



**PCR routine
perfection**

Reliable PCR

Mastercycler® family

eppendorf

Optimizing your PCR routine

Mastercycler® gradient

The Mastercycler family is Eppendorf's core product line for routine applications in PCR. The Mastercycler gradient, the Mastercycler and the Mastercycler personal offer ultimate reliability combined with easy to use software. The universal blocks can work with all common consumables.

The Eppendorf CycleManager software allows you to control up to 16 cyclers of the Mastercycler family with one computer.

The Mastercycler gradient combines the reliability of the Mastercycler family with the flexibility of a gradient cycler. A programmable temperature gradient of up to 20 °C enables the optimization not only of the annealing temperature, but of all temperature steps of a PCR protocol.

Reliable technology

It goes without saying that we have adapted the Mastercycler gradient model to suit the ever-increasing demands of its users. The software of the Mastercycler family covers all your needs and is easy to use.

To ensure that you are well-equipped to deal with future developments in PCR, the latest software updates are available on the Internet. The Mastercycler gradient is also fitted with one serial and one parallel interface for communication with a PC and printer.

Chip-based personal cards for unrestricted expansion of the memory capacity make the entire Mastercycler family unique in their user friendliness.

Product features

- Gradient block: gradient selectable from 1 °C to 20 °C across the entire temperature-control range
- Temperature-control range from 4 °C to 99 °C
- Maximum flexibility, easy programming: Gradient function, adjustable ramps, time- and temperature increments, incubation mode, in situ mode, link function, pause function
- Heated lid
- Software-based *in situ* Adapter
- RS 232 and printer interface
- Autostart option in event of power failures
- Updatable software via Internet
- Two-year warranty



Practice of the patented polymerase chain reaction (PCR) process requires a license. The Eppendorf [or appropriate trademark] Thermal Cycler is an Authorized Thermal Cycler and may be used with PCR licenses available from Applied Biosystems. Its use with Authorized Reagents also provides a limited PCR license in accordance with the label rights accompanying such reagents. This is a Licensed Real-Time Thermal Cycler under Applied's United States Patent No. 6,814,934 and corresponding claims in non-U.S. counterparts thereof, for use in research and for all other applied fields except human *in vitro* diagnostics. No right is conveyed expressly, by implication or by estoppel under any other patent claim.

It's the details that count

Mastercycler[®] gradient

Format Flexibility

The universal block for different tube types increases the range of applicational possibilities available with the Mastercycler gradient, and also saves time and costs. It is possible to use 96 x 0.2 ml tubes, 77 x 0.5 ml tubes or one microtiter plate, without having to exchange the block.

Three thermal cyclers – one card: your personal card

- Three thermal cyclers – one card: your personal card
- Personal memory card
- Guarantees simple data transfer among all Mastercyclers
- Up to 10 programs can be stored on each card
- One card contained in delivery package



- Universal block for 96 x 0.2 ml tubes or one 8 x 12 microtiter plate or 77 x 0.5 ml tubes



- Connect up to 16 units and control the entire network with one computer

Running PCR all day?

Mastercycler®

Just like the Mastercycler gradient, the Mastercycler is characterized by its universal block with a 96-well format. This cycler is the ideal instrument for already optimized PCR applications. Pre-optimized protocols can be transferred to the Mastercycler easily by using the included personal card.

To ensure that your Mastercycler software keeps pace with the changing world of PCR, all the latest updates are available on the Internet.

