Industrial Cleaning and Conditioning Systems

Innovative solutions for tough cleaning problems.
Genesis™ Modular Shower Family

Overview

Features
- Modular shower design
- Components are interchangeable – imperial and metric
- Simple slide bearing design with alignment keys
- Full coverage stainless steel brushes
- 316 stainless steel construction
- User-friendly brush rotator and blowdown valve arrangement for keeping nozzles clean

Benefits
- Globally available spare parts
- Upgrade from stationary to oscillating
- Low maintenance costs
- Uniform distribution of shower water
Genesis™ Stationary Showers

Overview

Applications
- Roll and doctor lubrication
- Conveyor and belt cleaning
- Product knock-off
- Cylinder cleaning
- Chemical cleaning

Stationary shower without brush
Available with internal brushes for nozzle cleaning
Complete internal shower pipe cleaning
Auto-brush rotator
Genesis™ Oscillating Showers

Overview

Applications
- High-pressure belt press fabric cleaning
- High-pressure cylinder cleaning
- High-impact roll cleaning
- Drilled vacuum roll cleaning
- Conveyor belt cleaning
- Sludge press cleaning

Genesis shower with EMO III™ oscillator side mount and auto-brush rotator

Double-tube oscillating shower

Genesis shower with Genesis oscillator installation on belt filter

Complete internal shower pipe cleaning
Industrial Showering Applications

Belt press

Belt press cleaning trial results

Conditioned Sludge/Polymer

Gravity Zone

Sludge Inlet

Belt Wash Station

High-Pressure Zone

Low-Pressure (Wedge) Zone

Belt Wash Station

Dewatered Sludge

Typical belt press cleaning

DeltaFormer™ for non-wovens

Fruit juice press
**Oscillator Systems**

**EMO III oscillator with panel**

**Genesis oscillator with smart motor**

**Thermography showing poor crank-arm oscillation**

**Crank-arm oscillation pattern (not recommended)**

**EMO III oscillation pattern**

**Improved Cleaning and Conditioning for Better Moisture Profile Management and Enhanced Cleaning Efficiency**

The low frequency (low speed), instantly reversing EMO III or Genesis Ultra electro-mechanical oscillators are designed and proven to provide optimal fluid distribution for cleaning and conditioning machine fabrics. Conventional piston drive and crank-arm oscillators operate at fast speeds with excessive dwell at stroke reversal. This produces non-uniform fabric cleaning and wear, vividly illustrated by the shower pattern photo shown above. Kadant’s minimal dwell and precisely controlled oscillators consistently provide uniform shower coverage. Optimal fabric cleaning contributes to optimum machine performance for improved web profile, surface finish, and density.
## Industrial Nozzles

<table>
<thead>
<tr>
<th>Nozzle Pressure</th>
<th>PSI</th>
<th>20</th>
<th>40</th>
<th>60</th>
<th>80</th>
<th>100</th>
<th>125</th>
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<th>300</th>
<th>400</th>
<th>600</th>
<th>800</th>
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<tbody>
<tr>
<td>Orifice in/mm</td>
<td>Fan Angle</td>
<td>Nozzle Flow: Gallons Per Minute/Liters Per Minute</td>
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<td><strong>0.028” 0.71 mm</strong></td>
<td>Jet</td>
<td>0.064</td>
<td>0.090</td>
<td>0.110</td>
<td>0.128</td>
<td>0.143</td>
<td>0.160</td>
<td>0.175</td>
<td>0.202</td>
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<td>0.247</td>
<td>0.285</td>
<td>0.349</td>
<td>0.403</td>
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<td><strong>0.033” 0.84 mm</strong></td>
<td>1.0 mm</td>
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<td>0.125</td>
<td>0.153</td>
<td>0.177</td>
<td>0.198</td>
<td>0.222</td>
<td>0.243</td>
<td>0.280</td>
<td>0.313</td>
<td>0.343</td>
<td>0.396</td>
<td>0.485</td>
<td>0.560</td>
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<td><strong>0.040” 1.0 mm</strong></td>
<td>1.4 mm</td>
<td>0.130</td>
<td>0.184</td>
<td>0.225</td>
<td>0.260</td>
<td>0.291</td>
<td>0.326</td>
<td>0.356</td>
<td>0.412</td>
<td>0.460</td>
<td>0.504</td>
<td>0.582</td>
<td>0.713</td>
<td>0.823</td>
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<tr>
<td><strong>0.055” 1.4 mm</strong></td>
<td>1.8 mm</td>
<td>0.246</td>
<td>0.348</td>
<td>0.426</td>
<td>0.492</td>
<td>0.550</td>
<td>0.615</td>
<td>0.674</td>
<td>0.778</td>
<td>0.870</td>
<td>0.953</td>
<td>1.10</td>
<td>1.35</td>
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<td><strong>0.070” 2.4 mm</strong></td>
<td>3.2 mm</td>
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Filtration Products

Kadant provides a variety of filtration products to complement its shower systems. Proper filtration of water used for showering is critical to remove dirt, rust, scale, and recycled water contaminants to ensure consistent water quality. Kadant also has expertise in the recycling of process water that can save energy and reduce effluent.