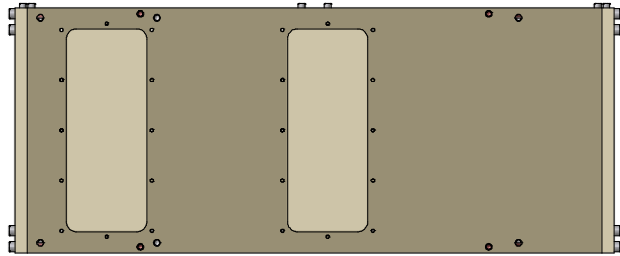


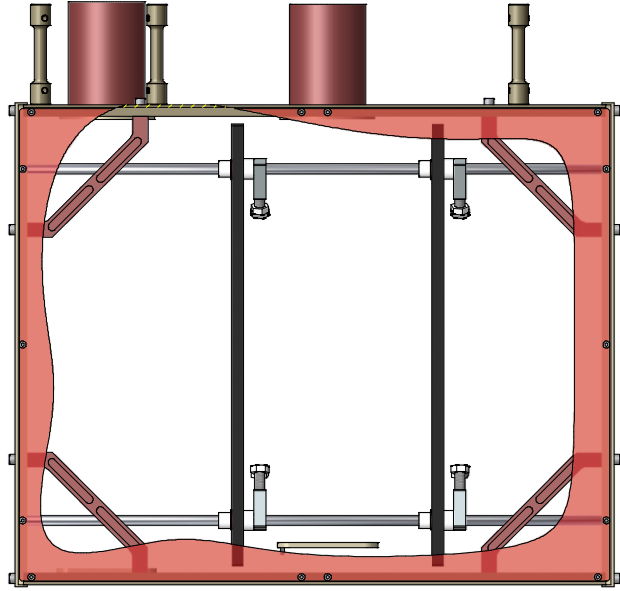
DOOR OPTICS TABLE ASSEMBLY

NUMBER OFF: ONE COMPLETE ASSEMBLY

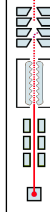
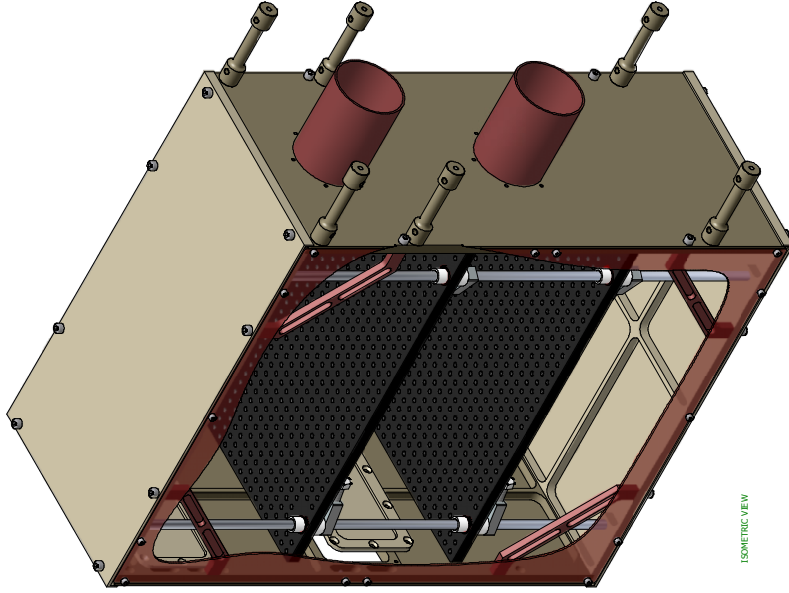
END VIEW



SIDE BREAKOUT VIEW



ISOMETRIC VIEW



Title		Revision	
Door Optics Table Assembly		1	
Drawn by:	P. Savage	Project:	Third angle
Designed by:	P. Savage	Model file:	DoorOpticsTable.asm
Checked by:		Drawing file:	FET5_FirstViewOpticsTable.dwg
Date:	Feb 2010	Version number:	1
Manufactured by:	I. W. Clark	Project:	FET1.S
Material:	Various	Sheet number:	1 / 10
Remove all burrs		Number of:	1
Scale:	Do not scale	Drawing number:	KC-FET5-235_FET5_2000
Notes:	Remove all burrs		
Contact:	p.savage@imperial.ac.uk (Work) 0207 594 7837 (Res) 0208 7260093		

Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in:	mm

Imperial College
London

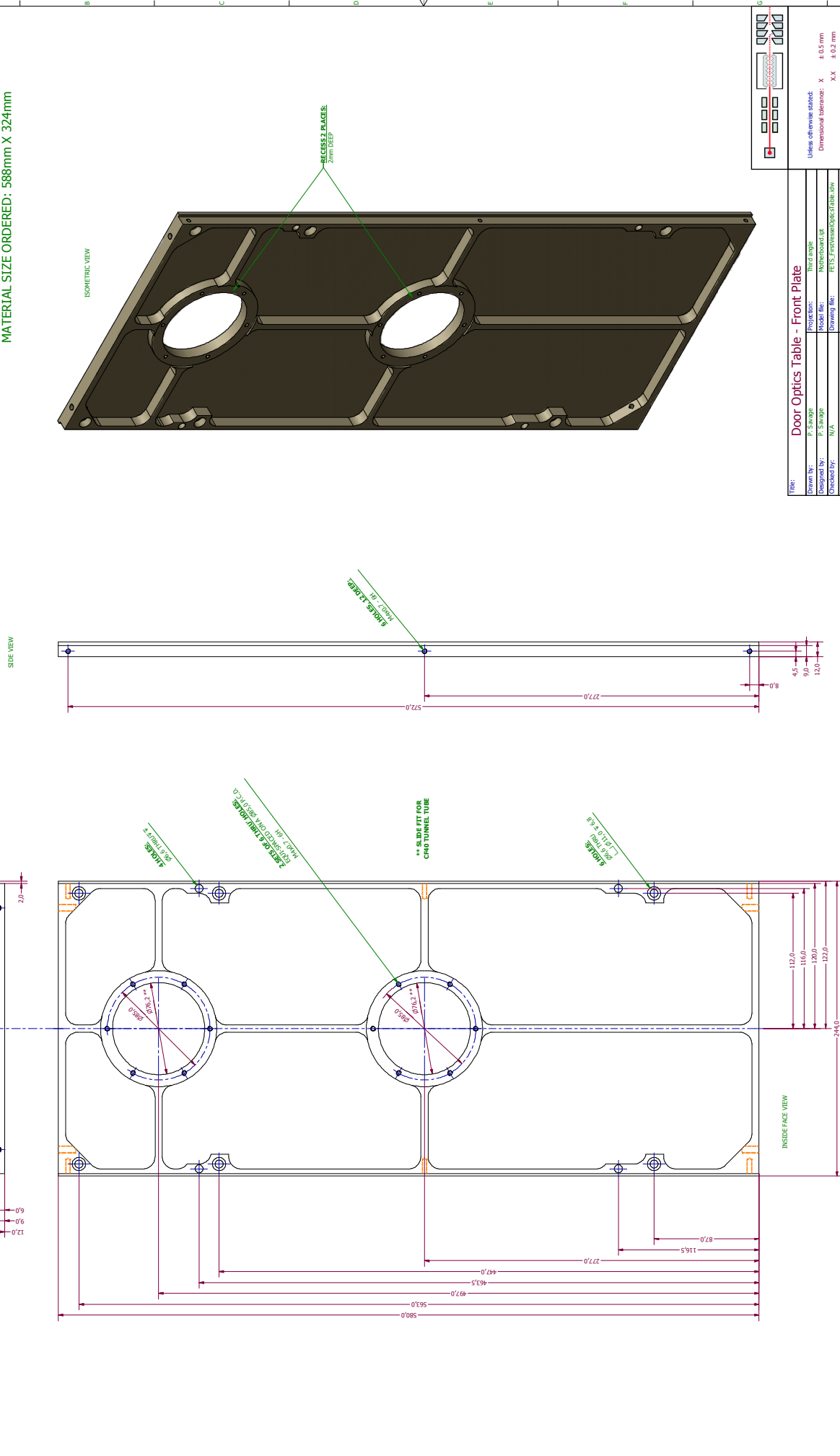
London

404.95
19 10
NEW YORK
1000

NUMBER OFF: 1

NUMBER OF 12: 4
MATERIAL: 12mm CAST ALUMINIUM TOOLING PLATE

MATERIAL SUPPLIER: OUTLOOK STOCKHOLDERS LTD
MATERIAL SIZE ORDERED: 588mm X 324mm



INSIDE FACE VIEW

244.0

122.0

120.0

116.0

112.0

4.05

2 THRU' CIRCULAR POCKETS, REMAINDER 10mm DEEP
POCKET PROFILES DEFINED IN IGS FILE:
DoorOpticsTable_FrontPlate.igs
CAM PROG 408

[illegible]

DOOR OPTICS TABLE - BACK PLATE

NUMBER OFF: 1

MATERIAL: 12mm CAST ALUMINIUM TOOLING PLATE

MATERIAL SUPPLIER: OUTLOOK STOCKHOLDERS LTD

MATERIAL SIZE ORDERED: 588mm X 324mm

END VIEW

SIDE VIEW

ISOMETRIC VIEW

INSIDE FACE VIEW

2 THRU' POCKETS, REMAINDER 10mm DEEP
POCKET PROFILES DEFINED IN IGS FILE:
DoorOpticstabl e_BackPlate. igs

Door Optics Table - Back Plate

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	BackOptic.tbl
Checked by:	N/A	Drawing file:	RET5_FirstVaseOptic.tbl.dwg
Date:	Feb 2010	Version number:	1
Manufactured by:	I. W. Clark	Project:	Front End Test Stand
Material:	Cast aluminium	Sheet number:	4 / 10
Remove all burrs		Number off:	1
Scale:	Drawn at scale	Drawing number:	IC-FE2-735-RET5_300X
Notes:			
Unless otherwise stated:			
Dimensional tolerance:	X		± 0.5 mm
	X.X		± 0.2 mm
	X.XX		± 0.1 mm
Angular tolerance:			± 0.5°
Hole centres:			± 0.05 mm
Surface finish:			1.6 microns
Dimensions in mm			□

