pc-dmis	PART NAME : PN440004-n-Trans-Rings-000-TB9XXX000-v3-IR		January 27, 2010	16:53
	REV NUMBER :	SER NUMBER :	STATS COUNT :	1

440004-n
FNAL 1.3GHZ TESLA
RF CAVITY
ASSEMBLY
measurement of Transition Rings
@ 000 rotational orientation

'Inspected by ' : Robert Riley
'Cavity Number' : TB9RI019
' ' : 1001271344

Datum Discs

⌖	MM	LOC1 - CIRC_DATUM_DISC_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.000	0.000	0.000	0.000	0.000
Y	25.000	26.826	1.826	10.000	10.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	111.000	110.943	-0.057	0.050	0.050	0.007
RN	0.000	0.023	0.023	0.050	0.000	0.000

⌖	MM	LOC2 - CIRC_DATUM_DISC_FP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.000	0.000	0.000	0.000	0.000
Y	-1032.384	-1029.031	3.353	10.000	10.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	111.000	110.926	-0.074	0.050	0.050	0.024
RN	0.000	0.012	0.012	0.050	0.000	0.000

Datum Disc planes

⌖	MM	LOC3 - PLNC_DD_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	27.000	28.970	1.970	10.000	10.000	0.000
FL	0.000	0.033	0.033	0.100	0.000	0.000

⌖	MM	LOC4 - PLNC_DD_FP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1034.384	-1031.162	3.222	10.000	10.000	0.000
FL	0.000	0.034	0.034	0.100	0.000	0.000

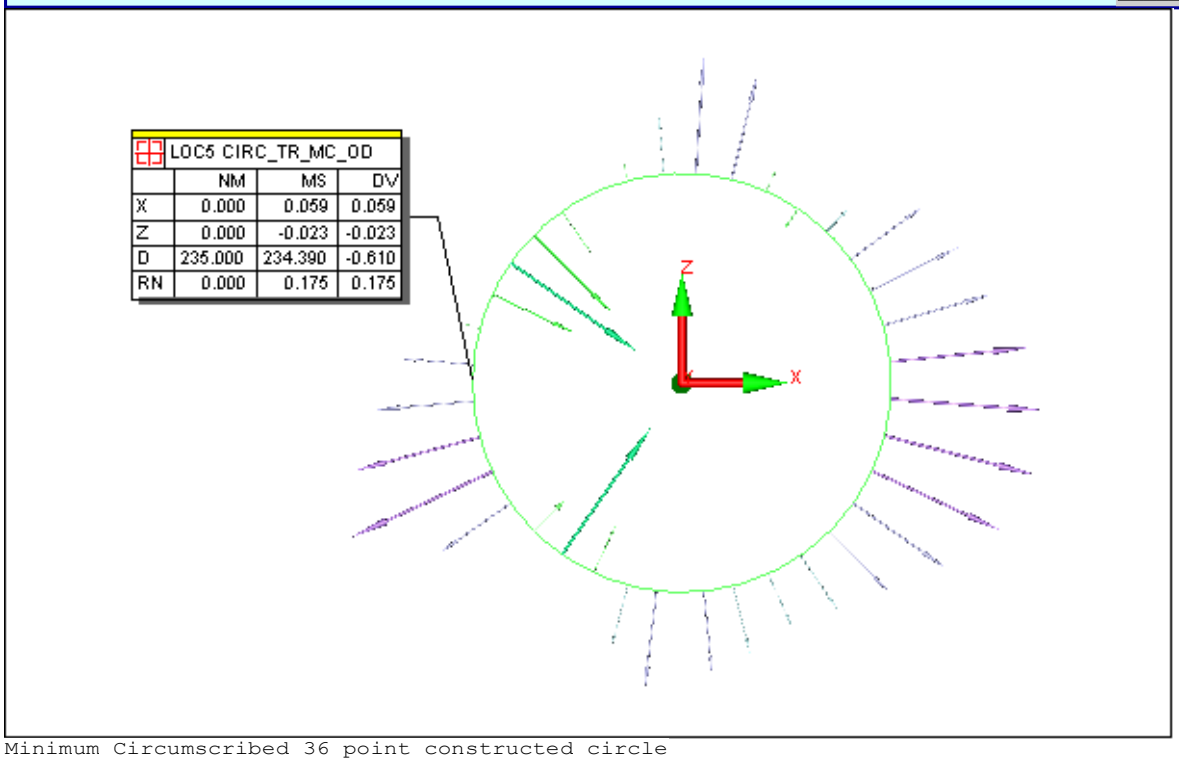
Distance between Datum Disc planes

↔	MM	DIST1 - PLNC_DD_FP TO PLNC_DD_MC (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1061.060	1060.133	-0.927	0.200	0.200	-0.727	

Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
235.0 O.D.

