

THE TECHNICAL RUNNING SHOE GUIDE

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(A clinical 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.

CARBON PLATED GUIDE



UPDATED 2026

12/2025 ASICS
1/2026 ANTA
1/2026 OLYMPIC
1/2026 ADIDAS
1/2026 NIKE
2/2026 SAUCONY

UPDATED 2026

UPDATED 2026

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CARBON PLATED SHOES / PLATED SHOES

Including other types of plates or inserts that are similar

Established 2019

Updated: 2/2026








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

SUPERSHOES PLATED SHOES

Introduced 7/2019 (28), 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, 2/2025, 09/2025, 01/2026, 1/2026, 2/2026

<p>ADIDAS</p> 	<p>ADIDAS ADIOS PRO 4 RF39mm–FF33mm–HD6mm (Energy Rods)</p>  <p>ADIDAS ADIOS PRO 3 RF39mm–FF33mm–HD6mm (Energy rods 2.0)</p>  <p>ADIZERO PRIME X STRUNG RF50mm–FF43mm–HD7mm (Illegal racer, stack height above legal limit with 2 carbon plates)</p>  <p>ADIDAS PRIME X 2 STRUNG RF50mm–FF43mm–HD7mm (Illegal running shoe) (2 Carbon plates)</p>  <p>ADIDAS PRIME X 3 STRUNG RF50mm – FF43mm – HD7mm (Illegal shoe) (Energy rods 2.0 and 1 Carbon plate)</p>  <p>ADISTAR BYD RF40mm–FF34mm–HD6mm (distance driven carbon infused plate, lightstrike pro and repetitor 2.0 midsole, continental rubber sole)</p> 
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ADIZERO BOSTON 13 RF36mm-FF30mm-HD6mm (Energy Rods 2.0)



ADIZERO BOSTON 12 RF39mm-FF33mm-HD6mm (Energy Rods)



ADIZERO TAKUMI SEN 11 RF33mm-26mm-HD7mm (Energy Rods 2.0 [5/10km shoe])












ADIZERO TAKUMI SEN 10 RF33mm-FF27mm-HD6mm (Energy Rods)



ADIZERO ADIOS 9 RF27mm-FF20mm-HD7mm (Nylon Dogbone)



	 <p>ADIZERO EVO SL RF39mm – FF33mm – HD6mm (Nylon Dogbone) Energy rods 2.0, continental rubber outsole</p>    <p>ADIZERO ADIOS 9 RF27–FF20–HD7mm Lightlock upper, Nylon Dogbone a lightstrike Pro midsole and lightraxion outsole with continental.</p>  <p>ADIZERO SL 2 rect break down of the boston 12)</p> 
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<p>ALTRA</p> 	<p>Altra Vanish</p> 
<p>ANTA</p> 	<p>ANTA ROCKET PRO</p> <p>Tempo runs or mid distance training</p> <p>Responsive springy feel</p> <p>Midsole – Dual density midsole – NITROEDGE – for responsive cushioning and good energy return, EVA BASE LAYER – durable and light and to support the softer midsole layer above</p>

ENBEDDED NYLON PLATE – midfoot stability and energy transfer

RIDE – softer than a pure racing flat but firmer than a daily trainer

Stack heights – RF28-FF22–HD6mm (28-22-6mm)

Weight – M 227, W 210



ANTA ROCKET 6.0

Tempo runs or mid distance training

Responsive springy feel

Midsole – NITROEDGE – for responsive cushioning

V-SHAPED ELASTIC PROPULSION PLATE – rebound and forefoot drive during faster running

Moderate fast workouts – tempo, steady state, daily runs

Stack heights – RF28-FF20–HD8mm (28-20-8mm)

Weight – M 295, W 245



ANTA MACH 5

Speed training & tempo runs

Road races 5km to 21km

Midsole – EVA & RUBBER – lightweight cushioning, grip & durability

AW-SHAPED NYLON FORK – enhances snappy roll-off. Cuts lateral torque while allowing forefoot flexibility

Stack heights – RF28-FF22–HD6mm

Weight – M 235



ANTA C202 6.0 PRO

Marathon race day, long tempo runs,

Midsole – DUAL LAYER NITROEDGE PRO FOAM – EVE/TPU BLOWN WITH NITROGEN – high energy return & long run comfort

FULL LENGTH AVIATION GRADE CARBON PLATE – engineered to improve propulsion, reduce ground contact time, smooth out the stride from landing to toe-off

