










LEADING EDGE ORTHOTICS LABORATORIES



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THE LEO LAB ORTHOTIC OFFERINGS

Orthotic Type	Rigidity	Shell Material	Topcover	Notes
Name, Use and Description	1mm (Flex) 2mm (Semi) 3mm (Rigid)	Polypropylene / AN Thermal / Carbon Flex	ETC-1/16" or 1/8" Suede-1/16" Microcell Puff-1/16" or 1/8" Diabetic Plastizote Vinyl Poron-1/16" or 1/8"	Additional information to consider when prescribing
 UNIVERSAL Ideal for everyday use	Flex / Semi-Flex / Rigid	Polypropylene / AN Thermal / Carbon Flex	1/8" Black ETC	Will fit in most shoes
 DRESS Thinner low profile device narrowed to fit a dress style shoe	Flex / Semi-Flex	Polypropylene / AN Thermal / Carbon Flex	1/16" Black Suede	This is a low functionality device that will not offer a great deal of midfoot control
 DRESS-SLIM Very thin and narrow device with minimal thickness	Flex	Polypropylene / AN Thermal / Carbon Flex	1/16" Black Suede	Will fit in a high heel pump style shoe
 SPORT Designed with athletes in mind	Flex / Semi-Flex / Rigid	Polypropylene / AN Thermal / Carbon Flex	1/8" Blue ETC	Ideal for wear during activities. Includes a zero degree neutral rearfoot extrinsic post
 DIABETIC Designed to accommodate and gently align a diabetic or arthritic foot	Flex	Thin Carbon Flex with soft arch fill	Diabetic Plastizote 1/8" Black or Tan with 1/16" Blue Poron	Thicker device that will require a shoe that has extra room for the increased cushioning
 UCBL University of California Berkeley Laboratory Very functional rigid device with a deep heel cup that wraps around the whole calcaneus	Rigid	Polypropylene / AN Thermal / Carbon Flex	1/8" Microcell Puff	Medial and lateral flanges through the midfoot. Neutral rearfoot heel post
 SOFT (EVA) Medium density foam body	Flex	No thermoplastic shell	1/8" Microcell Puff 1/16" Black only	Accommodative device (thicker device) that will require a shoe that has extra room for the bulkier insert

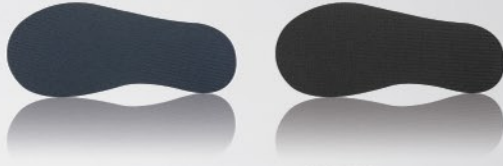
PLEASE NOTE:

LEO Lab's orthotics are all custom made. Special requests can be accommodated. Orthotics are manufactured with the topcover specified above, unless an alternative is requested when the order is placed. Carbon Flex is an additional charge.

MATERIALS



Vinyl Poron: Synthetic leather material that comes in two thicknesses based on cushioning requirements and space availability. Easy to wipe down, this material offers higher durability, but less breathability.



ETC: Cloth woven material, low friction, good breathability. Two colour options, blue and black. Durable material for athletic shoes and workboots.



Suede: Thinner black suede like material (1/16"), generally used for dress style devices. Due to the thinner profile it does not offer as much cushioning as the thicker cover options. Moderately durable but can discolour with heavy use or barefoot use.



Diabetic: Thick foam material, tan tone topcover acts as memory foam to alleviate areas of high pressure. Works well with an accommodative device and for diabetic patients who may be at risk of ulceration. Topcover conforms well to pressure areas of the foot. Benefits of the ability to conform need to be weighed up against durability.



Microcell: Foam cover, 1/8" or 1/16" (only black). Closed cell structure that will not absorb moisture and odour. Thinner than the diabetic cover but similar in softness. Moderate durability as the foam will start to compress over time. This cover works very well with deep heel cups and UCBL devices. Wider variety of colours to choose from such as pink/purple for girls and green/blue for boys. Black for adults.



Neoprene: Cross between ETC and microcell. Absorbs moisture better than the microcell or vinyl and has a cloth cover similar to ETC. Moderate durability as the cushioned material can develop an odour in the case of excessive perspiration.

TOPCOVERS



3/4 Length: Topcover cut to end of plastic shell, toes and metatarsal heads are not on the cover material. Generally used in tighter fitting shoes where the liner may not come out. May have a tendency to slide forward and move around inside footwear.



Sulcus Length: Topcover cut to distal end of metatarsal heads. Distal edge feathered smooth for comfortable transition. Orthotic will move around less inside the shoe with wear and can easily be transferred to different shoe shapes.



Full Length: This is the standard length for topcovers, insole will completely replace the liner removed from shoe. Device will not move around inside footwear with wear. Can easily be switched between similar style footwear.



