
**Textile machinery and accessories —
Web roller cards — Terms and
definitions**

*Matériel pour l'industrie textile — Non-tissé cards à hérissons —
Terminologie*

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Contents

	Page
Foreword	iv
1 Scope	1
2 Terms and definitions	1
2.1 Basic terms	1
2.2 Width dimensions	2
2.3 Technological terms	3
2.4 Machine components	3
2.4.1 Feed unit	4
2.4.2 Breast unit	4
2.4.3 Transfer unit	5
2.4.4 Main cylinder unit	5
2.4.5 Take-off unit	6

Foreword

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The committee responsible for this document is ISO/TC 72, *Textile machinery and accessories*, Subcommittee SC 1, *Spinning preparatory, spinning, twisting and winding machinery and accessories*.

Textile machinery and accessories — Web roller cards — Terms and definitions

1 Scope

This International Standard defines terms of the card with a web-forming method using staple fibres for non-woven machinery.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1 Basic terms

2.1.1

web roller card

machine for mechanical web formation with at least two working rollers for opening fibre tufts and for producing unconsolidated textile fabric

[SOURCE: *web* (2.3.3)]

2.1.2

work flow direction

direction of fibre flow through machine (material flow)

2.1.3

entry side

side on which the fibre flow enters the machine

2.1.4

delivery side

side on which the fibre flow runs out the machine

2.1.5

right side

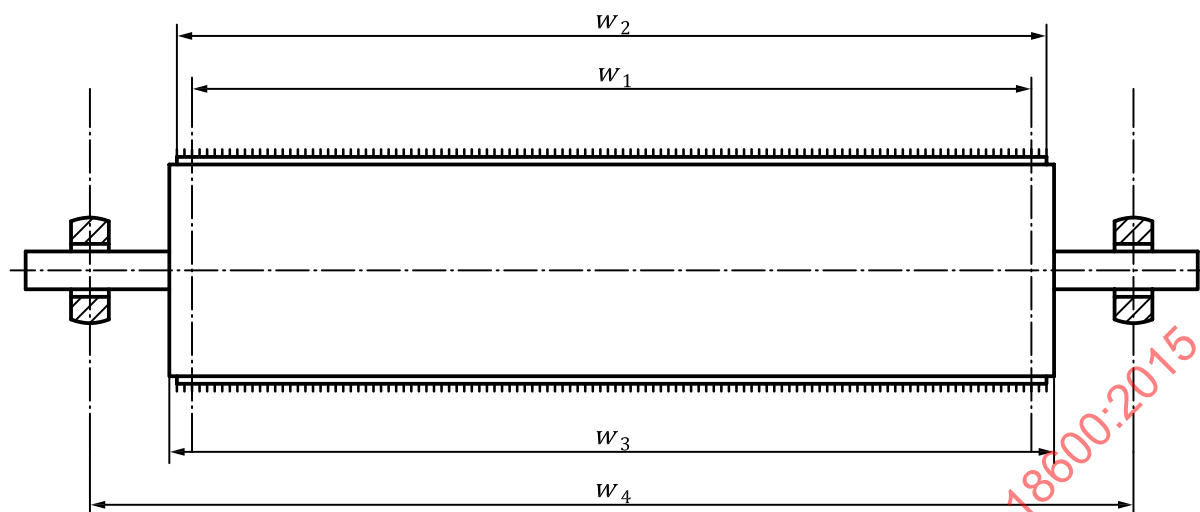
side of the machine which, when looking in the direction of the fibre flow, is situated on the right

2.1.6

left side

side of the machine which, when looking in the direction of the fibre flow, is situated on the left

2.2 Width dimensions



Key

- w_1 working width
- w_2 width of carding wire
- w_3 cylinder width
- w_4 bearing centre distance

Figure 1 — Width dimensions

2.2.1

cylinder width

w_3

overall width of roller body when designed with flanges including these flanges

Note 1 to entry: See [Figure 1](#).

2.2.2

width of carding wire

w_2

width decisive for calculating carding wire equal to the cylinder width less possible flanges

Note 1 to entry: See [Figure 1](#).

