

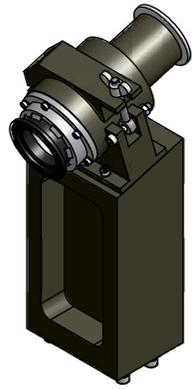
(1 : 4)

ITEM	QTY	PART NUMBER	DESCRIPTION
1.1	1	7725012	KF Reducing Cross (KRX40-25)
1.2	1	GLAS-12-001 r2	KF40 transfer tube
1.3	5	7710015	KF40 centering ring (K40-CRA)
1.4	2	1200122	Edge Welded Bellows (EWM40-25KF)
1.5	1	310073	Manual Angle Valve 25KF (KAV-100)
1.6	1	432011	Bourdon Gauge 25 KF (K100-VG)
1.7	2	7710014	KF25 centering ring (K25-CRA)
2	7	7701002	Clamping Ring KF40 (K40-C)
3	2	7701001	Clamping Ring 25KF (K25-c)

Note: Above part numbers generally refer to Caburn components (www.caburn.co.uk). Any other standard KF fittings can be used instead.

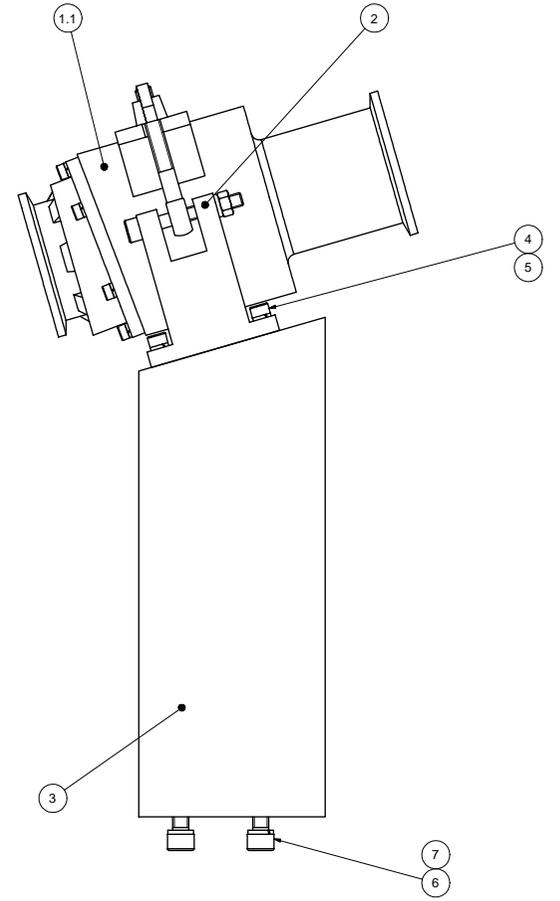
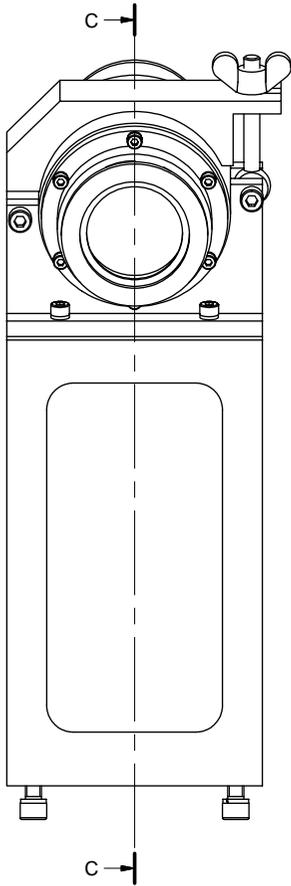
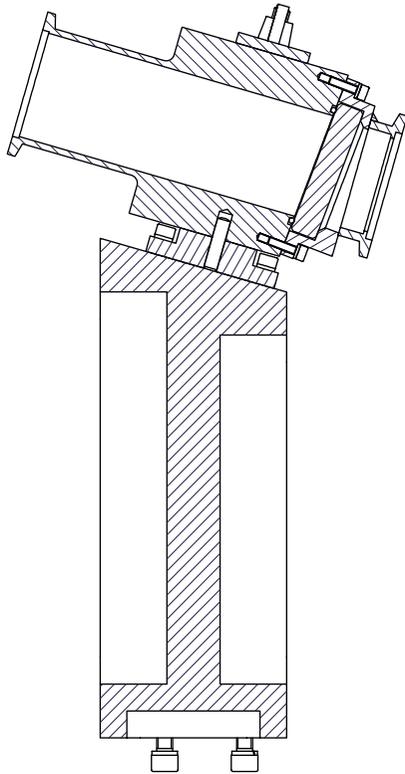
Third Angle

<small>UNLESS OTHERWISE STATED: 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 distributed in any form without the written consent of the Isaac Newton Group of Telescopes.</small> </small>	Material	Drawn by jolley	Date 24/08/2005	Revision 3	<h3>Transfer Tube Full Assembly</h3>
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			



ITEM	QTY	PART NUMBER	DESCRIPTION
1.1	1	GLAS-12-2-000 r2	Window Assembly
2	1	GLAS-12-1-000 r2	Clamp Assembly
3	1	GLAS-12-002 r3	Lower Tube Stand
4	8	BS 4168 - M4 x 16	Hexagon Socket Head Cap Screw
5	8	BS 4464 - M4 Form A	Spring Washer
6	4	BS 4168 - M6 x 16	Hexagon Socket Head Cap Screw
7	4	BS 4464 - M6 Form A	Spring Washer

C-C (1:1)

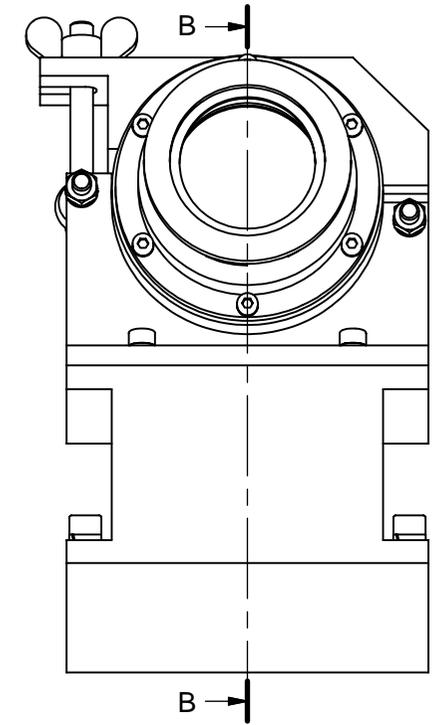
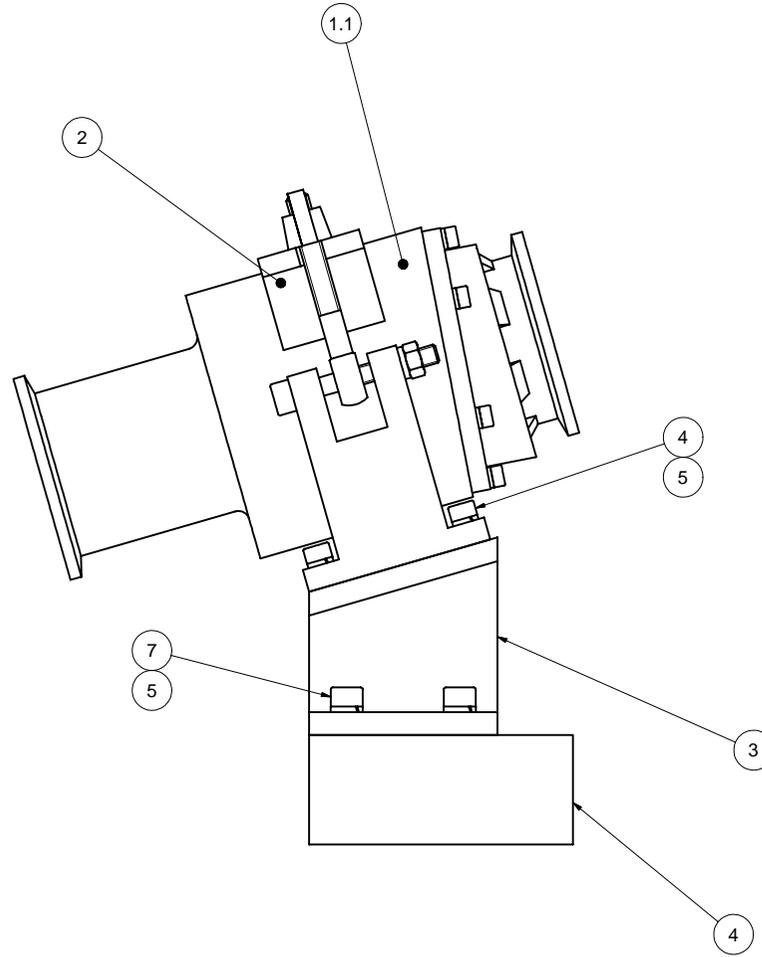
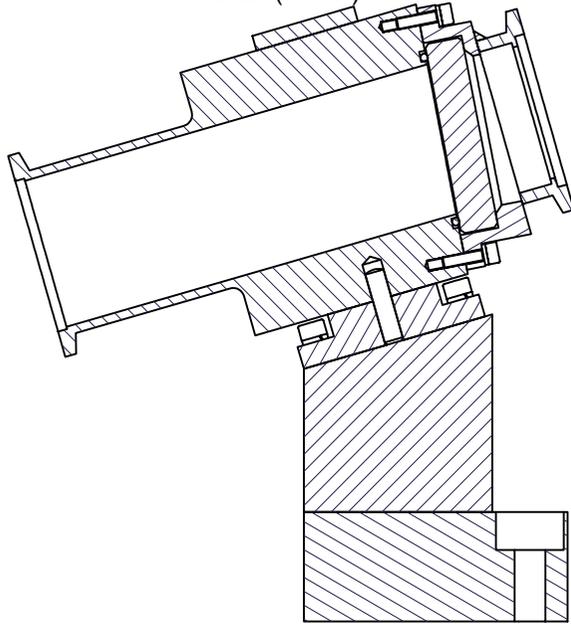


