



Hudson Robotics Inc
10 Stern Ave
Springfield, NJ 07081
+1-978-376-7400 · +1-973-376-8265 (fax)

RapidPick-SP Features Document

The RapidPick-SP (Single-Pin) Colony Picking System is now available. The system can be easily upgraded into many of the configuration of the RapidPick-MP (Multi-Pin) instrument. The RapidPick-SP is presently available as a standalone system unless otherwise requested.

- Universal specifications
 - All RapidPick-SP systems can automated plate loading and unloading of both source and destination plates with a single robotic arm.
 - All RapidPick-SP Systems come standard with software for colony picking, cherry picking, re-arraying and plate replication.
 - All RapidPick-SP Systems come standard with software for picking from a segmented plate
 - All RapidPick-SP Systems come standard with the ability to interface with additional software packages like LIMS or a sample management database such as Titian.
 - All RapidPick-SP Systems come standard with the feature to save all log files, import text files and export data files about the colonies selected for picking.
 - All RapidPick-SP Systems can image the plate, allow off-line image processing, then return a specific plate to the picker for processing.
 - All RapidPick-SP Systems can be upgraded to image and pick halo forming colonies as well as GFP.
 - All RapidPick-SP Systems include SoftLinx scheduling software for easy integration, remote notifications and error/exception handling.
 - All RapidPick-MP Systems can be integrated with an automated incubator and multiple 3rd party devices (requires the addition of the PlateCrane EX).
 - All RapidPick-SP Systems are made in the USA.

- RapidPick-SP Single Pin Colony Picker
 - The RapidPick-SP is the ideal size for use in an anaerobic chamber.
 - The RapidPick-SP holds 1 source plate and 1 destination plate at a time
 - The system uses 1 tungsten pin on spring loaded linear slides attached to a drive for picking.
 - The system uses a LED light box with the intensity of the lights controlled in software.
 - The LED lights can be changed to different colors if desired.
 - The camera takes an image of the entire plate in a single image. No image cropping or building is required.

- The user creates parameter files for identifying good colonies. There is no limit to the number of parameter files that can be created. Good colonies are determined by size, shape, contrast to background and closeness to other colonies.
- The system gives the user the option of manually editing the plate to be picked if desired. Colonies can be selected or deselected with the click of the mouse.
- The operation of the picker is very fast and easy; scan image, analyze image, edit image and start picking.
- Typical picking speed is 1 pick every 9 seconds; 400 wells inoculated per hour
- The picking pin can pick through the agar and hit the bottom of the plate with no damage to the pin, the linear slide or the plate.
- The inoculation pin can be set to “wobble or dither” in the destination well from 1-10 shakes. This improves the inoculation efficiency to 98%+.
- The wash station is a vacuum wash to remove loose debris on the pin. After leaving the wash station the pin travels through a brush to remove anything remaining
- The pins are sterilized with direct heat. The pin enter a heater coil (furnace) at 600F for just under 1 second. The tungsten pin heats through and all sample on the pin is destroyed. The property of the tungsten allows the pin to cool before being used for picking again.
- The picker can support NUNC Omnitrays and Petri dishes for picking
- The picker supports most SBS format shallow and deep well plates for the destination or in use with plate replication; 24 wells, 96 and 384 formats.

The imaging system, picking pin and sterilization system on the RapidPick-SP is the same as the imaging system, picking pin and sterilization system on the RapidPick-MP. The differences are the plate loading and the number of pins used to pick samples.

The wash and sterilization system has been used on the picking system for over 10 years. Multiple customers have tested the sterilization of the system with PCR and there has never been an issue with contamination after the heater.

There is no need to change the pins for picking and reformatting applications. The RapidPick makes the change in software and uses the same pins. Larger diameter pins are available if desired. The standard pins transfer ~50nl of liquid. The system can be set up for multiple transfers from the same source if needed.

RapidPick-SP Automated Systems

- The system is fully compatible with Hudson’s PlateCrane EX. SoftLinX scheduling software, already installed on the RapidPick-SP is ready to go for integration of the plate handling arm and stacks. Advanced integration is also possible.
- The RapidPick-SP is small and easy to use.

- The RapidPick-SP includes a full set of API commands allowing easy control of the system by 3rd party software.
- The RapidPick-SP System offer an optional enclosure around the instruments with UV lights and a control for the sterilization time.