
**Tools for pressing — Elastomer pressure
springs —**

**Part 1:
General specification**

Outillage de presse — Ressorts de compression en élastomère —

Partie 1: Spécifications générales

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ISO 10069-1:2008

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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.

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 10069-1 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 10069-1:1991), of which it constitutes a minor revision. In particular, the indication of surface textures has been updated in accordance with ISO 1302:2002.

ISO 10069 consists of the following parts, under the general title *Tools for pressing — Elastomer pressure springs*:

— *Part 1: General specification*

— *Part 2: Specification of accessories*

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Tools for pressing — Elastomer pressure springs —

Part 1: General specification

1 Scope

This part of ISO 10069 specifies the dimensions, in millimetres, of elastomer pressure springs intended for use in press tools, and the diameters, in millimetres, of counterbores for these pressure springs. It also gives information concerning materials and their hardness, and specifies the designation of springs that are in accordance with its requirements, together with the marking of their packages.

Examples of suitable applications are given in Annex A.

Dimensions of accessories (spring collars and pilot pins) are specified in ISO 10069-2.

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2 Normative references (standards.iteh.ai)

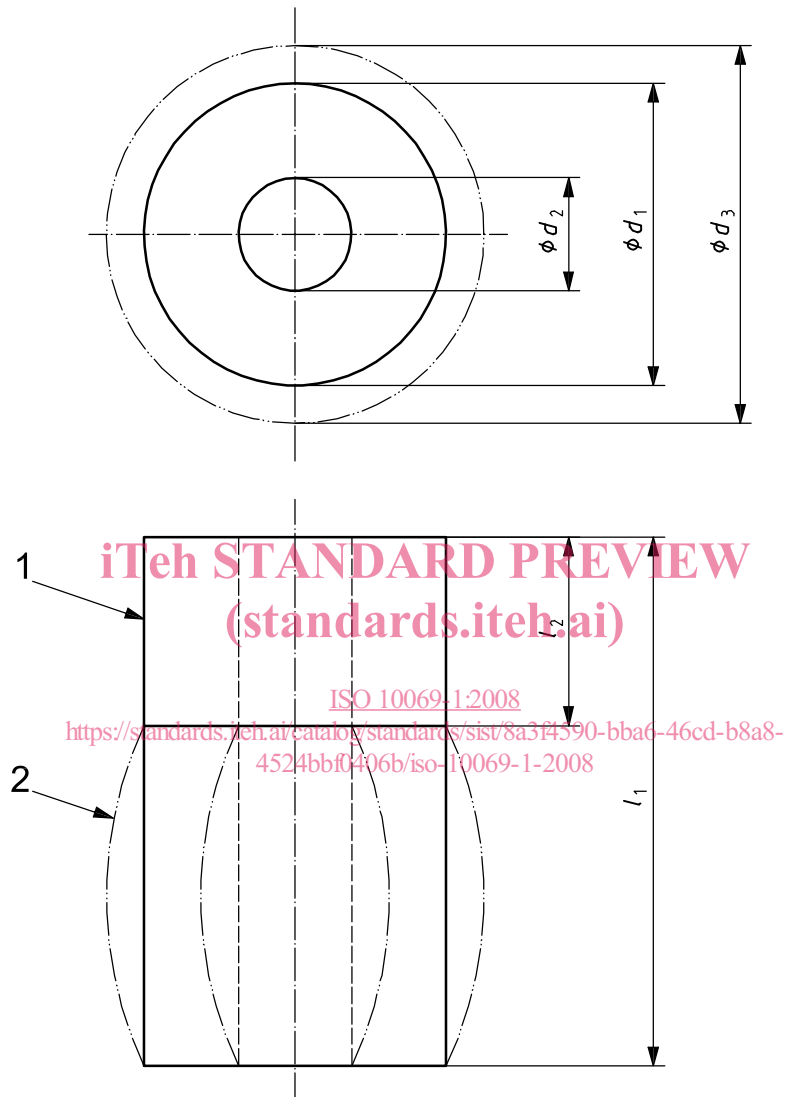
The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10069-2, *Tools for pressing — Elastomer pressure springs — Part 2: Specification of accessories*

3 Dimensions

3.1 Elastomer pressure springs

The dimensions of elastomer pressure springs shall be in accordance with Figure 1 and Tables 1 and 2.



