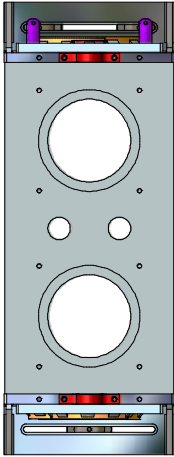
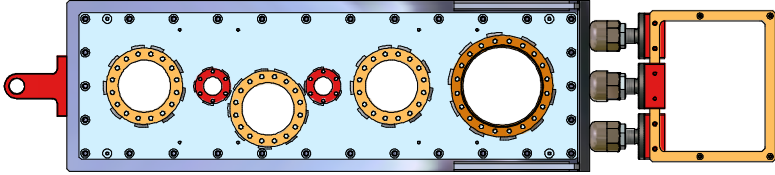


BEAM PROFILE MEASUREMENT TANK - OVERVIEW

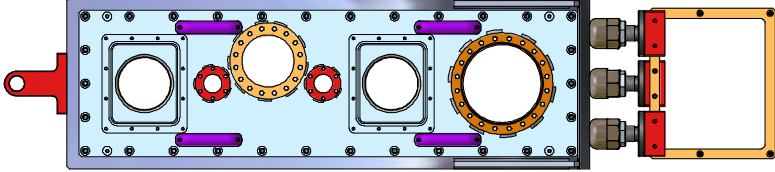


TOP FACE (0.2 : 1)

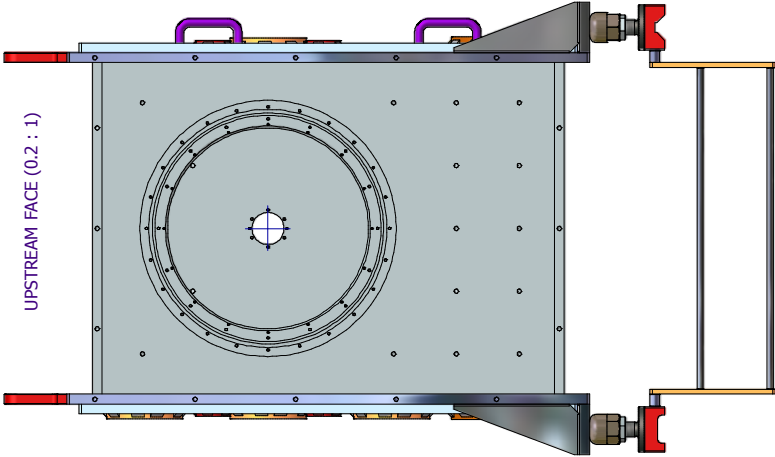
STATIC SIDE FACE (0.2 : 1)



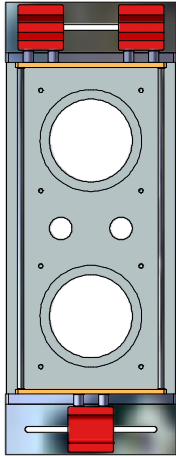
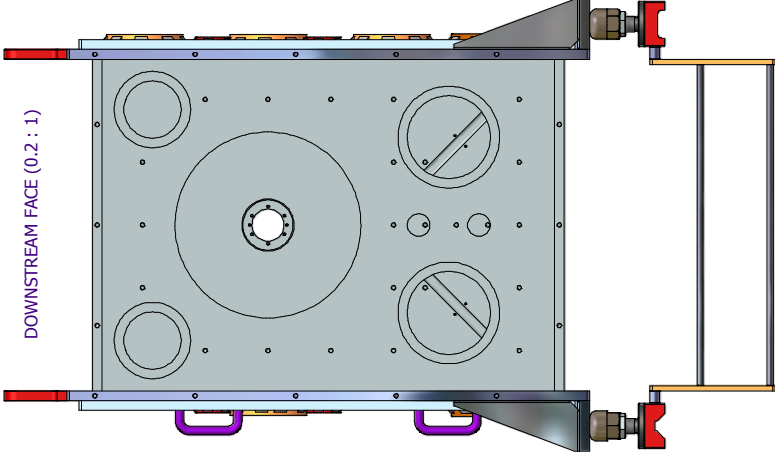
DYNAMIC FACE (0.2 : 1)



UPSTREAM FACE (0.2 : 1)



DOWNSTREAM FACE (0.2 : 1)



BOTTOM FACE (0.2 : 1)

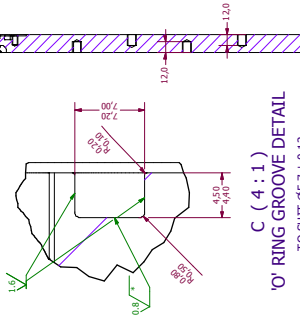
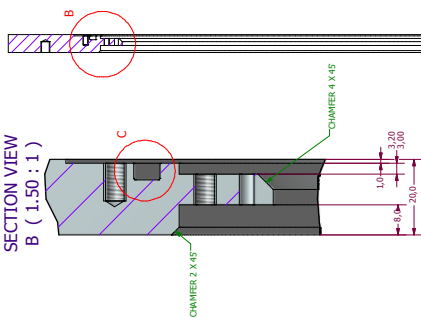
Beam Profile Measurement Tank

Title:	Projection:	Third angle
Drawn by:	P. Savage	
Designed by:	P. Savage	Model file: TankStripperWTFredAndBlue.dwg
Checked by:	P. Savage	Drawing file: ProfileMeasurements.dwg
Date:	April 2008	Version number: 6
Manufactured by:	304 Stainless Steel	Project: Front End Test Stand
Material:	304 Stainless Steel	Sheet number: 1 / 46
Remove all burrs		Number of: 2 complete assembly
Scale:	Drawn scale	Number of: 1 x 1/2 x 1/2 x 1/2 x 1/2
Notes:		Drawing number: 1 x 1/2 x 1/2 x 1/2 x 1/2
Contact:	p.savage@imperial.ac.uk	(Version 6) (Rev 2008)

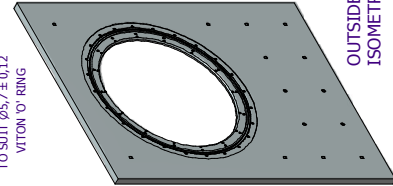
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	□

SECTION VIEW
A-A (0.35 : 1)

CENTRAL HOLE DETAIL
SECTION VIEW
B (1.50 : 1)

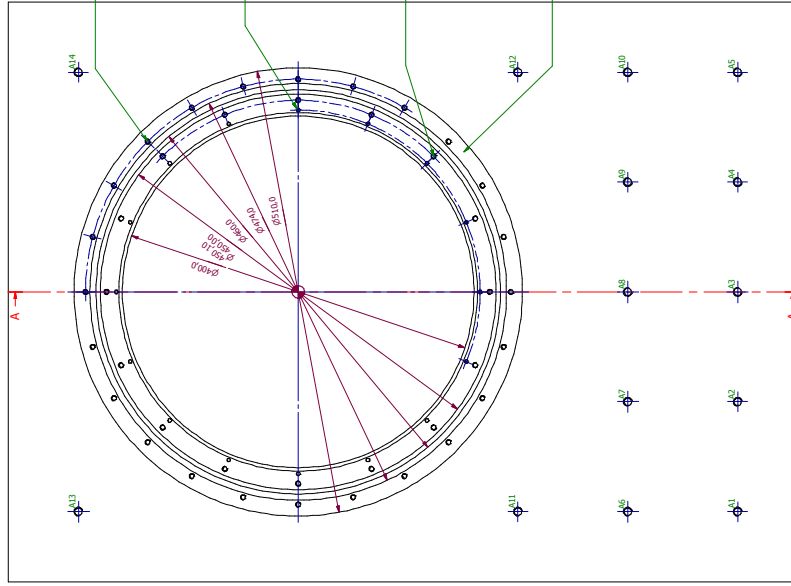


'O' RING GROOVE DETAIL
TO SUIT $\phi 57 \pm 0.12$
VITON 'O' RING



OUTSIDE FACE
ISOMETRIC VIEW (0.15 : 1)

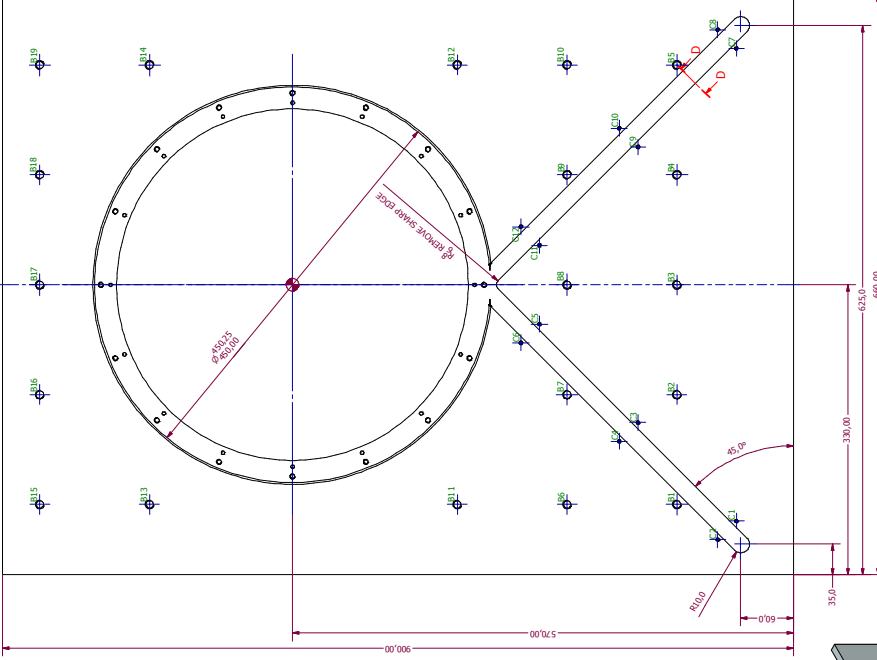
OUTSIDE FACE (0.35 : 1)



HOLE	200M	250M	300M
A1	250.0	250.0	250.0
A2	250.0	250.0	250.0
A3	250.0	250.0	250.0
A4	250.0	250.0	250.0
A5	250.0	250.0	250.0
A6	250.0	250.0	250.0
A7	250.0	250.0	250.0
A8	250.0	250.0	250.0
A9	250.0	250.0	250.0
A10	250.0	250.0	250.0
A11	250.0	250.0	250.0
A12	250.0	250.0	250.0
A13	250.0	250.0	250.0
A14	250.0	250.0	250.0

ALL HOLES:
TAPPED M10 x 1.5 x 12.0 DEEP
HOLE MUST NOT BREAK THRU

INSIDE FACE (0.35 : 1)



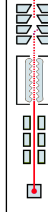
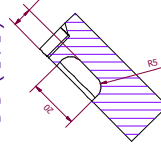
HOLE	200M	250M	300M
B1	250.0	250.0	250.0
B2	250.0	250.0	250.0
B3	250.0	250.0	250.0
B4	250.0	250.0	250.0
B5	250.0	250.0	250.0
B6	250.0	250.0	250.0
B7	250.0	250.0	250.0
B8	250.0	250.0	250.0
B9	250.0	250.0	250.0
B10	250.0	250.0	250.0
B11	250.0	250.0	250.0
B12	250.0	250.0	250.0
B13	250.0	250.0	250.0
B14	250.0	250.0	250.0
B15	250.0	250.0	250.0
B16	250.0	250.0	250.0
B17	250.0	250.0	250.0
B18	250.0	250.0	250.0
B19	250.0	250.0	250.0

ALL HOLES:
TAPPED M10 x 1.5 x 12.0 DEEP
HOLE MUST NOT BREAK THRU

HOLE	200M	250M	300M
C1	250.0	250.0	250.0
C2	250.0	250.0	250.0
C3	250.0	250.0	250.0
C4	250.0	250.0	250.0
C5	250.0	250.0	250.0
C6	250.0	250.0	250.0
C7	250.0	250.0	250.0
C8	250.0	250.0	250.0
C9	250.0	250.0	250.0
C10	250.0	250.0	250.0
C11	250.0	250.0	250.0
C12	250.0	250.0	250.0

ALL HOLES:
TAPPED M10 x 1.5 x 12.0 DEEP
HOLE MUST NOT BREAK THRU

CABLE CHANNEL DETAIL
D-D (1:1)



INSIDE FACE
ISOMETRIC VIEW
(0.15 : 1)

Beam Profile Measurement Tank

Drawn by:	P. Savage	Model file:	Wall Upstream.dwg
Designed by:	P. Savage	Project:	ProfileMeasurements.dwg
Checked by:	P. Savage	Version number:	6
Date:	April 2008	Project:	Front End Test Stand
Manufactured by:	304 Stainless Steel	Sheet number:	2 / 46
Remove all bars		Number of:	1
Scale:	Drawn scale	Drawing number:	IC-REP-235-FE15_3051
Notes:			
Contact:	p.savage@imperial.ac.uk	(Ver 6) 0207 5947 837	(Release) 20/04/2008

NOTES:

1. SURFACE FINISH INDICATED THUS "4"
M/C LAY CIRCULAR,
NO SCRATCHES ACROSS LAY
2. GRAIN FINISH INSIDE, BEAD BLAST FINISH OUTSIDE
ON NON-FEATURE SURFACES

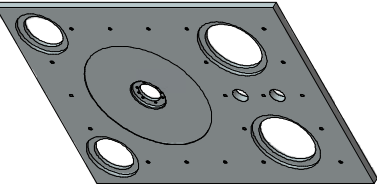
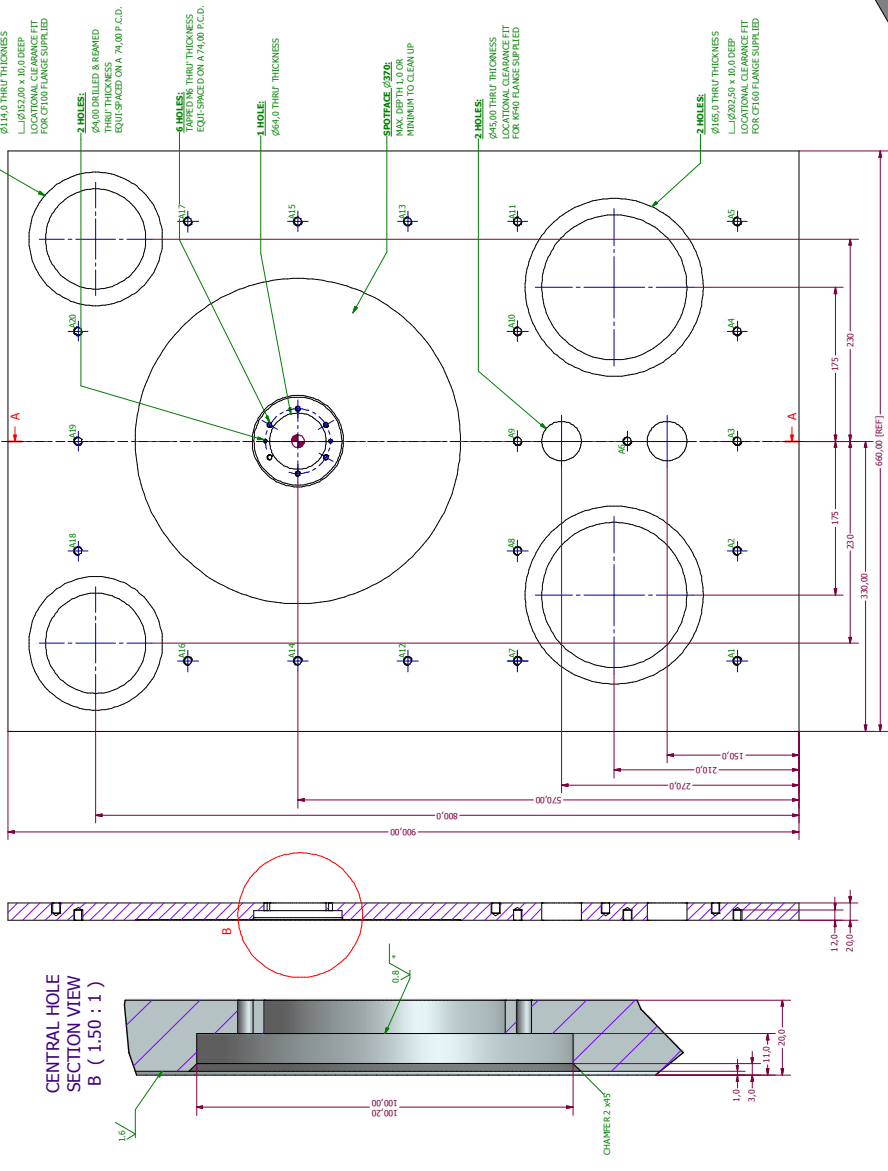
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	$\pm 0.5^\circ$
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	

SECTION VIEW
A-A (0.35 : 1)

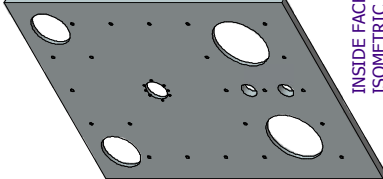
OUTSIDE FACE (0.35 : 1)

INSIDE FACE (0.35 : 1)

CENTRAL HOLE
SECTION VIEW
B (1.50 : 1)



OUTSIDE FACE
ISOMETRIC VIEW
(0.15 : 1)



INSIDE FACE
ISOMETRIC VIEW
(0.15 : 1)

HOLE TABLE 1	Y	X	Ø	Y	X	Ø
A1	250.0	-250.0	125.0	250.0	-250.0	125.0
A2	125.0	-500.0	125.0	125.0	-500.0	125.0
A3	125.0	-500.0	125.0	125.0	-500.0	125.0
A4	125.0	-500.0	125.0	125.0	-500.0	125.0
A5	250.0	-500.0	125.0	250.0	-500.0	125.0
A6	250.0	-500.0	125.0	250.0	-500.0	125.0
A7	250.0	-500.0	125.0	250.0	-500.0	125.0
A8	250.0	-500.0	125.0	250.0	-500.0	125.0
A9	250.0	-500.0	125.0	250.0	-500.0	125.0
A10	250.0	-500.0	125.0	250.0	-500.0	125.0
A11	250.0	-500.0	125.0	250.0	-500.0	125.0
A12	250.0	-500.0	125.0	250.0	-500.0	125.0
A13	250.0	-500.0	125.0	250.0	-500.0	125.0
A14	250.0	-500.0	125.0	250.0	-500.0	125.0
A15	250.0	-500.0	125.0	250.0	-500.0	125.0
A16	250.0	-500.0	125.0	250.0	-500.0	125.0
A17	250.0	-500.0	125.0	250.0	-500.0	125.0
A18	250.0	-500.0	125.0	250.0	-500.0	125.0
A19	250.0	-500.0	125.0	250.0	-500.0	125.0
A20	250.0	-500.0	125.0	250.0	-500.0	125.0

HOLE TABLE 1
TAPPED H10 x 1.5 x 12.0 DEEP
HOLE MUST NOT BREAK THRU

HOLE TABLE 2
ALL HOLES
Ø114.0 THRU THICKNESS
L1052.0 x 10.0 DEEP
LOCATIONAL CLEARANCE FIT
FOR C7160 FLANGE SUPPLIED

HOLE TABLE 3
ALL HOLES
Ø114.0 THRU THICKNESS
L1052.0 x 10.0 DEEP
LOCATIONAL CLEARANCE FIT
FOR C7160 FLANGE SUPPLIED

HOLE TABLE 4
ALL HOLES
Ø114.0 THRU THICKNESS
L1052.0 x 10.0 DEEP
LOCATIONAL CLEARANCE FIT
FOR C7160 FLANGE SUPPLIED

HOLE TABLE 5
ALL HOLES
Ø114.0 THRU THICKNESS
L1052.0 x 10.0 DEEP
LOCATIONAL CLEARANCE FIT
FOR C7160 FLANGE SUPPLIED

HOLE TABLE 6
ALL HOLES
Ø114.0 THRU THICKNESS
L1052.0 x 10.0 DEEP
LOCATIONAL CLEARANCE FIT
FOR C7160 FLANGE SUPPLIED

HOLE TABLE 7
ALL HOLES
Ø114.0 THRU THICKNESS
L1052.0 x 10.0 DEEP
LOCATIONAL CLEARANCE FIT
FOR C7160 FLANGE SUPPLIED

HOLE TABLE 8
ALL HOLES
Ø114.0 THRU THICKNESS
L1052.0 x 10.0 DEEP
LOCATIONAL CLEARANCE FIT
FOR C7160 FLANGE SUPPLIED

NOTES:
1. SURFACE FINISH INDICATED THIS **
MC LAY CIRCULAR
NO SCRATCHES ACROSS LAY
2. GRAIN FINISH INSIDE, BEAD BLAST FINISH OUTSIDE
ON NON-FEATURE SURFACES

Beam Profile Measurement Tank

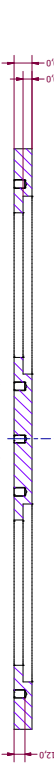
Unless otherwise stated:
Dimensional tolerance: X ± 0.5 mm
X.X ± 0.2 mm
X.XX ± 0.1 mm
Angular tolerance: ± 0.5°
Hole centres: ± 0.05 mm
Surface finish: 1.6 microns
Dimensions in mm

Drawn by: P. Savage
Designed by: P. Savage
Model file: Vial DrawGreen.dwg
Drawing file: ProfileMeasurements.dwg
Version number: 6
Project: Front End Test Stand
Sheet number: 3 / 46
Number of: 1
Drawing number: K10P2.35_FETS_3052
Notes:
Contact: p.savage@imperial.ac.uk (Vial) 0207 594 9137 (Vial) 0208 728093

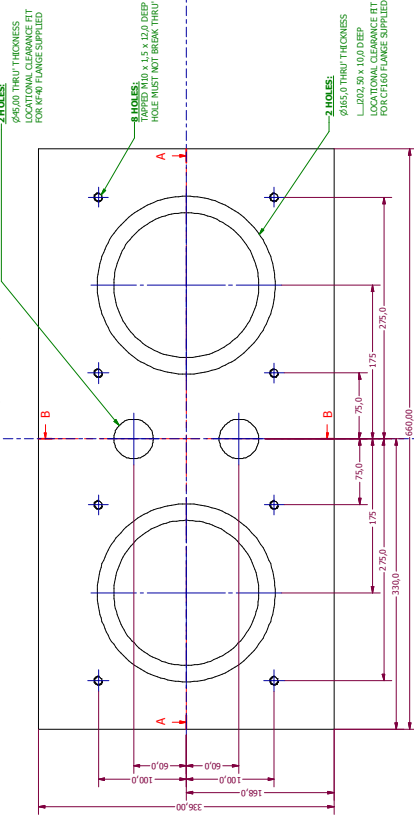
TOP / BOTTOM WALL

Version 6

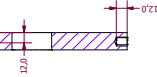
SECTION VIEW
A-A (0.35 : 1)



OUTSIDE FACE (0.35 : 1)



SECTION VIEW
B-B (0.35 : 1)



SIDE VIEW (0.35 : 1)

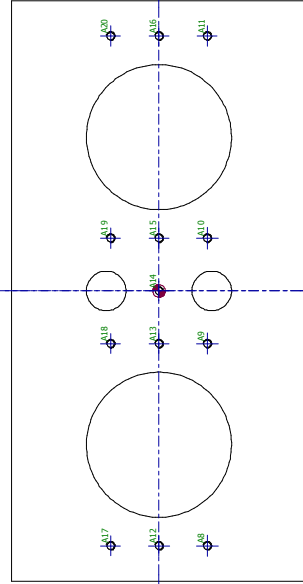


HOLE TABLE A

HOLE	X (mm)	Y (mm)	DIAM (mm)	DEPTH (mm)
A1	250.0	250.0	12.0	12.0
A2	250.0	250.0	20.0	12.0
A3	250.0	250.0	30.0	12.0
A4	250.0	250.0	12.0	12.0
A5	250.0	250.0	20.0	12.0
A6	250.0	250.0	30.0	12.0
A7	250.0	250.0	12.0	12.0
A8	250.0	250.0	20.0	12.0
A9	250.0	250.0	30.0	12.0
A10	250.0	250.0	12.0	12.0
A11	250.0	250.0	20.0	12.0
A12	250.0	250.0	30.0	12.0
A13	250.0	250.0	12.0	12.0
A14	250.0	250.0	20.0	12.0
A15	250.0	250.0	30.0	12.0
A16	250.0	250.0	12.0	12.0
A17	250.0	250.0	20.0	12.0
A18	250.0	250.0	30.0	12.0
A19	250.0	250.0	12.0	12.0
A20	250.0	250.0	20.0	12.0

HOLE TABLE A
ALL HOLES: 12.0 X 12.0 DEEP
HOLE MUST NOT BREAK THRU

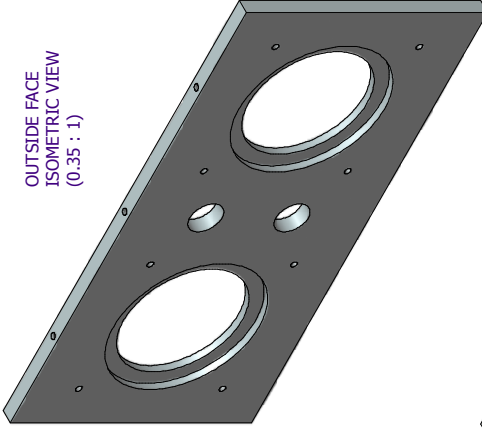
INSIDE FACE (0.35 : 1)



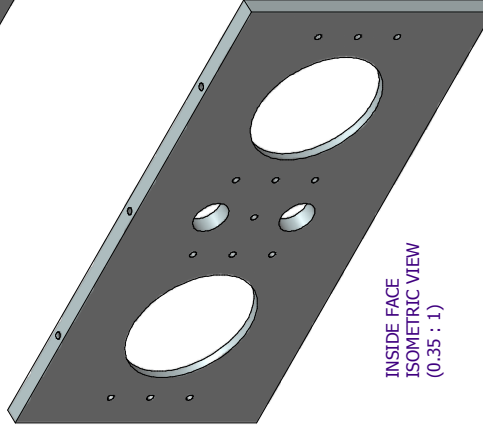
NOTES:

1. GRAIN FINISH INSIDE, BEAD BLAST FINISH OUTSIDE ON NON-FEATURE SURFACES

OUTSIDE FACE
ISOMETRIC VIEW
(0.35 : 1)



INSIDE FACE
ISOMETRIC VIEW
(0.35 : 1)



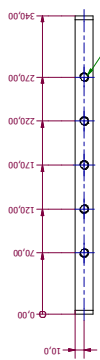
Beam Profile Measurement Tank

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	Wall_TopBottom.dwg
Checked by:	P. Savage	Drawing file:	ProfileMeasurements.dwg
Date:	April 2008	Version number:	6
Manufactured by:	304 Stainless Steel	Project:	Front End Test Stand
Material:	304 Stainless Steel	Sheet number:	4 / 46
Remove all burrs		Number of:	2
Scale:	Drawn scale	Drawing number:	XC-EP-2-35-FE15-3053
Notes:	Remove superficial MID holes from inside face (14 of)	Dimensions in:	mm
Contact:	p.savage@imperial.ac.uk	(Ver 6.007 9947 837 - (Revision) 20/08/2008)	

