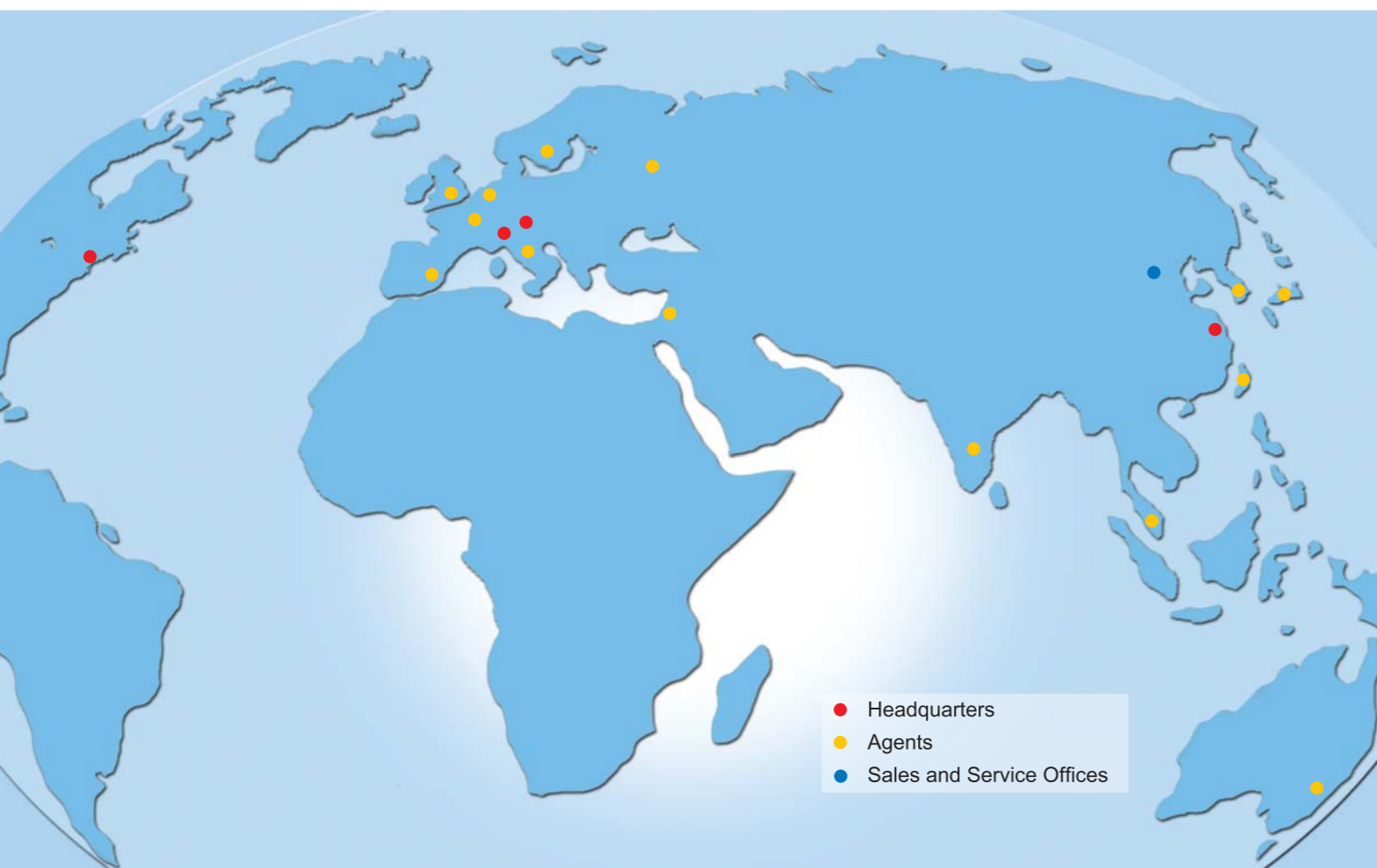


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INERTGAS TECHNOLOGY

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MB ENCAP-150

Manual Encapsulation System

MBRAUN MB ENCAP-150 Manual Encapsulation System



The MBRAUN MB ENCAP-150-B is a manual encapsulation system which provides all relevant process stations to encapsulate 150 x 150 mm substrates.

The compact modular setup allows connecting various kinds of deposition chambers, inkjets or spin coaters directly to the glovebox system so that the deposition process and the encapsulation process can be done within the same ultra-high pure atmosphere.

The system is suitable for customers who are interested in high quality equipment at low investment costs.

Vacuum Dryer

This unit is designed to remove moisture from the glass surface. Multiple shelves inside the vacuum oven can hold several glasses so that the oven is run batch-wise. The oven is integrated in the rear wall of the glovebox to provide enough space for the operator's manual work area.



