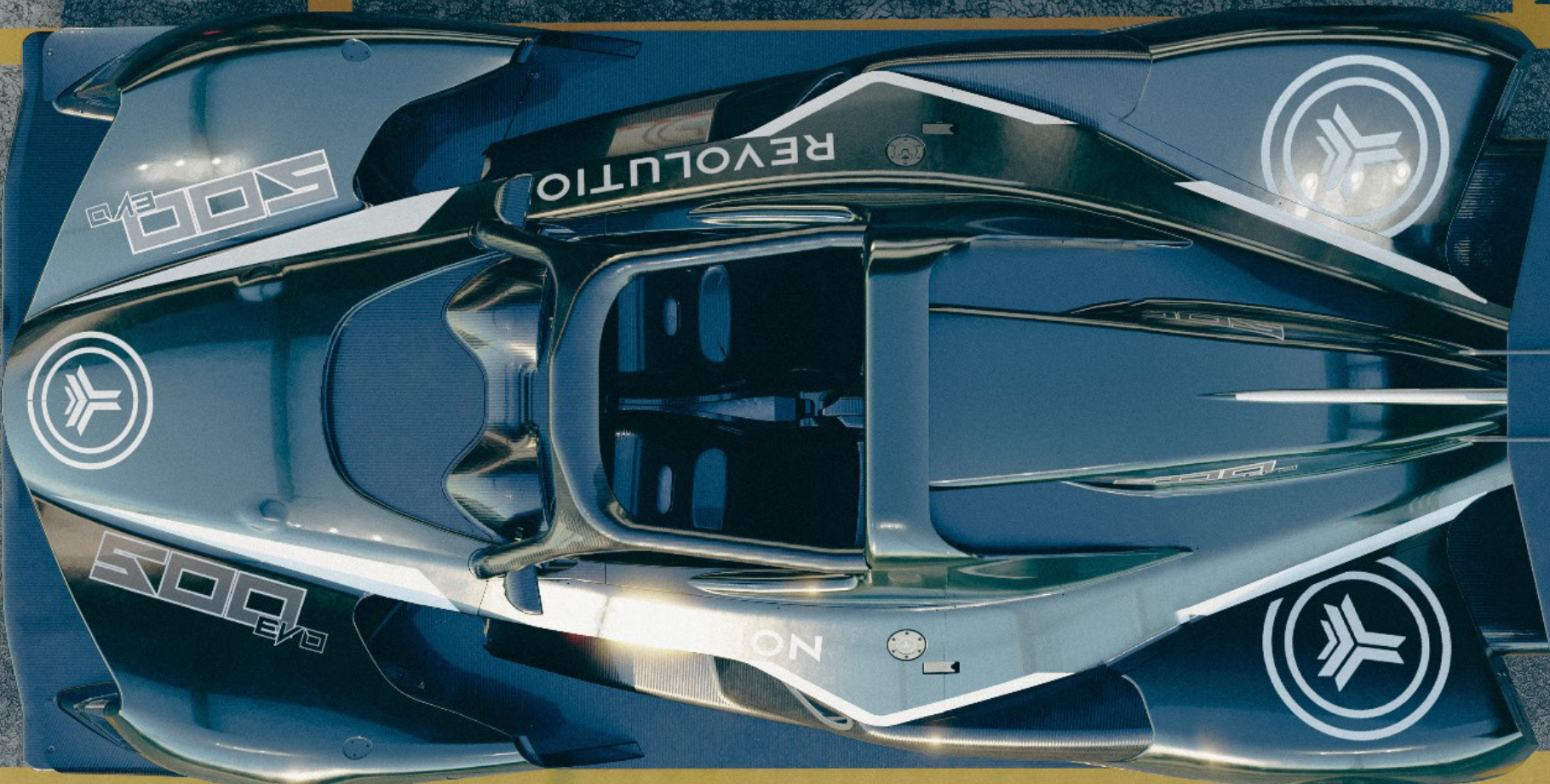


REVOLUTION



500 EVO

Welcome

Introducing the Revolution, a groundbreaking track and race car meticulously conceived, designed, developed, and built by seasoned racers, for racers.

This exceptional vehicle brings Le Mans Prototype (LMP) technology and safety features to a broader audience, marking a pioneering milestone as the first genuinely affordable sports racer equipped with a state-of-the-art carbon-reinforced polymer tub.

The Revolution is not merely poised to redefine the landscape for race and track driving enthusiasts worldwide; it is actively redefining it.

As a true two-seater, it stands as a testament to a new era of accessible performance and cutting-edge automotive technology, crafted by the experts at Revolution Race Cars, a team with an extensive wealth of experience in the field.

Embark on a journey with us, and welcome to our world of revolutionary racing excellence.

“Enjoy and welcome to our world.”

