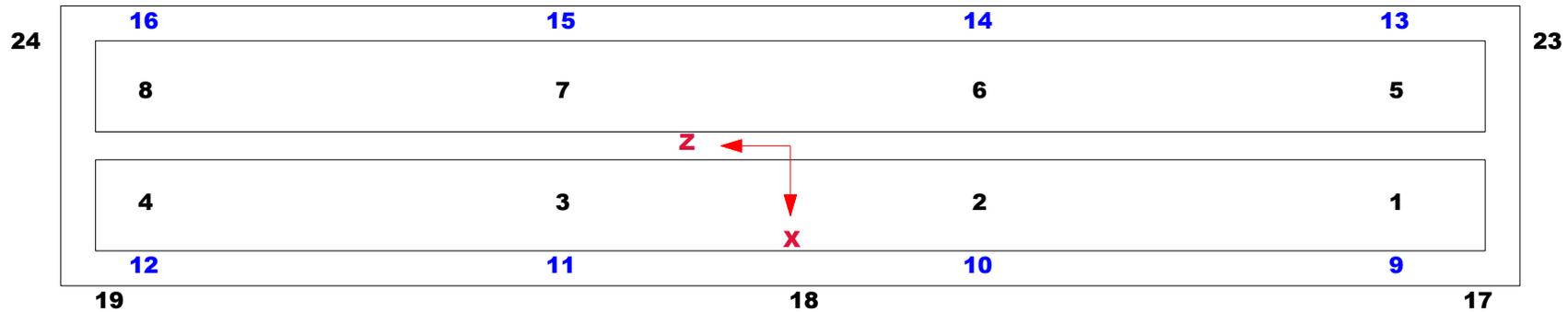


.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.033	-0.134	-1489.163
TB 10	430.093	0.226	-524.153
TB 11	430.122	0.282	523.537
TB 12	430.031	-0.279	1489.547
TB 13	-429.894	-0.155	-1490.275
TB 14	-429.865	-0.077	-524.725
TB 15	-429.877	0.130	523.888
TB 16	-429.870	-0.089	1488.876

1.5in Tooling Ball Center Coordinates

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.337	136.023	-1666.284
TB 2	98.301	136.004	-556.146
TB 3	98.521	136.069	555.595
TB 4	98.575	136.064	1665.954
TB 5	-98.426	135.974	-1666.570
TB 6	-98.179	136.083	-556.738
TB 7	-98.019	136.116	555.429
TB 8	-97.861	136.054	1665.421
TB 17	470.399	-230.277	-1580.367
TB 18	470.392	-228.709	87.914
TB 19	470.756	-228.595	1579.708
TB 23	-405.519	-230.744	-1709.000
TB 24	-405.988	-231.178	1708.363



Grider centerline in reference to Pointed Magnets

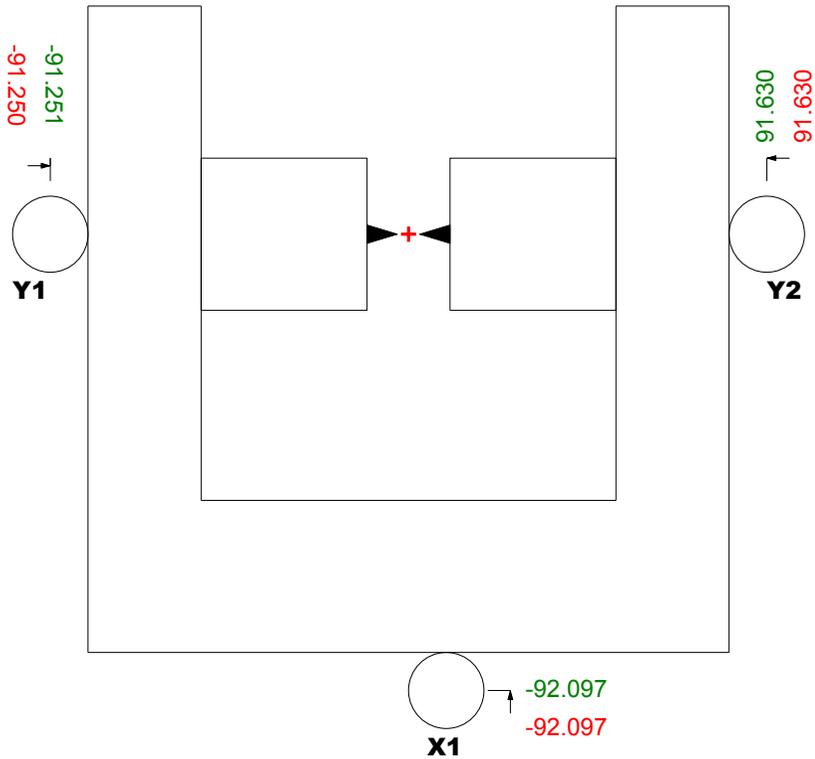
Dimensions in MM, Angles in Milliradians

