

Fiducials for QFC Std. Vac. Chamber

QFC002

Date:

1/15/02

Chamber:

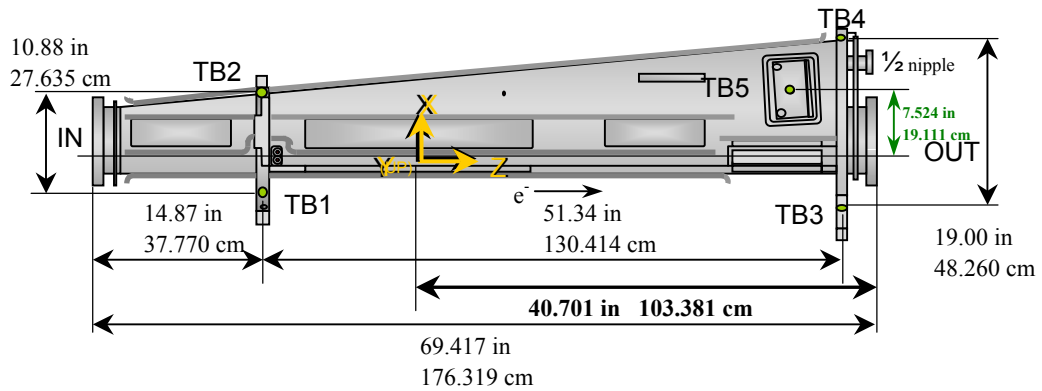
QFC002

Operator(s):

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Notes:

Traveler Step #1200: N/A; #1280: 12/11/01 (#1380 & #1465 see below)



Fiducial Coordinates for QFC Standard Vacuum Chamber: (inches)

Fiducial	Z	X	Y
TB1	-13.799	-3.401	4.430
TB2	-13.826	7.304	4.358
TB3	37.499	-5.450	4.389
TB4	37.561	13.240	2.968
TB5	33.430	7.565	2.066
TB6	13.401	2.585	2.374
TB7			

TB5 _x Absorber Check	
Measured	7.565
Nominal	7.524
Difference	0.040

STATUS: **OK**
< 0.100 in

Source: **US Step**

Description:
Fid. vals based on internal chamber datum. Source="US Step" indicates final data unless rechecked.

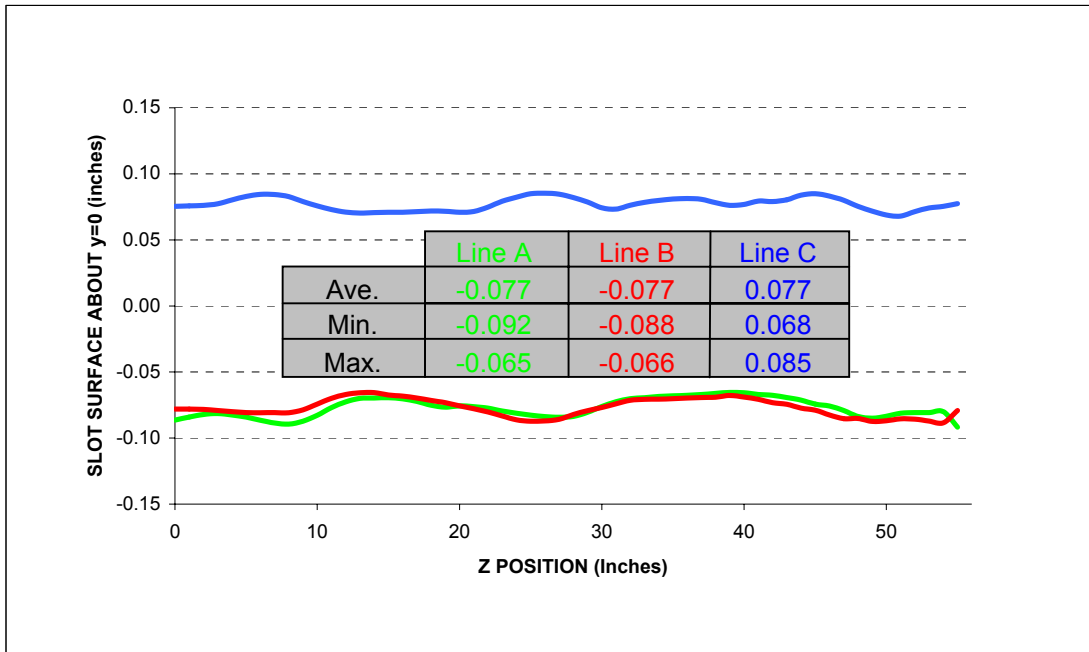
Flange Positions: (inches)

Flange	Z	X	Y	Source
IN	-28.612	1.826	0.009	US
OUT	40.701	1.843	-0.024	DS
NIP	N/A	10.513	-0.031	DS

Source: **US Step**

Description:
Flange values based on scans of flange surfaces and referenced to internal chamber datum.

