



DIN 8330

103 Ti UTC IFR/103 Ti IFR



Sinn


SPEZIALUHREN ZU FRANKFURT AM MAIN





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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

GREETING FROM CARSTEN SCHARFENBERG

NATIONAL DIRECTOR OF THE BUNDESVEREINIGUNG
FLIEGENDES PERSONAL DER POLIZEI e.V. (BFPP)



Timekeeping has always played an important role in aviation. In the early days, the key role of timekeeping was in measuring the duration of the flight – later, the take-off and landing times. And today, time and precise timekeeping are becoming ever more important due to the increasing complexity of modern aircraft.

Precise time measurement is a crucial element of every phase of a flight, from flight scheduling to starting the engine, from in-flight operations to shutting down the engines at the end of a flight. It is particularly important in extreme situations such as emergencies.

It is absolutely vital for the crew to be able to rely on their instruments at such times. And if an on-board instrument should fail, it is all the more important to have a reliable alternative to fall back on. When it comes to time measurement, a pilot watch certified in accordance with DIN 8330 can perform this role.

Even aircraft manufacturers recognise the importance of such alternatives: some flight manuals, for example, permit engine start and take-off procedures even with malfunctioning on-board instruments, as long as the pilot has another adequate watch with which to check the engine start procedure. In order above all to create legal certainty, the *Bundesvereinigung fliegendes Personal der Polizei* (federal association of police flying personnel – BfPP) fully supports certification in accordance with DIN 8330. All parties involved have succeeded in developing a practical catalogue of technical specifications in line with flight safety requirements, and ultimately in building watches which comply with these specifications and are certified in accordance with DIN 8330.

We heartily congratulate Sinn Spezialuhren on this achievement!

You, the user, hold in your hands the result of a lengthy development process. We hope you will enjoy all the benefits this watch has to offer, and that you will have many happy “aeronautical moments” together.

Many happy landings!

A handwritten signature in black ink, appearing to read 'C. Scharfenberg', written in a cursive style.

Carsten Scharfenberg
Police Commissioner



Sinn

INGENIEURBÜRO FÜR FACHBEREICHEN IM MASCHINENBAU

Sinn

INGENIEURBÜRO FÜR FACHBEREICHEN IM MASCHINENBAU

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°C to $+80^{\circ}\text{C}$. 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 CRYSTAL 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 ARCTIC 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 CRYSTAL and the 203 ARCTIC 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 EZM 1.1 and 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 and 05 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.



Inductor apparatus for test with cockpit-specific magnetic fields. Magnetic fields must not significantly influence the accuracy of professional pilot watches.



THE DIN 8330 HOROLOGY – AVIATOR WATCHES IS THE NEW STANDARD FOR PILOT WATCHES.

German DIN standards command a high level of respect both nationally and internationally, and represent the very highest level of quality. The new standard DIN 8330 Horology – Aviator watches, which came into force in March 2016, sets a new benchmark for safe, functional and reliable pilot watches.

Watches certified in accordance with DIN 8330 are designed to fully assume the functions of the instruments for time measurement in aircraft and helicopters in the event of outages or suspected failures. This means that pilot watches must meet certain requirements in terms of functionality and reliability, resistance to external stresses, safety and compatibility.

As a long-established manufacturer of pilot watches, Sinn Spezialuhren took the initiative and played a key role in promoting the development of a recognised DIN standard – the first new German watch standard in decades. It all started with the TESTAF technical standard for pilot watches developed by SINN in collaboration with the Department of Aerospace Technology at Aachen University of Applied Sciences which was presented to the public in 2012. Building on this standard – again on the initiative of SINN, and with the broad participation of the German watchmaking industry – the DIN 8330 Horology - Aviator watches was developed over a period of several years by users, testing institutes and scientists, and introduced in March 2016. Sinn Spezialuhren, Stowa, Glashütte Original, Aachen University of Applied Sciences, Luffthansa Cargo, Airbus Helicopters (formerly Eurocopter), DNV GL (formerly Germanischer Lloyd) and others were all involved in developing DIN 8330.



DIN 8330 defines what a pilot watch must be able to do and which stresses it must be able to withstand. This includes fast, clear readability of the dial both during the day and at night, the ability to operate the watch even while wearing pilot gloves and accuracy not only at room temperature but also at ranges of between -15°C and 55°C .

