
International Standard



368

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Textile machinery and accessories — Tubes for ring-spinning, doubling and twisting spindles, taper 1 : 38 and 1 : 64

Matériel pour l'industrie textile — Tubes pour broches de continus à filer et à retordre à anneaux, conicité 1 : 38 et 1 : 64

Second edition — 1982-11-01

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Descriptors : textile machinery, ring twisters, spinning frames, spinning, pipes (tubes), gauges, designation, dimensions, dimensional tolerances, taper.

Price based on 7 pages

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 368 was developed by Technical Committee ISO/TC 72, *Textile machinery and allied machinery and accessories*, and was circulated to the member bodies in June 1981.

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

Australia	Germany, F.R.	Switzerland
Belgium	India	Turkey
Bulgaria	Korea, Rep. of	United Kingdom
China	Mexico	USSR
Czechoslovakia	Romania	Yugoslavia
France	South Africa, Rep. of	

The member bodies of the following countries expressed disapproval of the document on technical grounds:

Japan
Poland

This second edition cancels and replaces the first edition (i.e. ISO 368-1975). It also cancels and replaces International Standard ISO 3296-1975, of which it constitutes a technical revision.

Textile machinery and accessories — Tubes for ring-spinning, doubling and twisting spindles, taper 1 : 38 and 1 : 64

1 Scope and field of application

This International Standard lays down the dimensions (length and inner diameter) 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 Reference

ISO 286/1, *ISO system of limits and fits — Part 1 : General tolerances and deviations.*¹⁾

3 Dimensions, tolerances and types

3.1 Tube sizes

Tube sizes shall be chosen from the dimensions specified in tables 1 and 3.

3.2 Gauges

Gauges shall conform to the dimensions and tolerances specified in tables 2a) or 2b) or tables 4a) or 4b).

3.3 Tube types

Plain top tubes as shown in figures 1a) and 3a) shall be defined as type A tubes. Rolled-in top tubes as in figures 1b) and 3b) shall be defined as type B tubes.

4 Designation

4.1 Tubes

The designation of a tube shall comprise, in order, the name, the number of this International Standard, taper, type of tube, length and the row.

Example :

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

Tube ISO 368 — 1 : 64 B-230/2

Further details, if necessary, are to be agreed between customer and supplier.

4.2 Gauges

The designation of a gauge shall comprise, in order, the name, the number of this International Standard, taper, type of tube to be checked, length and the row of tube to be checked.

Example :

A gauge with taper 1 : 64, for tubes type B, $l_3 = 215$ mm, row 2, shall be designated as follows :

Gauge ISO 368 — 1 : 64 B-215/2

1) At present at the stage of draft. (Revision of ISO/R 286-1962.)