⌖	MM	LOC5 - CIRC_TR_MC_OD					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
X	0.000	0.059	0.059	0.250	0.250	0.000	
Z	0.000	-0.023	-0.023	0.250	0.250	0.000	
D	235.000	234.390	-0.610	0.250	0.250	0.360	
RN	0.000	0.175	0.175	0.250	0.000	0.000	

○	MM	RND1 - CIRC_TR_MC_OD					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	0.000	0.175	0.175	0.250	0.000	0.000	

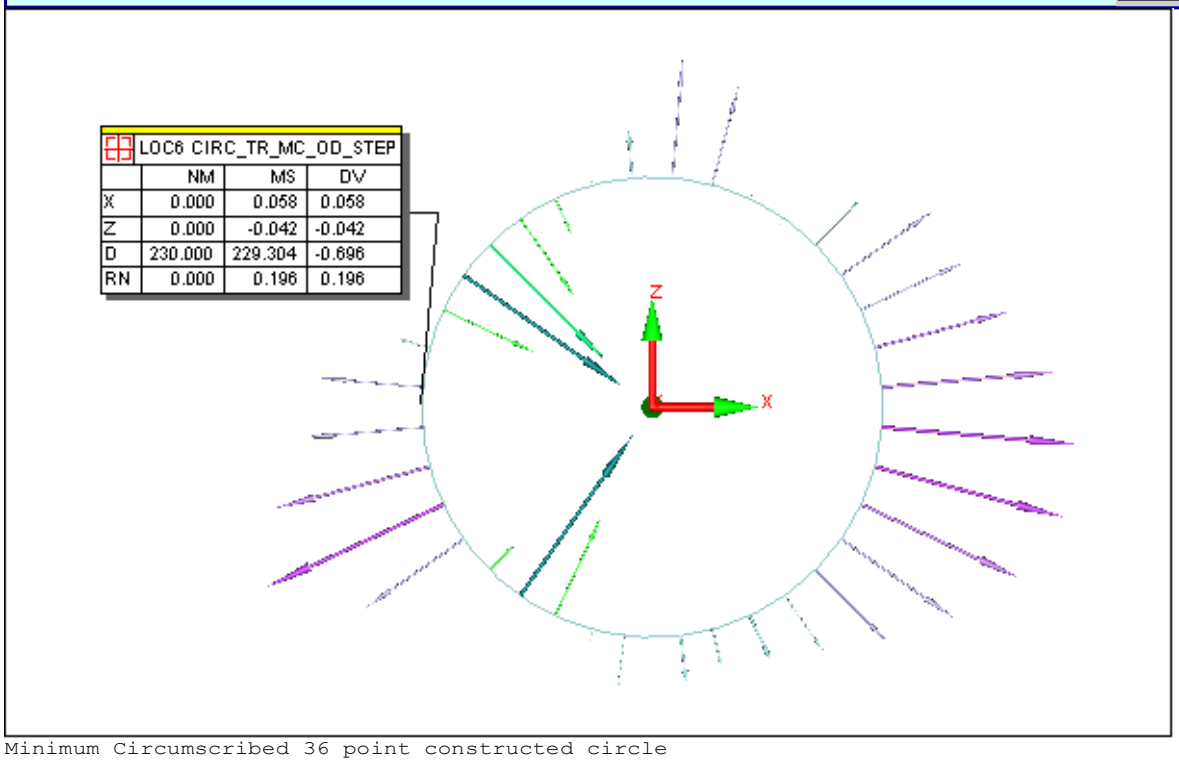


Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
235.0 O.D. x1000

Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
233.00 O.D. step

⌗	MM	LOC6 - CIRC_TR_MC_OD_STEP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.058	0.058	0.250	0.250	0.000
Z	0.000	-0.042	-0.042	0.250	0.250	0.000
D	230.000	229.304	-0.696	0.000	0.250	0.446
RN	0.000	0.196	0.196	0.250	0.000	0.000

○	MM	RND2 - CIRC_TR_MC_OD_STEP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.196	0.196	0.250	0.000	0.000

