MLS LANNY GMBH

THE LANNY VALVE

06-2026
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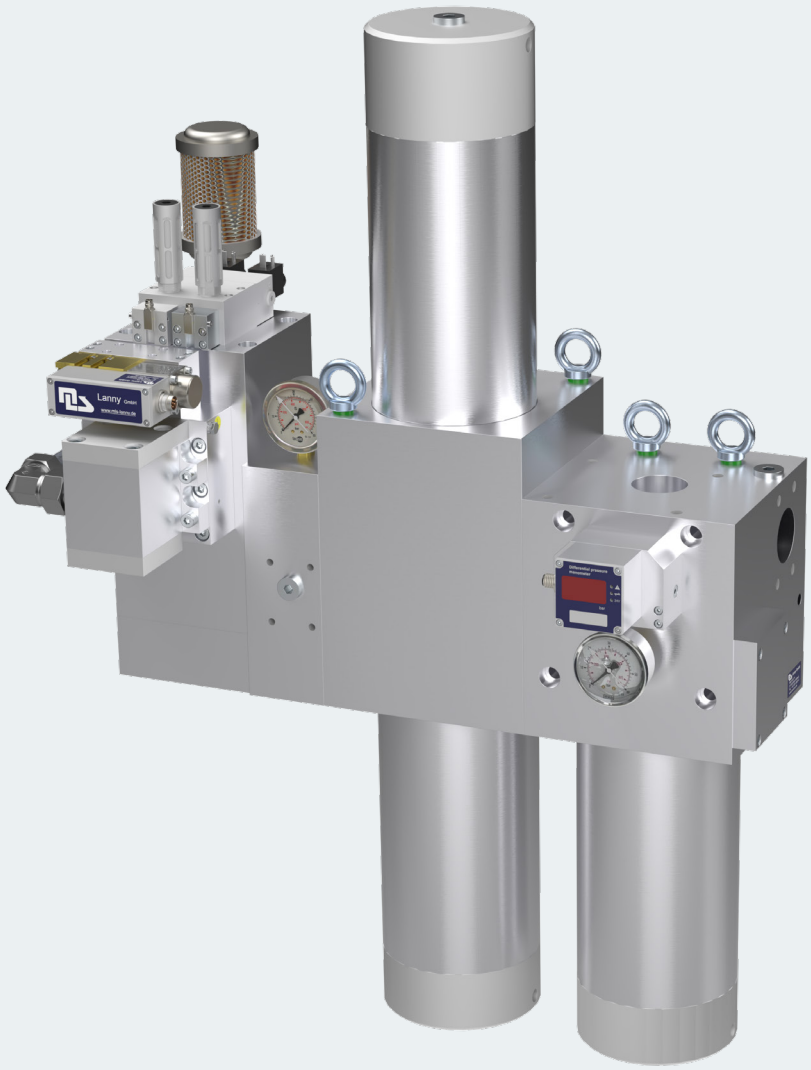
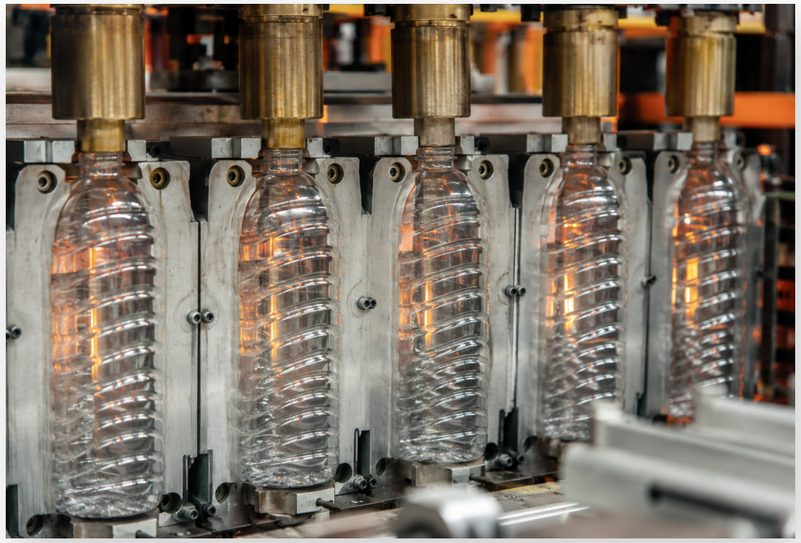
HIGH-PERFORMANCE AIR SUPPLY FOR DEMANDING SBM PROCESSES





