

ZEUS

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Zeus the bionic hand

Zeus [A-01-L-T; A-01-R-T] is a multi-articulating myoelectric hand combining ease of control with an elegant, robust design. The fingers and thumb provide a firm grasp to perform everyday tasks with ease. The fingers stall individually, allowing them to conform to the shape of the object, regardless of shape and size. Users can choose from 12 grips.

- Zeus is the strongest bionic hand on the market (34.17lbf / 152N grip force)
- Zeus is impact resistant and can carry loads up to 77lbs / 35 Kgs.
- Even in the event of damage, digits can be repaired very quickly locally; all repairs can be made in less than 30 minutes!

The hand is compatible with most industry standard electrodes and batteries, as well as a variety of wrist rotators and elbows.

Key Features



- **Compliant fingers** to prevent breaking of finger units
- **The strongest bionic hand** (34.17lbf/ 152N grip force)
- **5 Individually motorized articulating digits** allowing for dexterity in movement
- **Opposable thumb**
- **Modular design** all repairs can be done under 30 minutes
- **12 Selectable** grip patterns
- **Closing speed 1.2 seconds**
- **Closed loop motor control** sensing finger position and applied force for proportional control

Opposed Grips

Power Grip

In this grip, the thumb is opposed, while all of the fingers can be closed until they meet the object or no further close signal is given. The strong grip provides 34.17lbf/ 152N of force spread over all four fingers and thumb. This multi-purpose grip allows you to open a door or shake hands. Individual finger stalling means the grip conforms to the shape of the object so that you can lift things such as a wine glass. Thanks to advanced sensors, the hand optimizes the force applied to the object.



Trigger Grip

This grip is useful for operating appliances which require trigger mechanisms like sprays. The hand grasps the object and conforms to the shape of the object. The index finger and middle finger are controlled proportionately to operate the trigger mechanism. The speed and force applied by the index finger can be modulated on the basis of EMG signal.

Precision

Open Grip

In this grip, the thumb moves to a mid-point and stops. The index finger can be controlled proportionally to form a pinch. Middle, ring and little fingers remain open. This grip can be used for picking up small delicate objects and various precise activities.



Precision

Closed Grip

In this grip, the thumb moves to a mid-point and stops. The index finger can be controlled proportionally to form a pinch. Middle, ring and little fingers close fully. This grip can be used for picking up small objects from a table.



Tripod Closed Grip

The grip allows you to hold medium sized objects such as a pen, car keys and eggs. The thumb assumes a midpoint position while the index and middle finger move proportionally to reach the tip of the thumb. The ring finger and little finger close fully.



Tripod Open Grip

This grip allows you to hold a variety of daily life objects like a pen, car keys and eggs. The thumb assumes a mid-point position while the index and middle finger move proportionally to reach the tip of the thumb. The ring finger and little finger remain open.

Non-Opposed Grips

Finger Point

The index finger is active and in a pointing position with the rest of the fingers closed. This can be used for pushing switches and buttons.



The index finger is active and in a pointing position with the rest of the fingers open. This can be used for working on computer keyboard, typing.

Active Index



Open

Palm The hand opens to the extent where it provides a slight curvature to support plates, bowls and books. The rubberized palm provides a flat, non-slippery surface to confidently carry objects in this grip.



Hook

Grip

This grip is used for lifting up heavy objects like briefcases, shopping bags and gym equipment. Because of the self-locking nature of Zeus, the fingers have a static grip capacity of 77lbs / 35Kgs, allowing you to lift heavy objects with ease. This grip can also be used to provide support when getting up from a seated position.



Key Grip

This is a commonly used grip for picking up thin flat objects, holding a key or turning a page. The four fingers assume a position to provide a flat platform for the thumb. The thumb can be controlled proportionately to open and close.



This grip is used to operate a computer mouse. The hand assumes the position of the mouse. The index finger and the middle finger can be controlled to push left and right buttons respectively.