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

SIDE WALL FLANGE

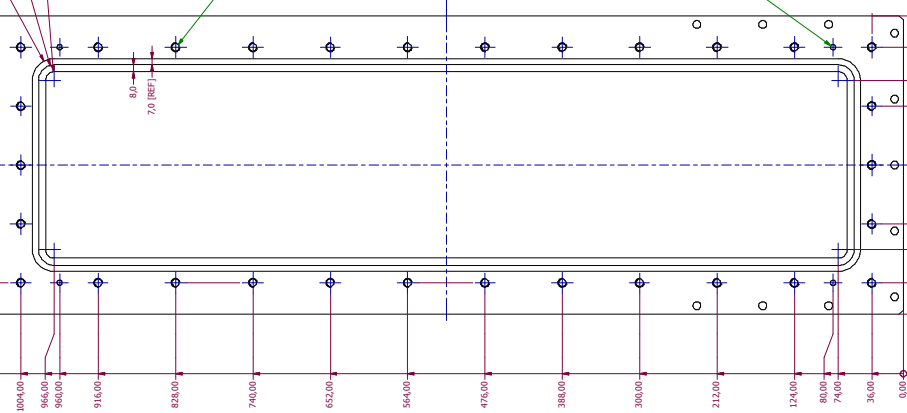
TOP END VIEW (0.35 : 1)



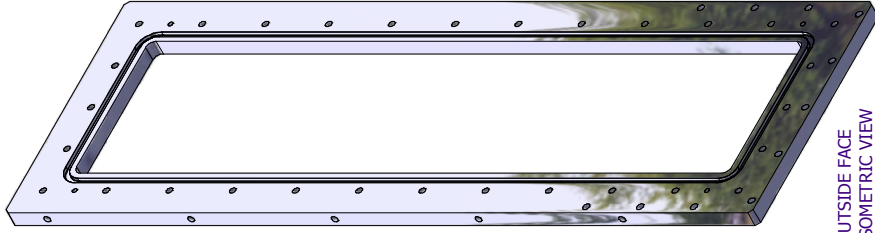
SIDE VIEW (0.35 : 1)



OUTSIDE FACE (0.35 : 1)



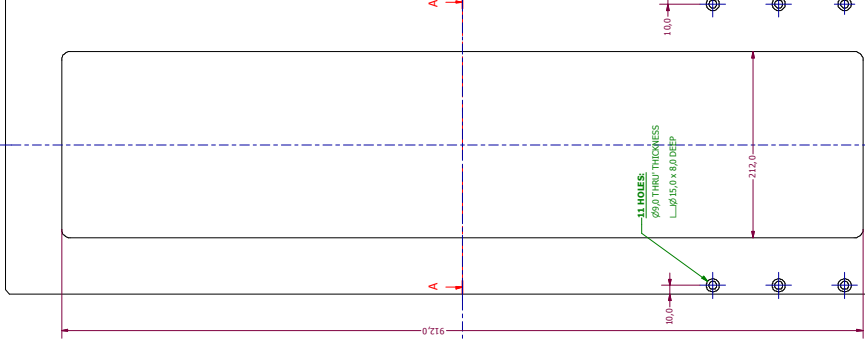
OUTSIDE FACE
ISOMETRIC VIEW
(0.35 : 1)



SECTION VIEW
A-A (0.35 : 1)



INSIDE FACE (0.35 : 1)



INSIDE FACE
ISOMETRIC VIEW
(0.35 : 1)

Beam Profile Measurement Tank

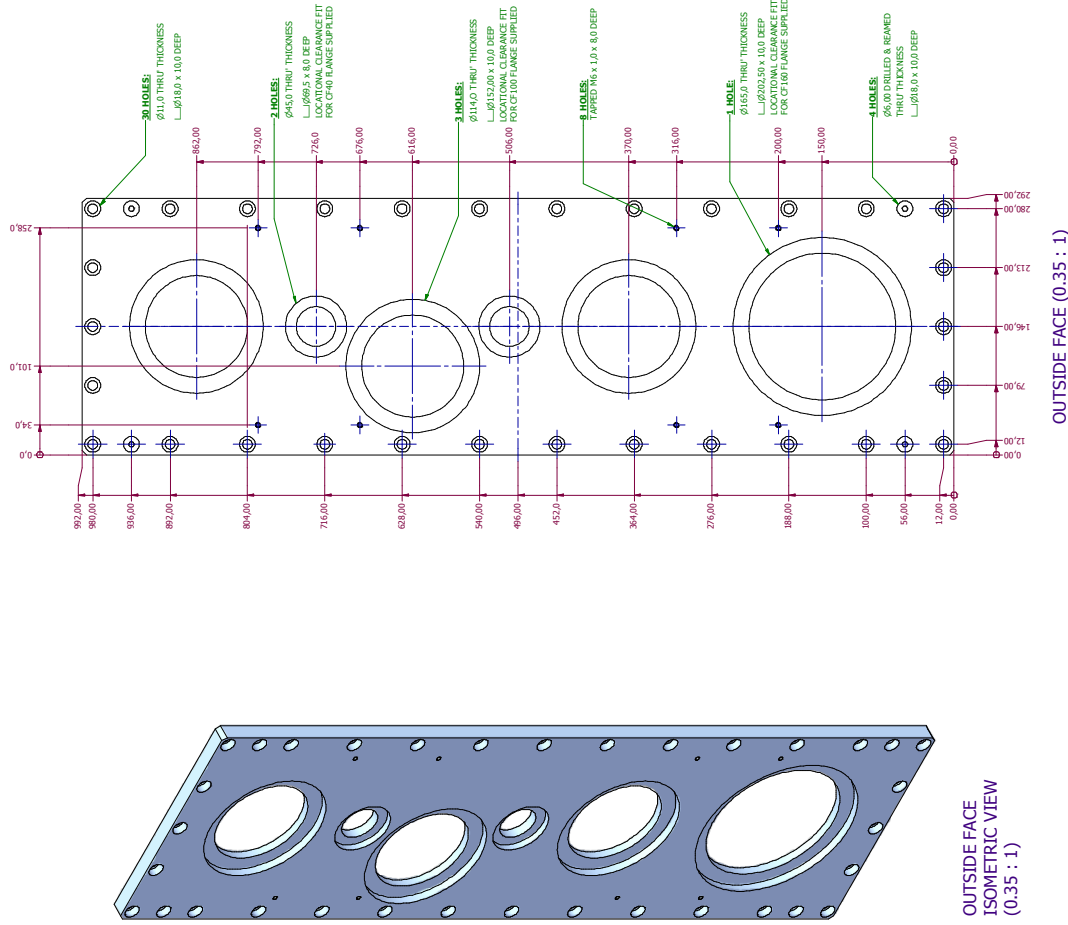
Drawn by:	P. Sanger	Projection:	Third angle
Designed by:	P. Sanger	Model file:	Wall_Sect.dwg
Checked by:	P. Sanger	Drawing file:	ProfileMeasurements.dwg
Date:	April 2008	Version number:	6
Manufactured by:	304 Stainless Steel	Project:	Front End Test Stand
Remove all burrs		Sheet number:	5 / 46
Drawn:		Number of:	2
Drawn scale:		Drawing number:	IC-FPS-235-FRTS_3054
Notes:			
Contract:	p.sanger@imperial.ac.uk	(Ver 6.00) 994 7837	(Revision) 20/04/2008

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

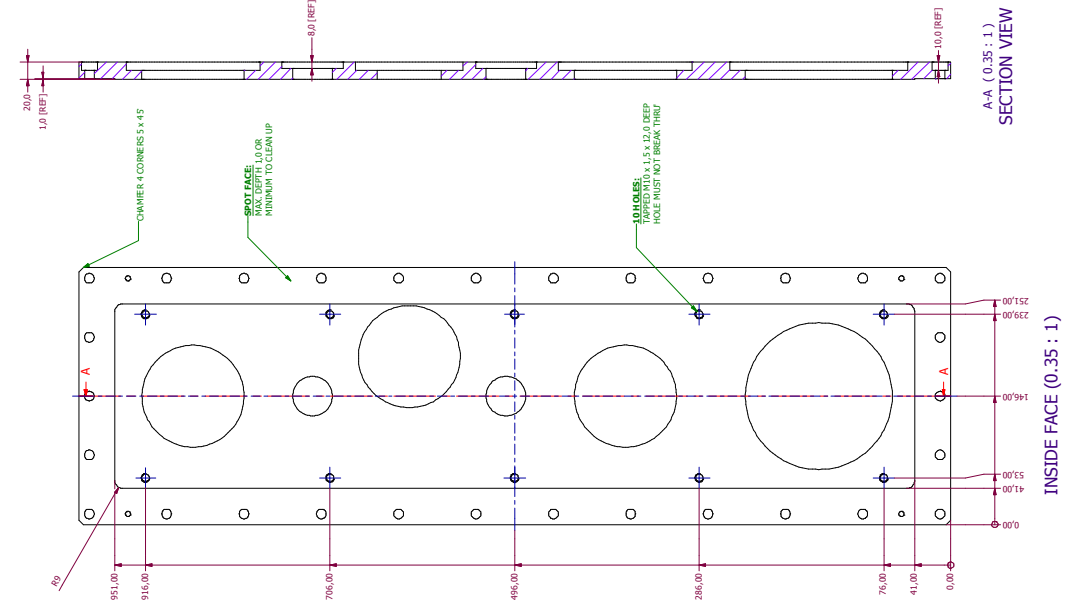
- NOTES:**
1. GRAIN FINISH INSIDE. BEAD BLAST FINISH OUTSIDE ON NON-FEATURE SURFACES

BOTTOM END VIEW (0.35 : 1)



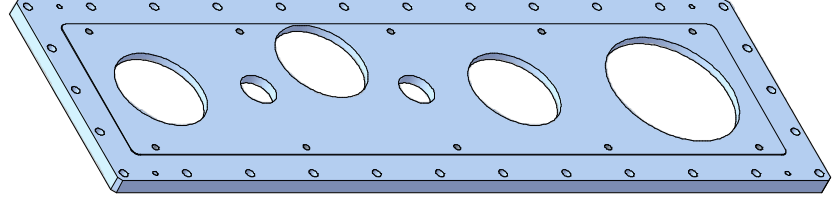


OUTSIDE FACE
ISOMETRIC VIEW
(0.35 : 1)

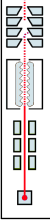


A-A (0.35 : 1)
SECTION VIEW

INSIDE FACE (0.35 : 1)



INSIDE FACE
ISOMETRIC VIEW
(0.35 : 1)



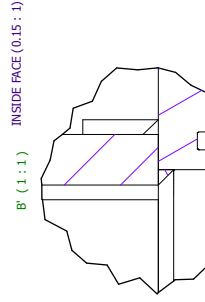
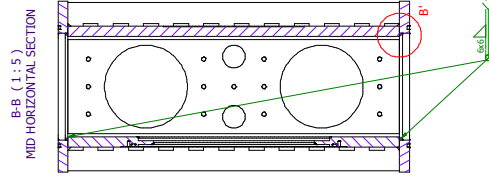
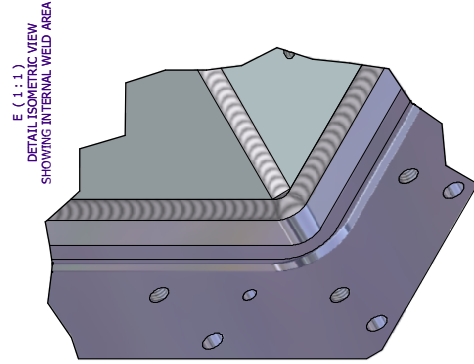
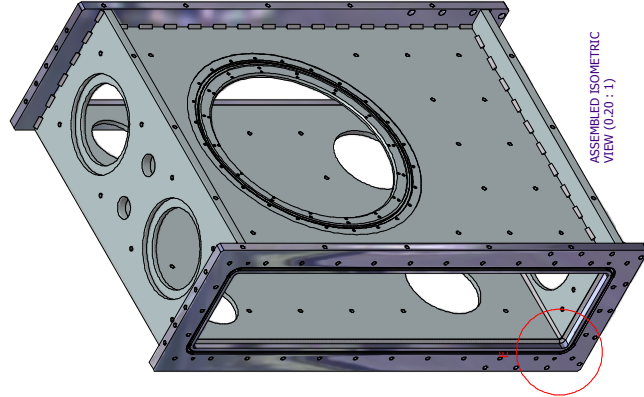
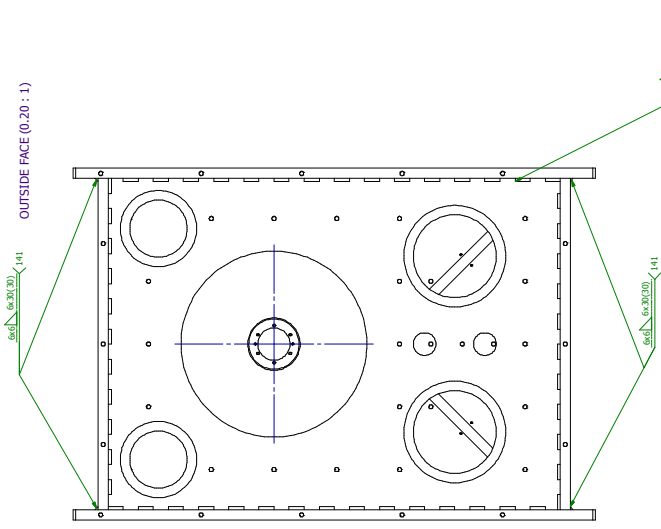
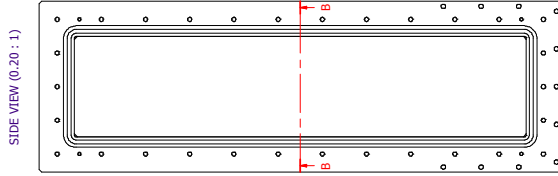
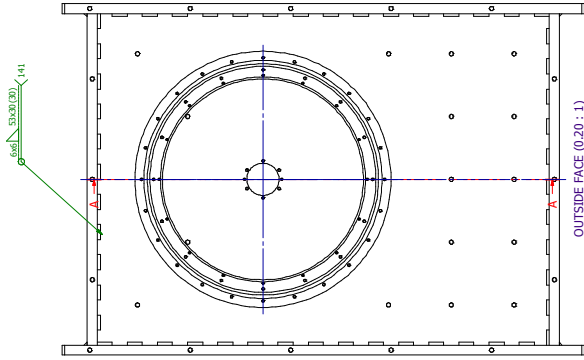
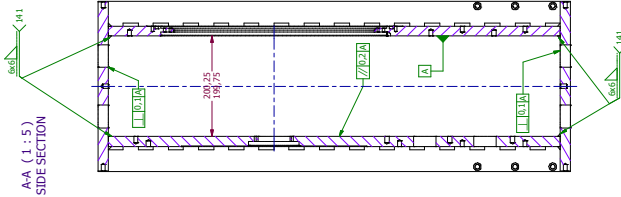
Title		Beam Profile Measurement Tank
Drawn by:	P. Savage	Projection: Third angle
Designed by:	P. Savage	Model file: Over_Static.rpt
Checked by:		Drawing file: ProfileMeasurements.dwg
Date:	April 2008	Version number: 6
Manufactured by:		Project: Front End Test Stand
Material:	304 Stainless Steel	Sheet number: 8 / 46
Remove all burrs		Number of: 1
Scale:	Drawn scale	Drawing number: K_PEP_235_PET5_3057
Notes:		
Contact:		p.savage@imperial.ac.uk (Work) 0207 594 9137 (Home) 02089 208093

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

- NOTES:
- GRAIN FINISH INSIDE, BEAD BLAST FINISH OUTSIDE
ON NON-FEATURE SURFACES

MAIN TANK BODY WELD DETAIL

Version 6

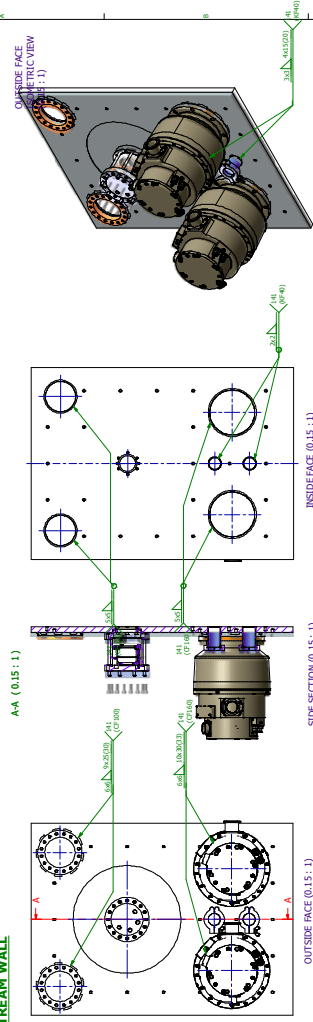


Title		Revision	
Beam Profile Measurement Tank			
Drawn by:	P. Savage	Project:	Third angle
Designed by:	P. Savage	Model file:	BeamProfileMeasurementTank.dwg
Checked by:	P. Savage	Drawing file:	ProfileMeasurementTank.dwg
Date:	April 2008	Version number:	6
Manufactured by:	304 Stainless Steel	Project:	Front End Test Stand
Material:	304 Stainless Steel	Sheet number:	9 / 49
Remove all burrs		Number of:	2 tank assembly
Scale:	Drawn scale	Drawing number:	KC-PEP-25-FE15_3058
Notes:		Dimensions in mm	
Contact: p.savage@imperial.ac.uk (Work) 0207 2260093			

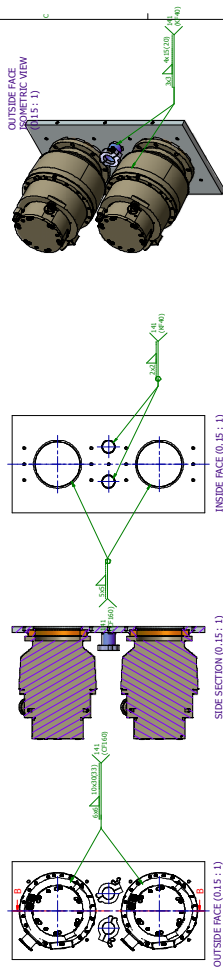
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm:	0

FLANGE WELDING DETAIL

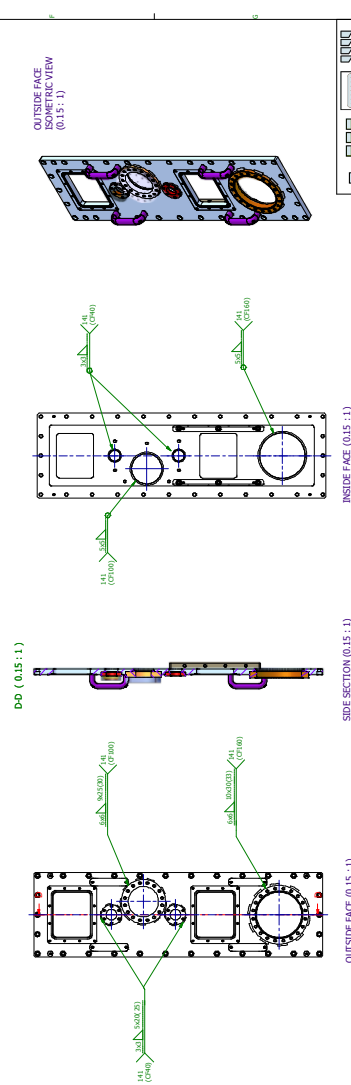
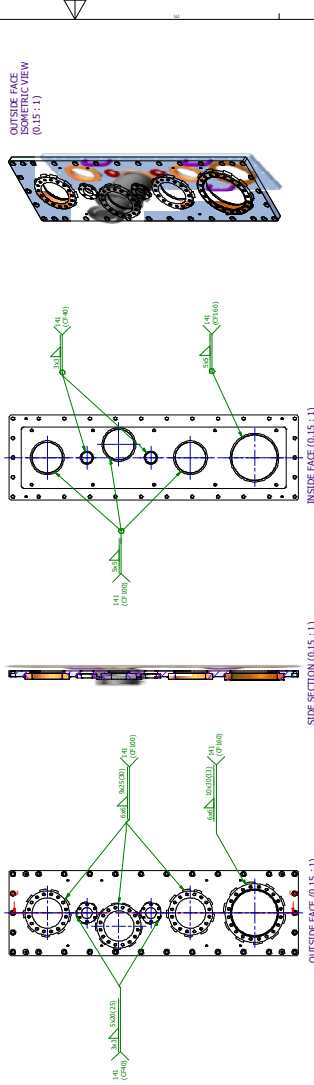
A-A (0.15 : 1)



B-B (0.15 : 1)



C-C (0.15 : 1)



Customer No.:
WAL 00000000000000000000

Ordering type:
P - Single

Ordering date:
4/27/2025

Material shown on the invoice:
FLANGE

Material number:
101 F 419

Material description:
101 F 419

Part No.:
101 F 419

Quantity:
100 PCS

Unit price:
101 F 419

Unit weight:
101 F 419

Unit volume:
101 F 419

Unit weight:
101 F 419

Unit volume:
101 F 419

Unit price:
101 F 419

Unit weight:
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Unit price:
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Unit weight:
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Unit volume:
101 F 419

Unit price:
101 F 419

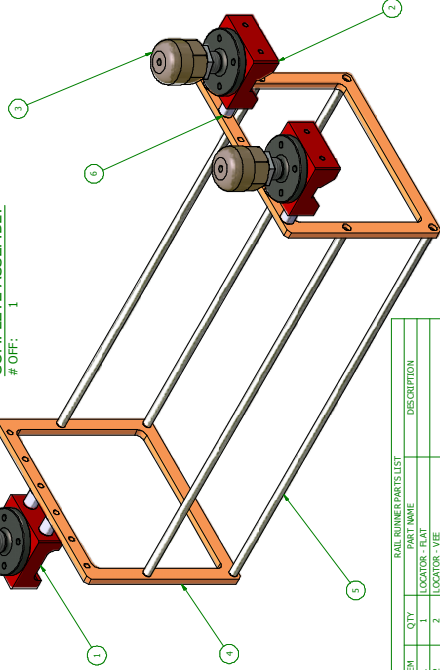
Unit weight:
101 F 419

NOTES:

1. FLANGE ORIENTATION - HOLES TO STRADDLE CENTRE LINE AS SHOWN
i.e. NO HOLE AT TOP DEAD CENTRE POSITION

COMPLETE ASSEMBLY

OFF: 1

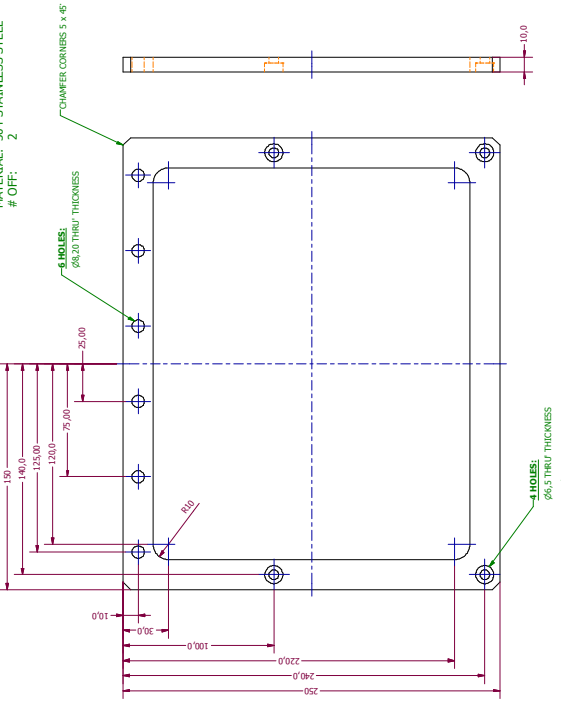


RAIL RUNNER PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	LOCATOR - FLAT
2	2	LOCATOR - VEE
3	2	LOCATOR - SCREW
4	2	SIDE PLATE
5	4	TIE ROD
6	6	SPACER

RAIL RUNNER SIDE PLATE

MATERIAL: 304 STAINLESS STEEL

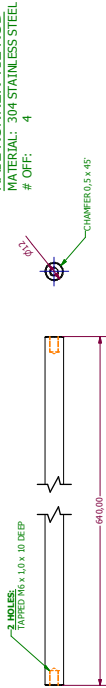
OFF: 2



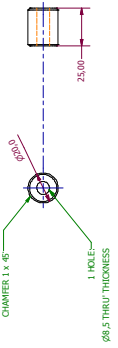
RAIL RUNNER TIE ROD

MATERIAL: 304 STAINLESS STEEL

OFF: 4



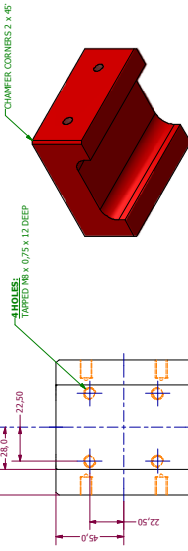
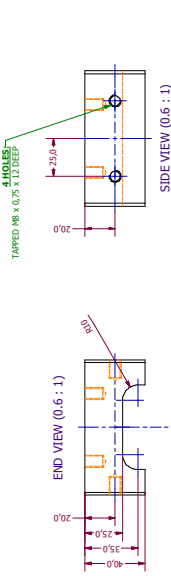
RAIL RUNNER ASSEMBLY



RAIL RUNNER SPACER

MATERIAL: 304 STAINLESS STEEL

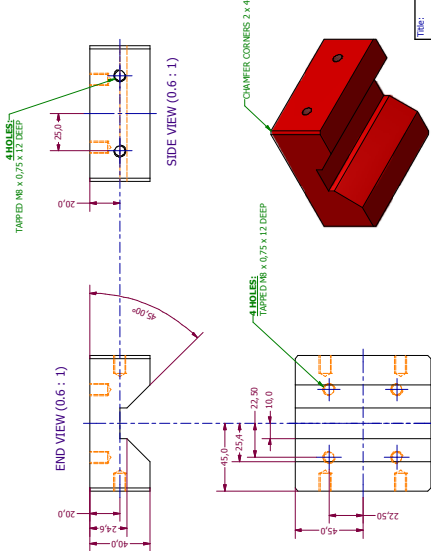
OFF: 6



RAIL RUNNER LOCATOR - FLAT

MATERIAL: EN24

OFF: 1



RAIL RUNNER LOCATOR - VEE

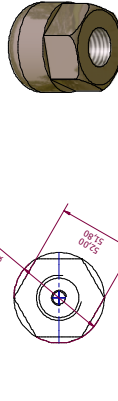
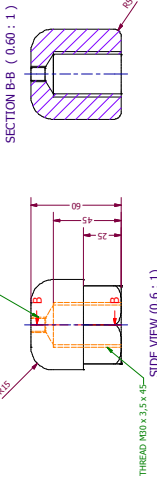
MATERIAL: EN24