ISACON CONSULTING S.L. All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.05 Surface Finish (micro Ra): 3.2 MATERIAL: ALUMINUM FINISH:	Drawn by: jolley Date: 24/08/2005 Revision: 3 Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400	Transfer Tube Full Assembly Part Number: GLAS-12-000 r3 A1 Sheet: 2 / 3
--	--	---

Third Angle



B-B (1:1)



5	8	BS 4464 - M4 Form A	Spring Washer
7	4	BS 4168 - M5 x 16	Hexagon Socket Head Cap Screw
4	8	BS 4168 - M4 x 16	Hexagon Socket Head Cap Screw
5	4	BS 4464 - M5 Form A	Spring Washer
4	1	GLAS-12-004 r1	Upper Stand/BLT Interface
3	1	GLAS-12-003 r3	Upper Tube Stand
2	1	GLAS-12-1-000 r1	Clamp Assembly
1.1	1	GLAS-12-2-000 r2	Window Assembly
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
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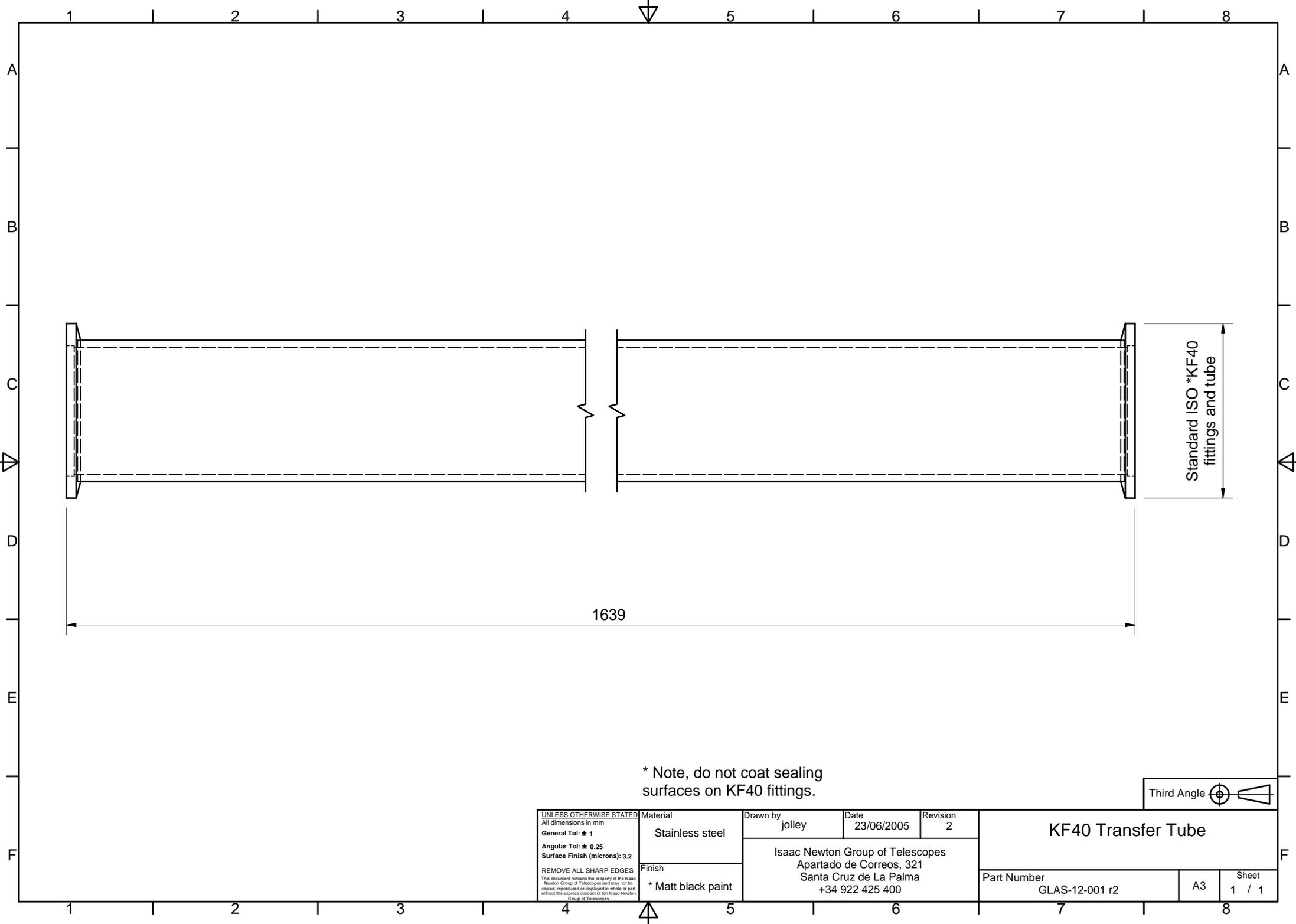
Material
 Finish

Drawn by jolley
 Date 24/08/2005
 Revision 3
 Isaac Newton Group of Telescopes
 Apartado de Correos, 321
 Santa Cruz de La Palma
 +34 922 425 400

Third Angle

Transfer Tube Full Assembly

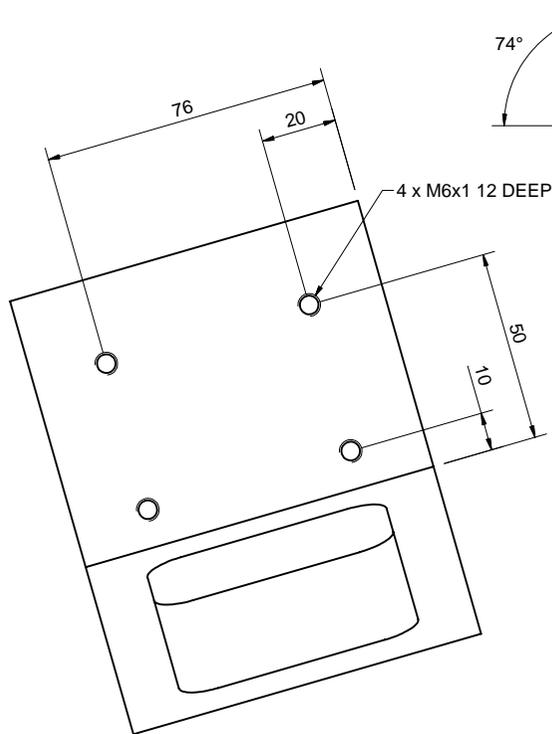
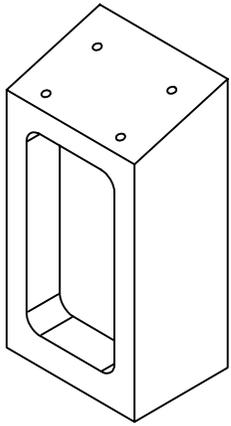
Part Number GLAS-12-000 r3
 Sheet 3 / 3



