

Fiducials for BM2-MCA Vac. Cham.

BM2-MCA2

Date:

1/22/03

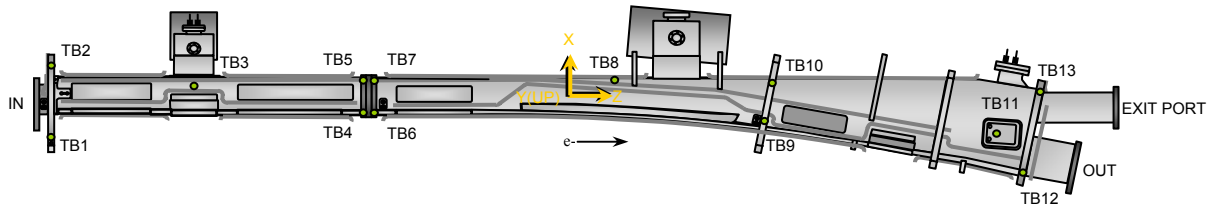
Chamber #:

2

Operator(s):

FG MR

Notes:



Fiducial Coordinates for BM2-MCA Vacuum Chamber: (inches)

Fiducial	Z	X	Y
TB1	-111.822	-5.960	4.379
TB2	-111.874	7.480	4.385
TB3	-87.031	3.648	2.385
TB4	-51.162	-2.218	5.160
TB5	-51.154	5.728	5.087
TB6	-49.227	-2.151	5.215
TB7	-49.220	5.716	5.099
TB8	0.053	4.262	2.341
TB9	28.157	-4.009	4.425
TB10	29.273	3.769	4.399
TB11	63.352	-3.839	2.433
TB12	69.733	-11.759	4.388
TB13	71.626	2.313	4.375

Nominal Deltas For H3 Absorber (TB11)

Z	X	Y
63.275	4.950	2.433
63.269	4.924	2.408
0.006	0.026	0.025

Rotated Part Coord. System

inches inches inches

Source **FINAL**

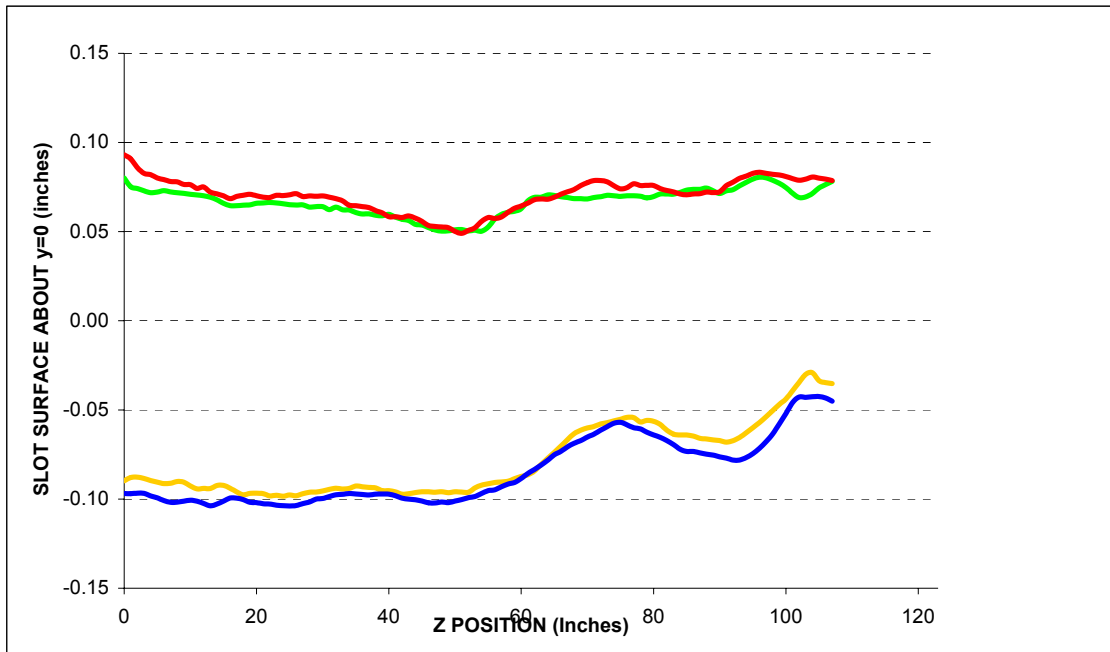
Description:

Fiducial vals based on established chamber datum. Source="Final" indicates final data.

