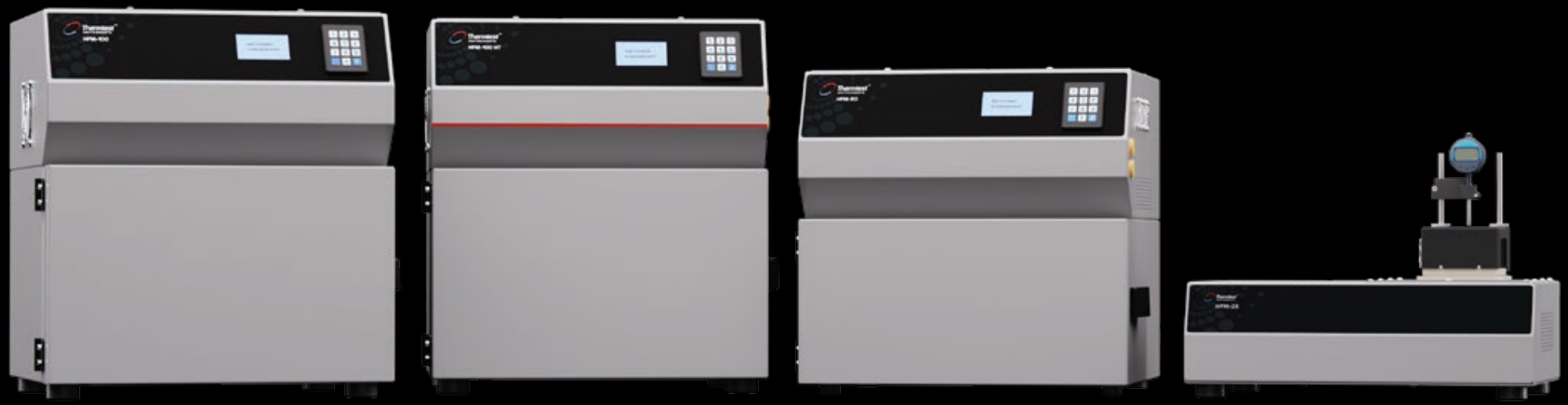
HFM Series

Thermal conductivity meters for insulation and construction materials.
ASTM C518, ASTM C1784, ISO 8301, JIS A1412, EN 12667, and EN 12664.



