



SPRINGER

made in Germany



Scientifically
PROVEN



IMPULSE-LINE



the modifiable foot orthotic with an active principle



4

reasons for orthotic blanks with active impulses:



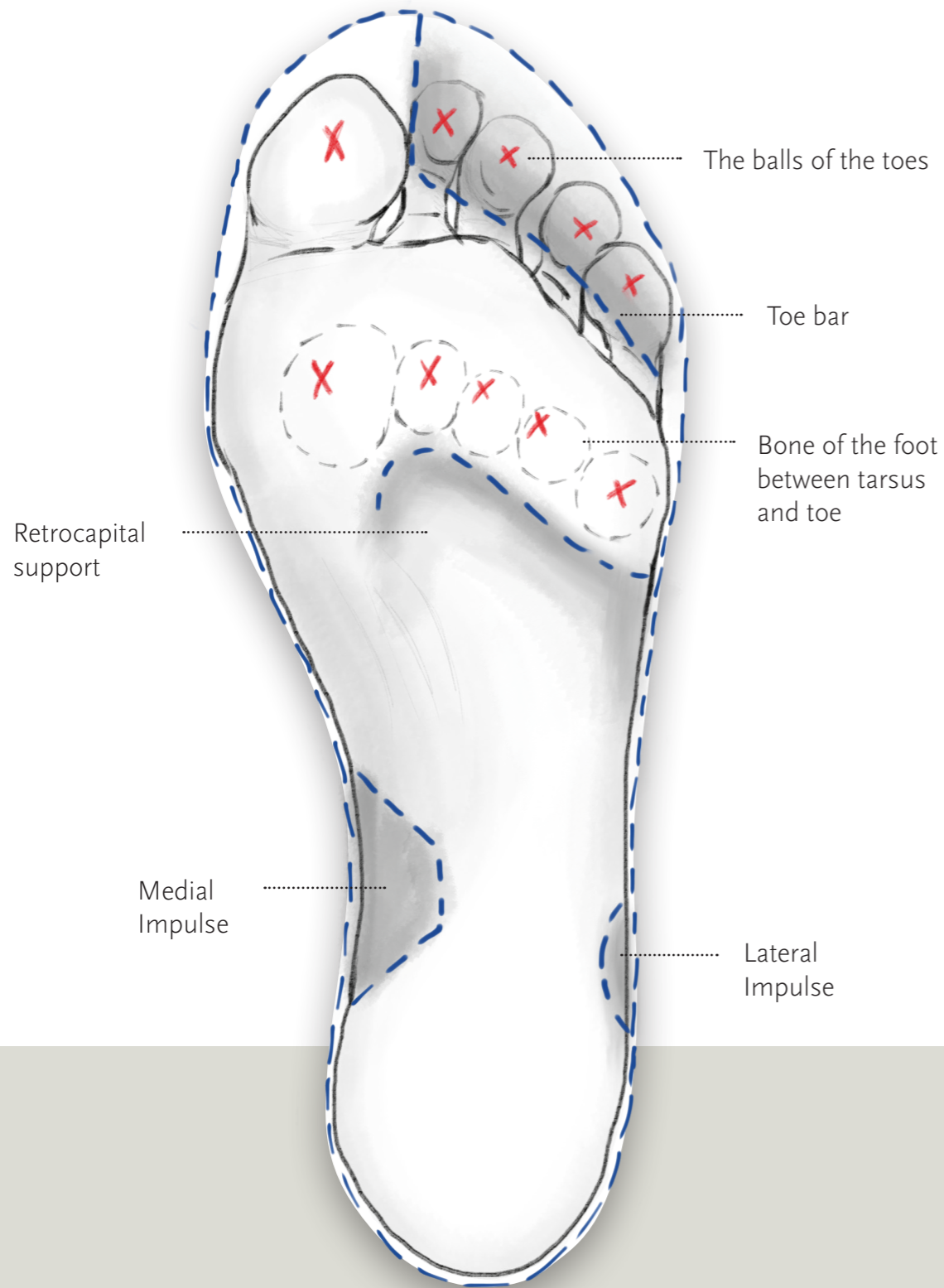
- **Scientifically proven principle**
The effective orthotic modified by trained clinicians – customer satisfaction guaranteed.
- **Premium product**
Sell a unique premium product.
- **Majority of results show patient improvements**
Outcomes are improved and rehab gains are made.
- **Unique and great performance**
Results in better margins and a higher markup.

