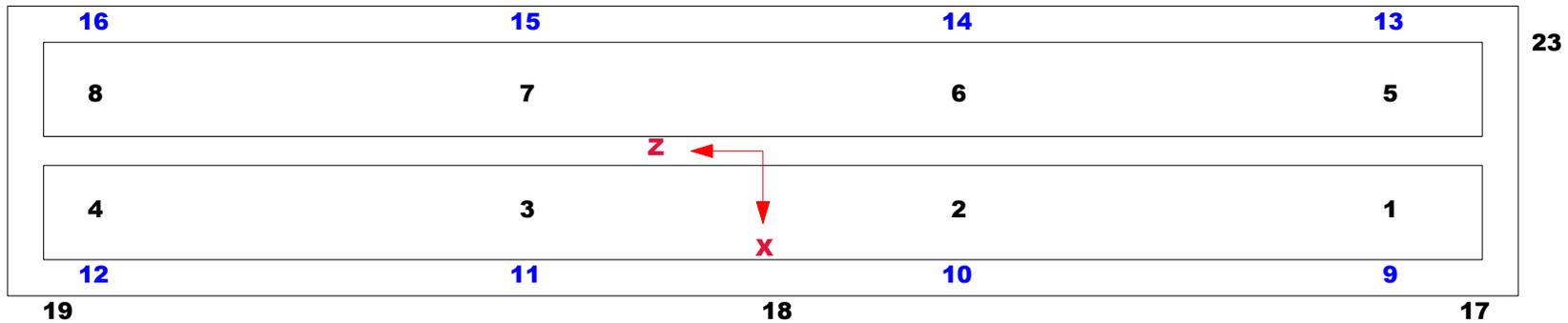


.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.206	-0.329	-1489.324
TB 10	430.108	-0.414	-523.873
TB 11	430.235	-0.526	523.749
TB 12	430.229	-0.504	1488.956
TB 13	-430.070	-0.419	-1489.349
TB 14	-430.130	-0.421	-524.125
TB 15	-430.194	-0.566	524.240
TB 16	-430.304	-0.267	1489.810

1.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.431	135.932	-1666.097
TB 2	98.272	135.995	-556.112
TB 3	98.863	136.004	555.786
TB 4	98.898	135.953	1665.785
TB 5	-98.766	136.125	-1666.296
TB 6	-98.734	136.016	-556.200
TB 7	-98.387	136.041	556.108
TB 8	-99.458	136.077	1666.138
TB 17	479.232	-162.978	-1641.878
TB 18	479.318	-162.930	44.798
TB 19	479.420	-162.971	1638.155
TB 23	-404.592	-228.864	-1708.997



