

Fiducials for QFC Std. Vac. Chamber

QFC006

Date:

8/1/01

Chamber:

QFC006

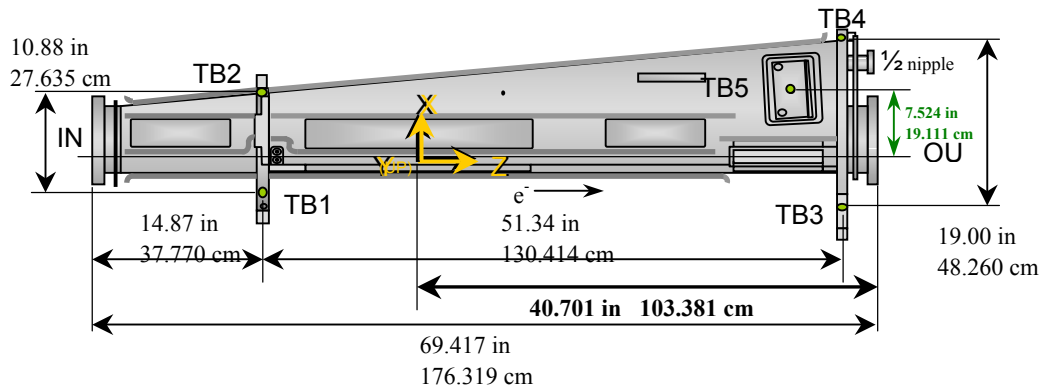
Operator(s):

H. Imfeld

M. Gaydosh

Notes:

Trav. St #1200: 7/17/01; #1280: 7/25/01. TBs 6 and 7 added after initial meas.



Fiducial Coordinates for QFC Standard Vacuum Chamber: (inches)

Fiducial	Z	X	Y
TB1	-13.947	-3.364	4.409
TB2	-13.948	7.280	4.375
TB3	37.416	-5.488	4.402
TB4	37.511	13.229	2.964
TB5	33.423	7.545	2.065
TB6	13.390	2.604	2.346
TB7	13.513	2.627	-2.336

TB5 _x Absorber Check	
Measured	7.545
Nominal	7.524
Difference	0.021

STATUS: **OK**
< 0.100 in

Source: **US Step**

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

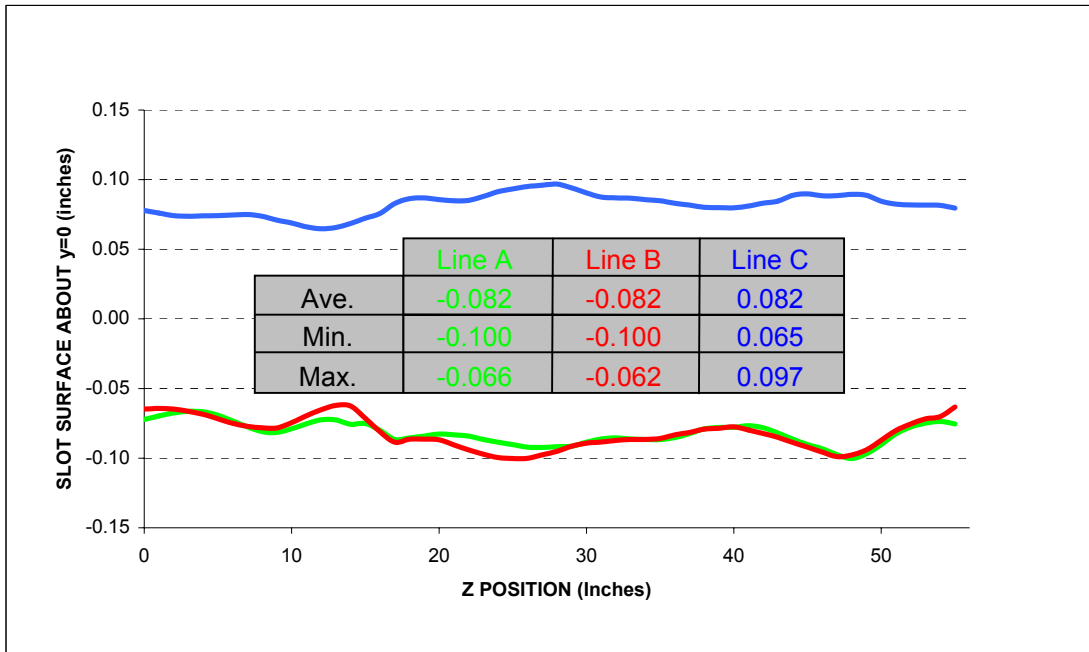
Flange Positions: (inches)

