



ORIS

ORIS
Swiss Made Watches
Since  1904

LIGHT SPEED

ORIS HAS DEVELOPED AND PATENTED A CARBON FIBRE MANUFACTURING PROCESS DERIVED FROM TECHNIQUES USED IN FORMULA 1 AND NEVER BEFORE SEEN IN WATCHMAKING



CARBON FIBRE

FORMULA WON

Forty-six years after entering the world of motor sport, Oris is pioneering innovative carbon fibre technology for two spectacular new chronographs

There's no denying the symbiotic relationship between watches and motor sport. Oris's passion for the speed and innovation of racing goes back to 1970 and the launch of the Chronoris, the independent Swiss brand's first chronograph watch and one of the most celebrated pieces in its long and illustrious history. This year, Oris begins the next chapter in the story with the launch of the high-performance Oris Williams Valtteri Bottas Limited Edition.

The partnership between Oris and the highly successful Williams Team began in 2003, and more than a decade later their relationship is truly cemented by this year's major launch: the company's first carbon fibre timepiece. There have been Oris Williams watches before – limited editions and pieces made to celebrate the team's milestone

achievements – but this year marks the first time that Oris has used the ultra-lightweight, high-strength material pioneered so famously by the performance car industry. And it has been used in a way that is unprecedented in the watch industry.

The cases of the new Oris Williams Valtteri Bottas Limited Edition (limited to 770 pieces) and core-collection Oris Williams Chronograph Carbon Fibre Extreme are made of carbon fibre and titanium, but not just any carbon fibre. Oris has developed and patented an innovative manufacturing technique derived from processes shared by the Williams Team to produce a fully carbon monocoque case middle, weighing a mere 7.2 g. The titanium case back and sapphire crystal can be mounted straight on, without special gaskets or 'containers'.

FAST FRIENDS

The new Oris Williams Valtteri Bottas Limited Edition pays tribute to Oris's long-standing partnership with the Williams Team and its talented driver, who starts his fourth F1 season with the team this year

ORIS WILLIAMS VALTTERI BOTTAS LIMITED EDITION

PRODUCT FEATURES

- Automatic movement Oris Cal. 674, based on ETA 7750, with chronograph function and date at 6 o'clock
- Multi-piece case, case middle part made of high-tech carbon fibre. Water resistant to 10 bar/100 m
- Titanium crown and pushers with black DLC coating
- Titanium bezel with black DLC coating
- Flat sapphire crystal with anti-reflective coating inside
- Screwed titanium case back with special engravings
- Carbon fibre dial with applied numerals. Black hour and minute hands with white Super-LumiNova®. Blue stop second hand with white tip, blue chronograph hands and white small second hand
- Black rubber strap with black DLC-coated titanium folding clasp



IN THE WORKSHOP

MAKING THE CASE

Layer upon layer of woven carbon fibre is painstakingly hand-moulded in Switzerland to create Oris's revolutionary new watch case

Given the incredible strength-to-weight ratio of carbon fibre, it's no wonder the material has become so prevalent in Formula 1 cars, from the monocoque to suspension wishbones. Oris's new technique exploits carbon fibre to yield three key watchmaking benefits. The first two are rigidity and

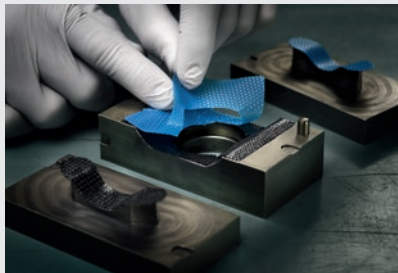
water-tightness: in most carbon fibre watches these can only be achieved by adding extra components such as metal reinforcements, or metal 'containers', but Oris's solution bypasses the need for these. The third is in post-production. Processing carbon fibre after it has been moulded and hardened is labour-intensive and costly. For example, milling tools are used up to 300 times with steel cases whereas milling carbon fibre allows only 10 – 15 cases.

To make this unique composite, up to 35 sheets of pre-cut fabric are layered manually in individual moulds and twice hardened under pressure at 130 C in special ovens. No single layer is randomly oriented. The result is a totally integrated carbon case with perfectly aligned carbon fabric.

