FT5
Flocculation Titrimeter

Asphaltenes & Polymers

Measurement Category	Asphaltenes & Polymers
Measurement Target	Automatic measurement of precipitation and crystallization of asphaltenes and polymers.
Sample Materials	Crude oils (including dark) and aqueous solutions
Pressure Range	Ambient / up to 200 bar / up to 700 bar
Temperature Range	-10 to +80 °C (Basic) / -10 to +120 °C (MP) / - 20 to +180 °C (HP) / +30 to +300 °C (HPHT)
Sample Quantity	Approx. 30 ml
Repeatability	Depends on the attempt
Dimensions	26 x 38 x 16 cm
Weight	Basic unit: ~4 kg Complete system: ~50 kg
Supply	at >0 bar: Gas and compressed air supply
Price Range	
Special Features	▪ Measurement under pressure and high pressure (live oil testing) ▪ Measurement under extreme temperatures (refinery products) ▪ Accurate results without dilution even in darkest oils ▪ Testing compatibility between condensate, crude oil and other components

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Basic requirements Situation (s)	▪ No exact measurement method for the efficacy of asphaltene inhibitors ▪ No measurement method for stability of polymer solutions under elevated temperatures ▪ No measurement possible under production conditions ▪ Determination of Heithaus Parameters

Requirement criteria

- What oilfield chemicals do you sell? (good: asphaltene inhibitors)
- With which measuring method do you currently measure? (good: not at all | worse: optically unprinted | bad: MettlerToledo)
- Do you need increased pressure or temperature? (good: yes | bad: ambient pressure is sufficient, standard temperature is sufficient)
- Also measure undiluted, dark oils (good: yes | bad: no)

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Optional add-on products (Up-selling)	
Extended physics. Properties	T, p
Software	obligatory
More measuring stations	
Maintenance	✓
Additional Features (recommended)	Titration Pump
Spare parts (if required)	✓
Documents for customs	✓
Customizing	✓
Service	✓
Training	✓

Optional by-products (cross-selling)	
Calibration Set	
Test measurement	✓
Chiller	✓
Gas-Booster (recommended)	>50 bar
PC	✓
Other	CO_2-Injection

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Reason for purchase 1	Safety: You ensure the accuracy of your measurement results because you can measure under reservoir conditions.
Reason for purchase 2	You increase the quality of your measurement data because you can immediately and accurately work on undiluted oils. Because of this measurement method, PSL gave a lecture in 2017 at the PetroPhase event in Le Havre.
Reason for purchase 3	You ensure the stability of your solution and your oil because you can see under which test parameters particles are formed.
Reason for purchase 4	Comfort: You are flexible because you can upgrade the device to high pressure, for example, at a later date.
Reason for purchase 5	Safety: You ensure the functionality of your device because you have 20 years of experience in further development in the field of flocculation measurement.
Reason for purchase 6	Safety: You protect yourself against asphaltene precipitation during CO2 injection because you can also add CO_2 under high pressure conditions (from approx. 60 bar).

For all devices

Step 1	Step 2
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.	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.
Step 3	**Step 4**
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.	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.
Step 5	**Step 6**
1 month before delivery you will receive the 2nd invoice (30 %). After receipt of payment we will send the system to you.	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.