

A blue HAFNER tanker truck is shown in motion on a road, with a white text box overlaid in the center. The truck has a large white cylindrical tank with a red dashed line around the top edge. A speed limit sign with the number 90 is visible on the tank. The truck is moving towards the right, and the background is blurred to indicate speed.

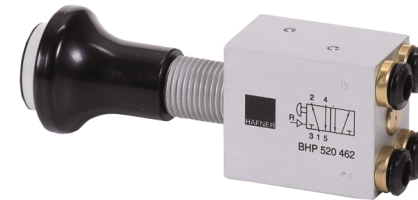
HAFNER

**PNEUMATIC SOLUTIONS FOR
COMMERCIAL VEHICLES**

HAFNER products are an integral part of commercial vehicle applications. They can be used in anything from PTO valves for bottom loading systems to complex axle lift controls.

Some technical features make our valves especially valuable in commercial vehicles:

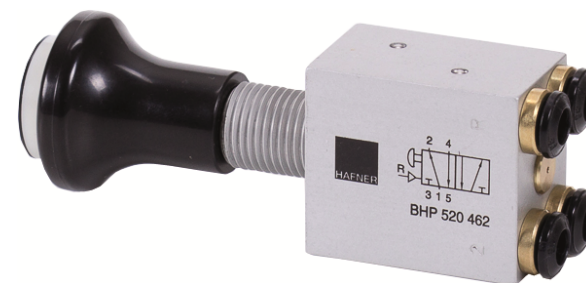
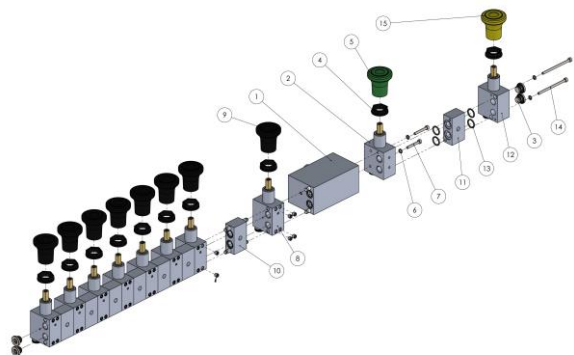
- ✓ Applicable for temperatures as low as -50°C
- ✓ Robust design
- ✓ 316L stainless steel and products with Ematal body treatment
- ✓ Vibration-tested sealing system
- ✓ High flow with a compact design
- ✓ Maximum sealing efficiency at low pressure
- ✓ Solenoid valves for battery applications, also with 6V DC
- ✓ Solenoid valves up to IP67 protection





With their compact design, interchangeability & customized manifold system, our BHP-valves are ideal for use in bottom loading systems as well as in PTO (power take-off) applications.

The valves are equipped with an additional pneumatic reset port. This port is often used as a safety connection to ensure that the valve is closed after refueling.



