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

*Vis à tôle à tête fraisée bombée à six lobes internes*



Reference number  
ISO 14587:2011(E)

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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 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.



# 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*

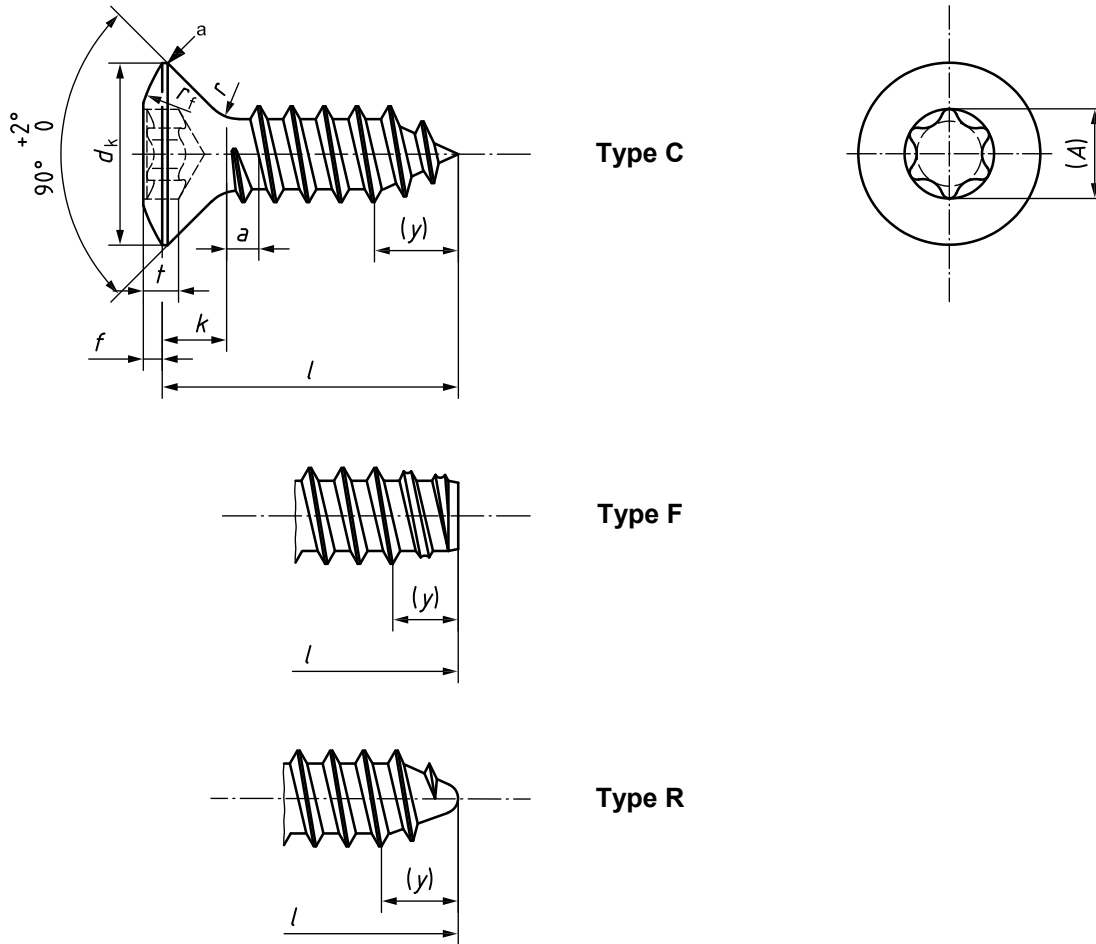
ISO 10664, *Hexalobular internal driving feature for bolts and screws*

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		
$f$		$\approx$	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		
$r_f$		$\approx$	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.		<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>25</b>	<b>30</b>		
	$A$	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.						
<b>4,5</b>	3,7	5,3	3,7	4,5	—	—	—	—	—	—
<b>6,5</b>	5,7	7,3	5,7	6,5	—	—	—	—	—	—
<b>9,5</b>	8,7	10,3	8,7	9,5	—	—	—	—	—	—
<b>13</b>	12,2	13,8	12,2	13,0	—	—	—	—	—	—
<b>16</b>	15,2	16,8	15,2	16,0	—	—	—	—	—	—
<b>19</b>	18,2	19,8	18,2	19,0	—	—	—	—	—	—
<b>22</b>	21,2	22,8	20,7	22,0	—	—	—	—	—	—
<b>25</b>	24,2	25,8	23,7	25,0	—	—	—	—	—	—
<b>32</b>	30,7	33,3	30,7	32,0	—	—	—	—	—	—
<b>38</b>	36,7	39,3	36,7	38,0	—	—	—	—	—	—
<b>45</b>	43,7	46,3	43,5	45,0	—	—	—	—	—	—
<b>50</b>	48,7	51,3	48,5	50,0	—	—	—	—	—	—
NOTE Preferred lengths are the ones between the bold stepped lines.										
<sup>a</sup> $P$ is the pitch of the thread.										
<sup>b</sup> Gauging of head dimensions is specified in ISO 7721.										
<sup>c</sup> 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**

<b>Material</b>		Steel, as specified in ISO 2702
<b>Thread</b>	International Standard	ISO 1478
<b>Mechanical properties</b>	International Standard	ISO 2702
<b>Tolerances</b>	Product grade	A
	International Standard	ISO 4759-1
<b>Hexalobular socket</b>	International Standard	ISO 10664
<b>Finish — Coating</b>		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.
<b>Acceptability</b>		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**





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**ICS 21.060.10**

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