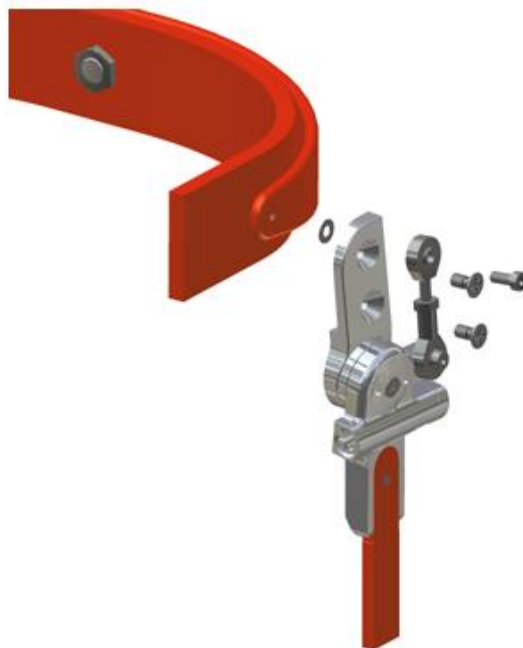


## The Reciprocating Revo-2-D / -1-D Hip Joint

A special feature of the Revo 2-D hip joints is the **7+7 degree positioning of the movement axis**.

The first joint angle, seen from the front, is slanted **7 degrees from the vertical** in order to permit pelvic rotation. This rotation represents movement of the trunk in relation to the lower extremity, which allows the legs to remain aligned in the chosen walking direction.

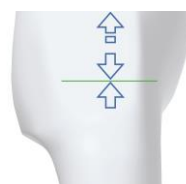
The second **7-degree angle**, viewed from above, is slanted **inwardly and anteriorly**. It allows the joint axis to be anteriorly offset and prevents pinching during sitting.



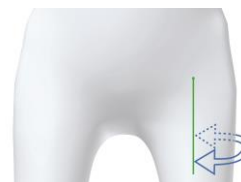
Revo-2-D- left



Reciprocating



Locked



Pelvic Rotation (Revo-2-D)

## Other Special Features

- ☐ Weight classification ensures the system is stable **even with large patients**.
- ☐ Joint sizes small to extra-large use an easy to operate safety lock which prevents accidental opening of the joint. Revo-infant uses a lever mechanism for added security with smaller patients.
- ☐ Can be detached from the pelvic band, permitting **modifications** at a later time.
- ☐ **Developed** for the unilateral joint system.
- ☐ Rigid connecting plate **cannot be bent**.
- ☐ **Compact size** allows the orthosis to be worn under clothing and in a wheelchair.

# Functions

Stabilization and Compensation	Absence of <b>hip adductors is compensated</b> by the rigid pelvic connection.
	Absence of <b>hip abductors is compensated</b> by the rigid pelvic connection.
	Absence of <b>hip extensors compensated</b> by the flexion control.
	Absence of <b>hip flexors compensated</b> by the extension control.
<p>When the weight is shifted laterally and posteriorly, the opposite swing leg is lifted from the floor and, by way of a rocker-bar mechanism, transferred forwards. With the <b>Revo-2-D</b> hip joints, a slight external rotation takes place in the swing leg. The hip follows this rotary movement and simultaneously guides the inner rotation of the supporting leg. This combination of movements enables partial hip rotation while walking, and allows a longer stride length. <b>A detailed explanation of the gait is available from us.</b></p>	
Control	<b>Hip adduction</b> movements are smooth during reciprocal walking ( <b>Revo-2-D only</b> ).
	<b>Hip abduction</b> movements are smooth during reciprocal walking ( <b>Revo-2-D only</b> ).
	<b>Hip extends</b> to the chosen stride length during reciprocal walking.
Increased Independence	<b>Hip flexes</b> to the chosen stride length during reciprocal walking.
	In combination with the unilateral <b>Konso or Blocker knee joints</b> , the thigh cuff can be left off where sufficient knee stability exists and flexion contractures are below 20 degrees.
	The <b>pre-selected mechanism</b> enables locking and unlocking of the hip joints without external help (sizes Revo small to extra large). For size Revo-infant, unlocking of the joint is possible only with assistance.

