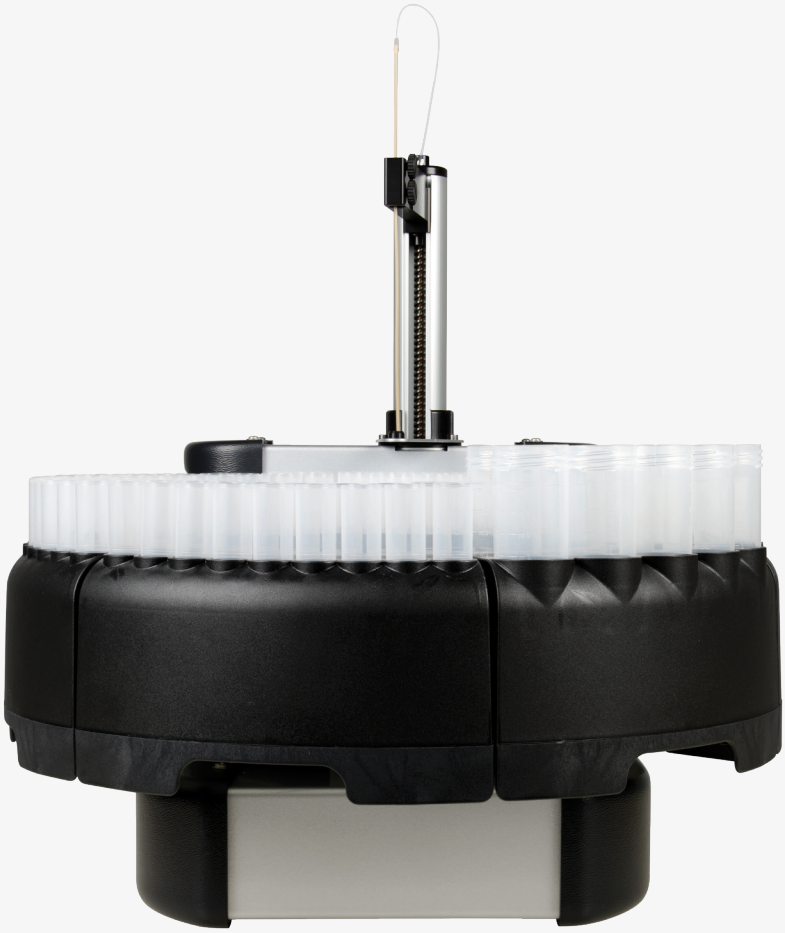
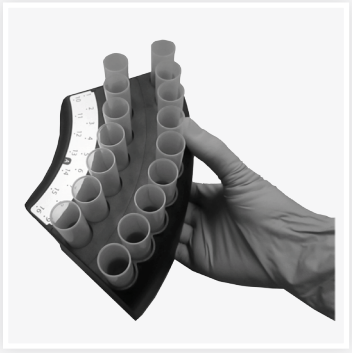
HT1000I

ATOMIC SPECTROSCOPY AUTOSAMPLER: ICP-OES, ICP-MS, MP-AES, FLAME AAS





HT1000I is compatible with a wide range of spectroscopy applications, including **ICP-OES, ICP-MS, MP-AES** and **FLAME AAS**.

HT1000I **offers easy setup and operation**: for line priming, end-of-session washes and setup it features an integrated keypad, while for sample processing it can be controlled by the most popular ICP and AAS software.

The carousel and the arm – that holds the sample probe – rotate in order to align the first sample tube to be processed. The probe is then inserted at the **programmable depth**; at that point, the sample is aspirated by the analyzer through the **inert flow-path**.

As soon as this task is completed, the probe is automatically moved to the **washing port** where the washing pump **cleans the sample probe internally and externally** in order **to avoid the cross contamination**. HT1000I is then ready to process the next sample!

KEY FEATURES:

- **Next generation electronics**
- **Optimized layout & short flow-path**
- **Removable racks for continuous feeding**

NEXT-GENERATION ELECTRONICS: THE AGE OF SMARTER AUTOSAMPLERS IS ALREADY HERE

Up-to-date technologies run HT1000I. We have utilized our experience with chromatography autosamplers to make HT1000I the smartest autosampler in the spectroscopy market.

While almost all competitors target an XYZ position in the deck, instead we target and check – by an **encoder-driven solution** – that the position is effectively reached. This **prevents the time-based drift** effect you may have experienced with other systems, and allows HT1000I – in case an obstacle is faced – to safely complete the operations as soon as the obstacle is removed.

