RACKETS TECHNOLOGIES

BADMINTON



SPECIALIST SPORTS

SMART CARBON

S.M.A.R.T CARBON HOW TO DE-CODE THE S.M.A.R.T CARBON DNA

Ш

STRUCTURE

The category of carbon fiber.
We use different carbon fibers to
deliver specific racket performance
characteristics.

M

MODULUS

Relates to the tensile strength and stiffness of the carbon fiber, it defines the performance of the frame for different skill levels, durability and speed of swing. **ASPECT**

How our engineering team constructs the racket using different layers, types and angles of composite material to alter racket behaviour to suit different playing styles.

RESIN

We fill the voids between the carbon fibers with a viscous fluid that adds incremental performance benefit to the racket.

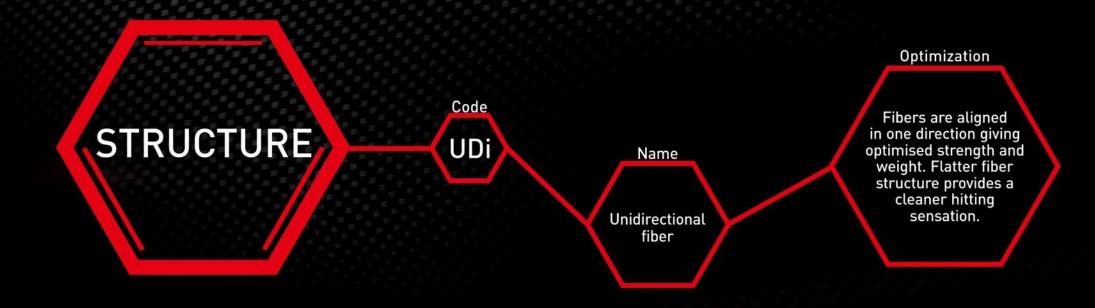
TYPE

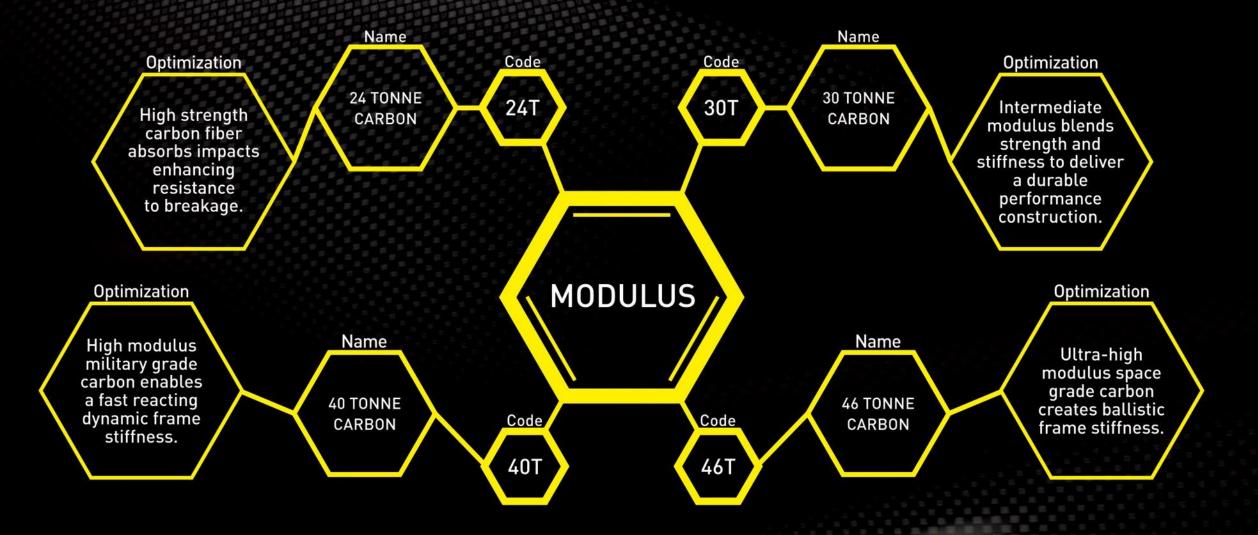
We use different composite materials to engineer new levels of performance.



