



**WHITE KNIGHT®**

.....engineer approved™

# CBA SERIES DEBUBBLERS

## Remove Bubbles from Chemical Processes

CBA Series debubblers reduce bubbles in high-purity chemical delivery and wafer process systems. The 4-in inside diameter provides a large surface area to allow bubbles to rise out of the fluid. They are available in various connectable pipe lengths to offer volume capacities of 1-6L. They feature configurable port connections and tongue-and-groove seals. Liquid level sensor is available.

## Advanced Technologies

- Process-safe PTFE, PFA flow paths
- Up to 7 Bar (100 psi) pressures
- Up to 100°C (212°F) temperatures
- Chemical delivery and wafer process debubbling
- Extruded PFA pipe with threaded connections
- Leak-Free Tongue-and-Groove seals
- Capacity up to 6 liters



Connectable pipes offer extra capacity.

Sensors can be in brackets or at any location on the tube.



## Features & Benefits

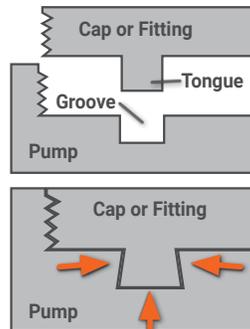
- Chemically-resistant PTFE/PFA fluid path
- Extruded PFA pipe with threaded connections offer easy setup and maintenance without welding
- Pressure capabilities up to 7 Bar (100 psi) provide high flow rates and allow for faster processes
- Operates in applications up to 100°C (212°F)
- Models available for 1-6 liters

## Operation

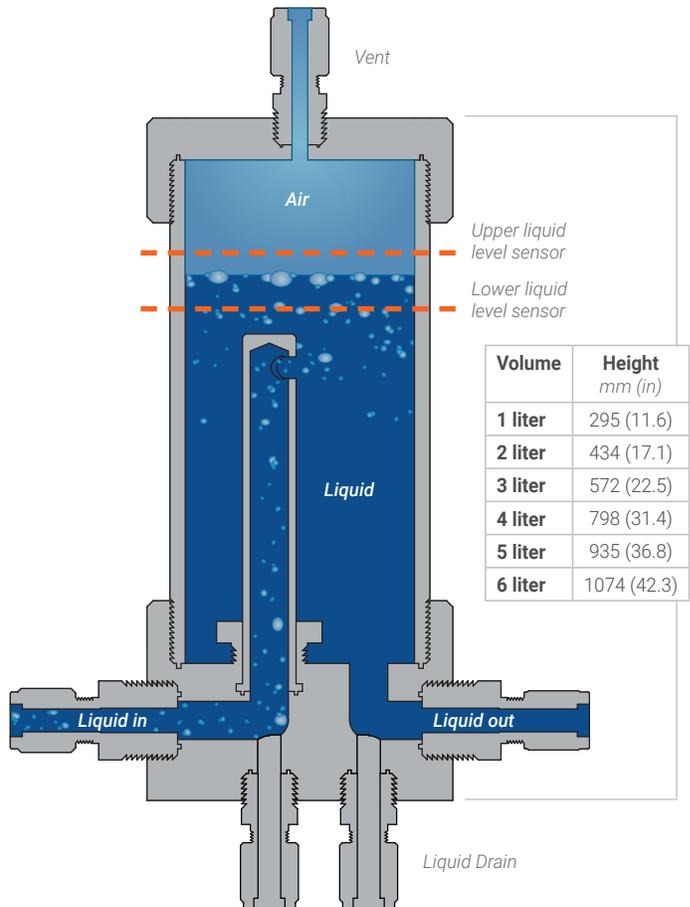
CBA Series debubblers redirect flow upward and slows the fluid so that air bubbles rise within the chamber. As air collects at the top, the liquid level drops until the lower sensor detects a low liquid level and signals a valve to open to releases air via the air vent. As air vents, the liquid level rises until the upper sensor detects a high liquid level and signals the valve to close.

## Tongue-&-Groove Seal Technology

White Knight Tongue-and-Groove seals are the most reliable and reusable sealing technology available for high-purity applications. Their tongues expand diametrically within the grooves to create an interference fit and ensure reliable, effect sealing.