Key

- 1 contour of free pressure spring
- 2 contour of pressure spring in compression

- d_1 diameter of the free pressure spring
- d_2 internal diameter of the pressure spring
- d_3 diameter of the pressure spring in compression
- l_1 length of the free pressure spring
- l_2 difference between the free and fully compressed lengths

Figure 1 — Pressure spring

Table 1 — General dimensions of elastomer pressure springs

Dimensions in millimetres

d_1	d_2	$d_{3, \max}$ for $l_{2, \max}$		l_1										
		CR ^a	PUR ^a	16	20	25	32	40	50	63	80	100	125	160
16	6,5	21,6	20	x	x	x								
20	8,5	27	25	x	x	x	x							
25	10,5	33,8	31,3		x	x	x	x						
32	13,5	43,2	40				x	x	x	x				
40		54	50				x	x	x	x	x			
50	17	67,5	62,5				x	x	x	x	x	x		
63		85	78,8				x	x	x	x	x	x	x	
80	21	108	100				x	x	x	x	x	x	x	
100		135	125				x	x	x	x	x	x	x	
125	27	168,8	156,3				x	x	x	x	x	x	x	x

^a See Clause 4 for an explanation of these abbreviated terms.

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Table 2 — Values of the load, F , and the difference between the free and fully compressed lengths, l_2 , for elastomer springs in accordance with this part of ISO 10069

Dimensions in millimetres

d_1	l_1	CR		PUR		d_1	l_1	CR		PUR	
		F max. kN	l_2^a max.	F max. kN	l_2^b max.			F max. kN	l_2^a max.	F max. kN	l_2^b max.
16	16	0,3	5,6	1,2	4	63	32	10	11,2	21	8
	20		7		5		40		14		10
	25		8,75		6,25		50		17,5		12,5
20	16	0,5	5,6	2	4	80	63	18	22,05	38	15,75
	20		7		5		80		28		20
	25		8,75		6,25		100		35		25
	32		11,2		8		125		43,75		31,25
25	20	0,8	7	3,5	5	100	32	27	11,2	65	8
	25		8,75		6,25		40		14		10
	32		11,2		8		50		17,5		12,5
	40		14		10		63		22,05		15,75
32	32	2,3	11,2	4,5	8	125	32	42	11,2	100	8
	40		14		10		40		14		10
	50		17,5		12,5		50		17,5		12,5
	63		22,05		15,75		63		22,05		15,75
40	32	3,6	11,2	8,5	8	125	32	42	11,2	100	8
	40		14		10		40		14		10
	50		17,5		12,5		50		17,5		12,5
	63		22,05		15,75		63		22,05		15,75
	80		28		20		80		28		20
50	32	5,5	11,2	13	8	125	32	42	11,2	100	8
	40		14		10		40		14		10
	50		17,5		12,5		50		17,5		12,5
	63		22,05		15,75		63		22,05		15,75
	80		28		20		80		28		20
	100		35		25		100		35		25
							125	42	43,75	100	31,75
							160		56		40

