

Technical specification

BRHS | All-In-One Reactor Heating



High-Performance-Heating System for small Reactors

The all-in-one heating system for Berghof high-pressure reactors from 25 ml to 300ml offers a space-saving, compact reaction setup. The touch controller is easy to operate and offers quick access to all important functions and parameters, such as pressure- and temperature values and the stirring speed.

Technische Details	
Power	230 V \pm 10%, 50/60Hz, 8 A
Maximal power consumption	1.400 W
Heating power	1.200 W max.
Temperature sensor	PT100, 2-/4-wirer
Displayed temperature range	0 – 400°C / 32 – 752 °F, \pm 0,1°C
Displayed speed range	0-2000 rpm
Displayed pressure range	-1 – 300 bar
Pressure sensor	Electronical pressure sensor, digital manometer
Display	5" Touchscreen with swipe function
Weight	18 kg (without reactor)
Dimensions	250 x 360 x 345 mm (W x D x H; without reactor)
Languages	German, English
Connections	

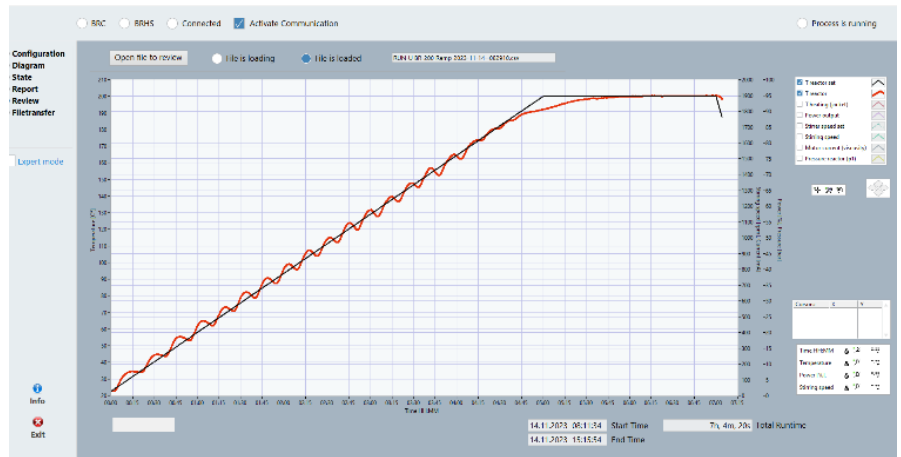


1	Main switch
2	Fuse drawer (2x AC 250 V / 8AT slow blow)
3	Mains cable connection
4	P-1: Connection pressure sensor (4...20mA / RS485)
5	T-R: Connection temperature sensor reactor (PT-100)
6	USB (PC): Mini-USB connection. Connection to a computer.

All-In-One System	<ul style="list-style-type: none">• Heating with 1200W• Control with Touch-Controller• Intelligent magnetic stirring• Active air cooling
Auto-Tuning	<ul style="list-style-type: none">• Faster heating rates and lower overshoots• Preset, already optimized PID values• Optimization to actual filling quantity, reagents used and temperature range possible• Storage of up to 3 parameter sets per recipe
Active Cooling	<ul style="list-style-type: none">• Improves control accuracy, especially at fast heating rates• Minimizes overshoot above the target temperature• Reduces the cooling times of the reactor• Switches on when a preset pressure limit is exceeded
Operation modes	<ul style="list-style-type: none">• Manual<ul style="list-style-type: none">- Manual start and stop- Programming of a set temperature and pressure limit- Agitation with constant set speed• Ramp<ul style="list-style-type: none">- Pre-heating function- Programming of heating, holding and cooling phase- Agitation with constant set speed• Sequence<ul style="list-style-type: none">- Programming of complex temperature programs- Each ramp can be individualized with set speed and pressure limit• Auto-Tuning<ul style="list-style-type: none">- Determination of temperature control parameters for each individually configured reactor system- Customizable with and without PTFE insert
Data logging	<p>By connecting an external PC via USB, the BRHS process controller can also be used as a data logger to document the temperature and pressure curves or other standard signals. Using the PC software supplied, the temperature, pressure, heating power, speed and motor current curves can be recorded via the BRHS.</p>

PC-Software

- PC-Software BRVI for data logging during the experiment



Heating times

Heating times for a BR-100 reactor	
Set temperature	BR-HS
50°C	6 min
100°C	12 min
150°C	17 min
200°C	26 min
250°C	35 min
300°C	75 min

User Management

- User management regulates access rights in for hierarchy levels user, admin, sysadmin and service

Further information can be found at:

<https://www.berghof-instruments.com/en/products/berghof-reactor-heating-system/>