

Heating & Cooling



CPAC

Cold plate air cooled product line

CPAC Heating & Cooling Unit Product Line

High performance Peltier driven temperature controlled devices

CPAC Ultraflat & CPAC Microplate

Product description

CPAC (Cold Plate Air Cooled) devices are compact all-in-one heating & cooling blocks for microplates, tubes or reservoirs. They are designed for the integration into robotic workstations.

The CPAC product line is intensively used for NGS library preparations.

5 models are available which differ in temperature range, capability to frequently change temperature and deck positioning to optimize disposable height or to avoid cooling air stream on deck. The ideal model for you depends on your liquid handling workstation and on your application needs. The Ultraflat variants are installed on deck. They have a height of only 80 mm. The Microplate variants are integrated into the deck. Only their heating/cooling plates (14 mm) are above deck level, with the air ventilation systems below deck. This configuration is preferred if air streams on deck must be avoided or if the disposable is too large to be placed on the Ultraflat models.

The temperature range is from 4 °C up to 70 °C for the standard devices with one Peltier element (1-TEC), or from 4 °C up to 110 °C for the 2 Peltier models (2-TEC). The 2-TEC versions also offer faster rates of temperature change, making them the preferred option when incubation requires rapid temperature changes. Versions with single Peltier elements are recommended when assays require steady temperature levels.

Controller and accessories

For single CPAC devices, the power supply and temperature setting/control is performed through the INHECO Single TEC Control unit (STC). For multiple (up to six) INHECO heating & cooling units, an INHECO Multi TEC Control unit (MTC, with display) or MTC Compact (no display) is used and each device is controlled individually. A slot module is required to connect the CPAC to the STC/MTC.

For optimal temperature transfer, an adapter is always needed. On our website, you will find a list of existing adapter variants for a broad range of disposables with or without insulation. In case you need an adapter for your disposable, which is not yet on the list, we offer to custom design and manufacture it on request.

For heating-only solutions, please refer to the INHECO HeatPAC. For dedicated thermal cycling with rapid temperature changes, please refer to the INHECO ODTC®. For liquid cooled solutions, we refer to the INHECO CPLC.



CPAC Ultraflat HT 2-TEC, 7000166



CPAC Microplate HT 2-TEC, 7000163



MTC Compact, 8900029
Multi TEC Control (MTC), 8900030
Single TEC Control (STC), 8900031

Product	Part No.	Peltier Elements	Frequent temperature changes	Robotic installation
CPAC Ultraflat HT 2-TEC ¹⁾	7000166	2	Yes	on deck
CPAC Ultraflat ²⁾	7000190	1	No	on deck
CPAC Ultraflat HT 2-TEC DV ^{1) 3)}	7000165	2	Yes	on deck
CPAC Microplate HT 2-TEC ¹⁾	7000163	2	Yes	inside deck or ALP
CPAC Microplate ²⁾	7000179	1	No	inside deck or ALP

1) CPAC HT 2-TEC devices are optimized for high target temperatures with occasional temperature changes within minutes.

For rapid cycling within seconds, please refer to the INHECO ODTC®

2) Standard 1-TEC CPAC devices are designed to maintain a constant target temperature

3) Waste air down vent to avoid heating-up the deck, deck cut-out required. Please check effects of below-deck air flow

Main specifications

Specifications	7000166/7000165	7000190	7000163	7000179
Accuracy at 37 °C target temperature*	±0.3 K	±0.3 K	±0.3 K	±0.3 K
Uniformity at 37 °C target temperature*	±0.5 K	±0.5 K	±0.5 K	±0.5 K
Temperature range	4 °C to 110 °C	4 °C to 70 °C	4 °C to 110 °C	4 °C to 70 °C
Required slot module	black	blue	black	blue
Ambient temperature	15 °C to 32 °C	15 °C to 32 °C	15 °C to 32 °C	15 °C to 32 °C
Dimensions W x D x H (mm)	89 x 129 x 80	89 x 129 x 80	89 x 129 x 113	89 x 129 x 113

