

# Live. With Michelangelo

---

## The Michelangelo Hand replicates numerous functions of the natural hand

Combined with the Axon-Bus system, the Michelangelo Hand from Ottobock is a milestone for prosthetic fittings. Thanks to its highly natural design, it integrates harmoniously into the natural body image.

Few parts of the human body are as diverse and complex as the hand. Its extraordinary functionality is based on the perfect interplay between nerves, tendons, a total of 27 bones, 39 muscles and 36 joints. This is why modelling its natural form and as many of its numerous functions as possible in a prosthesis is one of the greatest challenges for medical technology.

Amputees are particularly aware of how valuable it is to master everyday tasks themselves – without the help of others. With the Michelangelo Hand, Ottobock has developed a product that restores a great deal of freedom for the user.

### **Complex technology for practical applications**

The Michelangelo hand offers four movable fingers and a thumb that can be separately positioned using muscle signals. This allows different gripping movements to be carried out precisely and confidently – something never before possible in a prosthesis.

The thumb, index finger and middle finger are controlled actively, while the ring finger and little finger passively follow the movements. Gripping an object from the side, holding one or several flat things like paper, holding an object such as a plate on an open hand, resting the hand in a natural and inconspicuous position or grasping small and large objects such as a bottle or a pen – these are all gripping movements that everybody uses all the time at work, in everyday life and during leisure time. They are now possible with the Michelangelo Hand as well.

The entire system is supported by the AxonWrist mechanical wrist. The wrist unit can be flexed, extended and rotated inwards or outwards. In addition, the AxonWrist



Quality for life

copies the movement of a relaxed, natural wrist in a newly developed flexible mode. So far, this is something unique! Unnatural compensating movements can thus be avoided, encouraging a relaxed and healthy bodily posture. For upper arm fittings, the two elbow components AxonArm Ergo and AxonArm Hybrid are available.

## **Outstanding, natural design**

For the product designers and developers, making the appearance and feel of the Michelangelo Hand resemble a natural hand as closely as possible posed a special challenge. The fingers are made from hard and soft materials, thus imitating the natural hand in detail. The flat, oval hand adapter increases the natural appearance – even more than the previously available round wrist units. Matching, durable prosthetic gloves, available in six different tones, are constructed in layers. Coloured fibres inside imitate the natural vein structure of the human hand. Ribs are integrated into the shell of the hand to make the movement of the wrist and thumb appear natural. For those who wish to show off their modern arm prosthesis, a translucent and a black prosthetic glove are available as well.

## **Proven safety**

The technology of the Michelangelo Hand is based on the Axon-Bus system, which is derived from safety systems used in aviation and the automotive industry. Because the individual prosthesis components have been matched optimally to one another, they function very safely and reliably. In addition, there are no losses in the speed and functionality of the Michelangelo Hand.

## **For further information:**

Karsten Ley

Director Corporate Communication

Otto Bock HealthCare GmbH, Max-Näder-Str. 15, 37115 Duderstadt

Phone: +49 (0) 5527-848-3036, Fax +49 (0) 5527-848-3360

E-mail: [press@ottobock.com](mailto:press@ottobock.com)

Internet: [www.ottobock.com](http://www.ottobock.com)