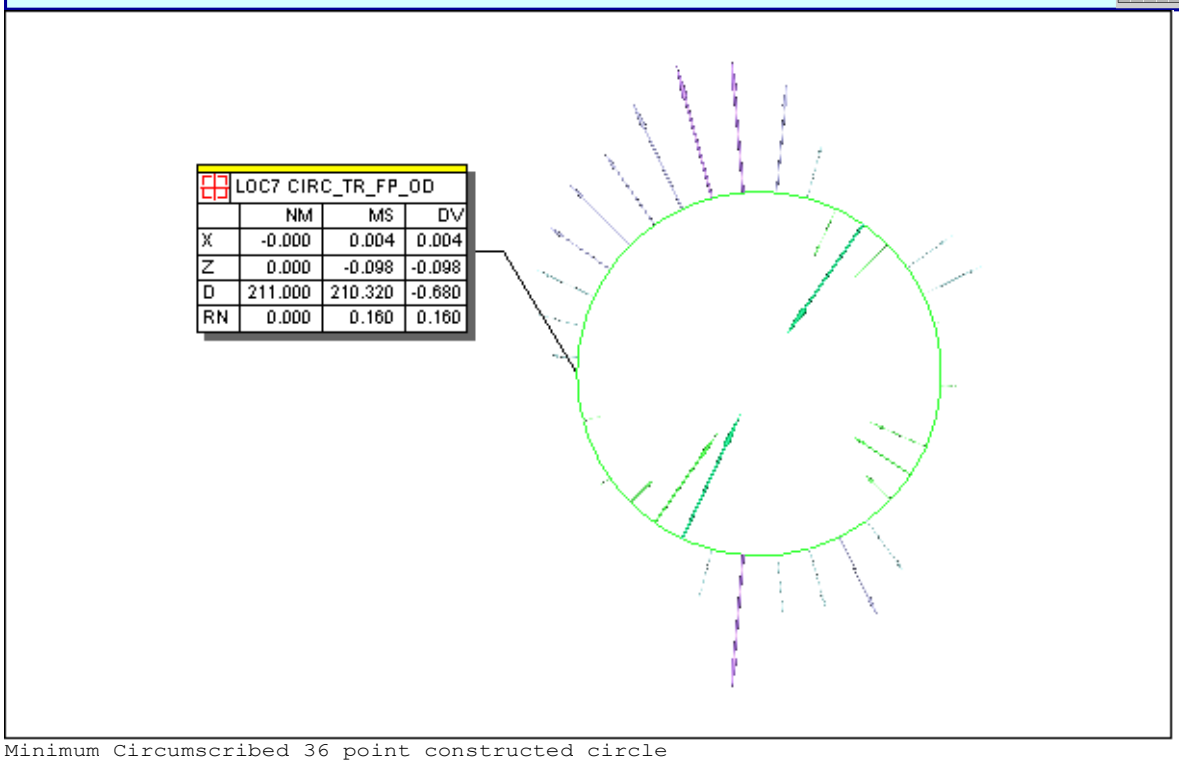


Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
233.00 O.D. step x1000

Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
211.0 O.D.

#	MM	LOC7 - CIRC_TR_FP_OD				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.004	0.004	0.250	0.250	0.000
Z	0.000	-0.098	-0.098	0.250	0.250	0.000
D	211.000	210.320	-0.680	0.250	0.250	0.430
RN	0.000	0.160	0.160	0.250	0.000	0.000

○	MM	RND3 - CIRC_TR_FP_OD				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.160	0.160	0.250	0.000	0.000

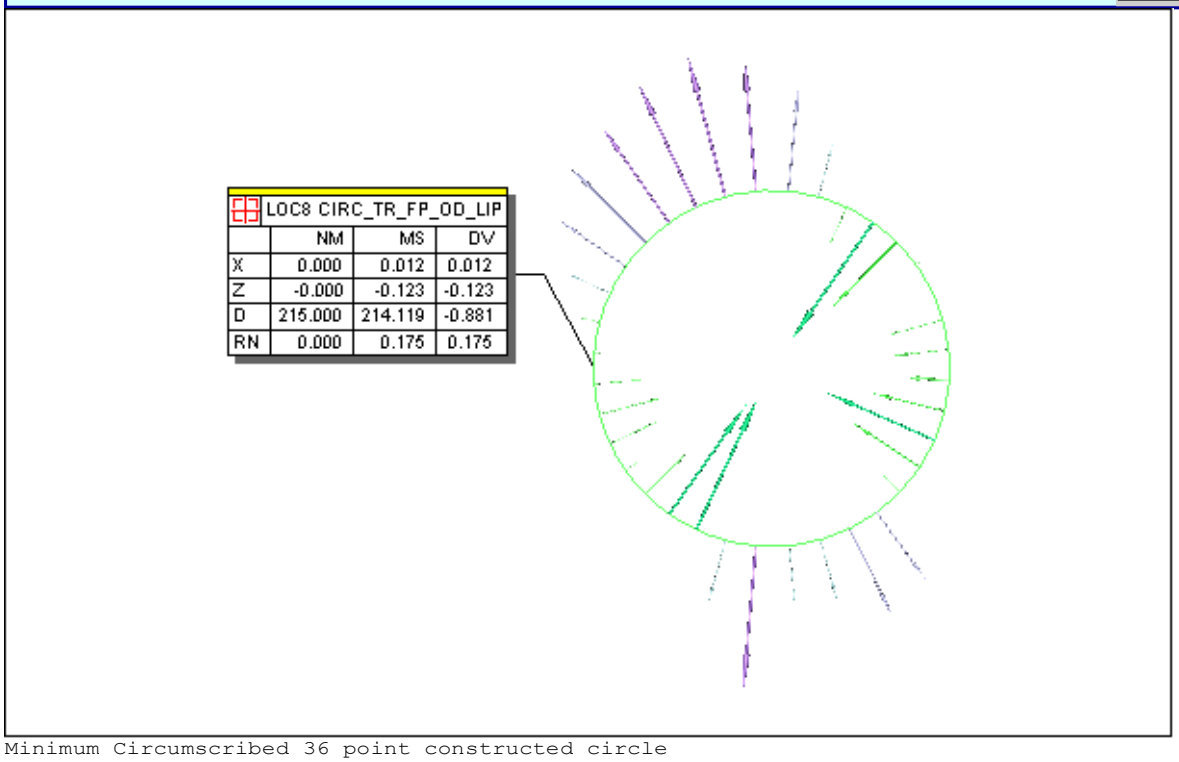


Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
211.0 O.D. x1000

Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
215.0 O.D. lip

⌗	MM	LOC8 - CIRC_TR_FP_OD_LIP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.012	0.012	0.250	0.250	0.000
Z	0.000	-0.123	-0.123	0.250	0.250	0.000
D	215.000	214.119	-0.881	0.250	0.250	0.631
RN	0.000	0.175	0.175	0.250	0.000	0.000

○	MM	RND4 - CIRC_TR_FP_OD_LIP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.175	0.175	0.250	0.000	0.000



Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
215.0 O.D. lip x1000

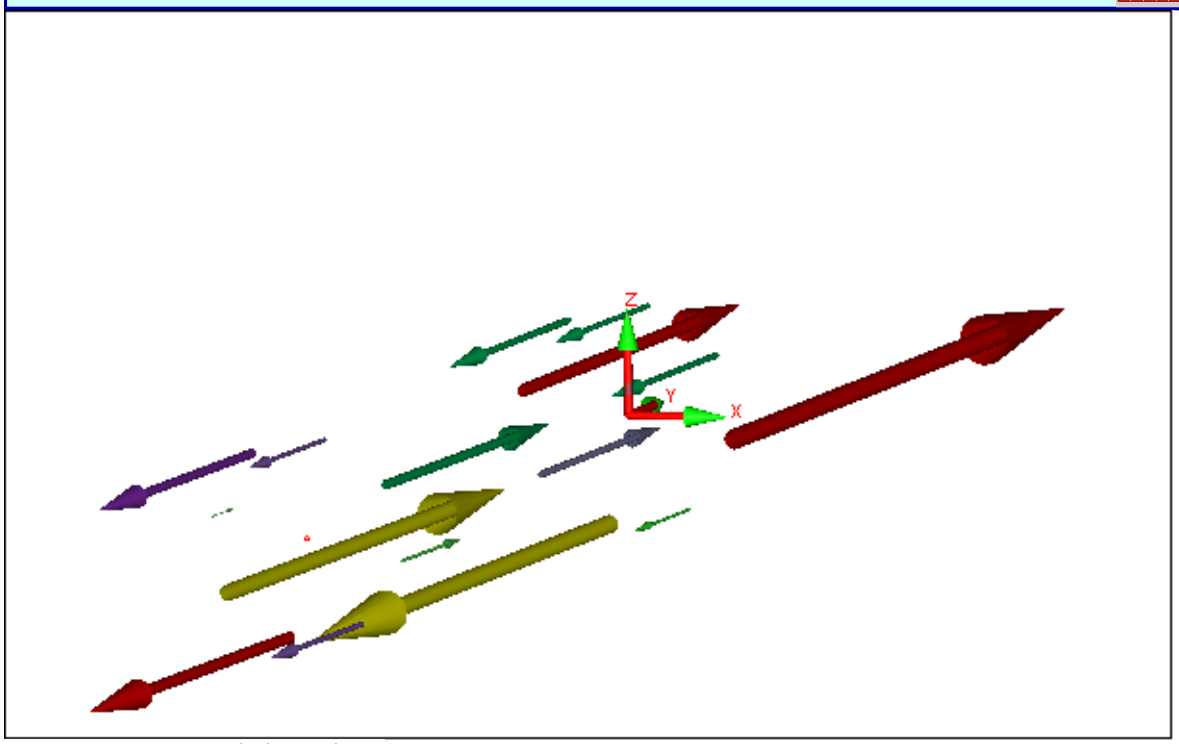
Transition Ring planes

	MM	LOC9 - PLNC_TR_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.000	0.000	0.000	0.000	0.000
FL	0.000	0.398	0.398	0.200	0.000	0.198

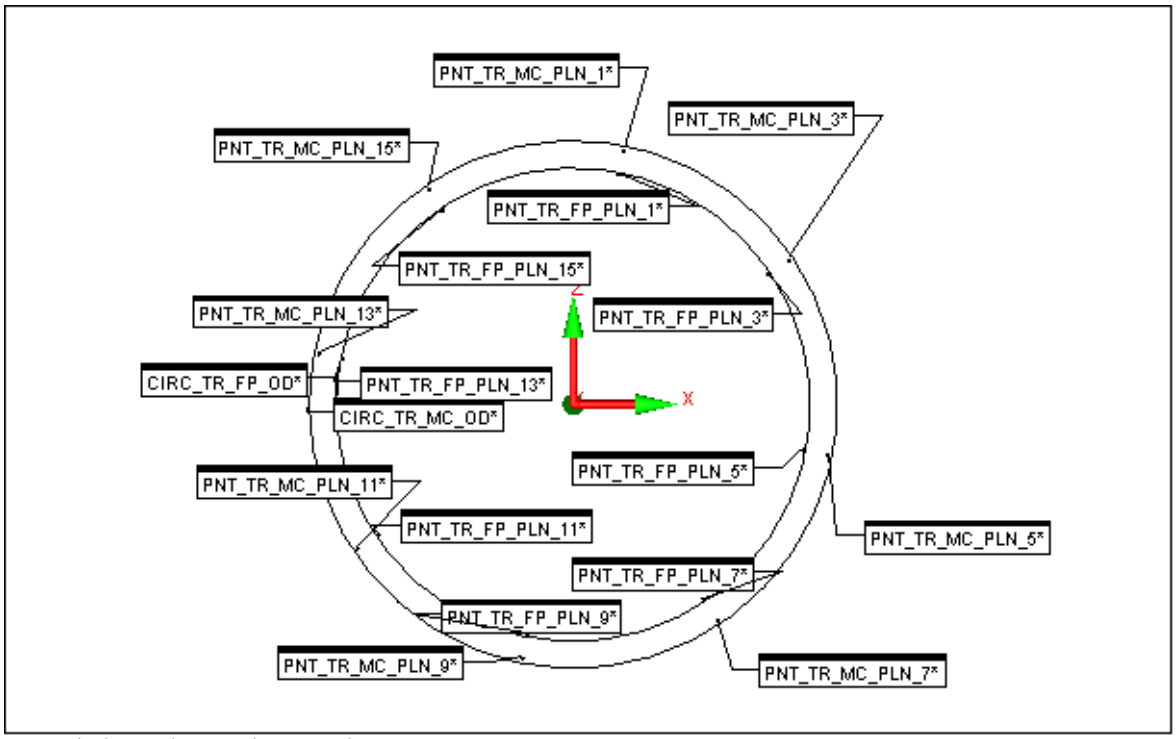
	MM	LOC10 - PLNC_TR_FP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1004.431	3.069	10.000	10.000	0.000
FL	0.000	0.300	0.300	0.200	0.000	0.100

