

PathFinder™ 900 Plus

Taking the stress out of managing your samples



PathFinder™ 900 Plus

Brooks' PathFinder™ 900 Plus is a high speed robotic workstation designed for the busy pathology laboratory which automatically processes and manages the distribution of sample tubes ready for analysis or storage. The system automates a number of manual processes including:

- Loading and unloading of specimen tubes in generic or analyzer sample racks
- Determining the patient id and sample type of each presented tube
- Decapping of primary tubes
- Preparing and labeling of secondary tubes
- Aliquoting sample from a primary tube into one or more labeled secondary tubes
- Capping of secondary and primary tubes
- Sorting of tubes into different destination racks
- Interfacing with the LIS

While sophisticated in design, the day-to-day use of the instrument is simple and intuitive.

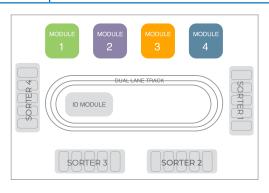
Unique Modular Design

The PathFinder™ 900 Plus is a truly modular system with a number of modules arranged around a two lane conveyor track.

Each module is dedicated to a specific function and sample tubes are transported around the system between modules in pucks. The basic system includes four sorter modules and a sample tube ID module with the facility to accommodate up to four function modules as shown in the schematic diagram below.

The different function modules that can be fitted to the system are:

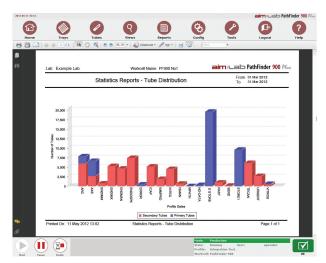
Position	Function Module
1	De-capping or Capping
2	Secondary Tube Preparation
3	Aliquot (also decaps the primary tube)
4	De-capping or capping



The flexibility in the design allows the system to be customized to suit the workload of your laboratory. For example, if presented tubes are to be aliquoted into secondary tubes, the system is equipped with a Secondary Tube Preparation module and an Aliquot module. To increase the decapping throughput or to decap tubes without aliquoting, a Decapping module can be added. Finally, to selectively foil cap secondary tubes or re-presented uncapped tubes, a Capping module can be installed in the remaining function module position.

Easy-to-Use Software

- Dynamic interface that updates system status in real time
- Full management and workflow reporting
- Workflow productivity graphs and statistics
- · Ability to track, search and locate tubes on request
- · Complete customization of work area and tube types
- Web based technology which allows multiple PCs to use the same interface
- · In-built user diagnostics with pop up help screens
- Available in different languages

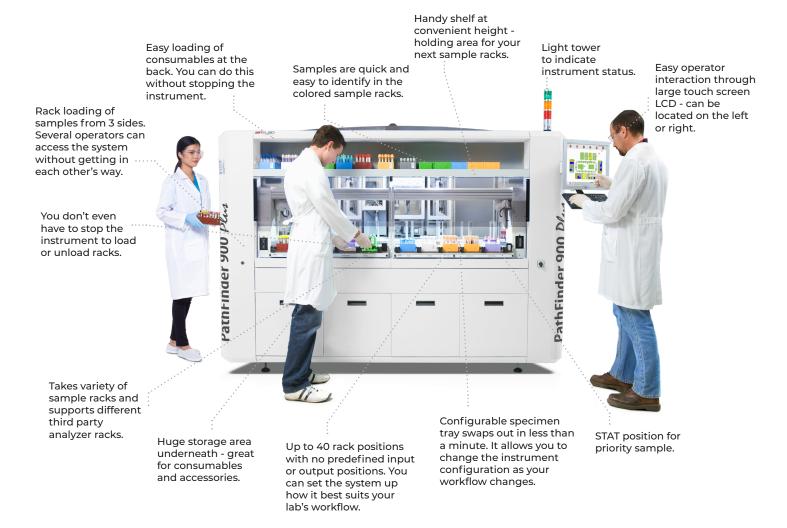


Key Features

- · Full clot detection.
- Processing capped or uncapped primary tubes.
- Capping a primary tube with its original cap or a foil cap.
- Foil capping of secondary tubes to IATA* requirements for air transport.
- · Multiple aliquots per primary tube.
- Ability to manage multiple tubes of the same type with the same barcode.
- Optional alignment of tube bar codes in analyzer destination racks.
- · Optional liquid volume detection.

