Clean. Engineering. Expertise.

GLOVEBOX WORKSTATIONS

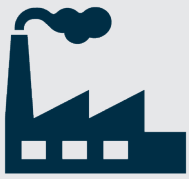
INERTGAS SOLUTIONS

High Quality Products and Services

CONTENT

KEY FACTS

ABOUT US



Headquarters and
main production area
Munich, Germany

International network
Through subsidiaries
& Strong partners
4 production sites

Know-How of
approx.400 employees

Founded in 1976 as a manufacturer of pure inertgas glovebox systems, MBRAUN has expanded its product and service portfolio over the years, offering technical solutions for thermal treatment, vacuum coating, operator safety and automated material handling. The spectrum of dedicated solutions ranges from standardized laboratory systems to fully customized system solutions for large-scale industry. The systems are used in high-tech applications such as the research and production of flat screens based on OLED technology, LEDs, thin-film batteries, solar cells (perovskites) and a range of pharmaceutical products.

MBRAUN maintains intensive cooperation with research institutions and development departments and is a leading global supplier to university laboratories and renowned industrial customers. With production sites in Germany, the USA and China, as well as its own sales and service subsidiaries in the UK, France, South Korea and India, MBRAUN can supply its customers globally and ensure customer-oriented service. With an installed base of more than 25,000 systems, MBRAUN is currently represented in more than 40 countries and relies on the expertise of more than 400 employees.

Whether your work involves gloveboxes, inert gas purification, thin-film technology, isolators or custom system solutions in clean environments, MBRAUN has the right solution for you.

WHY CHOOSE

MBRAUN GLOVEBOX?

WE ARE HERE TO EMPOWER YOUR SUCCESS AND DRIVE YOUR OPERATIONS FORWARD.

MBRAUN stands as a premier manufacturer of glovebox solutions, distinguished by our commitment to providing more than just gloveboxes. We deliver comprehensive solutions rooted in a collaborative partnership, characterized by highest level counseling, customization, innovation, quality, global support, expertise, versatility, and sustainability. Experience the MBRAUN difference - a comprehensive approach that goes beyond products to drive your success.

Tailored Solutions

At MBRAUN, we understand that every project is unique. That's why we offer extensive customization options, ensuring that your glovebox solution perfectly aligns with your specific requirements and applications. From size and configuration to specialized features, we'll work closely with you to create a solution that exceeds your expectations.

Versatility Across Applications

Whether you're in research, thin-film cell manufacturing, pharmaceuticals, or beyond, our glovebox solutions are designed to meet the diverse needs of various industries. Our versatile designs can accommodate different processes and applications, providing flexibility and scalability for your operations.

Uncompromising Quality

When you choose MBRAUN, you're investing in quality and reliability. Our gloveboxes undergo rigorous testing and adhere to stringent quality control standards, delivering unmatched durability and performance you can rely on.

Global Support Network

With a tight worldwide presence of subsidiaries and partners, we offer comprehensive support and service wherever you are. From installation and training to ongoing maintenance and technical support, we're here to ensure your glovebox operates at peak performance throughout its life cycle.

Decades of Expertise

Our team of engineers and specialists has a deep understanding of glovebox and gas purification technology and can provide invaluable insights and guidance to help you make informed decisions.

Cutting-Edge Technology

Our glovebox solutions incorporate advanced technologies, such as integrated monitoring systems and state-of-the-art gas purification technologies, ensuring optimal performance and efficiency for your processes.

OVERVIEW

GLOVEBOX WORKSTATIONS

Our standard glovebox solutions are designed to adapt to your specific needs, offering individual configuration to suit a variety of applications. Within our range, we offer three distinct models, each catering to different requirements and levels of functionality. Whether you're seeking an entry-level option, a versatile university all-rounder, or the pinnacle of performance and capability, MBRAUN has the perfect solution for you.

	LABstar pro	UNIlab pro	LABmaster pro
Modular System	✓	✓	✓
Double Sided Possible	✗	✓	✓
Different Box Sizes	4	16	16
Gas Purification Systems: Single Filter Double Filter	 MB-10-G MB-100-G	 MB-15-G MB-150-G	 MB-20-G / -I MB-200-G / -I
Standard Position of Purifier	Below Box Frame	Below Antechamber	Below Antechamber or Integrated in Box Frame
Control Unit	MBRAUN PLC	MBRAUN PLC	Siemens PLC
Removal of	Oxygen < 1ppm Moisture < 1ppm	Oxygen < 1ppm Moisture < 1ppm	Oxygen < 1ppm Moisture < 1ppm opt. Nitrogen < 1ppm
Filter capacity per purification line: (O2) Oxygen	20 l	36 l	36 l
Filter capacity per purification line: (H2O) Moisture	900 g	1350 g	1350 g
Common Working Gas	Nitrogen, Argon or Helium	Nitrogen, Argon or Helium	Nitrogen, Argon or Helium
Range of options	Entry	Intermediate	Advanced

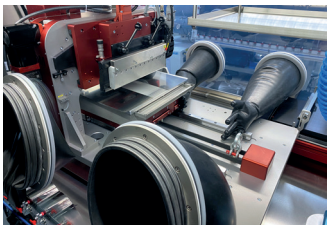
CUSTOMIZED SOLUTIONS

ENGINEERING EXCELLENCE

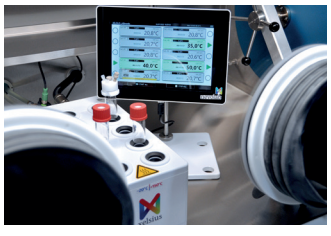
In our pursuit of excellence, we understand that every challenge requires a tailored approach. While our standard gloveboxes serve a multitude of purposes, the unique demands of our industrial partners often call for bespoke solutions. At MBRAUN, we embrace this need for customization as an opportunity to innovate. With our team of seasoned engineers, we thrive on crafting specialized enclosures that not only meet but exceed expectations. It's not just about providing solutions; it's about enhancing productivity, driving progress, and transforming challenges into triumphs

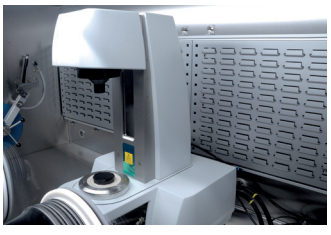
Glovebox Integration

When striving for scientific discoveries, precision and adaptability are of the utmost importance. At MBRAUN, we understand that your experiments often require specialized equipment to achieve your research objectives. That's why we offer seamless integration of your specific equipment into our glovebox solutions.

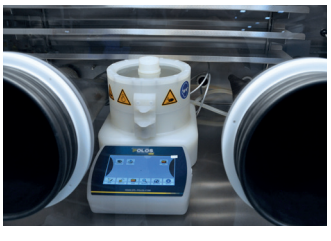


Certain equipment may necessitate adjustments to function effectively within an inert atmosphere. Whether mechanical modifications for ergonomic purposes or electrical adaptations for seamless operation, MBRAUN has the expertise to accommodate your needs.



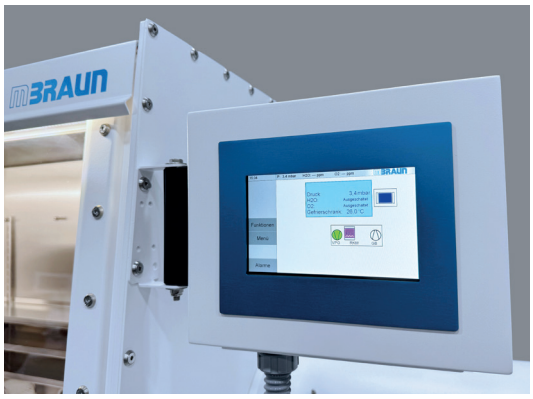


Additionally, our comprehensive range includes a variety of standard and custom-made leak tight feedthroughs, providing effortless interfacing for your equipment. With MBRAUN, you can trust in a solution that not only meets your experimental requirements but also seamlessly integrates with your existing setup, ensuring optimal performance and efficiency for your research efforts.



LABstar^{pro}

Compact. Powerful. Precise.

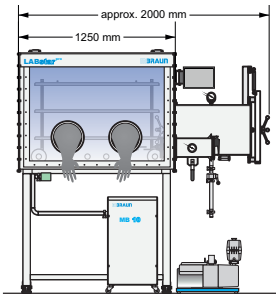


The LABstar^{pro} Glovebox - compact yet powerful. With integrated inert gas purification, stainless steel construction and a MBRAUN PLC controller, it offers seamless operation. Enjoy simultaneous purification and regeneration in the DP (Double Purifier) version, a large antechamber and both negative and positive pressure options. Easily adjust pressure with the foot switch. Explore optional features for enhanced functionality. Our antechambers provide unrivaled flexibility as they are removable and not permanently welded, allowing for easy dismantling and transportation when needed.

