Thermal Conductivity Test Tool

λ-Meter EP500*e*

NEW!

Guarded Hot Plate Apparatus
specially designed for testing thermal insulation and construction materials in accordance with

- ISO 8302
- ASTM C177
- EN 1946-2
- EN 12664
- EN 12667
- EN 12939
- DIN 52612

Lambda-Meßtechnik GmbH Dresden

Comprehensive Measurement Solutions

Automated **λ-Meter EP500***e*

PC-Workstation with *EP500-Control Program*

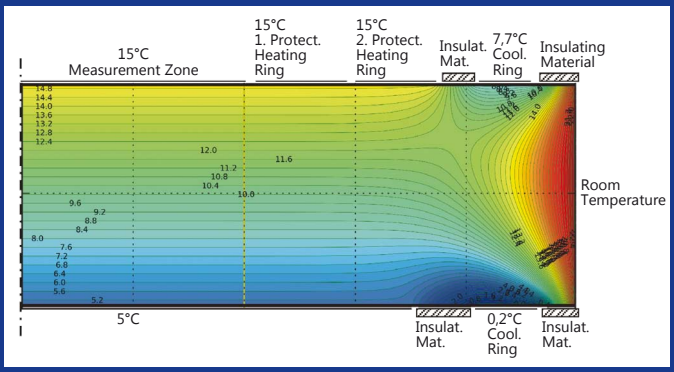
Different kind of Construction and Insulation Materials

Thermal Conductivity Test Tool λ-Meter EP500*e*

- guarded hot plate apparatus (GHP), stationary direct measurement of thermal conductivity without calibration samples:

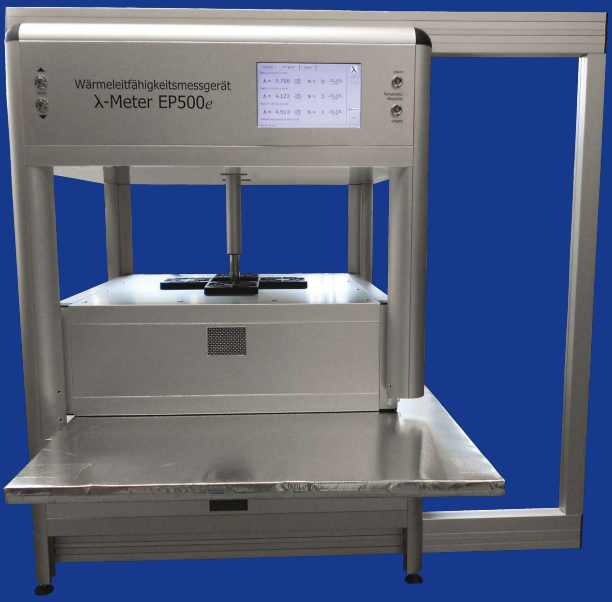
$$\lambda = \frac{\dot{Q} \cdot d}{\Delta T \cdot A}$$

- intelligent temperature field within the inserted sample:



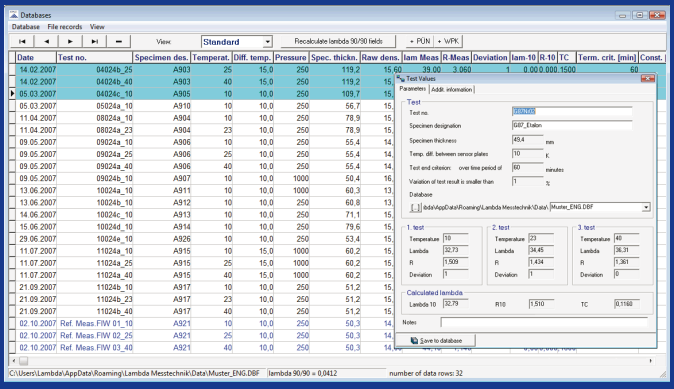
→ no measurement chamber necessary, open device
→ can be easily automated
→ prepared for large samples

