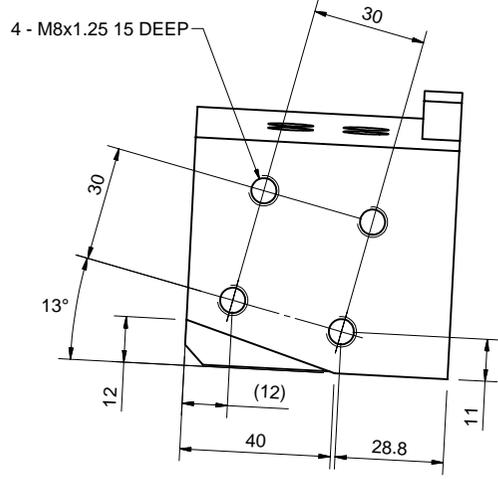


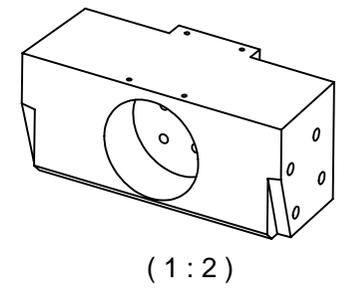
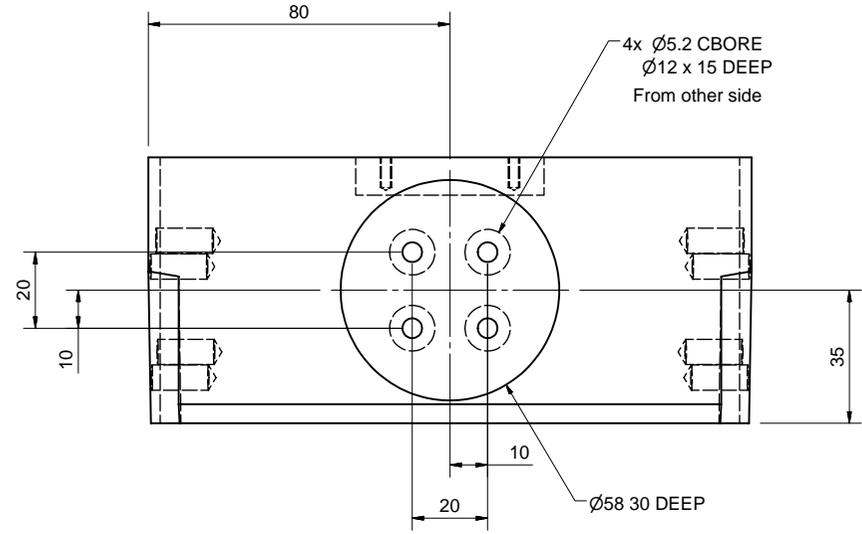
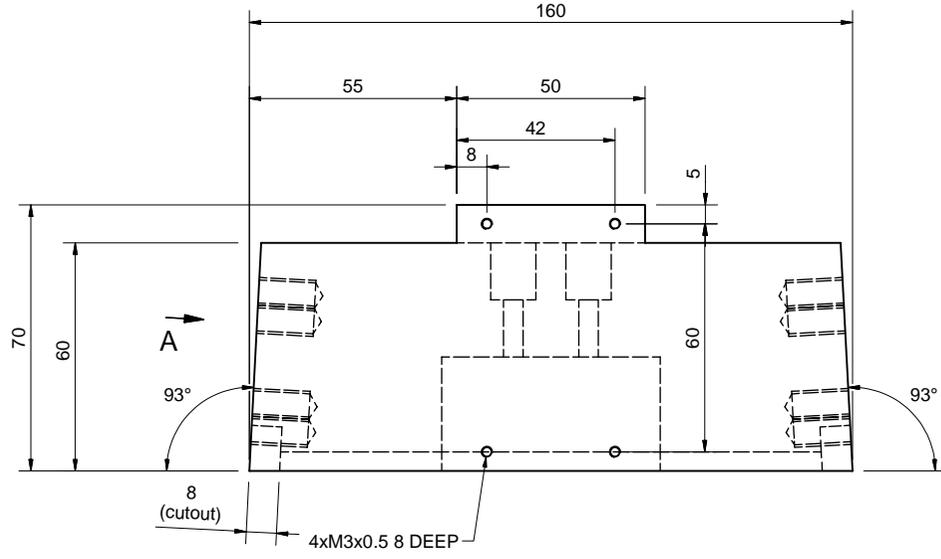
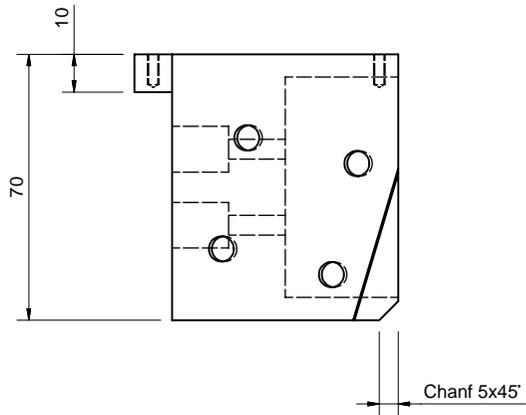
15	4	BS 4168 - M3 x 10	Hexagon Socket Head Cap Screw
14	4	BS 4464 - M3 Form A	Spring Washer
13	12	BS 3692 - M8	Hex Nut
12	12	BS 3692 - M8 x 30	Hexagon Head Screw
11	4	BS 4464 - M5 Form A	Spring Washer
10	4	BS 4168 - M4 x 30	Hexagon Socket Head Cap Screw
9	20	BS 4464 - M8 Form A	Spring Washer
8	8	BS 4168 - M8 x 20	Hexagon Socket Head Cap Screw
7	1	GLAS-1-002 r1	side rod bracket 1
6	1	GLAS-1-003 r1	side rod bracket 2
5	1	GLAS-1-004 r1	Top rod bracket
4	1	GLAS-1-001 r1	Support block
3	1	GLAS-1-1-000 r1	Astatic lever assembly
2	2	GLAS-1-2-000 r1	2" Side rod weldment
1	1	GLAS-1-2-000a r1	2" Top rod weldment
ITEM	QTY	PART NUMBER	DESCRIPTION

<small> ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED ANGLES TO 0.1 SURFACE FINISH (PERFORMANCE) 3.2 UNLESS OTHERWISE SPECIFIED FINISH </small>	<small> Material Drawn by Date Revision Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400 </small>	<small> Part Number GLAS-1-000 r1 </small>	<small> A1 Sheet 1 / 1 </small>
---	--	---	---

Third Angle

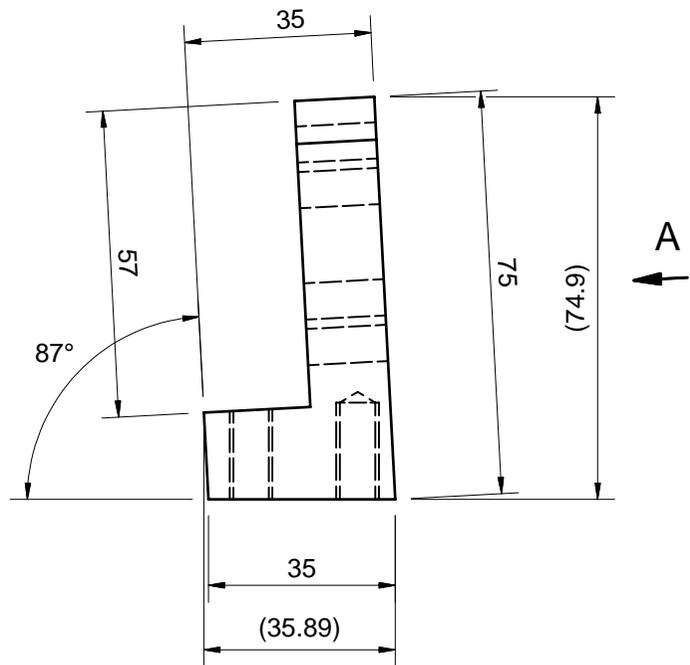


Auxillary View on A
Showing hole and cut
out details for both ends

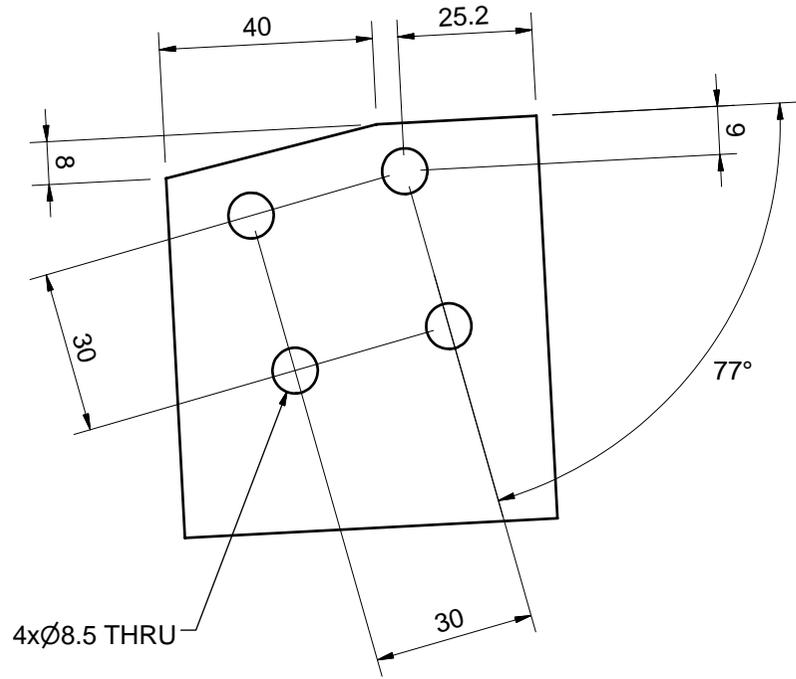


(1:2)

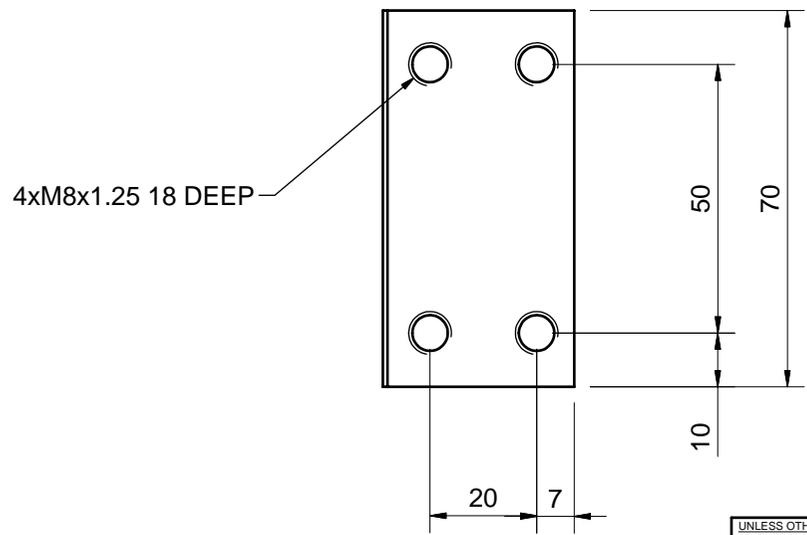
<small>UNLESS OTHERWISE STATED: All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or distributed in whole or in part without the written consent of the Isaac Newton Group of Telescopes.</small> </small>	Material	Aluminium alloy BS 1470 6082 T6	Drawn by	jolley	Date	16/06/2005	Revision	1		Support Block
	Finish	Matt white paint	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	GLAS-1-001-r1	Sheet		