	MM	FLAT3 - PLNC_TR_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.398	0.398	0.250	0.000	0.148

	MM	FLAT4 - PLNC_TR_FP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.300	0.300	0.250	0.000	0.050



Flatness of Transition Rings
x5000



Transition Ring points Main Coupler end

⊕	MM	LOC11 - PNT_TR_MC_PLN_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.301	-0.301	1.000	1.000	0.000
PR	115.000	115.001	0.001	1.000	1.000	0.000
PA	101.250	101.244	-0.006	1.000	1.000	0.000

⊕	MM	LOC12 - PNT_TR_MC_PLN_3				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.005	0.005	1.000	1.000	0.000
PR	115.000	114.997	-0.003	1.000	1.000	0.000
PA	146.250	146.246	-0.004	1.000	1.000	0.000

⊕	MM	LOC13 - PNT_TR_MC_PLN_5				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.552	0.553	1.000	1.000	0.000
PR	115.000	115.000	0.000	1.000	1.000	0.000
PA	-168.750	-168.750	0.000	1.000	1.000	0.000

⊕	MM	LOC14 - PNT_TR_MC_PLN_7				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.379	0.379	1.000	1.000	0.000
PR	115.000	115.000	0.000	1.000	1.000	0.000
PA	-123.750	-123.752	-0.002	1.000	1.000	0.000

⊕	MM	LOC15 - PNT_TR_MC_PLN_9				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.054	0.054	1.000	1.000	0.000
PR	115.000	115.010	0.010	1.000	1.000	0.000
PA	-78.750	-78.755	-0.005	1.000	1.000	0.000

⌖	MM	LOC16 - PNT_TR_MC_PLN_11				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.005	0.005	1.000	1.000	0.000
PR	115.000	115.006	0.006	1.000	1.000	0.000
PA	-33.750	-33.757	-0.007	1.000	1.000	0.000

⌖	MM	LOC17 - PNT_TR_MC_PLN_13				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.206	-0.206	1.000	1.000	0.000
PR	115.000	115.004	0.004	1.000	1.000	0.000
PA	11.250	11.247	-0.003	1.000	1.000	0.000

⌖	MM	LOC18 - PNT_TR_MC_PLN_15				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.488	-0.489	1.000	1.000	0.000
PR	115.000	115.004	0.004	1.000	1.000	0.000
PA	56.250	56.245	-0.005	1.000	1.000	0.000

Transition Ring points Field Probe end

⌖	MM	LOC19 - PNT_TR_FP_PLN_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1004.124	3.376	1.000	1.000	2.376
PR	104.000	103.998	-0.002	1.000	1.000	0.000
PA	101.250	101.240	-0.010	1.000	1.000	0.000

⌖	MM	LOC20 - PNT_TR_FP_PLN_3				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1004.125	3.375	1.000	1.000	2.375
PR	104.000	103.994	-0.006	1.000	1.000	0.000
PA	146.250	146.243	-0.007	1.000	1.000	0.000

⌖	MM	LOC21 - PNT_TR_FP_PLN_5				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1004.460	3.040	1.000	1.000	2.040
PR	104.000	103.993	-0.007	1.000	1.000	0.000
PA	-168.750	-168.753	-0.003	1.000	1.000	0.000

⌖	MM	LOC22 - PNT_TR_FP_PLN_7				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1004.787	2.713	1.000	1.000	1.713
PR	104.000	103.997	-0.003	1.000	1.000	0.000
PA	-123.750	-123.749	0.001	1.000	1.000	0.000

⌖	MM	LOC23 - PNT_TR_FP_PLN_9				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1004.911	2.589	1.000	1.000	1.589
PR	104.000	104.090	0.090	1.000	1.000	0.000
PA	-78.750	-78.734	0.016	1.000	1.000	0.000

⌖	MM	LOC24 - PNT_TR_FP_PLN_11					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	-1007.500	-1004.459	3.041	1.000	1.000	2.041	
PR	104.000	104.096	0.096	1.000	1.000	0.000	
PA	-33.750	-33.775	-0.025	1.000	1.000	0.000	
⌖	MM	LOC25 - PNT_TR_FP_PLN_13					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	-1007.500	-1004.350	3.150	1.000	1.000	2.150	
PR	104.000	104.042	0.042	1.000	1.000	0.000	
PA	11.250	11.195	-0.055	1.000	1.000	0.000	
⌖	MM	LOC26 - PNT_TR_FP_PLN_15					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	-1007.500	-1004.229	3.271	1.000	1.000	2.271	
PR	104.000	103.961	-0.039	1.000	1.000	0.000	
PA	56.250	56.194	-0.056	1.000	1.000	0.000	

