

# OmniFerm® mini

Compact parallel fermenter systems

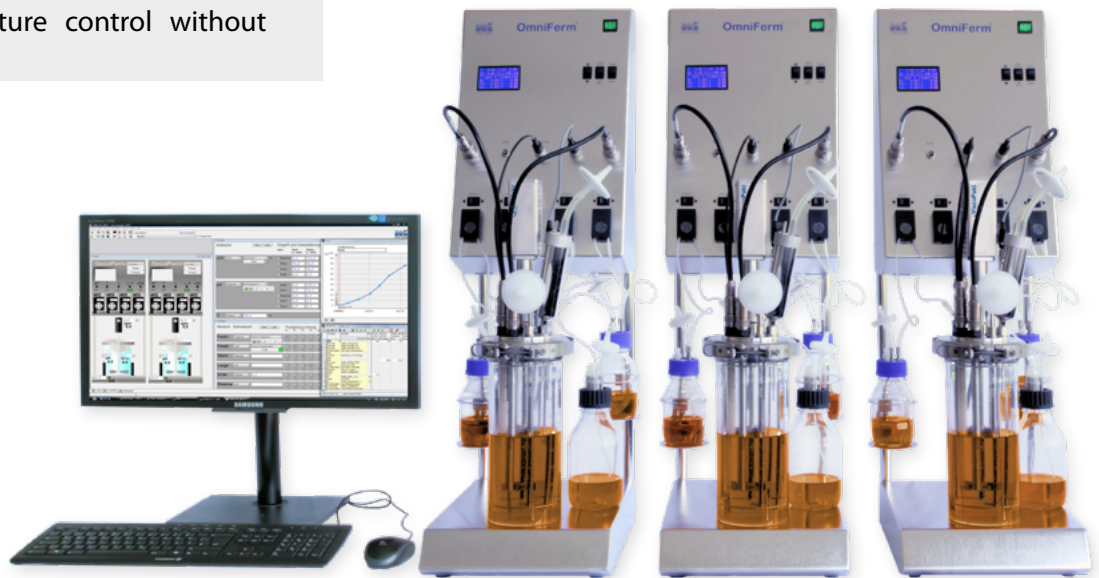


The OmniFerm® mini parallel fermenter system is distinguished by the particularly small footprint, enabling several bioreactors to fit onto one laboratory workbench.

This mini-culture system closes the gap between shake flasks and a laboratory fermenter.

Knowledge gained in shake cultures may now be validated in the next-largest scale with little need for material and with great time savings.

- ✓ Full research fermenter functions
- ✓ High level of automation
- ✓ Extensive sensor system
- ✓ Solid-state temperature control without heat carrier



*Compact OmniFerm®-mini 1 liter parallel fermenter systems*

The modular construction and the numerous customized diversity of variants provide a maximum degree of flexibility in comparison with standard systems.

The basic unit consists of a glass vessel with a stainless steel cover with all the required connections and an exhaust air cooler. Containers with working volumes from 150 to 1,600 mL are available.

The pH value is measured via an invasive pH electrode and can be regulated by CO<sub>2</sub>/base or acid/base. Gas injection can be applied by the headspace, a sparger or by a gas injection ring.

A solid-state temperature control system without heat transfer medium is used for heating and cooling, i.e. the vessel is heated and cooled over the base plate.

Highly precise pump drives for analysing pump hoses with dosing rates of 1 µL/min up to 30 mL/min enable exact dosing in semi-continuous and continuous operation. Laboratory balances may be optionally integrated in order to achieve controlled gravimetric dosing.

The stirrer is powered by a speed-controlled, wear-free, brushless DC motor. A mechanical seal ensures the required sterility. Propeller, Rushton or diagonal blade stirrers are used. A magnetic stirrer with PTFE stirring rods is available as an alternative or supplement for gravity-sensitive micro-organisms.

OmniFerm®-mini fermenters are sterilised by autoclaving. After disconnecting the plug and the stirrer drive and the removal of the hoses from the pump drives the vessels may be sterilised within the autoclave.

## Extensions

- » Precision exhaust analysis
- » Probes for OD (TM, cell number), glucose, lactate, conductivity, etc.
- » Free programmable recipe control
- » OTR-, CTR- and RQ-based feed regulation
- » Gravimetric dosings by connectable scales



## Technical data

- » Dimensions (d x w x h): 390 x 275 x 900 mm
- » Reactor volume: 600, 1000 oder 2000 mL
- » Work volume: approx. 275-500, 500-800 or 500-1600 mL
- » Vessel height outside (flange): 145 mm (DN80), 155 mm (DN100), 260 mm (DN100)
- » Contact material: borosilicate glass and stainless steel 1.4571
- » Sterilisation: autoclave
- » Pumps: 4 peristaltic hose pumps 0...30 mL/min, opt. gravimetrically controlled
- » Agitator: wear-free BLDC head drive with Rushton turbine or impeller of your choice
- » Shaft seal: mechanical seal
- » Temperature range: RT -10 °C up to 50 °C
- » Applications: aerobic/anaerobic processes of bacteria, yeast and mammalian cells

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