Contact: p.savage@imperial.ac.uk (Work) 0207 594 7837 (Home) 02081 208093

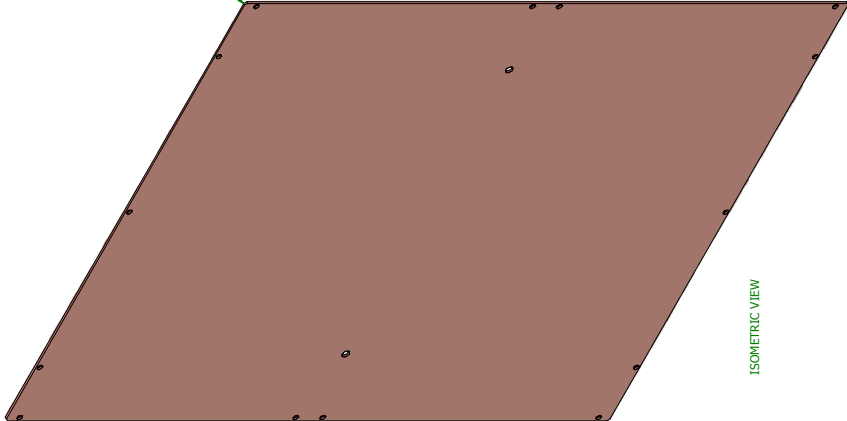
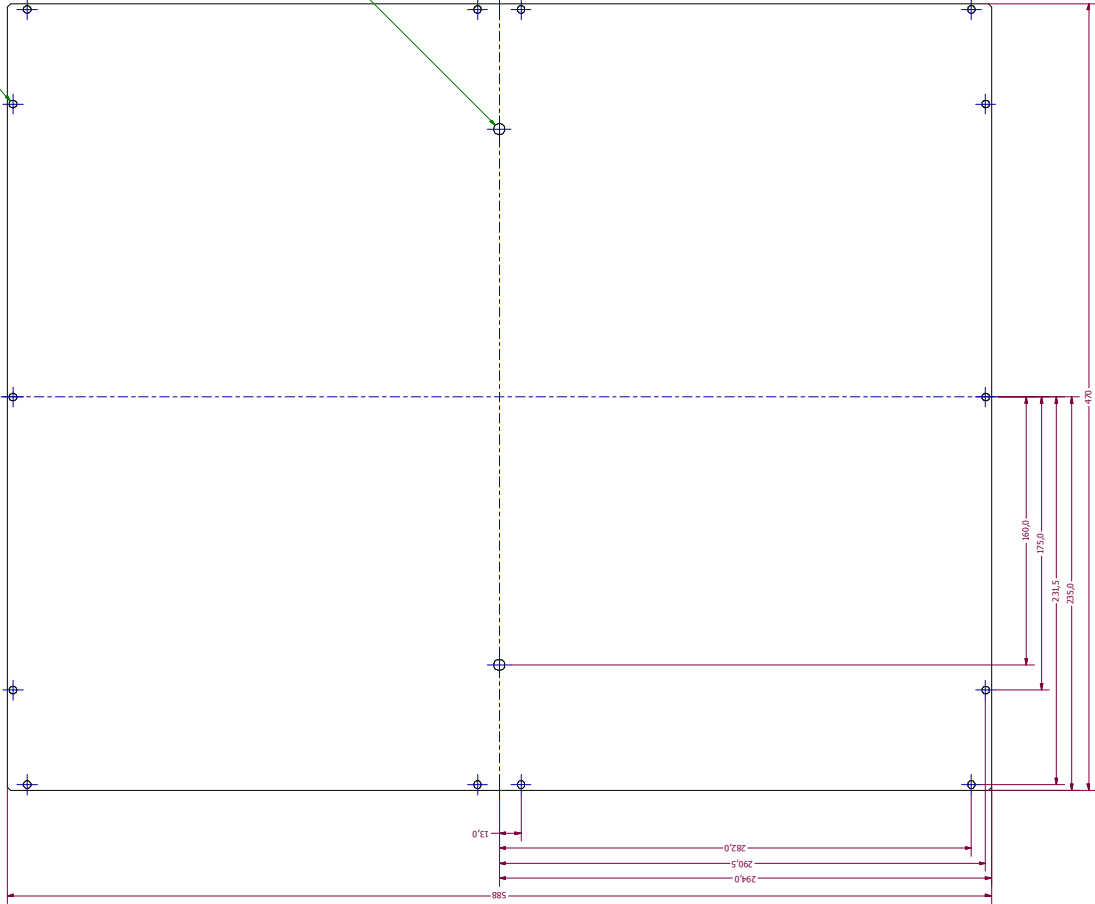
DOOR OPTICS TABLE - SIDE COVER

NUMBER OFF: 2
MATERIAL: ALUMINIUM ALLOY SHEET, 2 OR 3mm THICK
MATERIAL SUPPLIER: IN STOCK
MATERIAL SIZE ORDERED: N/A

FACE VIEW

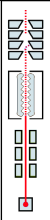
1.5mm THICK
2.5mm THICK

SIDE VIEW



CHAMFER CORNERS 2 X 45°

ISOMETRIC VIEW



Door Optics Table - Side Cover

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	SideCover.dwg
Checked by:	N/A	Drawing file:	ETS_FirstViewOpticsTable.dwg
Date:	Feb 2010	Version number:	1
Manufactured by:	I. W. Clark	Project:	Front End Test Stand
Material:	Aluminium alloy sheet	Sheet number:	5 / 10
Remove all burrs		Number off:	2
Scale:	Drawn scale	Drawing number:	ETS-FPS-235-ETS-2000
Notes:			

Unless otherwise stated:
Dimensional tolerance: X ± 0.5 mm
X.X ± 0.2 mm
X.XX ± 0.1 mm
Angular tolerance: $\pm 0.5^\circ$
Hole centres: ± 0.05 mm
Surface finish: 1.6 microns
Dimensions in mm

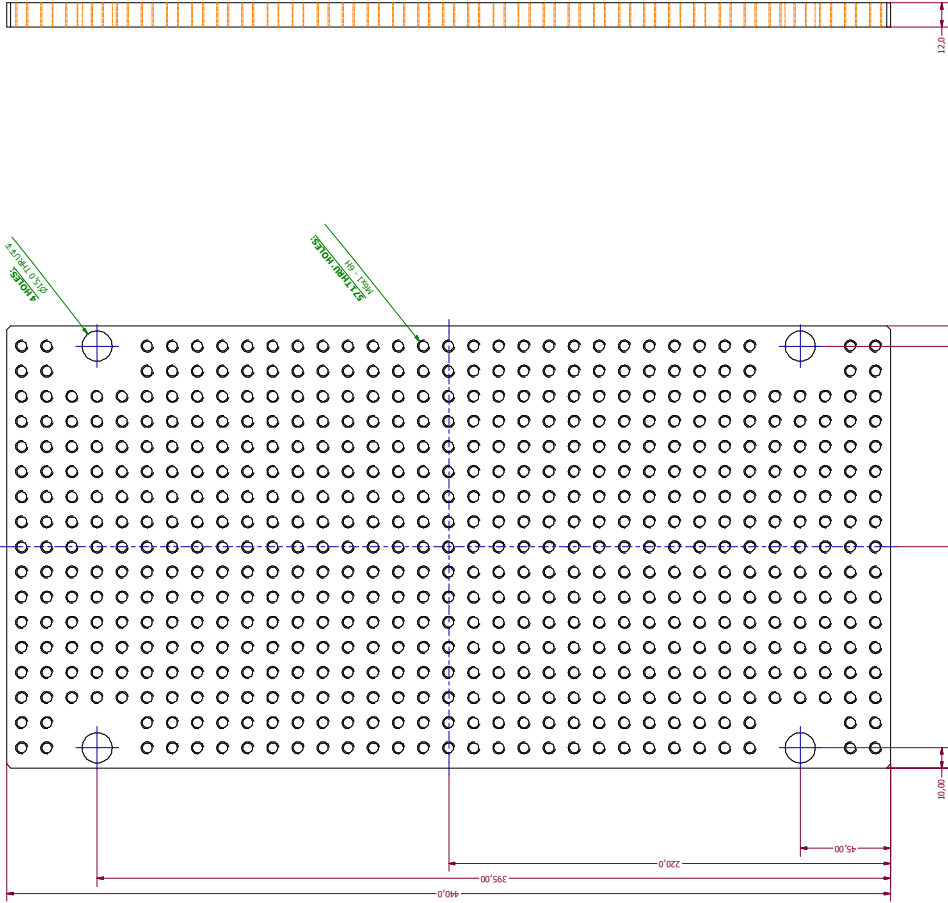
Contact: p.savage@imperial.ac.uk (View ID: 9947837 - (Revision) 20100120000)