Revolution Race Cars founded

Revolution A-One 427 launched

First car sold

F1 support race at Portimão

F1 support race at Monza

First certified Canadian dealer established and first Revolutions shipped to Canada

5th Season of Sports Prototype Cup in Europe

First Season of Sports Prototype Cup UK

First race won

First certified USA Dealers established and first Revolutions shipped to USA

500SC launched

Sports Prototype Cup North America launched

2017

2018

2019

2020

2021

2022

2023

First championship won

First 500SC sold

209% revenue growth

Formula Prototype Challenge Canada launched

Seven 500SCs sold at Portimão launch event

First certified Australian Dealer established and first Revolution shipped to Sydney

500EVO launched

Mission

“In the ever-evolving realm of motorsport, a noticeable rift has emerged between top-tier series with a ‘cost no object’ philosophy and the amateur level motorsport enthusiasts. The former pushes technology to unprecedented levels, often leaving the latter and manufacturers lagging behind. Revolution Race Cars has taken up the challenge to bridge this gap. Our mission is to bring cutting-edge technology and the very highest safety standards within reach of the broader motorsport community, ensuring that innovation is not confined to the elite.”

The Concept

The Revolution is more than a lightweight sports car, it's a powerhouse on wheels, boasting over 500bhp from its dry-sump Ford V6 engine.

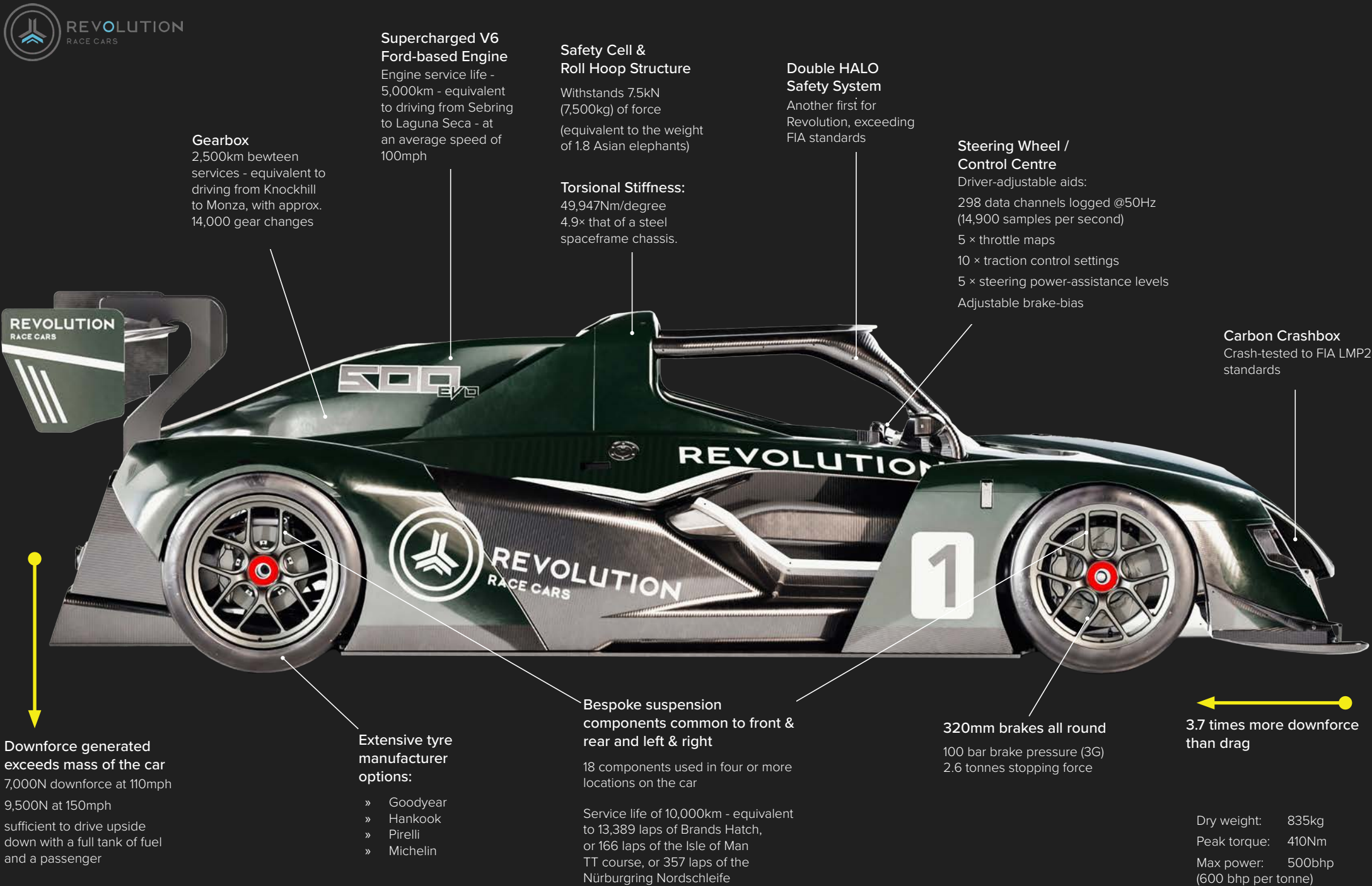
Beyond sheer power, reliability is woven into its DNA, setting a new standard in automotive design. Its exceptional performance not only thrills but also comes with some of the most economical running costs in its class, showcasing impressive intervals between maintenance rebuilds.