When can you use impulse.foot orthotics?

- ✓ Proprioceptive foot orthotics are desired
- ✓ No neurological diagnosis
- ✓ For premium pes planovalgus calcaneus treatment
- ✓ For functional gait and running deficits
- ✓ For chronic ankle instability, frequent ankle distorsions
- ✓ For overuse pain in sports

An active sensorimotor insole approach is particularly suitable for pain patterns and pathologies that are functionally related. The targeted stimulation of muscles and the nervous system produces a training effect that can contribute to lasting pain relief.

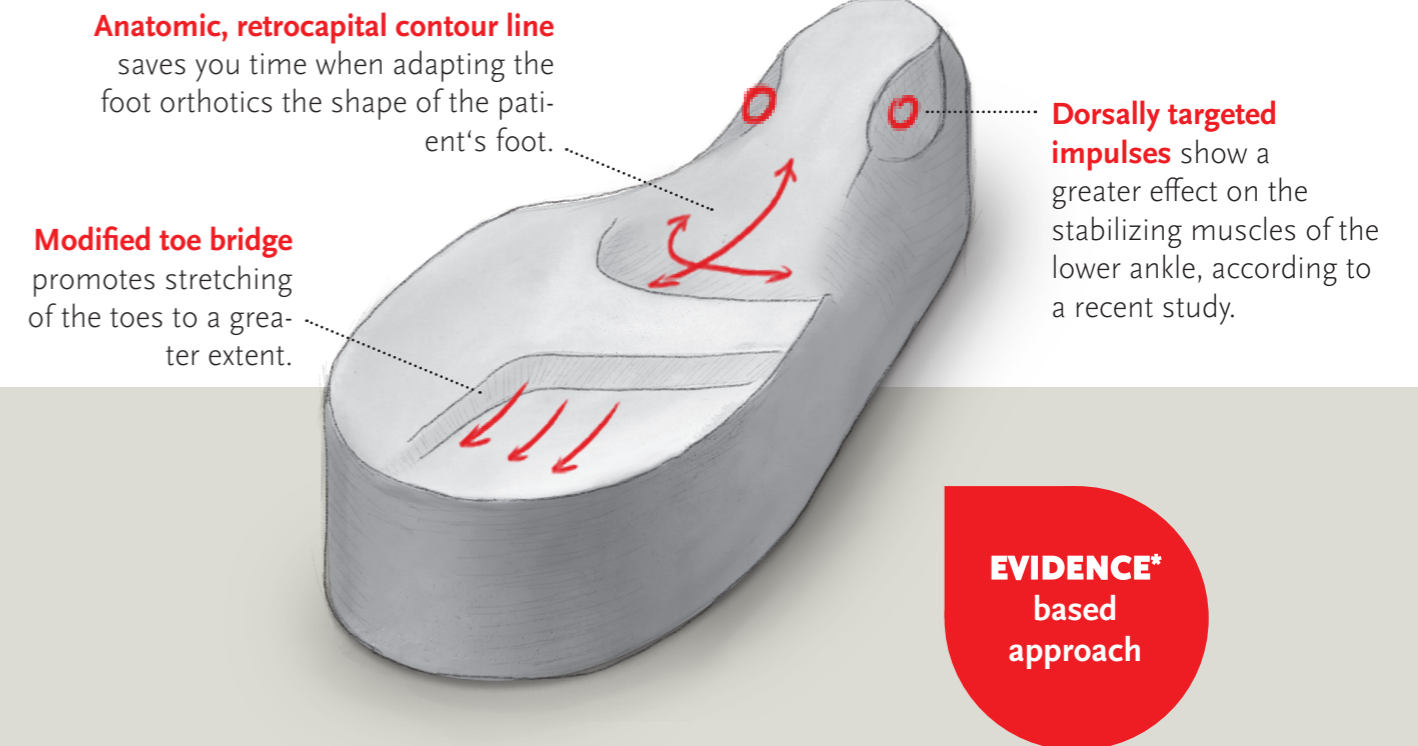
Thanks to evidence-based modulation, impulse.orthotic help your business, when the feet and ankles require muscular stabilization. These blanks can be used for active premium foot orthoses. To treat foot misalignment and functional movement deficits actively they offer the patient additional functionality and allow you to invoice at a higher margin.



