INGENIEUR

NOW THERE'S A NAME FOR VISIONARY TECHNOLOGY: INGENIEUR



The first time the hallmarks of the watch family's design are featured together: Ingenieur SL, Reference 1832, launched in 1976



IWC and the MERCEDES AMG PETRONAS Formula One™ Team share the same passion for precision technology and performance engineering

In the early 1970s, freelance watch designer er Gérald Genta was walking on the shores of Lake Geneva when he spotted a diver, whose helmet was secured to his diving suit with screws. This tiny detail inspired him to adopt a distinctly modernist, technical approach that was to revolutionize watch design. Instead of trying to hide the screws or functional bores, he left them plain for all to see on the bezel. For IWC Schaffhausen Gérald Genta designed the legendary Ingenieur SL, Reference 1832. Five rudimentary bores could be seen in the bezel. These are engaged with a special tool during manufacture to bring the bezel into position so it could be screwed down. The Ingenieur SL was launched in 1976. Its eye-catching design stood for masculine values: it was rugged and sporty with a distinctly technical appeal, and has influenced the appearance of the Ingenieur watches to this day. The Ingenieur watch family's success story, incidentally, began back in the 1950s. It was an era with a booming economy.

An increasing number of technical appliances were making their way into ordinary households. These generated magnetic fields that adversely affected the accuracy of wristwatches. Engineers, in particular, often worked in areas subject to magnetic fields. By this time, IWC had perfected protection against magnetic fields with the help of a soft-iron inner case including a soft-iron dial to the point that making a new watch line especially for this profession seemed like a good idea. The lightning bolt, a physical symbol for electricity, became the signature for a new watch class named after its main target group: the Ingenieur.

IWC HAS MAINTAINED ONE OF THE LEADING POSITIONS IN TITANIUM SURFACE FINISHING TO THIS DAY

The first Ingenieur, unveiled in 1955, was in several respects a quantum leap for watchmaking. The developers' aim was to make a perfectly protected, high-precision watch, wound solely by movements of the wearer's arm. IWC had already made the leap from hand-wound to automatic movements 4 years previously. However, it was only with the Ingenieur watch that IWC catapulted itself into the vanguard of Swiss manufacturers competing to create the first bidirectional automatic movement. Its winding mechanism (calibres 852 and 8521) was the brainchild of the then Technical Director, Albert Pellaton. The Pellaton system did not convert the movement of the rotor into a rotary movement: it featured an eccentrically shaped cam



In the IWC 80110 calibre, the integrated shock-absorption system fulfils the same function as the suspension in a racing car

and a rocking bar with two pawls that translated it into a bidirectional to-and-fro movement. The concept is unusually efficient and repeated in several watches in the current collection.

In the late 1950s, the movement in the Ingenieur watches was successively improved until, in 1964, it attained the pinnacle of perfection found in the 854 and 8541 calibres. The second Ingenieur generation, recognizable by its new date window, was launched in 1967.

In the 1970s and 1980s, quartz watches reigned supreme on the world's watch markets. IWC used quartz-regulated oscillators to keep time in certain Ingenieur models. A little later, in 1983, the new Ingenieur SL (Reference 3505) was just 10 millimetres high and back on sale with a mechanical automatic movement: the 375 calibre was just under 4 millimetres in thickness. One of its typical features was the diamond pattern on the dial.

In 1985, with the Ingenieur in titanium, Reference 3350, the Schaffhausen-based manufacturer underscored its unparalleled reputation as one of the watch industry's great materials pioneers.

In 1989, IWC presented the Ingenieur Automatic "500,000 A/m", Reference 3508, whose impressive protection against magnetic fields withstood even a magnetic resonance tomograph generating 3.7 million A/m.

