

INNOVATION

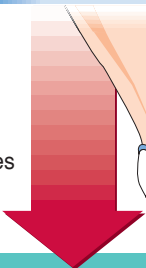
Hi-tech shoes in race for gold

Since the last Olympics in Seoul the sports shoe industry has grown into a multi-million dollar high-technology business. Today that extra advantage – which can make the difference between gold and silver – is as much a matter of equipment as of talent and determination

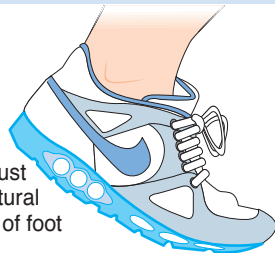


Shock:
Athlete's shoe must cushion and support the feet

Runner experiences forces 2–3 times body weight each time foot lands



Shoes must follow natural flex lines of foot



Nike Air Cushioning

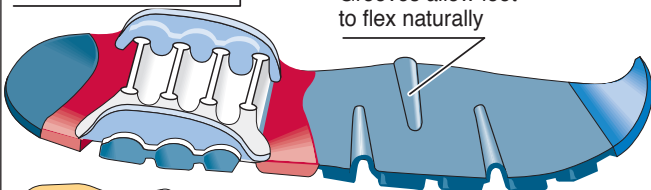
Side panels:
Polymer mesh panels support foot and allow it to breathe

Sole:
Carbon rubber sole increases durability

Air cushions:
Gas-filled polyurethane air tubes provide 75% of protection required under heel

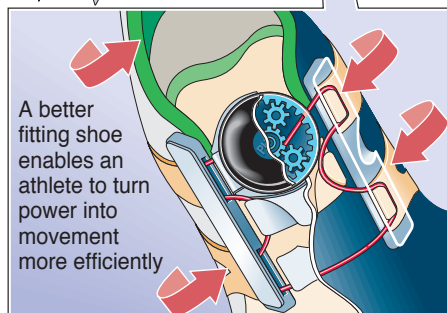
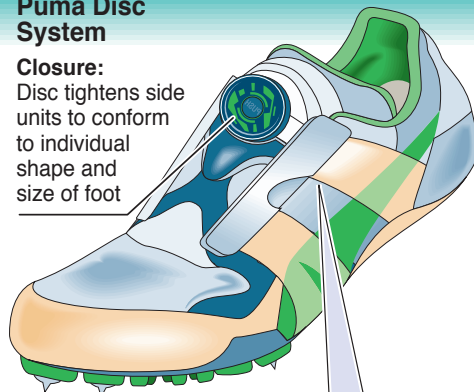
Forefoot air cushion

Grooves allow foot to flex naturally

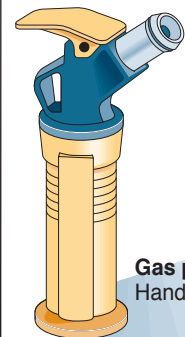


Puma Disc System

Closure:
Disc tightens side units to conform to individual shape and size of foot



A better fitting shoe enables an athlete to turn power into movement more efficiently



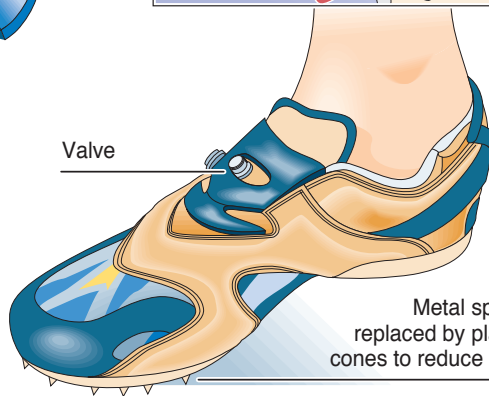
Reebok Insta-Pumps

Inflatable sprinting shoe:

Instead of using conventional laces the sprint shoe envelops the foot with a series of inflatable chambers

Gas pump:
Hand-held carbon dioxide canister

Valve



Metal spikes replaced by plastic cones to reduce drag