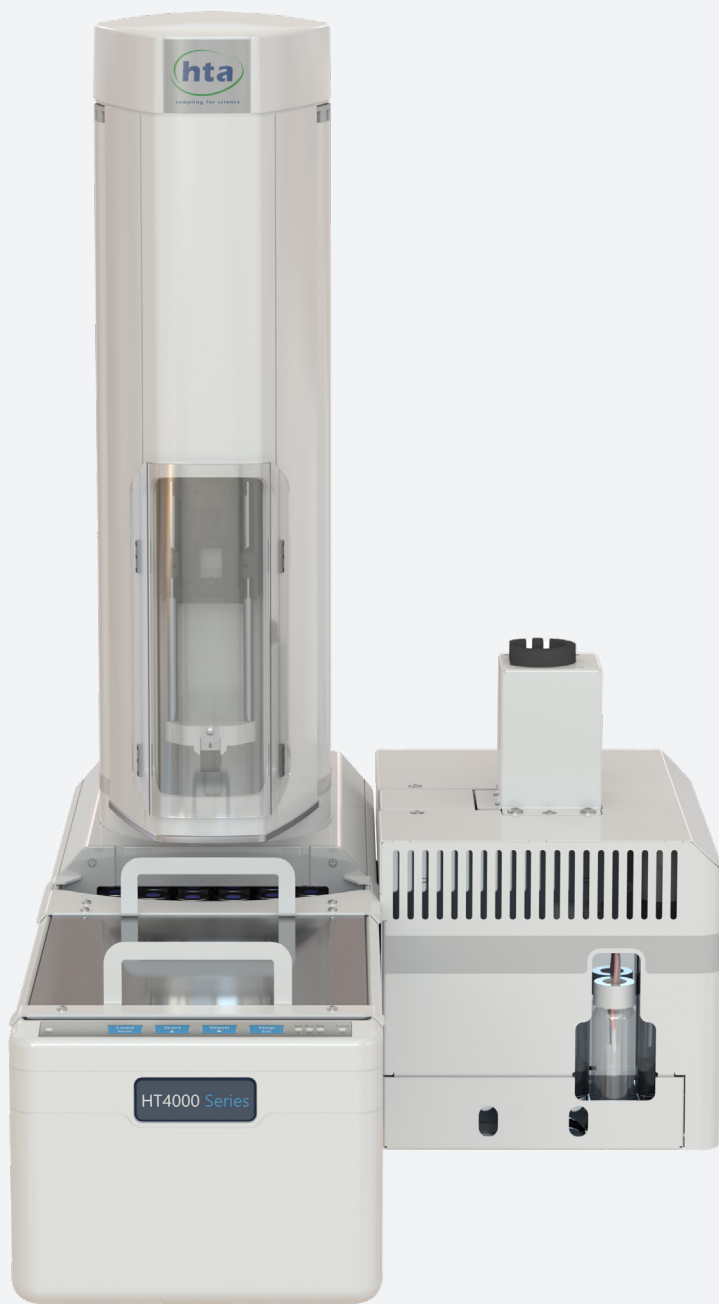




DYNAMIC HEADSPACE AUTOSAMPLERS

HT4000H



ROBUST, RELIABLE AND SENSITIVE

The **HT4000H** combines the **robustness and reliability** that have always distinguished HTA autosamplers, with the **sensitivity** of the dynamic headspace sampling (DHS).

HTA dynamic headspace autosamplers are typically associated with **electronic noses**, Ion Mobility spectrometers (**IMs**) or **micro-GCs**, for which assure a **true walk-away automation**.

OPERATIONS: HOW IT WORKS

The robotic vial processing operation allows sample analysis in a straightforward and systematic way. The sample vial is transported from the rack into the heated oven, where the **sample is simultaneously heated and shaken** to facilitate the state change and to reach equilibrium. After a defined time, when the analyser is ready, the **double-needle set** is inserted into the vial at the set depth. The headspace is continuously flushed with an inert sample gas that is routed through the appointed analyser by the dedicated transfer line.

At the end of the sampling phase, the autosampler removes the needle pair from the sample vial, that is subsequently brought back to its original position in the rack.

The autosampler can even bring the sample preparation forward. In particular, if this is allowed by the combination of analysis time, incubation time in the autosampler oven and sampling time in the vial, the autosampler will take automatically care of loading the next sample vials in the oven. This way, the incubation of the following vials starts during the analysis of the previous one.

KEY FEATURES:

- **Robustness, reliability, and sensitivity**
- **Includes all you need for most demanding and trace applications**

EFFICIENT DESIGN AND RELIABLE TECHNOLOGIES

The **HT4000H** model includes **66 positions for 20ml vials**, representing the ideal solution for high throughput laboratories. Samples in the tray are protected by a cover that allows to preserve samples from dust.

The **heated oven accommodates 8 samples simultaneously** allowing to maximise the sample overlap for the highest productivity.

During sampling operations, a

pressure relief system is activated automatically if the carrier gas pressure exceeds the maximum pressure for assuring the maximum safety.

A dedicated **valve** is used to connect alternatively the flushing needle to the carrier gas source or to the waste line. In particular, during the needle's exposition into the sample vial, the flushing needle is connected to the **gas source**. During the non-sampling phase, instead, the needle is connected to the **waste line** (composed by a dedicated waste vial and an apposite waste connector).

USER INTERFACE: KEYPAD AND SOFTWARE

From the **autosampler keypad** you can perform basic service operations such as needles' replacement or sample loading.

For anything else, the autosampler is operated via a PC. For **setup and service**, we include the software "**HTA Autosampler Manager** (Standard Version)" for free, while **for sample processing the autosampler should be integrated in your own software**.



Vial loading in the oven



Vial heating and shaking



Vial unloading after sampling

TECHNICAL SPECIFICATIONS

General features

Tray capacity:	66 vials, 20ml (1 removable rack)
Electrical control:	LAN and TTL
PC ¹ :	Required for operations, installation and service

Analytical parameters

Oven positions:	8
Oven temperature:	off; 40-220°C
Shaking method:	suissultatory
Shaker speed:	from very low to very high
Shaking cycles:	on/off 0-9.9min
Secondary temperature control:	off; 40-220°C for needle or transfer line

Physical features

Dimensions (WxHxD) ² :	690x420x705mm
Weight:	22.5kg
Power supply:	100-240±10%Vac; 50-60Hz; 160W

Pneumatics (Gas)

Carrier gas:	Inert gas
Max pressure:	50 PSI
Connection:	Swagelok type
Needle's gauge:	22

¹For PC specifications refer to "HTA Autosampler Manager" flyer

²Without accounting the transfer line

HT4000H, being dedicated to the most demanding applications, is customized for each project. In the base version, the transfer line is not provided, although it is required to operate the instrument.

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