



SERIES 434




Sinn

SPEZIALUHREN ZU FRANKFURT AM MAIN



CONTENTS

SINN SPEZIALUHREN ZU FRANKFURT AM MAIN	6 – 11
MODEL SERIES 434	12 – 13
434 TW68 WG S/ 434 TW68 WG MOTHER-OF-PEARL W	14 – 15
INSTRUCTIONS FOR USE	16 – 17
[Q] TECHNOLOGY	18 – 19
ADJUSTING THE LENGTH OF THE WATCH STRAPS	20 – 21
TECHNICAL DETAILS	22 – 23
ADVICE	24 – 25
SERVICE	26 – 27





DEAR CUSTOMER,

We know from numerous conversations that the people who buy our watches do so out of conviction. This includes people with a pronounced affinity to technology who are fascinated, for example, by the solutions we have devised for protection from magnetic fields and scratch resistance. Some of our customers, such as divers, pilots and the German GSG 9 special police unit, rely on their watches in their respective careers because their lives depend on it.

They all swear by the performance, resilience and durability, as well as the quality and precision of our watches. That is why the world's largest classification society DNV GL (formerly Germanischer Lloyd, Hamburg) regularly tests and certifies the water and pressure resistance of our diving watches.

Selected pilot watches are tested and certified by independent institutions according to the DIN 8330 Horology – Aviator watches in an extensive and complex type and unit verification process. This ensures that a DIN 8330-compliant pilot watch is a suitable all-round replacement for the on-board timekeeping instruments available to pilots. Functionality is our top priority and ultimately determines the design. Only the technical features that are really needed can be found on our watches. Because we believe that products have to speak for themselves.

The basic question that we ask ourselves is: which innovative technologies and materials can be employed for our craft and provide solutions for rendering our watches even more practical for everyday use? It is often worth indulging in a little lateral thinking to see what is going on in other industrial sectors or fields of science. We repeatedly go to the limits of physical resources to upgrade our watches – with the aim of making what’s good even better. Most of our best developments are yet to come!

I am delighted that you have decided to buy a SINN timepiece and hope that it will continue to give you pleasure for many years to come.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'L. Schmidt', with a stylized flourish at the end.

Lothar Schmidt



Sinn

ENGINEERING OF TECHNOLOGY ON WINE

Sinn

INGEGNERIA E TECNOLOGIA DEL VINO

SINN SPEZIALUHREN ZU FRANKFURT AM MAIN

It was back in 1961 that pilot and blind-flying instructor Helmut Sinn founded the company. Since then, we have been committed to producing high-specification mechanical watches. In 1994, the graduate engineer Lothar Schmidt took over the company. This marked the beginning of a new era for the SINN brand, because the new owner took a decisive step towards more innovation. Under his leadership, new technologies and materials were introduced, thus providing the crucial incentives for our company's evolution and gradual emergence as an insider's tip for lovers of fine watches. Today, our name stands for technical innovations – much to the delight of both the trade and our customers alike.

Technical innovations

Take, for example, the absolutely condensation-free, anti-reflective, German Submarine Steel diving watch – made possible by HYDRO Technology. Other examples include a chronometer chronograph fashioned from a 22-carat gold alloy that is as hard as stainless steel and a chronometer with a magnetic resistance of up to 80,000 A/m. There are also watches with a clockwork mechanism optimally protected from aging by an inert gas and integrated dehumidifying capsule. The list would not be complete without mentioning the development of mission timers (Einsatzzeitmesser or EZM in German) for firefighters, for special police units and border patrol guards. DIAPAL is one of our most important technological developments, with oiling no longer needed for the most important functions in the watch thanks to the materials we select. This technology was first used in 2001. With the aid of TEGIMENT Technology, we achieve greatly increased scratch resistance through surface hardening.

Ongoing advancement in technology and quality

Our top priority has always been to develop watches that offer superior performance – both in daily and in professional use. Which is why our engineers are working continually to identify which innovative methods, materials and technologies are best suited for optimising our watches. Each new development has to first undergo rigorous practical tests before being incorporated. And no watch leaves our workshops before it has been subjected to thorough checking and fine adjustment by our master watchmakers.

