
sit,

simply.

"The world's
simplest and smartest
office chair."
AXIS, Nov.-Dec.1999

"Amazing!"
Interiors & Sources,
Sept.1999

"The Freedom Chair is
all about comfort
and back protection."
Interior Design,
Sept.1999

"Two very different
chair manufacturers
position themselves
to inherit the
upscale office throne."
Metropolis
(on Humanscale and
Steelcase) Nov.1999

"The raves…from
dealers was nearly
deafening."
MMQB, May 24, 1999

"Herman Miller and
Steelcase may
think they have
the ergonomic chair
market all sewn
up. But watch
out for newcomer
Humanscale."
Grid, Fall 1999

The Freedom Chair
by Humanscale

Why should your chair have six different levers when you only have one behind?

Good question
Attached to every "ergonomic" office chair is anything up to half a dozen buttons, levers and knobs. They're meant to provide the user interface between you and a comfortable seat. But most people haven't a clue how to use them.

A recent study of office workers found that less than two percent even understood the purpose of the tension control—the most basic of chair controls. The result is that most people end up sitting in poorly adjusted chairs that confine movement.

Is it any wonder that 80% of the population suffers from back pain at some point in their lives?

Technology can make simple things complicated or complicated things simple. We prefer the latter.

The Freedom chair is based on one idea — that sitting comfortably should be the easiest part of your day.

Hello Freedom.

Goodbye manual adjustments
The Freedom chair is designed to give the maximum ergonomic benefit to the sitter with a minimum number of manually-adjusted controls. Once the chair is fitted, no further adjustment is required.

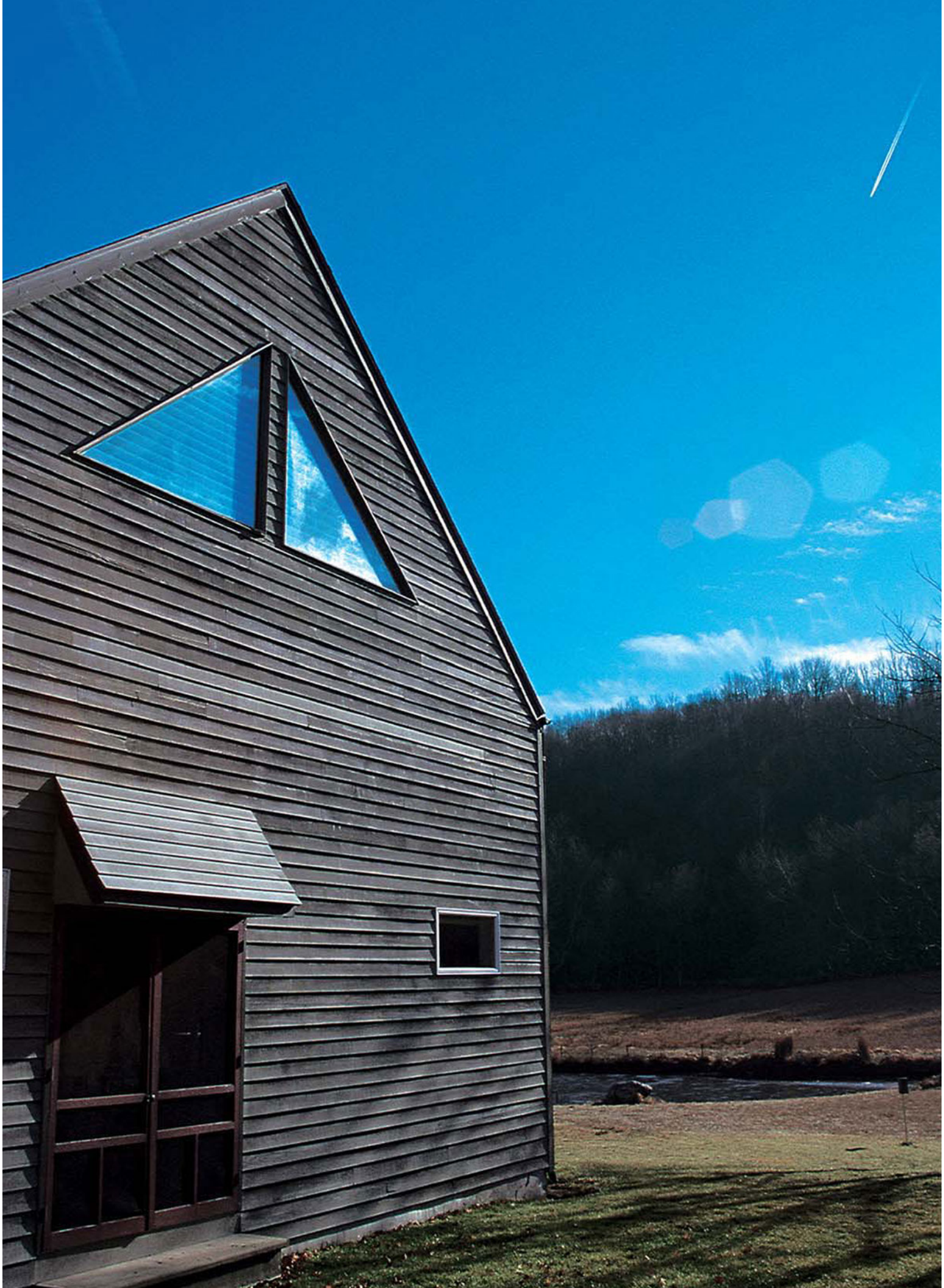
The idea is that movement, which is essential for a healthy body, shouldn't be constricted by locking mechanisms and manual controls. In other words, sitting comfortably isn't something you should have to think about.