The DIN tests to determine physical resilience include not only a simple low-pressure test, but also a several-thousandfold pressure change cycle which simulates the stresses on the watch caused by changes in pressure during take-off and landing of an aircraft in daily long-haul operation. Resistance to liquids typically found in aircraft (fuel, lubricants, cleaning fluid and de-icing fluid) not only guarantees safety during flight operations but also provides additional protection on the ground. A DIN-certified pilot watch

Test facility for testing the safe fastening of the strap system.

must also be able to withstand clearly defined vibrations, impact and centrifugal force loads, temperature changes and, not least, magnetic fields. The complete watch must prove that it meets the requirements even when placed under these various physical stresses.

The safety features of a DIN-compliant pilot watch include a particularly secure strap fastening and the required compatibility with night vision equipment. Light reflections that could distract or dazzle the pilot are minimised, and the possibility of any interference with the plane's avionics and emergency compass is eliminated as far as possible through tests at a specially developed test facility. All this means that watches certified in accordance with DIN 8330 not only ensure better safety in the air but also increased suitability for everyday use, going far beyond the shock-resistant and waterproof characteristics of standard watches.

Until now, there have not been any comparable regulations to define the requirements for wristwatches when it comes to meeting the relevant aeronautical specifications with a similar durability to comparable on-board instruments. The aim of DIN 8330 is for watches that conform to this standard to be recognised by regulatory authorities, manufacturers and aircraft operators as a replacement for malfunctioning on-board instruments. This would ensure objectively better safety in the air.

Aeronautical specifications

The process of developing the DIN standard involved systematically reviewing and implementing *aeronautical specifications*. The functional requirements of a watch are implemented by EU-OPS, JAR-OPS, CS construction regulations, the third implementing ordinance for the operating regulations for aeronautical equipment (3. DV LuftBO) and FAR regulations, to name just a few examples.

Resistance to external stresses

The provisions on *resistance* to external pressures are based on the regulations found in EUROCAE ED-14G and MIL-PRF-46374G, among others. In addition to the aeronautical specifications, watch-specific DIN regulations (such as water resistance, impact protection and accuracy) are also taken into consideration. It is particularly important for the watch and its components (most notably the seals and anti-reflective coating technology) to be resistant to liquids typically found in flight, and this is the first time that this requirement has been introduced for wristwatches. Even the cyclic pressure test, which simulates several thousand changes between the air pressure at sea level and that inside a pressurised cabin, did not exist for wristwatches until now.

Safety and compatibility

Ultimately, the DIN ensures *safety and compatibility* with other pieces of equipment. This includes avoiding magnetic interference with cockpit instruments and avionics, compatibility with night vision devices (in accordance with MIL-STD-3009), avoiding light reflectance, and an exceptionally secure strap fitting.



Test facility for testing shock and impact resistance. The 103 Ti IFR is being tested here.



103 Ti UTC IFR in a centrifuge to test G-force load. It is being tested with a load of six Gs.



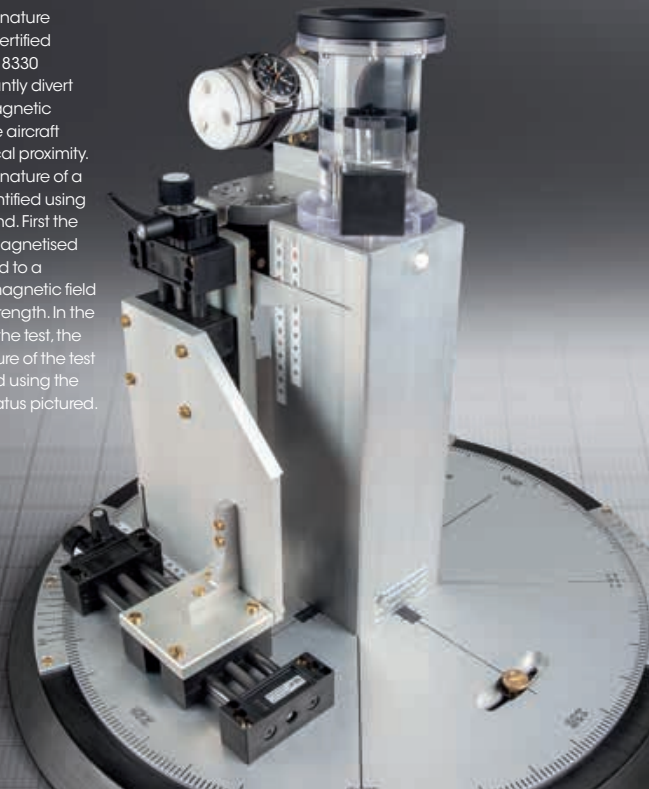
Differential pressure testing in a vacuum desiccator: a DIN 8330-certified pilot watch like the 103 Ti UTC IFR has to be able to withstand several-thousandfold alternating pressure loads.