With a distinctive exhaust system and precise engine tuning, the Revolution isn't just about horsepower; it offers a driving experience like no other. The ultra-responsive throttle and distinctive soundtrack create an exhilarating symphony on the track. Power is seamlessly channelled through a cutting-edge 3MO 6-speed gearbox, integrating LMP technology for top-notch performance, reliability, and user-friendly operation.

What truly distinguishes the Revolution is its fusion of exhilarating performance and practicality. Designed for easy maintenance, cost-effective operation and accessible handling without sacrificing performance, it caters to a broad spectrum of drivers - from track-day enthusiasts to those with Le Mans aspirations.

In essence, the Revolution isn't merely a challenge to the status quo, it's a redefinition.

Every aspect of this revolutionary concept has been meticulously considered, making it a symbol of innovation and performance in the world of sports cars.



Supercharged V6 Ford-based Engine

Engine service life - 5,000km - equivalent to driving from Sebring to Laguna Seca - at an average speed of 100mph

Safety Cell & Roll Hoop Structure

Withstands 7.5kN (7,500kg) of force (equivalent to the weight of 1.8 Asian elephants)

Double HALO Safety System

Another first for Revolution, exceeding FIA standards

Steering Wheel / Control Centre

Driver-adjustable aids:
298 data channels logged @50Hz (14,900 samples per second)
5 × throttle maps
10 × traction control settings
5 × steering power-assistance levels
Adjustable brake-bias

Carbon Crashbox

Crash-tested to FIA LMP2 standards

Gearbox

2,500km between services - equivalent to driving from Knockhill to Monza, with approx. 14,000 gear changes

Torsional Stiffness:

49,947Nm/degree
4.9× that of a steel spaceframe chassis.

Downforce generated exceeds mass of the car
7,000N downforce at 110mph
9,500N at 150mph
sufficient to drive upside down with a full tank of fuel and a passenger

Extensive tyre manufacturer options:

- » Goodyear
- » Hankook
- » Pirelli
- » Michelin

Bespoke suspension components common to front & rear and left & right

18 components used in four or more locations on the car

Service life of 10,000km - equivalent to 13,389 laps of Brands Hatch, or 166 laps of the Isle of Man TT course, or 357 laps of the Nürburgring Nordschleife

320mm brakes all round

100 bar brake pressure (3G)
2.6 tonnes stopping force

3.7 times more downforce than drag

Dry weight: 835kg
Peak torque: 410Nm
Max power: 500bhp (600 bhp per tonne)

The Evolution of the Concept: 500 EVO

Building upon the success of the 427 & 500SC, Revolution's dedicated team of passionate racers and skilled engineers is thrilled to unveil the latest evolution in the 500SC series: the Revolution 500 EVO.

"BUILT BY RACERS FOR RACERS"

Our endeavours are driven by an unwavering commitment to deliver the very best on the starting line. However, to maintain our leading position we understand the necessity of continually raising the bar. This is the essence of our ethos: Revolution stems from perpetual evolution!

"PUSHING THE LIMITS"

Our pursuit extends beyond conventional boundaries, pushing the limits of technological innovation while maintaining cost-effectiveness. Through tyreless improvement efforts, we continuously explore new avenues to integrate elite-level technologies and materials into the club motorsport market.

"NO COMPROMISE SAFETY PHILOSOPHY"

Acknowledging the inherent risks of motorsport, Revolution's safety philosophy is starkly uncompromising. Our carbon-reinforced polymer safety cell, double halo, and crash structures undergo rigorous testing, surpassing even the stringent FIA crash test specifications.



The 500 EVO

Derived from two years of meticulous support and observation of 500SC dealers and customers worldwide, the 500 EVO model reflects a comprehensive understanding of how the car can be enhanced to elevate performance.

The EVO upgrades achieves the following:

- » **Enhanced mechanical & low-speed grip**
- » **Finer refinement of engine power delivery characteristics**
- » **Improved aerodynamic efficiency with balanced adjustments**
- » **A more robust and adjustable transmission**

The 500 EVO shaves off lap time compared to its predecessor, simultaneously enhancing reliability and consistency over longer race distances.

These advancements in performance are realised through a strategic combination of:

Weight Saving Program:

Implementing a targeted weight-saving initiative, enabling the minimum weight of 835kg to be maintained despite increases to gearbox and wheel/tyre package size. The weight saving areas include:-

- » **Engine bay “A” frame**
- » **Roll hoop**
- » **Halo**
- » **Tub / safety cell**
- » **Rear structure**
- » **Battery**
- » **Exhaust parts**

New Spec Gearbox:

Introducing a cutting-edge gearbox with long / short ratios and preload adjustment on the differential, ensuring optimal power distribution for improved control.

Enhanced Wheel and Tyre Configuration:

Upsizing the wheels and tyres to amplify performance on the track.

Enhanced wheel diameter and tyre sizes offer heightened mechanical grip, improved load-handling characteristics, and a significantly expanded array of brand and compound options, providing greater flexibility and performance customisation.

