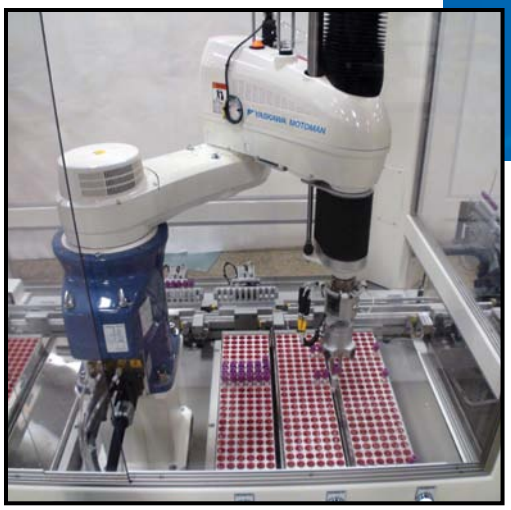
YASKAWA
MOTOMAN ROBOTICS

SOLUTIONS IN MOTION®

AutoSorter II



PRE- AND POST-ANALYTIC SPECIMEN PROCESSING

AutoSorter II is a multi-function handler for specimen sorting, with the productivity, flexibility and reliability to meet the demands of large and mid-size labs. Optimized for throughput and flexibility, AutoSorter II processes over 1,000 specimens/hour for pre-analytic sorting and post-analytic sorting/archiving.

ROBUST, INDUSTRIAL DESIGN WITH FULL SAFETY ENCLOSURE

INTUITIVE GRAPHICAL USER INTERFACE (GUI)

IMPROVE YOUR LAB OPERATIONS

- Flexibility to process multiple specimen configurations
- High sorting accuracy/specimen traceability
- Robust design and industrial components provide high system uptime and reliability
- Free your staff from non-value-added specimen processing tasks

HIGHLIGHTS

Flexibility

- Accepts most common tube sizes in mixed batches.
- Tray adaptors permit use of a wide range of instrument-specific racks as target racks, thereby minimizing “touch labor”.
- A barcode reader mounted on the gripper reads labels as tubes are rotated within the gripper, eliminating need to orient labels on incoming tubes.
- User-configurable to meet sorting needs of your lab today; easily adapts to changes as they occur.
- Sort groups may be defined for multiple setups and recalled for use as needed.
- Large sort groups can span multiple drawers/racks, while smaller groups can be combined in a single rack to efficiently use large sort deck area.
- Specimen archive consolidation is a standard function. In this mode, specimens are logged into the database by barcode, noting exact location (row/column) and rack ID for storage.
- Sort deck configuration may include drawers and/or conveyors for standalone or connected installations.

Productivity

- Motoman Robotics applied the experience gained in over 10 years of solving clinical laboratory automation needs to the design of AutoSorter II, yielding a high-throughput, labor saving process improvement tool for your lab.
- A large deck maintains increased quantities of input and output specimens to provide extended walk-away times.
- Drawer access for loading and unloading allows continuous operation while accessing input and output areas.
- STAT and other special handling functions allow discriminatory processing.

Reliability

- AutoSorter II utilizes a high-speed industrial robot for movement of specimens within the cell.
- The robot is designed and proven to provide extremely high uptime with minimal maintenance and long life.
- AutoSorter II has performed high-throughput (>1,000 specimens/hour) processing for over five years in some of the busiest labs in the United States.

AUTOSORTER II SPECIFICATIONS

Dimensions		**Specimen Formats**	
Height	2,040 mm (80.0")	Tube diameter	12-16 mm
Width	1,738 mm (68.5")	Tube height	75-100 mm
Depth	1,268 mm (50")	Mixed formats	Yes
Shipping Weight (approx.)	2,400 lbs	**Utility Requirements**	
Specimen Throughput	1,000 tubes per hour	Pneumatic	1 SCFM at 80 PSI
		Electrical	208 VAC, 3-phase, 20 Amps, 5-wire 110 VAC, 5 Amps

AUTOSORTER II

All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.

PROCESSES

Specimen Loading

- Incoming specimens are prepared for processing simply by loading them into an input rack (in random order).
  - Drawers provide access to load racks of specimens for processing, as well as to remove empty racks.
  - Input racks may be generic or instrument-specific.
- The handler picks up a specimen from the input rack and rotates it to permit reading of the barcode.
- The specimen ID (SID) is compared to a local database (which is periodically updated from the LIS) for processing instructions.

NOTE: If the SID is not found or if the barcode label is unreadable, the specimen is sorted to an "error" target for manual resolution. This occurs without interrupting processing.

