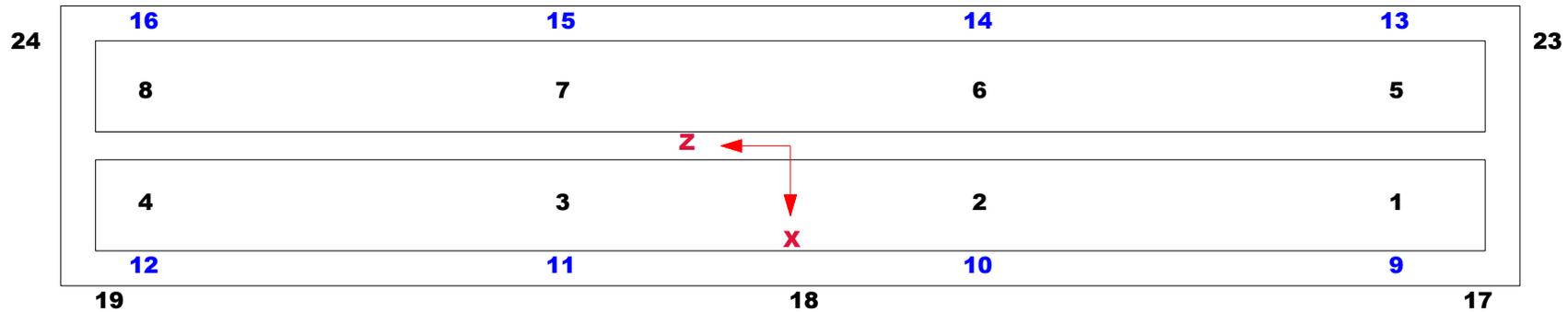


**.5in Tooling Ball Center Coordinates**

Name	X Corr.	Y Corr.	Z Corr.
TB 9	430.107	-0.245	-1488.693
TB 10	430.134	0.217	-523.961
TB 11	429.941	-0.020	524.549
TB 12	430.194	-0.084	1489.891
TB 13	-430.247	-0.020	-1489.490
TB 14	-430.299	-0.028	-524.174
TB 15	-430.312	0.402	524.562
TB 16	-430.267	0.244	1490.284

**1.5in Tooling Ball Center Coordinates**

Name	X Corr.	Y Corr.	Z Corr.
TB 1	98.235	136.110	-1665.510
TB 2	98.410	136.124	-555.612
TB 3	98.667	136.119	556.236
TB 4	98.583	136.038	1666.111
TB 5	-98.846	136.175	-1666.073
TB 6	-98.700	136.134	-556.165
TB 7	-98.790	136.143	555.942
TB 8	-98.770	136.172	1665.973
TB 17	472.481	-231.020	-1582.876
TB 18	473.145	-226.462	83.839
TB 19	472.718	-230.956	1576.934
TB 23	-404.674	-229.582	-1710.654
TB 24	-405.224	-231.821	1704.297



