

Technical Features

Screw-down case back and Screw-in crown

The answer to water-resistance for high-performance sports watches

There's water-resistance and there's water-resistance

Longines watches are approved under the criteria applied for the international ISO 2281 norm. This standard allows us to use the label "water-resistant to xx metres" or "xx bars". This means that Longines certifies that its products meet the criteria required under the norm.

Given that the constraints of actually wearing a watch cannot all be simulated in a laboratory, Longines recommends that its customers allow a safety margin according to the table below.

Marking on back of watch	Meaning*	Rain, hand-washing	Washing up, housework and bathing	Swimming, snorkeling, showering	Scuba diving
none	not water-resistant	no	no	no	no
3 atm	water-resistant to 30 m	yes	yes	yes, with care	no
5 atm	water-resistant to 50 m	yes	yes	yes, with care	no
10 atm	water-resistant to 100 m	yes	yes	yes	no
30 atm	water-resistant to 300 m	yes	yes	yes	yes

* The values given in metres are equivalent to the degree of water superpressure applied under the ISO 2281 norm for the test series described in section 6.2.6.

A range of methods are used to check the water-resistance of watches depending on the level of protection required. Although the use of sealing gaskets confers a certain degree of imperviousness, it is how the watch is constructed that is instrumental in determining its ability to keep water and dust out. There are a number of parts in particular that play a crucial role in ensuring a watch's water-resistance: the case back and the crown, the glass and in principle all the elements that make up the case.

In general, absolute water-resistance cannot be guaranteed for an unlimited time. After a few years, it may be affected by the natural wear of the gaskets or by an accidental shock which may deform the moving parts of the case. For reasons of safety, we recommend that you have your watch checked for water-resistance once a year by an approved Longines agent.



Screw-down case back

Water-resistance is an essential feature of any high-performance sports watch. It is a reflection of the precision and avant-garde technology used in its construction and, in addition, provides it with the prestige associated with superior know-how.

A water-resistant watch must have a high-quality case. A screw-down case back means that the watch's water-resistance is ensured over a longer time. It guarantees water-resistance up to a superpressure equivalent to 300 metres*.



Screw-in crown

Like the screw-down case back, it is also how the crown is constructed that plays an essential role in guaranteeing water-resistance. To facilitate setting and (for mechanical watches) winding operations, the case must incorporate an opening. This opening, however, is also a potential entry point for water or dust.

To eliminate this weak point, the winding stem is inserted into a tube which, in turn, is inserted into the case. The crown then screws into the thread of the tube and gaskets are fitted to further enhance water-resistance.