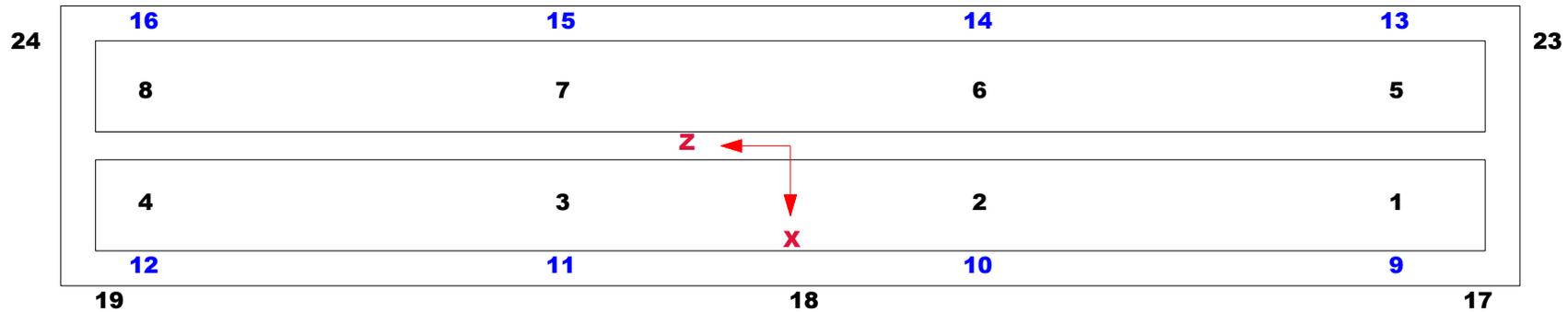


.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.200	0.136	-1488.983
TB 10	430.361	0.275	-524.125
TB 11	430.326	-0.020	523.716
TB 12	430.195	0.009	1488.769
TB 13	-430.287	0.002	-1490.232
TB 14	-430.284	-0.093	-524.355
TB 15	-430.587	-0.466	524.001
TB 16	-430.346	0.187	1488.885

1.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.404	135.985	-1665.693
TB 2	98.419	136.025	-555.737
TB 3	98.682	136.014	556.017
TB 4	98.544	136.026	1665.921
TB 5	-98.895	136.160	-1666.248
TB 6	-98.638	136.099	-555.964
TB 7	-98.637	136.076	555.908
TB 8	-98.579	136.086	1665.929
TB 17	473.545	-230.129	-1581.563
TB 18	473.633	-229.256	84.641
TB 19	473.901	-231.078	1577.727
TB 23	-403.409	-228.714	-1709.503
TB 24	-403.105	-226.923	1706.502



