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EZM7
EINSATZZEITMESSER

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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



Sinn

INGENIEURBÜRO DE FACHBEREICH AN DER
UNIVERSITÄT WÜRZBURG

Sinn

INGENIEURBÜRO DE FACHBEREICH AN DER
UNIVERSITÄT WÜRZBURG

SINN SPEZIALUHREN ZU FRANKFURT AM MAIN

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

Technical innovations

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

Ongoing advancement in technology and quality

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

Innovations in endurance testing

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



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

The Temperature Resistance Technology keeps mechanical watches performing at temperatures ranging from $-45\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$. This technology has proven its worth in the EZM 10 TESTAF, for example, used as part of the official approvals procedure for Airbus Helicopters (formerly Eurocopter) EC 145 T2 high-performance helicopter. The 303 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.



LETTER FROM TOMÁS STANKE

Chief Fire Inspector, Hattingen Fire Brigade



Allow me to begin by telling you a little about my profession and my passion for timepieces. I have been a fireman for more than 19 years, and it's not just an occupation but a vocation for me.

I began my career in 1991 as a mid-level civil servant with the fire-fighting services in Bochum, where I received training as a fire chief. I logged several thousand hours of emergency service and gained extensive experience while also participating in ongoing educational programmes. I was trained as a paramedic, group leader and finally, in the year 2003, as a fire inspector and was promoted to the upper grade of the civil service. Subsequently I was made chief guard, head of the fire-fighters school and safety coordinator. I authored mission concepts and risk assessments and was responsible for organising and supervising the training programme for new candidates for the fire brigade. Since I transferred to the Hattingen fire department I have primarily served as head of operations, responsible for coordination and consulting on safety issues as

well as personnel management. Between 2007 and 2009 I completed a correspondence course and was certified as an expert in occupational safety.

I have also been fascinated by watches since I was 16. In fact, they have become my passion – it involves more than just observing the watch market and keeping abreast of technical innovations and prices, more than reading the trade press, advertisements and contributions to various forums. And it is not just limited to knowing about calibre and production techniques. Above all, my passion has been finding the perfect watch for every situation that may arise in my life. I've tried out many watch brands and become more or less acquainted with many of them.

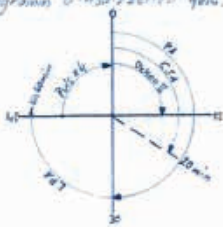
Over the years, and also influenced by my experiences in my profession, I have placed increasingly greater demands on my wristwatch. As a fireman I demand a lot from my timepiece, and I have tested many different models. My primary criteria have always been wearing comfort, readability in any situation, reliable seals and convenient operation. Many watches were unable to withstand the stress firemen's watches are subjected to. Heavy blows to the case and crystal, for example when handling equipment, moisture, steam, the heat of fire scenes – all of these prove too much for most wristwatches.

At some point I thought it would be a good idea to design a special mission timer watch for use by firemen. I combined my expertise and experience as a fireman with the demands I placed on a watch suitable for day-to-day use in fire-fighting missions. I also wanted it to be possible to read off mission times as described in the fire service manuals (**Feuerwehrdienstvorschriften, FwDv**) 7 and 500.

So I made some simple drawings of dials and bezels. The inclusion of a variety of mission times and processes described in the fire service manuals resulted in a clear idea of what a fireman's mission timer should be capable of. The dial would be a pictogram with all important mission times, and the bezel would be able to count off these times with the help of the minute hand. For reasons of clarity I represented the mission times on the bezel with the traffic-signal colours red, yellow and green, which are often used in fire-fighting.

There was only one company I could imagine implementing my idea. It was my wish that Sinn Spezialuhren would manufacture the fire-fighting mission timer. At the time, I was using a SINN 857 model, a watch that fulfilled all the demands of the fire-fighting profession in terms of the material and technology used to make the case, its magnetic field protection, dehumidifying technology, water resistance, readability and general functionality. I was very satisfied with that watch, but in spite of its attractiveness and its functionality it was still a pilot's watch. I remained fascinated by the idea of creating a watch specifically for fire-fighting missions.

Piktogramm Einsatzzeiten gem. FuWIV 7 und FuWIV 500



Als Hilfe
mittel zur
Linierte

Tabelle mit Zeiten als 2. Möglichkeit

Betreiber	• 15 min
CSA	• 20 min
PA	• 20 min
LPA	• 60 min
Puls 45 Sch. u 47 Tqm.	

Als Maßstab oder
auf Schloß (Grenze)

neuer E.M.A. gem. FuWIV 7/500
Stationsplan T. Skizze F.A.S.

