pc-dmis	PART NAME : PN440004-n-Trans-Rings-000-TB9AES013-v4-IR		October 20, 2010	10:15
	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' : TB9AES013
' ' : 1010200904

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	27.434	2.434	10.000	10.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	111.000	110.800	-0.200	0.050	0.050	0.150
RN	0.000	0.052	0.052	0.050	0.000	0.002

⌖	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	-1032.244	0.140	10.000	10.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	111.000	110.773	-0.227	0.050	0.050	0.177
RN	0.000	0.064	0.064	0.050	0.000	0.014

Datum Disc planes

⌖	MM	LOC3 - PLNC_DD_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	27.000	29.454	2.454	10.000	10.000	0.000
FL	0.000	0.048	0.048	0.100	0.000	0.000

⌖	MM	LOC4 - PLNC_DD_FP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1034.384	-1034.439	-0.054	10.000	10.000	0.000
FL	0.000	0.111	0.111	0.100	0.000	0.011

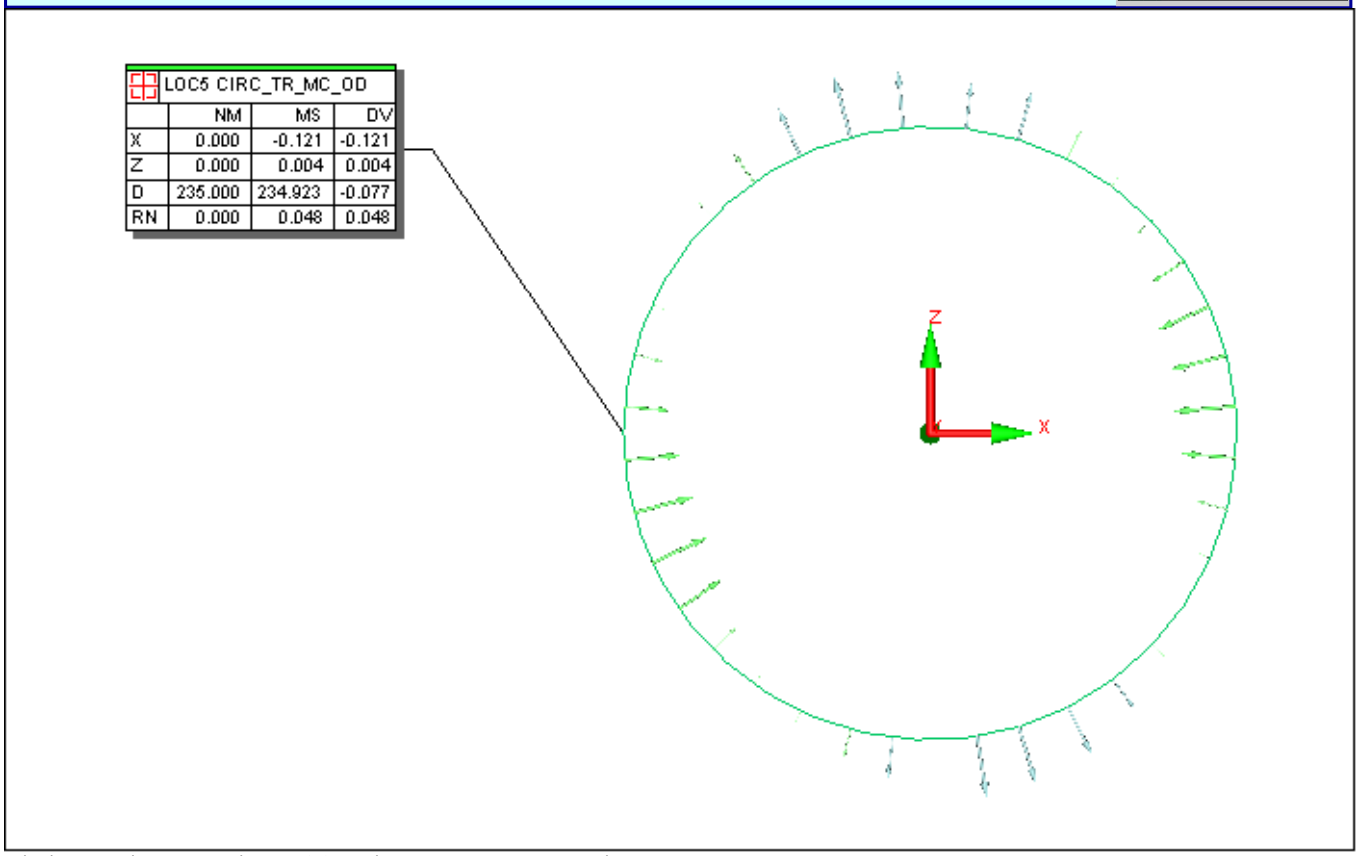
Distance between Datum Disc planes

↔	MM	DIST1 - PLNC_DD_FP TO PLNC_DD_MC (YAXIS)				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1061.060	1063.892	2.832	0.200	0.200	2.632

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	-0.121	-0.121	0.250	0.250	0.000
Z	0.000	0.004	0.004	0.250	0.250	0.000
D	235.000	234.923	-0.077	0.250	0.250	0.000
RN	0.000	0.048	0.048	0.250	0.000	0.000

○	MM	RND1 - CIRC_TR_MC_OD				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.048	0.048	0.250	0.000	0.000

