INTERNATIONAL STANDARD

ISO 14584

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Hexalobular socket raised countersunk head screws

Vis à métaux à tête fraisée bombée à six lobes internes



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Foreword

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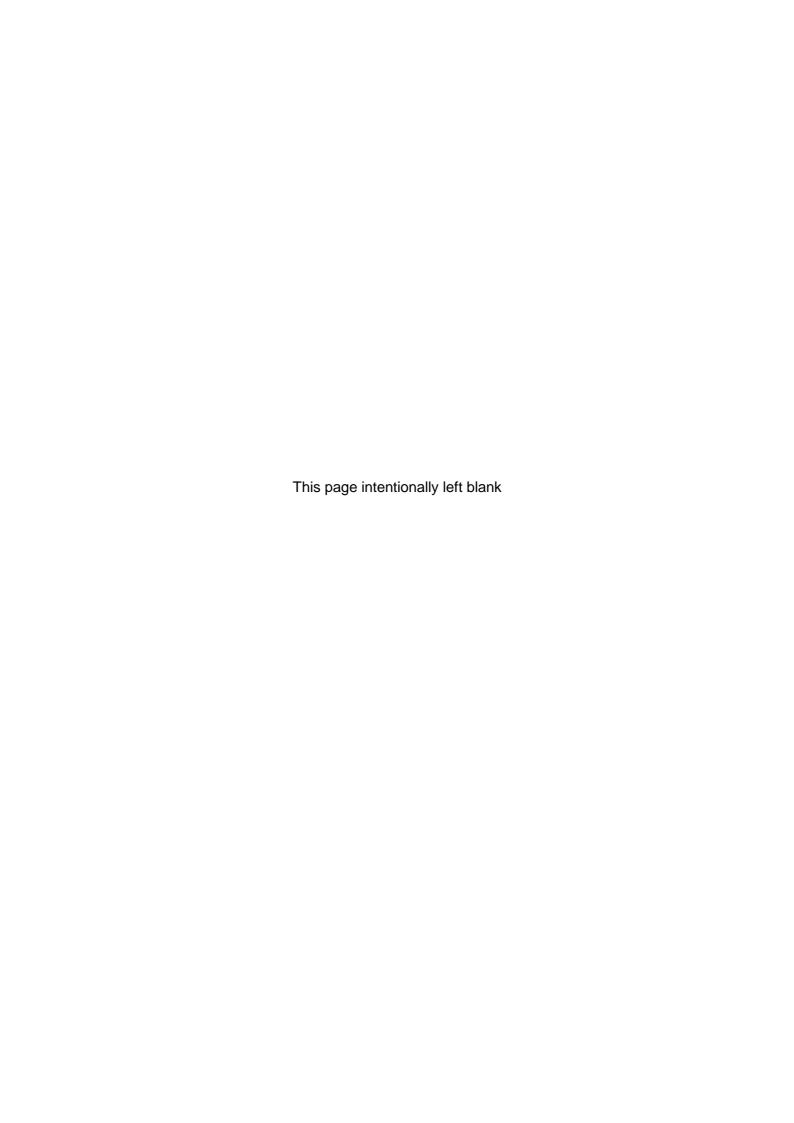
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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 14584 was prepared by Technical Committee ISO/TC 2, Fasteners.

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Hexalobular socket raised countersunk head screws

1 Scope

This International Standard specifies the characteristics of hexalobular socket raised countersunk head screws in product grades A and with thread sizes from M2 to M10 inclusive.

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 261, ISO 888, ISO 898-1, ISO 965-2, ISO 3506-1, 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 261:1998, ISO general-purpose metric screw threads — General plan

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 965-2:1998, ISO general purpose metric screw threads — Tolerances — Part 2: Limits of sizes for general purpose external and internal screw threads — Medium quality

ISO 3269:2000, Fasteners — Acceptance inspection

ISO 3506-1:1997, Mechanical properties of corrosion-resistant stainless-steel fasteners — Part 1: Bolts, screws and studs

ISO 4042:1999, Fasteners — Electroplated coatings

ISO 4759-1:2000, Tolerances for fasteners — Part 1: Bolts, screws, studs and nuts — Product grades A, B and C

ISO 6157-1:1988, Fasteners — Surface discontinuities — Part 1: Bolts, screws and studs for general requirements

ISO 7721:1983, Countersunk head screws — Head configuration and gauging

ISO 8839:1986, Mechanical properties of fasteners — Bolts, screws, studs and nuts made of non-ferrous metals

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

ISO 10664:1999, Hexalobular internal driving feature for bolts and screws

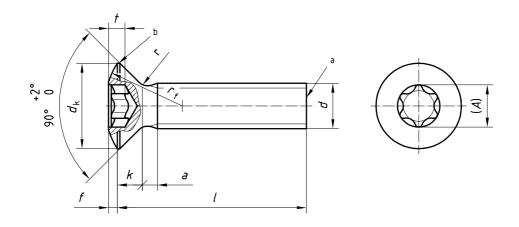
ISO 10683:2000, Fasteners — Non-electrolytically applied zinc flake coatings

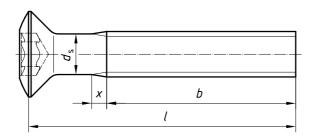
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3 Dimensions

See Figure 1 and Table 1.

Symbols and designations of dimensions, except dimension A, are specified in ISO 225.