Finally, in June of 2009, I screwed up my courage and sent an email to Sinn Spezialuhren. The response was positive, and after a very nice telephone conversation with Lothar Schmidt we met in person in Frankfurt in August 2009. I was given the opportunity to present my idea to him and two of his executives. My ideas were well received and in that first meeting we began discussing how SINN could go about implementing them.

I'll never forget the moment when we were saying goodbye, and Mr Schmidt shook hands with me and my wife and said, "We'll make that watch!" Another incredibly exciting and joyful moment came in December 2009, when I received an email from the development department containing the first draft of the prototype. For the first time, I saw a professionally made EZM 7 fire-fighting mission timer. The engineers at SINN had perfectly realised all my thoughts, ideas and wishes. I was closely involved in working out the finer details, and there was further email correspondence to coordinate the fine-tuning.



There were more than 20 revisions before the final, optimal version was achieved. Thus I gained a lot of insight into the development process and planning stages of a specialised timepiece, from the initial idea to the finished product, and now I know how many hours are required to bring a project like this to fruition.

My initial impression about Sinn Spezialuhren was ultimately confirmed, and I would like to express my respect for all the employees who played a part in this project. They made a concerted effort to acquaint themselves with an area of technical expertise that lay outside their normal sphere, and their high standards resulted in a perfect specialist chronograph. I hope that the knowledge I contributed on behalf of all firemen has resulted in a mission timer that fulfils all the relevant requirements for professional and volunteer fire-fighters, and that can also accompany them everywhere they go.

Here's to safety, a passion for specialist watches and solidarity among all fire brigades.

Tomás Stanke



KEEPING TRACK OF DETAILS, EVEN IN AN EMERGENCY

When an emergency call comes in to the fire brigade and rescue personnel, perfect coordination is of the essence. Whether a residence is in flames, dangerous chemicals have escaped into the environment or an ambulance is needed – fire-fighting and rescue personnel are on the scene within minutes. It's also essential for all of these personnel to monitor the amount of time spent in the danger zone. Sinn Spezialuhren manufactures a bezeled mission timer capable of keeping track of elapsed time on fire-fighting missions: the **EZM 7 model**.

When they're finding their way through an unknown building, laden with breathing apparatus and other heavy equipment, struggling against smoke and flammable gases, rescue personnel are concentrated on their task – saving lives, fighting fires and preventing the situation from escalating. That's why it's important for them to know at all times which team has been on the premises for how long, and to adhere to the prescribed mission times. There are strict regulations governing respiratory equipment (**Atemschutzüberwachung, ASÜ**). Every extra minute spent in the danger zone can be life-threatening. The teams are often exhausted by the time they start making their way back out.

With the professional assistance of chief fire inspector Tomás Stanke, we have developed a mission timer that facilitates reading off the most important mission times in accordance with fire service manuals 7 and 500 (**Feuerwehrdienstvorschriften, FwDv**).

On the front lines with respiratory equipment

Saving lives and fighting fires, indoors and out, are part of the everyday routine of Germany's fire fighters. They are often called upon to work in environments where there is not only little breathable oxygen but also poisonous gases. It is imperative – and required by law – to make use of breathing apparatus. Compressed air breathing apparatus (PA – Pressluftatmer) is an important part of firemen's protective equipment and makes it possible for them to work in toxic environments. Missions involving respiratory equipment are subject to strict regulations and procedures (FwDv 7). They are practised and drilled at regular intervals with a view toward achieving the primary goal in case of an actual emergency: preventing danger to people, animals and property.

Expert's note:

Chief Fire Inspector Tomás Stanke, Safety Coordinator (FAS)

Firemen rely on numerous pieces of special apparatus for monitoring and controlling respiratory equipment, including electronic monitoring devices, acoustic and visual positioning systems, etc. These are supplemented by organisational safety plans in compliance with the regulations set out in FwDV 7. The EZM 7 mission timer can provide additional assistance, provided wearing a wristwatch is deemed safe following a risk analysis in accordance with the fundamentals set out in GUV-V A1 (principle of prevention §3).



Respiratory equipment – constant monitoring of mission times

To protect the lives and ensure the safety of personnel, strict monitoring of elapsed time on fire-fighting missions is specified in fire service manuals 7 (Feuerwehrdienstvorschrift, FwDv). The team leader is responsible for monitoring respiratory equipment. Officers working outside the danger zone help register the officers wearing the equipment and also record the time when the breathing apparatus is put into operation. They are also responsible for notifying the emergency teams by radio when one-third and two-thirds of the expected mission time have elapsed. They remind the wearers of the breathing apparatus to check the pressure level in the oxygen containers.