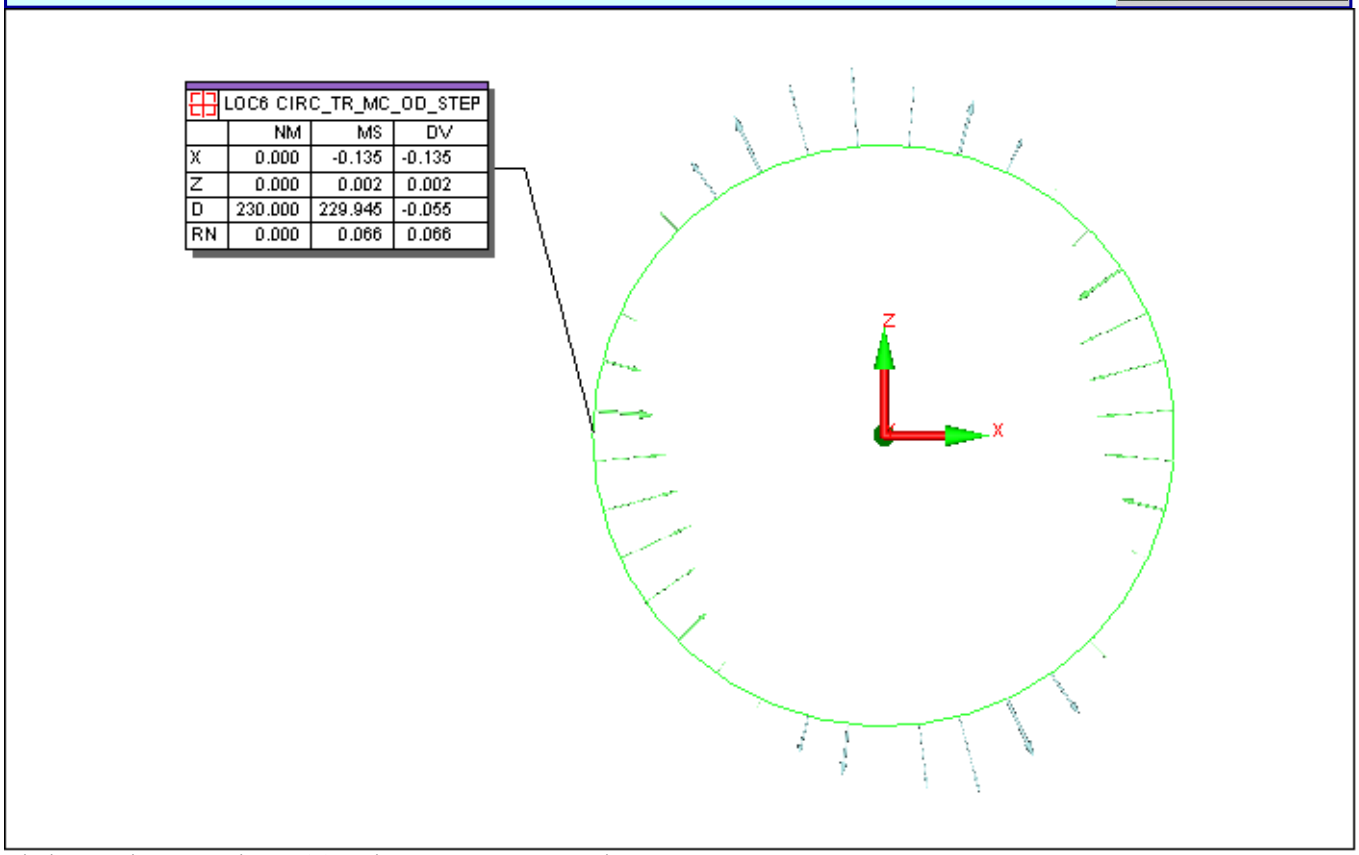


Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
235.0 O.D. x1000

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	-0.135	-0.135	0.250	0.250	0.000	
Z	0.000	0.002	0.002	0.250	0.250	0.000	
D	230.000	229.945	-0.055	0.000	0.250	0.000	
RN	0.000	0.066	0.066	0.250	0.000	0.000	

○	MM	RND2 - CIRC_TR_MC_OD_STEP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	0.000	0.066	0.066	0.250	0.000	0.000	

