

# MAGIC VENT<sup>®</sup> AIR ADMITTANCE VALVES



**ARCHITECTS & CONTRACTORS AGREE...  
USE MAGIC VENT<sup>®</sup> AAV**

- **ELIMINATES ROOF PENETRATIONS**
- **BUILDING CODE ALLOWED**
- **SAVES TIME & MONEY**
- **GREAT DESIGN FLEXIBILITY**
- **MULTIPLE USE APPLICATIONS**



NER 607



DWV ASSE 1051



1050-2002

U.S. Patent No. D427,286  
& Patent Pending

1051-2002



**100% PRESSURE TESTED FOR  
QUALITY AND PERFORMANCE**



## WHAT ARE AIR ADMITTANCE VALVES (AAV's)?

The main purpose of the venting system in a drain, waste, and vent line is to protect the trap seal from siphonage caused by negative pressure in the system and to prevent leakage of sewer gas. Usually, this is done with numerous vent stacks penetrating the roof of a structure.

AAV's perform this function without the need for additional piping to the outdoors. When there is negative pressure in the system, they open to admit air, balance the pressure, and then return to a closed state. In positive pressure situations, they close even more tightly preventing escape of sewer gas.

## WHY USE MAGIC VENT® AAV?

### • Save Time & Money

Eliminates costly labor associated with running extensive vent stacks.

### • Eliminates Roof Penetrations

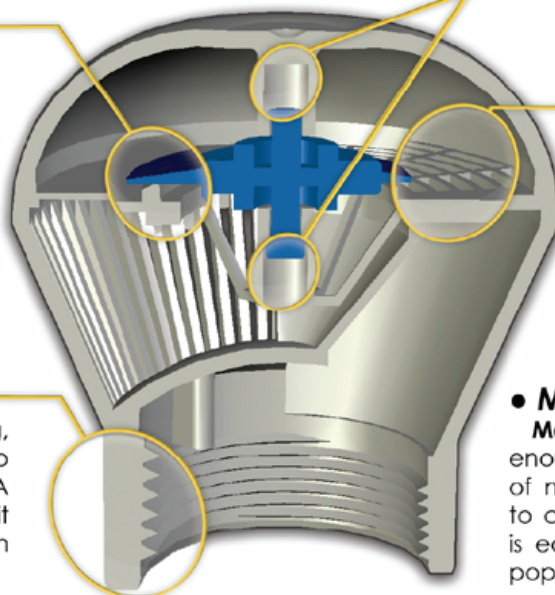
No risk of roof leaking due to cumbersome roof jacks.

### • Unique Double Guide

**Magic Vent®** has a double guide system that prevents the membrane from seating improperly and getting stuck during rough handling while being installed.

### • Superior Seal

The circular sealing surface of the **Magic Vent®** membrane is unlike other air admittance valves that use an annular seat. This results in a more positive seal for high pressure conditions which may occur when exposed to pressure jet drain cleaning equipment. The membrane also contains no lubricants that could attract dust or dirt and cause a malfunction.



### • Pest & Insect Resistant

A series of two screens protects the **Magic Vent®** from pests & insects.

### • Great Design Flexibility

Unightly vent stacks are not required with **Magic Vent®** AAV's, allowing for unlimited design possibilities when laying out plumbing systems.

### • Fast & Easy to Install

When used with **Magic Trap™** fitting, **Magic Vent®** takes only seconds to install in under-sink applications. A solvent weld fitting or an access grill kit can be used when installation is within a wall chase or an attic application.

### • Membrane Opens Quickly

**Magic Vent's** membrane is light-weight enough to open with the slightest amount of negative pressure, but heavy enough to close by gravity once system pressure is equalized. The AAV does not make a popping sound.

### • Multiple Use Applications

**Magic Vent®** AAV's can be used in a wide variety of plumbing systems, such as apartments, schools, dorms, hotels and other commercial applications as well as single family residences.

### • Technical Support

**RectorSeal®** provides a comprehensive technical support staff and licensed engineers to help with questions.

## MAGIC VENT® SIZING GUIDE

**Magic Vent®** AAV's are rated for the drainage pipe to which they are connected. (See the below sizing guide table for assistance) The Micro Size AAV has a 1 1/2" female threaded connection. However, the valve is rated for 1 1/4" through 2" individual or branch vent pipes. The Macro Size AAV has a 3" hubless connection. This valve can be connected to any vent system with an elastomeric hubless coupling or by solvent cement. It is rated for either a 2", 3" or 4" vent pipe for either stack vents or individual and branch vents.