Tongue presses into groove.



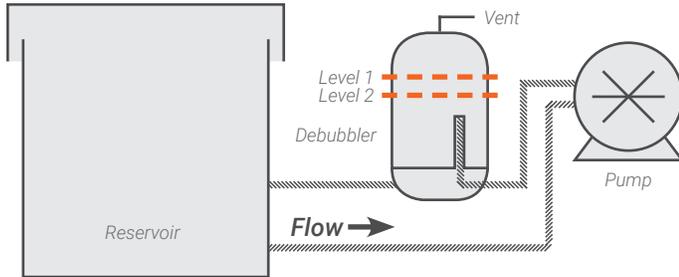
Volume	Height mm (in)
1 liter	295 (11.6)
2 liter	434 (17.1)
3 liter	572 (22.5)
4 liter	798 (31.4)
5 liter	935 (36.8)
6 liter	1074 (42.3)



## Debubbler Applications

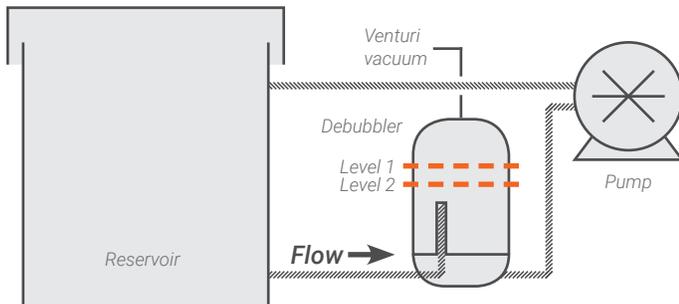
### Removing Bubbles After the Pump

Chemical enters the debubbler through the stand tube. Level sensors 1 and 2 control the collected air volume in the debubbler. Collected air exits through the vent line.



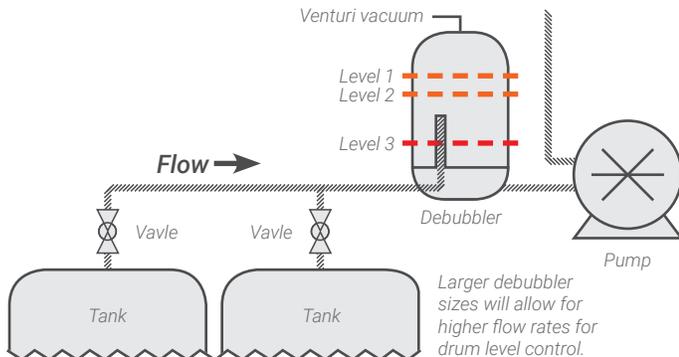
### Removing Bubbles Before the Pump

Chemical is pulled into the debubbler through the stand tube. Level sensors 1 and 2 control air collection level to purge the collected air, a vacuum is required to remove collected air. This can be achieved using a venturi-type vacuum.



### Automated Drum Change with Empty Drum Signal

Level sensors 1 and 2 act to keep bubbles from the drums from continuing through to the pump. Level 3 indicates an empty drum. This can be used as an automatic drum switch or drum empty signal.



## Selection Reference Data

Use this approximate performance data to determine which debubbler size best fits your application.

\*Example: 3-liter debubbler is capable of 30 lpm flow at 15 psi (0.103 MPa) discharge pressure when solution air volume is 45%.

Volume	Maximum Flow (l/m)	Maximum Flow Pressure		Solution Air Volume
		(psi)	(MPa)	
2 liter	25	15	0.103	28%
2 liter	15	20	0.138	55%
3 liter*	30	15	0.103	45%
3 liter	15	20	0.138	75%
4 liter	35	20	0.138	45%
4 liter	30	15	0.103	55%
5 liter	40	20	0.138	45%
5 liter	30	15	0.103	62%
6 liter	45	20	0.138	46%
6 liter	30	15	0.103	67%

Contact us for specific data, control integration, and selection help.  
Maximum Flow: Effective flow rate at listed pressure and air solution.  
Maximum Flow Pressure: Discharge pressure at max flow rate.  
Solution Air Volume: Approximate percentage of air in tested solution.

## CBA Dimensions

