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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

Trickle Bed Reactor | ReaktiLabX 15

Category: Chemical Reaction Technology · **Order Code:** REAKTILABX 15 · **Country of Origin:** India

Product Overview

Trickle Bed Reactor ReaktiLabX 15 is a bench-scale glass column apparatus for studying gas-liquid flow through packed beds. It measures pressure drop, hold-up and flow regime in a trickle bed reactor under co-current and co-current flow conditions using 4 ball valves. The double jacketed borosilicate glass column (80mm inner dia., 1000mm height) accepts interchangeable packing: glass beads or Rasching rings. Rotameters, a differential pressure transmitter and pressure gauges provide flow and pressure measurement. Optional ReaktiLabX 15 DAQ software enables LabVIEW-based data acquisition on Windows.

View this product online: https://scienticoindia.com/product/trickle-bed-reactor-reaktilabx-15/



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

Technical Specifications

Trickle Bed Reactor ReaktiLabX 15 — Technical Specifications

Parameter	Value
Column Type	Double jacketed
Column Material	Borosilicate glass
Column Inner Diameter	80mm
Column Height	1000mm
Packing: Glass Beads Diameter	3mm
Packing: Rasching Rings Diameter	10mm
Packing: Rasching Rings Height	10mm
Pressure Gauge Quantity	2
Pressure Gauge Range	0~2bar
Differential Pressure Transmitter Range	-25~25kPa
Differential Pressure Transmitter Accuracy	0.1kPa
Rotameter, Liquid	1~7LPM
Rotameter, Gas/Air	0.4~4m3/h
Feed Tank Capacity	20L

Parameter	Value
Feed Tank Material	Borosilicate
Feed Pump Max. Flow Rate	10L/min
Feed Pump Max. Head	10m
Feed Pump Power Consumption	120W
Measuring Range: Flow	1~7LPM, 0.4~4m3/h
Measuring Range: Temperature	-100~400°C
Measuring Range: Differential Pressure	-25~25kPa
Measuring Range: Pressure	0~2bar

Technical Data

Column

Parameter	Value
Type	Double jacketed
Material	Borosilicate glass
Inner Diameter	80mm
Height	1000mm

Packing: Glass Beads

Parameter	Value
Diameter	3mm

Packing: Rasching Rings

Parameter	Value
Diameter	10mm
Height	10mm

Pressure Gauge

Parameter	Value
Quantity	2
Range	0~2bar

Differential Pressure Transmitter

Parameter	Value
Range	-25~25kPa
Accuracy	0.1kPa

Rotameter

Parameter	Value
Liquid	1~7LPM
Gas/Air	0.4~4m3/h

Feed Tank

Parameter	Value
Capacity	20L
Material	Borosilicate

Feed Pump

Parameter	Value
Max. Flow Rate	10L/min
Max. Head	10m
Power Consumption	120W

Measuring Ranges

Parameter	Value
Flow	1~7LPM, 0.4~4m3/h
Temperature	-100~400°C
Differential Pressure	-25~25kPa
Pressure	0~2bar

Key Features

Key Features

- **Reactor Type:** Trickle bed reactor with easily interchangeable glass column
- **Structure:** Rust free steel structure with caster wheels for easy movement
- **Flow Configuration:** Con-current and co-current flow using 4 ball valves
- **Mixing Chamber:** Stainless steel construction
- **Column Design:** Hot water circulated, transparent concentric type, compatible capacity for air and water
- **Liquid Catch Pot:** Stainless steel, compatible capacity
- **Packing Material:** Two types available (glass beads, Rasching rings)
- **Liquid Flow Measurement:** Rotameter
- **Pressure Drop Measurement:** Differential pressure transmitter for gas/air pressure drop in column
- **Feed Tank:** Transparent liquid feed tank
- **Piping:** Stainless steel and PVC for water lines
- **Feed Circulation:** Feed pump
- **Control Valves:** Gun metal/brass material
- **Air Supply:** Air compressor
- **Control Panel:** Temperature indicators and switches
- **Pressure Gauges:** Provided for liquid and gas

Experiments

- To determine hydrodynamics of a trickle bed reactor involving the measurement of pressure drop, hold-up and flow regime

Construction and Design

The Trickle Bed Reactor ReaktiLabX 15 is built around a glass column that can be easily changed. Packing material can be placed inside the column as required. Air enters the top of the column after passing through a sparker and a pressure vessel with controlled pressure. A spray nozzle at the top of the column distributes liquid fed from a tank by a pump. Manometers are included in the setup. Solenoid valves are fitted in the feed line at the top of the column for immediate release and closing. Flow rate is adjusted using valves built into each line. The frame is a rust free steel structure fitted with caster wheels for easy movement. The mixing chamber is made of stainless steel. The column is a hot water circulated, transparent, concentric type with compatible capacity for air and water. The liquid catch pot is made of stainless steel with compatible capacity. Two types of packing material are used. A rotameter measures liquid flow and a differential pressure transmitter measures gas/air pressure drop in the column. The liquid feed tank is transparent. Piping for

water lines is stainless steel and PVC. Feed circulation is achieved using a feed pump. Control valves are made of gun metal/brass. An air compressor supplies air to the system. The control panel comprises temperature indicators and switches. Pressure gauges are provided for both liquid and gas. This design allows con-current and co-current flow using 4 ball valves, making this trickle bed reactor suitable for hydrodynamic studies.

Software

ReaktiLabX 15 software (optional): DAQ software specially designed in National Instruments LabVIEW environment to measure and calculate the results of the apparatus. The software is optional. While using the software, a set of electronic sensors is included. The software can be run in any Windows environment.

Optional Accessories

- ReaktiLabX 15 software (DAQ software with electronic sensors, optional)

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 Trickle Bed Reactor ReaktiLabX 15 used for?
A: It is used to determine the hydrodynamics of a trickle bed reactor, involving measurement of pressure drop, hold-up and flow regime.

Q: What flow configurations does the ReaktiLabX 15 support?
A: Con-current and co-current flow using 4 ball valves.

Q: What is the column material and size?
A: A double jacketed borosilicate glass column with 80mm inner diameter and 1000mm height.

Q: What packing materials are used in this trickle bed reactor?
A: Glass beads (3mm diameter) and Rasching rings (10mm diameter, 10mm height).

Q: Is data acquisition software available for the ReaktiLabX 15?
A: Yes. The optional ReaktiLabX 15 software is a DAQ system built in the National Instruments LABVIEW environment, runs on any Windows environment, and requires a set of electronic sensors when used.

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