



**3M**

## Value Proposition 1174

Product Membrane contractors

Industry: ultrapure water

Value Proposition: Superior to vacuum towers to  
remove dissolved gases

# Due to Advantages Membrane Contractors are Replacing Other Dissolved Gas Removal Options

- 3M™ Liqui-Cel™ Membrane Contactors have helped displace vacuum towers, forced draft deaerators, and oxygen scavengers around the world for over 20 years. 3M supports your dissolved gas control projects with deep technical support and service by working collaboratively to ensure solutions meet requirements and expectations.
- The pharmaceutical industry requires high water quality without contamination. 3M™ Liqui-Cel™ Membrane Contactors offer an ideal solution for reliable and efficient gas control with low extractables.\*
- Unlike conventional Forced Draft Deaerators or chemical alternatives 3M Liqui-Cel are closed systems that may help reduce the risk of introducing environmental contaminants and they do not require chemicals to operate.
- Additionally, EDI and CDI technology have become commonplace for ion exchange in the pharmaceutical industry. These technologies operate more efficiently if the dissolved CO<sub>2</sub> is first removed from the water. High CO<sub>2</sub> level in the water could reduce the efficiency of the EDI units requiring the installation of more EDI stacks than are necessary.
- 3M™ Liqui-Cel™ Membrane Contactors are compact and reliable devices that are able to reduce CO<sub>2</sub> levels down <1 ppm. For more than a decade, these gas transfer membrane have been used in pharmaceutical process water applications to keep dissolved gases in process water in check.
- \*3M™ Liqui-Cel™ Membrane Contactors may be used to create the purified water that is processed by either distillation or some other equivalent process to create WFI