

Sinn

SPEZIALUHREN ZU FRANKFURT AM MAIN

Since the company's foundation in 1961, Sinn have focused on making navigation cockpit clocks and wristwatches designed to ensure maximum functionality and precision. Careful consideration goes into all of their timepieces, as functionality is always at the forefront of every concept and design. For the last 20 years, this philosophy has been implemented to perfection in their mission timers.



Sinn Technologies

Captive Bezel

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

The design is based on an elastic, unsealed loss-prevention ring located in the interior of the bezel. A number of screws in the side contract this ring until it bridges the gap between the bezel and the case. Only by removing the screws does the loss-prevention ring relax and retract from the gap, allowing the bezel to be removed from the case.



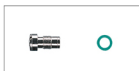
1. To adjust the set time, first unlock the bezel. Press it down on opposite sides using two fingers. It is not possible to unlock the bezel using just one finger.



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.

Ar-Dehumidifying Technology

Ar-Dehumidifying Technology solves a basic problem of mechanical watches: the aging of oils due to moisture in the air contained inside, or diffusing into, the watch. The movement is mounted in a nearly anhydrous atmosphere thanks to the three Ar-Dehumidifying Technology elements of drying capsule, EDR seals (Extreme Diffusion-Reducing) and protective gas filling. Aging processes and fogging of the crystal from sudden cold are prevented, and reliable functioning and accuracy are ensured.



The titanium drying capsule. As with crowns and push-pieces, we use EDR seals here, too.



All seals are made of sealing materials that are extremely diffusion reducing (EDR).



The Ar-symbol on the dial, here the 103 Ti DiAPAL, indicates models with Ar-Dehumidifying Technology

Magnetic Field Protection

Magnetic fields such as those of electric motors, loudspeakers or door closers cause the Nivarox balance spring to become magnetized and adversely affect the accuracy of the watch. We solve this problem by using a protective sheath consisting of a closed, magnetically soft inner case that includes the dial, the movement holding ring and the case back. This Magnetic Field Protection far exceeds the DIN specification for antimagnetic watches and minimizes magnetic interference.



Magnetic field protection from SINN: A soft iron cage



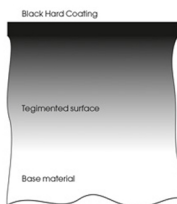
This Sinn trademark portrays stylised magnetic field lines and a magnetic core.

TEGIMENT

TEGIMENT Technology raises the hardness level of the base material, e.g. stainless steel, by a significant factor. Tegiment Technology provides highly effective protection against scratches. The method is not, however, based on the application of a coating. Instead it is the surface of the material itself which is hardened by means of a special process, thereby creating a protective layer ("tegimentum" in Latin). The surface of any watch hardened using TEGIMENT Technology has a significantly greater level of protection against scratches than that afforded by the hardness of the base material.

Black Hard Coating

Sinn Spezialuhren only uses hard coatings (known as PVD coatings) with TEGIMENT surfaces. Because only in this combination is it possible to achieve the high quality of our PVD paint coatings. This means that paint coatings applied using what is known as the PVD technique are exceptionally hard. The great and sudden difference in hardness between the hard paint coating and base material means these tend to crack when under stress because the hard shell (PVD paint coating) is applied seamlessly to a very soft core (case material). When suddenly subjected to stress, the base material yields and cannot support the outer layer sufficiently. This is called the 'eggshell effect'. The hardness of the TEGIMENT surface, by contrast, supports the hard coating. This prevents the eggshell effect and dramatically reduces flaking of the paint coating.



Temperature Resistance Technology

The long-term accuracy of a watch movement crucially depends on the lubrication of its moving parts – this is particularly true at extreme temperatures. Sinn Spezialuhren uses the special oil to ensure reliable function under even the most extreme conditions. With its outstanding properties, it provides lubrication that is highly resistant to aging at temperatures between - 45 °C and + 80 °C.

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