

## Foam Generation & Application

### SupraFoam for:

- Stainblocker
- Soil, water and oil repellents
- Fluorocarbons
- Anti static chemicals
- Softeners
- Flame retardants
- Anti bacterial chemicals
- Moth and beetle proofing agents
- Pile stabilizers
- Anti shedding agents
- crease resist and dimensions stability resins

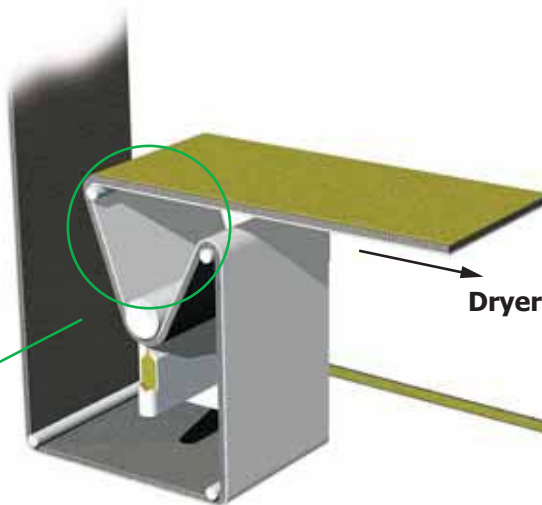
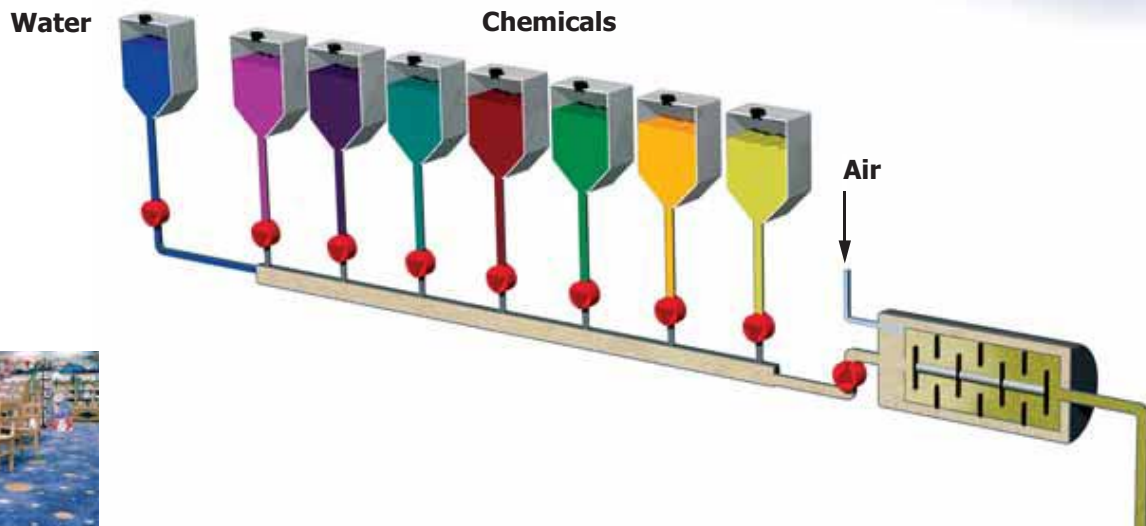
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# Foam Generation & Application

## SupraFoam – Foam mixing and application system

- to produce the multi-functional carpet
- saves chemicals and energy
- reduces errors and cost
- improves quality and productivity



## SupraMix - Foam Generator

Dosing and mixing various products is a permanent job in the industry.

Most of the automatic dosing and mixing units have a limited range set by the size and type of the dosing pump. Any change in range requires either a new system or major modification of the pump and drive system.

Another problem is a fully continuous mode of operation: Several pumps can only operate in a "pulse" mode or must run at a certain speed.

To keep the expenses low Zimmer has developed a special combination of a stepping motor drive and a peristaltic pump.

With this combination it is possible to reach a dosing range per pump of about 1:100 within +/- 2% accuracy without using expensive and complicated flow meters – using one type of pump and one type of tube. By changing the tube and adding additional heads to the drive the ratio can be extended by additional 1:100.

This results in a total dosing range of up to 1:10.000 with minimum modification.

