
Photography — Tripod connections

Photographie — Éléments de fixation sur le trépied

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ISO 1222:2010

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Reference number
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Foreword

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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 fourth edition cancels and replaces the third edition (ISO 1222:2003), of which it constitutes a minor revision. It also incorporates the Technical Corrigendum ISO 1222:2003/Cor.1:2003.

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Photography — Tripod connections

1 Scope

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

2 Normative references

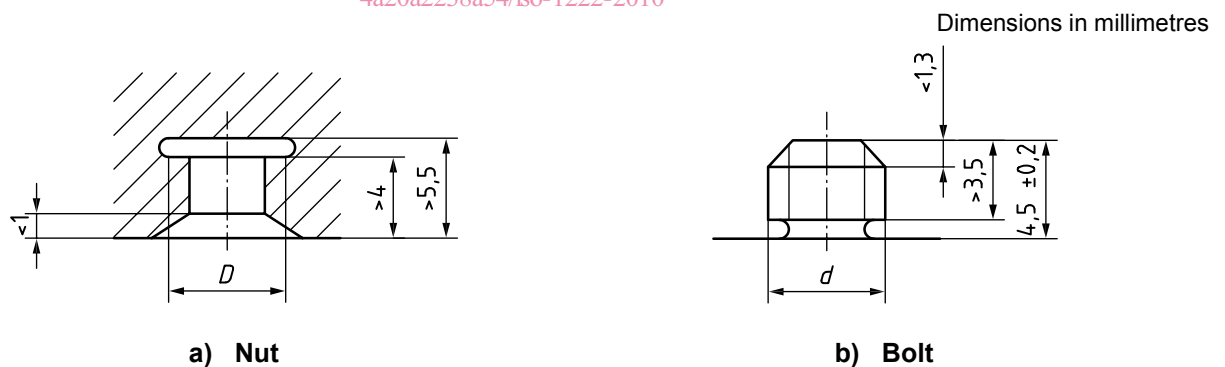
The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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.



Key

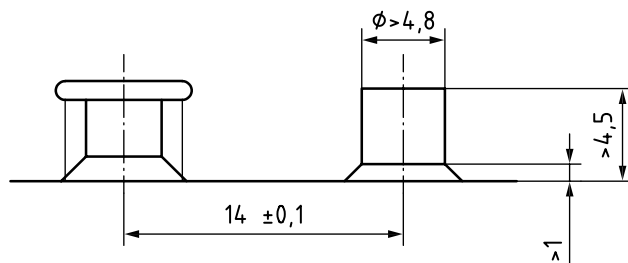
- D major diameter of nut
- d major diameter of bolt

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, 3, 4 and 5.

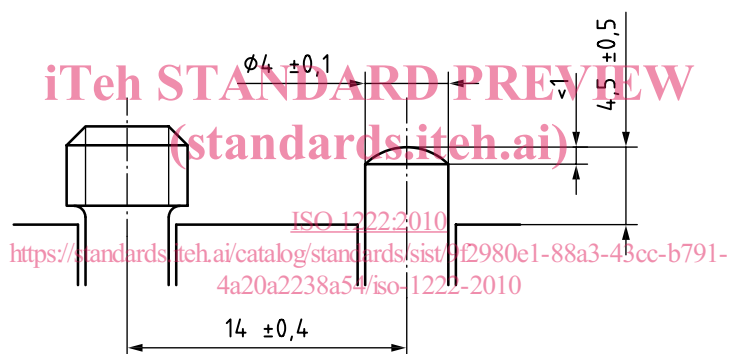
Dimensions in millimetres



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

Figure 2 — Dimensions of nut with stabilizing lock

Dimensions in millimetres

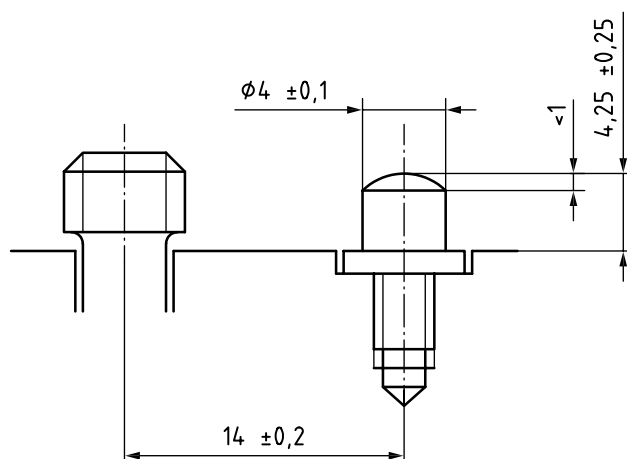


NOTE 1 The lock pin is sinkable.

NOTE 2 The dimension 14 mm is the distance between the centre of the hole for the bolt and that of the lock pin.

