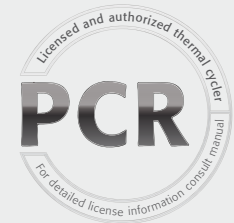


SpeedCycler²

Ultra high-performance thermal cycler

- *rapid*PCR in less than 8 minutes
- Standard-Profile-Rapid (SPR) systems for 0.2 mL standard consumables
- Small footprint satellite system, expendable to full cycler networks



SpeedCycler²

Ultra high performance thermal cycler



Ultra high-performance thermal cycler

With the SpeedCycler², Analytik Jena has launched the second generation of the original SpeedCycler technology with an instrument even faster than its predecessor and delivering extraordinary high heating and cooling rates of up to 15 °C/sec and 10 °C/sec, respectively. That makes the SpeedCycler² the fastest available thermal cycler in the world.

A smaller footprint, the modular design, the external control panel and, last but not least, ultra high-performance distinguishes the SpeedCycler² from other available instruments. The system is ideal either as space-saving single thermal cycler or as a modular system expandable to full cycler networks.

The SpeedCycler² may be controlled via PC or via the external controlling unit HID-Pro 320. This option gives you opportunity to use the SpeedCycler² as stand-alone device or else to integrate the cycler into a bigger network controlled by one particular controlling unit.

The SpeedCycler² is available in three different versions, comprising Low-Profile-Rapid-, Standard-Profile-Rapid- and Standard format. This means that standard PCR consumables can be used as well as low-profile PCR consumables

The LPR format, in particular, has been optimized for low sample consumption and maximizes performance. Sample loss and condensation are effectively prevented by the enormously high lid contact pressure, even for volumes as small as 2 µL.

Low-Profile-Rapid (LPR) systems use specially patented, ultra-thinwalled microplates or strips based on the SBS standard format, which contributes greater thermal efficiency than ever before.

SAC (Self-Adapting Container) technology allows the thermo-elastic walls of the sample containers to adapt to the shape of the sample block like a second skin, thus, ensuring *rapid* heat transfer into the samples and achieving unsurpassed thermal

Features

- *rapid*PCR in less than 8 minutes
- Heating and cooling rates of up to 15 °C/sec and 10 °C/sec, respectively
- SAC (Self-Adapting-Container) technology delivers outstanding heat transfer
- Low-Profile-Rapid (LPR) systems for 20 µL
- Standard-Profile-Rapid (SPR) systems for 0.2 mL standard consumables
- Optimized for low reagent consumption and reduced running costs
- Small footprint satellite system, expendable to full cycler networks
- Thermal blocks made of massive sterling silver with a gold layer
- Portable user-interface HID-Pro 320
- Reduced primer mismatching

efficiency of over 90 percent. *rapid*PCR is the only technology suitable for applications using what are known as “touch and go” protocols. A whole experiment can be carried out in less than 8 minutes.

The SpeedCycler² has been optimized for very small sample consumption and for the use of inexpensive standard PCR reagents. Costly and often limiting chemical additives can be consciously avoided and are not necessary for *rapid*PCR amplification. Furthermore, the higher cooling rate significantly improves specificity of the PCR products compared to those from standard thermal cyclers.

External user-interface HID-Pro 320

The new portable HID-Pro 320 user interface eliminates the need for a PC and makes the system exceptionally easy to operate. Its extra large 5.7" color touchscreen eliminates the need for a keyboard or mouse.



SpeedCycler² without HID-Pro 320



User-friendly and versatile control panel HID-Pro 320 with 5.7" touchscreen



The software, which is based on Windows CE, offers typical Windows functions and operating environment, as well as an intuitive menu bar. Programs can be stored individually and organized in userdefined directories. An USB and LAN port allows users to exchange programs to other cyclers, export data from executed PCR runs, and connect the cycler directly to other basic units.

Users can easily change the operating language by clicking a button. The HID-Pro 320 is also compatible with other instruments from Analytik Jena, such as the ScanDrop® microliter spectrophotometer.

The built-in power failure function restarts the cycler automatically. The software restarts with the denaturing step of the last active cycle to eliminate any possible unspecific annealing.

Features

- Software based on Windows CE
- USB and LAN port for uncomplicated data exchange
- Power failure function
- Multilingual software (English, German, Greek, Russian and Spanish; others to come)
- Reduced primer mismatching

SpeedCycler² 96 LPR

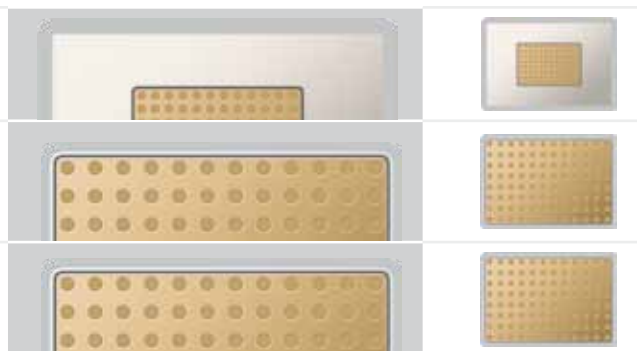
For 96 × 20 µL Microplate LP or 8 well Strips LP
HR 15°C/sec; CR 10°C/sec

SpeedCycler² 96 SPR

For 96 × 0.2 ml standard tubes, 8 well strips or PCR plates
HR 8°C/sec; CR 6°C/sec

SpeedCycler² 96 SP

For 96 × 0.2 ml standard tubes, 8 well strips or PCR plates
HR 5.5°C/sec; CR 4°C/sec



▲ Schematic drawing of thermal blocks

Technical data

Sample capacity		
SpeedCycler ² 96LPR	▪	96 x 20 µl
SpeedCycler ² 96SPR	▪	96 x 0.2 ml
SpeedCycler ² 96SP	▪	96 x 0.2 ml
Heating and cooling rates		
SpeedCycler ² 96LPR	Heating rate	15 °C/sec max.
	Cooling rate	10 °C/sec max.
SpeedCycler ² 96SPR	Heating rate	8 °C/sec max.
	Cooling rate	6 °C/sec max.
SpeedCycler ² 96SP	Heating rate	5.5 °C/sec
	Cooling rate	4 °C/sec
General Data		
Temperature control mode	▪	Block Control (Simulated) Tube Control
Sample block temperature range		4 °C – 105 °C
Control accuracy		< ± 0.2 °C at 72 °C
Block homogeneity		< ± 0.3 °C at 72 °C
Lid	▪	Can be heated up to 120 °C Adjustable contact pressure
User interface	▪	PC via included software Alternative via HID-Pro 320
Number of programs		Nearly unlimited; 500 on HID-Pro 320
Other technical data		
Dimensions (W x H x D)		280 × 290 × 250 mm
Weight		12 kg
Power supply		100–240 V ± 15 % (47–63 Hz)
Power consumption		800 W
Warranty		
Basic unit		2 years
Thermal blocks		2 years
Remarks		Licensed and authorized thermal cycler

PC Disclaimer for ThermoCycler
 limited non-transferable immunity from suit for the purchaser's own internal research and development and applied fields other than human in vitro diagnostics under one or more of US Patents Nos. 5,038,852; 5,656,493; 5,475,610; and 6,703,236, or corresponding claims in their non-US counterparts, owned by Applied Biosystems Corporation. No right is conveyed expressly, by implication or by estoppel under any patent claim, reagents, kits, or methods such as 5' nuclease methods, or under any other apparatus or system claim, including but not limited to US Patent No. 6,574,324 and its non-US counterparts, where disease and claim terms describe and claim terms specify capable of real time detection.