Clean. Engineering. Expertise.

Modular Glovebox Systems
Gas Purifier Units

- Modular glovebox with screwed in flanged side panels
- Easy to extend or modify while keeping a flat work place
- Define your specific system with suitables gas purifier units
- Possibility to connect 2 gloveboxes directly or link them with an antechamber
- Large choice of antechambers
- Sensors dedicated to our application
- Feedthroughs to adapt your tools in the glovebox

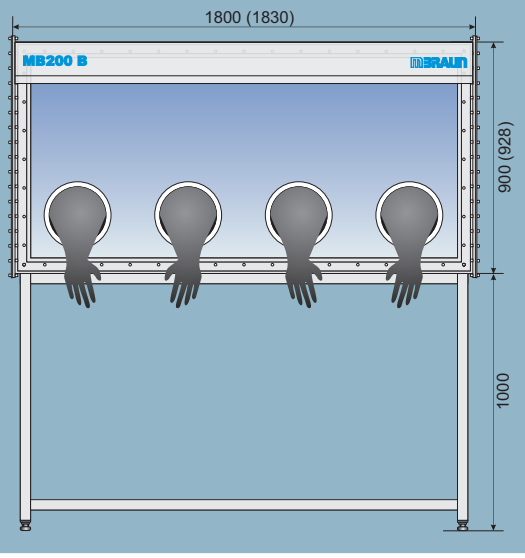
INERTGAS TECHNOLOGY

Modular Glovebox System Dimensions

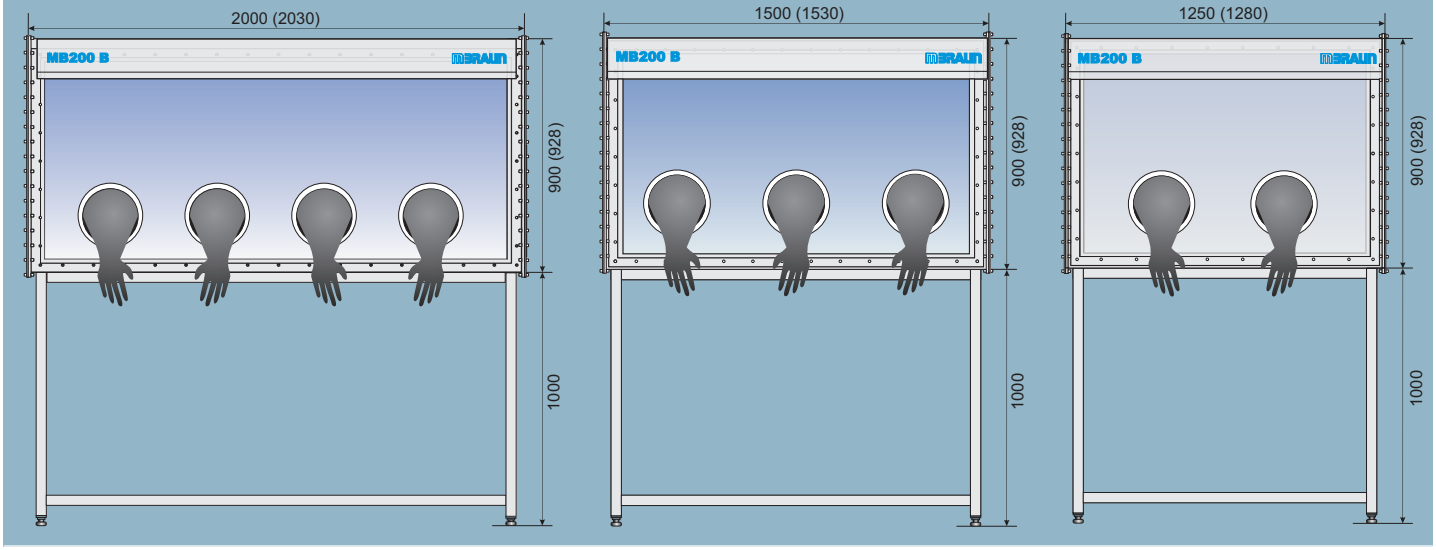
DESCRIPTION	
Length / Depth (in mm)	Weight
1250/780	218 kg
1500/780	250 kg
1800/780	288 kg
2000/780	320 kg
1250/1000	265 kg
1500/1000	294 kg
1800/1000	344 kg
2000/1000	382 kg
1250/1200	293 kg
1500/1200	325 kg
1800/1200	378 kg
2000/1200	420 kg

