

SuperSpinner – Disposable Membrane Aeration

SuperSpinner – the next step in incubator-based cell cultivation devices. Advanced technology, ease of operation and low cost make the SuperSpinner ideal for cell culture experiments.

University, hospital and biopharmaceutical research laboratories can employ the SuperSpinner for the production of biomolecules, including monoclonal antibodies. Sartorius BBI Systems has developed in cooperation with Saxonia BioTec a new membrane holder made of Polycarbonate with an integrated magnet.

Functional principles and application

The SuperSpinner is equipped with a patented (DE 3539664), bubble free aeration system that also functions as a stirrer. This aeration technology has been proven for several years in various stirred tank bioreactors. The increased efficiency and improved productivity make the SuperSpinner the logical choice for replacing Roux bottles and spinner flasks as well as mouse – ascites techniques.



Configuration of the SuperSpinner

The SuperSpinner consists of a 1 liter glass bottle with three ports. The center port contains the membrane aeration stirrer (MAS). Two offset ports are for feed, sampling and/or harvest connections. One offset port comes equipped in a CO₂ incubator. The SuperSpinner is magnetically driven.

The membrane aeration stirrer is the highlight of the system. It consists of a frame wrapped with polypropylene (OXYPHAN®) tubing. Incubator gas is pumped through the tubing with a membrane pump. Exhaust gas passes through a wash bottle. Temperature, dissolved oxygen and pH in the SuperSpinner are controlled via the incubator's controlled environment.

Mode of operation

The complete setup is sterilized in an autoclave. Once cooled, it is filled with medium through a side port. If necessary, this operation may be performed outside a laminar flow hood using an offset port in conjunction with a pair of optional sterile connectors (female connector, Part No.: BB-08809410, male connector, Part No.: BB-08809402).

Inoculation is done in the same manner using the same sterile connectors. The SuperSpinner is then placed in an incubator on a magnetic drive. Aeration is initiated by switching on the membrane pump.

Benefits of the new SuperSpinner disposable membrane aeration:

- Completely tested and proven
- Easy to change
- Disposable
- No cleaning necessary

Material

- 10 m (segmented) Polypropylene aeration membrane of hydrophobic, \varnothing_a 380 μ m, \varnothing_i 280 μ m, pore size 0,2 μ m