When calculating mission times, it is assumed that officers will require twice as much air for the return trip from the (indoor) mission site to the safe area where the officers can remove their breathing apparatus as they required going in. This is due to such potential factors as exhaustion, the added weight of rescued persons or increased respiratory rate. At least one additional officer is ready on stand-by for each team member using respiratory equipment and can provide assistance in case of emergency.

Monitoring tables and a reliable watch are indispensable for the officers in charge – whether the mission is a conventional fire-fighting task or a special NBC situation.

Dehon II • 15 min
CSA •• 20 min
PA • 30 min
LPA biso 60 min
Puls 15 Sek. x 4 = Freq.

Expert's note:

Chief Fire Inspector Tomáš Stanke, Safety Coordinator (FAS)

Electronic monitoring equipment also includes a watch, generally a battery-operated digital display that is built into the board. Virtually no one gives the accuracy of these timepieces a second thought. But in case this equipment fails, it is advantageous to have a reliable, high-quality mechanical watch as a backup – provided the wearing of a wristwatch is allowed under the regulations contained in GUV-V A1. In this case, the EZM 7 model is ideally suitable for providing a safe and reliable overview of the elapsed time.



Provision of Level II Decontamination on NBC missions

In the case of NBC missions (nuclear, biological or chemical hazards), the team leader must also monitor a second important aspect: the length of time until level II decontamination is carried out (standard decontamination on missions involving special equipment). The fire service manuals specify that a maximum of 15 minutes may elapse from the point in time when personnel don the equipment until level II decontamination is carried out. The decontamination area must be upwind of the danger zone and clearly divided into a “black” (contaminated) and “white” (clean) area. Rescue teams and rescued persons must pass through this decontamination area to prevent the spread of toxicity.

Expert's note:

Chief Fire Inspector Tomáš Stanke, Safety Coordinator (FAS)

The decontamination level depends on the number of persons to be decontaminated. Various manufacturers offer different technologies for level II decontamination. Generally speaking, level II should be sufficient for decontaminating 5-10 persons. In most cases the individual technological modules of level II decontamination rely on emergency decontamination, which must be executed immediately before beginning a NBC mission.

Checking the pulse quickly

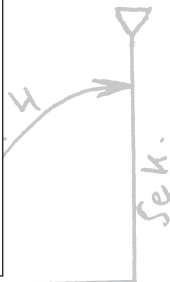
When it comes to preventing hazards and saving lives, fire fighters are on the front line. This is why emergency personnel are also trained in rescue procedures. Measuring a victim's pulse is an important aspect. When the "Pulse x4" function is activated, the EZM 7 mission timer provides a quick way of measuring a person's pulse: You count the pulse rate for 15 seconds (ideally starting when the second hand reaches one of the four coloured markings) then multiply the number by four. For example, 19 beats in 15 seconds equals a pulse rate of 76.

Expert's note:

Chief Fire Inspector Tomas Stanke, Safety Coordinator (FAS)

State laws stipulate that local towns and districts are responsible for rescue teams. In Nordrhein-Westfalen (state of Germany), for example, fire fighters are deployed to fight fires and act as emergency rescue personnel. They are, as a minimum, trained as ambulance personnel (Rettungssanitater, RS) and in some cases as paramedics capable of assisting the emergency physician (Rettungsassistent, RA). Certification as a paramedic is granted by the state following a two-year training programme that can be completed while serving as a fire-fighter.

Puls
Zifferblatt





Overview of the most important mission times

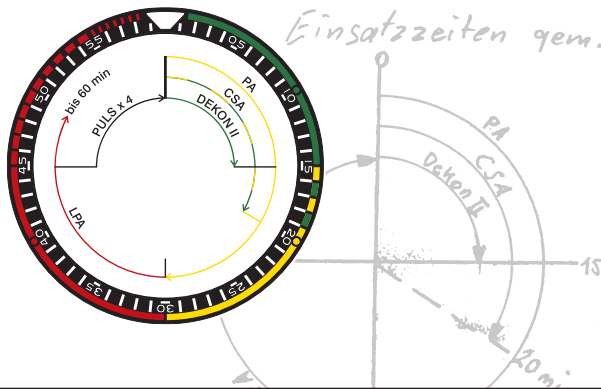
Over the past few years, the increasing risks posed by fire-fighting missions have resulted in improved technologies and stricter regulations. On the basis of physiological aspects (e.g. physical fitness, age), length of experience, the added strain of contemporary fire protection clothing and equipment, and the specifications of the fire service manuals (**Feuerwehrdienstvorschriften, FwDv**) 7 and 500, it is possible to calculate the maximum permissible mission times.