DOOR OPTICS TABLE - BREADBOARD

NUMBER OFF: 2
MATERIAL: CAST ALUMINIUM TOOLING PLATE
MATERIAL SUPPLIER: OUTLOOK STOCKHOLDERS LTD
MATERIAL SIZE ORDERED: 300mm X 448mm X 12mm

FACE VIEW

SIDE VIEW

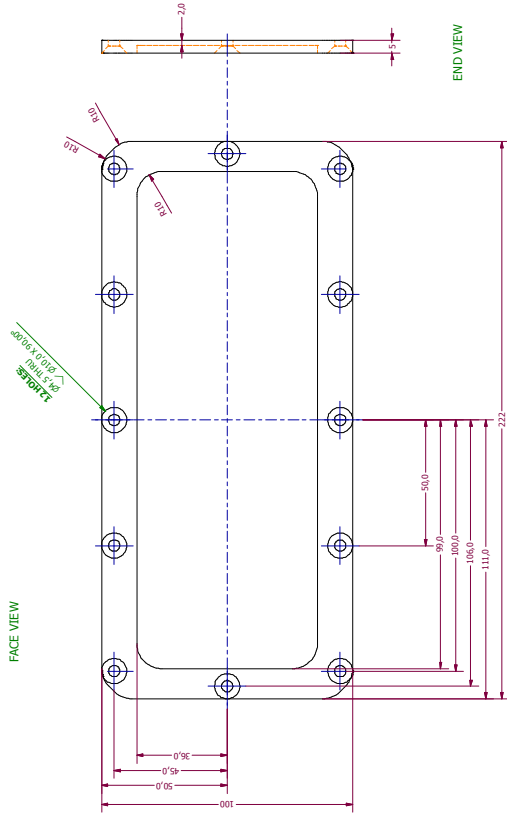


Door Optics Table - Breadboard			
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	Breadboard.ig
Checked by:	N/A	Drawing file:	RET5_FirstVeseOpticTable.4dw
Date:	Feb 2010	Version number:	1
Manufactured by:	I. W. Clark	Project:	Front End Test Stand
Material:	Cast Alu Tooling Plate	Sheet number:	6 / 10
Remove all burrs		Number off:	2
Scale:	Drawn scale	Drawing number:	IC-FEFS-25-RET5-2000
Notes:			
Contact:	p.savage@imperial.ac.uk	(New) 020 7 594 9137	(Home) 0208 218093

HOLE POSITIONS DEFINED IN IGES FILE:
DoorOpticTable_Breadboard.igs

DOOR OPTICS TABLE - RECTANGULAR PORT COVER

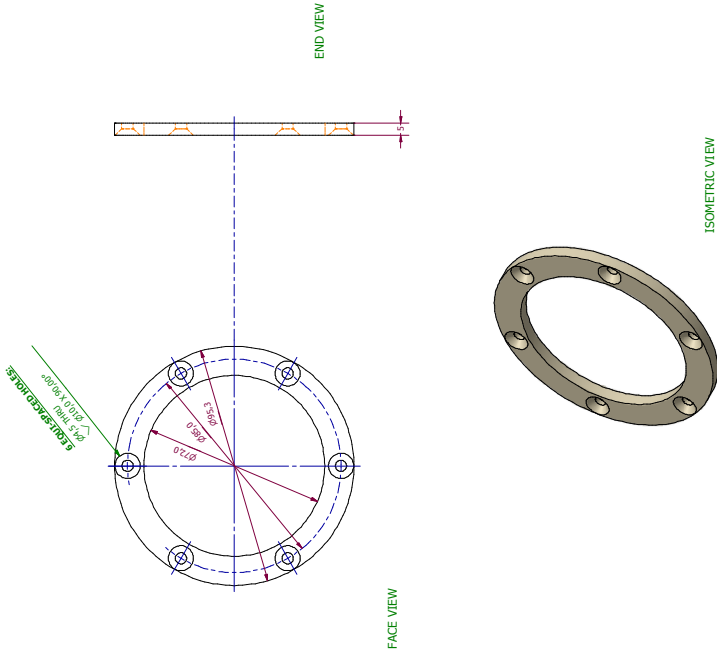
NUMBER OFF: 2
MATERIAL: CAST ALUMINIUM TOOLING PLATE 4 OR 5mm THICK
MATERIAL SUPPLIER: OUTLOOK STOCKHOLDERS LTD
MATERIAL SIZE ORDERED: 500mm X 500mm X 5mm



DoorOpticsTable_RectPortCover.igs

DOOR OPTICS TABLE - ROUND PORT COVER

NUMBER OFF: 2
MATERIAL: CAST ALUMINIUM TOOLING PLATE 4 OR 5mm THICK
MATERIAL SUPPLIER: OUTLOOK STOCKHOLDERS LTD
MATERIAL SIZE ORDERED: FROM SAME STOCK AS RECT PORT COVER



DoorOpticsTable_RoundPortCover.igs

Title		Door Optics Table - Port Covers	
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	MathsTable2_Cover.igb
Checked by:	N/A	Drawing file:	RETS_FirstVaseOpticalTable.dwg
Date:	Feb 2010	Version number:	1
Manufactured by:	I. W. Clark	Project:	Port End Test Stand
Material:	Cast aluminium	Sheet number:	7 of 10
Remove all burrs		Number of:	2 each
Scale:	Drawn scale	Drawing number:	IC-REP-235-RETS-2000
Notes:		Notes:	
Contract:	p.savage@imperial.ac.uk (View ID: 9947837 - (Revision) 2 (01/04/2009))		

Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	□

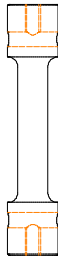
BREADBOARD ROD

NUMBER OFF: 4
MATERIAL: T316 SEAMLESS S/STEEL TUBE
MATERIAL SUPPLIER: OUTLOOK STOCKHOLDERS LTD
MATERIAL SIZE ORDERED: 10mm O.D. x 1mm WALL x 3m LONG