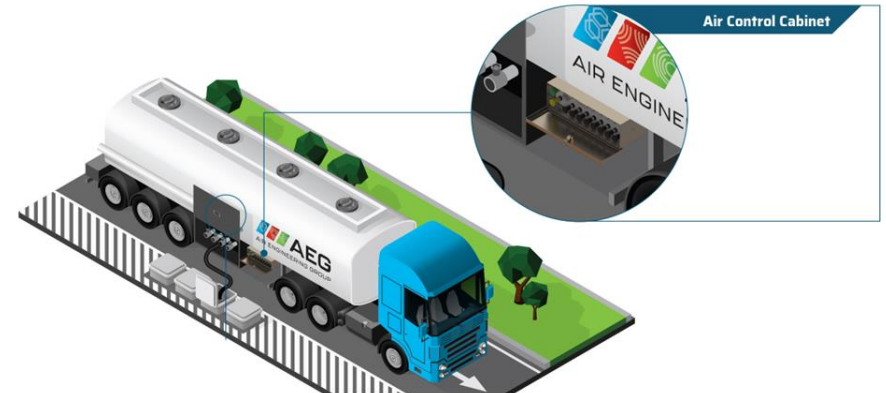
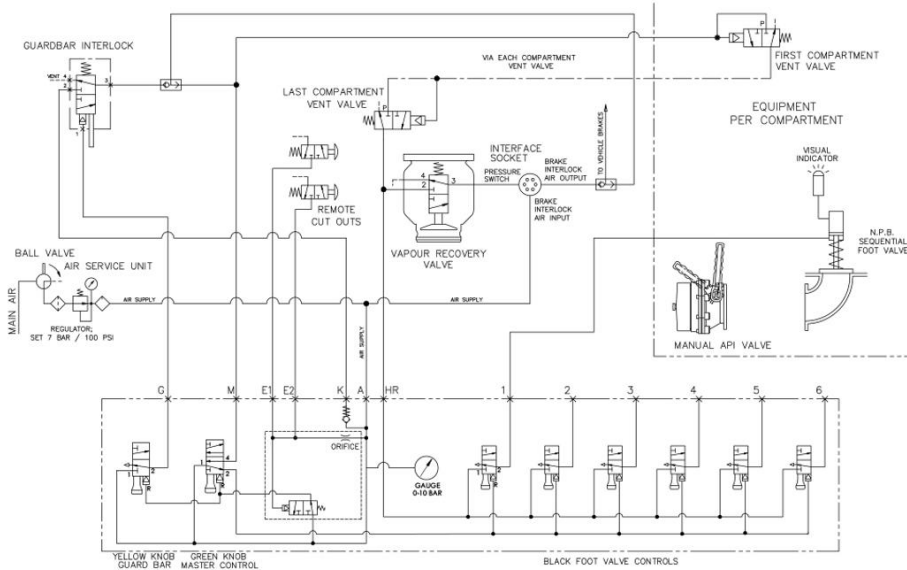
- 3/2-way and 5/2-way
- Individual valves or as a modular system
- With 4 mm or 6 mm push-in connections
- Different button colours: black, red, blue, green and yellow

On request with:

- ATEX-certification
- Cartridges for inch tubes
- Low temperature version -40°C



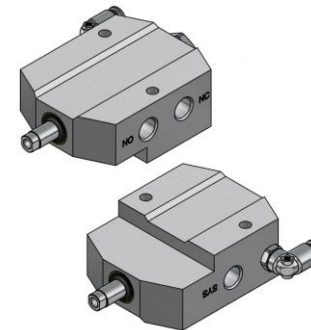
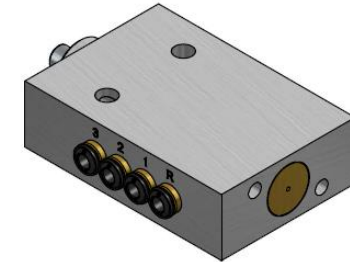
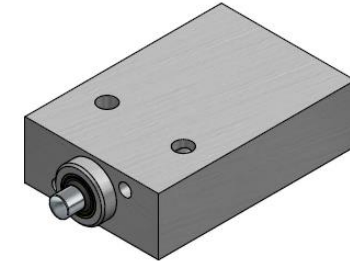
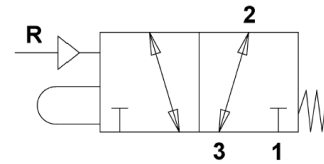
In addition to individual components we can offer systems and solutions developed and built in cooperation with our British partner AEG.





Guardbar interlock valves are designed to pneumatically lock the guard bar, which prevents access to the system's discharge valves, except when loading or unloading.

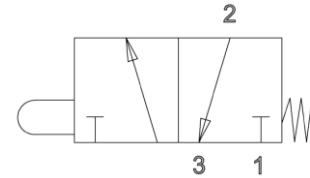
They can also prevent movement of the vehicle by interlocking to the brakes during loading and discharge.



