AEG
AIR ENGINEERING GROUP

AEG

PNEUMATIC & FLUID PRODUCT DIVISION

YOUR COMPLETE **PARTNER** FOR **PNEUMATIC AND FLUID** CONTROL PRODUCTS



AIR ENGINEERING GROUP

WE **EXCEL** IN PROVIDING **INNOVATIVE SOLUTIONS** WITHIN CHALLENGING CONSTRAINTS, SETTING THE **STANDARD FOR EXCELLENCE**





Precision in motion: Advanced pneumatic and fluid control solutions

At Air Engineering Group, we specialise in delivering high-performance pneumatic and fluid control solutions designed to meet the most demanding industrial requirements. With strong expertise in specialist valves and instrumentation, we provide cutting-edge components and integrated systems that enhance efficiency, reliability and precision across a diverse range of applications and industries.

With decades of experience our team understands the challenges of modern engineering, providing not only superior products from a group of specialist and trusted partners but also technical innovation, agile support and customised solutions. We partner with customers to develop robust, cost-effective and future-ready systems that enhance control, improve efficiency and ensure operational excellence.

CONTROL SYSTEMS

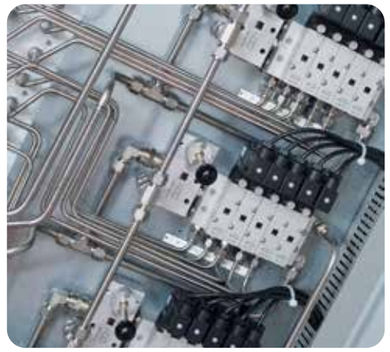
Optimising performance with advanced control solutions

Reliable and efficient control systems are essential for precise pneumatic and fluidic automation across various industries. Our electro-pneumatic control systems are designed to provide seamless operation, ensuring accurate regulation and process optimisation. Built with high-quality components and engineered for flexibility, they offer tailored solutions for complex applications, from manufacturing through to process automation.

With a reputation for innovation and technical excellence, we deliver control solutions that enhance efficiency, reliability and cost-effectiveness.







EX D VALVES

Ensuring safety and performance in hazardous environments

In industries where explosive atmospheres are a concern, reliable and certified solenoid valves are essential for safe and efficient operation. Our Ex d solenoid valves are designed to withstand harsh conditions, providing robust performance in applications such as offshore platforms, chemical processing and industrial automation. With approvals for ATEX, IECEx, UKCA, and CSA/FM standards, these valves offer proven protection in environments where safety is critical.



Why choose our valves?

Certified for hazardous areas
Approved to ATEX, IECEx, UKCA, and CSA/FM standards, ensuring compliance with global safety regulations.

Reliable Performance
Engineered for consistent operation in high-risk environments, reducing downtime and ensuring system integrity.

Expert technical support
Backed by industry specialists to assist with selection, integration and compliance for hazardous area applications.

Durable and corrosion-resistant
Manufactured from high-quality materials to withstand extreme temperatures, aggressive media, and harsh industrial conditions.

Flexible and customisable
Available in a range of configurations to suit specific process requirements, including various voltages and connection options.



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MACHINE ENGINEERING AND INDUSTRIAL AUTOMATION

Compact and tailored to your needs

Our valves are appreciated by machine builders worldwide for their compact and rugged design. Our extensive catalogue ensures you find the ideal product for your needs. Additionally, our experienced engineering team is dedicated to developing customised solutions. The modular design of our valves allows us to adapt catalogue products with minimal modifications, keeping custom solutions competitively priced.

Why choose our valves?

Custom valve solutions
Tailored to your specifications, even for smaller quantities.

Exceptional durability
Long-lasting performance with our unique HAFNER sealing system.

High IP protection
Valves with protection up to IP67.

High flow capacity
Valves handling flows up to 6,000 Nl/min.

Industry 4.0 ready
I/O-Link compatible valve terminals for advanced automation.

Advanced connectivity
Valve terminals with fieldbus and Industrial Ethernet interfaces.

Complete control panels
Integrated solutions to meet all of your automation needs.

Standardisation
Valves for machine builders, labelled with their logo, type number and other specifications.



Valve with flow-control banjo screw

Direct-acting 3/2-way solenoid valve used in pumping systems for artificial snowmaking. Port 2 features a flow control banjo screw, available in either G 1/8“ or G 1/4“.



