pc-dmis	PART NAME : PN440004-n-Trans-Rings-000-TB9XXX000-v3-IR		January 20, 2010	08:14
	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' : TB9RI018
' ' : 1001181635

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	26.866	1.866	10.000	10.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	111.000	110.909	-0.091	0.050	0.050	0.041
RN	0.000	0.028	0.028	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	-1027.703	4.681	10.000	10.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	111.000	110.925	-0.075	0.050	0.050	0.025
RN	0.000	0.010	0.010	0.050	0.000	0.000

Datum Disc planes

⌖	MM	LOC3 - PLNC_DD_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	27.000	28.877	1.877	10.000	10.000	0.000
FL	0.000	0.058	0.058	0.100	0.000	0.000

⌖	MM	LOC4 - PLNC_DD_FP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1034.384	-1029.781	4.603	10.000	10.000	0.000
FL	0.000	0.049	0.049	0.100	0.000	0.000

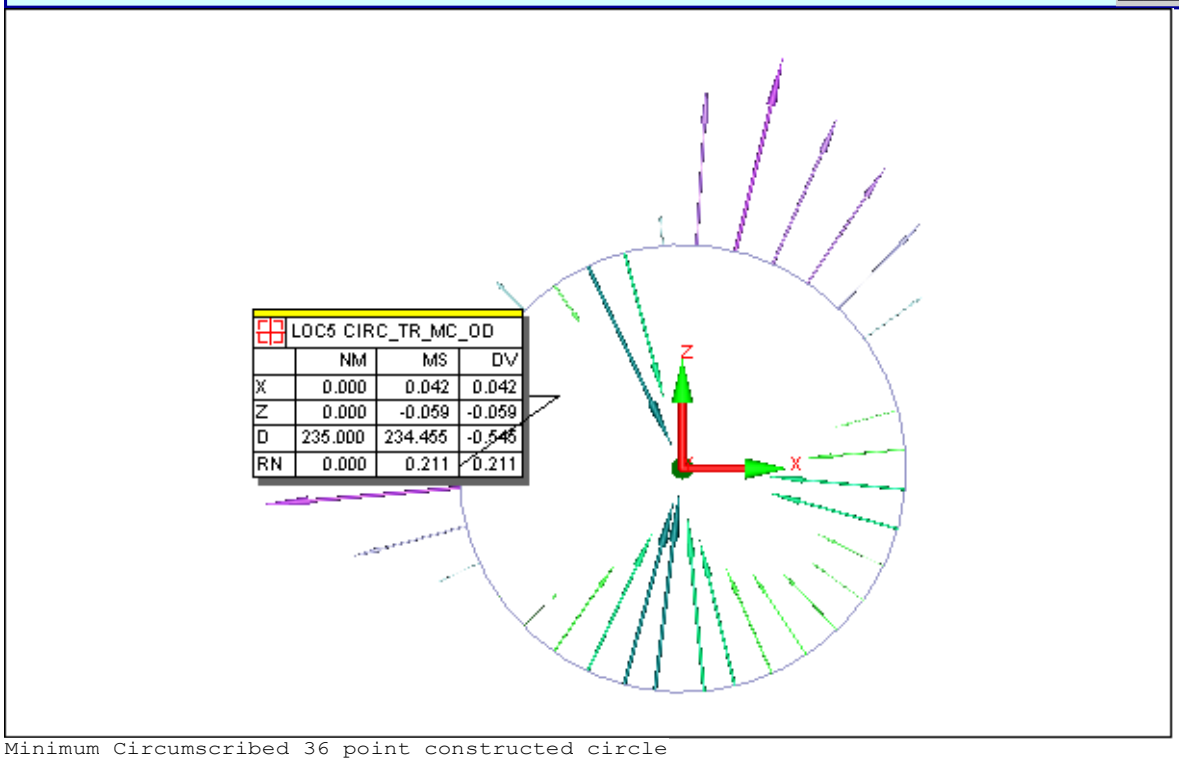
Distance between Datum Disc planes

↔	MM	DIST1 - PLNC_DD_FP TO PLNC_DD_MC (YAXIS)				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1061.060	1058.658	-2.402	0.200	0.200	-2.202

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	0.042	0.042	0.250	0.250	0.000
Z	0.000	-0.059	-0.059	0.250	0.250	0.000
D	235.000	234.455	-0.545	0.250	0.250	0.295
RN	0.000	0.211	0.211	0.250	0.000	0.000

○	MM	RND1 - CIRC_TR_MC_OD				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.211	0.211	0.250	0.000	0.000

