INTERNATIONAL STANDARD

ISO 866

Second edition
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Centre drills for centre holes without protecting chamfers — Type A

Forets à centrer pour centres sans chanfrein de protection — Type A

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

The committee responsible for this document is ISO/TC 29, *Small tools,* Subcommittee SC 2, *Holding tools, adaptive items and interfaces*.

This second edition cancels and replaces the first edition (ISO 866:1975), which constitutes a minor revision with the addition of Annex B, showing the relationship between the symbols in this International Standard and the symbols in the ISO 13399 series.

Introduction

This International Standard, relating to centre drills, covers only centre drills for centre holes without a protecting chamfer (Type A). The other types are covered in ISO 2540 (Type B) and ISO 2541 (Type R).

Centre drills for centre holes without protecting chamfers — Type A

1 Scope

This International Standard specifies the dimensions of centre drills for centre holes without protecting chamfers (Type A).

It covers only metric dimensions, which are regarded as the only recommended dimensions in the future for this type of drill.

The flutes may be straight or spiral, depending on the manufacturer's discretion.

Unless otherwise indicated, these drills will be right-hand cutting.

Recommended dimensions for Type A centre holes, which can be obtained by a rational use of the centre drills listed in this International Standard, are given in Annex A.

2 Dimensions

Dimensions of the centre drill shall be in accordance with the dimensions shown in Figures 1 and 2 and given in Table 1.

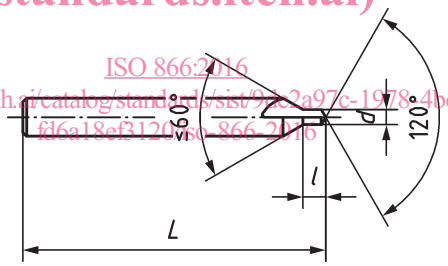

Figure 1 — Single-ended centre drill — Type A ($d \leq 0{,}8$ mm)

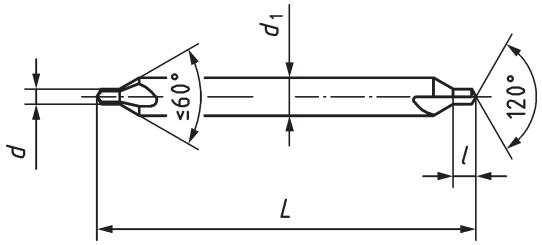

Figure 2 — Double-ended centre drill — Type A ($d \geq 1$ mm)

Table 1 — Single- and double-ended centre drill (Type A) dimensions

Dimensions in millimetres

d^a k12	d_1 h9	L		l	
		max.	min.	max.	min.
(0,5)	3,15	21	19	1,0	0,8
(0,63)	3,15	21	19	1,2	0,9
(0,8)	3,15	21	19	1,5	1,1
1,0	3,15	33,5	29,5	1,9	1,3
(1,25)	3,15	33,5	29,5	2,2	1,6
1,6	4,0	37,5	33,5	2,8	2,0
2,0	5,0	42	38	3,3	2,5
2,5	6,3	47	43	4,1	3,1
3,15	8,0	52	48	4,9	3,9
4,0	10,0	59	53	6,2	5,0
(5,0)	12,5	66	60	7,5	6,3
6,3	16,0	74	68	9,2	8,0
(8,0)	20,0	83	77	11,5	10,1
10,0	25,0	103	97	14,2	12,8

[a] Sizes in brackets should be avoided whenever possible.

3 Designation

A centre drills in accordance with this International Standard shall be designated by the following:

a) the term “Centre drill”;

b) reference to this International Standard (e.g. ISO 866);

c) Type A;

d) pilot diameter, d (in millimetres);

e) shank diameter, d_1 (in millimetres).

EXAMPLE A centre drill type A, pilot diameter d = 0,63, shank diameter d_1 = 3,15 is designated as follows:

Centre drill ISO 866 - A 0,63/3,15

Annex A
(normative)

Dimensions for Type A centre holes and choice of the dimensioning method

There are two methods for dimensioning type A centre holes (see Figures A.1 and A.2), which are practically equivalent. One or the other method may be used.

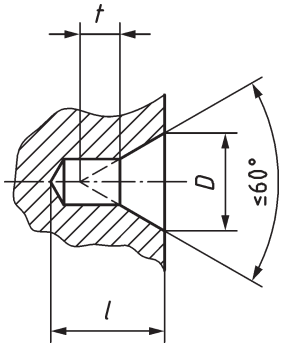

Figure A.1 — Method 1

Dimension *l* depends on the length, *l*, of the centre drill. It should not, even in the case of drilling with re-sharpened centre drills, be less than the reference value, *t*, given in Table A.1.

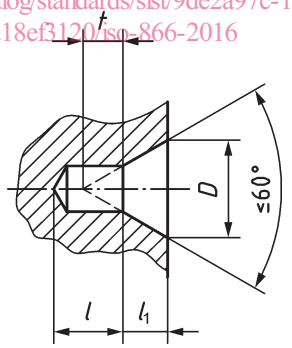

Figure A.2 — Method 2

Dimension *l* depends on the length, *l*, of the centre drill. It should not, even in the case of drilling with re-sharpened centre drills, be less than the reference value, *t*, given in Table A.1.