

UniFuge® UFMini

The UFMini is an automated batch centrifuge for low shear separation of mammalian, bacteria, and insect cell lines. This system produces high cell recovery rates using a single-use, tubular-bowl module mounted in the bowl. In addition, all process contact surfaces in the centrifuge system are disposable and 100% replaceable after each run. The UFMini operates in an intermittent, batch mode. During the filling phase of the separation cycle, the bowl is rotated to the preset preliminary fill speed(s) allowing liquid suspension to be fed into the UFMini at a controlled flow rate. When a full bowl condition is detected, the controller stops the feed pump and the centrifuge is automatically accelerated to a preset separation speed. Once the bowl has reached the separation speed, the feed is restarted at the preset process flow rate and the clarified supernatant valve opened. At the end of the preset feed cycle, the centrifuge bowl is stopped, and the feed pump reversed to recover the cell concentrate. This cycle is repeated as many times as required to process the bioreactor volume.

Features

- Single-use module with tube-set
- Four pinch valve configuration: Feed, Concentrate, Supernatant, and Buffer
- Continuous discharge of supernatant and intermittent discharge of cell culture
- Recipe System for setting system parameters
- Optional data acquisition for SCADA System via Ethernet connection
- Optional features for 21 CFR Part 11 compliance
- Processes scalable to UniFuge Pilot and U2k
- CE Compliant Design

Operating Parameters*

- Variable G-force between 50-4000 x g
- Processing Rates: 50 - 1000 ml/min
- Recommended Bioreactor Volume: 500mL – 25L
- Maximum Bowl Speed: 9,250 RPM
- Maximum Concentrate Density: < 1.5 g/ml
- Automated with flexible cycle parameters
- Designed for fluid transfer with temperatures between 4-38 °C (39-100 °F)
- Low noise level (below 80 dB) during operation

*Processing speeds are application-dependent and may vary.

**Weights and dimensions dependent on system configuration and options required.



Equipment Specifications

- Stainless-Steel construction
- Allen-Bradley® PLC & HMI Touchscreen 22.9 cm (9") - 16:9 aspect ratio
- Table-top footprint: 69cm wide x 56cm deep x 38cm high (27" x 22" x 15" high)
- System weight (approx.): 45 kg (100 lbs.)

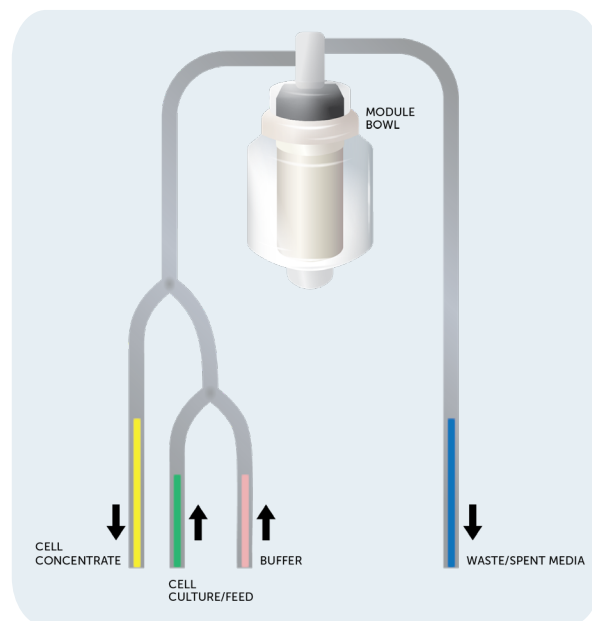
Utility Requirements

- Single phase universal power supply including:
 - 100V, 50/60 Hz, 7.5 amps, 1-Phase
 - 120V, 60Hz, 6.3 amps, 1-Phase
 - 230V, 50Hz, 3.1 amps, 1-Phase
- Instrument-quality air only, supplied at 5.5 (+/- 1) Bar, 80 (+/-15) PSI, 550 (+/-100) kPa

UniFuge® UFMini Single-Use Modules

The single-use module is supplied with a tube-set, which can be readily tube welded to your single-use bioreactor connections. Customer-specified single-use connectors available upon request.

Tubular-bowl technology is optimal for high cell viability, recovery, concentration, washing and fast processing times that address the challenges of conventional centrifugation by continuously separating cells in a low shear, scalable and automated system.



System	UFMini	
Module	UFMini	UFMicro
Part Number	C6839001	C6839012
Min Working Volume	275 mL	90 mL
Recommended Bioreactor Volume	5L - 25 L*	500 mL - 10 L*
Tubing Materials & Connection	TPE, Plug	TPE, Plug
Tubing Diameter ID (OD)	1/4" (3/8")	1/4" (3/8")
Integrity Testing	✓	✓
Endotoxin Free	✓	✓
Animal Derived Component Free	✓	✓
Gamma Irradiated	✓	✓
Physiochemical: USP <87> <88> Class VI, USP 661 (or ISO 10993) for plastic materials	✓	✓
Manufactured in ISO 13485 facility with Class 7 cleanroom	✓	✓

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