- » Front: 8.5" × 17" (205/620 × 17)
- » Rear: 11" × 18" (285/660 × 18)

Increased Brake Diameter:

Upgrading both front and rear brake systems to elevate stopping power and increase longevity:

- » Disc size increased to 320mm Ø front & rear for better front-to-rear weight distribution & commonality of components



Bodywork Adjustments:

Adapting the bodywork to seamlessly accommodate the augmented wheel and tyre dimensions, ensuring a harmonious integration with the enhanced performance components.

We have divided the front body section into three segments to enhance cost-effectiveness during panel replacement. This modification ensures that individual panel replacements can be performed more efficiently, minimising both time and expenses.

New Suspension Layout:

We have introduced a new suspension layout tailored to accommodate the latest gearbox. Additionally, we've made enhancements to the front end, specifically modifying the mounting point of the third element to the rockers. This adjustment aims to minimise friction, streamline the number of components, and simplify the adjustment process.

Dampers:

The dampers have undergone meticulous refinement, fine-tuned to align seamlessly with the distinct characteristics of the 500 EVO. This optimisation process involves utilising advanced tools such as 5-post rig testing to allow for precise adjustments to suspension settings. Additionally, extensive track development has been undertaken to ensure that the dampers deliver optimal performance under real-world track driving conditions.

New Low-Drag High-Downforce Rear Wing, designed by Pete Watt:

Introducing an aerodynamically optimised rear wing design that artfully balances low-drag with high-downforce, thereby enhancing overall stability and traction during high-speed cornering. This innovative design not only prioritises performance but also offers an expanded adjustment range, providing greater flexibility for fine-tuning and optimising the setup to meet diverse track conditions.

These meticulous enhancements collectively contribute to the overall evolution of the Revolution 500 EVO, promising a superior driving experience marked by heightened speed, control, and aerodynamic efficiency.

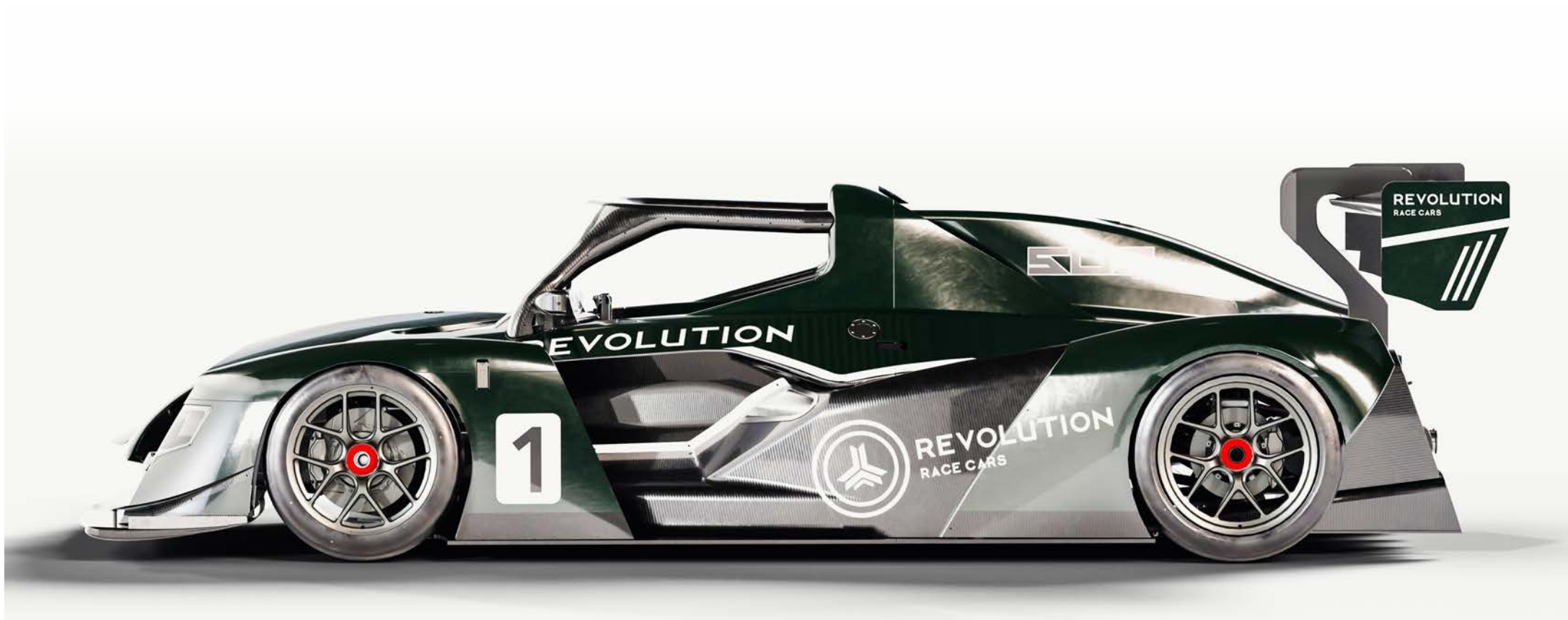


Engineering

The Revolution stands as a testament to craftsmanship and expertise, meticulously designed and constructed by industry leaders in their field, such as in composites and machining.

Each component, from clevises to uprights and rockers, is engineered for seamless interchangeability. This thoughtful design not only streamlines costs but also minimises inventory and simplifies track repairs.

