

ICC-ES Evaluation Report



ESR-1664

Effective Date: April 2024

This listing is subject to re-examination in one year.

www.icc-es-pmg.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

DIVISION: 22 00 00—PLUMBING

Section: 22 13 19.36—Air Admittance Valves

REPORT HOLDER:

OATEY CO. www.oatey.com

ADDITIONAL LISTEE:

FERGUSON ENTERPRISES

EVALUATION SUBJECT:

SURE-VENT® AND PROFLO AIR ADMITTANCE VALVES

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021, 2018, 2015, 2012 and 2009 *International Plumbing Code*® (IPC)
- \blacksquare 2021, 2018, 2015, 2012 and 2009 International Residential Code $^{\circledR}$ (IRC)
- 2020, 2015, 2010 and 2005 National Plumbing Code of Canada® (NPC)

Compliance with the following standards:

- ASSE 1050-2021, Performance Requirements for Stack Air Admittance Valves (AAV's) for Sanitary Drainage Systems
- ASSE 1051-2021, Performance Requirements for Individual and Branch Type Air Admittance Valves (AAV's) for Sanitary Drainage Systems
- NSF/ANSI 14-2022, Plastics Piping System Components and Related Materials

2.0 USES

SURE-VENT® and PROFLO air admittance valves are used as a terminus for plumbing vents inside of buildings.

3.0 DESCRIPTION

3.1 General:

SURE-VENT® and PROFLO air admittance valves are designed to protect water seals in traps by opening to admit air into the drainage piping system when subjected to a negative internal drain pressure. SURE-VENT® and PROFLO air admittance valves close by gravity and seal the vent terminal when internal drain pressure is equal to

or exceeds atmospheric pressure, thereby preventing sewer gases from entering the building.

SURE-VENT® and PROFLO air admittance valves consist of a body, cap and slide and diaphragm. The body, cap and slide are manufactured from virgin polyvinyl chloride (PVC) plastic. The diaphragm is manufactured from nitrile (NRB) elastomer or chloroprene (CR) elastomer (neoprene). All valves conform to the requirements of NSF/ANSI 14.

3.2 SURE-VENT®, SURE-VENT® II and PROFLO 8 DFU STACK / 20 DFU BRANCH:

8 DFU stack / 20 DFU branch SURE-VENT® and PROFLO are available with a 1¹/₂-inch-diameter (38 mm) male pipe thread connection for connection to 1¹/₂-inch-diameter (38 mm) vent pipes. Adapters are available for solvent cementing to 1¹/₂-inch-diameter (38 mm) Schedule 40 DWV pipe in ABS (acrylonitrile-butadiene-styrene) and PVC. Also, adapters are available for tubular connection in 1¹/₂-inch-diameter (38 mm) slip joints in both black and white polypropylene. The valves conform to the requirements of ASSE 1050 and ASSE 1051.

3.3 SURE-VENT®, SURE-VENT® II and PROFLO 24 DFU STACK / 160 DFU BRANCH:

24 DFU stack / 160 DFU branch SURE-VENT® and PROFLO are available with a 2-inch-diameter (51 mm) male pipe thread connection for connection to up to 2-inch-diameter (51 mm) vent pipes. Adapters are available for solvent cementing to 1½- and2-inch-diameter (38 and 51 mm) Schedule 40 DWV pipe in ABS and PVC. The valves conform to the requirements of ASSE 1050 and ASSE 1051.

3.4 SURE-VENT® and PROFLO 72 DFU STACK / 160 DFU BRANCH:

72 DFU stack / 160 DFU branch SURE-VENT® and PROFLO are available with a 2-inch-diameter (51 mm) male pipe thread connection for connection to up to 3-inch-diameter (76 mm) vent pipes. Adapters are available for solvent cementing to 2- and 3-inch-diameter (51 and 76 mm) Schedule 40 DWV pipe in ABS and PVC. The valves conform to the requirements of ASSE 1050 and ASSE 1051.

