

CARBORUN

Active Carbon Fiber Wheelchair



About US

In 2017, AVITA was founded by a number of elite graduates under the slogan of “Live Independently”. In this path, we strive to provide beautiful and uniquely designed products for the users. Safety, comfort and user satisfaction are our top priorities.

In addition to rehabilitation and medicine, AVITA is involved in the design and manufacturing of electric vehicles.

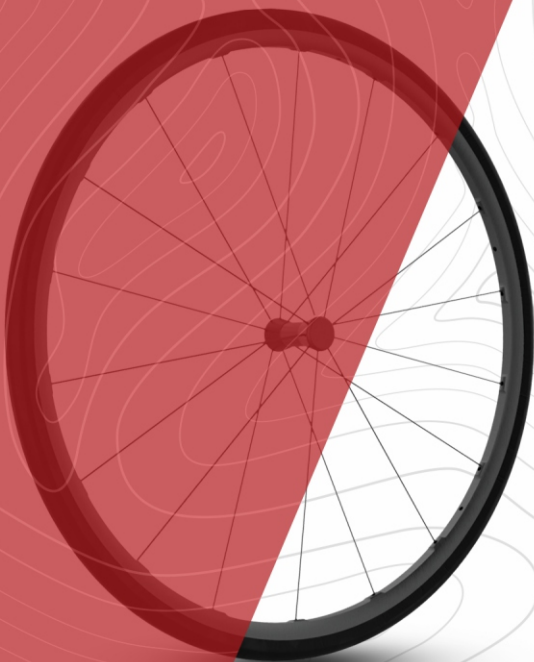


TEAM WORK

INGENUITY ART INTEGRITY

avita design

The design of a product is its spirit. A product with no spirit, regardless of its technology and innovation, still leaves a lot to be desired. At AVITA, product development is spearheaded by the design team. The design team works passionately towards creating new products with eyes looking towards the future trends, getting inspired by different tastes and feedbacks. We aspire to be seen not just because of our quality or services, but also our passion for product design.





Technology

Carbon fiber composites are among the lightest and strongest structural materials widely used in various applications from aerospace to marine structures. It has a strength to weight ratio 5 times that of steel and can be produced in complex shapes and various beautiful designs. It has an exceptional durability and chemical resistance.



ADVANCED CARBON FIBER TECHNOLOGY

Conceptual Design

Step 1

Research and Development

Development of Conceptual Design

Preliminary Conceptual Design



Detailed Design

Step 2

Advanced Conceptual Design

Finalized Design

3D Modelling



Prototyping

Step 3

Rapid Prototyping

Design of Pre-Production

Pre-Production



CARBORUN ACTIVE WHEELCHAIR

CARBORUN employs an ultralight yet strong carbon fiber chassis, combined with a beautiful and head-turning design. Overall wheelchair weight starts from 8 kg, with a transport weight (weight without rear wheels) of 5 kg.

Excellent agility and maneuverability of the wheelchair are among other key features of CARBORUN. The combination of design and craftsmanship results in an ultralight wheelchair that delivers on performance.

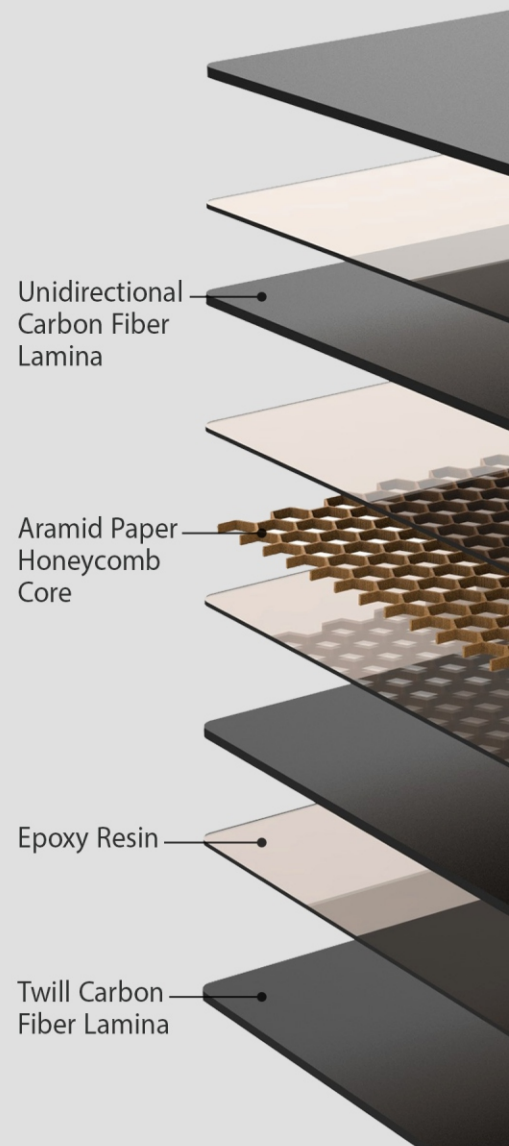
Made of a full carbon fiber frame, it adopts the latest technologies in each detail. It provides users with an elegant and smooth riding experience, unmatched by many of bestselling traditional wheelchairs.





High Strength Carbon fiber laminates

The carbon fiber reinforced polymer (CFRP) is an extremely strong and light fiber-reinforced plastic which contains carbon fibers. These composites are commonly used wherever high strength-to-weight ratio and stiffness (rigidity) are required. In CFRP, the reinforcement is carbon fiber, which provides its strength and the matrix is usually a polymer resin, such as epoxy, to bind the reinforcements together. One method of producing CFRP parts is by layering sheets of carbon fiber cloth into a mold in the shape of the final product. The alignment and proper grade of fiber should be chosen in order to optimize the strength and stiffness properties of the resulting material. The resulting part is very corrosion-resistant, stiff, and strong for its weight. The chassis parts are produced using compression moulding method after adding prepreg layups to the mould. The resulting parts are precisely shaped, and contain a low amount of defect due to the high pressure applied in the curing process.





