

High-pressure autoclave with pneumatic lifting device – floor standing model, 2–10 litres

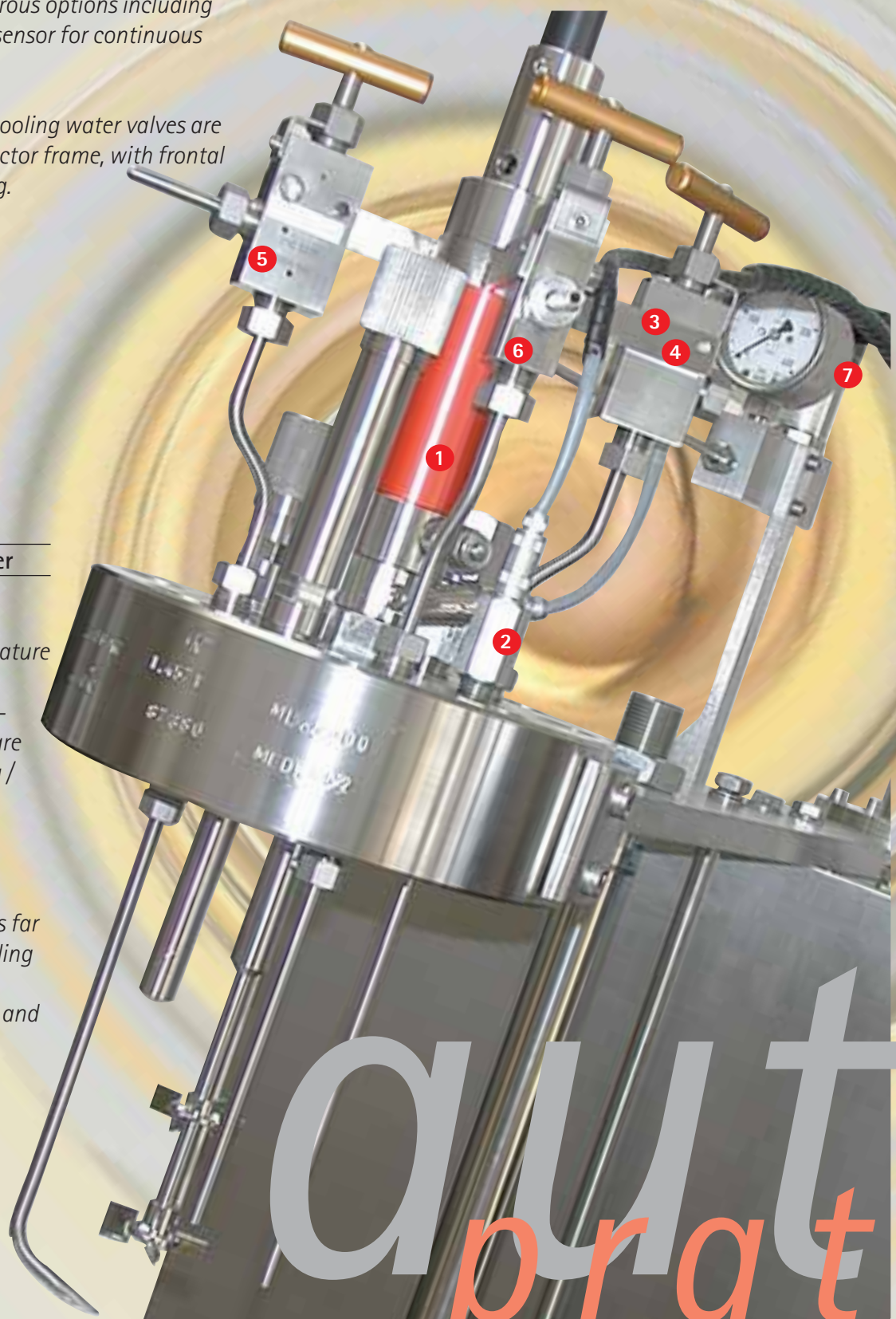
Our «prator» high-pressure autoclave offers a professional solution for your reactions. A pneumatic cylinder raises and lowers the reactor vessel towards the cover, so that fixed pipework can be installed for the fittings on the reactor cover.

Customers can choose from premex reactor ag's range of add-on devices to be fitted on the reactor cover. As well as the standards, we offer numerous options including a pH sensor, IR sensor and level sensor for continuous reactions.

