

Multiaxial foot



Description

Multiaxial feet feature articulated joints which allow a rocking motion of the foot from heel to toe (dorsiflexion/plantarflexion) as well as from side to side (inversion and eversion). In addition, the foot may exhibit other motions like the ability to twist or rotate about the longitudinal axis of the shin.

These movements mimic normal foot motion more closely than SACH or Single Axis feet.

Multiaxial feet excel at walking on uneven terrain. They return more energy than SACH or Single Axis feet and feel softer and more compliant underfoot, increasing stability and comfort especially on uneven surfaces.

Advantages

- Heel height can usually be modified.
- Increased stability and comfort on non-level surfaces.
- Quite waterproof.
- More options to tune the foot to a particular user.
- Reasonably durable.

- Improved function compared to SACH / Single Axis feet.
- Suited to medium to high activity levels.

Disadvantages

- Heavier than SACH or Single Axis feet.
- More expensive to produce than SACH or Single Axis feet.
- Small bearing surfaces and bumpers can lead to wear and noise.
- Become looser as they wear, giving the user less control.
- Lacks significant shock absorption or energy return.