

THE RTF-5

Real Time Engineering has over 20 years experience in producing solution systems for the biological sciences industries.

The RTF-5 is available in a standard package as detailed below.

RTF-5 Vessel		RTF-5 Baseunit	
Stirrer system, with 2 rushton impellers	✓	Brushless DC motor and tachometer	✓
pH sensor with cable	✓	Steam generator for Sample Valve	✓
DOT sensor with cable	✓	Variable Speed Peristaltic pumps	4
Foam sensor with cable	✓	3 Mass Flow Controllers for Air, O ₂ , N ₂ /Co ₂	3
Triple addition port	✓	Thermocirculator with recirculating flow sensor	✓
Gas addition sparger	✓	Amplifiers and electronics for all sensors and devices	✓
Gas exit condenser	✓	Embedded control system and software	✓
Gas Inlet Filter	✓	7" LCD screen, with user controls.	✓
Gas Exit filter	✓	Dimensions	Baseunit Vessel
Feed addition port	✓	Height	580 310/510*
Septum holder	✓	Width	380 180
Septa	10	Depth	520 -
Blanks for 12mm ports	5		*510mm with condenser
Blanks for 6.4mm ports	3	Required services	
Temperature sensor	✓	Air	
Heat exchanger	✓	Water	
Sample/harvest valve	✓	Drain	
Baffle cage	✓	Mains electricity	

Fully configurable PID controllers
flexible for all aspects of control

Graphical user interface
with adjustable 7" LCD display

Logging and multivariable graphs
for detailed live trend analysis

Base driven stirrer with ceramic seal
more compact, reliable and longer lasting

Unique port sealing design
for increased reliability and repeatability

Bottom mounted sample valve
for near zero dead volume samples or harvest.

Network enabled for live, remote information
View log files over your local network using any web browser



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Vessel

Baseunit

Controller

Results



3.1 Litre vessel
316L stainless steel and glass components
Eight 12mm ports for pH, DOT, Triple addition, gases etc
Four 6.4mm (1/4") for feed and antifoam etc
General-purpose 32mm port
Unique port sealing system for zero shear stress on seals.
Bottom mounted sample/harvest valve



3 Digital mass flow controlled gases
4 Variable speed reversible peristaltic pumps
Internal isolated amplifiers for pH, DOT and Foam using 16bit ADC
Digital temperature acquisition
Thermocirculating cascaded heat exchanger
Brushless reversible stirrer motor 0 – 1500 rpm
Steam generator for sterilizing sample valve
Auto shutoff condenser connections

Up to 14 user configurable controllers

Single or double sided outputs with deadband and limit control

True PID control algorithm

Cascadable controller output

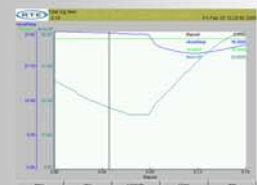
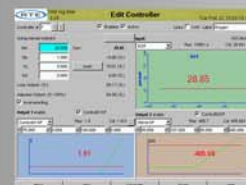
Ability to load and save configurations independently of specific device calibration

Several predefined configurations supplied

Graphical based Live display – always real time information

Real time graphing of log data gives visual and numerical trend information for any process variable, output or setpoint. Multiple variables can be viewed on the same graph and/or axes for easy comparison.

Log files can be viewed from remote network locations using any web browser and are easily exported into spreadsheet programs such as Microsoft Excel.



Simple and reliable user interaction requires only the use of a dial and menu buttons.

Easily learnable input method for quick and precise numerical entry and adjustments
Connection for optional mouse & keyboard if required for a large amount of data input



The RTF-5

Flexible. Useable. Powerful. Affordable. Reliable.