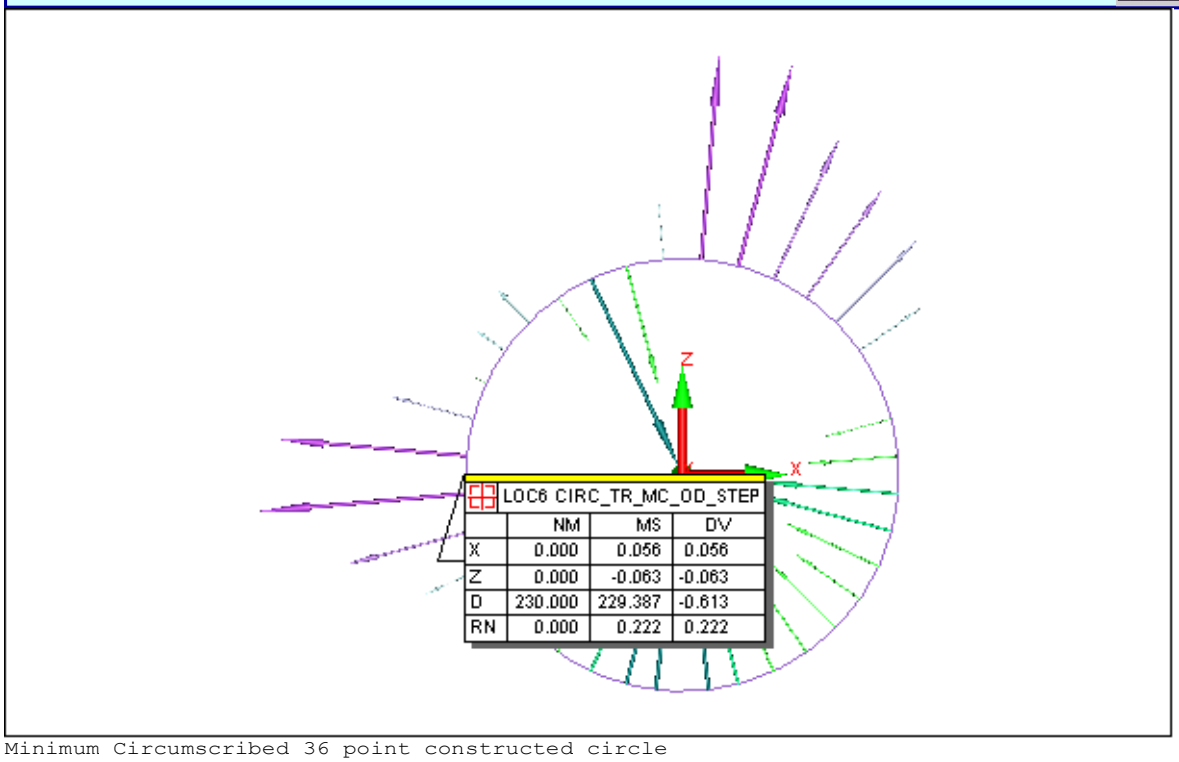


Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
235.0 O.D. x1000

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	0.056	0.056	0.250	0.250	0.000
Z	0.000	-0.063	-0.063	0.250	0.250	0.000
D	230.000	229.387	-0.613	0.000	0.250	0.363
RN	0.000	0.222	0.222	0.250	0.000	0.000

○	MM	RND2 - CIRC_TR_MC_OD_STEP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.222	0.222	0.250	0.000	0.000

