
INTERNATIONAL STANDARD



3296

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 : 64

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

First edition — 1975-05-01

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UDC 677.052

Ref. No. ISO 3296-1975 (E)

Descriptors : textile machinery, spinning frames, ring twisters, spinning (extruding), pipes (tube), specifications, dimensions, taper.

Price based on 4 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 3296 was drawn up by Technical Committee ISO/TC 72, *Textile machinery and accessories*, and circulated to the Member Bodies in December 1973.

It has been approved by the Member Bodies of the following countries :

| | | |
|---------------------|-------------|----------------|
| Belgium | India | Thailand |
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No Member Body expressed disapproval of the document.

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

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the dimensions and tolerances (length and diameter) of tubes with taper 1 : 64 for ring-spinning, doubling and twisting spindles.

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2 DIMENSIONS AND TOLERANCES

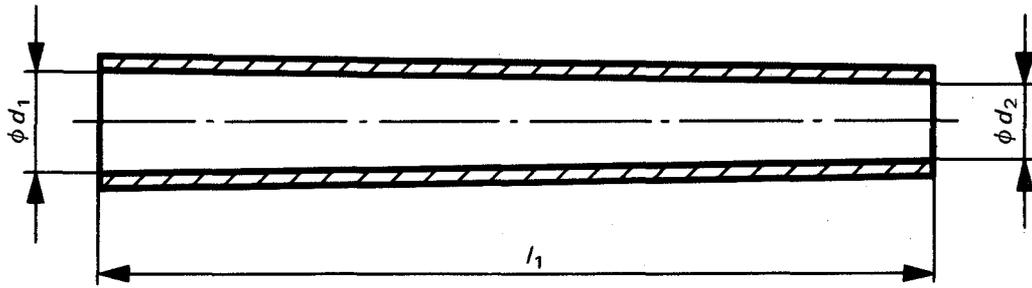


FIGURE 1a) – Tube type A with plain top

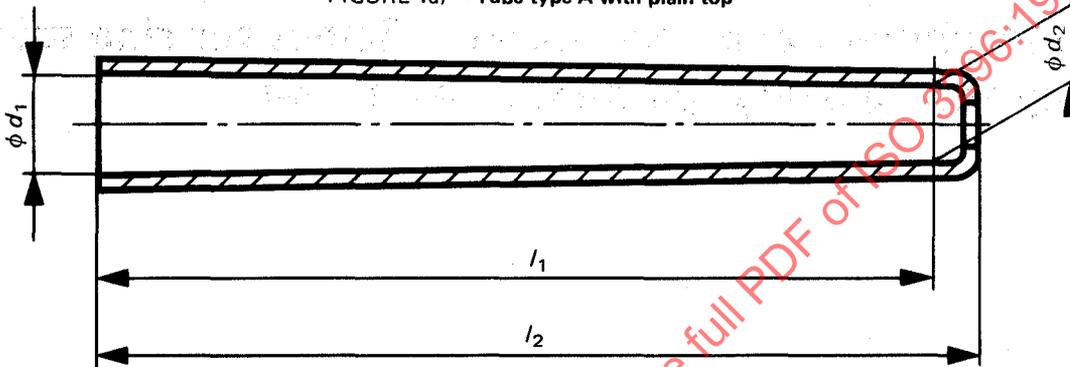


FIGURE 1b) – Tube type B with rolled-in top

TABLE 1 – Dimensions and tolerances for tubes

Values in millimetres

| Length | | Tolerance l_1 and l_2 | 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 |
| 220 | 230 | ± 1,5 | 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 | ± 2,0 | 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 | ± 2,5 | 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 | ± 3,0 | 33 | 28,62 | 30 | 25,62 | 27 | 22,62 | 24 | 19,62 |
| (290) | (300) | | 33 | 28,47 | 30 | 25,47 | 27 | 22,47 | 24 | 19,47 |
| 300 | 320 | ± 2,5 | 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 | ± 3,0 | 42 | 36,69 | 36 | 30,69 | 33 | 27,69 | 30 | 24,69 |
| 360 | 380 | | 45 | 39,38 | 39 | 33,38 | 36 | 30,38 | 33 | 27,38 |
| 380 | 400 | ± 4,0 | 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 | ± 5,0 | 60 | 52,97 | 54 | 46,97 | 49 | 41,97 | — | — |
| 500 | 520 | | 70 | 62,19 | 62 | 54,19 | 56 | 48,19 | — | — |
| 550 | 570 | ± 4,0 | 80 | 71,41 | 70 | 61,41 | 64 | 55,41 | — | — |
| 600 | 620 | | 90 | 80,63 | 80 | 70,63 | 70 | 60,63 | — | — |
| 650 | 670 | ± 5,0 | — | — | 90 | 79,84 | 80 | 69,84 | — | — |
| 700 | 720 | | — | — | 100 | 89,06 | 90 | 79,06 | — | — |
| 750 | 770 | ± 5,0 | — | — | 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.

