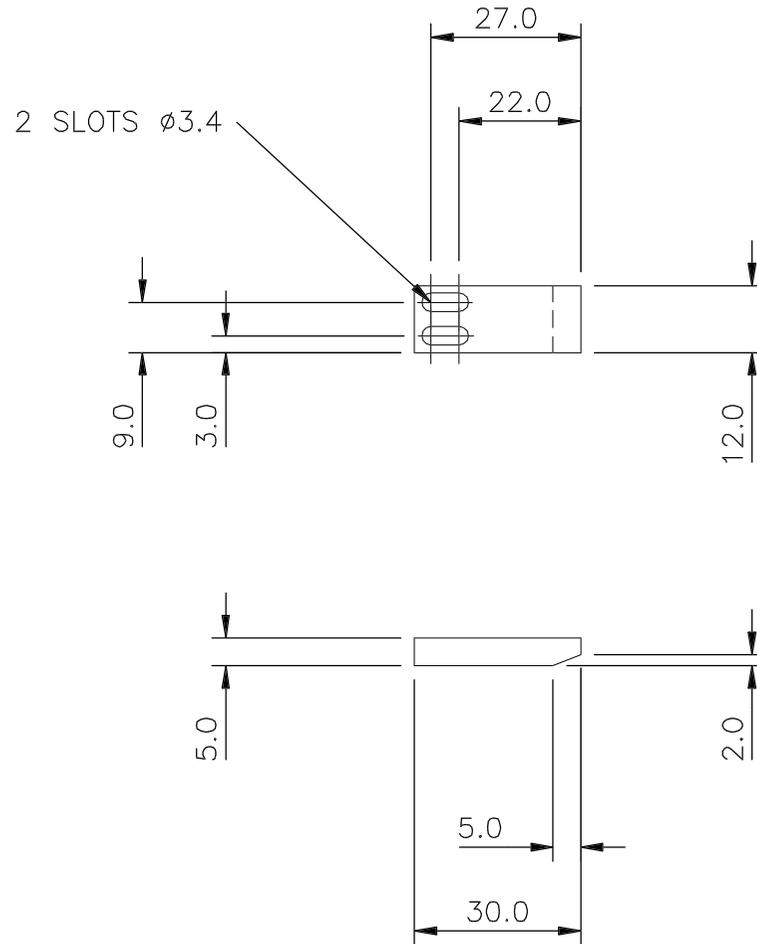
ROYAL GREENWICH OBSERVATORY

CAMBRIDGE CB3 0EZ

DRG NO.
BL/540

DO NOT SCALE

REMOVE ALL SHARP EDGES

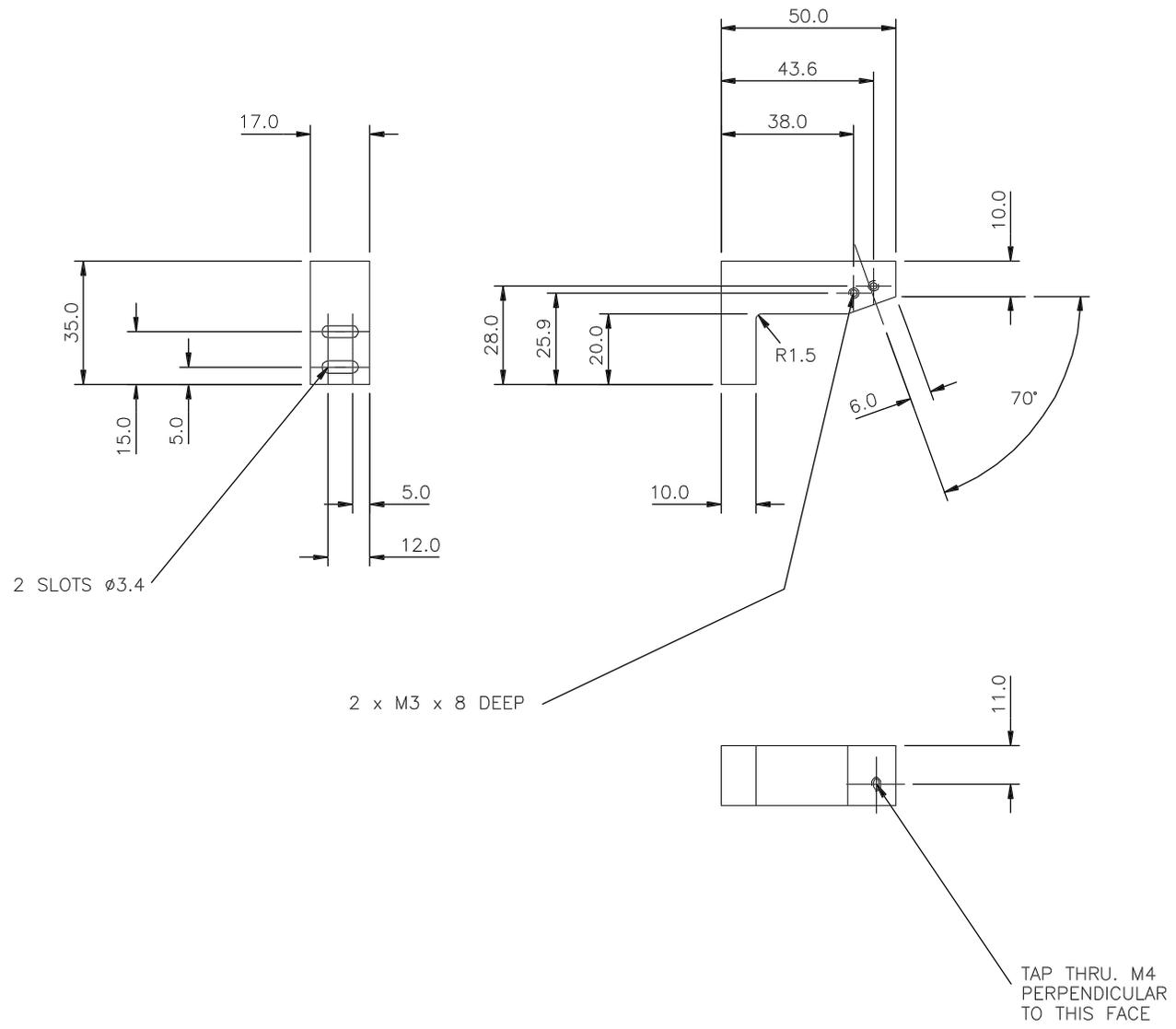


			TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE 1:1	ORIGINAL SHEET SIZE A3	G.A. NO.	
			X ±	AL.ALLOY		ROYAL GREENWICH OBSERVATORY	TITLE	4.2 WYFFOS GRATING – STOP ARM MOUNTED TO FIRST COLLIMATOR		
1	19/12/96	AJW	X.X ± 0.1	FINISH	No. REQ'D	MADINGLEY ROAD				
ISSUE	DATE	DRAWN	X.XX ±	BLK. ANODISE	2 OFF	CAMBRIDGE CB3 0EZ	DRG NO.	BL/540	SHT. 1	LOC'N BL
			ANG. ±							