5 Tubes and gauges, taper 1 : 38

5.1 Tubes

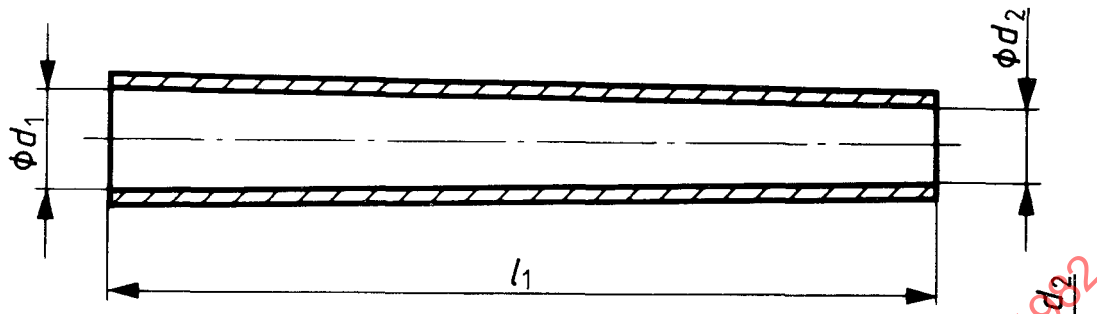


Figure 1 a) – Tube type A with plain top

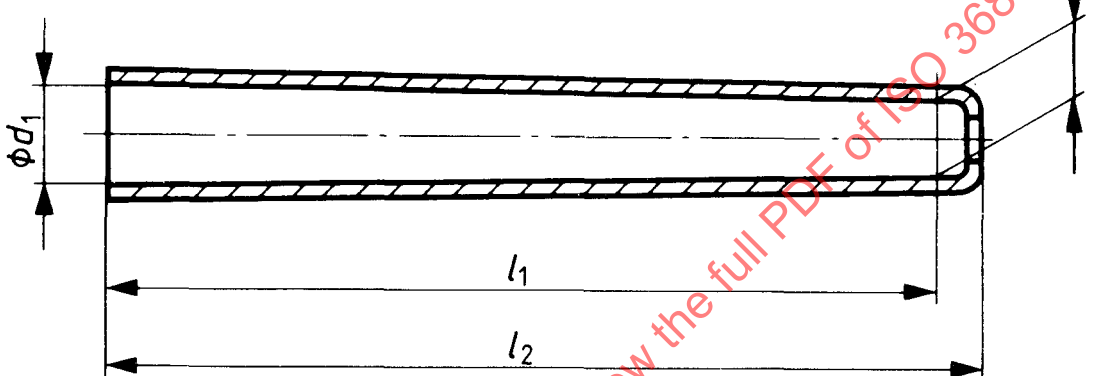


Figure 1 b) – Tube type B with rolled-in top

Table 1 – Dimensions for tubes with taper 1 : 38

Values in millimetres

Length		Admissible deviations	Row 0		Row 1		Row 2		Row 3	
l_1	l_2		d_1	d_2	d_1	d_2	d_1	d_2	d_1	d_2
200	210	± 1,5	22,26	17,00	20,26	15,00	18,76	13,50	—	—
(210)	(220)		22,27	16,75	20,27	14,75	18,77	13,25	—	—
220	230		24,28	18,50	22,28	16,50	20,28	14,50	18,78	13,00
(230)	(240)	± 2,0	24,30	18,25	22,30	16,25	20,30	14,25	18,80	12,75
240	250		27,31	21,00	24,31	18,00	22,31	16,00	20,31	14,00
(250)	(260)		27,32	20,75	24,32	17,75	22,32	15,75	20,32	13,75
260	270		30,34	23,50	27,34	20,50	24,34	17,50	22,34	15,50
(270)	(280)		30,35	23,25	27,35	20,25	24,35	17,25	22,35	15,25
280	290	± 2,5	33,36	26,00	30,36	23,00	27,36	20,00	24,36	17,00
(290)	(300)		33,37	25,75	30,37	22,75	27,37	19,75	24,37	16,75
300	310		36,39	28,50	33,39	25,50	30,39	22,50	27,39	19,50
320	330	± 3,0	39,42	31,00	33,42	25,00	30,42	22,00	—	—
340	350		42,44	33,50	36,44	27,50	33,44	24,50	—	—
360	370		45,47	36,00	39,47	30,00	36,47	27,00	—	—
380	390		48,50	38,50	42,50	32,50	39,50	29,50	—	—
400	410		51,52	41,00	45,52	35,00	42,52	32,00	—	—
450	460	± 4,0	60,59	48,75	54,59	42,75	49,59	37,75	—	—
500	510		70,65	57,50	62,65	49,50	56,65	43,50	—	—
550	560		80,72	66,25	70,72	56,25	64,72	50,25	—	—
600	610	± 5,0	90,79	75,00	80,79	65,00	70,79	55,00	—	—
650	660		—	—	90,85	73,75	80,85	63,75	—	—
700	710		—	—	100,92	82,50	90,92	72,50	—	—
750	760		—	—	110,99	91,25	100,99	81,25	—	—
800	810		—	—	121,05	100,00	111,05	90,00	—	—

The values framed in bold are preferred. The values in brackets should be avoided wherever possible, in both the preferred and non-preferred areas.

