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MATE-XT

Muscular Aiding Tech
Exoskeleton



MATE-XT EXOSKELETON

Take lightweight and highly breathable ergonomic support to the eXTreme.

The MATE exoskeleton suit has been designed to improve the quality of life at work by providing consistent, advanced shoulder and arms assistance.

It reduces muscle effort during strenuous indoor and outdoor repetitive operations and daily tasks.



WHAT IS MATE-XT?

MATE-XT is the **upper-limb** exoskeleton totally passive (w/o motors).
It is designed to assist the user during flexo-extension movements of the shoulder.

MECHANICAL SHOULDER CHAIN

Structure that facilitates the free movement of the user, such as sliding and rotating joints

GARMENT INTERFACE

All parts in direct contact with the user's body.



TORQUE GENERATING BOX (TGB)

Core mechanism that stores and transforms potential mechanical energy in order to create an adjustable assistive torque

HOW DOES IT WORK?

MATE-XT GIVES YOU THE EXACT LEVEL OF SUPPORT WHEN AND WHERE YOU NEED IT

Zero torque at 0°
Max torque at 90°

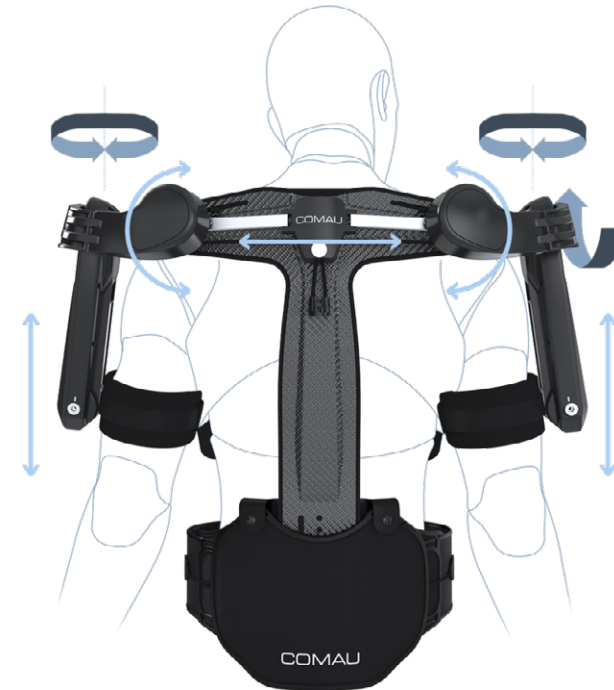
109°

Flexo-extension angle



The assistance torque provided by the MATE-XT exoskeleton suit follows your individual shoulder flexion/extension angle (maximum torque is at 90° degree)

MATE-XT MOVES IN HARMONY WITH YOUR SHOULDERS



Thanks to a chain of passive degrees of freedom, the flexion-extension rotation axis of the human shoulder is aligned with that of MATE-XT

