

**ottobock.**

***micHELangelo,  
myosmart plus and  
connectgrip.***

Information for professionals



# Take control with powerful performance.

***micHELangelo*** is a powerful, natural-looking myoelectric hand that delivers precise, versatile, and strong gripping through high grip force, multiple grip options, and a highly realistic design. Together with the ***myosmart plus*** prosthesis control and the ***connectgrip*** app, it delivers smart, outcome-driven fitting solutions for users and technicians alike. Its combination of natural mobility, strong grip force and intelligently personalized control provides exceptional functionality, safety and flexibility, setting a new standard.





## Powerful, reliable and fast performance.

**miclangelo** is a powerful, natural-looking myo-electric hand that provides a strong grip, multiple grip options, and a realistic design for precise, fast, and confident grasping. Depending on the user's preferences, the choice of glove can create a look ranging from robotic to highly natural, blending seamlessly into the user's overall appearance.

The robust technology of the **miclangelo** delivers dependable everyday function, enabling secure gripping of various objects as well as quick and precise movements – for maximum flexibility and confidence in any situation.



## The interface to the prosthesis.

The **connectgrip** app is a universal tool for prosthetic fitting and everyday use. It guides both users and CPOs through the structured fitting process, provides visual feedback to support training, and helps to promote independence in daily life. Additional movement patterns can be recorded and individual settings adjusted via the app to optimise prosthesis control and functionality according to the user's personal requirements. Helpful resources such as user manuals, training guides and videos are also available. The remote update feature keeps **myosmart** and **myosmart plus** up to date over the long term and reduces service times.

# Direct, intuitive prosthetic control.



**myosmart** and **myosmart plus** are myoelectric controls based on advanced pattern recognition. They enable users to control their prosthetic arm in a personalized, precise and direct way. **myosmart** uses the same principles as conventional 2-site systems but utilizes the advantages of modern signal processing, no more crosstalk and threshold adjustments, making it ideal for fast, reliable fittings with less training effort.

**myosmart plus** takes control one step further. By supporting up to eight directly controllable prosthetic movements, optionally combined with switching signals, it allows motivated users to control their prosthesis directly and fluidly through everyday tasks.

Every muscle movement generates characteristic signals that **myosmart plus** detects and interprets as movement patterns. During a structured training, it learns to map these individual signals to the corresponding prosthetic movements. Up to eight electrodes record these signals, delivering more than 1,800 measurements per second. This allows multiple prosthetic movements to be controlled directly without switching signals. The result is fast, precise control that responds to the user's intentions.

**myosmart plus** is ideal for individuals with congenital limb differences or who have undergone an amputation and want to perform prosthetic movements as directly as possible. It is particularly suitable for individuals with good muscle coordination or those who are willing to actively train and develop their control skills further. It offers significant advantages when using myoelectric prosthetic hands, active wrist rotation, or active elbows, as fewer switching events lead to smoother, more fluid movements. By combining direct control through pattern recognition with optional switching signals, **myosmart plus** makes getting started easier and supports users in gradually advancing their control skills over time.

# Advantages at a glance.

- **Versatile gripping options**

**micchelangelo** supports important everyday and work-related gripping tasks – from holding a glass to fastening a jacket. Paired with **myosmart plus** these movements feel responsive, connected and fluid – without additional switching signal.

- **Direct and fast control**

The combination of **micchelangelo** and **myosmart plus** enables direct access to grips and movements that respond the way users intend, for both transradial and transhumeral fittings.

- **IP67 water-resistant**

Dust, splashes or a light rain shower? No problem. With an intact glove, the hand remains reliably functional up to the glove edge, whether in the kitchen or outdoors.

- **Interchangeable inner hand**

The inner hand can be easily replaced by a CPO when needed.

- **Lightweight and ergonomic**

The compact design reduces effort and supports a relaxed, natural posture.

- **Small and medium: the right size for everyone**

The **micchelangelo** is available in small and medium sizes, providing an ideal fit for teenagers, women and men.

- **Glove options – from subtle to expressive**

The **micchelangelo** is available in seven skin tones, featuring realistic veins and nail details for a natural look. For a modern, striking style, translucent and black gloves are also available.

- **Paintable nails**

The nails can be customized with standard nail polish, giving the hand a personal touch.

- **Functionality through modular wrists**

Four **modular wrists** allow individualized prosthetic setups based on specific user requirements. The **micchelangelo** is compatible with the **wrist flex** – Ottobock's unique, dampened modular wrist. This combination supports more natural posture and reduces compensatory movements compared to conventional myoelectric systems.