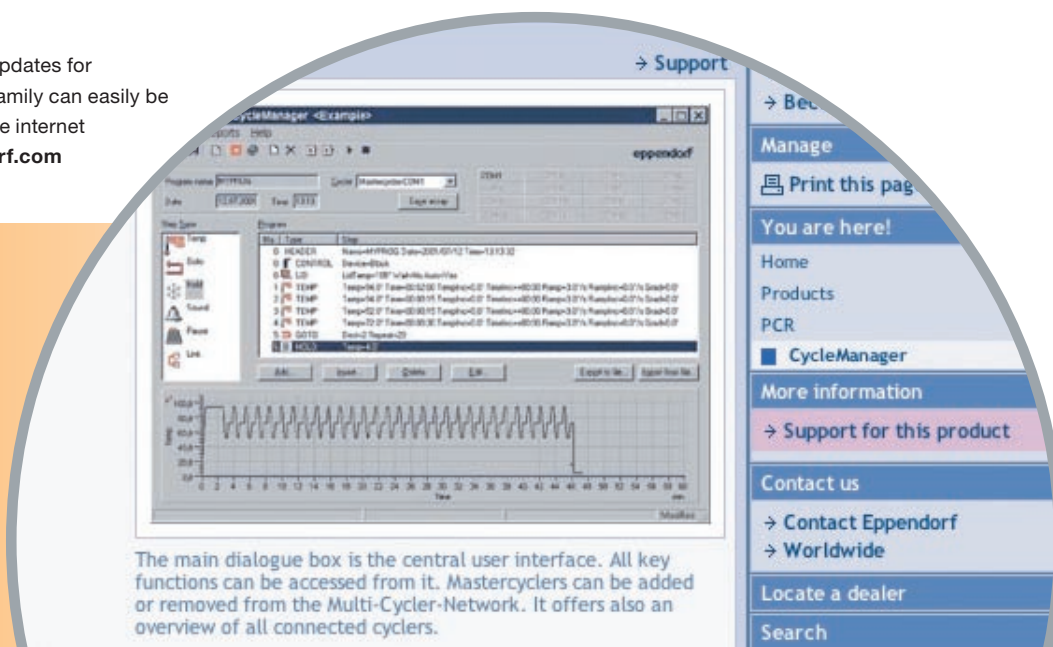


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Product features

- Universal block for 96 x 0.2 ml tubes, 77 x 0.5 ml tubes or one 8 x 12 microtiter plate
- Temperature-control range from 4 °C to 99 °C
- Easy programming: adjustable ramps, time- and temperature increments, incubation mode, *in situ* mode, link function, pause function
- Heated lid
- Software-based *in situ* Adapter
- RS 232 and printer interface
- Autorestart option in event of power failures
- Updatable software via Internet
- Two-year warranty

- Recent software updates for the Mastercycler family can easily be downloaded via the internet at www.eppendorf.com



The main dialogue box is the central user interface. All key functions can be accessed from it. Mastercyclers can be added or removed from the Multi-Cycler-Network. It offers also an overview of all connected cyclers.

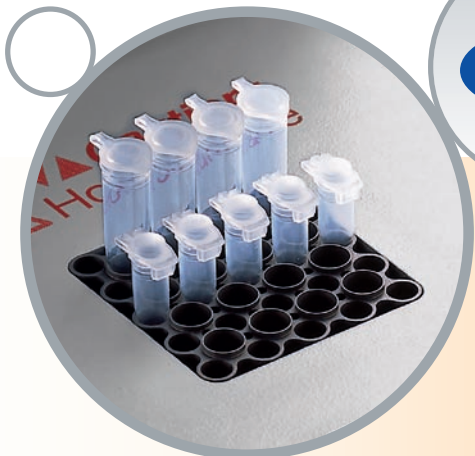
Limited space for PCR?

Mastercycler® personal

The Mastercycler personal is the compact cyclor of the Mastercycler family. Its universal block with a 25-well format can accommodate 25 x 0.2 ml tubes, 16 x 0.5 ml tubes or microtiter plates in a 5 x 5 grid format. With the aid of the personal card system, protocols can be exchanged with the two 96-format Mastercyclers. The small footprint of the Mastercycler personal makes it ideal for your limited bench space.

Product features

- Easy programming: adjustable ramps, time- and temperature increments, incubation mode, *in situ* mode, link function, pause function
- Temperature-control range from 4 °C to 99 °C
- Heated lid
- RS 232 interface and printer interface
- Autorestart option in event of power failures
- Two-year warranty



- Universal block for 25 x 0.2 ml tubes, 16 x 0.5 ml tubes or one 5 x 5 microtiter plate

System accessories for the Mastercycler family

Accessories

***In situ* Adapter**

The *in situ* Adapter can be used to convert your Mastercycler or Mastercycler gradient to an *in situ* device. With precise block homogeneity, the *in situ* Adapter has room for up to four standard glass slides. The special *in situ* mode of the Mastercyclers' software guarantees that your experiments will be a reliable success.

***In situ* Frames**

Adhesive on both sides, *in situ* Frames are positioned between a standard glass slide and the coverslip in order to improve the quality of your hybridization and amplification. The frames are fully autoclavable.

