

MC Standard Hand

Prosthetist Manual

Fillauer[®]
Motion Control

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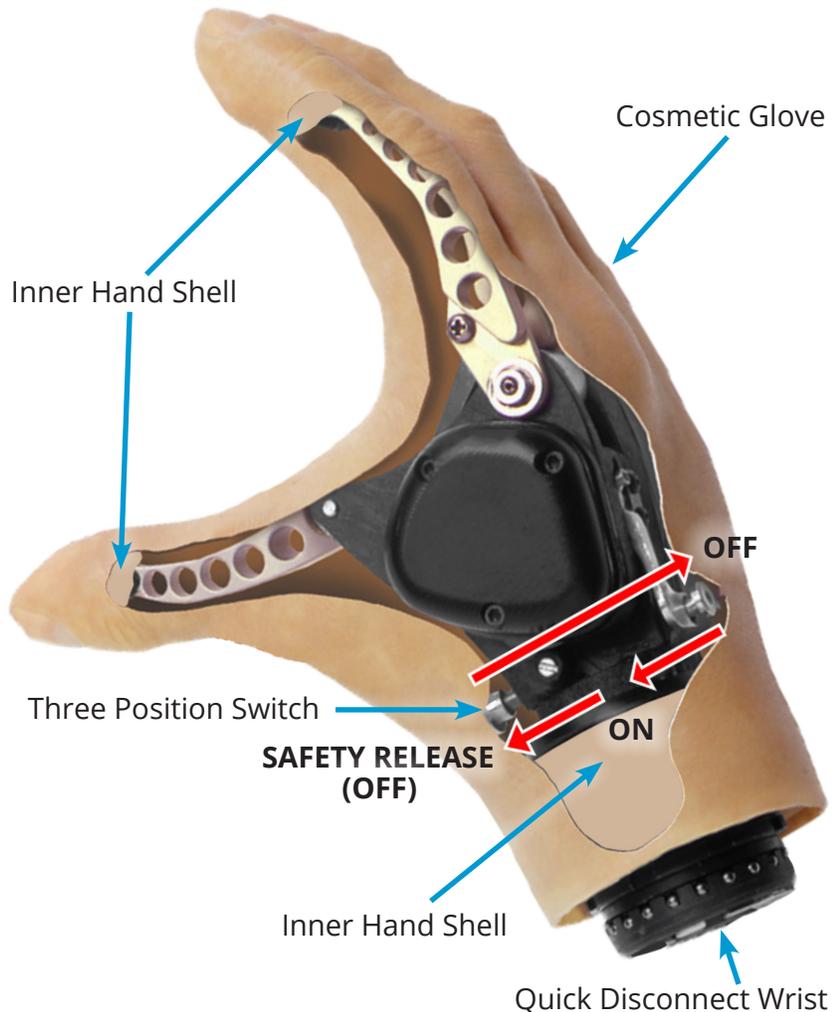
Introduction

The Motion Control (MC) Standard Hand is a high performance electric hand for persons with upper extremity limb loss. The MC Hand is available in three sizes and several lengths to accommodate a variety of individuals. It contains a battery-saver circuit for longer battery life, wide-opening fingers, heavy-duty machined frame and fingers, and a unique safety release. This results in a robust, efficient, high-speed terminal device for an upper extremity prosthesis.

The MC Hand motor drive is shorter than other hands, allowing the addition of two different types of Motion Control flexion wrists, the Flexion Wrist or Multi-Flex Wrist, without major increases in length. This shorter hand is an advantage in cases where the residual forearm length is rather long. Choose the short hand option (which includes the Quick Disconnect) or the Wrist Disarticulation version, which is even shorter by 2.4 cm (1.0 in.), by sacrificing the Q/D and fabricating directly to the forearm.

The MC Standard Hand can only be used when a controller is upstream of the terminal device, such as cases with a ProControl2, Utah Artificial Arm or Utah Hybrid Elbow.

MC Standard Hand (cutaway)



MC Standard Hand
blue coax receptacle



Special Precautions



Risk Management

To minimize the risk of device damage or injury to the user while maximizing the functions of this device, follow the instructions for installation, and use this device as described in this manual.



The MC Hand is not waterproof

Do not allow water to enter the cosmetic glove or inner hand shell. To minimize incidental moisture damage such as rain, or cleaning the hand with a damp cloth, maintain an intact cosmetic glove and inner hand shell. Damage to either, will allow moisture into the mechanism and cause damage. If water or other liquid should enter the hand, remove the hand at the quick disconnect (or turn the hand off if there is no quick disconnect) and take it to your prosthetist for disassembly and inspection.



Flammable Gases

Caution should be used when operating the hand around flammable gases. The hand utilizes an electric motor that can ignite volatile gases.



Do not bend fingertips

While the MC Hand is robust, body weight represents a great deal of force. Do not apply full body weight on the finger or thumb tips. Additionally, a fall with the force directed to the fingertips could cause damage. If the fingertips do become bent or out of alignment, remove the cosmetic glove and inner hand shell. If the index finger, middle finger and/or thumb are badly bent, broken, or out of alignment, return the hand to Motion Control for replacement of fingers.



