PENGUIN ORTHOTICS

For Professionals — By Professionals

Product Catalogue 2026

PENGUIN ORTHOTICS

Product Catalogue 2026

Rev. 1.0 (April 2026)

Address:
2-352 Wilson St. E.
Ancaster, ON L9G 2C2
Canada

Website: www.penguinorthotics.ca

Inquiries: penguinorthotics@gmail.com

Phone: 905-648-9176

Orders: penguin.orthotics@outlook.com

Made in Canada

With over 30 years of experience in chiropody and pedorthics, our team is dedicated to providing exceptionally precise, durable, and comfortable orthotics with a quick turnaround time.

Our advanced 3D-printing technology ensures a perfect fit for your patients, while our prescription process makes ordering simple and efficient.

Table of Contents

Functional Orthotics

Standard Orthotics - Full Length

A versatile, heel-to-toe orthotic designed to enhance alignment, improve pressure distribution, and provide consistent comfort throughout daily activities. Ideal for all-purpose use in most footwear styles.

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: 10–12 mm* for everyday rearfoot control
Grind: Low-profile functional grind
Post: Intrinsic or extrinsic, neutral
Top Cover: Durable, moisture-resistant with optional extensions

Control Level 2

*or as per Rx

Standard Orthotics - Short

A compact, heel-to-met heads/sulcus orthotic designed to support alignment, reduce localized pressure, and enhance comfort without affecting forefoot fit. Ideal for everyday use in footwear requiring minimal bulk at the toe box.

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: 10–12 mm* for everyday rearfoot control
Grind: Low-profile functional grind
Post: Intrinsic or extrinsic, neutral
Top Cover: Durable, moisture-resistant (heel-to-met heads/sulcus)

Control Level 2

*or as per Rx

Functional Orthotics

Cleats/Skates Orthotics

A low-profile performance orthotic designed for firm support, impact control, and stable edge-to-edge movement inside cleats, skates, etc. Built to enhance alignment and responsiveness without adding bulk to tight athletic footwear.

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: Low-profile contour for tight athletic footwear
Grind: Precision athletic grind for stable movements
Post: Intrinsic posting applied with controlled alignment tolerances
Top Cover: Durable, high-traction

Control Level 2

Running Orthotics

A lightweight, heel-to-toe orthotic designed to absorb repetitive impact, support forward-motion alignment, and enhance comfort over varied distances. Ideal for runners seeking improved stability, efficiency, and reduced fatigue without adding bulk to their footwear.

Manufacturing Standards

Shell: 3D printed in flexible TPU**
Heel Cup: 10–12 mm* for repetitive-impact control
Grind: Low-profile performance grind for smooth stride flow
Post: Intrinsic or extrinsic, tuned for forward-motion stability
Top Cover: Durable, suited to high-sweat running conditions

*or as per Rx
**in prescriber-selected density (medium, soft or hard)

Control Level 2

Functional Orthotics

Dress Orthotics - Full Length

A slim, heel-to-toe orthotic designed to improve alignment, reduce pressure, and provide discreet comfort in low-volume dress footwear. Ideal for users needing subtle support without altering the fit or aesthetic of formal shoes.

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: 8–10 mm* for low-profile rearfoot control
Grind: Slim dress grind for minimal bulk
Post: Intrinsic or extrinsic, tuned for stability
Top Cover: Thin, durable with forefoot options for tight footwear

Control Level 2

*or as per Rx

Dress Orthotics - Short

A compact, heel-to-met heads/sulcus orthotic designed to provide subtle alignment support and pressure relief while preserving the sleek fit of low-volume dress footwear. Ideal for users needing discreet stability without altering forefoot space or shoe aesthetics.

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: 8–10 mm* for low-profile rearfoot control
Grind: Slim dress grind for minimal bulk
Post: Intrinsic or extrinsic, tuned for subtle stability
Top Cover: Thin, durable (heel-to-met heads/sulcus)

Control Level 2

*or as per Rx

Functional Orthotics

Cobra Orthotics

A low-profile, mid-foot–focused orthotic designed to enhance arch support, improve foot posture, and provide targeted relief without adding bulk. Ideal for users needing discreet, lightweight stabilization that fits seamlessly into slim or fashion-forward footwear.

Manufacturing Standards

Shell: 3D printed in flexible TPU** or PA12-CF in prescriber-selected thickness
Heel Cup: Minimal heel contour for ultra-low-profile fit
Grind: Slim cobra grind for seamless mid-foot integration
Post: Intrinsic posting tuned for subtle arch stabilization
Top Cover: Thin, durable with mid-foot focus for minimal bulk

Control Level 2

**in prescriber-selected density (medium, soft or hard)

Sandal Orthotics

An open-footwear-compatible orthotic designed to enhance alignment, improve comfort, and provide discreet support without disrupting sandal fit or strap placement. Ideal for stability and cushioning in warm-weather or minimal-coverage footwear.