DRG NO.
BL/541

DO NOT SCALE

REMOVE ALL SHARP EDGES

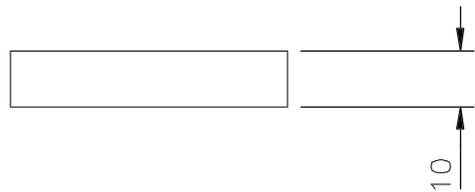
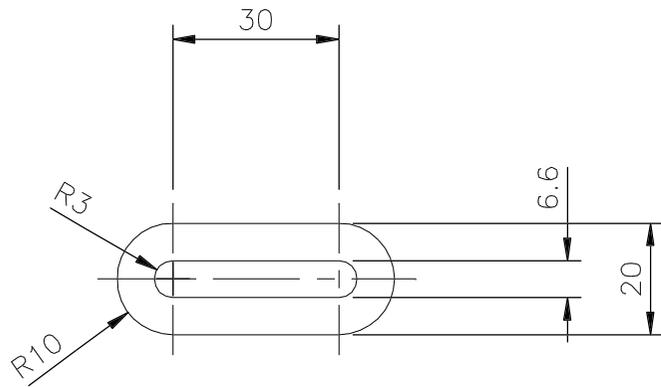


				TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE	1:1	ORIGINAL SHEET SIZE A2	G.A. NO.
				X ± 0.1	AL.ALLOY		ROYAL GREENWICH OBSERVATORY			TITLE	LOC'N. BL SHT. 1
1		19/12/96	AJW	X.X ± 0.1	FINISH	NO. REQ'D PER ASSY	MADINGLEY ROAD			4.2 WYFFOS GRATING – STOP BRACKET	DRG NO.
ISSUE	MOD. NO.	DATE	DRAWN BY	X.XX ±	BLK.ANODISE	1 OFF	CAMBRIDGE CB3 0EZ			MOUNTED TO FIRST COLLIMATOR	BL/541

DRG NO.
BL/534

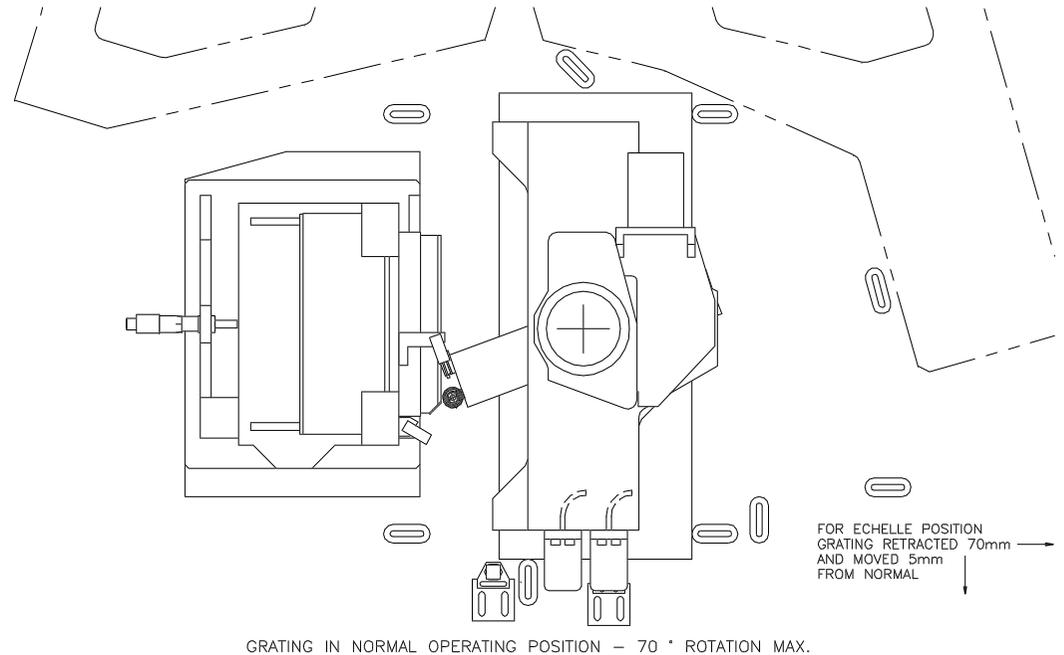
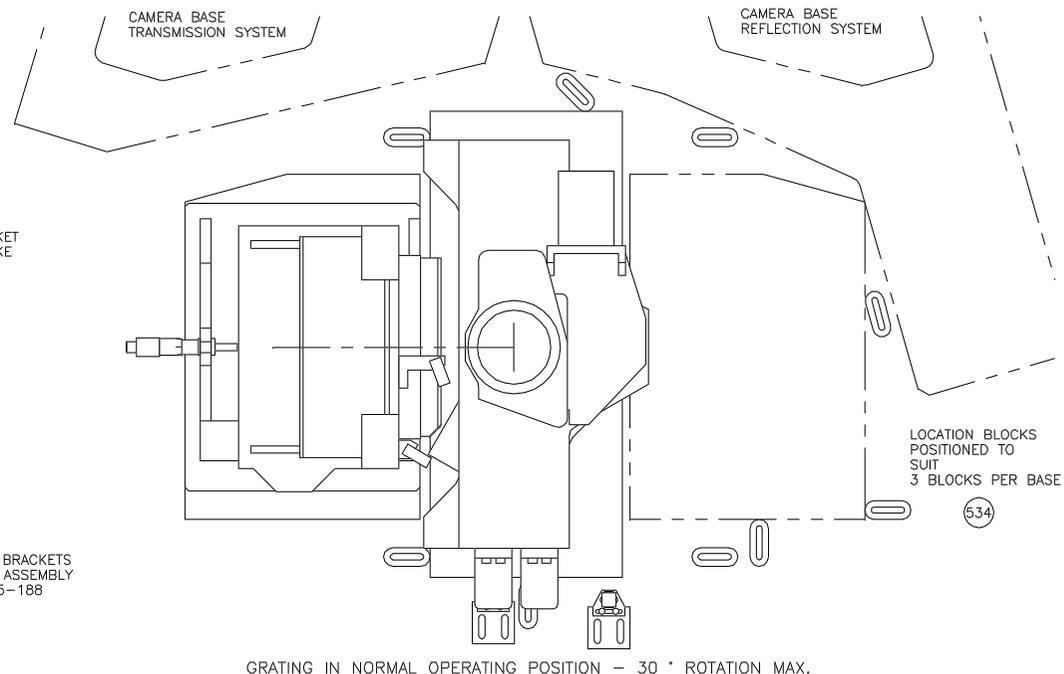
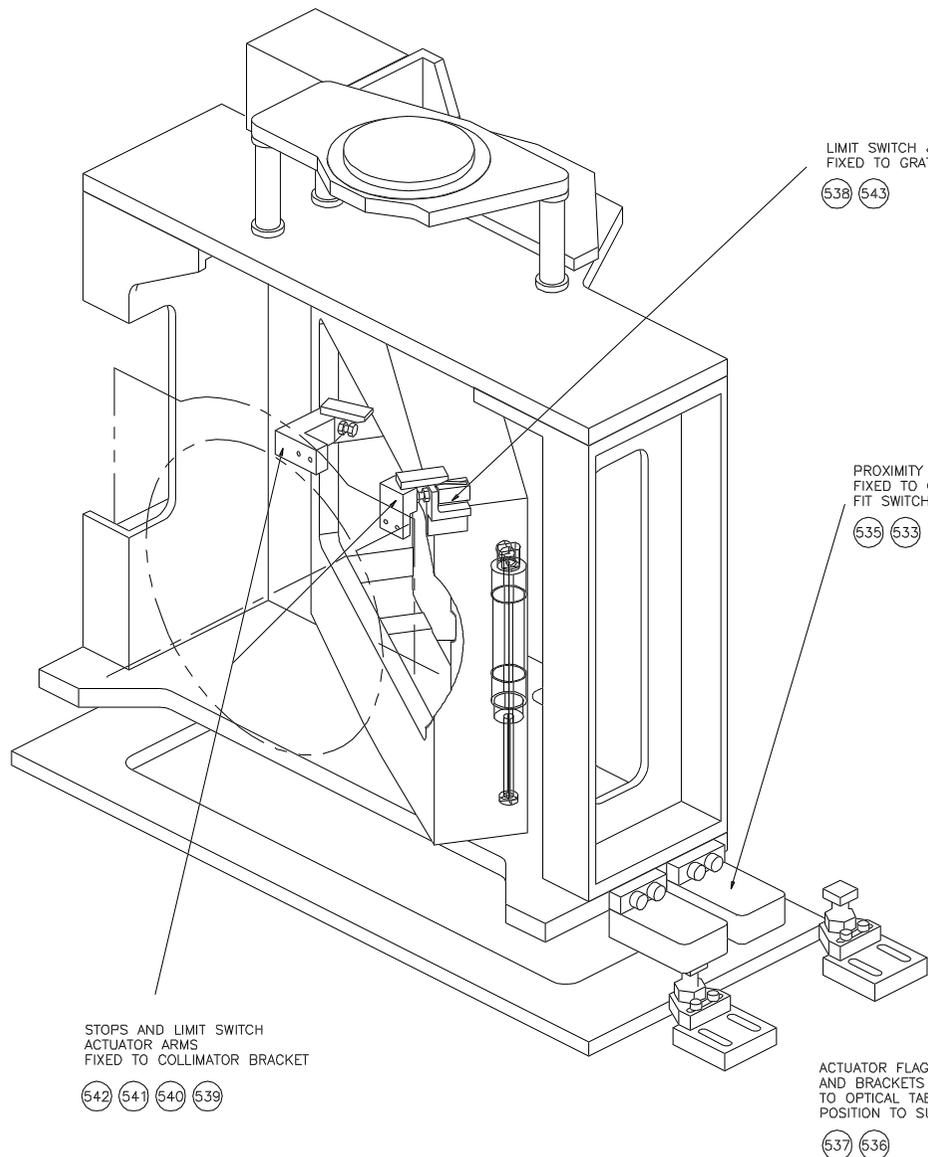
DO NOT SCALE

