
Tools for moulding — Angle pins

Outillage de moulage — Doigts de démoulage

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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 8404 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 8, *Tools for pressing and moulding*.

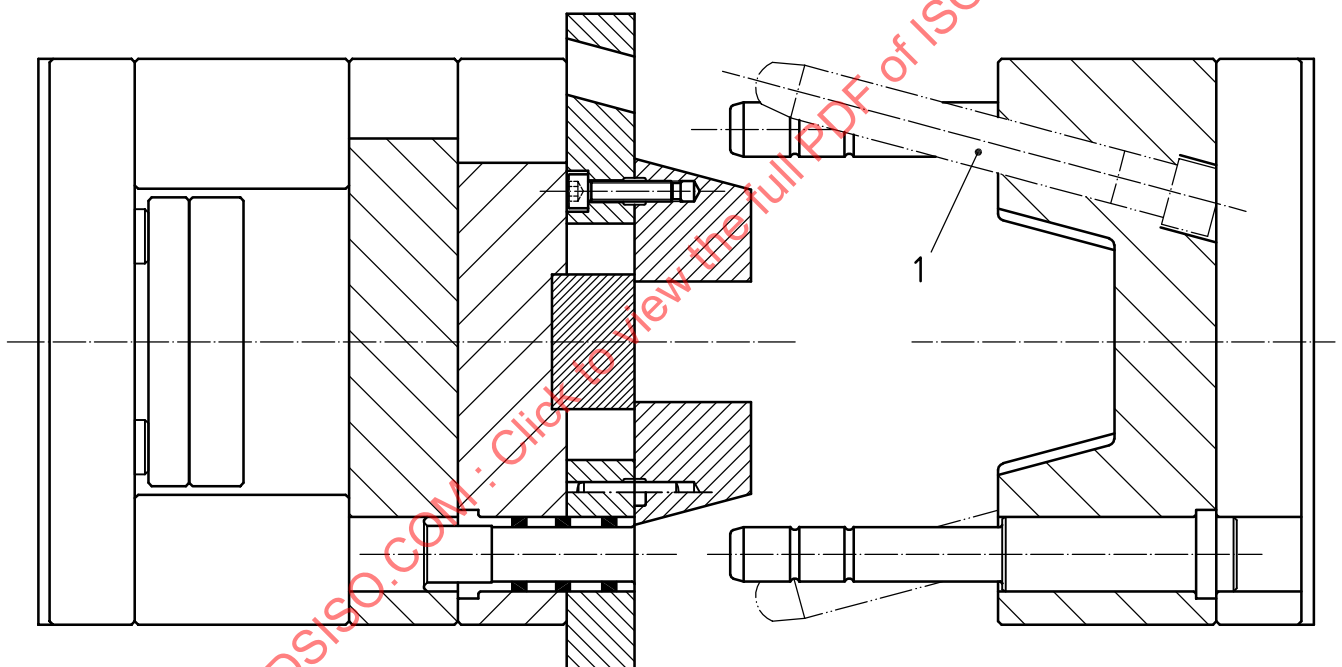
This second edition cancels and replaces the first edition (ISO 8404:1986), Clause 3 of which has been technically revised.

Tools for moulding — Angle pins

1 Scope

This International Standard specifies the basic dimensions, in millimetres, of headed angle pins (type A) and of straight angle pins (type B) intended for use in diescast dies and tools for moulding (an example of application is given in Figure 1).

It also specifies the material hardness and designation of the angle pins (type A and B).



Key

- 1 angle pin (ISO 8404 - A)

