

CellMaker Airlift Bioreactors from Cellexus



Dunn Labortechnik presents the CellMaker "Airlift" bioreactor systems from Cellexus International Ltd. for the cultivation of bacterial and yeast cells, efficient amplification and production of bacteriophages. The CellMaker bioreactor systems offer different temperature-controlled reactor enclosures for a wide range of applications with suitable sterile bioreactor bags for 4, 8 and 50 liters culture volume, and optional accessories for process monitoring and control. Depending on the system configuration, the reactors allow the monitoring of relevant process parameters such as temperature, pressure and dissolved oxygen, pH value and control of other gas flows to create cultivation conditions for working volumes ranging from 1.5 to 50 liters.

Furthermore, the "CellMaker Dual Controller" allows the operation of two CellMaker reactor systems in parallel, to run identical or different processes at the same time, offering a flexible adaptation of the culture volume and easy scaling of the bioprocess.

The disposable bioreactor bags of the CellMaker culture system are made of multi-layered, high-quality polymer materials. They are gas-tight and already equipped with all necessary connections including a sparger, enabling controlled air and gas distribution for gentle mixing of the culture medium and supply of the cultivated cells with nutrients.

The specific design of the single-use bioreactor bags allows rapid installation and removal from the reactor enclosure without additional cleaning and sterilization efforts.

All available CellMaker controllers are equipped with a touch screen monitor and run by a 21 CFR Part 11 compliant control and monitoring software.

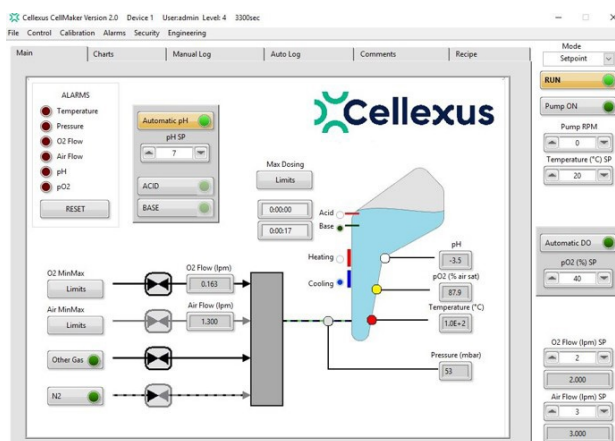
In addition to the cultivation of microorganisms or amplification of bacteriophages for the production of biomass, proteins or metabolites, the Cell Maker system has also been tested with mammalian cell cultures.

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Features of the CellMaker reactor systems

- Temperature monitoring and control ranging from 16 - 40 °C ± 0,1°C (Peltier heater-cooler)
- Airflow control and monitoring of gas flows and pressure
- Controller monitor with touchscreen and 21 CFR Part 11 conforming software
- 8-liter and 50-liter reactor enclosure available for working volumes 1,5 - 8 and 10 - 50 liters
- Dual CellMaker controller for operation of two CellMaker systems in parallel
- Optimised reactor bag variants available: 4-liter (“Plus”) and 8 - 50-liter (“Regular” and “Plus”)



Available reactor models and accessories

- **CellMaker Regular:** aeration rate 1 – 20l/min (integrated air pump), oxygen flow-control, monitoring of pressure; for the use with “regular” reactor bags for low cell density applications
- **CellMaker Plus:** additional functions: monitoring and control of pH and dissolved oxygen and other gases (e.g. CO₂ and nitrogen); for the use with “regular” or “plus” reactor bags for high cell density cultivations
- **CellMaker Low Flow:** aeration rate 0,2 – 2l/min for sensitive cells (e.g. animal cell or plant cells)

Range of Applications (excerpt)

- Phage amplification: amplification and production of bacteriophages (e.g. von *Escherichia coli*, *Salmonella*, *Agrobacterium*, *Pseudomonas aeruginosa* and *Ps. syringae* strains, *Staphylococcus* and *Yersinia ruckeri*)
- Microbial fermentation processes, for example production of proteins, metabolites and biomass from bacterial or yeast cell cultures (e.g. *Pichia pastoris*)
- Cell culture applications, e.g. mammalia cell cultures for antibody production

➔ Please inquire for further applications, accessories
and for an offer suitable for your application!