

# XP Diabetic Walker™ System

AIRCAST<sup>®</sup> LLC

pneumatic (01PD-S, 01PD-M, 01PD-L)

The XP Diabetic Walker System provides pneumatic support for a “total contact” fit.

## The XP Diabetic Walker System features and benefits:

- Multi-aircell support for a “total contact” fit
- Rocker sole for reduction of plantar pressures (Fig. 2)
- Graduated aircell compression for edema control (Fig. 1)
- Regulated aircell inflation with hand bulb pressure gauge
- Semi-rigid shell combined with full aircell coverage to:
  - maximize plantar unloading
  - regulate shear stress
  - provide protection and immobilization

## OPERATION

The XP Diabetic Walker System is applied and the aircells are inflated in sequence (see instructions). The proximal aircell overlaps the distal, providing a gap-free pressure gradient. When walking, the aircells provide pulsating, graduated compression that helps to control edema and offers exceptional support and comfort (Fig. 1).

## CLINICAL EXPERIENCE

Aircast pioneered the use of the pneumatics in functional splints.<sup>4,5</sup> The effectiveness of the XP Walker (formerly known as the PneumaticWalker™) in reducing plantar pressures has been documented in numerous studies. “The authors recorded the greatest average reduction in peak forefoot pressures with the Aircast (PneumaticWalker)”.<sup>1</sup> When unweighting of the plantar foot and equalization of plantar foot pressures were compared in a total contact cast and the Aircast Walker, the results supported the recommendation to use the PneumaticWalker “as an alternative to total contact casting to unweight the foot in the treatment of neuropathic ulceration.”<sup>2</sup> (Fig. 2)

“PneumaticWalkers, which have air bladders in the (semi) rigid shell, can give a contact fit and reduce edema and shear forces... (they) immobilize the leg like a contact cast, but can be removed to allow clinicians and patients to evaluate wounds”.<sup>3</sup>



Typical Compression Profile

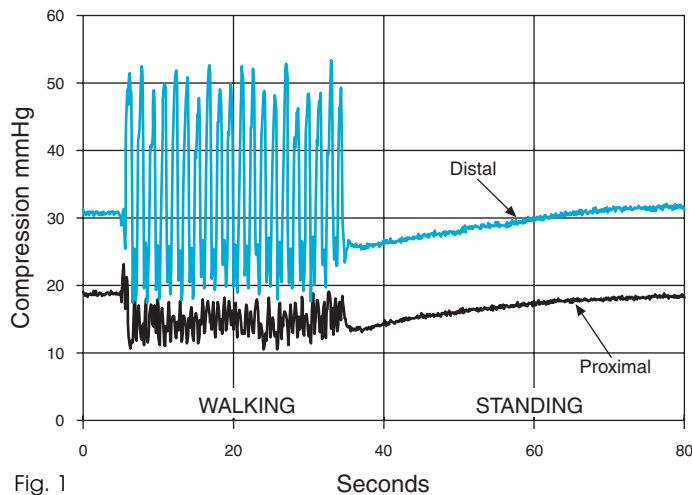


Fig. 1

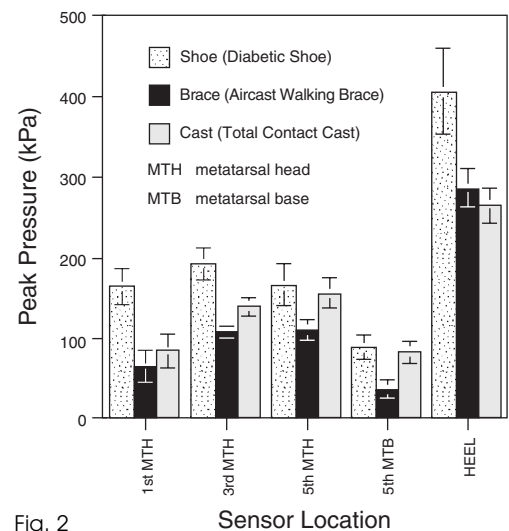


Fig. 2

## REFERENCES

1. Glod DJ, Fetting P, Gibbons RW: A Comparison of Weightbearing Pressures in Various Postoperative Devices. *J Foot and Ankle Surg* 35(2): 149–154, 1996
2. Baumhauer JF, Werve R, McWilliams J, et al: A Comparison Study of Plantar Foot Pressure in a Standardized Shoe, Total Contact Cast and Prefabricated Pneumatic Walking Brace. *Foot and Ankle Int* 18(1): 26–33, 1997
3. Myerly SM, Stavosky JW: An Alternative Method for Reducing Plantar Pressure in Neuropathic Ulcers. *Adv Wound Care* 10(1): 26–29, 1997
4. Stover CN, York JM: Aircast/Air-Stirrup System for Graduated Management of Lower Extremity Injuries. Scientific Exhibit Paper, AAOS, San Francisco, 1979
5. Hubenet BJ: Aircast (Walking Brace). New England Orthopedic Society Meeting, 1975

# XP Diabetic Walker™ System (01PD-S, 01PD-M, 01PD-L)

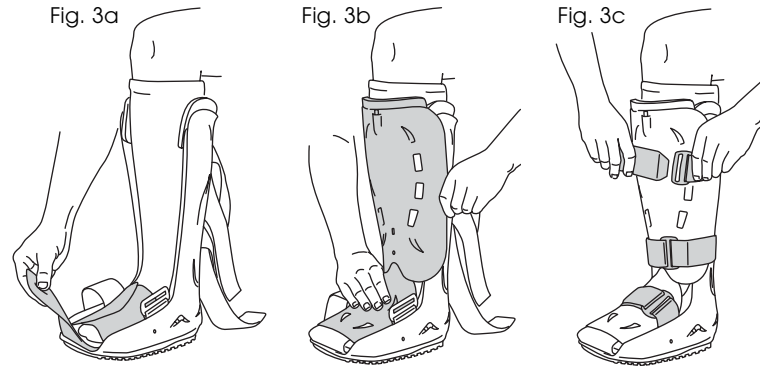
## Instructions:

### 1 Prepare brace

Unfasten straps, remove front panel, and open toe cover and foot flaps.

