

American Society of Sanitary Engineering
PRODUCT (SEAL) LISTING PROGRAM
Factory Audit Inspection Test Report



ASSE STANDARD #1013 - REVISED: 2011
**Reduced Pressure Principle Backflow Preventers and Reduced
Pressure Principle Fire Protection Backflow Preventers**

LABORATORY FILE NUMBER: _____

LISTEE: _____

SEAL #: _____

MODEL # TESTED: _____

MODEL SIZE: _____

ADDITIONAL MODEL INFORMATION (i.e. orientation, series, end connections, shut-off valves): _____

NUMBER OF SAMPLES SUBMITTED: _____ NUMBER OF SAMPLES TESTED: _____

DATE TESTING BEGAN: _____

DATE TESTING COMPLETED: _____

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 Board. The Seal 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.



FIRST SAMPLE TEST RESULTS

SECTION III

3.0 Performance Requirements and Compliance Testing

3.2 Hydrostatic Test of Complete Device

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: _____

3.5 Allowable Pressure Loss at Rated Flow For RP Assemblies

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

What was the rated water flow for the assembly? _____ 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)

For RPF Assemblies

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

What was the rated water flow for the assembly? _____ 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)

For RPF Assemblies & Manifold RPF Assemblies

What was the pressure loss observed at flows of:

GPM	L/s	psi	kPa
05.0	0.32	_____	_____
10.0	0.63	_____	_____
15.0	0.95	_____	_____
20.0	1.26	_____	_____
25.0	1.58	_____	_____
30.0	1.89	_____	_____
35.0	2.21	_____	_____
40.0	2.52	_____	_____
45.0	2.84	_____	_____
50.0	3.15	_____	_____

Rated Flow

150% of Rated Flow for RPF and Manifold Assemblies _____ psi (_____ kPa)
200% of Rated Flow for RPF and Manifold Assemblies _____ psi (_____ kPa)
What was the maximum pressure loss observed at flows from (0) GPM to rated flow for both RP and RPF assemblies? (Both ascending and descending) _____ psi (_____ kPa)
Was there any discharge from the relief valve during the flow test? Yes No



For RPF assemblies, did the pressure drop generally increase from static up to a flow of 50.0 GPM (3.15 L/s) with a maximum total downward deviation of 10% from the highest previous valve at any point? Yes No

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 Relief Valve Opening Test

Was the assembly installed per Figure 1 with a bypass line with a needle valve and differential gauge between test cock #2 and #3? Yes No

If no, explain: _____

The test system was pressured to _____ psi (_____ kPa)

When the needle valve was opened to show a decreasing differential pressure, at what pressure did the first drop of water come out of the relief valve? _____ psi (_____ kPa)

When the assembly was returned to a static condition after a small amount of water was flowed through the assembly, what was the differential pressure across the first check? _____ psi (_____ kPa)

Repeat the test and record the data when the first drop of water comes out of the relief valve when using supply pressures of:

psi	(kPa)	psi	kPa
20	137.9	_____	_____
30	206.9	_____	_____
40	275.8	_____	_____
50	344.8	_____	_____
60	413.7	_____	_____
70	482.7	_____	_____
80	551.6	_____	_____
90	620.6	_____	_____
100	689.5	_____	_____
110	758.5	_____	_____
120	827.4	_____	_____
130	896.4	_____	_____
140	965.3	_____	_____
150	1034.3	_____	_____
160	1103.2	_____	_____
170	1172.2	_____	_____
180	1241.2	_____	_____
190	1310.1	_____	_____
200	1379.1	_____	_____

At the time of the opening of the relief valve, were all readings 2.0 psi (13.8 kPa) or greater? Yes No

Did the relief valve close drip tight at each pressure segment? Yes No



Was the assembly on test in complete compliance with the criteria of Section 3.6? Yes No

