



Effective Date: February 2024

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

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A Subsidiary of the International Code Council®

CSI: DIVISION: 22 00 00—PLUMBING
Section: 22 13 19.36—Air Admittance Valve

Product certification system:

The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.

Product: Studor Air Admittance Valves: Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent®, Trap-Vent®, Chem-Vent®

Listee: Studor, Inc., Division of IPS Corporation
500 Distribution Parkway
Collierville, Tennessee 38017
www.studor.com

Additional listees:

Hajoca (Mainline brand)
1942 Airport Road
Monroe, NC 28110

Compliance with the following codes:

2024, 2021, 2018, 2015, 2012 and 2009 *International Plumbing Code*® (IPC)
2021, 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
2024, 2021, 2018, 2015, 2012 and 2009 *National Standard Plumbing Code*® (NSPC)*

**National Standard Plumbing Code is a copyrighted publication of Plumbing-Heating-Cooling-National Association*

Compliance with the following standards:

ASSE 1050 – 2021, Performance Requirements for Stack Air Admittance Valves for Sanitary Drainage Systems
ASSE 1051 – 2021, Performance Requirements for Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems- Fixture and Branch Devices
ASSE 1049 – 2021, Performance Requirements for Individual and Branch Type Air Admittance Valves for Chemical Waste Systems
NSF/ANSI 14 – 2022, Plastic Piping System Components and Related Materials

Identification:

The Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent®, Trap-Vent® and Chem-Vent® must be identified by molded lettering on the lid, indicating the name of the product, the manufacturer's name, manufacturing location (Ellington, Connecticut), and the ICC-ES PMG listing mark.

Installation:

Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent®, Trap-Vent® and Chem-Vent® must be installed in accordance with the manufacturer's installation instructions and the conditions of this listing.

Models:

The Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent® and Trap-Vent® are air admittance valves conforming to ASSE 1050, ASSE 1051 and NSF 14. The Mini-Vent® and Redi-Vent® are designed for pipe sizes of 1½ inches through 2 inches (38 mm through 51 mm). The Maxi-Vent® is designed for pipe sizes of 3 inches through 4 inches (76 mm through 102 mm). The Tec-Vent® is designed for 1½ inch pipe (38mm). The Trap-Vent is designed for 1¼ inches through 1½ inches pipe.

The Studor air admittance valves are used as a vent termination for individual vents, common vents, circuit vents and branch vents. Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent® and Trap-Vent® are also permitted to be used as the vent termination for a vent stack or stack vent with six branch intervals or less.

The Studor Chem-Vent® is an air admittance valve conforming to ASSE 1049 and NSF 14. The Chem-Vent® is designed for pipe sizes of 1½ inches (38 mm).

The Studor Chem-Vent® air admittance valve is used as a vent termination for non-neutralized special waste system to prevent siphonage of the fixture trap. Chem-Vent® is also permitted to be used as the vent termination for a vent stack or stack vent with six branch intervals or less.

Conditions of listing:

1. The Studor Mini-Vent® and Redi-Vent® are supplied with a connector which enables the valve to be solvent cemented onto 1½-inch- or 2-inch-diameter (38 mm or 51 mm) pipes or screwed into 1½-inch (38 mm) I.P.S. threads. The Tec-Vent® has 1½ (38mm) I.P.S. threads and does not come with a connector.
2. The Studor Maxi-Vent® is supplied with a synthetic rubber connector which enables the valve to be push fitted into a 4-inch-diameter (102 mm) PVC, cast iron or ABS pipe. It may also be installed on a 3-inch-diameter (76 mm) PVC, cast iron or ABS pipe in accordance with the manufacturer's instructions.
3. The Studor Chem-Vent® must be installed in accordance with the manufacturer's installation instructions
4. The use of Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent®, Trap-Vent® and Chem-Vent® is limited to systems subject to siphonage conditions and a maximum pressure condition of 1-inch (25 mm) water column.
5. Each Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent®, Trap-Vent® and Chem-Vent® must be located a minimum of 4 inches (102 mm) above the horizontal branch drain or fixture drain being vented when providing trap seal protection for fixtures or branches. When serving as vent terminals for stack vents or vent stacks, they must be a minimum of 6 inches (152 mm) above the flood level rim of the highest fixture served.
6. Each Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent®, Trap-Vent® and Chem-Vent® must be accessible for replacement if required.