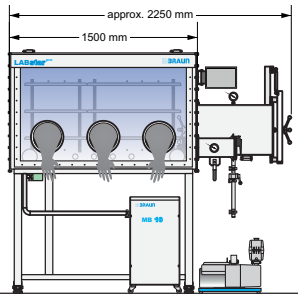
GLOVEBOX TECHNICAL DATA	
Type of construction	Modular box with screwed in flanged side panels
Material	Stainless steel (US 304, 1.4301)
Inside lengths	1250 / 1500 / 1800 / 2000 mm
Inside depth	Single sided: 780mm
Inside height	900 mm
Leak rate	< 0.05 Vol%/h, Class 1 according to ISO 10648-2 (Oxygen Method)
Window	Scratch and chemical resistant window
Glove ports	220 mm diameter, O-ring sealed
Gloves	Butyl
Feedthroughs	5 DN40KF flanges on the rear wall and 2 on the roof are available for use; 6 remain accessible after reserving one for the power supply (see below)
Electrical feedthrough	1 (incl. 1 power cord Type B 6 Outlet power strip)
Dust filter	HEPA H13 in/out
Shelves	3 adjustable shelves rear side (length: depending on box length)

SIZES AND CONFIGURATION

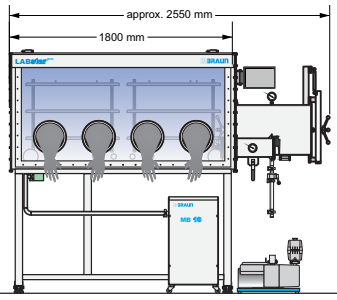
Dimensions in mm



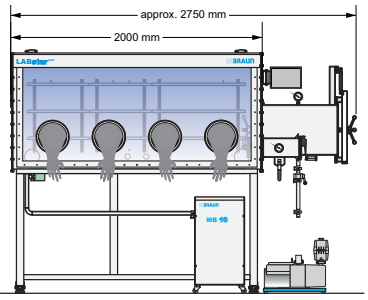
Weight: approx.
330 - 380 kg



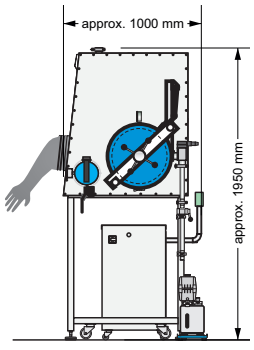
Weight: approx.
360 - 410 kg



Weight: approx.
390 - 440 kg



Weight: approx.
410 - 460 kg



UTILITIES				
	Medium (or type)	Pressure	Flow rate	Connection
Working gas	Nitrogen, Argon, Helium or mixtures of those	5.. 6 bar	250 l/min	Ø 10 mm cutting ring-screw connection
Regeneration gas	N2/H2 mix. or Ar/H2 mix. (H2 2-5 %)	0.3 - 0.4 bar	50	Ø 10 mm cutting ring-screw connection
Regeneration gas exhaust	Flexible hose, 9 x 3 mm			
Vacuum pump exhaust	Depressurized flexible hose, diameter not less than 25 mm (to be supplied by customer)			
Electrical load (FLA) may vary upon configuration	230 V / 50 ... 60 Hz / 6.4 ... 8 A 115 V / 50 ... 60 Hz / 13 ... 16 A 100 V / 50 ... 60 Hz / 15 ... 18.5 A			

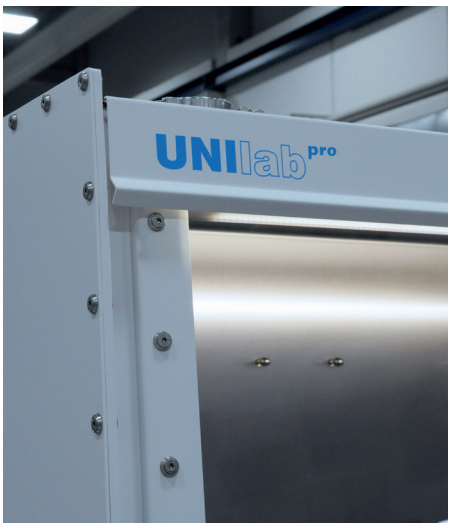
The gas purifier unit for our LABstar glovebox is positioned under the glovebox. It is not built into the glovebox frame but is mounted on castors, allowing for easy relocation.

GAS PURIFIER UNIT TECHNICAL DATA	
Attainable purity level	Moisture < 1 ppm, Oxygen < 1 ppm
Recommended enclosure volume	Up to 2 m³
Number of purification lines per purifier	1 for Single Purifier (SP) / 2 for Double Purifier (DP)
Filter capacity per purification line	
(O2) Oxygen	20 l
(H2O) Moisture	900 g
Control unit	MBRAUN PLC
Box pressure control	Automatic pressure control with foot switch (± 15mbar)
Vacuum pump	Rotary vane pump with 17 m³/h (10 CFM)
Blower (50 Hz / 60 Hz)	Variable speed up to 22 m³/h
Weight	Approx. 51 kg (SP), approx.104 kg (DP)

UNIlab^{pro}

Precision. Adaptability. Innovation.

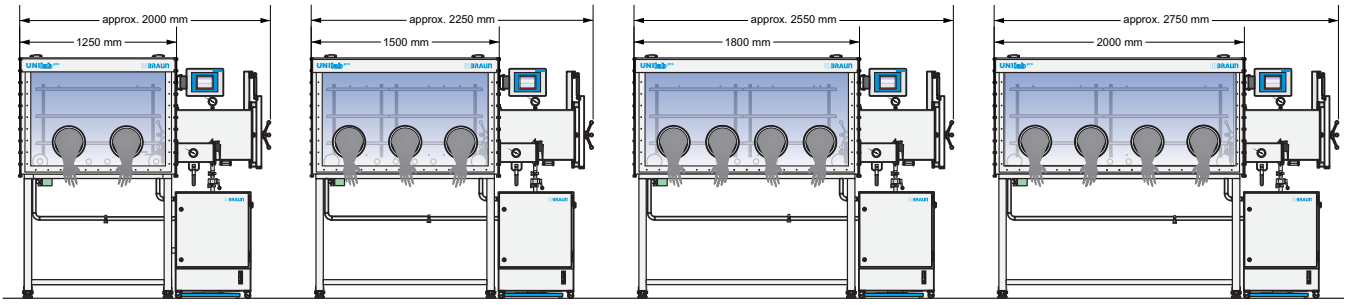
The UNIlab^{pro} Glovebox - the versatile research all-rounder. Crafted with a stainless steel enclosure and a resistant window, it ensures both strength and visibility. Featuring our advanced MBRAUN PLC controller and large color touch panel for intuitive operation. With simultaneous purification and regeneration, closed-loop recirculation and both negative and positive pressure options, it adapts to diverse research needs. Easily adjust pressure with the foot switch. The spacious antechamber includes a sliding tray for easy transfers. Explore optional features for enhanced functionality.



GLOVEBOX TECHNICAL DATA	
Type of construction	Modular box with screwed in flanged side panels
Material	Stainless steel (US 304, 1.4301)
Inside lengths	1250 / 1500 / 1800 / 2000 mm
Inside depth	Single sided: 780mm or 1000 / Double sided: 1000 or 1200 mm
Inside height	900 mm
Leak rate	< 0.05 Vol%/h, Class 1 according to ISO 10648-2 (Oxygen Method)
Window	Scratch and chemical resistant window
Glove ports	220 mm diameter, O-ring sealed
Gloves	Butyl
Feedthroughs	5 DN40KF flanges on the rear wall and 2 on the roof are available for use; 6 remain accessible after reserving one for the power supply (see below)
Electrical feedthrough	1 (incl. 1 power cord Type B 6 Outlet power strip)
Dust filter	HEPA H13 in/out
Shelves	3 adjustable shelves rear side (single sided) or hanging (double sided)

SIZES AND CONFIGURATION

Dimensions in mm

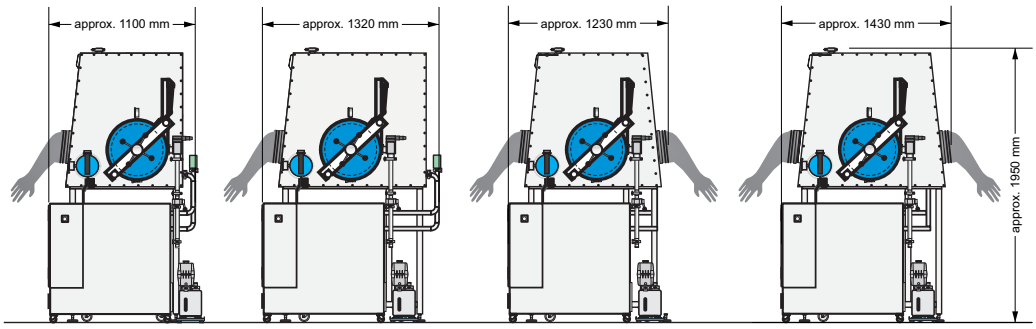


Weight: approx.
440 - 490 kg

Weight: approx.
470 - 520 kg

Weight: approx.
500 - 550 kg

Weight: approx.
520 - 470 kg



UTILITIES				
	Medium (or type)	Pressure	Flow rate	Connection
Working gas	Nitrogen, Argon, Helium or mixtures of those	5.. 6 bar	250 l/min	Ø 10 mm cutting ring-screw connection
Regeneration gas	N2/H2 mix. or Ar/H2 mix. (H2 2-5 %)	0.3 - 0.4 bar	50	Ø 10 mm cutting ring-screw connection
Regeneration gas exhaust	Flexible hose, 9 x 3 mm			
Vacuum pump exhaust	Depressurized flexible hose, diameter not less than 25 mm (to be supplied by customer)			
Electrical power (FLA) for DP version	230 V / 50 ... 60 Hz / 6.4 ... 8 A 115 V / 50 ... 60 Hz / 13 ... 16 A 100 V / 50 ... 60 Hz / 15 ... 18.5 A			