Rigid wheelchairs typically are manufactured of materials that are lighter in weight than standard or folding wheelchairs. Their sleek design also minimizes the amount of material that is used to produce the wheelchair, which adds to the reduction in weight. Although these wheelchairs are very light, they are designed to be durable for the active user. CARBORUN is an active and rigid wheelchair made of carbon fiber composite.

Frame , Footplate and Sideguard Material	Carbon fiber composite
Backrest Material	Aluminum
Frame Color	Custom
Front Wheel	Size: 3" - 4" - 5"
Rear Wheel	Size: 24"
Seat Width (SW)	36 - 39 – 42 – 45 cm
Seat Depth (SD)	38 – 40 – 42 – 44 cm
Footplate Distance (FD)	33 – 35 – 37 – 39 – 41 – 43 – 45 cm
Backrest Height (BH)	25 – 35 – 40 – 42 – 45 cm
Backrest Angle (BA)	85 , 90 , 95 , 100 degree
Transport Weight (<i>Without rear wheels</i>)	approx. 5.1 kg
Total Weight	approx. 8 kg
Maximum User Weight	approx. 130 kg

CARBORUN



- Rigid frame and Transfer-friendly design
- Perfect balance of weight and stability
- A wide range of frame colours
- Different adjustments for a perfect individual fit
- Specially designed carbon fibre elements
- Integrated design and structure

live
independently



CARBORUN



TECHNICAL DATA



SW: 36 – 45 cm
in increments
of 3 cm



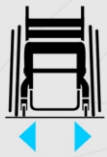
SD: 38 – 44 cm
in increments
of 2 cm



FD: 33 – 43 cm
in increments
of 2 cm



BA: 85° – 100°
in increments
of 5°



TOTAL WIDTH:
approx
SW + 18 cm



TOTAL LENGTH:
approx
85 – 100 cm



SH: fixed
front: 47 cm
rear: 43 cm



BH: 25 – 45 cm
in increments
of 5 cm



CAMBER:
0° or 2°



TOTAL WEIGHT:
approx
8 kg



TRANSPORT
WEIGHT:
approx
5.1 kg



MAX USER
WEIGHT:
130 kg



REAR WHEEL:
24 inch



FRONT WHEEL:
3/4/5 inch



SIDE GUARD:
carbon fiber



CARBON FIBER:
frame / foot plate
/ side guard

CARBORLIN



FRAME COLOR

BLACK



**CARBON
TEXTURE**



WHITE



BROWN



PURPLE



PINK



BLUE



CYAN



GREEN



**NEON
GREEN**



RED



YELLOW



Brake



Classic
Material: Aluminum



Sport (N1)
Material: Aluminum
Stainless Steel
PVC



Sport (N3)
Material: Plastic



Sport (N2)
Material: Aluminum
Stainless Steel
PVC

Side Guard



Straight Handrest



Curve Handrest



Classic Side Guard
Carbon Fiber



Sport Side Guard
Carbon Fiber



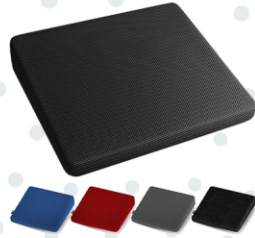
Classic Side Guard
Aluminum



Straight Side Guard
Carbon Fiber



Foam Cushion



Breathable
Cushion



Memory Foam
Cushion



Back Support
Cushion



Anti-Tip



Telescopic Mini Pump
Color: Blue, Red,
Black, Silver



Portable Mini Pump
(Xiaomi)



Black Backpack



Positioning Belt



Cup Holder

Accessories



Size: 3"
Outer Diameter
 80 mm
Surface: Anodized
Tire Width: 26 mm
Color: Blue, Red, Black



Size: 4"
Outer Diameter
 103 mm
Surface: Anodized
Tire Width: 33 mm
Color: Blue, Red, Black



Size: 5"
Outer Diameter
 125 mm
Surface: Anodized
Tire Width: 33 mm
Color: Blue, Red, Black



Standard Fork
Material: AL
Surface: Anodized
Color: Black



Sport Fork
Material: AL
Surface: Anodized
Color: Blue, Red, Black



Single-Sided Fork
Material: AL
Surface: Anodized
Color: Blue, Red, Black



Single-Sided Fork



Size: 5"

Front Wheel



Basic: Size: 24"
Pushrim: Silver
Anodized Aluminum
Weight: 1.5 kg



Avita-One: 24"
Pushrim: Silver
Anodized Aluminum
Weight: 1.6 kg



Day-Lite: 24"
Pushrim: Black
Anodized Aluminum
Weight: 1.2 kg



Spoke-Size: 24"
Material: AL
Surface: Anodized
Color: Blue, Red, Black



Pushrim: Size: 24"
Material: AL
Surface: Anodized
Color: Black, Red, Silver



Handrim Cover
Material: Silicone
Size: Diameter 53-54 cm
Thickness 4.6 mm
Color: Black, Red, Blue



Pneumatic Rear
Tire Size: 24"
Color: Black, White

Rear Wheel



AVITA MEDICAL

CARBORUN W102

Live Independently



www.avita-med.com
info@avita-med.com

@avitawheelchairs



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