

# Body-Driven Digit Prostheses

## Naked Prosthetics



**NAKED**  
PROSTHETICS



# Who are **Naked Prosthetics**?

Naked Prosthetics manufacture **durable, custom-fabricated finger prostheses** to replace partial loss of a digit. The **PIPDriver**, **MCPDriver** and **ThumbDriver** are all designed to restore functionality by mimicking the natural motions of a finger, all driven by the residual digit. Their exoskeletal appearance is designed with functionality in mind as well as providing a sleek appearance which users are proud to wear.

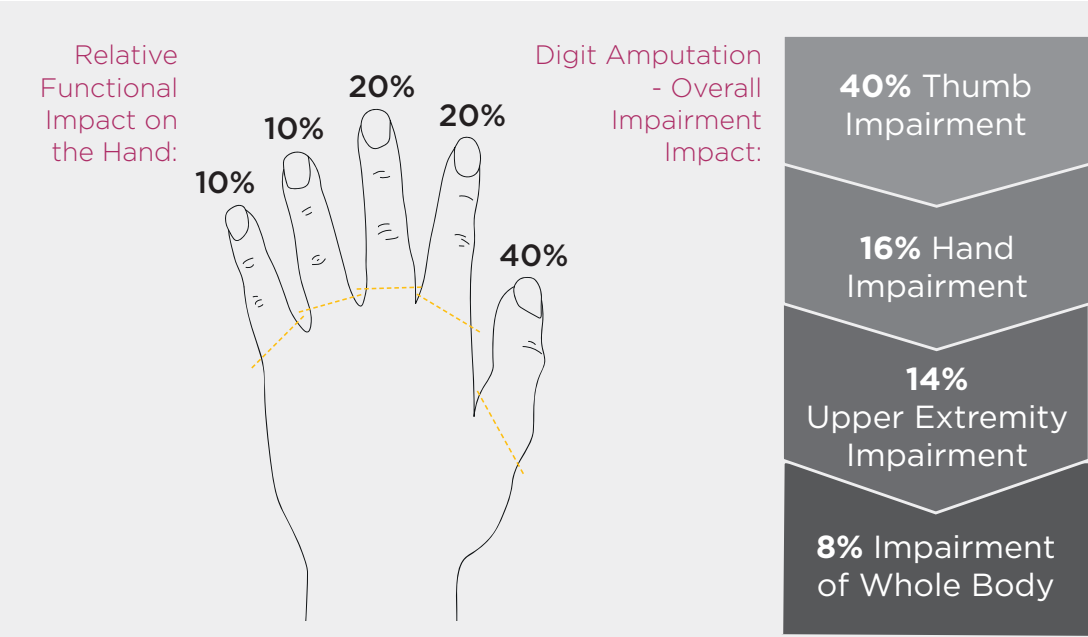
Returning a user’s ability to perform daily tasks is the ultimate outcome for these prostheses, and protecting long-term hand health so individuals can get back into the workplace and lead an active, fulfilled lifestyle. These Naked Prosthetic devices are custom-manufactured according to an individual’s specific measurements and requirements, and are designed to be worn in combination with one another if needed.



## Naked Prosthetics | **Body-Driven Prostheses**



### Colour Coating Options



## Digit Loss | The Impact

The loss of a finger not only has a significant physical impact, but can also be detrimental to an individual’s mental health.

Often digit loss is overlooked, as the call for prosthetic arms, hands and lower limb builds are commonly prioritised in amputee care.

However, the loss of a digit can inflict equivalent levels of impairment as a lower limb amputation - significantly reducing quality of life and an individual’s ability to get back to work.

Reference: *Guide to the Evaluation of Permanent Impairment*. American Medical Association, Sixth ed., 2008.

### Bespoke Designs

Every device is custom-designed and fabricated according to a patient’s unique anatomy and clinical presentation. Detailed measurements, casts and images are taken at the prescription stage, which are then translated into the bespoke manufacturing process to ensure optimal force output and the available range of motion for individual digits are utilised.

### Optimised Mechanics

The exoskeletal design optimises the patient’s range of motion and strength to mimic natural hand positions. It also acts as a protection aid against accidental impact or abrasion on the hypersensitive amputation site.

