



AXIOM

Axiom Cushion

Evidence-based seating solutions

AXIOM

ORIGINS



Axiom Cushions were created to provide a cohesive family of seating products designed with a “Best in Class” approach, all based on the Science of Seating.

Every cushion was developed with the core design elements of Directed Loading and Surface Tension Reduction through the use of Pre-contoured shapes, high-end, quality materials and superior cover design.

It’s important for all cushions (from General Use upwards) to have a properly designed pre-contoured shape. That’s why we cooperated with Georgia Tech to study anthropometrics. The result? Designs that have the best possible cushion shapes to fit a wide range of sizes and needs.

We chose to use high-end materials in our foam components. You will see the foams have a high IFD (Indention Force Deflection) and density, both elements lead to a long-

lasting, comfortable and functional product.

Design elements like a back-cut front edge add to comfort, while rounded rear corners enhance wheelchair fitting.

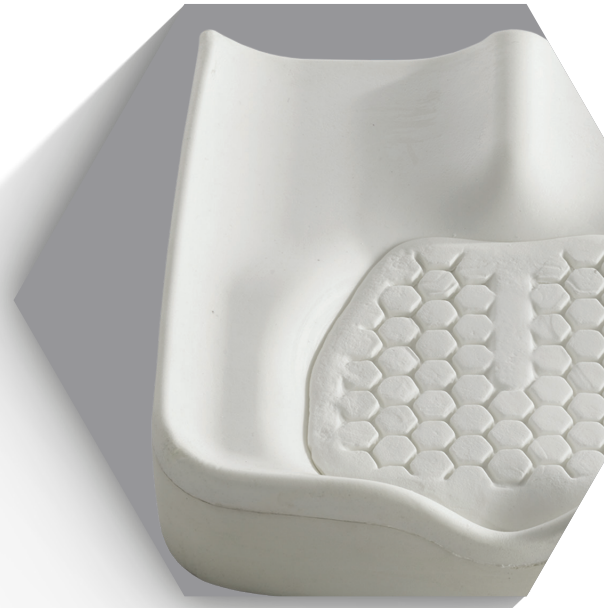
Finally, you will see a consistent look and feel from all of our seating products. The covers have a sleek, minimalist look with a lot of high-end features like zipper pulls with a stow-away pocket, water resistant zippers and high-denier fabrics. Axiom cushion covers are not only highly functional, but also attractive enough to complement any chair, regardless of colour.

There was a lot of thought put into the Axiom seating line.

It didn’t just happen, we designed it this way.

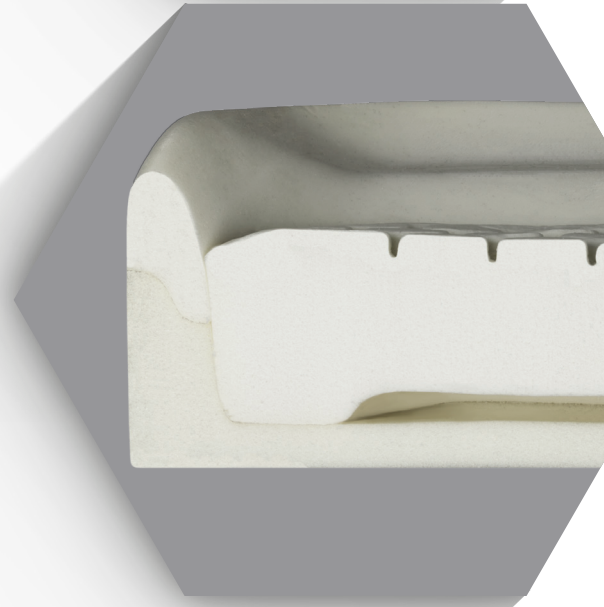
Pre-contoured shape

It is important for all cushions to have a properly designed pre-contoured shape. That's why we cooperated with Georgia Tech to study anthropometrics. The result is a set of cushion shapes built to fit a wide range of sizes and needs, spreading load evenly and easing pressure around the ischial tuberosities, typically the area carrying the most load, instead of letting it build in one spot.



High quality materials

We chose to use high-end materials in our foam and fluid components. You will see the foams have a high IFD and density, both elements lead to a long-lasting, comfortable and functional product.



Superior cover design

Covers across the range share a sleek, minimalist design, with high-end touches like zipper pulls with a stow-away pocket, water-resistant zippers, and high-denier fabric that holds up to daily wear. Axiom cushion covers are not only highly functional, but are attractive enough to complement any chair, regardless of colour.

