



## **ATMI LifeSciences Launches New Streamlined Single-Use Bioreactor, the Integrity PadReactor System, for Cell Culture and Vaccine or Protein Production Applications**

### **Highly Flexible Bioreactor Combines Superior Mixing Technology With 'Any Controller' Approach and Full Compatibility Across Company's Line of Single-Use Mixing, Storage and Transfer Products**

NEW YORK, Apr 20, 2010 (GlobeNewswire via COMTEX News Network) -- ATMI, Inc. (Nasdaq:ATMI) today launched a disposable bioreactor representing a new, highly scalable entry point in its line of mixing and process manufacturing systems for the biopharma and biotech industries. The introduction took place at INTERPHEX, an annual conference on life sciences manufacturing equipment, production process, and packaging developments.

The Integrity(TM) PadReactor(TM) system accommodates volumes ranging from 20 liters to 1,000 liters. The bioreactor is portable along its entire range of volumes and provides features available on larger, stationary units while offering much swifter set-up times, minimal facility requirements, and the economic benefits of single-use technologies over stainless steel systems.

"When customers see this system for the first time, they're surprised by the square tank or the sparger's action in the vessel," said Jeff Craig, ATMI LifeSciences' Global Director of Marketing and Business Development. "Once they put the PadReactor to use, we consistently hear them talk about its higher cell densities in suspension, higher cell viability on microcarriers, and better overall yields than other single-use bioreactors."

Incorporating key elements of ATMI's industry-leading PadMixer(TM) technology, the PadReactor system provides enhanced gas exchange, due to its moving sparger. It also achieves low shear mixing due to the vertices of the square tank, which act as natural baffles. These advantages, plus the system's scalability, make it ideal for the production of vaccines, monoclonal antibodies, and other secreted proteins.

#### **Rapid Setup**

Installation of the PadReactor system can be completed in well under an hour. The system is fully compatible with ATMI's line of single-use mixing, media, storage, and bioreactor vessels made from the Integrity TK8 film polymer. These single-use products are animal-derived component free (ADCF), integrity tested, and gamma irradiated. Once a manufacturer qualifies the multi-layer film for use in a process, requalification is not necessary when introducing new vessels or different vessel sizes. Certificates of sterility and film characterization provided with each Integrity TK8 product can be referenced or included in a customer's batch records.

"TK8 is the same film available in our single-use technologies across the board, so now you can have a process with integrated ATMI units of operation from media formulation to bioreactor to harvest, clarification, and concentration -- even to buffer preparation to column collection and final formulation," Craig said. "If you modify or scale your process with any of our technologies, there are no film requalification issues because it's always exactly the same film."

Providing customers with bioreactor drive units that can operate at a range of volumes contributes to savings by eliminating or reducing the need for capital investment in additional equipment. Designed to be set up easily with a minimum of commissioning time, the Integrity PadReactor system has a footprint of 1.3 m x 0.9 m (1.17 m<sup>2</sup> or about 1.4 yd<sup>2</sup>) at its 25-250 liter volume. At 500-1,000 liters, the system occupies 1.6 m x 1.5 m (2.4 m<sup>2</sup> or about 2.87 yd<sup>2</sup>). Along with the reduced cycle time, lower operations cost and lower validation cost of single-use products, the system features detachable drive hardware that adds to its flexibility and mobility.

"In many settings, mobility is very important," he added. "If needed, you can literally move the bioreactor vessel to the next station for harvest, or any other required step."

#### **Open Architecture**

Increasing the overall versatility of the Integrity PadReactor system is ATMI's decision to publish its interface standards, enabling this single-use bioreactor to be paired with any controller technology. ATMI can configure the system with integrated control and monitoring technology or, thanks to its open architecture, allow users to purchase it in "plug-and-play" mode: ready

for their own choice in technology.

"Users can capitalize on the PadReactor's benefits while putting their existing or preferred control systems to use," Craig said. "It makes for an economic and efficient way to introduce the system to their site. They can continue to rely on their own technology and expertise to control the process and capture data without any new training or needing to transition from before."

The single-use Integrity PadReactor system from ATMI LifeSciences is available for order now. Prices start at under \$30,000 for an open architecture model in which customers supply their own controller technology. It also can be ordered equipped with controller technology specified by the customer; pricing for these configurations will vary.

The PadReactor system can be seen in Booth 1719 at INTERPHEX 2010 at the Jacob K. Javits Convention Center in New York, April 20-22.

#### About ATMI LifeSciences

ATMI LifeSciences is a leader in single-use mixing, storage, and bioreactor technology, fluoropolymer-based products, and custom-engineered, flexible packaging solutions. The business's fundamental knowledge of polymers, specially selected resins, and its clean room manufacturing experience coalesce to help drive optimum performance in critical disposable process operations. For more information, please visit [www.atmi-lifesciences.com](http://www.atmi-lifesciences.com).

#### About ATMI

ATMI, Inc. provides specialty semiconductor materials, and high-purity materials handling and delivery solutions designed to increase process efficiencies for the worldwide semiconductor, flat panel, and life sciences industries. For more information, please visit <http://www.atmi.com>.

The ATMI, Inc. logo is available at <http://www.globenewswire.com/newsroom/prs/?pkgid=5254>

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