

# bebionic

The versatile prosthetic hand for everybody



Quality for life

## Unique range of functionality

Stephen, a techie and part-time DJ, knew even in his younger years that he would always prefer a highly functional prosthesis over a passive cosmetic device. So it's no wonder that the bionic hand and its breadth of functionality marked the beginning of a new phase in the Irishman's life – one defined by even greater independence.





The bebionic hand is the result of many years of research and close cooperation with users.

Based on cutting-edge technology and a natural design, the bebionic prosthetic hand opens up a new dimension in terms of quality of life for users around the world.

This multi-articulated hand works intuitively and precisely. It unites numerous everyday benefits with a high degree of independence.

# bebionic

## Sizes and grip patterns



▶ Small, black



▶ Small, white



▶ Medium





► Large



**Thumb in opposition**



**Thumb in lateral position**



The bebionic hand features 14 different grip patterns. There is the possibility to preconfigure eight of the most commonly used grip patterns for easy use in everyday life. This innovative hand also features two selectable thumb positions: opposition and lateral position.

**Grip patterns with the thumb in opposition**

- ..... Tripod grip
- ..... Power grip
- ..... Finger adduction
- ..... Hook grip
- ..... Active index grip
- ..... Pinch grip
- ..... Precision open grip
- ..... Precision closed grip

**Grip patterns with the thumb in lateral position**

- ..... Key grip
- ..... Finger point
- ..... Open palm grip
- ..... Column grip
- ..... Mouse grip
- ..... Relaxed hand position

# Wrist options

The bebionic hand is available with four different wrist options to suit the individual requirements of the user. Available options include the EQD (electric quick disconnect) wrist, a short wrist to accommodate a long residual limb/wrist disarticulation as well as the multi-flex and flexion wrists, which allow a larger range of wrist motion.

## 1 EQD wrist

The EQD wrist allows the hand to be removed easily. The user can therefore quickly rotate the hand to remove or attach terminal devices as required.

## 2 Short wrist

The short wrist consists of a low-profile connector for users with a long residual limb. A short wrist lamination ring is also supplied for these hands. Plus, the hand can be rotated against a constant friction, which can be adjusted by the O&P professional.

## 3 Multi-flex wrist\*

The longer multi-flex wrist offers passive hand movement in all directions and the ability to lock in 30° flexion, 30° extension or a neutral position. Lateral movements are still possible while the wrist is locked at the preferred flexion angle.

\* This wrist option is only compatible with the bebionic hands medium and large.

## 4 Flexion wrist

The flexion wrist is a versatile flexion device that allows the wearer to easily lock or unlock the hand where desired, and reposition the wrist in either a flexion or extension position. Offers up to 30 degrees of extension and flexion as well as locking in all three positions.



# Main dimensions and specifications



| Technical data                             | Small                | Medium               | Large                |
|--|----------------------|----------------------|----------------------|
| Tripod grip force                          | 36 N                 | 36 N                 | 36 N                 |
| Key grip force                             | 26 N                 | 26 N                 | 26 N                 |
| Time to open or close – tripod grip        | 0.5 sec.             | 0.5 sec.             | 0.5 sec.             |
| Time to open or close – power grip         | 1.0 sec.             | 1.0 sec.             | 1.0 sec.             |
| Time to open or close – key grip           | 1.0 sec.             | 1.0 sec.             | 1.0 sec.             |
| Hand carry load (static)                   | 45 kg (99 lb, 3 oz)  | 45 kg (99 lb, 3 oz)  | 45 kg (99 lb, 3 oz)  |
| Finger carry load (static)                 | 25 kg (55 lb, 3 oz)  | 25 kg (55 lb, 3 oz)  | 25 kg (55 lb, 3 oz)  |
| Fingertip extension load                   | 6 kg (13 lb, 3 oz)   | 6 kg (13 lb, 3 oz)   | 6 kg (13 lb, 3 oz)   |
| Vertical push down load (through knuckles) | 90 kg (198 lb, 6 oz) | 90 kg (198 lb, 6 oz) | 90 kg (198 lb, 6 oz) |
| Main dimensions                            | Small                | Medium               | Large                |
| <b>A</b> Middle fingertip to hand base     | 160 mm (6 1/4")      | 175 mm (6 7/8")      | 180 mm (7 1/16")     |
| <b>B</b> Thumb tip to hand base            | 100 mm (3 7/8")      | 120 mm (4 3/4")      | 124 mm (4 7/8")      |
| <b>C</b> Max. chassis width (no glove)     | 70 mm (2 4/4")       | 83 mm (3 1/4")       | 91 mm (3 1/2")       |
| <b>D</b> Diameter of chassis at palm       | 45 mm (1 3/4")       | 50 mm (2")           | 50 mm (2")           |
| Palm circumference (no glove)              | 180 mm (7")          | 210 mm (8 1/4")      | 230 mm (9")          |
| Maximum opening width – tripod grip        | 90 mm (3 1/2")       | 105 mm (4 1/8")      | 105 mm (4 1/8")      |