HAND MADE IN SWITZERLAND The painstaking technique behind Oris's patented manufacturing process



1. Flexible and thin carbon fibre reinforced polymer is the basis for the case.



2. The case middle part is composed of five individually moulded parts: two side panels, one top part, one bottom part and the centre part.



3. Each of the five parts is prepared by hand, and moulded and hardened separately. The five outer surfaces have their final finish.



4. In the second phase all five pre-prepared parts are combined as one casting mould composition. No single layer is accidental or randomly oriented.



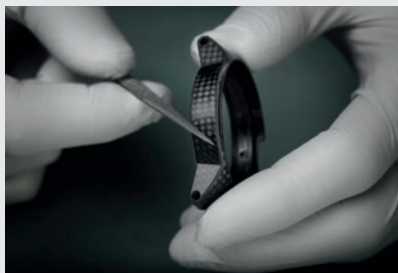
5. The casting mould composition is heated the second time up to 130 C and under 5 bar of pressure in special ovens.



6. The case middle blank fuses all five single parts into one piece with up to 35 sheets of pre-cut woven carbon fibre reinforced polymer.



7. Redundant overlaying material is milled off and holes for pushers, the crown and the strap are milled into the case.



8. At the very last stage, edges and holes are cleaned and hand-finished very carefully.



9. The evolution process shows the main stages of the production - from the woven carbon fibre reinforced polymer to the final case.



RACING FOR GLORY

HIGH FIBRE DIET AT WILLIAMS

Williams' new Formula 1 race car consumes thousands of hand-crafted carbon fibre parts – all in the name of strength, lightness and speed

This year's FW38 car will see more than 2,000 carbon fibre components laboriously manufactured for a single racing car – all of them made in-house at the Williams Team's headquarters in Grove, Oxfordshire, by around 80 technicians working multiple shifts over a seven-day period. Enabling this is a combination of state-of-the-art five-axis machinery, complemented by traditional hand skills.

The manufacture of the chassis itself began back in July 2015, when the first master pattern was cut on a five-axis milling centre. Between then and delivery of the completed race car five months later, 1,750 patterns were manufactured, from which 1,750 moulds were laminated to yield 2,000 components.

By contrast, during the race season an electrical bracket can, for example, be designed, manufactured and delivered to the pits of any F1 circuit within 24 hours, such is the Williams Team's efficiency.

SPEED DEMON

The aerodynamic carbon fibre struts and wishbones of the Williams Team 2016 FW38 race car are elegant, yet sinister at the same time

THE ORIS WILLIAMS COLLECTION

- 1 Williams Valtteri Bottas Limited Edition
- 2 Williams Chronograph Carbon Fibre Extreme
- 3 Williams Chronograph
- 4 Williams Engine, Date
- 5 Williams Day Date



2



3



4



5



1



GREAT COURAGE

Frank talks to Piers Courage at the 1970 Monaco Grand Prix while his De-Tomaso-Cosworth car is refuelled

SIR FRANK WILLIAMS

LIFE IN THE FAST LANE

Oris partner Williams is one of the great names in motor sport. But it would be nothing without the drive and determination of the extraordinary man behind it



THE ORIGINAL ORIS CHRONORIS

Produced in 1970, the Oris Chronoris marked two milestones. It was the brand's first chronograph and the first in its line of iconic motor sport watches

LIGHTS OUT!

This year the Williams Team will be looking to build on a successful 2015 season that resulted in four podiums and a third-place finish in the Constructors' Championship



Frank Williams. Even non-motor sport

fans will know the name. He has been involved in motor racing for almost half a century, survived a life-changing car accident and received a knighthood from the Queen. He is a sporting icon. Indeed, he is *Sir* Frank.

It all began for a young Frank 55 years ago when he first lined up on the grid at the wheel of a racing car. The year was 1960, the location was Mallory Park racing circuit, and his car was an Austin A35 he'd bought for £ 400.

But after a few years he abandoned his dreams of becoming a racing driver, instead focusing on the business side of the sport. He founded Frank Williams Racing Cars and made his Formula 1 debut at the 1969 Spanish Grand Prix, with Piers Courage behind the wheel.

