



**SLOVENSKI STANDARD**  
**SIST ISO 10509:2015**

**01-marec-2015**

**Nadomešča:**  
**SIST ISO 10509:1996**

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**Pločevinski vijaki s šestrobo glavo s krajcem**

Hexagon flange head tapping screws

**iTeh STANDARD PREVIEW**  
Vis à tôle à tête hexagonale à embase cylindro-tronconique  
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**Ta slovenski standard je istoveten z ~~SIST ISO 10509:2015~~ ISO 10509:2012**

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**ICS:**

21.060.10      Sorniki, vijaki, stebelni vijaki      Bolts, screws, studs

**SIST ISO 10509:2015**

**en,fr**

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# INTERNATIONAL STANDARD

**ISO  
10509**

Second edition  
2012-05-15

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## Hexagon flange head tapping screws

*Vis à tôle à tête hexagonale à embase cylindro-tronconique*

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Reference number  
ISO 10509:2012(E)

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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 10509 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 13, *Fasteners with non-metric thread*.

This second edition cancels and replaces the first edition (ISO 10509:1992), which has been technically revised. In particular, Clauses 2 and 5, Tables 1 and 2, as well as Figures 1 and A.1 have been technically revised.

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# Hexagon flange head tapping screws

## 1 Scope

This International Standard specifies hexagon flange head tapping screws with threads from ST2,2 up to and including ST9,5.

## 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 3506-4, *Mechanical properties of corrosion-resistant stainless steel fasteners — Part 4: Tapping screws*

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 8992, *Fasteners — General requirements for bolts, screws, studs and nuts*

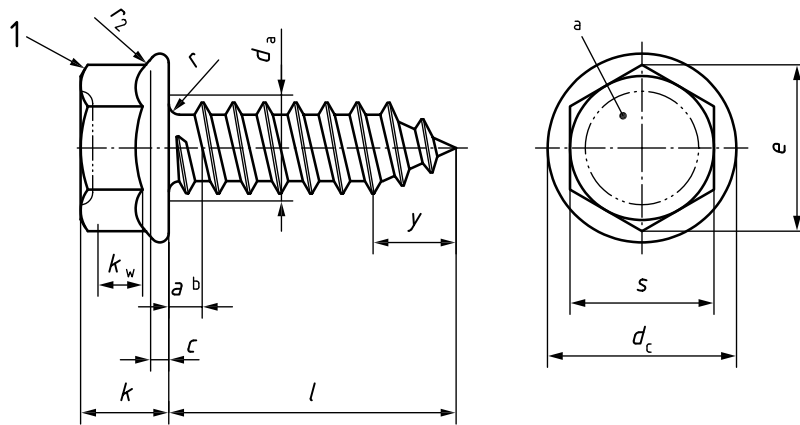
ISO 10683, *Fasteners — Non-electrolytically applied zinc flake coatings*

ISO 16048, *Passivation of corrosion-resistant stainless-steel fasteners*

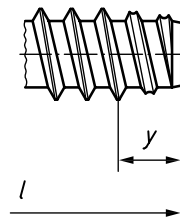
## 3 Dimensions

For the dimensions, see Figure 1 and Table 1.

Symbols and descriptions of dimensions are specified in ISO 225.



a) Type C



b) Type F



c) Type R

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**Key**

- 1 chamfer or radius
- a Optional indentation.
- b Dimension  $a$  is to be measured at the core diameter of the first full thread.

**Figure 1 — Hexagon flange head tapping screw**



Table 1 — Dimensions

Dimensions in millimetres

Thread		ST2,2	ST2,9	ST3,5	ST4,2	ST4,8	ST5,5	ST6,3	ST8	ST9,5	
$p^a$		0,8	1,1	1,3	1,4	1,6	1,8	1,8	2,1	2,1	
$a$	max.	0,8	1,1	1,3	1,4	1,6	1,8	1,8	2,1	2,1	
$d_a$	max.	2,8	3,5	4,1	4,9	5,6	6,3	7,3	9,2	10,7	
$d_c$	max.	4,5	6,4	7,5	8,5	10,0	11,2	12,8	16,8	21,0	
	min.	4,1	5,9	6,9	7,8	9,3	10,3	11,8	15,5	19,3	
$c$	min.	0,3	0,4	0,5	0,6	0,6	0,8	1,0	1,2	1,4	
$s$	nom. = max.	3,00	4,00	5,00	5,50	7,00	7,00	8,00	10,00	13,00	
	min.	2,86	3,82	4,82	5,32	6,78	6,78	7,78	9,78	12,73	
$e$	min.	3,16	4,27	5,36	5,92	7,55	7,55	8,66	10,89	14,16	
$k$	max.	2,2	3,2	3,8	4,3	5,2	6,0	6,7	8,6	10,7	
$k_w$	min.	0,85	1,25	1,60	1,80	2,20	2,50	2,80	3,70	4,60	
$r$	min.	0,1	0,1	0,1	0,2	0,2	0,2	0,3	0,4	0,4	
$r_2$	max.	0,1	0,2	0,2	0,2	0,3	0,3	0,4	0,5	0,6	
$y$	ref.	Type C	2,0	2,6	3,2	3,7	4,3	5,0	6,0	7,5	8,0
		Type F	1,6	2,1	2,5	2,8	3,2	3,6	3,6	4,2	4,2
		Type R	—	—	2,7	3,2	3,6	4,3	5,0	6,3	—
$l^b$		Type C and type R		Type F		<p style="text-align: center;">iTech STANDARD PREVIEW (standards.itech.ai)</p> <p style="text-align: center;">SIST ISO 10509:2015</p> <p style="text-align: center;"><a href="https://standards.itech.ai/catalog/standards/sist/2bd4f23c-20ff-4d37-87a2-1c5296a354d5/sist-iso-10509-2015">https://standards.itech.ai/catalog/standards/sist/2bd4f23c-20ff-4d37-87a2-1c5296a354d5/sist-iso-10509-2015</a></p>					
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							
<p><sup>a</sup> <math>P</math> is the pitch of the thread.</p> <p><sup>b</sup> Sizes with lengths marked with a dash (—) shall not be manufactured.</p>											