REMOVE ALL SHARP EDGES



			TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE 1:1	ORIGINAL SHEET SIZE A3	G.A. NO.
			X ± 0.3	AL.ALOY		ROYAL GREENWICH OBSERVATORY	TITLE 4.2 WYFFOS GRATING – BASEPLATE STOPS		
1	19/12/96	AJW	X.X ± 0.1	FINISH BLK.	No. REQ'D	MADINGLEY ROAD	REQUIRED FOR UPGRADE TO SUIT ECHELLE GRATING		
ISSUE	DATE	DRAWN	ANG. ±	ANODISE	9 OFF	CAMBRIDGE CB3 0EZ	DRG NO. BL/534	SHT. 1	LOC'N BL

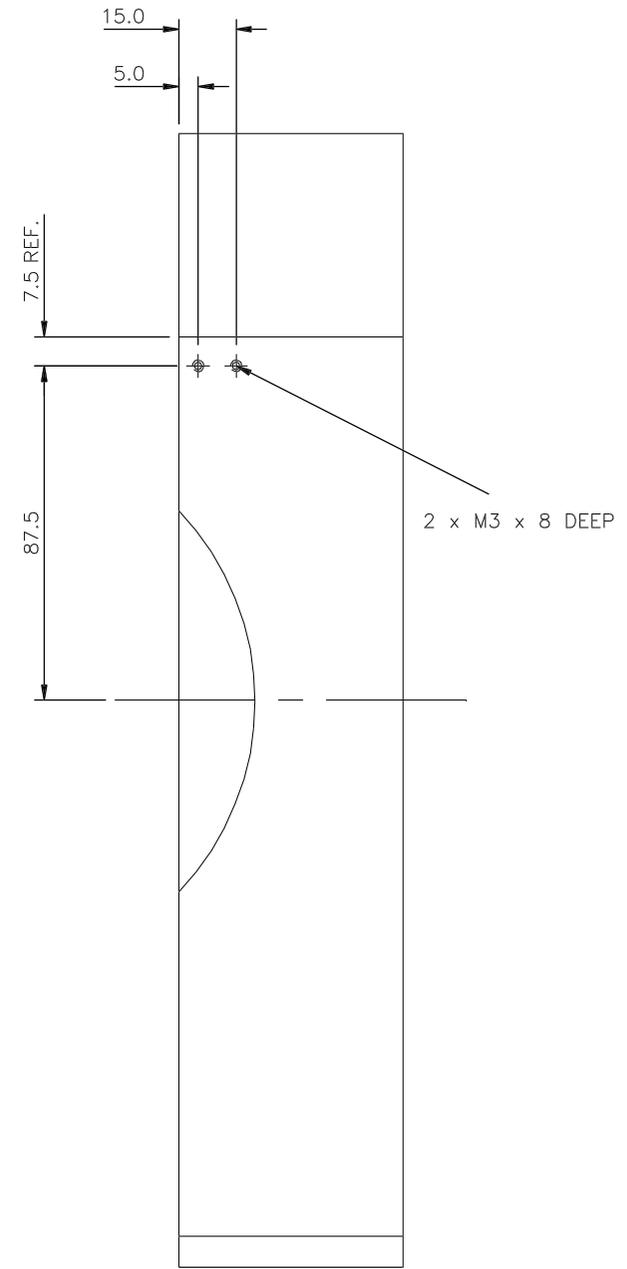
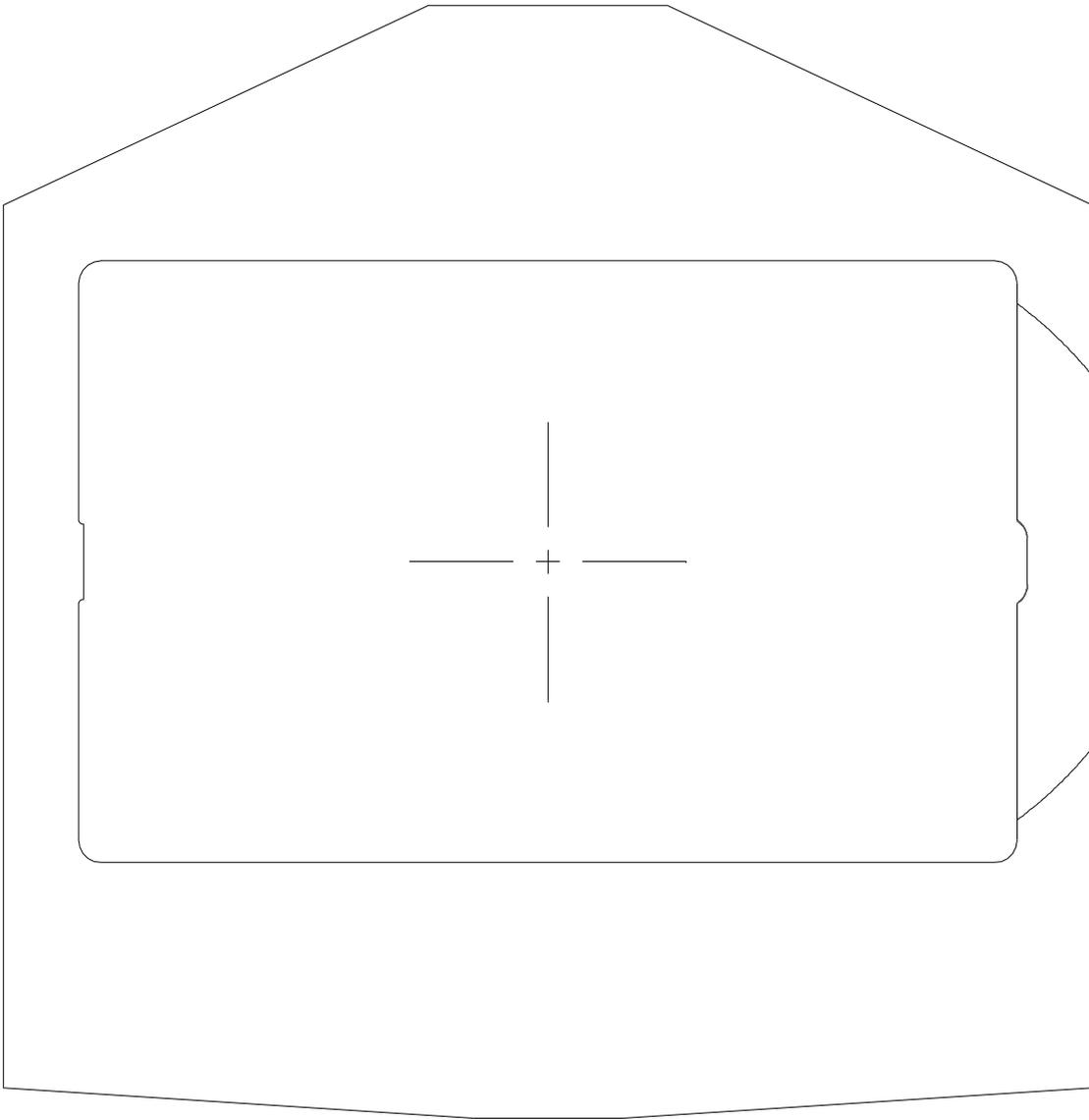
DO NOT SCALE



