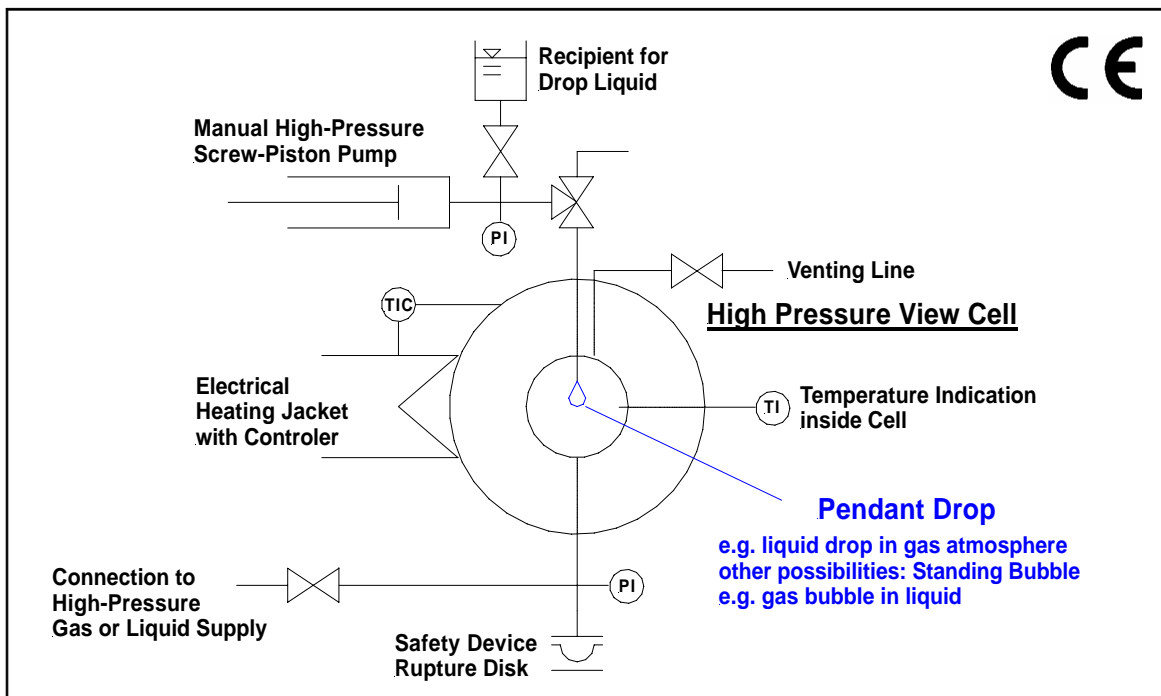


High Pressure View Chamber HP3230



HP3230 with KRÜSS DSA100

The **High Pressure View Chamber HP3230** is designed to operate in combination with the KRÜSS DSA100 system and allows the determination of surface tension (pendant drop and rising bubble) and contact angles of fluids in the parameter range from vacuum to 69 MPa (10,000 psi) and 180°C (350°F). Additionally, the device enables the scientist to visually observe the material behavior under these extreme conditions. Observation of e.g. solidification or swelling behavior can lead to valuable insights about the system properties.



Schematic Drawing of HP3230 High Pressure View Chamber



Technical Description HP3230

High Pressure View Cell

Max. pressure	69 MPa (10,000 psi)	<i>higher upon request</i>
Max. temperature	180°C (350°F)	<i>higher upon request</i>
Window material	sapphire	
Window Diameter	18 mm	
Wetted Material	stainless steel (316SS or similar)	<i>other upon request</i>
Volume	approx. 25 ml (Ø: 28 mm, L: 40 mm)	<i>other upon request</i>

Valves and fittings

All valves and tubing are proven high pressure products.

Drop Formation Device

A High Pressure Screw Piston Pump with a capacity of approx. 30 ml (manual operation) allows precise dosing of the drop. The liquid is pressed through a needle either from the top ("pendant drop") or the bottom ("rising bubble") into the view cell. The diameter of the needle can be chosen in accordance with the user, different interchangeable sizes are available.

automatic metering pump upon request

Heating, Measuring

- 1 Electric heating jacket, 230 VAC/ 50 Hz *other upon request*
- 1 PID controller with temperature sensor, accuracy of indication 1°C
- 1 Pressure indicator, analogous, max. 100 MPa, accuracy 1% of full scale, division 2 MPa
- 1 Pressure indicator, analogous, max. 100 MPa, accuracy 2.5% of full scale, division 2 MPa
- 1 Thermocouple inside view cell, hand held indicator with indication accuracy 0.1°C

High Pressure Fluid (Gas or Liquid) Supply

The system does not include a high pressure pump for filling the view cell, but it is ready for adaptation to a pressurized fluid supply like a gas cylinder or a pump. The supplied standard connection is for a 1/8" high pressure tubing (gland and collar supplied).

A pumping system can be offered, according to your needs (media, max. pressure, speed of pressure increase, electric or air driven etc.)

Supporting facility

All equipment is firmly mounted on a stainless steel support. The KRÜSS DSA100 is positioned on top of this support. The approximate size of the steel support is 950 x 650 x 800 mm (L x W x H) and the total weight is approximately 80 kg.

