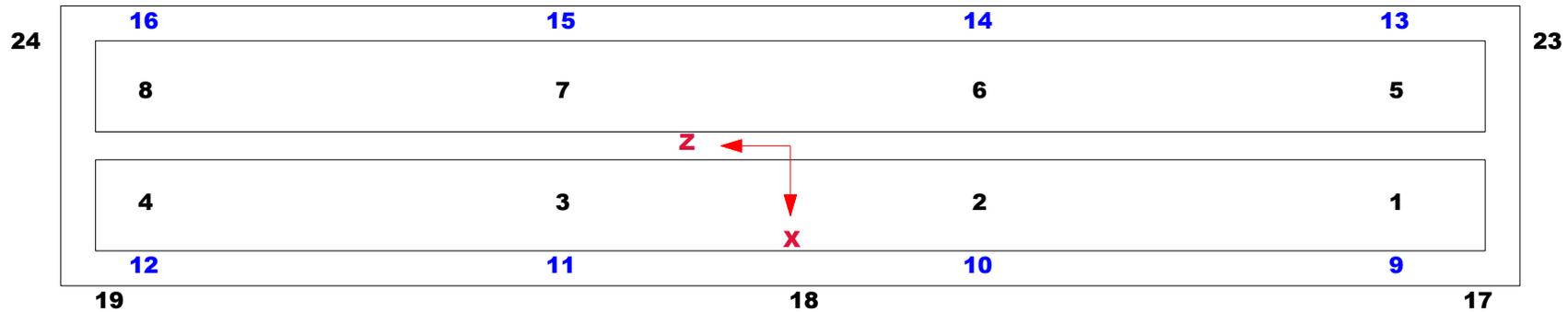


.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.158	0.430	-1489.465
TB 10	430.101	-0.149	-523.616
TB 11	430.122	-0.076	524.279
TB 12	430.142	-0.231	1489.770
TB 13	-430.517	0.090	-1490.041
TB 14	-430.513	-0.239	-524.240
TB 15	-430.625	0.097	524.237
TB 16	-430.339	0.359	1489.454

1.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.715	135.938	-1665.848
TB 2	98.299	136.007	-555.565
TB 3	98.613	136.039	556.398
TB 4	98.625	135.988	1666.015
TB 5	-98.716	135.946	-1666.300
TB 6	-98.815	136.011	-556.049
TB 7	-98.803	136.066	555.768
TB 8	-98.699	136.095	1665.586
TB 17	472.798	-231.532	-1582.103
TB 18	472.633	-226.258	83.851
TB 19	471.451	-230.777	1576.588
TB 23	-403.364	-231.493	-1710.209
TB 24	-406.412	-232.111	1704.499



