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## Photography — Tripod connections

*Photographie — Pièces d'assemblage d'un appareil photographique sur un pied*

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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 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 1222 was prepared by Technical Committee ISO/TC 42, *Photography*.

This third edition cancels and replaces the second edition (ISO 1222:1987), which has been technically revised.

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# Photography — Tripod connections

## 1 Scope

This International Standard specifies the screw connections to be used between a camera and a tripod or other accessories.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 68-2:1998, *ISO general-purpose screw threads — Basic profile — Part 2: Inch screw threads*

## 3 Form, basic dimensions, deviations and tolerances

### 3.1 General

The form and dimensions of connections shall be as given in Figure 1.

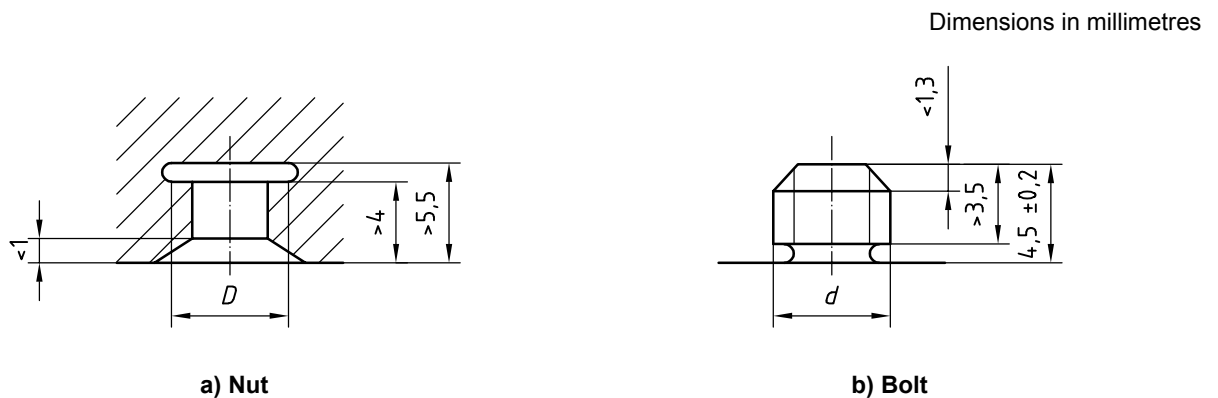


Figure 1 — Dimensions of nut and bolt

### 3.2 Use of stabilizing lock

In the case where the optional stabilizing lock is used, its forms and dimensions shall be in accordance with Figures 2, 4, 5 and 6.

Dimensions in millimetres

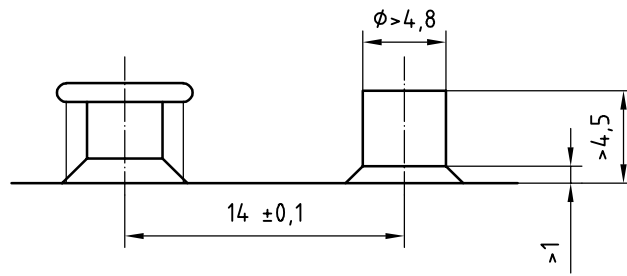


Figure 2 — Dimensions of nut with stabilizing lock

Dimensions in millimetres

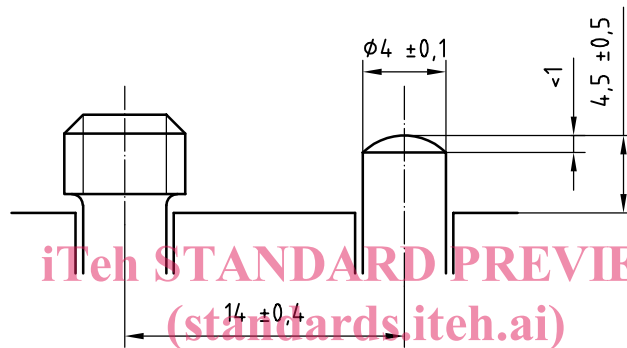


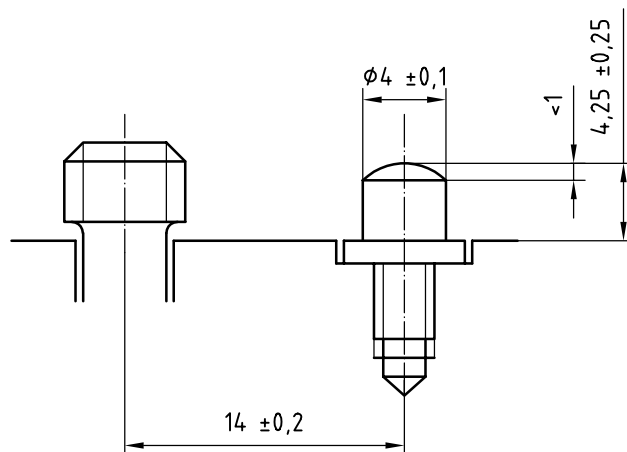
Figure 3 — Dimensions of bolt with stabilizing lock

NOTE The lock pin is sinkable

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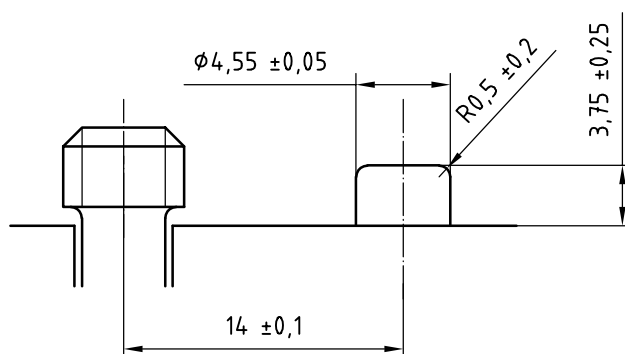
Dimensions in millimetres



NOTE The lock pin is removable.