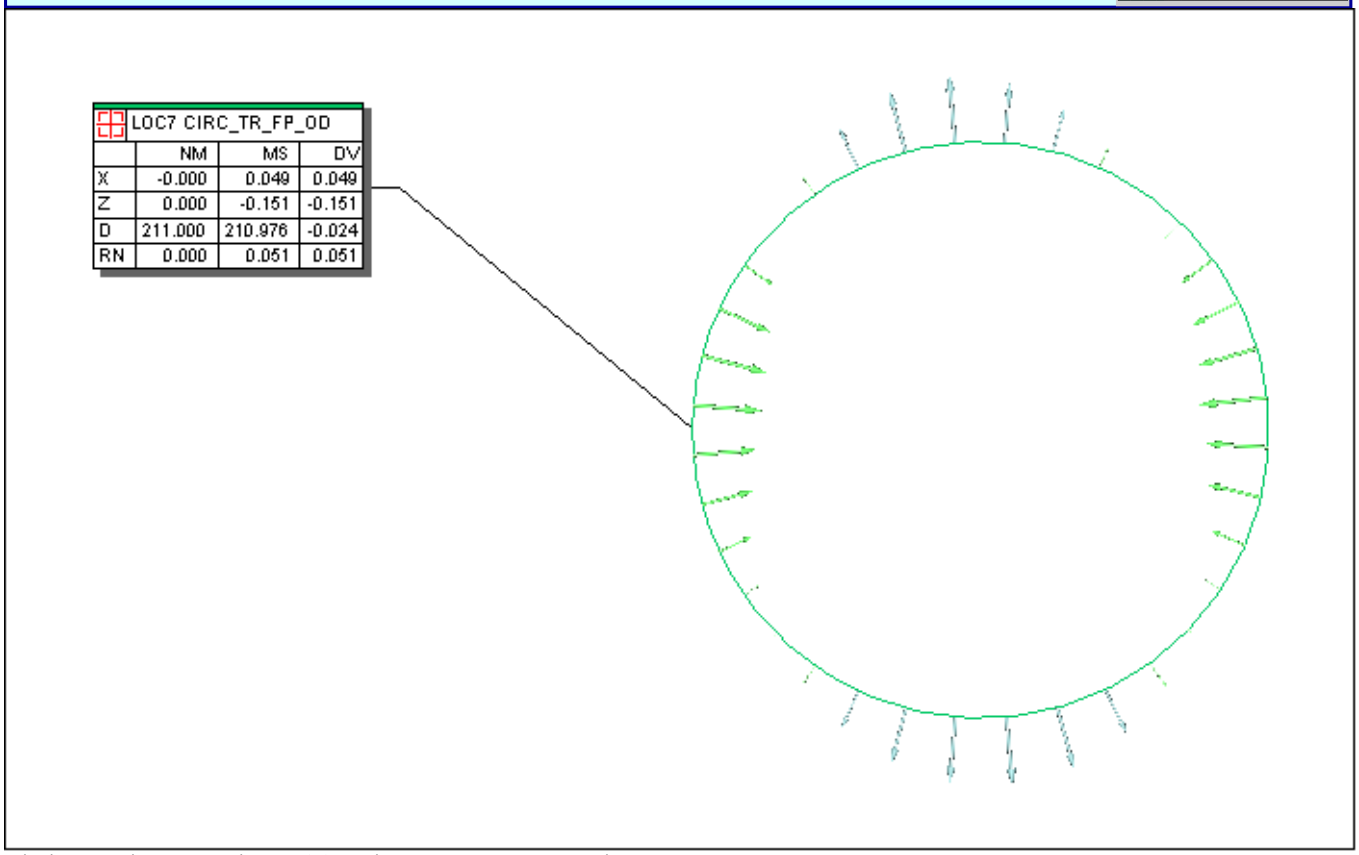


Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
233.00 O.D. step x1000

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	0.049	0.049	0.250	0.250	0.000
Z	0.000	-0.151	-0.151	0.250	0.250	0.000
D	211.000	210.976	-0.024	0.250	0.250	0.000
RN	0.000	0.051	0.051	0.250	0.000	0.000

	MM	RND3 - CIRC_TR_FP_OD				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.051	0.051	0.250	0.000	0.000