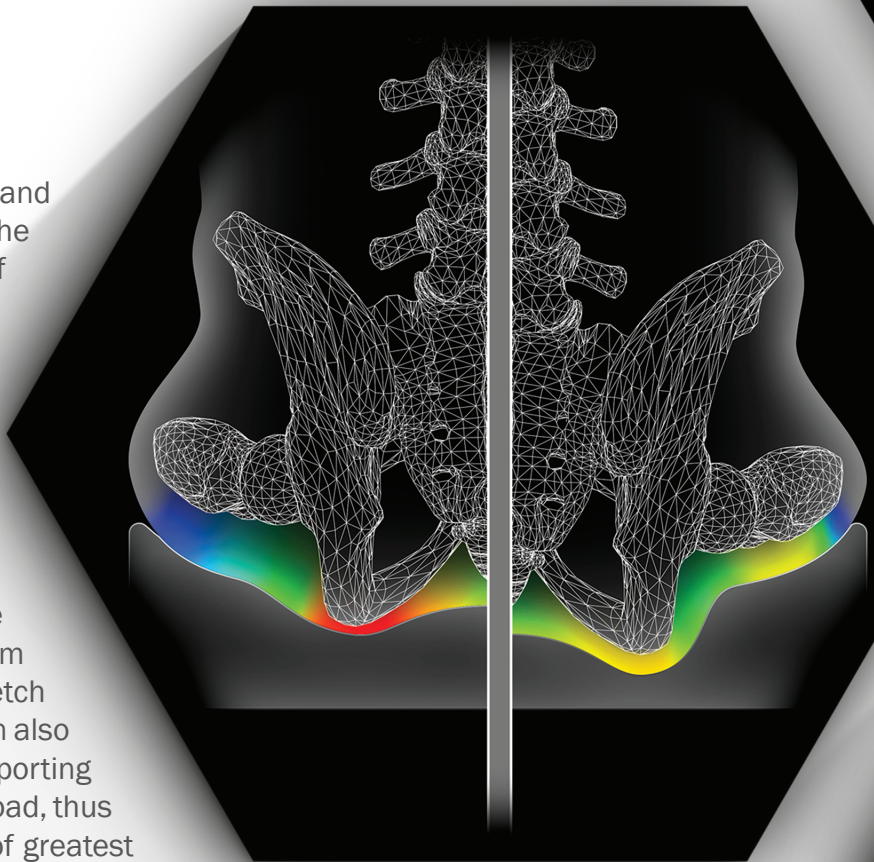


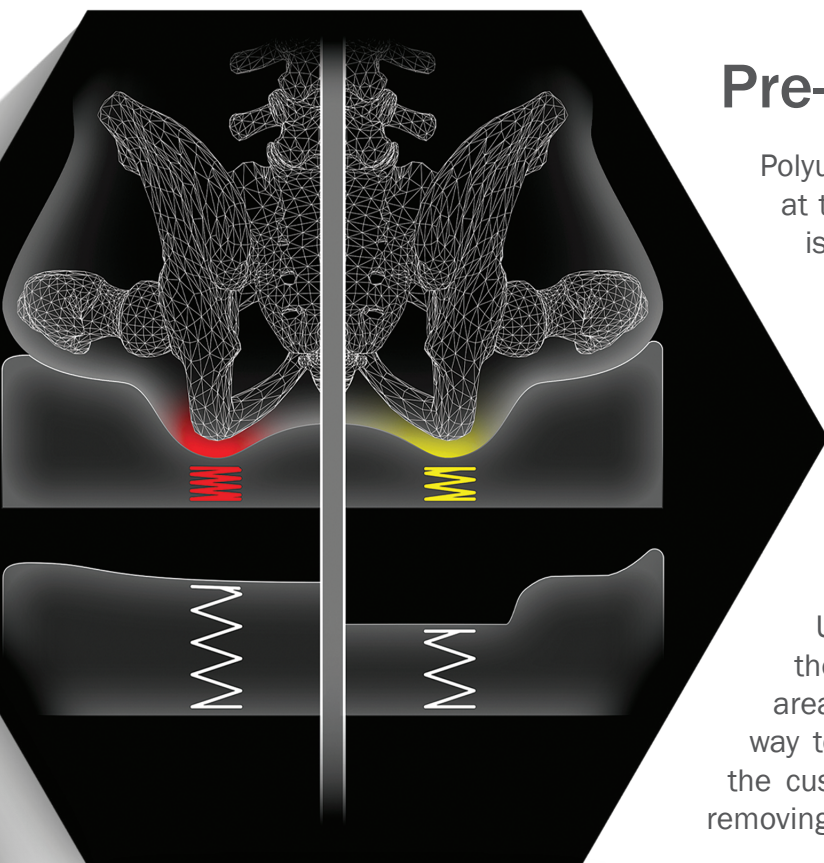
The science of seating

High quality polyurethane foam can be used to make a highly effective cushion. The efficacy does not just come from the quality of the materials, but also the specific shapes, densities and coverings. All aspects of design are critical to the cushion's performance. Let's cover some specific design concepts used throughout the Axiom line:

Surface tension reduction

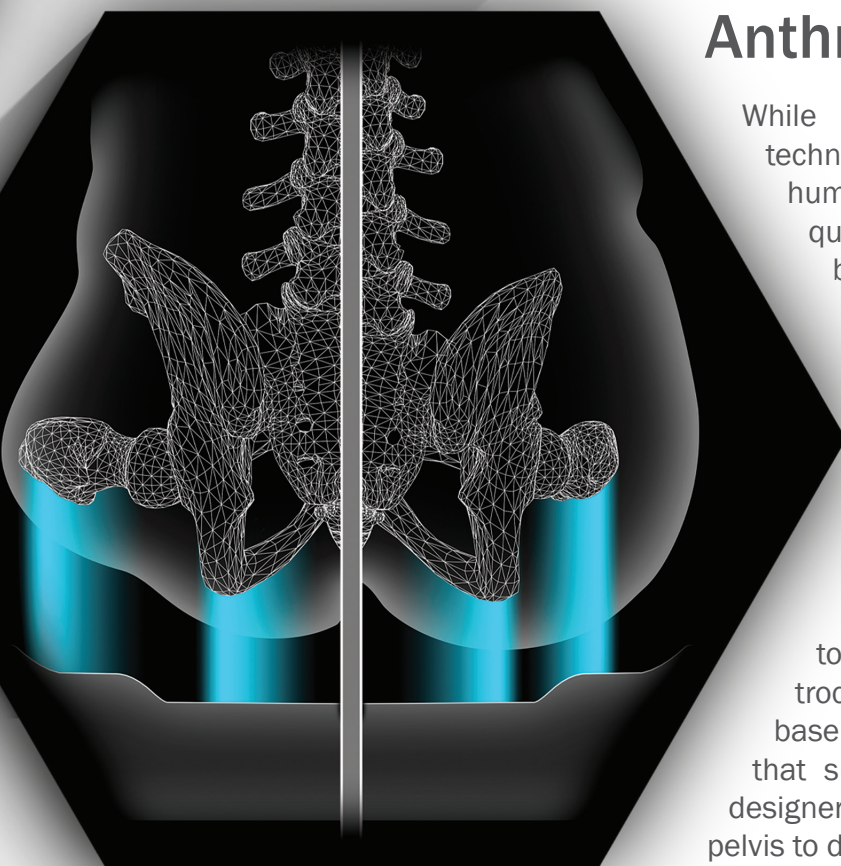
Improved pressure distribution and stability are directly related to the ability of the body to immerse itself in the cushion. Less immersion means less surface area to spread the load over and a smaller base of support for stability. Foam compresses under load to allow the body to immerse. Surface tension in the foam and its coverings can limit that immersion. This is the result of tension forming as the foam and cover materials attempt to stretch to accept the body. This tension can also change the shape the tissues supporting the bony prominences take under load, thus concentrating forces at the point of greatest immersion, usually the area around the Ischial Tuberosities.





Pre-contouring

Polyurethane foam is made by the formation of a gas at the same time as the urethane polymerisation is occurring; resulting in cells with elastic walls. As a result, the foam acts like a spring; it compresses under load and rebounds when the load is removed. There is a reaction force “pushing back” in any compressed area. The greater the compression the greater the reaction force. In a flat foam cushion the area of greatest immersion is the area of greatest compression and therefore it has the greatest reaction force. Unfortunately, this is most likely to occur around the tissue supporting the ischial tuberosities; the area where we are trying to reduce pressure. One way to reduce this reaction force is to pre-contour the cushion to match the shape of the buttocks by removing foam.



Anthropometrics

While pre-contouring is a very effective design technique, it can be difficult to execute because humans vary in size and shape, as well as the quality and amount of tissue surrounding the bones we sit on. Cushion widths relate directly to the overall width of the individual and their wheelchair. A paraplegic individual may have very little tissue outside of their trochanters. So, their overall width may closely relate to their bitrochanteric width. Conversely, another person may have considerable redundant tissue lateral to their trochanters and therefore have a much smaller bitrochanteric width relative to their overall width. Since loading of the trochanters improves stability by widening the base of support and reduces the load the tissue that supports the ischial tuberosities must bear, designers must understand the anthropometry of the pelvis to design an effective cushion.

