

INTERNATIONAL STANDARD

ISO 4018

Third edition
1999-08-15

Hexagon head screws — Product grade C

Vis à tête hexagonale entièrement filetées — Grade C

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ISO 4018:1999

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Reference number
ISO 4018:1999(E)

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 3.

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.

International Standard ISO 4018 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

This third edition cancels and replaces the second edition (ISO 4018:1988) which has been technically revised.

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Introduction

This International Standard is part of the complete ISO product standard series on external hexagon drive fasteners. The series comprises:

- a) hexagon head bolts (ISO 4014 to ISO 4016 and ISO 8765);
- b) hexagon head screws (ISO 4017, ISO 4018 and ISO 8676);
- c) hexagon nuts (ISO 4032 to ISO 4036, ISO 8673 to ISO 8675);
- d) hexagon bolts with flange (ISO 4162 and ISO 15071);
- e) hexagon nuts with flange (ISO 4161 and ISO 10663);
- f) structural bolts and nuts (ISO 4775, ISO 7411 to ISO 7414 and ISO 7417).

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Hexagon head screws — Product grade C

1 Scope

This International Standard specifies the characteristics of hexagon head screws with threads from M5 up to and including M64, of product grade C.

NOTE This type of product is the same as that covered by ISO 4016 with the exception of threading up to head.

If, in special cases, specifications other than those listed in this International Standard are required, they should be selected from existing International Standards, for example ISO 724, ISO 888, ISO 898-1, ISO 965-1 and ISO 4759-1.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 225:1983, *Fasteners — Bolts, screws, studs and nuts — Symbols and designations of dimensions.*

ISO 724:1993, *ISO general-purpose metric screw threads — Basic dimensions.*

ISO 888:1976, *Bolts, screws and studs — Nominal lengths, and thread lengths for general purpose bolts.*

ISO 898-1:1999, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs.*

ISO 965-1:1998, *ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data.*

ISO 3269:—¹⁾, *Fasteners — Acceptance inspection.*

¹⁾ To be published. (Revision of ISO 3269:1988)

ISO 4042:1999, *Fasteners — Electroplated coatings*.

ISO 4759-1:—²⁾, *Tolerances for fasteners — Part 1: Bolts, screws, studs and nuts — Product grades A, B and C*.

ISO 8992:1986, *Fasteners — General requirements for bolts, screws, studs and nuts*.

ISO 10683:—³⁾, *Fasteners — Non-electrolytically applied zinc flake coatings*.

3 Dimensions

See Figure 1 and Tables 1 and 2

Symbols and description of dimensions are defined in ISO 225.

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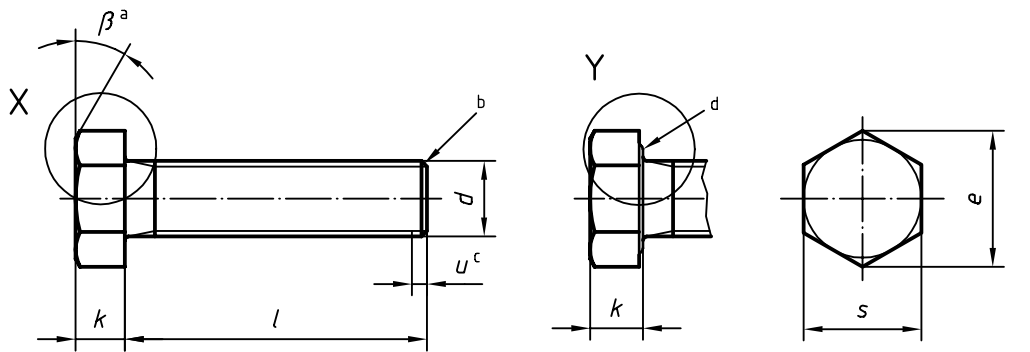
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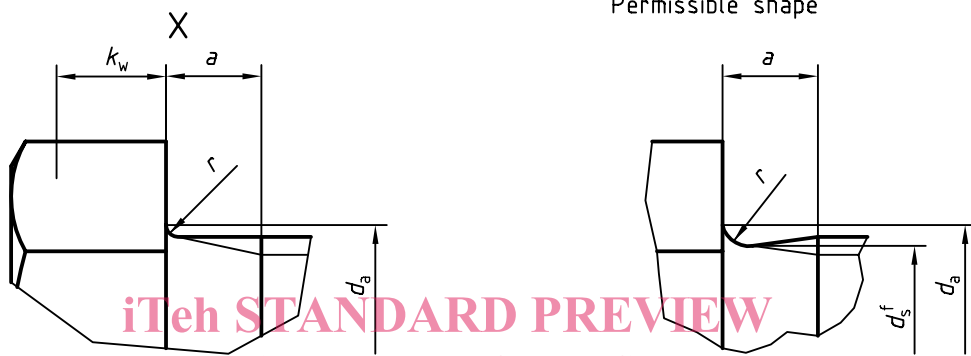
²⁾ To be published. (Revision of ISO 4759-1:1978)

³⁾ To be published.

