

Perforation Devices

for the cold perforation of foils, plastic foams and many other materials. Can be easily intergrated into an existing production line.



Examples of use:

- Perforation of:
 - Polyethylene foils
 - Paper webs
 - Plastic foams
 - Metal foils
- Ventilation at lamination processes
- Microperforation

Advantages:

- Easy integration into an existing production line
- High web speed
- Easy way of use
- Multi-purpose
- Optional roller arrangement
- High predision due to state-of-the-art CNC machines
- Made in Germany

We are pleased to submit you an offer an short notice. Please fill in the necessary details in the questionnaire. Special designs of the devices or perforation tools can also be supplied. In this case, please send us your specification.

tambula
Textilmaschinenteile GmbH
Robert-Bunsen-Straße 15
36179 BEBRA
Germany

Internet: www.tambula.de
Phone: 06622/919035
Fax: 06622/7480
Email: verkauf@tambula.de

Description:

- The device is basically intended for the cold perforation process.
- The correct penetration depth is adjusted via adjusting screws.
- After the adjustment of the correct penetration depth by the adjusting screws, the top roller is actuated either manually, pneumatically with hand lever valve or electro-pneumatically with remote control.
- The device does not include any maintenance unit, as the pressure air can be normally taken from the system.
- The support shafts can be exchanged according to the material guiding (see 2.1).
- Mounting brackets for the fitting at the machine are available.
- The device will be adjusted accordingly if the fastening points are specified.

Questionnaire:

Please mark the desired version with a cross and fill in the form completely. If there are any questions concerning the desired spiked or counter rollers please feel free to contact us and/or to send us a sample of your material for testing purposes.

1. Purpose of use

Material to be processed: (z.B.: HDPE)

Material thickness: (μm , mm)

Working width of material: (mm)

(Working width of device = working width of material + 100mm)

Product speed: (m/min)

Type of machine:

2. Perforation device

2.1 Material guiding:

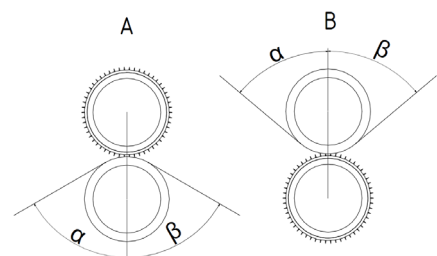
(The material to be perforated should always be guided over the counter roller)

Spiked roller up (sketch A)

α : , β :

Counter roller up (sketch B)

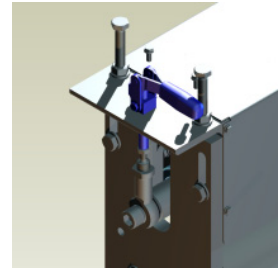
α : , β :



2.2 Lowering of the roller:

Manually

- Push rod clamping device for lowering the roller manually
- Fine adjustment with adjusting screws

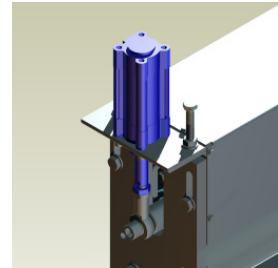


Remote controlled

- Pneumatically actuated cylinders
- Fine adjustment by adjusting screws

Control by:

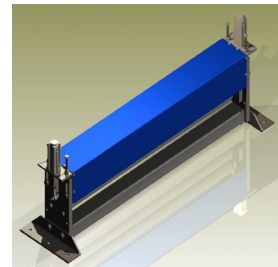
- Hand lever valve
- Solenoid valve (please specify the voltage)



2.3 Shock-proof protection:

Cover plates or hood

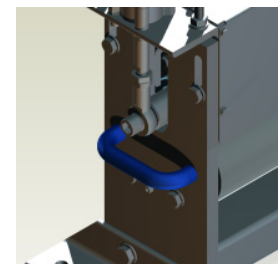
- Not essential if integrated into an existing production line
- Protects from unintentional contact with the spiked rollers
- You must comply with the valid safety instructions when using the device
- Please fill in under (2.1) web guiding and angle



2.4 Possibilities of transport:

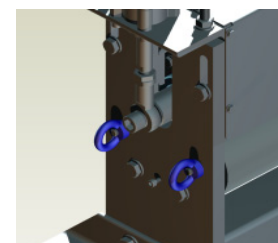
Bracket handles

- Not essential
- Facilitates the manual transport (for lightweight devices) or the application of transport material



Ring nuts (ISO 582 M10)