The TESTAF and DIN 8330 standards take the uncompromisingly high demands placed on aircraft and helicopter equipment and apply these to wristwatches. Building on TESTAF, the DIN standard widens the pool of certifiable watches (mechanical watches are now eligible as well as quartz watches) and features more stringent test criteria for readability, vibration stresses and resistance to liquids commonly found in aircraft, among other things. The DIN standard also features a new requirement for pilot watches to be compatible with night vision equipment.

Thanks to the DIN 8330 standard, we hope that pilot watches will once again be defined as watches offering special functional and technical features. The special quality standards that apply to a DIN 8330-certified pilot watch can be seen at every stage of its manufacture, from the selection of high-quality materials to production processes where special care is always taken and ultra-narrow tolerances apply. The goal is achieved in an extensive, complex type-and-unit verification procedure and a certification process carried out by a neutral institution in accordance with DIN/ISO 17065 and 17067. Only then can the watch be furnished with the well-known DIN certification mark.

With its support for the TESTAF and DIN 8330 initiatives, Sinn Spezialuhren underlined its aspiration to create functional, high-quality and high-tech watches. For the technologically sophisticated German watchmaking industry, the new standard for pilot watches provides major impetus to maintain and expand its leading role in this segment among the international competition.

The magnetic signature of a pilot watch certified according to DIN 8330 must not significantly divert the approved magnetic compasses in the aircraft through its physical proximity. The magnetic signature of a pilot watch is identified using a special test stand. First the test watch is demagnetised and then exposed to a homogeneous magnetic field of defined field strength. In the second stage of the test, the magnetic signature of the test watch is analysed using the test stand apparatus pictured.





103 Ti UTC IFR / 103 Ti IFR

Uncompromisingly high standards must be met by aircraft and helicopter equipment in terms of functionality, reliability and safety. With DIN 8330, these uncompromisingly high standards are applied to wristwatches too.

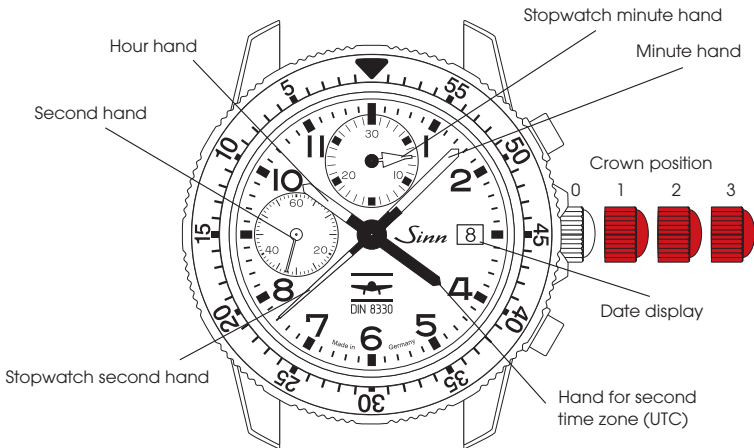
Various measures are taken to ensure that a DIN 8330-compliant pilot watch is not only a suitable all-round replacement for the on-board timekeeping instruments available to pilots, but is also capable of remaining unaffected by the physical stresses of flight, posing no risk potential for the crew or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

With the development of the pilot watches 103 Ti UTC IFR and 103 Ti IFR, two of the world's first pilot watches certified in accordance with DIN 8330, we have succeeded in meeting precisely these requirements for flight operation in accordance with instrument flight rules (IFR).

This is supported by the installation of a range of our technologies: Ar-Dehumidifying Technology ensures greater functional reliability and freedom from fogging as well as functional reliability at a temperature range of -45°C to $+80^{\circ}\text{C}$. Another special feature is the captive pilot's bezel which is easy to operate even while wearing pilot gloves. The 103 Ti UTC IFR also has a second time zone display on 12-hour basis.

INSTRUCTIONS FOR USE

Model: 103 Ti UTC IFR



Winding the watch (crown position 1)

The crown is screwable (crown position 0). To loosen the crown, turn it *counter-clockwise* (crown position 1). The movement is wound by turning the crown *clockwise*. About 40 winds of the crown are generally enough to ensure reliable functionality. Under normal circumstances, simply wearing the watch every day should suffice to keep the self-winding mechanism wound. The power reserve allows you to take off your watch overnight without having to re-wind it.