Manufacturing Standards

Shell: Full length 3D printed in flexible TPU**
Heel Cup: 12–15 mm* depending on footwear volume
Grind: Functional sport grind for lightweight edge profiling
Post: Intrinsic or extrinsic
Top Cover: Durable, moisture-resistant

Control Level 2

*or as per Rx
**in prescriber-selected density (medium, soft or hard)

Functional Orthotic

Sandwich Orthotics

A dual-density orthotic designed to blend firm structural support with cushioned shock absorption in a slim, versatile profile. Ideal for users needing balanced stability and comfort across everyday, occupational, or long-duration footwear.

Top View Bottom View

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: Digitally defined contour provides consistent, balanced rearfoot stabilization.
Grind: Low-profile functional grind matched to sandwich construction
Post: Intrinsic or extrinsic
Top and Bottom Covers: Clean, uniform edge finishing on top and bottom

Control Level 2

3D-Printed or Pressed: Orthotics Built the Way You Need

We primarily manufacture our orthotics using advanced 3D printing for exceptional precision and consistency. However, we also offer traditionally pressed polypropylene orthotics for clinicians who prefer or require this fabrication method. Both options are built to the same high standards, giving you full flexibility in how each device is produced.

Call us for more information.

Specialized Orthotics

Pediatric Orthotics

A lightweight, growth-friendly orthotic engineered to support developing feet, encourage healthy alignment, and improve comfort during active play. Designed to fit seamlessly into children's footwear without adding bulk, while providing the stability and cushioning needed for all-day movement.

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: 15-18 mm* for rearfoot control and reduced excess motion
Grind: Low-profile functional grind
Post: Intrinsic or extrinsic posting for pediatric pronation and alignment needs
Top Cover: Durable, easy-clean, moisture-resistant for high-activity use

Control Level 2

*or as per Rx

UCBL Orthotics

A high-control orthotic designed to stabilize the rearfoot, contain the midfoot, and improve alignment in cases requiring substantial corrective support. Built for secure shoe integration and precise biomechanical influence, offering firm guidance without unnecessary bulk.

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: Deep 18–20 mm* cup for calcaneal lock and rearfoot stability
Grind: Low-profile functional grind for clean shoe seating
Post: Intrinsic or extrinsic posting for structural pronation and alignment needs
Top Cover: Durable, easy-clean, moisture-resistant

Control Level 5

*or as per Rx

Specialized Orthotics

Gait Plate Orthotics

A corrective orthotic designed to influence toe-out or toe-in gait patterns by guiding forefoot progression during stance and propulsion. Built to subtly redirect rotational mechanics while maintaining comfort, stability, and smooth integration into everyday footwear.

Manufacturing Standards

Shell: Semi-flexible PA12-CF 3D printed in prescriber-selected thickness
Heel Cup: 12–15 mm* depending on sport and footwear volume
Grind: Functional sport grind for lightweight edge profiling
Post: Intrinsic or extrinsic
Top Cover: Durable, moisture-resistant

Control Level 2

*or as per Rx

Lattice Orthotics

A lightweight, engineered TPU lattice structure that delivers targeted pressure redistribution, controlled flexibility, and high durability. Its open-cell geometry reduces weight, enhances ventilation, and allows zone-specific tuning for cushioning, shear reduction, and midfoot or heel support.

Manufacturing Standards

Shell: 3D printed in flexible TPU**
with open-cell geometry engineered for zoned cushioning and pressure redistribution
Heel Cup: 10–14 mm* depending on footwear
Grind: Perimeter-frame edge profiling for smooth integration and reduced bulk
Post: Intrinsic or extrinsic posting achieved through variable lattice density
Top Cover: Durable, moisture-resistant bonded to the lattice surface

Control Level 2

*or as per Rx
**in prescriber-selected density (medium, soft or hard)

Accomodative Orthotics

Diabetic/Rheumatoid Arthritis Orthotics

An accommodative orthotic that protects sensitive feet, reduces shear, and improves pressure distribution for people with diabetes or rheumatoid arthritis. Provides gentle support, enhanced cushioning, and friction reduction while fitting seamlessly into everyday footwear.

Manufacturing Standards

Shell: 3D printed in flexible TPU**
Heel Cup: Soft 8–10 mm* for rearfoot guidance without pressure points
Grind: Low-profile grind to reduce shear and improve shoe fit
Post: Intrinsic or extrinsic posting for stable, accommodative alignment
Top Cover: Soft, durable, moisture-resistant to protect sensitive skin

Control Level 1

*or as per Rx
**in prescriber-selected density (medium, soft or hard)

Diabetic/Rheumatoid Arthritis - Standard Mold Orthotics

A pressure-redistributing orthotic that protects sensitive feet, reduces shear, and enhances comfort for people with diabetes or rheumatoid arthritis. It offers stable support with gentle contouring to minimize pressure and fit seamlessly into everyday footwear.