Customized solution

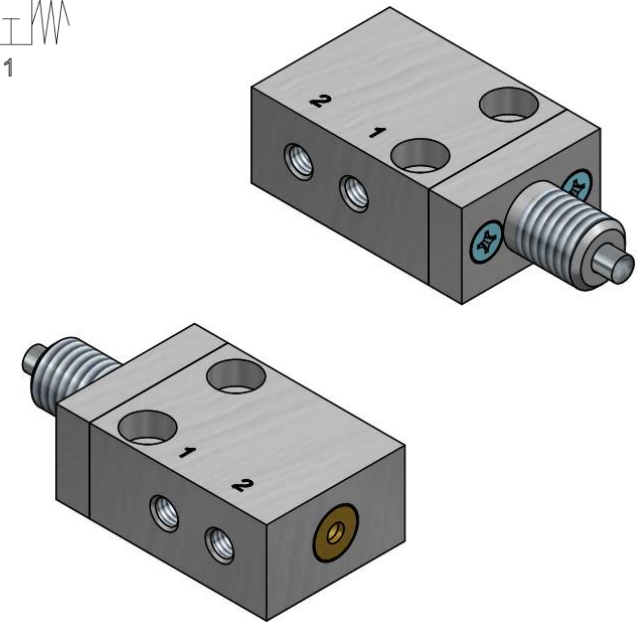
Tanker trucks

Stem actuated valve that sends a pneumatic signal as soon as the truck has been earthed.



This 3/2-way mechanically actuated plunger valve is used to transmit a pneumatic signal as soon as the truck has been earthed (earthing plug inserted).

- Temperature range -10 °C to +60 °C
- Working pressure: 1 - 10 bar
- Nominal diameter: 2.5 mm
- Flow rate 115 NI/min.
- Actuating force 14 N.





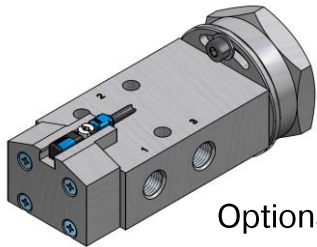
Pneumatic valves for use in hydrogen transport trailers have to fulfill additional requirements:

- Explosion-proof designs for zones 1, 2, 21, and 22
- Wide temperature range from -40°C to +65°C
- Robust design

To control gas mixing valves on the swap body of hydrogen trailers, we have developed a range of control panel valves that meet all these requirements.



Valves can be supplied with a wide range of different actuators.



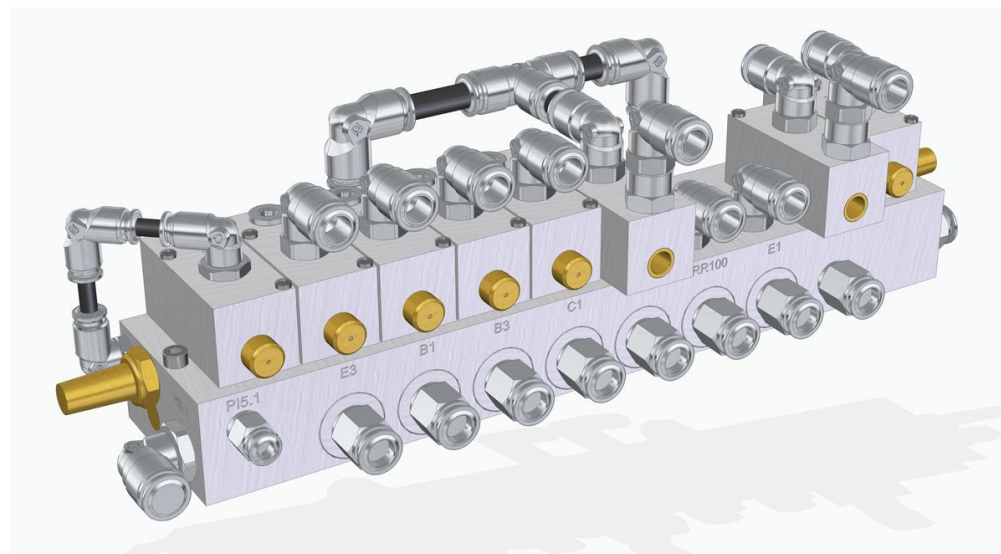
Optionally with position feedback sensor.



