

Miscellaneous Accessories



No. 26 Vacuum Breaker



Nos. 87, 67 and 7 Automatic Air Vents



Nos. 17 Sr. and 17 Jr. Automatic Air Valves



No. 4V Coin-Operated Air Vent

Installation, Operation and Maintenance Instructions

INSTALLER: PLEASE LEAVE THIS MANUAL FOR THE OWNER'S USE.



SAFETY INSTRUCTION

This safety alert symbol will be used in this manual to draw attention to safety related instructions. When used, the safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**

DESCRIPTION

Air vents are designed to vent the accumulation of troublesome air whenever it can be trapped.

The No. 87, 67 and 7 models are automatic air vents of float type while the No. 17 Sr. and 17 Jr. automatic models are hygroscopic in operation.

The No. 4V air vent is a manual type vent specially designed for radiators.

The No. 26 vacuum breaker is designed to protect closed vessels and piping systems against collapse when induced vacuum exceeds design conditions. When used on steam systems the vacuum breaker permits the normal return of condensate to the boiler.

INSTALLATIONS INSTRUCTIONS

1. Install air vent in hydronic piping system or in hydronic system components where air is expected to accumulate and must be removed for proper hydronic system operation.

Vacuum breakers are installed in steam systems or other systems where vacuum from condensing steam or from other sources must be controlled.

2. #7, #67 and #87 air vents are float type and must be installed in the vertical position with vent connection pointing up.
3. The #87 air vent can be installed on 1/2" nipple or into a 3/4" NPT female connection.
4. The #17 Sr and #17 Jr air vents will function better if installed on a 1/2" or 3/4" 5" to 6" long NPT nipple.



CAUTION: Uncontrolled venting of water can occur with automatic air vents if foreign material prevents vent from closing. A No. 113023 overflow connector and 1/4" OD copper tube should be used to direct unwanted flow to a drain. Failure to follow these instructions could result in property damage and/or moderate personal injury.



CAUTION: Pipe compound can foul the air vent or vacuum breaker operating mechanism. Use pipe joint compound sparingly on male pipe threads only. Failure to follow these instructions could result in property damage and/or moderate personal injury.



CAUTION: Overtightening and breakage can occur with the use of teflon pipe joint compounds. Teflon provides lubricity so that care must be exercised not to overtighten joints. Failure to follow these instructions could result in property damage and/or moderate personal injury.



CAUTION: Venting hot water or steam can cause injury. When working near any air vent or vacuum breaker be careful not to get inline with vent connection. Failure to follow these instructions could result in property damage and/or moderate personal injury.

OPERATIONAL LIMITS

Model No.	Pressure psig (Bar)	Temperature °F (°C)
87	150 (10.3)	240 (116)
67	35 (2.4)	240 (116)
7	75 (5.1)	240 (116)
17Sr	30 (2.1)	225 (107)
17Jr	30 (2.1)	225 (107)
4V	150 (10.3)	250 (121)
26	2" Hg Vacuum to 150 (10.3)	240 (116)



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OPERATING INSTRUCTIONS

CAUTION: Dirt and scale from the system can foul the automatic air vent operating mechanism. On #7, #67 and #87 air vents keep vent cap closed tight during system filling to prevent dirt from running into valve vent mechanism. Failure to follow these instructions could result in property damage and/or moderate personal injury.

1. Automatic air vents can be used for automatically or manually venting hydronic systems. To manually operate the #7, #67 and #87 vents press down on the vent stem (tire type valve).

CAUTION: Hot venting water can be hazardous. Avoid contact with venting fluid and only manually vent when system temperature is below 100°F (38°C). Failure to follow these instructions could result in property damage and/or personal injury.

To shutoff #7, #67 and #87 vents so they can not vent automatically, (only those without overflow connector installed), screw cap on top of vent down tight. For normal automatic venting open cap only about one full turn so that there is a slow release of air. A fast release of air will allow dirt or scale to foul the vent mechanism. The small hole in the side of the cap allows air to escape with cap in place. When an overflow connector and tube to a safe drain is used, continuous automatic venting is provided.

2. The #4V coin operated air vent is a manual vent and is opened by the use of a coin or screwdriver inserted and turned in the slotted screw on top of the vent. The vent is opened and air bled off until water appears. Vent is then closed by securely tightening the vent screw.
3. The #17 Sr and #17 Jr automatic air vents are not float types and operate hygroscopically. Air is allowed to escape but water is not. Both vents have a manual venting feature which is operated by screwing the black plastic cap halfway up on the #17 Sr or by opening the screw in the center of the #17 Jr two turns maximum.

CAUTION: Hot venting water can be hazardous. Avoid contact with venting fluid and only manually vent when system temperature is below 100°F (38°C). Failure to follow these instructions could result in property damage and/or personal injury.

Screwing the black plastic cap on the #17 Sr all the way up cuts off manual venting but allows venting to continue. Turning the black plastic cap all the way down on the #17 Sr closes the vent to both automatic and manual venting. The automatic venting of the #17 Jr can not be shutoff. Manual venting is stopped by screwing down the center vent screw tightly.

4. The #26 vacuum breaker can be adjusted to open at any vacuum between 1/4" Hg and 20" Hg. This is accomplished by pulling off the brass cover and adjusting the position of the brass nuts. The top nut is a jam nut used for locking the set position. Threading the nuts down will increase the vacuum at which the vent opens and threading the nuts up will decrease the vacuum at which the vent opens. After adjustments are made make sure the jam nut is tightened against the spring nut so that it is locking the set position. Replace the protective cover.

SERVICE INSTRUCTIONS

There is no service required for any of the air vents or vacuum breaker.

CAUTION: Corrosion or leakage of vents or vacuum breaker can cause damage or injury. Periodically inspect the air vents or vacuum breaker for signs of leakage or corrosion. If noted the vent or vacuum breaker must be replaced. Failure to follow these instructions could result in property damage and/or moderate personal injury.

For further information, contact ITT Bell & Gossett, 8200 N. Austin Avenue, Morton Grove, IL 60053, Phone (847) 966-3700 – Facsimile (847) 966-9052.



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