In 2005, 50 years after the first IWC Ingenieur, the watch family celebrated a stirring comeback. The Ingenieur Automatic, Reference 3227, assumed the cool, engineering-inspired aura of Gérald Genta's Ingenieur SL. The newly developed IWCmanufactured 80110 calibre with its Pellaton winding system also featured an integrated shock-absorption system to protect it against impacts and vibrations. As a symbol of the new partnership between IWC and Mercedes-AMG, IWC unveiled two Ingenieur models in titanium. They underscored the values



THE NEW INGENIEUR AUTOMATIC CARBON PERFORMANCE WILL APPEAL TO MOTORSPORT ENTHUSIASTS WITH ITS CASE MADE OF CARBON-FIBRE MATTING

shared by the technology specialists in Schaffhausen and Affalterbach: precision, performance and engineering expertise.

In 2007, the Big Ingenieur's extra-large 51113 calibre, Pellaton winding system and 7-day power reserve created a sensation. For mechanical watch lovers with a penchant for precision, it was also available as a chronograph with a tachymeter display that was practical for calculating speeds.

The new Ingenieur collection for 2013 acknowledges the global partnership between IWC and the MERCEDES AMG PETRONAS Formula One[™] Team. Their cooperation is founded on a jointly held conviction that a pioneering approach and skilled craftsmanship can take mechanics into new and unexplored realms.

Every season, the Mercedes engineers create a new, improved version of the Silver Arrow. IWC Schaffhausen emulates that in 2013 with a completely overhauled watch collection. Lovers of mechanical timepieces can look forward to more powerful in-house movements, more material innovations and even more exciting functions.

The technical tour de force of the new season is the Ingenieur Constant-Force Tourbillon with double moon display. A highly efficient example of precision engineering, its outstanding feature is the regularity of its rate. To achieve this, IWC's watchmakers integrated a patented constant-force mechanism in a tourbillon. Another masterpiece of the art of watchmaking is the quick-action switch found in the Ingenieur Perpetual Calendar Digital Date-Month, which moves up to five display discs simultaneously. Its case is made of titanium aluminide, another compound used in Formula One.

Other materials frequently found in modern, high-tech racing cars, such as carbon, ceramic and titanium, have established themselves as typical new design features of the Ingenieur watch family alongside the five characteristic ceramic screw heads in the bezel. The screws secure the bezel to the case and are a reinterpretation of Gérald Genta's original design cues. The newly designed line includes the Ingenieur Automatic Carbon Performance with a case and dial made of carbon fibres, as well as the Ingenieur Automatic AMG Black Series Ceramic. The Ingenieur Double Chronograph Titanium, featuring a splitseconds function, and the Ingenieur Dual Time Titanium, which shows a second local time, both come in a titanium case.

The classic Ingenieur line in the tradition of the 1976 Ingenieur SL and the Ingenieur Automatic of 2005 is still instantly recognizable from the stainless-steel cases and the five distinctive drill holes in the bezel. Technically speaking, and depending on the model in question, the roots go back all the way to the



During a pit stop, every single action must be spot on. Tenths of a second can spell the difference between victory and defeat

original Ingenieur of 1955 with Pellaton winding, a shock-absorption system and magnetic field protection.

The Ingenieur Chronograph Racer and the Ingenieur Chronograph Silberpfeil are perfect for recording stopped times, lap times and the speed achieved over a measured distance. While the Ingenieur Chronograph Racer is decorated with the engraving of a modern Formula One vehicle, the engraving on the back of the Silberpfeil celebrates the historic racing car of the same name made by Mercedes-Benz.

With a case measuring 10 millimetres in height and 40 millimetres in diameter, the Ingenieur Automatic is particularly well suited to a more slender wrist. Thanks to its three hands and stainless-steel case with distinctive bores in the bezel, this elegant watch clearly reflects the genetic code of the Ingenieur watch family. Its protection against magnetic fields refers to the technical tradition of this watch line.

There is a surprise this year in the form of a new rubber strap with a textile or leather inlay. This solution is an inspired way of combining the desired "look" of the outer material with the comfort and durability of rubber.