HFM-100 | HFM-100 HT | HFM-50 | HFM-25

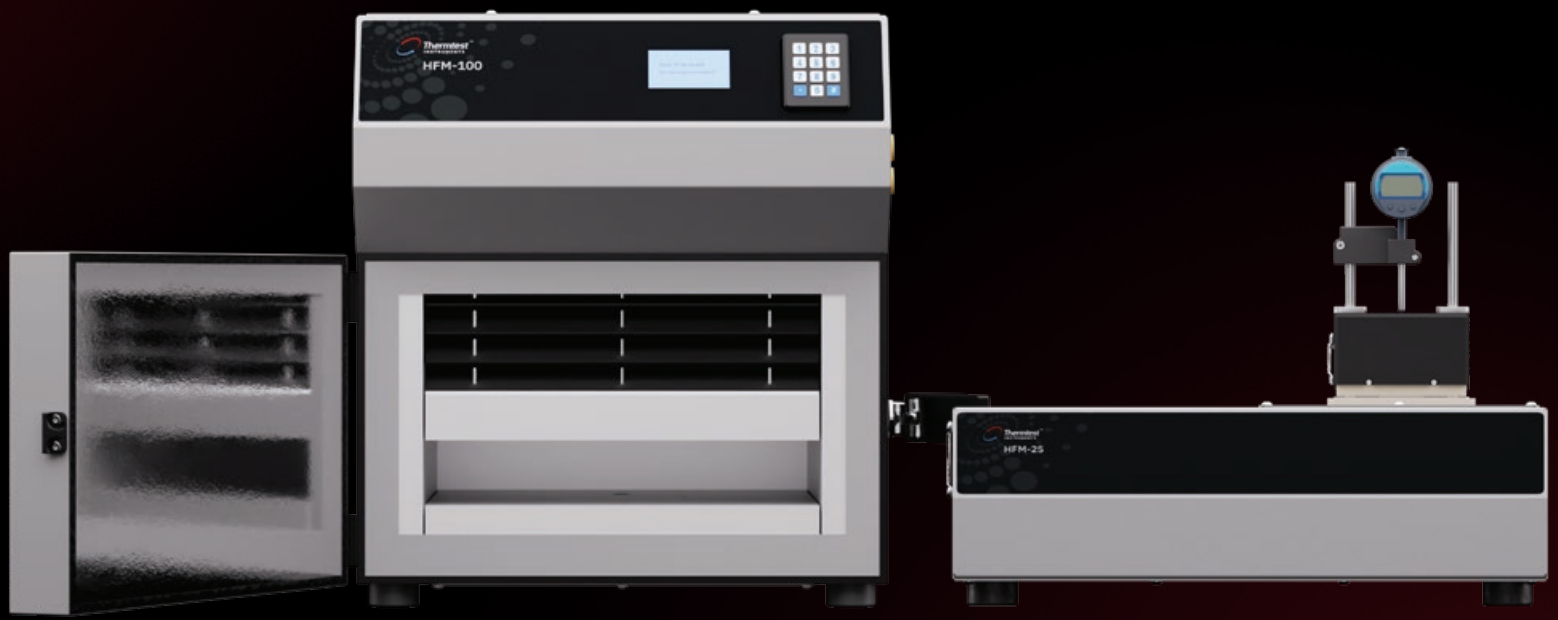
Thermtest™ INSTRUMENTS

Thermtest.com

METHOD

The Heat Flow Meter is an easy-to-use technique for measuring the thermal resistance and thermal conductivity of insulation products, construction materials, packaging, and assemblies. Our HFM series was designed and engineered to combine the highest accuracy, repeatability, widest temperature range, and industry leading performance all at an exceptional value.

The second-generation HFM Series meets rigorous international standards such as ASTM C518, ASTM C1784, ISO 8301, JIS A1412, EN 12667, and EN 12664.



FEATURES

Thickness Measurement*

Features the advantage of an automatic determination of sample thickness for rigid materials, or a user defined sample thickness for compressible materials. Sample thickness is measured using digital optical encoder technology to resolve any plate misalignment.

Clamping Control**

For rigid materials, plates automatically clamp together for optimum contact between the sample and heat flux sensors.

For compressible materials, the desired height of the sample may be entered manually and the plate will automatically stop at the entered sample height.

Temperature Control

Thermoelectric Peltier elements heat and cool the HFM testing plates. A thermoelectric element is a solid-state, active heat pump which transfers heat from one side of the device to the other, with consumption of electrical energy, depending on the direction of the current.

This flexibility allows the user to change heating and cooling direction to best match their application.

*HFM-25 (only) used digital distance gauge for thickness measurement.