Distances between matching points on Transition Rings

↔	MM	DIST_PA_11.25 - PNT_TR_MC_PLN_13 TO PNT_TR_FP_PLN_13 (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1004.144	-3.356	1.000	1.000	-2.356	
↔	MM	DIST_PA_56.25 - PNT_TR_MC_PLN_15 TO PNT_TR_FP_PLN_15 (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1003.741	-3.759	1.000	1.000	-2.759	
↔	MM	DIST_PA_101.25 - PNT_TR_MC_PLN_1 TO PNT_TR_FP_PLN_1 (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1003.824	-3.676	1.000	1.000	-2.676	
↔	MM	DIST_PA_146.25 - PNT_TR_MC_PLN_3 TO PNT_TR_FP_PLN_3 (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1004.130	-3.370	1.000	1.000	-2.370	
↔	MM	DIST_PA_-168.75 - PNT_TR_MC_PLN_5 TO PNT_TR_FP_PLN_5 (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1005.012	-2.488	1.000	1.000	-1.488	
↔	MM	DIST_PA_-123.75 - PNT_TR_MC_PLN_7 TO PNT_TR_FP_PLN_7 (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1005.165	-2.335	1.000	1.000	-1.335	
↔	MM	DIST_PA_-78.75 - PNT_TR_MC_PLN_9 TO PNT_TR_FP_PLN_9 (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1004.965	-2.535	1.000	1.000	-1.535	
↔	MM	DIST_PA_-33.75 - PNT_TR_MC_PLN_11 TO PNT_TR_FP_PLN_11 (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1004.464	-3.036	1.000	1.000	-2.036	

↔	MM	DIST_BETWEEN_PLANES - PLNC_TR_MC TO PLNC_TR_FP (YAXIS)				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1004.431	-3.069	1.000	1.000	-2.069

LOCATIONS OF CONSTRUCTED CIRCLES
ON 18 HALF CELLS

⊕	MM	LOC_CC3 - CIRC_CAV_1_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.009	-0.009	0.200	0.200	0.000
Y	0.000	-967.746	-967.746	2000.000	2000.000	0.000
Z	0.000	-0.132	-0.132	0.200	0.200	0.000
D	210.300	210.425	0.125	0.200	0.200	0.000
RN	0.000	0.212	0.212	0.200	0.000	0.012

⊕	MM	LOC_CC4 - CIRC_CAV_1_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.034	0.034	0.200	0.200	0.000
Y	0.000	-956.246	-956.246	2000.000	2000.000	0.000
Z	0.000	-0.195	-0.195	0.200	0.200	0.000
D	210.300	210.304	0.004	0.200	0.200	0.000
RN	0.000	0.131	0.131	0.200	0.000	0.000

⊕	MM	LOC_CC5 - CIRC_CAV_2_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.073	0.073	0.200	0.200	0.000
Y	0.000	-853.623	-853.623	2000.000	2000.000	0.000
Z	0.000	-0.490	-0.490	0.200	0.200	0.290
D	210.300	210.283	-0.017	0.200	0.200	0.000
RN	0.000	0.116	0.116	0.200	0.000	0.000

⊕	MM	LOC_CC6 - CIRC_CAV_2_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.146	0.146	0.200	0.200	0.000
Y	0.000	-841.113	-841.113	2000.000	2000.000	0.000
Z	0.000	-0.473	-0.473	0.200	0.200	0.273
D	210.300	210.321	0.021	0.200	0.200	0.000
RN	0.000	0.144	0.144	0.200	0.000	0.000

⊕	MM	LOC_CC7 - CIRC_CAV_3_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.095	0.095	0.200	0.200	0.000
Y	0.000	-738.045	-738.045	2000.000	2000.000	0.000
Z	0.000	-0.769	-0.769	0.200	0.200	0.569
D	210.300	210.347	0.047	0.200	0.200	0.000
RN	0.000	0.195	0.195	0.200	0.000	0.000

⊕	MM	LOC_CC8 - CIRC_CAV_3_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.116	0.116	0.200	0.200	0.000
Y	0.000	-724.409	-724.409	2000.000	2000.000	0.000
Z	0.000	-0.771	-0.771	0.200	0.200	0.571
D	210.300	210.381	0.081	0.200	0.200	0.000
RN	0.000	0.126	0.126	0.200	0.000	0.000

⊕	MM	LOC_CC9 - CIRC_CAV_4_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.037	0.037	0.200	0.200	0.000
Y	0.000	-622.182	-622.182	2000.000	2000.000	0.000
Z	0.000	-0.866	-0.866	0.200	0.200	0.666
D	210.300	210.400	0.100	0.200	0.200	0.000
RN	0.000	0.158	0.158	0.200	0.000	0.000

⊕	MM	LOC_CC10 - CIRC_CAV_4_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.014	0.014	0.200	0.200	0.000
Y	0.000	-610.518	-610.518	2000.000	2000.000	0.000
Z	0.000	-0.894	-0.894	0.200	0.200	0.694
D	210.300	210.312	0.012	0.200	0.200	0.000
RN	0.000	0.143	0.143	0.200	0.000	0.000

