INTERNATIONAL STANDARD

ISO 8405

Second edition
1998-11-01

Tools for moulding — Ejector sleeves with cylindrical head — Basic series for general purposes

Outillage de moulage — Éjecteurs tubulaires à tête cylindrique — Série de base pour usages généraux

Reference number
ISO 8405:1998(E)

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 8405 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 8405:1986) which has been technically revised.

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Tools for moulding — Ejector sleeves with cylindrical head — Basic series for general purposes

1 Scope

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

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

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All Standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6751:1998, *Tools for moulding – Ejector pins with cylindrical head*.

3 Dimensions

See figure 1 and table 1.

4 Material and hardness

Ejector sleeves with cylindrical head shall be made of hot worked steel or alloyed cold worked steel. The hardness of the shaft and head respectively are given in table 2.

5 Designation

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

a) "Ejector sleeve with cylindrical head";

b) reference to this International Standard, i.e. ISO 8405;

c) the diameter, D_1, in millimetres;

d) the length, L, in millimetres;

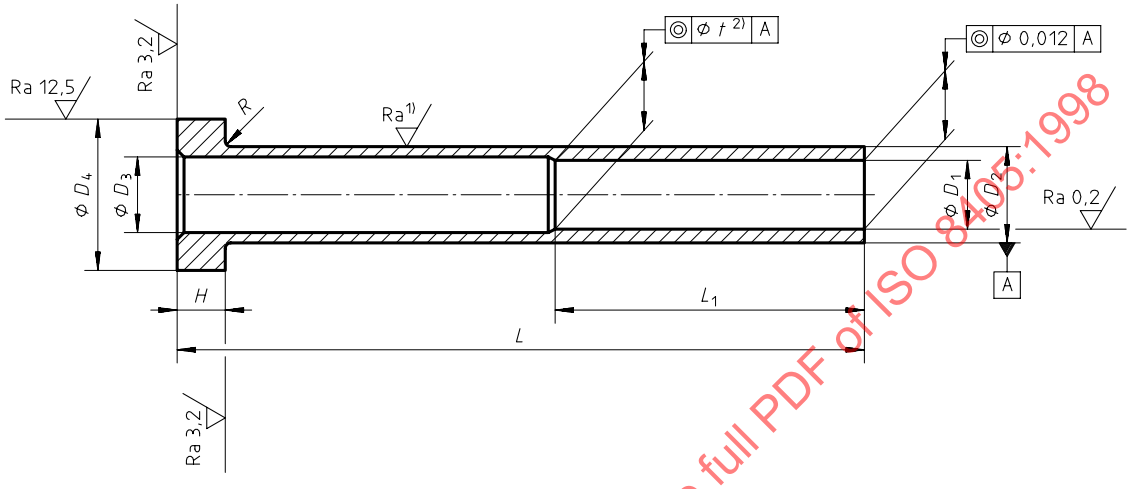
e) the material.

EXAMPLE

An ejector sleeve with cylindrical head with diameter D_1 = 2 mm, length L = 75 mm and made of hot worked steel is designated as follows:

Ejector sleeve with cylindrical head ISO 8405 - 2 - 75 - 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) t = 0,012 mm (L_1 x 10^{-1}).

Figure 1 — Ejector sleeves

Table 1 — Ejector sleeves

Dimensions in millimetres

D_1 H5		D_2 g6	D_3 0 −0,1	D_4 0 −0,2	L_1 +1 0	L +1 0										H[1] 0 −0,05	R +0,2 0
Standard size	Over size					75	100	125	150	175	200	225	250	275	300		
2		4	2,5	8	35	X	X	X								3	0,3
	2,2					X	X	X									
2,5		5	3	10		X	X	X									
	2,7					X	X	X									
3			3,5		45	X	X	X	X								
	3,2					X	X	X	X								
4		8	4,5	14		X	X	X	X	X	X					5	0,5
	4,2					X	X	X	X	X	X						
5			5,5			X	X	X	X	X	X						
	5,2					X	X	X	X	X	X						
6		10	6,5	16			X	X	X	X	X	X	X				
	6,2						X	X	X	X	X	X	X				
8		12	8,5	20			X	X	X	X	X	X	X	X	X	7	0,8
	8,2						X	X	X	X	X	X	X	X	X		
10		14	10,5	22			X	X	X	X	X	X	X	X	X		
	10,2						X	X	X	X	X	X	X	X	X		
12		16	12,5					X	X	X	X	X	X	X	X		
	12,5		13					X	X	X	X	X	X	X	X		

1) For shaft diameters, D_2, larger than those given in this table, up to 32 mm, the ratio of head height and diameter shall be the same as for ejector pins given in ISO 6751.

Table 2 — Material and hardness

Material	Hardness[1)]	
	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 ± 2) HRC	
1) The point at which hardness is measured is left to the manufacturer's discretion.		