

BS ISO 18599:2015



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Textile machinery and accessories — Strips for water jet solidification

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National foreword

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A list of organizations represented on this committee can be obtained on request to its secretary.

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**Textile machinery and accessories —
Strips for water jet solidification**

*Matériel pour l'industrie textile — Bandes pour solidification du jet
d'eau*



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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.

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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*.

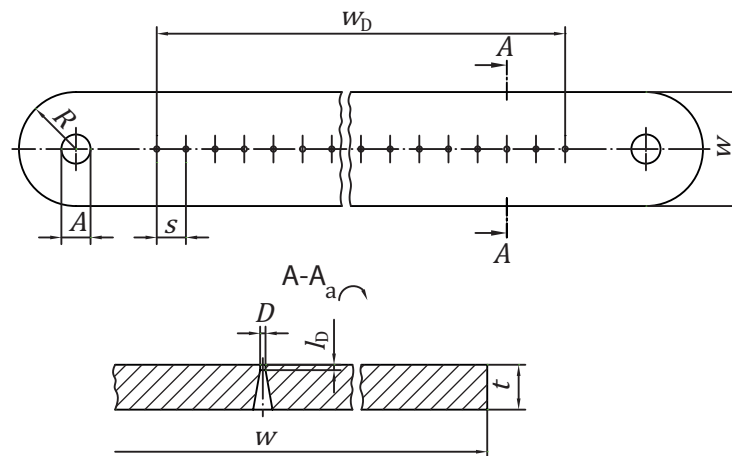
Textile machinery and accessories — Strips for water jet solidification

1 Scope

This International Standard specifies the dimensions and execution of strips for water nozzle solidification including their designation.

2 Symbols of dimensions

The designation of dimensions for jet strips are given in [Figure 1](#), [Figure 2](#) and [Figure 3](#).



Key

w	width	r	number of nozzle rows
t	thickness	A	diameter of expansion drilling
w_D	length of nozzle rows	R	terminating radius
D	nozzle diameter	l_D	nozzle length
s	nozzle distance		
a	magnified presentation		

Figure 1 — Single row jet strip $r = 1$

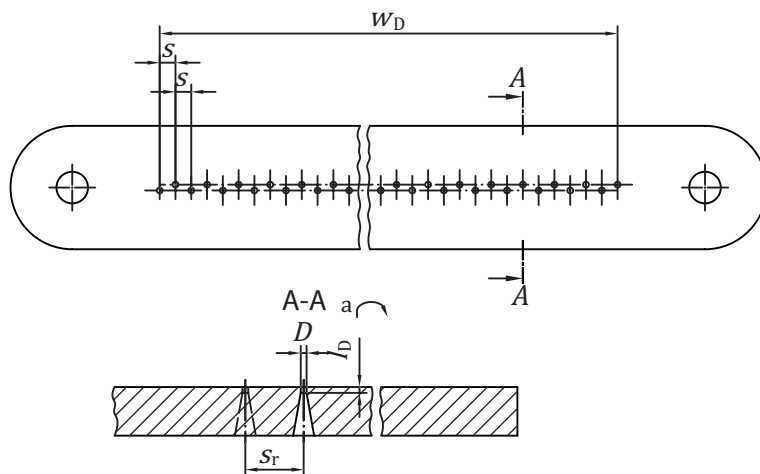
The number of nozzles per metre is calculated according to Formula (1):

$$n_D = \frac{1\,000}{s} + 1 \quad (1)$$

where

n_D is the number of nozzles per metre;

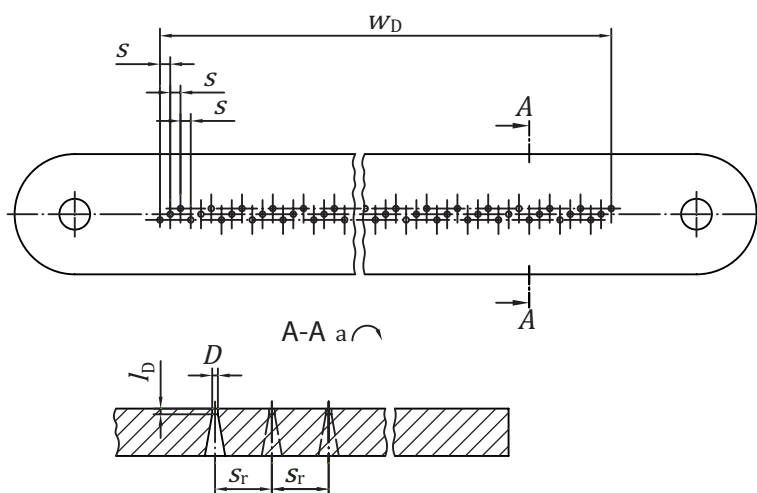
s is the nozzle distance, in mm.