OFF: 2

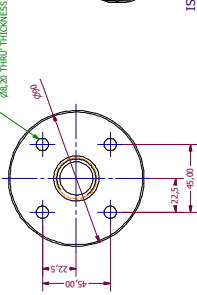
SCREW JACK - NUT

MATERIAL: EN24

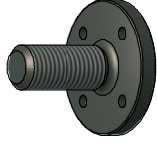
OFF: 3



PLAN VIEW (0.6 : 1)



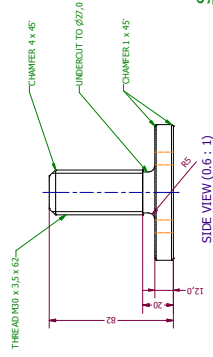
ISOMETRIC VIEW (0.6 : 1)



SCREW JACK - SCREW

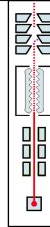
MATERIAL: EN24

OFF: 3



SIDE VIEW (0.6 : 1)

ISOMETRIC VIEW (0.6 : 1)



Beam Profile Measurement Tank

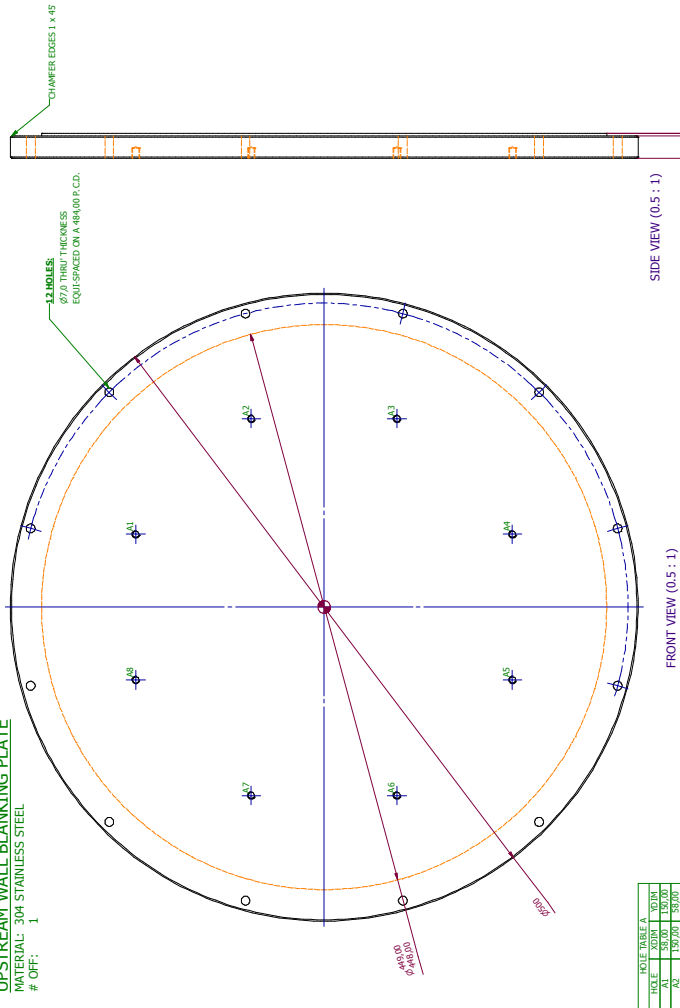
Drawn by:	P. Sanger	Projection:	Third angle
Designed by:	P. Sanger	Model file:	Railrunner.asm
Checked by:	P. Sanger	Drawing file:	ProfileMeasurements.dwg
Date:	April 2008	Version number:	6
Manufactured by:	Sanger per part	Project:	Front End Tie Rod
Material:	Remove all burrs	Sheet number:	11 of 49
Scale:	Drawn scale	Number of:	Surface finish: 1.6 microns
Notes:		Drawing number:	IC_FEP275_FETD_3060
Contact:	p.sanger@imperial.ac.uk		

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	0

MISCELLANEOUS

UPSTREAM WALL BLANKING PLATE

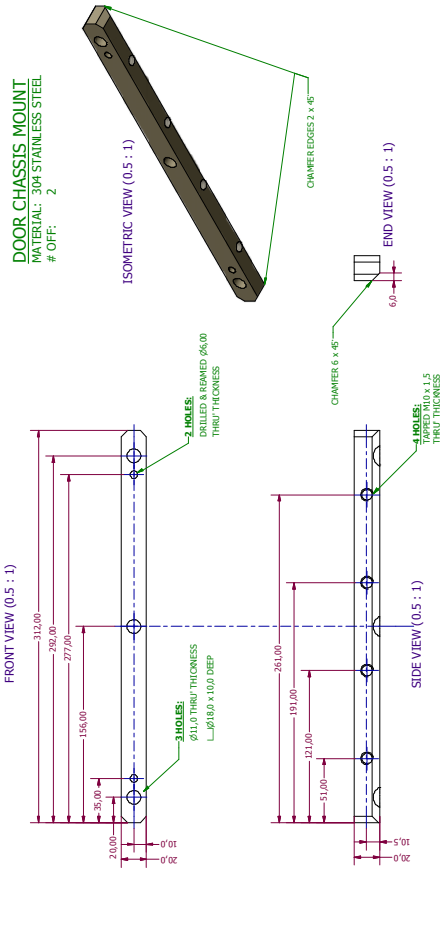
MATERIAL: 304 STAINLESS STEEL
OFF: 1



HOLE	TABLE A	TABLE B	TABLE C
A1	150.00	150.00	150.00
A2	150.00	150.00	150.00
A3	150.00	150.00	150.00
A4	150.00	150.00	150.00
A5	150.00	150.00	150.00
A6	150.00	150.00	150.00
A7	150.00	150.00	150.00
A8	150.00	150.00	150.00

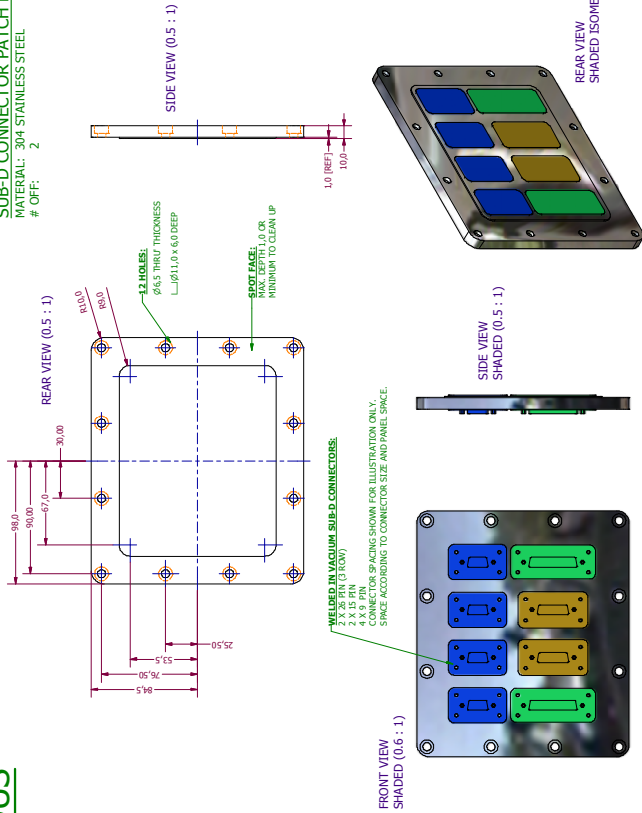
DOOR CHASSIS MOUNT

MATERIAL: 304 STAINLESS STEEL
OFF: 2



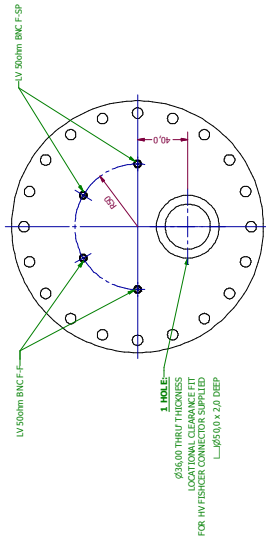
SUB-D CONNECTOR PATCH PANEL

MATERIAL: 304 STAINLESS STEEL
OFF: 2



CF FLANGES WITH FEEDTHROUGHS

MATERIAL: USING FLANGES SUPPLIED
OFF: 1 OF EACH TYPE SHOWN



CF160 BLANK FLANGE (SUPPLIED) FITTED WITH:
2 x LOW VOLTAGE 50 OHM FEMALE BNC CONNECTORS
EQUI-SPACED ON A 100 P.C.D.

CF100 BLANK FLANGE (SUPPLIED) FITTED WITH:
4 x LOW VOLTAGE 50 OHM FEMALE BNC CONNECTORS
EQUI-SPACED ON A 70 P.C.D.

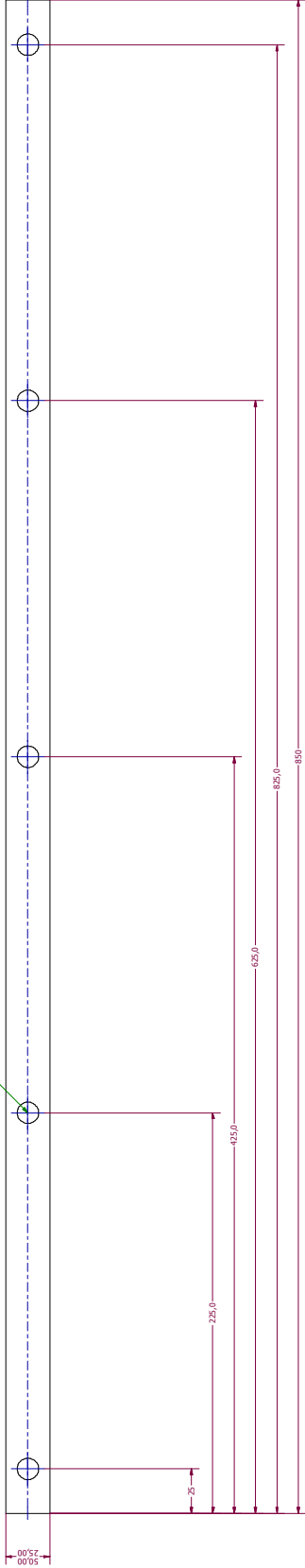
Beam Profile Measurement Tank

Drawn by:	P. Sanger	Model file:	BeamProfileMeasurementTank.dwg
Checked by:	P. Sanger	Version number:	6
Date:	April 2008	Project:	Front End Test Stand
Manufactured by:	Sanger per part	Sheet number:	27 / 49
Remove all bars		Number of:	2 x 160 x 160 x 160
Scale:		Drawing number:	27-160 x 160 x 160
Notes:			
Contact:	p.sanger@imperial.ac.uk	(View) 0207 5949 837	(Fax) 0207 5949 837

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

TANK TO CAGE MOUNTING STRIP

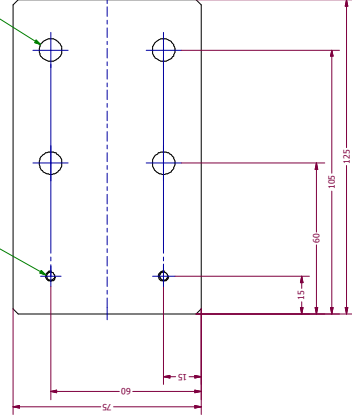
4 HOLES
Ø15.0 THRU THICKNESS



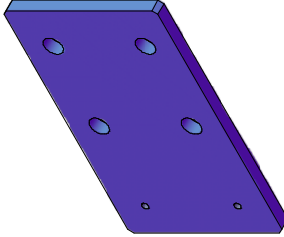
2 HOLES
DRILL Ø16 TAP M4
THRU THICKNESS

1 HOLES
DRILL Ø9 THRU THICKNESS

CHAMFER CORNERS 2 x 45°



OPTICAL TABLE STAY PLATE
MATERIAL: DURAL
OPT: 4

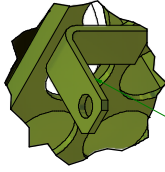
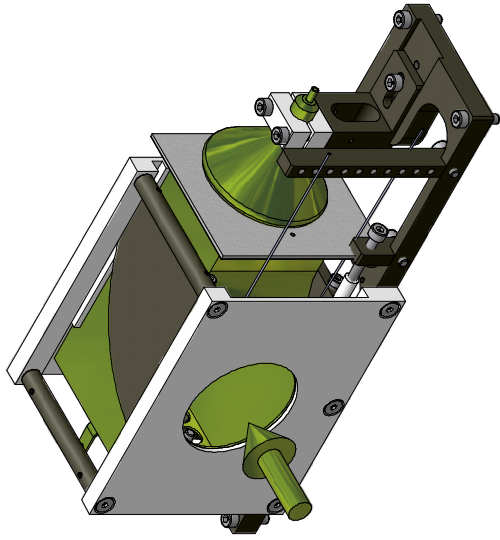


Beam Profile Measurement Tank

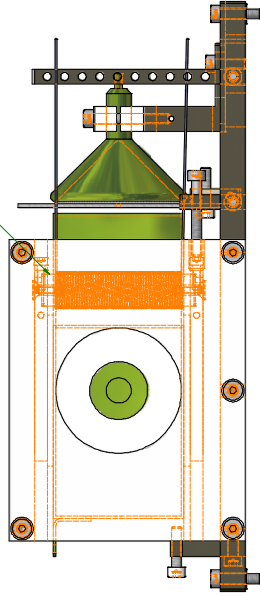
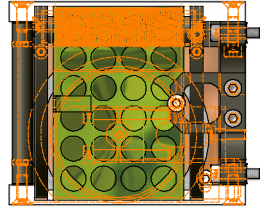
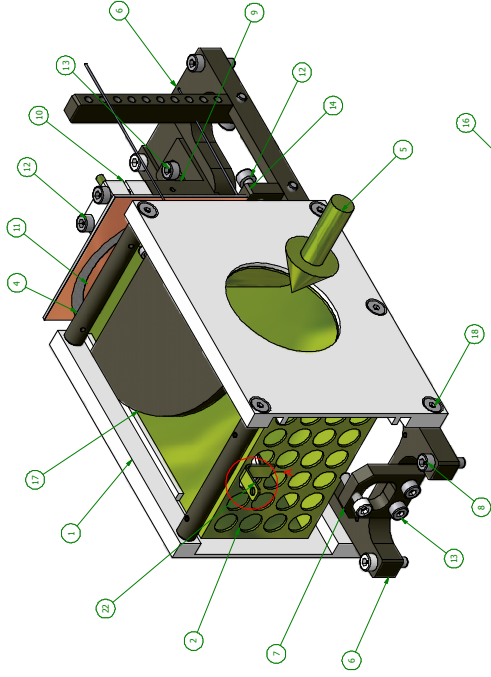
Title:	P-Savage	Projection:	Third angle
Drawn by:	P-Savage	Model file:	TankToCageMountStrip.dwg
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	April 2008	Version number:	6
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	Alu Alloy 2088	Sheet number:	13 / 49
Remove all burrs		Number of:	2
Scale:	Do not scale	Drawing number:	K-HEP-235-FE15_3062
Notes:	None		
Contact:	p.savage@imperial.ac.uk	(Ver 6.00) 9949 7837	(Revision) 200803

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	□

DETECTOR PROTOTYPE



DETAILED VIEW OF SOLDERED
ELECTRICAL CONNECTION



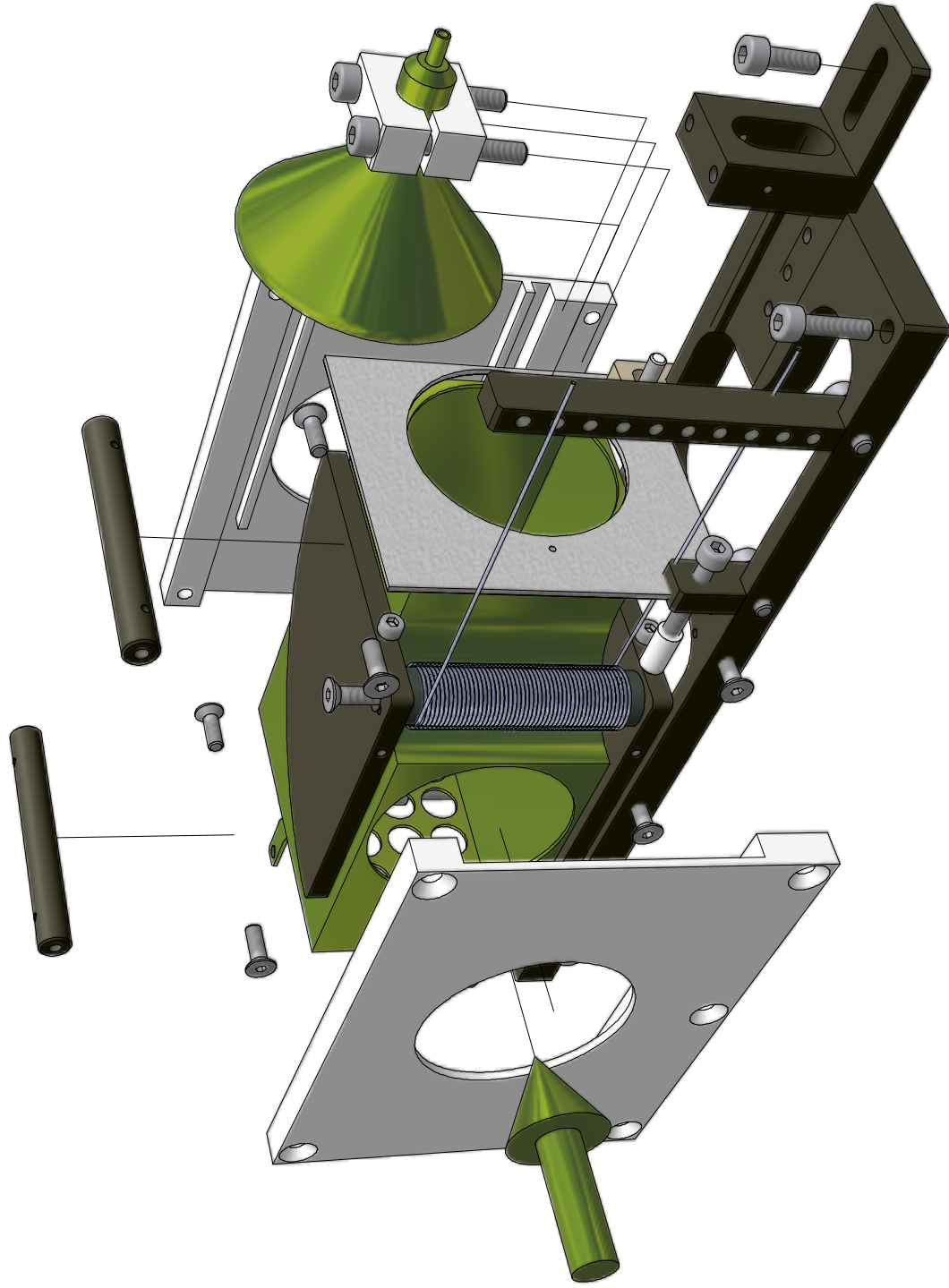
BILL NUMBER PARTS LIST		
ITEM	QTY	DESCRIPTION
1	2	Copper/Jack/Insulator
2	1	PTFE or Nylon if PTFE is too unstable
3	1	Fabricated soldered film (c.1.0mm) copper jacket
4	2	Base plate
5	2	Base plate
6	1	Base plate
7	1	Base plate
8	6	ISO 4612 - M4 x 16
9	1	Hexagon Socket Head Cap Screw
10	1	PTFE
11	1	PTFE
12	3	ISO 4612 - M4 x 20
13	5	ISO 4612 - M4 x 12
14	4	Base plate
15	4	Base plate
16	1	Base plate
17	2	Dupont-Quadrant
18	12	ISO 4612 - M4 x 10
19	2	Base plate
20	2	Base plate
21	1	Dupont/Electrical/Connection
22	1	Copper Jack/Insulator for 2kV
23	1	1000pF caps
24	1	Capacitor
25	1	Capacitor
26	1	Capacitor
27	1	Capacitor



Beam-Profile Measurement Tank - Internals

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	Detector11um
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	June 2008	Version number:	1
Manufactured by:	HEP Workshop	Project:	Front End Test Stand
Material:	N/A	Sheet number:	35 / 49
Remove all burrs		Number of:	2 complete assembly
Scale:	Drawn scale	Drawing number:	IC-HEP-FS-FETIS_3064
Notes:	Prototype design		
Contact:	p.savage@imperial.ac.uk (Work) 0207 594 7837 (Home) 02088 208093		

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	□



DETECTOR PROTOTYPE EXPLODED VIEW

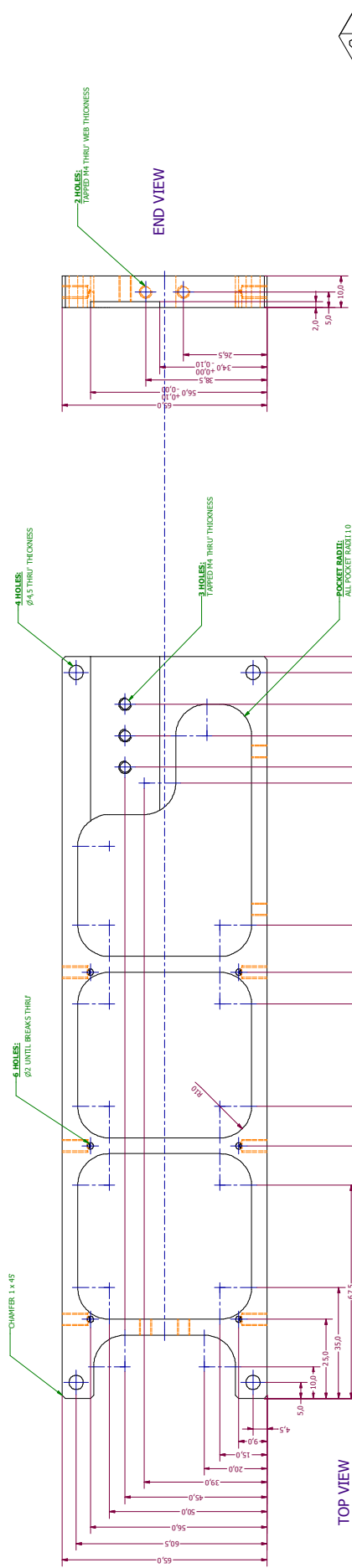
Beam Profile Measurement Tank - Internals

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	DetectorI1.dwg
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	June 2008	Version number:	1
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	N/A	Sheet number:	26 / 49
Remove all burrs		Number of:	2 complete assembly
Scale:		Drawing number:	KC-HEP-2-25-FETIS_3065
Notes:			

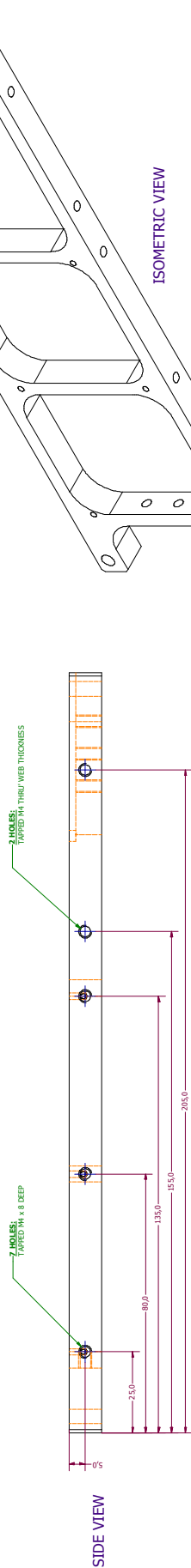
Contact: p.savage@imperial.ac.uk (New 0207 994 9137) (Revision 01/08/2008)

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

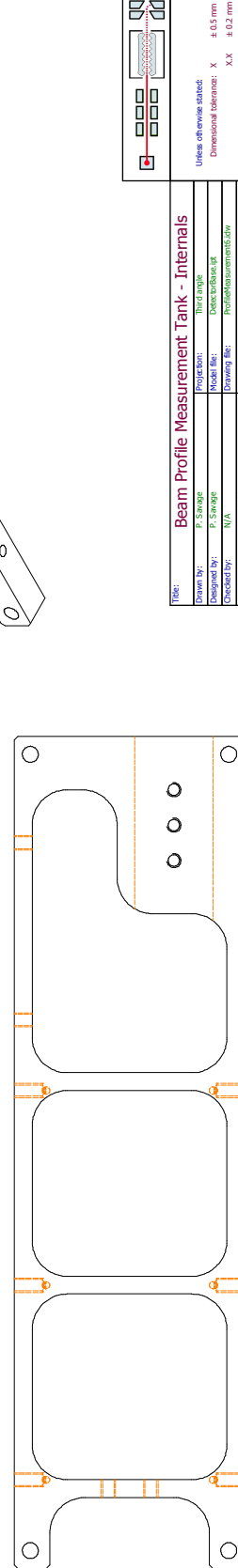
DETECTOR BASE PLATE



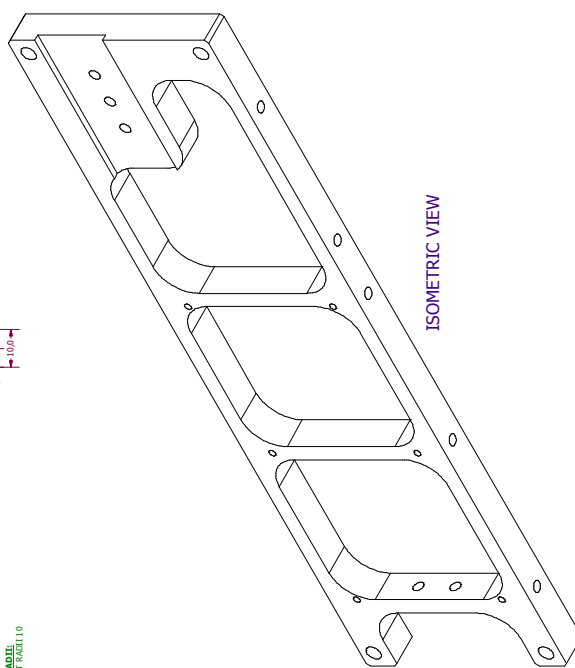
TOP VIEW



SIDE VIEW



BOTTOM VIEW



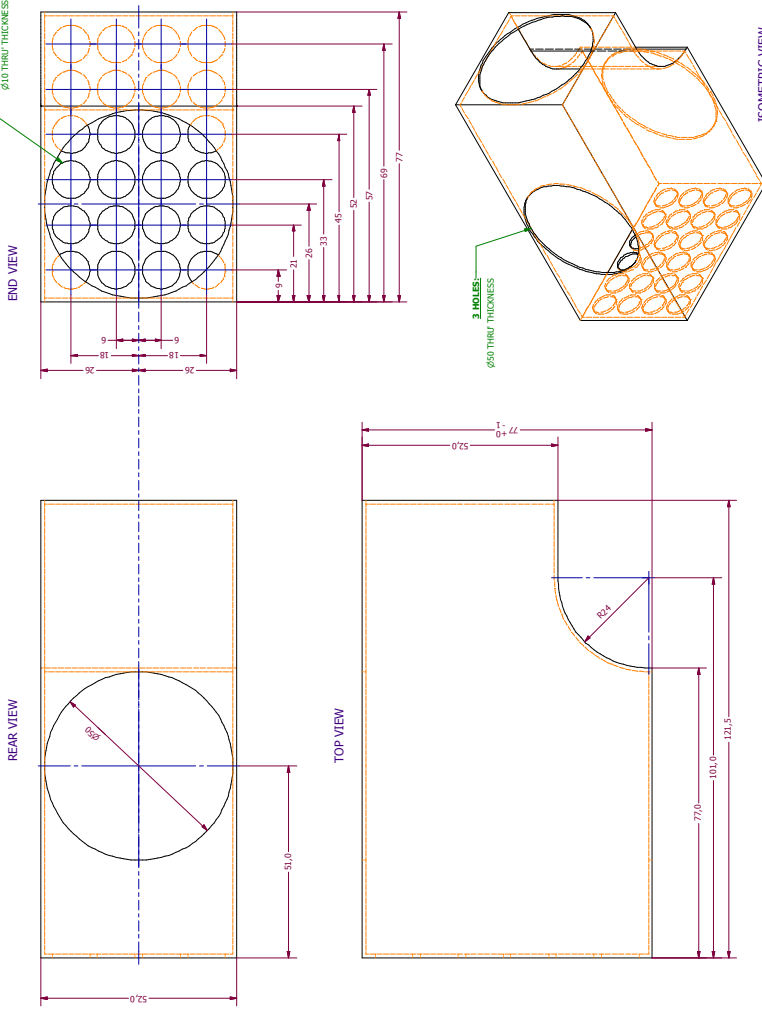
ISOMETRIC VIEW

Beam Profile Measurement Tank - Internals

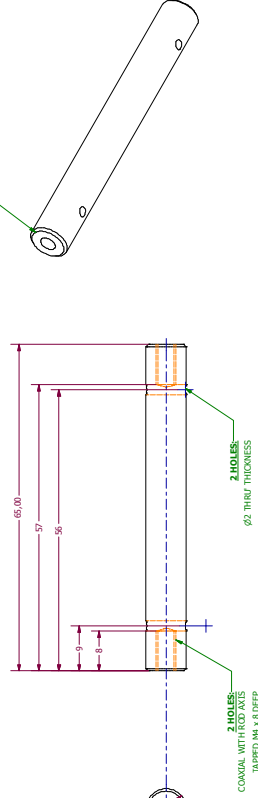
Drawn by:	P. Savage	Projection:	Third angle	Unless otherwise stated:	
Designed by:	P. Savage	Model file:	DetBase.dwg	Dimensional tolerance:	X ± 0.5 mm
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg		X.X ± 0.2 mm
Date:	June 2008	Version number:	1		X.XX ± 0.1 mm
Manufactured by:	HEP workshop	Project:	Front End Test Stand	Angular tolerance:	± 0.5°
Material:	C250 Cast Aluminium	Sheet number:	17 / 49	Hole centres:	± 0.05 mm
Remove all burrs		Number of:	1	Surface finish:	1.6 microns
Scale:	Drawn scale	Drawing number:	IC-FEFS-PTS-3066	Dimensions in mm	mm
Notes:					
Contact:	p.savage@imperial.ac.uk	(Ver 1.00) 9947 837	(Revision) 20/08/2008		

