

Fiducials for QFC Std. Vac. Chamber

QFC018

Date:

1/25/02

Chamber:

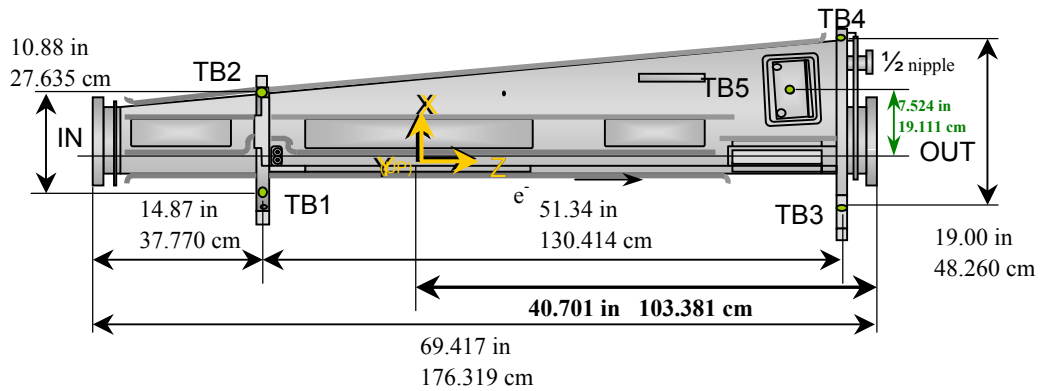
QFC018

Operator(s):

F. Gaudreault
C. Banuelos

Notes:

Traveler Step #1200: 01/07/02; #1280: 01/15/02 (#1380 & #1465 see below)



Fiducial Coordinates for QFC Standard Vacuum Chamber: (inches)

Fiducial	Z	X	Y
TB1	-13.809	-3.431	4.392
TB2	-13.852	7.238	4.361
TB3	37.465	-5.441	4.390
TB4	37.554	13.237	2.964
TB5	33.438	7.563	2.073
TB6			
TB7			

TB5 _x Absorber Check	
Measured	7.563
Nominal	7.524
Difference	0.039

STATUS: **OK**
< 0.100 in

Source: **US Step**

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

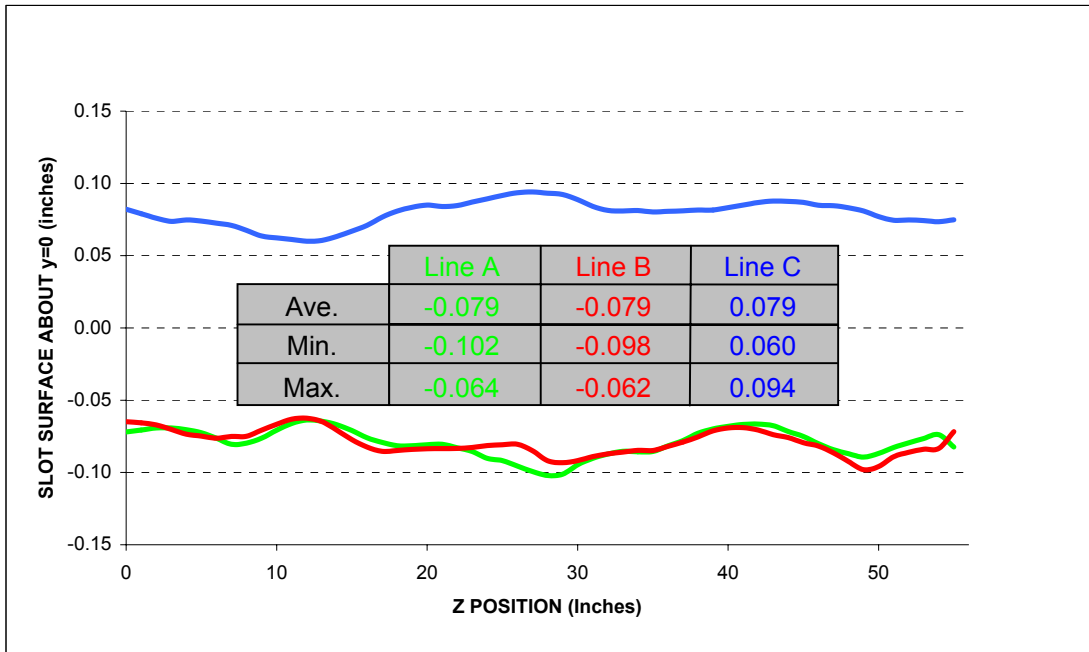
Flange Positions: (inches)