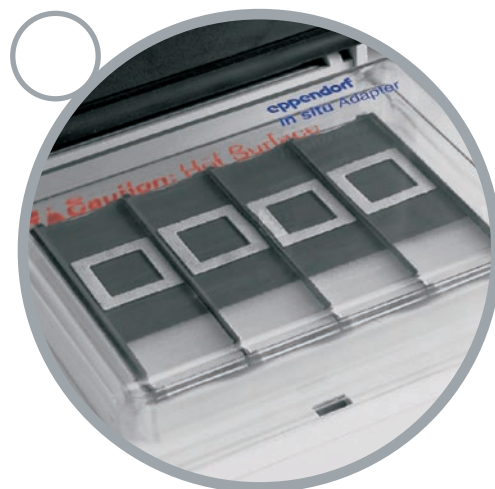
Technical specifications, *in situ* Adapter

Sample capacity	Max. 4 glass slides (76 × 26 mm)
Temperature range	4 °C to 99 °C
Temperature distribution across the adapter	
95 °C:	±1.0 °C
20 °C to 72 °C:	±0.6 °C
Temperature-control speed, measured on the adapter	
Heating:	≥ 1.0 °C/s
Cooling:	≥ 0.7 °C/s

Technical specifications subject to change.

Product features *in situ* adapter

- Easy to handle
- Perfect fit for optimal heat transfer
- Software-based, easy to program, extremely flexible
- Can accommodate four standard glass slides
- Transparent covering hood



Temperature-validation system

The temperature-validation system for the entire Mastercycler family enables easy and fast validation and calibration of the temperature block. The program for automatic measurement and calibration is integrated into the Mastercycler software, thus furnishing the Mastercycler family with an accurate and precise system that meets all documentation and detection requirements in the laboratory.

Product features of the temperature-validation system

- Sensor for 0.2 ml
- Easy and fast validation
- Autocalibration with Mastercycler software upwards of version 2.10
- Calibratable



Mastercycler gradient, Mastercycler and Mastercycler personal

Technical specification

	Mastercycler gradient®/Mastercycler®	Mastercycler® personal
Sample capacity	96 × 0.2 ml PCR tubes or 77 × 0.5 ml PCR tubes or one 8 × 12 microtiter plate	25 × 0.2 ml PCR tubes or 16 × 0.5 ml PCR tubes or one 5 × 5 microtiter plate
Temperature-control range	4 °C to 99 °C	4 °C to 99 °C
Temperature distribution across the block		
95 °C:	±1.0 °C	±1.0 °C
20 °C to 72 °C:	±0.6 °C	±0.6 °C
Block homogeneity (S₉₅)*		
20 to 72 °C:	≤ ±0.4 °C	≤ ±0.4 °C
95 °C:	≤ ±0.5 °C	≤ ±0.5 °C
Regulation accuracy	±0.2 °C	±0.2 °C
Temperature-control speed (measured on the block)	approx. 3 °C/s (heating), approx. 2 °C/s (cooling)	approx. 3 °C/s (heating), approx. 2 °C/s (cooling)
No. of programs	100 on device; approx. 10 on personal card	100 on device; approx. 10 on personal card
Max. no. of cycles	99	99
Dimensions (W × D × H); weight	26 cm × 41 cm × 27 cm; 12.4 kg	18 cm × 35 cm × 25 cm; 6.8 kg
Power supply; power consumption	230 V, 50–60 Hz; 450 W	230 V, 50–60 Hz; 300 W

Technical specifications subject to change.