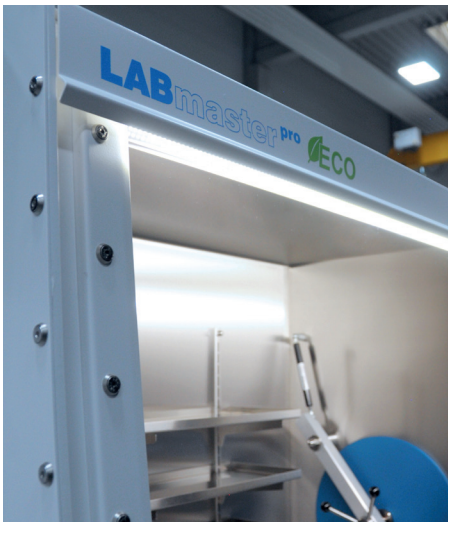
The gas purification system of our UNIlab glovebox is conveniently located under the main antechamber and is equipped with castors for easy mobility

GAS PURIFIER UNIT TECHNICAL DATA	
Attainable purity level	Moisture < 1 ppm, Oxygen < 1 ppm
Recommended enclosure volume	Up to 5 m³
Number of purification lines per purifier	1 for Single Purifier (SP) / 2 for Double Purifier (DP)
Filter capacity per purification line	
(O2) Oxygen	36 l
(H2O) Moisture	1350 g
Control unit	MBRAUN PLC
Box pressure control	Automatic pressure control with foot switch (± 15mbar)
Vacuum pump	Rotary vane pump with 17 m³/h (10 CFM)
Blower (50 Hz / 60 Hz)	Frequency controlled up to 88 m³/h
Weight	Approx. 140 - 205 kg (depending on configuration)
Size	820 x 600 x 848 mm (L x W x H)

LABmaster^{pro}

Capability. Versatile. Performance.

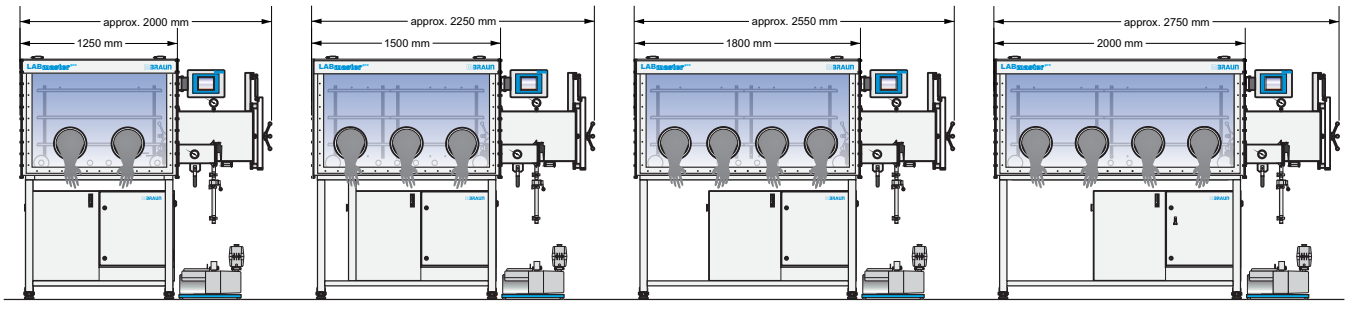
The LABmaster^{pro} Glovebox - the ultimate solution for controlled environments. Managed by a PLC system with a widespread Siemens color touch panel, operation is intuitive and efficient. Using the Siemens system offers the widest range of options. With simultaneous purification and regeneration in the DP version, along with closed-loop recirculation, it optimizes performance. Offering both negative and positive pressure operation, it adapts to diverse needs. Plus, explore our range of optional features for enhanced functionality.



GLOVEBOX TECHNICAL DATA	
Type of construction	Modular box with screwed in flanged side panels
Material	Stainless steel (US 304, 1.4301)
Inside lengths	1250 / 1500 / 1800 / 2000 mm
Inside depth	Single sided: 780mm or 1000 / Double sided: 1000 or 1200 mm
Inside height	900 mm
Leak rate	< 0.05 Vol%/h, Class 1 according to ISO 10648-2 (Oxygen Method)
Window	Scratch and chemical resistant window
Glove ports	220 mm diameter, O-ring sealed
Gloves	Butyl
Feedthroughs	5 DN40KF flanges on the rear wall and 2 on the roof are available for use; 6 remain accessible after reserving one for the power supply (see below)
Electrical feedthrough	1
Dust filter	HEPA H13 in/out
Shelves	3 adjustable shelves rear side (single sided) or hanging (double sided)

SIZES AND CONFIGURATION

Dimensions in mm

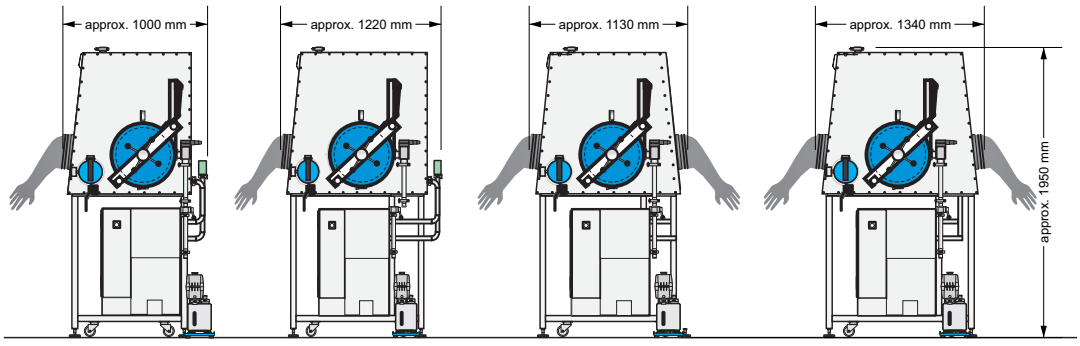


Weight: approx.
500 - 550 kg

Weight: approx.
540 - 590 kg

Weight: approx.
590 - 640 kg

Weight: approx.
610 - 660 kg

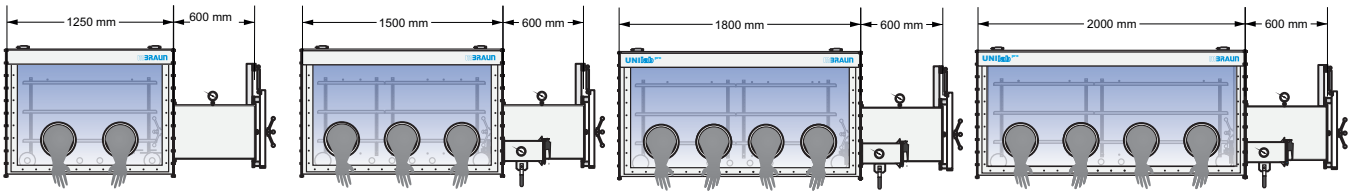


UTILITIES				
	Medium (or type)	Pressure	Flow rate	Connection
Working gas	Nitrogen, Argon, Helium or mixtures of those	5.. 6 bar	250 l/min	Ø 10 mm cutting ring-screw connection
Regeneration gas	N2/H2 mix. or Ar/H2 mix. (H2 2-5 %)	0.3 - 0.4 bar	50	Ø 10 mm cutting ring-screw connection
Regeneration gas exhaust	Flexible hose, 9 x 3 mm			
Vacuum pump exhaust	Depressurized flexible hose, diameter not less than 25 mm (to be supplied by customer)			
Electrical power (FLA) for DP version	230 V / 50 ... 60 Hz / 6.4 ... 8 A 115 V / 50 ... 60 Hz / 13 ... 16 A 100 V / 50 ... 60 Hz / 15 ... 18.5 A			

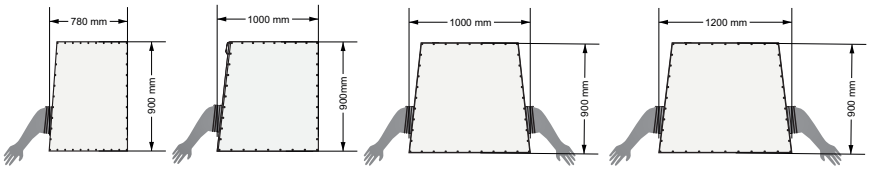
Our LABmaster model offers flexible installation options for the gas purifier system. You can choose to have it positioned either under the glovebox or beneath the antechamber, depending on your spatial and operational preferences.