The exceptional quality of every Revolution part is a testament to our unwavering commitment to precision and attention to detail.



Work of Art

Simon Cox, a leading figure in the industry renowned for his design expertise, has an impressive track record, having served as the head of design at Infiniti and GM. His innovative concepts laid the foundation for this project, evolving seamlessly from initial concepts through rigorous engineering development to tangible reality.

The structural mastery and meticulous CAD modelling integral to this venture were entrusted to Peter Watt, a seasoned professional with a comprehensive background. His extensive experience spans roles such as Head of Composites at BAR F1, contributions to Bentley's Le Mans programme, design involvement in the iconic Bugatti Veyron, and proficiency as a McLaren prototype engineer.

Watt's expertise complements Cox's visionary designs, ensuring a harmonious synthesis of form and function in this ambitious undertaking.





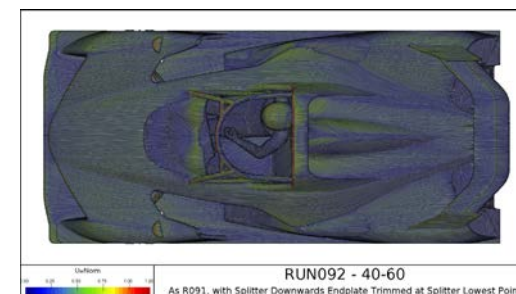
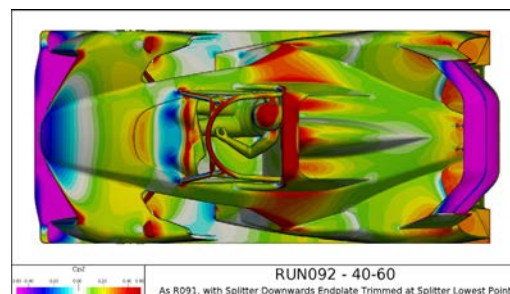
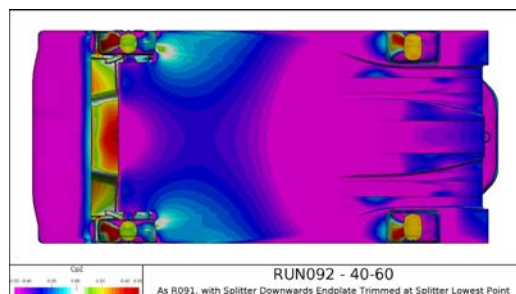
Computational Fluid Dynamics

Prioritising drivability has consistently been a key focus. The vehicle's aerodynamic excellence is the result of a thorough development program conducted by skilled aerodynamic experts at TotalSim, utilising Computational Fluid Dynamics (CFD).

A comprehensive CFD Aerodynamic design and refinement process was meticulously carried out. The goal was not only to ensure superior downforce within its price range but also to guarantee a harmonious balance in various driving scenarios.

To validate the CFD findings, we implemented an exhaustive track-testing program. This rigorous process underscores our commitment to delivering a vehicle that excels not only on paper but also performs exceptionally well in real-world driving conditions.

This aspect holds significant weight in a market where our car caters to a discerning audience, ranging from seasoned professionals to passionate amateur enthusiasts.



Engine

The Ford V6 stands as a testament to its reliability, showcasing exceptional performance and unparalleled cost-effectiveness with extended intervals between rebuilds.

Its bespoke dry-sump system not only enhances engine reliability but also contributes to a lowered centre of gravity. The wide rev band offers great power control with an evocative tone.

Powering the supercharged 500 EVO, this engine generates over 500 horsepower along with an impressive 410ft-lb of torque.