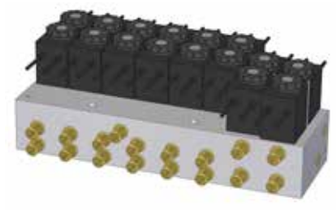
Valve block with integrated pressure switch

This valve block with an integrated pressure switch is designed for professional laundry presses. It features two virtually leak-proof interconnected valves and a pressure switch in a single, compact unit. Quick installation is ensured with clamp mounts, allowing for easy attachment in seconds, while push-in cartridges eliminate the need for screw fittings.



Ready-to-install valve assembly with 2 x 2/2-way valves

This pre-assembled valve module is designed for disinfectors and utilises direct-acting 2/2-way valves. It manages both the opening and closing of doors, as well as the inflation of door seals. By ordering this ready-to-install assembly group, the customer benefits from simplified management and integration, streamlining the assembly process.



Valve block for low-pressure and vacuum use

Low-pressure and vacuum-capable direct-acting solenoid valves as multi-valve systems. These valve blocks are used in devices, featuring 16 valves in a single block.



Redundant valve block

These redundant 5/2-way valves commonly used for press control feature electronic position monitoring. To open the air passage, both valves must be activated. If one valve fails, the system automatically exhausts. Inductive sensors provide continuous monitoring of the valve positions.



Double 3/2-way manually operated valve with safety button

Double 3/2-way valve for vacuum lifting devices featuring a safety button. It has two different pressure connections and a common exhaust. The valve is operated by pulling and pushing. To prevent accidental activation, the valve includes a safety mechanism: the white button must be pressed before the black actuator can be pulled.



Valve with customised interface

Valve designed with a customised flange interface. Not all actuators use standardised interfaces, and some customers prefer a smaller size than those specified by NAMUR or ISO. We have been supplying these valves for many years to a manufacturer of coaxial valves. Soon, these valves will also venture into space, being used on European rockets.



Bistable valve with plunger and air operation

This bistable pneumatic valve is designed for actuating collets on a rotary indexer in can body production. It can be operated through the two pilot ports on the top and can also be mechanically actuated from one side using a stem. It features precise height tolerances, with the pilot ports controlled by a rotary switching mechanism that uses an air pulse during rotation.



The right accessory valve for every process control need.

PROCESS VALVE AUTOMATION

Accessories for smart valve automation

We offer a distinctive range of smart valve automation solutions specifically designed for process valves. From 3/2-way and 5/2-way NAMUR valves for standard on-off applications to an extensive array of devices for specialised control tasks, our products are engineered to meet diverse automation needs with precision and reliability.

Why choose our valves?

Exhaust air recirculation
Standard in all 3/2-way NAMUR valves for optimal protection of actuator chambers.

NAMUR interfaces
Available in NAMUR 1 and NAMUR 2.

Fail-safe solutions
Ensures dependable performance under all conditions.

Accessory valves for positioners
Includes options for quick-exhaust, fail-safe, tank-control and positioner override.

Low power solenoid systems
Coils with <= 2 Watt power consumption are ideal for ASI bus systems, as no additional electric connection cable is required.

High flow capacity
Delivered in a compact and space-saving design.

SIL3 and explosion-proof products
Compliant with stringent safety and explosion-proof standards.

Harsh environment suitability
Functions in temperatures as low as -50°C, available in 316L stainless steel or with seawater-resistant Ematal coating.

Brass-free versions
For aggressive atmospheres, such as ammonia, or when strict lead reduction is required.

Fully encapsulated coils
Provides IP67 protection against dust and water ingress.

Customisable valves
Available with your logo and fully assembled ready-to-use.





Flow regulator plate

Flow regulator plates provide exceptional precision in controlling the speed of both single- and double-acting actuators. They are available with either a knob or screwdriver adjustment screw. Flow regulator plates are also the only option to independently regulate the opening and closing speeds of single-acting actuators.

Block and vent valves with optional position feedback sensor

Valves that either keep an actuator in position by blocking all ports (block-and-block) or exhaust both actuator chambers (block-and-vent). The blocked or exhausted position can be secured with a padlock. Optionally, the valve can be equipped with an inductive sensor to provide position feedback to the PLC.





