
PERFORMANCE ENGINEERING FOR THE WRIST

THE NEW INGENIEUR WATCH COLLECTION FROM IWC SCHAFFHAUSEN

The completely remodelled 2013 Ingenieur watch collection from IWC Schaffhausen focuses entirely on its new partnership with the MERCEDES AMG PETRONAS Formula One™ Team. For the next three years, the watch manufacturer will be the Official Engineering Partner of the Mercedes-Benz works team. For the new collection, IWC's design engineers took their inspiration from Formula One™. Materials typically used in motorsport, such as carbon fibre, ceramic and titanium, are the hallmarks of a new design line in the Ingenieur watch family. The technologically demanding workmanship confirms the reputation of IWC Schaffhausen as a company that has been manufacturing top-quality timepieces for more than 140 years.

Georges Kern, CEO of IWC Schaffhausen, commented on the global partnership with the MERCEDES AMG PETRONAS Formula One™ Team: "The engineers who work within our two companies have many things in common. They share a passion for precision technology and innovation. They are the heroes behind the scenes: their craftsmanship and expertise with high technology lay the foundations for our success. Their pioneering spirit and know-how push the boundaries of mechanical engineering and continuously redefine the achievements of precision technology. The two companies have a name for this untiring quest for perfection: performance engineering."

IWC's cooperation with Mercedes-Benz dates all the way back to October 2004, when the Schaffhausen-based watch manufacturer announced a partnership with AMG, the car producer's high-performance brand. The following year, IWC unveiled its first two Ingenieur models named exclusively after AMG. This successful and long-lasting partnership is now to be extended to Formula One™ motorsport. As a symbol of the ground common to their work, IWC Schaffhausen and the MERCEDES AMG PETRONAS Formula One™ Team have joined forces and merged their strengths in a new form of cooperation. "We are delighted that for the next three years we will be working side by side with a

partner who stands for the same values as we do," explains Karoline Huber, Director of Marketing & Communications. "Apart from fitting perfectly with IWC's central message 'Engineered for men', the technical challenges, the emotional highs and lows and the gripping race against time make Formula One™ the ideal environment for the fascinating stories that surround our Ingenieur watches." IWC Schaffhausen's new watch models have been inspired not only by high-tech, state-of-the-art motor racing, but also by the sport's historic roots. In the 1930s and in 1954/55, the Mercedes-Benz Silver Arrow dominated the international motor-racing scene. This is the reason why IWC has dedicated the Ingenieur Chronograph Silberpfeil to the legendary Mercedes racing car.

The 1950s was also the decade that saw the advent of the tradition-steeped Ingenieur watch family. By pursuing the motto "Progress results from continuous change", the Ingenieur fully embodied the philosophy of the Schaffhausen-based watch manufacturer. The cool, functional exterior housed a movement with a wealth of sophisticated technology. The more outstanding features included the first bidirectional automatic winding system and protection against magnetic fields. The timepieces very soon came to stand for precision and reliability. Thanks to their rugged

qualities, the Ingenieur models not only appealed to technicians but also gradually found favour with sportsmen and globetrotters. In 2013, to coincide with the relaunch of the Ingenieur line, this trend has logically taken IWC to a sporting discipline that brings together all three attributes: Formula One™.

TWO WATCHES AT THE FRONT OF THE GRID

The 2013 Ingenieur watch collection has been completely overhauled and comes to the grid with a host of new features. Pole position has to go to the spectacular **Ingenieur Constant-Force Tourbillon** (Ref. 5900) in its platinum and ceramic case. Its patented constant-force mechanism is integrated in the tourbillon and guarantees an extremely precise rate. Two barrels supply the higher torque required to drive the constant-force tourbillon and also supply the energy needed for the moon phase module: pure performance, from start to finish. Another model guaranteed a place at the front of the grid is the **Ingenieur Perpetual Calendar Digital Date-Month** (Ref. 3792) with its case made of titanium aluminide, perpetual calendar and digital date display. In order to maximize efficiency, it emulates the hybrid boost button used in Formula One™ and uses the energy recovery principle. Every night, when the date display advances, the quick-action switch taps off a little energy and stores it until the end of the month or year, and makes it available precisely when it is needed. The dial has semi-transparent sapphire-glass inlays over the date, month and leap year discs, which enable the wearer to observe the complex interplay of the discs as they advance. On New Year's Eve, the five displays begin to move simultaneously. It is a complex technological feat that will hold an irresistible appeal for lovers of sophisticated mechanical systems.

A NEW, SPORTS-INSPIRED INGENIEUR LINE

With these two high-tech time machines fronting the grid, the 2013 Ingenieur watch collection is divided into two distinct lines: first, the purist-inspired timepieces in stainless-steel cases; second, sports models whose cases were inspired by the innovative range of materials used in Formula One™. Christian Knoop, Creative Director at IWC: "In the new Ingenieur line, IWC interprets the racing theme by using materials typically employed in motorsport, such as carbon fibre, ceramic and titanium, and drawing on design cues

taken from the modern Formula One™ cockpit. Screws attach the bezels securely to the case, which lends additional emphasis to the watches' sporty, high-tech character. They are thus a logical continuation of an IWC product family that has one of the richest traditions of them all. Inspired by our own history, which naturally includes the legendary design of the Ingenieur SL created by the famous watch designer Gérald Genta, we combine technical innovation with characteristic design in the new collection. The result is a set of powerful, striking Ingenieur watches in a class of their own."

An outstanding example of the new sports-inspired ethos is the limited **Ingenieur Automatic Carbon Performance** (Ref. 3224). Like the safety cell (monocoque) and bodywork of a Formula One™ racing car, the case and dial are made of epoxy resin-soaked carbon-fibre matting, which is then cured at high temperatures and overpressure. Carbon fibre has long been one of the hallmarks of Formula One™ and, at the same time, an impressive symbol for innovative materials. By using this demanding material not only for individual components but also for the entire outer case of the Ingenieur Automatic Carbon Performance, IWC Schaffhausen underscores its reputation as a manufacturer of top-quality watches. The **Ingenieur Automatic AMG Black Series Ceramic** (Ref. 3225) recalls the many years of cooperation between IWC and AMG, the high-performance arm of Mercedes-Benz. The Schaffhausen-based watch manufacturer discovered the use of ceramic – or, more specifically, zirconium oxide – for the watch industry as early as 1986. Titanium, which was introduced by IWC in 1980, was used for the **Ingenieur Double Chronograph Titanium** (Ref. 3865). Thanks to a split-seconds function, the double chronograph is ideally equipped to keep track of lap times. The **Ingenieur Dual Time Titanium** (Ref. 3264) neatly rounds off the sporty design line. It has a display that shows a second time of day, which is of enormous help to the MERCEDES AMG PETRONAS Formula One™ Team, who need to keep track of things when moving continuously from one time zone to another.

