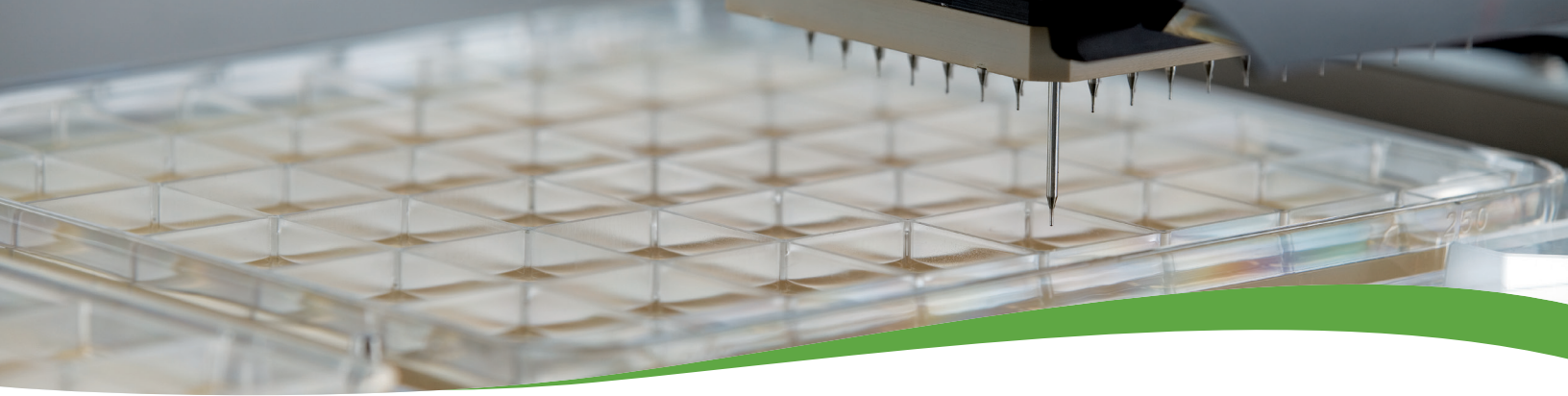


# QPix XE

## Microbial Colony Picker

With the all-new QPix™ XE, focus on discovery instead of repetitive, error-prone tasks

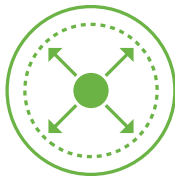


## Accuracy, precision, and quality – all in a smaller package

Although smaller than other colony pickers on the market, don't let its size fool you – it doesn't compromise on results. The QPix XE streamlines your colony picking process, allowing you to focus on discovery and not repetitive, error-prone tasks.

### So why not choose the smarter option?

Choose the QPix XE Microbial Colony Picker today and see the difference it can make in your research.



**Modular and scalable design**  
for future throughput growth  
or walk-away time



**Easy to use, intuitive,**  
process- driven software



**Compact size** saves  
high-value lab space **without**  
**compromising efficiency**



**High picking efficiency** of  
1500 colonies per hour



**Screen and pick** single colonies based  
on morphological characterization



**Automatic sample tracking**  
and data storage

## Key benefits of automated colony picking

- Screen and pick microbial colonies
- Pick 1,500 colonies per hour
- Get up and running quickly with easy-to-use, application driven software interface
- Future-proof your investment with a modular design that's automation compatible
- Track comprehensive data from start to finish
- Do more than just colony picking—plate replication and cherry picking

# Key applications

For use in synthetic biology, biotechnology, biofuels, agriculture, microbiome, environmental science, food and beverage, academia, and government research

## Protein engineering

Colony picking | Library management

Protein engineering is an iterative two-step process that involves generating libraries of protein mutants and then screening them to select for desired traits. It can be used for a wide range of applications including antibody discovery, enzyme evolution, and structural biology. The QPix XE can be used to increase the throughput of variants to be screened. Its accurate, high-speed picking protocols allow users to screen through a richer genetic library, increasing the chances of a desirable hit. Additionally, library management features provide robust sample tracking.

