



EZM 13
EINSATZZEITMESSER




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 depends 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.

We have selected pilot's watches tested and certified to the technical standard for pilot's watches (TESTAF) by Aachen University of Applied Sciences. The TESTAF ensures that a pilot's watch meets all timekeeping requirements during flight operations in accordance with visual and/or instrumental flight regulations and is suitable for professional use. 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 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.



Advancements in endurance testing

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 as well as Temperature Resistance Technology to keep 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 model, for example, used as part of the official approvals procedure for Airbus Helicopter's (formerly Eurocopter) EC 145 T2 high-performance helicopter. Hot and cold climate tests and high-altitude experiments were carried out in the deserts of the USA, the Rocky Mountains and the frozen wastes of Canada. The watch was worn unprotected, outside the pilot's overall, during cold climate tests at temperatures reaching -45°C .



Innovations and certifications

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.

We have had selected pilot's watches tested and certified to the technical standard for pilot's watches (TESTAF) by Aachen University of Applied Sciences since 2012. The TESTAF, the result of a research project at the initiative of Sinn Spezialuhren, ensures that a pilot's watch meets all timekeeping requirements during flight operations in accordance with visual and/or instrumental flight regulations and is suitable for professional use.

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.

Workshop modifications and hand-engraving

From the robust case and the polished crystal through to elaborate refinements: we make sure that each and every detail of our watches is fit for purpose. The same applies to our workshop modifications. Only the perfect interaction of all components and technologies ensures that our watches can meet all their design specifications in full. Take for example the SZ02 calibre of our U1000 diving chronograph. The 60-minute scale of the stopwatch minute counter is much simpler and more intuitive to read than the 30-minute scale commonly found on other watches. The hand-engraving represents a highly personal form of refinement. If required, our specially trained engraver can etch a name, initials, monograms or symbols onto the rotor, movement bridge and case back.





PERFECT DIVING WATCHES

Our watches are famous for their outstanding functionality. We consistently implement this principle in our accurate timepieces for pilots as well as in our diving watches. The technical development of such perfect time-keeping instruments is one of the greatest challenges for our engineers and watchmakers. During a dive, absolute water resistance, perfect readability in all lighting and water conditions and extreme durability are of life-saving importance.

This is due to the fact that we develop these watches exclusively for their intended purpose – with the consequence that the form follows the primary function. Thus we ensure an extremely high standard of reliability, safety and practicality in everyday use.

DNV GL CERTIFIES SINN DIVING WATCHES

So what does DNV GL (formerly Germanischer Lloyd) have to do with a watch manufacturer from Frankfurt am Main? The renowned company tests and certifies our diving watches according to a variety of criteria. One test focuses on water resistance and pressure resistance, while a second test procedure covers something never done before in the watchmaking industry: certification in accordance with the European standards for diving equipment!

Testing for water resistance and pressure resistance

In each dive, time plays a crucial role in survival on every dive. Diving watches must therefore be water-resistant, reliable and durable, and guarantee perfect readability in all lighting and water conditions. The information we provide about our diving watches is thus not merely captured in words, but proven in practice as well. Since 2005, DNV GL has been testing our diving watches for water resistance and pressure resistance. In accordance with these certification standards, the EZM 3 and EZM 13 are pressure-resistant to 50 bar, the T1, U1 and the U1000 series are pressure-resistant to 100 bar, while the T2, U2 and U200 series are pressure-resistant to 200 bar and the UX series is actually pressure-resistant to any accessible diving depth. For this series, DNV GL has confirmed the pressure resistance of the case to 12,000 m and of the movement to 5,000 m diving depth. The tests are repeated at regular intervals on all of these watches in order to document the consistency of the quality.



Certificate
No. 77239-09 HH

This is to certify that at request of Messrs. Sinn Spezialuhren zu Frankfurt am Main, in
Fächchen 5-7, 90469 Frankfurt,

a hydraulic pressure test on

2 diving watches
of type line Sinn U1000

representing serial number lot

1911.1901-1911.2000

has been performed at September 8th, 2009 with a nominal pressure of 100 bar,
corresponding to a diving depth of 1000 m for a testing time of one hour. Additionally,
a testing with a test pressure of 125 bar and a testing time of 15 minutes has taken
place. The tests have been performed under survey of Germanischer Lloyd with
officially calibrated pressure measuring devices.

There were no housing deformations noticed. The proper function of the watches has
been determined and a subsequent examination has proved the leak tightness of the
tested specimen.

Hamburg, 2009-09-10



Germanischer Lloyd
(now DNV GL) has
confirmed and certified
the pressure resistance.
The certificate shown here
is representative of the
certified EZM 13.

