



RCS

Sapphire Rocking Cell

Hydrates



Measurement Category	Hydrates
Measurement Target	Determination of the efficiency and effectiveness of kinetic gas hydrate inhibitors, anti-agglomerants, as well as the influence of different inhibitors in multi-phase mixtures
Sample Materials	Water, Gas, Oil (Hydrocarbon), Inhibitors
Pressure Range	Individually adjustable up to 200 bar (350 bar option)
Temperature Range	-10 to +60 °C (-20 °C expandable)
Sample Quantity	20 cm ³ per test cell
Repeatability	depends on the attempt
Dimensions	RCS2: 64 x 76 x 110 cm (<i>right</i>) RCS6: 160 x 75 x 105 cm RCS8: 160 x 75 x 115 cm (<i>middle</i>) RCS20: 235 x 96 x 204 cm (all without thermostat) (<i>left</i>)
Weight	RCS20: approx. 500 kg / RCS6: approx. 320 kg
Supply	Additionally: Compressed air
Price Range	
Special Features	<ul style="list-style-type: none">▪ Fully visible test cell▪ Parallel tests possible▪ Ball running time measurement▪ Strong mixing simulates pipeline conditions▪ Variable and automated tests



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Basic requirements
Situation (s)

- Test of anti-agglomerants AA
- Test of multi-phase samples (gas/water/oil)
- Screening with multiple parallel tests required

Requirement criteria

- What oilfield chemicals do you sell? (good: hydrate inhibitors)
- Are you developing hydrate inhibitors? (good: Yes)
- Do you do screening? (good: Yes | bad: No)
- Which inhibitors do you measure?
(good: AA | bad: KHI, TDI, HET --> RC5 or GHA)
- Do you need a visual inspection?
(good: YES | bad: pressure drop is enough --> RC5)
- Do you test multi-phase samples? (good: YES)
- Do you test sour gas with H₂S content?
(good: Yes --> Hastelloy option)
- How many tests do you run per day?
- How many tests would you like to run per day?
(good: GAP between ACTUAL and SET: factor approx. 2-3)



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Optional add-on products (Up-selling)

Extended physics. Properties	T, p, Hastelloy
Software	included
More measuring stations	2, 6, 8, 10, 20 pressure cells
Maintenance	✓
Additional Features	Camera
Spare parts (if required)	✓
Documents for customs	✓
Customizing	✓
Service	✓
Training	mandatory

Optional by-products (cross-selling)

Calibration Set	
Test measurement	✓
Chiller	mandatory
Gas-Booster	✗
PC	Included
Other	Vacuum pump



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Reason for purchase 1	Safety: You see what happens because during the test measurement you can see the entire sample chamber through the visible cells and thus observe the behavior (pumpability) and the structure of the gas hydrates formed. (no deposition on the walls, no large hydrate particles)
Reason for purchase 2	Time / money: You save time and money in the project because you have more measuring stations (in less space) and the sample throughput (measurements / time) increases.
Reason for purchase 3	Convenience: With the software you can variably set all test conditions in advance by means of a script (e.g. tilt angle, tilt frequency, duration of test phases), so that you can start an automated test at the touch of a button. This allows you to examine complex test sequences in a single test run.
Reason for purchase 4	Convenience: You operate your measuring instruments conveniently and simply because the test procedure is automated via the software after setup.
Reason for purchase 5	Comfort / Time: You save time when cleaning the system because the cells are very easy to disassemble and dismantle.
Reason for purchase 6	Safety: Make sure you include sour gas in your tests because you can upgrade the RCS to H ₂ S compatibility.



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>