Grider centerline in reference to Pointed Magnets

Dimensions in MM, Angles in Milliradians



HGVPU - Fiducialization at 9mm Gap, Tooling Balls

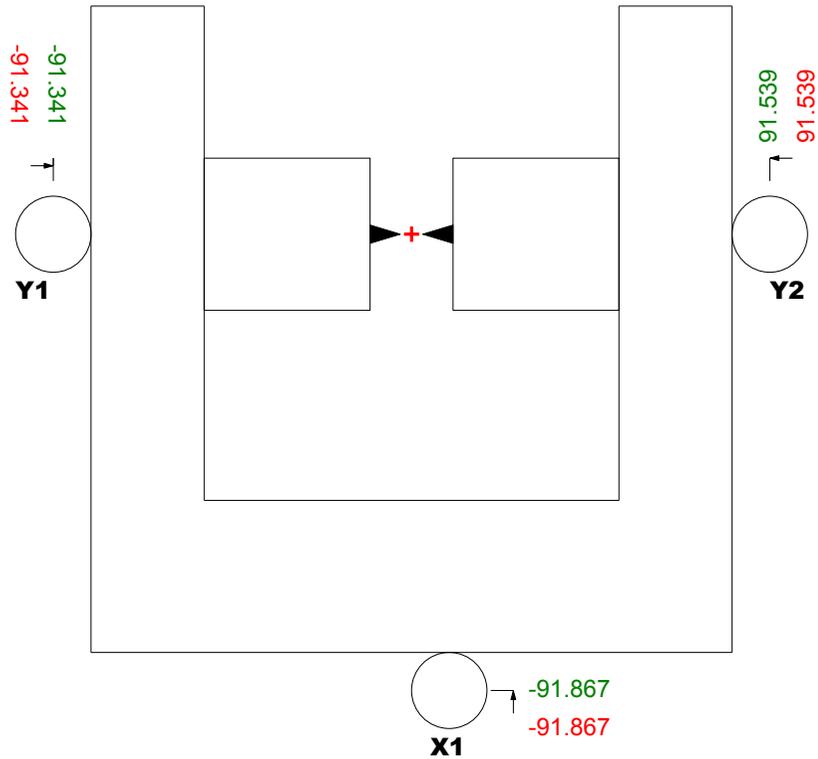
Nominal Gap :	9.000	US Full :	8.999	DS Full :	8.9998
Nom. Taper :	0.000	US Wall Half :	4.5013	DS Wall Half :	4.4999
		US Aisle Half :	4.4989	DS Aisle Half :	4.5042

S/N	: HXU_006
Date	: 09-JUL-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B

PM 2

Up Stream

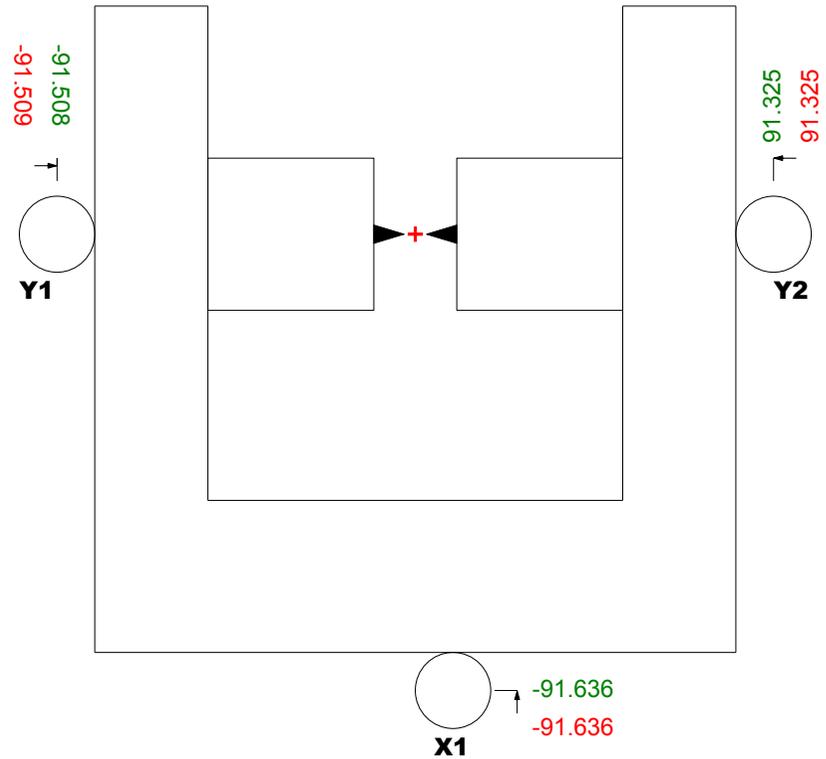
Z Center = -1842.301



PM 3

Down Stream

Z Center = 1842.474



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 :	8.999	DS Full :	8.9998
Nom. Taper :	0.000	US Wall Half :	4.5013	DS Wall Half :	4.4999
		US Aisle Half :	4.4989	DS Aisle Half :	4.5042

S/N	: HXU_006
Date	: 09-JUL-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B