

# THE TECHNICAL RUNNING SHOE GUIDE

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## **CARBON SHOE GUIDE**

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This newly revised guide includes Traditional running shoe models available in South Africa,

Carbon plated shoes, Sports socks, Maximalistic running shoes, Minimalistic Running Shoes.

**Only shoe & sock models that are available in South Africa are included.**



### JUST UPDATED

1/2025 FALK

1/2025 ASICS

2/2025 SAUCONY

3/2025 NEW BALANCE

### PENDING

3/2025 ALTRA

3/2025 DIADORA

3/2025 JOMA

2/2025 ADIDAS

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PDF - Update to website [www.footdoctor.co.za](http://www.footdoctor.co.za) on 8/3/2025



# **CARBON PLATED SHOES / PLATED SHOES**

**Including other types of plates or inserts that are similar**

*Established 2019*

**Updated: 3/2025**

**Special mentions:**

See article: <http://www.footdoctor.co.za/wp-content/uploads/2022/06/CARBON-SHOE-GUIDE-20.6.2022-website-update.pdf>

## NEW CARBON PLATED RUNNING SHOES

### SUPER SHOES

Introduced 7/2019 (22), 9/2019, 12/2020, 6/2021, 6/2022, 7/2022, 9/2022, 2/2023, 8/2023, 12/2023, 3/2024, 5/2024, 10/2024, 11/2024, 3/2025

ADIDAS



**Adidas Adios Pro 3** RF39mm–FF33mm–HD6mm (Energy Rods)



**Adidas Adios Pro 2** RF39mm–FF30mm–HD9mm



**Adidas Prime X Strung** RF50mm–FF41mm–HD9mm



**Adidas Prime X Strung 2.0** RF50mm–FF41mm–HD9mm





















**Adizero Boston 12** RF39mm–FF33mm–HD6mm (Energy Rods)







**Adizero Boston 11** RF39mm–FF33mm–HD6mm (Energy Rods)



	<p><b>AdiZero Boston 10</b> RF29–FF19–HD10mm Energy rods</p> 
<p><b>ALTRA</b></p> 	<p><b>Altra Vanish</b></p> 
<p><b>ASICS</b></p> 	<p><b>Metaspeed Sky +</b> RF39-FF34–HD5mm Flytefoam Blast on top Flytefoam Blast + on bottom, Repositioned full length CARBON PLATE (1.1mm) closer to foot, Updated m/s geometry,</p>  <p><b>Asics Metaspeed Sky</b> RF33-FF28–HD5mm (25-15-9mm)</p>  <p><b>Asics Metaspeed Edge</b> RF28-FF20–HD8mm (25-15-9mm)</p>  <p><b>Asics Metaracer</b> RF24-FF15–HD9mm (25-15-9mm)</p>  <p><b>Asics Glideride 3</b> RF32-FF26–HD6mm (31-25-6mm)  <b>ENERGY SAVING</b> No carbon Plate between the Flytefoam and Flytefoam Blast Rocker sole Guidesole technology</p> 

<p><b>BROOKS</b></p> 	<p><b>Brooks Hyperion Elite 4</b> RF-FF-HD8mm</p> 
<p><b>HOKA</b></p> 	<p><b>Mach X 2</b> RF44-FF39-HD5mm W-RF37-FF32-HD5mm Pebax plate, increased rocker profile, PEBA and EVA midsole foams,</p>  <p><b>Cielo X 1</b> RF39-FF32-HD7mm W-RF37-FF-30-HD7mm Winged carbon fiber plate, PEBA, Speed- centric rocker shape</p>  <p><b>Skyward X</b> RF48-FF43-HD5mm W-RF46-FF-41-HD5mm Convex carbon fiber plate, EVA and peba M/S</p> 
<p><b>MIZUNO</b></p> 	<p><b>Wave Rebellion Pro 2</b> RF38-FF36.5-HD2.5mm Mizuno Energy Lite, Mizuno Energy Lite+</p>  <p><b>Wave Rebellion Flash 2</b> RF35-FF34.5-HD0.5mm Mizuno Energy Lite, Mizuno Energy Lite+</p> 

