

Model CorrDATS™4 Corrosion & Deposit Monitoring System

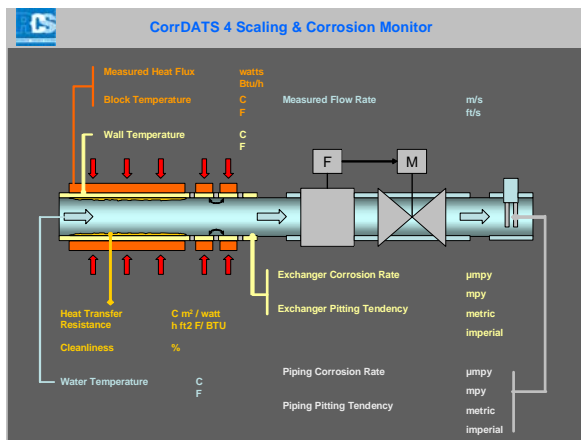
Features:

- **Integrated On-Line Corrosion and Deposit Monitoring System**
- **Corrosion Rate and Pitting on Heat Exchanger Surface**
- **Corrosion Rate and Pitting on Second Non-heated Alloy**
- **Field Proven Technologies**

Rohrback Cosasco Systems and Bridger Scientific have collaborated to produce the new Rohrback Cosasco Systems CorrDATS™4 integrated corrosion and deposit monitoring system. The newly designed control unit provides stand-alone operation with a touch screen panel display of corrosion, scaling and related data.



becomes more complex. The CorrDATS 4 provides the essential on-line data to allow you to manage this balancing act easily and efficiently.

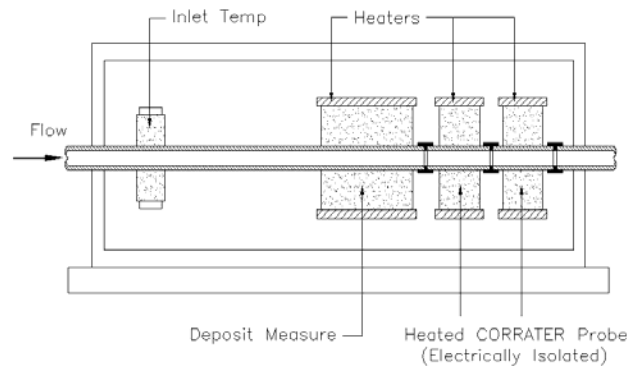


On-board Touch Screen Display

An output interface provides the same data in Modbus over IP format to a PLC, SCADA or process control system.

The CorrDATS™4 system comprises a heat exchanger unit with scaling and corrosion measurement, a flow measurement and control unit, an external second corrosion probe, and a main control unit.

Scale and corrosion control in the field can be a delicate balance. Higher pH reduces corrosion but increases scaling. Lower pH reduces scaling but increases corrosion. Add to that the protection of heat exchanger often copper-based alloys with carbon steel pipe work and vessels and the problem



The CorrDATS 4 heat exchanger tube is matched to the alloy of the field heat exchanger to be monitored. The flow through the tube is programmed and controlled to represent the most critical plant condition, normally the lowest flow velocity. The heated surfaces of the CorrDATS 4 exchanger are programmed and controlled to represent the most critical heat transfer conditions, normally the highest heat flux. The CorrDATS 4 system is then connected to the plant heat exchanger outlet, where the water temperature is greatest. This sets up the system for scale and deposit monitoring.

In many systems, the heat exchanger tubing is a copper-based alloy and the rest of the system is carbon steel. Separate elements of the corrosion inhibition must be simultaneously regulated to prevent corrosion of both of these alloys. In addition, the corrosion rate on the heat exchanger tube material varies with temperature. The CorrDATS™ 4 system is unique in providing corrosion rate measurement on the heated surface of the exchanger under the same heat flux

conditions as in the actual plant. A second “passive probe” with electrodes that match the rest of the plant vessels and pipe work, usually carbon steel, is inserted in the flow to measure the corrosion rate and pitting of the rest of the plant

The 9030-Plus corrosion monitoring electronics are used in the CorrDATS™ system, for increased flexibility (see bulletin #301 for more details). The 9030-Plus unit monitors multiple parameters, including corrosion rate and pitting tendency from two CORRATER® probes. The basic model uses a paddle flowmeter which is suitable for clean water or laboratory use. For field use we recommend upgrading to the ultrasonic flowmeter

UNS Code	Alloy
K03005	Carbon Steel
C11000	Copper
C44300	Arsenical Admiralty Brass
C70610	90/10 Copper Nickel
C71500	70/30 Copper Nickel
Other alloys subject to availability	

Table 1

Specifications:

- **Maximum Heat Flux:** 50,000 Btu/hr.ft²
- **Maximum Fluid Temp:** +180° Deg F
- **Flow Velocity Range:** 1-10 ft/sec
- **Tube Size:** 7/8" dia.
- **Tube Alloy:** Any Commercially available
- **Enclosures:** Plastic sealed enclosures Stainless steel/ Aluminum heat exchanger case
- **Corrosion Rate:** 0 - 1000 mpy
- **Imbalance (Pitting Index):** 0 - 1000 pitting units
- **Operating Range:** Conductivity (µmhos/cm) divided by corrosion rate (mpy) > 4
- **9030-Plus Inputs:**
2 Channel Corrosion Rate
2 Channel Imbalance

Ordering Information:

Model	Description																												
CorrDATS™4	Corrosion and Deposit Monitoring System																												
	<table border="1"> <thead> <tr> <th>Code</th> <th>Heated Tube Alloy and Heated Corratrater Probe Alloy</th> </tr> </thead> <tbody> <tr> <td>XXXXXX</td> <td>Enter UNS Code (See Table 1)</td> </tr> <tr> <th>Code</th> <th>Unheated Corratrater Probe Alloy</th> </tr> <tr> <td>XXXXXX</td> <td>Enter UNS Code (See Table 1)</td> </tr> <tr> <th>Code</th> <th>Supply Voltage</th> </tr> <tr> <td>115</td> <td>115 VAC 50/60 Hz</td> </tr> <tr> <td>230</td> <td>230 VAC 50/60 Hz</td> </tr> <tr> <th>Code</th> <th>Flowmeter Option</th> </tr> <tr> <td>0</td> <td>Paddle Flowmeter</td> </tr> <tr> <td>1</td> <td>Magnetic Flowmeter</td> </tr> <tr> <td>2</td> <td>Ultrasonic Flowmeter</td> </tr> <tr> <th>Code</th> <th>Output</th> </tr> <tr> <td>0</td> <td>Without Modbus over IP</td> </tr> <tr> <td>2</td> <td>Modbus over IP</td> </tr> </tbody> </table>	Code	Heated Tube Alloy and Heated Corratrater Probe Alloy	XXXXXX	Enter UNS Code (See Table 1)	Code	Unheated Corratrater Probe Alloy	XXXXXX	Enter UNS Code (See Table 1)	Code	Supply Voltage	115	115 VAC 50/60 Hz	230	230 VAC 50/60 Hz	Code	Flowmeter Option	0	Paddle Flowmeter	1	Magnetic Flowmeter	2	Ultrasonic Flowmeter	Code	Output	0	Without Modbus over IP	2	Modbus over IP
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<p>CorrDats4 — C44300 — K03005 — 115 — 2 — 2 ← Example</p>																													



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