THE ART OF HOROLOGICAL COMPLICATIONS

WEMPE

2020/2021

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FOREWORD

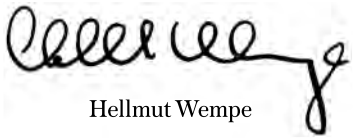
Time was originally measured according to the position of the sun, which is why Romance languages use the same word for "weather" and "time." The advancement of society can also be seen in the evolution of time measurement, whose progress went from the sundial to the geared clock and then the atomic clock. The accuracy of timekeeping, along with its global standardization and formalization, served as a motor for the industrialized modern age. It also contributes to the feeling that the pace of life has accelerated.

To prevent the past from becoming a hasty form of the present, this edition of The Art of Horological Complications takes a look to the past – but not too far back. We focus our attention on the 1970s, a decade that was a colorful field of experimentation, especially in popular culture. The watch industry likewise found creative ways to combine contrasts. One was a new generation of sporty luxury watches, recognizable by their integrated bracelets made of stainless steel or precious metal. Nowadays these watches serving as role models for new editions are sought-after collector's items.

Our second retrospective peers a bit further back in time to a structural development program that began exactly 175 years ago in the small, impoverished town of Glashütte in the Erz Mountains. This program's unparalleled success proved that the intentional establishment of watchmaking in Glashütte was indeed the right decision. The industry's history is marked by political upheavals, but the town's inhabitants were able to hold their own at all times and under all circumstances thanks their commitment to watchmaking. This is why outstanding mechanical timepieces are still manufactured in Glashütte today.

Wempe wrote an important chapter in this ongoing success story. Our family-owned company renovated Glashütte's observatory, establishing our own watch production facility and Germany's only chronometer-testing facility there.

Cordially yours,



Hellmut Wempe

NOBLE RADIANCE – METAL BRACELETS MAKE WRISTWATCHES INTO SPORTY LUXURY ITEMS

Legendary watchmaker Abraham-Louis Breguet made the first known wristwatch in 1810; its recipient was none other than Napoleon's sister, the Queen of Naples – and for many decades thereafter, wearing a wristwatch was considered extremely unmanly. The vest pocket was where a gentleman wore his watch, the quality and material of whose chain indicated his social status. Only after half a century had passed



Rolex Oyster bracelet

was the struggle for supremacy between the pocket watch and the wristwatch ultimately decided in favor of the latter. Among other challenges, the watch bracelet played a decisive role in this. Describing the hurdles to be overcome, Rolex founder Hans Wilsdorf asserted in typical terse precision, "A wristwatch that cannot be relied on is not worth owning." Wilsdorf meticulously worked through every challenge. Registering "Rolex" as his brand's name in 1908, a mere two years later one of these became the first wristwatch ever to earn a chronometer certificate; after he even succeeded in obtaining one from the renowned observatory in Kew, England in 1914, Wilsdorf equipped every Rolex watch with a caliber that could pass the chronometer test. Precision was no longer an unresolved issue, but resistance to water in its exposed position on the wrist remained problematic. When Mercedes Gleitze attempted to swim across the English Channel in 1927, Wilsdorf recognized the potential of her undertaking. "The Wonder Watch That Defies the Elements" proclaimed a headline in the Daily Mail when Wilsdorf gave the swimmer a watch to carry with her on her adventurous swim. She wore the world's first water-resistant wristwatch – appropriately called the "Oyster" and patented the year before – not on her wrist, but around her neck. The first serially manufactured Oyster models were likewise secured by leather straps. Wilsdorf had big plans for wristwatches, realizing they would quickly become fashionable accessories and accordingly needed to be able to "adapt to changes in taste." Each owner would want several watches, and if they were not all acquired simultaneously, then at least successively. Water-resistant materials for wristbands became urgent when divers needed to know exactly how long they had been underwater and when



Rolex President bracelet

they must begin their ascent without exhausting their limited supply of air, taking into account any pauses for decompression that might be necessary along the way. Émile Gagnan collaborated with oceanographer Jacques-Yves Cousteau to develop a breath regulator called the Aqualung in 1943; thanks to a breathing mixture inside a pressurized cylinder, this innovation made scuba diving possible – and diving soon became important in military applications. Armies in many different countries set up special divisions for frogmen. Recreational diving first became popular in the 1990s and afterward developed into a sport enjoyed by countless amateur divers. With the increasing demand for watches conceived expressly for divers, engineers at watch brands focused their efforts on constructing seawater-resistant metal bracelets. The first wristwatch developed expressly for divers was the Fifty Fathoms, which Blancpain debuted in 1953. Designed from the outset with a stainless steel bracelet, it was the first watch with a unidirectionally rotating bezel to preset the intended dive time. Rolex chose the three-row Oyster bracelet it had developed in the late 1930s to serve as the attachment for its Submariner, which was created in 1953 and officially launched in 1954. These first metal bracelets were comparatively simple constructions, but nonetheless empirically proven and sturdy. The riveted stainless steel bracelets on Tudor's Black Bay models are reminiscent of these early attachments and pay tribute to the pioneering divers of yesteryear. When Rolex presented the Oyster Perpetual Datejust in 1945, it was equipped with a matching metal Jubilee bracelet. The President bracelet was introduced with the Oyster Perpetual Day-Date in 1956 and is still exclusively reserved for that model today. The Pearlmaster bracelet debuted in 1992 and has accompanied the Pearlmaster ladies watch ever since.



Rolex Pearlmaster bracelet

Metal bracelets also offered new possibilities for innovative clasps. One of the best known is the Oysterclasp for all Oyster bracelets. In some models, this closure is also equipped with a quick-adjustment mechanism: the Easylink enables its wearer to readily adjust the bracelet by as much as five millimeters. The bracelets of the Rolex Professional models are secured by Oysterlock clasps, while those of the Submariner, Sea-Dweller, and DeepSea diver's watches are equipped with Fliplock and Glidelock extensions; the latter two mechanisms allow the bracelet's length to be adjusted without taking the watch off the wrist. Metal bracelets are the optimal attachments for diver's watches, which – at the very latest since the advent of the James Bond films – can also be worn under the sleeve of a tuxedo jacket. Although these sporty timepieces have enabled their wearers to distinguish themselves as true adventurers, a wristwatch with a gold bracelet and a gold case was still considered the epitome of a genuine luxury watch. This changed in the 1970s, a revolutionary decade in more ways than one, in which new materials such as plastic perfectly matched the irresistible allure of rebellion. Novel styling and an unprecedented indulgence in vivid colors put a new face on everyday life. This environment favored innovation, but a new trend in the watch industry was initially considered too revolutionary: stainless steel wristwatches with integrated metal bracelets priced as high as watches with precious metal cases and bracelets. Designer Gérald Genta (1931-2011) is inseparably associated with this new epoch of steel watches. Born in Geneva and trained as a jewelry designer, Genta achieved his first major success with Audemars Piguet's Royal Oak in 1972. The metal bracelet's direct connection to the case by means of two smaller elements that also function as bracelet links achieved the unprecedented feat of making stainless steel an acceptable material for luxury watches.



Patek Philippe Nautilus



IWC Yacht Master

Moreover, the watch case no longer needed to be round to accommodate a spring bar between the strap lugs. Customers' reactions ranged from cautious to reserved at the Royal Oak's premiere in 1972 – as it was with Genta's Nautilus, which Patek Philippe unveiled in 1976, and his Ingenieur SL by IWC, the Royal Oak's success story did not begin until much later. IWC is currently paying a very successful and appreciative tribute to Genta with the stainless steel bracelet of the Portugieser Yacht Club. In subsequent years many models quietly disappeared from the brands' collections, but not from the memories of collectors: the combination of small quantities and bold styling was very tempting for watch enthusiasts. Rapidly rising prices paid by collectors for rare steel watches along with the renaissance of the mechanical watch prompted the brands to again include these models in their portfolios. The challenges involved in manufacturing stainless steel bracelets should not be underestimated, though. These elaborately constructed attachments challenge every craftsperson involved in their production. Patek Philippe's Nautilus serves as a good example to illustrate the complex processes and diverse polishing techniques that are essential to the success of a metal bracelet for a luxury wristwatch: these steps include sandblasting (also known as lapping in specialist jargon), brushing, and high-gloss polishing. Patek Philippe explains that after the first processing by machine, no fewer than 55 manual operations are needed to complete the case and bracelet. The handcrafting process begins with each of the bracelet's individual outer elements, whose undersides are sanded while their upper surfaces are satin-finished. The central elements follow: each underside is sanded while each upper side is polished. Next comes the assembly of the bracelet: individual elements are joined and pins are inserted. Sharp edges on the bracelet's upper and lower surfaces are painstakingly beveled and smoothed and then satin-finished to create a uniform finish.

The next step is masking, which sees a protective film applied to individual areas on the outside of the bracelet not destined for treatment in the subsequent finishing process. Now the central elements and the beveled edges are polished to a high gloss. This is followed by fitting the clasp, adjusting its tension, and riveting the cover of three-blade clasps. Every detail is examined again during a final inspection. Gérald Genta also created other groundbreaking designs: Omega's Constellation as well as



TAG Heuer Aquaracer

Bulgari's Bvlgari Bvlgari and Octo are based on his ideas. Genta designed appealingly classic lines to go with his frequently octagonal cases connected by elaborately designed bracelets that adroitly combined fine, multiple links. His bracelets often tapered toward the clasps so that one component is hardly every precisely the same size as another. A sporty luxury watch can hardly compete on the market without an integrated metal bracelet, which may be made of stainless steel or other metals, including precious alloys. Hublot is one of the latest brands to confirm the undiminished momentum of this trend. As the third word in the name of the Big Bang Integral suggests, a metal bracelet has been integrated into the flagship model of the sporty, expressive brand. The core of Hublot's brand essence comprises combining precious metal cases with rubber straps, which helped them to achieve a breakthrough in watches. Under the leitmotif of the "fusion" concept, Hublot successfully introduced many unconventional materials, some appearing in this context for the first time. But it was not until the arrival of the brand's integrated metal bracelet that the decisive design task seemed solved. Remaining faithful to the brand's DNA, the elaborate bracelet with its wide central elements is made of titanium rather than stainless steel. TAG Heuer, one of Hublot's sibling brands in the LVMH Group, achieved a different historical significance with its Aqua Racer diver's watch, which successfully launched in 2003. A solid stainless steel clasp with an integrated diver's extension mechanism and safety push pieces secures this sporty model's finely brushed, three-row, stainless steel bracelet, consisting of alternating polished and satin-finished elements, it has a signature safety clasp with a safety catch and integrated diver's extension mechanism. Girard-Perregaux's Laureato, which premiered along with its three-row steel bracelet in 1975, is likewise inextricably linked to the history of luxury steel watches. The bracelet's cambered and polished middle part harmonizes with the



Girard Perregaux
Laureato



Longines
Hydro Conquest



Piaget
Polo



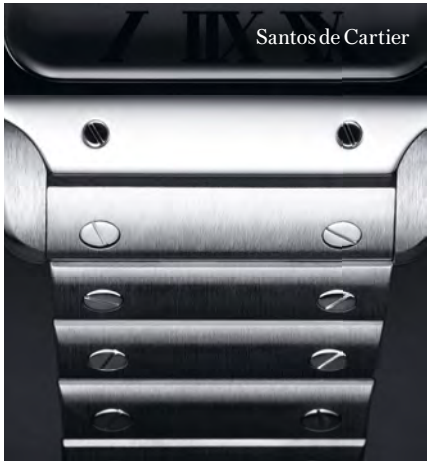
Hublot
Big Bang Intergral

Longines offered divers interesting access to its collection with the launch of the Hydro Conquest in 2007, which underwent various facelifts and improvements in ensuing years. TAG Heuer has regularly updated and optimized its entire collection over the past decade and more, and the Aqua Racer's stainless steel bracelet is among the beneficiaries: eye-catching bezel, which juxtaposes straight lines and arcing curves. Piaget's Polo pursued a different creative route to its goal in 1979, achieving an exciting contrast through the interplay between the round periphery of the broad brushed bezel and its daring inner contours with four semicircular curves. This dialogue is enhanced by the

proportions of the wide, satin-finished, central element of the stainless steel bracelet with which the Polo S has been offered since 2016. It was not Gérald Genta, but Jörg Hysek, who designed a steel wristwatch with integrated bracelet for Vacheron Constantin in 1977. Launched to celebrate the 222nd birthday of the brand founded in Geneva in 1755, it served as a role model for Vacheron Constantin's Overseas, which appeared with its distinctive jagged bezel in 1996. The Maltese cross, which has been this brand's registered trademark since 1880, inspired this unusual bezel, and the distinctive cross recurs in the bracelet components. An innovative strap-changing system was introduced in 2016 that has since allowed the stainless steel and precious metal bracelets to be readily removed and replaced with rubber or leather straps. Cartier goes one step further: the owner of a Santos or Pasha watch can disconnect its stainless steel bracelet and, furthermore, the bracelet's components are designed so that the pins can be loosened and the links individually added or removed to alter the bracelet's length by the owner – all without tools. With Breitling's reissue of the Chronomat, this Grenchen-based brand retrieved the Rouleaux bracelet from its archives, which was quite popular in its day. Introduced to fete Breitling's 100th birthday in 1984, and now in reworked form, the Chronomat is an exemplary symbol of the revival of the mechanical wristwatch. Its integrated metal bracelet with its characteristic cylindrical elements was a major contribution to this model's success; current models are equipped with a double folding clasp. Parmigiani likewise took a great leap forward in 2020 with the Tonda GT and the Tondagraph GT chronograph: the brand headed by the internationally renowned restorer and watch designer Michel Parmigiani now presents a collection of sporty watches with very slim and handsomely integrated steel bracelets. Panerai offers metal bracelets for some of its models as well: the central section of the latest version recalls the conspicuous crown protectors of the Luminor and Luminor 1950; this bracelet only fits those models obviously. The metal bracelet of



Santos de Cartier



Santos de Cartier



Parmigiani Tonda

Jaeger-LeCoultre's Polaris is similarly striking. Contrasting broad, satin-finished, central components and polished, beveled elements along the side, the bracelet skillfully prolongs the play of light reflecting off the Polaris's alternately satin-finished and brushed case. Breguet, which has always felt very much at home in the elite world of fine watchmaking, now proves that it can also meet the challenges of robust watchmaking in its Marine collection. And Chopard's Alpine Eagle recalls the brand's St. Moritz model, a famous interpretation of a sporty luxury watch. The Alpine Eagle, which is also available in a chronograph version as of this year, has a case made of a special steel alloy: Lucent A223 is uncommonly resistant, bright, and reflective. This alloy's sheen reminiscent of gold results from the high purity of the material, which is manufactured in a resource-saving manner from up to 70% recycled steel.



Breitling Chronomat



Panerai



Nomos Club Sport Neomatik 42

The epicenter of German watchmaking – Glashütte – has recently seen elaborate and exciting bracelet constructions that combine outstanding engineering and innovative styling. The Sport metal bracelet by Nomos Glashütte is nearly as complex as this brand's watches, consisting of no fewer than 145 individual parts, all of which are manually screwed together. In 2019, Glashütte Original recalled a diver's watch from the recent past: the SeaQ collection is based on the Spezimatic Type RP TS 200, which was unveiled by VEB Glashütte Uhrenbetriebe in 1969. Available in a model with the brand's typical panoramic date display, it wins admirers thanks to its uncommonly slim, three-row, stainless steel bracelet, which is equipped with an eight-step fine adjustment mechanism. Stainless steel played only a secondary role at A. Lange & Söhne until 2019, when the Odysseus joined this brand's collection as its first serially manufactured stainless steel wristwatch. The secure folding clasp on this model's five-row stainless steel bracelet can be adjusted in small increments to add up to seven millimeters to its length. Pressing the button embossed with the Lange logo allows the wearer to adjust the length by pulling or pushing the bracelet, an adjustment can be accomplished without even opening the clasp. The steelworkers known as Iron Walkers, whose surefootedness and freedom from vertigo raised the steel skeletons of skyscrapers in New York City's urban canyons to breathtaking heights in the 1920s, were the role models for the



Glashütte Original SeaQ

Special Edition 40 Years Wempe New York Iron Walker Diver's Watch



Iron Walker collection from Wempe Glashütte I/SA. This line's impressive styling benefits to no small degree from the integrated transition between the case and its bracelet: the case's elegant lines continue into the H-shaped elements comprising the bracelet, which tapers toward its folding clasp. These parts are vertically satin finished; their edges are chamfered and polished so the bracelet can reflect light vividly but without sparkling. The wristwatch has been with us for a century, but the fastening element that earns it the name wristwatch is not always given the attention it deserves. Thanks to the integrated bracelet, designers and engineers can explore and skillfully utilize new creative potentials. And the bracelet's fluent transition into the case invites it to bask in a well-earned spotlight.