- **Real-time visual biofeedback**

The **connectgrip** app visualizes the user's muscle signals in a dynamic display, helping identify optimal electrode placement and guide training with precision. This visualization supports efficient and high-quality fitting results.

- **Easy, efficient setup**

The digital ecosystem – **myosmart plus**, **connectgrip** and the **myosmart cuff** – uses advanced pattern recognition to streamline the entire fitting process. No more time windows or thresholds: simply fine-tune the grips and personalize them to the user's needs.

- **Optimal for above-elbow fittings**

The **micchelangelo**, together with **myosmart plus** and **connectgrip**, is compatible with the **DynamicArm**, offering an ideal solution for functional, active transhumeral fittings.









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*Thanks to my  
prosthetic arm, I feel  
confident and can fully  
enjoy spending time  
with my baby.*

Nicky



# Make everyday confidence look more natural than ever.

## At a glance – Advantages for users:

- Powerful performance with a natural appearance
- Natural gripping movements enabled by precise pattern recognition
- Direct and fast control for smooth, fluid movements
- Personalized control of the arm prosthesis with the **myosmart plus**
- Up to 8 electrodes enabling excellent proportional control
- IP67 – reliably protected from dust and splashes
- Natural design and appearance
- Paintable nails for a personal touch
- Lightweight and ergonomic for a relaxed, natural posture
- Perfect fit for teens, women and men
- Selectable wrist: modular, flexible and perfectly tailored to individual needs
- Individual adjustment and personalization of the prosthesis for everyday use with the **connectgrip** app
- Compatible with below-elbow, above-elbow, and shoulder prostheses

*“Most people don’t realize it’s a prosthesis at all. It looks so natural, and I love that I can paint the nails.”*

Marie



Watch on youtube



# **Master your performance.**

Ottobock is redefining what's possible in upper-limb prosthetics. Depending on the individual user's potential, myoelectric terminal devices and intelligent controls can be seamlessly combined with components such as rotation- and elbow joints. The result is a personalized prosthetic solution that supports each user's capabilities and enables intuitive, natural control.





***bebionic***



***micelangelo***



***speedhand***



***Greifer***



***wrist flex***



***wrist eqd***



***wrist short***



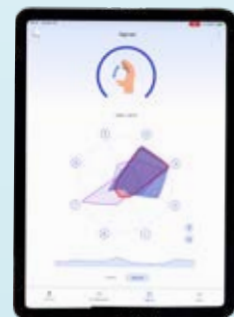
***wrist transcarpal***



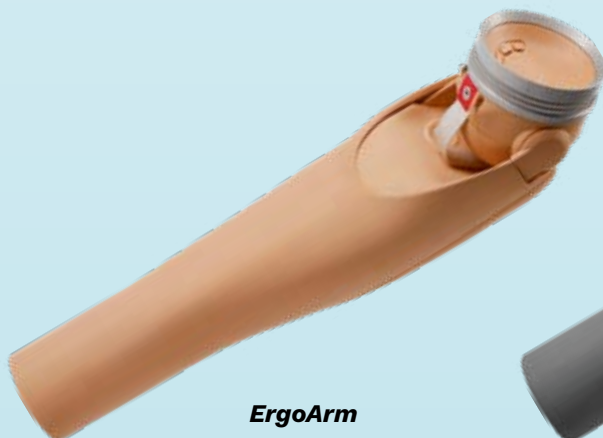
***myosmart plus***



***myosmart***



***connectgrip***



***ErgoArm***



***DynamicArm***

# Streamlined prosthetic arm fitting.

Simplify the fitting process with a clear workflow:  
from assessment to everyday training.

Define your client's potential, select the optimal  
terminal device, and enable training during daily use.  
Trial patterns and hands-on practice are key to  
ensuring optimal functionality of the prosthetic arm.

Anamnesis

Evaluation

Fitting

Training

Refitting



*“Together, **myosmart plus** and **connectgrip** make prosthetic control transparent for users, enabling movements to be visualized and trained directly.”*

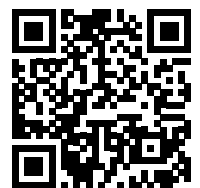
Birgit, therapist



“

*With michelangelo  
and myosmart plus, we  
can tailor the fitting to the  
individual needs of each user.  
The structured process gives  
us confidence in achieving a  
precise result every time.*

Mark, CPO



Watch on youtube





**Tra**  
**two**

A collection of components for a prosthetic arm, including a silicone arm model, a black and blue prosthetic arm, various sensors, wires, and a white glove. The components are laid out on a white background. The silicone arm model is a realistic-looking arm with a hand. The black and blue prosthetic arm is a more mechanical-looking arm. The sensors include a small black sensor with three wires, a small black sensor with two wires, a small black sensor with one wire, and a small black sensor with no wires. The wires are of various colors (red, blue, green, black) and lengths. The white glove is a simple, open-palmed glove.

