

Data Sheet

MAP Mix 9001 ME

Proportional gas mixers for MAP applications
- with detection of a too low gas inlet pressure

New!



Features

- High accuracy for optimal mixing quality
- Proportional gas mixing principle
- Prepared for use with a microprocessor controlled gas analyser
- Very high flow rate
- Sturdy industrial design made in stainless steel/ aluminium
- Easy mixture adjustment
- Optional ON/OFF solenoid valve for gas flow (to shut off the gas flow on flow packaging machines when the packaging machine stops)

Gas mixer/gas analyser

For some applications it is an advantage to have the gas mixer and the gas analyser together. PBI-Dansensor offers the microprocessor controlled gas analyser MAP Check Combi, which can be mounted together with our mixers.

The analyser, MAP Check Combi, is based on a high accuracy zirconium sensor, developed and manufactured by PBI-Dansensor and featuring complete self-diagnostics, semi-automatic calibration, built-in pump and two alarm levels for O₂ concentrations. Optionally MAP Check Combi can be delivered with an additional CO₂ sensor. This product is developed to work with our proportional gas mixers on vertical and horizontal flow packaging machines. Additionally the analyser CMV-2 is available measuring the O₂ and CO₂ levels when operating with thermoforming and trays sealing machines.

Flexible and ready to install

All our gas mixers will be delivered pre-adjusted and ready to install. PBI-Dansensor also offers electronic gas mixers, which as a special feature will be prepared for easy change of different pre-selected gases. This means that the user easily and safely is able to choose between a number of different gases to be used with the mixer.

Accuracy and optimal blending quality

The MAP Mix series offers an unprecedented linearity in the flow range of 15-100% and mix settings of 10-90%.

Due to the design of the proportional pressure system, deviating pressure conditions on the inlet side have virtually no effect on the accuracy. (See fig. 2 on the back of this page).

Introduction to the MAP Mixers

The MAP Mix series is based on a proportional gas mixing principle especially designed for packaging machines and other industrial applications where the gases carbon dioxide, oxygen and the inert gases nitrogen and argon are used either in a 2-gas or 3-gas combination.

The mixing principle of the MAP Mix series is very unique and can be used for all types of packaging machines, e. g. flow packaging machines and gas vacuum packaging machines. The PBI-Dansensor gas mixer is very user-friendly with high accuracy - also under conditions usually causing problems for the repeatability of most other mixers.

The mixer features detection of a too low gas inlet pressure with an alarm relay output to the external control. The standard version of the mixer can among others be combined with PBI-Dansensor's the microprocessor controlled high quality gas analyser MAP Check Combi and CMV-2.

PBI Dansensor

Best choice for gas and permeability instrumentation

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Mixing principle

All our mixers are utilising the advantage of proportional mixing, which means that the mixing is carried out via proportional pressures on the two sides of a diaphragm. This diaphragm «absorbs» the deviation in the inlet pressure which normally is causing changes in the mixing conditions. (See fig. 1).