Pre-Fiducialization Step:

Slot Calibration	
Ideal	0.511
Meas.	
Delta	-----

Inverted Mouse Slot Calibration	
Ideal	0.511
Meas.	
Delta	-----

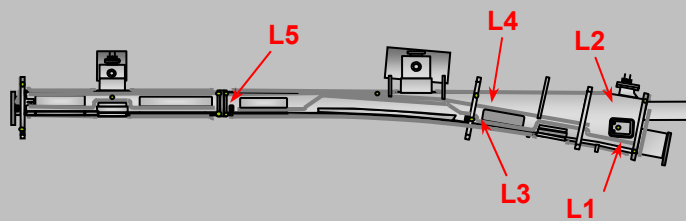


BM2-MCA2

Step 1: Heights for BM2 MCA Vac. Chamber

Fiducial	Y
TB6	5.178
TB7	5.130
TB8	2.350
TB9	4.423
TB10	4.423

inches

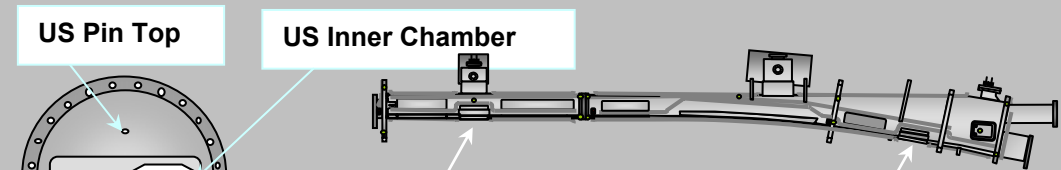


Description:

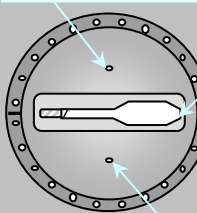
Fiducial heights of the five tooling balls are based on leveled datum as defined by outside surface measurements. (L1 through L5)

US Flange Position

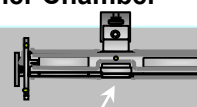
Step 2: UpStream Flange Position



US Pin Top



US Inner Chamber



US Pin Bottom

US MASK X-Position	
-2.574	Measured
-2.667	Nominal
0.093	Delta
inches	(Part Sys)

DS MASK X-Position	
-2.657	Measured
-2.667	Nominal
0.010	Delta
inches	(Rot Part)

US PIN TOP	Z	X	Y
Measured		-0.002	2.289
Nominal	0.000	0.000	2.282
Difference (inches)	-----	-0.002	0.007

US PIN BOTTOM	Z	X	Y
Measured		-0.003	-2.278
Nominal	0.000	0.000	-2.282
Difference (inches)	-----	-0.003	0.004

US Inner Chamber	Z	X	Y
Measured		-1.412	
Nominal	0.000	-1.404	0.000
Difference (inches)	-----	-0.008	-----

US Flange Position	Plane	From Circle Fit	
	Z	X	Y
Measured	-115.482	-0.007	-0.008
Nominal	-115.489	0.000	0.000
Difference (inches)	0.007	-0.007	-0.008
	inches	inches	inches

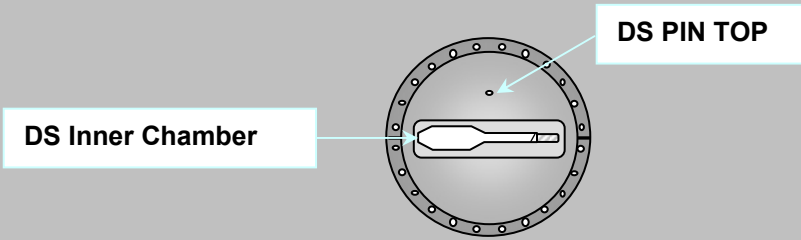
US Flange Attitude		
	yaw	pitch
Measured	7.0	0.4
Nominal	0.0	0.0
Difference	7.0	0.4
	mrad	mrad

US Flange Diameter	
	DIA
Measured	11.470
Nominal	11.471
Difference	-0.001
	inches

Description:
 Measured vs. nominal values for US flange expressed in the PART coordinate system.
 Tol +/- 10mils and +/- 3 mrad. Values in **BOLD** or **RED** are most critical.