**HFM-25 (only) manual operation of clamping control.

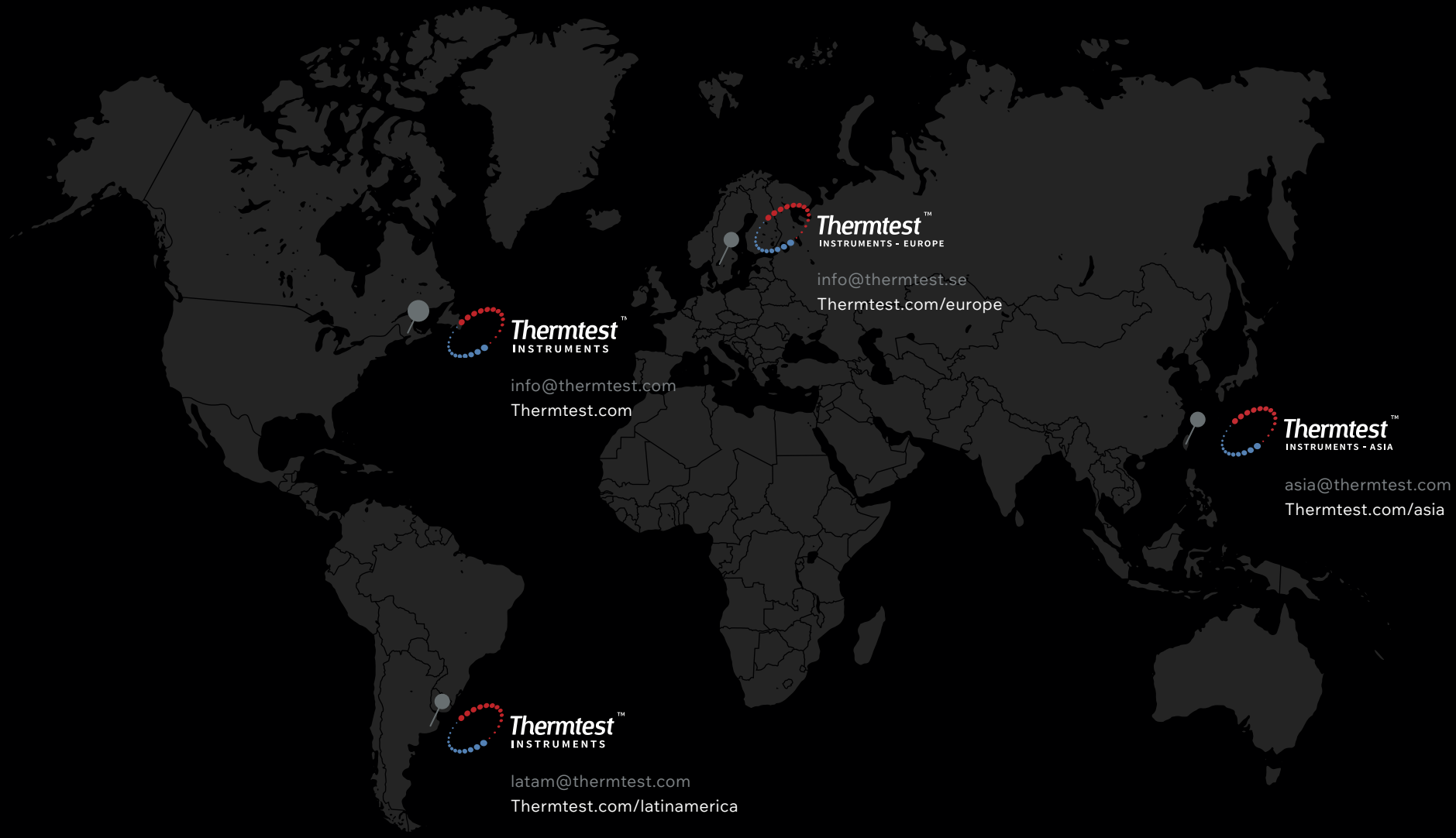
SPECIFICATIONS

Following international standards, the HFM Series is designed for testing both homogeneous and heterogeneous materials of a range of sample dimensions.

Methods	HFM-100	HFM-100 HT	HFM-50	HFM-25
Materials	Insulation, solids, and textiles	Insulation, solids, and textiles	Insulation, solids, and textiles	Insulation, solids, and textiles
Type of sensors	Flux sensors (x2)	Flux sensors (x2)	Flux sensors (x2)	Flux sensors (x2)
Thermal conductivity (W/m•K)	0.002 to 0.5	0.002 to 0.5	0.002 to 0.5	0.01 to 0.3
Specific heat	Optional	Optional	Optional	N/A
High thermal conductivity kit (W/m•K)	Optional (up to 2.5)	Optional (up to 2.5)	Optional (up to 2.5)	N/A
Sample size (mm)	300 x 300 x up to 100	300 x 300 x up to 100	200 x 200 x up to 50	Up to 300 x 300 x 25
Test time (minutes)	30 to 40	30 to 40	30 to 40	20
Accuracy (Thermal conductivity) *	1 to 2%	1 to 2%	1 to 2%	3%
Repeatability (Thermal conductivity)	0.5 to 1%	0.5 to 1%	0.5 to 1%	1%
Plate temperature range (°C)	-20 to 75**	-30 to 110	-20 to 70**	10 to 75
Factory calibrated	Yes	Yes	Yes	Yes
Standard	ASTM C518, ASTM C1784, ISO 8301, JIS A1412, EN 12667, and EN 12664	ASTM C518, ASTM C1784, ISO 8301, JIS A1412, EN 12667, and EN 12664	ASTM C518, ASTM C1784, ISO 8301, JIS A1412, EN 12667, and EN 12664	ASTM C518, ASTM C1784, ISO 8301, JIS A1412, and EN 12667

*Performance verified with NIST 1435d / 1450e

**Chilled circulator required



Headquarters

Thermtest Inc.
Fredericton, NB Canada
+1 (506) 458-5350
info@thermtest.com | Thermtest.com

RIFERIMENTO PER L'ITALIA

Qi technologies

Qi srl
t +39 06 9105461
www.qitech.it | sales@qitech.it