Movement	Revo-2-D	Revo-1-D
Pelvic rotation	reciprocally guided	no
Flexion / Extension	reciprocally guided	reciprocally guided
Feet move closer together when sitting	yes	no

## Sitting Function ('Pre-select' not applicable for size infant)

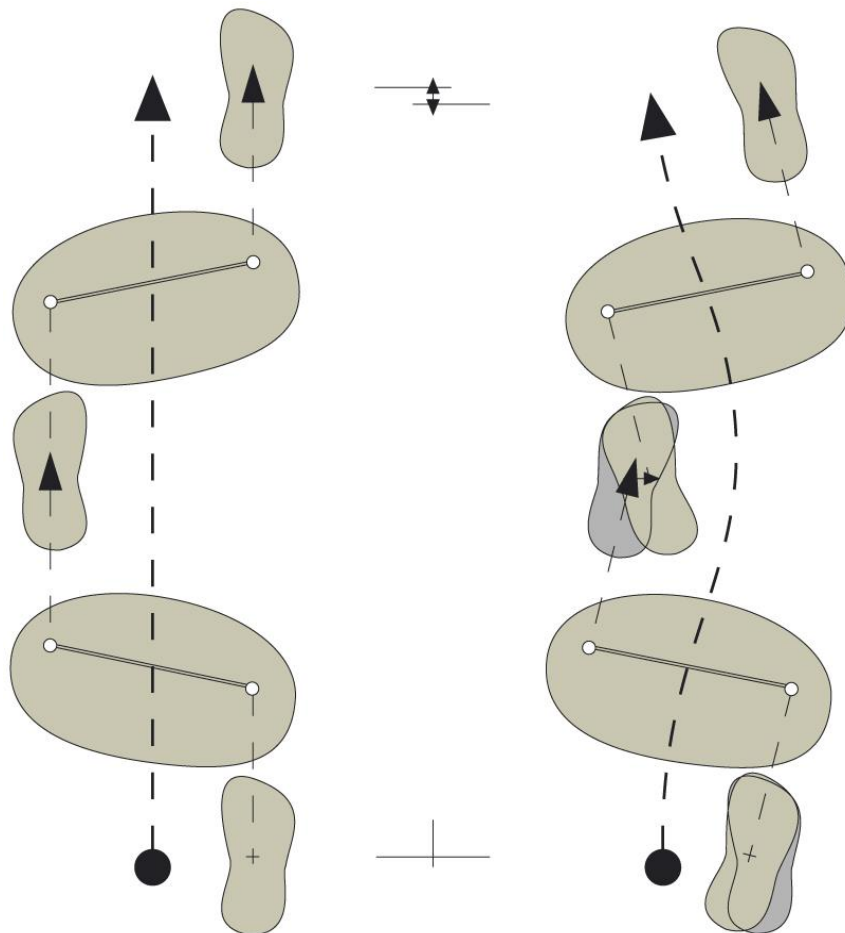
The sitting function is a further demand on the hip joint for the lesion area L 3 - Th 5. Both hip joints must be capable of flexing at the same time. This requires releasing the legs from the reciprocal movement mechanism.

The patient turns with his back towards a sitting surface. He holds firmly to this with, for example, his left hand and releases the lock at the right side with his right hand, and vice versa. If the locks were to release the joints immediately after opening, this would cause the patient to fall, since he is not supporting himself with both hands in order to sit securely. To avoid falling, the sitting function lock is, so to speak, pre-selected. The patient holds tight exactly as described above and opens the joints in the stressed state. That means that the center of gravity lies anterior to the hip joints, and the locks are under tension. Once the sides have been unlocked, both hands are available for support and a hip extension movement relieves the locks, allowing them to spring open. To allow the patient to stand up, the sitting function is locked while he is still sitting. He stands up supported by both arms. Once erect, the hips are extended completely, allowing the locks to engage by a snap mechanism.

## Gait for Revo-2-D

and

## -1-D Hip Joints



Article No.****		Weight Classification *	Total Length / Width ** / Thickness**		
Revo-2-D-ex-groß	Revo-2-D-AG-ex-groß	Up to 85 kg	144,0 mm	35,0 mm	32,0 mm
Revo-1-D-ex-groß	Revo-1-D-AG-ex-groß				
Revo-2-D-groß	Revo-2-D-AG-groß	Up to 70 kg	142,0 mm	35,0 mm	32,0 mm
Revo-1-D-groß	Revo-1-D-AG-groß				
Revo-2-D-mittel	Revo-2-D-AG-mittel	Up to 50 kg	142,0 mm	35,0 mm	28,0 mm
Revo-1-D-mittel	Revo-1-D-AG-mittel				
Revo-2-D-klein	Revo-2-D-AG-klein	Up to 25 kg	134,0 mm	35,0 mm	28,0 mm
Revo-1-D-klein	Revo-1-D-AG-klein				
Revo-2-D-infant	Revo-2-D-AG-infant	Up to 15 kg	91,0 mm***	28,0 mm	23,0 mm
Revo-1-D-infant	Revo-1-D-AG-infant				

☐ \* The configurator at [www.ortho-systems-inmotion.com](http://www.ortho-systems-inmotion.com) helps you in choosing the proper joints for your orthosis. The system guides you step by step through the selection process to the shopping cart.

☐ \*\* For one hip joint without pelvic connection or upright.

☐ \*\*\* Revo-infant has an integrated upright, i.e. not removable. The above stated measurement does not include this section.

☐ \*\*\*\* The suffix "AG" in the article number means we bend the rocker-bar mechanism according to your specifications. For further information please see page 14.

## Applications

RGO Reciprocating Gait Orthosis