7. The Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent®, Trap-Vent® and Chem-Vent® must be located to allow adequate air to enter the valve. When the products are located in a wall space or attic space, ventilation openings must be provided into the space. When in an attic space, the vents must be located a minimum of 6 inches (152 mm) above any ceiling insulation.
8. All air-admittance valves must be installed in the vertical upright position. The maximum offset from the vertical upright position must not exceed 15 degrees.
9. Each vent must connect to the drain with a vertical connection to maintain an unblocked opening in the piping to the air admittance valves.
10. 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.
11. The Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent®, Trap-Vent® and Chem-Vent® are permitted to be installed as the vent termination for a vent stack or stack vent with six branch intervals or less or as a branch vent terminal for fixtures on the same floor.
12. All air admittance valves must be installed after the drainage system has been pressure tested.
13. 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.
14. The Studor Mini-Vent®, Maxi-Vent®, Redi-Vent®, Tec-Vent® and Trap-Vent® shall not be installed in non-neutralized special waster systems as described in chapter 8 of IPC. The Chem-Vent® air admittance valve can be used as a vent termination for non-neutralized special waste system to prevent siphonage of the fixture trap with the approval of the authority having jurisdiction.
15. All air admittance valves shall not be located in spaces utilized as supply or return air plenums.
16. The air admittance valves without an engineered design (See Figure 11) shall not be utilized to vent sumps or tanks of any type.
17. The Studor Mini-Vent®, Maxi-Vent®, Redi-Vent® and Chem-Vent® are under annual surveillance audits by ICC-ES.

TABLE 1 — AIR ADMITTANCE VALVE MODELS NUMBERS OF STUDOR/IPS NAME ONLY

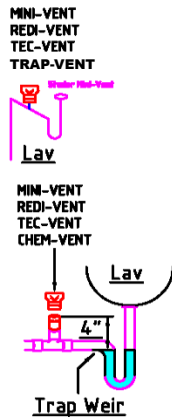
DESCRIPTION
Mini Vent – w/ PVC adaptor
Mini Vent – w/ ABS adaptor
Maxi Vent USA PVC
Redi Vent - w/ PVC adaptor
Redi Vent - w/ ABS adaptor
Tec Vent
Trap Vent
Chem Vent

TABLE 2 — AIR ADMITTANCE VALVE CROSS REFERENCE OF MODEL NUMBERS, STUDOR AND HAJOCA

STUDOR/IPS PART NO.	DESCRIPTION	HAJOCA CORP. (BRIDAGE / MAINLINE BRAND) MODEL NO.
20302	Maxi Vent USA PVC (25 pack)	BR10464 / ML10464
20305	X-Pack Mini Vent-PVC (40 pack)	BR10465 / ML10465
20336	X-Pack Mini Vent-ABS (40 pack)	BR10466 / ML10466
20386	Redi Vent-PVC (120 pack)	BR10469 / ML10469
20389	Redi Vent-ABS (120 pack)	BR10470 / ML10470
20345	Chem Vent	-----

The following diagrams are examples of acceptable designs using the Mini-Vent®, Maxi-Vent®, Redi-Vent® and Tec-Vent®

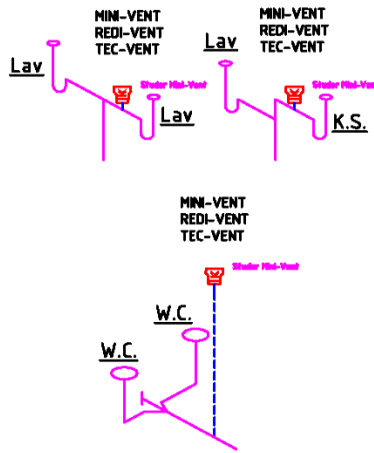
Individual Vent



The air admittance valve must be located a minimum of 4" above the weir of the trap. However, the valve may be located below the flood rim level of the fixture being vented.

Figure 1

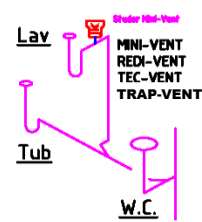
Common Vent



A common vent is similar to an individual vent. The vent serves two(2) fixtures. The Studor Mini-Vent can be located in the proximity to the fixtures being served.

Figure 2

Wet Vent

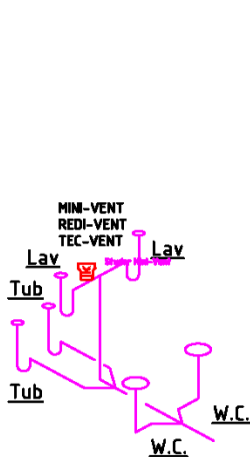


A wet vent is a single vent for one or two bathroom groups. There are different layouts for achieving the venting concept.

A single bathroom group wet vent can terminate to a Studor Mini-Vent.