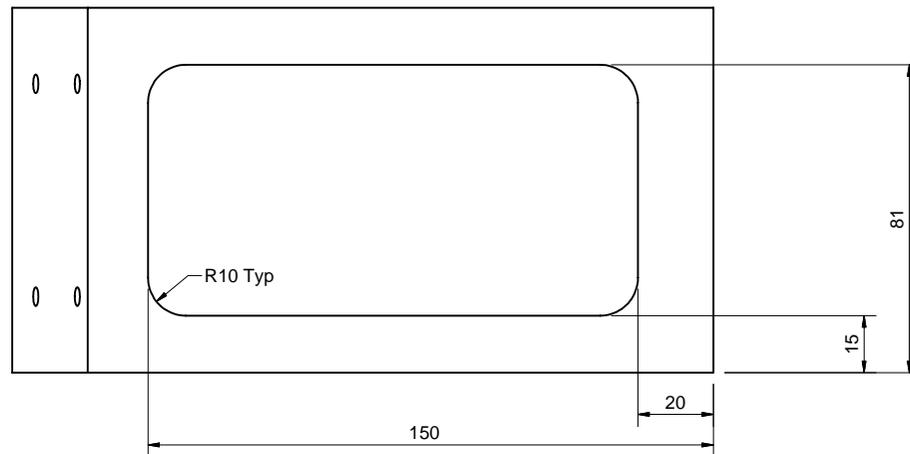
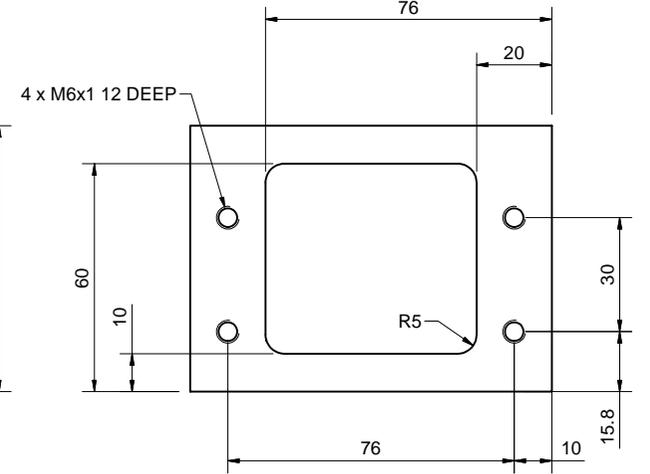
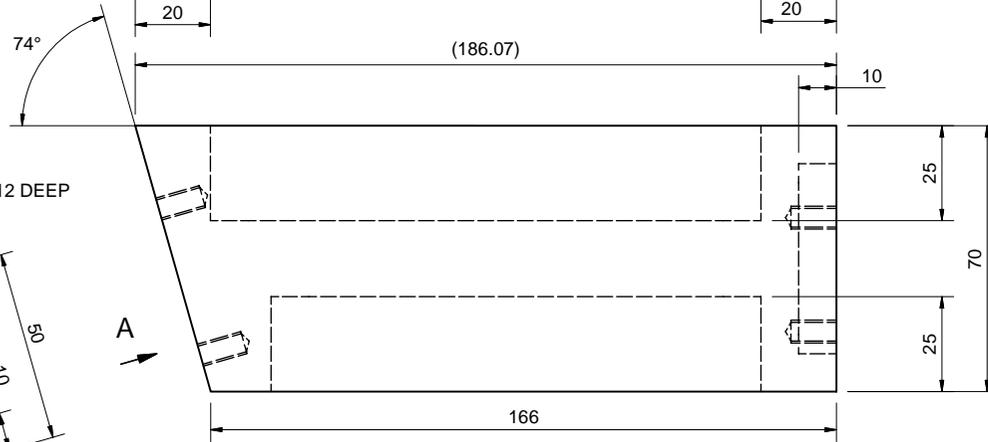
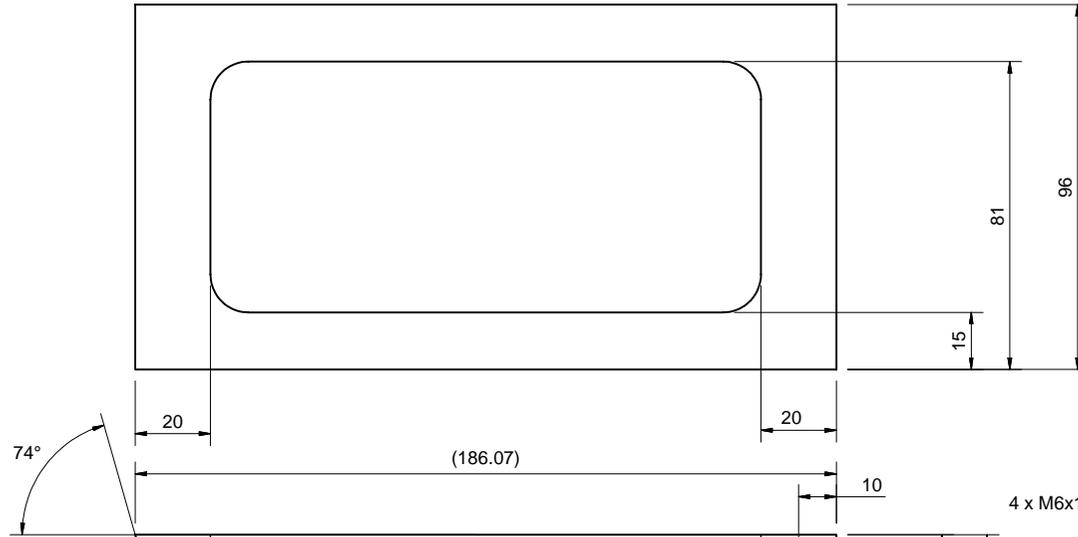
* Note, do not coat sealing surfaces on KF40 fittings.



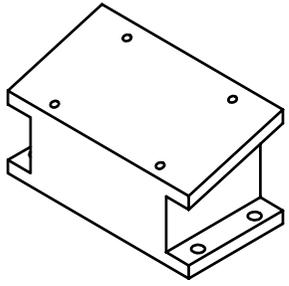
<small>UNLESS OTHERWISE STATED</small> All dimensions in mm General Tol: ± 1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or displayed in whole or part without the express consent of the Isaac Newton Group of Telescopes</small>	Material	Drawn by	Date	Revision	KF40 Transfer Tube		
	Stainless steel	jolley	23/06/2005	2			
	Finish	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	Sheet	
* Matt black paint				GLAS-12-001 r2	A3	1 / 1	



