

IWC PILOT'S WATCHES

FLYING LEGENDS SINCE 1936



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Legendary Watches

IWC Pilot's Watches

Ebner Verlag







Rüdiger Bucher
Christian Pfeiffer-Belli (editors):

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by Chronos Magazine

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70 Years of Cult Pilot's Watches

Pilot's watches have always ranked among the most popular of wristwatch genres. On the one hand, they still breathe the spirit of the early airborne pioneers. On the other hand, this proud history imbues them with many positive attributes that are useful in daily life: e.g. good legibility, clear and uncompromising styling, ultra-precise timing, and last but not least, durability. All of these characteristics date from the pioneer years of aviation, when daring young men in flying machines needed special watches for navigation. Their watches had to be questioningly reliable, able to cope with sudden loss of aircraft pressure, drastic changes of temperature, or strong magnetic fields.

Today's pilot's watches were fundamentally shaped by IWC. In 1936, this company, based in Schaffhausen, Switzerland, created the "Special Watch for Pilots," a wristwatch that combined all of the special features that are crucial for pilots. IWC and pilot's watches have been inseparably linked for the past 70 years. The "Special Watch" was followed by other models that also acquired cult status, for example, the "Big Pilot's Watch" or the famous "Mark 11," as well as watches with small complications, such as chronographs or a second time zone (UTC). IWC today has a full line of pilot's watches, an attractive and contemporary family of products that looks back on a rich tradition – and looks ahead to a bright future.

This book, written by renowned journalists who specialize in watches, is devoted to all facets of IWC's pilot's watches, past and present. And this volume also marks the beginning of a new series of books from Ebner Publishers. Under the title "Watch Legends," we'll be publishing portraits of legendary models that have made and will continue to make horological history.

Rüdiger Bucher Christian Pfeiffer-Belli

A passion between heaven and earth

When IWC built its first pilot's watch in the form of the "Special Watch for Pilots" in 1936, aviation was no longer in its infancy: The legendary Spitfire, the aerodynamic masterpiece of the British Royal Air Force, had its maiden flight in the same year and set new standards in the skies. Flying, whether civil or military, was an elitist and enormously exhausting undertaking. It imposed extreme demands on both the pilots and their modest technical aids to navigation. A watch that was reliable and easy to read in every situation, and which could also withstand the strong magnetic fields of the cockpit instruments, was indispensable. With its "Special Watch for Pilots," IWC built the first professional timepiece for pilots, and in so doing established a pilot's watch tradition which is acclaimed around the globe to this day.