A collection of prosthetic arm components. At the top left is a tan-colored forearm with a realistic hand. Below it is a white, glove-like hand. To the right of the white hand are several small electronic components: a black sensor module with four colored wires (blue, green, red, black), a black wrist unit, and a small black rectangular sensor. Further right is a black, cylindrical prosthetic arm with a silver-colored wrist. At the bottom right are two black cables with multiple colored wires (blue, green, red, black) and small black sensors attached.

# Winning combinations.

## Above elbow fitting



**DynamicArm**  
12K100N



**ErgoArm**  
12K50  
12K44

## Below elbow fitting



**Remote electrodes**  
13E400 / 13E401



**MyoEnergy Integral**  
757B35=4 / 757B35=5



**Standard electrodes**  
13E200 / 13E202



**myosmart**  
13E522



**myosmart plus**  
13E523



**Active rotation**  
13E205\* / 10S17



**Passive rotation**  
9E169 + 10S4



**michelangelo + wrist flex**  
8E5 + 10V61



**michelangelo + wrist eqd**  
8E5 + 10V62



**michelangelo + wrist short**  
8E5 + 10V63



**michelangelo + wrist transcarpal**  
8E5 + 10V64



**michelangelo glove**  
8S500, 8S501, 8S502,  
8S511 (only for size M)

\* Only needed in combination with ErgoArm

# micangelo.

**micangelo** is a powerful, natural-looking myoelectric hand that delivers precise, versatile, and strong gripping through high grip force, multiple grip options, and a highly realistic design.

## Key features:

- Natural gripping movements enabled by precise pattern recognition for maximum control and flexibility
- Direct and fast control for smooth, fluid movements
- Individually customizable control for every user
- Up to 8 electrodes enabling excellent proportional control
- IP67 – reliably protected from dust and splashes (with intact glove until glove edge)
- Natural design and appearance
- Lightweight and ergonomic for a relaxed, natural posture
- Paintable nails for a personalized touch
- Suitable fit for teenagers, women and men
- Modular wrist units supporting a range of build heights
- Guided app-based setup that improves training and fitting efficiency
- **connectgrip** app enables independent personalization and everyday adjustments
- Interchangeable inner hand
- Compatible with below-elbow, above-elbow, and shoulder prostheses
- Tested compatibility with Ottobock prosthetic hands, elbows, and accessories
- Compatible with below-elbow, above-elbow and shoulder prostheses

## Technical data

|                                             |                                                                    |
|---------------------------------------------|--------------------------------------------------------------------|
| Article number                              | 8E5=R-S, 8E5=L-S, 8E5=R-M, 8E5=L-M                                 |
| Opening width                               | size S: 100 mm<br>size M: 110 mm                                   |
| Operating voltage                           | 6,5 V – 8,4 V                                                      |
| Weight (without prosthetic glove and wrist) | size S: 390 g<br>size M: 410 g                                     |
| Gripping force                              | opposition mode: approx. 70N<br>lateral mode: approx 58N           |
| Glove cover options for micangelo           | size S and size M:<br>8S500=*, 8S501=*, 8S502=*<br>size M: 8S511=* |







# modular wrists.



## 10V61=1 *wrist flex*

The **wrist flex** allows for easy locking and unlocking of the wrist position and positioning of the **micHELangelo** in four different locking stages. The hand position can be fixed in flexion and extension from  $-40^{\circ}$  to  $+40^{\circ}$  in  $20^{\circ}$  steps. Additionally, the wrist offers a flexible mode that prevents compensatory movements. The **wrist flex** is equipped with a quick-disconnect mechanism.

- Flexible mode for natural movement
- Rigid mode with adjustable angles ( $-40^{\circ}$  to  $+40^{\circ}$ ) in  $20^{\circ}$ -degree steps
- Easy to use with an intuitive locking button and quick-disconnect mechanism
- Compatible with the **micHELangelo** 8E5 and **speedhand** 8E2
- One size



## 10V62=1 *wrist eqd*

The **wrist eqd** is ideal for situations with minimal height, while still allowing easy swapping of terminal devices.

- Minimal height
- Easy swapping of terminal devices
- Easy to use with a quick-disconnect mechanism
- Compatible with the **micHELangelo** 8E5 and **speedhand** 8E2
- One size



#### **10V63=1 wrist short**

The **wrist short** features a low-profile connection for users with long residual limbs, providing an adjustable friction resistance for passive rotation.