Wempe Iron Walker Diver's Watch

ROLEX

THE CROWN AND THE CAMERA

Marlon Brando wore a Rolex wristwatch when he played the role of Colonel Kurtz in Apocalypse Now. Another Rolex timepiece shone on Paul Newman's wrist when he slipped into his alter ego as pool player "Fast" Eddie Felson in The Color of Money. And a third Rolex was strapped to the wrist of Bill Paxton in Titanic when he portrayed treasure hunter Brock Lovett, who explored the famous shipwreck aboard a Mir submersible. The wristwatches appeared in these movies not as a result of product placement, but thanks to the personal preferences of the films' directors. Rolex has been the exclusive timekeeper for the Academy of Motion Picture Arts and Sciences since 2017 and sponsors the Oscars®, which are awarded by the Academy. Rolex is also a founding sponsor of the Academy Museum of Motion Pictures: designed by architect and Pritzker Prize winner Renzo Piano, the museum is intended to serve as a central meeting place for cineastes and will include, among its other attractions, approximately 4,600 square meters of exhibition space and a cinema auditorium with seating for 1,000 viewers. Rolex also has partnerships with Kathryn Bigelow, James Cameron, Alejandro G. Iñárritu, and Martin Scorsese.



Alejandro G. Iñárritu

These four brand ambassadors, who were honored for their diverse achievements including a total of 57 Oscars, have made it their missions to share their life experiences with young filmmakers. Through the Rolex Mentor and Master Student Initiative, the brand with the crown-shaped logo supports aspiring filmmakers through mentoring and contributes to culture by passing on world-renowned artistic heritage. Both Scorsese and Iñárritu have mentored master students in this program. Since 2002, talented young artists from a variety of disciplines have been chosen to work creatively and for an extended period of time with masters of their field. Other mentors in the film genre have been Alfonso Cuarón, Stephen Frears, Mira Nair, Zhang Yimou, and film editor Walter Murch.

ROLEX

OYSTER PERPETUAL GMT-MASTER II

The development of aviation surely ranks among the greatest achievements of humankind in the twentieth century. From Otto Lilienthal's initial bouncing attempts and the Wright brothers' first powered flight, the pathway into the air progressed with extraordinary speed toward the first commercial flight in 1914, when a flying boat carried passengers from St. Peters-burg in Florida to neighboring Tampa. And civil aviation continued its dynamic development; pleasantly surprised passengers were served by the world's first stewardess on May 15, 1930. As air travel grew progressively more popular, flight attendants became commonplace aboard airliners. In the 1950s and 1960s, commercial jets enabled passengers to travel to far-flung locations around the world faster than ever. And suddenly there was no longer only one time but more than two dozen different times, each speedily accessible simply by crossing the boundary of its time zone. Pan Am, one of the largest airlines at the time, asked a Swiss manufacturer to design a watch for its pilots that could display the time in more than one zone and Rolex's Oyster Perpetual GMT-Master was born in 1955. It was subsequently produced in numerous variants, but each has the typical 24-hour two-color bezel for day/night indication and the distinctive triangular 24-hour hand.



The GMT-Master II was powered by Caliber 3085 from 1982 onward. This model's 24-hour hand can be reset in hourly increments to show a different hour without affecting the position or progress of the minute and second hands. The 40 mm GMT-Master II is currently available in several variations, including two models in stainless Oystersteel with Jubilee bracelets and one model in Everose gold with an Oyster bracelet. Its automatic Caliber 3285 supports fast, independent resetting of the hour hand to indicate the time in a second zone. This caliber boasts a 70-hour power reserve and is accurate to plus or minus two seconds per day. Numerals and graduated markings are engraved into the bidirectionally rotating two-color – brown and black – Cerachrom ceramic bezel.



Oyster Perpetual GMT-Master II in 18-karat Everose gold, manufacture movement Caliber 3285, Superlative Chronometer (COSC + Rolex certification after casing of the movement)

ROLEX

OYSTER PERPETUAL DAY-DATE 40 – THE PRESIDENTIAL WATCH

Rolex founder Hans Wilsdorf brought his vision to fruition with the introduction of the Oyster Perpetual Day-Date in 1956. Since registering the Rolex brand in Switzerland in 1908 his aim had been to build the perfect wristwatch, which he approached with the Oyster featuring a water- and shockproof case. Certified chronometers, his movements enjoyed a reputation for high precision. The premiere of the automatically winding Perpetual rotor in 1931 made his Oyster watches indispensable timekeepers in daily life. Rolex celebrated its fortieth anniversary with the Datejust in 1945, and Wilsdorf presented the 100,000th chronometer to none other than Winston Churchill in 1947. The Day-Date followed as the "Presidential Watch": this iconic model is most often seen gracing the wrists of presidents, leaders, and visionaries. With the full weekday spelled out at 12 o'clock and the date in a window at 3 o'clock, the Day-Date remains true to its basic characteristics. This model comes on the three-link President bracelet with semi-rounded link elements, a bracelet that still remains exclusively reserved for the Day-Date. The bezel's fluting originally served a practical purpose: it was used as a firm grasp so the component could be screwed to the case band, thereby ensuring the watch's water resistance. The bezel fluting therefore corresponded to its counterpart on the case back. Rolex built special tools to screw the case's back to the case band, thus making the watch uncommonly water-resistant. The fluting serves only aesthetic purposes nowadays. The Oyster Perpetual Day-Date is offered solely in gold. The Day-Date 40 houses Caliber 3255, which was launched in 2015. Equipped with a bidirectionally winding rotor, this automatic movement boasting a 70-hour power reserve relies on a progressive Chronergy escapement. Its two components – lever and escape wheel – are made of a nickel-phosphorus alloy that are resistant to magnetic interference. The escape wheel is openworked, which reduces its weight and thus also its inertia, thereby boosting its efficiency. The rate is accurate to within plus or minus two seconds per day.





Oyster Perpetual Day-Date 40 in 18-karat Everose gold, manufacture movement Caliber 3255, Superlative Chronometer (COSC+ Rolex certification after casing of the movement)

NEW PREMISES CREATE NEW OPPORTUNITIES

Accommodating complex and complicated things in the smallest of spaces is a Patek Philippe specialty. Almost a quarter of a century after inaugurating the first factory building in the Geneva suburb Plan-les-Ouates, in 2015 the manufacture decided to lay the foundation stone for a new building. Patek Philippe's watch collection had evolved considerably during the preceding quarter of a century; complicated watches currently comprise nearly half of all models, where so-called useful complications like annual calendars, the "weekly" calendar, time zone displays, and world-time watches are enjoying particularly strong growth. This has lead to an increase in the average number of components per watch and corresponding complexity in the production process. The new building nonetheless proved essential despite the fact that no increases are planned to the annual production of 62,000 watches; the yearly quota is naturally limited by the extremely strict quality requirements of the Patek Philippe Seal. Construction work on the new building was completed and production activities commenced there at the beginning of 2020. And Patek Philippe's new building is already impressive thanks to its sheer size: 189 by 67 by 34 meters with ten floors, including four underground stories. It is equally striking due to its emphatically modern architecture, which distinguishes the building as a new landmark in Plan-les-Ouates. Spacious glass surfaces – plenty of daylight is indispensable for watchmakers – are subdivided by bronze-colored fire escapes inspired by similar constructions on buildings in New York City and white concrete walkways along the entire length of the façade. The building resembles an enormous ocean liner with clearly defined forms. The interior is divided into five segments, which can be accessed via four staircases and more than 20 passenger and freight elevators. An auditorium offers seating for up to 299 persons. The building is crowned on the fifth floor by a penthouse restaurant with 880 seats and a fantastic panoramic view of the surrounding countryside as well as four lounges for VIP guests.



Patek Philippe manufacture building

PATEK PHILIPPE
GENEVE

NAUTILUS CHRONOGRAPH 5980/1R

The octagonal bezel tracing gentle curves rather than straight lines unmistakably bears the signature of Gérald Genta, who first sketched Patek Philippe's Nautilus in 1976. A chronograph encasing powered by Caliber CH 28-520 C was added to the collection to celebrate the thirtieth anniversary of the Nautilus; its pushers triggering the chronograph's functions are discreetly integrated into the case, which resembles a porthole. The broad, satin-finished bezel, the alternatingly polished and satin-finished surfaces of the case, and the integrated flanks of the bracelet create an appealing and varied play of light. The dial's embossed decoration with black gradient is another typical feature of the Nautilus, while the hands and applied gold indices glow in the dark. The chronograph's combined 60-minute and 12-hour totalizer is positioned at 6 o'clock. The 5980's rose gold case spans 40.5 mm when measured across the dial's center from the 10 to the 4, and it is 12.2 mm in height. It is also water-resistant to 12 bar, which corresponds to a depth of 120 meters. Its Caliber CH 28-520 C consists of 308 components, including 13 bridges. When fully wound, it boasts a maximum power reserve of 55 hours. This movement's Gyromax balance is paced at 28,800 vibrations per hour and equipped with a Spiromax hairspring, unveiled by the Patek Philippe Advanced Research Department in 2006 and made of Silinvar®, which was likewise developed by Patek Philippe and presented the year before. The name combines syllables borrowed from the words "silicon" and "invariable." Monocrystalline silicon is extremely temperature stable, lightweight, twice as hard as steel, and very resistant to wear and tear. A Spiromax hairspring has less mass and is only two-thirds as tall as a Breguet hairspring, so it undergoes less stress from gravity and impacts. Patek Philippe patented the geometry of the spring with its characteristic thickening at its outer end, the integrated fastening for its balance spring stud, and its self-centering integrated collet – features that contribute to the watch's accurate timekeeping. The Patek Philippe Seal introduced in 2009 confirms that the watch's rate does not stray beyond the narrow range from –3 to +2 seconds per day.





18k rose gold, self-winding movement, chronograph

PATEK PHILIPPE
GENEVE

FROM WETSUIT TO TUXEDO – NAUTILUS 5711/1R

The first design of the Nautilus is the brainchild of Gérald Genta, the ingenious designer who conceived numerous stainless steel watches in the 1970s. Patek Philippe brought him on board to create a sportier watch model that would enable the brand



to appeal to a new customer base. Genta certainly delivered the goods: the eye-catching porthole design, the interplay of polished and satin-finished components, and the prominent integrated bracelet initially made of stainless steel were the ingredients for a model soon to become a classic. When this watch was launched in 1976, customers first had to get used to its modern design. New materials, colors, fabrics, and shapes were revolutionizing the look of daily life in the 1970s, but a sports watch from Patek Philippe still seemed unfamiliar to many customers. History soon bestowed success on the innovative spirit of the family-run manufacture. The Nautilus now ranks among the world's most sought-after watches. Its name comes from Jules Verne's famous novel Twenty Thousand Leagues Under the Sea. The portholes of Captain Nemo's eponymous submarine had a similar oval shape in some depictions. Like a ship's window, the bezel is screwed to the case. This was necessary in order to achieve water resistance to 120 meters (12 bar), which was rather deep according to the standards of the time. The model's daringly creative advertising slogan was, "It looks as sharp with a tux as it does with a scuba suit." The Nautilus underwent a judicious facelift in 2006 when it was given a three-part case and a central second hand. Automatic manufacture Caliber 26-330 S C can be viewed through the sapphire crystal case back. Water resistance to 12 bar and the integrated bracelet remain unchanged.



18k rose gold, self-winding movement

MORE THAN SEDUCTIVE EMBELLISHMENTS

It was Abraham-Louis Breguet who first used guilloche patterns to decorate timepieces in 1786: the impressive aesthetics of the final result lent a silky appearance and pleasant texture to the watch's case. Breguet's real interest, however, was in the additional functionality offered by a guilloche pattern as the technique protects the decorated object against wear and scratches that tended to mar smoothly polished surfaces. Guilloche, it turned out, also improved light reflection, making the dial easier to read; additionally, different decorative patterns could be used to mark off each indication such as the hours and minutes, the seconds, a power-reserve display, and various other counters. Guilloche is a mechanical handcraft comprising delicate and precise engraving of the material with complex patterns consisting of straight, curved, continuous, and broken lines. This fine work is carried out with the aid of a hand-guided guilloche tool capable of producing circular figures or linear patterns. A skillful artisan can lead the fine grooves (guilloche patterns) to run parallel to or cross one another, thus forming a repetitious, symmetrical pattern. Although the technique requires the aid of a machine, it is by no means an automated industrial process. On the contrary, everything here is handcrafted and only possible thanks to manual guidance: while the artisan's left hand turns a crank to drive the machine, his or her right hand pushes a carriage holding the graver tool, which engraves the material. Great skill and many years of experience are required in order to master all the subtleties of this art form, which the Breguet brand continues to cultivate at its manufactory in L'Orient, in the heart of the Vallée de Joux. In workshops expressly created for this purpose, approximately twenty specially trained craftspeople work with both historical and modern guilloche machines that were designed and manufactured in-house.



Guilloche engraving under a microscope

Breguet
Depuis 1775

MÉNAGE À TROIS OF SUPERLATIVES

The Renaissance man Abraham-Louis Breguet, an all-around genius, was interested in all areas of watchmaking, but particularly in marine chronometry, a specialized field that was already leading horological research during Breguet's lifetime. Not only among the great seafaring nations were precise nautical instruments for conquering the oceans the timepieces of the hour. Breguet, who was a member of the Bureau des Longitudes, was appointed watchmaker of the Royal Navy by King Louis XVIII in the autumn of 1815. This marked the beginning of a tradition that continued into the 1960s and is now beautifully expressed in the brand's Marine collection. A first glance at the dial confirms that this line literally has sailor's blood in its veins: an exquisite guilloche pattern in the form of little waves creates maritime accents on the watch dial. The Marine Tourbillon Équation Marchante, without a doubt the technical flagship of the line, is a masterpiece of haute horlogerie combining three of the most sophisticated grand complications: a one-minute tourbillon, a perpetual calendar, and an equation of time display. The so-called equation indicates not only mean time but also true solar time, which can differ from mean time by up to +16 or -14 minutes over the course of a year. It is linked to the perpetual calendar, which, as if by magic, will automatically take into account the differing lengths of the months until the last day of February 2100. The retrograde date display is a charming addition, whose hand hurries back to its starting position after reaching the end of its 180-degree scale. The technical virtuosity is further enhanced by a slender caliber: this rare gem is powered by extra-thin automatic Caliber 581DPE, which boasts a silicon escape wheel, a silicon balance spring, and an 80-hour power reserve. A total of 563 components nestle into a very small volume of space, working together in perfect harmony to display the time – and so much more.





18k rose gold, self-winding-movement, tourbillon, perpetual calendar

Breguet
Depuis 1775

CONSUMMATE SIMPLICITY



The special fascination of Breguet wristwatches lies in their perfect proportions, which lend a profoundly harmonious and elegant appearance to this manufacture's exquisite timepieces. Beginning with the numerals and indexes, continuing with the hands and indications, then to the case and bezel, and culminating in the strap and clasp, perfection in form results from the meticulously measured dimensions of every element, including the tiny, barely visible details. This harmonious charm is particularly expressive in the Classique line; connoisseurs often agree that these timepieces are the ones epitomizing Breguet watches. Each pays homage to the brand's ingenious founder, whose legacy is reflected in diverse facets of the watch. Arguably the most outstanding example is the new Classique 7337 with its guilloche dial, whose intense blue color acquires unique radiance thanks to diverse filigree patterns: a barleycorn motif for the periphery of the hour circle, a checkerboard pattern for the small seconds subdial, and the famous clous de Paris motif in the dial's center. It is well known that this rare handcraft is a style-forming feature that traces its ancestry to Abraham-Louis Breguet, who introduced it in 1786. The original purpose of guilloche was not to add embellishment to Breguet's pocket watches, but to improve their legibility. Off-center subdials were also not a mere aesthetic gimmick, but served to clearly distinguish among the displays. These are flanked in the Classique 7337 by two cloud-shaped windows in which the date and the weekday appear. Enthroned above this ensemble, the moon phase display also indicates the current age of the earth's companion, which is portrayed in white gold against the background of a naturalistic starry sky. As in every Breguet watch, the external aesthetics reflect the fascinating mechanical interior. A pane of sapphire crystal in the back of the white gold case reveals extra-thin automatic Caliber 502.3 QSE1, which is lavishly and traditionally finished by true masters of their crafts. Modernity, on the other hand, is embodied by the innovative silicon hairspring enhancing the precision of the timekeeping.