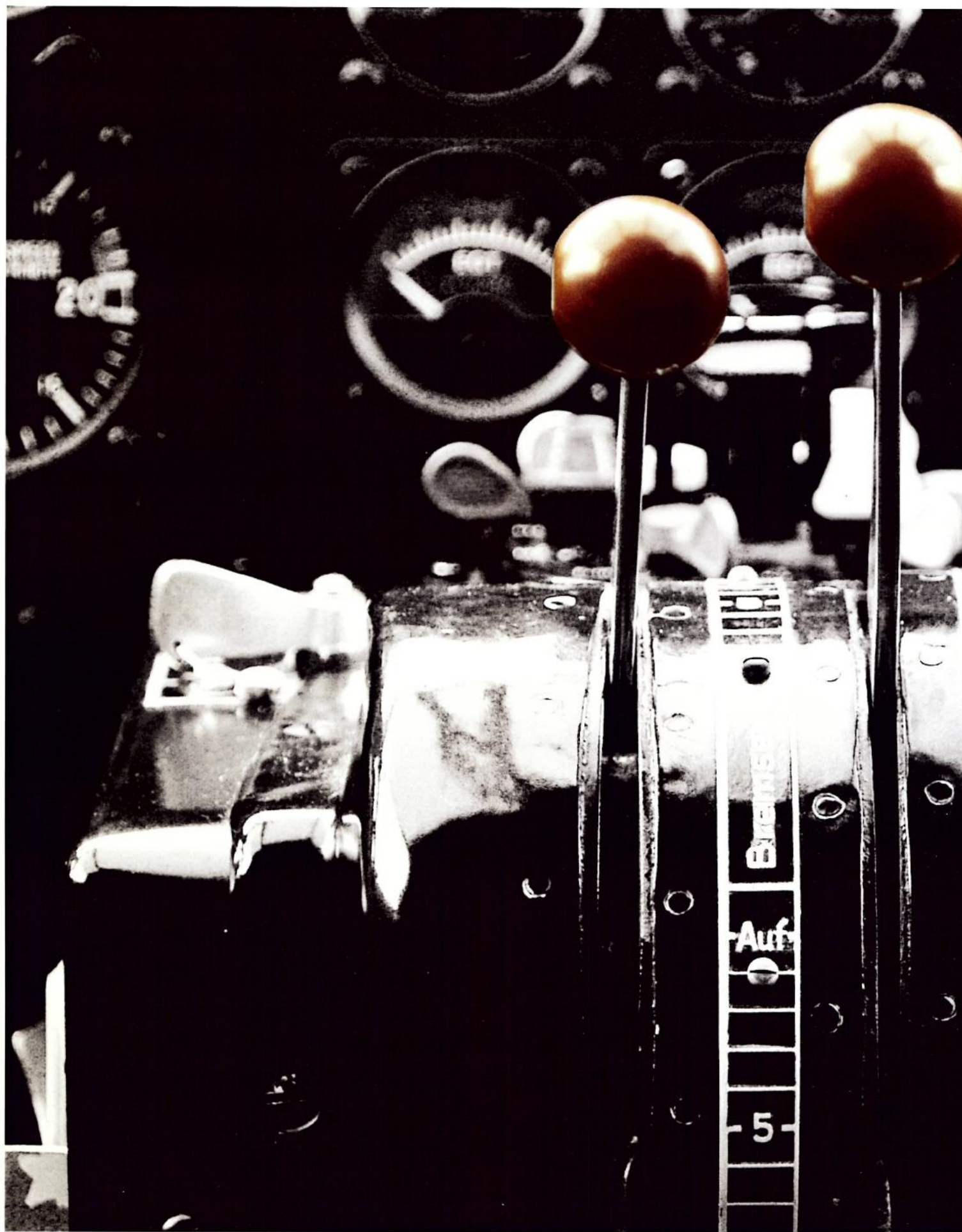
The fact that IWC embarked on the adventure of aviation was no coincidence. The engineers at the Schaffhausen manufactory have always been champions of innovations and technical achievements. The quality standard "Probus Scafusia" – good, solid craftsmanship from Schaffhausen – is backed by technological developments and a pioneering spirit. Pilot's watches occupy an eminent position within the collection of IWC. Our passion for technology, precision and perfection appeals not only to pilots but to fellow-passengers as well. Our passion for precision achievements and complex functionality also manifests itself in the Aquatimer family of diving watches, the Ingenieur and the *haute horlogerie* product ranges: the Portuguese, the Grande Complication and the Da Vinci from IWC.

We feel a great sense of honor that our long-standing pilot's watch tradition is able to celebrate the debut of a new series of books. We wish all watch enthusiasts a stimulating read about the pilot's watches from IWC.

