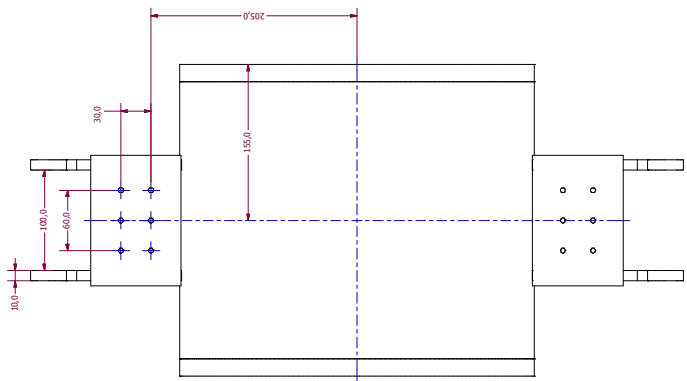
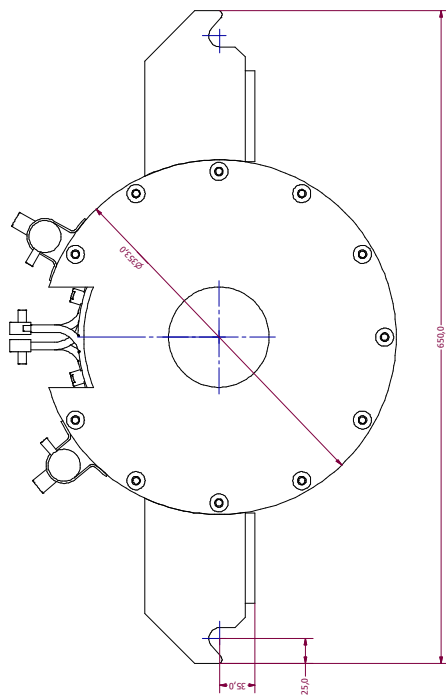
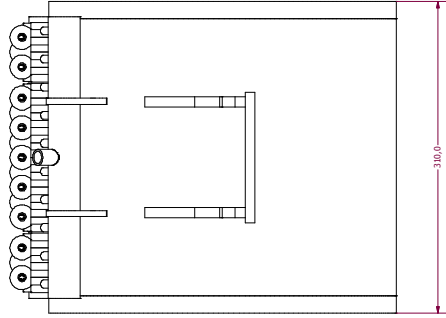
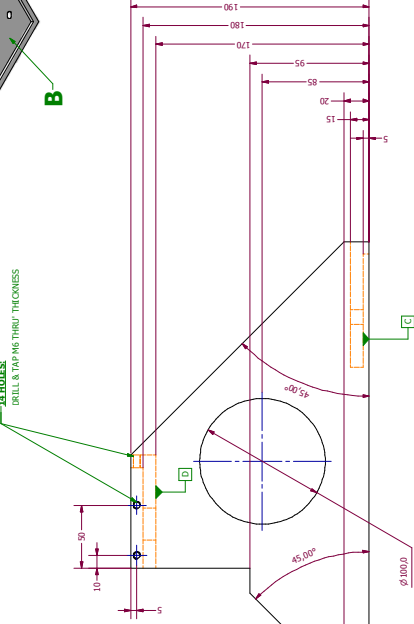




ORIGINAL DIAMETER LEBT,
MODEL REFLECTS OLD SIZES,
NEW SIZES IN PAPER DWG ONLY.

Title:		Unless otherwise stated:	
Drawn by:	Projection:	Model file:	PRODUCT_RUTHERFORD_LEBT.dwg
Designed by:	Model file:	Version number:	LEBT.dwg
Checked by:	Version number:	Project:	1 / 33
Date:	Project:	Sheet number:	1 / 33
Manufactured by:	Sheet number:	Number of:	1 / 33
Material:	Number of:	Drawing number:	
Finish:	Drawing number:		
Scale:			
Notes:			
Contact:		p.sanger@rutherford.ac.uk (New) 0191 748093	

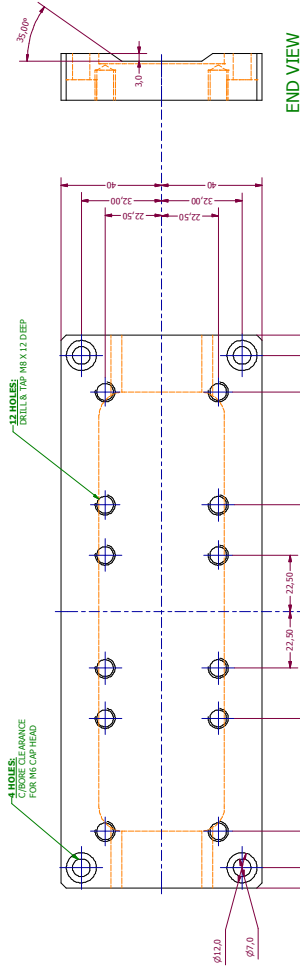
Dimensional tolerance:	X	± 0.5 mm
	X.X	± 0.2 mm
	X.XX	± 0.1 mm
Angular tolerance:		± 0.5°
Hole centres:		± 0.05 mm
Surface finish:		1.6 microns
Dimensions in mm		0



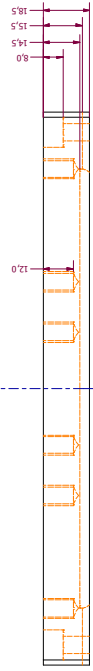
File:	LE.B.T. Solenoid Support Bridge			
Drawn by:	P. Savage	Projection:	Third angle	
Designed by:	P. Savage	Model file:	Best pt.12.pt	
Checked by:	N/A	Drawing file:	LE.B.T. dwg	
Date:	12 June 2008	Version number:	1	
Manufactured by:	AMS Steel **	Part End Test Stand		
Material:	Alum.	Sheet number:	2 / 31	
Surface finish:	Smooth or diff.	Drill size:		
Scale:	Drawn as is	Drawing number:	LE-B.P. B.S. F.R.S. 2500	
Notes:				
Contact:	p.savage@imperial.ac.uk (Work) 0207 594 7337 (Mobile) 07884 283838			

Notes: To be painted using the same process as for the FETS support stands DWG # 1C_HEP_PJS_FETS_2000, colour white, threaded holes and top surface of plate A and bottom surface of plate B to be free of paint.

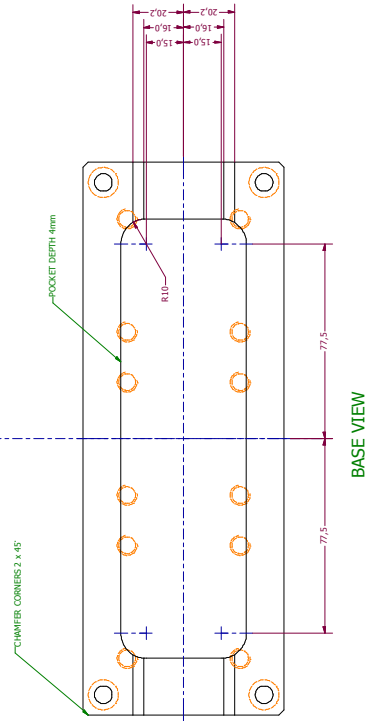
** All plates are mild steel except two plates A which are a non-magnetic grade of stainless steel.

L.E.B.T. SUPPORT
VEE RAIL RUNNERFRONT END TEST STAND (F.E.T.S.)
<http://fets.lsls.rl.ac.uk/>

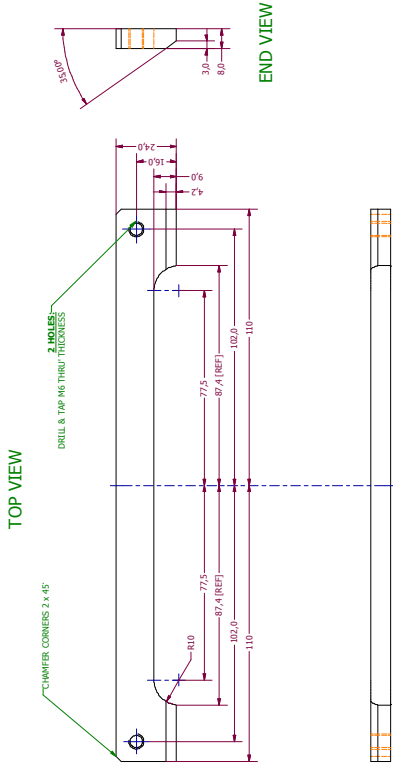
TOP VIEW



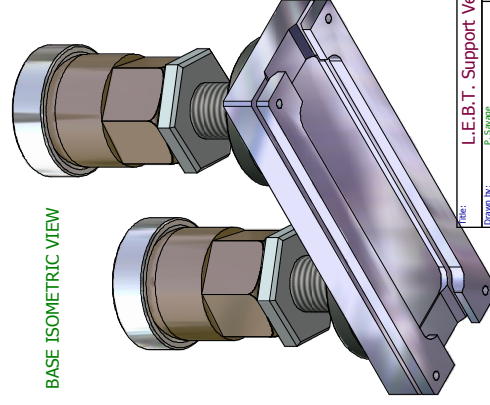
SIDE VIEW



BASE VIEW

VEE RAIL RUNNER - TOP
MATERIAL: EN24
OFF: 4

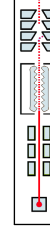
SIDE VIEW

VEE RAIL RUNNER - BASE
MATERIAL: EN24
OFF: 8

BASE ISOMETRIC VIEW

END VIEW

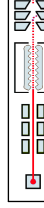
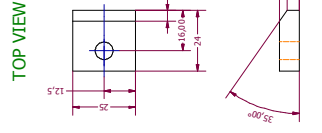
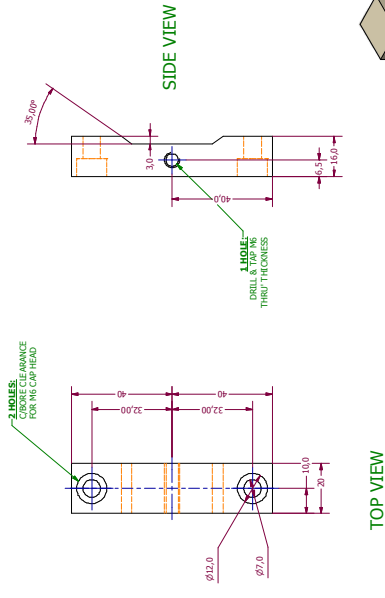
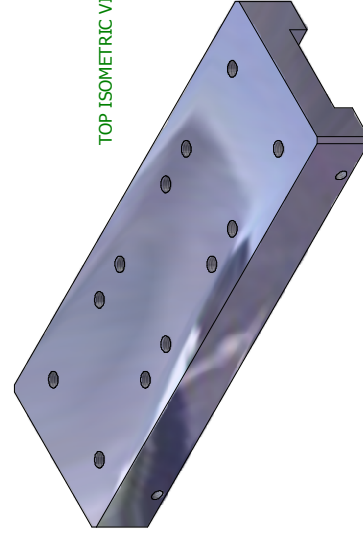
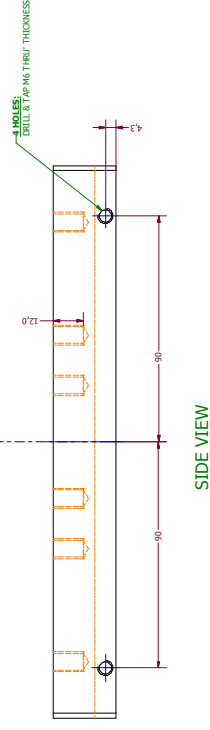
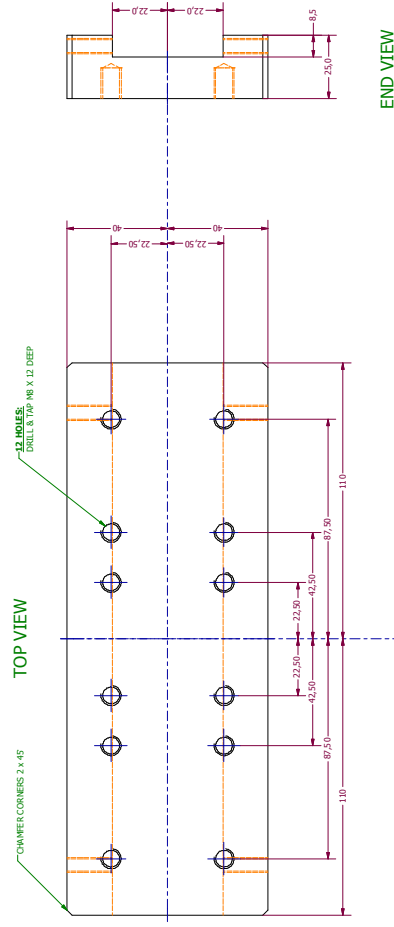
VEE RAIL RUNNER - ASSEMBLY



L.E.B.T. Support Vee Rail Runner

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	LEBTSupportRunner.dwg
Checked by:	N/A	Drawing file:	LEBTS.dwg
Date:	Feb 2008	Version number:	1
Manufactured by:	Daresbury Labs - T.S.C.	Project:	Front End Test Stand
Material:	Steel grade EN24	Sheet number:	4 / 30
Part:		Number of:	4 complete assemblies
Scale:	Drawn scale	Drawing number:	LC-FE2-PS-FE15-2502
Notes:	None	Dimensions in mm	
Contact:	p.savage@imperial.ac.uk (Work) 0207 7347 737 (Home) 02088 208093		

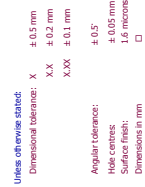
Unless otherwise stated:
Dimensional tolerance: X ± 0.5 mm
X.X ± 0.2 mm
X.XX ± 0.1 mm
Angular tolerance: ± 0.5°
Hole centres: ± 0.05 mm
Surface finish: 1.6 microns
Dimensions in mm



File:	L.E.B.T. Support - Flat Rail Runner				
Drawn by:	P. Savage	Position:	LEB.T Railrunner pt		
Designed by:	P. Savage	Model file:	LEB.T.dwg		
Checked by:	N/A	Drawing title:	LEB.T.dwg		
Date:	Feb 2008	Version number:	1		
Manufactured by:	Overhaul Labs - T.B.C.	Project:	Front End Ref Sand		
Material:	Steel - galv EN9	Sheet number:	5 of 3		
Notes:	Units in g/s				
Scale:	Drawing units				
Notes:	Do not scale				
Comments:	p.savage@overhaul.co.uk (0924) 202 594 7317 (0623) 0184 285839				

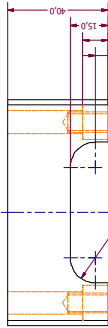
Unless otherwise stated:	
Dimensional tolerance:	X ± 0.5 mm X.X ± 0.2 mm X.XX ± 0.1 mm
Angular tolerance:	± 0.5°
Hole centres	± 0.05 mm
Surface finish:	1.6 microns
Dimensions in mm	☐

Contact: p.savage@imperial.ac.uk (Work) 0207 594 7817 (Mobile) 07884 268059

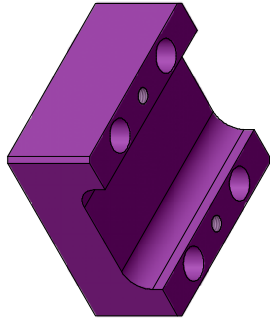
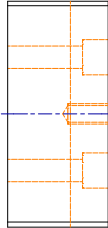