- nevertheless compact size and weight → desktop device
- modern technology and electronics
- large measurement ranges within one device:
  - Rth = 0.025 ... 14 m^2K/W
    → λ = ca. 0.002 ... 3 W/(m•K)
  - adjustable measurement temperatures
    -10 ... 50°C, in 1 K steps
  - thickness = <10 ... 200 mm
- high resolutions:
  - temperature: < 1 mK
  - thickness: <0.01 mm
- high precision and accuracy: < 1.0 % (mostly < 0.7 %)
- high reproducibility: < 0.5 % (mostly <0.2 %)
- measurements at pre-defined pressure (50 ... 2500 Pa) or at pre-defined nominal thickness
- sample dimensions:
  - 500 x 500 mm^2 or smaller
  - measurement zone size at minimum
  - one side can be longer
  - with several VIP construction options
    also 800/1250 x *{arbitrary}* mm^2

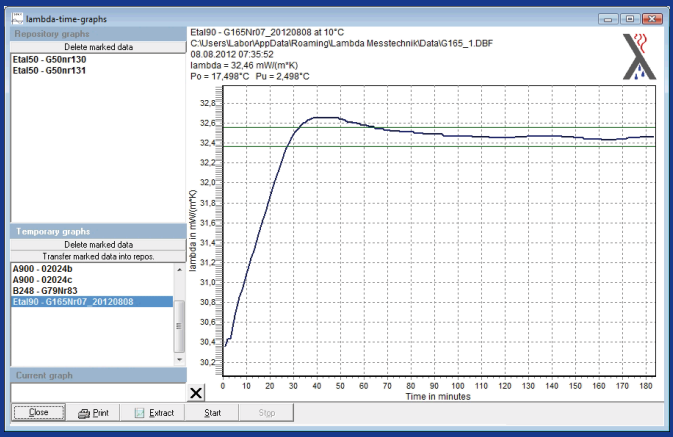


(construction variant for VIP with width of 800 mm)

- air cooled (no water installation required)
- very quiet (< 50 dB)
- only 230 VAC power supply necessary
- RS232 or Bluetooth interface (cordless!) to Test-PC
- many possibilities for test end signalling
  - accoustically or with flash lamp
  - via Notify in PC-networks
  - via SMS to mobile phones
- very completed PC-software, fulfills also all accordance with international standards for thermal conductivity measurements, including database functionality and detailed test reports



(powerful data management and evaluation tools)



(recorded lambda-time-graph for each measurement)

Test report

Test report acc. EN 12667 paragraph 9

Date	19.05.2007
Report no.	A900-02024b
Test owner	Lambda-Meßtechnik GmbH Dresden
Test tool	Single-Specimen Conductivity Meter 'lambda-Meter EP500' acc. to EN 1946-2 by Lambda-Messtechnik GmbH Dresden
Test arrangement	Sensor plates horizontal, hot plate on top normal inserted
Standards	Thickness measurement acc. to EN 823 Thermal conductivity measurement acc. to ISO 8302 and EN 12667
Tester	Mr. Smith

Specimen designation	A900	**Specimen dimension**	
Origin of specimen	German manufacturer	**Area**	25 dm²
Date of manufact.	05.06.2006	**Thickness**	49,6 mm
Material name	PS 15 SE according to EN13163	**Nominal thickness**	50 mm
Material description	Polystyrol particle foam of high density	**Specimen mass**	506 g
		Raw density	40,8 kg/m³

Spec. pre-conditioning		
Change in mass during:		
drying	0,0	%
test	0,0	%
Humidity before test	0,0	%
Pressure	1000	Pa

A900 - 02024b at 10°C
C:\Users\Lambda\AppData\Roaming\Lambda Messtechnik\Data\Muster_ENG.DBF
19.05.2007 10:28:45
Po = 17,498°C Pu = 2,500°C
lambda = 32,68 mW/(m*K)

lambda [mW/(m*K)]
t [min]

1. Test

Test no.	02024b_10
Meas.temp. in °C	10
Diff.temp. in K	15
Lambda in mW/m*K	32,69
R in m²K/W	1,517

Lambda-10	32,690	mW/(m*K)
R-10	1,520	m²K/W
TC	0	mW/(m*K²)

(Multi-Language Test Reports according to European Standards)

- the best technical support via intelligent firmware and PC-software, so called "Error Analysis Report": very quick, easy, comprehensible - free of charge also after 10 years or more
- except cleaning all air filters in periodical times, there are absolutely no maintenance works on the test tool necessary

As you can recognize, our

Thermal Conductivity Test Tool λ-Meter EP500*e*

maybe exceed your requirements! Please feel free to contact us to inquire detailed quotations or if you have technical or commercial questions.

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