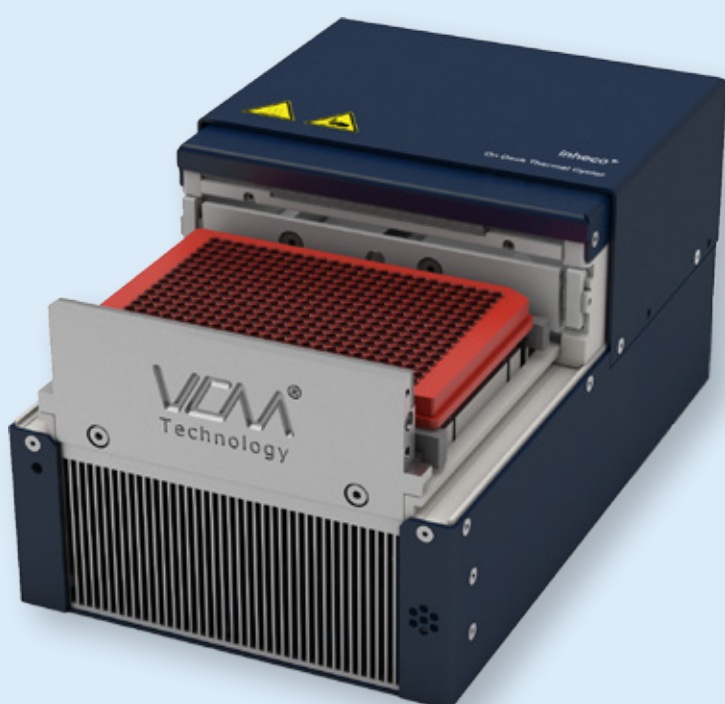


## Thermal Cycling

ODTC® - On Deck Thermal Cycler  
for 96 well or 384 well PCR plates



### ⊕ Benefits

- ▶ Top thermal performance
- ▶ Very fast runs
- ▶ Seamless integration
- ▶ 24/7 automated operation
- ▶ Pipetting during PCR Run

### ⊕ Features

- ▶ Automated Horizontal Lid
- ▶ Super conductive VCM® Mount
- ▶ Small footprint, low height
- ▶ SiLA communication standard
- ▶ Verification tool optional

# Thermal Cycler for Fully Automated Applications

The world's first purpose-designed thermal cycler for on-deck use in robotic workstations



## ODTC® - On Deck Thermal Cycler

### Application Areas

- NGS library preparation
- End point PCR
- CRISPR/Cas9
- Sanger sequencing
- All PCR-AFLP applications
- Hybridisation
- Incubation

Any molecular biological workflow that needs repeated heating or cooling steps and a lid to prevent evaporation of the processed liquid, can be realized with the combination of the ODTC® and a liquid handling workstation.

### Sealing with Horizontally Moving Lid

The flexible design of the ODTC® allows the use of two different sealing options within the horizontally moving lid:

1. Pre-installed ODTC® Sealing Cover, opens with lid, easily exchangeable
2. Automation friendly Sealing Lid, e.g. Bio-Rad Auto-Sealing Lid, etc. instead of ODTC® Sealing Cover

We recommend to use pre-sealed plates to prevent cross contamination.

### Perfect Integration

- **Leaves a lot of space on deck:** The ODTC® is the most compact on-deck thermal cycler on the market. Height <125mm; footprint similar to 2.5 deck positions.
- **Gripper & pipettor can move freely:** The horizontally opening lid avoids any collision risk with gripper and pipetting head.
- **Smooth removals of plates:** The plate ejection bars are easily exchangeable to accommodate full-, semi-, and un-skirted PCR plates.
- **Pipetting between cycle steps:** Outstanding temperature uniformity with open lid allows pipetting without removing the plate from the cycler mount.
- **Easy integration** with SiLA API
- **Dedicated verification tool** OVT available
- **Stand alone use** for testing without LH possible

### Top Performance

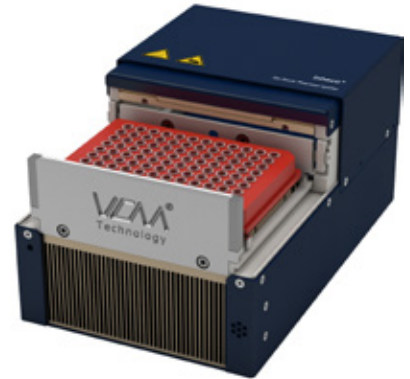
The thermal performance of the ODTC® is comparable or even better than the performance of "state-of-the-art" thermal cyclers available on the market.