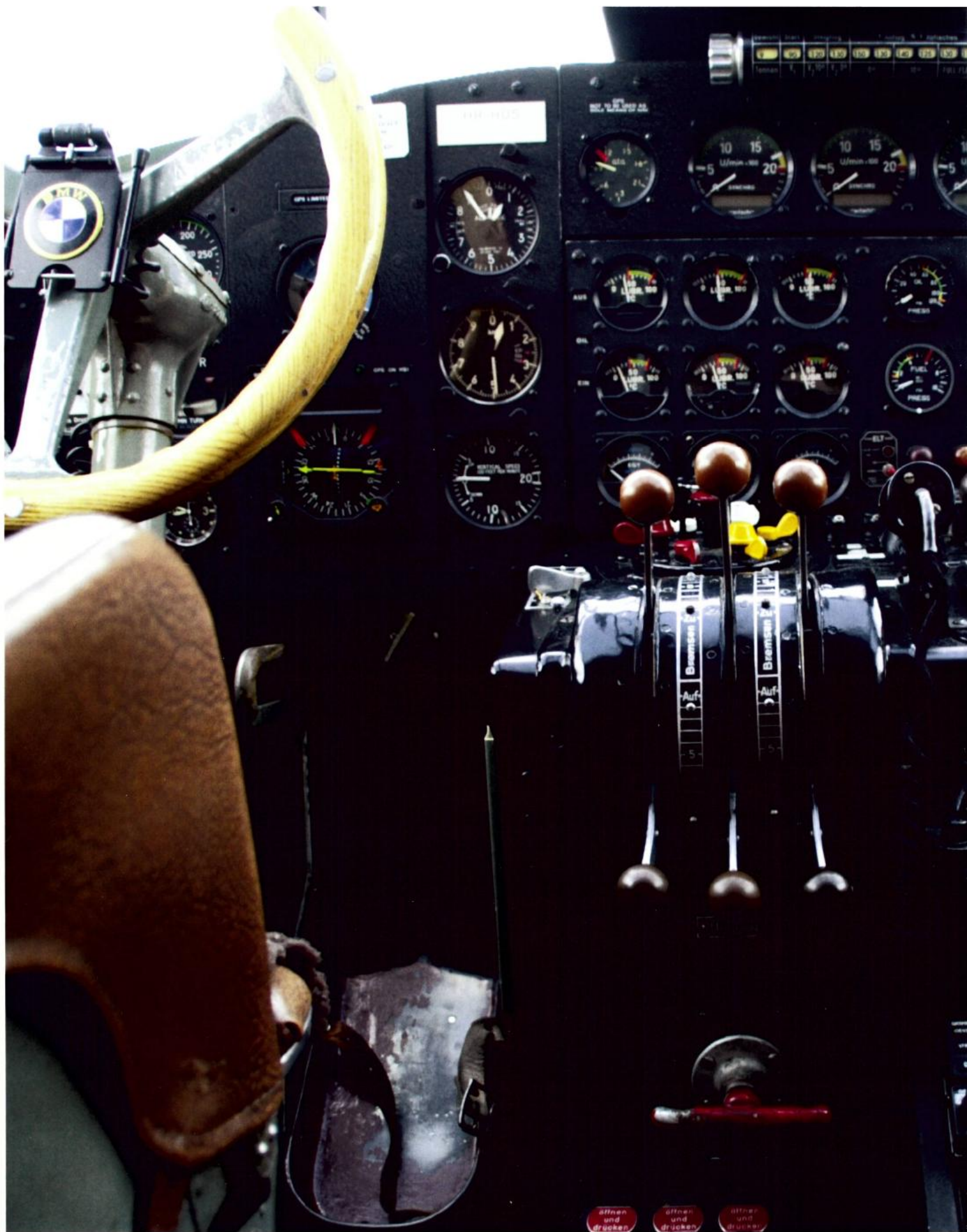
Georges Kern, CEO IWC

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The Pilot's Watch as a Genre

The Dream of Flight

by Witold A. Michalczyk

"Those Magnificent Men in Their Flying Machines or How I Flew from London to Paris in 25 Hours and 11 Minutes" is the title of a classic comedy film that debuted in 1965. The movie is about a fictitious airborne race between London and Paris that allegedly took place in 1910. The film is fiction, but the many difficulties that beset the pilots in the movie are quite similar to the actual travails associated with flying during the first decade of the 20th century, when aviation was still years away from becoming the comfortable glide through the sky that we take for granted nowadays. Back then, the pilots in their small aircraft were subjected to bone-jarring vibration. Open cockpits exposed the aviators to gale-force winds and inclement weather. Altitude and speed combined to produce freezing temperatures. No doubt: flying was more of an adventure than a pleasure. Watches in the era after the turn of the century were by no means capable of coping with such extreme stresses. But the biggest problem was that pocket-watches, which were the fashion in those days, were much too cumbersome. Extracting the watch from one's jacket pocket and reading its dial distracted a pilot's attention from the steering stick and kept him distracted for too long. Furthermore, a pilot needed to be able to continuously keep one eye on the time in order to know how much flying time his remaining supply of fuel could provide and to figure out, by glancing at his map, approximately where he and his aircraft were momentarily located. Aviators obviously needed a timepiece that could satisfy their special requirements.