| Part number        | Structural height†             | Weight             | Description                                    |
|--------------------|--------------------------------|--------------------|--|
| <b>Hand small</b>  |                                |                    |  |
| 1 BBHSM*QD-W       | 105 mm + 25 mm (4" + 1")       | 390 g (13 3/4 oz)  | bebionic hand small with EQD wrist – white     |
| 2 BBHSM*SW-W       | 105 mm + 12 mm (4" + 1/2")     | 369 g (13 oz)      | bebionic hand small with short wrist – white   |
| 3 BBHSM*QD-W-F     | 105 mm + 53 mm (4" + 2")       | 460 g (16 oz)      | bebionic hand small with flexion wrist – white |
| 1 BBHSM*QD-B       | 105 mm + 25 mm (4" + 1")       | 390 g (13 3/4 oz)  | bebionic hand small with EQD wrist – black     |
| 2 BBHSM*SW-B       | 105 mm + 12 mm (4" + 1/2")     | 369 g (13 oz)      | bebionic hand small with short wrist – black   |
| 3 BBHSM*QD-B-F     | 105 mm + 53 mm (4" + 2")       | 460 g (16 oz)      | bebionic hand small with flexion wrist – black |
| <b>Hand medium</b> |                                |                    |  |
| 1 BBHMD*QD         | 121 mm + 25 mm (4 3/4" + 1")   | 591 g (1 lb, 5 oz) | bebionic hand medium with EQD wrist            |
| 2 BBHMD*SW         | 121 mm + 12 mm (4 3/4" + 1/2") | 570 g (1 lb, 4 oz) | bebionic hand medium with Short wrist          |
| 3 BBHMD*QD-MF      | 121 mm + 50 mm (4 3/4" + 2")   | 691 g (1 lb, 8 oz) | bebionic hand medium with multi-flex wrist     |
| 4 BBHMD*QD-F       | 121 mm + 53 mm (4 3/4" + 2")   | 661 g (1 lb, 7 oz) | bebionic hand medium with Flexion wrist        |
| <b>Hand large</b>  |                                |                    |  |
| 1 BBHLG*QD         | 125 mm + 25 mm (5" + 1")       | 598 g (1 lb, 5 oz) | bebionic hand large with EQD wrist             |
| 2 BBHLG*SW         | 125 mm + 12 mm (5" + 1/2")     | 577 g (1 lb, 4 oz) | bebionic hand large with short wrist           |
| 3 BBHLG*QD-MF      | 125 mm + 50 mm (5" + 2")       | 698 g (1 lb, 8 oz) | bebionic hand large with Multi-flex wrist      |
| 4 BBHLG*QD-F       | 125 mm + 53 mm (5" + 2")       | 668 g (1 lb, 7 oz) | bebionic hand large with flexion wrist         |

† The structural height consists of the thumb tip to base of hand measurement, plus the structural height for each wrist option.

The second number refers to the minimum allowance for the corresponding wrist unit. \*Denotes side of hand; insert L for a left hand or R for a right hand.

