



A-V Impulse™ Foot Compression System

 **COVIDIEN**
positive results for life™

[*A Step Beyond DVT Prophylaxis* **]**



peace of mind

for everyone involved...



Nurses

Beyond a convenient, easy to apply solution for DVT Prophylaxis, the Impad rigid sole foot covers feature elements to address patient comfort and satisfaction in an effort to improve compliance.



Doctors

Beyond a clinically proven solution for DVT Prophylaxis, the A-V Impulse™ foot compression system is indicated for acute swelling reduction and circulation enhancement; providing the physician with a single solution for proven outcomes with the clinician and patient in mind.



Patients

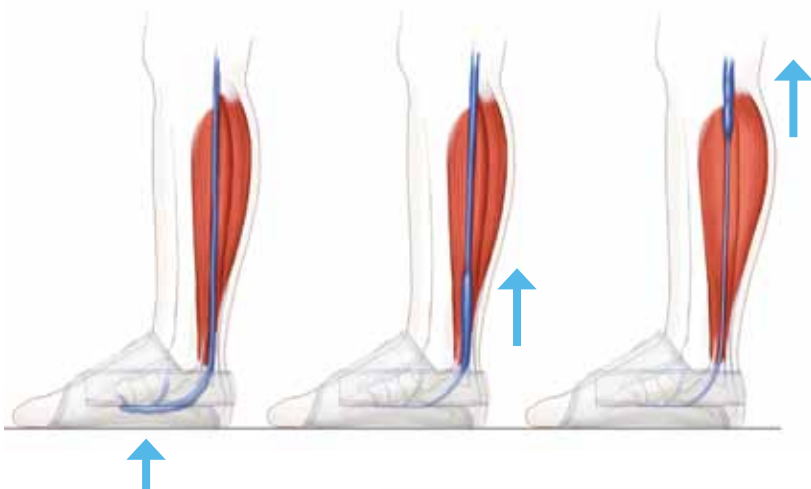
Beyond a comfortable solution for DVT Prophylaxis, the A-V Impulse foot compression system improves outcomes through swelling reduction and improved mobility.^{1,2}

Mimics the natural hemodynamic action of normal ambulation



The natural sequence of physical venous flow

With every step, the plantar arch is flattened, causing the venous plexus to empty. This action sends a column of blood up to the heart, allowing plexus to refill.



A-V Impulse foot compression system mimics physical venous flow

The Impad features a hard rigid sole designed to contain and direct the impulse directly to the bottom of the foot. This action mimics the hemodynamic effect of ambulation by flattening the plantar plexus and completely evacuating blood from the bottom of the foot.

Default Operating Specifications

- 130 mmHg pressure
- 0.4 second rapid inflation simulates the weight bearing process
- 3 second hold time
- 20 second deflation



Unique Design Features

- Rigid sole
- Vent holes
- Cushioned foot cover
- Anatomically shaped bladder
- Dorsum wrap



Comfort

Sweat, heat, itchiness, pressure and skin irritation are the top five discomfort factors patients experience with pneumatic leg compression.[†]

The A-V Impulse Impad rigid sole foot covers feature elements to address patient comfort and satisfaction in an effort to improve compliance.

sweat Vent holes in the bladder circulate air between the patient's foot and Impad following each compression

heat Impads cover less surface area than other forms of pneumatic compression, reducing the amount of area where heat could be trapped against a patient's skin

itchiness Impads are lined with a soft, polyester material to minimize patient discomfort

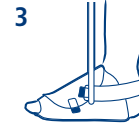
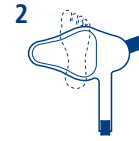
pressure Pressure parameters are adjustable to maximize comfort for patients with sensitive extremities

skin irritation Impads are anatomically shaped and comprised of soft, foam polyester-lined material to cushion the patient's foot during use

A-V Impulse™ Foot Compression System

Fitting

1. For improved efficacy, apply T.E.D.™ anti-embolism stocking or stockinette over the foot and ankle as required. Avoid wrinkles.
2. Select size of Impad foot cover. Place foot centrally as shown.
3. Wrap inside of the foot cover over top of foot. Overlap outside of foot cover. Secure the strap around the heel.



