

UNIVERSAL CRUSHER 02-XL



- High performance crusher for best results and best reproducibility
 - adjustable
 - highest efficiency
 - solid and strong
 - with teflon coated tube

■ **Dipl.-Ing. Albert Classen**

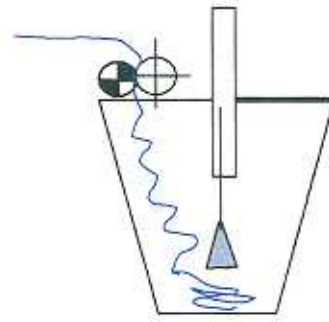
New and second hand textile machines and spare parts

Vermittlung und Verkauf von Textilmaschinen und textilen Erzeugnissen

Description



inlet frame of the machine
the unrolling device is optional



feeding piston



piston with pressing chamber -
different executions



feeding piston

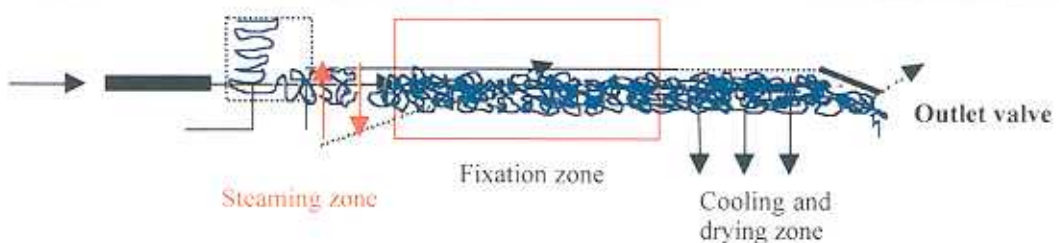
In the pressing chamber the material is compressed by a motor driven or compressive air driven piston. The piston speed is variable.

We offer different feeding systems according to the fabrics to be crushed.



Infeeding zone

motor driven, frequency controlled fabric driving piston



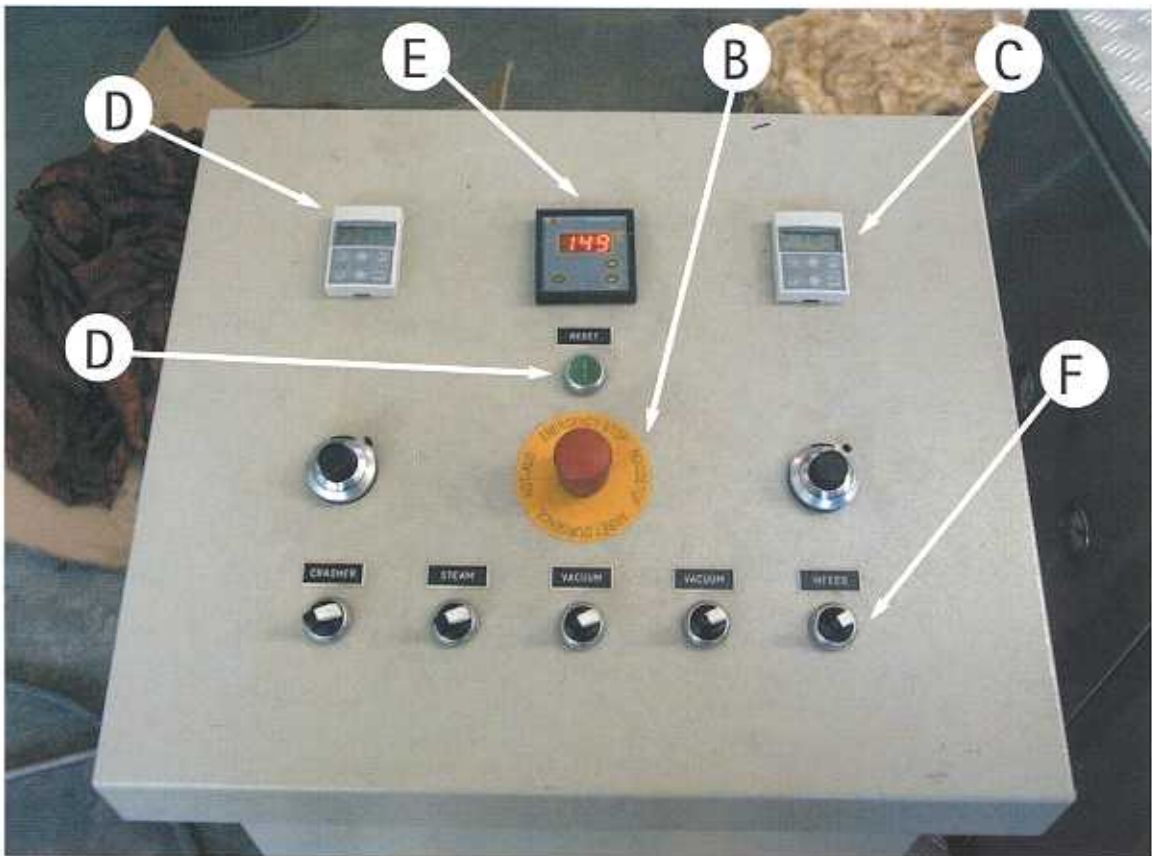
■ Heating tank

In compressed condition the material is plastically deformed by steam injection and heating. Both the temperature and the amount of steam are adjustable, depending on the material and the desired result.