PURIST, FUNCTIONAL AND TECHNICALLY MATURE

The classic Ingenieur line can still be recognized by the robust stainless-steel cases and the five bores in the bezel. Purist, functional and technically mature, it distils all that is best from six decades of Ingenieur history. The **Ingenieur**

Chronograph Racer and the **Ingenieur Chronograph Silberpfeil** (Ref. 3785) are perfect for recording periods of time, pit-stop times and, with the help of the tachymeter scale, the speed achieved over a measured distance. The Racer features the engraving of a modern Formula One™ car while the **Ingenieur Chronograph Silberpfeil** revives the legend of the historic Mercedes-Benz racing car of the same name. The silver-coloured circular graining on the dial is a tribute to the legendary Silver Arrow W25, whose instruments were placed on a dashboard with a circular-grain decoration. In addition, a historic Silver Arrow is engraved on the case back. The elegant **Ingenieur Automatic** (Ref. 3239) with its three hands rounds off the classic line and has a timeless, distinctively clear design together with protection against magnetic fields up to 40,000 amperes per metre.

The quest for ever-superior materials extends not only to the watch itself but also to IWC's straps. There is a surprise this year in the form of a new rubber strap with a textile or leather inlay. This solution cleverly combines the elegant look of the outer material with the comfort and durability of rubber on the inner side. In order to ensure that the watch is comfortable to wear despite the dimensions of the case, the lugs have been ergonomically improved and point more noticeably downwards. This ensures that the surface in contact with the wrist is concave. The metal bracelet of the Ingenieur Chronograph Racer is equipped with a special fine-adjustment clasp that enables the wearer to make minor modifications to the length of the strap whenever he wishes. All he needs to do is press gently on the button with the IWC logo at the centre of the clasp cover and pull or push the bracelet slightly.

Georges Kern sums up the major relaunch of the Ingenieur watches as follows: "The new Ingenieur collection boasts three distinct quality features: first-class IWC-manufactured movements, sophisticated functions and typical Formula One™ materials." IWC Schaffhausen's CEO continues: "Some of the in-house movements bear witness to the inventive spirit of our watchmakers. These include the highly complex 94800 calibre with its constant-force mechanism and the 89802 calibre with the quick-action switch. With complications like the tourbillon, perpetual calendar, digital big date and moon phase display, the Ingenieur watch line has finally taken its place in the upper echelons of haute horlogerie."

FORWARD-LOOKING AND INSPIRED BY THE ZEITGEIST

The history of the Ingenieur watch family has been defined by models that reflected the prevailing zeitgeist but at the same time incorporated the forward-looking technology and progressive design that have opened up new avenues in the watchmaking industry. The launch of the first Ingenieur in 1955 (Ref. 666) took place at a time of growing enthusiasm for technology and economic boom. Its automatic movement with bidirectional winding had been developed by the then Technical Director Albert Pellaton. The Pellaton winding system was particularly efficient and gave IWC a decisive competitive edge. This was also true of the watch's protection against magnetic fields. It was aimed specifically at a professional group that came into regular contact with magnetic fields and gave the watch its name: engineers – or, in German, Ingenieure.

In the mid-1970s, freelance designer Gérald Genta revolutionized the appearance of modern timepieces with an uncomplicated, technology-inspired design language. For IWC Schaffhausen, he designed the legendary Ingenieur SL (Ref. 1832). Instead of concealing the bores for the screws that held the bezel in position, he made them a design feature and the hallmark of the watch family.

In the 1980s, IWC fitted its Ingenieur models with thin automatic movements. One of these was the new Ingenieur SL (Ref. 3505), unveiled in 1983, which was just 10 millimetres in height. In 1985, with the Ingenieur in titanium (Ref. 3350), the Schaffhausen-based manufacturer made use of this challenging material for the first time in the Ingenieur watch family. In 1989, IWC presented the Ingenieur Automatic "500,000 A/m" (Ref. 3508), whose impressive protection against magnetic fields withstood even the 3.7 million A/m generated by a magnetic resonance tomograph. In 2005 the watch family celebrated a comeback with three new models. Equipped with the large 51113 calibre featuring Pellaton winding and a 7-day power reserve, the Big Ingenieur (Ref. 5005) made an impression in 2007. In the following years, the ruggedness and reliability of the Ingenieur Automatic (Ref. 3236) helped it to become the timekeeper of choice in extreme situations.

The new 2013 Ingenieur collection will doubtless appeal equally to admirers of highly sophisticated in-house watch movements and to those who love nothing more than the scream of a high-performance engine.

IWC SCHAFFHAUSEN

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WHERE POWER MEETS PRECISION

INGENIEUR CONSTANT-FORCE TOURBILLON

With its spectacular Ingenieur Constant-Force Tourbillon, Swiss watch manufacturer IWC Schaffhausen has secured itself a leading position in the Constructors' Championship of haute horlogerie. To ensure a particularly regular rate, the watchmakers integrated the patented constant-force mechanism in a tourbillon – an impressive example of engineering at its best.

Haute horlogerie and Formula One™ motorsport have one thing in common: only if the engineers adjust the individual parts to interact perfectly can they get the most out of their machines. And only then, whether they're designed for the wrist or the racetrack, will their performance be spot on. While V8 engines are built for extreme acceleration and braking power, the hand-wound mechanism of a mechanical wristwatch should ideally supply energy at as constant a rate as possible. But because the mainspring in a conventional hand-wound movement is under more tension when freshly wound than when running down, the amount of power it generates varies constantly. IWC's team of engineers, watchmakers and designers sought an answer to the problem for 10 whole years. The result of their efforts is a highly complex constant-force mechanism integrated in a tourbillon. And in 2013, IWC's invention makes its way into the Ingenieur watch family for the first time in the form of the Ingenieur Constant-Force Tourbillon (Ref. IW590001) in a platinum and ceramic case.

THE CONSTANT-FORCE TOURBILLON: THE HEART OF THE WATCH

Positioned at "9 o'clock", the impressive constant-force tourbillon provides a fascinating view of its layered construction. Connoisseurs of precision mechanics will particularly enjoy watching the complex interaction of the springs, wheels and pallets. The striking black tourbillon bridge is calibrated to facilitate reading off the seconds and, like the black screws, underscores the dial's high-tech look. As a captivating contrast to this we see the delicate, gold-coloured Glucydur®* beryllium alloy balance with its high-

precision adjustment cam on the balance arms. The tourbillon revolves around its own axis once every 60 seconds to offset the influence of gravity on any positional error in the balance and its adverse effect on the rate. Down in the depths of the tourbillon we see the constant-force mechanism, the true heart of the watch. This intricate assembly allows the escapement to be uncoupled from the gear train, which keeps the amplitude of the balance – and thus the watch's rate – virtually constant. The energy is stored temporarily in a balance spring and dispensed to the escape wheel. This balance spring is put under tension once a second, as we can see from the one-second advances made by the tourbillon hand. After every five beats of the balance, the stop wheel and the tourbillon cage are also released. The stop wheel turns and causes the tourbillon cage to rotate with it, which puts the balance spring under tension again. After about 2 days, the watch moves from constant-force mode into normal mode. Now, the seconds hand advances smoothly every one-fifth of a second. The constant-force tourbillon guarantees a regular and precise rate over a period of at least 48 hours.

