

# LABORATORY SEATING

Task-Responsive,  
Posture-Sensitive

**Thomas**  
Scientific



**BI**  **FIT**<sup>®</sup>  
**75** YEARS IN THE  
**SCIENCE OF**  
**SEATING**

20  
**21**

## Lab Seating Should Check All the Boxes

When selecting seating for laboratory environments, discipline-focused design, quality construction and style are factors that routinely top the list. Naturally, ergonomic support is critical, especially considering the long hours, customary shift-changes, and frequent relocation of scientists, technicians and researchers between workstations. Given the hands-on nature of tasks unique to bioscience, biopharma, chemistry, clinical, R&D and numerous other applications, it only stands to reason that in most cases, every chair and stool must not only be up to the job – but many, many jobs.

Adaptability is essential.

So is choosing seating that makes it standard.

Every scenario may have its own idiosyncrasies, but there are some commonalities specific to lab work regardless of discipline. Unlike office work, technicians routinely take measurements, perform experiments and conduct tasks from higher seated positions, frequently while leaning forward. In addition to accommodating different working heights and task-related user postures, lab seating must comply with pertinent government standards and industry specifications. And today more than ever, easy and effective cleanability, including withstanding frequent exposure to cleaners and disinfectants, is paramount.





## Common Denominators

Like all industries, the laboratory marketplace dictates what it wants. The key is having the right conversations with the right people at the right time – a principle that has held fast throughout the development process of seating to match the needs of today’s users in the laboratory category. In large part, that has meant reimagining the components of chairs from the top down.

In real-world user research conducted by BioFit, many facility managers – particularly those overseeing multiple lab installations – demanded seating solutions that addressed organization-wide ergonomic concerns in one complete package, with advanced functionality and associated detailed adjustments that help workers stay comfortable, productive, alert and on-task throughout the workday. And nearly every specifier interviewed described a desire for seating that reflected the look and brand image found in their office counterparts.

## Here's What to Look For:

### On-Target Adjustability

#### Working Heights

In contrast to office environments, where the typical desk-working height is 29 inches, working heights in laboratory applications can run 6 to 12+ inches higher, and can change quickly according to task requirements. Working at the upper-end of a high-bench seat height range also brings unit stability into question, especially with ergonomic controls that encourage tilting and reclining postures, which is why it's vital for seating to have a 5-star base with a diameter wide enough to alleviate concern over tipping mishaps.



**PRO TIP:** BioFit offers lab seating models featuring gas-lift pneumatic height adjustments to accommodate use at traditional desktop, standard bench or high-bench heights, as well as standing work heights – as much as 33 ½ inches at the top of the seat-height range – as well as a variety of bases, including a 28.7" wide cast aluminum version. Plus, the heights of specific models can be adjusted from a seated position.



## Form and Function, in Balance

- ✓ Addressing Forward-Leaning and Precision Tasks



One thing that's easily observable in laboratory workplaces is the tendency of users to lean forward in their chairs as they perform various tasks as opposed to their office counterparts, who routinely sit at a 90-degree angle on average to their keyboard and monitor. Conducting intensely focused activities in a forward-leaning seated posture shifts the weight of the upper torso and head directly over the thigh area, putting additional pressure on the lumbar region of the back and thighs and potentially cutting off blood circulation to the lower legs – even when using a chair with waterfall-front edge.



**PRO TIP:** *Functionality exclusive to BioFit MVMT® Pro seating addresses comfort and ergonomic issues traditionally associated with forward-leaning tasks. Highlighted by the technical seating industry's first weight-activated synchronous control, MVMT Pro chairs automatically adjust to the weight of each user. The control is synchronized to a 5 to 1 ratio, it allows individuals to dial-in their preferred level of leaning tension.*

*Other proprietary functions include backrest-forward-backward and forward seat tilt adjustments. This is an industry-first for forward seat tilt with independent forward adjustment of the backrest while still allowing for synchronous tilting functionality, enabling users to maintain contact with the chair's backrest – thereby maintaining back support – in forward-leaning positions for tasks such as microscopy and pipetting. The resulting simultaneous combination of forward seat tilt and backrest-forward positioning provides lumbar relief in forward-leaning positions while also relieving pressure behind the legs without creating a dramatic slope.*

*MVMT Pro seating also has a 2.5" seat slide range to accommodate user leg-length as well as a micro-tension adjustment to address how different users carry their weight. It also offers control lockout, which freezes adjustments for precision and motion-sensitive work. All these adjustments are standard, available and functional, even at the maximum lab-bench-compatible seat height.*

