

MODULAR LABORATORY SYSTEMS

Comprehensive Technical Specifications & Architecture Directory

1. Modular Workbenches & Island Systems

Heavy-duty modular workstations engineered for robust material handling, cleanability, and structural durability. Available in floor-mounted plinth series, suspended C-frame configurations, or fully customizable layout matrix arrays.

Dimensional Matrix

Component	Standard Width/Depth	Standard Height	Module Lengths
Wall-Facing Workbench	750 mm	900 mm (Standing) / 750 mm (Sitting)	1200 / 1500 / 1800 mm
Center Island Assembly	1500 mm	900 mm (Standing)	Continuous runs per room

Material Specifications (Under-Bench Cabinetry)

- **Substrate:** High-yield prime Cold Rolled Close Annealed (CRCA) steel sheets conforming to industry standard guidelines.
- **Gauge Thickness:** Main carcass panels: 1.0 mm; Drawer fronts & shutters: 0.8 mm; Heavy-weight load-bearing frames: 1.2 mm to 1.5 mm.
- **Surface Chemistry:** 7-tank chemical pre-treatment followed by high-performance epoxy-polyester powder coating (thickness 50–70 microns), baked at 180°C to 200°C for exceptional acid, alkali, scratch, and impact threshold resistance.
- **Internal Core:** Sound-deadening double-skin insulated construction featuring internal reinforcement ribbons or paper honeycomb cores.

Countertop Chemistry Options

- **Premium Jet Black Granite:** 18mm to 20mm thick natural non-porous granite stone with a polished mirror finish, mitered vertical lip edges, and under-cut drip grooves.
- **Epoxy / Phenolic Resin Solid Core:** Seamless monolithic slab structure designed specifically for aggressive testing environments demanding zero microbial transmission and absolute fluid impermeability.

2. Air Containment & Fume Extraction Systems

Designed to safely contain toxic particulate hazards and harmful gases, protecting technicians during reactive testing procedures.

- **Aerodynamic Sashes:** Tempered safety glass sashes equipped with smooth vertical counterbalanced pulleys.
- **Baffle Technology:** Multi-tiered internal aerodynamic back-draft baffles optimizing laminar flow draw over the entire working envelope.
- **Material Infill:** Solid chemical-resistant internal linings (such as compact phenolic board or fiber-reinforced polymers) with integrated spillage collection containment zones.

3. Chemical Storage Cabinets

Heavy-duty storage lockers tailored for hazardous waste, reactive agents, and flammables to ensure safe workspace segregation.

- **Flammable Enclosures:** Double-walled 18-gauge steel build with 1.5-inch insulating structural air gaps. Includes auto-latching three-point secure containment key systems.
- **Corrosive/Acid Lockers:** Built from pure welded high-density polypropylene sheets, ensuring zero mechanical decay or surface chemical corrosion over extended operational exposure windows.

4. Specialty Balance Tables & Sinks

- **Anti-Vibration Tables:** Multi-layered heavy core suspension systems designed to decouple precision analytical microbalances from high-frequency structural building vibrations.
- **Polypropylene Sinks:** High-density, chemical-resistant injection-molded PP sinks fitted with anti-siphon chemical traps and high-arc, triple-nozzle swan-neck emergency water faucets.

5. Ergonomic Workspace Seating

- **Construction:** Heavy-duty, solid molded non-porous polyurethane (PU) foam seating shells. Smooth and entirely non-absorbent surfaces allow fast chemical wipe-downs.
- **Mechanisms:** Equipped with variable hydraulic gas lifts, 360-degree rotation, stable support foot rings, and heavy anti-static (ESD) underlying components.

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