The new Ingenieur collection will doubtless appeal equally to admirers of top-quality in-house watch movements as to motorsport fans who love nothing more than the scream of a V8 engine.



Finding the ideal line calls for absolute precision and perfect timing





A POWERFUL DRIVE TO DELIVER HIGHER TORQUE

With the spectacular Ingenieur Constant-Force Tourbillon in its platinum and ceramic case, IWC still leads the field in the Constructors' Championship of haute horlogerie. This precision machine's patented constant-force mechanism is integrated in a tourbillon and ensures that the amplitude of the balance remains almost constant. It guarantees an extremely precise rate over a period of at least 48 hours. The newly developed 94800-calibre basic movement features two barrels that 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. The double moon display depicts the surface of the earth's only natural satellite so realistically that even tiny craters can be recognized. The countdown scale shows the number of days remaining until the next full moon. The power reserve display between "4" and "5 o'clock" indicates the energy remaining in the mainspring. The design on the movement side, visible through the transparent sapphire-glass back, was inspired by a sports car's engine block. Perforations provide a clear view of the intermeshing gears: performance engineering for purists.



INGENIEUR CONSTANT-FORCE TOURBILLON

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REFERENCE 5900



REF. IW590001 in platinum and ceramic with black alligator leather strap

Mechanical movement · Hand-wound · 96-hour power reserve when fully wound · Power reserve display · Perpetual 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 · Screw-in crown · Sapphire glass, flat, antireflective coating on both sides · See-through sapphire-glass back · Water-resistant 12 bar · Case height 14 mm · Diameter 46 mm With the Ingenieur Perpetual Calendar Digital Date-Month, IWC presents its first watch case made of titanium aluminide and reaffirms its reputation as the materials pioneer in the watchmaking industry. Titanium aluminide is used widely in motorsport: the alloy is lighter and more robust than pure titanium. The black parts of the case are made of zirconium oxide, yet another material typically used in Formula One. Modern racing cars have a boost button designed to provide maximum thrust when needed. In the case of the perpetual calendar with its digital date and leap year display, this job is handled by IWC's revolutionary quick-action switch. Every night, when the date changes, this sophisticated mechanism siphons off a little energy, stores it and then discharges it precisely at the end of the month to rotate the display discs. At the end of the year, no fewer than five display discs need to be advanced synchronously. On New Year's Eve, thanks to the three semi-transparent totalizers, the entire dial is set in motion. It is a spectacle of technical brilliance that no one who appreciates complex mechanical systems will want to miss. The transparent sapphire-glass back provides an unimpeded view of the IWC-manufactured 89802 calibre, whose rotor resembles the spokes on a light alloy wheel rim.



INGENIEUR PERPETUAL CALENDAR DIGITAL DATE-MONTH

REFERENCE 3792





REF.IW379201 in titanium aluminide with black rubber strap and textile inlay

Mechanical chronograph movement · Self-winding · 68-hour power reserve when fully wound · Perpetual calendar · Large double-digit displays for both the date and month · Leap year display · 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 · Sapphire glass, flat, antireflective coating on both sides · See-through sapphire-glass back · Water-resistant 12 bar · Case height 17 mm · Diameter 46 mm