Time adjustment (crown position 3)

In crown position 3, the motion is paused. This helps you to set the watch precisely. Please make sure the date changes at midnight and not at midday. Just move the hands forward until the date changes. Afterwards you attempt to set the time. We recommend moving the hands past the desired minute marker and then adjusting it backwards. The movement restarts as soon as the crown is no longer in position 3.

Quickset date adjustment (crown position 2)

Do not use this function between 9 p.m. and 3 a.m. Set the crown in position 2 and turn it *clockwise* until the correct date appears in the date display window. **Please do not use the date-setting function between 9 p.m. and 3 a.m.** Between these times, the gear wheels used for changing the date are engaged, and the movement could be damaged.

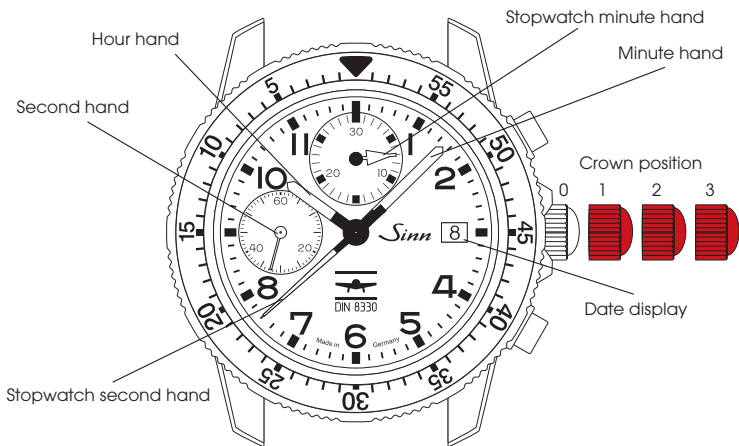
Adjusting the second time zone (crown position 2)

Pull the crown into position 2 and turn it *counter-clockwise* until the correct time appears. The UTC hand stops at hourly intervals. This setting may be adjusted between 9 p.m. and 3 a.m., but it is important to ensure that you are really setting the second time zone in this period by turning the crown *counter-clockwise*! Otherwise the watch could be damaged!

Please take care to fasten the crown after making adjustments.

INSTRUCTIONS FOR USE

Model: 103 Ti IFR



Winding the watch (crown position 1)

The crown is screwable (crown position 0). To loosen the crown, turn it *counter-clockwise* (crown position 1). The movement is wound by turning the crown *clockwise*. About 40 winds of the crown are generally enough to ensure reliable functionality. Under normal circumstances, simply wearing the watch every day should suffice to keep the self-winding mechanism wound. The power reserve allows you to take off your watch overnight without having to re-wind it.

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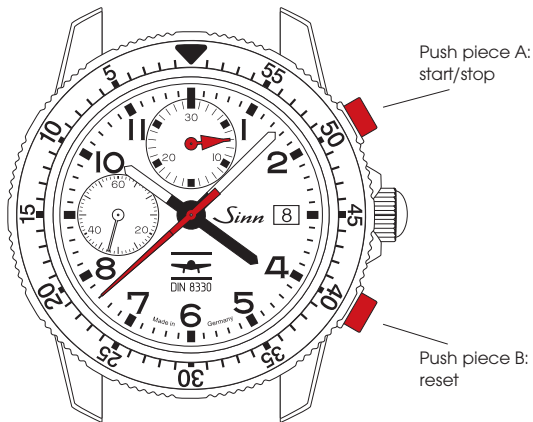
Quickset date adjustment (crown position 2)

Do not use this function between 9 p.m. and 3 a.m. Set the crown in position 2 and turn it *clockwise* until the correct date appears in the date display window. **Please do not use the date-setting function between 9 p.m. and 3 a.m.** Between these times, the gear wheels used for changing the date are engaged, and the movement could be damaged.

Please take care to fasten the crown after making adjustments.

USING THE CHRONOGRAPH TO MEASURE TIME

The chronograph is operated by means of buttons A and B. The measurement starts when button A is pressed once. Pressing this button again stops the measurement. The measurement is resumed by pressing button A once more. This allows you to add up and record the cumulative time. Button B resets the hands of the chronograph to zero.



USING THE PILOT'S BEZEL TO MEASURE TIME

The pilot's bezel can be moved manually in both directions. The triangle glows in the dark. It can be used in a number of ways, including to measure important lengths of time. For example, you can set the marking to the beginning of the time span to be measured, or you can use it to indicate the end of a given span of time.