L.E.B.T. Support -
Rail Locator

END VIEW

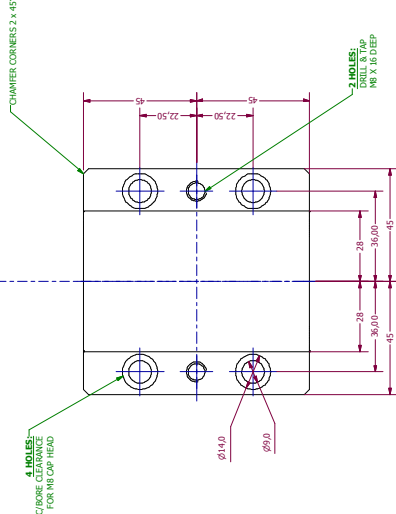


SIDE VIEW



ISOMETRIC VIEW

BASE VIEW

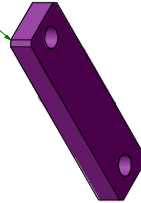


L.E.B.T. Support - Rail Locator Flat
MATERIAL: EN24
OFF: 2

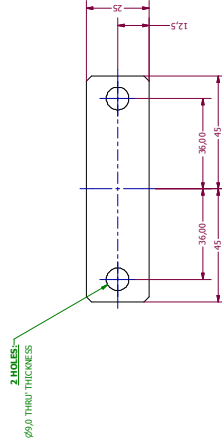
END VIEW



ISOMETRIC VIEW

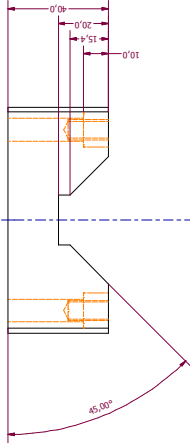


BASE VIEW

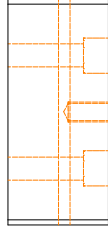


L.E.B.T. Support - Rail Locator Stay
MATERIAL: EN24
OFF: 4

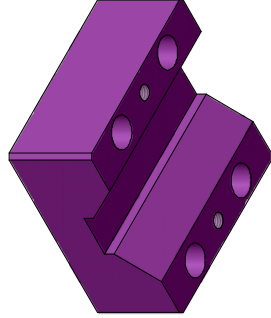
END VIEW



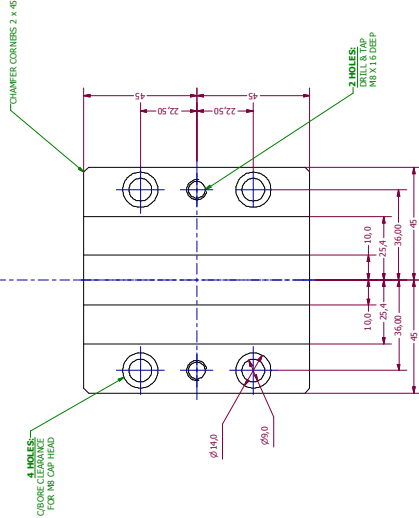
SIDE VIEW



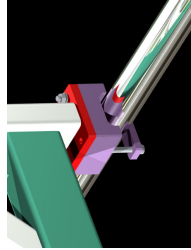
ISOMETRIC VIEW



BASE VIEW



L.E.B.T. Support - Rail Locator Vee
MATERIAL: EN24
OFF: 2



L.E.B.T. Support - Rail Locator

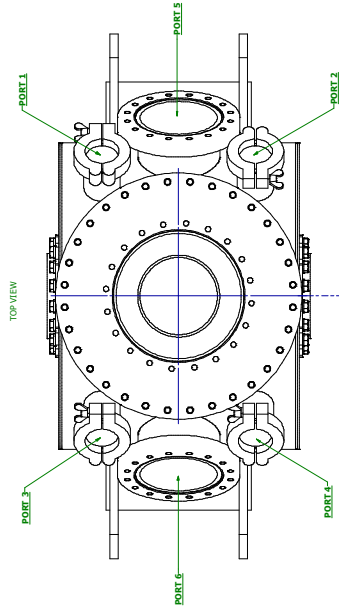
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	BurntLocatorFlat.dpt
Checked by:	N/A	Drawing file:	LEBT.dwg
Date:	Feb 2008	Version number:	1
Manufactured by:	Diamond Labs - T.S.C.	Project:	Front End Test Stand
Material:	Steel grade EN24	Sheet number:	7 / 33
Part:		Number of:	2 each type
Scale:	Drawn scale	Drawing number:	LC-FE2725-FETS_2505
Notes:			
Contact:	p.savage@imperial.ac.uk	(View) 0207 994 7837	(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

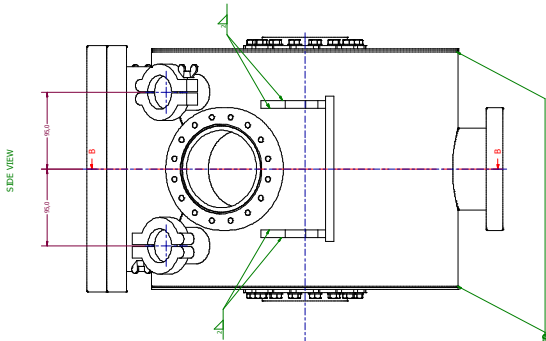
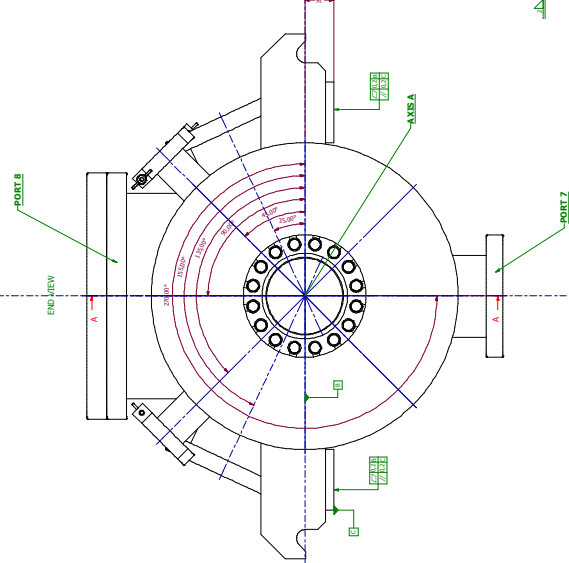
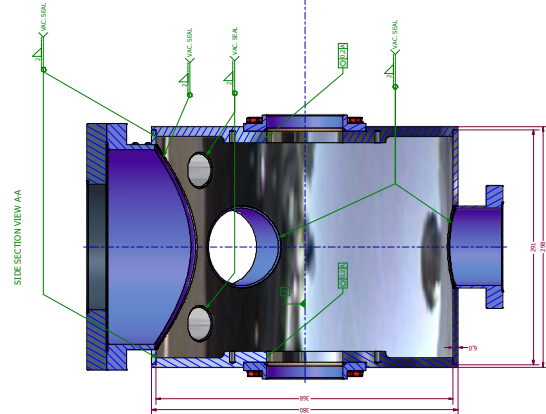
DRIFT VESSEL

FRONT END TEST STAND (F.E.T.S.)

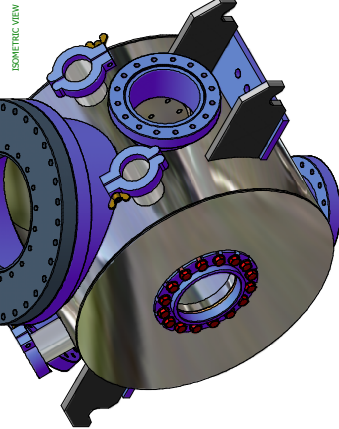
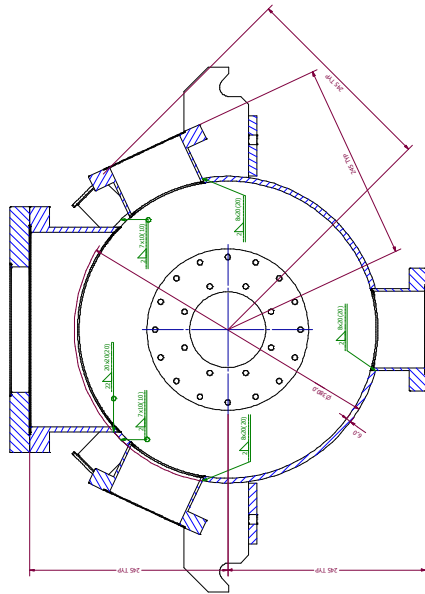
REVISED 11.06.2007



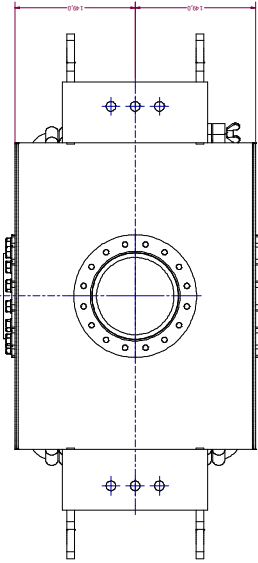
ITEM	DESCRIPTION	UNIT	QTY	REMARKS
1	DRIFT VESSEL	NO	1	
2	DRIFT VESSEL	NO	1	
3	DRIFT VESSEL	NO	1	
4	DRIFT VESSEL	NO	1	
5	DRIFT VESSEL	NO	1	
6	DRIFT VESSEL	NO	1	
7	DRIFT VESSEL	NO	1	
8	DRIFT VESSEL	NO	1	
9	DRIFT VESSEL	NO	1	
10	DRIFT VESSEL	NO	1	
11	DRIFT VESSEL	NO	1	
12	DRIFT VESSEL	NO	1	
13	DRIFT VESSEL	NO	1	
14	DRIFT VESSEL	NO	1	
15	DRIFT VESSEL	NO	1	
16	DRIFT VESSEL	NO	1	
17	DRIFT VESSEL	NO	1	
18	DRIFT VESSEL	NO	1	
19	DRIFT VESSEL	NO	1	
20	DRIFT VESSEL	NO	1	



END SECTION VIEW B-B

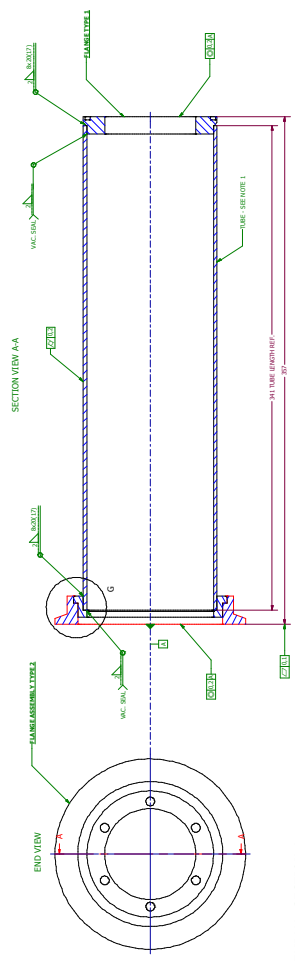


FINISH:
GALVANNEZ INSIDE
BEAD BLAST FINISH OUTSIDE

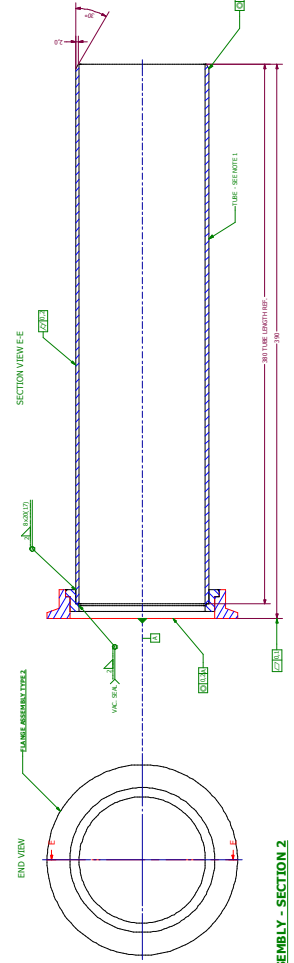


LE.B.T. Drift Vessel

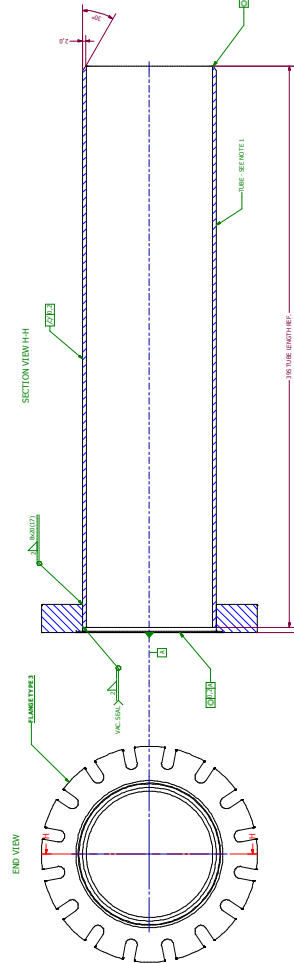
Item	Quantity	Unit	Description	Material	Notes
1	1	NO	DRIFT VESSEL	SS 316	
2	1	NO	DRIFT VESSEL	SS 316	
3	1	NO	DRIFT VESSEL	SS 316	
4	1	NO	DRIFT VESSEL	SS 316	
5	1	NO	DRIFT VESSEL	SS 316	
6	1	NO	DRIFT VESSEL	SS 316	
7	1	NO	DRIFT VESSEL	SS 316	
8	1	NO	DRIFT VESSEL	SS 316	
9	1	NO	DRIFT VESSEL	SS 316	
10	1	NO	DRIFT VESSEL	SS 316	
11	1	NO	DRIFT VESSEL	SS 316	
12	1	NO	DRIFT VESSEL	SS 316	
13	1	NO	DRIFT VESSEL	SS 316	
14	1	NO	DRIFT VESSEL	SS 316	
15	1	NO	DRIFT VESSEL	SS 316	
16	1	NO	DRIFT VESSEL	SS 316	
17	1	NO	DRIFT VESSEL	SS 316	
18	1	NO	DRIFT VESSEL	SS 316	
19	1	NO	DRIFT VESSEL	SS 316	
20	1	NO	DRIFT VESSEL	SS 316	



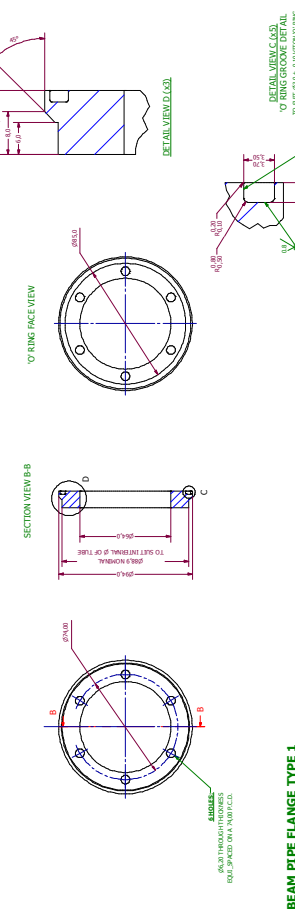
BEAM PIPE ASSEMBLY - SECTION 1
OFF: 1



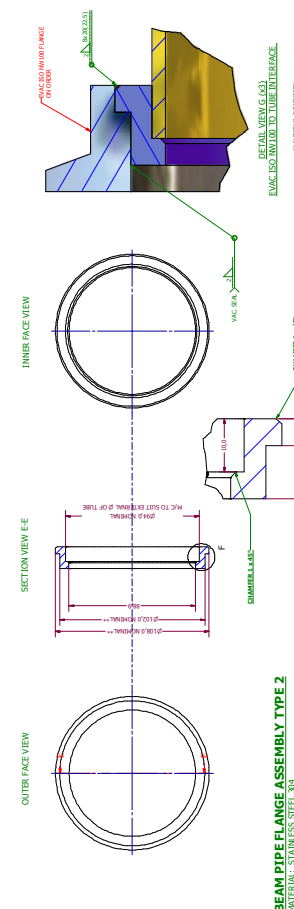
BEAM PIPE ASSEMBLY - SECTION 2
OFF: 1



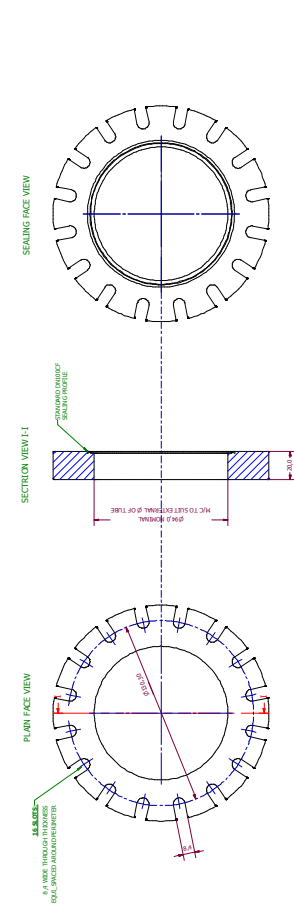
BEAM PIPE ASSEMBLY - SECTION 3
OFF: 1



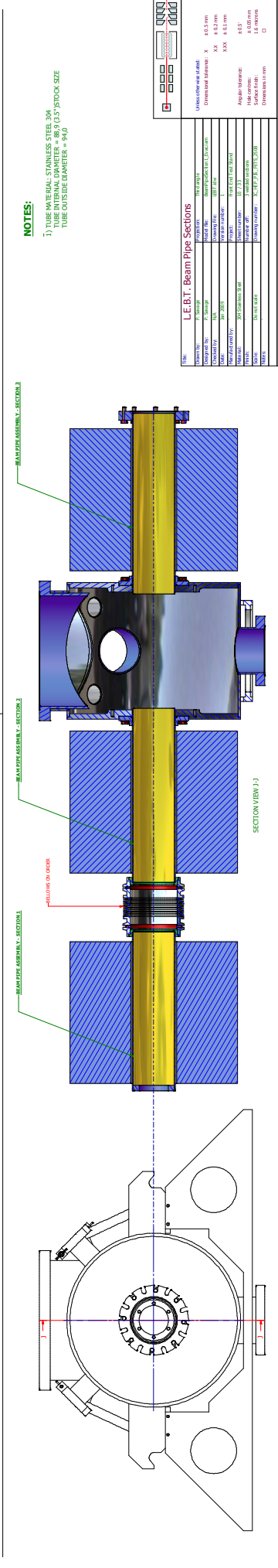
BEAM PIPE FLANGE TYPE 1
MATERIAL: STAINLESS STEEL 304
OFF: 1



