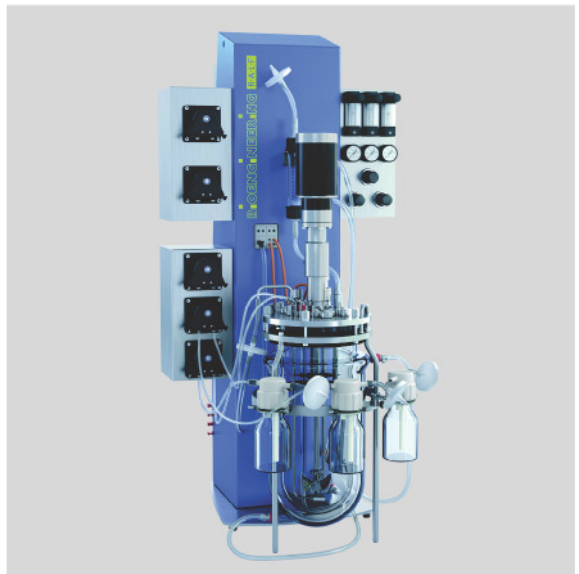


Bioengineering RALF – Request for quotation

Process specific configuration

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 individually select each component of your RALF, please fill out the RFQ Form for a *Self-configured system*.

Process specific configuration

Characterization of your process

Organism	<input type="checkbox"/> Bacteria	<input type="checkbox"/> Cells	<input type="checkbox"/> Fungi	<input type="checkbox"/> Yeast
Respiration	<input type="checkbox"/> Aerobic	<input type="checkbox"/> Anaerobic	<input type="checkbox"/> Facultative aerobic	
Other design considerations	<input type="checkbox"/> Shear sensitive	<input type="checkbox"/> Heat sensitive	<input type="checkbox"/> Highly foaming	<input type="checkbox"/> Other

Feed

Operation mode	<input type="checkbox"/> Batch	<input type="checkbox"/> Fed batch	<input type="checkbox"/> Continuous	<input type="checkbox"/> Perfusion
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Aeration

Aeration for a microbial process	<input type="checkbox"/> Standard air <i>(1 channel for 2 vvm Air with pulsed valve)</i>	<input type="checkbox"/> O ₂ enriched <i>(2 channels for 2 vvm Air and 1 vvm O₂ with pulsed valves)</i>	<input type="checkbox"/> Anaerobic <i>(2 channels for 2 vvm Air and 1 vvm N₂ with pulsed valves)</i>	<input type="checkbox"/> Mass flow controllers Number of mass flow controllers:
Aeration for a cell process	<input type="checkbox"/> Standard 3 gas mix <i>(3-channels submersed for 0.1 vvm Air, 0.1 vvm O₂ and 0.05 vvm CO₂, all with</i>	<input type="checkbox"/> Enhanced 4 gas mix <i>(4-gas channels submersed: 0.1 vvm Air, 0.1 vvm O₂, 0.1 vvm N₂ and 0.05 vvm</i>	<input type="checkbox"/> Surface aeration	<input type="checkbox"/> Mass flow controllers Number of mass flow controllers:

Process monitoring + control

Cultivation parameters Agitation, T, DO, pH incl. in standard models	<input type="checkbox"/> OD for biomass monitoring	<input type="checkbox"/> Exhalizer for online gas analysis of O ₂ and CO ₂ concentration	<input type="checkbox"/> Redox for monitoring of activity of anaerobic/ micro aerobic culture	<input type="checkbox"/> Antifoam
	<input type="checkbox"/> Balance 10-35'000 g	<input type="checkbox"/> Balance 1-16'100 g	<input type="checkbox"/> Balance 1-6'500 g	<input type="checkbox"/> Level
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>	

Dosing

Line for	<input type="checkbox"/> Base	<input type="checkbox"/> Acid	<input type="checkbox"/> Feed	<input type="checkbox"/> Antifoam
	<input type="checkbox"/> Others, please state number			

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		

Options

Additional items	<input type="checkbox"/> Installation
	<input type="checkbox"/> Installation with IQ/OQ
	<input type="checkbox"/> Spare parts package
	<input type="checkbox"/> Spare filters for gas inlet and outlet
	<input type="checkbox"/> Chiller 50 L, for up to 6 RALF units

Comments

Do you have any additional process requirements not covered by this questionnaire?
 Would you like a multipurpose model that can be configured for both microbial and cell culture applications?
 Tell us what you need and we'll put together the best version for your requirements.