



AIR ADMITTANCE VALVES



**Providing the Ideal Venting Solutions
For Island Sinks, Remote Bathroom
Groups and Remodel Jobs by
Eliminating the Need for a Stack Vent**

U.S. Patent 6,415,816 and others pending

WHICH DFU IS RIGHT FOR YOU?

MAKE THE RIGHT CHOICE

Sensitivity to pressure changes, combined with its ability to consistently open and close, is what distinguishes the Oatey® Sure-Vent® AAV from all others. Superior engineering along with stringent quality standards ensure a lifetime of unmatched performance.

An air admittance valve's ability to breathe is measured in Drainage Fixture Units or DFUs. The higher the DFU rating on the valve, the greater amount of air that can enter the DWV system. DFU loads are assigned to plumbing fixtures dependent on the volume rate of discharge, the duration of operation and the time between operations. Common fixture load ratings are shown in the table.

To ensure proper breathing capability, determine all fixtures to be vented and calculate the total DFU load, then select the appropriate Sure-Vent® for the application. Available in four different sizes, each Oatey Sure-Vent® cap indicates its maximum DFU rating.

Proper sizing of the Sure-Vent® is critical, because undersizing would not allow the plumbing system to operate properly.

FIXTURE APPLICATIONS	DFU LOAD
Traditional Public Bathroom Group (Toilet (1.6 gpf), bathtub w/ shower, and sink)	6
Traditional Private Bathroom Group (Toilet (1.6 gpf), bathtub w/ shower, and sink)	5
Public Toilet (1.6 gpf)	4
Private Toilet (1.6 gpf)	3
Washing Machine	3
Bathtub w/ Shower	2
Sink & Disposal	2
Dishwasher	2
Shower Stall (5.7 gpm or less)	2
Sink	2
Drinking Fountain	0.5

2012 International Plumbing Code Section 709 Fixture Units

SURE-VENT® WALL BOXES

AAVs should never be installed within a closed wall cavity without access of air movement. Oatey Sure-Vent® wall boxes support both requirements.



METAL WALL BOXES

- Allows access to Sure-Vent air admittance valve.
- Fits Oatey Sure-Vents (Sold Separately.)
 - 20 Branch, 8 Stack DFU Sure-Vent®
 - 160 Branch, 24 Stack DFU Sure-Vent®
 - 160 Branch, 72 Stack DFU Sure-Vent®

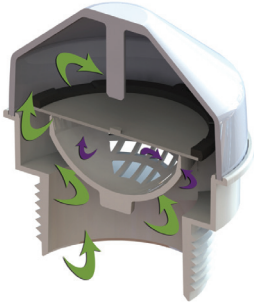


POLYSTYRENE WALL BOXES

- New, smaller size: 4-1/2" x 5-3/4".
- High-impact polystyrene construction.
- Accommodates:
 - 20 Branch, 8 Stack DFU Sure-Vent®
 - 160 Branch, 24 Stack DFU Sure-Vent®
- UPC listed.

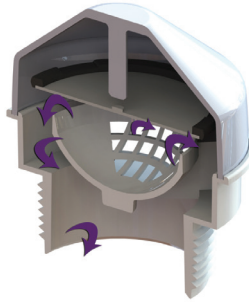
UNMATCHED PERFORMANCE

Sensitivity to pressure changes, combined with its ability to consistently open and close, distinguishes the Oatey Sure-Vent® AAV from all others. Superior engineering along with stringent quality standards ensure a lifetime of unmatched performance.



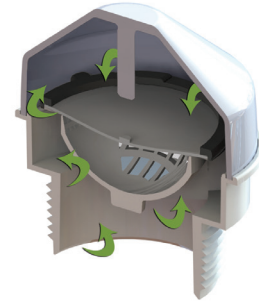
ZERO PRESSURE

At zero pressure the Sure-Vent® AAV is sealed, ready to react to pressure changes. The Sure-Vent® AAV will not allow sewer gas to enter the structure.



NEGATIVE PRESSURE

A pressure change of -0.01 psi (-0.25 " H₂O) will cause the Sure-Vent® AAV to open. When open, air will flow from the room, through the protective screening, past the seal and into the DWV system as the arrows indicate. When pressure is equalized, the Sure-Vent® AAV returns to the zero pressure position.



POSITIVE PRESSURE

The Sure-Vent® AAV seals at 0 psi and above indefinitely. The figure shows the Sure-Vent® AAV in a sealed position blocking sewer gasses. When pressure subsides, the Sure-Vent® AAV returns to the zero pressure position.