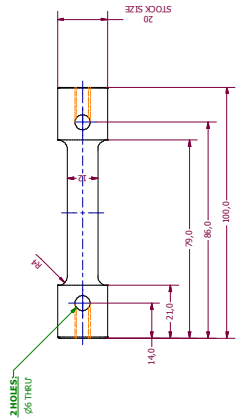


SIDE VIEW

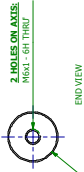
390



SIDE VIEW



TOP VIEW



END VIEW

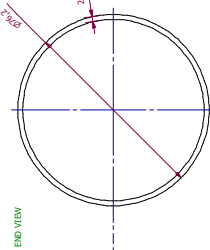
CHAMFER 0.5 X 45°



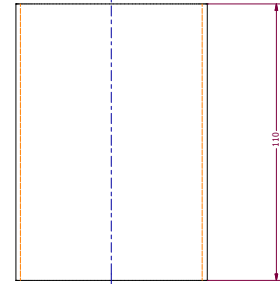
ISOMETRIC VIEW

MOUNTING RODS

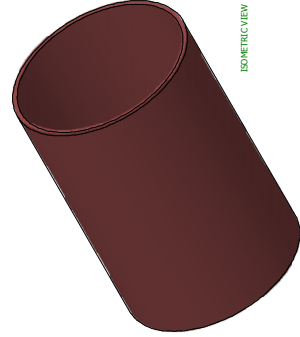
NUMBER OFF: 6
MATERIAL: T303 S/STEEL ROD
MATERIAL SUPPLIER: OUTLOOK STOCKHOLDERS LTD
MATERIAL SIZE ORDERED: 20mm O.D. X 1m LONG



END VIEW



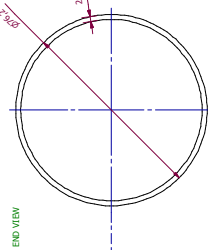
SIDE VIEW



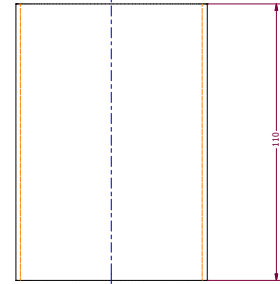
ISOMETRIC VIEW

CF40 TUNNEL

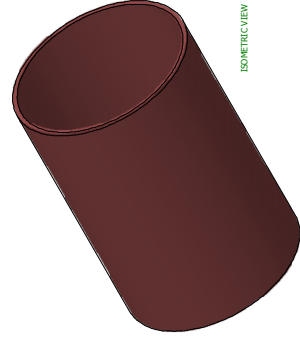
NUMBER OFF: 2
MATERIAL: T304 WELDED S/STEEL TUBE
MATERIAL SUPPLIER: OUTLOOK STOCKHOLDERS LTD
MATERIAL SIZE ORDERED: 3" O.D. 14 SWG WALL X 1m LONG



END VIEW



SIDE VIEW



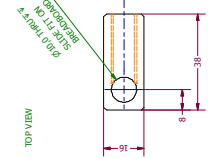
ISOMETRIC VIEW

BREADBOARD ROD CLAMP

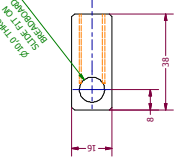
NUMBER OFF: 8
MATERIAL: ALUMINIUM ALLOY
MATERIAL SUPPLIER: EXISTING W/SHOP STOCK
MATERIAL SIZE ORDERED: NONE



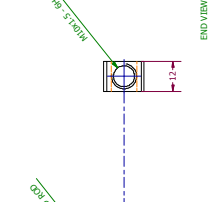
ISOMETRIC VIEW



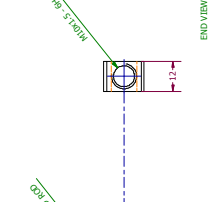
TOP VIEW



END VIEW



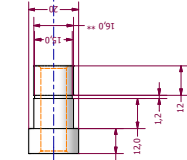
SIDE VIEW



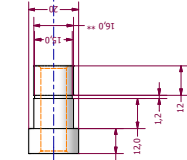
ISOMETRIC VIEW

BREADBOARD ROD BUSH

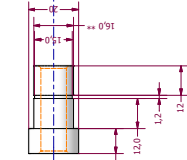
NUMBER OFF: 8
MATERIAL: PTFE
MATERIAL SUPPLIER: RS (PART #: 680-640)
MATERIAL SIZE ORDERED: 20mm O.D. X 1m LONG