Mouse Grip



Technical Specification



Height (finger tip to wrist base)
172mm / 6.77in
Palm Width
86mm / 3.38in
Thickness
30.5mm / 1.20in



Device weight with QWD
590 g / 1.31lbs



Closing time
1.2sec



Grip force
152N / 34.17lbf


Force with closed hand
(static, carrying a bag)

350N
78.68lbf



Force on chassis
(static, supporting the hand)

500N
112.40lbf



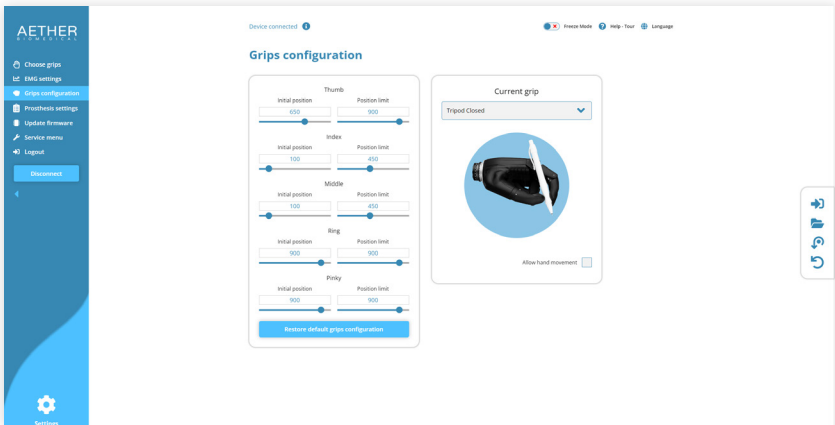
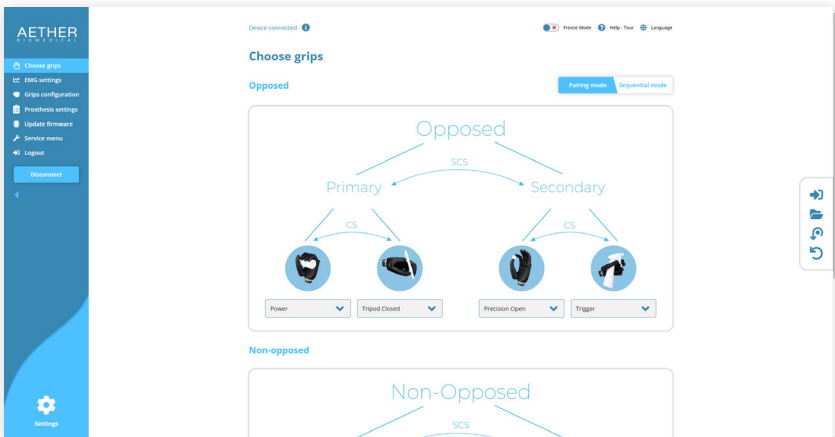
Max. weight supported on the knuckles
90 kg / 198 lbs over the knuckles

▲ Avoid pressure on thumb

Software

All the settings of the prosthesis can be adjusted by the clinician, using our dedicated configuration software. This allows for the fine tuning of the hand- sensitivity, grips and control methods.

The hand's firmware can be updated via the software, so that the hand always has the latest features.



Warranty and Compatibility

Compatibility

- The hand is compatible with most industry standard sensor system:
 1. Dual channel EMG
 2. Single channel EMG
 3. Switch
- The hand is also compatible with 7.4V battery systems and a variety of wrist rotators and elbows. Please refer to the compatibility manual DMR-4 v1.



Warranty

The Zeus hand comes with a 2-year-standard warranty from Aether Biomedical Sp. z o.o. In addition, extended warranty packages are available. The Zeus hand must be serviced every 12 months.

Aether Biomedical

Aether Biomedical is a medical robotics company focused on biosignal processing and bionic limbs for upper limb amputees. Since the company's founding, our team has expanded to represent diverse specialties such as engineering, medicine, design and strategy. We are striving to shake up the world of medical technology innovation. Our products are engineered with precision, designed to exceed global standards and are fundamentally driven by human need. Our solutions are conceived and developed in-house and scaled externally with the help of manufacturers and distributors.



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