### Rewriting the Stigma

Amputation sites are often the cause of low self-esteem, so by creating an exoskeletal design with fine mechanics and customisable finishes, these devices are a way of counteracting a negative outlook.

### Length Restoration

Naked Prosthetic devices act as an artificial substitute for absent digits, which as a result reduces compensatory metacarpal and phalangeal deviation of adjacent digits for improved hand health.

### Object Manipulation

Optimised range of motion allows for reliable object handling and manipulation, as the devices react to natural finger motion ensuring reliable strength and grasp every time.

### Robust & Hard-Wearing

All of the devices are resistant to oil, water, dust, dirt, and are heat resistant up to 175°C, making them suitable for manual labour tasks.

For more information, visit [www.steepergroup.com](http://www.steepergroup.com).



# PIPDriver™ | 2nd Generation



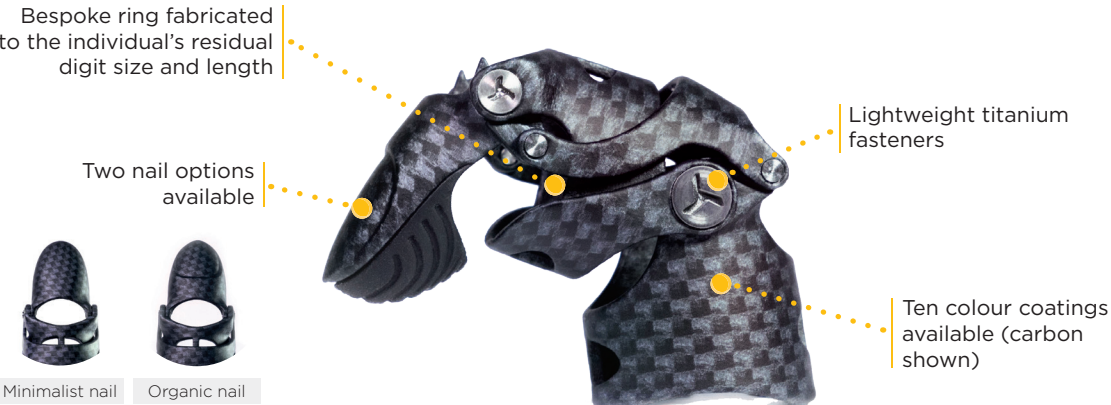
**The PIPDriver is a body-driven mechanical finger, designed to restore length and dexterity using the intact PIP joint to provide DIP flexion/extension.**

This custom-designed prosthesis mimics the anatomical motion of the finger, as it is driven by the residuum using a self-suspended linkage system.

## Who is this suitable for?

This prosthesis is intended for use on a **finger absence at or just proximal to the distal interphalangeal (DIP) joint**, where there is some joint range of motion and enough residual digit to engage the distal suspension ring at the PIP joint.

Manufactured using medical-grade Nylon 12, the PIPDriver is a durable yet lightweight device, capable of carrying out everyday tasks with natural gestures. The force output of the device is dependent on the patient's strength - whatever force the individual is capable of inputting will be safely transmitted by the PIPDriver.



## Features & Benefits:

- Articulation and force output are dependent on the length of the residual digit distal to the PIP joint, as well as the strength and range of motion of the affected PIP joint
- Prevents hyperextension
- Protects the site of amputation without making contact with the residuum end
- Silicone rubber tip pads mimic the grip of a natural fingertip
- Full set of silicone shims in three sizes provided to optimise the fit of the device

## Technical Information

Materials	Nylon 12, silicone, titanium		
Resistant To	Water, alcohol, acetone, isopropanol		
Heat Resistance	< 175°C (347°F)	Ring Tensile Strength	27kg (60lbs)
Force Ouput	Same as intact finger		
Warranty	1 year (extended warranty options available)		

# MCPDriver™ | 2nd Generation



**The MCPDriver is a body-driven mechanical finger, designed to provide PIP and DIP flexion/extension.**

The MCPDriver is driven by the user's residual digit strength and motion, to mimic anatomical gestures of the middle and distal phalanges. Custom-fabricated to within millimetres of the individual's residual fingers, the device follows the natural movement of the finger to regain fine dexterity.

