
**Hexalobular socket raised countersunk
(oval) head tapping screws**

Vis à tôle à tête fraisée bombée à six lobes internes

STANDARDSISO.COM : Click to view the full PDF of ISO 14587:2011



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

STANDARDSISO.COM : Click to view the full PDF of ISO 14587:2011



COPYRIGHT PROTECTED DOCUMENT

© ISO 2011

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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 14587 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 10, *Product standards for fasteners*.

This second edition cancels and replaces the first edition (ISO 14587:2001), of which it constitutes a minor revision.

[STANDARDSISO.COM](https://standardsiso.com) : Click to view the full PDF of ISO 14587:2011

Hexalobular socket raised countersunk (oval) head tapping screws

1 Scope

This International Standard specifies the characteristics of hexalobular socket raised countersunk (oval) head tapping screws with thread sizes from ST2,9 to ST6,3 inclusive.

If, in special cases, specifications other than those listed in this International Standard are required, they can be selected from existing International Standards, for example ISO 1478, ISO 2702, ISO 4759-1.

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 225, *Fasteners — Bolts, screws, studs and nuts — Symbols and descriptions of dimensions*

ISO 1478, *Tapping screws thread*

ISO 2702, *Heat-treated steel tapping screws — Mechanical properties*

ISO 3269, *Fasteners — Acceptance inspection*

ISO 4042, *Fasteners — Electroplated coatings*

ISO 4759-1, *Tolerances for fasteners — Part 1: Bolts, screws, studs and nuts — Product grades A, B and C*

ISO 7721, *Countersunk head screws — Head configuration and gauging*

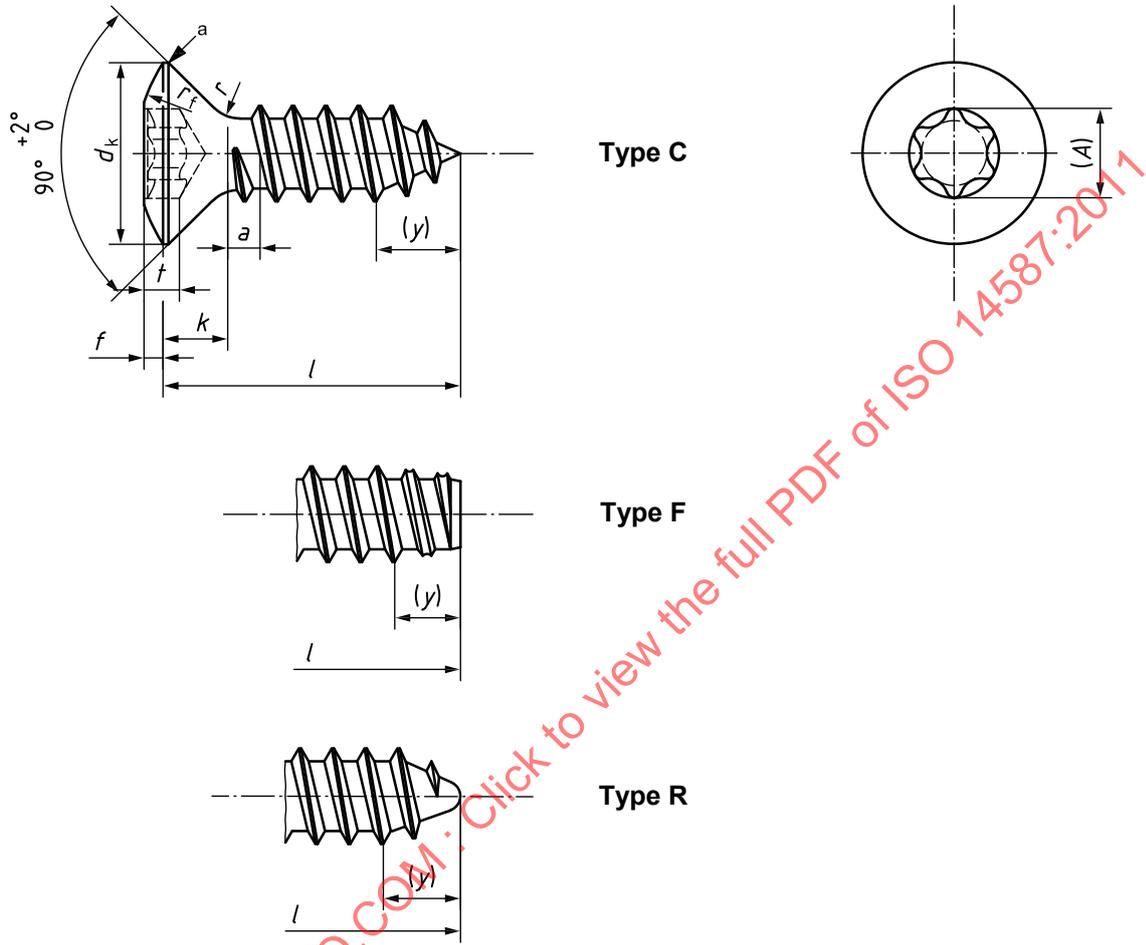
ISO 10664, *Hexalobular internal driving feature for bolts and screws*

ISO 10683, *Fasteners — Non-electrolytically applied zinc flake coatings*

3 Dimensions

See Figure 1 and Table 1.