TOLERANCES (UNLESS OTHERWISE STATED)								MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE	ORIGINAL SHEET SIZE A0		G.A. NO.	LOC'N.	BL
ISSUE	MOD NO.	DATE	DRAWN BY	ISSUE	MOD NO.	DATE	DRAWN BY	FINISH	NO. REQ'D PER ASSY	ROYAL GREENWICH OBSERVATORY MADINGLEY ROAD CAMBRIDGE CB3 0EZ	TITLE	4.2 WYFFOS GRATING - MODIFICATIONS TO SUIT THE ECHELLE GRATING MODE		DRG. NO.	SHT.NO.	1
				1		19/12/96	AJW							BL/532		

DRG NO.
BL/543

DO NOT SCALE

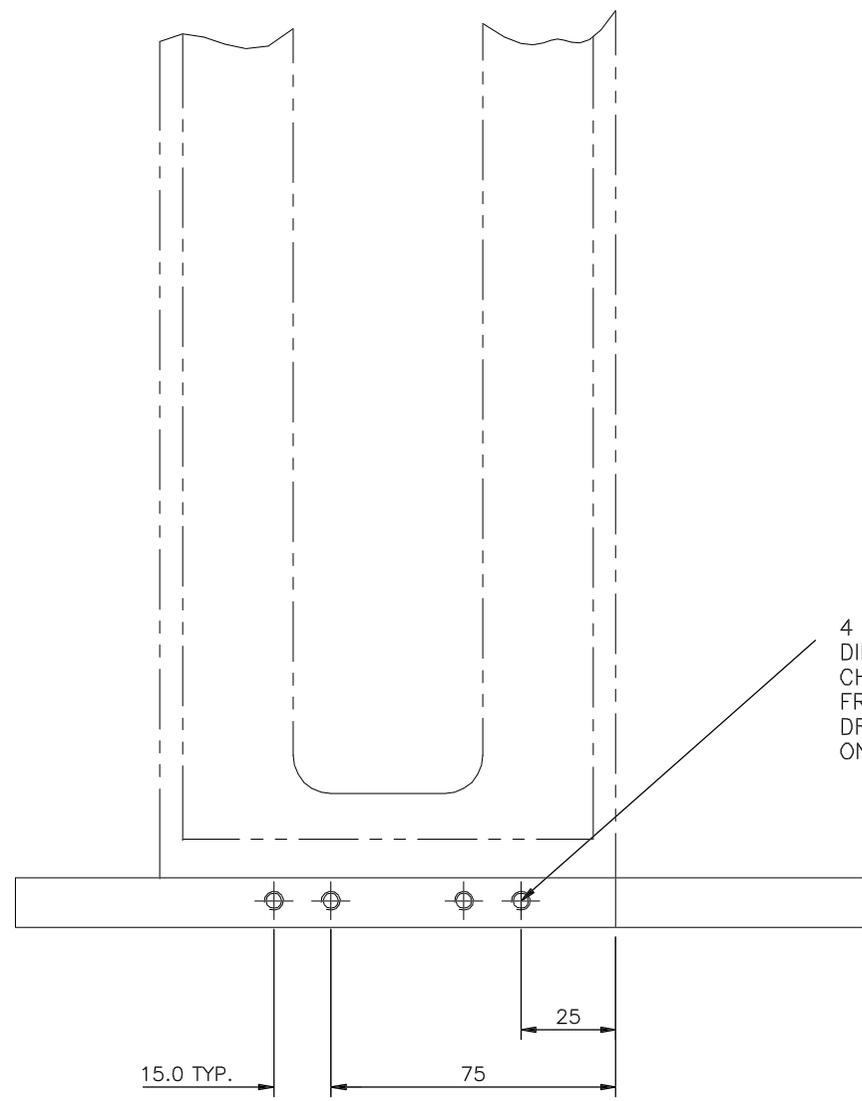


ALL OTHER DETAILS AS DRG. V/BL/493

				TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE 1:1	ORIGINAL SHEET SIZE A2	G.A. NO.		
				X ±						LOC'N.	BL	SHT. 1
1		19/12/96	AJW	X.X ±		NO. REQ'D PER ASS'Y	ROYAL GREENWICH OBSERVATORY	TITLE	4.2 WYFFOS GRATING - YOKE MODS.	DRG NO.		
ISSUE	MOD. NO.	DATE	DRAWN BY	X.XX ±	FINISH		MADINGLEY ROAD	TO SUIT EXTRA ROTATION FOR ECHELLE			BL/543	
				ANG. ±			CAMBRIDGE CB3 0EZ					

