



MANÁFOOD® - Clássico

Static or Dynamic gas mixer for mixing between two to four gases, with adjustment of the gas concentration from 0 to 100%, control of the flow rate and outlet pressure of the gas mixture. Also includes safety valves and sintered filters for the mixer inlet doors.

Suitable for food preservation/conservation of MAP – Modified Atmosphere Packaging, aiming to increase shelf life, preserving flavor, shape, color and freshness and maintaining the quality of the food.

Inside the food packaging, the atmosphere that protects, preserves and prolongs the food's life is achieved by combining CO₂, (Carbon Dioxide), N₂ (Nitrogen), O₂ (Oxygen) and some cases CO (Carbon Monoxide). Depending on the food to be packaged, the gas mixture changes as well as each gas content. Others gases can also be included to the food grade gas mixture.

The Static or Dynamic gas mixer **MANÁFOOD®** can generate mixtures of gases for modified atmospheres packaging or storage of the most diverse food products, including beef, pork, fish, bread, fresh pasta, fruit, vegetables, eggs, sausages (salami, ham, etc.), frozen meals, cheese, milk, etc.

BENEFITS:

- **RETURN on INVESTMENT (ROI), SAVINGS and PROFITABILITY**
Due to the high monthly consumption and its cost, food grade premixed gas mixture packaged in high-pressure cylinders can greatly affect the final cost of the food product. With the gas mixer **MANÁFOOD®**, meat processing companies (beef, pork, poultry, ...), bread, pasta, cookies manufacturers, coffee powder producers, ... all are able to blend, on site, their own gas mixtures from pure gases and most of the time, the ROI is under 12 months.
- **FLEXIBILITY – REACH THE MOST SUITABLE GAS MIXTURE FOR EACH FOOD/MAP (Modified Atmosphere Packaging)**
Different foods and packaging require different mixtures of gases for better performance in terms of increased shelf life. The Static or Dynamic gas mixer **MANÁFOOD®** generates custom gas mixture according to each food product characteristics, and in addition, the final user can change the gas mixture any time, in a matter of seconds.
- **ELIMINATES STOCK AND HANDLING CYLINDERS WITH SEVERAL DIFFERENT GAS MIXTURES**
Having the freedom to generate your own gas mixtures saves time and money, as it reduces the number of premixed gas mixture packaged in high pressure cylinders.
- **HOMOGENEOUS GAS MIXTURES**
Premixed gas mixture packaged in high-pressure cylinders can have their gas components become separated (stratify) if stored for a long time. The food grade gas mixtures generated by **MANÁFOOD®** are homogeneous, stable and with high accuracy (%) content, thus eliminating the risk of stratification.

MANÁFOOD® – Clássico – Dynamic Gas Mixer with adjustment of the gas concentration from 0 to 100% or static gas mixture				
Carrier Gas	Carbon Dioxide (CO ₂)		Nitrogen (N ₂)	
Balance Gas	Carbon Monoxide (CO) Oxygen (O ₂)		Carbon Dioxide (CO ₂) Oxygen (O ₂) Carbon Monoxide (CO)	
Gas mixture range (%)	Examples of Gas Mixtures for Food Modified Atmosphere Packaging and Storage MAP modified atmosphere storage of banana – 93 % of N ₂ , 3,5% of CO ₂ and 3,5% of O ₂ ; MAP modified atmosphere storage of ready meals – 65% of N ₂ and 35% of CO ₂ ; MAP modified atmosphere storage of bakery products – 65% of N ₂ and 35% of CO ₂ ; MAP modified atmosphere storage of processed poultry – 75% of N ₂ and 25% of CO ₂ ; MAP modified atmosphere storage of processed fish – 50% of N ₂ and 50% of CO ₂ ; MAP modified atmosphere storage of bean – 90% of N ₂ , 7,5% of CO ₂ and 2,5% of O ₂ ;			
Inlet Pressure	Min. 5 bar (70 psi) Max. 20 bar (290 psi)			
Outlet Pressure	De 1 to 8 bar (14,5 to 116 psi)			
Safety Valve	2 bar (30 psi) above inlet pressure			
Flow Rate	0,72 to 12,3 m ³ /h – (12 – 205 L/min) (in Nitrogen)			
Inlet Door	1 / 4 or 3/8 NPT Female			
Outlet Door	1 / 4 or 3/8 NPT Female			
Dimensions and Weight	Length	Width	Height	Weight
	300 (mm)	290 (mm)	200 (mm)	7 kg

Important: We can meet other demands for additional gas mixtures, according to customer specifications



OPTIONS:

- INLINE GAS ANALYZER FOR CONTROL, DOCUMENTATION AND ADJUSTMENT OF GAS MIXTURE CONCENTRATION;
- ALARM SYSTEM, FOR OPTICAL AND ACOUSTIC SIGNALING OF FAULT GAS MIXTURE CONCENTRATION;
- ALARM SYSTEM, FOR OPTICAL AND ACOUSTIC SIGNALING OF FAULT/LOW SUPPLY PRESSURE (INLET GASES);
- USB PORT TO ALLOW THE GAS MIXER TO BE LINKED TO A PC OR PLC TO RECORD GAS CONCENTRATION X TIME;
- INTEGRATED BAR-CODE READER FOR EASILY AND QUICKLY DATA LOGGING OF INSPECTOR/QUALITY CONTROL;
- MIXED GAS RECEIVERS WITH 250L, 280L, 550L and 890L VOLUMES.

