Technical Specifications
High Pressure Reactor BR-25

Note	Unique selling propositions and knock-out specifications are written in blue. Notes refer to main competitors Parr Instruments, Büchi and Premex.

High Pressure Reactor BR-25	High Pressure Reactor BR-25
Model with PTFE-Lining	**Model without PTFE-Lining**
General Specifications Please select appropriate specifications according to customers reactor configuration	
Materials of construction: Vessel : SS 316 and PTFE Valves and fittings: SS 316 or Hastelloy	Materials of construction: Vessel : SS 316 or Hastelloy Valves and fittings: SS 316 or Hastelloy
Sealing: PTFE, FPM (Viton) or FFKM	Sealing: PTFE, FPM (Viton) or FFKM
Capacity reactor: 25 or 40ml	Capacity reactor: 25 or 40ml
Capacity liner: 25 or 40 ml	
Max. operating temperature: 230°C (446°F)	Max. operating temperature: 300°C (572°F)
Max. operating pressure: 200 bar (2900 psi)	Max. operating pressure: 200 bar (2900 psi)
TÜV* certificate	TÜV* certificate
Outer diameter: 40 mm (1.6 inch)	Outer diameter: 40 mm (1.6 inch)
Interior diameter: 22 mm (0.87 inch) with 25ml 24 mm (0.94 inch) with 40ml	Interior diameter: 25 mm (0.98 inch) with 25ml 24 mm (0.94 inch) with 40ml
Interior depth: 77 mm (3.0 inch) with 25ml 98 mm (3.9 inch) with 40ml	Interior depth: 60 mm (2.4 inch) with 25ml 97 mm (3.8 inch) with 40ml
Basic Installation PTFE-lining knocks-out all competitors.	
High pressure reactor with pressure vessel made of stainless steel SS 316 TI fully lined with PTFE for effective corrosion protection for all reactor components which come in contact with liquid medium. Lining consists of removable PTFE-insert with a wall thickness of 2.3 mm, and an O-seal ring made of PTFE, FPM or FFKM. The reactor is closed manually, tool-	High pressure reactor with pressure vessel made of stainless steel SS 316 TI or Hastelloy C-4 for corrosive media and a O-seal ring made of PTFE, FPM or FFKM. The reactor is closed manually, tool-free and exceeding of the maximum pressure is prevented by a rupture disc with a burst pressure of 200 bar (2900 psi).

BERGHOF

free and exceeding of the maximum pressure is prevented by a rupture disc with a burst pressure of 200 bar (2900 psi).

Set of Fittings SS 316

Please select appropriate specifications according to customers reactor configuration.

Fittings are made of SS 316 and include: Manometer (0-250 bar; 0-3626 psi) Rupture disc made of monel with PFA protecting foil with rupture disc holder made of SS 316 TI incl. Certificate. Connection to high pressure tubing possible for safe drainage of emitted gases. Gas valve (nominal width 2 mm) NiCrNi-temperature probe (type K) in PFA-sheathed (thickness 0.5 mm) dip-tube made of SS 316 TI	Fittings are made of SS 316 and include: Manometer (0-250 bar; 0-3626 psi) Rupture disc made of monel with PFA protecting foil with rupture disc holder made of SS 316 TI incl. Certificate. Connection to high pressure tubing possible for safe drainage of emitted gases. Gas valve (nominal width 2 mm) NiCrNi-temperature probe (type K) in dip-tube made of SS 316 TI
Options: Liquid sampling valve with PTFE rising tube (nominal width 2 mm) PTFE high pressure exhaust tubing for rupture disc (2.5m, ID 9mm, 550bar)	Options: Liquid sampling valve with SS 316 rising tube (nominal width 2 mm) PTFE high pressure exhaust tubing for rupture disc (2.5m, ID 9mm, 550bar)

Option: Set of Fittings Hastelloy C4

Please select appropriate specifications according to customers reactor configuration.
Hastelloy valves and fittings knocks-out Parr, especially.

Fittings are made of Hastelloy C4 and include: Manometer (0-250 bar; 0-3626 psi) with Hastelloy C4 pressure transmitter Rupture disc made of monel with PFA protecting foil with rupture disc holder made of HC-4 incl. Certificate. Connection to high pressure tubing possible for safe drainage of emitted gases. Gas valve (nominal width 1 mm) NiCrNi-temperature probe (type K) in PFA-sheathed (thickness 0.5 mm) dip-tube made of SS 316 TI	Fittings are made of Hastelloy C4 and include: Manometer (0-250 bar; 0-3626 psi) with Hastelloy C4 pressure transmitter Rupture disc made of monel with PFA protecting foil with rupture disc holder made of HC-4 incl. Certificate. Connection to high pressure tubing possible for safe drainage of emitted gases. Gas valve (nominal width 1 mm) NiCrNi-temperature probe (type K) in dip-tube made of HC-4
Options: Liquid sampling valve with PTFE rising tube (nominal width 1 mm) PTFE high pressure exhaust tubing for rupture disc (2.5m, ID 9mm, 550bar)	Options: Liquid sampling valve with HC-4 rising tube (nominal width 1 mm) PTFE high pressure exhaust tubing for rupture disc (2.5m, ID 9mm, 550bar)

Heating

Heating is performed from outside with a heating plate (heating output: 850W, power supply: 230V/50Hz) and a suitable heating block. The heating plate is controlled by the inner temperature of the reactor with a freely adjustable, separate controller (PID-controller) with LED-display (power supply 95-230V; max. current 10A, 50/60Hz). Adjustable parameters are heating ramp, end point, power limitation etc. A stand is not required.	Heating is performed from outside with a heating plate (heating output: 850W, power supply: 230V/50Hz) and a suitable heating block. The heating plate is controlled by the inner temperature of the reactor with a freely adjustable, separate controller (PID-controller) with LED-display (power supply 95-230V; max. current 10A, 50/60Hz). Adjustable parameters are heating ramp, end point, power limitation etc. A stand is not required.

Agitation

Competitors typically do not offer such a simple, cost effective stirrer but magnetic clutch with electronic drive.

Magnetic agitation with a magnetic bar using the integrated magnetic drive in the heating plate (0-1250 rpm) A stand is not required.	Magnetic agitation with a magnetic bar using the integrated magnetic drive in the heating plate (0-1250 rpm) A stand is not required.

BTC-3000

Temperature controller with built-in data logger system with 62x42 mm LCD graphic display for real-time monitoring of temperature (0-500 °C, display accuracy 1°C) and pressure progression (display accuracy 1 bar). Heating programs are programmed and controlled in up to 6 steps comprising of warm-up time, hold time and temperature with a run time up to 17 days. PID regulation of temperature with PID parameters freely programmable.
Implemented monitoring of stirrer rotational speed (0-2000rpm) and second adjustable, overtemperature protection (30-300°C).
Control of heaters with max. 3000W power consumption.
Data logger function including PC software data monitoring of up to 4 reactor systems.

BDL-3000

Data Logger System with PC-Software to monitor, display and document pressure, temperature data of up to 2 reactors.
Provision of internal reactor temperature regulation with BLH-800 hot plate for up to 2 reactors.
Operating system: Windows 98, Windows 2000 or higher

* An independent german testing laboratory