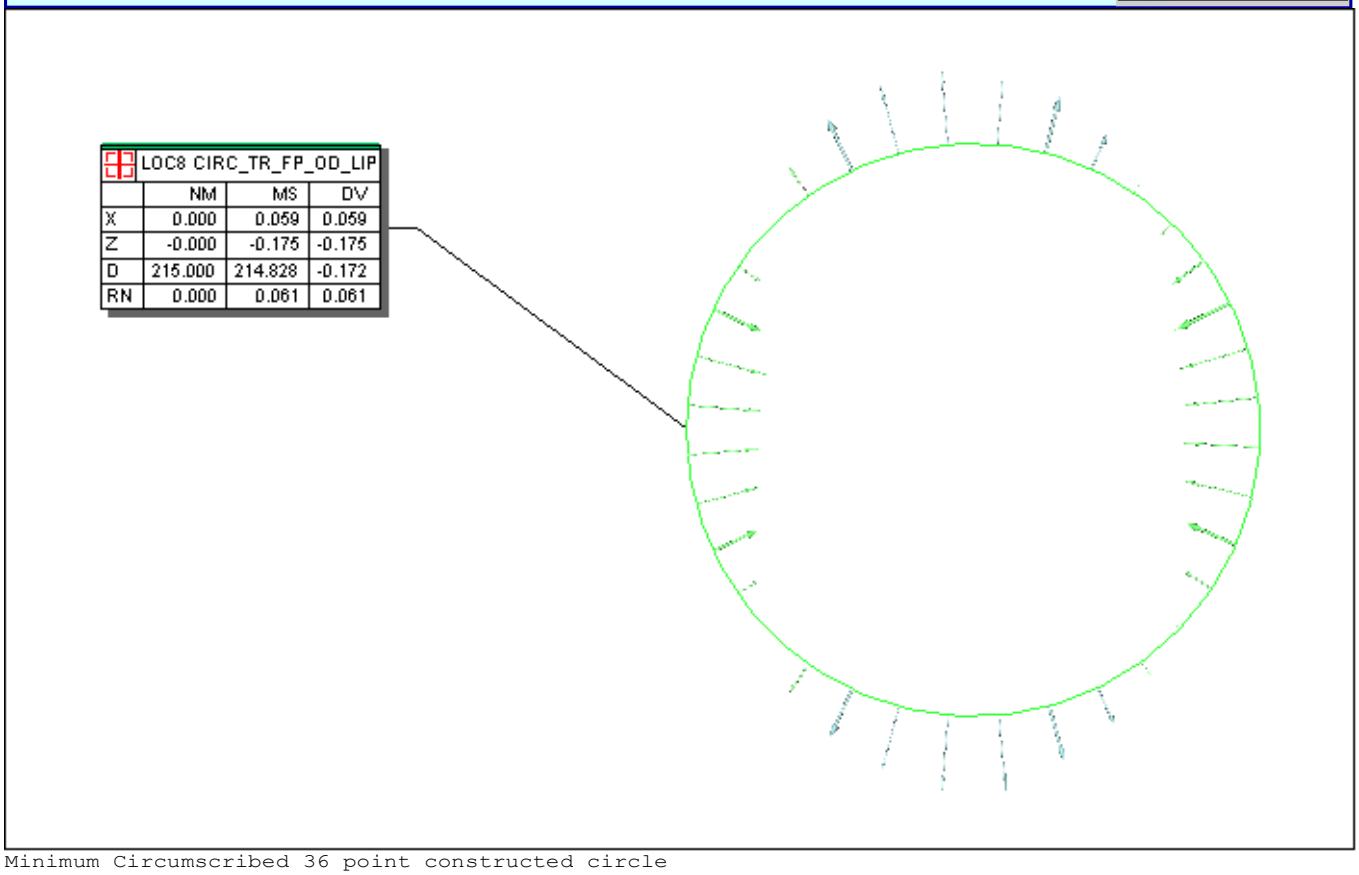


Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
211.0 O.D. x1000

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

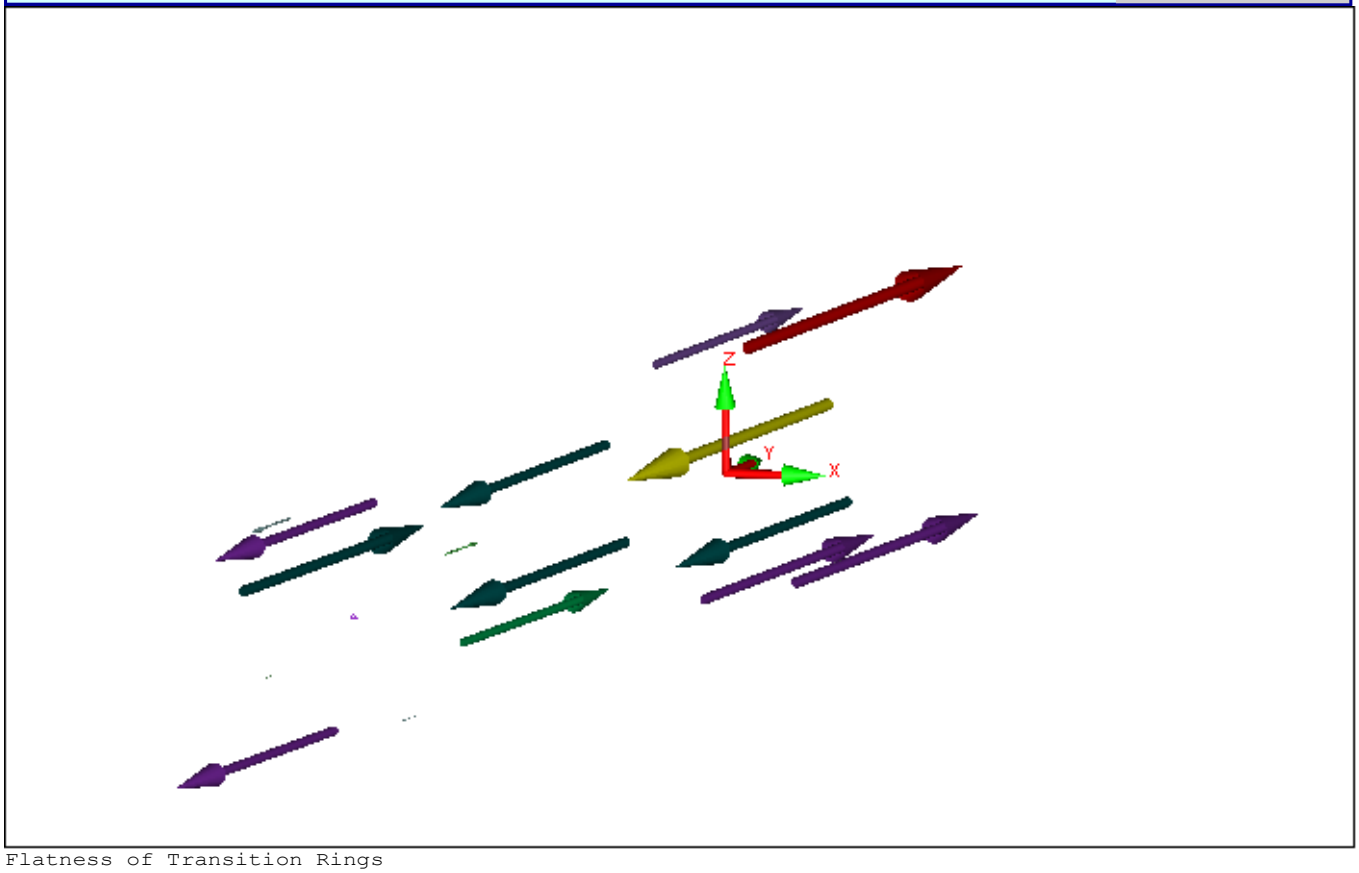
#	MM	LOC8 - CIRC_TR_FP_OD_LIP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.059	0.059	0.250	0.250	0.000
Z	0.000	-0.175	-0.175	0.250	0.250	0.000
D	215.000	214.828	-0.172	0.250	0.250	0.000
RN	0.000	0.061	0.061	0.250	0.000	0.000

○	MM	RND4 - CIRC_TR_FP_OD_LIP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.061	0.061	0.250	0.000	0.000