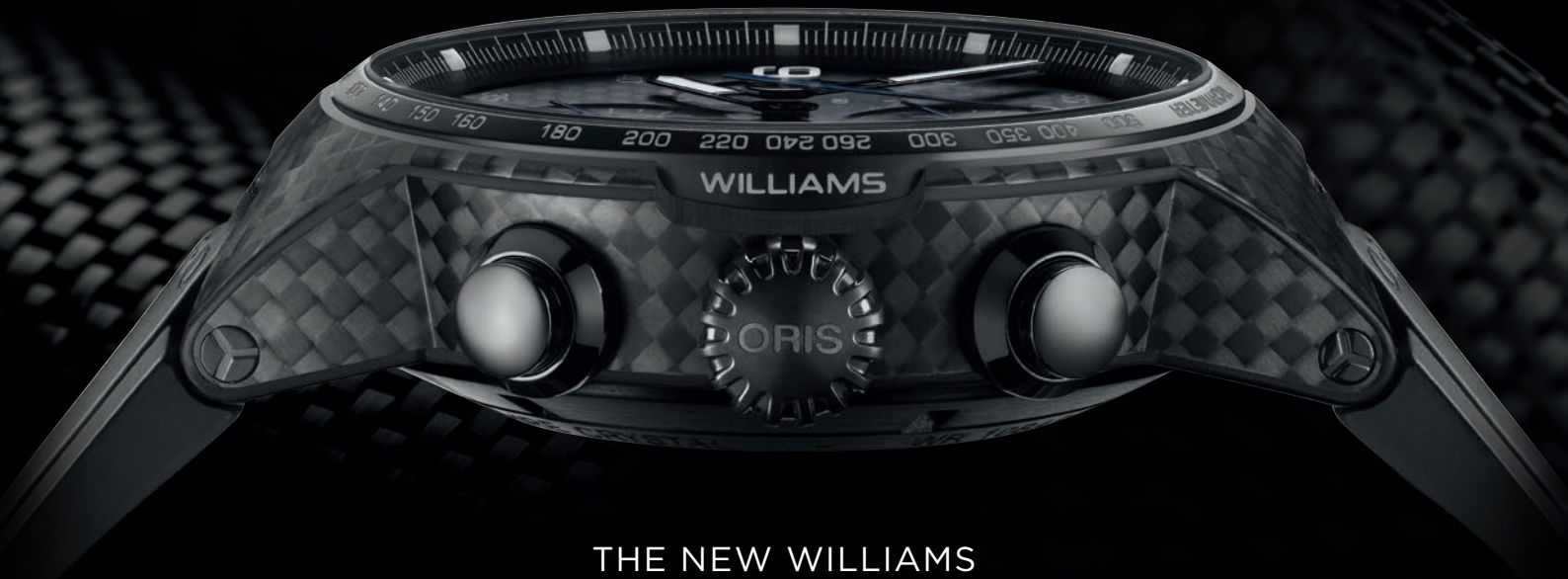
A year later, Frank was devastated when Courage was tragically killed at the Dutch Grand Prix. In the following years he didn't achieve the F1 success he craved and so in 1977 he tried again, teaming up with talented engineer Patrick Head to form Williams Grand Prix Engineering. The combination was dynamite – the team dominated F1 in the 1980s and 1990s, claiming nine Constructors' Championships and seven drivers' titles.

Williams cars were driven by legends of the sport, including Clay Regazzoni, Keke Rosberg, Nigel Mansell, Alain Prost and, of course, Ayrton Senna. Such is his contribution to motor sport that Frank was made a CBE in 1987 and knighted by HM The Queen in 1999. Motor racing may be a glamorous sport, but Oris has partnered with the Williams Team since 2003 based on Frank's dedication, passion and unwavering commitment.

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Since  1904



BORN RACERS



THE NEW WILLIAMS
CARBON FIBRE COLLECTION
INSPIRED BY THE SPEED, POWER AND
INNOVATION OF THE WILLIAMS TEAM

real watches **for** real people

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