FIREFLY

CUSTOM MADE FOOT ORTHOSES

PRODUCT CATALOGUE

INTRODUCTION

As a podiatrist, you want to achieve the best patient outcomes possible. For over 20 years Firefly Orthoses has been partnering with Podiatrists to keep their patients' moving, from the feet up.

We do this by manufacturing and distributing beautiful, custom made foot orthoses, offering industry-leading technical support and MSK education. Our Technical Support department advise podiatrists at all levels of expertise on the most suitable device types and materials to meet their patient's needs.

Our commitment to excellence in product quality, professional expertise and customer service has set the standard in the foot orthotic industry since 2003.

We are committed to driving the Podiatry profession forward by developing unique orthotic designs, created using state-of-the-art technologies. We have developed patient-focused data capture solutions in the form of our FUSION app for iPad, designed to deliver clinical efficiencies for you and your patients.

If you are not currently a Firefly customer, begin your journey with us by scanning the QR code.

The future is exciting, let's move together!

CONTENTS

SHELL MATERIAL OVERVIEW

Polypropylene is the material used to manufacture both our direct milled and vacuum formed range of orthoses. It is available in rigid, semi-rigid and semi-flexible. Polypropylene shells are highly durable. Our vacuumed formed Polypropylene shells produce a neat finish for slimmer fitting shoes.

3D Printed PA11 is a sustainable material (a dirivitive of the Caster tree) that shares similar characteristics to that of Polypropylene but offers potential to incorporate forefoot modifications such as met raises into a forefoot shell extension.

XT Sprint Similar to TL2100 but offers greater flexibility, this poly-graphite material allows for deeper heel cups than that of the TL2100 option - up to 20mm. XT Sprint is suitable for both sport and dress devices but is preferable to TL2100 in athletic footwear.

TL2100 is a thermoplastic acrylic carbon fibre composite laminate available in 2.2mm semi-rigid and 2.8mm rigid versions. It is similar to XT Sprint but offers greater rigidity. This material is suitable for devices designed for slim fitting male and female dress shoes. Not advisable for athletic footwear. Heel cups are limited to 18mm in depth. Aesthetically speaking, TL2100's carbon fibre is very eye catching – it looks the business!

Performance RX is similar to Polypropylene but more suitable for high impact environments. This material can withstand plenty of punishment, bending, flexing and stress. Suitable for low profile requirements with a maximum heel cup depth of 18mm.

Delrin roughly half as much DELRIN® is required as that of a standard Polypropylene shell. Therefore, 2.5mm Delrin® = 5mm Polypropylene to create the same level of support and can still be heat adjusted in the manner of a standard Polypropylene shell.

DEVICE LENGTH

What dictates the length of a foot orthotic? There are a number of considerations; if the patient wishes to move the device between various footwear types, then a met length device is an appropriate choice. Sulcus lenght offers oppertunity for offloading or cushioning at the patient's met heads. If the prescription requires forefoot additions then a full length device will be required to accomodate these design features.

The device shell ends near the metatarsal heads and is sometimes referred to as a 3/4 length devices. Met length devices are commonly used in dress shoes and are therefore neater [narrower and slimmer with shallow heel cup] in design. By reducing the size of the foot orthotic there is some loss of control.

The devices extends under the metatarsal heads and ends just before the toes. This can be beneficial for patients who wear high heel shoes or need more comfort at the metatarsal heads due to increased pressure.

The full length device extends from heel to toe and covers the entire base of the footwear. To accommodate a full length orthotic, it is advisable that the footwear's insole is removed before the orthotic is inserted. Full length devices are commonly used in sports footwear (football boots, athletic running shoes, hiking and work boots).

PRESCRIBING ORTHOSES TO FIT PATIENT FOOTWEAR

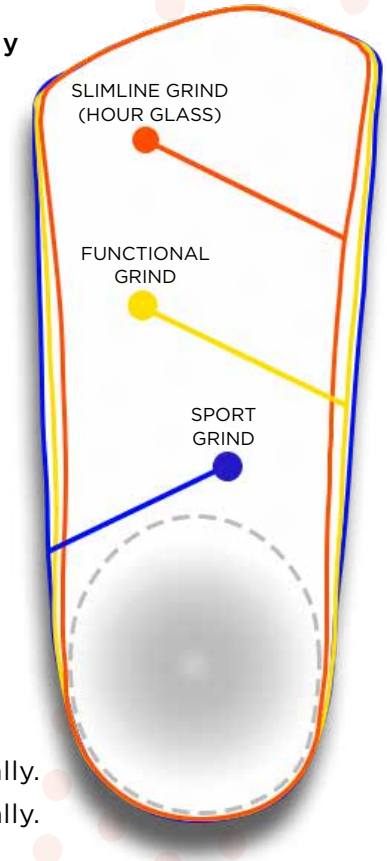
Orthotic design considerations that determine shell width and volume

The intended footwear must accommodate the orthotic comfortably for the patient to have a positive experience.