INSTRUMENT-LIKE TOTALIZERS

The new 94800-calibre basic movement was developed entirely internally by IWC. It features two barrels, which provide the energy for the higher torque required to drive the constant-force tourbillon. It also provides the moon phase module with the necessary power. IWC's hallmark double moon display for the northern and southern hemispheres also makes its debut in the new design. If its position on the dial is a bold statement in itself, the incredibly

realistic depiction of the moon is even more daring. IWC used a special 3-D laser technique to render the surface as authentically as possible. As a result, even tiny craters are visible to the naked eye. The countdown display on the outer ring of the totalizer shows the number of days remaining before the next full moon. A new departure for IWC is the retrograde design of the power reserve display between "4" and "5 o'clock", which has a triangular indicator to show the power remaining. The connecting bridge was designed in such a way that the IWC logo is not concealed at any point during the watch's 96-hour run time. The three totalizers protruding into the bezel were inspired by dashboard instruments and underscore the watch's sporty character. In keeping with the cool, technically inspired look are the finely nuanced shades of black on the dial, the black, high-tech ceramic lugs and the solid crown protection in platinum. In the inner circle is the traditional pattern consisting of interlocking capital "I"s with elongated serifs. The letter stands for Ingenieur and lends an unusual depth to the relief.

A LOOK UNDER THE BONNET

If we look at the Ingenieur Constant-Force Tourbillon from the movement side, it's like peering into a sports car's engine compartment. Complementing the bores in the bezel on the front side are five titanium screws with ceramic heads, which secure the sapphire-glass back firmly to the case. On the bottom plate, the lively interplay of blasted and satin-finished surfaces combined with polished edges is reminiscent of a high-performance Formula One™ racing car. Perforated sections reveal the intermeshing gears, while engravings provide the technical details. All the design elements are meticulously harmonized and radiate power and pure dynamism.

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INGENIEUR CONSTANT-FORCE TOURBILLON

REF. IW590001

FEATURES

Mechanical movement – Power reserve display – High-precision moon phase display – Double moon phases for the northern and southern hemispheres – Countdown display showing phases until next full moon – Tourbillon with integrated constant-force mechanism – Glucydur®* beryllium alloy balance with high-precision adjustment cam on balance arms – Screw-in crown – See-through sapphire-glass back

MOVEMENT

Calibre	94800
Frequency	18,000 A/h / 2.5 Hz
Jewels	43
Power reserve	96 h
Winding	hand-wound

WATCH

Materials	platinum and ceramic case, black dial, black alligator leather strap, pin buckle in platinum
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	46 mm
Case height	14 mm

* IWC Schaffhausen is not the legal owner of the Glucydur® trademark.

POLE POSITION IN THE BATTLE OF THE TITANS

INGENIEUR PERPETUAL CALENDAR DIGITAL DATE-MONTH

The Ingenieur Perpetual Calendar Digital Date-Month comes with a large date display, a sporty design and a case made of titanium aluminide. Like the hybrid boost button on the steering wheel of a Formula One™ car, its quick-action switch supplies maximum power precisely when it is needed at the end of the month.

The sight of an original MERCEDES AMG PETRONAS steering wheel is intriguing – and not only for motorsport fans. Dozens of displays, levers and buttons are arranged in the tiniest of spaces. At first sight rather confusing, they are so clear to the driver that he can operate them intuitively, even at speeds of up to 300 kph. The instrument look was the source of inspiration for the designers and engineers at IWC when they created the new Ingenieur Perpetual Calendar Digital Date-Month (Ref. IW379201). The black-and-white dial looks every bit as complex as a Formula One™ steering wheel. Four totalizers are grouped around the central axis, dominated by the oversized numerals in the perpetual calendar, which shows the date and month on a large digital display. The perpetual calendar is one of the most impressive mechanisms ever invented by IWC Schaffhausen. The angular numerals underscore the technological aspects of the chronograph. Cut-out sections in the middle of the subdials reveal the arbors of the sophisticated disc mechanism. The 4-year leap year cycle is also shown digitally. On top of this, there is another new feature in the design of the perpetual calendar: the dial has semi-transparent sapphire-glass inlays over the date, month and leap year discs, which enable the wearer to observe the complex interplay of the discs as they advance. On New Year's Eve, the five displays begin to move simultaneously. It is a complex technological feat that no lover of mechanical complications will want to miss. The perpetual calendar is mechanically programmed to take the 29th day of February into account every 4 years. Only on 1 March 2100 will it require intervention by a watchmaker, because that year

breaks with the conventional 4-year cycle and will not be a leap year. Despite its complicated mechanism, the perpetual calendar can be set easily using the crown.

TITANIUM ALUMINIDE - A MATERIAL USED IN MOTORSPORT

When it comes to the use of state-of-the-art high-tech materials, the competition in both watchmaking and motor racing is fierce. For the first time ever, IWC Schaffhausen unveils a watch case made of titanium aluminide (TiAl) and underscores its passion for innovative solutions. IWC discovered the use of titanium for the watch industry as a case material as early as 1980. In motor racing, titanium aluminide is used for pistons and valves: this is because the alloy is lighter and tougher than pure titanium and very well suited to the extreme temperatures generated in the combustion chamber. Machining this high-performance material for case blanks is a major technological challenge. A team of specialists at IWC worked on it for 3 years until they mastered the process to perfection. Push-buttons, screw heads and the crown and its protective shoulders on the Ingenieur Perpetual Calendar Digital Date-Month are made of black high-tech ceramic (zirconium oxide). IWC was also the first watch manufacturer to use this anti-magnetic, acid-resistant and scratch-resistant material for a case – that of the Da Vinci Ceramic (Ref. 3755) – back in 1986. Composites using ceramics have established themselves for the use of brake discs in Formula One™ because of their resistance to heat and to mechanical wear

and tear. The combination of titanium aluminide and ceramic in the case is not only an indication of IWC's engineering prowess but also of the special affinity between the Ingenieur watches and motor racing.

QUICK-ACTION SWITCH DELIVERS MAXIMUM POWER

When a Formula One™ driver needs more power, he simply presses the hybrid boost button on the steering wheel to unleash all his engine's potential. At the end of the year, the Ingenieur Perpetual Calendar Digital Date-Month is called upon to advance two date and two month display discs as well as the leap year disc. Unfortunately, it cannot simply push a boost button. Mastering the technological challenge presented here took a team of IWC watchmakers and design engineers no less than 4 years. They developed a mechanism to store the energy separately: a quick-action switch, as it is known. Every night, when the date display advances, this sophisticated mechanism siphons off a little of the energy, stores it and then discharges it precisely at the end of the month. At the end of the year, five display discs – including the one for the digital leap year display – have to be advanced simultaneously. Needless to say, this must have no effect on the watch's accuracy, even if the tension in the mainspring is almost exhausted or if the chronograph is also activated at the same time.

WATCH-WITHIN-A-WATCH

The innovative "watch-within-a-watch" was designed for the rapid, intuitive display of stop times between a minute and 12 hours. While stop times up to 60 seconds are shown conventionally by the central chronograph hand, the hours and minutes recorded by the stopwatch can be read off on the totalizer at "12 o'clock" as easily as reading the time on an analogue display. The integrated flyback function allows wearers to return the running stopwatch hand to zero and to start another timing sequence immediately. To turn this practical chronograph function into reality, the design engineers equipped the IWC-manufactured 89802 calibre with a particularly efficient automatic double-pawl winding system. The movement consists of 474 individual parts and can build up a power reserve of 68 hours. As an acknowledgement of IWC's involvement with motor racing in 2013, the rotor takes the shape of a wheel rim and can be seen through the transparent sapphire-glass back on

the reverse side of the Ingenieur Perpetual Calendar Digital Date-Month. The attractive black rubber strap with textile inlay ensures that the watch is extremely comfortable to wear and has a long service life.

