

made in italy



WHEELS carbon fibre boat steering wheels

EXIT
CARBON



OUR WHEELS

Exit Carbon wheels are suitable for sailing yachts, racing yachts, catamarans, and trimarans.

Exit Carbon steering wheels are ideal for anyone looking for a more responsive helm and enhanced comfort while, at the same time, increasing safety.

BEST AVAILABLE MATERIAL

100% carbon pre-pregs fabrics and carbon moulds

BEST AVAILABLE TECHNOLOGY

clean room lay-up and autoclave cure



EXIT
CARBON

TECHNICAL EXCLUSIVITY

Three spokes design: DAME nominated.

European Patent 1755869B1:
Exit Engineering was the first company to design and manufacture a wheel built in one piece, with no gluing of separate parts, unlike all other brands.

Best results in terms of lightness, strength and consistency.

The exact same wheel which we supply to the fastest racing multihulls and monohulls in the world is available for your yacht as well.

CUSTOMISATION

Each wheel is supplied with the appropriate hub for your steering system. Custom hubs can be designed, machined and installed on request.

Our wheels are sold with clearcoat as standard finishing and custom painting is available as option.

RELIABILITY

Manufactured with the very best materials, fibres lay-up, and components.

Traceability of each wheel is guaranteed, from the raw materials to the final packaging, by its Serial Number, and each wheel is supplied with its individual Declaration of Conformity.

We use only the best PPG® paints, tested for our products by a specialised laboratory, certifying the durability of our clearcoat and resins, both for UV radiation and Salt Spray.



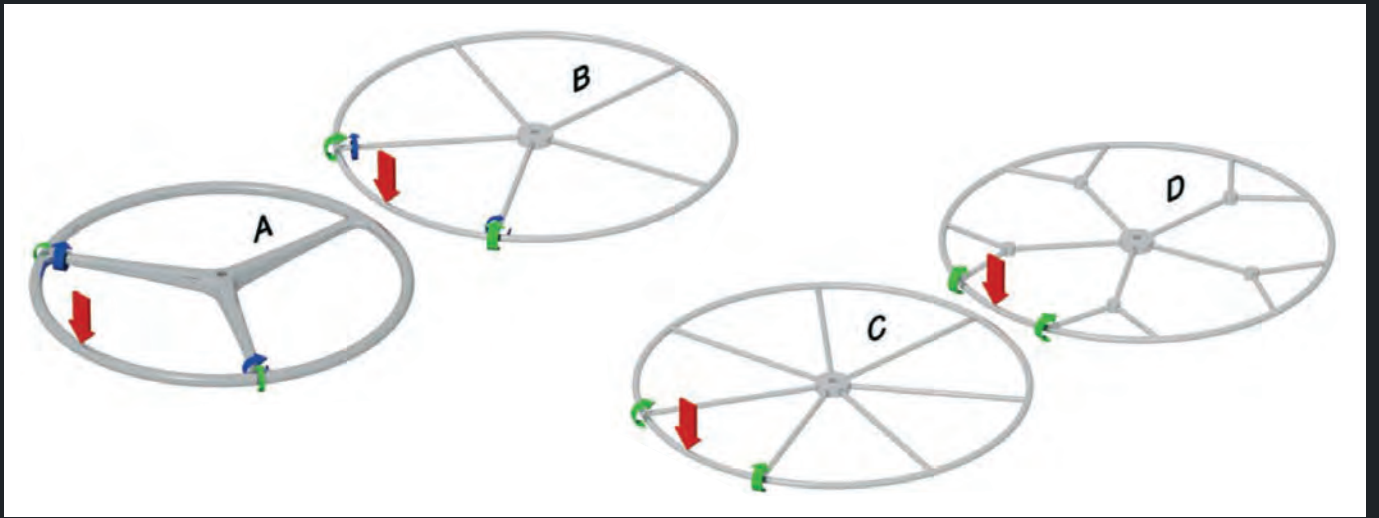
Y OR I? TWO SOLUTIONS FOR ONE PROBLEM: to transfer a pull from the rim to the spokes to discharge it onto the axle

It is a simple problem with many solutions. If you pull on the rim at the end of a spoke, the load on the spoke is exclusively bending, but if you pull between two spokes, the bending decreases with the number of spokes and, as shown in figures D to A, it mainly becomes torsion. If we want to use only a few spokes, they must be designed to resist both types of load, thus they must have a very wide connection to the rim. Just think of what happens if you try to unscrew a screw with a screwdriver that is too small. As we can see the Y construction behaves like metal wheels with a lot of spokes.