A ←

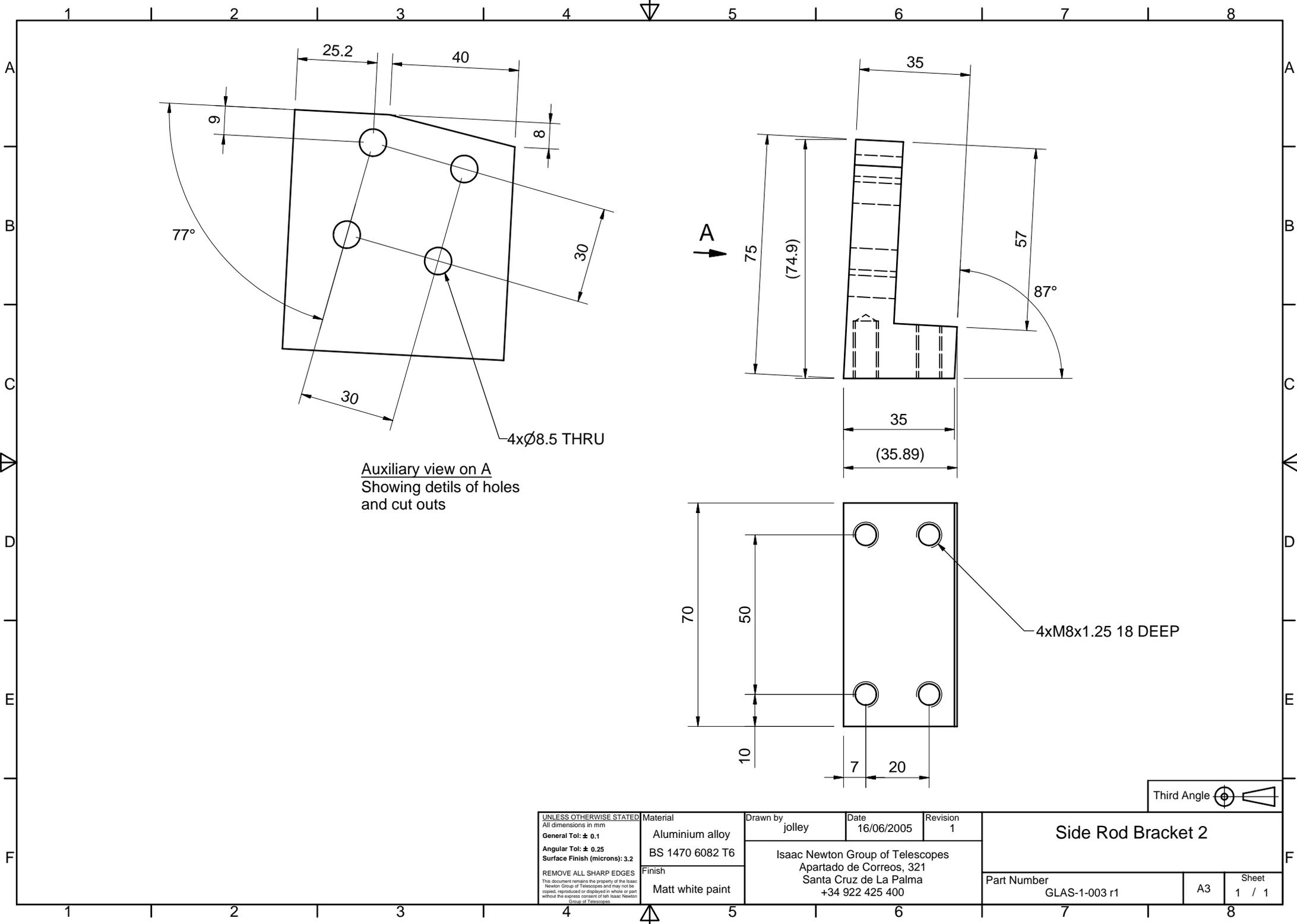


Auxillary view on A
Showing hole and
cut out details



Third Angle

<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	Side Rod Bracket 1		
	Aluminium alloy BS 1470 6082 T6	jolley	16/06/2005	1			
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	Sheet	
Matt white paint				GLAS-1-002 r1	A3	1 / 1	

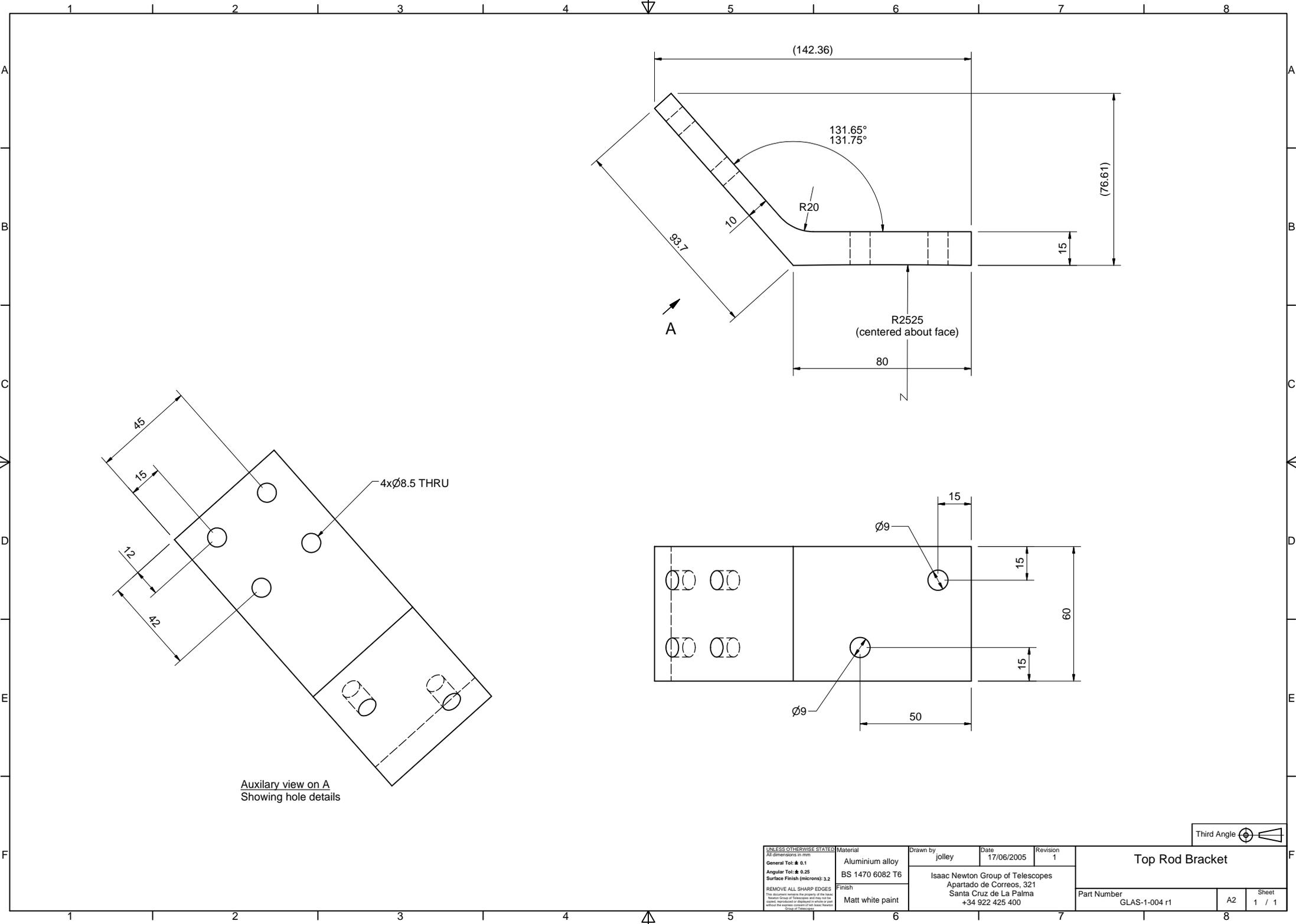


Auxiliary view on A
Showing details of holes
and cut outs

4xM8x1.25 18 DEEP



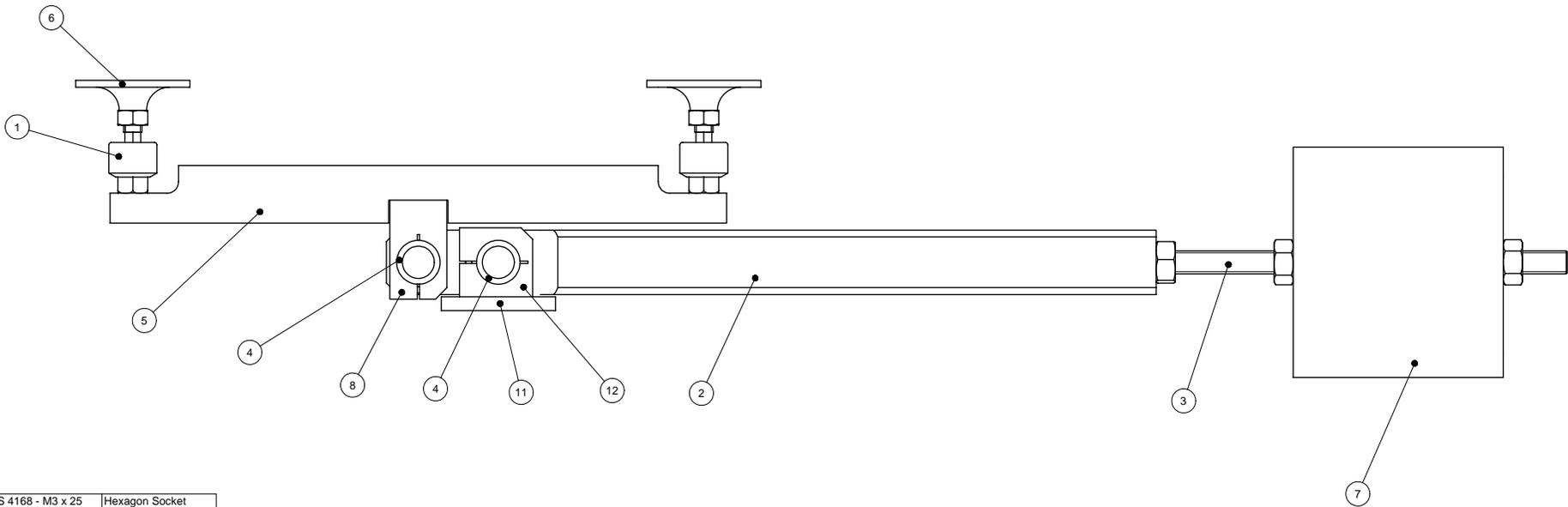
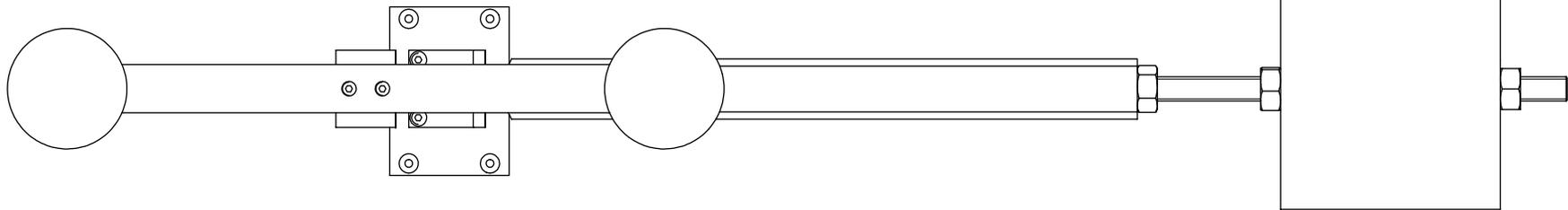
<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	Side Rod Bracket 2		
	Aluminium alloy BS 1470 6082 T6	jolley	16/06/2005	1			
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	Sheet	
Matt white paint				GLAS-1-003 r1	A3	1 / 1	



