



NEW TS
Cabinet protection
now at 26 mm

SELECTOSPRAY® **Pneumatic Roll Cooling** **Systems**



SELECTOSPRAY® — PNEUMATIC ROLL

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.

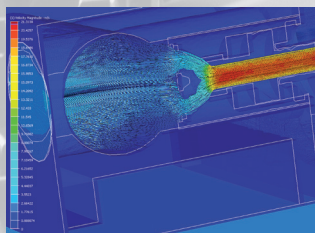
Lechler SELECTOSPRAY® Systems present a performance advantage to improve all aspects of the roll cooling process.

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 Pneumatic Valves

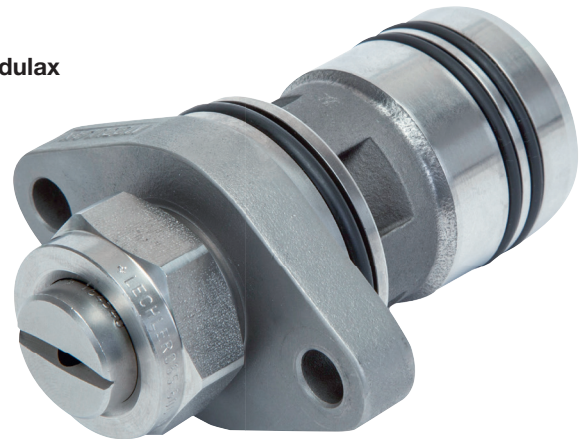
SELECTOSPRAY® Selective Roll Cooling Systems are integrally fitted with our family of valves. Pneumatic valves are used primarily in steel or hot aluminium rolling mills at 52 mm and 26 mm valve pitch.

Robust, Reliable, Simple

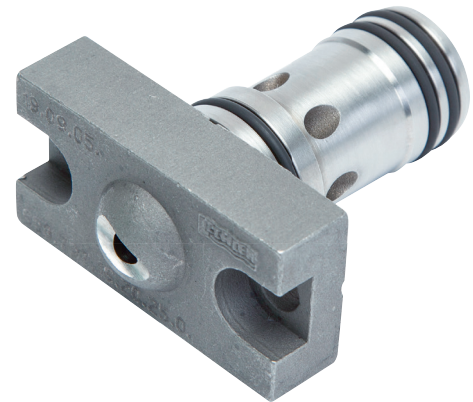
- Contamination tolerant
- Large orifices – high flow
- Completely removable from the header front
- Normally failure-open
- Quick response time

Twin Seal – Pneumatic Valves

52 mm Modulax



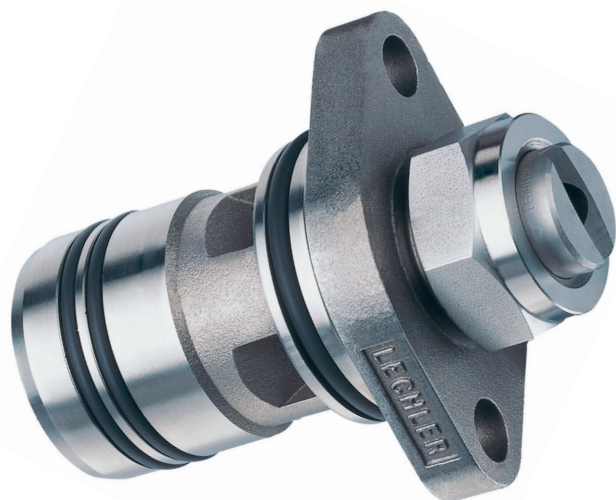
26 mm Mini Modulax



- Reduced costs with less maintenance
- One moving part
- Extended life in arduous conditions
- Secure cabinet protection