GAS PURIFIER UNIT TECHNICAL DATA	
Attainable purity level	Moisture < 1 ppm, Oxygen < 1 ppm
Recommended enclosure volume	Up to 5 m³
Number of purification lines per purifier	1 for Single Purifier (SP) / 2 for Double Purifier (DP)
Filter capacity per purification line	
(O2) Oxygen	36 l
(H2O) Moisture	1350 g
Box pressure control	Automatic pressure control with foot switch (± 15mbar)
Vacuum pump	Rotary vane pump with 17 m³/h (10 CFM)
Blower (50 Hz / 60 Hz)	Frequency controlled up to 88 m³/h
Weight	Approx. 140 - 205 kg (depending on configuration)
Size	1176 x 525 x 720 mm (L x W x H)

SIZES AND CONFIGURATION



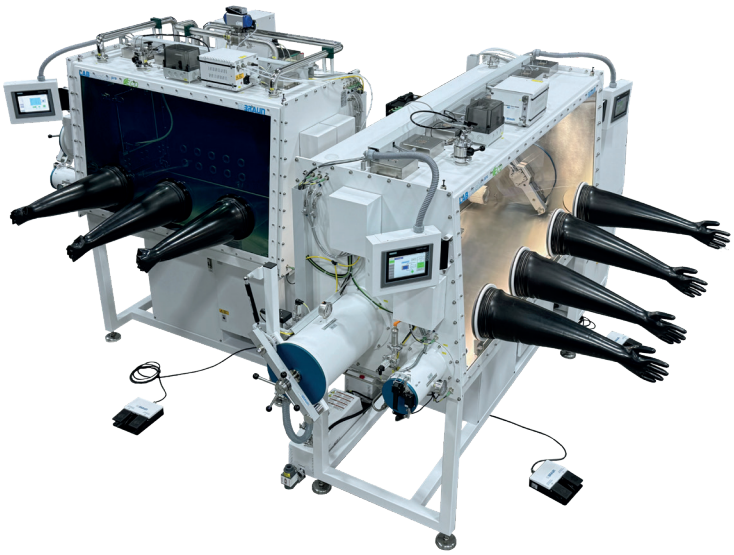
GLOVEBOX VOLUMES			
Box length / Depth	780 mm	1000 mm	1200 mm
1250 mm	0.8 m³	1.1 m³	1.3 m³
1500 mm	1.0 m³	1.3 m³	1.6 m³
1800 mm	1.3 m³	1.6 m³	1.9 m³
2000 mm	1.4 m³	1.8 m³	2.1 m³



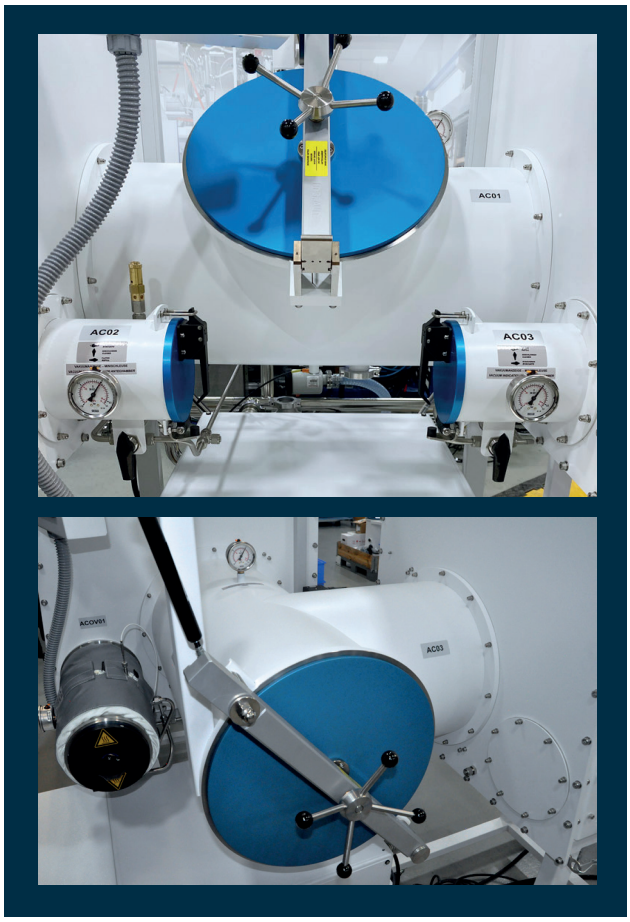
Glovebox Cluster

Explore the versatility of MBRAUN's modular glovebox options, offering endless configurations to suit your specific needs. Easily connect and expand gloveboxes in any combination to create clusters of any size. For larger setups spanning multiple gloveboxes, our transport tunnel seamlessly connects them. Choose from a wide range of antechamber options to customize your glovebox setup with ease and precision.

Unlocking limitless potential, we transform concepts into tailored solutions.

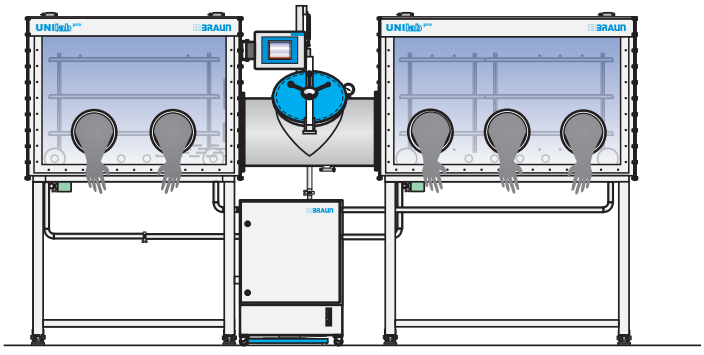


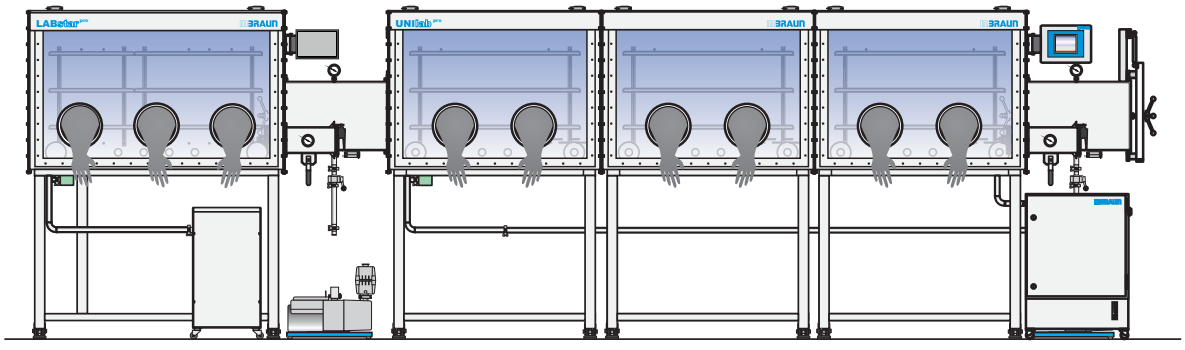
The scope of supply MBRAUN offers starts with single, stand-alone gloveboxes, stretches over multiple interconnected mini-environments and goes up to fully automated systems including large integrated process-tools as defined by the client. This flexibility of our approach allows to tailor the system setup to the technical requirements and the available budget of our customers.

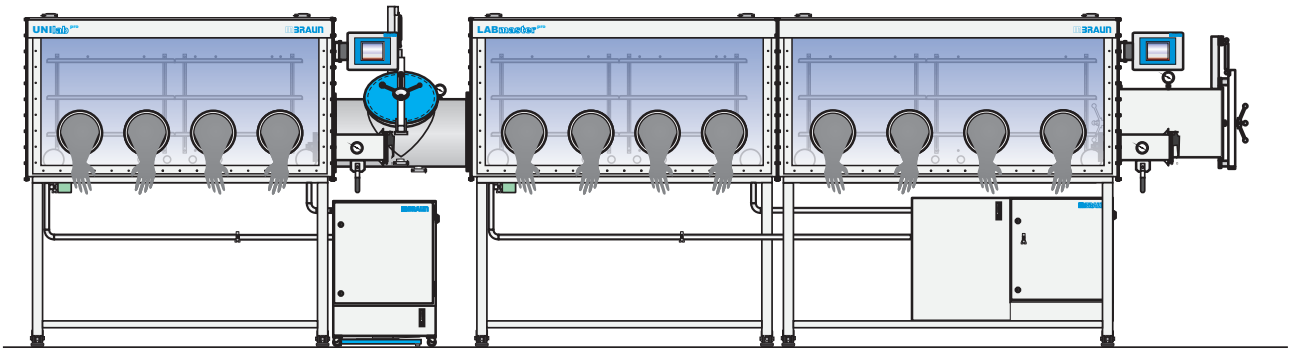


EMPOWERING INNOVATION THROUGH PERSONALIZED SOLUTIONS

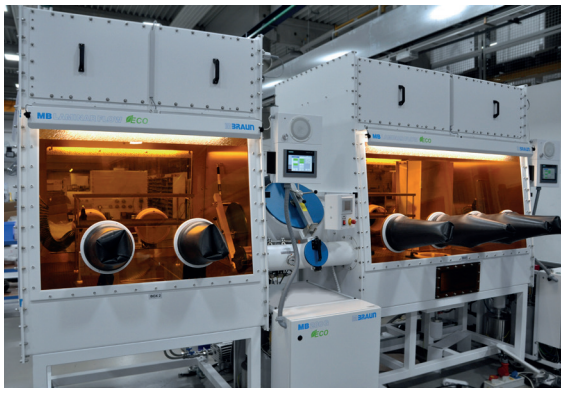
Configuration Examples:

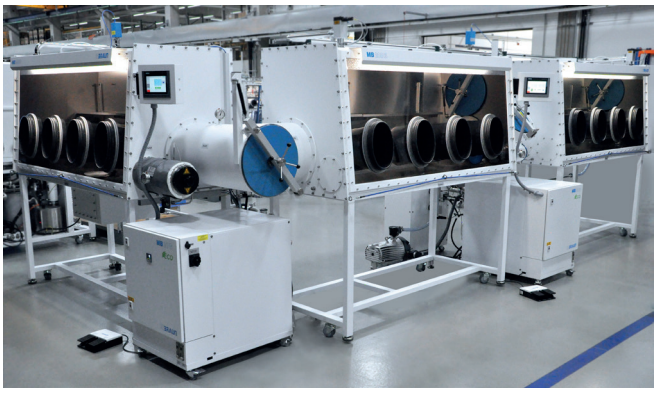


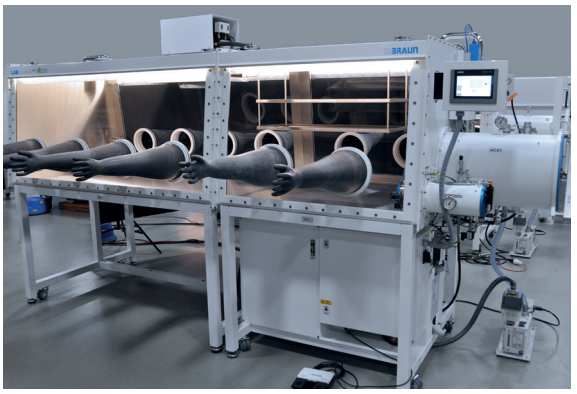




Mini-Clusters



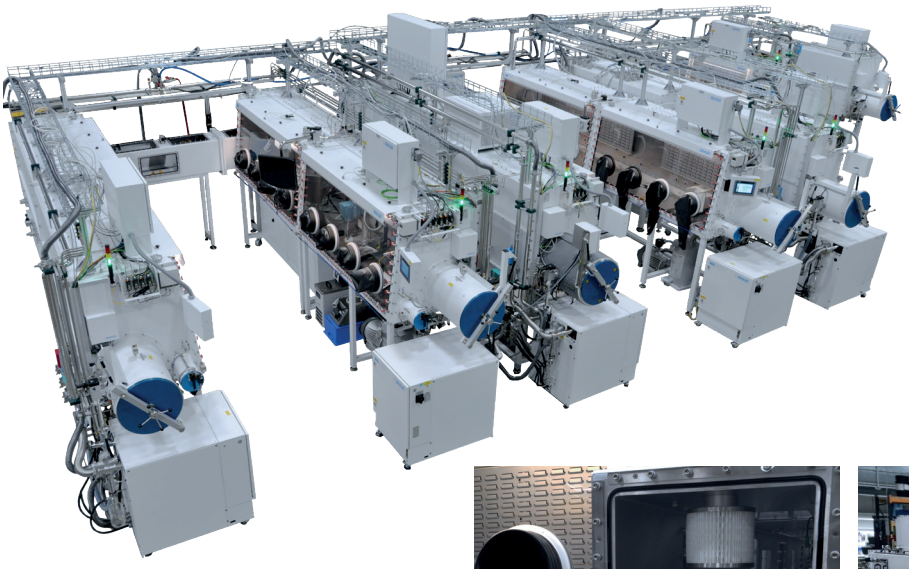




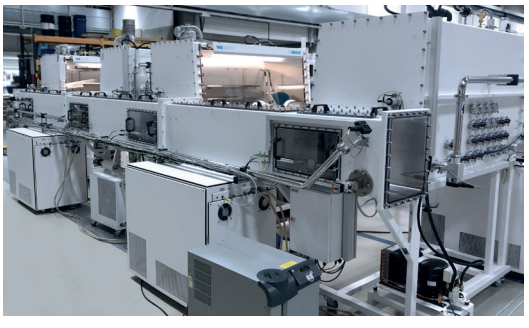
Turnkey Solutions

Clusters

H_2O O_2 N_2 < 1ppm



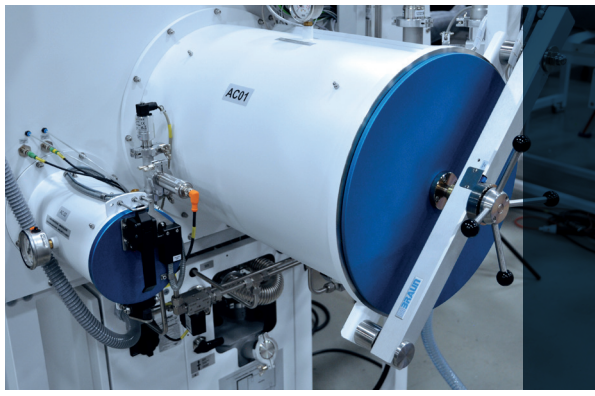
- Layout tailored to process flow
- Automated transport tunnel
- Equipment Integration



MAIN & MINI

ANTECHAMBER

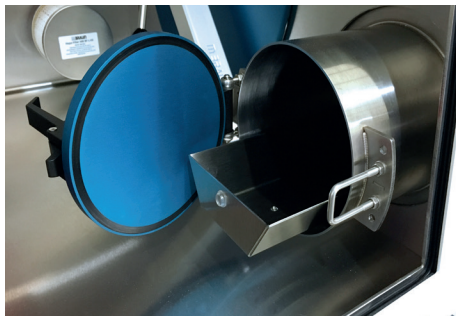
The mini-antechamber option completes our large main antechamber for streamlined glovebox operations. It allows you to access materials and tools swiftly, saving 90% gas compared to the main antechamber. Moreover, its secure door mechanism prevents damage, ensuring smooth and efficient usage.
Our antechambers let you bring your materials and tools into the box without polluting the glovebox atmosphere.
We offer both standard and customized systems, with different sizes and options for heating, automation and safety.



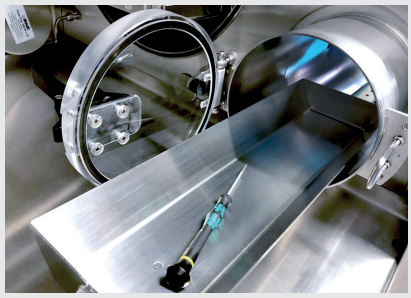
MAIN ANTECHAMBER TECHNICAL DATA	
Type	Cylindrical
Material	Stainless steel
Dimensions	390 x 600 mm (D x L)
Leak rate	< 10E-4 mbar l/s
Sliding tray	Stainless steel
Dimensions of sliding tray	575 x 290 mm (L x W)
Doors	Aluminum, anodized, thickness 10 mm
Door lock	Door closing mechanism with spindle handle for one hand operation
Pressure gauge	Analog
Vacuum / Refill process	Manual operation via hand valves

MINI ANTECHAMBER TECHNICAL DATA	
Type	Cylindrical
Material	Stainless steel
Dimensions	150 x 400 mm (D x L)
Leak rate	< 10E-4 mbar l/s
Sliding tray	Stainless steel
Dimensions of sliding tray	387 x 120 mm (L x W)
Doors	Aluminum, anodized, thickness 12 mm
Door lock	Hinged doors attached to the antechamber body to prevent door from falling out
Pressure gauge	Analog
Vacuum / Refill process	Manual operation via hand valves

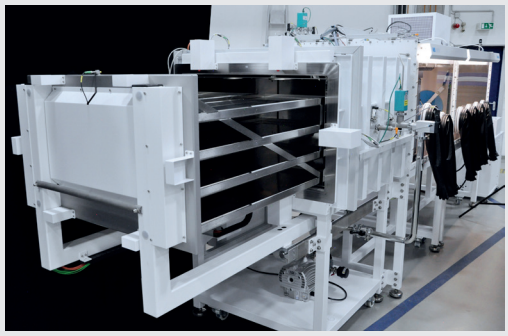
Our antechambers can be flexibly placed on either the left or right side of the glovebox. This adaptability allows for the configuration to be tailored to the specific spatial requirements and workflows of your laboratory or production facility, ensuring optimal efficiency and ease of use.

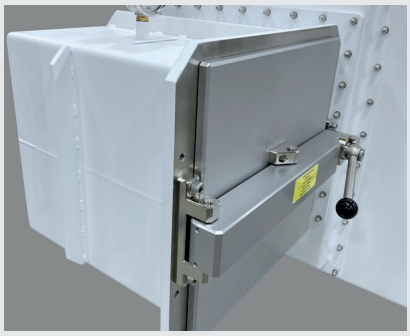


The mini antechamber can also have different shapes or arrangements, such as L-shaped. A glass lid makes it easy to see what is inside the antechamber without having to open it.



