

NEGATIVE PRESSURE AUTODRAIN

PRODUCT DATA SHEET—102

Continuous inline drainage of accumulated liquids
For solvent-based processing systems

Introduction

The Neutronics Negative Pressure Autodrain is a preconditioning component designed to handle accumulated liquids in the gas sampling line and other components. Large amounts of particulate matter and condensate will often overload standard inline filters and components, causing sample flow loss, system alarms, and high maintenance frequency. The Autodrain provides continuous maintenance-free draining of liquids accumulated in the sampling line and other sample conditioning components such as the Neutronics Coalescing Prefilter (ref. PDS-101), Spray Scrubber (ref. PDS-104) and Liquid Trap (ref. PDS-107). Condensate drain traps are the accepted industry standard for evacuating condensate without allowing the inflow of ambient air.

Operation

Designed for systems operating at negative pressures, the Autodrain serves as a liquid-seal drain trap, preventing the inflow of ambient air. Improper trapping leads to several problems. If the trap isn't tall enough, the liquid seal won't hold and air will be drawn in through the drain into the Negative Pressure Autodrain. If the trap is too tall, the negative pressure will prevent drainage, causing the liquid to back up into the system. Proper design, installation, and maintenance will ensure trouble-free service.

Installation

To prevent accumulated liquid from being drawn into the sample line by the negative system pressure, the Autodrain must be vertically mounted at least 60 inches (1524 mm) below the sample line. This distance is based on the 55" WC vacuum draw created by the Neutronics aspirator sample pump. The Autodrain may be used to drain up to two liquid sources on the sampling line when configured with two separate inlet ports. Additional piping must be installed on the overflow connection and piped to a suitable drain or returned to the process vessel. Prior to start-up, the Autodrain must be filled to the overflow port with water or liquid.

Maintenance

The sight tube provides easy liquid level verification. Proper maintenance requires periodic inspection and refill of the liquid. The fill port is located on top of the upper sight tube fitting.



Features

- Automatically drains off accumulated condensate and liquids from other preconditioning components
- Prevents the inflow of ambient air from contaminating the sample gas stream – increases system reliability
- Liquid level sight tube simplifies routine inspections – easy to maintain
- Overflow port provides protection against over-filling – simple to use
- Designed to drain up to two liquid sources in the sampling system
- Corrosion resistant materials of construction – available in Stainless steel, Hastelloy, Kynar, Polypropylene, or Teflon

NEGATIVE PRESSURE AUTODRAIN — SPECIFICATIONS

Materials of construction

Stainless steel, Hastelloy, Kynar, polypropylene or Teflon

Sight tube

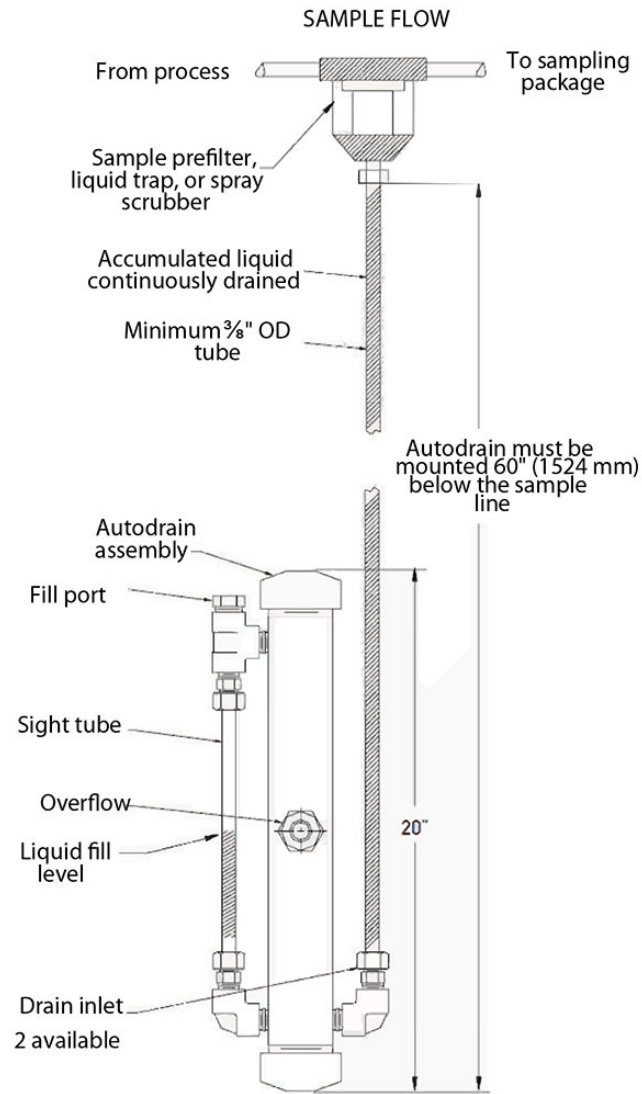
Teflon

Piping inlets

(2)1/2" NPT

Piping outlets

(1)1/2" NPT



Order information

Part No. 6-02-1000-44-0

Negative pressure autodrain

Stainless steel

Part No. 6-02-4000-69-0

Negative pressure autodrain

Hastelloy

Part No. 6-02-1000-44-1

Negative pressure autodrain

Kynar

Part No. 6-02-1000-44-4

Negative pressure autodrain

Polypropylene

Part No. 6-02-1000-44-5

Negative pressure autodrain

Teflon



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