

Fiducials for QFC Std. Vac. Chamber

QFC009

Date:

8/27/01

Chamber:

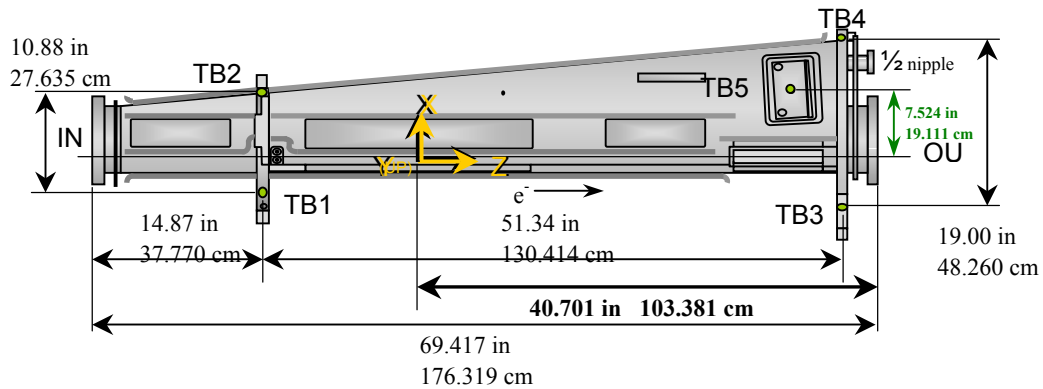
QFC009

Operator(s):

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Notes:

Trav. St # 1200: 8/3/01; #1280: 8/8/01. TBs 6 and 7 were not on original chamber



Fiducial Coordinates for QFC Standard Vacuum Chamber: (inches)

Fiducial	Z	X	Y
TB1	-13.768	-3.313	4.418
TB2	-13.812	7.337	4.367
TB3	37.476	-5.391	4.403
TB4	37.560	13.303	2.962
TB5	33.456	7.558	2.071
TB6	13.459	2.538	2.331
TB7	13.456	2.633	-2.323

TB5 _x Absorber Check	
Measured	7.558
Nominal	7.524
Difference	0.034

STATUS: **OK**
< 0.100 in

Source: **US Step**

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

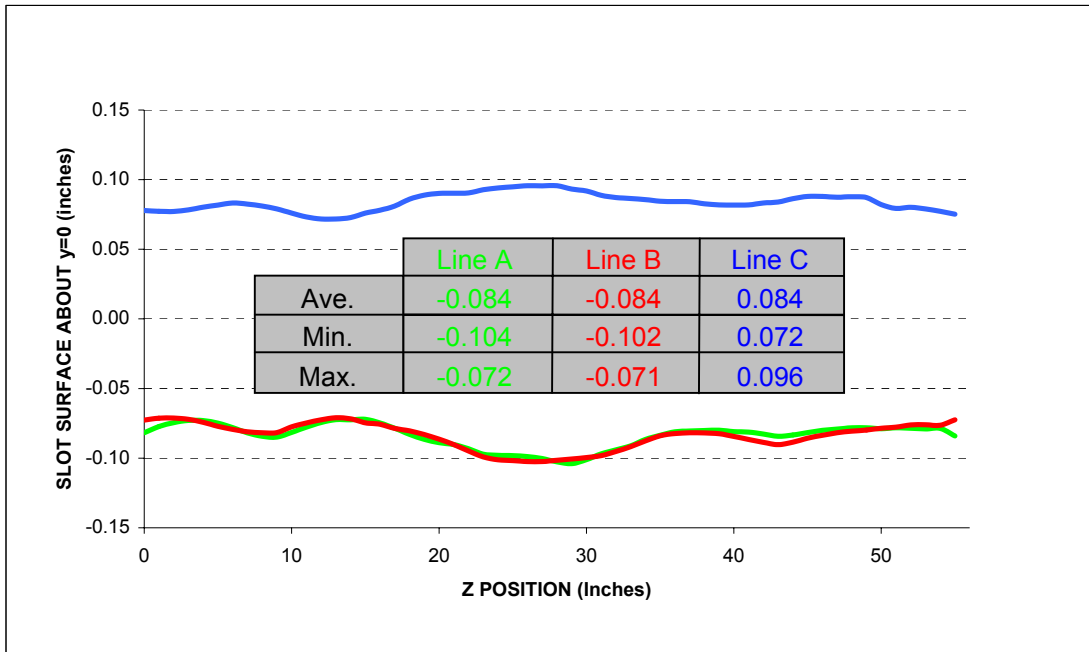
Flange Positions: (inches)

