

STA 449 <b>F3</b> Jupiter®	
Design	Top-loading
Temperature range	-150°C to 2400°C
Furnace	Variety of furnaces incl. high-speed, water-vapor, low to highest temperature, e.g., silver, platinum, tungsten, etc.
Motorized furnace hoist	Double hoist for two furnaces or one furnace + automatic sample changer
Heating rate	<ul style="list-style-type: none"> <li>▪ 0.001 to 50 K/min (furnace-dependent)</li> <li>▪ High-speed furnace: up to 1000 K/min</li> </ul>
Sensors	TGA, TGA-DTA, TGA-DSC, TGA-DSC <sub>p</sub> , special sensors for hanging samples. Sensors can be changed out easily in a matter of moments
Vacuum-tight	10 <sup>-4</sup> mbar <sup>1</sup>
<i>AutoVac</i>	Option for software-controlled automatic evacuation
Evacuation system	Options for one and two furnaces; manual or software-controlled operation
Atmospheres	Inert, oxidizing, static, dynamic, vacuum
Oxygen trap system (OTS®)	Optional
Automatic sample changer (ASC)	20 crucible positions (optional)
Gas flow control	Integrated frits (optional 3 mass flow controllers)
Temperature resolution	0.001 K
Balance resolution	0.1 µg (over the entire weighing range)
DSC resolution (depending on sensor type)	1 µW for DSC sensor type S and e. g. 0.5 µW for DSC sensor type E
Balance drift	< 5 µg/hour
Maximum sample load	35000 mg (incl. crucible), corresponds to TGA measuring range
Sample volume (max.)	<ul style="list-style-type: none"> <li>▪ TGA: up to 10 ml</li> <li>▪ DSC: 0.19 ml</li> <li>▪ DTA: 0.9 ml</li> </ul>
DSC enthalpy accuracy	1% (for indium)
Evolved gas analysis	QMS, GC-MS and/or FT-IR couplings, <i>PulseTA</i> ® (options)
Optional instrument specialties	<ul style="list-style-type: none"> <li>▪ Glove box version</li> <li>▪ Corrosion-resistant version</li> </ul>

<sup>1</sup> Actual achievable vacuum depends on the selected evacuation system

# Technical Specifications



Sensor thermocouple	Temperature range	Sensor types	Atmospheres
Type E	-150°C to 700°C*	TGA-DTA, TGA-DSC ( $c_p$ )	inert, red., oxid., vac.
Type K	-150°C to 800°C*	TGA-DTA, TGA-DSC ( $c_p$ )	inert, red., oxid., vac.
Type S	RT to 1650°C	TGA, TGA-DTA, TGA-DSC ( $c_p$ )	inert, red., oxid., vac.
Type S protected	RT to 1650°C	TGA, TGA-DTA	inert, red., oxid., vac., corr.
Type P	-150°C to 1000°C	TGA, TGA-DSC, TGA-DSC ( $c_p$ )	inert, red., oxid., vac.
Type B	RT to 1750°C	TGA, TGA-DTA, TGA-DSC	inert, red., oxid., vac.
Type W	RT to 2400°C	TGA, TGA-DTA	inert, red., vac.

\* in oxid. atmosphere up to 500 °C