Fiducialization Step: (Traveler Step # 1380: 01/15/02)



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Step 1: Fiducial and Flange Coordinates for QFC Std. Vac. Chamber

Fiducial	Z	X	Y	Downstream Flanges	
TB1	-13.799	-3.401	4.430	OUT	NIP
TB2	-13.826	7.304	4.358	Z	41.451 N/A in
TB3	37.499	-5.450	4.389	X	1.849 10.513 in
TB4	37.561	13.240	2.968	Y	-0.025 -0.031 in
TB5	33.430	7.565	2.066		
TB6	13.401	2.585	2.374		
TB7					
	inches	inches	inches	Nominals:	Xout 1.836 Yout 0.000

Description:
Fiducial values based on internal chamber datum. Flange OUT X and Y values checked ± 0.020 in.

Status

Step 2: Downstream Flange Check

Flange	Yaw	Pitch	Diameter		Nominal Diameter	Status
			Meas.	Actual		
OUT	-10.71	6.90	11.467	9.967	9.970	OK
NIP	N/A	N/A	4.229	2.729	2.730	OK ??
	mrad	mrad	inches			± 0.015 in

Description:
Yaw -6 to -13 mrad. Pitch ± 3 mrad. Diameter difference ± 0.015 in

Step 1: Change in Fiducial Values Check

Fiducial	Delta Z	Delta X	Delta Y
TB1	0.000	-0.001	0.000
TB2	0.001	0.000	-0.001
TB3	-0.002	0.001	-0.001
TB4	0.000	0.000	0.000
TB5	-0.001	-0.001	0.000
TB6			
TB7			

inches inches inches

OK

OK

OK

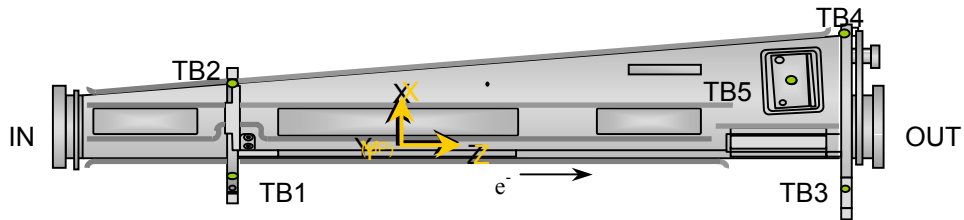
OK

OK

±0.006 in

Description:
Difference between current and previous fiducial values.

Global: **OK**



Step 2: Change in Downstream Flange Check

Flange	X	Y	Diameter
OUT			
New:	1.843	-0.024	11.469 in
Delta:	-0.006	0.000	0.002 in

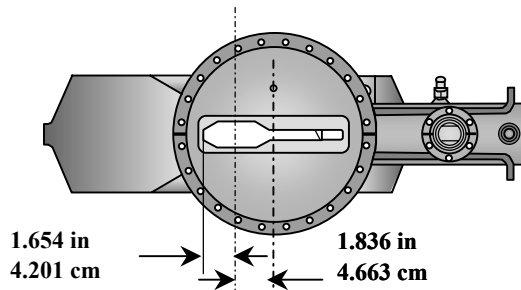
Diameter:

UPDATE

X and Y: ±0.006 in

Diameter: ±0.015 in

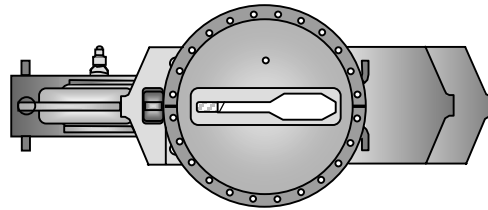
Description:
Difference between current and previous fiducial values and diameter. If the current diameter is acceptable, only then will the corresponding X and Y vals be updated if either exceed the tolerance.



Final "Upstream Flange" Step (#1465 continued):

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Step 3: Upstream Flange Values					
Flange IN		Flange IN			
-29.362	Z	7.86	2.44	mrad	
1.826	X	Yaw	Pitch		
0.009	Y				
inches		Meas.	Actual	Nominal Diameter	
Diameter		11.469	9.969	9.970	OK
		in		±0.015 in	
Description:					
Location and orientation of Flange IN (upstream) plus its measured diameter.					
Flange IN X and Y values are also checked ±0.020 in. Yaw 5 to 9 mrad. Pitch ±3 mrad.					



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Step 4: QFC Chamber Length				
Length with SMR		Length	Nominal Length	
70.813	inches	69.313	69.417	OK
Description:				
Length should be between nominal value and nominal value - 0.125 in.				

