



Product Presentation

High pressure reactors Modularity and Flexi- bility with highpreactors

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Agenda

- Overview
- Constructing Materials
- Reactor configuration
- Reaction Parameter
- Benefits

Overview

Overview

Safe and easy working in chemical synthesis

Comfort

- Tool-free opening and closing
- Easy handling and cleaning
- Low contamination risk

Safety

- TÜV test
- Certified pressure and leak test

Flexibility

- Flexible configuration due to modular concept
- Variable fittings



Overview

Safe and easy working in chemical synthesis

Modularity

- Combination of lids with different reactor vessel volumina
- Possible volume from 25mL up to 4L

Material concept

- Stainless steel or Hastelloy reactors
- Complete PTFE lining of lid and vessel enables working even with highly corrosive media
- Low operational costs due to longevity of PTFE parts

Sealing concept

- Sealing by O-Rings made of fluoropolymers
- Various O-Ring for different working conditions

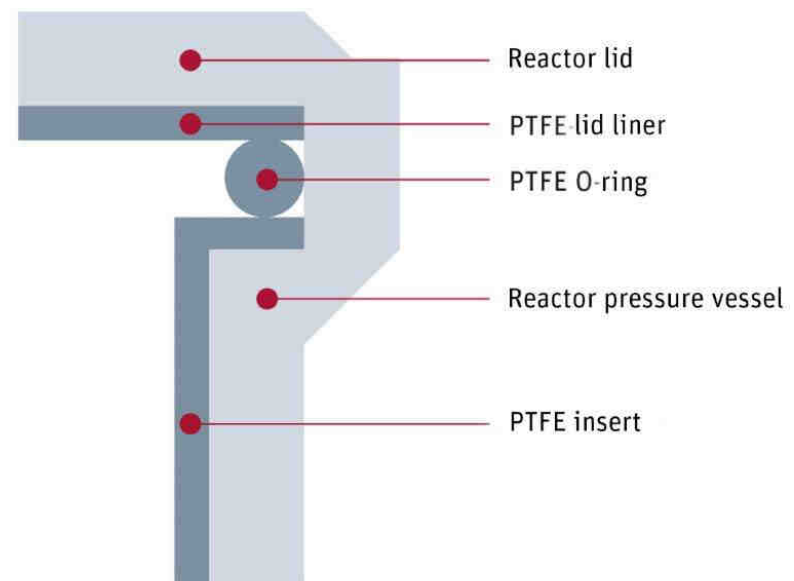


Constructing materials

Liners made from PTFE for optimal chemical resistance

PTFE

- Removable PTFE inserts
 - Hermetically sealed
 - Dip tubes made from PTFE
 - Sheathed pip tubes and stirrers
 - PTFE sealing rings
 - T-range -20 to 260°C
 - Pressure tight up to 200 bar
- All parts in contact with liquid phase are protected against chemical attack by means of Fluoropolymers