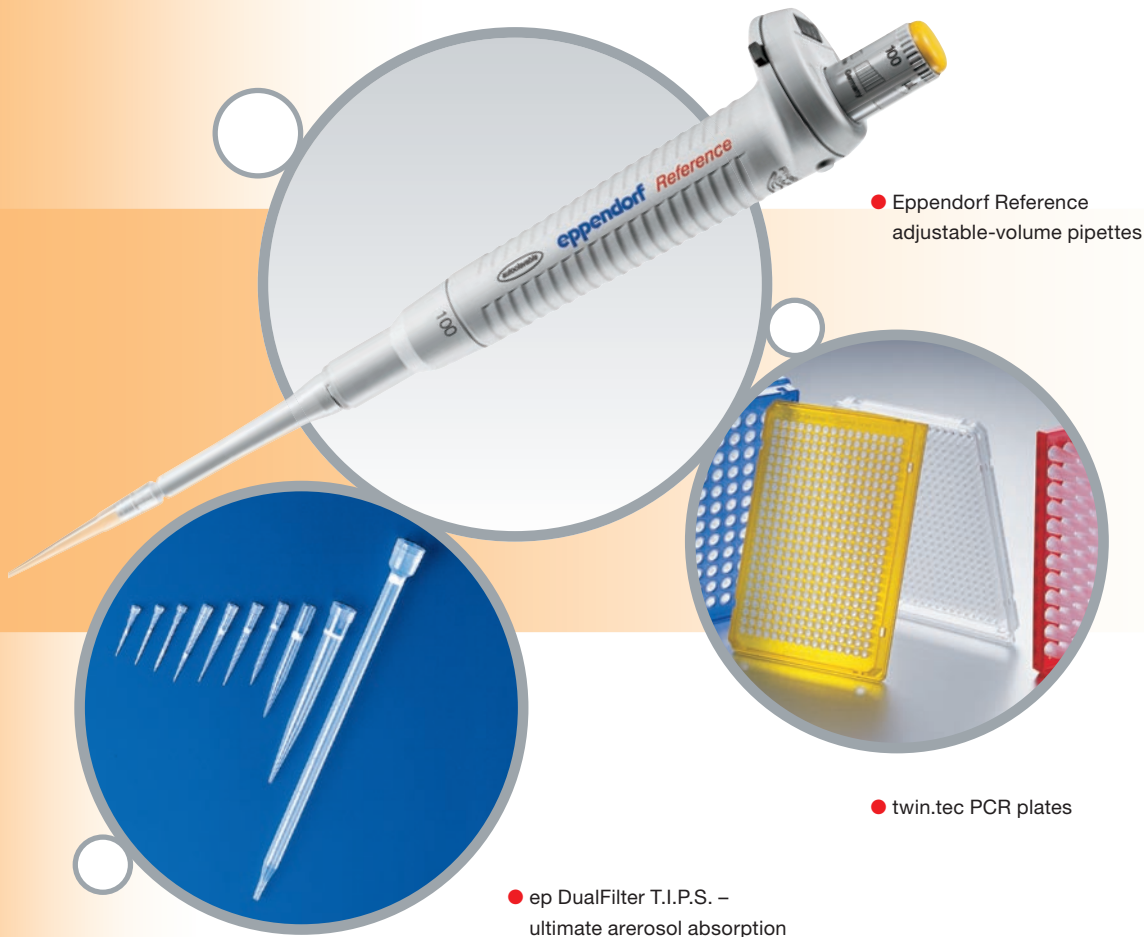
* mean values

Ordering information

Article	Order no.
Mastercycler gradient with heated lid and personal card (230 V / 50–60 Hz)	5331 000.010
Mastercycler with heated lid and personal card (230 V / 50–60 Hz)	5333 000.018
Mastercycler personal with heated lid and personal card (230 V / 50–60 Hz)	5332 000.014
Eppendorf CycleManager software (incl. installation manual, online help and connection cable)	5339 810.003
personal card	5332 300.018
<i>in situ</i> Adapter	5331 220.002
Temperature-validation system	5331 222.005
0.2 ml PCR test tubes, colorless	0030 124.332
5-tube strip for 0.2 ml PCR test tubes, colorless	0030 124.340
8-tube strip for 0.2 ml PCR test tubes, colorless	0030 124.359
0.5 ml PCR test tubes, thin-walled, with lid attached, colorless	0030 124.502
twin.tec PCR Plate 96, skirted (clear wells), 25 pcs.	
Clear	0030 128.648
Yellow	0030 128.656
Green	0030 128.664
Blue	0030 128.672
Red	0030 128.680
twin.tec PCR Plate 96, semi-skirted (colorless wells), 25 pcs.	
Clear	0030 128.575
Yellow	0030 128.583
Green	0030 128.591
Blue	0030 128.605
Red	0030 128.613
twin.tec PCR Plate 384 (colorless wells), 25 pcs.	
Clear	0030 128.508
Yellow	0030 128.516
Green	0030 128.524
Blue	0030 128.532
Red	0030 128.540

The perfect tools for your PCR setup

Make sure to use the best material for your PCR set-up. Precise pipettes and high quality consumables can help to produce reliable, accurate and reproducible results – every day.



● Eppendorf Reference adjustable-volume pipettes

● twin.tec PCR plates

● ep DualFilter T.I.P.S. – ultimate aerosol absorption

eppendorf
In touch with life

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