Sorting Process

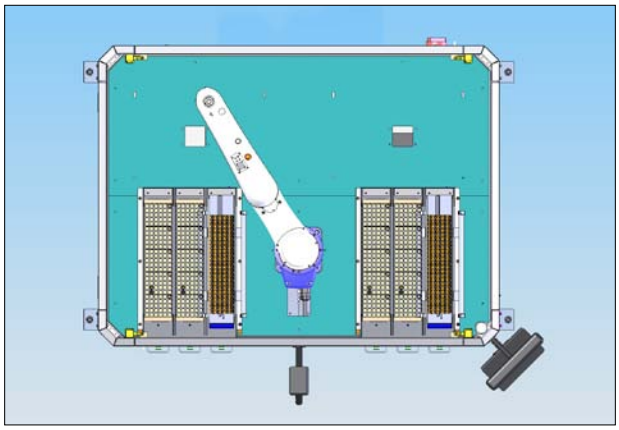
- Every specimen is sorted to one of the target output racks.
  - Output racks are arranged in drawers, permitting the use of generic and/or instrument-specific racks as targets.
  - The racks contained within the drawer may be determined and changed as necessary to facilitate specimen mix at different times of day, conversion to use of a new instrument, etc.
  - The output drawer may be accessed at any time to allow a rack of specimens to be removed.
- Specimens are tracked as they progress through the specimen processing system. Additionally the system records the target rack barcode (if provided) and row/column location.

NOTE: This tracking is very useful in providing archive consolidation of post-analytic specimens, as well as maintaining traceability of specimens through the pre-analytic sequence.

Configurability

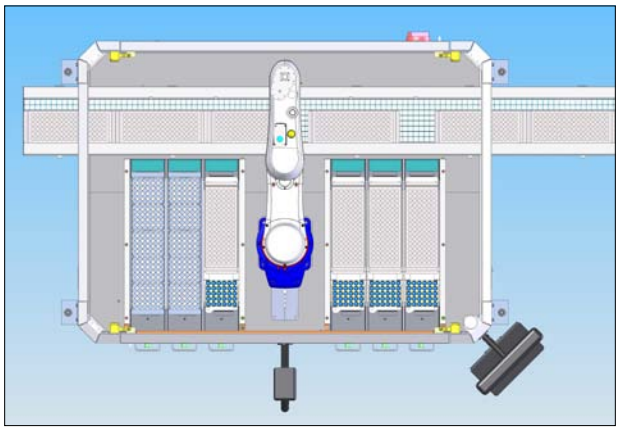
- AutoSorter II is equipped with a configurable deck that can be populated with drawers or flow-through conveyors (or a combination of both) to feed specimens into the sorter and present racks for sort targets. A standard drawer may be equipped with an insert (standard designs are available) to fixture many popular instrument racks as well as generic racks and trays. Up to six drawers provide capacity of 900 tubes, or greater with flow-through conveyer rack handling. Special configurations are available to accommodate large instrument racks (i.e. Siemens LabCell).
- AutoSorter II may operate as a "stand-alone" sorter or as one in a series of processing stations in a conveyorized line (pre-analytic or post-analytic). Motoman Robotics offers a puck-based, modular specimen transportation solution that may be configured to include the appropriate number and type of processing instruments (AutoSorter II and other Motoman or 3rd party) to meet the needs of your lab.

DECK LAYOUTS



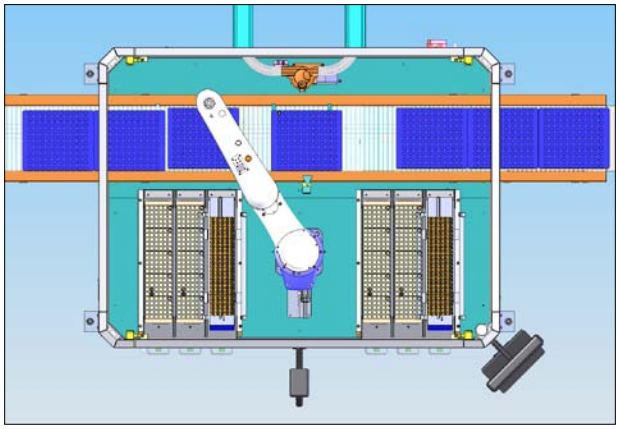
Standalone

- Drawer loaded
- Drawer unloaded



Standalone

- Drawer loaded
- Drawer unloaded
- Also conveyorized high-volume target



Integrated

- Conveyorized specimen delivery (input)
- Drawer unloaded

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