INTERNATIONAL STANDARD

ISO 3317

Third edition
2015-05-01

Assembly tools for screws and nuts — Square drive adaptor with hexagon or cylindrical flat drive, for power socket wrenches

Outils de manoeuvre pour vis et écrous — Adaptateurs à carré mâle avec entraînement hexagone ou cylindrique mâle, pour douilles machines

Reference number
ISO 3317:2015(E)

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

The committee responsible for this document is ISO/TC 29, *Small tools*, SC 10, *Assembly tools for screws and nuts, pliers and nippers*.

This third edition cancels and replaces the second edition (ISO 3317:2009), which has been technically revised with the following changes:

a) Form C was added;

b) dimensions for d_{min} were revised;

c) dimensions for l_1 were partly revised.

Assembly tools for screws and nuts — Square drive adaptor with hexagon or cylindrical flat drive, for power socket wrenches

1 Scope

This International Standard prescribes the technical specifications for square drive adaptor hexagon or cylindrical flat inserts for power socket wrenches. It applies to square drive adaptor with hexagon drive or with cylindrical flat end drive as defined in ISO 1173, and to driving squares for power socket wrenches as defined in ISO 1174-2.

Square drive adaptors with hexagon drive for power socket wrenches are listed under number 5 2 00 02 0 in ISO 1703.

2 Normative references

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

ISO 1173, *Assembly tools for screws and nuts — Drive ends for hand- and machine-operated screwdriver bits and connecting parts — Dimensions, torque testing*

ISO 1174-2, *Assembly tools for screws and nuts — Driving squares — Part 2: Driving squares for power socket tools*

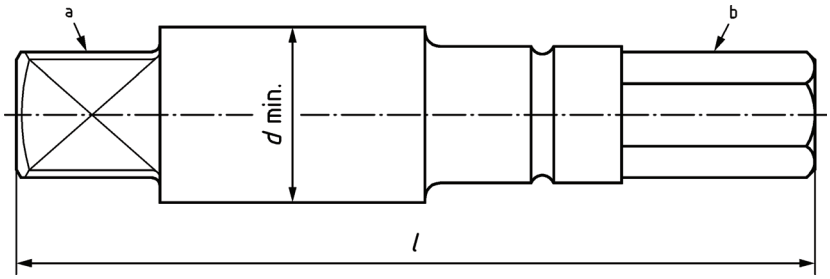
3 Dimensions

Figure 1 and Table 1 show the recommended combinations of square drive adaptor for power socket wrenches in accordance with ISO 1174-2.

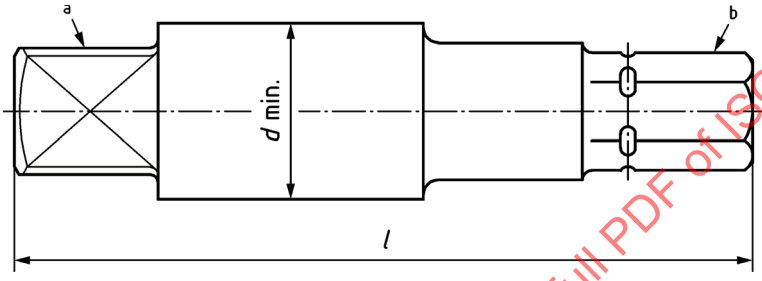
The shape of the liaison between the tip and the end is at the discretion of the manufacturer.

4 Technical requirements

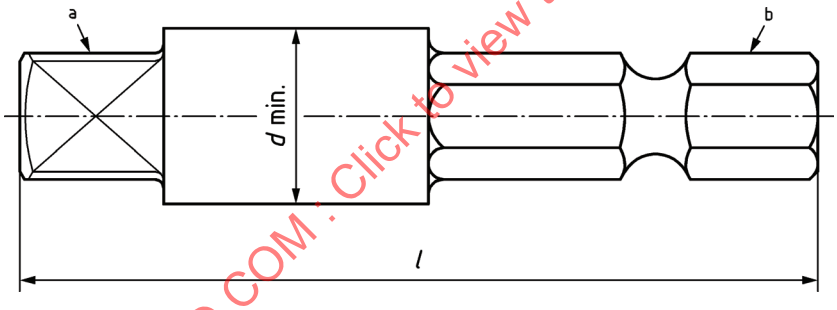
The entire square drive adaptor shall be through hardened to a minimum hardness of 52 HRC.



