SLOVENSKI STANDARD
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Tehniļ ne risbe - Poenostavljeno prikazovanje srediġļ nih izvrtin

Technical drawings -- Simplified representation of centre holes

Dessins techniques -- Représentation simplifiée des trous de centre

Ta slovenski standard je istoveten z: **ISO 6411:1982**

ICS:

01.100.20	Konstrukcijske risbe	Mechanical engineering drawings

SIST ISO 6411:1995 **en**

International Standard 6411

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Technical drawings — Simplified representation of centre holes

Dessins techniques — Représentation simplifiée des trous de centre

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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 6411 was developed by Technical Committee ISO/TC 10, *Technical drawings*, and was circulated to the member bodies in January 1980.

It has been approved by the member bodies of the following countries :

Australia	France	Poland
Austria	Germany, F. R.	Romania
Belgium	India	South Africa, Rep. of
Brazil	Italy	Spain
Canada	Japan	Sweden
China	Korea, Dem. P. Rep. of	Switzerland
Czechoslovakia	Korea, Rep. of	United Kingdom
Denmark	Mexico	USA
Finland	Norway	USSR

The member body of the following country expressed disapproval of the document on technical grounds :

Netherlands

Printed in Switzerland

Technical drawings — Simplified representation of centre holes

1 Scope and field of application

This International Standard specifies the simplified representation of centre holes and their designation. Simplified representation of centre holes may be used particularly when it is not necessary to show the exact form and size and where the designation of standardized centre holes is sufficient for information.

2 References

ISO 128, *Technical drawings — General principles of presentation.*

ISO 866, *Centre drills for centre holes without protecting chamfers — Type A.*

ISO 2540, *Centre drills for centre holes with protecting chamfers — Type B.*

ISO 2541, *Centre drills for centre holes with radius form — Type R.*

ISO 3098/1, *Technical drawings — Lettering — Part 1 : Currently used characters.*

ISO 6428, *Technical drawings — Requirements for micro-copying.* [1)]

3 Indication on drawings

3.1 Requirements

Generally, three different requirements may be defined on technical drawings for the form and size of centre holes, namely :

a) centre hole is required on the finished part;

b) centre hole can be accepted on the finished part, but is not a fundamental requirement;

c) centre hole shall not exist on the finished part.

1) At present at the stage of draft.

3.2 Simplified representation

The symbols representing centre holes and their application to the end face of a shaft are shown in column 2 of table 1.

3.3 Designation of centre holes

The designation of centre holes is dependent on the drill and may be indicated with reference either to an International Standard or to any other standard dealing with this subject.

The designation of the centre hole itself consists of

— a reference to this International Standard;

— the letter for the type (R, A or B);

— the pilot diameter d;

— the outside countersink centre hole diameter D.

The two values are separated by a solidus.

Example : a centre hole[1], type B with d = 2,5 mm and D_3 = 8 mm may be indicated on the drawing as :

ISO 6411-B 2,5/8

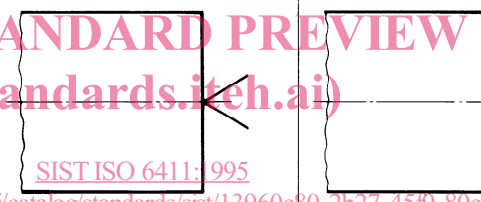
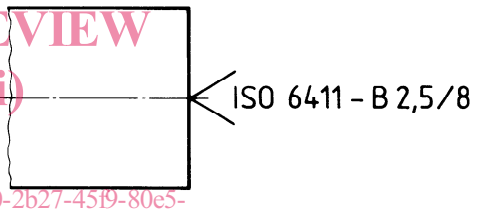
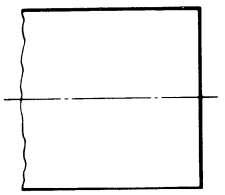
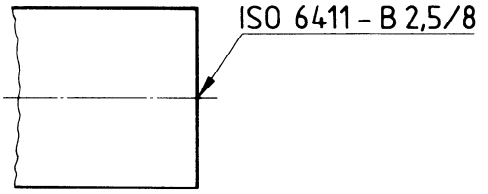
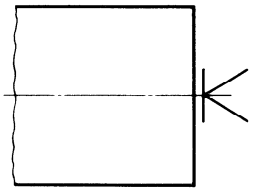
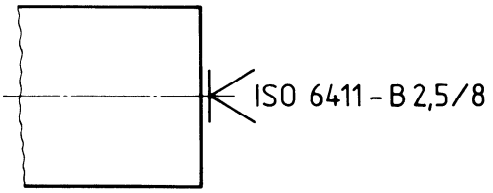
4 Interpretation of indication

The relationship between the various designations used to specify the centre holes, the dimensions represented by the given designations, and dimensions depending on the centre drill used are shown in table 2.

