
Horology — Water-resistant watches

Horlogerie — Montres étanches



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Contents

Page

Foreword	iv
Introduction.....	v
1 Scope.....	1
2 Terms and definitions	1
3 Requirements.....	1
3.1 General	1
3.2 Water resistance to overpressure	1
3.3 Water resistance at shallow depth	2
3.4 Water resistance when a strain is placed on the operative components.....	2
3.5 Water resistance on exposure to thermal shocks	2
4 Test methods	2
4.1 Test conditions	2
4.2 Condensation test	2
4.3 Water resistance tests by immersion.....	3
4.4 Water resistance test by air overpressure.....	4
5 Marking.....	4
Annex A (informative) Precautions in use and notions of physics	5
Bibliography.....	7

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 22810 was prepared by Technical Committee ISO/TC 114, *Horology*, Subcommittee SC 3, *Water-resistant watches*.

This first edition of ISO 22810 cancels and replaces ISO 2281:1990, which has been technically revised.

Introduction

This International Standard has been drawn up to meet a global demand for specifications for watches resistant to immersion in water and to any form of aquatic environment.

This International standard is a reference. It clarifies the terms used, defines the criteria to be met by the product and specifies the marking which may appear on the product.

It stipulates the tests to be applied in the event of a dispute and leaves to the manufacturer the responsibility for defining the tests (within his area of expertise) which he applies at the production stage to his own products if he wishes to be able to guarantee that they satisfy the requirements of this International Standard.

The manufacturer is responsible for stating whether a specific activity falls within the field of use of a particular watch. Similarly, he defines the warranty conditions and the precautions to be taken to maintain the quality of the watch over an extended period of time.

The notion of immersion defines a depth at which protection against water penetration is guaranteed. However, mention is made of the fact that the quality and permanent nature of the protection will depend, in particular, on the sound construction of the watchcase, on the quality with which it has been made and on the product's history (service actions, shocks, etc.).

Annex A gives the user appropriate recommendations to ensure that use of his watch procures lasting satisfaction. Some useful notions of physics are also included.

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Horology — Water-resistant watches

1 Scope

This International Standard establishes the requirements and specifies the test methods used to verify the water resistance of watches.

Moreover, it indicates the marking which the manufacturer is authorized to apply to them.

Divers' watches, specified as such, are covered by ISO 6425 which establishes special requirements.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

water resistance

ability to resist water penetration

2.2

water-resistant watch

watch that resists water penetration

NOTE This International Standard applies to the watch or the watch head.

2.3

overpressure

mechanical strain undergone during immersion, expressed in bar¹⁾, proportional to the depth of immersion

NOTE Explanations and some useful notions of physics can be found in A.2.1 and A.2.2.

2.4

depth of immersion

vertical distance, expressed in metres, separating the immersed watch from the water surface

3 Requirements

3.1 General

Every water-resistant watch shall satisfy the following requirements.

3.2 Water resistance to overpressure

There shall be no condensation on the internal surface of the glass, as revealed by the condensation test performed in accordance with 4.2 and carried out before and after the test described in 4.3.2.

1) 1 bar = 10⁵ Pa = 10⁵ N/m² and corresponds to 10 m water depth.