INTERNATIONAL STANDARD 2010

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Slotted raised countersunk (oval) head screws — Metric series

Vis à tête fendue fraisée bombée — Série métrique

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2010 was drawn up by Technical Committee ISO/TC 2, *Fasteners,* and circulated to the Member Bodies in December 1971.

It has been approved by the Member Bodies of the following countries :

Austria	India	South Africa, Rep. of
Belgium	Italy	Spain
Bulgaria	Japan	Sweden
Czechoslovakia	Netherlands	Switzerland
Denmark	New Zealand	Thailand
Egypt, Arab Rep. of	Norway	Turkey
Finland	Poland	United Kingdom
Germany	Portugal	U.S.S.R.
Hungary	Romania	

This International Standard has also been approved by the International Union of Railways (UIC).

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Canada
France

Printed in Switzerland

Slotted raised countersunk (oval) head screws — Metric series

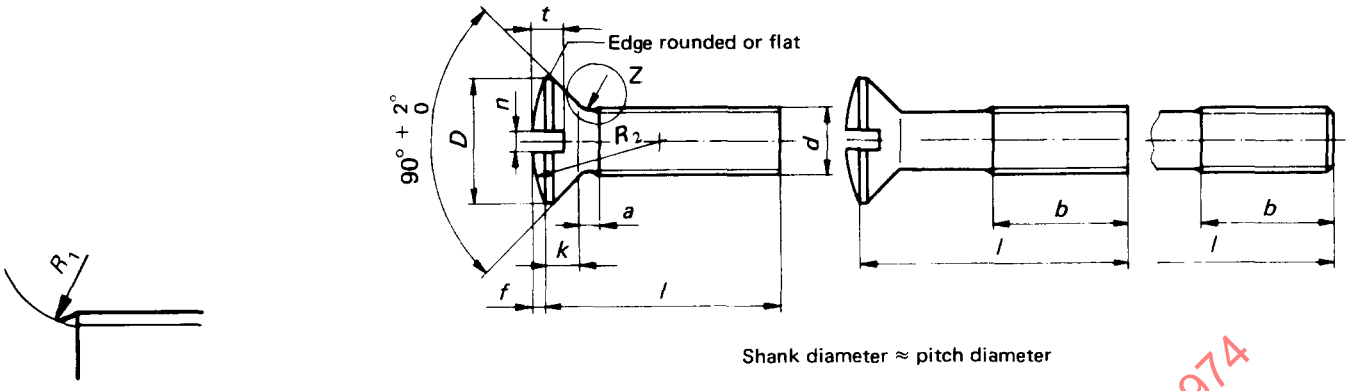
1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies dimensions of slotted raised countersunk (oval) head screws of the metric series and provides a system of standard lengths, i.e. recommended combinations of thread diameter, thread length and nominal length.

2 DIMENSIONS

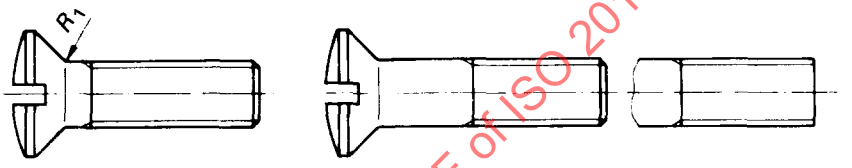
Principal dimensions are given in table 1. Nominal lengths and thread lengths are given in clause 3.

The thread sizes in brackets are to be avoided if possible.



Detail Z

Shank diameter ≈ pitch diameter



Shank diameter = major diameter

TABLE 1 – **Principal dimensions**

Dimensions in millimetres

Thread diameter *d*		**1**	**1,2**	**(1,4)**	**1,6**	**(1,8)**	**2**	**(2,2)**	**2,5**	**3**	**(3,5)**	**4**	**(4,5)**	**5**	**6**	**8**	**10**	**12**	**(14)**	**16**	**(18)**	**20**
D	theoretical	2,2	2,64	3,08	3,52	3,96	4,4	4,84	5,5	6,3	7,35	8,4	9	10	12	16	20	24	28	32	36	40
	max.	2	2,35	2,7	3,1	3,45	3,8	4,2	4,7	5,6	6,5	7,4	8,3	9,2	11	14,5	18	21,5	25	28,5	32,5	36
	min.	1,75	2,1	2,45	2,8	3,15	3,5	3,9	4,4	5,3	6,1	7	7,9	8,8	10,5	14	17,5	21	24,5	28	31,5	35
k	max.	0,6	0,72	0,84	0,96	1,08	1,2	1,32	1,5	1,65	1,93	2,2	2,25	2,5	3	4	5	6	7	8	9	10
n	nominal	0,25	0,3	0,3	0,4	0,4	0,5	0,6	0,6	0,8	0,8	1	1	1,2	1,6	2	2,5	3	3	4	4	5
	min.	0,31	0,36	0,36	0,46	0,46	0,56	0,66	0,66	0,86	0,86	1,06	1,06	1,26	1,66	2,06	2,56	3,06	3,06	4,07	4,07	5,07
	max.	0,45	0,5	0,5	0,6	0,6	0,7	0,8	0,8	1	1	1,2	1,2	1,51	1,91	2,31	2,81	3,31	3,31	4,37	4,37	5,37
t	min.	0,4	0,48	0,56	0,64	0,72	0,8	0,88	1	1,2	1,4	1,6	1,8	2	2,4	3,2	4	4,8	5,6	6,4	7,2	8
	max.	0,55	0,64	0,73	0,8	0,9	1	1,1	1,2	1,45	1,7	1,9	2,1	2,3	2,8	3,7	4,5	5,4	6,3	7,2	8,1	9
R_1	≈	0,1	0,12	0,14	0,16	0,18	0,2	0,22	0,25	0,3	0,35	0,4	0,45	0,5	0,6	0,8	1	1,2	1,4	1,6	1,8	2
R_2	≈	2,1	2,6	2,9	3,4	3,8	4,2	4,6	5,4	6	6,8	8	8,7	9,4	12	15	19	22,5	26	30	34	38
f		0,25	0,3	0,35	0,4	0,45	0,5	0,55	0,6	0,75	0,9	1	1,1	1,25	1,5	2	2,5	3	3,5	4	4,5	5
a (2 × pitch)	max.	0,5	0,5	0,6	0,7	0,7	0,8	0,9	0,9	1	1,2	1,4	1,5	1,6	2	2,5	3	3,5	4	4	5	5

3 STANDARD LENGTHS

Standard lengths, i.e. recommended combinations of thread diameter, thread length and nominal length, are to be selected from those given in table 2. The standard lengths are those between the heavy stepped lines.

Screws with nominal lengths above the broken stepped line (– – –) are threaded up to the head. Nominal lengths in brackets are to be avoided if possible.

TABLE 2 – **Standard lengths**

Dimensions in millimetres

Thread diameter *d*	1	1,2	(1,4)	1,6	(1,8)	2	(2,2)	2,5	3	(3,5)	4	(4,5)	5	6	8	10	12	14	16	18	20
Thread length *b*	*	*	*	15	15	16	17	18	19	20	22	24	25	28	34	40	46	52	58	64	70
Nominal length *l*	Standard lengths																				
2																					
2,5																					
3																					
4																					
5																					
6																					
(7)																					
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170																					
180																					
190																					
200																					

* Threaded up to the head only.