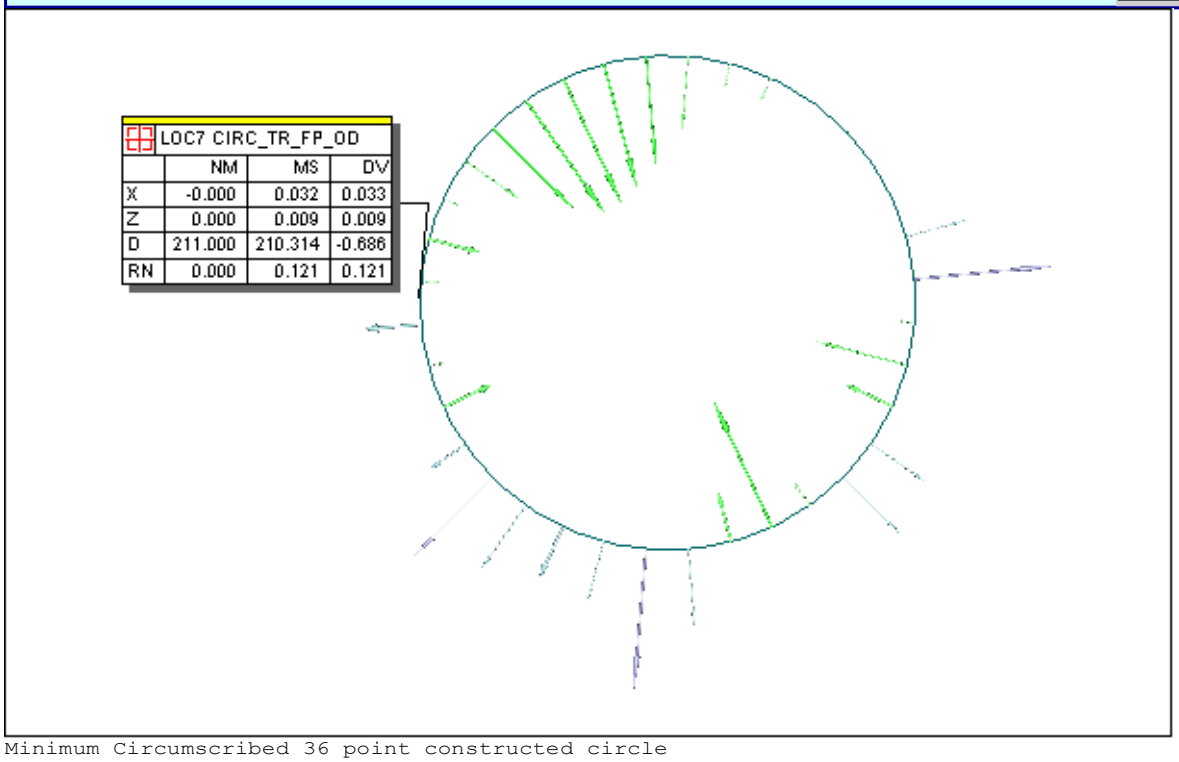


Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
233.00 O.D. step x1000

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	0.032	0.033	0.250	0.250	0.000
Z	0.000	0.009	0.009	0.250	0.250	0.000
D	211.000	210.314	-0.686	0.250	0.250	0.436
RN	0.000	0.121	0.121	0.250	0.000	0.000

	MM	RND3 - CIRC_TR_FP_OD				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.121	0.121	0.250	0.000	0.000

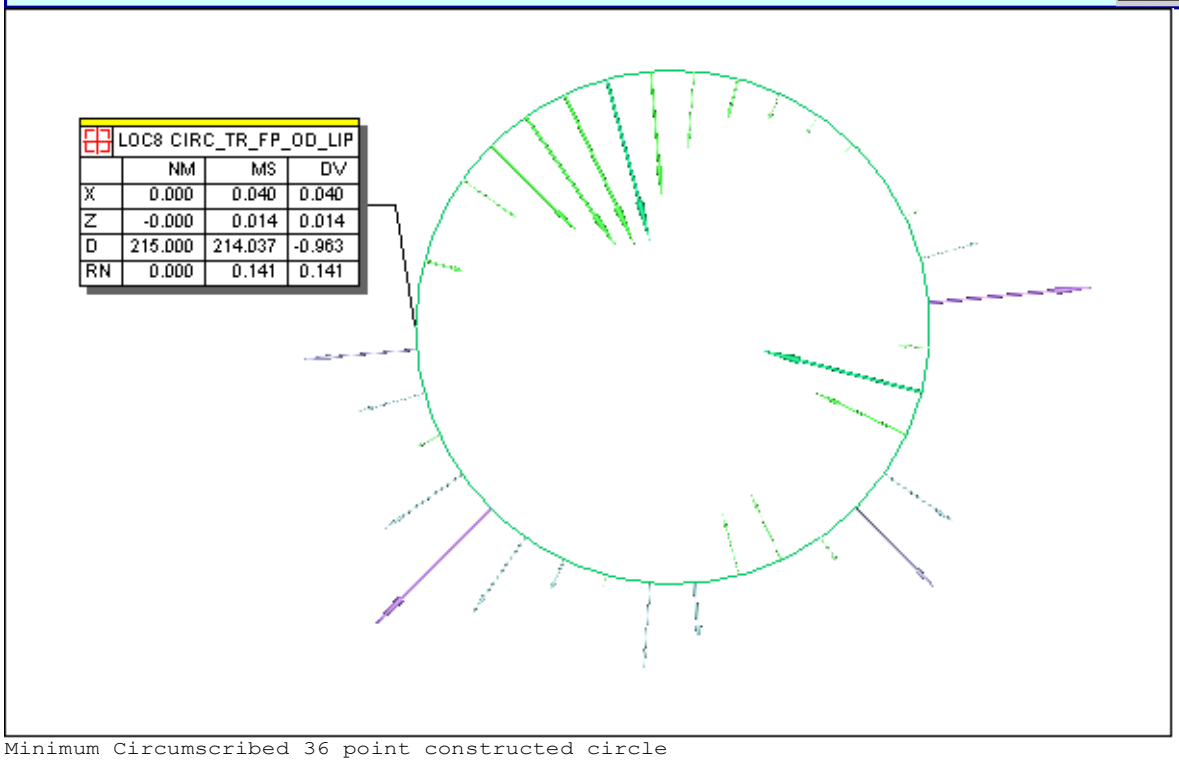


Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
211.0 O.D. x1000

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	0.040	0.040	0.250	0.250	0.000
Z	0.000	0.014	0.014	0.250	0.250	0.000
D	215.000	214.037	-0.963	0.250	0.250	0.713
RN	0.000	0.141	0.141	0.250	0.000	0.000

