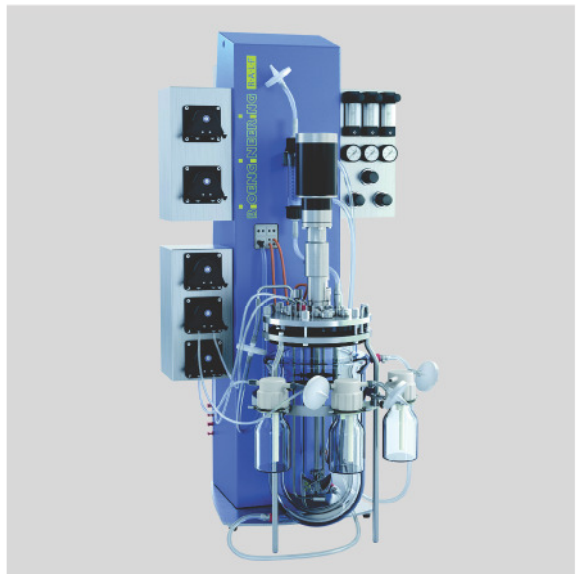


Bioengineering RALF – Request for quotation

Essential models

Your contact information

Name	
Company	
Designation	
Address line 1	
Address line 2	
Email	
Phone	



To individually select each component of your RALF, please fill out the RFQ Form for a *Self-configured system*.
 Or to have us configure the best version for your process requirements, please fill out the RFQ Form for a *Process specific configuration*.

Essential models

	Microbial		Cell culture	
	RALF Basic	RALF Advanced	RALF Basic	RALF Advanced
Total volume [L]	2 3.7 5 6.7			
Geometry D _i :H _i 2 L 3.7 L 5 L 6.7 L [mm]	96:300 125:300 150:300 150:400			
Dimensions autoclave w x h [mm]	307-440 x 507-607			
Footprint w x d [mm]	512 x 679-723			
Ports (vessel lid) 2 L 3.7 L 5 L 6.7 L	15 18 19 19 DN04 connection tubes: 6 5 5 5 DN12 lid ports: 8 12 12 12 DN19 lid ports: 0 0 1 1 Agitator port: 1 1 1 1			
Vessel	Single wall vessel		Single wall vessel	Double wall vessel
Controllers	Agitator speed, temperature, pH, DO	Agitator speed, temperature, pH, DO, foam	Agitator speed, temperature, pH, DO	Agitator speed, temperature, pH, DO, level
Drive	Top drive mechanical seal, 20-1500 rpm			
Agitators	2 Flat-blade disc agitators		1 Propeller agitator	
Temperature control	Electrical heating jacket and cooling finger with solenoid valve for temperature control	Heating and cooling by per-fused stainless steel baffles connected to heating circuit with circulation pump, elec-	Electrical heating jacket and cooling finger with solenoid valve for temperature control	Heating circuit connected to double wall; with circulation pump, electrical heater and cooling water valve

Aeration	Ring sparger, 1 pulsed gas line (Air), condenser	Sinter sparger, 3 pulsed gas lines (Air, O ₂ , CO ₂), condenser
Pumps	2 fixed speed	2 fixed speed, 1 variable
Dosing	2x bottle, immersion tube, cap and filter	3x bottle, immersion tube, cap and filter
Sampling/harvest	Sampling system with glass tube	
Configurable ports for external devices	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	
Software/control	BioSCADA RALF	

Options

Additional items	<input type="checkbox"/> Laptop with preconfigured BioSCADA RALF <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
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Request a quotation for:

	<input type="checkbox"/> RALF Microbial Basic <input type="checkbox"/> RALF Microbial Advanced <input type="checkbox"/> RALF Cell Basic <input type="checkbox"/> RALF Cell Advanced
Volumes + units	<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

Please send a copy of this RFQ to sales@bioengineering.ch and we will respond with an offer as soon as possible.