

The brand-new RITTER Heating Oven for the RITTER Biogas Batch Fermentation System



**PRESENTING
THE ALL-NEW
RITTER HEATING OVEN
FOR ITS LABORATORY
BIOGAS BATCH
FERMENTATION
SYSTEM!**

RITTER Engineering has been successful in the manufacture of measuring instruments as well as in the field of thermoplastic engineering for 70 years. In 2015 RITTER introduced the Biogas Batch Fermentation System which was installed successfully in many biogas laboratories world-wide since then. As a next step RITTER developed its own heating oven for Batch Fermentation Systems made out of thermoplastic (PE).

With this heating oven RITTER provides the only batch fermentation system allowing different substrates being tested simultaneously plus 3 blank tests plus 3 cellulose tests.

Features & Benefits

- › 18 Fermentation Bottles á 0.5 / 1 / 2 ltr:
 - › 3x Blank test
 - › 3x Cellulose
 - › **4x Different substrates simultaneously**
- › Easy loading and unloading from the top
- › Heat transfer through forced air circulation (fans):
No evaporation of water, no contamination
- › Programmable temperature profiles
(in combination with the new data acquisition software RIGAMO 4.0)

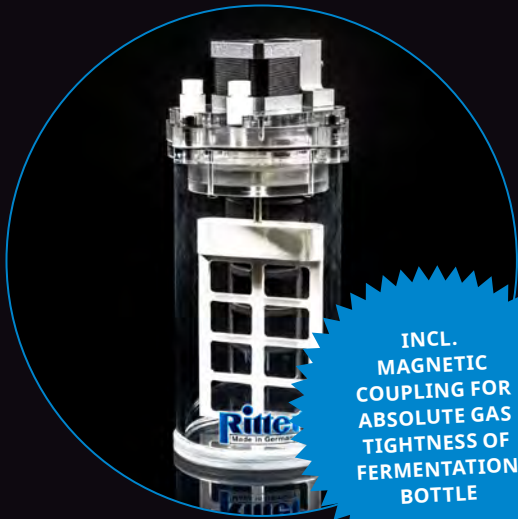
When operated with data logging and control software »Rigamo« V4.0:

- › Programming and logging of oven temperature including ramp function
- › Programming of stirrers: Speed, stirring time, pause time, forward / backward rotation

Technical Data

- › Manufacturer: RITTER
- › Dimensions: W x D x H 750 x 720 x 300 mm
- › Weight: approx. 39 kg
- › Temperature range: Room temperature to 55°C
- › Control of stirring devices of fermentation bottles (speed, interval) by RIGAMO software
- › Air circulation with mechanical convection (2 fans)
- › Digital temperature setting via front panel, increment 1°C
- › Bus interface RJ12 for connection to signal interface module »SIM« (required for operation with »Rigamo« software)

Associating RITTER Developments for its Laboratory Biogas Batch-Fermentation System



INCL. MAGNETIC COUPLING FOR ABSOLUTE GAS TIGHTNESS OF FERMENTATION BOTTLE

The RITTER PMMA Fermentation Bottle

- › Absolute gas-tight by magnetic coupling between stirring motor and stirring blade
- › Various bottle sizes: 0.5 / 1 / 2 ltr – custom sizes on request
- › High breaking strength by PMMA material (no fragile glass gas outlet nozzle)
- › Custom stirring blades available
- › Stirring speed adjustable from 1 to 30 r/min *
- › Interval stirring with freely selectable interval times *
- › Suitable for media with low and high viscosity ($\leq 450 \text{ mm}^2/\text{sec}$)
- › Gas outlet port: PVDF screw-type tube connection for tube $\varnothing 4, / 6, \text{ mm}$

* with RIGAMO software V4.x

The all new 3-cell and 9-cell BlockMilliGascounter *

- › Multiple measurement cells in one unit
- › Independently measuring
- › Gas in/outlet for each cell
- › Calibration certificate for each cell
- › Compensation of temperature
- › Compensation of pressure
- › Compensation of humidity

Compact! Accurate! Powerful!

* in preparation



UP TO 9 RITTER MILLIGASCOUNTERS IN JUST ONE BLOCK



NEW VERSION RIGAMO V4.0

Unified Data Acquisition Software for RITTER Products **ONE software for ...**

- › volumetric measurement of gas volume and flow rate
- › gas analysis with NDIR & NDUV gas sensors
- › RITTER Multiplexer for gas analysis of up to 18 gas lines
- › control of heating oven
- › control of fermentation bottles
- › volumetric mass flow measurement

For more informations please contact ...

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