18k white gold, self-winding movement, moon-phase display, small seconds subdial

EVERY WATCH IS ASSEMBLED TWICE

There is only one quality standard at A. Lange & Söhne: perfection. All components are elaborately finished by hand and each watch is assembled twice, no matter whether the timepiece is a perpetual calendar, a minute repeater, an automatic, or a simple three-handed model. One reason for this repeated assembly is the three-quarter plate: introduced by Ferdinand Adolph Lange in 1864, it provides more support to the movement's moving parts as a single spacious bridge spans the entire gear train. But this capacious plate also makes assembly more difficult because even an experienced watchmaker must screw it on and off several times until each individual shaft provides optimal vertical play. A second reason for assembling the movement twice is that the three-quarter plate is traditionally made from nickel silver. This special alloy of copper, nickel, and zinc ensures that the movement is held with great stability. As time passes, the alloy also acquires a warm, subtly golden patina that naturally protects the plate's surface and makes galvanic coating unnecessary. However, this handsome patina is unforgiving: a fingertip can leave a permanent print and an inaccurately guided screwdriver can cause light scratches. Many long hours are spent finely finishing and polishing nearly all components. Meticulous finishing is even lavished on parts that are later hidden. Each Lange movement is then meticulously assembled and finely adjusted until all mechanical parts perfectly interact – only to be completely disassembled afterwards, at which time all parts are painstakingly cleaned. The finest finishing and polishing is also applied to the component surfaces later visible through the sapphire crystal on the back of the case. Only after the three-quarter plate has been decorated with characteristic Glashütte ribbing and the last gold chaton has received its high-gloss polish is the movement assembled a second time using up to eight different lubricants. And now thermally blued screws replace the provisional screws used in the first assembly.



Fitting of the balance spring

A. LANGE & SÖHNE
GLASHÜTTE I/SA

ODYSSEUS

A. Lange & Söhne's latest model family is already welcoming a new member: the Odysseus, introduced in 2019, is the first stainless steel watch produced in series by the Saxon manufactory. Robust construction and a case water-resistant to a depth of 120 meters mean that this model can also be worn in situations where a precise mechanical watch would not typically accompany its wearer. A large weekday window at 9 o'clock, diametrically opposite the outsize date at 3 o'clock, distinguishes this sportily elegant timepiece. In addition to the stainless steel version, the Odysseus is now also available in white gold with an integrated leather or rubber strap. The new model combines an 18-karat white gold 40.5 mm case with a grey dial, the dark background of which enhances the legibility of the white gold hands and notched baton-shaped applied markers. These handsomely match the large date numerals and weekday display, whose white letters stand out against a grey background. The hour indices are noctilucent, as are the hour and minute hands. The dial gains an appealingly vivid and almost sculptural quality thanks to an embossed grooved texture beneath the applied hour markers and subdial scale for the seconds. This contrasts with the matte inner surfaces of the main dial and subdial. Above and below the crown, wedge-shaped push pieces to adjust the date and weekday lend a distinctive shape to the tripartite white gold case. An interplay of brushed matte surfaces and polished bevels adorns the case and strap lugs. Manufacture Caliber L155.1 Datomatic ticks inside the case, a movement whose name alludes to its combination of date mechanism and automatic winding. Ensuring a highly stable rate, the balance vibrates at a frequency of 28,800 vibrations per hour (four Hertz), while recessed regulating screws minimize air turbulence that could adversely affect the rate. The movement boasts a maximum power reserve of 50 hours, while a large central rotor with a peripheral platinum weight ensures reliable winding.





18k white gold, self-winding movement,
small seconds subdial, sapphire crystal case back

A. LANGE & SÖHNE
GLASHÜTTE I/SA

ZEITWERK MINUTE REPEATER

The Zeitwerk Minute Repeater is the only wristwatch in the world to combine mechanical jumping numerals with a decimal minute repeater. It had been available only in platinum since its premiere in 2015, but now A. Lange & Söhne presents a limited edition of thirty pieces in 18-karat white



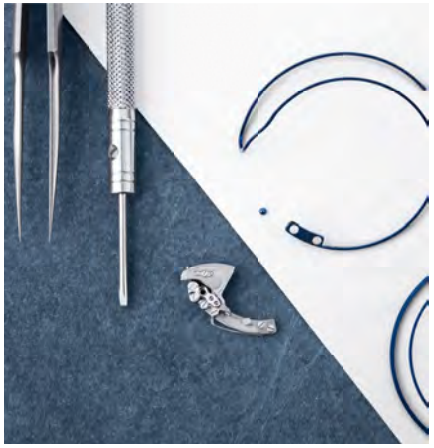
gold cases with deep blue dials crafted in solid silver. The striking mechanism of the Zeitwerk Minute Repeater chimes double strokes at ten-minute intervals rather than the usual quarter hours – which matches the "digital" display of the time, so what you see is what you hear. The gongs and hammers are unobtrusively integrated into the dial's design and meticulously tuned by hand to produce a rich and harmonious sound. The striking mechanism is constructed so that the number of tones chiming full-hour, ten-minute, and single-minute intervals is scanned directly from stepped snails connected to the display mechanism. This ensures that the audibly announced time always precisely matches the time shown on the dial. A spring barrel supplies the energy for the striking mechanism, while a push piece on the side of the case triggers the Zeitwerk's minute repeater. By omitting a conventional slide, the case is more effectively sealed; the watch is water-resistant to three bar. Manufacture Caliber L043.5 is equipped with sophisticated safety mechanisms to guarantee reliable functioning of the complex striking mechanism under all circumstances. Mechanical conflicts could occur if time setting were initiated while the repeater is chiming, so the system delays advancing the numeral disks should this happen. Likewise, for safety's sake, the crown cannot be pulled out while the striking mechanism is active. This also ensures that the acoustic time indication always perfectly corresponds to the time displayed. Finally, the striking mechanism cannot be triggered if the watch's remaining power reserve is less than twelve hours, which means that the chiming is always completed and the watch cannot stop running while the repeater is striking. A red dot on the power-reserve indicator scale indicates the crucial twelve-hour mark.



18k white gold, hand-wound movement, digital display, minute repeater, sapphire crystal case back

THE QUEST FOR CRYSTAL-CLEAR SOUND

Among grand complications, the minute repeater is regarded as extremely sophisticated and demanding. It gives a voice to time: the user can trigger it to chime the hours, quarter hours, and minutes entirely as desired. A true master in this field, Jaeger-LeCoultre had already developed approximately 100 minute repeaters up to 1900. The fact that the original mechanism is still valid and needs improvement only in its details speaks to the genius of the watchmakers of yesteryear, who found ways to install a melodic ensemble within the small volume of space bounded by the case of a pocket watch. This is why Jaeger-LeCoultre now focuses on optimizing the sound. The manufacture relies on modern methods and technologies, e.g. synthetic sapphire crystal, to assure a perfect audible experience. The "crystal gongs", which were patented in 2005, are soldered directly onto the watch glass, which resonates along with the gong and thus amplifies its sound. In order to produce an evenly powerful strike, the little gongs are square in cross-section and have a flat surface against which the even tinier hammers strike. The speed and power of the blow is optimized by the trebuchet hammers, which debuted in 2009. Jaeger-LeCoultre introduced a new synchronisation function with the ultra-slim Hybris Mechanica 11. It ensures that even when the quarter hours are not struck, the minute chimes immediately follow the hour strokes. Calibre 950, which was launched in 2019, embodied another premiere in the form of an innovatively designed gong. Instead of a flat arrangement of overlapping coils, the two gongs wind in the same direction almost once around the movement's periphery before bending upwards to form two semicircles around the upper part of the movement. This improves the resonance and assures that the chimes ring with a crystal-clear sound, which is emotionally echoed by connoisseurs in the form of incomparable moments of happiness.



Gongs of the Master Grande Tradition Répétition Minutes Perpétuelle

JAEGER-LECOULTRE

MASTER CLASS

The Master Control collection has shone with virtuosic mechanics and unmistakable elegance since 1992. When it premiered on the stage of Swiss haute horlogerie, it not only convinced aficionados with its functionality, practicality and aesthetics, but also set new standards thanks to a novel quality certificate. With the advent of this



certificate, Jaeger-LeCoultre fired off a starting signal for a rigorous testing process – the "1,000 Hours Control" certificate – in which the encased movement is thoroughly tested for 1,000 hours before the completed watch may to leave the manufacture. This year, Jaeger-LeCoultre presents a new generation of watches whose styling is inspired by several iconic watches of the 1950s – the Memovox, Futurematic, and PowerMatic models for example. True to these role models, the stylistic revision prioritized timeless design with a focus on detail and function. The case radiates a simple elegance with a modern touch expressed through its well-proportioned diameter of 40 millimeters, a bezel that slopes slightly downward toward the outer rim, and dynamically curved strap lugs. The same elegance also distinguishes the silver dial with its delicate sunburst finish. The technical highlight is the Master Control Chronograph Calendar, which is powered by new Caliber 759. The automatic movement boasts a 65-hour power reserve when fully wound and is equipped with a complex column-wheel chronograph with vertical clutch as well as a full calendar with weekday, month, date pointer, and moon phase indicator. A chronograph augmented with these calendric complications is a first for Jaeger-LeCoultre. Despite its numerous displays, the dial is well balanced and intuitively legible. Even the sharply delineated strokes of the pulsometer scale along the flange blend harmoniously into the expressive overall picture.



Stainless steel, self-winding movement, chronograph, full calendar, moon-phase display

JAEGER-LECOULTRE

HEAVENLY TRINITY

Jaeger-LeCoultre brings three large complications to the wrist with the Master Grande Tradition Grande Complication: a minute repeater, a tourbillon, and a sidereal calendar. Each of these complications is a masterpiece in its own right, but as a trio they embody a rare achievement in modern



haute horlogerie that very few manufactories in the world have mastered. Perhaps the most demanding of these feats of watchmaking is the minute repeater, a function that can be triggered by its wearer to chime the time whenever desired. As soon as the precisely orchestrated ensemble of the complex striking mechanism is set in motion by activating the slide in the left flank of the case, this wristwatch's wearer hears what they see and sees what they hear. Jaeger-LeCoultre has been a master of repeating watches for over 150 years and has devised numerous innovations to perfect the quality of their sound. For example, to benefit from the unique acoustics of synthetic sapphire crystal, the patented gongs are soldered directly to the sapphire crystal, which resonates along with the gongs, thus amplifying their sound. While the repeater musically delights the ears, the eyes can feast on an orbital tourbillon and a detailed miniature celestial map depicting the starry firmament as it appears above the Vallée de Joux. The displays and functions are as complex as the construction: the tourbillon not only rotates around its own axis once every 60 seconds, but also completes one complete revolution per sidereal day above the multilevel dial. The sidereal day lasting 23 hours, 56 minutes, and 4.1 seconds is accordingly somewhat shorter than the solar day upon which our civil time is based; astronomers use these approximately four extra minutes to follow the visible motion of celestial bodies across the night sky. A small golden sun at the edge of this watch's constellation disk indicates the date, month, and zodiacal signs and points to the 24-hour scale on the flange.



18k rose gold, tourbillon,
self-winding movement, moon-phase display

Cartier

CENTURIAL WITNESSES

Gary Cooper, Alain Delon, and Gunter Sachs wore them. As did Princess Diana, Catherine Deneuve, and Jackie Onassis. Cartier's celebrity factor is unique even in the luxurious world of the rich and famous; iconic timepieces from this exclusive house have shone on the wrists of the international jet set throughout the last century. The Tank, history's first unisex wristwatch, is particularly popular: important politicians such as Jacques Chirac, leading avant-garde artists, members of the intellectual scene, and the most famous fashion designers, including Yves-Saint Laurent and Jean-Charles de Castelbajac, all wore Tanks. A legendary quip is attributed to Andy Warhol, who didn't think it necessary to wind his Tank: "I don't wear it to tell me the time," the Pop Art icon is reputed to have once said in his characteristically brusque manner. Many legends have grown up around the Tank. Actor Rudolph Valentino is said to have insisted on wearing his Tank during the entire shooting of The Sheikh's Son and never to have taken it off, even during breaks between shots. Nobody seemed to be bothered by the fact that the Tank's cool, classic appearance contrasted starkly with Valentino's opulent oriental costume. And precisely herein lies the secret to the success of all Cartier timepieces: they brilliantly unite contrasts and seem to take delight in playing with them. Cartier's bold and incisive designs (square, rectangular, round, or cushion-shaped) coupled with the accentuation and perfection of selected details have resulted in veritable icons of timekeeping for more than a century. Needless to say, Cartier's experts have mastered all disciplines of jewelry and craftsmanship. The timepieces' exteriors are so expressive that one could almost forget how exquisite their interiors are. That would be a most lamentable omission because Cartier has evolved into a full-fledged manufacture under the direction of chief watchmaker Carol Forestier-Kasapi. From spectacular tourbillons to secret watches and perpetual calendars, the maison de Cartier has mastered the entire repertoire of haute horlogerie.



Tank de Cartier in an asymmetric shape

Cartier

THE SQUARING OF THE CIRCLE OR CHARISMA DOWN TO THE SMALLEST DETAIL

In 1985, Cartier reaffirmed that it is always good for a surprise by presenting the Pasha de Cartier, a new watch line that once again demonstrated the brand's creativity and unerring sense of style. The watch's nonchalant personality is no less striking than its name: in the charged field between the two most contradictory geometric shapes – the circle and the square – this model embodies a profoundly original design that has lost none of its fascination and sophistication 35 years later. As is usual for this French brand, the focus was on the perfection of form. The squared railroad minute track, which Cartier eloquently calls chemin de fer, blends harmoniously into the circular dial. Four prominent, emphatically sweeping Arabic numerals and eye-catching blued sword-shaped hands continue the appealing interplay of contrasts. The Pasha de Cartier is once again in the limelight this year, presented in a new generation. The most emblematic model from an artisanal point of view is the Pasha de Cartier Skeleton, which features the time-honored Swiss handcraft of skeletonizing in its most beautiful form. The individual components of manufacture Caliber 9624 MC have been painstakingly freed from all superfluous material so that their precise interplay, function, and tiniest details can be admired from every side without obstruction. Like the other models in the collection, the Pasha de Cartier Skeleton is equipped with a number of innovative features like the QuickSwitch system. A paragon of ingenuity and simplicity, this mechanism enables the wearer to change straps entirely without the need for a tool. The SmartLink system likewise requires no tool, making it child's play for the watch's owner to adjust the length of the watch's metal bracelet. The "chained" crown mechanism, which has always been one of the most important design elements of the Pasha de Cartier, has also been redesigned. Cartier has gone one step further in the new version by adding a little plate that can be engraved with initials concealed beneath the crown, which is topped off with either a blue spinel or a sapphire.





Stainless steel, self-winding movement, skeletonized

VACHERON CONSTANTIN
GENÈVE

PERFECTION HAS MANY FACES



Manufacture building

Goethe was just six years old when Vacheron Constantin was founded in Geneva in 1755. Fourteen years before Napoleon Bonaparte was born, the manufacture on the legendary watchmaking isle Quai de l'Île on the banks of Lake Geneva's Rhône river was already working toward the motto of its founder Jean Marc Vacheron: "Do it better whenever possible – and that is always possible." In 1819 François Constantin joined the company, which has done business as Vacheron Constantin ever since, uninterruptedly continuing to manufacture watches to this day. The Maltese cross was registered as the company's logo in 1880. This manufacture has stood for the highest art of watchmaking, so-called belle haute horlogerie, for more than a quarter of a millennium. Generations of master watchmakers continue to perfect the experience and knowledge they have acquired at the Genevan manufacture. In addition to countless awards, this mastery is also affirmed by the Hallmark of Geneva, Swiss watchmaking's oldest seal of quality for exquisite and technically refined timepieces. The brand's Patrimony line is classic thanks to the simplicity of its shapes; Historiques reinterprets historical models with contemporary mechanisms; the sporty Overseas line is dedicated to the revolutionary design idiom of the 1970s; the Malte collection is characterized by its charming tonneau-shaped case; and with the Métiers d'Art pieces, Vacheron Constantin preserves traditional decorative techniques such as enameling, engraving, gem-setting, and guilloche. According to the spirit of its founders, the manufacture continues the tradition of offering its discerning clientele the option of having a watch made entirely to their own specifications. For this purpose, the company has a special department, Les Cabinotiers, which cultivates the knowledge and expertise needed to manufacture these outstanding one-of-a-kind pieces. This was also the birthplace of Reference 57260: currently the world's most complicated portable timepiece, the pocket watch is equipped with no fewer than 57 complications.