Manufacturing Standards

Shell: 3D printed in flexible TPU in medium density
Heel Cup: 10–12 mm* for stable rearfoot positioning without pressure points
Grind: Low-profile grind to reduce shear
Post: Intrinsic or extrinsic posting for stable, accommodative alignment
Top Cover: Soft, durable, moisture-resistant to protect sensitive skin

Gyroid - Medium Density

Control Level 1

*or as per Rx

Accomodative Orthotics

Diabetic/Rheumatoid Arthritis - Flexible Mold Orthotics

An accommodative, pressure-relieving orthotic that protects sensitive feet, reduces shear, and enhances comfort for people with diabetes or rheumatoid arthritis. Its flexible mold base conforms to plantar contours, providing gentle support while minimizing pressure and friction.

Manufacturing Standards

Shell: 3D printed in flexible TPU in soft density
Heel Cup: 10–12 mm* for stable rearfoot positioning without pressure points
Grind: Low-profile grind to reduce shear
Post: Intrinsic or extrinsic posting for stable, accommodative alignment
Top Cover: Soft, durable, moisture-resistant to protect sensitive skin

Control Level 1

*or as per Rx

Sweet Spot Orthotics

A low-profile orthotic featuring a recessed, cushioned sweet spot that offloads a precise pressure point, easing irritation while maintaining natural gait mechanics and full-foot stability.

Manufacturing Standards

Shell: Semi-flexible "Form" 3D printed in prescriber-selected thickness
Heel Cup: 10–12 mm* for stable rearfoot positioning
Grind: Low-profile grind to maintain smooth transitions and minimize shear
Post: Intrinsic or extrinsic
Top Cover: Soft, durable, moisture-resistant to protect sensitive skin

Control Level 2

*or as per Rx

Additions & Modifications

Heel Cut-Out

A heel cut-out reduces focal heel pressure by removing material under the tender area, usually paired with a soft plug for cushioning and off-loading.

Arch Support Bars

Arch support bars are rigid medial-arch reinforcement that increases midfoot stiffness, improves load sharing, and helps resist arch collapse during gait.

Reverse Morton's Extension

A recess under the first met head that allows first-ray plantarflexion and shifts load laterally to reduce hallux pressure.

Morton's Extension

A rigid first-ray extension that limits first-MTP dorsiflexion and shifts load laterally to improve stability and reduce hallux pressure.

Additions & Modifications

1-5 PMP / 2-5 PMP

A 1-5 PMP or a 2–5 PMP is a proximal forefoot pad that off-loads metatarsal heads by shifting pressure proximally and reducing peak loading during propulsion.

2-5PMP Bottom View

2-5PMP Lateral View

Flanges

A flange is a shell extension (lateral or medial) that increases surface contact, improves containment, and enhances control without altering plantar geometry.

Heel Pad/Cushion

A soft heel insert that increases shock absorption and reduces pressure under the heel for improved comfort during gait.

Heel cushion (in blue)

Horseshoe Pad

A U-shaped heel pad that off-loads a central tender spot by shifting pressure to the surrounding rim.

Additions & Modifications

Metatarsal Pads/Bumps

Dome pads placed just proximal to the met heads to spread the transverse arch and off-load forefoot pressure.

First Ray Cut-Out / First Met Cut-Out

A first ray cut-out is a plantar recess under the first metatarsal that creates space for first-ray plantarflexion, improving medial load transfer and reducing jamming at the first MTP joint.

Heel Lift

A heel raise that reduces Achilles strain, improves limb-length symmetry, and decreases heel pressure. Can be printed or added.

Medial Arch Skive

A medial arch grind-out that increases medial midfoot contact and boosts pronation control.

Additions & Modifications

Plantar Facstiitis Groove

A longitudinal recess that reduces pressure along the plantar fascia and eases strain during gait.

Depression/Relief

Localized recesses that reduce pressure over sensitive areas by creating space and redistributing load.

Heel depression

Need Something Beyond the Standard Options?

These are our most popular additions and modifications, the proven upgrades clinics rely on to elevate comfort, performance, and patient satisfaction. They cover the vast majority of clinical needs, which is why they've become our go-to standards. But your options don't end here. If you're looking for something more specialized, a unique combination, or a fully custom solution that isn't listed, just ask. Our team builds tailored configurations every day, and we're always ready to help you deliver a higher level of care with exactly the features your patient needs.

