eppendorf

Raise Your Standard

Eppendorf Mastercycler® X40

New Mastercycler® X40

Evolve your PCR experiments together with the new Mastercycler® X40. Take the next step to a digital lab and keep a small footprint, reliability and flexibility.

Protects your samples from evaporation
SafeLid applies ideal pressure to your PCR consumables.

Consumable flexibility
The aluminum block can be used with 0.1 and 0.2 mL PCR tubes and tubestrips, as well as any kind of 96-well PCR plate (unskirted, semi-skirted and skirted).

7 inch LCD Touchscreen
The sensitive color touchscreen is covered with an easy-to-clean glass surface.

Import and export of protocols
Easy access of USB port on the device front.

Intuitive software
Easy programming and editing of programs with the well-proven user interface of Mastercycler X50.

12-column gradient
Optimize temperature steps in your PCR protocol efficiently by testing 12 different temperatures from column 1 to 12.

Flexibility

You have got varying sample numbers? No problem, the high-quality aluminum block of Mastercycler X40 fits to all common consumables. Unskirted, semi-skirted and skirted plates as well as 0.1, or 0.2 mL tubes and tubestrips can be used. The SafeLid adapts to the height of the consumables and applies optimal pressure for evaporation protection.

Please visit our website:
www.eppendorf.link/pcr-consumables

Small footprint
No space in your lab? Mastercycler X40 has a small footprint and air vents on its back to fit even in small spaces left over on your lab bench. Its measures are only 24.5 x 38.5 x 23 cm (W × D × H). Additionally it is lightweight of only 7.25 kg.

Please visit our website:
www.eppendorf.link/mastercycler-x40

Digitalization

Do you want to have the control over your runs from wherever you are?
The VisioNize® Lab Suite enabled Mastercycler X40 can be easily connected for monitoring and documentation. Stay connected to your digital lab and connect multiple lab devices to VisioNize to take full control from all over the world.

> **Monitor** all **device-related parameters** like temperature, status and runtime as well as all device interactions like set-point changes.
> **Check** the **current status of your experiment** or if a device is available.
> Export **parameter** and **event data**.
> Receive **real-time notifications** via email and SMS: »Program finished«.

Please visit our website:
www.eppendorf.link/visionize-lab-suite

Ease-of-use

Struggling with complicated programming? The ultimate touchscreen interface and easy programming of the proven Mastercycler software speeds up programming of new protocols. Intuitive protocol drawing allows to create your program in one step with only one finger.

The Mastercycler X40 is the first Eppendorf device to feature a short instruction included in the package, the full digital manual is available in multiple languages via QR code online.
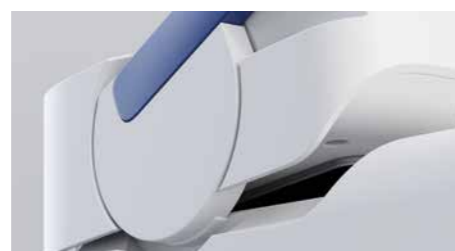
01:05h

Productivity

Are you always rushing? Time is everything in science. The aluminum block of Mastercycler X40 heats with max. 3.3 °C/s and cools with max. 1.5 °C/s to enable fast PCR runs. You can fill up your consumables and run your PCR with up to 100 µL to increase yield and reduce downstream clean-up efforts.

An easy switch from your former cycler
Import your programs from slower cyclers to the Mastercycler X40 by only programming the total runtime your current cycler needs. Mastercycler X40 automatically adjusts its ramp rate to the runtime and the PCR will perform as you are used to. No further optimization of your proven protocols is needed.

12-column gradient
Optimize your PCR or test new primers efficiently with the 12-column gradient. You save valuable time by testing 12 different temperatures in one run to find the best conditions for your samples. Together with fast program-ming and an immediate termination notice when it is connected to VisioNize you can save time in your workflow.
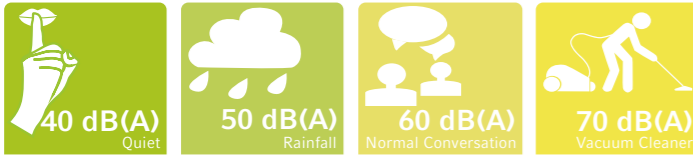
Need more speed? Check out Mastercycler X50 with a heating rate up to 10 °C/s.

Design

Premium Usability

Simple, intuitive design features which are common across the entire product ecosystem. Positioned and crafted in a way that unlocks each device's physical and digital functionality.

Advanced Ergonomics

Combining ease of use with consistent design for minimum physical effort and maximum efficiency.

Reliable Durability

Products you can depend on use after use, so you can focus on your work.

Please visit our website:
www.eppendorf.link/mastercycler-x50

Did You Know…

Reduce Noise in Your Lab!

40 dB(A) Quiet	50 dB(A) Rainfall	60 dB(A) Normal Conversation	70 dB(A) Vacuum Cleaner

✔ 40.5 dB(A)

… that the **Mastercycler X40** undercuts the 45 dB(A) maximum value

In general, cyclers have a sound level between

➖ 50-72 dB(A) (Recommandation maximum value for routine office work and industrial workplaces)
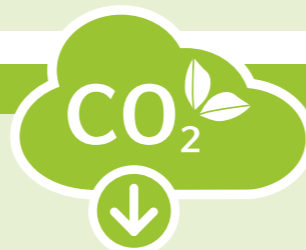
Reduce Your CO₂ Footprint!

