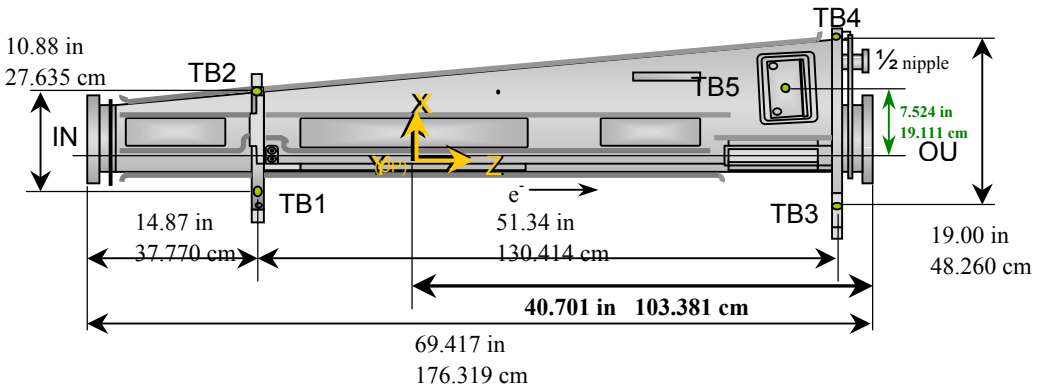
Fiducials for QFC Std. Vac. Chamber | *QFC015*

Date: 10/23/01

Chamber: QFC015

Operator(s): F. Gaudreault, L. Griffin

Notes: Traveler Step #1200: 08/20/01; #1280: 08/23/01 (#1380 & #1465 see below)



Fiducial Coordinates for QFC Standard Vacuum Chamber: (inches)

Fiducial	Z	X	Y
TB1	-13.800	-3.192	4.408
TB2	-13.792	7.292	4.360
TB3	37.426	-5.214	4.427
TB4	37.541	13.294	2.955
TB5	33.437	7.567	2.059
TB6	13.388	2.636	2.372
TB7	13.435	2.635	-2.366

$TB5_x$ Absorber Check	
Measured	7.567
Nominal	**7.524**
Difference	**0.043**

STATUS: **OK** (< 0.100 in)

Source: **Fid. Step**

Description:

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

Flange Positions: (inches)

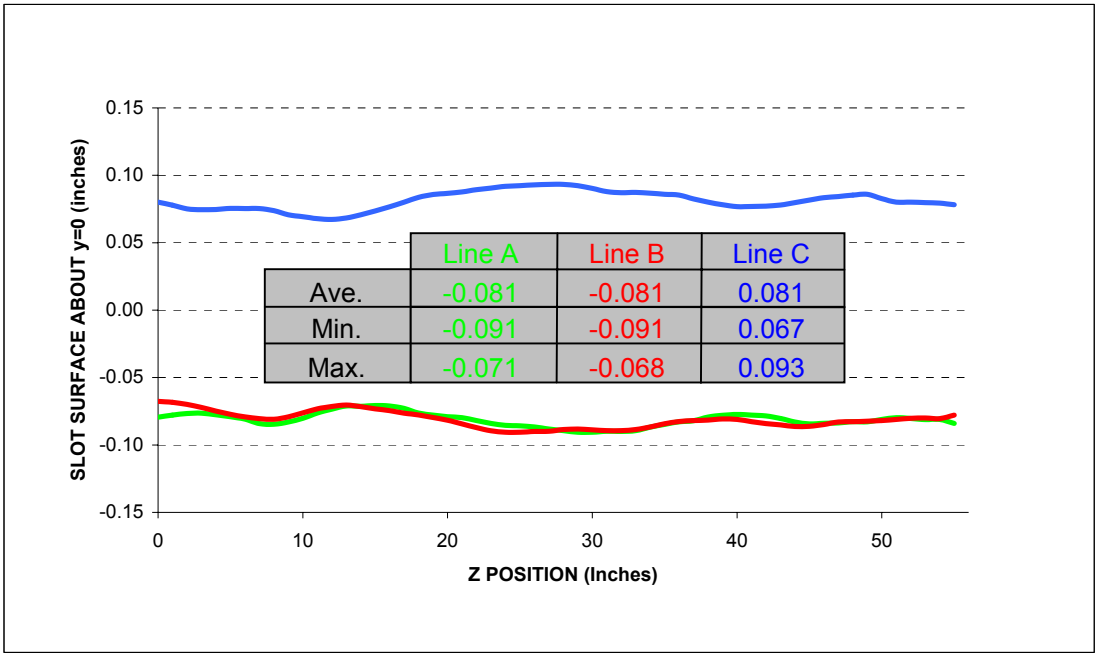
Flange	Z	X	Y	
IN		1.852	0.012	US
OUT	40.701	1.845	0.024	DS
NIP	N/A	10.522	-0.023	DS

