

November 2021

Spence Drain Air



Figure 1. Drain Air

Features

- **Automatic and Positive Drain** — Effectively removes condensate from compressed air systems with minimum air loss and rapid shutoff on no load conditions.
- **Reliable** — Only one moving part.
- **Low Maintenance Cost** — No adjustments necessary. Replaceable cartridge for in line repair and/or cleaning.
- **Long Service Life** — Stainless Steel internals.
- **Freezeproof** — Will not freeze when installed in vertical position with muffler removed.
- **Quiet Operation** — Meets OSHA noise standards.
- **Simplifies Startup** — No need to drain air lines through manual valves or petcocks. Top performance is reached without waiting for system to purge.
- **Sized for Most Applications** — available in NPS 3/8 and 1/2 / DN 10 and 15.

Introduction

The liquid drain trap is thermodynamically designed with screwed NPT connections. It effectively removes condensate from compressed air systems with minimum air loss and rapid shutoff.

Drain Air

Specifications

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

Available Configuration

Drain Air: Forged body with Stainless steel internal mechanism and nylon muffler

Body Size

NPS 3/8 and 1/2 / DN 10 and 15

End Connection Style

NPT

Maximum Operating Pressure⁽¹⁾

600 psig / 41.4 bar

Maximum Operating Temperature⁽¹⁾

200°F / 104°C

Maximum Allowable Pressure⁽¹⁾

600 psig / 41.4 bar

Maximum Allowable Temperature⁽¹⁾

800°F / 426°C

Capacity Information

See Figures 2 and 3

Materials of Construction

Body and Cover: Forged Steel

Cartridge: 416 Stainless Steel with hardened disc and seat

Bolts: High temperature alloy

Cover Gasket: Stainless steel spiral-wound with graphite filler

Integral Strainer: 304 Stainless Steel

Muffler: Nylon Housing, Aluminum

Applications

Air Header Drainage (pocket risers, end of line)

Air Station or Location where petcock is used for blowdown, collecting wells and separators.

Approximate Weight

2.3 lbs / 1.04 kg

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

Principle of Operation

A disc is used with no linkage or close fitting parts to eliminate problems found in ordinary small float or piston-operated devices used in drip legs on air lines. Disc will lift off seat on a periodic time cycle, allowing moisture to be discharged and atomized through the muffler. Positive action of the disc assures reliable condensate removal with minimum loss of air and rapid shutoff on no load condition. Intermittent discharges atomize condensate to avoid messy accumulations produced by other devices. Highly effective, specially designed muffler eliminates noise and diffuses moisture so that discharge drain piping is usually unnecessary. Freeze proof when mounted in vertical position with outlet facing down and muffler removed.

Installation

1. Install Drain Air at lowest point of equipment or line in vertical position with outlet facing down. Arrow on body bottom shows flow line, see Figure 4 for typical installations.
2. Install muffler in Drain Air outlet, hand tight.