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INGENIEUR PERPETUAL CALENDAR DIGITAL DATE-MONTH

REF. IW379201

FEATURES

Mechanical chronograph movement – Stopwatch function with hours, minutes and seconds – Hour and minute counters combined in a totalizer at 12 o'clock – Flyback function – Small hacking seconds – Perpetual calendar – Large double-digit displays for both the date and the month – Leap year display – Screw-in crown – See-through sapphire-glass back – Rotor in the shape of a wheel rim

MOVEMENT

Calibre	89802
Frequency	28,800 A/h / 4 Hz
Jewels	51
Power reserve	68 h
Winding	automatic

WATCH

Materials	case in titanium aluminide, black dial with sapphire-glass inlays, black rubber strap with textile inlay, pin buckle in titanium
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	46 mm
Case height	17 mm

HIGH-TECH TIMEPIECE IN A CARBON CASE

INGENIEUR AUTOMATIC CARBON PERFORMANCE

In 2013 IWC Schaffhausen starts a 3-year period as Official Engineering Partner of the MERCEDES AMG PETRONAS Formula One™ Team. Worldwide, the two companies stand for outstanding craftsmanship, innovation and performance engineering. To mark their cooperation, IWC presents a new timepiece in a carbon case. Available with either red or yellow design elements, the Ingenieur Automatic Carbon Performance is limited to 100 watches in each version.

When the red lights go out in front of the new MERCEDES AMG PETRONAS Formula One™ Team car in Melbourne for the first time, it signals the start of the 2013 Grand Prix season. Watching on intently will be a television audience in the tens of millions. And they will not be alone. Behind the scenes, a practised team of racing strategists and technicians will scrutinize every detail of the technical data streaming across their monitors. Have they got the technical parameters right? Has all the effort been worth it? And have all the months of calculations paid off? The set-up of a Formula One™ racing car is cutting-edge precision work. Like the engineers at MERCEDES AMG PETRONAS, the designers, technicians and master watchmakers at IWC Schaffhausen work tirelessly to achieve a level of perfection known to both companies as performance engineering. In 2013 IWC is launching a timepiece that underscores its commitment as Official Engineering Partner of the MERCEDES AMG PETRONAS Formula One™ Team. The material used for the outer case is demanding, and the way in which it is processed only confirms IWC's reputation as a manufacturer of timepieces of the very highest quality.

CARBON - A HALLMARK MATERIAL IN FORMULA ONE™

In the early 1980s, the use of carbon fibre revolutionized the manufacture of Formula One™ racing cars. No other

material is as suitable as carbon for making the safety shell (monocoque) and bodywork. It is twice as rigid as steel and, volume for volume, just a fifth of the weight. A Formula One™ car monocoque consists of up to twelve layers of carbon-fibre matting and weighs less than 60 kilograms. The material is extremely rigid, which makes the carbon shell practically indestructible and plays a key role in the safety concept behind modern Formula One™. Carbon has become a hallmark of Formula One™ and at the same time a symbol of state-of-the-art materials innovation. Today, even the steering wheels found in racing cars are made mainly of carbon. So it seems only apt that IWC Schaffhausen should unveil a new timepiece in a carbon case to mark its cooperation with MERCEDES AMG PETRONAS: the Ingenieur Automatic Carbon Performance (Ref. IW322401, Ref. IW322402). The three-part outer case is based on the same principles as those used for the monocoque body of a racing car. Fibre matting is soaked in epoxy resin, moulded to the desired shape and then baked at a high temperature with overpressure. Finally, the resin is cured. A closer look at the webbing reveals individual fibres five times finer than a human hair. The black dial of the Ingenieur Automatic Carbon Performance is coated with carbon-fibre webbing in a twill weave: each strand of the weft thread is woven twice over and twice under a warp strand. This produces the characteristic pattern found on the steering wheel of the MERCEDES AMG PETRONAS Formula One™ racing car.

The black carbon-fibre webbing complements the authentic Formula One™ look perfectly and gives the watch a dynamic surface with the added dimension of depth.

**DESIGN CUES BY
WATCH DESIGNER GÉRALD GENTA**

The five screws securing the outer case and carbon bezel to the water-resistant titanium inner case further enhance the technical look and feel of the Ingenieur Automatic Carbon Performance. The screw heads are a reinterpretation of Gérald Genta's design language. He created the legendary Ingenieur SL (Ref. 1832), which was housed in a sporty steel case and launched in 1976. It has remained one of the watch industry's great designs to this day. Taking his inspiration from a diving helmet, Genta made no attempt to conceal the screws and bores integral to the design, and placed them in full view on the bezel. Together with the lightning-bolt logo, the bores in the Ingenieur SL's bezel have become a hallmark of the Ingenieur watch family. In much the same way that contemporary diving equipment influenced Gérald Genta, IWC's design technicians have now taken many of their ideas from Formula One™. The classic range of materials traditionally found in a Formula One™ racing car inspired the choice of materials for the Ingenieur Automatic Carbon Performance: carbon for the case and dial; ceramic for the crown, crown protection and screw heads; titanium for the screws; and, finally, rubber for the strap with its textile inlay. The strap has signal-yellow or red thread stitches reminiscent of the yellow stripes on the outer walls of soft slicks and the red stripes found on super-soft slicks used in Formula One™. In motor racing's leading discipline, the choice of tyres is strategically decisive. The colours help spectators to identify the six different kinds of tyres more easily. The stitching on the strap matches the colour of the yellow or red numerals showing seconds on the flange, which differ in the two versions of the Ingenieur Automatic Carbon Performance. The rotor can be seen at work through the transparent sapphire-glass back, and was modelled on the pistons in a Formula One™ racing car. In this case, the engine is the IWC-manufactured 80110-calibre movement with the Pellaton automatic winding system. The powerful drive ticks away reliably and has a 44-hour power reserve.

QUALIFYING FOR WATCHES

When a Formula One™ driver hurtles round the track at speeds of up to 300 kph, he encounters impacts and vibrations that could – literally – leave him shaken up. In the bends, his body is subjected to centrifugal forces of up to five times the pull of gravity. Without a muscular physique and an effective suspension, it would be virtually unbearable. In the Ingenieur Automatic Carbon Performance, the job of counteracting impacts and vibrations is handled by the integrated shock-absorption system. It means the 80110 calibre is one of the most robust movements to make it through IWC's gruelling series of tests, which simulate everything that can happen to a watch in both normal and extreme circumstances. The process known as "qualifying" in Formula One™ has similarities with "qualification" at IWC. In the workshops in Schaffhausen, the term stands for an extremely tough testing programme lasting several months. Only timepieces that emerge successful from countless tests involving impact, abrasion, climate, corrosion, UV and practice will make it to the marketplace, where they are measured against the rest of the competition in the field of haute horlogerie. The Ingenieur Automatic Carbon Performance has passed with flying colours. This impressive example of high technology is limited to 100 examples each with yellow or red numerals for the seconds and stitching on the strap. The case back ring bears the engraving "ONE OUT OF 100".