ALWAYS PLAY S.M.A.R.T

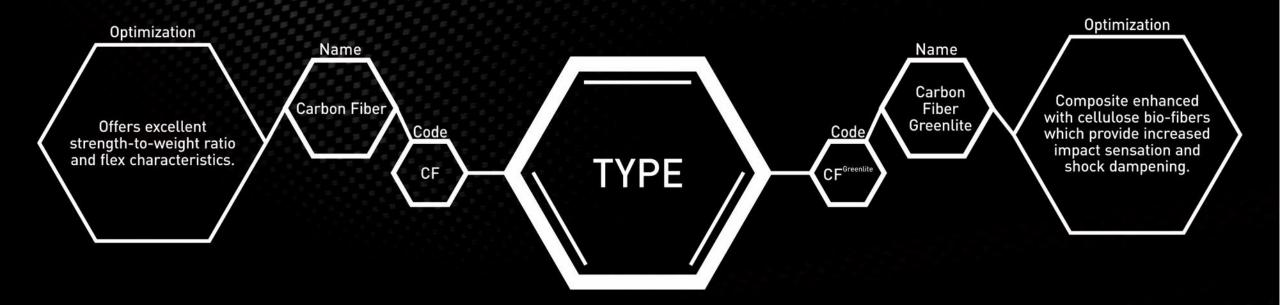
The S.M.A.R.T code can be found on the hoop of adidas badminton rackets.



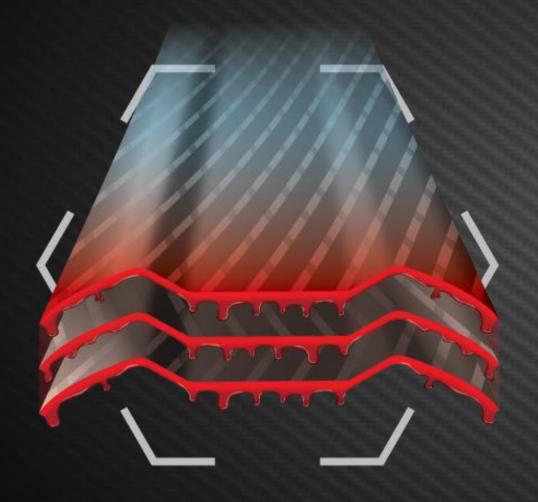








UPGRADED SMART CARBON



name

/// HOT S.M.A.R.T Carbon

function

/// thin film ply technology applied to the S.M.A.R.T Carbon DNA

benefit

///increases distribution and consistency of resin in the S.M.A.R.T Carbon matrix

performance

///greater performance and uprated durability

KEY ENABLING TECHNOLOGIES

QUATTRO CAGE



name

///quattro cage

function

///4 reinforced carbon cages positioned at key locations in the hoop

benefit

///explosively increases the dynamic stiffness of the hoop

performance

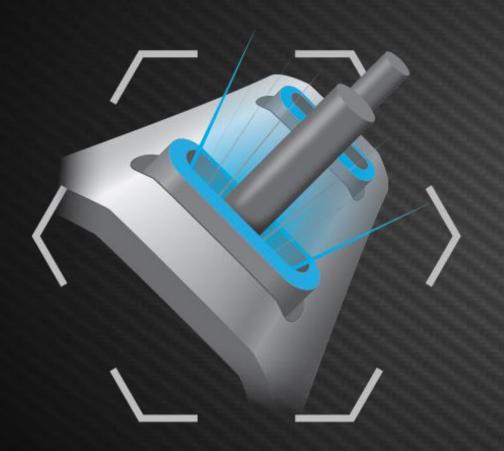
///stores and catapults energy during snap back accelerating the shuttle

features on

///wucht P8 / P7 / P6



E.G.G GROMMETS



```
name
///E.G.Gs
```

```
function
///elliptical geometry grommets
```

