
Design Story

Herman Miller turned to designers Don Chadwick and Bill Stumpf to design a totally new kind of chair. Chadwick's and Stumpf's previous collaboration had produced the groundbreaking Equa chair.

The two designers began this development process with a clean slate, with no assumptions about form or material, but with some strong convictions about what a chair ought to do for a person.

Ergonomically, it ought to do more than just sit there. It should actively intercede for the health of the person who sits in it longer than she should.

Functionally, it ought to move and adjust as simply and naturally as possible. It should support a person in any position he cares to assume, at any task his office job serves up.

Anthropometrically, it ought to be more inclusive than its predecessors. It should do more than accommodate small or large people; it should really fit them.

Environmentally, it ought to be benign. It should be sparing of natural resources, durable and repairable, designed for disassembly and recycling.

The design that fulfilled these criteria met all expectations and shattered some of them. It wasn't upholstered. It wasn't padded. It was dimensioned in three models that looked exactly alike and that had nothing to do with their users' job titles. It didn't look like any other office chair. And its revolutionary concept incorporated more patentable ideas than any previous Herman Miller research program.

"It was a matter of deliberate design to create a 'new signature shape' for the Aeron chair," says designer Bill Stumpf. "Competitive ergonomic chairs became look-alikes. Differentiation was a huge part of the Aeron design strategy, and it remains one of, if not the most, critical aspects of Aeron's success.

"The human form has no straight lines, it is biomorphic. We designed the chair to be above all biomorphic, or curvilinear, as a metaphor of human form in the visual as well as the tactile sense. There is not one straight line to be found on an Aeron chair.

"The Pellicle was equally a deliberate design strategy in that its transparency symbolizes the free flow of air to the skin in the same way lace, window screens, and other permeable membranes permit the flow of air or light or moisture. The transparency of the chair as a visual element was in keeping with the idea of transparent architecture and technology, which Aeron pioneered in advance of Apple's transparent iMac computers. Transparency is a major design movement. Its purpose is to make technology less opaque, to communicate the inner workings of things, and to make objects less intrusive in the environment. Aeron is a non-intrusive chair."

The Aeron design was refined and validated through research and experts' opinions:

- It was tested for comfort with scores of users, pitting it against the best work chairs available.
- Leading ergonomists, orthopedic specialists, and physical therapists evaluated the chair's fit and motion, the benefit and ease of its adjustments.
- The design team conducted anthropometric studies across the country, using a

specially developed instrument to calculate everything from popliteal height to forearm length.

- The research team did pressure mapping and thermal testing to determine the weight distribution and heat- and moisture-dissipating qualities of the Pellicle material on the chair's seat and back.

- Field studies using a specially-designed measuring device examined the relationship between sizes of people and their preference for chair size (Dowell 1995b). Measurements of 224 people--in a sample that was evenly distributed between men and women and that closely reflected the distribution of the U.S. population on most dimensions--found that of all the anthropometric dimensions measured, height and weight had the strongest relationship to chair size preference. The relationship is strong enough to allow us to recommend one of the three chair sizes based on those dimensions.

Although it reveals its aesthetic heritage in lyrical shapes reminiscent of George Nelson designs, organic forms that recall the work of Charles Eames, and a spare, athletic aspect that brings to mind its designers' Equa chair, the Aeron chair finally looks only like itself. Its unique form expresses its purpose and use and the material composition of its parts and the way they connect. The slightly transparent and reflective nature of its surfaces gives it an airy quality. It becomes a part of the person who uses it and the environment that surrounds it.

Made largely of recycled materials, the Aeron chair is designed to last a long time, with parts that get the most wear easily replaced and recycled. Just what you would expect in a well thought-out design.