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

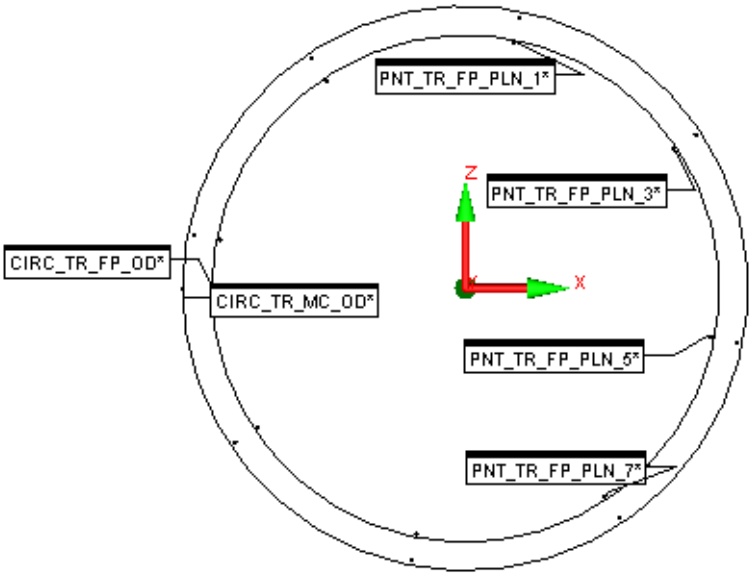
⊕	MM	LOC9 - PLNC_TR_MC					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	0.000	0.000	0.000	0.000	0.000	0.000	
FL	0.000	0.223	0.223	0.200	0.000	0.023	
AX		I		J		K	
V		0.004		1.000		0.000	
⊕	MM	LOC10 - PLNC_TR_FP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	-1007.500	-1007.392	0.108	10.000	10.000	0.000	
FL	0.000	0.184	0.184	0.200	0.000	0.000	
AX		I		J		K	
V		-0.002		-1.000		0.005	
▱	MM	FLAT3 - PLNC_TR_MC					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	0.000	0.223	0.223	0.200	0.000	0.023	
▱	MM	FLAT4 - PLNC_TR_FP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	0.000	0.184	0.184	0.200	0.000	0.000	



Flatness of Transition Rings
x5000

⊥	MM	PERP1 - PLNC_TR_MC TO LINC_LEVEL_DCC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0	0.843	0.843	0.200	0	0.643

⊥	MM	PERP2 - PLNC_TR_FP TO LINC_LEVEL_DCC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0	1.128	1.128	0.200	0	0.928



Transition Ring points Main Coupler end

⊕	MM	LOC11 - PNT_TR_MC_PLN_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.009	0.009	1.000	1.000	0.000
PR	115.000	114.961	-0.039	1.000	1.000	0.000
PA	101.250	101.215	-0.035	1.000	1.000	0.000

⊕	MM	LOC12 - PNT_TR_MC_PLN_3				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.480	-0.480	1.000	1.000	0.000
PR	115.000	114.976	-0.024	1.000	1.000	0.000
PA	146.250	146.228	-0.022	1.000	1.000	0.000

⊕	MM	LOC13 - PNT_TR_MC_PLN_5				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.512	-0.512	1.000	1.000	0.000
PR	115.000	115.009	0.009	1.000	1.000	0.000
PA	-168.750	-168.766	-0.016	1.000	1.000	0.000

⌖	MM	LOC14 - PNT_TR_MC_PLN_7				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.124	-0.123	1.000	1.000	0.000
PR	115.000	115.037	0.037	1.000	1.000	0.000
PA	-123.750	-123.775	-0.025	1.000	1.000	0.000

⌖	MM	LOC15 - PNT_TR_MC_PLN_9				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.198	0.198	1.000	1.000	0.000
PR	115.000	115.046	0.046	1.000	1.000	0.000
PA	-78.750	-78.794	-0.044	1.000	1.000	0.000

⌖	MM	LOC16 - PNT_TR_MC_PLN_11				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.278	0.278	1.000	1.000	0.000
PR	115.000	115.026	0.026	1.000	1.000	0.000
PA	-33.750	-33.809	-0.059	1.000	1.000	0.000

⌖	MM	LOC17 - PNT_TR_MC_PLN_13				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.331	0.330	1.000	1.000	0.000
PR	115.000	114.996	-0.004	1.000	1.000	0.000
PA	11.250	11.192	-0.058	1.000	1.000	0.000

⌖	MM	LOC18 - PNT_TR_MC_PLN_15				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.301	0.301	1.000	1.000	0.000
PR	115.000	114.967	-0.033	1.000	1.000	0.000
PA	56.250	56.198	-0.052	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	-1006.971	0.529	1.000	1.000	0.000
PR	104.000	103.991	-0.009	1.000	1.000	0.000
PA	101.250	101.198	-0.053	1.000	1.000	0.000

⌖	MM	LOC20 - PNT_TR_FP_PLN_3				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.215	0.285	1.000	1.000	0.000
PR	104.000	103.981	-0.019	1.000	1.000	0.000
PA	146.250	146.207	-0.043	1.000	1.000	0.000

⌖	MM	LOC21 - PNT_TR_FP_PLN_5				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.596	-0.096	1.000	1.000	0.000
PR	104.000	103.981	-0.019	1.000	1.000	0.000
PA	-168.750	-168.784	-0.034	1.000	1.000	0.000

MM	LOC22 - PNT_TR_FP_PLN_7					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.958	-0.458	1.000	1.000	0.000
PR	104.000	103.992	-0.008	1.000	1.000	0.000
PA	-123.750	-123.776	-0.026	1.000	1.000	0.000
MM	LOC23 - PNT_TR_FP_PLN_9					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.983	-0.483	1.000	1.000	0.000
PR	104.000	104.126	0.126	1.000	1.000	0.000
PA	-78.750	-78.796	-0.046	1.000	1.000	0.000
MM	LOC24 - PNT_TR_FP_PLN_11					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.543	-0.043	1.000	1.000	0.000
PR	104.000	104.087	0.087	1.000	1.000	0.000
PA	-33.750	-33.845	-0.095	1.000	1.000	0.000
MM	LOC25 - PNT_TR_FP_PLN_13					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.010	0.490	1.000	1.000	0.000
PR	104.000	103.989	-0.011	1.000	1.000	0.000
PA	11.250	11.136	-0.114	1.000	1.000	0.000
MM	LOC26 - PNT_TR_FP_PLN_15					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1006.855	0.645	1.000	1.000	0.000
PR	104.000	103.898	-0.102	1.000	1.000	0.000
PA	56.250	56.165	-0.085	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	1007.341	-0.159	1.000	1.000	0.000
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	1007.156	-0.344	1.000	1.000	0.000
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	1006.980	-0.520	1.000	1.000	0.000
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	1006.735	-0.765	1.000	1.000	0.000
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	1007.084	-0.416	1.000	1.000	0.000

