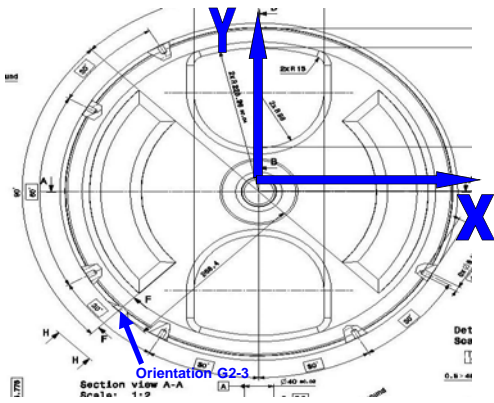


Part name	Standard disc G2-3
NCBJ internal name (if any)	
Drawing No	SPLACPMG0003
Part identifier	PXACPMG001-OS000001
Raw material identification code	
Date	06-07-2012
Time	13:00

Side with reference C = side X with number	2
Side with reference B = side Y with number	3
Temperature of part during measurement [C]	20.513
Temperature compensation	On

Coordinate system

side with reference B=3 on top



Surface Roughness

Side	Point	Surface roughness Ra [µm]
Side B-3	1	0.41
Side B-3	2	0.14
Side B-3	3	0.10
Side B-3	4	0.22
Side C-2	1	0.51
Side C-2	2	0.15
Side C-2	3	0.11
Side C-2	4	0.19

nominal	tol	lower	upper	Measured	deviation	outtol	outtol/tol	comment
0.800	0.000	0.800	0.800	0.440	-0.360	0.000	0%	nose roughness ok
0.800	0.000	0.800	0.800	0.140	-0.660	0.000	0%	
0.800	0.000	0.800	0.800	0.100	-0.700	0.000	0%	excellent
0.800	0.000	0.800	0.800	0.220	-0.580	0.000	0%	
0.800	0.000	0.800	0.800	0.510	-0.290	0.000	0%	nose roughness ok
0.800	0.000	0.800	0.800	0.150	-0.650	0.000	0%	
0.800	0.000	0.800	0.800	0.110	-0.690	0.000	0%	
0.800	0.000	0.800	0.800	0.190	-0.610	0.000	0%	

Metrology CERN

diff	
40.003	-0.000
63.988	0.006
0.600	-0.600
0.110	0.030
0.150	-0.050
0.290	-0.070
0.790	-0.280
0.170	-0.020
0.130	-0.020
0.180	0.010

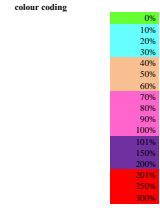
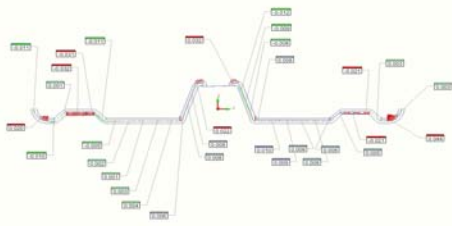
General geometry