2.2.3

working width

w_1

theoretically utilizable cover width of fibre material on the roller

Note 1 to entry: See [Figure 1](#).

2.2.4

bearing centre distance

w_4

distance between two bearing centres

Note 1 to entry: See [Figure 1](#).

2.3 Technological terms

2.3.1

draft

V

relationship of delivery speed, v_2 , to entry speed, v_1

Note 1 to entry: See Formula (1).

$$V = \frac{v_2}{v_1} \quad (1)$$

2.3.2

distribution

A_F

relationship of circumferential speed on the main cylinder, v_3 , to entry speed, v_1

Note 1 to entry: See Formula (2).

$$A_F = \frac{v_3}{v_1} \quad (2)$$

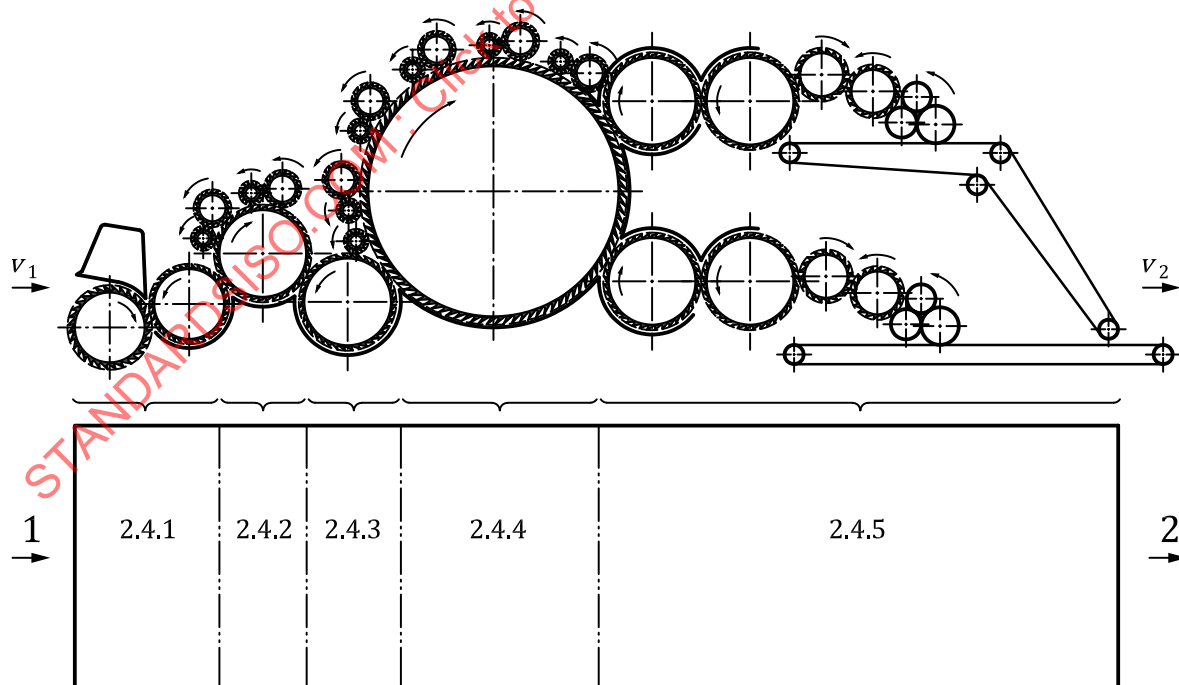
2.3.3

web

unconsolidated fibre fabric made out of individual fibres aligned according to card type

2.4 Machine components

NOTE See [Figure 2](#).



Key

v_1 speed at the entry

v_2 speed at the delivery

Figure 2 — Machine components

2.4.1 Feed unit

NOTE See [Figure 3](#).