**Grider centerline in reference to Pointed Magnets**

Dimensions in MM, Angles in Milliradians



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

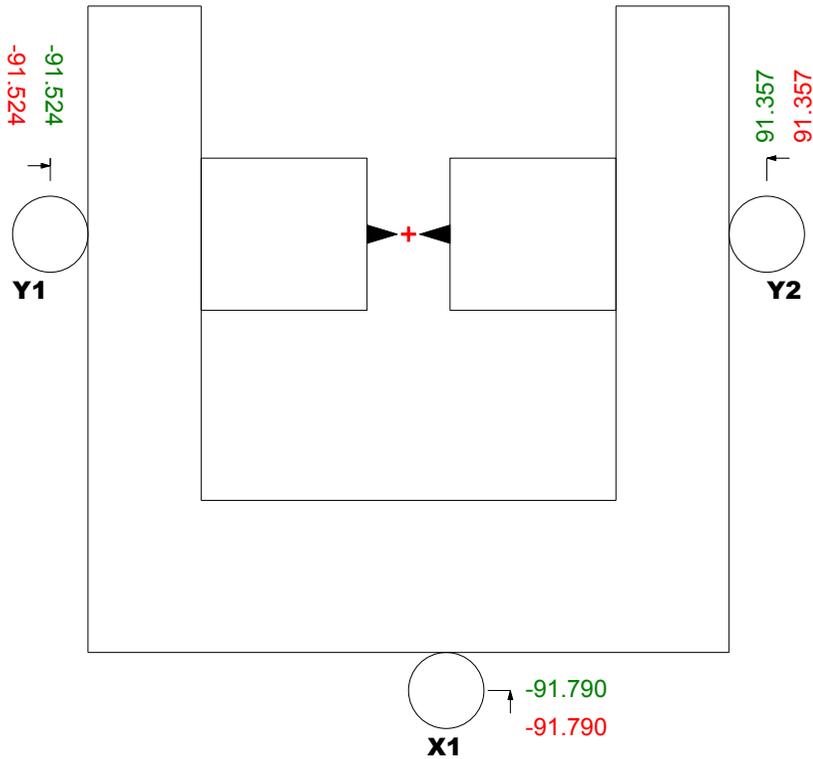
<b>Nominal Gap :</b>	<b>9.000</b>	<b>US Full :</b>	<b>83.794</b>	<b>DS Full :</b>	<b>83.7933</b>
<b>Nom. Taper :</b>	<b>0.000</b>	<b>US Wall Half :</b>	<b>41.8884</b>	<b>DS Wall Half :</b>	<b>41.8836</b>
		<b>US Aisle Half :</b>	<b>41.8875</b>	<b>DS Aisle Half :</b>	<b>41.8900</b>

<b>S/N</b>	<b>: HXU_005</b>
<b>Date</b>	<b>: 25-JUN-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

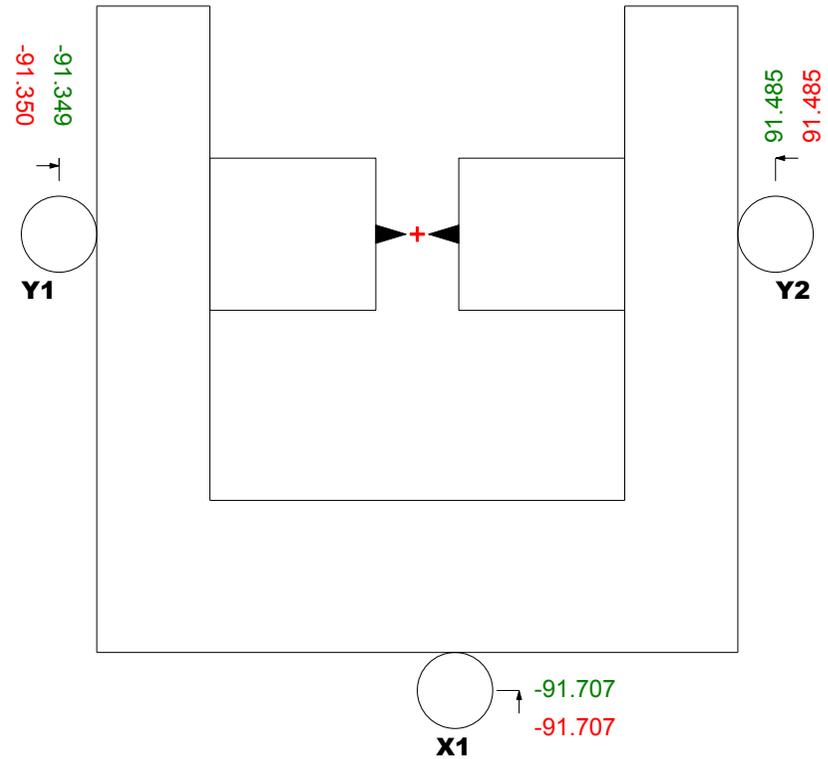
Z Center = -1842.302



## PM 3

### Down Stream

Z Center = 1842.384



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 :	83.794	DS Full :	83.7933
Nom. Taper :	0.000	US Wall Half :	41.8884	DS Wall Half :	41.8836
		US Aisle Half :	41.8875	DS Aisle Half :	41.8900

S/N	: HXU_005
Date	: 25-JUN-2019
Data Set	: 0001
Run	: FINAL
Cam Pos.	: B