1. consider volume and size of patient's footwear
2. choose a device type suitable for the patient's activity type
3. considerations that impact bulk and volume:
   - > full length device will be bulkier than met length device
   - > combination of top covers will increase device volume
   - > arch fills, fill extensions, Reverse Morton Extensions, Functional Hallux Limitus Accommodation will add bulk
4. considerations that increase shell width:
   - > different shell designs have different widths
     - > Sport designs are widest
     - > Slimline grind is narrowest
     - > Functional grind is in-between
   - > increasing heel cup depth results in wider shell
   - > shell modifications; sweet spots, flanges will result in wider shell

Narrow shell grind reduces width by 2mm medially and 2mm laterally.

Wide shell grind increases width by 2mm medially and 2mm laterally.



CAST DRESSING

Orthotic design considerations that determine shell width and volume

Cast dressing is essentially a plaster or CAD CAM modification to allow for tissue spread that can vary depending on method of anatomy capture. We adjust this based on the method of capturing foot anatomy and your cast dressing choice.

Cast dressing is applied based on foot size and body weight. We apply less cast dressing on a semi-weight bearing foam impression compared to a neutral negative plaster of Paris impression as there is a degree of soft tissue spread captured using a foam impression.

You can choose five different types of cast dressing. Consider how cast dressing can be applied to alter moments of force.

- > Skin: 0mm dressing. A tight fit of the orthotic shell to patients anatomy.
- > Type 1: 1 - 2 mm
- > Minimum: 2 - 3 mm
- > Moderate: 3 - 4 mm
- > Maximum: 5 - 6 mm taking the orthotic shell further away from the anatomy.


SKIN


TYPE 1


MINIMUM


MODERATE


MAXIMUM

STANDARD

A vaccum formed Standard Functional device for everyday use.

LAB STANDARD DESCRIPTION

> Vacuum formed semi-rigid Polypropylene shell
> 12 - 14mm heel cup
> Functional shell grind
> HD EVA extrinsic rearfoot post with Nylon strike plate
> Vinyl top cover to mets

APPLICATION

Most everyday men's and ladies' athletic walking, hiking, work boots, and lace-up casual footwear, slip-on footwear with moderate to deep heel depth area.

OPTIONAL SHELL MATERIALS

> 3D Printed
> Performance RX
> XT Sprint
> TL 2100

DIRECT MILLED

A CNC 'milled' variant of our Standard Functional device

LAB STANDARD DESCRIPTION

> Milled semi-rigid Polypropylene shell
> 12 - 14mm heel cup
> Functional shell grind
> Unitised rearfoot stabilising post
> Vinyl top cover

NOTE

Milled shells are generally less flexible than vacuum formed shells but extremely durable.

APPLICATION

Most everyday mens' and ladies' athletic walking, hiking, work boots, and lace-up casual footwear, slip-on footwear with moderate to deep heel depth area.

OPTIONAL SHELL MATERIALS

> Delrin

STANDARD SLIMLINE

A modified functional shell style

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell

8 - 10mm heel cup

> Moderate, slimline (hourglass) shell grind

> Shallow HD EVA extrinsic rearfoot post with Durasole thin strike plate

> Microsuede top cover to mets

APPLICATION

Most ladies slip-on casual and dress shoes with heel heights less than 3mm.

OPTIONAL SHELL MATERIALS

> 3D Printed

> Performance RX

> XT Sprint

> TL 2100

LOW HEEL CUP SLIMLINE

A modified slimline shell with a low heel cup

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell
> 4 - 6mm heel cup
> Moderate slimline (hourglass) grind
> Shallow HD EVA extrinsic rearfoot post with Durasole thin strike plate
> Microsuede top cover to mets

APPLICATION

Most men's and ladies' athletic walking, hiking, work boots, and lace-up casual footwear, slip-on footwear with moderate to deep heel depth area.

OPTIONAL SHELL MATERIALS

> Performance RX
> XT Sprint
> TL 2100

FLAT HEEL CUP

A modified slimline shell style with no heel cup

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell
> 0mm heel cup
> Moderate slimline (hourglass) grind
> Microsude top cover to mets

NOTES

No rearfoot angles possible

APPLICATION

Most ladies' slip-on casual and dress shoes with a low cut counter and heel height less than 3cm

OPTIONAL SHELL MATERIALS

> XT Sprint
> TL 2100

COBRA

A shell style designed for high heels

LAB STANDARD DESCRIPTION

> Semi-flexible Polypropylene shell
> Medium Durometer EVA arch fill
> Cobra grind
> 1.5mm Poron forefoot extension to sulcus
> Microsude top & bottom covers

NOTES

Forefoot posting options only.

