

# ASSE International

## PRODUCT (SEAL) LISTING PROGRAM



### ASSE 1015-2021

#### Double Check Backflow Prevention Assemblies

Separate, complete laboratory evaluation report forms for each alternate orientation must be submitted to ASSE for review.

Manufacturer: \_\_\_\_\_

Contact Person: \_\_\_\_\_ E-mail: \_\_\_\_\_

Address: \_\_\_\_\_

Laboratory: \_\_\_\_\_ Laboratory File Number: \_\_\_\_\_

Model # Tested: \_\_\_\_\_

Model Size: \_\_\_\_\_

Additional models report applies to: \_\_\_\_\_

Additional Model Information (i.e. orientation, series, end connections, shut-off valves)

\_\_\_\_\_

Date models received by laboratory: \_\_\_\_\_ Date testing began: \_\_\_\_\_

Date testing was completed \_\_\_\_\_

If models were damaged during shipment, describe damages:

\_\_\_\_\_

Prototype or production sample? \_\_\_\_\_

Were all tests performed at the selected laboratory?  Yes  No

If offsite, identify location: \_\_\_\_\_

#### General information and instructions for the testing engineer:

***The results within this report apply only to the models listed above.***

There may be items for which the judgment of the test engineer will be involved. Should there be a question of compliance with that provision of the standard, a conference with the manufacturer should be arranged to enable a satisfactory solution of the question.

Should disagreement persist and compliance remain in question by the test agency, the agency shall, if the product is in compliance with all other requirements of the standard, file a complete report on the questionable items together with the test report, for evaluation by the ASSE Seal Control Board. The Seal Control Board will then review and rule on the question of compliance with the intent of the standard then involved.

Documentation of material compliance must be furnished by the manufacturer. The manufacturer shall furnish to the testing agency, a bill of material which clearly identifies the material of each part included in the product construction. This identification must include any standards which relate thereto.



**SECTION 1**

**1.0 General**

1.1 Does the purpose of this device agree with that of the standard?  Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

1.2.1 Description  
Does the device conform to the product described in the standard?  Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

1.2.2 Size \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
Is the pipe size in accordance with Table 1?  Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

1.2.3 Rated Pressure  
What is the maximum working pressure as noted by the manufacturer?  
\_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
minimum of 175 psi (1206.6 kPa)

1.2.4 Temperature range as noted by the manufacturer:  
Assemblies for cold water applications  
\_\_\_\_\_ °F to \_\_\_\_\_ °F ( \_\_\_\_\_ °C to \_\_\_\_\_ °C)  
Assemblies for hot water applications  
\_\_\_\_\_ °F to \_\_\_\_\_ °F ( \_\_\_\_\_ °C to \_\_\_\_\_ °C)

1.3.2.1 Were female pipe threaded connections so constructed that it would not be possible to run a pipe into them far enough to restrict the flow through the assembly or interfere with working parts?  Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

1.3.2.2 Is the assembly repairable and seats replaceable without removing the assembly from the line?  Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

1.3.2.3 Was the assembly delivered with the shut-off valves attached?  Yes  No

1.3.2.4 Were test cocks properly located?  Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

1.3.2.5 List the inlet and outlet thread size(s) for the test cocks.  
Inlet thread size: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
Outlet thread size: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

Do these sizes meet the minimum per Table 2?  Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

1.3.2.6 State the manufacturer size and model number of all shut-off valves tested with the device:  
\_\_\_\_\_



**SECTION II**

**2.0 Test Specimens**

State the quantity of units provided for the evaluation of the orientation requested. \_\_\_\_\_

How many units were utilized during the laboratory evaluation? \_\_\_\_\_

**Drawings**

Were assembly drawings, installation drawings and other technical data which are needed to enable a testing agency to determine compliance with this standard submitted with the assembly?

Yes  No

Were these drawings reviewed in the laboratory?

Yes  No

**Alternate Orientation:**

Has an alternate orientation, other than that marked on page 1 of this laboratory evaluation report form been requested?

Yes  No

If yes, were the required additional samples submitted per Section 2.1?