BEAM PIPE FLANGE ASSEMBLY TYPE 2
MATERIAL: STAINLESS STEEL 304
OFF: 2



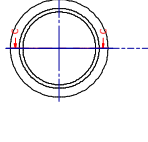
BEAM PIPE FLANGE TYPE 3
MATERIAL: STAINLESS STEEL 304
OFF: 1



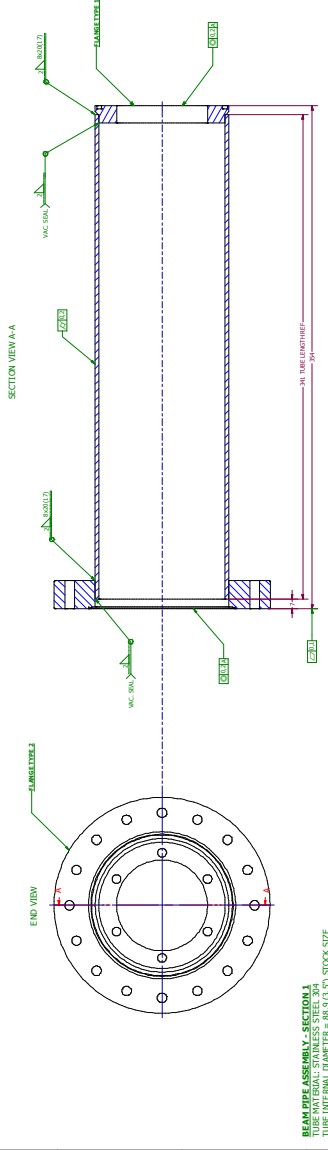
NOTES:

- 1) TUBE MATERIAL: STAINLESS STEEL 304
- 2) TUBE WALL THICKNESS: 10 mm
- 3) TUBE OUTSIDE DIAMETER: 100 mm

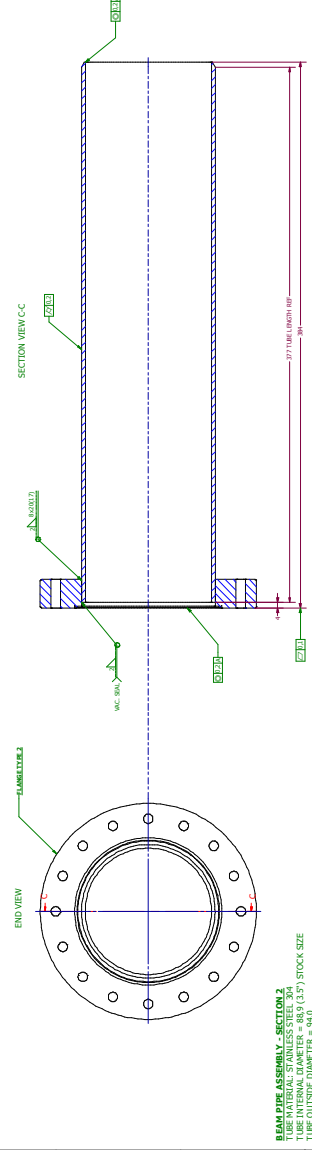
L.E.B.T. Beam Pipe Sections			
Item	Part Number	Material	Quantity
1	1000	STAINLESS STEEL 304	1
2	1000	STAINLESS STEEL 304	1
3	1000	STAINLESS STEEL 304	1
4	1000	STAINLESS STEEL 304	1
5	1000	STAINLESS STEEL 304	1
6	1000	STAINLESS STEEL 304	1
7	1000	STAINLESS STEEL 304	1
8	1000	STAINLESS STEEL 304	1
9	1000	STAINLESS STEEL 304	1
10	1000	STAINLESS STEEL 304	1
11	1000	STAINLESS STEEL 304	1
12	1000	STAINLESS STEEL 304	1
13	1000	STAINLESS STEEL 304	1
14	1000	STAINLESS STEEL 304	1
15	1000	STAINLESS STEEL 304	1
16	1000	STAINLESS STEEL 304	1
17	1000	STAINLESS STEEL 304	1
18	1000	STAINLESS STEEL 304	1
19	1000	STAINLESS STEEL 304	1
20	1000	STAINLESS STEEL 304	1



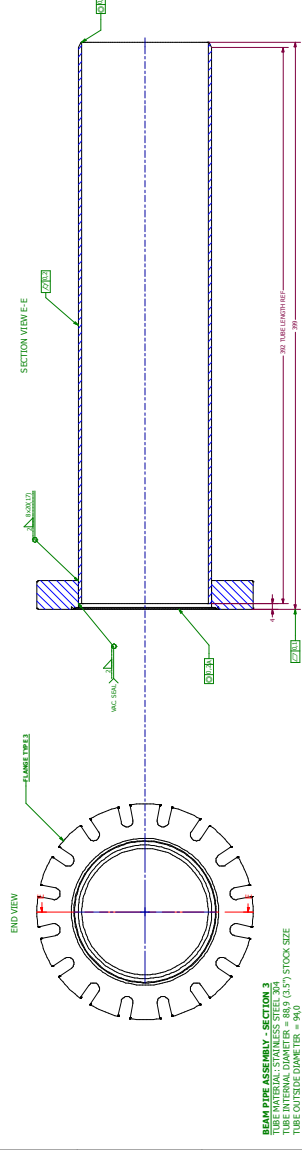
			
Universal mounting as standard. X Drift vessel reference X Drift vessel size 3.0 x 3.0 Drift vessel weight 3.0 kg Any other reference 1.000 mm Drift vessel size 3.0 x 3.0 Drift vessel weight 3.0 kg Drift vessel size 3.0 x 3.0 Drift vessel weight 3.0 kg			



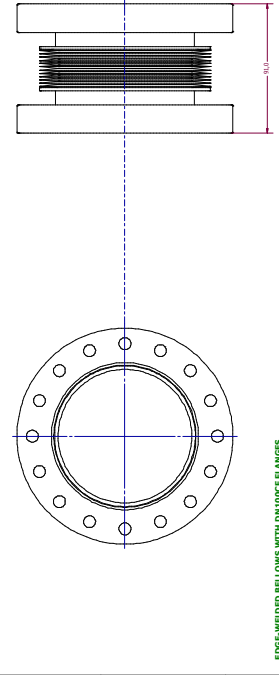
BEAM PIPE ASSEMBLY - SECTION 1
TUBE MATERIAL: STAINLESS STEEL 304
TUBE INTERNAL DIAMETER = 88,9 (3.5")
TUBE OUTSIDE DIAMETER = 94,0



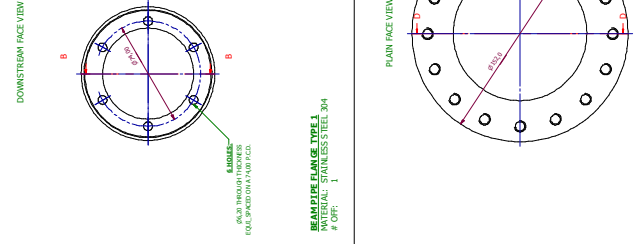
BEAM PIPE ASSEMBLY - SECTION 2
TUBE MATERIAL: STAINLESS STEEL 304
TUBE INTERNAL DIAMETER = 88,9 (3.5")
TUBE OUTSIDE DIAMETER = 94,0



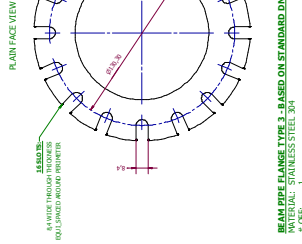
BEAM PIPE ASSEMBLY - SECTION 3
TUBE MATERIAL: STAINLESS STEEL 304
TUBE INTERNAL DIAMETER = 88,9 (3.5")
TUBE OUTSIDE DIAMETER = 94,0



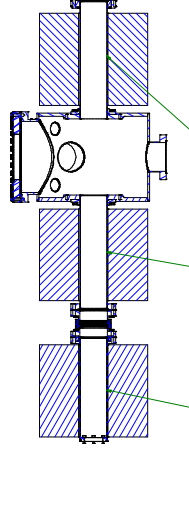
EDGE-WELDED BELLOWS WITH DN100CF FLANGES
MATERIAL: STAINLESS STEEL 304



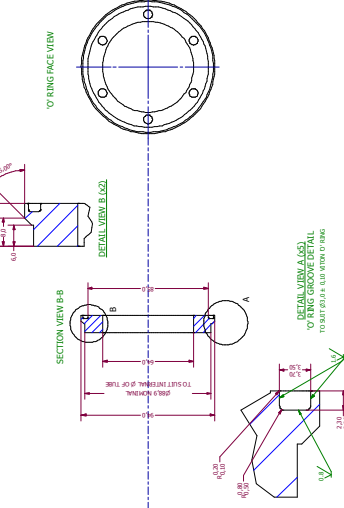
BEAM PIPE FLANGE TYPE 2 - BASED ON STANDARD DN100CF FLANGE
MATERIAL: STAINLESS STEEL 304
OF: 2



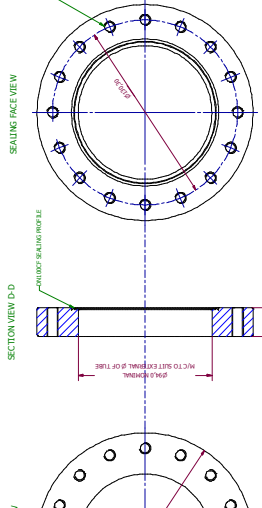
BEAM PIPE FLANGE TYPE 3 - BASED ON STANDARD DN100CF FLANGE
MATERIAL: STAINLESS STEEL 304
OF: 1



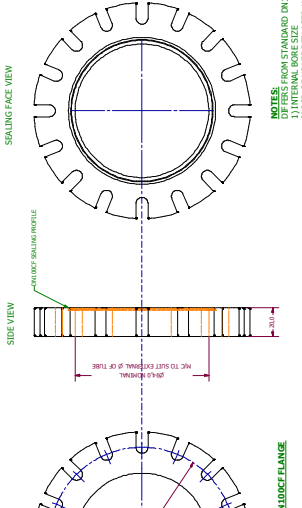
BEAM PIPE SECTION 1



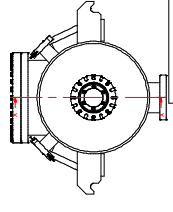
BEAM PIPE FLANGE TYPE 1
MATERIAL: STAINLESS STEEL 304
W OFF: 1



NOTES:
DIFFERS FROM STANDARD DN100CF IN TWO WAYS:
1) INTERNAL BORE SIZE
2) TAPPED M8 HOLES IN PLACE OF CLEARANCE HOLES



NOTES:
DIFFERS FROM STANDARD DN100CF IN TWO WAYS:
1) INTERNAL BORE SIZE
2) BOTTOM HOLES BORED WITH GLOVE

[illegible]

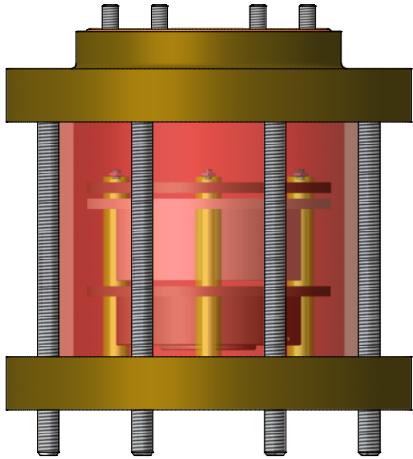
Contact: p.savogal@imperial.ac.uk (Work) 020 7 594 7817 (Mobile) 07804 260050

FETS FIRST VESSEL
FARADAY CUP ASSEMBLY

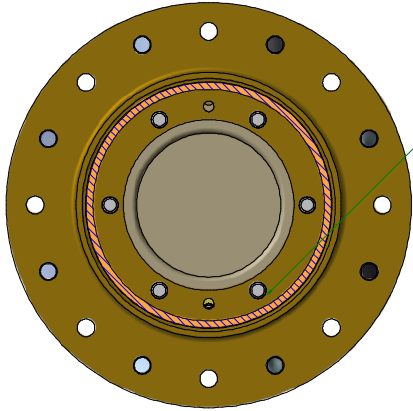
FRONT END TEST STAND (F.E.T.S.)

HEB//FETS.1ASX (1.1.06.047)

DOWNSTREAM END VIEW

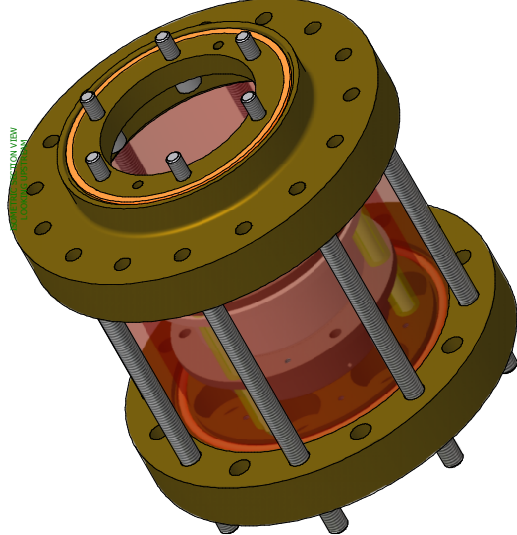
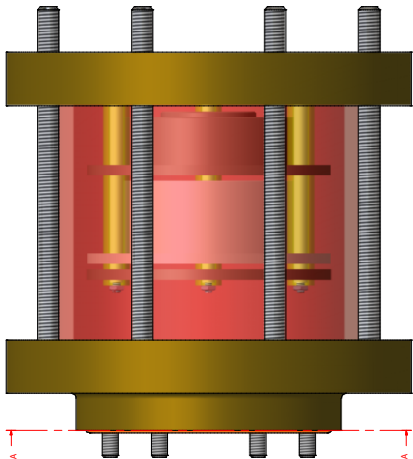


SIDE SECTION VIEW

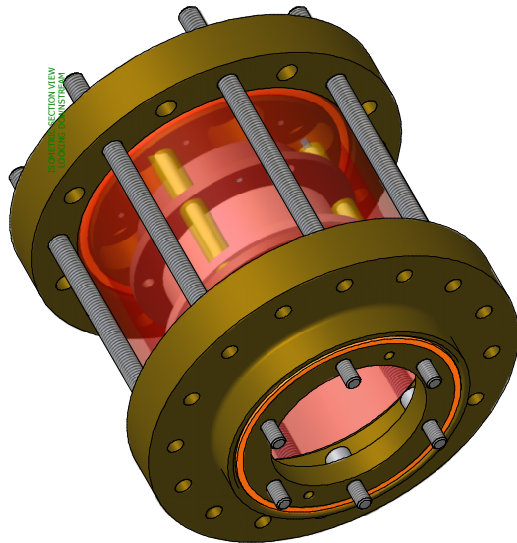


IGNORE CERAMIC RING
MAY BE REQUIRED IN FUTURE

UPSTREAM END VIEW



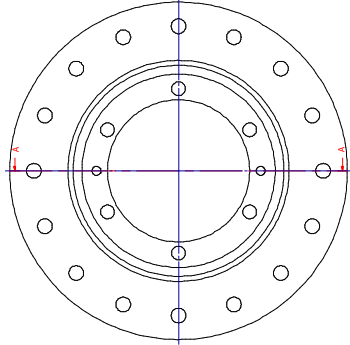
ISOMETRIC EXTERNAL VIEW



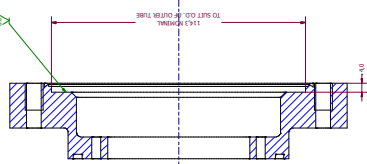
First vacuum vessel faraday cup assembly

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	12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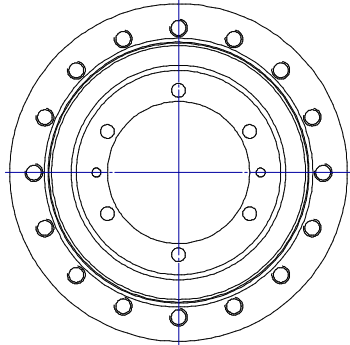
UPSTREAM FACE VIEW