Freedom's designer
One of the century's preeminent American designers, Niels Diffrient has endeavored throughout his storied career to emphasize the "human factors" of industrial design, using ingenuity and intuition to bring consumers products that meet their needs. From his 25 years at the office of Henry Dreyfuss, where his signature output covered everything from thermostats to high voltage towers, to one of his most recent projects, an office system for KI—awarded Best of Competition at NeoCon 1998—Diffrient has operated under the assumption that designers needed to work from "the inside out," with the design process proceeding hand in hand with the engineering process, and not as a subsequent frill to adorn an otherwise anodyne product. His emphasis on meeting human needs was codified in the three-volume Humanscale, an influential sourcebook for designers that examined the movements and dimensions of the human body.

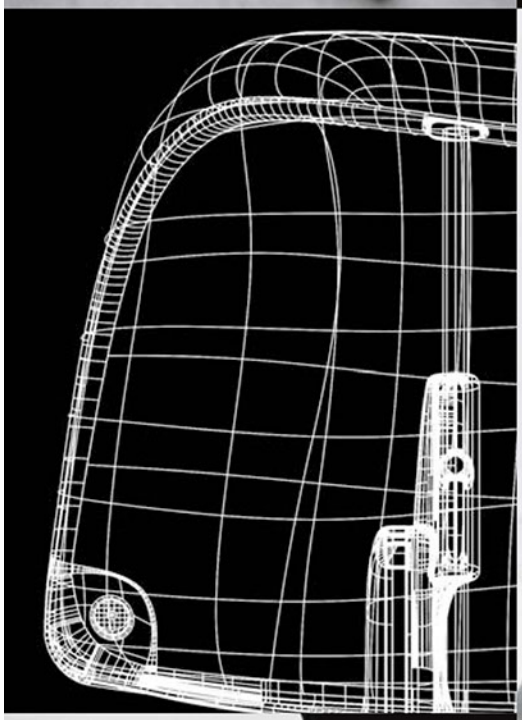
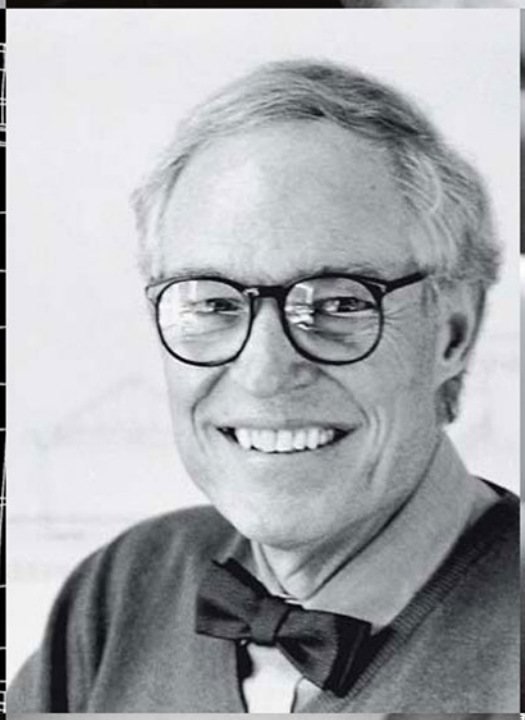
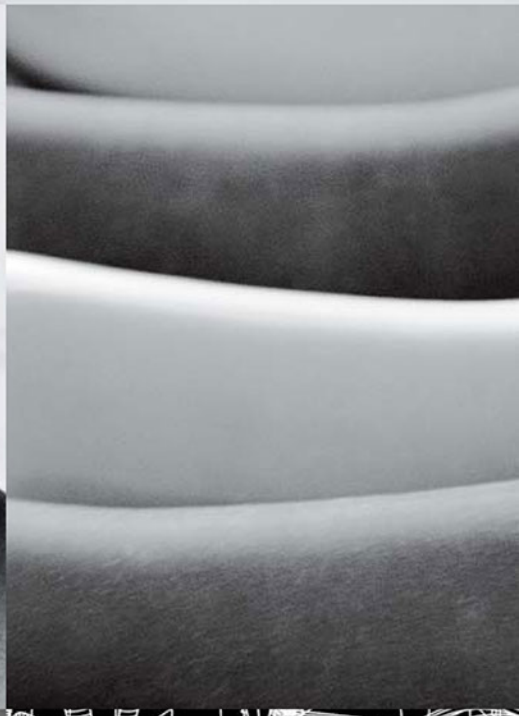
From his early work with Eero Saarinen and Marco Zanuzo to the present, Diffrient's integrity and vision have been recognized in dozens of awards and honorary citations, and he has served as designer or consultant to the Fortune 500's leading companies. His quest to create workplace environments fitted to the needs of their users continues unabated with "Freedom," a task chair that conforms to its user's shape without an array of knobs and levers.
—DaimlerChrysler Design Awards, a retrospective of winners, 1999

