Spence™ Venter NAV Series

Figure 1. *NAV Series Free-Floating Lever Air Vent*

Features

- **Automatic and Positive Vent –** Effectively provides automatic positive venting of air/gas under pressure.
- **Inexpensive –** Low maintenance and initial cost
- **Stainless Steel Body –** Durable heavy wall construction provides years of reliable service and resists corrosion and freezing.
- **Maintenance Free –** Sealed body design prevents tampering and no gaskets or adjustments are necessary.
- **All Stainless Steel Construction –** Long lasting, rugged, and corrosion resistant
- **Direct Lever Action –** Ensures proper seating under all operating conditions.

Introduction

The NAV Series air/gas vent is a float-type design capable of discharging air or gas in a pressurized liquid system. All components including sealed body, seat and valve are made of stainless steel and are available in NPS 1/2 or 3/4 / DN 15 or 20 inlet and NPS 1/2 / DN 15 outlet with NPT end connection.

Specifications

This section lists the specifications for the NAV Series. Factory specifications are stamped on the nameplate fastened on the steam trap at the factory.

Available Configuration
NAV Series: Free-Float Air/Gas Vent

Body Size
Inlet: NPS 1/2 or 3/4 / DN 15 or 20
Outlet: NPS 1/2 / DN 15

End Connection Style
NPT

Orifice Size
1/8, 3/32 and 5/64 in. / 3.18, 2.38 and 1.98 mm

Maximum Operating Pressure[1]
See Table 1

Maximum Allowable Pressure[1]
400 psig / 27.6 bar

Maximum Allowable Temperature[1]
500°F / 260°C

Materials of Construction
Body, Connectors, Float, Lever and Bracket
Clip: 304 Stainless steel
Valve and Valve Seat: Hardened chrome steel

Applications
For hot or cold water and non-viscous liquid systems
For the removal of air and other gases from hydronic heating, cooling systems, liquid chilling operations and other light liquid services

1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.

TYPE		INLET SIZE	OUTLET SIZE	ORIFICE
NAV - VENTER SERIES	-	1 = NPS 1/2 / DN 15 2 = NPS 3/4 / DN 20	1 = NPS 1/2 / DN 15	1 = 1/8 in. / 3.18 mm 2 = 3/32 in. / 2.38 mm 3 = 5/64 in. / 1.98 mm

Example:

N	A	V	-	2	1	1

Type NAV-211 is a free-floating lever air venter with NPS 3/4 / DN 20 inlet size, NPS 1/2 / DN 15 outlet size and 1/8 in. / 3.18 mm orifice.

Figure 2. *Venter NAV Series Ordering Code*

Table 1. *Maximum Operating Pressure*

ORIFICE SIZE		MAXIMUM OPERATING PRESSURE	
In.	mm	psi	bar
1/8	3.18	175	12.1
3/32	2.38	300	20.7
5/64	1.98	400	27.6

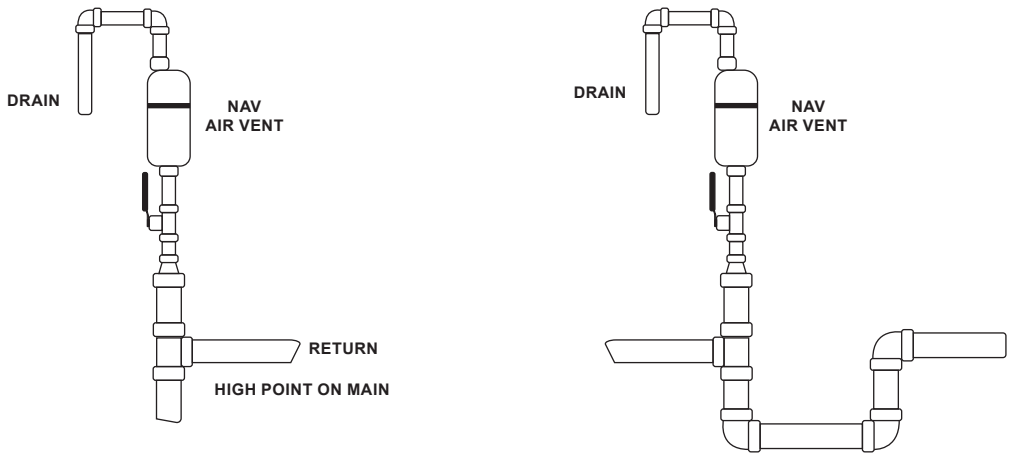

Figure 3. *Venter NAV Series Installations*

Principle of Operation

The NAV Series air/gas vent allows the removal of air/gas from a pressurized liquid system. The float and lever-operated design provides instantaneous and automatic adjustment to variations in flow and pressure. The valve is closed in the presence of liquid. As air/gas enters the bottom of the vent, the float begins to drop and open the valve. When air is removed, it lifts back up to close off the valve. This cycle repeats as more air/gas builds up.