Side No	Measurement	NOMINAL	+TOL	-TOL	MEAS	DEV	OUT/1	No	nominal	tol	lower	upper	Measured	deviation	outtol	outtol/tol	comment
1	0.04±0.02 = ref A	40.000	0.020	0.020	40.003	0.003	0.000	1	40.000	0.020	39.980	40.020	40.003	0.003	0.000	0%	
2	distance d4	64.000	0.010	0.010	63.994	-0.006	0.000	2	64.000	0.010	63.990	64.010	63.994	-0.006	0.000	0%	
3	Symmetry 0.02E	0.000	0.020	0.000	0.004	0.004	0.000	3	0.000	0.020	0.000	0.020	0.004	0.004	0.000	0%	
B-3 4	Ø518.720±0.020	518.720	0.020	0.020	518.730	0.010	0.000	4	518.720	0.040	518.680	518.760	518.730	0.010	0.000	0%	
B-3 5	Ø518.720±0.020	518.720	0.020	0.020	518.730	0.010	0.000	5	0.000	0.050	0.000	0.050	0.045	0.045	0.000	0%	
B-3 6	Ø524.720±0.025	524.720	0.020	0.020	524.717	-0.003	0.000	6	524.720	0.020	524.695	524.720	524.717	-0.003	0.000	0%	
B-3 7	coaxiality Ø0.02A wrt Ø524.720±0.025	0.000	0.020	0.000	0.028	0.028	0.000	7	0.000	0.020	0.000	0.020	0.028	0.028	0.000	40%	
B-3 8	flatness 0.002A	0.000	0.000	0.000	0.005	0.005	0.000	8	0.000	0.040	0.000	0.040	0.033	0.033	0.000	0%	
B-3 9	Ramoss of B	0.000	0.020	0.000	0.017	0.017	0.000	9	0.000	0.020	0.000	0.020	0.017	0.017	0.000	0%	
B-3 10	Ø524.720±0.025	524.720	0.020	0.020	524.720	0.000	0.000	10	524.720	0.020	524.700	524.740	524.720	0.000	0.000	0%	to be discussed
B-3 11	coaxiality Ø0.02A wrt Ø518.720±0.010	0.000	0.020	0.000	0.008	0.008	0.000	11	0.000	0.020	0.000	0.020	0.008	0.008	0.000	0%	
B-3 12	Ø518.720±0.020	518.720	0.020	0.020	518.728	0.008	0.000	12	518.720	0.040	518.680	518.760	518.728	0.008	0.000	0%	
B-3 13	position 0.01B at distance nose tip to B	0.000	0.010	0.000	0.007	0.007	0.000	13	0.000	0.010	0.000	0.010	0.007	0.007	0.000	0%	uncertainty in fit
B-3 14	length 1.5 (±0.1) ISO 2768-mK-E	1.500	0.100	0.100	1.498	-0.002	0.000	14	1.500	0.100	1.400	1.600	1.498	-0.002	0.000	0%	
C-2 15	Ø518.720±0.020	518.720	0.020	0.020	518.728	0.008	0.000	15	518.720	0.040	518.680	518.760	518.728	0.008	0.000	0%	
C-2 16	coaxiality Ø0.02A wrt Ø518.720±0.020	0.000	0.020	0.000	0.024	0.024	0.000	16	0.000	0.050	0.000	0.050	0.043	0.043	0.000	0%	
C-2 17	Ø524.720±0.025	524.720	0.020	0.020	524.707	-0.013	0.000	17	524.720	0.020	524.695	524.720	524.707	-0.013	0.000	0%	
C-2 18	Ø518.720±0.020	518.720	0.020	0.020	518.728	0.008	0.000	18	0.000	0.020	0.000	0.020	0.027	0.027	0.000	55%	
C-2 19	Ramoss of C	0.000	0.020	0.000	0.015	0.015	0.000	19	0.000	0.040	0.000	0.040	0.032	0.032	0.000	0%	
C-2 20	Ø524.720±0.025	524.720	0.020	0.020	524.719	-0.001	0.000	20	524.720	0.020	524.700	524.740	524.719	-0.001	0.000	95%	
C-2 21	coaxiality Ø0.02A wrt Ø518.720±0.010	0.000	0.020	0.000	0.019	0.019	0.000	21	524.720	0.020	524.700	524.740	524.719	-0.001	0.000	95%	
C-2 22	distance nose tip to C	44.775	0.010	0.010	44.777	0.002	0.000	22	44.775	0.010	44.765	44.785	44.777	0.002	0.000	0%	
C-2 23	position 0.01B at distance nose tip to B	0.000	0.010	0.000	0.006	0.006	0.000	23	0.000	0.010	0.000	0.010	0.006	0.006	0.000	0%	
C-2 24	length 1.5 (±0.1) ISO 2768-mK-E	1.500	0.100	0.100	1.488	-0.012	0.000	24	1.500	0.100	1.400	1.600	1.488	-0.012	0.000	0%	

Metrology CERN

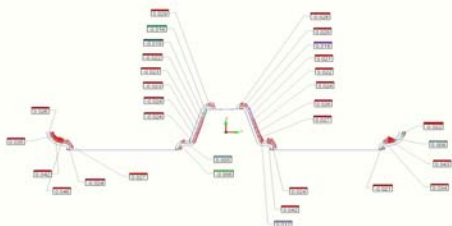
diff	
40.003	0.000
63.988	0.006
0.600	-0.020
0.110	0.018
524.713	0.004
0.034	-0.006
0.060	-0.020
0.009	0.008
538.770	-0.007
0.036	0.021
518.731	-0.003
0.049	-0.006
524.697	0.010
0.007	0.020
0.024	0.008
0.016	-0.001
538.766	-0.007
0.01	0.009
44.782	-0.005
0.013	-0.007
1.500	-0.012

