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**Nexgear Family –
raising the standard.**

Information for practitioners





Nexgear Family.

The **Nexgear** Family includes five orthotic joints made of titanium or steel in numerous variants as well as accessories for comprehensive, high-quality AFO/KAFO fitting solutions.

The products were developed for users with partial or complete paralysis of the leg muscles or orthopaedic diseases of the lower limbs. They enable mobility under various conditions, such as walking on level ground, stairs and ramps.

Three monocentric knee joints are available in five sizes and four contour versions. Individual settings can be made with just a few tool keys. Reusable steel lamination dummies ensure clean, sustainable processing. The two free-running knee joints

Nexgear free knee and **Nexgear posterior knee** impress with easy running thanks to ball bearings and make little noise due to the integrated damper in the stop. The extension stop on the **Nexgear posterior knee** can be adjusted in the range of -5° to 15° using a wedge set. The **Nexgear lock knee** offers several options for operating the locking function, such as the **Nexgear function switch**, which is available as an accessory. The **Nexgear function switch** also allows the knee joints to be permanently unlocked with one hand for training on an indoor bicycle. If needed, the play of the lock lever can be easily regulated with an eccentric screw on the inside of the joint.

Two **Nexgear** ankle joints complete the product range. The **Nexgear Tango ankle** double action ankle joint offers a wide range of patient-specific settings with four different function modules. These can be tested on and with the user using the **Tango test orthoses** and the **Nexgear Tango Fit-Kit** in order to determine the most appropriate adjustment and alignment on an individual basis. Thanks to its damping characteristics and spring-loaded stop the joint is noiseless. The foot stirrup is wear-resistant and serviceable thanks to replaceable shim plates made of hardened steel. The **Nexgear Sixty-six ankle** also permits many individual settings. It supports the dorsiflexion function and can be locked on one or both sides and fitted as free-moving or spring-assisted. All system components are characterized by a coordinated, high-quality design. The components for the individual orthosis can be easily selected with the help of an online configurator.

Nexgear Tango ankle. 17AD300

Dynamic. Modular. Powerful.

Thanks to its comparatively high energy return, the modular, double action **Nexgear Tango ankle** joint offers the dynamic properties required for a more physiological gait.

More flexibility thanks to modular design

The **Nexgear Tango ankle** offers four different function modules: the Stop-module, the Spring-module, the Reaction-module and the Ultra-module. With these modules, the **Nexgear Tango ankle** can be adapted to the patient's individual needs at any time. Different springs can be used to accommodate different needs. Cushioning and a spring-mounted stop ensure silent stops of the joint. The joint can be used throughout the entire rehabilitation process, even as the patient's needs change.

Fit-Kit and test braces for user testing

The **Tango Fit-Kit** includes all four function modules in each size, all the springs and the required tools. During the fitting process modules and springs can be tested on the user with the test brace to find the proper setting and alignment.

Dummy kit

A tool case containing the tools required for orthosis fabrication is available, including reusable lamination dummies, shaping dummies and foot stirrup assembly aids.

Serviceable stirrup

The replaceable shim plates prevent abrasion on the foot stirrup and provide wear protection.

Indications

- Partial or total paralysis of the leg muscles
- Orthopaedic diseases of the lower limbs



Nexgear Tango ankle. 17AD300

| Article number | System width | Max. body weight | | Material | Quantity unit |
|----------------|--------------|--------------------|--------------------|----------|---------------|
| | | unilateral | bilateral | | |
| 17AD300=14-T | 14 mm | 50 kg / 110 lbs | 80 kg / 176 lbs | Titanium | 1 piece |
| 17AD300=14-ST | 14 mm | 50 kg / 110 lbs | 80 kg / 176 lbs | Steel | 1 piece |
| 17AD300=16-T | 16 mm | 85 kg / 187 lbs | 120 kg / 264.5 lbs | Titanium | 1 piece |
| 17AD300=16-ST | 16 mm | 85 kg / 187 lbs | 120 kg / 264.5 lbs | Steel | 1 piece |
| 17AD300=20-T | 20 mm | 110 kg / 242.5 lbs | 160 kg / 352.5 lbs | Titanium | 1 piece |
| 17AD300=20-ST | 20 mm | 110 kg / 242.5 lbs | 160 kg / 352.5 lbs | Steel | 1 piece |

Available sides:

universally usable for either the left or right leg and either medially or laterally.

Available materials:

titanium (T), steel (ST)

The 17AD300 Nexgear Tango ankle joint includes the joint base body, the appropriate screws and blind caps, the axial washers and an upper (part) lamination dummy.

