**Understand and control process chemistry in kilo lab, pilot plant, and plant**

**Sensors, flow cells, and probes**

Directly sample in-process chemistry providing critical reaction information. Our patented DiComp™ (diamond) sensor allows precise analysis and faster results than offline methods. Sensors perform under actual chemical process conditions, including low temperature, corrosive or abrasive agents, heterogeneous or viscous reactions.

**FiberConduit™**

Is developed specifically to provide ultimate flexibility and easy access to the reactor. The IR transmissive optical fiber is an ideal alternative for situations where the ability to use conventional mirror-based optical conduits is limited, because of mechanical vibration, space constraints and/or other issues.

**Ultrasonic cleaner**

Cleans the probe tip while in process. The ultrasonic cleaner reduces downtime, while creating a safer production environment by reducing the chance of exposure to hazardous chemicals.

**TCP communication**

Permits remote configuration and management. MonARC™ communicates to plant control systems via a universal ModBus/TCP or by using 4-20mA Programmable Logic Control.

**MonARC™**

The METTLER TOLEDO MonARC™ provides specific information about the identity and quantity of chemical species present on an industrial scale and detects potential run-away conditions before the reaction is out of control. Tracking key reactants, products, intermediates and impurities through discreet changes in their “infrared fingerprint” allows tighter control of processes, improved batch cycle time, increased yield, improved process efficiency and safety.
Technical data

**MonARC™**

*In situ* spectroscopy for campaigning

**Standard equipment**
- Hardened interferometer with multi-level vibration isolation
- NEMA 4X stainless steel enclosure with active temperature control
- Class I, Division I (Zone 1) compatibility
- Operational state indicators
- Real-time measurement status indicators
- Self diagnostics
- Touch panel access to process measurements, analyze performance, and configuration reports
- Software – MonARC™ process instrument application and remote configuration tool – ReactIR™ and QuantIR™ application development tools

**Optional equipment**
- Standard or custom sampling interfaces
- *In situ* ultrasonic sensor cleaner
- Fiber or articulated conduit interface
- DTGS or MCT (high sensitivity) detection - no liquid nitrogen required
- Purge pressurization: Expo Technologies, Inc. - SmartPurge, MiniPurge, X-Purge

**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>MonARC™- NA</th>
<th>MonARC™- UK**</th>
<th>MonARC™- EC**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>100 pounds</td>
<td>45 kg</td>
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</tr>
<tr>
<td>Space requirements (excl. doors)</td>
<td>50 in x 70 in x 50 in</td>
<td>127 cm x 178 cm x 127 cm</td>
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<tr>
<td>Ambient temperature operating range</td>
<td>32°F - 104°F</td>
<td>0°C - 40°C</td>
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<td>Utility requirements</td>
<td>509 SCFH, 80 PSI dry air or nitrogen</td>
<td>240 lpm, 5.5 bar dry air or nitrogen</td>
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<td>Certifications</td>
<td>NFPA 496 code</td>
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**Sampling technology**

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<td>-112°F to 392°F</td>
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<td>Vacuum to 1552 PSI</td>
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<tr>
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* Other sensor material available upon request

**MonARC™ software**

- Touch panel access to critical system reports and process performance values
- 21 CFR Part 11 compliant audit and error logs
- View real-time state and process monitoring status
  - Access tabular reports of:
    - Real-time process monitoring measurements
    - System configuration
    - Error and audit log
- System performance monitoring via 24-hour trend charts
  - Remotely configure process monitoring applications and system operation parameters
  - Single step downloading to the MonARC™
  - Access system operational state and “heartbeat”
  - Access system performance values and process monitoring measurements
- Multi-level user authentication
- DCS interface via Modbus-TCP/IP ethernet slave

www.mt.com/MonARC

Visit for more information

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Fax +1 410 910 8600
Email autochem.marketing@mt.com

Quality certificate ISO9001:2000 Real Time Analytics East Product Group
Internet: http://www.mt.com/autochem
Worldwide service

Subject to technical changes

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