

ON THE QUALITY LINE

## MAP Mix 9000

# PROPORTIONAL GAS MIXERS

Easy to use proportional  
gas mixers with high accuracy.  
Optimal blending quality.



 **PBI Dansensor**

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# Improve the mixing quality

## 2 Gas Mixer



## MAP Mix 9000 - The right

MAP Mix 9000 is a proportional gas mixer especially designed for packaging machines and other industrial applications where the gases N<sub>2</sub>, CO<sub>2</sub> and O<sub>2</sub> are used, either in a 2-gas or a 3-gas combination.

The mixing principle of MAP Mix 9000 is very strong and can be used for all types of packaging machines, e.g. flow packaging machines and gas vacuum packaging machines as well.

The PBI-Dansensor gas mixer is very user friendly with high accuracy - also under conditions which usually cause problems for the repeatability of most other mixers.

MAP Mix 9000 features detection for too low gas inlet pressure with alarm relay output to external control. The standard version of MAP Mix 9000 can be delivered with PBI-Dansensor's microprocessor controlled high quality oxygen analyser, MAP Check 9000, mounted together.

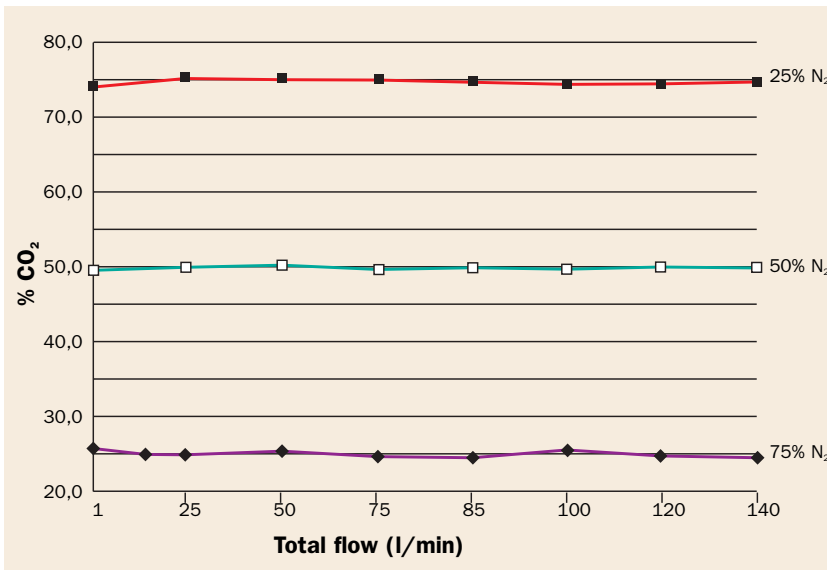
# Quality with MAP Mix 9000

## 3 Gas Mixer



## choice if quality matters

USE	ADVANTAGES	FLOW-RANGE
<ul style="list-style-type: none"> <li>● MAP packages in the food industry</li> <li>● The pharmaceutical industry</li> <li>● The chemical industry</li> <li>● The welding industry</li> <li>● Breweries</li> </ul>	<ul style="list-style-type: none"> <li>● High accuracy</li> <li>● Easy to use</li> <li>● Electronic alarm (visual, acoustic and relay contact) for too low gas inlet pressure</li> <li>● High flow rate</li> </ul>	<p><b>2 GAS MIXER:</b></p> <ul style="list-style-type: none"> <li>● 0 - 150 l/min</li> <li>● 0 - 300 l/min</li> <li>● 0 - 450 l/min</li> <li>● 0 - 600 l/min</li> </ul> <p><b>3 GAS MIXER:</b></p> <ul style="list-style-type: none"> <li>● 0 - 150 l/min</li> <li>● 0 - 300 l/min</li> </ul>

