

INACOM INSTRUMENTS

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Magazine

Great Fluidic Solutions

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© Thomas Landén

FULL STAND ALONE DEGASSING SYSTEMS

- prevent bubble formation in your Fluidic System with BIOTECH DEGASi line of Degassers.

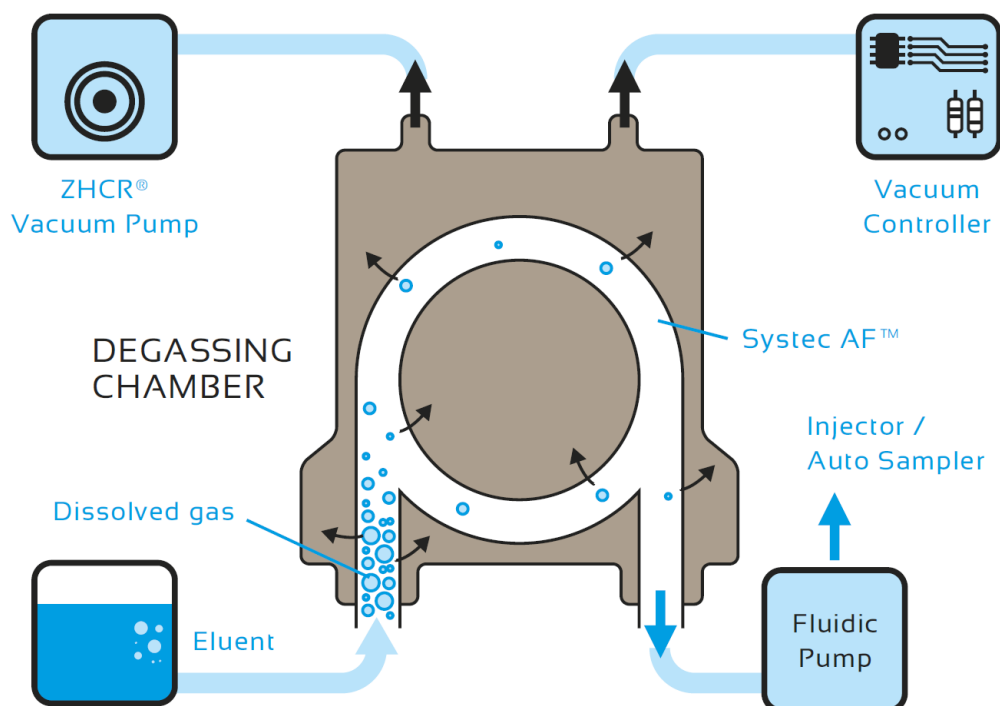


- Analytical and Prep scale models
- Ultra-high degassing efficiency
- Low volume, easy to prime
- Patented corol eliminates baseline fluctuations
- Inert flow path
- 5+ year lifetime

The critical component of the vacuum degasser is a short length of Systec AF™ tubing through which the solvent flows. This tubing is located in a chamber where a partial vacuum is maintained by a vacuum pump that is constantly running at a low speed. Dissolved gasses migrate across the tubing wall under a concentration gradient produced by the vacuum as the solvent flows within the tubing in accordance with Henry's law. The gasses are expelled from the system and the chamber is maintained at a constant, preset vacuum level by vary-

ing the vacuum pump speed as needed. A special port in the vacuum pump continually flushes the pump head with a small "bleed" of air to remove any solvent vapors which may enter the pump from the vacuum chamber. This air bleed eliminates the need for any solenoid valves within the system. This patented design results in zero vacuum "hysteresis". It is not necessary to totally eliminate the dissolved gas, it only needs to be reduced to a concentration that is below the saturation point of the mixture. Typically, ~50% must be removed.

DEGASSING EXPLAINED



THE PRINCIPLE OF OUR DEGASi®-LINE Dissolved gasses are actively removed from a flowing liquid stream by vacuum via the Systec AF™ membrane.