3.5 SURE-VENT® and PROFLO 500 DFU STACK / 160 DFU BRANCH:

24 DFU stack / 160 DFU branch SURE-VENT® PROFLO are available with a 3-inch-diameter (76 mm) male pipe thread connection for connection to up to 4-inch-diameter (102 mm) vent pipes. Adapters are available for solvent cementing to 3- and 4-inch-diameter (76 and 102 mm) Schedule 40 DWV pipe in ABS and PVC. The valves conform to the requirements of ASSE 1050 and ASSE



1051.

4.0 INSTALLATION

SURE-VENT® and PROFLO air admittance valves must be installed in accordance with the requirements of IPC Section 917 or IRC Section P3114, as applicable and Clause 2.2.10.16 of the NPC; the manufacturer's published installation instructions, and this report.

The valves must be installed in a vertical position not exceeding 15 degrees from plumb and must be located a minimum of 4 inches (102 mm) above the weir of the trap, or 6 inches (152 mm) above the flood level rim of the highest fixture being vented for stack-type air admittance valves. The valves must not be installed in a supply or return air plenum of an HVAC system or in areas where temperatures exceed 150°F (66°C).

5.0 CONDITIONS OF USE

- 5.1 Each air admittance valve must be located a minimum of 4 inches (102 mm) above the weir of the fixture trap when providing trap seal protection for fixtures or branches. When serving as vent terminals for stack vents or vent stacks, the valves must be a minimum of 6 inches (152 mm) above the flood level rim of the highest fixture served.
- 5.2 Each air admittance valve must be accessible for service, repair and replacement.
- 5.3 The air admittance valve must be located to allow adequate air to enter the valve. When located in a wall space or attic space, ventilation openings must be provided into the space. When in an attic space, ventilation openings must be located a minimum of 6 inches (152 mm) above any ceiling insulation.
- 5.4 The air-admittance valve must be installed in the vertical upright position. The maximum offset from the vertical upright position must not exceed 15 degrees.
- 5.5 Each vent must connect to the drain with a vertical connection to maintain an unblocked opening in the piping to the air admittance valves.
- 5.6 A minimum of one vent stack or stack vent must extend outdoors to the open air for every building plumbing drainage system, unless specifically engineered.
- 5.7 Air admittance valves are permitted to be installed as the vent termination for a vent stack or stack vent with six branch intervals or fewer.
- 5.8 The air admittance valves must be installed after the drainage system has been pressure-tested.

- 5.9 When a horizontal branch connects to a stack more than four branch intervals from the top of the stack, a relief vent must be provided. The relief vent must be located between the connection of the branch to the stack and the first fixture connecting to the branch. The relief vent may also serve as a vent for a single fixture. The relief vent must connect to the vent stack or stack vent and extend to the open air outside the building.
- 5.10 The SURE-VENT® air admittance valves are under a quality control program with annual surveillance inspection by ICC-ES.

6.0 IDENTIFICATION

- 6.1 The SURE-VENT® and PROFLO air admittance valves described in this listing must have the following information marked on it by a suitable, permanent method where it will be visible after installation:
 - a) Manufacturer's name or trademark
 - b) Model number or description of the device
 - iCC-ES evaluation report number (ESR-1664) or the ICC-ES PMG listing mark.

The markings shall be cast, etched, stamped or engraved on the body of the device or on a corrosion resisting plate securely attached to the device.

The SURE-VENT® air admittance valves must have the following information marked on the packaging:

- a) Manufacturers' name or trademark
- b) Model number or description of the device
- C) ICC-ES evaluation report number (ESR-1664) or the ICC-ES PMG listing mark.
- d) Drainage pipe size and fixture unit rating
- 6.2 The report holder's contact information is the following:

OATEY CO. 4700 WEST 160TH STREET CLEVELAND, OHIO 44135 www.oatey.com

ADDITIONAL LISTEE:

FERGUSON ENTERPRISES 12500 JEFFERSON AVENUE NEWPORT NEWS, VIRGINIA 23602-4314