





turning ideas into solutions

MBRAUN

STANDARD GLOVEBOX WORKSTATIONS

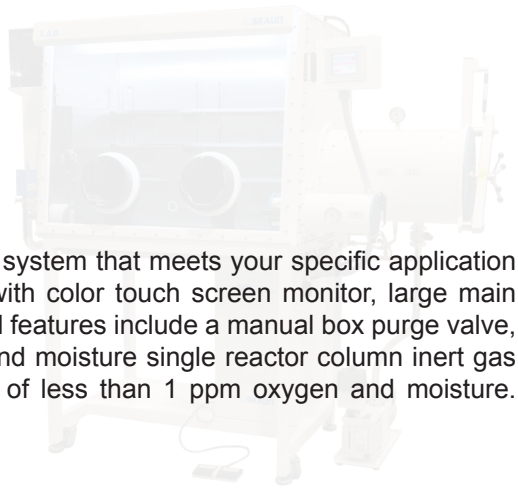
INERTGAS TECHNOLOGY



UL CE ECO

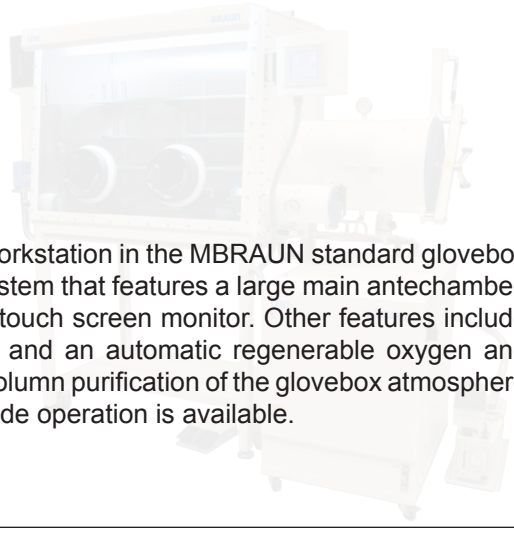
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LABstar
WORKSTATION



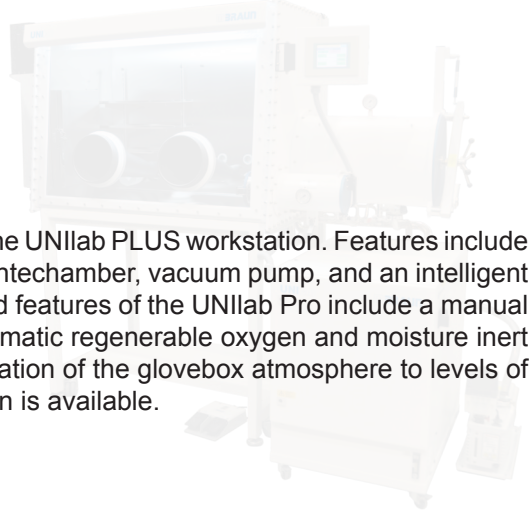
The LABstar workstation is a ready to operate high quality glovebox system that meets your specific application requirements. The LABstar features an intelligent micro controller with color touch screen monitor, large main antechamber, adjustable shelving, and vacuum pump. Other standard features include a manual box purge valve, high vacuum feedthroughs, and an automatic regenerable oxygen and moisture single reactor column inert gas purification system that purifies the glovebox atmosphere to levels of less than 1 ppm oxygen and moisture. Optional ***ECO*** mode operation is available November 2013!

UNIlab PLUS
WORKSTATION



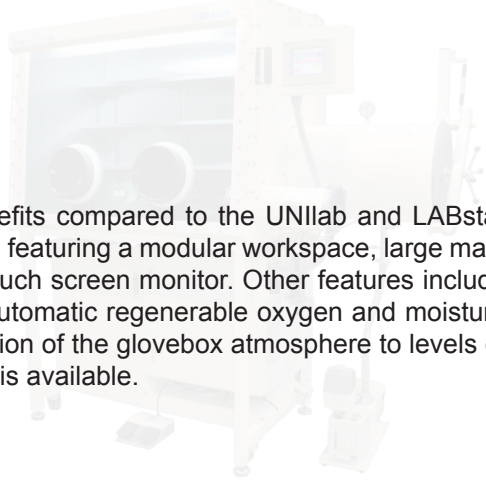
The UNIlab PLUS workstation is the next step up from the LABstar workstation in the MBRAUN standard glovebox line. The UNIlab PLUS is a ready to operate high quality glovebox system that features a large main antechamber, vacuum pump, and an intelligent micro controller with a large color touch screen monitor. Other features include a manual box purge valve, integrated high vacuum feedthroughs, and an automatic regenerable oxygen and moisture inert gas purification systems with single or double reactor column purification of the glovebox atmosphere to levels of less than 1 ppm oxygen and moisture. Optional ***ECO*** mode operation is available.

