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**Textile machinery and accessories —  
Cylindrical sliver cans —**

**Part 2:  
Spring bottoms**

*Matériel pour l'industrie textile — Pots cylindriques pour rubans —  
Partie 2: Fonds à ressort*

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Published in Switzerland

## 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 93-2 was prepared by Technical Committee ISO/TC 72, *Textile machinery and accessories*, Subcommittee SC 1, *Spinning preparatory, spinning, twisting and winding machinery and accessories*.

This third edition cancels and replaces the second edition (ISO 93-2:1999), which has been technically revised.

ISO 93 consists of the following parts, under the general title *Textile machinery and accessories — Cylindrical sliver cans*:

— Part 1: *Main dimensions*

— Part 2: *Spring bottoms*

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# Textile machinery and accessories — Cylindrical sliver cans —

## Part 2: Spring bottoms

### 1 Scope

This part of ISO 93 specifies the principal features of spring bottoms — with and without pre-tension — for cylindrical sliver cans, as specified in ISO 93-1, used in the textile industry.

### 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 93-1, *Textile machinery and accessories — Cylindrical sliver cans — Part 1: Main dimensions*

### 3 Symbols

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- $d$  inside diameter of sliver can
- $d_4$  outside diameter of spring plate
- $h$  overall height
- $h_2$  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
- $L_0$  length of unloaded spring
- $L_v$  length of spring in top working position (i.e. when constrained)

## 4 Principal features

### 4.1 Spring bottoms for cylindrical cans without castors

See Figures 1 and 2, and Table 1.

For type A (see Figure 1), force of spring  $F_n$  and tolerances of parallelism of the spring plate shall be agreed between the producer, machine manufacturer and customer.

For type B (see Figure 2), force of spring  $F_n$  and force of spring in top working position  $F_v$ , as well as tolerances of parallelism of the spring plate, shall be agreed between the producer, machine manufacturer and customer.

The distance from the top rim of can to surface of spring plate  $h_2$  shall be

- for type A, between  $\geq 5$  mm and  $\leq 70$  mm, and
- for type B, equal to 20 mm.

