

Impulse® Ankle Instructions

WHAT'S IN THE BOX

Impulse Ankle
Fiberglass Interface Plate
M10 x 32 Foot Bolt
Instructions

INSTALLATION AND ALIGNMENT

The Impulse Ankle is designed to limit dorsiflexion when the angle between the midline of the ankle and the attachment surface of the foot is approximately 90 degrees. Limiting dorsiflexion at such an early point in the gait cycle allows a more complete loading response of the Impulse Foot to be attained. In order to achieve the optimum level of performance, WillowWood recommends the alignment procedure specified in Steps 4 through 8.

1. Insert only the M10 x32 mm foot bolt that was included with the ankle into the foot. Check to make sure that the bolt extends at least .393 (10 mm) but no more than .512" (13 mm) above the foot. Using a foot bolt that is too long or too short could result in failure.

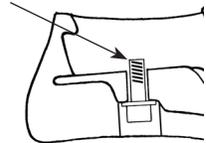
Note: if using a non-WillowWood foot with an Impulse Ankle, order the longest available 10 mm foot bolt from WillowWood, and cut the bolt to the appropriate length as indicated above.

2. Place the Impulse Ankle onto the foot so that the arrow underneath the word "Anterior" on the ankle is pointing toward the anterior direction, and so that the ridge on the bottom of the ankle fits into the slot on the top of the foot.

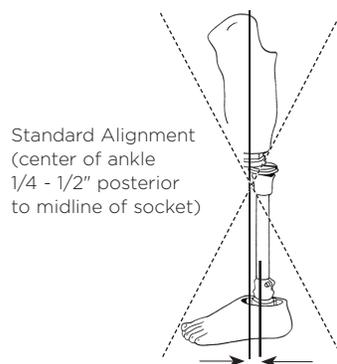
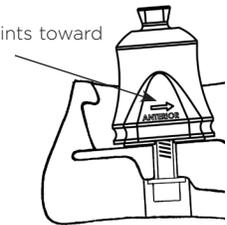
Note: If using another manufacturer's foot, check to see whether the foot has a slot on the top that is at least 1/16" (1.5 mm) deep and 3/32" (2.1 mm) wide. If not, install the Fiberglass Interface Plate between the ankle and the foot so that the ridge on the bottom of the ankle fits into the slot on the top of the Interface Plate. If the foot has a slot on top that is at least 1/16" (1.5 mm) deep and 3/32" (2.1 mm) wide, do not use the Fiberglass interface Plate.

3. Apply Loctite 242 Removable Threadlocker (or equivalent) to the foot bolt. Insert the bolt through the foot and into the ankle, and tighten the foot bolt to 30 ft-lbs (41 Nm).
4. Begin with a standard bench alignment, but slide the foot and ankle 1/4" to 1/2" (6 to 13 mm) in the anterior direction from where the foot and ankle would normally be in a traditional alignment. 3/8" (10 mm) in the anterior direction is a good starting point.

Bolt should extend at least .393 (10 mm) but no more than .512" (13 mm) above the foot.



Arrow points toward anterior



Recommended Impulse Ankle Starting Alignment (center of ankle in line with midline of socket)



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5. Complete a dynamic alignment, including slide adjustment.
6. Allow the amputee to walk for 15 to 30 minutes, especially on ramps and uneven surfaces.

Note: It is not unusual for the amputee to initially feel that the foot or ankle might be somewhat stiff. Do not instantly assume that the foot or ankle is too stiff for the patient, and do not dorsiflex the foot or slide the foot in a posterior direction. Only after 15 to 30 minutes of walking will the amputee be able to fully appreciate and evaluate the performance of the foot and ankle, and the placement of the foot with respect to the socket or shin.

7. Ask the amputee for feedback.
 - If the amputee feels that there is **too much** energy return, slide the foot slightly **posterior**.
 - If the amputee feels that there is **not enough** energy return, slide the foot slightly **anterior**.

An adjustment of 1/4" (6 mm) should make a noticeable difference.

8. If the amputee still feels that the toe does not feel smooth, you may need to select a foot with a softer toe. Please call a WillowWood certified prosthetist at 877-699-2574 or 740-869-3377 for assistance.

MAINTENANCE

There is no required maintenance for the Impulse Ankle. During annual check-ups, simply check to make sure that the foot bolt is still torqued to 30 ft-lbs (41 Nm), and visually inspect the ankle for structural integrity.

WARRANTY

The warranty for the Impulse Ankle is one year from the date of invoice, provided that the ankle is selected according to the following criteria:

Note: The weights listed below are adjusted body weights. Adjusted body weight is defined as the weight of the amputee plus any loads carried normally or routinely by the amputee.

Impulse Ankle with Aluminum Base (Part No. IMPA-R, IMPA-B, IMPA-Y, IMPA-G)	270 lbs/122 kg
Impulse Ankle with Titanium Base (Part No. IMPA-K, IMPA-W)	350 lbs/159 kg (300 lbs/136 kg for Level 4*)

*Level 4: Has the ability or potential for prosthetic ambulation that exceeds basic ambulation skills, exhibiting high impact, stress, or energy levels. Typical of the prosthetic demands of the child, active adult, or athlete.

Use of the Impulse Ankle for amputees who do not meet the above criteria or who engage in extremely high and abusive activities is against WillowWood's recommendation and will void the one-year warranty. "Extremely high and abusive activities" are defined as activities such as skydiving, karate, and judo; activities that could result in an injury to an individual's natural foot; and activities that expose the prosthesis to corrosives such as salt water.

WARRANTY DISCLAIMER

WillowWood warrants that each product manufactured will, at the time of delivery, be of workmanlike quality and substantially free of defects. WILLOWWOOD MAKES NO OTHER WARRANTY, IMPLIED, OR EXPRESSED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. This warranty shall terminate immediately upon an action to combine our products with other materials or in any manner to change the nature of our products. The sole remedy is replacement of the products or credit for the products. WillowWood's liability shall not exceed the purchase price of the product. WillowWood shall not be liable for any indirect, incidental, or consequential damage.

WILLOWWOOD RETENTION OF RIGHTS

WillowWood retains all intellectual property rights reflected or incorporated in its physical products, regardless of the transfer of the physical products to another party or parties.