shape with function

THE LAST

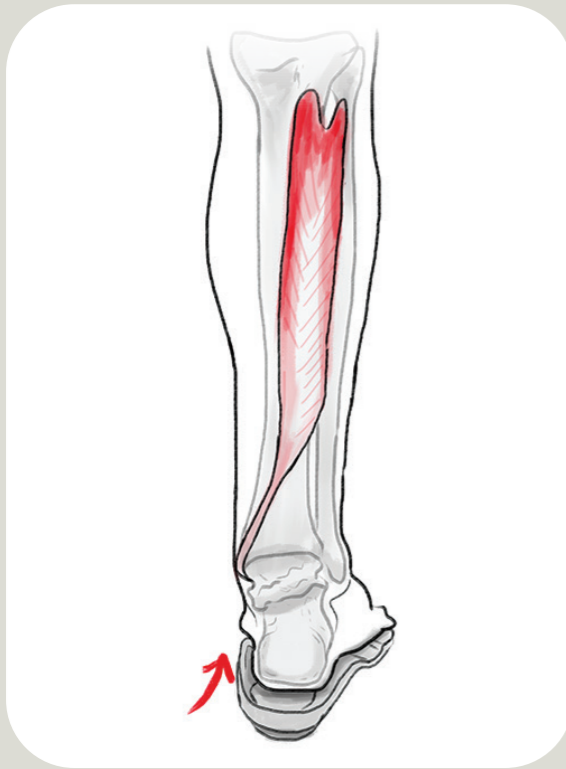
Over 20 years ago, our dream was that the sensorimotor principle - our passion at SPRINGER Aktiv - would one day be an inherent part of the everyday orthopedics business. In fact, more and more physicians, therapists and pedorthists have been convinced that this principle gives them a whole new approach to effectively treat malalignments and clinical symptoms. Today, sensorimotor foot orthoses have become an indispensable part of the practice of pedorthics. Based on the latest scientific evidence, we have modified our active shoe last shape to offer you the best modular substructure for fabricating sensorimotor foot orthotics in your routine operations.



