

KINETECH® CUSTOM ORTHOSES

The future of custom made orthoses is here . . .

Now!



53% share of custom made orthotics market

30% share of the prosthetics market of U.A.E

And a firm commitment to give you
your money's worth!



KINETECH® UNILATERAL JOINT SYSTEM



The Unilateral Joint System consists of a knee joint and a combinable ankle joint. A connection plug makes it possible to combine both functional parts with a unilateral system bar. For use in fittings with the Otto Bock RGO 17H100 Hip Joint System, connectors are available to complement the system.

The joint components are classified according to body weight and lower leg length making size selection easier. Size 1 is intended for patients up to 100 kg (220 lb), size 2 – up to 75 kg (165 lb) and size 3 – up to 45 kg (99 lb).

The classification of the lower leg length is also necessary because of the different degrees of leverage accompanying different body sizes. Size 1 is limited to 55 cm from the medial tibial plateau (MTP) to the floor. Size 2 is limited to 45 cm and size 3 to 35 cm.

A new kind of ankle joint for unilateral fitting has been constructed in an unusual, though highly functional design. The special feature of this joint is its slim design, which – for a unilateral ankle joint – is rather unusual. By offsetting the lower leg bar and the foot stirrup towards each other, it has been possible to design the joint with dimensions hardly larger than a normal ankle joint.

This offers decisive advantages for the height, the effectiveness of the foot lifter and cosmetics. In terms of function it offers the orthopedic technician many possibilities. Exchangeable joint inserts allow to apply different stop angles (angle sizes 0° to 15°) that limit movement.

Another feature is the connection between ankle joint and knee joint. The tibial joint bar with the attachment device for the ankle joint can be directly connected to the knee joint at the proximal end. This considerably reduces the structural height and improves function and appearance of the orthosis.



The foot lever function, which can be used if necessary, ensures effective and soundless dorsiflexion. Using an O-ring made of polyurethane makes it low maintenance and easy to retrofit. If necessary, a second ring can be used to increase the force of the foot lever. Lubrication is not required due to special bearing technology in the joint. For maintenance of the ankle joint, all moveable parts are easily accessible and can be replaced at any time if required. Thanks to the unilateral guidance and the flat shape of the joint, normal shoes can generally be worn. The 17LA1 ankle joints are classified similar to the knee joints.

Please note that the ankle joint is delivered with a joint insert that has no movement (i.e. 0°-0°). You can order the joint inserts as a set or as single parts. We recommend a set as initial equipment.

Joint Insert Set:

| | |
|----------|------------|
| 17LA10=1 | for size 1 |
| 17LA10=2 | for size 2 |
| 17LA10=3 | for size 3 |

KINETECH® RGO HIP JOINT SYSTEM



The connection between the leg bars and the hip module is especially important for fittings with reciprocating gait orthoses.

With our RGO Hip Joint System a pelvic rotation that imitates physiological rotation during walking with the orthosis can be achieved.

Thanks to the development of a bi-axial joint construction, a pelvic rotation of 15° is possible without having to change walking direction.

The results: less effort, effective gait.

Indications

The Reciprocating Hip Joint System was specially designed for patients with a body weight of up to 65 kg (143 lbs). It can be used with patients suffering from spina bifida or myopathies of other genesis (e.g. traumatic paraplegia) with a lesion level of Th5 to L3.

Restrictions must be made for patients with ICP, motor perception disorders, deficits of movement of the upper extremity, insufficient muscle strength in the shoulder girdle, loss of trunk mobility in frontal or sagittal plane, severe deformities of the skeletal system (e.g. scoliosis, dislocations), hip flexion contracture (> 20°), knee joint flexion contracture (> 15°), and torsional deformities of the legs.

Special features of the Otto Bock® RGO Hip Joint System

- Easy to use modular system.
- Separate components allow the orthosis to grow with the child.
- Torsion-proof aluminum alloy pelvic tube allows for modular connection of joints.
- The bi-axial system allows for a pelvic rotation of 15° in the orthosis without changing the walking direction.
- Push-pull cable system aids in smooth and maintenance-free power transmission during walking.
- Sitting joint lock releases with pre-release of the locking mechanism.
- Safety button for re-locking in case of accidental pre-release of the sitting joint.
- Choice between thermoplastic or laminate for the individualized pelvic module.
- Torso bar is easily disassembled.
- Torso bar hip flexion adjusts up to 10°.
- Prefabricated aluminum alloy thigh bars with 0 mm, 5 mm or 10 mm offset available.