A premiere: certification in accordance with European diving device standards

In a standardised test situation, will a diving watch deliver the same reliable performance as, say, a breathing apparatus? To answer this question, we were the first who have watches tested and officially certified according to the European standards for diving equipment. Also these tests are performed at regular intervals for all these watches. The testing and certification according to the European standards EN250 and EN14143 was completely new territory for both sides. This was the case because the standards for diving equipment cannot be applied to watches without modification. The experts at DNV GL thus adapted the standards appropriately and defined two series of tests. In the first of the two, they put the timepieces in a test cabinet for three hours at -20°C , then for three more hours at $+50^{\circ}\text{C}$. The timepieces were subsequently checked for accuracy and functional reliability at both temperatures. In a second test, the watches had to withstand three hours at -30°C and 3 hours at $+70^{\circ}\text{C}$ with 95% humidity. The result: Temperature resistance and perfect functioning were documented and certified for the watches in the U1, U1000 (since 2007), U2, U200 (since 2009), T1, T2 (since 2013), EZM 13 (since 2014) and EZM 3 series after both tests. The UX series watches were also certified; however, these were subjected to a modified test involving temperatures between -20°C and $+60^{\circ}\text{C}$ due to their battery operation and oil filling.



Certificate
Nr. 77319-10 HH

This is to certify that at request of Messrs. Sinn Spezialuhren zu Frankfurt am Main,
Im Fildchen 5-7, 60489 Frankfurt,

temperature and functional tests on min.

2 diving watches
of type line Sinn U1000

representing serial number lot

1011.1001-1011.2000

have been performed on January 29th, 2010. The examinations are based on the
requirements of European Standards EN250:2000 and EN14143:2003 for type
examination of diving equipment at Zentrum für Sicherheitstechnik of BG Bau in Haan.

The proper function of the watches has been determined directly after 2 hours
conditioning at -30°C and +70°C with 95% relative humidity.

Hamburg, 2010-03-25



Dr. Stephan Venz

Germanischer Lloyd (now DNV GL) has confirmed and certified the type-based test of temperature resistance and functionality in accordance with the European diving device standards EN250:2000 and EN14143:2003. The certificate shown here is representative of the certified EZM 13.



The EZM 13 was designed as a mechanical timepiece for professional diving. As readability plays a crucial role when diving, the EZM 13 features an integrated SINN SZ02 chronograph movement. Boasting a 60-minute – rather than the standard 30-minute – counter at 6 o'clock, this SZ02 movement enables direct and easy reading of the minutes right through from 0 to 60.

Another special feature is the positioning of the crown and push-pieces on the left-hand side of the EZM 13. These ensure unlimited freedom of movement for the hand. Also worth highlighting are the technological features of the diving chronograph, i.e. Magnetic Field Protection, Ar-Dehumidifying Technology and Temperature Resistance Technology. These features ensure professional divers are equipped with a reliable and high-performing instrument.

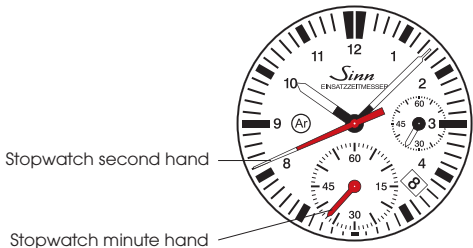
The EZM 13's suitability for professional use was tested by DNV GL who verified and certified its pressure resistance to a diving depth of 500 metres and its temperature resistance and functionality in accordance with the European diving device standards.



SINN MOVEMENT SZ02

The SZ movement 02 is a modification of the SZ01 movement, characterized by an off-center 60-minute counter.

The Valjoux 7750, by contrast, only has a 30-minute chronograph counter. Stopped times are difficult to see on this standard caliber as the interim marks of the hour counter are very close to the hour indices. Only with the aid of this pointer is it possible to distinguish between a minute display of 0 to 30 and 30 to 60. The SZ02 permits direct reading of the minutes right through from 0 to 60 minutes.



