

Key Technical Data

NETZSCH

DSC 204 F1 Phoenix®

Furnace Type	Silver Furnace
Temperature range (max.)	-180°C to 700°C
Cooling rate / heating rate	0.001 to 200 K/min
Measuring range (max.)	± 750 mW (τ-sensor)
Enthalpy accuracy	< 1%*
Precision of specific heat capacity determination	< 2 to 3% (for sapphire, RT to 500°C)
Exchangeable sensors	<ul style="list-style-type: none"> ▪ τ-sensor (-180°C to 700°C) ▪ μ-sensor (-150°C to 400°C)
Cooling options	<ul style="list-style-type: none"> ▪ Air compressor: RT to 700°C ▪ Compressed air: <0°C to 700°C (Vortex) ▪ Intracooler: -85°C to 600°C ▪ Liquid nitrogen: -180°C to 700°C
Gas atmospheres	Inert, oxidizing, static, dynamic
Gas-tight	Yes
Mass flow controller for purge/protective gas	3, integrated (0 ... 250 ml/min)
Gas flow regulation	Software-controlled
Automatic sample changer (ASC)	Optional, for up 192 samples + up to 12 calibration samples
Evolved Gas Analysis	MS and/or FT-IR, possible with ASC
Photocalorimetry (optional)	UV extension for various commercial lamps, possible with ASC
Proteus® software (included features)	<ul style="list-style-type: none"> ▪ SmartMode ▪ ExpertMode ▪ AutoCalibration ▪ AutoCooling ▪ AutoEvaluation ▪ Identify ▪ Advanced BeFlat®
Proteus® software extensions (optional)	<ul style="list-style-type: none"> ▪ Temperature modulation, TM-DSC ▪ Purity
Advanced software extensions (optional)	<ul style="list-style-type: none"> ▪ Peak Separation ▪ Thermokinetics ▪ Thermal Simulations ▪ Component Kinetics
Size (W x H x D) - incl. ASC and physical connections	approx. 62 cm x 42 cm x 58 cm

The system works in line with all relevant DSC standards (DIN, ISO, ASTM).

* for metals

** using the equation published by B. Wunderlich, Thermal Analysis of Polymeric Materials, Springer (2005), page 346