Side No B-3 26 profile I



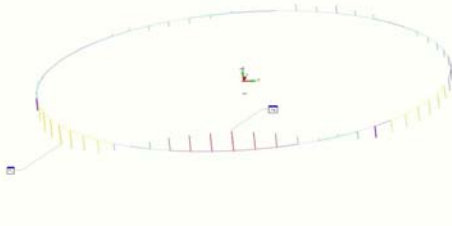
nose cone region at limit

Side No B-3 27 profile II

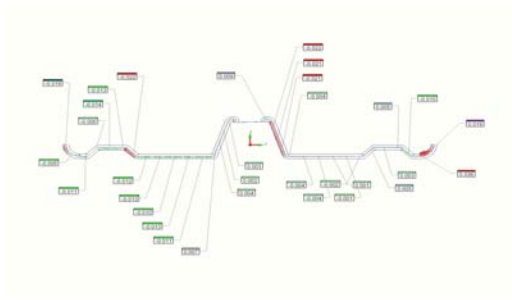


nose cone region at limit

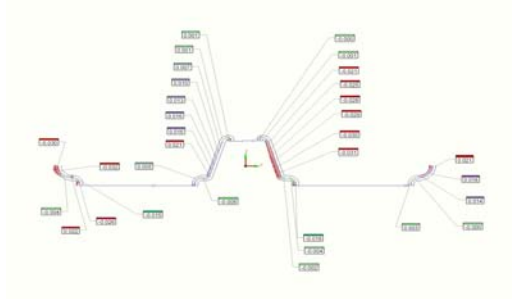
Side No B-3 28 profile III



Side No	Measurement
C-2 29	profile I

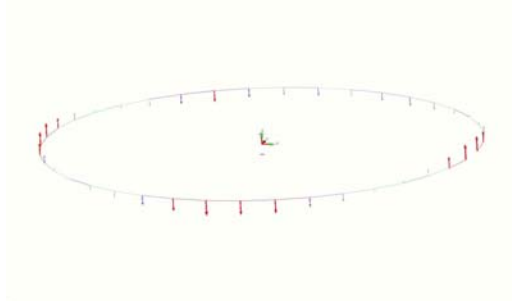


Side No	Measurement
C-2 30	profile II



nose cone region at limit

Side No	Measurement
C-2 31	profile III



Coupling slots

No	Measurement	NOMINAL	+TOL	-TOL	MEAS	DEV	OUT/IN	No	nominal	tol	lower	upper	Measured	deviation	out/in	out/in tol	comment
32	Coupling slot 1 R88	88.000	0.100	0.100	88.004	0.004	0.000	32	88.000	0.025	87.975	88.025	88.004	0.004	0.000	0.000	0%
33	Coupling slot 1 176.0±0.05	176.000	0.050	0.050	176.011	0.011	0.000	33	176.000	0.050	175.950	176.050	176.011	0.011	0.000	0.000	0%
34	Coupling slot 1 R229.36±0.04	229.360	0.040	0.040	229.361	0.001	0.000	34	229.360	0.040	229.320	229.400	229.361	0.001	0.000	0.000	0%
35	Coupling slot 1 70.0±0.04	70.000	0.040	0.040	69.975	-0.025	0.000	35	70.000	0.040	69.960	70.040	69.975	-0.025	0.000	0.000	0%
36	Coupling slot 1 R15, side E	15.000	0.050	0.050	15.009	0.009	0.000	36	15.000	0.025	14.975	15.025	15.009	0.009	0.000	0.000	0%
37	Coupling slot 1 R15, side opposite to E	15.000	0.050	0.050	15.000	0.000	0.000	37	15.000	0.025	14.975	15.025	15.000	0.000	0.000	0.000	0%
38	Coupling slot 2 R88	88.000	0.100	0.100	88.003	0.003	0.000	38	88.000	0.025	87.975	88.025	88.003	0.003	0.000	0.000	0%
39	Coupling slot 2 176.0±0.05	176.000	0.050	0.050	176.008	0.008	0.000	39	176.000	0.050	175.950	176.050	176.008	0.008	0.000	0.000	0%
40	Coupling slot 2 R229.36±0.04	229.360	0.040	0.040	229.361	0.001	0.000	40	229.360	0.040	229.320	229.400	229.361	0.001	0.000	0.000	0%
41	Coupling slot 2 70.0±0.04	70.000	0.040	0.040	70.018	0.018	0.000	41	70.000	0.040	69.960	70.040	70.018	0.018	0.000	0.000	0%
42	Coupling slot 2 R15, side E	15.000	0.100	0.100	15.001	0.001	0.000	42	15.000	0.025	14.975	15.025	15.001	0.001	0.000	0.000	0%
43	Coupling slot 2 R15, side opposite to E	15.000	0.100	0.100	15.009	0.009	0.000	43	15.000	0.025	14.975	15.025	15.009	0.009	0.000	0.000	0%
44	Symmetry 0.02A, at reference 1	0.000	0.020	0.000	0.016	0.016	0.000	44	0.000	0.020			0.016	0.016	0.000	0%	