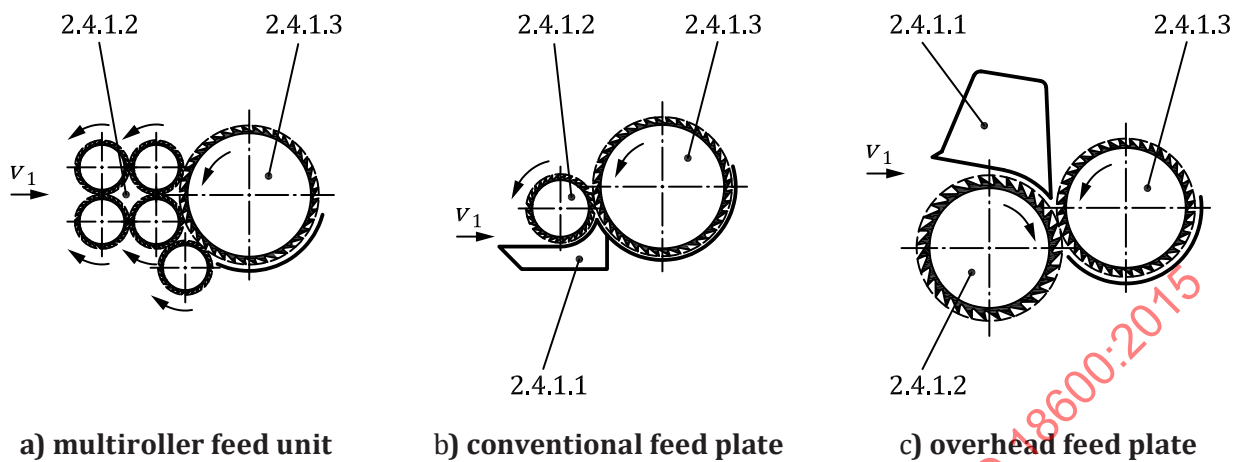


Figure 3 — Feed unit

2.4.1.1 feed plate

device for clamping fibre material prior to first opening of fibre material in the web-forming machine

2.4.1.2 feed roller

one or several rollers for feeding fibre material to the web-forming machine

2.4.1.3 taker-in roller

roller between *feed roller* ([2.4.1.2](#)) and *breast cylinder* ([2.4.2.2](#)) for first opening of fibre material in the web-forming machine

2.4.2 Breast unit

2.4.2.1 breast unit

breast cylinder ([2.4.2.2](#)) with *worker* ([2.4.2.3](#)) and *stripper rollers* ([2.4.2.4](#)) for further opening of fibre material

Note 1 to entry: See [Figure 4](#).

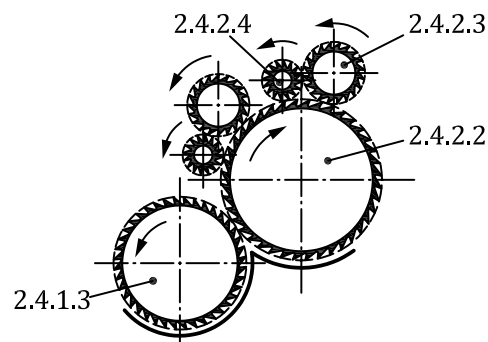


Figure 4 — Breast unit

2.4.2.2

breast cylinder

main cylinder of breast unit in front of *main cylinder* ([2.4.4.1](#))

2.4.2.3

worker roller

roller which, due to its low circumferential speed compared to that of the *breast cylinder* ([2.4.2.2](#)) and its reverse position of teeth, partly takes up the fibre material, opens it and feeds it indirectly to the breast cylinder via the *stripper roller* ([2.4.2.4](#))

2.4.2.4

stripper roller

roller which removes fibre material adhered to the *worker roller* ([2.4.2.3](#)) and feeds it back to the *breast cylinder* ([2.4.2.2](#))

2.4.3 Transfer unit

2.4.3.1

transfer unit

roller or roller combination between *breast unit* ([2.4.2.1](#)) and *main cylinder unit* ([2.4.4.1](#)) for transferring fibre material to the *main cylinder* ([2.4.4.2](#))

Note 1 to entry: See [Figure 5](#).

