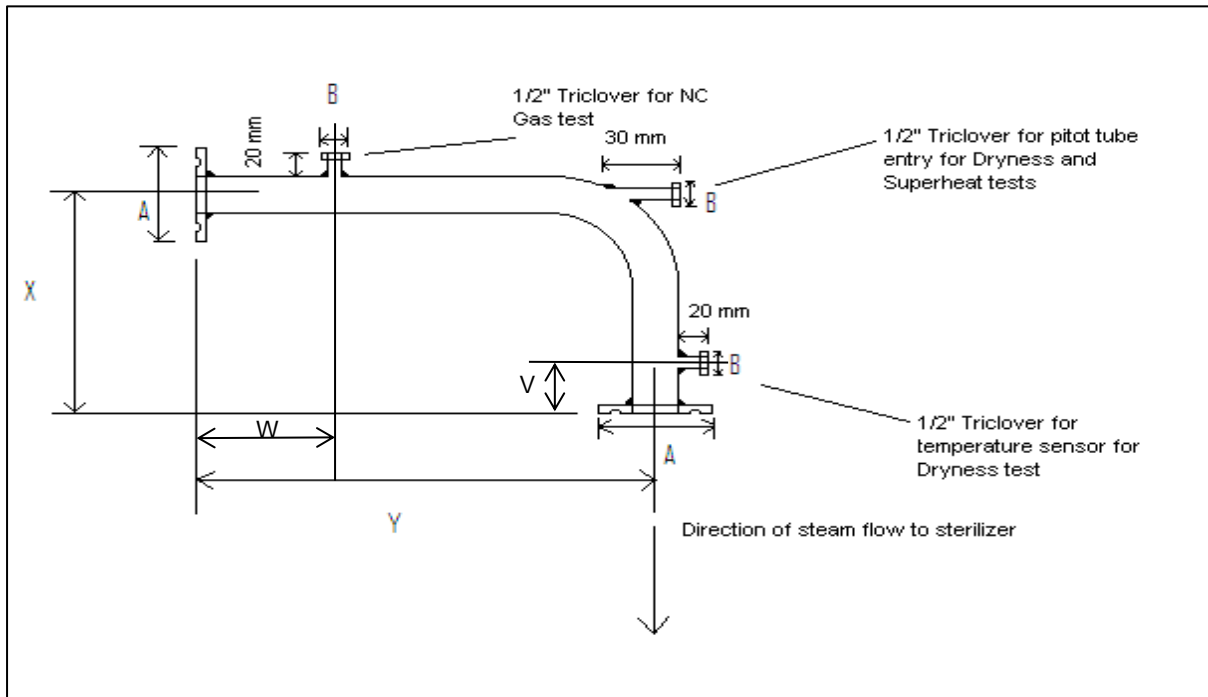


## STEAM QUALITY TEST ELBOWS



Elbow Size	V	W
0.75 - 1.5"	40mm	100mm
2" or larger	50mm	100mm

### Test Elbow Dimensions

Nominal size	Pipe outside diameter (inches/mm)	Pipe wall thickness (mm)	X (mm)	Y (mm)	A - Both ends (mm)	B - All sample points (mm)
*1/2" & 3/4"	3/4"/19.05	1.65	90	400	24.9	24.9
1"	1"/25.4	1.65	90	400	50.3	24.9
1 1/2"	1 1/2"/38.1	1.65	110	400	50.3	24.9
2"	2"/50.8	1.65	160	400	64	24.9
2 1/2"	2 1/2"/63.5	1.65	225	400	77.5	24.9
3"	3"/76.2	1.65	225	400	90.9	24.9
4"	4"/101.6	2.11	253	253	119	24.9

\* Please note that the test elbow supplied for 1/2" applications uses 3/4" pipe, which is necessary to fit 1/2" sample connections. This does not affect the performance of the tests or the results.



Test elbows are not supplied with tri-clamps and seals as these are usually commonly available on the client's premises.

## **TECHNICAL SPECIFICATION**

### **Pipework Standards**

Configured to Good Manufacturing and Engineering Practices (cGMP).

Please note that the ½” ports are manually welded onto the elbow and the weld finish will not be that of an orbitally welded joint.

### ***Material Conformance / Certification / Traceability***

Supplier: Dockweiler - Registered ISO 9001.

### ***Safetron Tube***

Welded stainless steel tube manufactured from cold drawn strip. Werkstoff 1.4404/1.4435/AISI 316L, fully annealed, free from grease. Outer surface bright finish of 0.8<sup>U</sup>m max, axial and radial inner surface roughness of RA 0.4<sup>U</sup>m max, testing according to DIN 17457 PK2/ADW2 & TRB 100, DIN 2463 D4 T3, ASTM A270. Hardness HV180/RB80 max, ends capped and bagged copies of original mill certificates supplied.

### ***Safetron Fittings***

Fitting manufactured from welded stainless steel tube, reducers, blanks and ferrules made from solid material 316L/1.4404/1.4435, plain ends prepared suitable for orbital welding, inner surface roughness of RA less than 0.4<sup>U</sup>m. Ends are capped, bagged and copies of original mill certificates supplied.

### ***Welder Qualification***

Manual / orbital welding would be of T.I.G. (Tungsten Inert Gas) method.

Orbital welding using an internal and external argon gas purge, using a computer controlled enclosed head orbital welding plant.

Manual / orbital welding will be carried out by operatives coded to EN 287, to procedures coded EN 288.



Welding profiles and isometric drawings will be compiled for all welds.

### ***Pipework Inspection***

100 x visual (no inclusion for NDT).

### ***Weld Inspection Record/Isometric Drawings***

For each service in the Weld Inspection Record and Isometric Drawing detailing materials, identification, welding data (print-out for each weld), finished weld conformance certificates will be recorded in compliance with FDA regulations.

### ***Passivation***

N/A

### **IQ Documentation**

On completion issue full IQ Documentation & Isometric Weld Plan Drawings will be issued as listed below:-

- Isometric Drawings
- Weld Inspection Record (Manual / Orbital) Including Orbital Weld Tickets/Reports
- Weld Procedures (Manual/Orbital)
- Welder Qualifications
- All Identification Numbers/Calibration Certificate of Welding Equipment/Manufacturers
- Purge Gas (Certificate of Conformity)
- Material Test Report / Conformity & Approved Certificates, 3.1b Certificates



## **Elbow Orientation**

The test elbows are available in four orientations:

“Standard”, “Left Hand”, “Right Hand” and “Vertical” as detailed in Appendices 1 to 4 below.

Unless specified to the contrary, elbows will be supplied in the “Standard” orientation as shown in Appendices.