KINETECH® FREE WALK® ORTHOSIS



OUR EMPLOYEES ARE CERTIFIED BY OTTO BOCK FOR THEIR VARIOUS PRODUCTS

Walk smoothly and stand securely with the Free Walk Orthosis System. The special Otto Bock orthosis system locks the knee joint during the stance phase and becomes released during the swing phase. This allows patients to bend their leg, thus requiring less energy when walking.

The light and stable Free Walk orthosis also lightens the load on the back, hips and knee joint through its mode of operation. It can be easily put on and off. Thus, the Free Walk ensures the patients individual security, stability, and above all mobility.

The Free Walk orthosis was developed for patients who, due to a partial paralysis or a complete failure of the knee extensors, are unable to stabilize their knee without compensatory measures. For example, knee joints are often stabilized through hyperextension achieved by compensatory movement of the gluteal muscles (e.g. when the foot touches the ground, the hip extension leads to a knee extension).



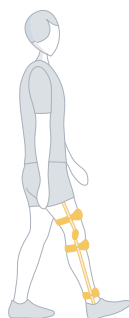
Benefit

- Smooth gait pattern
- Secure standing
- Customized
- Easy to apply
- Light, narrow and stable
- Cosmetically appealing
- High comfort

Indications

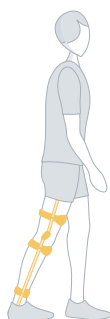
Paresis or paralysis of the lower extremities

Functional Principle



Security in the stance phase:

The orthotic joint automatically locks when the knee is extended before the heel strike. The patient stands securely and the leg can bear weight during the stance phase. The Free Walk fulfills the functions of a locked orthosis.



Disengagement in the swing phase:

The patient disengages the orthotic knee joint by completely extending the knee before the toe off, thus permitting a dorsal flexion of the ankle joint. Then the Patient can bend his leg and swing through freely.

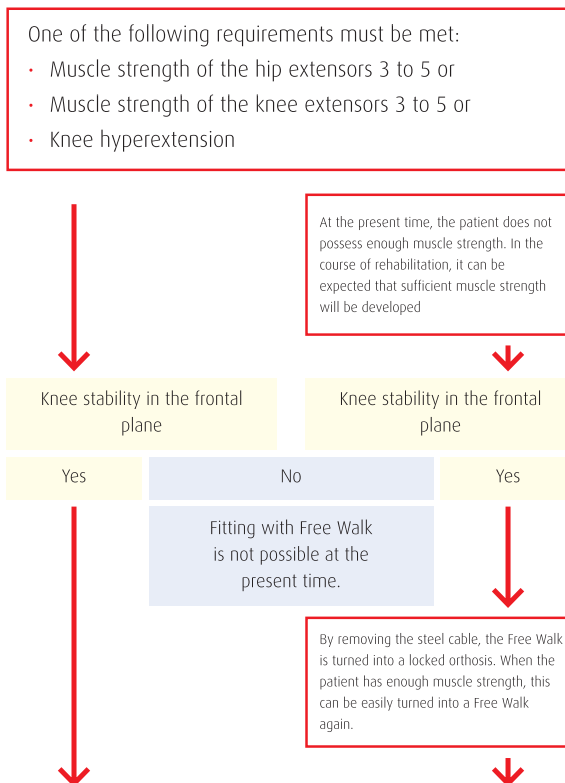
Further Information

- **646A214=GB** »Free Walk-Orthosis« (Therapeutic application)
- **646D182=GB** »Free Walk-Orthosis« (Information for doctors and therapists)
- **646D183=GB** »Free Walk-Orthosis« (Patient information)

Requirements for fitting

- Muscle strength of the hip or knee extensors (muscle status) of 3 to 5 or knee hyperextension (Genu recurvatum)
- Dorsal ankle mobility of at least 10°
- Knee flexion contracture of a maximum 10°
- Valgus or varus deviation in the knee joint of a max. 10°
- No uncontrollable spasms

Selection Criteria



| Body weight | |
|----------------------------------------------|-----------------------------------------------|
| up to 80 kg / 176 lb | up to 120 kg / 265 lb |
| Free Walk 170K1=L/R 80-0 caucasian colour | Free Walk 170K1=L/R 120-0 caucasian colour |
| Free Walk 170K1=L/R 80-7 black colour | Free Walk 170K1=L/R 120-7 black colour |