Auxiliary view on A
Showing hole details

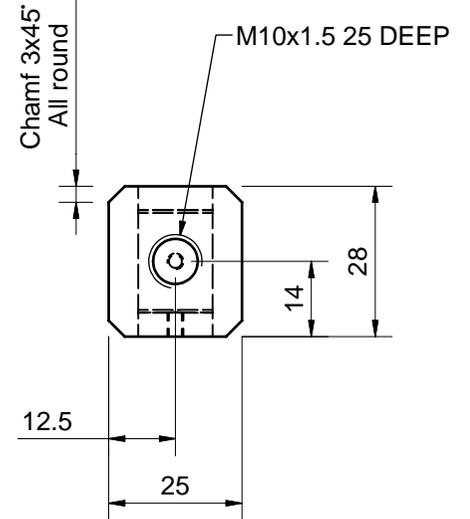
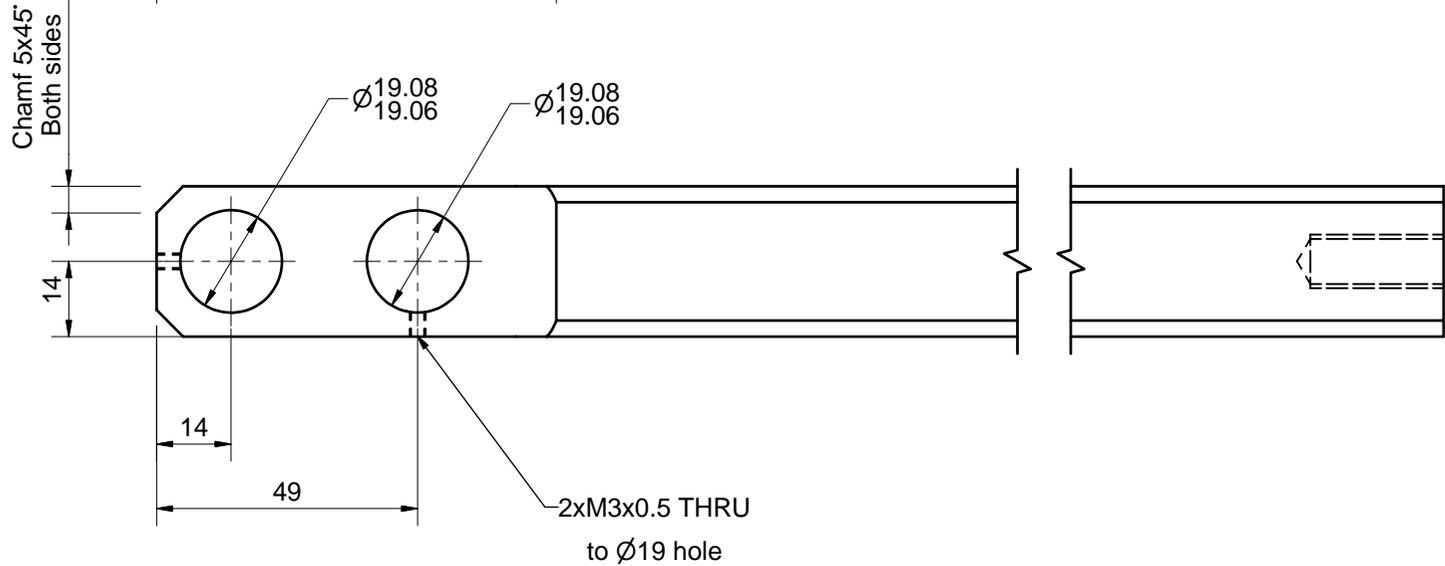
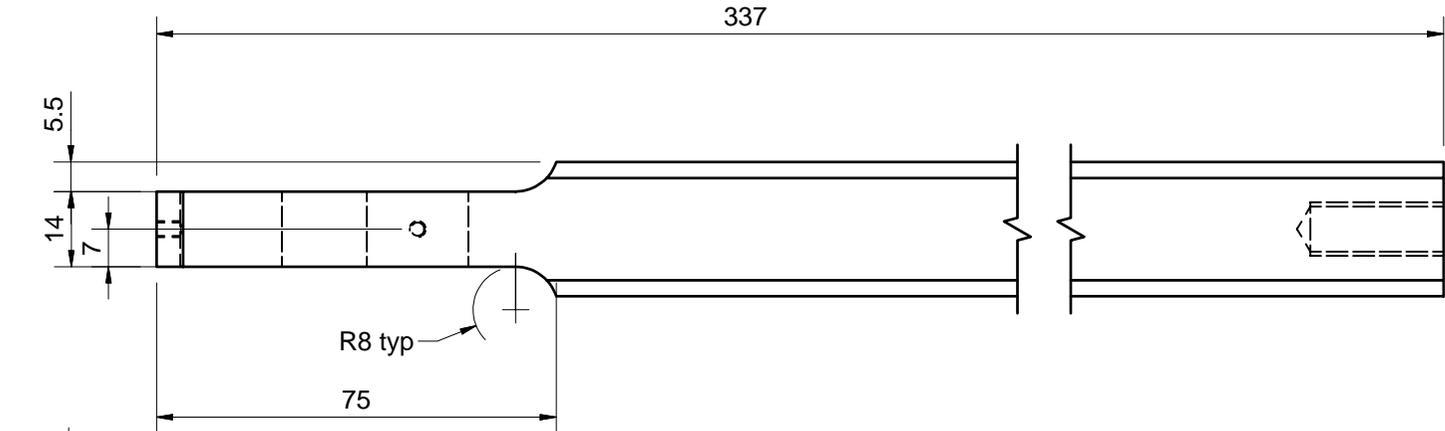


<small>UNLESS OTHERWISE STATED: All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or disclosed in whole or in part without the written consent of the Isaac Newton Group of Telescopes</small></small>	Material	Drawn by	Date	Revision	Top Rod Bracket	
	Aluminium alloy	jolley	17/06/2005	1		
	BS 1470 6082 T6	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400				
Finish	Matt white paint	Part Number			Sheet	
		GLAS-1-004 r1			A2	1 / 1

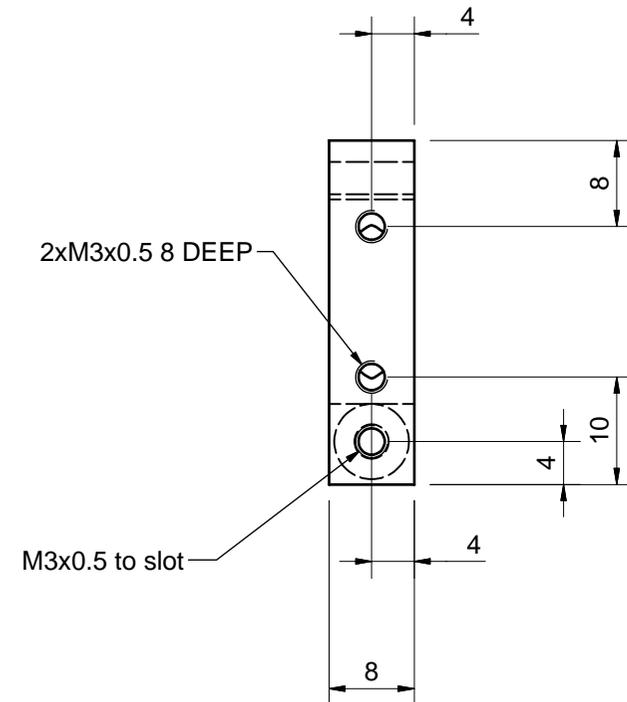
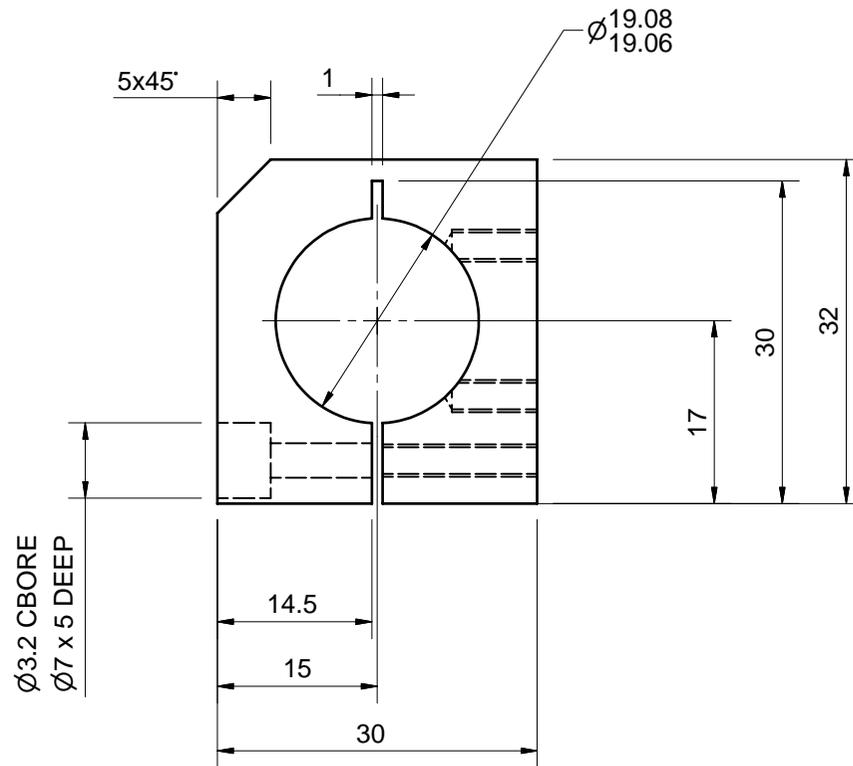


