



Thermo Scientific Piko Thermal Cyclers

Half the size

Twice the speed

Top performance

Thermo Scientific Piko Thermal Cyclers

deliver high performance in a compact package. Although merely half the size of other instruments, the Piko[®] Thermal Cycler meets the highest criteria in performance and is able to complete a PCR protocol in less than 15 minutes. This is achieved using novel technical advances that allow significant reduction in PCR run times and overall size of the instrument. The Piko Thermal Cycler is an ideal solution for both conventional and fast PCR applications. Due to its small size and low power consumption, the Piko Thermal Cycler is also conveniently portable for field use.

Thermo Scientific Piko Thermal Cyclers offer you

- **Best-in-class thermal performance** Consistent results from well-to-well due to extremely short settling times and high temperature uniformity across the block.
- **Time savings** PCR in as little as 15 minutes enabled by fast ramp rates and quick settling times.
- **Reagent savings** Repeatable yields from as little as 5 µL when using UTW vessels and heat sealers.
- **Space savings** The smallest footprint available - fits into a tiny bench space.
- **Energy saving** Short protocols and low wattage requires only ¼ the power consumption of typical thermal cyclers.
- **Repeatable sealing to prevent sample evaporation** Automatic heated lid provides consistent and tight sealing from run-to-run.

Two formats: 24- and 96-well blocks

Piko Thermal Cyclers are available in two different block configurations: 24-well and 96-well. 24-well cyclers accept all standard low profile single tubes, and 8-tube strips with flat caps as well as 24-well Piko PCR Plates. The 96-well instrument utilizes 96-well Piko PCR Plates, which are only ¼ the size of a conventional microplate. Despite the small size, all Piko PCR Plates maintain industry standard well spacing and sample capacity. The 24-well and 96-well Piko PCR Plates are compatible with standard Thermo Scientific multichannel pipettes, Multidrop[®] reagent dispensers and the Versette automated liquid handling system.

Green PCR

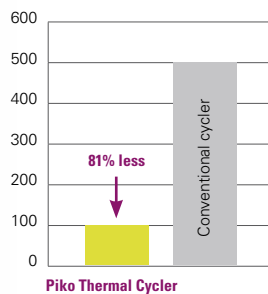
Reduced consumption – Enhanced performance

Green
PCR

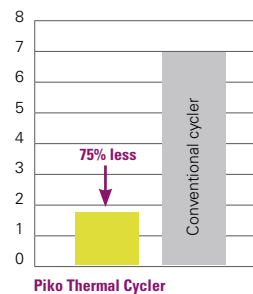
The unique design of the heating block and small plate format allow significant savings both in energy and plastics consumption. This helps reduce the environmental impact of your PCR.



A. Total energy consumption (KWh/Y)
running power + idle power



B. Plastic consumption (kg/y)

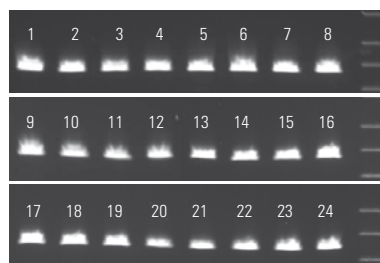


Significant savings in energy and plastics consumption. A) Total estimated annual energy consumption of the 96-well Piko Thermal Cycler vs. conventional 96-well cycler. B) Estimated annual plastics consumption using 96-well Piko PCR Plates vs. conventional 96-well microplates. Both calculations are based on 400 PCR runs per year.

High yields and uniform results in less than 15 minutes

The best-in-class thermal performance of Piko Thermal Cyclers means significant reduction of incubation times in most PCR protocols. This is due to the fast ramp rates, near-perfect temperature uniformity and incredibly short block settling time. It only takes 1 second for all the samples to reach temperature equilibrium.

A 400 bp amplicon from lambda DNA was amplified with an ultra-fast PCR protocol on a 24-well Piko Thermal Cycler using UTW reaction vessels and Phusion Flash High-Fidelity PCR Master Mix. 5 µl aliquots of each 15 µl reaction were run on an agarose gel. The following PCR protocol was used: 25 cycles of [98°C for 0 sec, 72°C for 0 sec], 72°C for 10 sec. Total cycling time was about 10 min.



