



Technical Data Sheet Prosthetics Hand Release Version 1.1 October 2024

Product Name:
The Genesis Hand

Key Features:

- ✓ Visual Feedback Indicator
- ✓ 1.2s closing speed
- ✓ 6 Powered DOFs
- ✓ Fully Modular Fingers
- ✓ Multifunction Push Button
- ✓ 15lbs Lifting Capacity
- ✓ Single or Dual Site EMG Control
- ✓ < 1mm Finger Position Repeatability

Product Summary:

The Genesis Hand is a 6 degree-of-freedom myoelectric / powered upper limb device developed for prosthetic applications. The Genesis Hand is equipped with a variety of advanced features that were inspired by feedback from the upper limb loss community, prosthetists, and upper limb specialists. The hand was designed to provide an affordable alternative to current powered hands while also maintaining advanced functionalities, reducing learning curves, and most importantly, helping amputees live a more independent lifestyle.



Mechanical Specifications

Specification	Value
Dimensions (Medium)	7.7" H x 4.3" W x 2.2"
Weight	1.0 lb.
Max Grip Force (Power Grip)	13N
Max Grip Speed (Power Grip)	1.2 seconds
Maximum Carrying Capability	15lbs (Power Grip + Hand Lock)
Thumb Type	Powered (2 Degrees of Freedom)
Thumb Rotation Speed	1.2 seconds to full stroke rotation
Thumb Flexion Speed	1.2 seconds to full stroke flexion
Finger Flexion Speed	1.0 seconds to full stroke flexion
Water Resistance	Unofficial IP54 - Resistant to limited dust and splashes. Best for indoor areas, avoid rain.
Electrode Configuration	Single or Dual Site
Grip Patterns	4 Core
Custom Grip Patterns	Infinite
Connection Type	6-Pin EQD (Compatible with 4-Pin Coax)
Feedback Mechanisms	Visual Only

General Specifications	
Grip Patterns	4 Core
Custom Grip Patterns	Infinite
Single-Site Control Method	<p>Double Button Press = Change Grip</p> <p>Palmar Flex = Close Grip Wait 1.5s Palmar Flex = Open Grip</p> <p><i>Grip can also be changed via app</i></p>
Dual-Site Control Method	<p>When No Grip Is Activated</p> <p>Single Palmar Flex = Core Grip 1 Double Palmar Flex = Core Grip 2 Single Dorsal Flex = Core Grip 3 Double Dorsal Flex = Core Grip 4</p> <p>When Core Grip Activated</p> <p>Palmar Flex = Close Grip Dorsal Flex = Open Grip</p> <p>When Core Grip Is Open</p> <p>Dorsal Flex = Return to Core Grip Directory</p> <p><i>Grip can also be changed via app</i></p>

General Specifications (Continued)

Warranty

1-Year Limited

Operational Lifetime: The lifetime of a finger (or thumb) depends mainly on the conditions during operation. The total hours of operation can therefore vary greatly from some hundreds of hours under extreme conditions to over 10,000 hours under optimal conditions. Under typical load conditions a finger will have an operational lifetime anywhere between 1,000 to 5,000 running hours.

PDAC : Pending PDAC Approval – L6880

Who Should Use The Genesis Hand?

The Genesis Hand is specifically designed for adult transradial amputees (aged 18 and above) seeking a reliable and functional prosthetic solution for everyday tasks. While adaptable for use by bilateral amputees, the Genesis Hand excels when used by individuals with unilateral transradial amputations or congenital differences.

It is important to note that the device is not intended for people who regularly engage in high-impact activities such as frequently lifting weights exceeding 15 lbs, mountain biking, or other extreme sports. This focus ensures that the hand maintains its longevity and performance, offering a balance of functionality and ease of maintenance for everyday tasks and moderate physical activities.

This information is provided to help both clinicians and amputees understand the optimal use conditions for The Genesis Hand, ensuring it delivers the highest levels of comfort, utility, and satisfaction for the intended patient population.