

LIFTSUIT SPECIFICATION

The LiftSuit® is a lightweight textile exoskeleton that supports the back and hip muscles when lifting objects or working in a forward-leaning position. It features integrated elastic elements that store energy to support the user and reduce the workload.



Mass overall	0.9 kg
Dimensions (packed)	Around 25 cm x 50 cm x 10 cm
Dimension on a coat rack	Around 110 cm x 30 cm x 15 cm
Size	One size (M-L)
Back height	45-60 cm
Chest circumference	88-120 cm
Hip circumference	75-105 cm
Thigh circumference	49-67 cm
List Price	CHF 850 without taxes (around € 800)

LIFTSUIT APPLICATIONS

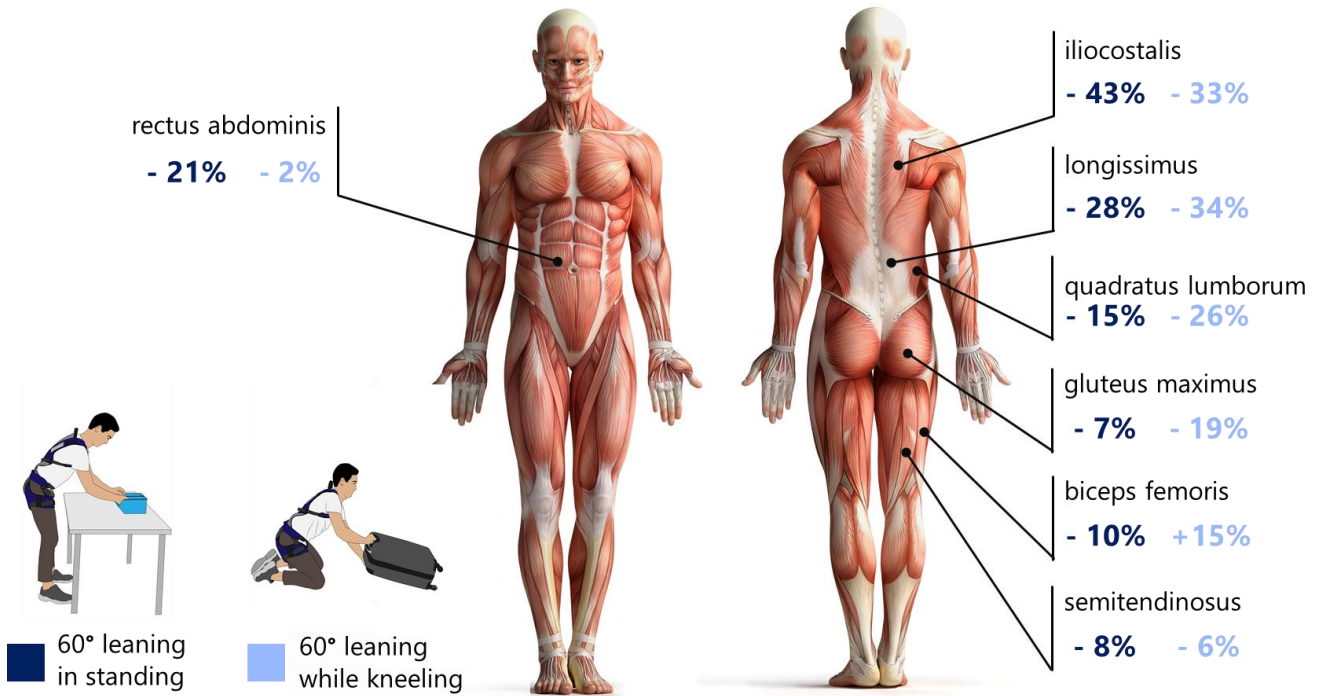
The LiftSuit supports all work that requires frequent lifting of objects from below hip level or working in a forward-leaning position. Use cases include applications in logistics, construction, warehousing, healthcare, agriculture, and others.



LIFTSUIT BIOMECHANICAL PERFORMANCE

The LiftSuit supports back- and hip muscles when lifting objects from below hip level or while remaining in a forward-leaning position. It functions as a layer of artificial muscles outside the body. This way, it reduces the load on its users' muscles. The level of load reduction has been quantified through a series of experiments in a biomechanical laboratory. The results are summarized here.

WORKING IN FORWARD LEANING POSITIONS



*Results represent the average reduction for 8 participants. Individual reductions may vary and depend on the particular person and the task performed while using the LiftSuit

REPETITIVE LIFTING OF LOADS



No Exo Repetitive lifting of 6 kg

Heart rate (HR) = 122 bpm
Working heart rate (WHR) = 58 bpm



LiftSuit Repetitive lifting of 6 kg

HR = 117 bpm (↓4 bpm)
WHR = 54 bpm (↓7%)