Accessories separately available

Thermo Scientific Piko PCR Plates

Thermo Scientific Piko PCR Plates guarantee reliable results with routine and ultra-quick PCR protocols. The vessel walls are half the thickness of conventional thin-walled tubes. This improves thermal transfer between the heating block and sample allowing shorter incubation times without compromising the consistency of results. Plate frames are available to assemble Piko PCR Plates into standard SBS format plate size.



Thermo Scientific Piko Plate Illuminator - Simplify sample loading

Thermo Scientific Piko Plate Illuminator is a state-of-the-art plate rack that provides a simple way to track the loading of reactants by illuminating the target well(s) from below with white LED lights.



Thermo Scientific Piko Microcentrifuge

Thermo Scientific Piko Microcentrifuge is a compact centrifuge for spinning down samples. It is compatible with all 0.2 ml tubes, 8-tube strips and Piko PCR Plates. The Piko Microcentrifuge has two interchangeable rotors.



Piko Studio software

Piko Studio is a full-featured PC software that allows you to control the Piko Thermal Cycler remotely, backup, edit and transfer protocols.

Improved performance with high-quality Thermo Scientific PCR enzymes!

To achieve the shortest PCR protocols with your Piko Thermal Cycler, combine it with **Thermo Scientific Phusion** or **Phire DNA Polymerases**. These robust PCR enzymes deliver high yields with minimal optimization. Phusion® High-Fidelity DNA Polymerases can be used in all DNA amplifications, Phire® Hot Start II DNA Polymerase is ideal for routine PCR and high-throughput applications. For more information, please visit www.thermoscientific.com/pikoreagents.

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Finnzymes products are now sold under the Thermo Scientific brand.

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Technical specifications	
Piko Thermal Cycler	
Size	Width 16 cm, depth 17 cm, height 23 cm
Weight	4 kg (with external power supply)
Power requirements	100–240 V input power
Block configurations	24-well (well volume 0.225 ml, sample volume max 50 µl) and 96-well (well volume 0.05 ml, sample volume max 20 µl)
Max ramp rate	> 5°C heating and > 4.5°C cooling
Typical thermal uniformity	+/- 0.3°C within 5 s of clock start at 95°C
Thermal accuracy	+/- 0.2°C
Settling times:	Achieve thermal specifications within 1 s of start of clock
Thermal range	0°C - 99.9°C
User interface	Semi-graphical and list mode programming
Number of programs	Over 1000
Heated lid	Fully-automated and motorized function
Warranty	2 years parts and labor

Ordering information		
Product number	Description	Quantity
Piko Thermal Cyclers		
TCP0024	Piko Thermal Cycler, 24-well	1
TCP0096	Piko Thermal Cycler, 96-well	1
Piko Studio		
PST0001	1 user	
PST0005	up to 5 users	
PST0010	up to 10 users	
Piko Plate Illuminator		
PIP2496	Piko Plate Illuminator	1
Piko Microcentrifuges		
MCP0010	Piko Microcentrifuge with 2 rotors (US 110V)	1
MCP0011	Piko Microcentrifuge with 2 rotors (UK, 230V)	1
MCP0012	Piko Microcentrifuge with 2 rotors (EU, 230V)	1
Piko PCR Plates and Frames		
SPL0240	24-well Piko PCR Plate, clear	200 plates
SPL0960	96-well Piko PCR Plate, clear	200 plates
SFR0241	Plate Frame for 24-well Piko PCR, white. Holds 4 plates.	50 frames
SFR0961	Plate Frame for 96-well Piko PCR, white. Holds 4 plates.	50 frames
UTW® PCR tubes with flat caps		
TUC0080*	UTW® 8-tube strip with attached, flat optical caps, clear	120 strips
TUC0010	UTW® individual tube with attached, flat optical cap, clear	960 tubes
Sealers		
HSF0021	Heat sealing film, opaque, Piko size	400 sheets
ASF0020	Optical adhesive film, cryo-storage compatible, Piko size	400 sheets
TCS1080	Flat 8-cap strips, optical	120 strips

* not available in the U.S. and other markets. Check with your representative for availability.

PCR vessels and frames are available in several colors. Complete list of products and a compatibility chart are available at www.thermoscientific.com/pikoplastics.

Purchase of this instrument conveys a limited, non-transferable immunity from suit for the purchaser's own internal research and development and applied fields other than human in vitro diagnostics only under Canadian Patent 1,339,653, U.S. Patent 5,475,610 (claims 160-163 only) and non-U.S. counterpart claims as applicable.

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www.thermoscientific.com/piko

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