212 KSK

GB

Sinn

SPEZIALUHREN ZU FRANKFURT AM MAIN

CONTENTS

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,

Lothar Schmidt

FOREWORD BY THE COMMANDER OF THE KOMMANDO SPEZIALKRÄFTE (GERMAN SPECIAL FORCES COMMAND)

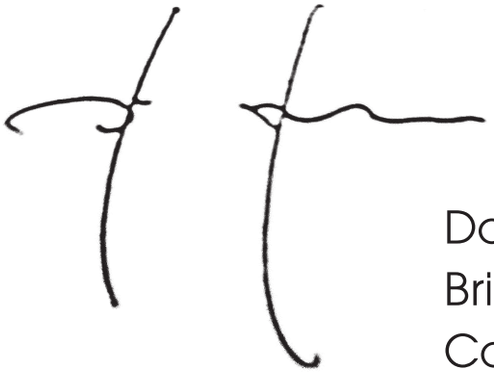
The watch that you hold in your hands is the result of a collaboration between the Gemeinschaft Deutscher Kommandosoldaten e.V (association of German commando soldiers) and Sinn Spezialuhren to mark the 20th anniversary of the establishment of the German special forces command (KSK) in September 2016. The association of German commando soldiers comprises active and ex-soldiers who successfully completed commando training over the course of their military careers. The watch that has resulted from this cooperation with Sinn is symbolic in two respects: firstly, it honours the history of a commando unique in the Bundeswehr (German federal armed forces); secondly, it symbolises the importance to the military special forces of a watch that is suitable for army operations.

Of all the equipment required by a commando soldier for operations, it is the watch – an instrument used to measure time – that is of prime importance. When learning the military trade, great importance is attached to understanding the relationship of the deployed troops to the relevant distances and time available; being able to grasp the relationship between available forces, space and time is the bedrock on which military tactics are based. This is especially true when it comes to the deployment of military special forces because these soldiers can only bring their specialised skills to bear, often in high-risk situations, with precise deployment planning and execution in terms of time. The operational aim, where forces are sometimes subjected to the most challenging

and risky conditions, can only be achieved if the planned mission takes place at the right moment and is executed to the most precise standards of timing. That is why great importance is attached to time measurement when deploying military special forces and an appropriate watch in this respect symbolises the operational requirements of the KSK in an exemplary fashion.

It is no wonder then that a collaboration was formed between the Gemeinschaft Deutscher Kommandosoldaten and the tradition-steeped company, Sinn Spezialuhren, to design a watch that would be suitable for commando soldiers and fitting for the anniversary. When it came to selecting a watch manufacturer, Sinn made this decision easy not only with its reputation for quality and precision, but also with its uncompromising attitude to design, which focuses more on usability in all conceivable conditions and less on sales figures. The standards that Sinn sets for its products in relation to precision and perfection are precisely those that commando soldiers appreciate in their daily military work and when selecting their equipment.

On that note, I would like to wish all those in possession of this special watch plenty of joy and happiness; you not only wear the memory of an important milestone in the history of the KSK on your wrist, but also an instrument for time measurement created to the highest of standards!



Dag Baehr
Brigadier-General
Commander of the Kommando Spezialkräfte


Sinn
SPEZIALUHREN ZU FRANKFURT AM MAIN

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 °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 result is high-quality calibres characterised by impressive technical features. An example of this is the SZ04 with regulateur for the 6100 REGULATEUR series. Or the SZ02 calibre for the U1000 diving chronograph. The 60-second scale of the stopwatch minute counter is much simpler and more intuitive to read than the 30-second scale commonly found in other watches.

A special feature is the high-quality hand-wound calibre UWD 33.1 made by Uhren-Werke-Dresden. This is equipped with a spring barrel supported on one side, also referred as flying spring barrel. In accordance with the functional principle of a swan-neck regulator, the regulator system enables zero-play precision adjustment and beat setting of the watch. Another sophisticated technical feature are the six eccentric weights on the balance wheel for precisely balancing the balance system.


Sinn
MEISTERBUND


Sinn

212 KSK

The Kommando Spezialkräfte (special forces command, or KSK) was officially formed on 20 September 1996. Since then, the global operations carried out by this special forces military unit have been of political, strategic and operational significance. A key priority of the KSK for example is to rescue and evacuate German citizens from crisis situations.