Installation

1. Properly clean all piping before installing the Venter NAV Series. Clean the pipes by flushing to remove loose dirt. A strainer in the line leading to the air vent is recommended for dirty systems.
2. Ensure that Venter NAV Series is properly sized and located in the system. The inlet piping should be the same size as the piping connection on the body and a full-port isolating valve should be installed upstream of the air vent.
3. Place the Venter NAV Series at a high point in the system or vessel where air can collect.
4. Install the air vent in level, vertical and with the inlet at the bottom. Make sure that the air vent is mounted in the proper direction with the flow arrow pointing upward. This will allow the float mechanism to operate properly.
5. Install gate valves or full ported ball valves so the Venter NAV Series can be isolated from the system to permit servicing. Do not use globe valves.
6. Pipe the discharge to a safe visible point or drain via air break.
7. Use pipe dope or piping tape springly and on male threads only. Leaving the end thread exposed to avoid introducing sealant into the system.
8. Use only the hex-shaped fitting as wrenching surfaces when tightening a pipe into either the inlet or the outlet fittings of the Venter NAV Series. Do not use the venter body for a wrenching surface to screw the venter into position.
9. Install Uniflex union pipe couplings if the venter is installed in a closed piping arrangement.

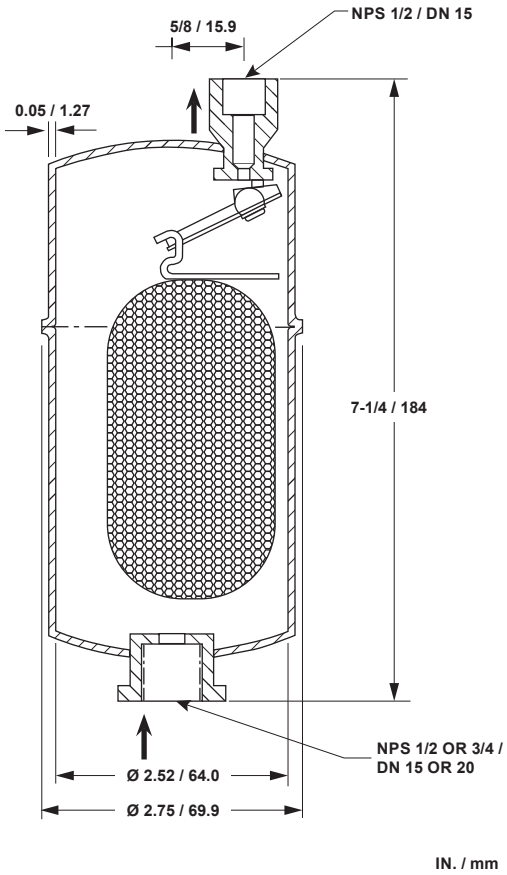

Figure 4. *NAV Series Dimension*

Ordering Information

When ordering, complete the ordering guide on this page. Refer to the Specifications section on page 2.

Review the description to the right of each specification and the information in each referenced table or figure. Specify your choice whenever a selection is offered.

Ordering Guide

Inlet Size (Select One)
- ☐ NPS 1/2 / DN 15
- ☐ NPS 3/4 / DN 20

Orifice Size (Select One)
- ☐ 1/8 in / 3.18 mm
- ☐ 3/32 in / 2.38 mm
- ☐ 5/64 in / 1.98 mm

SpenceValve.com

Emerson

Americas
McKinney, Texas 75069 USA
T +1 800 558 5853
+1 972 548 3574

Europe
Bologna 40013, Italy
T +39 051 419 0611

Asia Pacific
Singapore 128461, Singapore
T +65 6777 8211

Middle East and Africa
Dubai, United Arab Emirates
T +971 4 811 8100

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