UNIlab PRO
WORKSTATION



The UNIlab PRO workstation offers additional features compared to the UNIlab PLUS workstation. Features include a ready to operate high quality modular glovebox with a large main antechamber, vacuum pump, and an intelligent micro controller with large color touch screen monitor. Other standard features of the UNIlab Pro include a manual box purge valve, integrated high vacuum feedthroughs, and an automatic regenerable oxygen and moisture inert gas purification systems with single or double reactor column purification of the glovebox atmosphere to levels of less than 1 ppm oxygen and moisture. Optional ***ECO*** mode operation is available.

LABmaster PRO
WORKSTATION



The LABmaster PRO workstation offers additional features and benefits compared to the UNIlab and LABstar workstations. The LABmaster is the top of the line modular workstation featuring a modular workspace, large main antechamber, vacuum pump, and a PLC controller with large color touch screen monitor. Other features include an automated box purge valve, high vacuum feedthroughs, and an automatic regenerable oxygen and moisture gas purification systems with single or double reactor column purification of the glovebox atmosphere to levels of less than 1 ppm oxygen and moisture. Optional ***ECO*** mode operation is available.



*LABstar glovebox workstation pictured with optional features

LABstar Standard Features:

- Intelligent micro controller
- Color touch screen monitor
- Large main antechamber
- Three glovebox sizes available
- Vacuum pump
- Automatic regeneration H_2O/O_2 single column inert gas purifier
- Integrated high vacuum feedthroughs
- Stainless steel adjustable shelving
- Stainless steel piping



*UNIlab PLUS glovebox workstation pictured with optional features

UNIlab PLUS Standard Features:

- Intelligent micro controller
- Color touch screen monitor
- Large main antechamber
- Three glovebox sizes available
- Vacuum pump
- Automatic regeneration H_2O/O_2 single (SP) (optional double (DP) column inert gas purifier)
- Manual box purge valve
- Integrated high vacuum feedthroughs
- Stainless steel adjustable shelving
- Stainless steel piping



*UNIlab PRO glovebox workstation pictured with optional features

UNIlab PRO Standard Features:

- A variety of modular glovebox sizes available
- Intelligent micro controller
- Color touch screen monitor
- Large main antechamber
- Vacuum pump
- Automatic regeneration H_2O/O_2 single (SP) (optional double (DP) column inert gas purifier)
- Manual box purge valve
- Integrated high vacuum feedthroughs
- Stainless steel adjustable shelving
- Stainless steel piping



*LABmaster PRO glovebox workstation pictured with optional features

LABmaster PRO Standard Features:

- A variety of modular glovebox sizes available
- PLC controller with color touch screen monitor
- Large main antechamber
- Vacuum pump
- Automatic regeneration H_2O/O_2 single (SP) (optional double (DP) column inert gas purifier)
- Heat Exchanger
- Sensors
- Automated box purge valve
- Integrated high vacuum feedthroughs
- Stainless steel adjustable shelving
- Stainless steel piping

GLOVEBOX CONFIGURATIONS MAY VARY

MBRAUN GLOVEBOX DIRECT COMPARISON

MBRAUN



MBRAUN GLOVEBOX WORKSTATIONS

LABstar Workstation

Glovebox	• Sizes (Internal Workspace)	1200 mm (L) x 780 mm (D) x 920 mm (H) 1450 mm (L) x 780 mm (D) x 920 mm (H) 1950 mm (L) x 780 mm (D) x 920 mm (H)
	• Controller	Intelligent Micro Controller w/ 7" Color Touch Screen Monitor
	• Dust Filter (0.3 µm)	(1) Gas Inlet, (1) Gas Outlet, Class H13
	• Operation	Closed Loop Recirculation
	• Gloves	(1)Butyl .4 mm Thick
	• Glove Port (Oval Ports Available)	POM 220 mm Diameter
	• Box Light	Fluorescent Front Mounted Lamp
	• Stainless Steel Shelving	(3) 1000 mm Length x 220 mm Depth
	• Feedthroughs	DN 40 KF Ports and Electrical Ports
	• Leak Rate (Oxygen method according to ISO 10648-2)	(3) <0.05 vol%h Typical (Class 1)
Large Antechamber	• Type	(4) Cylindrical w/ Stainless Steel Sliding Tray
	• Size (Inside Dimensions)	390 mm Diameter x 600 mm Length
	• Evacuation & Refill	Manual Operation
	• Leak Rate	$<10^{-5}$ mbar l/s
Inert Gas Purification	• Inert Gas Purification	Single Column Gas Purifier Unit
	• Attainable Purity	H_2O < 1 ppm, O_2 < 1 ppm
	• Vacuum Pump (Dry Pump Available)	(5) 10 cfm Rotary Vane Pump (12 m³/h)
	• Regeneration	Auto Regeneration
	• Capacity Per Reactor	(5)14 l O_2 Removal & 700 g H_2O Removal
	• Box Pressure	Automatic Box Pressure Control w/ Foot Switch (+15 mbar, -15 mbar)
	• Flow Rate	(5) up to 22 m³/h
	• Piping	Stainless Steel 1.4301 (US Type 304)
Optional Features	• Freezer or Box Cooling	Available
	• Oxygen, Moisture, and Solvent Sensors	Available
	• Solvent Vapor Removal (Internal and External)	Available
	• Regenerable Solvent Vapor Removal	Not Available
	• Double Purifier (DP) Reactor Columns	Not Available
	• *ECO* Mode Operation	Available November 2013!
	• Mini Antechamber	Available
	• Timed Control Antechamber Purge	Available
	• Fully Automatic Antechamber Purge	Not Available
	• Automatic Antechamber Doors	Not Available
	• Antechamber Door Interlock	Not Available
	• Auto Box Purge Valve	Available
	• Recirculation Chiller	Not Available
	• Heat Exchanger	Not Available
	• (2) Box Operation	Available
	• Data Logging	Available