To mark its 20th anniversary in September 2016, the Gemeinschaft Deutscher Kommandosoldaten e.V. (association of German commando soldiers) has collaborated with Sinn Spezialuhren in designing a special watch, the K212 Special Forces Command, a special 70-piece limited edition exclusively for KSK members.

To enable members of the public to share in this special watch, too, we are delighted to be able to present the 300-piece limited edition 212 KSK, a retail version of the K212 Special Forces Command anniversary watch. The design is based on the anniversary edition, which is not available for retail. A commando sword surrounded by oak leaves, the KSK emblem, thus adorns the dial.

Guided by our conviction, special attention has also been given to making sure this edition is suitable for everyday use in KSK military service, too. For this, we chose a robust, resistant case material and set the pressure resistance correspondingly high at 100 bar. The 212 KSK also features a second time zone on 24-hour basis, thus taking into account the global operations of the KSK.

212 KSK made of German Submarine Steel

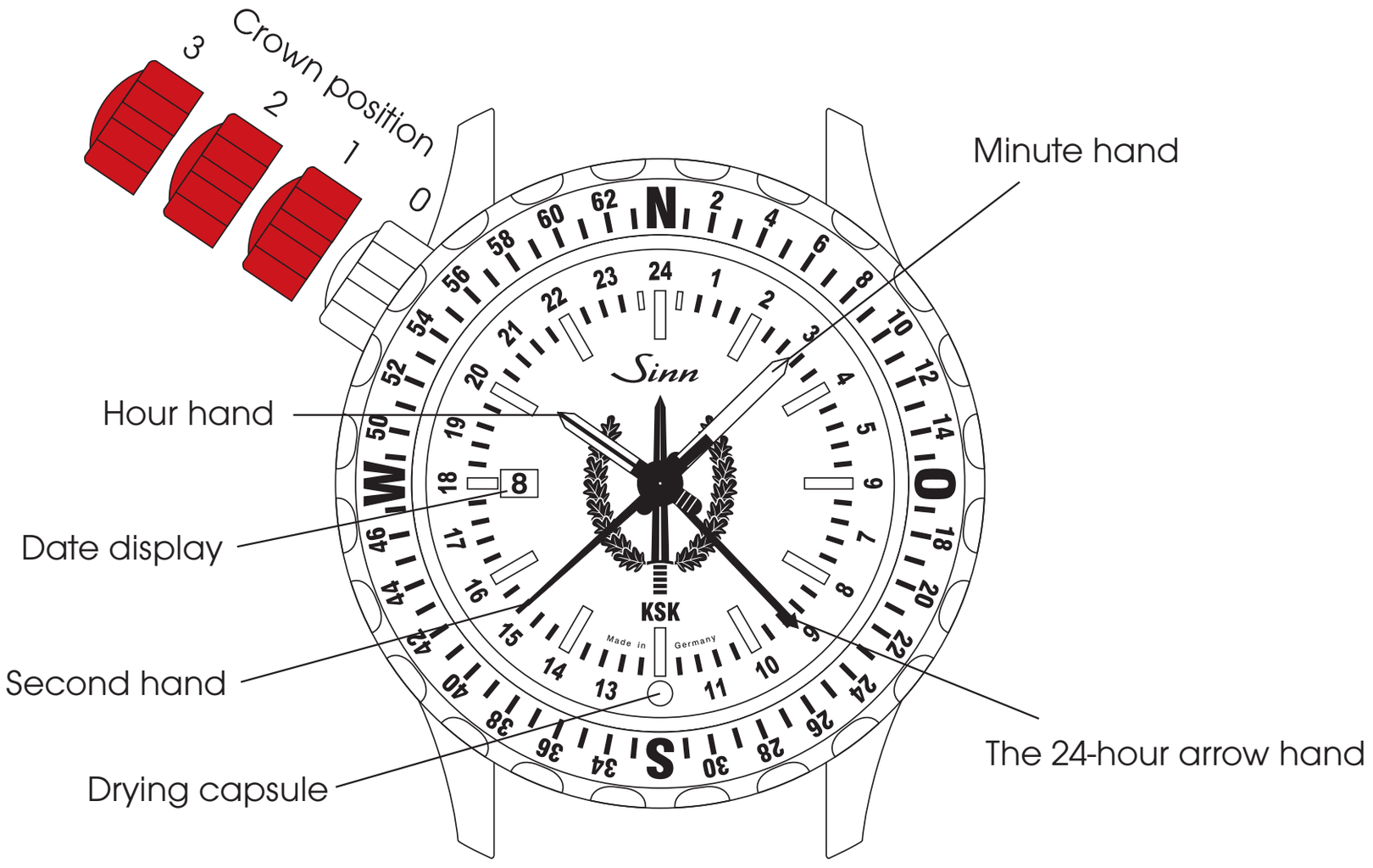
This special grade of steel is developed by ThyssenKrupp for the outer shells of the very latest non-nuclear submarines, the 212 class, of the German navy. Normal case steel has to be rinsed in fresh water after contact with saltwater, as long-term exposure to saltwater can, in adverse circumstances, lead to corrosion. Submarine Steel, by contrast, is completely resistant to prolonged contact with saltwater. Also, submarine steel is, on account of its ductility, extremely resistant to cracking, thereby further increasing its reliability. Its mechanical strength is more than 1.55 times that of the usual watch case steel AISI 316L.