- Designed for users with long residual limbs
- Adjustable friction resistance for passive hand rotation
- Compatible with the **micelangelo** 8E5 and **speedhand** 8E2
- One size



#### **10V64=1 wrist transcarpal**

The **wrist transcarpal** is specifically designed for long residual limbs up to transcarpal level. Physiological pronation and supination of the residual limb are required to achieve full functionality.

- Designed for long residual limbs up to transcarpal level
- Shortest build height
- Requires physiological pronation and supination of the residual limb
- Compatible with the **micelangelo** 8E5 and **speedhand** 8E2
- One size

# myosmart plus and myosmart.

**myosmart plus** is an advanced prosthetic control that transforms individual muscle signals into precise movements, enabling direct control of multiple functions. Optional switching signals expand fitting options and offer flexibility.

## Key features:

- Capturing unintentional muscle signals to avoid unwanted prosthetic movements
- Quick and easy prosthesis deactivation via muscle signals
- Effortless switching between different terminal devices – without any adjustments to the settings
- Tested compatibility with Ottobock prosthetic hands, elbows, and accessories
- Firmware updates via the **connectgrip** app
- Flexible control options: up to 8 direct movements, 2 switching inputs, and fast access movements
- Clear, detailed visualization of muscle signals
- Up to 8 electrodes enabling excellent proportional control
- Best suited for users with good muscle control who want to actively develop their skills further
- Ideal foundation for any prosthetic evaluation



**myosmart plus**  
13E523=TR-1  
13E523=TH-1

**myosmart** is a myoelectric control built on the proven principles of conventional 2-site control and enhanced by modern signal processing. It reduces cross-talk and removes manual threshold adjustments, enabling fast, reliable fittings with minimal training.

## Key features:

- Capturing unintentional muscle signals to avoid unwanted prosthetic movements
- Quick and easy prosthesis deactivation via muscle signals
- Effortless switching between different terminal devices – without any adjustments to the settings
- Tested compatibility with Ottobock prosthetic hands, elbows, and accessories
- Firmware updates via the **connectgrip** app
- Enables direct open/close control in combination with 2 switching inputs and fast access movements
- Up to 4 signal inputs, enabling excellent proportional control
- No more separation of electrode signals and electrode cross talk problems
- Retrofit-compatible into an existing socket for use with hand and elbow, without changing the user's control habits
- Best fit with **speedhand** and lower complexity fittings



**myosmart**  
13E522=1

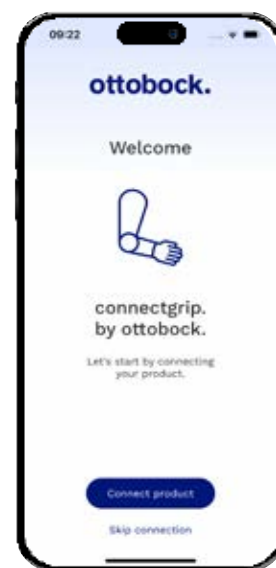


# connectgrip and myosmart cuff.

The **connectgrip** app provides a user-friendly interface for users and professionals to control and personalize myoelectric arm and hand prostheses. It enables easy adjustments, real-time signal visualization, and individual motion recording for movements, joint switching and unintended movements. Users achieve improved control, while professionals benefit from streamlined prosthetic setup features, improving both functionality and comfort.

## Key features:

- Personalization with advanced signal processing and independent adjustments for everyday use
- User friendly interface for easy daily adjustments
- Real-time visualization with immediate myoelectric signal feedback
- Individual motion recording to minimize unintended movements
- Prosthetic setup and documentation streamlining the fitting process for healthcare professionals



**connectgrip**  
available in the App Stores



The **myosmart cuff** visualizes muscle activity in real time and allows precise evaluation of electrode positions to optimize training and fitting. Users can also experience prosthesis control in action and interactively test it with a demonstrator.

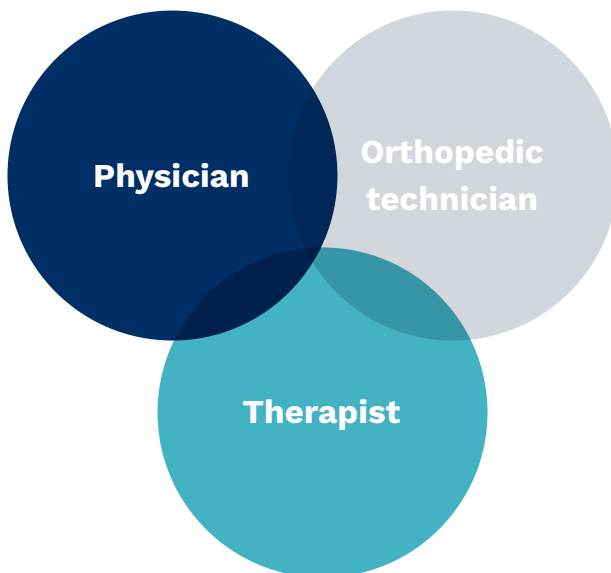
- Simplifies user assessment for optimal myoelectric solutions
- Enables early signal training for better control
- Boosts confidence and excitement for new users



