

## **MB200 IGMS & MB300 IGMS** INERT GAS MANAGEMENT SYSTEMS



**INERT GAS TECHNOLOGY**

- The market standard in high efficiency gas purifiers
- Introduced to the market in 2001 – now in its 5th generation
- Developed specifically for the demands of the OLED industry
- Unmatched safety, automation and capacity characteristics
- For enclosures up to 4m<sup>3</sup> (MB200 IGMS) and 10m<sup>3</sup> (MB300 IGMS)
- Attainable purity of oxygen (O<sub>2</sub>) and moisture (H<sub>2</sub>O) < 1 ppm

Working under pure atmosphere with oxygen and moisture levels below 1ppm is the prerequisite of processing high sensitive materials in the OLED industry.

The MBraun fully automatic IGMS gas purification systems are the worldwide recognized industrial standard in OLED production. A frequency controlled blower and two redundant reactors are used for continuous removal of oxygen and moisture during gas circulation.

The working pressure inside the inert gas enclosure is automatically controlled within a programmable range in over pressure as well as in under pressure. All process relevant parameters like oxygen, moisture and pressure are monitored by MBraun's proprietary designed sensors. In contrast to other commonly available gas purifiers the IGMS features a full control of all connected utilities like working gas, control gas and regeneration gas.

An automatic leak test (ALAS-test) can be performed to verify the leak tightness of the complete inert gas enclosure system.

The automatically controlled purge function and supervised change over to circulation guarantees the highest operational standard for the start up as well as during processing.

Optionally the MBraun IGMS can be equipped with a redundant solvent vapor removal system (LMF) to separate hydrocarbons from the inert gas atmosphere. The remaining capacity of the filters is detected by a special solvent sensor.

Further upgrades like multi-box-operation, vacuum interlock for working in combination with vacuum chambers, extended PLC control units (e.g. Mitsubishi Q-Series) or customized communication interfaces promote the MBraun IGMS to an unmatched all-rounder in the inert gas technology.



<b>MB200 IGMS &amp; MB300 IGMS Overview</b>	<b>MB200 IGMS</b>	<b>MB200 IGMS-LMF</b>	<b>MB300 IGMS</b>	<b>MB300 IGMS-LMF</b>
<b>Performance</b>				
Max. enclosure volume [m <sup>3</sup> ]	4	4	10	10
Blower capacity [m <sup>3</sup> /h]	84	84	120	120
Purity O <sub>2</sub> [ppm]	<1	<1	<1	<1
Purity H <sub>2</sub> O [ppm]	<1	<1	<1	<1
Capacity O <sub>2</sub> [NI]	100	100	275	275
Capacity H <sub>2</sub> O [g] <sup>(1)</sup>	2.400	2.400	7.000	7.000
Capacity LMF [g] <sup>(2)</sup>	-	1.600	-	4.000
<b>Sensors</b>				
O <sub>2</sub> ppm	•	•	•	•
O <sub>2</sub> %	•	•	•	•
H <sub>2</sub> O ppm	•	•	•	•
Pressure sensor	•	•	•	•
Solvent sensor	-	•	-	•
Utility monitoring	•	•	•	•
<b>Features</b>				
Automatic purge [l/min.]	200	200	500	500
ALAS leak test	•	•	•	•
Trend diagram H <sub>2</sub> O/O <sub>2</sub> ppm	•	•	•	•
Trend diagram box pressure	•	•	•	•
Automatic regeneration	•	•	•	•
Mitsubishi control (FX-series)	•	•	•	•
Multi color touch panel	•	•	•	•
Dry vacuum pump	•	•	•	•
<b>Options</b>				
Integrated 2-Box Operation	○	○	○	○ <sup>(3)</sup>
Integrated 3-Box Operation	○	○	○	○ <sup>(3)</sup>
Mitsubishi Q-Series control	○	○	○	○
MB-QP (Quick purge)	○	○	○	○
MB-APU (Air purge)	○	○	○	○
MB-SAPU	-	-	○	○
Vacuum interlock	○	○	○	○
VCR fittings	○	○	○	○

<sup>(1)</sup> per mfg specs <sup>(2)</sup> e.g. Toulene <sup>(3)</sup> customized

• included [o] option available [-] option not available

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