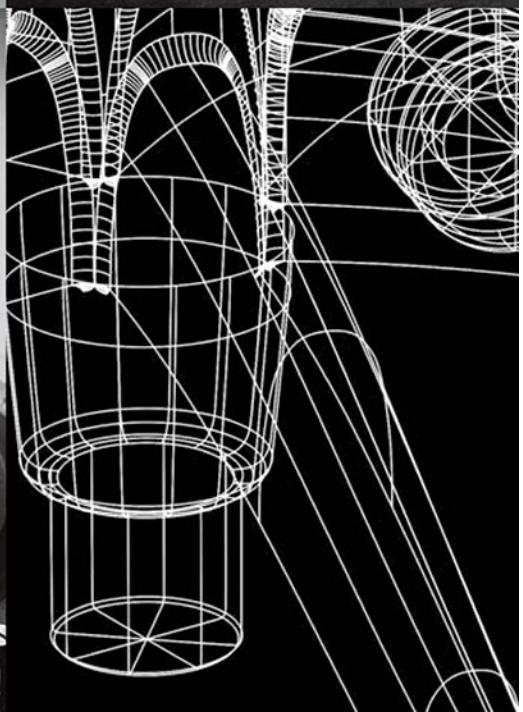
In a converted barn, located 50 miles north of New York City, one man has thought about how humans sit on chairs probably more than anyone in the world.

One man, one barn, fifty years.





Designing your future chair.

When design springs from an understanding of the people who are going to use a product, you begin to see forms that you would never have imagined.
Niels Diffrient

Traditional design
Conventionally, office chairs are designed by teams of people — engineers, designers, ergonomists and marketing managers — whose own interests can compromise the others' objectives. The resulting product is often overly complex or heavily diluted in an effort to suit all parties.

The Diffrient way
Having experienced situations in which a committee decision weakened a design, Niels Diffrient began working independently in 1981, applying his accumulated knowledge of ergonomics, design and engineering to projects of his own. His philosophy is that the performance and user-friendliness of a chair should not be compromised by marketing or styling objectives.

Civilization
advances
by extending
the number
of important
operations
which we can
perform
without thinking
about them.

Alfred North Whitehead

Automatic Headrest
The dynamic, position-sensitive headrest cradles your head and neck as you recline, and moves out of the way when you sit upright – automatically.

Body fit
The seat, back and headrest may be independently positioned to fit your exact body size.

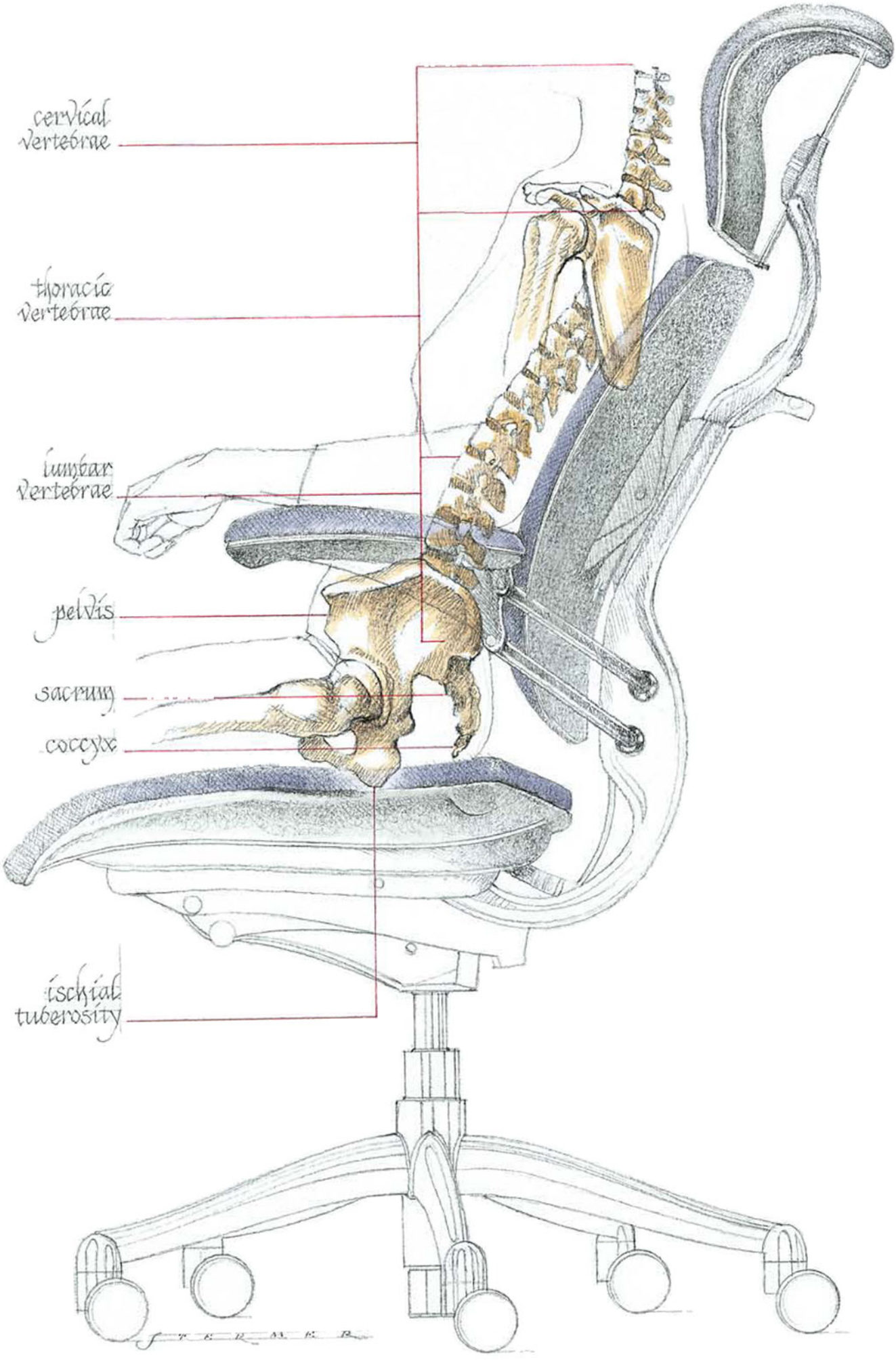
Synchronous armrests
Freedom's body-friendly, gel armrests move up and down together, so you are always in balance.