Foot Compression

Impad Rigid Sole Foot Cover Latex Free

Women's Shoe Size	Men's Shoe Size	Size	Item Code	Foot Circumference
5½ - 9	4½ - 8	Medium	5065	up to 12"
9½ - 11½	8½ - 12½	Large	5075	up to 13"
9½ - 12½	8½ - 13½	Extra Large	5107	13-18"

Sterile Impad Rigid Sole Foot Cover

Style	Size	Item Code
Sterile Right Foot	One Size Fits All	6066
Sterile Left Foot	One Size Fits All	6067

To learn more, log on to www.covidien.com/avi

1. Erdmann, et al. Os Calcis Fractures: A Randomized Trial Comparing Conservative Treatment with Impulse Compression of the Foot BRITISH JOURNAL OF ACCIDENT SURGERY 1992

2. Pitto, et al. Hemodynamics of the Lower Extremity with Pneumatic Foot Compression. The Effect of the Position of the Limb BIOMED TECH 2001

[†] Data on file.



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A-V Impulse™ Foot Compression System

DVT Prophylaxis

0% Fatal PE Rate¹	In a study of over 3,000 elective hip surgery patients, the use of A-V Impulse foot compression + thigh length graduated compression stockings showed a 0% fatal PE Rate, 0.1% symptomatic DVT rate, and 0.07% symptomatic proximal DVT rate. ¹
75% Reduction of Overall DVT²	The addition of intra-operative A-V Impulse foot compression to a protocol of T.E.D.™ stockings + heparin has been shown to significantly reduce DVT from 27.27% to 6.6% in total hip arthroplasty (THA) patients as compared to T.E.D. stockings + heparin alone. ²
0% Proximal DVT³	Adding A-V Impulse foot compression to a regimen of T.E.D. stockings + heparin has been shown to significantly reduce the incidence of proximal DVT from 2% to 0% in total hip replacement (THR) patients. ³

Reduction of Swelling

34% Reduction of Post-Operative Thigh & Calf Swelling³	A-V Impulse foot compression has been shown to provide a 34% swelling reduction of the thigh and calf in THR patients. ³
74% Reduction of Post-Traumatic Swelling⁴	A-V Impulse foot compression has been shown to reduce post-traumatic foot and ankle swelling by 74% 4 days post-injury. ⁴

Further Indications

Reduction of Pain	The application of A-V Impulse foot compression has been shown to reduce pain due to calcaneal fracture / foot trauma by 63% as compared to patients not receiving foot compression. ⁵
Greater Range of Motion	A-V Impulse foot compression has been clinically proven to increase post-traumatic range of motion in the ankle, as well as increase rapid flexion of the operative knee in total knee arthroplasty (TKA) patients. ^{5,6}
Enhance Circulation	A-V Impulse foot compression has been clinically proven to increase femoral blood flow velocity 250% over baseline in the reverse trendelenberg position. ⁷
Increase Arterial Blood Flow	A-V Impulse foot compression has been clinically proven to increase arterial blood flow. ⁷
Decrease Compartment Pressure	A-V Impulse foot compression has been clinically proven to decrease compartment pressure in trauma patients at risk of surgical decompression via fasciotomy. ⁷
Decrease Time Out of Work	The application of A-V Impulse foot compression has been shown to decrease time out of work due to calcaneal fracture / foot trauma by 3 months as compared to patients not receiving foot compression. ⁵

1. Sugano, et al. Clinical Efficacy of Mechanical Thromboprophylaxis without Anticoagulant Drugs for Elective Hip Surgery, THE JOURNAL OF ARTHROPLASTY, 2009
2. Bradley, et al. The Effectiveness of Intermittent Plantar Venous Compression in Prevention of Deep Venous Thrombosis After Total Hip Arthroplasty, THE JOURNAL OF ARTHROPLASTY, 1993
3. Pitto, et al. Mechanical Prophylaxis of Deep Vein Thrombosis after Total Hip Replacement, JOURNAL OF BONE AND JOINT SURGERY, 2004
4. Myerson, et al. Clinical Applications of a Pneumatic Intermittent Impulse Compression Device after Trauma and Major Surgery to the Foot and Ankle, FOOT AND ANKLE, 1993
5. Erdmann, et al. Os Calcis Fractures: A Randomized Trial Comparing Conservative Treatment with Impulse Compression of the Foot, BRITISH JOURNAL OF ACCIDENT SURGERY, 1992
6. Windisch, et al. Pneumatic Compression with Foot Pumps Facilitates Early Postoperative Mobilisation in Total Knee Arthroplasty, INTERNATIONAL ORTHOPEDICS, 2010
7. Gardner & Fox, Reduction of Post-Traumatic Swelling and Compartment Pressure by Impulse Compression of the Foot, JOURNAL OF BONE AND JOINT SURGERY, 1990



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