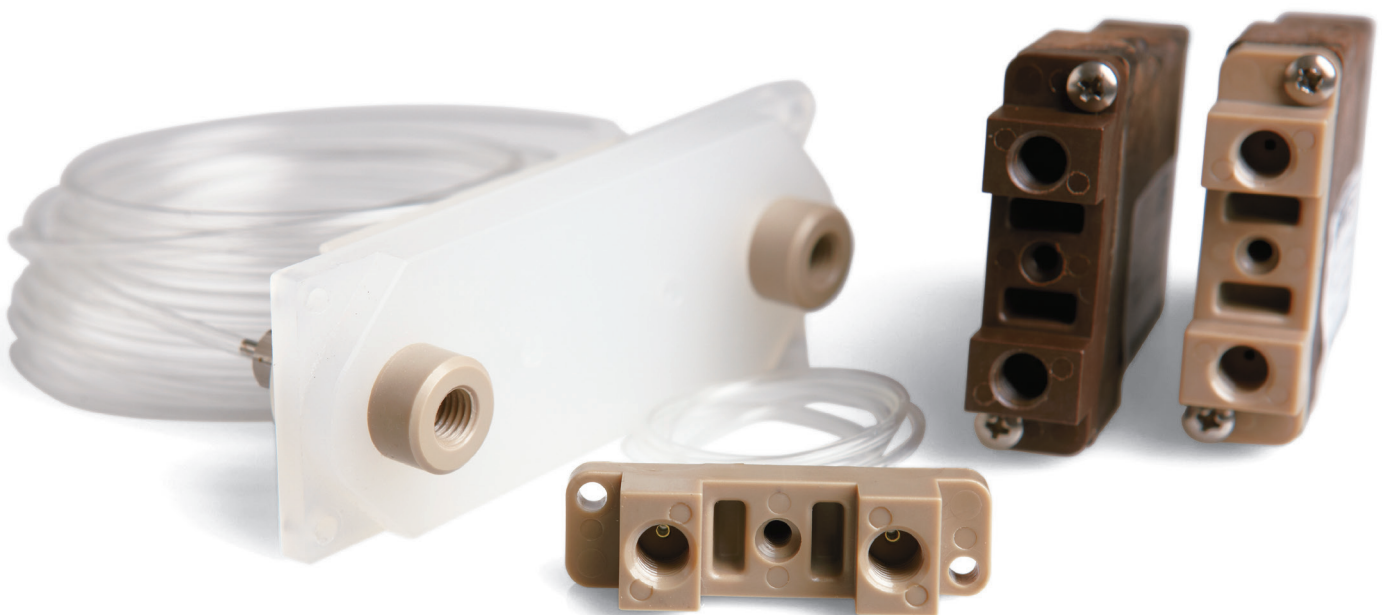
THE DEGASSING CHAMBER THE HEART OF OUR DEGASi®-LINE

THE SECRET REVEALED

The Systec AF™ membrane is an essential part of the degassing process. Systec AF™ consists of an amorphous perfluorinated copolymer. Through the highly permeable membrane the dissolved gasses are removed, by applying vacuum on the outside of the membrane, while the liquid stays on the inside.

The flow path is inert and most of our different degassing chambers have a biocompatible flow path. Every vacuum chamber is manufactured with the highest quality and tested individually to ensure top-of-the-line performance.

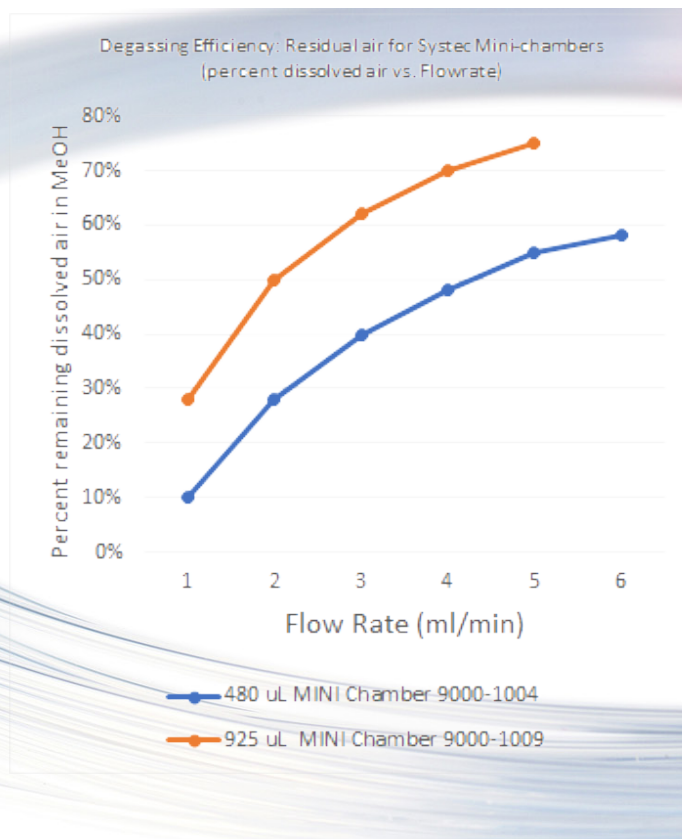
Depending on your needs regarding conditions such as type of solvents and flow rates, we can help you determine the size of the vacuum chamber that will be optimal for your application.



