



MacBick
LABS AND INTERIORS

MacBick LabWave™

Touchless Innovation for Laboratories and Clinics



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Introduction

At MacBick Labs and Interiors, we believe the future of laboratory and clinical operations is one that is touchless, efficient, and sterile. Introducing **MacBick LabWave™**: a gesture-controlled platform designed to enable seamless, contamination-free operation of critical lab, clinical, and surgical room equipment.

MacBick LabWave™ leverages advanced gesture recognition to empower users to control devices without physical contact, dramatically improving workflow, safety, and compliance in sterile environments.

The Need for Touchless Control

In laboratories, clinics, and surgical rooms, contact with control surfaces can introduce contaminants and disrupt sterile conditions. MacBick LabWave™ addresses these challenges by eliminating the need for touch, offering a safer, more efficient way to manage essential functions.



MacBick LabWave™

Laboratory Equipment



Autoclaves



Soap and Sanitizer Dispenser

Dispense hygiene products via simple hand gestures.



Refrigerators and Freezers



Laboratory Equipment

Fume Hood Controls:

Adjust airflow and lighting with a wave.

Centrifuges:

Initiate and stop spin cycles touch-free.

Incubators:

Open doors and modify settings remotely.

Pipetting Robots:

Control operations via simple hand commands.

Balance Scales:

Tare or reset scales with a flick of the wrist.

Spectrophotometers:

Start readings or switch modes contactlessly.



Clinical and Surgical Applications

Surgical Faucets



Scrubbing stations activated by gesture for sterile preparation.

Vital Signs Monitors:

Acknowledge alarms or change display views.

Endoscopic Systems:

Navigate menus, zoom, or capture imagery.

Ventilators:

Make minor adjustments to settings without contamination risk.

Anesthesia Machines:

Simple parameter adjustments without touch.

Surgical Lighting Systems

Adjust brightness and positioning during procedures.



Operating Tables

Modify height and tilt without physical buttons.

Diagnostics and Imaging



PCR Machines

Load trays and start cycles with simple gestures.

Lab Automation Systems

Manage sample loading and workflow without manual input.



Facility Management



Doors

Open/close secure lab and OR doors via motion sensors.



Elevators

Call and direct elevators without pressing a button.



HVAC Systems

Adjust room temperatures and airflows remotely.

Transferring Smart Kitchen Tech to Research & Medical Labs

Innovative Concepts Inspired by Culinary Efficiency for Lab Excellence

Efficiency, cleanliness, and user-centered design are at the heart of modern kitchen innovations—and these same values are crucial in research and medical laboratory environments. At MacBick Labs and Interiors, we see a powerful opportunity to borrow the best ideas from advanced culinary settings and reimagine them for the scientific world.

This whitepaper presents a curated list of kitchen technologies that can be adapted to transform labs into more ergonomic, efficient, and hygienic workspaces.

1. AutoFlow Reagent Stations

Inspired by: Touchless Faucets & Dispensers

Lab Adaptation: Motion-activated dispensing of reagents or sterile water; glove-compatible design; customizable for temperature or chemical type.

Benefit: Improves aseptic workflows and reduces the risk of contamination.

Feature Highlight: Compatible with MacBick LabWave™ Technology for brand synergy.

2. SmartHeat Lab Surfaces

Inspired by: Induction Cooktops

Lab Adaptation: Embedded flameless heating units in benchtops or fume hoods; activates only under specific lab glassware.

Benefit: Enhances lab safety and minimizes fire risk while ensuring precise heating control.

3. SealSure Sample Preservation Station

Inspired by: Built-In Vacuum Sealers

Lab Adaptation: Sterile vacuum-sealing of reagents and samples; ideal for DNA/RNA, biologicals, or sensitive compounds.

Benefit: Maintains sample integrity and simplifies preparation for shipping or long-term storage.

4. EquipNest Recessed Access Modules

Inspired by: Appliance "Garages"

Lab Adaptation: Built-in compartments for centrifuges, mixers, or thermal cyclers; keeps bench space clean and organized.

Benefit: Reduces visual clutter and contamination risk, while improving equipment accessibility.

5. SlideStack Modular Lab Drawers

Inspired by: Pull-Out Pantry Systems

Lab Adaptation: Modular vertical storage for pipettes, tips, and chemicals; can be integrated into mobile carts.

Benefit: Promotes ergonomics and efficient retrieval of lab supplies.

6. BioTrack Cold Storage Systems

Inspired by: Smart Refrigerators

Lab Adaptation: RFID-tracked cold storage for sensitive samples; compliance-ready with auto-logging and alerts.

Benefit: Ensures sample integrity and simplifies regulatory reporting.

7. MagTool Wall Mount Strips

Inspired by: Magnetic Knife Strips

Lab Adaptation: Magnetic strips for scissors, tweezers, markers, etc.; safe for stainless tools.

Benefit: Maximizes workspace while keeping critical tools within reach.

8. SortSafe Waste Management Units

Inspired by: Compost & Trash Sorting Stations

Lab Adaptation: Distinct sorting for general, biohazard, and sharps waste; flush-fit design for seamless integration.

Benefit: Encourages sustainability and ensures proper disposal compliance.



MacBick LabWave™ Key Benefits

- Enhanced Sterility: Prevents contamination across critical environments.
- Increased Workflow Efficiency: Enables faster, uninterrupted operation.
- User-Friendly Interface: Simple gestures trigger intuitive responses.
- Reduced Equipment Wear: Fewer physical contacts extend device lifespans.
- Seamless Integration: Retrofittable to existing equipment or available in new MacBick-designed systems.

Technology Overview

MacBick LabWave™ utilizes state-of-the-art motion tracking and AI gesture interpretation to recognize specific user movements. The system can be customized to detect:

- Swipes (left, right, up, down)
- Rotations (clockwise/counterclockwise)
- Holds and waves
- Finger taps or closed fist commands

Customizable gesture libraries ensure that **MacBick LabWave™** adapts to specific lab or clinical needs.

Contact & Next Steps

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MacBick LabWave™ is not just an innovation—it's the evolution of how medical, clinical, and laboratory professionals interact with their environments. By partnering with MacBick Labs and Interiors, facilities can advance into a safer, more efficient, and smarter future.

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MacBick LabWave™ — The Future, Hands-Free.



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