## Mixing head

- Easy access and maintenance
- Double slide-ring sealing
- Variable speed drive



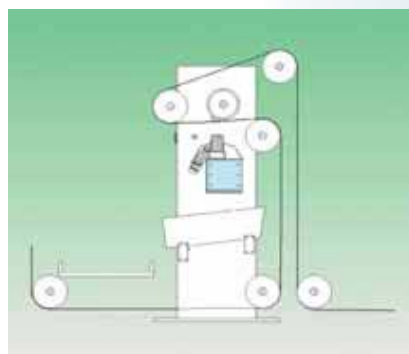
Technical data	DMF 50	DMF 250	DMF 500
Foam volume	50 liter/min	250 liter/min	500 liter/min
Liquid flow rate	2 liter/min	5 liter/min	7,5 liter/min
Foam density	20 - 100 g/liter (higher density at lower flow rate)		
Dosing range	0,5 - 500 g/l (1:100 with each pump)		
Products	1 - 8 chemicals + water		

## SupraMix DMF

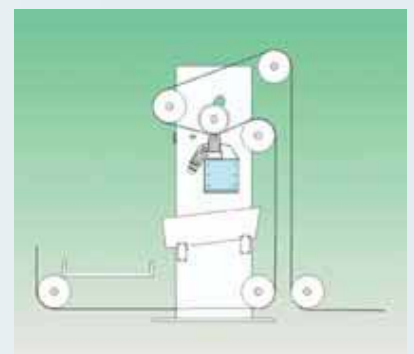
- Dosing, mixing and foaming in one step
- Fully computer controlled
- Easy to install, operate and maintain
- Up to 8 dosing pumps
- Dynamic foam mixer with variable speed
- 20-100 g/liter foam density

## SupraFoam Applicator

- up to 5 m in width
- automatic width adjustment
- full penetration at low wet pick-up of 5-20%
- easy to clean
- low foam content - even distribution
- instant on/off
- in-line with coating or printing



Pressing roller and carpet in non-contact position (foam application inactive)

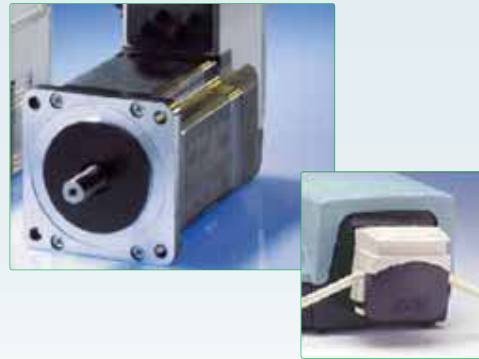


Pressing roller and carpet in contact position (foam application active)

## Foam Generation & Application

### Stepping Motor Drive System

- Exceptionally robust, maintenance-free drives.
- Step-by-step movement specified by a positioning controller is executed precisely.
- No minimum speed
- One type of drive for all pumps
- Built-in electronic control
- Directly coupled to the pump - no gear

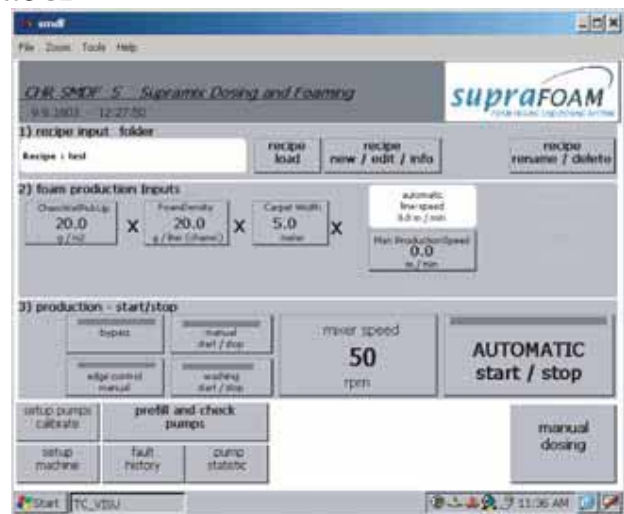


### Control System

The control system is based on a touch terminal with  WindowsCE

#### Basic program modules

- **Calibration:** Each dosing pump is calibrated and adopted to individual specific weights of products
- **Dosing:** In batch mode or continuous mode
- **Cleaning:** Pre-mixing tank and in-line mixer cleaning
- **Report:** All stored recipes can be exported and printed out
- **Tracking:** Report of the total consumption of each individual product over a period of time



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