Albert Santos-Dumont numbered among the most daring pioneers in the early days of flight. This Brazilian-born adventurer, who was one of the first successful pilots of motorized aircraft, was also the first aviator to commission a wristwatch designed expressly for airborne use. He dreamt of a



Always readily legible: IWC debuted the first wristwatch for pilots in 1936



Protected against magnetism by a soft iron cage: the Mark 11

sturdy timepiece with a readily legible dial – and his good friend Louis Cartier made his dream come true.

Although Santos-Dumont's watch can be regarded as the first wristwatch designed and built explicitly for an aviator, its design exerts scarcely any influence on the appearance of today's pilot's watches. The reason for this is probably because flying in those days was considered to be little more than an exotic hobby for wealthy eccentrics.

Few manufacturers built watches expressly for pilots, so airmen resorted to a jury-rigged solution. They commissioned goldsmiths to solder pendants onto pocket-watches so that long leather straps could be inserted, thereby transforming ordinary pocket-watches into makeshift wristwatches. Thanks to their large dimensions, pocket-watches were also readily legible when turbulent winds violently shook the airplanes and their pilots. Then as now, a watch's legibility typically increases in direct proportion to the diameter of its dial, a simple equation which is still an important factor in the design of contemporary pilot's watches.

The First IWC Pilot's Watch Established the Genre

Pilots didn't get the wristwatches they needed until the 1930s. After his solo flight across the Atlantic, Charles Lindbergh conceived a wristwatch that would be specifically designed to meet the needs of aviators. The catalyst for this concept was a dramatic moment when Lindbergh's wristwatch gave up its ghost during his transatlantic flight. Longines debuted the first model built according to Lindbergh's specifications in 1931. The so-called "hour-angle watch" was a stately 47.5 millimeters in diameter, with a big crown and a similarly bulky rotating bezel so that the watch could be operated without requiring its user to remove his gloves. And thus another characteristic of the pilot's watch was born: effortless operability of the various functions in every situation.

Even before Lindbergh's flight, it had already become clear that it was only a matter of time before flying realized its tremendous potential. The first aviation companies that devoted themselves to commercial aviation were founded in the early 1920s. The first airfield for civil aviation was built in Königsberg-Devau in 1922. The Deutsche Luft Hansa Aktiengesellschaft began operations in 1926. This went hand in hand with the desire for punctual flight schedules and exact navigation. Precision timepieces were indispensable.

IWC debuted its first interpretation of a wristwatch for pilots in 1936. This timepiece satisfied all the requirements that pilots demanded of a watch in those days. Its sturdy case was rather large by the standards of its era: 37.5 millimeters in diameter. It also had a rotating bezel so that a pilot could legibly mark moments in time that were particularly important for his flight.



A look that typifies the pilot's watch:
robust leather strap with white stitching

The dial's excellent legibility was assured by the clear contrast between a black matte background and white Arabic numerals. The latter, like the hands, were coated with luminous material so that the time remained legible, even under adverse lighting conditions. IWC's "Special Watch for Pilots" was styled after the deck watches that were used in those years by the German navy. These excellently legible watches had already attracted the attention of more than a few pilots, some of whom had arranged to have them modified so that they could be worn on the wrist.

Despite the historical incorrectness of the term, collectors later named this watch "Mark IX." Its erroneous appellation notwithstanding, this timepiece embodied the debut of the genre of the pilot's watch and its appearance still sets the standard for pilot's watches today. Although the hands, numerals, dimensions and materials underwent changes in ensuing years, all pilot's watches – regardless of their manufacturer – ultimately trace their lineage to this model.