APPLICATION

Ladies' dress shoes with heel height greater than 3cm.

OPTIONAL SHELL MATERIALS

> None

MENS DRESS

Shell designed for low volumne mens footwear

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell
> 10mm heel cup
> Narrow functional grind
> HD EVA extrinsic rearfoot post with Durasole thin strike plate.
> Vinyl top cover to mets

APPLICATION

Most mens' slip-on casual and dress shoes.

OPTIONAL SHELL MATERIALS

> 3D Printed
> Performance RX
> XT Sprint
> TL 2100

Above device is lab standard with leather top cover

STANDARD SPORT

Shell designed to be accommodated in higher volume sport footwear

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell
> 16mm heel cup
> Sport grind
> HD EVA extrinsic rearfoot post with Nylon strike plate
> Full length 3mm Neoprene top cover with protective bottom cover

APPLICATION

Most mens', ladies' and children's athletic style footwear with removable manufacturer's insoles.

OPTIONAL SHELL MATERIALS

> 3D Printed
> Performance RX
> XT Sprint
> TL 2100

DIRECT MILLED SPORT

A CNC 'milled' variant of our Standard Sport device

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell
> 16mm heel cup
> Sport grind
> Unitised rearfoot stabilising post
> Full length 3mm Neoprene cover with protective bottom cover

APPLICATION

Most mens', ladies' and children's athletic style footwear with removable manufacturer's insoles.

OPTIONAL SHELL MATERIALS

> 3D Printed
> Delrin

NOTE

Great for heavy duty use.

Device above features 1.5mm Poron top cover
with 1.5mm Poron mid layer & intrinsic rearfoot post.

LOW PROFILE SPORT

A thinner and slightly narrower variant of our Standard Sport

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell
> 12mm heel cup
> Functional shell grind
> Extrinsic rearfoot post with Nylon strike plate
> Full length 1.5mm Puff top cover, to toes and protective bottom cover

NOTE

Works well with cycling & golf shoes

APPLICATION

Most men's, ladies' and children's lower volume athletic style footwear.

OPTIONAL SHELL MATERIALS

> Printed 3D
> Performance RX
> XT Sprint
> TL 2100

IMPACT SPORT

For high level control & maximum shock attenuation in athletic footwear.

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell
> 16mm heel cup
> Functional shell grind
> Full length 3.0mm Puff top cover and 1.5mm Nyplex bottom cover

APPLICATION

Most mens', ladies' and children's athletic style footwear where maximum shock attenuation is important.

OPTIONAL SHELL MATERIALS

> 3D Printed
> XT Sprint

Device above features dual density rearfoot post

SOCCER SPORT

A slimline design with superior durability specifically for narrow sports footwear such as football boots

LAB STANDARD DESCRIPTION

> Semi-rigid XT Sprint shell
> 10mm heel cup
> Hourglass shell grind
> 1.5mm Nyplex forefoot extension to toes
> 1.5mm Puff top cover to toes
> WSL carbon bottom cover
> Low profile rearfoot post
> Thin Durasole strike plate

APPLICATION

A slimline sport device with superior durability, incorporating an hourglass grind for football boots or similar sport footwear.

OPTIONAL SHELL MATERIALS

> 3D Printed
> Performance Rx
> Polypropylene
> TL2100

STANDARD MOULD

Modified Functional shell with excellent shock attenuation for patients who cannot tolerate the rigidity of Functional devices

LAB STANDARD DESCRIPTION

> Semi-flexible Polypropylene shell with Poron arch fill

> 16mm heel cup

> Functional shell grind

> Full length 3mm Puff top cover with 1.5mm Nyplex bottom cover

> Intrinsic heel post

APPLICATIONS

Arthritic and / or hypersensitive feet in athletic, walking or extra depth footwear.

Reduced functional ranges of motion

Recalcitrant Plantar Fasciitis.

OPTIONAL SHELL MATERIALS

> All, except TL2100

LOW PROFILE MOULD

A reduced thickness and slightly narrower variant of our Standard Mould

LAB STANDARD DESCRIPTION

- Semi-flexible Polypropylene shell with Poron arch fill
- 12mm heel cup
- Narrow functional shell grind
- Full length 1.5mm Puff top cover with Microsude bottom cover
- Intrinsic heel post

OPTIONAL SHELL MATERIALS

- All, except TL2100

APPLICATIONS

Suitable for arthritic and/or hypersensitive feet. For use in most mens' and ladies' athletic walking, hiking, work boots and lace-up casual footwear as well as slip-on footwear with moderate to deep heel area depth.

Reduced functional ranges of motion Recalcitrant Plantar Fasciitis.

A NEW APPROACH TO OFFLOADING ORTHOSES

We have re-imagined our range of diabetic and RA specialised devices.