Symbols and descriptions of dimensions are specified in ISO 225.



^a Edge rounded or flat.

Figure 1

Table 1 — Dimensions

Dimensions in millimetres

| Thread sizes | | ST2,9 | ST3,5 | ST4,2 | ST4,8 | ST5,5 | ST6,3 | |
|---|-------------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|
| p^a | | 1,1 | 1,3 | 1,4 | 1,6 | 1,8 | 1,8 | |
| a | | 1,1 | 1,3 | 1,4 | 1,6 | 1,8 | 1,8 | |
| d_k^b | theoretical | max. | 6,3 | 8,2 | 9,4 | 10,4 | 11,5 | 12,6 |
| | actual | max. | 5,5 | 7,3 | 8,4 | 9,3 | 10,3 | 11,3 |
| | | min. | 5,2 | 6,9 | 8,0 | 8,9 | 9,9 | 10,9 |
| f | | ≈ | 0,7 | 0,8 | 1 | 1,2 | 1,3 | 1,4 |
| k^b | | max. | 1,7 | 2,35 | 2,6 | 2,8 | 3 | 3,15 |
| r | | max. | 1,2 | 1,4 | 1,6 | 2 | 2,2 | 2,4 |
| r_f | | ≈ | 6,0 | 8,5 | 9,5 | 9,5 | 11 | 12 |
| y ref. | Type C | | 2,6 | 3,2 | 3,7 | 4,3 | 5 | 6 |
| | Type F | | 2,1 | 2,5 | 2,8 | 3,2 | 3,6 | 3,6 |
| | Type R | | — | 2,7 | 3,2 | 3,6 | 4,3 | 5 |
| Hexalobular socket | Socket No. | | 10 | 15 | 20 | 25 | 25 | 30 |
| | A | ref. | 2,8 | 3,35 | 3,95 | 4,5 | 4,5 | 5,6 |
| | t | max. | 1,27 | 1,40 | 1,80 | 2,03 | 2,03 | 2,42 |
| | | min. | 1,01 | 1,14 | 1,42 | 1,65 | 1,65 | 2,02 |
| l^c | | | | | | | | |
| | Type C and Type R | | Type F | | | | | |
| nom. | min. | max. | min. | max. | | | | |
| 4,5 | 3,7 | 5,3 | 3,7 | 4,5 | — | — | — | — |
| 6,5 | 5,7 | 7,3 | 5,7 | 6,5 | — | — | — | — |
| 9,5 | 8,7 | 10,3 | 8,7 | 9,5 | — | — | — | — |
| 13 | 12,2 | 13,8 | 12,2 | 13,0 | | | | |
| 16 | 15,2 | 16,8 | 15,2 | 16,0 | | | | |
| 19 | 18,2 | 19,8 | 18,2 | 19,0 | | | | |
| 22 | 21,2 | 22,8 | 20,7 | 22,0 | | | | |
| 25 | 24,2 | 25,8 | 23,7 | 25,0 | | | | |
| 32 | 30,7 | 33,3 | 30,7 | 32,0 | | | | |
| 38 | 36,7 | 39,3 | 36,7 | 38,0 | | | | |
| 45 | 43,7 | 46,3 | 43,5 | 45,0 | | | | |
| 50 | 48,7 | 51,3 | 48,5 | 50,0 | | | | |
| NOTE Preferred lengths are the ones between the bold stepped lines. | | | | | | | | |
| ^a P is the pitch of the thread. | | | | | | | | |
| ^b Gauging of head dimensions is specified in ISO 7721. | | | | | | | | |
| ^c Sizes with lengths marked with a dash (—) in the table cannot be manufactured. | | | | | | | | |

4 Specifications and reference International Standards

See Table 2.

Table 2 — Specifications and reference International Standards

| | | |
|------------------------------|------------------------|---|
| Material | | Steel, as specified in ISO 2702 |
| Thread | International Standard | ISO 1478 |
| Mechanical properties | International Standard | ISO 2702 |
| Tolerances | Product grade | A |
| | International Standard | ISO 4759-1 |
| Hexalobular socket | International Standard | ISO 10664 |
| Finish — Coating | | As processed |
| | | Requirements for electroplating are specified in ISO 4042. |
| | | Requirements for non-electrolytically applied zinc flake coatings are specified in ISO 10683. |
| | | Additional requirements or other finishes or coatings shall be agreed between the supplier and the purchaser. |
| Acceptability | | Acceptance inspection is specified in ISO 3269. |

5 Designation

EXAMPLE A hexalobular socket raised countersunk (oval) head tapping screw with thread size ST3,5, nominal length $l = 16$ mm, round end type R is designated as follows:

Tapping screw ISO 14587 - ST3,5 × 16 - R