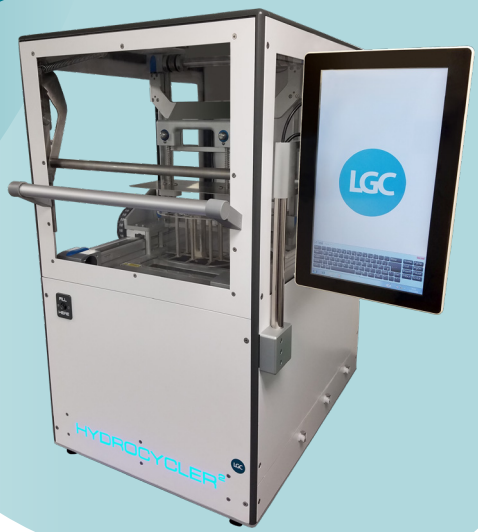

Hydrocycler²

For Research Use Only. Not for use in diagnostic procedures.

Water bath thermal cycler for PCR

Combining throughput, efficiency and robust design, the Hydrocycler²™ offers an effective alternative to traditional Peltier-based thermal cyclers for high-throughput PCR.

Water conducts heat - Using water to conduct heat to a PCR sample offers multiple advantages including the ability to process many plates or arrays in parallel for high throughput with minimal variation in temperature from plate to plate or array to array.

Fast cycling time - In addition, cycling time is 40% faster since there is no need to ramp temperatures up or down during the PCR cycle.

Precise temperature control - Plates and arrays automatically move from one temperature bath to another and the temperature of each bath can be precisely controlled.

Why choose the Hydrocycler²

Increased throughput
- Ability to process more than 145,000 samples in an eight-hour day(1)
- Suitable for 96-, 384- and 1536-well plate formats and 384-well Nexar™ or IntelliQube™ Array Tape™ with minimal system set up(2)

Efficient amplification
- Circulation Jet ensures temperature uniformity in each tank for high PCR consistency and eliminates edge effect
- Multi-bath system delivers precise temperature control, enhances cycling time, and eliminates temperature fluctuations
- Minimal external heat generation eliminates the need for an air conditioned environment
- Compact footprint for placement on floor or lab benchtop with tank covers minimising water evaporation
- Optimised protocols for both plates and Array Tape

Intuitive user interface
- Simple and intuitive user interface for easy use
- Optional barcode tracking with accompanying software
- Report generation and log file reviewer

Chemistry
- Supports all common end-point PCR chemistries and protocols as well as emulsion PCR (ePCR)
- Provides uniform temperature across the entire plate or array for consistent reactions and accurate data

(1) Throughput is highly dependent on specific cycling conditions and chemistry selection. This estimate is based on 1536-plates and a standard KASP 36-cycle run totaling 1 hour 10 minutes.
(2) Plates must be sealed using water bath validated seals and sealers. For LGC, Biosearch Technologies' 384- and 1536-well laser plates, the Biosearch Technologies' Kube™ and Fusion³™ sealers meet the necessary requirements

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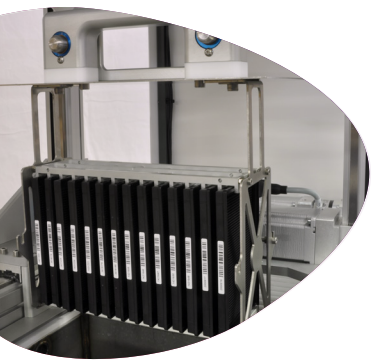
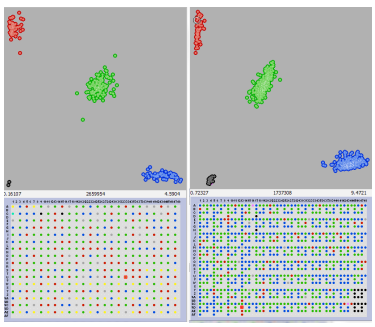
Hydrocycler² specification

Instrument dimensions	Depth: 70.5 cm (27.8”) Width (without open screen): 55 cm (21.6”); Width (with open screen): 75 cm (29.5”) Height (door closed): 92 cm (36.2”); Height (door open): 130 cm (51.2”)
Instrument weight	Without water: approx. 100 kg (220 lbs), With water: approx. 150 kg (330 lbs)
Electrical power requirements	230 VAC @ 16 A or 4 kW
Special instructions/ requirements	Reverse Osmosis (R.O.) Water: 48.5 L (12.8 gal) Standard Minimum Grade ASTM Standard (ISO 3696) Type III ISO Standard Grade 3 Clinical Laboratory Standards Institute (CLSI - CLRW) Type 3 *Note: Commercial/industrial R.O. water systems typically meet these requirements* Tank 1: 14 L (3.7 gal) Tank 2: 14 L (3.7 gal) Tank 3: 14 L (3.7 gal) Tank 4 (fill tank): 6.5 L (1.7 gal)
Capacity	96-, 384- or 1536-well plates – up to 16 plates; Array Tape - up to 50 arrays
Rates	Tank 1: (Denature tank) - Ramp rate: ~1.75°/min Tanks 2 & 3: (Extend and anneal tanks) - Ramp rate: ~.65°/min
Certificates	CE

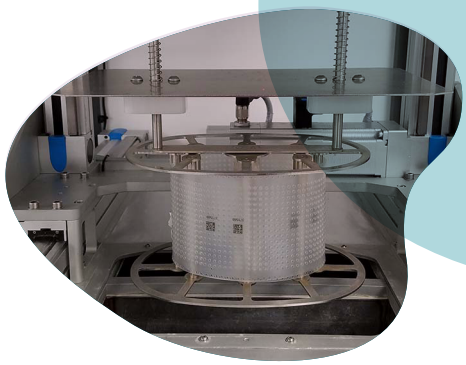
Ordering information

Cat no.	Description
KBS-0028-001	Hydrocycler² PCR system (10-16 plates)*
KBS-0028-003	384-/1536-well plate weld seal basket (16 plates)
KBS-0028-002	96-well plate weld seal basket (10 plates)
KBS-0028-004	384-well Array Tape basket (50 arrays)
KBS-0025-003	1-dimensional handheld barcode scanner
KBS-0900-176	Hydrocycler² 12-month service contract





Data generated from the Hydrocycler² (left) demonstrates good clustering and 100% concordance in the genotype calls when compared to data produced by the Hydrocycler 16.



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