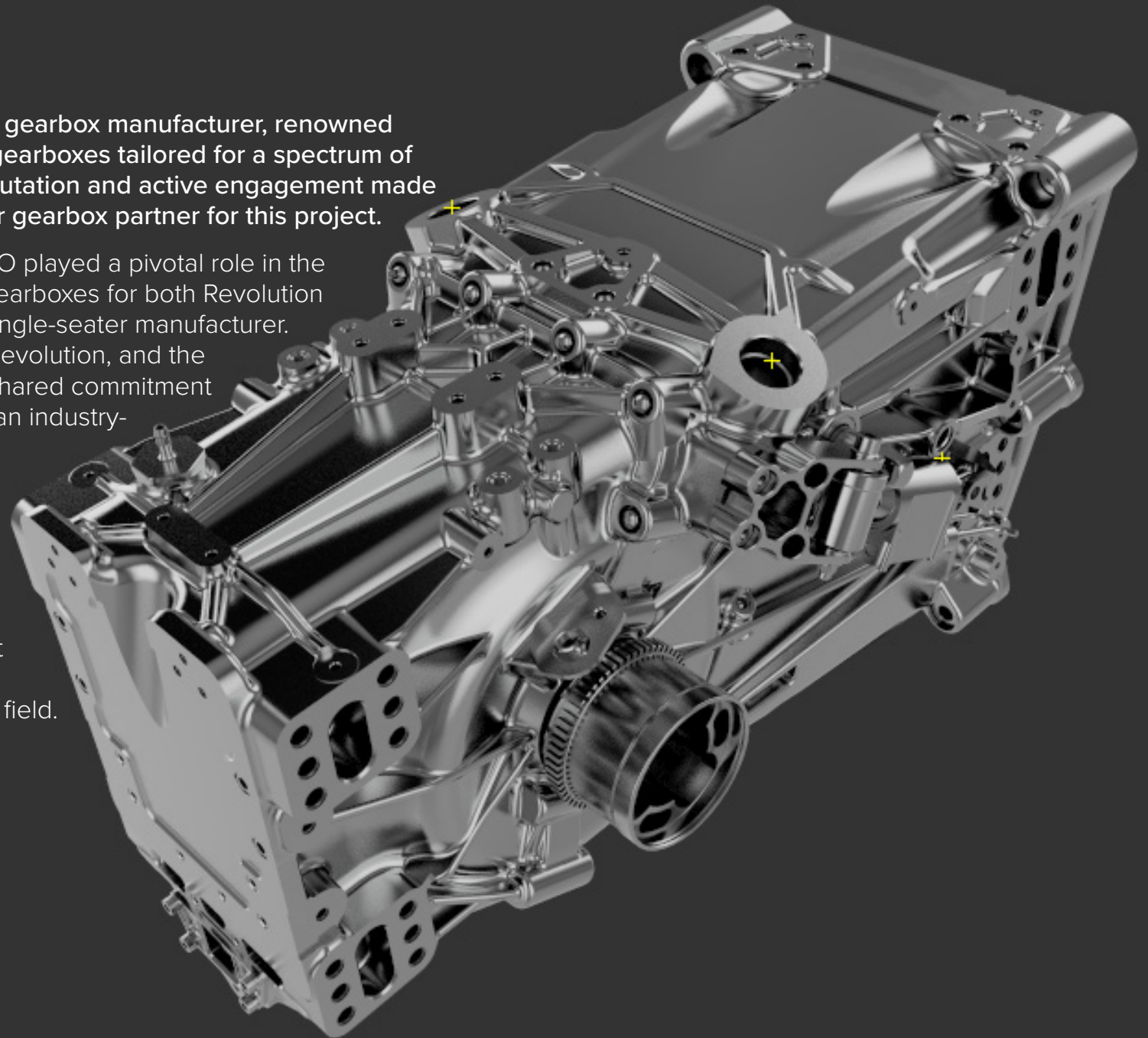


Transmission

3MO stands as a distinguished gearbox manufacturer, renowned for crafting high-performance gearboxes tailored for a spectrum of applications. Their sterling reputation and active engagement made them the obvious choice as our gearbox partner for this project.

In the case of the 500 EVO, 3MO played a pivotal role in the collaborative development of gearboxes for both Revolution and a prominent international single-seater manufacturer. This partnership, uniting 3MO, Revolution, and the manufacturer, was driven by a shared commitment to excellence. The outcome is an industry-leading gearbox, characterised by interchangeable ratios and differential preload adjustment.

This marks a significant leap forward in terms of durability, performance, and adjustability. The gearbox not only meets but surpasses industry standards, setting a new benchmark in the field.



Chassis

The redesigned carbon-reinforced polymer safety cell and steel roll structures on the 500 EVO mark a significant advancement, shedding 21kg compared to the original 2018 design.

This achievement is a testament to our continuous commitment to research and development in the carbon-reinforced polymer manufacturing process, establishing Revolution Race Cars as industry leaders.

The latest safety cell not only boasts a remarkable reduction in weight but also exhibits unprecedented strength.

Our innovative safety cells employ a carbon-infusion process, ensuring efficient production while maintaining the highest standards of quality and safety.

Within the tub, ample space is provided for two occupants, offering a class-leading width and driver room. This thoughtful design facilitates seamless operation, whether driving solo or with a passenger on board.



Double HALO

Revolution's groundbreaking 'double halo' structure is inspired by the head protection mandated in Formula One and represents a pioneering advancement in the realm of two-seater sports prototype cars.

Affixed to Revolution's cutting-edge carbon-reinforced polymer monocoque chassis, crafted through an energy-efficient infusion process, this innovation offers not only unparalleled safety but also comfort for two occupants. Ideal for driver training and corporate driving experiences, the 'double halo' and chassis comply with the latest FIA Article 277 safety standards.

Exceeding FIA requirements, the 'double halo' is meticulously manufactured from T45 high-tensile carbon-manganese cold-drawn seamless tube. This not only ensures compliance but also underscores Revolution's commitment to pushing safety standards beyond expectations. Beyond its safety features, the Revolution stands out as a testament to engineering excellence, marrying form and function seamlessly.



Suspension System Redefined

At the core of the 500 EVO, we've revolutionised the suspension system, prioritising the driver's experience. Our innovative design focuses on enhancing driving performance and control, ensuring every race is a seamless blend of performance, speed and drivability.

Key features on the 500 EVO include:

Optimised Layout:

The suspension layout of the 500 EVO introduces a groundbreaking modification by repositioning the mounting point of the third element to the rockers. This strategic adjustment serves a dual-purpose: minimising friction and simplifying the overall componentry.