	<p><b>Wave Rebellion Sonic 2</b> RF32–FF24-HD8mm Mizuno Enerzy foam, Mizuno Wave plate</p> 
<p><b>NEW BALANCE</b>    new balance</p>	<p><b>FUELCELL SUPER COMP ELITE v4</b>  Widths (M/W): D   B  RF37mm – FF33mm – HD4mm  Weight (M/W): 230 (g)   191 (g)  Midsole – FuelCell (FC) with Energy Arc technology, Thinner carbon plate, Marathon racing shoe</p>  <p><b>FUELCELL SUPER COMP TRAINER v4</b>  Widths (M/W): D   B  RF40mm – FF34mm – HD6mm 4MM ??  Weight (M/W): 261 (g)   209 (g)  Midsole – FuelCell (FC) with Energy Arc technology, Carbon plate, 12/35 hardness with 20% PEBA blend</p> 

**FUELCELL PROPEL v5****Widths (M/W): D | B**

RF28mm - FF22mm - HD6mm

Weight (M/W): 280 (g) | 220 (g)

Midsole – FuelCell (FC) 10/35 durometer combined with a full length TPU plate

**SC ELITE v3****Widths (M/W): D | B**








FuelCell with Energy Arc technology and a carbon fiber plate.

RF37mm - FF33mm - HD4mm

Weight (M/W): 229 (g) | 179 (g)

Midsole – FuelCell (FC)



<p><b>NIKE</b></p> 	<p><b>Nike ZoomX Vaporfly Next %</b>        Tchnology: ZOOMX foam-cushioning, full length CARBON PLATE</p>  <p><b>Nike Zoom Alphafly NEXT %2</b>        Technology: ZOOMX foam-cushioning, full length CARBON PLATE, FLYKNIT, VISIBLE ZOOM AIR PODS, wider FF by 2mm &amp; RF by 3mm, well-padded tongue        40mm STAC        RF–FF–HD8mm (From 4mm)</p>  <p><b>Nike Streakfly – 5k, 10k Road Racing</b>        Technology: ZOOMX foam-cushioning, mid-foot CARBON PLATE</p>  <p><b>Nike Zoom Fly 5– Road Racing</b>        Technology: REACT foam-cushioning, full length CARBON PLATE, FLYKNIT cuff</p> 
<p><b>MR PRICE MAXED</b></p> 	<p><b>Maxed Elite Hi Racer (MAXED ELITE) R2700</b>        Full carbon plate, Pebax midsole</p> 



	<p><b>Elite KM (MAXED ELITE) R1300</b> Torsion plate</p>  <p><b>Elite Zeus Running (MAXED ELITE) R800</b> Carbon propel technology</p> 
<p><b>PUMA</b>  </p>	<p><b>PUMA FAST - R NITRO ELITE RF38-FF30-HD8mm</b>  Propulsive racer, Nitro elite, PWRPLATE</p>  <p><b>PUMA FAST - FWD NITRO ELITE RF36-FF27-HD9mm 5 – 10KM</b> racer, Nitro elite, PWRPLATE</p>  <p><b>PUMA DEVIATE NITRO ELITE 2 RF38-FF30-HD8mm</b>  Propulsion, Nitro elite, PWRPLATE</p>  <p><b>PUMA DEVIATE NITRO 2 RF38-FF30-HD8mm</b> Propulsion, Nitro elite, PWRPLATE – forked ff plate</p> 
<p><b>SALOMON</b> </p>	<p><b>Phantasm - 2023 RF20–FF14-HD6mm</b> Energy blade, Energy Surge Foam, R.Camber</p>



**Spectur - 2023** RF-FF-HD6mm Energy blade, Energy Surge Foam, R.Camber, Smooth ride



**SAUCONY**  
saucony

**ENDORPHIN PRO 4** RF39.5-FF31.5-HD8mm PWRRUN HB foam on top, PWRRUN PB foam on bottom, cushioning, S-curve carbon plate, FORMFIT fit, XT900 o/s, snappy SPEEDROLL technology, SRS super responsive sockliner











**ENDORPHIN SPEED 4** RF36-FF28-HD8mm – Re-engineered nylon plate, men & ladies, PWRRUN PB, Super critical sockliner, XT 900 carbon outersole, smooth SPEEDROLL technology