18	2	BS 4168 - M3 x 25	Hexagon Socket Head Cap Screw
17	2	BS 3692 - M8	Hex Nut
16	2	BS 4464 - M8 Form A	Spring Washer
15	2	BS 4168 - M8 x 12	Hexagon Socket Head Cap Screw
14	3	BS 3692 - M10	Hex Nut
13	4	BS 4168 - M3 x 10	Hexagon Socket Head Cap Screw
12	2	GLAS-1-1-002 r1	Bottom beam brg block
11	1	GLAS-1-1-003 r1	Base
10	4	BS 4168 - M3 x 16	Hexagon Socket Head Cap Screw
9	10	BS 4464 - M3 Form A	Spring Washer
8	1	GLAS-1-1004 r1	Top beam brg block
7	1	GLAS-1-1-008 r1	8kg Counterweight
6	2	GLAS-1-1-006 r1	Load pad
5	1	GLAS-1-1-005 r1	Top beam
4	2	flex_pivot-ID-20	C-flex Bearing Co.
3	1	GLAS-1-1-007 r1	Stud
2	1	GLAS-1-1-001 r1	Bottom beam
1	2	JA20-8-125	SMC floating joint
ITEM	QTY	PART NUMBER	DESCRIPTION

<small> ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED DIMENSIONS IN MILLIMETERS GENERAL TOL: ±0.1 ANGULAR TOL: ±0.05 SURFACE FINISH: (see drawing) 3.2 UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS </small>	<small> Material Finish </small>	<small> Drawn by Date Revision </small>	<small> Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400 </small>	Astatic Lever Assembly
<small>Part Number</small> GLAS-1-1-000 r1			<small>Sheet</small> 1 / 1	<small>Third Angle</small>



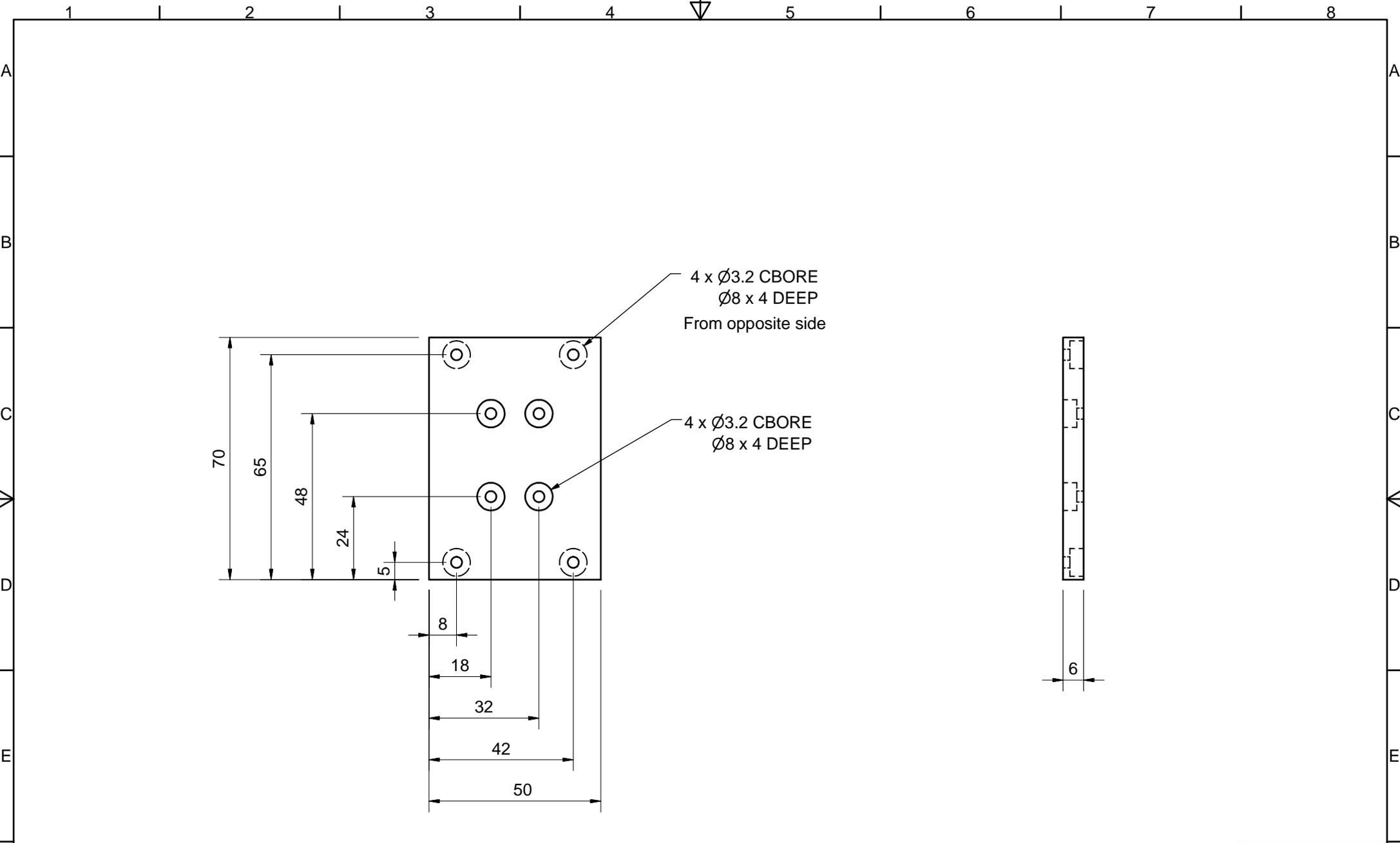
<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	<h3>Bottom Beam</h3>		
	Aluminium alloy BS 1470 6082 T6	jolley	13/06/2005	1			
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	Sheet	
Black anodise				GLAS-1-1-001 r1	A3	1 / 1	



(2 : 1)

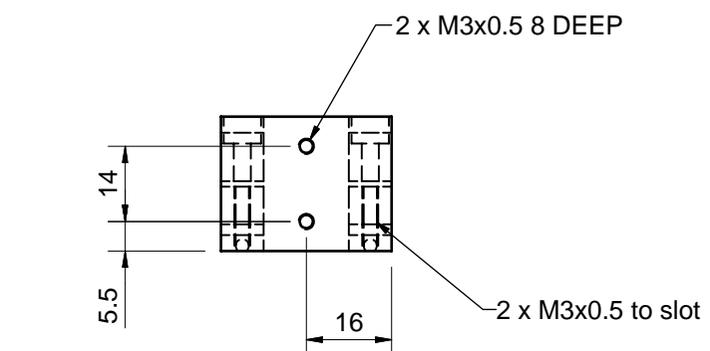
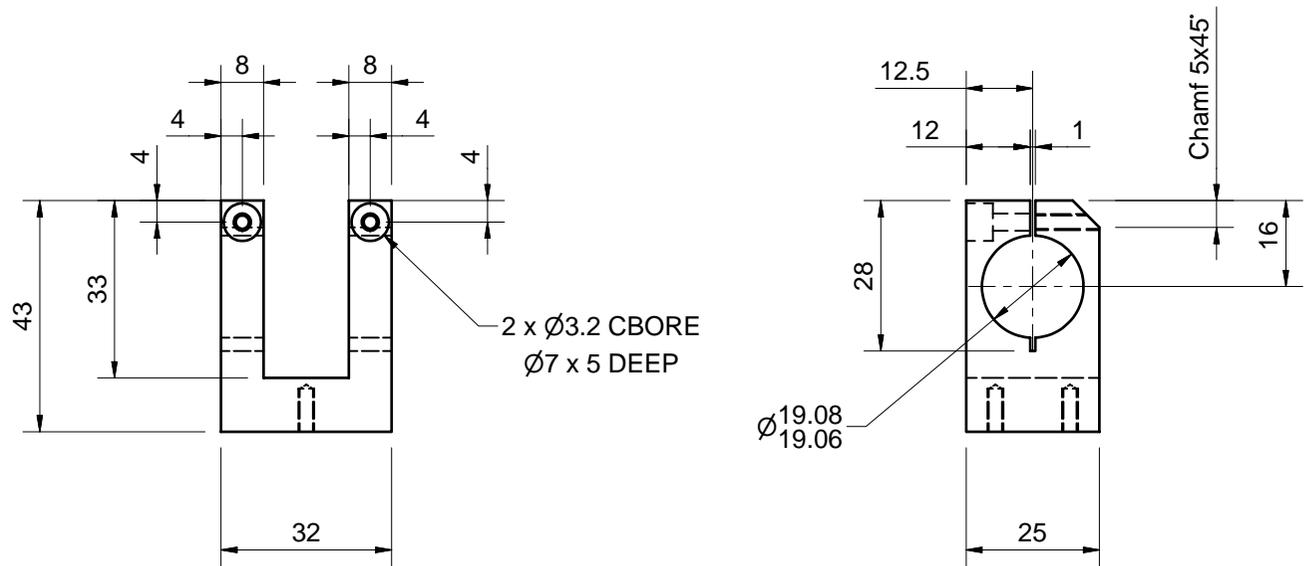


<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	Bottom Beam Bearing Block		
	Aluminium Alloy BS 1470 6082 T6	jolley	15/06/2005	1			
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	Sheet	
Black anodise				GLAS-1-1-002 r1	A3	1 / 1	