5.2 Gauges

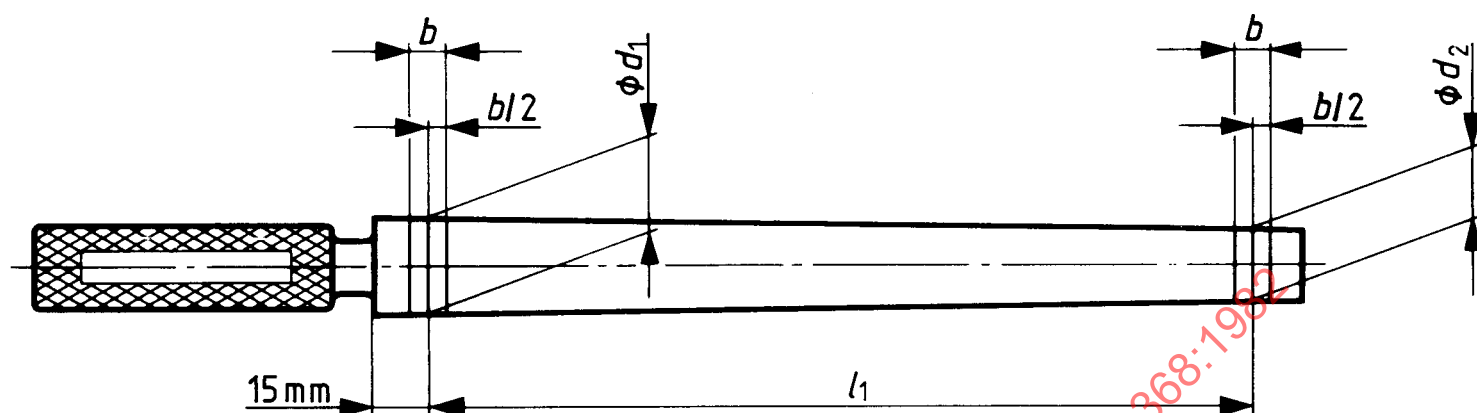


Figure 2 a) – Gauge with taper 1 : 38 for tubes type A

Table 2 a) – Dimensions and tolerances for gauges with taper 1 : 38 for tubes type A

Values in millimetres

l_1 $\pm 0,2$	Row 0		Row 1		Row 2		Row 3		b $\pm 0,1$
	$d_1^{1)}$	$d_2^{1)}$	$d_1^{1)}$	$d_2^{1)}$	$d_1^{1)}$	$d_2^{1)}$	$d_1^{1)}$	$d_2^{1)}$	
200	22,26	17,00	20,26	15,00	18,76	13,50	—	—	6
210	22,27	16,75	20,27	14,75	18,77	13,25	—	—	
220	24,28	18,50	22,28	16,50	20,28	14,50	18,78	13,00	
230	24,30	18,25	22,30	16,25	20,30	14,25	18,80	12,75	
240	27,31	21,00	24,31	18,00	22,31	16,00	20,31	14,00	8
250	27,32	20,75	24,32	17,75	22,32	15,75	20,32	13,75	
260	30,34	23,50	27,34	20,50	24,34	17,50	22,34	15,50	
270	30,35	23,25	27,35	20,25	24,35	17,25	22,35	15,25	
280	33,36	26,00	30,36	23,00	27,36	20,00	24,36	17,00	10
290	33,37	25,75	30,37	22,75	27,37	19,75	24,37	16,75	
300	36,39	28,50	33,39	25,50	30,39	22,50	27,39	19,50	
320	39,42	31,00	33,42	25,00	30,42	22,00	—	—	
340	42,44	33,50	36,44	27,50	33,44	24,50	—	—	12
360	45,47	36,00	39,47	30,00	36,47	27,00	—	—	14
380	48,50	38,50	42,50	32,50	39,50	29,50	—	—	
400	51,52	41,00	45,52	35,00	42,52	32,00	—	—	
450	60,59	48,75	54,59	42,75	49,59	37,75	—	—	
500	70,65	57,50	62,65	49,50	56,65	43,50	—	—	18
550	80,72	66,25	70,72	56,25	64,72	50,25	—	—	
600	90,79	75,00	80,79	65,00	70,79	55,00	—	—	
650	—	—	90,85	73,75	80,85	63,75	—	—	
700	—	—	100,92	82,50	90,92	72,50	—	—	20
750	—	—	110,99	91,25	100,99	81,25	—	—	25
800	—	—	121,05	100,00	111,05	90,00	—	—	

1) Tolerance $j_s 6$, ISO 286/1.

For checking the internal diameter at the base of the tube by means of the corresponding marks on the gauge, the tube must 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.