Innovations in endurance testing

The world's largest classification society for maritime safety DNV GL (formerly Germanischer Lloyd, Hamburg), has been testing our diving watches for pressure and water resistance since 2005. As part of DNV GL's official certification process, our diving watches have been treated as part of diving equipment since 2006 and tested and certified in accordance with European diving equipment standards. This is unparalleled in the watch industry. Selected pilot watches are tested and certified by independent institutions according to the DIN 8330 Horology – Aviator watches in an extensive and



complex type and unit verification process. This ensures that a DIN 8330-compliant pilot watch is not only a suitable all-round replacement for the on-board timekeeping instruments available to pilots, but is also capable of remaining unaffected by the physical stresses of flight, posing no risk potential for the crew or aircraft, and demonstrating compatibility with other on-board instruments.

The Temperature Resistance Technology keeps mechanical watches performing at temperatures ranging from $-45\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$. This technology has proven its worth in the EZM 10 TESTAF, for example, used as part of the official approvals procedure for Airbus Helicopters (formerly Eurocopter) EC 145 T2 high-performance helicopter. The 303 KRISTALL is impressive proof of the functional reliability of our watches under the toughest climatic conditions. Equipped with Temperature Resistance Technology, the chronograph passed the acid test at the Yukon Quest, the world's most demanding dogsled race. The 203 ARKTIS passed its Arctic endurance test on the wrist of extreme diver Mario M. Weidner, withstanding all dives in the freezing cold waters of the Arctic Ocean above 81 degrees latitude. Both watches were worn on top of protective clothing. The real test was in the extreme temperature fluctuations between water and land – a test that the 303 KRISTALL and the 203 ARKTIS passed with flying colours.

Image: All of the technical details of our watches are documented by tests. This system of assessment has been specially designed for certification of the pressure resistance of our diving watches by DNV GL (formerly Germanischer Lloyd, Hamburg), the world's largest classification society for maritime safety.

Workshop modifications

From the robust case and the polished crystal to the exquisitely decorated movement, we make sure that each and every detail in our watches is fit for purpose. In addition to our technology, the heart of any SINN watch is the fascinating mechanical movement. That is why we rely only on selected renowned manufacturers.

“SZ movements” is the name given to our movement modifications. The results are high-quality calibres characterised by impressive features. An example of this is the SZ04 with regulateur for the 6100 REGULATEUR series.

The model series 140 and EZM 10 uses our proprietary chronograph development, the SZ01. It was modelled on the Lemania 5100 calibre used in the EZM 1. One of the biggest differences between the SZ01 and the Lemania 5100 is the former’s stopwatch minute display. This feature now makes it even easier and quicker to record stop times more accurately. This development is based on the Valjoux 7750 calibre. The aim of this modification was to significantly improve the readability of the chronograph function.

The SZ calibres 02, 03, 05 and 06 are a modification of the SZ01 movement, characterized by an off-center 60-minute counter. The 60-minute scale of the stopwatch minute counter is much simpler and more intuitive to read than the 30-minute scale commonly found in other watches.





MODEL SERIES 434

The six ladies' watches of the 434 series represent the values of timeless aesthetics, perfect lines and maximum precision, demonstrating that they've managed to stylishly reconcile understatement and fascination.

All the watches in this series boast a classically elegant stainless-steel case. For a stylish touch of finesse, selected models feature a sophisticated, decorative bezel in 18-carat yellow gold or 18-carat white gold, in this version with 68 precious diamonds in Top Wesselton quality. Additional unique design features include a variety of dials and various rhodium-plated appliqués meticulously attached by hand to show the hours, and make a stylish statement that's sure to turn heads. As part of the overall look, this series conveys the impression of an exceptionally attractive watch creation, further reinforced by a clear elegance.

Equipped with [Q] Technology, this series also fulfils our high technical standards. The [Q] symbol on the dial confirms minimisation of the electromagnetic radiation emitted by the high-precision, temperature compensated high-precision quartz movement. All watches also include a battery with a four-year service life.