Yes  No

**NOTE:** Separate, complete laboratory evaluation report forms must be submitted for each alternate orientation. The correct number of devices specified in the standard for each intended orientation must be submitted to the testing facility for evaluation to this standard.

**SECTION III**

**3.0 Performance Requirements and Compliance Testing**

**3.1 Independence of Components**

How was the independence of components verified?

- Drawing Review
- Physical cycling of components
- Other \_\_\_\_\_

In Compliance?

Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

**3.2 Hydrostatic Test of Complete Device**

What is the maximum working pressure from section 1.2.3? \_\_\_\_\_

The assembly was pressurized to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

The test period was for: \_\_\_\_\_ minutes

Were there any external leaks from the assembly?  Yes  No  Questionable

If questionable, explain: \_\_\_\_\_

**3.3 Seat Leakage Test for Shut-Off Valves**

Was the check valve removed?  Yes  No

What was the pressure applied to the inlet side of the #1 shut-off valve?

\_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

How long was the pressure held? \_\_\_\_\_ minutes

What was the pressure applied to the outlet side of the #1 shut-off valve?

\_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

How long was the pressure held? \_\_\_\_\_ minutes

Did you observe leakage into the assembly from the #1 shut-off valve sealing member?

Yes  No



What was the pressure applied to the inlet side of the #2 shut-off valve? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 How long was the pressure held? \_\_\_\_\_ minutes

What was the pressure applied to the outlet side of the #2 shut-off valve? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 How long was the pressure held? \_\_\_\_\_ minutes

Did you observe leakage into the assembly from the #2 shut-off valve sealing member?  
 Yes  No

**3.4 Hydrostatic Backpressure Test of Checks**

What was the pressure applied to the downstream side of the first check valve? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 What was the pressure on the upstream side? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ minutes

What was the initial height of water in the sight glass in test cock #2? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the final height of water in the sight glass in test cock #2? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

What was the pressure applied to the downstream side of the second check valve? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 What was the pressure on the upstream side? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ minutes

What was the initial height of water in the sight glass in test cock #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the final height of water in the sight glass in test cock #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.5 Allowable Pressure Loss For DC Assemblies**

Was the assembly installed per Figure 1?  Yes  No  
 If no, explain: \_\_\_\_\_

What was the rated water flow for the assembly per Table 1? \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)  
 What was the supply pressure used for this test? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 What pressure loss through the piping system (if any) was deducted? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

**Rated Flow**

150% of Rated Flow \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 200% of Rated Flow \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 How long was the 200% of rated flow maintained before recording differential pressure? \_\_\_\_\_  
 What was the maximum pressure loss observed at flows from (0) GPM to rated flow for DC assemblies? (Both ascending and descending) \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

Was there any damage or permanent deformation of the internal components of the assembly?  
 Yes  No

Was the assembly on test in complete compliance with the criteria of Section 3.5?  
 Yes  No



**3.6 Drip Tightness of First Check**

What was the initial height of water in the sight glass at test cock #2: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
What was the final height difference in the water levels between the sight glasses at test cocks #2 and #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.7 Drip Tightness of the Second Check**

What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
What was the initial height of water in the sight glass at test cock #4: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
What was the final height difference in the water levels between the sight glasses at test cocks #3 and #4? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.8 Deterioration at Manufacturer's Extremes of Temperature and Pressure Ranges**

Temperature range as noted by the manufacturer:  
\_\_\_\_\_ °F to \_\_\_\_\_ °F ( \_\_\_\_\_ °C to \_\_\_\_\_ °C)  
Maximum rated pressure as noted by the manufacturer: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
Water at: \_\_\_\_\_ °F ( \_\_\_\_\_ °C)  
was circulated through the assembly at: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
at a flow rate of: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)  
Start date and time \_\_\_\_\_  
End date and time \_\_\_\_\_  
for: \_\_\_\_\_ hours

While still at temperature, the assembly shall be retested to Sections 3.6 and 3.7:

*Retest Section 3.6*

What was the initial height of water in the sight glass at test cock #2: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
What was the final height difference in the water levels between the sight glasses at test cocks #2 and #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

*Retest Section 3.7*

What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
What was the initial height of water in the sight glass at test cock #4: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
What was the final height difference in the water levels between the sight glasses at test cocks #3 and #4? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.8 continued**

Upon completion of the 100 hours and the retesting of Sections 3.6 and 3.7, water at:  
\_\_\_\_\_ °F ( \_\_\_\_\_ °C) was circulated through the assembly.

