

Systec® Debubbler Series

For Instrument Manufacturers

Remove bubbles, dissolved gas, or both!

Dissolved gases and bubbles in system liquids cause dispense volume anomalies in many instruments, negatively affecting both dispense precision and analytical accuracy. Now you have a choice of components for actively removing bubbles with or without also removing dissolved system gases. Online Vacuum Degassing offers operating convenience, high efficiency and low operating costs compared to other common degassing technologies.

Active Debubbler

In many low-pressure systems, such as diagnostic instruments, bubbles in the fluid stream can cause false detection readings and dispense anomalies. For these systems, the Systec® Active Debubbler captures and removes bubbles before they can affect the instrument or the results.

Degasser/Debubblers

For dispensing applications, removing both bubbles and dissolved gases from the flow path improves dispense precision and accuracy and enhances overall system performance. By combining vacuum degassing with active bubble removal, the Systec® Degasser/Debubblers both eliminate existing bubbles and actually prevent the formation of new bubbles by removing the dissolved gases before they can nucleate and cause problems.

Transfer-Line Degasser

In instruments where keeping the lowest internal volume is critical, a debubbler may not be the optimal choice. In these cases, it is possible to prevent bubble formation by degassing the system fluid in the transfer tubing itself. The Systec® Transfer-Line Degasser employs a unique co-axial approach to remove dissolved gases before they can form bubbles and affect critical results.



Precision Engineered Fluidics™

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INNOVATIVE LABORATORY
PRODUCTS

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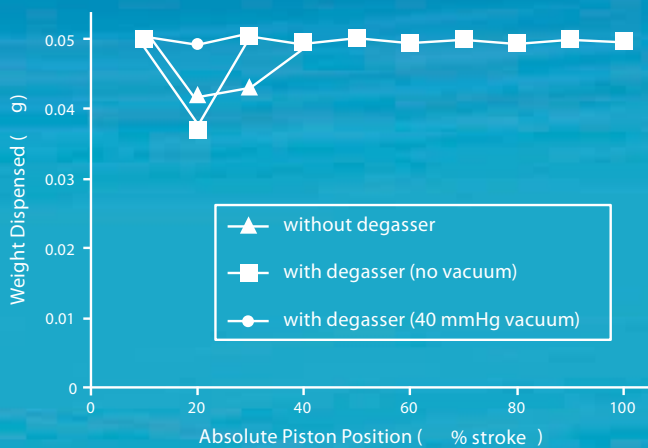
Website NEW : www.chromalytic.com.au E-mail : info@chromtech.net.au Tel: 03 9762 2034 . . . in AUSTRALIA

Debubbler Technical Data

- ▶ Standard Bubble Trap Sizes:
5 mL, 2.5 mL, and 0 mL (no bubble trap)
- ▶ Transfer Line Length:
2.5 mL size: 488.95 mm (19.25 in)
5.0 mL size: 977.9 mm (38.5 in)
- ▶ Debubbling / Degassing Membrane:
Proprietary Debubbling Membrane (chemical resistance similar to PTFE) or Teflon[®] AF
- ▶ Wetted Materials:
ETFE, Ultem[®], Debubbling Membrane or Teflon[®] AF
- ▶ Internal Volume:
1.1 mL in transfer line + bubble trap volume
- ▶ Liquid Connection:
3.18 mm (0.125 in) OD ETFE Tubing
- ▶ Vacuum Connection:
Barb-type fitting for 1.57 mm (.062 in) ID tubing
- ▶ Pressure Drop:
0.8 mm Hg / mL / min (assumes laminar flow and viscosity of 1 cP)
- ▶ Max Bubble Capacity:
2.5 mL or 5 mL depending on size of bubble trap



Effect of Degassing on Dispense Accuracy



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U.S. Patents Pending.
Created 7/07



ISO 9000:2001
FM 69754

Installation of the Active Debubbler 9000-1540 and 9000-1541

The unit must be mounted with the vacuum fitting toward the top in a completely vertical orientation or at an angle no greater than 45° from vertical. Flow is intended to enter at the top of the unit (nearest the vacuum port) and exit the bottom. Debubbler can be installed before or after a pump.

