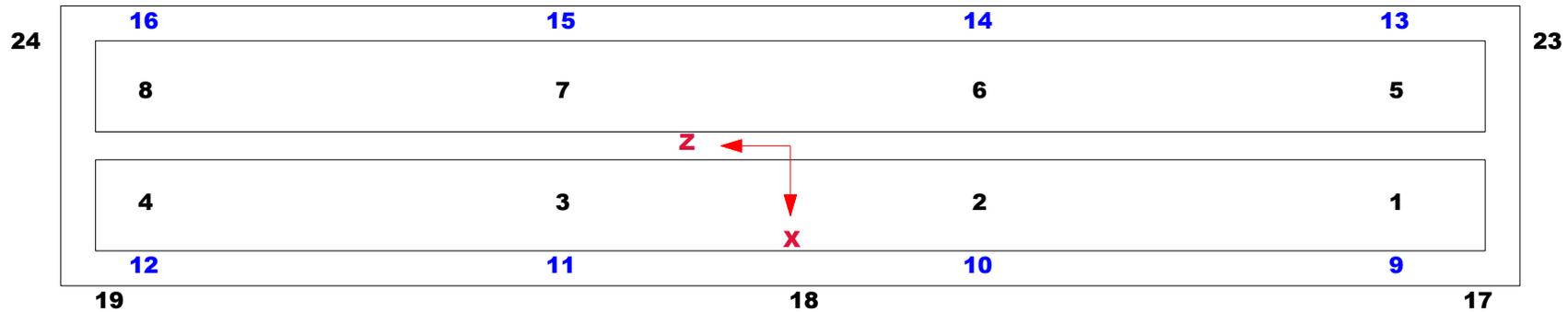


**.5in Tooling Ball Center Coordinates**

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.263	0.095	-1489.261
TB 10	430.084	-0.217	-523.883
TB 11	430.150	-0.180	525.441
TB 12	430.313	-0.372	1490.552
TB 13	-430.206	-0.261	-1490.052
TB 14	-429.956	-0.312	-524.113
TB 15	-429.951	-0.061	524.194
TB 16	-430.353	0.178	1490.087

**1.5in Tooling Ball Center Coordinates**

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.618	135.734	-1665.565
TB 2	98.519	135.579	-555.520
TB 3	98.372	135.538	556.411
TB 4	98.893	135.678	1666.564
TB 5	-98.684	135.413	-1666.103
TB 6	-98.409	135.696	-556.098
TB 7	-98.510	135.708	555.970
TB 8	-98.722	135.635	1665.949
TB 17	471.368	-228.475	-1583.655
TB 18	472.647	-227.264	85.352
TB 19	472.284	-229.948	1577.327
TB 23	-405.898	-227.722	-1711.650
TB 24	-406.621	-229.192	1705.353