212 KSK with captive bezel

Bezels are conventionally attached to the body of the case using a snap-in mechanism. If knocked, the ring can, in the worst case, become detached and the set time lost. Many our watches are therefore fitted with a safety system which overcomes this design weakness.

The rotating bezel as an emergency measure

In keeping with the unconventional spirit of the KSK, the design of the rotating bezel features the rather unconventional 64-mil ratcheting of a German army compass, which facilitates orientation in KSK field operations. This military-style ratcheting shows east at 16 milliradians, south at 32 milliradians, west at 48 milliradians and north at 64 milliradians. The rotating bezel can thus be turned to mark the direction of north – ascertained using the time and position of the sun – and aligned north. The numbers marked on the rotating bezel subsequently enable the direction and azimuth of the destination to be read. This special rotating bezel represents the determination and ability of the KSK to fulfil their mission even when all modern equipment fails.



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)
Set the crown in position 2 and turn it *counter-clockwise* until the correct date appears in the date display window.

Setting the second time zone (crown position 2)
The crown is screwable (crown position 0). To loosen the crown, turn it *counter-clockwise*. You can use the second time zone (UTC) display to show the time in a second location, such as New York (six hours behind Central European Time), or as an additional display the time of day. To do this, turn the crown in position 2 *clockwise* until you reach the correct time. The 24-hour arrow hand moves on the hour.

Please take care to fasten the crown after making adjustments.

ORIENTATION BY CARDINAL POINT AND AZIMUTH

Basically, compass roses are divided into equal sectors of a circle: 360-degree, 400-gradian or 6,400-milliradian (or mil) sub-sectors, where generally only the hundreds are indicated. Milliradian is the name of the unit of measurement used for specifying plane angles in the artillery ("artillery milliradian"), which are necessary for orientation.

The principle for determining the cardinal point on the 212 KSK is based on the arrow hand (the 2nd time-zone hand) being used as a 24-hour hand. If the watch is subsequently rotated horizontally so that the hour hand is pointing towards the sun, the arrow hand will point toward the north. The watch is aligned north by turning the rotating bezel so that the north marker is an extension of the tip of the arrow hand. The cardinal points and azimuths are now readable on the rotating bezel.

This principle works on the premise that you are in the northern hemisphere. If the same method is applied in the southern hemisphere, the arrow hand will point toward the south. It should also be noted that this principle is based on local time. When applying standard time (zone time), the difference between this and local time should be taken into account. During daylight saving time, the arrow hand should be adjusted forward by one hour.

The angle between the azimuth and north is also known as the course angle or direction angle. It is always measured clockwise from a north baseline. For example, the cardinal point north-east is equivalent to a 45° course angle, or 800 milliradians. Accordingly, as only the hundreds are indicated, 8 units are readable on the rotating bezel. Therefore, this solely indicates the direction you have to go, i.e. the bearing of your destination.

1. Align the watch with the hour hand toward the sun

3. The destination is shown at 51 milliradians (compass direction 51-mil)

2. Arrow hand in 24-hour mode points toward the north

The watch must be aligned horizontal!