Source: **Fid. Step**

Description:

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

Fiducialization Step: (Traveler Step # 1380: 10/19/01; 10/23/01; 11/08/01)



QFC015

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

Fiducial	Z	X	Y
TB1	-13.800	-3.192	4.408
TB2	-13.792	7.292	4.360
TB3	37.426	-5.214	4.427
TB4	37.541	13.294	2.955
TB5	33.437	7.567	2.059
TB6	13.388	2.636	2.372
TB7	13.435	2.635	-2.366
	inches	inches	inches

Downstream Flanges

	OUT	NIP	
Z	41.451	N/A	in
X	1.845	10.522	in
Y	**0.024**	-0.023	in

Nominals:	Xout	Yout
	1.836	0.000

Description:

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

Step 2: *Downstream Flange Check*

Flange	Yaw	Pitch	Diameter Meas.	Diameter Actual	Nominal Diameter	Status	
OUT	-8.92	-1.60	11.463	9.963	9.970	OK	
NIP	N/A	N/A	4.211	**2.711**	2.730	**DIAM?**	??
	mrad	mrad	inches			±0.015 in	

Description:

Yaw -6 to -13 mrads. Pitch ±3 mrads. Diameter difference ±0.015 in

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

QFC015 Status

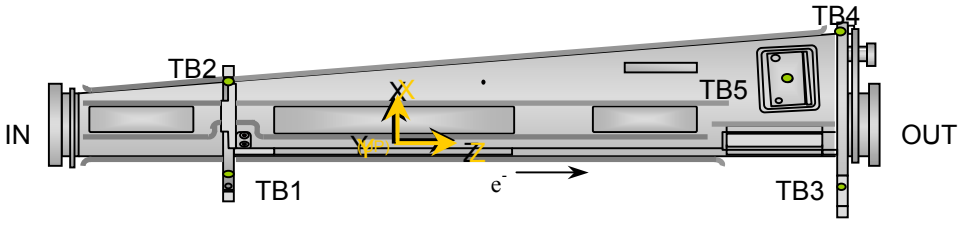
Step 1: *Change in Fiducial Values Check*

Fiducial	Delta Z	Delta X	Delta Y	
TB1				**PENDING**
TB2				**PENDING**
TB3				**PENDING**
TB4				**PENDING**
TB5				**PENDING**
TB6				**PENDING**
TB7				**PENDING**
	inches	inches	inches	±0.006 in

Description:

Difference between current and previous fiducial values.

Global: **PENDING**



QFC015 Status

Step 2: *Change in Downstream Flange Check*

Flange OUT	X	Y	Diameter	
New:				in
Delta:				in

Diameter:

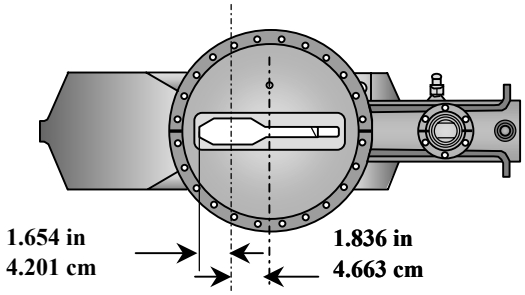
PENDING

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):

QFC015 Status

Step 3: *Upstream Flange Values*

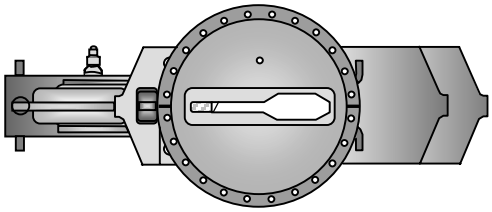
Flange IN		Flange IN		
	Z			mrad
1.852	X	Yaw	Pitch	
0.012	Y			
inches		Meas.	Actual	
	Diameter			in

Nominal Diameter: 9.970 **PENDING** ±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 mrads. Pitch ±3 mrads.



QFC015 Status

Step 4: *QFC Chamber Length*

Length **with SMR**	Length	
inches		inches

Nominal Length: 69.417 **PENDING**

Description:

Length should be between nominal value and nominal value - 0.125 in.