

INTERNATIONAL STANDARD

ISO
368

Third edition
1991-11-01

**Spinning preparatory, spinning and doubling
(twisting) machinery — Tubes for ring-spinning,
doubling and twisting spindles, taper 1:38 and
1:64**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Matériel de préparation de filature, de filature et de retordage — Tubes pour broches de continus à filer et à retordre à anneaux, conicité 1:38 et 1:64

<https://standards.iteh.ai/catalog/standards/sist/79223d85-507c-4c06-80e4-401d7883e880/iso-368-1991>



Reference number
ISO 368:1991(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 368 was prepared by Technical Committee ISO/TC 72, *Textile machinery and allied machinery and accessories*, Sub-Committee SC 1, *Spinning preparatory, spinning and doubling (twisting) machinery*.

This third edition cancels and replaces the second edition (ISO 368:1982), of which it constitutes a technical revision.

ITeH STANDARD PREVIEW
(standards.iteh.ai)
ISO 368:1991
<https://standards.iteh.ai/catalog/standards/sist/79223d85-507c-4c06-80e4-401d7883e880/iso-368-1991>

Spinning preparatory, spinning and doubling (twisting) machinery — Tubes for ring-spinning, doubling and twisting spindles, taper 1:38 and 1:64

1 Scope

This International Standard specifies the dimensions (length and inner diameter) and permissible total run-out of tubes with taper 1:38 and 1:64 for ring-spinning, doubling and twisting spindles. It also specifies the dimensions and tolerances of the gauges for checking the tubes.

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 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*.

3 Types, dimensions and tolerances

3.1 Tubes

3.1.1 Tube types

Plain top tubes as shown in figure 1 a) shall be designated as type A tubes. Rolled-in top tubes as shown in figure 1 b) shall be designated as type B tubes.

3.1.2 Dimensions

Tube sizes shall be chosen from the dimensions specified in table 1.

3.1.3 Total run-out tolerance

The permissible total run-out tolerance, T_r , shall be in accordance with the values specified in table 1. The total run-out shall be measured in accordance with figure 2.

3.2 Gauges

Gauges shall conform to the dimensions and tolerances specified in table 2 or table 3.

4 Designation

4.1 Tubes

The designation of a tube in accordance with this International Standard shall comprise the following information in the order given:

- "Tube";
- the number of this International Standard (i.e. ISO 368);
- the taper;
- the type of tube (i.e. A or B);
- the length l_1 for tubes type A or the length l_2 for tubes type B, in millimetres;
- the row.

If necessary, further information may be given by agreement between the customer and the supplier.

EXAMPLE

A tube with taper 1:64, type B with rolled-in top, of length $l_2 = 230$ mm and row 2, is designated as follows:

Tube ISO 368 - 1:64 B - 230/2

4.2 Gauges

The designation of a gauge in accordance with this International Standard shall comprise the following information in the order given:

- a) "Gauge";
- b) the number of this International Standard (i.e. ISO 368);
- c) the taper;
- d) the type of tube which the gauge is designed to check (i.e. A or B);
- e) the length l_1 for gauges for tubes type A or the length l_3 for gauges for tubes type B, in millimetres;
- f) the row (corresponding to the tube which the gauge is designed to check).

EXAMPLE

A gauge with taper 1:64 for tubes type B, of length $l_3 = 215$ mm and row 2, is designated as follows:

Gauge ISO 368 - 1:64 B - 215/2

5 Tubes and gauges

5.1 Tubes

See figures 1 and 2 and table 1.