NOTES:

1. MATERIAL: C250 CAST ALUMINIUM MACHINED TOOLING PLATE

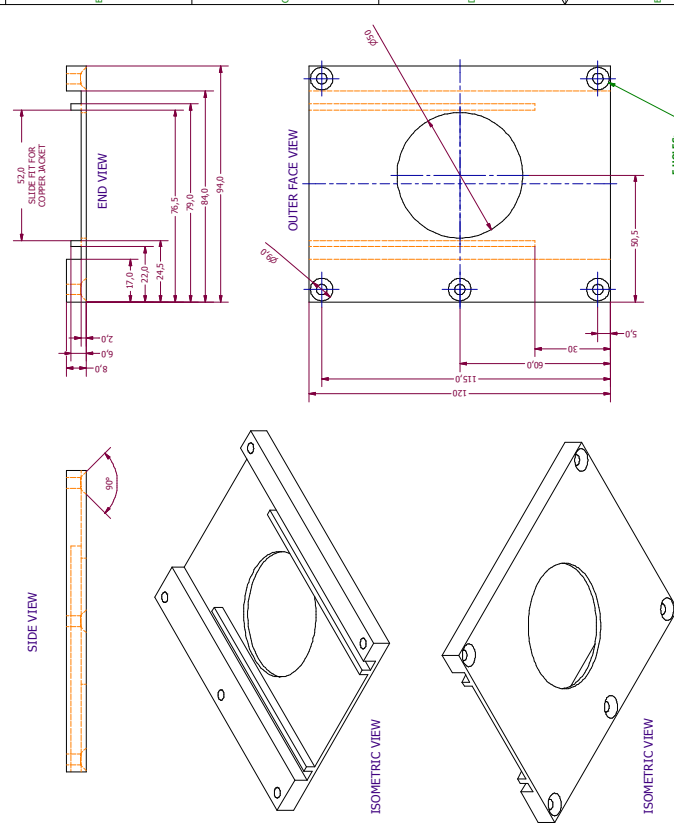


- NOTES:**
- OVERLAP LUGS TO AID SOLDERED FABRICATION CAN OCCUPY INTERIOR VOLUME BUT MUST MINIMISE OBSTRUCTION OF HOLES
 - CLEAN TO REMOVE EXCESS SOLDER FLUX AFTER COMPLETION

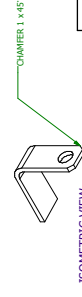
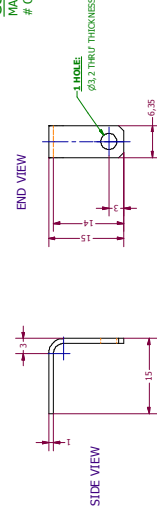


CROSS BAR
MATERIAL: DURAL
OFF: 2

COPPER JACKET INSULATOR
MATERIAL: P.T.F.E. or MACOR / SHAPAL IF P.T.F.E. PROVES UNSUITABLE
OFF: 2



COPPER JACKET CONNECTOR
MATERIAL: COPPER
OFF: 1

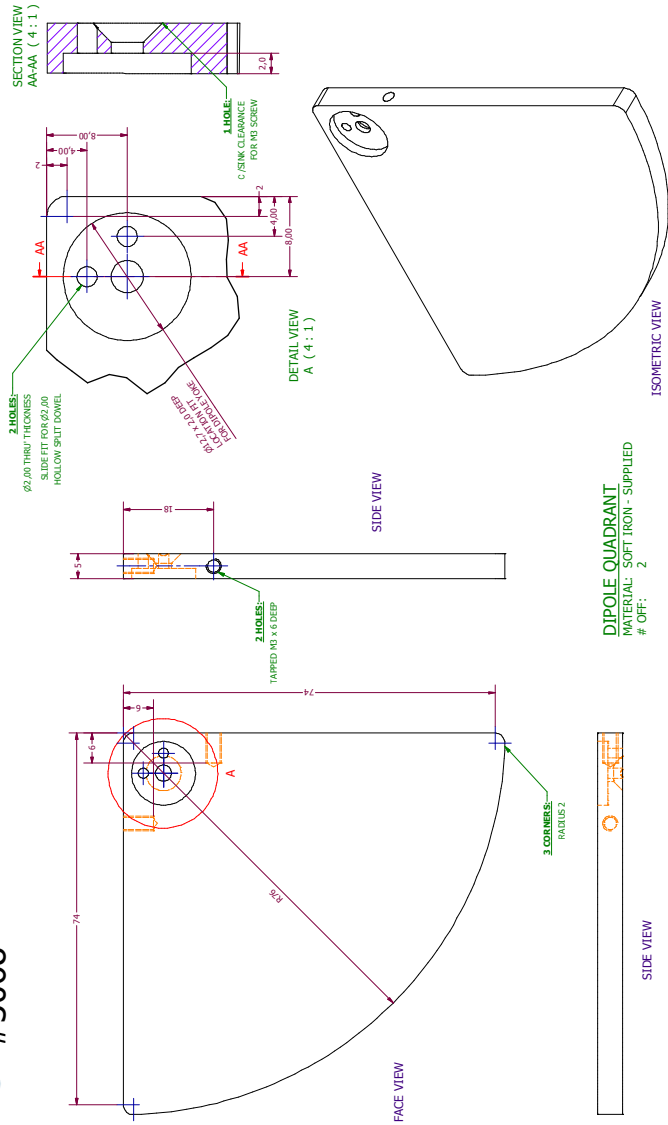


BASE VIEW

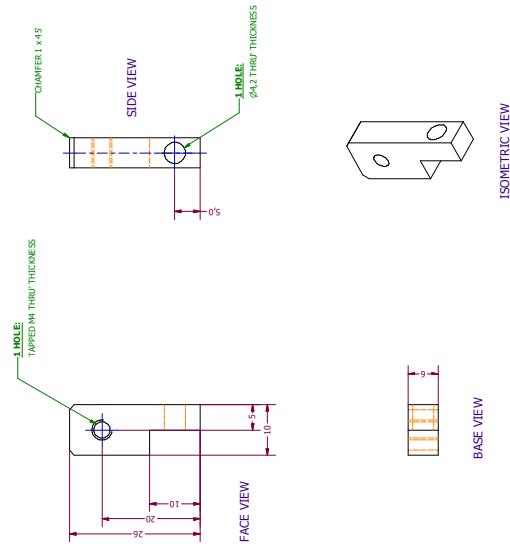
ISOMETRIC VIEW

Title: Beam Profile Measurement Tank - Internals	
Drawn by: P. Savage	Projection: Third angle
Designed by: P. Savage	Model file: Copper Jacket.dwg
Checked by: N/A	Drawing file: ProfileMeasurements.dwg
Date: June 2008	Version number: 1
Manufactured by: HEP workshop	Project: Front End Test Stand
Material: N/A	Sheet number: 28 / 49
Remove all burrs	Number of: N/A
Scale: Drawn scale	Drawing number: KCP-FS-FETS_3067
Notes:	Notes:
Contact: p.savage@imperial.ac.uk (View 000 994 837 (Internal) 0181 276009)	

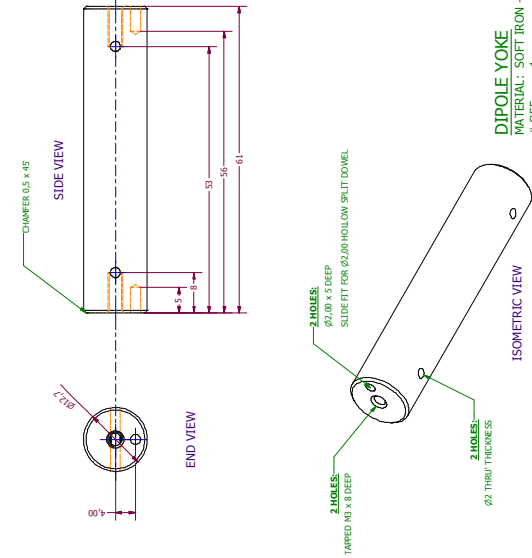
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	Ø



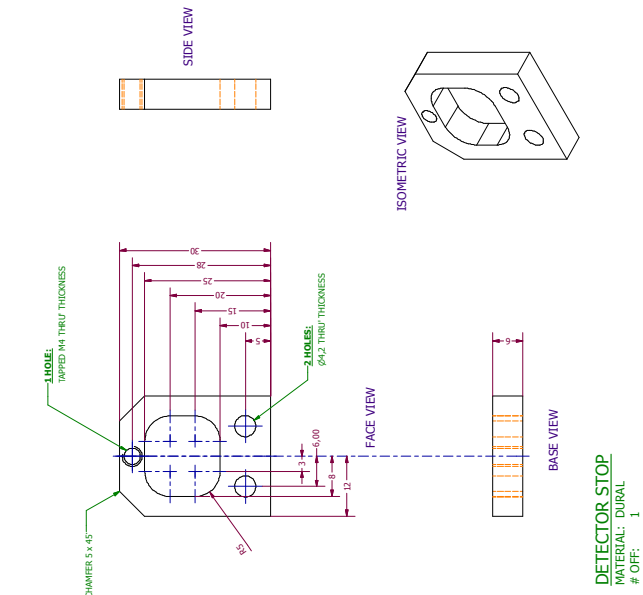
DIPOLE QUADRANT
MATERIAL: SOFT IRON - SUPPLIED
OFF: 2



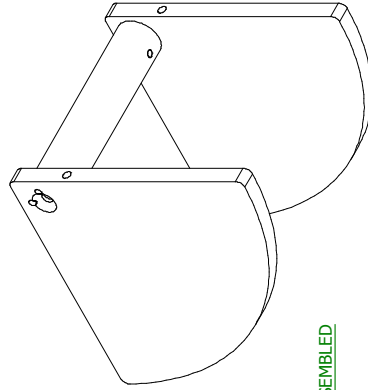
DIPOLE STOP
MATERIAL: DURAL
OFF: 1



DIPOLE YOKE
MATERIAL: SOFT IRON - SUPPLIED
OFF: 1



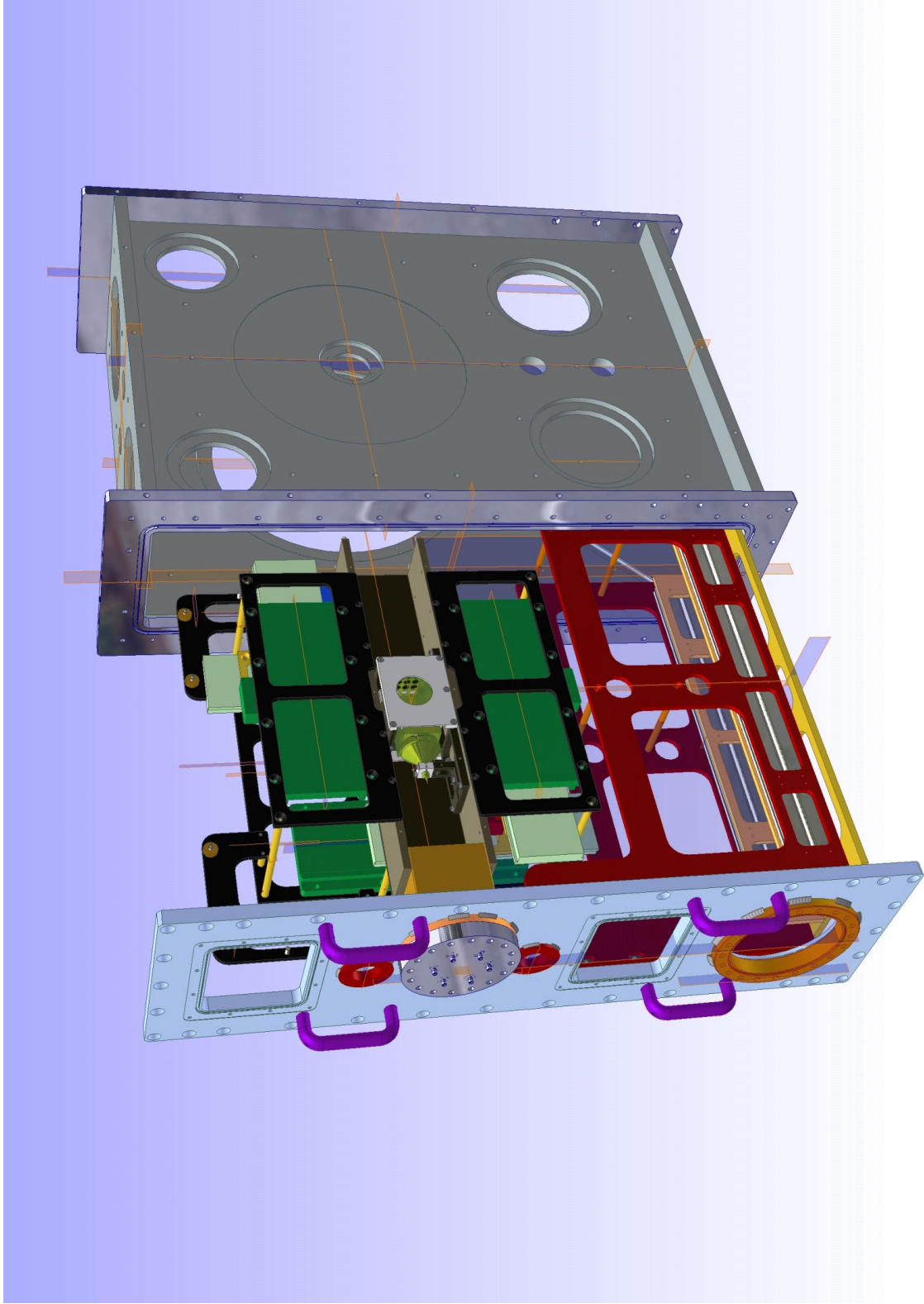
DETECTOR STOP
MATERIAL: DURAL
OFF: 1



DIPOLE ASSEMBLED

Title		Beam Profile Measurement Tank - Internals	
Drawn by:	P. Sanger	Projection:	Third angle
Designed by:	P. Sanger	Model file:	DipoleQuadrant.dwg
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	June 2008	Version number:	1
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	N/A	Sheet number:	29 / 49
Remove all burrs		Number of:	N/A
Scale:	Drawn scale	Drawing number:	IC-HEP-735-FETS_3068
Notes:			
Contact:		p.sanger@imperial.ac.uk (Work) 0207 594 7837 (Home) 02088 220093	

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:	Ø



**DOOR ASSEMBLY COMPLETE
WITH MOTORS AND DETECTOR**

Beam Profile Measurement Tank - Internals

Drawn by:	P. Savage	Projection:	N/A
Designed by:	P. Savage	Model file:	
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	June 2008	Version number:	1
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	N/A	Sheet number:	21 / 49
Remove all burrs	N/A	Number of:	N/A
Seals:	N/A	Drawing number:	KC-HEP-235_FETS_3070
Notes:	N/A		
Contact:	p.savage@imperial.ac.uk	(Ver 1.00) 9947 7837	(Revision) 29/08/2008

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



Beam Profile Measurement Tank - Internals

File:	Beam Profile Measurement Tank - Internals			
Drawn by:	P. Savage	Project:	Door Chase Completion	
Designed by:	P. Savage	Model file:	DoorChaseCompletion.dwg	
Created by:	N/A	Drawing file:	BeamProfileMeasurements.dwg	
Date:	3rd July 2018	Version number:	1	
Manufactured by:	HEP workshop	Project:	Front End Test Stand	
Material:	Aluminium	Sheet number:	22 / 149	
Assembly:	Assembly	Part of assembly:	Beam Profile Measurement	
Scale:	Drawn scale	Drawing number:	IC-EP-FS-IFTS-3011	
Notes:				
Contd:	P. Savage@imperial.ac.uk (Work) 0207 594 7817 (Mobile) 07884 258358			

DOOR CHASSIS - SIDE



20F

20F

IDEALLY ALL HOLES 'A' TO BE PRODUCED WITHOUT RELOCATING PART

MOLE	YIELD	YIELD	DESCRIPTION
81	51.00	93.00	Mk007-6H
82	51.00	143.00	Mk007-6H
83	51.00	193.00	Mk007-6H
84	51.00	243.00	Mk007-6H
85	29.00	51.00	Mk007-6H
86	29.00	143.00	Mk007-6H
87	29.00	193.00	Mk007-6H
88	29.00	243.00	Mk007-6H
89	49.00	93.00	Mk007-6H
90	49.00	143.00	Mk007-6H
91	49.00	193.00	Mk007-6H
92	49.00	243.00	Mk007-6H
93	49.00	293.00	Mk007-6H
94	69.00	143.00	Mk007-6H
95	69.00	193.00	Mk007-6H
96	69.00	243.00	Mk007-6H

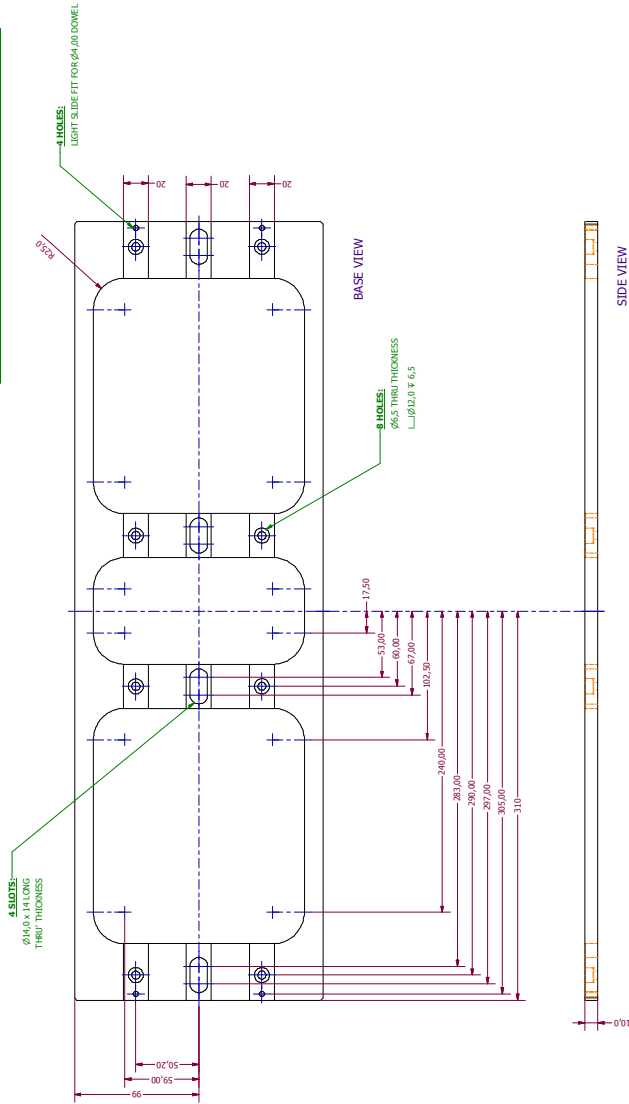
Hole	Table C - All holes diameter 3,00 thru to tapped hole
1	0,0982
2	0,0649
3	0,0982
4	0,0649
5	0,0982
6	0,0649
7	0,0982
8	0,0649
9	0,0982
10	0,0649
11	0,0982
12	0,0649
13	0,0982
14	0,0649
15	0,0982
16	0,0649
17	0,0982
18	0,0649
19	0,0982
20	0,0649
21	0,0982
22	0,0649
23	0,0982
24	0,0649
25	0,0982
26	0,0649
27	0,0982
28	0,0649
29	0,0982
30	0,0649
31	0,0982
32	0,0649
33	0,0982
34	0,0649
35	0,0982
36	0,0649
37	0,0982
38	0,0649
39	0,0982
40	0,0649
41	0,0982
42	0,0649
43	0,0982
44	0,0649
45	0,0982
46	0,0649
47	0,0982
48	0,0649
49	0,0982
50	0,0649
51	0,0982
52	0,0649
53	0,0982
54	0,0649
55	0,0982
56	0,0649
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71	0,0982
72	0,0649
73	0,0982
74	0,0649
75	0,0982
76	0,0649
77	0,0982
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79	0,0982
80	0,0649
81	0,0982
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88	0,0649
89	0,0982
90	0,0649
91	0,0982
92	0,0649
93	0,0982
94	0,0649
95	0,0982
96	0,0649
97	0,0982
98	0,0649
99	0,0982
100	0,0649



File:	Beam Profile Measurement Tank - Internals			
Drawn by:	P. Savage	Project file:	Third angle	
Designed by:	P. Savage	Model name:	Coastal-14	
Created:	N/A	Drawing file:	ProfileMeasurements.dwg	
Checked by:		Version number:	1	
Date:	3rd July 2008	Project Name:	Profile Test Sand	
Manufactured by:	HEP workshop	Sheet number:	21/149	
Material:	C20 casting grade	Project number:		
Number of Joints:		Drawing number:	1-4457 P-15-IFTS-3974	
Scale:	Drawn to scale			
Notes:				
Contract:	P.savage@btinternet.co.uk (work) 0707 567 7617 (mobile) 01698 158358			

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	□

DOOR CHASSIS - BASE

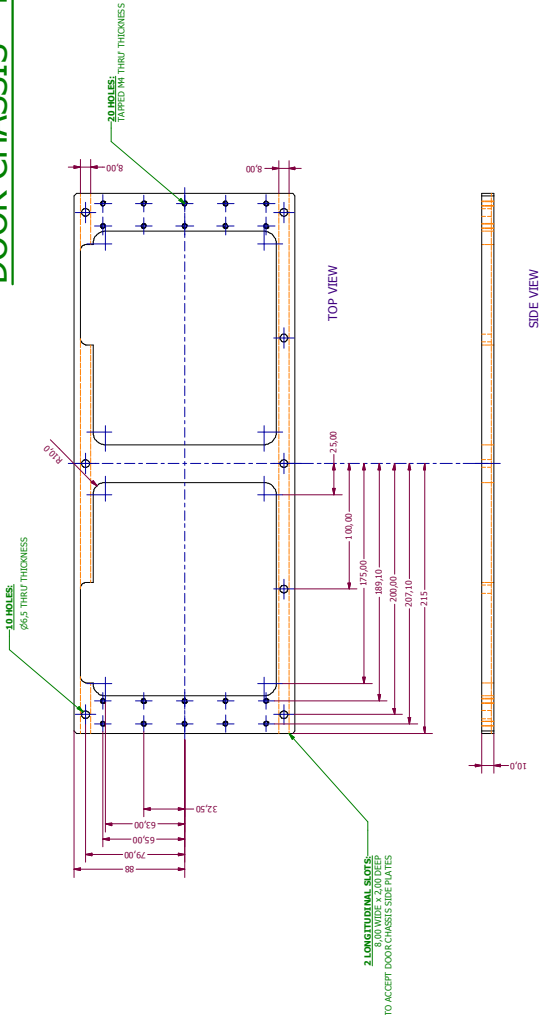


NOTES:

MATERIAL: C250 CAST ALUMINIUM MACHINED TOOLING PLATE

1 OFF

DOOR CHASSIS - TOP



NOTES:

MATERIAL: C250 CAST ALUMINIUM MACHINED TOOLING PLATE

1 OFF

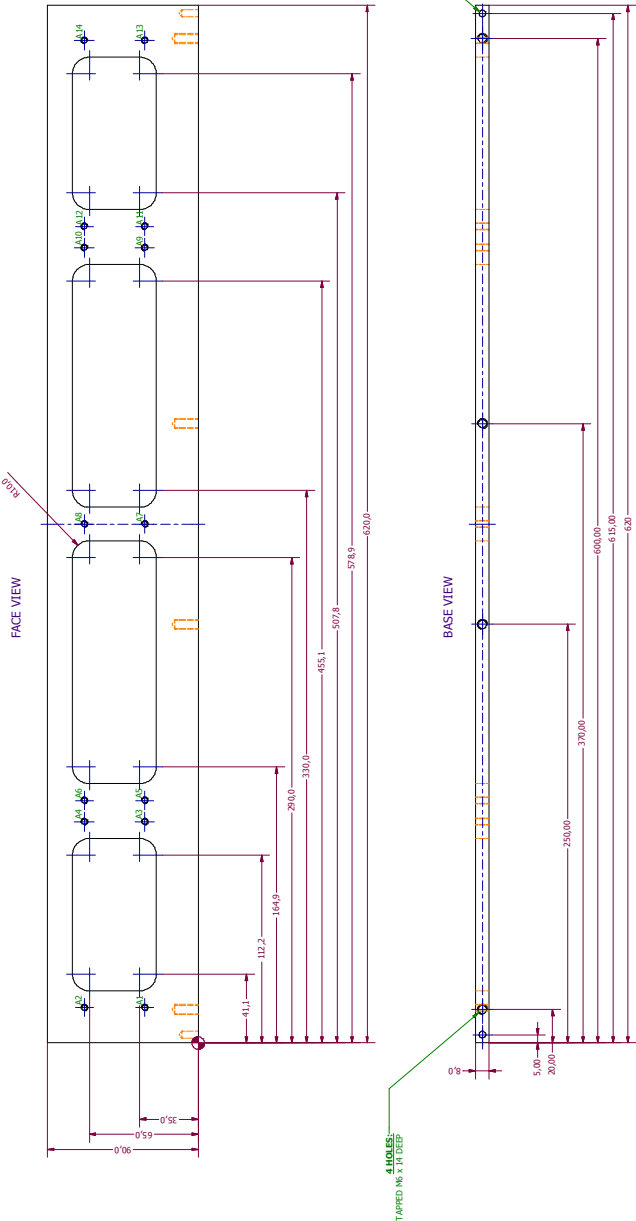
Beam Profile Measurement Tank - Internals

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	DoorChassisBase.rvt
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	3rd July 2008	Version number:	1
Manufactured by:	HEP Workshop	Project:	Front End Test Stand
Material:	C250 tooling plate	Sheet number:	28 / 49
Remove all burrs		Number of:	2 each
Seals:		Drawing number:	IC-HEP-735-FRTS-3073
Notes:		Drawing scale:	
Contract:	p.savage@imperial.ac.uk (Ver 1.007 9947 837 (Release 200808))		

Unless otherwise stated:

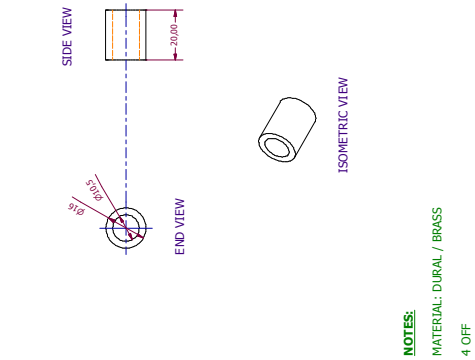
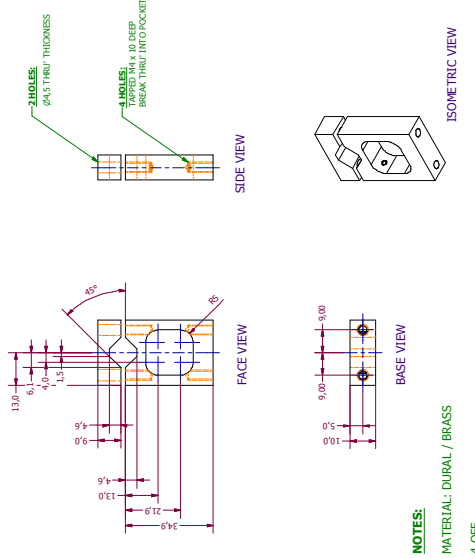
Dimensional tolerance:	X	± 0.5 mm
	X.X	± 0.2 mm
	X.XX	± 0.1 mm
Angular tolerance:		± 0.5°
Hole centres:		± 0.05 mm
Surface finish:		1.6 microns
Dimensions in mm		Ø

DOOR CHASSIS - BALL SLIDE TO BASE MOUNT



CHASSIS INTERFACE MOUNT

CHASSIS INTERFACE SPACER



NOTES:

MATERIAL: C250 CAST ALUMINIUM MACHINED TOOLING PLATE
2 OFF
IDEALLY ALL HOLES 'A' TO BE PRODUCED WITHOUT RELOCATING PART

Beam Profile Measurement Tank - Internals			
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	BeamProfileMeasurementTank.dwg
Checked by:	N/A	Drawing file:	BeamProfileMeasurementTank.dwg
Date:	4th July 2008	Version number:	1
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	Remove all burrs	Sheet number:	25 / 49
Scale:	Drawing scale	Number of:	1
Notes:		Drawing number:	IC-HEP-235-RETS-3074
Contact:	p.savage@imperial.ac.uk (Work) 0207 594 9137 (Home) 02084 200093		

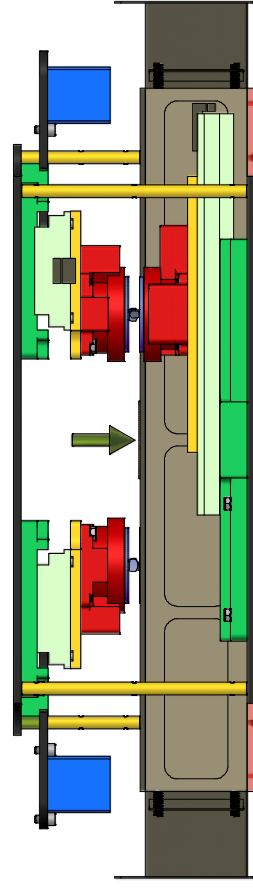
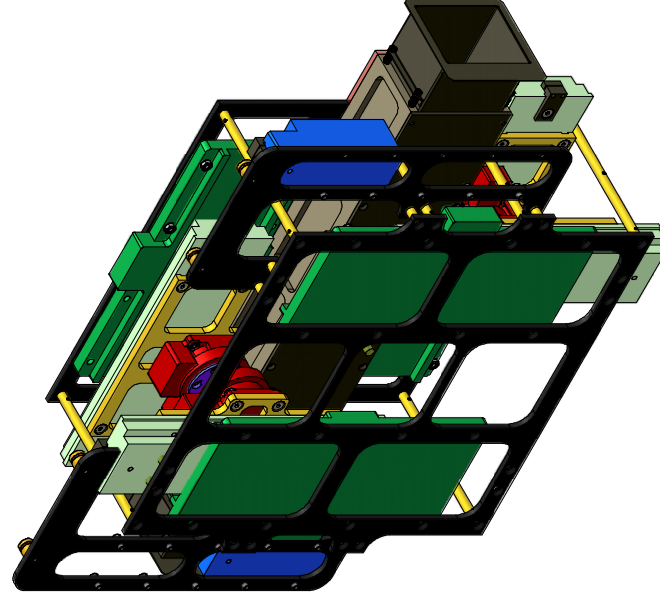
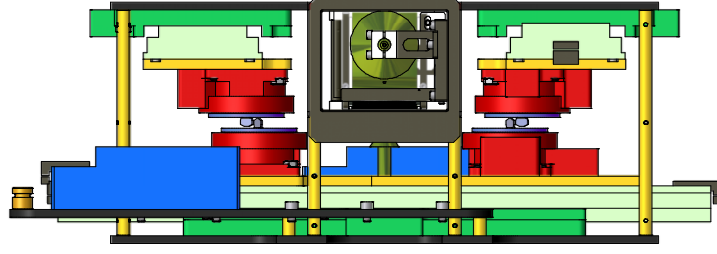
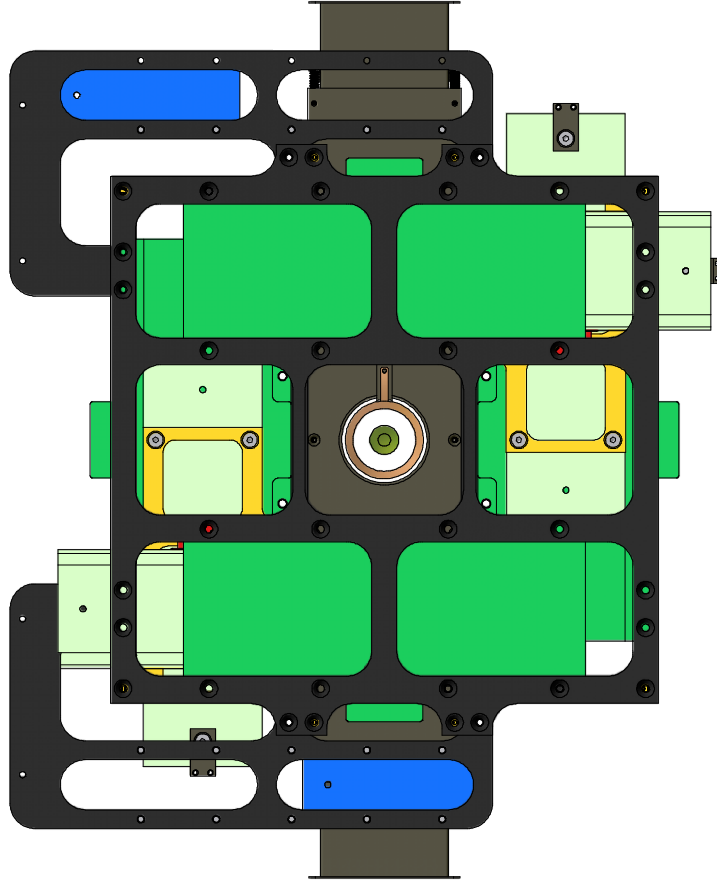
NOTES:

MATERIAL: DURAL / BRASS
4 OFF

NOTES:

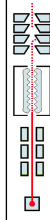
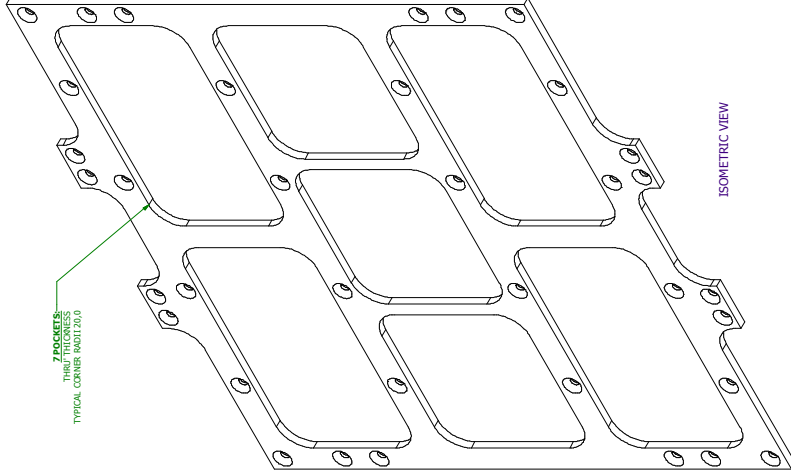
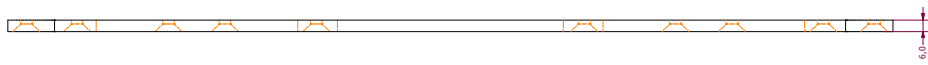
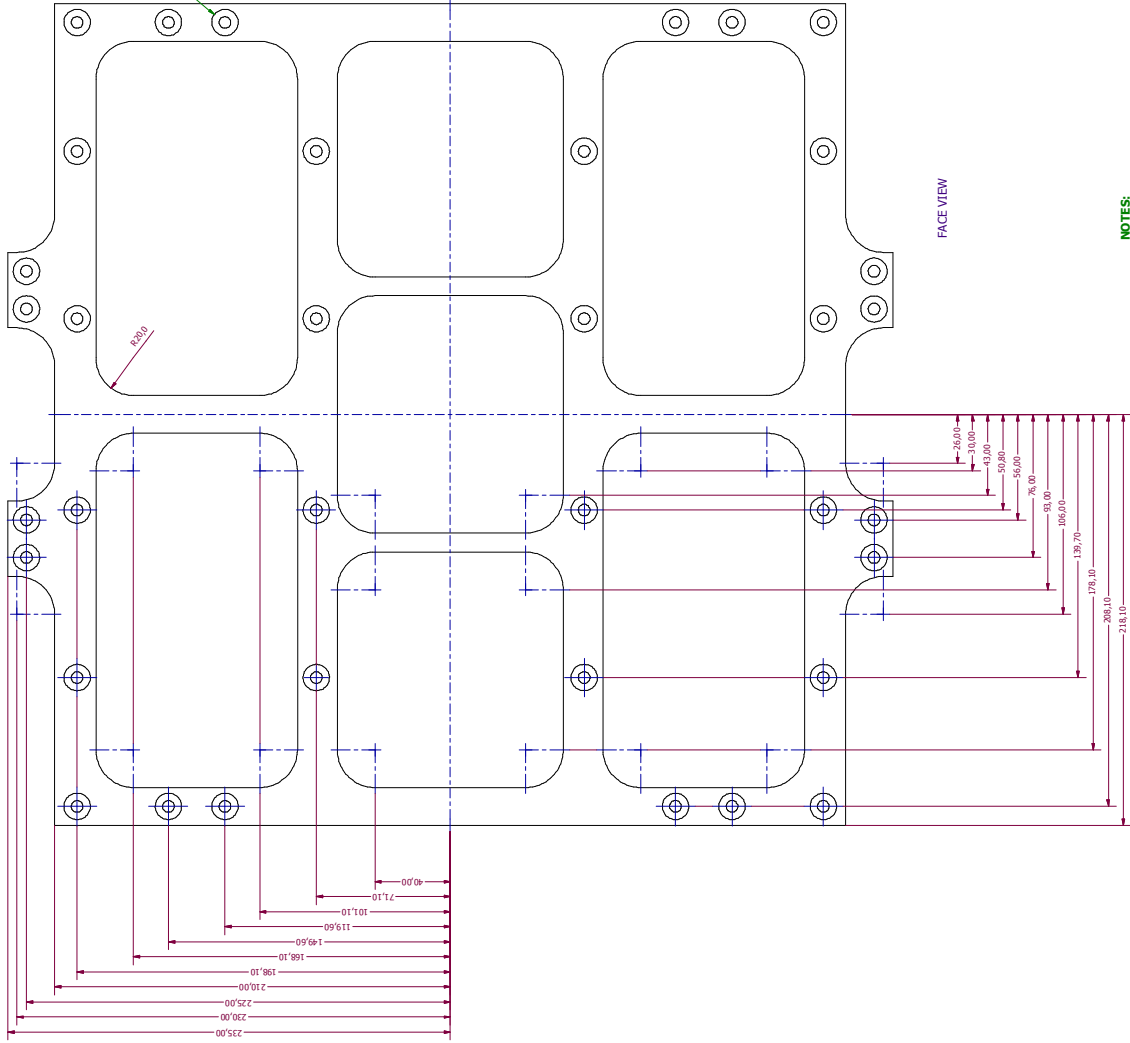
MATERIAL: DURAL / BRASS
4 OFF

MOTOR CHASSIS - ASSEMBLED



File:	
Drawn by:	Project:
Designed by:	Model file:
Created by:	Driving file:
Date:	Version number:
Manufactured by:	Project:
Material:	Sheet number:
Remove all bars:	Number of:
Color:	Drawing number:
Notes:	
Contact:	p.savage@imperial.ac.uk (Work) 020 7594 7417 (Mobile) 07864 250038

MOTOR CHASSIS - VERTICAL SIDE



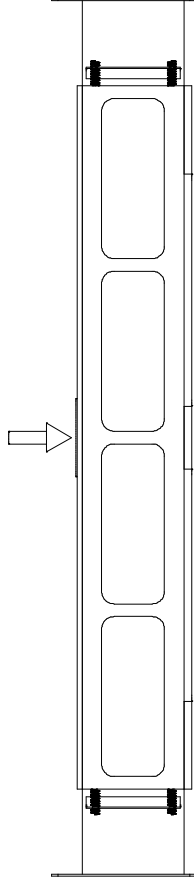
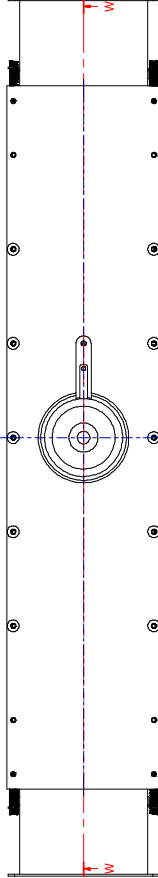
Title: Beam Profile Measurement Tank - Internals	
Drawn by: P. Savage	Projection: Third angle
Designed by: P. Savage	Model file: MotorChassisVertical.dwg
Checked by: N/A	Drawing file: ProfileMeasurements.dwg
Date: 10th July 2008	Version number: 1
Manufactured by: HEP workshop	Project: Front End Test Stand
Material: C250 tooling plate	Sheet number: 27 / 49
Remove all burrs	Number of: 1
Scale: Drawn scale	Drawing number: IC-HEP-235-2FIS-3076
Notes:	Notes:
Contact: p.savage@imperial.ac.uk (Work) 0207 594 7837 (Home) 0208 208093	

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

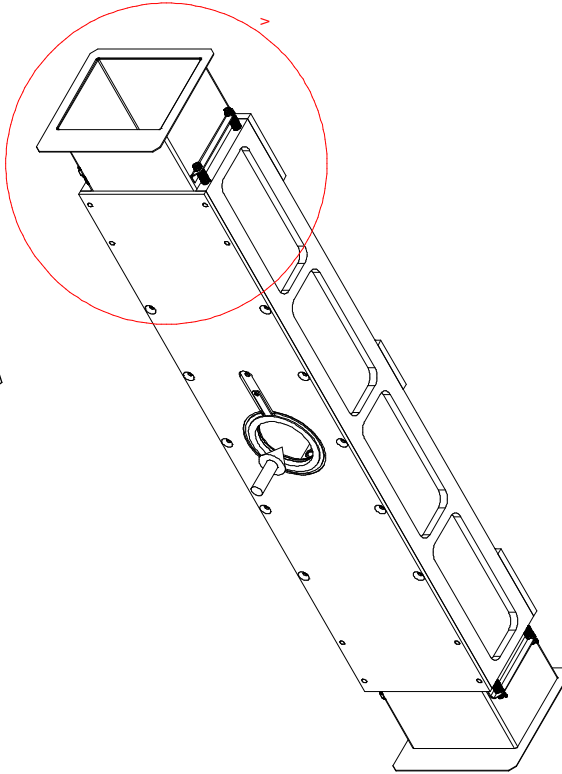
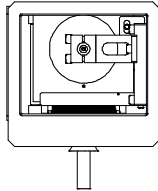
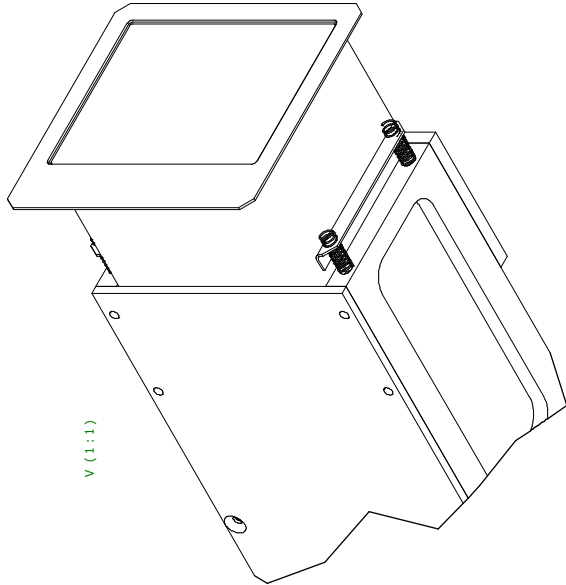
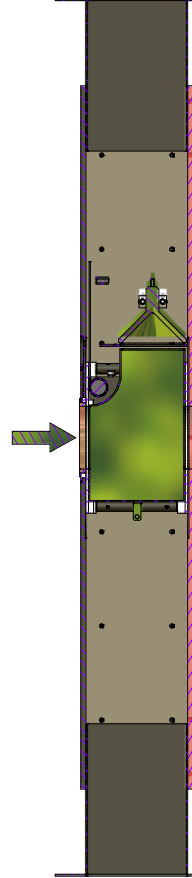
NOTES:
MATERIAL: C250 CAST ALUMINUM MACHINED TOOLING PLATE
1 OFF

TUNNEL - ASSEMBLED

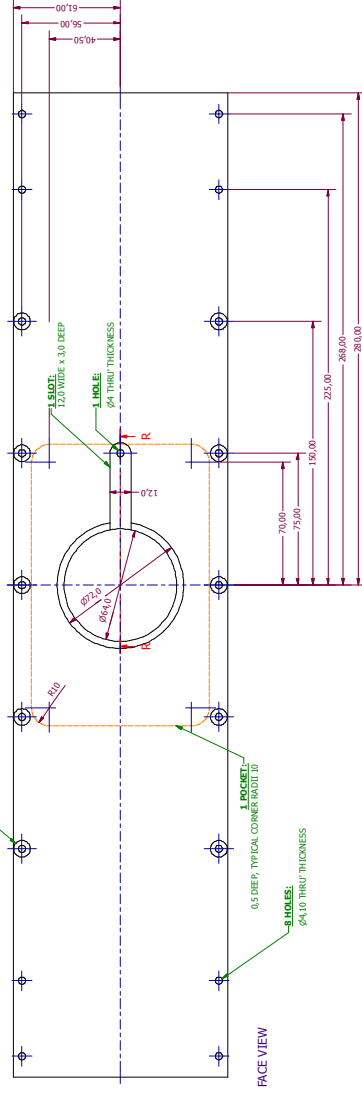
V (1:1)



W-W (1:2)



File:	Projection:	Model file:	Unless otherwise stated:
Drawn by:	Tunnel.Lam	Model file:	Dimensional tolerance:
Checked by:	ProfileMeasurements.dwg	X.X	X ± 0.5 mm
Date:		X.XX	X ± 0.2 mm
Version number:		X.XXX	X ± 0.1 mm
Manufactured by:			Angular tolerance:
Material:			± 0.5°
Remove all burrs			Hole centres:
Scale:			± 0.05 mm
Notes:			Surface finish:
			1.6 microns
			Dimensions in mm
Contact:	p.sanger@imperial.ac.uk	(New) 0207 594 7837	(Fax) 0207 208030



MATERIAL: C250 CAST ALUMINIUM MACHINED TOOLING PLATE
1 OFF

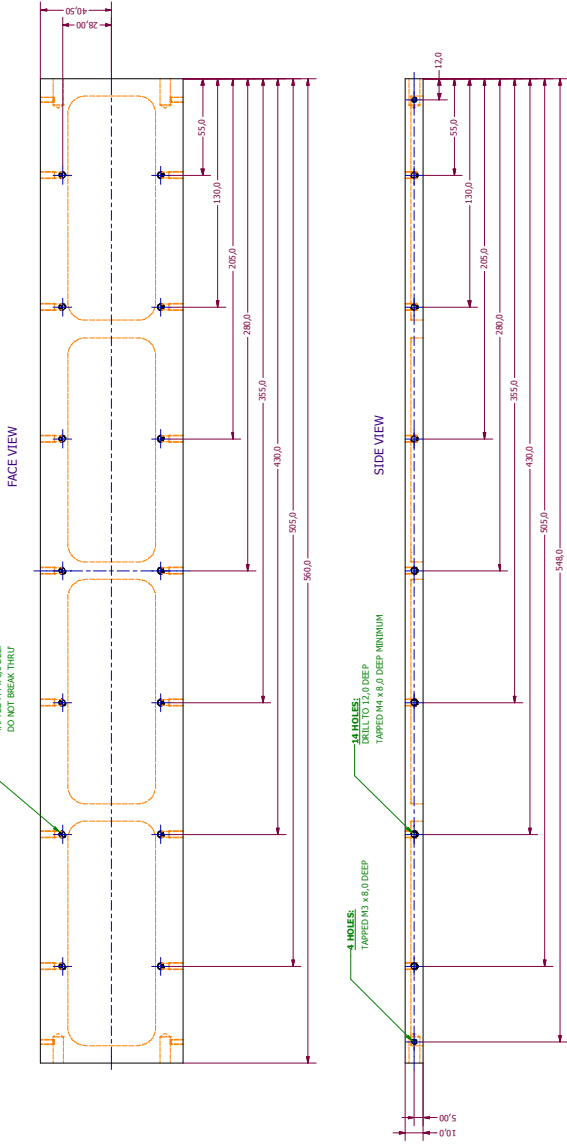


MATERIAL: C250 CAST ALUMINIUM MACHINED TOOLING PLATE
1 OFF

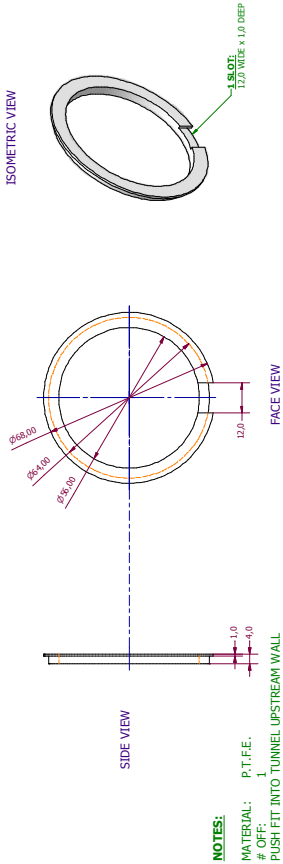


Unless otherwise stated: Dimensional tolerance: X ± 0.5 mm ± 0.05 mm ± 0.2 mm X.X X.XX X.XX	Angular tolerance: $\pm 0.5^\circ$ ± 0.05 mm 1.6 microns ☐
Surface finish: Weld centres: Surface finish: Dimensions in mm	

