INTERNATIONAL STANDARD

ISO 10072

Second edition
2004-02-01

Tools for moulding — Sprue bushes — Dimensions

Outillage de moulage — Buses d'injection — Dimensions

Reference number
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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10072 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 8, *Tools for pressing and moulding*.

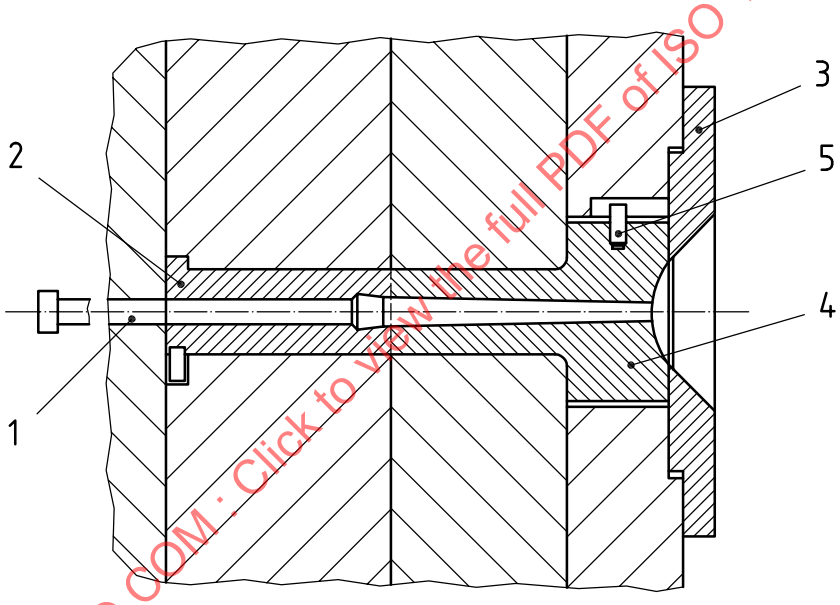
This second edition cancels and replaces the first edition (ISO 10072:1993), Clause 3 of which has been technically revised.

Tools for moulding — Sprue bushes — Dimensions

1 Scope

This International Standard specifies the main dimensions and tolerances, in millimetres, of sprue bushes that are used mainly in injection moulds for plastics and rubbers (an application example is shown in Figure 1).

It also specifies the hardness and designation of sprue bushes conforming to this International Standard.



Key

1 ejector pin (ISO 6751)
2 sprue puller (ISO 16915)
3 locating ring (ISO 10907-1)
4 sprue bush (ISO 10072)
5 dowel pin (ISO 8734)

Figure 1 — Application example of sprue bushes

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

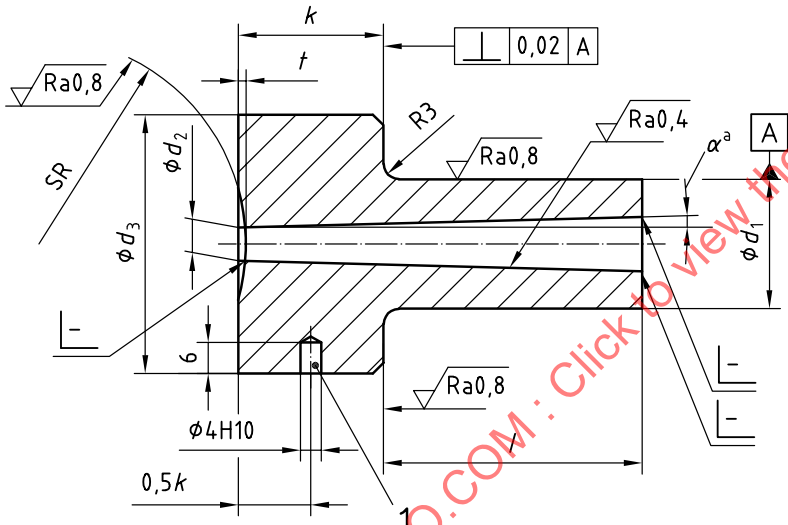
ISO 4957, *Tool steels*

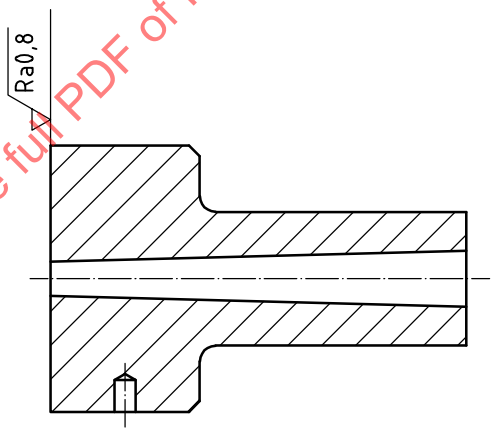
3 Dimensions

See Figures 2 and 3 and Table 1.

Dimensions in millimetres,
surface roughness values in micrometres

General tolerances ISO 2768-m





Key

1 fixing hole

a α = 30', 1° or 1°30' at the manufacturer's discretion.

Figure 2 — Type A, with radius to match machine nozzle

Figure 3 — Type B, straight to match machine nozzle

Table 1

Dimensions in millimetres

d_1 k6	d_2 +0,3 +0,1	SR	l +0,5 +0,3								d_3 0 −0,5	k +0,15 +0,05	t ±0,1
			20	25	32	40	50	63	80	100			
12	2,5	15,5 ou 40	X	X	X	X	X				28	12	1,5
	3												
	3,5												
16	3,5			X	X	X	X	X			32	16	
	4												
	4,5												
20	3,5				X	X	X	X	X	X	40	21	
	4												
	4,5												
25	4,5						X	X	X	X	50	28	
	5,5												
	6,5												

4 Material and hardness

Sprue bushes shall be made from tool steel in accordance with ISO 4957. The hardness shall be (50 ± 5) HRC.

5 Designation

Sprue bushes in accordance with this International Standard shall be designated by:

a) “Sprue bush”;

b) reference to this International Standard, i.e. ISO 10072;

c) type (A or B);

d) diameter d_1, in millimetres;

e) diameter d_2, in millimetres;

f) radius SR (for type A only), in millimetres;

g) length, l, in millimetres;

h) angle, α.

EXAMPLE A sprue bush of type A with diameter d_1 = 12 mm, diameter d_2 = 2,5 mm, radius SR = 15,5 mm, length l = 20 mm and α = 1°30' is designated as follows:

Sprue bush ISO 10072 - A12 × 2,5 × 15,5 × 20/1°30'

Bibliography

[1] ISO 6751:1998, *Tools for moulding — Ejector pins with cylindrical head*

[2] ISO 8734:1997, *Parallel pins, of hardened steel and martensitic stainless steel (Dowel pins)*

[3] ISO 10907-1:1996, *Tools for moulding — Locating rings — Part 1: Locating rings for mounting without thermal insulating sheets in small or medium moulds — Types A and B*

[4] ISO 16915:2003, *Tools for moulding — Sprue pullers*