* Data refer to flat bottom plates at 22 °C ambient temperature, measured with INHECO IMP verification tool

The CPAC product line is integrated within a large number of established Lab Automation systems, such as:

CPAC Ultraflat

Agilent: Bravo, Encore Multispan, BioCel
 Hamilton: Star Line, Nimbus, Vantage
 PerkinElmer: JANUS, Multiprobe II
 Tecan: Freedom EVO, Genesis, TEMO, Fluent
 Beckman: Biomek 3000, 4000 i-Series

CPAC Microplate

Beckman: Biomek FX, NX, i-Series
 PerkinElmer: Sciclone, Zephyr
 Protodyne: BioCube



Heated Lid, 8900033

Heated Lid

The Heated Lid can be used as an extra add-on heater in addition to the CPAC (or Heat-PAC), to increase heating rates, to improve temperature uniformity (especially for deep well plates), and to enable longer duration incubation. The Heated Lid prevents condensation at the top of the plate, and reduces evaporation losses without the space consumption of a dedicated incubator. The Heated Lid has a flexible cable and only weighs 420 g, allowing most gripper systems to transport it, yet it is heavy enough to seal the plate. Thus, a fully automated process is possible with the Heated Lid.

Product	Part No.	Temperature range	Dimensions W x D x H (mm)
Heated Lid	8900033	ambient +5 K to 115 °C	134 x 91 x 19



INHECO Measurement Plate (IMP), 7901000

Verification plate

INHECO offers a compact and precise measurement plate (IMP) in ANSI/SLAS (formerly SBS) format for verification of temperature and/or shaking performance. The IMP can be used on heating, cooling, shaking devices and inside incubation chambers. Please Refer to the IMP brochure for more information.

Product	Part No.	Dimensions W x D x H (mm)	Weight	Temperature range
IMP	7901000	87.5 x 128 x 14.9	100 g	4 °C to 60 °C

Accessories

Product	Part No.
MTC Compact	8900029
Multi TEC Control (MTC)	8900030
Single TEC Control (STC)	8900031

Product	Part No.
Black Slot Module (2-TEC units)	2400125
Blue Slot Module (1-TEC units)	2400128
Heated Lid	8900033

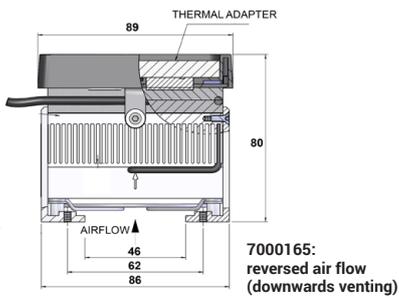
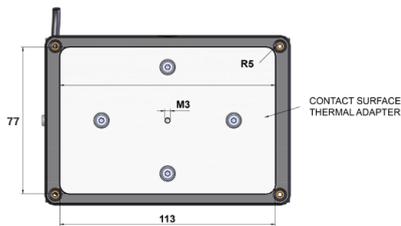
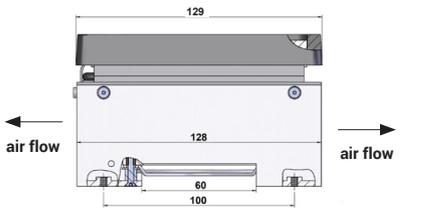
Adapter plates*

Product	Part No.
Flat Bottom adapter	7900016
Micro Plate 96 PCR	3200203
Micro Plate 384 PCR	3200204

* Over 100 adapters are available for perfect fit of a wide range of disposables on www.inheco.com. We also customize upon request.

Visit us on www.inheco.com

Drawings CPAC Ultraflat 7000166, 7000190, 7000165



FIXATION THREAD M4

Drawings CPAC Microplate 7000163 (7000179)

