

# How to clean the fiber cement felt

## The material of the fiber cement felt

The FC felt always be made of PA6 or PA66 yarns and fibers.

## The high pressure Jet

Continuous cleaning with low pressure fan shower (4 –6 BAR) and overlapping high pressure needle jet oscillating showers up to 20 bar either inside or outside of the felt or from both sides, using fresh or clarified water. The oscillating stroke should be double the nozzle spacing distance in order to assure uniform felt coverage. Shower nozzles should be checked on a regular basis for clogging.

**DISTANCE BETWEEN NOZZLES:** 75-120 mm, common 100mm

**Nozzles SIZE:** 1.0mm to 2.0mm

The specific flow of water is a very important factor as it is required to determine the water demand and therefore the power of the pump to be installed

## Vacuum system

The essential technical characteristics of the vacuum boxes are:

**VACUUM:** from 25 to 40 cm Hg for positions that go from initial to the final ones, that is, from more open felts to the heaviest and compact felts.

**AIR FLOW:** 70 l/min./cm<sup>2</sup> for speeds up to 90 m/min.

Vacuum must be equally distributed on the whole width and the slots

must be covered with low friction coefficient, materials like ceramics or HDPE. Some manufactures use adjustable slot vacuum boxes, which can be useful when you need to vary vacuum and air delivery values. It is important that each suction box be connected to its own vacuum system; nevertheless, there should be the possibility of differentiating the vacuum and the deliveries in the different positions, based on the actual requirement. In normal operating conditions, two separate boxes are installed for each felt. The effectiveness improves if you leave enough space between the first and the second box for the re-distribution of the water in the felt. If this is not possible, a lubricating shower is required between the first and second box.

### **Chemical cleaning**

We recommend thorough backwashing of the felt with a **3 – 4.5 % hydrochloric acid solution(HCL)** before any significant down time or when felt is accidentally contaminated due to poor conditioning, too much flocculants etc.. Chemical cleaning can be of important help to integrally restore the resilience and the receptiveness of the felt. Slacken the felt tension and apply the solution through a separate chemical shower with machine in crawl speed for about 30 minutes. After all the solution has been applied, turn on the water showers, preferably clear or clarified water, and rinse the felt thoroughly and turn on the vacuum boxes. Recommended quantity of water is 1,5 / 2,0 times the weight of the dry

felt. Strong acids (hydrochloric and sulfuric) are corrosive for the iron parts of the machine and therefore must be used with caution, or by adding passivation agents like terpolyphosphate soda. Synthetic fibers are very sensible to strong acids, and special care must be taken to avoid direct contact between felt and concentrated acid.