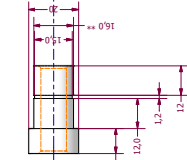
SIDE VIEW



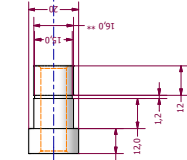
END VIEW



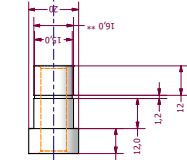
ISOMETRIC VIEW



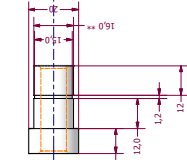
END VIEW



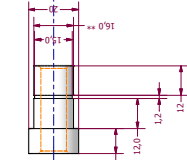
ISOMETRIC VIEW



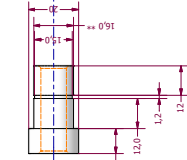
END VIEW



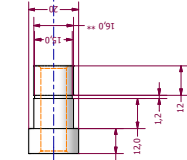
ISOMETRIC VIEW



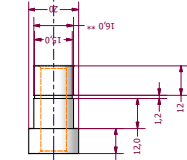
END VIEW



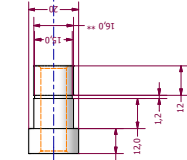
ISOMETRIC VIEW



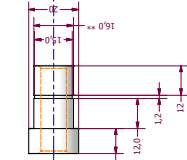
END VIEW



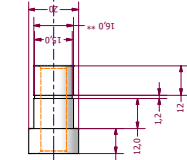
ISOMETRIC VIEW



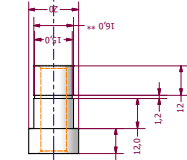
END VIEW



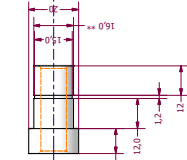
ISOMETRIC VIEW



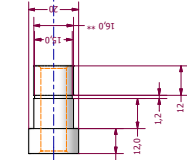
END VIEW



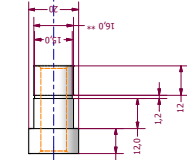
ISOMETRIC VIEW



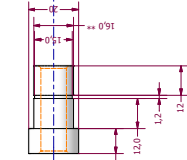
END VIEW



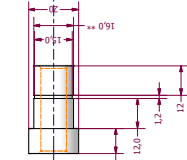
ISOMETRIC VIEW



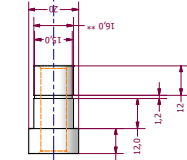
END VIEW



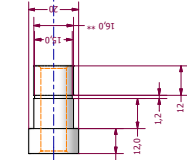
ISOMETRIC VIEW



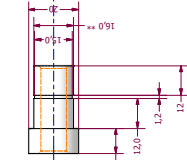
END VIEW



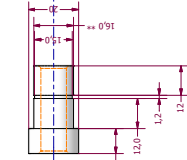
ISOMETRIC VIEW



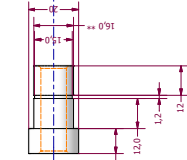
END VIEW



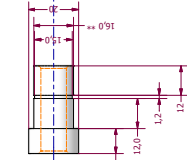
ISOMETRIC VIEW



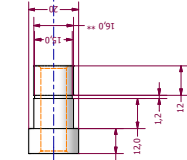
END VIEW



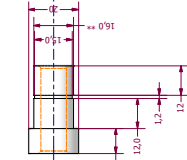
ISOMETRIC VIEW



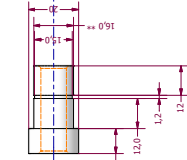
END VIEW



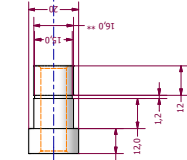
ISOMETRIC VIEW



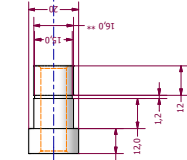
END VIEW



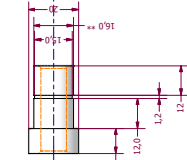
ISOMETRIC VIEW



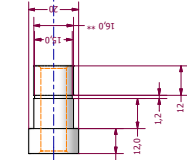
END VIEW



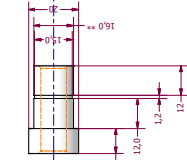
ISOMETRIC VIEW



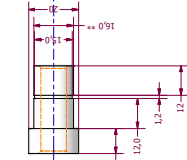
END VIEW



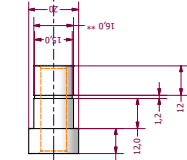
ISOMETRIC VIEW



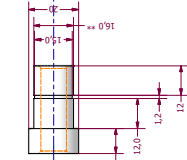
END VIEW



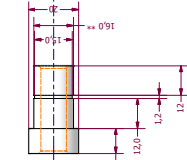
ISOMETRIC VIEW



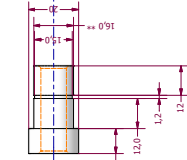
END VIEW



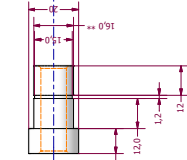
ISOMETRIC VIEW



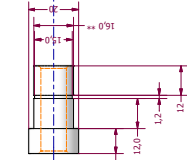
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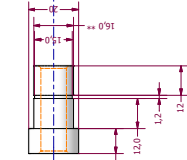
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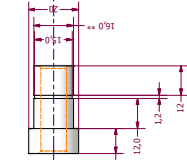
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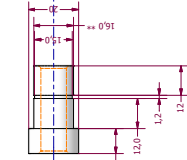
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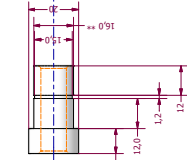
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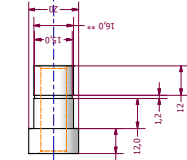
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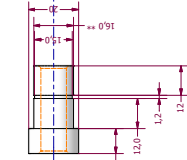
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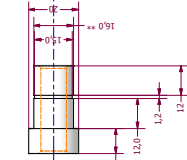
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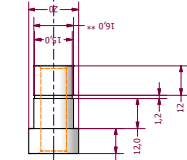
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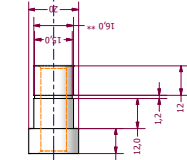
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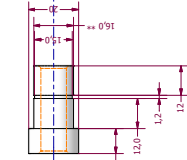
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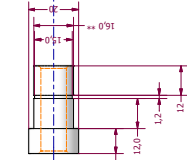
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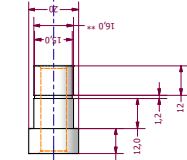
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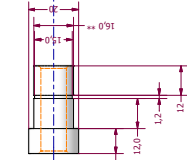
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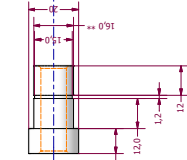
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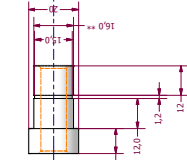
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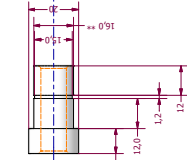
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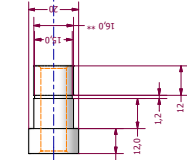
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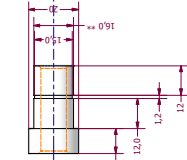
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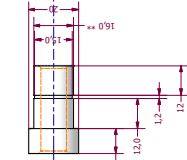
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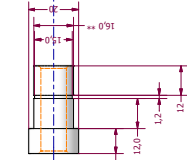
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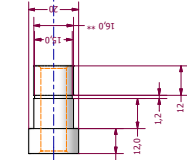
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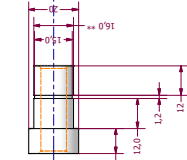