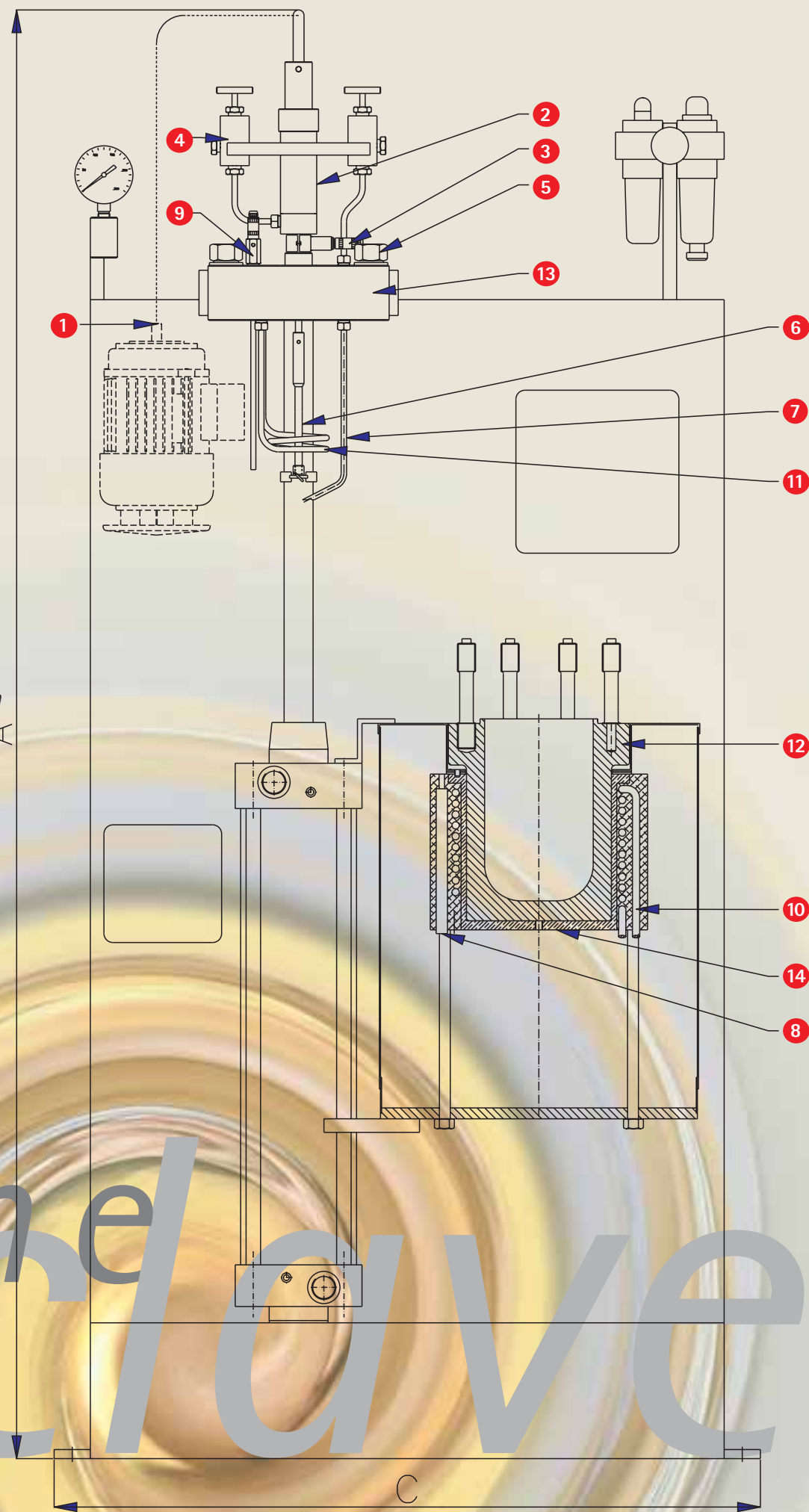
The pneumatic control and the cooling water valves are built into the rear wall of the reactor frame, with frontal access through a service opening.

Bore holes on the reactor cover

- 1 Magnetic stirrer drive
- 2 Submerged tube with temperature sensor, type Pt100, type K or type N for measuring temperatures in the medium (there are 2 more sensors in the heating / cooling shell to control and monitor the heating).
- 3 Gas supply valve
- 4 Pressure release valve
- 5 Valve with submerged tube as far as the reactor base, for sampling
- 6 Product feed valve
- 7 Manometer (pressure gauge) and pressure transducer



- 1 Electrical motor
- 2 Magnetic coupling
- 3 Speed reading point fitted to the driven shaft
- 4 Gas supply on magnetic stirrer drive
- 5 high tensile bolts and nuts
- 6 Stirrer
- 7 Submerged tube (sampling)
- 8 Electrical heating elements in heating shell or double shell design
- 9 Temperature sensor in the medium
- 10 Cooling spiral cast into the aluminium block, for electrical heating
- 11 Cooling spiral in the medium (exothermal) on request
- 12 Autoclave vessel
- 13 Autoclave cover with all fittings
- 14 Base valve on request



autoclave
prator
hpm

External dimensions

Reactor frame with pneumatic system, floor standing model

A = height 1800 mm
B = depth 700 mm
C = width 800 mm

Basic information

Nominal volume 2 Lt., 3 Lt., 5 Lt., 7 Lt., 10 Lt.
Excess operating pressure 100 bar, 200 bar, 325 bar, 700 bar
Operating temperature up to 350°C max.
Speed up to 3'000 rpm max.
Material Mat. no. 1.4435 (AISI 316L)
Mat. no. 1.4571 (AISI 316Ti)
Mat. no. 1.4980 (AISI 660)
Hastelloy C276, C22, B3
Titanium Gr. 2

Flange lock

with high tensile bolts (CrMoV57) and nuts (CrMo5), up to 700 bar.

Sealing

O-rings made of various materials, conical metal-to-metal seal, or pure silver flat seal.

Heating

Electrical heating elements, 3000–7000 W thermal output, inserted in copper / aluminium block, or double shell for heat transfer oil.

Cooling

Cooling spiral cast into aluminium block or double shell cooling.

Temperature sensors

One Pt100 temperature sensor, type K or type N in the submerged tube to measure the medium temperature, and two more sensors in the heating / cooling shell.

Drive

Electrical motor with nominal power of 120 W–550 W, 3x240/400 V, 4-pole, 1'400 rpm, activated with a frequency converter. The speed is adjusted using a potentiometer, from 200–2'000 rpm (maximum limit).

Magnetic stirrer design

The magnetic stirrer drive features a streamlined design, and it is available in torques from 1 Nm–7 Nm.

Bearings

The driven shaft is mounted on ball bearings made of stainless steel or friction bearings made of PTFE/carbon.

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