



BIONIT LABS

TURNING DISABILITIES INTO NEW POSSIBILITIES

PRODUCT BROCHURE

AA **ADAM'S HAND®**
The First of its Kind



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ADAM'S HAND (PN AH01)



Adam's Hand is the **World's First Fully-Adaptive Bionic Hand**. It is based on a game-changing technology that allows all the fingers to automatically adapt to the shape and size of the grasped objects: so **the user does not need to carry out complicated muscle contractions to select a preset grip pattern, as is the case of all bionic prostheses currently on the market.**

The user has only to decide if opening or closing the hand, while the Adam's Hand automatically performs the most suitable grip pattern for each grasped object.

Moreover, an **integrated Artificial Intelligence** allows the user to perform a fast and intuitive calibration procedure, further simplifying the use of the device.

The Adam's Hand also features a robust mechanism which allows the **thumb passive abduction/adduction in 3 locked positions**: neutral (45°), lateral (0°) and in opposition (90°). The thumb also features a pressure sensor, which can activate an anti-slip mode, useful to manipulate heavy objects.

The user can enjoy a **light, compact and IP44** prosthetic hand, with high autonomy and improved ease of use.

The **multi-function button** on the back of the hand allows the users to activate/deactivate the EMERGENCY and the STANDBY MODE, turn ON/OFF the **Bluetooth** needed to connect the Adam's Hand to our MyoLogic App, and be informed about all the Adam's Hand operational status.

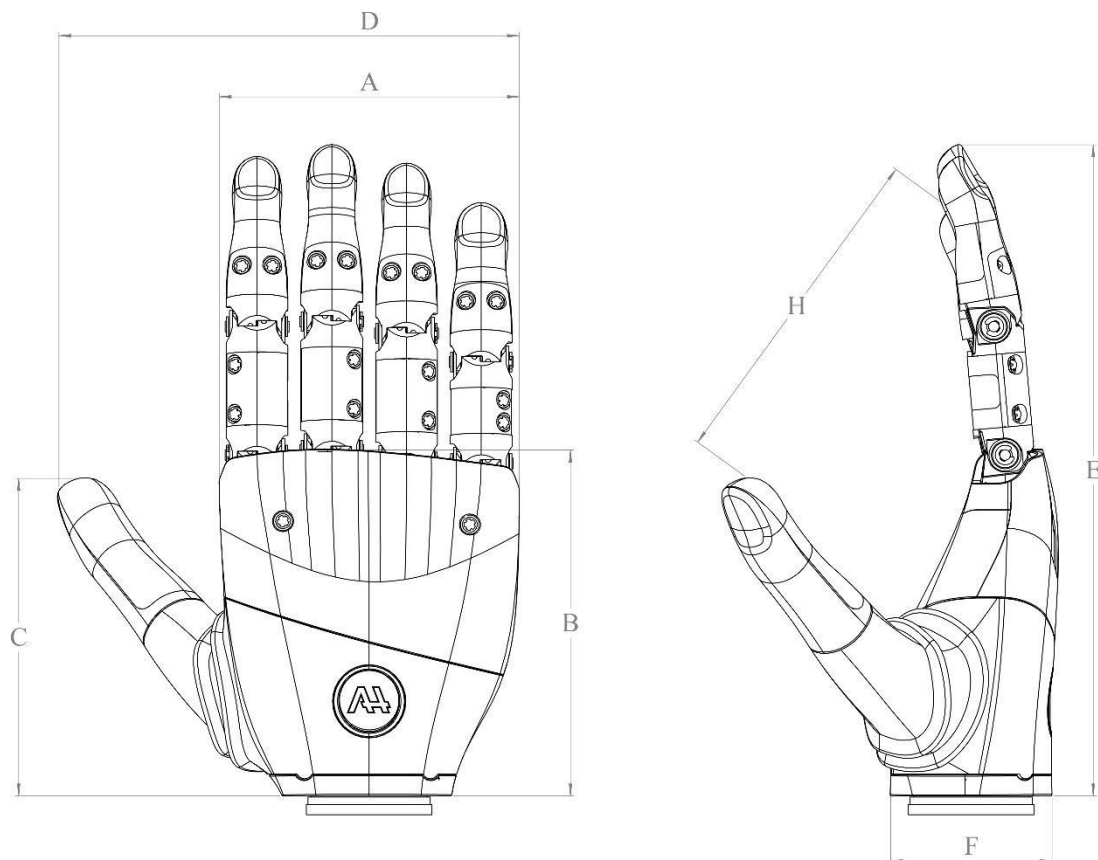
Adam's Hand also has **field-serviceable fingers** that can be replaced **directly by the orthopedic technician**, without the need to send the device back to our headquarters, thus shortening repair times and allowing the users to spend as much time as possible with their device. Moreover, the ability to **remotely update the firmware also allows users to always use a device at its full potential**.

The **internal mechanism and finger joints** are manufactured with **high-strength aviation grade aluminium and stainless steel**, while the phalanges and frame are manufactured using **highly impact-resistant techno-polymers**, in order to maintain the lowest possible weight **without compromising the device robustness**.