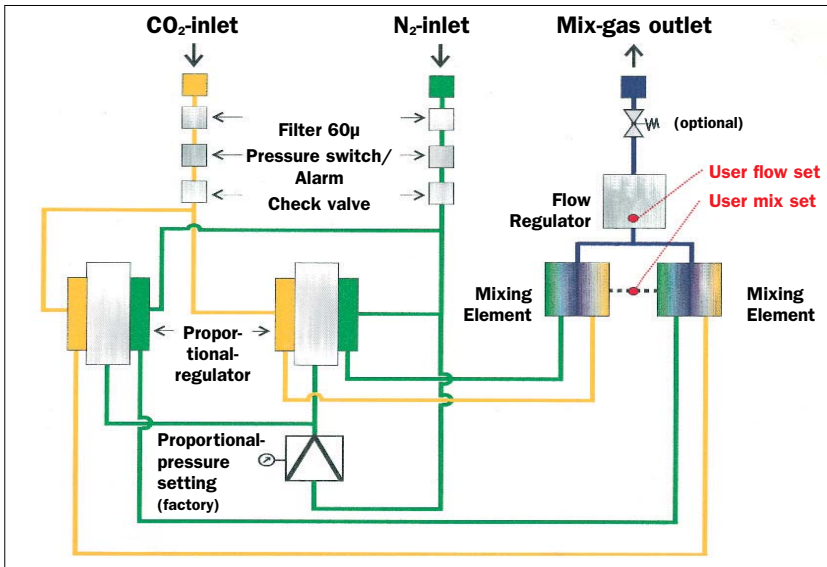


**HIGH ACCURACY**

MAP Mix 9000 offers an unprecedented linearity independent of flow rate and mixing range in the 10-100% settings. Deviating pressure conditions on the outlet side have, due to the design of the proportional pressure system, virtually no effect on the accuracy.

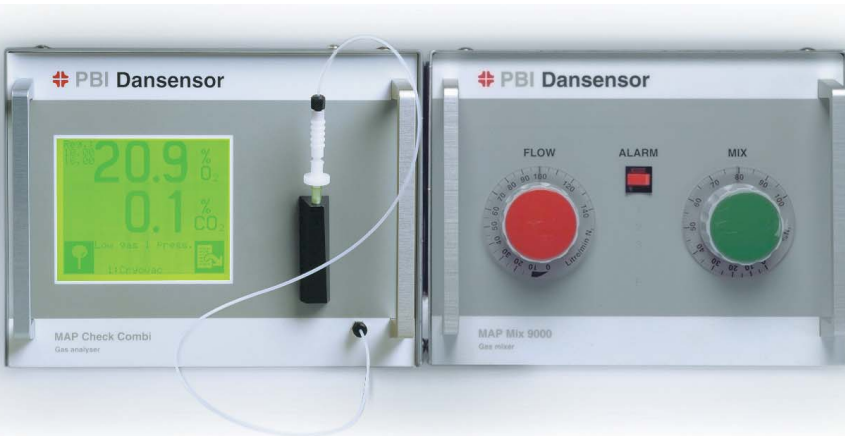
**MIXING PRINCIPLE**

MAP Mix 9000 utilizes 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 inlet pressure which normally causes changes in the mixing conditions, such as change of flow rate. Here the principle is shown for a 2 gas mixer.



**GAS MIXER - GAS ANALYSER INTEGRATION**

For some applications it is an advantage to have the gas mixer and the gas analyser together. PBI-Dansensor offers its microprocessor controlled oxygen analyser, MAP Check 9000 and MAP Mix 9000 as two separate units, which can function independently of each other, mounted together. The analyser, MAP Check 9000 is based on a high accuracy zirconia sensor, developed and manufactured by PBI-Dansensor and features complete self diagnostics, semi automatic calibration, built-in pump and 2 alarm levels for O<sub>2</sub> concentration. Optionally, MAP Check 9000 is available with a built-in random test syringe for manual testing of modified atmosphere packages.



**For gas vacuum applications: Special versions are available.**

# GAS MIXER SPECIFICATIONS

## General:

**Accuracy:**

Better than +/- 1% within 10 - 100% flow settings

**Pressure:**

Inlet pressure: 5 - 8 Bar  
 Outlet pressure: 3 - 4 bar  
 Other settings upon request

**Proportional pressure settings:**

Internal, factory set

**Gas in/gas out:**

Rear Panel

**Mixture adjustment:**

Proportional

**Alarms:**

Inlet pressure alarm with visual indication per gas and signal out (contact relay) on rear panel.  
 Acoustic alarm for too low gas inlet pressure.