	<p>HGVPU - Fiducialization at 9mm Gap, Tooling Balls</p>				<p>S/N : HXU_024</p>	
	<p>Nominal Gap : 9.000</p>	<p>US Full : 8.999</p>	<p>DS Full : 8.9998</p>	<p>US Wall Half : 4.5014</p>	<p>DS Wall Half : 4.5010</p>	<p>Date : 03-SEP-2019</p>
	<p>Nom. Taper : 0.000</p>	<p>US Aisle Half : 4.5009</p>	<p>DS Aisle Half : 4.5033</p>	<p>Run : FINAL</p>	<p>Cam Pos. : B</p>	<p>Data Set : 0001</p>

PM 2

Up Stream

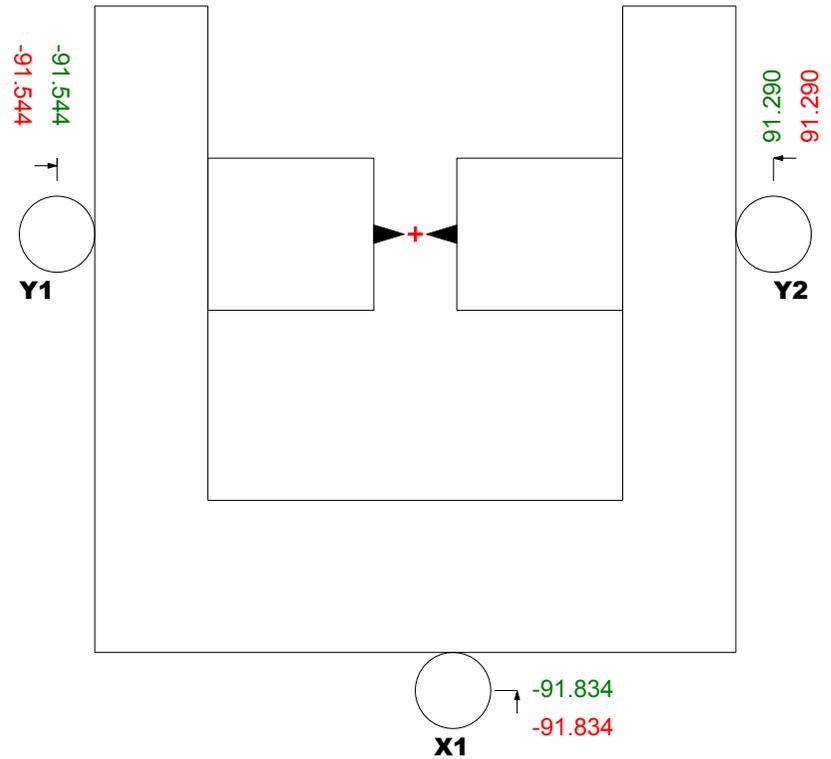
Z Center = -1842.220



PM 3

Down Stream

Z Center = 1842.291



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 :	4.5014	DS Wall Half :	4.5010
		US Aisle Half :	4.5009	DS Aisle Half :	4.5033

S/N	: HXU_024
Date	: 03-SEP-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B