GAS MIXTURES FOR FOOD PRESERVATION AND MODIFIED ATMOSPHERE PACKAGING:

FOOD PRESERVATION GAS MIXTURES	FOOD X MODIFIED ATMOSPHERE PACKAGING
20% of CO ₂ and 80% of N ₂	MAP modified atmosphere storage of loaf bread (winter)
40% of CO ₂ and 60% of N ₂	MAP modified atmosphere storage of loaf bread (summer)
1,5% of O ₂ , 2% of CO ₂ and 96,5% of N ₂	MAP modified atmosphere storage of apple
25% of CO ₂ and 75% of N ₂	MAP modified atmosphere storage of raw poultry
12% of O ₂ , 10% of CO ₂ and 78% of N ₂	MAP modified atmosphere storage of mushroom
3% of O ₂ , 5% of CO ₂ and 92% of N ₂	MAP modified atmosphere storage of bell pepper
5% of O ₂ , 3,5% of CO ₂ and 93% of N ₂	MAP modified atmosphere storage of carrots
1,5% of O ₂ , 7,5% of CO ₂ and 91% of N ₂	MAP modified atmosphere storage of broccoli
7,5% of O ₂ , 17,5% of CO ₂ and 75% of N ₂	MAP modified atmosphere storage of strawberry
3,5% of O ₂ , 6,5% of CO ₂ and 90% of N ₂	MAP modified atmosphere storage of papaya
7,5% of O ₂ , 5% of CO ₂ and 87,5% of N ₂	MAP modified atmosphere storage of lemon
3,5% of O ₂ , 6,5% of CO ₂ and 90% of N ₂	MAP modified atmosphere storage of avocado
1,5% of O ₂ , 4% of CO ₂ and 94,5% of N ₂	MAP modified atmosphere storage of kiwi
7,5% of O ₂ , 2,5% of CO ₂ and 90% of N ₂	MAP modified atmosphere storage of orange
2,5% of O ₂ , 0,5% of CO ₂ and 97% of N ₂	MAP modified atmosphere storage of pear
3% of O ₂ , 15% of CO ₂ and 82% of N ₂	MAP modified atmosphere storage of corn
1,5% of O ₂ and 98,5% of N ₂	MAP modified atmosphere storage of onion
77,5% of O ₂ and 22,5% of CO ₂	MAP modified atmosphere storage of raw red meat
20% of CO ₂ and 80% of N ₂	MAP modified atmosphere storage of pre-baked bread (winter)
80% of CO ₂ and 20% of N ₂	MAP modified atmosphere storage of pre-baked bread (summer)
50% of CO ₂ and 50% of N ₂	MAP modified atmosphere storage of pasta
30% of O ₂ and 70% of N ₂	MAP modified atmosphere storage of boiled beef
3,5% of O ₂ , 2% of CO ₂ and 94,5% of N ₂	MAP modified atmosphere storage of grape
5% of O ₂ , 6,5% of CO ₂ and 85,5% of N ₂	MAP modified atmosphere storage of mango
1,5% of O ₂ , 4% of CO ₂ and 94,5% of N ₂	MAP modified atmosphere storage of peach
2,5% of O ₂ , 2,5% of CO ₂ and 95% of N ₂	MAP modified atmosphere storage of artichoke
2,5% of O ₂ , 4,5% of CO ₂ and 88% of N ₂	MAP modified atmosphere storage of cabbage
3,5% of O ₂ , 3,5% of CO ₂ and 93% of N ₂	MAP modified atmosphere storage of cauliflower
4% of O ₂ and 96% of N ₂	MAP modified atmosphere storage of tomato
40% of O ₂ and 60% of N ₂	MAP modified atmosphere storage of fish
30% of O ₂ and 70% of N ₂	MAP modified atmosphere storage of ready-made meals
25% of O ₂ and 75% of N ₂	MAP modified atmosphere storage of grated and soft cheeses

Complementary product for this application:

GAS ANALYZER AG MF 70® – Carbon Dioxide (CO₂), Oxygen (O₂) and Ethylene (C₂H₄)

- Ensures quality of food packaged with MAP;
- Able to determine CO₂, O₂ and Ethylene concentrations;
- Wireless, operates through 03 rechargeable batteries;
- Stores data and transmits results by RS232, Wi-Fi or Bluetooth;
- Minimum sample volume, allows small packages testing;
- Single-handed operation;
- Barcode reader for quick sample identification;
- Results of each sample are shown on the front display;
- Low maintenance cost.



For additional information, please visit www.managas.com.br