Ready-to-install assembly with 8 pneumatic valves, complete with fittings and tubing on the plate.

The customer can connect the hoses directly to the assembly.

- Temperature range -20 °C to +65 °C.
- Manifold is ATEX-certified for zone 2, hydrogen environment.



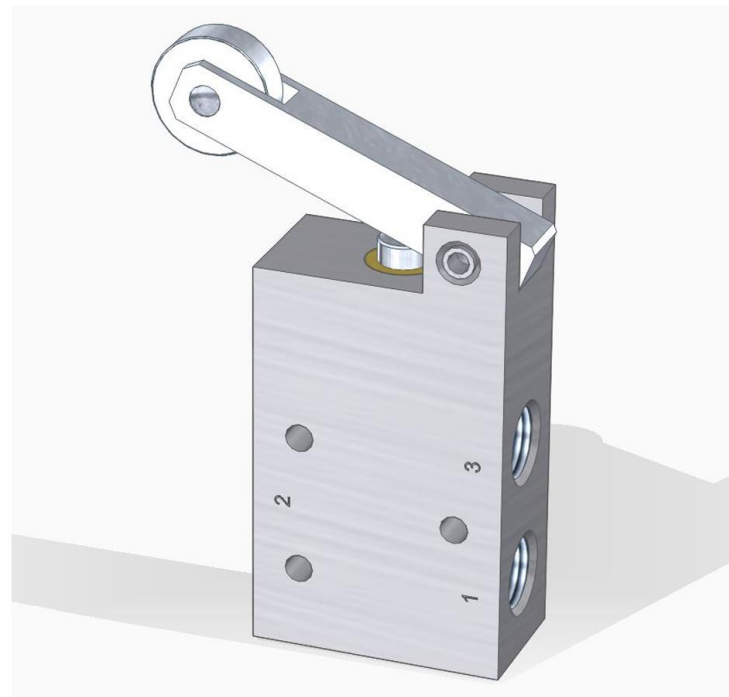
Hydrogen transport trailers

Roller lever valves that are optimized for the harsh environmental conditions.



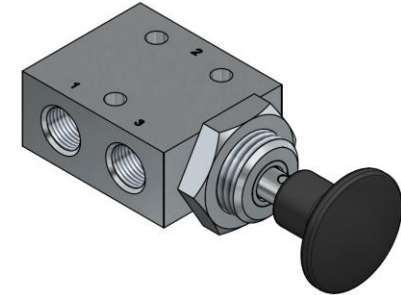
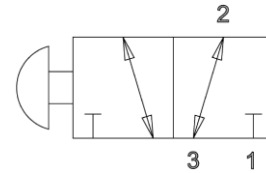
Roller lever valve with roller made from stainless steel and with ball bearing.

Valve is ATEX certified for zone 1, 2, 21 and 22 and product can be used from -40°C to $+65^{\circ}\text{C}$.



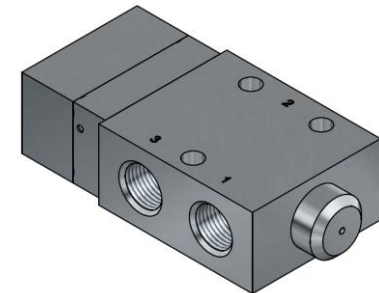
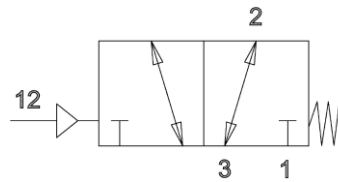
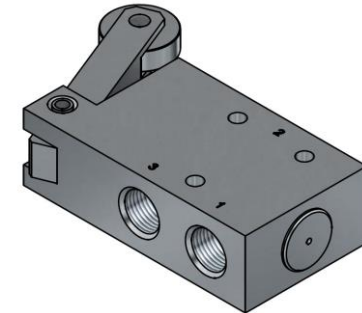
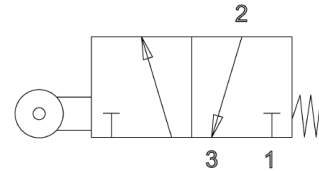
Hydrogen transport trailers

Valves entirely made from 316L / 1.4404 stainless steel.