A CASE MADE OF HIGH-TECH FIBRE

To mark its current cooperation with the MERCEDES AMG PETRONAS Formula One[™] Team IWC presents a big new high-tech model with a carbon-fibre case: the Ingenieur Automatic Carbon Performance. The middle section of the case, which is held together by five screws, is manufactured using the same principle as the monocoque of a racing car: the fibre matting is soaked in epoxy resin and shaped to the desired form before being baked at high temperature and pressure. The resin is cured in the meantime. The dial too is made of carbon fibre. It goes perfectly with the authentic Formula One look and gives the watch a profiled, three-dimensional surface. Carbon is only one-fifth the weight of steel, but does not have its resistance to impacts or scratching. For other parts of the case, IWC designers also took inspiration from the materials used in motorsport's leading discipline. Ceramic for the screw heads, the crown and crown protection, titanium for the screws and case-back ring, and rubber for the strap with textile inlay. The strap is stitched with a signal yellow or red nylon thread reminiscent of the yellow stripes on the outer walls of the soft slicks and the red stripes found on the super-soft slicks. Thanks to its integrated shock-absorption system, the IWC-manufactured 80110-calibre movement is unaffected by extreme acceleration as well as sharp braking manoeuvres and vibrations, making it the perfect watch for racing drivers. Perfectly in keeping with the design of the rotor, which is shaped like pistons.



INGENIEUR AUTOMATIC CARBON PERFORMANCE

REFERENCE 3224



REF. IW 322401 in carbon with black rubber strap and textile inlay



REF. IW322402 in carbon with black rubber strap and textile inlay

Limited edition of 100 watches each, once with yellow and once with red nylon threads · Mechanical movement · Pellaton automatic winding · 44-hour power reserve when fully wound · Integrated shock-absorption system · Date display with crown-activated rapid advance · Central hacking seconds · Screw-in crown · Sapphire glass, flat, antireflective coating on both sides · See-through sapphire-glass back · Water-resistant 12 bar · Case height 14.5 mm · Diameter 46 mm

HIGH TECHNOLOGY AND CRAFTSMANSHIP

 protective shoulders are all made of black zirconium oxide inspired by the high-performance ceramic disc brakes found in premium AMG vehicles. The striking screws in the bezel firmly secure the front glass, case and sapphire-glass back and are an unmistakable reference to the technical design cues of Gérald Genta's legendary Ingenieur SL. The watch is equipped with the in-house 80110 calibre, which has an integrated shock-absorption system and is one of the most rugged movements made by IWC. A glance through the transparent sapphire-glass back reveals a precision, high-performance mechanism with a blackened rotor.



INGENIEUR AUTOMATIC AMG BLACK SERIES CERAMIC

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REFERENCE 3225



REF. IW322503 in ceramic with black rubber strap and textile inlay



REF.IW322504 in ceramic with black rubber strap and brown calfskin inlay

Mechanical movement · Pellaton automatic winding · 44-hour power reserve when fully wound · Integrated shock-absorption system · Date display with crown-activated rapid advance · Central hacking seconds · Screw-in crown · Sapphire glass, flat, antireflective coating on both sides · See-through sapphire-glass back · Water-resistant 12 bar · Case height 14.5 mm · Diameter 46 mm

In Formula One, lap times provide important information about various technical parameters and the progress of a race. During qualifying, the driver with the fastest lap time is awarded pole position. So it was clear that the new Ingenieur collection, which was deeply influenced by the cooperation between IWC and MERCEDES AMG PETRONAS, should feature a double chronograph. The split-seconds hand can be stopped to record intermediate times while the stopwatch hand continues to run. If the push-button at "10 o'clock" is pressed a second time, the split-seconds and stopwatch hands are resynchronized. This allows the user to record as many lap times as he chooses. For the Ingenieur Double Chronograph Titanium with the new 79420 calibre, IWC's designers took their inspiration from materials typically used in Formula One: the casing ring is made of titanium and the striking screw heads in the bezel are made of ceramic. The crown, the crown protection and the push-buttons are lavishly coated with black rubber. The totalizers, which closely resemble tachometers, give the watch a consistent, instrumentinspired look. The watch is available with a silver-plated or black dial and normally worn with a black rubber strap.