SYSTEC AF™ MEMBRANE

The new Systec AF™ membrane is 50x more permeable and outperforms the older Teflon® PTFE membranes used in many other degassing systems today. This translates into the ability to use shorter tubing for removal of dissolved gasses.

- Ultra-high degassing efficiency
- Low volume
- Considerably shorter equilibration times
- Very easy to prime
- Short vacuum pull-down times, typically 30 seconds
- Single lumen design for consistent degassing
- Inert flow path
- Excellent chemical compatibility flow path
- Long lifetime



DEGASi PLUS CLASSIC



This is the first choice for most applications in analytical instrumentation and chromatography. This state-of-the-art stand alone degasser will provide you with trouble free and efficient degassing day after day.

DEGASi PLUS PREP+



DEGASi PREP+ uses a revolutionary new technology that makes it possible to degass organic solutions with higher flows in a cost effective manner. That means you can get increased capacity at a lower price.

DEGASi® PREP+ is a perfect choice for efficient degassing of many types of liquids at high flow rates, up to 75-100 ml / min per chamber.

DEGASi PLUS MICRO



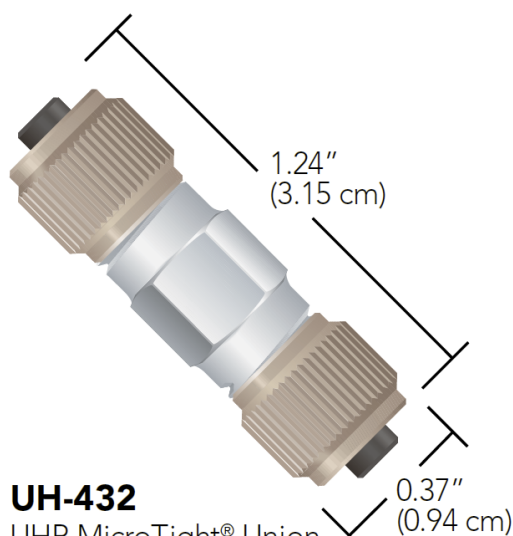
Are you working with very low flow rates? Do you want to minimize the dead volumes inside your system? Then DEGASi® MICRO is your number one choice of degasser. With only 100 µl internal volume you minimize the internal volume while still keeping excellent degassing efficiency up to approximately 0.5 ml/min.

MICROFLUIDIC CONNECTIONS

VHP MicroTight® Unions

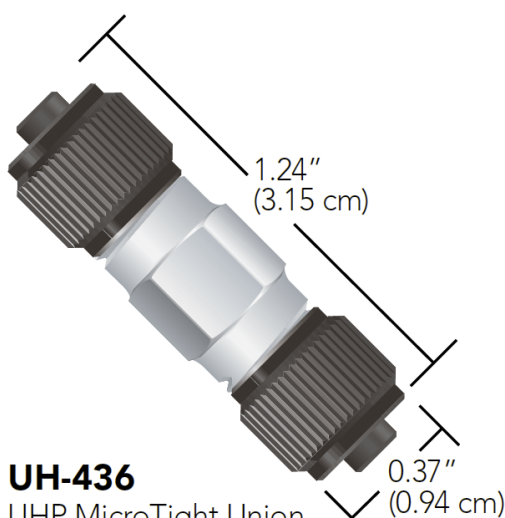


Two of these products — the UH-432 and UH-436 — follow the design of our popular Mini MicroFilters and allow a convenient union between either 1/32" OD tubing or 360 µm OD tubing. Each features a stainless steel union body and a unique stainless steel union capsule, enabling both excellent chemical compatibility as well as conductivity, making these a great choice for electrical interfacing in certain LC-MS applications. Each is also coupled with direct-connect ferrules made from our proprietary PEEK polymer blend (PK), allowing tubing connections up to 15,000 psi (1,034 bar).