Figure 4 — Dimensions of bolt with type B stabilizing lock

Dimensions in millimetres



NOTE 1 The lock pin is fixed.

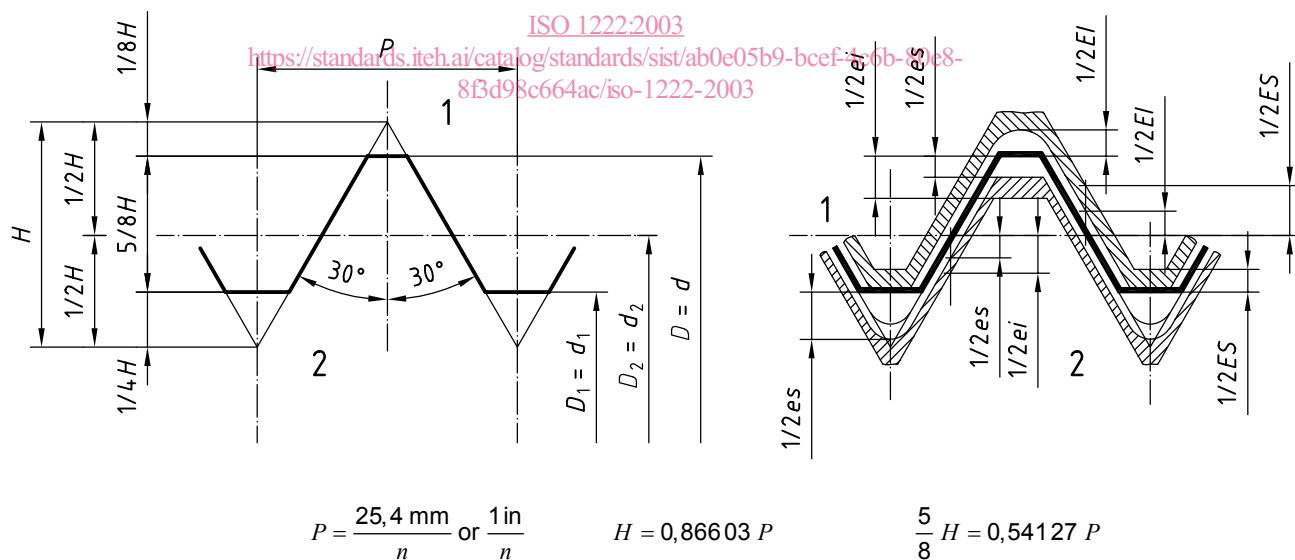
NOTE 2 The clearance between the bolt and the hole has a diameter of 0,2 mm.

Figure 5 — Dimensions of bolt with type C stabilizing lock

The dimension 14 mm is the distance between the centre of the hole for the bolt and that of the lock pin.

### 3.3 Screw threads

Screw thread dimensions shall be in accordance with Figure 6 and Tables 1 and 2. The basic profile of screw threads shall be in accordance with ISO 68-2:1998.



#### Key

- 1 nut
- 2 bolt

Figure 6 — Nut and bolt screw threads

Table 1 — Nut threads

UNC NOD size in	Number of threads per 25,4 mm (1 in) <i>n</i>	Pitch <i>P</i> mm	Diameters	Major diameter <i>D</i> mm	Pitch diameter <i>D</i> <sub>2</sub> mm	Minor diameter <i>D</i> <sub>1</sub> mm	
1/4	20	1,270	Basic dimensions		6,350	5,525	4,975
			Deviations	upper ( <i>ES</i> )	—	+ 0,295	+ 0,292
				lower ( <i>EI</i> )	+ 0,110	+ 0,110	0
			Tolerance		—	0,185	0,292
3/8	16	1,588	Basic dimensions		9,525	8,494	7,806
			Deviations	upper ( <i>ES</i> )	—	+ 0,366	+ 0,357
				lower ( <i>EI</i> )	+ 0,150	+ 0,150	0
			Tolerance		—	0,216	0,357

Table 2 — Bolt threads

UNC NOD size in	Number of threads per 25,4 mm (1 in) <i>n</i>	Pitch <i>P</i> mm	Diameters	Major diameter <i>D</i> mm	Pitch diameter <i>D</i> <sub>2</sub> mm	Minor diameter <i>D</i> <sub>1</sub> mm	
1/4	20	1,270	Basic dimensions		6,350	5,525	4,975
			Deviations	upper ( <i>es</i> )	- 0,028	- 0,028	- 0,212
				upper ( <i>ei</i> )	- 0,338	- 0,170	—
			Tolerance		0,310	0,142	—
3/8	16	1,588	Basic dimensions		9,525	8,494	7,806
			Deviations	upper ( <i>es</i> )	- 0,033	- 0,033	- 0,262
				upper ( <i>ei</i> )	- 0,393	- 0,199	—
			Tolerance		0,360	0,166	—

NOTE Deviations and tolerances in Tables 1 and 2 refer basically to USC 1A and 1B (with minor changes for deviations *D* and *D*<sub>2</sub> to allow international interchangeability with existing apparatus).

#### 4 Bearing face between a nut side and a bolt side

Dimensions of the bearing faces shall be chosen according to the camera, tripod or accessories.

The bearing face shall be free from protrusions. If there is a recess, the diameter of the recess around the bolt shall not be larger than 12 mm (for the 1/4 in size) or 20 mm (for the 3/8 in size), and the depth of the recess shall be as small as possible.



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