

Increase Ink Jet Print Speeds by 15% with SuperPhobic® Membrane Contactors

Many high-speed, wide-format ink jet printer manufacturers are now using SuperPhobic® Membrane Contactors to remove air bubbles and excess gasses from the ink feeding the print head to reduce downtime and improve yields. Entrained bubbles and excess gasses are often the cause of printing surface defects and ink flow interruptions that can cause the printer to shut down.

Manufacturers report that by degassing ink, printer line speeds improve by up to 15%. Debubbling the ink jet ink promotes smooth printer operation and high quality output at faster speeds.

Membrana has developed several small membrane contactors designed specifically for Ink debubbling. These Membrane contactors utilize a unique nonporous membrane that is gas permeable. Ink is pumped across one side of the membrane while a vacuum is applied to the other side. Dissolved gases and bubbles freely move to the vacuum side of the membrane producing bubble free inks.

A small diaphragm vacuum pump is typically used as the vacuum source for the printer. The typical vacuum and vacuum load for each size and ink type is listed below:

SIZE	INK FLOW (ml/min)	VACUUM LOAD ml/min
0.5 x 1	5-30	3-9 @ 100 mbar
1 x 3	15-60	12-22 @ 100 mbar
2 x 6	100-1000	85-220 @ 150 mbar

INK TYPE	TYPICAL VACUUM mbar abs.
Aqueous	100-150
UV	150-200
Solvent	100-200



0.5 x 1 SuperPhobic® Contactors Installed on a Wide Format Ink Jet Printer



1 x 3 SuperPhobic® Contactors Installed on a Wide Format Ink Jet Printer

Ink packagers can also utilize SuperPhobic® Membrane technology to degas ink prior to the packaging or bottling steps to reduce foaming. Foaming can slow packaging speeds and negatively impact filling volumes. Bubbles in the ink can also interfere with quality testing and negatively impact readings.

Membrana has been manufacturing membrane contactors for over 20 years and is recognized as the leader in membrane degassing technology.

For more information on ink debubbling, please contact your Membrana representative or visit our web site at www.superphobic.com.

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