STABILITY UNDER HIGH AIR DEMAND

Machine reality

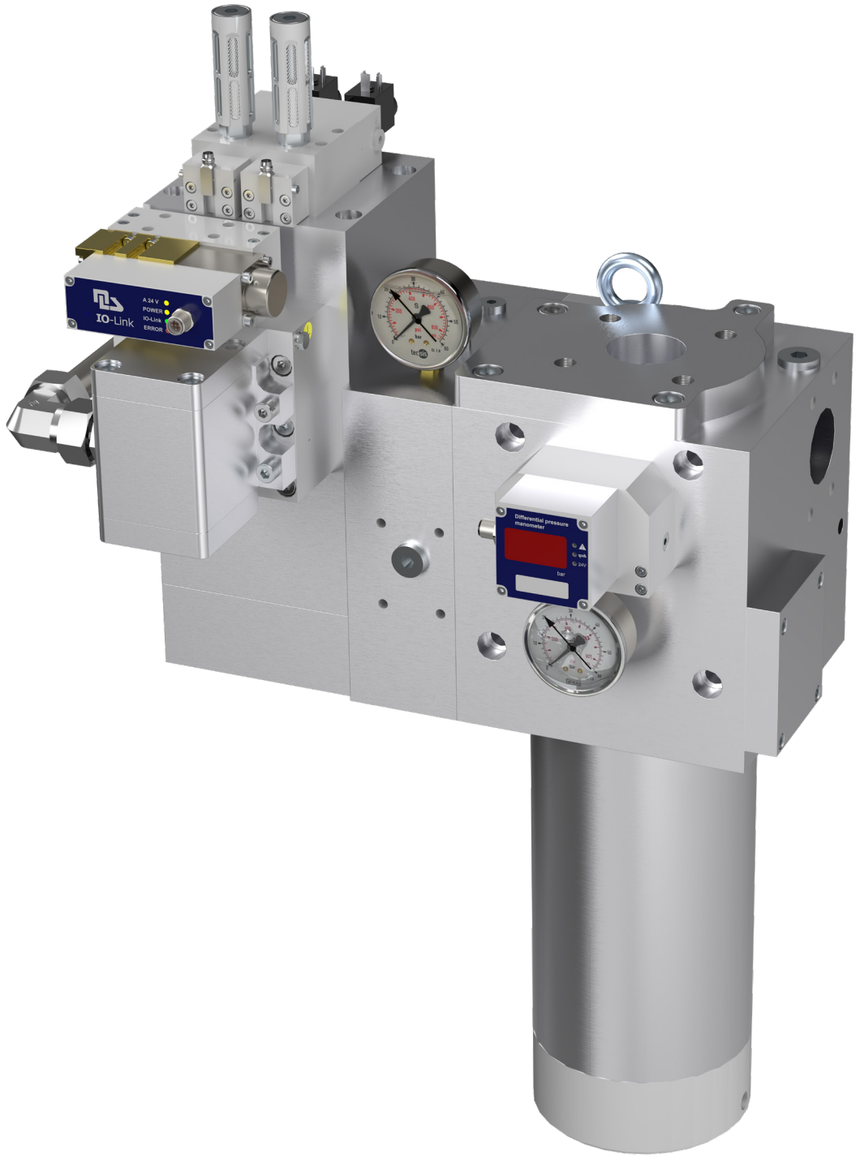
Air supply systems in stretch blow molding machines must deliver very large air volumes reliably. What matters is not only maximum flow, but above all stable and repeatable pressure control under all operating conditions.

Physical consequences

Air demand can fluctuate significantly depending on machine operation. Under very high flow rates and rapid load changes, pressure instability becomes a critical issue and directly affects repeatability and machine performance.

Where conventional approaches reach their limits

Conventional solutions often reach their limits at very high flow rates or become unnecessarily complex – potentially introducing pressure instability in machine pre-pressure control.