IWC SCHAFFHAUSEN

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INGENIEUR AUTOMATIC CARBON PERFORMANCE

REF. IW322401 · IW322402

FEATURES

Mechanical movement – Pellaton automatic winding – Integrated shock-absorption system – Date display with crown-activated rapid advance – Central hacking seconds – Screw-in crown – Limited edition of 100 watches each, once with yellow and once with red numerals for the seconds and stitching on the strap

MOVEMENT

Calibre	80110
Frequency	28,800 A/h / 4 Hz
Jewels	28
Power reserve	44 h
Winding	automatic

WATCH

Materials	Ref. IW322401: carbon case, black dial, black rubber strap with textile inlay, pin buckle in titanium, limited to 100 watches with yellow numerals for the seconds and stitching on the strap, engraving on case back “ONE OUT OF 100” Ref. IW322402: carbon case, black dial, black rubber strap with textile inlay, pin buckle in titanium, limited to 100 watches with red numerals for the seconds and stitching on the strap, engraving on case back “ONE OUT OF 100”
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	46 mm
Case height	14.5 mm

GREETINGS FROM SCHAFFHAUSEN TO AFFALTERBACH

INGENIEUR AUTOMATIC AMG BLACK SERIES CERAMIC

Since the start of their cooperation in 2004, IWC Schaffhausen and Mercedes-AMG have forged a strong partnership. The precision, efficiency and manufacturing quality of AMG cars and the Ingenieur watches from IWC hold an irresistible appeal for technology enthusiasts. In 2013, IWC is dedicating the Ingenieur Automatic AMG Black Series Ceramic to the two companies' many years of cooperation.

Mercedes-AMG, the high-performance brand owned by Mercedes-Benz and domiciled in Affalterbach, Germany, makes the most powerful series-production models in the company's portfolio. At irregular intervals, AMG adds a highlight to its range with the "Black Series", which is inspired by motorsport. Formula One™ fans are also familiar with Mercedes-AMG from the Official F1™ Safety Car that has featured regularly on the world's racing circuits since 1996. Despite being made for the track, a "Black Series" vehicle from AMG boasts all the features typically found in a genuine Mercedes-Benz: quality, reliability, everyday practicability and a long service life. They are the same attributes that apply to the new Ingenieur Automatic AMG Black Series Ceramic timepiece from IWC (Ref. IW322503, IW322504). This is no coincidence: after all, the engineers and technicians in Schaffhausen and Affalterbach share the same passion for handcrafted precision technology at the very highest level.

UNCOMPROMISINGLY ELEGANT

IWC's designers created the Ingenieur Automatic AMG Black Series Ceramic as a tribute to its namesake. One of the two versions of the watch is finished entirely in elegant black, with the exception of the white hands and indices. But the "Black Series" models made by the car manufacturer are available not only in black. This explains why a second version of the watch features a brown dial, beige hands and appliqués as well as a rubber strap with a brown calfskin inlay. The purist design of the watch, with its

three hands, is an expression of the philosophy jointly held by IWC and Mercedes-AMG: uncompromising performance, functionality and no gimmicks. Some of the surfaces have a high-gloss, piano-lacquer-like finish while others are silky matte. This intriguing interplay ensures that the timepiece is an attractive eye-catcher. Clear-cut, meticulously aligned contours underscore the watch's chic, sporty appeal.

CERAMIC: A MATERIAL WITH A TRADITION AT IWC

Inspired by the high-performance ceramic disc brakes found in premium AMG vehicles, the case (water-resistant to 12 bar) of the Ingenieur Automatic AMG Black Series Ceramic, including the bezel, crown and solid protective shoulders, is made entirely of black zirconium oxide. IWC discovered the high-performance ceramic for the watch industry back in 1986 and, as a result, has the technological expertise needed to machine this extremely hard material. In view of its hardness of 8 on the Mohs scale, the case blank can be machined only with diamond-tipped tools, which register 10 on the Mohs hardness scale. Apart from being extremely scratch-, heat- and corrosion-resistant, zirconium oxide is skin-friendly and weighs about 30 per cent less than steel, making it ideal for watch cases.

Ten titanium screws with striking ceramic heads hold the two sides of the case securely together, referencing the DNA of the modern Ingenieur watches. This is because the original five bores in the bezel – the brainchild of world-

famous watch designer Gérald Genta – were inspired by diving helmets, which were secured to the diver's suit by screws. In the mid-1970s, IWC commissioned him to design the legendary Ingenieur SL, whose decidedly technical appearance has given the Ingenieur family its face and left its stamp to this day.

ONE OF IWC'S TOUGHEST MOVEMENTS

Rather like an AMG Mercedes vehicle, which is as much at home on the track as it is on the road, the Ingenieur Automatic AMG Black Series Ceramic is ideally equipped to meet the stresses and strains of everyday use and of extreme situations. This is thanks, not least, to the IWC-manufactured 80110 calibre, one of the most rugged movements manufactured by the Schaffhausen-based company. It boasts an integrated shock-absorption system, which effectively protects the rotor bearing against impacts and vibrations. Before an IWC movement earns the right to be called "shock-resistant", it undergoes a daunting series of tests lasting weeks, during which all the parts are subjected to forces of up to 5000 g (the unit used to measure the earth's gravitational pull). The watch is thus well equipped to withstand the breathtaking acceleration of the current SLS AMG Coupé Black Series: from 0 to 100 km/h in 3.6 seconds.

A glance through the transparent sapphire-glass back at the watch's precision "high-performance engine" reveals a movement with Pellaton winding, 44-hour power reserve and blackened rotor, underscoring the watch's technical appeal. Geneva stripes and circular graining adorn the bridges and parts of the bottom plate. The rubber strap with its textile or calfskin inlay combines the attraction of a genuine eye-catcher with the wearability and durability of rubber.

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INGENIEUR AUTOMATIC AMG BLACK SERIES CERAMIC

REF. IW322503 · IW322504

FEATURES

Mechanical movement – Pellaton automatic winding – Integrated shock-absorption system – Date display with crown-activated rapid advance – Central hacking seconds – Screw-in crown

MOVEMENT

Calibre	80110
Frequency	28,800 A/h / 4 Hz
Jewels	28
Power reserve	44 h
Winding	automatic

WATCH

Materials	Ref. IW322503: ceramic case, black dial, black rubber strap with textile inlay, pin buckle in titanium Ref. IW322504: ceramic case, brown dial, black rubber strap with brown calfskin inlay, pin buckle in titanium
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	46 mm
Case height	14.5 mm

TWO INGENIEURS FOR THE RACETRACK

INGENIEUR DOUBLE CHRONOGRAPH TITANIUM AND INGENIEUR DUAL TIME TITANIUM

Materials used in Formula One™ inspired the cases of the Ingenieur Double Chronograph Titanium and Ingenieur Dual Time Titanium. Technically speaking, too, the two timepieces are ideal for the motorsport's premier discipline. While the Double Chronograph records lap times, the Dual Time helps to keep track of the time during the racing season despite constant time-zone changes.