Flange	Z	X	Y	Source
IN	-28.629	1.833	0.005	US
OUT	40.701	1.843	-0.025	DS
NIP	N/A	10.523	-0.035	DS

Source: **US Step**

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

Fiducialization Step: (Traveler Step # 1380: 01/30/02)



QFC018

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

Fiducial	Z	X	Y	Downstream Flanges	
TB1	-13.809	-3.431	4.392	OUT	NIP
TB2	-13.852	7.238	4.361	Z	41.451 N/A in
TB3	37.465	-5.441	4.390	X	1.843 10.523 in
TB4	37.554	13.237	2.964	Y	-0.025 -0.035 in
TB5	33.438	7.563	2.073		
TB6					
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	-7.59	3.67	11.467	9.967	9.970	OK
NIP	N/A	N/A	4.228	2.728	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	-0.001	0.002
TB2	-0.001	0.001	-0.002
TB3	0.000	0.000	-0.001
TB4	0.000	0.000	0.001
TB5	0.001	0.000	0.000
TB6			
TB7			

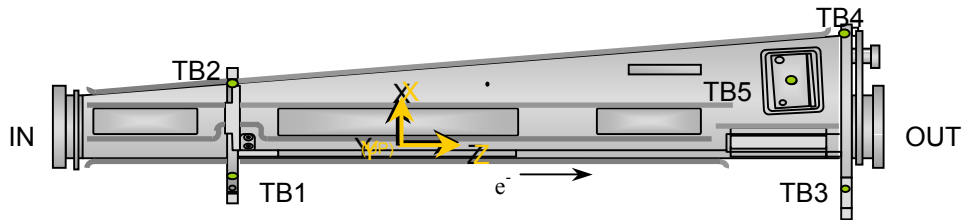
inches inches inches

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

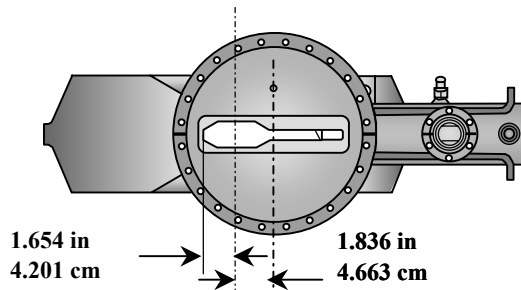
Flange	X	Y	Diameter
OUT			
New:	1.847	-0.022	11.467 in
Delta:	0.004	0.003	0.000 in

Diameter: 9.967

OK

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

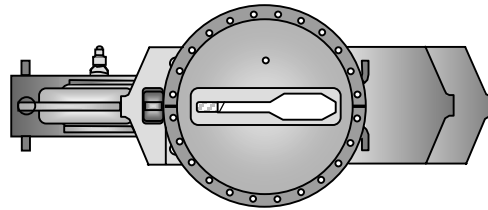
Description:
Difference between current and previous fiducial values and diameter. If the current diameter is acceptable, only then will the corresponding X and Y vals be updated if either exceed the tolerance.



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

QFC018
Status

Step 3: Upstream Flange Values					
Flange IN		Flange IN			
-29.379	Z	6.91	1.38	mrad	
1.833	X	Yaw	Pitch		
0.005	Y				
inches		Meas.	Actual	Nominal Diameter	
Diameter		11.463	9.963	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.					



QFC018
Status

Step 4: QFC Chamber Length				
Length with SMR		Length		Nominal Length
70.830	inches	69.330	inches	69.417
				OK
Description:				
Length should be between nominal value and nominal value - 0.125 in.				

