



T50 GOLDBRONZE



Sinn

SPEZIALUHREN ZU FRANKFURT AM MAIN



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DEAR CUSTOMER,

Since the company was founded in 1961, we have focused on the creation of high-quality mechanical watches. Nowadays, watch lovers associate innovation and patents with the name of Sinn Spezialuhren. And it's not just our diving watches that stand for high performance, robustness, and durability, quality and precision.

These watches do, however, constitute an outstanding example of how we repeatedly push the limits of what can be achieved physically in development.

We are driven by the question of which new technologies and materials can be used to make diving watches safer and more suitable 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. It is therefore no coincidence that the series U1, U2, U50, U212 and UX are made of high-strength, seawater-resistant German Submarine Steel. We also demonstrate a high level of expertise with the bronze alloy Goldbronze 125 developed by us for the models T50 GBDR and T50 GOLDBRONZE. Due to the exceptionally high degree of purity, there is improved skin compatibility and increased corrosion resistance to seawater compared to conventional bronze alloys.

Fittingly, we work closely with an independent company specialising in technical maritime security. The world's largest classification society DNV (formerly Germanischer Lloyd, Hamburg) checks and certifies the diving-watch data – including compliance with European diving device standards, which is unique in the watch industry.

I am delighted that you have decided to buy a SINN diving watch 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

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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 100 mT (= 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 (formerly Germanischer Lloyd, Hamburg), has been testing our diving watches for pressure and water resistance since 2005. As part of DNV'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 (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 model 717 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. 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.





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 CERTIFIES SINN DIVING WATCHES

So what does DNV (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 has been testing our diving watches for water resistance and pressure resistance. In accordance with these certification standards, the 206 ARKTIS II and 206 St Ar are pressure-resistant to 30 bar, the T50, U50, EZM 3, EZM 13 and EZM 13.1 are pressure-resistant to 50 bar, the T1, U1, U212 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 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.



TEST CERTIFICATE

Certificate No:
A1171172-4E

Particulars of Manufacturer

Manufacturer: Sinn Spezialuhren zu Frankfurt am Main
Address: Wilhelm-Fray-Straße 21,
65936 Frankfurt am Main,
Germany

This is to certify

that for the diving watch type line: SINN T50 Goldbronze
representing the lot of serial nos: 1052.2501 - 1052.2800

2 diving watches have been tested on basis of the relevant requirements of DNV GL Rules for Classification of Underwater Technology, DNVGL RU UWTF, Diving apparatus: Open-circuit self-contained compressed air diving apparatus EN250:2014, Self contained re-breathing diving apparatus EN14143:2013.

Temperature resistance and functional testing

The proper function of the watches could be determined directly after 3 hours of conditioning at -30°C as well as at +70°C and 95% relative humidity, respectively. Examinations were carried out in accordance with the requirements of the European standards EN250:2014 and EN14143:2003, as applicable to the EU Type-Examination of diving apparatus and were performed at the Zentrum für Sicherheitstechnik der BG Bau in Haan, Germany, as confirmed by test report no. 21-1-0449, dated on 2022-11-21

External pressure testing

Hydraulic pressure tests have been performed under supervision of an authorised representative of DNV using officially recognized calibrated pressure gauges on 2022-09-28. Testing was carried out as stated below.

Test pressure / Corresponding water depth: **50 bar, 63bar / 500m**

Cycles x Holding time: **1 x 1h, 1 x 0.25h**

Test media: **Fresh water**

After pressure testing, no watch case deformations could be noticed. The proper function of the watches under test conditions has been determined and a subsequently performed examination proofed the leak tightness of the tested specimen during the pressure test.

Issued at **Hamburg, Germany** on **2022-12-07**

for **DNV**

Dr.-Ing. Stephan Hinz
Inspection Engineer and Surveyor for
Underwater Technology

Stamp: This document has been digitally signed and will therefore not have handwritten signatures

DNV has confirmed and certified the pressure resistance.

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 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 $-20\text{ }^{\circ}\text{C}$, then for three more hours at $+50\text{ }^{\circ}\text{C}$. 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 $-30\text{ }^{\circ}\text{C}$ and 3 hours at $+70\text{ }^{\circ}\text{C}$ 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, U212 (since 2013), EZM 13 (since 2014), 206 (since 2019), U50 (since 2020), EZM 13.1 (since 2022), T50 (since 2023) 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 $-20\text{ }^{\circ}\text{C}$ and $+60\text{ }^{\circ}\text{C}$ due to their battery operation and oil filling.



TEST CERTIFICATE

Certificate No:
A1171172-4E

Particulars of Manufacturer

Manufacturer: Sinn Spezialuhren zu Frankfurt am Main
Address: Wilhelm-Fray-Straße 21,
65936 Frankfurt am Main,
Germany

This is to certify

that for the diving watch type line: SINN T50 Goldbronze
representing the lot of serial nos: 1052.2501 - 1052.2800

2 diving watches have been tested on basis of the relevant requirements of:
DNV GL Rules for Classification of Underwater Technology, DNVGL RU LUWT,
Diving apparatus: Open-circuit self-contained compressed air diving apparatus EN250:2014,
Self-contained re-breathing diving apparatus EN14143:2013.

Temperature resistance and functional testing

The proper function of the watches could be determined directly after 3 hours of conditioning at -30°C as well as at +70°C and 95% relative humidity, respectively. Examinations were carried out in accordance with the requirements of the European standards EN250:2014 and EN14143:2003, as applicable to the EU Type-Examination of diving apparatus and were performed at the Zentrum für Sicherheitstechnik der BG Bau in Haan, Germany, as confirmed by test report no. 21-1-0449, dated on 2022-11-21.

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Test pressure / Corresponding water depth: **50 bar, 63bar / 500m**

Cycles x Holding time: **1 x 1h, 1 x 0.25h**

Test media: **Fresh water**

After pressure testing, no watch case deformations could be noticed. The proper function of the watches under test conditions has been determined and a subsequently performed examination proofed the leak tightness of the tested specimen during the pressure test.

Issued at **Hamburg, Germany** on **2022-12-07**

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Dr.-Ing. Stephan Hinz
Inspection Engineer and Surveyor for
Underwater Technology

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DNV has confirmed and certified the type-based test of temperature resistance and functionality in accordance with the European diving device standards EN250 and EN14143.



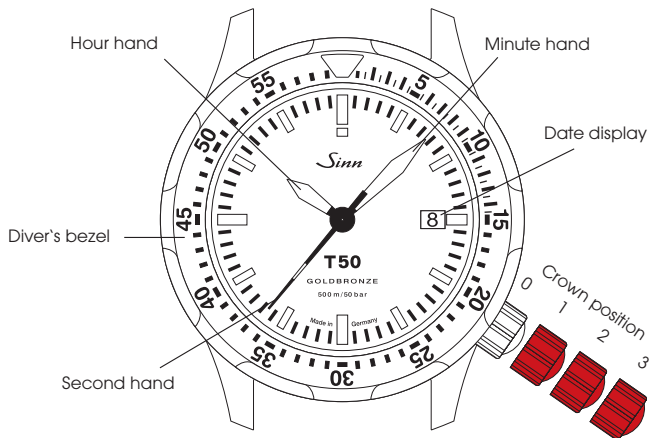
T50 GOLDBRONZE

The T50 GOLDBRONZE edition, limited to only 300 pieces, is another impressive demonstration of our extensive expertise in the field of metallurgy. For this interesting timepiece, we are using a bronze alloy we developed, which has a patent pending.

This alloy, referred to as Goldbronze 125, has an exceptionally high degree of purity, and one eighth of it is gold. With bronze, we are embracing a material that has been used frequently in a wide range of maritime applications in the past. However, the exceptionally high degree of purity of our Goldbronze 125 results in improved skin compatibility and increased corrosion resistance to seawater compared to conventional bronze alloys. The case back of the T50 GOLDBRONZE is made of high-strength titanium. As this metal does not cause allergies, the watch provides exceptionally high wearing comfort overall.