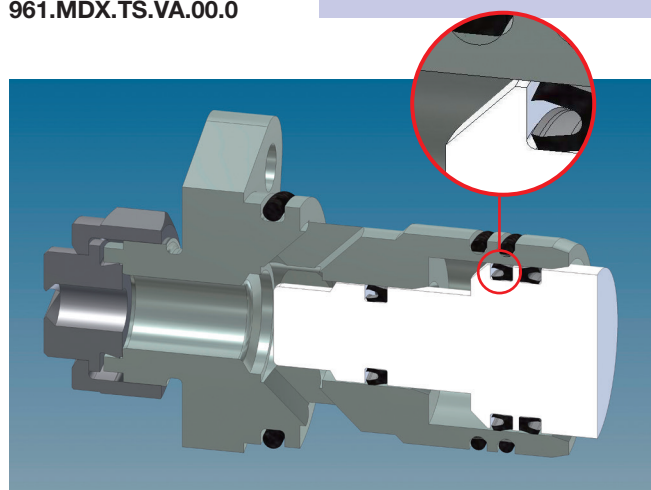
L COOLING SYSTEMS

Modulax Twin Seal Valve 52 mm / 2"



Product code
961.MDX.TS.VA.00.0

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



The Lechler Modulax TS (Twin Seal) is used in rolling mills where the ability to fail open is beneficial. Typically where emulsions or dispersions are used as the coolant.

Enhanced Functionality

The Twin Seal Modulax Valve offers all the benefits of previous Modulax valves, with the enhanced feature of an additional lip seal for cabinet protection. The secondary seal is reversed as shown in the cut out to the right.

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 pneumatic control lines back to the cabinet solenoids.

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

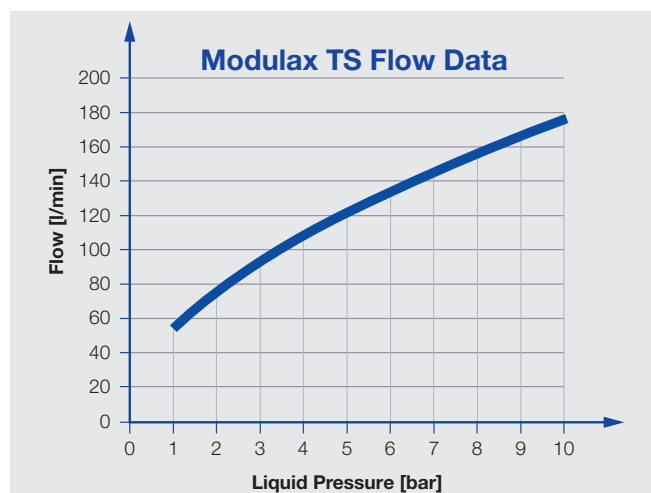
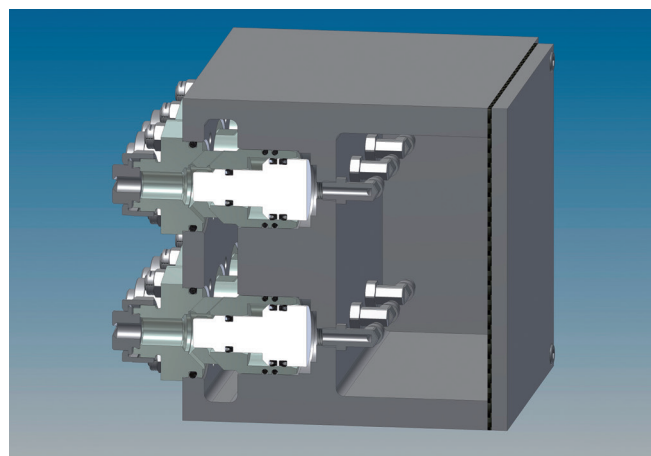
Features

The Modulax Twin Seal Valve has all the features of the Standard Modulax Valve, these being:

- 2:1 coolant / air pressure ratio
- Four large coolant inlets
- Only one moving part, the low inertia Delrin piston assembly
- Pneumatic 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 remote from the mill in a control cabinet

Advantages

- Long-life low-friction lip seals
- Tested to over 10 million cycles
- Cabinet solenoid protection
- Visible seal damage indicator
- Cost effective replacement
- Segregation of air and coolant by a secondary protection barrier seal