**ENDORPHIN ELITE 2** RF39.5-FF31.5-HD8mm – Premium fast and light race day shoe, SPEEDROLL technology, New RUN FOAM midsole material, Full length carbon fiber plate, unisex, PWRRUN PB sockliner, PWRTRAC rubber outersole



<p>ON </p>	<p><b>ON CLOUDSURFER 7 RF–FF-HD6mm</b> – Performance running, Cloudtec No speedboard, Helion superfoam</p>  <p><b>ON CLOUDGO RF–FF-HD6mm</b> – Cloudtec cushioning TPU Speedboard, Helion super foam</p>  <p><b>ON CLOUDSTRATUS RF–FF-HD6mm</b> – Performance running, CloudTec layers, PP speedboard, Helion superfoam</p>  <p><b>ON CLOUDNOVA FORM RF–FF-HD6mm</b> – lifestyle, Polypropylene and speedboard</p>  <p><b>ON CLOUDFLOW RF–FF-HD6mm</b> – Polypropylene speed board, Helion superfoam - Racer / trainer</p>  <p><b>ON CLOUDFLYER 4 RF–FF-HD6mm</b> – Trainer, TO MARATHON DIST, Polypropylene speed board</p>  <p><b>ON CLOUD AWAY RF–FF-HD6mm</b> – lifestyle, Speedboard</p> 
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	<p><b>ON CLOUD X</b> RF–FF-HD6mm – Helion superfoam, Speedboard</p>  <p><b>ON CLOUDBOOM ECHO 4</b> RF–FF-HD9mm – carbon infused Speedboard plate – CloudTec cushioning midsole – CloudTec in Helion superfoam</p>  <p><b>ON CLOUD MONSTER</b> RF–FF-HD6mm CloudTec cushioning, Helion super foam, Speedboard</p> 
<p><b>SKECHERS</b></p> 	<p><b>Skechers Razor Elite</b></p>  <p><b>Skechers Speed Elite</b></p>  <p><b>Skechers Speed Freek</b></p> 
<p><b>NOT AVAILABLE IN SA</b></p>	<p>Anta C202 GT          Atreyu ‘The artist’          BMAI 42Km Turbo          Craft CTM Ultra Carbon          Dowin Speedster          Fila Racer Carbon          Health Hiracer          Li-Ning Feidian Elite 2.0, Li-Ning Feidian Elite 1.0          Li-Ning Feidian Challenger 2.0, Li-Ning Jueying          Qiaodam Fetying PB          Scott Speed Carbon RC          XStep 160X Pro, XStep 160X 2.0, XStep 160X 1.0, XStep 160X 1.0 Knit</p>



## THE TRUTH ABOUT THE "SUPER SHOES"

Forget the hyperbole and folklore, these are the facts.

### SUMMARY:

- Repeated research indicates there is an energetic advantage\*
- However, this advantage is athlete specific.
- There is no universal advantage.
- All shoes are characterised by a **carbon fibre or nylon hybrid plate, high stack heights and defined geometry.**

All super shoes are characterized by radical geometry, with most incorporating a large rocker.

? protective benefits with regards to attenuating muscle soreness, damage and inflammation.  
Kelly B., et al 2019 Footwear Science 11:S1



The foams in most super shoes are not EVA based, but hybrids or technical new materials like PEBAX.

World Athletics has decreed that the heel stack must not exceed 40mm.  
<https://www.worldathletics.org/news/press-releases/modified-rules-shoes>

Super shoes may reduce the net energy loss without increasing the mechanical demand at the ankle as we would expect.

Farina et al 2019 Footwear Science 11:S1

Positioning of the plate closer to the foot will improve performance but care should be taken to not alter the perceived comfort and/or increase injury risk.

Flores, N. et al. (2019) The stiff plate location into the shoe influences the running biomechanics, Sports Biomechanics, published online.  
<https://www.worldathletics.org/news/press-releases/modified-rules-shoes>

Only one carbon fibre plate is permitted.  
<https://www.worldathletics.org/news/press-releases/modified-rules-shoes>

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**From Simon Bartold**

**<https://www.bartoldclinical.com/infographic-the-truth-about-the-super-shoes-and-running-shoes>**