



**Liqui-Cel™**  
Membrane Contactors

**Faster.  
Smoother.  
Smarter.**

**3M™ Liqui-Cel™ SP Series  
Membrane Contactors**

An industry-leading technology for bubble-free  
inks, coatings, solvents and other process liquids.



# Solving the trouble with bubbles

*From wide-format graphics to printed tees, ink jet production is a growing market. Faced with high customer expectations for print quality and fast turnaround, printers depend on technologies that help keep the presses running without interruption. And without smudging the fine print.*



## 3M™ Liqui-Cel™ SP Series Membrane Contactors

Bubbles and dissolved gas in inks, solvents, coatings, and other low surface tension fluids lead to poor-quality processing and deposition. 3M™ Liqui-Cel™ SP Series Membrane Contactors offer a simple, in-line solution to keep printers and lines running at optimal quality and speeds.

Liqui-Cel SP Series membrane contactors remove bubbles and dissolved gases from processed liquids to help prevent foaming, nozzle malfunction, misfires and poor drop formation. This helps increase line and printing speeds while minimizing downtime and defects for a faster, smoother printing process—and high-quality output.

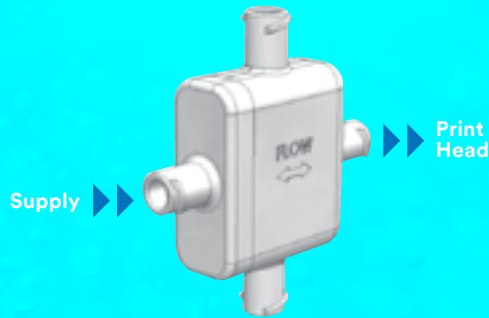
- Improve printing quality
- Increase run speeds
- Minimize process interruptions
- Reduce waste and yield loss

## Applications

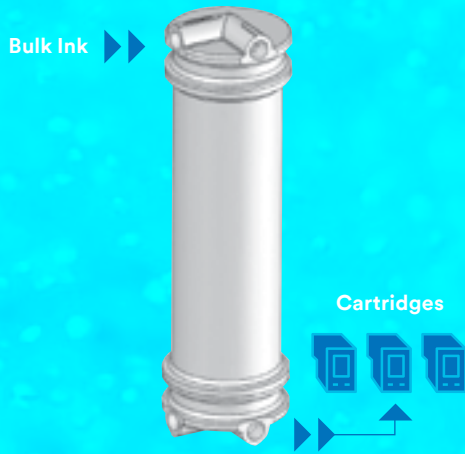
- Aqueous, UV, ceramic, textile and solvent-based inks
- Coatings applied to paper, photographic film, printing plates and electronics
- Contact lens solutions
- Other low surface tension fluids
- Quality test equipment

## Optimized ink jet printing and processing

### Debubbling on the printhead

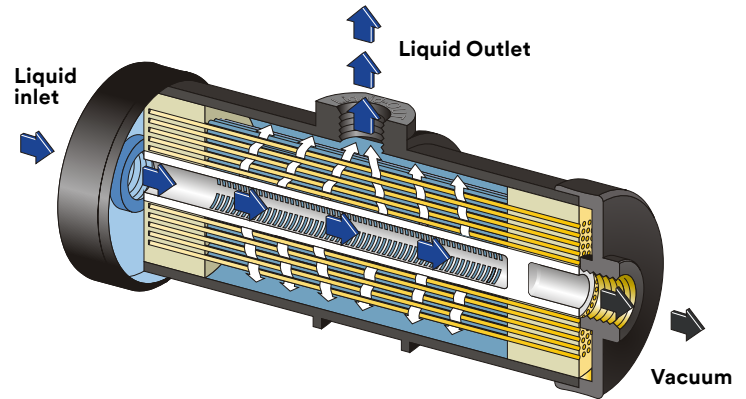


### Degassing at filling

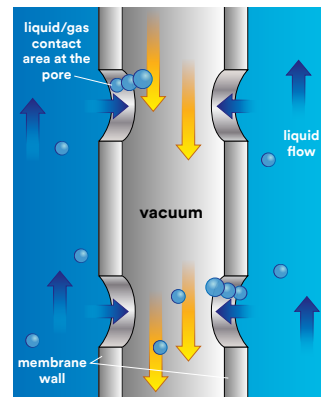


## How SP Series membrane contactors work

3M™ Liqui-Cel™ SP Series Membrane Contactors use a non-porous, gas-permeable hollow fiber membrane to transfer dissolved gases from inks, coatings and other low surface tension liquids.



Liquid flows on the outside of the hollow fiber while a vacuum is applied to the inside. The resulting gas concentration differential drives rapid transfer of gases from the liquid into the vacuum.



## Features and Benefits

- Easy in-line installation
- Continuous debubbling
- Compact, flexible design
- Low maintenance
- Low priming volumes
- Functions with many low surface tension liquids
- Low pressure drop

## Reliable debubbling for inks, coatings and more

Many process solutions require debubbling to remove entrained air, prevent foaming, yield loss and other production interruptions, and ensure reliable quality test readings. 3M™ Liqui-Cel™ SP Series Membrane Contactors are well suited for degassing fluids with low surface tension. Contact your 3M representative to discuss your application.

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