⊕	MM	LOC_CC11 - CIRC_CAV_5_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.026	0.026	0.200	0.200	0.000
Y	0.000	-506.563	-506.563	2000.000	2000.000	0.000
Z	0.000	-0.922	-0.922	0.200	0.200	0.722
D	210.300	210.260	-0.040	0.200	0.200	0.000
RN	0.000	0.226	0.226	0.200	0.000	0.026

⊕	MM	LOC_CC12 - CIRC_CAV_5_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.007	-0.007	0.200	0.200	0.000
Y	0.000	-494.744	-494.744	2000.000	2000.000	0.000
Z	0.000	-0.956	-0.956	0.200	0.200	0.756
D	210.300	210.265	-0.035	0.200	0.200	0.000
RN	0.000	0.162	0.162	0.200	0.000	0.000

⊕	MM	LOC_CC13 - CIRC_CAV_6_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.070	-0.070	0.200	0.200	0.000
Y	0.000	-391.657	-391.657	2000.000	2000.000	0.000
Z	0.000	-0.861	-0.861	0.200	0.200	0.661
D	210.300	210.327	0.027	0.200	0.200	0.000
RN	0.000	0.109	0.109	0.200	0.000	0.000

⊕	MM	LOC_CC14 - CIRC_CAV_6_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.071	-0.071	0.200	0.200	0.000
Y	0.000	-379.567	-379.567	2000.000	2000.000	0.000
Z	0.000	-0.872	-0.872	0.200	0.200	0.672
D	210.300	210.363	0.063	0.200	0.200	0.000
RN	0.000	0.244	0.244	0.200	0.000	0.044

⊕	MM	LOC_CC15 - CIRC_CAV_7_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.049	-0.049	0.200	0.200	0.000
Y	0.000	-276.305	-276.305	2000.000	2000.000	0.000
Z	0.000	-0.752	-0.752	0.200	0.200	0.552
D	210.300	210.404	0.104	0.200	0.200	0.000
RN	0.000	0.155	0.155	0.200	0.000	0.000

⊕	MM	LOC_CC16 - CIRC_CAV_7_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.000	0.000	0.200	0.200	0.000
Y	0.000	-263.790	-263.790	2000.000	2000.000	0.000
Z	0.000	-0.644	-0.644	0.200	0.200	0.444
D	210.300	210.431	0.131	0.200	0.200	0.000
RN	0.000	0.210	0.210	0.200	0.000	0.010

⊕	MM	LOC_CC17 - CIRC_CAV_8_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.031	0.031	0.200	0.200	0.000
Y	0.000	-161.069	-161.069	2000.000	2000.000	0.000
Z	0.000	-0.429	-0.429	0.200	0.200	0.229
D	210.300	210.371	0.071	0.200	0.200	0.000
RN	0.000	0.223	0.223	0.200	0.000	0.023

⊕	MM	LOC_CC18 - CIRC_CAV_8_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.015	-0.015	0.200	0.200	0.000
Y	0.000	-149.389	-149.389	2000.000	2000.000	0.000
Z	0.000	-0.398	-0.398	0.200	0.200	0.198
D	210.300	210.320	0.020	0.200	0.200	0.000
RN	0.000	0.174	0.174	0.200	0.000	0.000

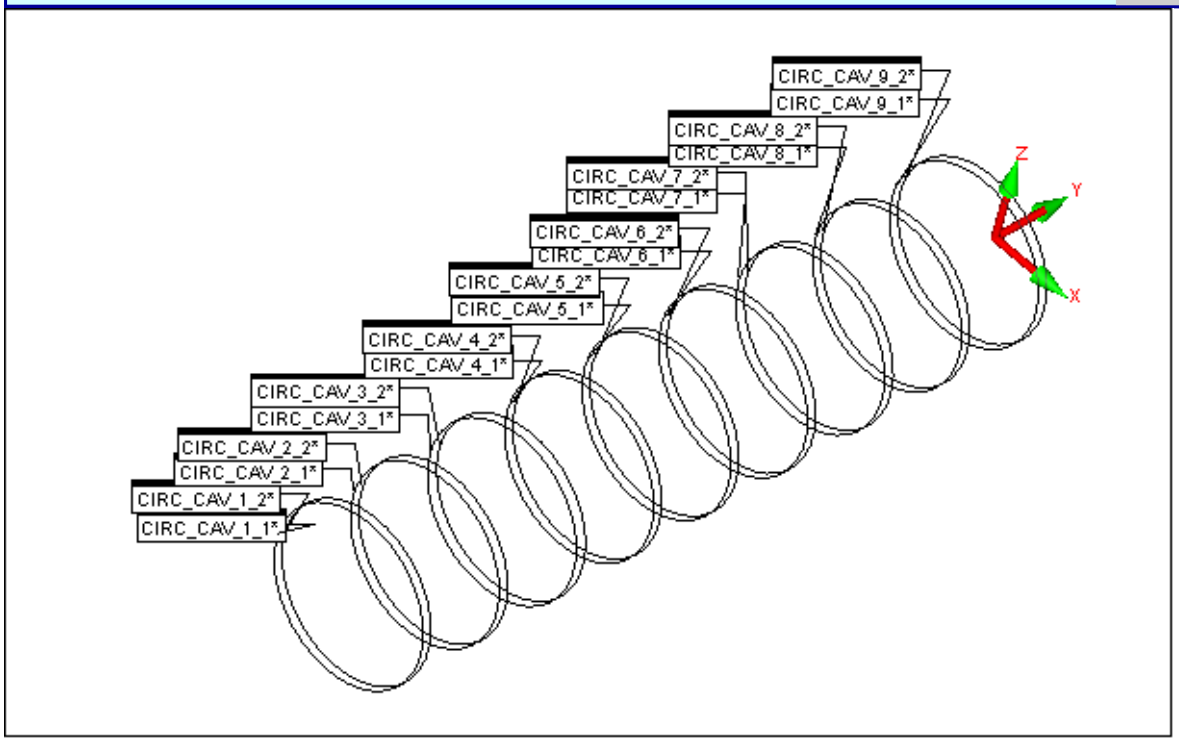
⊕	MM	LOC_CC19 - CIRC_CAV_9_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.034	0.034	0.200	0.200	0.000
Y	0.000	-46.234	-46.234	2000.000	2000.000	0.000
Z	0.000	-0.178	-0.178	0.200	0.200	0.000
D	210.300	210.325	0.025	0.200	0.200	0.000
RN	0.000	0.093	0.093	0.200	0.000	0.000

