

Technical Specifications

NETZSCH

TMA 512 Hyperion®		
	Select	Supreme
Design	Top-loading	Top-loading
Instrument interface	Touch display	Touch display
Temperature range	-150°C to 1500°C/1600°C*	-150°C to 1600°C
Measuring ranges/ Δl resolution	500 μm (± 250 μm)/0.125 nm 5000 μm (± 2500 μm)/1.25 nm	500 μm (± 250 μm)/0.125 nm 5000 μm (± 2500 μm)/1.25 nm
Furnace hoist	Single, motorized (double optional)	Double, motorized
Furnace	- IC furnace for use with intracooler - SiC furnace - Steel furnace	- SiC furnace - Steel furnace - IC furnace for use with intracooler - Copper furnace - Water-vapor furnace
Heating/cooling rate	0.001 K/min to 50 K/min	0.001 K/min to 50 K/min
Cooling systems	- Intracooler for IC furnace - Fan for SiC furnace	- Intracooler for IC furnace - Fan for SiC furnace For steel and copper furnace: - Liquid nitrogen cooling - Vortex tube
Atmospheres	Inert, oxidizing, static, dynamic, vacuum, reducing	Inert, oxidizing, static, dynamic, vacuum, reducing
Humid atmospheres*	No	Humidity, water vapor
Hydrogen atmospheres*	Yes	Yes
Gas flow control	3-way switch or 1-/3-/4-way MFC*	1-way MFC or 3-/4-way MFC*
Measurement modes	Expansion, penetration, 3-point bending, tension	
Force and displacement	Simultaneous measurement of force and displacement signal	
Force range (load at the sample)	0.001 N to 3 N without using additional weights	0.001 N to 4 N without using additional weights
Force resolution	< 0.01 mN	< 0.01 mN
Interchangeable sample holder systems	- Fused silica: up to 1100°C - Alumina: up to 1600°C	- Fused silica: up to 1100°C - Alumina: up to 1600°C
Special sample containers	For tests on pastes, powders, liquids, molten metals, molten salts, waxes, immersion	
Coupling*	Yes	Yes

* optional