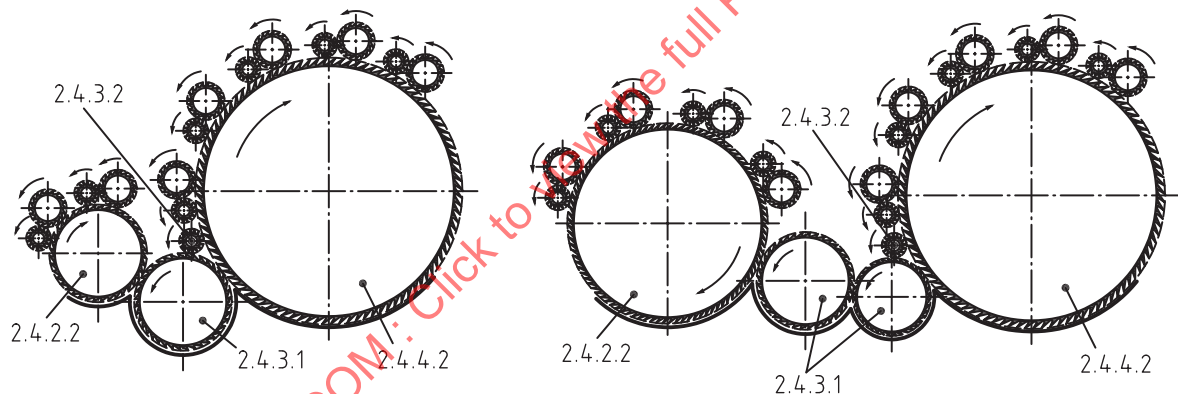


Figure 5 — Transfer unit

2.4.3.2

wind roller

roller between two cooperating rollers with the purpose to collect fibres and lead them to one of the two rollers

Note 1 to entry: Sealing rollers can be used at different places of the machine.

2.4.4 Main cylinder unit

2.4.4.1

main cylinder unit

main cylinder(s) of the web-forming machine [*web roller card* ([2.1.1](#))], which, in combination with the *worker rollers* ([2.4.4.3](#)), perform(s) most of the opening of the fibre material to individual fibres

Note 1 to entry: See [Figure 6](#).

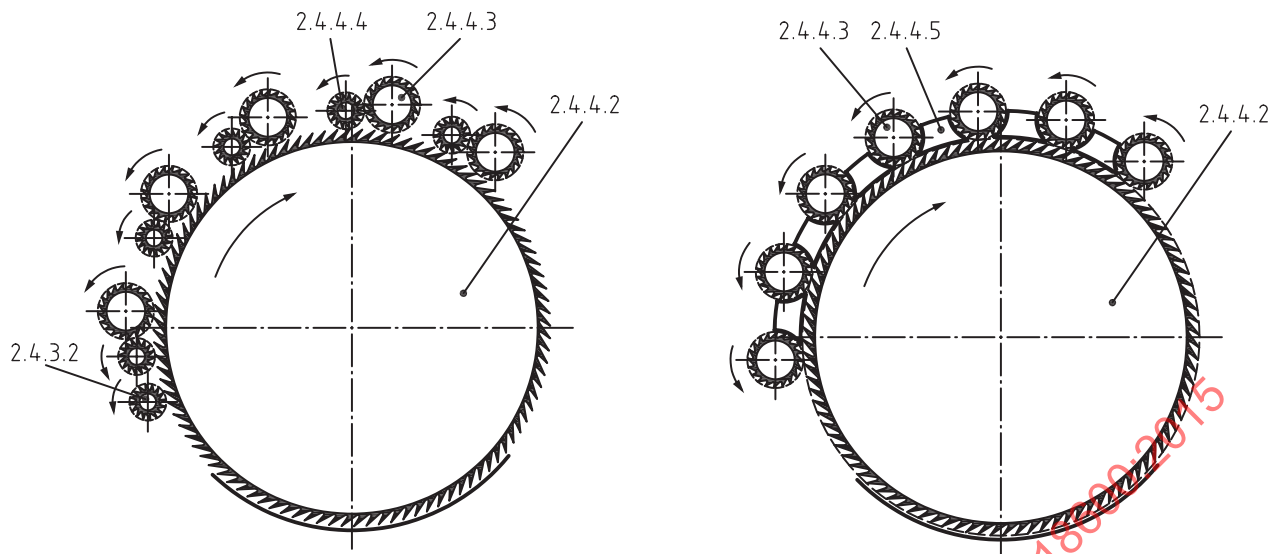


Figure 6 — Main cylinder unit

2.4.4.2

main cylinder

cylinder which delivers fibres to the *take-off unit* ([2.4.5.1](#))