**myosmart cuff**  
757M20-2=\* (one size)

# Comprehensive Care.

Successful use of the **micHELangelo** and **myosmart plus** requires continuous support for the user. Close collaboration among all stakeholder involved is essential: physicians, therapists, technicians, the user, and their social environment. Teamwork is the key!



Tailoring prosthetic training to the user's individual wishes, needs, and life circumstances is crucial for overall success. Several factors play a decisive role: the cause of amputation, whether it is an initial or re-fitting, unilateral or bilateral fitting, the social environment, occupation, interests and hobbies as well as importantly, the user's psychological baseline and motivation. To achieve the best possible outcome, coordination within the interdisciplinary team is vital, and, where possible, family members should also be included.

Before beginning the actual training, a thorough assessment is required. This includes gathering general and condition-specific information about the affected side, followed by an in-depth physical examination.





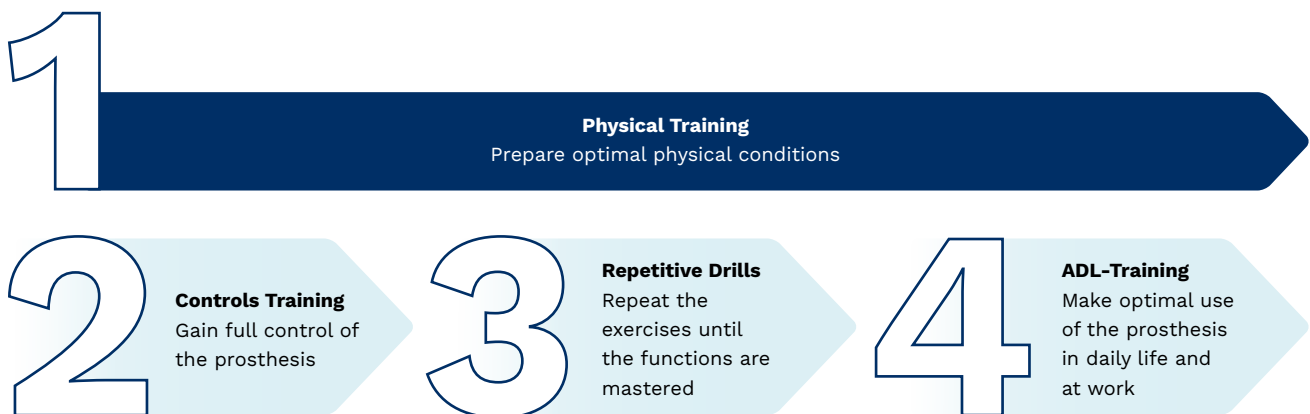






# Success with professional prosthetic training.

For optimal training results, the prosthetic training is divided into progressive phases that build on each other. In each phase, you should practice with the user and encourage independent practice until they feel confident and can handle their **micHELangelo** hand reliably.



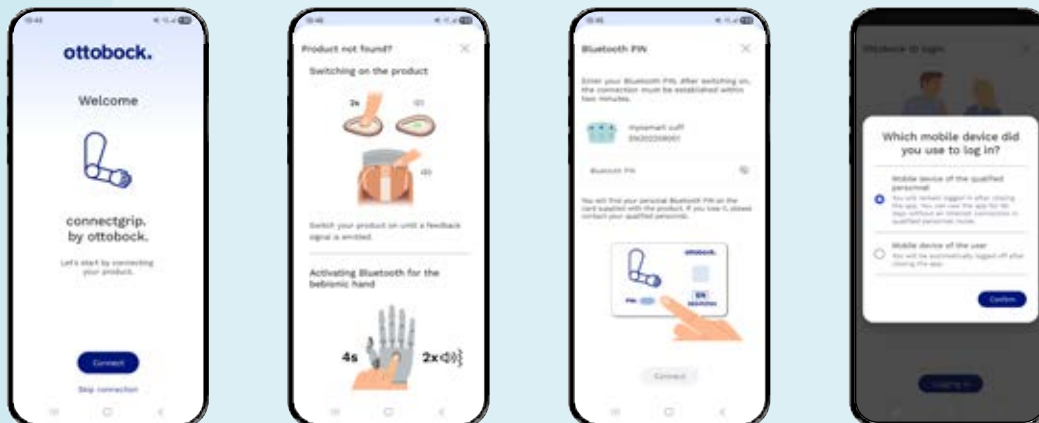
It is important to begin each training session with simple exercises and only gradually transfer these skills into everyday situations. **myosmart plus** is the optimal starting point for any prosthetic training.

