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Ontario

**Building Materials Evaluation
Commission**

**Commission d'évaluation des
matériaux de construction**

BMEC AUTHORIZATION: 14-07-373

Aqua-Protec® Electro-pneumatic Backwater Control System

Date of Authorization: May 29, 2014

Date of Expiry¹: May 29, 2019

1. Applicant

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3275 Chemin de l'Industrie, Ste 6
Saint-Mathieu de Beloeil,
Quebec J3C 0M8

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2. Manufacturing Facility

Inflotrolix Inc.
3275 Chemin de l'Industrie, Ste 6
Saint-Mathieu de Beloeil,
Quebec J3C 0M8

3. Authorization

The Aqua-Protec® Electro-pneumatic Backwater Control System, (the "Aqua-Protec® System") is comprised of Inflotrolix Inc.'s retractable pneumatic sealing system control panel (model number AP-01) and an EPDM balloon fitting (model number BL-01).

The EPDM balloon fitting (model number BL-01) measures 179 mm (7.05") long and has an outside diameter of 103.05 mm (4.075").

The Aqua-Protec® System is designed to normally operate in the open position, allowing the unobstructed gravity flow sewage and venting of the plumbing system. Upon detection of a sewer backup the balloon fitting automatically inflates and seals the drainage pipe, inhibiting sewage backflow within the drainage system or the private premises.

¹ This Authorization expires on the date shown. It is the responsibility of Authorization holders to make a complete application considering the time for review and complexity of the new application.

Additional descriptive information is provided in documents supplied by the Applicant listed in Appendix A.

Reports and assessment provided by the Applicant demonstrate that if the Aqua-Protec® System is manufactured, designed, constructed, installed, and maintained in accordance with the manufacturer's instructions and limitations, and the specific terms and conditions stated in this authorization, the use of the Aqua-Protec® System shall be deemed to not be a contravention of Sentence 7.4.6.4.(2) of Division B of the Building Code.

All other requirements pertaining to the construction and installation are subject to the requirements of the Building Code, and subject to the following terms and conditions contained in 4 and 5 below:

4. Specific Terms and Conditions

1. This Authorization is valid only for Inflatrolix Inc.'s EPDM balloon fitting (model number BL-01), when used in conjunction with the retractable pneumatic sealing system control panel (model number AP-01);
2. The Aqua-Protec® System shall only be used in Part 9 "Housing and Small Buildings", Group C occupancies, residential buildings only, as they are defined in Ontario's Building Code;
3. The Aqua-Protec® System shall maintain the "Certificate of Listing" in accordance with IAPMO IGC 283-2011ae11 "Electro-Pneumatic Backwater Prevention Systems";
4. The Aqua-Protec® System shall be installed, activated, and removed by a licenced plumber, and who is trained and certified by Inflatrolix Inc.
5. The Aqua-Protec® System shall only be used:
 - a. with ABS, PVC, and cast iron type drainage pipes, and cleanouts,
 - b. with Y type drain waste fitting, and
 - c. in horizontal locations;
6. The Aqua-Protec® System shall be installed in accordance with Inflatrolix Inc.'s "Installation and Removal Instructions for Aqua-Protec & RPSM", last release date 2014-05-08, 21 pages;
7. The Aqua-Protec® System shall be installed in such a manner that the EPDM balloon fitting is located 19 mm ($\frac{3}{4}$ in.) below the top of the pipe;
8. The Aqua-Protec® System shall be installed in a gravity drainage system that has been designed with a minimum slope of 1 in 50.
9. The Aqua-Protec® System shall not be used in a force main system;

10. The Aqua-Protec® System shall be installed in a cleanout having a straight run and a developed length not greater than 1.2 m (4 ft);
11. The Aqua-Protec® System shall be installed at a horizontal distance of not less than ten (10) times the diameter of the drainage pipe from an adjacent plumbing stack;
12. The Aqua-Protec® System shall not be installed where the temperature in the pipe is expected to drop below 5°C or exceed 50°C;
13. The Aqua-Protec® System shall be connected to an electrical system with the power limitations as set out by the manufacturer in the Inflotrolx Inc., "Installation and Removal Instructions for Aqua-Protec & RPSM";
14. The Inflotrolx Inc.'s shall provide a copy of the manuals and warranty certificates with each fitting sold; and
15. After installation The Aqua-Protec® System EPDM balloon fitting shall be protected with an "Aqua-Protec®" security seal.

5. General Conditions

1. The use of the Aqua-Protec Electro-pneumatic Backwater Control System as described in Section 3. and the Specific Terms and Conditions set out in Section 4 must comply with:
 - (a) the *Building Code Act, 1992*, (the "Act") as amended or re-enacted,
 - (b) except as specifically authorized herein, the Building Code as amended or remade, and
 - (c) all other applicable legislation.
2. A copy of this Authorization shall accompany each application for a building permit and shall be maintained on the site of the construction with the building permit.
3. The Applicant specified in Section 1. shall promptly notify the BMEC of:
 - (a) the failure of the Applicant to comply with any of the Specific Terms and Conditions set out in Section 4,
 - (b) the failure of the material, system or building design that is the subject matter of this Authorization to
 - (i) comply with any of the Specific Terms and Conditions set out in Section 4, or
 - (ii) provide a satisfactory level of performance in situ, or
 - (c) the occurrence of any of the events described in General Conditions 5.4.(a), (b), (e) or (f).
4. The BMEC may amend or revoke this Authorization at any time on its own initiative, or at the request of the Applicant specified in Section 1. Without restricting the foregoing, the BMEC may amend or revoke this Authorization where it determines that:

- (a) any change has been made to:
 - (i) the name of the Applicant specified in Section 1,
 - (ii) the address or other contact name information of the Applicant specified in Section 1,
 - (iii) the ownership of the Applicant specified in Section 2,
 - (iv) the manufacturing facilities specified in Section 2,
 - (v) the material, system, or building design that is the subject matter of this Authorization, or
 - (vi) a test method relevant to this Authorization,
- (b) the Applicant has failed to comply with any of the terms and conditions set out in this Authorization,
- (c) in the opinion of the BMEC, the use of the material, system or building design authorized herein provides an unsatisfactory level of performance in situ,
- (d) in the opinion of the BMEC, amendment or revocation of the Authorization is appropriate on the basis of potential danger to public health and safety,
- (e) the *Act* or Building Code has been amended, re-enacted or remade in a manner relevant to this Authorization,
- (f) this Authorization was issued on mistaken, false or incorrect information, or
- (g) a revision of an editorial nature is appropriate.

Dated at Toronto this 29th day of May 2014

BUILDING MATERIALS EVALUATION COMMISSION

Edward Link, P.Eng
Chair, Building Materials Evaluation Commission

ENCLOSURES: APPENDIX A - SUPPORTING INFORMATION

Appendix A – Supporting Information

The following is a list of the documents that were submitted and reviewed, but were not limited to:

1. Standard, IAPMO IGC 283-2011ae1 “Electro-Pneumatic Backwater Prevention Systems”, published August 2011;
2. Test Report, IAPMO R&T Lab, “Inflotrolix Inc. Report Number: 1654-12002”, Report Issued, March 5, 2012;
3. Letter Report, IAPMO IGC 283-2011ae11 “Electro-Pneumatic Backwater Prevention Systems”, dated March 2011;
4. Letter Report, Sereca Larden Muniak Consulting Inc., “BMEC Application for Electro-Pneumatic Backwater Prevention System, Model: BL-01”, January 8, 2014;
5. Letter Report, Sereca Larden Muniak Consulting Inc., “BMEC Application for Electro-Pneumatic Backwater Prevention System, Model: BL-01”, January 16, 2014;
6. Certificate of Compliance, Canadian Standards Association, “Sewer Backflow Controller, Model Aqua Protec...”, Certificate: 2249549, dated 2010/03/26;
7. Certificate of Listing, IAPMO “Electro-Pneumatic Backwater Prevention System , IAPMO IGC 283—2011a”; dated January 2015;
8. Approval from other jurisdiction, “Regie du batiment du Quebec – direction des installations techniques”, dated March 9, 2012, versions provided in French and English;
9. Approval from other jurisdiction, “Regie du batiment du Quebec – direction des installations techniques”, dated February 2, 2012, versions provided in French and English;
10. Manual, Inflotrolix Inc., “Installation and Removal Instructions for Aqua-Protec & RPSM”, 17 pages;
11. Manufacturer’s Illustrations, Inflotrolix Inc., “Aqua-Protec : Functional and Dimensional Diagrams”, undated, 2 pages;
12. Label, sample, “Inflotrolix Inc.”;
13. Drawing, Inflotrolix Inc., “RPSM System Wye 4/4”, dated 13-4-27;
14. Letter Report, Inflotrolix Inc., “Aqua-Protec: Electro-pneumatic backwater control system, response to BMEC Subcommittee review”, 2014-03-14,
15. Letter Report, Sereca Larden Muniak Consulting Inc., “BMEC 2014-01: Aqua-Protec Electro-Pneumatic Backwater Prevention Control System, Model”, March 18, 2014;
16. Manual, Aqua Protec, “Owner manual”, v1.4, 7 pages;
17. Manufacturer’s Literature, Inflotrolix Inc. Aqua Protec, “Technical data sheet: Aqau-Protec^{MD} 4x4 Wye”, 2 pages, undated;
18. Test Results, Direction Ecoefficacite Industrielle Et Environnement, « Essaia De Viellissement – Ballon Antirefoulemnt D’Egout » Dossier CRIQ n 640-PE40114-R1, le 26 Septembre 2011;
19. Video, Sereca Larden Muniak Consulting Inc. “Aqua-Protec Demonstration Video”, dated March 2014;

20. Drawings, Inflowtrolix Inc., "DWG. NO. BL-01-REV1, RPSM 4/4 in, P-MOU-001 and S-SBL-101";
21. Manufacturer's Literature, Inflowtrolix Inc Aqua Protec "Configurations for the installation of the RPSM and the Control Pannel(sp)", date of 1st revision 2013-05-23, 18 pages;
22. Test Report, Industrial Eco-Efficiently and Environment Department, "Aging Tests – Sewer Backup Prevention Balloon CRIQ file no. 640-PE40114-R1", dated September 26, 2011; and
23. Letter Report, Inflowtrolix Inc., "Aqua-Protec: Electro-pneumatic backwater control system," 2014-05-01.
24. Manufacturer's Literature, Inflowtrolix Inc Aqua Protec "Configurations for the installation of the RPSM and the Control Pannel(sp)", last release date 2014-05-07, 18 pages;
25. Manual, Inflowtrolix Inc., "Installation and Removal Instructions for Aqua-Protec & RPSM", last release date 2014-05-08, 21 pages; and
26. Manual, Aqua Protec, "Owner manual", v1.5, 8 pages.