Technical note: Inner (and outer) dimensions in mm

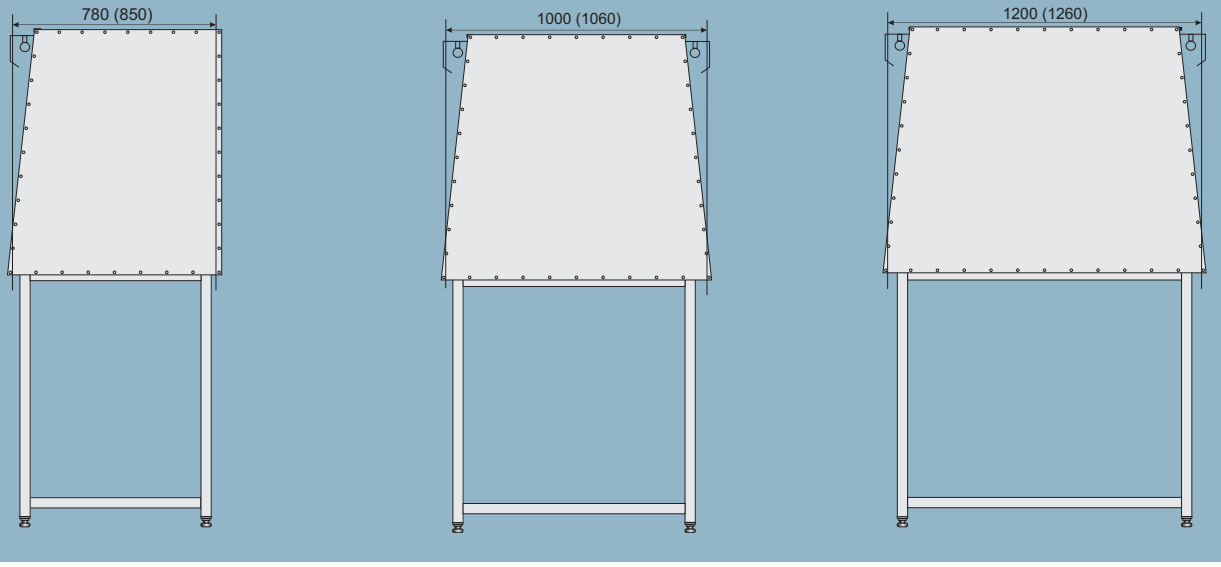
WIDTH AND HEIGHT



WIDTH AND HEIGHT

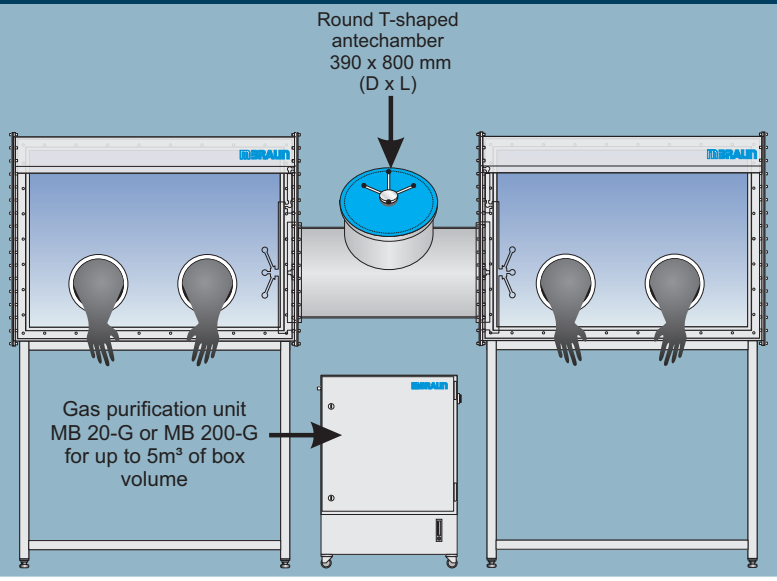


DEPTH

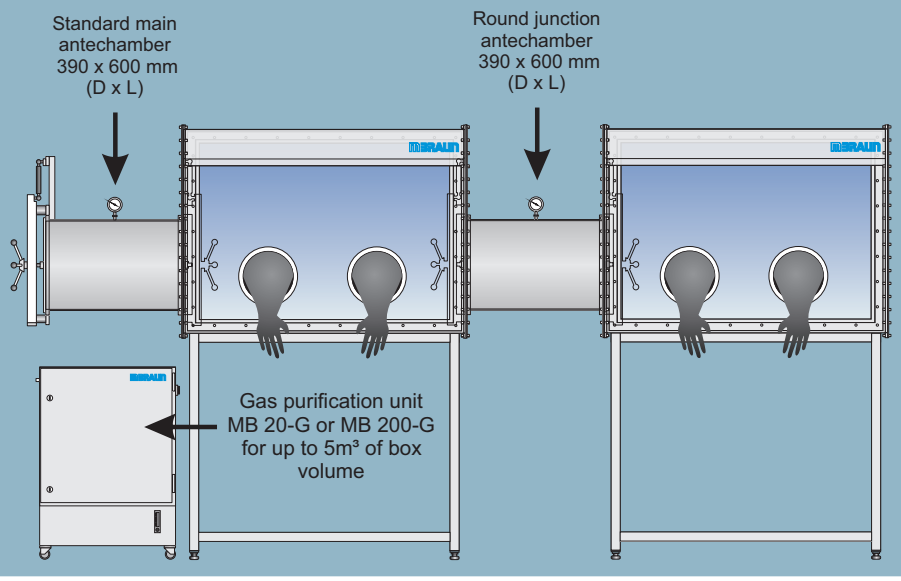


Several Solutions to Build your System

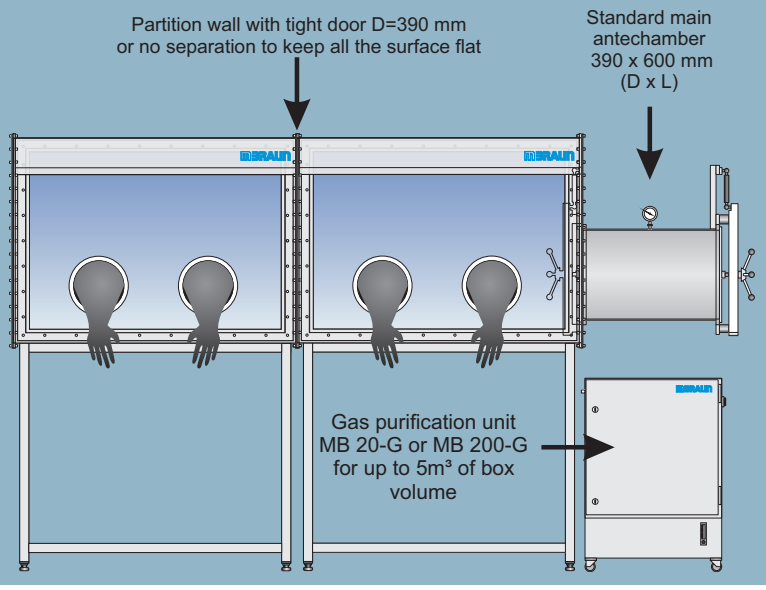
WITH A T-SHAPED ANTECHAMBER



WITH A JUNCTION ANTECHAMBER



NO ANTECHAMBER IN BETWEEN



Gas Purifier Units

ECO Mode operation

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

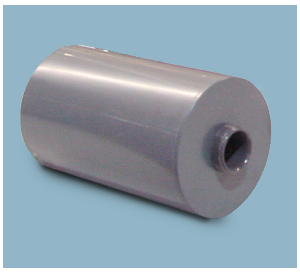
TECHNICAL DATA					
	MB-10-G	MB-20-G	MB-200-G	MB-300-G	MB-600-G
Operation principle	Closed loop recirculation				
Attainable purity level	Moisture < 1 ppm, Oxygen < 1 ppm				
Recommended enclosure volume	Up to 2 m³	Up to 5 m³	Up to 5 m³	Up to 12 m³	Up to 24 m³
Number of purification lines per purifier	1	1	2	2	2
Number of reactor columns per line	1	1	1	1	2
Number of reactor columns per purifier	1	1	2	2	4
Reactor capacity per purification line*					
(O2) Oxygen	20 l	36 l	36 l	91 l	182 l
(H2O) Moisture	900 g	1350 g	1350 g	4420 g	8840 g
Regeneration	Automatic regeneration sequence				