Once the assembly reaches ambient temperature, the assembly shall be retested to Sections 3.2 and 3.4 as shown below:

*Retest Section 3.2*

What is the maximum working pressure from section 1.2.3? \_\_\_\_\_  
The assembly was pressurized to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
The test period was for: \_\_\_\_\_ minutes  
Were there any external leaks from the assembly?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_



*Retest Section 3.4*

What was the pressure applied to the downstream side of the first check valve? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
What was the pressure on the upstream side? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

The test period was for \_\_\_\_\_ minutes

What was the initial height of water in the sight glass in test cock #2? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

What was the final height of water in the sight glass in test cock #2? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

What was the pressure applied to the downstream side of the second check valve? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

What was the pressure on the upstream side? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

The test period was for \_\_\_\_\_ minutes

What was the initial height of water in the sight glass in test cock #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

What was the final height of water in the sight glass in test cock #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.8 continued**

Upon completion of testing at ambient water temperature, water at: \_\_\_\_\_ °F ( \_\_\_\_\_ °C)  
was circulated through the assembly for: \_\_\_\_\_ hours  
and then the assembly was retested to Sections 3.6 and 3.7:

*Retest Section 3.6*

What was the initial height of water in the sight glass at test cock #2: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

What was the final height difference in the water levels between the sight glasses at test cocks #2 and #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

*Retest Section 3.7*

What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

What was the initial height of water in the sight glass at test cock #4: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

What was the final height difference in the water levels between the sight glasses at test cocks #3 and #4? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.8 continued**

Was the assembly on test in complete compliance with the criteria of Section 3.8?  Yes  No

**3.9 Cycle Test**

(1) Flow water at 25% of the rated flow (see Table 1)  
What was the flow rate? \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)  
What was the supply pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
The test period was for \_\_\_\_\_ seconds

(2) What was the static pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
The test period was for \_\_\_\_\_ seconds



- (3) The pressure was decreased to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds
- (4) Backpressure was increased to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds
- (5) Remove backpressure  
 What was the supply pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)
- (6) Steps (1) through (5) were repeated for \_\_\_\_\_ cycles.
- (7) Retest assembly to Sections 3.6 and 3.7:

**Retest Section 3.6**

What was the initial height of water in the sight glass at test cock #2: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the final height difference in the water levels between the sight glasses at test cocks #2 and #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**Retest Section 3.7**

What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the initial height of water in the sight glass at test cock #4: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 The test period was for: \_\_\_\_\_ minutes.  
 What was the final height difference in the water levels between the sight glasses at test cocks #3 and #4? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.9 continued**

- (8) Flow water at 50% of the rated flow (see Table 1)  
 What was the flow rate? \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)  
 What was the supply pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds
- What was the static pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds
- The pressure was decreased to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds
- Backpressure was increased to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds
- Remove backpressure  
 What was the supply pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)
- Steps (1) through (5) were repeated for \_\_\_\_\_ cycles.
- (9) Retest assembly to Sections 3.6 and 3.7:

**Retest Section 3.6**

What was the initial height of water in the sight glass at test cock #2: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the final height difference in the water levels between the sight glasses at test cocks #2 and #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)



*Retest Section 3.7*

What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches( \_\_\_\_ mm)  
 What was the initial height of water in the sight glass at test cock #4: \_\_\_\_\_ inches ( \_\_\_\_ mm)  
 What was the final height difference in the water levels between the sight glasses at test cocks #3  
 and #4? \_\_\_\_\_ inches ( \_\_\_\_ mm)