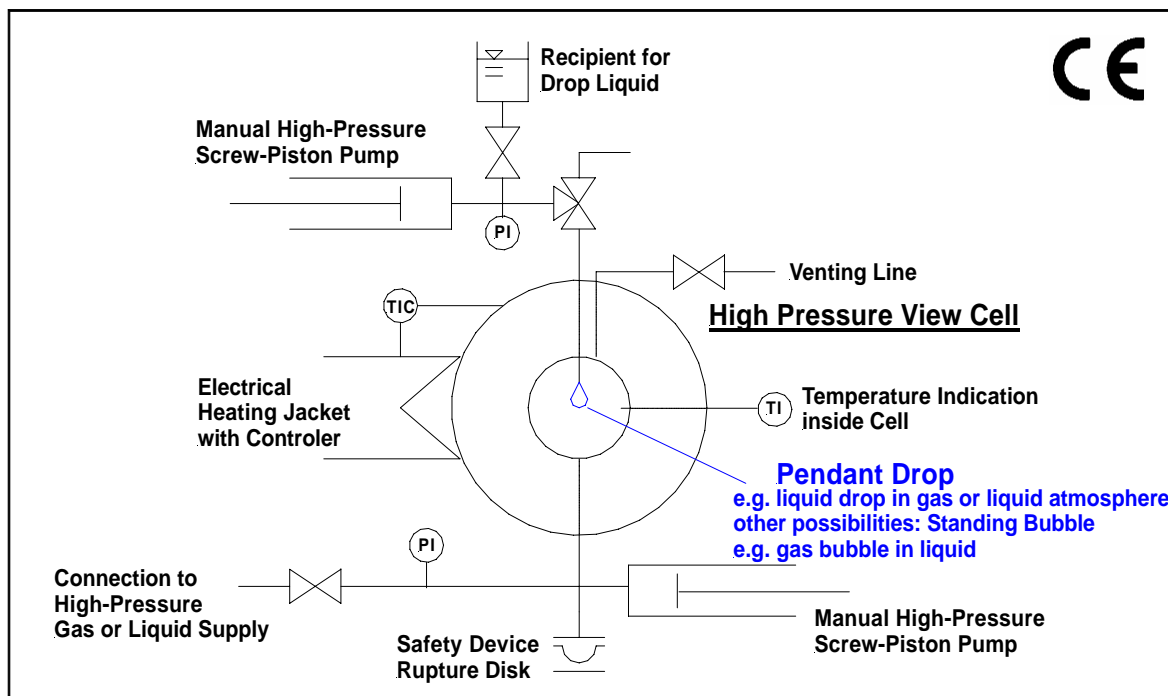
Technical specifications are subject to change without notice.

High Pressure View Chamber HP3230LL



HP3230LL with KRÜSS DSA100

The **High Pressure View Chamber HP3230LL** is designed to operate in combination with the KRÜSS DSA100 system and allows determination of surface tension (pendant drop and rising bubble) and contact angles of gas-liquid or liquid-liquid systems in the parameter range from vacuum to 69 MPa (10,000 psi) and 180°C (350°F). Additionally, the device enables the scientist to visually observe the material behavior under these extreme conditions. Observation of e.g. solidification or swelling behavior can lead to valuable insights about the system properties.



Schematic Drawing of HP3230LL High Pressure View Chamber



Technical Description HP3230LL

High Pressure View Cell

Max. pressure	69 MPa (10,000 psi)	<i>higher upon request</i>
Max. temperature	180°C (350°F)	<i>higher upon request</i>
Window material	sapphire	
Window Diameter	18 mm	
Wetted Material	stainless steel (316SS or similar)	<i>other upon request</i>
Volume	approx. 25 ml (Ø: 28 mm, L: 40 mm)	<i>other upon request</i>

Valves and fittings

All valves and tubing are proven high pressure products.

Drop Formation and Pressure Variation Device

Two High Pressure Screw Piston Pumps with a capacity of approx. 30 ml (manual operation) allow variation of pressure and precise generation of a liquid drop. The drop liquid is pressed through a needle either from the top ("pendant drop") or the bottom ("rising bubble") into the view cell. The diameter of the needle can be chosen in accordance with the system specifications, different interchangeable sizes are available.

automatic metering pump upon request

Heating, Measuring

- 1 Electric heating jacket, 230 VAC/ 50Hz *other upon request*
- 1 PID controller with temperature sensor, accuracy of indication 1°C
- 1 Pressure indicator, analogous, max. 100 MPa, accuracy 1% of full scale, division 2 MPa
- 1 Pressure indicator, analogous, max. 100 MPa, accuracy 2.5% of full scale, division 2 MPa
- 1 Thermocouple inside view cell, hand held indicator with indication accuracy 0.1°C

High Pressure Fluid (Gas or Liquid) Supply

The view cell may be filled with a liquid and pressurized by the second hand pump included in the apparatus. The system does not include a high pressure pump for filling the view cell with gas, but it is ready for adaptation to a pressurized fluid supply like a gas cylinder or a pump.

A gas pumping system can be offered, according to your needs (media, max. pressure, speed of pressure increase, electric or air driven etc.)

Supporting facility

All equipment is firmly mounted on a stainless steel support. The KRÜSS DSA100 is positioned on top of this support. The approximate size of the steel support is 950 x 650 x 800 mm (L x W x H) and the total weight is approximately 80 kg.

Options, e.g.

HP3220H has wetted material Hastelloy C
Other custom-made versions are possible

Technical specifications are subject to change without notice.