Valves entirely made from 316L / 1.4404 stainless steel and for an extended temperature range of -50°C to +80°C.

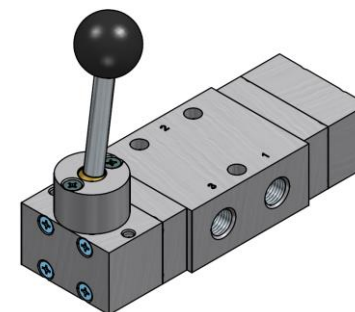
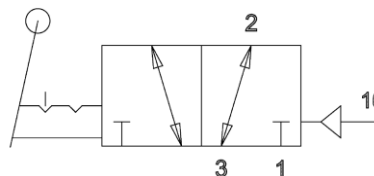
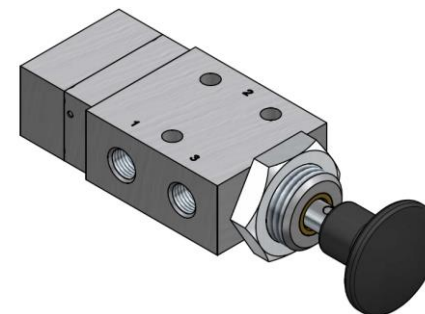
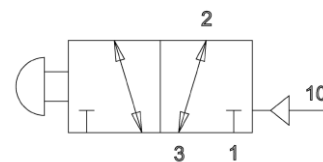
- Port size: G 1/4"
- Air-flow: 1.250 NI/min
- Explosion proof: zone 1, 2, 21, 22





Manually operated 3/2-way valves with pneumatic reset port for an extended temperature range of -50°C to +80°C.

- Port size: G 1/8"
- Air-flow: 650 NI/min
- Explosion proof: zone 1, 2, 21, 22



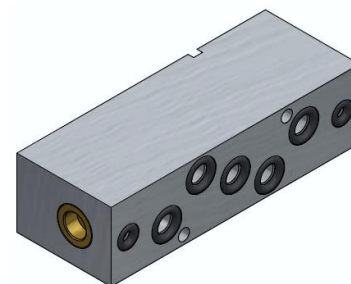
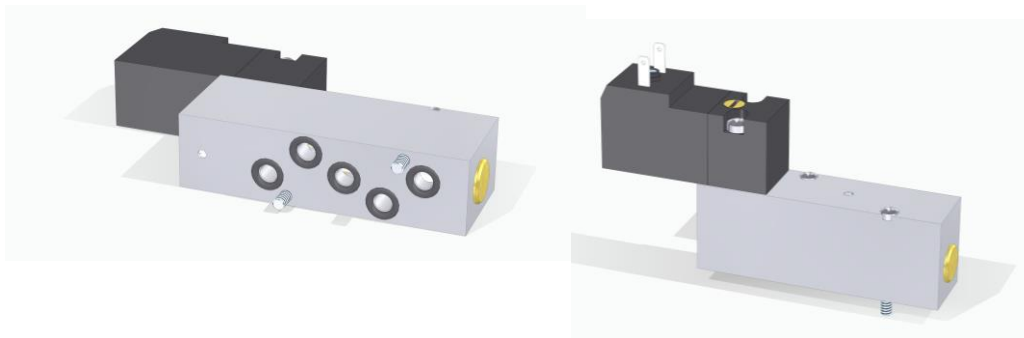


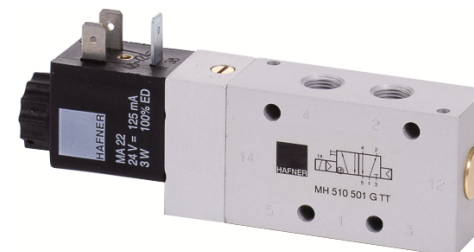
Valves in sweepers often have to withstand high temperatures. We offer 5/2-way solenoid valves for +80°C and with a low power consumption of just 2 watts. For higher temperatures of up to +120°C, we can offer pneumatically actuated valves.

