**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

# Fluidized Bed Reactor | ReaktiLabX 19

**Category:** Chemical Reaction Technology · **Order Code:** REAKTILABX 19 · **Country of Origin:** India

## Product Overview

Fluidized Bed Reactor ReaktiLabX 19 supports a solid bed of catalytic particles on an upward gas flow, enabling simple catalyst loading and removal. This fluidized bed reactor is approximately 1 meter long with a 25 mm ID, featuring a replaceable porous metal gas diffusion plate and a disengaging zone at the top. Separate heaters, a multipoint thermocouple, and a heated cyclone separator support stable operation. Reaction products are cooled by a condenser and collected in a 600 mL product receiver, with pressure and temperature monitored and controlled digitally.

View this product online: https://scienticoindia.com/product/fluidized-bed-reactor-reaktilabx-19/




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

## Technical Specifications

### Fluidized Bed Reactor ReaktiLabX 19 — Technical Specifications

| Parameter | Value |
|---|---|
| Gas Handling Sub-system | Blends and regulates reactant gas flow to bottom of reactor |
| Reactor Length | Approx. 1 meter |
| Reactor Inner Diameter (ID) | 25 mm |
| Gas Diffusion Plate | Porous metal, easily replaceable, at lower portion of reactor |
| Disengaging Zone | Formed by abrupt widening at top of reactor |
| Heaters | Separate heaters for main reactor and disengaging zone |
| Temperature Monitoring | Multipoint thermocouple for internal reactor temperature distribution |
| Fines Capture | Heated cyclone separator or filter, immediately downstream of reactor |
| Product Cooling | Condenser cools reaction products |
| Product Receiver Capacity | 600 mL |
| Pressure Control | Maintained by pressure regulator |
| Gas Feed Control | Manual adjustment via flowmeter valves |
| Pressure Monitoring | Pressure gauges, digital display possible |
| Temperature Control | Digital controlled and maintained by Process Controller |

### Technical Data

#### Reactor

| Parameter | Value |
|---|---|
| Length | Approx. 1 meter |
| Inner Diameter | 25 mm |
| Gas Diffusion Plate | Porous metal, easily replaceable |
| Disengaging Zone | Abrupt widening at top of reactor |
| Heaters | Separate heaters for main reactor and disengaging zone |
| Temperature Monitoring | Multipoint thermocouple |

#### Cyclone Separator/Filter

| Parameter | Value |
|---|---|
| Type | Heated |
| Function | Captures fines from particle attrition |
| Location | Immediately downstream of reactor |

#### Condenser and Product Receiver

| Parameter | Value |
|---|---|
| Function | Condenser cools reaction products |
| Product Receiver Capacity | 600 mL |

#### Pressure System

| Parameter | Value |
|---|---|
| Pressure Control | Maintained by pressure regulator |
| Pressure Monitoring | Pressure gauges, digital display possible |

#### Gas Feed System

| Parameter | Value |
|---|---|
| Control Type | Manual adjustment via flowmeter valves |
| Sub-system Function | Blends and regulates reactant gas flow to reactor bottom |

#### Temperature Control

| Parameter | Value |
|---|---|
| Control Type | Digital controlled and maintained by Process Controller |
| Monitoring | Multiple locations along the reactor column |

## Key Features

#### Key Features

- **Reactor Type:** Fluidized bed reactor with solid bed supported by upward gas flow
- **Catalyst Handling:** Simple loading and removal of catalyst
- **Reactor Dimensions:** Approx. 1 meter length, 25 mm ID
- **Gas Diffusion Plate:** Porous metal, easily replaceable
- **Disengaging Zone:** Abrupt widening at top of reactor for fluidized bed

- **Heating:** Separate heaters for main reactor and disengaging zone
- **Temperature Monitoring:** Multipoint thermocouple for internal temperature distribution
- **Fines Capture:** Heated cyclone separator or filter downstream of reactor
- **Cooling:** Condenser cools reaction products
- **Product Receiver:** 600 mL capacity
- **Pressure Control:** Maintained by pressure regulator
- **Gas Feed Control:** Manual adjustment via flowmeter valves
- **Pressure Display:** Pressure gauges with digital display option
- **Temperature Control:** Digital controlled Process Controller

**Construction and Design**

The Fluidized Bed Reactor ReaktiLabX 19 is built around a reactor approximately one meter long with a 25 mm inner diameter. The lower portion of the reactor incorporates an easily replaced porous metal gas diffusion plate. The top of the reactor widens abruptly to form a disengaging zone for the fluidized bed. Separate heaters are provided for both the main reactor and the disengaging zone. A multipoint thermocouple monitors the internal reactor temperature distribution. A heated cyclone separator or filter is fitted immediately downstream of the reactor to capture fines resulting from particle attrition. Reaction products are cooled by a condenser and collected in a 600 mL product receiver. System pressure is maintained by a pressure regulator. Gas feed to the reactor is controlled manually by adjustment of flowmeter valves. Pressure is monitored by pressure gauges and can also be displayed digitally. Temperature of the reactor chamber is monitored at different locations along the column. Temperature is digitally controlled and maintained by a Process Controller. This construction makes the fluidized bed reactor suitable for studying gas-solid reaction systems at laboratory scale.

## 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 Fluidized Bed Reactor ReaktiLabX 19 used for?**
A: It is used to study fluidized bed reactor behavior in chemical processes where a solid bed of catalytic particles is supported by an upward gas flow, such as catalytic hydrocarbon cracking, Fischer-Tropsch synthesis, and gasification of coal, biomass, or waste sources.

**Q: What are the dimensions of the reactor?**
A: The reactor is approximately one meter long with a 25 mm inner diameter (ID).

**Q: How is temperature monitored and controlled?**
A: Temperature is monitored at different locations along the column using a multipoint thermocouple and is digitally controlled and maintained by a Process Controller.

**Q: What is the capacity of the product receiver?**
A: The product receiver has a capacity of 600 mL.

**Q: How is gas feed to the reactor controlled?**
A: Gas feed is controlled manually by adjustment of flowmeter valves, with system pressure maintained by a pressure regulator.

**SCIENTICO INDIA**
Manufacturer & Exporter · Ambala, Haryana, India
#71, Industrial Area, Ambala Cantt, Haryana, India

+91 7015865225 · info@scienticoindia.com
scienticoindia.com
Product reference: REAKTILABX 19