FerMac 320 Bioreactor

Outstanding value-for-money package- An autoclavable, bench-top bioreactor control system.

The FerMac 320 bioreactor fermenter is a new medium-priced system which combines a specially designed range of vessels with a variation of our established 360 controller to give a truly outstanding value-for-money package with proven realiability.

Key Features for the FerMac 320 Bioreactor Fermenter

- Available in both microbial and cell culture versions
- Bench-top bioreactor control system
- Outstanding value-for-money package
- Vessel mounted motor with unique locking system
- Intuitive measurement & control system with built-in motor drive
- Fully autoclavable vessels with removable baffles and cooling coil

The FerMac 320 Agitation

Agitation is provided by the direct drive motor which is attached to the vessel by a bayonet fitting, making it easy to remove. This fitting is designed to tighten as speed is increased to give positive, vibration-free drive at all speeds. To achieve the ideal mixing arrangement, our impellors can be easily adjusted or changed to give maximum flexibility.

The FerMac 320 Controller

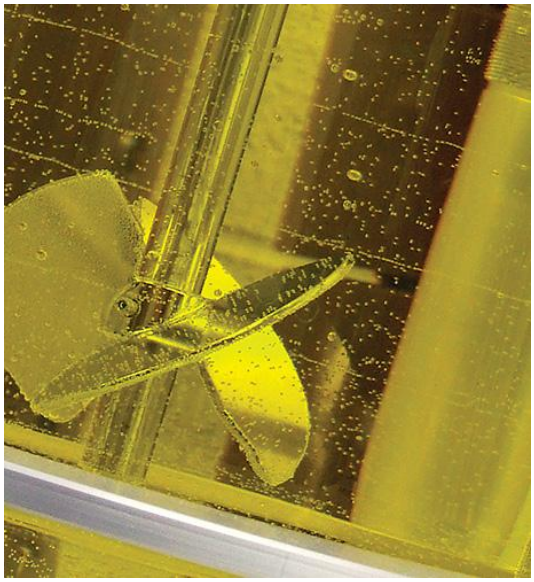
The FerMac 320 Controller has built-in motor drive - no external drive is required making the FerMac 320 an exceptionally compact, effective unit. Using the 320 is made straight forward and practical by the display of all key parameters on one screen at the same time. At the press of a key, all the functions for a parameter are available allowing easy adjustment of electrode calibration, control elements, alarms etc.

The 320 was also designed with the future in mind. Not only is it pre-configured to take additional FerMac modules - such as our FerMac 368 CO2 /O2 gas analyser, or the FerMac 366 pump module - but is has spare parameter channels to allow for future upgrades. Redox, optical density, CO2 - almost any measurable probe can be added at a later date.

FerMac 320 Vessels

The range of FerMac 320 Vessels, available in 2, 5 & 10 litre working volumes, has both baffles and cooling coil attached to the top plate for easy removal and cleaning. The top plate itself has interchangeable ports in two sizes to take all standard electrodes and fittings (sampling, inoculation, tri-port - and many more), and each port is O-ring sealed on the sterile side to reduce cross-over contamination.

The FerMac 320 offers practicality, reliability and sophistication at a genuinely affordable price.



FerMac 320 Cell Culture

Key Features for the FerMac 320 Cell Culture

- Specially shaped dished-based vessel
- Gas flow system with individual precision flow meters for O_2 N_2 CO_2 & air
- Impellers in a wide range of sizes, types and configurations
- Low speed motor drive available
- Magnetically coupled drive shaft available as an option

FerMac 320 cell culture vessel

With the fragile nature of all cells in mind, the FerMac 320 cell culture vessel has been designed with a specially shaped dished base for use with our low shear impellors. These are available in a wide range of sizes in both up-draft and down-draft configuration and, for those difficult mixing situations, we have a range of variable pitch impellors which can be adjusted to achieve just the right arrangement.

The separate service plate keeps the water and gases safely segregated from the electronics and comes complete with individual precision flow meters for air, CO_2 O_2 & N_2. Each flow meter has "easy-change" flow tubes allowing the flow range to be changed to suit an individual culture experiment.

With the choice of standard or very low speed motor drive, the FerMac 320 cell culture system offers a winning combination of all the essential elements for cell culture work.