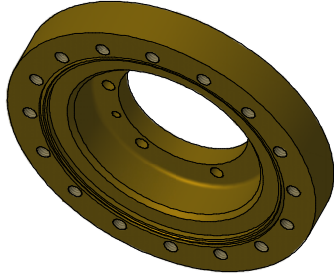
SECTION VIEW A-A



DOWNSTREAM FACE VIEW



ISOMETRIC
DOWNSTREAM FACE VIEW



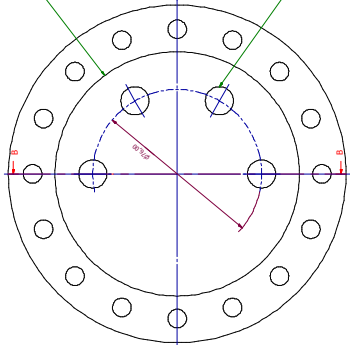
BEAM PIPE PORT ADAPTOR

MATERIAL: ALUMINIUM ALLOY
PART SUPPLIED: ADD CIRCULAR POCKET FEATURE DETAILLED

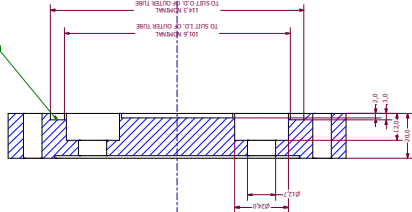
OFF: 1

NOTES:
1) SURFACES INDICATED THIS **
N/C LAY CIRCULAR
NO SCANTIES ACROSS LAY

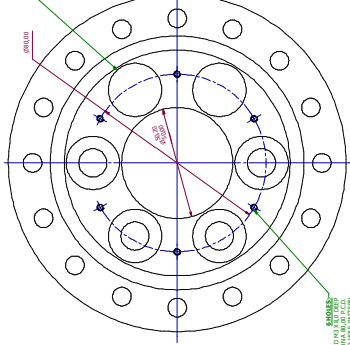
DOWNSTREAM FACE VIEW



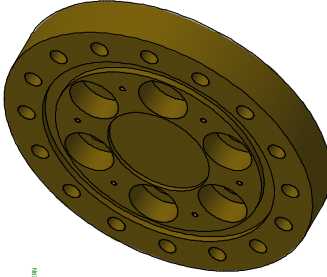
SECTION VIEW B-B



UPSTREAM FACE VIEW



ISOMETRIC
UPSTREAM FACE VIEW



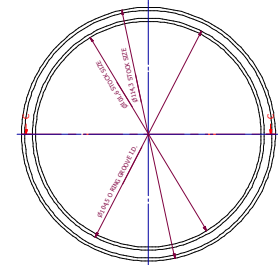
FARADAY CUP ASSEMBLY FLANGE

MATERIAL: STAINLESS STEEL GRADE 304
PART SUPPLIED: ADD CIRCULAR POCKET FEATURE DETAILLED
SUPPLIED BY DESIGLON

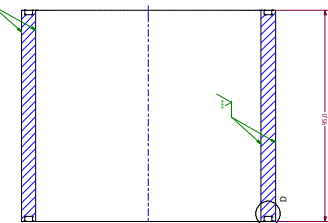
OFF: 1

NOTES:
1) SURFACES INDICATED THIS **
N/C LAY CIRCULAR
NO SCANTIES ACROSS LAY

END VIEW

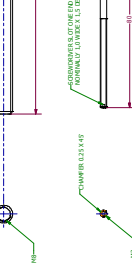


SECTION VIEW C-C



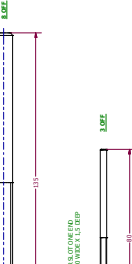
END VIEW

SECTION VIEW D-D



SIDE VIEW

SECTION VIEW E-E



STUDDING

MATERIAL: STAINLESS STEEL



ADAPTOR ALUM. BUSH AS SUPPLIED

SUPPLIED

OUTER TUBE

MATERIAL: ALUMINIUM ALLOY 6062
MATERIAL SUPPLIER: AALCO

OFF: 1

NOTES:
1) SURFACES INDICATED THIS **
GIRTH AT SURFACES
PRODUCT END BUSHING FACES

SELF ASSEMBLY VACUUM BNC FEED THROUGH
COPPER

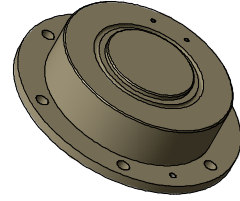
SUPPLIED

First vacuum vessel Faraday cup assembly

Item	Part Number	Material	Quantity	Notes
1	0001	ALUMINIUM ALLOY 6062	1	OUTER TUBE
2	0002	STAINLESS STEEL	1	STUDDING
3	0003	ALUMINIUM ALLOY 6062	1	ADAPTOR ALUM. BUSH AS SUPPLIED
4	0004	COPPER	1	SELF ASSEMBLY VACUUM BNC FEED THROUGH
5	0005	STAINLESS STEEL	1	FARADAY CUP ASSEMBLY FLANGE
6	0006	ALUMINIUM ALLOY 6062	1	BEAM PIPE PORT ADAPTOR

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS

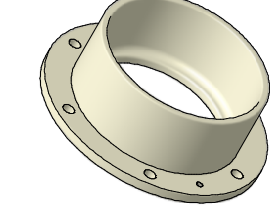
Overall length	100.0 mm
Overall width	100.0 mm
Overall height	100.0 mm
Overall diameter	100.0 mm
Overall thickness	10.0 mm
Overall radius	10.0 mm
Overall angle	90.0 deg
Overall surface finish	0.8 Ra
Overall material	ALUMINIUM ALLOY 6062
Overall supplier	AALCO



FARADAY CUP

MATERIAL: STAINLESS STEEL 316
OFF: 1

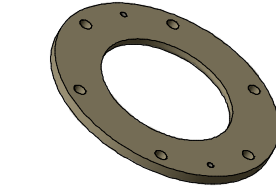
NOTES:
1) SURFACES INDICATED THUS ***
GRITBLAST SURFACES
2) REMOVE SHARP EDGES



SECONDARY ELECTRON SUPPRESSION RING

MATERIAL: STAINLESS STEEL 316
OFF: 1

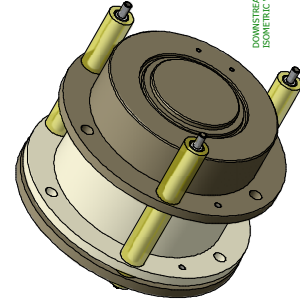
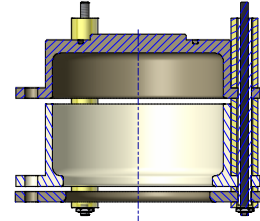
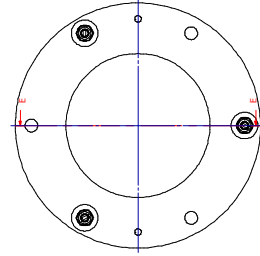
NOTES:
1) SURFACES INDICATED THUS ***
GRITBLAST SURFACES
2) REMOVE SHARP EDGES



FRONT PLATE

MATERIAL: STAINLESS STEEL 316
OFF: 1

NOTES:
1) SURFACES INDICATED THUS ***
GRITBLAST SURFACES
2) REMOVE SHARP EDGES



FARADAY CUP ASSEMBLY

MATERIAL: STAINLESS STEEL 316
OFF: 1 COMPLETE ASSEMBLY

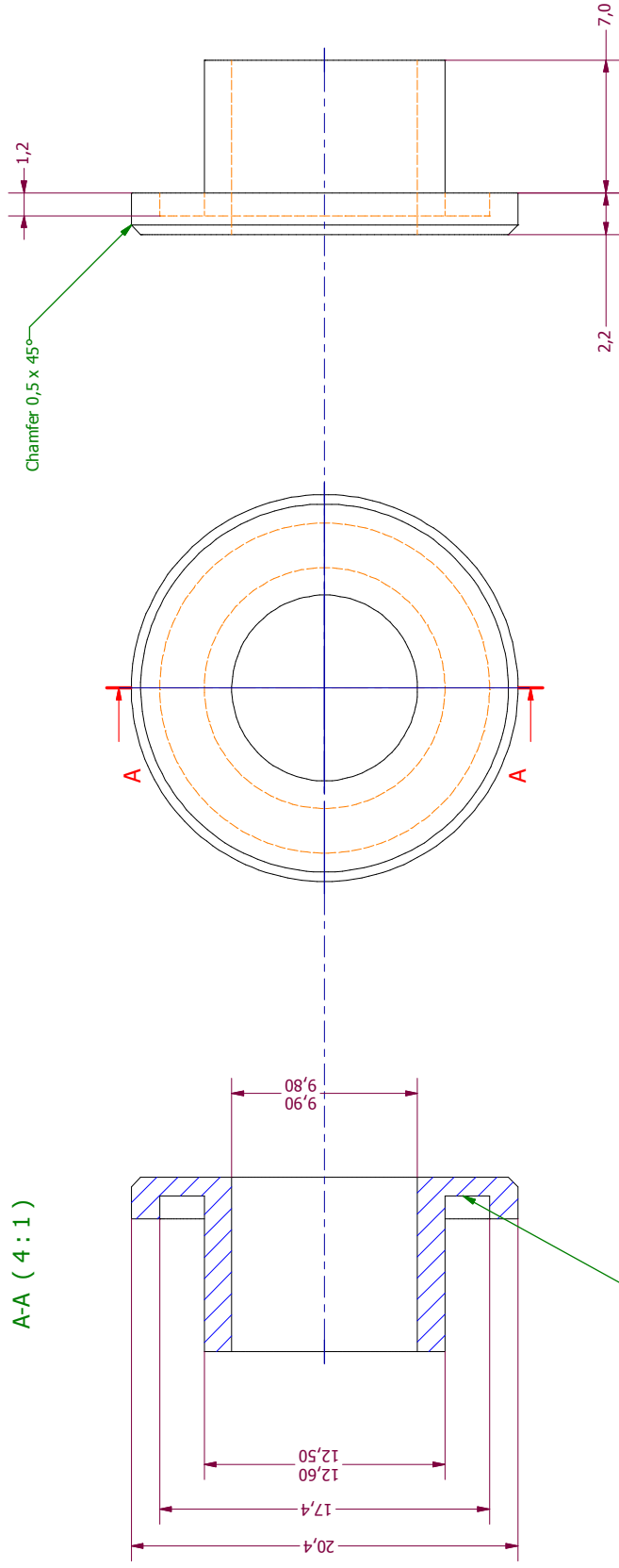
[illegible]

U-braço de alçaclado

Dimensões tolerância:	X	+0,5 mm
	XX	+0,2 mm
	XXX	+0,1 mm
		+0,5°

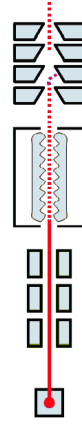
Angulos tolerância:	
Hidrantes:	± 0,02 mm
Superfícies:	16 microns
Dimensões em mm	D





'O' RING GROOVE:-

TO SUIT $\varnothing 1,6 \pm 0,10$ VITON 'O' RING
CIRCULAR LAY - ENSURE SURFACE IS
FREE FROM SCRATCHES



Title: First vacuum vessel faraday cup BNC insert

Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	BNC_Insert.ipt
Checked by:	N/A	Drawing file:	LEBT.idw
Date:	1st May 2009	Version number:	1
Manufactured by:	HEP workshop, IWC	Project:	Front End Test Stand
Material:	Brass or S/Steel	Sheet number:	17 / 33
Finish:	Remove all burrs	Number off:	6
Scale:	Do not scale	Drawing number:	IC_HEP_PJS_FETS_2524
Notes:			

Unless otherwise stated:

Dimensional tolerance: X ± 0.5 mm

X.X ± 0.2 mm

X.XX ± 0.1 mm

Angular tolerance:

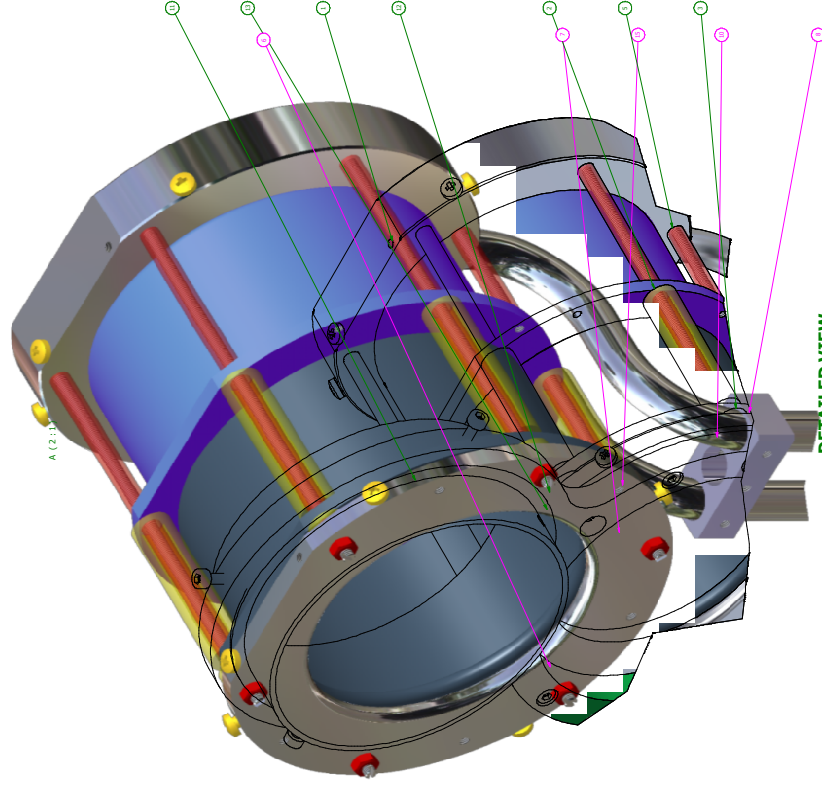
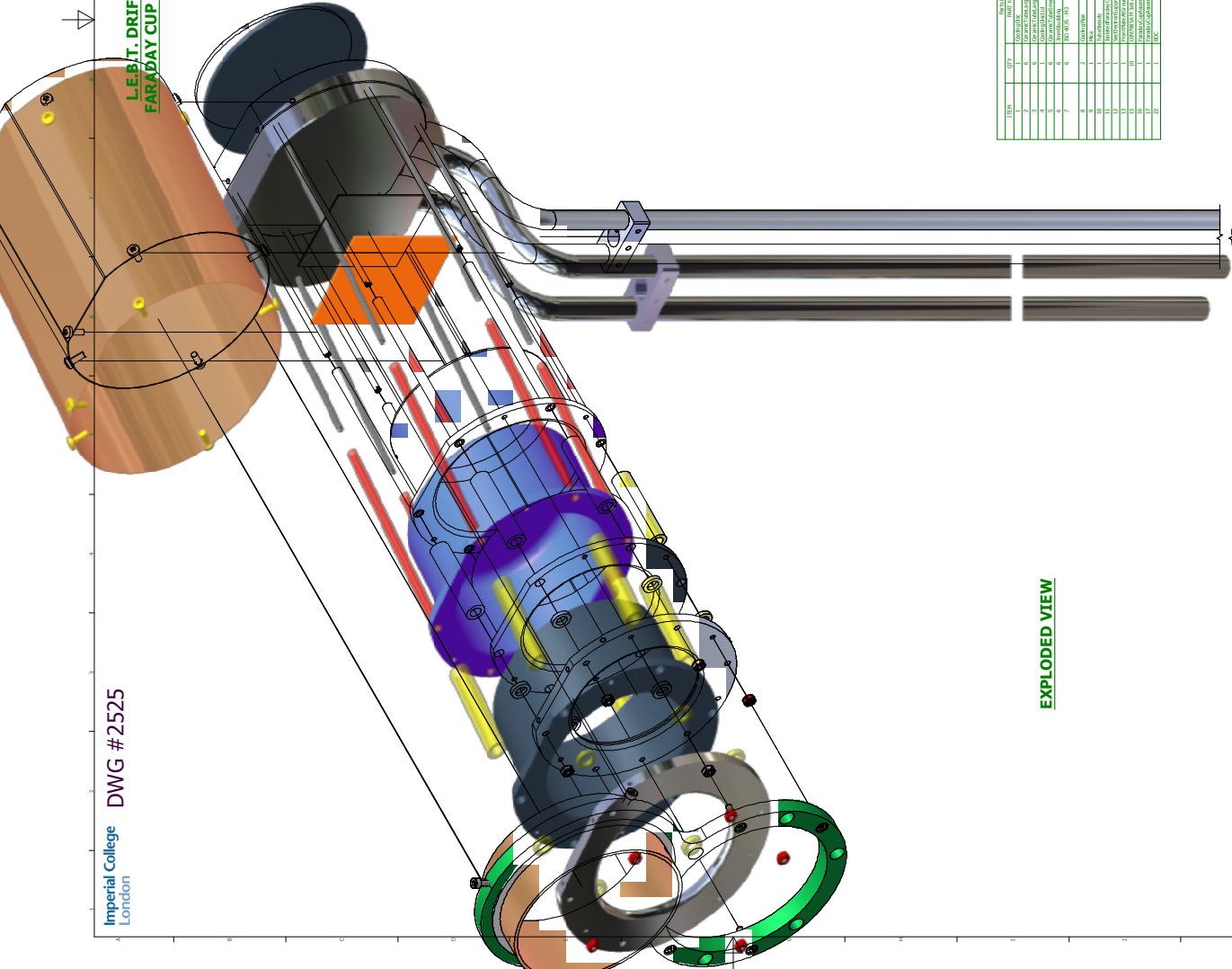
Hole centres: ± 0.05 mm

