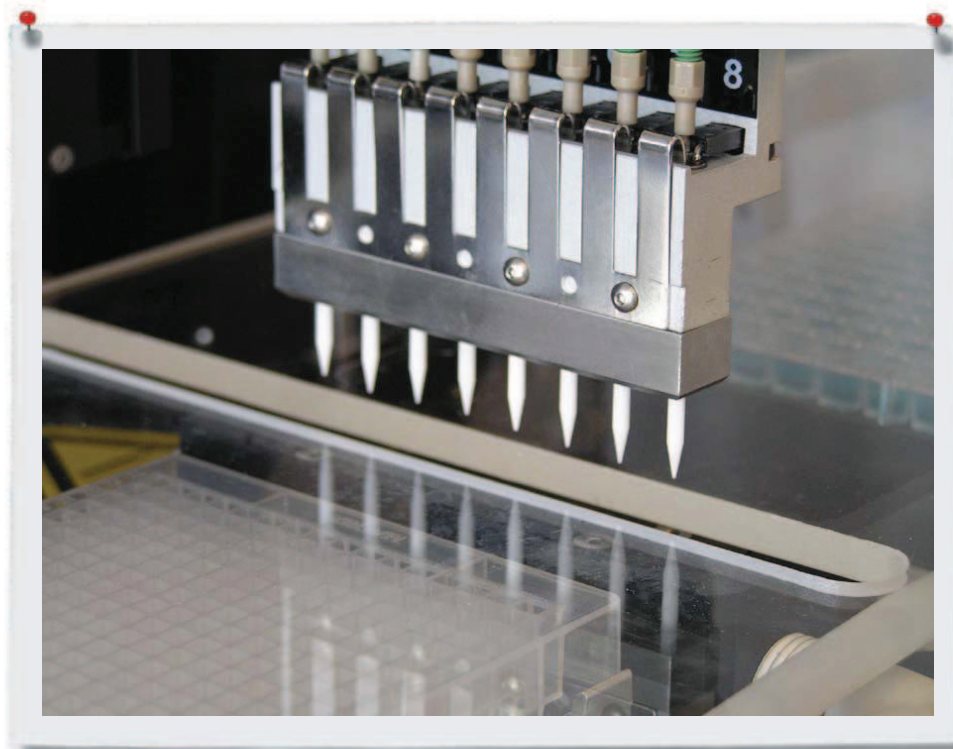


Honeybee X⁸

Protein Crystallization System.



Key Benefits

- Multiple crystallization techniques
- Screen multiple proteins in a single experiment
- Elimination of carry-over
- Membrane protein studies
- Applications beyond crystallization
- Minimized evaporation
- Accurate and precise transfer of viscous screening solutions

The Honeybee X⁸ from Digilab is a **bench-top system for the miniaturization of vapour diffusion and microbatch protein crystallization experiments**. This versatile system is suitable for both a dedicated and multi-user research environment. The Honeybee X⁸ uses **flexible software** designed for the programming of a wide range of plate formats (96 to 1536 well) and crystallization protocols, including more complex studies using multiple proteins and combinatorial techniques.

Low volume dispensing of both precipitant solutions and proteins is accomplished using market-proven synQUAD technology. Proprietary synQUAD technology provides **fast, precise and accurate non-contact dispensing** of up to 8 solutions simultaneously at nanoliter volumes. The Honeybee X⁸ maintains precision at these volumes even with challenging solutions such as detergents and viscous precipitants e.g. 30% 8K PEG.

Exceptional software control of all dispensing parameters enables the researcher to program the Honeybee X⁸ for the automation and miniaturization of many applications beyond protein crystallization, ensuring this system is a key addition to any multifunctional laboratory.

Design Specifications

Dimensions	50" W x 27.6" D x 25.6" H (1.27 m x 0.70 m x 0.65 m)
Power Requirement	110 - 240 VAC, 50-60 Hz (auto-switching)
Weight	36 kg

Key Features

Sitting drop, hanging drop, and microbatch techniques

Versatility in programming enables the **Honeybee X⁸** to be used for nanoliter dispensing of precipitant and protein for multiple crystallization techniques. In addition to vapour diffusion experiments the **Honeybee X⁸** can be used for microbatch studies as the synQUAD channels have enough inertia to dispense through the oil layer.

Multiple synQUAD channels enable flexibility of experiment design

Multiple proteins, additives or protein-ligand combinations can be primed simultaneously, without compromise on plate preparation time, and screened against each precipitant solution. Each protein can be aspirated using only a single channel, minimizing waste and ensuring efficient use of even the smallest samples.

Efficient tip washing

Patented non-contact synQUAD dispensing technology eliminates carry over by efficient tip washing and vacuum drying. This technology eliminates the need to purchase expensive disposable tips.

Non-contact dispensing of protein and precipitant solutions

Application of non-contact synQUAD technology for all dispensing ensures accurate and precise dispensing onto hydrophobic plates (e.g. for membrane protein studies).

Comprehensive control of liquid handling parameters

Automation and miniaturization of many laboratory liquid handling protocols, beyond protein crystallization, can be achieved with the flexible **Honeybee X⁸**, e.g. assay assembly.

Evaporation control

The **Honeybee X⁸** is supplied with a choice of humidity chamber or plate cover as standard to ensure risk of sample evaporation is minimized.

synQUAD technology for precise and accurate dispensing

synQUAD dispensers couple high speed microsolenoid valves with high resolution syringe pumps for accurate and precise on-the-fly dispensing of volumes as low as 50 nL while accuracy of the x-y axis ensures positioning of the protein drop on top of the precipitant. Fluidic inertia ensures efficient reagent mixing at nanoliter volumes.

Dispense Precision	<10% CV with both deionised water and 30% 8K PEG at 0.05 µL to 1 µL
Dispense Volume	0.05 µL to 1 µL



Worldwide Headquarters

Digilab, Inc.
84 October Hill Road
Holliston, MA 01746
USA

Phone: (508) 893-3130
Toll Free: (800) 935-8007
Fax: (508) 893-8011
E-Mail: info@digilabglobal.com

DIGILAB[®]