Control block for inflatable butterfly valve seats

This control block enables purely pneumatic control of butterfly valves with inflatable valve seats. It allows the time delay for inflating and deflating the valve seat to be adjusted between 0 and 2 seconds. This solution is purely pneumatic, making it both easy to use and cost-effective.

Bypass valve

This 6/2-way valve is versatile for various control tasks, including quick-exhaust functions in combination with positioners, fail-safe control of double-acting actuators with an external air tank, and implementing redundant circuits for selecting between two air sources.

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Quick-exhaust block

The quick-exhaust block, available with NAMUR 1 and NAMUR 2 interfaces, provides exceptionally fast exhaust rates of up to 3,000 Nl/min, enabling rapid closing functions for spring-return actuators. It features a NAMUR interface for assembling the pilot valve and a threaded port for external piping.

Cylinder-valve combination plate

Cylinder-valve combination plates facilitate the easy and quick assembly of NAMUR valves onto linear or scotch-yoke actuators. This system offers several benefits: it simplifies valve replacement, allows for the addition of NAMUR accessories, ensures fast actuator switching times, and minimizes air consumption. Additionally, the reduced installation effort translates to lower overall costs, making it a more economical choice.



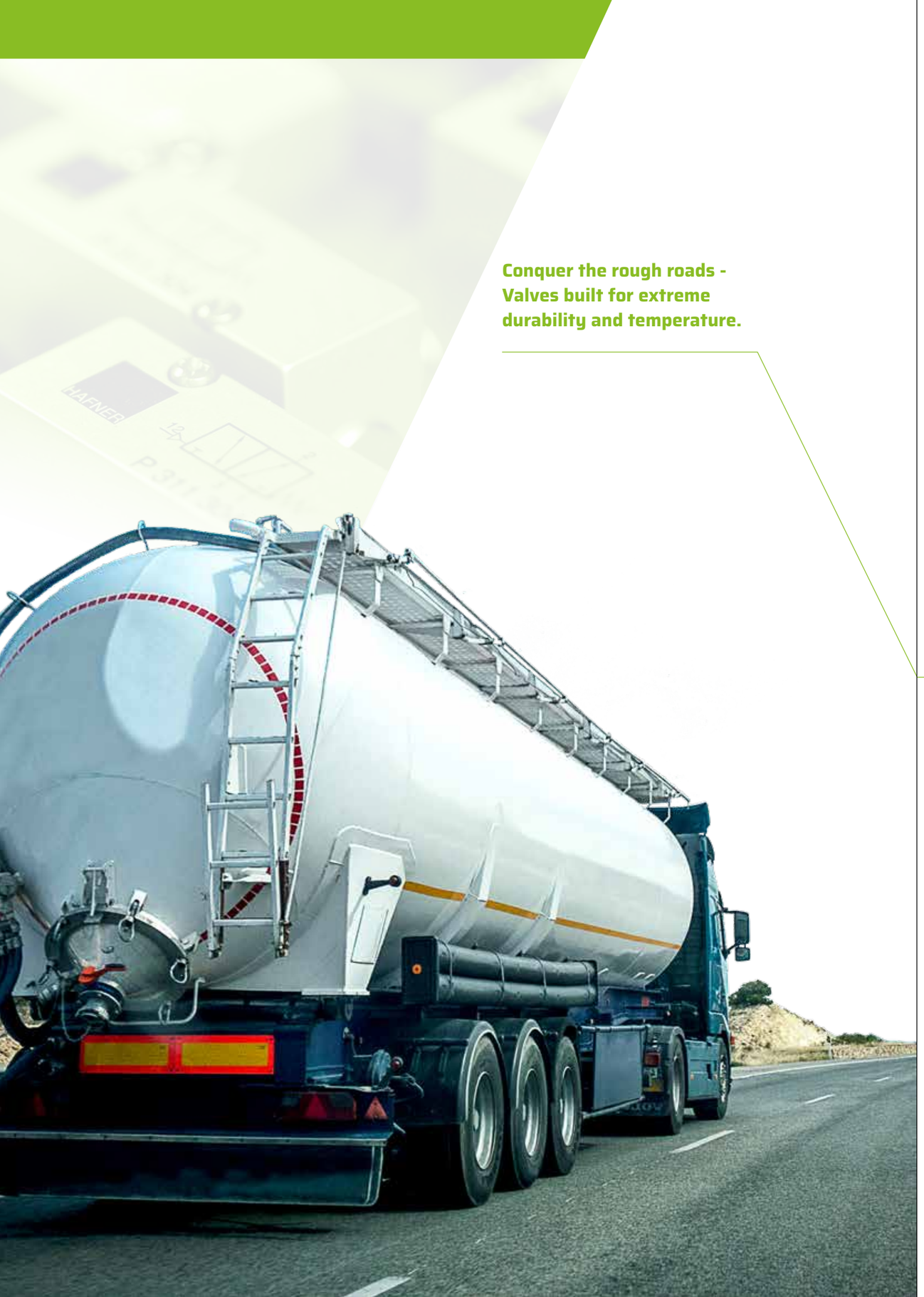


Lock-up valve

The lock-up valve is designed to trap air inside the actuator or exhaust the actuator as soon as the pressure falls below the preset value. The opening and closing pressure of the valve is adjustable via a setting screw. The valve can be directly mounted on the actuator using the NAMUR interface and connected to the positioner via threaded ports on the front.

3-position valve with fail-safe

This 3-position valve for double-acting actuators allows the actuator to be opened, closed, or held in intermediate positions. In the fail-safe scenario, where no power is available but a minimum pressure of 3 bar is maintained, the valve pressurises one of the actuator chambers, allowing it to move to the fail-safe position.



Conquer the rough roads - Valves built for extreme durability and temperature.

COMMERCIAL VEHICLES

Tough valves for commercial vehicles - Because durability counts.

Our valves are widely used in commercial vehicle applications. Whether you need push-pull valves for bottom-loading systems or valves to control complex axle lift systems, we offer a broad range of proven solutions. Our valves are designed to withstand harsh global road conditions, featuring vibration-tested durability and operation down to -50°C.

