

INTERNATIONAL
STANDARD

ISO
8116-2

Second edition
1995-09-15

**Textile machinery and accessories —
Beams for winding —**

Part 2:
Warper's beams

*Matériel pour l'industrie textile — Ensouples pour enroulement —
Partie 2: Ensouples d'ourdissaires*



Reference number
ISO 8116-2:1995(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 8116-2 was prepared by Technical Committee ISO/TC 72, *Textile machinery and allied machinery and accessories*, Subcommittee SC 2, *Winding and preparatory machinery for fabric manufacture*.

This second edition cancels and replaces the first edition (ISO 8116-2:1985), which has been technically revised.

ISO 8116 consists of the following parts, under the general title *Textile machinery and accessories — Beams for winding*:

- Part 1: *General vocabulary*
- Part 2: *Warper's beams*
- Part 3: *Weaver's beams*
- Part 4: *Quality classification of flanges for weaver's beams, warper's beams and sectional beams*
- Part 5: *Sectional beams for warp knitting machines*
- Part 6: *Beams for ribbon weaving and ribbon knitting*
- Part 7: *Beams for dyeing slivers, rovings and yarns*

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- Part 8: *Definitions of run-out tolerances and methods of measurement*
- Part 9: *Dyeing beams for textile fabrics*

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Textile machinery and accessories — Beams for winding —

Part 2: Warper's beams

1 Scope

This part of ISO 8116 defines the basic terms and lays down the main dimensions, the variations of form and position, the driving devices and the designation for warper's beams with and without shafts.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 8116. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 8116 are encouraged to investigate the possibility of applying the most recent editions of the standards 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.*

ISO 1940-1:1986, *Mechanical vibration — Balance quality requirements of rigid rotors — Part 1: Determination of permissible residual unbalance.*

ISO 8116-8:1995, *Textile machinery and accessories — Beams for winding — Part 8: Definitions of run-out tolerances and methods of measurement.*

3 Terminology and main dimensions

(See figures 1 to 3 and tables 1 and 2)

d_1 flange diameter

d_2 barrel diameter

d_3 shaft diameter

d_4 bore diameter

d_5 ruffle diameter

l_1 width between flanges

- l_2 overall length (without shafts)
- l_3 length or extension of shaft
- l_4 total length (with shafts)