- Not essential
- Facilitates the application of transport material



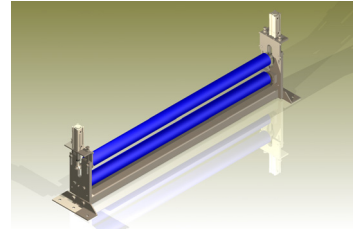
2.5 Support shaft material:

Steel

- Cheaper option
- Heavy construction

Aluminum

- Optional: Light construction



2.6 Surface structure of the counter roller:

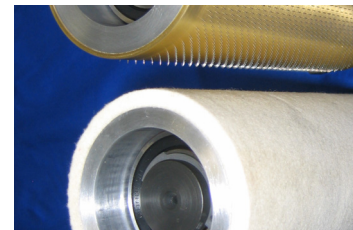
Brushes

- According to the material suited for coarser till fine pins ($T \geq 5\text{mm}$)
- By choosing a balanced brush-counterroller there is always a steelshaft installed



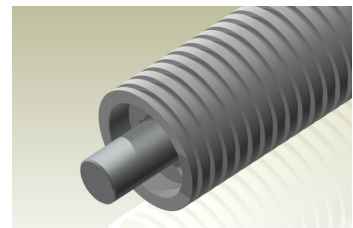
Felt

- Suited for fine pins



Grooved aluminum / steel

- The grooves have been directly worked into the steel or aluminum counter roller
- The pins run in the grooves
- Suited e. g. for harder material which is to be perforated
- Possible from pitch 5 mm (in rows), or from 10mm (staggered)



PU-coated

- Necessary for microperforation
- Suited for very fine pins or for very small hole diameters



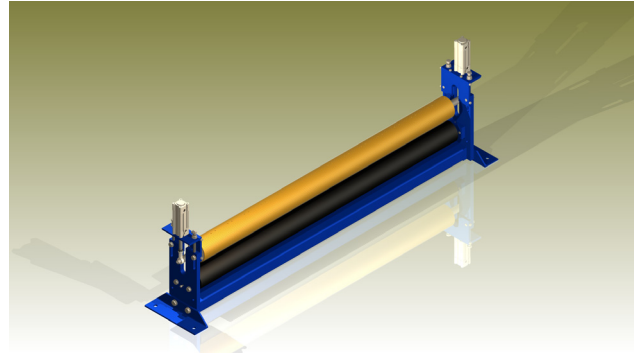
2.7 Balancing of rollers:

Balancing of support shafts

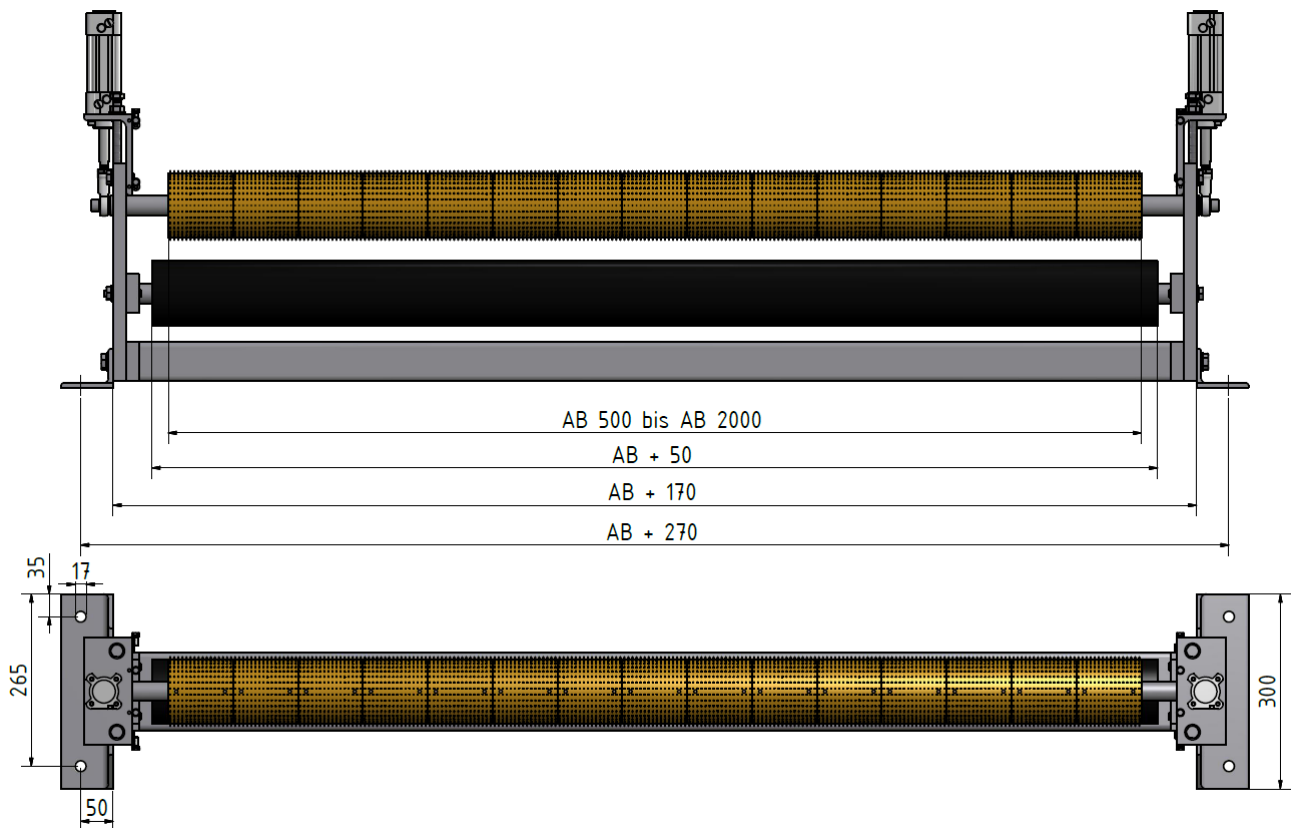
- From the following web speeds and working widths (AB) balancing is advisable:
AB: 500mm-1500mm **95m/min** (300 rpm) AB: 1600mm-2000mm **120m/min** (300 rpm)