Make sure the user experiences positive achievements. This helps prevent feelings of being overwhelmed or reacting with frustration.

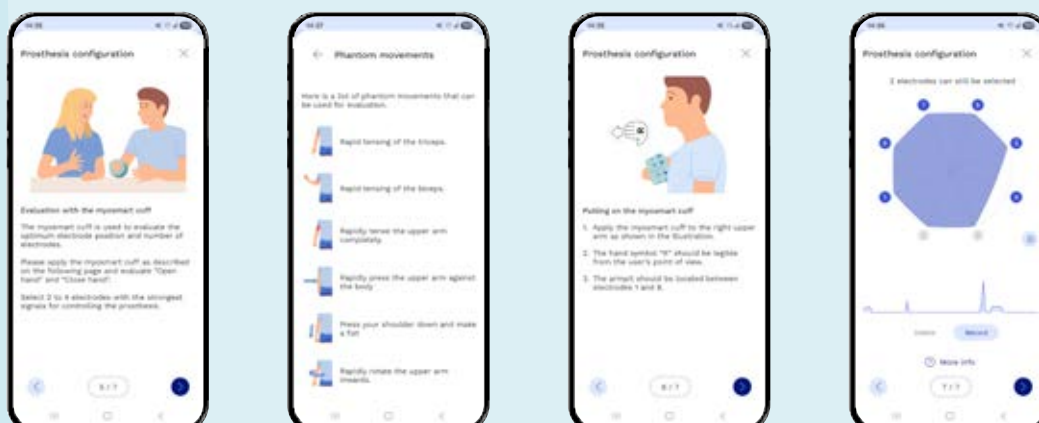
A good psychological and physical condition on the part of the user is an essential requirement for the training process. Integrating their occupation, hobbies, and personal interests helps tailor the training program to their needs. This supports both the successful use of the **micHELangelo** and the entire rehabilitation process.