### 2 Apply brace

Put on stocking included with brace. While seated, place leg in brace with foot flat on insole and heel in back of brace. Smooth any wrinkles in stocking. Wrap foot flaps over foot and toe cover around toes (Fig. 3a). Secure front panel with lower part inside brace, and upper part outside brace (Fig. 3b). Secure straps from bottom to top (Fig. 3c). Tighten until snug and comfortable.



### 3 Inflate aircells with Hand Bulb

#### Inflate Aircells in correct order and to correct pressure

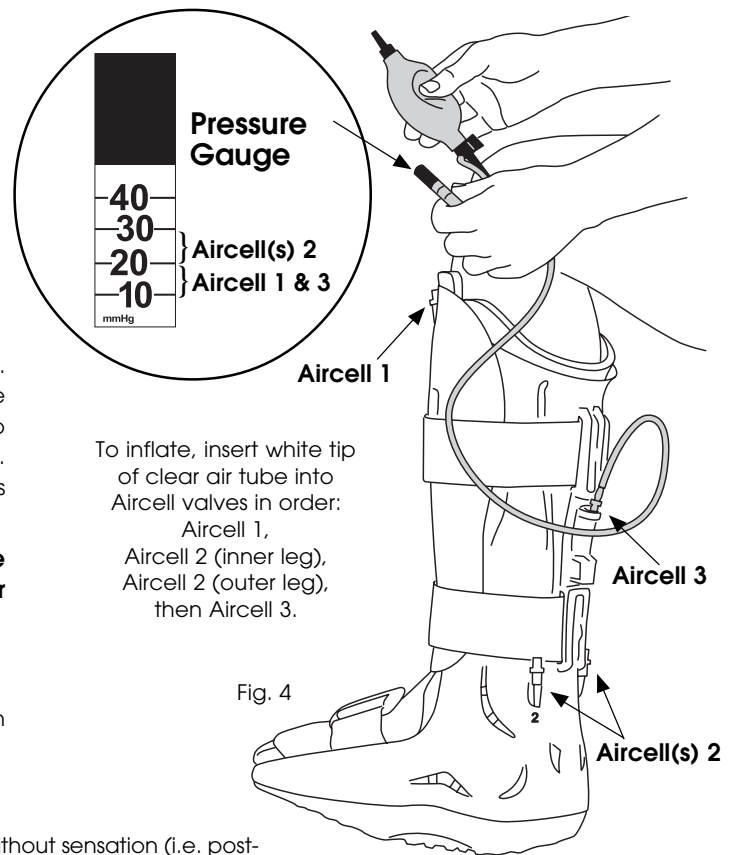
Aircell Order	Pressure
Aircell 1	10 to 20
Aircell 2 (inner leg)	20 to 30
Aircell 2 (outer leg)	20 to 30
Aircell 3	10 to 20

To inflate, firmly insert white tip of clear air tube into Aircell valve. Squeeze Hand Bulb until the bottom edge of black Pressure Gauge indicator is above the number 30. Leave air tube in valve and stop squeezing hand bulb — the Pressure Gauge indicator will slowly fall. Pull air tube out of valve when the **bottom edge** of the indicator falls within the correct pressure (Fig. 4).

**Be sure to check aircell compression with Pressure Gauge whenever brace is adjusted and/or straps are tightened or loosened.**

### 4 Deflate aircells before removing brace

To deflate, firmly insert black tip of Hand Bulb marked "deflate" in valve and squeeze bulb.



To inflate, insert white tip of clear air tube into Aircell valves in order: Aircell 1, Aircell 2 (inner leg), Aircell 2 (outer leg), then Aircell 3.

#### CAUTION

Like all lower extremity immobilizers, such as casts or braces, patients without sensation (i.e. post-op anesthesia, neuropathies, etc.) should be monitored frequently for "hot spots", skin irritation or wound management.

Use caution when walking on slippery or wet surfaces to avoid injury.

Federal law restricts this device to sale by or on the order of a licensed healthcare professional.

#### WARNING

Do not overinflate aircells. Improper aircell inflation may cause significant skin irritation in patients with diabetic neuropathy. Reduce aircell compression with any visual skin changes or reported discomfort. Do not use this device on patients incapable of communicating physical discomfort.

#### REPLACEMENT INSOLES AND STOCKINGS

The brace insole and stocking should be replaced in conjunction with and/or on the advice of a medical professional. Additional stockings and insoles are available in the Diabetic Replacement Kit (01R-S, 01R-M, 01R-L).

#### XP DIABETIC WALKER CAN BE LOCKED

The XP Diabetic Walker can be secured shut with the Aircast Brace-Lok (01P414) to help monitor patient progress.

**PRESSURE GAUGE ACCURACY** Pressure Gauge accuracy is  $\pm 20\%$ .

**LATEX** This product is latex-free.

#### WARRANTY POLICY

Aircast will provide a replacement to the original purchaser should the XP Diabetic Walker become unserviceable for any reason for a period of one year from date of sale, provided the defective part is returned to Aircast for analysis.

"XP Diabetic Walker System", "PneumaticWalker", and "Brace-Lok" are trademarks of Aircast LLC, Summit, New Jersey, USA. US PATENTS: 6,027,468 AND OTHER PATENTS PENDING

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