A powerful ARM processor runs HT1000I, allowing support of sophisticated algorithms – such as the **automated calibration procedure**, the management of external stresses and **automatic recovery** – while minimizing the electric consumption.

OPTIMIZED LAYOUT: TO SAVE BENCH SPACE AND REDUCE COSTS

When you look at autosamplers, automatic sample changers or any other automation equipment, the larger it is, the more expensive it is. By surveying labs in many countries, we have sized HT1000I to offer **enough sample capacity to satisfy the needs of a standard lab**.

Oversized instruments lead to oversized costs: at the initial purchase, during operations – as detailed below – and at maintenance – being more expensive to care about. Therefore, choosing the correct size is the best way to optimize your total cost of ownership.

Our autosampler layout allows us - unlike our main competitors – **to move the sample rack instead of moving only the probe to the sample position**. As a consequence of this, we have minimized the transfer line: we typically run with a sample transfer tube 0.5 meter shorter than that of our competitors! That leads to a shorter sample rinse time, simpler/faster cleaning step and reduced bench space occupation: expect reduced argon and power supply consumption; expect longer lifetime of consumables like the tubings, the spray chamber and the torch as the contact time with the sample (matrix) is kept on a minimum level.

SAMPLE CAROUSEL: DESIGNED TO FIT YOUR ROUTINE

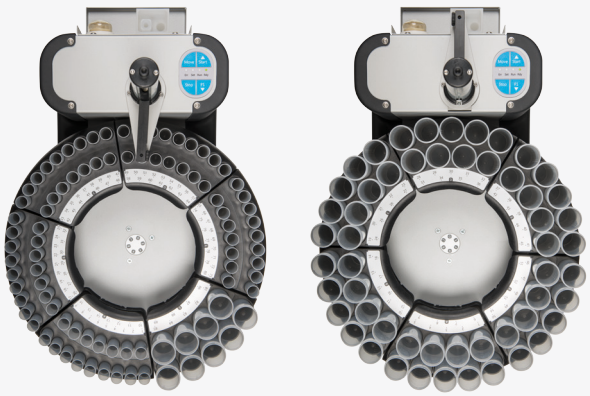
The sample carousel is organized in six racks, each of which may run a different type of sample tubes from those available. Therefore you may designate one rack for standards and control samples using large 50ml tubes, while using smaller tubes in the other positions racks to maximize capacity.

Racks are removable in order **to support off-instrument sample preparation and continuous sample feeding**. Furthermore, the **racks are recognized so that a mismatch is not possible** (e.g. putting rack #2 in the position of rack #3) to comply with the best lab practices.

USER INTERFACE: KEYPAD AND SOFTWARE TO ENABLE A SUPERIOR USER EXPERIENCE

From the **autosampler keypad** you can perform all the operations that would be more convenient to do when in front of the autosampler, such as **sample loading, peristaltic pump priming, sample probe installation and extra washing** that you may require at the beginning or end of your analysis session. The four integrated LEDs offer an easy visual indication of the autosampler status and PC connectivity.

For anything else, HT1000I is operated via a PC. For **setup and service,** we include the software "**HTA Autosampler Manager** (Standard Version)" for free, while for **sample analysis HT1000I can be integrated with most common analyzer software packages,** after installing the communication driver (also included for free).



TECHNICAL SPECIFICATIONS

General features

Maintenance:	Preventive counters available
Electrical control:	USB 2 Relays, 2 Auxiliary inputs
PC[1]:	Required for operations, installation and service
Required PC ports:	1 USB (standard configuration) 2 USB and 1 RS232 (special configurations)

Washing

Rinse station:	Included
Peristaltic pump:	Included, depending on model

Physical features

Dimensions (WxHxD)[2]:	355x380x560mm
Weight:	8kg
Power supply:	100-240±10%Vac; 50-60Hz; 15W

Carousel

Number of racks:	6 (removable)
Rack type:	16 tubes - 10ml (16x100mm) 9 tubes - 50ml (30x115mm)
Featuring:	Rack polarization Flexible position assignment Random access Priority samples

Tube capacity (Sample/ Standard)

HT1001I/HT1101I/HT1103I:	80 (10ml) + 9 (50ml)
HT1002I/HT1102I/HT1104I:	54 (50ml)

[1]For PC specifications refer to "HTA Autosampler Manager" flyer
[2]Without accounting sample probe

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