Discover even more customization with our cubic antechambers. If requested, we can provide square antechambers to perfectly suit your requirements.

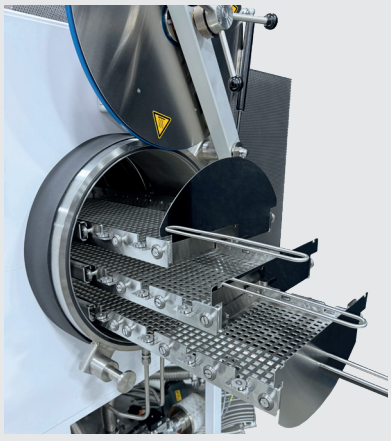


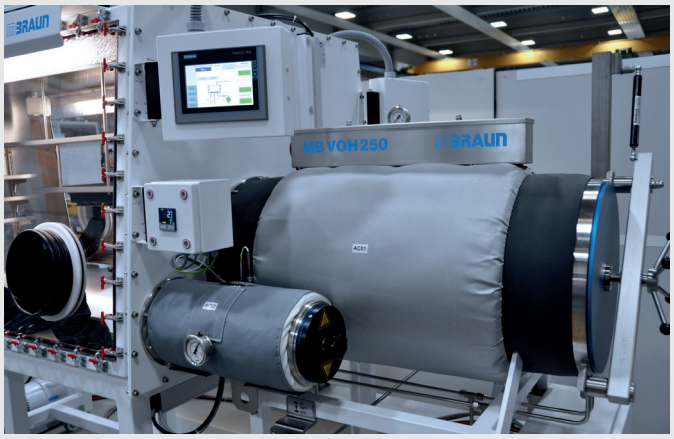


CUSTOMIZED

ANTECHAMBER OPTIONS

Experience seamless antechamber management with our range of advanced options tailored to enhance your glovebox operations. Automated vacuum / refill cycles ensure effortless operation, supported by precise cycle duration measurements or vacuum sensors for optimal antechamber functionality. Safeguarding your workspace, our refill with clean gas feature eliminates contamination risks by purging the antechamber with pristine gas from your supply, ensuring a safe environment when accessing instruments or opening the outer door. Elevating safety standards, our door locks option minimizes errors by preventing premature access until the cycle completes, promoting reliability throughout your operations. For unparalleled convenience and safety, our Automatic Doors feature offers seamless operation, while motorized antechamber shelves streamline movement, enhancing efficiency. Experience enhanced workflow and safety in your laboratory environment with our innovative antechamber options.





RECOMMENDED ADD-ONS

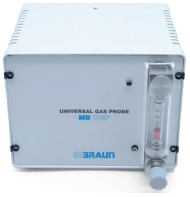
ANALYZERS

For precise control of your glovebox atmosphere, accurate measurement of oxygen, moisture, solvents, and nitrogen levels is essential. At MBRAUN, we understand the importance of maintaining purity, which is why we've developed advanced analyzers tailored to meet your needs.

Our analyzers are designed to provide unparalleled accuracy in the low measurement range, typically 0-1 ppm, ensuring that your atmosphere remains as pure as possible. Through meticulous signal processing adjustments, we've optimized our sensors to deliver precise readings even in the most challenging conditions.

We offer a range of analyzers adapted to different atmospheres, empowering you to maintain the desired level of purity for your specific application: **Moisture, Oxygen, Solvent, Nitrogen, UGP Gas**

To ensure the proper use and function of the analyzer and to maintain the warranty, it is important to have it calibrated annually by our trained personnel, who will ensure the correct procedure. You will also receive a corresponding calibration certificate from us.



ECO-MODE

ECO Mode operation

The ECO mode option is designed to reduce noise emission and reduce power consumption up to 90%.

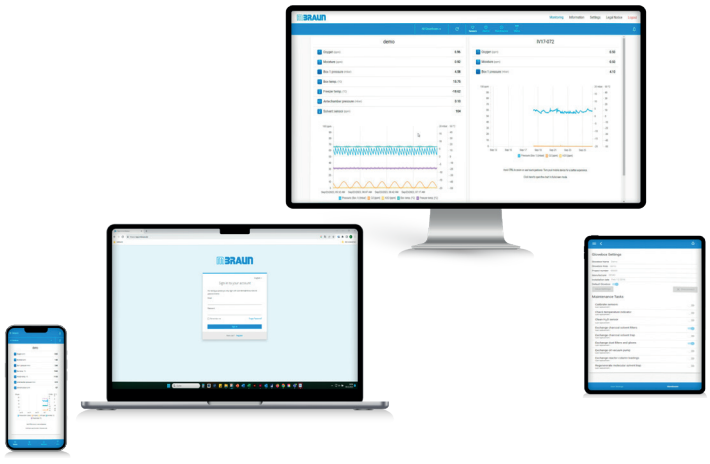
Unlock significant energy savings of up to 93% with our innovative ECO-MODE option. By intelligently managing energy-intensive components, this feature ensures optimal system performance while drastically reducing energy consumption. Not only does ECO-MODE minimize power usage, but it also diminishes noise emissions for a quieter working environment.

WEB-APP

myMBRAUN

Our web-app is compatible with any of our glovebox systems. It can be accessed from any device via your browser.

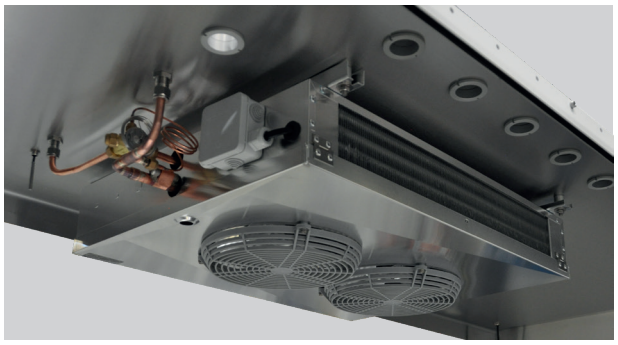
- Real-time data
- Cross-device compatibility
- Remote monitoring of MBRAUN systems
- Parameters and trends of MBRAUN analyzers
- Reporting of errors and necessary maintenance



BOX COOLING

CIRCULATING COOLER

MBRAUN offers solutions with a heat exchanger integrated into the purification system and/or integrated into the enclosure. Different powers are available depending on your needs.



HEAT EXCHANGER

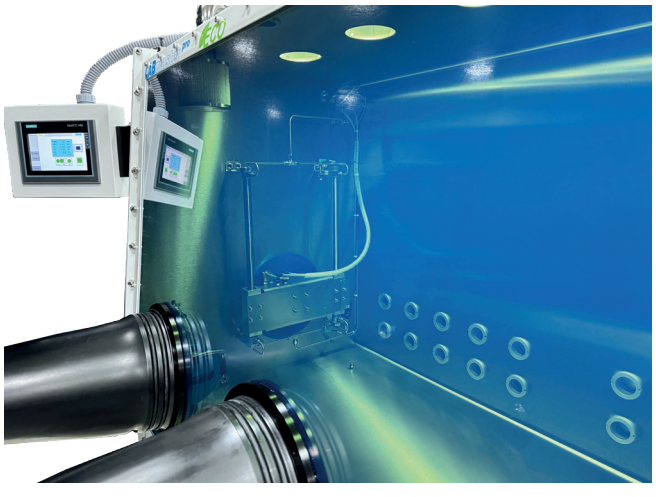
Circulation in a closed circuit is necessary for the continuous purification of the atmosphere in your glovebox. This circulation necessarily generates a little heat because of the gas compression at the outlet of the turbine.
MBRAUN offers for certain systems the possibility of integrating a heat exchanger into the gas purification system. This will allow you to cool the atmosphere in your glove box by circulating a coolant in this exchanger.

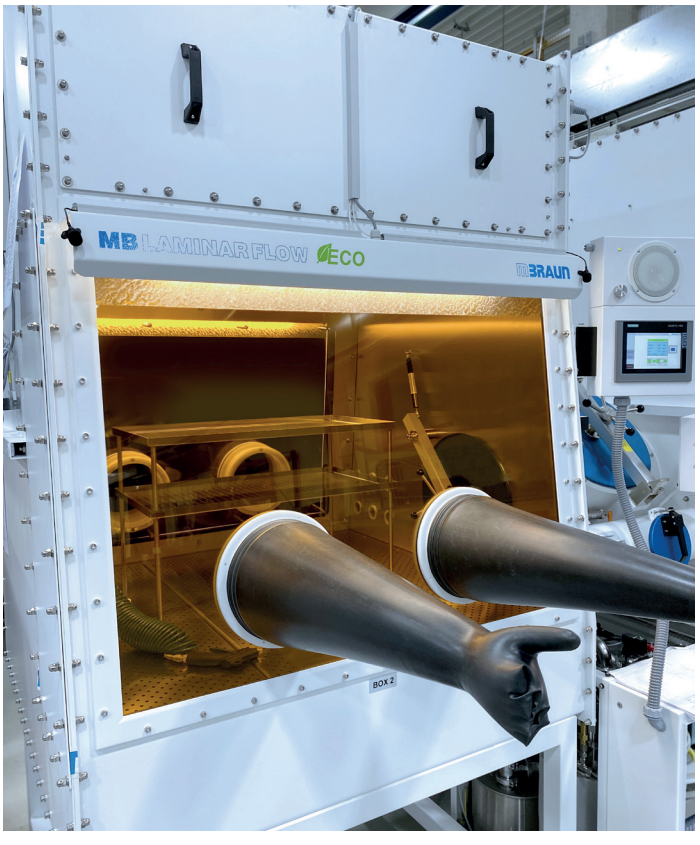
DIFFERENT

WINDOW OPTIONS

Complete Stereo microscope for the integration in MBRAUN glovebox windows.