Temperature control by a steampressure-reducer installed on the machine.

The steampressure is inherent to its temperature: 1 bar = 120°C , 2 bar = 133°C , 3 bar = 143°C
4 bar = 151°C , 5 bar = 158°C , 6 bar = 165°C , 7 bar = 171°C

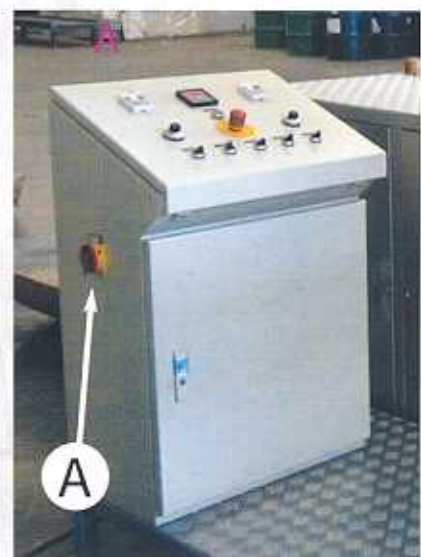
Most of the fabrics run at 165°C to receive a good fixation. Tests will be run with new qualities to find the right parameters. Some colours are sensitive to high temperature. Check dyeing recipes in order to use dyes solid to contact heat. If you produce different colours start with the light colours.



■ Operating system

The operating system is housed in a cabinet mounted on the platform with the following functions and controls:

main switch A, emergency stop B, frequency control reading for the material infeed C and plunger speed D, temperature display E, on/off switches F and a reset button G

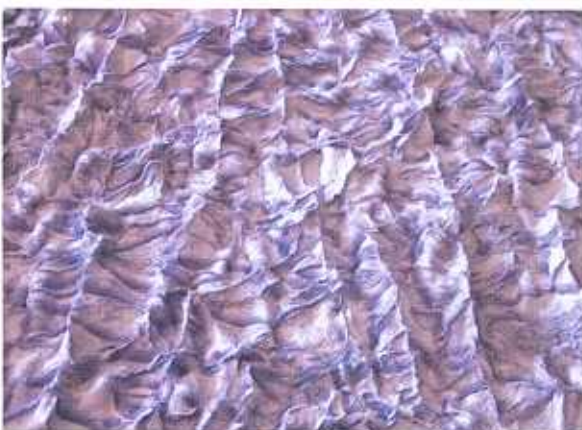




Different types of outlet valves - valves above allowing the pressure in the tube to be controlled - manually driven - left or by an adjustable compressive air driven valve. In this way the crush can be influenced for an optimal throughput.



production line depending on the capacity required, up to three machines installed in line



crush effect on high pile fabrics after one crush passage
The article is a woven artificial fur fabric.



crush effect on a flat woven article



samples finished with less



or more tension in warp and weft direction

- layout for one single crushing machine: length approx. 8 m, width approx. 2 m



- layout for three machines working in one line: length approx. 17 m



- **The crusher consists of:**

1. entry roller with funnel taking the material automatically to the pressing chamber using a pneumatic or motor driven piston
2. pressing chamber, where the material is compressed
3. steaming section where the fabric is treated with direct steam and heating tank where the material is made plastic by means of indirect steam injection
4. cooling and drying section where the material is cooled down and dried before leaving the tube
5. adjustable exit valve giving counter pressure to the fabric inside the tube with control unit
6. operating panel

■ Technical Specifications

Dimensions: L x W x H 2000 x 1000 x 1000 mm , (base frame, without infeed)

Weight: approx. 800 kg

Connections: pneumatic - 6 bar, connection G 1/2"
steam pipe - 8 bar, connection G 1/2", +/- 100Kg/hour
electricity - 7 kW; 220/380, 3 phases, 50 Hz

Speed: up to 2000 m/hour, depending on material thickness and tube diameter

Materials: should contain at least 50% synthetic fibres

Exhaust: depending on material type and coating
capacity: 400 m/h
air speed: 40 m/sec
connection: diameter 90 mm

Material data of components under pressure: material in accordance with DIN;
tube: stainless steel 304

Heating tank: (PxL) < 200 bar/l; PED guideline table 2, internal manufacturing check,
maximum pressure 8 bar

Machine manufactured in Holland exclusively for Dipl.-Ing. A. Classen, CE-confirmed.

■ Crushing Process

Crushing process to be performed two to four times according to the material and the density to be obtained. With our machine the fabric receives a very regular and intensive crush effect. The fabric is almost dry and cold, leaving the tube. This is a big advantage for the final finishing of the fabric.

The flat woven articles are normally sent to a transfer calander, to fix the crush. On the transfer calander finishing will be fixed in the way the customers desires. Therefore the inlet frame of the transfer calander must have two additional options:

1. one opening device by driven rollers together with a width control so that the fabric will be stretched to the final width.
2. one overfed system allowing to feed more fabric

With these two options the fabric can be finished with more or less visible crush effects. If the customer needs less effect the fabric will be stretched more in weft direction with device no. 1 and is held back in warp direction with device no. 2.

If the customer crushes pile fabrics one to three passages are necessary. After these processes the fabric has to go to the stenter to get its final width and maybe a polishing process at the POLROTOR machine is necessary to open and soften the pile.

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