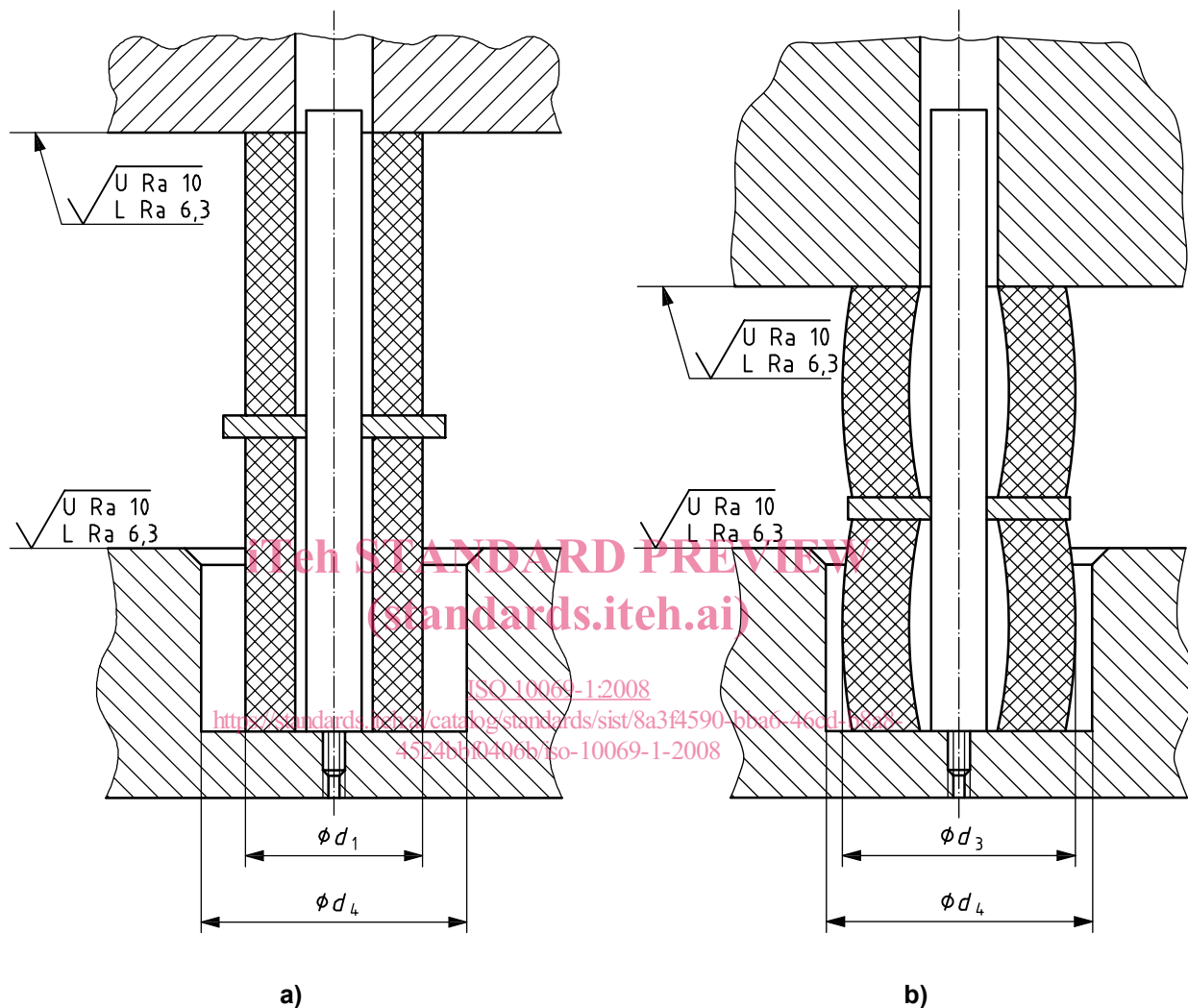
^a $l_{2, \max} = 0,35l_1$.

^b $l_{2, \max} = 0,25l_1$.

3.2 Counterbores for elastomer pressure springs

The dimensions of counterbores for elastomer pressure springs shall be in accordance with Figures 2 a) and 2 b) and Table 3.

Surface roughness values in micrometres



Key

- d_1 diameter of the free pressure spring
- d_3 diameter of the pressure spring in compression
- d_4 diameter of the counterbore

Figure 2 — Elastomer pressure spring

Table 3 — Dimensions of the counterbores, d_4 , as a function of the diameters d_1 and d_3

Dimensions in millimetres

	d_4									
	24	30	38	48	61	75	94	118	150	188
d_1	16	20	25	32	40	50	63	80	100	125
d_3	22	27	34	43	54	68	85	108	135	169