The ODTC® keeps its temperature uniformity even with unequally filled wells, e.g. some full & some empty wells. This extraordinary performance is achieved by the innovative new 3D vapor chamber technology (VCM®).

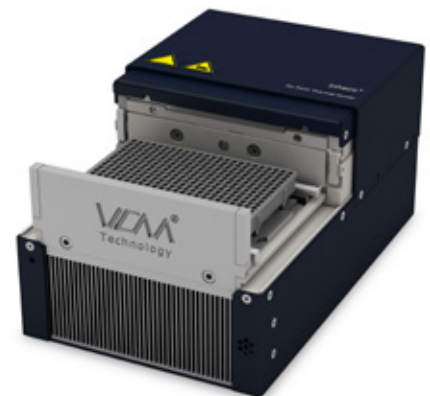
### VCM® Technology used in Disposable Contact Surface

The VCM® or "Vapor Chamber Mount" technology (patent pending) is based on heat pipe technology and is as such a further development of a standard 1D heat pipe (usually used in laptop computers) and a flat 2D vapor chamber.

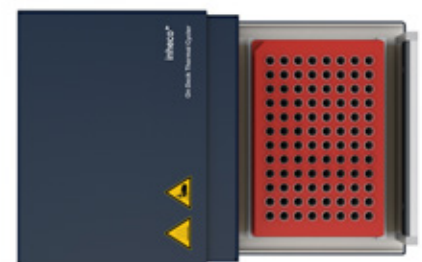
The VCM® is the first 3D heat pipe used as a super-conductive disposable carrier/mount for thermal cyclers, which provides an outstanding well-to-well temperature uniformity across 96 and 384 well PCR plates.



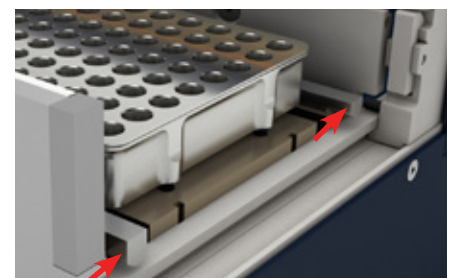
ODTC® 96 with Bio-Rad PCR plate



ODTC® 384 without a PCR plate



ODTC® top view with disposable



ODTC® plate ejection bars

## Transient Response & Faster PCR Runs

Due to the use of VCM® Technology the transient response of the ODC® is much faster than the response of state-of-the-art thermocyclers using aluminum or silver thermal blocks. All 96/384 wells are on the same temperature level right after reaching the target plateau temperature. This fast transient response allows a reduction of the plateau time and speeding up the whole PCR process.

## Main Specifications

Thermal Specifications of ODC®		
	ODTC® 96	ODTC® 384
Temperature range	+4°C to +99°C [+39°F to +210°F]	
Temperature accuracy	±0.3°C at +55°C [+131°F]	
	±0.2°C at +55°C [+131°F]	
Temperature uniformity	±0.2°C at +72°C [+162°F]	
	±0.2°C at +95°C [+203°F]	
Adjustable heating rate	from 0.1 to 4.4 K/sec	from 0.1 to 5.0 K/sec
Adjustable cooling rate	from 0.1 to 2.2 K/sec	
Heating rate average	max. 4.4 K/sec	max. 5.0 K/sec
Cooling rate average	max. 2.2 K/sec	
Heated lid temperature	adjustable between ambient temperature + 5K to +115°C	

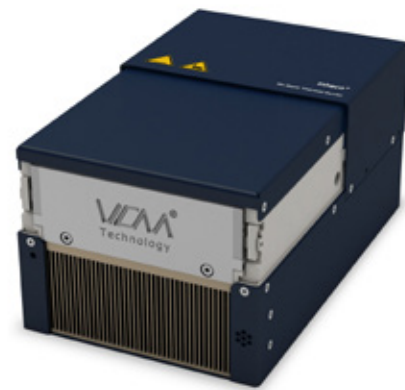
Mechanical Specifications of ODC®		
	ODTC® 96	ODTC® 384
PCR plates	- BioRad Hard-Shell® low-profile thin-wall 96-well skirted PCR plate (HSP-9xxx)	- BioRad Hard-Shell® low-profile thin-wall 384-well skirted PCR plate (HSP-3xxx)
	- 4titude FrameStar 96-PCR plate (4ti-0960/C)	- 4titude FrameStar 384-PCR plate (4ti-0384/C/IND and all color versions)
	- Hamilton 96-PCR FramePlate® (814302)	- Hamilton 384-PCR FramePlate® (814305)
	for other plates contact <a href="mailto:sales@inhenco.com">sales@inhenco.com</a>	
Plate ejection	exchangeable ejection bars, scope of supply includes bars for fully skirted PCR plates. Bars for other PCR plates on request.	
ODTC® dimensions (WxDxH)	156.5 mm x 248 mm x 124.3 mm	