## Who is this suitable for?

This body-driven device is suitable for patients with a **finger absence between the proximal interphalangeal (PIP) and metacarpophalangeal (MCP) joint**. The MCPDriver is constructed using rigid stainless steel linkages which are anchored onto a comfortable backplate system, to allow for the residuum to carry out natural grip patterns whilst maintaining optimal strength.

Much like the PIPDriver, the functional force at the fingertips is reflective of the user's input force. This device also features a power hook grasp posture, which effectively transfers load to the suspension around the wrist allowing objects of a substantial weight to be lifted.



## Features & Benefits:

- Can be made for multiple finger amputations on one hand, and used in conjunction with the PIPDriver and ThumbDriver
- Available in ten colour coatings
- Full set of silicone shims in three sizes provided so patients can adjust fit in accordance with volume fluctuations
- Adjustable harness for optimal comfort
- Restores multiple movements including pinch, key and cylindrical grasps, as well as grip stability

## Technical Information

Materials	Nylon 12, silicone, titanium, Stainless Steel 316		
Resistant To	Water, alcohol, acetone, isopropanol		
Heat Resistance	< 175°C (347°F)	Ring Tensile Strength	36kg (80lb)
Force Ouput	~2/3 input (4-5kg/9-12 lbs)		
Warranty	1 year (extended warranty options available)		



# ThumbDriver™

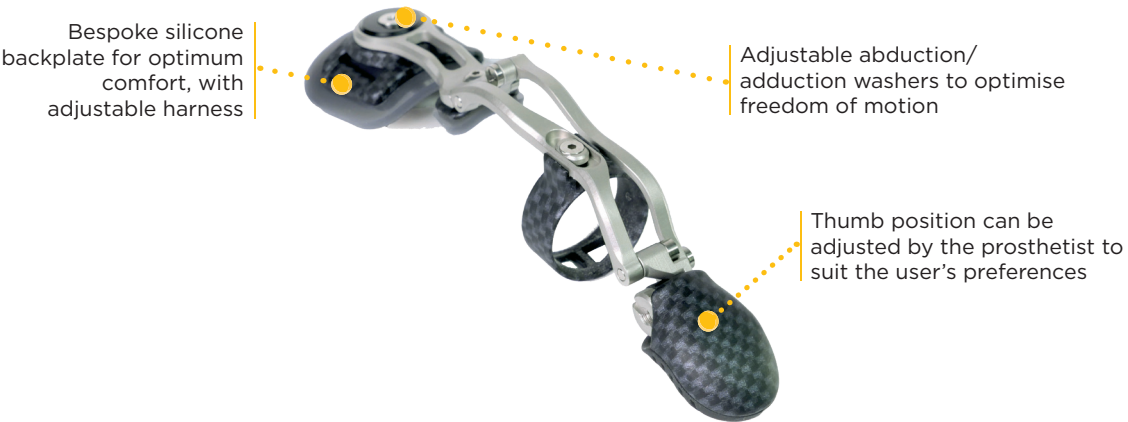
The ThumbDriver is a body-driven mechanical thumb, which uses a unique anchor design to restore the grasp abilities of the hand.

Designed with the functionality of the entire hand in mind, the ThumbDriver works in conjunction with the fingers to provide the key oppositional force required when grasping or gripping objects.

## Who is this suitable for?

The ThumbDriver is intended for use by those with a **thumb absence between the MCP and IP joint**. There must be natural motion present in the individual’s CMC and/or MCP joints, along with enough residual digit to engage the distal suspension ring, so the device can provide a rigid opposition to any heavy forces generated by the finger.

Adopting many of the design elements of the MCPDriver, the ThumbDriver provides a more subtle articulation movement using MCP joint flexion, with the backplate washer and unique hinge design allowing the device to track the complex multi-axial CMC motion of the thumb.