Surface finish: 1.6 microns

Dimensions in mm

Contact: p.savage@imperial.ac.uk (Work) 0207 594 7817 (Mobile) 07884 268058

L.E.B.T. DRIFT VESSEL
FARADAY CUP ASSEMBLY



DETAILED VIEW
SHOWING HEAD WITH
JACKET REMOVED

TRIN	QTY	AVAIL NUMBER	DESCRIPTION
1	1	ConcType	Used for total quantity
2	6	ConcType	Used for total quantity
3	6	ConcType	Used for total quantity
4	1	ConcType	Used for total quantity
5	6	ConcType	Used for total quantity
6	6	ConcType	Used for total quantity
7	6	ConcType	Used for total quantity
8	2	ConcType	Used for total quantity
9	1	ConcType	Used for total quantity
10	1	ConcType	Used for total quantity
11	1	ConcType	Used for total quantity
12	1	ConcType	Used for total quantity
13	1	ConcType	Used for total quantity
14	1	ConcType	Used for total quantity
15	1	ConcType	Used for total quantity
16	1	ConcType	Used for total quantity
17	1	ConcType	Used for total quantity

EXPLODED VIEW

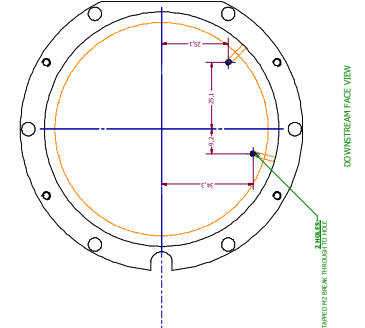
Title:	LE.B.T. Drift Vessel Faraday Cup Assembly
Known by:	P. Sengul
Designed by:	P. Sengul
Created by:	RJA
Date:	May 2020
Approved by:	HF workshop
Version:	Version
Printed:	
Scale:	Do not scale
Notes:	

COMPLETE

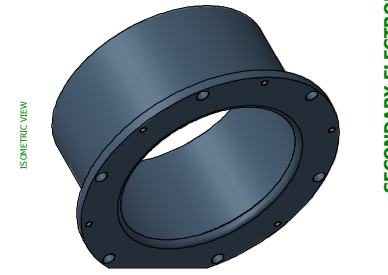
1000 x 1000 x 100

10 holes

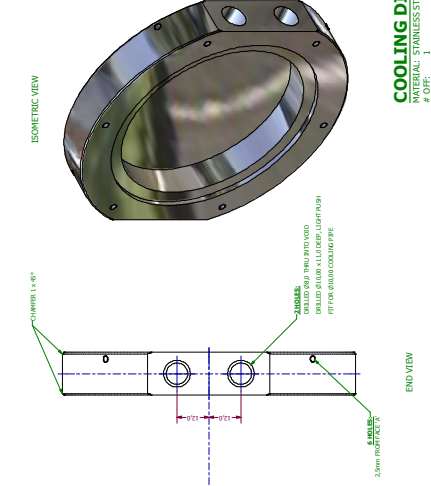
Technical drawing of a 1000mm x 1000mm x 100mm plate with 10 holes. The drawing shows a top view with 10 holes arranged in two rows of five. A red line indicates the center of the plate. Dimensions are given in mm: overall width 1000, overall height 1000, hole diameter 16, hole spacing 100, and hole offset 50. The drawing is labeled '1000 x 1000 x 100' and '10 holes'.



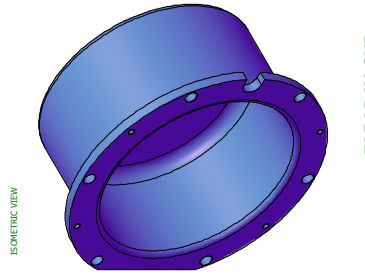
DOWNSTREAM FACE VIEW



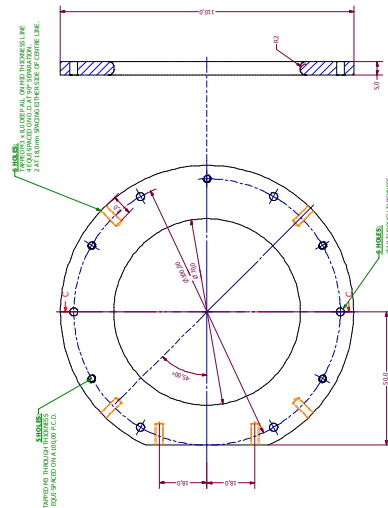
**SECONDARY ELECTRON
SUPPRESSION RING**
MATERIAL: STAINLESS STEEL 316



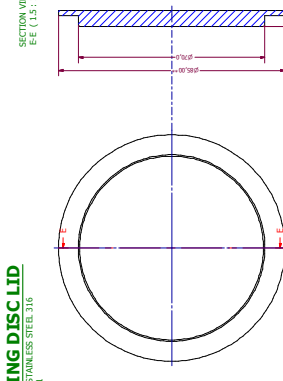
COOLING DISC
MATERIAL: STAINLESS STEEL 316
OFF: 1



ISOMETRIC VIEW



SECTION VIEW
C-C (1:5:1)

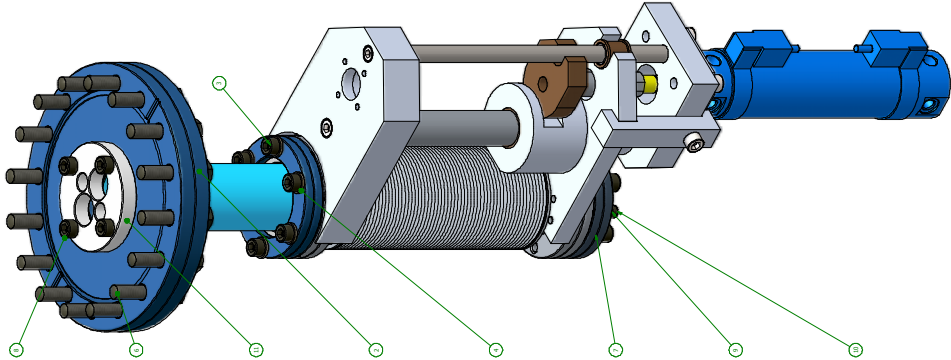


ISOMETRIC VIEW

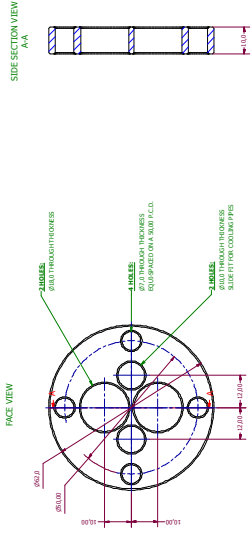
[illegible]

NOTES:
1) ** LIGHT PUSH FIT INTO COOLING DISC

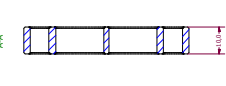
ISOMETRIC ASSEMBLY
VIEW



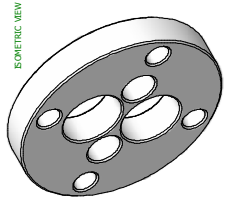
ITEM	QTY	REV	DATE	DESCRIPTION
1	1	1	17 DEC 2005	ISSUED FOR DESIGN
2	1	1	17 DEC 2005	ISSUED FOR DESIGN
3	1	1	17 DEC 2005	ISSUED FOR DESIGN
4	1	1	17 DEC 2005	ISSUED FOR DESIGN
5	1	1	17 DEC 2005	ISSUED FOR DESIGN
6	1	1	17 DEC 2005	ISSUED FOR DESIGN
7	1	1	17 DEC 2005	ISSUED FOR DESIGN
8	1	1	17 DEC 2005	ISSUED FOR DESIGN
9	1	1	17 DEC 2005	ISSUED FOR DESIGN
10	1	1	17 DEC 2005	ISSUED FOR DESIGN



FACE VIEW

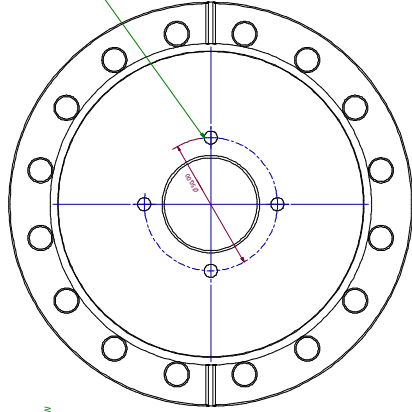


SIDE SECTION VIEW
AA

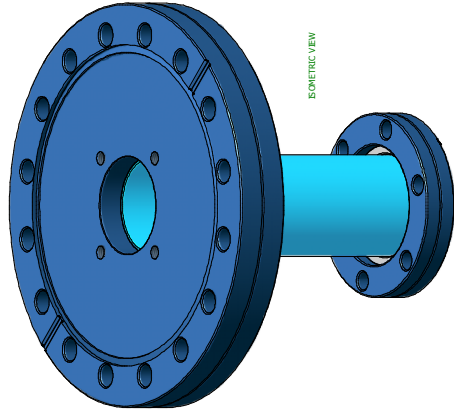


ISOMETRIC VIEW

COOLING PIPE BUSH
MATERIAL: PTFE
QTY: 1

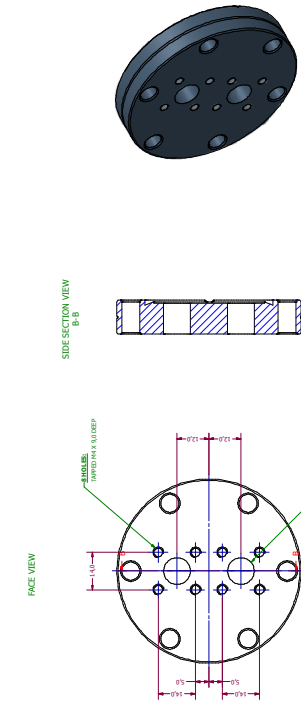


TOP FACE VIEW

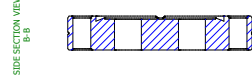


ISOMETRIC VIEW

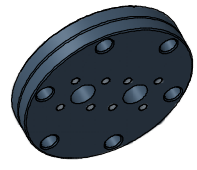
ADDITION OF 4 TAPPED HOLES ONLY
TO BE TAPPED BY PART 1 LEADER
MATERIAL: 304 STAINLESS STEEL
MATERIAL: 304 STAINLESS STEEL
NUMBER OF: 2



FACE VIEW

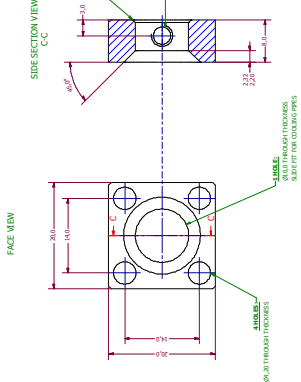


SIDE SECTION VIEW
BB

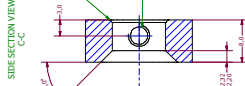


ISOMETRIC VIEW

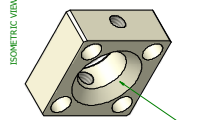
COOLING PIPE SEALING CLAMP
MATERIAL: 304 STAINLESS STEEL
NUMBER OF: 2



FACE VIEW



SIDE SECTION VIEW
CC

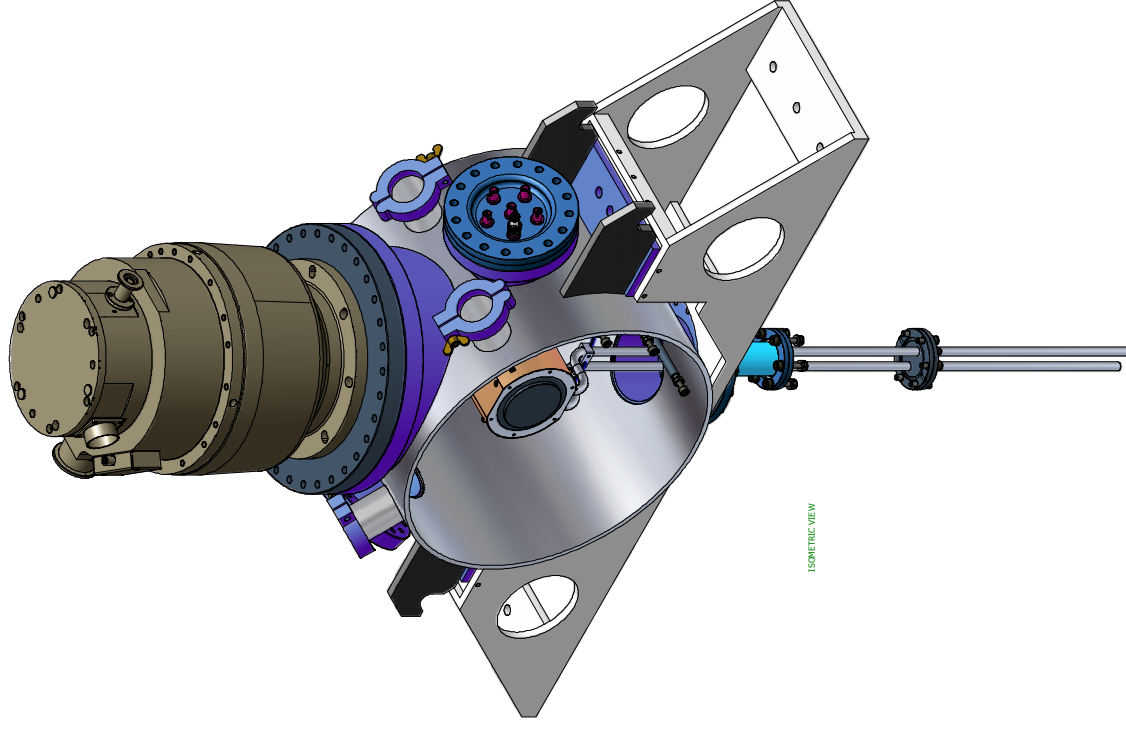
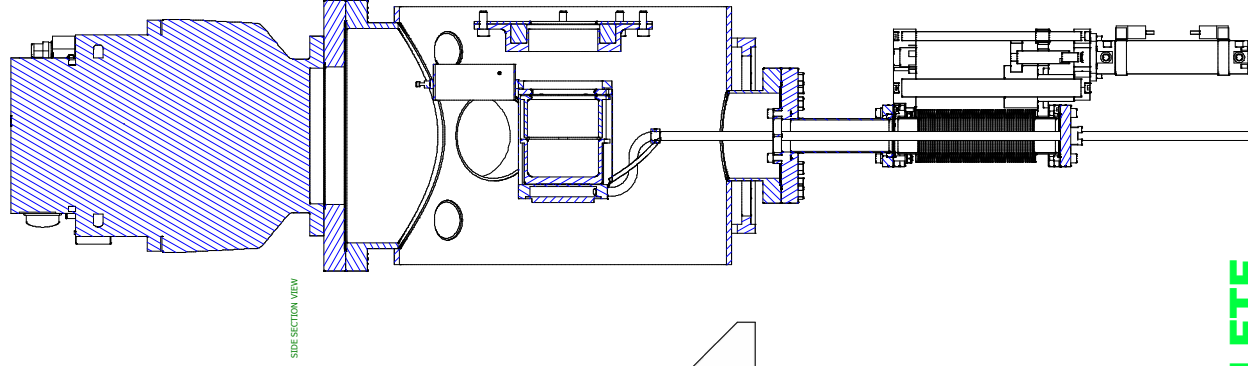
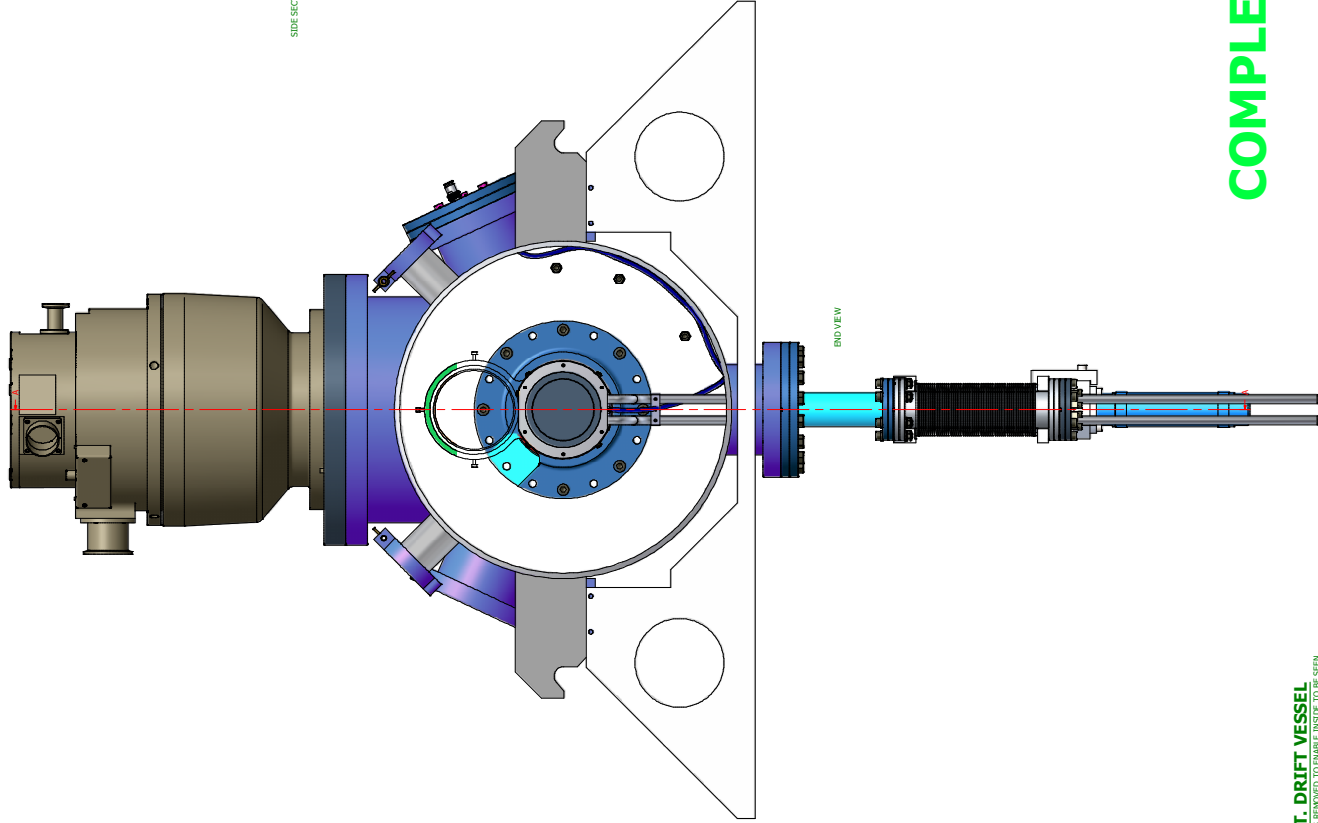


