

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION

### R 441

#### DROP WIRES FOR MECHANICAL AND ELECTRICAL WARP STOP MOTIONS

1st EDITION

July 1965

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## BRIEF HISTORY

The ISO Recommendation R 441, *Drop Wires for Mechanical and Electrical Warp Stop Motions*, was drawn up by Technical Committee ISO/TC 72, *Textile Machinery and Accessories*, the Secretariat of which is held by the Association Suisse de Normalisation (SNV).

Work on this question by the Technical Committee began in 1950 and led in 1956, to the adoption of two Draft ISO Recommendations.

These first Draft ISO Recommendations (Nos. 127 and 128) were circulated to all the ISO Member Bodies for enquiry, in September 1956. As the results of this consultation were not considered satisfactory, the Technical Committee presented two second Draft ISO Recommendations, which were circulated to all the ISO Member Bodies in September 1963, and which were approved by the following Member Bodies:

– for Draft ISO Recommendation No. 127:

|                |                 |                |
|----------------|-----------------|----------------|
| Argentina      | Greece          | Poland         |
| Brazil         | Hungary         | Spain          |
| Colombia       | Italy           | Switzerland    |
| Czechoslovakia | Korea (Rep. of) | United Kingdom |
| France         | Netherlands     | Turkey         |
| Germany        | New Zealand     |                |

Two Member Bodies opposed the approval of the second Draft:

India  
U.S.S.R.

– for Draft ISO Recommendation No. 128:

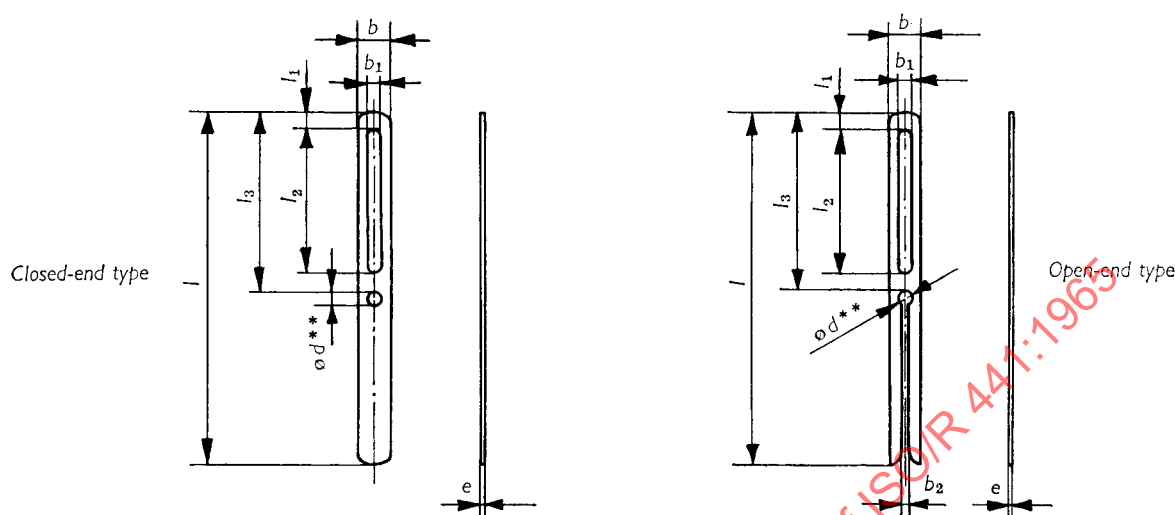
|                |                 |                |
|----------------|-----------------|----------------|
| Brazil         | Hungary         | Poland         |
| Colombia       | India           | Spain          |
| Czechoslovakia | Italy           | Switzerland    |
| France         | Korea (Rep. of) | United Kingdom |
| Germany        | Netherlands     | Turkey         |
| Greece         | New Zealand     |                |

One Member Body opposed the approval of the second Draft: U.S.S.R.

These two Draft ISO Recommendations were then submitted by correspondence to the ISO Council, which decided, in July 1965, to accept them as an ISO RECOMMENDATION.

