

PERFECT CYCLING
VWR® THERMOCYCLERS



THE VWR THERMOCYCLER FAMILY

Latest technology in 32 (Ristretto), 2x 48 (Doppio), 96 and 384 (UNO) formats

The latest generation of the VWR thermocycler family, packed with pioneering cyler engineering and now available in a wide range of block formats.

New thermocycler technology

Outstanding performance

A newly engineered thermo plate with impressive thermal characteristics, powerful Peltier elements with Long Life Technology, a revolutionary heat sink and cooling fans with magnetic bearings enabling controlled rapid temperature change of up to 5 °C/s.

Reliable reproducible results

Novel Peltier elements control the temperature row by row enabling outstanding block homogeneity of $\pm 0,2$ °C and the choice of absolute linear gradients and independent lane control.

German quality manufacturing

Engineered and manufactured in Germany according to ISO 9001, calibrated and maintained according to NIST standards and backed with more than 20 years of cyler expertise and experience.

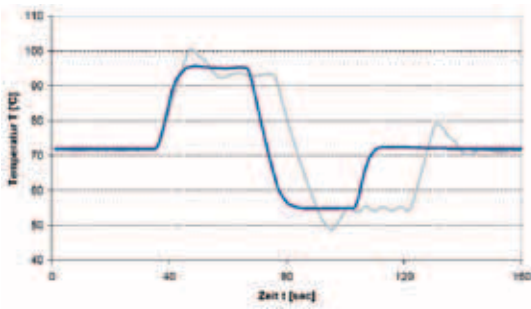
All so very simple

With a sharp, clear TFT display and intuitive 'touch screen' commands, just switch on the UNO, Doppio and Ristretto and you'll be ready to run.

A new suite of laboratory control

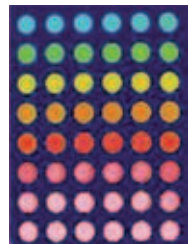
Up to 4x USB, 1x Ethernet (MS Windows®, Linux), remote control and monitoring of instruments via PC software, MP3 signal tones, user calls via email and master/slave control.





Fast ramping up to 5 °C/s without overshoots

Through the combination of the newly developed thermo plate, high performance Peltier elements and sophisticated control circuitry.



Up to date data management

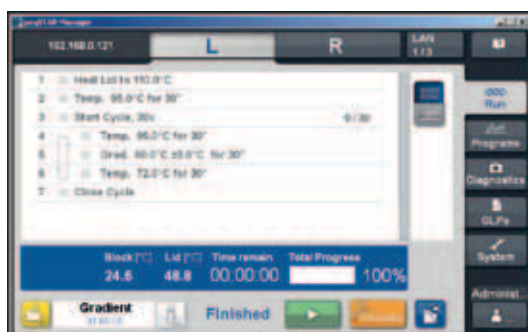
Huge 500 000 program memory, 4x USB ports for simple and quick data transfer. Network integration for central program administration for total cycler control.

Simple to use VWR 'PCR Cycler Master Software'

For remote control and monitoring of instruments plus creating PCR protocols on a PC.

FlexGradient Technology

With the temperature of the 8 rows each individually controlled, select between a perfectly linear temperature gradient – ideal for PCR optimisation, or independent lane control – ideal for the use of different primer pairs in the same run.



New system tools

All at a touch of a button: Graphical or tabular programming, 'Global Program Ramp', 'Gradient Control', 'Tube Control', 'Emulation' mode, Online help, 'Quickstart' function and 'Power Fail Denaturation' for auto-restart after power failure.

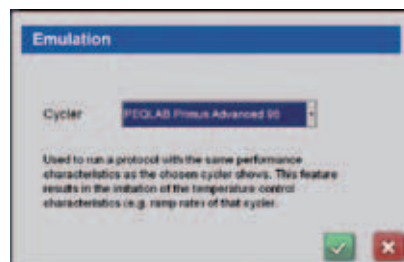
High specification remote control

Packed with state-of-the-art technology, control your UNO, Doppio and Ristretto thermocycler with VWR 'PCR Cycler Master Software', receive notifications via email or just make use of the system's MP3 player.