There are many reasons why Exit Carbon have adopted the current 3-spoke construction and in our opinion it is fully justified, despite the greater structural complexity, which involves additional design work.

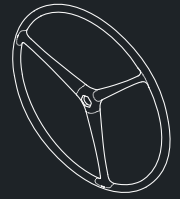
If you use fewer spokes, each of them can be wider. It's easier to lay-up a large diameter spoke, so the process is more controllable, meaning that the quality and reliability of the wheels is uniform. In a carbon fibre wheel, the overlaps account for a significant part of the overall weight. Any bifurcation in the spokes needs additional plies, thus increasing the number of overlaps between plies. Therefore, avoiding forks, saves weight. Our patented Continuous Shell Construction Method requires internal vacuum bags for creating a monocoque wheel. Straight spokes allow for much easier vac bags than forked spokes. On the other hand, if you make the wheel by glueing separate parts, you don't care about the complexity of internal vacuum bags, which you don't use at all. The wide connections to the rim reduce tension peaks, meaning that minimum thickness can be used away from the hub, to the benefit of low rotational inertia. Therefore we consider that the construction with a few straight spokes is far superior to any Y fork architecture, however you really have to be carefully designing the rim-to-spokes and hub-to-spokes connections. A good design should have wide connections to both. The alternatives are excessive weight and/or potentially weak interface.





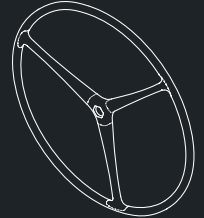
90 cm

overall diameter	935 mm	hub thickness	60 mm
weight*	1.34 kg	rim thickness	35 mm



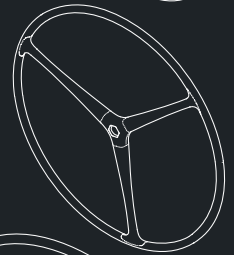
105 cm

overall diameter	1050 mm	hub thickness	60 mm
weight*	1.52 kg	rim thickness	35 mm



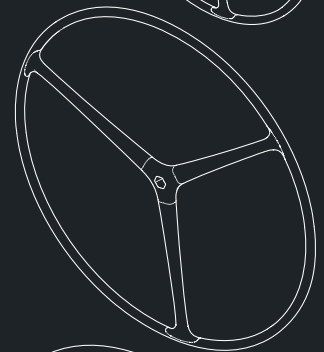
120 cm

overall diameter	1200 mm	hub thickness	60 mm
weight*	1.75 kg	rim thickness	35 mm



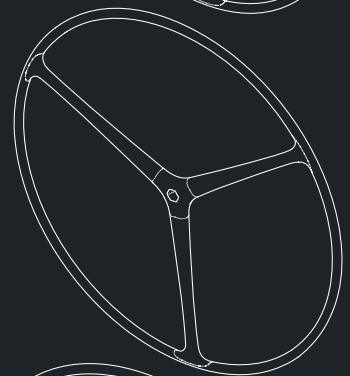
160 cm

overall diameter	1640 mm	hub thickness	60 mm
weight*	3.18 kg	rim thickness	40 mm



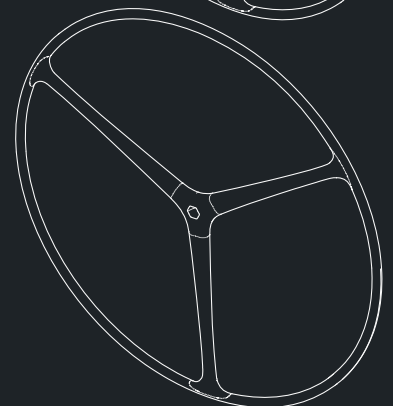
170 cm

overall diameter	1720 mm	hub thickness	60 mm
weight*	3.28 kg	rim thickness	40 mm



180 cm

overall diameter	1840 mm	hub thickness	60 mm
weight*	3.68 kg	rim thickness	40 mm



* The weights correspond to the carbon fibre steering wheels with anti UV coating without the hubs.

Conical hubs weigh 200 g Cylindrical hubs weigh 275 g



www.exitcarbon.com

Exit Engineering S.r.l.
VAT: IT03880600287

via Industria, 43
30010 Camponogara (Venezia) Italy
T. +39 041 89 48 038

F. + 39 041 89 48 034
www.exitcarbon.com
E info@exitengineering.com

