Precision Control Solutions
Made Simple

DECK-MOUNTED THERMAL CYCLER

We offer a compact, single-box deck-mounted thermal cycler that delivers fast, uniform, and reproducible thermal performance for seamless integration into automated workflows.



Superior Temperature Uniformity

Compact Single-Box Design

SiLA 2 Compatible

ABOUT OUR **PRODUCT**

Featuring our innovative patented thermoelectric control technology that delivers outstanding temperature stability with high power efficiency, V-BMB's Deck-mounted Thermal Cycler provides fast, consistent heating with superior temperature uniformity across every well, ensuring reliable and reproducible results for high-throughput automated workflows. It incorporates an independent multi-channel design that actively compensates for local thermal variations to ensure uniformity across the PCR plate.

Its compact, single-box architecture is enabled by an integrated, space-efficient TEC controller design that combines the thermal block and control electronics into one streamlined module. This minimizes deck footprint, simplifies installation, and frees valuable space on automated platforms. Designed for precise and stable heating and cooling, the system includes an adjustable heated lid and supports low-profile 96-well PCR plates.

With support for SiLA 2, direct command, or API-based control, the system offers flexible automation options to suit different user preferences. This enables seamless deployment across a wide range of liquid-handling platforms while supporting efficient, continuous PCR workflows.

Features

- Fast, uniform, and reproducible thermal performance across all wells
- Compact single-box design for minimal deck footprint and simplified installation
- Supports SiLA 2 / direct command / API
- Heated lid cover to prevent condensation
- Supports low-profile 96-well PCR plates
- Three ventilation configurations: rear, down, and right
- Automated plate ejection for seamless integration with automated workflows

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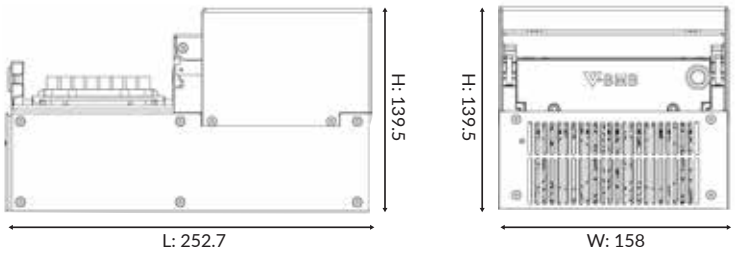
Specifications

	Deck-mounted Thermal Cycler VDTC302
Temperature Range	4 °C to 99 °C (39 °F to 210 °F)
Temperature Accuracy	±0.25 K @ 37 °C (99 °F), 65 °C (149 °F), 95 °C (203 °F)
Temperature Uniformity	≤ 0.2 K @ 37 °C (99 °F) ≤ 0.2 K @ 65 °C (149 °F) ≤ 0.3 K @ 95 °C (203 °F)
Max. Heating Rate (Slope)	≥ 4 K/sec
Max. Cooling Rate (Slope)	≥ 2 K/sec
Heating & Cooling Rate Resolution	0.1 K/sec
Lid Temperature	Adjustable from ambient to 115 °C (239 °F)
Lid Default Temperature	110 °C (230 °F)
Plate Ejection	Automated plate ejection mechanism with exchangeable ejection bars
Ventilation Configurations	Rear (default), down, right
DC Input	36 - 48 VDC/ 1000 W (max)
PCR Plates	Low-profile 96-well PCR plates
Max. Volume During PCR	100 µl/well for 96 well version
Operating Temperature Range	15 °C to 32 °C (59 °F to 90 °F)
Operating Humidity (Tolerable RH)	30 - 80%
Communication Interface	USB / RS-485 / RS-232
Dimensions & Weight	158mm x 252.7mm x 139.5mm, 7.4 kg

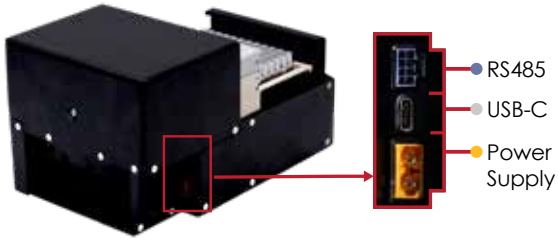
Part Number and Ordering Information

VDTC302 □
Model
Ventilation Configurations (A, B or C)

Ventilation Configurations	Part Number
Rear	VDTC302A
Down	VDTC302B
Right	VDTC302C



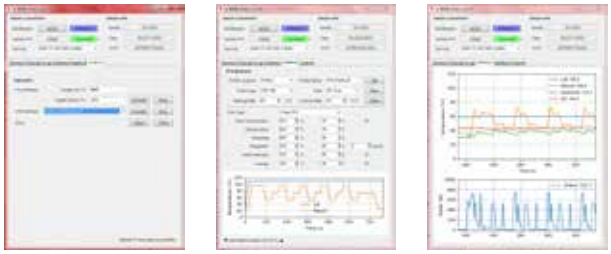
External Interfaces



VDTC Utility

Profile Setting Function

Monitoring Function



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