ISOMETRIC VIEW

ITEM	QTY	REV	DATE	DESCRIPTION
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2	1	1	17 DEC 2005	ISSUED FOR DESIGN
3	1	1	17 DEC 2005	ISSUED FOR DESIGN
4	1	1	17 DEC 2005	ISSUED FOR DESIGN
5	1	1	17 DEC 2005	ISSUED FOR DESIGN
6	1	1	17 DEC 2005	ISSUED FOR DESIGN
7	1	1	17 DEC 2005	ISSUED FOR DESIGN
8	1	1	17 DEC 2005	ISSUED FOR DESIGN
9	1	1	17 DEC 2005	ISSUED FOR DESIGN
10	1	1	17 DEC 2005	ISSUED FOR DESIGN

LEBT Vessel Misc. Components

ITEM	QTY	REV	DATE	DESCRIPTION
1	1	1	17 DEC 2005	ISSUED FOR DESIGN
2	1	1	17 DEC 2005	ISSUED FOR DESIGN
3	1	1	17 DEC 2005	ISSUED FOR DESIGN
4	1	1	17 DEC 2005	ISSUED FOR DESIGN
5	1	1	17 DEC 2005	ISSUED FOR DESIGN
6	1	1	17 DEC 2005	ISSUED FOR DESIGN
7	1	1	17 DEC 2005	ISSUED FOR DESIGN
8	1	1	17 DEC 2005	ISSUED FOR DESIGN
9	1	1	17 DEC 2005	ISSUED FOR DESIGN
10	1	1	17 DEC 2005	ISSUED FOR DESIGN



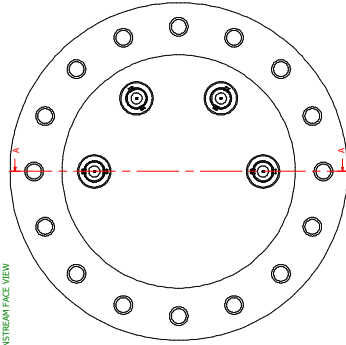
COMPLETE

L.E.B.T. DRIFT VESSEL
VESSEL ENDS REMOVED TO ENABLE INSIDE TO BE SEEN

L.E.B.T. Drift Vessel

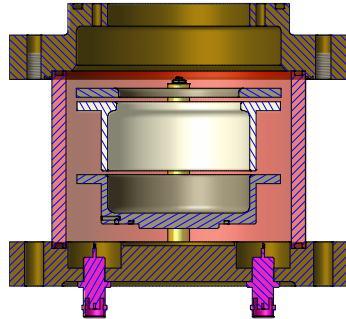
Item	Part No.	Rev.	Material	Quantity	Unit	Notes
1	1.000.001	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
2	1.000.002	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
3	1.000.003	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
4	1.000.004	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
5	1.000.005	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
6	1.000.006	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
7	1.000.007	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
8	1.000.008	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
9	1.000.009	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
10	1.000.010	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
11	1.000.011	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
12	1.000.012	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
13	1.000.013	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
14	1.000.014	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
15	1.000.015	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
16	1.000.016	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
17	1.000.017	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
18	1.000.018	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
19	1.000.019	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
20	1.000.020	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
21	1.000.021	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
22	1.000.022	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
23	1.000.023	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
24	1.000.024	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
25	1.000.025	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
26	1.000.026	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
27	1.000.027	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
28	1.000.028	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
29	1.000.029	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
30	1.000.030	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
31	1.000.031	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
32	1.000.032	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
33	1.000.033	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
34	1.000.034	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
35	1.000.035	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
36	1.000.036	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
37	1.000.037	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
38	1.000.038	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
39	1.000.039	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
40	1.000.040	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
41	1.000.041	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
42	1.000.042	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
43	1.000.043	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
44	1.000.044	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
45	1.000.045	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
46	1.000.046	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
47	1.000.047	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
48	1.000.048	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
49	1.000.049	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
50	1.000.050	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
51	1.000.051	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
52	1.000.052	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
53	1.000.053	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
54	1.000.054	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
55	1.000.055	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
56	1.000.056	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
57	1.000.057	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
58	1.000.058	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
59	1.000.059	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
60	1.000.060	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
61	1.000.061	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
62	1.000.062	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
63	1.000.063	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
64	1.000.064	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
65	1.000.065	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
66	1.000.066	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
67	1.000.067	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
68	1.000.068	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
69	1.000.069	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
70	1.000.070	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
71	1.000.071	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
72	1.000.072	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
73	1.000.073	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
74	1.000.074	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
75	1.000.075	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
76	1.000.076	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
77	1.000.077	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
78	1.000.078	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
79	1.000.079	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
80	1.000.080	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
81	1.000.081	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
82	1.000.082	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
83	1.000.083	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
84	1.000.084	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
85	1.000.085	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
86	1.000.086	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
87	1.000.087	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
88	1.000.088	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
89	1.000.089	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
90	1.000.090	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
91	1.000.091	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
92	1.000.092	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
93	1.000.093	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
94	1.000.094	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
95	1.000.095	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
96	1.000.096	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
97	1.000.097	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
98	1.000.098	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
99	1.000.099	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)
100	1.000.100	01	ALUMINUM	1	PC	FRONT END TEST STAND (F.E.T.S.)

DOWNSTREAM FACE VIEW



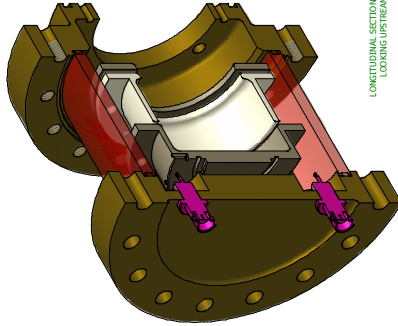
FETS FIRST VESSEL FARADAY CUP ASSEMBLY

A-A (1:25:1:1)

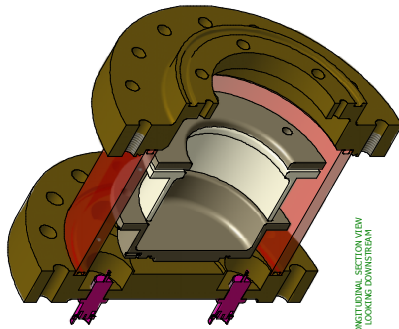


SIDE SECTION VIEW

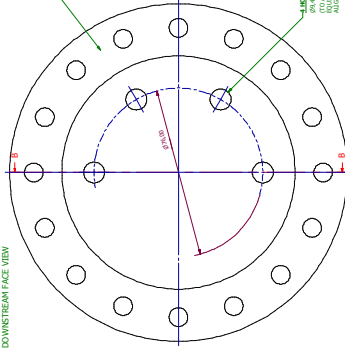
LONGITUDINAL SECTION VIEW
LOOKING UPSTREAM



LONGITUDINAL SECTION VIEW
LOOKING DOWNSTREAM



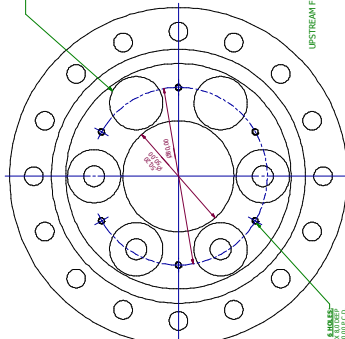
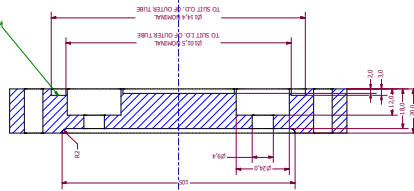
DOWNSTREAM FACE VIEW



ALUMINUM
TO BE USED FOR ALL TIMES

ALUMINUM
TO BE USED FOR ALL TIMES
(TO AVOID FANCLAY POLYMER REACTION)
ALUMINUM TO BE USED FOR ALL TIMES
ALUMINUM TO BE USED FOR ALL TIMES

SECTION VIEW B-B

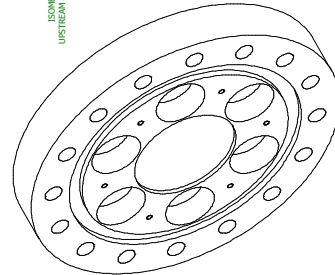


UPSTREAM FACE VIEW

ALUMINUM
TO BE USED FOR ALL TIMES

ALUMINUM
TO BE USED FOR ALL TIMES
(TO AVOID FANCLAY POLYMER REACTION)
ALUMINUM TO BE USED FOR ALL TIMES
ALUMINUM TO BE USED FOR ALL TIMES

ISOMETRIC
UPSTREAM FACE VIEW



FARADAY CUP ASSEMBLY FLANGE

MATERIAL: STAINLESS STEEL GRADE 304

MANUFACTURED FROM DRILLING BLANK FLANGE

1

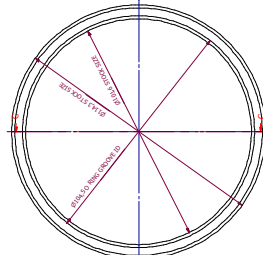
OFF: 1

NOTES:

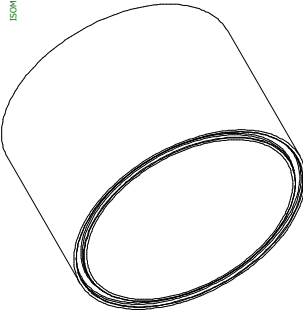
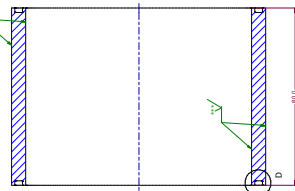
1) SURFACES INDICATED THIS WAY
IN CLAY CIRCULAR
NO SANDING REQUIRED LAY

COMPLETE

END VIEW



SECTION VIEW C-C



ISOMETRIC VIEW

DETAIL VIEW D (1:1)

TO BE USED FOR ALL TIMES
IN CLAY CIRCULAR
NO SANDING REQUIRED LAY

ALUMINUM
TO BE USED FOR ALL TIMES
(TO AVOID FANCLAY POLYMER REACTION)
ALUMINUM TO BE USED FOR ALL TIMES
ALUMINUM TO BE USED FOR ALL TIMES

OUTER TUBE

MATERIAL: ALUMINUM ALLOY 6062

MANUFACTURED FROM DRILLING BLANK FLANGE

1

OFF: 1

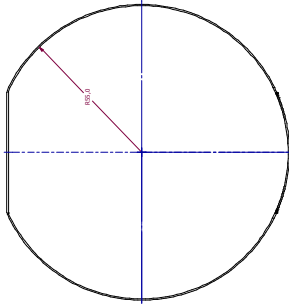
NOTES:

1) SURFACES INDICATED THIS WAY
IN CLAY CIRCULAR
NO SANDING REQUIRED LAY

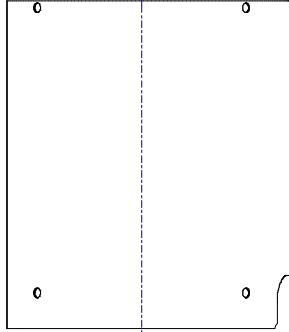
First vessel faraday cup assembly

Item	Description	Material	Quantity	Unit	Notes
1	Outer tube	Aluminum alloy 6062	1	pc	See note 1
2	Faraday cup assembly flange	Stainless steel grade 304	1	pc	See note 1
3	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
4	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
5	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
6	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
7	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
8	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
9	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
10	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
11	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
12	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
13	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
14	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
15	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
16	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
17	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
18	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
19	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1
20	Faraday cup assembly	Stainless steel grade 304	1	pc	See note 1

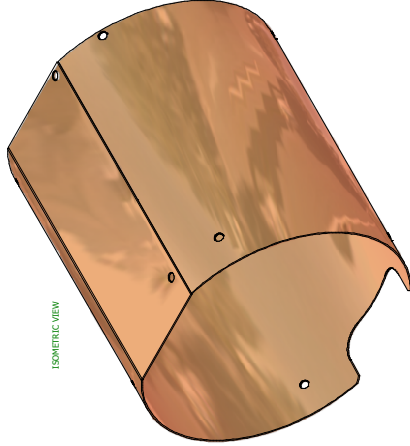
END VIEW



SIDE VIEW



ISOMETRIC VIEW

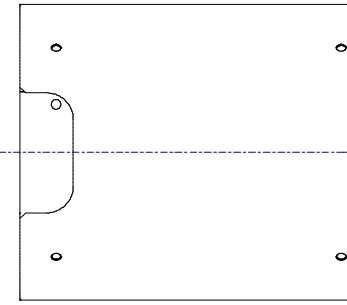


L.E.B.T. FARADAY CUP ASSEMBLY JACKET

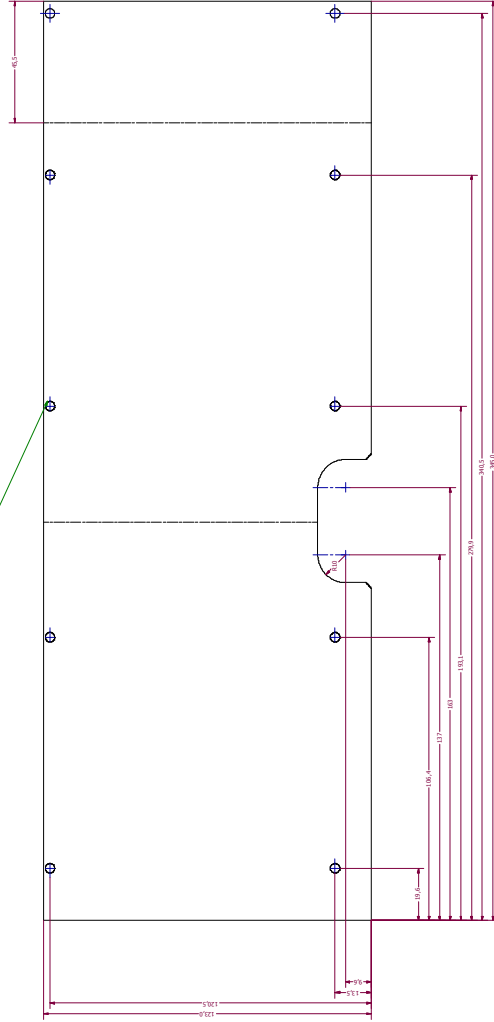
MATERIAL: THIN COPPER SHEET (0.5mm)

