INTERNATIONAL STANDARD

ISO 3294

Second edition
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Parallel shank countersinks for angles 60, 90 and 120 degrees inclusive

Outils à chanfreiner à queue cylindrique, à angle au sommet de 60, 90 et 120 degrés

Reference number
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Contents

Page

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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html

The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 9, *Tools with defined cutting edges, cutting items*.

This second edition cancels and replaces the first edition (ISO 3294:1975), of which it constitutes a minor revision.

Parallel shank countersinks for angles 60, 90 and 120 degrees inclusive

1 Scope

This International Standard specifies the dimensions of parallel shank countersinks for angles 60°, 90° and 120° inclusive.

It specifies dimensions in metric units only, these being regarded as the only recommended dimensions in the future, for countersinks with cutting diameters in the range 8 mm to 25 mm.

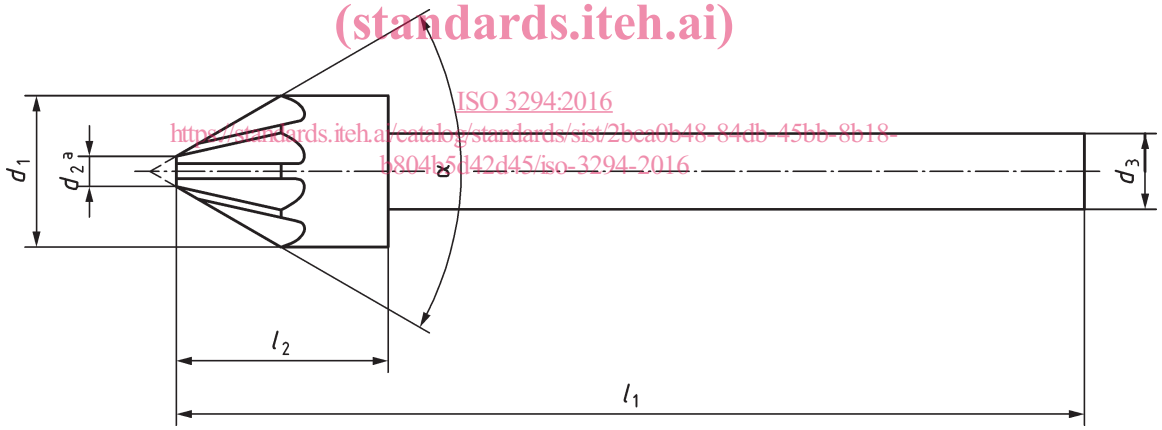
The dimensions apply only to tools made from high-speed steel. However, if the method of production allows, the shanks may be manufactured from a suitable alternative material, such as a carbon steel.

Unless otherwise indicated, the countersinks will be right-hand cutting.

Morse taper shank countersinks are the subject of ISO 3293.

2 Dimensions

See Figure 1 and Table 1.



Key

α = 60°, 90° or 120° inclusive (tolerance: $^{0}_{-1°}$)

Figure 1

Table 1

Dimensions in millimetres

Nominal size	Small diameter	Overall length l_1		Body length l_2		Shank diameter
d_1	d_2[a]	α = 60°	α = 90° and 120°	α = 60°	α = 90° and 120°	d_3 h9
8	1,6	48	44	16	12	8
10	2	50	46	18	14	8
12,5	2,5	52	48	20	16	8
16	3,2	60	56	24	20	10
20	4	64	60	28	24	10
25	7	69	65	33	29	10

[a] Front end design optional.

Annex A
(informative)

Relationship between designations in this International Standard and ISO 13399

A.1 Relationship between designations

For the relationship between the designations in this International Standard and preferred symbols according to ISO 13399, see Table A.1.

Table A.1 — Relationship between designations in this International Standard and ISO 13399

Symbol in ISO 3294 (this International Standard)	Reference in ISO 3294 (this International Standard)	Property name in the ISO 13399 series	Symbol in the ISO 13399 series	Reference in the ISO 13399 series
d_1	Clause 2, Figure 1 and Table 1	Cutting diameter	DC	ISO/TS 13399-3 BSU 71D084653E57F
d_2	Clause 2, Figure 1 and Table 1	Interference cutting diameter	DCINTF	ISO/TS 13399-3 BSU 726E2FCC0EC78
d_3	Clause 2, Figure 1 and Table 1	Connection diameter machine side	DCONMS	ISO/TS 13399-3 BSU 71EBDBF5060E6
l_1	Clause 2, Figure 1 and Table 1	Overall length	OAL	ISO/TS 13399-3 BSU 71D078EB7C086
l_2	Clause 2, Figure 1 and Table 1	Head length	LH	ISO/TS 13399-3 BSU 71D07574A61E8
α	Clause 2, Figure 1 and Table 1	Point angle	SIG	ISO/TS 13399-3 BSU 71DCCC4FEF366

Bibliography

[1] ISO 3293, *Morse taper shank countersinks for angles 60 degrees, 90 degrees and 120 degrees inclusive*

[2] ISO 13399 (all parts), *Cutting tool data representation and exchange*