VACHERON CONSTANTIN
GENÈVE

OVERSEAS PERPETUAL CALENDAR ULTRA-THIN

Uniting complex mechanisms in the smallest amount of space is a challenge that practitioners of the high art of watchmaking are keen to accomplish. One of the finest examples is the ultra-thin perpetual calendar of Vacheron Constantin's Overseas line. Its automatic movement is 29.6 millimeters in diameter and 4.05 millimeters in height. This confined space hosts individual 276 components, including 36 jewels serving as gear train bearings. Beating at a frequency of 19,800 vibrations per hour, the mechanism powers displays for the hours, minutes, and moon phases as well as a perpetual calendar indicating the weekday, date, month, and leap year on a 48-month counter. A perpetual calendar not only "knows" the differing lengths of the months, but also takes into account the leap years, when February is given an extra day. This calendar accordingly needs no manual correction until the last day of February in the year 2100. An oscillating weight made of 22-karat gold supplies the Overseas with the energy it needs. Even if the watch is not worn, its fully wound mainspring stores enough power for approximately 40 hours. The slim movement is housed in a similarly thin case made of 18-karat rose gold that is 41.5 millimeters in diameter, a mere 8.1 millimeters in height, and containing an inner core made of soft iron to protect the movement from magnetic influences. This watch's impressive inner workings are only one source of pleasure for its owner: admiring gazes are irresistibly drawn to the dial, which boasts a transparent coating of blue lacquer, a satin-finished sunburst finish, and a velvety minute scale. The hour hand, minute hand, and hour markers are made of 18-karat rose gold and coated with a white luminescent substance that radiates a bluish glow in the dark. The elements of the 18-karat rose gold bracelet are shaped like half of a Maltese cross. Thanks to a sophisticated quick change system the bracelet can be easily removed without any tool and replaced by a blue alligator leather strap with large rectangular reptilian scales. A strap made of blue rubber is also included.





18k rose gold, self-winding movement,
perpetual calendar, moon-phase display

NAVIGATION ON THE WRIST

When IWC Schaffhausen's Portugieser first appeared in the late 1930s, this model seemed unusually large. Its equally unusual name alludes to the story of its creation, which began when two Portuguese retailers asked IWC to build a wristwatch with the precision of a marine chronometer. The manufactory, which had been founded in Schaffhausen in 1868 by the American Florentine Ariosto Jones, was well known as a manufacturer of highly accurate pocket watches. IWC's watchmakers accordingly ensconced hunter pocket watch Caliber 74 inside the 41.5 mm case of a wristwatch in 1939. The dial was inspired by the faces of the deck watches that IWC was producing for the British Navy at the time. Among their other uses, these pocket-sized nautical instruments aided with navigation aboard ship so they had to be readily legible and extremely precise. With a subdial for the seconds at 6 o'clock, a simple minute scale, Arabic numerals, and slender feuille hands, Reference 325 gave rise to a timeless design language that would run like Ariadne's thread through the subsequent history of the Portugieser family. However, this elegant wristwatch in pocket-watch format was decades ahead of its time: IWC's books documented only approximately 690 sales by the end of the 1970s. Hannes



Portugieser Reference 325

Pantli, IWC Schaffhausen's erstwhile marketing and sales director, deserves credit for plucking Reference 325 out of oblivion and making it into what is arguably IWC's most iconic product. The manufacture celebrated its 125th anniversary in 1993 with the debut of Il Destriero Scafusia (Ref. 1868), which was advertised at the time as the most complicated wristwatch in the world. This sparked the idea of reissuing Reference 325 in a small and strictly limited series. The new name – Portugieser – not only recalls the origins of Reference 325, but also alludes to themes such as navigation, precision, and reliability. The Portugieser Anniversary Edition (Ref. 5441) consists of 1,000 pieces in stainless steel cases, 500 in rose gold cases, and an additional 250 timepieces in platinum cases. It quickly sold out, establishing a global trend toward large-format wristwatches.

IWC
SCHAFFHAUSEN

PORTUGIESER PERPETUAL CALENDAR



A milestone in the Portugieser's history occurred in 2003 when a perpetual calendar debuted in this watch family. Developed by Kurt Klaus in the 1980s, the sophisticated mechanical mechanism automatically adapts to the differing lengths of the months, even "remembering" to add an extra day to February in leap years. All displays are synchronized and can be easily reset via the crown if the watch has been left unused for a lengthy interval. Kurt Klaus seized the opportunity associated with the development of extra-large Caliber 5000 to fundamentally revise his calendar module so it would optimally use the ample space afforded by the generously sized movement. IWC's own manufacture movements will be the base for this complication for the first time this year: the 42 mm timepiece displays calendrical information on three subdials. IWC manufacture Caliber 82650 thereby delivers a single impulse each night to power the displays of the calendar module. Equipped with zirconium oxide ceramic components, the Pellaton automatic-winding mechanism conveys energy to the barrel, which boasts a 60-hour power reserve. This movement can be admired through a pane of sapphire crystal on the case back. The perpetual calendar's mechanical programming automatically recognizes the different lengths of the months and adds a leap day at the end of February every four years; each of the indications are set via the crown. In this version of the calendar, the date, month, and weekday are displayed on three subdials respectively at 3, 6, and 9 o'clock. The perpetual moon phase indication is integrated into the month display and deviates from the real orbit of the moon by only one full day every 577.5 years. A display integrated into the weekday indicator counts the years until the next leap year. Equipped with a domed sapphire crystal on either side, the case 13.8 mm in height is water-resistant to three bar (30 meters). The Portugieser Perpetual Calendar has an alligator leather strap made by Santoni and secured by a folding clasp.



18k rose gold, self-winding movement, perpetual calendar, moon-phase display

ALFRED HELWIG TEACHES THE TOURBILLON TO FLY

It was Abraham-Louis Breguet who applied for a patent for the tourbillon in portable watches in 1801. This little "whirlwind" is a small cage-like construction inside which the balance wheel rotates around its own axis, thus compensating for the ill effect of gravity on the accuracy of the rate. For an extraordinary watchmaker like Alfred Helwig, though, the tourbillon was a constant challenge impelling him to improve. Even his first teacher noticed how meticulously Helwig, who was born on 5 July 1886, carried out his tasks, recommending that he attend the German School of Watchmaking in Glashütte where he was accepted as student number 729 in 1904. He graduated the very next year with top grades. He became a journeyman and spend the years from 1908 to 1910 at the Hamburg-based Chronometerwerke now belonging to Wempe. After military service in World War I, Alfred Helwig returned to the German School of Watchmaking in Glashütte in 1917. He envisioned a flying tourbillon. Making initial sketches, step by step the flying tourbillon matured. Including its gold settings, jewels and screws, the rotating carriage weighed less than half a gram. Its hairspring was a mere 0.025 mm at its thinnest point. Helwig's tourbillon was borne only on one side, where two closely spaced bearings guided the wheel's shaft. This enabled him to install the rotating cage and the escapement without an upper cock, thus offering an unobstructed view of the tourbillon, which seemed to fly. Furthermore, the cage was thus relieved of pressure and could be quite delicately designed. The flying tourbillon used less material, was lighter, and less sluggish, thereby achieving the best rate results for precision watches of its era. Helwig's masterpiece from 1920 is now believed to be lost. His teaching career spanned 41 years, during which time he trained more than 800 students. Glashütte Original's school of watchmaking, which now bears Helwig's name, conveys the expertise of Glashütte's master watchmakers to the next generation.



Manual engraving of the PanoLunar Tourbillon

Glashütte
ORIGINAL

SENATOR COSMOPOLITE

Glashütte Original's Senator Cosmopolite in blue is a new interpretation of this globetrotter's stainless steel version with the experts at the brand's dial manufactory in Pforzheim modifying the face of the Senator Cosmopolite to optimize its legibility. Even in bright daylight, the new sword-shaped hour and minute hands



contrast boldly against the galvanic blue dial, which is decorated with a sunburst pattern. Excellent legibility likewise distinguishes the white printed numerals, markings, and lettering of the various displays. Twelve typical applied markers round out the high-contrast appearance. The Senator Cosmopolite is powered by manufacture Caliber 89-02, which boasts a 72-hour power reserve and shows two time zones in such an intuitive manner that its wearer can read the time in each zone at a glance; a time-zone ring offers a selection of all 35 currently valid time zones. Each is represented by an official IATA location code, which stands for an international airport in the respective time zone. A white IATA code indicates the 24 time zones that differ from Greenwich Mean Time in full hours; a pastel blue code represents another eight time zones with half-hour differences as well as the three remaining time zones with three-quarter-hour differences. Two windows at 8 o'clock allow the wearer to select either daylight savings time (DST) or standard time (STD). There are also day/night displays for both home time and the time at the wearer's location. The complex mechanism takes into account any date adjustments when travelling forward or backward in time (east-west or west-east). The 44 mm stainless steel case is water-resistant to five bar, which corresponds to pressure at a depth of 50 meters. Automatic manufacture Caliber 89-02 ticks at a pace of 28,800 vibrations per hour; it has 63 jewels and a screw balance with four regulating screws. The Senator Cosmopolite can be worn either on a stainless steel bracelet or a blue alligator leather strap.



Stainless steel, self-winding movement,
35 time zones, Daylight Saving Time/Standard Time

THE URANIA OBSERVATORY

Urania built the observatory atop the Ochsenkopf hilltop high above the Müglitz valley between 1904 and 1910. The muse of astronomy in Greek mythology, Urania also lent her name to the student association of the German School of Watchmaking, which was officially opened in Glashütte on May 1, 1878 on the initiative of Moritz Grossmann on behalf of the Central Association of German Watchmakers. It contributed to Glashütte's international reputation; at times, one-third of the school's students came from abroad. The watchmaking industry in Glashütte, which had been founded by Ferdinand Adolph Lange in 1845, needed a reliable reference time. This was calculated with the help of celestial observations by the Imperial Metrological Institute in Berlin, which cabled it in Morse code as a manually entered time signal to the school of watchmaking and the manufactories in Glashütte. However, this method of transmission and the resulting inaccuracy of the time signal had long since ceased to meet the needs for precision required by Glashütte's timepieces. A telescope of their own in an onsite observatory was intended to solve the problem. The time finally came in 1910 when the observatory commenced operations. In addition to its own time signal, Glashütte now also had an educational observatory that was used by the school of watchmaking. The establishment of a research institute was also under consideration. Ferdinand Adolph Lange's grandson, Otto Lange, and Herbert Wempe, who owned Wempe Chronometerwerke in Hamburg, met in the late 1930s and agreed on plans to this end, but World War II thwarted their plans: both companies were obliged to build chronometers for the German navy. Following the war, the observatory became municipal property and was neglected. Decades of decay left it in ruins until 2005, when Wempe renovated it, transformed it into a production facility for Wempe chronometers, and established on its premises Germany's only chronometer-testing facility. The success is so great that the observatory building has already twice undergone extensive expansions.

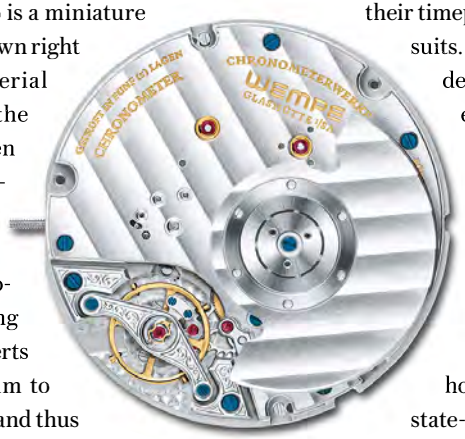


Glashütte Observatory was inaugurated in 1910

CHRONOMETERWERKE
WEMPE
GLASHÜTTE I/SA

A SMOOTH GLIDE

The Chronometerwerke Pilot's Watch CW4 Bronze combines the long tradition of Wempe's production of pilot's watches and a trendy case material. Bronze has a warm, soft color and thus a very special charm that has made this alloy of copper and tin quite important in the visual arts. The Automatic Pilot's Watch CW4 is a miniature masterpiece in its own right in bronze, a material that responds to the influence of oxygen and moisture by developing a patina of oxidized copper, which coats and protects the underlying alloy. Wempe's experts add more aluminum to the alloy to delay – and thus pleasurably savor – the visible aging. This process cannot be prevented, but the patina lends a uniquely personal touch to each watch. The smooth bezel of the satin-finished case surrounds the bronze-colored dial of this model, which is produced in a limited edition of just 25 timepieces. The applied Arabic numerals and indices share the same warm color, while the luminous hands contrast boldly against the dial's bronze-colored background. The case is water-resistant to three bar, which corresponds to water pressure at a depth of 30 meters. The case is 41 millimeters in diameter, a size making it somewhat more moderately dimensioned than historical pilot's watches. The brown vintage-style leather strap is similar to those used by airmen of yesteryear to strap their timepieces over their flight suits. The strap has a small decorative seam on one end and a bronze buckle with the engraved Wempe logo on the other end. Automatic manufacture Caliber CW4, which was unveiled in 2016, combines traditional horological virtues with state-of-the-art technology. The high-performance movement undergoes a meticulous finishing process, which also includes finishing with decorative patterns and fine engravings; five ruby bearing jewels are set into pressed chatons. An off-center heavy metal rotor rotates above the typical Glashütte three-quarter plate, winding a mainspring that stores enough energy for 90 hours of power.





Bronze, self-winding movement, chronometer, saphhire crystal case back



Glashütte 1855

175 YEARS OF WATCHMAKING IN GLASHÜTTE

It seems likely that the 15 young men from Glashütte ranging in age from 15 to 18 were eagerly looking forward to December 7, 1845. Despite their youth, they were to become decisive for the future of the impoverished little town in the foothills of the Erz Mountains. The youths attended a midday meal organized by the town at the invitation of the company where they would soon begin apprenticing as watchmakers. With some persistence, the company's founder, Ferdinand Adolph Lange, had succeeded in obtaining a loan of 5,580 thalers from the government of Saxony to establish watchmaking in the state. He had also been granted a non-repayable sum for the procurement of tools and equipment. The 15 apprentices had committed to continue working exclusively for Lange for a period of five years after the completion of their training. The timing was well chosen. Saxony's industrialization, the construction of railway lines, and the institution of a unified time zone for all of Saxony created a growing demand for accurate timepieces. Ferdinand Adolph Lange, who was born in Dresden on February 18, 1815, proved to be the ideal person to meet this need. Following his parents' separation, a merchant family with which his parents were on friendly terms raised Lange as a foster child and enabled him to receive an education. He attended the Technische Bildungsanstalt in Dresden and simultaneously began training with renowned watchmaker Johann Christian Friedrich Gutkaes. During this apprenticeship, his mentor was commissioned to create a digital clock for the Semper Opera House. High above the stage, two silently



C. F. Gutkaes

revolving rollers digitally display the time: one roller makes a revolution every five minutes, while the other advances every hour on the hour. The clock was ordered because the king had been annoyed that some spectators in the darkened hall triggered their repeating pocket watches to chime the time during a performance. The Semper Opera House has been destroyed twice in its long history, but its five-minute clock still shows the correct time today. Upon completing his apprenticeship with distinction in 1837, Lange travelled to Paris, the center of precision watchmaking in those years. He honed his skills under the tutelage of Joseph Thaddäus Winnerl, who had been a pupil of Abraham-Louis Breguet and ran a leading horological workshop. While in Paris, Lange also found time to study astronomy and physics at the Sorbonne. The pages of his travel and sketchbook detail how meticulously he pursued these studies. Rather than measuring his constructions in the customary lignes, he used the more practical – but still rather uncommon – metric system. When Lange returned to Dresden, he married Antonia, the daughter of his master, who had been promoted to court watchmaker. Lange was granted his master's certificate and became a partner in his father-in-law's business. Despite the difficulties besetting the era, his horological and entrepreneurial successes were considerable. To promote the economy the Saxon government began handing out subsidies, which spurred Lange's entrepreneurial spirit and sense of civic duty. He began striving for the implementation of his plan to establish a Saxon watch manufactory as a German counterbalance to the then-predominant manufacturers of fine watchmaking in England and Switzerland. But the festive start in Glashütte was misleading: training the 15 village youths from the "undernourished valley" turned out to be more difficult than expected, and many of them had to be replaced. Lange increased their number to 30. Slow to get underway, watch production was delayed. The company's name became "A. Lange & Cie" as the subsidy proved insufficient and brother-in-law Gustav Bernhard Gutkaes had to come aboard as a guarantor. The pocket-watch movements were accordingly