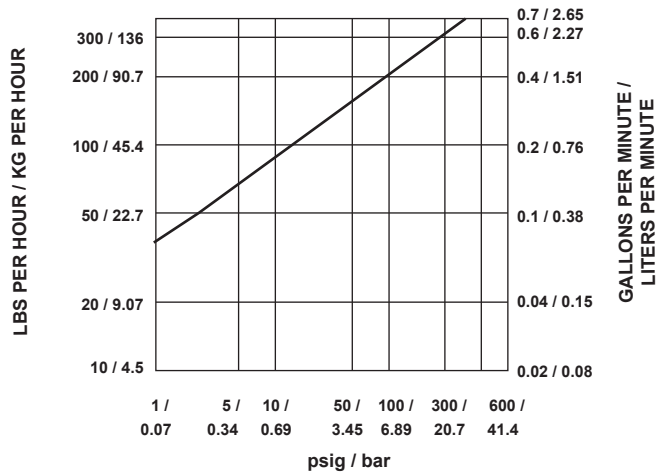


Figure 2. Drain Air Discharge Capacity

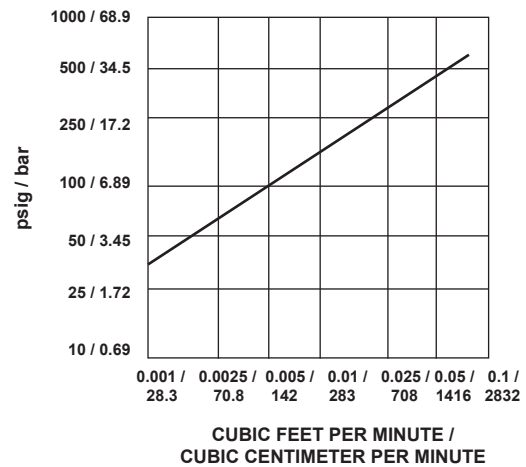


Figure 3. Air Loss - No Load Condition

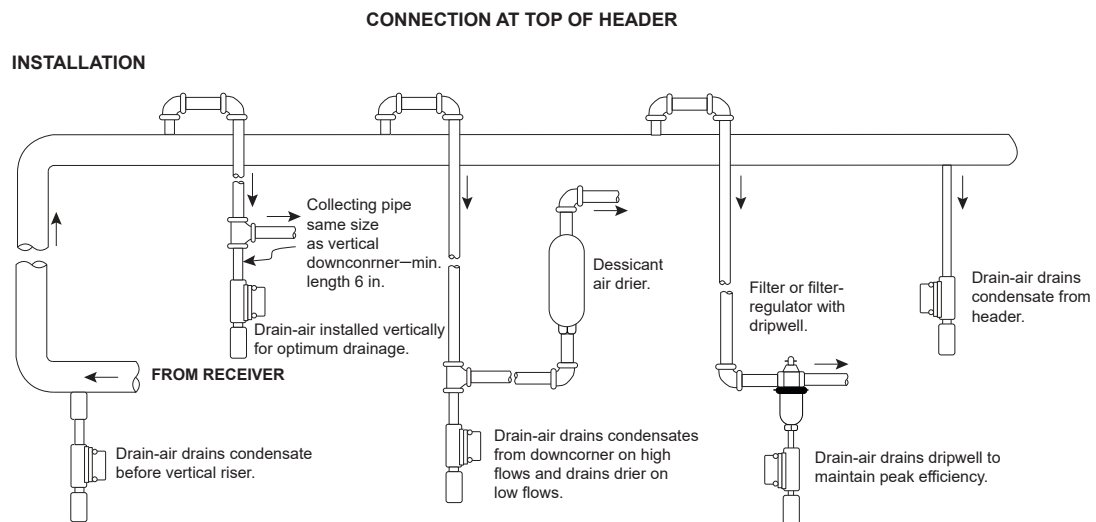


Figure 4. Typical Installations of Drain Air

Drain Air

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

Drain Air Body Size (Select One)

- ☐ NPS 3/8 / DN 10
- ☐ NPS 1/2 / DN 15

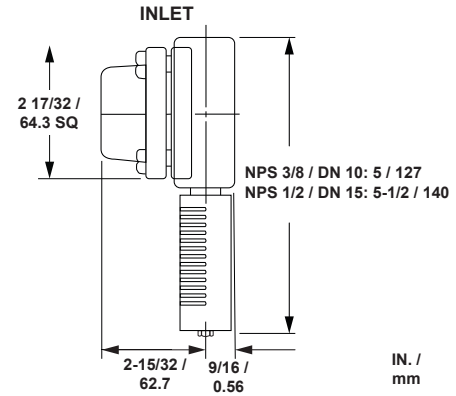


Figure 5. Dimension

 [SpenceValve.com](https://www.SpenceValve.com)

 Sales@SpenceValve.com

Emerson Automation Solutions

Americas

McKinney, Texas 75070 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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