Responsive backrest
Freedom's unique Dual Pivot backrest automatically adapts to the changing needs of your spine during recline.

Contoured cushions
The thin, sculpted cushions are specifically designed for long-term sitting comfort.
Our optional gel seat cushion maximizes weight distribution and minimizes pressure points.

Intelligent mechanism
Freedom's revolutionary counterbalance mechanism automatically provides the right amount of recline tension for your body size and weight.

Recline action
As you recline, you'll maintain a near constant eye level, while the angle between your torso and legs opens up for better body function.


cervical vertebrae
thoracic vertebrae
lumbar vertebrae
pelvis
sacrum
coccyx
ischial tuberosity

Changing the way people sit.

Ergonomic furniture has created back problems because it succeeds too well in supporting the body in one position.
Galen Cranz

Aside from lifting heavy weights, the greatest risk of lower back injury comes from simply working for long periods of time in a sitting position.
Gunnar B. Andersson

The truth about locks
Recline locks have been marketed as "features" on current-generation chairs. But the truth is, they are only there to compensate for the inadequacies of standard spring-tension mechanisms, which, by their very nature, are incapable of supporting the body in multiple positions. The problem is, a locked chair keeps you from moving, and that's not healthy.

Freedom from locks, freedom to move
The Freedom chair was designed specifically to encourage frequent, spontaneous changes of position. There are no locks and no tension springs to negotiate. Instead, there are elegant mechanisms that automatically support your body in every position you'll assume throughout the day.

Movement is essential for a healthy back
People are spending more time sitting than ever before. Not surprisingly, this increase in sitting has been accompanied by a proportional increase in back problems. Our bodies were designed to move. In fact, movement, more than anything else, provides nourishment for the spine, keeps the joints lubricated and flexible, improves circulation and therefore keeps us comfortable.

Conversely, when we don't move, the elasticity of our spine and joints is reduced and our muscles become fatigued. The key to healthy and comfortable sitting is being able to move without restrictions.

It's not about how you sit,

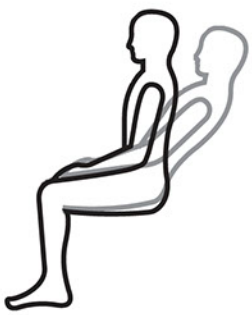
Any fixed posture, no matter how closely it approaches the optimal, will generate muscle fatigue. Therefore, it is important to build in flexibility to allow operators to shift positions easily.
Marvin J. Dainoff

it's about how you move.

Freedom to recline.

Relax. It's good for you
An upright sitting posture transfers the weight of your entire upper body through your spine directly to the sitting bones, increasing pressure and discomfort. Reclining, on the other hand, transfers some of the body's weight to the backrest, reducing the load on your sitting bones. The more you recline, the more the weight of your body is proportionately distributed. Also, the angle between your torso and thighs opens up, allowing better breathing and easing internal pressure. This is why you can stay fully recumbent for hours without discomfort.

The more you recline, the more the weight of your body is proportionately distributed and the more comfortable you get. Ergo, the best chair is a bed.
Niels Diffrient



Recline is supported by lifting body weight.