The new design line in the Ingenieur watch family is easy to identify: instead of the characteristic bores, the bezels of these distinctive sports watches feature five screws. These secure the bezel firmly to the cases of the Ingenieur Double Chronograph (Ref. IW386501, IW386503) and the Ingenieur Dual Time (Ref. IW326403), which are made of titanium. Titanium is one of the materials IWC first introduced to the watch industry back in the early 1980s and has several outstanding properties: only half the weight of stainless steel, it is corrosion-resistant, antimagnetic and particularly skin-friendly. In both watches, therefore, the crown, crown protection and push-buttons are made of titanium, which is painstakingly coated with rubber.

QUALIFYING FOR A DOUBLE CHAMPION

In Formula One™ racing, lap times provide information about technical parameters and the course of the race. During qualifying, the driver with the fastest lap time is awarded pole position, on the inside bend at the front of the grid. So it was clear that the new Ingenieur collection, which is dedicated to the partnership agreement between IWC Schaffhausen and the MERCEDES AMG PETRONAS Formula One™ Team, would have to feature a double chronograph. The split-seconds hand can be used to record two intermediate times within a given minute while the stopwatch hand with its blue or white tip continues to run. When the push-button at "10 o'clock" is pressed again, the split-seconds hand instantly catches up with the

chronograph hand and runs synchronously with it once again. In this way, users can record as many lap times as they choose. The stopwatch display at "12 o'clock" is divided up into 30 minutes and contains a jumping minute counter. In the course of an hour, its triangular tip completes two revolutions. The hour counter in the totalizer at "6 o'clock" marks off stop times in half-hour segments. The recessed totalizers, which closely resemble tachometers, give the watch its consistent, instrument-inspired look. With so many displays, it goes almost without saying that, apart from the date, there should also be one for the day of the week. The Ingenieur Double Chronograph Titanium is water-resistant to 12 bar, available with either a silver-plated or black dial, and worn with a rubber strap.

TIME UNDER CONTROL

Melbourne, Barcelona, Monza, Kuala Lumpur, Singapore, São Paulo, Shanghai: around 20 times a year, the international Formula One™ cavalcade moves round the globe, from one racing circuit to the next. It is helpful, then, if drivers and their teams can keep track of the time in various zones. The new Ingenieur Dual Time Titanium takes the hard work out of it by showing a second local time of the wearer's choice. On the dial, we see the current local time. This can be advanced or moved back in one-hour steps, even beyond the International Date Line. While the white-tipped seconds hand relentlessly circuits the dial, the white triangle in the outer 24-hour ring shows a second time and

ensures that the wearer's home time is always visible. To make it easier to differentiate between day and night, the upper half, from 6 p.m. to 6 a.m., is darker than the lower half. The Ingenieur Dual Time Titanium retails with a black rubber strap.

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INGENIEUR DOUBLE CHRONOGRAPH TITANIUM

REF. IW386501 · IW386503

FEATURES

Mechanical chronograph movement – Self-winding – Date and day display – Stopwatch function with hours, minutes and seconds – Small hacking seconds – Split-seconds hand for intermediate timing – Screw-in crown

MOVEMENT

Calibre	79420
Frequency	28,800 A/h / 4 Hz
Jewels	29
Power reserve	44 h
Winding	automatic

WATCH

Materials	Ref. IW386501: titanium case, silver-coloured dial, black rubber strap, pin buckle in titanium
	Ref. IW386503: titanium case, black dial, black rubber strap, pin buckle in titanium
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	45 mm
Case height	16 mm

INGENIEUR DUAL TIME TITANIUM

REF. IW326403

FEATURES

Mechanical movement – Self-winding – Hour hand adjustable in one-hour steps (TZC = Time Zone Corrector) – 24-hour display (second time zone) – Date display – Central hacking seconds – Screw-in crown

MOVEMENT

Calibre	35720
Frequency	28,800 A/h / 4 Hz
Jewels	27
Power reserve	42 h
Winding	automatic

WATCH

Materials	titanium case, titanium-coloured dial, black rubber strap, pin buckle in titanium
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	45 mm
Case height	13 mm

AT HOME OUT ON THE CIRCUIT

INGENIEUR CHRONOGRAPH RACER

IWC Schaffhausen set to enter the motor-racing season in 2013 as the Official Engineering Partner of the MERCEDES AMG PETRONAS Formula One™ Team. To mark their cooperation, IWC is launching the Ingenieur Chronograph Racer in stainless steel with an engraving of a Formula One™ racing car on the case back.

For one of the parties in the venture, time is a genuine ally; for the other, a powerful opponent. Nevertheless, the engineers and designers from IWC Schaffhausen and the mechanics with the MERCEDES AMG PETRONAS Formula One™ Team have the same vision: they repeatedly push the boundaries of mechanical engineering and redefine the limits of precision technology. The two companies have a name for this untiring quest for perfection: performance engineering. As part of this joint venture, IWC is dedicating the Ingenieur Chronograph Racer (Ref. IW378507, IW378508, IW378509, IW378510) to the Formula One™ racing team. Recording periods of time of up to 12 hours, timing pit stops and calculating the average speed attained over a measured distance: there is virtually no time-related task to which the watch is not equal. A perfect watch for the racetrack.

THE 89361 CALIBRE - A PARAGON OF EFFICIENCY

The set-up of a Formula One™ racing car and the assembly of a high-precision timepiece exemplify the art of engineering at the highest-possible level. They pose the same questions to watchmakers and racing mechanics: what will happen to one of the parameters if we change something about another? How can we make the powertrain even more efficient? And how can we assemble the individual parts – in an Ingenieur Chronograph there are over 300 of them, in a Formula One™ vehicle ten times as many – to produce the optimum result?

The development of the 89361 calibre is a perfect example of the crucial role played by passion and expertise in the

quest to achieve a leading position in the Constructors' Championship for watch manufacturers. A team of engineers at IWC Schaffhausen spent four years developing this superb movement. In the beginning was a vision: the members of the team wanted to develop a chronograph display that would eliminate the mental arithmetic needed to calculate recorded times of over one minute using both the hour and minute counters. In addition, they set themselves the ambitious goal of making the ingenious Pellaton winding system, one of the most outstanding watchmaking achievements ever to emerge from Schaffhausen, even more efficient. A solution to the first challenge was soon found. Recorded hours and minutes are combined in a single totalizer which has two hands and is read off like an analogue watch display: for example "8 hours and 52 minutes". Shorter recorded times, i.e. those less than a full minute, continue to be shown by the central chronograph hand. In order to put this simple but revolutionary idea into practice, IWC's engineers had to develop a completely new movement based on the Pellaton winding system. They also found a brilliant solution to their second task. The mechanism, which is known as double-pawl winding, no longer has just two pawls in series but a total of four – two sets of double pawls – assembled diagonally to the pawl wheel. These transmit the push-and-pull movements generated by the rotor to the barrel. The arrangement eliminates dead spots during winding and boosts the system's efficiency by a measurable 30 per cent. Even if the chronograph displays a recorded time for a protracted period, the amplitude remains constant and the watch's accuracy is unaffected. Additionally, the pawls are not fitted with springs but designed as springs themselves, and rest against the pawl wheel with precisely the right degree of tension. The pawls

are controlled by a miniature drive shaft – similar to the crankshaft in a car – which is set in motion by the rotor. For this reason, it is only logical that the 89361 calibre is now the driving force behind the Ingenieur Chronograph Racer.