Streamlined Components:

We believe in the beauty of simplicity. By streamlining the number of components, we have not only reduced complexity but also improved the overall functionality of the suspension system. This design philosophy translates into a more intuitive and hassle-free adjustment process, allowing drivers to focus on what they do best - driving.

Driver-Centric Design:

From the driver's seat outwards, every aspect of the 500 EVO is meticulously crafted with driving pleasure and control in mind. The pushrod & rocker suspension system, featuring state-of-the-art 3-way adjustable R53 dampers, ensures a responsive and dynamic driving experience.

Tailor Your Experience:

We understand that every driver and team have unique preferences. The 500 EVO empowers drivers and teams to fine-tune the setup of the car to their liking. With adjustable anti-roll bars both front and rear, coupled with the 3rd element system to assist with pitch and heave, customisation options are at your fingertips.

In conclusion, the 500 EVO suspension system is not just a technological advancement; it is a testament to our commitment to our ethos. Elevate your driving experience with the 500 EVO.

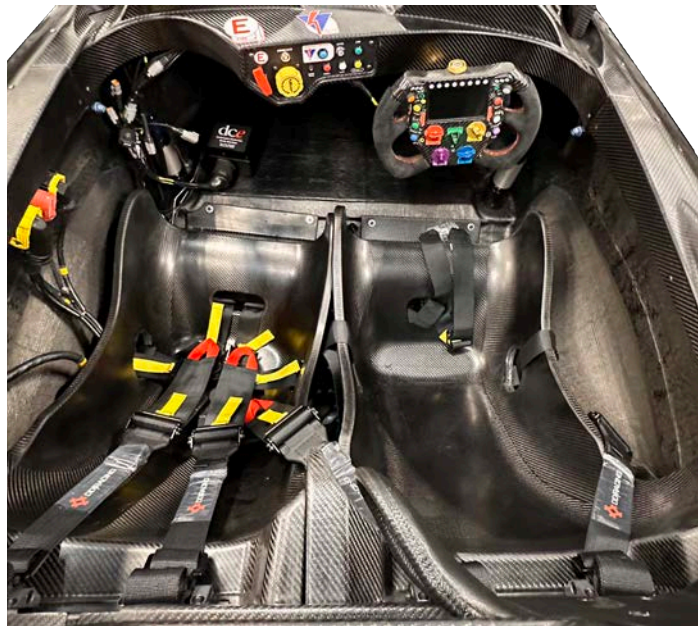
Cockpit

The cockpit section is meticulously crafted to ensure an optimal driving experience. With its unique egg-shaped design, it not only provides a stylish aesthetic but also prioritises the driver's comfort and safety.

The innovative egg shape allows for ample personal space, enhancing the overall sense of freedom within the cockpit.

The dual independent seats are thoughtfully designed to accommodate tall individuals comfortably, ensuring both the driver and passenger enjoy a spacious and enjoyable ride.

Integrating cutting-edge technology, the F1-style steering wheel is a marvel in itself. With this advanced steering wheel, you take command of the entire car's information at your fingertips.



Effortlessly control features such as the lap timer, temperature gauges, car-to-pit radio, and pitlane speed limiter using intuitively-positioned switches directly on the steering wheel.

This seamless integration of technology not only enhances the driving experience but also reflects a commitment to precision and performance.

Control Centre

The Revolution control centre is a carbon-crafted masterpiece, redefines driving control.

Its intuitive steering wheel, adorned with multiple buttons, rotary dials and a paddle-shift system, seamlessly integrates cutting-edge tech.

The on-the-fly customisable settings include electronic power steering, brake bias, throttle maps and traction control, putting the driver in command.

Precision meets connectivity with multiple dash displays and seamless integration with the vehicles data system, providing real time lap information and car status updates, such as tyre pressures and brake bias.

In essence, the Revolution control centre is a compact symphony of art, engineering, and unparalleled performance.



Data & Electronics

The 500 EVO employs advanced Life Racing systems to meticulously track both the car and driver performance.

The Revolution factory and certified dealer teams can comprehensively monitor the vehicle even remotely, via sophisticated data systems seamlessly integrated into the race car.

This approach allows the factory to offer invaluable assistance in diagnosing issues and recommending optimal maintenance cycles. Every aspect, from the engine and gearbox to all electronics, undergoes close scrutiny and monitoring.

Furthermore, Life Racing's state-of-the-art data logging is utilised to track and analyse various driver inputs, including throttle, brake, steering, and resulting wheel speed, all integrated with GPS location on the track.

This not only facilitates precise performance evaluation but also empowers driver coaches and individuals to scrutinise and enhance their driving techniques.

Safety

Utilising state-of-the-art Finite Element Analysis (F.E.A.) and cutting-edge testing tools, previously exclusive to Formula 1 and Le Mans-style racing, our components undergo rigorous assessments.

These tests subject the components to loads far surpassing any conditions they would encounter on track. This commitment to exceeding industry standards not only ensures exceptional performance but also instils confidence and security in our first-time customers.