Perfectly adjusted recline (guaranteed)
Freedom's revolutionary exoskeletal design works like a human-sized weighing scale. The chair's virtual pivot point is at the body's natural pivot point – the hip – so the geometry of the chair parallels that of the body. As you recline, your weight automatically balances the force required to recline the chair, effortlessly keeping Freedom in perfect balance with you. That's why you're fully supported at all times without the need for locks.

Optional Infinite Tilt for forward tilt and additional recline of the entire chair.

Infinite Tilt
The optional Infinite Tilt mechanism allows you to tilt the entire chair 6° forward or 5° further to the rear. Forward tilt of the entire seat pan rotates the pelvis and puts the lumbar area of the spine into a healthy lordotic curve preferred for desktop work. In forward tilt, the backrest follows the tilt of the seat to provide constant back support. The additional tilt toward the rear gives the whole chair an exceptional 27° of recline – far more than the other leading office chairs.

Why traditional headrests don't work

Headrests are added to chairs because your head needs support when you recline – which is why people without headrests put their hands behind their heads when they lean back. However, a fixed headrest is usually in the wrong position. And a manually adjustable headrest requires constant adjustment every time you change position, and who can be bothered with that?

Freedom's advanced headrest technology

Freedom's headrest mechanism is as smart as the rest of the chair. It is ingeniously connected to the chair's reclining mechanism, so that when you lean back, the headrest moves forward to a supporting position (keeping your head upright). Not insignificantly, the headrest movement parallels the natural arc of the head and neck, so that it provides optimal support through their full range of motion. To fit all users, it can be adjusted vertically within a 5" range.

In an upright position, the headrest stays out of the way.

Headrest revolution.

As you recline, the headrest moves forward to support your head.

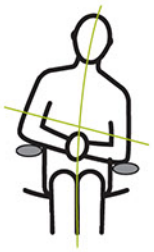
In full recline, the headrest moves to an optimum working position, cradling your head and neck in perfect comfort.

Synchronous armrests!

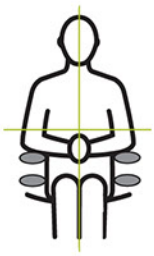
Armrests matter
Armrests are critical to long-term comfort and health. Without them, the neck and shoulders have to carry the weight of the arms (11% of body weight), putting strain on the upper back and pressure on the spine.

But incorrectly adjusted armrests cause similar problems. Different tasks require different armrest heights: low for desk work and keyboarding/mousing, mid-range for conversational posture, high for reading/ reclining. If armrests are not adjusted as tasks change, then the user isn't getting their full benefit.

Synchronous is easy
The revolutionary armrests on Freedom, with a vertical range of 7", can be adjusted synchronously without release buttons.
In fact they're so easy to use that people will actually adjust them throughout the day to correctly support their many different tasks.

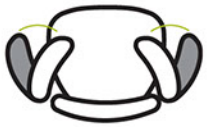


Today's armrests
The individually adjusted armrests on traditional chairs are difficult to get even, and, in fact, unknowing users often set them at different levels on purpose. This virtually ensures that they sit (sometimes for years) with a crooked spine – a high-risk posture for back injury.



Synchronous is better
Freedom's synchronous armrests ensure you'll always work in balance, with your spine straight and your weight evenly distributed on your sitting bones. And that's critical for long-term safety and comfort.

Stress–free recline
The armrests on most traditional chairs attach to the seat, which means that they stay forward as you recline. This action causes your arms to extend, which puts stress on your neck and shoulders. Freedom's armrests attach to the backrest, keeping your elbows in line with your shoulders (the neutral arm posture) and minimizing the added stress of arm extension during recline.

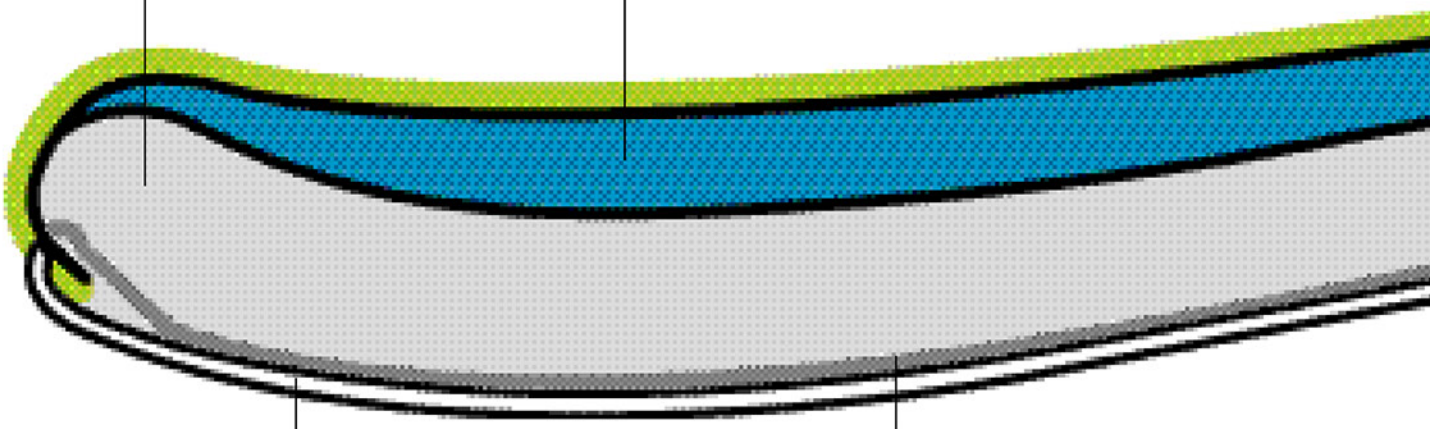


Optional swivel
Freedom's optional Advanced Armrests pivot at the elbow and can be locked to support the forearm in any position within a 35° arc of motion. Likewise, they can be left unlocked to swing freely — a nice feature when moving frequently between keyboard and mouse.

Defying gravity.

Foam
The cushion core consists of molded, density-controlled, high-performance polyurethane foam.

Gel (optional)
Top layer of plasticizer-free gel will not degrade over time. Provides excellent shock absorption and weight distribution for unmatched comfort.



Outer shell
Provides structural support for the cushion.

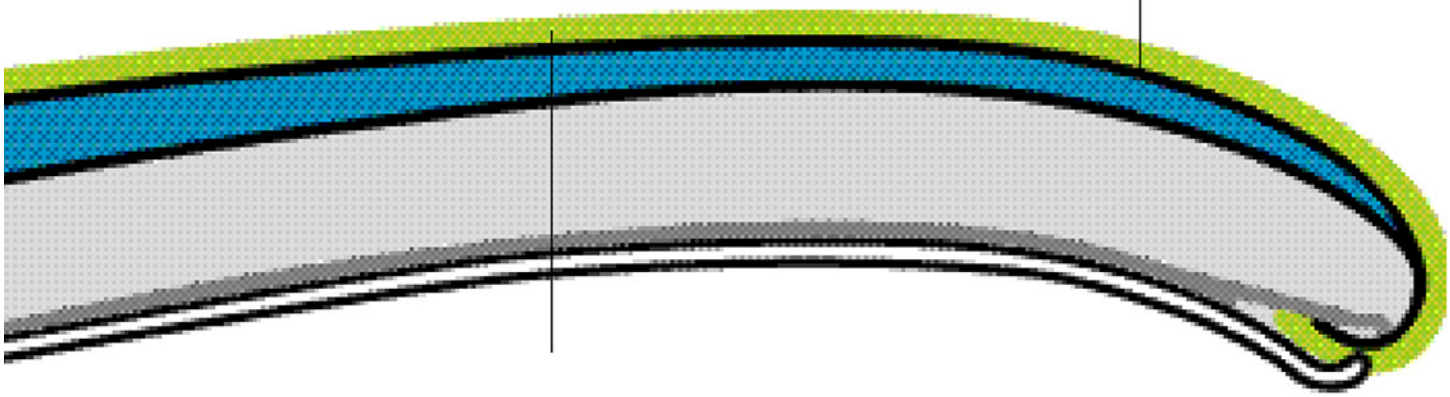
Inner shell
Forms the cushion's contours and makes it uniquely modular so that cushions can easily be replaced.

Cross-section of the Freedom cushion

The benefits of a thin cushion
The old, thick cushions found on traditional chairs look comfortable, and feel comfortable when you first sit down, but if you've spent any time in one of these chairs, you'll know that the comfort level turns to discomfort over time.

That's because thick, foam cushions compress under your body weight and form a cavity that effectively keeps you from shifting positions. Freedom's new, thinner cushions are designed to maximize comfort over several hours, not several minutes!

Foam layer
Layer of urethane-coated foam bonded to the textile creates an impermeable barrier between the textile and the cushion, which reduces the ability of allergens, dust mites and bacteria to propagate.



