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**Tools for moulding — Ejector pins with  
cylindrical head**

*Outillage de moulage — Éjecteur à tête cylindrique*

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**(standards.iteh.ai)**

ISO 6751:1998

<https://standards.iteh.ai/catalog/standards/sist/447ccd53-b8ea-4467-bf07-564ab5fa9159/iso-6751-1998>



## 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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.

International Standard ISO 6751 was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee 8, *Tools for pressing and moulding*.

This third edition cancels and replaces the second edition (ISO 6751:1986), which has been technically revised.

Annex A of this International Standard is for information only.

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# Tools for moulding — Ejector pins with cylindrical head

## 1 Scope

This International Standard specifies the dimensions and tolerances, in millimetres, of ejector pins with cylindrical head which are used in compression and injection moulds and in die casting dies.

It also gives material guidelines and hardness requirements, and specifies the designation of ejector pins with cylindrical head.

Flat ejector pins are specified in ISO 8693, shouldered ejector pins are specified in ISO 8694.

## 2 Dimensions

See figure 1 and tables 1 and 2.

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## 3 Material and hardness

Ejector pins with cylindrical head shall be made of hot worked steel or alloyed cold worked steel. The hardness of the shaft and head is given in table 3.

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## 4 Designation

Ejector pins with cylindrical head according to this International Standard shall be designated by

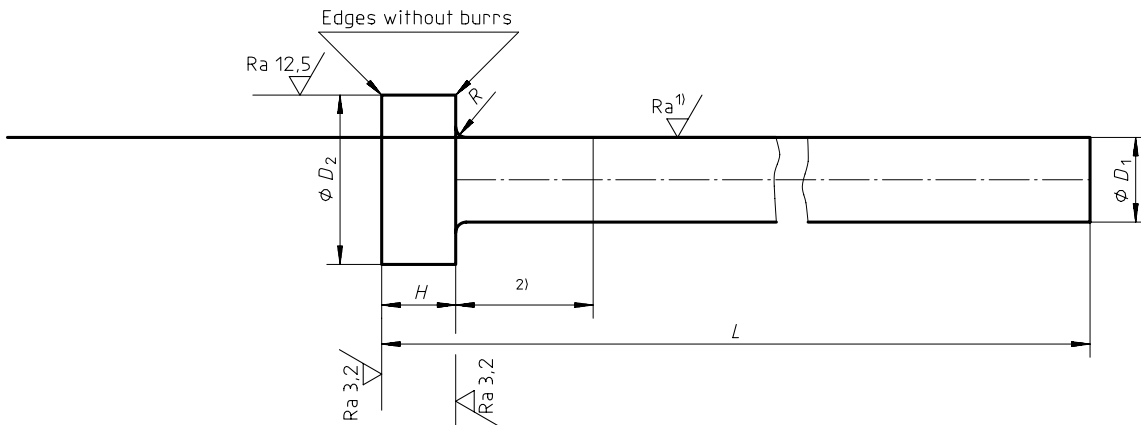
- a) “ejector pin with cylindrical head”;
- b) reference to this International Standard, i.e. ISO 6751;
- c) ejector pin diameter,  $D_1$ , in millimetres;
- d) ejector pin length,  $L$ , in millimetres;
- e) ejector pin material.

### EXAMPLE

The designation for an ejector pin with cylindrical head of diameter  $D_1 = 2$  mm, of length  $L = 100$  mm and of hot worked steel is as follows:

**Ejector pin with cylindrical head ISO 6751 - 2 - 100 - Hot worked steel**

Surface roughness values in micrometres



1)  $Ra\ 0,8$  for hot worked steel.  $Ra\ 0,4$  for alloyed cold worked steel.

2) Providing the ejector pin with an alternative surface roughness or a small variation on the diameter,  $D_1$ , over a certain length is permitted.

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Figure 1 — Ejector pin with cylindrical head

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Table 1 — Dimensions of ejector pins with cylindrical head of hot worked steel

Dimensions in millimetres

$D_1$ g6		$D_2$ 0 -0,2	$L \begin{matrix} +2 \\ 0 \end{matrix}$											$H$ 0 -0,05	$R$ +0,2 0
Standard size	Over size		100	125	160	200	250	315	400	500	630	800	1000		
2		4	X	X	X									2	0,2
	2,2			X		X									
2,5		5	X	X	X	X								3	0,3
	2,7			X		X									
3		6	X	X	X	X	X	X						3	0,3
	3,2			X		X		X							
3,5		7	X	X	X	X	X	X						3	0,3
	3,7			X		X		X							
4		8	X	X	X	X	X	X	X					3	0,3
	4,2			X		X		X		X					
5		10	X	X	X	X	X	X	X	X				3	0,3
	5,2			X		X		X		X					
6		12	X	X	X	X	X	X	X					5	0,5
	6,2			X	X	X	X	X	X	X					
8		14	X	X	X	X	X	X	X	X	X			5	0,5
	8,2			X		X		X		X		X			
10		16	X	X	X	X	X	X	X	X	X	X	X	5	0,5
	10,2			X	X	X	X	X	X	X	X	X	X		
12		18		X	X	X	X	X	X	X	X	X	X	7	0,8
	12,5			X	X	X	X	X	X	X	X	X	X		
16		22			X	X	X	X	X	X	X	X	X	7	0,8
20		26			X	X	X	X	X	X	X	X	X		
25		32				X	X	X	X	X	X	X	X	10	1
32		40					X	X	X	X	X	X	X		

Table 2 — Dimensions of ejector pins with cylindrical head of alloyed cold worked steel

Dimensions in millimetres

$D_1$ g6		$D_2$ 0 -0,2	$L + 2$ 0								$H$ 0 -0,05	$R$ +0,2 0
Standard size	Over size		80	100	125	160	200	250	315	400		
1,5		3	X	X	X	X					1,5	0,2
	1,6		X	X	X	X						
2		4	X	X	X	X	X			2		
	2,2		X		X		X					
2,5		5	X	X	X	X	X			3	0,3	
	2,7		X		X		X					
3		6	X	X	X	X	X	X		3		
	3,2			X		X		X				
3,5		7	X	X	X	X	X	X		3		
	3,7			X		X		X				
4		8	X	X	X	X	X	X	X	3		
	4,2		X		X		X		X			
5		10	X	X	X	X	X	X	X	5	0,5	
	5,2		X		X		X		X			
	6,2		X		X		X		X			
8		14	X	X	X	X	X	X	X	5		
	8,2		X		X		X		X			
10		16		X	X	X	X	X	X	5		
	10,2			X		X		X				
12		18		X	X	X	X	X	X	7	0,8	
	12,5			X	X	X	X	X	X			
16		22		X	X	X	X	X	X	8	1	
20		26			X	X	X	X	X	8	1	

Table 3 — Material and hardness

Material	Hardness <sup>1)</sup>	
	Shaft	Head
Hot worked steel	min 1 400 MPa core strength min 950 HV 0,3	45 ± 5 HRC hot forged
Alloyed cold worked steel	60 HRC ± 2 HRC	
1) The hardness measurement point is left to the manufacturer's discretion.		

**Annex A**  
(informative)

**Bibliography**

- [1] ISO 8693:1998, *Tools for moulding - Flat ejector pins.*
- [2] ISO 8694:1998, *Tools for moulding - Shouldered ejector pins.*

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**ICS 25.120.30**

**Descriptors:** moulding equipment, tools, ejectors, specifications, materials specifications, dimensions, designation.

Price based on 5 pages

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