INTERNATIONAL STANDARD

ISO 3317

Second edition
2009-07-01

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

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

Reference number
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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 3317 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 10, *Assembly tools for screws and nuts, pliers and nippers*.

This second edition cancels and replaces the first edition (ISO 3317:1974), which has been technically revised as follows:

a) addition of Form E;

b) revision of the dimensions for $d_{\text{min.}}$ and l.

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 adaptors 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 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 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*

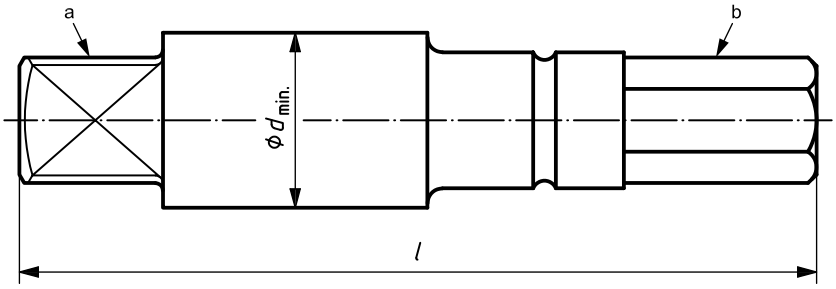
3 Dimensions

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

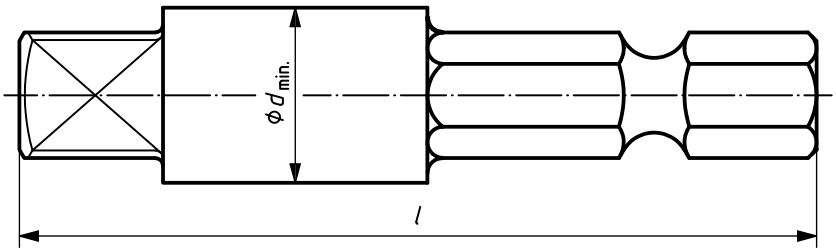
The shape of the liaison between the tip and the end is at the discretion of the manufacturer.

4 Technical requirements

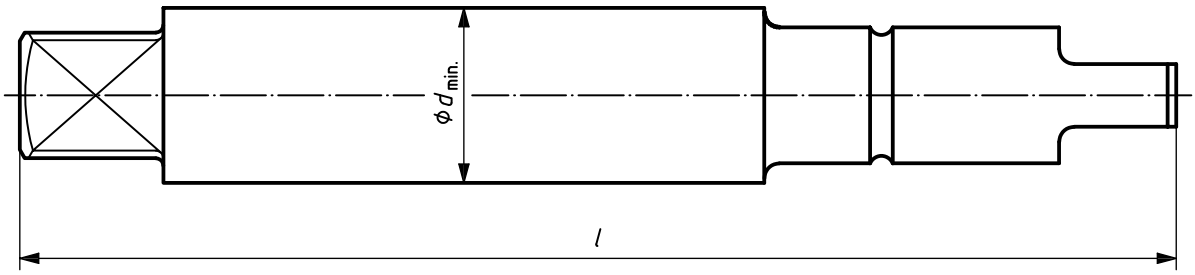
The entire square drive adaptor shall be through-hardened to a minimum hardness of 52 HRC.



a) Form A



b) Form E



c) Form G

[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 of 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		E 6,3		E 8	E 11,2	G 7	
	$l \pm 1$	50	50	100	50	100	75	75	75	
6,3		x	x	x	x	x	x		x	8,0
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 up to 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
	E 6,3	62
	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 this International Standard shall be designated by:

a) “Adaptor”;

b) reference to this International Standard, i.e. ISO 3317:2009;

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 drive end E 6,3 (in accordance with ISO 1173) and square drive socket wrenches of 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**

Bibliography

[1] ISO 1703, *Assembly tools for screws and nuts — Designation and nomenclature*

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