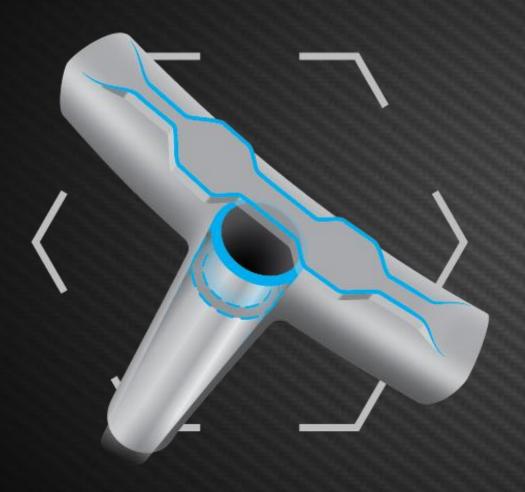
benefit ///increases string bed movement

performance ///greater string bed dynamic responsiveness

```
Features on /// wucht P5 /P3 / P2 / P1
```



T-LOK



```
name
///T-Lok
```

function

///higher insertion point of shaft into the hoop

benefit

///tight integration of shaft and hoop

performance

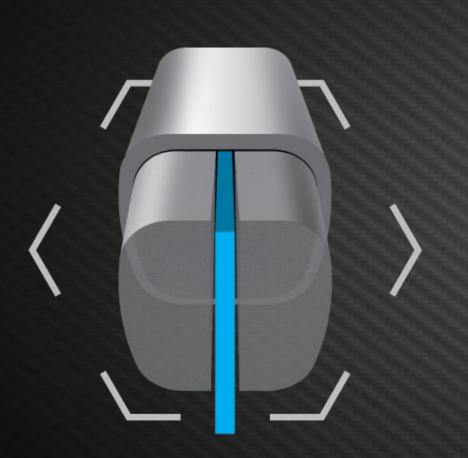
///increased T-joint stability

Features on

///kalkül A5 /A3 / A2 / A1



CARBON CORE



name

///carbon core

function

///24T/30T/40T Carbon foam reinforced inner hoop core

benefit

///increases stiffness and structural strength

performance

///greater hoop responsiveness

Features on

///überschall F5 /F3 / F2 / F1

CARBON CORE INNER STRENGTH

adidas

HOOP STIFFNESS



CARBON LAYER INTEGRATED INTO FOAM CORE

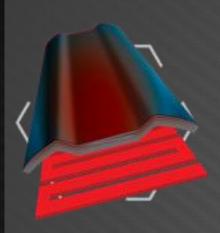
HOOP TORQUE



3%
TORQUE
ENHANCEMENT

LEVEL 2 TECHNOLOGIES

CONSTRUCTION



N: Thermacyclic Cure

F: Advanced frame molding system accurately controls temperature and pressure cycles