3.8 Drip Tightness of First Check

What was the static pressure differential across the first check for the following line pressures:

psi	(kPa)	psi	kPa
20	137.9	_____	_____
30	206.9	_____	_____
40	275.8	_____	_____
50	344.8	_____	_____
60	413.7	_____	_____
70	482.7	_____	_____
80	551.6	_____	_____
90	620.6	_____	_____
100	689.5	_____	_____
110	758.5	_____	_____
120	827.4	_____	_____
130	896.4	_____	_____
140	965.3	_____	_____
150	1034.3	_____	_____
160	1103.2	_____	_____
170	1172.2	_____	_____
180	1241.2	_____	_____
190	1310.1	_____	_____
200	1379.1	_____	_____

Were these pressure differentials at least 3.0 psi (20.7 kPa) greater than the pressure differential between the inlet line pressure and the zone pressure required to open the relief valve as determined in Section 3.6? Yes No

3.9 Drip Tightness of the Second Check Valve

Indicate the initial height of water in the sight glass at test cock #3: _____ inches (_____ mm)

Indicate 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)

3.11 Relief Valve Discharge With Positive Supply Pressure

What was the rated flow (per table 2) through the relief valve for the size of the device on test? _____ GPM (_____ L/s)

What was the supply pressure? _____ psi (_____ kPa)

What was the intermediate chamber pressure? _____ psi (_____ kPa)

What was the recorded discharge flow rate from the relief valve? _____ GPM (_____ L/s)



SECOND SAMPLE TEST RESULTS*

*A second sample shall only be tested if the first sample failed the necessary test sections.

SECTION III

3.0 Performance Requirements and Compliance Testing

3.2 Hydrostatic Test of Complete Device

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: _____

3.5 Allowable Pressure Loss at Rated Flow For RP Assemblies

Was the assembly installed per Figure 1? Yes No

If no, explain: _____

What was the rated water flow for the assembly? _____ 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)

For RPF Assemblies

Was the assembly installed per Figure 1? Yes No

If no, explain: _____

What was the rated water flow for the assembly? _____ 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)

For RPF Assemblies & Manifold RPF Assemblies

What was the pressure loss observed at flows of:

GPM	L/s	psi	kPa
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30.0	1.89	_____	_____
35.0	2.21	_____	_____
40.0	2.52	_____	_____
45.0	2.84	_____	_____
50.0	3.15	_____	_____

Rated Flow

150% of Rated Flow for RPF and Manifold Assemblies _____ psi (_____ kPa)

200% of Rated Flow for RPF and Manifold Assemblies _____ psi (_____ kPa)

What was the maximum pressure loss observed at flows from (0) GPM to rated flow for both RP and RPF assemblies? (Both ascending and descending) _____ psi (_____ kPa)

Was there any discharge from the relief valve during the flow test? Yes No



For RPF assemblies, did the pressure drop generally increase from static up to a flow of 50.0 GPM (3.15 L/s) with a maximum total downward deviation of 10% from the highest previous valve at any point? Yes No

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 Relief Valve Opening Test

Was the assembly installed per Figure 1 with a bypass line with a needle valve and differential gauge between test cock #2 and #3? Yes No

If no, explain: _____
 The test system was pressured to _____ psi (_____ kPa)

When the needle valve was opened to show a decreasing differential pressure, at what pressure did the first drop of water come out of the relief valve? _____ psi (_____ kPa)

When the assembly was returned to a static condition after a small amount of water was flowed through the assembly, what was the differential pressure across the first check? _____ psi (_____ kPa)

Repeat the test and record the data when the first drop of water comes out of the relief valve when using supply pressures of:

psi	(kPa)	psi	kPa
20	137.9	_____	_____
30	206.9	_____	_____
40	275.8	_____	_____
50	344.8	_____	_____
60	413.7	_____	_____
70	482.7	_____	_____
80	551.6	_____	_____
90	620.6	_____	_____
100	689.5	_____	_____
110	758.5	_____	_____
120	827.4	_____	_____
130	896.4	_____	_____
140	965.3	_____	_____
150	1034.3	_____	_____
160	1103.2	_____	_____
170	1172.2	_____	_____
180	1241.2	_____	_____
190	1310.1	_____	_____
200	1379.1	_____	_____