**Cabinet:**

Stainless steel

**Dimensions:**

2 Gases: 150 - 300 l/min  
 ( D x H x W ) 420 x 194 x 235 mm / 8,8 kg  
  
 3 Gases: 150 l/min  
 ( D x H x W ) 420 x 194 x 235 mm / 8,8 kg  
  
 3 Gases: 300 l/min  
 ( D x H x W ) 420 x 194 x 470 mm / 16,5 kg  
  
 2 Gases: 450 - 600 l/min  
 ( D x H x W ) 420 x 194 x 470 mm / 16,5 kg

**Power:**

230 V 50 Hz or 115 V 50/60 Hz

**Optional:**

Flow ranges other than described below.  
 Built-in electronically operated flow on/off valve

## Standard versions available:

Gases	Max. l/min	*)Outlet pressure control	Item no 230V - 50Hz	Item no 115V - 50/60Hz
N <sub>2</sub> /CO <sub>2</sub>	150	No	950582	960635
N <sub>2</sub> /CO <sub>2</sub>	150	Yes	960183	960636
N <sub>2</sub> /CO <sub>2</sub>	300	No	950594	960642
N <sub>2</sub> /CO <sub>2</sub>	300	Yes	960230	960643
N <sub>2</sub> /CO <sub>2</sub>	450	No	970005	970006
N <sub>2</sub> /CO <sub>2</sub>	600	Yes	960683	960684
N <sub>2</sub> /O <sub>2</sub>	150	No	960406	960637
N <sub>2</sub> /O <sub>2</sub>	150	Yes	960408	960638
N <sub>2</sub> /O <sub>2</sub>	300	No	960407	960644
N <sub>2</sub> /O <sub>2</sub>	300	Yes	960409	960645
N <sub>2</sub> /CO <sub>2</sub> /O <sub>2</sub>	150	No	960181	960646
N <sub>2</sub> /CO <sub>2</sub> /O <sub>2</sub>	150	Yes	960242	960647
N <sub>2</sub> /CO <sub>2</sub> /O <sub>2</sub>	300	No	960681	960682
N <sub>2</sub> /CO <sub>2</sub> /O <sub>2</sub>	300	Yes	970146	200176
CO <sub>2</sub> /O <sub>2</sub>	150	Yes	960404	960634
CO <sub>2</sub> /O <sub>2</sub>	150	No	960402	960633
CO <sub>2</sub> /O <sub>2</sub>	300	Yes	960405	960641
CO <sub>2</sub> /O <sub>2</sub>	300	No	960403	960640
Ar/O <sub>2</sub>	300	Yes	960366	960639

## GAS ANALYSERS

### CHECKMATE



CheckMate for O<sub>2</sub> and O<sub>2</sub>/CO<sub>2</sub> testing of MA-packages. Built-in printer, data logging and RS 232 for external windows interface. Automatic spot measuring function and self-diagnostics. Extremely small sample volume and 12 months between calibrations of the O<sub>2</sub> and CO<sub>2</sub> sensors. Protected by an efficient water trap.

### MAP CHECK COMBI



Microprocessor controlled O<sub>2</sub> and O<sub>2</sub>/CO<sub>2</sub> analyser for on-line monitoring with self-diagnostics, alarms, measuring ranges: 0-100% and built-in random test device. The analyser MAP Check Combi is based on a very accurate zirconium sensor developed by PBI-Dansensor and is provided with complete self-diagnostics, semi-automatic calibration, built-in pump and 4 alarm levels for gas concentration.

### DANSENSOR MODULE



On line gas analyser for O<sub>2</sub> or combined O<sub>2</sub>/CO<sub>2</sub> non-destructive measurement on vacuum gas packaging machines. Each package index is measured and you are absolutely sure that the gas content is correct. Better package quality, better production economy.

**PBI-Dansensor also offers a wide range of gas analysers and leak detectors for laboratories and on-line use.**

**Ask for further information.**

Distributor:

 **PBI Dansensor**

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