# DROP WIRES FOR MECHANICAL AND ELECTRICAL WARP STOP MOTIONS

## 1. DROP WIRES FOR MECHANICAL WARP STOP MOTIONS



| Type of drop wires | Length         |            | Width           |    | Thickness |     | Position and dimensions of upper slot |              |                          |              | Length of upper part  |            | Yarn eye              |         | Lower slot    |            | Mass appr.                 |     |     |
|--------------------|----------------|------------|-----------------|----|-----------|-----|---------------------------------------|--------------|--------------------------|--------------|-----------------------|------------|-----------------------|---------|---------------|------------|----------------------------|-----|-----|
|                    | <i>l</i>       |            | <i>b</i>        |    | <i>e</i>  |     | <i>b</i> <sub>1</sub>                 |              | <i>l</i> <sub>1</sub>    |              | <i>l</i> <sub>2</sub> |            | <i>l</i> <sub>3</sub> |         | ∅ <i>d</i> ** |            | <i>b</i> <sub>2</sub> min. |     |     |
|                    | in             | mm         | in              | mm | in        | mm  | in                                    | mm           | in                       | mm           | in                    | mm         | in                    | mm      | in            | mm         | in                         | mm  | g   |
| closed end         | 4.882 to 5.039 | 124 to 128 | 9/32            | 7  | 0.008     | 0.2 | 3/16                                  | 4.75 max     | 0.1875 or 3/16 to 5.16   | 4.75 to 5.16 | 2.063 to 2.125        | 52 to 53.5 | 2.48 ±0.012           | 63 ±0.3 | 0.157 ±0.008  | 4 ±0.2     | 0.10                       | 2.5 | 0.9 |
|                    |                |            | 0.344* or 11/32 | 8  | 0.008     | 0.2 | 0.207 ±0.010                          | 5.25 ±0.25   |                          |              |                       |            |                       |         | 1.1           |            |                            |     |     |
|                    |                |            | 0.437* or 7/16  | 11 | 0.012     | 0.3 | 0.236 ±0.020                          | 6 ±0.5       |                          |              |                       |            |                       |         | 1.7           |            |                            |     |     |
|                    |                |            |                 |    | 0.012     | 0.3 |                                       |              |                          |              |                       |            |                       |         | 2.5           |            |                            |     |     |
|                    |                |            |                 |    | 0.016     | 0.4 |                                       |              |                          |              |                       |            |                       |         | 3.3           |            |                            |     |     |
| open end           | 5.709          | 145        | 9/32            | 7  | 0.008     | 0.2 | 3/16                                  | 4.75 max     | 0.1875 or 3/16 to 5.16   | 4.75 to 5.16 | 2.519 to 2.850        | 64 to 65.5 | 2.935 ±0.012          | 75 ±0.3 | 0.157 ±0.008  | 4 ±0.2     | 0.12                       | 3   | 0.9 |
|                    |                |            | 0.344* or 11/32 | 8  | 0.008     | 0.2 | 0.207 ±0.010                          | 5.25 ±0.25   |                          |              |                       |            |                       |         | 1.1           |            |                            |     |     |
|                    |                |            | 0.437* or 7/16  | 11 | 0.008     | 0.2 | 0.236 ±0.020                          | 6 ±0.5       |                          |              |                       |            |                       |         | 1.7           |            |                            |     |     |
|                    |                |            |                 |    | 0.012     | 0.3 |                                       |              |                          |              |                       |            |                       |         | 2.5           |            |                            |     |     |
|                    |                |            |                 |    | 0.016     | 0.4 |                                       |              |                          |              |                       |            |                       |         | 3.3           |            |                            |     |     |
| closed end         | 5.709          | 145        | 0.344* or 11/32 | 8  | 0.008     | 0.2 | 0.1875 or 3/16 to 5.16                | 4.75 to 5.16 | 0.1875 or 3/16 to 0.1968 | 4.75 to 5    | 2.519 to 2.850        | 64 to 65.5 | 2.935 ±0.012          | 75 ±0.3 | 0.207 ±0.010  | 5.25 ±0.25 | 0.10                       | 2.5 | 1.2 |
|                    |                |            | 0.437* or 7/16  | 11 | 0.012     | 0.3 |                                       |              |                          |              |                       |            |                       |         | 0.236 ±0.020  | 6 ±0.5     |                            |     | 1.9 |
|                    |                |            |                 |    | 0.016     | 0.4 |                                       |              |                          |              |                       |            |                       |         |               |            |                            |     | 3.9 |
| open end           | 6.500          | 165        | 0.344* or 11/32 | 8  | 0.008     | 0.2 | 0.203 or 13/64                        | 4.75 to 5.16 | 2.519 to 2.850           | 64 to 65.5   | 2.935 ±0.012          | 75 ±0.3    | 0.10                  | 2.5     | 0.207 ±0.010  | 5.25 ±0.25 | 0.12                       | 3   | 1.2 |
|                    |                |            | 0.437* or 7/16  | 11 | 0.012     | 0.3 |                                       |              |                          |              |                       |            |                       |         | 0.236 ±0.020  | 6 ±0.5     |                            |     | 1.9 |
|                    |                |            |                 |    | 0.016     | 0.4 |                                       |              |                          |              |                       |            |                       |         |               |            |                            |     | 2.9 |
| closed end         | 6.500          | 165        | 0.437* or 7/16  | 11 | 0.008     | 0.2 | 0.008                                 | 0.2          | 0.012                    | 0.3          | 0.016                 | 0.4        | 0.236 ±0.020          | 6 ±0.5  | 0.12          | 3          | 2.2                        |     |     |
|                    |                |            |                 |    |           |     |                                       |              |                          |              |                       |            |                       |         |               |            |                            |     | 3.3 |
|                    |                |            |                 |    |           |     |                                       |              |                          |              |                       |            |                       |         |               |            |                            |     | 4.4 |
| open end           | 7.283 or 185   | 180 or 185 | 0.437* or 7/16  | 11 | 0.008     | 0.2 | 0.012                                 | 0.3          | 0.016                    | 0.4          | 0.236 ±0.020          | 6 ±0.5     | 0.12                  | 3       | 2.2           |            |                            |     |     |
|                    |                |            |                 |    |           |     |                                       |              |                          |              |                       |            |                       |         |               |            | 3.3                        |     |     |
|                    |                |            |                 |    |           |     |                                       |              |                          |              |                       |            |                       |         |               |            | 4.4                        |     |     |

\* The exact equivalent of 8 mm is 0.315 in, and of 11 mm, 0.433 in, but 0.344 in and 0.437 in respectively are accepted for British use.

\*\* Or width of U-shaped eye. The upper edge of the U-shaped eye should fit with the upper edge of the round eye. The length of the eye, from the upper straight edge to the lower rounded edge, should not exceed 10 mm (0.4 in).