Flange	Z	X	Y	Source
IN	-28.648	1.834	-0.001	US
OUT	40.701	1.848	0.008	DS
NIP	N/A	10.518	-0.008	DS

Source: **US Step**

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

Fiducialization Step: (Traveler Step # 1380:08/01/01)



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

Fiducial	Z	X	Y	Downstream Flanges	
TB1	-13.949	-3.366	4.409	OUT	NIP
TB2	-13.946	7.281	4.375	Z	41.451 N/A in
TB3	37.458	-5.500	4.401	X	1.840 10.518 in
TB4	37.509	13.228	2.962	Y	0.011 -0.008 in
TB5	33.424	7.546	2.068		
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	-6.87	-0.89	11.467	9.967	9.970	OK
NIP	N/A	N/A	4.232	2.732	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

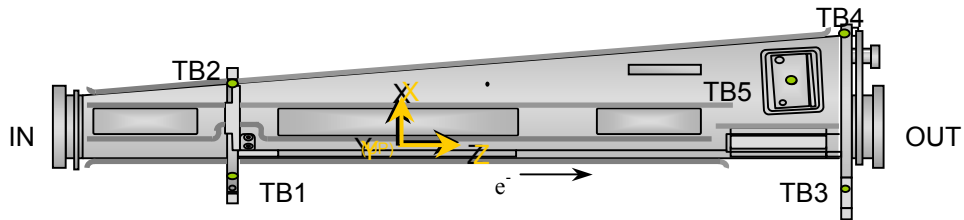
Fiducial	Delta Z	Delta X	Delta Y
TB1	0.001	0.002	0.000
TB2	-0.002	-0.002	0.000
TB3	-0.042	0.012	0.001
TB4	0.002	0.001	0.002
TB5	-0.001	-0.001	-0.003
TB6	13.390	2.604	2.346
TB7	13.513	2.627	-2.336

inches inches inches

OK
OK
DELTA Z?
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

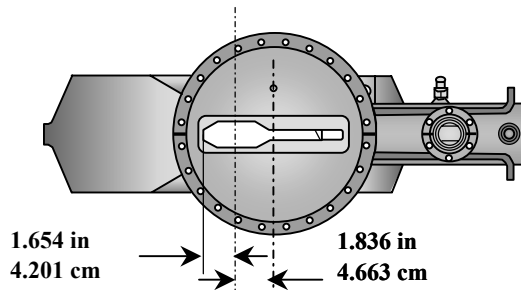
Flange	X	Y	Diameter
OUT			
New:	1.848	0.008	11.468 in
Delta:	0.009	-0.003	0.000 in

Diameter:

UPDATE

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

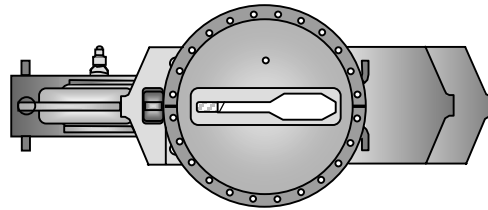
Description:
Difference between current and previous fiducial values and diameter. If the current diameter is acceptable, only then will the corresponding X and Y vals be updated if either exceed the tolerance.



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

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Step 3: Upstream Flange Values					
Flange IN		Flange IN			
-29.398	Z	5.79	-0.08	mrad	
1.834	X	Yaw	Pitch		
-0.001	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	
70.849	inches	69.349	69.417	OK
Description:				
Length should be between nominal value and nominal value - 0.125 in.				