B: Improved carbon fiber alignment

P: Optimised frame performance and durability

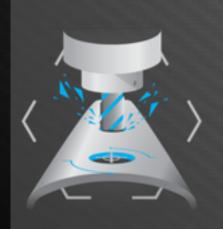


N: C^2 Milled

F: Precision cutting of the shaft to create a perfectly even shaft cross section

B: Improved consistency of shaft flexion

P: Higher shaft performance



N: C^2 Ports

F: Computer controlled drilling of grommet ports

B: Improved alignment of grommets within the grommet rail

P: *Increased string bed performance*



N: C^2 Forged

F: Computer controlled curing of the shaft

B: Improved carbon fiber alignment

P: Maximum shaft performance

HOOP GEOMETRY



N: Hex Wing

F: 6 sided hoop beam profile

B: Reduces hoop flexion

P: Provides a stable hitting platform for pin

point accuracy



N: Quad Wing

F: Rigid box frame hoop profile

B: Creates a strong, hard frame

P: Enhanced power generation



N: Micro Quad Wing

F: Stealth like slim beam profile

B: Reduced air drag

P: Greater aerodynamic efficiency



N: 3D Reflex Wing

F: D beam hoop profile that reflexes at 3 and 9 o'clock

B: Creates a **smooth** surface area

P: Dissipates vibration for greater feel and playability

HOOP GEOMETRY



N: Delta Wing

F: Delta shaped hoop cross section

B: Increases stiffness across the hoop on shuttle impact

P: Hoop power rating increased



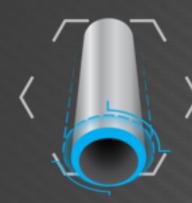
N: Knife Edge

F: Sharpened hoop profile at 3 and 9 o'clock

B: Cuts through the air to reduce drag

P: *Increased hoop speed*

SHAFT GEOMETRY



N: Slim 6.8

F: *Slim shaft diameter*

B: Faster flex reaction of shaft

P: *Improved elastic power*

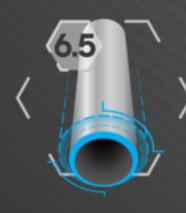


N: S.M.A.R.T Wrap

F: Construction **DNA** of adidas badminton shafts

B: Optimisation of shaft material

P: Specific and aggressive shaft performance



N: *X-Slim 6.5*

F: Extreme slim 40T carbon shaft diameter

B: Lightning fast responsiveness

P: Greater accuracy of shot



N: 3DT

F: 3 dimensional T-joint