INGENIEUR DOUBLE CHRONOGRAPH TITANIUM

REFERENCE 3865



REF. IW386501 in titanium with black rubber strap



REF.IW386503 in titanium with black rubber strap

Mechanical chronograph movement · Self-winding · 44-hour power reserve when fully wound · Date and day display · Stopwatch function with hours, minutes and seconds · Small hacking seconds · Split-seconds hand for intermediate timing · Screw-in crown · Sapphire glass, flat, antireflective coating on both sides · Water-resistant 12 bar · Case height 16 mm · Diameter 45 mm

AT HOME AROUND THE WORLD

— Melbourne, Abu Dhabi, Monza, São Paulo, Kuala Lumpur: 20 times a year, the international Formula One cavalcade moves from one racing circuit to the next, at locations all over the planet. The new Ingenieur Dual Time Titanium takes the hard work out of keeping on track while moving from one time zone to another by showing a second local time of the wearer's choice. This way, people who move rapidly from one continent or time zone to the next and who communicate worldwide will always stay on top of things. On the dial, we see current local time. This can be advanced or moved back in one-hour steps via the rubber-coated crown, even beyond the International Date Line. The hand with the white triangle indicates the second time on the outer 24-hour ring, meaning that the wearer's home time or the local time of a business partner are always visible. To make it easier to differentiate between day and night, the top half, from 6 p.m. to 6 a.m., is darker than the lower half. The Ingenieur Dual Time Titanium is available with a black rubber strap.



The Ingenieur Dual Time Titanium helps the crew that moves rapidly from one time zone to another to keep track of the time in their home country

INGENIEUR DUAL TIME TITANIUM

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REFERENCE 3264



REF. IW326403 in titanium with black rubber strap

Mechanical movement · Self-winding · 42-hour power reserve when fully wound · Hour hand adjustable in one-hour steps (TZC = Time Zone Corrector) · 24-hour display (second local time) · Date display · Central hacking seconds · Screw-in crown · Sapphire glass, flat, antireflective coating on both sides · Water-resistant 12 bar · Case height 13 mm · Diameter 45 mm



IN ITS ELEMENT ON THE CIRCUIT

In 2013 IWC Schaffhausen embarks on the Formula One season as the Official Engineering Partner of the MERCEDES AMG PETRONAS Formula One™ Team. The designers, technicians and engineers on both sides share a common passion for precision and performance engineering. To mark this cooperation, IWC rolls out the Ingenieur Chronograph Racer in stainless steel with an engraving of a Formula One racing car on the case back. The rugged timepiece has been equipped with one of the most efficient movements manufactured entirely by IWC, the 89361 calibre. It displays stopped times in hours and minutes on a totalizer, while times up to one minute are measured by the central stopwatch hand. It also features a tachymeter scale that shows the average speed covered over a distance of 1,000 metres. 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 chronograph is available with a slate-coloured dial and black totalizers or a silver-plated dial with silver-plated totalizers and blue hands. The red "60" in the chapter ring was inspired by the digital display on the steering wheel of the MERCEDES AMG PETRONAS racing car. Both watches are available with a black rubber strap and textile inlay, as well as a stainlesssteel bracelet.

INGENIEUR CHRONOGRAPH RACER

REFERENCE 3785



REF. IW378507 in stainless steel with black rubber strap and textile inlay

Mechanical chronograph movement · Self-winding · 68-hour power reserve when fully wound · 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 · Sapphire glass, flat, antireflective coating on both sides · Water-resistant 12 bar · Case height 14.5 mm · Diameter 45 mm

INGENIEUR CHRONOGRAPH RACER

REFERENCE 3785



REF.IW378509 in stainless steel with black rubber strap and textile inlay

Mechanical chronograph movement · Self-winding · 68-hour power reserve when fully wound · 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 · Sapphire glass, flat, antireflective coating on both sides · Water-resistant 12 bar · Case height 14.5 mm · Diameter 45 mm

INGENIEUR CHRONOGRAPH RACER

REFERENCE 3785



REF.IW378508 in stainless steel with stainless-steel bracelet



REF.IW378510 in stainless steel with stainless-steel bracelet

Mechanical chronograph movement · Self-winding · 68-hour power reserve when fully wound · 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 · Sapphire glass, flat, antireflective coating on both sides · Water-resistant 12 bar · Case height 14.5 mm · Diameter 45 mm