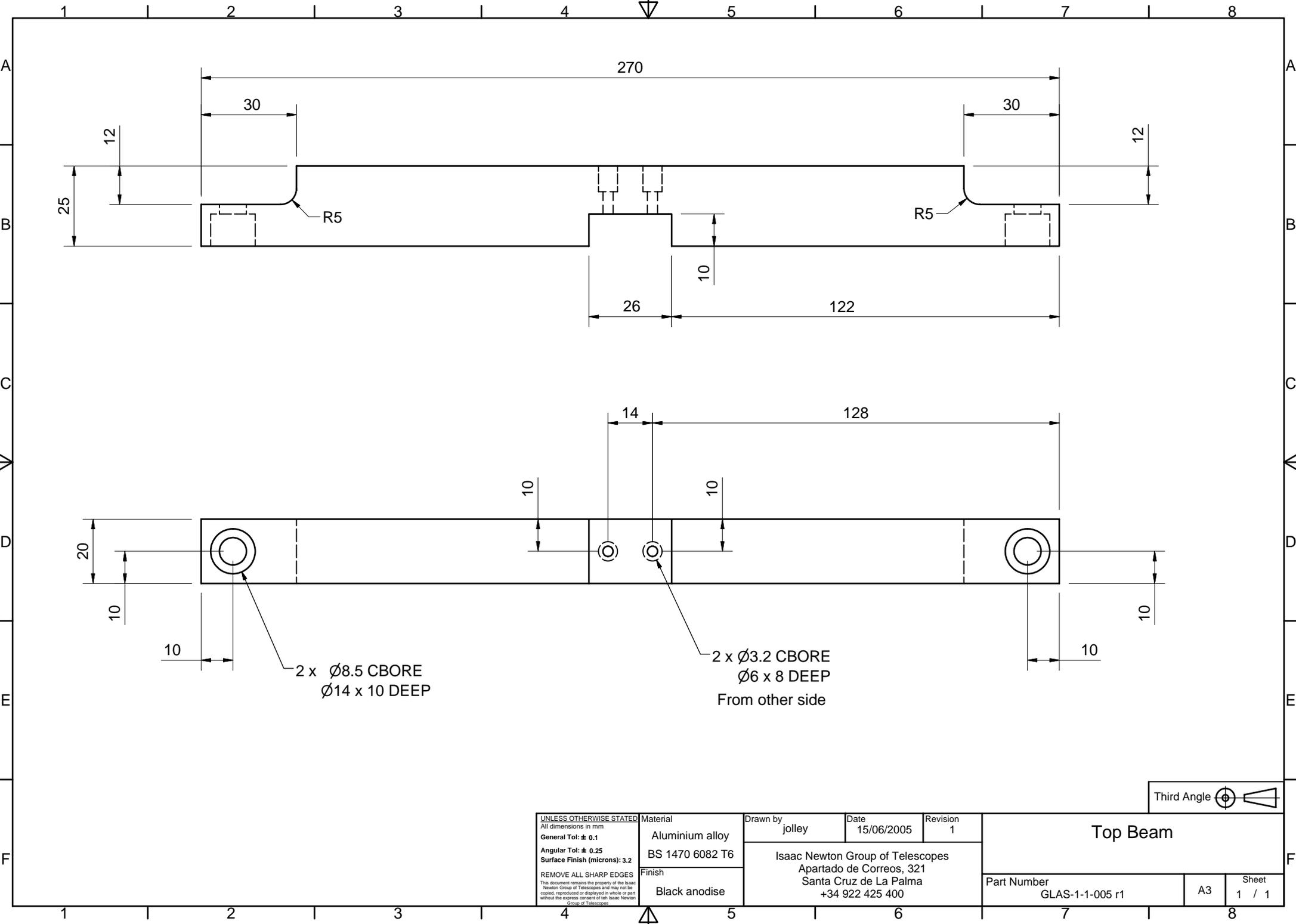
Third Angle

<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	Base		
	Aluminium alloy BS 1470 6082 T6	jolley	15/06/2005	1			
Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number		Sheet	
Black anodise				GLAS-1-1-003 r1	A3	1 / 1	



Third Angle

<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	<h3>Top Beam Bearing Block</h3>		
	Aluminium alloy BS 1470 6082 T6	jolley	15/06/2005	1			
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	Sheet	
Black anodise				GLAS-1-1-004 r1	A3	1 / 1	



UNLESS OTHERWISE STATED
 All dimensions in mm
 General Tol: ± 0.1
 Angular Tol: ± 0.25
 Surface Finish (microns): 3.2
 REMOVE ALL SHARP EDGES
 This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes

Material
 Aluminium alloy
 BS 1470 6082 T6
 Finish
 Black anodise

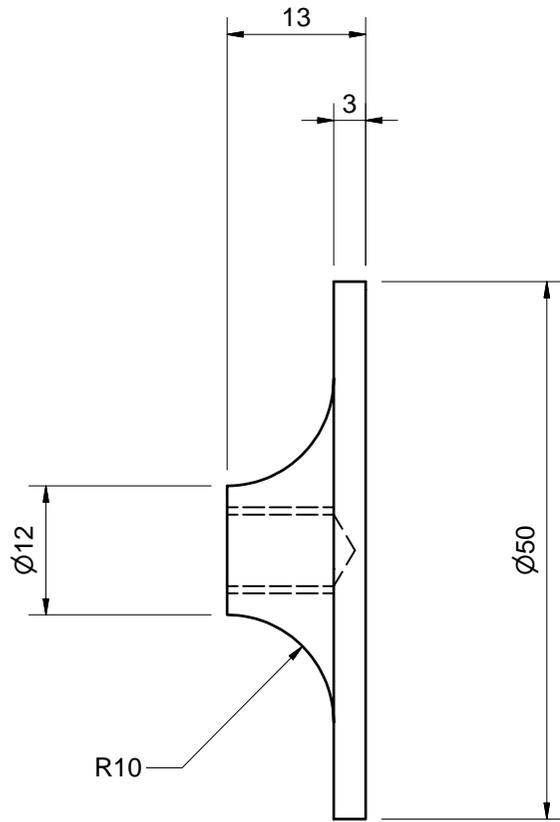
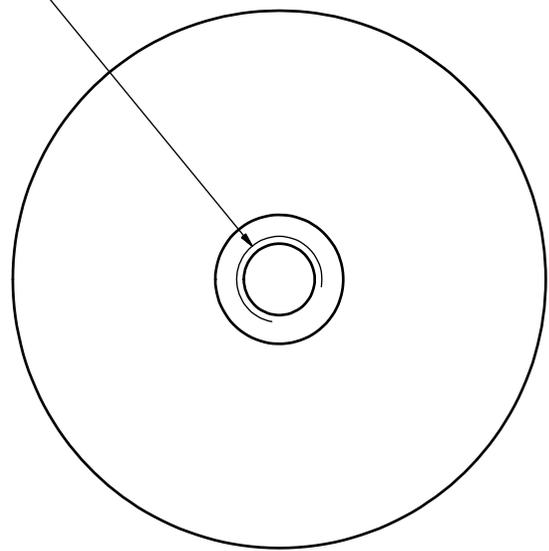
Drawn by
 jolley
 Isaac Newton Group of Telescopes
 Apartado de Correos, 321
 Santa Cruz de La Palma
 +34 922 425 400

Date
 15/06/2005
 Revision
 1

Top Beam
 Part Number
 GLAS-1-1-005 r1
 A3
 Sheet
 1 / 1



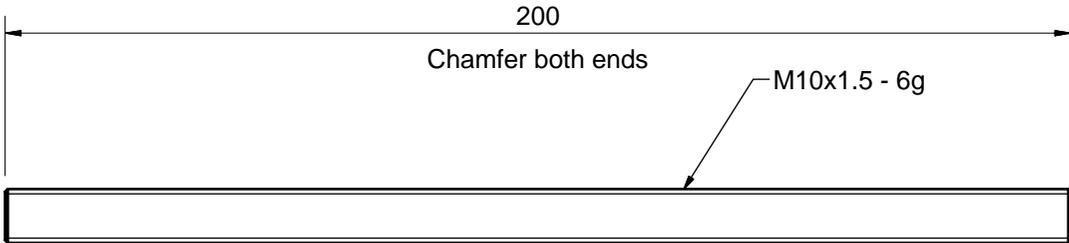
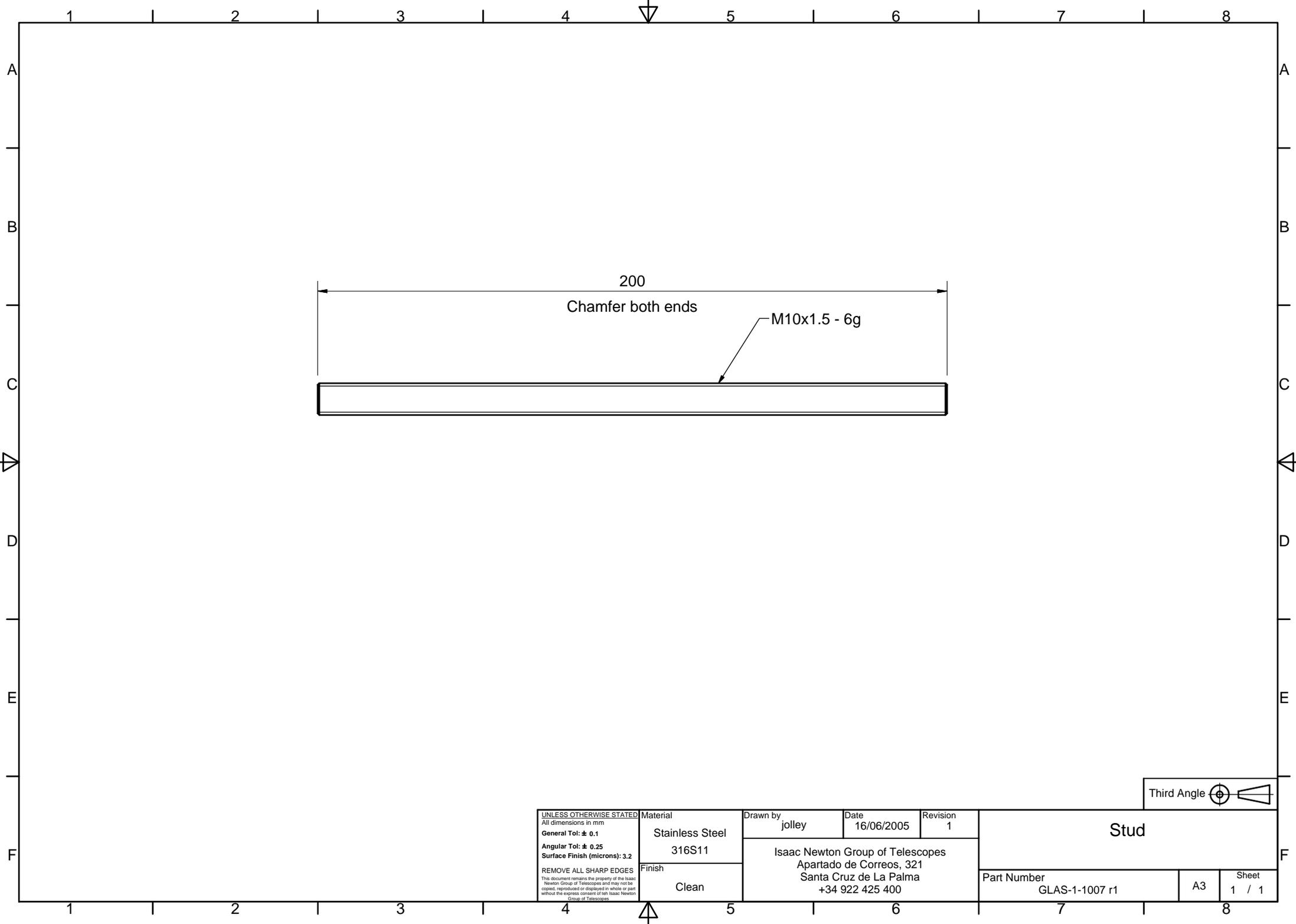
M8x1.25 10 DEEP