2.8 Color of the device:

- Standard color: Blue (RAL 5010)
- Special color as required:

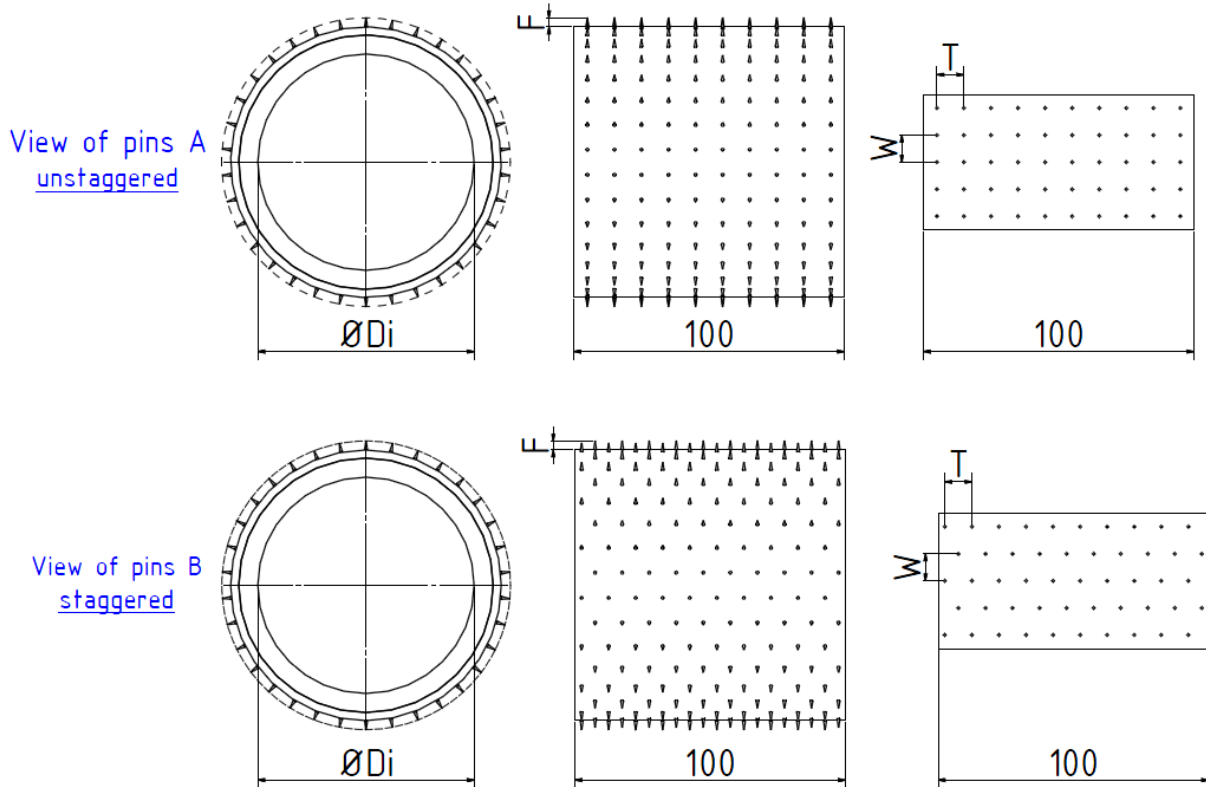


2.9 Working width (AB) and standard mounting dimensions:



3. Pin Segments

3.1 Dimensions of the standard pin segments:



(Dimensions in mm)