MAXIMUM DRAINAGE FIXTURE UNITS

MAXIMUM NUMBER OF DRAINAGE FIXTURE UNITS

Drain, Branch or Stack Size		Maximum DFUs on Branch	Maximum DFUs on Stack
1-1/2"	40 mm	3	8
2"	50 mm	6	24
3"	75 mm	20	72
4"	100 mm	160	500

Source: 2015 IPC Table 710.1(2) "Horizontal Fixture Branches & Stacks."

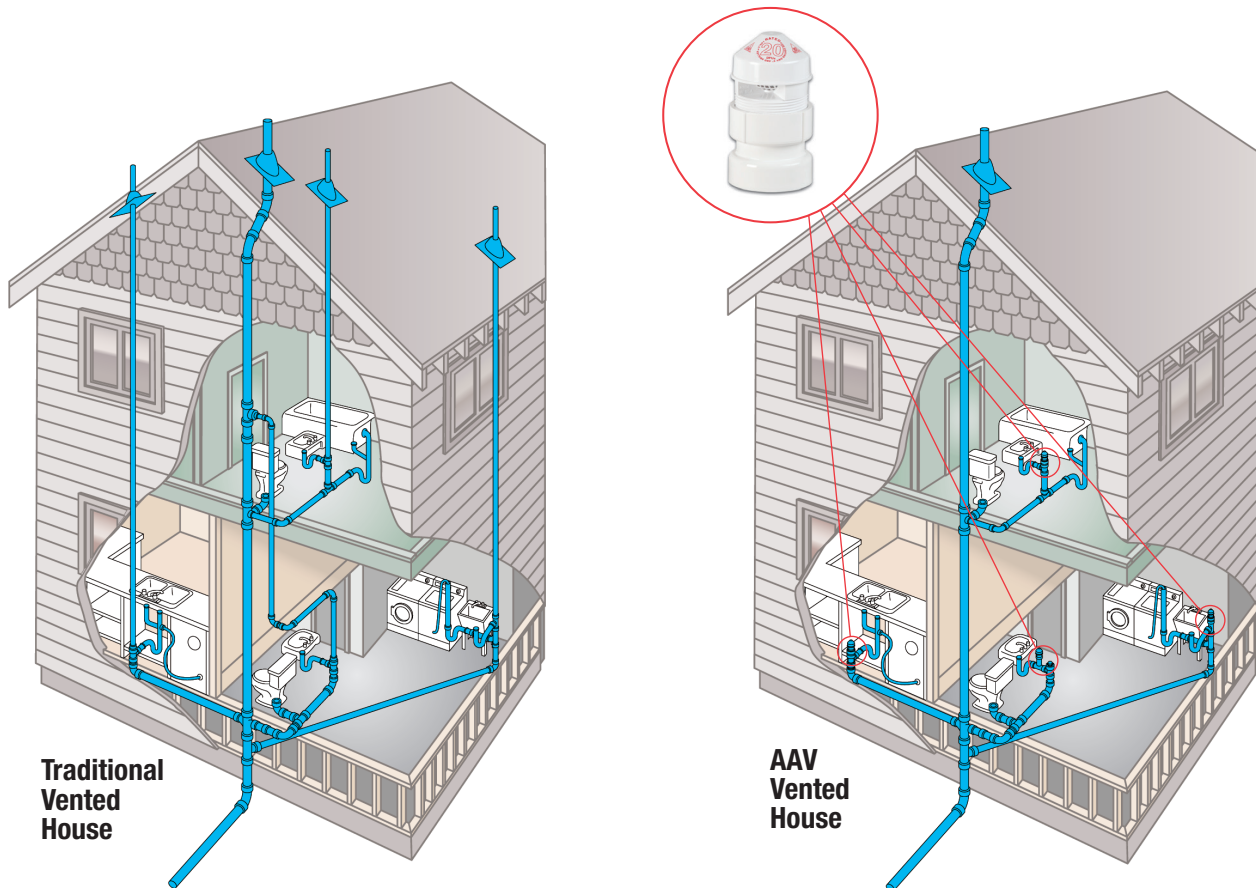
AAVS AND ACCESSORIES

Oatey offers a wide range of Air Admittance Valves and accessories to enable installation in virtually any application. Included are new polystyrene wall boxes, which are a convenient, easy to use solution for recessed installations. Available with PVC or ABS adapters.