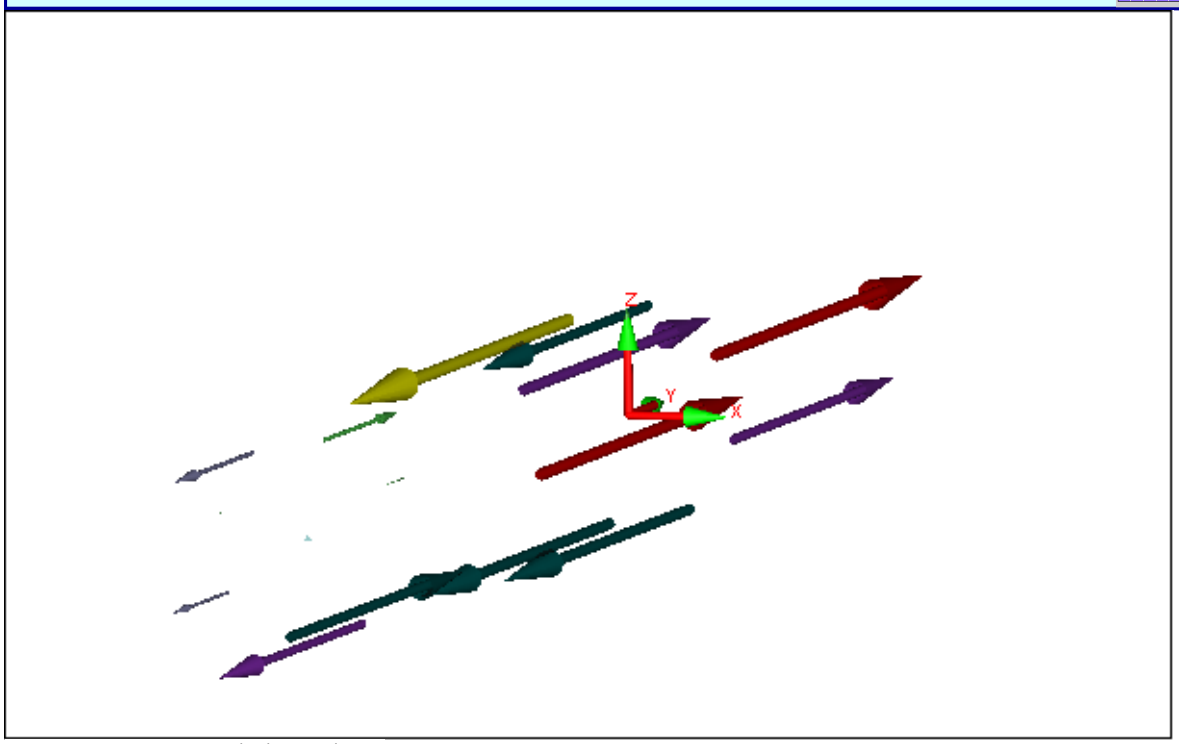
	MM	RND4 - CIRC_TR_FP_OD_LIP				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.141	0.141	0.250	0.000	0.000



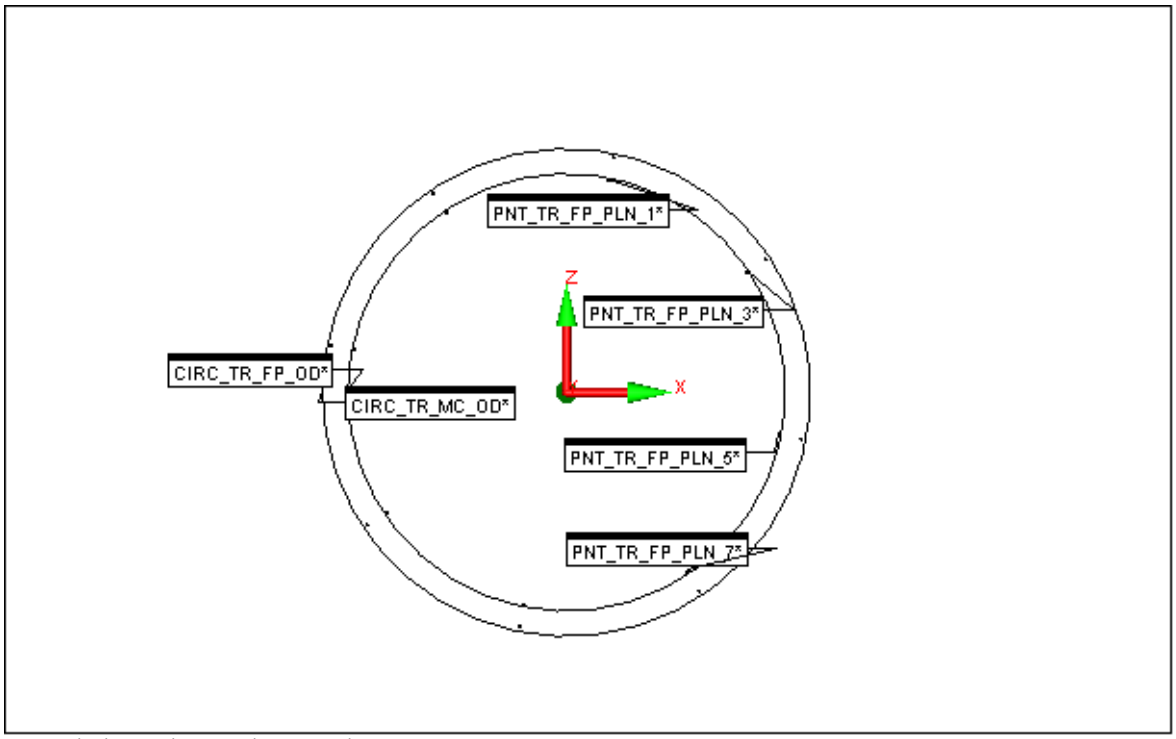
Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
215.0 O.D. lip x1000