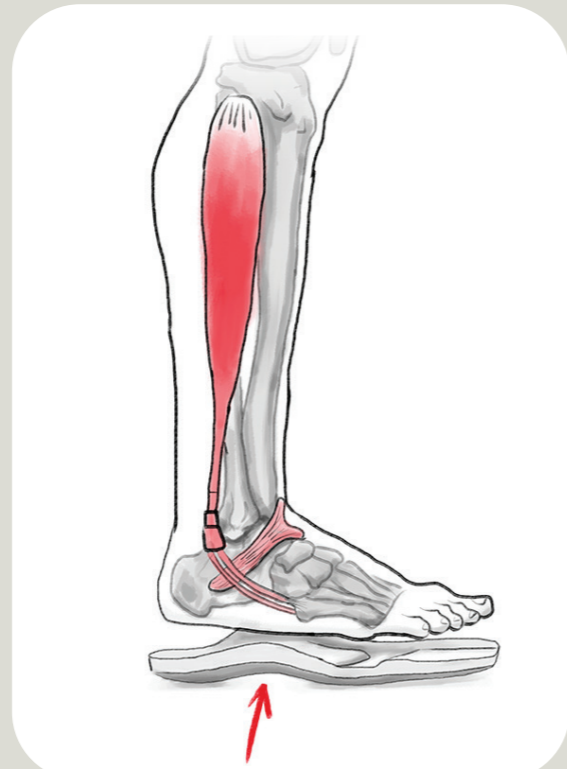
*Study:
 Ludwig O., Quadflieg R., Koch M. (2013): »Impact of a sensorimotor foot orthotic on the activity of the m. peroneus longus during the stance phase«. Deutsche Zeitung für Sportmedizin (German Journal for Sports Medicine) 64(3), 77-82. DOI: 10.5960/dzsm.2012.049
 Schmitt, A. P.-L., Liebau, K.-H., Hamm, A., Hacke, C., Mittelmeier, W., & Schulze, C. (2022). Comparison of the Influence of Supportive and Sensorimotor Insoles in the Muscle Activity of Tibialis anterior and Peroneus longus in Combat Boots. The Foot, 101910.



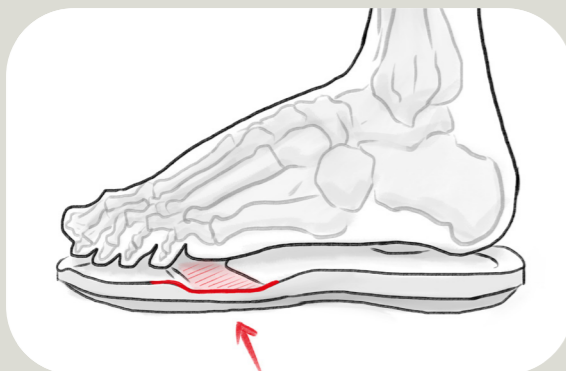
- Lower and upper ankle stabilization
- Relaxation of the rear leg muscles
- Contribution to muscular balance



1 Activates the tibial muscles



2 Activates the peroneal muscles



3 Provides relief to the balls of the feet



4 Stimulates the tactile sensors and facilitate stretching of the toes



shape with function

THE PRINCIPLE

Sensorimotor foot orthoses function according to proven neuro-physiological mechanisms. They modify and control sensory stimulation via impulses primarily of the musculotendinous spindles thereby regulating muscle tension. The effect is specifically characterized by enhanced joint stability, improved alignment of the leg and body axes while also producing a more physiological gait pattern. For patients with chronic ankle instability, this translates into enhanced muscle tension in the posterior tibial muscle and the toe flexors. The reason for this is that these muscles actively promote foot arch alignment and counteract instability of the calcaneus.

The **medial impulse** activates the tibialis muscles.



The **retrocapital impulse** ensures that the balls of the feet receive relief.

The **lateral impulse** activates the peroneus muscles.

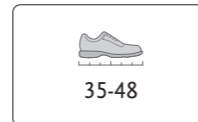
4 The toe bridge generates **tactile impulses**, which stimulate the proprioceptors of the toes.



128.impulse

Quality materials designed for modification

Manufacturer number:
309 2L 128 000 1 000 00000



SUITABLE SHOE TYPES:



Sports



Hiking



Comfort

DIAGNOSIS

- Ankle instability
 - Foot misalignments e.g. Pes valgus or planovalgus
 - Tibialis posterior/anterior syndrom
 - Runner's Knee
 - Heel spurs, where applicable
- Cushioning foot orthotics with soft padding
 - As indicated, with supination or pronation wedge
 - As indicated, with heel spur cut-out
 - As indicated, with compensation for leg length discrepancy
 - Impression taken by physician
 - Impression taken in your workshop



138.impulse

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130.impulse

From a milled base to almost ready for modification

Manufacturer number:
306 3L 30L 000 1 000 00000



SUITABLE SHOE TYPES:



Children's shoes Sneakers

DIAGNOSIS

- Pes planovalgus calcaneus
- Gait insecurity and abnormalities
- Leg axis deficits e.g. X- or O-legs
- Foot misalignments e.g. Pes valgus or planovalgus
- Shell foot orthosis made of thermoplastics
- As indicated, with supination or pronation wedge
- As indicated, with compensation for leg length discrepancy – only available for 130.impulse
- ¾-length cushioned footbed
- Soft cushioned forefoot footbed
- Impression taken by the pedorthist
- Impression taken in your workshop



5138.impulse

From a milled base to almost ready for modification

Manufacturer number:
020 3L 30L 620 1 000 00000



SUITABLE SHOE TYPES:



Children's shoes Sneakers Chucks Soccer cleats

DIAGNOSIS

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- Leg axis deficits e.g. X- or O-legs
- Foot misalignments e.g. Pes valgus or planovalgus
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- As indicated, with compensation for leg length discrepancy – only available for 130.impulse
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- Soft cushioned forefoot footbed
- Impression taken by the pedorthist
- Impression taken in your workshop



1730.impulse

Ready to go model
Economic and intimate great
for evaluation or a second pair

Manufacturer number:
001 4L 730 619 2 002 00000



SUITABLE SHOE TYPES:



Business



Sneakers



Leisure footwear



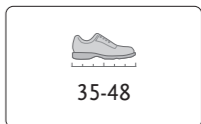
Soccer cleats



1737.impulse

Ready to go model
Economic and intimate great
for evaluation or a second pair

Manufacturer number:
007 4L 730 631 1 002 00000



SUITABLE SHOE TYPES:



Business



Sneakers



Leisure footwear

DIAGNOSIS

- Pes planovalgus calcaneus
 - Frequent ankle distortions
 - Leg axis deficits e.g. X- or O-legs
 - Foot misalignments e.g. Pes valgus or planovalgus
 - Increased risk of falls
- Duplicate foot orthosis made of thermoplastics
 - As indicated, with supination or pronation wedge
 - ¾-length cushioned footbed
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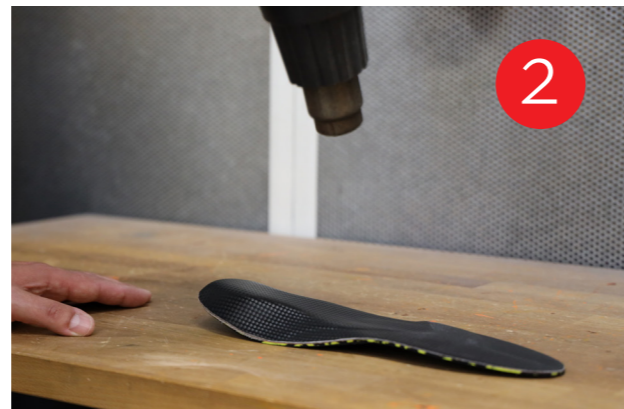
thermoplastic modelling of a shell insole in 5 minutes*



Width of the insole in the heel area determine example left. 7cm. A width of 6 cm is desired (>1 cm on the left). A width difference of approx. 1cm is possible to deform.

Set the hair dryer to a temperature of approx. 120 degrees and heat the insole (insole core) evenly in the heel area for approx. 2 min.

WARNING: Heat the insole **ONLY FROM BELOW**, as there is a risk of damaging the padding and surface material.



The material should react (become soft and elastic), if this is the case, only then you can start remodeling.



Shape spots medially & laterally with even pressure to the desired shape. Press heel cup up with index finger under even pressure and bring into shape. If necessary, repeat step several times until the desired width has been achieved. (In this case > 1cm).

let material cool down by means of air pressure if necessary.



Re-measure and check whether the width has been achieved by the modeling. (Example: as shown in the pictures, from 8 cm to 7 cm width).

* modell 1730 impulse

* auxiliary means: footprint, impression, scan





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