Unstaggered pins (A)						Staggered pins (B)					
	Density	T	W	F	PinØ		Density	T	W	F	PinØ
<input type="checkbox"/>	16 pins/cm ²	2,5	2,5	3,85	0,99	<input type="checkbox"/>	16 pins/cm ²	2,5	2,5	3,85	0,99
<input type="checkbox"/>	4 pins/cm ²	5	5	3,85	0,99	<input type="checkbox"/>	4 pins/cm ²	5	5	3,85	0,99
<input type="checkbox"/>	1 pins/cm ²	10	10	5,5	1,63	<input type="checkbox"/>	1 pins/cm ²	10	10	5,5	1,63
<input type="checkbox"/>	0,25 pins/cm ²	20	20	10	2,62	<input type="checkbox"/>	0,25 pins/cm ²	20	20	10	2,62

(pinØ = maximum diameter at the pin shank)

Customer request

- We will be pleased to offer upon request any individual pin arrangements of the segments according to your specification.
- In this case please fill in our “**Questionnaire Spiked Rollers**” or send us a drawing.
- Please note that the outer diameters of the support shafts at the following working widths (AB) are as follows:

AB: (500mm – 1500mm) **Di= ø80 mm**

AB: (1600mm – 2000mm) **Di= ø110 mm**

3.2 Core material of the standard segments:

Without core

- The roundness is not as accurate as with core
- Low-cost version from AB 1600 or coarse pins (0.25 pin/cm²)
- Attachment between clamping disks

Steel core

- Cheaper than aluminum core
- Heavy construction

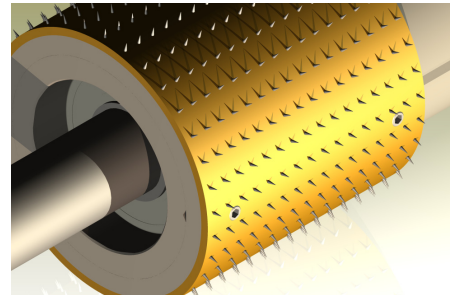
Aluminum core

- Light construction
- Also suited for high product speeds

3.3 Attachment of the standard pin segments:

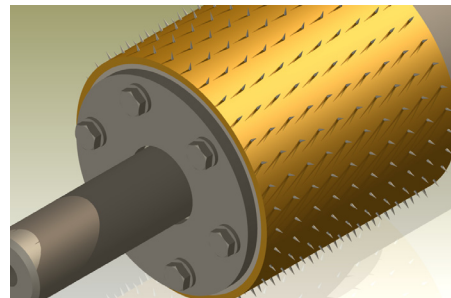
Setscrews

- Standard version
- Any roller is attached separately at the support shaft
- Serves as axial (displace) and radial (turn) fixing
- In connection with a notched support shaft, a correct pin arrangement can be reached
- Only up to a pitch of $T > 10$ mm (0.25 N/cm², 1 N/cm²). At a smaller pitch the pins are omitted at the screw connection.
- Is necessary for movable single segments at partial perforation



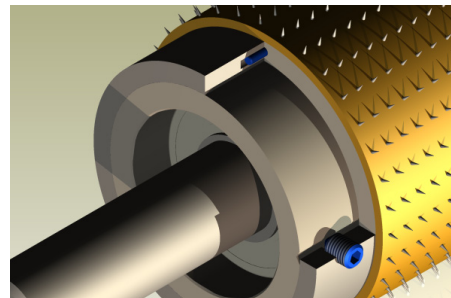
Tensed between clamping disks

- Manual alignment of the pin segments
- The segments are tensed by clamping disks which are attached at the front of the support shafts. In this way the segments are protected from axial and radial displacement
- Only necessary for fine pins (16 pins/cm²) and segments without core



Front studs

- Special equipment
- The spiked rollers are put together and they are correctly aligned by the studs.
- For the axial fixing 2 additional edge segments are necessary. These segments are attached by clamping screws at the support shaft.



tambula
Textilmaschinenteile GmbH
Robert-Bunsen-Straße 15
36179 BEBRA
Germany

Internet: www.tambula.de
Telefon: 06622/919035
Telefax: 06622/7480
Email: verkauf@tambula.de