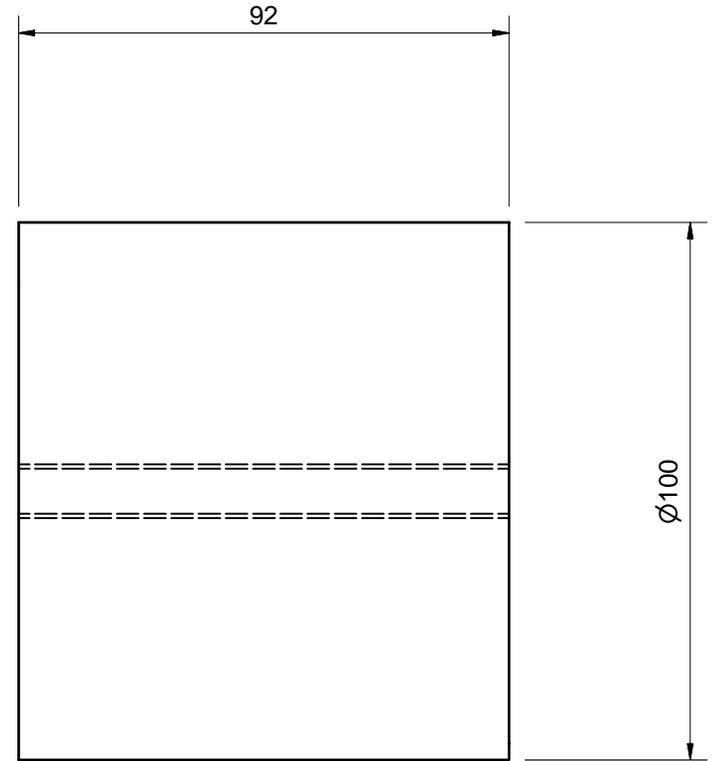
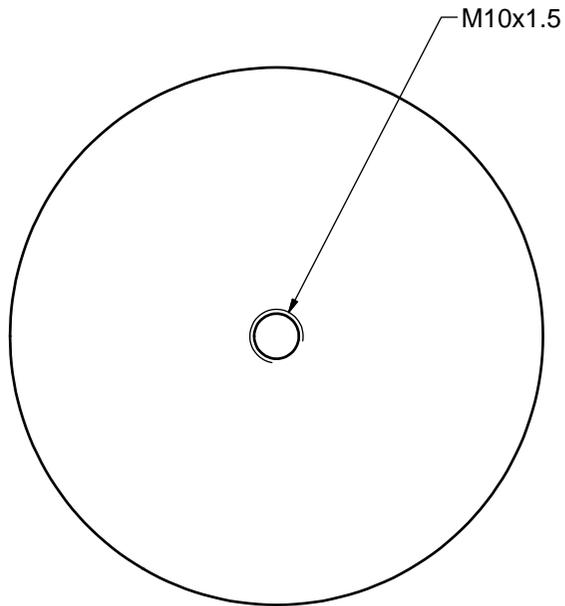
(2 : 1)



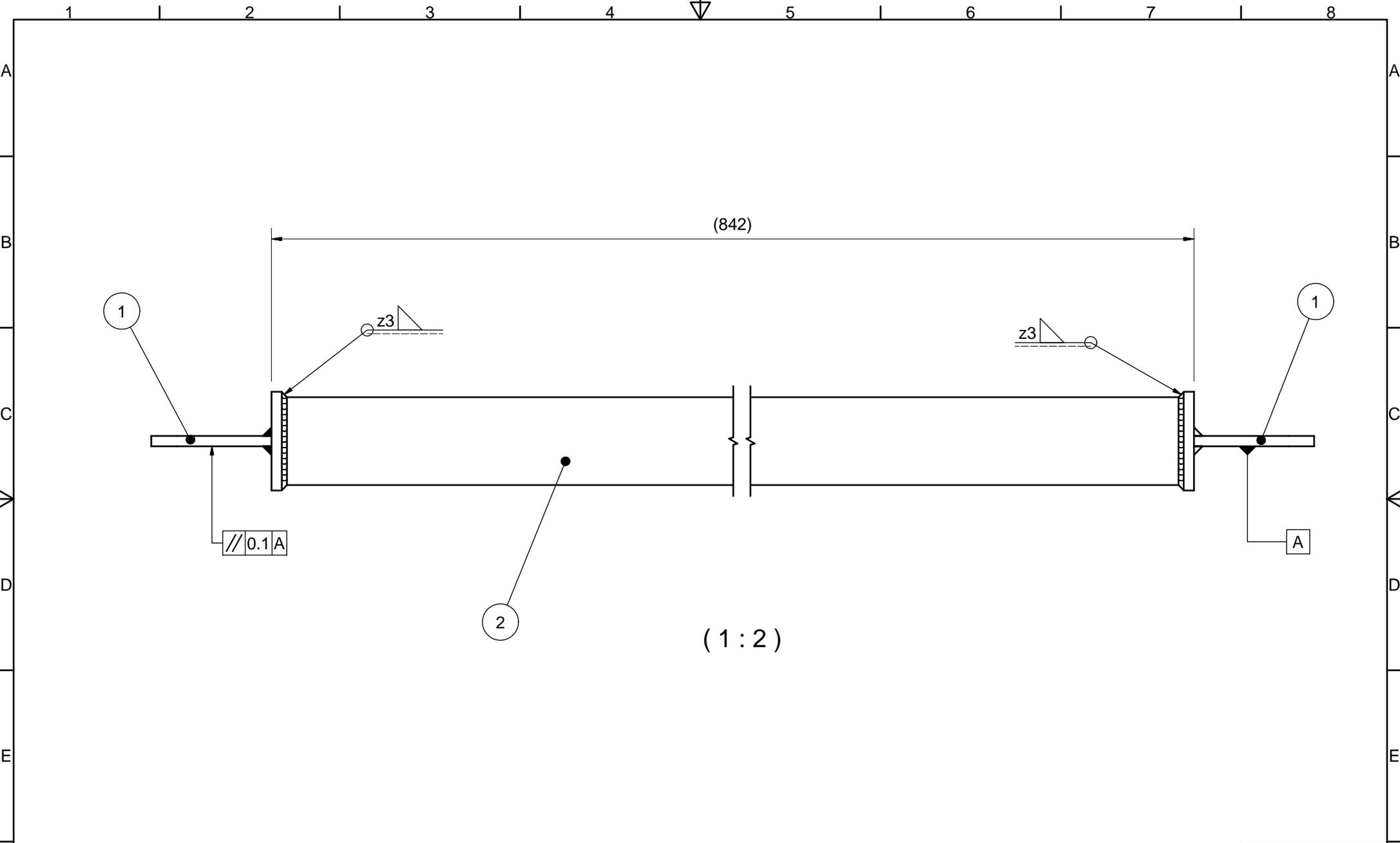
<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	Load Pad		
	Aluminium alloy BS 1470 6082 T6	jolley	16/06/2005	1			
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	Sheet	
	Black anodise				GLAS-1-1-006 r1	A3	1 / 1



<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	Stud		
	Stainless Steel	jolley	16/06/2005	1			
	316S11	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	A3	Sheet 1 / 1
Finish	Clean				GLAS-1-1007 r1		



<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	8Kg Counterweight		
	Lead	jolley	16/06/2005	1			
Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400				Part Number	Sheet	
Matt white paint					GLAS-1-1-008 r1	A3	1 / 1



(1 : 2)



2	1	GLAS-1-2-001 r1	2" Side Tube
1	2	GLAS-1-3-000 r1	2" End Cap Weldment
ITEM	QTY	PART NUMBER	DESCRIPTION

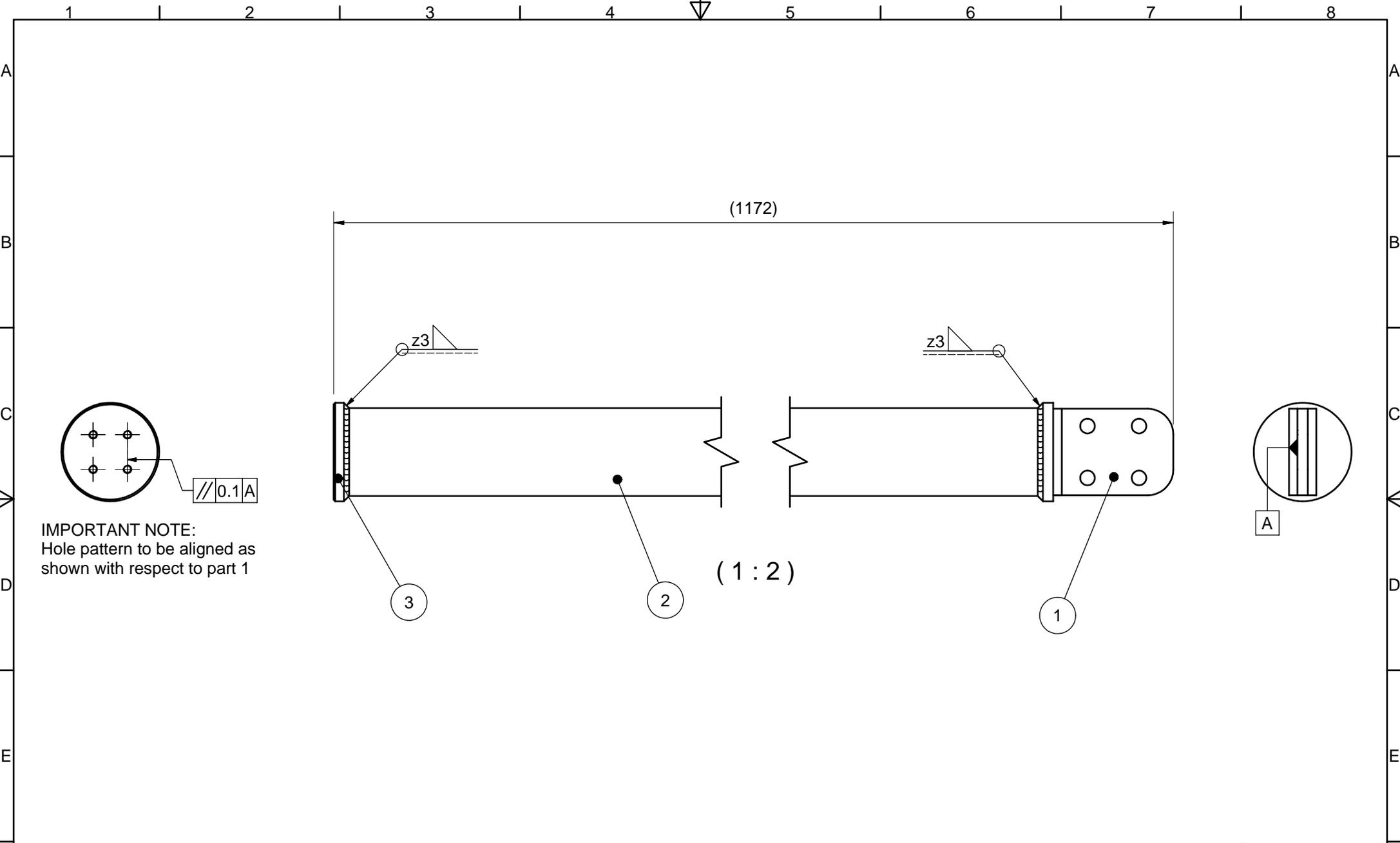
UNLESS OTHERWISE STATED
 All dimensions in mm
 General Tol: ± 0.1
 Angular Tol: ± 0.25
 Surface Finish (microns): 3.2
 REMOVE ALL SHARP EDGES
This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes

Material

 Finish
 Matt white paint

Drawn by
 jolley
 Date
 13/06/2005
 Revision
 1
 Isaac Newton Group of Telescopes
 Apartado de Correos, 321
 Santa Cruz de La Palma
 +34 922 425 400

2" Side Rod Weldment
 Part Number
 GLAS-1-2-000 r1
 A3
 Sheet
 1 / 1



IMPORTANT NOTE:
Hole pattern to be aligned as
shown with respect to part 1

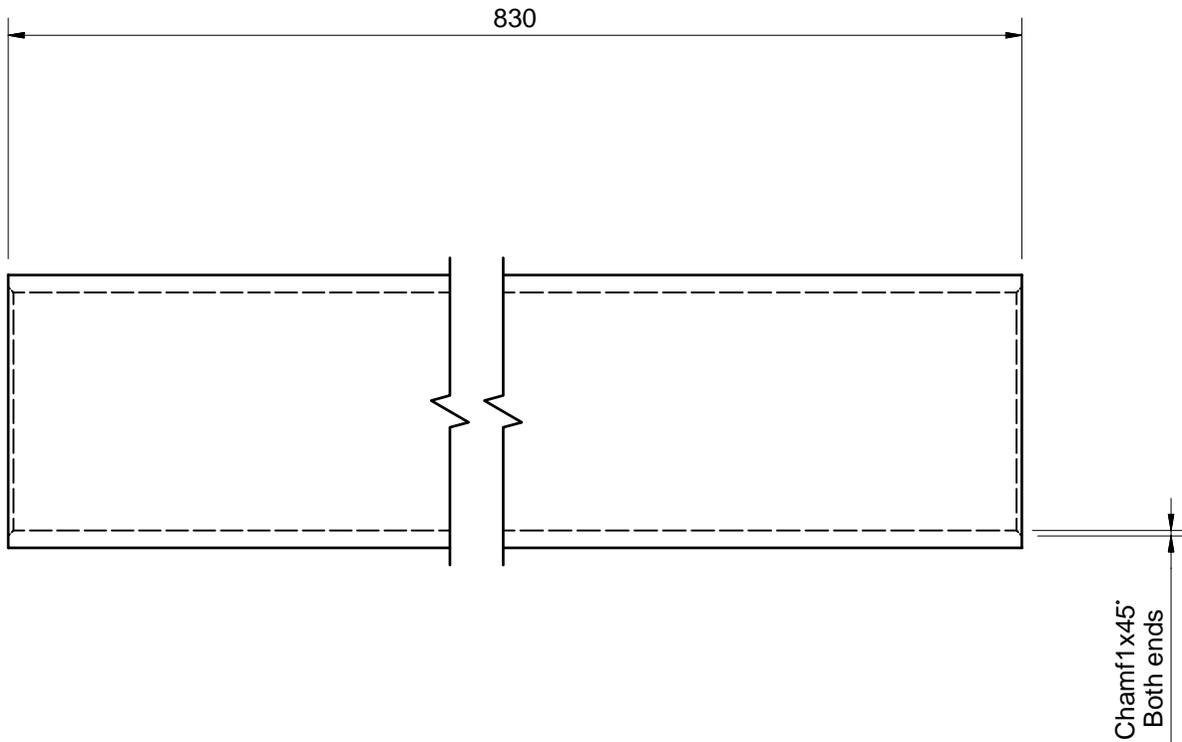
ITEM	QTY	PART NUMBER	DESCRIPTION
3	1	GLAS-1-3-003 r1	2" End Cap - Special
2	1	GLAS-1-2-002 r1	2" Top Tube
1	1	GLAS-1-3-000 r1	2" End Cap Weldment

UNLESS OTHERWISE STATED All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material
Finish	Matt white paint

Drawn by jolley	Date 13/06/2005	Revision 1
Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400		

2" Top Rod Weldment		
Part Number GLAS-1-2-000a r1	A3	Sheet 1 / 1

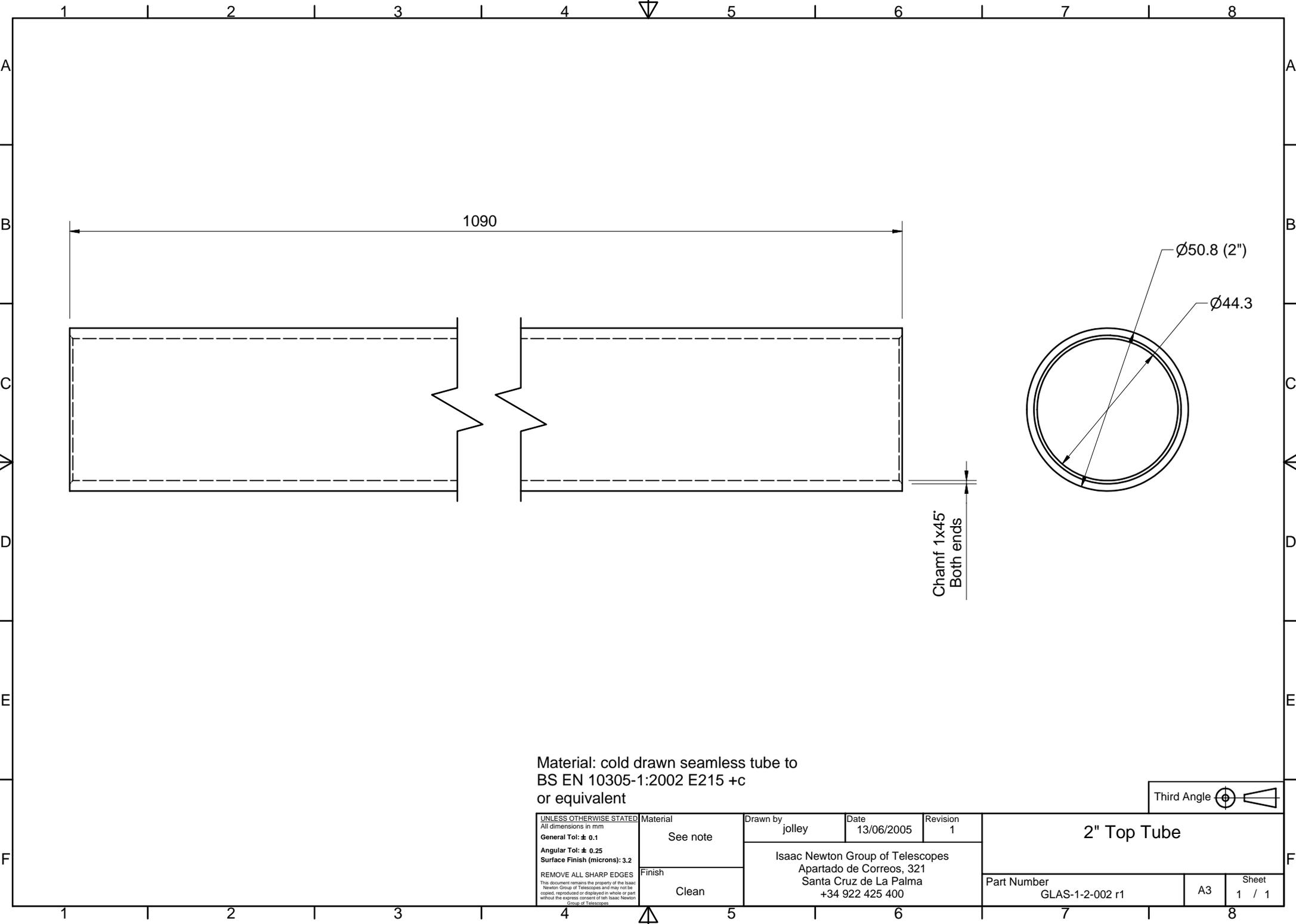




Material: cold drawn seamless tube to
BS EN 10305-1:2002 E215 +c
or equivalent



<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	2" Side Tube		
	See note	jolley	13/06/2005	1			
Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400				Part Number	Sheet	
Clean					GLAS-1-2-001 r1	A3 1 / 1	



1090

Ø50.8 (2")

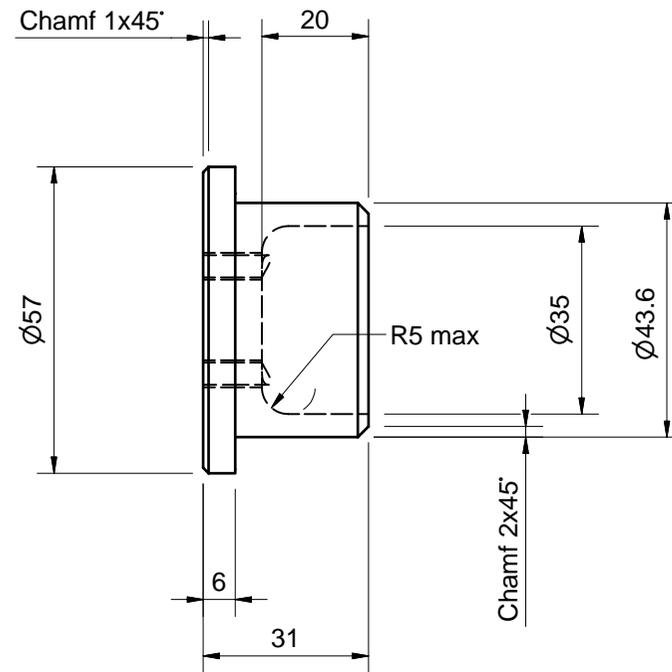
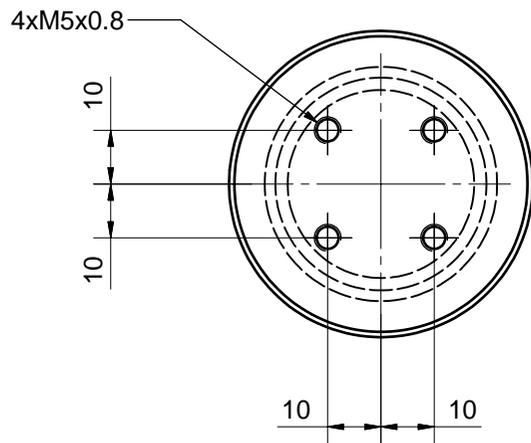
Ø44.3