Magic Vent Sizing Guide				
Size of Drain or Stack Required by Code	Size of Vent	Maximum DFU's on Branch <sup>a</sup>	Maximum DFU's on Stack <sup>b</sup>	Valve to Specify
1 1/4"	1 1/4"	1	1	Micro Size
1 1/2"	1 1/4" to 1 1/2"	3	8	Micro Size
2"	1 1/4" to 2"	6	24	Micro Size
3"	1 1/2" to 3"	20 <sup>c</sup>	72 <sup>c</sup>	Micro or Macro Size
4"	2" to 4"	160	500	Micro or Macro Size
6"	3" to 6"	620	1900	Macro Size

<sup>a</sup> Does not include branches of the building drain

<sup>b</sup> Up to six branch intervals

<sup>c</sup> No more than two water closets or bathroom groups within each branch interval or more than six water closets or bathroom groups on the stack

Fixture Applications	DFU Load
Traditional Public Bathroom Group	6
Traditional Private Bathroom Group	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	2
Sink	1
Drinking Fountain	0.5
Trap Size 1-1 1/2"	2
Trap Size 2"	3
Trap Size 3"	5
Trap Size 4"	6

© 2003 International Plumbing Code

# HOW THE MAGIC VENT® AAV WORKS

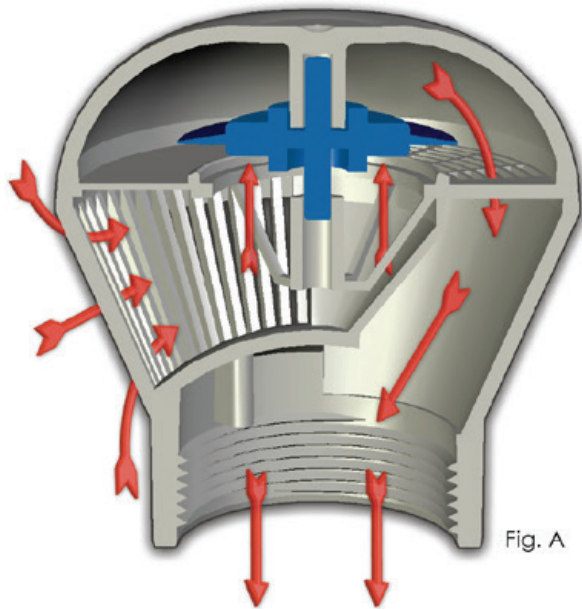


Fig. A

(Fig. A) When water moves through drain pipes, the drainage system is subjected to negative pressure causing the **Magic Vent®** to open and admit air. Fresh air balances the pressure in the drainage system, preventing siphonage and protecting the trap seal.

(Fig. B) Upon reaching neutral pressure, the **Magic Vent®** AAV close by gravity to form a tight seal, preventing any transmission of sewer gas through the valve.

If a positive pressure condition occurs in the drainage piping (typically the result of a blockage in the drain), **Magic Vent®** is designed to close more tightly, preventing escape of sewer gas into the structure.

