

Bioengineering RALF – Request for quotation

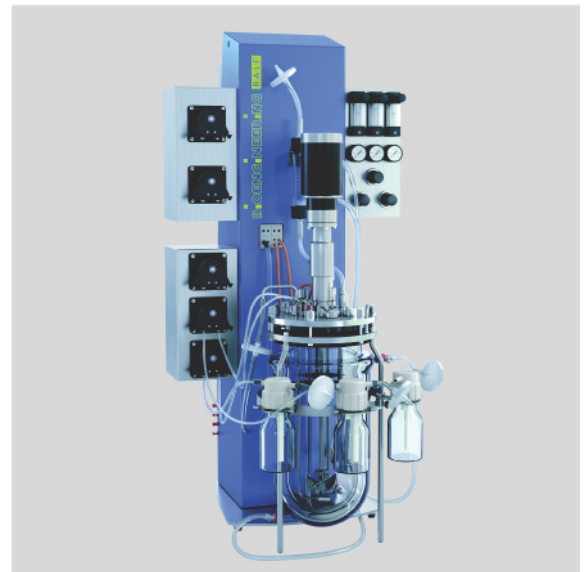
Self-configured system

Your contact information

Name	
Company	
Designation	
Address line 1	
Address line 2	
Email	
Phone	

For Bioengineering's recommended configurations please fill out the RFQ Form for *Essential models* instead.

Or to have us configure the best version for your process requirements, please fill out the RFQ Form for a *Process specific configuration*.



Self-configured system

Characterization of your process

Application	<input type="checkbox"/> Microbial	<input type="checkbox"/> Cell		
Feed strategy	<input type="checkbox"/> Batch	<input type="checkbox"/> Fed batch	<input type="checkbox"/> Continuous	<input type="checkbox"/> Perfusion

Volumes + units

Up to six units can be supplied and controlled with one PC	<input type="checkbox"/> 2.0 L: units
	<input type="checkbox"/> 3.7 L: units
	<input type="checkbox"/> 5.0 L: units
	<input type="checkbox"/> 6.7 L: units

If you require multiple units with different configurations, please send us a separate RFQ form for each type of configuration.

Vessel

Vessel	<input type="checkbox"/> Single wall vessel	<input type="checkbox"/> Double wall vessel	
Drive	<input type="checkbox"/> Direct top drive with mechanical seal	<input type="checkbox"/> Direct top drive magnetically coupled	
Agitators	<input type="checkbox"/> 2 Flat-blade disc agitators	<input type="checkbox"/> 1 Propeller agitator	<input type="checkbox"/> 1 Segment pitched blade agitator

Temperature control

- Heating pad and cooling finger Electrical heating jacket and cooling finger *
- Perfused baffles Heating circuit connected to perfused baffles *
- Double jacket Heating circuit connected to double jacket **