## Microbial strain engineering

Phenotypic selection | Colony picking  
Library management

Strain engineering is a broad term that refers to the manipulation of genetic pathways to harness the power of existing biological systems in novel ways (often to manufacture molecules or proteins). The QPix XE allows identification and selection of variants with desired characteristics in a high-throughput manner. Optional fluorescence imaging can be leveraged to prescreen colonies and automatically image and select clones of engineered microorganisms.

## Phage display

Colony picking | Library management

Phage display is commonly used to find high affinity interactions between antibodies and antigens, which play a critical role in viral pathogenesis, vaccines, and other treatments. The QPix XE can be used to increase the throughput of colonies screened, increasing the chances that you are able to identify a high affinity binder.

## Molecular cloning

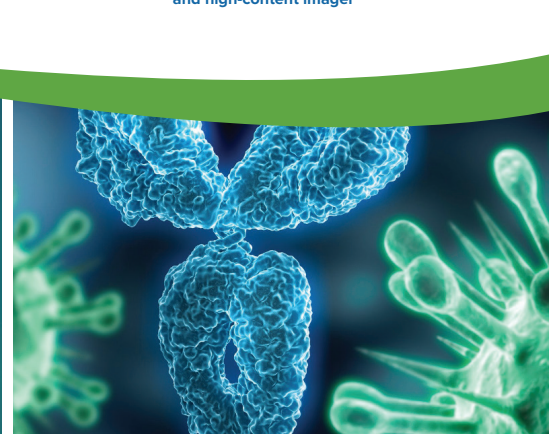
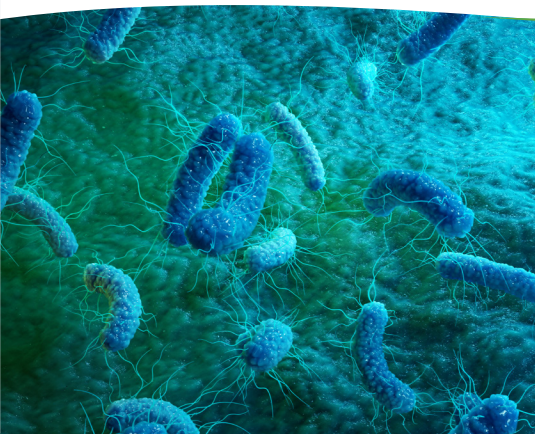
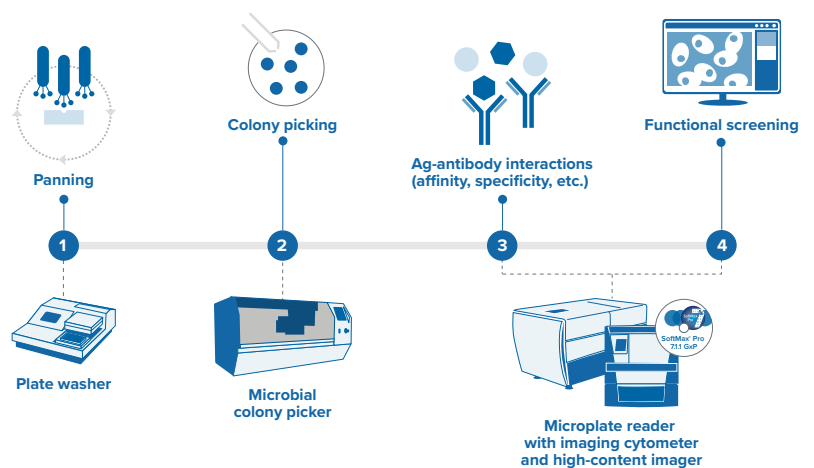
Colony picking | Library management

Molecular cloning is the assembly of DNA into a vector, leveraging *E. coli* as a host organism to produce plasmids. Using the QPix XE to automate the laborious process of colony picking frees scientists to analyze data, not perform repetitive, time-consuming tasks. Increase throughput and speed while also increasing accuracy with complete audit trail and sample tracking.

## Gene editing/CRISPR in microbes

Library management | Pooled library picking

Gene editing techniques, such as CRISPR-Cas9, have improved the ability to create precise mutant libraries, allowing scientists to explore the genome more accurately. The QPix XE makes it possible to screen a larger library than what could otherwise be done manually.