Cooling channels

	Measurement	NOMINAL	T.TOL	-T.TOL	MEAS	DEV	DUOT0	No nominal	tol	lower	upper	Measured	deviation	outal	outof/bd	comment	
45	cooling channel 1, distance 243.0±0.1	243.000	0.100	-0.100	242.946	-0.054	0.000	45	243.000	0.300	242.700	243.300	242.946	-0.054	0.000	0%	
46	cooling channel 1, length 109.5±0.1	109.500	0.100	-0.100	109.441	-0.059	0.000	46	109.500	0.300	109.200	109.800	109.441	-0.059	0.000	0%	
47	cooling channel 1, distance dev1, calculated 6 mm	6.000	0.100	-0.100	5.987	-0.013	0.000	47	6.000	0.300	5.700	6.300	5.987	-0.013	0.000	0%	
48	cooling channel 1, longitudinal position in respect to ref. D (symmetry)	0.000	0.050	-0.050	0.050	0.050	0.000	48	0.000	0.100	-0.100	0.100	0.050	0.050	0.000	0%	
49	cooling channel 1, angle in respect to reference F	0.000	0.100	-0.100	0.013	0.012	0.000	49	0.000	0.050	-0.050	0.050	0.012	0.012	0.000	0%	offset at end 0.073
50	cooling channel 2, distance 267.0±0.1	267.000	0.100	-0.100	266.998	-0.002	0.000	50	267.000	0.300	266.700	267.300	266.998	-0.002	0.000	0%	
51	cooling channel 2, angle 42°	42.000	0.100	-0.100	42.050	0.050	0.000	51	42.000	0.100	41.900	42.100	42.050	0.050	0.000	0%	
52	cooling channel 2, length 100.0±0.1	100.000	0.100	-0.100	100.873	0.873	0.000	52	100.000	0.300	100.600	101.200	100.873	-0.028	0.000	0%	
53	cooling channel 2, longitudinal position in respect to ref. D (symmetry)	0.000	0.050	-0.050	0.047	0.047	0.000	53	0.000	0.100	-0.100	0.100	0.047	0.047	0.000	0%	offset at end 0.056
54	cooling channel 2, angle in respect to reference F	0.000	0.100	-0.100	0.000	0.000	0.000	54	0.000	0.050	-0.050	0.050	0.000	0.000	0.000	0%	offset differential end 0.017
55	cooling channel 3, distance 265.0±0.1	265.000	0.100	-0.100	264.970	-0.030	0.000	55	265.000	0.300	264.700	265.300	264.970	-0.030	0.000	0%	
56	cooling channel 3, angle 53°	53.000	0.100	-0.100	52.990	-0.010	0.000	56	53.000	0.100	52.900	53.100	52.960	-0.040	0.000	0%	
57	cooling channel 3, longitudinal position in respect to ref. D (symmetry)	0.000	0.100	-0.100	0.000	0.000	0.000	57	0.000	0.100	-0.100	0.100	0.000	0.000	0.000	0%	
58	cooling channel 3, distance dev1 (min distance channel to vacuum)	9.000	0.100	-0.100	9.027	0.027	0.000	58	9.000	0.100	8.900	9.100	9.027	0.027	0.000	0%	
59	cooling channel 3, longitudinal position in respect to ref. D (symmetry)	0.000	0.050	-0.050	0.048	0.048	0.000	59	0.000	0.100	-0.100	0.100	0.048	0.048	0.000	0%	
60	cooling channel 3, angle in respect to reference F	0.000	0.100	-0.100	0.000	0.000	0.000	60	0.000	0.050	-0.050	0.050	0.000	0.000	0.000	0%	offset at end 0.085
61	cooling channel 4, distance 264.0±0.1	264.000	0.100	-0.100	263.938	-0.062	0.000	61	264.000	0.300	263.700	264.300	263.938	-0.062	0.000	0%	
62	cooling channel 4, angle 77°	77.000	0.100	-0.100	77.020	0.020	0.000	62	77.000	0.100	76.900	77.100	77.020	0.020	0.000	0%	
63	cooling channel 4, distance dev1 (min distance channel to vacuum)	11.200	0.100	-0.100	11.161	-0.039	0.000	63	11.200	0.300	10.900	11.500	11.161	-0.039	0.000	0%	