Upper – A-web & xian fiber

Outersole – A-grip pro – high traction & durability

Stack heights – RF33-FF29–HD4mm

Weight – M 190



C 202 G9

Marathon race day, long tempo runs

10km to marathon

Midsole – NITROEDGE PRO FOAM – responsive cushioning & excellent energy return

ENHANCED CARBON PLATE WITH INCREASED CURVATURE TO PROMOTE ROLLING MOTION, REDUCE GROUND CONTACT & IMPROVE PROPULSION

Upper – A-web & xian fiber

Outersole – Full-length liquid anti-slip rubber

Stack heights – RF33-FF29–HD4mm

Weight – M 181



C 202

Marathon race day, long tempo runs

10km to marathon

Midsole – DUAL LAYER NITROEDGE PRO FOAM – EVE/TPU BLOWN WITH NITROGEN – high energy return & long run comfort

EMBEADED CARBON PLATE FOR PROPULSION WITH INCREASED CURVATURE TO PROMOTE ROLLING MOTION, REDUCE GROUND CONTACT & IMPROVE PROPULSION










Upper – A-web & xian fiber

Outersole – A-grip pro








Stack heights – RF33-FF29–HD4mm



Weight – M 21





















	
<p>ASICS </p>	<p>MAGIC SPEED 5 Midsole – FF LEAP & FF BLAST PLUS – dual midsole composition Full length CARBON PLATE between the 2 midsole layers Outersole – Asicsgrip Stack heights - RF37.5-FF30.5–HD7mm Increased stack heights reduced heel drop, Midsole height – M 31–24 Weight – 196</p>  <p>Asics Metaspeed Sky Tokyo RF39.5-FF34.5–HD5mm Motionwrap, CARBON PLATE, ASICSGRIP FF LEAP, FF TURBO, 170g</p>  <p>Asics Metaspeed Edge RF28-FF20–HD8mm (25-15-9mm)</p>  <p>Asics Metaracer RF24-FF15–HD9mm (25-15-9mm)</p>  <p>Asics Glideride 3 RF32-FF26–HD6mm (31-25-6mm) ENERGY SAVING No carbon Plate between the Flytefoam and Flytefoam Blast Rocker sole Guidesole technology</p> 
<p>BROOKS </p>	<p>Brooks Hyperion Elite 4 RF-FF–HD8mm</p> 










<p>DIADORA</p> 	<p>Gara Carbon 6 – 13 Uk RF40mm – FF34mm – HD5mm Carbon plate, Anima pbx, Duratech 5000 sole</p> 
<p>HOKA</p> 	<p>Mach X 2 RF44-FF39-HD5mm W-RF37-FF32-HD5mm Pebax plate, increased rocker profile, PEBA and EVA midsole foams,</p>  <p>Cielo X 1 RF39-FF32-HD7mm W-RF37-FF-30-HD7mm Winged carbon fiber plate, PEBA, Speed- centric rocker shape</p>  <p>Skyward X RF48-FF43-HD5mm W-RF46-FF-41-HD5mm Convex carbon fiber plate, EVA and peba M/S</p> 
<p>JOMA</p> 	<p>R - 1000 2404 M&L RF-FF-HD7mm ENDOPLATE CARBON FIBER PLATE, Foam reactive midsole, Fly reactive technology, Premium, competition</p>  <p>R - 3000 2408 M&L RF-FF-HD8mm CARBON PLATE, Fly reactive technology, Competition, <u>Premium</u></p>  <p>R - 5000 2404 M&L RF-FF-HD6mm CARBON PLATE, Foam reactive midsole, Fly reactive technology, Competition & race walk, <u>Premium</u></p>  








<p>MIZUNO</p> 	<p>Wave Rebellion Pro 2 RF38–FF36.5-HD2.5mm Mizuno Energy Lite, Mizuno Energy Lite+</p>  <p>Wave Rebellion Flash 2 RF35–FF34.5-HD0.5mm Mizuno Energy Lite, Mizuno Energy Lite+</p>  <p>Wave Rebellion Sonic 2 RF32–FF24-HD8mm Mizuno Energy foam, Mizuno Wave plate</p> 
<p>NEW BALANCE</p> 	<p>FUELCELL SUPER COMP ELITE v4 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>FUELCELL SUPER COMP TRAINER v4 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>  <p>FUELCELL PROPEL v5 Widths (M/W): D B RF28mm - FF22mm - HD6mm</p>

	<p>Weight (M/W): 280 (g) 220 (g) Midsole – FuelCell (FC) 10/35 durometer combined with a full length TPU plate</p>  <p>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> 
<p>NIKE </p>	<p>NIKE VAPORFLY NEXT% 4 Technology: ZOOMX foam-cushioning, full length CARBON PLATE weight M8.5 169g Heel 35mm, Forefoot 29mm, offset 6mm</p>  <p>NIKE ZOOM ALPHAFLY NEXT % 3 Technology: ZOOMX foam-cushioning, full length CARBON PLATE, ATOM KNIT UPPER, VISIBLE ZOOM AIR PODS, continuous bottom connects heel and forefoot. Fast shot outsole for lightweight, traction and durability Weight M10 220g,W8 176g Heel M10 40mm, Forefoot 30mm, offset 10mm</p>  <p>NIKE ZOOM FLY 6 Road Racing Technology: ZOOMX AND SR-02 MIDSOLE FOAMS, full length CARBON FIBER FLYPLATE, TWO LAYER WOVEN MESH UPPER Weight M10 256g, W8 218g Heel 42mm, Forefoot 34mm, offset 8mm</p>