Safety Release

Do not force the fingers and/or thumb opened or closed. This will result in serious damage to the device. The safety release will allow easy opening and closing of the hand. If the release mechanism does not allow motion, the device requires service by Motion Control.



Repairs or Alterations

Do not attempt to repair or alter any of the mechanical or electronic components of the MC Hand. This will likely cause damage, additional repairs, and void the warranty.



Safety Caution

Use caution when using this device in situations where injury to yourself or others may occur. These include but are not limited to activities such as driving, operating heavy machinery, or any activity where injury may occur. Conditions such as a low or dead battery, loss of electrode contact, or mechanical/electrical malfunction (and others) may cause the device to behave differently than expected.

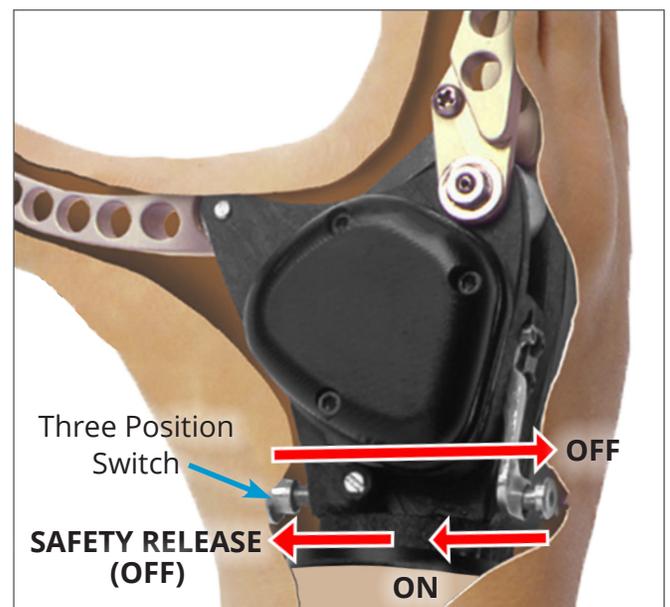


Serious Incidents

In the unlikely event a serious incident occurs in relation to the use of the device, users should seek immediate medical help and contact their prosthetist at the earliest possible convenience. Clinicians should contact Motion Control immediately in the event of any device failure.

Three Position Switch

The MC Hand has a three position sliding switch located in the middle of the back of the hand. On the palm side, it is located at the base of the thumb. With the switch pushed all the way toward the back of the hand, the hand is OFF. Pushing from the back of the hand towards the palm, the first click turns the hand ON. Pushing completely toward the palm is the SAFETY RELEASE position, releasing the fingers. In the Safety Release position, the hand is also turned OFF.



MC Standard Hand showing
Three Position Switch

Quick Disconnect Wrist

The Quick Disconnect wrist is a universal design that allows interchangeability with our other terminal devices, such as the MC Standard ETD and other manufacturers' devices.

Inner Hand Shell

This durable glove is installed at the factory and is not meant to be removed except by trained personnel. This shell provides protection for the hand along with some moisture resistance. If a hole or damage is discovered, the hand shell should be replaced. Some smaller size hands do not have an inner hand shell, they have only a cosmetic glove. This requires a special order from Motion Control.

Cosmetic Glove

This glove should be chosen in conjunction with your wearer, examining the color swatches compared to the wearer's skin tone. Ideally, this should be done outdoors, under natural light, not under fluorescent lighting. The glove should remain intact to prevent damage to the hand. Holes or damage to the glove could allow liquids to enter the hand, and cause damage. Always maintain an intact glove.

Instructions for Use

Before attaching the MC Hand to the forearm, locate the switch on the palmar side of the hand at the base of the thumb. Ensure it is pushed completely to the back of the hand (the OFF position).

Insert the quick disconnect wrist on the hand into the wrist on the forearm. While pushing it in firmly, rotate the hand until an audible click is heard. It is advisable to rotate the hand both directions several clicks, then attempt to pull the hand off to ensure it has attached firmly.

Now, push the switch on the back of the hand toward the palmar surface to the second (middle) position and the hand is now ON and ready for use.

To disconnect the hand, first turn it OFF (by pushing the switch all the way to the back of the hand), then rotate it in either direction until a slightly more difficult click is felt. Overcoming this click will disconnect the hand from the forearm. This allows interchangeability with another terminal device, such as the MC Standard ETD.

Water Damage

The Motion Control Hand is not waterproof. If water or other liquid should enter the hand, remove the hand at the quick disconnect (or turn the hand off if there is no quick disconnect), then remove the cosmetic glove and inner hand shell. If the hand is only slightly wet (has not been submersed), dry it as much as possible, and attempt to power it up and operate. If it does not operate, or if the hand has been submersed, return it to Motion Control.