ENGINEERING A STABLE AIR SUPPLY

Our focus

In stretch blow molding machines, we focus on the central air supply level.
Our solutions regulate the stable machine pre-pressure that supplies all downstream processes and stations.

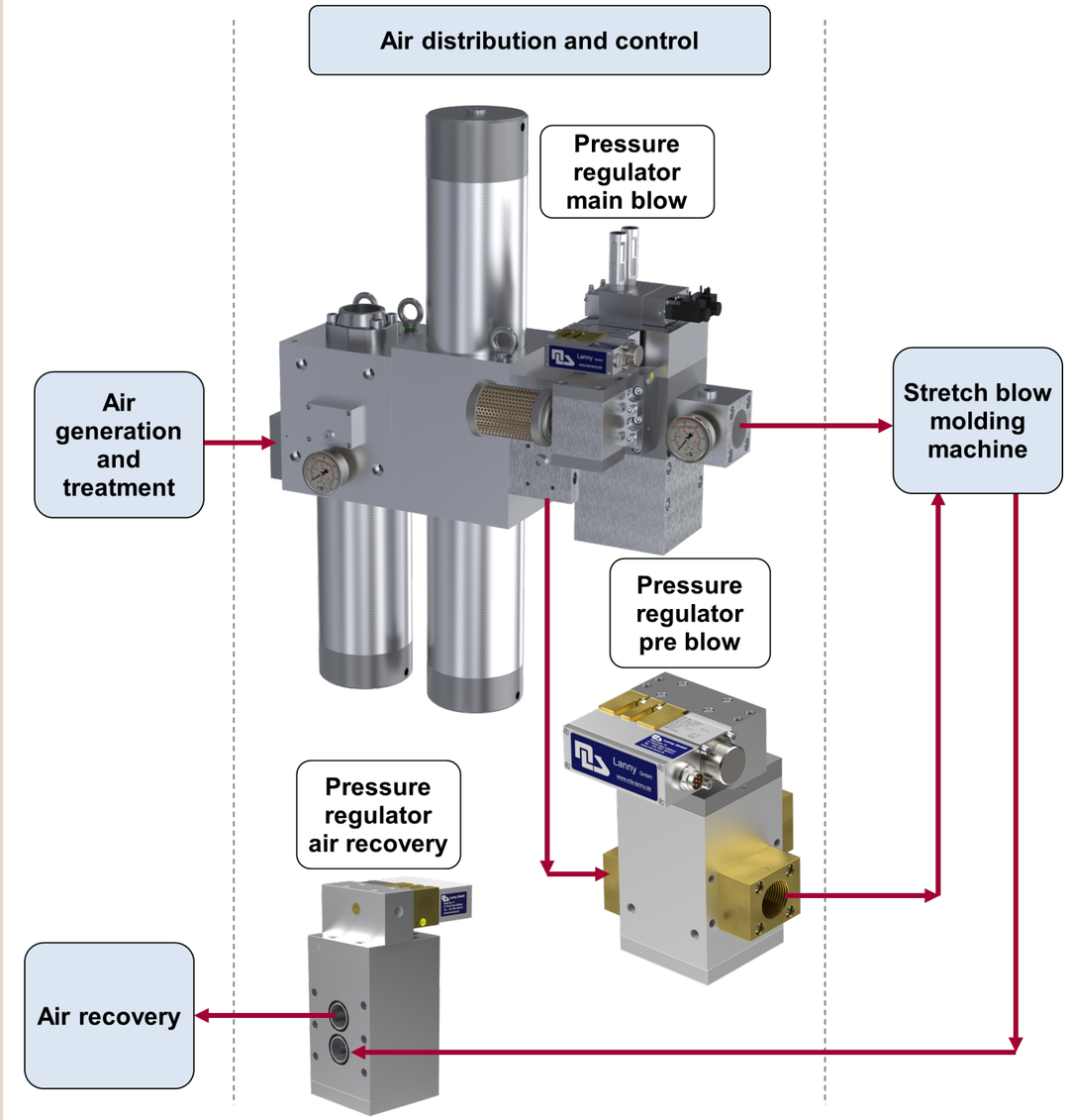
Technical approach

Our control valves are designed for extremely high flow rates while maintaining precise and stable pressure control.
They are engineered to handle strongly fluctuating air demand and rapid load changes – without introducing instability into the machine's air supply.

