Thermo Scientific imPULSE MDS Single-Use Mixing System

Modularity and safe shipping

Mixing for your process

The Thermo Scientific™ imPULSE™ MDS (mixing, docking, and shipping system) allows users to mix liquid-to-liquid or powder-to-liquid solutions efficiently and consistently throughout the BioProcess Container (BPC). The mixing disc on the imPULSE systems are a unique and efficient feature as an integrated part of the BPC.

The shape is engineered with multiple slots and film flaps. Tests have shown this to completely mix at various locations in the mixing BPC. A rolling diaphragm provides the pumping action to the mixing head, keeping surfaces free from abrasion and particulate generation.

Mixing, docking, and shipping

The imPULSE MDS platform has all the benefits and mixing capabilities of the imPULSE stationary platform except that the motor is mounted on the docking station, allowing tanks to be easily interchanged. A loading/unloading hoist eases the transfer of the shipping containers on and off the station.

Features and benefits

- The disc and film flaps are an integrated part of the BPC; multiple slots and film flaps provide consistent mixing
- Turbulence created by the vessel shape and the disposable mixing unit pulls the content into the fluid stream without creating a vortex
- Variable mixing speed, low shear, and low air entrainment

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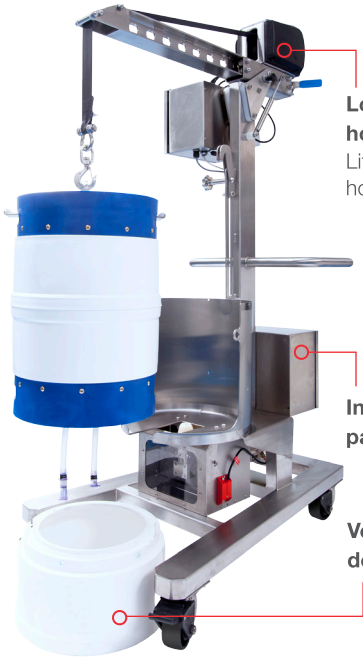
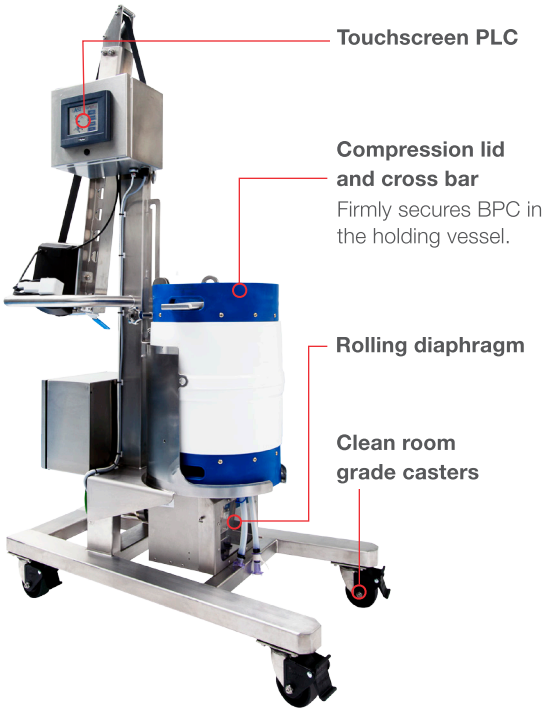
Standard options

Size	Available in 30 L and 50 L
Docking station	Docking station material of construction: 304 L stainless steel with loading hoist.
BPC holding vessel	Vessel material of construction: Co-polymer propylene
Clean room grade casters	Four clean room–grade casters, which facilitate transfer of the station
Rolling diaphragm	A rolling diaphragm provides the pumping action to the mixing disc. This will not abrade the surfaces or produce particulates
Integrated control panel	An integrated control panel with relay logic, manual push buttons, a selector switch interface, and digital speed indication

Additional options

PLC	This option provides a programmable logic controller and panel mounted HMI with soft touch keys and graphical interface to control the unit.
Disposable process monitoring (pH, DO, CO_2)	Disposable probe ports are welded to the mixing BPC and are accommodated by slots in the view window. Optical cables are attached to the ports and connected to an optical Process monitor. The system provides monitoring of Low pH (4 to 7); mid pH (5.5 to 10); and DO.
Conventional process monitoring (pH, DO, CO_2)	Conventional, reusable probes are inserted into tri-clamp end ports welded on the side of the mixing BPC. An analyzer mounted in the control panel indicates the process condition (pH, DO).
Weight indication system with load cells	The weight of the tank is indicated on the control panel digital display. A switch is included on the panel to select automatic mixer speed operation. When selected, the mixing BPC speed is automatically slowed as the weight decreases.
Holding vessel support device	By placing the BPC vessel on this device, the user is able to adjust the rolling diaphragm and tubing.





The imPULSE MDS systems can be customized to meet specific needs. Please contact your Thermo Fisher BioProduction sales representative for more information.

Find out more at **thermofisher.com/sum**

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