JUST THE WAY YOU DO

MATEXT

MATE-XT FIT YOUR BODY

GIVING YOU THE FREEDOM TO MOVE

New shoulder length regulation design

Ergonomically designed cuffs

High-tech, lightweight carbon fiber structure

Breathable fabrics

Intuitive lock/unlock mechanism for easy donning/doffing

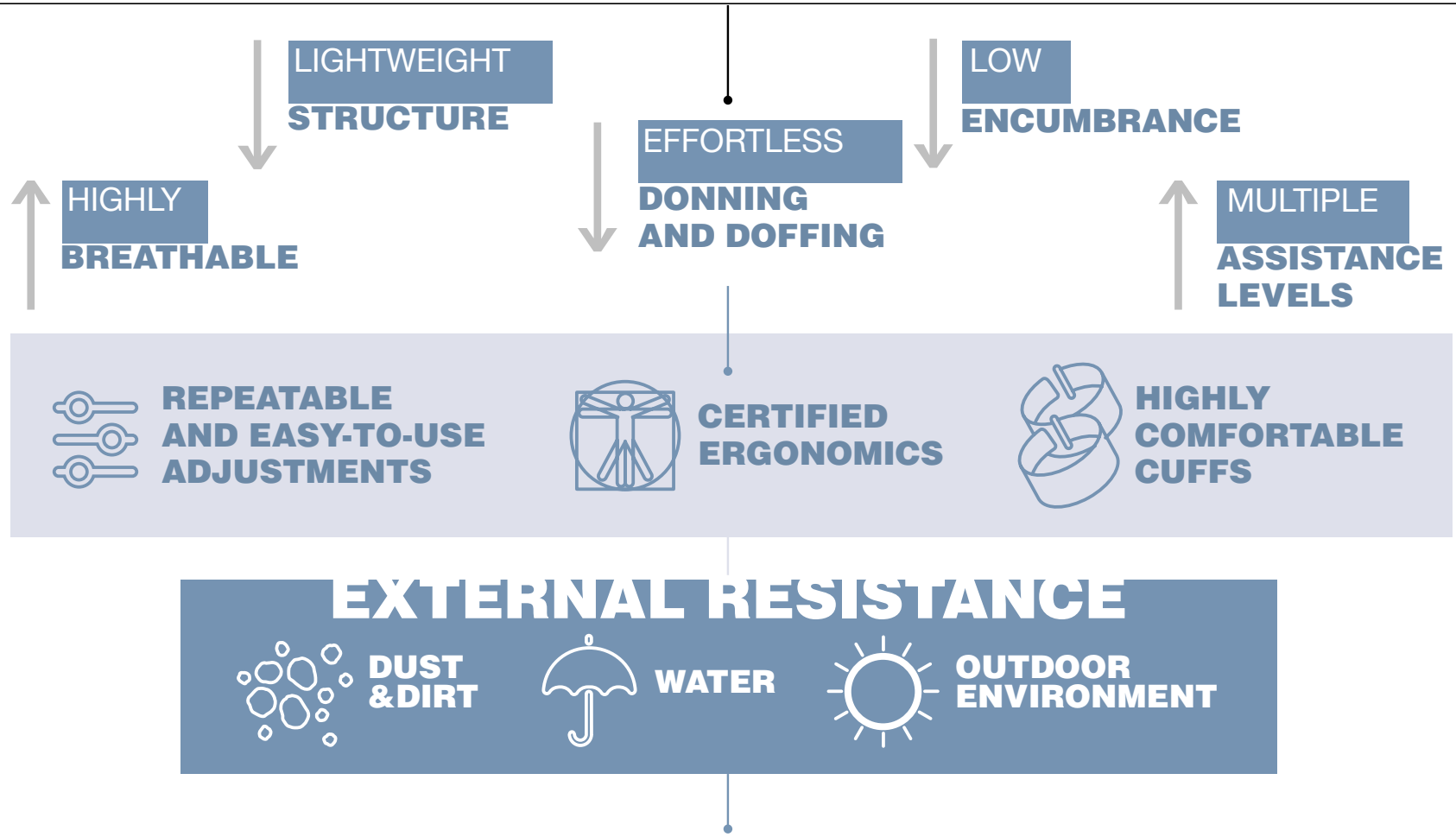
Intuitive labels for regulations and adjustments

Slim active box design

Available sizes: L and S

MATE-XT WORKS WHEN, WHERE AND HOW YOU DO.

EXTREMELY ERGONOMIC, EVERYWHERE



WHY IS MATE-XT UNIQUE?

FOR WORKERS

**REDUCED
MUSCULAR
EFFORT**

30% ↓ AT
SHOULDER
LEVEL
SCIENTIFIC STUDY

**PERCEIVED
EFFORT
REDUCTION**

25% ↓ LESS MUSCLE
STRAIN
PERCEIVED
PERFORMING ACTIVITIES

**BACK
SUPPORT
RELIEF**

50% ↑ OF WORKERS
IMPROVED
THEIR POSTURE
PERFORMING ACTIVITIES

FOR COMPANIES

**POSITIVELY
IMPACT YOUR
ERGONOMICS**

**LESS
EXECUTION
TIME**

**HIGHER
PRECISION**

**ADDRESS WORK-
RELATED
MUSCULOSKELETAL
DISORDERS**



MORE **FLEXIBILITY**



MORE **COMFORT**



MORE **RESISTANCE**



MORE **SUPPORT**

EN



MATE-XT4.0

Sensorized version with
IoT functionalities



MATE-XT 4.0 VERSION

MATE-XT 4.0 combines the MATE-XT with advanced sensors to enable IoT application and extend the MATE “family”

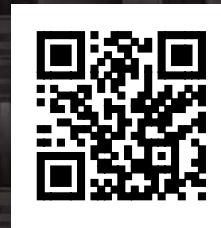


Availability:
MATE-XT4.0 Right hand side &
MATE-XT 4.0 - Left hand side
(Large & Small Size)

WHAT ARE THE ADDITIONAL FUNCTIONALITIES OF MATE-XT 4.0



- **Wifi-connected sensors** to deliver near real-time data with an intuitive digital dashboard
- **IoT-ready device:** MATE-XT 4.0 Integration with Industry 4.0
- **Advantage of Tax credit rebate** according to local legislations for introduction of Industry 4.0 devices
- **Preventive Maintenance:** Fault prevention



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