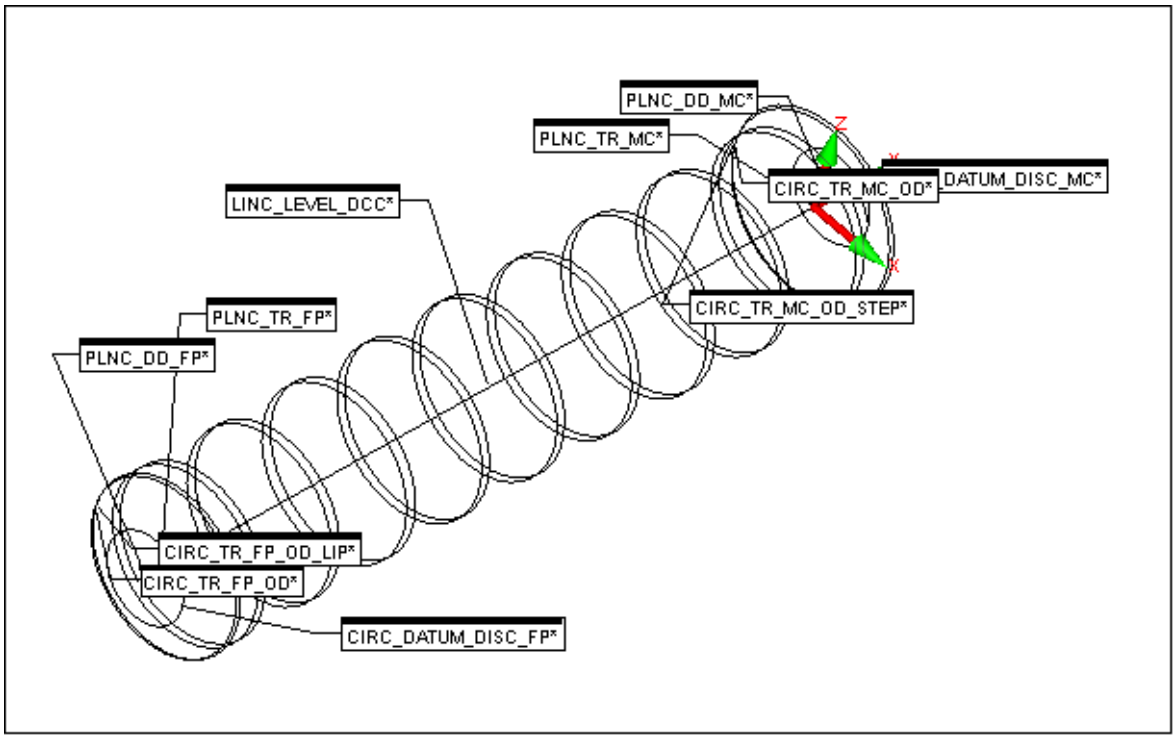
⌖	MM	LOC_CC20 - CIRC_CAV_9_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.023	-0.023	0.200	0.200	0.000
Y	0.000	-33.641	-33.641	2000.000	2000.000	0.000
Z	0.000	-0.110	-0.110	0.200	0.200	0.000
D	210.300	210.410	0.110	0.200	0.200	0.000
RN	0.000	0.118	0.118	0.200	0.000	0.000

Location of End Flanges

⌖	MM	LOC_23 - CIR_END_FLANGE_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.055	0.055	0.200	0.200	0.000
Y	0.000	116.619	116.619	2000.000	2000.000	0.000
Z	0.000	0.187	0.187	0.200	0.200	0.000
D	140.000	140.079	0.079	0.300	0.300	0.000
RN	0.000	0.005	0.005	0.200	0.000	0.000

⌖	MM	LOC_24 - CIR_END_FLANGE_FP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.143	-0.143	0.200	0.200	0.000
Y	-1153.884	-1117.538	36.346	2000.000	2000.000	0.000
Z	0.000	0.314	0.314	0.200	0.200	0.114
D	140.000	140.078	0.078	0.300	0.300	0.000
RN	0.000	0.004	0.004	0.200	0.000	0.000

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CIRC_TR_MC_OD*
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PLNC_DD_FP*
CIRC_TR_FP_OD_LIP*
CIRC_TR_FP_OD*
CIRC_DATUM_DISC_FP*