



SELECTOSPRAY® – Your Competitive Advantage

Characteristics > The benefits to you

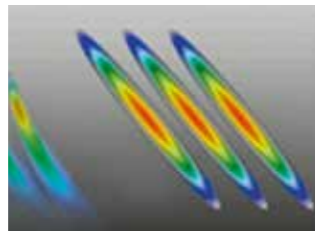
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|---|--|
| <p>Bespoke Nozzle Design</p> <ul style="list-style-type: none"> ■ Custom-designed spray coverage ■ Optimised coolant usage | <ul style="list-style-type: none"> – Precise spray patterns – Homogeneous spray pattern – Increased cooling efficiency – Reduced running costs |
| <p>Pneumatic Operation</p> <ul style="list-style-type: none"> ■ Contamination tolerant ■ Fast response 30 ms can be pulsed ■ Low power solenoids ■ High operating temperature (120 °C) | <ul style="list-style-type: none"> – Reduced downtime – Improved product quality – Reduced flatness deviation – Reduced running costs – Can be used for roll conditioning |
| <p>Easy Access</p> <ul style="list-style-type: none"> ■ Removable from the header front ■ Valve alignment not required | <ul style="list-style-type: none"> – Quicker valve changes – Reduced maintenance costs – Repeatable spray performance |
| <p>Compact Dimensions</p> <ul style="list-style-type: none"> ■ Low section headers ■ Small diameter valves | <ul style="list-style-type: none"> – Optimised spray position – Increased cooling efficiency – Less expensive headers – Can be closely grouped (25 mm) |
| <p>Reliability</p> <ul style="list-style-type: none"> ■ Tested to over 20 million cycles ■ Low-friction seals | <ul style="list-style-type: none"> – Reduced running costs – Easy maintenance |



Valves removable from the front of the header



Dedicated electropneumatic cabinets



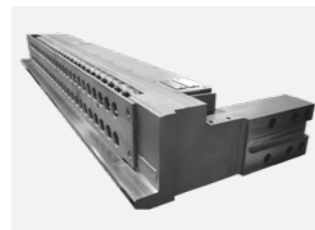
Perfect spray geometry (max HTC)



Protection for Solenoids and fittings



25mm valve pitch allows for a compact header design



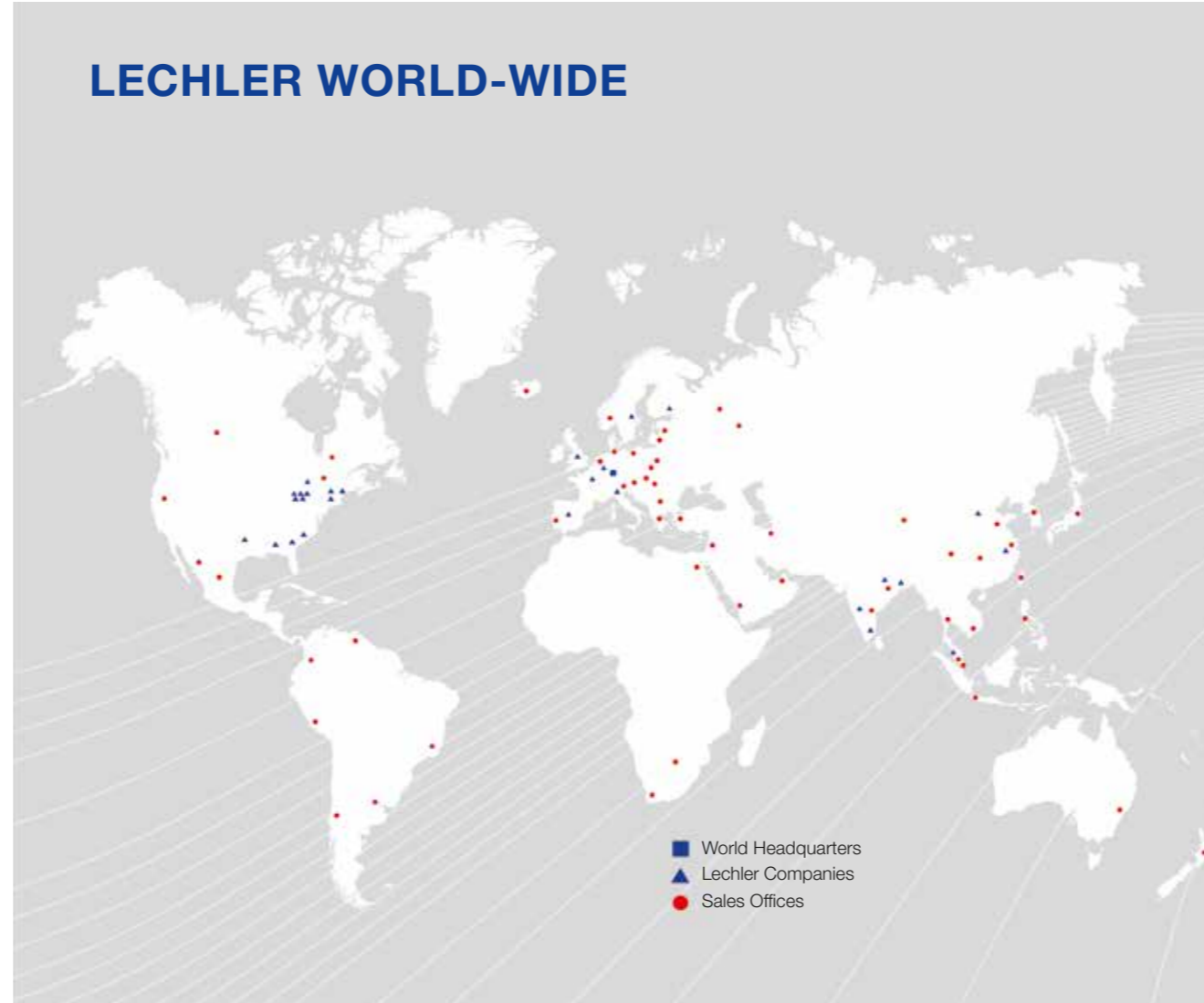
Bespoke header design provides the optimum spray solution



