

SUPER
ROCKER

$$\text{Radius} = (l - e)^2 / (20 * (s + t - 2p))$$

$$LH = LW * 0.1$$

$$L1 = (LTOT - LW) * 0.8$$

$$L2 = LW * 0.9$$

$$LS = L1 + LW$$

$$L = L1 + L2$$

$$R = \frac{L2}{2000 * (S + H - 2 * W)}$$

ULTRA
LIGHT
FIBREGLASS STABILIZER - PAULOWNIA CORE - CARBON B
ARMIED BASE

NEOTERIC
CAMBER

SPEARHEAD 80

SUPER ROCKER

CARBON ULTRA LIGHT

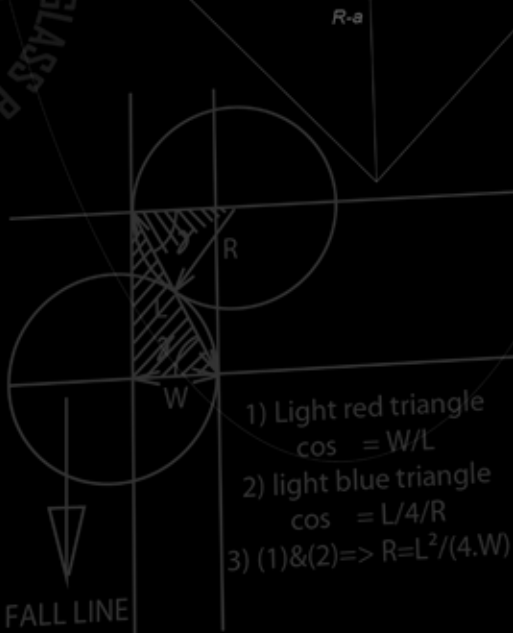
Middle Foot

woodCore



ULTRA
LIGHT
FIBREGLASS STABILIZER - PAULOWNIA CORE - CARBON B
ARMIED BASE

SPEARHEAD
WHYMPER
KRUMPE
JEAGER



- 1) Light red triangle
 $\cos = W/L$
- 2) light blue triangle
 $\cos = L/4/R$
- 3) (1)&(2) => $R = L^2 / (4.W)$



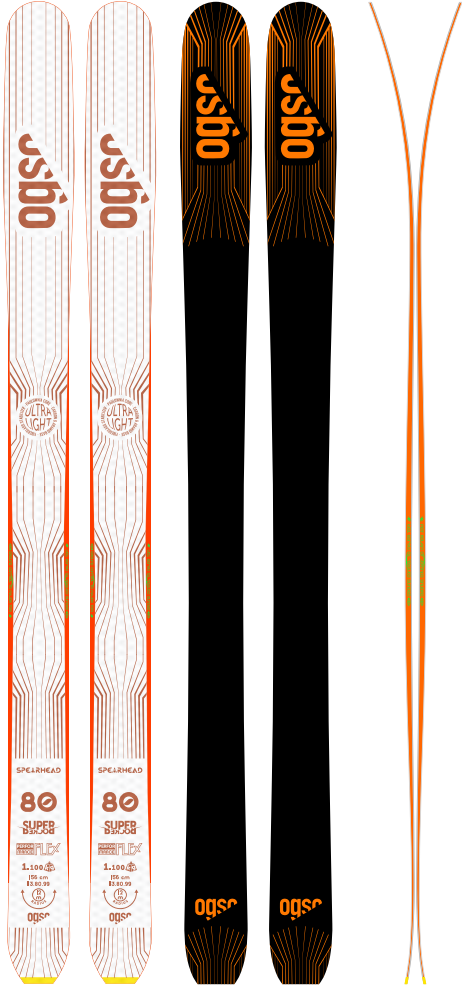
Scan to watch
on

GROUND CONTROL TO MAJOR TOM "DAVID BOWIE"



MOUNTAIN ESSENTIALS

SPEARHEAD 80 SUPER ROCKER CARBON ULTRA LIGHT



GROUND CONTROL TO MAJOR TOM "DAVID BOWIE"

[ULTRA TOURING]

SPEARHEAD is an ultralight touring ski designed for big, high and long tours. This versatile, all-mountain ski is one of the lightest skis we make and is super playful in all snow and mountain conditions.