Dimensions in millimetres



Permissible shape

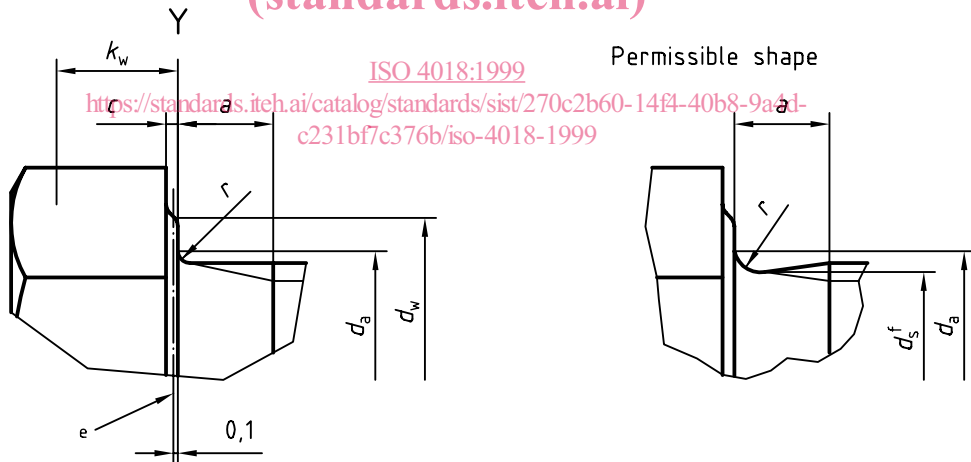


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Permissible shape



- a $\beta = 15^\circ$ to 30°
- b End without special requirements
- c Incomplete thread $u \leq 2P$
- d Washer face permissible
- e Reference datum for d_w
- f $d_s \approx$ pitch diameter

Figure 1

Table 1 — Preferred threads

Thread (d)	Dimensions in millimetres														
	M5	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56	M64	
<i>p</i> ^a	0,8	1	1,25	1,5	1,75	2	2,5	3	3,5	4	4,5	5	5,5	6	
<i>a</i>	max.	3	4,00	4,5	5,30	6	7,5	9	10,5	12	13,5	15	16,5	18	
	min.	0,8	1	1,25	1,5	1,75	2	2,5	3	4	4,5	5	5,5	6	
<i>c</i>	0,5	0,5	0,6	0,6	0,6	0,8	0,8	0,8	0,8	0,8	1	1	1	1	
<i>d_a</i>	6	7,2	10,2	12,2	14,7	18,7	24,4	28,4	35,4	42,4	48,6	56,6	67	75	
<i>d_w</i>	6,74	8,74	11,47	14,47	16,47	22	27,7	33,25	42,75	51,11	59,95	69,45	78,66	88,16	
<i>e</i>	8,63	10,89	14,2	17,59	19,85	26,17	32,95	39,55	50,85	60,79	71,3	82,6	93,56	104,86	
<i>k</i>	nom.	4	5,3	6,4	7,5	10	12,5	15	18,7	22,5	26	30	35	40	
	max.	3,875	4,375	5,675	6,85	7,95	10,75	13,4	15,9	19,75	23,55	27,05	31,05	36,25	41,25
<i>k_w</i> ^b	min.	3,125	3,625	4,925	5,95	7,05	9,25	11,6	14,1	17,65	21,45	24,95	28,95	33,75	38,75
	min.	2,19	2,54	3,45	4,17	4,94	6,48	8,12	9,87	12,36	15,02	17,47	20,27	23,63	27,13
<i>r</i>	0,2	0,25	0,4	0,4	0,6	0,6	0,8	0,8	1	1	1,2	1,6	2	2	
<i>s</i>	nom. = max.	8,00	10,00	13,00	16,00	18,00	24,00	30,00	46	55,0	65,0	75,0	85,0	95,0	
	min.	7,64	9,64	12,57	15,57	17,57	23,16	29,16	45	53,8	63,1	73,1	82,8	92,8	
<i>t</i> ^c															
nom.	min.	max.													
10	9,25	10,75													
12	11,1	12,9													
16	15,1	16,9													
20	18,95	21,05													
25	23,95	26,05													
30	28,95	31,05													
35	33,75	36,25													
40	38,75	41,25													
45	43,75	46,25													
50	48,75	51,25													
55	53,5	56,5													
60	58,5	61,5													
65	63,5	66,5													
70	68,5	71,5													
80	78,5	81,5													
90	88,25	91,75													
100	98,25	101,75													
110	108,25	111,75													