ASSEMBLING AND ADJUSTING OF STRAPS

If you are not sure how to assemble, shorten or lengthen the watch straps, please contact your specialist SINN retailer directly or one of our watchmakers in customer service in Frankfurt am Main. We would also be happy to help you over the telephone.

Assembling the textile strap

1. Place your watch on a soft cloth with the dial facing down.
2. Fold over the shorter side of the textile strap with the two metal loops pointing to the left. Then bring the longer side of the textile strap through the spring bars on the left and right, as illustrated in figure 1 (steps A to C).

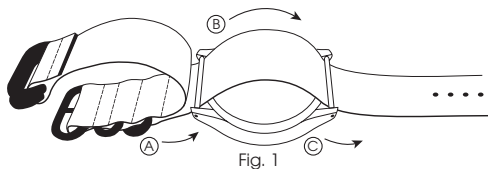


Fig. 1

3. Fold over the shorter side of the textile strap to the right over the case back and bring the longer side through the two metal loops. Tighten the textile strap carefully (figure 2).



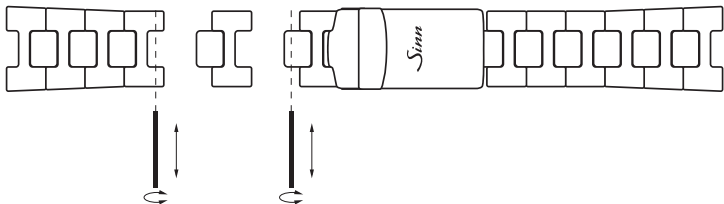
Fig. 2

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.

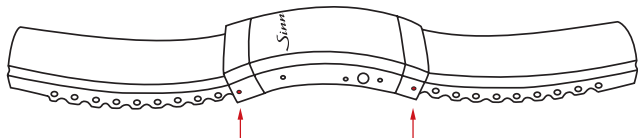
It is not necessary to detach the solid bracelet from the watch or the clasp.

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.

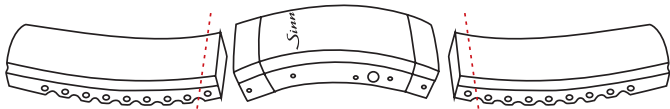


Adjusting the length of the silicone strap

1. Release the silicone band from the clasp. To do so, use the pointed end of the band replacement tool to push the spring bar out of the fastener. The other side of the spring bar can be removed while the fastener is open, enabling you to remove the silicone band.



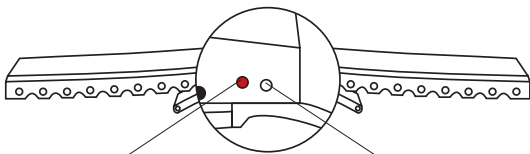
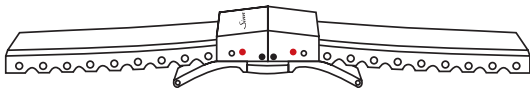
2. Using a knife or scissors, cut the silicone band in the middle between two metal pins. You should shorten the band symmetrically and little by little, starting from the clasp, until you have reached the desired length. Test the length from time to time before proceeding. Shortening both ends by the length of one metal pin results in a total difference of 10 mm in the length of the strap; shortening one end reduces the length by 5 mm.



3. Remove the first metal pin and replace it with the spring bar. Then reattach the clasp to the band.

Assembling the butterfly folding clasp as follows

We recommend first inserting the bar at the red marker, as per the illustration. If the silicone strap is too tight, use the option shown in the illustration by the white marker.



Hole for spring bar:
Tight-fitting strap

Hole for spring bar:
Extend strap

If you want to shorten the overall length of the silicone strap, refer to steps 1 to 3 in chapter “Adjusting the length of the silicone strap”.

Ar-DEHUMIDIFYING TECHNOLOGY

Indication colours of the drying capsule



Pale blue

Up to 25%
saturation



Light blue

Up to 50%
saturation



Medium blue

Up to 75%
saturation



Dark blue

Drying capsule
saturated



When the drying capsule is saturated, as indicated by a deep blue colour, we recommend you have it exchanged so you can continue to enjoy all the advantages of the Ar-Dehumidifying Technology (enhanced reliability, longer intervals between maintenance).