Further details specifying the dimensions of the centre hole, to be indicated preferably on the drawings, are given in annex A.

Table 1 — Representation and designation of centre holes on drawings

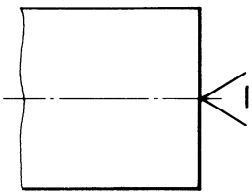
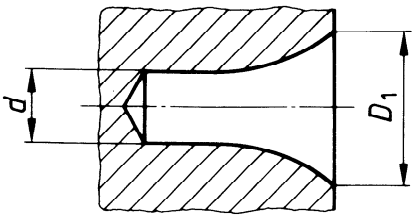
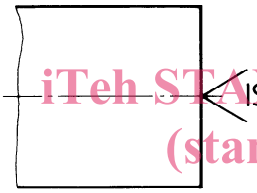
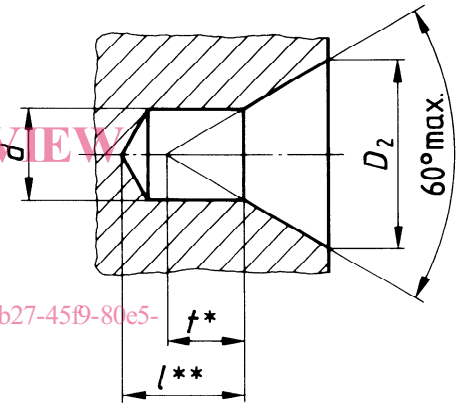
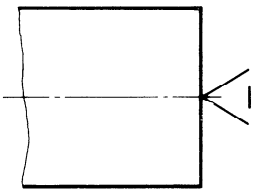
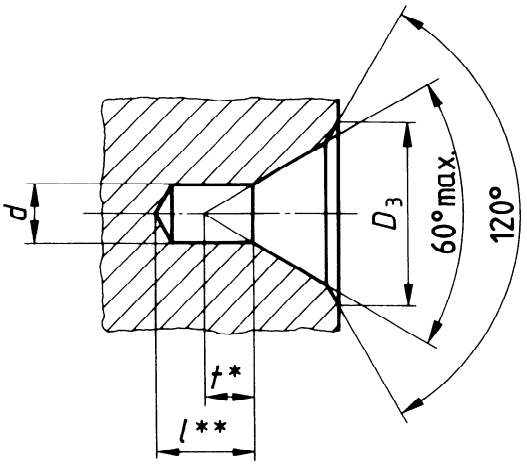
Dimensions in millimetres

Requirement	Representation	Designation
Centre hole is required on the finished part		
Centre hole may remain on the finished part		
Centre hole shall not exist on the finished part		

1) For the machining of such a centre hole, a drill with d = 2,5 and d_1 = 10 according to ISO 2540 is used.

Table 2 — Interpretation of the designation

Dimensions in millimetres

Type of centre hole	Designation (examples)	Interpretation of the designation
R with radius form (centre drill according to ISO 2541)		 d = 3,15 D_1 = 6,7
A without protecting chamfer (centre drill according to ISO 866)		 d = 4 D_2 = 8,5
B with protecting chamfer (centre drill according to ISO 2540)		 d = 2,5 D_3 = 8

* For dimension t, see annex A.

** Dimension l depends on the length of the centre drill. It should not be less than t.

Annex A

Dimensions for centre holes type R, A and B

The dimensions which are necessary to specify a centre hole are shown in table 3.

Table 3 — Dimensions of preferred centre holes

Dimensions in millimetres

d nom.	Type				
	R according to ISO 2541	A according to ISO 866		B according to ISO 2540	
	D_1 nom.	D_2 nom.	t ref.	D_3 nom.	t ref.
(0,5)		1,06	0,5		
(0,63)		1,32	0,6		
(0,8)		1,70	0,7		
1,0	2,12	2,12	0,9	3,15	0,9
(1,25)	2,65	2,65	1,1	4	1,1
1,6	3,35	3,35	1,4	5	1,4
2,0	4,25	4,25	1,8	6,3	1,8
2,5	5,3	5,30	2,2	8	2,2
3,15	6,7	6,70	2,8	10	2,8
4,0	8,5	8,50	3,5	12,5	3,5
(5,0)	10,6	10,60	4,4	16	4,4
6,3	13,2	13,20	5,5	18	5,5
(8,0)	17,0	17,00	7,0	22,4	7,0
10,0	21,2	21,20	8,7	28	8,7

NOTE — Sizes in brackets should be avoided whenever possible.