

SciBot™

Customised laboratory robots

- » Cell culture in microtitre plates
- » Flexible liquid handling platform
- » Additional sensor and actuating systems can be integrated
- » Easy integration into up- and downstream applications
- » Simple programming via hteMaster™ software
- » Optional:
 - › Tool changer
 - › Miscellaneous tools
 - › Sterilisable (24 h / 90 °C)



AUTOSAM™

Automatic sample collector, four different models with sample bottles from 1.5 ml to 2,000 ml are available

- » Bottling of samples
- » Submission of educts
- » Quenching, mixing and diluting
- » Liquid handling
- » Optional:
 - › Integrated magnetic stirrer
 - › Cooling incubator
 - › Heater
- » Freely programmable methods with LiquiMaster™ software



The Leading Edge of Bioprocess Automation

Gmix™

High precision gas mixing station

- » Best possible accuracy and reproducibility
- » Precise process control
- » No inaccurate multiplex operation
- » Regulates each gas at every single input separately
- » Useable for stand-alone and remote operation
- » Compact design



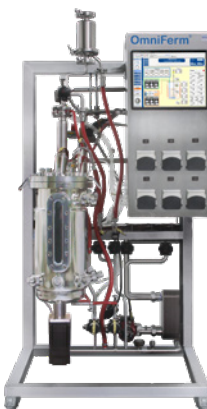
Re-Engineering, Services & Maintenance

Your fermenter control is outdated, you run your processes manually and want to have more time for your core capabilities?

As a competent partner for automation we can offer you a wide range of solutions. Please talk to us!

From planning to training

- » Planning and projecting
- » Plant automation
- » Reconstruction and modernisation
- » Order programming
- » User training



Services & Didactics

HiSense™

Precision gas analytics for biotechnology

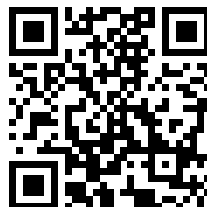
- » 1 to 5 measurement channels for 1 to 4 fermenters
- » high-resolution measurement
- » Real OUR-, CER- and RQ-measurement
- » Humidity correction
- » Low cross sensitivity
- » Overpressure possible
- » Wear-free sensor technology
- » Optional:
 - › Freely programmable
 - › RQ and OTR based feed control



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Contact

RAMOS®

Bioprocess optimisation in shake flasks and microtitre plates

- » Exhaust gas analysis OTR, CTR, RQ
- » Differentiation between process-based and biological effects
- » An alternative to more expensive stirred tank bioreactor experiments
- » Equivalent cultivation conditions compared to standard shake flasks
- » Virtual non-stop processing through extremely short setup times
- » Establishes optimal screening conditions



CULTILUX™

The CultiLux™ exposure measurement module for the RAMOS®, allows an individual exposure of every flask.

For the cultivation of plant cells or rather generally of phototrophic organisms, light energy is an essential requirement for semi-syntheses (light and dark reaction)

The exposure time as well as intensity, can be varied according to exposure profiles.

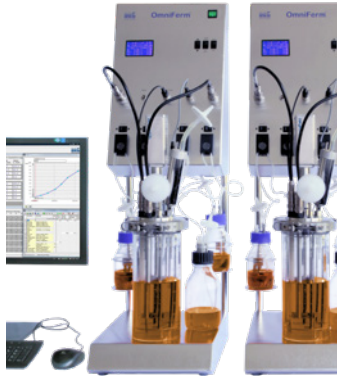


Fermentation Technology

OmniFerm®-mini

Flexible parallel fermenter system for R&D applications

- » High automation level
- » Extensive sensor system
- » Online analytics-based regulation possible
- » Solid-state temperature control without heat carrier
- » Optional:
 - > Gravimetric dosing
 - > Gas analytics & mixing
 - > Rotary oscillating single-use square bottles