434 TW68 WG S/

434 TW68 WG MOTHER-OF-PEARL W

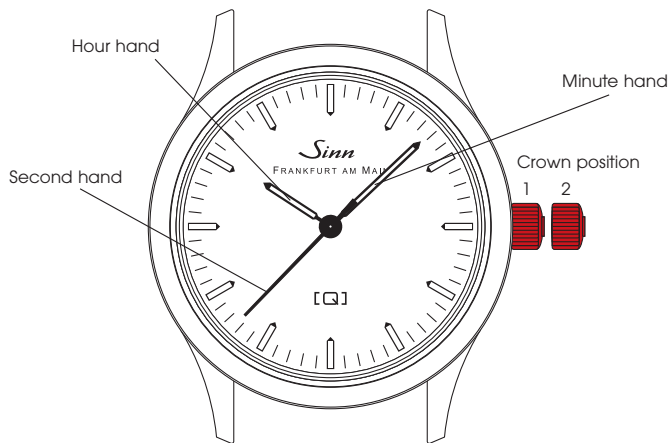
These ladies' watches are real pieces of jewellery that are ideal for special occasions, and can be worn with just about anything. They boast refined, feminine elegance as well as a look that seamlessly combines purity and timeless design.

Encased in 68 precious diamonds in Top Wesselton quality, the sophisticated, decorative bezel in 18-carat white gold is an eye-catching feature. The delicate white of the diamonds and the silver colour of the decorative bezel perfectly complement the elegant stainless steel-case and dial designs. In this arrangement, the appliqués attached by hand to show the hours are a treat for the eyes and underline the impression of a classically beautiful ladies' watch, particularly in the case of the variant featuring the hours with rhodium-plated Roman numerals.

The two watches feature [Q] Technology, which minimises the electromagnetic radiation emitted by the quartz movement, as confirmed by the [Q] symbol on the dial. The battery life of four years ensures reliable function over the long term.

Image: 434 TW68 WG S, 434 TW68 WG Mother-of-Pearl W

INSTRUCTIONS FOR USE



Time adjustment (outer crown position 2)

In order to reach crown position 2, you must pull the crown out in its entirety. In the process, the crown should snap once into place. In crown position 2, the motion is paused. This helps you to set the watch precisely. The movement restarts as soon as the crown is no longer in position 2.

Battery replacement

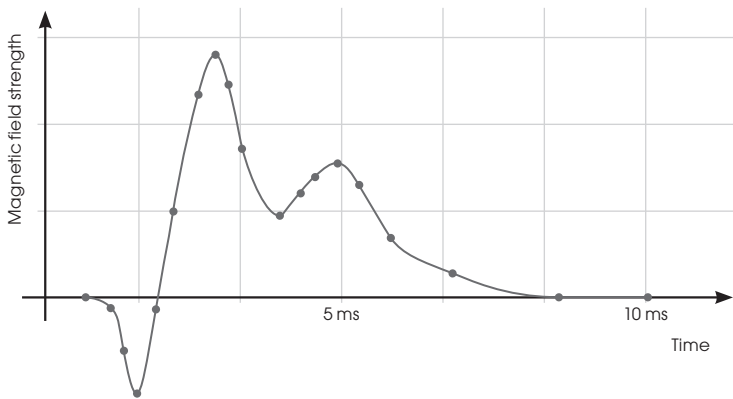
The battery has a service life of four years, which ensures that the watch will function reliably for years. It needs to be replaced when the seconds hand no longer jumps every second, but every four seconds. The watch will continue running in this mode for another one to two weeks. We recommend having the battery replaced by one of our authorised dealers or through our customer service in Frankfurt am Main. You can find instructions in the SERVICE chapter of this brochure and in the customer service menu at www.sinn.de/en.

[Q] TECHNOLOGY

In the case of analogue quartz watches like our 434 series, the gear train is powered by a stepper motor. When the hand of a quartz watch jumps ahead one second, the stepper motor powering the movement generates electromagnetic radiation. Because you wear the watch directly on your body for a longer period of time, we've minimised this electromagnetic impulse on all 434 series watches – as confirmed by the [Q] symbol on the dial.