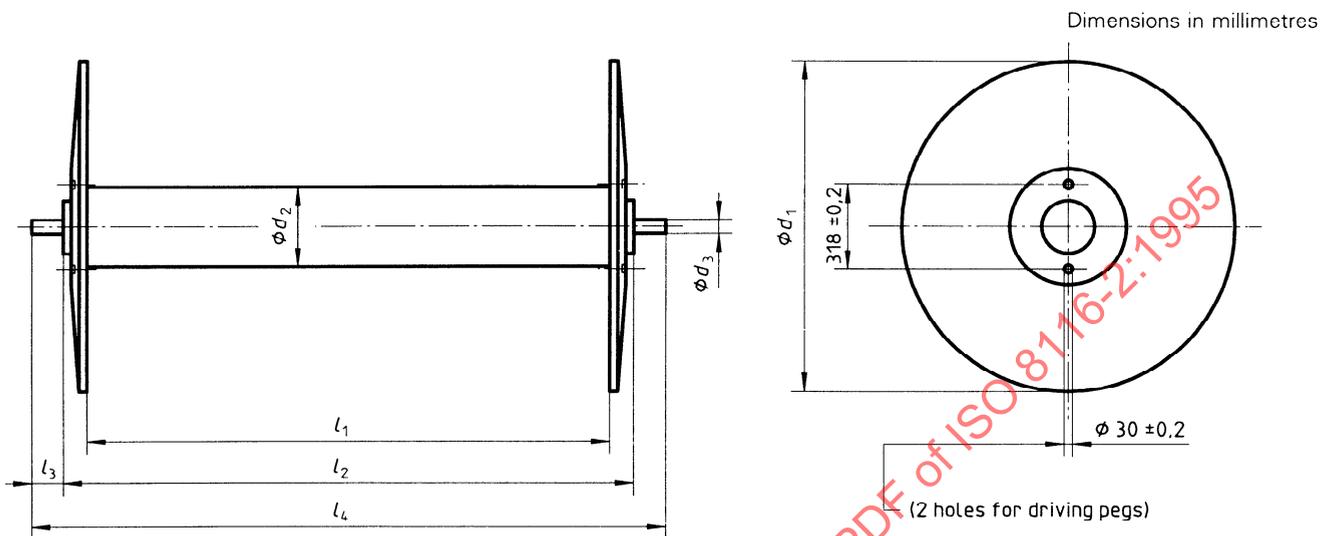
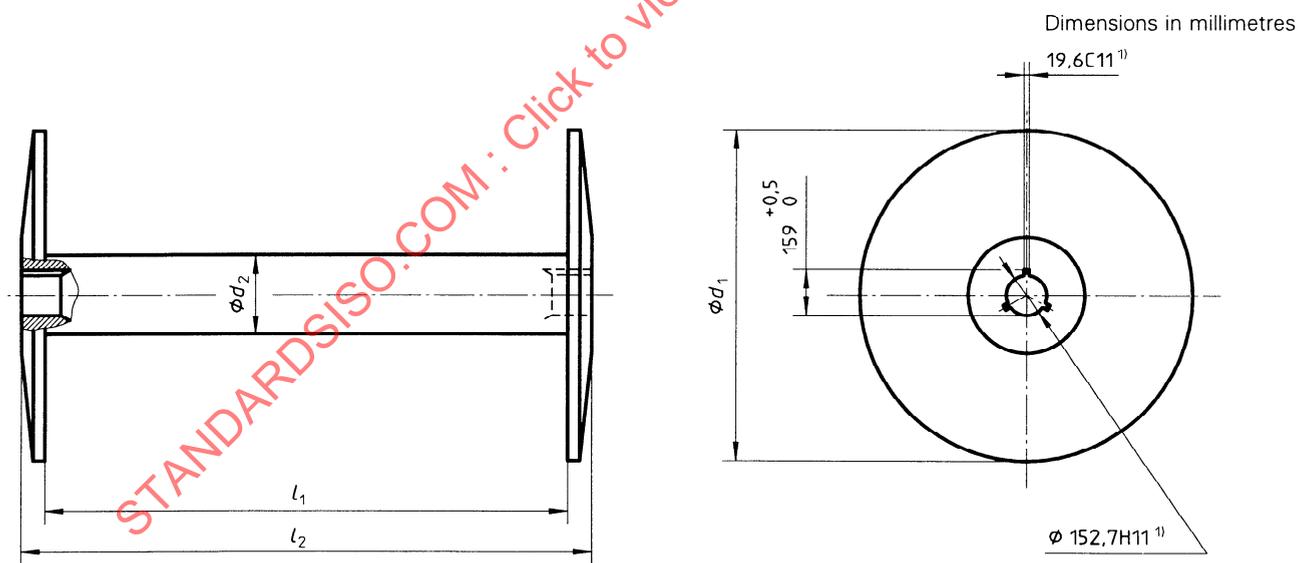


Figure 1 — Warper's beams with shafts — Type A



1) See ISO 286-2.

Figure 2 — Warper's beams with cylinder bore for centring and keyseat for driving — Type B

