

# COALESCING PREFILTER

PRODUCT DATA SHEET—101

Coalescing sample filter with replaceable element  
 For solvent-based or powder processing systems

## Introduction

The Neutronics Coalescing Prefilter is a preconditioning sample filter designed for installation upstream of a Neutronics Sample Conditioning Package. Large amounts of particulate matter and entrained mists in the sample gas stream will often overload standard inline filters, causing sample flow loss, system alarms, and high maintenance frequency. This coalescing type prefilter provides the required particulate and mist removal in harsh process applications, ensuring trouble-free operation, reducing maintenance, and increasing reliability.

## Operation

The prefilter consists of a cartridge type filter element and a heavy-duty filter bowl for liquid and particulate removal. For solvent applications, the sample gas passes through the filter element in an inside-out flow direction. This allows droplets to form and drip into the filter bowl, away from the sample stream. For powder processing systems, an outside-in flow configuration is used, allowing the particulate to accumulate on the outside of the filter. The microfiber filter element combines excellent filtration performance with high stability, exceptional dirt and liquid holding capacity, and high flow rates with low pressure drop.

## Installation

The prefilter must be mounted in a vertical and upright position at a low point in the sample line between the process system and the sample conditioning package. For applications with condensable vapors in the gas sample stream, the prefilter should be installed with the inside-out flow direction. For applications with dry particulate in the gas stream, the outside-in flow direction configuration is recommended. There are two outlet piping configurations for the drain port. For positive pressure applications, a drip leg and ball valve must be installed on the drain port to ensure sufficient backpressure for the sample flow. When a moderate amount of liquid is expected, a sight glass or reservoir should be installed between the prefilter and the ball valve. For vacuum applications, a Negative Pressure Autodrain (ref. PDS-102) must be installed on the drain port to provide maintenance-free continuous drainage and to prevent ambient air from entering the system and contaminating the sample stream.



## Maintenance

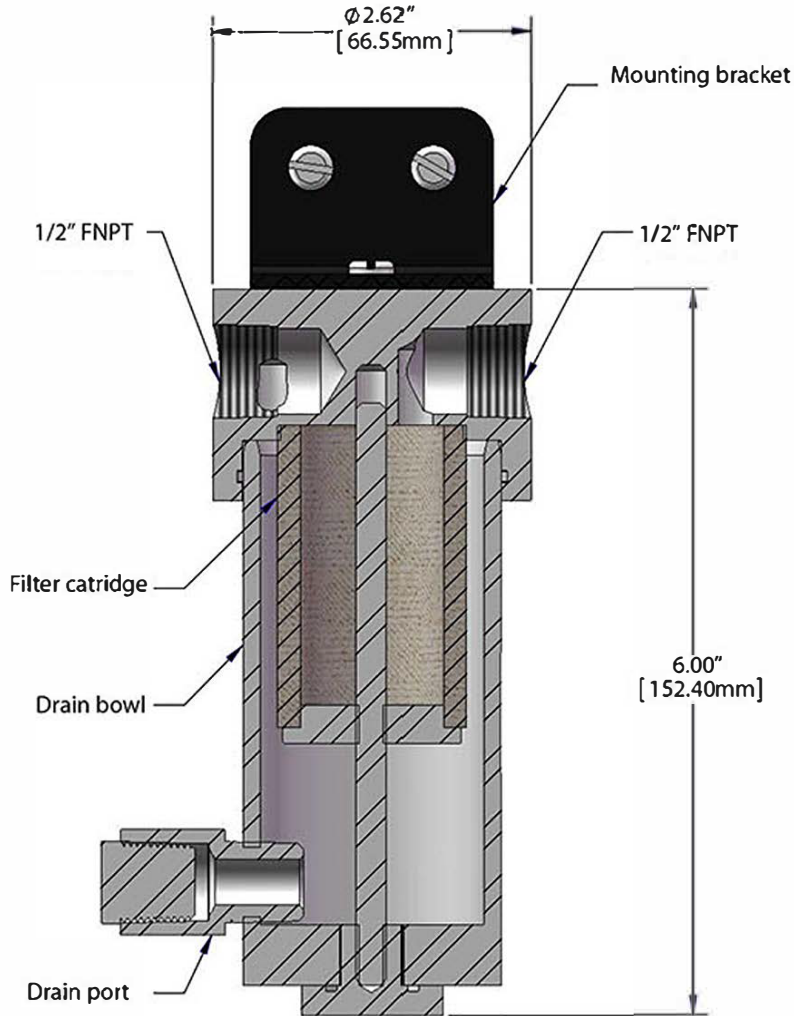
The prefilter requires periodic inspection. The filter should be replaced when dirt and residue are visible. To access the filter, remove the locknut and O-Ring on the bottom of the filter bowl. Twist the filter bowl to remove it from the filter head. The prefilter requires periodic inspection. The filter should be replaced when dirt and residue are visible. To access the filter, remove the locknut and O-Ring on the bottom of the filter bowl. Twist the filter bowl to remove it from the filter head.

## Features

- Removes entrained mists and particulate from sample gas streams for improved system reliability
- Replaceable microfiber filter provides excellent chemical and temperature resistance -- suitable for a broad range of applications
- Thick walled filter cartridge delivers improved coalescing efficiency – improves sampling system performance
- Easy to use – simple filter bowl removal minimizes maintenance costs and unplanned downtime
- Corrosion resistant materials of construction – available in Stainless steel or Kynar

# COALESCING PREFILTER — SPECIFICATIONS

Materials of construction	316 Stainless steel or Kynar
O-Ring seals	Viton, EPDM or Kalrez
Filter element	3.5" DX grade disposable cartridge
Filter efficiency	93% @ 0.1 micron



## Spare parts

Part No. 4-05-2700-02-0	Filter element
Part No. 4-04-4060-07-0	Filter head O-Ring
Part No. 4-04-4000-44-0	Filter bowl locknut O-Ring

## Order information

Part No. 6-02-4000-22-0	Coalescing prefilter	316 Stainless steel/Viton
Part No. 6-02-4000-22-9	Coalescing prefilter	316 Stainless steel/EPDM
Part No. 6-02-4000-79-0	Coalescing prefilter	316 Stainless steel/Kalrez
Part No. 6-02-4000-18-0	Coalescing prefilter	Kynar/Viton



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