Figure 3

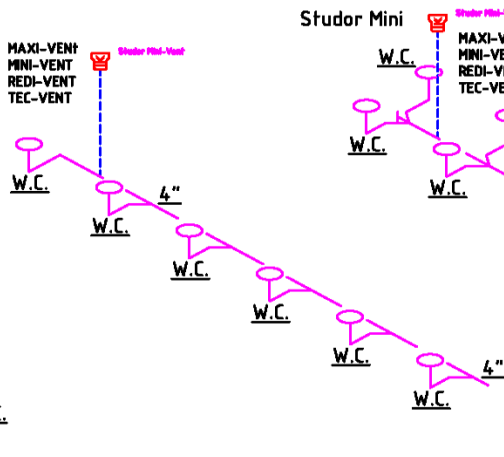
Back to back Wet Vent



A double bathroom group, back to back, can be wet vented with a single Studor Mini connecting as the vent terminal.

Figure 4

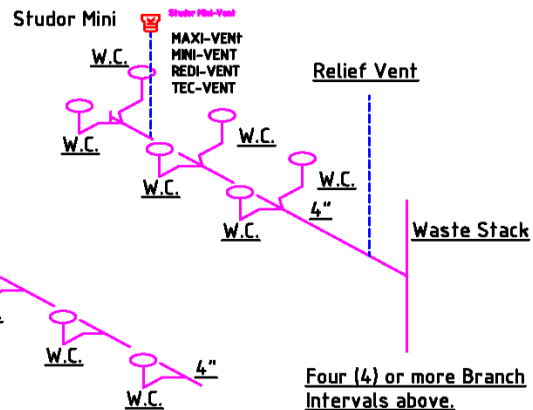
Circuit Vent



A single vent serves as the vent for three to eight fixtures. The Studor Mini or Maxi Vent serves as the vent terminal for the circuit vent. See Figure 6 for the relief vent requirement.

Figure 5

Circuit with Relief Vent



When the horizontal drainage branch connects to a stack having more than four branch intervals located above the branch, a relief vent is required. A relief vent is also required for branches receiving discharge from 4 or more water closets. The relief vent must connect to the vent stack or stack vent and extend to the outdoor air.

Figure 6

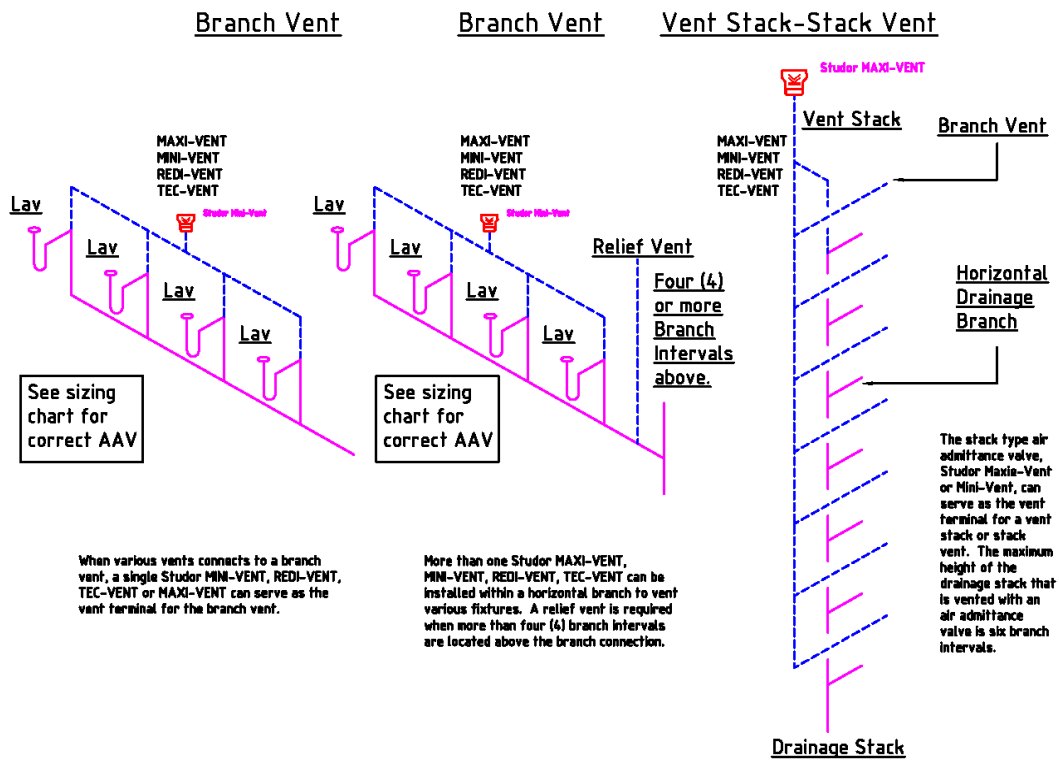
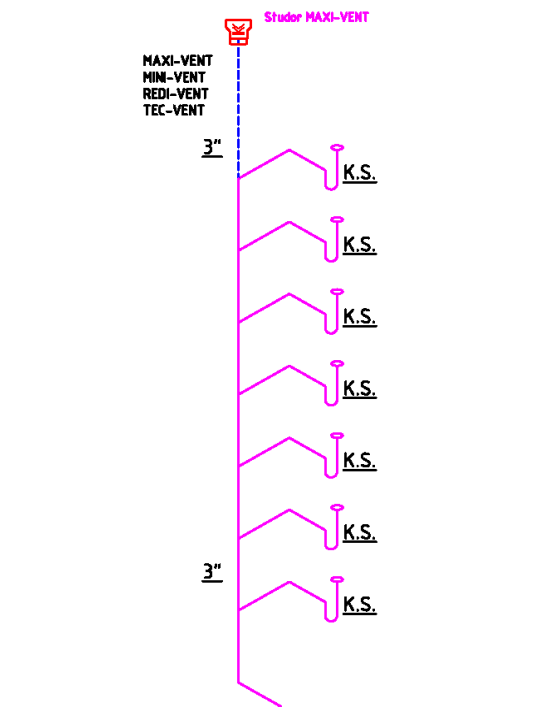