PRODUCT	DESCRIPTION	PACK
20 BRANCH, 8 STACK DFU SURE-VENT AIR ADMITTANCE VALVE		
39228	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, W/PVC SCHED 40 ADAPTER	6
39229	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, W/ABS SCHED 40 ADAPTER	6
39005	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, W/PVC SCHED 40 ADAPTER	50
39227	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, W/ABS SCHED 40 ADAPTER	50
39250	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, W/90 DEG PVC SCHED 40 ADAPTER	6
39251	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, W/90 DEG ABS SCHED 40 ADAPTER	6
39252	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, W/90 DEG PVC SCHED 40 ADAPTER	50
39253	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, W/90 DEG ABS SCHED 40 ADAPTER	50
39254	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, STRAIGHT PVC SCHED 40 ADAPTER	6
39256	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, STRAIGHT ABS SCHED 40 ADAPTER	6
39255	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, STRAIGHT PVC SCHED 40 ADAPTER	50
39020	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, NO ADAPTER	50
39225	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, WHITE TUBULAR ADAPTER	6
39226	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, BLACK TUBULAR ADAPTER	6
39239	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, INSTALLATION PACK W/TUBULAR ADAPTER	6
392393	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, INSTALLATION PACK- 3 PACK	3
39245	20 BRANCH, 8 STACK DFU SURE-VENT®, 1.5 IN, TRAP PACK	20
39262	SURE-VENT® BOX KIT WITH PVC ADAPTER AND 20 BRANCH, 8 STACK DFU	6
39263	SURE-VENT® BOX KIT WITH ABS ADAPTER AND 20 BRANCH, 8 STACK DFU	6
160 BRANCH, 24 STACK DFU SURE-VENT AIR ADMITTANCE VALVE		
39016	160 BRANCH, 24 STACK DFU SURE-VENT®, 1.5 X 2 IN, PVC SCHED 40 ADAPTER	6
39018	160 BRANCH, 24 STACK DFU SURE-VENT®, 1.5 X 2 IN, ABS SCHED 40 ADAPTER	6
39017	160 BRANCH, 24 STACK DFU SURE-VENT®, 1.5 X 2 IN, PVC SCHED 40 ADAPTER	50
39019	160 BRANCH, 24 STACK DFU SURE-VENT®, 1.5 X 2 IN, ABS SCHED 40 ADAPTER	50
39238	160 BRANCH, 24 STACK DFU SURE-VENT®, 1.5 IN, W/MECHANICAL ADAPTER	12
39018C	160 BRANCH, 24 STACK DFU SURE-VENT®, 1.5 X 2 IN, ABS CANADA	6
160 BRANCH, 72 STACK DFU SURE-VENT AIR ADMITTANCE VALVE		
39220	160 BRANCH, 72 STACK DFU SURE-VENT®, 2 X 3 IN, PVC SCHED 40 ADAPTER	6
39221	160 BRANCH, 72 STACK DFU SURE-VENT®, 2 X 3 IN, ABS SCHED 40 ADAPTER	6
160 BRANCH, 500 STACK DFU SURE-VENT AIR ADMITTANCE VALVE		
39223	160 BRANCH, 500 STACK DFU SURE-VENT®, 3 X 4 IN, PVC SCHED 40 ADAPTER	6
39224	160 BRANCH, 500 STACK DFU SURE-VENT®, 3 X 4 IN, ABS SCHED 40 ADAPTER	6
ACCESSORIES		
39260	SURE-VENT® WALL BOX	6
39261	SURE-VENT® WALL BOX LOUVERED FACEPLATE	6
39010	SURE-VENT® WALL BOX WITH METAL GRILLE FACEPLATE	12
39011	METAL GRILLE FACEPLATE FOR WALL BOX	10
34247	LOUVERED DESIGN ACCESS PANEL	12

NO NEW ROOF PENETRATIONS

Plumbing Drain, Waste and Vent systems, known as DWV, consist of the DRAIN pipes that provide a network for the removal of WASTE and the VENT pipes that prevent traps from siphoning and maintain an equalized pressure. The DWV system uses gravity and air displacement throughout the piping network to function and breathe. In a simplified example, water in an inverted bottle without an air hole will glug and gasp when emptied. Adding an opening to the bottom of the bottle will turn the process into an efficient, steady flow because the bottle “breathes.”



EVERY DRAIN NEEDS A TRAP. EVERY TRAP NEEDS A VENT.

To prevent sewer gases from being released into the structure, plumbing code states that a trap is required for all fixtures. A trap is designed to create a barrier between the structure and sewer system. Trap seals can only be compromised under two conditions – high sewer pressure and water siphonage, in both cases vents prevent this from happening.