AXIOM

G | P

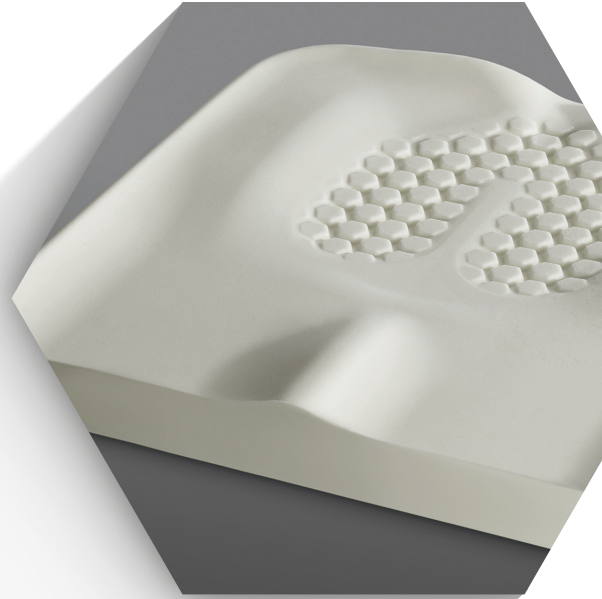


- 1 | Water resistant zipper and zipper pull make it simple to put on and remove the cover while still protecting the foam.
- 2 | Unique hexagonal foam shapes reduce surface tension and increase envelopment around the ischia and coccyx.
- 3 | All cover options provide breathable, wipeable, and 4-way stretch benefits.
- 4 | Easy-to-reach front handle comes with utility loops for hanging accessories.

Specifications	Width	Depth	Height (Leg Troughs)	Height (Overall)	Weight	Weight Cap.
Axiom G	360 - 560 mm	360 - 560 mm	57 mm	76 mm	0.99 kg	158 kg
Axiom P	360 - 560 mm	360 - 560 mm	57 mm	89 mm	1 kg	158 kg

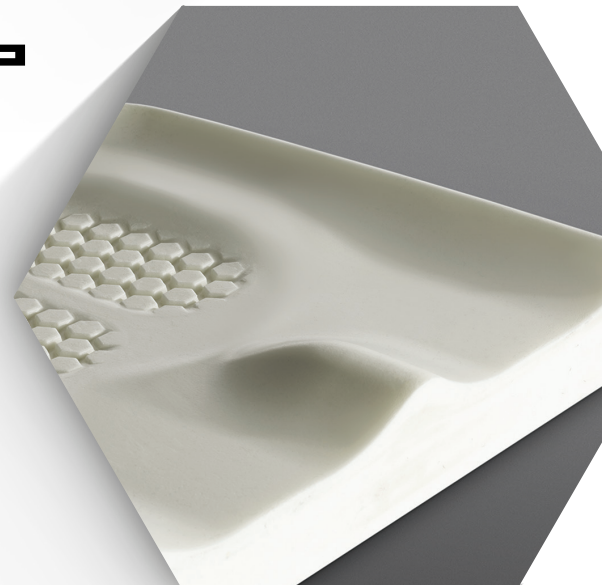
AXIOM | G

A feature-rich, premium general use cushion that is anything but Basic. With its pre-contoured shape, surface tension reducing well and high-quality foam & cover materials, it is sure to be the professional's choice for years to come.



AXIOM | P

Offering all the same great features of the Axiom G, with better medial and lateral stability. With superior positioning features and surface tension reduction in the well, the Axiom P proves positioning cushions can still be comfortable while providing positioning and stability.



AXIOM

SF VISCO



- 1 Super 4-way stretch Lycra outer cover for optimum surface tension reduction.
- 2 4-way stretch inner cover with self-sealing zipper is water resistant and is easy to clean.
- 3 Viscoelastic foam insert with unique hexagonal shapes increase envelopment and reduce compression around the ischia
- 4 Dual density polyurethane foam base offers firm support in the lower layer with a durable comfort layer on top.

Axiom SP Visco is designed to provide increased immersion, allowing the trochanters to bear an effective load. This improves stability by widening the base of support and reduces the load the tissue that supports the Ischial Tuberosities must bear. A thick section of a specially designed Viscoelastic foam deforms to immerse and envelop the Ischial Tuberosities. Using anthropometric design, this section also has two small areas where foam is removed under the Ischial Tuberosities to facilitate immersion.