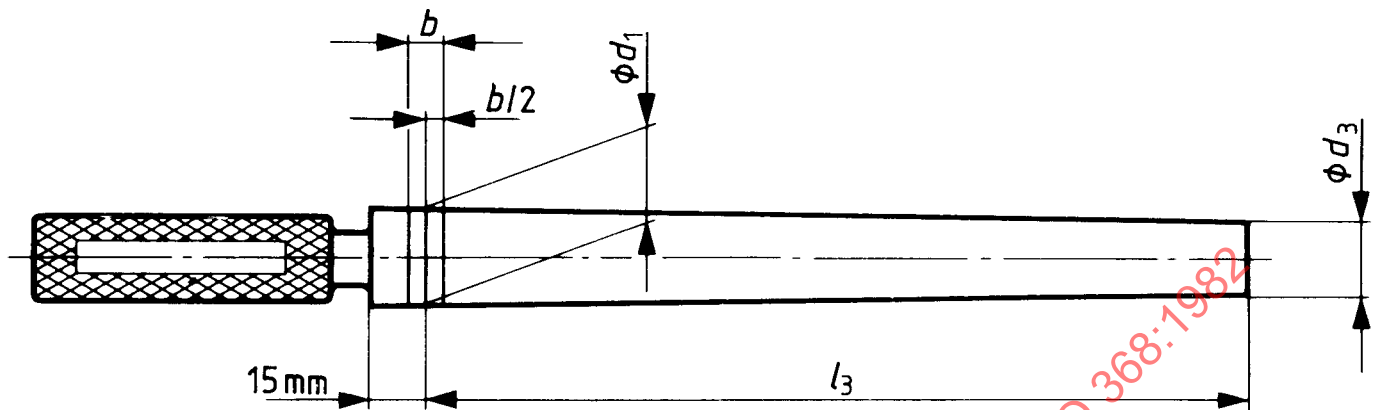


Figure 2 b) – Gauge with taper 1 : 38 for tubes type B

Table 2 b) – Dimensions and tolerances for gauges with taper 1 : 38 for tubes type B

Values in millimetres

Length of corresponding tube l_2	Row 0		Row 1		Row 2		Row 3		b $\pm 0,1$	
	l_3 $\pm 0,2$	$d_1^{1)}$	$d_3^{1)}$	$d_1^{1)}$	$d_3^{1)}$	$d_1^{1)}$	$d_3^{1)}$	$d_1^{1)}$		$d_3^{1)}$
210	200	22,26	17,00	20,26	15,00	18,76	13,50	—	—	6
(220)	210	22,27	16,75	20,27	14,75	18,77	13,25	—	—	
230	220	24,28	18,50	22,28	16,50	20,28	14,50	18,78	13,00	8
(240)	230	24,30	18,25	22,30	16,25	20,30	14,25	18,80	12,75	
250	240	27,31	21,00	24,31	18,00	22,31	16,00	20,31	14,00	10
(260)	250	27,32	20,75	24,32	17,75	22,32	15,75	20,32	13,75	
270	260	30,34	23,50	27,34	20,50	24,34	17,50	22,34	15,50	12
(280)	270	30,35	23,25	27,35	20,25	24,35	17,25	22,35	15,25	
290	280	33,36	26,00	30,36	23,00	27,36	20,00	24,36	17,00	14
(300)	290	33,37	25,75	30,37	22,75	27,37	19,75	24,37	16,75	
310	295	36,39	28,63	33,39	25,63	30,39	22,63	27,39	19,63	16
330	315	39,42	31,13	33,42	25,13	30,42	22,13	—	—	
350	330	42,44	33,76	36,44	27,76	33,44	24,76	—	—	18
370	350	45,47	36,26	39,47	30,26	36,47	27,26	—	—	
390	370	48,50	38,76	42,50	32,76	39,50	29,76	—	—	20
410	390	51,52	41,26	45,52	35,26	42,52	32,26	—	—	
460	440	60,59	49,01	54,59	43,01	49,59	38,01	—	—	25
510	485	70,65	57,89	62,65	49,89	56,65	43,89	—	—	
560	535	80,72	66,64	70,72	56,64	64,72	50,64	—	—	20
610	585	90,79	75,40	80,79	65,40	70,79	55,40	—	—	
660	630	—	—	90,85	74,27	80,85	64,27	—	—	25
710	680	—	—	100,92	83,03	90,92	73,03	—	—	
760	730	—	—	110,99	91,78	100,99	81,78	—	—	20
810	780	—	—	121,05	100,52	111,05	90,52	—	—	

1) Tolerance $j_s 6$, ISO 286/1.