# Possibilities with *connectgrip*.

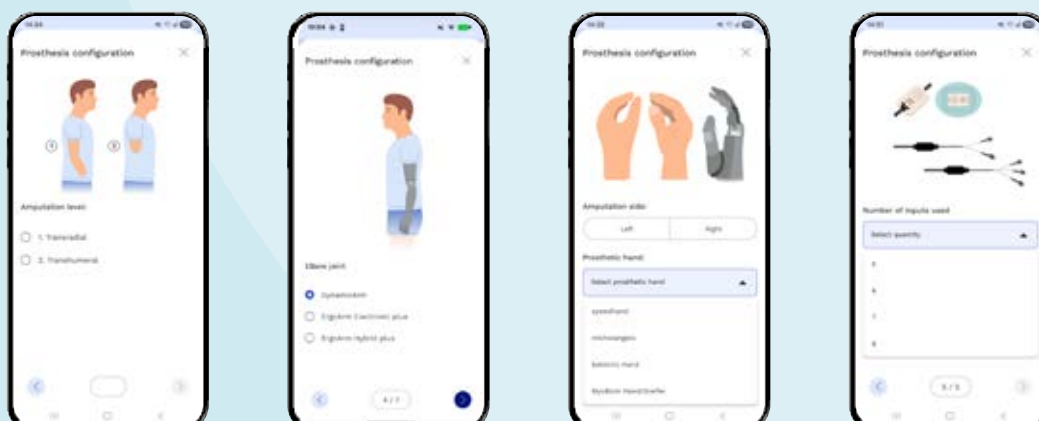
## Login



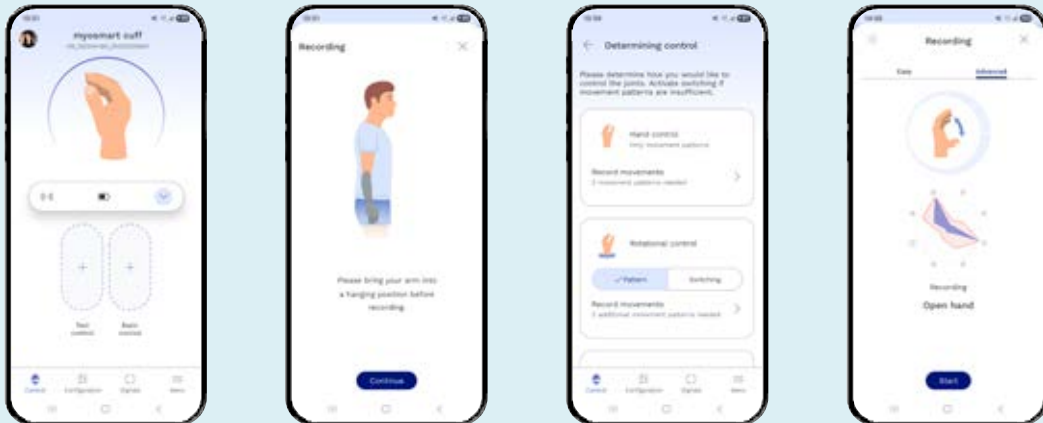
## Evaluation with *myosmart cuff*



## Configuration



## Movement recording



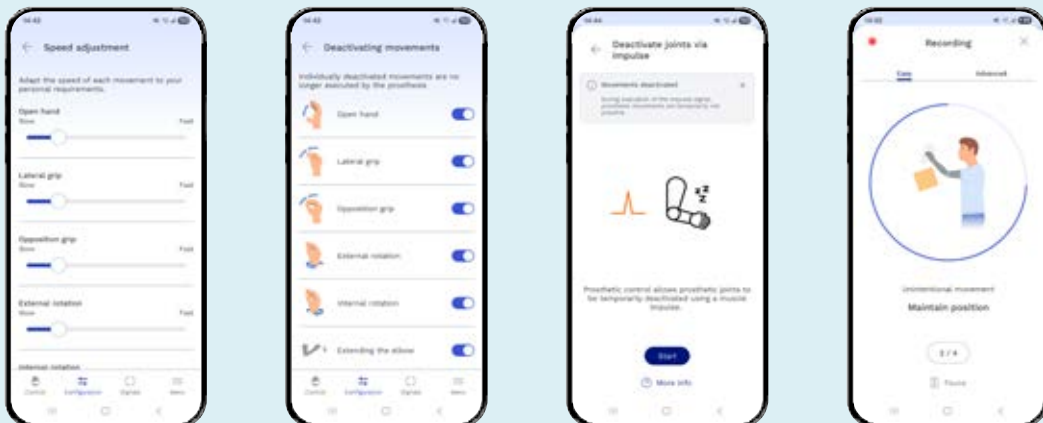
## Individualization

Speed adjustment

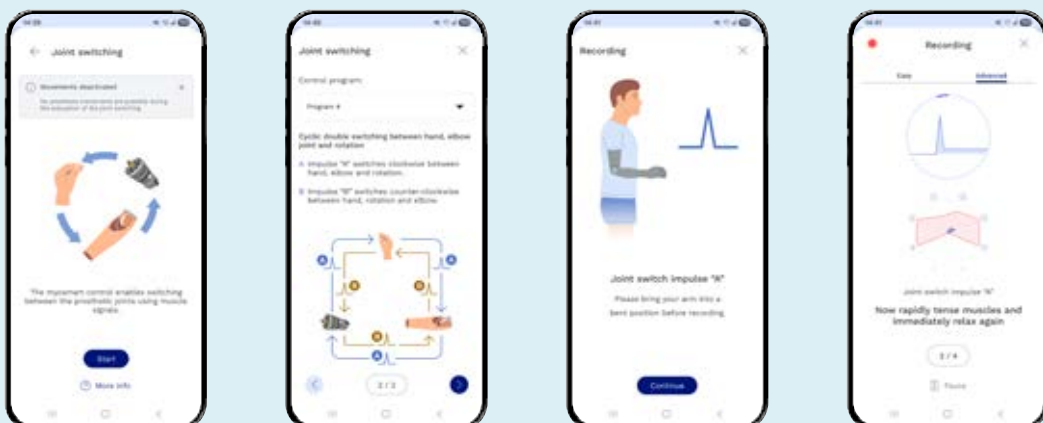
Deactivate movements

Deactivate joints

Unintended movements



## Switching input adjustment



# Frequently asked questions.

## How are the hand and wrist connected correctly?

The hand and **modular wrists** are 2 separate components that are connected by the orthopaedic technician using a screw connection.

## Which glove options are available?

Choose the suitable option out of PVC gloves 8S500=\*, 8S501=\*, 8S502=\* or Silicone gloves (only for size M): 8S511=\*

## As an orthopaedic technician, what can I change on the *micelangelo*?

The inner hand, the cosmetic glove and the **modular wrists** can be changed.