Control unit	PLC - M. Braun	Siemens PLC			
Display	Large color touch panel	Large color touch panel			
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	Frequency controlled up to 88 m³/h		Frequency controlled up to 250 m³/h	Frequency controlled up to 500 m³/h
Main and side piping	DN 40 ISO-KF				
Main and control valves	DN 40 ISO-KF				
Electrical (FLA) (without options)	Stainless steel 1.4301 (SUS 304)				
Cooling water (optional)	-	Optional: 2 bars max., (2-5 l/min)			
Regeneration gas	N2/H2 mix. or Ar/H2 mix. (H2 2-10 %)				
Working gas	Nitrogen, Argon or Helium				
Size in mm (LxWxH)	472 x 459 x 705	820 x 600 x 848	820 x 600 x 848	730 x 980 x 2040	1050 x 1230 x 2190
Weight	50 kg (without vacuum pump)	151 kg (without vacuum pump)	171 kg (without vacuum pump)	475 kg (without vacuum pump)	855 kg (without vacuum pump)
Optional feature	Moisture and oxygen analyzer				
Optional feature	ECO Mode	ECO Mode	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	Box purge function	Automatic box purge unit			
Optional feature w/ MBRAUN glovebox	Antechamber automatic (time controlled)	Antechamber automatic pressure controlled			