Flange	Z	X	Y	Source
IN	-28.619	1.834	0.006	US
OUT	40.701	1.849	-0.002	DS
NIP	N/A	10.523	-0.026	DS

Source: **US Step**

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

Fiducialization Step: (Traveler Step # 1380: 8/14/01)



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

Fiducial	Z	X	Y	Downstream Flanges	
TB1	-13.766	-3.313	4.420	OUT	NIP
TB2	-13.815	7.337	4.365	Z	41.451 N/A in
TB3	37.472	-5.401	4.401	X	1.838 10.523 in
TB4	37.562	13.303	2.961	Y	0.000 -0.026 in
TB5	33.459	7.558	2.073		
TB6	0.000	0.000	0.000		
TB7	0.000	0.000	0.000		
	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	-13.24	-0.36	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

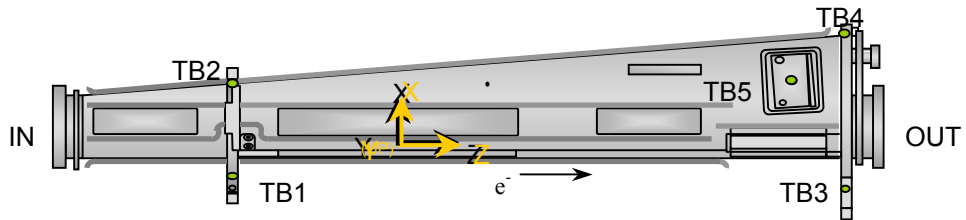
Fiducial	Delta Z	Delta X	Delta Y
TB1	-0.003	0.000	-0.002
TB2	0.003	0.001	0.002
TB3	0.005	0.010	0.002
TB4	-0.002	0.000	0.000
TB5	-0.003	-0.001	-0.002
TB6	13.459	2.538	2.331
TB7	13.456	2.633	-2.323

inches inches inches

OK
OK
DELTA X?
OK
OK
DELTA Z?
DELTA Z?
±0.006 in

Description:
Difference between current and previous fiducial values.

Global: **UPDATE**



Step 2: Change in Downstream Flange Check

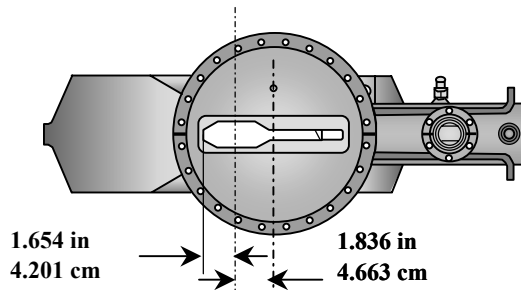
Flange	X	Y	Diameter
OUT			
New:	1.849	-0.002	11.473 in
Delta:	0.011	-0.002	0.006 in

Diameter:

UPDATE

X and Y: ±0.006 in
Diameter: ±0.015 in

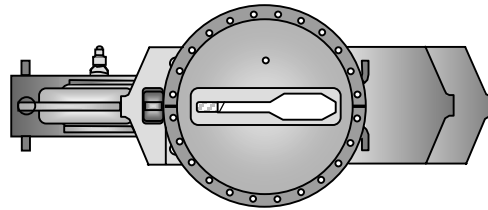
Description:
Difference between current and previous fiducial values and diameter. If the current diameter is acceptable, only then will the corresponding X and Y vals be updated if either exceed the tolerance.



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

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Step 3: Upstream Flange Values					
Flange IN		Flange IN			
-29.369	Z	8.01	1.04	mrad	
1.834	X	Yaw	Pitch		
0.006	Y				
inches		Meas.	Actual	Nominal Diameter	
Diameter		11.471	9.971	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	
70.820	inches	69.320	inches	69.417	OK
Description:					
Length should be between nominal value and nominal value - 0.125 in.					

