



# DSL

## Differential Scale Loop

Scale



|                      |   |
|----------------------|---|
| Measurement Category | Scale / Salt deposit  |
| Measurement Target   | Testing of precipitation and deposition of scale and other salt crystals in pipework systems like oil or water pipelines  |
| Sample Materials     | Water treatment additives (Inhibitors / Dissolvers)   |
| Pressure Range       | Up to 380 bar (5500 psi)  |
| Temperature Range    | +30 to 250 °C (Basic model)<br>+25 to 150 °C (Low Temperature Model)  |
| Sample Quantity      | From 250 ml   |
| Repeatability        | High  |
| Dimensions           | 135 x 50 x 75 cm  |
| Weight               | Approx. 75 kg   |
| Supply               | No special requirements   |
| Price Range          |   |
| Special Features     | <ul style="list-style-type: none"><li>▪ Fully Automated Tube Blocking System (Scale Deposition)</li><li>▪ Programming and execution of complete test series (different parameters)</li><li>▪ Automatic repeat tests (same test) and long-term tests</li><li>▪ Automatic Tests with Decreasing Inhibitor Concentration</li></ul> |



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Basic requirements

Situation (s)

- Current method can not measure under high' temperatures and pressures
- Current provider does not provide any service

### Requirement criteria

- What chemicals do you sell? (good: scale inhibitors)
- With which measuring method do you currently measure?  
(good: bottle test | bad: dynamic loop)
- Do you need the minimum inhibitor concentration MIC?  
(good: yes | bad: no)
- Do you only measure in the lab or do you also have to measure mobile?  
(good: laboratory | ok: mobile --> mDSL)
- Which pressure & temperature range do you need?  
(good: pressure > 1 bar and / or T > 80 °C |  
bad: pressure = ambient and T < 80 °C)



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

|                              |   |
|------------------------------|---|
| Extended physics. Properties | T,p, Hastelloy  |
| Software                     | Included  |
| More measuring stations      |   |
| Maintenance                  | ✓   |
| Additional Features          | Suction aid, Flow meter, pH sensor, EC sensor (conductivity), Filter blocking. Thermostat |
| Spare parts (if required)    | ✓   |
| Documents for customs        | ✓   |
| Customizing                  | ✓   |
| Service                      | ✓   |
| Training                     | ✓   |

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

|                  |             |
|------------------|-------------|
| Calibration Set  |             |
| Test measurement | ✓           |
| Chiller          |             |
| Gas-Booster      |             |
| PC               | mandatory   |
| Other            | Demo Device |





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|-----------------------|---|
| Reason for purchase 1 | Time / Comfort: You can program and carry out extensive tests and test series easily and conveniently.  |
| Reason for purchase 2 | You get comfort in the application e.g. by the suction aid, which makes an improved system start possible.  |
| Reason for purchase 3 | Time / Comfort: You save time when cleaning the device because it cleans itself.  |
| Reason for purchase 4 | You receive a device tailored to your needs through a variety of available options (e.g. pH / EC measurement, flow measurement, filter blocking). |
| Reason for purchase 5 | You will also receive special models for mobile measuring operation, sour water and halite testing.   |
| Reason for purchase 6 | They ensure that you not only have an expert contact person for online support at all times, but also receive on-site service on request.         |





## 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>  |