Known previously as our Specialised Devices, this range has been re-designed, presented with an updated order form and re-positioned as offloading orthoses.

Firefly is working closely with leading podiatrists who, on a daily basis are treating patients with diabetes and rheumatoid arthritis. Through this partnership, the process of prescribing an offloading foot orthotic to meet the patient's needs at the various stages of treatment - from preventative to ulceration and in remission, was streamlined. Our research and consultation process shaped Firefly's offloading range that now feature updated material combinations, including our sustainable 3D printed PA11 shell material.

We have replaced the old specialised device order form with a newly designed offloading orthoses form.

This improved form is more descriptive, detailing the default device specs within the order form itself, removing some of the barriers faced by prescribing podiatrists.

There has been an update to the terminology used too. Terms such as Total Contact Medium Density EVA have been adopted for the range. This more descriptive use of language aligns the products closer with terminology frequently used by podiatrists prescribing for the diabetic population.

It is in Firefly's nature to continuously update our range of custom made foot orthoses as we continue to play a role moulding the current state of the art in the field of custom made foot orthoses.

We always welcome your feedback on our devices and we encourage you to submit any questions or observation to our Technical Support team by email or phone.

RA SOFT MOULD

Suitable for advanced arthritic and or hypersensitive feet during athletic activity, walking or extra depth footwear.

LAB STANDARD DESCRIPTION

> Rubberflex & Cork shell

> Poron arch fill

> 1.5mm Poron & 1.5mm Puff top cover to toes

> 1.5mm Nyplex bottom cover

> Functional shell grind

> 16mm heel cup

OPTIONAL SHELL MATERIALS

> None

DIABETIC TRIDENSITY

Suitable for diabetic feet during athletic activity; walking and extra depth footwear.

LAB STANDARD DESCRIPTION

> Rubberflex & Cork shell

> Fisher foam high density EVA fill

> 3mm Poron & 3mm P-Cell top cover to toes

> 1.5mm Cork bottom cover

> Functional shell grind

> 18mm heel cup

OPTIONAL SHELL MATERIALS

> None

DIABETIC / RA SEMI-FLEX MOULD

Suitable for the high-risk or arthritic foot, an added level of support with it's semi-flexible 3D printed shell for offloading.

LAB STANDARD DESCRIPTION

> 3D printed semi-flexible shell

> Poron arch fill

> 1.5mm Poron & 1.5mm Puff top cover to toes

> Agoflex bottom cover

> Functional shell grind

> 16mm heel cup

OPTIONAL SHELL MATERIALS

> Polypropylene

DIABETIC / RA SEMI-RIGID MOULD

Suitable for the high-risk or arthritic foot, an added level of support with a semi-rigid 3D printed shell for offloading.

LAB STANDARD DESCRIPTION

> 3D printed semi-rigid shell

> Poron arch fill

> 1.5mm Poron & 1.5mm Puff top cover to toes

> Agoflex bottom cover

> Functional shell grind

> 16mm heel cup

OPTIONAL SHELL MATERIALS

> Polypropylene

TCI MD EVA

Full length milled EVA device for shock absorption and to offload pressures on the foot.

LAB STANDARD DESCRIPTION

> Full length medium density milled EVA shell

> 1.5mm Puff top cover to toes

> Vinyl bottom cover

> Functional shell grind

> Skin cast dressing

> 16mm heel cup

EVA

A functional shell style made from medium Durometer EVA

LAB STANDARD DESCRIPTION

> Rubberflex shell with medium Durometer EVA arch fill

> 16mm heel cup

> Functional shell grind

> Vinyl top cover to mets

> Vinyl bottom cover.

APPLICATION

Most men's and ladies' athletic, walking, hiking, work boots and lace-up casual footwear.

OPTIONAL SHELL MATERIALS

> None

UCBL

The gold standard shell for maximum control of Subtalar Joint function

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell

> 26 - 30mm heel cup

> Full width shell grind

> Extrinsic rearfoot post with Nylon strike plate

> 1.5mm Puff top cover to mets

APPLICATION

Maximally or medially deviated Subtalar Joint axis, Benign Hyper-mobility, Tarsal Coalition with athletic or practical footwear.

OPTIONAL SHELL MATERIALS

> None

ROBERTS WHITMAN

A hybrid shell style featuring a hight medial and lateral profile

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell

> 16mm heel cup

> Medial and lateral flanges

> Roberts Whitman grind

> Extrinsic rearfoot post with Nylon strike plate

> Vinyl or 1.5mm Puff top cover (depending on foot size)

APPLICATION

Extreme over pronators with athletic or Oxford style footwear

OPTIONAL SHELL MATERIALS

> None

NOTE

Sometimes better tolerated and accommodated than a UCBL shell style.