Constructing Materials

Liners made from PTFE for optimal chemical resistance

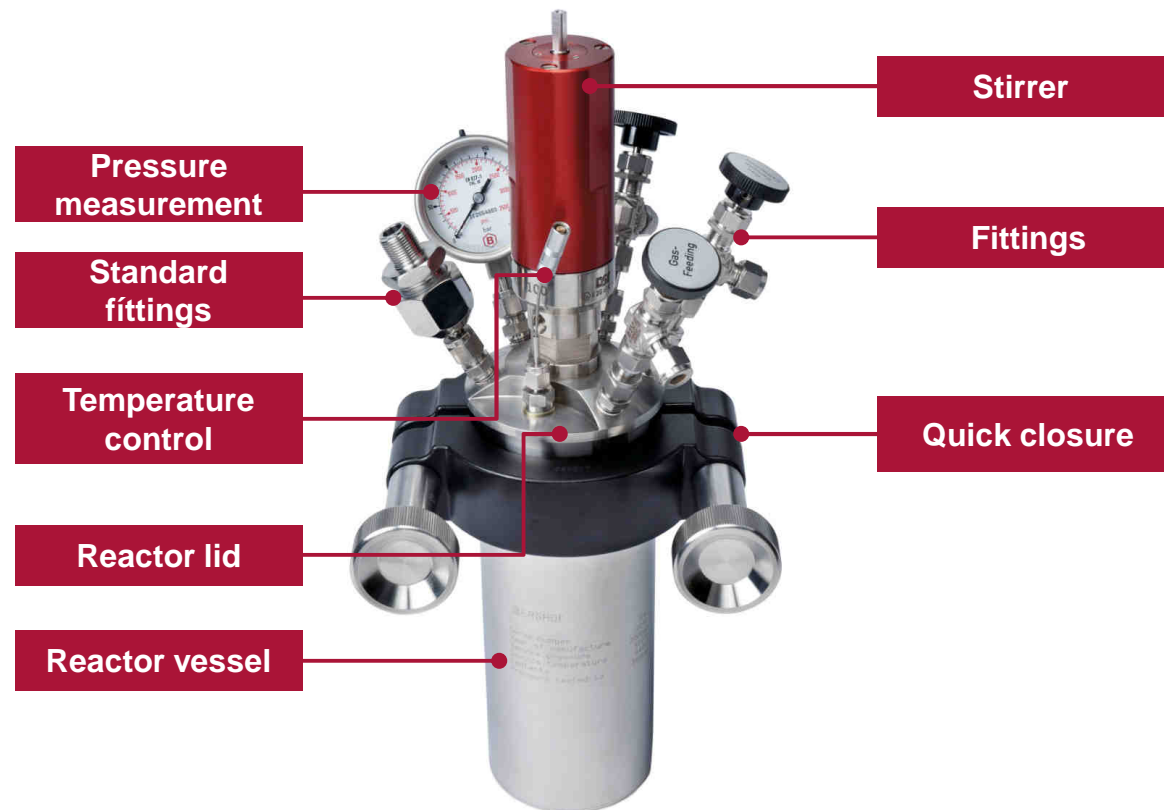
Benefits PTFE

- Universal chemical resistance, even to acids and basis
- Corrosion protection
- Superior resistance to chemicals
- Free of contamination
- T-range -20 to 260°C
- Pressure tight up to 200 bar



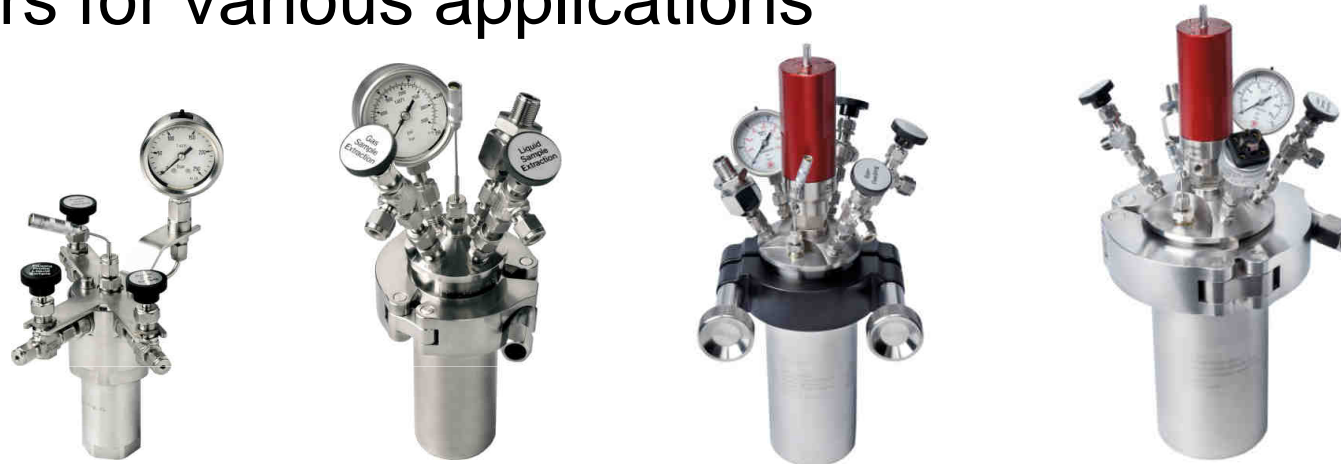
Reactor configuration

Unique modular design of BR-reactors



Reactor configuration

Reactors for various applications



Overview

Serie	Volume	p-max	T-max
BR-25	25 - 40 mL	200 bar	300°C
BR-100	75 - 200 mL	200 bar	300°C
BR-300	300 - 900 mL	200 bar	300°C
BR-1000	1000 - 2300 mL	200 bar	300°C
BR-4000	4700 - 5500 mL	150 bar	230°C

Reactors & fittings available in SS316Ti, Hastelloy® C4 | C22, PTFE, customized alloys...

Reaction Parameters Measurement and Control

Pressure

- Pressure gauge
- Pressure sensor

Temperature

- Thermocouple
- Resistor-type thermometer
PT-100



Reaction Parameters

Heating and Controlling

Heating

- Hot plate + heating block
- Electrical heating jacket
- Thermostated mantle

Stirring

- Stirring bar
- Magnetic clutch
- Different stirrer blades

Controller

- BTC-1000
- BTC-3000
- BDL-3000

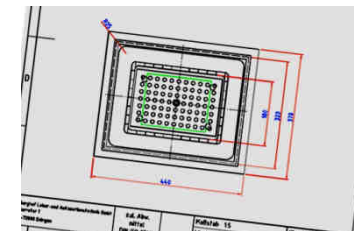


Customer Benefits

- High comfort and easy handling
- Safe operation due to mature vessel technology
- High quality PTFE lining for corrosion protection
- Modular design offers individual solutions for manifold synthesis pathways

Service

- Accredited application laboratory EN ISO/IEC17025:2000
- Collection of applications
- Work-Shops and personally demonstrations
- Specifically trained dealers and service technicians
- Customized solutions
- Quality management system EN ISO 9001:2000



Many thanks for
your attention!