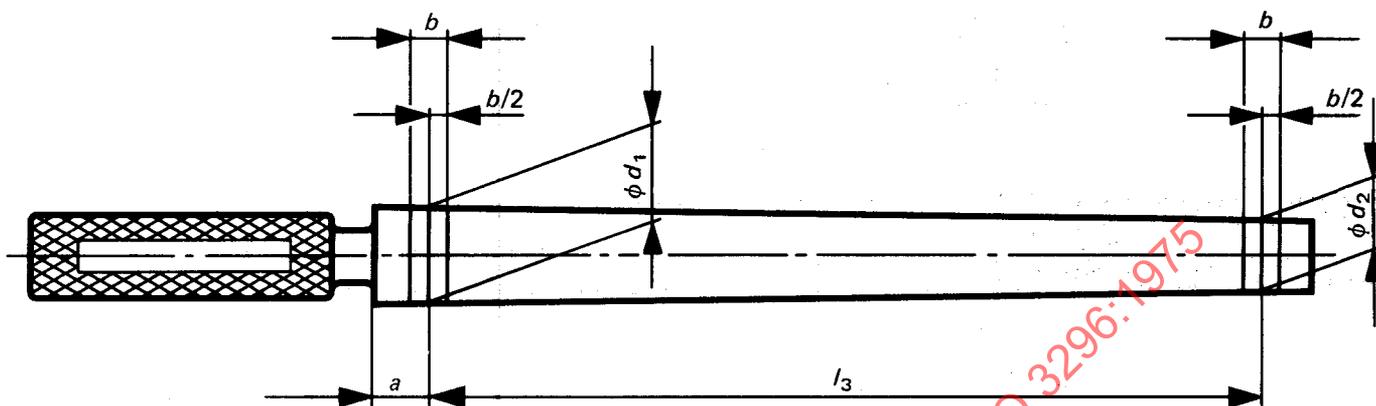


FIGURE 2a) – Gauge for tubes type A

TABLE 2 a) – Dimensions and tolerances for gauges for tubes type A

Values in millimetres

| Length $l_3 \pm 0,2$ | Row 0 | | Row 1 | | Row 2 | | Row 3 | | Distance $a \pm 1$ | Distance $b \pm 0,1$ |
|-------------------------|-------|-------|-------|--------|-------|-------|-------|-------|-----------------------|-------------------------|
| | d_1 | d_2 | d_1 | d_2 | d_1 | d_2 | d_1 | d_2 | | |
| 220 | 24 | 20,56 | 22 | 18,56 | 20 | 16,56 | 18 | 14,56 | 20 | 10 |
| 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 | — | — | | 30 |
| 550 | 80 | 71,41 | 70 | 61,41 | 64 | 55,41 | — | — | | 33 |
| 600 | 90 | 80,63 | 80 | 70,63 | 70 | 60,63 | — | — | | 42 |
| 650 | — | — | 90 | 79,84 | 80 | 69,84 | — | — | | |
| 700 | — | — | 100 | 89,06 | 90 | 79,06 | — | — | | |
| 750 | — | — | 110 | 98,28 | 100 | 88,28 | — | — | | |
| 800 | — | — | 120 | 107,50 | 110 | 97,50 | — | — | | |

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. 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.

