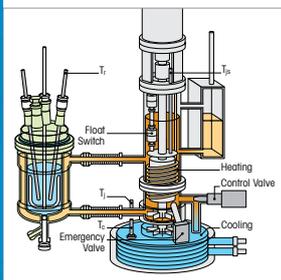


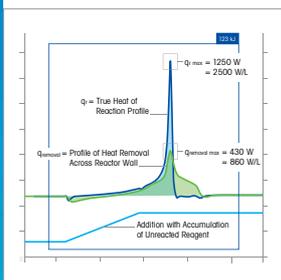
Chemical Process Safety

Ensure Safety by Design



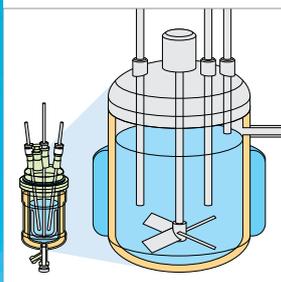
Intrinsically Safe

Exploring new process conditions can result in unexpected hazards. With the intrinsically safe and extremely powerful RC1mx thermostat, fast and strong exothermic events are easily kept under control. This allows operators to reliably explore unknown process conditions without exposing themselves or the laboratory to any danger.



Complete Heat of Reaction

Measuring the "complete" heat of reaction versus the profile of the heat of removal allows scientists to evaluate the risk, scalability, and criticality of a process and to predict worst case scenarios accurately, avoiding safety and scale up risks at large scale.



Understanding All Parameters

Safety and scale up determination can be done only when the impact of all individual parameters is determined. The RC1mx software allows fast and accurate calculation of these parameters, which can easily be integrated with simulation packages to allow the precise and efficient prediction of process characteristics.



One Click Analytics™

The powerful iC Safety software provides scientists with the information they need to quickly calculate parameters that are optimized for process safety. iControl™ software combines data from different sources, simplifies analysis, and creates reports with One Click Analytics that can be securely stored or shared across organizations.



RC1mx™ Reaction Calorimeter

The RC1mx is the world leading technology for reaction calorimetry and process safety. Accurate and comprehensive calorimetric data provides researchers with information needed to identify and eliminate non-scalable conditions, and ensure confidence when scaling up. The intuitive platform increases personal safety when working with unknown and hazardous reactions. The highly reproducible results minimize experimental repetition. Because investigations in the RC1mx are performed under conditions that mimic pilot or manufacturing scale, they allow direct assessment of process hazards and the development of safer processes ready for scale up. Decisions made by applying RC1mx data improve the effectiveness of chemical development and ensure that processes are better optimized, more robust, and economically viable.

Chemical Process Safety

Ensure Safety by Design

Precision and Confidence

Established SmartConnect™ technology provides flexible plug-and-play connections to a wide range of sensors and minimizes errors by eliminating the need to configure the RC1mx. Over 30 years of experience in designing high performance reaction calorimeters, investing in superior control technology, and developing data management software ensures that the process development workflow is efficient and cost-effective.

User Interface

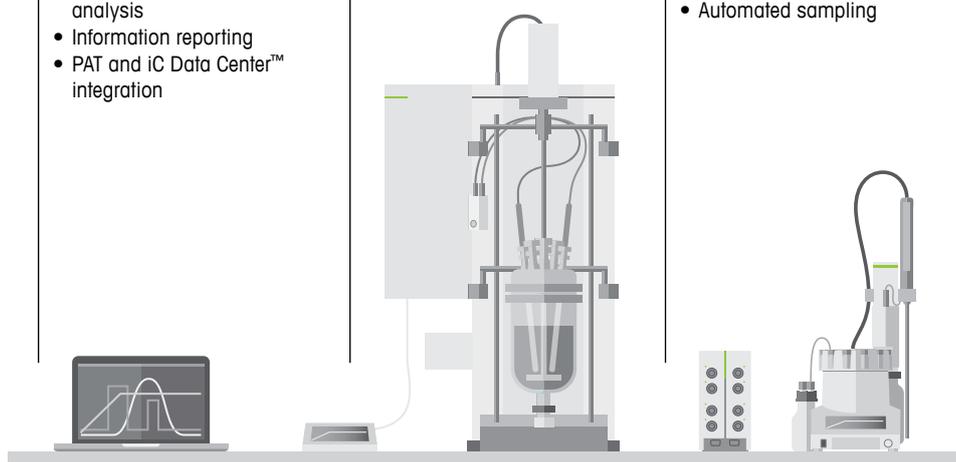
- Touchscreen
- iControl software
- Recipe control
- Data acquisition
- Trending
- Data evaluation and analysis
- Information reporting
- PAT and iC Data Center™ integration

Reaction Control and Calorimetry

- Basic control
- Temperature
- Stirring
- User safety
- Determination of calorimetric data

Extended Process Control and Measurement

- Automated dosing
- pH control
- Pressure control
- Extended measurement with METTLER TOLEDO and third-party sensors
- Automated sampling



Technical Specifications

Temperature Range	-70 °C to 300 °C
Heating/Cooling	Fast heat transfer media circulation with split heating and cooling loop for effective and precise temperature control
Heating Power	Up to 4 kW
Cooling Power	Up to 6 kW
Volume Range/Reactors	100 mL to 22 L Glass, AISI316, Alloy C-22
Pressure Range	Vacuum to 100 bar (depending on reactor)
Calorimetric Measurement	Heat flow and real-time calorimetry <ul style="list-style-type: none">• Isothermal• Non-isothermal• Adiabatic• Reflux conditions
Connectivity and Data Transfer	Ethernet: Communication to PC (iControl/iC Data Center) CAN: Interface to peripherals USB: Data export to USB stick
Supported Languages (Touchscreen)	English, German, French, Spanish, Japanese, Chinese
Safety Features for Maximum Protection	<ul style="list-style-type: none">• Emergency button for immediate execution of emergency program• Emergency relays to connect audible or visual alert• 24 V outlets to trigger safety measures, e.g. quenching
Dimensions, WxDxH	64.2 cm x 72.5 cm x 118.05 cm, 25.3" x 28.5" x 46.5" (with standard glass reactor)
Weight	160 kg

www.mt.com/RC1mx

For more information

METTLER TOLEDO Group

Automated Reactors and In Situ Analysis

Local contact: www.mt.com/contacts

Subject to technical changes

© 02/2018 METTLER TOLEDO. All rights reserved
30445388