Chamf 1x45°
Both ends

Material: cold drawn seamless tube to
BS EN 10305-1:2002 E215 +c
or equivalent

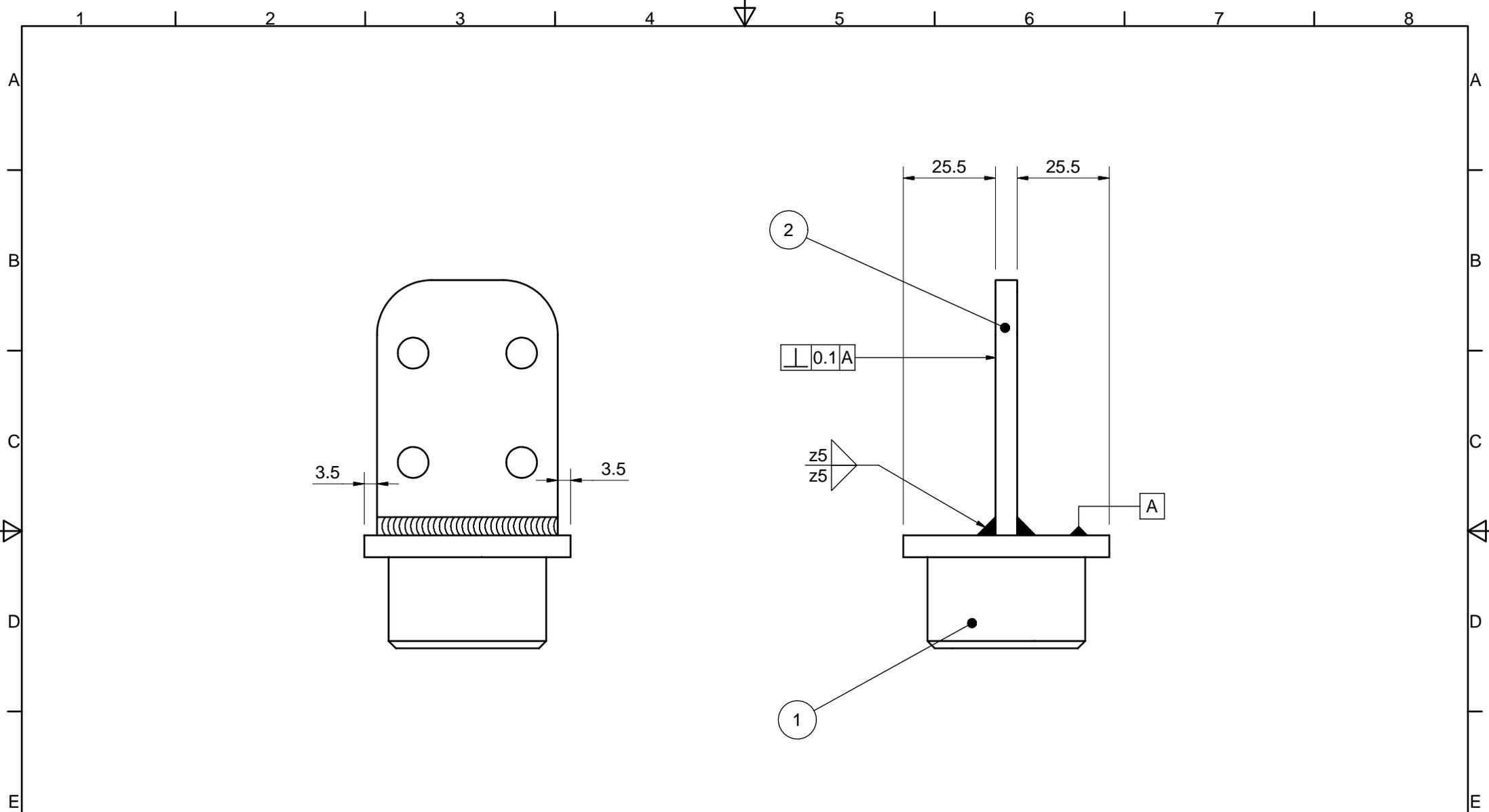


<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	2" Top Tube		
	See note	jolley	13/06/2005	1			
Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400				Part Number	Sheet	
Clean					GLAS-1-2-002 r1	A3 1 / 1	



Third Angle

<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	2" End Cap - Special		
	070M20 (EN3B)	jolley	13/06/2005	1			
Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400				Part Number	Sheet	
Clean					GLAS-1-3-003 r1	A3 1 / 1	



Used on:
 GLAS-1-2-000 r1
 GLAS-1-2-000a r1
 GLAS-11-000 r1

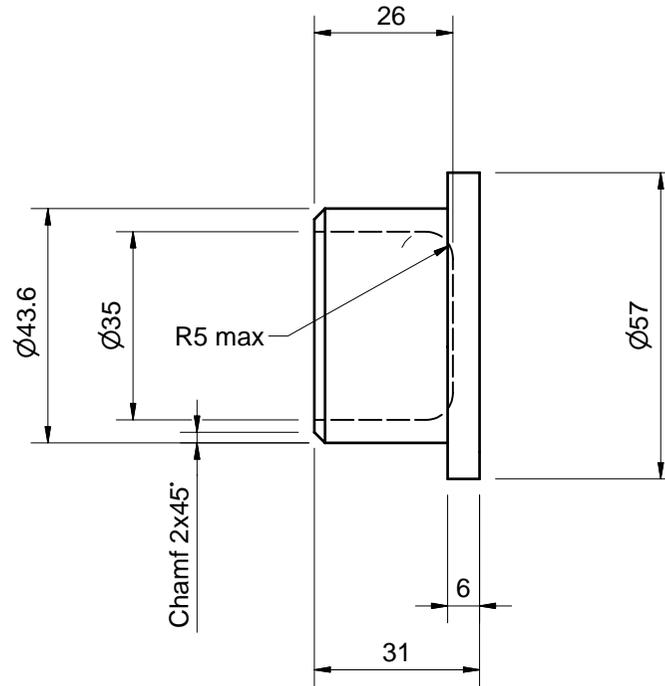
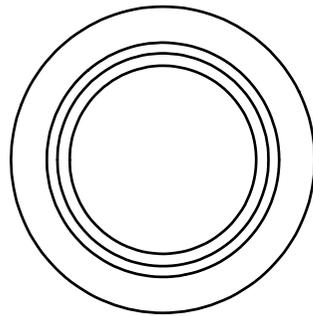


2	1	GLAS-1-3-002 r1	Tang
1	1	GLAS-1-3-001 r1	Base
ITEM	QTY	PART NUMBER	DESCRIPTION

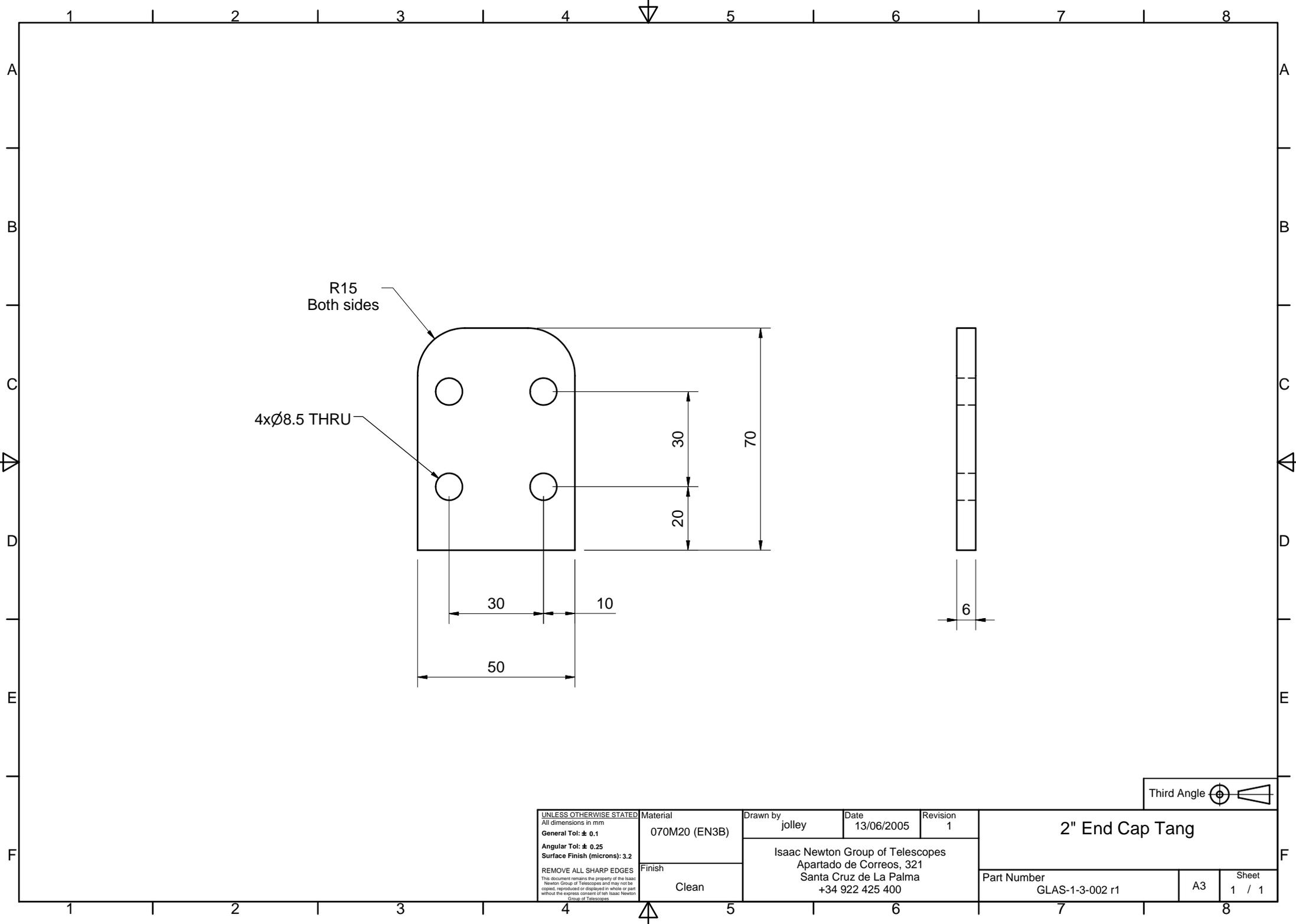
UNLESS OTHERWISE STATED All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material
Finish	Matt white paint

Drawn by jolley	Date 13/06/2005	Revision 1
Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400		

2" End Cap Weldment		
Part Number GLAS-1-3-000 r1	A3	Sheet 1 / 1



<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	2" End Cap Base		
	070M20 (EN3B)	jolley	13/06/2005	1			
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	Sheet	
Clean				GLAS-1-3-001 r1	A3	1 / 1	



R15
Both sides

4x \varnothing 8.5 THRU

30

20

70

30

10

50

6

Third Angle

<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: \pm 0.1 Angular Tol: \pm 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	2" End Cap Tang			
	070M20 (EN3B)	jolley	13/06/2005	1				
Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400				Part Number		Sheet	
Clean					GLAS-1-3-002 r1		A3	1 / 1