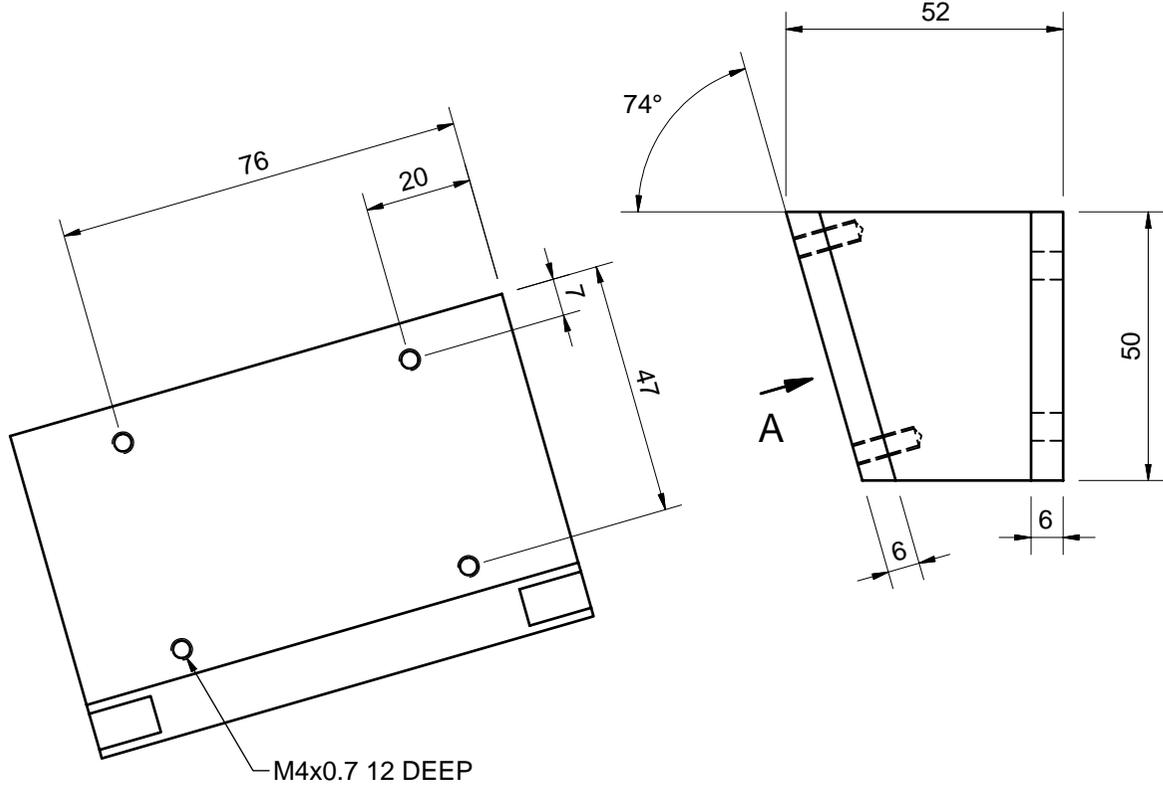
Auxiliary view on A
Showing hole details



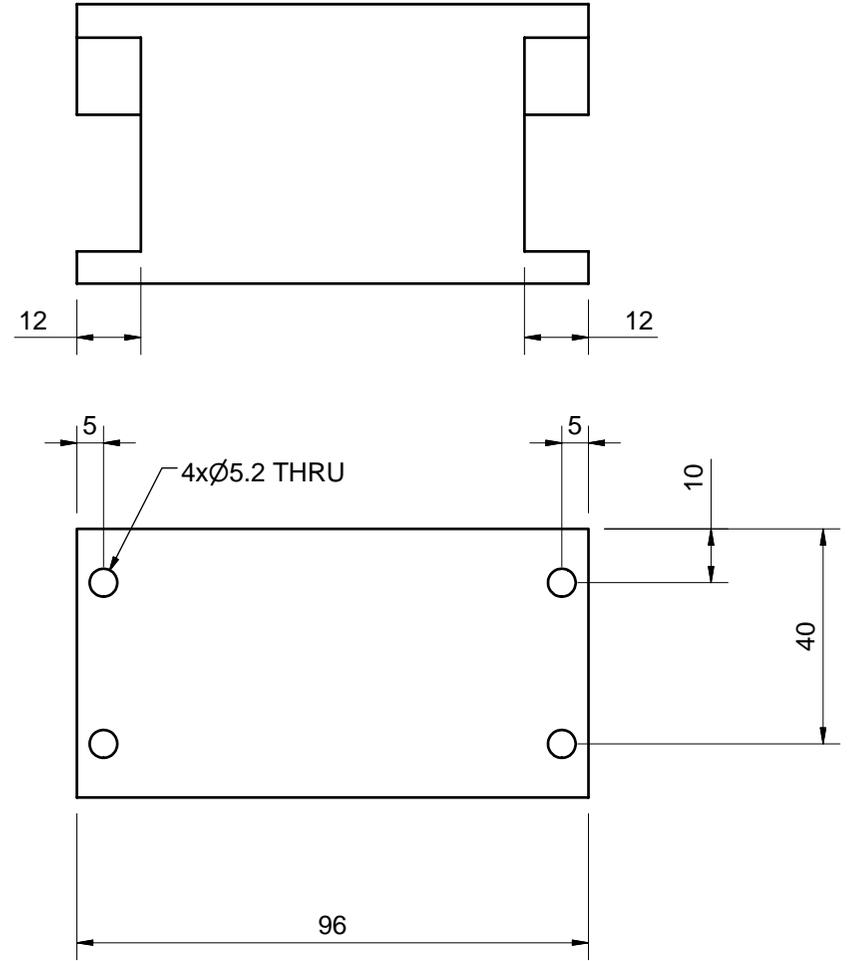
<small>UNLESS OTHERWISE STATED: All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document remains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or distributed in any form without the written consent of the Isaac Newton Group of Telescopes.</small> </small>	Material	Drawn by	Date	Revision	Lower Tube Stand
	Aluminium alloy BS1470 6082 T6	jolley	24/08/2005	3	
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-12-002 r3	A2 1 / 1



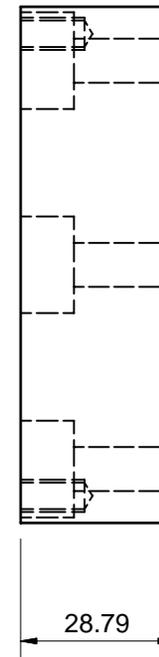
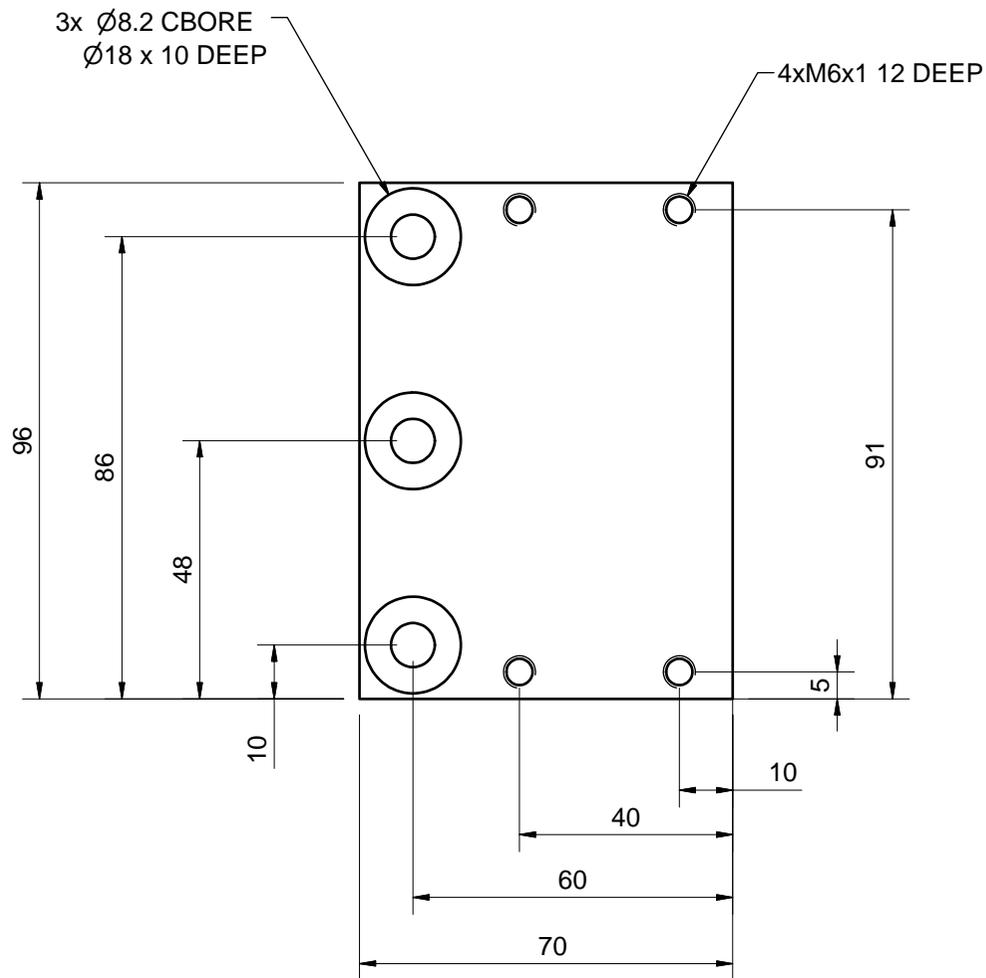
(1:2)



