



News Release

Susan Alesina
+1 978 715 4622
susan.alesina@emdmillipore.com

June 15, 2015

EMD Millipore Introduces the Mobius® 2000 Liter Single-Use Bioreactor with Industry-leading Design for Ease-of-Use

- **Industry's first bottom-loading drawer enables easiest Flexware® assembly installation on market**
- **Self-deploying Flexware® assembly with a shaft-free impeller eliminates need for operator intervention**
- **5:1 turndown ratio provides the most flexible seeding and growth strategy**
- **Patent-pending baffle design gives the mixing performance of a stainless steel bioreactor with no cleaning required**
- **External SensorReady loop allows flexibility to incorporate additional sensors without Flexware® assembly modification and assures sterile connections**

Billerica, Massachusetts, June 15, 2015 – [EMD Millipore](#), the Life Science business of Merck KGaA of Darmstadt, Germany, today introduced the Mobius® 2000 liter single-use bioreactor. The 2000 liter bioreactor joins the Mobius® stirred tank bioreactor portfolio (from 3 to 2000 liters) that provides the ultimate in flexibility, scalability, and convenience. With configurable software, hardware, and single-use Flexware® assemblies for suspension and adherent cell culture applications, the new 2000 liter single-use bioreactor incorporates industry-leading design features that enable users to easily optimize their upstream process.

The new Mobius® 2000 liter single-use bioreactor features the industry's first pull-out drawer and self-deploying bag, making Flexware® assembly installation and inflation safe and easy. This design minimizes operator intervention and requires no hoist during

News Release

Flexware® assembly installation and removal. A patent-pending baffle design creates superior, homogenous mixing. The 5:1 turndown ratio allows users to inoculate and harvest at lower volumes, creating a wider, more flexible process window for seeding, growth, and collection strategies.

The Mobius® 2000 liter single-use bioreactor includes an external SensorReady loop connected to the Flexware® assembly via Lynx® connectors to provide greater flexibility and confidence for process monitoring and control. Unlike traditional bioreactors in which sensors are inserted into the Flexware® assembly, the SensorReady loop enables users to incorporate additional sensors without modifying the Flexware® assembly.

The Mobius® 2000 liter single-use bioreactor can be supplied as a fully-integrated system with intuitive GMP-compliant software that reduces the learning curve for operators and allows for easy integration into plant automation strategies. The automation is simple and enables users to easily customize and control their processes. For customers with plant-wide common automation strategies, the single-use bioreactor can be integrated into third party automation platforms.

“Successful development of upstream processes demands flexibility, scalability and ease of use,” said Udit Batra, president and CEO, EMD Millipore. “Our ground-breaking Mobius® 2000 liter single-use bioreactor delivers these essential benefits, including superior mixing, 5:1 turndown ratio, and critical ease of use. Our complete upstream and downstream portfolio supports GMP production and allows our customers to move molecules faster and more reliably into the clinic and to market.”

The Mobius® 2000 liter single-use bioreactor joins the 3, 50, and 200 liter Mobius® single-use bioreactors, and is just one of the Company’s new additions to a comprehensive portfolio of products to optimize, streamline, and accelerate drug development and production. Recently introduced products include:

Cellvento® CHO cell culture media and companion feed formulations allow selection of the optimal media formulation for a given application, tailored for specific CHO cell lines. Available in liquid and powder form, the chemically defined, non-animal-origin media

News Release

deliver superior cell growth and productivity in batch, fed-batch mode, and perfusion applications.

The **NovaSeptum single-use preloaded holder**, pre-loaded with flat bags, bottles, or AV syringes, is ideal for aseptic and sterile processes. The closed design ensures the sample is isolated from point of sample to analysis. The high purity sampling units are suited for a variety of applications including sterility, bioburden and endotoxin testing, chemical analysis, and applications requiring very low affinity for proteins, complex carbohydrates or small molecules.

Clarisolve® depth filters process pretreated feeds in a significantly reduced footprint without the need for a secondary stage of clarification. Clarisolve® depth filters eliminate the need for centrifugation, enabling a fully single-use process train, and considerably reduces the pre-use flushing requirements. This technology was developed to address the shortcomings of traditional downstream clarification approaches when processing high cell density and high titer cell cultures.

For more information on the Mobius® 2000 liter single-use bioreactor and other Mobius® products, please visit www.emdmillipore.com/MobiusTwist.

About EMD Millipore

EMD Millipore is the U.S. Life Science subsidiary of Merck KGaA, Darmstadt, Germany. As part of the global Life Science business of Merck KGaA, Darmstadt, Germany, EMD Millipore offers a broad range of innovative, performance products, services and business relationships that enable our customers' success in research, development and production of biotech and pharmaceutical drug therapies. Through dedicated collaboration on new scientific and engineering insights, and as one of the top three R&D investors in the life science tools industry, the Life Science business of Merck KGaA, Darmstadt, Germany, serves as a strategic partner to customers and helps advance the promise of life science. Headquartered in Billerica, Massachusetts, the global business has around 10,000 employees, operations in 66 countries and 2014 revenues of €2.7 billion.

For more information, please visit www.emdmillipore.com.

About Merck KGaA, Darmstadt, Germany

Merck KGaA, Darmstadt, Germany, is a leading company for innovative and top-quality high-tech products in healthcare, life science and performance materials. The company has six businesses – Biopharmaceuticals, Consumer Health, Allergopharma, Biosimilars, Life Science and Performance Materials – and generated sales of € 11.3 billion in 2014. Around 39,000 employees work in 66 countries to improve the quality of life for patients, to foster the success of customers and to help meet global challenges. Merck KGaA, Darmstadt, Germany, is the world's oldest pharmaceutical and chemical company – since 1668, the company has stood for innovation, business success and responsible entrepreneurship. Holding an approximately 70% interest, the founding family remains the majority owner of the company to this day. Merck KGaA, Darmstadt, Germany holds the global rights to the Merck name



News Release

and brand. The only exceptions are Canada and the United States, where the company operates as EMD Serono, EMD Millipore and EMD Performance Materials.

For more information, please visit www.emdgroup.com.