A full range of spares, tools and accessories are available

- Competitive Advantages**
- Easy maintenance
 - Quick change
 - Removable from the front of the header
 - No requirement to remove the headers for servicing
 - Lower maintenance costs
 - Class leading flow rates
- Twin Seal Advantages**
- No coolant damage to:
 - Pneumatic solenoids
 - Internal header fittings
- Extended production time between maintenance
 - Reduced running costs

LECHLER WORLD-WIDE



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Edition 07/17 · EN · 500 · M-2017-3550-082 · www.dgm-walliser.de · Subject to technical modification.

SELECTOSPRAY® Electropneumatic Roll Cooling Systems



SELECTOSPRAY®

SELECTOSPRAY® — ELECTROPNEUMATIC ROLL COOLING SYSTEMS

SELECTOSPRAY® from Lechler

The demand for cost effective production pushes all parameters in the rolling process. The requirements for product rolled at ever increasing rolling speeds and reductions, presents complex technical challenges.

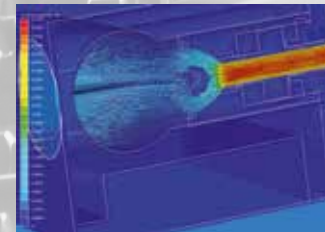
Lechler SELECTOSPRAY® Systems present a performance advantage to improve all aspects of the roll cooling process.

Efficient use of available coolant, through optimised spray positions increases the cooling effect per litre of coolant.

Eliminating cost from the rolling process is all part of the SELECTOSPRAY® experience.

Key features of a SELECTOSPRAY® system are:

- CFD design of header and valves, to optimise flow and reduce pressure losses



- Very robust and reliable construction of headers, valves, nozzles, hoses and cabinets

SELECTOSPRAY® Benefits

- Significantly improves rolled product flatness
- Contributes to extended work roll life
- Efficient application reduces applied volumes
- Reduces costs of coolant recovery

Lechler Electropneumatic Valves

SELECTOSPRAY® Selective Roll Cooling Systems are integrally fitted with our family of valves. The Modulax DSA valve is extremely flexible, dependable and adaptable. It is used in Steel, Aluminium and all non ferrous rolling mills in both hot and cold processes at 52 mm and 26 mm valve pitches.

Robust, Reliable, Simple

- Contamination tolerant
- Large orifices – high flow
- Completely removable from the header front
- Normally failure-open
- Quick response time suitable for pulsing

Twin Seal – Electropneumatic Valves

52 mm Modulax DSA



26 mm Mini Modulax DSA



Electropneumatic solenoid mountings 52 mm and 26 mm



- Reduced costs with less maintenance
- Extended life in arduous conditions
- Secure solenoid protection

Modulax DSA Valve 52 mm / 2”



The Lechler Modulax DSA (Direct Solenoid Actuation) is used in rolling mills where the ability to fail open is beneficial. Typically where emulsions or dispersions are used as the coolant.

