



Calo2310 pro BS

The newest Reaction Calorimeter for Safety Investigations as well as Scale-Up



Combined **Heat Flow** and **Heat Balance Calorimeter** with automated „Zero Watt“ Baseline for non-isothermal mode.

The one and only professional „**state of the art**“ **Calorimeter**. A Calorimeter for the complete range of reaction mechanisms. With on-line display of output and heat of Heat Flow, Heat Balance and Calibration as well as A, U and cp in the „**Blue Window**“.

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automatically better

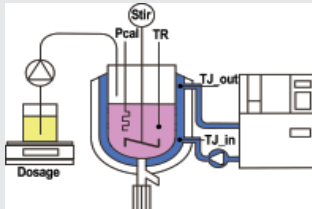
Calo2310 pro BS

Professional Universal Reaction Calorimeter



- Top class, combined heat-flow and heat-balance calorimeter for non-isothermal applications (n-iso HFC and HBC)
- Using simultaneously two complimentary measuring methods for critical comparisons
- Automated „Zero Watt“ baseline, based on instrument supported evaluation
- Measurement capability even without simultaneous calibration
- cp Determination automatically during calibration
- Blue Window with online display of A, U, cp as well as output and heat, for heat-flow (HF) and heat-balance (HB) each
- Optional heat balance within reflux condenser and combined total balance
- HBC is independent of filling level, viscosity, vortex and heat transit

Measuring principles & Blue Window



$$HB = (T_{J_{in}} - T_{J_{out}}) \cdot cp \cdot r \cdot F$$

(W) (°C) (°C) (J/g.K) (g/ml) (ml/s)

$$HF = (TR - T_{J_{out}}) \cdot A \cdot U$$

(W) (°C) (°C) (m²) (W/m².K)

On-Line Evaluation	
Power	Heat
HF -0,1 W	33,1 kJ
HB -1,1 W	27,9 kJ
Ref 0,0 W	
Cal 0,0 W	34,1 kJ
mass 635,0 g	cp 2,42 J/g.K
A (D) 0,0440 A (I-1)	0,0440 m²
U (D) 153,05 U (I-1)	122,75 W/m²
cp(D) 2,91 cp(I-1)	1,92 J/g.K
Integration ON	Calibration ON
Reset Values	

Data Summary Calo2310 pro BS

Reactor	Glass, conical shape, 1l capacity, triple wall, with bottom discharge, tight, with safety valve	
Operating Range	-50°C to +180°C	} dependent of selected
Thermostat	Unistat 380w from -80°C to +200°C	} thermostat
Stirrer Speed	40 to 2000 rpm	
Dosing Mode	1 x gravimetrically, using membrane pump	
Pressure/Vacuum	0 to 1.6 bar _{abs} including control	
Temp.-Resolution	0.007 K, HF and HB signals 0.001 K	
Accuracy	HF: 2%, HB: 4% (isothermal, 5° to 50°C)	
OPTIONS	Heat balance of reflux (accuracy 5%), second dosing facility, pH, pH control, distillation with balance, pressure reactor.	

Technical details are subject to change without notice

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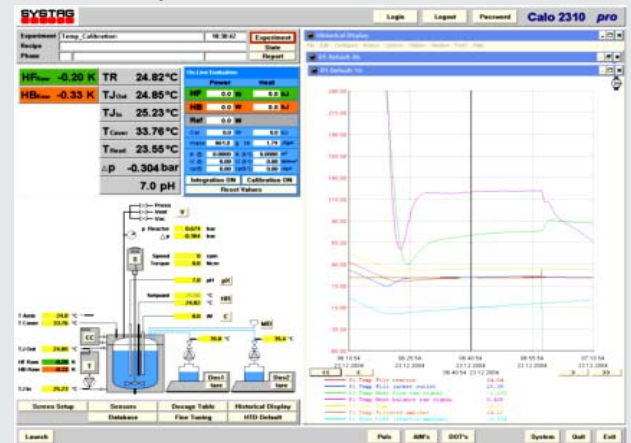
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Overview

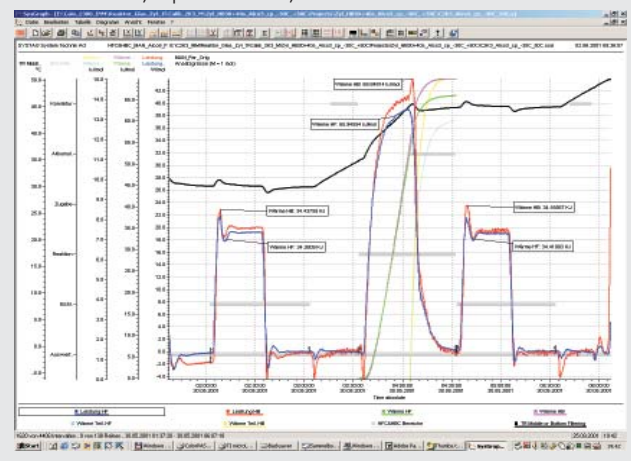
The new FlexySys Surface provides comprehensive operating facilities, whilst reaction progress can be monitored at a glance.



The new Recipe Editor OperX is a drag-and-drop Windows Editor incorporating all advantages of the current Base Operations.



SysGraph evaluation software combined with Calo2000 package for automated „Zero Watt“ base-line function, output and heat of HF, HB and reflux as well as adiabatic increase TR.



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