Thermal Conductivity Test Tool X-Meter EP500e



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

Comprehensive Measurement Solutions

Different kind of Construction and Insulation Materials 120-6-946997

6W 246 118326 9 130

Automated **λ-Meter EP500***e*

PC-Workstation with EP500-Control Program

Wärmeleitfähigkeitsmessgerät A-Meter EP500e

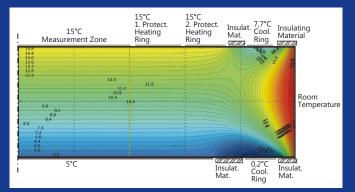
207-2-991516

Thermal Conductivity Test Tool λ-Meter EP500e

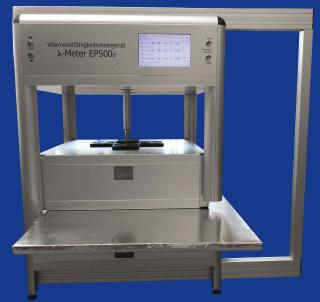
 guarded hot plate apparatus (GHP), stationary direct measurement of thermal conductivity without calibration samples:

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

intelligent temperature field within the inserted sample:



- \rightarrow no measurement chamber necessary, open device
- \rightarrow can be easily automated
- \rightarrow 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 m²K/W
 - $\rightarrow \lambda$ = 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 mm² or smaller
 - measurement zone size at minimum
 - one side can be longer
 - with several VIP construction options also 800/1250 x {arbitrary} mm²

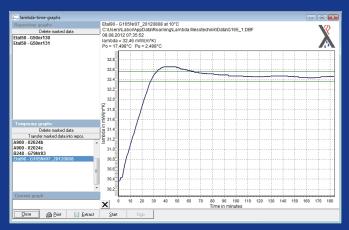


(construction variant for VIP with width of 800 mm)

- 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

Databases O C C												
		View	Standard		Bacalo	ulate lambda 90/9	0.644	+ PÜN + WPK				
				_								
Date								s. Iam Meas R-Meas Deviation Iam-10 R-10 TC Term. crit. [min] Const.				
14.02.2007			25	15,0		119,2	15,6	50 39.00 3.060 1 0.00.000.1500 60				
14.02.2007			40	15,0	250	119,2	10,	Parameters Addlt information				
• 05.03.2007			10	10,0	250	109,7	15,	Test				
05.03.200			10	10,0		56,7	15.	Test no. Test no.				
11.04.200			10	10,0		78,9	15,	Specimen designation GB7_Etalon				
11.04.2007			23	10,0		78,9	15,					
09.05.2007			10	10,0		55,4	14,					
09.05.2007			25	10,0		55,4	14,	Temp. dit. between sensor plates 10 K				
09.05.2007			40	10,0		55,4	14,	Test end caterion: over time period of 60 minutes				
09.05.2007			10	10,0		50,4	16,	Variation of test result is smaller than 1 3				
13.06.2007			10	10,0		60,3	13,	Database				
13.06.2007			10	10,0		60,8	13,	[] 8dal/4ppDatal/Roaming/Lambda Messtechnik/Data/ Muster_ENG.DBF				
14.06.200			10	10,0		71,1	15,					
15.06.200			10	10,0		79,6	15,	1. test 3. test				
29.06.200			10	10,0		53,4	15,	Temperature 10 Temperature 23 Temperature 40				
11.07.200			10	15,0		60,2	15,	Lambda 22,73 Lambda 34,45 Lambda 26,31				
11.07.200			25	15,0		60,2	15,	R 1,509 R 1,434 R 1,361				
11.07.200			40	15,0		60,2	15,	Deviation 1 Deviation 0				
21.09.200			10	10,0		51,2	15,	Calculated lambda				
21.09.200			23	10,0		51,2	15,	Lambda 10 22,79 B10 1,510 TC 0,1160				
21.09.200			40	10,0		51,2	15,					
	7 Ref. Meas.FIW 01_10		10	10,0		50,3	14,	Notes				
	7 Ref. Meas.FIW 02_25		25	10,0		50,3	14,	Sove to database				
	7 Ref. Meas.FIW 03_40	A921	40	10,0	250	50,3	14,6	antial staat and assales and assales				
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(powerful data management and evaluation tools)



(recorded lambda-time-graph for each measurement)

	Test report		18							
	Test report acc. EN 12667 paragraph 9									
Date	19.05.2007									
Report no.	A900-02024b	A900-02024b								
lest owner		Lambda-Meßtechnik GmbH Dresden Single-Specimen Conductivity Meter 'lambda-Meter EP500' acc. to EN 1946-2								
Fest tool			to EN 1946-2							
Fest arrangement		by Lambda-Messlechnik ChmHP Dresden Sensor plates hortsmänk, hot plate on top normal inserted Thickness measurement acc. to ISO 8307 Thermal conductivity measurement acc. to ISO 8302 and EN 12867 Mr. Smith								
Standards	Thermal conductivity measurem									
Tester	Mr. Smith									
Specimen designation	A900									
Origin of specimen Date of manufact.	German manufacturer 05.06.2006	Area Thickness	25 dm² 49.6 mm							
Date of manufact. Material name	05.06.2006 PS 15 SE according to EN13163		49,6 mm 50 mm							
Material description	Polystyrol particle foam of high d		506 g 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									
A000 - 02224b at 10°C C Waret & ambdwep bata Webani 19 05 2007 10:28:45 Po = 17.48°C Pu = 2.50°C Iambda = 32.85 mWk(mK) 33.4 U 33.4 U 3	ngiLambda MesstechnikiDataWuster_	ENG.DBF								
228										
a 32.0										
2 32.4										
9 32,2										
32,0	2 14 16 18 20 22 24 26 28 t[min]	30 32 34 36 38 40 42	44 46 48 50							
0 2 4 6 8 10 1										
0 2 4 6 8 10 1. 1. Test										
0 2 4 6 8 10 1. 1. Test Test no. 02024b_10 Meas.temp. in *C 10										
0 2 4 6 8 10 1: 1. Test Test no. 02024b_10 Meas.temp. in *C 10 0)ff.temp. in K 15 ambda in mW/m*K 32.69	Contract.									
0 2 4 6 8 10 1: 1. Test Test no. 02024b_10 Meas.temp. in *C 10 Diff.temp. in Wim*K 32.69	Lambda-10 32/	590 mWK(m*K)								
0 2 4 6 8 10 1: 1. Test Test no. 02024b_10 Meas.temp. in *C 10 Diff.temp. in Wim*K 32.69		590 mWi(m*K) 520 mWi(m*K*) 0 mWi(m*K*) 0 2008 Lantes								

(Multi-Language Test Reports according to European Standards)

- the best technical support via intelligent firmware and PCsoftware, 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 EP500e

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



Lambda-Meßtechnik GmbH Dresden Zellescher Weg 24 D-01217 Dresden GERMANY T: +49 (0) 351 / 647 55 35 F: +49 (0) 351 / 647 55 36 ⊠ lambda@online.de ⊠ support@lambda-messtechnik.de ■ www.lambda-messtechnik.de