An **aesthetic glove** can be used by the patient who wants to obtain an aesthetic similar to that of a natural limb.

The **Adam's Hand** is currently available in **Large size (8 1/4")**, and the **Medium Size hand (7 3/4")** is **currently under development** and it will be officially launched during **OTWorld 2022**, in May 2022.

PRODUCT DIMENSIONS:








| Size | Large (8 1/4'') |
|----------------------------------|-----------------|
| A - Max Palm width | 88 mm |
| B - Palm length | 102 mm |
| C - Thumb tip to hand base | 94 mm |
| D - Max. Hand width | 157 mm |
| E - Hand length | 192 mm |
| F - Diameter of chassis at wrist | 47 mm |
| H - Max. opening width | 112 mm |

| COLOUR OPTIONS | |
|----------------|---|
| Solid Black |  |
| White |  |
| Desert Sand |  |
| Spectrum |  |
| Carbon Fiber |  |





TECHNICAL DATA:

| | |
|--|---|
| Size | Large (8 1/4'') |
| Weight | 570 g |
| Thumb abduction/adduction | Passive, 3 fixed positions: 0° (lateral), 45° (rest), 90° (opposition) |
| Wrist Option | Quick Disconnect Wrist |
| Input Voltage | 6 ÷ 8.4 V (DC) |
| Supply Current | 6 A |
| Operating environmental conditions | Temperature: -10°C/14°F to +40°C/104°F Humidity: from 30% to 85%, non-condensing |
| Storage and transport environmental conditions | Temperature: -20°C/-4°F to +70°C/158°F Humidity: 85%, non-condensing |
| Degree of protection from liquids and solids (IEC 60529) | IP44 (IP67 with cosmetic glove) |
| Service life | 5 years |
| Warranty | 3 years* |

*Extended warranty options are available. For more information, send an email to support@bionitlabs.com.

| Button functionality | Pressure time | Acoustic feedback | LED feedback | |
|--|---------------|-------------------|-----------------------------------|--|
| | | | | |
| Enter EMERGENCY MODE (the Adam's Hand opens and stops) | 1 x Long* | 2 x Long | Red – Stationary |  |
| Enter STANDBY MODE (the Adam's Hand stops – no EMG reading) | 1 x Short* | 1 x Long | Red – Blinking |  |
| Activate the Adam's Hand (exit STANDBY or EMERGENCY MODE) | 1 x Short* | 2 x Short | Green – Double blink |  |
| Turn ON the Bluetooth | 2 x Short* | 2 x Short | Blue – Double blink |  |
| Turn OFF the Bluetooth | 2 x Short* | 1 x Long | Blue – Stationary for approx. 1 s |  |

*Long: more than 1 s / Short: less than 1 s.

| Hand operational status | Acoustic feedback | LED feedback | |
|----------------------------------|--------------------|--------------------------------|---|
| EMERGENCY MODE | 2 x Long | Red - Stationary |  |
| STANDBY MODE | 1 x Long | Red - Blinking |  |
| Bluetooth connected successfully | 1 x Short | Blue - Single blink every 10 s |  |
| Warning* | 1 x Long every 3 s | Red - Blinking |  |

*For more information, send an email to support@bionitlabs.com.

ADAM'S HAND ACCESSORIES



Thundercell Battery is an **external interchangeable lithium-ion battery** which features the fast-charge technology through a **USB-C connector**, an **IP67 waterproof design** and a **multi-function LED button**. It is a **smart device** that sends to the **Adam's Hand** relevant information about any operating status and the **overall battery health**. Moreover, it provides the user with useful information through **haptic feedback**, it allows **remote firmware update via our MyoLogic app** and it integrates a **9-axis motion sensor** which allows the tracking of the **position of the user's arm for rehabilitation purposes**. Finally, the users can recharge their mobile devices using ThunderCell as a **power bank**.

For more information, see "[ThunderCell Battery – Product Brochure](#)".



Wave Electrodes are **compact, low-power, and active EMG surface electrodes** which ensure accurate and fast reading of users' muscular signals and feature an **IP67 waterproof design**. They're available in both **50 Hz and 60 Hz versions**.

For more information, see "[Wave Electrodes – Product Brochure](#)".

COMPATIBILITY

Provided with an integrated **Quick Disconnect Wrist**, the **Adam's Hand** is compatible with several **myoelectric upper-limb prosthetic systems** available on the market - EMG electrodes, battery systems, wrist prono-supinators and elbow modules.

For more information, please visit our [website](#), or send us an email to support@bionitlabs.com.

CE CONFORMITY AND FDA REGISTRATION

The **Adam's Hand** (Large size) is a **Class I CE marked medical device**, in accordance with the **European Regulation for Medical Devices MDR 2017/745** and it is compliant with **IEC 60601-1**, **IEC 60601-1-2**, **IEC 60601-1-11** and **RED** standards. It has been listed in the **FDA database**.

MANUFACTURER



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