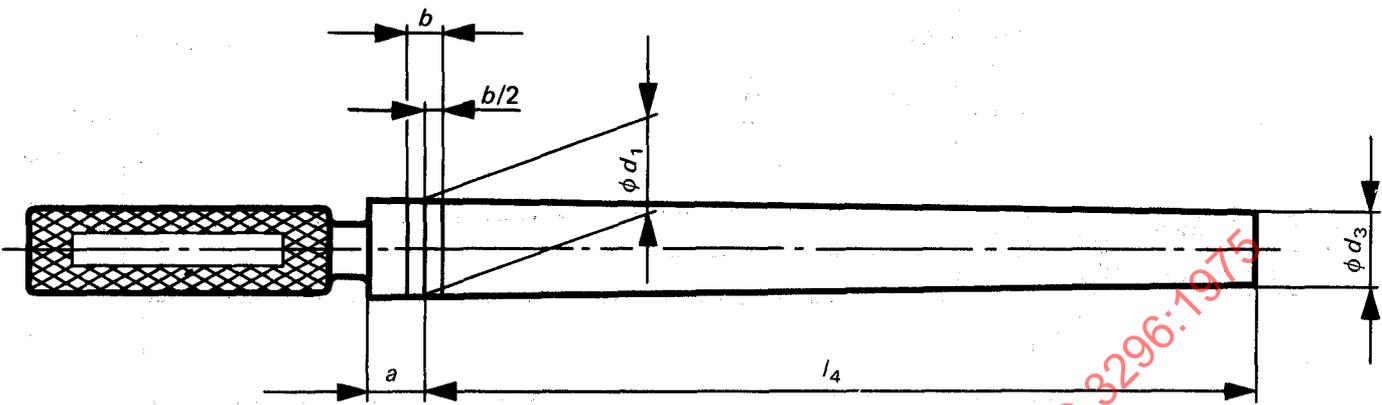


FIGURE 2b) – Gauge for tubes type B

TABLE 2b) – Dimensions and tolerances for gauges for tubes type B

Values in millimetres

| Length $l_4 \pm 0,2$ | Row 0 | | Row 1 | | Row 2 | | Row 3 | | Distance $a \pm 1$ | Distance $b \pm 0,1$ |
|-------------------------|-------|-------|-------|--------|-------|-------|-------|-------|-----------------------|-------------------------|
| | d_1 | d_3 | d_1 | d_3 | d_1 | d_3 | d_1 | d_3 | | |
| 215 | 24 | 20,64 | 22 | 18,64 | 20 | 16,64 | 18 | 14,64 | 20 | 10 |
| 225 | 24 | 20,48 | 22 | 18,48 | 20 | 16,48 | 18 | 14,48 | | |
| 230 | 27 | 23,41 | 24 | 20,41 | 22 | 18,41 | 20 | 16,41 | | |
| 240 | 27 | 23,25 | 24 | 20,25 | 22 | 18,25 | 20 | 16,25 | | |
| 250 | 30 | 26,09 | 27 | 23,09 | 24 | 20,09 | 22 | 18,09 | | |
| 260 | 30 | 25,94 | 27 | 22,94 | 24 | 19,94 | 22 | 17,94 | | |
| 270 | 33 | 28,78 | 30 | 25,78 | 27 | 22,78 | 24 | 19,78 | | |
| 280 | 33 | 28,62 | 30 | 25,62 | 27 | 22,62 | 24 | 19,62 | | |
| 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 | | |
| 330 | 42 | 36,84 | 36 | 30,84 | 33 | 27,84 | 30 | 24,84 | | |
| 350 | 45 | 39,53 | 39 | 33,53 | 36 | 30,53 | 33 | 27,53 | | |
| 370 | 48 | 42,22 | 42 | 36,22 | 39 | 33,22 | 36 | 30,22 | | |
| 390 | 51 | 44,91 | 45 | 38,91 | 42 | 35,91 | 39 | 32,91 | | |
| 440 | 60 | 53,12 | 54 | 47,12 | 49 | 42,12 | — | — | 40 | 26 |
| 485 | 70 | 62,42 | 62 | 54,42 | 56 | 48,42 | — | — | | 30 |
| 535 | 80 | 71,64 | 70 | 61,64 | 64 | 55,64 | — | — | | 33 |
| 585 | 90 | 80,86 | 80 | 70,86 | 70 | 60,86 | — | — | | 42 |
| 635 | — | — | 90 | 80,08 | 80 | 70,08 | — | — | | — |
| 685 | — | — | 100 | 89,30 | 90 | 79,30 | — | — | | — |
| 730 | — | — | 110 | 98,59 | 100 | 88,59 | — | — | | — |
| 780 | — | — | 120 | 107,81 | 110 | 97,81 | — | — | | — |

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.

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● Extra long parallel shank twist drills

Forets extra-longs à queue cylindrique

First edition — 1975-04-01

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UDC 621.951.45

Ref. No. ISO 3292-1975 (E)

Descriptors : tools, twist drills, parallel shanks, dimensions.

Price based on 2 pages