2.4.4.3

worker roller

roller which, due to its low circumferential speed compared to that of the *main cylinder* ([2.4.4.2](#)) and its reverse position of tooth, partly takes up the fibre material, opens it and feeds it indirectly to the main cylinder via the *stripper roller* ([2.4.4.4](#))

2.4.4.4

stripper roller

roller which removes fibre material adhered to the *worker roller* ([2.4.4.3](#)) and feeds it back to the *main cylinder* ([2.4.4.2](#))

2.4.4.5

fibre guiding element

element for guiding fibre material taken up by the *worker roller* ([2.4.4.3](#))

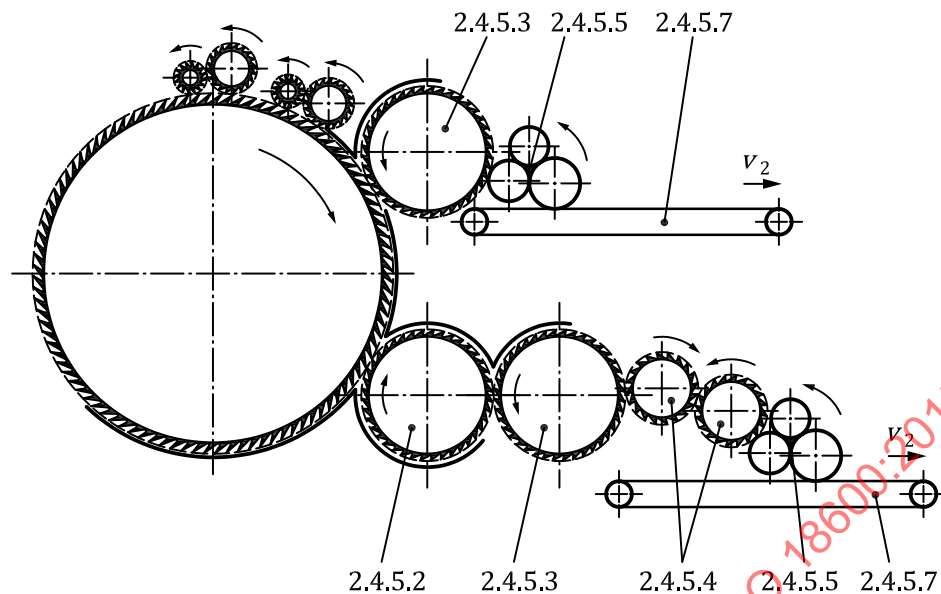
2.4.5 Take-off unit

2.4.5.1

take-off unit

unit for taking off material from the *main cylinder* ([2.4.4.2](#))

Note 1 to entry: See [Figure 7](#).

**Key**

v_2 delivery speed of the take-off unit

Figure 7 — Take-off unit

2.4.5.2**random roller**

roller which, due to its circumferential speed, direction of rotation and tooth position, produces a special random orientation of the fibres in the web (2.3.3)

2.4.5.3**doffer**

roller which takes off the fibre material of the *random roller* (2.4.5.2) or of the *main cylinder* (2.4.4.1) thus forming the web (2.3.3)

2.4.5.4**condensing roller**

roller for compressing and re-orienting of the web (2.3.3) from the doffer or upstream condensing roller

2.4.5.5**take-off roller**

rotating device for web discharge

2.4.5.6**take-off combing device**

oscillating device for web discharge

Note 1 to entry: See Figure 8.

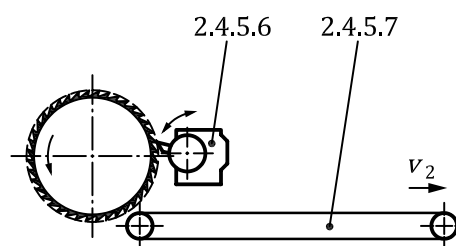


Figure 8 — Take-off combing device