Why choose our valves?

Extreme temperatures
Reliable operation in temperatures as low as -50°C and as high as +120°C.

Vibration tested
Certified to DIN EN 61373 standards for vibration resistance (railway standard).

Robust design
Engineered to withstand the demanding conditions of commercial vehicles.

High flow capacity
Achieved in a compact, space-saving design.

Superior sealing performance
Ensures high efficiency, even at low pressures.

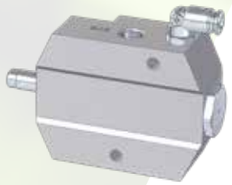
Solenoid valves run by battery
Includes options for 6VDC applications.

IP 67 rated solenoid valves
Provides excellent protection against dust and water ingress.



Manually operated valve with pneumatic reset

With their compact design, interchangeability and customised manifold system, our BHP valves are ideal for bottom loading systems and PTO (power take-off) applications. They feature an additional pneumatic reset connection which serves as a safety feature to ensure the refuelling valve closes properly after use. In addition, various button colours are also available.



Pneumatic locking device

This Guardbar interlock valve is designed to pneumatically secure the guard bar, restricting access to the system's discharge valves except during loading or unloading. It can also prevent vehicle movement by interlocking with the brakes during these operations. The body of the valve features a custom-specific geometry tailored to customer requirements.



Ex-proof valves for hydrogen trailers

Panel mounted valves designed for hydrogen transport trailers feature an explosion-proof design suitable for zones 1, 2, 21, and 22, and operate within -40°C to +65°C. They are robustly built to withstand harsh conditions and are available with various actuators to meet different operational requirements.



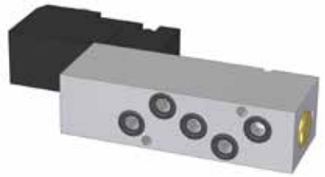
Ready-to-use assembly group

This assembly comes ready-to-install, featuring 8 pneumatic valves mounted on a manifold plate complete with fittings and tubing. It operates within a temperature range of -20°C to +65°C and is ATEX-certified for zone 2, making it suitable for use in hydrogen environments.



Push-pull valve with pneumatic reset

Manually operated 3/2-way push-pull valve with an additional pneumatic reset port.



High-temperature solenoid valve

Valves used in sweepers often need to withstand high temperatures. For this purpose, we offer 5/2-way solenoid valves that can operate at temperatures up to +80°C with a low power consumption of just 2 watts. For even higher temperatures, up to +120°C, we provide pneumatically actuated valves. Valves are designed for manifold assembly, with all ports located in the manifold plate, making replacement quick and easy.