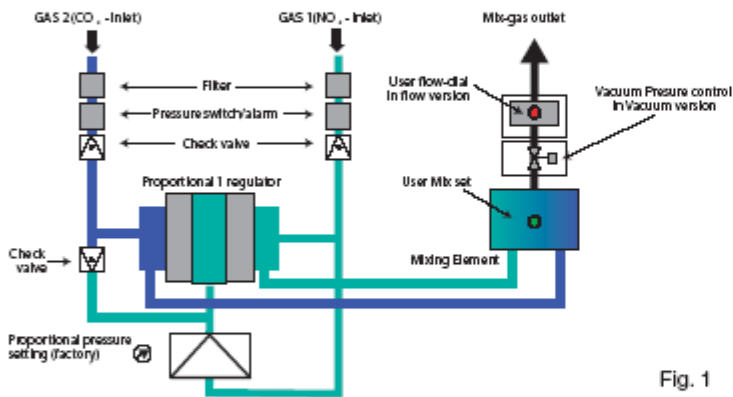


Fig. 1

Technical specifications

General	
Accuracy:	Better than +/- 2% absolute within a flow range of 15 - 100% and mix settings of 10 - 90%
Pressure:	See below Flow shut off valve (optional/flow versions)
Gas in / gas out:	Rear panel
Mixture adjustment:	Manual
Alarms:	Inlet pressure alarm with visual indication per gas and signal out (contact relay) on the rear panel. Acoustic alarm for a too low gas inlet pressure
Cabinet:	Stainless steel

Configurations

Model / 9001 ME for thermoforming and tray sealing machines: (Buffer)	Max. outlet	Inlet	Cabinet dimensions: (DxHxW) mm.	Approx. weight:
25-250L, 2-gas	6.0 bar	5.5 - 10 bar	420x194x235	10.0 Kg.
100-400L, 2-gas	6.0 bar	5.5 - 10 bar	420x194x235	10.5 Kg.
100-1000L 2-gas	6.0 bar	5.5 - 10 bar	420x194x475	16.5 Kg.
20-200L 3-gas	5.0 bar	6.5 - 10 bar	420x194x235	12.0 Kg.
100-400 3-gas	5.0 bar	6.5 - 10 bar	420x194x475	17.0 Kg.
Model / 9001 ME for flow wrapping machines:		Inlet	Cabinet dimensions: (DxHxW) mm.	Approx. weight:
25-250L, 2-gas		8.5 - 10 bar	420x194x235	10.0 Kg.
100-400L, 2-gas		8.5 - 10 bar	420x194x235	10.5 Kg.
20-200L 3-gas		8.5 - 10 bar	420x194x235	12.0 Kg.
100-400L, 3-gas		8.5 - 10 bar	420x194x475	17.0 Kg.

Note: Specifications apply to the combinations of N₂, CO₂ and O₂ but combinations with other gases are available upon request.

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PBI-05-Qesh-gas-to-MME-UK-3

Flow capacity for MAP Mix 9001 ME for buffer

The MAP mixers are delivered with standard inlet pressure 8.5-10 bar. Other settings are optional and has to be specified when ordering the gas mixer.

2 gas / 250 litre					
Flow l/min	Buffer tank pressure				
Inlet pressure	2 bar	3 bar	4 bar	5 bar	6 bar
5.5 - 7.0 bar	132	84			
6.5 - 8.0 bar	183	145	90		
7.5 - 9.0 bar	226	220	170	110	
8.5 - 10 bar	262	257	221	190	120

2 gas / 400 litre					
Flow l/min	Buffer tank pressure				
Inlet pressure	2 bar	3 bar	4 bar	5 bar	6 bar
5.5 - 7.0 bar	267	187			
6.5 - 8.0 bar	346	287	185		
7.5 - 9.0 bar	453	418	345	236	
8.5 - 10 bar	505	480	434	332	198

2 gas / 1000 litre					
Flow l/min	Buffer tank pressure				
Inlet pressure	2 bar	3 bar	4 bar	5 bar	6 bar
5.5 - 7.0 bar	655	427			
6.5 - 8.0 bar	853	732	442		
7.5 - 9.0 bar	1052	945	762	472	
8.5 - 10 bar	1219	1158	1036	808	442

3 gas / 200 litre					
Flow l/min	Buffer tank pressure				
Inlet pressure	2 bar	3 bar	4 bar	5 bar	
6.5 - 8.0 bar	145	104			
7.5 - 9.0 bar	207	183	141		
8.5 - 10 bar	235	217	185	127	

3 gas / 400 litre					
Flow l/min	Buffer tank pressure				
Inlet pressure	2 bar	3 bar	4 bar	5 bar	
6.5 - 8.0 bar	285	205			
7.5 - 9.0 bar	400	345	245		
8.5 - 10 bar	444	400	325	176	