

Laboratory Technology

Safety **high**preactor

Construction

Berghof high pressure laboratory reactors are designed, manufactured, and tested in accordance with the 97/23/EG instrument guideline from the AD-2000 body of regulations. In particular, this includes:

- EG design test (Module B), in accord. with the 97/23/EG guideline;
- Pressure test (Module C1), in accord. with the 97/23/EG guideline.

Regardless of the employed material or of their size, all reactors are constructed with an additional corrosion protection layer of at least 1mm.

Every Berghof high pressure laboratory reactor is hydrostatically tested at 1.6-times its maximum operating pressure, and undergoes a nitrogen leak test. The function of every reactor is therefore ensured, and each delivery includes a corresponding manufacturer's certificate.

Buyer's responsibility

In order to ensure safe operation within the specified tolerances, the greatest possible care has been taken in the design, manufacture, and testing of every Berghof high pressure laboratory reactor.

However, selection of the most suitable reactor remains the responsibility of the buyer. The buyer must ensure that the reactor is adequately dimensioned for the intended application, and that the employed materials are suitable. Berghof is happy to assist you with any questions and can make informational materials available.

Explosion proof

Explosion proof reactors are available on request.

Over-pressure protection

Every reactor is equipped with a rupture disc to provide protection against over-pressure. As a rule, the rupture disc burst pressure is equal to the maximum permissible operating pressure. Rupture discs with lower burst pressures can also be installed on request, thus allowing the secured maximum pressure to be matched to the actual operating range.

An overflow valve can also be employed for additional, redundant over-pressure protection. The desired relief pressure of this valve must be indicated with the order and, most practically, should lie at least 10% below the rupture disc burst pressure. The valve opens when the relief pressure is exceeded and closes automatically once the pressure drops back below the relief pressure.

Both over-pressure protection components can be connected to a vent system by means of pressure hoses to ensure that hot gases are harmlessly released.

Over-temperature protection

A second, independent temperature probe can be installed to provide over-temperature protection, thus protecting the reactor against overheating and preventing uncontrolled reactions.



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