Both the solenoid valves and the pneumatically actuated valves are designed for manifold assembly with all connections on one side. This enables quick and easy replacement.

Cylinders with reinforced piston rod guide

ISO 15552 cylinders in an extremely robust execution featuring a reinforced piston rod guide. Also available with PUR-coating.





5/2-way spring-return and bistable solenoid valves for temperatures -50°C , used to control the hooks on skip handler trucks.

Equipped with 24V DC Form A coil with 2-watt power consumption.



AND / OR-gates for low temperatures are part of the system as well.





5/2-way hand-lever valve with nut for panel mounting, rubber gaiter and modified lever.

Used in refuse collection vehicles to operate double-acting cylinders.

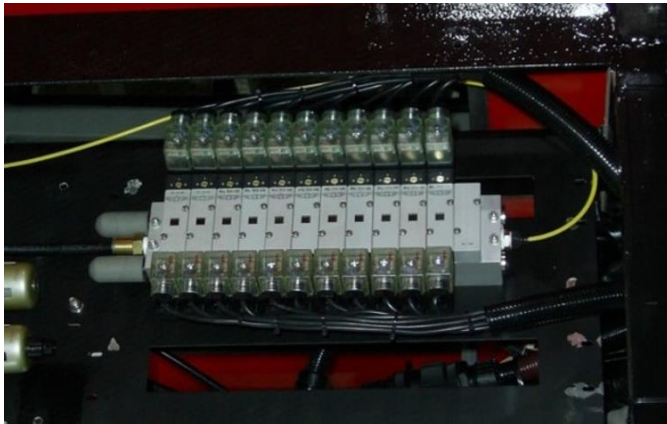




For manufacturers of both airport crash tender vehicles and domestic firefighting vehicles we supply manifold systems and valve terminals.



Sub-D valve terminals



Fieldbus terminals,
CANopen to come in Q4 - 2024

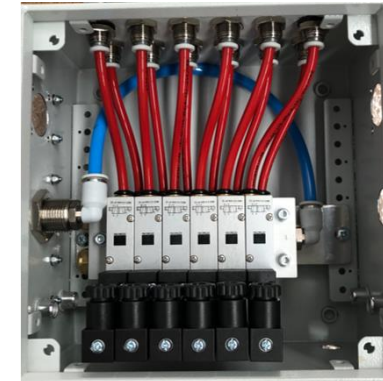
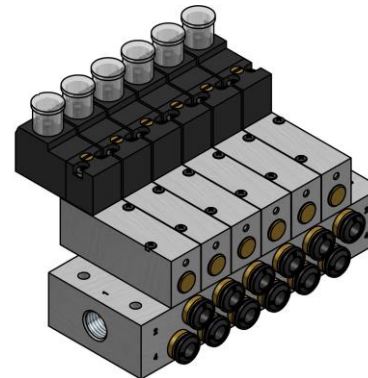


Compact solenoid valves for +80°C with high air-flow of 450 NI/min and low power consumption of 1,8 Watt.

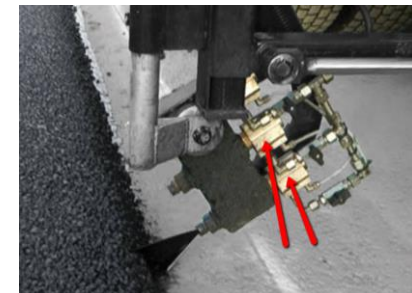
Manifold plates from 2 to 16-stations, equipped with 6 mm push-in fittings.

Bespoke cylinders with stainless steel piston rod and zinc-plated aluminum body for asphalting machines.

Cylinders are used to control the flow of asphalt. The piston rod is opening and closing the asphalt nozzle.