Although the surface of Goldbronze 125 darkens due to oxidation, developing a patina, we achieve inertia against environmental influences with the gold alloy component. The surface darkens much more slowly than with ordinary bronze. The darkening can also be easily removed using the special gold bronze care cloth we provide.

INSTRUCTIONS FOR USE



Winding the watch (crown position 1)

The crown is screwed down (crown position 0). To loosen the crown, turn it *counter-clockwise* (crown position 1). The movement is wound manually by turning the crown *clockwise*. Under normal circumstances, a few turns of the crown are enough to start the movement. We recommend 20 full turns of the crown for the initial use. 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 rewind it. About 40 turns of the crown by hand will wind up the watch completely. Because the winding mechanism of your watch is designed for automatic winding with minimal winding speed, the watch should be wound at a moderate, consistent speed when winding by hand to avoid damaging the movement.

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 *clockwise* until the correct date appears in the date display window.

Please take care to fasten the crown after making adjustments.

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).

THE CAPTIVE DIVER'S SAFETY BEZEL

The construction of the rotating bezel is extremely important in terms of safety. To prevent any risks to the life and health of the diver, the solution we use for the captive diver's bezel is based on two elements.

One is the captive design of the rotating bezel, which differs greatly from that of conventional snap-in mechanisms. A special design prevents the rotating bezel from becoming detached as the result of catching or being accidentally knocked, causing the set time to be lost.

In addition to the captive design of the captive diver's bezel, it is also protected against accidental rotation – a feature which goes beyond the specifications laid down in DIN 8306. This standard stipulates that it should only be possible to adjust the set time of a diver's watch by turning the bezel anti-clockwise on one side.

A sophisticated mechanism prevents the safety bezel from being unintentionally rotated. This makes it impossible for the set time to be accidentally knocked and changed.



How to adjust the set time using the captive safety bezel

1. To adjust the set time, first unlock the bezel. Press it down on opposite sides using two fingers. It is not possible to unlock the bezel using just one finger.



2. Hold down the bezel and turn it anti-clockwise to the desired set time. Once you release the bezel, the rotation protection is reapplied and the bezel is once again prevented from being accidentally adjusted.

Shown on the identical T50 model.

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.







Luminous design.

Colour-differentiated luminous paint for minute hand, second hand and key mark on the bezel for clear reading of set time.

TECHNICAL DETAILS

Mechanical Movement

- SW300-1
- Self-winding mechanism
- 28,800 semi-oscillations per hour
- Seconds stop function
- Anti-magnetic as per DIN 8309

Dial and Hands

- Dial with decorative grinding
- Indices coated with luminescent colour
- Hour, minute and second hand coated with luminescent colour
- Colour-differentiated luminous paint for minute hand, second hand and key mark on the bezel for clear reading of set time

SINN Technologies

- Ar-Dehumidifying Technology enhances functional reliability and freedom from fogging
- Captive diver's bezel made of Goldbronze 125 with guard to prevent accidental misadjustment

Functions

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

Watch Case

- Case made of Goldbronze 125, bead-blasted
- Sapphire crystal glass in front, anti-reflective on both sides
- Case back screw-fastened, made of high-strength titanium
- Crown screwable
- Band lug width 20 mm
- Case diameter 41 mm

Tests and Certification

- Tested based on European diving equipment standards EN 250 / EN14143, certified by DNV
- Waterproof and pressure-resistant to 500 m diving depth (= 50 bar), certified by DNV
- According to the technical demands for the diving norm DIN 8306
- Meet the technical requirements for waterproofness, as set out in standard DIN 8310
- Low pressure resistant



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

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Technische Änderungen vorbehalten.

Technical specifications are subject to changes.