For checking the internal diameter at the base of the tube by means of the corresponding marks on the gauge, the tube must be cut into parts.

6 Tubes and gauges, taper 1 : 64

6.1 Tubes

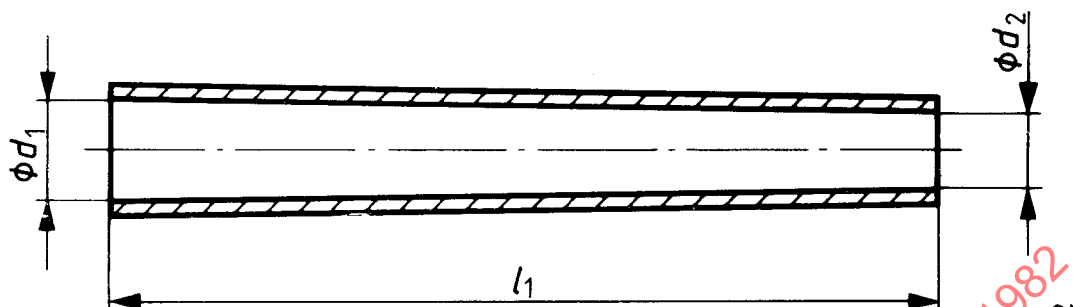


Figure 3 a) – Tube type A with plain top

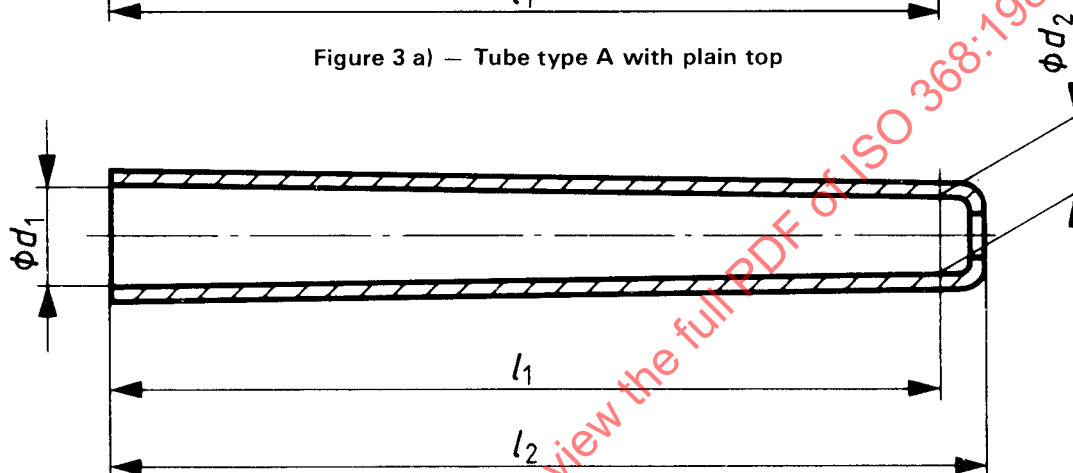


Figure 3 b) – Tube type B with rolled-in top

Table 3 – Dimensions for tubes with taper 1 : 64

Values in millimetres

Length		Admissible deviations	Row 0		Row 1		Row 2		Row 3	
l_1	l_2		d_1	d_2	d_1	d_2	d_1	d_2	d_1	d_2
200	210	± 1,5	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)		24	20,41	22	18,41	20	16,41	18	14,41
240	250		27	23,25	24	20,25	22	18,25	20	16,25
(250)	(260)	± 2,0	27	23,09	24	20,09	22	18,09	20	16,09
260	270		30	25,94	27	22,94	24	19,94	22	17,94
(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
300	320		36	31,31	33	28,31	30	25,31	27	22,31
320	340		39	34,00	33	28,00	30	25,00	27	22,00
340	360		42	36,69	36	30,69	33	27,69	30	24,69
360	380	± 3,0	45	39,38	39	33,38	36	30,38	33	27,38
380	400		48	42,06	42	36,06	39	33,06	36	30,06
400	420		51	44,75	45	38,75	42	35,75	39	32,75
450	470		60	52,97	54	46,97	49	41,97	—	—
500	520	± 4,0	70	62,19	62	54,19	56	48,19	—	—
550	570		80	71,41	70	61,41	64	55,41	—	—
600	620		90	80,63	80	70,63	70	60,63	—	—
650	670		—	—	90	79,84	80	69,84	—	—
700	720	± 5,0	—	—	100	89,06	90	79,06	—	—
750	770		—	—	110	98,28	100	88,28	—	—
800	820		—	—	120	107,50	110	97,50	—	—

The values framed in bold are preferred. The values in brackets should be avoided wherever possible, in both the preferred and non-preferred areas.

