

# The Next Generation of Thermocyclers

THE LABCYCLER: OPTIMAL UP-TO-DATE CYCLER TECHNOLOGY



# THE LABCYCLER FROM SENSOQUEST

Using our long experience in the development and production of thermocyclers we created the next generation of cyclers.



## PRECISION

The LabCycler is characterized by precision in the smallest detail - naturally not only in development and production, but also in practical operation.

## QUALITY

Thanks to our many years of experience in development and planning we have created the next generation's thermocycler.

The solid metal design is of a precise and high-quality workmanship. This makes the LabCycler a reliable and lasting device.

Peltier elements of the latest generation offer high speed and long life. More than 250 000 standard PCR-cycles have been done without any failures.

The tests are continuing.

## FLEXIBILITY

The LabCycler has a unique system for exchanging the thermoblock. So far there are three block formats: 48 wells for 0.5 ml, 96 wells for 0.2 ml or MTP 96 and MTP 384.

The equipment is gradient capable and will soon be available in a robotic version.

## INNOVATION

You really don't want to invest in a new cycler regularly. That's why we devise our systems with enough farsightedness, so that they leave room for future expansions.

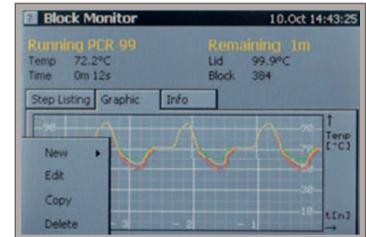
We keep developing the LabCycler for tomorrow's demands.

## THE USER INTERFACE

You know from experience: a cycler is only as good as its user interface. This is a lesson we have taken to heart: our LabCycler has a **large-scale touchscreen**. The window-based surface is intuitively operated, allowing convenient programming of protocols.

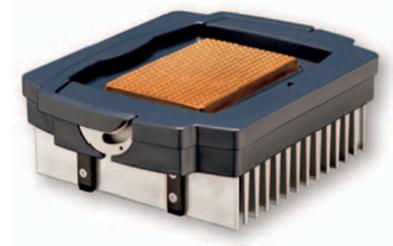
The large programmable memory offers a clearly represented directory structure. The **illuminated and coloured graphic display** gives you all the important information at a glance and lets you follow everything in real time.

A familiar keypad complements the modern visual user interface. The protocols of the 16 most recent programme sequences can be retrieved at any time. By the way: You will hardly ever need the user manual. At a stroke of a key our context sensitive online help will inform you about the next steps.



## THE THERMOBLOCK

The heart of our LabCycler is its thermoblock, setting new standards for temperature-uniformity and ramp rate. There are **gold-coated silver blocks** for 0.5 ml-tubes (48 wells), 96-wells MTP's and 384-wells MTP's, which through new construction methods show exceptional temperature homogeneity with **high heating (4.2 °C) and cooling (3.2 °C) rates**. The homogeneity is further enhanced by a 6 zone regulation. Of course the block is gradient-capable.



The silverblock has only half of the heat-capacity of an aluminiumblock, halving the consumption of energy and as well the unwanted heating of the laboratory. The peltier elements of the latest generation can take hundreds of thousands of cycles. Due to our unique changing system the thermoblock module can be exchanged in seconds with one hand only. The inserted block is immediately operational. The block has its own processor, identifies itself to the device and stores its operational data. Extensive self check functions continuously verify the perfect condition of device and thermoblock. Because the temperatures are measured by the block itself, one block will work identically in any machine.

## THE HEATED LID

The **heated lid** is integrated into the case lid's elegant design. Its linear opening and closing is made possible by an electronically controlled motor. **Pressure and temperature are fully programmable**. Through high power the heated lid quickly reaches its uniform temperature. Sealing of foils is possible. The temperature and force of the lid can be preselected for every programme.

## THE UPGRADING

You also want to use your cycler in robotic systems? No problem. Our device is equipped with interfaces for remote control as well as software updates.

**Unique quick changing system for 48, 96, 384 wells.**



THE MACHINES	LabCycler Basic	LabCycler Gradient
Order Number	011-103	011-101
Gradients	no	20 °C (+/- 10 °C); 48, 96, 384 wells module
Display	TFT 1/4" VGA illuminated colour display 320 * 240 pixel, 5.7" diagonal	
Keyboard	numeric block 0-9, -, ., alphanumeric and function keys in the touchscreen	
Help	permanently available, context-sensitive online help	
Languages	English, German	
Programmes	at least 3000 steps consisting of:	
Temperatures	-5 °C to 99.9 °C	
Holding Times	1 sec to ∞	
Cycles	up to two nested loops, each up to 99 passes	
Ramp Rates	0.001 °C / sec to 5 °C / sec	
Temp Increments	-9.99 °C to + 9.99 °C	
Time Increments	-99.99 sec to + 99.99 sec	
Pauses	preprogrammed or manual during the programme's run	
Programme Names	any name up to ten letters	
Folders	up to four levels with individual names	
Password Protection	for folders	
Protocol Function	the last 16 programme runs can be displayed anytime	
Realtime Clock	battery buffered, enables protocolling of programme changes and running data with times	
Heated Lid	electrically moving, temperature and pressure programmable	
Temperature	50 °C to 99.9 °C	
Power	200 W	
Heating Rate	> 1 °C / sec	
Pressure	up to 120 N, foil sealing possible	
Interfaces	2 * RS232 for software-updates, remote control and protocolling by computer and for future options	
Line Voltage	85 V to 265 V without switching, 50 to 60 Hz	
Power	max 350 W, 25 W standby	
Dimensions	L = 444 mm B = 251 mm H = 201 mm	
Weight	11.5 kg	

THE THERMOBLOCKS	Thermoblock 384	Thermoblock 96	Thermoblock 48
Order Number	012-101	012-103	012-102
Formats	microtiterplate 384 wells	microtiterplate 96 wells single tubes 0.2 ml	single tubes 0.5 ml
Description	processor controlled gradient-capable block with separately controlled peltier elements for extraordinary temperature homogeneity at high heating and cooling rates, unique quick changing system		
Material	electroformed gold plated silver		
Temperature	-5 °C to 99.9 °C		
Temperature Gradients	20 °C (+/- 10 °C) between the narrow sides of the block		
Heating Rate	4.2 °C / sec		
Cooling Rate	3.2 °C / sec		