TPU Orthotics Lab Prescription

(ThermoPlastic Polyurethane)

PENGUIN ORTHOTICS 2-352 Wilson St. E., Ancaster ON, L9G 2C2
T: 905-648-9176 F: 905-648-5492 Email: penguin.orthotics@outlook.com

Doctor:	Patient:		
	Date:	Due date:	
	Approx. weight:	Age:	Quantity:

PRINTED SHELL

TPU
Soft ○
Medium ○
Hard ○

LENGTH
Short ○
Long ○
Web ○

HEEL CUP
12 mm ○
15 mm ○
20 mm ○

HEEL LIFT (printed)
Right ○ Left ○
____ mm

STYLE
Sport ○
Dress ○
Cobra ○

SHOE SIZE [ ]
Ladies' ○

SHOE WIDTH [ ]
Men's ○

POSTING

Post to calcaneal vertical ○ Neutral (as they sit) ○

REARFOOT: Intrinsic ○ Extrinsic ○
Left ____ ° VR ○ VLG ○ Right ____ ° VR ○ VLG ○

FOREFOOT: Intrinsic ○ Extrinsic ○
Left ____ ° VR ○ VLG ○ Right ____ ° VR ○ VLG ○

Skive **L** ____ mm **R** ____ mm
Inversion **L** ____ °inversion **R** ____ °inversion
Motion **L** ____ °of motion **R** ____ °of motion

FLANGES
Right ○
Medial ○ Lateral ○
Left ○
Medial ○ Lateral ○

ADDITIONS (PRINTED)

	Right	Left
Morton's extension (printed) 1mm ○ 2mm ○ 3mm ○	○	○
Reverse Morton's (printed) 1mm ○ 2mm ○ 3mm ○	○	○
1-5 PMP (printed) 1mm ○ 2mm ○ 3mm ○	○	○
Metatarsal pads (printed)	○	○
Horseshoe pads (printed) 1mm ○ 2mm ○ 3mm ○	○	○
Hole in heel	○	○

Small ○ Med ○ Lrg ○ ------ Height of pads ____ mm
Position ____ mm to distal
____ mm to proximal

Lift All Except (printed)
1st MTPJ R ○ L ○ ____ mm
All toes R ○ L ○ ____ mm

ADDITIONS (ADDED)

	Right	Left
Metatarsal pads	○	○
Heel pads (3mm PPT)	○	○
Horseshoe pads 1mm ○ 2mm ○ 3mm ○	○	○
Heel lift ____ mm (added)	○	○

1 ○ 2 ○ 3 ○ 4 ○ 5 ○ ------- Reduced by ____ %
Position ____ mm to distal
____ mm to proximal

CUSHION

Spenco / ETC ○ V-Foam ○ Poron ○ Plastazote ○
Nyplex ○ Other ○ _____ Thickness: ____ mm

TOP COVER

Vinyl ○ Vinaire ○ Trinidad ○
Ultrasuede ○ Leather ○ Other ○ _____

SANDAL

TPU
Soft ○
Medium ○

TOP
Nyplex 6mm ○
Plastaz 6mm ○

DIABETIC

Regular ○
Thick ○

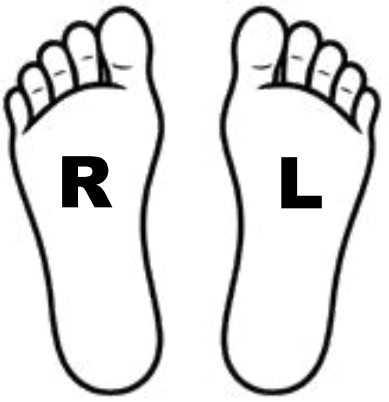
STANDARD TPU

Medium ○
Soft ○
MLA Flange ○
MLA Skive ○

TPU P3 ○

- 3mm PPT
- 3mm Plastazote
- 3mm 1-5PMP
- Met bump -50%

SHORTCUTS



Other notes/instructions:

Prescription Form Guide for TPU Orthotics

← Documentary part to be filled in by the prescriber.

← "**Printed** parts" (not glued on).

← **Shortcuts** allow you to prescribe some favourite orthotics quickly.

← **Additions** "glued on" or "added" to the printed shell.

← You can type any other **instructions or notes** in this section. You can also dictate in this section by pressing the "mic" button on your phone.