**3.9 continued**

(10) A back pressure of: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 was applied for: \_\_\_\_\_ minutes  
 Record the leakage at test cock #3: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)

(11) A back pressure of: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 was applied for: \_\_\_\_\_ minutes  
 Record the leakage at test cock #3: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)

(12) A back pressure of: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 was applied for: \_\_\_\_\_ minutes at test cock #3  
 Record the leakage at test cock #2: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)

(13) The backpressure at test cock #3 was raised to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 for: \_\_\_\_\_ minutes  
 Record the leakage at test cock #2: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)

(14) Flow water at 75% of the rated flow (see Table 1)  
 What was the flow rate? \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)  
 What was the supply pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds

What was the static pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds

The pressure was decreased to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds

Backpressure was increased to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds

Remove backpressure  
 What was the supply pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

Steps (1) through (5) were repeated for \_\_\_\_\_ cycles.

(15) Retest assembly to Sections 3.6 and 3.7:

*Retest Section 3.6*

What was the initial height of water in the sight glass at test cock #2: \_\_\_\_\_ inches ( \_\_\_\_ mm)  
 What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_ mm)  
 What was the final height difference in the water levels between the sight glasses at test cocks #2  
 and #3? \_\_\_\_\_ inches ( \_\_\_\_ mm)





*Retest Section 3.7*

What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the initial height of water in the sight glass at test cock #4: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the final height difference in the water levels between the sight glasses at test cocks #3  
 and #4? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.9 continued**

(16) Flow water at 100% of the rated flow (see Table 1)

What was the flow rate? \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)  
 What was the supply pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds

What was the static pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds

The pressure was decreased to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds

Backpressure was increased to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 The test period was for \_\_\_\_\_ seconds

Remove backpressure  
 What was the supply pressure? \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)

Steps (1) through (5) were repeated for \_\_\_\_\_ cycles.

(17) Retest assembly to Sections 3.6 and 3.7:

*Retest Section 3.6*

What was the initial height of water in the sight glass at test cock #2: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the final height difference in the water levels between the sight glasses at test cocks #2  
 and #3? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

*Retest Section 3.7*

What was the initial height of water in the sight glass at test cock #3: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the initial height of water in the sight glass at test cock #4: \_\_\_\_\_ inches ( \_\_\_\_\_ mm)  
 What was the final height difference in the water levels between the sight glasses at test cocks #3  
 and #4? \_\_\_\_\_ inches ( \_\_\_\_\_ mm)

**3.9 continued**

(18) A back pressure of: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 was applied for: \_\_\_\_\_ minutes  
 Record the leakage at test cock #3: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)

(19) A back pressure of: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 was applied for: \_\_\_\_\_ minutes  
 Record the leakage at test cock #3: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)

(20) A back pressure of: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 was applied for: \_\_\_\_\_ minutes at test cock #3  
 Record the leakage at test cock #2: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)



(21) The backpressure at test cock #3 was raised to: \_\_\_\_\_ psi ( \_\_\_\_\_ kPa)  
 for: \_\_\_\_\_ minutes  
 Record the leakage at test cock #2: \_\_\_\_\_ GPM ( \_\_\_\_\_ L/s)

**3.9 continued**

Was the USC Life Cycle test protocol used?  Yes  No  
 If yes, attach these test results.

Was the assembly on test in complete compliance with the criteria for DC or with the USC Test Protocol?  
 Yes  No

**SECTION IV**

**4.0 Detailed Results**

**4.1 Materials**

Did the manufacturer provide evidence that the materials make-up of the device has been used successfully in similar applications for at least one (1) year?  Yes  No

4.1.1 Did any solder and fluxes in contact with the potable water supply exceed 0.2% lead content?  
 Yes  No  Questionable  
 If questionable, explain: \_\_\_\_\_

4.1.2 Did all of the elastomers and polymers in contact with the water comply with the requirements of the U.S. Code of Federal Regulations (CFR) Title 21, Section 177?  
 Yes  No  Questionable  
 If questionable, explain: \_\_\_\_\_