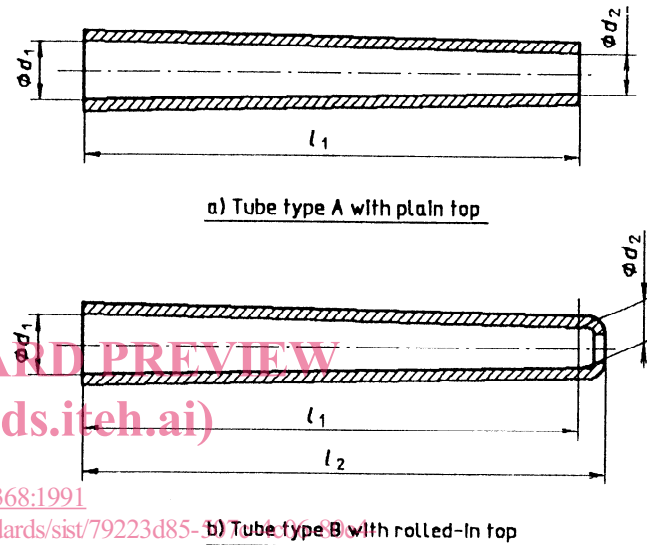


Figure 1 — Tubes

Dimensions in millimetres

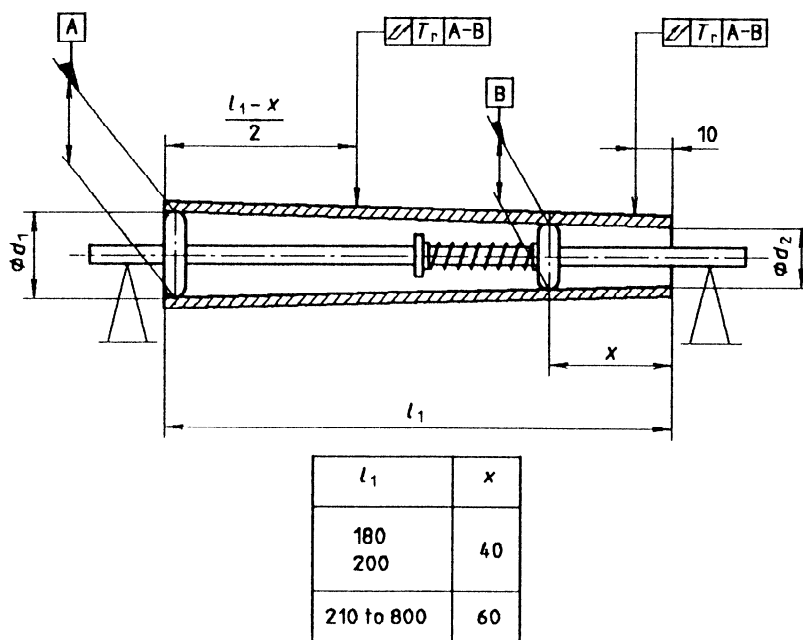


Figure 2 — Measurement of total run-out, T_r

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 368:1991

<https://standards.iteh.ai/catalog/standards/sist/79223d85-507c-4c06-80e4-401d7883e880/iso-368-1991>

Table 1 — Dimensions and total run-out tolerances of tubes

Dimensions in millimetres

Lengths			Row 0		Row 1		Row 2		Row 3		Permissible total run-out T_r		
l_1	l_2	Permissible deviation	d_1	d_2	d_1	d_2	d_1	d_2	d_1	d_2	1)	2)	3)
Tubes with taper 1:38													
180	190	± 1,5	20,24	15,5	18,74	14	17,24	12,5	—	—	0,25	0,2	
200	210		22,26	17	20,26	15	18,76	13,5	—	—			
(210)	(220)		22,27	16,75	20,27	14,75	18,77	13,25	—	—			
220	230	± 2	24,28	18,5	22,28	16,5	20,28	14,5	18,78	13	0,4		
(230)	(240)		24,3	18,25	22,3	16,25	20,3	14,25	18,8	12,75			
240	250		27,31	21	24,31	18	22,31	16	20,31	14			
(250)	(260)		27,32	20,75	24,32	17,75	22,32	15,75	20,32	13,75			
260	270		30,34	23,5	27,34	20,5	24,34	17,5	22,34	15,5			
(270)	(280)		30,35	23,25	27,35	20,25	24,35	17,25	22,35	15,25			
280	290	± 2,5	33,36	26	30,36	23	27,36	20	24,36	17			
(290)	(300)		33,37	25,75	30,37	22,75	27,37	19,75	24,37	16,75			
300	310		36,39	28,5	33,39	25,5	30,39	22,5	27,39	19,5			
320	330	± 3	39,42	31	36,42	28,5	33,42	25,5	30,42	22,5			
340	350		—	—	—	—	33,44	24,5	34	25,05			
(350)	(360)		—	—	—	—	—	—	35	25,79			
360	370		—	—	—	—	36,47	27	36	26,53			
380	390		—	—	—	—	39,5	30,5	38	28			
400	410		—	—	—	—	42,52	32	40	29,47			
450	460	± 4	—	—	—	—	49,59	37,75	45	33,16			
500	510		—	—	—	—	56,65	43,5	50	36,84			
550	560		—	—	—	—	—	—	55	40,53			
600	610		—	—	—	—	—	—	60	44,21			
650	660		—	—	—	—	—	—	65	47,89			
700	710		—	—	—	—	—	—	70	51,58			
750	760	± 5	—	—	—	—	—	—	75	55,26			
800	810		—	—	—	—	—	—	80	58,95			

