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LiftSuit Lift Exoskeleton

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LiftSuit

The most advanced lightweight back-support exoskeleton, offering natural muscle support and unparalleled usability.

The LiftSuit offers versatile back and hip support during repetitive lifting or prolonged forward-leaning work, making it suitable for a wide range of industries.

An innovative support concept inspired by human anatomy delivers a natural way of supporting back and hip muscles.

Relying on a fully textile frame to optimize for lightness, comfort, and freedom of movement, the LiftSuit blends the lines between advanced exoskeleton technology and work clothes to achieve a new level of practical performance.





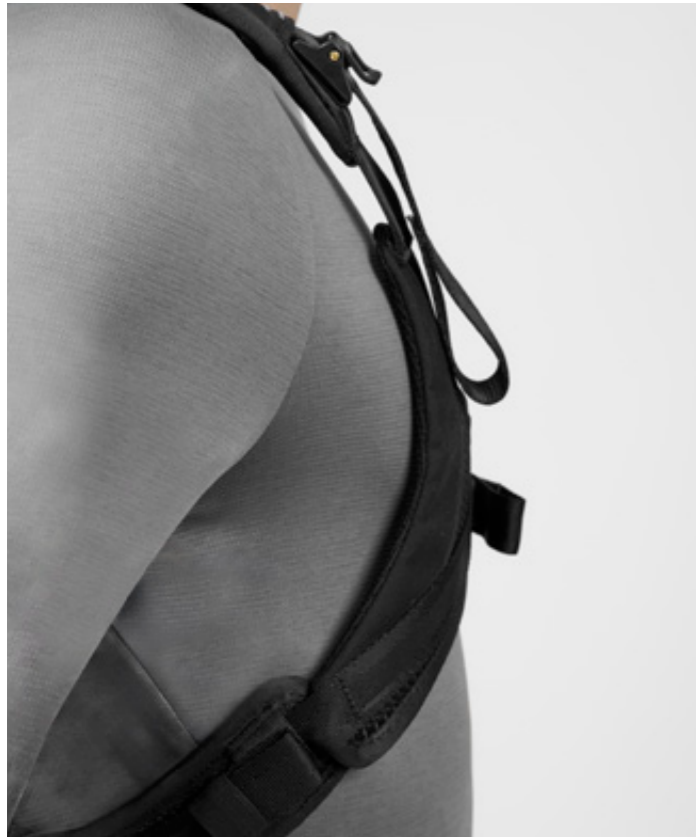
Design

Inspired by human anatomy, the LiftSuit provides natural support and unlimited versatility.

Small, low-profile, flexible, lightweight, and naturally adapting to the user's body, the LiftSuit allows full freedom of movement across all work activities. Whether you work in open or confined spaces, stand or kneel, or occasionally need to sit down, the LiftSuit offers nearly unlimited versatility.

Its support system imitates the behavior of human muscles, resulting in natural and intuitive assistance. An easy-to-use adjustment mechanism allows for quick individualization.

The fully textile frame combines advanced exoskeleton technology with traditional work clothes, ensuring all-day use without limitations.



The lightweight, low-profile design blends the line between the exoskeleton and work clothes.

The ergonomic design provides natural muscle support while allowing full freedom of movement.