Single Patient Use

Each amputee is unique. The shape of their residual limb, the control signals each generates and the tasks an amputee performs during the day require specialized design and adjustment of the prosthesis. Motion Control products are manufactured to be fit to one individual.

Disposal/Waste Handling

This device, including any associated electronics and batteries should be disposed of in accordance with applicable local laws and regulations. This includes laws and regulations regarding bacterial or infectious agents, if necessary.

Limited Warranty

Seller warrants to Buyer that the equipment delivered hereunder will be free from defects in materials and manufacturing workmanship, that it will be of the kind and quality described and that it will perform

as specified in Seller's written quotation. The limited warranties shall apply only to failures to meet said warranties that appear within the effective period of this Agreement. The effective period shall be one year (12 months) from the date of delivery to the fitting center that has purchased the components. Refer to the shipping receipt for the date of shipment.

For more information regarding the Limited Warranty, see the MC FACT SHEET - Limited Warranty.

Return Policy

Returns are accepted for a full refund (not including any repairs that may be required) for up to 30 days from date of shipment. Returns 31-60 days from date of shipment will be accepted, subject to a 10% restocking fee. Returns 61-90 days from date of shipment will be accepted, subject to a 15% restocking fee. Returns must be in re-saleable condition. Beyond 90 days, returns are not accepted.

Technical Specifications

Operating Temperature: -5° to 60° C (23° to 140° F)

Transport & Storage Temperature: -18° to 71° C (0° to 160° F)

Pinch Force: At 7.2 volts nominal: 10 kg (22 lbs, or ~ 100N)

Operating Voltage Range: 6 to 8.2 Vdc - MC Standard Hand

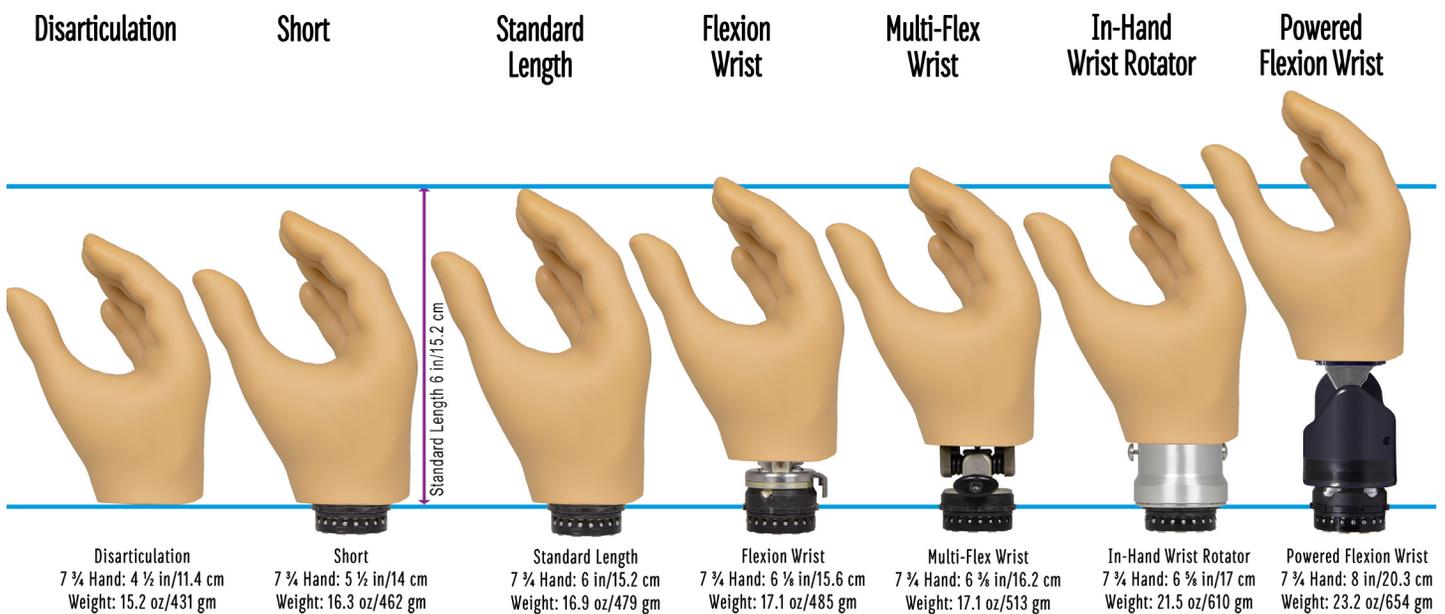
Load Limit: 22 kg / 50 lbs in all directions (+/- 10%)

Declaration of Conformity

The product herewith complies with Medical Device Regulation 2017/745 and is registered with the United States Food and Drug Administration. (Registration No. 1723997)



MC Hand Size and Weight Chart



Note: 8 ¼ Hand is ½ in/0.3 cm longer • 7 ¼ Hand is ½ in/0.3 cm shorter

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