(Ar)-DEHUMIDIFYING TECHNOLOGY

Indication colours of the drying capsule

Pale blue

Up to 25% saturation

Initial condition

Light blue

Up to 50% saturation

Medium blue

Up to 75% saturation

Dark blue

Up to 100% saturation

Drying capsule saturated

The colour scale for the Ar-Dehumidifying Technology: the capsule continues to absorb moisture until the darkest colouration is reached.

Perfect freedom from fogging

All the watches in this series meet the technical requirements for water resistance, 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**xtreme **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).

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).

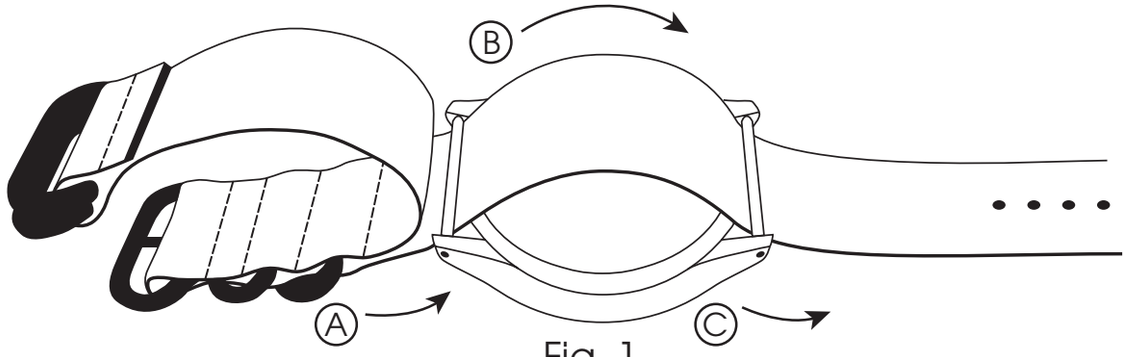


Fig. 1

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).

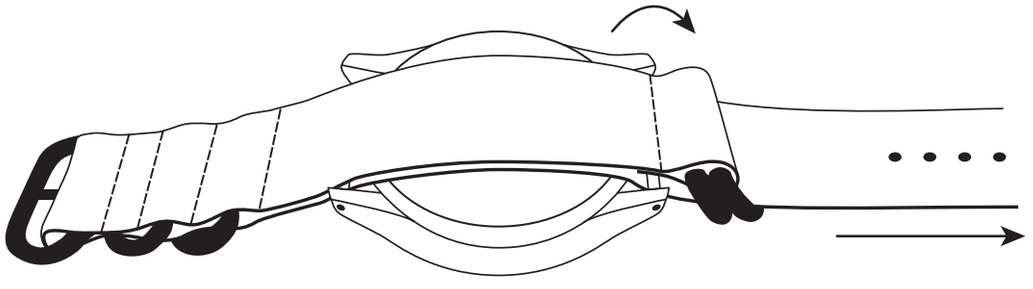
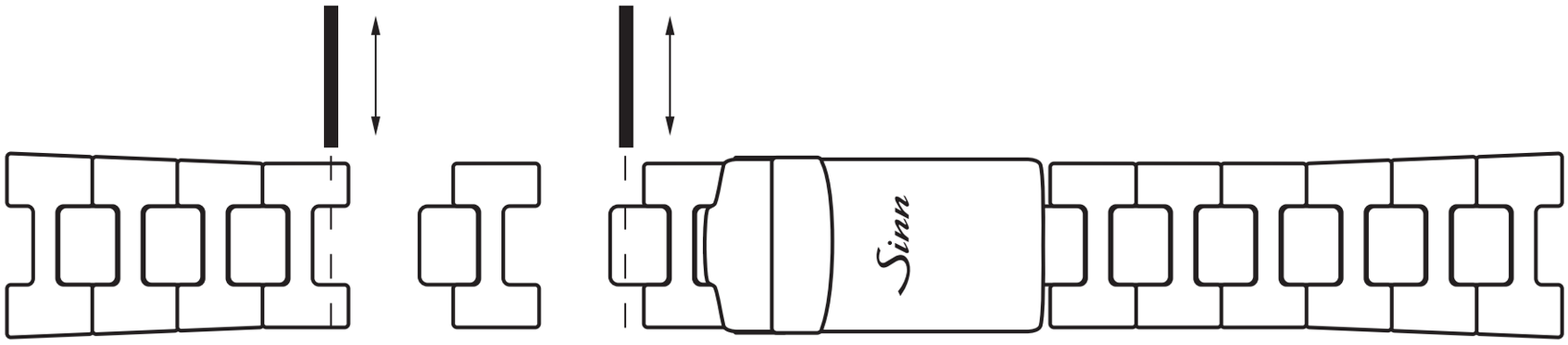