Constructive measures and special material combinations are necessary to significantly reduce electromagnetic radiation, as the electromagnetic impulse of the stepper motor represents a spectrum of many different frequencies, all of which cannot be effectively suppressed in the same way. Shielding measures "trap" the radiation emitted by the movement in the case of the watch, preventing it from escaping.

The 434 series also features an energy-efficient movement: the high-precision, temperature compensated ETA E64.10 significantly increases the life of the battery.



Graphic illustration of the magnetic components of a stepper impulse, which occurs with every jump of the hand; that is 60 times a minute.

ADJUSTING THE LENGTH OF THE WATCH STRAPS

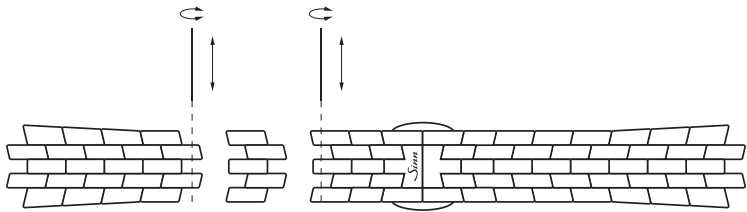
If you don't know how to shorten or lengthen the solid bracelet, please contact your SINN dealer or the watchmakers in our customer service department in Frankfurt am Main. Our customer service employees are also happy to help you over the telephone.

Adjusting the length of the solid bracelet

Determine the relative lengths of the two sides before adjusting the length of the bracelet. To ensure maximum comfort, both sides of the bracelet should contain the same number of links. If this is not possible, the top bracelet strap (above the 12 on the clock) should be longer.

It is not necessary to detach the solid bracelet from the watch or the clasp.

1. Loosen the screws on the side of the bracelet link which is to be removed or added.
2. Remove the superfluous bracelet link or insert a new one.
3. Before screwing tight, add a small drop (no more!) of thread-locker (AN 302-42 medium-tight) to the thread of the bracelet screw.





Luminous design:

434 TW68 WG Mother-of-Pearl W

434 St GG Mother-of-Pearl W

434 St Mother-of-Pearl W



Luminous design:

434 TW68 WG S

434 St GG S

434 St S

TECHNICAL DETAILS

Quartz movement

- Calibre ETA E64.10
- Temperature compensated
- Battery with a service life of four years
- 8 bearing jewels
- Anti-magnetic as per DIN 8309

Functions

- Hours, minutes, seconds

Watch case

- Stainless steel, polished
- Sapphire crystal glass in front
- Case back nickel-free
- Meet the technical requirements for waterproofness, as set out in standard DIN 8310
- Pressure-resistant to 10 bar
- Resistant to low pressure
- Band lug width 18 mm
- Case diameter 34 mm

SINN Technology

- [Q] Technology

434 TW68 WG S

- Electroplated black dial, with sunburst decoration
- Decorative bezel of 18-carat white gold with 68 diamonds

434 TW68 WG Mother-of-Pearl W

- Shimmering white mother-of-pearl dial
- Decorative bezel of 18-carat white gold with 68 diamonds

434 St GG S

- Electroplated black dial, with sunburst decoration
- Decorative bezel of 18-carat yellow gold

434 St GG Mother-of-Pearl W

- Shimmering white mother-of-pearl dial
- Decorative bezel of 18-carat yellow gold

434 St S

- Electroplated black dial, with sunburst decoration

434 St Mother-of-Pearl W

- Shimmering white mother-of-pearl dial



ADVICE

Water resistance

In its original condition, your watch fulfils the technical requirements of water resistance according to DIN 8310. The static compressive stress of your watch is given in bar. Each and every one of our watches is tested for water resistance. However, in everyday use it is important to note that seals can suffer from wear and ageing over time due to a wide range of factors which arise when wearing a wristwatch. We therefore recommend having the water resistance checked at least once a year. To ensure your watch retains its water resistance for as long as possible, rinse it with tap water if it comes into contact with seawater, chemicals or the like.

