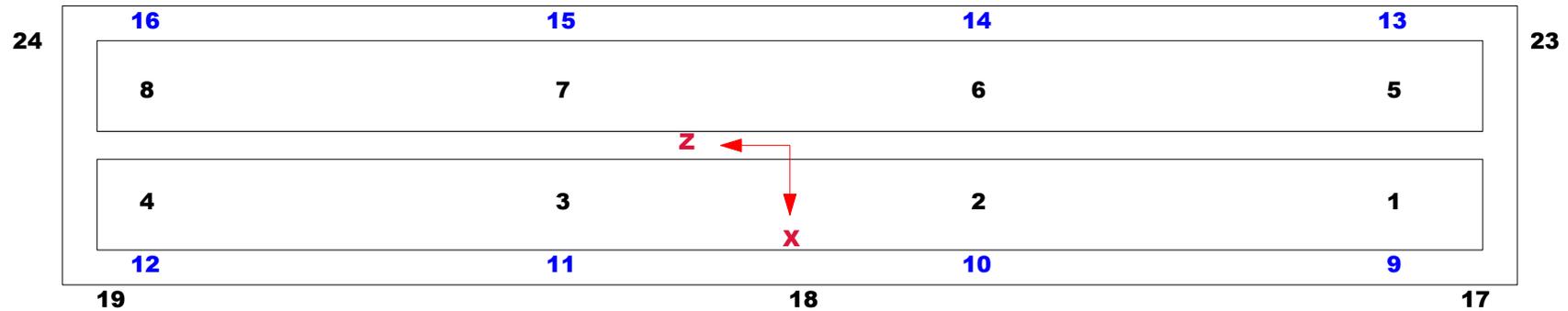


.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.014	-0.501	-1489.235
TB 10	430.048	-0.470	-524.035
TB 11	430.101	-0.754	524.394
TB 12	430.021	-0.723	1489.736
TB 13	-430.060	0.169	-1489.950
TB 14	-430.047	0.087	-524.275
TB 15	-430.062	0.524	523.716
TB 16	-430.009	0.157	1489.184

1.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.778	136.031	-1665.552
TB 2	98.565	136.033	-555.649
TB 3	98.591	135.950	556.019
TB 4	98.429	135.945	1666.193
TB 5	-98.515	136.155	-1666.222
TB 6	-98.546	136.197	-556.282
TB 7	-98.334	136.210	555.412
TB 8	-98.175	136.176	1665.575
TB 17	471.543	-230.340	-1580.173
TB 18	470.436	-228.836	87.014
TB 19	469.892	-231.640	1580.218
TB 23	-405.366	-231.304	-1709.032
TB 24	-405.794	-230.831	1708.147



Grider centerline in reference to Pointed Magnets

Dimensions in MM, Angles in Milliradians



HGVPU - Fiducialization at 9mm Gap, Tooling Balls

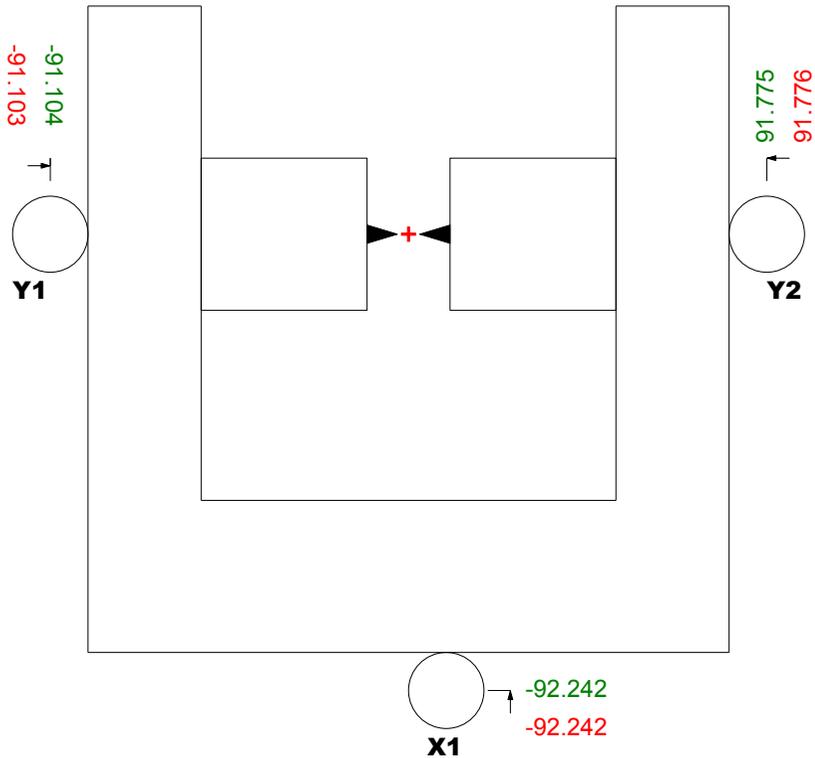
Nominal Gap :	9.000	US Full :	9.000	DS Full :	8.9994
Nom. Taper :	0.000	US Wall Half :	4.4983	DS Wall Half :	4.5003
		US Aisle Half :	4.4978	DS Aisle Half :	4.5025

