

# INTERNATIONAL STANDARD

**ISO**  
**3160-1**

Third edition  
1998-11-15

**AMENDMENT 1**  
2000-02-15

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## Watch-cases and accessories — Gold alloy coverings —

### Part 1: General requirements

#### AMENDMENT 1

*Boîtes de montres et leurs accessoires — Revêtements d'alliage d'or —  
Partie 1: Exigences générales  
AMENDEMENT 1*

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Amendment 1 to International Standard ISO 3160-1:1998 was prepared by Technical Committee ISO/TC 114, *Horology*, Subcommittee SC 6, *Precious metal coverings*.

# Watch-cases and accessories — Gold alloy coverings —

## Part 1: General requirements

### AMENDMENT 1

*Page 1, Scope*

Replace the second sentence with the following:

"It is applicable to watch-cases and their accessories, including bracelets when they are permanently attached to the case."

ISO 3160-1:1998/Amd.1:2000(E)

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**ICS 39.040.10**

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## **Watch-cases and accessories — Gold alloy coverings —**

### **Part 1: General requirements**

*Boîtes de montres et leurs accessoires — Revêtements d'alliage d'or —  
Partie 1: Exigences générales*

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International Standard ISO 3160-1 was prepared by Technical Committee ISO/TC 114, *Horology*, Subcommittee SC 6, *Precious metal coverings*.

This third edition cancels and replaces the second edition (ISO 3160-1:1995), which has been technically revised.

ISO 3160 consists of the following parts, under the general title *Watch-cases and accessories — Gold alloy coverings*:

- *Part 1: General requirements*
- *Part 2: Determination of fineness, thickness, corrosion resistance and adhesion*
- *Part 3: Abrasion resistance tests of a type of coating on standard gauges*

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International Organization for Standardization  
Case postale 56 • CH-1211 Genève 20 • Switzerland  
Internet iso@iso.ch

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# Watch-cases and accessories — Gold alloy coverings —

## Part 1: General requirements

### 1 Scope

This part of ISO 3160 specifies general requirements concerning gold alloy coverings.

It is applicable to watch-cases and their accessories, including bracelets.

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 3160. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 3160 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3160-2:1992, *Watch cases and accessories — Gold alloy coverings — Part 2: Determination of fineness, thickness, corrosion resistance and adhesion.*

ISO 3160-3:1993, *Watch cases and accessories — Gold alloy coverings — Part 3: Abrasion resistance tests of a type of coating on standard gauges.*

### 3 Definitions

For the purposes of this part of ISO 3160, the following definitions apply.

#### 3.1 gold-plated covering

covering achieved with a method by which a layer of gold alloy is applied to the component by an electrolytic, chemical or other process

#### 3.2 rolled-gold covering

covering achieved with a method by which a layer of gold alloy is bonded to a sheet or a bar of base metal, the whole then being subjected to reduction by rolling

#### 3.3 gold capping

gold covering which can be obtained by different methods in order to be permanently affixed to the component

**3.4****significant surface**

that part of the surface which is to receive the gold covering and which is essential to the appearance or function of the component

**3.5****fineness**

proportion of pure gold contained in the gold alloy, normally expressed in thousandths

NOTE 41,67 thousandths = 1 carat

**4 Fineness of gold alloy****4.1 Gold-plated covering**

The minimum fineness shall be 585 thousandths.

**4.2 Rolled-gold covering**

The minimum fineness shall be 585 thousandths.

**4.3 Gold capping**

The minimum fineness shall be 585 thousandths.

**5 Measurement of thickness of covering**

The thickness of the covering shall be measured in accordance with one of the methods described in ISO 3160-2.

**6 Thickness of coverings****6.1 Gold-plated covering**

The range of nominal thicknesses shall be the following, in micrometres (formerly known as "microns"):

5 - 10 - 20 - 40 - 80

with a tolerance of -20 %.

**6.2 Rolled-gold covering**

The range of nominal thicknesses shall be the following, in micrometres (formerly known as "microns"):

5 - 10 - 20 - 40 - 80

with a tolerance of -20 %.

**6.3 Gold capping**

The range of nominal thicknesses shall be the following, in micrometres (formerly known as "microns"):

200 - 250 - 300

with a tolerance of -20 %.

## 7 Marking of coverings

7.1 The marking shall comprise:

- a) the letters denoting the type of covering;
- b) the figure giving the nominal thickness in micrometres (formerly known as “microns”);
- c) the marker's mark or mark of responsibility.

The markings shall be durable and normally visible.

7.2 When watch-case components, as given in clause 1, have different thicknesses of gold alloy, only the lowest value is to be marked.

The designation shall express the true composition of each part.

7.3 Marking applies to the main components (backs, middles, bezels, bracelets). It does not apply to crowns, rivets, screws and pins.

7.4 The fineness of the gold alloy shall not be mentioned.

7.5 Marking is obligatory for the coverings defined in 3.1, 3.2 and 3.3 for a nominal thickness of 5  $\mu\text{m}$  and greater. Marking is prohibited for gold coverings of less than 5  $\mu\text{m}$  thickness. The marker's mark or the mark of responsibility shall apply to all coverings.

7.6 The indication of the covering shall be made by combining the letters indicating the method of covering together with the nominal thickness.

- a) Letters indicating the method of covering:
  - GP for gold-plated covering;
  - GR for rolled-gold covering;
  - GC for gold capping.
- b) Indication of covering thickness:
  - the thickness shall be indicated immediately after the indication of the covering method.

### EXAMPLES

GP 10: Gold-plated covering, nominal thickness 10  $\mu\text{m}$

GR 20: Rolled-gold covering, nominal thickness 20  $\mu\text{m}$

GC 250: Gold capping, nominal thickness 250  $\mu\text{m}$ .

## 8 Quality requirements

Gold alloy coverings shall comply with the test requirements specified in ISO 3160-2 and with the tests defined in ISO 3160-3.

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**Descriptors:** time measuring instruments, watches, horological components, watch cases, accessories, metal coatings, gold alloys, gold plating, specifications.

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