Figure 7

Figure 8

Figure 9

Waste Vent Stack



The Studor MAXI-VENT, MINI-VENT, REDI-VENT or TEC-VENT, can serve as the vent terminal for a waste stack. The maximum height of the waste stack that is vented with an air admittance valve is six branch intervals.

Figure 10

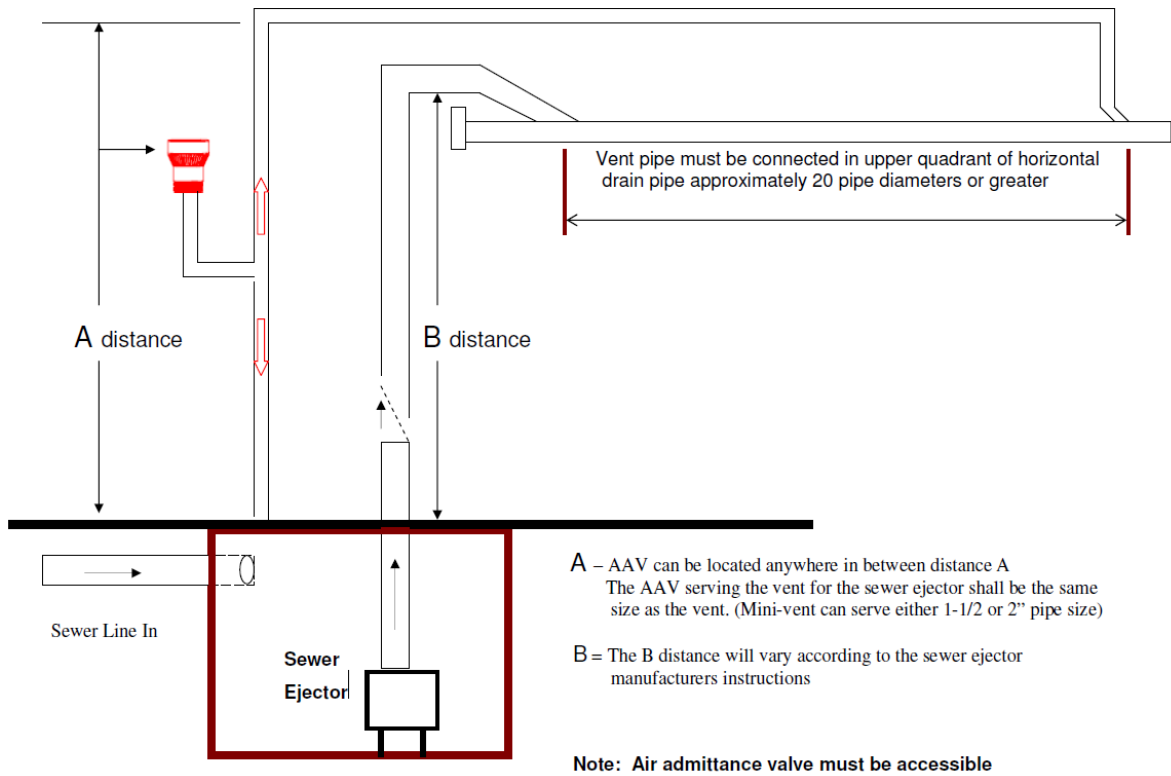


Figure 11