Optional feature w/ MBRAUN glovebox	Freezer	Freezer and box cooling			

* Technical note: dependent upon operating conditions.

Solvent Traps

DESCRIPTION SOLVENT FILTER MB-BF

- Integrated into the glovebox (instead of the outer dust filters)
- Loading: Charcoal
- Easy exchange of loading
- Capacity*: 100 g solvent vapour
- Integrated dust filter HEPA H13



DESCRIPTION SOLVENT TRAP MB-LMF

- Integrated into the purifier unit or stand-alone
- Easy exchange of loading with bypass hand valves linked to the vacuum pump
- Loading: Charcoal
- Capacity*: 500 g solvent vapour

DESCRIPTION REGENERABLE SOLVENT TRAP MB-LMF-REG (INTEGRATED INTO THE GAS PURIFIER UNIT)

- Integrated into the purifier unit or stand-alone
- Regeneration programm PLC-operated
- Loading: Molecular sieve
- Capacity*: about 810 g solvent vapour

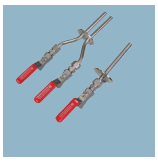
Accessories and Options

SENSORS FOR:

- Oxygen
- Moisture
- Solvents
- CO_2

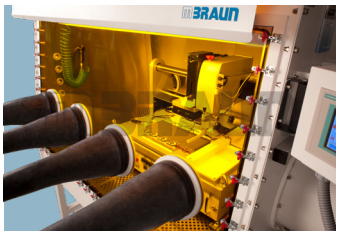
FEEDTHROUGHS FOR:

- Liquid, gas, vacuum
- Cables (power supply, signal...)
- Fiber optic
- USB and other connectors