…that the difference between 0.134 kWh and 0.473 kWh per PCR run resembles a difference of around 124 g of CO$_2$ emissions. That's enough to fill around 11 party balloons. Over a year, this can add up to additional CO$_2$ emissions of 129 kg*!

(source: https://www.eea.europa.eu/ims/greenhouse-gas-emission-intensity-of-1)

* 4 PCR runs per day, 5 days a week

✔ 0.134 kWh

… that the **Mastercycler X40** shows with 0.134 kWh an extremelylow power consumption for a PCR run.

The power consumption of other thermal cyclers can be 35-70 % higher

➖ > 0.134 kWh

Save plastic and paper!

> The Mastercycler X40 is packed in a cardboard box, with only two small recycable plastic bags to protect the device and cable from dust.

> The packaging contains only a short manual to start right away. The full manual is available via QR code.

> Small footprint and low weight enables more devices to be shipped on one palette – and with this reduces spendings on gas/fuel and freight for each single device.

CO$_2$

Ergonomics

Worrying about your health? Our Mastercycler X40 is designed to be ergonomic. Low noise level, easy programming, low weight, easy opening and closing and status LED that you can see from a distance make your life easier and healthier.

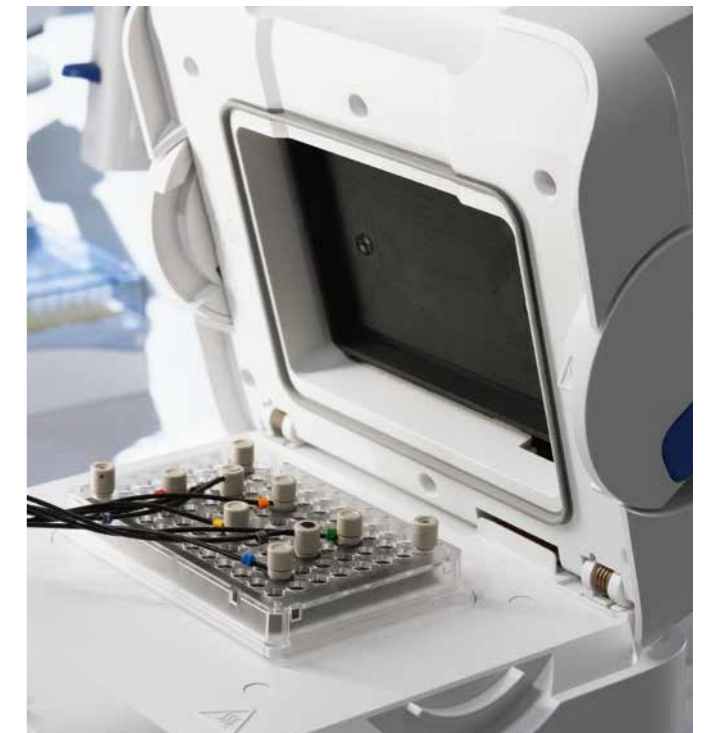**PhysioCare concept**

Reliability & Service

ep*Services* for premium performance

Mastercycler X40 is so reliable that we give a warranty for the first 2 years after buying your cycler. Anyway, get your service package to have your cycler checked regularly to reduce your mental load. Avoid downtime and reduce audit stress by regular maintenance of your lab devices. We offer dedicated services for your cyclers to keep the performance.

Do you want to verify your PCR cycler block temperature? Then go for it with our Temperature Verification System TVS T6 for 96- and 384-well blocks. You can check the block in only 15 minutes to be sure that your cycler performs as you want it to.

Ordering information

Description	International Order no.	North America Order no.
Mastercycler® X40 (aluminum block)	6381 000 018	6381000018
Eppendorf twin.tec® PCR Plate 96, skirted, clear 25 pcs.	0030 128 648	951020401
Eppendorf twin.tec® PCR Plate 96, semi-skirted, clear 25 pcs.	0030 128 575	951020303
Eppendorf twin.tec® PCR Plate 96, unskirted low profile, clear 20 pcs,	0030 133 307	0030133307
Temperature Verification System TVS T6	3120 000 900	3120000900

Find more information about additional models of Mastercycler X40 on www.eppendorf.com/mastercycler

Technical specification

Features	Mastercycler X40
Thermoblock	Aluminum
Sample Capacity	96 × 0.1/0.2 mL PCR tubes/tubestrips,1 × 96-well PCR plate
Temperature control range of the block	4-99 °C
Temperature control mode	Fast, Intermediate, Standard, Safe
Heating technology of the block	Three peltier elements
Gradient block	over 12 columns
Gradient range	1-30 °C
Gradient temperature range	30-99 °C
Lid temperature range	37-110 °C
Lid descent and closing pressure	SafeLid for evaporation protection
Block homogeneity: **20 °C-72 °C** **95 °C**	± 0.2 °C ± 0.3 °C
Block temperature accuracy	± 0.15 °C
Heating rate*	max. 3.3 °C/s
Cooling rate*	max. 1.5 °C/s
Interfaces	Ethernet, USB A
Dimension (W × D × H)	24.5 x 38.5 x 23 cm
Weight	7.25 kg (15.9 lbs)
Power supply	100-240 V, 50-60 Hz
Max. power consumption in a 3-step PCR run	0.134 kWh

* Heating and cooling rates measured at block