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	0.269	0.269	0.200	0.000	0.069	
	MM	LOC10 - PLNC_TR_FP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	-1007.500	-1002.780	4.720	10.000	10.000	0.000	
FL	0.000	0.197	0.197	0.200	0.000	0.000	
	MM	FLAT3 - PLNC_TR_MC					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	0.000	0.269	0.269	0.250	0.000	0.019	
	MM	FLAT4 - PLNC_TR_FP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
M	0.000	0.197	0.197	0.250	0.000	0.000	



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	-0.017	-0.017	1.000	1.000	0.000
PR	115.000	115.034	0.034	1.000	1.000	0.000
PA	101.250	101.260	0.010	1.000	1.000	0.000

⊕	MM	LOC12 - PNT_TR_MC_PLN_3				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.351	0.351	1.000	1.000	0.000
PR	115.000	115.008	0.008	1.000	1.000	0.000
PA	146.250	146.255	0.005	1.000	1.000	0.000

⊕	MM	LOC13 - PNT_TR_MC_PLN_5				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.325	0.325	1.000	1.000	0.000
PR	115.000	114.985	-0.015	1.000	1.000	0.000
PA	-168.750	-168.744	0.006	1.000	1.000	0.000

⊕	MM	LOC14 - PNT_TR_MC_PLN_7				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.021	-0.021	1.000	1.000	0.000
PR	115.000	114.974	-0.026	1.000	1.000	0.000
PA	-123.750	-123.735	0.015	1.000	1.000	0.000

⊕	MM	LOC15 - PNT_TR_MC_PLN_9				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.207	-0.206	1.000	1.000	0.000
PR	115.000	114.975	-0.025	1.000	1.000	0.000
PA	-78.750	-78.725	0.025	1.000	1.000	0.000

⌖	MM	LOC16 - PNT_TR_MC_PLN_11				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.093	-0.093	1.000	1.000	0.000
PR	115.000	114.990	-0.010	1.000	1.000	0.000
PA	-33.750	-33.719	0.031	1.000	1.000	0.000

⌖	MM	LOC17 - PNT_TR_MC_PLN_13				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.105	-0.105	1.000	1.000	0.000
PR	115.000	115.016	0.016	1.000	1.000	0.000
PA	11.250	11.279	0.029	1.000	1.000	0.000

⌖	MM	LOC18 - PNT_TR_MC_PLN_15				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.234	-0.235	1.000	1.000	0.000
PR	115.000	115.037	0.037	1.000	1.000	0.000
PA	56.250	56.275	0.025	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	-1002.660	4.840	1.000	1.000	3.840
PR	104.000	104.015	0.015	1.000	1.000	0.000
PA	101.250	101.262	0.012	1.000	1.000	0.000

⌖	MM	LOC20 - PNT_TR_FP_PLN_3				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1002.817	4.683	1.000	1.000	3.683
PR	104.000	104.002	0.002	1.000	1.000	0.000
PA	146.250	146.260	0.009	1.000	1.000	0.000

⌖	MM	LOC21 - PNT_TR_FP_PLN_5				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1002.923	4.577	1.000	1.000	3.577
PR	104.000	103.991	-0.009	1.000	1.000	0.000
PA	-168.750	-168.735	0.015	1.000	1.000	0.000

⌖	MM	LOC22 - PNT_TR_FP_PLN_7				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1003.025	4.475	1.000	1.000	3.475
PR	104.000	103.990	-0.010	1.000	1.000	0.000
PA	-123.750	-123.729	0.021	1.000	1.000	0.000

⌖	MM	LOC23 - PNT_TR_FP_PLN_9				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1002.747	4.753	1.000	1.000	3.753
PR	104.000	103.961	-0.039	1.000	1.000	0.000
PA	-78.750	-78.756	-0.006	1.000	1.000	0.000