Auxiliary view on A
Showing hole details



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	Aluminium alloy BS1470 6082 T6	jolley	24/08/2005	3			
	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-12-003 r3	A3	1 / 1	



Third Angle

UNLESS OTHERWISE STATED
All dimensions in mm
General Tol: ± 0.1
Angular Tol: ± 0.25
Surface Finish (microns): 3.2
REMOVE ALL SHARP EDGES
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Material
Aluminium alloy
BS1470 6082 T6
Finish
Black anodise

Drawn by
jolley

Date
13/02/2006

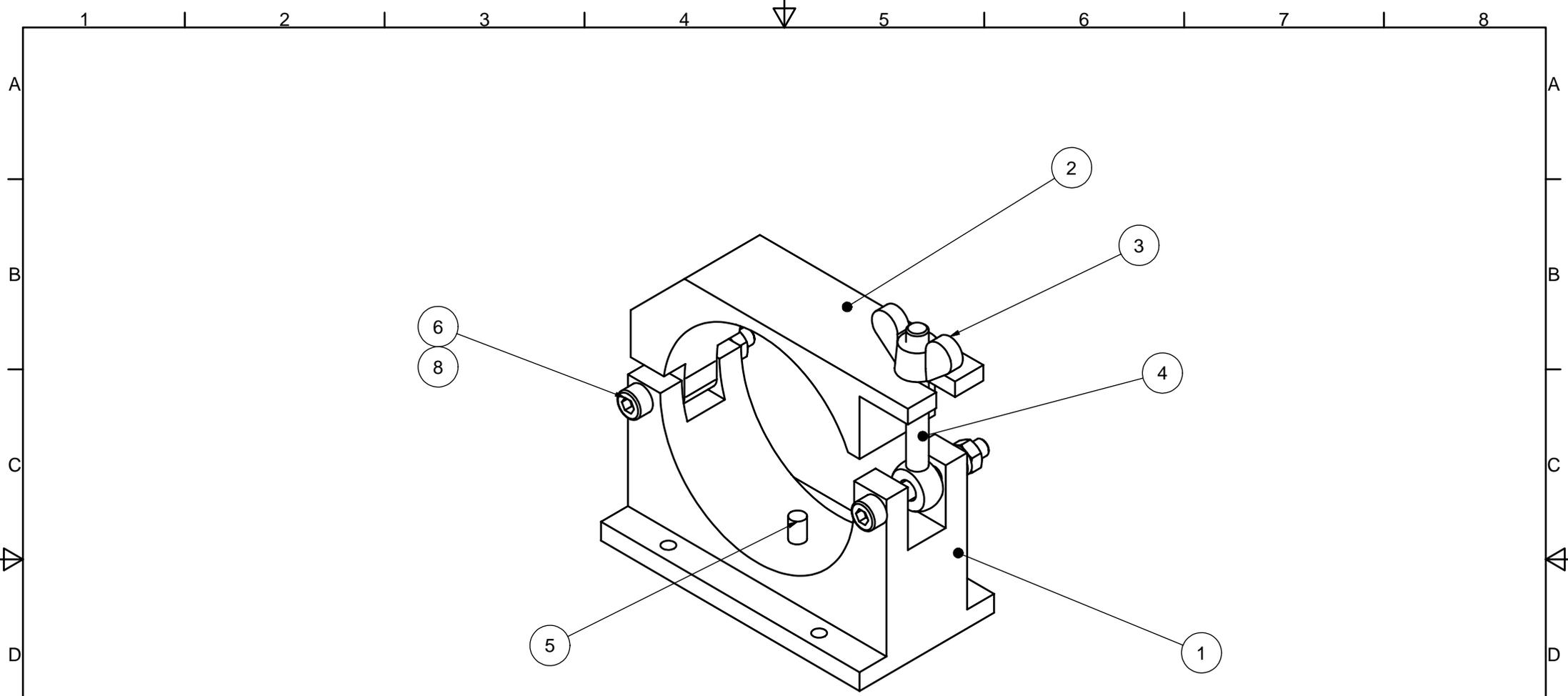
Revision
1

Upper Stand/BLT Interface

Part Number
GLAS-12-004 r1

A3

Sheet
1 / 1



8	2	BS 3692 - M5	Hex Nut
7	2	BS 4464 - M5 Form A	Spring Washer
6	2	BS 4168 - M5 x 40	Hexagon Socket Head Cap Screw
5	1	BS 1804-2 - 5 x 20	Dowel Pin
4	1	M6	Swing bolt
3	1	ANSI B18.17 - 1/4 - 20 or equivalent	Wing Nut
2	1	GLAS-12-1-002 r1	Tube clamp top
1	1	GLAS-12-1-001 r1	Tube clamp bottom
ITEM	QTY	PART NUMBER	DESCRIPTION

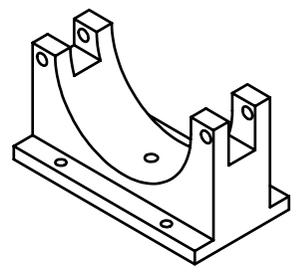
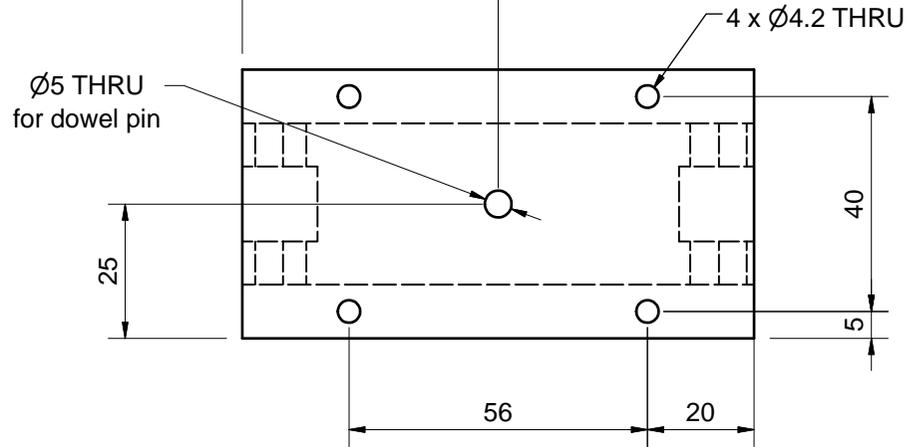
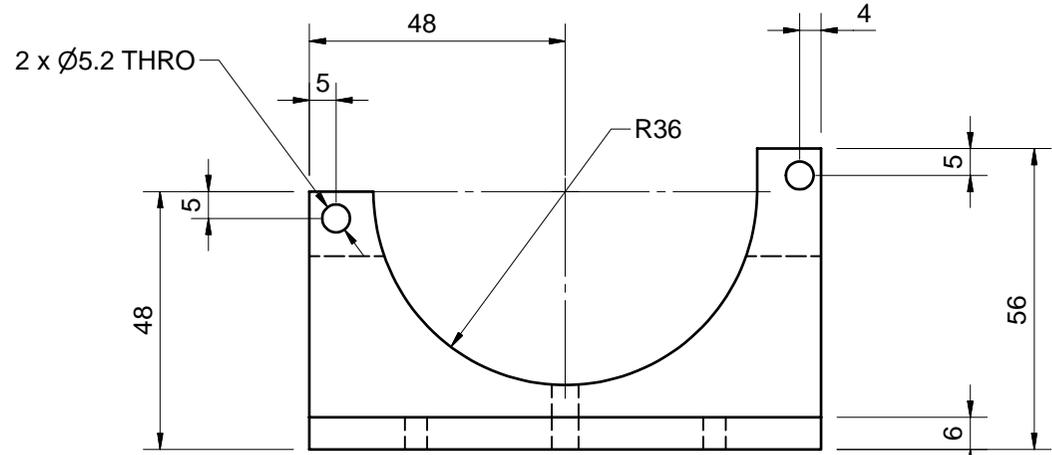
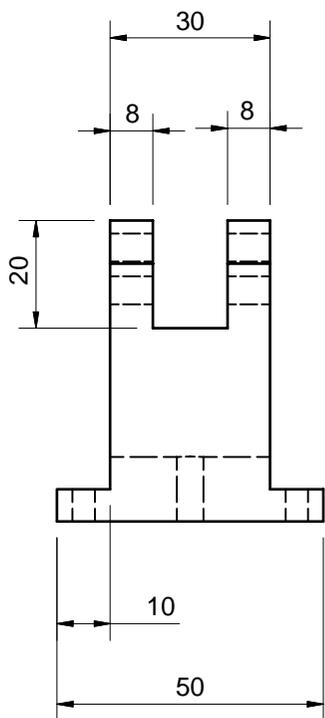
UNLESS OTHERWISE STATED
 All dimensions in mm
 General Tol: ± 0.1
 Angular Tol: ± 0.25
 Surface Finish (microns): 3.2
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Material
 Drawn by jolley
 Date 24/06/2005
 Revision 2
 Isaac Newton Group of Telescopes
 Apartado de Correos, 321
 Santa Cruz de La Palma
 +34 922 425 400

