

In the market segment for small reactors premex offers the "andorra", the "apart", the "avalon" and the "avalon plus". Four models with different performance features. Their modularity, dimensions and design, are unmatched in their area of application.

A Masterpiece of Possibilities!

Technical data for the "avalon plus" multiple reactor system consisting of the modular components: reactors, heating/cooling elements, connection station, control unit, mobile rack

Reactor Module

Basic data:

- 4 piece high pressure reactors
- 350 bar
- 50-100 ml
- 300°C (up to 500°C depending on material)
- Prod. No. 1.4435 (AISI 316L) or No. 2.4602 (HC22)

Closure and seal: 1

- Union nut
- O-ring for temperatures to 300°C and 300 bar
- Sealing edge, metal/metal, to 500°C and 350 bar

Fittings or bores in the cover:

- Bore with thermal protection sleeve and thermocouple type K. Other thermoelements on request 2
- Bore with rupture disc holder and rupture disc 3
- Bore with valve for pressure relief 4
- Bore with valve for the gas supply 5
- Bore with valve and immersion tube for sampling 6
- Central bore with magnetic stirrer coupling 7
- Optional are quick couplings that can be used with the individual connections to the fittings 8

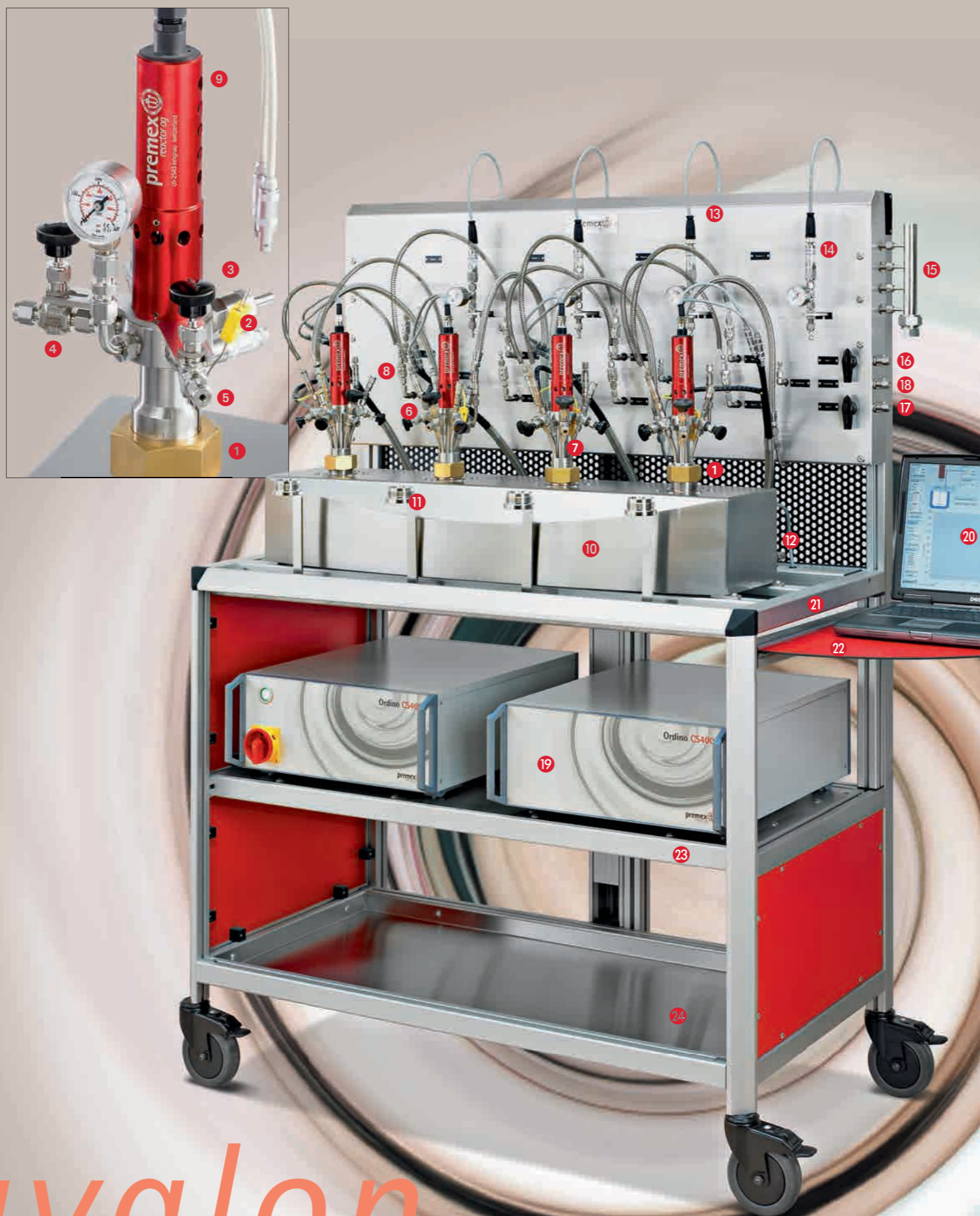
Magnetic stirrer drive 9

- DC motor with an output speed to 1'150 rpm (the circuit board is part of the control unit.)
- Torque of the magnetic coupling 20-50 Ncm
- Ball bearing on the drive shaft or plain bearing in carbon/graphite or teflon
- A mounted gassing stirrer. Other stirrers upon request.

Heating/Cooling Element Module:

Basic data:

- Heating manifold consisting of 4 independent units.
- Heat output per reactor 650 watts
- The units are located in a common chassis 10
- 4 cooling spirals provide controlled cooling as well as emergency cooling
- 4 piece NO or NC cooling valves



- Each reactor can be heated individually and controlled independently by means of software.
- Holders are available on the front for removing the reactor covers 11
- On the back are all the necessary electrical connection sockets 12

Connector Station Module (Gas Panel): 13

Basic data:

- Complete with cooling water connection, gas supply and disposal, cable connections, manometer with pressure transducer 14
- 4 piece purge lines after the rupture disc, brought together on the side in a common connection 15
- Main line for hydrogen with 4 outlets to the individual reactors 16
- Main line for inert gas with 4 outlets to the individual reactors 17
- Main line for exhaust with 4 outlets to the individual reactors 18
- 4 piece pressure hoses to the connection of the rupture discs
- Gas dosing as option
- All connections to the water cooling and all electrical are located on the back in the connection station

Control Module "Ordino Package 4":

Basic data:

- To operate 4 reactors we need two "ordino" CS400 control units 19, a PC and Software 20 (within the scope of delivery)
- The following connections and installations for regulation and control are built in:
 - 4x Heating regulation
 - 4x Cooling water valves
 - 4x Speed control by means of a control board for the motor
 - 4x Speed indicator by means of a Reed contact directly from the shaft
 - 4x Thermocouple, type "K" fuse in the heating chassis
 - 4x Thermocouple, type "K" control in the heating chassis
 - 4x Thermocouple, type "K" control, medium reactor
 - 4x Pressure indicator 4-20 mA reactors

Software: 20

- Temperature regulation of the individual reactors independent of one another
- Temperature regulation switchable from internal to jacket control
- Ramp control
- Online chart
- Alarm activation
- Recipe management
- Historical trend display
- Options upon request

Mobile Cart with Frame Module:

- A mobile chassis, that offers a support for the heating/cooling elements with its small reactors 21
- A connection station on the back, also called a gas line 13
- Holders are provided on the frame for the careful removal of each of the reactor covers 11
- A table support that pivots out for your PC 22
- A support for the ordino CS400 control units 23
- Adequate storage space for your equipment 24

avalon
reactor system
hps