B: Reduces twisting

P: Enhanced power transfer

HOOP TUNING



N: Dual Power Rail

F: 2 carbon reinforced tracks positioned at 2 and 10 o'clock

B: Increases dynamic stiffness in key hoop locations

P: Drives an increase in power output



N: Power Arc

F: Carbon reinforced T-Joint

B: Enhances torque transfer from shaft to hoop

P: Greater hoop power



N: Impulse Wave

F: Sculpted frame hoop profile at 3 and 9 o'clock

B: Grooves help to dissipate hoop vibration shock

P: More natural playing experience

GROMMET ENGINEERING



N: Expanders

F: Grommet upgrades that increase string bed

B: Opens up the sweetspot

P: Boosts elastic string bed power



N: Glide Inserts

F: Polymer reinforced grommets

B: Reduced friction between grommet and string

P: *Increased string performance*

STRING PATTERNS

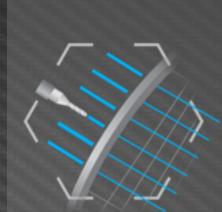


N: Compressor 76/72

F: Higher number of strings per square inch

B: Greater surface area connection between shuttle and string bed

P: Accuracy of shuttle placement is increased

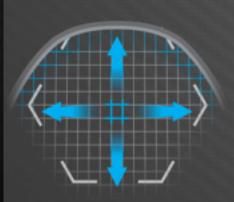


N: Parallel 72 and 76

F: Horizontal strings at 3 and 9 o'clock

B: *Increased string dynamic stiffness*

P: Greater elastic string bed power

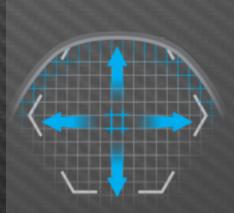


N: *Aero 80*

F: Reduced number of strings per square inch

B: Reduces the effect of string drag

P: Optimised aerodynamic efficiency



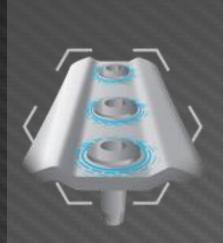
N: Aero 74

F: Reduced number of double holes

B: Improved aero string package

P: Optimised aerodynamic efficiency

STRING PATTERNS



N: Sense 76

F: Evenly distributed string pattern

B: Balanced touch and power delivery

P: Consistent playability



N: Dura 72/56/54

F: Low grommet hole count

B: Reduces potential frame breakage

P: *Increased frame* **durability**



N: Mono Strung

F: No co-shared string holes and smaller string inserts

B: Reduces aero elasticity and drag around hoop