GAIT PLATE

A functional shell style modified to induce out-toeing or in-toeing in children

LAB STANDARD DESCRIPTION

> Semi-rigid Polypropylene shell
> 14 - 16mm heel cup
> Modified functional shell grind
> Extrinsic rearfoot post with nylon strike plate
> 1.5mm Puff top cover

APPLICATION

Children's athletic or Oxford style footwear

OPTIONAL SHELL MATERIALS

> XT Sprint

HEEL LIFT

MATERIAL / CHARACTERISTICS

Durometer EVA material.

1mm to 12mm thicknesses available.

LOCATION

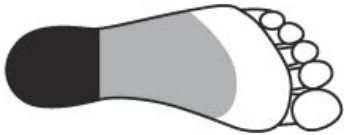
Located plantar to extrinsic rearfoot post.

INDICATIONS

Leg length discrepancy.

Achilles tendinitis.

Tight calf.



HEEL PAD

MATERIAL / CHARACTERISTICS

3mm Poron. Edges tapered for comfort.

LOCATION

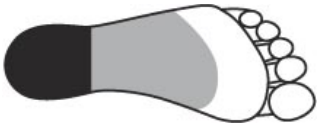
Covering the entire surface of heel cup, extending distally to level of anterior calcaneus.

INDICATIONS

Heel pain.

Heel spur.

Reduced fibro-fatty pad.



MORTON'S EXTENSION

MATERIAL / CHARACTERISTICS

3mm Cushion Cork

LOCATION

Sub 1st Metatarsal-phalangeal joint extending from distal end of shell to sulcus

INDICATIONS

Short 1st metatarsal in relation to length of 4th/5th metatarsals, Dorsiflexed 1st Ray, Hallux limitus (mild)

CONTRAINDICATIONS

Long 2nd metatarsal in relation to all metatarsals.

REVERSE MORTON'S EXTENSION

MATERIAL / CHARACTERISTICS

3mm Cushion Cork

LOCATION

Applied to distal dorsal aspect of shell extending to sulcus, supporting 2nd to 5th metatarsals.

INDICATIONS

Plantar-flexed 1st ray.

CONTRAINDICATIONS

Hallux limitus/rigidus.

FUNCTIONAL HALLUX LIMITUS ACCOMMODATION

MATERIAL / CHARACTERISTICS

3mm EVA. Includes anatomical cutout at 1st metatarsophalangeal joint (MPJ).

LOCATION

Applied from distal plantar aspect of shell extending to sulcus.

INDICATIONS

Functional hallux limitus: (Normal 1st MPJ ROM non-weight-bearing, becomes reduced when weight-bearing dorsiflexes 1st ray).

CONTRAINDICATIONS

Anatomical hallux rigidus/limitus 1st MPJ O/A with osteophytic lipping.

FOREFOOT/MPJ LESION ACCOMMODATION

MATERIAL / CHARACTERISTICS

3mm Cushion Cork extension (Poron or EVA option available)

LOCATION

Forefoot extension tapered onto distal / dorsal aspect of shell extending to level of sulcus (1-5) with cutout to lesion site (as marked on negative cast).

INDICATIONS

Persistent/painful corn, callus or plantar warts

Dropped metatarsal-phalangeal joint

CONTRAINDICATIONS

Will add extra thickness in forefoot area, therefore, not recommended unless footwear can accommodate adequately

METATARSAL PAD

MATERIAL / CHARACTERISTICS

Prefabricated Poron Pad (Tear-drop shaped) (small, medium, large size – based on foot size)

LOCATION

Centered on 3rd metatarsal, extending 3-4mm beyond distal edge of shell

INDICATIONS

Reduced transverse arch, Metatarsalgia, Dropped lesser metatarsal, Forefoot callusing, Interdigital neuroma, Intermetatarsal-phalangeal bursitis

CONTRAINDICATIONS

Rigid/immobile forefoot

HORSESHOE SPUR

MATERIAL / CHARACTERISTICS

3mm Poron heel pad with “u-shaped” cutout at the medial calcaneal tubercle

LOCATION

Heel cup.

INDICATIONS

Heel spur.

Reduced fibro-fatty pad.

METATARSAL BAR

MATERIAL / CHARACTERISTICS

Prefabricated Poron pad (small, medium, large sizes based on foot size)

LOCATION

Centered on 2-4 metatarsals, extending 3-4mm beyond distal edge of shell

INDICATIONS

Metatarsalgia

Forefoot callusing

METATARSAL RAISE

MATERIAL / CHARACTERISTICS

3mm Poron.

LOCATION

Spans from 1st to 5th metatarsals (shaft to metatarsal heads) and positioned at dorsal distal aspect of shell.

INDICATIONS

Metatarsalgia

Forefoot callusing

PORON ARCH PAD

MATERIAL / CHARACTERISTICS

Poron offers additional comfort and shock attenuation.