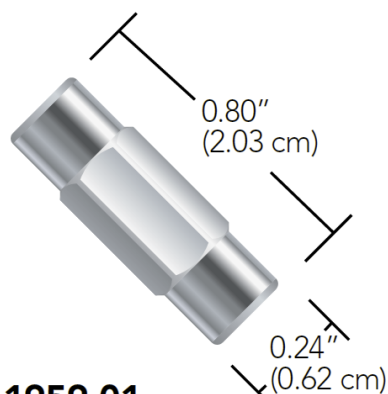
UH-432

UHP MicroTight® Union for 1/32" OD tubing with fittings and capsule union included



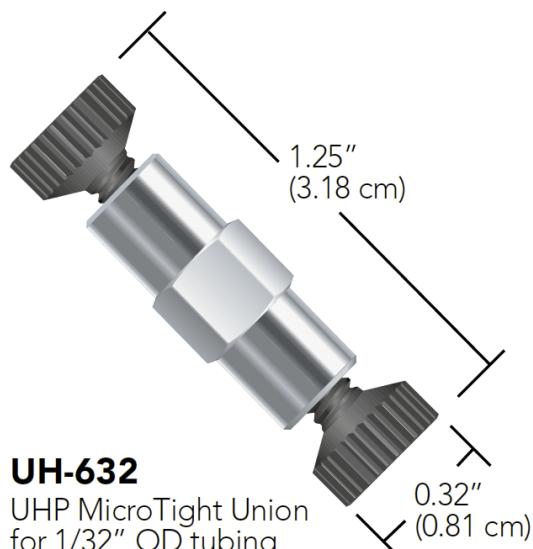
UH-436

UHP MicroTight Union for 360 µm OD tubing with fittings and capsule union included



1959-01

UHP MicroTight® Union for 1/32" OD tubing

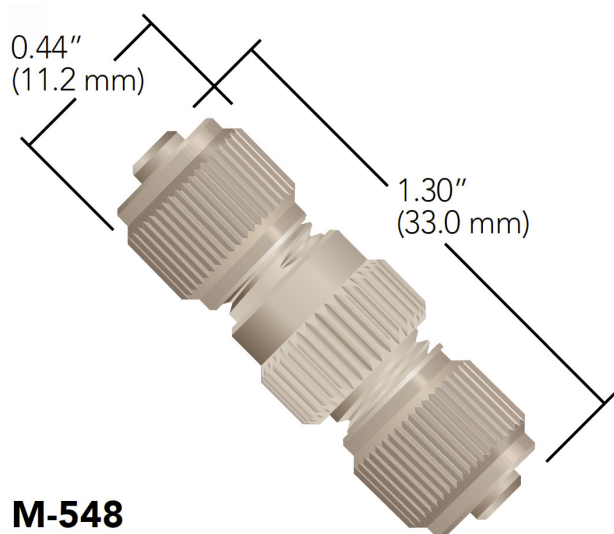


UH-632

UHP MicroTight Union for 1/32" OD tubing with fittings included

Mini MicroFilters

Our Inline Mini MicroFilter Assemblies filter effectively with internal volumes low enough to ensure reliable chromatographic results — even at nanoliter per minute flow rates! Internal volumes of these encapsulated filters are as low as 85 nL with the micro-screen and 10 nL to 22 nL with the frit disc option..



SPECIFICATIONS & DETAILS

Because of the size-specific nature of the ferrules included with each Mini MicroFilter assembly, please note that these ferrules are not interchangeable with other Micro-Ferrules for different tubing sizes.

