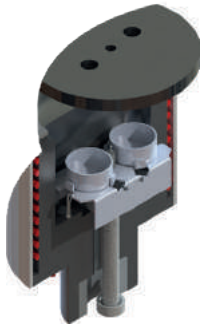
Features



SETLINE® TRANSDUCER

SENSOR

The Setline® transducer is made from chromel-constantan and uses plate-shaped DSC rod technology ensuring high sensitivity over the full temperature range (-170 °C to 700 °C). It is housed in a small volume, resistor furnace with low thermal inertia. This enables high heating and cooling rates for the multiple, high speed experiments typical in academic environments.

The furnace temperature is extremely uniform, ensuring high quality data and accurate sample temperature measurement of thermal events.

CRUCIBLES

We provide Regular and High Pressure crucibles.
• Regular Alumina and Aluminium (30 and 100 µl) crucibles ensure good thermal transfer between sample and sensor.
• For Setline DSC and DSC+ : Stainless Steel (30 µl) crucibles and Gold plated (30 µl) crucibles up to 200 bar and 400 °C provide High Pressure capability while being inert to most sample types.
• For Setline DSC : High Pressure Incoloy (30 µl) crucibles deliver unmatched high pressure capability up to 500 bar, 600 °C.

SUB-AMBIENT COOLING OF THE SETLINE® DSC AND DSC+

There are three types of sub-ambient cooling devices:

- **Liquid Nitrogen (LN2) Manual cooling accessory for DSC operating from -170 to 400 °C**
- **Liquid Nitrogen (LN2) Automated cooling accessory for DSC and DSC + operating from -150 to 400 °C****
- **A cryothermostat cooling device for intermediate temperature ranges for DSC and DSC+****
  -60°C* to 200°C under a flow of Helium
  -50°C to 400°C under a flow of Argon, Nitrogen or dry Air

Specifications

	SETLINE® DSC	SETLINE® DSC+
Temperature range (°C)	-170 to 700	-170** to 700
Programmable heating rate (°C/min)	0.01 to 100	0.01 to 100
Cooling time	12 min from 500 °C to 100 °C (air) 12 min from 25 °C to -100 °C (LN_2) 5 min from 100 °C to 0 °C (cryothermostat)	12 min from 500 °C to 100 °C (air) 12 min from 25 °C to -100 °C (LN_2) 5 min from 100 °C to 0 °C (cryothermostat)
Enthalpy accuracy / precision* (%)**	+/- 0.8 / 2.5	
Temperature accuracy / precision* (°C)**	+/- 0.30/ 0.50	
DSC measurement range (mW)	+/- 6 000	
Atmosphere	Inert gas, air (possible gas switch between 2 gases)	
Gas flow range (ml/min)	10 to 100	
Autosampler	-	59 positions (samples or references)
Height - Width - Depth (mm) / (in)	320 - 380 - 500 / 12.6 - 15 - 19.7	365 (825 open) - 455 - 510 / 14.4 (32.5 open) -17.9 - 20
Power requirements	230V - 50/60Hz	230V - 50/60Hz

***Lower temperatures can be achieved. The time to reach these minimum temperatures can be over two hours; **When sub-ambient cooling devices are used, the autosampler cannot operate; ***Based on indium melting tests**