↔	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	1007.834	0.334	1.000	1.000	0.000	

↔	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	1008.181	0.681	1.000	1.000	0.000	

↔	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	1007.822	0.322	1.000	1.000	0.000	

↔	MM	DIST_BETWEEN_PLANES - PLNC_TR_MC TO PLNC_TR_FP (YAXIS)					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	1007.500	1007.392	-0.108	1.000	1.000	0.000	

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	-0.034	-0.034	0.200	0.200	0.000	
Y	0.000	-968.714	-968.714	2000.000	2000.000	0.000	
Z	0.000	-0.058	-0.058	0.200	0.200	0.000	
D	210.300	211.082	0.782	0.200	0.200	0.582	
RN	0.000	0.236	0.236	0.200	0.000	0.036	

⊕	MM	LOC_CC4 - CIRC_CAV_1_2					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
X	0.000	-0.039	-0.039	0.200	0.200	0.000	
Y	0.000	-959.951	-959.951	2000.000	2000.000	0.000	
Z	0.000	-0.105	-0.105	0.200	0.200	0.000	
D	210.300	211.186	0.886	0.200	0.200	0.686	
RN	0.000	0.184	0.184	0.200	0.000	0.000	

⊕	MM	LOC_CC5 - CIRC_CAV_2_1					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
X	0.000	0.027	0.027	0.200	0.200	0.000	
Y	0.000	-853.197	-853.197	2000.000	2000.000	0.000	
Z	0.000	-0.338	-0.338	0.200	0.200	0.138	
D	210.300	211.031	0.731	0.200	0.200	0.531	
RN	0.000	0.149	0.149	0.200	0.000	0.000	

⌖	MM	LOC_CC6 - CIRC_CAV_2_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.081	-0.081	0.200	0.200	0.000
Y	0.000	-844.361	-844.361	2000.000	2000.000	0.000
Z	0.000	-0.286	-0.286	0.200	0.200	0.086
D	210.300	211.125	0.825	0.200	0.200	0.625
RN	0.000	0.226	0.226	0.200	0.000	0.026

⌖	MM	LOC_CC7 - CIRC_CAV_3_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.083	-0.083	0.200	0.200	0.000
Y	0.000	-737.840	-737.840	2000.000	2000.000	0.000
Z	0.000	-0.444	-0.444	0.200	0.200	0.244
D	210.300	211.111	0.811	0.200	0.200	0.611
RN	0.000	0.167	0.167	0.200	0.000	0.000

⌖	MM	LOC_CC8 - CIRC_CAV_3_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.065	-0.065	0.200	0.200	0.000
Y	0.000	-729.155	-729.155	2000.000	2000.000	0.000
Z	0.000	-0.476	-0.476	0.200	0.200	0.276
D	210.300	211.218	0.918	0.200	0.200	0.718
RN	0.000	0.170	0.170	0.200	0.000	0.000

⌖	MM	LOC_CC9 - CIRC_CAV_4_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.009	-0.009	0.200	0.200	0.000
Y	0.000	-621.828	-621.828	2000.000	2000.000	0.000
Z	0.000	-0.617	-0.617	0.200	0.200	0.417
D	210.300	211.109	0.809	0.200	0.200	0.609
RN	0.000	0.221	0.221	0.200	0.000	0.021

⌖	MM	LOC_CC10 - CIRC_CAV_4_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.062	-0.062	0.200	0.200	0.000
Y	0.000	-613.634	-613.634	2000.000	2000.000	0.000
Z	0.000	-0.577	-0.577	0.200	0.200	0.377
D	210.300	211.137	0.837	0.200	0.200	0.637
RN	0.000	0.226	0.226	0.200	0.000	0.026

⌖	MM	LOC_CC11 - CIRC_CAV_5_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.061	-0.061	0.200	0.200	0.000
Y	0.000	-506.098	-506.098	2000.000	2000.000	0.000
Z	0.000	-0.661	-0.661	0.200	0.200	0.461
D	210.300	211.089	0.789	0.200	0.200	0.589
RN	0.000	0.208	0.208	0.200	0.000	0.008

⌖	MM	LOC_CC12 - CIRC_CAV_5_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.051	-0.051	0.200	0.200	0.000
Y	0.000	-497.475	-497.475	2000.000	2000.000	0.000
Z	0.000	-0.716	-0.716	0.200	0.200	0.516
D	210.300	211.169	0.869	0.200	0.200	0.669
RN	0.000	0.240	0.240	0.200	0.000	0.040

⌖	MM	LOC_CC13 - CIRC_CAV_6_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.056	-0.056	0.200	0.200	0.000
Y	0.000	-390.693	-390.693	2000.000	2000.000	0.000
Z	0.000	-0.726	-0.726	0.200	0.200	0.526
D	210.300	210.964	0.664	0.200	0.200	0.464
RN	0.000	0.265	0.265	0.200	0.000	0.065

⌖	MM	LOC_CC14 - CIRC_CAV_6_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.038	-0.038	0.200	0.200	0.000
Y	0.000	-381.959	-381.959	2000.000	2000.000	0.000
Z	0.000	-0.714	-0.714	0.200	0.200	0.514
D	210.300	211.115	0.815	0.200	0.200	0.615
RN	0.000	0.169	0.169	0.200	0.000	0.000

⌖	MM	LOC_CC15 - CIRC_CAV_7_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.053	-0.053	0.200	0.200	0.000
Y	0.000	-275.075	-275.075	2000.000	2000.000	0.000
Z	0.000	-0.622	-0.622	0.200	0.200	0.422
D	210.300	211.013	0.713	0.200	0.200	0.513
RN	0.000	0.124	0.124	0.200	0.000	0.000

