

MB-200-G-N-I

GAS PURIFICATION SYSTEM FOR O₂, H₂O AND N₂ REMOVAL



- Double reactor columns for continuous 24/7 operation (for H₂O and O₂)
- One reactor column for N₂
- Optimum performance for attached enclosure volumes up to 5 m³
- Removal of oxygen, moisture <1 ppm and Nitrogen <1 ppm
- Automated box pressure and regeneration control
- PLC with multi-color touch panel display
- ECO Mode operation feature available
- Optional control and safety features available

MB-200-G-N-I



Clean. Engineering. Expertise.

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DESCRIPTION

The gas purifier unit MB-200-G-N-I is unique. It combines O₂/H₂O purification and N₂ purification. It has been specifically designed for both university and industrial applications, where it is necessary to remove the 3 gases from inert atmosphere (batteries research and production). Two reactor columns for purifying O₂ and H₂O allow continuous operation. One regenerable reactor column per line maintains ultra-low levels of oxygen and moisture in inert enclosures. One reactor column purifies N₂ thanks to high temperature Titanium reactor. The temperature control is integrated in the Siemens-PLC, which manages every function of the gas purifier unit.

COMMON SPECIFICATIONS

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|-------------------------------------|---|
| Operation principle | Closed loop recirculation |
| Recommended enclosure volume | Up to 5 m ³ |
| Working gas | Argon |
| Control unit | Siemens PLC |
| Display | Large color touch panel |
| Box pressure control | Automatic pressure control with foot switch (± 15mbar) |
| Vacuum pump* | Rotary vane pump with 17 m ³ /h (10 CFM) |
| Blower (50 Hz / 60 Hz)* | Frequency controlled up to 88 m ³ /h |
| Main and side piping | DN 40 ISO-KF |
| Main and control valves | DN 40 ISO-KF |
| Cooling water | 2 bar (4 l/min at 10 °C, 10 l/min at 15 °C) |
| Electrical (FLA) (without options) | 3L/N/PE, 400V, 50Hz, 25A |
| Size | 1064 x 628 x 1808 mm (LxWxH) |
| Weight | 420 kg |
| Optional feature | Moisture and oxygen analyzer |
| Optional feature | ECO Mode |
| Optional feature | Solvent vapor removal |
| Optional feature | Regenerable solvent vapor removal |
| Optional feature | Recirculation chiller for optimal working environment (RCC) |
| Optional feature | Dry pump upgrade |
| Optional feature w/ MBRAUN glovebox | Automatic box purge unit |
| Optional feature w/ MBRAUN glovebox | Antechamber automatic pressure controlled |
| Optional feature w/ MBRAUN glovebox | Freezer and box cooling |

TECHNICAL DATA

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|---|--|
| N ₂ PURIFICATION | |
| Attainable purity level | < 1 ppm N ₂ in Ar |
| Number of purification lines per purifier | 1 |
| Number of reactor columns per line | 1 |
| Number of reactor columns per purifier | 1 |
| Reactor column material | High temperature stainless steel |
| Reactor column loading | Titanium |
| Temperature control | Integrated PLC control from combined MB-200-G |
| Security system | Bypass-system using electro-pneumatic valves |
| Leak rate | 10E-6 mbar l/s for purifier units and components |
| Regeneration | Not regenerable |

TECHNICAL DATA

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|---|---|
| O ₂ /H ₂ O PURIFICATION | |
| Attainable purity level | Moisture < 1 ppm, Oxygen < 1 ppm |
| Number of purification lines per purifier | 2 |
| Number of reactor columns per line | 1 |
| Number of reactor columns per purifier | 2 |
| Reactor capacity per purification line* | |
| (O ₂) Oxygen | 36 l |
| (H ₂ O) Moisture | 1350 g |
| Regeneration | Automatic regeneration sequence |
| Regeneration gas | N ₂ /H ₂ mix. or Ar/H ₂ mix. (H ₂ 2-10 %) |

*Technical note: Dependent upon operating conditions.

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