SCIENTICO INDIA
Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

Phone: +91 7015865225 **Email:** info@scienticoindia.com **Web:** scienticoindia.com **Address:** #71, Industrial Area, Ambala Cantt, Haryana, India

Continuous Stirred Tank Reactor in Series (Stand Alone) | ReaktiLabX - 14

Category: Chemical Reaction Technology · **Country of Origin:** India

Product Overview

The Continuous Stirred Tank Reactor in Series (Stand-Alone) ReaktiLabX - 14 connects three glass reactors in series as a self-contained unit. This Continuous Stirred Tank Reactor in Series (Stand-Alone) features five stirrers, stainless steel chambered bottoms as heat exchangers, and dedicated pumps for reactant and product delivery. It includes its own heating water circuit and tanks, requiring no external supply unit. Optional DAQ software enables measurement and calculation of results.

View this product online: https://scienticoindia.com/product/continuous-stirred-tank-reactor-in-series-stand-alone-reaktilabx-14/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Continuous Stirred Tank Reactor in Series (Stand Alone) ReaktiLabX - 14 — Technical Specifications

Specification	Detail
Reactors	3 identical stirred tank reactors made of glass connected in series
Chambered Bottom	Made of stainless steel as heat exchanger
Inter-Reactor Delivery	Via 2 peristaltic pumps
Reactor Capacity	Small reactor capacity for less consumption of chemicals
Sensor	For measuring the conductivity and temperature
Display	Of conductivity and temperature
Temperature Control	In the reactor

Technical Data

3 Reactors

Parameter	Value
Outer diameter	each 110mm
Inside diameter	each 100mm
Height	each 250mm

Parameter	Value
Reactor capacity	each approx. 1950mL/min
Adjustable volume	1500~1950mL
Material	Boro 3.3 glass

Stirrer

Parameter	Value
Speed	approx. 300min^{-1}
Quantity	5

Peristaltic Pump for Reactants

Parameter	Value
Quantity	2
Max. flow rate	approx. 500mL/min

Peristaltic Pump for Products

Parameter	Value
Max. flow rate	approx. 500mL/min

Water Pump

Parameter	Value
Max. flow rate	10L/min
Max. head	10m
Power consumption	120W

Tanks

Parameter	Value
Reactants	2x 3L
Product	5L
Heating water	8L

Measuring Ranges

Parameter	Value
Conductivity	0~200mS/cm
Temperature	0~60°C

Heater

Parameter	Value
Power consumption	3000W

Key Features

Key Features

- **Reactors:** 3 identical, glass, 110mm outer diameter, 100mm inside diameter, 250mm height each

- **Adjustable Volume:** 1500~1950mL, boro 3.3 glass material
- **Stirrers:** 5, approx. 300min^{-1} speed
- **Reactant Pumps:** 2 peristaltic pumps, approx. 500mL/min max. flow rate each
- **Product Pump:** peristaltic, approx. 500mL/min max. flow rate
- **Water Pump:** 10L/min max. flow, 10m max. head, 120W power consumption
- **Heater:** 3000W power consumption
- **Tanks:** 2x 3L reactant tanks, 5L product tank, 8L heating water tank
- **Chambered Bottom:** stainless steel, functions as heat exchanger
- **Self-Contained Design:** built-in pumps, tanks, and heating circuit make this Continuous Stirred Tank Reactor in Series (Stand-Alone) fully independent

Experiments

- Fundamentals of a saponification reaction
- Conversion in each reactor depending on: retention time, temperature, concentration

Construction and Design

The Continuous Stirred Tank Reactor in Series (Stand Alone) ReaktiLabX - 14 consists of 3 identical stirred tank reactors, each made of glass, 110mm outer diameter, 100mm inside diameter, 250mm in height, with an adjustable volume of 1500 to 1950mL. Five stirrers, operating at approximately 300min^{-1}, ensure homogenous mixing across the reactors. Each reactor's chambered bottom, made of stainless steel, functions as a heat exchanger. Two peristaltic pumps, each with a maximum flow rate of approximately 500mL/min, deliver reactants, while a separate peristaltic pump handles product delivery at the same flow rate. Delivery between the stirred tanks occurs via 2 peristaltic pumps. A water pump, rated 10L/min max. flow, 10m max. head, and 120W power consumption, works with a 3000W heater for temperature regulation. Tanks include two 3L reactant tanks, a 5L product tank, and an 8L heating water tank. A combined conductivity and temperature sensor identifies conversion in each reactor, with values digitally displayed.

Software

Software ReaktiLabX - 14 (optional). DAQ software specially designed in National Instrument™, LABVIEW™ environment to measure and calculate the results of the apparatus. The software is optional; a set of electronic sensors is included when the software is used. The software can be run with any Windows™ environment.

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q: What is the Continuous Stirred Tank Reactor in Series (Stand-Alone) ReaktiLabX - 14 used for?
A: It is used to study stirred tank reactor behavior and operation sequentially across three reactors connected in series, examining conversion, saponification fundamentals, and retention time effects.

Q: How many reactors are connected in series?
A: Three identical stirred tank reactors, each with an adjustable volume of 1500 to 1950mL, are connected in series.

Q: What makes this unit "standalone"?
A: The apparatus includes its own heating water circuit, connections, pumps, and reactant and product tanks, allowing it to operate as a self-contained unit.

Q: How many stirrers does the system have?
A: The system has 5 stirrers, operating at approximately 300min^{-1}.

Q: Is data acquisition software available with this system?
A: Yes, Software ReaktiLabX - 14 is available as an optional add-on, designed in National Instrument™ LABVIEW™ environment, and can run with any Windows™ environment.