NOTE Shank diameter d_s is approximately equal to pitch diameter or equal to major thread diameter permissible.

- a As rolled end
- b Edge may be rounded or flat

Figure 1

Table 1 — Dimensions

Dimensions in millimetres

Thread	d		M2	M2,5	М3	(M3,5) ^a	M4	M5	М6	М8	M10
$_{P}$ b			0,4	0,45	0,5	0,6	0,7	0,8	1,0	1,25	1,5
а		max.	0,8	0,9	1	1,2	1,4	1,6	2	2,5	3
b		min.	25	25	25	38	38	38	38	38	38
$d_{\mathbf{k}}$ C	theoretical	max.	4,4	5,5	6,3	8,2	9,4	10,4	12,6	17,3	20,0
	actual	nom. = max.	3,8	4,7	5,5	7,30	8,40	9,30	11,30	15,80	18,30
	actual	min.	3,5	4,4	5,2	6,94	8,04	8,94	10,87	15,37	17,78
f		≈	0,5	0,6	0,7	0,8	1	1,2	1,4	2	2,3
_k c		nom. = max.	1,2	1,5	1,65	2,35	2,7	2,7	3,3	4,65	5
r	r m		0,5	0,6	0,8	0,9	1,0	1,3	1,5	2,0	2,5
r_{f}		≈	4	5	6	8,5	9,5	9,5	12	16,5	19,5
x		max.	1,0	1,1	1,25	1,5	1,75	2,0	2,5	3,2	3,8
		Socket No.	6	8	10	15	20	25	30	45	50
Hexalo	bular	A ref.	1,75	2,4	2,8	3,35	3,95	4,5	5,6	7,95	8,95
socket		max.	0,77	1,04	1,15	1,53	1,80	2,03	2,42	3,31	3,81
		min.	0,63	0,91	0,88	1,27	1,42	1,65	2,02	2,92	3,42
I d Approximate mass of carbon steel screws, in kilograms per 1 000 piec						000 piece	es .				
nom. ^a	min.	$(\rho = 7,85 \text{ kg/dm}^3)$. max. (for information only)									
3	2,8	3,2	0,119	0,212		(,,			
4	3,76	4,24	0,138	0,242	0,351						
5	4,76	5,24	0,156	0,272	0,395	0,669	0,99				
6	5,76	6,24	0,175	0,302	0,439	0,729	1,07	1,49			
8	7,71	8,29	0,212	0,362	0,527	0,849	1,23	1,73	2,79		
10	9,71	10,29	0,249	0,422	0,615	0,969	1,39	1,97	3,14	6,89	
12	11,65	12,35	0,287	0,482	0,703	1,09	1,54	2,21	3,49	7,53	11,4
(14)	13,65	14,35	0,325	0,543	0,791	1,21	1,70	2,45	3,84	8,17	12,5
16	15,65	16,35	0,362	0,603	0,879	1,33	1,85	2,69	4,19	8,81	13,5
20	19,58	20,42	0,436	0,723	1,06	1,57	2,17	3,17	4,89	10,1	15,5
25	24,58	25,42	,	0,874	1,28	1,87	2,56	3,77	5,77	11,7	18,0
30	29,58	30,42		,	1,50	2,17	2,95	4,37	6,64	13,3	20,6
35	34,5	35,5				2,47	3,34	4,97	7,52	14,9	23,1
40	39,5	40,5					3,73	5,57	8,39	16,5	25,6
45	44,5	45,5				:	, -	6,16	9,27	18,1	28,1
50	49,5	50,5				<u> </u>		6,76	10,1	19,7	30,7
(55)	54,4	55,6							11,0	21,3	33,2
60	59,4	60,6							11,9	22,9	35,7
	·	1 '	l			1		I		·	,

NOTE Commercial lengths are the ones between the bold stepped lines.

^a Sizes in parentheses should be avoided if possible.

b P pitch of the thread.

^c Gauging of head dimensions is specified in ISO 7721.

d Screws with nominal lengths above the dashed stepped line are threaded up to the head [b = l - (k + a)]. See ISO 888.

4 Specifications and reference International Standards

See Table 2.

Table 2 — Specifications and reference International Standards

Material		Steel	Stainless steel	Non-ferrous metal					
General requirements	International Standard		ISO 8992						
Thread	Tolerance	6g							
Tilleau	International Standards	ISO 261, ISO 965-2							
Mechanical	Property class	4.8	A2-70 A3-70	As agreed					
properties	International Standards	ISO 898-1	ISO 3506-1	ISO 8839					
Tolerances	Product grade	А							
Tolerances	International Standard	ISO 4759-1							
Hexalobular International Standard socket		ISO 10664							
		As processed	Plain	Plain					
Finish		Requirements for electroplating are covered in ISO 4042	_	Requirement for electroplating are covered in ISO 4042.					
		Requirements for non-electrolytically applied zinc flake coatings are covered in ISO 10683.							
Surface discontin	nuities	Limits for surface discontinuities are covered in ISO 6157-1.	-	_					
Acceptability		For acceptance procedure, see ISO 3269.							

5 Designation

EXAMPLE A hexalobular socket raised countersunk head screw with thread M5, nominal length l = 20 mm and property class 4.8 is designated as follows:

Hexalobular socket raised countersunk head screw ISO 14584 - M5 \times 20 - 4.8