AtmoMix®

Innovative gas mixers for almost any application

www.atmocheck.com
www.atmomix.com

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Product Overview_AtmoMix_R2_en

AtmoMix®

With the AtmoMix® series, we offer you an innovative product range of gas mixers for up to 3 different gases. The range is designed for different pressure and flow rates, with either fixed or variable gas mixture ratios that are precisely controlled for high process reliability, tailored to meet the exact requirements of your particular processes.

- Cost savings through the use of individual gases
- Safe and easy application due to preset gas mixtures
- Purely pneumatic operating principle, no power supply necessary
- Safety interlock for gas mixing ratios in case of supply failure of a gas
- Robust, compact design
- Safe for use in virtually all application areas
- Numerous options available

Application areas

- Metalworking
- Welding and cutting
- Food industry
- Biotechnology
- Glass industry
- Medical technology
- Laser technology

Welding & cutting

Food technology

Beverage technology

Laser technology

Glass processing

Key facts

Gas types
- Argon
- Nitrogen
- Carbon dioxide
- Oxygen
- Helium
- Flammable gases

Flow ranges
- SF Series up to 50 l/min.
- LF Series up to 200 ltr/min
- HF Series up to 100 m^3/hr
- XF Series up to 200 m^3/hr

Mixing precision
- Standard +/- 1%
- High Performance +/- 0.5%

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All highlights at a glance

- Excellent mixing accuracy and consistency
- High process reliability
- High dynamic range, buffer tank no longer necessary
- Independent of pressure fluctuations at the gas inlet
- No electrical power supply required
- Very robust and compact design
- Table-top and wall-mounted panel units available
- Low maintenance

Options

- Inlet pressure monitoring
- Outlet pressure control
- Buffer tank
- Integrated analysis unit
- Stainless steel housing
- Touch display for operation and gas mixture switching

All gas mixers in the AtmoMix® series can be combined with inlet pressure and outlet pressure control in conjunction with a buffer tank, in-line analysis and flow control. Proven sensor technology, simple operation and an integrated data logger ensures the quality of your production and helps you to avoid costly malfunctions and production downtime.

Suitable for use with virtually all technical and flammable gases and different flow rates, plus optional state-of-the-art pressure and analysis monitoring. Depending on your particular requirements and application, we offer you either an individual or central gas supply solution for the consistent production of high-precision gas mixtures.
Gas mixers in our AtmoMix® series are based on decades of experience. Our in-house development and production of gas mixing valves guarantees you optimum performance modern compact gas mixing systems for 2 or more gases.

Consistent gas mixture quality is therefore assured; whether for very low and for high consumption, for continuous and highly fluctuating withdrawal quantities, without the use of buffer tanks.
Whilst fixed gas mixtures prevent quality problems due to incorrect operation and thus ensures a consistent quality in your production, your AtmoMix® gas mixer can alternatively be supplied with an adjustable mixing valve should you prefer.

AtmoMix® SF Series

Our compact AtmoMix® SF series is optimally suited for use in the production of up to 3 component gas mixtures for the relatively small flow ranges used in welding gas applications, beverage industry, life science, Biotechnology etc..

A special feature is the availability of up to 3 fixed gas mixture outlets in one compact gas mixer unit, giving maximum flexibility. Once set, no more adjustment of the gas mixture is necessary, giving you consistent quality and high accuracy. Optionally, the AtmoMix® SF gas mixer can optionally be equipped with an adjustable gas mixture valve.

The AtmoMix® SF gas mixer is available for all common industrial gases: CO2, N2, Ar, He, O2, H2, and special gases can be accommodated on request. Depending on the inlet and outlet pressures, the AtmoMix® range is available for different flow rates.

All gas mixers in the AtmoMix® Series operate as purely pneumatic gas mixers and therefore do not require any additional power supply. When using the optionally available inlet and outlet pressure monitoring and integrated analysis technology, an external voltage supply is required for this addition.

