TC 72

INTERNATIONAL STANDARD ISO 93/II

Textile machinery and accessories — Cylindrical sliver cans — Part II : Spring bottoms

Matériel pour l'industrie textile — Pots cylindriques pour rubans —
Partie II : Fonds à ressort

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 93/II was developed by Technical Committee ISO/TC 72, *Textile machinery and accessories*, and was circulated to the member bodies in June 1977.

It has been approved by the member bodies of the following countries :

Belgium	Italy	South Africa, Rep. of
Czechoslovakia	Japan	Spain
Egypt, Arab Rep. of	Korea, Rep. of	Switzerland
France	Mexico	Turkey
Germany, F. R.	Netherlands	U.S.S.R.
India	Poland	Yugoslavia
Ireland	Romania	

The member body of the following country expressed disapproval of the document on technical grounds :

United Kingdom

Textile machinery and accessories — Cylindrical sliver cans — Part II : Spring bottoms

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the principal features of spring bottoms, with and without pre-tension, used in cylindrical sliver cans specified in ISO 93/I.

2 SYMBOLS AND PRINCIPAL FEATURES

2.1 Spring bottoms for cylindrical cans without castors

2.1.1 Symbols

d = inside diameter of sliver can

d_4 = outside diameter of spring plate

h = height of sliver can

h_2 = distance from top rim of can to surface of spring plate

h_3 = depth of spring plate

F_n = force of spring

F_v = force of spring in top working position

L_o = length of unloaded spring

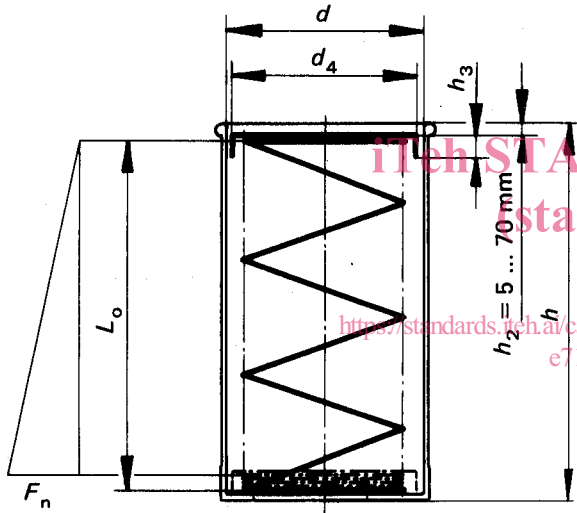L_v = length of spring in top working position (i.e. when constrained)
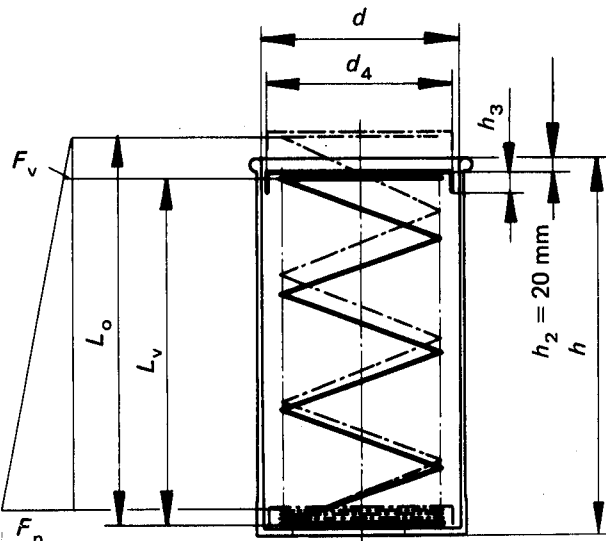

FIGURE 1 — Spring bottom without pre-tension, type A

FIGURE 2 — Spring bottom with pre-tension, type B

2.1.2 Principal features

TABLE 1 — Principal features of spring bottoms — Types A and B

Size of can (see ISO 93/I)		Characteristics of springs without pre-tension Type A		with pre-tension Type B		Spring plate	
d [1]	h	$L_o \pm 30$	F_n [2]	$L_o \pm 30$	F_n [2]	d_4	h_3
mm	mm	mm	daN	mm	daN	mm	mm
250			2,5		2,5	236	
300			3,5		3,5	285	
350	800	740	5	840	5	335	50
400			8		8	385	
225			2,5		2,5	215	50
250			3		3	236	50
300			4		4	285	50
350			6		6	335	50
400			8		9	385	50
500	900	840	13	940	14	485	55
600			17		18	585	60
700			22		22	682	70
800			28		28	780	85
900			35		35	880	100
1 000			43		43	980	100
300			5		5	285	50
350			7		7	335	50
400			9		11	385	50
(450)			12		14	435	50
500			14		16	485	55
(550)	1 000	940	16	1 040	18	535	55
600			18		20	585	60
700			24		25	682	70
800			31		31	780	85
900			38		38	880	100
1 000			46		46	980	100
400			11		13	385	50
500			16		19	485	55
600	1 100	1 040	20	1 140	22	585	60
700			25		27	682	70
800			34		34	780	85
500			19		21	485	55
600			22		24	585	60
700	1 200	1 140	27	1 240	30	682	70
800			34		37	780	85
900			45		45	880	100
1 000			54		54	980	100
800			37		39	780	85
900	1 300	1 240	45	1 340	47	880	100
1 000			54		56	980	100

1) The values shown in parentheses are considered to be non-preferred sizes.