⌖	MM	LOC_CC16 - CIRC_CAV_7_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.079	-0.079	0.200	0.200	0.000
Y	0.000	-266.369	-266.369	2000.000	2000.000	0.000
Z	0.000	-0.539	-0.539	0.200	0.200	0.339
D	210.300	210.980	0.680	0.200	0.200	0.480
RN	0.000	0.354	0.354	0.200	0.000	0.154

⌖	MM	LOC_CC17 - CIRC_CAV_8_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.032	-0.032	0.200	0.200	0.000
Y	0.000	-158.925	-158.925	2000.000	2000.000	0.000
Z	0.000	-0.422	-0.422	0.200	0.200	0.222
D	210.300	211.128	0.828	0.200	0.200	0.628
RN	0.000	0.143	0.143	0.200	0.000	0.000

⌖	MM	LOC_CC18 - CIRC_CAV_8_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.070	-0.070	0.200	0.200	0.000
Y	0.000	-150.536	-150.536	2000.000	2000.000	0.000
Z	0.000	-0.388	-0.388	0.200	0.200	0.188
D	210.300	211.029	0.729	0.200	0.200	0.529
RN	0.000	0.198	0.198	0.200	0.000	0.000

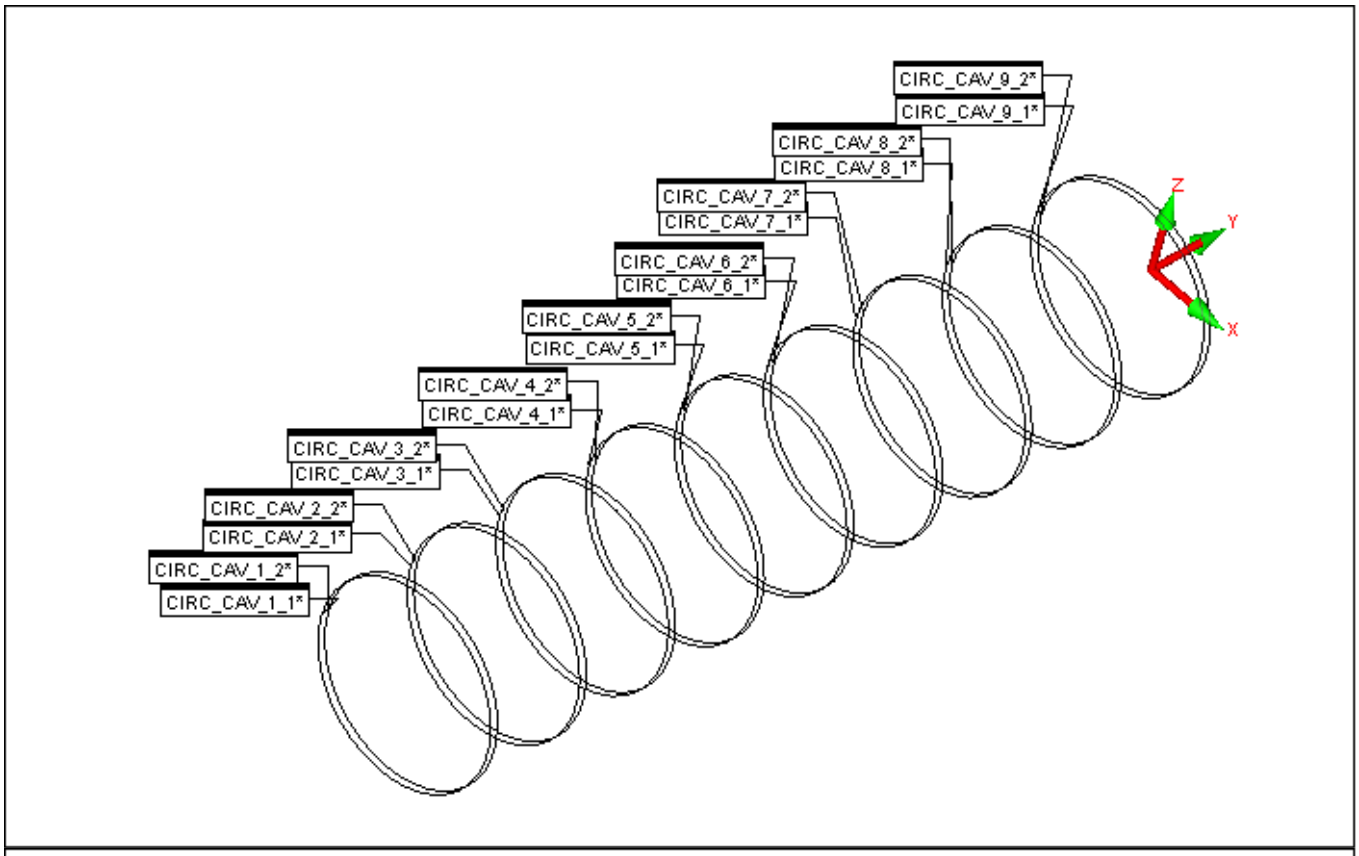
⌖	MM	LOC_CC19 - CIRC_CAV_9_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.043	-0.043	0.200	0.200	0.000
Y	0.000	-43.803	-43.803	2000.000	2000.000	0.000
Z	0.000	-0.248	-0.248	0.200	0.200	0.048
D	210.300	211.084	0.784	0.200	0.200	0.584
RN	0.000	0.203	0.203	0.200	0.000	0.003