Viscoelastic material is both viscous (changes shape slowly) and elastic (it returns to its original shape). It deforms and returns to shape very slowly. There is a significant lag between when you deform a viscoelastic foam and when it returns to shape. Because energy is effectively absorbed and dissipated during the time lag there is less reaction force pushing back after deformation.



Specifications	Width	Depth	Height (Leg Troughs)	Height (Overall)	Weight	Weight Cap.
Axiom SPV	360 - 560 mm	360 - 560 mm	82.5 mm	114 mm	1.59 kg	158 kg

Accessories - Covers



Standard Cover G | P

A four-way stretch, water-resistant, quilted cover that minimizes resistance and allows immersion into the seating well.



Standard Cover SP

Made from four-way stretch Lycra, minimizing resistance and allowing immersion into the seating well. Equipped with microclimatic AirMesh around the seating well to reduce shear forces and provide effective moisture and temperature regulation.

AXIOM | G

		Width							
		14"	15"	16"	17"	18"	19"	20"	22"
		36 cm	38 cm	41 cm	43 cm	46 cm	48 cm	51 cm	56 cm
Depth	14"	36 cm	XG1414						
	16"	41 cm	XG1416	XG1516	XG1616	XG1716	XG1816	XG1916	XG2016
	17"	43 cm		XG1517	XG1617	XG1717	XG1817		
	18"	46 cm	XG1418	XG1518	XG1618	XG1718	XG1818	XG1918	XG2018
	20"	51 cm		XG1520	XG1620	XG1720	XG1820	XG1920	XG2020
	22"	56 cm					XG1822	XG1922	XG2022
									XG2222

Washing instructions
 Standard Cover 60° C
Weight capacity: 158 kg

AXIOM | P

		Width							
		14"	15"	16"	17"	18"	19"	20"	22"
		36 cm	38 cm	41 cm	43 cm	46 cm	48 cm	51 cm	56 cm
Depth	14"	36 cm	XP1414						
	15"	38 cm		XP1515					
	16"	41 cm	XP1416	XP1516	XP1616	XP1716	XP1816	XP1916	XP2016
	17"	43 cm	XP1417	XP1517	XP1617	XP1717	XP1817	XP1917	
	18"	46 cm	XP1418	XP1518	XP1618	XP1718	XP1818	XP1918	XP2018
	19"	48 cm		XP1519	XP1619	XP1719	XP1819	XP1919	XP2019
	20"	51 cm		XG1520	XP1620	XP1720	XP1820	XP1920	XP2020
	21"	53 cm			XP1621		XP1821	XP1921	XP2021
	22"	56 cm			XP1622		XP1822	XP1922	XP2022
									XP2222

Washing instructions
 Standard Cover 60° C
Weight capacity: 158 kg

AXIOM | SP VISCO

		Width								
		14"	15"	16"	17"	18"	19"	20"	21"	22"
		36 cm	38 cm	41 cm	43 cm	46 cm	48 cm	51 cm	53 cm	56 cm
Depth	14"	36 cm	XSP1414V	XSP1514V	XSP1614V					
	15"	38 cm		XSP1515V	XSP1615V	XSP1715V				
	16"	41 cm	XSP1416V	XSP1516V	XSP1616V	XSP1716V	XSP1816V	XSP1916V	XSP2016V	
	17"	43 cm	XSP1417V	XSP1517V	XSP1617V	XSP1717V	XSP1817V	XSP1917V		
	18"	46 cm	XSP1418V	XSP1518V	XSP1618V	XSP1718V	XSP1818V	XSP1918V	XSP2018V	XSP2118V
	19"	48 cm			XSP1619V	XSP1719V	XSP1819V	XSP1919V	XSP2019V	
	20"	51 cm	XSP1420V	XSP1520V	XSP1620V	XSP1720V	XSP1820V	XSP1920V	XSP2020V	XSP2120V
	21"	53 cm					XSP1821V	XSP1921V	XSP2021V	
	22"	56 cm			XSP1622V	XSP1722V	XSP1822V	XSP1922V	XSP2022V	XSP2122V



Washing instructions
Standard Cover 60° C

Weight capacity: 158 kg





Etac is a world-leading developer of innovative assistive devices and patient handling equipment. Since 1973, we have been committed to improving quality of life for the individual, family members and caregivers.

For the intended purpose of the products and latest information, please visit www.etac.com

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