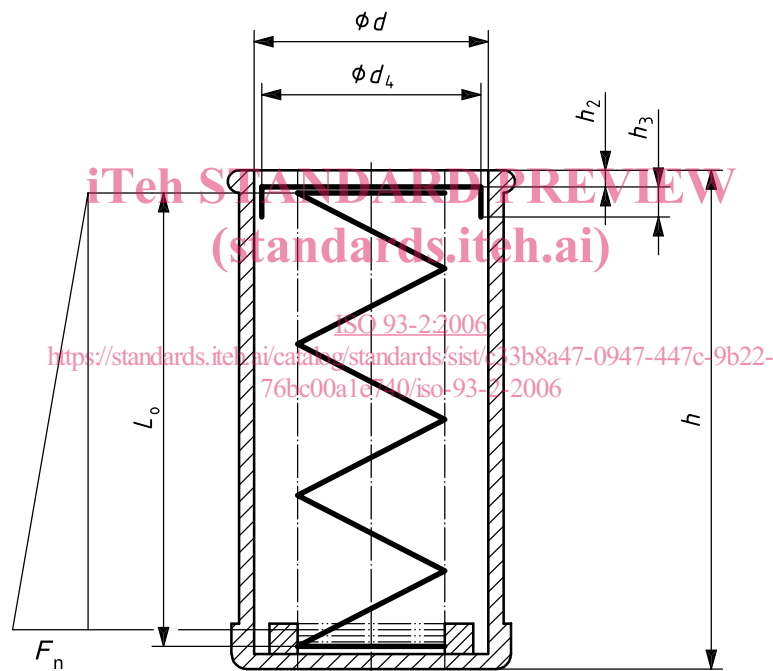


Figure 1 — Spring bottom without pre-tension — Type A

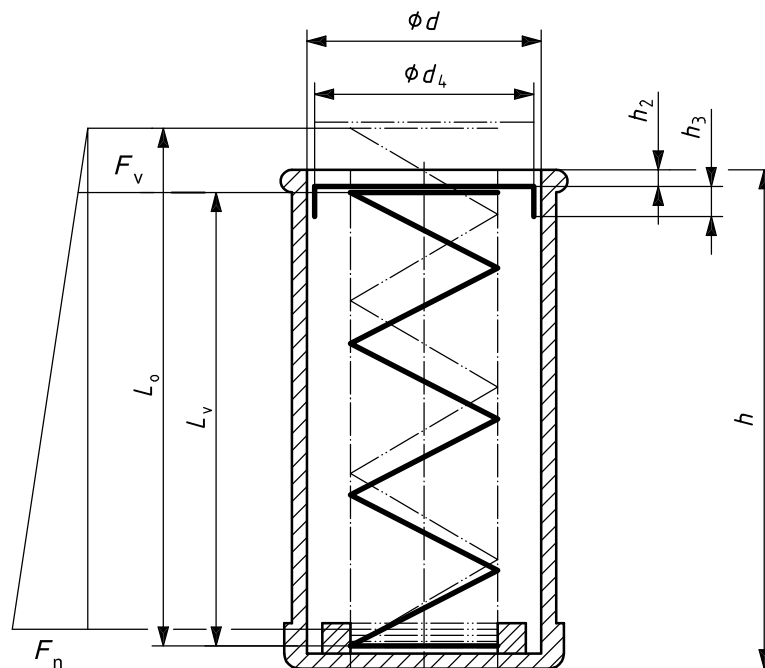


Figure 2 — Spring bottom with pre-tension — Type B  
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Table 1 — Principal features of spring bottoms — Types A and B

Dimensions in millimetres

Size of can <sup>a</sup>		Characteristics of spring		Spring plate	
<i>d</i> ± 3	<i>h</i>	Type A <i>L</i> <sub>0</sub> ± 30	Type B <i>L</i> <sub>0</sub> ± 30	<i>d</i> <sub>4</sub>	<i>h</i> <sub>3</sub>
300	900	840	940	285	50
350				335	50
400				385	50
450				435	50
500				485	55
600				585	60
700				682	70
300	1 000	940	1 040	285	50
350				335	50
400				385	50
450				435	50
500				485	55
600				585	60
700				682	70
400	1 100	1 040	1 140	385	50
450				435	50
500				485	55
600				585	60
700				682	70
450	1 200 <sup>c</sup>	1 140	1 240	435	50
500				485	55
600				585	60
700 <sup>b</sup>				682	70

<sup>a</sup> According to ISO 93-1.

<sup>b</sup> Inside diameters *d* greater than 700 mm shall be in increments of 100 mm.

<sup>c</sup> Heights *h* greater than 1 200 mm shall be in increments of 100 mm.



## 4.2 Spring bottoms for cylindrical cans with castors

See Figures 3 and 4, and Table 2.

For type C (see Figure 3), force of spring  $F_n$  and tolerances of parallelism of the spring plate shall be agreed between the producer, machine manufacturer and customer.

For type D (see Figure 4), force of spring  $F_n$  and force of spring in top working position  $F_v$ , as well as tolerances of parallelism of the spring plate, shall be agreed between the producer, machine manufacturer and customer.

The distance from the top rim of can to surface of spring plate  $h_2$  shall be

- for type C, between  $\geq 5$  mm and  $\leq 70$  mm, and
- for type D, equal to 20 mm.

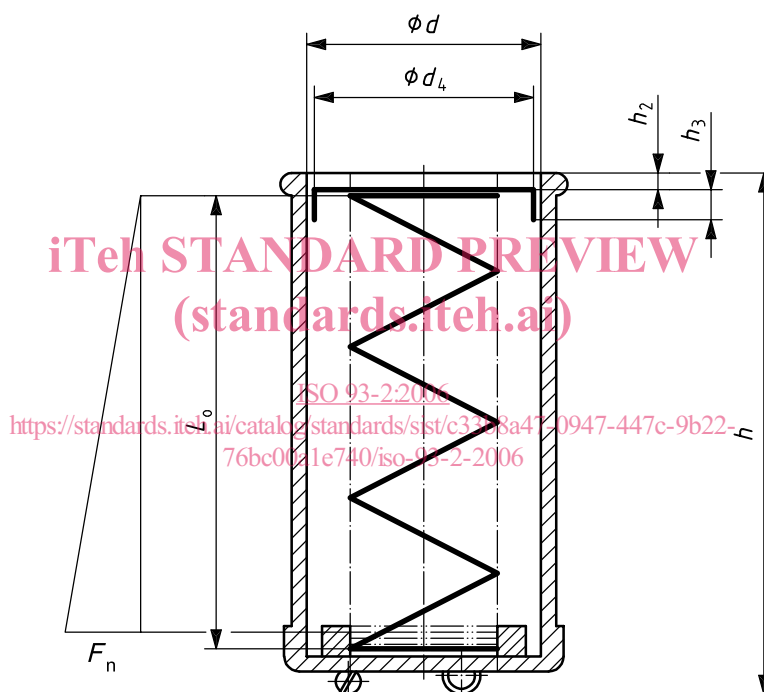


Figure 3 — Spring bottom without pre-tension — Type C