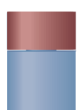
M-548

Mini MicroFilter Assembly

Filter Capsule Color Identification



M-121



M-125



M-128



M-131

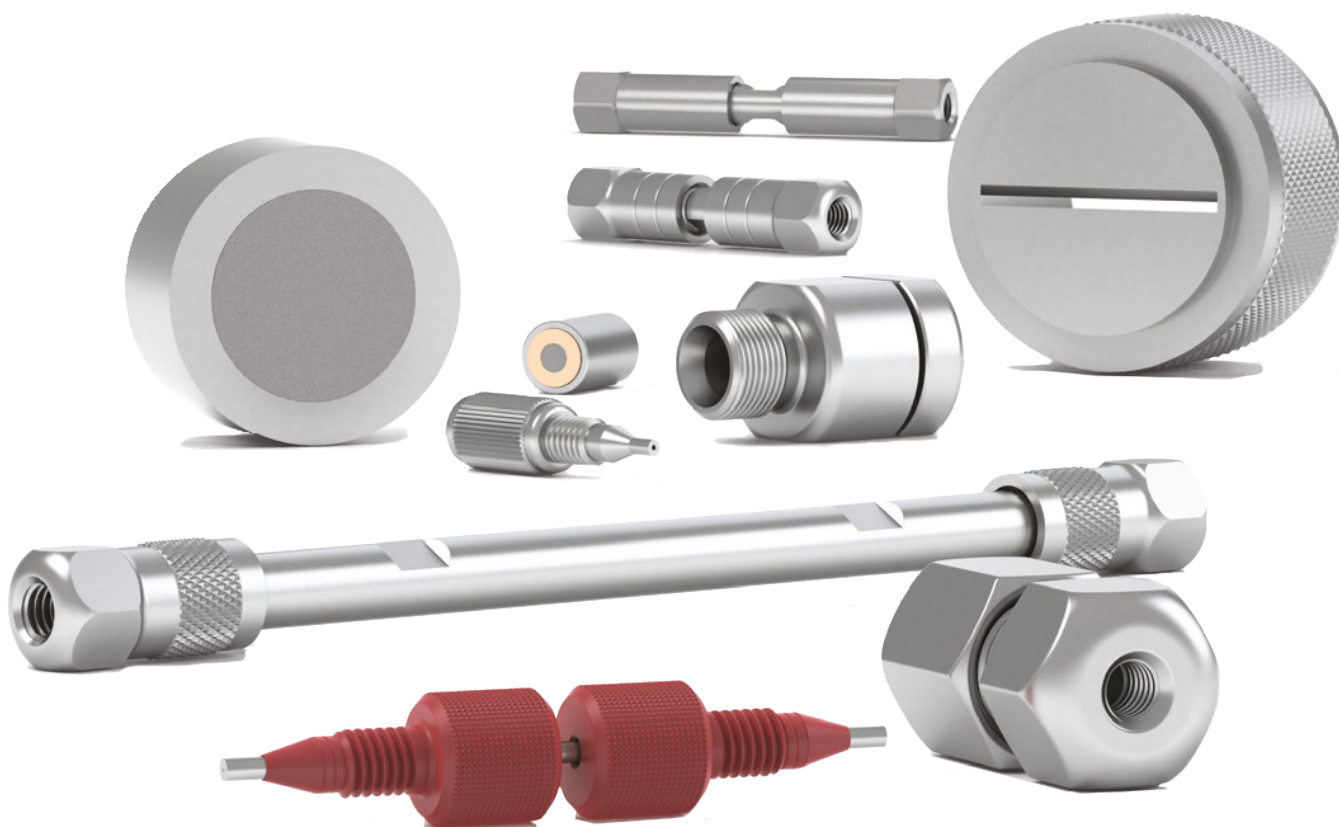


M-133

What's the Difference Between Precolumn & Inline Filters?

You may have noticed that the bodies of Precolumn and Inline Filters look similar, and as such, you may have wondered what the differences are. Because Precolumn Filters, by definition, are typically placed in a volume-sensitive area immediately preceding the column, these filters usually feature smaller thru-holes and smaller frit diameters. In contrast, Inline Filters are often placed where the internal volume is not as critical and where longer life and less fluid restriction is more important.

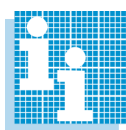
COLUMN HARDWARE



We offer an extensive line of HPLC and UHPLC Column Hardware that has been optimized to enable selectivity, efficiency, and high-quality separation performance in your flow paths. To browse the full line of our column hardware portfolio please visit: www.biotechfluidics.com/products/column-hardware/.

- Biocompatible materials for LC and UHPLC columns
- Accessories for column protection and packing.

Our line of column hardware includes protective accessories and connection products that enhance column functionality. Our columns come in a variety of sizes and materials to meet your system requirement.



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