



sherpa3D

powered by OssKin

3D-Printed Custom Multi-material foot orthotics



Revolutionary foot orthotic solution engineered by OssKin, combining the best of 3D-printing technology and traditional materials; offering the most optimally precise foot orthotics to support and assist the natural movement and function of the foot.

Advantages:

Featherlight



Incredibly lightweight, weighing just 35 grams per printed sole.

Low-volume design

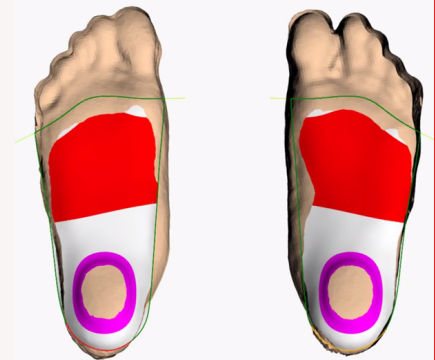


Optimized amount of material, all while providing necessary foot support

Digital Bespoke Custom



Digitally modeled for perfect precision down to .01mm accuracy



Scan-to-Print Solution



1. Scanning

—
You



2. CAD Design

—
sherpa3D Team



3. 3D-Print



4. Patient Fit

—
You

Bespoke Custom - Algorithms

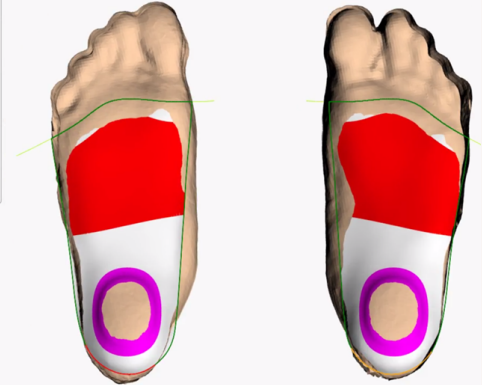
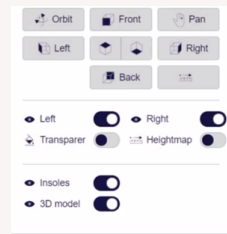
Algorithms calculate general and key biomechanical parameters for each foot orthotics based on:

- Patient's height and weight
- Arch height and length
- Heel alignment (varus/valgus)
- Forefoot to rearfoot angle

Using parametric modeling and rules-based logic, algorithms build the orthotic shell to match the foot contours and customize them, for example:

- Variable shell thickness
- Arch support height
- Heel cup depth
- Posting angle

These algorithms ensure optimal efficacy, personalization, replicability based on patient's data and clinician input.



Designed around Foot Biomechanics

Absorption.

Poron material insert in the heel cup for extreme shock and load absorption at heel strike

Stability.

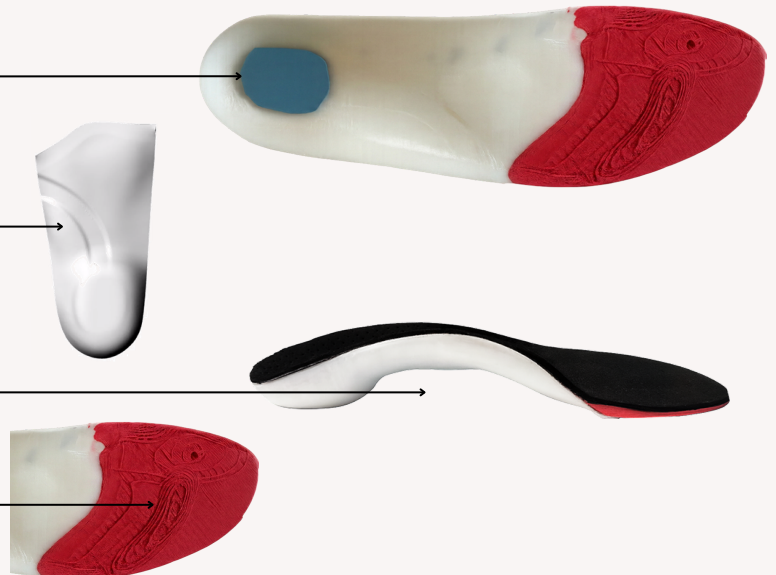
Designed action line to create greater medial-lateral stability during load

Adaptability.

Elevated and ground-cleared arch support with variable thicknesses to create support and rebound effect

Propulsion.

TPU lattice structure at the forefoot to ensure spring and propulsion effect at toe-off



Pathologies - preset recipes for clinical efficacy

All recipes based on pathologies equally have algorithmic customizations for certain inputs based on patient's weight, foot length and width, clinician's preference for rigidity, etc.)

Recipes are algorithmic presets, however, clinicians can overwrite any input.

Metatarsalgia

- Met Head Pad
- Meta pad
- Heel insert

Plantar fasciitis

- Semi-rigid arch
- Anterior arch extension
- Meta Bar
- Heel Insert

Heel Pain / Heel Spur

- Semi-rigid arch
- Heel insert

Equinus

- Semi-rigid arch
- Anterior arch extension
- Meta Bar
- Heel Insert

Hyperpronation / Pes planus

- Anterior arch extension
- Semi-rigid arch
- Internal forefoot post
- Heel insert

Hypersupination / Pes cavus

- External rearfoot post
- Semi-rigid arch
- Meta bar

Posterior Tibial Tendonitis

- Anterior arch extension
- Internal forefoot post
- Heel insert
- High medial flange