PERFECT FOR THE RACETRACK: TACHYMETER AND FLYBACK FUNCTIONS

With the help of the tachymeter scale on the chronograph's bezel, it is a simple task to calculate the speed of a car: if a measured distance of 1,000 metres is covered in 30 seconds, the tachymeter scale shows 120. The vehicle's speed over the kilometre is thus 120 km/h. Thanks to the flyback function, pressing the reset button brings the stopwatch hand back to zero and immediately restarts timing, making it perfect for recording pit-stop times.

The Ingenieur Chronograph Racer is available with a slate-coloured dial and black totalizers or with a silver-plated dial, silver-plated totalizers and blue hands and appliqués. The red "60" in the chapter ring was inspired by the digital display on the steering wheel of the MERCEDES AMG PETRONAS Formula One™ racing car, which shows the selected gear, oil temperature and lap times during the race. The engraving of a Formula One™ racing car – a modern Silver Arrow, of course – decorates the case back.

The watch comes with a robust stainless-steel bracelet fitted with a special fine-adjustment clasp, which allows the wearer to make minor adjustments to the length of the strap at any time. All he needs to do is press gently on the button with the IWC logo in the middle of the clasp cover and to pull or push the bracelet slightly. The timepiece is also available with a sporty rubber strap with a textile inlay. While the material on the upper side is very attractive to look at, the rubber on the inside makes the strap enormously durable and pleasant to wear.

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INGENIEUR CHRONOGRAPH RACER

REF. IW378507 · IW378508 · IW378509 · IW378510

FEATURES

Mechanical chronograph movement – Date display with crown-activated rapid advance – Stopwatch function with hours, minutes and seconds – Hour and minute counters combined in a totalizer at 12 o'clock – Flyback function – Small hacking seconds – Screw-in crown

MOVEMENT

Calibre	89361
Frequency	28,800 A/h / 4 Hz
Jewels	38
Power reserve	68 h
Winding	automatic

WATCH

Materials	Ref. IW378507: stainless-steel case, slate-coloured dial, black rubber strap with textile inlay, pin buckle in stainless steel Ref. IW378508: stainless-steel case, slate-coloured dial, stainless-steel bracelet with fine-adjustment clasp Ref. IW378509: stainless-steel case, silver-plated dial, black rubber strap with textile inlay, pin buckle in stainless steel Ref. IW378510: stainless-steel case, silver-plated dial, stainless-steel bracelet with fine-adjustment clasp
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	45 mm
Case height	14.5 mm

TRIBUTE TO A LEGEND

INGENIEUR CHRONOGRAPH SILBERPFEIL

With its Ingenieur Chronograph Silberpfeil, IWC breathes fresh life into the legend of the historic Mercedes-Benz racing car. The designers took their inspiration from the illustrious W25 while the technicians equipped the chronograph, as only fitting, with a highly efficient IWC-manufactured movement.

An old black-and-white photograph taken at a motor race in Bern in 1936 records a very special moment: it shows Albert Pellaton, IWC Schaffhausen's future Technical Director, walking along the Mercedes-Benz pit and a line of W25 Silver Arrow racing cars. In the background we see the Mercedes team mechanics and even Mercedes' well-known racing-team manager, Alfred Neubauer. It is a brief encounter between men with a passion for engineering: men who use that passion – in both watchmaking and motorsport – in the pursuit of excellence, and who write technological history. To this day, the two disciplines are united by an obsession for precision technology and the quest for higher efficiency and performance.

AN INGENIOUS INVENTION AND A CRAZY IDEA

Albert Pellaton went on to design a pawl winding mechanism for IWC that was named after him. His 85-calibre movement featured the world's first bidirectionally wound automatic movement. Unlike conventional winding systems, which functioned only when the rotor was moving in one direction, his mechanism wound in both directions and was significantly more efficient. Pellaton's invention gave IWC a technological edge over the competition in the 1950s and has been continuously improved ever since. Today, it plays an important role in the Ingenieur watch family. The Mercedes-Benz Silver Arrow dominated international motorsport in the 1930s and in 1954/55, thanks not least to its mechanics. By the standards of the time, their contribution was simply remarkable. The Mercedes Silver Arrow's success story has lasted to this day and began with the W25 at the Eifel GP on the Nürburgring in 1934. It was there that Manfred von Brauchitsch was first past the chequered flag

in a cigar-shaped car that developed 354 h.p. and was capable of speeds up to 300 kph. The car had already created a furore in the Mercedes pit before the race even started. During the official technical inspection, it proved to be exactly one kilogram heavier than the permitted maximum weight of 750 kilograms. At this, von Brauchitsch is said to have suggested stripping the white paint to reduce the weight to the permitted limit. And overnight, this is precisely what the mechanics did. This revealed the gleaming aluminium bodywork, which from then on gave the W25 and its successors the name "Silver Arrow" (German: "Silberpfeil"). The legend was born.

THE MERGER OF TWO TECHNOLOGICAL ICONS

In 2013, IWC Schaffhausen brings together the illustrious names "Ingenieur" and "Silberpfeil" in its new Ingenieur Chronograph Silberpfeil. The thing that strikes you most about the chronograph in its stainless-steel case is the design. One of the most conspicuous features is the circular-grained dial in silver (Ref. IW378505) or brown (Ref. IW378511). Circular graining, or "perlage", is a cloud-like pattern of small overlapping circles that is usually reserved for plates and bridges. Here, it is a tribute to the legendary Mercedes-Benz W25, whose instruments were mounted on a dashboard with a circular-grained surround. The pattern creates a fascinating play of light and reflections and gives the Ingenieur Chronograph Silberpfeil its high-quality, technically inspired look. The red elements on the silver-plated or brown dial take up the design of the tachometer and revolution counter. The date display is integrated into the lower counter, thus maintaining the perfect symmetry of the dial.

TRADITION AND HIGH TECHNOLOGY

The efficient IWC-manufactured 89361 calibre is one of the best that fine watchmaking currently has to offer. The movement enables stopped hours and minutes to be read off as simply as the time on a subdial, while the central stopwatch hand records short stop times of up to a minute. Used in combination with the tachymeter scale, this provides the speed at which a reference distance of 1,000 metres is completed. Another practical feature for anyone who frequents the world's racing circuits is the flyback function for measuring pit-stop times: simply pressing the reset button causes the chronograph seconds hand to jump to zero and immediately starts another timing sequence. This eliminates the complicated business of successively pressing the stop, reset and start buttons. The further-improved Pellaton winding system builds up a 68-hour power reserve in next to no time. Its automatic double-pawl winding mechanism is 30 per cent more efficient than the one designed by Albert Pellaton: an enhancement of which the ingenious inventor would wholeheartedly have approved. On top of that, the watch's accuracy is unaffected when the chronograph is running or when the flyback function is activated.