⌖	MM	LOC24 - PNT_TR_FP_PLN_11					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	-1007.500	-1002.766	4.734	1.000	1.000	3.734	
PR	104.000	103.942	-0.058	1.000	1.000	0.000	
PA	-33.750	-33.732	0.018	1.000	1.000	0.000	
⌖	MM	LOC25 - PNT_TR_FP_PLN_13					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	-1007.500	-1002.631	4.869	1.000	1.000	3.869	
PR	104.000	103.958	-0.042	1.000	1.000	0.000	
PA	11.250	11.289	0.039	1.000	1.000	0.000	
⌖	MM	LOC26 - PNT_TR_FP_PLN_15					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL	
Y	-1007.500	-1002.674	4.826	1.000	1.000	3.826	
PR	104.000	103.998	-0.002	1.000	1.000	0.000	
PA	56.250	56.301	0.051	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	1002.526	-4.974	1.000	1.000	-3.974	
↔	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	1002.440	-5.060	1.000	1.000	-4.060	
↔	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	1002.643	-4.857	1.000	1.000	-3.857	
↔	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	1003.169	-4.331	1.000	1.000	-3.331	
↔	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	1003.248	-4.252	1.000	1.000	-3.252	
↔	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	1003.004	-4.496	1.000	1.000	-3.496	
↔	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	1002.541	-4.959	1.000	1.000	-3.959	
↔	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	1002.673	-4.827	1.000	1.000	-3.827	

↔	MM	DIST_BETWEEN_PLANES - PLNC_TR_MC TO PLNC_TR_FP (YAXIS)				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1002.780	-4.720	1.000	1.000	-3.720

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	-0.008	-0.008	0.200	0.200	0.000
Y	0.000	-966.268	-966.268	2000.000	2000.000	0.000
Z	0.000	-0.138	-0.138	0.200	0.200	0.000
D	210.300	210.339	0.039	0.200	0.200	0.000
RN	0.000	0.108	0.108	0.200	0.000	0.000

⊕	MM	LOC_CC4 - CIRC_CAV_1_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.030	-0.030	0.200	0.200	0.000
Y	0.000	-954.825	-954.825	2000.000	2000.000	0.000
Z	0.000	-0.198	-0.198	0.200	0.200	0.000
D	210.300	210.339	0.039	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	0.000	0.000	0.200	0.200	0.000
Y	0.000	-851.939	-851.939	2000.000	2000.000	0.000
Z	0.000	-0.346	-0.346	0.200	0.200	0.146
D	210.300	210.334	0.034	0.200	0.200	0.000
RN	0.000	0.103	0.103	0.200	0.000	0.000

⊕	MM	LOC_CC6 - CIRC_CAV_2_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.021	0.021	0.200	0.200	0.000
Y	0.000	-839.791	-839.791	2000.000	2000.000	0.000
Z	0.000	-0.329	-0.329	0.200	0.200	0.129
D	210.300	210.356	0.056	0.200	0.200	0.000
RN	0.000	0.173	0.173	0.200	0.000	0.000

⊕	MM	LOC_CC7 - CIRC_CAV_3_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.021	0.021	0.200	0.200	0.000
Y	0.000	-736.520	-736.520	2000.000	2000.000	0.000
Z	0.000	-0.556	-0.556	0.200	0.200	0.356
D	210.300	210.385	0.085	0.200	0.200	0.000
RN	0.000	0.185	0.185	0.200	0.000	0.000

⌖	MM	LOC_CC8 - CIRC_CAV_3_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.019	-0.019	0.200	0.200	0.000
Y	0.000	-724.020	-724.020	2000.000	2000.000	0.000
Z	0.000	-0.572	-0.572	0.200	0.200	0.372
D	210.300	210.418	0.118	0.200	0.200	0.000
RN	0.000	0.176	0.176	0.200	0.000	0.000

⌖	MM	LOC_CC9 - CIRC_CAV_4_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.010	0.010	0.200	0.200	0.000
Y	0.000	-620.567	-620.567	2000.000	2000.000	0.000
Z	0.000	-0.674	-0.674	0.200	0.200	0.474
D	210.300	210.390	0.090	0.200	0.200	0.000
RN	0.000	0.271	0.271	0.200	0.000	0.071

⌖	MM	LOC_CC10 - CIRC_CAV_4_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.008	-0.008	0.200	0.200	0.000
Y	0.000	-608.703	-608.703	2000.000	2000.000	0.000
Z	0.000	-0.661	-0.661	0.200	0.200	0.461
D	210.300	210.362	0.062	0.200	0.200	0.000
RN	0.000	0.126	0.126	0.200	0.000	0.000

⌖	MM	LOC_CC11 - CIRC_CAV_5_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.010	0.010	0.200	0.200	0.000
Y	0.000	-505.023	-505.023	2000.000	2000.000	0.000
Z	0.000	-0.671	-0.671	0.200	0.200	0.471
D	210.300	210.281	-0.019	0.200	0.200	0.000
RN	0.000	0.107	0.107	0.200	0.000	0.000