LOCATION

Medial arch

INDICATIONS

Fatty pad atrophy

ARCH FILL

MATERIAL / CHARACTERISTICS

Poron / EVA / Cork

LOCATION

Chosen Metatarsal applied to plantar aspect of device, ground flush with rear foot stabilizer, tapered on sides.

INDICATIONS

Heavier or obese cases requiring extra support / reinforcement. Extreme pes planus cases requiring firmer / reinforced MLA support.

CONTRAINDICATIONS

Flexible device desired (fill will increase rigidity)

NEUROMA PAD

MATERIAL / CHARACTERISTICS

3mm Poron pad.

LOCATION

Centered between 3rd and 4th metatarsal heads.

INDICATIONS

Interdigital Neuroma

Intermetatarsal bursitis

CUBOID PAD

MATERIAL / CHARACTERISTICS

3mm Poron

NOTE: custom orthoses will most often support the lateral column adequately as the contour of the LLA is captured in the negative.

LOCATION

Sub base of 5th metatarsal/cuboid

INDICATIONS

Chronically subluxing /cuboid

CONTRAINDICATIONS

Inappropriate use may prematurely lock calcaneal-cuboid joint possibly resulting in midtarsal ligament strain, cuboid contusion and/or lateral plantar nerve entrapment.

SULCUS CREST

MATERIAL / CHARACTERISTICS

6mm Poron, tapered and reduced to follow anatomy.

LOCATION

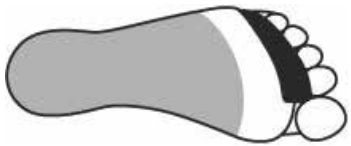
Applied in area of sulcus to support central segments of 2 to 5 digits.

INDICATIONS

Fixed clawed/hammer toe deformities, Apical lesions (corns, callus, ulcerations due to pressure).

CONTRAINDICATIONS

Top cover length less than “to toes”.



DANCER’S PAD

MATERIAL / CHARACTERISTICS

3mm Cushion Cork. 1st metatarsal shell cut out is recommended

LOCATION

Applied to dorsal aspect of shell at apex of medial longitudinal arch and extends to sulcus.

Cushion Cork extends sub 2nd to 5th metatarsals.

INDICATIONS

Rigid, severely plantarflexed 1st ray Sesamoiditis , fractured sesamoid, contused sesamoids.

CONTRAINDICATIONS

Hallux rigidus / limitus 1st MPJ O/A.

AMPUTATION ACCOMMODATION P/F FOREFOOT

MATERIAL / CHARACTERISTICS

Plastazote block built on 3mm Polypropylene or cork base (stiffens device to prevent pinching).

LOCATION

Full/Partial forefoot block in area of missing anatomy

INDICATIONS

Surgically or trauma induced amputation of forefoot anatomy

CONTRAINDICATIONS

No missing anatomy

No accommodation required if missing middle digits or 5th only.

Note: Footwear required for this addition

1st MET CUT-OUT

LOCATION / CHARACTERISTICS

Corner of shell material removed in area of 1st MPJ.

INDICATIONS

Dancer's pad/FHL accommodation.

Plantarflexed 1st ray.

CONTRAINDICATIONS

Hallux limitus/rigidus 1st MPJ O/A.

1st MET CUT OUT WITH SUPPORT POST

LOCATION / CHARACTERISTICS

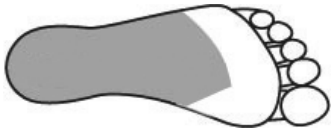
As per "1st met cut-out", with EVA post applied to plantar aspect of device in area of cut-out to prevent excessive de-flexion of shell.

INDICATIONS

High weight bracket (>200 lbs).

CONTRAINDICATIONS

Extrinsic forefoot post FHL addition (above already adds EVA to area of support post).



1st RAY CUT-OUT

LOCATION / CHARACTERISTICS

Corner of shell material removed in area of 1st MPJ.

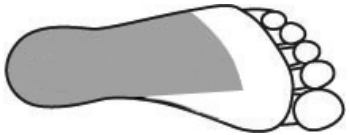
INDICATIONS

Dancer's pad/FHL accommodation.

Plantarflexed 1st ray.

CONTRAINDICATIONS

Hallux limitus/rigidus 1st MPJ O/A.



RIGID 1st EXTENSIONS

MATERIAL / CHARACTERISTICS

Extension of shell material sub 1st metatarsal-phalangeal joint.

Polypropylene only.

LOCATION

Continuation of shell material to sulcus or toes.

INDICATIONS

Hallux limitus

Short 1st metatarsal with hallux limitus or pain on dorsiflexion.

Turf toe.