Five-minute clock of the Semper Opera House in Dresden

stamped with the "G&L" hallmark: G for Gutkaes and L for Lange. Ferdinand Adolph Lange analyzed the watch landscape, identified his competitors in England, France, Switzerland and Germany, and defined his goal: the production of a simple "but mechanically perfect pocket watch." Precision was his top priority, so Lange's production relied on the metric system from the outset even if the Saxon government did not officially adopt the meter as a unit of measurement until 1858. Using the millimeter as his basic unit of measurement simplified calculations, but first the movement's dimensions had to be laboriously converted from the old lignes system (one ligne is equal to 2.256 millimeters). But Lange went even further: to that point, it had been customary to merely manufacture and sell watches, leaving their fine adjustment to local watchmakers, who performed this task to the best of their abilities. Lange countered this risk by only selling watches that had already been finely adjusted. During their five "compulsory years" with Lange, the journeymen specialized in the skills they had learned during their apprenticeships. Each young watchmaker was responsible for a specific step, thus significantly reducing the error rate. Ferdinand Adolph Lange also optimized the tools and equipment, for example, by introducing foot-powered lathes. Their operators could set round parts such as pins, pinions, wheels, and disks into continuous rotary motion, thus facilitating fine and precise machining. The first specialist suppliers started their own businesses in 1848 – supported by Lange, who wanted to establish a system based on efficient division of labor. The suppliers concentrated on manufacturing components such as hands, escapements, and balances. Others focused their efforts on milling, the production of pinions or plates, and the manufacture of gears or spring barrels. Success was frustratingly elusive at first. Still hoping to lead his company and the city of Glashütte to success, Lange applied for personal loans and went into deep debt. He exhibited his watches for the first time at the Leipzig Trade Fair in 1850 and participated in the Great Exhibition in London in 1851. He was able to gain a market share in England and North America, where customers were eager to buy and able to pay for good, reliable, high-quality watches; the domestic market generated only about ten percent of his sales. Another advantage of Lange's division-of-labor system was that he could evaluate his suppliers' wares and select only the best components among them. His suppliers were nevertheless able to operate profitably because other watch companies began settling in the region, thus utilizing and strengthening the infrastructure of the emerging watch industry. One of these competitors was Julius Assmann, a native of Stettin, who settled in Glashütte as an independent watch manufacturer on October 2, 1852, which was also his 55th birthday. Ferdinand Adolph Lange, who had meanwhile also been elected mayor, supported Assmann's efforts. Watchmaker Moritz Grossmann, who numbered among Lange's friends, left Dresden and settled in Glashütte toward the end of 1854. He helped Lange and his foreman Adolf Schneider train aspiring watchmakers by making models of movements for educational purposes. In addition to running his own watch manufactory, which also produced precision pendulum clocks and chronometers, Grossmann gave lectures, translated technical articles into German, and published articles in technical journals. His lecture at the first German Watchmakers Day in 1876 led one year later to the decision to establish the German Watchmaking School in Glashütte, which opened its doors on May 1, 1878. This school, which achieved global fame in subsequent decades, counts many renowned watchmakers among its alumni. One-third of its students came from abroad and their reports helped Glashütte earn an enviable reputation in their home countries. The aforementioned Schneider likewise ventured onto the path toward independent entrepreneurship, opening his own watch factory in 1855 and completing the cloverleaf of the four founding families. Over the next 20 years, Glashütte's pocket watches earned international renown as precise time-measuring instruments. All four watchmaking companies relied on the same suppliers of individual components; they coordinated to promote technical developments leading to improvements in movements and tools. The movements manufactured by Lange, Assmann, Schneider, and Grossmann were therefore nearly identical, establishing the success of the division-of-labor system. The Glashütte precision pocket watch was manufactured for 80 years. Shortly before the thirtieth anniversary of the founding of his company, Ferdinand Adolph Lange died at the age of 60 on December 3, 1875. His sons Richard and Emil were already longstanding partners in the company, which was accordingly named A. Lange & Söhne. Richard Lange distinguished himself as a superlative watch designer while Emil Lange developed outstanding commercial skills. One year later, Heinrich Schäfer in Vienna commissioned A. Lange & Söhne to manufacture a grande complication.This watch has a striking mechanism with small and large chimes (petite et grande sonnerie), a minute repeater, and a split-seconds chronograph with "lightning" seconds (seconde foudroyante) and a 60-minute counter. It is also features a perpetual calendar with moon phase display. All this mechanical complexity is



ensconced in a chased and hand-engraved gold hunter case with classic Graff engraving. Remaining a one-of-a-kind timepiece, its German silver movement is crafted in 1A quality and powered by three spring barrels. This unique creation dates from the heyday of pocket-watch production in Glashütte, which lasted from 1890 to 1914. A. Lange & Söhne's annual production increased from 1,237 watches in 1872 to 2,417 individual timepieces in 1907; Glashütte's watchmaking industry employed 258 people in that year. Glashütte's fame attracted other watch companies such as Nomos-Uhren-Gesellschaft, which was founded in



Grande Complication pocket watch

1906. That company purchased complete watches from Switzerland, gave them a final inspection in Glashütte, and sold them under the name "New System – Nomos Glashütte." A complaint filed by Assmann, Lange, and Union developed into a legal dispute, which ended with a settlement on May 10, 1910 and the subsequent withdrawal of Nomos from Glashütte. The city of Glashütte received permission from the king of Saxony to use a new coat of arms in 1912. The shield is horizontally divided into a golden upper half and a red lower portion: the former bears a pair of diagonally crossed mining hammers, while the latter shows a silver watch dial with a red sun. World War I put an abrupt end to the heyday of watchmaking in Glashütte as many employees were needed to work in the armaments industry or serve in the army. The watch companies devoted their efforts to manufacturing marine chronometers and observation watches. With support from the city of Glashütte, the Deutsche Präzisions-Uhrenfabrik (DPUG) was founded in 1918 to resume production of inexpensive watches for everyday use. Using standardized manufacturing methods, the focus was on a caliber with visible anchor pallets in the Swiss style. New measuring instruments made by R. Mühle & Sohn contributed to initial success in the form of a pocket watch making its debut in 1921 whose production cost 20 percent less than comparable timepieces made by local competitors. The company produced 350 precision pocket watches each month – more watches than had previously been manufactured in an entire year by all of Glashütte's businesses together. This watch sold very strongly at the Leipzig Spring Fair, but the success misled Glashütte's watchmaking industry into overlooking the triumphant trajectory of the wristwatch and dismissing it as a mere passing fad. This miscalculation, further exacerbated by rampant inflation and the global economic crisis, led to the opening of bankruptcy proceedings on June 17, 1925. The Assmann and Union/Dürrstein companies were deleted from the commercial register in 1930 and 1936. Only A. Lange & Söhne survived the worldwide financial downturn. Glashütte's watchmakers nonetheless remained undaunted. The Giro-Zentrale Sachsen bank, which had granted large loans to the defunct DPUG, founded the Uhren-Rohwerke-Fabrik Glashütte AG (Urofa) and the Uhrenfabrik Glashütte AG (Ufag) on December 7, 1926 as it was eager to make up for its losses. The new ébauche factory planned to manufacture, finish, and galvanize movement plates with bridges and cocks. Each factory was legally independent, but Dr. Ernst Kurtz, a lawyer, managed both. The watch factory – also an assembly facility – was set to speedily and smoothly assemble the movements. But due to inadequate experience with mass production, it was not until 1928 that the first pocket watches came to market at a competitive price. Serial production of Caliber 52, the first movement for ladies' wristwatches, commenced in the autumn of 1929, followed by Caliber 55 for men's wristwatches in 1931. Thanks to its clever architecture, Caliber 58, which debuted in 1935, was able to accommodate both a large spring barrel and a generously proportioned balance. This caliber earned its place in watchmaking history as an unusually space-saving movement. The National Socialists' seizure of power led to a substantial upturn in the watchmaking and fine mechanics industries. Demand for marine chronometers and observation watches rose sharply. Collaboration between A. Lange & Söhne in Glashütte and Wempe Chronometerwerke in Hamburg led to the creation of the Unified Chronometer, 6,500 pieces of which were produced by the end of the war. Approximately 12,000 observation watches and pilot's wristwatches were also manufactured. During this same period, Urofa made approximately 25,000 wristwatch chronographs powered by Caliber 59, which boasted additive timing and the ability to tally up to 30 minutes. Russian fighter pilots began dropping bombs on the city of Glashütte at 6 o'clock on the morning of May 8, 1945. Lange's production facility was among the casualties. Dr. Ernst Kurtz, director of Urofa and Ufag, had left the city the night before, preparing well in advance

and arranging for machines and manufacturing equipment to be transported to Memmelsdorf in Central Franconia, where they were stored. After the war, this stockpile enabled him to set up a new wristwatch production facility in Glashütte tradition under the name Tutima, which relocated its production to Ganderkesee, near Bremen, in 1951. Tutima became well known in the 1980s when it was commissioned to manufacture service watches for pilots in West Germany's air force. A grimmer fate was in store for the remaining watch companies in Glashütte. After the bombardment, watch production resumed on May 16, 1945, but an order to dismantle Urofa and Ufag was issued on July 1. Nothing survived to dismantle at A. Lange & Söhne, which had suffered a direct hit during the bombing. The owners of the watch companies were expropriated and their businesses transferred to state ownership between 1946 and 1948. Lange was nonetheless able to begin delivering a men's wristwatch in 1949 by producing Calibers 28 and 28.1 (with central second hand). The VEB Glashütter Uhrenbetriebe (GUB) combine was founded on July 1,1951. Among other firms, GUB incorporated A. Lange & Söhne, Urofa and Ufag, Robert Mühle & Co, and the Makarenko vocational school into a single unit with more than 1,000 employees. GUB produced its millionth watch as early as 1959, and exports to socialist countries had already begun in 1950. Starting in 1957, GUB also supplied watches to West Germany's Quelle mail-order company, which marketed them under the name "Meister-Anker." Automatic watches were manufactured under the name Spezimatic



Aviator chronograph, 1941



starting in 1964. Mergers with other watchmaking companies in Ruhla and Weimar resulted in the highly efficient and large-scale production of millions of timepieces. Germany's reunification abruptly ended this "success story" when the state-owned GUB was taken over by the Treuhand fiduciary authority; the company restarted operations under the name "Glashütte Original" with a core workforce of 72 employees concentrating their efforts on the production of high-quality mechanical watches, thus following the example set by A. Lange & Söhne. Walter Lange, great-grandson of Ferdinand Adolph Lange, partnered with Günter Blümlein to revive the Lange brand, which joined the Geneva-based Richemont Group in 2000. Roland Schwertner founded Nomos in 1990, thus resurrecting the name of a watch manufacturer that had been based in Glashütte in 1906. The Nomos manufactory now operates with a high degree of vertical integration, including the ability to produce its own escapements. Union Glashütte was once again





Glashütte 2015

called into existence after the Swatch Group took over Glashütte Original in 2000. And with Mühle Nautische Instrumente, which was already well known in the field of horological metrology, yet another family from Glashütte contributed to the market for Glashütte-made wristwatches. With the elaborate restoration of the city's observatory and the establishment of a chronometer-testing facility, Wempe recalled a cooperation with A. Lange & Söhne that was first planned in the 1930s and commenced manufacturing its own watches on site. Tutima returned to its original hometown in 2008. Following 175 years of colorful history, alternately marked by success and beset by catastrophe, Glashütte has earned a prominent and globally recognized position on the international watchmaking map.

PANERAI

POLARIZING, BUT WITH STYLE

There are only a handful of timeless stylistic icons among the thousands of watch designs in the world. Panerai stands out among these elite few. Some connoisseurs are not fond of this brand's straightforward and amply dimensioned styling. Others find it to be the epitome of distinctive beauty. But all parties agree on one point: the style of Panerai's dials and cases distinguishes these wristwatches from all others. Probably no other watch brand is as skillful in its mastery of bold masculine styling coupled with minimalistic design. There is a simple reason for this: Guido Panerai upheld a strict principle of functionality when he first designed these watches for the royal Italian navy in the late 1930s. This is also why the Radiomir and later the Luminor models are distinguished by excellent readability, especially in the dark or under water. But their breakthrough as commercial watches would not occur until many decades later and in a very unusual way. Sylvester Stallone discovered the brand by chance when he was in Rome to shoot the film Daylight, in which one of Panerai's watches co-stars on Stallone's burly wrist. The actor subsequently made the timepiece into an "it watch" in Hollywood of the late 1990s. Wempe was likewise infected with enthusiasm for Panerai and added the brand's watches to its portfolio in 1998. Panerai's international market launch followed at the turn of the millennium – and an incredible success story began. Panerai now utilizes nothing but its own movements from its manufactory in Neuchâtel, Switzerland. Long regarded as typically men's watches, Panerai's stylish icons are now also comfortably wearable on women's slimmer wrists as the brand added several models from the Luminor Due series to its collection as of 2016. Despite their smaller diameter of 38 mm, they feature all of Panerai's typical design elements and are also powered by Officine Panerai's thinnest automatic manufacture caliber.



Panerai store, 1860

PANERAI

LUMINOR MARINA FIBRATECH 44 MM

The conspicuous design language of Panerai's watches is sacred to the brand's fans, so-called Paneristi who hotly debate every even so slight variation and new combinations of familiar elements. With this in mind, it is only natural for Panerai to seek new challenges and to push the envelope in exploring new materials. After having been one of the first to use bronze cases as a reference to its maritime origins, this Florentine brand is now pursuing a totally unprecedented approach. The cases of Panerai's new Fibratech watches are made from the minerally fibers of basalt. Fibratech is an extremely unusual material that has never before been used in the watch industry. After initial tests in the aerospace industry, Panerai further developed and optimized the substance for use as a case material. Fibratech is made by melting basalt rock to obtain unidirectional mineral fibers. These fibers are then bonded with polymers to form thin layers, which are superimposed in precise alignment and finally solidified under strictly controlled temperature and pressure conditions. The result is a matte grey appearance that can be individually modified depending on how the material is cut. In the new PAM01663 model, this innovative case material is combined with a bezel and crown-protector lever made of Carbotech, a composite material developed in-house. The screw-down case is crafted from micro-sandblasted titanium. The Luminor Marina Fibratech is water-resistant to 30 bar, which is equivalent to the pressure at a depth of 300 meters. Caliber P9010 was designed and developed entirely in Panerai's manufactory in Neuchâtel. A mere six millimeters thick, the automatic movement is still able to store enough energy in its twin spring barrels to display the correct time for three consecutive days, even if it languishes unworn. The 44 mm Luminor Marina Fibratech has a sandwich-style dial in a blue color that get gradually paler toward the center. The four Arabic numerals fluoresce green, while the indexes are coated with white luminous material. The strap is made of blue Sportech textile with white stitching secured by a trapezoidal buckle made of DLC-coated titanium. A blue rubber strap is also delivered along with the watch.





Fibratech, self-winding movement, small seconds subdial

BREITLING
1884

CHRONOMAT – A MODEL DEFINES THE MILESTONES OF THE COMPANY'S HISTORY

The first Breitling timepiece to bear the name Chronomat – which combined syllables borrowed from the words "chronograph" and "mathematics" – was a patented instrument watch with a chronograph and a circular slide rule. Venus Caliber 175 provided the power for this ancestor of the Navitimer. Chronomat models subsequently played a special role in the history of this watch brand founded in St. Imier in 1884. The one-two punch of the turbulent quartz crisis and his own poor health impelled Willy Breitling, grandson of the company's founder, to sell the firm to entrepreneur Ernest Schneider in 1979. The new owner and his family looked after the company's affairs until 2017. The headquarters were relocated to Grenchen on December 30, 1982. Italian aerobatic team Frecce Tricolori ("three-colored arrows") commissioned Breitling to make a chronograph with an automatic movement. This model, whose case dimensions and winding system departed from contemporary tastes, caused quite a stir in the watchmaking world; it is now regarded as one of the points of crystallization for the gradual renaissance of the mechanical wristwatch. Inspired by the Frecce Tricolori watch, Breitling celebrated its centenary the following year with the Chronomat. This marked the return of the mechanical chronograph upon which the brand had originally built its reputation. The screw-mounted riders protecting the watch crystal became one of this watch's special features; the riders at 15 and 45 minutes could be interchanged to facilitate a kind of countdown function using the chronograph. Breitling again chose a Chronomat model to host its first manufacture movement, the B01, which debuted to celebrate the brand's 125th anniversary in 2009. After CVC acquired the brand in 2017, Breitling's CEO Georges Kern commenced a thorough reorientation of the model range and brand identity – and thus the Chronomat returns this year with reversible riders and the Rouleaux bracelet from the 1980s.



Breitling
Chronomat, 1984

BREITLING
1884

A LEGENDARY MODEL IN THE COMPANY'S HISTORY

Breitling concludes the comprehensive redesign of its collection with the Chronomat family. Alongside re-editions of classic models such as the 1959 Navitimer 806 and the chronographs in the Premier line, all of the collections have been thoroughly revised and the brand's overall image has been visibly rejuvenated. The Chronomat has always played a special role at each outstanding moment in the company's history. Its four riders ensure its characteristic appearance and simultaneously protect the cambered sapphire crystal with antireflective coating on both sides. The riders of the new editions of the Chronomat are somewhat flatter and less likely to snag on a shirt cuff, but they too are screwed to the bezel from the outside at 3 and 9 o'clock and are interchangeable so the chronograph can either tally up or count down. The riders also facilitate the handling of the unidirectionally rotatable bezel. The watch's stainless steel Rouleaux bracelet with double folding clasp is integrated into the 42 mm stainless steel case. Breitling's Chronomat is water-resistant to 20 bar, which corresponds to the water pressure at a depth of 200 meters. Manufacture Caliber B01 keeps time inside the case: a COSC-tested chronometer, this automatic chronograph movement is paced at 28,800 vibrations per hour and can accordingly measure elapsed intervals to the nearest quarter of a second. After full winding, its ball-borne and bidirectionally winding rotor provides enough power reserve to continue displaying the correct time for 70 hours without further motion of the wearer's wrist. The chronograph movement comprises 346 components, including a column wheel and a vertical clutch. Breitling is producing a special version exclusively for Wempe Jewelers with a blue dial and silver-colored totalizers in a limited edition of 50 pieces.