## What should I do if the wrist is set too loose?

The passive rotation of the wrist can be adjusted by an orthopedic technician. Decreasing compensation of the **wrist flex** must be serviced by the Ottobock Service Center. If you experience any unexpected behavior of the prosthesis, contact the Ottobock service branch.

## Which battery versions can be used?

For the best performance, 757B35=4 and 757B35=5 need to be used for a definitive fitting. The system is compatible with 757B35=3, but this battery type is only recommended for trial fittings, as it limits the performance of the system.

## What are the conditions for the IP67 classification?

An intact **micelangelo** glove must be used. Water / particles / moisture must not get into the hand through the end of the glove.

## Can I use the *micelangelo* with an existing Axon / *Micelangelo* Hand socket?

No, this is not possible due to difference in wrist design.

## Can I use a *micelangelo* with an already fitted *myosmart*?

Yes, after performing the indicated software update via **connectgrip** app.

## Which electrodes can be used?

- Use 4 to 8 signal inputs, either 13E200/202 or 13E400/401
- 13E400/401: At least 2 pieces of 13E401 are required to ensure proper grounding.

## What is the advantage of the 13E400/401 electrodes?

They provide **myosmart plus** with an unfiltered myo signal, which allows the control unit to calculate several characteristic values in addition to the signal strength.

## How many electrodes should I use?

There is no general rule, it depends on how many direct movements are planned and how good the user can separate and repeat his muscle patterns. Best is to determine this during the evaluation with the **myosmart cuff**.

## Can I operate external prosthetic hands with the system?

Only Ottobock prosthetic hands, elbows, and accessories have been tested for compatibility.

## Which components are compatible?

Components from the **MyoBock** portfolio, more details and article numbers can be found in the IFU.

## How do I connect an electric wrist rotator or coaxial plug correctly?

See wiring diagrams in the **connectgrip** app, IFU or certification documents.

## Which app can be used to configure the system?

**connectgrip** by Ottobock.



**Where can I find my professional login data?**

The unlocking for setup and configuration of the respective product in professional user mode is done after logging in with your OttobockID.

**Where can I find the PIN for Bluetooth Pairing?**

The PIN can be found on the product card that is in the product packaging. Alternatively, you can contact your Ottobock representative.

**Can I use an existing *speedhand*, *bebionic*, *VariPlus Speed*, *SensorHand Speed*, *Digital Twin*, *DMC Plus* or *Greifer DMC VariPlus* with *myosmart plus*?**

Yes, you can use them. They will be displayed as ***speedhand***, ***bebionic*** or ***Myo Bock Hand/Greifer***. Depending on the initial configured hand grip patterns will be general used for close hand or need to be added.

**Can the prosthesis configuration and the basic control be changed or deleted by the user?**

No, these can only be changed or deleted by certified specialist personnel.

**Why does my newly received received *myosmart* or *myosmart plus* controller not work?**

Please check if a *connectgrip* app update is available if on the app store.

**Can I use an existing *myosmart cuff* for *myosmart plus* evaluations?**

Yes, after performing the indicated software update via the ***connectgrip*** app.

**How does the *myosmart cuff* differ from the *MyoPlus cuff*?**

The ***myosmart cuff*** has blue press studs and labeling on the textile.

**Can I also set-up the *bebionic* with *connectgrip*?**

Yes, after turning on the Bluetooth on the ***bebionic*** all settings can be made without the PC software.

**How can I use the *DynamicArm* and *ErgoArm* with *myosmart plus*?**

This requires the adapter cable 13E102 and the ***EllbowSoft*** software to calibrate and set the ***myosmart plus*** configuration profile. Additionally, the ***ErgoArm***, when active rotation is enabled, requires the ***MyoRotronic*** 13E205 and the ***MyoSelect***.

**Can I use my existing *Myo Plus* prosthesis with *connectgrip*?**

No, this is not possible, but the ***Myo Plus*** app is still available.

**Can I use *michelangelo* with my existing *Myo* or *Myo Plus* prosthesis?**

Yes, but only with basic functions, grip change is only possible with long open and hand will not be displayed in the ***Myo Plus*** app.

**Will *PAULA* and *MyoBoy* still be available?**

With the launch of ***connectgrip***, the ***PAULA*** software will be provided with basic updates until further notice. There will be no further development or adaptation to new Windows versions. All other software products and the ***MyoBoy*** can be used without any restrictions.

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*I wear my prosthetic arm every day; without it, I feel incomplete. During work meetings, for example, it holds my laptop or tablet, leaving my other hand free for more important tasks.*

Lars



Watch on youtube





Please contact us if you have any further questions or  
would like more information.