6.2 Gauges

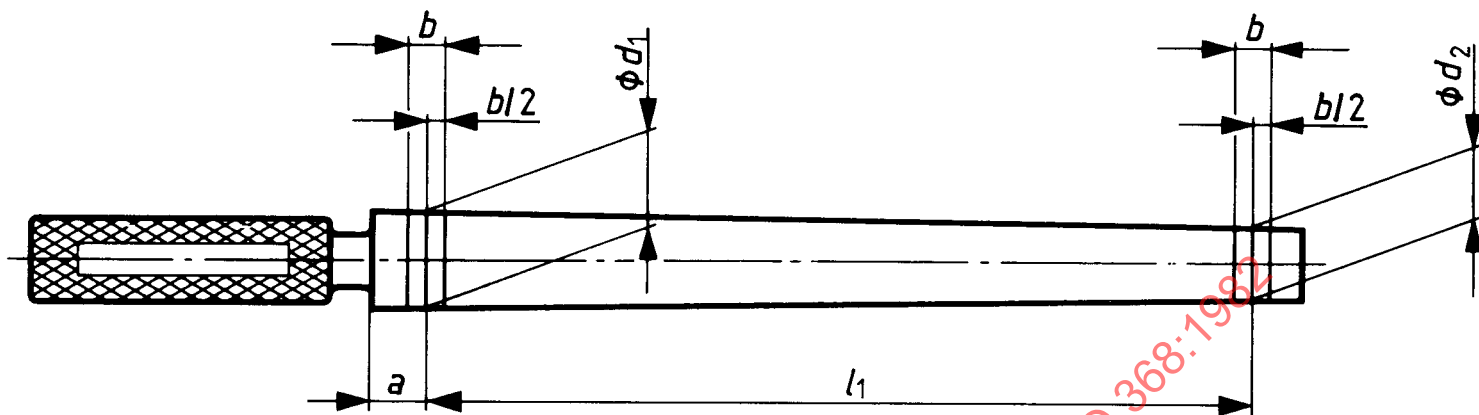


Figure 4 a) – Gauge with taper 1 : 64 for tubes type A

Table 4 a) – Dimensions and tolerances for gauges with taper 1 : 64 for tubes type A

Values in millimetres

l_1 $\pm 0,2$	Row 0		Row 1		Row 2		Row 3		a ± 1	b $\pm 0,1$
	$d_1^{1)}$	$d_2^{1)}$	$d_1^{1)}$	$d_2^{1)}$	$d_1^{1)}$	$d_2^{1)}$	$d_1^{1)}$	$d_2^{1)}$		
200	21	17,88	19	15,88	17	13,88	15	11,88	20	10
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	39	34,00	33	28,00	30	25,00	27	22,00		
340	42	36,69	36	30,69	33	27,69	30	24,69		
360	45	39,38	39	33,38	36	30,38	33	27,38		
380	48	42,06	42	36,06	39	33,06	36	30,06		
400	51	44,75	45	38,75	42	35,75	39	32,75		
450	60	52,97	54	46,97	49	41,97	—	—	40	26
500	70	62,19	62	54,19	56	48,19	—	—		
550	80	71,41	70	61,41	64	55,41	—	—		30
600	90	80,63	80	70,63	70	60,63	—	—		
650	—	—	90	79,84	80	69,84	—	—		33
700	—	—	100	89,06	90	79,06	—	—		
750	—	—	110	98,28	100	88,28	—	—		42
800	—	—	120	107,50	110	97,50	—	—		

1) Tolerance j_s 6, ISO 286/1.

For checking the internal diameter at the base of the tube by means of the corresponding marks on the gauge, the tube must 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.

