MATE-XT

Muscular Aiding Tech Exoskeleton

COMAU

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 shoulders 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 flex-extension movements of the shoulder.

MECHANICAL SHOULDER CHAIN

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

TORQUE GENERATING BOX (TGB)

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

GARMENT INTERFACE

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

HOW DOES IT WORK?

MATE-XT GIVES YOU THE EXACT LEVEL OF SUPPORT WHEN AND WHERE YOU NEED IT
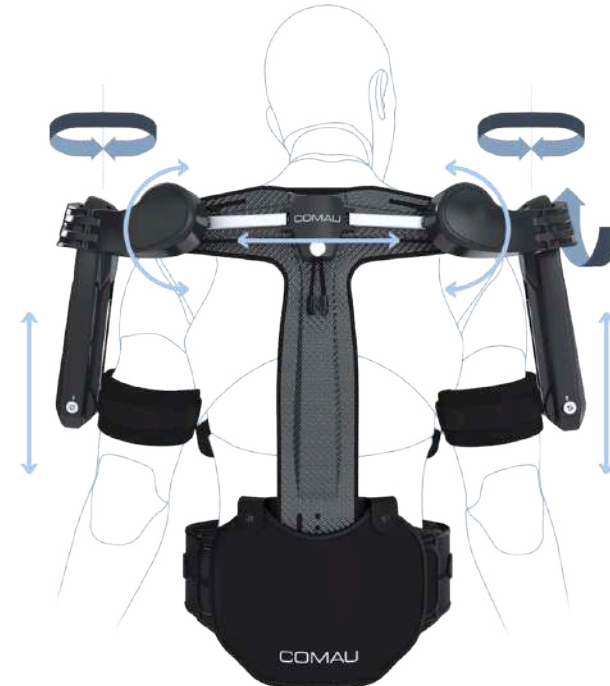
Zero torque at 0°
Max torque at 90°

109°

Flexo-extension angle

The assistance torque provided by the MATE-XT exoskeleton suit follows your individual shoulder flexion/ extension angle

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
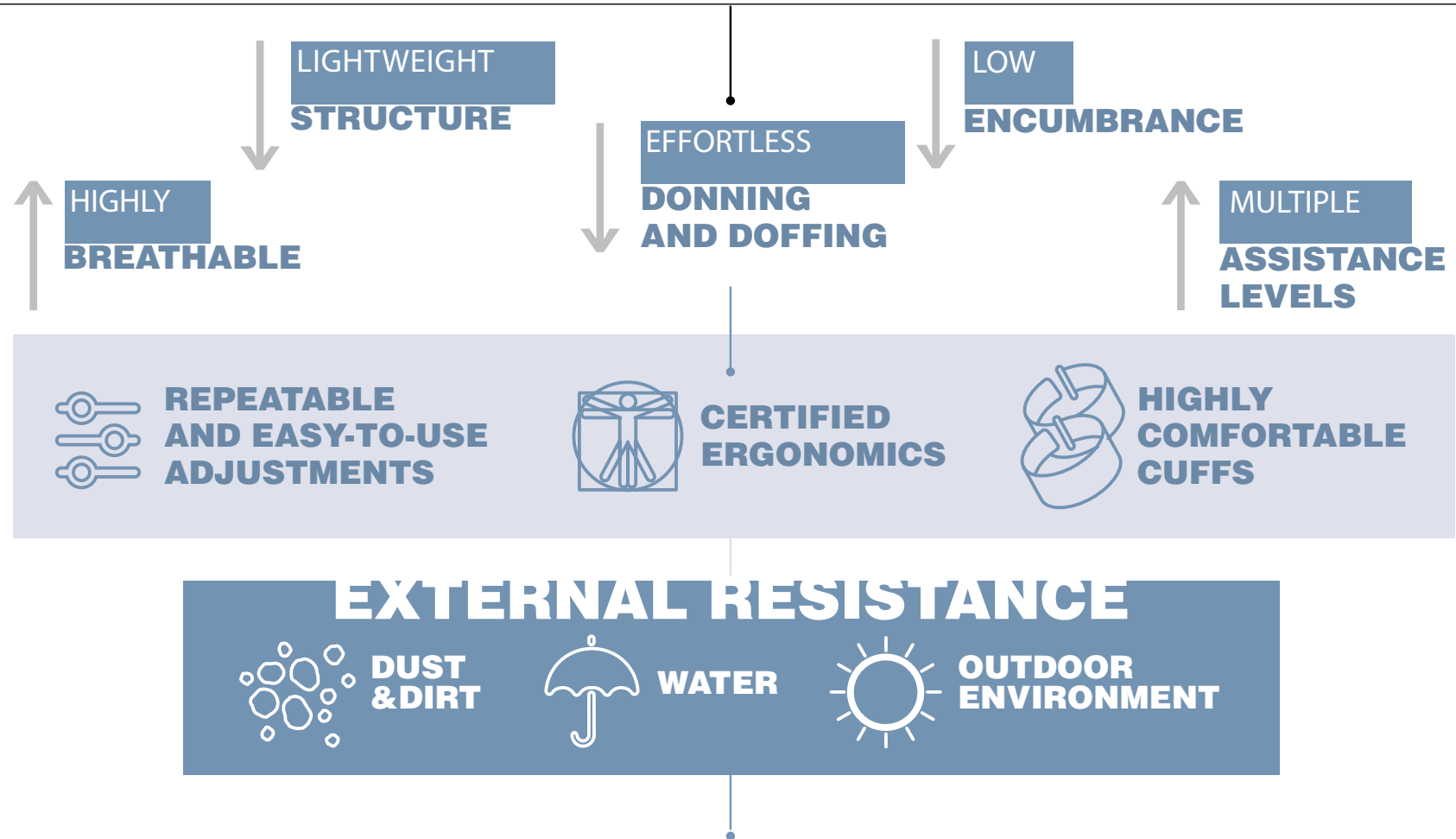
JUST THE WAY YOU DO

MATE-XT FITS 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

LIGHTWEIGHT
STRUCTURE

LOW
ENCUMBRANCE

HIGHLY
BREATHABLE

EFFORTLESS
DONNING AND DOFFING

MULTIPLE
ASSISTANCE LEVELS

REPEATABLE AND EASY-TO-USE ADJUSTMENTS

CERTIFIED ERGONOMICS

HIGHLY COMFORTABLE CUFFS

EXTERNAL RESISTANCE

DUST &DIRT **WATER** **OUTDOOR ENVIRONMENT**

MATEXT

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

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