Technical Specifications

	STA 449 ***F1*** *Jupiter*®
Design	Top-loading
Temperature range	-150°C to 2000°C
Furnace	Variety of furnaces incl. high-speed, water-vapor, low to highest temperature, e.g., silver, platinum, etc.
Motorized furnace hoist	Double hoist for two furnaces or one furnace + automatic sample changer
Heating rate	▪ 0.001 to 50 K/min (furnace-dependent) ▪ High-speed furnace: up to 1000 K/min
Sensors	TGA, TGA-DTA, TGA-DSC, TGA-DSC (c_p), special sensors for hanging samples. Sensors can be changed out in a matter of seconds.
Vacuum-tight	10^{-4} mbar[1]
Evacuation system	▪ *AutoVac* for software-controlled automatic evacuation ▪ Pump systems for one or two furnaces
Atmospheres	Inert, oxidizing, static, dynamic, vacuum
Oxygen trap system (*OTS*®)	Optional
Automatic sample changer (ASC)	20 crucible positions (optional)
Gas flow control	3 mass flow controllers
Temperature resolution	0.001 K
Balance resolution	0.025 µg
Balance drift	< 2 µg/hour
Maximum sample load	5000 mg (corresponds to weighing range)
Sample volume (max.)	▪ TGA: up to 5 ml ▪ DSC: 0.19 ml ▪ DTA: 0.9 ml
DSC enthalpy accuracy	± 2% (for most materials)
Evolved gas analysis	QMS, GC-MS and/or FT-IR couplings, *PulseTA*® (options)
Optional instrument specialties	▪ Glove box version ▪ Corrosion-resistant version

1 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 2000°C	TGA, TGA-DTA	inert, red., vac.

* in oxid. atmosphere up to 500°C