DRG NO.
BL/533

DO NOT SCALE



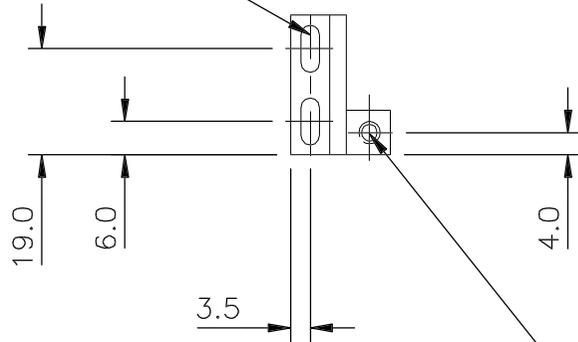
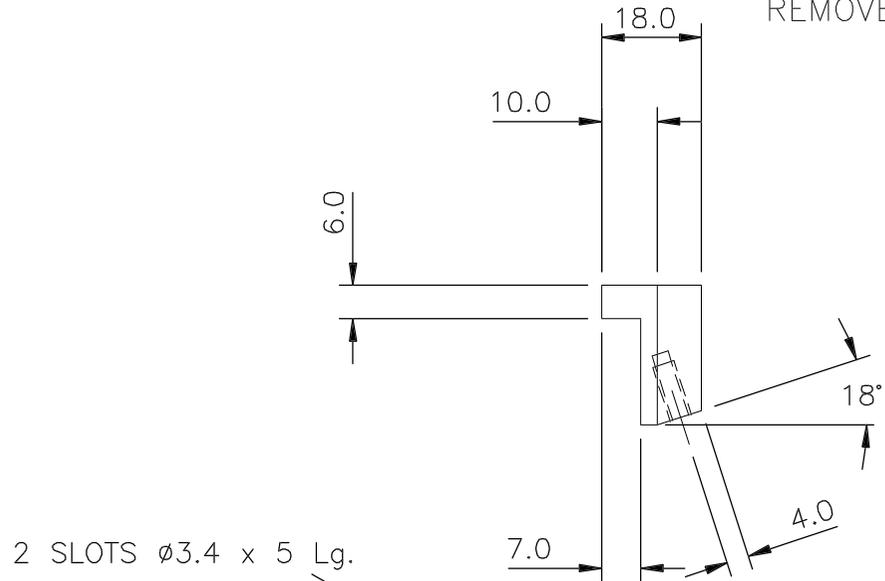
4 x M5 x 12 DEEP
DIMENSIONS ARE NOMINAL
CHECK POSITIONS REQUIRED
FROM SWITCH BRACKETS
DRG. BL/535
ON ASSEMBLY

ALL C

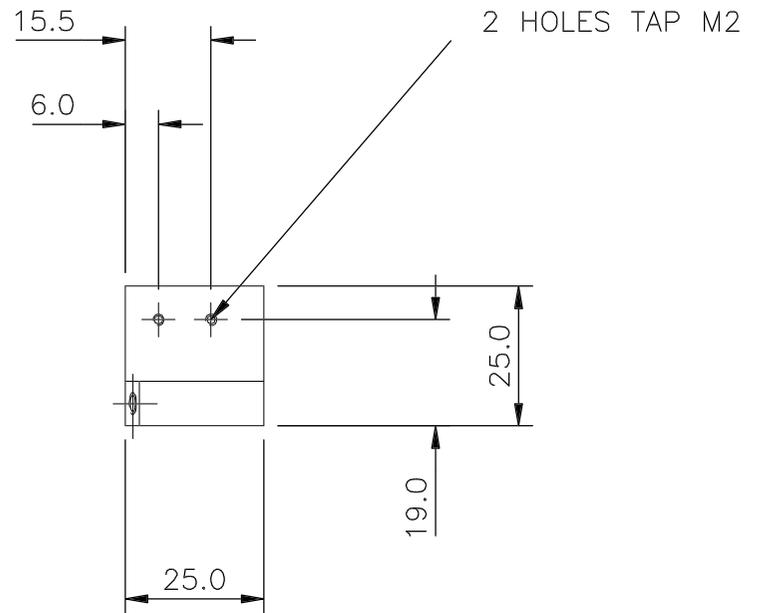
				TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE 1:1	ORIGINAL SHEET SIZE A2	G.A. NO.		
				X ±						LOC'N.	BL	SHT.
1		19/12/96	AJW	X.X ±			ROYAL GREENWICH OBSERVATORY	TITLE	4.2 WYFFOS GRATING – SUPPORT MODS.			1
ISSUE	MOD. NO.	DATE	DRAWN BY	X.XX ±	FINISH	NO. REQ'D PER ASSY	MADINGLEY ROAD		TO SUIT POSITION ID SWITCH	DRG NO. BL/533		
				ANG. ±			CAMBRIDGE CB3 0EZ					

DRG NO.
BL/529

DO NOT SCALE
REMOVE ALL SHARP EDGES



TAP M4 x 10 DEEP



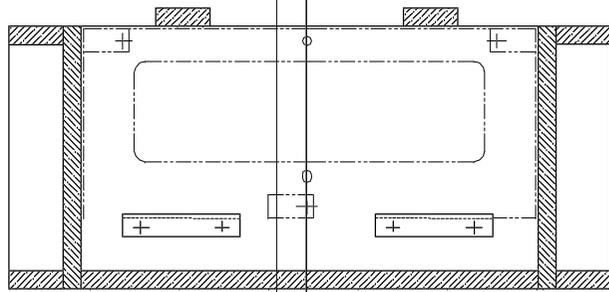
			TOLERANCES (UNLESS OTHERWISE STATED)	MATERIAL	THIRD ANGLE PROJECTION	DIMS IN mm	ORIGINAL SCALE 1:1	ORIGINAL SHEET SIZE A3	G.A. NO. V/BL/400
			X \pm 0.3	AL.ALLOY		ROYAL GREENWICH OBSERVATORY	TITLE	WYFFOS GRATING – LIMIT SW. BRACKET	
1	03/02/95	AJW	X.X \pm 0.1	FINISH BLK	No. REQ'D	MADINGLEY ROAD			
ISSUE	DATE	DRAWN	ANG. \pm	ANODISE	1 OFF	CAMBRIDGE CB3 0EZ	DRG NO. BL/529	SHT. 1	LOC'N BL