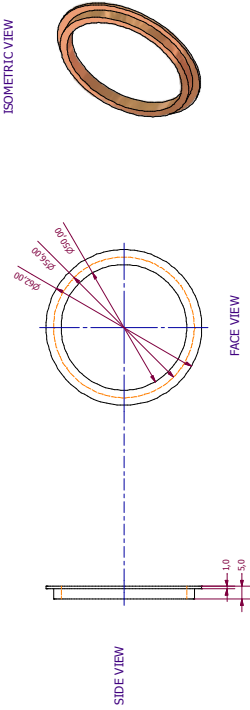
TUNNEL WALL SIDE



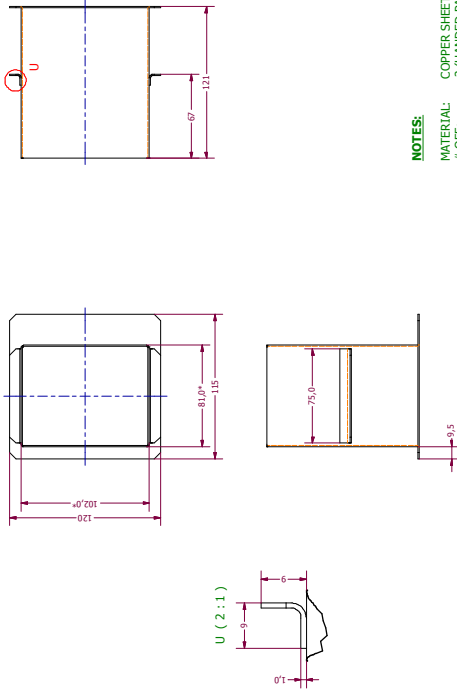
SUPPRESSION RING ISOLATOR



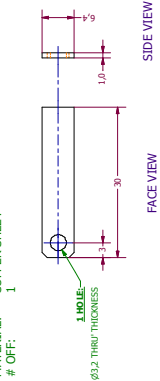
SUPPRESSION RING



TUNNEL SLIDER



SUPPRESSION RING CONNECTOR

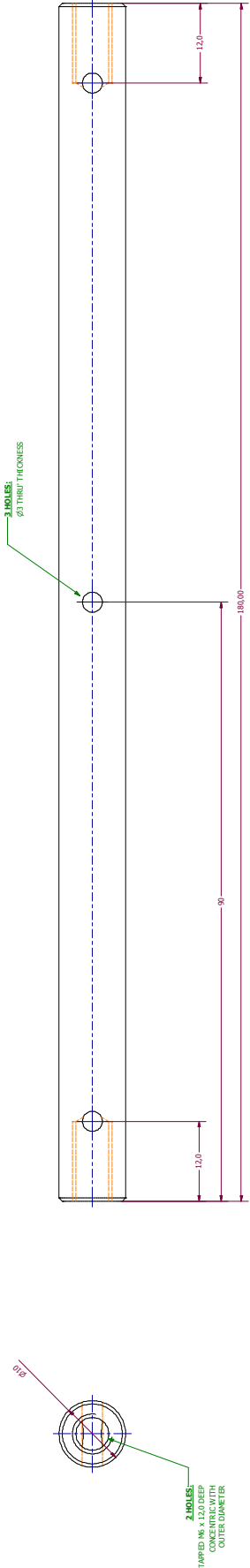


Beam Profile Measurement Tank - Internals

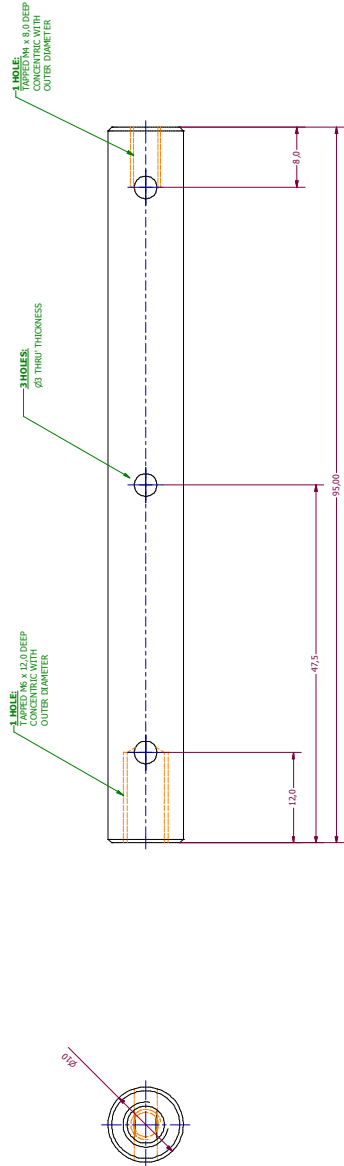
Drawn by:	P. Sanger	Projection:	Third angle
Designed by:	P. Sanger	Model file:	TunnelSlider.dwg
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	5th August 2008	Version number:	1
Manufactured by:	HEP Workshop	Project:	Front End Test Stand
Material:	Stainless steel	Sheet number:	32 / 49
Remove all burrs		Starter per part:	
Drawn scale:		Drawing number:	IC-HEP-25-FETIS_3081
Notes:			
Contact:	p.sanger@imperial.ac.uk	(Ver 1.00) 994 9137	(Release) 27/08/2009

Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	XX ± 0.2 mm
	XXX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	0

MOTOR CHASSIS TIE RODS



NOTES:
MATERIAL: STAINLESS STEEL
4 OFF



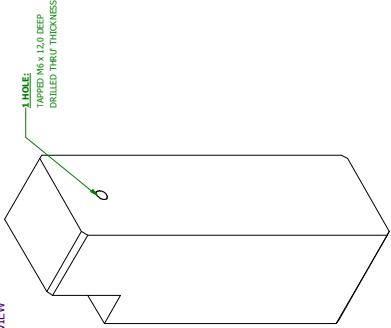
NOTES:
MATERIAL: STAINLESS STEEL
4 OFF

Title: Beam Profile Measurement Tank - Internals	
Drawn by: P. Savage	Projection: Third angle
Designed by: P. Savage	Model file: MotorChassisParting.dwg
Checked by: N/A	Drawing file: ProfileMeasurements.dwg
Date: 5th September 2008	Version number: 1
Manufactured by: HEP Workshop	Project: Front End Tie Rod
Material: Inconel	Sheet number: 37 / 49
Remove all burrs	Number of: 4 off at each length
Scale: Drawn scale	Drawing number: K_HEP_25_P415_3082
Notes:	
Contact: p.savage@imperial.ac.uk (Work) 949 7837 (Home) 9498 268093	

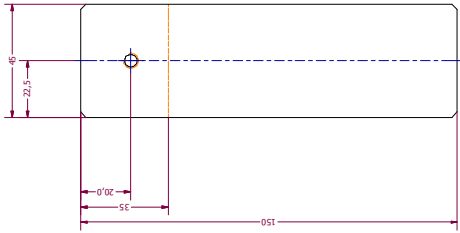
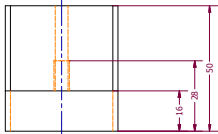
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	□

MOTOR COUNTER-WEIGHTS

ISOMETRIC VIEW



TOP END VIEW



REAR VIEW

SIDE VIEW



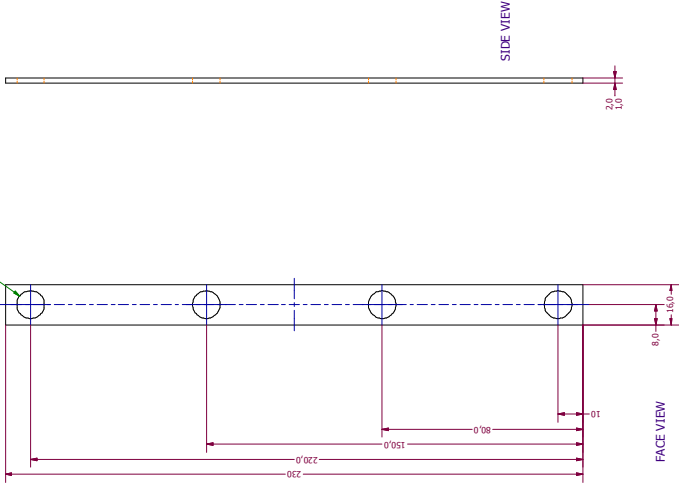
NOTES:

MATERIAL: CZ112 BRASS (SUPPLIED)
CHAMFER CORNERS SHOWN 2 x 45°
MASS: 2.6kg
2 OFF

NOTES:

MATERIAL: BRASS / S STEEL / COPPER / ALUMINIUM
GUILLOTINED TO SIZE IS ACCEPTABLE
2 OFF

ISOMETRIC VIEW



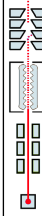
SIDE VIEW



FACE VIEW



DOOR MOUNTING STRIP



Beam Profile Measurement Tank - Internals

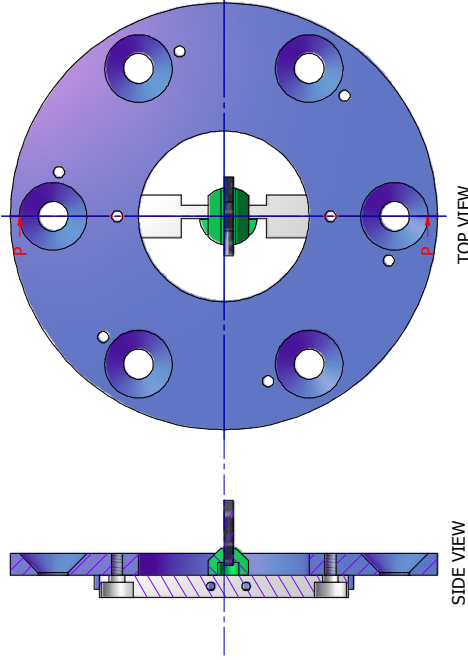
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	CounterWeight.dwg
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	30th September 2008	Version number:	1
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	Stainless steel	Sheet number:	34 / 49
Remove all burrs		Number of:	Stainless steel
Scale:	Drawn scale	Drawing number:	IC-HEP-ZS-FE15_3083
Notes:			

Contact: p.savage@imperial.ac.uk (New) 0207 594 7837 (Home) 0208 708093

#3010

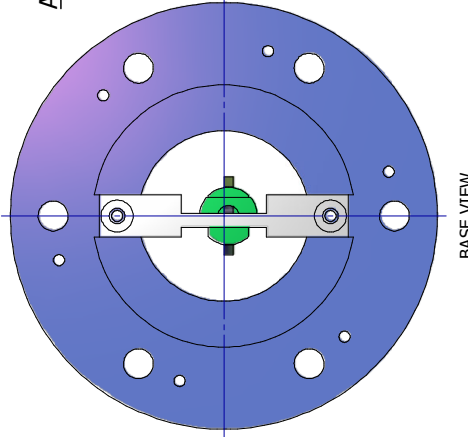
P-P (2:1)

BEAM PROFILE MEASUREMENT TANK -
MIRROR MOUNT TO ALIO STAGE



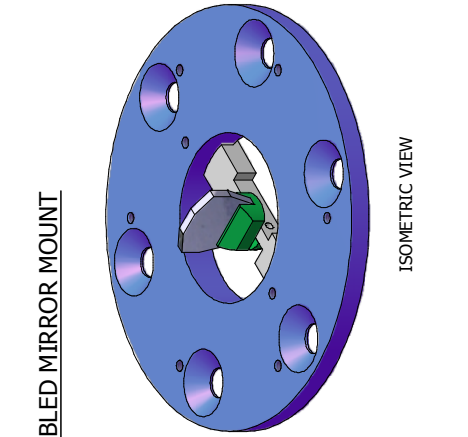
TOP VIEW

SIDE VIEW



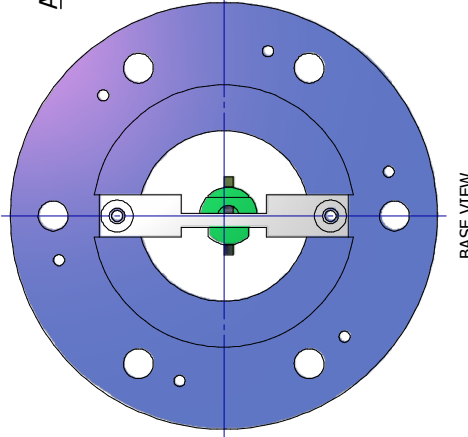
BASE VIEW

SIDE VIEW



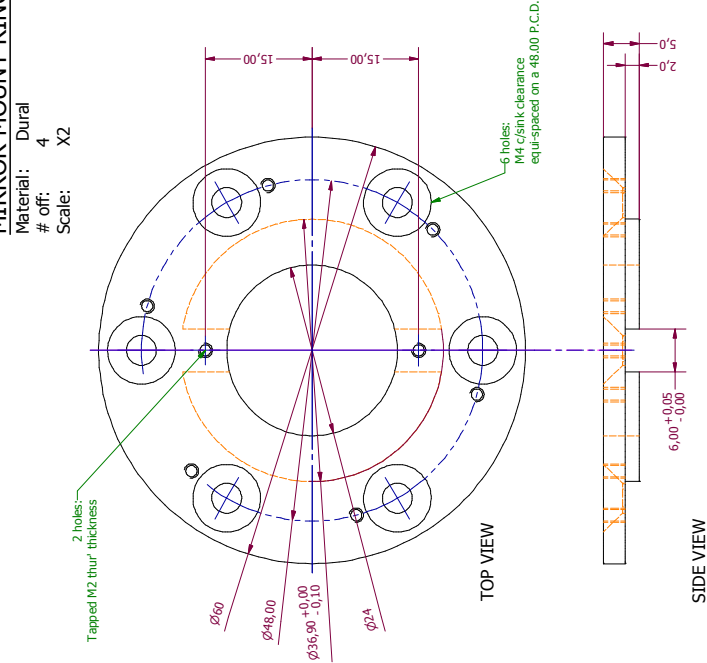
ISOMETRIC VIEW

ASSEMBLED MIRROR MOUNT



MIRROR MOUNT RING

Material: Dural
off: 4
Scale: X2

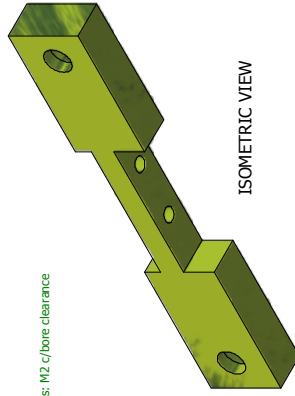


TOP VIEW

SIDE VIEW

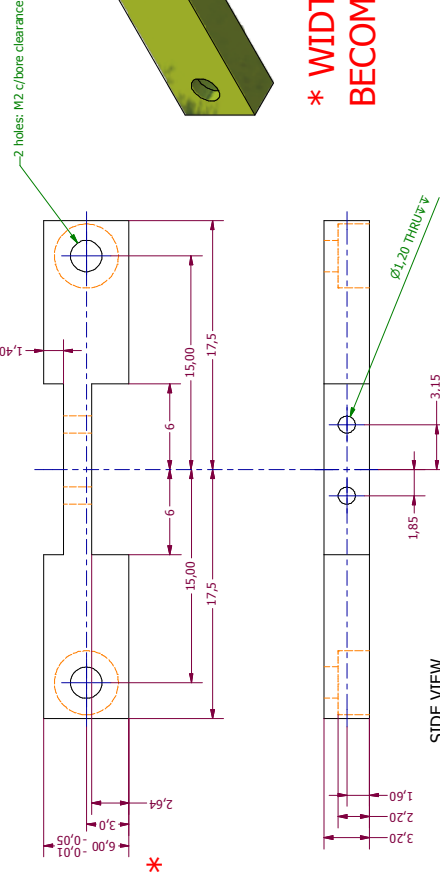
BASE VIEW

SIDE VIEW



ISOMETRIC VIEW

* WIDTH 6.00 HAS
BECOME 5.95

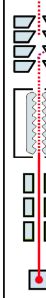


MIRROR MOUNT TO ALIO stage

Title:	Projection:	Third angle
Drawn by:	P. Savage	Model file:
Designed by:	P. Savage	ProfileMeasurements.dwg
Checked by:		Version number:
Date:	September 2007	Project:
Manufactured by:	H.E.P. Workshop	F.E.T.S.
Material:	See individual part	Sheet number:
Remove all burrs	Do not scale	Number off:
Scale:	Do not scale	Drawing number:
Notes:	Remove all burrs	
Contact:	p.savage@imperial.ac.uk	(Work) 0207 594 7817 (Mobile) 07884 26058

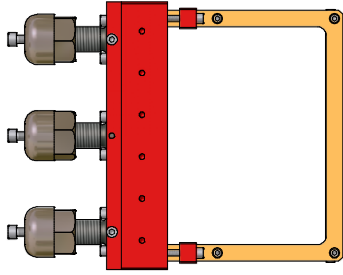
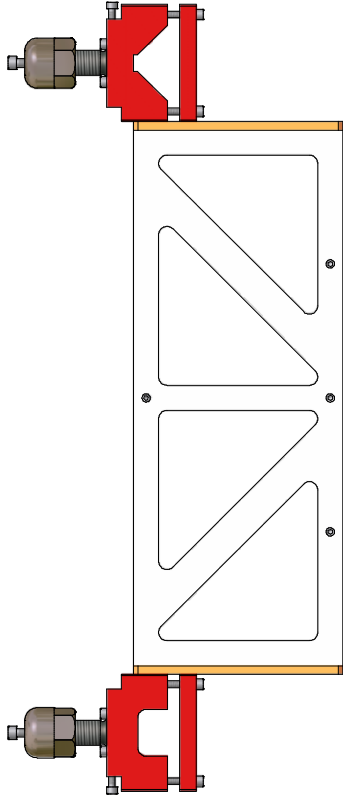
MIRROR MOUNT BAR

Material: Brass
off: 4
Scale: X4



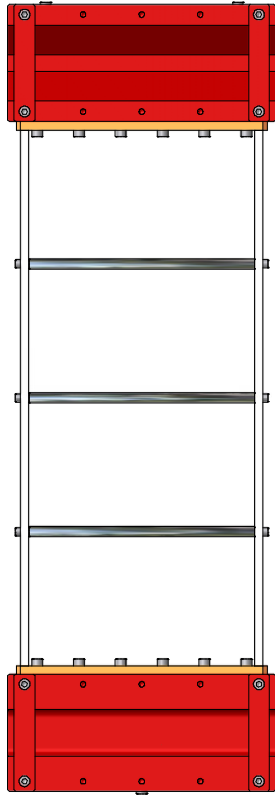
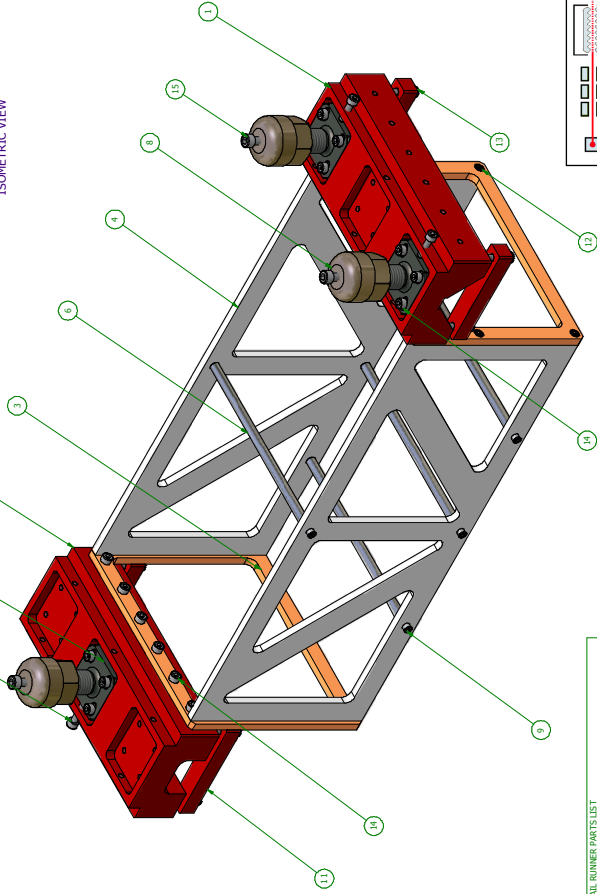
Unless otherwise stated:
Dimensional tolerance: X ± 0.5 mm
X.X ± 0.2 mm
X.XX ± 0.1 mm
Angular tolerance: ± 0.5°
Hole centres: ± 0.05 mm
Surface finish: 1.6 microns
Dimensions in mm

RAIL RUNNER ASSEMBLY



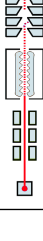
FACE VIEW

ISOMETRIC VIEW

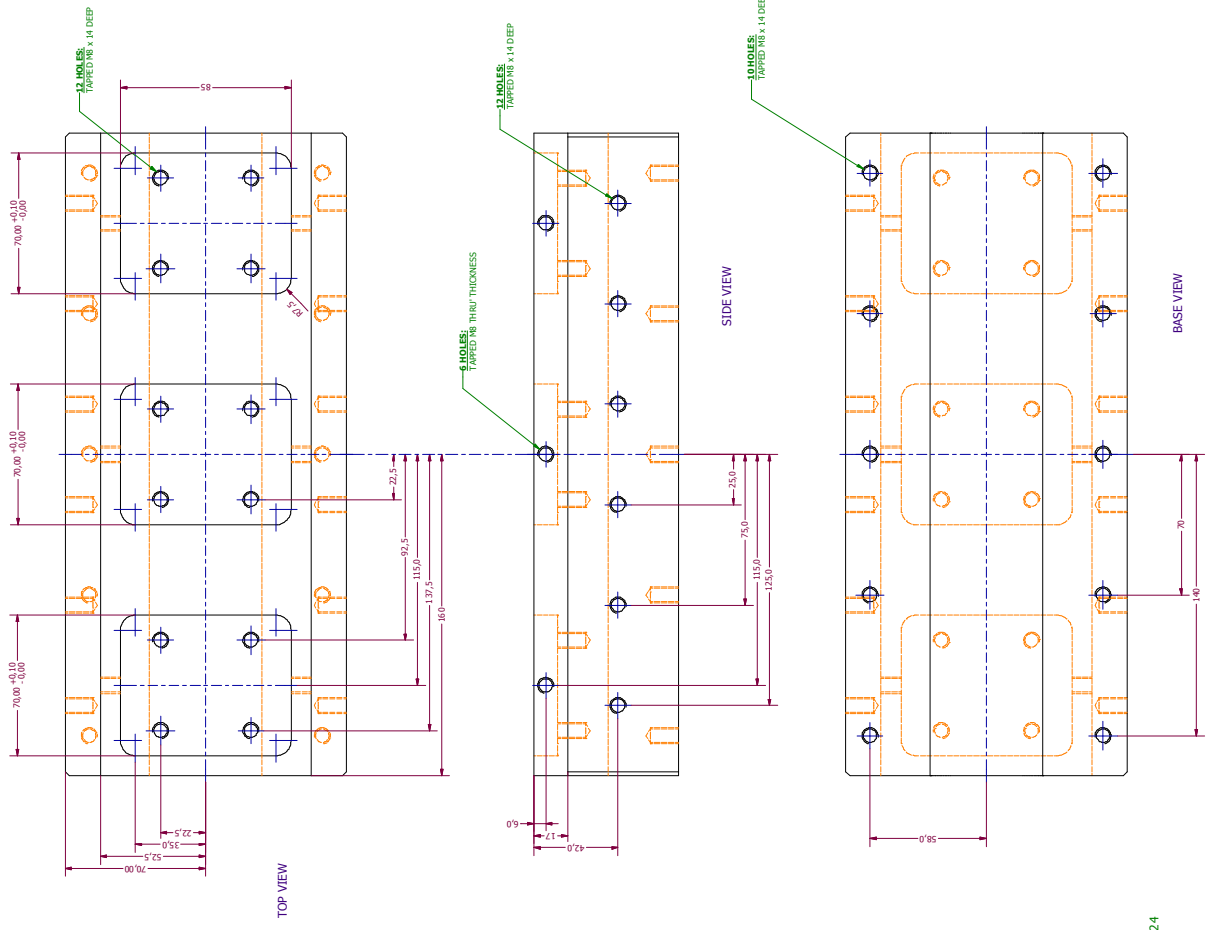


BOTTOM VIEW

RAIL RUNNER PARTS LIST			DESCRIPTION
ITEM	QTY	PART NUMBER	
1	1	BurnerCoator/Vinc.org	
2	3	T. Bushrod	
3	2	BR. SocketScrew	
4	2	ISO 4752 - M8 x 30	Heavygn Socket head Cap Screw
5	3	ISO 4752 - M8 x 30	Heavygn Socket head Cap Screw
6	4	TieRodRod	
8	3	Nut	
9	8	ISO 4752 - M6 x 20	Heavygn Socket head Cap Screw
10	1	BR. SocketScrew	
11	4	ISO 4752 - M6 x 35	Heavygn Socket head Cap Screw
12	8	ISO 4752 - M8 x 30	Heavygn Socket head Cap Screw
13	8	ISO 4752 - M8 x 30	Heavygn Socket head Cap Screw
14	20	ISO 4752 - M8 x 20	Heavygn Socket head Cap Screw
15	3	CapScrew M10 x 20	Bit M10x20 ISO 4762

		Unless otherwise stated: Dimensional tolerances: X XX XXX Angular tolerances: ± 0.5° Hole centres: ± 0.05 mm Surface finish: 1.6 microns Dimensions in mm: ☐
Beam Profile Measurement Tank - Support		
File:	Projection: Third angle	
Drawn by:	P. Sanger	Model file: BeamProfile.dwg
Designed by:	P. Sanger	Drawing file: ProfileMeasurements.dwg
Checked by:	N/A	Version number: 2
Date:	24th July 2008	Project: Front End Test Stand
Manufactured by:	HEP / AC Precision	Sheet number: 36 / 49
Material:	N/A	Number of: 2 assembly
Remove all burrs		Drawing number: AC-HEP-2-PS-FETIS_3085
Scale:	Drawn scale	
Notes:		
Contract:	p.sanger@imperial.ac.uk (Work) 0207 594 7817 (Mobile) 07984 08036	

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	□



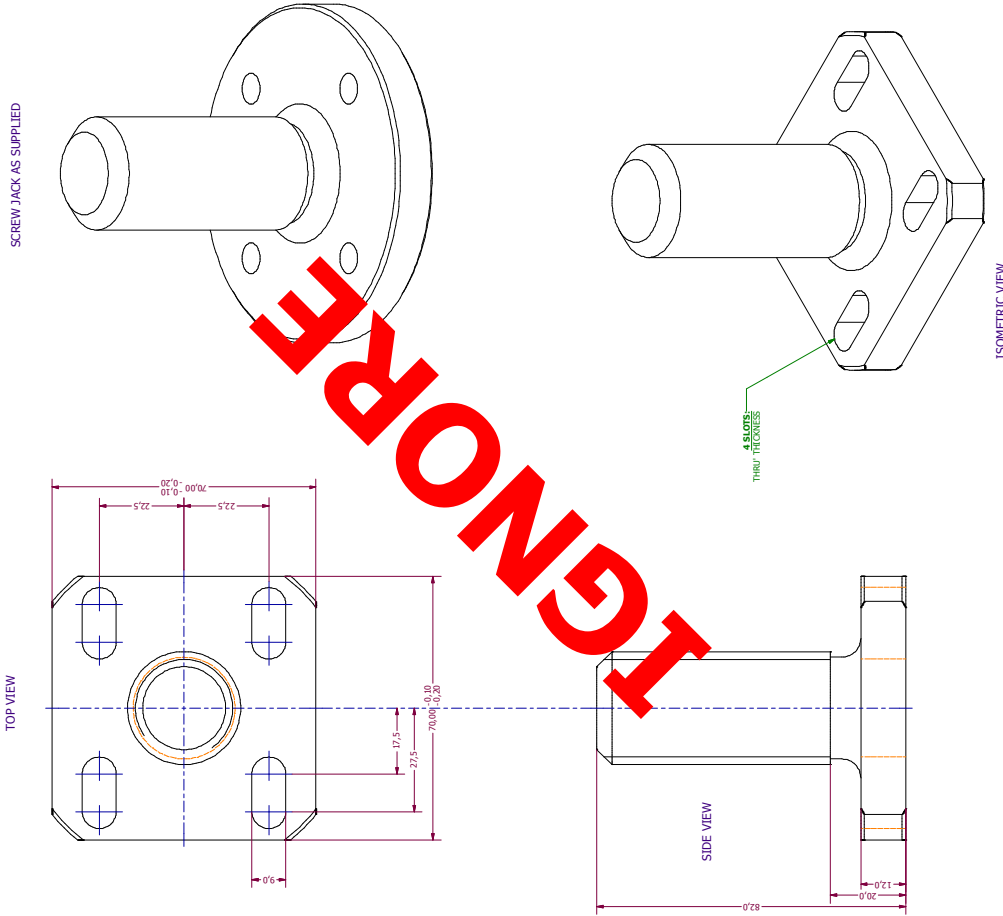
File#:	Beam Profile Measurement Tank - Support		
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	BeamProfileMeasurement.dwg
Created by:	N/A	Drawing file:	ProfileMeasurement.dwg
Checked by:	N/A	Version number:	2
Released by:	24th July 2008	Project:	Post East Test Stand
Drawn by:	EN24	Part number:	175
Reviewed by:	EN24	Revision number:	1
Approved by:	EN24	Number off:	1
Scale:	Do not scale	Drawing number:	IC-EP-275-ETS-3337
Notes:	Contract: www.temperatures.co.uk (W007 594 7637) (M0049) 07/08/2008		

