

Labcycler

The SensoQuest team has been developing and making thermocyclers since 1990. SensoQuest launched a new generation of thermocyclers in 2005. Since this time more and more customers are working world wide with the Labcycler.

The Labcycler features are a truly intuitive user interface with a coloured touchscreen, a nice design and solid construction. All that comes with a unique block changing system, giving full flexibility for present and future applications. A choice of three **gold plated silver blocks** was designed for high speed, yet low energy consumption and good temperature uniformity. These are complemented by the Triple Block, which lets you run three independent processes on one machine.

Sustainability and good value were prime considerations. The peltier elements were tested to **600,000 cycles without any failures**, giving at least 20 years of lifetime even under the harshest conditions. The silver blocks are electroformed for lowest heat capacity and best heat conductance. This allows high speed with a maximum power of only 350 Watts. The average during a typical run is less than 150 Watts. The result is good performance with **low energy consumption**, low carbon dioxide footprint, less heat in the lab and, last but not least, less noise from the cooling fans.

Precision is further enhanced by a **6-zone temperature regulation** that corrects for any differences between the 6 peltier elements. Each block has its own processor with a continuously self-calibrating temperature measuring circuitry. Indefinite cooling at 4 °C is of course possible, the blocks even go down to minus 5 °C.

Although the user interface is quite self-explanatory, a context sensitive online help function further assists you, making the manual a rarely used item.

Programs can be copied between two Labcyclers via a cable, making it easy to keep several of them "in line". The password administration allows saving programs and folders up to 64 users.

Of course, there is an **automatic restart** after a failure of the power line. The program will continue with the last denaturation step to prevent false annealing.