64	cooling channel 4, longitudinal position in respect to ref. D (symmetry)	0.000	0.050	-0.050	0.046	0.046	0.000	64	0.000	0.100	-0.100	0.100	0.046	0.046	0.000	0%	offset at end 0.076
65	cooling channel 4, angle in respect to reference F	0.000	0.100	-0.100	0.007	0.007	0.000	65	0.000	0.050	-0.050	0.050	0.007	0.007	0.000	0%	offset differential end 0.009
67	cooling channel 5, distance 264.0±0.1	264.000	0.100	-0.100	263.919	-0.081	0.000	67	264.000	0.300	263.600	264.400	263.919	-0.081	0.000	0%	
68	cooling channel 5, angle 77°	77.000	0.100	-0.100	76.910	-0.090	0.000	68	77.000	0.100	76.900	77.100	76.910	-0.090	0.000	0%	
69	cooling channel 5, length 246.9±0.1	246.900	0.100	-0.100	246.804	-0.096	0.000	69	246.900	0.300	246.600	247.200	246.804	-0.096	0.000	0%	
70	cooling channel 5, distance dev1 (equivalent to dev3)	11.200	0.100	-0.100	11.194	-0.006	0.000	70	11.200	0.100	11.100	11.300	11.194	-0.006	0.000	0%	
71	cooling channel 5, longitudinal position in respect to ref. D (symmetry)	0.000	0.100	-0.100	0.033	0.033	0.000	71	0.000	0.100	-0.100	0.100	0.033	0.033	0.000	0%	
72	cooling channel 5, angle in respect to reference F	0.000	0.100	-0.100	-0.005	-0.005	0.000	72	0.000	0.050	-0.050	0.050	-0.005	-0.005	0.000	0%	offset at end 0.015
73	cooling channel 6, distance 265.0±0.1	265.000	0.100	-0.100	264.927	-0.073	0.000	73	265.000	0.300	264.700	265.300	264.927	-0.073	0.000	0%	
74	cooling channel 6, length 235.8±0.1	235.800	0.100	-0.100	235.980	0.180	0.000	74	235.800	0.300	235.500	236.100	235.980	0.180	0.000	0%	
75	cooling channel 6, distance dev1 (equivalent to dev3)	235.000	0.100	-0.100	235.861	0.861	0.000	75	235.000	0.300	235.600	236.200	235.861	-0.039	0.000	0%	
76	cooling channel 6, distance dev2 (equivalent to dev3)	9.000	0.100	-0.100	8.970	-0.030	0.000	76	9.000	0.100	8.900	9.100	8.970	-0.030	0.000	0%	
77	cooling channel 6, longitudinal position in respect to ref. D (symmetry)	0.000	0.050	-0.050	0.012	0.012	0.000	77	0.000	0.100	-0.100	0.100	0.012	0.012	0.000	0%	offset at end 0.098
78	cooling channel 6, angle in respect to reference F	0.000	0.100	-0.100	0.021	0.021	0.000	78	0.000	0.050	-0.050	0.050	0.021	0.021	0.000	0%	offset differential end 0.083
79	cooling channel 7, distance 267.0±0.1	267.000	0.100	-0.100	266.926	-0.074	0.000	79	267.000	0.300	266.700	267.300	266.926	-0.074	0.000	0%	
80	cooling channel 7, angle 42°	42.000	0.100	-0.100	42.010	0.010	0.000	80	42.000	0.100	41.900	42.100	42.010	0.010	0.000	0%	
81	cooling channel 7, length 100.0±0.1	100.000	0.100	-0.100	100.843	0.843	0.000	81	100.000	0.300	100.600	101.200	100.843	0.057	0.000	0%	
82	cooling channel 7, longitudinal position in respect to ref. D (symmetry)	0.000	0.050	-0.050	0.009	0.009	0.000	82	0.000	0.100	-0.100	0.100	0.009	0.009	0.000	0%	
83	cooling channel 7, angle in respect to reference F	0.000	0.100	-0.100	0.016	0.016	0.000	83	0.000	0.050	-0.050	0.050	0.016	0.016	0.000	0%	offset at end 0.037
84	cooling channel 8, distance 264.0±0.1	264.000	0.100	-0.100	263.919	-0.081	0.000	84	264.000	0.300	263.600	264.400	263.919	-0.081	0.000	0%	