The following are not included in the scope of delivery and must be ordered separately:

- 17AD301=* Stop-module
- 17AD302=* Spring-module
- 17AD303=* Reaction-module
- 17AD304=* Ultra-module (only available for sizes 16 and 20)
- 17AD305=* Reaction-spring, blue (strong)
- 17AD306=* Reaction-spring, yellow (extra strong)

- 17AD307=* Ultra-spring, grey (ultra-strong, only available for sizes 16 and 20)
- 17AD308=* Spring dummy set
- 17AD310=* Shaping dummy set
- 17AD312=* Assembly tool set for 17SF300
- 17AD313=* Lamination dummy set
- 17LS3=* Lamination bar
- 17SF300=* Foot stirrup, straight

Optional accessories:

- 17AD309=* Tool set for dynamic adjustment of Reaction- and Ultra-module
- 17AT1=1 Test brace set (in combination with 17AT3=1 Fit-Kit)
- 17AT2=* Test braces (in combination with 17AT3=1 Fit-Kit)
- 17AT3=1 Fit-Kit for 17AD300
- 17AT4=1 Dummy kit for 17AD300 (also available in 17MK1=1 Nexgear set of dummies)



| Combination matrix | | Knee joint | | | | | | | | | | | | | | | | |
|--------------------|-----------------------------------|--|----|----|----------------------|----------------------|-------------------------|----|---------------------|----------------------|-------------------------|-------------------------|-------------------------|----|----------------------|----------------------|-------------------------|-------------------------|
| | | Bilateral fitting | | | | | | | | | | Unilateral fitting | | | | | | |
| | | 17KF110 Nexgear free knee 17KF210 Nexgear posterior knee 17KL100 Nexgear lock knee | | | | | 17LK3 | | | | | 17LK3 | | | | | | |
| Ankle joint | Bilateral fitting | Size | 10 | 12 | 14 | 16 | 20 | 10 | 12 | 14 | 16 | 20 | 10 | 12 | 14 | 16 | 20 | |
| | | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | | | ≤ 80 kg ≤ 176 lbs | | | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs |
| | 16 | | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | | | | ≤ 120 kg ≤ 264.5 lbs | | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs |
| | 20 | | | | | | | | | | | | ≤ 160 kg ≤ 352.5 lbs | | | | | |
| Unilateral fitting | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | | | | ≤ 40 kg ≤ 88 lbs | | | | | | ≤ 50 kg ≤ 110 lbs | | | |
| | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | | | ≤ 80 kg ≤ 176 lbs | | | | | | ≤ 85 kg ≤ 187 lbs | | |
| | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | | ≤ 110 kg ≤ 242.5 lbs | |

Combinable Combination possible if needed

Nexgear **Sixty-six ankle.** 17AD200

Multifunction system ankle joint with many adjustment and processing options.

With the 17AD200 **Nexgear Sixty-six ankle** joint, the user can get around flexibly on even and uneven ground, stairs and ramps. The multifunction system ankle joint has an impressive array of individual adjustment options and can be installed in AFOs and KAFOs. It supports the dorsiflexion function and can be locked on one or both sides and fitted as free-moving or spring-assisted. The sophisticated dummy concept accompanying the product makes alignment and assembly work easy. The shape of the dummy ensures that there is enough space left to use alignment and assembly tools once the orthosis has been built. This makes the orthosis easier to complete. There is the option of shortening the dummy so that various laminate designs can be implemented in the joint area. In summary, the 17AD200 **Nexgear Sixty-six ankle** is remarkably easy to handle for processing, fitting and maintenance.

The 17AD200 Nexgear Sixty-six ankle is:

- Only suitable for bilateral use (AFO/KAFO)
- Only usable for orthoses without ischium bars
- It can be combined with:
 - 17KL100*, 17KF110*, 17KF210*, 17LK3*, 17B203*, 17B203* and 17B206* orthotic knee joints (note the instructions for use)
 - 17SL100* lamination bars
 - 17SB100* side bars
 - 17SF200=OS-* and 17SF200=FT-* foot stirrups
- Only for processing with lamination technique when combined with the following orthotic joints: 17LK3*, 17B203* **E-MAG Active** (with and without 17B206* support)

Indications

- Partial or total paralysis of the leg muscles
- Orthopaedic diseases of the lower limbs



Nexgear Sixty-six ankle. 17AD200

| Article number | System width | Max. body weight | Material | Quantity unit |
|----------------|--------------|--------------------|----------|---------------|
| 17AD200=10-T | 10 mm | 15 kg / 33 lbs | Titanium | 1 piece |
| 17AD200=10 | 10 mm | 15 kg / 33 lbs | Steel | 1 piece |
| 17AD200=12-T | 12 mm | 20 kg / 44 lbs | Titanium | 1 piece |
| 17AD200=12 | 12 mm | 20 kg / 44 lbs | Steel | 1 piece |
| 17AD200=14-T | 14 mm | 50 kg / 110 lbs | Titanium | 1 piece |
| 17AD200=14 | 14 mm | 50 kg / 110 lbs | Steel | 1 piece |
| 17AD200=16-T | 16 mm | 85 kg / 187 lbs | Titanium | 1 piece |
| 17AD200=16 | 16 mm | 85 kg / 187 lbs | Steel | 1 piece |
| 17AD200=20-T | 20 mm | 110 kg / 242.5 lbs | Titanium | 1 piece |
| 17AD200=20 | 20 mm | 110 kg / 242.5 lbs | Steel | 1 piece |

Available sides:

universally usable for either the left or right leg and either medially or laterally.