Third Angle

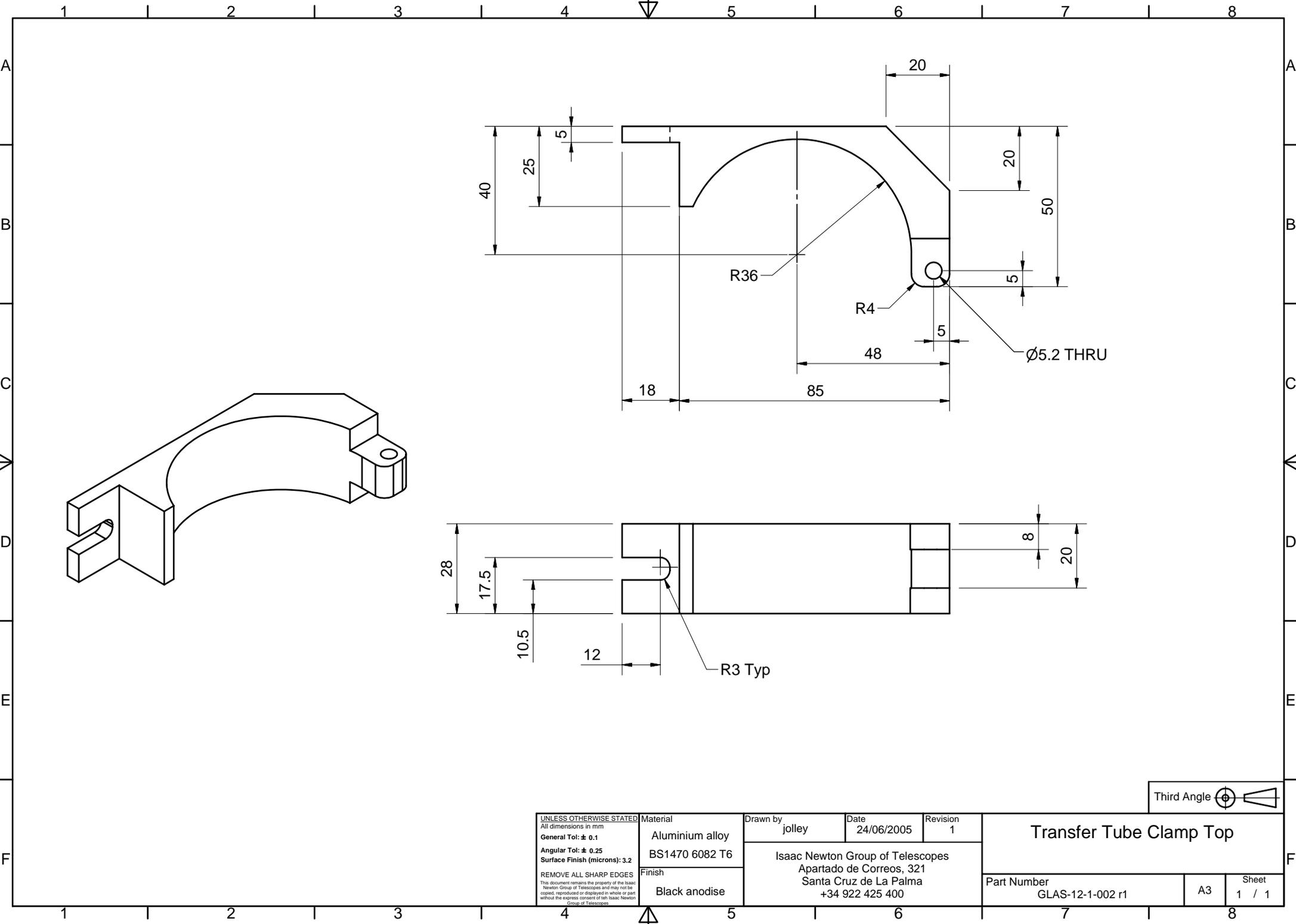
Transfer Tube Clamp Assembly

Part Number GLAS-12-1-000 r2
 Sheet 1 / 1



Third Angle

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	Aluminium alloy	jolley	24/06/2005	1			
	BS1470 6082 T6	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	A3	Sheet
Finish	Black anodise				GLAS-12-1-001 r1		1 / 1