## Features & Benefits:

- Constructed using lightweight materials
- The ‘cage’ structure protects the hypersensitive site of amputation
- Silicone rubber tip pads mimic the natural thumb tip
- Easy to don and doff
- Full set of silicone shims in three sizes provided to accommodate for volume fluctuation and provide additional extension
- Interchangeable suspension rings provided to ensure correct fit

## Technical Information

Materials	Nylon 12, silicone, titanium, Stainless Steel 316		
Resistant To	Water, alcohol, acetone, isopropanol		
Heat Resistance	< 175°C (347°F)	Ring Tensile Strength	36kg (80lb)
Warranty	1 year (extended warranty options available)		

# The Prescription Process

To order a Naked Prosthetic device, a qualified prosthetist will need to fill in the Patient Intake Form (PIF - available upon request). This form will be used to assess if a device(s) will be suitable for the patient to ensure a positive outcome. **Please contact Steeper for sizing rings, swatches and clinical support.**

In order to properly assess suitability, and manufacture a device optimised to the patient’s individual anatomy, specific details are required:

<b>Patient Goals</b> PIP, MCP & ThumbDriver The patient will need to provide 3-5 manual tasks they would like to achieve by wearing the device, as it will provide an insight into what the potential outcomes will be and aid in managing expectations.	<b>Videos &amp; Photos</b> PIP, MCP & ThumbDriver High-resolution photos and video must be taken showing an unobstructed view of the hand and the impaired digit. This will highlight if the patient has suitable ROM and articulation for use with the prescribed device.	<b>Size and ROM</b> PIP, MCP & ThumbDriver Sizing rings will be supplied to accurately measure the circumference of the residual digit. Rings come in both a circular and conical shape to accommodate residuum lengths and sizes. Angular measures of extremes of ROM will be required.
<b>Colour</b> PIP, MCP & ThumbDriver The cosmetic finish will need to be selected from the ten swatches - please contact your local product manager to order a swatch ring.	<b>Nail Style</b> PIPDriver Two nail styles are available for the PIPDriver - organic and minimalist. Please note if ordering a combination of devices for one patient, the MCP and ThumbDrivers only come in minimalist style.	<b>Positive Hand Mould</b> MCP & ThumbDriver A positive cast of the hand and wrist made from hard-setting plaster will be required for the MCPDriver and ThumbDriver, in order for the bespoke silicone backplate to be manufactured correctly.

## Ordering Information

### PIPDriver

Product	Product Code	1-Year Warranty Code	2-Year Warranty Code
PIPDriver	NPIP-01	NEW1AY-PIP-01	NEW2AY-PIP-01

### MCPDriver

Product	Product Code	1-Year Warranty Code	2-Year Warranty Code
MCPDriver: 1-digit system	NMCP-1DS	NEW1AY-1DS	NEW2AY-1DS
MCPDriver: 2-digit system	NMCP-2DS	NEW1AY-2DS	NEW2AY-2DS
MCPDriver: 3-digit system	NMCP-3DS	NEW1AY-3DS	NEW2AY-3DS
MCPDriver: 4-digit system	NMCP-4DS	NEW1AY-4DS	NEW2AY-4DS

### ThumbDriver

Product	Product Code	1-Year Warranty Code	2-Year Warranty Code
ThumbDriver: 1-digit system	NMCPTH-1DS	NEW1AY-1DS	NEW2AY-1DS

### ThumbDriver & MCPDriver Combination

Product	Product Code	1-Year Warranty Code	2-Year Warranty Code
ThumbDriver/MCPDriver: 2-digit system	NMCPTH-2DS	NEW1AY-2DS	NEW2AY-2DS
ThumbDriver/MCPDriver: 3-digit system	NMCPTH-3DS	NEW1AY-3DS	NEW2AY-3DS
ThumbDriver/MCPDriver: 4-digit system	NMCPTH-4DS	NEW1AY-4DS	NEW2AY-4DS
ThumbDriver/MCPDriver: 5-digit system	NMCPTH-5DS	NEW1AY-5DS	NEW2AY-5DS

**Please note:** Before placing an order, please ensure you have completed the Patient Intake Form, and supplied the necessary photos, videos, measurements and casts required for manufacturing.

If you require any **assistance, training, or information** regarding the prescription and ordering process, please contact your local product manager. Alternatively, contact Customer Services at **customerservices@steepergroup.com** or call **+44 (0) 870 240 4133**.



For videos of the Naked  
Prosthetics Devices in action, or  
for more information, visit [www.  
steepergroup.com](http://www.steepergroup.com)

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