Available materials:

titanium (T), steel (-)

The 17AD200 **Nexgear Sixty-six ankle** includes a compression spring, stops, spring stops and lamination dummy cover.

The following are not included in the scope of delivery and must be ordered separately:

- 17SL100* lamination bars/17SB100* side bars and 17SF200=OS-* and 17SF200=FT-* foot stirrups
- 17AD200A=DY-* lamination dummy set with dummy lower section and slotted oval head screw
- 743R6 orthotic joint alignment set

| Combination matrix | | Knee joint | | | | | | | | | | | | | | | | | | |
|--------------------|--|--|---------------------|----------------------|----------------------|-------------------------|-------|---------------------|---------------------|----------------------|----|-------------------------|---------------------|---------------------|----------------------|----------------------|--|-------------------------|--|--|
| | | Bilateral fitting | | | | | | | | | | Unilateral fitting | | | | | | | | |
| | | 17KF110 Nexgear free knee 17KF210 Nexgear posterior knee 17KL100 Nexgear lock knee | | | | | 17LK3 | | | | | 17LK3 | | | | | | | | |
| Size | | 10 | 12 | 14 | 16 | 20 | 10 | 12 | 14 | 16 | 20 | 10 | 12 | 14 | 16 | 20 | | | | |
| Ankle joint | Bilateral fitting 17AD200 Nexgear Sixty-six ankle | ≤ 15 kg ≤ 33 lbs | | | | | | | | | | | ≤ 15 kg ≤ 33 lbs | | | | | | | |
| | | | ≤ 20 kg ≤ 44 lbs | | | | | ≤ 20 kg ≤ 44 lbs | | | | | | ≤ 20 kg ≤ 44 lbs | | | | | | |
| | | | | ≤ 50 kg ≤ 110 lbs | | | | | ≤ 40 kg ≤ 88 lbs | | | | | | ≤ 50 kg ≤ 110 lbs | | | | | |
| | | | | | ≤ 85 kg ≤ 187 lbs | | | | | ≤ 80 kg ≤ 176 lbs | | | | | | ≤ 85 kg ≤ 187 lbs | | | | |
| | | | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | | ≤ 110 kg ≤ 242.5 lbs | | |

Combinable Combination possible if needed

Nexgear free knee. 17KF110

Smooth-running, free motion system orthotic knee joint.

The 17KF110 is a free motion orthotic knee joint for bilateral use.

The knee joint can be processed using lamination and prepreg techniques as well as the thermoplastic technique or as a bar-clamp device. Sustainable, reusable steel dummies are available.

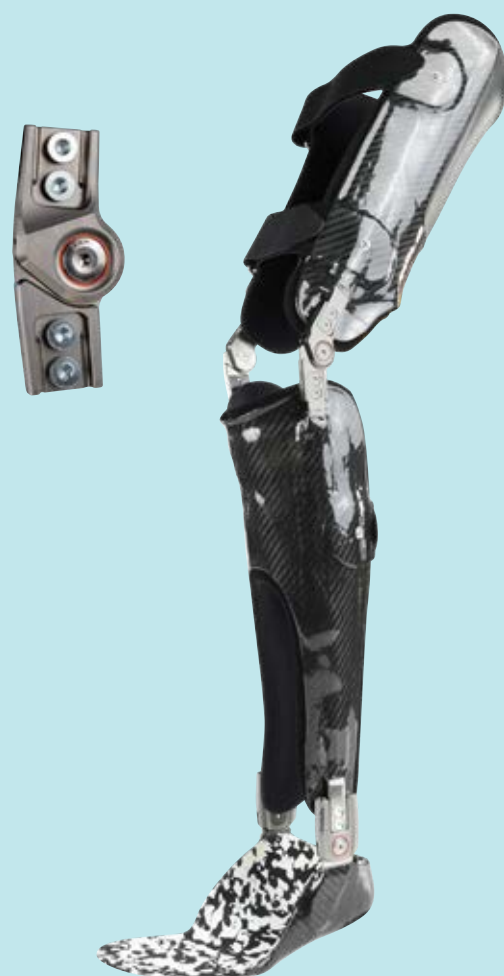
- The 17KF110 **Nexgear free knee** is remarkably easy to handle for processing and maintenance.
- A sustainable dummy concept with reusable steel dummies creates less waste.
- The joint is low-noise. At the end stop in the terminal stance phase this is achieved thanks to the integrated damper.
- The joint has a ball bearing and runs smoothly. It has remarkably low flexion resistance.

The 17KF110 Nexgear free knee is:

- Only suitable for bilateral use
- Combinable with the following orthotic ankle joints:
 - 17AD200*
 - 17AD300*
 - 17LA3N*
- Combinable with the following bars:
 - 17SL100=* lamination bar (lamination and prepreg technique)
 - 17SB100=* side bar (thermoplastic technique and bar-clamp device)

Indications

- Partial paralysis of the leg muscles
- Orthopaedic diseases of the lower limbs



Nexgear free knee.