Figure 3 — Dimensions of bolt with type A stabilizing lock

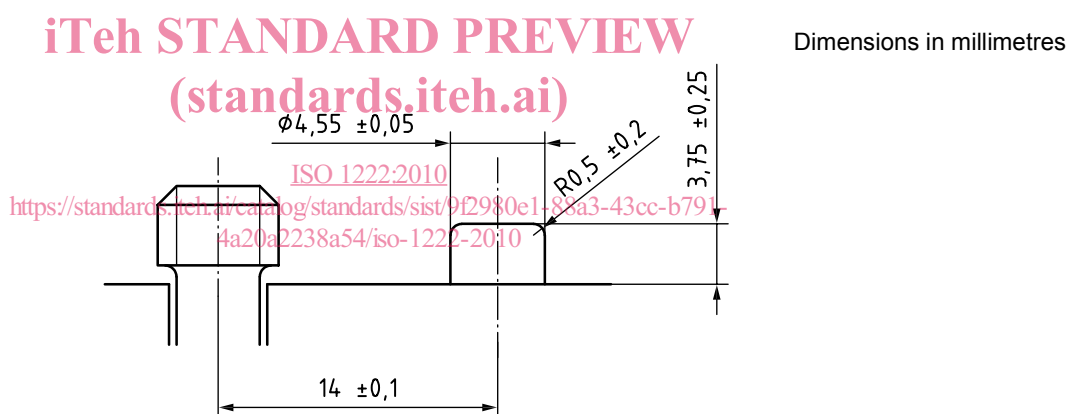
Dimensions in millimetres



NOTE 1 The lock pin is removable.

NOTE 2 The dimension 14 mm is the distance between the centre of the hole for the bolt and that of the lock pin.

Figure 4 — Dimensions of bolt with type B stabilizing lock



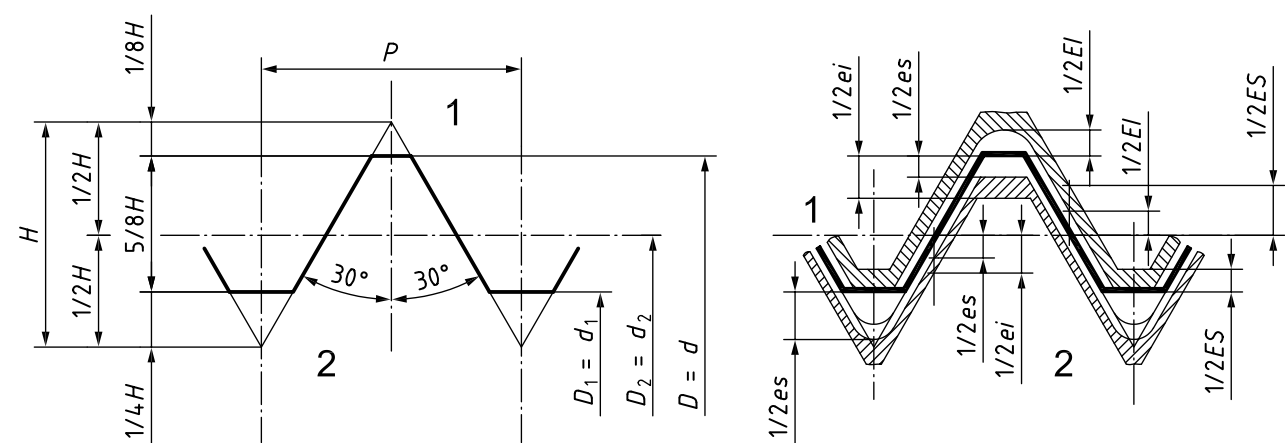
NOTE 1 The lock pin is sinkable or removable.

NOTE 2 The dimension 14 mm is the distance between the centre of the hole for the bolt and that of the lock pin.

Figure 5 — Dimensions of bolt with type C stabilizing lock

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.



$P = \frac{25,4}{n} \text{ mm or } P = \frac{1}{n} \text{ in}$

$H = 0,86603 P$

$\frac{5}{8} H = 0,54127 P$

Key

- 1 nut
- 2 bolt

H height of fundamental triangle (see ISO 68-2:1998, Figure 1)

NOTE For other dimensions, see Tables 1 and 2.

Figure 6 — Nut and bolt screw threads

Table 1 — Nut threads

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

NOTE Deviations and tolerances basically refer to USC 1A and 1B (with minor changes for deviations D and D₂ to permit international interchangeability with existing apparatus).

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> ₂ mm	Minor diameter <i>d</i> ₁ 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
				lower (<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
				lower (<i>ei</i>)	– 0,393	– 0,199	—
			Tolerance		0,360	0,166	—
NOTE Deviations and tolerances basically refer to USC 1A and 1B (with minor changes for deviations <i>d</i> and <i>d</i> ₂ to permit international interchangeability with existing apparatus).							

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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.
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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.