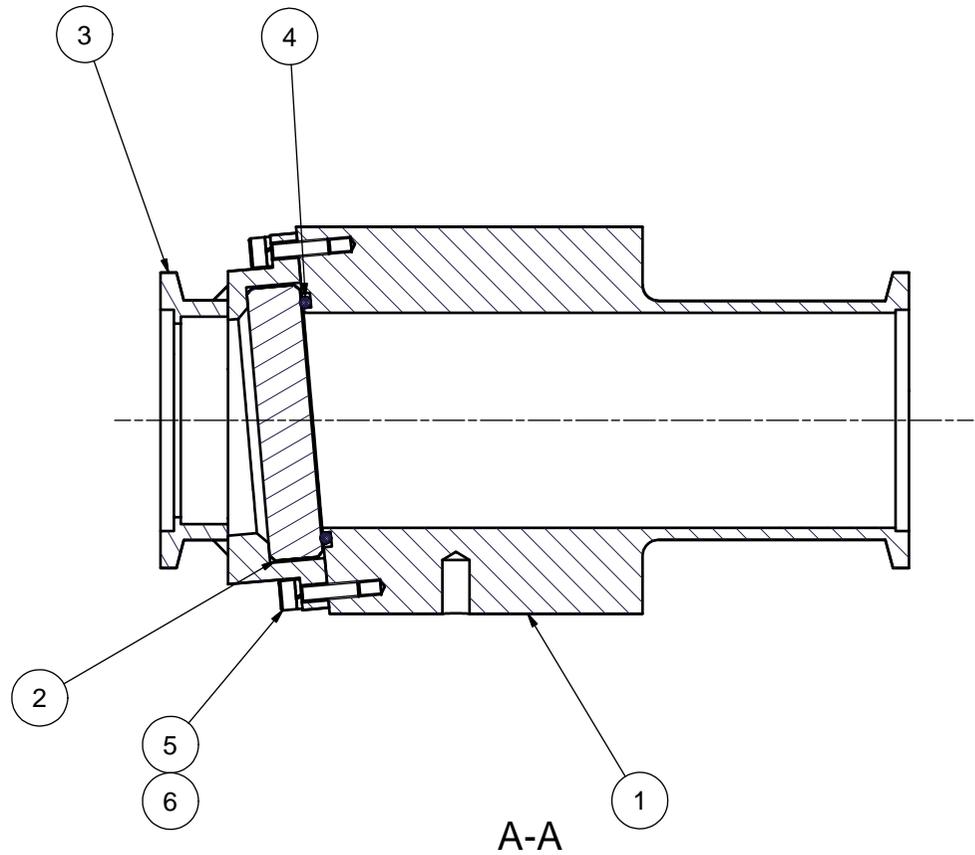
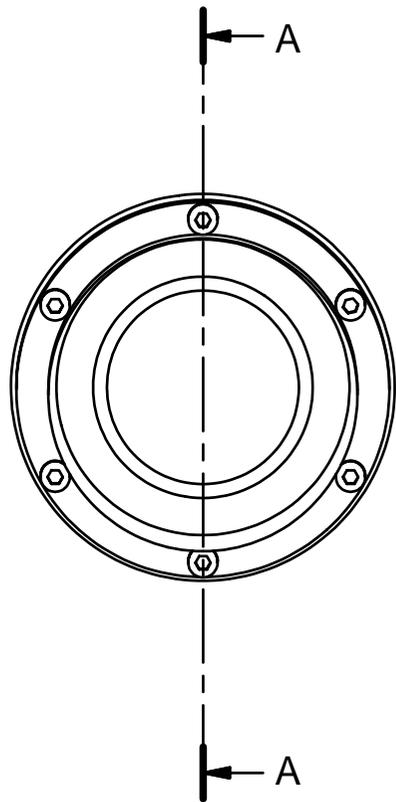
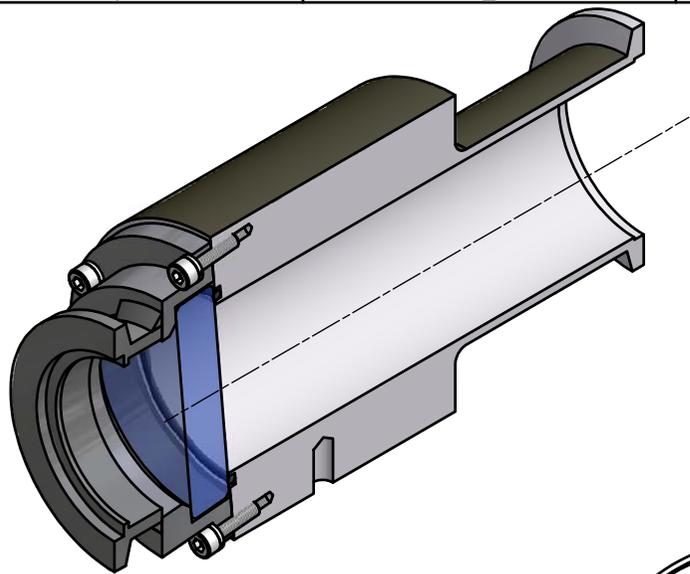
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 All dimensions in mm
 General Tol: ± 0.1
 Angular Tol: ± 0.25
 Surface Finish (microns): 3.2
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Material
 Aluminium alloy
 BS1470 6082 T6
 Finish
 Black anodise

Drawn by
 jolley
 Date
 24/06/2005
 Revision
 1
 Isaac Newton Group of Telescopes
 Apartado de Correos, 321
 Santa Cruz de La Palma
 +34 922 425 400

Transfer Tube Clamp Top
 Part Number
 GLAS-12-1-002 r1
 A3
 Sheet
 1 / 1





6	6	BS 4464 - M3 Form A	Spring Washer
5	6	BS 4168 - M3 x 12	Hexagon Socket Head Cap Screw
4	1	ID 42 x 2	O Ring - nitrile
3	1	GLAS-12-2-003 r1	Window Retainer Weldment
2	1	As supplied	Window
1	1	GLAS-12-2-001 r1	Window Holder
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
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Material

Drawn by
 jolley

Date
 24/06/2005

Revision
 2

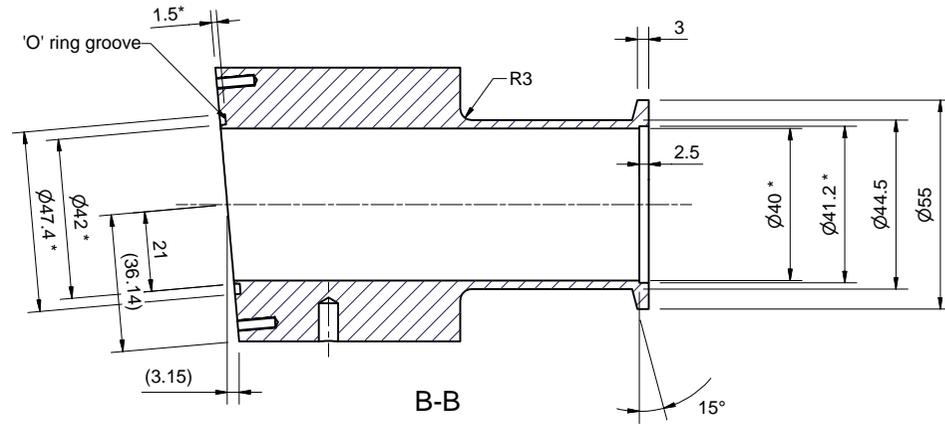
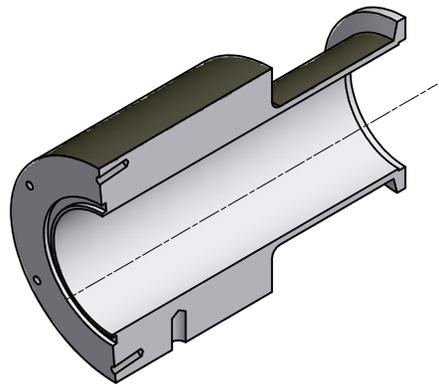
Isaac Newton Group of Telescopes
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Transfer Tube Window Holder

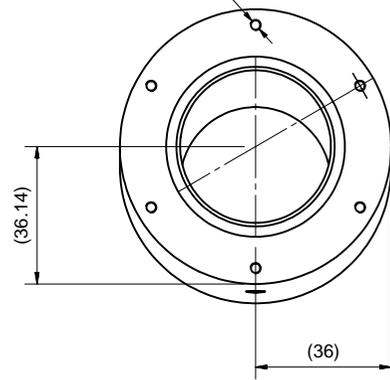
Part Number
 GLAS-12-2-000 r2

Sheet
 1 / 1

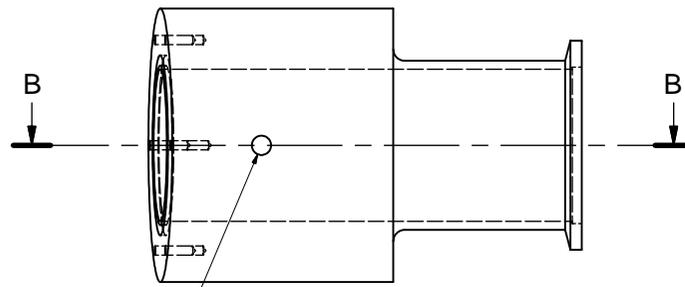
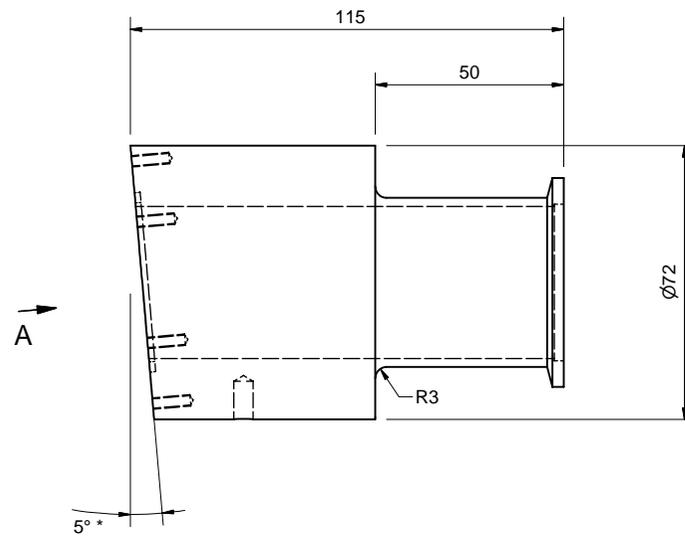




