

Technical Specifications

DMA 303 Eplexor®

Temperature range	-170°C to 800°C
Heating rate	0.01 K/min to 40 K/min
Frequency range	0.001 Hz to 150 Hz
Force range	From 1 mN to 50 N
Maximum controlled amplitude	± 2.5 mm
Static deformation	Up to 30 mm
Cooling device	▪ Liquid nitrogen: -170°C to 800°C ▪ AIC 80 air intracooler: -30°C / -70°C to 800°C; ▪ Compressed air: RT / 15°C to 800°C
Deformation modes	3-point bending, Single / dual cantilever bending, shear, tension, compression/penetration
Measurement modes	Temperature sweep, timesweep, Temperature-frequency sweep, Frequency sweep, Universal test, Creep/Relaxation, Load Sweep, TMA mode (optional)
Optional accessories	Humidity, Immersion bath, UV light, Camera, Dielectric Analyzer (DEA)

Sample Holders for Different Modes

Sample Holder	Sample Dimensions			Applications
Single/Dual Cantilever	Free Bending Length*	Width (max.)	Height (max.)	
Standard	(2×)5 mm (2×)17 mm	13 mm 13 mm	10 mm 10 mm	Thermoplastics, elastomers
3-Point Bending	Free Bending Length*	Width (max.)		
Round-edged	10 mm, 20 mm, 30 mm, 40 mm, 50 mm, 60 mm	13 mm		Fiber-reinforced or highly filled thermoplastics
Tension	Length*	Width	Thickness	
Standard	30 mm	13 mm	5 mm	Films, fibers, thin rubber strips
Reinforced	30 mm	13 mm	5 mm	Samples fixed with two screws, perfect for stiffer material
Compression/ Penetration	Sample Ø (max.)	Probe Ø [mm]	Height (max.)	
Standard	15 mm	1, 3, 15	25 mm	Soft samples; e.g., rubber
Shear	Ø/Width/Height (max.)	Thickness (max.)		
Flat surfaces	15 mm	5 mm		Adhesives, elastomers

* The samples must be greater in length than the free bending and free tension length values listed here.