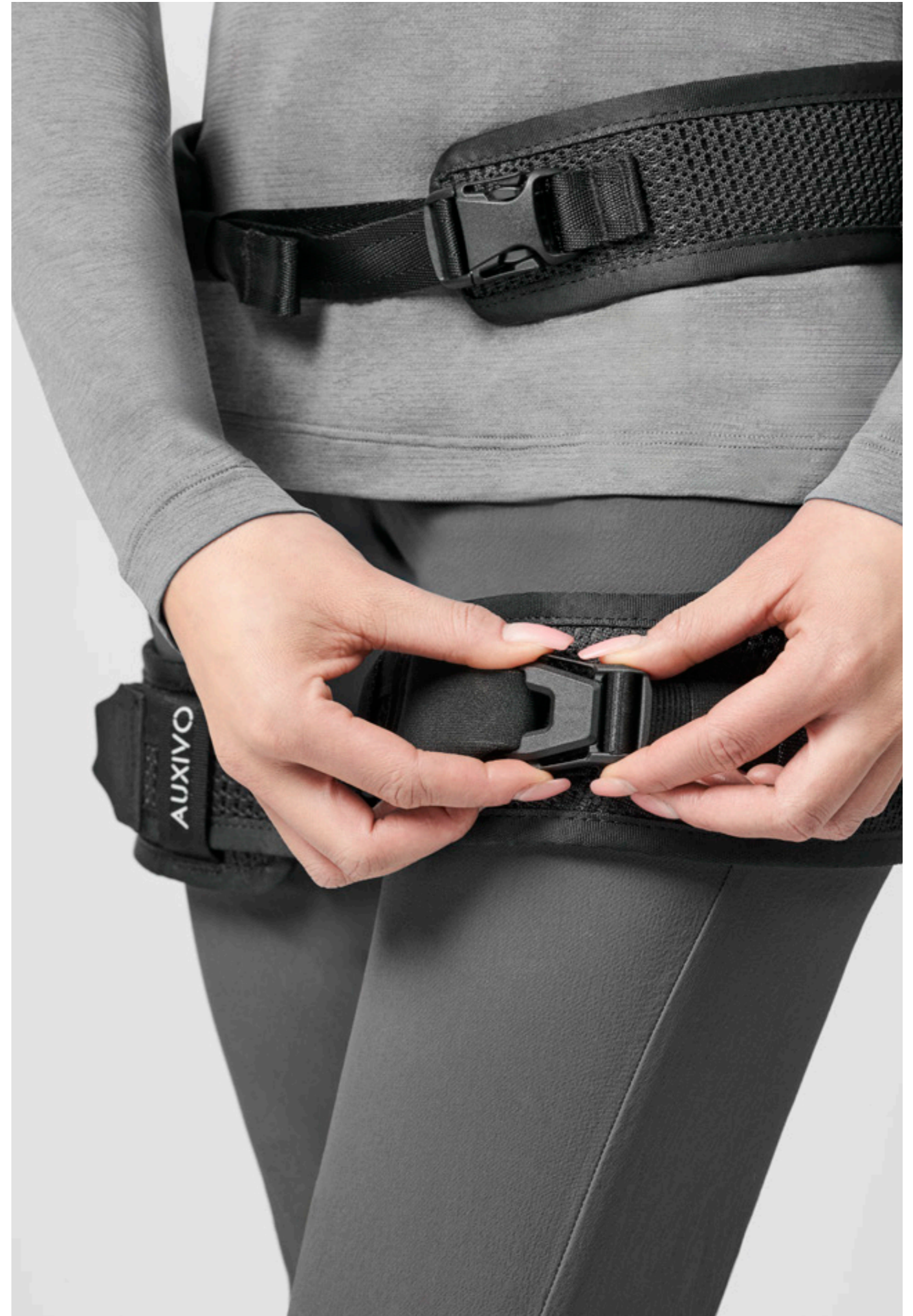
Engineering

Advanced technical textiles and artificial muscles create a lightweight and highly energy-efficient exoskeleton.

As a textile exoskeleton, the LiftSuit is engineered to achieve the highest level of flexibility and energy efficiency. A weight of only 0.9 kg ensures effortless everyday use.

Integrated Elastic Energy Storage (EES) elements act as artificial muscles that support the human back and hip muscles by relying on gravity compensation and energy recuperation.

Made from wear-resistant technical textiles for durability and machine washability, the LiftSuit is easy to maintain and integrate into operations.



The use of advanced technical textiles creates a high level of flexibility and results in a lightweight, low-profile exoskeleton.

Textile springs act as artificial back muscles to support the user in a natural, energy-efficient way.



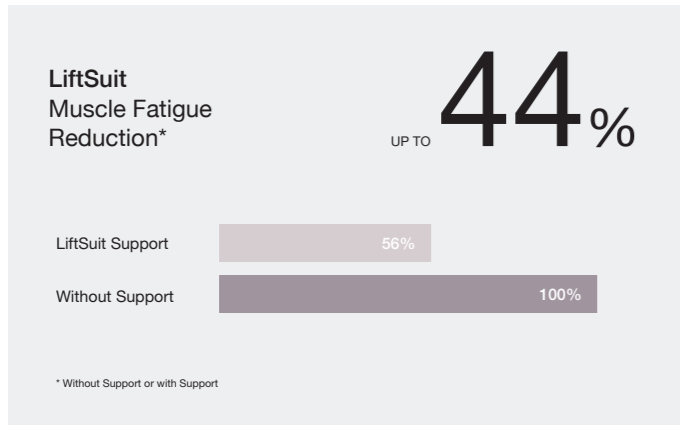
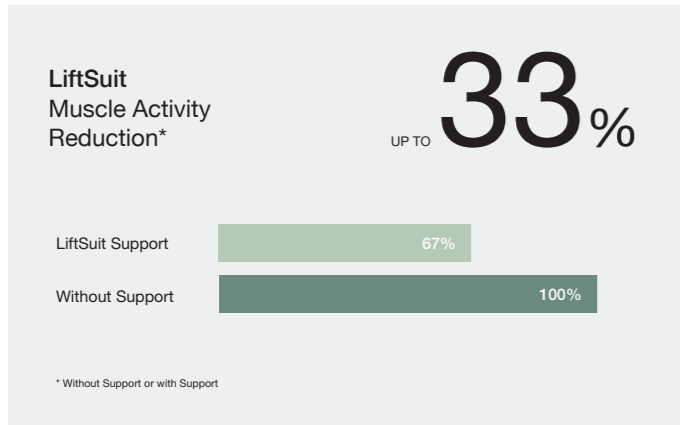
Performance

With its unique versatility, the LiftSuit can significantly reduce workload in a wide range of applications.

The LiftSuit provides significant relief for back and hip muscles during lifting or extended periods of leaning forward, significantly reducing the user's physical strain.

By combining this support with its optimized size, weight, comfort, and ease of use, it achieves a very high level of versatility and performance.

This performance makes the LiftSuit suitable for various industries. Whether you are lifting 1000 boxes daily in a warehouse, managing hundreds of luggage pieces at an airport under time constraints, spending hours leaning forward in agricultural work, or frequently bending over patients in healthcare settings, the LiftSuit offers reliable support.



Versatility of the LiftSuit in different fields and tasks.

Scientific evaluations show that the LiftSuit significantly reduced muscle load and fatigue in the back and hip.



Technical Data

Hardware

Textile Structure	3D-Mesh Structure Coated Cordura® 560 dtex
Chemical Composition	Main-fabric: 100% Polyester Spacer-mesh: 100% Polyester Lining: 100% Polyester
Dimensions (HxWxD)	1100 mm x 300 mm x 150 mm (Size S-M) 1100 mm x 400 mm x 150 mm (Size L-XL)
Weight	920 g (Size S-M) 1000 g (Size L-XL)

Scientific measurements

Average back muscle support when leaning forward holding load	33%
Average reduction of peak muscle activity in the lower back when lifting 6 kg	21%
Average back muscle fatigue reduction	10%
Average hip muscle fatigue reduction	44%
Cardiac cost reduction when lifting loads	7%

More detailed scientific data can be found in the LiftSuit Performance Sheet.
Available on our Website: www.auxivo.com

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