

Technical Specifications

NETZSCH

STA 509 Jupiter®			
	Classic	Select	Supreme
Design	Top-loading	Top-loading	Top-loading
Instrument interface	Illuminated information panel (optional touch display)	Touch display	Touch display
Temperature range	RT to 1600°C (sample temperature)	-150°C to 2400°C	-150°C to 2000°C
Temperature resolution	0.001 K	0.001 K	0.001 K
Furnace hoist	Motorized hoist	Motorized double hoist for two furnaces or one furnace + automatic sample changer	
Furnace	SiC furnace	Variety of furnaces incl. high-speed, water-vapor, low to highest temperature, e.g., silver, platinum, tungsten, etc.	
Heating rate	0.001 to 50 K/min		Furnace-dependent
Sensors	<ul style="list-style-type: none"> ■ TGA ■ TGA-DTA ■ TGA-DSC 	<ul style="list-style-type: none"> ■ TGA ■ TGA-DTA ■ TGA-DSC 	<ul style="list-style-type: none"> ■ TGA ■ TGA-DTA ■ TGA-DSC
	All sensors are easily interchangeable within seconds.		
Evacuation system	Manual or software-controlled operation (<i>AutoVac</i>)		
Vacuum-tight	10 ⁻² mbar*	10 ⁻⁴ mbar*	10 ⁻⁴ mbar*
Atmospheres	Inert, oxidizing, static, dynamic, vacuum	Inert, oxidizing, static, dynamic, vacuum, corrosive (optional)	
Automatic sample changer (ASC) (optional)	20 crucible positions	20 crucible positions	20 crucible positions
Piercing device (optional)	Yes	Yes	Yes
Gas flow control	3 mass flow controllers integrated for 1 protective and 2 purge gases (optional 4 MFC)		
OTS (Oxygen Trapping System) (optional)	Yes	Yes	Yes
Balance resolution over the entire weighing range	0.1 µg	0.1 µg	0.025 µg
Maximum sample load	35 g	35 g	5 g
Balance drift	< 5 µg/hour	< 5 µg/hour	< 2 µg/hour

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DSC resolution (digital)	1 µW for DSC sensor type S	1 µW for DSC sensor type S	1 µW for DSC sensor type S
DSC enthalpy accuracy	1% (for indium)	1% (for indium)	1% (for indium)
Sample volume (max.)	<ul style="list-style-type: none"> ■ TGA: 10 ml ■ DSC: 0.19 ml ■ DTA: 0.9 ml 	<ul style="list-style-type: none"> ■ TGA: 10 ml ■ DSC: 0.19 ml ■ DTA: 0.9 ml 	<ul style="list-style-type: none"> ■ TGA: 5 ml ■ DSC: 0.19 ml ■ DTA: 0.9 ml
Evolved gas analysis (optional)	QMS (via capillary coupling), GC-MS and/or FT-IR couplings	QMS (via capillary coupling or direct via SKIMMER system), GC-MS and/or FT-IR couplings	QMS (via capillary coupling), GC-MS and/or FT-IR couplings
PulseTA® (optional)	Yes	Yes	Yes
Special versions	–	<ul style="list-style-type: none"> ■ Glovebox version ■ Corrosion-resistant version 	<ul style="list-style-type: none"> ■ Glovebox version ■ Corrosion-resistant version

* Achievable vacuum depends on the evacuation system selected