Dimensions in millimetres

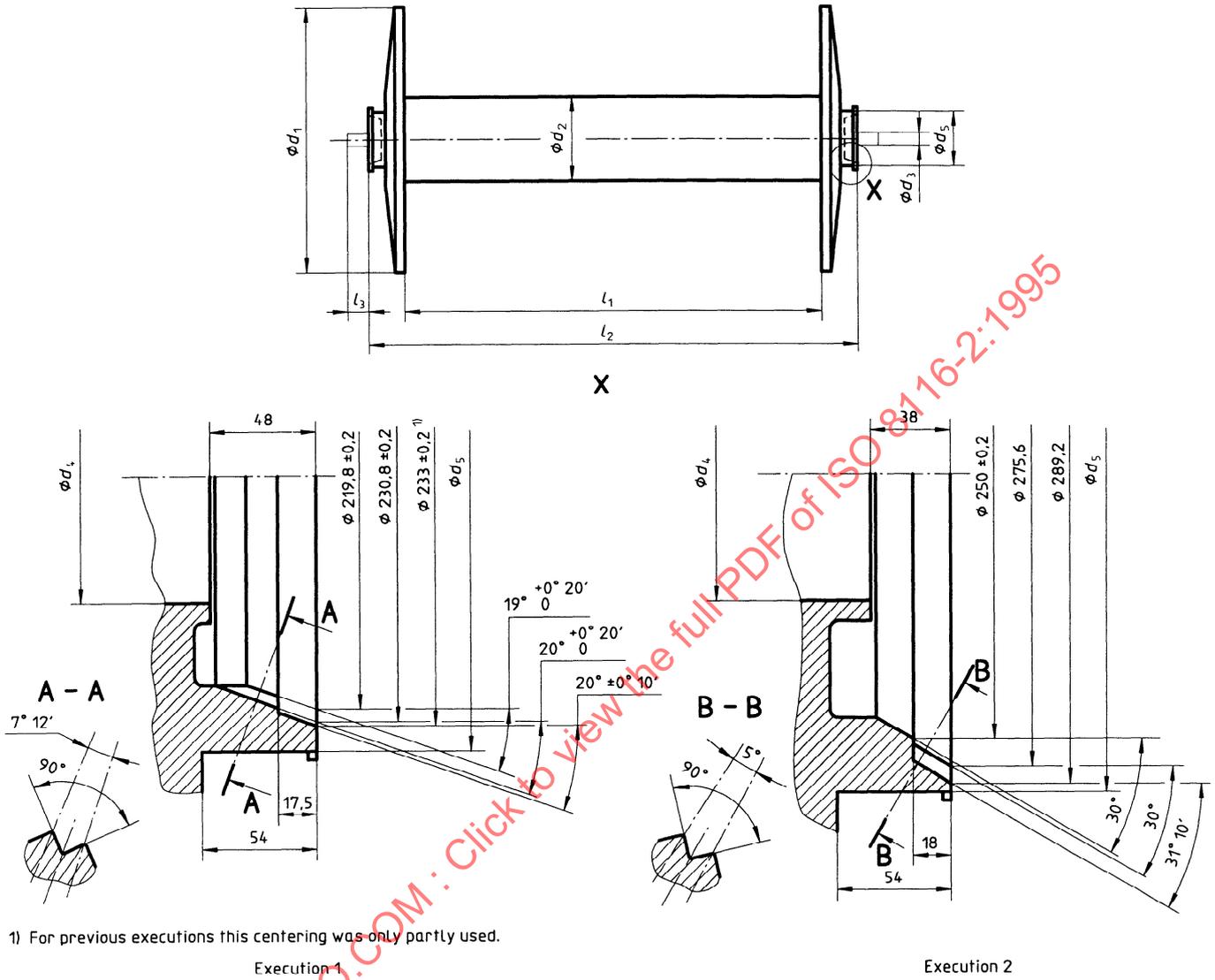


Figure 3 — Warper's beams with toothed cone for centring and driving — Type C

Table 1 — Warper's beams main dimensions — Types A and B

Dimensions in millimetres

d_1 $\pm 1,5$	d_2 ± 5	d_3 h11 2)	l_1 1) $+1,5$ 0	l_2 0 -2	l_3	l_4
815	300 (320)	38 50	1 378	$l_1 + 150$	120	$l_2 + 2l_3$
915			1 524			
1 015		50	1 800			
1 250			2 000			

NOTE — The dimension in parentheses should be avoided whenever possible.

1) If widths of more than 2 000 mm between flanges are necessary, increments of 200 mm shall be selected.

2) See ISO 286-2.

Table 2 — Warper's beams main dimensions — Types C

Dimensions in millimetres

d_1 $\pm 1,5$	d_2 ± 5	d_3 h11 2)	d_4 E9 2)	d_5 Execution		l_1 1) $+1,5$ 0	l_2 0 -2	l_3
				1	2			
800	300 (320)	38 50	38 50	245	—	(1 372)	$l_1 + 270$	120
(900)						1 400		
1 000		50	50			(1 524)		
(1 100)	360	60	60	260	295	1 600	$l_1 + 320$	120
1 250	400					1 800		
1 400	450					2 000		

NOTE — The dimensions in parentheses should be avoided whenever possible.

1) If widths of more than 2 000 mm between flanges are necessary, increments of 200 mm shall be selected.

2) See ISO 286-2.

4 Circular axial run-out tolerance, T_a , of flanges

The permissible circular axial run-out tolerances, T_a , of flanges are given in table 3. The run-out shall be measured in accordance with ISO 8116-8.

Table 3 — Permissible circular axial run-out tolerances of flanges

d_1 mm	T_a mm
$d_1 \leq 915$	0,5
$d_1 > 915$	0,75

5 Total run-out tolerance, T_r , of the barrel

The permissible total run-out tolerances, T_r , of the barrel are derived using the formulae given in table 4. The run-out shall be measured in accordance with ISO 8116-8.

Table 4 — Total barrel run-out tolerances

Yarn to be wound	T_r mm
Filament yarn	$T_r = \frac{0,25 l_1}{1\ 000}$
Spun yarn	$T_r = \frac{0,4 l_1}{1\ 000}$

6 Residual imbalance

Depending on the circumstances, it is sometimes necessary to fix a value for the residual imbalance of warper's beams. In general, a quality grade G 6,3 (see ISO 1940-1) will be appropriate. If special conditions call for another grade, this shall be specified.

7 Designation

The designation of a warper's beam in accordance with this part of ISO 8116 shall include the following information in the order given:

- "Warper's beam";
- reference to this part of ISO 8116, i.e ISO 8116-2;
- the type of beam (A, B or C);
- the flange diameter, d_1 , in millimetres;
- the shaft diameter, d_3 , in millimetres;