Stainless steel, self-winding movement, chronograph, chronometer

HUBLOT

PLEASURE AND RESPONSIBILITY

Hublot is no stranger to a well-groomed appearance in the limelight, but this company also likes to tread new paths beyond the posh red carpet. As such, Hublot was one of the first watch brands to consistently dedicate itself to soccer. Its partnerships with UEFA and FIFA become obvious to spectators when assistant referees raise the boards displaying the added time in front of the video cameras at major international football events – including women's soccer. Among the brand's partners are leading personalities in the world of football such as Kylia Mbappé and Edson Arantes do Nascimento, who is better known as Pelé. The popular team sport on the pitch is complemented by an equally popular team sport on the racetrack: since 2011, Hublot has been the official timekeeper of Scuderia Ferrari, the Formula 1 department of the Italian sports car manufacturer. Hublot annually designs new watch models in cooperation with Ferrari, including a Classic Fusion collection for the Ferrari GT. Hublot also cultivates close contacts with individually played sports, like track and field and golf, as well as world-class artists and musicians. Alongside pleasure, Hublot is also aware of its social responsibility. A large percentage of the proceeds from sales of the Unico Sorai



Care for Wild dial

(Save Our Rhino Africa India) go directly to Care for Wild for the care and protection of orphaned baby rhinoceros and to the South African National Parks Agency. Since 2015, Hublot has supported Best Buddies, a non-profit organization that offers people with intellectual disabilities and developmental impairments opportunities for friendships, integrated employment, and managerial training. In its support of the Only Watch project, Hublot returns to a place of glamor. Every two years, major luxury watch brands create unique timepieces for the Monegasque charity in support of Duchenne muscular dystrophy. Hublot has supported the foundation since its establishment in 2005. The proceeds of the auction, which is held at Christie's in Geneva, are devoted entirely to this good cause's research.

HUBLOT

BIG BANG INTEGRAL TITANIUM – CONNECTION

Hublot's Big Bang premiered in 2005 with a spectacular combination of steel, ceramics, and rubber. Celebrating its fifteenth birthday, the Big Bang is now available for the first time in combination with an integrated bracelet. The custom-made design



of the bracelet is recognizable only at second glance, though: at first only the broad elements in the midline of the bracelet's three rows stick out, but closer scrutiny shows that the details combine to tell an independent design story. All elements harmonize here: the seemingly sharp-edged bracelet echoes the austere shape of the case and the angular edges parallel the shapes of the chronograph's push pieces, which have been revised to incorporate distinctive features of the original 2005 model. These pushers inspired the styling of the bracelet with its interplay of edges, bevels, and alternating polished and satin-finished surfaces, which recur throughout the watch, its case, and bracelet. The Big Bang Integral Titanium's case retains its "sandwich" construction, but without the use of composite resin. The 42 millimeter case and the bracelet with folding clasp are manufactured entirely in lightweight titanium. The sole exceptions to this are the crown protection in black composite resin and the rubber-covered crown. The dial and bezel are designed in the same way as their counterparts on previous Big Bang models, but there is an exception here too: indices have replaced the erstwhile Arabic numerals. The column wheel of in-house manufacture Caliber Unico V2 is visible at 6 o'clock. Its chronograph mechanism features a horizontal double clutch; its thin automatic winding supplies it with enough energy for three days of power reserve when fully wound. Caliber Unico V2 consists of 354 components, including 43 jewels.

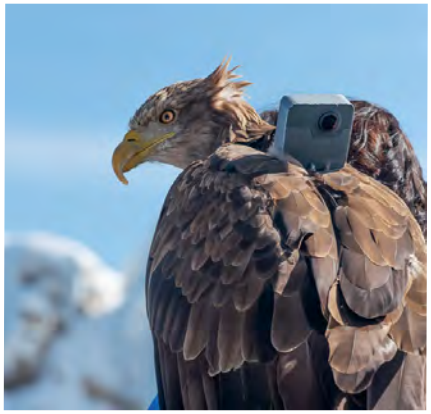


Titanium, self-winding movement, chronograph

Chopard

FAMILY TRADITION BEGETS MANUFACTURE AND RESPONSIBILITY

Founded by Louis-Ulysse Chopard in 1860, the house of Chopard manufactures high-quality watches and jewelry. The Scheufele family has run Chopard with its exceptional sense of family spirit since 1963. Perfection in every detail, creativity coupled with traditional craftsmanship, and clear ethical values are the pillars of its success. Co-president Karl-Friedrich Scheufele, who is responsible for the company's watch division, returned to the roots of the art of watchmaking with the founding of Chopard Manufacture in Fleurier in 1996. Twenty basic movements in as many years speak for the success of this strategy. Chopard's launch of the Alpine Eagle last year, drawing attention to the Alps, led to Karl-Friedrich Scheufele co-founding and supporting the Eagle Wings project, which monitors the changes taking place in the Alpine ecosystem with eagle eyes. Europe's tallest and most extensive mountain range extends nearly 1,200 kilometers across Austria, France, Germany, Italy, Liechtenstein, Monaco, Slovenia, and Switzerland. The Alps are geographically important, accounting for 11% of Europe's surface area and exerting major influence on the climate. While German photographer Nomi Baumgartl keeps a sharp eye on Alpine events from the ground with her impressive and particularly sensitive artistic images, two supporters take a critical look at the Alpine region from the air. The first is white-tailed eagle Victor, an internationally renowned aerial photographer who has filmed the Arctic Ocean, Mont Blanc, and the skylines of Paris, London, and Dubai with a 360° camera strapped to his back. Victor's images promote the appreciation and awareness of an environment that is changing much too quickly. Detailed satellite images of Alpine regions are generated at even higher altitudes by the second: the German Aerospace Centre (DLR) and the European Space Agency (ESA) are also partners in the Alpine Eagle project, contributing a global and scientific perspective. The combined efforts of all participants offer a glimpse into our future.



Sea eagle with a 360° camera

Chopard

ALPINE EAGLE – THE CHRONOGRAPH SPREADS ITS WINGS

The Alpine Eagle XL Chrono, a flyback chronograph in a new 44 millimeter case, complements the Alpine Eagle collection launched in 2019. The new watch's appearance is striking and unmistakable, combining a round case with stylized protruding elements, a crown with an engraved compass rose, a bezel with eight functional screws, luminous indices on a structured dial in natural hues, and an integrated metal bracelet with ingot-shaped links. From the chronometer-certified movement to the dial, bracelet, and A223 Lucent steel case, these chronographs are manufactured entirely on premises by the experts in Chopard's workshops. The Lucent steel alloy, specially developed by Chopard, is the result of a complex industrialized process that endows the material with three exclusive properties: it is hypoallergenic, extremely resistant, and has a shine comparable to the gleam of gold.



The robust case protects Chopard's automatic Caliber 03.05-C from penetration by water to a pressure of ten bar, which corresponds to the water pressure at a depth of 100 meters. Like all calibers in this collection, this movement was developed and manufactured entirely by Chopard and is certified by the COSC, the official Swiss chronometer-testing authority. The complex chronograph caliber comprising 310 components is equipped with a column wheel and flyback mechanism; its mainspring boasts a 60-hour power reserve to keep the movement running even when its skeletonized tungsten-alloy rotor is not currently supplying it with a fresh transfusion of energy. Caliber 03.05-C is embellished with modern finishing that expresses this collection's sporty style. It can be admired by peering through the back of the case blessed with a sapphire crystal that is no less antireflective than its counterpart covering the dial. This front crystal protects the Aletsch-blue embossed brass dial, which is adorned with a radial motif inspired by the iris of an eagle's eye.



Stainless steel, self-winding movement, chronograph, chronometer

LAUDING THE GRADUATE

Constant Girard, born in 1825, founded Girard & Cie in 1852. Two years later, he married Marie Perregaux, who came from an important family of watch retailers in Le Locle. The combination of their family names gave birth to the Girard-Perregaux manufacture in La Chaux-de-Fonds. Constant Girard-Perregaux excelled in his horological creations, above all in his escapement developments – and especially tourbillons. His famous Tourbillon with Three Gold Bridges, which was awarded the gold medal at the Paris World Exhibition in 1889, remains the unmistakable motif of the manufacture to this day. Constant Girard-Perregaux was succeeded by his son Constant Girard-Gallet, who merged Girard-Perregaux with the renowned Bautte company, thus fusing two famous names in the elite world of Swiss watchmaking. In 1966, Girard-Perregaux presented the Gyromatic HF, the first high-frequency movement beating at 36,000 vibrations per hour, for which the brand was awarded the Centennial Prize of the Neuchâtel observatory for research and development by the Canton of Neuchâtel. After ten years of development, the master watchmakers celebrated Girard-Perregaux's 200th anniversary with the debut of a technical masterpiece: the famous Tourbillon with Three Gold Bridges in wristwatch format. In 2013, Girard-Perregaux premiered the first watches utilizing this manufacture's own revolutionary constant-force escapement; the trailblazing development earned Girard-Perregaux the Aiguille d'Or of the Grand Prix d'Horlogerie de Genève, which is widely recognized as the most prestigious award in the world of watchmaking. Girard-Perregaux marked its 225th anniversary in 2016 with the return of the Laureato in a limited edition, which was presented as a complete family of models two years later. The Laureato, which means "the graduate" in Italian, has developed into the most important model in Girard-Perregaux's current collection, truly passing all its tests with flying colors.



Manufacture building

GP
GIRARD-PERREGAUX
HAUTE HORLOGERIE SUISSE DEPUIS 1791

LAUREATO INFINITY – TESTIMONY OF A PARTNERSHIP

The Italian translation of this word is very accurate. While the original title of the 1967 classic film The Graduate with Dustin Hoffman refers to graduation either from high school or college, the Italian name ("Laureato") more closely aligns with the university degree recently earned by the main character of the motion picture. Be that as it may: with the then freshly created Laureato, Girard-Perregaux declared itself qualified to begin its its life. The stainless steel watch with integrated bracelet was likewise at the cutting edge of technology. Girard-Perregaux's researchers opted for a frequency of 32 kilohertz – precisely 32,768 Hertz – which remains the standard frequency for quartz watches today. Nowadays, of course, the classic Laureato with its exciting mix of straight lines and rounded curves is powered by a mechanical movement from the manufacture founded in La Chaux-de-Fonds in 1791. The current Laureato Infinity is the equivalent of a summa cum laude diploma with a handmade dial crafted in black onyx. This glossy black face accentuates the watch's luxurious impression by providing an elegant background for the rose gold markers, applied Girard-Perregaux logo, and second hand. The silver-colored baton-shaped hour and minute hands engage in playful dialogue with the stainless steel case. The date is indicated by white numerals on a black date disk, whose coloring matches the swarthy dial. The Girard-Perregaux Laureato Infinity 42 Millimeters is available in a limited edition of 188 watches. Water-resistant to ten bar, the stainless steel case is only 10.7 mm high and has a diameter of 42 mm. Manufacture Caliber GP01800-1404, paced at 28,800 vibrations per hour, comprises 191 components. Wempe offers both this and a second limited edition for a two-month period exclusively at select branches in Germany, New York, and London: available in a limited edition of 88 pieces, this mechanical 38 mm variation is also available with a bezel set with 56 diamonds weighing a total of approx. 0.90 carats.



Laureato advertisement, 1975



Stainless steel, self-winding movement, onyx dial

ROGER DUBUIS

EXTRAVAGANCE AS A MASTERED CHALLENGE



Lamborghini Essenza

To want to position oneself as an extraordinary brand is one thing but being able to do so is quite another. The spectacular models and collaborations with which Roger Dubuis regularly surprises fans of the brand would not be possible without the relevant expertise of the Geneva-based manufacture. This company is as young as its dynamic image suggests. Exactly a quarter of a century ago, the manufacture's founder, Roger Dubuis, ended his fourteen-year career in Patek Philippe's studio for grand complications and founded his own business. Thanks to an investor and watch designer, Dubuis succeeded in quickly establishing a manufacture with an astonishingly extensive depth of production. As early as 2003, he had premiered his own escapement with in-house hairspring, thus accomplishing a feat of manufacturing and horological constructive expertise mastered by only a dozen brands to date. Without exception, all Roger Dubuis wristwatches are equipped with the brand's own calibers. Nearly all of these watches earn and proudly bear the Geneva Seal. This gives the brand ample opportunity to resolutely pursue its own paths, which sometimes lead to skillfully crafted, yet provocative timepieces. For example, the devilishly dissonant interval known as diabolus in musica first found its way into watchmaking with the debut of the Excalibur Diabolus in Machina. Roger Dubuis personally created the basis for this: Caliber RD 107 is based on Dubuis' RD 08 with its two unidirectionally winding micro rotors. A similar symmetry characterizes the Excalibur Double Tourbillon. As the Excalibur Twofold, however, it proves that this manufacture has successfully transferred new technologies and materials to the world of watchmaking. By manufacturing certain components from an ultra-white composite substance, Roger Dubuis enables the contours of the main plate and the profiles of the rubber strap to glow in the dark in greenish tones. Any company looking to go to the limits and beyond in haute horlogerie must know the tradition, explore and implement new technologies, and consummately master the craft.

ROGER DUBUIS

EXCALIBUR HURACÁN – BLACK SWORDS

Geneva-based watch manufacturer Roger Dubuis nourishes its extraordinary status from two sources. One is an extremely high vertical range of manufacture, which endows this manufactory with the independence enabling it to constantly venture into new technical and horological territory. The other source is partnerships outside the watch industry, such as with Pirelli and Lamborghini Squadra Corse, which is Lamborghini's racing division. In cooperation with that maker of superlative sports cars, equally superb sporty watches have been created that spark the imagination of watch aficionados and car lovers alike. The latest expression of this high-octane power is the all-black version of the Excalibur Huracán.

Powered by automatic manufacture Caliber RD 630, it offers the same high performance, low weight, and excellent reliability as its namesake. Its 45 millimeter titanium case is coated with black DLC (diamond-like carbon) as are the bezel and titanium crown. The watch, water-resistant to five bar, which corresponds to the water pressure at a depth of 50 meters, offers a skeletonized dial, a recessed bezel with black lettering, and a similarly recessed minute scale. The balance wheel paced at 28,800 vibrations per hour of Caliber RD 630, a movement comprising 233 components, is inclined 12° to minimize the negative effect of gravity on the isochronism of the hairspring. The base plate and bridges are sandblasted and blackened with micro particles. The 60-hour power reserve is supplied by a 360° rotor styled to resemble the tires of a supercar.





Titanium, DLC coating,
self-winding movement, skeletonized

FERDINAND
1753
BERTHOUD

PASSION RESCUES WATCH HISTORY FROM OBLIVION

Ferdinand Berthoud was born into a prestigious watchmaking family in the Val-de-Travers in the canton of Neuchâtel in 1727. Today, the valley is also the production site of two watch manufactures owned by Chopard, whose co-president Karl-Friedrich Scheufele is also president of Chronométrie Ferdinand Berthoud! But we are getting ahead of ourselves. At the youthful age of 18 Ferdinand Berthoud was drawn to Paris, where he opened his own workshop in 1753 after the Royal Council of King Louis XV recognized his outstanding talent and issued a special decree appointing him watchmaker to the royal court. He also worked as a scientist. In 1755, he wrote several scholarly articles on the art of watchmaking for the encyclopedia published by Diderot and d'Alembert. These were followed in 1763 by a two-volume treatise with the modest title Essai sur l'horlogerie. The Royal Society in London was so impressed by this publication that they made him an "associate foreign member." Berthoud also achieved great success and earned appreciative recognition as a watchmaker. The highly precise timepieces that served as chronometers aboard sailing ships had yet to prove themselves suitable for reliably determining a vessel's longitude on the high seas. Thanks to the accuracy of Berthoud's marine chronometer No. 8, the navigators aboard an 18-month expedition successfully determined their ship's position to within half a degree of longitude in 1768. This success led to Berthoud's appointment as watchmaker and mechanic to the royal court and royal navy in 1770. He subsequently built no fewer than 20 marine chronometers, which rendered valuable service in the mapping of the oceans. He published his main work on timekeeping, Histoire de la mesure du temps par les horloges, in 1802, while Napoleon made him a Knight of the Legion of Honor in 1804. Though Ferdinand Berthoud's nephew and sons successfully continued his legacy after his death in 1807, the family name fell into centuries of dormancy with the death of Charles-Auguste Berthoud in 1876. But the sleeper awoke in 2015 when Karl-Friedrich Scheufele revived the brand threatened by oblivion in Ferdinand Berthoud's native valley. And thus our tale comes full circle.



