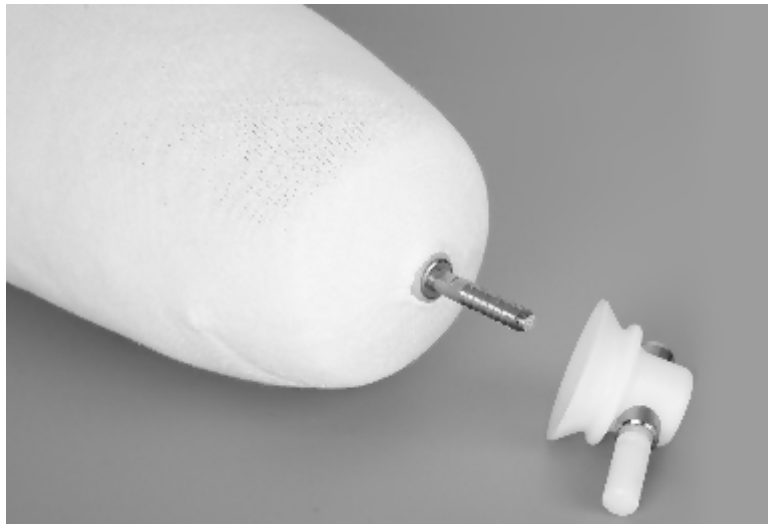


Pin and lock



Description

The pin locking suspension system is an effective suspension system for active people.

The system uses a silicon or gel liner as the interface between the residual limb and the socket. The liner has a pin extending out of the distal end. As the socket is donned, the pin engages into a locking mechanism built into the bottom of the socket. The locking mechanism holds the pin securely, fastening the socket to the liner.

The system is used extensively in transfemoral, transradial & transtibial prostheses. Transtibial amputees need a heavily tissueed residual limb to dissipate the pulling forces on the distal tissues. The distal liner will often feature a matrix to stop elongation of the distal liner. This greatly reduces the pulling forces generated on the distal tissues.

The market is dominated by Össur who developed the original Transfemoral system (Iceross). This was the first suspension liner exclusively designed to provide maximum stability and control for transfemoral amputees.

Liners are often covered externally with a textile to extend durability.

Advantages

- Comfortable
- Durable
- Reliable
- Provides easy donning/doffing
- Can be donned from a seated position
- Allows for volume fluctuations
- Can be used to pull the stump into the socket
- Enhanced stabilization of the tissues
- Mimics a longer bony lever

Disadvantages

- Relatively expensive
- Heavier than other types of suspension
- Can cause discomfort in the distal tissues
- Liners wear and require replacement
- Misaligned pins cause difficulty donning
- More complex fabrication