Technical Specifications

NETZSCH

DIL 402 *Expedis Classic*	
Design	Pushrod dilatometer, single or dual system
Furnaces	▪ Fused silica: RT to 1150°C ▪ SiC: RT to 1600°C (optional furnace for fast cooling)
Heating rates	0.001 … 50 K/min
Cooling systems	Air compressor or connection set (ballistic cooling; only for optional SiC-furnace for fast cooling)
Sample holder systems	Interchangeable, made of fused silica and alumina, in two versions ▪ Single system (one pushrod) ▪ System with two pushrods usable in dual or differential mode ▪ Al_2O_3 tension sample holder*
Sample dimensions	Sample length max.: 52 mm ▪ Ø 12 mm standard (optional Ø 19 mm max.) ▪ Ø 8 mm in dual sample holder system
Automatic sample length determination	Yes
Displacement system	*NanoEye*
Temperature accuracy	1 K
Temperature precision	0.1 K
Temperature resolution	0.001 K
Thermal stability (isothermal)	± 0.02 K
Temperature calibration	▪ Via displacement using metal references ▪ c-*DTA*® (optional, incl. endo/exothermal effects)
Measuring range	± 5000 µm
ΔL Resolution	2 nm (over the entire measuring range)
$\Delta L/L_0$ Repeatability	0.002 %, absolute value
$\Delta L/L_0$ Accuracy	0.003 %, absolute value
Force range (load at the sample)	0.01 N … 3 N (valid for compressive and tensile force depending on the sample holder)
Force resolution	0.001 mN
Gas atmosphere	Inert, oxidizing under static or dynamic conditions
Gas control	1-way, optional 3-way switch
Gas-tight	Yes
Software	Windows 7 32/64 bit Professional®, Windows 7 32/64 bit Enterprise®, Windows 7 32/64 bit Ultimate®, Windows 8.1 Pro® and Enterprise® Windows 10 Pro® and Enterprise®

* Please note, using the tension sample holder has an influence on the noise behavior.

NGB · 0320 · Technical specifications are subject to change.

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