



LEO[®] Linear Electronic Drives for Oscillating Spray Pipes

CLEANING SYSTEMS AND COMPONENTS
FOR THE PAPER AND PULP INDUSTRY



Spraying Systems Co.[®]
Experts in Spray Technology



Even, streak-free cleaning can only be guaranteed if the spray nozzle is moved by precisely the jet diameter with each rotation of the felt or wire.

LEO oscillators guarantee this by coupling the drive control with the paper machine speed signal and the use of a linear electronic stepper motor in the drive.

Our oscillators increase the cleaning efficiency of the spray nozzle ensuring a perfect clean and a long service life for costly screens and felts.

The link between our variable speed drive and machine speed allows deep cleaning using a smaller nozzle diameter and lower spray pressures. This significantly reduces water usage, effluent production and power consumption while maintaining an even streak free clean.



DESIGN CHARACTERISTICS & ADVANTAGES

- Even spray coverage and streak-free cleaning across the entire felt or wire surface
- Extended service life on screens and felts thanks to optimised cleaning efficiency
- Clean felts and wires correspond to improvement in paper quality
- Smaller diameter nozzles minimise water and power consumption
- Easy 'Plug & Spray' control with full adjustment of stroke, feed and return speed
- Simple integration into existing lines
- Durable design: IP 67 rated for safe operation in wet areas including direct wash down
- Easy-to-operate control: Settings can be pre-programmed and adjusted during operation
- Various assembly options: Inline or flanged
- Integrated proximity switch for monitoring the stroke position and protection of the system
- Minimal servicing required

DRIVE SYSTEMS

A drive system consists of 1 oscillator and, optionally, an oscillator control unit as well as assembly and flange-mounting accessories.

	LEO 450	LEO 900	LEO 1200	LEO 2000
Operating voltage	230 V 50 Hz (110 V 50 Hz) . 60 Hz possible.			
Power consumption	270 W	400 W	400 W	400 W
Operating temperature	70° C (max.) control unit and 75° C (max.) Oscillator			
Oscillating speed	from 0.01 mm/s - 3.00 mm/s			
Oscillating stroke	1 mm - 345 mm			
Optional alarm	Relay outputs for max. 24 V, 100 mA, not potential-free. Error notification on the display. Internal rotation monitoring by the initiator on the flexible coupling.			
Optional	---	Internal stroke monitoring by the light guide		
Display	Either 4-line LCD screen or 4.5" touchscreen display			
Protection class	Oscillator: IP 67			
Thrust*	max. 4,500 N	max. 9,000 N	max. 12,000 N	max. 20,000 N

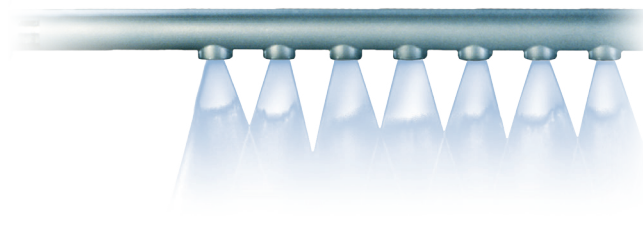
* = Depending on the oscillating speed

IDEALLY SUITED FOR THE CLEANING OF

- Felt
- Suction roller
- Screen netting

BRUSHLESS SHOWERS

- Economic yet robust spray solution with genuine Spraying Systems Co. nozzles
- Developed for use with freshwater where no nozzle blockages are expected
- For use with self-cleaning nozzles or easy to change dovetail nozzles
- Suitable nozzles: Self-cleaning nozzles from ranges such as ShowerJet®, DiscJet®
- Distance between the nozzles: Variable
- Pipeline materials: Stainless steel 1.4305 or 1.4571