Under high sewer pressures without a vent, trap seals will allow sewer gases to escape and enter the structure. This happens when the sewer pressure is greater than the pressure from the column of water in the trap. A vent will keep the sewer and atmospheric pressures equalized to maintain the trap seal.

Water moving through pipes can create a negative pressure or a siphon. The siphon will pull the water from a trap, leaving a clear path for sewer gases to enter the structure. A vent will prohibit siphoning, maintaining the trap seal.

WHY USE A SURE-VENT® AIR ADMITTANCE VALVE?

Air Admittance Valves (AAVs) open and close in conjunction with normal DWV system operation, effectively eliminating the need for secondary vent pipes. An AAV provides an alternative to secondary venting when utilized within the scope of model plumbing codes, referenced standards and Oatey installation instructions.

AAVs provide the ideal venting solution for island sinks, remote bathroom groups and remodeling jobs by eliminating the need to tie into a stack vent.

AAVs are often more economical than installing vent pipe in new construction because they reduce the added need for materials and labor.

The Oatey Sure-Vent® offers UNMATCHED PERFORMANCE by opening and closing under the smallest pressures, multiple sizes for OPTIMIZED DFUs and SUPERIOR SEALING technology, providing a lifetime of reliability.



SURE-VENT® AIR ADMITTANCE VALVES

TECHNICAL SPECIFICATIONS



ENGINEERING SPECIFICATION:

The purpose of an air admittance valve is to provide a method of allowing air to enter the plumbing system without the use of a vent extended to open air and to prevent sewer gases from escaping inside a building.

FEATURES

- Four vents rated at:
 - 20 Branch, 8 Stack DFU Sure-Vent®
 - 160 Branch, 24 Stack DFU Sure-Vent®
 - 160 Branch, 72 Stack DFU Sure-Vent®
 - 160 Branch, 500 Stack DFU Sure-Vent®
- Sweet Spot™ technology opens at -0.01 psi (-0.25" H₂O) and seals at 0 psi and above
- Screening on air inlets to guard the seal
- Protective sleeve provides grip for installation and keeps valve from debris
- 100% functionally tested at 0.25" water and 30" water ensuring trouble-free performance
- Limited Lifetime Warranty

LISTINGS

- ANSI/ASSE 1050 & ANSI/ASSE 1051
- ICC-ES PMG ESR-1664
- cNSFus
- IAPMO – Classified Mark
- ASTM D2661/D2665/F409

CODE APPROVALS

- International Plumbing Code (IPC) 2012
- International Residential Code (IRC) 2012
- Uniform Plumbing Code (UPC) 2012 – Section 301.2



US 6,415,816
CAN 2,420,307

AUS 2001/281,345
EUR 1,313,975

US 7,422,030

INSTALLATION

Read installation instructions prior to use of this product. Always consult local plumbing codes prior to installing an AAV. Individual, branch and circuit vents are permitted to terminate with a connection to a Sure-Vent® AAV. The Sure-Vent® AAV will only vent fixtures that are on the same floor level and connect to a horizontal branch drain. The horizontal branch drain shall connect to the drainage stack a maximum of four branch intervals from the top of the stack. The Sure-Vent® AAV should be located within the maximum developed length permitted for the vent. The Sure-Vent® AAV must be located a minimum of 4 inches above the horizontal branch drain and 6 inches above any insulation material and within 15 degrees of vertical. Every structure in which plumbing is installed shall have at least one primary stack vent. The stack vent should run as directly as possible from the building drain through to the open air.

Sure-Vent® AAVs are designed only to be installed during final fixtures placement (trim out) and should never be installed during the construction process. To ensure air-tight seal, apply pipe thread tape or FBC-approved pipe joint compound to male threads and remove protective sleeve after installation.

Sure-Vent® AAVs are intended for installation in the confines of a structure, cannot be exposed to outside elements and are intended for use between -40°F and 150°F. AAVs must be accessible for inspection and service.

Sure-Vent® AAVs are not designed to relieve positive pressure.

Sealed Pit / Mechanical Pump Applications: When venting a sealed pit / mechanical pump application, first confirm with local code enforcement and pump manufacturer the use of an Oatey® Sure-Vent is an approved application. If approval is received from both entities, reach out to Oatey Technical for further information (technical@oatey.com).

Multiple Floors/Stack: For stack vents that serve drainage stacks serving more than 6 branch intervals, the use of an Oatey® Sure-Vent is prohibited. For further questions, reach out to Oatey Technical (technical@oatey.com).



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