HOMAGE TO A LEGEND

With the new Ingenieur Chronograph Silberpfeil, IWC has breathed fresh life into the legend of the historic Mercedes-Benz racing car. One characteristic feature is the dial with its circular graining in silver or brown. This is a tribute to the mythical status of the Silver Arrow W25, whose dashboard had a steel surround with circular-grain decoration. The efficient double-pawl winding in the IWC-manufactured 89361 calibre is one of the most outstanding achievements of haute horlogerie currently on offer. The upper totalizer makes it possible to read off stopped hours and minutes as simply as the time on a subdial. Stopped times up to one minute are measured by the central seconds hand. Used in combination with the tachymeter scale, this provides the speed at which a reference distance of 1,000 metres has been completed. Another very practical feature for anyone who frequents the world's racing circuits is the flyback function for measuring pit-stop times. The chronograph features a black rubber strap with a calfskin inlay. This, too, was inspired by the world of motorsport in the 1930s, when thick leather belts were omnipresent on motorcar bonnets. An attractive engraving of a stylized Silver Arrow racing car can be found on the case back. Between 1934 and 1939, Mercedes-Benz chalked up countless Grands Prix and other championship victories with its Silver Arrows. Both dial versions are available in limited editions of 1,000 watches.



INGENIEUR CHRONOGRAPH SILBERPFEIL

REFERENCE 3785



REF. IW378505 in stainless steel with black rubber strap and brown calfskin inlay

Limited edition of 1,000 watches · Mechanical chronograph movement · Self-winding · 68-hour power reserve when fully wound · 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 · Sapphire glass, flat, antireflective coating on both sides · Water-resistant 12 bar · Case height 14.5 mm · Diameter 45 mm



INGENIEUR CHRONOGRAPH SILBERPFEIL

REFERENCE 3785



REF.IW378511 in stainless steel with black rubber strap and brown calfskin inlay

Limited edition of 1,000 watches · Mechanical chronograph movement · Self-winding · 68-hour power reserve when fully wound · 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 · Sapphire glass, flat, antireflective coating on both sides · Water-resistant 12 bar · Case height 14.5 mm · Diameter 45 mm



CLASSIC MEMBERS OF THE WATCH FAMILY

-With the moderate dimensions of the case. the Ingenieur Automatic in stainless steel is well suited to a slimmer wrist. Despite its relatively modest height of 10 millimetres, the watch still comes with a soft-iron inner cage for maximum protection against magnetic fields and water-resistance to 12 bar. The Ingenieur Automatic models consistently reflect the design cues of this traditional watch family. The main reason for this is the equally elegant and functional design of a watch with its three hands. 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. Originally, they served to hold it in position. Since then, the bores and/or screw heads together with the stylized bolt of lightning have become the hallmarks of the Ingenieur family. Like the solid metal hands, the rugged-looking crown protection underscores the impression that you are dealing here with a genuine strongbox. The classic Ingenieur is supplied with a silver-plated or black dial. The model with a silver-plated dial has rhodium- or rose-gold-plated hands and appliqués, while the rhodium-plated hands and appliqués attractively contrast with the black dial.

INGENIEUR AUTOMATIC

REFERENCE 3239



REF. IW 323906 in stainless steel with stainless-steel bracelet



REF. IW 323904 in stainless steel with stainless-steel bracelet



REF.IW323902 in stainless steel with stainless-steel bracelet

Mechanical movement · Self-winding · 42-hour power reserve when fully wound · Date display with crown-activated rapid advance · Central hacking seconds · Screw-in crown · Soft-iron inner case for protection against magnetic fields · Sapphire glass, flat, antireflective coating on both sides · Water-resistant 12 bar · Case height 10 mm · Diameter 40 mm