⌖	MM	LOC_CC12 - CIRC_CAV_5_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.018	-0.018	0.200	0.200	0.000
Y	0.000	-493.609	-493.609	2000.000	2000.000	0.000
Z	0.000	-0.682	-0.682	0.200	0.200	0.482
D	210.300	210.342	0.042	0.200	0.200	0.000
RN	0.000	0.078	0.078	0.200	0.000	0.000

⌖	MM	LOC_CC13 - CIRC_CAV_6_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.018	-0.018	0.200	0.200	0.000
Y	0.000	-389.705	-389.705	2000.000	2000.000	0.000
Z	0.000	-0.616	-0.616	0.200	0.200	0.416
D	210.300	210.347	0.047	0.200	0.200	0.000
RN	0.000	0.102	0.102	0.200	0.000	0.000

⌖	MM	LOC_CC14 - CIRC_CAV_6_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.006	-0.006	0.200	0.200	0.000
Y	0.000	-378.531	-378.531	2000.000	2000.000	0.000
Z	0.000	-0.613	-0.613	0.200	0.200	0.413
D	210.300	210.399	0.099	0.200	0.200	0.000
RN	0.000	0.097	0.097	0.200	0.000	0.000

⌖	MM	LOC_CC15 - CIRC_CAV_7_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.002	0.002	0.200	0.200	0.000
Y	0.000	-274.886	-274.886	2000.000	2000.000	0.000
Z	0.000	-0.504	-0.504	0.200	0.200	0.304
D	210.300	210.435	0.135	0.200	0.200	0.000
RN	0.000	0.101	0.101	0.200	0.000	0.000

⌖	MM	LOC_CC16 - CIRC_CAV_7_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.021	-0.021	0.200	0.200	0.000
Y	0.000	-263.298	-263.298	2000.000	2000.000	0.000
Z	0.000	-0.519	-0.519	0.200	0.200	0.319
D	210.300	210.460	0.160	0.200	0.200	0.000
RN	0.000	0.184	0.184	0.200	0.000	0.000

⌖	MM	LOC_CC17 - CIRC_CAV_8_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.055	-0.055	0.200	0.200	0.000
Y	0.000	-160.813	-160.813	2000.000	2000.000	0.000
Z	0.000	-0.307	-0.307	0.200	0.200	0.107
D	210.300	210.407	0.107	0.200	0.200	0.000
RN	0.000	0.180	0.180	0.200	0.000	0.000

⌖	MM	LOC_CC18 - CIRC_CAV_8_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.028	-0.028	0.200	0.200	0.000
Y	0.000	-149.081	-149.081	2000.000	2000.000	0.000
Z	0.000	-0.294	-0.294	0.200	0.200	0.094
D	210.300	210.385	0.085	0.200	0.200	0.000
RN	0.000	0.129	0.129	0.200	0.000	0.000

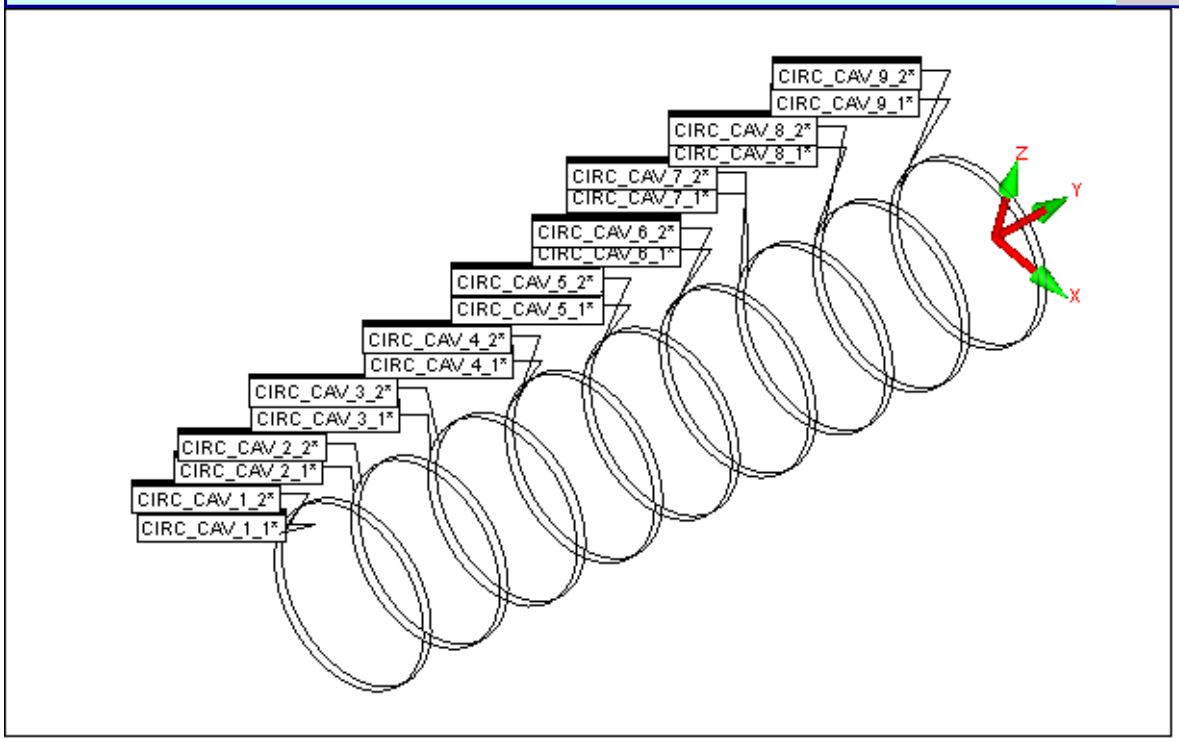
⌖	MM	LOC_CC19 - CIRC_CAV_9_1				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.013	-0.013	0.200	0.200	0.000
Y	0.000	-45.587	-45.587	2000.000	2000.000	0.000
Z	0.000	-0.001	-0.001	0.200	0.200	0.000
D	210.300	210.310	0.010	0.200	0.200	0.000
RN	0.000	0.144	0.144	0.200	0.000	0.000