Lengths			Row 0		Row 1		Row 2		Row 3		Permissible total run-out T_r		
l_1	l_2	Permissible deviation	d_1	d_2	d_1	d_2	d_1	d_2	d_1	d_2	1)	2)	3)
Tubes with taper 1:64													
180	190	± 1,5	19	16,19	17	14,19	15	12,19	—	—	0,4	0,25	0,2
200	210		21	17,88	19	15,88	17	13,88	15	11,88			
220	230		24	20,56	22	18,56	20	16,56	18	14,56			
(230)	(240)	± 2	24	20,41	22	18,41	20	16,41	18	14,41	0,4	0,25	0,2
240	250		27	23,25	24	20,25	22	18,25	20	16,25			
(250)	(260)		27	23,09	24	20,09	22	18,09	20	16,09			
260	270	± 2	30	25,94	27	22,94	24	19,94	22	17,94	0,4	0,25	0,2
(270)	(280)		30	25,78	27	22,78	24	19,78	22	17,78			
280	290		33	28,62	30	25,62	27	22,62	24	19,62			
(290)	(300)	± 2,5	33	28,47	30	25,47	27	22,47	24	19,47	0,4	0,25	0,2
300	320		36	31,31	33	28,31	30	25,31	27	22,31			
320	340		—	—	—	—	32	27	—	—			
340	360	± 3	—	—	—	—	34	28,69	—	—	0,4	0,25	0,2
(350)	(370)		—	—	—	—	35	29,53	—	—			
360	380		—	—	—	—	36	30,38	—	—			
380	400	± 3	—	—	—	—	38	32,06	—	—	0,4	0,25	0,2
400	420		—	—	—	—	40	33,75	—	—			
450	470		—	—	—	—	45	37,97	—	—			
500	520	± 4	—	—	—	—	50	42,19	—	—	0,4	0,25	0,2
550	570		—	—	—	—	55	46,41	—	—			
600	620		—	—	—	—	60	50,63	—	—			
650	670	± 4	—	—	—	—	65	54,84	—	—	0,4	0,25	0,2
700	720		—	—	—	—	70	59,06	—	—			
750	770		—	—	—	—	75	63,28	—	—			
800	820	± 5	—	—	—	—	80	67,5	—	—	0,4	0,25	0,2

NOTE -- The values framed in bold are preferred. The values in brackets should be avoided wherever possible, in both the preferred and non-preferred areas. The values shown in italics are preferred for suppressed balloon ring-spinning.

1) $n \leq 15\,000 \text{ min}^{-1}$ (r/min of spindle).
 2) $15\,000 \text{ min}^{-1} < n \leq 18\,000 \text{ min}^{-1}$ (r/min of spindle).
 3) $n > 18\,000 \text{ min}^{-1}$ (r/min of spindle).

5.2 Gauges

5.2.1 Gauge for tubes type A

See figure 3 and table 2.

For checking the internal diameter at the base of the tube by means of the corresponding marks on the gauge, the tube shall be cut into parts. The marks $\pm b/2$ at the small end of the gauge are used only for checking the internal diameter at the top of the tube.

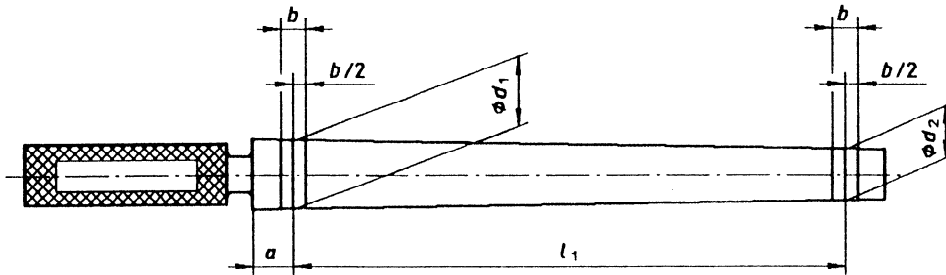


Figure 3 — Gauge for tubes type A

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 368:1991
<https://standards.iteh.ai/catalog/standards/sist/79223d85-507c-4c06-80e4-401d7883e880/iso-368-1991>