Our glovebox systems come usually with polycarbonate windows featuring SAPHIR hard coating, offering resistance against chemicals and scratches. As optional upgrades, choose sato safety glass windows for added durability or opt for a microscope installation to enhance observation capabilities. Additionally, select UV or laser protection for specialized applications, along with anti static properties for added safety. With our range of window options, tailor your glovebox to meet your unique requirements while ensuring optimal visibility and performance.





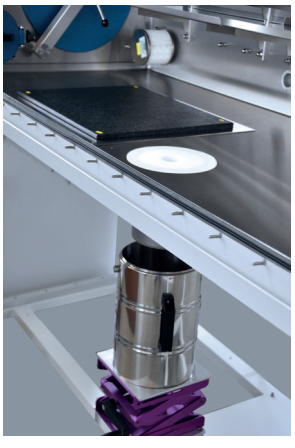
GLOVEBOX INTEGRATED

FREEZERS

Elevate your research capabilities with our glovebox integrated freezers, seamlessly installed within the side or rear walls of the glovebox enclosure. Available across different models, these freezers offer a wide temperature range from +10°C down to -40°C, ensuring precise control over your samples and materials. With capacities of up to 40 liters, you can slow down you process to examine each step of it or simply just store a wide variety of specimens, reagents, and samples directly within your controlled environment.
Experience unmatched convenience and efficiency with our glovebox integrated freezers, designed to meet the numerous needs of modern laboratory research.

COLD WELL

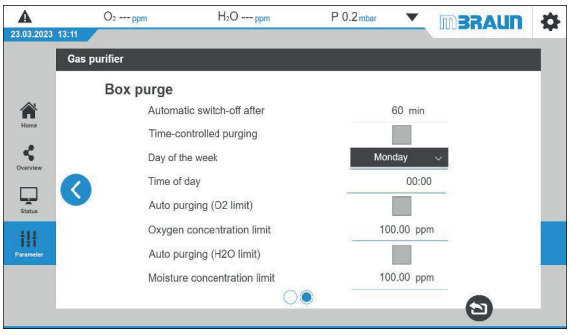
Our cold well is designed to store or manipulate samples, materials, or reagents at extremely low temperatures without the need to transfer them to an external refrigerator or freezer. The Cold-Well allows users to perform their experiments directly within the glovebox, enhancing protection against contamination and improving workflow efficiency.

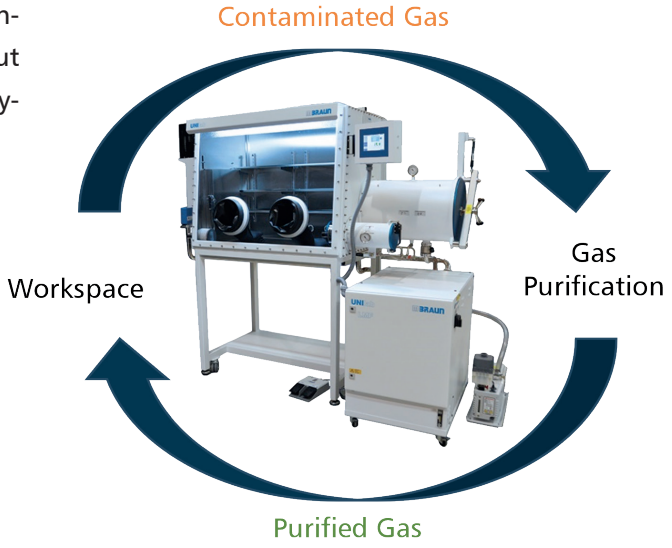


AUTOMATED

BOX PURGING

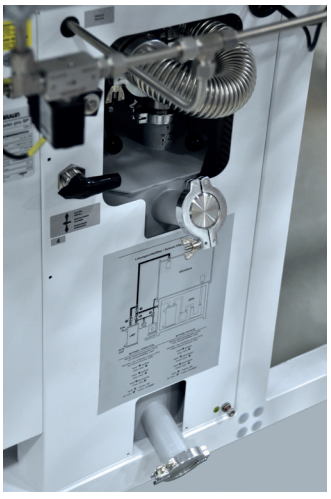
The glovebox purge function is essential for system startup and maintenance, swiftly reducing oxygen and moisture levels to safeguard stored materials, particularly in response to incidents like glove punctures or leaks. For enhanced convenience, advanced versions automatically trigger purging when oxygen levels exceed set thresholds, shielding materials from oxygen, moisture and nitrogen damage. Furthermore, our antechamber purge function ensures a clean atmosphere for introducing materials without risking glovebox contamination, complementing the emptying/filling cycle.





SOLVENT TRAPS

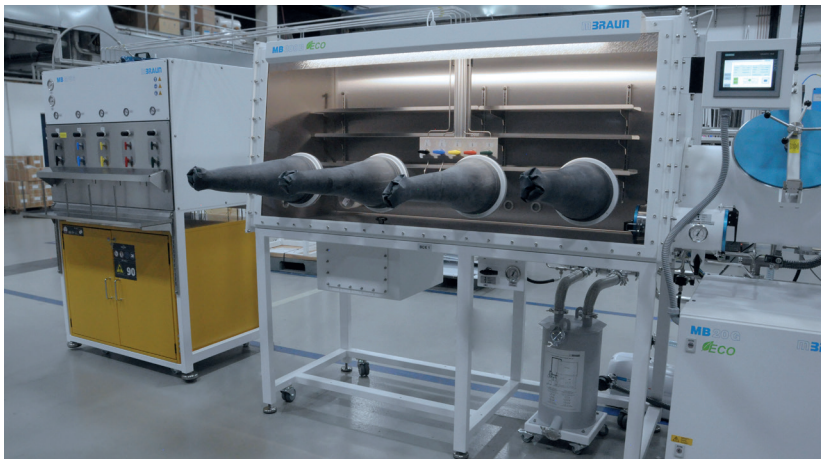
When solvents are used in the mini-environment, some of them evaporate and end up in the atmosphere. Those solvent vapors need to be removed from the atmosphere to avoid polluting your next manipulations, and to avoid damaging certain glovebox components.
MBRAUN offers a range of solutions for every application, from integrated filters to regenerable traps.



INTEGRATED AND STANDALONE

SOLVENT PURIFICATION

Our complete solvent purification systems, designed to eliminate oxygen and moisture from solvents, can be seamlessly integrated with an MBRAUN glovebox or utilized as an efficient standalone unit.

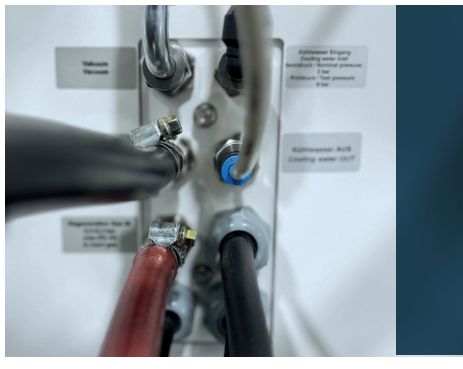


GROUPING OF EXHAUSTS

Safety and maintaining laboratory air integrity are top priorities when handling hazardous substances in gloveboxes. That's why we've developed the Grouping Of Exhausts (GOE) accessory for effective confinement and ventilation.