Emulation mode (UNO and Doppio)

The simplest way to transfer and optimise protocols from your old cycler, just pick a system from the drop down menu for immediate protocol emulation.



Technical specifications

System characteristics

- 8 (Ristretto), 2x 8 (Doppio) or 16 (UNO) powerful Peltier elements with Long Life Technology
- 8, 2x 8 or 16 control circuits with PT1000 thermal probes
- Max. heating and cooling rate: 5 °C/s (3 °C/s for Ristretto)
- Block uniformity (at 72 °C): ±0,2 °C
- Temperature range thermo block: 4 to 105 °C
- Regulating accuracy thermo block: ±0,1 °C
- Adjustable ramping: 0,1 to 3,0 °C/s (single steps or 'Global Program Ramp' for the whole protocol)
- Increment/decrement time: 0:01 to 9:59 minutes
- Increment/decrement temperature: 0,1 to 9,9 °C
- Temperature range heated lid: 40 to 120 °C
- Programmable lid locking (UNO and Doppio only)
- 4x USB (1x USB Ristretto), 1x Ethernet port (MS Windows®, Linux)
- Various blocks (32-well, 2x 48-well, 96-well and 384-well) available, see 'Ordering information' for further details
- Standard lid with automatic height adjustment, High Pressure Lid (HPL) with programmable pressure from 100 to 250 N for the UNO 384





Gradient feature (optional)

- Maximum gradient over 8 or 16 rows: 30 °C (±15 °C)
- Temperature range gradient: 35 to 105 °C
- Gradient accuracy: ±0,1 °C
- Gradient upgradability on the spot
- FlexGradient Technology: Ideal, linear gradient or independent lane control
- Gradient Control: Synchronised plateau times or ramp rates

User-interface/functions

- Touch-sensitive TFT display (800x480 px, 16:9, 65536 colours) control via USB mouse possible
- Internal memory for 500 000 typical PCR protocols in unlimited, self-created directories/subfolders
- Unlimited number of programs via network PC or using USB memory sticks
- PC software for convenient remote control/monitoring of runs and creation of PCR programs in the office
- Master/slave control of instruments
- Password protected user-accounts with flexible access rights
- Auto-restart after power failure
- Create and run programs using graphical or tabular view
- GLP reports for the continuous recording of all runs
- MP3 signal tones
- User-call via email
- Emulation mode for easier transfer of PCR protocols



Our service pledge

- Personal and professional support through our application hotline and local field representatives
- Product demonstrations, installation and on-the-spot instruction
- Rapid delivery times

Ordering information



Model	Description	Cat. No.
UNO ⁹⁶	With 96-well universal block and standard lid for 96x 0,2 ml tubes, 96-well PCR plates or 48x 0,5 ml tubes with flat caps	732-2548
UNO ⁹⁶ Gradient	With 96-well universal gradient block and standard lid for 96x 0,2 ml tubes, 96-well PCR plates or 48x 0,5 ml tubes with flat caps	732-2549
UNO ³⁸⁴ HPL	With 384-well block and High Pressure Lid for 384-well PCR plates	732-2550
Doppio	With 2x 48-well universal blocks and standard lids for 48x 0,2 ml tubes or 24x 0,5 ml tubes with flat caps per block	732-2551
Doppio Gradient	With 2x 48-well universal gradient blocks and standard lids for 48x 0,2 ml tubes or 24x 0,5 ml tubes with flat caps per block	732-2552
Ristretto	With 32-well universal block and standard lid for 32x 0,2 ml tubes or 16x 0,5 ml tubes with flat caps	732-2553
Gradient upgrade	For UNO For Doppio	732-2554 732-2555



VWR products for PCR

Reagents, consumables and instruments
From extraction to results analysis

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for details or visit vwr.com

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