6 x M3x0.5 10 DEEP Equi-spaced on a 66 PCD



Auxiliary view on A
Showing hole details

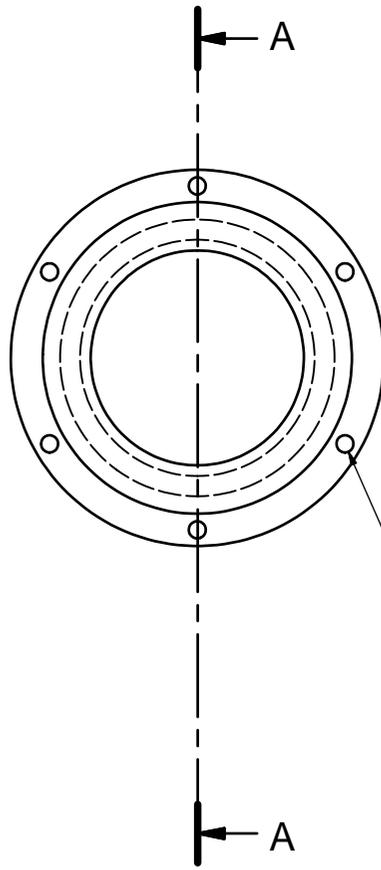
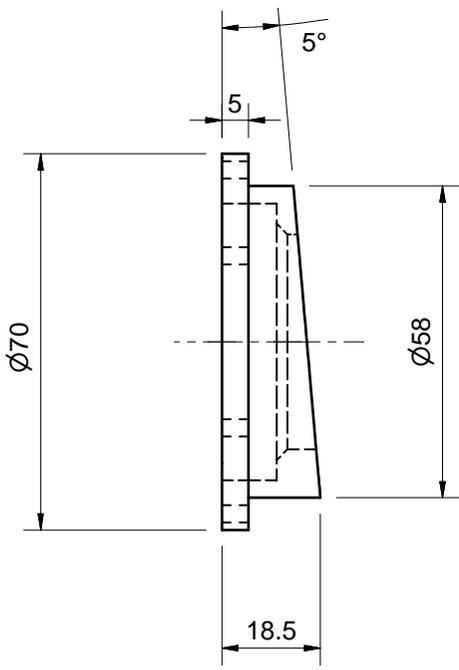


Ø5.1 10 DEEP
For dowel pin on GLAS-12-1-000
Do not break through

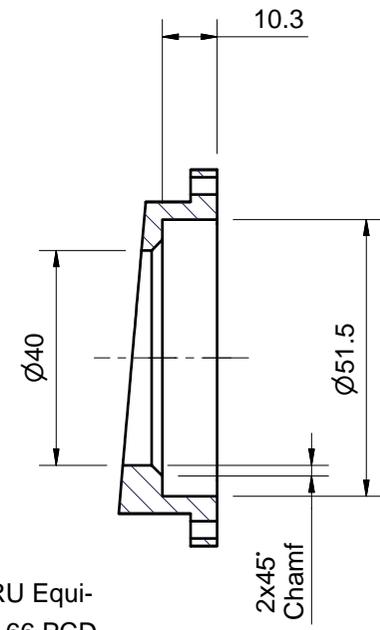
Note: Black anodise except areas marked with an * (inside main bore, O-ring groove and both end faces)



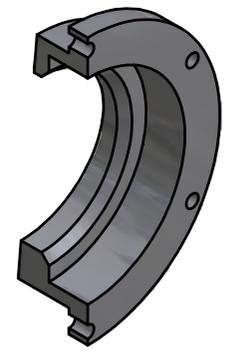
<small>UNLESS OTHERWISE STATED: All dimensions in mm General Tol: ± 0.1 Angular Tol: ± 0.25 Surface Finish (microns): 3.2 REMOVE ALL SHARP EDGES <small>This document contains the property of the Isaac Newton Group of Telescopes and may not be copied, reproduced or distributed in any form without the written consent of the Isaac Newton Group of Telescopes.</small> </small>	Material	Aluminium alloy BS1470 6082 T6	Drawn by	jolley	Date	23/06/2005	Revision	2	Window Holder	
	Finish	See note	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400			Part Number	GLAS-12-2-001 r2	A2		



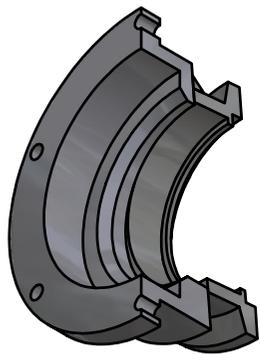
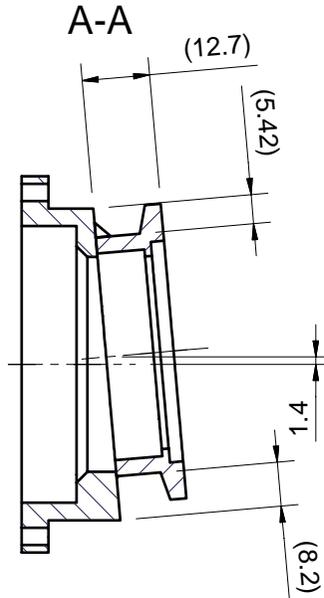
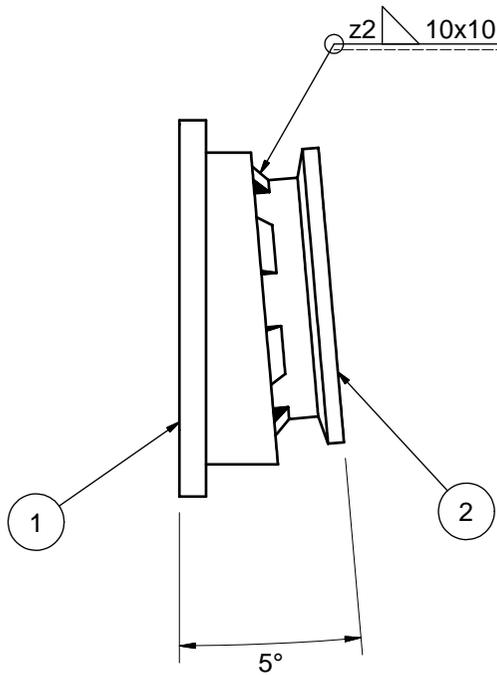
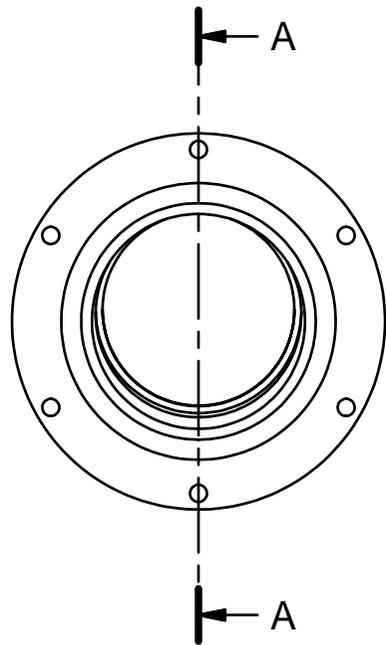
6xØ3.2 THRU Equi-spaced on a 66 PCD



A-A



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		304S	Isaac Newton Group of Telescopes Apartado de Correos, 321 Santa Cruz de La Palma +34 922 425 400							
	Finish	Clean	Part Number		GLAS-12-2-002 r2		A3	Sheet 1 / 1		



Note, Item 2 is a standard component from Caburn (www.caburn.co.uk). Any other equivalent KF fitting can be used.



2	1	7713003	KF40 Socket Weld Flange (K40-SW)
1	1	GLAS-12-2-002 r2	Window Retainer
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
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Material

 Finish

Drawn by
jolley
 Date
13/02/2006
 Revision
1
 Isaac Newton Group of Telescopes
 Apartado de Correos, 321
 Santa Cruz de La Palma
 +34 922 425 400

Window Retainer Weldment
 Part Number
GLAS-12-2-003 r1
 A3
 Sheet
1 / 1