FERDINAND
1753
BERTHOUD

FB 1 – A TOURBILLON IN THE TRADITION OF FAMOUS MARINE CHRONOMETERS

This wristwatch by Chronométrie Ferdinand Berthoud pays homage to the horological genius of its namesake. And with it Karl-Friedrich Scheufele, president of Chronométrie Ferdinand Berthoud, also continues the proud tradition of the house of Chopard with this exceptional chronometer. The Ferdinand Berthoud FB 1 chronometer is furnished with a manual winding mechanism comprising more than 1,120 components. It is enclosed inside an octagonal case with watertight sapphire crystal windows. Exclusively designed and produced by Chronométrie Ferdinand Berthoud in Fleurier, Caliber FB-T.FC is equipped with several unique patent-pending components: a tourbillon with a central second hand, a movement superstructure supported by pillars, a constant-force mechanism via chain and fusée, and a mobile cone for the power-reserve display. The pillar construction of Caliber FB-T.FC continues the tradition of the marine chronometers originally designed by Ferdinand Berthoud in the eighteenth century. Its unusually slowly paced three-Hertz tourbillon is connected to a central second hand. The barrel and the fusée are connected by a chain that ensures that constant torque is transferred to the barrel. The barrel and fusée are attached to the plate on one side, thus minimizing the height of the construction. Other exquisite details include a winding system with differential gear train and a very special power-reserve indicator that relies on a truncated cone moving downward as the mainspring runs down. After nearly three years of research and development culminating in the most demanding reliability tests, Caliber FB-T.FC impresses connoisseurs with its uniquely accurate rate, constant-torque power supply, official Swiss chronometer certificate issued by the COSC, perfectly legible displays for hours, minutes and seconds, and 53 hours of power reserve when fully wound. The uncommonly fine and slender spokes of the gears are patterned after their counterparts in regulator timepieces made by Ferdinand Berthoud. The gears, which are meticulously and patiently embellished with circular graining, are also beveled at the center to perfectly reflect light and direct it to the pinions.





18k white gold, hand-wound movement, fusée-and-chain transmission, tourbillon, power-reserve indicator

ULYSSE NARDIN
SINCE 1846 LE LOCLE - SUISSE

THE SWISS WATCH INDUSTRY AND SEAFARING

The sea has been a ceaseless source of inspiration since human beings first gained the ability to think, and the urge to conquer its immeasurable expanses has always been accompanied by the quest for technical ways and means to make that wish come true. Ulysse Nardin's maritime-inspired watches tell the story of this ongoing endeavor: their high-precision complications and corrosion-resistant materials recall the close affiliation that this Swiss watch manufacturer has traditionally cultivated with seafaring, sharing humankind's fascination with the endless freedom of the sea. Few watch brands can rival the steadfastness with which this company has dedicated itself to the development of high-precision marine chronographs for nearly 200 years. To this day, no wave can be too high nor any dive too deep for this brand's extravagant timepieces. The so-called quartz crisis brought the company to the brink of insolvency in 1982 and 1983, but its new CEO Rolf W. Schnyder and chief watchmaker Ludwig Oechslin returned it to the crème de la crème of Swiss watch manufacturers within a few short years. When Ulysse Nardin unveiled the Freak to the world in 2001, it turned the watch industry upside down in more ways than one: this luxury timepiece was the first to boast the use of silicon components – and it functioned without hands, without a dial, and without a crown. Two bridges took over the work ordinarily performed by the hands, the upper bridge displaying the minutes and its lower counterpart indicating the hours. The bezel and the back of the case rotated to set the time and wind the mainspring. And the company took it a step further in 2019: the new Freak X models feature a crown for the first time, thus making them easier to set. And the Freak Next entirely dispenses with pivots and bearing jewels. The result is maximum performance thanks to the total elimination of friction in the bearings.



Freak X

ULYSSE NARDIN
SINCE 1846 LE LOCLE - SUISSE

EXECUTIVE BLAST BLACK

When Ulysse Nardin unveiled the Freak in 2001, it granted watch enthusiasts' wish for a technically and creatively unique wristwatch. This watch's movement rotates around a shaft in the center of the dial, the entire gear train completing one rotation around its own axis every sixty minutes so that the tip of its subassembly always indicates the current minute. A disk under the gear train requires twelve hours for one rotation; an arrow tip on it points to the hour. The Freak was the first serially manufactured watch with a silicon escapement, and this same high-tech material is used for the balance spring and tourbillon escapement of the new Blast. Its design focuses on the X as a stylistic element, thus following in the footsteps of last year's Freak X. The tourbillon oscillates at a pace of 2.5 Hertz inside a completely redesigned X-shaped cage. Skeletonized Caliber UN-172 is positioned vertically: its spring barrel and the platinum micro rotor are located at 12 o'clock, while the tourbillon is at 6 o'clock. An evolved descendant of Caliber UN-171, UN-172 boasts a three-day power reserve. The designers at Ulysse Nardin redesigned and reinforced the strap lugs, which are styled to resemble the aerodynamic wings of a stealth fighter jet. Each of their triangular surfaces has a different texture: polished, satin-finished, or matte. The iconic model in the line – the Black Blast – features a black ceramic bezel, a black rectangular bridge with red and black X-shaped patterns, and a bright red silicon balance. The latter is a first for Ulysse Nardin. The sapphire crystal's seal is also red as are the jewels and the words "Silicium Technology" on the barrel. Ulysse Nardin's grey logo completes the rectangular frame. A patented system with three spring blades allows the user open the folding clasp on the textured rubber strap with a simple click. The 44 mm ceramic case is water-resistant to five bar, which is equivalent to water pressure at a depth of 50 meters. The Executive Blast is also available in a titanium version with 18-karat rose gold.





Titanium, self-winding movement, micro rotor, tourbillon

TUDOR

TRENDY TEXTILE STRAPS FROM HISTORIC LOOMS

Having registered the Tudor brand in 1926, Hans Wilsdorf established MONTRES TUDOR S.A. in 1946. Rolex's founder wanted to create a brand offering watches with the quality and reliability of a Rolex but at more affordable prices. In addition to those admirable qualities, Tudor continues to set new trends in the watch industry – textile straps being a good example. Fabric straps were already quite popular among collectors of sports watches a decade ago when most luxury watches were not yet available with them because the major brands considered them unsuitable for their elite timepieces. Tudor recognized the design potential of this accessory and had its designers create distinctive straps, arranging to have them handcrafted at the Julien Faure weaving mill located in the region around Saint-Étienne in France. Like many innovations that subsequently attained widespread popularity, textile straps for watches originated in the military sector. In the early 1970s, NATO stipulated that soldiers' wristwatches must be attached to uniform nylon straps. Though not particularly comfortable, they were inexpensive, sporty, and easy to interchange. Tudor decided to redesign the textile strap, equipping it with a closure similar to the buckle on the seatbelt of a classic racing car. The strap was also made with little "tunnels" containing barrette-style bars that securely connect it to the watch. Finally, Tudor turned to one France's last weaving mills of this type, which specializes in ribbon weaving. Julien Faure still makes ribbons using the traditional jacquard technique with shuttles and can weave an almost inexhaustible variety of complex motifs. Thanks to their high thread density, jacquard ribbons are not only extremely durable but also very supple, which makes them quite comfortable to wear. Tudor first equipped its watches with textile straps in 2010; the company now offers them in many different designs and sizes. Even though the textile strap has become a modern classic in the watch industry, Tudor's straps set their own standards thanks to their excellent technical and aesthetic quality.



Weaving of the Heritage Ranger textile strap on the antique Jacquard weaving loom

TUDOR

BLACK BAY FIFTY-EIGHT NAVY BLUE



The number 58 in the name of Tudor's Black Bay refers to 1958, the year in which Tudor presented Reference 7924, nicknamed "Big Crown," the brand's first diver's watch with water-resistance to a depth of 200 meters. In a 39 mm case, this new model takes after its illustrious predecessor. This new diver's watch also continues Tudor's long tradition of blue sports watches, a story that began in 1969 with a diver's watch equipped with a blue dial and blue bezel. Other chronographs and sports watches soon followed in that model's sporty footsteps. Incidentally: blue is the world's most popular color, favored more or less equally by men and women alike. Tudor opted for a blue hue when it equipped the French navy with diver's watches back in the 1970s. The Black Bay Fifty-Eight Navy-Blue thus continues a noble tradition with its navy blue dial and unidirectionally rotating bezel. The cambered dial also has a grained surface to discourage glaring reflections, while the stainless steel bezel bears a numbered ring in blue anodized aluminum with silver minute hashmarks and numerals. Tudor offers a matching navy blue synthetic textile strap with a flannel feel; the textile strap has also become one of Tudor's typical features. The company has offered its models with this strap style since 2010 when the accessory made its debut with the Heritage Chronograph. The straps are manufactured in the Saint-Étienne region, a place where traditional Jacquard looms dating from the 19th century are used to make them. The third option is a stainless steel bracelet with riveted elements. This diver's watch is powered by manufacture Caliber MT5402. Tudor ensures that the maximum daily rate deviation of this automatic COSC-certified chronometer whose balance is equipped with a silicon hairspring lies between −2 and +4 seconds. A bidirectionally winding rotor supplies the mainspring with enough energy for 70 hours of power upon full winding, even if its wearer has taken the watch off and left it lying motionlessly. Tudor offers a five-year warranty on watches purchased after January 1, 2020: no registration is required and the warranty is transferable.



Stainless steel, self-winding movement, manufacture movement
Caliber MT5402, COSC certification, chronometer

TAG Heuer
SWISS AVANT-GARDE SINCE 1860

IN THE RACE FOR 160 YEARS

Edouard Heuer was just 20 years old when he opened his watch workshop in Saint-Imier in the Swiss Jura in 1860. At first he made pocket watches, mostly with silver cases. In the 1880s, his company began manufacturing large quantities of pocket chronographs, which were used to measure the times of races on roads, cinder tracks, and bodies of water. In 1887, Heuer obtained patents for its oscillating pinion, a component that allows the chronograph to be instantly started and stopped by pressing a button. When wristwatches supplanted pocket watches, Heuer relocated the precision chronograph from the pocket to the wrist. Heuer's catalogue from 1914 described this wristwatch chronograph as "unique on the market." Edouard Heuer's son Charles-Auguste initiated a project that would succeed in increasing the accuracy of stop-watches from 1/5th of a second to 1/50th of a second in the Semikrograph and to 1/100th of a second in the Mikrograph. Heuer subsequently supplied chronographs for the Olympic Games and world championships in alpine disciplines. Heuer switched from two- to three-counter chronographs in the early 1940s: the third counter enabled the user to tally intervals up to twelve hours in duration. Jack Heuer took over the management of his family's business as the fourth generation in 1958 and subsequently focused on diverse varieties of motorsports from amateur club rallies to Ferrari's Formula 1 racing team. The company premiered the Heuer Carrera in 1963: Jack Heuer borrowed this model's name from the Carrera Panamericana, a legendary but short-lived road race that annually traversed Mexico between 1950 and 1954. Heuer unveiled the world's first automatic chronographs in 1969. The label's ownership changed hands in 1985 to the Technique d'Avantgarde (TAG) group, whose acronym still appears in Heuer's brand name today. The "Don't Crack Under Pressure" campaign, which ran from 1991 to 1994, is now being revived by TAG Heuer, which has belonged to the world's largest luxury goods group (LVMH) since 1989. Jack Heuer returned to the brand as honorary chairman at the age of 69 in 2001. Frédéric Arnault became TAG Heuer's CEO in June 2020.



Grand Prix Historique in Monte Carlo

TAG Heuer
SWISS AVANT-GARDE SINCE 1860

RACING MODELS WITH A NEW ENGINE

To celebrate TAG Heuer's 160th anniversary, the Swiss watch brand presents an updated and redesigned chronograph in its TAG Heuer Carrera racing collection. The 44 millimeter stainless steel case boasts alternating brushed and polished surfaces; a multifaceted interaction that lends this wristwatch a slimmer looking profile – for which reason the sapphire crystal has been newly integrated. The deep blue dial of the TAG Heuer Carrera is decorated with a round-brushed finish, and its color matches the hue of the ceramic bezel with integrated tachymeter scale. In conjunction with the chronograph, the tachymeter scale allows the wearer to calculate the average speed travelled along a defined length of road. The inner ring – the so-called flange – is beveled and its indices incline toward the center of the dial. The hour counter at 9 o'clock now bears the digits 12, 4, and 8 to create a visual balance with the minute counter at 3 o'clock. The new H-shaped bracelet is thinner than its predecessor, making it more ergonomic and enhancing its comfort. Caliber Heuer 02, an automatic movement manufactured entirely on premises at TAG Heuer's Swiss Chevenex factory, powers this new Carrera model. With only 168 components the movement makes do with a surprisingly small number of parts, but thanks to its column-wheel gears and vertical clutch it lacks none of the attributes befitting a fine chronograph. Paced at 28,800 vibrations per hour, its power reserve fully wound is a remarkable 80 hours, so if the order of the day is less-demanding, this chronograph can be set down for up to three days without the need to reset it afterward. The TAG Heuer Carrera's Caliber Heuer 02 is water-resistant to ten bar, which is equivalent to the water pressure at a depth of 100 meters.





Stainless steel, self-winding movement, chronograph

WEMPE
IRON WALKER
GLASHÜTTE I/SA

WATCH PRODUCTION IN GLASHÜTTE

Parents tend to be particularly critical of their own children. The same applies to Wempe. All the know-how and experience that Wempe has acquired since taking over the Chronometerwerke Hamburg is incorporated into the production of our own watches at Glashütte in Saxony. When Herbert Wempe took over the chronometer production on January 1, 1938, he perfectly solved a problem: simultaneously training the most talented and capable watchmakers while accessing new business opportunities. He estimated that anyone who makes extremely precise marine chronometers is also perfectly prepared to service other high-quality timepieces. His assertion proved true: Chronometerwerke Hamburg soon ascended into the elite ranks of German watchmaking. And the products are equally impressive, including marine chronometers, observation watches, time-signal transmitters, and the Unified Chronometer. Developed by Wempe and manufactured in collaboration with A. Lange & Söhne, the Unified Chronometer later achieved success as it was produced in large quantities in the Soviet Union. Wempe and A. Lange & Söhne jointly conceived a plan to establish a research and movement regulation institute in Glashütte, but their ideas never came to fruition due to World War II. Kim-Eva Wempe made her grandfather's dream come true 60 years later. Following painstaking renovation work, production of in-house watch collections began at Glashütte's observatory in 2006. Together with the start of its watch production in Glashütte, Wempe received accreditation to begin Glashütte's chronometer-testing laboratory. Thus, in collaboration with the State Office for Metrology and Verification of Saxony and the Thuringian State Office for Consumer Protection, Wempe operates Germany's only independent chronometer-testing laboratory. The Zeitmeister and Chronometerwerke collections were joined this year by the Iron Walker line. Whether Chronometerwerke, Zeitmeister or Iron Walker, nearly every watch from Wempe Glashütte I/SA earns prestigious certification as a German chronometer according to ISO 3159, guaranteeing that it keeps time with the utmost accuracy.



Case of the Iron Walker with integrated bracelet

WEMPE

IRON WALKER
GLASHÜTTE I/SA

IRON WALKER AUTOMATIC CHRONOGRAPH – NO FEAR OF HEIGHTS

The photo "Lunch Atop a Skyscraper" made photographic history; it is of course unforgettable: eleven construction workers sit on a steel girder at a dizzying height without any visible safeguard and Central Park clearly visible in the background. The workmen hail from every corner of the world, including a few Irishmen and some indigenous Mohawk people, all undauntedly enjoying a lunch break at a height of 250 meters during the construction of the RCA building at Rockefeller Center. The photo was shot on the 69th floor in 1932 and published in the New York Herald Tribune the same year. The image remains as fascinating as ever, as do the surefooted "Iron Walkers" who, for decades to come, went on to build the steel skeletons that literally gave rise to New York City as we know it today. The youngest family of Wempe Glashütte I/SA watches is inspired by these men, who seemed preternaturally free from vertigo and born with spines of steel. It is equally inspired by the architecture their labor created – because self-supporting steel structures like the one depicted in the famous photo made it possible to construct the skyscrapers that tower along Manhattan's urban canyons. The Iron Walker Automatic Chronograph is an expressive representative of these stainless steel constructions. Its 42 millimeter stainless steel case rises to a height of 13.95 millimeters. The luminous coating on its steel indices and hands shines like a skyline at night. Sharp edges and gentle lines alternate, as do satin-finished and smoothly polished surfaces. The lively architecture of Iron Walker's construction continues into the elegant three-part bracelet with folding clasp, which merges seamlessly into the case that is water-resistant to ten bar (which corresponds to the pressure at a depth of 100 meters). The case houses automatic Swiss Caliber ETA 7753, which boasts a 54-hour power reserve when fully wound. The movement's accuracy is certified by an official certificate issued by Germany's only chronometer-testing center at the Wempe Observatory in Glashütte. In addition to the version with a deep blue dial, the Iron Walker Chronograph from Wempe Glashütte is also available with a black dial and white totalizers.