NOTES:

MATERIAL: EN24

1 OFF

SCREW JACK MODIFICATION



NOTES:

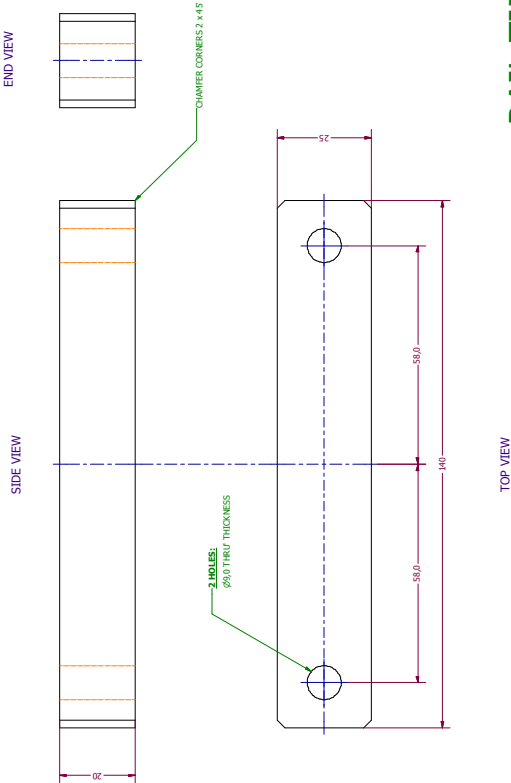
2 MODIFICATIONS TO SUPPLIED SCREW JACK BASE:

- 1) MAKE 70mm ACROSS FLATS
- 2) REPLACE HOLES WITH SLOTS

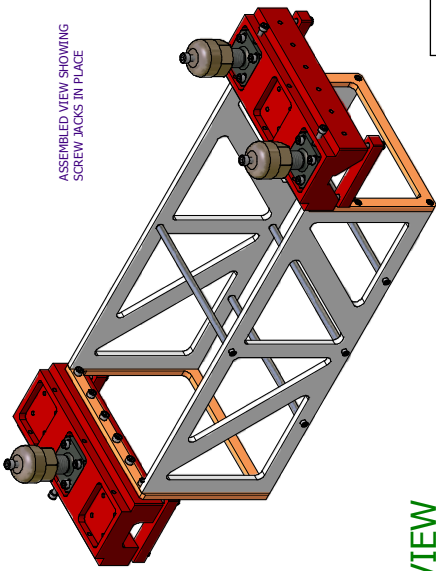
MATERIAL: EN24
3 OFF

NOTES:

OK TO USE 3/4" x 1" STOCK AND LEAVE UNMACHINED
MATERIAL: EN24
4 OFF



RAIL TIE



ASSEMBLED VIEW SHOWING
SCREW JACKS IN PLACE

OVERVIEW

Beam Profile Measurement Tank - Support

Drawn by:	P. Sanger	Projection:	Third angle
Designed by:	P. Sanger	Model file:	T_BaseProd.rvt
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	24th July 2008	Version number:	2
Manufactured by:	EN24	Project:	Front End Tie Stand
Material:	EN24	Sheet number:	38 / 49
Remove all bars		Number of:	3
Scale:		Drawing number:	IC-FPS-235-FRTS_3088
Notes:			

Contact: p.sanger@imperial.ac.uk (Work) 0207 594 9137 (Home) 02088 208093

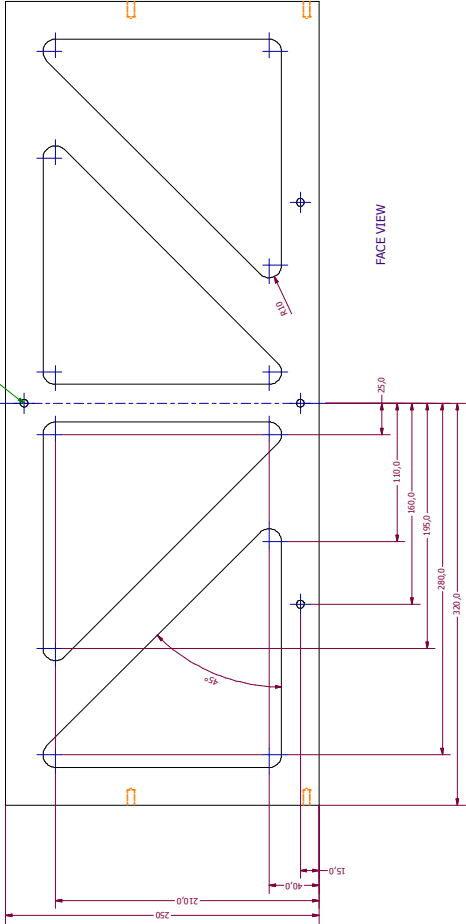
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in:	mm

RAIL RUNNER CROSS BRACE

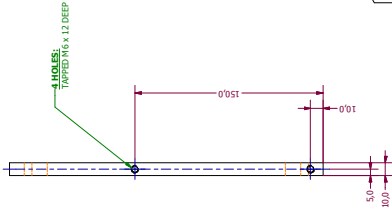
NOTES:

MATERIAL: C350 CAST ALUMINIUM MACHINED TOOLING PLATE
2 OFF

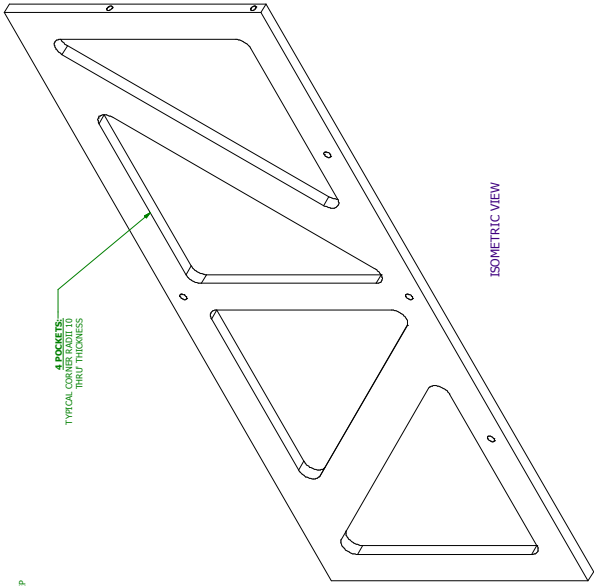
4 HOLES
Ø6.0 TIRU THICKNESS



END VIEW



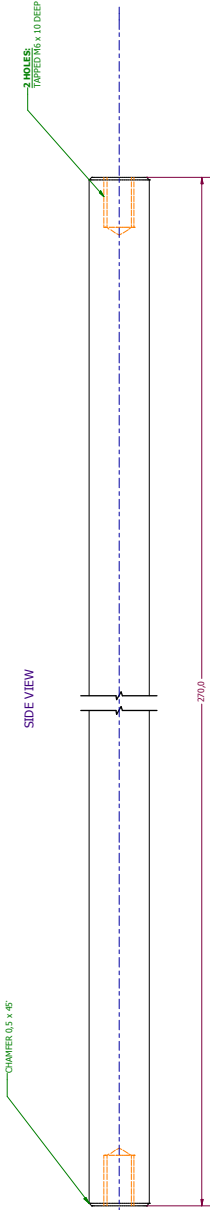
ISOMETRIC VIEW



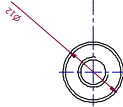
EDGE VIEW



SIDE VIEW



END VIEW



NOTES:

MATERIAL: 304 STAINLESS STEEL - SUPPLIED BY AMOS

4 OFF

RAIL RUNNER TIE BAR

Beam Profile Measurement Tank - Support

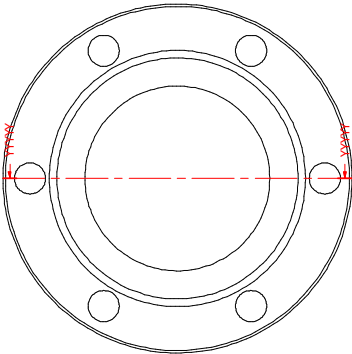
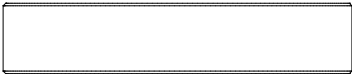
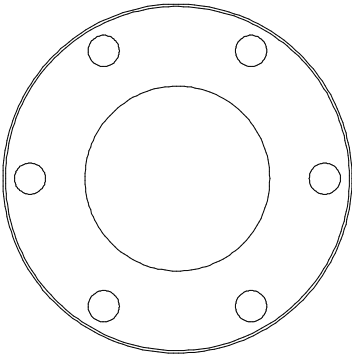
Title:	Beam Profile Measurement Tank - Support
Drawn by:	P. Savage
Designed by:	P. Savage
Checked by:	N/A
Date:	24th July 2008
Version number:	2
Project:	HEP workshop
Manufacturer:	HEP workshop
Material:	304 Stainless Steel
Remove all burrs	Yes
Scale:	Drawn scale
Drawing number:	IC-HEP-25-PT15_3089
Notes:	
Contract:	p.savage@imperial.ac.uk (Ver 1.007 9947 837 - (Revision) 20/08/2008)

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:	0

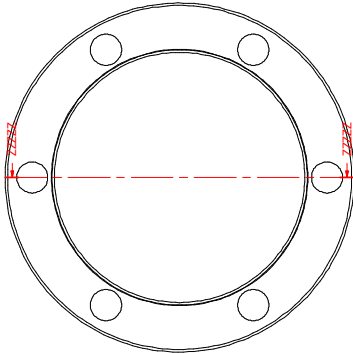
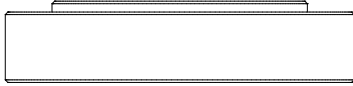
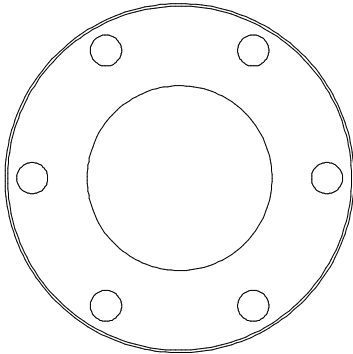
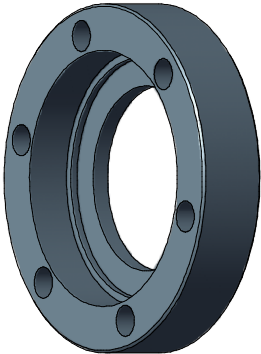
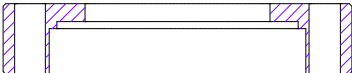
4 OFF

CF40 (STYLE) WINDOW
FLANGE

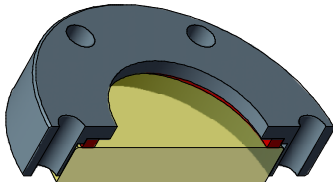
NOTES:
MATERIAL: NYLON 66
4 OFF



YYYY-YYYY (2:1)



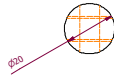
ZZZZ-ZZZZ (2:1)



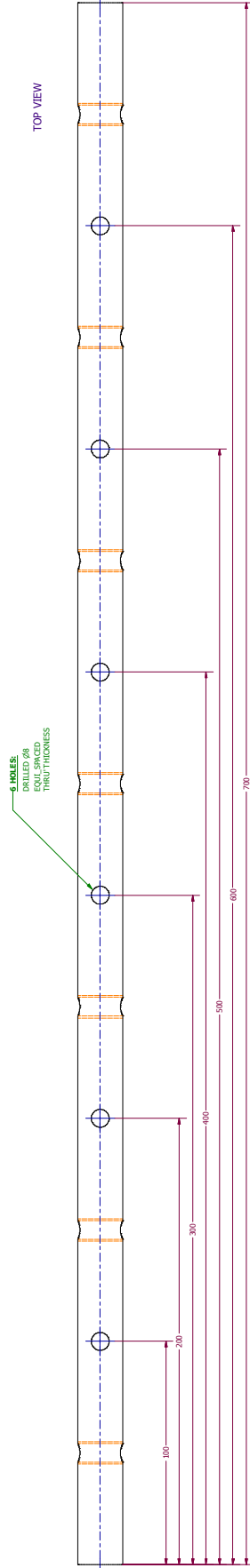
Beam Profile Measurement Tank

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	CF40_WindowFlange.dwg
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	7th November 2008	Version number:	1
Manufactured by:	HEP Workshop	Project:	Front End Test Stand
Material:	Drill	Sheet number:	41 / 49
Remove all burrs		Number of:	4
Scale:	Drawn scale	Drawing number:	KCFP235_FET5_3090
Notes:	N/A		
Contact:	p.savage@imperial.ac.uk	(Ver 1.00) 994 7837	(Revision) 20/08/2008

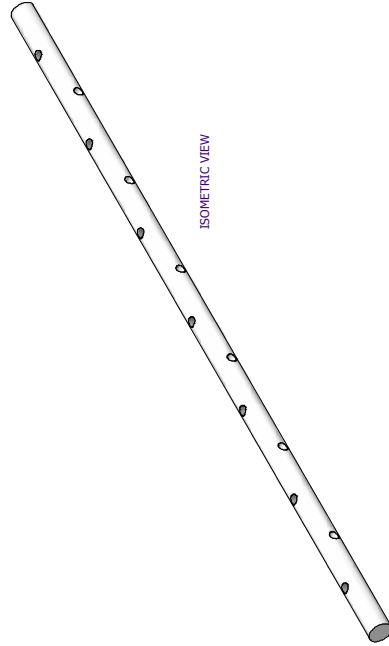
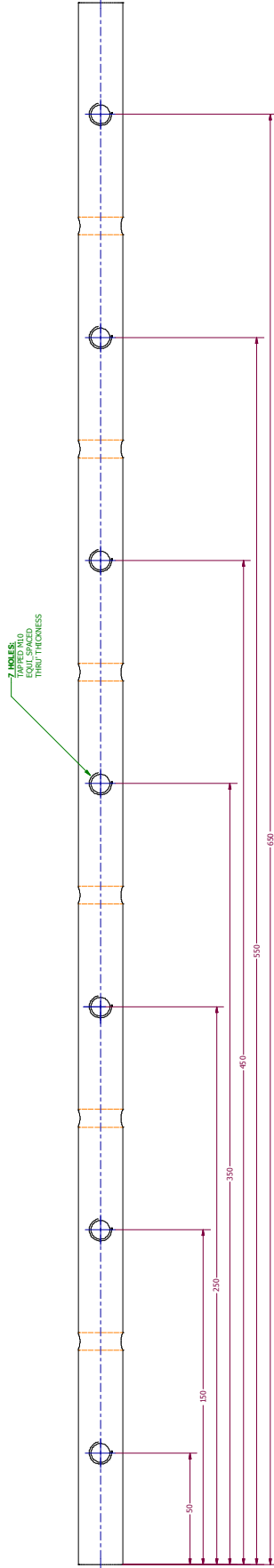
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm
	X.X ± 0.2 mm
	X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	□



END VIEW



SIDE VIEW



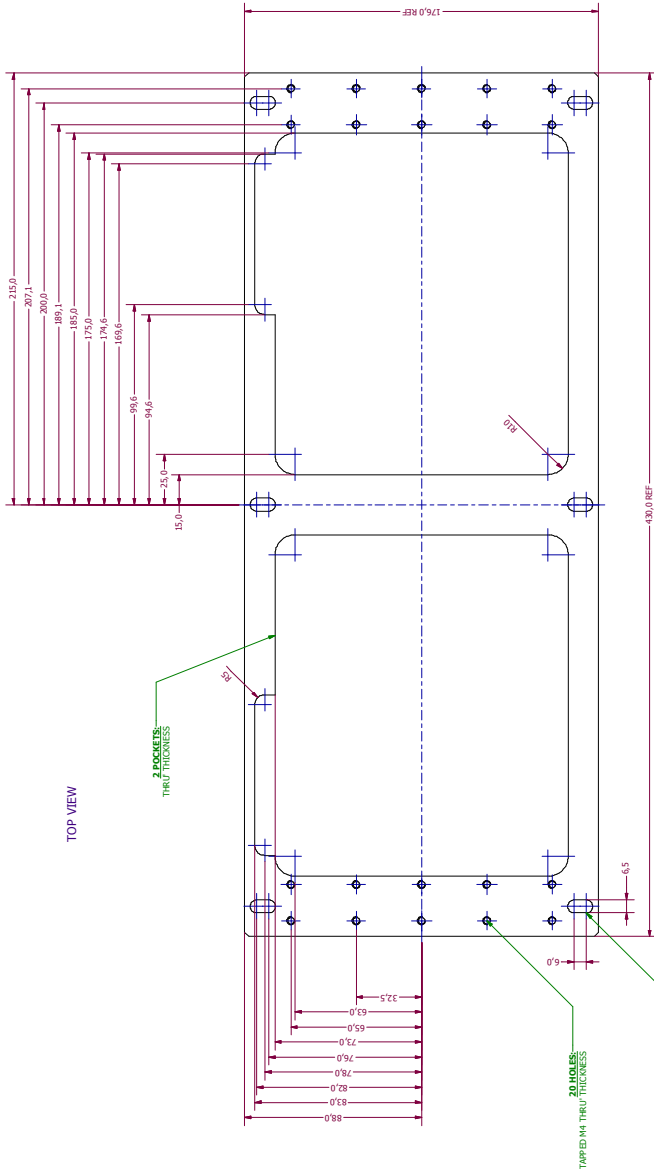
ISOMETRIC VIEW

- NOTES:**
- 1) ADDITIONALLY CUT 7 OFF M10 NYLON BOLTS (RS 292-710) TO 18 LONG.
 - 2) SUPPLY WITH 6 OFF CABLE TIES (RS 666-177)
 - 3) 1 OFF

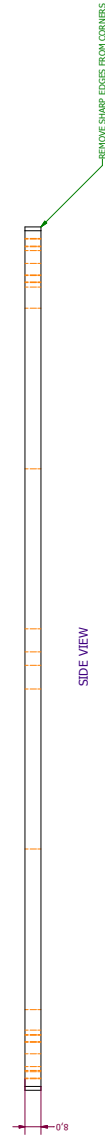
Title		Revision	
Beam Profile Measurement Tank			
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	DoorSteady_Rt
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	20th November 2008	Version number:	1
Manufactured by:	HEP Workshop	Project:	Front End Test Stand
Material:	P.T.F.E.	Sheet number:	42 / 49
Remove all burrs		Number of:	1
Scale:	Drawn scale	Drawing number:	K_HEP_235_PET5_3091
Notes:		Dimensions in mm	
Contact: p.savage@imperial.ac.uk (Work) 0207 994 7837 (Home) 02088 208093			

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	□

DOOR CHASSIS - TOP
VERSION 2



ISOMETRIC VIEW



Beam Profile Measurement Tank - Internals

File:	Projection:	Third angle
Drawn by:	P. Savage	
Designed by:	P. Savage	DoorChassis Top 2.dwg
Checked by:	N/A	ProfileMeasurements.dwg
Date:	20th Jan 2009	Version number: 2
Manufactured by:	HEP workshop	Project: Front End Test Stand
Material:	Cast aluminium tooling	Sheet number: 1
Remove all burrs		Number of: 49
Scale:	Drawn scale	Drawing number: K-HEP 2.35-PEIS_3092
Notes:		
Contact:	p.savage@imperial.ac.uk	(Version 2) (Date 2009)

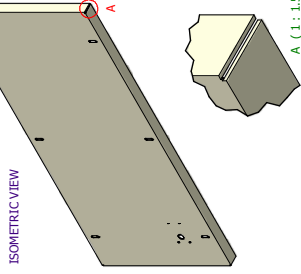
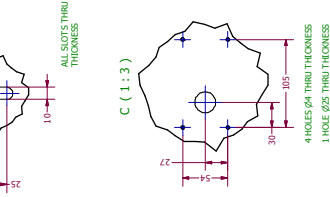
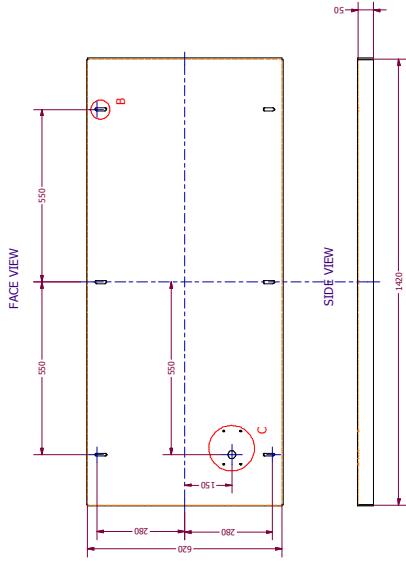
Unless otherwise stated:
Dimensional tolerance: X ± 0.5 mm
X.X ± 0.2 mm
X.XX ± 0.1 mm
Angular tolerance: ± 0.5°
Hole centres: ± 0.05 mm
Surface finish: 1.6 microns
Dimensions in mm

NOTES:
MATERIAL : C250 CAST ALUMINIUM MACHINED TOOLING PLATE
1 OFF

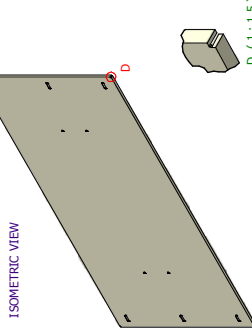
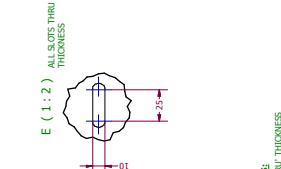
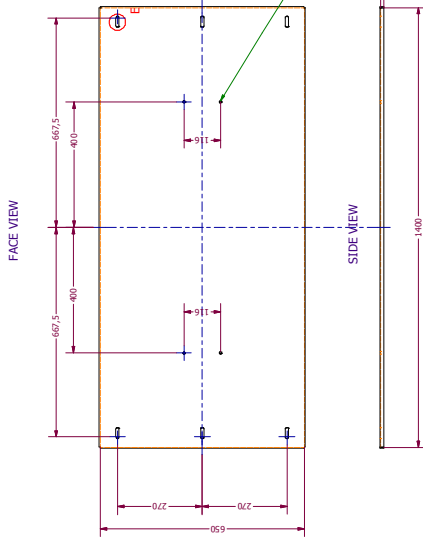


TOP PANEL (1420 x 620)

Material: 1.5mm thick Aluminium alloy 1050 - H14
1 off



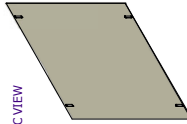
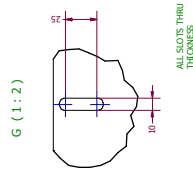
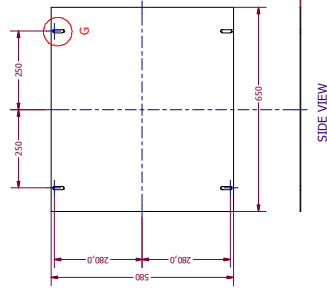
FACE VIEW



SIDE PANEL (1400 x 650)

Material: 1.5mm thick Aluminium alloy 1050 - H14
2 off

FACE VIEW

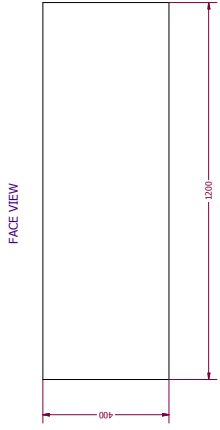


END PANEL (650 x 580)

Material: 1.5mm thick Aluminium alloy 1050 - H14
2 off

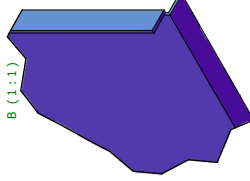
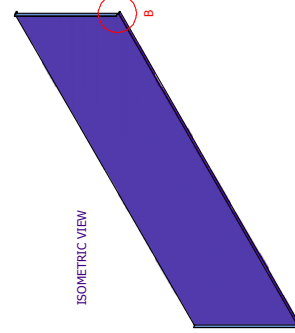
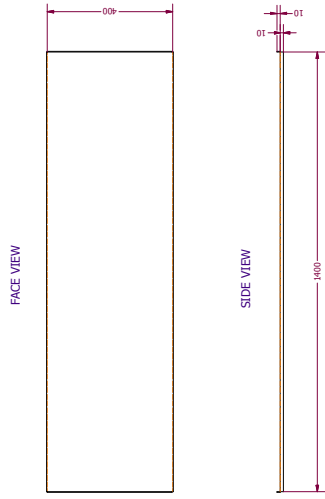
BASE PLATE (1200 x 400)

Material: 6mm thick Aluminium alloy
1 off



TOOL SHELF (1400 x 400)

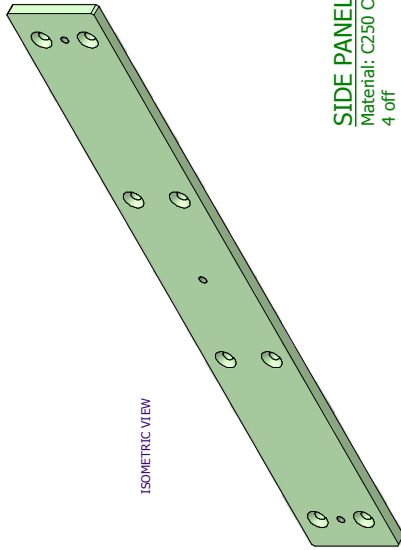
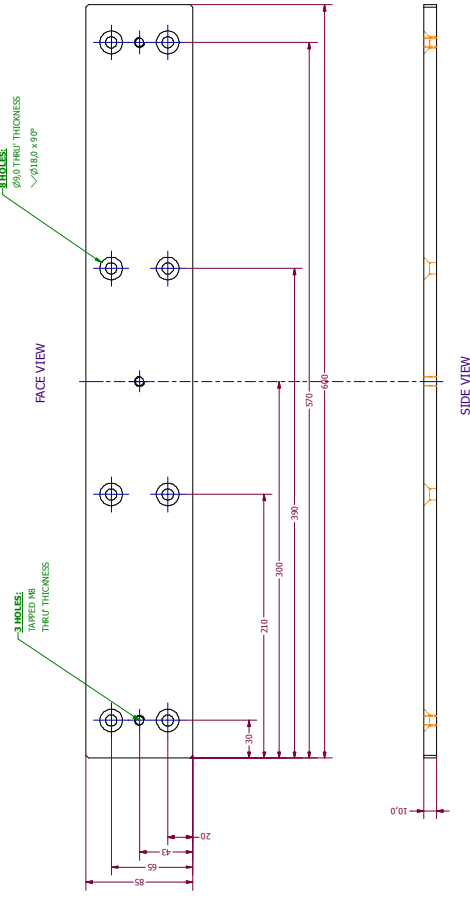
Material: 1.5mm thick Aluminium alloy 1050 - H14
1 off