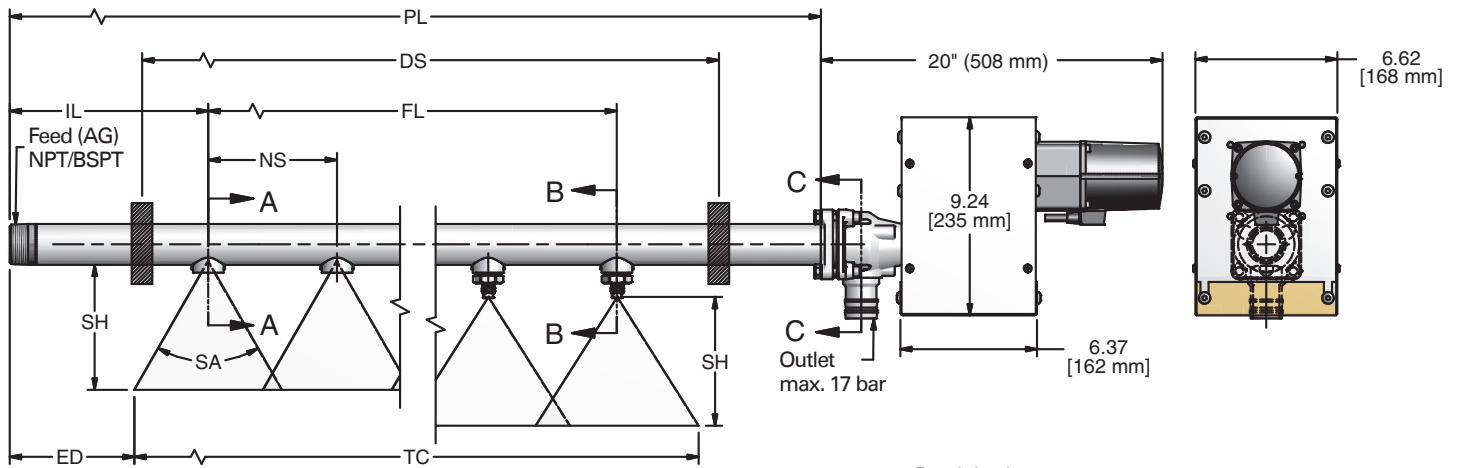


BRUSH SHOWERS: MANUAL OR AUTOMATIC

- A proven method to remove dirt and debris from inside the shower or plugged nozzles without removing the nozzles. A rod with strategically placed brushes is permanently mounted inside the shower and is turned by use of a hand wheel (manual) or motor (auto)
- Manual cleaning takes place by turning a hand wheel. This rotates the brushes around the inside diameter of the shower and the back of all the nozzles releasing dirt and debris.
- An automatic brush shower uses a motor to turn the brushes. In both instances, as the brush rotates a valve is opened, allowing the dirt and debris to be flushed to drain
- The auto cleaning cycle can be pre-programmed using our full control system. You can alternatively start the cleaning cycle by pressing a button.
- The standard cleaning cycle consists of three rotations with a pause of at least 2 minutes between the cycles. The pauses can easily be programmed with the time control (option).
- Simple installation. Unlike comparable brush showers where the motor and control are separate units, our entire electronic system is accommodated in the motor housing. Simply connect the motor to the operating unit and the system is ready for operation.
- Practically maintenance-free: our only recommendation would be to lubricate the gears twice per year and change out the spray nozzles every 18-24 months
- Gear motors or direct current smart motor with an IP 68 rating
- Control: NEMA 4X, fibreglass switch cabinets
- Time control system (option)
- Cleaning brushes are positioned at an offset of 120° to maximise surface area coverage
- Our Brush showers use genuine Spraying Systems nozzles

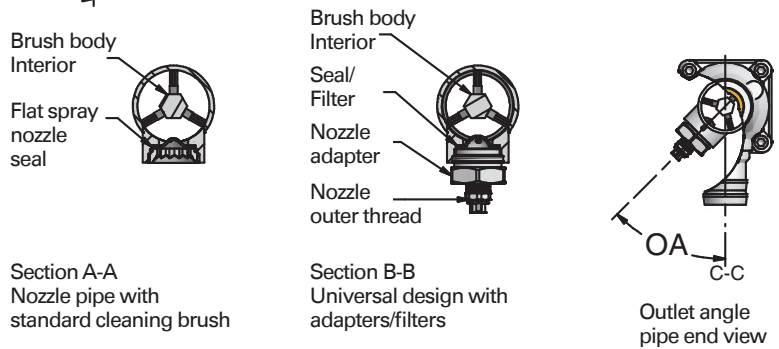


Design information for the various showers



We need some basic information from you to enable us to design a shower that suits your individual requirements.

If you need help with your selection please contact your local Spraying Systems representative. Shower speck sheets: www.spray.com/specsheets



TECHNICAL SPECIFICATION OF NOZZLES FOR BRUSH AND BRUSHLESS SHOWERS

Easy to assemble / dismantle with conventional tool (spanner size 22) - Quicklock
Nozzle diameter: 0.4 mm - 1.7 mm. Intermediate sizes available on request.
Thread: M30 x 1.5 and M32 x 1.5 as well as 1 3/16 -18 UNEF
Colour coding system: 6 colour-coded plastic nozzles for various nozzle diameters
Available with ruby or sapphire insert
Material: Stainless steel 1.4305 and 1.4571 or fibreglass-reinforced special plastic (guarantees the metal-like dimensional stability, even in the event that the hex is exposed to severe load)



Quicklock connection with nozzle and tool

For further information, please view catalog 227 or datasheets.



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