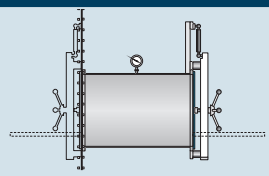
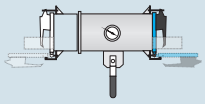
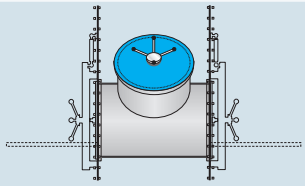
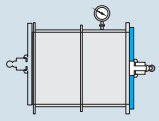
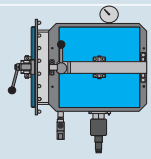
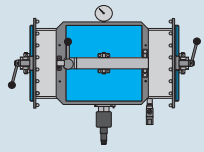
SPECIAL EQUIPMENT FOR GLOVEBOXES:

- Oval gloveport feedthrough
- Antistatic / UV-cut window
- Vacuum cleaner (dust removal)
- Microscope
- Cold well

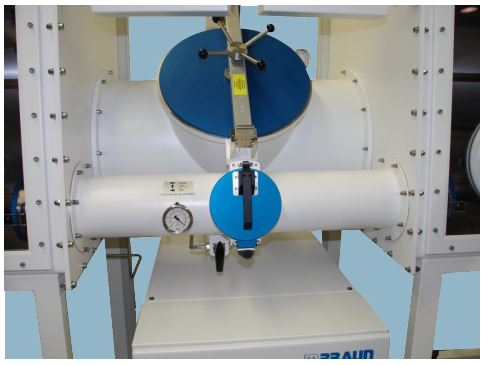


* Technical note: dependent upon operating conditions.

Standard Antechambers

DESCRIPTION	SIZE	COMMENTS	
Main antechamber, cylindrical volume: 72 l	Ø 390 mm L: 600 mm	Can be mounted on right or left end panel, length can be modified on request	
Mini antechamber, cylindrical volume: 7 l	Ø 150 mm L: 400 mm	Can be mounted on right or left end panel, length can be modified on request	
Round T-shaped antechamber volume: 75 l/100 l	Ø 390 mm L: 600 / 800 mm		
Square Antechamber volume: 16 l / 36 l	W: 200 mm H: 200 mm L: 400 mm or W: 300 mm H: 300 mm L: 400 mm	Can be mounted on right or left end panel	
Square L-shaped antechamber volume: 36 l	W: 300 mm H: 300 mm L: 400 mm	Can be mounted on right or left end panel	
Square T-shaped antechamber volume: 54 l / 72 l	W: 300 mm H: 300 mm L: 600 / 800 mm		