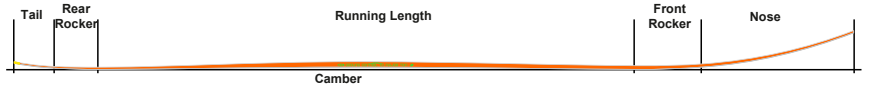
If you're looking for a playful, ultralight touring ski for your biggest days in the alpine that is lightning fast edge-to-edge, floats in powder, and rails fun turns on the piste, then SPEARHEAD is the ski for you.

An ISOSPORT 7510 base is a racing standard base that provides fast glide and outstanding durability.



SIZE: [156] [164] [172] [180] [188]

SKI PROFILE SHAPE



SPEARHEAD TOP-SHEET



CK-700 CARBON



PAULOWNIA WOOD CORE



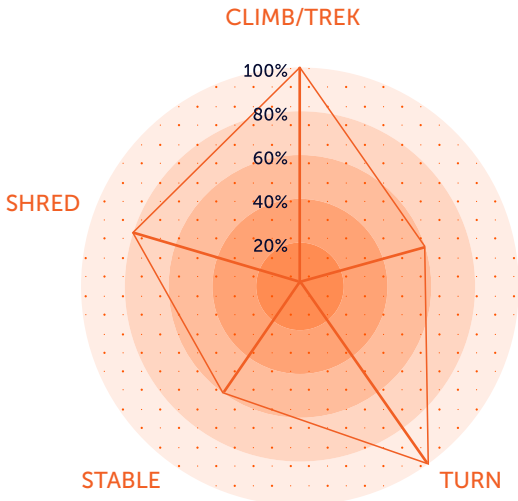
CK-700 CARBON

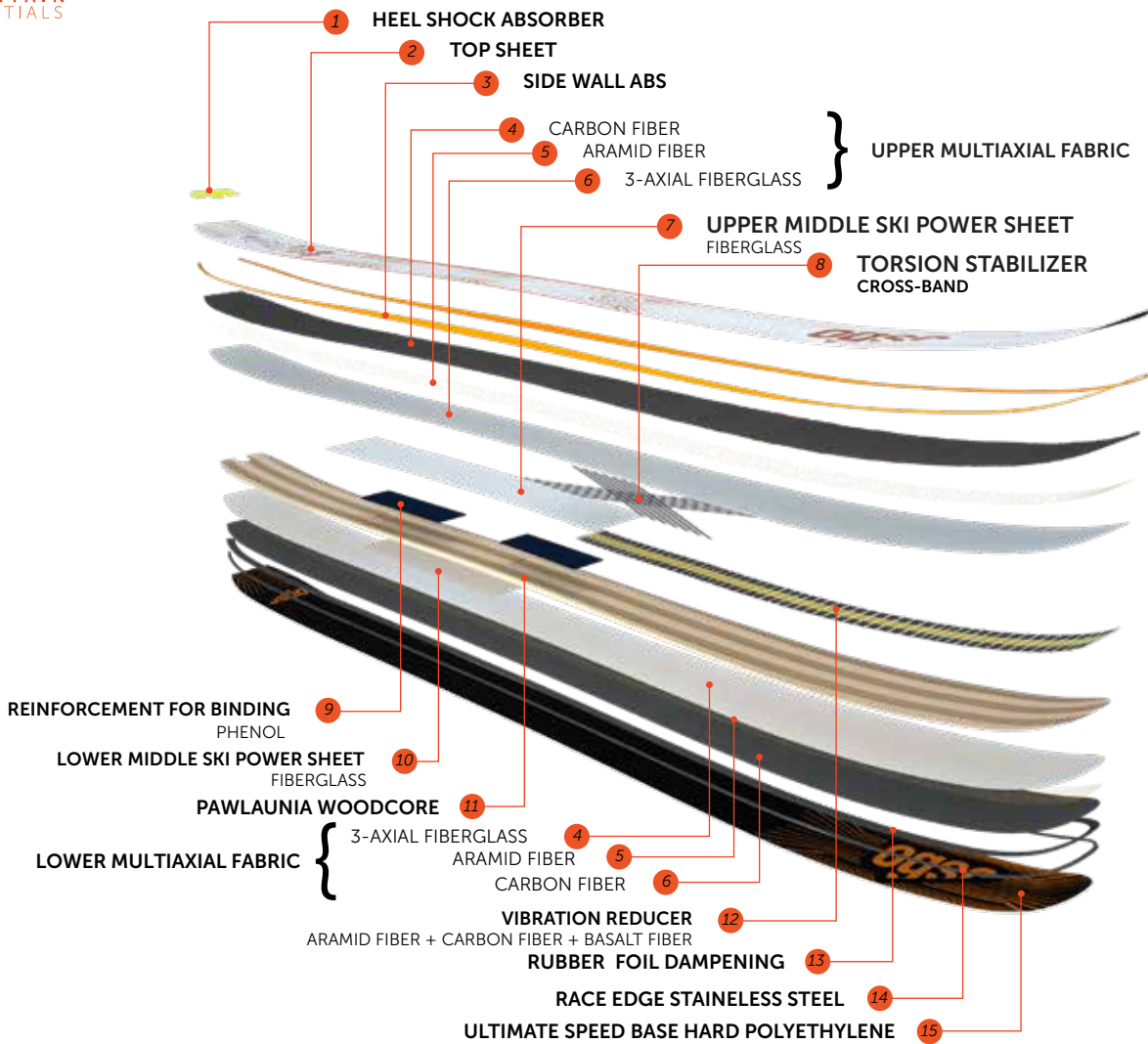


SPEARHEAD BASE-SHEET IS 7510



Base thickness 1.2mm

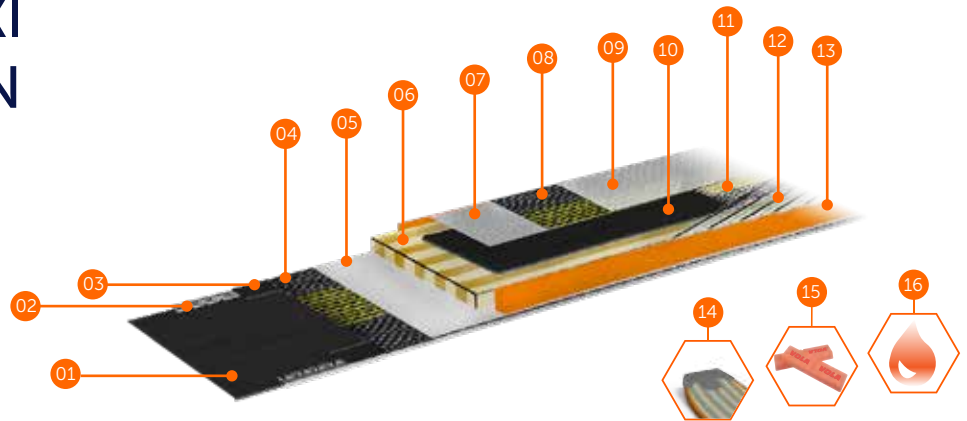




Spearhead 80 SUPER ROCKER ULTRALIGHT

Commercial Length (cm)	156	164	172	180	188
A: Flat Length (cm)	155,4	164,05	172,2	180,05	187,7
B: Air Length (cm)	155,0	163,6	171,7	179,5	187,1
Surface Area (cm ²)	1427,0	1545,0	1667,0	1777,0	1893,0
Weight (kg)	1,1	1,2	1,3	1,4	1,5
Width Measures: Front, Middle, Back (mm)	113,80,99	117,82,102	121,84,105	123,86,107	125,88,108
Radius Average (m)	14	15	16	18	20
Radius Center (m)	12	13	14	16	18
Nose Rise Length (mm)	270	275	290	305	320
Tail Length (mm)	60	65	70	75	80
Front Rocker Length (mm)	120	130	140	150	160
Back Rocker Length (mm)	120	130	140	150	160
Running Length (mm)	990	1040	1080	1120	1160
Camber Height (mm)	4	4	4	4	4
Nose Height (mm)	62	62	62	62	62
Tail Height (mm)	14	14	14	14	14
E: Middle Boot From Tail including tail protection (mm)	650	687,5	720	752,5	785

ULTRA LIGHT SKI COMPOSITION



01 BASE SHEET IS 7510

www.isosport.com

- Black carbon 10-15%
- Made of premium crosslink polyethylene.
- Good abrasion resistance, very low stress level.
- Modified with wax for better gliding.

02 STAINLESS EDGE

www.waelzholz.com

The steel racing edge provides smooth flex and minimal friction resistance.

The main characteristics of stainless steel are as follows:

- High durability
- Good ductility
- Optimal gliding behaviour
- Improved adhesion
- High mechanical strength

03 RUBBER

www.haberkorn.ch

Thin rubber used between the metal edge and fiberglass layers to minimize shearing-induced delamination. Equalising temperature-related expansion and differing stress-strain coefficients.

