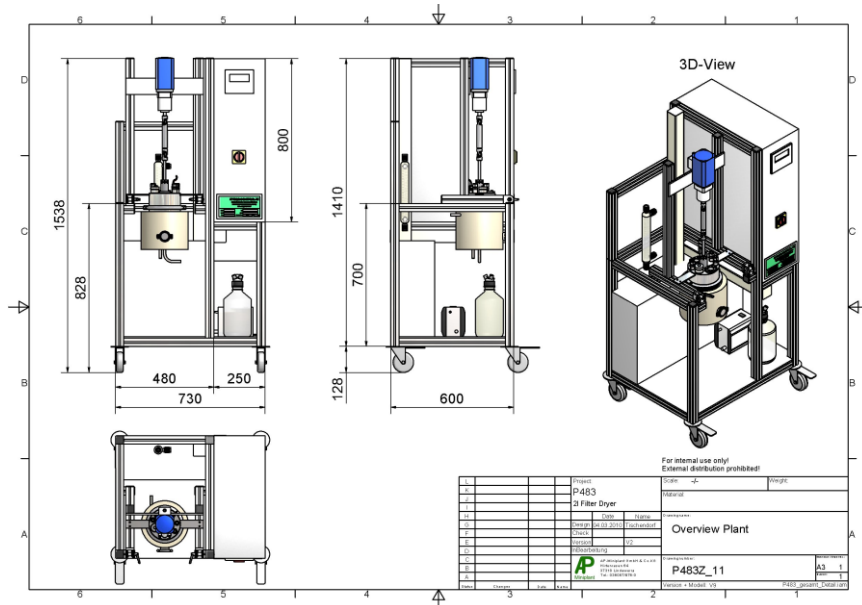


Combined Filter and Dryer



- Heated jacket and filter plate, stirrer adjustable in height
- Automatic control of pressure, vacuum, temperature
- Apparatus tiltable for side removal of the product
 - For 3 l suspension, about 0.5 l filter cake

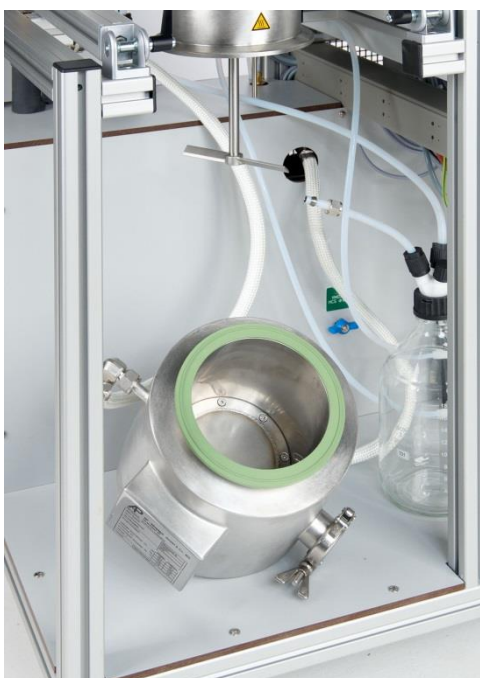
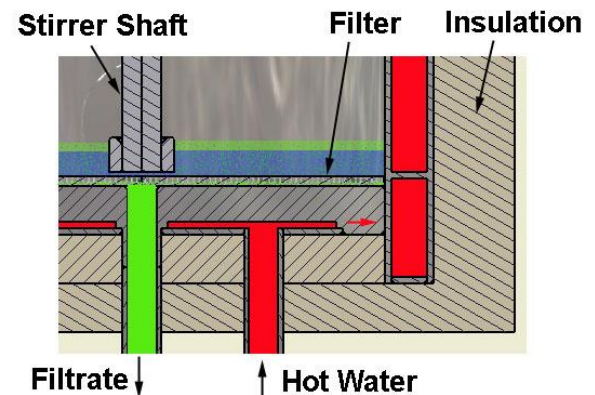


Compact Design

- B x T x H = 730-1000 x 600 x 1600 mm
- moveable on robust roles
- necessary auxiliaries integrated such as:
 - heating-cooling system
 - filtrate collector
 - vacuum pump
 - cooler
 - nitrogen purging
 - automatic controller
 - sight and light glass

Optimal Drying

- pressurized water circulation system for filter jacket and plate with 1,5 kW heating power for temperatures up to 140 °C and water cooling with heat exchanger
→ safe temperature control
- direct heating of the sandwich type metal filter plate
→ optimal heat transfer towards the filter plate
- jacket extension below the filter plate and extra insulation at the bottom
→ minimizing the heat loss at the filter plate
- mixing of the filter cake by using a height adjustable stirrer
→ uniform drying process



Simple Maintenance

- exchangeable sinter-mesh filter plate with different mesh sizes (available from 1 to 200 µm)
- no paper filter necessary
→ improvement of heat transfer and mechanical stability while agitating
- simple opening with clamp flange
- easy to clean connections