Table 2 — Dimensions and tolerances of gauges for tubes type A

Dimensions in millimetres

l_1 $\pm 0,2$	Row 0		Row 1		Row 2		Row 3		a	b $\pm 0,1$
	d_1 js6 ¹⁾	d_2 js6	d_1 js6	d_2 js6	d_1 js6	d_2 js6	d_1 js6	d_2 js6		
Gauges with taper 1:38										
180	20,24	15,5	18,74	14	17,24	12,5	—	—	15	6
200	22,26	17	20,26	15	18,76	13,5	—	—		
210	22,27	16,75	20,27	14,75	18,77	13,25	—	—		
220	24,26	18,5	22,28	16,5	20,28	14,5	18,78	13		
230	24,3	18,25	22,3	16,25	20,3	14,25	18,8	12,75		
240	27,31	21	24,31	18	22,31	16	20,31	14		
250	27,32	20,75	24,32	17,75	22,32	15,75	20,32	13,75		
260	30,34	23,5	27,34	20,5	24,34	17,5	22,34	15,5		
270	30,35	23,25	27,35	20,25	24,35	17,25	22,35	15,25		
280	33,36	26	30,36	23	27,36	20	24,36	17		
290	33,37	25,75	30,37	22,75	27,37	19,75	24,37	16,75		
300	36,39	28,5	33,39	25,5	30,39	22,5	27,39	19,5		
320	39,42	31	33,42	25	30,42	22	32	23,58		
340	—	—	—	—	33,44	24,5	34	25,05		
350	—	—	—	—	—	—	35	25,79		
360	—	—	—	—	36,47	27	36	26,53		
380	—	—	—	—	39,5	29,5	38	28		
400	—	—	—	—	42,52	32	40	29,47		
450	—	—	—	—	49,59	37,75	45	33,16		
500	—	—	—	—	56,65	43,5	50	36,84		
550	—	—	—	—	—	—	55	40,53		
600	—	—	—	—	—	—	60	44,21		
650	—	—	—	—	—	—	65	47,89		
700	—	—	—	—	—	—	70	51,58		
750	—	—	—	—	—	—	75	55,26		
800	—	—	—	—	—	—	80	58,95		
Gauges with taper 1:64										
180	19	16,19	17	14,19	15	12,19	—	—	20	10
200	21	17,88	19	15,88	17	13,88	15	11,88		
220	24	20,56	22	18,56	20	16,56	18	14,56		
230	24	20,41	22	18,41	20	16,41	18	14,41		
240	27	23,25	24	20,25	22	18,25	20	16,25		
250	27	23,09	24	20,09	22	18,09	20	16,09		
260	30	25,94	27	22,94	24	19,94	22	17,94		
270	30	25,78	27	22,78	24	19,78	22	17,78		
280	33	28,62	30	25,62	27	22,62	24	19,62		
290	33	28,47	30	25,47	27	22,47	24	19,47		
300	36	31,31	33	28,31	30	25,31	27	22,31		
320	—	—	—	—	32	27	—	—		
340	—	—	—	—	34	28,69	—	—		
350	—	—	—	—	35	29,53	—	—		
360	—	—	—	—	36	30,38	—	—		
380	—	—	—	—	38	32,06	—	—		
400	—	—	—	—	40	33,75	—	—		
450	—	—	—	—	45	37,97	—	—		
500	—	—	—	—	50	42,19	—	—		
550	—	—	—	—	55	46,41	—	—		
600	—	—	—	—	60	50,63	—	—		
650	—	—	—	—	65	54,84	—	—		
700	—	—	—	—	70	59,06	—	—		
750	—	—	—	—	75	63,29	—	—		
800	—	—	—	—	80	67,5	—	—		
Gauges with taper 1:16										
180	19	16,19	17	14,19	15	12,19	—	—	40	10
200	21	17,88	19	15,88	17	13,88	15	11,88		
220	24	20,56	22	18,56	20	16,56	18	14,56		
230	24	20,41	22	18,41	20	16,41	18	14,41		
240	27	23,25	24	20,25	22	18,25	20	16,25		
250	27	23,09	24	20,09	22	18,09	20	16,09		
260	30	25,94	27	22,94	24	19,94	22	17,94		
270	30	25,78	27	22,78	24	19,78	22	17,78		
280	33	28,62	30	25,62	27	22,62	24	19,62		
290	33	28,47	30	25,47	27	22,47	24	19,47		
300	36	31,31	33	28,31	30	25,31	27	22,31		
320	—	—	—	—	32	27	—	—		
340	—	—	—	—	34	28,69	—	—		
350	—	—	—	—	35	29,53	—	—		
360	—	—	—	—	36	30,38	—	—		
380	—	—	—	—	38	32,06	—	—		
400	—	—	—	—	40	33,75	—	—		
450	—	—	—	—	45	37,97	—	—		
500	—	—	—	—	50	42,19	—	—		
550	—	—	—	—	55	46,41	—	—		
600	—	—	—	—	60	50,63	—	—		
650	—	—	—	—	65	54,84	—	—		
700	—	—	—	—	70	59,06	—	—		
750	—	—	—	—	75	63,29	—	—		
800	—	—	—	—	80	67,5	—	—		

1) See ISO 286-2.