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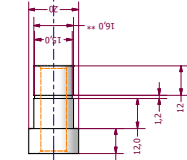
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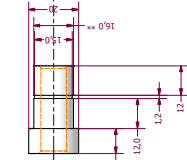
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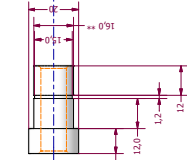
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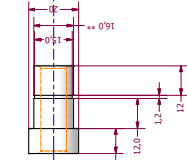
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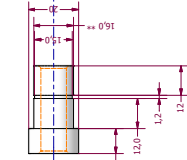
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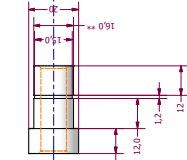
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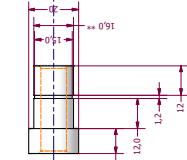
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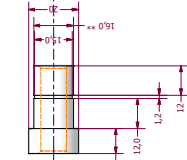
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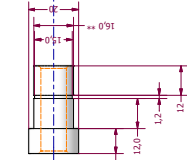
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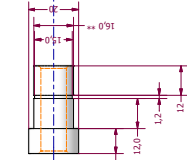
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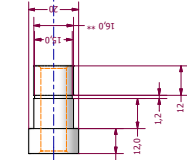
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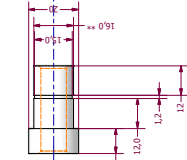
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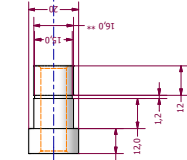
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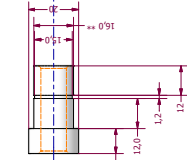
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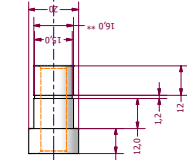
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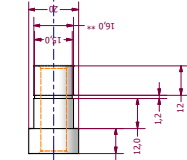
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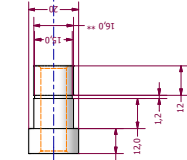
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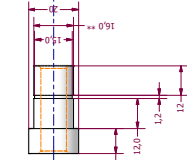
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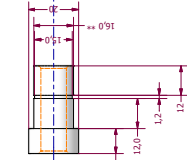
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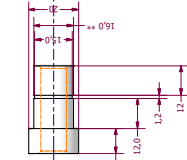
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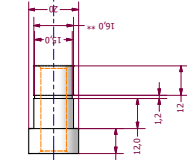
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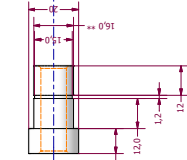
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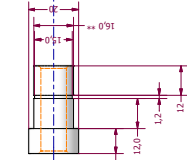
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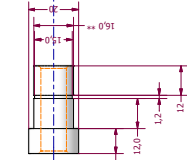
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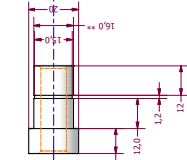
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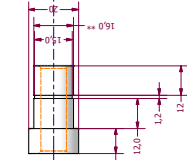
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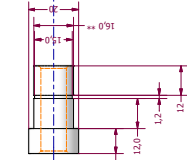
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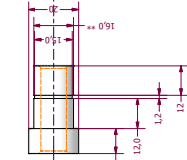
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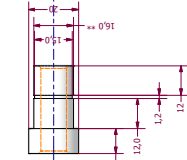
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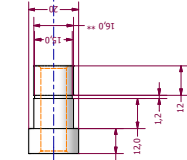
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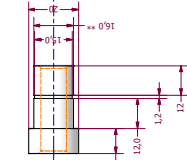
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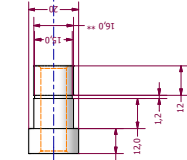
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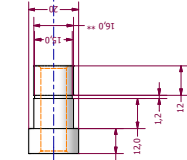
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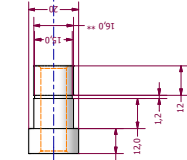
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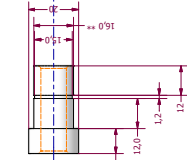
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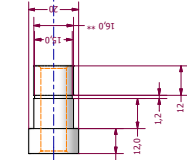
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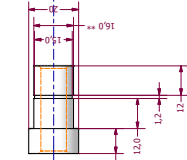
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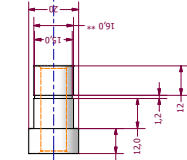
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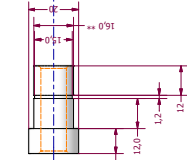
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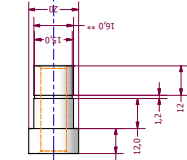
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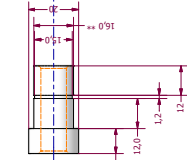
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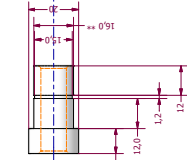
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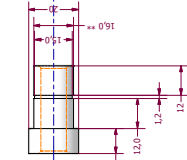
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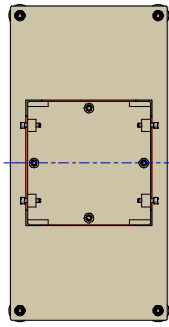