Due to a new type of valve technology, the use of a buffer tank can be dispensed with in most instances. In the case of highly fluctuating withdrawal quantities, e.g. when supplying several withdrawal points, the AtmoMix® gas mixers can be equipped with a buffer tank and a pressure control.

All highlights at a glance

- Standard and High Performance mixing accuracy available
- Cost savings through the use of individual gases
- Integrated gas inlet filters protect against contamination
- Purely pneumatic operating principle, no electrical power supply required
- Robust, compact design
- Table-top and wall-mounted panel units available
- Wall-mounted panel unit available
- Low maintenance
- Easy operation due to preset gas mixtures
- Suitable for fluctuating withdrawal quantities
- Safety interlock in case of omission of an input gas

Options

- Inlet pressure monitoring
- Outlet pressure control
- Flow regulator
- In-line analysis
- Stainless steel housing

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Application areas

- Welding shield gases according to DIN EN ISO 14175
- Beverage dispensing systems
- Biotechnology

Technical data	
Type	AtmoMix® SF
Gases	Ar, CO2, N2, O2, He, H2, other gases on request
Gas mixing range	Preset, depending on customer requirement
Gas mixture outlet	1-3 possible
Flow range	See table
Inlet pressure	min. 3 bar, max. 10 bar gauge
Outlet pressure	1.5 ... 8 bar (depending on inlet pressure)
Flow range	0.5- 50 l/min. (depending on the inlet pressure)
Temperature	-10°C ... +50°C
Gas inlet	Push-in connection or compression fitting
Gas outlet	Push-in connection or compression fitting
Housing	Anodised aluminium or brass

AtmoMix® LF Series

The AtmoMix® LF is a powerful and versatile unit that is optimally suited for the production of 2-component mixed gas where the mix ratio is set in advance. It is alternatively available with a freely adjustable variant. with operator adjustable gas mixture valves.

Decades of experience and modern production techniques, together with safe handling and highly precise mixing results make our AtmoMix® LF a powerful system in your processes, e.g. in the food industry, welding gas applications, beverage industry, life science and biotechnology.

Our AtmoMix® LF gas mixer is available for all common industrial gases: CO2, N2, Ar, He, O2, H2, special gases can be accommodated on request. Depending upon the inlet and outlet pressures, the AtmoMix® LF gas mixer is available for small to medium flow ranges.

All gas mixers of the AtmoMix® LF series operate as purely pneumatic gas mixers, and therefore do not require any additional electrical supply. When using the optionally available inlet and outlet pressure monitoring and integrated analysis technology, an external voltage supply is required for this addition.

Due to a new type of valve technology, the use of a buffer tank can be dispensed with in most instances. In the case of highly fluctuating withdrawal quantities, e.g. when supplying several withdrawal points, our AtmoMix® gas mixers can be equipped with a buffer tank and a pressure control.

In the event of a gas failure at the gas inlet, an integrated safety interlock ensures that no gas mixture is released. This increases the quality and safety of your production process. For superior control of the inlet and outlet pressures, pressure gauges are integrated in the gas mixer housing as standard . The gas mixer can be supplied as a wall-mounted panel.

All highlights at a glance

- Standard and High Performance mixing accuracy available
- Cost savings through the use of individual gases
- Integrated gas inlet filters protect against contamination
- Purely pneumatic operating principle, electrical power supply is required
- Robust, compact design
- Wall-mounted panel unit available
- Low maintenance
- Easy operation due to preset gas mixtures
- Suitable for fluctuating withdrawal quantities
- Safety interlock in case of omission of an input gas

Options

- Inlet pressure monitoring
- Outlet pressure control
- Flow regulator
- In-line analysis
- Additional input filters
- Pressure regulator

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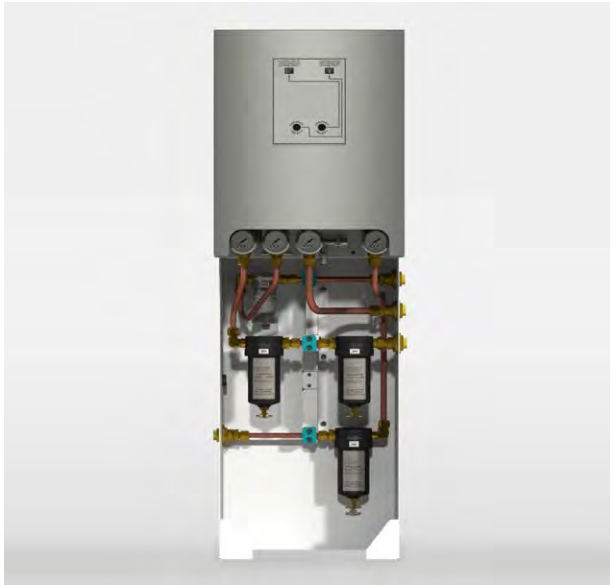
Application areas

- Welding shield gases according to DIN EN ISO 14175
- Coating and surface treatment
- Heat treatment
- Controlled and modified atmospheres
- Food packaging (MAP)
- Inerting, process chemistry
- Water treatment
- Hydrogen technology
- Biotechnology, Oxygenation & Fermentation

Technical data	
Type	AtmoMix® LF
Gases	Ar, CO2, N2, O2, He, H2, other gases on request
Gas mixing range	Preset, flexible, depending on customer requirement
Flow range	see table
Inlet pressure	min. 3 bar, max. 16 bar gauge
Outlet pressure	1.5 ... 13 bar (depending on inlet pressure)
Flow range	See table
Temperature	-10°C ... +50°C
Gas inlet	Selectable according to customer requirements
Gas outlet	Selectable according to customer requirements
Housing	Stainless steel

AtmoMix® HF Series



AtmoMix® XF Series

The AtmoMix® HF / XF is a powerful and versatile gas mixer that is optimally suited as a central gas mixing unit for the supply of production lines with several extraction points and with fluctuating extraction requirements.

It is available for producing mixtures from up to 3 component gasses, either as a fixed gas ratio preset, or alternatively with adjustable gas mixing valves to produce any desired variant. Safe handling plus highly precise and consistent mixing, together with modern manufacturing methods and decades of experience, makes our AtmoMix® HF / XF a truly powerful system in your process. E.g. in the food industry, welding gas applications, laser applications, burner control, life science and biotechnology.

The AtmoMix® HF / XF gas mixer is available for all common industrial gases: CO2, N2, Ar, He, O2, H2, and other special gases can be accommodated on request. Depending on the inlet and outlet pressures, the gas mixer AtmoMix® HF / XF is available for medium to high flow ranges.

All gas mixers in the AtmoMix® series operate as purely pneumatic gas mixers, and therefore do not require any additional electrical power supply. When using the optionally available inlet and outlet pressure monitoring and integrated analysis technology, an external voltage supply is required for this addition.

Due to a new type of valve technology, the use of a buffer tank can be dispensed with in most instances. In the case of highly fluctuating withdrawal quantities, e.g. when supplying several withdrawal points, the AtmoMix® gas mixers can be equipped with a buffer tank and a pressure control.

An integrated safety interlock ensures that, in the event of a gas failure at the gas inlet, gas mixing stops immediately. This increases both the quality and safety of your production process.

Pressure gauges are integrated into the gas mixer housing as standard, to give better control of the inlet and outlet pressures. The gas mixer can optionally be supplied as a wall-mounted panel.

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All highlights at a glance

- Standard and High Performance mixing accuracy available
- Cost savings through the use of individual gases
- Integrated gas inlet filters protect against contamination
- Purely pneumatic operating principle, no electrical power supply required
- Robust, compact design
- Wall-mounted panel unit available
- Low maintenance
- Easy operation due to preset gas mixtures
- Suitable for fluctuating withdrawal quantities
- Safety interlock in case of omission of an input gas

Options

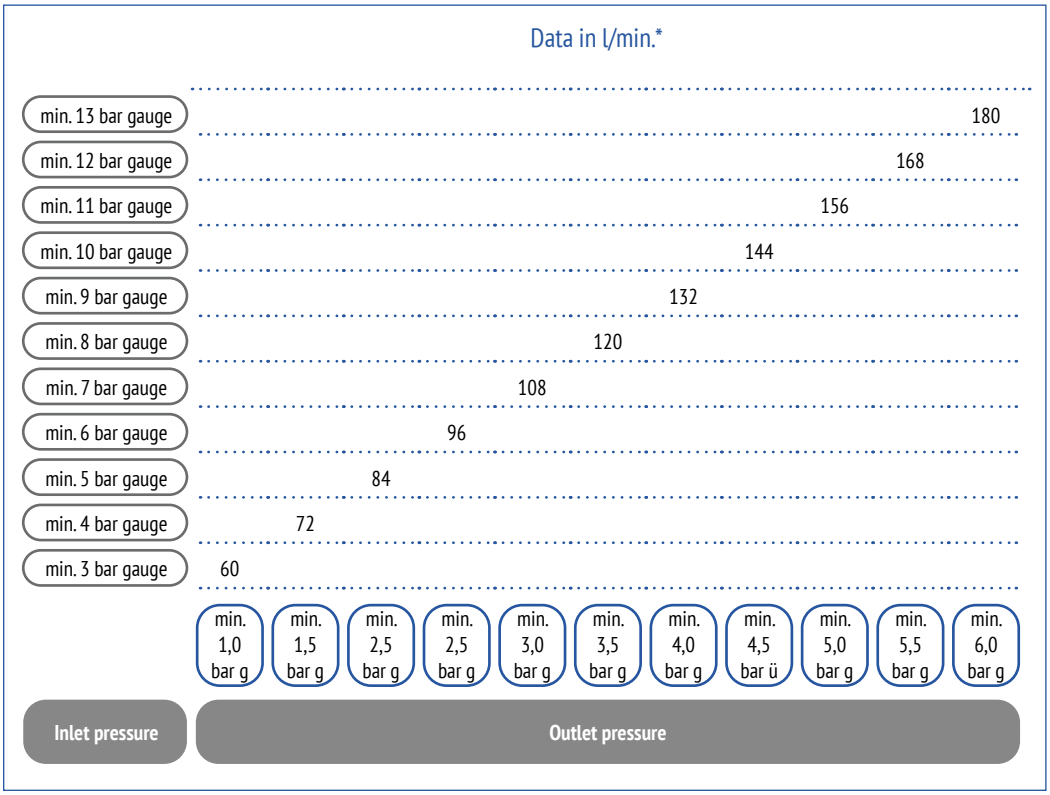
- Inlet pressure monitoring
- Outlet pressure control
- Flow regulator
- In-line analysis
- Additional input filters
- Pressure regulator

Application areas

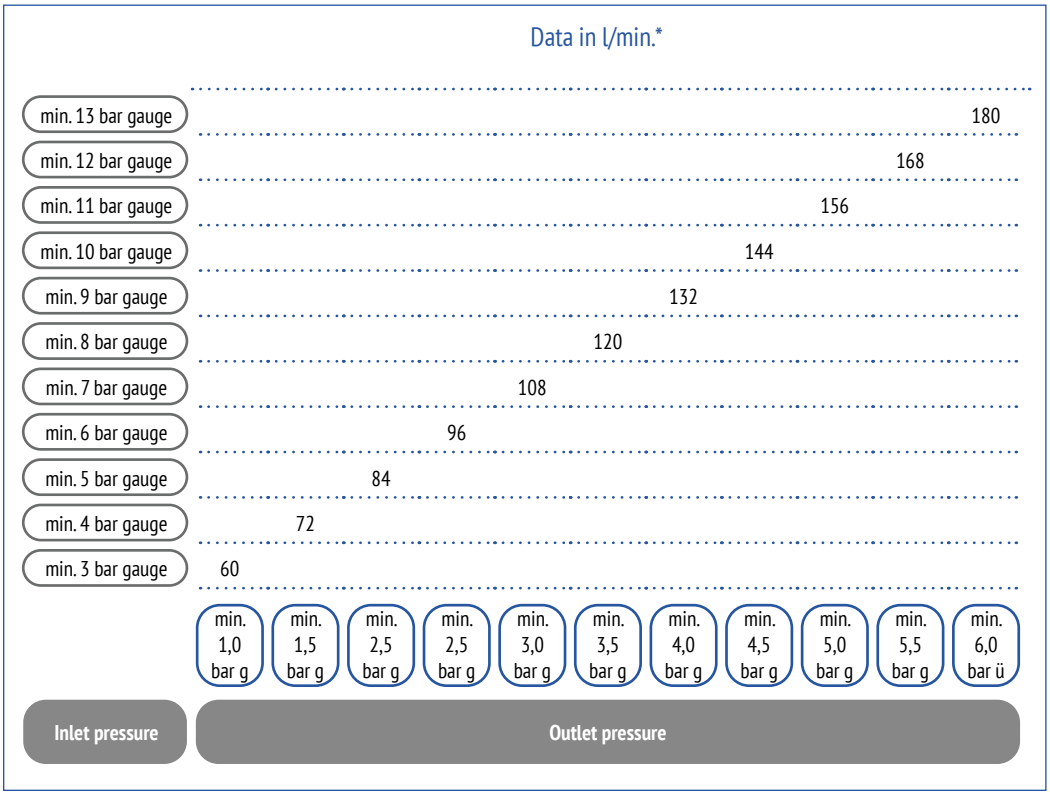
- Welding shield gases according to DIN EN ISO 14175
- Coating and surface treatment
- Heat treatment
- Controlled and modified atmospheres
- Food packaging (MAP)
- Inerting, process chemistry
- Water treatment
- Hydrogen technology
- Biotechnology, Oxygenation & Fermentation

Technical data	
Type	AtmoMix® HF / XF
Gases	Ar, CO2, N2, O2, He, H2, other gases on request
Gas mixing range	preset, flexible, depending on customer requirement
Flow range	see table
Inlet pressure	min. 3 bar, max. 16 bar gauge
Outlet pressure	1.5 ... 13 bar (depending on inlet pressure)
Flow range	see table
Temperature	-10°C ... +50°C
Gas inlet	Selectable according to customer requirements
Gas Outlet	Selectable according to customer requirements
Housing	Stainless steel

Flow ranges AtmoMix® SF Series



Flow ranges AtmoMix® LF Series - 1



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Flow ranges AtmoMix® LF Series - 2

Data in l/min.*

	min. 1,0 bar g	min. 1,5 bar g	min. 2,5 bar g	min. 2,5 bar g	min. 3,0 bar g	min. 3,5 bar g	min. 4,0 bar g	min. 4,5 bar g	min. 5,0 bar g	min. 5,5 bar g	min. 6,0 bar g
min. 13 bar gauge											360
min. 12 bar gauge										336	
min. 11 bar gauge									312		
min. 10 bar gauge								288			
min. 9 bar gauge							264				
min. 8 bar gauge						240					
min. 7 bar gauge					216						
min. 6 bar gauge				192							
min. 5 bar gauge			168								
min. 4 bar gauge		144									
min. 3 bar gauge	120										

Inlet pressure | Outlet pressure

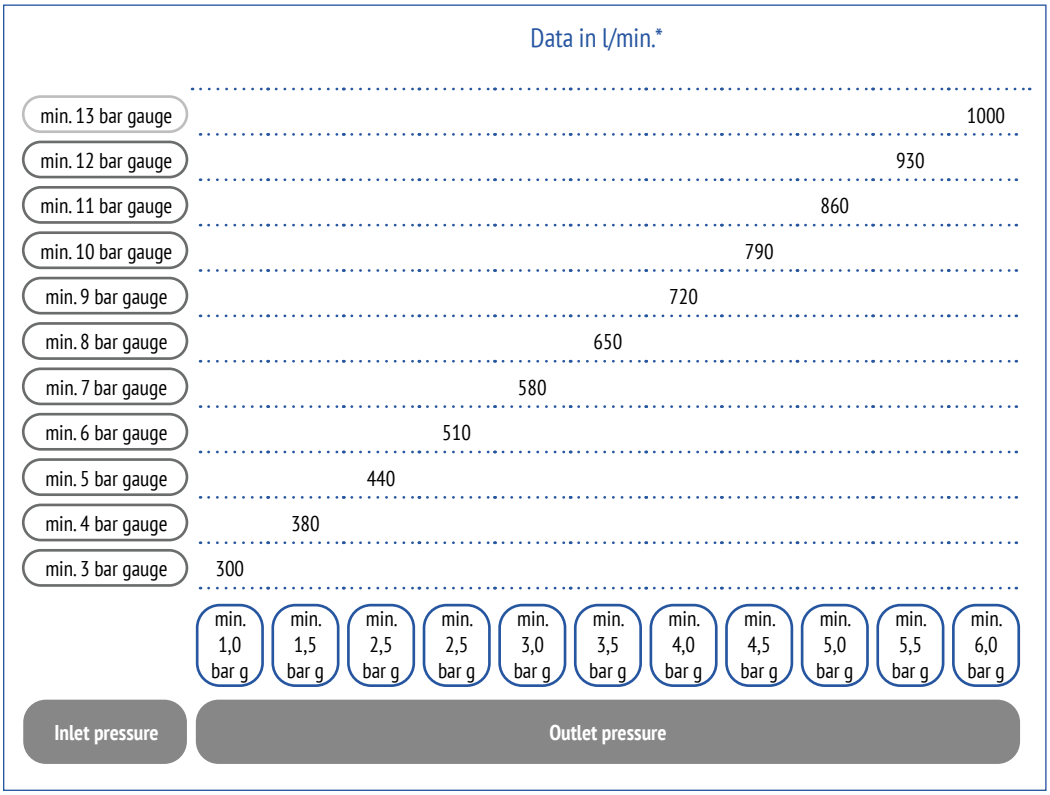
Flow ranges AtmoMix® HF Series / AtmoMix® HF Series - 1

Data in l/min.*

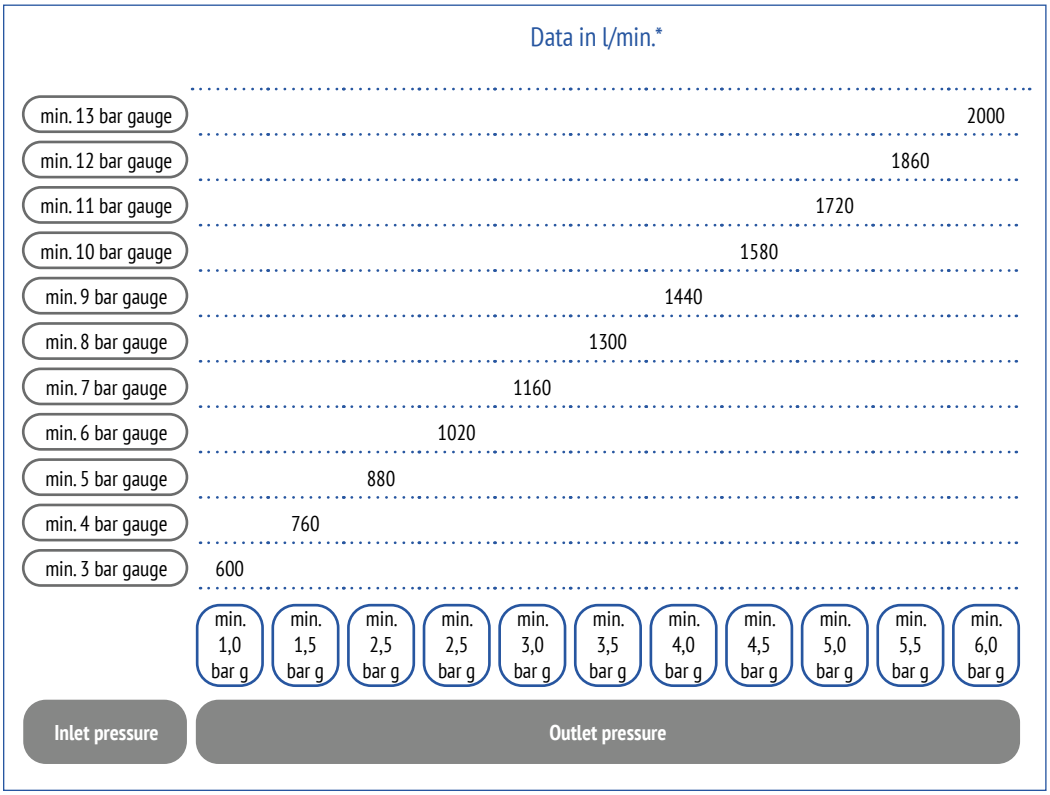
	min. 1,0 bar g	min. 1,5 bar g	min. 2,5 bar g	min. 2,5 bar g	min. 3,0 bar g	min. 3,5 bar g	min. 4,0 bar g	min. 4,5 bar g	min. 5,0 bar g	min. 5,5 bar g	min. 6,0 bar g
min. 13 bar ü											500
min. 12 bar gauge										465	
min. 11 bar gauge									430		
min. 10 bar gauge								395			
min. 9 bar gauge							360				
min. 8 bar gauge						325					
min. 7 bar gauge					290						
min. 6 bar gauge				255							
min. 5 bar gauge			220								
min. 4 bar gauge		185									
min. 3 bar gauge	150										

