

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. Unlike passive bubble traps where bubble removal is dependent on backpressure, the Active Debubbler can be installed before or after a pump and provides consistent debubbling regardless of the system conditions.

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.



Transfer-Line Degasser

Active Debubbler

Debubbler/Degasser

Debubbler Technical Data

Debubbling / Degassing Membrane:

- ▶ PORIDEX™ (chemical resistance similar to PTFE)

Wetted Materials:

- ▶ ETFE, Ultem®, PORIDEX, polyethylene

Liquid Connection:

- ▶ 3.18 mm (0.125") OD ETFE Tubing

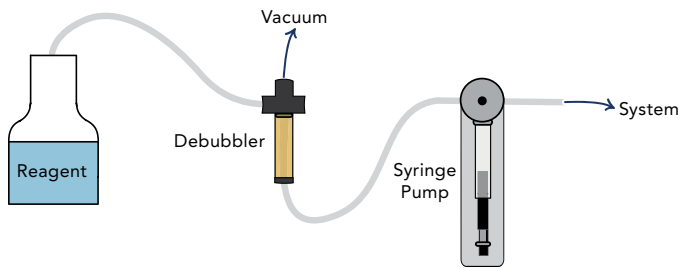
Vacuum Connection:

- ▶ Barb-type fitting for 1.57 mm (0.062") ID tubing

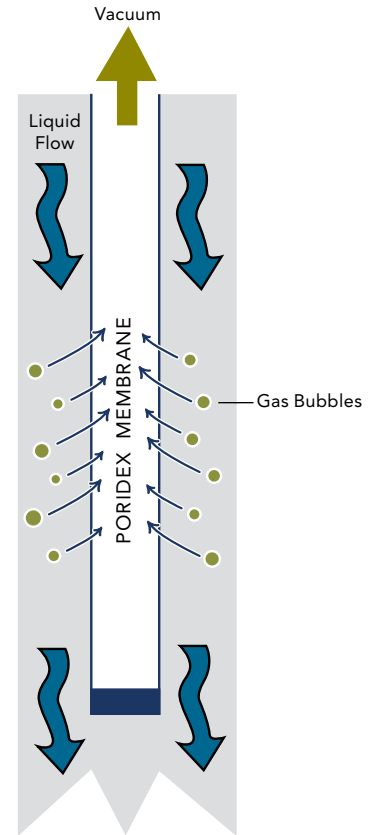
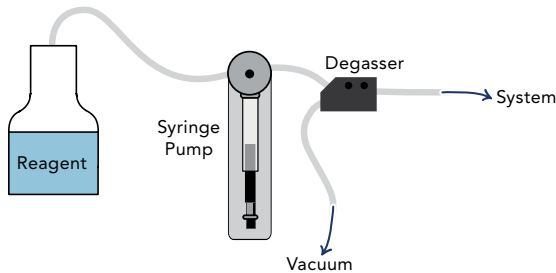
Max Pressure:

- ▶ 0.7 MPa (100 psi) @ 25 C

Typical Debubbler Implementation



Transfer-Line Degasser Implementation



Gas bubbles are actively removed from a flowing liquid stream by vacuum via the PORIDEX membrane.

Available Standard Configurations

Systec Part Number	Description	Standard Bubble Trap Size	Transfer Line Length	Internal Volume	Max Bubble Capacity
9000-1540	2.5 mL Active Debubbler	2.5 mL	-	2.5 mL	2.5 mL
9000-1541	5 mL Active Debubbler	5 mL	-	5 mL	5 mL
9000-1544	2.5 mL Debubbler/ Degasser	2.5 mL	430 mm (17 in)	2.5 mL in transfer line + 2.5 mL in bubble trap	2.5 mL
9000-1545	5 mL Debubbler/ Degasser	5 mL	850 mm (33.5 in)	5 mL in transfer line + 5 mL in bubble trap	5 mL
9000-1549	1.1 m Transfer-Line Degasser	-	1.1 m (43 in)	4 mL	N/A

Specifications are subject to change without notice.

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SYS: 500-01/2009