



# HPV

## HT/HD-Viscometer

Viscosity



Measurement Category	Viscosity
Measurement Target	Measurement of viscosity of shear rate-dependent (Newtonian) fluids as well as the viscosity of shear rate independent (non-Newtonian)
Sample Materials	Newtonian and non-Newtonian fluids
Pressure Range	Up to 1.500 bar
Temperature Range	-10 to 200 °C
Sample Quantity	Approx. 15-50 ml
Repeatability	1 - 5 %, depending on geometry
Dimensions	45 x 50 x 140 cm
Weight	approx. 60 kg
Supply	Test gas and compressed air
Price Range	
Special Features	<ul style="list-style-type: none"><li>▪ Extreme pressure and temperature conditions can be simulated</li><li>▪ For low (5 mPas limited) to very high viscosities (100,000 mPas) – depending geometry</li><li>▪ Pressure vessel is TÜV-tested according to EC-Directive 2014/68/EU</li><li>▪ Simple operation with pneumatic lifting platform</li><li>▪ Control and evaluation software (Rheowin)</li></ul>



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Basic requirements  
Situation (s)

- No high pressure viscometer available
- No stability test available under high pressures and/or shear rates.

### Requirement criteria

- How important is it that you also measure the viscosity of your chemicals under high pressure? (good: important | bad: unimportant)
- According to which measuring method do you currently measure? (good: other | bad: rotational viscometer)
- In which pressure range do you measure? (good: > 700 bar | worse: < 700 bar | bad: 0 bar --> VM, Haake)
- What is the viscosity range of the samples? (good: > 10 mPas | worse: 5-10 mPas | bad: < 5 mPas --> Haake)
- What is the temperature range of the samples? (good: -10 °C to 200 °C | bad: outside)
- Do you still have special applications, such as stability under high shear rate and pressure? (good: YES)
- Do you have other applications for yield point or hydrate measurement? (good: YES)



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### Optional add-on products (Up-selling)

Extended physics. Properties	
Software	included
More measuring stations	
Maintenance	✓
Additional Features	
Spare parts (if required)	✓
Documents for customs	✓
Customizing	✓
Service	✓
Training	✓

### Optional by-products (cross-selling)

Calibration Set	
Test measurement	✓
Chiller	✓
Gas-Booster	✓
PC	✓
Other	Viscometer Accessories



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Reason for purchase 1	Safety: You increase the quality of your measurement data because you can carry out tests under field conditions (pressure, temperature, shear rate).
Reason for purchase 2	Safety: You measure with constant measuring accuracy even at the highest pressures (up to 1,500 bar).
Reason for purchase 3	Convenience: You can easily perform even complex measurement tasks with the software and evaluate the data with extensive rheological tools.
Reason for purchase 4	Comfort: If required, you will receive a complete Plug and Play measuring station including pressure supply and sampling cylinder.
Reason for purchase 5	Comfort / Safety: You can perform special tests up to 1,500 bar, such as yield point determination and gas hydrates.
Reason for purchase 6	Safety: They ensure the long-term stability of the oilfield chemicals at high pressures and high shear rates.



## For all devices

Step 1	Step 2
<p>In the first step after our discussion, you will receive a quotation for the system with various variants and options. On this basis, you can initiate an internal budget discussion and use secure arguments.</p>	<p>In the second step, you discuss the requirements and the available budget internally with your colleagues. We support you with our advice and helpful documents.</p>
Step 3	Step 4
<p>In the third step we evaluate the quotation with you - based on your internal requirements - and compile the variants and variables as you need them for your application. On this basis you can make a well-founded decision.</p>	<p>If we are perceived as your best alternative, we would be pleased to receive your order. Afterwards we will deal with the details of production, delivery and commissioning. Also, we will send you the order confirmation with the 1st invoice (70 % advance payment) and set an expected delivery date.</p>
Step 5	Step 6
<p>1 month before delivery you will receive the 2nd invoice (30 %). After receipt of payment we will send the system to you.</p>	<p>In the sixth step, we accompany the commissioning and train your staff. Four weeks after commissioning, we arrange a telephone feedback discussion with you and clarify questions and previous experience.</p>