Specific antechambers available on request

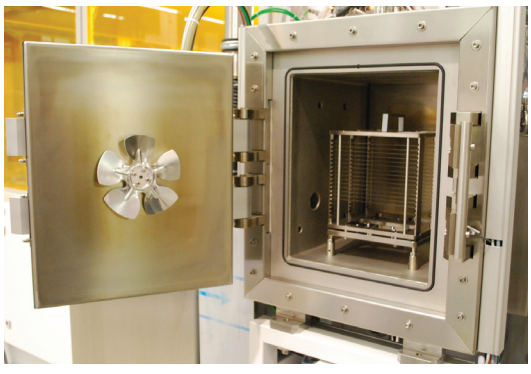


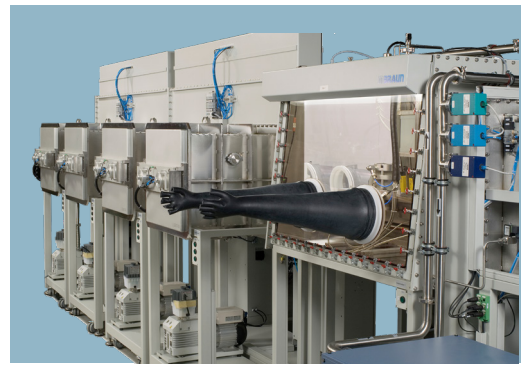
Standard Ovens

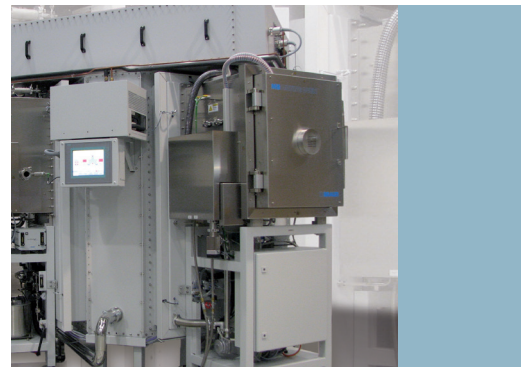
NAME	DESCRIPTION	
MB-VOH-Mini	Stand alone controller Vacuum heating Maximum temperature: 150 °C Ø 150 mm L: 400 mm	
MB-H-V-150-390	Stand alone controller Vacuum heating Maximum temperature: 150 °C Ø 390 mm L: 600 mm	
MB-H-V-250-390-W	PLC-operated Vacuum heating Maximum temperature: 250 °C Ø 390 mm L: 600 mm Water cooled	
MB-H-V-600-390-W	PLC-operated Vacuum heating Maximum temperature: 600 °C Ø 390 mm L: 600 mm Water cooled	

MORE OVENS AVAILABLE:

- Convection ovens
- Up to 2200 °C (under vacuum)
- Large volume ovens



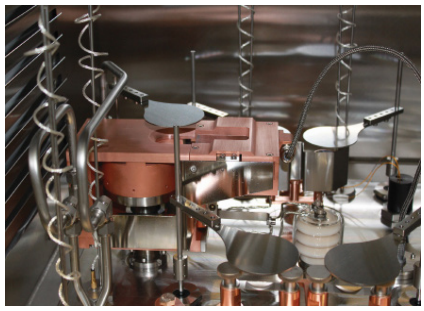




Examples of Equipment Integration

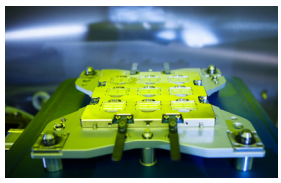
THIN FILM DEPOSITION SYSTEMS:

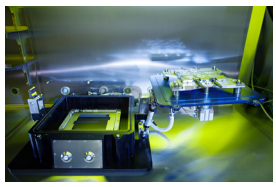
- Cylindrical or square antechamber
- Fully integrated in the glovebox
- Thermal, organic, e-beam, sputtering sources
- Cryo, turbo pumps
- Controllers and measurement devices



ENCAPSULATION SOLUTIONS:

- UV Press
- UV Curing
- Vacupress
- Automatic dispensing robots





LAMINAR FLOW:

- UDF
- Laminar flow enclosure: class 1 (according US-FED Standard 209E) or particle class 2 (according ISO 14644-1)

SUBSTRAT PRE-TREATMENT OR CURING:

- UV-Clean
- Plasma cleaning
- Hot plates for ambient and vacuum
- Cryo, turbo pumps

BATTERY:

- Electrolyte Filling
- Contact Welding
- Electrode Punching

OTHER SOLUTIONS:

- Convection oven
- Automation
- Solutions for Additive Manufacturing

M. Braun Inertgas-Systeme GmbH (Headquarters)
Dieselstr. 31 • D-85748 Garching • Germany
Phone: +49 89 32669-0 • Fax: +49 89 32669-105
Web: www.mbraun.de
E-Mail Sales: info@mbraun.de
E-Mail Service: service@mbraun.de

M. Braun Incorporated
14 Marin Way • Stratham, NH • 03885 • USA
Phone: +1 (603) 773 9333 • Fax: +1 (603) 773 0008
Web: www.mbraunusa.com
E-Mail Sales: info@mbraunusa.com
E-Mail Service: service@mbraunusa.com

M. Braun Inertgas Systems (Shanghai) Co., LTD
Ground floor of building #1 • No. 145 Jintang Road
Tangzhen, Pudong, Shanghai • 201201 • P.R.China
Phone: + 86 21 5032 02 57 • Fax: + 86 21 5032 02 29
Web: www.mbraunchina.com
E-Mail: info@mbraunchina.com

BR08/V5/2018_02