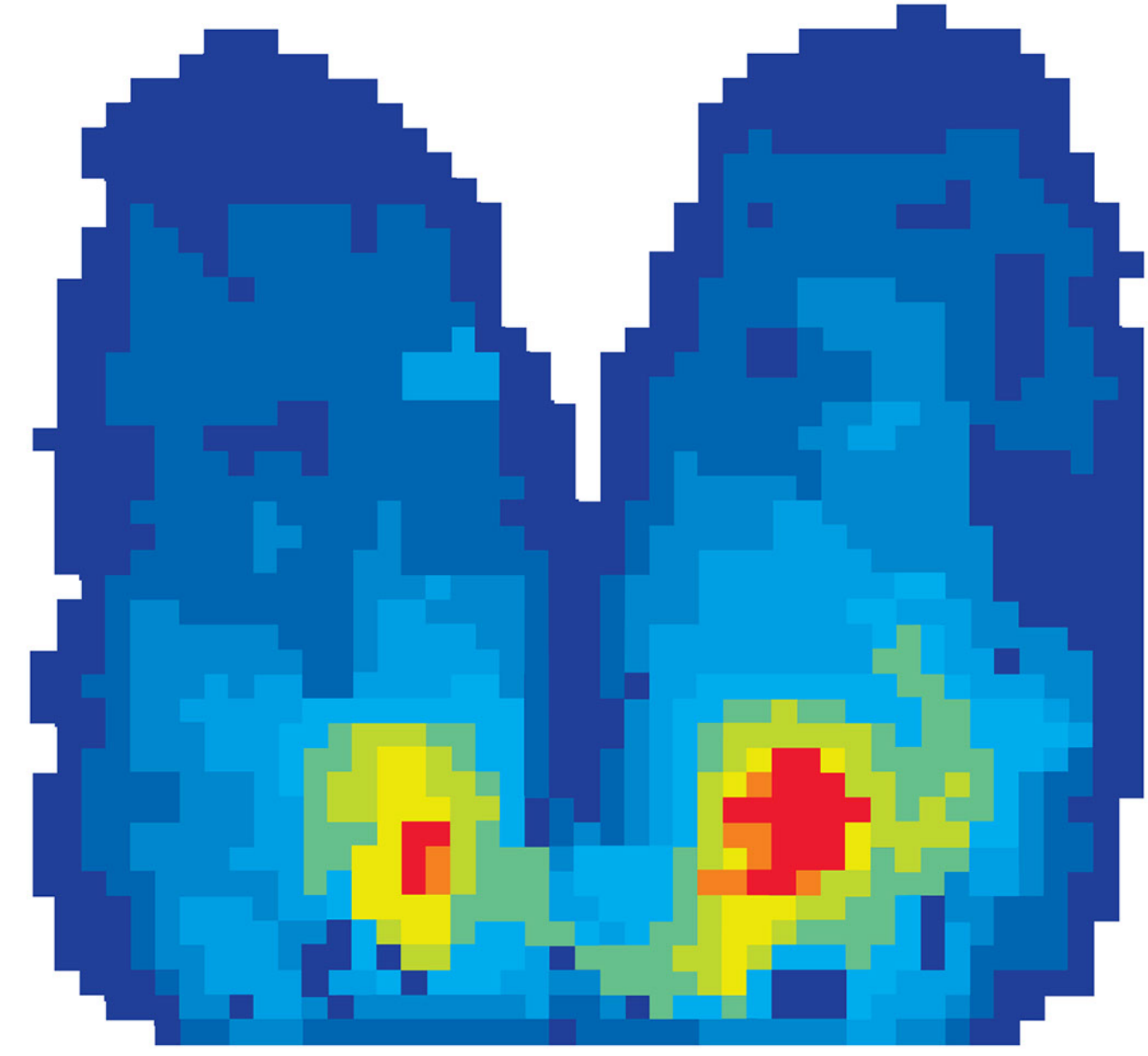
variety of colors to suit most any decor.

Don't like your predecessor's choice of color? With Freedom's modular cushions (they easily install with four screws), you can implement a new color scheme (or get rid of that coffee stain) within 48 hours.

Gel comfort.

After 90 minutes of sitting, the max pressure on a gel cushion is 60% less than the max pressure on a foam cushion. When it comes to long-term comfort, gel cushions have no equal.

The red areas below show how foam seats create pressure points that can make it hard to sit over a long period of time.