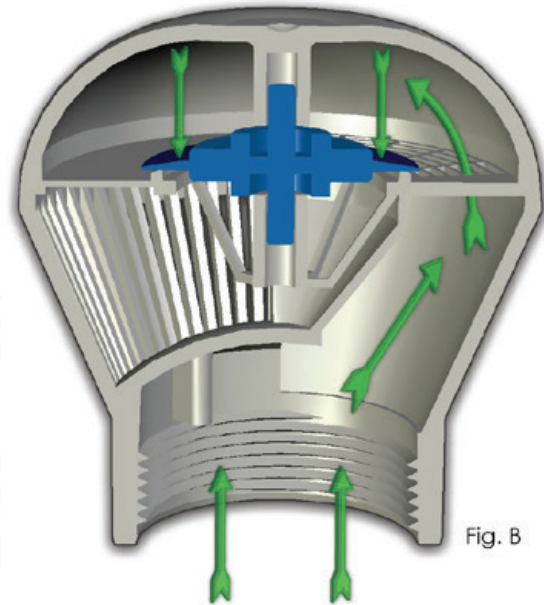
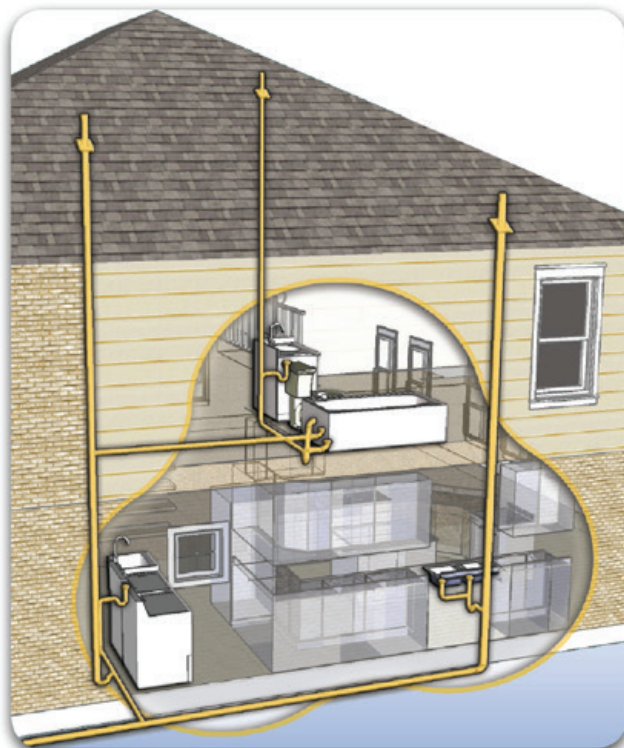


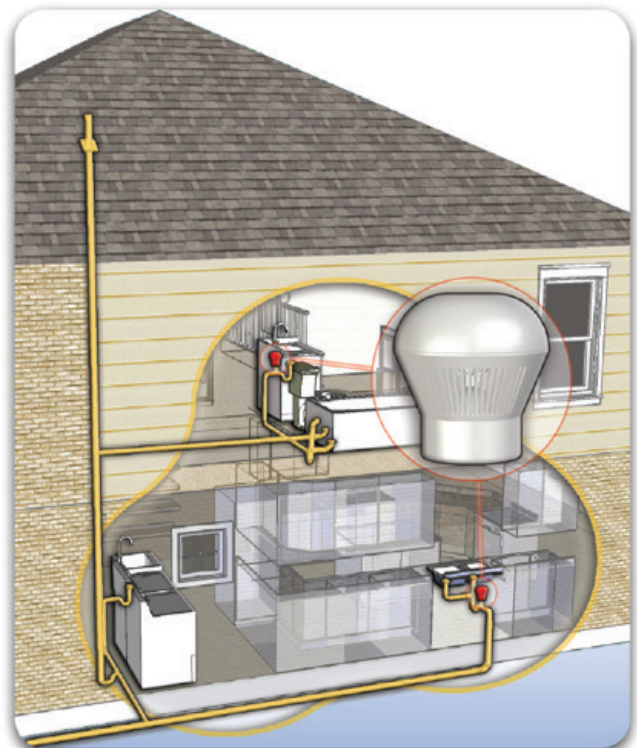
Fig. B

## DRAIN, WASTE & VENT SYSTEM

**Magic Vent®** eliminates the need for multiple vent stacks in a DWV system.



Traditional Vented DWV System



AAV Vented DWV System

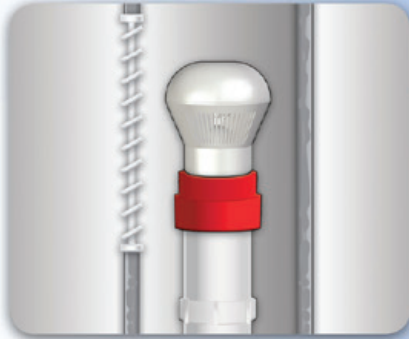
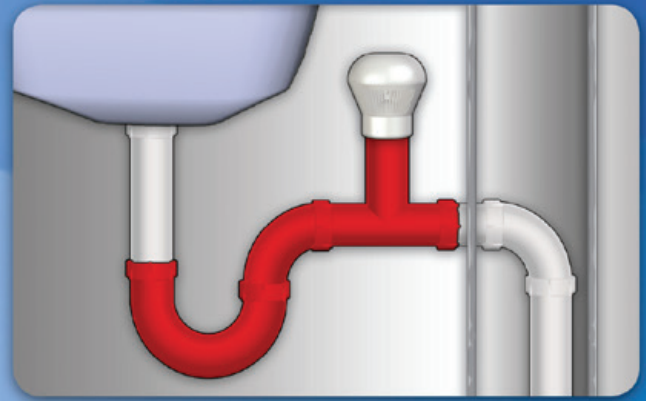
## MAGIC TRAP™ FITTING & MAGIC VENT® ADAPTER

- **Ideal for Wet Venting**

The **Magic Trap™** fitting is a 1 1/2" tubular polypropylene fitting that replaces any standard 1 1/2" tubular trap.