Ergonomic hand-lever valve

This 5/2-way hand-lever valve is modified for use in refuse collection vehicles to operate double-acting actuators.
It features a nut for panel mounting, a rubber gaiter, and an ergonomic lever.



CANopen valve terminal

Our valve terminal series includes industrial Ethernet and fieldbus connections, such as CANopen.
It is particularly well-suited for commercial vehicle applications due to its robust aluminum construction and high protection rating of IP 55.



Actuator with air release function

Customised pneumatic actuator designed for a fifth wheel coupling manufacturer. This actuator features an air release function and is specifically tailored for use with terminal tractors.



OR-valve with barbed fittings

Customised OR-valve with integrated barbed fittings, with end-cap and fittings made of stainless steel. Operating range from -50°C to +50°C.



AIR ENGINEERING GROUP

RAIL VEHICLES

Decades of reliable performance in challenging outdoor conditions

Our valves are highly valued in the rail industry for their robust construction and exceptional performance in extreme conditions, including temperatures as low as -50°C. Whether it's for train door controls, couplings, or wagon construction, we offer the perfect solution for your needs.

Why choose our valves?

Railway approved solenoid systems
Designed to operate with rail-specific voltages 24VDC and 110VDC and a voltage tolerance of +/- 30%.

Extreme temperatures
Reliable operation in ambient temperatures down to -50°C.

Vibration tested
Certified to DIN EN 61373 standards for vibration resistance.

Optimised for pantographs
Designed for reliable operation in rail pantograph systems, ensuring precise control and rapid response.

Fire safety certified
Solenoid systems meet DIN EN 45545-2 fire protection standards.

Durable construction
Engineered for rugged performance in demanding environments.

High flow capacity in a compact design
Delivers high flow rates while maintaining a compact footprint.

Superior sealing performance
Ensures maximum sealing efficiency even at low pressures.

IP67 protection
Solenoid valves with high protection against dust and water ingress.



Integrated electric switch

Panel mounted valve with emergency stop button and electric switch. The electric switch activates as soon as the emergency stop button is engaged. Developed for a work train application.



Double roller lever valve

Two 3/2-way roller valves in a single compact body, featuring a customised flange interface for seamless system integration.



Precise flow regulation

This flow regulator features a slotted spindle design, ensuring very precise flow control across the entire regulation range. This design allows for meticulous adjustments, making it ideal for applications requiring high accuracy. It is commonly used in pantographs.



Roller-stem valve

Roller-stem valve for automatic train couplings. Designed for a temperature range of -40°C to +60°C.



Double solenoid valve +/- 30%

Bistable solenoid valve for automatic train couplings, equipped with a railway solenoid system featuring a voltage tolerance of +/- 30%, compliant with fire safety standard DIN EN 45545-2.



Roller-stem valve with electrical override

This roller plunger valve is designed for automatic train couplings and can be electrically overridden via the solenoid when necessary. It is used during towing operations when two incompatible couplings meet.



ISO1 valve for -40°C

5/2-way solenoid valve with ISO1 interface according to ISO 5599-1. Also available as a pneumatically piloted version.



Integrated valve-block including wiring

This customised valve block is designed for controlling the automatic articular joint in trams. It features a 5/2-way spring-return valve and a 5/3-way centre-exhausted valve. With all valve ports integrated into the plate, it allows for easy and quick replacement in the field, ensuring efficient maintenance and minimal downtime.



OFFSHORE & MARINE

Ensuring performance even in harsh seas

In the shipbuilding and offshore industries, equipment must endure harsh conditions, which is why we offer robust and reliable valve solutions designed for these environments. Our valves are used in various applications, such as ballast water treatment systems on ships and on oil platforms to pilot hydraulic valves.

Why choose our valves?

“Heavy Metal” series
Constructed from 316L stainless steel, these valves offer exceptional durability and corrosion resistance, perfect for the toughest marine and offshore environments.

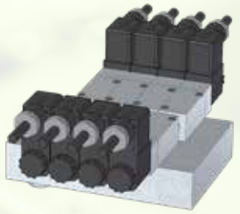
“Salt & Valves“ series
Crafted from high-quality aluminium alloy with an Ematal coating, providing superior corrosion protection to meet C5-M standards.

