Technical Specifications for the DSC 8000/8500 Differential Scanning Calorimeters

Introduction

At PerkinElmer, we're committed to the future of thermal analysis. We prove it with the introduction of our new line of high-performance DSC solutions – DSC 8000 and DSC 8500. The DSC 8000/8500 features our proprietary double-furnace technology, which directly measures the heat flow difference between two independent furnaces. This design gives higher accuracy and sensitivity for even your most demanding applications.

Technical Description and Specifications		
DSC type	Double-furnace design	The two furnaces are much lower in mass than a single furnace design allowing much faster thermal response and faster cool down times
Measurement principle	Power-compensation	Measures heat-flow (Energy) directly without the need for conversion. Delivers more accurate heat-flow measurements
Furnace material	90% platinum alloy	Superior thermal conductivity for fast furnace response. Extremely chemically robust. Can operate with oxygen at temperatures >600 °C to allow furnaces to be cleaned by combustion.
Temperature sensors	Distributed, platinum resistance thermometers	Platinum resistance thermometers are more accurate and linear over a wider temperature range than thermocouples
MT-DSC	Included	
Software	Includes Pyris™ software, Pyris Player, Isothermal Kinetics, Scanning Kinetics, Specific Heat and Purity software packages	
Cooling accessories	Chiller, Intracooler 2, Intracooler 3 and CLN2	

JCANO INGENIERIA DE MÉXICO:
Priv. Brunel Mz. 1 Lt. 5 Cs 4-B Fracc. Quinta Versalles
C.P. 55767 Tecámac, Edo. De México
Correo: mcano@jcanoingenieria.com
Página Web: https://jcanoingenieria.com
Tel: 55 3996 2586
WhatsApp: 55 7129 9832
Facebook: https://www.facebook.com/JCanoIngenieria

JCANO® INGENIERÍA DE MÉXICO
Equipo de Laboratorio, Mantenimiento, Capacitación y CRM personalizado

PerkinElmer® For the Better

	DSC 8000	DSC 8500	Technical Description
Hardware Features			
Dual, digital mass flow-controller	Included		Switch easily between gases
Cooling accessory upgrades	User exchangeable		Minimal downtime and expense
Automated DSC cover	Included		Easy, quick sample loading and unloading
Semi-automated sample loading accessory	Included		
96-position autosampler	Optional		
High-pressure DSC	Optional		
Remote-DSC accessory	Optional		
Photocalorimeter	Optional		
DSC-Raman	Optional		
Calorimetric Performance			
Dynamic range	±800 mW		Allows applications with high energy thermal transitions to be measured
Accuracy	<±0.2%		
Precision	<±0.03%		
Indium height/width (mW/˚C)	18.4		Indium melting peak height/width at half-height. 1 mg Indium, 10 ˚C/min, nitrogen purge. No mathematical treatment to the data or correction applied.
Indium melting time (sec)	2.3		The time between Indium melting peak onset and maximum
Digital resolution	0.18 µW		This is the resolution of the electronics
Temperature Performance			
Range	-180 ˚C to 750 ˚C		
Accuracy	±0.05 ˚C		Using on-set temperatures of Indium melting peak
Precision	±0.008 ˚C		
Data points/sec	40	100	
Controlled heating rates	0.01 to 300 ˚C/min	0.01 to 750 ˚C/min	
Controlled cooling rates	0.01 to 150 ˚C/min	0.01 to 750 ˚C/min	Depends on cooling accessory installed and cooling range selected
***In-situ* ballistic sample cooling of up to 1400 ˚C/min**	Upgrade	Included	
Between-sample cooling times (100 to -100 ˚C with CLN2 cooling accesory)	80 seconds	30 seconds	For fast sample turnaround

	DSC 8000	DSC 8500	Technical Description
Regulatory			
21 CFR Part 11 Compliance	Optional		
Qualification, verification and calibration services	Available		
Site Requirements			
Dimensions (HxWxD)	30x54x62 cm (12″x21″x24″) without autosampler 50x54x62 cm (20″x21″x24″) with autosampler		
Weight	20 kg (44 lb) without autosampler 30 kg (66 lb) with autosampler		
Power requirements	100-240 Volt 50/60 Hz	100-240 Volt 50/60 Hz	

JCANO INGENIERIA DE MÉXICO:
Priv. Brunel Mz. 1 Lt. 5 Cs 4-B Fracc. Quinta Versalles
C.P. 55767 Tecámac, Edo. De México
Correo: mcano@jcanoingenieria.com
Página Web: https://jcanoingenieria.com
Tel: 55 3996 2586
WhatsApp: 55 7129 9832
Facebook: https://www.facebook.com/JCanoIngenieria

PerkinElmer, Inc.
940 Winter Street
Waltham, MA 02451 USA
Phone: (800) 762-4000 or
(+1) 203-925-4602
www.perkinelmer.com

For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

008495_01