85	cooling channel 8, length 109.5±0.1	109.500	0.100	-0.100	109.429	-0.071	0.000	85	109.500	0.300	109.200	109.800	109.429	-0.071	0.000	0%	
86	cooling channel 8, distance dev1 (equivalent to dev1)	6.000	0.100	-0.100	5.967	-0.033	0.000	86	6.000	0.100	5.900	6.100	5.967	-0.033	0.000	0%	
87	cooling channel 8, longitudinal position in respect to ref. D (symmetry)	0.000	0.050	-0.050	0.010	0.010	0.000	87	0.000	0.100	-0.100	0.100	0.010	0.010	0.000	0%	offset at end 0.067
88	cooling channel 8, angle in respect to reference F	0.000	0.100	-0.100	0.030	0.030	0.000	88	0.000	0.050	-0.050	0.050	0.030	0.030	0.000	0%	offset differential end 0.030
89	cooling channel 9, distance 243.0±0.1	243.000	0.100	-0.100	242.938	-0.062	0.000	89	243.000	0.300	242.700	243.300	242.938	-0.062	0.000	0%	
90	cooling channel 9, length 109.5±0.1	109.500	0.100	-0.100	109.461	-0.039	0.000	90	109.500	0.300	109.200	109.800	109.461	-0.039	0.000	0%	
91	cooling channel 9, distance dev1 (equivalent to dev1)	6.000	0.100	-0.100	5.993	-0.007	0.000	91	6.000	0.100	5.900	6.100	5.993	-0.007	0.000	0%	
92	cooling channel 9, longitudinal position in respect to ref. D (symmetry)	0.000	0.050	-0.050	0.026	0.026	0.000	92	0.000	0.100	-0.100	0.100	0.026	0.026	0.000	0%	
93	cooling channel 9, angle in respect to reference F	0.000	0.100	-0.100	0.019	0.019	0.000	93	0.000	0.050	-0.050	0.050	0.019	0.019	0.000	0%	offset at end 0.062
94	cooling channel 10, distance 267.0±0.1	267.000	0.100	-0.100	266.981	-0.019	0.000	94	267.000	0.300	266.700	267.300	266.981	-0.019	0.000	0%	
95	cooling channel 10, angle 42°	42.000	0.100	-0.100	42.011	0.011	0.000	95	42.000	0.100	41.900	42.100	42.011	0.011	0.000	0%	
96	cooling channel 10, length 100.0±0.1	100.000	0.100	-0.100	100.919	0.919	0.000	96	100.000	0.300	100.600	101.200	100.919	0.019	0.000	0%	
97	cooling channel 10, longitudinal position in respect to reference D	0.000	0.050	-0.050	0.010	0.010	0.000	97	0.000	0.100	-0.100	0.100	0.010	0.010	0.000	0%	offset at end 0.081
98	cooling channel 10, angle in respect to reference F	0.000	0.100	-0.100	0.029	0.029	0.000	98	0.000	0.050	-0.050	0.050	0.029	0.029	0.000	0%	offset differential end 0.019
99	cooling channel 11, distance 268.0±0.1	268.000	0.100	-0.100	267.985	-0.015	0.000	99	268.000	0.300	267.700	268.300	267.985	-0.015	0.000	0%	
100	cooling channel 11, angle 53°	53.000	0.100	-0.100	52.967	-0.033	0.000	100	53.000	0.100	52.900	53.100	52.967	-0.033	0.000	0%	
101	cooling channel 11, length 235.9±0.1	235.900	0.100	-0.100	235.929	0.029	0.000	101	235.900	0.300	235.600	236.200	235.929	0.029	0.000	0%	
102	cooling channel 11, distance dev1 (equivalent to dev3)	9.000	0.100	-0.100	8.948	-0.052	0.000	102	9.000	0.100	8.900	9.100	8.948	-0.052	0.000	0%	
103	cooling channel 11, longitudinal position in respect to reference D	0.000	0.050	-0.050	0.022	0.022	0.000	103	0.000	0.100	-0.100	0.100	0.022	0.022	0.000	0%	
104	cooling channel 11, angle in respect to reference F	0.000	0.100	-0.100	0.010	0.010	0.000	104	0								