

# SteamTech<sup>TC</sup>

## Tissue Curved Steamshower

Mills making high-quality tissue, need a level sheet moisture on the yankee dryers for even drying. Today with SteamTech and its unique actuator technology, superior performance in the moisture profile is achievable. The SteamTech<sup>TC</sup>, a member of the SteamTech Family, is a curved type steam actuator system for the press section. Our advanced technology allows VIB Systems to provide a high performance reliable steam actuator with zone spacing down to 50 mm. This, along with our long life pneumatic actuators, provides superior benefits for today's tissue makers.



## Advanced Actuator Control Systems

### SteamTech<sup>TC</sup> Description

The most important properties of a good steam actuator are its profiling capability and its ability to raise dry content. These two properties will improve the sheet's cross-directional moisture profile and optimize the machine's productivity and runability. With a SteamTech<sup>TC</sup> on the suction roll, managing the moisture profile and drying capacity becomes notably easier.

The compromise between production increases and profiling capability has been eliminated by increasing the velocity of the high speed steam jets onto the web in two separate machine direction zones.

SteamTech<sup>TC</sup> has two zones in the machine direction to make the profiler more efficient. The profiling zone is fully compartmentalized, supplying high velocity steam to each cross direction compartment via a separate, uniquely designed actuation valve that allows optimum zone definition and precise control. The constant full width zone has higher steam velocity to ensure greater steam condensation on the paper web.

Primary material for SteamTech<sup>TC</sup> is stainless steel 1.4571 (316 Ti). Special grade stainless steel 1.4539 (904 L) is used against highly corrosive wear at the diffuser plate, edge-heating zones and in pneumatic control lines. Optional Teflon coating is also available for the diffuser plate and edge heating zones for easy cleaning and dust removal.

**Control Station<sup>ECS</sup>** is a SteamTech electronic control station that manages the control of the pneumatic actuators. Each actuator is controlled with an I/P-converter with a control signal from 0.4 - 2 bar (6 - 30 psi). Setpoints are sent from the VIB control station<sup>IPS</sup> using measurement system data.

**Control Station<sup>IPS</sup>** is an integrated process station that serves as the central process point for the system. It contains the integrated MD/CD control, the operator visualization package, PLC functions and the intelligence to manage the total actuator control system.

### Benefits to the Tissue Industry

- Increased production and flatter moisture profile can be achieved simultaneously.
- Narrow spacing of the actuator can be defined based on the desired profiling effect.
- Optional feedback of the actuator position ensures reliable functioning of the SteamTech Actuator.
- Provides better crapping through even moisture profile.
- CD moisture 2-sigma improvement of 60 %, profile correction of 2,5 %.
- Dryness increase of 3 - 4 % after suction press roll.
- Production increase of 8 - 12 %.
- Improved runability on the whole production line.
- Improved converting through better moisture profiles.
- **Efficiency increase of total production line with integrated moisture control of 1,5 - 3 %.**

## Technical Features

- Two separate zones in the machine direction.
- Integrated CD and MD control including PLC functionalities (interlocks, loops).
- Profiling zone spacing down to 50 mm means high profiling capability.
- Rigid construction, material 316 Ti.
- LAN or Serial Link protocol for connection to the measurement system. Switchable with a mouse click.

## Options

- Teflon coating for diffuser plate
- Removable diffuser plate
- Steam supply engineering
- PosiTrak position feedback
- Turnkey installation

## Technical Specifications

### Pneumatic Actuator

Body material 1.4404  
 Control signal 0.4 - 2 bar (6 - 30 psi)  
 Position indicator  
 Closed when no control signal

### Stainless Steel

Primary 1.4571 (316 Ti)  
 1.4539 (904 L) used for high corrosive areas  
 (diffuser plate, edge heaters, control lines)

## SteamTech<sup>®</sup> Actuator Family

SteamTech <sup>FF</sup>	Fourdrinier Flat Steamshower
SteamTech <sup>TAD</sup>	Through Air Drying Steamshower
SteamTech <sup>TC</sup>	Tissue Steamshower
SteamTech <sup>SC</sup>	Press Section Steamshower
SteamTech <sup>TFF</sup>	Teflon Flat Felt Heating Steamshower

## Advanced Actuator Control System Layout