**Grider centerline in reference to Pointed Magnets**

Dimensions in MM, Angles in Milliradians



**HGVPU - Fiducialization at 9mm Gap, Tooling Balls**

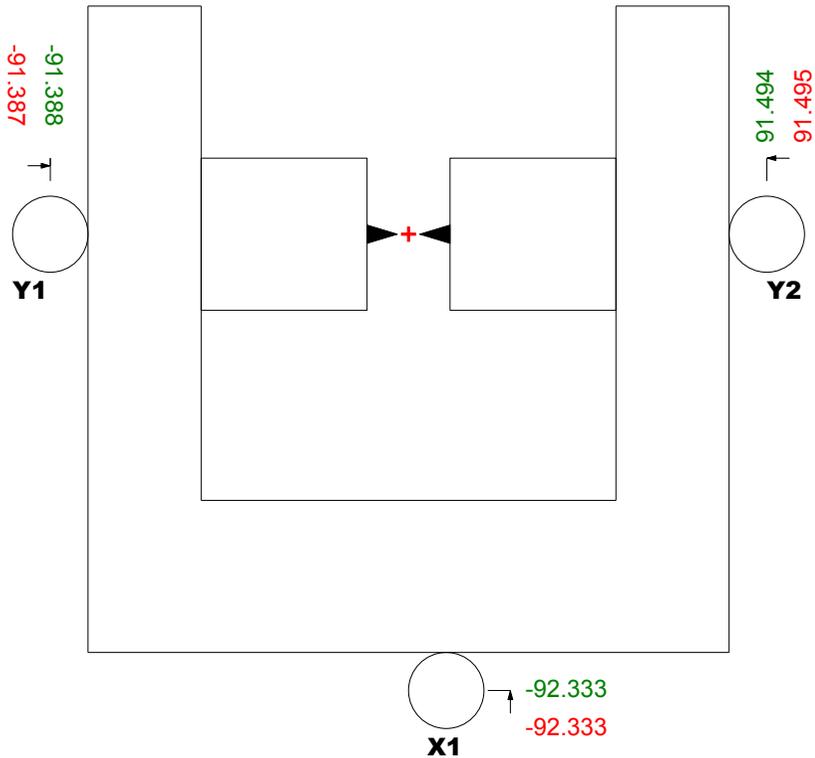
<b>Nominal Gap :</b>	<b>9.000</b>	<b>US Full :</b>	<b>-113.544</b>	<b>DS Full :</b>	<b>-362.6015</b>
<b>Nom. Taper :</b>	<b>0.000</b>	<b>US Wall Half :</b>	<b>4.5000</b>	<b>DS Wall Half :</b>	<b>4.4990</b>
		<b>US Aisle Half :</b>	<b>4.5012</b>	<b>DS Aisle Half :</b>	<b>4.4994</b>

<b>S/N</b>	<b>: HXU_003</b>
<b>Date</b>	<b>: 10-MAY-2019</b>
<b>Data Set</b>	<b>: 0001</b>
<b>Run</b>	<b>: FINAL</b>
<b>Cam Pos.</b>	<b>: B</b>

## PM 2

### Up Stream

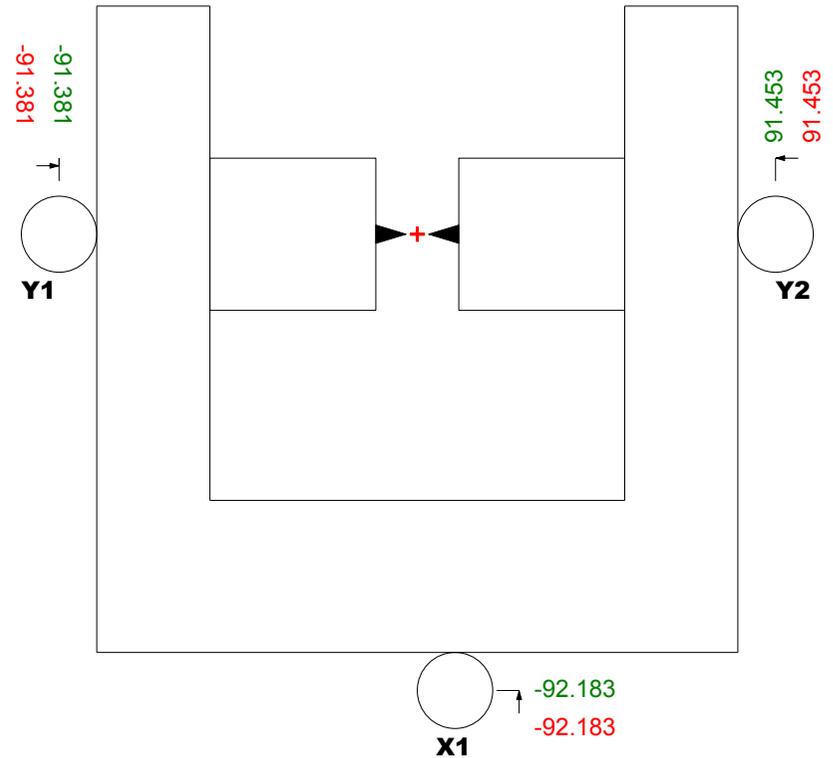
Z Center = -1842.238



## PM 3

### Down Stream

Z Center = 1842.256



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 :	-113.544	DS Full :	-362.6015
Nom. Taper :	0.000	US Wall Half :	4.5000	DS Wall Half :	4.4990
		US Aisle Half :	4.5012	DS Aisle Half :	4.4994

S/N	: HXU_003
Date	: 10-MAY-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B