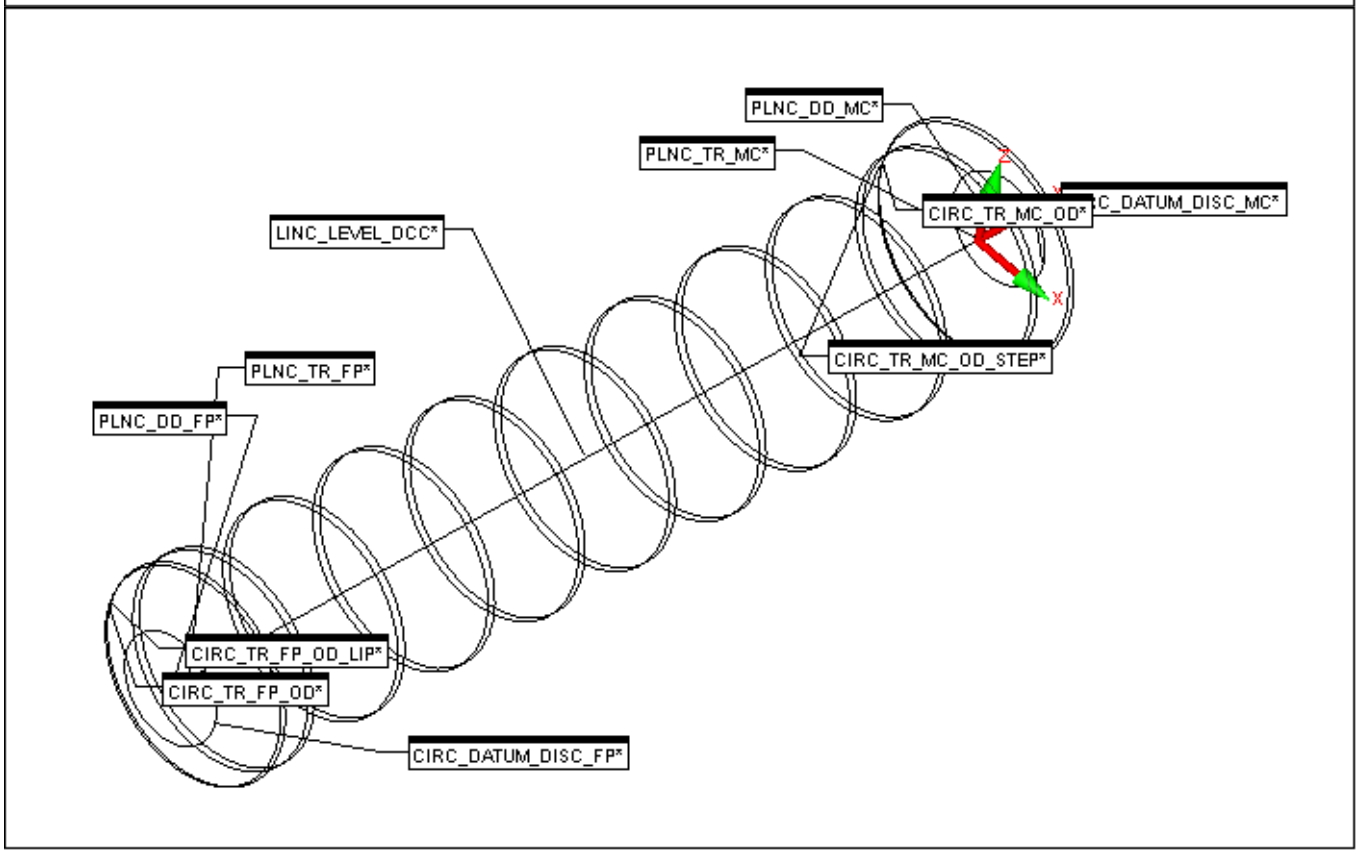
⌖	MM	LOC_CC20 - CIRC_CAV_9_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.029	-0.029	0.200	0.200	0.000
Y	0.000	-35.171	-35.171	2000.000	2000.000	0.000
Z	0.000	-0.207	-0.207	0.200	0.200	0.007
D	210.300	211.019	0.719	0.200	0.200	0.519
RN	0.000	0.265	0.265	0.200	0.000	0.065

Location of End Flanges

⌖	MM	LOC_23 - CIR_END_FLANGE_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.029	-0.029	0.200	0.200	0.000
Y	0.000	117.237	117.237	2000.000	2000.000	0.000
Z	0.000	0.119	0.119	0.200	0.200	0.000
D	140.000	140.007	0.007	0.300	0.300	0.000
RN	0.000	0.024	0.024	0.200	0.000	0.000

⌖	MM	LOC_24 - CIR_END_FLANGE_FP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.110	-0.110	0.200	0.200	0.000
Y	-1153.884	-1120.746	33.138	2000.000	2000.000	0.000
Z	0.000	0.327	0.327	0.200	0.200	0.127
D	140.000	139.976	-0.024	0.300	0.300	0.000
RN	0.000	0.013	0.013	0.200	0.000	0.000


CIRC_CAV_9_2*
CIRC_CAV_9_1*
CIRC_CAV_8_2*
CIRC_CAV_8_1*
CIRC_CAV_7_2*
CIRC_CAV_7_1*
CIRC_CAV_6_2*
CIRC_CAV_6_1*
CIRC_CAV_5_2*
CIRC_CAV_5_1*
CIRC_CAV_4_2*
CIRC_CAV_4_1*
CIRC_CAV_3_2*
CIRC_CAV_3_1*
CIRC_CAV_2_2*
CIRC_CAV_2_1*
CIRC_CAV_1_2*
CIRC_CAV_1_1*
Z
Y
X


PLNC_DD_MC*
PLNC_TR_MC*
CIRC_TR_MC_OD*
C_DATUM_DISC_MC*
LINC_LEVEL_DCC*
CIRC_TR_MC_OD_STEP*
PLNC_TR_FP*
PLNC_DD_FP*
CIRC_TR_FP_OD_LIP*
CIRC_TR_FP_OD*
CIRC_DATUM_DISC_FP*
Z
X