* IATA packing standard p650

Lab Automation Made Easy



Key Benefits

- Improves laboratory workflow and sample Turn Around Time
- Minimizes manual handling errors and decision steps
- · Decreases biohazard exposure
- Reduces lost or misplaced tubes
- · Reduces RSI injuries
- Assists in tracking samples as they move through the laboratory
- Free up lab staff for more productive work

Applications

- Automated aliquoting and distribution of secondary tubes
- Automated decapping and distribution of decapped primary tubes
- Recursive distribution of samples based on test priority
- Auditing test panel completeness
- Capping and archiving of samples into low cost storage racks
- Foil sealing and sorting of prepared "send out" tubes ready for transport

Flexibility

The PathFinder™ 900 Plus has been developed with flexibility as an essential design criteria. Sample racks can be loaded or unloaded from the front or either side of the instrument onto easily configurable specimen trays. Any rack position (and there can be up to 40 in total) can be set up as either an input or output position giving ultimate flexibility in the layout. As a result, the instrument can be configured specifically to optimize the workflow based on both the workload and layout of your laboratory. Several operators can access the system at the same time without getting in each other's way.

User-Centric Design

The flexibility also characterizes the way the system processes samples. Tubes can be directly picked from or placed into different analyzer racks or low cost PathFinder™ automation racks. PathFinder™ racks are conveniently available in different capacities and colors and make ideal destination or storage racks. Operators are alerted to empty input racks or full output racks as soon as they need replacement. Even partially filled racks can be replaced at any time without stopping the instrument and impacting throughput. The system layout can be changed in a matter of minutes as the workload changes throughout the day.

Compact Size

With a footprint of only 2.5m x 1.4m (8.2' x 4.6') and a working area that allows operator access from both the front and the sides, the PathFinder $^{\text{TM}}$ 900 Plus is compact in size for the functionality and flexibility it offers. The component modules fit through a standard doorway so the system can be subsequently assembled on site with minimal disruption to existing infrastructure or the laboratory layout.

Parallel Processing

The dual track design allows parallel sample processing to improve overall efficiency. Samples that require only sorting will bypass sample queues for aliquoting and capping. The PathFinder™ 900 Plus workcell controller monitors the input workload to automatically optimize the work directed to each module. This workload balancing capability ensures maximum throughput performance of each module is maintained under varying workloads.

PathFinder™ 900 Plus Specifications

Throughput

- Up to 1,200 sorted tubes/hour (sorting only)
- Up to 1,000 decapped tubes/hour (decapping only)
- Up to 1,100 foil capped tubes/hour (capping only)
- Up to 560 total tubes/hour decapping and aliquoting (1 primary: 3 secondary)

Sample ID

- · Positive barcode identification
- Tube type recognition

Presented Tubes

- Handles most standard sample collection tubes from major tube manufactures
- · Diameter: 12 16mm
- · Height: 63mm -120mm (depending on rack)

Rack Types

- PathFinder™ racks 20, 50, or 128 well sample racks, available in different colors
- Choice of rack adapters for loading different analyzer racks
- · Stat/error rack

Sorting Area Capacity

- · Up to 1,016 samples (16mm OD tubes)
- Up to 2,064 samples (13mm OD tubes)

LIS Interface

 CLSI/NCCLS LIS1-A (ASTM1381-95) and LIS2-A (ASTM1394-97), bi-directional (TCP/IP or File Transfer)

Dimensions

· 2.5m (8.2') L x 1.4m (4.6') W x 1.8m (5.9') H

Power Supply

· 220 - 240VAC, 50 - 60Hz, 2400W

Operating Temperature Range

· 10°C - 35°C (50°F - 95°F)

Utilities Required

- Power
- Network Point
- Compressed Air

Certification

- Designed and manufactured in accordance with ISO13485
- Meets 2014/30/EU,2014/35/EU, REACH, RoHS.