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

Up to 100%
saturation



Initial condition



Drying capsule
saturated

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

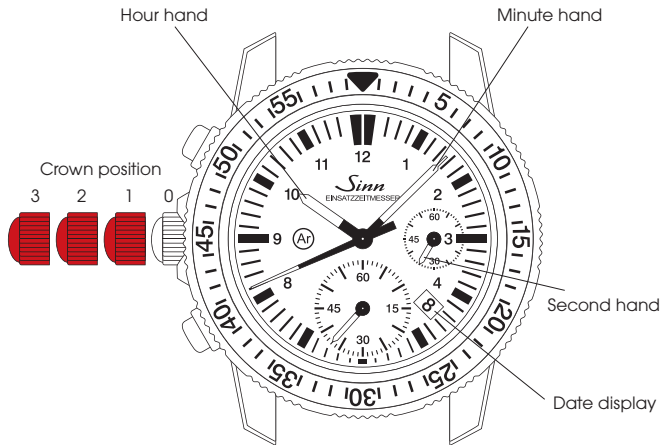
Perfect freedom from fogging

All watches in this series are water-resistant as per 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 (**extreme diffusion reduction**) 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).

INSTRUCTIONS FOR USE



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.

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 diver's bezel to measure time

The diver's bezel is a rotatable bezel that can be set to the minute and only be rotated in one direction to prevent accidental adjustment. It has a luminous main marker which can be used in various ways. It can be used to highlight important time periods. Use it, for example, to mark the start of a period of time; the elapsed time can then be read off at a glance at any time.



ADJUSTING THE LENGTH OF THE WATCH STRAPS

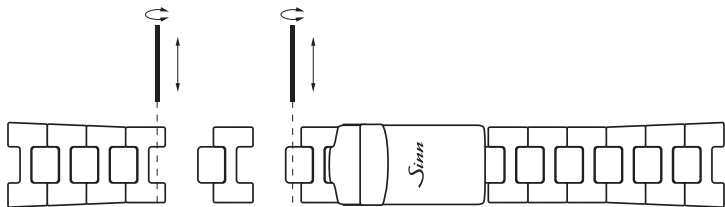
If you don't know how to shorten or lengthen the solid bracelet, please contact your SINN dealer or the watchmakers in our customer service department in Frankfurt am Main. Our customer service employees are also happy to help you over the telephone.

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

TECHNICAL DETAILS

Mechanical movement

- SINN movement SZ02
- Self-winding mechanism
- Hand adjustment with stop-second function
- 25 bearing jewels
- 28,800 semi-oscillations per hour
- Shock resistant as per DIN 8308
- Anti-magnetic as per DIN 8309

Functions

- Hours, minutes, subsidiary seconds
- Chronograph with 60-minute stopwatch hand
- Date display
- Diver's bezel with luminescent key mark

Watch case

- Stainless steel, bead-blasted
- Crown screwable
- Sapphire crystal glass in front
- Case back screw-fastened, nickel-free
- Band lug width 20 mm
- Case diameter 41,5 mm



41 mm

SINN Technologies

- Ar-Dehumidifying Technology
- Magnetic Field Protection up to 80,000 A/m
- Functionally reliable from -45 °C up to +80 °C
- Push-pieces with D3-System and integrated push-pieces protection
- Captive bezel

Tests and Certification

- Tested and certified as per European diving equipment standards EN 250 and EN 14143, by DNV GL
- Water-resistant and pressure resistant up to 500 m diving depth (= 50 bar), tested and certified by DNV GL
- As per technical demands for diving watch norm DIN 8306
- Water-resistant as per DIN 8310
- Low pressure resistant

SERVICE

General advice

To preserve the water resistance for as long as possible, the watch should be rinsed whenever it has been in contact with seawater, chemicals, etc. If your watch is frequently worn in water or underwater, we recommend having its water resistance checked at yearly intervals.

The watch is designed to withstand high levels of mechanical wear and tear and is shock resistant as per DIN 8308. Nevertheless, it goes without saying that continual mechanical stress in the form of impacts or vibration will affect its durability.

Care should therefore be taken to protect your watch from unnecessary wear and tear. It is only possible to judge how well the watch keeps time after it has been in operation for approximately eight weeks, since it takes that long for the working mechanism to become adjusted, especially in view of the fact that everybody has different lifestyles and habits. In the event of any excessive deviation, please keep a day-to-day record of its timekeeping over a period of about one week, for example.

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 "Repairs" in our general terms and conditions of business 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.

Send your SINN watch by insured post to:

Sinn Spezialuhren GmbH
Kundendienst
Im Földchen 5-7
60489 Frankfurt am Main
Germany

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

A vibrant underwater photograph of a coral reef. The scene is dominated by a large, branching coral structure in shades of blue and purple, extending from the top right towards the center. Below it, a thick, reddish-brown coral stalk rises. The background is a deep blue, with several small, bright orange fish swimming in the water. The overall lighting is bright, highlighting the textures and colors of the marine life.

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Technische Änderungen vorbehalten.
Technical specifications are subject to changes.