System perspective

Depending on machine concept and customer requirements, our valves are often implemented as integrated valve blocks.
These units can combine multiple functions such as pressure control, safety, manual pressure reduction or filtering into a compact and robust system solution.

High flow rate | Consistent pressure | Robust, industrial design



STABLE AIR SUPPLY BY DESIGN

Why two stages

At very high flow rates, a direct-acting valve concept would require actuator forces that are impractical.
A two-stage (pilot-operated) architecture separates precision control from high-flow power.

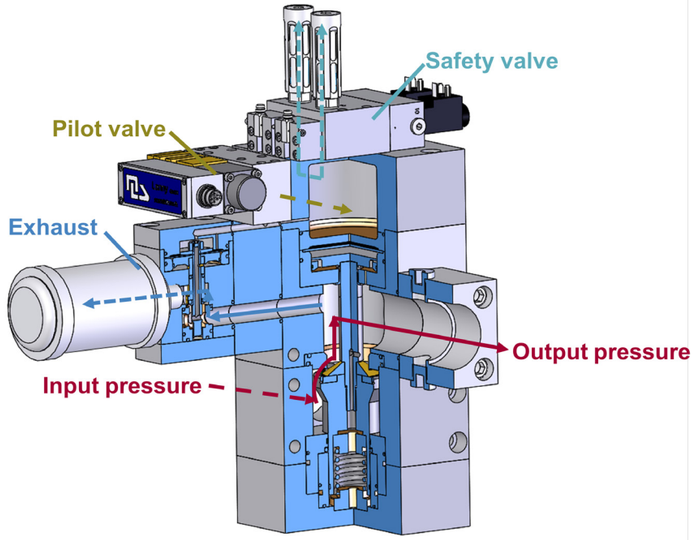
Dome principle (force amplification)

A smaller, high-precision pressure regulator controls the dome pressure.
The dome pressure acts on a diaphragm, generating a large force that positions the main valve element and opens/closes the valve seats as required.

What this achieves

The result is a stable air supply level that is designed to handle strongly fluctuating air demand while keeping machine pre-pressure stable and reproducible.
In practical terms, this means:

- Stable and predictable operating conditions even under highly dynamic air demand
- Decoupling of downstream machine processes from fluctuations in the central air supply
- Simplified air supply architecture with fewer compensating measures and less interaction between components
- Reduced tuning and commissioning effort due to pressure stability ensured by design
- Robust behavior in continuous operation without pushing actuators or components to their physical limits
- Flexible system integration from standalone solutions to compact valve blocks combining multiple functions in one unit



AIR SUPPLY COMPONENTS FOR STRETCH BLOW MOLDING MACHINES

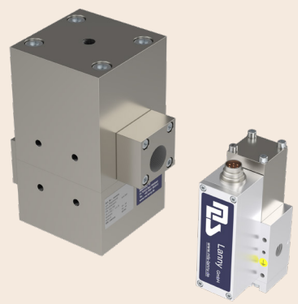
MLS Lanny offers a modular portfolio of air supply components that can be combined to match different SBM machine concepts and integration levels.

2/2-Way Valves – High-Flow Pressure Control

Used when venting is handled elsewhere in the machine air supply system.

H2B40
40 bar
5.500 l/min

H2B40 ... HF
40 bar
7.900 l/min

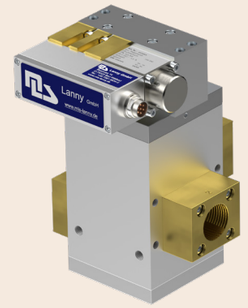


HEH2B40
40 bar
7.900 l/min
Stainless Steel for H2O2

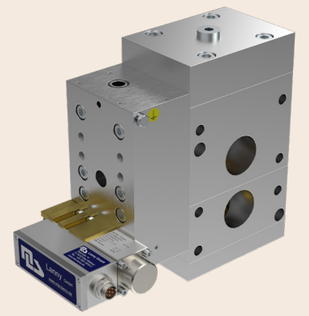
K2B40
40 bar
8.300 l/min

3/2-Way Valves – Pressure Control with Integrated Venting

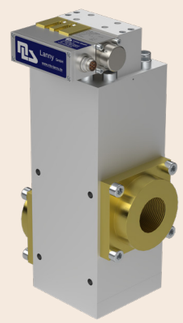
Used when the venting function needs to be integrated directly into the valve.