2) The values of F_n are a guide based on the mass (in kilograms) of average cotton sliver and slivers of similar density which the can will contain. For slivers of lower densities, reductions in the values of F_n will be necessary.

2.2 Spring bottoms for cylindrical cans with castors

2.2.1 *Symbols*

d = inside diameter of sliver can

d_4 = outside diameter of spring plate

h = height of sliver can

h_2 = distance from top rim of can to surface of spring plate

h_3 = depth of spring plate

F_n = force of spring

F_v = force of spring in top working position

L_o = length of unloaded spring

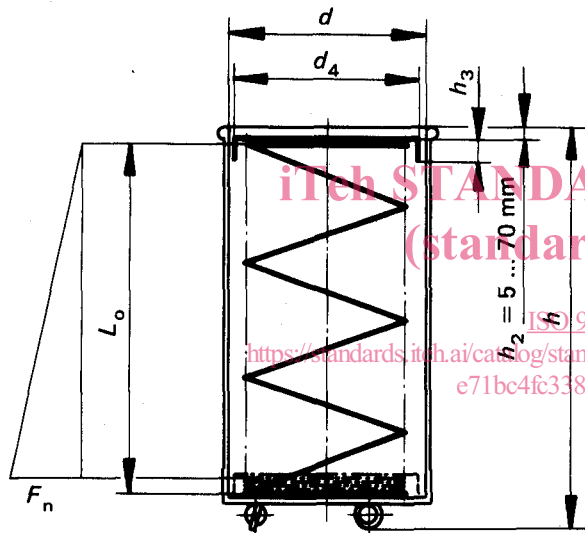L_v = length of spring in top working position (i.e. when constrained)

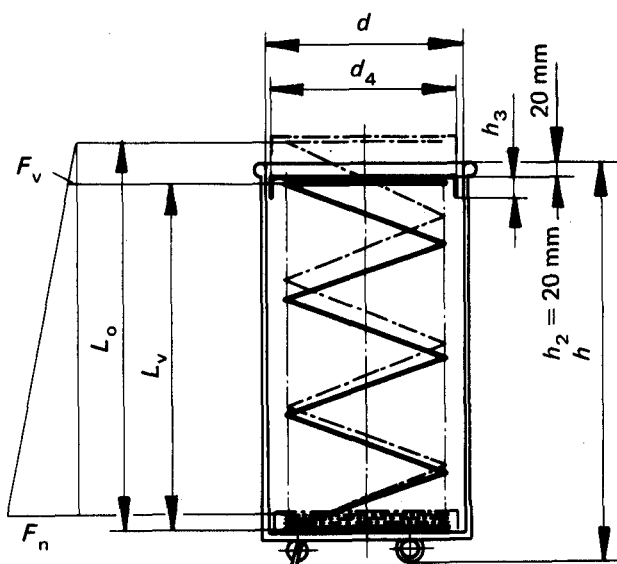FIGURE 3 — **Spring bottom without pre-tension, type C**

FIGURE 4 — **Spring bottom with pre-tension, type D**

2.2.2 *Principal features*

TABLE 2 — **Principal features of spring bottoms — Types C and D**

Size of can (see ISO 93/I)		Characteristics of springs				Spring plate	
		without pre-tension Type C		with pre-tension Type D			
d [1]	h	$L_o \pm 30$	F_n [2]	$L_o \pm 30$	F_n [2]	d_4	h_3
mm	mm	mm	daN	mm	daN	mm	mm
(400)	900	770	8	870	8	385	50
600			16		16	585	60
(400)			8		9	385	50
(450)			11		12	435	50
500			13		14	485	55
600	1 000	870	17	970	18	585	60
700			22		22	682	70
800			28		28	780	85
900			35		35	880	100
(450)			14		14	435	50
500			16		16	485	55
600			18		20	585	60
700	1 100	970	22	1 070	25	682	70
800			28		31	780	85
900			35		38	880	100
1 000			46		46	980	100
500			16		19	485	55
600			20		22	585	60
700			25		27	682	70
800	1 200	1 070	31	1 170	34	780	85
900			38		42	880	100
1 000			46		50	980	100
1 200			68		68	1 180	100
800			34		37	780	85
900	1 300	1 170	42	1 270	45	880	100
1 000			50		54	980	100
1 200			68		73	1 180	100

1) The values shown in parentheses are considered to be non-preferred sizes.

2) The values of F_n are a guide based on the mass (in kilograms) of average cotton sliver and slivers of similar density which the can will contain. For slivers of lower densities, reductions in the values of F_n will be necessary.

3 ORDER SPECIFICATION

The designation used for ordering a spring bottom for a cylindrical sliver can shall include the following particulars :

a) type;

b) characteristics of the spring, i.e. L_o and F_n;

c) dimensions of the spring plate, i.e. d_4 and h_3.

Example :

Spring bottom for cylindrical sliver can, type D, length of unloaded spring L_o = 1 170 mm, force of spring F_o = 34 daN, outside diameter of spring plate d_4 = 780 mm, depth of spring plate h_3 = 85 mm :

Spring bottom D 1 170 × 34 — 780/85 ISO 93/II

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