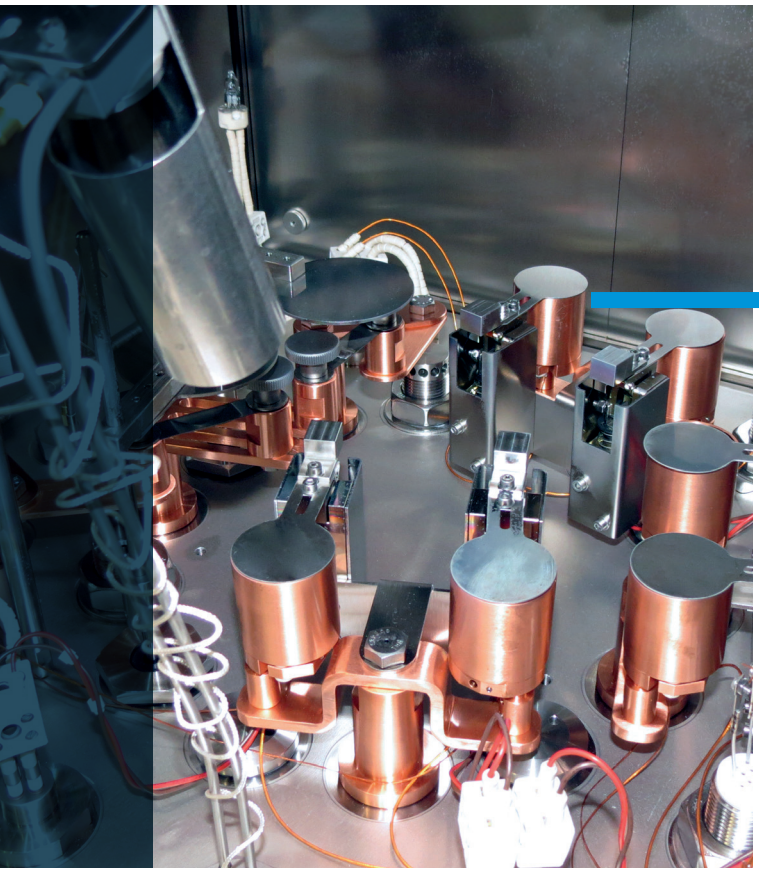
- Gathering outlets at a single point, e.g. the glovebox purge, vacuum pump, regeneration gas. This centralized design allows for easy connection to your extraction network, streamlining ventilation and ensuring efficient confinement of hazardous materials.
- Preventing hazardous substances used within the glovebox from escaping into your laboratory environment. By effectively managing exhausts, the GOE helps safeguard the air quality within your workspace, reducing potential health risks associated with exposure to dangerous chemicals.

In case of a large amount of outlets to evacuate the GOE can be effectively updated. Furthermore, our MBRAUN systems fill the antechamber with clean gas, preventing hazardous substances from entering the laboratory air. This proactive measure enhances safety by minimizing contamination risk and maintaining a controlled environment within the glovebox system.

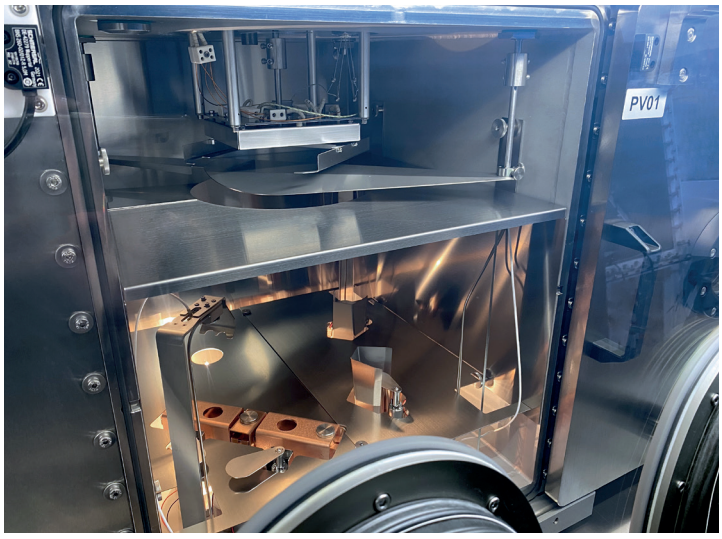


IN-HOUSE SOLUTIONS FOR

VACUUM COATING



Vacuum deposition systems for perovskites, organic electronics, all-solid-state battery production and various other applications in cutting-edge technologies.



ENHANCING PEROVSKITE THIN FILM MANUFACTURING

Vacuum coating techniques play a decisive role in the fabrication of perovskite thin films, offering precise control over film thickness and morphology. However, conventional vacuum processes often encounter challenges such as perovskite decomposition and defects induced by exposure to ambient conditions. To address these issues, the implementation of inert gas environments during vacuum coating has emerged as a promising strategy. Perovskite manufacturing commonly involves wafer sizes ranging from small-scale research-oriented substrates (e.g., 1 cm^2) to industrial-scale wafers (e.g., 21 cm^2 or larger), with variations depending on the specific application and production requirements.

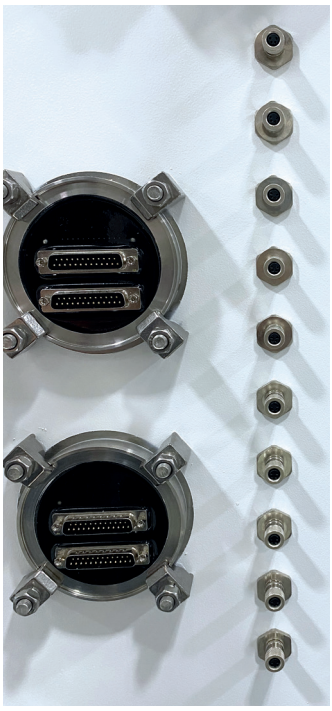
Physical Vapor Deposition (PVD):

- Thermal Evaporation
- Sputter
- EBEAM
- IONBEAM

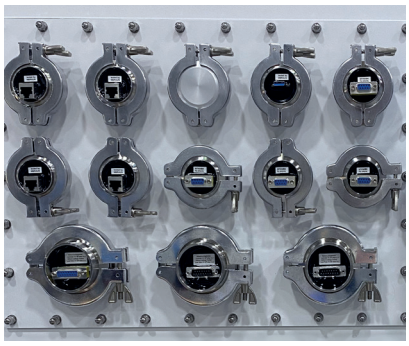
STANDARD & CUSTOMIZED

FEEDTHROUGHS

We offer a wide range of standard leak tight feedthroughs and flanges for gas and liquid media as well as for signals. Moreover we also offer molding and sealing of cables in special jackets for the mounting to DN 40 flanges. This way we provide customized feedthroughs for your glovebox system.





DUST REMOVAL

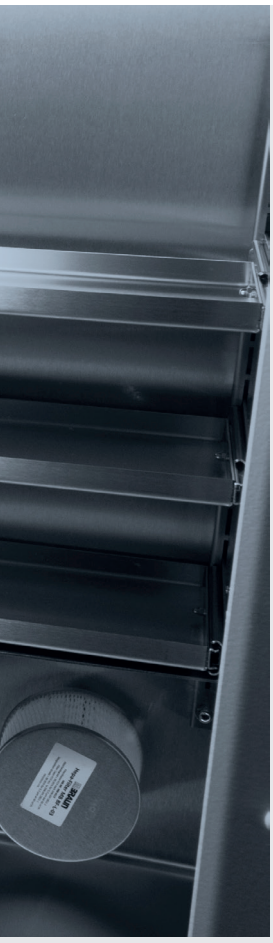
The ultimate solution for maintaining a spotless glovebox environment. Designed to effectively remove particles and dust in the glovebox to ensure cleanliness and optimal performance. The user-friendly MB-Easy-Clean maintains a contamination-free work area.

Moreover, a gas gun serves as a valuable tool for efficiently removing particles from surfaces, including substrates, by blowing them away.

Check out our YouTube Video on how to use the MB-Easy-Clean:

DIFFERENT STORAGE

OPTIONS



SHELVES AND CABINETS

Our shelving and cabinets offer a secure storage solution within the glovebox, ensuring organization and protection of materials. This not only enhances safety by minimizing the risk of spills and cross-contamination but also creates a controlled and efficient work environment.

Standard with three rows of shelves, our glovebox provides enough storage space. Additional shelves or storage areas can be easily added to accommodate specific needs.

We provide a variety of solutions to tailor your workstation setup to your preferences. Options include cupboards beneath the glovebox, storage boxes along the rear wall, and telescopic or custom-designed shelves. For instance, our innovative bottle storage system maximizes workspace by keeping bottles within the inert environment, optimizing efficiency while ensuring a clean and organized workspace.

MBRAUN

SERVICE TEAM

Our worldwide sales and service network ensures that we can fully satisfy your expectations of a professional and efficient support system.

Our Service includes:

- Wide range of accessories
- Technical and administrative support
- Online Shop for spare parts
- System upgrades and modernizations
- Customer training programs
- Calibration of analyzers
- Preventive maintenance

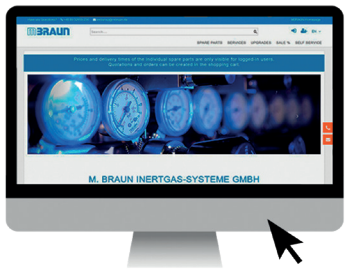
HIGH AVAILABILITY DUE TO OWN WAREHOUSE FOR SPARE PARTS

A good supply of spare parts is the basis for the continuous use of our systems. It is important to us that you can always count on us. Therefore we have dedicated warehouses which contains all commonly used spare parts - ready to be shipped in the shortest possible time. This way we can ensure our customers a quick availability of the required items. All withdrawals are booked in the system on a daily basis, so that the current availability of our items is regularly checked and reordered if necessary.

ONLINE SHOP

ANYWHERE AND ANYTIME

- All spare parts with current delivery time and price
- Self-service section, with training videos
- Technical FAQ's to help with initial questions
- Annual discount promotions exclusively through our online shop



Each glovebox system is different due to customization of the systems and requires regular, individual maintenance. Preventative maintenance has advantages because unexpected troubles can be avoided.

TECHNICAL SUPPORT

- Excellent Problem-Solving Skills
- Attention to Detail
- Great Communication Skills
- Passion for Technology

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