- **Saves Time & Money**

When used with the **Magic Trap™** fitting, the **Magic Vent®** AAV takes only seconds to install in under-sink applications. It automatically places the AAV at the required 4" height above the drain pipe (per code).



- **Easy to Install in a Wall Cavity or Attic**

The optional **Magic Vent®** adapter can be solvent welded to either 1 1/2" or 2" plastic pipe and allows the **Magic Vent®** to be threaded directly on and easily removed for maintenance.

## MAGIC VENT® USES & APPLICATIONS



- **Residential Construction**

**Magic Vent®** preserves the attractive roof lines of family residences and saves money and labor in the construction of apartment buildings. It also reduces penetrations in tile roofs, which can be expensive and may compromise the roof.



- **Office Construction**

Using **Magic Vent®** AAV reduces costs associated with labor and material in running vent stacks. It also greatly reduces expensive roof penetrations along with potential leaks and subsequent damage.



- **Island Sinks**

**Magic Vent®** replaces costly loop venting needed when installing island kitchen sinks.

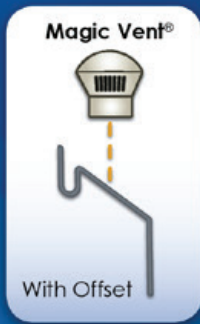


- **Unique Architectural Designs**

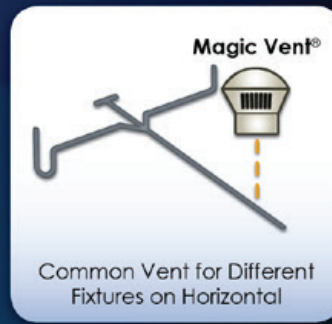
When **Magic Vent®** is used in a DWV system, a building's architectural design is not confined by multiple vent stacks.

# INSTALLATIONS USING MAGIC VENT® AAV

## Individual Vent



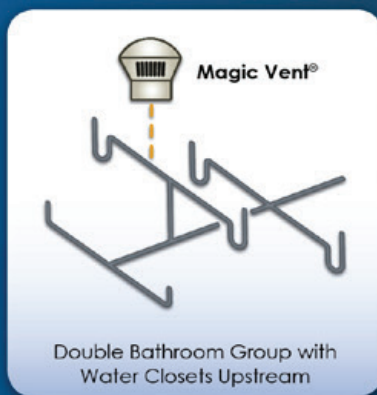
## Common Vent



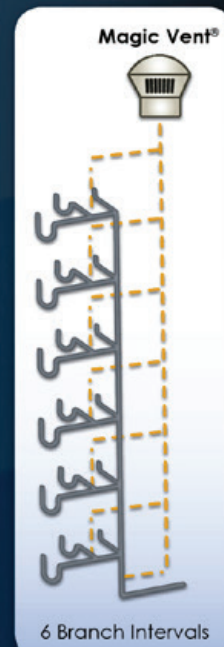
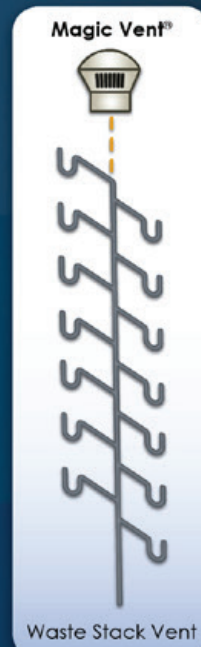
## Wet Vent Installation



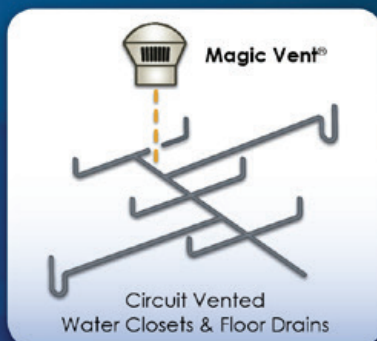
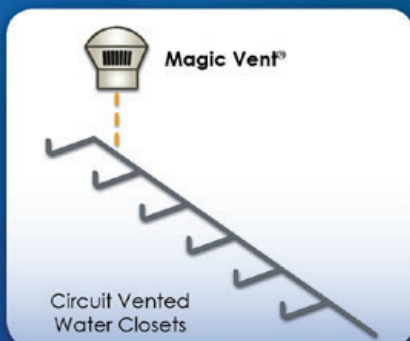
## Double Bathroom Group Wet Venting



## Stack Applications



## Circuit Venting



For stack installations, the AAV must be installed 6 inches above the highest fixtures flood level rim.