4.1.3 Did all ferrous cast parts conform to ASTM A126 for gray iron or ASTM A536 Grade 65-45-12 for ductile iron?  
 Yes  No  Questionable  
 If questionable, explain: \_\_\_\_\_

4.1.4 Were all ferrous cast parts in contact with the water flowing through the assembly protected against corrosion by epoxy coating or other equivalent methods?  
 Yes  No  Questionable  
 If questionable, explain: \_\_\_\_\_

4.1.5 Were all stainless steel components in contact with water of Series 300 s/s?  Yes  No  Questionable  
 If questionable, explain: \_\_\_\_\_

4.1.6 Were all non-ferrous wetted parts of a corrosion resistance of at least equal to an alloy of 79% copper?  
 Yes  No  Questionable  
 If questionable, explain: \_\_\_\_\_

4.1.7 Were all internal non-cast parts of a corrosion resistance of at least equal to an alloy of 79% copper?  
 Yes  No  Questionable  
 If questionable, explain: \_\_\_\_\_

4.1.8 Were all springs in contact with the water flowing through the assembly of a corrosion resistance of at least equal to stainless steel series 300?  
 Yes  No  Questionable  
 If questionable, explain: \_\_\_\_\_



4.1.9 Were all flexible non-metallic parts of a design to withstand all the criteria of this standard without change in their physical characteristics?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_

4.1.10 List the seating materials of:  
Disc Seats: \_\_\_\_\_  
Valve Disc Seats: \_\_\_\_\_

4.1.11 Were the seat rings of a corrosion resistance of at least equal to an alloy of 79% copper?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_

4.1.12 Were the test cocks of a corrosion resistance of at least equal to an alloy of 79% copper.  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_

4.1.13 Do all pipe flanges conform to ASME B16.24 for bronze flanges and ASTM A126 for cast iron flanges?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_

4.1.14 Do all pipe threads conform to ASME B1.20.1 for taper pipe threads and ASME B1.20.3 for dryseal?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_

**4.2 Grooved Connections**  
Do inlet and outlet grooved connections comply with AWWA C606?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_

**4.3 Marking Instructions**  
4.3.1 Identify the markings found on the test assembly/manifold assemblies:  
(a) Manufacturer's name or trademark: \_\_\_\_\_  
(b) Type (DC) and model number of the assembly: \_\_\_\_\_  
(c) Maximum working pressure: \_\_\_\_\_  
(d) Maximum working temperature: \_\_\_\_\_  
(e) Serial number consistent with the manufacturer's standard practice: \_\_\_\_\_  
(f) Nominal valve size: \_\_\_\_\_  
(g) Direction of water flow: \_\_\_\_\_  
(h) Each shut-off valve shall be marked with the manufacturer's name or trademark and model number: \_\_\_\_\_

4.3.2 Describe how these markings were made: \_\_\_\_\_

**4.4 Installation and Maintenance Instructions**  
4.4.1 Were instructions for installation and maintenance submitted with the device?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_

4.4.2 Did the installation instructions indicate the tested and approved installation orientation of the assembly?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_



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4.4.3 Was the test assembly capable of being maintained or repaired while in-line?  Yes  No  
 Questionable

If questionable, explain: \_\_\_\_\_

4.4.4 Were field testing instructions furnished?  Yes  No  Questionable  
If questionable, explain: \_\_\_\_\_



LISTED LABORATORY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_

FAX \_\_\_\_\_

TEST ENGINEER(S): \_\_\_\_\_

If applicable:

OUTSOURCED LABORATORY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_

FAX: \_\_\_\_\_

TEST ENGINEER(S): \_\_\_\_\_

Scope of outsourced testing: \_\_\_\_\_

We certify that the evaluations are based on our best judgments and that the test data recorded is an accurate record of the performance of the device on test.

Signature of the official of the listed laboratory: \_\_\_\_\_

Signature

Title of the official: \_\_\_\_\_ Date: \_\_\_\_\_