Accuracy/battery replacement

Your watch contains a high-precision, temperature compensated ETA quartz movement, which due to its temperature compensation is 20 times more accurate than a high-quality quartz movement regulated at room temperature, and is currently the most accurate autonomously running wristwatch movement. ETA SA defines accuracy at a wear temperature as ± 10 seconds per year. The ETA E64.10 movement used features energy-efficient control, whilst the battery boasts high capacity. Together, these two factors ensure that the battery maintains an exceptionally long service life of four years. It needs to be replaced when the seconds hand no longer jumps every second, but every four seconds. The watch will continue running in this mode for another one to two weeks. We recommend having the battery replaced by one of our authorised dealers or through our customer service in Frankfurt am Main.

SERVICE

Does your SINN watch need a battery change, an inspection, repair, retrofitting or reconditioning?

If possible, please use our service order form. For information about our service order form, please refer to the section entitled "Customer Service" on our website www.sinn.de/en and to the section entitled "Servicing and repairs" in our general terms and conditions at www.sinn.de/en. We would be happy to send you a copy of the general terms and conditions. Our international partners generally offer on-site service. However, should they be unable to provide a certain service, they will organise the safe dispatch and return of the SINN watch to our manufactory in Germany. Please be aware that our partners will wait until they have a sufficient number of SINN watches before they post a shipment, in order to keep transport costs and customs duties to a minimum. This will increase the processing time. Alternatively, you can send your SINN watch to us directly. You will be required to cover the postage costs for the delivery and return shipment, which vary depending on the country. For insurance reasons, we strongly recommend sending us any return goods by registered parcel post. We regret that we are unable to accept deliveries with unpaid postage! In case you have a chance to drop off your watch directly at our office in Frankfurt am Main we look forward to your visit. Please make a note of our opening times.

For information about our service, please refer to the section entitled "Customer Service" on our website www.sinn.de/en or +49 (0)69/97 84 14-400.

Do you have any questions? Our employees will be pleased to advise you.

Telephone: +49 (0)69/97 84 14-400

Telefax: +49 (0)69/97 84 14-401

E-mail: kundendienst@sinn.de

DISPOSAL NOTICE

In many cases, old electrical and electronic devices still contain valuable materials. However, they also contain harmful substances that were necessary for their functionality and safety. When placed in the residual waste, or if handled incorrectly, these may be harmful to human health and the environment.

As an owner of electrical and electronic devices, you must keep old devices that you wish to dispose of separate from other waste. You must not dispose of these in the household waste. The displayed symbol showing a crossed-out waste bin advises you of this.



These products can be handed in, free of charge, at the collection point established in your town of residence for the return and processing of old electrical and electronic devices.

If the old devices being disposed of contain any personal data, you will be responsible for erasing the data prior to their disposal.

NB Please note that owing to the oil filling (HYDRO Technology), the battery cannot be easily removed from watches in the UX series. We will be pleased for you to return your watch to us so that we can dispose of the battery professionally.

Any batteries or power cells must be removed from the device prior to disposal and disposed of separately.

In the context of selling standard and rechargeable batteries, as a dealer we are obliged under battery legislation to advise our customers of the following:

You are legally obliged to return used standard batteries and rechargeable batteries after use. As a consumer, you may also return used standard and rechargeable batteries from our product range to our showroom free of charge, or send them back to us. You can also return the used standard and rechargeable batteries to a municipal collection point or local retail outlet. Please note that you may not dispose of standard batteries and rechargeable batteries in household waste. This is indicated by the diagram of a crossed-out dustbin on standard and rechargeable batteries.

The reason is that the improper disposal of used standard and rechargeable batteries can have harmful effects on the environment and on health due to the substances contained in the batteries. For this reason, the separate collection and recycling of used batteries is of particular importance for the environment and for health.

Standard and rechargeable batteries are also marked with the chemical symbol of the harmful substance that they contain. Batteries that contain more than 0.0005% by mass of mercury, more than 0.002% by mass of cadmium or more than 0.004% by mass of lead are marked with the chemical symbol of the metals (e.g. Cd for cadmium, Pb for lead, Hg for mercury).

Sinn

SPEZIALUHREN ZU FRANKFURT AM MAIN

© Sinn Spezialuhren GmbH

3. Auflage / 3rd Edition

08 2020

Technische Änderungen vorbehalten.

Technical specifications are subject to changes.

WEEE-Reg.-Nr.: 75393444