At the time of the opening of the relief valve, were all readings 2.0 psi (13.8 kPa) or greater? Yes No

Did the relief valve close drip tight at each pressure segment? Yes No



Was the assembly on test in complete compliance with the criteria of Section 3.6? Yes No

3.8 Drip Tightness of First Check

What was the static pressure differential across the first check for the following line pressures:

psi	(kPa)	psi	kPa
20	137.9	_____	_____
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40	275.8	_____	_____
50	344.8	_____	_____
60	413.7	_____	_____
70	482.7	_____	_____
80	551.6	_____	_____
90	620.6	_____	_____
100	689.5	_____	_____
110	758.5	_____	_____
120	827.4	_____	_____
130	896.4	_____	_____
140	965.3	_____	_____
150	1034.3	_____	_____
160	1103.2	_____	_____
170	1172.2	_____	_____
180	1241.2	_____	_____
190	1310.1	_____	_____
200	1379.1	_____	_____

Were these pressure differentials at least 3.0 psi (20.7 kPa) greater than the pressure differential between the inlet line pressure and the zone pressure required to open the relief valve as determined in Section 3.6? Yes No

3.9 Drip Tightness of the Second Check Valve

Indicate the initial height of water in the sight glass at test cock #3: _____ inches (_____ mm)

Indicate 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)

3.11 Relief Valve Discharge With Positive Supply Pressure

What was the rated flow (per table 2) through the relief valve for the size of the device on test? _____ GPM (_____ L/s)

What was the supply pressure? _____ psi (_____ kPa)

What was the intermediate chamber pressure? _____ psi (_____ kPa)

What was the recorded discharge flow rate from the relief valve? _____ GPM (_____ L/s)



TESTING AGENCY: _____

ADDRESS: _____

PHONE: _____ FAX: _____

TEST ENGINEERS: _____

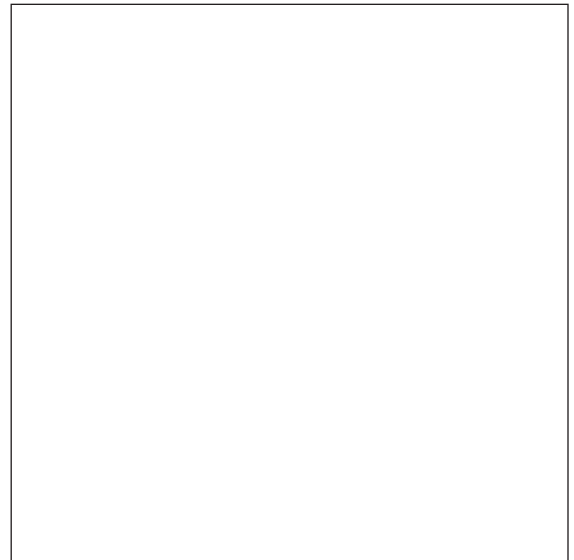
We Certify that the evaluations are based on our best judgements and that the test data recorded is an accurate record of the performance of the device on test.

SIGNATURE OF THE OFFICIAL OF THE AGENCY: _____

TITLE OF THE OFFICIAL: _____ DATE: _____

SIGNATURE AND SEAL OF THE REGISTERED PROFESSIONAL ENGINEER SUPERVISING THE LABORATORY EVALUATION:

SIGNATURE: _____



PE SEAL

*To insert images into document (PE seal and signatures)

Adobe Acrobat Pro users: At the top of the page, go to: Tools > Advanced Editing > TouchUp Object Tool. Once you have selected TouchUp Object Tool, right click within the document and select Place Image. Choose the image you want to place (PE seal or signature) and then select Open. Once the image is in the document, move and re-size the image accordingly. Save and send to ASSE.

Adobe Reader users: Adobe Reader does not allow users to place images into the document. You must print this completed document and then sign and stamp the PE seal by hand. You may then send the completed document to ASSE via fax or mail, or you can scan the completed document and send via e-mail.

COMMENTS: