



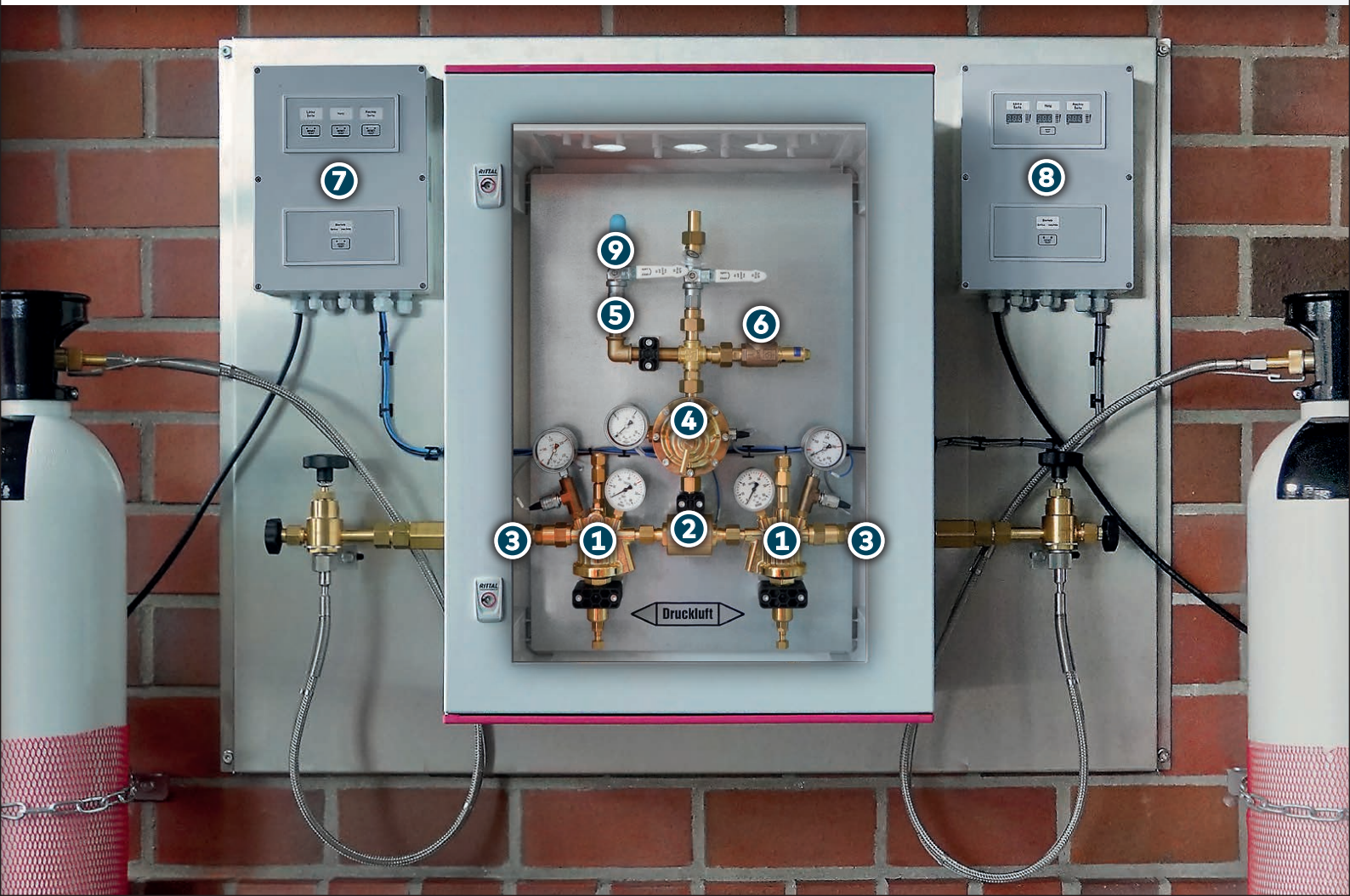
Breathing air supply systems

Stationary system solutions

Stationary breathing air supply

Continuous air supply without downtime

A stationary breathing air supply system controls the supply of breathable air from multiple sources, such as a high-pressure cylinder bundle. High-quality main and working pressure reducers with operational indicator provide users with the required working pressure. An automatic changeover unit switches to an additional, fully charged breathing air source as soon as the residual pressure of the primary source is reached. This ensures a continuous supply of breathing air.





Component
Electronics
Housing
High-pressure hose material
High-pressure hose length
Number of medium-pressure outlets

1

Left and right main pressure reducers

Pressure reduction from 300 bar to approx. 28 bar.

2

Automatic changeover unit

Both sides feed the changeover unit (flow rate: 250 Nm³/h at 28 bar, equivalent to more than 4,150 NI/min). The unit transfers the gas flow to the piping system. If one breathing air source is depleted, the pressure drops and a piston automatically switches to the full source.

3

Optional: Left and right high-pressure warning whistle

Audible warning device that activates when the supply pressure falls below the required level.

4

Working/final pressure reducer

Reduces the upstream pressure after the main pressure reducers from approximately 28 bar to a working pressure between 0 and max. 10 bar.

5

Shut-off valve

Used for venting the system within the housing, e.g. for maintenance, without depressurizing the entire system.

6

Relief valve/excess pressure valve/safety valve

Safety component that releases excess pressure within the housing to prevent damage caused by excessive pressure.

7

Optional: Mechanical pressure monitoring – contact pressure gauge

The warning device monitors the inlet pressure of the breathing air sources and the system pressure in the compressed air piping network. It operates in the high-pressure range and enables timely replacement of breathing air sources when the warning threshold is reached.

8

Optional: Digital pressure monitoring – transmitter

The device monitors and displays the system pressure in the compressed air piping network. It operates in the high-pressure range and enables timely replacement of breathing air sources when the warning threshold is reached.

Options for the stationary breathing air system

The BR55 is available in various configurations depending on requirements.

The semi-flexible solution offers selectable options to configure an optimal customer-specific system according to the following table. Additional accessories (e.g. angled valves with venting or hose reels) are available on request.

Configuration example BR55:

Without electronics + stainless steel housing + stainless steel high-pressure hoses (2 m) + 4 medium-pressure outlets

Option 1 (standard)	Option 2	Option 3
Without electronics	⑦ Electro-mechanical version 1 contact switching incl. signal unit	⑧ Electronic version 2 transmitter incl. signal unit
Plastic with outdoor protection (Rittal)	Stainless steel	
Stainless steel	Plastic	
1,5 m	2 m	3 m
2	3	4

BR55

Semi-flexible solution for high air demand

Functional description and safety measures for the BR 55 breathing air station

The automatic changeover unit BR55 is designed for operation with breathing air cylinders or cylinder bundles with a maximum filling pressure of 300 bar. The system can be scaled up on request using input manifolds (Vareo distribution stations), so that several bottles or bundles can be connected at the same time.

High pressure is reduced in a first stage by main pressure reducers (left and right) to a line pressure of approximately 28 bar. A downstream working pressure reducer ensures that the required working pressure (between 0 and 10 bar) is supplied. The breathing air station is designed for a maximum capacity of 250 Nm³/h at 28 bar and is protected by a relief valve preventing overpressure in case of component failure.

Technical data:

- » Compliant with PED 97/23/EC Pressure Equipment Directive
- » Robust housing provides standard mechanical protection
- » Stainless steel base plate
- » Shut-off valves: two on inlet side, one on outlet side
- » Two preset main pressure reducers, each with high- and medium-pressure gauges
- » Pressure reduction from 300 bar to approximately 25–35 bar (factory setting, typical nominal value ≈28 bar)
- » Flow rate: 250 Nm³/h at 28 bar (equals > 4,150 NI/min)
- » Automatic changeover unit
- » Automatic switching at approximately 3–4 bar pressure difference
- » Adjustable working pressure: 0–10 bar via downstream working pressure reducer
- » Pressure relief valve



100 % continuous air supply
100 % continuous (pressure) monitoring
100 % system solutions for every stationary application

 scalable air supply

Safety with every breath.

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