Key

- | | | | |
|-------|------------------------|-------|--------------------------------|
| w_D | length of nozzle rows | s_r | distance of nozzle rows |
| D | nozzle diameter | A | diameter of expansion drilling |
| s | nozzle distance | l_D | nozzle length |
| a | magnified presentation | | |

Figure 2 — Double row jet stripe $r = 2$



Key

- | | | | |
|-------|------------------------|-------|--------------------------------|
| w_D | length of nozzle rows | s_r | distance of nozzle rows |
| D | nozzle diameter | A | diameter of expansion drilling |
| s | nozzle distance | l_D | nozzle length |
| a | magnified presentation | | |

Figure 3 — Three row jet stripe $r = 3$

3 Dimensions

3.1 Jet strips

The dimensions of jet strips are given in [Table 1](#).

Table 1 — Dimensions of jet strips

Dimensions in millimetres

Width, w	18	25,4^a
Thickness, t	0,8	1,0^a
Terminating radius, R	9	12,7
Expansion drilling, A	6,5	6,5
^a Preferred dimensions given in bold.		

3.2 Nozzle

The dimensions of nozzles are given in [Table 2](#) and [Table 3](#) and are presented in [Figure 4](#).

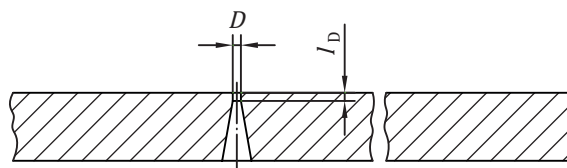
Table 2 — Nozzle dimensions (diameter)

Dimensions in millimetres

Nozzle diameter, D	0,07	0,08	0,09	0,10^a	0,11	0,12^a	0,13	0,14	0,15	0,16
^a Preferred dimensions given in bold.										

Table 3 — Nozzle dimensions (ratio)

Nozzle ratio $\frac{D}{l_D}$	0,8	1,0^a	1,2	1,5
^a Preferred dimensions given in bold.				



Key

D nozzle diameter

l_D nozzle length

Figure 4 — Nozzle ratio

3.3 Distance of nozzle rows

The number and distance of nozzle rows are given in [Table 4](#) and [Table 5](#).

Table 4 — Number of nozzle rows

Number of nozzle rows, r	1	2	3
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Table 5 — Distance of nozzle rows

Dimensions in millimetres

Distance of nozzle rows, s_r	0,6	0,8	1,0	1,2
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4 Specifications

4.1 Straightness and parallelism of jet strips

The requirements adhered to straightness and parallelism of jet strips are given in [Figure 5](#).

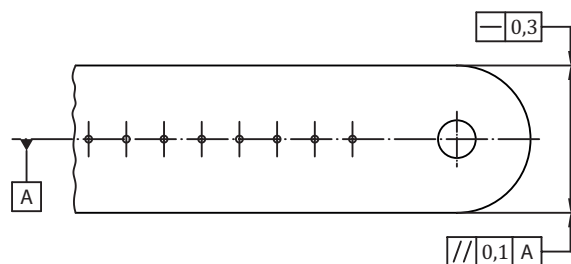


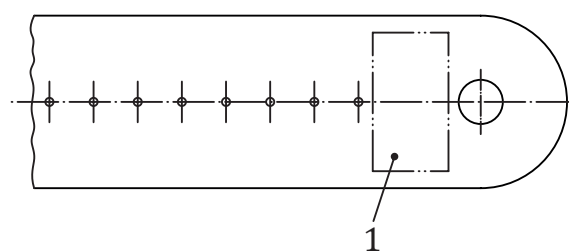
Figure 5 — Straightness and parallelism of jet strips

4.2 Hardness of jet strips

The material of jet strips is made of stainless steel. The minimum hardness of the stainless steel in Vickers hardness HV is 140.

5 Designation of jet strips

The designation of jet strips is given on the nozzle part (cylindrical part of nozzle) in the area between nozzle row and expansion drilling (see [Figure 6](#)).



Key

1 designation: ISO 18599 $D \times s - s_R \times t - w_D \times w$

Figure 6 — Designation

The designation shall include the following information in the order given:

- a) nozzle diameter, D ;
- b) nozzle distance, s ;
- c) distance of nozzle rows, s_R
- d) thickness, t ;
- e) length of nozzle rows, w_D ;
- f) width, w .

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