OFF: 1

SEALING
0.5mm THICKNESS



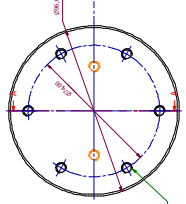
BASE VIEW



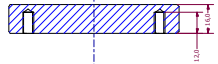
FLAT PATTERN

COMPLETE

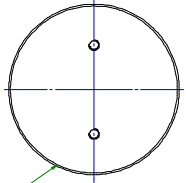
INSIDE FACE VIEW



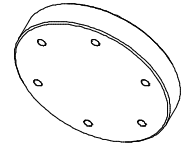
SECTION VIEW A-A



OUTSIDE FACE VIEW



ISOMETRIC VIEW



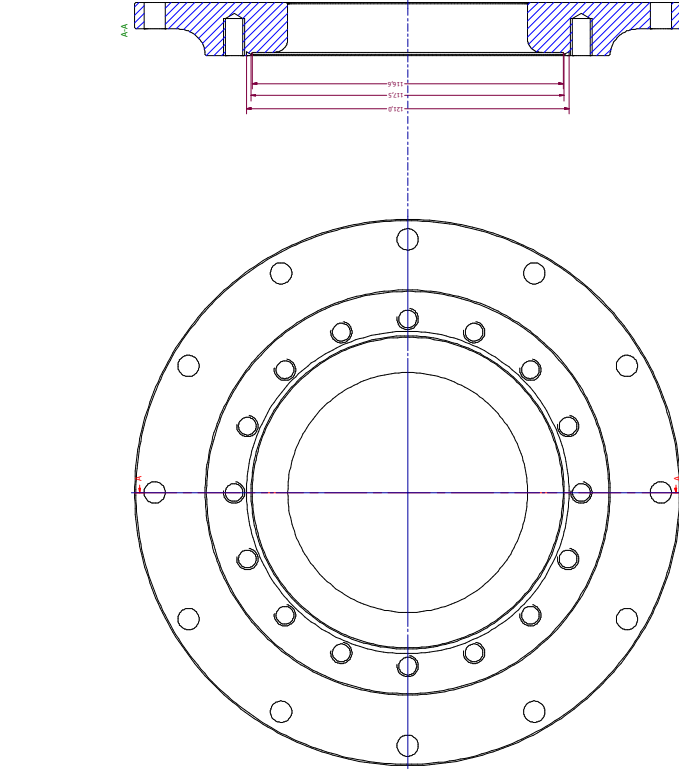
L.E.B.T. BEAM PIPE SECTION 1 BLANK

MATERIAL: STAINLESS STEEL

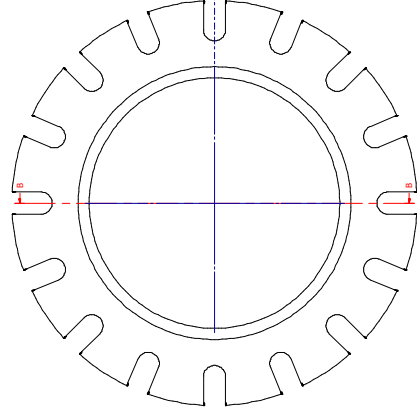
OFF: 1

Copper Jacket + Beam Pipe Blank	
Item	1
Part Name	Beam Pipe Blank
Material	STAINLESS STEEL
Quantity	1
Unit	mm
Drawn By	1
Checked By	1
Date	1
Revision	1
Notes	1
Material	STAINLESS STEEL
Quantity	1
Unit	mm
Drawn By	1
Checked By	1
Date	1
Revision	1
Notes	1
Material	STAINLESS STEEL
Quantity	1
Unit	mm
Drawn By	1
Checked By	1
Date	1
Revision	1
Notes	1

1



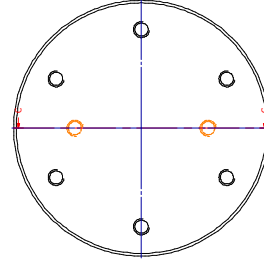
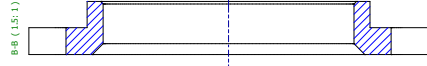
DN100CF ADDITIONAL KNIFE EDGE DIMENSIONS



SKIM INTERNAL DIAMETER

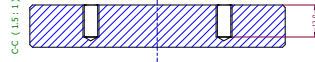
MATERIAL: STAINLESS STEEL

IF RUN-OUT IN LATHE < 0.02mm MACHINE
0.05mm FROM INTERNAL DIAMETER

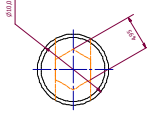
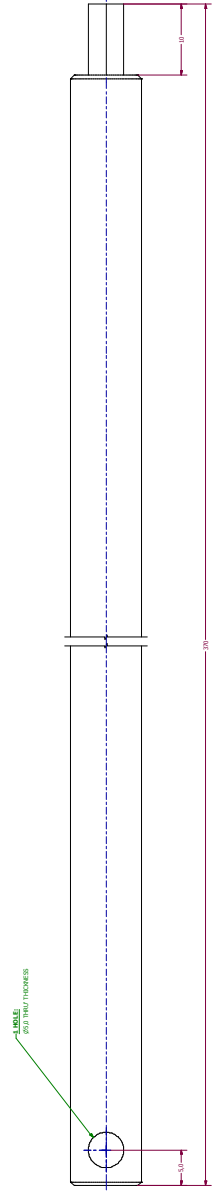
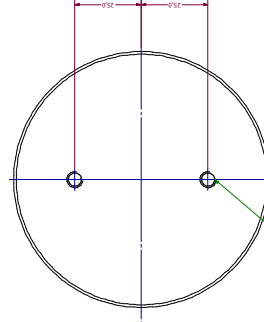


ADD TWO TAPPED HOLES

MATERIAL: STAINLESS STEEL



2 HOLES
TAPPED M6 x 12 DEEP
POSITIONED APPROXIMATELY RELATIVE TONGUES ON



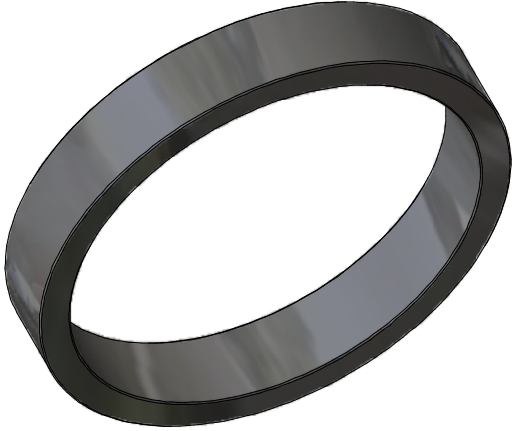
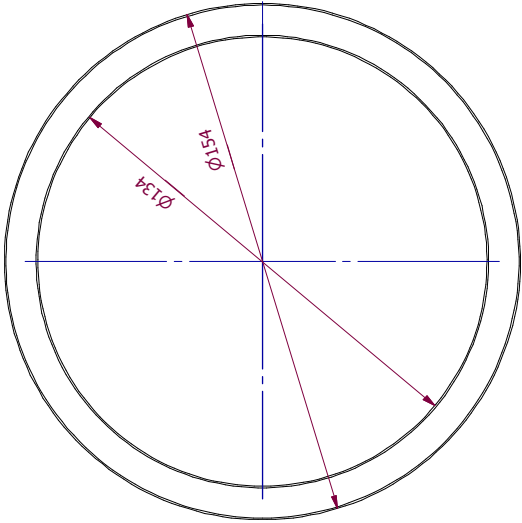
1 HOLE:

LONG REACH ALLEN KEY FOR M6 CAPHEAD

LONG REAG
MATERIAL: SILVER STEEL

OFF: 1
HARDEN & TEMPER HEXAGONAL TIP

[illegible]

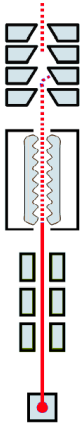


VACUUM BELLOWS PROTECTION RING

MATERIAL: NYLON 66
OFF: 2

Vacuum Bellows Protection Ring

Title:			
Vacuum Bellows Protection Ring			
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	BellowsCompressionLimit.ipt
Checked by:	N/A	Drawing file:	LEBT.idw
Date:	July 2009	Version number:	1
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	Nylon 66	Sheet number:	27 / 33
Finish:	Remove all burrs	Number off:	2
Scale:	Do not scale	Drawing number:	IC_HEP_PIS_FETS_2534
Notes:	** Material stock thickness		
Contact: p.savage@imperial.ac.uk (Work) 0207 594 7817 (Mobile) 07884 268058			



Unless otherwise stated:

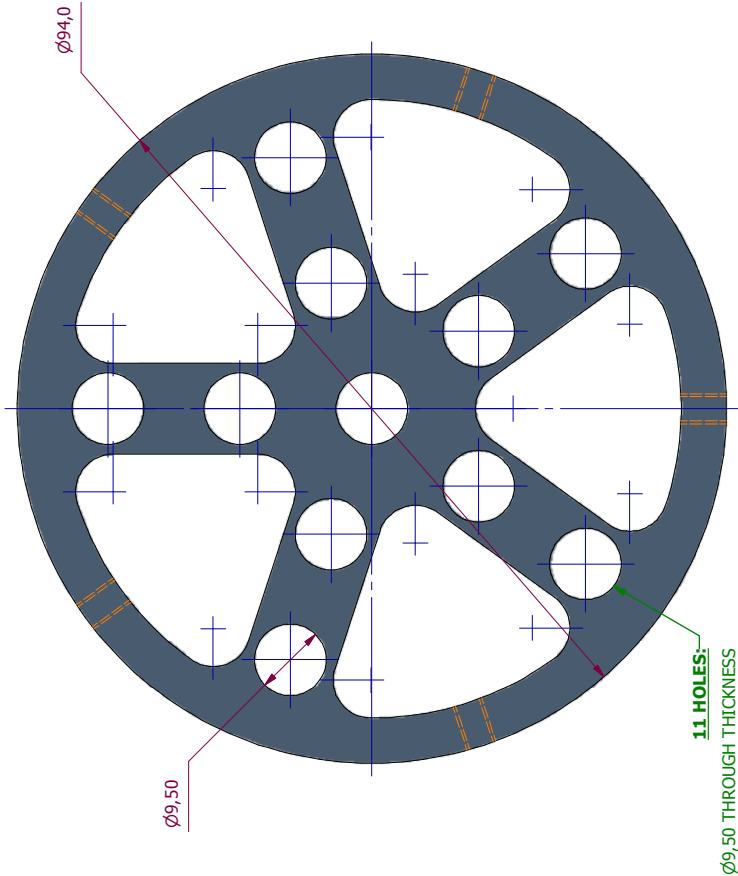
Dimensional tolerance: X ± 0.5 mm
X.X ± 0.2 mm
X.XX ± 0.1 mm

Angular tolerance: $\pm 0.5^\circ$

Hole centres: ± 0.05 mm

Surface finish: 1.6 microns

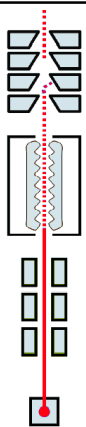
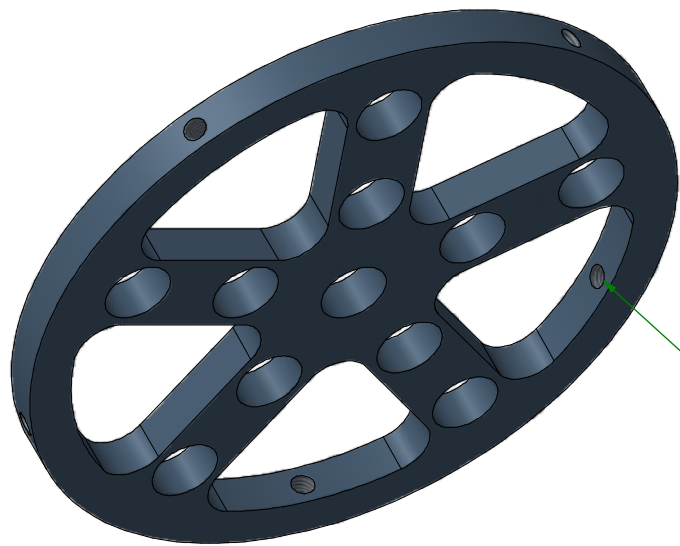
Dimensions in mm ☐



11 HOLES:
 $\phi 9,50$ THROUGH THICKNESS



5 HOLES:
TAPPED M4 THROUGH WEB



BNC Mounting Wheel

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	Projection:	Third angle
Designed by:	P. Savage	Model file:	BNC_FeedThrough_Wheel.ipt
Checked by:	N/A	Drawing file:	LEBT.idw
Date:	July 2009	Version number:	1
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	Cast aluminium alloy sheet	Sheet number:	28 / 33
Finish:	Remove all burrs	Number off:	1
Scale:	Do not scale	Drawing number:	IC_HEP_PJS_FETS_2535
Notes:			

BNC MOUNTING WHEEL

MATERIAL: 6mm THICK CAST ALUMINIUM ALLOY

OFF: 1

Unless otherwise stated:

Dimensional tolerance: X $\pm 0,5$ mm

X.X $\pm 0,2$ mm

X.XX $\pm 0,1$ mm

Angular tolerance: $\pm 0,5^\circ$

Hole centres: $\pm 0,05$ mm

Surface finish: 1,6 microns

Dimensions in mm



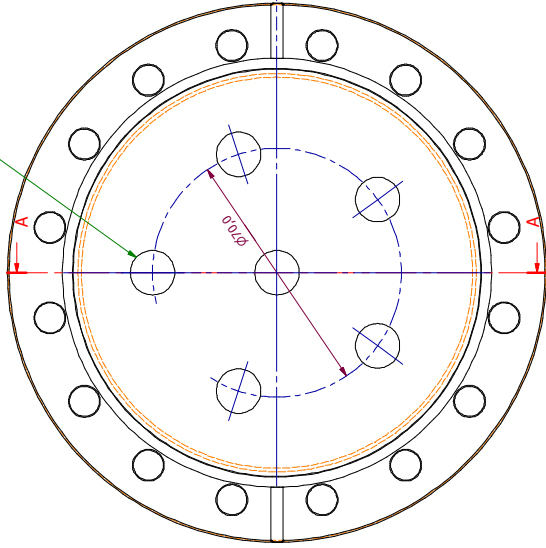
DN100CF - 6 BNC FEED-THROUGH

MATERIAL: STAINLESS STEEL 304

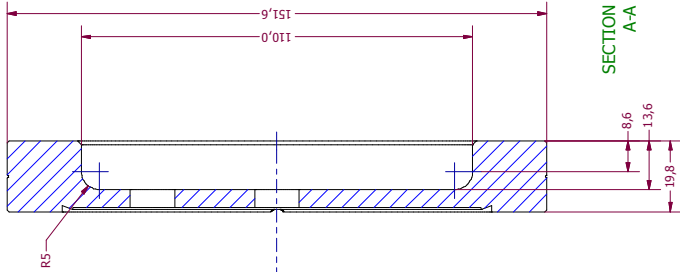
OFF: 1

ADDITION OF FEATURES TO SUPPLIED PART : 6 HOLES + CENTRAL RECESS

6 HOLES:
Ø12.5 THROUGH THICKNESS
5 EQUAL SPACED ON A 70.0 Ø C.D.
TO ACCEPT BNC FEED-THROUGH
AS PART # 2

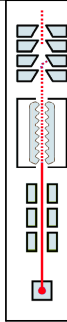
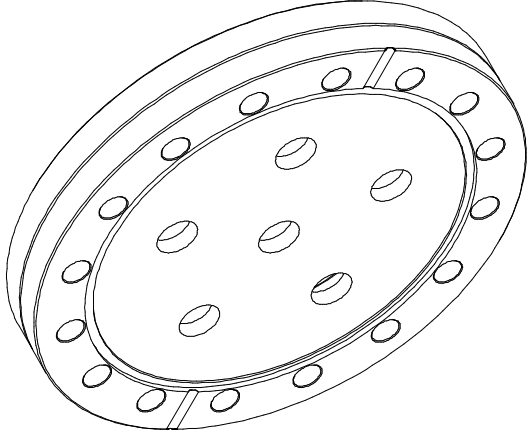


