

Aeron / questions and answers

What is the pellicle?

Pellicle means *breathable or permeable membrane*. It's a unique material developed and patented by Herman Miller. It's made of a synthetic material called Hytrel, woven in a straight and consistent pattern. It looks similar to net or wicker materials, but is much stronger.

What do you mean by *breathable*?

A central issue in the development of the pellicle was *aeration*, or breathability. Air flow through the pellicle transfers moisture away, keeping the user's skin at a more comfortable temperature than foam/fabric seating. (Think of the beaded seat backs that taxi drivers use to stay cool.)

What else makes the pellicle material better than a foam and fabric combination?

The pellicle material has a two-way stretch, and conforms to each person's shape, distributing body weight effectively across the seat and backrest. If you're wearing a belt, or have something in your pocket, it forces the pellicle out - it picks up on the very subtle changes in topography of the body or clothes, so it can exactly follow the shape of a particular user. It's a unique property of the pellicle. It prevents 'bottoming out' - the hammock effect that may occur with pre-contoured foam and fabric chairs, causing pressure and discomfort after a time. The pellicle suspension *automatically* supports the body in all sitting postures. It's the next best thing to sitting on air. Bill Stumpf describes it as 'An absence of awareness'.

Will the pellicle tear or lose its tension if it's accidentally snagged?

The pellicle is a very strong synthetic material woven in a metric pattern to avoid tears and abrasion. It's undergone rigorous testing to ensure that it won't rip or sag. Our confidence in its durability is demonstrated by the fact that we've given it a five-year warranty.

What's the frame made of?

Glass reinforced modified polyethylene terephthalate (P.E.T.) Characteristics are:

- outstanding balance of strength, stiffness and toughness
- outstanding electrical properties
- outstanding surface appearance
- outstanding chemical resistance

What is a 'Kinemat tilt'?

Kinesis is the Greek word for motion. The Kinemat tilt is a unique, highly sophisticated tilt mechanism patented by HM. It allows the body to pivot simultaneously at the

ankles, knees and hips, mimicking the natural motion of the human body, and giving a smooth ride. The backrest and seat pan move in proper relation for correct lumbar support in all postures from intense work to formal meetings to relaxed conversations. (The Kinemat tilt is different from a knee tilt, where the body rotates round a pivot point near the knee. The Equa chair has a knee tilt.)

Why are there three sizes of Aeron chair?

Men and women at work today are all sizes and shapes. Clearly, one chair designed for an 'average' user can't fit all. The A, B and C sized Aeron chairs are dimensioned to fit small, medium and large users, from 1st percentile female to 99th percentile male.

FIRA's Ergonomics Unit evaluated Aeron and stated that: "Having three different sizes of chairs is an excellent idea and it is in agreement with the ergonomics philosophy of the draft International Standard, ISO 9241 Part 5, which aims to fit furniture to individuals regardless of their sizes and shapes. "

How can you tell which size chair you need?

You can try out the chairs, or use the sizing grid in the product handbook as a guide.

For facility managers, there are a number of options for deciding which size chairs they need for employees:

- standardise on 'B' chair
- standardise on 'B' chair with a few 'A' and 'C' chairs as exceptions
- use the quick reference guide / sizing grid in the product handbook
- measure each employee, using HM's anthropometric data software
- provide sample chairs in each size and conduct a user fit test on site

What's the height adjustment range?

- A size 363 - 495 mm
- B size 385 - 545 mm
- C size 385 - 545 mm

What does two-stage height adjustment mean?

'Two-stage' is an engineering term. In this context it means that the pneumatic lift mechanism is designed to allow a wider range of height adjustment - lower and higher than a 'single stage' mechanism. To the user, there's no noticeable difference in the way it works.

Why are there so many adjustments?

To fine-tune the chair to individual needs of the worker and the work. The adjustments are easy to reach and

use. And if you don't want them, you don't have to have them all.

What tools are available to help me know how to adjust my chair?

There are three tools provided:

- User hangtag
- Facility Managers hangtag
- User adjustment software

Why do the left and right wheels used to adjust the height of the arms roll in opposite directions?

Research showed that people intuitively roll left and right wheels in different directions.

Why doesn't Aeron have a height-adjustable back?

Research has shown that the curvature of the spine is not well-served by adjusting chair back height. When the back of the chair is moved up and down it will inevitably mis-align with the user's spine in certain positions. With Aeron, the support for the spine is generalised at the top of the seat back and localised at the bottom - where adjustability is required most - by means of the adjustable lumbar support.

What's the weight limit for different sizes of Aeron?

For British Standards conformance, the B chair has been tested and certified for 24-hour use by a person weighing up to 120kgs. Beyond that, HMI will certify the chair for up to 300lbs (136kgs). The chair will probably support more weight, but testing has yet to be completed.

What makes Aeron environmentally efficient?

Recycling isn't necessarily going to solve environmental problems. *Durability* may be more important. Aeron is expected to last longer than most chairs, so there's less need to replace and therefore less material refuse.

The chair is also as lean as possible in use of *materials*. It uses the best materials from an environmental point of view - including recycled aluminium and polymers. Around 80% of the chair is further recyclable. Only one material is used for each component, or it's made certain that two or more materials are easy to separate. For recycling purposes, parts are clearly designated (metallic vs non-metallic), so they are easily identified when scrapping. And it consumes less energy during manufacturing than conventional foam-and-fabric seating.

Which European standards does Aeron meet?

The B size chair is certified to the following standards:

- BS 5459 / Performance
- BS 5940 / Design & dimensions
- BS 7179 / Ergonomics

- GS approval
- DIN 4551/ Performance
- NF D 61-040 / Dimensions
- NF D 61-041 / Performance

The A and C chairs are reported 'ergonomically sound' by FIRA's Ergonomics Unit.

What research went into the development of this chair?

Herman Miller carried out extensive research during the development phase of the Aeron chair, consulting with orthopaedic surgeons, ergonomists, physiotherapists, bio-mechanical engineers as well as a large range of clients. The designers of the chair - Bill Stumpf and Don Chadwick - also brought over 20 years of chair research experience to the project. (See appendix on research studies for more information.)

How do we define status with this chair?

If you want to define status with this chair, you can either use the variety of pellicle colours or the soft pad and leather versions of the chair.

Chair size is not the best way to define status. Everyone in an organisation should sit in a chair that fits properly. FIRA's Ergonomics Unit stated: "Herman Miller should be congratulated in breaking away from the common relationship between the size of a chair and the user's status, which is ergonomically incorrect".

Is there any special maintenance required?

No. All materials are designed to be maintenance-free.

How long is the warranty?

12 years for the chair, 5 years for the pellicle, 3 years for fabric and gas list - in 24 hour use.