

General instructions for water resistance according to DIN 8310



- Because water resistance is not a permanent quality, it should be tested annually.
- This is especially valid before strain, because built-in sealing elements' functioning decreases due to daily use.
- Watchcases are built accurately fitting from different materials which under variations in temperature vary in their coefficients of expansion.
- To guarantee water resistance for certain requirements, there are special constructions with built in seals. Those are subject to a natural aging process. They among other things are affected by sweat and acids.
- DIN 8310 regulates criteria for the construction and test pressures, which new watches need to withstand. The resistance is specified in »bar« or »ATM« and registered on the bottom of the watchcase.
- Watchcases are water resistant when they resist sweat, water drops, rain and so on. They have to withstand being submerged in water for more than 30 minutes in a water depth of 1m without water getting inside. Those watches are meant for normal daily use and should not be used under conditions where water pressure and temperature vary heavily.
- In case of additional indication of a pressure for instance »3 bar« test conditions have been increased. The pressure indication »3 bar« may not be confused with the diving depth it is the definition of the test pressure. A test pressure of »3 bar« will be reached in a water depth of 30m.
- When swimming and especially when diving into the water there can for a short time a much higher pressure onto the sealing elements occur than the guaranteed test pressure. Especially endangered are watches when you dive into the water after a long sun bath, because in that case the impact pressure adds to the depression due to the rapid cooling down, which can easier lead to damage.

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Watches are classified by watch manufacturers by their degree of water resistance which, translates to the following (1 metre \approx 3.29 feet):

Water Resistant 3 ATM or 30m

Suitable for everyday use. Splash/rain resistant. NOT suitable for showering, bathing, swimming, snorkelling, water related work and fishing. NOT suitable for diving.

Water Resistant 5 ATM or 50m

Suitable for swimming, white water rafting, non-snorkeling water related work, and fishing. NOT suitable for diving.

Water Resistant 10 ATM or 100m

Suitable for recreational surfing, swimming, snorkeling, sailing and water sports. NOT suitable for diving.

Water Resistant 20 ATM or 200m

Suitable for professional marine activity, serious surface water sports and skin diving. Suitable for skin diving.

Quelle: Wikipedia