SEALING FACE VIEW



SECTION VIEW
A-A

ISOMETRIC VIEW



Title: DN100CF 6 BNC FEED THROUGH			
Drawn by:	P. Savage	Projection:	Third angle
Designed by:	P. Savage	Model file:	F0600X000N_ModifiedForFeedthrough
Checked by:	N/A	Drawing file:	LEBT.dwg
Date:	August 2009	Version number:	2
Manufactured by:	HEP workshop	Project:	Front End Test Stand
Material:	Stainless Steel 304	Sheet number:	29 / 33
Finish:	Remove all burrs	Number of:	1
Scale:	Do not scale	Drawing number:	IC_HEP_PIS_FETS_2536
Notes:			
Contact:	p.savage@imperial.ac.uk (Work) 0207 594 7817 (Mobile) 07884 26058		

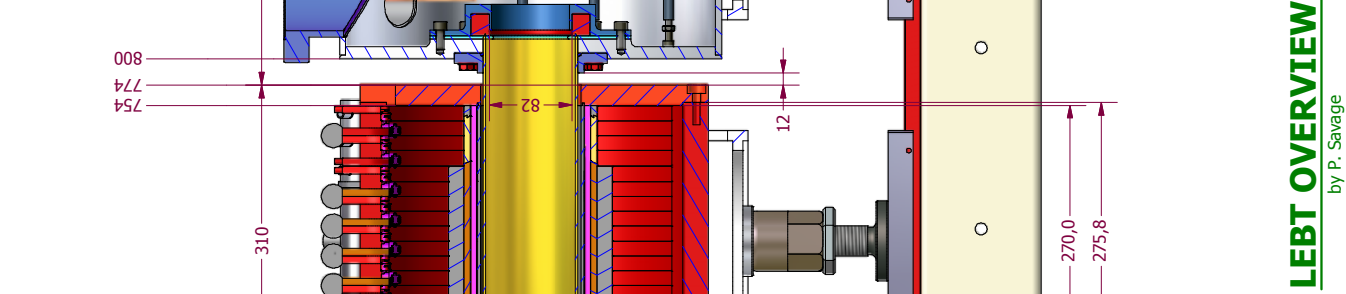
Unless otherwise stated:			
Dimensional tolerance:	X	± 0.5 mm	
	X.X	± 0.2 mm	
	X.XX	± 0.1 mm	
Angular tolerance:		± 0.5°	
Hole centres:		± 0.05 mm	
Surface finish:		1.6 microns	
Dimensions in mm			□

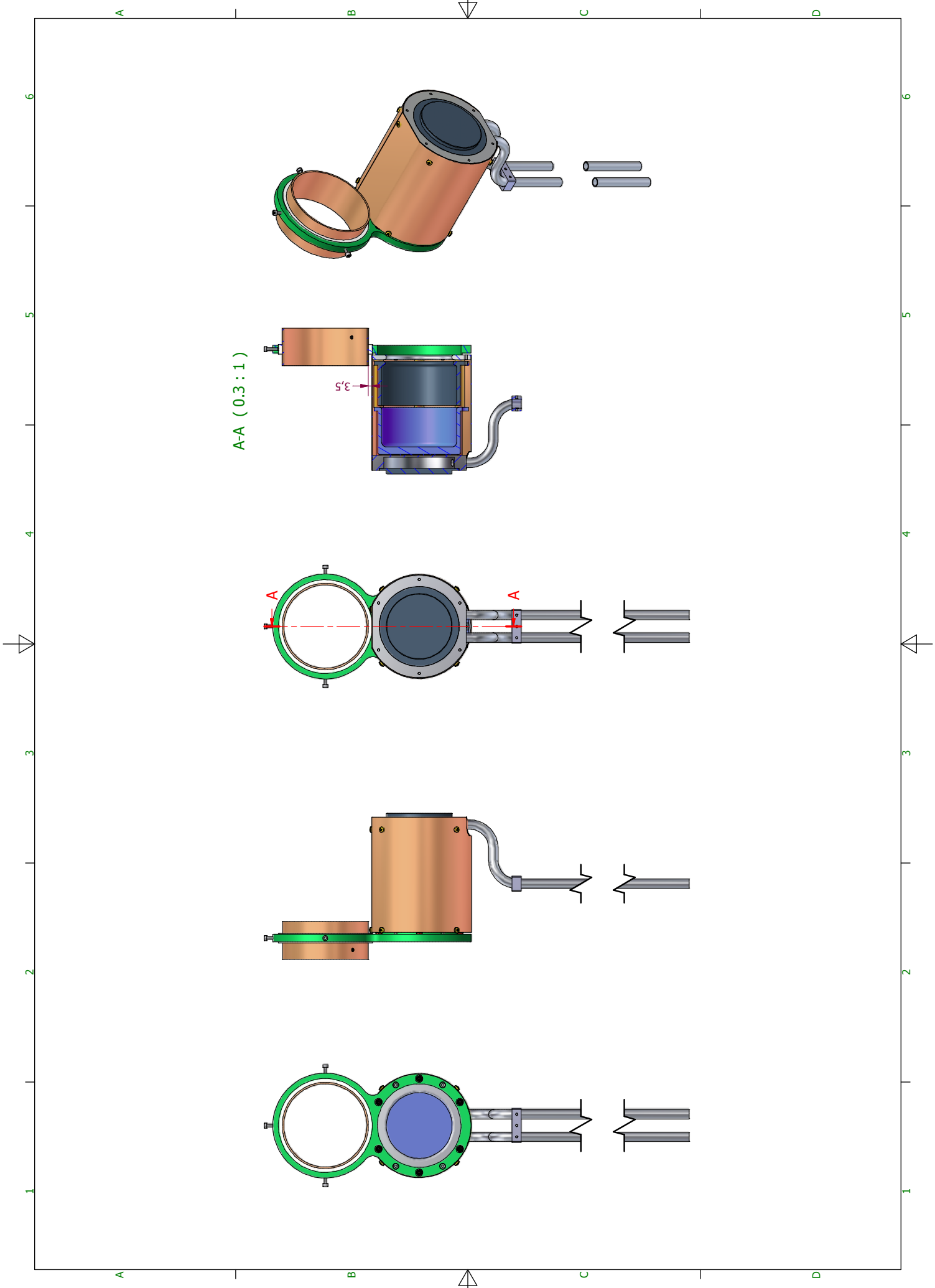
NOTES:

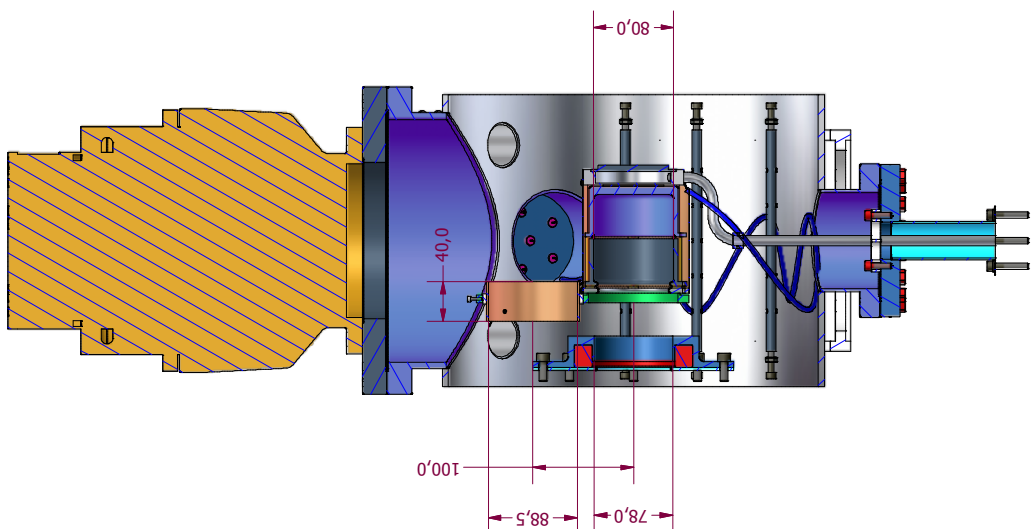
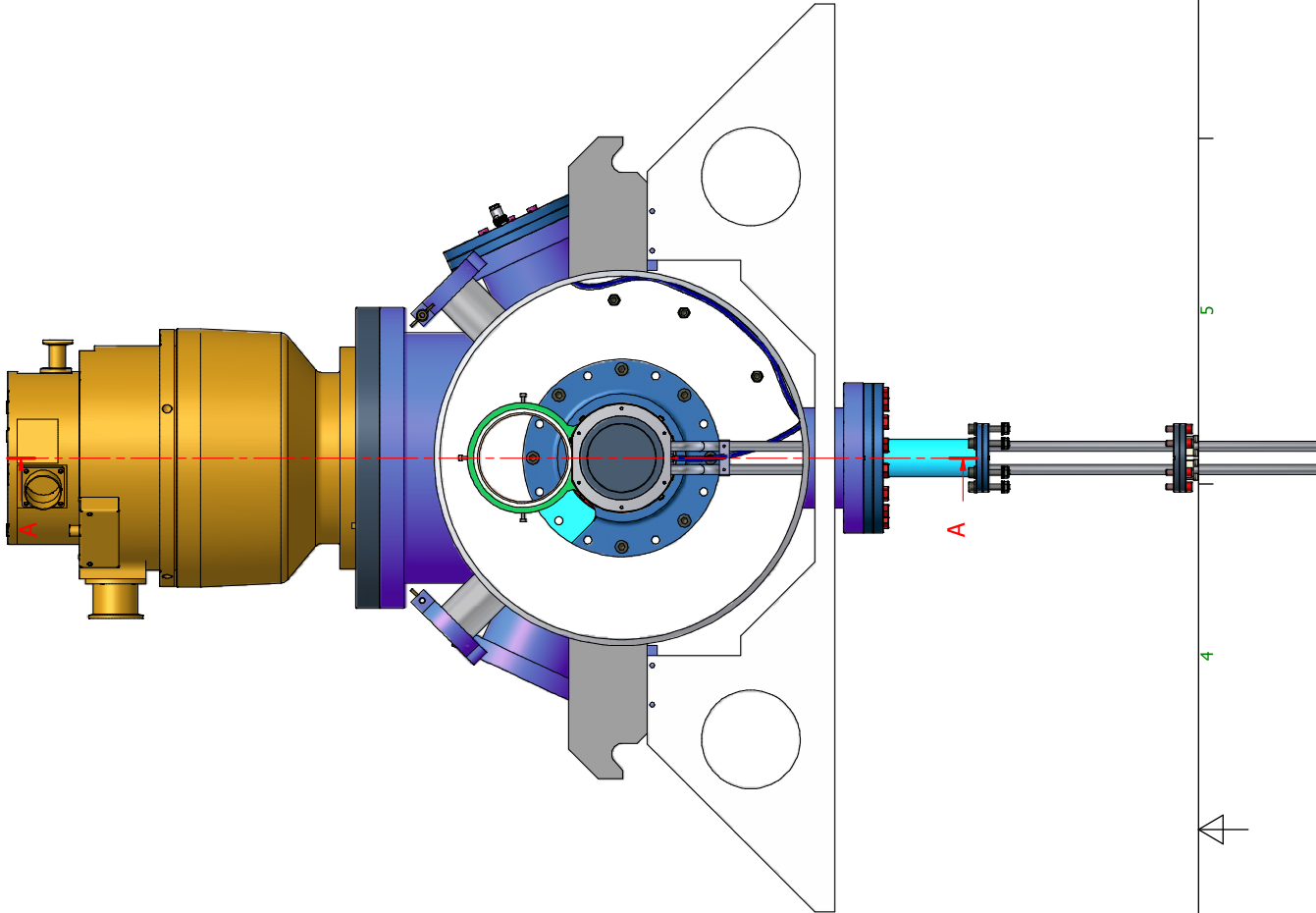
1) PROTECT SEALING FACE FROM SCRATCHES

FRONT END TEST STAND (F.E.T.S.)

<http://fets.isis.rl.ac.uk/>







A-A (0.2:1)

ION BEAM SPACE CHARGE DECOMPENSATOR

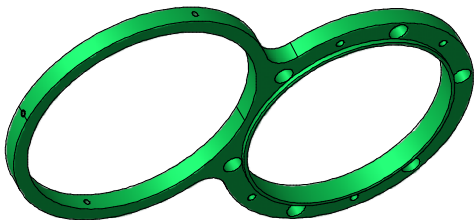
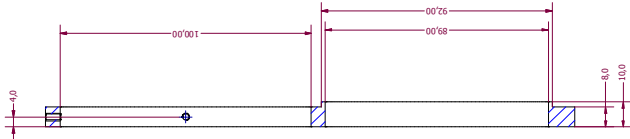
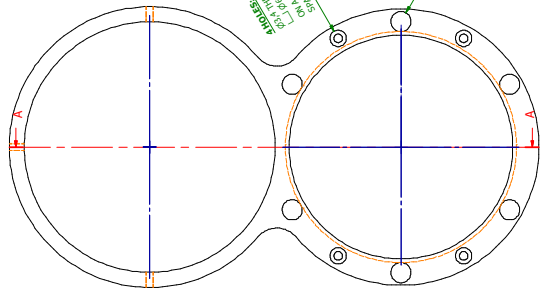
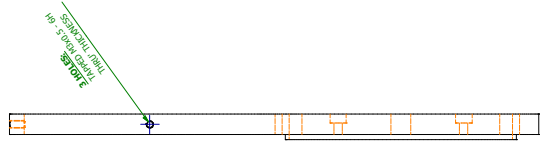
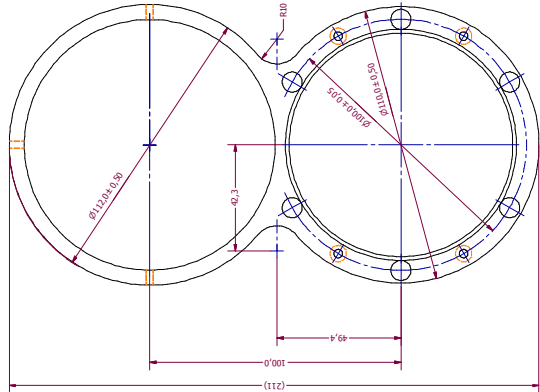
ISOMETRIC VIEW

SECTION VIEW
A-A (1:1)

SIDE VIEW

BACK VIEW

FRONT VIEW

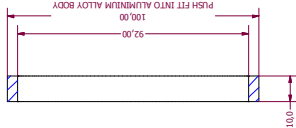
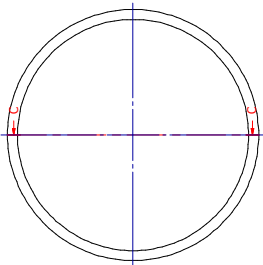


BODY
MATERIAL: ALUMINUM ALLOY
OFF: 1

SECTION VIEW
C-C (1:1)

FRONT VIEW

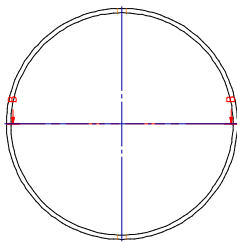
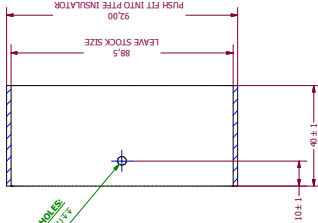
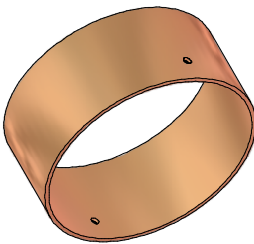
ISOMETRIC VIEW



ISOMETRIC VIEW

SECTION
B-B (1:1)

FRONT VIEW



ION BEAM SPACE CHARGE DECOMPENSATOR

INSULATOR
MATERIAL: PTFE
OFF: 1

DECOMPENSATOR TUBE

MATERIAL: COPPER
OFF: 1

File:	P-Sketch	Projection:	Third angle
Drawn by:	P. Sanger	Model file:	BDC_Clamp_Hatchout.dwg
Designed by:	N/A	Drawing file:	LEB1.dwg
Checked by:		Version number:	1
Date:	1st August 2011	Project:	Front End Test Stand
Manufactured by:	I. Clark, REF workshop	Sheet number:	33 / 33
Material:	Stainless steel	Number of:	2 of each part
Finish:	1.5 microns	Drawing number:	IC-REF-235-FE15-2006
Scale:	1:1	Notes:	
Notes:			
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:	1.5 microns
Dimensions in mm	