Extreme temperature
Operates flawlessly at temperatures as low as -50°C.

Redundant manifold solutions
Enhances system reliability and safety with built-in redundancy.

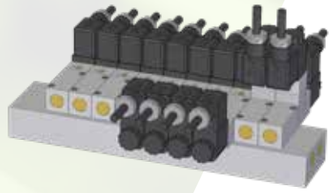
Explosion-proof products
Compliant with safety regulations for explosive hazardous atmospheres. Available in Ex ec up to Ex d ratings. Meets ATEX, IECEx, CCC, UKCA, and CSA/FM standards.

SIL III certified
Guarantees high safety standards and operational reliability.



Redundant manifold

Manifold block with 3/2-way double solenoid valves. Each pair of valves are redundantly connected through the manifold, ensuring reliable operation. Made from durable 316L stainless steel and equipped with Ex m solenoid coils, this system is built to last. All valve connections are in the manifold for quick and easy replacement during maintenance.



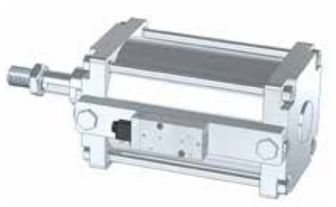
Redundant solenoids

Manifold block equipped with both spring-return and double solenoid 3/2-way valves. The two front valves are equipped with double solenoids to increase the availability and thus the safety of the system.



Redundant valve setup

The task for this product was to replace the existing 3/2-way valve blocks in ship control cabinets with redundant 3/2-way valves (both must be energised). Space was limited. The solution: a stackable design featuring an intermediate plate that connects the valves and ensures collected venting.



Cylinder-valve-combination

Cylinder-valve combination plate crafted from 316L stainless steel, mounted on a double-acting ISO 15552 cylinder with a NAMUR 2 (G ½") interface and a corresponding NAMUR valve, also in stainless steel.

Different materials and surface treatments

Hafner valves come in various configurations to meet your needs. Choose from our anodised options or the **"Salt & Valves"** series, where aluminium valves are enhanced with the Ematal anodisation and stainless steel components. The Ematal valves are also C5-M tested for durability in harsh environments. Additionally, we offer the **"HAFNER Heavy Metal"** series, featuring valves made entirely from robust 316L stainless steel for maximum strength and corrosion resistance.







	Standard Aluminium anodized	Series "Salt & Valves"	Series "HAFNER Heavy Metal"
Body	Aluminium	Aluminium	Stainless steel
Pilot-head	PA	Aluminium	Stainless steel
Surface	Anodised	Ematal anodised	Machined
Other parts to the outside	Brass	Stainless steel	Stainless steel
Inner parts	Stainless steel, brass, POM, NBR	Stainless steel, POM, PUR/FKM	Stainless steel, PUR/FKM



Optimising paper production with innovative pneumatic solutions.

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PULP AND PAPER INDUSTRY

From stock preparation to winder section with individual valves and control cabinets

In the demanding pulp and paper industry, equipment must endure extreme heat and dirt while maintaining reliable performance. We provide robust solutions with high IP-rated devices for harsh conditions. Our range includes IP67 high-temperature valves and innovative components to prepare your paper mill for Industry 4.0.

Why choose our valves?

Manifold plates with individual shut-off screws
The air supply to each solenoid valve can be shut off individually. This enables quick and easy replacement during operation.

Temperature range up to +120°C
Ensures reliable performance in high-heat environments.

Durable design
Engineered to withstand the demanding conditions typical in the paper industry.

Solenoid valves with IP67 protection
Offers exceptional resistance to dust and water ingress.

Solenoid coils with M12 connection
Guarantees secure and straight-forward installation.

Ready-to-use control cabinets
Pre-assembled and ready for immediate deployment, streamlining setup and integration.

Position feedback
Facilitates precise monitoring of the valve position, which is especially crucial for safety-relevant applications with SIL ratings.



Solenoid valve cabinet

This control cabinet features 8 x 5/2-way solenoid valves. All pneumatic connections are located outside the cabinet on the underside of the manifold plate. This setup offers several advantages, including no need for tubes and fittings inside the cabinet, which leads to reduced installation effort, less risk of leaks, and the elimination of a separate electrical connection box.