The Ingenieur Chronograph Silberpfeil has a wristband with a brown leather inlay. This likewise takes us back to the world of motor racing in the 1930s, when sturdy leather straps – on the drivers' overalls as well as in the cockpit and on the car's bonnet – were virtually omnipresent. Unlike those, however, the chronograph's high-quality strap is made of finest calfskin, which is bonded with hardwearing rubber on the inner surface. In this way, the traditional leather look is combined with the comfort and long service life of rubber. Another option is the stainless-steel bracelet with a fine-adjustment clasp. An elaborate engraving of a historic Silver Arrow racing car can be found on the case back.

THE ERA OF THE SILVER ARROWS

Between 1934 and 1939, Mercedes-Benz won countless Grand Prix victories and championships with the Silver Arrow. In 1935, Rudolf Caracciola was crowned European champion driving the W25: a feat he repeated with its successor, the W125, in 1937, and in 1938 with the W154. Until 1939, he and the other members of the team, such as Manfred von Brauchitsch and Hermann Lang, dominated international motorsport's premier discipline. And in 1954, Mercedes-Benz celebrated the return of the Silver Arrows to Formula One™ with a one-two victory at the French

Grand Prix. The winner, Juan Manuel Fangio, won three more Grands Prix with his W196 R, and the world championship. The W196 R dominated the 1955 season too. In the seven Grand Prix events that year, the team won five races, four of them one-twos, and Juan Manuel Fangio retained his Formula One™ crown. Teammate Stirling Moss became a living legend when he won the 1955 Mille Miglia in a new record time. After this, Mercedes-Benz retired from motorsport to focus on series production. Since 2010, the MERCEDES AMG PETRONAS Formula One™ Team has been vying for points again, and is now supported by its Official Engineering Partner, IWC Schaffhausen.

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INGENIEUR CHRONOGRAPH SILBERPFEIL

REF. IW378505 · IW378511

FEATURES

Mechanical chronograph movement – Date display with crown-activated rapid advance via the crown – Stopwatch function with hours, minutes and seconds – Hour and minute counters combined in a totalizer at 12 o'clock – Flyback function – Small hacking seconds – Screw-in crown

MOVEMENT

Calibre	89361
Frequency	28,800 A/h / 4 Hz
Jewels	38
Power reserve	68 h
Winding	automatic

WATCH

Materials	Ref. IW378505: stainless-steel case, silver-plated dial, black rubber strap with brown calfskin inlay, pin buckle in stainless steel Ref. IW378511: stainless-steel case, brown dial, black rubber strap with brown calfskin inlay, pin buckle in stainless steel
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	45 mm
Case height	14.5 mm

PURIST AND TIMELESS

INGENIEUR AUTOMATIC

The new Ingenieur Automatic is the most classic Ingenieur model in the current collection. Elegant, functional and conscious of its tradition, it consistently reflects the design elements defined by legendary watch designer Gérald Genta.

Of all the watches in the 2013 Ingenieur collection, the Ingenieur Automatic (Ref. IW323902, IW323904, IW323906) in stainless steel is the model that most visibly reflects the features typically associated with this watch family. The watch, with its three hands, has a timeless, clear-cut design. The conspicuous bores in the bezel were the brainchild of watch designer Gérald Genta. In the case of the legendary Ingenieur SL unveiled in 1976, he placed the five functional holes directly on the bezel, where they originally served to hold it firmly in position. The bores, the entire structure of the case and the logo, incorporating the stylized bolt of lightning, soon became the hallmarks of the Ingenieur family.

PROTECTION AGAINST MAGNETIC FIELDS UP TO 40,000 AMPERES PER METRE

Because of its low case height, the Ingenieur Automatic is fitted with the slim, automatic 30110-calibre movement. Water-resistant to 12 bar, the case also accommodates a soft-iron inner case for protection against magnetic fields. This technical feature was responsible for the watch family's name because, in the 1950s, engineers, who were often exposed to magnetic fields in the course of their work, were among the potential buyers of the original Ingenieur from IWC Schaffhausen. In order to guarantee protection against magnetic fields, the inner back plate, casing ring and dial are made of soft iron, which conducts magnetic flux lines around the movement. The protection provided – up to 40,000 amperes per metre – is more than eight times the minimum required by the Swiss standard for antimagnetic watches. Despite its elegant appearance, the Ingenieur Automatic is robust and ideally equipped for everyday use.

CLEAR-CUT FUNCTIONALITY DOWN TO THE LAST DETAIL

With a case measuring just 10 millimetres in height and 40 millimetres in diameter, the Ingenieur Automatic is equally well suited to a slimmer wrist. The slightly chamfered bezel features an integrated step, the overall effect being to make the watch look slimmer. All the surfaces of the case feature a matte finish. The various edges, most of which are polished, underscore the watch's simple elegance. The chunky screw-in crown is generously sized and shielded by solid protective shoulders. The raised inner circle on the dial has exactly the same radius as the hour hand, while the minute hand circumscribes the middle section with its purist hour markers. The central seconds hand extends as far as the outer chapter ring. Here, too, we find clarity and functionality down to the last detail, qualities underscored by the date window at "3 o'clock". The Ingenieur Automatic is available with a silver-plated or black dial. The silver-plated version comes with rhodium-plated or rose-gold-plated hands and appliqués, while the rhodium-plated hands and appliqués form an attractive contrast to the black dial. The watch is fitted with a solid stainless-steel bracelet. A black rubber strap with a pin buckle is also available on request.

IWC SCHAFFHAUSEN

With a clear focus on technology and development, the Swiss watch manufacturer IWC Schaffhausen has been producing timepieces of lasting value since 1868. The company has gained an international reputation based on a passion for innovative solutions and technical ingenuity. One of the world's leading brands in the luxury watch segment, IWC crafts masterpieces of haute horlogerie at its finest, combining supreme precision with exclusive design.

FURTHER INFORMATION

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DOWNLOADS

Illustrative material marking the launch of the new 2013 Ingenieur watch collection from IWC can be downloaded free of charge at www.photopress.ch/image/IWC/SIHH/2013

INGENIEUR AUTOMATIC

REF. IW323902 · IW323904 · IW323906

FEATURES

Mechanical movement – Date display with crown-activated rapid advance – Central hacking seconds – Soft-iron inner case for protection against magnetic fields up to 40,000 A/m – Screw-in crown

MOVEMENT

Calibre	30110
Frequency	28,800 A/h / 4 Hz
Jewels	21
Power reserve	42 h
Winding	automatic

WATCH

Materials	Ref. IW323902: stainless-steel case, black dial, rhodium-plated hands and appliqués, stainless-steel bracelet with folding clasp
	Ref. IW323904: stainless-steel case, silver-plated dial, rhodium-plated hands and appliqués, stainless-steel bracelet with folding clasp
	Ref. IW323906: stainless-steel case, silver-plated dial, rose-gold-plated hands and appliqués, stainless-steel bracelet with folding clasp
Glass	sapphire, flat, antireflective coating on both sides
Water-resistant	12 bar
Diameter	40 mm
Case height	10 mm