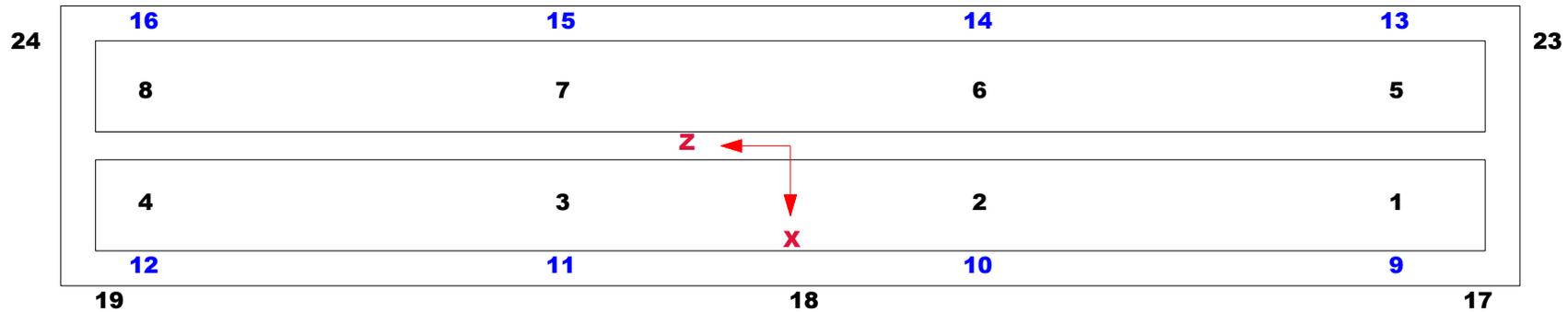


**.5in Tooling Ball Center Coordinates**

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.051	-0.527	-1489.482
TB 10	430.131	-0.279	-524.070
TB 11	430.152	-0.254	524.366
TB 12	430.130	-0.238	1489.551
TB 13	-430.234	0.461	-1489.523
TB 14	-430.186	0.484	-524.289
TB 15	-430.141	0.008	523.761
TB 16	-430.176	-0.061	1489.173

**1.5in Tooling Ball Center Coordinates**

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.399	135.793	-1665.512
TB 2	98.793	135.962	-555.625
TB 3	98.722	135.952	556.352
TB 4	98.594	135.861	1666.047
TB 5	-98.814	136.199	-1666.188
TB 6	-98.715	136.221	-556.301
TB 7	-98.615	136.223	555.967
TB 8	-98.799	136.162	1665.747
TB 17	470.527	-228.202	-1580.347
TB 18	471.672	-229.083	86.639
TB 19	472.435	-229.422	1580.267
TB 23	-406.656	-228.985	-1708.546
TB 24	-404.323	-229.060	1708.407



