

ottobock.

CarbonIQ Joint System

Experience Progress

A black and white photograph of a man with a prosthetic leg and a dog at a boat dock. The man is wearing a cap, a striped shirt, and shorts, and is leaning over a boat. The dog is standing on the dock, looking towards the man. The background shows a body of water and a line of trees. Two overlapping circles, one teal and one green, are on the left side of the image. The text 'Quality for life' is inside the green circle.

Quality for life

CarbonIQ : innovative material and modern design

Plastic and high mechanical load capacity are no longer a contradiction in our modern technical world. With the CarbonIQ joint system, we are starting a new chapter in the history of orthopaedic technology.

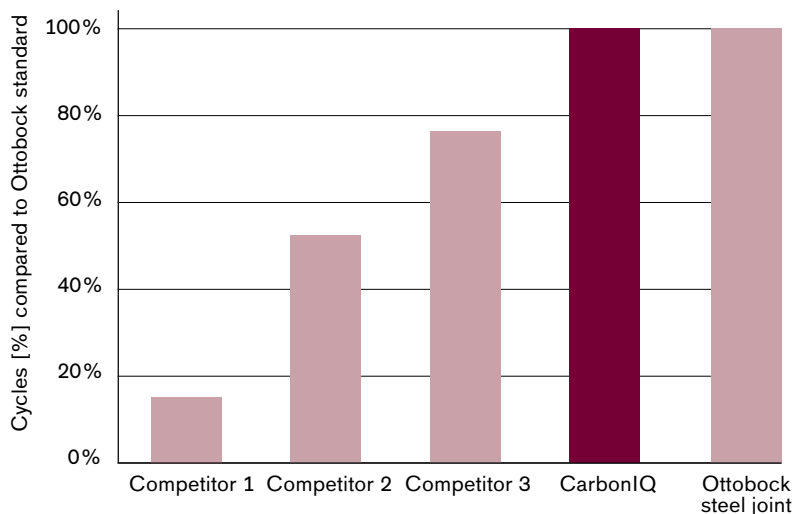
In our continuous search for innovations we found a material that fulfills the high demands of orthopaedic technology in terms of function, load capacity, durability, processing characteristics, weight and, last but not least, design.

The CarbonIQ joint system uses a proven technical thermoplastic strengthened with carbon fibre. Thus the benefits of plastic and carbon are unified to form an innovative, high-quality material combination for knee and ankle joints used in technical orthopaedics.

In a series of demanding tests it was proven that the CarbonIQ joint systems can handle just as much endurance as comparable joints made from metal – but are considerably lighter and are also fit for use in water.



Comparison of cycles for orthotic knee joint systems with same sagittal bending moment*.



* including system bars, test ends at corresponding number of cycles

Product advantages

Advantages of the CarbonIQ joint system over standard joints made from steel:

- Very lightweight (CarbonIQ knee joint: 100 g / 17B23 knee joint: 160 g; CarbonIQ ankle joint: 90 g / 17B66 ankle joint: 190 g)
- High strength and load capacity
- The function is not compromised by chlorine, salt, fresh or soapy water as long as the cleaning and care information as specified in the instructions for use are considered
- Low maintenance and wear

CarbonIQ Orthotic Joint System

Indications:

For partial or complete paralysis of the leg muscles requiring a fitting with an orthosis to ensure safe standing and walking.

The 17PK1*/17PA1* CarbonIQ joint system is approved for a body weight of up to 100 kg.

CarbonIQ knee joint with wedge lock

The 17PK1=* knee joint is a locked joint with a pull-release cable.

The locking system uses the latest technology for locked joints and offers a high level of security. It can be unlocked with one hand using the pull-release cable, making it very simple to use. The lock in the joint clicks into place automatically when standing up, without there being a risk of trapping clothes.

CarbonIQ ankle joint

The 17PA1=* ankle joint is a double-action joint and is based on the Otto Bock 17B66 ankle joint. This type of joint is by far the most versatile fitting. The 9 different possibilities for settings and combinations (see fig.) allow the joint's functions to be adapted to the user's requirements at any time, even if these change over the course of the fitting. Different variations are available for influencing the plantar flexion and dorsal extension.

Scope of delivery

The 17PK1* knee joint and the 17PA1* ankle joint are each delivered unassembled in pairs. When using the 17PA1*, the foot stirrups need to be ordered separately in addition (17PF1, delivered in pairs). The bar material also needs to be ordered (lightweight metal, or alternatively, steel or titanium bars).

CarbonIQ knee joint 17PK1*



CarbonIQ ankle joint 17PA1* with mounted foot stirrup

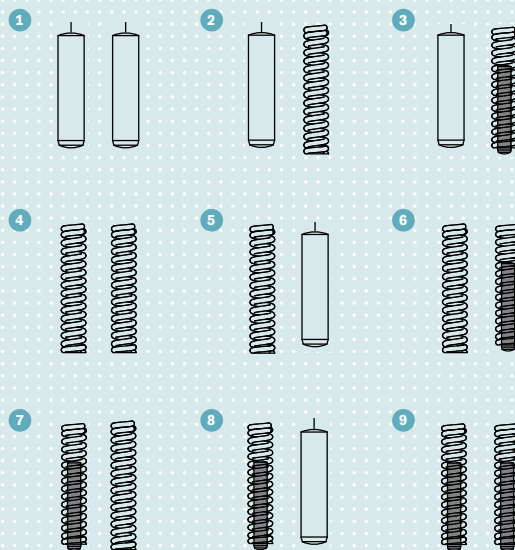


Fig.: Different combinations for CarbonIQ ankle joints

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