## Pressing Details

### ☑ Components that Count

Selecting chairs with properly sized and adjustable backrests (Figure A) is vital to providing lumbar support and keeping users comfortable and performing at their best. Optimally, like all ergonomic functions, backrest adjustments should require minimal effort. Other features that can prove invaluable to user comfort and productivity are sometimes only available as options on lab seating. Depending on the task and environment, specifiers should determine if the chairs they consider include the following:

- Casework permitting, comfortable adjustable armrests that accommodate the physical characteristics of respective users and can be repositioned in multiple directions with the touch of a finger (Figure B)
- Footrings on models designed for bench or high-bench height applications that adjust easily and stay put once positioned (Figure C)
- Casters that resist movement when the chair is unoccupied, aiding worker safety by helping ensure seating doesn't roll away when the user stands up (Figure D)



Figure A



Figure B



Figure C



Figure D

**PRO TIP:** BioFit offers laboratory seating with a variety of seat and back styles and sizes and specific models that include many standard components other manufactures only offer as costly upcharges, such as:

*Fingertip-controlled footring: MVMT Pro and Tech C5 seating models for bench- and high-bench use come standard with an easily adjustable 22" diameter polished aluminum footring. Featuring a specially fabricated, four-pad-brake system, users can reposition the footring by applying gentle thumb pressure on the plastic bushing at its core. Once adjusted to the desired height and upon release of the bushing, force placed on the footring will hold it firmly in place – the more weight applied*

*to the footring, the tighter the grip. Shorter users often use this footring as a step to climb into higher-height seating models.*

*Multidimensional arms: The height, depth and width of MVMT Pro 3D arms adjust easily by pushing actuator buttons on the outer and inside edges of the arm pads. Once repositioned, BioFit 3D arms lock into place securely. 3D arms feature adjustment ranges of 3.5" vertically, 2" front to back and 1" left to right on each armrest, for 2 full inches of width adjustment.*

*Dual-wheel resistance casters: a standard on all BioFit chairs, these casters help prevent the chair from rolling away when unoccupied. Two-inch-high glides are also available, as well as dual-wheel ESD resistance casters and glides on static-control models.*

## Cleanability

- ✓ Now and Over the Long Term, Again and Again



In non-technical workplaces and despite not being as strictly mandated as in critical-performance environments, facility managers have always understood the strong correlation between workstation cleanliness and productivity. In laboratories, however, proper cleaning, sanitizing and disinfecting of furnishings and equipment can mean the difference between life and death, let alone affecting the outcome of tests and experiments. That's why it's important to look for seating that's easy to clean, including assemblies with minimal gaps, components engineered to prevent buildup of debris and microbes, and substructures that do not pose obstacles to effective cleaning. It's equally important to look for seating that resists breaking down under cleaners, disinfectants and frequent cleaning protocols, particularly in the face of the current pandemic and similar circumstances.

## Did you know?

All BioFit laboratory seating is engineered and constructed to facilitate easy and effective cleaning, sanitizing and disinfecting.

- Products are designed to minimize or eliminate gaps in components traditionally associated with particle and debris infiltration
- We offer upholsteries designed to withstand frequent exposure to cleaners and disinfectants
- Base styles include easy-to-clean tubular steel and T-profile cast aluminum designs
- Metal parts include durable and quickly cleaned black powder coat or chrome finishes
- ArmorSeat™ series polypropylene chairs feature seats and backs molded of a proprietary polymer blend containing antimicrobial properties and capable for use in BSL-4 applications

What's more, The Scientific Equipment and Furniture Association (SEFA) Lab-Grade Seating Committee, co-chaired by our president, recently authored the SEFA Lab-Grade Seating Cleaning Protocol.

## Durability

### ✓ Quality Lab Seating is an Investment

In addition to checking warranty length and coverage when choosing laboratory seating, component construction, finishes and upholstery durability are important considerations. Are the edges of seats and backs prone to damage from inadvertent collisions with benches and casegoods? Will metal finishes stand up to wear and tear? Are selected upholsteries resistant to chemicals and fluids and rated for as long as the intended use?



Figure A

Figure B

**PRO TIP:** All BioFit lab seating is built for 24/7/365 use and warranted for 13 years (lifetime on pneumatic). Each component is engineered with user well-being and long-term use in mind. We collaborate with upholstery partners to offer many grades in current styles and application-specific upholsteries and fabrics, including a wide selection of chemical-resistant vinyls.

Thanks to built-in “defensive” features, our seating withstands situations when it may not be treated with the best of care:

- Seats of many models include internal seat board bumper guards, which makes them more comfortable, provides a fuller profile and protects seat edges from damage when they inevitably bump into surrounding furniture (Figure A).
- Backrests feature rugged wrap-around rear plastic panels to protect upholstery and provide a clean, finished look (Figure B).

Please contact your Thomas Scientific Sales Representative for more information.