From a technical point of view too, IWC's Special Watch for Pilots was an important basis for all subsequent pilot's watches. The ticking life inside its case is Caliber 83, a 12-ligne bridge movement with an antimagnetic escape-ment. The effort to protect the timekeeping mechanism from the deleterious



IWC introduced the stop-seconds function with the Big Pilot's Watch in 1940

influences of magnetic fields would play an important role in the development of new pilot's watches in ensuing years. Protection was essential because radio transmitters and afterwards radar devices, which were becoming increasingly common in cockpits, generated such strong magnetic fields that they seriously affected the accuracy of a sensitive and unprotected watch movement. Furthermore, the newer watch movements were adjusted for temperatures ranging from $+40^{\circ}$ to -40° Celsius. But the first pilot's watches lacked one salient feature which has since become standard for precise timekeeping on the wrist: the stop-seconds function. Only if the seconds-hand can be temporarily halted does it become practical to set a watch with the precision required for accurate navigation. IWC put this important feature into its legendary Big Pilot's Watch, which was delivered to the German Luftwaffe in 1940.

IWC's Mark 11, which went into service for the British air force in the late 1940s, heralded the entry of another innovation into the world of watchmaking. A soft iron cage, to which an additional back plate belonged, now protected the entire movement from magnetic fields. In terms of design and technology, IWC had defined the features that distinguish a genuine pilot's watch.

A Sporty Touch and Stylish Elegance

The 1936 debut of the Special Watch for Pilots, of which only a few specimens were constructed, marked the beginning of an ongoing and still thriving liaison between IWC and aviation. The manufactory in Schaffhausen formatively contributed toward making the pilot's watch one of the most popular types of wristwatches. But unlike the situation with diver's watches, no set of binding norms unambiguously defines when a timepiece has earned the right to be called a "pilot's watch." One result of this taxonomic imprecision is that a wide spectrum of widely diverse forms, designs, and features are subsumed under the appellation "pilot's watch."

The popularity of this genre is not restricted to its narrower target group, i.e. people with a more or less latent connection to aviation. Earthbound watch wearers likewise often opt for a timepiece with styling that unambiguously identifies it as pilot's watch. Plenty of good reasons argue in favor of this genre. First, there's the image. A pilot's watch is a robust and nearly indestructible timekeeper: after all, these watches were originally tested under extreme conditions, and the better ones among them are still so tested today. It therefore goes without saying at IWC that all watch components are meticulously examined prior to assembly. Thorough testing in various positions and at different temperatures is likewise obligatory before IWC pilot's watches are delivered to their customers. This is also why pilot's watches are perceived as being very accurate timepieces that can be relied upon in every situation.

In terms of design too, pilot's watches appeal to many customers' tastes. These timepieces have a slightly sporty touch, but are nonetheless so elegant

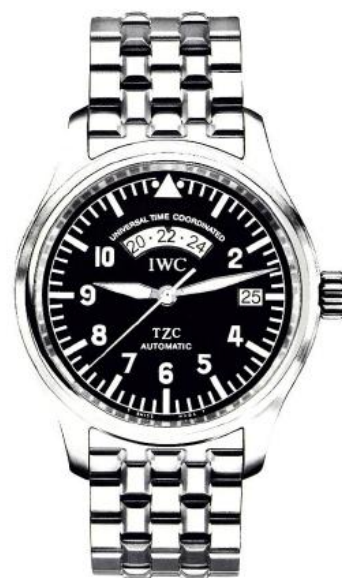


Building upon sixty years of history: the new "Big Pilot's Watch" was launched in 2002

that they can also be worn with a business suit. Hence, this species of time-keeper perfectly embodies the image of an all-round watch that many customers seek. At the same time, pilot's watches are imbued with the aura of sixty years of aviation history – authentic history in IWC's case, because no other brand has shaped this genre more formatively than the manufactory in Schaffhausen. Impressive proof of this assertion can be seen in the new Big Pilot's Watch that IWC launched in 2002. This watch alludes to the legendary pilot's watch from the 1940s with Caliber 52 S.C. The new model is 46.2 mm in diameter, which makes it noticeably smaller than its historical predecessor, but the newcomer is nonetheless a commanding eye-catcher on the wrist.