Suitability for use over a wide temperature range. Vibration damping up to the point of component decoupling.

04 CARBON FIBER CK-700

www.pgtext.ch

Carbon fibers or carbon fibres are fibers about 5–10 micrometres in diameter and composed mostly of carbon atoms.

Carbon fibers have several advantages such as:

- High stiffness,
- High tensile strength,
- Low weight,
- High chemical resistance,
- High temperature tolerance and low thermal expansion.

Its main use is to serve as a reinforcement in composite materials, which makes it possible to obtain parts having good mechanical properties while being significantly lighter than metal parts. These properties have made carbon fiber very popular in aerospace, civil engineering, military, and motorsports, along with other competition sports.

05 FIBER GLASS 60-24

www.pgtext.ch

E-glass fibre products are particularly resistant to abrasion and vibration and have excellent flexibility. The glass thread has a higher specific resistance (tensile strength/volumetric mass) than that of steel. This feature makes it possible to develop glass threads that reinforce high performance composites.

The main characteristics of Fiberglass are as follows:

- Good resistance to abrasion and vibrations
- Rot-resistant
- Excellent dielectric strength
- Excellent dimensional stability

06 PAULOWNIA WOOD CORE

FSC certified forest management. Paulownia is the wood of the phoenix tree. The paulownia wood is tall and straight. It is the leader among the trees. Paulownia is one of the lightest woods. It has the unique characteristics of resistance to rot, acid and alkali.



09 TOP SHEET 5275

www.isosport.com

The main characteristics of polyamides are :

- Resistance to aging over long periods.
- High mechanical strength and high rigidity.
- Functional tenacity even at low temperatures.
- Excellent dielectric properties.
- Good resistance to abrasion.

10 PHENOL REINFORCEMENT FOR BINDING

www.isosport.com

In this material, the high-strength papers are impregnated with phenolic resins and compressed into sheets of durable, durable and reactive material. This material is characterized by its excellent mechanical properties to hold the screws in place.

11 VIBRATION & CRACKING REDUCER

BAND(basalt-fiber+carbon-fiber+aramid fiber)

www.chomarat.com

The unidirectional ribbon is composed from a carbon frame that surrounds a large basalt and kevlar fiber core in a continuous weft.

The Carbon frame provides:

- High stiffness
- High tensile strength
- Excellent impact resistance

The Basalt & Kevlar core provides:

- Excellent dielectric insulation
- High modulus of elasticity
- Excellent vibration damping

12 TORSION STABILIZER

CROSS-BAND (carbon fiber+fiberglass)

www.chomarat.com

The ribbon is unidirectional carbon fiber with continuous weft. It is a light and open reinforcement.

- Narrow ribbons
- Excellent alignment of fibers
- Less crimped with good mechanical properties at 0°
- Ensures the rigidity and stability of the parts

13 SIDE WALL ABS

www.isosport.com

Especially designed for winter sport applications. Charpy impact strength notched: +23 C°/-25C° ISO DUR ID1000-147

14 HEEL SHOCK ABSORBER

The material we use is ELASTOLLAN R1000 from BASF.

Glass fibre reinforced thermoplastic Polyester-Polyurethane-Elastomer with exceptional properties, very

high impact resistance, high modulus with at the same time elasticity, low coefficient of thermal expansion

comparable with steel and aluminium.

- Modulus of elasticity - tensile test : 1000MPa
- Density : 1.36g/cm³
- Hardness : 60 Shore D
- Glass-fiber content : 20%
- Tensile strength : 50MPa
- Impact + notch strength : +23 -30

Injected by Injection 74

www.polyurethanes.basf.com
www.injection74.com



15 VOLA WAX

www.vola.fr

Racing universal wax 500G orange. Ski wax improves the coefficient of friction performance under varying snow conditions.

Universal 500G designed to match with the varying properties of snow, including crystal type and size, and moisture content of the snow surface, which vary with temperature of the snow.

16 RESIN

www.sicom.in.com

Bio Based resin is outcoming from the latest innovations in bio-based chemistry.

Bio Based resin is produced with a high content of carbon from plant origin.