PA12CF Orthotics Lab Prescription

(Carbon Fiber Reinforced Nylon 12)

PENGUIN ORTHOTICS 2-352 Wilson St. E., Ancaster ON, L9G 2C2
T: 905-648-9176 F: 905-648-5492 Email: penguin.orthotics@outlook.com

Doctor:	Patient:		
	Date:	Due date:	
	Approx. weight:	Age:	Quantity:

PRINTED SHELL

PA12-CF
2.2 mm ○ 2.5 mm ○
3.0 mm ○ 3.5 mm ○
4.0 mm ○ 4.5 mm ○
Other ○ ____ mm

HEEL CUP
12 mm ○
15 mm ○
20 mm ○
Other ○ ____ mm

HEEL LIFT
Right ○ Left ○
____ mm

Heel stabilizer size Small ○ Medium ○ Large ○
Forefoot post size Small ○ Medium ○ Large ○
Arch support bars Soft ○ Medium ○ Hard ○

ORTHO

STYLE
Sport ○
Dress ○
Cobra ○

LENGTH
Full foot ○
Sulcus ○
Met heads ○

SHOE SIZE
Ladies' ○

SHOE WIDTH
Men's ○

ADDITIONS GLUED-ON

	Right	Left
Metatarsal pads Small ○ Medium ○ Large ○	○	○
Heel pads (3mm PPT)	○	○
Horseshoe pads	○	○
Heel lift ____ mm (added)	○	○
Morton's extension	○	○
Reverse Morton's	○	○
1-5 PMP	○	○

CUSHION

Spenco / ETC ○ V-Foam ○ Poron ○ Plastazote ○
Nyplex ○ Other ○ _____ Thickness: ____ mm

TOP COVER

Vinyl ○ Vinaire ○ Trinidad ○
Ultrasuede ○ Leather ○ Other ○ _____

POSTING

Post to calcaneal vertical ○ Neutral (as they sit) ○

REARFOOT: Intrinsic ○ Extrinsic ○
Left ____ ° VR ○ VLG ○ Right ____ ° VR ○ VLG ○

FOREFOOT: Intrinsic ○ Extrinsic ○
Left ____ ° VR ○ VLG ○ Right ____ ° VR ○ VLG ○

Skive L ____ mm R ____ mm
Inversion L ____ °inversion R ____ °inversion
Motion L ____ °of motion R ____ °of motion

FLANGES
Right ○
Medial ○ Lateral ○
Left ○
Medial ○ Lateral ○

SHORTCUTS

STANDARD
2 mm ○
3 mm ○
4 mm ○

SANDWICH

Shell	Top	Bottom
2 mm ○	2 mm ○	1 mm ○
3 mm ○	3 mm ○	2 mm ○

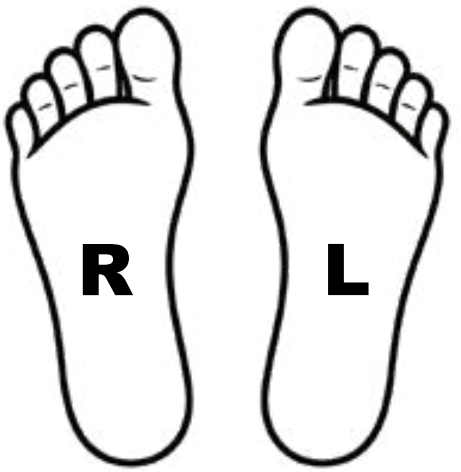
SANDAL
PA12-CF
2.2 mm ○ 2.5 mm ○
3.0 mm ○ 3.5 mm ○
4.0 mm ○ 4.5 mm ○

TOP
Nyplex 6mm ○
Plastaz 6mm ○

THIN DRESS
2 mm ○
3 mm ○
4 mm ○

DIABETIC
Regular ○
Thick ○

PA12-CF P3 ○
- 3mm PPT
- 3mm Plastazote
- 3mm 1-5PMP
- Met bump -50%



Other notes/instructions:

Prescription Form Guide for PA12CF Orthotics

Documentary part to be filled in by the prescriber.

"**Printed** parts" (not glued on).

Additions "glued on" or "added" to the printed shell.

Shortcuts allow you to prescribe some favourite orthotics quickly.

You can type any other **instructions or notes** in this section. You can also dictate in this section by pressing the "mic" button on your phone.

TPU/PA12CF Orthotics Lab Prescription

PENGUIN ORTHOTICS 2-352 Wilson St. E., Ancaster ON, L9G 2C2
T: 905-648-9176 F: 905-648-5492 Email: penguin.orthotics@outlook.com

Doctor:	Patient:		
	Date:	Due date:	
	Approx. weight:	Age:	Quantity:

PRINTED SHELL

PA12-CF

2.2 mm ○ 2.5 mm ○
3.0 mm ○ 3.5 mm ○
4.0 mm ○ 4.5 mm ○

HEEL CUP

12 mm ○
15 mm ○
20 mm ○

TPU Length:

Soft ○ Short ○
Medium ○ Long ○
Hard ○ Web ○

PA12-CF ONLY

Heel stabilizer size Small ○ Medium ○ Large ○
Heel lift (built in shell) Right ○ Left ○ ____mm
Forefoot post size Small ○ Medium ○ Large ○
Arch support bars Soft ○ Medium ○ Hard ○