Grider centerline in reference to Pointed Magnets

Dimensions in MM, Angles in Milliradians



HGVPU - Fiducialization at 9mm Gap, Tooling Balls

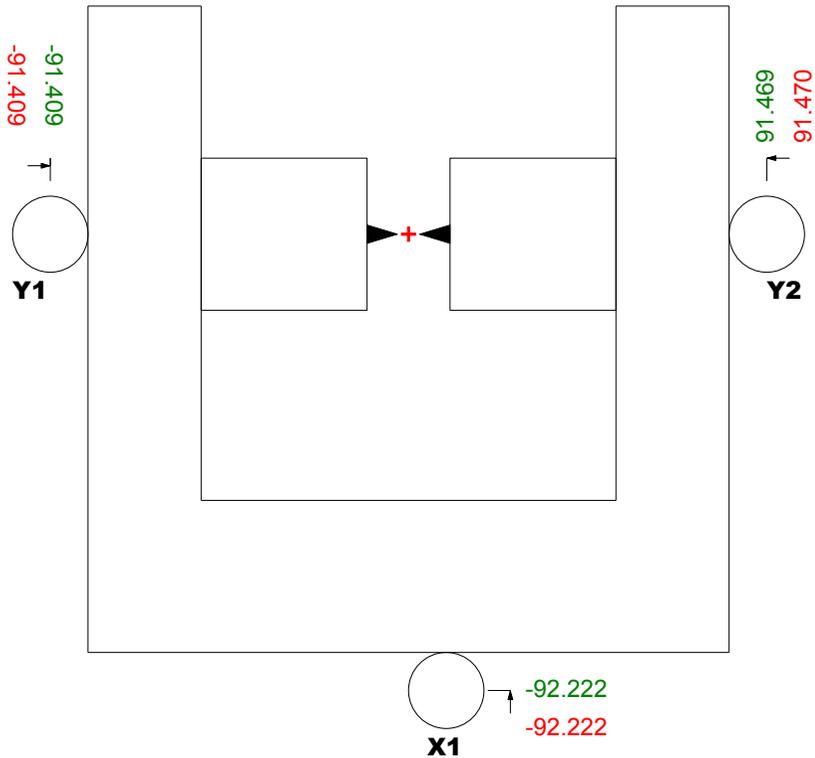
Nominal Gap :	9.000	US Full :	9.000	DS Full :	9.0001
Nom. Taper :	0.000	US Wall Half :	4.4997	DS Wall Half :	4.4979
		US Aisle Half :	4.4997	DS Aisle Half :	4.4980

S/N	: HXU_002
Date	: 25-APR-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B

PM 2

Up Stream

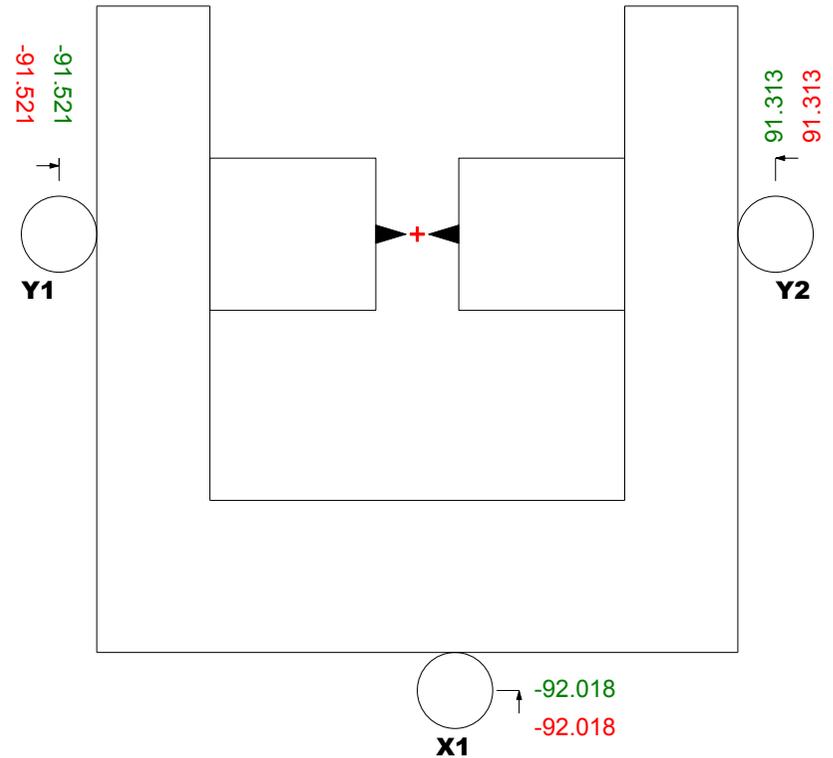
Z Center = -1842.362



PM 3

Down Stream

Z Center = 1842.144



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 :	9.0001
Nom. Taper :	0.000	US Wall Half :	4.4997	DS Wall Half :	4.4979
		US Aisle Half :	4.4997	DS Aisle Half :	4.4980

S/N	: HXU_002
Date	: 25-APR-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B