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Timekeeping instruments — Movements — Types, dimensions and nomenclature

*Instruments horaires — Mouvements — Formes, dimensions et
nomenclature*

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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 3764 was prepared by Technical Committee ISO/TC 114, *Horology*, Subcommittee SC 7, *Overall dimensions*.

This third edition cancels and replaces the second edition (ISO 3764:1997), of which it constitutes a minor revision.

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Timekeeping instruments — Movements — Types, dimensions and nomenclature

1 Scope

This International Standard specifies the types and fitting dimensions of mechanical and electromechanical watch-movements.

This International Standard is applicable to the four following types of movements:

- Type 1: round;
- Type 2: shaped round;
- Type 3: 5 ½'';
- Type 4: 6 ¾ × 8''.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 286-1, *ISO system of limits and fits — Part 1: Bases of tolerances, deviations and fits*

ISO 6426-2, *Horological vocabulary — Part 2: Technico-commercial definitions.*

3 Terms and definitions

For the purposes of this International Standard, the terms and definitions given in ISO 286-1 and ISO 6426-2, and the following, apply.

3.1 Diameters of movement

3.1.1

casing diameter

d_1

diameter of a plate, or an equivalent part or an assembly unit, by which the movement is located in the watch-case

NOTE The protruding elements of movement parts are not included in the casing diameter if the protrusion does not exceed 1,5 % of a diameter value and if in length it is no more than 10 % of the plate perimeter.

3.1.2

outer diameter

d_2
largest diameter of the movement, on the flange of the plate, of an equivalent part or of an assembly unit

3.2 Thickness of movements

3.2.1 Mechanical type

3.2.1.1

total thickness of the movement

l_1
thickness embracing all the movement parts, including the distance between the dial support surface and the lowest protruding part of the movement

3.2.2 Electromechanical type

3.2.2.1

total thickness of the movement without a battery

l_1
thickness embracing all the movement parts, including the distance between the dial support surface and the lowest protruding part of the movement

3.2.2.2

total thickness of the movement with a battery

l_2
distance between the dial support surface and the lower battery surface

NOTE If the battery is not the most protruding part, the total movement thickness is determined as l_1 .

3.2.2.3

total thickness of the movement including a battery and its fastening clamp

l_3
distance between the dial support surface and the lower surface of the clamp

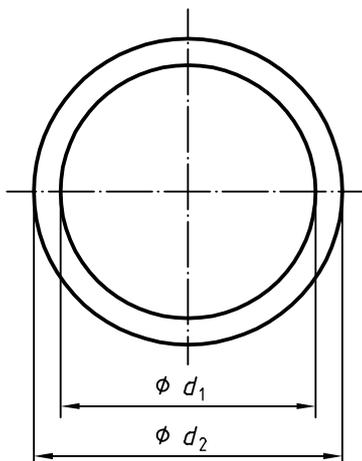
NOTE 1 If the battery with its clamp is not the most protruding part, the total movement thickness is determined as l_1 .

NOTE 2 For watches with analog display, the total thickness of the movement does not include the projection of the hand-fastening elements nor the elements providing electrical contact with the case.

4 Nomenclature of movements and their dimensions

4.1 Type 1: Round movement

See Figure 1 and Table 1.

**Key**

d_1 is the casing diameter

d_2 is the outer diameter

Figure 1 — Round movement (view from the side of the bridges)

Table 1 — Type 1: Round movements

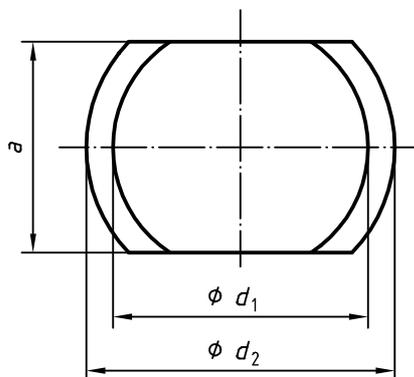
Dimensions in millimetres

d_1 tol. h8	d_2 tol. h8
10,0 *	10,4
12,0	12,4
13,0	13,4
15,3 *	15,7
16,0	16,4
17,2 *	17,6
19,4 *	20,0
21,0	21,6
22,0	22,6
23,3 *	23,9
24,0	24,6
25,6 *	26,2
28,0	28,6
30,0	30,6
36,0	36,8
40,0	40,8

NOTE 1 The values d_1 with an asterisk are the preferred values.
 NOTE 2 The tolerances only apply to metallic movements.
 NOTE 3 See ISO 286-1 for definition of the tolerances.

4.2 Type 2: Shaped round movement

See Figure 2 and Table 2.



Key

- a is the width
- d_1 is the casing diameter
- d_2 is the outer diameter

Figure 2 — Shaped round movement (view from the side of the bridges)

Table 2 — Type 2: Shaped round movements

Dimensions in millimetres

d_1 tol. h8	d_2 tol. h8
10,0	10,4
15,3	15,7
17,2	17,6
17,5	17,9
19,4	20,0
23,3	23,9
25,6	26,2

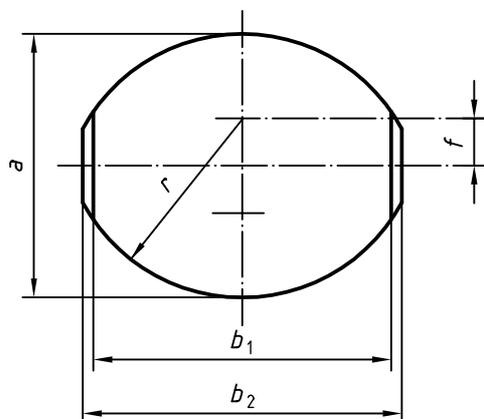
NOTE 1 The tolerances only apply to metallic movements.

NOTE 2 Width a is not specified.

NOTE 3 See ISO 286-1 for definition of the tolerances.

4.3 Type 3: 5 1/2" movement

See Figure 3 and Table 3.



Key

a is the width

b_1 is the fitting length

b_2 is the overall length

f is the offset of the radius centre

r is the oval radius

Figure 3 — 5 1/2" movement (view from the side of the bridges)

Table 3 — Type 3: 5 1/2" movements

Dimensions in millimetres

a tol. h9	b_1 tol. h8	b_2 tol. h9	f	r
13,0	15,15	15,55	2,3	8,8
NOTE 1 The tolerances only apply to metallic movements.				
NOTE 2 See ISO 286-1 for definition of the tolerances.				