Vacuum Dryer • Technical Features

Max. Temperature: Max. Temperature 200 °C
 Temperature Variation: ± 1.7 °C (at 100 °C)
 Temperature Fluctuation: 0.2 °C (at 100 °C)
 Display: Alphanumeric LCD Display

UV Ozone Cleaner

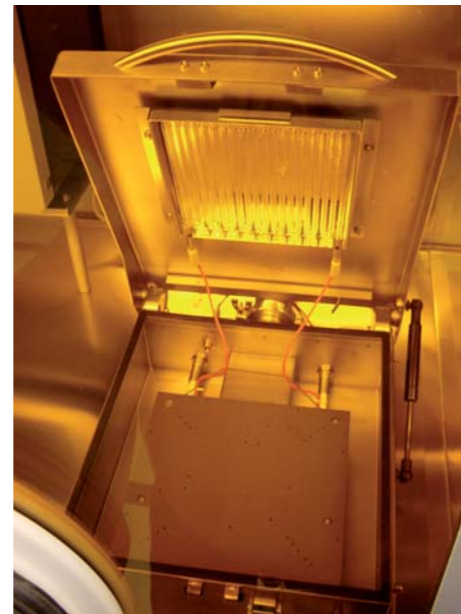
This unit is designed to remove hydrocarbons and to increase the wettability of the cover glass. The interaction of the glass surface with high intensity UV irradiation and ozone is providing an ultra-clean hydrocarbon-free surface.

The class 10 compatible design is integrated into the glovebox line so that the operator interface is outside and the process chamber itself inside the inert atmosphere. The process chamber is hermetically sealed to avoid that process and reaction gases contaminate the glovebox atmosphere.

Depending on the application the substrates are placed either on a table or on PTFE tracks in order to minimize edge contact.

The UV Ozone Cleaner is designed to be run under ambient pressure and temperature.

Processing time is selected by the help of an electronic timer. The oxygen flow into the process chamber can be adjusted up to 1 slm. The exhaust contains a catalyst trap in order to prevent environmental pollution.



Besides a hydrocarbon-free and activated surface the glass substrate has better adhesion characteristics for the UV adhesive and improved ability to be coated with multiple layers.

UV Ozone Cleaner • Technical Features

Max. Substrate Size: 160 x 160 x 10 mm
 Irradiation Intensity: > 50 mW/cm²
 Irradiation Time: 1 s to 99 min 59 s
 Dimension [W x H x D]: 360 x 303 x 470 mm

Dispenser

This easy to use 3-axis dispensing robot was especially designed for liquid-dispensing applications and enables the operator to realize even complex structures. Within the self-explaining teach-box and software multiple patterns can be taught within minutes. The dispenser itself is optimized for glovebox operation.



Dispenser • Technical Features

Max. Substrate Size: 200 x 160 x 50 mm
 Resolution: 0.02 mm/Axis
 Repeat Accuracy: ± 0.04 mm/Axis
 Interface: RS232
 Display: Teachbox LCD
 Dispensing Pattern: Dots, Lines, Bows and Circles
 Continuous Path Control
 Storage Capacity: 100 Programms, 4000 Dots/Program

UV Curing



Lamp: www.hoenle.de

According to the manual approach of the entire system the curing tool is handheld. With its high power output and intense irradiation this tool is especially designed to cure UV curing adhesives within seconds. Simultaneously the optimized reflection surface inside the lamp house guarantees a uniform intensity distribution. The lamp is modified for being used inside a glovebox

UV Curing • Technical Features

Power Output: 250 W
 Intensity: 250 mW/cm²
 (measured with Hönle UV probe)
 Radiated Area: 150 x 85 mm

Glovebox and Gas Purifier

The entire system consists of two modular gloveboxes and has one main antechamber in the standard configuration. The boxes suffice „ISO 10648-2 Class1“ (i.e. leakage less than 0.05 %Vol/h) and obtain residual oxygen and moisture levels of less than 1 ppm. The high purity atmosphere is sustained by means of a MBRAUN MB10 gas purifier.

Glovebox and Gas Purifier • Technical Features

Modular Design • Polycarbonate Windows • Stainless Steel (SUS 1.4301) body • Main Antechamber (dia. 390 mm, length 600 mm) • MB 10 Gas Purification System (Single Column, Closed Loop) • Oxygen Sensor (ppm Level) • Moisture Sensor (ppm Level) • Edwards RV-12 Oil Piston Pump



Available Upgrades

Antistatic Kit

Antistatic coating for windows, stainless steel gloveports

Pump Upgrade

Dry pump instead of rotary vane pump

UV Protection Windows

For protecting the materials inside the glovebox from UV radiation

Gas Purifier

MBRAUN MB 200 gas purification system for continuous operation instead of MBRAUN MB 10

Improved Particle Removal

Laminar flow units in box ceiling to reach a cleanroom class level below Class 10

Plasma Treatment

Atmospheric plasma tool to enhance surface activation characteristics of substrate and cover glass

UV Curing

Pneumatically driven lamination unit

High Temperature Oven

Bi-functional vacuum oven which acts as antechamber and vacuum oven; maximum temperature T_{max} = 250 °C

Automation Upgrade

Semi-automatic robot based system; controlled via touch panel by drag and drop method