High temperature solenoid valves on manifold plate

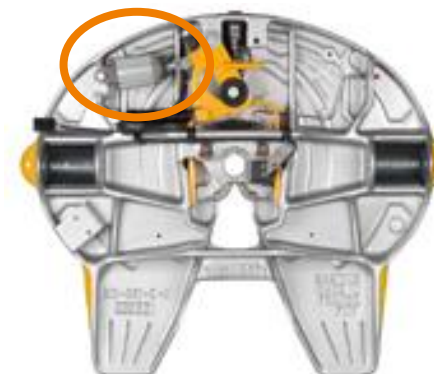
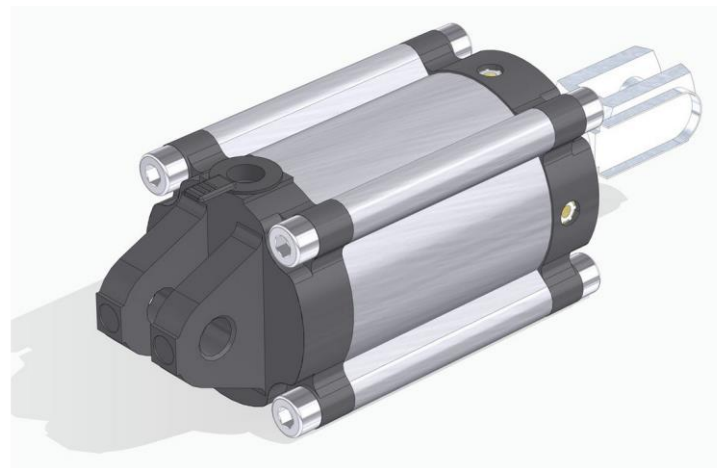


Bespoke cylinders with stainless steel piston rod



Customized cylinder for a fifth wheel coupling manufacturer.

The coupling features an air release function and is designed for terminal tractors.





For a manufacturer of semi-trailers, we supply bespoke cylinders with a stroke of more than 1 meter.

The cylinders are equipped with a reinforced piston rod guide.



Ordinary ISO 1552

vs



Special cylinder with reinforced guide





Valve is designed to be used inside busses for emergency door control.

After the bus reaches a certain speed, the valve received an electric signal which opens it and pressurizes the pneumatic cylinder. This will lock the door.

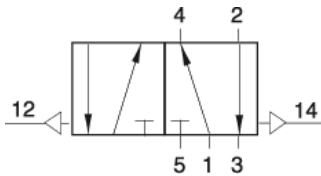
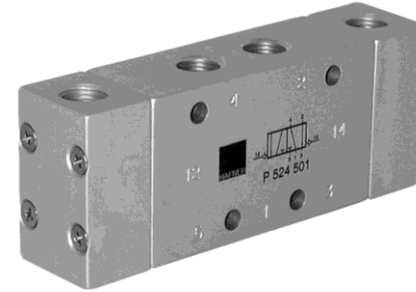
As soon as the bus lowers its speed to a certain point, the electric signal is taken away and the knob can be pushed in case the bus door has to be opened by hand. Pushing the knob will exhaust the cylinder.





Bleed valves, also called negative switching valves, are widely used in bus door controls.

These valves switch their position not by pressurising the pilot-ports, but by exhausting them. This gives the advantage that the actuating element which can be a manual push-button valve, doesn't need any air supply tubing.

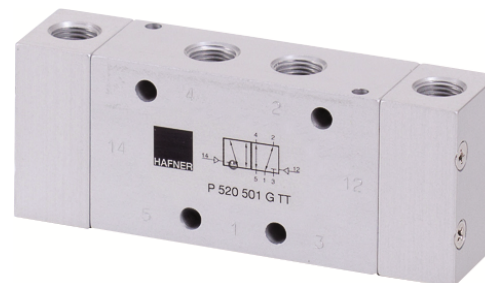


Valve switches position as soon as pilot ports 12 or 14 are exhausted.



We supplied compact cylinders and pneumatic control valves, both for low temperatures (-40°C), to the patented “easy tarp” system.

This system allows the truck driver to lock and unlock the tarp pneumatically. System has been discontinued by the customer.





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