17KF110

| Article number | System width | Max. body weight | Length from joint centre upper | Length from joint centre lower | Posterior offset | Quantity unit |
|------------------|--------------|--------------------|--------------------------------|--------------------------------|------------------|---------------|
| 17KF110=*-10-*-* | 10 mm | 15 kg / 33 lbs | ~ 31 mm | ~ 32 mm | 5 mm | 1 piece |
| 17KF110=*-12-*-* | 12 mm | 20 kg / 44 lbs | ~ 32 mm | ~ 33 mm | 6 mm | 1 piece |
| 17KF110=*-14-*-* | 14 mm | 50 kg / 110 lbs | ~ 34 mm | ~ 35 mm | 7 mm | 1 piece |
| 17KF110=*-16-*-* | 16 mm | 85 kg / 187 lbs | ~ 38 mm | ~ 39 mm | 8 mm | 1 piece |
| 17KF110=*-20-*-* | 20 mm | 110 kg / 242.5 lbs | ~ 41 mm | ~ 42 mm | 10 mm | 1 piece |

Available sides: right (R), left (L)

Available materials: titanium (T), steel (ST)

Available contours:

- straight lower section, straight upper section (1)
- contoured lower section, straight upper section (2)
- straight lower section, contoured upper section (3)
- contoured lower section, contoured upper section (4)

The following are not included in the scope of delivery and must be ordered separately:

- 17KF113=* ball bearing pressing tool (optional)
- 17KF112=* dummy set (making an orthosis requires two dummy sets)
- 17SL100* lamination bars/17SB100* side bars

| Combination matrix | | Knee joint | | | | | | |
|--------------------|--------------------|---------------------------------------|----|----------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | | Bilateral fitting | | | | | | |
| | | 17KF110 Nexgear free knee | | | | | | |
| | Size | 10 | 12 | 14 | 16 | 20 | | |
| Ankle joint | Bilateral fitting | 17AD200 Nexgear Sixty-six ankle | 10 | ≤ 15 kg ≤ 33 lbs | | | | |
| | | | 12 | | ≤ 20 kg ≤ 44 lbs | | | |
| | | | 14 | | | ≤ 50 kg ≤ 110 lbs | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | |
| | | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs |
| | | 14 | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | ≤ 110 kg ≤ 242.5 lbs | |
| | | 16 | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | |
| | Unilateral fitting | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | |
| | | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs |
| | | | 10 | ≤ 15 kg ≤ 33 lbs | ≤ 20 kg ≤ 44 lbs | | | |
| | | | 12 | | | ≤ 40 kg ≤ 88 lbs | | |
| | | 17LA3N | 14 | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | ≤ 110 kg ≤ 242.5 lbs |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs |
| 20 | | | | | | ≤ 110 kg ≤ 242.5 lbs | | |
| 14 | | | | ≤ 50 kg ≤ 110 lbs | | | | |
| 16 | | | | | ≤ 85 kg ≤ 187 lbs | | | |
| 20 | | | | | ≤ 110 kg ≤ 242.5 lbs | | | |

Order example

| Article number | Side | System width | Contour | Material |
|-------------------|-------|--------------|---|----------|
| 17KF110 | = R | - 10 | - 1 | - T |
| Nexgear free knee | right | 10 | straight lower section, straight upper section | titanium |
| 17KF110 | = L | - 14 | - 3 | - ST |
| Nexgear free knee | left | 14 | straight lower section, contoured upper section | steel |

  Combinable

Nexgear posterior knee. 17KF210

Smooth-running, free motion system orthotic knee joint with a posterior offset.

The 17KF210 is a free motion orthotic knee joint with a posterior offset for bilateral use. The posterior offset corresponds to the bar width. It can be processed using lamination and prepreg techniques as well as the thermoplastic technique or as a bar-clamp device. Sustainable, reusable steel dummies are available.

- The 17KF210 **Nexgear posterior knee** is remarkably easy to handle for processing and maintenance.
- The joint has a ball bearing and runs smoothly. It has remarkably low flexion resistance.
- The 17KF213 **extension wedge set** can be used to adjust the extension stop on the **Nexgear posterior knee** simply and conveniently to 5°, 10°, 15° and even -5°. In factory condition, the joint contains a 0° stop.
- The joint is low-noise. At the end stop in the terminal stance phase this is achieved thanks to the integrated damper.
- A sustainable dummy concept with reusable steel dummies creates less waste.