Air distributor cabinet

Our air distributor control cabinet includes a main shut-off valve, a pressure regulator, a pressure gauge and 12 outlet ports for air distribution. Each port can be individually closed using the shut-off screws inside the cabinet.



Sample-taking cabinet

The sample-taking control cabinet is designed to operate sampling valves. Samples can be collected using the hand lever on the cabinet door, and are automatically blown out with air after a predefined period. Additional air pulses can be activated at any time using the push-button valve.



G 3/4“ flow regulators

Our G 3/4“ block form flow regulators are designed specifically for ropeless paper transport systems and can handle flow rates of up to 6,000 Nl/min. They include easily readable coloured rings for flow settings and offer a nearly linear flow curve, enabling precise adjustments even at high flow rates. Featuring manifold mounting plates, they streamline installation and minimise piping requirements. Additionally, these regulators are suitable for use in ambient temperatures up to +120°C.



Lockable hand-lever valve with optional position feedback sensor

The lockable 5/2-way hand lever valve is designed to ensure personnel safety during maintenance or replacement of scraper blades. It features an extended spool that can be locked in place with a padlock. Suitable for ambient temperatures up to +120°C, this valve also includes an inductive sensor for position feedback.



Ready-to-use assembly group

This block comprises two flow control valves, a lockable 5/2-way hand lever valve, and a non-return fitting. It is specifically designed for lifting the scraper blade frame and can operate in ambient temperatures up to +120°C.



Double-acting actuator with oscillating module

This double-acting pneumatic actuator is designed to continuously move scraper blades back and forth on the rollers. Automatic switching occurs at the end of the piston rod stroke through the oscillating module. The oscillating speed is adjustable via an integrated flow control valve. The actuator features a protective cover, making it suitable for use in wet areas. It has a piston diameter of 160 mm, a stroke length of 16 mm, and operates within a temperature range of up to +110°C.

INSTRUMENTATION

Ensuring precision and control in critical applications

Accurate pressure regulation and signal conversion are essential in industrial automation, manufacturing and process control. Our instrumentation solutions are designed to provide reliability, efficiency, and precision, even in demanding environments. Whether maintaining stable air pressure, enhancing system responsiveness or integrating automated control, our products support a wide range of applications, ensuring smooth and consistent operation.

Why choose our instrumentation solutions?

Reliable in demanding environments
Engineered for use in industrial automation, manufacturing, and process control applications where precision is critical.

Precision and stability
Delivers highly accurate pressure regulation and signal conversion for consistent system performance.

Seamless system integration
Compatible with a wide range of pneumatic and electro-pneumatic systems for efficient operation.

High-quality materials
Manufactured using durable components to provide long-lasting reliability and resistance to wear.

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Volume boosters

Pneumatic Volume Boosters offer high flow capacity and fast response with a wide range of signal to output pressure ratios to choose from. Our Pneumatic Volume Boosters are used extensively for increased flow capacity, pressure amplification, and remote pressure control applications.



Valve positioners

Pneumatic and Electro-Pneumatic Valve Positioners are designed to provide stable and accurate control of rotary and linear valves. These force balanced positioners are fast responding, reliable and easy to calibrate and maintain. The NEMA 4X (IP66) housing provides rugged resistance to severe industrial environments. We also have a natural gas rated Valve Positioner when paired with our Type 950 IP Transducer.



IP pressure transducers

I/P Transducers (Current to Pressure Transducers), also known as I/P Converters, convert a variable electrical signal to a linearly proportional pneumatic output. The pneumatic output is commonly used to apply pneumatic pressure to control valves, actuators, dampeners and louvers clutches and brakes, and web tensioners.



Stainless steel pressure regulators

ControlAir's family of stainless steel pressure regulators are designed to withstand the most challenging environments, such as offshore applications, thanks to the use of corrosion-resistant 316L stainless steel. This material ensures a longer life for the devices, even in harsh conditions. Engineered to deliver precise pressure regulation and quick response times. They are available in various configurations to meet different needs, including filter service, high flow capacity, low temperature, and auto-drain options.



High pressure regulators

High precision regulators designed to provide reliable performance under variable operating conditions. These quality units are ideal as an economical alternatives for control of industrial process applications.

AIR ENGINEERING GROUP

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