T&O LABSYSTEMS

ATRAS

Bulk Loader and Sorter:
Cost-effective optimization of the sample reception area

Benefits

ATRAS optimizes the sample reception area efficiently and cost-effective

- Early registration of sample tubes
- Employees can focus on value adding activities

ATRAS improves process quality and reduces turn-around time

- Early identification and separation of samples in question
- Fast and reliable

ATRAS organizes pre-analytical sorting of hematology samples

- Direct sorting of hematology samples in bulk or racks (ATRAS RS)
- Significant reduction of samples for further pre-analytical processing

System description

ATRAS is characterized by a **clear structure**, **intuitive handling** and **low maintenance. High quality** and almost **wear-free parts** ensure the device's **reliability** and **durability**. Due to its **modular design** ATRAS provides an ideal **solution for diverse laboratory requirements**.

Sample registration
Sample tubes are registered via two barcode scanners for a fast and reliable sample tube identification.

Cap-color identification
A unique, in-house developed spectrometer identifies the cap-color of every single tube enabling a plausibility check between tube type and corresponding barcode.

Sorting rules
Sorting of tubes occurs by customer-defined rules based on cap-color and/or barcode information or by LIS-transmitted rules. Wipers smoothly guide the tubes into target bins.

User interface
Intuitive and simple operation via colored touchscreen.

SIQ-bin
External bin for samples in question.

Tube separation
A conveyor chain separates the sample tubes smoothly and reliable.

Bulk loader
Easy and continuous sample loading in bulk, with a capacity of up to 600 tubes.

Sorting to target bins
Illuminated target bins can be removed any time during the sorting process due to an automatic stop function. The target bins hold about 150-200 tubes and are equipped with a light barrier that controls the arrival of assigned samples and prevents overloading.

ATRAS *bulk-to-bulk registration and sorting*

Sample tubes are inserted in bulk, registered and sorted based on barcode and/or cap-color information. Registration is done by two barcode readers ensuring reliable specimen identification at high throughput. An adaptive and uniquely precise, in-house developed spectrometer enables the verification of a sample tubes cap-color and its corresponding barcode, detecting and sorting out false or unlabelled specimen at the earliest possible stage. Sorting rules can be set-up as required and adjusted easily, so ATRAS can communicate directly with the LIS or work independently as a stand-alone device. The continuous tracking of all sample tubes during the entire process from registration to sorting guarantees safe and reliable handling of all specimen to increase overall process quality.

- Througput: 2000 tubes/h
- All common sample tubes
- 6-10 target bins*
- External SIQ-bin
- Expandable by rack modules

*The number of target bins can be increased almost indefinitely through expansion modules.

ATRAS RS *bulk-to-rack registration and sorting*

Expanding the bulk-to-bulk sorting by bulk-to-rack sorting the ATRAS RS goes one step further in the direction of full laboratory automation, therefore being particulary suited for highly automated laboratories with a high sample-throughput.

Thanks to an intelligent software control and a buffer inside every rack module, ATRAS RS operates highly efficient achieving a throughput of 500 tubes/h per rack module.

- Arbitrary combination of rack and bulk modules
- Intelligent software control for efficient processing
- Throughput: 500 tubes/h per rack module
- All common racks

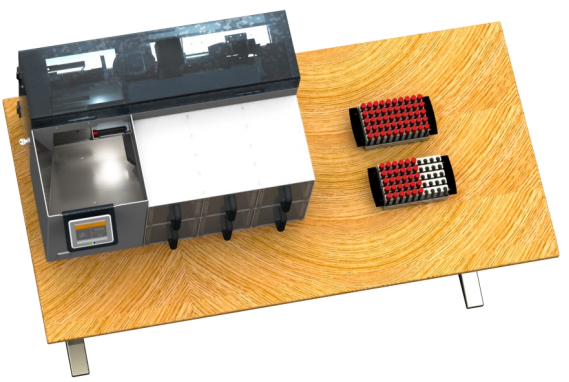
The modular design allows any combination of bulk and rack modules.

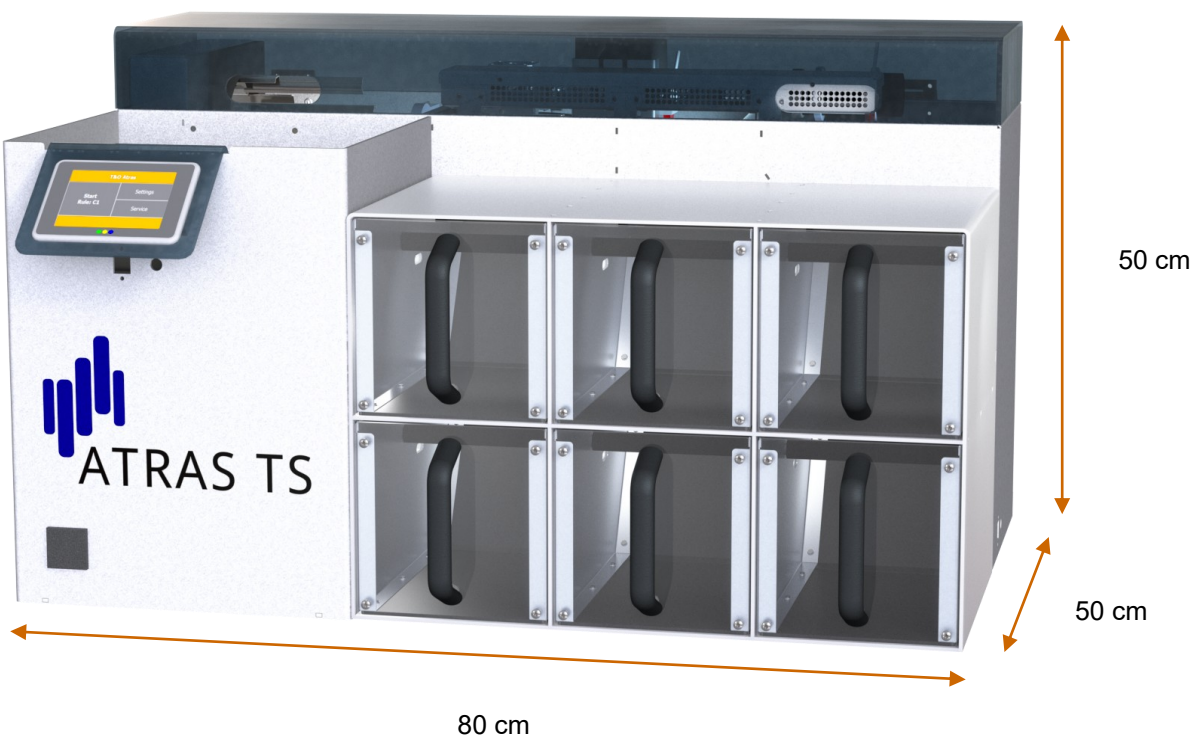
ATRAS TS *bench-top device for registration and sorting*