Metatarsal Pad: Teardrop shaped pad placed just proximal to the metatarsal heads. Will lift and splay the transverse arch and evenly distribute pressure. Used for metatarsalgia and to straighten toes that are starting to claw/hammer. Full profile is double the thickness of the default profile.



***MetAccom Pad:** Cushioned pad under the metatarsal heads. Standard thickness of 1/8". Low profile pad is 1/16" thickness. To alleviate areas of high pressure cutouts can be incorporated to specific metatarsal heads. Markings on forefoot of casting allow for exact placement of cutouts.



Morton's Extension: **Soft**-Can be used to cushion the first metatarsal, or gently support a forefoot varus. Will compress with weight. **EVA**-Can be used to support a forefoot varus with less compression. Can also stabilize the hallux from flexion and extension. **Rigid (shell)**-Used to immobilize the hallux from extension and flexion, suitable for an amputation or arthritic MTP.



Reverse Morton's Extension: Padding across the metatarsal heads with a cut out under the first MTPJ. Works to accommodate a plantar flexed first. Restricted ROM in the great toe can be alleviated by facilitating plantar flexion of the first metatarsal down into the cutout.



Archfill: All archfill will make the orthotic device thicker and will require more space in the shoe. **Soft**-Low density material used to increase rigidity of shell material arch. Will also absorb ground forces with loading. **Firm**-Medium density material used to moderately increase the rigidity of the shell material.



Heel Cushion: 1/8" thickness or 1/16" thickness based on space available in footwear. Used to cushion the calcaneus and alleviate general heel pain. Works with plantar fasciitis pain or mild heel spurring.



Heel Spur Pad: Horseshoe shaped pad offloading the centre of the heel. Does cause the foot to sit higher in the heel cup and is not ideal in shallow heel countered shoes. If the heel pain is medial or lateral, the heel spur pad can increase pressure around the perimeter of the heel.



Skid Plate: Thin durable material used to protect a rearfoot heel post from wear. Can act as a small lift of 1-2mm when placed on one foot.



Heel Cup Depth: **Shallow**-Standard depth for a dress style device. Does not give a significant amount of control to the rearfoot but will fit in shallower casual style shoes. **Standard**-Gives adequate control to the rearfoot. Will fit in most athletic and walking shoes. **Deep**-Gives maximum rearfoot control by wrapping around the calcaneus. Requires deeper shoes that have removable liners.



Medial Flange: **Shell**-The Edge of the shell material wraps higher onto the MLA for added support. Will make the shell material seem more rigid and take up extra room in a shoe. **Soft**-The topcover material wraps higher onto the MLA for added support. Not as aggressive as the shell medial flange but requires less extra room in footwear.



Lateral Flange: **Shell**-The edge of the shell material is extended higher onto the lateral longitudinal arch. Works to control lateral ankle instability or excess supination with gait. Will require extra room in the shoe. **Soft**-The topcover material wraps higher onto the lateral longitudinal arch for added support. Not as aggressive as the shell lateral flange but requires less extra room in footwear.



1st Ray Cutout: Cutout into the distal medial edge of the shell material back into the MLA. Allows more space for an enlarged first metatarsal head and creates room for plantar flexed first ray to sit without inverting forefoot.



1st Met Cutout: Cutout into the distal medial edge of the shell. Allows more space for an enlarged first metatarsal head without cutting into the MLA support.



Heel Hole: Cutout of heel cup shell material, filled with soft material to alleviate pressure on heel spur, will allow heel cup to sit slightly lower in the bottom of a shoe.

POSTING

Posting is done with degrees of correction

1-2	Degrees-Mild Correction
3-4	Degrees-Moderate Correction
4+	Degrees-Aggressive Correction

Forefoot Extrinsic: High density material added to medial or lateral forefoot of shell. This will invert or evert the forefoot based on needs of the client. With the shell already corrected to a neutral forefoot to rearfoot position anything greater than 2 degrees forefoot extrinsic posting may affect comfort and fit.

Heel Lift: Material added to the heel post to accommodate a leg length discrepancy. Generally material added to shortened leg side. Thickness measured in mm's and anything above 8mm may require specialty footwear with extra depth. Can be used in certain situations to alleviate Achilles tightness if done bilaterally. Opposite foot to lift is suggested to be extrinsically posted to neutral for stability.

Rearfoot Extrinsic: This will invert or evert the rearfoot with dense extrinsic heel posting material. A neutral heel post will align the foot into calcaneal vertical and offer medial and lateral stability. A rearfoot varus post will have thicker material on the medial aspect of the heel to help correct over pronation. A rearfoot valgus post will have thicker material on the lateral aspect of the heel to correct over supination.

All LEO Lab shells are intrinsically corrected to neutral. Extrinsic posting is added beyond neutral for more functionality.





Custom Orthotics
for all walks of life

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