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	
V / BL / 400 A	1		GENERAL ASSEMBLY SHT1							
V / BL / 400	1		GENERAL ASSEMBLY SHT2							
W / BL / 401	1	1	BASE PLATE	1						
W / BL / 402	1	2	PIVOT PLATE	1						
W / BL / 403	1	3	LEG R.H.	1						
W / BL / 404	1	4	LEG L.H.	1						
W / BL / 405	1	5	TOP PLATE	1						
W / BL / 406 A	1	6	SPINDLE	1						
/ / 407		7	SPINDLE PNEUMATIC CONNECTOR	1						
/ / 408		8	BALL	1						
W / BL / 409	1	9	BEARING	1						
/ / 410		10	PRESSURE PLATE	1						
/ / 411		11	BLOCK	2						
/ / 412		12	CLAMP ARM	1						
W / BL / 413	1	13	CLAMP & CYLINDER PIVOT	1						
/ / 414		14	SCREW	1						
/ / 415		15	COUNTER BALANCE WEIGHT	1						
/ / 416		16	BEARING	1						
W / BL / 417	1	17	PROXIMITY SWITCH BRACKET	2						
/ / 418		18	PROXIMITY SWITCH BRACKET	1						
/ / 419		19	PROXIMTY SWITCH FLAG	1						
/ / 420		20	PROXIMTY SWITCH FLAG	1						
/ / 421		21	PROXIMTY SWITCH FLAG	1						
W / BL / 422	1	22	CLAMP SPINDLE	1						
/ / 423		23	CLEVIS	2						
/ / 424		24	CLEVIS	1						
/ / 425		25	PROXIMITY SWITCH BRACKET	2						
/ / 426		26	PROXIMITY SWITCH BRACKET	1						
W / BL / 427	1	27	CRANK ARM	1						
/ / 428		28	PRE-LOAD CRANK BEARING	1						
/ / 429		29	LOCKNUT	3						
W / BL / 430	1	30	PRE-LOAD ROLLER SPINDLE	2						
/ / 431	1	31	SIDE ROLLER COVER	1						
/ / 432		32	CYLINDER PIVOT BRACKET	1						
/ / 433		33	CYLINDER PIVOT PIN	1						
W / BL / 434	1	34	BELL CRANK ROLLER	2						
/ / 435		35	SPRING RETAINER	4						
/ / 436		36	STOP SCREW	2						
JOB TITLE	GRATING HOUSING ASSEMBLY					ASS'Y DRG No. V/BL/400	SHEET No. 1 of 6	DRAWN BY PROMECH DATE 1/2/93		
ROYAL GREENWICH OBSERVATORY, MADINGLEY ROAD, CAMBRIDGE										

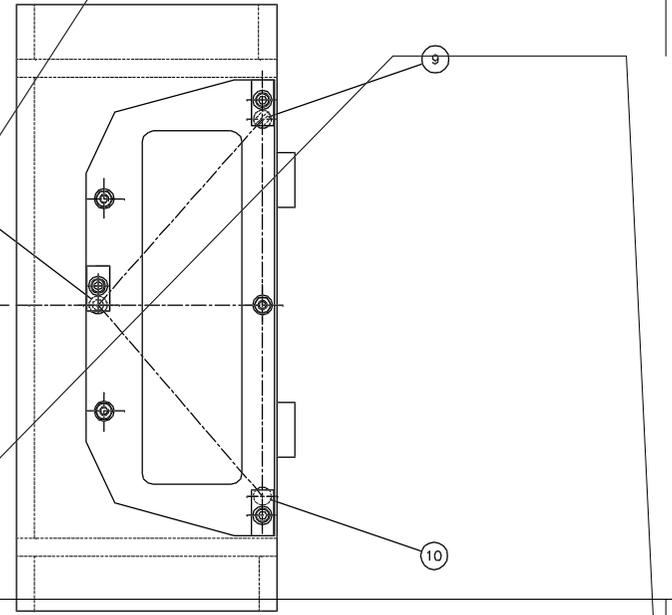
DRAWING NUMBER	No. OF SHEETS	GA ITEM No.	DRAWING TITLE OR COMPONENT NAME	No. OFF	MATERIAL STOCK OR ORDER No. AND DATE	REMARKS	ISSUE DATE	ISSUED TO	FINISH DATE	
437		37	SIDE ROLLER	1						
W/ BL /438 A	1	38	CYLINDER PIVOT	3						
/ /439		39	CATCH	3						
/ /440		40	BALL	1						
/ /441		41	LOCATION PAD	1						
/ /442		42	LOCATION PAD	2						
W/ BL /443	1	43	SPRING ANCHOR	1						
/ /444		44	SPRING ANCHOR	1						
/ /445		45	SPRING ANCHOR	1						
/ /446		46	SPRING ANCHOR	1						
W/ BL /447	1	47	PIVOT BLOCK	1						
/ /448		48	LEVER	1						
/ /449		49	LEVER	1						
/ /450		50	LEVER	1						
/ /451		51	CLAMP SPINDLE	2						
W/ BL /452	1	52	CLAMP VANE	1						
/ /453		53	VANE RETAINER	1						
/ /454		54	BEARING BLOCK	1						
/ /455		55	BEARING BLOCK	1						
W/ BL /456	1	56	WORM WHEEL	1						
W/ BL /457 A	1	57	WORM	1						
/ /458		58	PILLAR	3						
/ /459		59	SPACER	3						
/ /460		60	DIAPHRAGM	1						
W/ BL /461	1	61	CLAMP	3						
/ /462		62	PIVOT BLOCK	1						
/ /463		63	PIVOT BLOCK	1						
/ /464		64	CLAMP PIVOT	1						
/ /465		65	CLAMP PIVOT	1						
W/ BL /466	1	66	PLATE	2						
/ /467		67	PLATE	2						
/ /468		68	PIVOT	1						
/ /469		69	LEVER	1						
/ /470		70	CRANK	1						
W/ BL /471 A	1	71	ENCODER MOUNTING PLATE	1						
/ /472		72	ENCODER FLANGE	1						
/ /473		73	ENCODER CLAMP	3						
W/ BL /474 A	1	74	WORM MOUNTING PLATE	1						
JOB TITLE					GRATING HOUSING ASSEMBLY		ASS'Y DRG No.	SHEET No.	DRAWN BY PROMECH	
					ROYAL GREENWICH OBSERVATORY, MADINGLEY ROAD, CAMBRIDGE		V/BL/400 B	2 of 6	DATE 1/2/93	

