

# RADIX COMFORT ADAPTER

## USER GROUP

- Users of a leg prosthesis

## PURPOSE

- Restoring the natural freedom of movement in the transversal plane.
- Increasing the comfort of the prosthesis by decreasing the shear stresses on the stump.

## CHARACTERISTICS

- With the RADIX the user is able to rotate the body while the prosthetic foot stays in its place.
- Rotation of the body with a stiff prosthetic foot normally leads to high and uncomfortable torsional stresses on the interface between stump and socket. The RADIX decreases the amount of soft tissue stresses experienced at the stump-socket interface with approximately 80% which is a level that is common to the body.
- The torsional stiffness of the RADIX, which is lowest at zero bending load, increases considerably in bending. This results in prevention of undesired rotation of the foot at heel-strike and toe-off.

## DETAILED SPECIFICATIONS

- Maximum rotation: 30° to the left and right
- Total length, tube included: 420 mm
- Length of torsion adapter: 90 mm
- Diameter aluminum tubing: 30 mm
- Standard pyramid of stainless steel
- Total weight (including tube): 422 gr
- Weight torsion adapter: 222 gr
- Maximum bodyweight of the user 120 kg
- Tested according to: ISO-10328, Except clause 5-3.3.8 refering to maximum allowable torsion angles. The RADIX is designed to safely allow large torsion angles.

## MOUNTING INSTRUCTIONS

- Mount the RADIX on the prosthetic foot with the pyramid adapter.
- Shorten the tube to its appropriate length and mount it with a regular 30 mm clamp.
- The minimal length of the RADIX, calculated from the bottom side of the pyramid adapter, is 90 mm.

## WARRANTY AND MAINTENANCE

- Proper functioning of the RADIX is guaranteed for one year.
- The RADIX is free of maintenance.



*Cutaway image of the Radix (left) and adapter to 34 of 35 mm tube (right).*

## INSTRUCTIONS OF USE

The RADIX comfort adapter features a very low torsional rigidity. Because of this low rigidity rotations around the prosthetic stance leg require very little effort and makes its rotational movements more natural. Despite the low torsional rigidity there is no danger for undesired foot movements during walking, for instance at heel strike and during the push off phase. This is because the torsional rigidity of the RADIX depends on its bending load. This substantially increases during the heel strike and push off in walking. Because of this the RADIX will more or less lock itself and thus prevents undesired foot movements.

To optimise the use of this effect, placement of the RADIX just above the foot is advised. The low weight of the RADIX facilitates this. Placement of the RADIX higher up in the prosthesis generally reduces the bending loads on the RADIX, which increases the risk for undesired foot movements. These locations for the RADIX are therefore discouraged.

When using a RADIX, good information beforehand to the possible user is important. The very low torsional rigidity in general requires a certain period to get accustomed to. It is vital that the user is informed on this effect in advance. During the first period, that can take up to several days, the user learns that the flexibility of the RADIX during stance does not lead to undesired foot movements during walking.

### *Important notes:*

- Never rotate the RADIX beyond 30 degrees to the left or right.
- The RADIX cannot withstand temperatures exceeding 70 degrees centigrade.
- The torsional stiffness of the RADIX increases in cold environments.