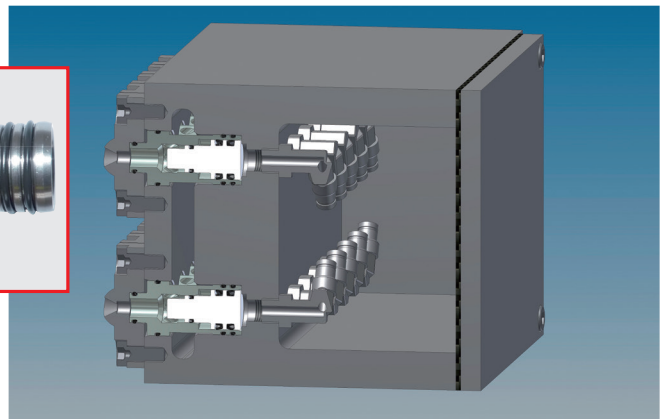
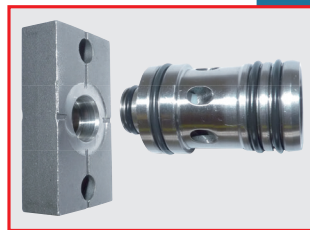
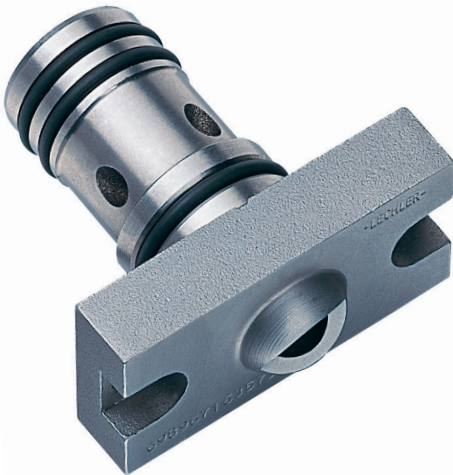


Maximum valve flow table (other flows are available with the correct Lechler nozzle selection)

Mini Modulax Twin Seal Valve 26 mm / 1"

Product code
961.000.00.MM.TS.0

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



The Lechler Mini Modulax TS (Twin Seal) is used in rolling mills where the ability to fail open is beneficial. Typically where emulsions or dispersions are used as the coolant.

Operation

When air, under pressure, passes through the opened solenoid in the control cabinet 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 in the remote cabinet, liquid pressure forces the piston back, opening the valve, and allowing the coolant to flow to the nozzle.

Cooling Efficiency

Large inlet ports in the Mini Modulax 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.

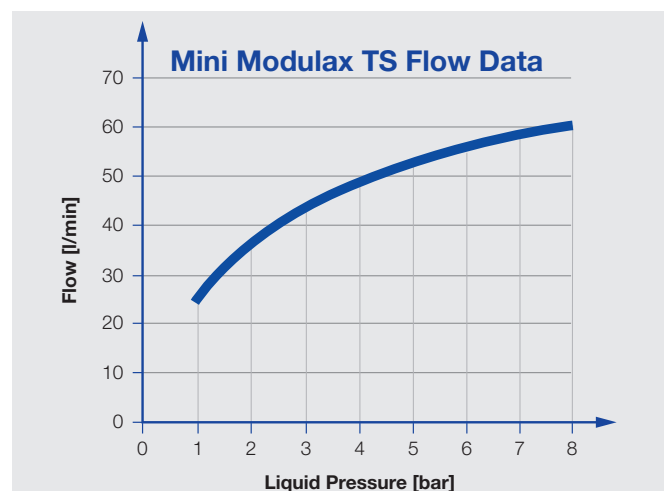
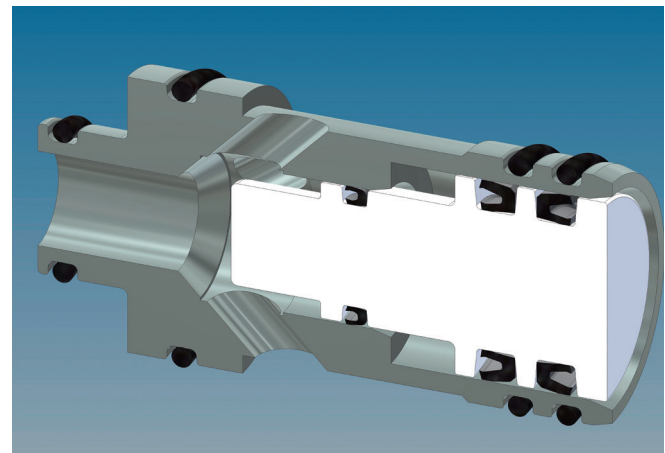
Features