Specifications of ODC® Power & Control Unit, included in ODC® scope of supply	
Interface	Web based protocol, XML files SiLA, Ethernet (RJ45 connector)
Dimensions (WxDxH horizontally placed)	256.5 mm x 414.5 mm x 58 mm Note: The ODC® Power & Control Unit can be positioned vertically or horizontally.
AC input	100-240 V / 50-60 Hz (1250W)
DC output	24 V / (1200W)
ODTC® cable length to PCU	3m

## Variants (wells and ventilation outlet)

Product	Part No.	Well	Product	Part No.	Well
ODTC® 96 Left	8100100	96	ODTC® 384 Left	8100200	384
ODTC® 96 Back	8100101	96	ODTC® 384 Back	8100201	384
ODTC® 96 Right	8100102	96	ODTC® 384 Right	8100202	384

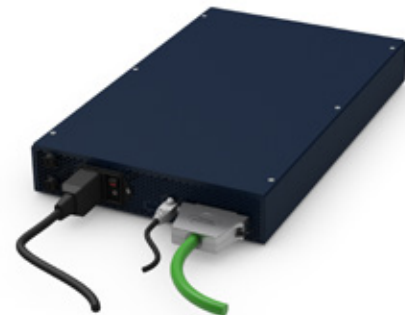
Power & Control Unit for all ODC® versions is identical.  
For optional ODC Verification Tool, see OVT brochure.



ODTC® closed



ODTC® is optimized for certain PCR Plates, e.g.: Bio-Rad low profile plate, here shown with Bio-Rad Auto-Sealing Lid



ODTC® Power & Control Unit (PCU) in horizontal position, alternative: vertical positioning of the Power & Control Unit is possible



ODTC® with OVT (ODTC Verification Tool)



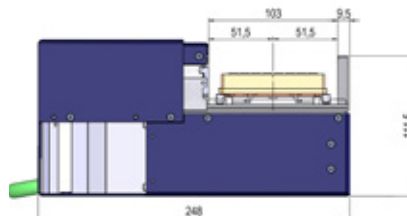
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 Germany

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## Drawings 96 & 384 Well ODT<sup>®</sup>

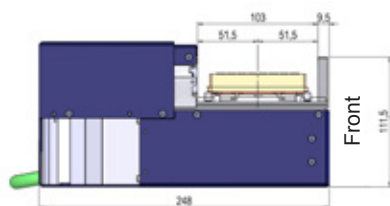


Front view & dimensions of all ODT<sup>®</sup> versions

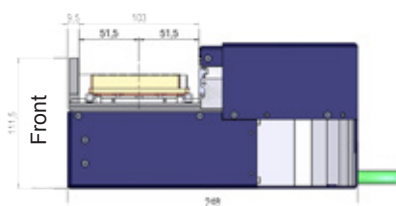


Dimensions of all ODT<sup>®</sup> versions.

## Ventilation Outlet



8100100 and 8100200: outlet to the left

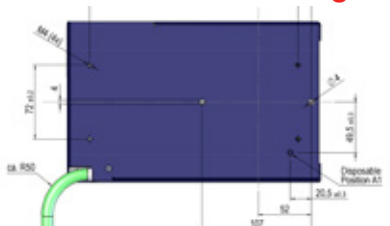


8100102 and 8100202: outlet to the right

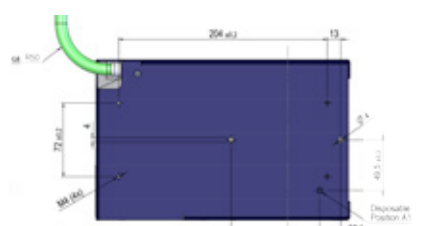


8100101 and 8100201: outlet to the back

## Cable Postion / Drilling Scheme, Bottom View



8100101 and 8100201: outlet to the back  
 8100102 and 8100202: outlet to the right



8100100 and 8100200: outlet to the left

## Order Information

The ODT<sup>®</sup> is available through liquid handling workstation suppliers. Please contact them for questions regarding integration, installation, prices, quotes, and delivery times. INHECO can provide contact details of workstation suppliers.