	
<p>MR PRICE MAXED</p> 	<p>Maxed Elite Hi Racer (MAXED ELITE) R2700 Full carbon plate, Pebax midsole</p>  <p>Elite KM (MAXED ELITE) R1300 Torsion plate</p>  <p>Elite Zeus Running (MAXED ELITE) R800 Carbon propel technology</p> 
<p>OLYMPIC</p> 	<p>STREAK Hybrid road & offroad performance shoe – street cross trainer</p> <p>Short distance to ultra marathons</p> <p>Gym training</p> <p>CARBON PLATE EMBEDDED IN MIDSOLE</p> <p>Midsole – PU cushioning system</p> <p>Stack heights – RF-FF–HD8m</p> <p>Weight – M 280</p> 
<p>PUMA</p> 	<p>PUMA FAST - R NITRO ELITE RF38-FF30-HD8mm Propulsive racer, Nitro elite, PWRPLATE</p>  <p>PUMA FAST - FWD NITRO ELITE RF36-FF27-HD9mm 5 – 10KM racer, Nitro elite, PWRPLATE</p> 

	<p>PUMA DEVIATE NITRO ELITE 2 RF38-FF30-HD8mm Propulsion, Nitro elite, PWRPLATE</p>  <p>PUMA DEVIATE NITRO 2 RF38-FF30-HD8mm Propulsion, Nitro elite, PWRPLATE – forked ff plate</p> 
<p>SALOMON </p>	<p>SALOMON S-LAB PHANTASM 2 RF-FF-HD9mm LRacing shoe, CARBON ENERGY BLADE, Optifoam</p>  <p>SALOMON S-LAB SPECTUR RF-FF-HD8mm LRacing shoe, CARBON ENERGY BLADE, Optifoam, Stability</p>  <p>SALOMON S-LAB SPECTUR 2 RF-FF-HD8mm Racing shoe, CARBON ENERGY BLADE, Optifoam, Stability</p> 
<p>SAUCONY </p>	<p>ENDORPHIN PRO 5 RF39.5-FF31.5-HD8mm SLOTTED CARBON FIBER PLATE. PWRRUN HG FOAM (energy return) & PWRRUN PB FOAM (soft cushion & energy return)</p>  <p>ENDORPHIN SPEED 5 RF36-FF28-HD8mm – Re - engineered <u>nylon plate</u>, men & ladies, PWRRUN PB, Super critical sockliner, XT 900 carbon outersole, smooth SPEEDROLL technology</p>

	 <p>ENDORPHIN ELITE 2 RF39.5-FF31.5-HD8mm – Premium fast and light race day shoe, SPEEDROLL technology, New RUN FOAM midsole material, <u>Full length carbon fiber plate</u>, unisex, PWRRUN PB sockliner, PWRTRAC rubber outersole</p> 
<p>ON</p> 	<p>ON CLOUDSURFER 7 RF-FF-HD6mm – Performance running, Cloudtec No speedboard, Helion superfoam</p>  <p>ON CLOUDGO RF-FF-HD6mm – Cloudtec cushioning TPU Speedboard, Helion super foam</p>  <p>ON CLOUDSTRATUS RF-FF-HD6mm – Performance running, CloudTec layers, PP speedboard, Helion superfoam</p>  <p>ON CLOUDNOVA FORM RF-FF-HD6mm – lifestyle, Polypropylene and speedboard</p>  <p>ON CLOUDFLOW RF-FF-HD6mm – Polypropylene speed board, Helion superfoam - Racer / trainer</p>  <p>ON CLOUDFLYER 4 RF-FF-HD6mm – Trainer, TO MARATHON DIST, Polypropylene speed board</p> 

	<p>ON CLOUD AWAY RF–FF-HD6mm – lifestyle, Speedboard</p>  <p>ON CLOUD X RF–FF-HD6mm – Helion superfoam, Speedboard</p>  <p>ON CLOUDBOOM ECHO 4 RF–FF-HD9mm – carbon infused Speedboard plate – CloudTec cushioning midsole – CloudTec in Helion superfoam</p>  <p>ON CLOUD MONSTER RF-FF-HD6mm CloudTec cushioning, Helion super foam, Speedboard</p> 
<p>SKECHERS</p> 	<p>Skechers Razor Elite</p>  <p>Skechers Speed Elite</p>  <p>Skechers Speed Freek</p> 
<p>NOT AVAILABLE IN SA</p>	<p>Anta C202 GT Atreyu ‘The artist’ BMAI 42Km Turbo Craft CTM Ultra Carbon Down 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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Rectangular Slip

From Simon Bartold

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