ATRAS TS is a small and compact benchtop version of ATRAS providing the same functionality at lower investment costs.

Due to its small size the device is the perfect automation solution for smaller laboratories with low to medium throughput requirements. ATRAS TS can be used for recursive sorting to further optimize sample workflow in the laboratory.

- Compact design, small footprint
- Throughput: up to 1200 tubes/h
- Intuitive and simple handling
- All common sample tubes
- Bulk input capacity: 400 tubes





Service

You have a question? Give us a call. Spare parts? Already on their way. We care for our partners!

The ATRAS series by T&O - low maintenance , simple service, unbureaucratic help.

Our service concept focuses on local customer support and aftersales service provided by all distributors. We support all distributors in the best possible way. In order to perform the tasks, all required information and help is provided by T&O LabSystems:

- **Servicetraining**
  We offer an intensive service training. During the class the entire device is explained, including exercises for troubleshooting, error recovery and software operations.

- **Cloud for information**
  In a proprietary cloud, crucial information and tools are provided to each distributor. The latest news, updates and best practices can be found here.

- **Third level support with personal contact**
  We offer a third level support for any issues, which means there is a direct contact at T&O LabSystems. We take every note and every request seriously and work hard to offer the solution as fast as possible.

- **Initial installation**
  The personal contact supports the distributor on site at the first installation.

Contact

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T&O

Who we are

We are a family-operated developer and manufacturer of laboratory automation solutions located in Hamburg, Germany. T&O was founded by our general manager Tom Lorenzen in 2009, who runs the company together with his sons Dave, who supports his father in the general management and Dennis, who is responsible for the software development. Engineers, technicians and economists complete the young interdisciplinary team of T&O, working highly motivated in a familiar atmosphere, driven by innovation, to improve pre-analytical processes in clinical laboratories.

Status quo

Establishing flat hierarchies, as well as a team-oriented business culture, has been a key factor for a constant and sustainable growth. With more than 100 installed systems in different countries all over the world, T&O can look back at successful market entries in close cooperation with well-known companies like SIEMENS, GBO or Roche PVT. We consider ourselves as a reliable partner aiming to build up long-term relationships with our partners.

Moving foward

We are not there yet: Targeting on futher expansions, we are constantly looking for cooperation and distribution partners to expand and promote our product portfolio and enter new markets.

Contact

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Technical specification: ATRAS, ATRAS RS

Construction

Dimensions (W x H x D)	1100-1500 (3-5 Modules) x 1140 x 600 mm
User interface	Touchscreen, colored
Barcodes	All common 1D-barcode types
Cap-color detection	Cap-color identification via spectrometer (CapID)
Sorting modes	Stand-alone or via LIS communication
Sorting basis	Barcode, cap-color
Target bins	Up to 5 modules with 10 target bins, 1 external bin for samples in question
Capacity	Input module: 400-600 tubes, target bins: 100-200 tubes
Throughput	1800-2000 tubes/h under normal conditions
Weight	App. 140 kg. / 310 lbs.

Electricial/Connections

Supply voltage	AC 100-240 V / 50-60 Hz
Consumption	App. 200 VA
LIS connection	Ethernet, RJ45
PC connection	Ethernet, RJ45

Rackmodule

Consumption	Additionally 50 VA per rackmodule
Throughput	App. 500 tubes/h per rackmodule
Racks	Common rack systems, max. size: 120 x 300 mm (W x D)
Features	Barcode alignment

Technical specification: ATRAS TS

Construction

Dimensions (W x H x D)	800 x 500 x 500 mm
User interface	Touchscreen, colored
Barcodes	All common 1D-barcode types
Cap-color detection	Cap-color identification via spectrometer
Sorting modes	Stand-alone or via LIS communication
Sorting basis	Barcode, cap-color
Target bins	6 target bins, 1 external bin for samples in question
Capacity	Input module: app. 400 tubes, target bins: 100-120 tubes
Throughput	1200 tubes/h under normal conditions
Weight	App. 50 kg. / 110 lbs.

Electricial/Connections

Supply voltage	AC 100-240 V / 50-60 Hz
Consumption	App. 200 VA
LIS connection	Ethernet, RJ45
PC connection	Ethernet, RJ45