Grider centerline in reference to Pointed Magnets

Dimensions in MM, Angles in Milliradians



HGVPU - Fiducialization at 9mm Gap, Tooling Balls

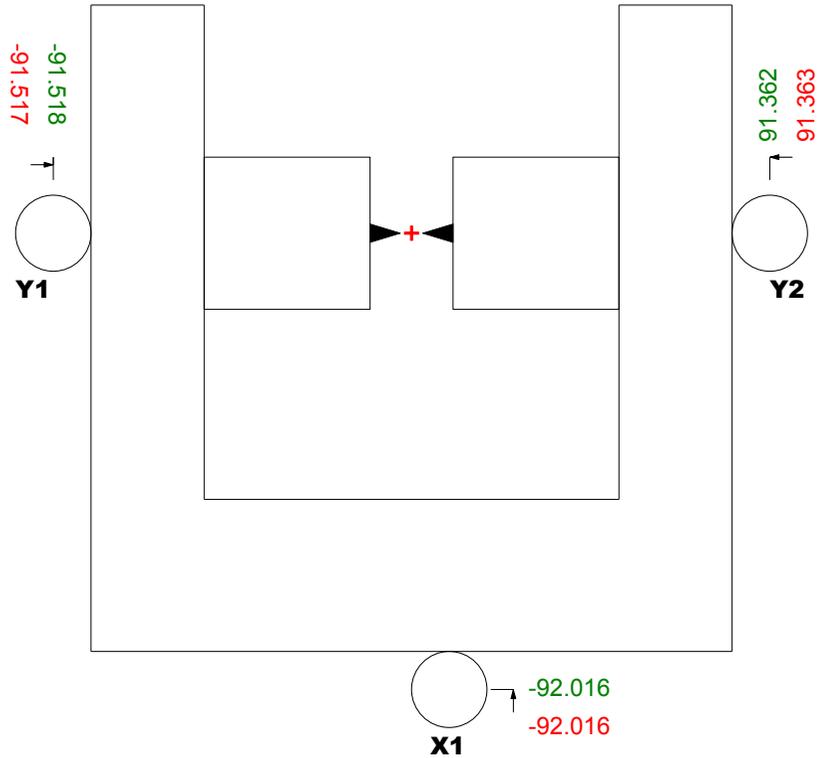
Nominal Gap :	9.000	US Full :	9.000	DS Full :	8.9998
Nom. Taper :	0.000	US Wall Half :	4.4958	DS Wall Half :	4.5040
		US Aisle Half :	4.5010	DS Aisle Half :	4.5018

S/N	: HXU_009
Date	: 30-OCT-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B

PM 2

Up Stream

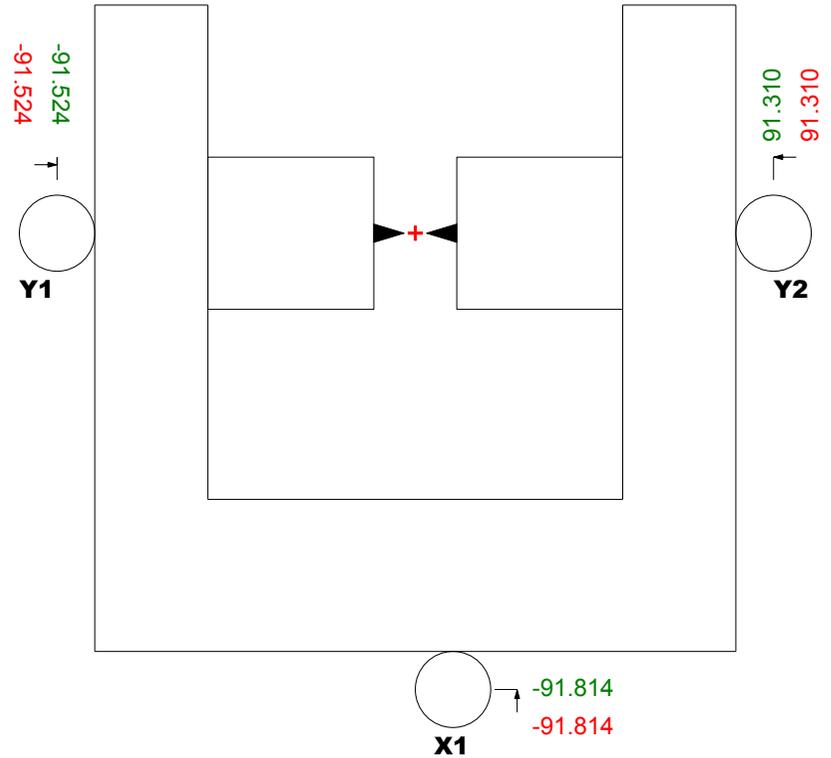
Z Center = -1842.232



PM 3

Down Stream

Z Center = 1842.375



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 :	8.9998
Nom. Taper :	0.000	US Wall Half :	4.4958	DS Wall Half :	4.5040
		US Aisle Half :	4.5010	DS Aisle Half :	4.5018

S/N	: HXU_009
Date	: 30-OCT-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B