Fig. 2

Adjusting the length of the solid bracelet

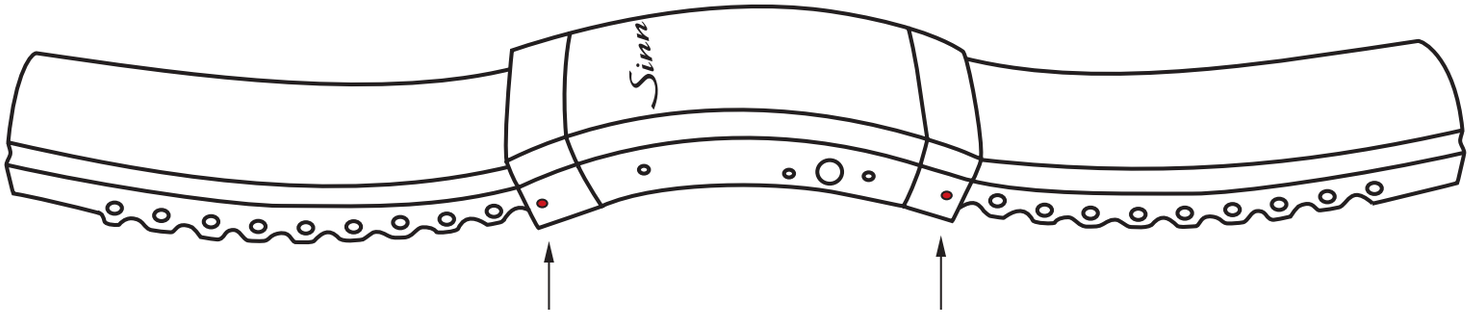
Determine the relative lengths of the two sides before adjusting the length of the bracelet. To ensure maximum comfort, both sides of the bracelet should contain the same number of links. If this is not possible, the top bracelet strap (above the 12 on the clock) should be longer.
It is not necessary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

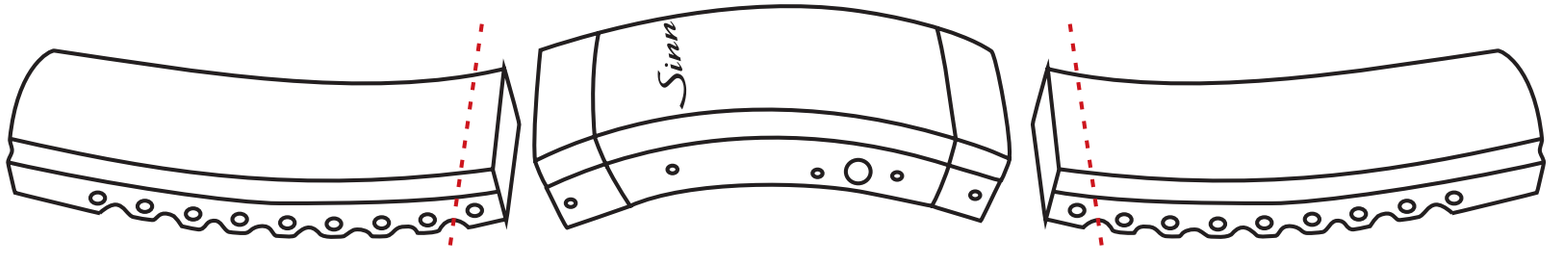


Adjusting the length of the silicone strap

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.