ORTHO

STYLE

Sport ○
Dress ○
Cobra ○

LENGTH

Full foot ○
Sulcus ○
Met heads ○

SHOE SIZE _____ Ladies' ○

SHOE WIDTH _____ Men's ○

ADDITIONS

	Right	Left
Metatarsal pads Small○ Medium○ Large○	○	○
Heel pads (3mm PPT)	○	○
Horseshoe pads	○	○
Heel lift ____ mm (added)	○	○
Morton's extension	○	○
Reverse Morton's	○	○
1-5 PMP	○	○

CUSHION

Spenco / ETC ○ V-Foam ○ Poron ○ Plastazote ○
Nyplex ○ Other ○ _____ Thickness: _____ mm

TOP COVER

Vinyl ○ Vinaire ○ Trinidad ○
Ultrasuede ○ Leather ○ Other ○ _____

POSTING

Post to calcaneal vertical ○ Neutral (as they sit) ○

REARFOOT: Intrinsic ○ Extrinsic ○

Left ____ ° VR ○ VLG ○ Right ____ ° VR ○ VLG ○

FOREFOOT: Intrinsic ○ Extrinsic ○

Left ____ ° VR ○ VLG ○ Right ____ ° VR ○ VLG ○

Skive L ____ mm R ____ mm
Inversion L ____ °inversion R ____ °inversion
Motion L ____ °of motion R ____ °of motion

FLANGES

Right ○
Medial ○ Lateral ○
Left ○
Medial ○ Lateral ○

SHORTCUTS

STANDARD

2 mm ○
3 mm ○
4 mm ○

SANDWICH

Shell	Top	Bottom
2 mm ○	2 mm ○	1 mm ○
3 mm ○	3 mm ○	2 mm ○

SANDAL

TPU	TOP
Soft ○	Nyplex 6mm ○
Medium ○	Plastaz 6mm ○

THIN DRESS

2 mm ○
3 mm ○
4 mm ○

DIABETIC

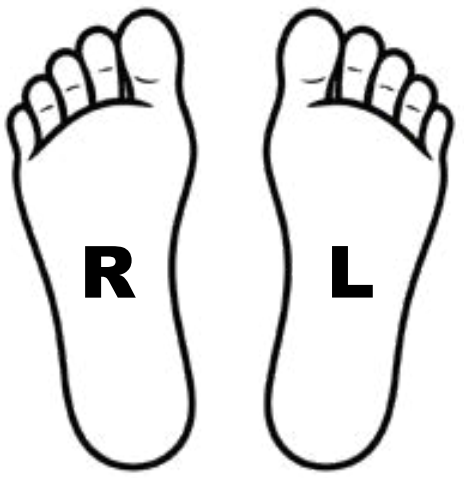
Regular ○
Thick ○

STANDARD TPU

Medium ○
Soft ○

TPU P3 ○ PA-CF P3 ○

- 3mm PPT
- 3mm Plastazote
- 3mm 1-5pmp
- Met bump -50%



Other notes/instructions:

Prescription Form Guide for TPU/PA12CF Orthotics

Documentary part to be filled in by the prescriber.

"**Printed** parts" (not glued on).

Additions "glued on" or "added" to the printed shell.

Shortcuts allow you to prescribe some favourite orthotics quickly.

You can type any other **instructions or notes** in this section. You can also dictate in this section by pressing the "mic" button on your phone.

PA12CF (Nylon 12 with 25% Carbon Fiber)

2mm - Flexible: Prescriber may specify the thickness in 0.1mm increments.

3mm - Semi-flexible: Prescriber may specify the thickness in 0.1mm increments.

4mm - Rigid: Prescriber may specify the thickness in 0.1mm increments to 5mm or more.

LENGTH (PA12-CF Orthotics)

Full foot (to toes): The shell is just proximal to the met heads. A flexible extension is added to the full length of the foot (to toes).

Sulcus / Web: The shell is just proximal to the met heads. A soft flexible extension is added up to the sulcus so that the MTP joints are covered.

Short (met heads): Usually short dress. Thin orthotics to fit dress shoes.

HEEL CUP DEPTH

These are suggested values.

Prescriber may specify any depth in 0.1mm increments from 0mm to 40mm.

PA12-CF ONLY (Support and stabilization)

Heel stabilizer size: Describes the length of the heel stabilizer. Usually to the centre of gravity.

Heel lift (mm): Shell is printed with the heel lift incorporated into the orthotic (not glued on).

Forefoot post size: Describes teh length of it distal to proximal.

Arch support bars: Describe the number of bar(s). Describe the thickness and the width of the bar(s). You may specify location.

TPU (Thermoplastic Polyurethane)

Soft: Printed **without enclosing side walls**. This makes the orthotic softer. Printed with gyroid infill at 15% density. (Gyroid pattern lattice interior visible.)