DS Flange Position

Step 3: DownStream Flange Position



DS PIN TOP	Z	X	Y
Measured		1.826	2.296
Nominal	0.000	1.836	2.282
Difference (inches)	-----	-0.010	0.014

DS Inner Chamber	Z	X	Y
Measured		-1.427	
Nominal	0.000	-1.404	0.000
Difference (inches)	-----	-0.023	-----

DS Flange Position	Plane	From Circle Fit	
	Z	X	Y
Measured	78.159	1.820	-0.001
Nominal	78.211	1.836	0.000
Difference (inches)	-0.052	-0.016	-0.001
	inches	inches	inches

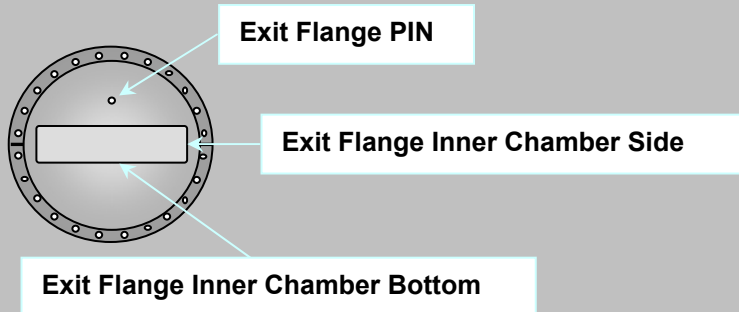
DS Flange Attitude		
	yaw	pitch
Measured	-1.2	-1.0
Nominal	0.0	0.0
Difference	-1.2	-1.0
	mrads	mrads

DS Flange Diameter	
	DIA
Measured	11.469
Nominal	11.471
Difference	-0.002
	inches

Description:
 Meas. vs. nom. values for DS flange expressed in a ROTATED PART coordinate system (7.9412°)
 Tol +/- 10mils and +/- 3 mrads. Values in **BOLD** or **RED** are most critical.

Exit Port Flange Position (DownStream)

Step 4: DownStream EXIT PORT Flange Postion



EXIT FLANGE PIN	Z	X	Y
Measured		0.373	1.735
Nominal	0.000	0.375	1.782
Difference (inches)	-----	-0.003	-0.047

EXIT FLANGE Inner Chamber Side	Z	X	Y
Measured		2.827	
Nominal	0.000	2.828	0.000
Difference (inches)	-----	-0.002	-----

EXIT FLANGE Inner Chamber Bottom	Z	X	Y
Measured			-0.154
Nominal	0.000	0.000	-0.219
Difference (inches)	-----	-----	0.065

EXIT Flange Position	Plane	From Circle Fit	
	Z	X	Y
Measured	83.343	0.419	-0.050
Nominal	83.396	0.375	0.000
Difference (inches)	-0.053	0.044	-0.050
	inches	inches	inches

EXIT FLANGE Attitude		
	yaw	pitch
Measured	-0.4	3.8
Nominal	0.0	0.0
Difference	-0.4	3.8
	mrad	mrad

EXIT FLANGE Diameter	
	DIA
Measured	9.472
Nominal	9.470
Difference	0.002
	inches

Description:

Meas. vs. nom. values for exit flange expressed in the PART coordinate system.

Tol +/- 10mils and +/- 3 mrad. Values in **BOLD** or **RED** are most critical.

Final Fiducial Coordinates for BM2 MCA Vacuum Chamber

Final: Fiducial Coordinates for BM2 MCA Vac. Chamber

Fiducial	Z	X	Y
TB1	-111.822	-5.960	4.379
TB2	-111.874	7.480	4.385
TB3	-87.031	3.648	2.385
TB4	-51.162	-2.218	5.160
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TB13	71.626	2.313	4.375

inches inches inches

Description:
 Fiducial values based on established chamber datum.