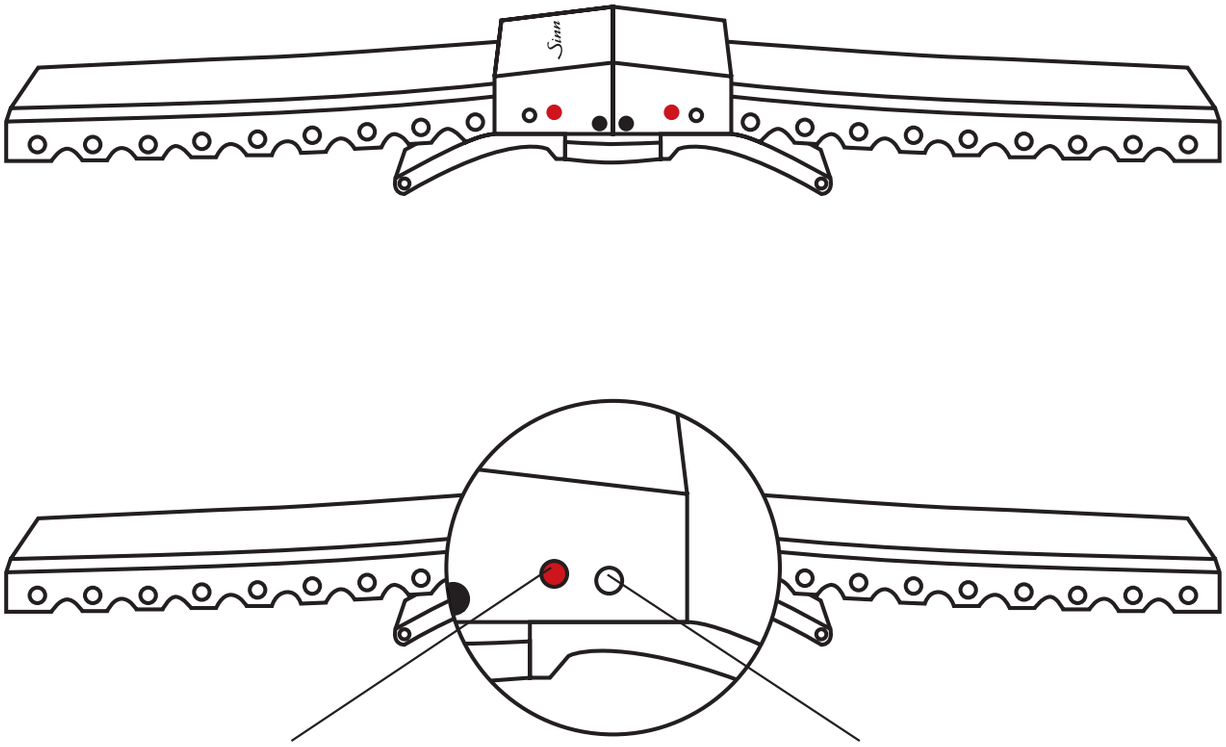
2. Using a knife or scissors, cut the silicone band in the middle between two metal pins. You should shorten the band symmetrically and little by little, starting from the clasp, until you have reached the desired length. Test the length from time to time before proceeding. Shortening both ends by the 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".

Luminous

TECHNICAL DETAILS

Mechanical movement

- Calibre ETA 2893-2 with GMT
- Self-winding mechanism
- Second stop function for accurate time adjustment
- 21 bearing jewels
- 28,800 semi-oscillations per hour
- Shock resistant as per DIN 8308
- Anti-magnetic as per DIN 8309

Watch case

- German Submarine Steel, bead-blasted
- Crown screwable
- Sapphire crystal glass in front
- Meet the technical requirements for water resistance, as set out in standard DIN 8310
- Pressure resistant up to 100 bar
- Low pressure resistant
- Band lug width 24 mm
- Case diameter 47 mm

SINN technologies and special features

- Ar-Dehumidifying Technology
- Bezel made with Black Hard Coating on a TEGIMENT Technology basis
- Functionally reliable from –45 °C up to +80 °C
- Crown with D3-System
- Captive bezel

Functions

- Hours, minutes, seconds
- Second time zone on a 24-hour basis
- Date display
- Bezel with 64 ratcheting in both direction with milliradian scale as an emergency measure


RATE
AMPLITUDE
BEAT ERROR
COUNT DOWN
Aut
BEAT MODE
BEATS PER HOUR
MEAS. TIME
LIFT ANGLE
GRAPH. REVOL.

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)69 978 414 400
Telefax: + 49 (0)69 978 414 401
E-mail: kundendienst@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.

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10.2016
Technical specifications are subject to changes.