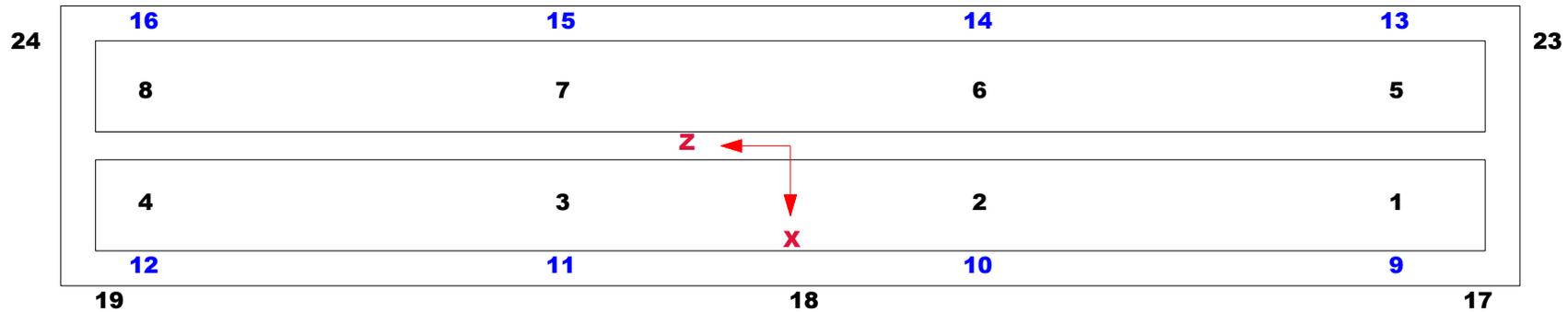


.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.193	-0.401	-1488.814
TB 10	430.044	-0.285	-523.831
TB 11	430.202	-0.244	524.497
TB 12	430.136	-0.227	1489.620
TB 13	-429.835	-0.077	-1489.757
TB 14	-429.907	0.402	-524.098
TB 15	-429.978	0.107	523.747
TB 16	-429.908	0.154	1489.407

1.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.611	135.938	-1665.442
TB 2	98.676	135.958	-555.684
TB 3	98.688	135.996	556.303
TB 4	98.500	136.030	1666.048
TB 5	-97.930	136.001	-1666.040
TB 6	-98.204	136.071	-556.230
TB 7	-98.300	136.132	555.851
TB 8	-98.180	136.177	1665.962
TB 17	471.604	-231.351	-1578.828
TB 18	469.246	-230.272	89.554
TB 19	467.785	-230.825	1581.313
TB 23	-405.916	-229.516	-1707.864
TB 24	-408.418	-232.521	1708.925



