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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Tools for pressing — Round matrixes

Outillage de presse — Matrices rondes

Reference number
ISO 8977 : 1987 (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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8977 was prepared by Technical Committee ISO/TC 29, *Small tools.*

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Tools for pressing — Round matrixes

1 Scope and field of application

This International Standard lays down the basic dimensions and tolerances in millimetres for round matrixes in the outside diameter range of 5 to 50 mm.

It gives examples of materials and hardness, and specifies a designation of matrixes which meet the requirements of this International Standard.

The main use of matrixes defined in this International Standard is for punching holes in steel sheet. They may also be used for punching holes in other materials.

2 References

ISO 4957, *Tool steels*.

ISO 6508, *Metallic materials — Hardness test — Rockwell test (scales A - B - C - D - E - F - G - H - K).*

3 Dimensions

See the figure and the table.

4 Material and hardness

The material is left to the manufacturer's discretion. The following hardness values are given as examples:

a) Tool steel with 5 to 12 % Cr: 62 ± 2 HRC

b) High-speed steel: 64 ± 2 HRC

5 Designation

Round matrixes in accordance with this International Standard shall be designated by

a) "Round matrix";

b) reference to this International Standard;

c) the type of matrix (A or B);

d) its external diameter, D;

e) its internal diameter, d;

f) its total length, L;

g) the depth of the working part, l.

Example:

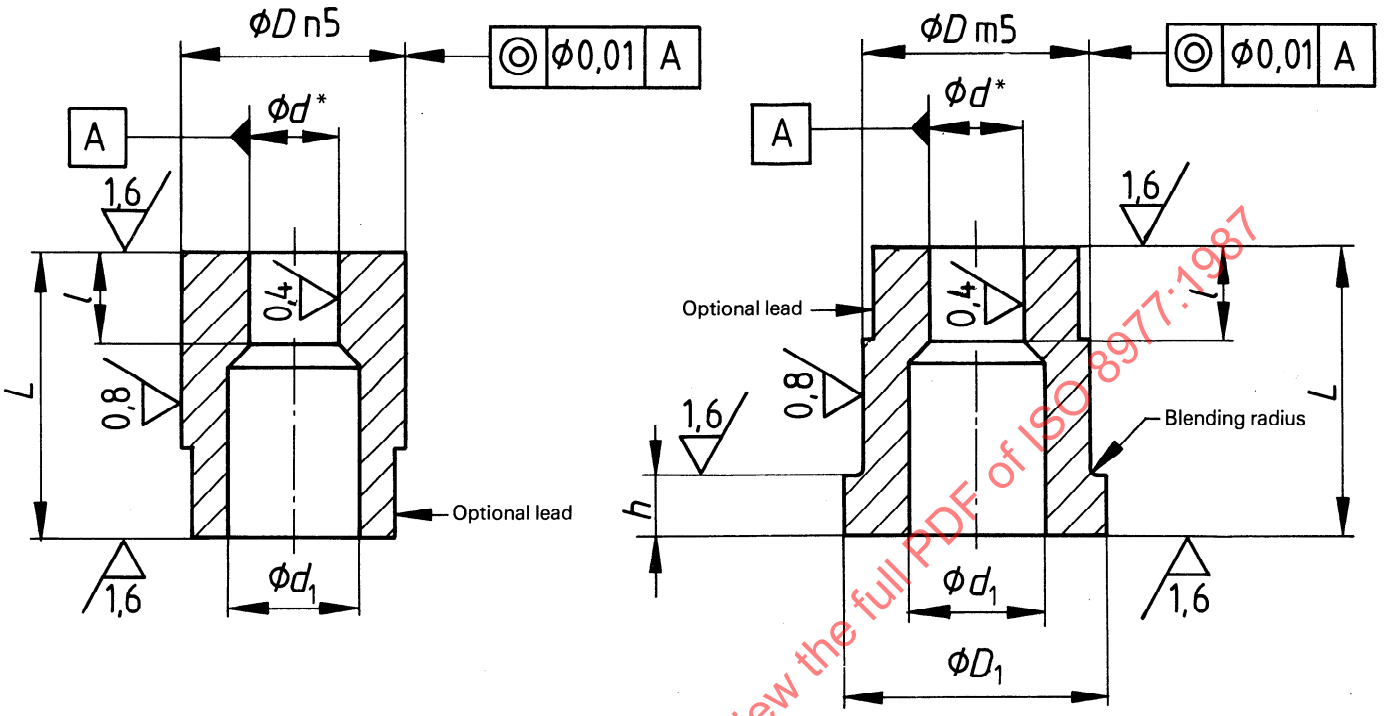
The designation for a round matrix, type A, of external diameter $D = 5$ mm, internal diameter $d = 1$ mm, total length $L = 16$ mm and having a depth of the working part $l = 2$ mm is as follows:

Round matrix ISO 8977 - A 5 × 1 × 16 × 2

Surface roughness values in micrometres

Type A — Headless matrixes

Type B — Headed matrixes



* As a special requirement, the working part may be tapered within the tolerance for d and with the smallest taper diameter at the upper surface.

Figure

Table

D	d[1] H8	L +0,5 0				D_1 0 −0,25	h +0,25 0	l Alternatives			d_1 max.
		16	20	25	32			min.	standard	max.	
5	1; ...; 2,4	×	×	×		8	5		2	4	2,8
6	1,6; ...; 3	×	×	×		9	5		3	4	3,5
8	2; ...; 3,5	×	×	×	×	11	5		4	5	4
10	3; ...; 5	×	×	×	×	13	5		4	8	5,8
13	4; ...; 7,2		×	×	×	16	5		5	8	8
16	6; ...; 8,8		×	×	×	19	5		5	8	9,5
20	7,5; ...; 11,3		×	×	×	24	5	5	8	12	12
25	11; ...; 16,6		×	×	×	29	5	5	8	12	17,3
32	15; ...; 20		×	×	×	36	5	5	8	12	20,7
40	18; ..., 27		×	×	×	44	5	5	8	12	27,7
50	26; ...; 36		×	×	×	54	5	5	8	12	37

1) Increment = 0,1 mm.

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