The 17KF210 Nexgear posterior knee is:

- Only suitable for bilateral use
- Combinable with the following orthotic ankle joints:
 - 17AD200*
 - 17AD300*
 - 17LA3N*
- Combinable with the following bars:
 - 17SL100=* lamination bar (lamination and prepreg technique)
 - 17SB100=* side bar (thermoplastic technique and bar-clamp device)

Indications

- Partial or total paralysis of the leg muscles



Nexgear posterior knee. 17KF210

| Article number | System width | Max. body weight | Length from joint centre upper | Length from joint centre lower | Posterior offset | Quantity unit |
|------------------|--------------|--------------------|--------------------------------|--------------------------------|------------------|---------------|
| 17KF210=*-10-*-* | 10 mm | 15 kg / 33 lbs | ~ 31 mm | ~ 31 mm | 10 mm | 1 piece |
| 17KF210=*-12-*-* | 12 mm | 20 kg / 44 lbs | ~ 32 mm | ~ 32 mm | 12 mm | 1 piece |
| 17KF210=*-14-*-* | 14 mm | 50 kg / 110 lbs | ~ 34 mm | ~ 34 mm | 14 mm | 1 piece |
| 17KF210=*-16-*-* | 16 mm | 85 kg / 187 lbs | ~ 38 mm | ~ 38 mm | 16 mm | 1 piece |
| 17KF210=*-20-*-* | 20 mm | 110 kg / 242.5 lbs | ~ 41 mm | ~ 41 mm | 20 mm | 1 piece |

Available sides: right (R), left (L)

Available materials: titanium (T), steel (ST)

Available contours:

- straight lower section, straight upper section (1)
- contoured lower section, straight upper section (2)
- straight lower section, contoured upper section (3)
- contoured lower section, contoured upper section (4)

The following are not included in the scope of delivery and must be ordered separately:

- 17KF113=* ball bearing pressing tool (optional)
- 17KF212=* dummy set (making an orthosis requires two dummy sets)
- 17KF213=* extension wedge set (optional)
- 17SL100* lamination bars/17SB100* side bars

| Combination matrix | | Knee joint | | | | | | | |
|--------------------|--------------------|---------------------------------------|--------|---------------------|----------------------|----------------------|-------------------------|-------------------------|--|
| | | Bilateral fitting | | | | | | | |
| | | 17KF210 Nexgear posterior knee | | | | | | | |
| | Size | 10 | 12 | 14 | 16 | 20 | | | |
| Ankle joint | Bilateral fitting | 17AD200 Nexgear Sixty-six ankle | 10 | ≤ 15 kg ≤ 33 lbs | | | | | |
| | | | 12 | | ≤ 20 kg ≤ 44 lbs | | | | |
| | | | 14 | | | ≤ 50 kg ≤ 110 lbs | | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | |
| | | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs | |
| | | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | |
| | | | 20 | | | | | | |
| | | | 17LA3N | 10 | ≤ 15 kg ≤ 33 lbs | ≤ 20 kg ≤ 44 lbs | | | |
| | | | | 12 | | | ≤ 40 kg ≤ 88 lbs | | |
| | 14 | | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | |
| | 16 | | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | |
| | 20 | | | | | | | | |
| | Unilateral fitting | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | |
| 20 | | | | | | | ≤ 110 kg ≤ 242.5 lbs | | |
| 17LA3N | | | 10 | ≤ 15 kg ≤ 33 lbs | | | | | |
| | | | 12 | | ≤ 20 kg ≤ 44 lbs | | | | |
| | | 14 | | | ≤ 50 kg ≤ 110 lbs | | | | |
| | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | | |
| | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs | | |

Order example

| Article number | Side | System width | Contour | Material |
|------------------------|-------|--------------|---|----------|
| 17KF210 | = R - | 10 | 1 | T |
| Nexgear posterior knee | right | 10 | straight lower section, straight upper section | titanium |
| 17KF210 | = L - | 14 | 3 | ST |
| Nexgear posterior knee | left | 14 | straight lower section, contoured upper section | steel |

  Combinable

Nexgear lock knee. 17KL100

Smooth-running system orthotic knee joint with locking function.

The 17KL100 is an orthotic knee joint with integrated lock for bilateral use. There are numerous options for unlocking the joint. The short lock lever can be replaced with a longer one. Optionally, a pull-release cable may be attached to the lock levers. The 17MA1 **Nexgear function switch**, which allows the joint to be unlocked for long periods for riding an indoor bicycle, is also available as an accessory. The lock lever play can be easily adjusted as needed using an eccentric screw on the inside of the joint.

The knee joint is remarkably easy to handle for processing and maintenance. It can be processed using lamination and prepreg techniques as well as the thermoplastic technique or as a bar-clamp device. Sustainable, reusable steel dummies are available.

- The 17KL100 **Nexgear lock knee** is remarkably easy to handle for processing and maintenance.
- The joint has a slide bearing and runs smoothly. It has remarkably low flexion resistance.
- The lock lever play is easily adjustable with an eccentric screw on the inside of the joint.
- There are numerous options for unlocking the joint, e.g. short or long lock lever or the 17MA1 **Nexgear function switch**. In factory condition, the joint contains a short lock lever.
- A sustainable dummy concept with reusable steel dummies creates less waste.