Modular construction with laminar flow characteristics in axial direction

- 2:1 coolant / air pressure ratio
- Totally enclosed by liquid
- Six large coolant inlets
- Only one moving part, the low inertia Delrin piston assembly
- Pneumatic actuation, perfect seating 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 remotely from the mill in a control cabinet

Advantages

- Long-life low-friction lip seals
- Tested to over 10 million cycles
- Cabinet 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)



SELECTOSPRAY® – Your Competitive Advantage

Characteristics

The benefits to you

Bespoke Nozzle Design

- Custom-designed spray coverage
- Optimised coolant usage
- Precise spray patterns
- Homogeneous spray pattern
- Increased cooling efficiency
- Reduced running costs

Pneumatic Operation

- Contamination tolerant
- Fast response 50 ms/m
- Low power solenoids
- High operating temperature (120 °C)
- Reduced downtime
- Improved product quality
- Reduced flatness deviation
- Reduced running costs
- Can be used for roll conditioning

Easy Access

- Removable from the header front
- Valve alignment not required
- Quicker valve changes
- Reduced maintenance costs
- Repeatable spray performance

Compact Dimensions

- Low section headers
- Small diameter valves
- Optimised spray position
- Increased cooling efficiency
- Less expensive headers
- Can be closely grouped (25 mm)

Reliability

- Tested to over 10 million cycles
- Low-friction seals
- Reduced running costs
- Easy maintenance

Competitive Advantages

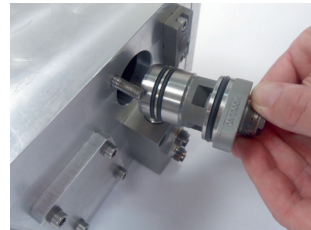
- Easy maintenance
- Quick change
- Removable from the front of the header
- No requirement to remove the headers for servicing
- Lower maintenance costs
- Class leading flow rates

Twin Seal Advantages

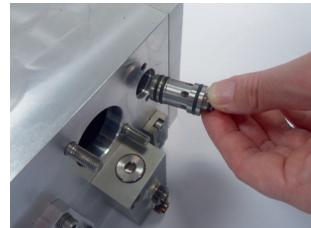
Cabinet Protection

- No coolant damage to:
 - Pneumatic solenoids
 - Nylon control tubes
 - Internal header fittings

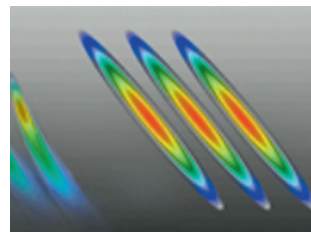
- Extended production time between maintenance
- Reduced running costs



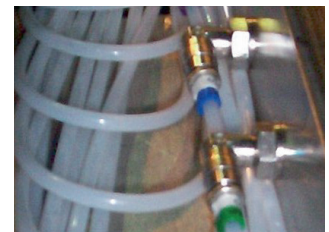
Valves removable from the front of the header



Protection for cabinets and solenoids



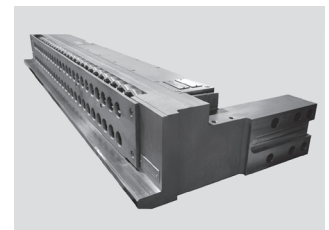
Perfect spray geometry (max HTC)



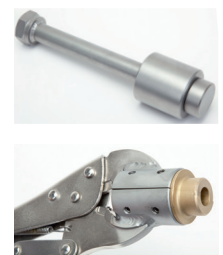
Protection for pneumatic lines and fittings



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



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