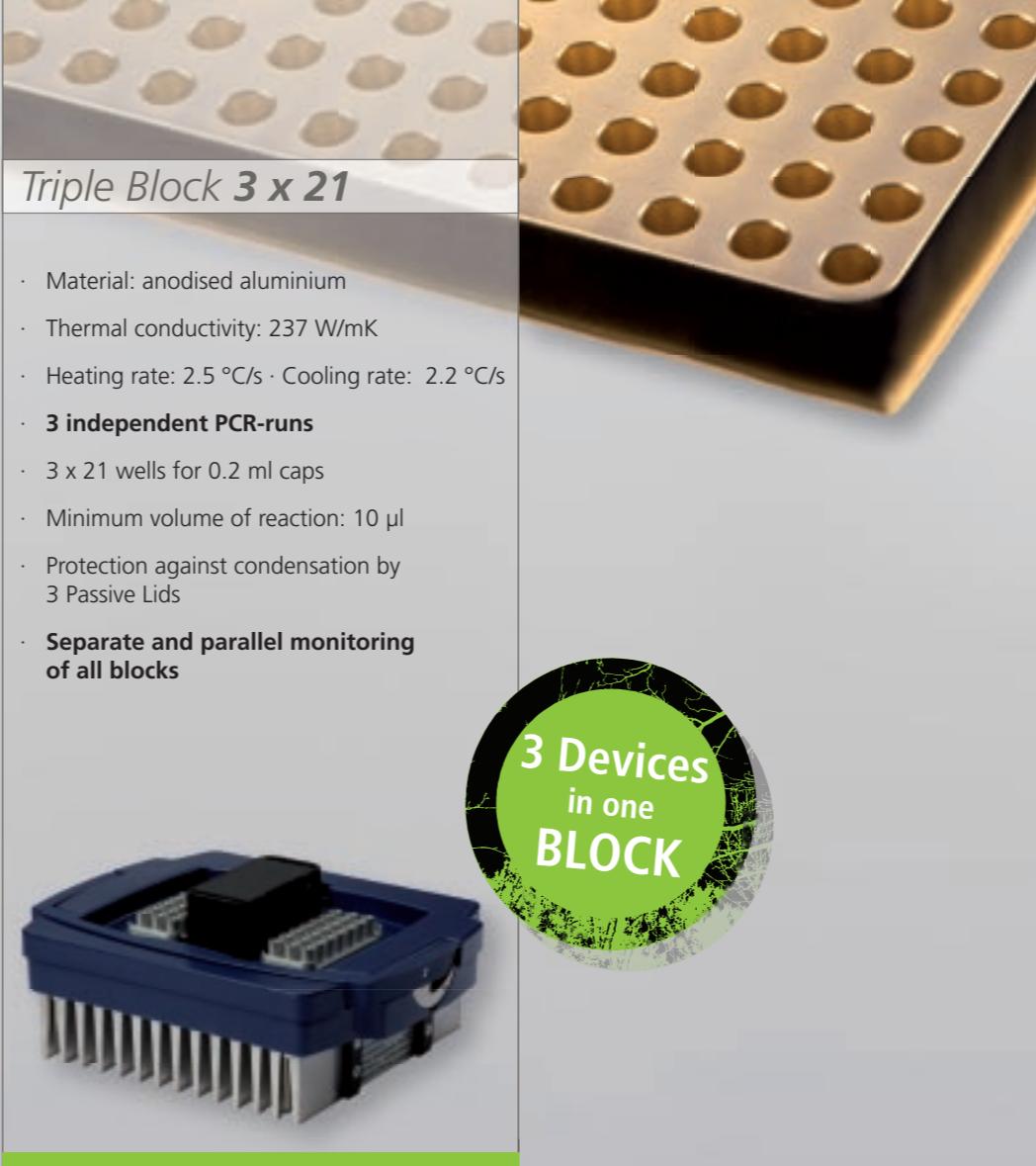


Thermoblocks

With the unique **quick block changing system**, a block change takes one hand and ten seconds.

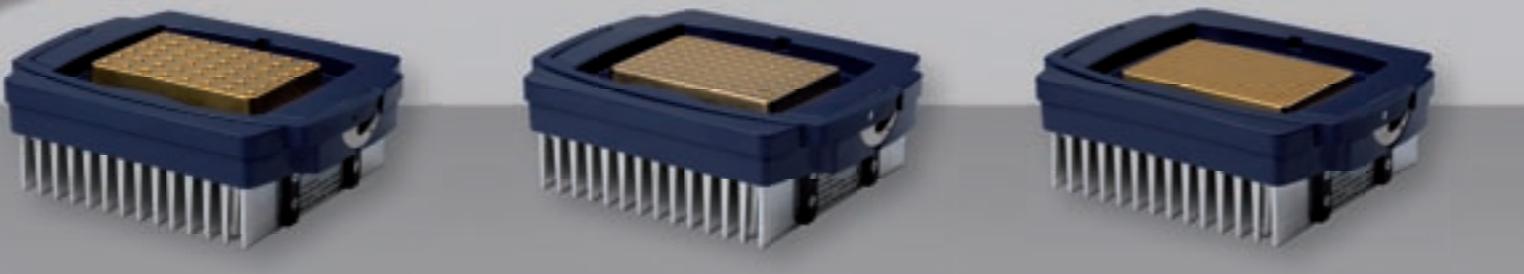
All thermoblocks have their own processor with **6 separately controlled peltier elements** for extraordinary temperature uniformity at high heating and cooling rates.

The temperature measuring system is entirely in the block and continuously **self-calibrating**, ensuring precise and identical operation of a block in any machine.



Triple Block 3 x 21

- Material: anodised aluminium
- Thermal conductivity: 237 W/mK
- Heating rate: 2.5 °C/s · Cooling rate: 2.2 °C/s
- 3 independent PCR-runs**
- 3 x 21 wells for 0.2 ml caps
- Minimum volume of reaction: 10 µl
- Protection against condensation by 3 Passive Lids
- Separate and parallel monitoring of all blocks**



Thermoblock 48

Material: **Electroformed gold plated silver**
Thermal conductivity: 429 W/mK
Heating rate 4.2 °C/s · Cooling rate 3.6 °C/s

48 well block	96 well block	384 well block
8 zone gradient	12 zone gradient	24 zone gradient
0.5 ml tubes	0.2 ml tubes	-
Gradient capable: 40 °C, ± 20 °C from the left to the right		
-	96 Well microtiterplates	384 Well microtiterplates
Minimum reaction volumina		
20 µl	10 µl	3 µl