Medium: All side walls **are printed**. Printed with gyroid infill at 20% density.

Hard: All side walls **are printed**. Printed with gyroid infill at 30% density.

LENGTH (TPU Orthotics)

Long (full length): The entire orthotic is printed out of TPU. The front part is about 1mm thick extending to the full foot. Prescriber selects the cushioning and/or covering material.

Sulcus / Web: The TPU shell can be printed to cover the MTP joints to the desired thickness or posting (i.e. firm 1-5pmp). The toes part is soft cushioning material and cover material.

Short (met heads): The shell is printed out of TPU. There is no extension, only the TPU shell is covered with your specified material.

STYLE

Sport: Plastic or polyurethane shell. Heel stabilizer on plastic. 2 or 3 mm cushion and top cover (vinyl, etc).

Dress: Short orthotics. Plastic shell without cushion. May have flexible extension to web.

Cobra: The thinnest orthotic we offer, without any thickness under the heel. Moderate arch support. May be extended to web with flexible material.

ADDITIONS

Metatarsal pads: Poron met pads glued on the dorsal aspect of the orthotics.

Heel pads: 3mm poron glued on the dorsal aspect of the orthotics into the heel area, extended just proximal to the cuboid.

Horseshoe pads: Same as above but with a hole to accomodate a heel spur.

Heel lifts (added): Hard EVA glued to the plantar aspect of the orthotics to compensate for leg length discrepancy.

Morton's extension: Glued on the dorsal aspect of the orthotics (3mm poron or as specified).

Reverse Morton's: Glued on the dorsal aspect of the orthotics (3mm poron or as specified).

1-5 PMP: Glued on the dorsal aspect of the orthotics. Full thickness under MTPJs.

STANDARD (Shortcut designs)

2mm: 2mm PA12-CF shell. Medium heel stabilizer. 2mm top cover (cushion plus vinyl).

3mm: 3mm PA12-CF shell. Medium heel stabilizer. 3mm cushion plus a top cover.

4mm: 4mm PA12-CF shell. Medium heel stabilizer. 3mm top cushion plus a top cover.

SANDWICH (Shortcut designs)

Shell: 2, 3 or 4mm PA12-CF shell.

Top: 2mm nyplex or 3mm nyplex.

Bottom: 1mm EVA or 2mm EVA

CUSHION

Spenco/ETC: 2mm black or 3mm black.

V-Foam: 35DURO EVA Foam.

Poron: PPT 30DURO. 1, 2 or 3mm.

Plastazote: 25DURO. 3, 6 or 9mm.

Nyplex: 25DURO. 3, 6 or 6mm. Can be used without top cover.

TOP COVER

Vinyl: Thin, usually black, more durable.

Ultrahyde: More flexible vinyl, black on black flex mesh.

Vinaire: Stronger, breathable vinyl or less flexible base mesh.

Trinidad: More durable, less expensive option.

Ultrasuede: Artificial nylon suede, resembles real suede, durable.

Leather: Polysealed, colour may vary.

SANDAL (Shortcut designs)

TPU: The entire length of the orthotic is printed. The shell and thin bottom are one piece. Corrections and additions can be incorporated into the printed orthotic.

Top: Regular 6mm nyplex without or with a top cover (suede or leather). Patients seem to like the feel of nyplex and it is easy to clean. Can also be 3mm PPT plus 3mm plastazote for diabetic patients.

THIN DRESS (Shortcut designs)

2mm: PA12-CF 2mm shell plus vinyl or leather. (Short or web length).

3mm: PA12-CF 3mm shell plus vinyl or leather. (Short or web length).

4mm: PA12-CF 4mm shell plus vinyl or leather. (Short or web length).

STANDARD TPU (Shortcut designs)

Medium: Medium density TPU. Short shell plus 3mm top cover to full length. Some MLA flange and some MLA skive.

Soft: Soft density (printed without side walls). Short shell plus 3mm cushion to full length. Some MLA flange and some MLA skive.

DIABETIC (Shortcut designs)

