

## HyTec® – CLEANING INSTRUCTIONS FROM GROZ-BECKERT FOR JET STRIPS



The manufacture of spunlaced products involves forcing water at high pressure through openings in the jet strip measuring only hundredths of a millimetre across. The process entails large quantities of process water flowing through the individual jets.

Contamination of the process water leaves deposits which clog up the jet area. Potential pollutants can include fibre residues, rust, metal particles, lime-scale particles and chemicals added to the process water. With time, the resulting deposits left adhering inside the jets gradually diminish the diameter, so impeding the flow of water.

Contaminants in the entrance area of the jet opening exert a detrimental effect on the formation of the water jet and consequently on the shape of the water curtain. This impacts negatively on the physical characteristics of the spunlaced product. Consequently, jet strips require professional cleaning at regular intervals to remove deposits, while taking care to protect the

sensitive structure of the jet strip. Aspects such as working safety and environmental protection also play an important role.

**Groz-Beckert recommends the use of a clearly defined cleaning process such as the routine described overleaf.**

## THE CLEANING PROCESS

### Procedure for correct cleaning of jet strips

#### Work step 1: Cleaning in diluted phosphoric acid

To prepare the cleaning solution, dissolve 3.5 litres of 85% strength standard technical phosphoric acid in 100 litres of water. Fully or partially deionized water can be used as well as tap water.

**Remark:** When stirring the solution, the acid must be added to the prepared water, never the other way round! The cleaning process, which takes around 15 minutes, is performed in an **ultrasound bath**.



#### Work step 2: Intermediate rinsing

In fully or partially deionized water, or also using tap water, rinse the jet strips after completion of the ultrasound bath cleaning process.



#### Work step 3: Cleaning in diluted sodium hydroxide

While stirring, dissolve 3 kilograms of sodium hydroxide pellets in 100 litres of water. Here too, the fully or partially deionized water or tap water must be prepared first and the product added, never the other way round!

**Note:** The fluid heats up during the dissolving process. Cleaning in the **ultrasound bath** should take place for at least 15 minutes.



#### Work step 4: Intermediate rinsing

In fully or partially deionized water, or also using tap water, rinse the jet strips after completion of the ultrasound bath cleaning process.



#### Work step 5: Jet strip cleaning plant

Using hot, fully deionized water, the holes of the jet strip are rinsed through from both sides at a pressure of appr. 200 bar.



#### Work step 6: Drying

If the jet strips are not used immediately after the cleaning process, we recommend drying them with compressed air.



RESULT WITH CLEAN JETS



RESULT WITH CLOGGED JETS

#### Note on working with jet strips

A jet strip is a highly sensitive precision tool. Although damage to the jets in the micron range cannot be seen with the naked eye, it does influence the physical characteristics of the spun-laced product. In extreme cases, the jet strip has to be exchanged. Consequently, particular care is called for when handling jet strips.

As a rule, the process water is circulated, necessitating a thorough cleaning process with the aid of special filter media. Filtration methods used can include sand and pocket filters (bag or cartridge filters). In addition, germs in the water should be destroyed by ultraviolet radiation. The process water should ideally have a pH value in the neutral range.



#### Note

When using chemicals in their concentrated or diluted form (e.g. phosphoric acid and diluted phosphoric acid), the valid safety regulations and instructions provided in the relevant safety data sheets must be observed without fail (e.g. eye protection, hand protection)!

Cleaning processes should only be carried out by suitably trained and qualified personnel.



#### Remark

Used chemicals must be disposed of in compliance with statutory legislation and local authority regulations.

GROZ-BECKERT KG

PO Box 10 02 49

72423 Albstadt, Germany

Phone +49 7431 10-0

Fax +49 7431 10-2088

contact\_fn@groz-beckert.com

www.groz-beckert.com

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