The 17KL100 Nexgear lock knee is:

- Only suitable for bilateral use
- Combinable with the following orthotic ankle joints:
 - 17AD200*
 - 17AD300*
 - 17LA3N*
- Combinable with the following bars:
 - 17SL100=* lamination bar (lamination and prepreg technique)
 - 17SB100=* side bar (thermoplastic technique and bar-clamp device)

Indications

- Partial or total paralysis of the leg muscles
- Orthopaedic diseases of the lower limbs



Nexgear lock knee. 17KL100

| Article number | System width | Max. body weight | Length from joint centre upper | Length from joint centre lower | Posterior offset | Quantity unit |
|------------------|--------------|--------------------|--------------------------------|--------------------------------|------------------|---------------|
| 17KL100=*-10-*-* | 10 mm | 15 kg / 33 lbs | ~ 43 mm | ~ 35 mm | 5 mm | 1 piece |
| 17KL100=*-12-*-* | 12 mm | 20 kg / 44 lbs | ~ 46 mm | ~ 36 mm | 6 mm | 1 piece |
| 17KL100=*-14-*-* | 14 mm | 50 kg / 110 lbs | ~ 48 mm | ~ 39 mm | 7 mm | 1 piece |
| 17KL100=*-16-*-* | 16 mm | 85 kg / 187 lbs | ~ 54 mm | ~ 46 mm | 8 mm | 1 piece |
| 17KL100=*-20-*-* | 20 mm | 110 kg / 242.5 lbs | ~ 57 mm | ~ 48 mm | 10 mm | 1 piece |

Available sides: right (R), left (L)

Available materials: titanium (T), steel (ST)

Available contours:

- straight lower section, straight upper section (1)
- contoured lower section, straight upper section (2)
- straight lower section, contoured upper section (3)
- contoured lower section, contoured upper section (4)

The following are not included in the scope of delivery and must be ordered separately:

- 17KL103=* long lock lever (optional)
- 17MA1=1 Nexgear function switch (optional)
- 17KL102=* dummy set
- 17SL100* lamination bars/17SB100* side bars

| Combination matrix | | Knee joint | | | | | | | |
|--------------------|--------------------|---------------------------------------|--------|---------------------|----------------------|----------------------|-------------------------|-------------------------|--|
| | | Bilateral fitting | | | | | | | |
| | | 17KL100 Nexgear lock knee | | | | | | | |
| | Size | 10 | 12 | 14 | 16 | 20 | | | |
| Ankle joint | Bilateral fitting | 17AD200 Nexgear Sixty-six ankle | 10 | ≤ 15 kg ≤ 33 lbs | | | | | |
| | | | 12 | | ≤ 20 kg ≤ 44 lbs | | | | |
| | | | 14 | | | ≤ 50 kg ≤ 110 lbs | | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | |
| | | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs | |
| | | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | |
| | | | 20 | | | | | | |
| | | | 17LA3N | 10 | ≤ 15 kg ≤ 33 lbs | ≤ 20 kg ≤ 44 lbs | | | |
| | | | | 12 | | | ≤ 40 kg ≤ 88 lbs | | |
| | 14 | | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | |
| | 16 | | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | |
| | 20 | | | | | | | | |
| | Unilateral fitting | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | |
| 20 | | | | | | | ≤ 110 kg ≤ 242.5 lbs | | |
| 17LA3N | | | 10 | ≤ 15 kg ≤ 33 lbs | | | | | |
| | | | 12 | | ≤ 20 kg ≤ 44 lbs | | | | |
| | | 14 | | | ≤ 50 kg ≤ 110 lbs | | | | |
| | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | | |
| | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs | | |

Order example

| Article number | Side | System width | Contour | Material |
|-------------------|-------|--------------|---|----------|
| 17KL100 | = R - | 10 | 1 | T |
| Nexgear lock knee | right | 10 | straight lower section, straight upper section | titanium |
| 17KL100 | = L - | 14 | 3 | ST |
| Nexgear lock knee | left | 14 | straight lower section, contoured upper section | steel |

Accessory



17MA1 Nexgear function switch


The 17MA1 Nexgear function switch is a switch for unlocking the 17KL100 Nexgear lock knee. Depending on the position of the toggle switch, the knee joints can be unlocked with one hand using the column grip, either once or for long periods for riding an indoor bicycle. The column grip is ergonomically shaped. It is easy to operate, even through clothing. For patients with impaired hand and finger motor function, the column grip can be replaced with the 17MA4=1 Perlon cable. This is available as an accessory.

Combinable

Nexgear Family – combination matrix.