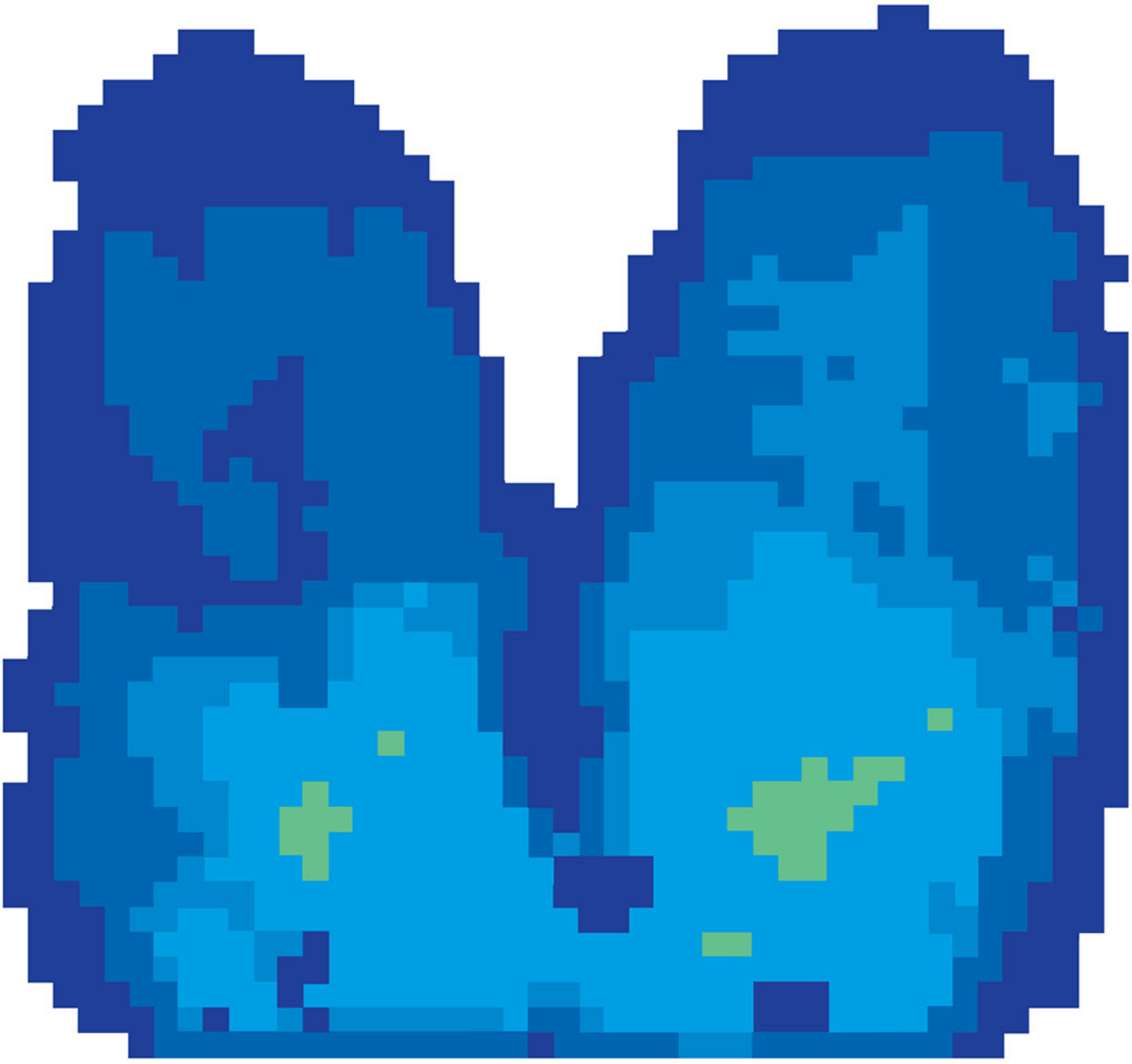


Foam Pressure Map

Get behind comfort
When it comes to materials that ease pressure points, gel tops the list. That's why gel has been the standard for the highest quality wheelchair cushions and bicycle seats.

Unlike foam, which compresses under body weight, gel, with it's liquid-like properties, disperses. Which means that it moves away from high-pressure areas and fills in gaps in low-pressure areas, thereby distributing body weight and easing pressure under the sitting bones.

Freedom's gel seat cushion, shown at right, disperses the load so that the pull of gravity doesn't put all the pressure in one place.

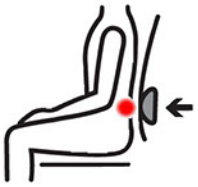


Gel Pressure Map

One size fits all.

Right-size your organization
In any organization, the average chair will be used by 10 or more people during its lifetime. Therefore, it is essential that the chair be adjustable to fit users of all sizes. Freedom fits a wider range of people (95%) than any other major chair on the market.

Our back matches your back
To support the lumbar, many chairs include a moveable "bump" which often has the undesirable effect of concentrating pressure on the lower back. With Freedom, the entire seat back is carefully contoured to fit the lumbar curve. Since it is the position more than the shape of the lumbar curve that varies from person to person, the whole backrest can be moved to match your back perfectly.



Traditional

Freedom

Operating instructions:
1. Sit
2. Move
3. Repeat step 2

There is a consensus in the literature that users must be trained to use chair adjustability controls. Most manufacturers do indeed provide manuals…but (they) are usually not read.
Martin O. Helander

Freedom's advanced technology has made sitting simple. Now you can think about your work, rather than worry about your chair.

Learn to sit?
Orientation in a networked office is a time-consuming business. It takes on-the-job training to learn how to use a telephone, set up a computer, send email, operate the copier. And it's not uncommon for task chairs to come with CD-ROMs and training videos — some chairs even have pull-out instruction cards built into the seats. The result is that "ergonomic" seating is so complex to negotiate that it has had the unintentional effect of putting people in wrongly adjusted seats by default.

Not anymore
Once you've fitted the Freedom chair to your body size, using the chair is as simple as sitting and moving. Now everyone in your organization, no matter how large or small, will be sitting comfortably.

We're not a furniture company,

we're an ergonomics company.

The modern office task chair is not furniture. It's a sophisticated mechanical device that must ergonomically support a variety of body sizes, shapes and postures. Who better to rely on for such products than the leader in office ergonomics — Humanscale.

Mission
At Humanscale, our mission is to design and manufacture products that encourage computer users to adopt low-risk body postures — creating a healthier, more comfortable and more productive work environment.

Freedom is a revolutionary advancement in office seating. Its many innovations will be duplicated in future chairs, which is why we can say with confidence that one day, all office task chairs will be like Freedom. The good news is, you don't have to wait for others to follow suit. Freedom can be yours…now!

One day, all task chairs will be like this.

The Freedom Saddle Seat, a perfect companion to our task chairs, doubles as a guest seat for in-office meetings and an ottoman for when you're ready to kick back and relax.

Humanscale

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