**Grider centerline in reference to Pointed Magnets**

Dimensions in MM, Angles in Milliradians



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

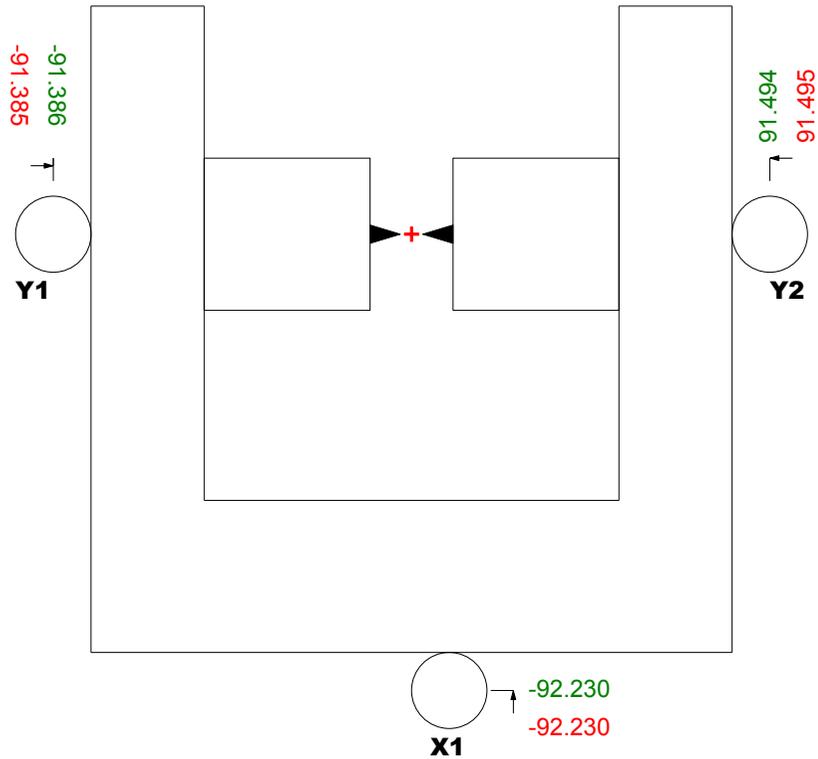
<b>Nominal Gap :</b>	<b>9.000</b>	<b>US Full :</b>	<b>9.000</b>	<b>DS Full :</b>	<b>8.9995</b>
<b>Nom. Taper :</b>	<b>0.000</b>	<b>US Wall Half :</b>	<b>4.4981</b>	<b>DS Wall Half :</b>	<b>4.5007</b>
		<b>US Aisle Half :</b>	<b>4.4970</b>	<b>DS Aisle Half :</b>	<b>4.5027</b>

<b>S/N</b>	<b>: HXU_026</b>
<b>Date</b>	<b>: 20-SEP-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

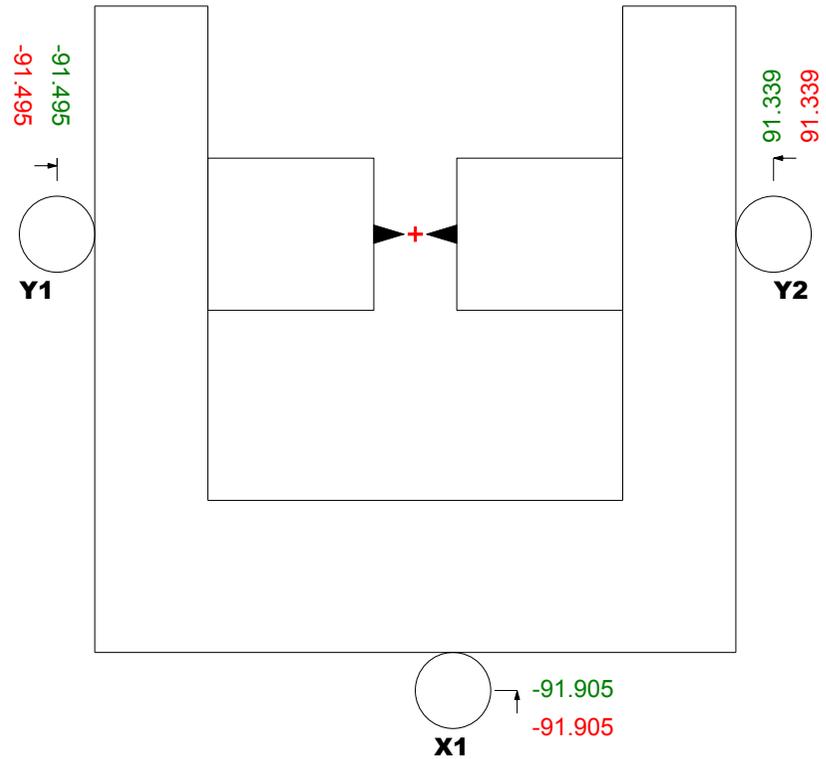
Z Center = -1842.006



## PM 3

### Down Stream

Z Center = 1842.326



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 :	8.9995
Nom. Taper :	0.000	US Wall Half :	4.4981	DS Wall Half :	4.5007
		US Aisle Half :	4.4970	DS Aisle Half :	4.5027

S/N	: HXU_026
Date	: 20-SEP-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B