| Combination matrix | | Bilateral fitting | | | | | | | | | | | | | |
|--------------------|--------------------|---------------------------------------|---------------------|---------------------|----------------------|-------------------------|-----------------------------------|-------------------------|---------------------|----------------------|-------------------------|-------------------------|-------------------------|--|---------------------|
| | | 17KF110 Nexgear free knee | | | | | 17KF210 Nexgear posterior knee | | | | | | | | |
| | | Size | 10 | 12 | 14 | 16 | 20 | 10 | 12 | 14 | 16 | 20 | 10 | | |
| Ankle joint | Bilateral fitting | 17AD200 Nexgear Sixty-six ankle | 10 | ≤ 15 kg ≤ 33 lbs | | | | | ≤ 15 kg ≤ 33 lbs | | | | | | ≤ 15 kg ≤ 33 lbs |
| | | | 12 | | ≤ 20 kg ≤ 44 lbs | | | | | ≤ 20 kg ≤ 44 lbs | | | | | |
| | | | 14 | | | ≤ 50 kg ≤ 110 lbs | | | | | ≤ 50 kg ≤ 110 lbs | | | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | | | | ≤ 85 kg ≤ 187 lbs | | | |
| | | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | ≤ 110 kg ≤ 242.5 lbs | | |
| | | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | |
| | 16 | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | | | |
| | 20 | | | | | | | | | | | | | | |
| | 17LA3N | 10 | ≤ 15 kg ≤ 33 lbs | ≤ 20 kg ≤ 44 lbs | | | | | ≤ 15 kg ≤ 33 lbs | ≤ 20 kg ≤ 44 lbs | | | | | ≤ 15 kg ≤ 33 lbs |
| | | 12 | | | ≤ 40 kg ≤ 88 lbs | | | | | | ≤ 40 kg ≤ 88 lbs | | | | |
| | | 14 | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | |
| | | 16 | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | |
| | | 20 | | | | | | | | | | | | | |
| | Unilateral fitting | 17AD300 Nexgear Tango ankle | 14 | | | ≤ 50 kg ≤ 110 lbs | | | | | ≤ 50 kg ≤ 110 lbs | | | | |
| | | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | | | | ≤ 85 kg ≤ 187 lbs | | | |
| 20 | | | | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | ≤ 110 kg ≤ 242.5 lbs | | | |
| 17LA3N | | 10 | ≤ 15 kg ≤ 33 lbs | | | | | | ≤ 15 kg ≤ 33 lbs | | | | | | ≤ 15 kg ≤ 33 lbs |
| | | 12 | | ≤ 20 kg ≤ 44 lbs | | | | | | ≤ 20 kg ≤ 44 lbs | | | | | |
| | | 14 | | | ≤ 50 kg ≤ 110 lbs | | | | | | ≤ 50 kg ≤ 110 lbs | | | | |
| | | 16 | | | | ≤ 85 kg ≤ 187 lbs | | | | | | ≤ 85 kg ≤ 187 lbs | | | |
| | | 20 | | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | | ≤ 110 kg ≤ 242.5 lbs | | |

  Combinable

 Combination possible if needed

Knee joint

| 17KL100 Nexgear lock knee | | | | | | | | | | Unilateral fitting | | | | |
|------------------------------|----------------------|----------------------|-------------------------|---------------------|---------------------|----------------------|-------------------------|-------------------------|---------------------|---------------------|----------------------|----------------------|-------------------------|--|
| 17LK3 | | | | | 17LK3 | | | | | 17LK3 | | | | |
| 12 | 14 | 16 | 20 | 10 | 12 | 14 | 16 | 20 | 10 | 12 | 14 | 16 | 20 | |
| | | | | | | | | | ≤ 15 kg ≤ 33 lbs | | | | | |
| ≤ 20 kg ≤ 44 lbs | | | | ≤ 20 kg ≤ 44 lbs | | | | | | ≤ 20 kg ≤ 44 lbs | | | | |
| | ≤ 50 kg ≤ 110 lbs | | | | ≤ 40 kg ≤ 88 lbs | | | | | | ≤ 50 kg ≤ 110 lbs | | | |
| | | ≤ 85 kg ≤ 187 lbs | | | | ≤ 80 kg ≤ 176 lbs | | | | | | ≤ 85 kg ≤ 187 lbs | | |
| | | | ≤ 110 kg ≤ 242.5 lbs | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | | ≤ 110 kg ≤ 242.5 lbs | |
| | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | | ≤ 80 kg ≤ 176 lbs | | | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | |
| | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | | | ≤ 120 kg ≤ 264.5 lbs | | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | |
| | | | | | | | | ≤ 160 kg ≤ 352.5 lbs | | | | | | |
| ≤ 20 kg ≤ 44 lbs | | | | ≤ 25 kg ≤ 55 lbs | | | | | ≤ 15 kg ≤ 33 lbs | ≤ 20 kg ≤ 44 lbs | | | | |
| | ≤ 40 kg ≤ 88 lbs | | | | ≤ 40 kg ≤ 88 lbs | | | | | | ≤ 40 kg ≤ 88 lbs | | | |
| | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | | | ≤ 80 kg ≤ 176 lbs | | | | | ≤ 50 kg ≤ 110 lbs | ≤ 80 kg ≤ 176 lbs | | |
| | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | | | | ≤ 120 kg ≤ 264.5 lbs | | | | | ≤ 85 kg ≤ 187 lbs | ≤ 110 kg ≤ 242.5 lbs | |
| | | | | | | | | ≤ 160 kg ≤ 352.5 lbs | | | | | | |
| | ≤ 50 kg ≤ 110 lbs | | | | ≤ 40 kg ≤ 88 lbs | | | | | | ≤ 50 kg ≤ 110 lbs | | | |
| | | ≤ 85 kg ≤ 187 lbs | | | | ≤ 80 kg ≤ 176 lbs | | | | | | ≤ 85 kg ≤ 187 lbs | | |
| | | | ≤ 110 kg ≤ 242.5 lbs | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | | ≤ 110 kg ≤ 242.5 lbs | |
| | | | | | | | | | ≤ 15 kg ≤ 33 lbs | | | | | |
| ≤ 20 kg ≤ 44 lbs | | | | ≤ 20 kg ≤ 44 lbs | | | | | | ≤ 20 kg ≤ 44 lbs | | | | |
| | ≤ 50 kg ≤ 110 lbs | | | | ≤ 40 kg ≤ 88 lbs | | | | | | ≤ 50 kg ≤ 110 lbs | | | |
| | | ≤ 85 kg ≤ 187 lbs | | | | ≤ 80 kg ≤ 176 lbs | | | | | | ≤ 85 kg ≤ 187 lbs | | |
| | | | ≤ 110 kg ≤ 242.5 lbs | | | | ≤ 110 kg ≤ 242.5 lbs | | | | | | ≤ 110 kg ≤ 242.5 lbs | |

