KĀDANT

DOCTORING, CLEANING, FILTRATION

EMO III™ Oscillator

Electro-Mechanical Oscillators

Optimize Shower and Paper Machine Performance.

Maximize Machine Clothing Performance

The EMO III oscillator provides control, reliability, and safety. Thousands of installations are helping papermakers fine-tune their machine's shower performance for excellent clothing conditioning and production.

The EMO III oscillator features a comprehensive oscillator control system housed in a window-panel enclosure (NEMA 4X and IP65, stainless steel optional), providing information and control options to both local and remote operators.

The digital display panel shows oscillation variables including speed, stroke length, motor load, and position. Push buttons enable manual speed adjustments ranging from 0.1" to 5"/min (2.5 mm to 127 mm/min) or automatic adjustment can be set to occur as paper machine speed changes. Push button stroke length adjustment in increments of 0.01" to 13.25" (0.3 mm to 337 mm) allows quick compensation for odd nozzle spacing or fabric streaking. Constant read-out of oscillator load simplifies troubleshooting for misalignment, worn sleeve bearings, or other potential problems.

Diagnostics

The Blue 2 controller now has enhanced diagnostics with the ability to tell you which component or circuit has failed or been wired incorrectly. The controller maintains a fault history, so you can review causes of problems and spot patterns that will help resolve core causes of maintenance issues. Status LEDs on the circuit board enhance troubleshooting and make many types of evaluation possible without the use of a multimeter (power supply status, input status, output state).

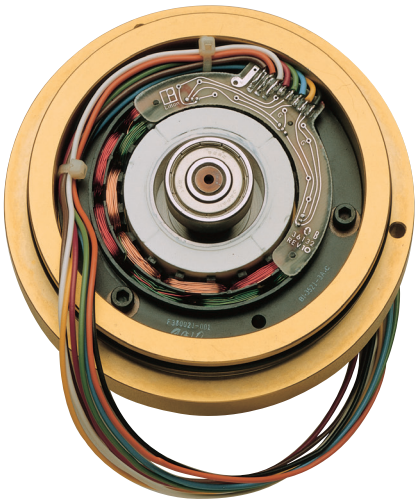
Rugged Reliability

All exposed and wetted parts are manufactured from 316L stainless steel. The drive shaft is protected from moisture damage by the advanced Posi-Seal, a lubricated double-seal assembly and integral scraper. Seal life is extended by the score-resistant, smoothly burnished drive shaft. An integral 316L stainless steel cover encases the drive shaft to further prevent mechanical damage and abrasive build-up. Weighing just 60 lbs. (27 Kgs), yet capable of delivering over 2000 lbs. of thrust, the entire unit is easily handled and installed.

The drive system of the EMO III oscillator is a low maintenance, multi-ball screw designed to avoid high load concentrations and provide long life performance. The 24 volt, brushless DC motor features solid-state commutation. Brush maintenance is eliminated because there are no brushes. There is no need for separate motion sensing switches. Hall effect sensors continuously monitor shaft speed, position, and cycles.

Dependable Precision

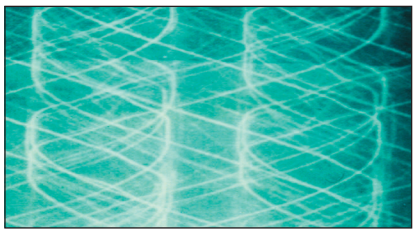
Precision ball bearings are used on all rotating shafts. There are no bushings to wear out. Precisely machined one-piece gears are fitted for long life and dependable performance.



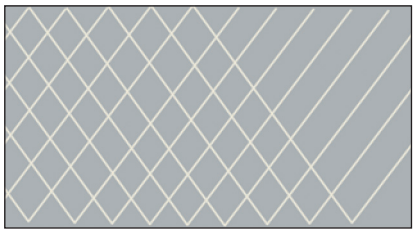
Moisture-Proof Assembly

The motor and integral gear reducer feature anti-corrosion treatment, positive sealing o-rings on all surfaces, and a one-piece premolded wiring harness to the motor provides a moisture-proof assembly that is well-protected from the wet papermaking environment.

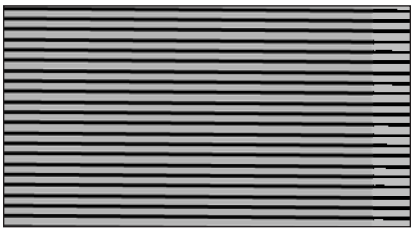
EMO III Oscillation Optimizes Shower Performance



Crank-arm Oscillation Pattern



Hydraulic Oscillation Pattern



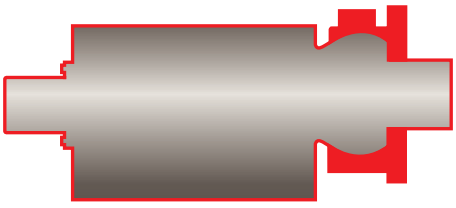
EMO III Oscillator Oscillation Pattern

Improved Cleaning and Conditioning for Better Moisture Profile Management and Enhanced Product Finish

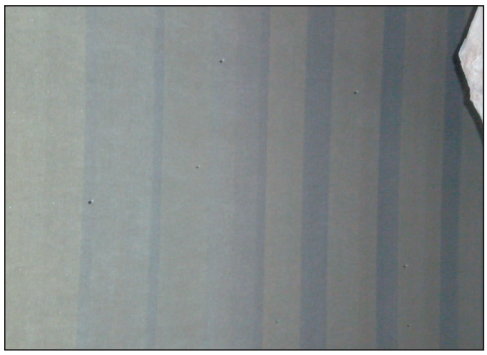
The low frequency (low speed), quick reversing EMO III electro-mechanical oscillator is designed and proven for optimizing fluid distribution for cleaning and conditioning machine clothing. Conventional piston drive and crank arm oscillators operate at fast speeds with excessive dwell at stroke reversal. This produces non-uniform fabric cleaning and wear, vividly illustrated by the shower pattern photo shown above. The EMO III oscillator's minimal dwell and precise control consistently provide uniform shower coverage. Optimizing clothing performance yields to optimizing forming and pressing for improved sheet profile, surface finish, and density.

Shelf Mount

Flange Mount



The EMO III oscillator can be supplied for shelf mounting to a separate bracket or flange mounting as an integral component of a double tube shower. Either way, the self-aligning design makes mounting and installation simple and secure.



Press fabric streaks due to poor oscillating shower performance.

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