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/ BL /607	1	113	BUTTON	3						
608		114	SUPPORT BUSH (CONE)	1						
W/ BL /609	1	115	ADJUSTING SCREW	3						
W/ BL /610	1	116	SUPPORT BUSH(VEE)	1						
611		117	SUPPORT BUSH(FLAT)	1						
613		118	CLAMP	4						
W/ BL /307	1	119	SCREW CLAMP(OPPOSITE HAND)	1						
/ /										
/ /										
/ /		120	CYLINDER "KUHNIKE"	1	2619010					
/ /		121	CYLINDER "KUHNIKE"	1	26304					
/ /		122	CYLINDER "KUHNIKE"	3	36291					
/ /		123	CYLINDER "KUHNIKE"	1	41100					
/ /		124	TENSION SPRING "LEE"	2	LE-055D-10					
/ /		125	TORSION SPRING "LEE"	2	LTL 070M3SS					
/ /		126	TORSION SPRING "LEE"	1	LTR 070M3SS					
/ /		127	TENSION SPRING "LEE"	4	LE-034B-8					
/ /		128	COMPRESSION SPRING "LEE"	2	LC-035C-5					
/ /		129	DISC SPRING "SPRINGMASTER"	11	OD12,ID5.2,GROUP1					
/ /		130	BALL RACE "RMB"	3	R 4130X					
/ /		131	BALL RACE "RMB"	1	RV 822X					
/ /		132	ANGULAR CONTACT "RMB"	2	RA 8220X					
/ /	Ⓐ	133	MOTOR "BERGER LAHA"	1	VRDM 568 DOUBLE ENDED					
/ /	Ⓐ	134	ENCODER 'HEIDENHAIN'	1	ROC 417					
/ /		135	RGO STATUS ENCODER-BAR CODE	1						
/ /	Ⓐ	136	COUPLING HELICAL	1	WAC 25-6mm-6mm					
/ /		137	VIBRATION MOUNT	4	17/1405					
/ /		138	"O" RING "DOWTY"	2	#015					
/ /		139	CIRCLIP EXTERNAL ø6 SHAFT	7						
/ /		140	BUSH "GLACIER"	6	PM 1010 DX					
/ /		141	PROXIMITY SWITCH "HETITCH"	9	5035					
/ /		142	BALL ø3.00	3						
/ /		143	COMPRESSION SPRING "LEE"	3	CI-012B-2					
/ /	Ⓐ	144	COUPLING HELICAL	1	WAC 25-8mm-8mm					
/ /										
/ /										
/ /										
/ /										
JOB TITLE					GRATING HOUSING ASSEMBLY		ASS'Y DRG No.	SHEET No.	DRAWN BY PROMECH	
							V/BL/400 B	4 of 6	DATE 1/2/93	
ROYAL GREENWICH OBSERVATORY, MADINGLEY ROAD, CAMBRIDGE										

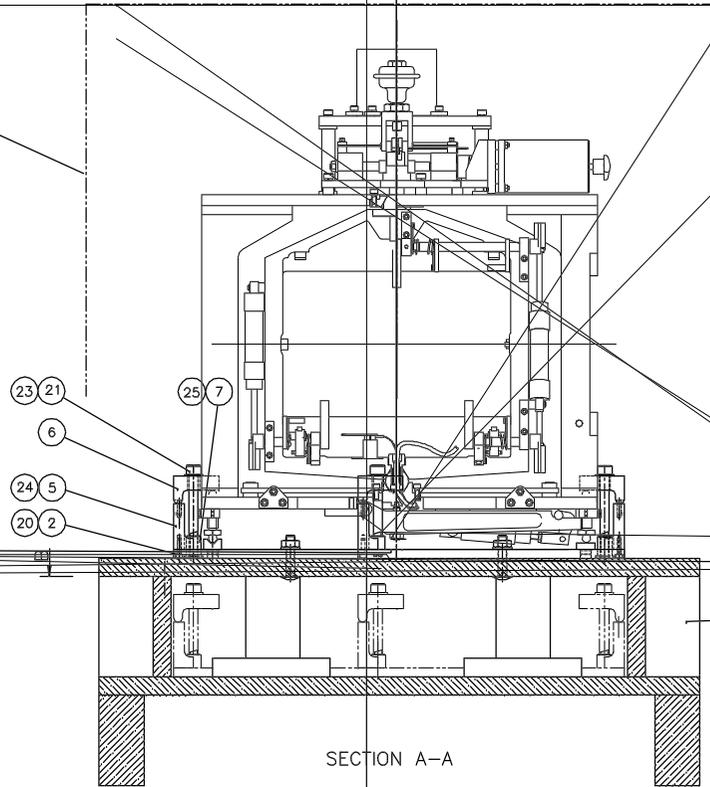
DRG NO.
V/BL/830



SECTION B-B

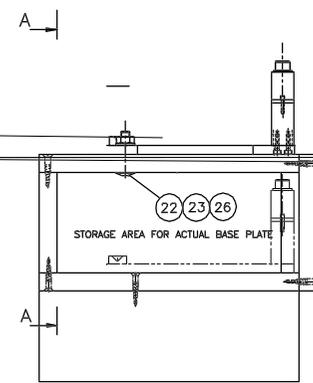


COVER TO SUIT (30)



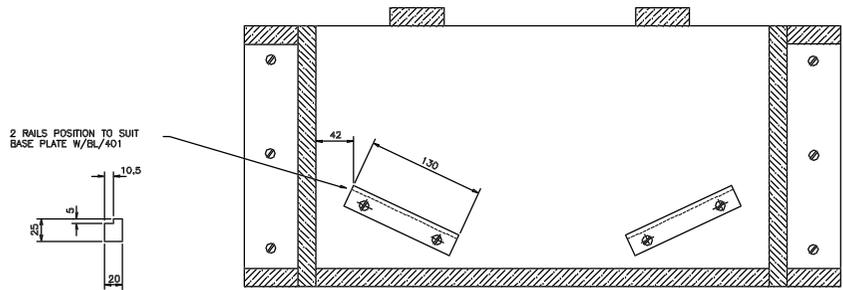
SECTION A-A

(1) ASSY.

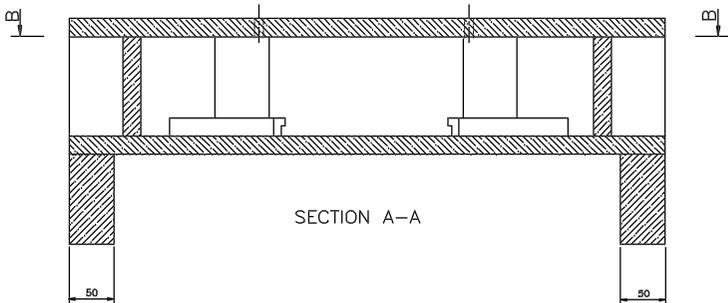
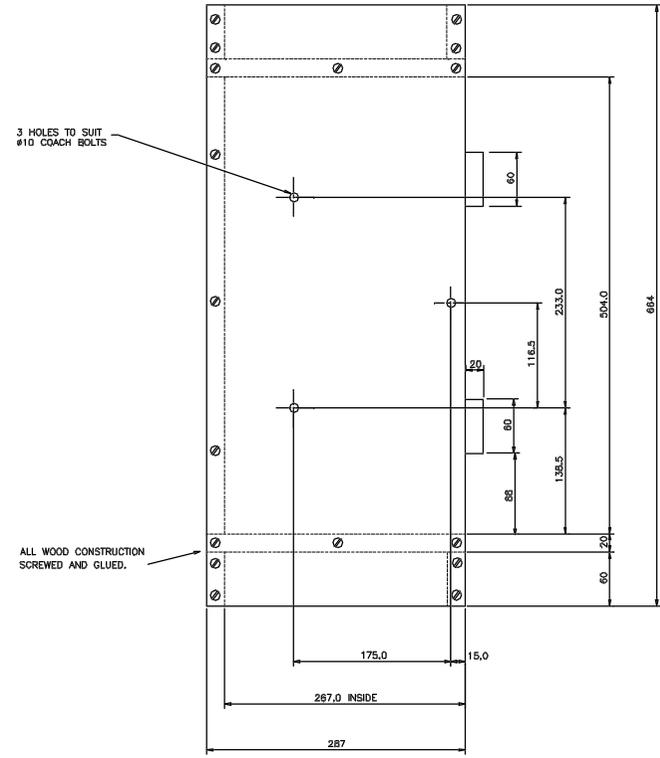


REF FOR REFLECTIVE GRATING ASSY. V/BL/400 ISS.D.