Inlet pressure | Outlet pressure

Flow ranges AtmoMix® HF Series / AtmoMix® HF Series - 2



Flow ranges AtmoMix® HF Series / AtmoMix® HF Series - 3



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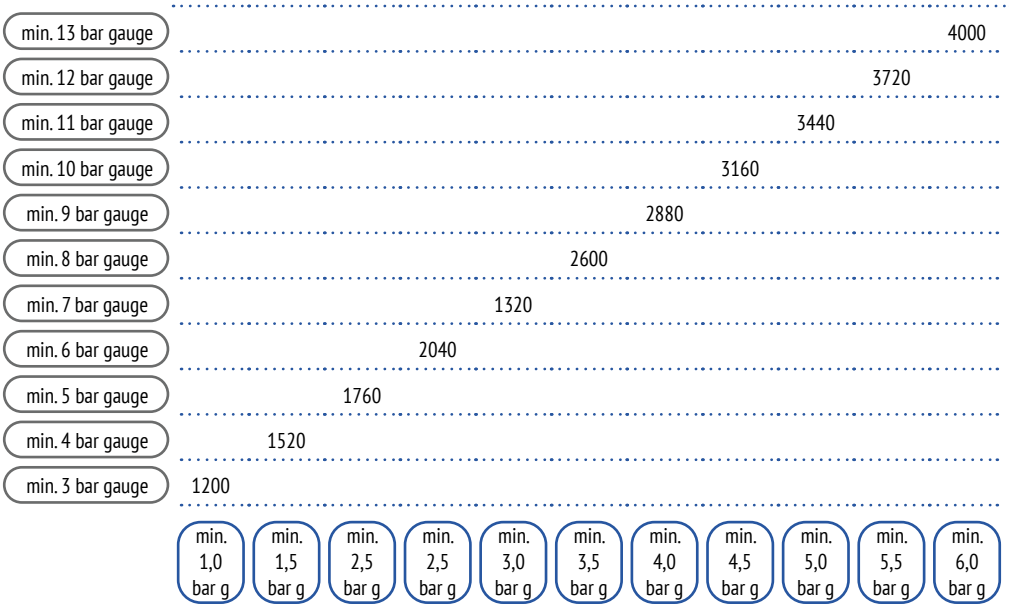
Flow ranges AtmoMix® HF Series / AtmoMix® HF Series - 4

Data in l/min.*



*All flow rates are based on air/nitrogen and may vary depending on the gas mixture setting.