CONTRAINDICATIONS

Normal 1st MPJ ROM (will act as a splint/ facilitate low gear toe-off)

MODIFICATION

PROVIDE MORE SPECIFIC SUPPORT AND CONTROL

MEDIAL FLANGE

LOCATION / CHARACTERISTICS

Medial border of device extended to encompass more of MLA

Maximize control/contact area between foot and device.

INDICATIONS

Excessively pronated foot type.

Medially deviated STJ axis.

CONTRAINDICATIONS

Footwear that cannot accommodate the extra width needed for device.

'Up not out' flange available

LATERAL FLANGE

LOCATION / CHARACTERISTICS

Lateral border of device extended to encompass more of the LLA

INDICATIONS

Supinated foot type.

Chronic lateral ankle instability.

CONTRAINDICATIONS

Shell flared vertically instead of wide.

ORTHOTIC WIDTH - WIDE

CHARACTERISTICS

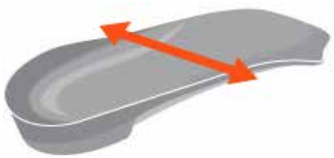
Shell to be 3-4 mm wider than lab standard

INDICATIONS

Excessive pronator to maximize contact area with plantar surface area

CONTRAINDICATIONS

Low profile/narrow footwear



ORTHOTIC WIDTH - NARROW

CHARACTERISTICS

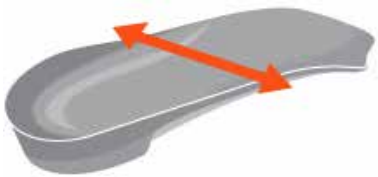
Shell to be 3-4 mm narrower than lab standard

INDICATIONS

Slender/narrow foot-type low profile footwear

CONTRAINDICATIONS

Wide footwear or deep heel cup (>14 mm)



HEEL SPUR ACCOMMODATION

MATERIAL / CHARACTERISTICS

Cavity in shell material, filled with Poron and contoured to shape of heel cup

LOCATION

Medial calcaneal Tubercle

INDICATIONS

Heel spur, reduced fibro-fatty pad

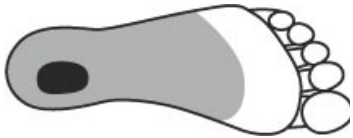
CONTRAINDICATIONS

No extrinsic rearfoot stabiliser (excluding moulds, sport impact devices),

Direct milled device.

SHELL LIMITATIONS

This modification can not be used with Performance Rx or TL2100 shell materials.



HEEL HOLE

MATERIAL / CHARACTERISTICS

25mm/32mm in diameter (based on foot size) hole through shell material

LOCATION

Centre of heel.

INDICATIONS

Heel spur

Minimize thickness of device in heel area.

DELL / SWEET SPOT

LOCATION / CHARACTERISTICS

Depression/cavity in shell material (in area as marked on casts), filled with poron to contour surrounding shell shape

INDICATIONS

Accessory navicular bony exostosis
Prominent navicular/cuneiform.

Base of 1st met, base of 5th met, styloid process or plantar fibromas

CONTRAINDICATIONS

Desired sweet spot in area which will not be in contact with device

SHELL LIMITATIONS

This modification can not be used with Performance Rx or TL2100 shell materials.

FASCIAL ACCOMMODATION

LOCATION / CHARACTERISTICS

Groove incorporated into shell material in area of medial plantar fascial ligament/flexor hallucis brevis (as marked on casts)

INDICATIONS

Anatomically tight plantar fascia (especially if prominent with dorsiflexion of 1st MPJ)

SHELL LIMITATIONS

This modification can not be used with Performance Rx or TL2100 shell materials.

MANUFACTURING PROFILE

Our orthoses are manufactured using advanced computer technology (CAD-CAM / computer aided design – computer aided manufacture). They are commonly used as a conservative therapeutic modality to not only treat painful conditions of the foot, lower extremity and lower back, but also to optimise the kinetics and kinematics of weight bearing activities so that future injuries can be avoided.

Each device is formed on a manually or digitally 'dressed mould' of foot impressions sent to us (manually via vacuum forming thermoplastic or digitally via CNC milling). We do not use a 'library' of shapes or any variation of a pre-moulded shell.

Firefly operates AOMS laser scanning of casts or impression boxes.

Firefly uses a manual or state of the art automated fabrication stream, utilising Sharp Shape's Automated Orthoses Manufacturing System (AOMS). AOMS consists of a cast scanner; digital corrections workstations and computer numerically controlled (CNC) milling equipment.

This allows practitioners to choose traditional-standard or direct milled prescription foot orthoses. CAD-CAM direct milling of polypropylene blocks produces custom made prescription foot orthoses.

CAD-CAM milling of positive models produces vacuum formed thermoplastic and carboplastic custom-made prescription foot orthoses.