* only with single wall vessel ** only with double wall vessel

Aeration

- Sparger Ring sparger Sinter sparger Aeration tube
- Gas inlet and outlet Microbial: 1 channel for 2 vvm Air with pulsed valve, exhaust gas line, condenser Cell culture: 3 channels for 0.1 vvm Air, 0.1 vvm O₂ and 0.05 vvm CO₂ with pulsed valve, exhaust gas line, condenser Configure each gas line individually (select below)
- | | | | | | | |
|-----------------------------------|--|--|--|--|---|--------|
| Individual gas line configuration | L/h: <input type="checkbox"/> 2 / <input type="checkbox"/> 5 / <input type="checkbox"/> 8 /
<input type="checkbox"/> 16 / <input type="checkbox"/> 40 /
<input type="checkbox"/> 100 / <input type="checkbox"/> 250 / <input type="checkbox"/> 500 | <input type="checkbox"/> mass flow controller
<input type="checkbox"/> pulsed valve | <input type="checkbox"/> Air
<input type="checkbox"/> CO ₂ | <input type="checkbox"/> O ₂
<input type="checkbox"/> N ₂ | <input type="checkbox"/> To sparger
<input type="checkbox"/> To head space | Line 1 |
| | L/h: <input type="checkbox"/> 2 / <input type="checkbox"/> 5 / <input type="checkbox"/> 8 /
<input type="checkbox"/> 16 / <input type="checkbox"/> 40 /
<input type="checkbox"/> 100 / <input type="checkbox"/> 250 / <input type="checkbox"/> 500 | <input type="checkbox"/> mass flow controller
<input type="checkbox"/> pulsed valve | <input type="checkbox"/> Air
<input type="checkbox"/> CO ₂ | <input type="checkbox"/> O ₂
<input type="checkbox"/> N ₂ | <input type="checkbox"/> To sparger
<input type="checkbox"/> To head space | Line 2 |
| | L/h: <input type="checkbox"/> 2 / <input type="checkbox"/> 5 / <input type="checkbox"/> 8 /
<input type="checkbox"/> 16 / <input type="checkbox"/> 40 /
<input type="checkbox"/> 100 / <input type="checkbox"/> 250 / <input type="checkbox"/> 500 | <input type="checkbox"/> mass flow controller
<input type="checkbox"/> pulsed valve | <input type="checkbox"/> Air
<input type="checkbox"/> CO ₂ | <input type="checkbox"/> O ₂
<input type="checkbox"/> N ₂ | <input type="checkbox"/> To sparger
<input type="checkbox"/> To head space | Line 3 |
| | L/h: <input type="checkbox"/> 2 / <input type="checkbox"/> 5 / <input type="checkbox"/> 8 /
<input type="checkbox"/> 16 / <input type="checkbox"/> 40 /
<input type="checkbox"/> 100 / <input type="checkbox"/> 250 / <input type="checkbox"/> 500 | <input type="checkbox"/> mass flow controller
<input type="checkbox"/> pulsed valve | <input type="checkbox"/> Air
<input type="checkbox"/> CO ₂ | <input type="checkbox"/> O ₂
<input type="checkbox"/> N ₂ | <input type="checkbox"/> To sparger
<input type="checkbox"/> To head space | Line 4 |
| | L/h: <input type="checkbox"/> 2 / <input type="checkbox"/> 5 / <input type="checkbox"/> 8 /
<input type="checkbox"/> 16 / <input type="checkbox"/> 40 /
<input type="checkbox"/> 100 / <input type="checkbox"/> 250 / <input type="checkbox"/> 500 | <input type="checkbox"/> mass flow controller
<input type="checkbox"/> pulsed valve | <input type="checkbox"/> Air
<input type="checkbox"/> CO ₂ | <input type="checkbox"/> O ₂
<input type="checkbox"/> N ₂ | <input type="checkbox"/> To sparger
<input type="checkbox"/> To head space | Line 5 |
| | L/h: <input type="checkbox"/> 2 / <input type="checkbox"/> 5 / <input type="checkbox"/> 8 /
<input type="checkbox"/> 16 / <input type="checkbox"/> 40 /
<input type="checkbox"/> 100 / <input type="checkbox"/> 250 / <input type="checkbox"/> 500 | <input type="checkbox"/> mass flow controller
<input type="checkbox"/> pulsed valve | <input type="checkbox"/> Air
<input type="checkbox"/> CO ₂ | <input type="checkbox"/> O ₂
<input type="checkbox"/> N ₂ | <input type="checkbox"/> To sparger
<input type="checkbox"/> To head space | Line 6 |

Addition / Transfer

- Immersion tube Optional height-adjustable dip tube (in addition to regular dip tube)
- Rotor filter package 20 µm Rotor filter package 20 µm *
- Primary pump module Pump module with 2 fixed speed pumps Pump module with 2 fixed speed pumps and 1 variable speed pump
- Additional pumps Additional pump module with 2 fixed speed pumps Standalone variable speed pump with display (select rpm below)
 Additional pump module with 2 fixed speed and 1 variable speed pumps
 with speed control 1-100 rpm
 with speed control 0.1-10 rpm
 with speed control 0.3-30 rpm
 with speed control 0.03-3 rpm

* only for cell culture models

Process monitoring

- Cultivation parameters (Agitation, T, DO, pH incl. in standard models) OD for biomass monitoring Exhalizer for online gas analysis of O₂ and CO₂ concentration Redox for monitoring of activity of anaerobic/ micro aerobic culture Antifoam

Control Unit

Visualization and control	<input checked="" type="checkbox"/> BioSCADA <i>(Full SCADA functionality incl. recipe configuration, data acquisition, analysis and export)</i>	<input type="checkbox"/> Laptop <i>(preconfigured and tested Laptop with BioSCADA)</i>	<input checked="" type="checkbox"/> I/O interface for external equipment <i>(Input: 1x RS232 connected to universal PID controller 4x 4-20 mA connected to universal PID controller Output: 4x 4-20 mA freely configurable 1x digital output 24 V, freely configurable 1x USB connection)</i>
Power supply	<input type="checkbox"/> 230 V, 50-60 Hz	<input type="checkbox"/> 110 V, 50-60 Hz	

Options

Additional items	<input type="checkbox"/> Installation		
	<input type="checkbox"/> Installation with IQ/OQ		
	<input type="checkbox"/> Chiller 50 L, for up to 6 RALF units		
	<input type="checkbox"/> Water supply connection set for up to 4 RALF units		
Spare parts	<input type="checkbox"/> Small set <i>(Content: O-ring set, 2x blind plug DN12, 1x mechanical seal, set of silicone tubing, pH buffer 4, pH buffer 7, diaphragm cleaner pepsin/HCl)</i>	<input type="checkbox"/> Large set <i>(Content: O-ring set, 2x blind plug DN12, 1x mechanical seal, set of silicone tubing, pH buffer 4, pH buffer 7, diaphragm cleaner pepsin/HCl, DO probe membrane kit, pH electrode, set of quick connections)</i>	<input type="checkbox"/> Filter set <i>(Content: 4x autoclavable filter 0.2 µm pore size, D 50 mm)</i>

Comments

Do you have any additional requirements not covered by this questionnaire?