FerMac 310/60 Bioreactor

A versatile fermenter designed with the modern laboratory in mind- An autoclavable, bench-top bioreactor system

Key Features of the FerMac 310/60 Bioreactor Fermenter

- Available in both microbial and cell **culture versions**
- **Autoclavable and bench-top**
- Powerful, intuitive measurement & control system
- Wide range of fully autoclavable vessels with unique, easily replaceable drive shaft system
- Robust, stainless steel framework designed for easy cleaning and improved vessel handling
- Controller pre-configured for system expansion
- 4 pumps fitted as standard (additional 2 pump module available)

The **FerMac 310/60 bioreactor fermenter control system** is designed with the modern multi-function laboratory in mind. It offers the control and footprint of an integrated system combined with the flexibility of a modular system.

The use of established engineering techniques and rigorous testing ensures that our impressive track record of reliability is maintained.

The FerMac 310 Stirrer

The FerMac 310 Stirrer is constructed using a durable stainless steel framework and the powerful top drive motor is of the highest specification to give maximum performance.

The whole assembly provides easy access for removal of vessel, inner parts and drip tray, whilst providing a useful stainless steel backplate for mounting additional items such as control valves and water pipework.

The FerMac 360 Controller

The FerMac 360 Controller is simple to use, powerful and effective. It uses a clear fluorescent display, showing all key parameters on one screen at the same time. A single keystroke takes you into specific calibration screens for each parameter, keeping the display uncluttered and intuitive.

When you decide to expand, the 360 is pre-configured for additional FerMac modules (the FerMac 368 gas analyser, or the FerMac 366 pump module) and has spare parameter channels to allow for future upgrades. Redox, optical density, CO_2 - almost any measurable probe can be added at a later date.

FerMac Vessels

FerMac Vessels for the 310/60 are available in 1, 2, 5, 10 & 18 litre working volumes and feature our easy coupling drive shaft design which allows easy replacement within minutes, minimising down-time. The high quality stainless steel top plate has ports in two sizes to take all standard electrodes and fittings (sampling, inoculation, tri-port etc), and each port is O-ring sealed on the sterile side to reduce cross-over contamination.

With 4 built-in peristaltic pumps and our optional FerMac 366 additional two-pump module available, the FerMac 310/60 system can efficiently tackle both batch and continuous flow fermentations.

FerMac 310/60 Cell Culture

Key Features for the FerMac 310/60 Cell Culture

- Specially designed, dish-based vessel with skirt for ease of handling
- Gas flow system with dedicated flow meters for O_2 CO_2 N_2 and air
- Wide range of impellor types and sizes
- Lower speed range for mixing of all types of cells

This version of the FerMac 310/60 has a vessel specifically designed for cell culture work by having a dished base. But we've also fitted a straight skirt to make it free-standing and therefore easier to handle, especially when preparing and autoclaving.

Inside the vessel, the agitator has a low speed range which, combined with a wide range of impellor types and sizes, gives excellent mixing for all types of cells.

The introduction of gases into the vessel is neatly and efficiently achieved by the gas flow/mixing plate fitted to the stirrer uprights which provides automatic gas mixing of air, O_2 N_2 & CO_2 . Each of these gases has a dedicated flow meter with "easy change" flow tubes allowing users to change flow rates to suit their application. Gas can be sparged through the media, into the head space, or both and our microporous sparge gives excellent gas transfer.

It is this attention to detail and focus on the user which sets Electrolab equipment apart from its competitors.