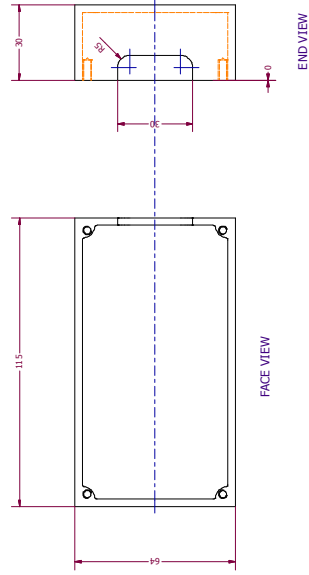
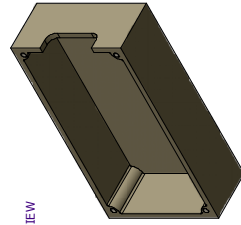
Laser Enclosure

Title:	Projection:	Third angle
Drawn by:	Model file:	Enclosure.dwg
Designed by:	Drawing file:	ProfileMeasurements.dwg
Checked by:	Version number:	1
Date:	6th Feb 2009	
Manufactured by:	HEP Workshop	
Material:	Aluminium alloy	
Remove all burrs	Sheet number:	45 / 49
Scale:	Number of:	2
Notes:	Drawing number:	IC-HEP-25-FE15_3094
	Drawn scale:	
	Drawn:	
Contact:	p.sanger@imperial.ac.uk	(New) 0207 594 9137 (Mobile) 07804 208093

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	0

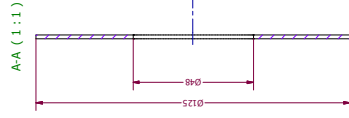


SIDE PANEL MOUNT PLATE
Material: C250 CAST ALUMINIUM ALLOY TOOLING PLATE
4 off

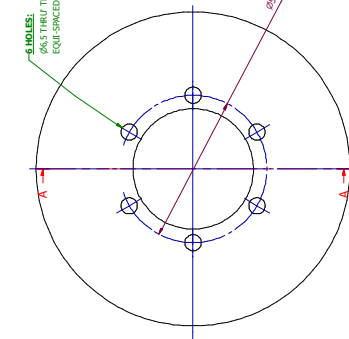


CAST ALUMINIUM ENCLOSURE
Part supplied: RS 517-3951
Material: Aluminium alloy
Add one slot in end wall as shown
2 off

SIDE SECTION
VIEW



FACE VIEW

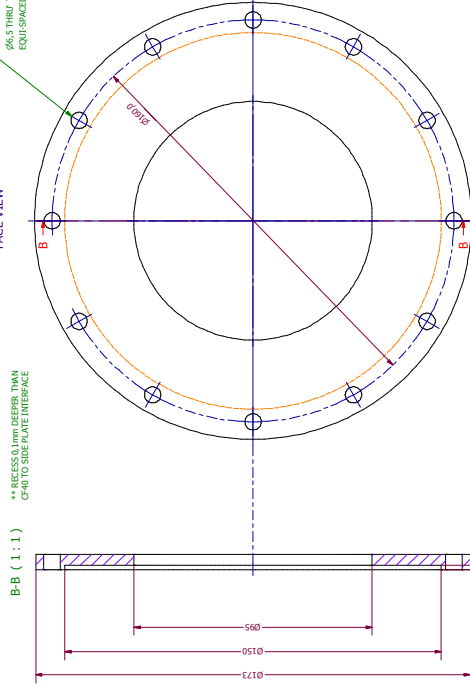


CF40 TO SIDE PLATE INTERFACE
Material: 1.5mm thick Aluminium alloy 1050 - H14
1 off

B-B (1:1)

1.6mm MIN DEEPER THAN
CF40 TO SIDE PLATE INTERFACE

FACE VIEW



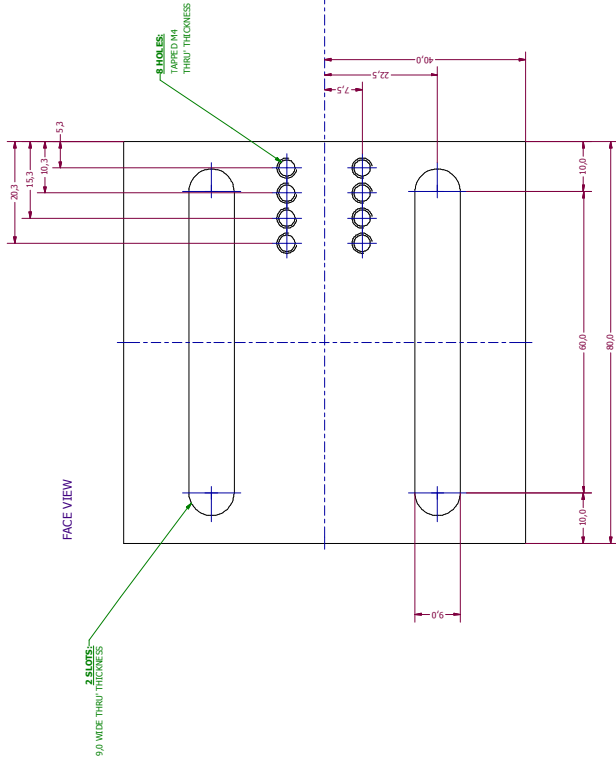
SIDE PLATE INTERFACE
Material: C250 CAST ALUMINIUM ALLOY TOOLING PLATE
1 off

Laser Enclosure

Drawn by:	P. Sanger	Projection:	Third angle
Designed by:	P. Sanger	Model file:	EnclosureFrame.dwg
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	6th Feb 2020	Version number:	1
Manufactured by:	HEP Workshop	Project:	Front End Test Stand
Material:	Aluminium alloy	Sheet number:	46 / 49
Remove all burrs		Number of parts:	3
Scale:	Drawn scale	Drawing number:	IC_HEP_FTS_3095
Notes:			
Contact:	p.sanger@imperial.ac.uk	(Work) 0207 2760091	

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	□

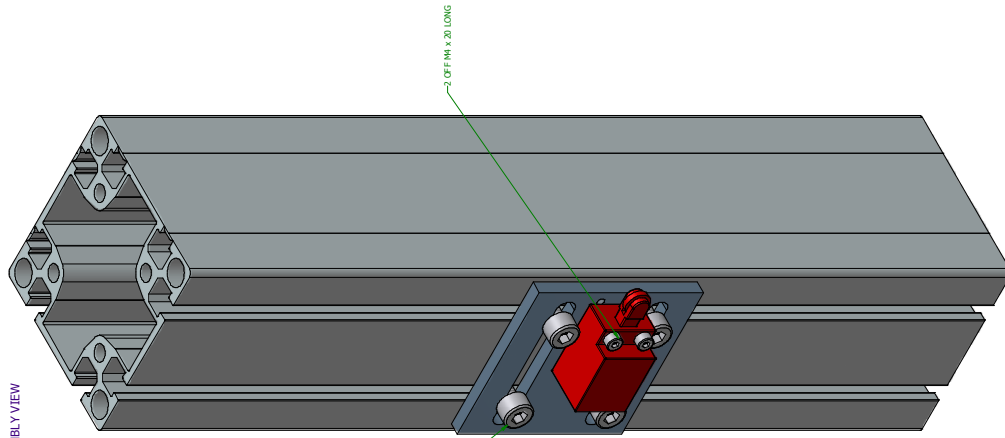
FACE VIEW



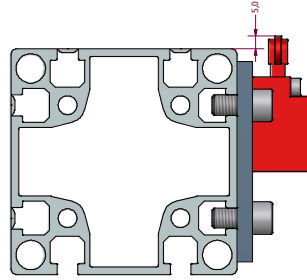
SIDE VIEW



ISOMETRIC ASSEMBLY VIEW

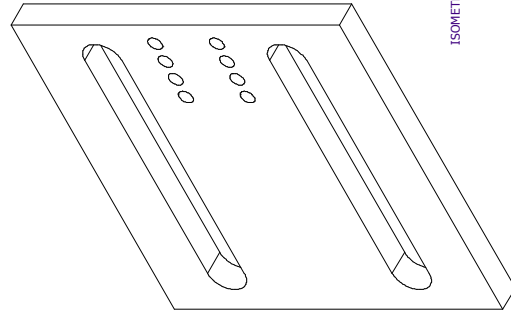


END ASSEMBLY VIEW



DISPLACEMENT WAX

ISOMETRIC VIEW



GUARDMASTER IMP MOUNT PLATE

Material: C250 CAST ALUMINIUM ALLOY TOOLING PLATE
2 off

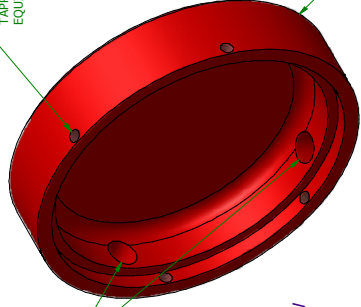
Laser Enclosure

File:	p-savage	Third angle
Drawn by:	P. Savage	GuardMaster/IMP.im
Designed by:	P. Savage	ProfileMeasurements.dwg
Checked by:	N/A	
Date:	March 2003	
Version number:	1	
Project:	HEP workshop	Front End Test Stand
Sheet number:	2	47 / 49
Number of:	C250 die casting plate	
Remove all burrs		
Scale:	Drawn scale	1:1
Drawing number:	1:1	1:1
Notes:		
Contact:	p.savage@imperial.ac.uk	(New) 0207 594 1837 (Mobile) 07904 200093

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

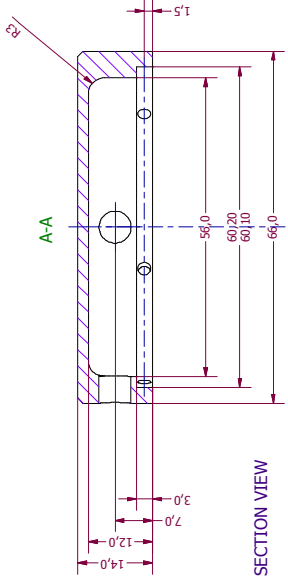
6 HOLES:
TAPPED M3 THRU THICKNESS
EQUI-SPACED AROUND CIRCUMFERENCE

2 HOLES:
Ø6.0 or Ø8.0 THRU THICKNESS
90° SEPARATION

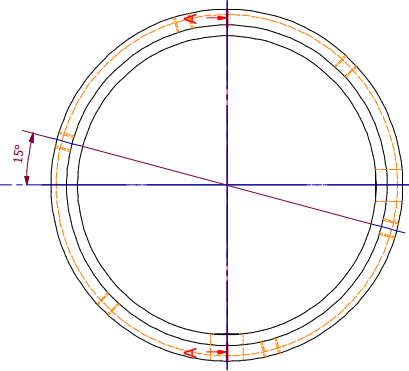


ISOMETRIC BASE VIEW

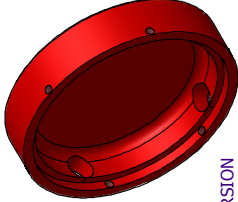
CHAMFER 1 x 45°



SIDE SECTION VIEW



BASE VIEW

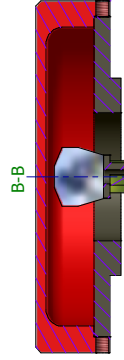


8mm HOLE VERSION

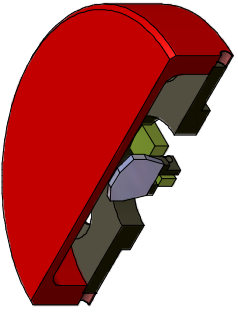
LENS MOUNT HOOD

Material: Stainless Steel
2 off with 6mm diameter hole
2 off with 8mm diameter hole

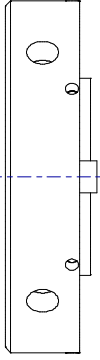
LENS MOUNT HOOD ASSEMBLY



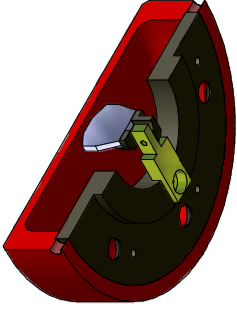
SIDE SECTION VIEW



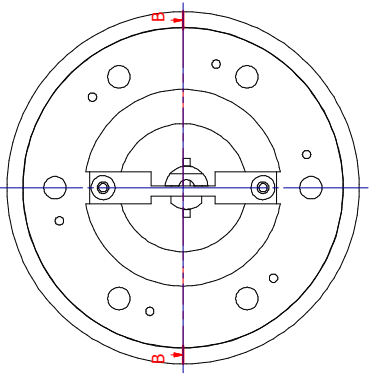
ISOMETRIC TOP SECTION VIEW



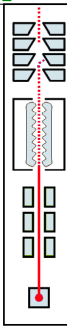
SIDE VIEW



ISOMETRIC BASE SECTION VIEW

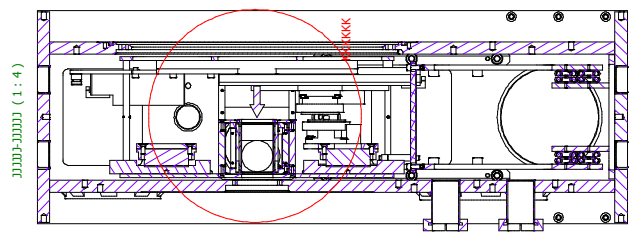
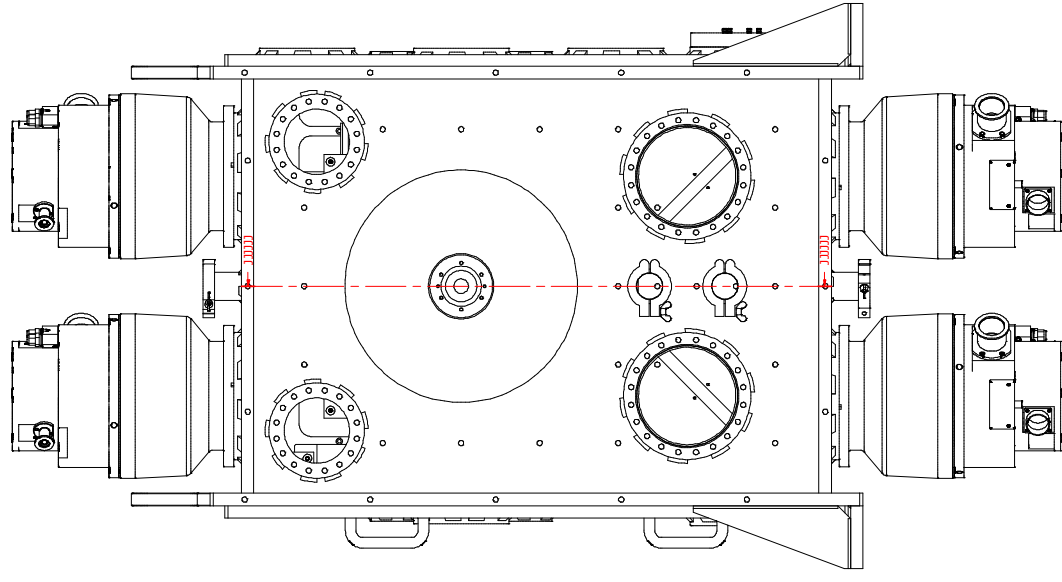


BASE VIEW

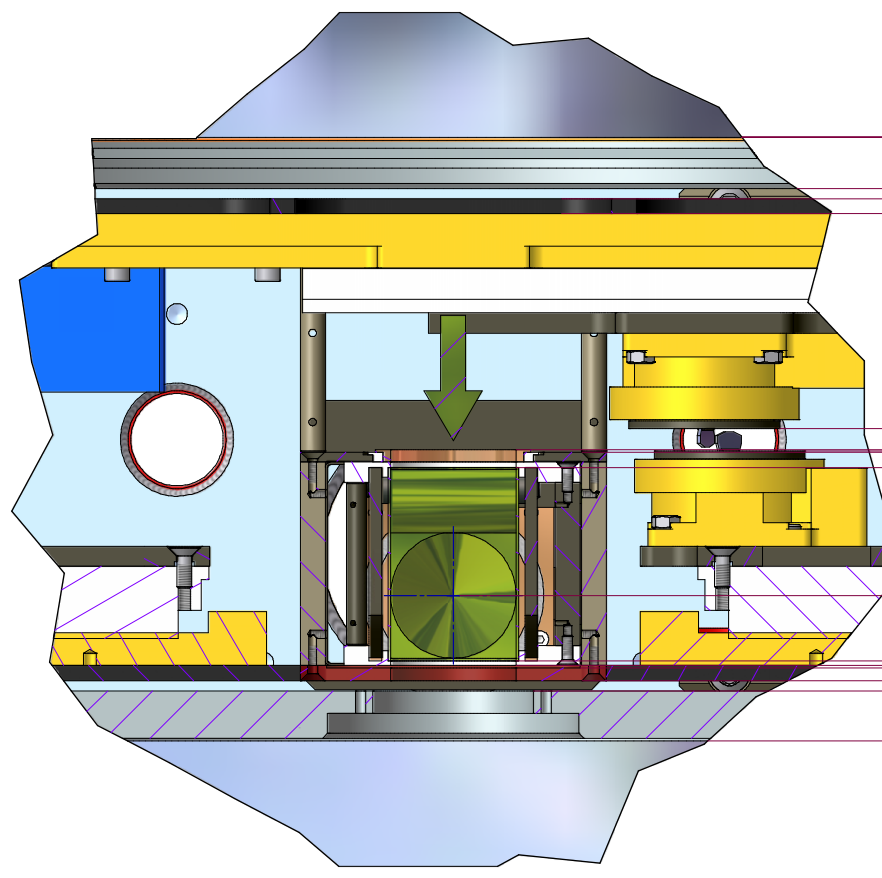


Title: Lens Mount Hood			
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	LensMountHood.ipt
Checked by:	N/A	Drawing file:	ProfileMeasurements.dwg
Date:	Aug 2009	Version number:	1
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	S/Steel	Sheet number:	48 / 49
Remove all burrs		Number off:	2 + 2
Scale:	Do not scale	Drawing number:	IC_HEP_PIS_FETS_3097
Notes:			
Contact:	p.savage@imperial.ac.uk (Work) 0207 594 7817 (Mobile) 07884 260558		

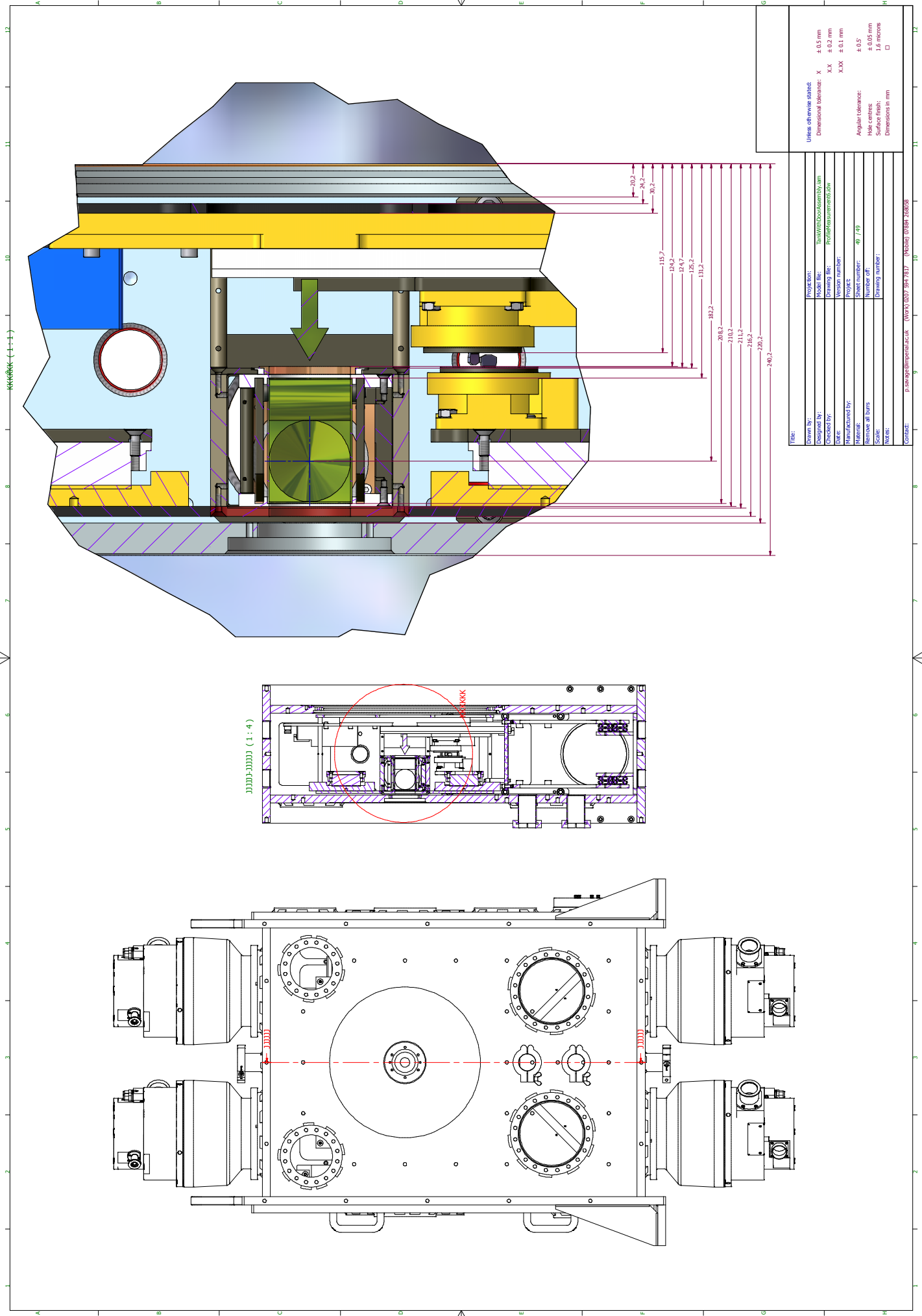
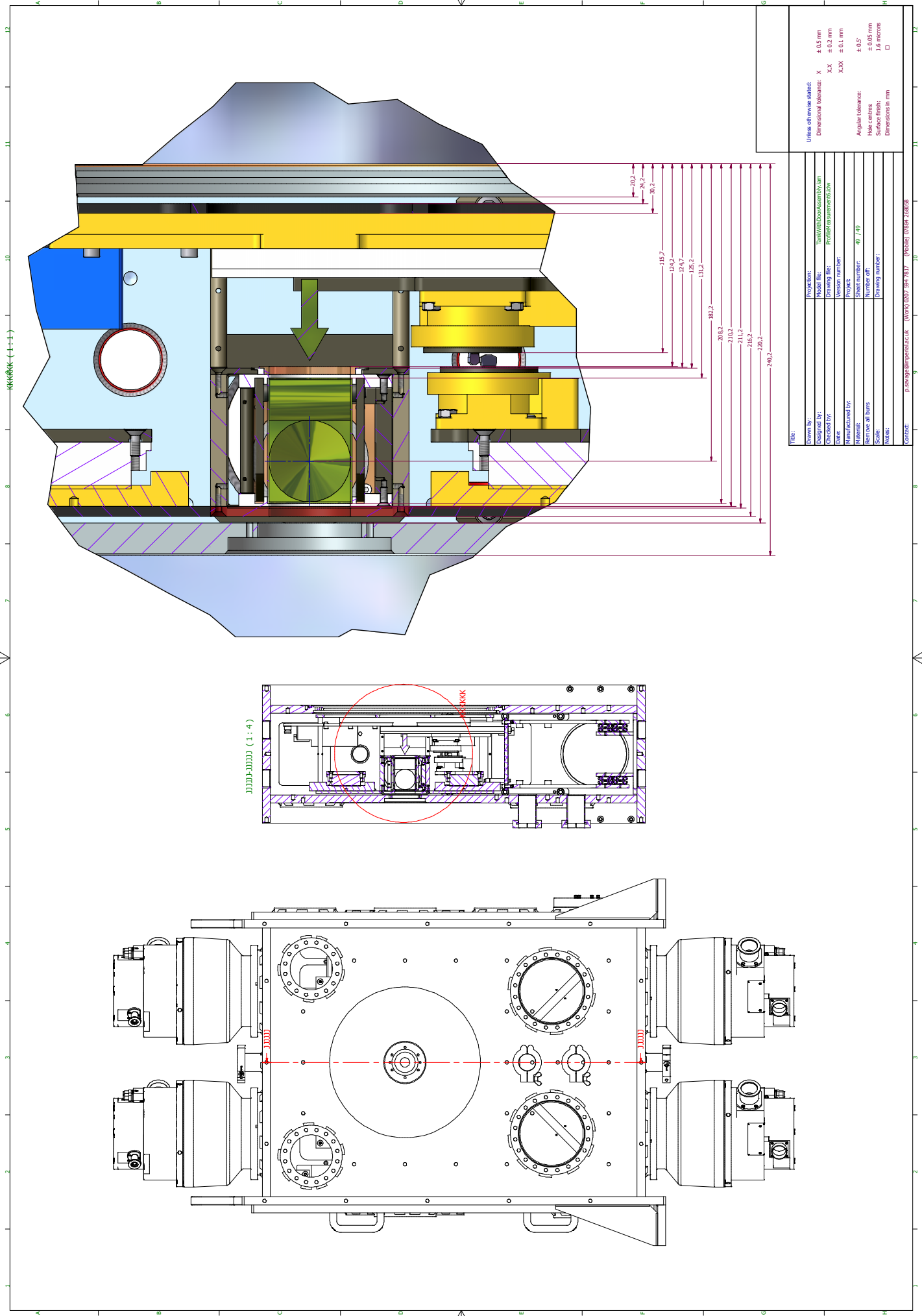
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm X.X ± 0.2 mm X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres:	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	□



3000-3000 (1:4)



SKK (1:1)



Title:		Projection:	Third Angle Projection
Drawn by:	tanw@tanw.com	Model file:	tanw@tanw.com
Checked by:		Drawing file:	tanw@tanw.com
Date:		Version number:	
Manufactured by:		Project:	
Material:		Sheet number:	48 / 49
Remove all bars:		Number of:	
Scale:		Drawing number:	
Notes:			
Contact:		p.sanchez@tanw.com (WhatsApp: 0034 910 200000)	

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