They are as follows:

- **20 minutes** in a chemical protective suit (CSA),
- **30 minutes** using compressed air breathing apparatus (PA) whereby the pressure level must be double-checked after 1/3 and 2/3 of the expected duration of the mission
- **Max. 60 minutes** using extended-time compressed air breathing apparatus (LPA), e.g. in case of longer approach routes.

The fire service manual FwDv 500 specifies the following mission times for NBC missions: Standard decontamination (usually level II decon) must be made available within **15 minutes**.

Einsatzzeiten gem. FwDV

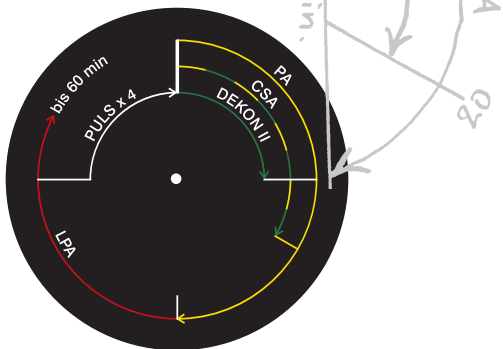


Expert's note:

Chief Fire Inspector Tomáš Stanke, Safety Coordinator (FAS)

The fire service manual FwDv 7 no longer refers to specific times, so the total mission time e.g. using compressed air breathing apparatus may be less than 30 minutes, depending on physical exertion and breathing frequency. This is why pressure must be monitored after each third of the expected mission duration. The officer with the highest consumption rate serves as the standard for calculation. Scientific studies (STATT) and analyses have shown that mission times in excess of 30 minutes are risky when extreme performance is required in the danger zone.

The pictogram on the dial



This diagram provides a quick overview of the start and end times of the important time stages of NBC missions and missions requiring respiratory equipment.

PA: Compressed air breathing apparatus

CSA: Chemical protective suit

LPA: Extended time compressed air breathing apparatus

DEKON II: Standard decontamination





On fire-fighting missions, speed and precision are of the essence. There are tasks to be coordinated, teams to be deployed and decisions to be made. In the hectic early phase, the team leader must process a great deal of information – and always keep an eye on the (elapsed) time. The Mission Timer (EZM) 7 was developed as a reliable means of monitoring time during complex missions with the professional assistance of Chief Fire Inspector Tomás Stanke.

The EZM 7 with its colour-coded bezel is easy to operate, making it child's play for people using breathing protection apparatus to set and read off the relevant durations – from CSA to LPA. As with our diving watches, the captive bezel can also be operated when wearing gloves. It rotates in one direction and features minute ratcheting. The crown is located on the left side of the case to prevent it from hitting against the back of the hand. The Ar-Dehumidifying Technology also enhances functional reliability and freedom from fogging, while the movement of the watch is protected from magnetic forces of up to 80,000 A/m. The surface of the stainless steel case is hardened using TEGIMENT Technology, making it especially scratch-resistant. This TEGIMENT case surface also provides the base for the Black Hard Coating (PVD coating) on the EZM 7 S, which is limited to 300 units. The EZM design and the luminous indices ensure optimum readability by day or night. Ideal for complex use by the fire brigade or rescue services.

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)

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.

Easy overview of times thanks to colour-coded bezel

When a mission requiring respiratory equipment gets under way, the bezel is set so the “zero” point which corresponds to the current position of the minute hand (zero position). This makes it possible to see precisely when the team must be relieved, e.g. after 20 minutes in a chemical protection suit (CSA green/ yellow), after 30 minutes with compressed air breathing apparatus (PA yellow) and after max. 60 minutes with extended-time compressed air breathing apparatus (LPA red). The black circle above the numbers 10, 20 and 40 also shows when 1/3 and 2/3 of the mission time has elapsed for 30 and 60 minute missions. This is an important detail because the monitoring officer must remind the team to check the pressure level in the containers when one-third and two-thirds of the expected mission time has elapsed.

In the case of NBC missions (nuclear, biological or chemical hazards), the green scale can simultaneously be used to read off the time remaining until level II decontamination (standard decontamination for missions requiring special protective equipment). The regulations specify that level II decontamination must be made available no later than 15 minutes after emergency personnel enters the danger zone (green).

Added safety

The bezel with minute ratcheting can only be turned counter-clockwise, like those of SINN diving watches. This ensures that even if the bezel is turned inadvertently, the maximum time will never be exceeded (the worst that can happen is that the mission is cut short).