Firefly uses a manual or state of the art automated fabrication stream, utilising Sharp Shape's Automated Orthoses Manufacturing System (AOMS). AOMS consists of a cast scanner; digital corrections workstations and computer numerically controlled (CNC) milling equipment.

Our 3D Printed devices are manufactured using HP's multijet fusion technology producing plastic polyamide 11 (PA 11) orthotic shells.

PRODUCT GUARANTEES

Polypropylene and Shells are guaranteed against breakage for the functional life of the device – up to 5 years.

3D printed Polyamide products are guaranteed against breakage for up to three years. When a shell breaks, we ask that our product is returned so that we can investigate prior to issuing a credit.

EVA orthoses are guaranteed against excessive compression for 6 months.

Covers, additions and posts are not guaranteed as individual body chemistry, weight and activity levels will cause wear at varying rates.

Note: Any modifications to device shell by any third party will void all or any Firefly warranty. Custom made foot orthoses can only withstand limited refurbishments over the product lifespan.

ADJUSTMENTS

Minor adjustments to your original prescription for fit, function or comfort will be made at no charge within 6 months from date of shipping. Charges will apply for the addition of any new components or major changes to your original prescription.

8 WEEK FREE ADJUSTMENT SERVICE

This service provides for any changes or adjustments to custom made foot orthoses within 8 weeks from date of dispatch (from Firefly Orthoses to customer). Note: this does not cover a full re-make of any custom made orthoses.

RETURNS

Custom orthoses are not returnable for credit. Each device is fabricated from the impression you take according to your specific prescription instructions detailed on the Firefly Orthoses order form.

When patient compliance or the desired therapeutic outcome is not achieved, we are committed to working with you to identify the problem and create a solution.

The most common reasons for device intolerance or unsatisfactory therapeutic outcomes are:

- >poor negative casts
- >improper correction prescription

> Inappropriate shoe gear and/or poor compliance with related treatment modalities

If a device is cracked please let us know immediately. Please note, we must receive the cracked device before we can process a warranty remake.

Please contact a member of our Technical Support team for assistance with any unsatisfactory case.

PRODUCT ORDER & DISPATCH

Our products are dispatched using Royal Mail's First Class delivery service and are delivered within one to two working days.

Firefly Orthoses can offer alternative delivery options where required.

In an effort to keep costs down, we rely on Royal Mail to provide their service as stated. However, there are occasional instances, beyond the control of Firefly, where delivery times are longer than stated.

Therefore, orders are only considered lost in post 15 working days from the date of dispatch.

CONSIDERATIONS/VOIDANCES OF WARRANTY

3D Printed Sulcus/full-length shell extensions

These may crack at the joint of the distal edge of the main body over time depending on use, bodyweight and activity levels. The extension can be easily removed if cracking does occurs and replaced with a durable bottom cover (eg Agoflex).

Charges will apply for the addition of any other new components or major changes to the original prescription.

Orders will not be remade under warranty should this cracking occur. The removal of the extension does not affect the functionality of the shell itself.

3D Printed Intrinsic met pads

Met pads may require adjustment from time to time due to positioning/shape/depth etc.

Repositioning of a met pads that is intrinsic to the shell will be carried out as follows: It will be removed completely and replaced with a soft non intrinsic met pad.

This is completed in lab free of charge within our standard six-month minor adjustment policy.

Charges will apply for the addition of any other new components or major changes to your original prescription.

Orders will not be remade under warranty based on intrinsic met pad positioning, shape or depth.

3D Printed Fascial grooves/ Sweet Spots (when fully available)

Placing of fascial grooves or sweet spots can be difficult. Using Firefly's Fusion App you can indicate exactly where these should be placed by marking the location on the patients foot before scanning.

Intolerances/incorrect positioning of fascial grooves or sweet spots will be remade within our standard six-month adjustment period or alternatively can be cushioned out with poron or filled up.

OUTGROWTH PLAN

Our aim at Firefly is to make children's' and adolescent's growth related replacement orthoses more affordable and to encourage continuity of necessary treatment and service to our customers clinics. We have designed the following discount plan:

DISCOUNTS

Initial pair – 0%

1st replacement pair – 50%

2nd replacement or subsequent pair – 33%

THE 'FINE PRINT'

Age Restrictions

Patients must be under the age of sixteen. Please supply us with patient's D.O.B on the initial order form when requesting to be registered for the Outgrowth Plan.

RECASTING

Patients must be re-cast within eighteen months from date of previous order to avail of the discounts.

NOTES

UK POSTAL ADDRESS:

Firefly Orthoses N.I. Ltd,
12 Main Street,
Garrison,
Enniskillen,
BT93 4ER.

HEAD OFFICE:

Firefly Orthoses ROI Ltd.
Connacht House,
Markievicz Road,
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