Thermoblock 96

Material: **Electroformed gold plated silver**
Thermal conductivity: 429 W/mK
Heating rate 4.2 °C/s · Cooling rate 3.6 °C/s

48 well block	96 well block	384 well block
8 zone gradient	12 zone gradient	24 zone gradient
0.5 ml tubes	0.2 ml tubes	-
Gradient capable: 40 °C, ± 20 °C from the left to the right		
-	96 Well microtiterplates	384 Well microtiterplates
Minimum reaction volumina		
20 µl	10 µl	3 µl

Thermoblock 384

Material: **Electroformed gold plated silver**
Thermal conductivity: 429 W/mK
Heating rate 4.2 °C/s · Cooling rate 3.6 °C/s

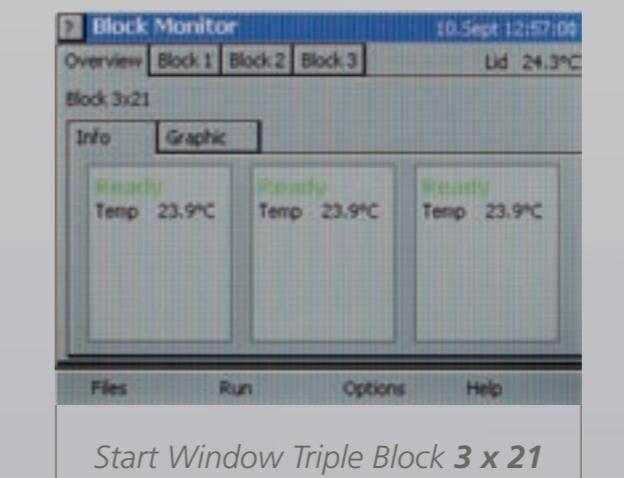
48 well block	96 well block	384 well block
8 zone gradient	12 zone gradient	24 zone gradient
0.5 ml tubes	0.2 ml tubes	-
Gradient capable: 40 °C, ± 20 °C from the left to the right		
-	96 Well microtiterplates	384 Well microtiterplates
Minimum reaction volumina		
20 µl	10 µl	3 µl

TFT Touchscreen

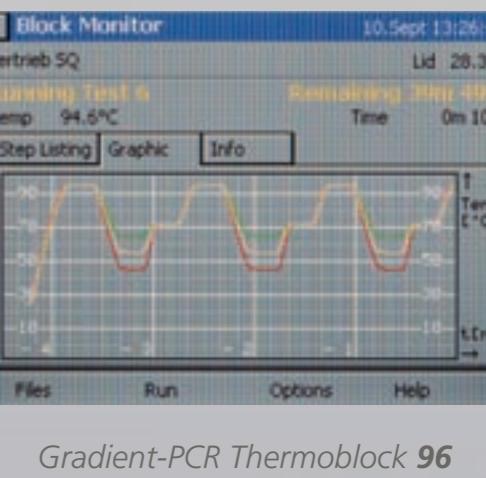
The Labcycler has a **TFT display with a touchscreen** featuring alphanumeric and function keys. Familiar buttons and icons enable an intuitive use. The interface „speaks“ English and German.

Graphic monitoring allows tracking of the PCR process for single and Triple Blocks. The Triple Block system is displayed with the TFT touchscreen separated in three parts.

- TFT 1/4 VGA illuminated colour display
- 320* 240 Pixel, 5.7" diagonal
- Languages: English and German
- Context-sensitive help function
- Alpha-keyboard on touchscreen
- Graphic monitoring of PCR process



Start Window Triple Block 3 x 21



Gradient-PCR Thermoblock 96

Automatic Lid

The heated lid is controlled by an electric motor. Pressure and temperature are fully programmable. Maximum temperature is 105 °C.

It quickly reaches its uniform temperature through high power.

During a programmed or manual pause the lid comes up to give access to the probes for **hotstart-procedures**. The temperature and force of the lid can be preselected for each program.

- Power 200 W
- Heating rate > 1 °C/s
- Lid can be deactivated
- Preheating can be deactivated
- Pressure 30 N to 120 N
- Hotstart-procedures possible
- Up to 105° C