Colour-coded bezel



- Green for Dekon II
- Green/Yellow for CSA
- Yellow for PA
- Red for LPA

● ● ● Coloured check points mark the first and second thirds of the maximum operation time

Example:

A time mission requiring compressed air breathing apparatus (PA yellow)

When the mission begins, you set the triangle on the bezel (zero mark) to the current position of the minute hand. The green circle reminds you when one third of the mission has elapsed. You must check the pressure level in the first third of the maximum mission time (in this case, ten minutes). The yellow circle indicates the second monitoring time after a maximum of 20 minutes. Once the minute hand reaches the red zone, indicating the maximum time for a mission requiring compressed air breathing apparatus has been exceeded (30 minutes), the team is overdue.

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 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).

ASSEMBLING AND ADJUSTING OF STRAPS

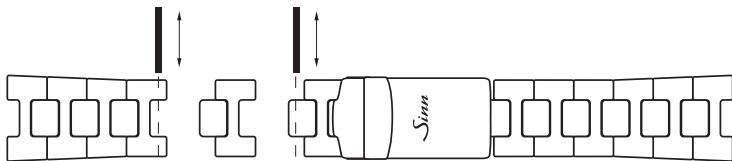
If you are not sure how to assemble, shorten or lengthen the watch straps, please contact your specialist SINN retailer directly or one of our watchmakers in customer service in Frankfurt am Main. We would also be happy to help you over the telephone.

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.

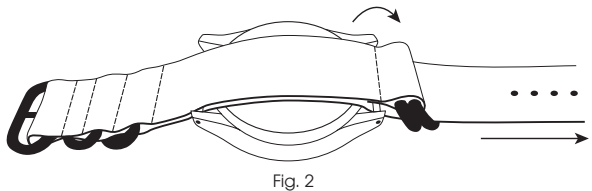
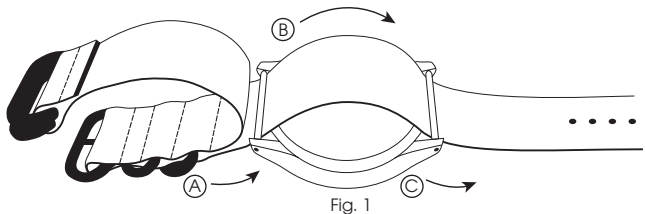
It is not necessary to detach the solid bracelet from the watch or the clasp.

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.



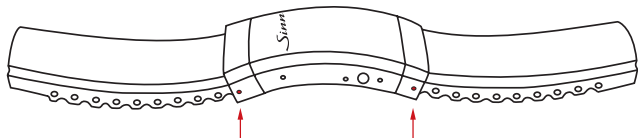
Assembling the textile strap

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).
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).

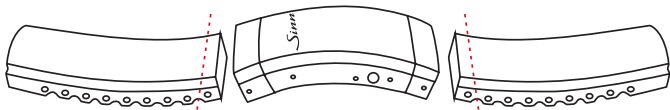


Adjusting the length of the silicone strap

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.



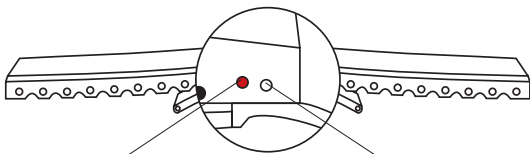
2. Using a knife or scissors, cut the silicone band in the middle between two metal pins. You should shorten the band symmetrically and little by little, starting from the clasp, until you have reached the desired length. Test the length from time to time before proceeding. Shortening both ends by the 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
- Self-winding mechanism
- 21 bearing jewels
- Seconds stop function
- 28,800 semi-oscillations per hour
- Shock resistant as per DIN ISO 1413
- Anti-magnetic as per DIN 8309

Functions

- Hours, minutes, seconds
- Second time zone on a 24-hour basis
- Date display
- Colour-coded key operation bezel for breathing protection and NBC rescue operations and with minute ratcheting and luminous triangle

SINN Technologies

- Ar-Dehumidifying Technology
- Magnetic Field Protection up to 80,000 A/m
- Functionally from - 45 °C up to + 80 °C
- Captive bezel
- EZM 7: TEGIMENT Technology, therefore especially scratch-resistant
- EZM 7 S: Case made with Black Hard Coating on a TEGIMENT Technology basis

Watch Case

- EZM 7: Stainless steel, bead-blasted
- EZM 7 S: Stainless steel, black
- Crown screwable
- Sapphire crystal glass on front, anti-reflective on both sides
- Case back screw-fastened, nickel-free
- Meet the technical requirements for waterproofness, as set out in standard DIN 8310
- Pressure-resistant up to 20 bar
- Low pressure resistant
- Band lug width 22 mm
- Case diameter 43 mm



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: 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.