Perfect freedom from fogging

All the watches in this series meet the technical requirements for waterproofness, as set out in standard DIN 8310. But even with watertight instruments, the air enclosed in the case contains water in a gaseous state. And air can also penetrate the seals. When the water vapour in the case condenses into liquid, the instruments are impossible to read. To prevent this from happening, we have developed the Ar-Dehumidifying Technology. The combination of a special drying capsule, EDR seals (**e**xtr**e**m**e** **d**iffusion **r**eduction) and a filling of protective gas guarantee that the crystal remains free from fogging, even in difficult conditions.

Longer service intervals

The sophisticated Ar-Dehumidifying Technology considerably slows the aging process of the watch's inner workings and keeps the movement functioning properly for longer. That is why we issue a three-year warranty on all our watches featuring Ar-Dehumidifying Technology. When the drying capsule is saturated, as indicated by a deep blue colour (refer to picture on the left side), we recommend you have it exchanged so you can continue to enjoy all the advantages of the Ar-Dehumidifying Technology (enhanced reliability, longer intervals between maintenance).



Luminous

TECHNICAL DETAILS

103 TI UTC IFR

Mechanical Movement

- Calibre Valjoux 7750 GMT
- Self-winding mechanism
- 25 bearing jewels
- Second stop function
- 28,800 semi-oscillations per hour
- Shock-resistant as per DIN ISO 1413
- Anti-magnetic as per DIN 8309

Watch Case

- Titanium, bead-blasted
- Sapphire crystal glass in front, anti-reflective on both sides
- Transparent back made of sapphire crystal glass, anti-reflective on the interior
- Screw-fastened case back
- Crown screwable
- Meet the technical requirements for waterproofness, as set out in standard DIN 8310
- Pressure resistant up to 20 bar
- Resistant to low pressure at high flight altitudes
- Band lug width 20 mm
- Case diameter 41 mm

Tests and certification

- Tested and certified in accordance with the German DIN 8330 Horology – Aviator watches

SINN Technologies

- Ar-Dehumidifying Technology enhances functional reliability and freedom from fogging
- Temperature resistance technology, therefore functionally reliable at temperatures from -45°C up to $+80^{\circ}\text{C}$
- Captive bezel

Functions

- Hours, minutes, subsidiary seconds
- Second time zone (UTC) on 12-hour basis
- Chronograph
- Date display
- Pilot's bezel with minute ratcheting and luminous key mark

Dial and Hands

- Matte black dial
- Number 6 and indices coated with luminescent colour
- Hour and minute hand coated with luminescent colour
- Stopwatch minute and stopwatch second hand coated with luminescent colour
- 5-minute stopwatch minute indices coated with luminescent colour



Luminous

TECHNICAL DETAILS

103 TI IFR

Mechanical Movement

- Calibre Valjoux 7750
- Self-winding mechanism
- 25 bearing jewels
- Second stop function
- 28,800 semi-oscillations per hour
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Watch Case

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- Crown screwable
- Meet the technical requirements for waterproofness, as set out in standard DIN 8310
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- Resistant to low pressure at high flight altitudes
- Band lug width 20 mm
- Case diameter 41 mm

Tests and certification

- Tested and certified in accordance with the German DIN 8330 Horology – Aviator watches

SINN Technologies

- Ar-Dehumidifying Technology enhances functional reliability and freedom from fogging
- Temperature resistance technology, therefore functionally reliable at temperatures from -45 °C up to +80 °C
- Captive bezel

Functions

- Hours, minutes, subsidiary seconds
- Chronograph
- Date display
- Pilot's bezel with minute ratcheting and luminous key mark

Dial and Hands

- Matte black dial
- Number 6 and indices coated with luminescent colour
- Hour and minute hand coated with luminescent colour
- Stopwatch minute and stopwatch second hand coated with luminescent colour
- 5-minute stopwatch minute indices coated with luminescent colour



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. Continual mechanical stress in the form of shocks and vibrations can also not only reduce water resistance, but also increase wear and tear of the movement. Care should therefore be taken to protect your watch from unnecessary impacts.

Accuracy

The measured results of the watch's rate are always "snapshots" taken under laboratory conditions. For this reason, we also take each owner's individual movements into account when making a specific regulator correction. It is therefore only possible to judge the accuracy of your watch after it has been in operation for approximately eight weeks. In the event of a deviation, please keep a daily record of its timekeeping over an extended period, for example one week.

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: service@sinn.de



SERVICE

Does your SINN watch need 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.

Sinn

SPEZIALUHREN ZU FRANKFURT AM MAIN





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Technische Änderungen vorbehalten.
Technical specifications are subject to changes.