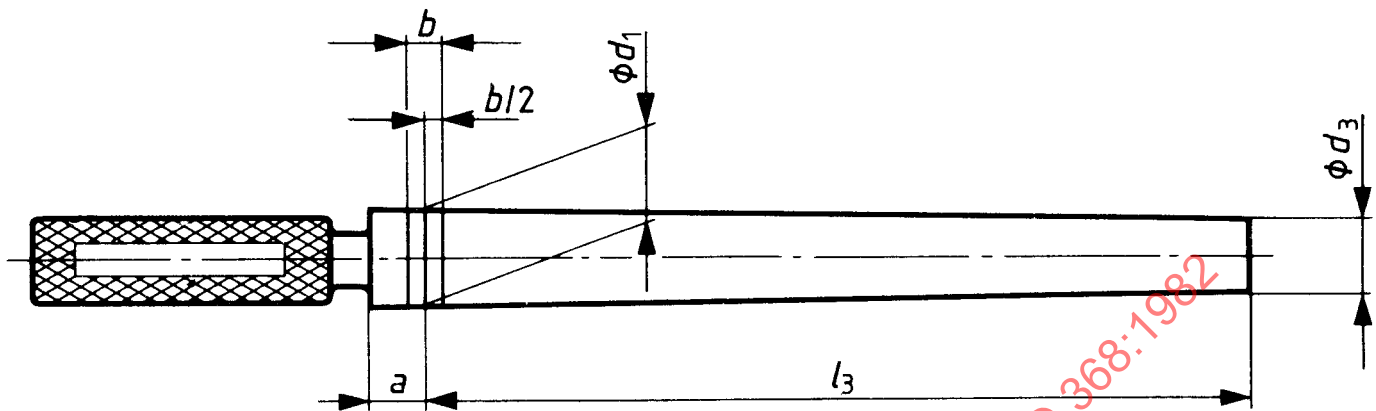


Figure 4 b) – Gauge with taper 1 : 64 for tubes type B

Table 4 b) – Dimensions and tolerances for gauges with taper 1 : 64 for tubes type B

Values in millimetres

Length of corresponding tube l_2	Row 0		Row 1		Row 2		Row 3		a ± 1	b $\pm 0,1$	
	l_3 $\pm 0,2$	$d_1^{1)}$	$d_3^{1)}$	$d_1^{1)}$	$d_3^{1)}$	$d_1^{1)}$	$d_3^{1)}$	$d_1^{1)}$			$d_3^{1)}$
210	195	21	17,95	19	15,95	17	13,95	15	11,95	20	10
230	215	24	20,64	22	18,64	20	16,64	18	14,64		
(240)	225	24	20,48	22	18,48	20	16,48	18	14,48		
250	230	27	23,41	24	20,41	22	18,41	20	16,41		
(260)	240	27	23,25	24	20,25	22	18,25	20	16,25		
270	250	30	26,09	27	23,09	24	20,09	22	18,09		
(280)	260	30	25,94	27	22,94	24	19,94	22	17,94		
290	270	33	28,78	30	25,78	27	22,78	24	19,78		
(300)	280	33	28,62	30	25,62	27	22,62	24	19,62		
320	300	36	31,31	33	28,31	30	25,31	27	22,31		
340	320	39	34,00	33	28,00	30	25,00	27	22,00	16	
360	330	42	36,84	36	30,84	33	27,84	30	24,84	19	
380	350	45	39,53	39	33,53	36	30,53	33	27,53	22	
400	370	48	42,22	42	36,22	39	33,22	36	30,22	26	
420	390	51	44,91	45	38,91	42	35,91	39	32,91	40	30
470	440	60	53,12	54	47,12	49	42,12	—	—		
520	485	70	62,42	62	54,42	56	48,42	—	—		
570	535	80	71,64	70	61,64	64	55,64	—	—		
620	585	90	80,86	80	70,86	70	60,86	—	—		
670	635	—	—	90	80,08	80	70,08	—	—		
720	685	—	—	100	89,30	90	79,30	—	—		
770	730	—	—	110	98,59	100	88,59	—	—		
820	780	—	—	120	107,81	110	97,81	—	—		

1) Tolerance j_6 , ISO 286/1.

For checking the internal diameter at the base of the tube by means of the corresponding marks on the gauge, the tube must be cut into parts.