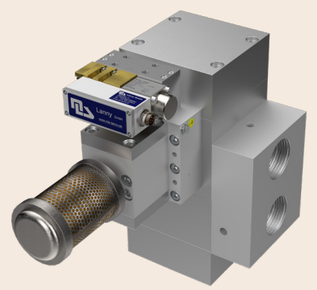
CONTROL VALVES K
40 bar
7.000 l/min



CONTROL VALVES L
40 bar
11.000 l/min



CONTROL VALVES M
40 bar
17.000 l/min



CONTROL VALVES N
40 bar
39.000 l/min

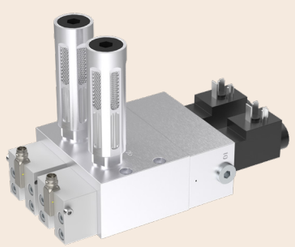
INTEGRATED VALVE BLOCKS
MODULAR AIR SUPPLY UNITS

Functional Components for Integrated Air Supply Systems

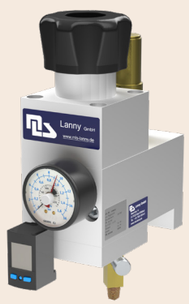
In addition to pressure control valves, various functional components can be integrated into valve blocks to create compact and application-specific air supply units.

DIFFERENTIAL PRESSURE GAUGES
Used for monitoring pressure conditions within the air supply system.

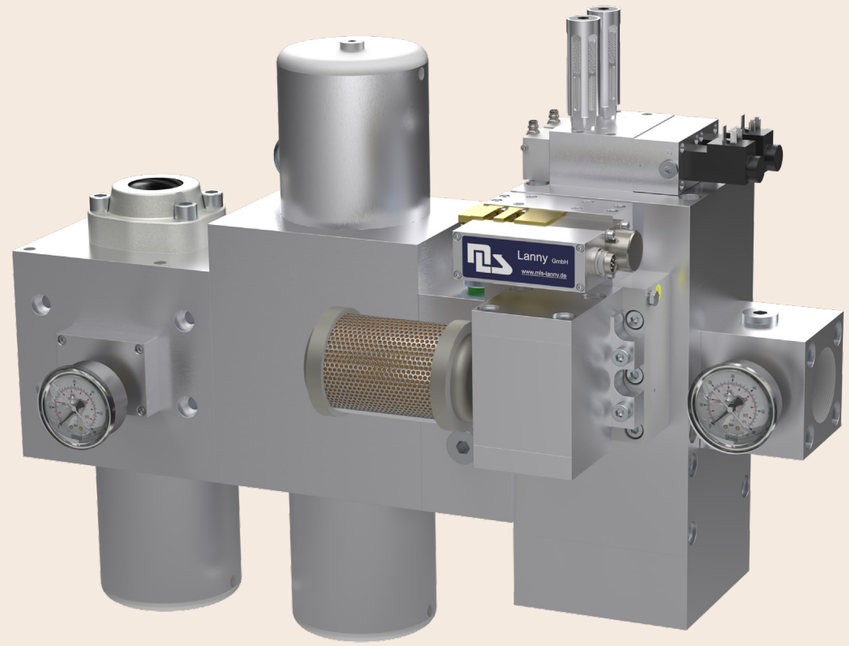
FILTER UNITS
(Particle filters, Activated carbon filters, Sterile filters)
Ensure clean and reliable compressed air supply at system level.



SAFETY VENTING VALVES
Provide controlled venting functions for machine and system safety.



MANUAL PRESSURE REGULATORS
Allow local manual pressure adjustment where required.



For higher integration levels, 2/2-way or 3/2-way valves can be combined with additional functions into compact valve blocks.
These units form a robust and clearly structured air supply layer for the entire machine.

Typical integrated functions:

- Pressure control
- Safety valves
- Manual pressure reduction
- Filters
- Pressure gauges
- Soft-start or venting functions
- Customer-specific combinations

RELIABLE.
ROBUST.
LANNY.

MLS LANNY GMBH

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