Stainless steel, self-winding movement, chronograph, chronometer

WEMPE
IRON WALKER
GLASHÜTTE I/SA

IRON WALKER AUTOMATIC DIVER'S WATCH

To comply with the international standard for diver's watches (ISO 6425), a watch like this one must allow its user to be able to precisely pre-set the intended diving time up to 60 minutes. Since 1955, mechanical diver's watches have accordingly been equipped with rotating bezels bearing correspondingly graduated minute scales. But it is crucially important that the pre-set diving time shown by the bezel cannot be inadvertently adjusted, ensured by the rotating bezels on diver's watches, which can be turned only counterclockwise. At the start of each dive, the wearer rotates the bezel until the distinctive luminous triangle is opposite the luminous tip of the minute hand. From this moment on, the diver can instantly view the temporal progress of the dive. If the bezel is accidentally reset under water, the remaining diving time shown is never lengthened, but always and only shortened. Wempe's Iron Walker Automatic Diver's Watch goes a decisive step further: its rotating timing component can also be turned only in one direction, and unintentional resetting is virtually impossible because it is located in the interior of the dial, in place of the flange, and is protected by a sapphire crystal. It can be adjusted by turning the additional screw-down crown at 2 o'clock, which effectively resists accidental manipulation. Massive crown protection ensures that nothing that could endanger the dive can become snagged between this one and the screw-down winding crown at 4 o'clock. This unconventional construction also allows for unusually elegant styling that's seldom seen in a diver's watch. This 42 mm stainless steel watch is only 11.7 mm high; thanks to its slim, polished bezel, this watch can vanish under a shirt cuff almost like a dress watch. The case is nevertheless water-resistant to 30 bar, which corresponds to the pressure at a depth of 300 meters. A tried-and-tested automatic Swiss movement boasts a 50-hour power reserve, and the German Chronometer-Testing Laboratory in Glashütte officially confirms the accuracy of the movement inside each individual watch. Wempe's Iron Walker Automatic Diver's Watch is also available with a blue dial.





Stainless steel, self-winding movement, internal diving bezel, chronometer

LONGINES®

ACCOMPANYING FAMOUS PIONEERS AND RESEARCHERS

Longines has always been a reliable partner to researchers, pioneers, and exceptional pilots. The precision, reliability, robustness, and innovative technologies of Longines watches and instruments have accompanied expeditions to the planet's last unexplored regions. Amelia Earhart, Paul-Émile Victor, Elinor Smith, and Howard Hughes are a few of the pioneers who relied on Longines timepieces. Earhart wore a Longines chronograph on her nonstop transatlantic flight in 1939, which lasted 14 hours and 56 minutes. Paul-Émile Victor put his life in the hands of Longines watches, which enabled him to calculate his longitude at –40° Celsius during his seven-week crossing of icebound Greenland in 1936. "These watches spelled the difference between failure and success," he declared afterwards. Pilot Elinor Smith had a Longines watch strapped to her wrist while endeavoring to set a new world record in 1931, when she suddenly lost consciousness at an altitude of 9,144 meters and nearly crashed her plane. She came to her senses in the nick of time, regained control over her aircraft and landed it safely. Undaunted, she tried again ten days later, setting an altitude record at 9,929 meters. Martin Scorsese raised a monument to Howard Hughes with the film Aviator in 2004, which saw Leonardo DiCaprio in the role of the pioneering American aviator and business magnate. The brand with the winged hourglass logo was the official timekeeper for Hughes' record circumnavigation of the globe in just three days, 19 hours, and 14 minutes. Hughes was the most famous user of Longines' patent-pending Siderograph, an onboard instrument for astronautical navigation. The crew aboard the pioneering airman's plane relied on Longines chronometers to display Greenwich Civil Time and Greenwich Sidereal Time. They also wore Longines Second-Setting watches to monitor their chronometers' accuracy. Hughes described his motivation as follows: "Do the impossible because almost everyone has told me my ideas are merely fantasies."



Elinor Smith

LONGINES

THE PIONEER SPIRIT LIVES ON

The Longines Spirit collection pays homage to the pioneers of aviation who celebrated world records, pioneering achievements, and heroic courage with Longines in the 1920s and 1930s. This brand looks back on a rich history of legendary pioneers and proudly pays homage to those bygone heroes and their immortal spirit.



As a link between history and innovation, Longines' new models feature typical characteristics of pilot's watches and allude to classic timepieces by the brand, yet also combine these references with contemporary styling and design codes. The five stars applied to Longines' dials have always stood for the exceptional quality and reliability of this brand's movements, while the well-known chronometer verbiage confirms the fact that each individual movement underwent and passed a 14-day accuracy test administered by Switzerland's official chronometer-testing authority, the COSC (Contrôle Officiel Suisse des Chronomètres). Chronograph Caliber L688.4 is based on ETA's extremely durable and highly reliable Caliber A08.L01. ETA is the movement manufacturer in the Swatch Group to which Longines also belongs. Specificallyy for Longines, ETA equips the chronograph with a column wheel to control the chronograph's functions and a silicon hairspring breathing inside the balance. Unlike a conventional steel hairspring, a silicon balance spring is insensitive to magnetic influence. This antimagnetic attribute combined with the high amplitude achieved by automatic winding and a 60-hour power reserve, contributes to the movement's extremely stable rate. In order to make the most of this chronograph's complexity, the Longines Spirit incorporates two subdials to tally the elapsing hours and minutes as well as the chronograph's sweep seconds hand, which bears an applied red element. The screw-down crown ensures sturdiness and protects the interior from water penetration to a depth of 100 meters or a pressure of 10 bar. The cambered sapphire crystal is given several antireflective coatings on both sides, thus guaranteeing great legibility of the dial. All of these factors combine to underscore the perfectionism of this wristwatch and the elegance of its styling.



Stainless steel, self-winding movement, chronograph, chronometer

LOVE OF CRAFTSMANSHIP

Some brands have the power to lend their style to diverse product worlds with seeming effortlessness, and Montblanc achieves this feat in a most impressive way. Like its legendary writing instruments, the Hamburg-based company's high-precision timepieces in classic vintage look affirm



Counting of the mainspring / determination of the length

one quality above all: a savvy sense of straightforward elegance paired with excellent craftsmanship. This unbeatable combination generates and sustains enthusiasm among Montblanc's clientele. After all, genuine values result from competent workmanship that can only be performed by experienced, masterly hands. There is a good reason why Montblanc's style prioritizes timelessly elegant aesthetics: like all Montblanc products, its watches are also built to be faithful companions for a lifetime – at least. Alongside the century of design history that Montblanc has already written with its famous fountain pens, the house can also look back with pride on a long tradition in watchmaking that began in 1858 in Villeret, when Charles-Yvan Robert founded Minverva in Vallon de Saint-Imier. Over the years, this manufacture earned an international reputation for its precise timepieces and established itself as a center of haute horlogerie. Minerva invariably focused on the creative interplay between tradition and the zeitgeist. Montblanc likewise succeeds in creating the extraordinary with its wristwatches, which bring out the best of all areas of watchmaking. Montblanc is always on the cutting edge of style and technology at one end of the spectrum with collections like the 1858, Heritage, and Tradition as well as outstanding craftsmanship and perfectly styled allusions to tasteful design of the 1950s and 1960s. At the other end of this spectrum stand the watches of the Timewalker Collection, which are inspired by the spirit of motor sports, and the Summit collection smartwatches.

MONTBLANC

HERITAGE MANUFACTURE PULSOGRAPH LIMITED EDITION

Inspired in equal measure by the classic historic Minerva wristwatches of the 1940s and 1950s, the newest creations in the Montblanc Heritage product line combine a vintage aesthetic with striking color combinations and sophisticated horological complications. The highlight of the collection is the Heritage Pulsograph, which appears in a limited edition of 100 timepieces, each with a 40-millimeter case in 18-karat rose gold. This model is inspired by the timepieces that watch collectors call "doctor's watches," which were used by physicians in the past to measure their patients' pulse rates. The Heritage Pulsograph is distinguished by its distinctive, smoky, tobacco-brown dial and its color-coordinated sfumato alligator leather strap, both of which accentuate the trendy vintage style. The sapphire crystal on the case back offers an appealing view of the sophisticated, handcrafted finishing of Montblanc Monopusher chronograph Caliber MB M13.21. This self-winding movement features an unusually large 11.5-millimeter balance wheel equipped with 18 screws, a column wheel, the legendary V-shaped chronograph bridge whose design was patented in 1912, and the unmistakable hand-decorated Minerva "arrow" component. The hairspring of the balance oscillating at the classic frequency of 18,000 vibrations per hour ends in a Philips terminal curve. Matching the case and tobacco-brown dial, which charmingly revives various vintage design codes from the 1940s and 1950s, the nickel silver plate and bridges of Caliber MB M13.21 are plated in rose gold. The lightly domed and smoky lacquered dial boasts a grained hour ring and sunburst pattern, Arabic numerals plated with 18-karat rose gold, dot markers with luminescent coating, 18-karat rose gold-plated Dauphine hands with luminescent coating for the hours and minutes, 18-karat rose gold-plated baton hands for the seconds and chronograph indications, and minute markings in rack-and-pinion design. Historical pay-phone styling distinguishes the indications for three, six, and nine elapsed minutes on the chronograph's minute counter. All watches in the Heritage line are water resistant to five bar.





18k rose gold, self-winding movement, chronograph, limited to 100 watches

NOMOS GLASHÜTTE

FROM SAXONY TO THE WHOLE WORLD

Aficionados of minimalism love Nomos Glashütte. The design and construction of this successful German manufactory's watches celebrate the beauty of pure functionality, and each timepiece is equipped with a movement of the highest horological quality. Inspired by Bauhaus, Nomos Glashütte's models have earned many international awards and are acknowledged as modern classics. Classics are classics because they inspire creativity and the strive for excellence in the best of every era. The revolutionary principles of design taught by the Bauhaus school are a genuine made-in-Germany classic. And classic Bauhaus design finds its contemporary interpretation in Nomos Glashütte's watches. Inspired by creatively focusing on the essentials as done in Bauhaus master classes, Nomos Glashütte's engineers, craftspeople, and designers collaborate closely. And like Deutscher Werkbund and Bauhaus creations, the goal is to achieve top output in every way at prices no more expensive than absolutely necessary. Nomos Glashütte's products are today's Bauhaus. Some call it the escapement, others the oscillator or regulator, but most people simply refer to it as the heart of the watch. Following seven years of research, since 2014 Nomos Glashütte has produced this heart at its own factory: the Nomos Swing System, which sets the pace in Nomos Glashütte's watches, also made this manufactory technologically independent of Swiss manufacturers. Since its advent, the Swing System has not only driven Nomos Glashütte's watches, but also propelled the brand's success story, ensuring precision and longevity in 11 in-house movements. The abbreviation "DUW" on the movements stands for "Nomos Glashütte Deutsche Uhrenwerke" and affirms this manufactory's claim as a maker of calibers, creating movements designed with love and according to the rules of traditional craftsmanship – built in Saxony and for the whole world.



Caliber assembly

NOMOS
GLASHÜTTE

TANGENTE SPORT – WITH BROAD SHOULDERS

Swimming regularly creates a wide shoulders. Perhaps this is why the Tangente Sport neomatik 42 Datum with its eponymous 42-millimeter diameter has a more definite masculine look than many other models from the Glashütte-based manufactory. It is also the first watch by Nomos designed with and for a metal bracelet. Its movement, manufacture Caliber neomatik Datum (DUW 6101), is protected by an extra-strong case, gaskets, sapphire crystals, and crown protection to safeguard it from vibrations, shocks, and – above all – water infiltration. The Tangente Sport's designers used the advantage of the thin automatic manufacture movement to create a much more robust case with a water resistance of 30 bar, which is equal to water pressure at a depth of 300 meters. This water resistance is specified on the dial as 1,000 feet. The Tangente Sport's dial is available in two color schemes: classically silver plated and blue-black, the latter conjuring the hue of the deep sea. More Super-LumiNova has been applied to the dial and hands in both versions, thus providing greater luminosity in the dark and underwater. The Tangente Sport's metal bracelet consists of 145 stainless steel components, all of which are manually screwed together; a screwdriver can be used to remove or add elements to the bracelet. Additional fine adjustment with a spring bar further enhances wearing comfort. The folding clasp, securely integrated into the Tangente Sport's bracelet, is also one of Nomos' own developments. The date display of Caliber DUW 6101 can be quickly set either forward or backward, and the movement also boasts a Glashütte-style three-quarter plate, Nomos' own Swing System escapement, a thermally blued hairspring, a doubly screwed balance bridge, and a rotor adorned with a raised, gold-plated engraving that winds the mainspring in both directions of rotation. Fully wound, this watch's power reserve is 42 hours. The movement's surfaces are rhodium plated and further embellished with Glashütte ribbing and circular graining. Twenty-seven ruby bearing jewels and thermally blued screws complete the handsome creation.





Stainless steel, self-winding movement, small seconds subdial

ERWIN SATTLER
MÜNCHEN

FAMILY-OWNED MANUFACTORY

"What you can't buy, you simply have to make yourself," was Heinrich Sattler's motto. Erwin Sattler's grandfather was a clockmaker who on March 4, 1903 patented a clock for desktops and shelves with a perpetual calendar. His grandson Erwin established his own clock factory in Gräfelfing, near Munich, in 1958. In the style of the time, the cases of his high-quality wall and table clocks were partly hand-carved and decorated with gold leaf. Erwin Sattler's wife, Viola Sattler, who was the artist in the family, painted various models by hand and thus lovingly created detailed one-of-a-kind timepieces. Stephanie Sattler, one of Erwin's three daughters, joined the company in 1989: an academically trained business economist, she has directed the company's purchasing, sales, and commercial divisions ever since. The erstwhile clock company began striving for full-fledged manufactory status in 1992 with the aim to establish Sattler's own in-house movement production. A vertical range of manufacture of more than 90% was achieved in 2002, which was the same year that Erwin Sattler handed over the company's future to his daughter Stephanie Sattler-Rick and watchmaker Richard Müller. Richard Müller retired in January 2020. Two master watchmakers – Markus Glöggler and Jürgen Kohler – who had worked for the company for many years, now support Stephanie Sattler in the technical area. In addition, the second generation of the company's ownerns offers precision clocks in the form of kits through its successful company Müller & Sattler Uhrenbausatz GmbH. Another milestone in the history of the manufactory took place in 2006, when the company relocated to a larger building in Gräfelfing. The machinery here was further augmented to meet increasing demand and a larger number of watchmakers now work under optimal conditions in these brighter and more spacious premises. A special highlight of the new factory building is its façade, where the nearly eight meter-long pendulum of the world's largest precision pendulum clock swings indefatigably back and forth.



Sattler Opus

ERWIN SATTLER
MÜNCHEN

P100 BAUHAUS – THE FUTURE OF TRADITION

Bauhaus celebrated its one-hundredth anniversary in 2019, but this is only the beginning of the story: a special edition from the Erwin Sattler clock manufactory alludes to the tale. Due to their austere and well-proportioned lines, Sattler's pendulum clocks already set design standards many years ago. All the lovelier that the limited 19-piece special edition called P 100 Bauhaus has inherited the basic principles of the Bauhaus style and continues to evolve them into the future as a perfect synthesis of art and craftsmanship. The clear lines, right angles, and duly famous typography used in this nearly one meter-high clock embody the century-old Bauhaus tradition. Form follows function here because this pendulum clock also has plenty to offer in terms of technology: gold-plated gears, a movement borne on jewels and ball bearings, and a striking mechanism that delights listeners with its resonant chimes every hour on the hour. Its black varnished and rather robust case skillfully directs the viewer's gaze to a black anodized dial with polished steel hands. The limited-edition verbiage and Arabic numerals at every second hour position make for eye-catching allusions to the Bauhaus tradition. A visual counterweight to the dial is provided by the high-polished pendulum lens weighing exactly one kilogram on its black wooden rod in the lower part of the clock. Pulley-winding provides Sattler Manufacture Caliber 1510 with sufficient energy for a seven-day power reserve. Measuring 25.5 centimeters wide and just over 10.5 centimeters deep, it is easy to find the ideal place for it to complement both modern and classically furnished rooms. The P 100 Bauhaus special edition stands for the best German-made quality and for the Bauhaus of yesterday and tomorrow. This is the timeless beauty that results from straightforward functionality, horological craftsmanship, and a ceaseless quest for perfection.





Black polished wood, seven-day movement, limited to 19 clocks

WEMPE
SINCE 1878

If an item in this book has sparked your interest, please contact us.
We would be pleased to help you make your wishes come true.

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