Features

The Modulax DSA Valve has all the features of the Modulax Valve, these being:

- A 2:1 coolant / air pressure ratio
- Four large coolant inlets
- Only one moving part, the low inertia Delrin piston assembly
- Electropneumatic actuation
- Can be fitted with nozzle blocks or the self-aligning dovetail fixing of the SELECTOSPRAY® nozzle range
- Easily and completely removable from the front of the header
- Solenoid valves located directly behind the valve

Enhanced Functionality

The Modulax DSA Valve offers all the benefits of the Modulax valves, with the enhanced feature of a discreet solenoid actuator. This allows the Modulax DSA valve to be pulsed up to 5 Hz.

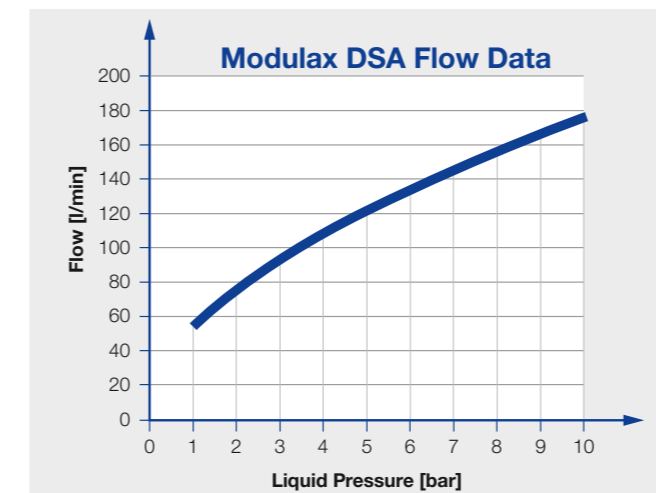
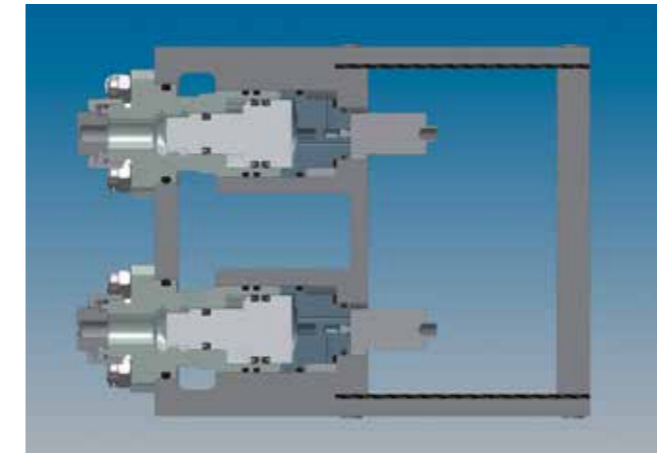
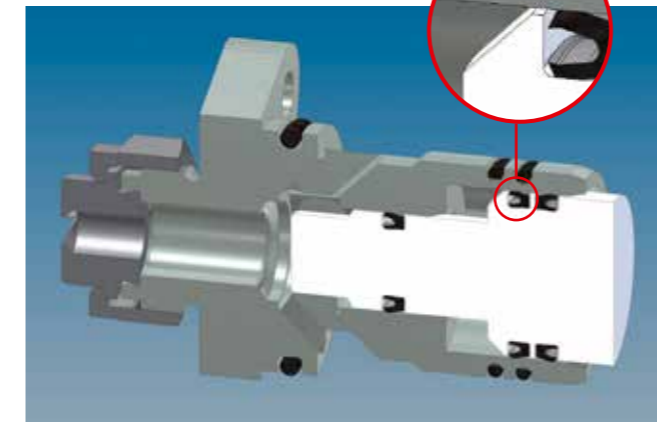
In the event of the front coolant seal failing due to mechanical damage, the secondary seal becomes energised, forcing the piston back and preventing any coolant from flowing through the solenoid into the rear chamber, ensuring improved integrity.

In a seal failure condition the Modulax DSA indicates an issue, by exhausting coolant via the front breather port.

Advantages

- Long-life low-friction lip seals
- Tested to over 20 million cycles
- Header solenoid protection
- Visible seal damage indicator
- Cost effective replacement
- Segregation of air and coolant by a secondary protection barrier seal