Specification

CHASSIS

- » Full Carbon-Reinforced Polymer Monocoque
- » Designed to Free Formula Article 277 regulations
- » Lightweight Carbon-Reinforced Polymer bodywork
- » Air Jacks

AERO DEVICES

- » Full Carbon-Reinforced Polymer Front Wing
- » Carbon Underfloor & Rear Diffuser
- » Dual Element Carbon Rear Wing

ENGINE

- » Supercharged Ford V6
- » 500bhp / 410ft-lb torque
- » Longitudinal, mid-mounted
- » Dry sump system

SUSPENSION

- » Double wishbone - pushrods & rockers
- » Cast aluminium uprights
- » R53 3-way adjustable dampers
- » 3rd Element Front & Rear

TRANSMISSION

- » 3MO Transaxle (supporting rear suspension loads)
- » Multi-plate limited slip differential with external preload adjustment
- » Long & short gear ratio options

STEERING

- » Electronic Power-Assisted Steering with 5 adjustable assistance settings

SAFETY

- » FIA-tested front crash structure & roll protection
- » Collapsible steering column
- » FIA-compliant Fuel Cell
- » Driver & Passenger Safety HALO

ELECTRONICS

- » Bespoke full F1-type steering wheel-operated control system
- » Engine & Chassis Data Logging
- » Bespoke Traction Control Module with up to 10 driver-adjustable settings, controlled by wheel speed & yaw sensors
- » 5 driver-adjustable throttle maps
- » 5 driver-adjustable electronic power-assistance steering settings

COCKPIT

- » Bespoke steering wheel with inbuilt display
- » Paddle shift gear change
- » Driver & passenger seat with six-point harnesses
- » Fully-floating balance bar with adjuster
- » Tilton pedal box

BRAKES

- » Front: 320mm x 25mm floating discs, four piston callipers
- » Rear: 320mm x 25mm floating discs, four piston callipers

WHEELS/TYRES

- » Front: 8.5" x 17" (205/620R17)
- » Rear: 11" x 18" (285/660R18)

KEY DIMENSIONS & CAPACITIES

Length:	4,353mm
Width:	2,000mm
Height:	1,155mm
Wheelbase:	2,660mm
Track (front):	1,800mm
Track (rear):	1,780mm
Fuel Capacity:	80 litres
Dry Weight:	835kg

PERFORMANCE

Power:	500bhp / 410ft lb
Aerodynamics:	3.5:1 Efficiency 7200N @ Vmax (45% front distribution with balance adjustment)
Weight Distribution:	45% Front, 55% Rear
Longitudinal G-Force:	Max. 2.5G (braking), up to 1G (acceleration)
Lateral G-Force:	2.2G

Racing

Revolution Race Cars has race series around the world, which include:-

- » **Sports Prototype Cup (Europe) (SPC)**
- » **Revolution Cup - North America**
- » **Formula Prototype Challenge Canada**

The Sports Prototype Cup and Formula Prototype Challenge Canada features exclusive classes for Revolution cars. This concept creates 'races within the race'. Rather than trying to balance the performance of a variety of different cars, any class of cars is promoted as its own event with the Cup.

For 2024 Revolution will continue to offer high class racing events around the world, having supported Formula One for two seasons and the World Endurance Championship.

The SPC in 2024 will have unique selling points:

- » **Best European Circuits**

We are committed to selecting the finest European circuits to ensure a memorable and challenging racing experience for all participants.

- » **Sprint & Endurance Events**

The season features a well-balanced blend of sprint and endurance races, catering to both solo drivers and teams of two. This design not only provides ample track time but also offers a varied set of challenges for all participants.

Trackdays

The Revolution stands out as an outstanding alternative to GT cars for track day enthusiasts.

The indescribable sensation behind the F1 style steering wheel elevates the experience to new heights.

The cars accessible performance, coupled with low-maintenance requirements and exceptional customer service from the factory, establishes the Revolution as an excellent platform for track day enthusiasts.



Customer Service

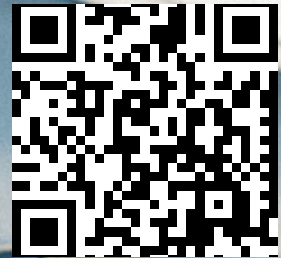
The Revolution is accessible exclusively through a network of fully-trained and certified dealers, collaboratively engaged with the factory to deliver an unparalleled service and ensure customer satisfaction on a global scale.

Revolution collaborates closely with its certified dealers to guarantee a consistent and timely supply of spare parts worldwide, ensuring customers stay on track without delays.

Our expansive target audience encompasses race enthusiasts seeking the ultimate thrill, aspiring racers eager to ascend to the upper echelons of the sport, track-day drivers who value top-tier lightweight cars featuring accessible aerodynamics, as well as race schools and motorsport country clubs.

Each segment of our diverse audience shares common priorities: cost-effective purchase and running costs coupled with unwavering reliability and customer service. Moreover, they all seek innovation that rivals the cutting-edge technology found at the pinnacle of the sport.

This is the Revolution.



Revolution Race Cars
Unit 2 Frankland Commerce Park
Harrier Way, Yaxley
Peterborough
PE7 3NN
United Kingdom

info@revolutionracecars.com