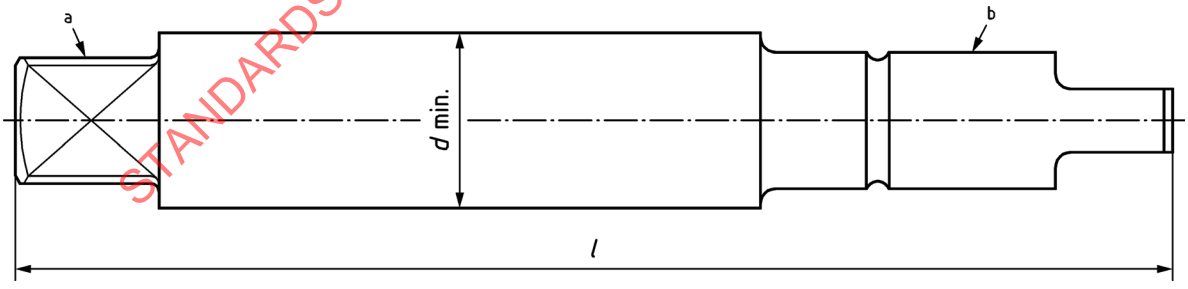
a) Form A



b) Form C



c) Form E



d) Form G

Key

a Driving squares for power socket tools (in accordance with ISO 1174-2).

b Drive end (in accordance with ISO 1173).

Figure 1 — Square drive adaptors for power socket wrenches

Table 1 — Recommended combinations between driving squares and drive end

Dimensions in millimetres

Nominal dimensions of driving squares [a]		Form and dimensions of male hexagon or cylindrical flat end [b]										d_{min}
		A 3	A 5,5		C 6,3		E 6,3		E 8	E 11,2	G 7	
	l ± 1	50	50	100	25	50	50	100	75	75	75	
6,3		x	x	x	x	x	x	x	x		x	7,8
10			x	x			x	x	x	x	x	12,2
12,5									x	x		16,3

[a] In accordance with ISO 1174-2.

[b] In accordance with ISO 1173.

5 Torque test

The drive end shall be fully engaged in a female holder in accordance with ISO 1173. The drive end shall be inserted in a test block in accordance with ISO 1174-2 with a minimum hardness of 62 HRC.

The test force shall be applied smoothly until the minimum torque value given in Table 2.

Following the application of the test torque, any possible damage or deformation shall not affect the usability of the tool. The adaptor shall then be loaded until failure. The adaptor shall show a permanent deformation before failure.

Table 2 — Torque test

Nominal dimension of driving squares [a]	Form and dimensions of male hexagon or cylindrical flat end [b]	Test torque min. Nm
6,3	A 3	7,6
	A 5,5	47
	C 6,3	62
	E 6,3	
	E 8	
	G 7	25
10	A 5,5	47
	E 6,3	71
	E 8	144
	E 11,2	202
	G 7	25
12,5	E 8	144
	E 11,2	396

[a] In accordance with ISO 1174-2.

[b] In accordance with ISO 1173.

6 Designation

A square drive adaptor for power socket wrenches in accordance with ISO 3317 is designated as follows:

a) "Adaptor";

b) a reference to this International Standard, i.e. ISO 3317;

c) the form and the dimensions of the drive end (in accordance with ISO 1173);

d) a hyphen;

e) the form and dimensions of the square drive adaptor for power socket wrenches (in accordance with ISO 1174-2).

EXAMPLE A square drive adaptor for power socket wrenches with a drive end E 6,3 (in accordance with ISO 1173) and square drive socket wrenches dimensions F 10 (in accordance with ISO 1174-2) is designated as follows:

Adaptor ISO 3317 E 6,3 – F 10

7 Marking

Square drive adaptors with hexagon or cylindrical flat drive, for power square drive socket wrenches, in accordance with ISO 3317, shall be marked permanently and legibly with the name or trademark of the manufacturer or supplier.

If not marked on the tool itself, the following items shall be given at least on the smallest commonly used packaging unit:

a) the form and dimensions of the hexagon or cylindrical flat drive end;

b) the form and dimensions of the square drive end;

c) the length in millimetres.

EXAMPLE **E 6,3 – F 10 × 100**