Product code
961.DSA.00.SP.00.0



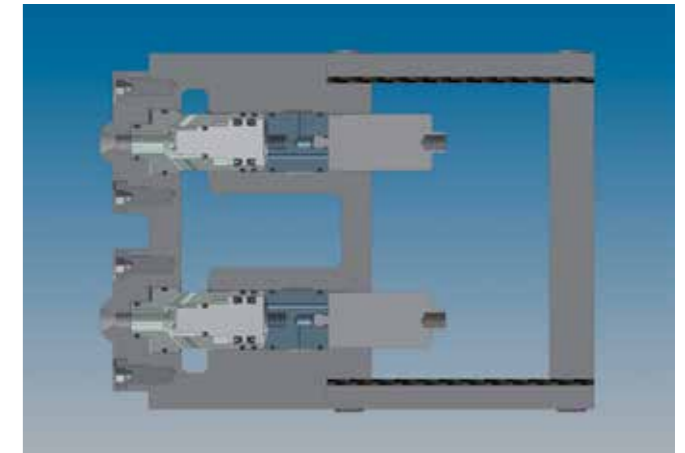
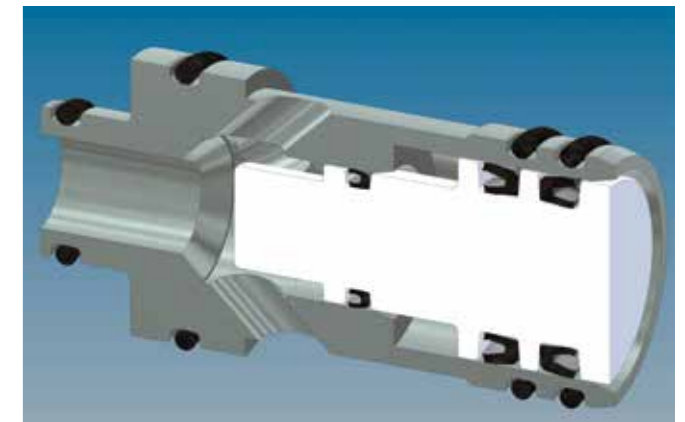
Maximum valve flow table (other flows are available with the correct Lechler nozzle selection)

- High flow – 159 l/min
- No orientation required
- Contamination tolerant
- Easy access

Mini Modulax DSA Valve 26 mm / 1”



Product code
961.DSA.MM.SP.00.0



The Lechler Mini Modulax DSA (Direct Solenoid Actuation) is used in rolling mills where the ability to fail open is beneficial. Typically where emulsions or dispersions are used as the coolant.

Features

Modular construction with laminar flow characteristics in axial direction

- A 2:1 coolant / air pressure ratio
- Totally enclosed by liquid
- Six large coolant inlets
- Only one moving part, the low inertia Delrin piston assembly
- Electropneumatic actuation
- Perfect sealing of the piston due to coolant continually washing piston seat
- Can be fitted with nozzle blocks or the Lechler SELECTOSPRAY® nozzle range
- Easily and completely removable from the front of the header
- Solenoid valves located directly behind the valve

Operation

As with the larger version, when air, under pressure, passes through the opened solenoid in the header it acts on the rear of the piston, moving it forward closing the Mini Modulax Valve.

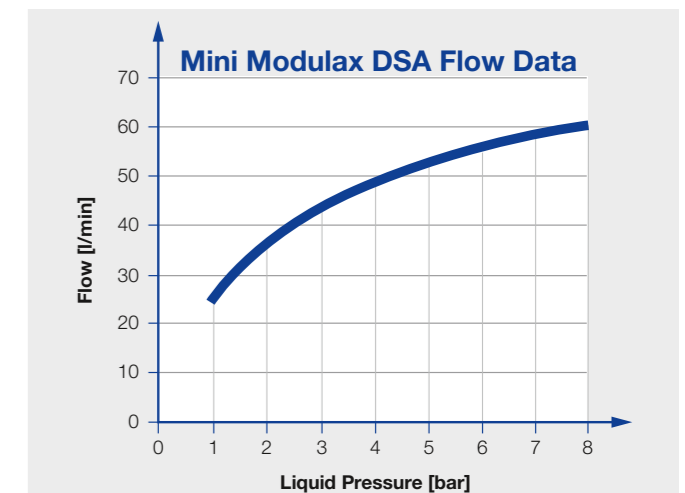
When air pressure is removed by the closing of the solenoid, liquid pressure forces the piston back, opening the valve, and allowing the coolant to flow to the nozzle.

Cooling Efficiency

As with the larger version, large inlet ports in the Mini Modulax DSA Valve permit coolant to enter directly and laminar to the nozzle. Due to the perfect geometry inside the valve, the nozzle forms a perfect blade-like flat jet for optimized heat transfer.

Advantages

- Long-life low-friction lip seals
- Tested to over 20 million cycles
- Header solenoid protection
- Visible seal damage indicator
- Cost effective replacement
- Segregation of air and coolant by a secondary protection barrier seal



Maximum valve flow table (other flows are available with the correct Lechler nozzle selection)

- High flow – 59 l/min
- No orientation required
- Contamination tolerant
- Easy access