

# Biogas Test Plant BTP2 - control

## Including comprehensive range of on-line measuring equipment

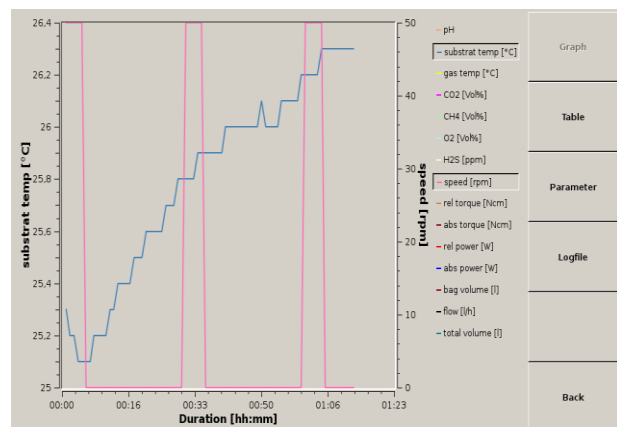
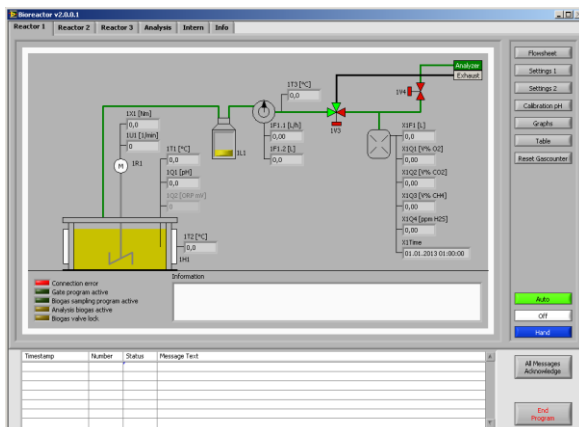


### Fields of application:

- Research
- Fermentation yield test
- Optimization of gas output

### Advantages:

- On-line measuring equipment
- System expandable up to 10 reactor units
- Integrated gas analysis
- Data storage and visualization



Software Biogas-control

### Possible configurations of BTP2-control

- Bio reactor with various installation ports
- Silicon – heater band
- Feeding system
- Stirrer including speed adjustment and display of torque
- Gas tight shaft feed
- Gas bag for gas sampling
- Assembly frame
- pH-measuring equipment
- T-Controller device
- Temperature measuring equipment
- Redox measuring equipment
- Recording of gas quantities through gas meters
- Automatic gas analysis system
- Software package Biogas-control

The detailed scope of supply will be defined within the quotation.

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## Including comprehensive range of on-line measuring equipment

<b>Bio reactor</b>	
Dimension:	Volume approx. 15 liter; outer diameter: 270 mm, wall thickness: 9 mm, height: 350 mm
Material/ configuration:	For measuring equipment
Max. allowed temperature:	60°C
Feeding:	Feeding funnel (stainless steel) including dipped duct and sealing plug
Shaft feed through	Variant 1: dipped duct Variant 2: surge tank
Heating:	Silicon-heater band incl. temperature sensor, Height of heater band: 200 mm; max. input power for heating: 500 W Adjustment of heating system through T-control unit
<b>Measuring equipment for bio reactor</b>	
pH	Measuring range: 1-14; Length: 220 mm, PG 13.5 screw-in thread
Redox potential	Option: Measuring range: - 2000...+2000 mV; length: 220 mm, PG 13.5 screw-in thread
Temperature	Measuring range: 0...60°C, resolution: 0.1 °C, sensor screwed-in
<b>Stirrer/ stirrer tools</b>	
Speed range:	10 – 500 rpm
Torque:	Max. 600 Ncm
Display:	Speed and torque
Stirrer tools:	2 levels with propeller shaped stirrers and anchor shaped stirrers
<b>Gas counter/ Gas bag</b>	
Measuring range:	1...60 l/h; resolution: 2,5 ml
Gas bag:	Volume 10 liter as sample for gas quality measurement
<b>Gas quality measurement system</b>	
CH <sub>4</sub> :	Range: 0...100 Vol. %; measuring principle: IR
CO <sub>2</sub> :	Range: 0...100 Vol. %; measuring principle: IR
H <sub>2</sub> S:	Range: 0...5000 ppm; principle: electro-chemical - one range
O <sub>2</sub> :	Range: 0...25 Vol. %; principle: electro-chemical measuring cell
Feature:	Gas cooler
<b>SENSOcontrol</b>	
Storage and Display unit	pH, temperature and gas amount – incl. graphical and tabular display of actual values
Control values:	Asynchronous timing of the agitator Option: pH control using of several 2-channel peristaltic pumps
<b>Software features</b>	
Software:	Biogas-control
<b>Space requirements</b>	
Modules:	Width: 50 cm; depth: 65 cm; height: 240 cm – for each module

Modifications due to technical progress are subject to change without notice.



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