Easy. Efficient. Environmentally friendly.

A number of accessories are available to make patient fittings with products from the **Nexgear** Family as easily, efficiently and environmentally friendly as possible. The following section presents a selection of available accessories.



Easy choice.

Online configurator for all Nexgear product range and more

The Ottobock orthosis configurator for custom leg orthoses.

With the guided online configuration process, custom orthoses can be created step by step in just a few clicks. Based on the patient-specific input data, suggestions for suitable designs are made and an overview of all relevant system components is provided for a simple and clearly structured ordering process.

Anamnesis

Collecting the relevant patient data forms the basis for the fitting.

Components

The basic fitting design is taken into account through the production technology and component selection.

Configuration

Individual requirements are taken into account by the choice of variants and materials.

Result

The configuration result can be saved, sent by mail or added to the shopping cart.



Easy testing.

Test braces and *Fit-Kit* for 17AD300 Nexgear Tango ankle

The 17AT1 **test brace set** contains various test braces and makes it possible to try out the 17AD300 **Nexgear Tango ankle** on the patient under professional supervision. Different configurations can be tested with additional use of the 17AT3 **Fit-Kit**, which contains all available modules for the Tango ankle joint (ultra, reaction, spring and stop modules) as well as the tools required to adjust them.



17AT1=1 Test brace set for 17AD300



Easy fabrication.

Lamination dummies and tools

Once the patient's suitability for the **Nexgear Tango ankle** has been identified and the required joint configuration has been determined, a range of accessories make the definitive fabrication of the orthosis easier. For example, the shaping dummy, which is available separately, takes into account the individual contour of the 17AD300 with respect to the Reaction-/Ultra-/Spring- and Stop-modules and ensures sufficient distance between the orthosis shell and orthotic joint from the outset. Canting or a collision with the laminate are excluded, so reworking (e.g. sanding) is no longer required. A specially developed assembly tool for assembling the foot stirrup is available.

In addition dummy sets are available, e.g. for building an orthosis with the 17KF110 **Nexgear free knee** and the 17KF210 **Nexgear posterior knee**. They contain a lamination dummy, upper and lower section, each in straight and contoured designs. The upper and lower sections can be combined together as needed in order to adjust the four different contouring options. The sections can also be deployed in a rotationally symmetrical manner and can therefore be used medially and laterally for the lamination process. The dummies are made of steel and are reusable, meaning less waste from the manufacturing process.

Nexgear workstation design

A workshop trolley using the **OrthoLean** concept, which includes lamination dummies and tools for the products in the **Nexgear** Family in sizes 14, 16 and 20, allows the organized storage and a targeted selection of the parts required for the respective orthosis fabrication.

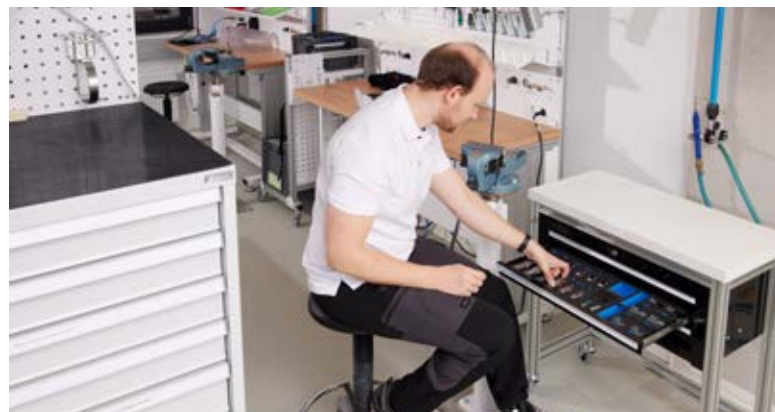


17AD310 Shaping dummy

17AD312 Assembly tool for 17SF300



17KF212 Dummy set for 17KF210



17MK1=1 Nexgear dummy assortment

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

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