S/N	: HXU_028
Date	: 23-OCT-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B

PM 2

Up Stream

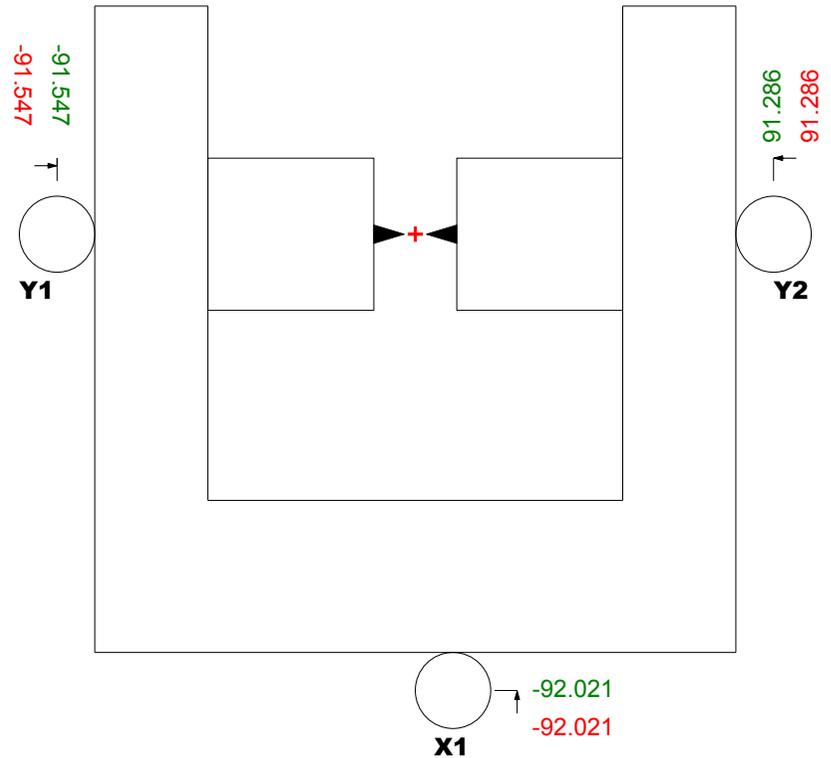
Z Center = -1842.401



PM 3

Down Stream

Z Center = 1842.231



Red values are in Girder Coordinate System, includes Roll component from Girder

Green values are in End Magnet Coordinate System

Girder centerline in reference to Pointed Magnets

Dimensions in MM, Angles in Milliradians



HGVPU - Fiducialization, Pointed End Magnet Values

Nominal Gap :	9.000	US Full :	9.000	DS Full :	8.9994
Nom. Taper :	0.000	US Wall Half :	4.4983	DS Wall Half :	4.5003
		US Aisle Half :	4.4978	DS Aisle Half :	4.5025

S/N	: HXU_028
Date	: 23-OCT-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B