Note: For post pump pressure see Maximum Operating Pressure below.

A vacuum source (minimum 16 kPa absolute) such as the Systec SST pump (9000-1585) is required.

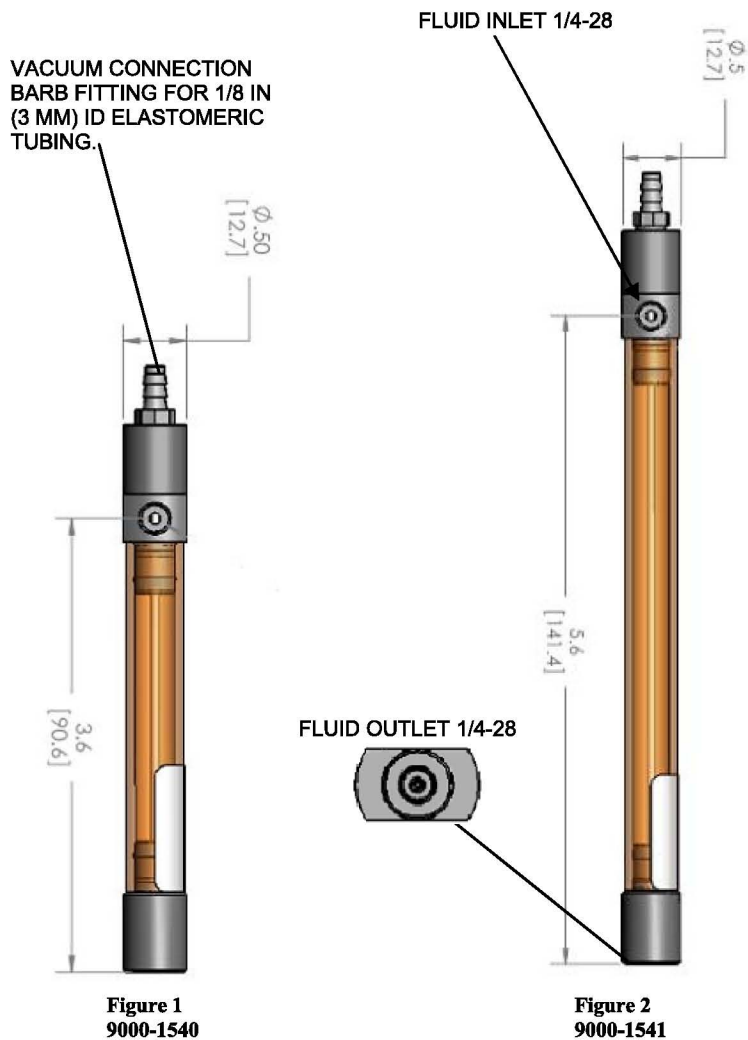
1. Connect a 1/8 inch (3 mm) ID elastomeric tube to barbed vacuum connection. (See Figure 1).
2. Then, connect your inlet fluid line into the horizontal 1/4-28 port. (See Figure 2).
3. Connect your outlet fluid line into the 1/4-28 port. (See Figure 2).

Maximum Operating Pressure:
200 kPa (30 psi) @ 25°C

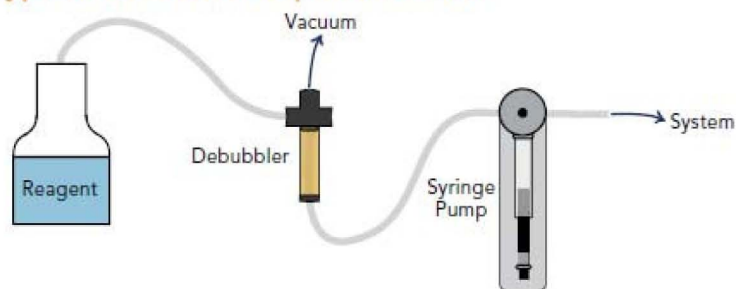
Bubble removal:
9000-1540—20 cc/min
9000-1541—30 cc/min

Compatible with aqueous salts, acids, and bases without detergents. For other solutions containing organics contact IDEX H&S.

Technical Support
Call +1-707-588-9000



Typical Debubbler Implementation



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