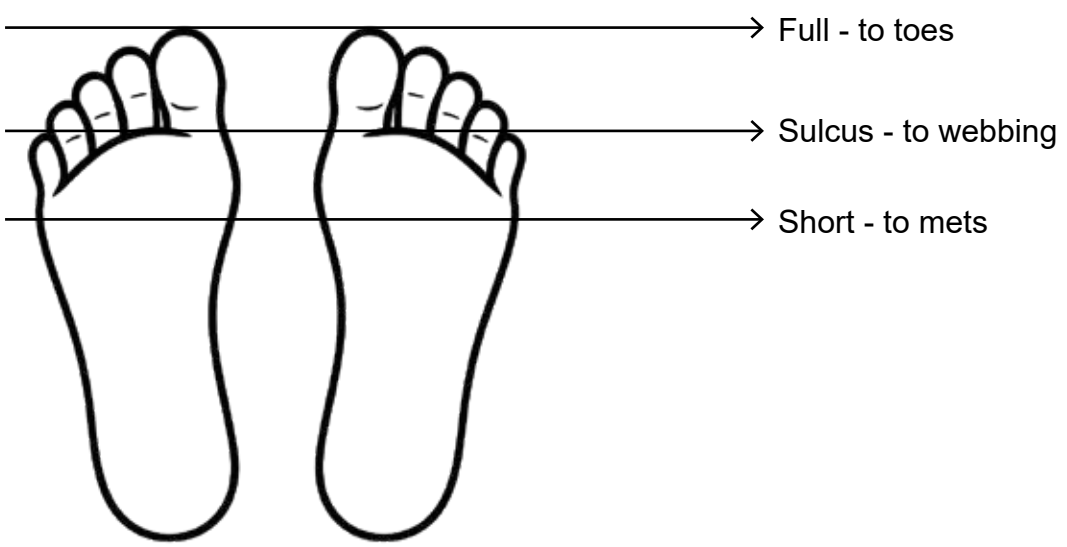
Regular: PA12-CF 3mm STD shell, plus 3mm PPT and 3mm plastazote.

Thick: Regular plus extra 3mm cushion. You may specify material.

P3 (Shortcut designs)

TPU P3: Medium density TPU. Short shell plus 3mm PPT, 1-5pmp out of 3mm PPT, met bump, plus 3mm plastazote.

PA-CF P3: PA12-CF 3mm STD shell, plus 3mm PPT, 1-5pmp out of 3mm PPT, met bump, plus 3mm plastazote.



Biomechanical Exam - Long Version

Doctor:	Patient:
	Date:
	Approx. weight:
	Age:

Non Weight-Bearing	Left	Right		Left	Right
Limb Length					
Hips Extended - *Int*			Hips Flexed - *Int*		
Hips Extended - *Ext*			Hips Flexed - *Ext*		
Clarke's Test			Genu Recurvatum		
Genu Varum			Genu Valgum		
Cruciate Stability - *Ant*			Collateral Stability - *Medial*		
Cruciate Stability - *Post*			Collateral Stability - *Lateral*		
McMurry's Sign			Hamstrings < 30°		
Malleolar Torsion			Calc to Tib - *Neutral*		
Ankle - *Knee Extended*			Calc to Tib - *Max Inv*		
Dorsiflexion - *Knee Flexed*			Calc to Tib - *Max Eve*		
Forefoot - *Rear Angle*			1st MPJ Dorsiflexed		
Reduced Forefoot - *Rear*			1st Metatarsal Position		

Weight-Bearing					
Tibial Angle - *Neutral*			Total STJ Range of Motion		
Tibial Angle - *Relaxed*					
Calc Stance - *Neutral*			Motion from STJ Neutral - *Inv*		
Calc Stance - *Relaxed*			Motion from STJ Neutral - *Eve*		
Static Pronation			Supinatus Present		
Total Rearfoot to Ground Angle			Total Forefoot to Ground Angle		

Recommended Orthotic	Rearfoot		
Posting Required	Forefoot		

Dynamic / EDG Observations:

Diagnosis:

Biomechanical Exam - Short Version

Doctor:	**Patient:**
	Date:
	Approx. weight:
	Age:

Non Weight-Bearing	**Left**	**Right**		**Left**	**Right**
Malleolar Torsion			Calc to Tib - *Neutral*		
Ankle - *Knee Extended*			Calc to Tib - *Max Inv*		
Dorsiflexion - *Knee Flexed*			Calc to Tib - *Max Eve*		
Forefoot - *Rear Angle*			1st MPJ Dorsiflexed		
Reduced Forefoot - *Rear*			1st Metatarsal Position		
Weight-Bearing					
Tibial Angle - *Neutral*			Total STJ Range of Motion		
Tibial Angle - *Relaxed*					
Calc Stance - *Neutral*			Motion from STJ Neutral - *Inv*		
Calc Stance - *Relaxed*			Motion from STJ Neutral - *Eve*		
Static Pronation			Supinatus Present		
Total Rearfoot to Ground Angle			Total Forefoot to Ground Angle		

Recommended Orthotic	Rearfoot		
Posting Required	Forefoot		

Dynamic / EDG Observations:

Diagnosis:

Notes:

PENGUIN ORTHOTICS

For Professionals — By Professionals

Website: www.penguinorthotics.ca

Inquiries: penguinorthotics@gmail.com

Orders: penguin.orthotics@outlook.com

Phone: 905-648-9176

Address:
2-352 Wilson St. E.
Ancaster, ON L9G 2C2
Canada

www.penguinorthotics.ca

Made in Canada