Figure 1 — Application example of headed angle pin, type A

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*

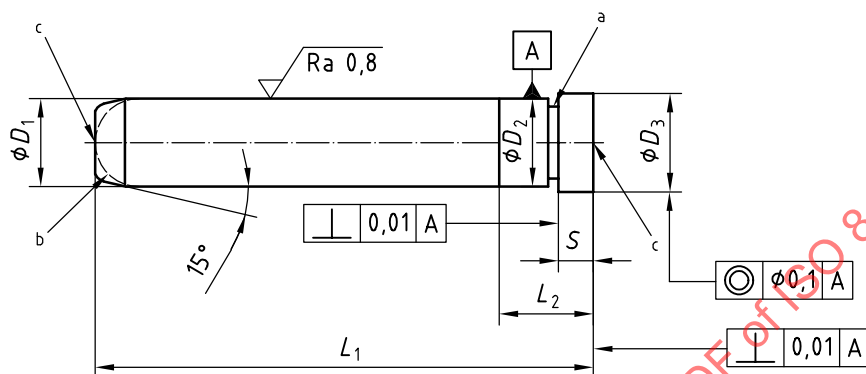
3 Dimensions

3.1 Type A — Headed angle pins

See Figure 2 and Table 1.

Dimensions in millimetres,
surface roughness values in micrometres

General tolerance: ISO 2768-m



- a Radius or undercut.
- b The leading end may be rounded. The choice of shape is left to the manufacturer.
- c Optional centres.

Figure 2 — Type A

Table 1 — Type A

Dimensions in millimetres

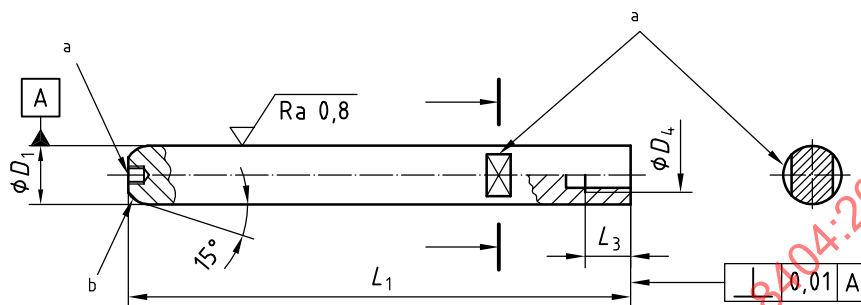
D_1 g6	10	12	16	20	25	32	40
D_2 m6							
$S_{-0,1}^0$	6	8	10	10	16	16	16
$D_{3-0,2}^0$	14	16	20	25	30	38	46
$L_{1-1,5}^0$	$L_{2-1,0}^{-0,5}$						
63	16	16					
80	16	16	26				
100	22	22	26	30			
125	22	22	26	30			
160			36	40			
200			36	40	42	47	54
250				40	42	47	62
315					42	54	62
400						54	62
500							71

3.2 Type B — Straight angle pins

See Figure 3 and Table 2.

Dimensions in millimetres,
surface roughness values in micrometres

General tolerance: ISO 2768-m



- a Position and dimensions of width across flats or alternatively hexagon socket are left to the manufacturer's discretion.
b The leading end may be rounded. The choice of shape is left to the manufacturer.

Figure 3 — Type B

Table 2 — Type B

Dimensions in millimetres

D_1 k6		10	12	16	20	25	32
D_4		M6	M6	M8	M10	M12	M16
$L_3 \begin{smallmatrix} +1,5 \\ 0 \end{smallmatrix}$		12	12	16	20	24	32
$L_1 \begin{smallmatrix} 0 \\ +1,5 \end{smallmatrix}$	63	X	X	X	X		
	80	X	X	X	X	X	
	100	X	X	X	X	X	X
	125	X	X	X	X	X	X
	160			X	X	X	X
	200			X	X	X	X
	250				X	X	X
	315					X	X
	400						X

4 Material and hardness

Angle pins shall be made from tool steel in accordance with ISO 4957. The hardness values shall be as follows:

- shaft: (62 ± 2) HRC
- head (type A): (45 ± 5) HRC

5 Designation

Angle pins for diecast dies and tool for moulding in accordance with this International standard shall be designated by

- a) "Angle pin";
- b) reference to this International standard, i.e. ISO 8404;
- c) type of angle pin (Type A or B);
- d) its diameter D_1 in millimetres;
- e) its length L_1 in millimetres.

EXAMPLE A type A angle pin with a diameter $D_1 = 20$ mm and a length of $L_1 = 160$ mm is designated as follows:

Angle pin ISO 8404 - A 20 × 160