# QPix XE system specifications

## Instrumentation

Model	110V / 220V
Dimensions	QPix XE (without table): 950 mm/37in (length), 800 mm/32 in (width), 800 mm/32 in (height)
<b>Gas requirement</b>	
Type	Compressed air
Specification	Clean oil-free submicron filtration
Minimum operating pressure	6 bars (~90 psi)
Minimum operating volume	80L/min

## Accessories

Picking heads	96- pin picking head (standard) interchangeable heads for other applications (optional)
Picking pins	Range of organism specific picking pins (optional)

## Imaging

White light	Trans-illumination
WL+ fluorescence modules (optional)	<ul style="list-style-type: none"> <li>Trans-illumination</li> <li>Epifluorescence with five standard wavelengths               <ul style="list-style-type: none"> <li>Ex /Em: 377 /447 nm for DAPI/Hoechst</li> <li>Ex /Em: 475 /536 nm for FITC/GFP</li> <li>Ex /Em: 531 /593 nm for Cy3/DS Red</li> <li>Ex /Em: 628 /692 nm for Cy5</li> <li>Ex /Em: 531 /624 nm for Rhodamine/Texas Red</li> </ul> </li> </ul>

## Camera

White Light only	<ul style="list-style-type: none"> <li>CCD camera</li> <li>Image resolution: 22 pixels/mm</li> <li>Field of View: 62x46mm</li> </ul>
White light and Fluorescence modules	<ul style="list-style-type: none"> <li>CCD Camera</li> <li>Image resolution: 22 pixels/mm</li> <li>Field of View: 32X24mm</li> </ul>

## Sterilization

Wash bath	3X static wash baths
Pin drying	Proprietary halogen pin drying station

## Processes and software licenses

Picking	Standard
Regional picking	Software license
Plate replication and re-arraying	Software license and additional head
Zone of inhibition detection	Software license

## Contact Us

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\*Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, Switzerland and United Kingdom

## Processes and software licenses

Colorimetric colony selection (Blue/white colonies)	Software license and filters
Control plate creation	Software license

## Picking Processes

Picking head	Fully pneumatic, 96 pin picking head. Interchangeable heads for other applications
Picking height	Integrated ultrasonic agar height sensor to set agar height per plate for accurate picking
Picking pin types	Range of organism-specific pins
Picking throughput	1500 colonies/hr
Source plate capacity	Without manual intervention: 1 x 15 cm petri dish; 5 x 9 cm petri dishes; 2 x OmniTrays; 1 x 22 cm QTrays
Source/picking plate compatibility	<ul style="list-style-type: none"> <li>Omnitrays &amp; divided Omnitrays</li> <li>QTrays &amp; divided QTrays</li> <li>Petri Dishes</li> </ul>
Destination plate capacity	Picking, 4 plates; Replicating and Re-arraying, maximum of 12 plate positions (including both source and destination)
Destination plate compatibility	<ul style="list-style-type: none"> <li>96/384 well plates (Standard)</li> <li>Deep well plates</li> <li>24 well plates (Not Standard)</li> <li>Ability to change plate types</li> </ul>
Fluorescent picking (optional)	Colonies imaged in white light for location identification and fluorescent light for data analysis; WL and FL multiplexed

## Data

Colony screening parameters (WL/White light)	Colonies selectable based on size, proximity, roundness. Selection performed on whole tray images
Colony screening parameters (FL/Fluorescence)	Multiple parameters available e.g., interior mean. Fluorescent intensity recorded for picked colonies.

1x barcode reader for tracking of source and destination plates. Data tracked through all applications for plates with same ID

## Tracking

## Automation

Available as Custom Solution

## Regulatory approval

Compliance	CE
Quality	ISO90001:

\*Price, time to deliver, and specifications will vary based on mutually agreed technical requirements. Solution requirements may cause adjustment to standard performance. Custom solutions are subject to Molecular Devices Custom Products Purchase Terms available at <http://www.moleculardevices.com/custom-products-purchase-terms>