OmniFerm®

Automated laboratory fermenter systems

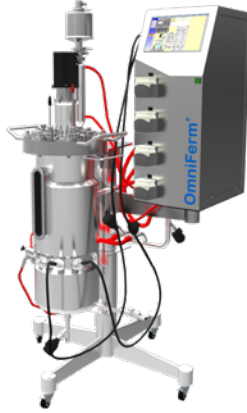
- » Full research fermenter functionality
- » Complex process control possible with EasyBatch™ or HiBatch™ recipe control
- » Seamless data chain from work order to LIMS
- » Extensive sensor system
- » Optional:
 - > Gravimetric dosing
 - > Gas analytics
 - > Gas mixing unit



OmniFerm® pilot fermenter

Fully automated pilot fermenter for R&D applications

- » Full research fermenter functionality
- » Fully automated
- » Sterilisation in place (SIP)
- » High mobility level
- » Monitoring and data recording
- » Seamless data chain from work order to LIMS
- » Customised configuration



RAMOS®-fb

The RAMOS® fed-batch system allows for performing controlled fed-batch experiments in shake flasks.

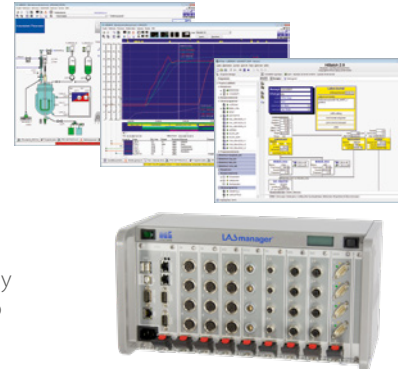
The feeding can be achieved by creating freely combinable feed profiles with a combination of constant, linear or exponential profiles or feed rates.



LABmanager® & LABVision®

The industrial standard for automation of laboratory plants, miniplants as well as pilot plants

- » Easy handling
- » Modular design
- » Highly precise, e.g. temperature measurement with 1 mK resolution
- » Extremely adaptable, compact and robust
- » Comfortable NAMUR connection technology
- » Scalable from 4 up to 3,040 inputs/outputs



EasyBatch™

Spreadsheet-based recipe control

- » Intuitive operation
- » More efficient operation
- » Automatic testing
- » Modification of parameters during run time
- » GLP- and GMP-compliant operation



Block	Parameter	Date	VISCOFPAKT CE	VISCOFPAKT B	T_R_CTRL	T_S_CTRL	DOOS1_CTRL	DOOS1_CTRL	DOOS1_CTRL	TB_OUT_X	Phase		
			Alkalische Schwebstoffe	Basen	Ein/Aus (Sto)	Temp. Kalibrierung	F-Sollwert	Dosiermenge 1	ein/Aus	Dosiermenge	Dosierzeit	10 (St)	1
Ausführung	BEPULL				Ein	250	Ein	30.0					Reif
Start													Aktiv
Warte auf	IT_RLX-29 (°C)							80.0					Warte
Rampe auf	DO01-00												T-Rin
Warte auf	IT_RLX-19 (°C)												Warte
Warten	NISCOFAKT TORR-100 (Neuro)	11											Aktiv
Start									Ein	2.0	10		Aktiv
Warte auf	IDOS1_CTRL_EH1												Aktiv
Start													Aktiv
Warte auf	IT_RLX-30 (°C)								Aus				Aktiv
Start													1

LABDos® PERISTALTIC

The universal dosing pump

- » High media resistance
- » Low pulsation conveying
- » Selectable conveying direction
- » Calibration possible in mg/min and ml/min
- » Highly precise drive
- » Easy to clean and maintain
- » Robust and compact stainless steel casing
- » Controllable via serial interface or manually



SyrDos™

High-precision syringe doser

- » High media resistance
- » Wetted parts: glass, PTFE and Kel-F, optional ceramics
- » Syringes from 25 µl up to 50 ml
- » 48,000 steps per stroke
- » Optional:
 - > Continuous conveying with shock-free changeover
 - > Overpressure shutdown
 - > High pressure up to 90 bar
 - > Dispensing push-button



LABDos® SOLID

Solid dosers for dosing, portioning and filling

- » For powder, granules, crystals, chips etc.
- » Chemically resistant
- » For mounting on an NS29 socket or as a desktop unit
- » Optional:
 - > Stand-alone version
 - > Vacuum- and pressure-resistant design