Property of the Crown: The "Broad Arrow"

The historical aspect is an important criterion for the popularity of pilot's watches. Hardly any other genre of timepiece can look back on such a comprehensive and anecdote-filled history. This may be one reason why watch designers repeatedly revive familiar insignia from the past. For example, the so-called "broad arrow" occasionally reappears on newly launched models. This stylized arrow first appeared on a pilot's watch when IWC debuted the W.W.W. (watch, wrist, waterproof), also known as the "Mark X." This watch was delivered to the British army late in the 1930s. The army's regulations



The time in a second time zone as a useful complication: IWC's UTC debuted in 1998



Essential for every pilot's watch:
optimal legibility, also at night

specified that the “broad arrow,” a symbol which for centuries had identified British crown property, had to be visible on the dials, cases and movements of these timepieces to identify them as state property. Nowadays, this arrow often serves merely as a reminiscence of the original symbol.

The Triangle as a Typical Emblem

A large triangle at the “12” is an element that’s often used in the design of pilot’s watches. Unfortunately, no entry in the literature records exactly when this attribute was first introduced, but its debut may well have been on German deck watches. It later found its way to pilot’s watches around the globe. One can assume that it served to improve legibility. Nowadays the bold triangle, sometimes flanked by a dot on either side, has become a typical distinguishing feature of pilot’s watches. And on some fashionable wristwatches, the triangle is often the sole attribute that the designers had in mind when they set out to create a pilot’s watch.

Nowadays, of course, high-tech electronics have made the wrist-borne timekeeper obsolete as a navigational instrument. But even in our 21st century, pilot’s watches in nearly every price echelon still rank among the favorites of watch buyers, and many manufacturers include this genre in their



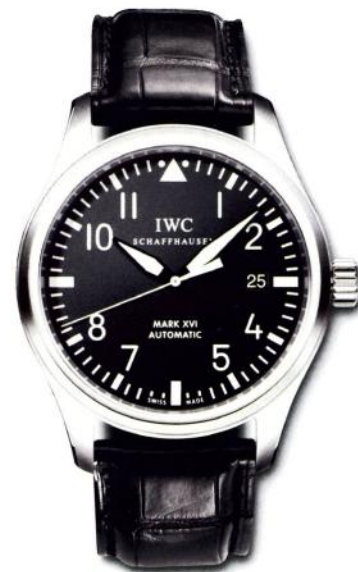
A highlight: the Double Chronograph was given a ceramic case in 2006



An important member of the pilot's watch family: the Automatic Chronograph

assortments. This popularity goes hand in hand with augmenting pilot's watches to include a very of additional functions. Pilot's watches were originally three-handed watches, but nowadays it's not uncommon to find complications on their dials. Not only pilots appreciate a timepiece that can show the time in a second time zone. On intercontinental flights, the dial's primary and most readily legible display can be set to show either the correct time in one's current zone or to indicate UTC, i.e. the internationally standardized time coordinate according to which flight plans are drawn up and in which time data is expressed in radio communications. This variant has long been part of the permanent repertory of IWC's pilot's watches. The same is true of chronograph mechanisms, which facilitate the measurement of elapsed flight time. Highlights such as IWC's Double Chronograph with flyback (rattrapante) are particularly appealing to aficionados of mechanical time-keeping.

A larger number of stories and anecdotes can be told about the pilot's watch than about any other genre of watch. These episodes are often associated with particular models. Sometimes a specific event was the occasion that prompted the construction or improvement of a particular timepiece. Each individual watch is one part of a grand and ongoing history that's rife with adventures, fraught with myths, and imbued with the dream of flight.



Clear face: the Mark XVI pilot's watch