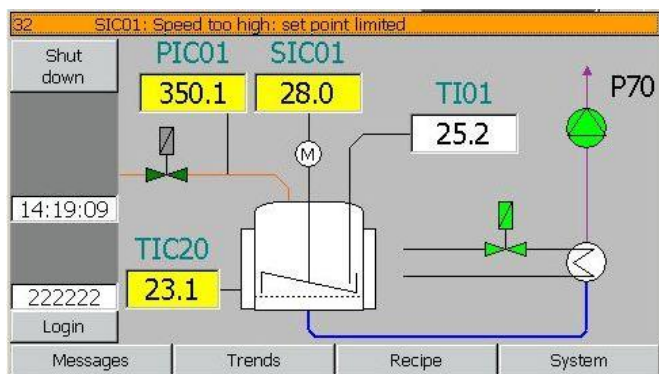
Sight glass

Maximum Flexibility

- vacuum and pressure filtration is possible
- controllable vacuum pump for a gradually lowering of the pressure to achieve a gentle drying
- controllable nitrogen purge and inertisation
- large opening with the possibility to adapt conical ground joints size 29/32

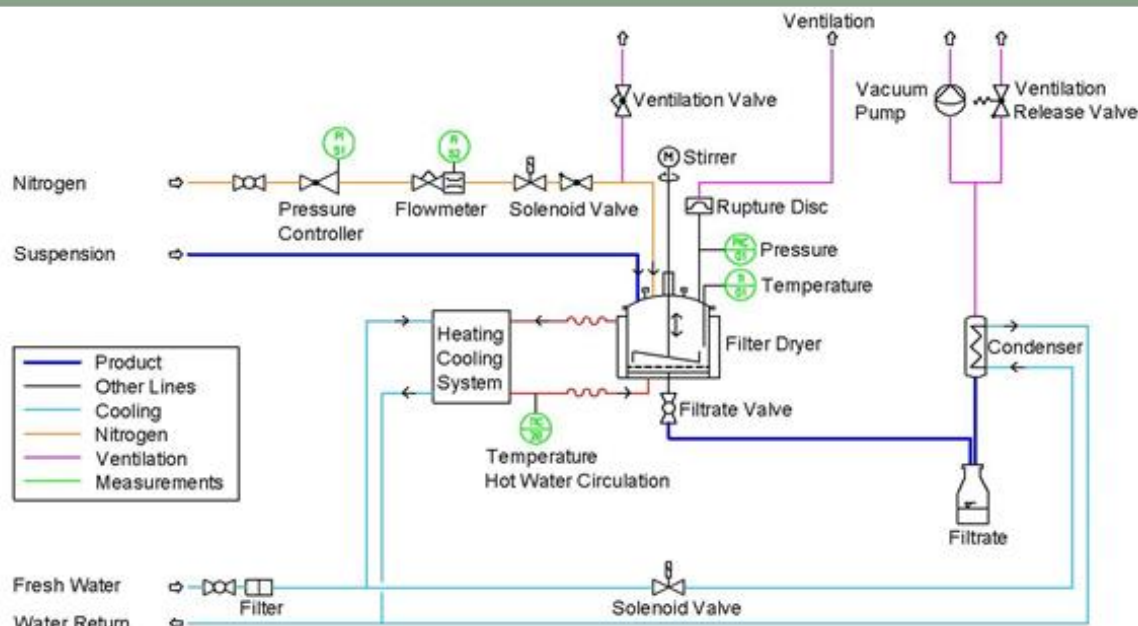
Fast Product Removal

- tiltable construction for solid removal without opening the lid
- side removal opening size 40 mm with clamp-flange and plug
- possibility to connect a plunger valve for product removal without contact to the atmosphere
- easy to change standard laboratory bottle as filtrate vessel



Reliable Automation

- industrial touch panel control system
- unsupervised operation possible
- touch-panel operator interface
- configurable recipe steps
- safety temperature and pressure
- text status and alarm messages
- acoustic alarm



P & I Diagram of the filter-dryer plant

Technical data

Dimension plant (W x D x H) and weight	1000 x 600 x 1600 mm, 182kg
Electrical supply	230 V / 50 Hz / 16 A
Pressure conditions design (operation)	-1 to 6 bar (60 mbar abs. to 4.5 bar g)
Temperature conditions design (operation)	-20 to 150 °C (-15 to 140 °C)
Filter volume and material	3 l, stainless steel 1.4404/316L
Receiver tank	Glass, 2 l
Filter area	105 cm ²
Filter media	Cloth, paper, metal sinter filter etc.

AP-Miniplant turn-key research plants are used for:

- Absorption, Adsorption, Extraction
- Reactive distillation. Distillation, Rectification, Evaporator, Humidification
- Precipitation, Stirred Reactor, Dryer, Mixer, Filter
- Polymerization Reactor, Polycondensation, Gas Phase Polymerization
- Catalyst Test System, Fixed Bed Reactor, High Temperature Furnace
- Training Plant, Container Unit, Gas, Liquid and Solid Dosing



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