# CODE & STANDARD APPROVALS

Magic Vent® AAV's comply with ASSE Performance Standard for Fixture, Branch and stack Air Admittance Valves, conforming to ANSI/ASSE 1051-2002 and ASSE 1050-2002 . Listed by ASSE. Tested and complies with NSF 14.

Permitted for use in accordance with International Plumbing Code 2006, Section 917, International Residential Code 2006, Manufactured Housing Construction and Safety Standard 1998 and all current versions of SBCCI - Standard Plumbing Code and BOCA - National Plumbing Code.

# TECHNICAL SPECIFICATIONS & REQUIREMENTS

The Magic Vent® AAV serves as an air inlet for the vent piping system in a plumbing drainage (DWV) system. Rather than extending the piping to the outdoors, the vent pipe can connect to the Magic Vent® AAV. The following installation instructions must be followed to assure proper operation:

- When installed under sink on a horizontal drain pipe, the Magic Vent® AAV must be located a minimum of 4 inches above the drainage pipe to which it connects. When installed at the top of a vent stack or stack vent (not a branch vent), the Magic Vent® AAV must be a minimum of 6 inches above the highest fixture's flood rim.
- The Magic Vent® AAV must be installed in the vertical position. It does not have to be vertically plumb, since it is designed for an maximum offset of 15° from vertical alignment.
- A minimum of one vent for every building drainage system must extend to the outdoors. For drainage systems connecting to private sewage disposal systems (septic tanks), it is recommended that the vent to the outdoors be connected as close as possible to the connection to the building's sewer to assist in venting the private sewage disposal system.
- The Magic Vent® AAV must be accessible for inspection or replacement.
- The use of an AAV to relieve positive pressure is prohibited.
- When located more than 4 branch intervals (5 stories of plumbing) from the top of the stack, a relief vent must connect to the horizontal branch and extend to the outdoors. The relief vent must be located between the stack and the Magic Vent® AAV. The relief vent can serve as the vent for other fixtures.
- The Magic Vent® AAV must be installed in locations that will allow the free circulation of air. This would include installations in a vanity cabinet or under a kitchen sink. When installed in a wall cavity, a grill or register must be installed to allow the entrance of air.
- The Magic Vent® AAV should be installed in indoor locations with normal building environments and only after the DWV system is pressure tested.

## PRODUCT INFORMATION

Code	Description	Qty. per Case
Magic Vent® Micro		
97400	Micro Size	12
97450	Micro Size w/ PVC adapter	12
97406	Micro Size w/ ABS adapter	12
Magic Vent® Macro		
97401	Macro Size	6
Magic Trap™ Fittings		
97402	Fittings	12

## MAGIC VENT® AAV TESTING



100% Pressure Tested For Quality and Performance

## LIFETIME WARRANTY

The RectorSeal® Corporation warrants that the Magic Vent® AAV, and Magic Trap™ fitting will be free from manufacturing defects, and agrees to replace any Magic Vent® AAV and Magic Trap™ fitting that fails, if found to be defective. The warranty applies to the Magic Vent® AAV and Magic Trap™ fitting for the lifetime of the original DWV system in which it is installed. The warranty includes, complete replacement of the defective unit, plus shipping costs in the United States.

This warranty shall be null and void if the Magic Vent® AAV and Magic Trap™ fitting are not installed in accordance with the manufacturer's installation instructions, local plumbing code, and ASPE Hand Book; or if the product is altered, abused, defaced, misused, or damaged by owner or installer.

The manufacturer is not liable for any indirect, incidental, or consequential damages or contingent liabilities resulting from any alleged defect of the product.

The RectorSeal® Corporation is not obligated, under the terms of this warranty, to bear any labor costs of removing, repairing, or replacing the product.

Some states do not allow limitations on implied warranties and some states do not allow exclusions or limitations regarding incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

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