END VIEW



ISOMETRIC VIEW





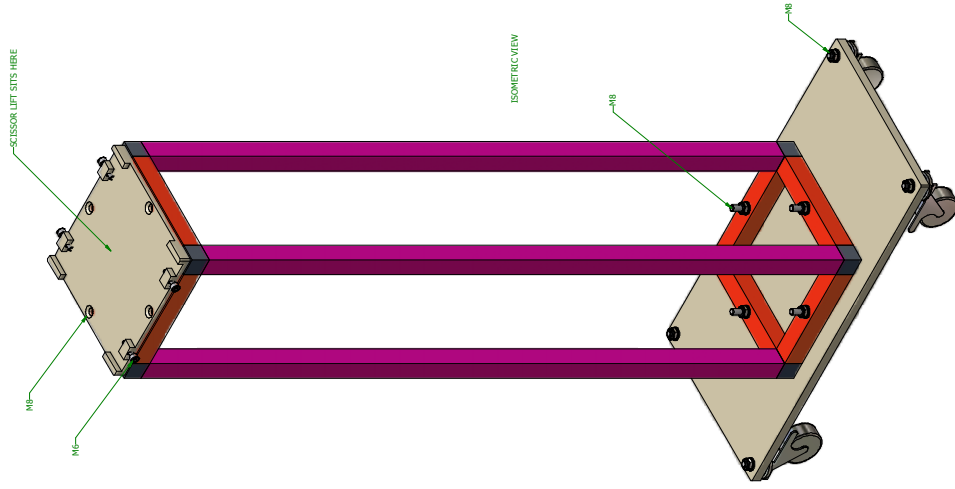
TOP VIEW



FRONT VIEW



SIDE VIEW



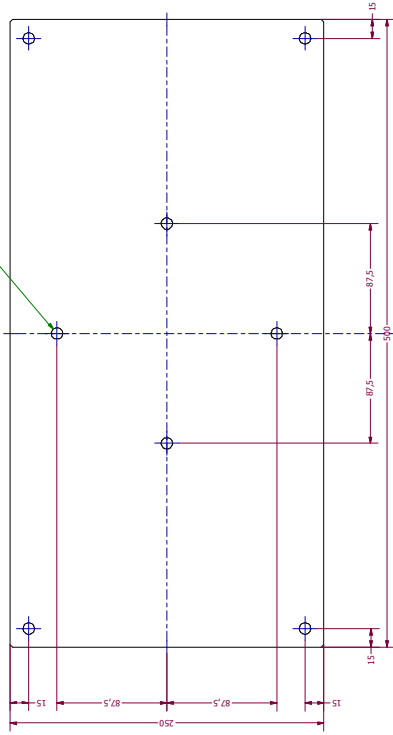
ISOMETRIC VIEW

**DOOR OPTICS TABLE -
SUPPORT TROLLEY**
NUMBER OFF: 1 COMPLETE ASSEMBLY
MATERIAL: ALUMINIUM ALLOY + STEEL SPEEDFRAME

Title: Door Optics Table - Support Trolley	
Drawn by: P. Savage	Projection: Third angle
Designed by: P. Savage	Model file: SupportTrolley.m
Checked by: N/A	Drawing file: RETS_FirstVaseOpticsTable.dwg
Date: March 2010	Version number: 1
Manufactured by: I. W. Clark	Project: Front End Test Stand
Material: Various	Sheet number: 9 / 10
Remove all burrs	Number off: 1 assembly
Scale: Drawn scale	Drawing number: X_CHEP2725_RETIS_2000
Notes:	
Contact: p.savage@imperial.ac.uk (Work) 0207 2260051	
Unless otherwise stated: Dimensional tolerance: X ± 0.5 mm X.X ± 0.2 mm X.XX ± 0.1 mm Angular tolerance: $\pm 0.5^\circ$ Hole centres: ± 0.05 mm Surface finish: 1.6 microns Dimensions in mm	

TOP VIEW

4x4mm 1000
ISO 2768



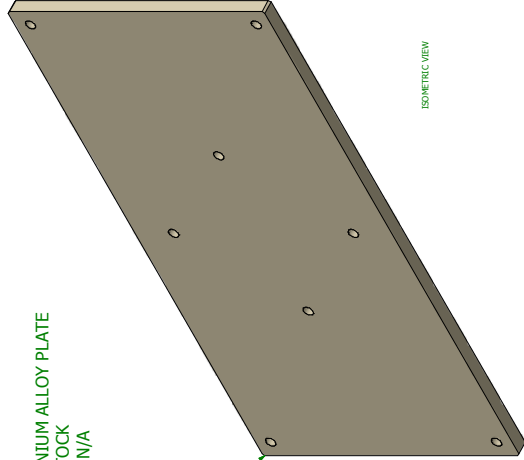
SIDE VIEW



DOOR OPTICS TABLE SUPPORT- BOTTOM PLATE

NUMBER OFF: 1
MATERIAL: 12.5mm ALUMINIUM ALLOY PLATE
MATERIAL SUPPLIER: IN STOCK
MATERIAL SIZE ORDERED: N/A

REMOVE SHARP CORNERS



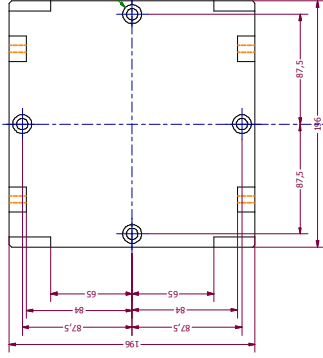
ISOMETRIC VIEW

DEFINED IN IGES FILE:
DoorOpticsTable_TrolleyBottomPlate.igs

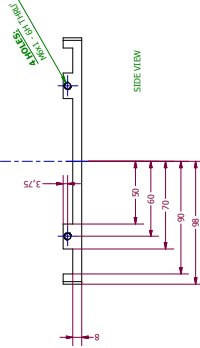
DEFINED IN IGES FILE:
DoorOpticsTable_TrolleyTopPlate.igs

TOP VIEW

4x4mm 1000
ISO 2768



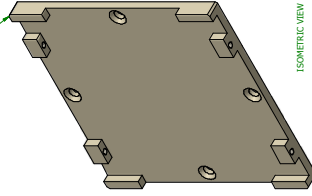
SIDE VIEW



DOOR OPTICS TABLE SUPPORT- TOP PLATE

NUMBER OFF: 1
MATERIAL: 15mm CAST ALUMINIUM TOOLING PLATE
MATERIAL SUPPLIER: IN STOCK
MATERIAL SIZE ORDERED: IN STOCK

REMOVE SHARP CORNERS



ISOMETRIC VIEW

Door Optics Table - Support Trolley

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	BottomPlate.igs
Checked by:	N/A	Drawing file:	RET5_FirstVaseOpticalTab.dwg
Date:	March 2010	Version number:	1
Manufactured by:	I. W. Clark	Project:	Front End Test Stand
Material:	Aluminium alloy	Sheet number:	20 / 10
Remove all burrs		Number off:	2 each part
Scale:	Drawn scale	Drawing number:	IC-FE2725-RET5-2000
Notes:		Unless otherwise stated:	
		Dimensional tolerance:	X ± 0.5 mm X.X ± 0.2 mm X.XX ± 0.1 mm ± 0.5 ± 0.05 mm Hole centres Surface finish 1.6 microns C
Contact:	p.savage@imperial.ac.uk (Work) 0207 594 9137 (Home) 02088 208093		