Technical data
TSR 2252 LN

**Environmental simulator
for temperatures**
Standard from -80 to 225 °C
optional from   -80 to 350 °C

The environmental simulator „Temperature Stress Routine – TSR 2252 LN" developed by S-TEC GmbH is used to test the material behaviour of test specimens at different temperatures and temperature courses. The temperature range from -80 to 225 °C is standard, the test range can be extended to 350 °C as an option.

Temperature range		-80 to 225 °C
Temperature range optional	high temperature units	-80 to 350 °C
Temperature transition rate	heating from -75 to 225 °C	ca. 15 s
	cooling from 125 to -55 °C	ca. 8 s
Temperature accuracy	at the injector	± 0,1 °C
	on the test specimen	± 0,1 °C
	temperature adjustability	0,1 °C
	temperature display	0,1 °C
Compressed air quality and supply	clean, dry air (CDA)	filtered with particle contamination of 5 microns
	oil content	< 0,1 ppm; filtered of 0,01 micrometer oil pollution
	dew point	< 0 °C at 6,5 bar
	air supply pressure	6,5 to 8,5 bar
	air supply temperature	20 to 25 °C
	air humidity	0 to 60 %, nominally 45 %
Volume flow	at the exit	2 to 10 l/s continuously
	standby	0 to 2 l/s
Control voltage		24 VDC
Electrical connection		16 A 400 V 3 L/N/PE
Mains connection		TN-C-S-System
Connecting lead		5 x 2,5 mm²
Connected load		5 kVA
Interfaces		GPIB 488.2; RS232; USB; TCP
Noise level	maximal	53 dB

Accessories	Standard	Option	Remark
Thermal cap	■	■	3 different sizes of thermal cap
Thermal cap 3,5"	■		standard is a bell in the size 3,5" or 4,5" delivered, with simple locking mechanism
Thermal cap 4,5"	■		
Thermal cap 5,5"		■	for larger test setups
Test chamber		■	in rectangular box form, instead of a thermal cap
K and T temperature probe for DUT mode	■		for external temperature measurement, supplied calibrated
Hose extension		■	freely configurable
Heating element		■	for defrosting refrigeration compressors
Mobile panel		■	Siemens TP177/277

Test conditions

For the DUT mode ("Device under test") external thermocouples of the K-type and T-type are directly connected at the head. Furthermore, purge air can be selected to thermal cap to prevent misting of the visible area during cooling. An external purge air connection on the thermal head prevents the carrier boards from freezing up in the test area at temperatures below 0 °C.
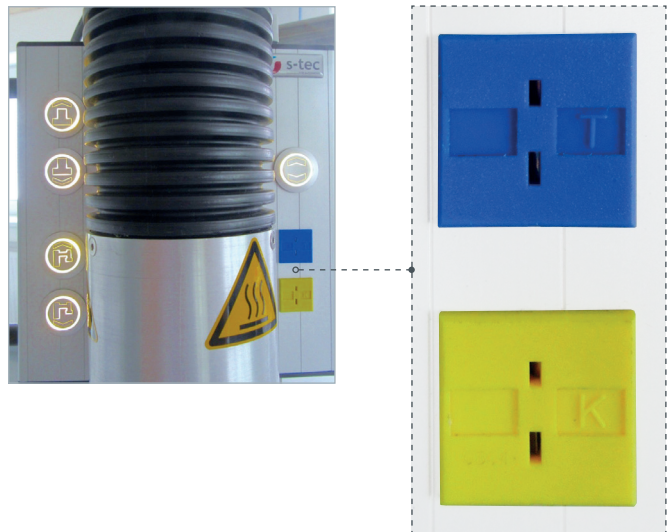
HAND operating mode

- for setting up the test area
- for the single test with only one or a few data sets

AUTOMATIC operating mode

In automatic mode, life tests are performed on the basis of maximum 10 data sets and a maximum of 999 repetition cycles performed:
- Nozzle mode – Temperature control via internal Nozzle temperature measurement
- DUT mode – Temperature control via external Temperature sensors (K and T types)

Remote control via GPIB

- Tests via an external PC via the GPIB interface with the data records stored in the PC