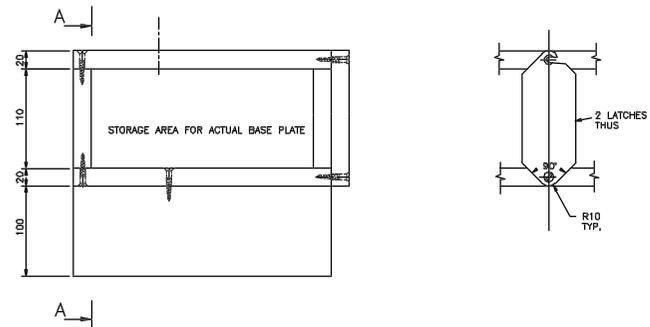
ISSUE				21/8/93				TOLERANCES (UNLESS OTHERWISE STATED)		MATERIAL		DIM IN MM		SCALE 1/2 FULL		THIRD ANGLE PROJECTION		G.A. NO.	
ISSUE	MOD. NO.	DATE	DRAWN BY	ISSUE	MOD. NO.	DATE	DRAWN BY	X	+	FINISH	DRG NO.	NO REQ	ROYAL GREENWICH OBSERVATORY	TITLE	PLATEN FOR REFLECTIVE GRATING	DRG NO.	V/BL/830		
								X/3X	+	PAINT TO RGO SPEC	USED ON								



SECTION B-B



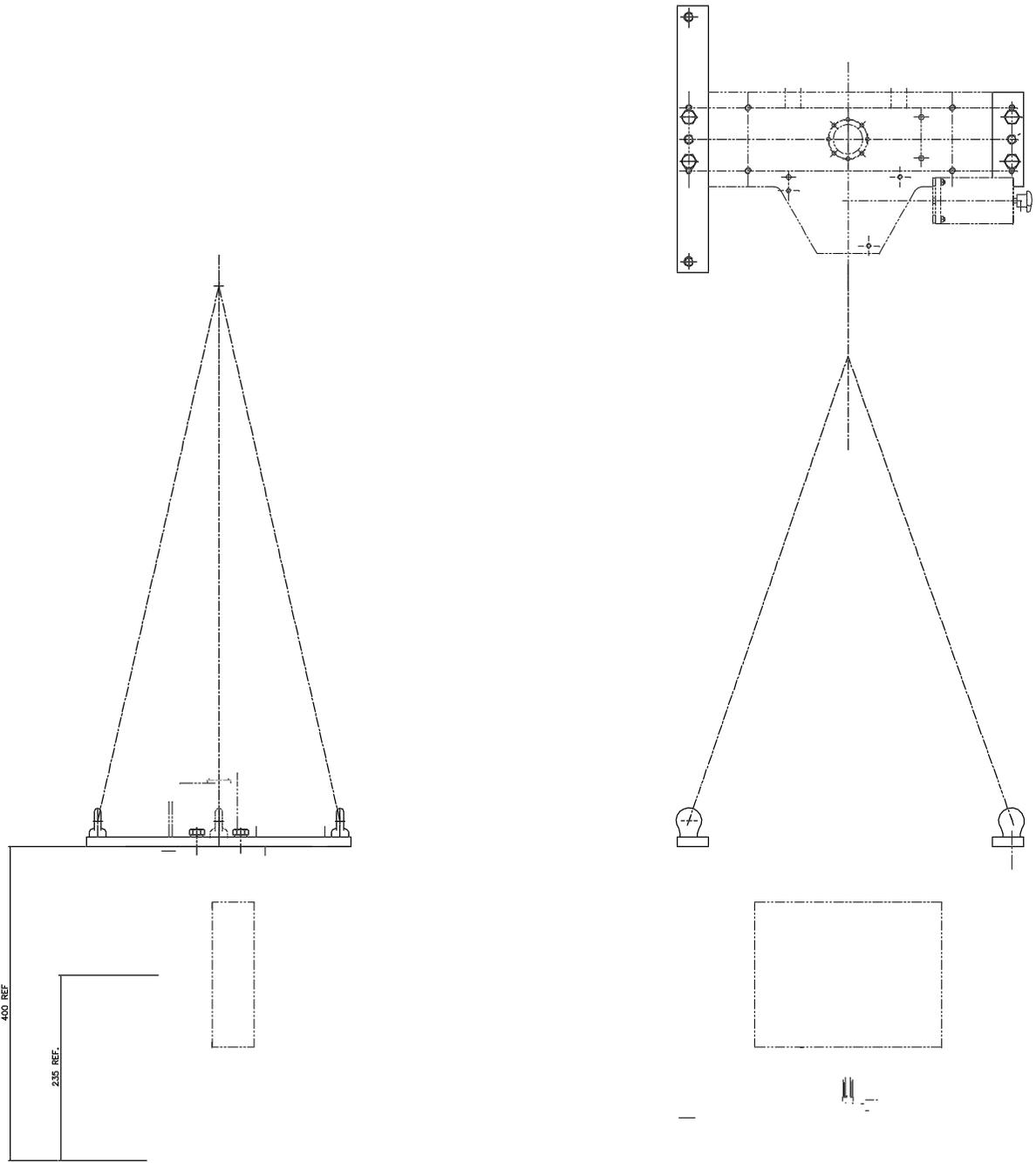
SECTION A-A



REF FOR REFLECTIVE GRATING V/BL/400 ISSA.

1 PLATEN			
MATERIAL	SCALE	TOLERANCES	
HARD WOOD	1/2 FULL	X	±
RG0 SPEC.	FOR RGO SPEC	X.XX	±
DRG NO.	ISSUE NO.	REVISIONS	
V/BL/830	R.G.O. V/BL/831		

TOLERANCES (UNLESS OTHERWISE STATED)		MATERIAL		DIM IN MM		SCALE 1/2 FULL		TITLE		G.A. NO.	
X	±	HARD WOOD		DRG NO.		ROYAL GREENWICH OBSERVATORY		THIRD ANGLE PROJECTION		DRG NO.	
X.X	±	PAINT TO RGO SPEC		NO REQ		MADINGLEY ROAD		DETAIL		V/BL/831	
X.XX	±	USED ON				CAMBRIDGE CB3 0EZ				FILE VBL831	
ANG	±										



								TOLERANCES (UNLESS OTHERWISE STATED)		MATERIAL		DIM IN MM		SCALE 1/2 FULL		THIRD ANGLE PROJECTION		G.A. NO.			
								X +/-		FINISH		DRG NO.		NO REQ		ROYAL GREENWICH OBSERVATORY		TITLE		DRG NO.	
								X.XX +/-		USED ON						MADINGLEY ROAD					
								ANG +/-								CAMBRIDGE CB3 0EZ		LIFTING SLING FOR GRATING		V/BL/860	
ISSUE	MDD. NO.	DATE	DRAWN BY	ISSUE	MDD. NO.	DATE	DRAWN BY														