P: Increased **speed** and **stability** through the air

HANDLE ENGINEERING



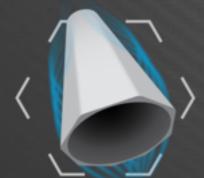
N: Pilot Top Cap

F: Stiffening ribs and wide flat front geometry

B: Decreases unwanted lateral flexion and

provides stable platform

P: Improves shaft stability and flex repeatability



N: Speed-8 Top Cap

F: Octagonal geometry top cap

B: Multi directional optimised aerodynamics

P: Faster swing speed



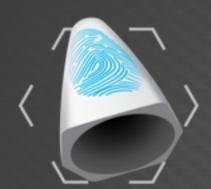
N: 4orces Top Cap

F: 4 power rails located on the front of the top cap

B: *Quadruple* stiffening of the top cap

P: Higher reactive shaft power

HANDLE ENGINEERING

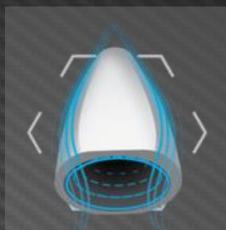


N: Control Pad

F: Increased top cap frontal surface area

B: Improved *connection* between hand and handle

P: Enhanced racket *touch play*



N: Impulse Cap

F: Smooth organically curved shape

B: Improves energy transmission through the hand

P: Smooth energy flow and comfort



N: Air Splitter

F: Aerodynamically optimised top cap

B: Reduces drag around grip

P: Increased racket speed

HANDLE ENGINEERING



N: Power Plate

F: Wide flared geometry giving a strong grip

B: Harder platform to launch your attack

P: Harder hitting



N: Shock Pod

F: *Ergo shaped with integrated shock absorbing material*

B: Soaks up handle vibration

P: Enhanced racket feeling



N: Micro Bubble

F: A capsule of micro bubbles in the handle

B: Reduces shock transfer from racket to hand

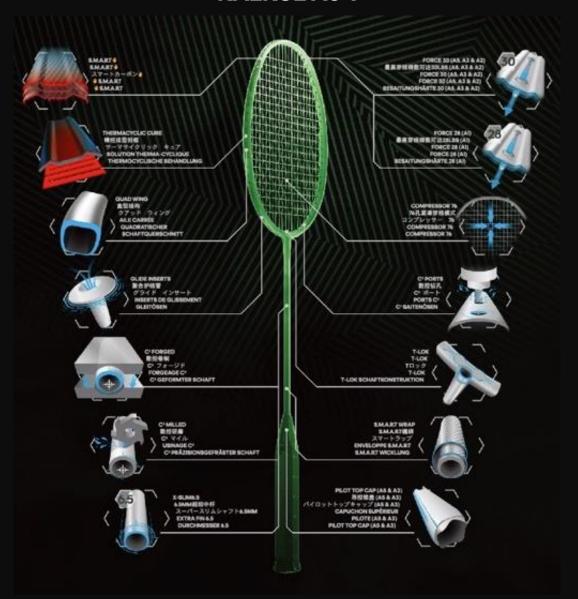
P: More natural playing experience

RACKETS TECH SHEETS





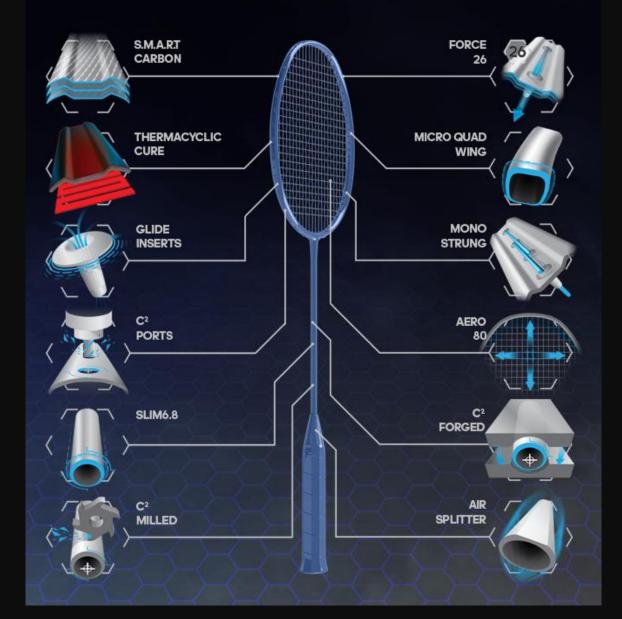
KALKÜL A5-1



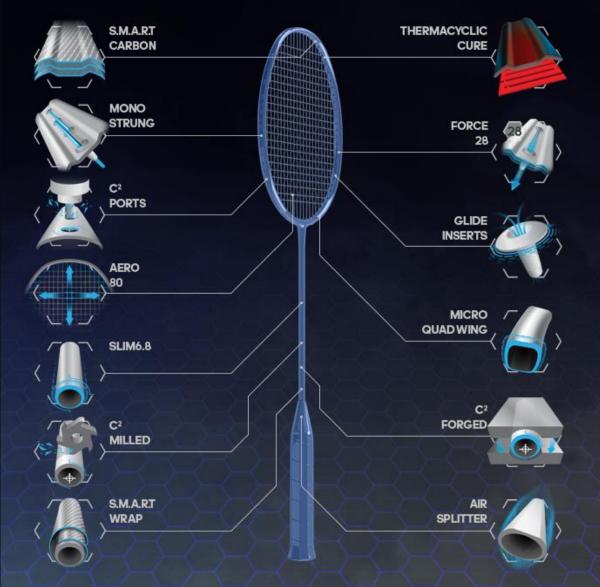
ÜBERSCHALL F5-F1



SPIELER F09.1 SL



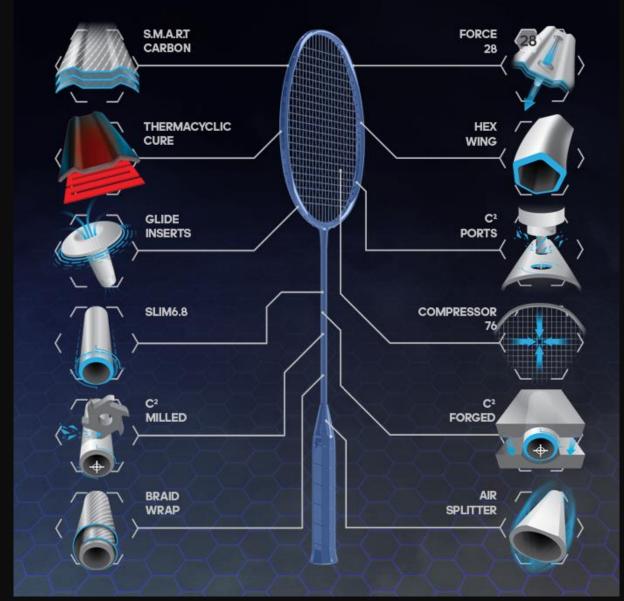
SPIELER F09.1



SPIELER W09.1



SPIELER A09.1



SPIELER E AKTIV S.M.A.R.T CARBON FORCE 30 (3U) THERMACYCLIC FORCE 28 (4U) CURE HEX WING C² PORTS GLIDE INSERTS SENSE C² FORGED S.M.A.R.T WRAP AIR SPLITTER