Grider centerline in reference to Pointed Magnets

Dimensions in MM, Angles in Milliradians



HGVPU - Fiducialization at 9mm Gap, Tooling Balls

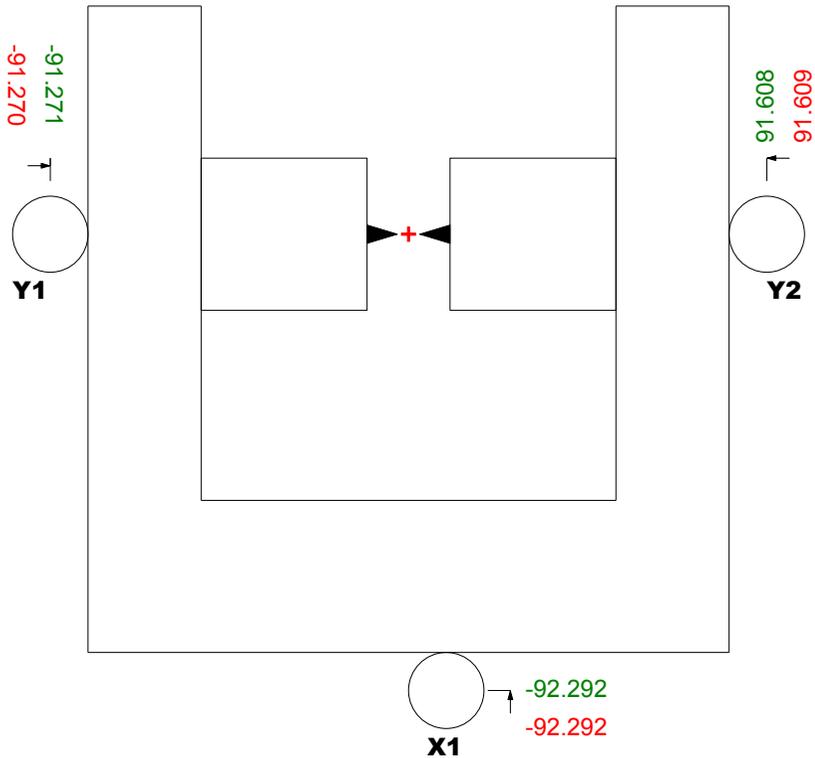
Nominal Gap :	9.000	US Full :	9.000	DS Full :	8.9996
Nom. Taper :	0.000	US Wall Half :	4.4995	DS Wall Half :	4.4981
		US Aisle Half :	4.5016	DS Aisle Half :	4.4979

S/N	: HXU_019
Date	: 10-SEP-2019
Data Set	: 0002
Run	: FINAL
Cam Pos.	: B

PM 2

Up Stream

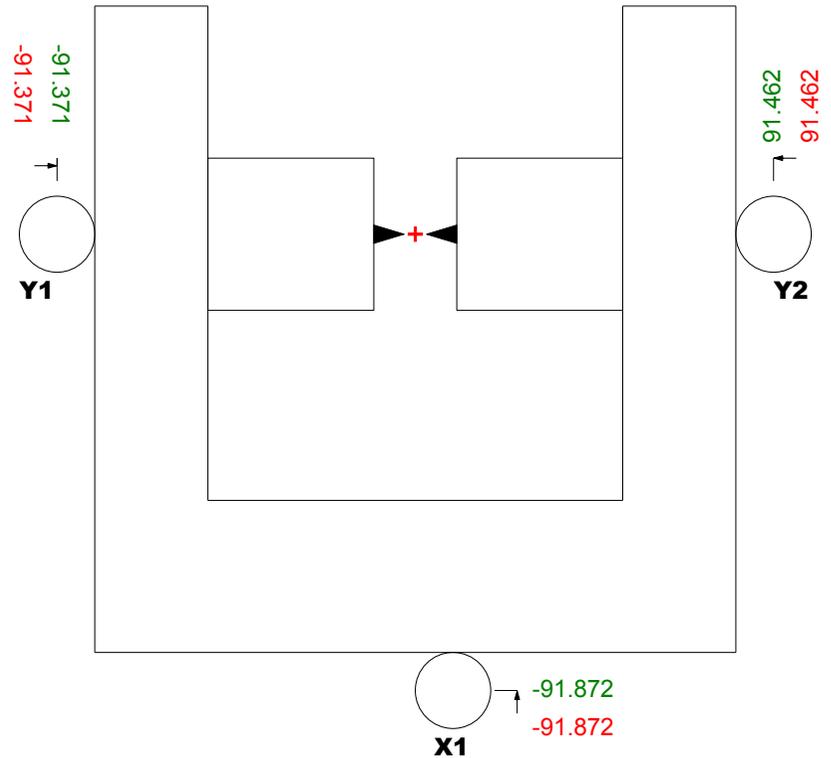
Z Center = -1841.868



PM 3

Down Stream

Z Center = 1842.749



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 :	8.9996
Nom. Taper :	0.000	US Wall Half :	4.4995	DS Wall Half :	4.4981
		US Aisle Half :	4.5016	DS Aisle Half :	4.4979

S/N	: HXU_019
Date	: 10-SEP-2019
Data Set	: 0002
Run	: FINAL
Cam Pos.	: B