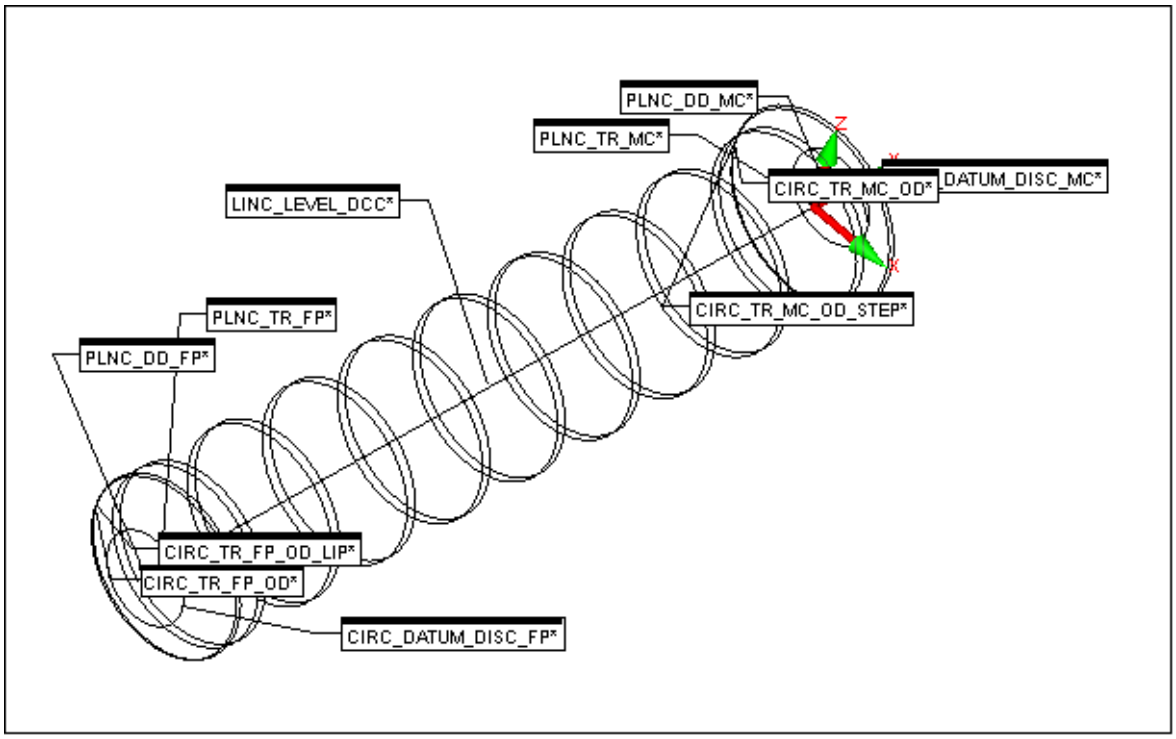
⊕	MM	LOC_CC20 - CIRC_CAV_9_2				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.025	-0.025	0.200	0.200	0.000
Y	0.000	-34.031	-34.031	2000.000	2000.000	0.000
Z	0.000	0.025	0.025	0.200	0.200	0.000
D	210.300	210.378	0.078	0.200	0.200	0.000
RN	0.000	0.245	0.245	0.200	0.000	0.045

Location of End Flanges

⊕	MM	LOC_23 - CIR_END_FLANGE_MC				
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.108	-0.108	0.200	0.200	0.000
Y	0.000	116.661	116.661	2000.000	2000.000	0.000
Z	0.000	0.411	0.411	0.200	0.200	0.211
D	140.000	140.076	0.076	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	-0.096	-0.096	0.200	0.200	0.000
Y	-1153.884	-1116.208	37.676	2000.000	2000.000	0.000
Z	0.000	0.250	0.250	0.200	0.200	0.050
D	140.000	140.088	0.088	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_FP_OD*
CIRC_DATUM_DISC_FP*