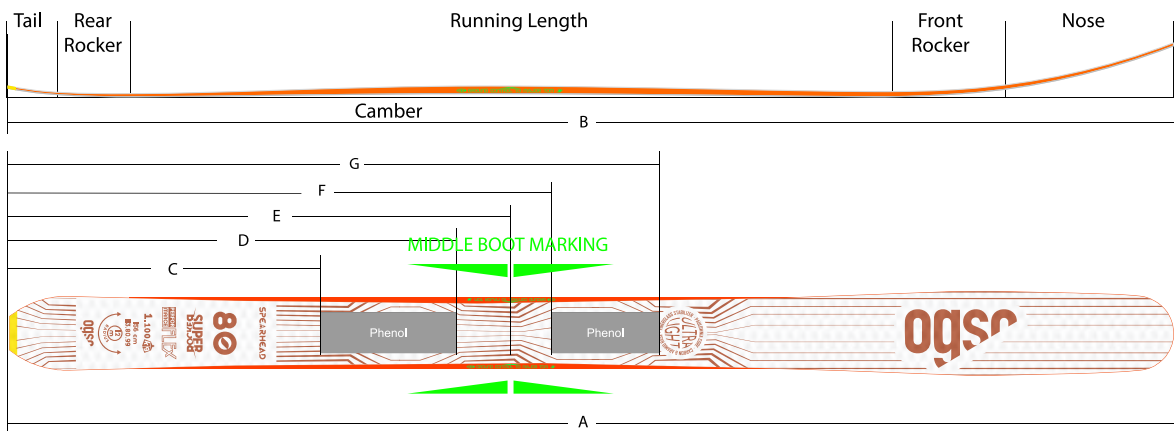
The bio-based Carbon content of our supplier's system is certified by an independent laboratory using Carbon 14 measurements (ASTM D6866 or XP CEN/TS 16640)

This is a significant technological advance on the following points: Clarity, colour, performances and guarantees of industrial tonnages availability.

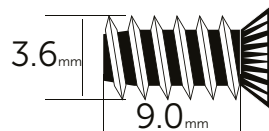


Spearhead 80 SUPER ROCKER ULTRALIGHT

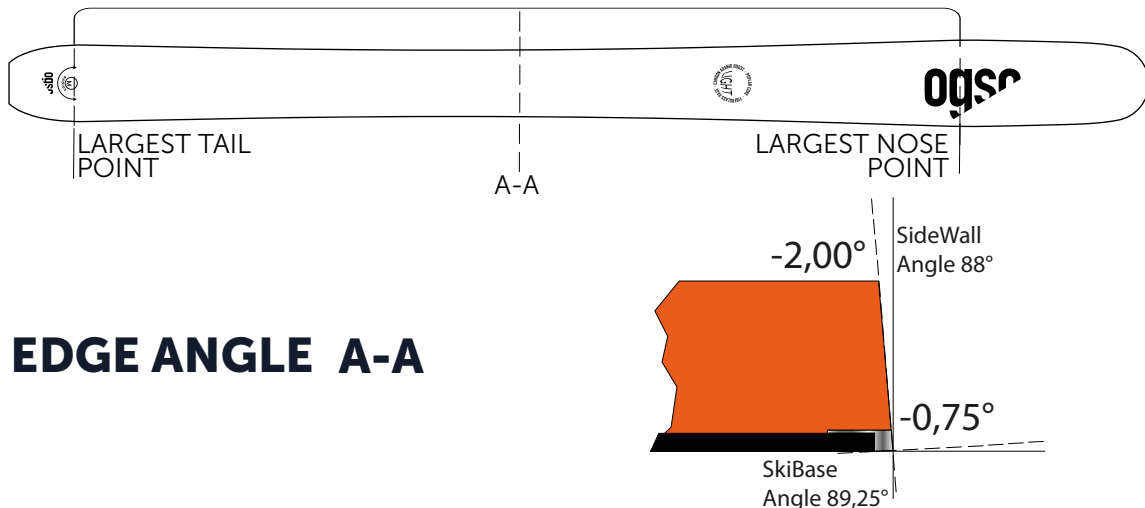
Commercial Length (cm)	156	164	172	180	188
A: Flat Length (cm)	155,4	164,05	172,2	180,05	187,7
B: Air Length (cm)	155,0	163,6	171,7	179,5	187,1
C: Start rear phenol	370	407,5	440	472,5	505
D: End rear phenol	570	607,5	640	672,5	705
E: Middle Boot From Tail including tail protection (mm)	650	687,5	720	752,5	785
F: Start front phenol	710	747,5	780	812,5	845
G: End front phenol	870	907,5	940	972,5	1005



SCREWS RECOMMENDED ULTRA LIGHT SERIES



SHARPENED STEEL EDGE AREA



EDGE ANGLE A-A