(1.) A variety of gloves (Hypalon, Neoprene and Butyl) and thickness sizes are available upon request. (2.) Double sided gloveboxes include 2 hanging shelves. Additional shelving options are available. (3.) < 0.05 vol%/h at negative pressure







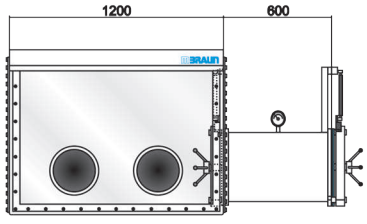
UNIlab PLUS Workstation	UNIlab PRO Workstation	LABmaster PRO Workstation
1200 mm (L) x 780 mm (D) x 920 mm (H) 1450 mm (L) x 780 mm (D) x 920 mm (H) 1950 mm (L) x 780 mm (D) x 920 mm (H)	Lengths: 1250 mm, 1500 mm, 1800 mm Depths: 780 mm, 1000 mm, 1200 mm Height: 900 mm **Modular Sizes**	Lengths: 1250 mm, 1500 mm, 1800 mm Depths: 780 mm, 1000 mm, 1200 mm Height: 900 mm **Modular Sizes**
Intelligent Micro Controller w/ 7” Color Touch Screen Monitor	Intelligent Micro Controller w/ 7” Color Touch Screen Monitor	PLC Controller w/ 7” Color Touch Screen Monitor
(1) Gas Inlet, (1) Gas Outlet, Class H13	(1) Gas Inlet, (1) Gas Outlet, Class H13	(1) Gas Inlet, (1) Gas Outlet, Class H13
Closed Loop Recirculation	Closed Loop Recirculation	Closed Loop Recirculation
[1]Butyl .4 mm Thick	[1]Butyl .4 mm Thick	[1] Butyl .4 mm Thick
POM 220 mm Diameter	POM 220 mm Diameter	POM 220 mm Diameter
Fluorescent Front Mounted Lamp	Fluorescent Front Mounted Lamp	Fluorescent Front Mounted Lamp
(3) 1000 mm Length x 220 mm Depth	[2](3) 1000 mm Length x 220 mm Depth	[2](3) 1000 mm Length x 220 mm Depth
DN 40 KF Ports and Electrical Ports	DN 40 KF Ports and Electrical Ports	DN 40 KF Ports and Electrical Ports
[3] <0.05 vol%h Typical (Class 1)	[3] <0.05 vol%h Typical (Class 1)	[3] <0.05 vol%h Typical (Class 1)
[4] Cylindrical w/ Stainless Steel Sliding Tray	[4] Cylindrical w/ Stainless Steel Sliding Tray	[4] Cylindrical w/ Stainless Steel Sliding Tray
390 mm Diameter x 600 mm Length	390 mm Diameter x 600 mm Length	390 mm Diameter x 600 mm Length
Manual Operation	Manual Operation	Manual & Optional Push Button
$<10^{-5}$ mbar l/s	$<10^{-5}$ mbar l/s	$<10^{-5}$ mbar l/s
Single Purifier (SP) / Double Purifier (DP)	Single Purifier (SP) / Double Purifier (DP)	Single Purifier (SP) / Double Purifier (DP)
$H_2O < 1$ ppm, $O_2 < 1$ ppm	$H_2O < 1$ ppm, $O_2 < 1$ ppm	$H_2O < 1$ ppm, $O_2 < 1$ ppm
[5] 10 cfm Rotary Vane Pump (12 m³/h)	[5] 10 cfm Rotary Vane Pump (12 m³/h)	[5] 10 cfm Rotary Vane Pump (12 m³/h)
Auto Regeneration w/ Auto Restart Feature	Auto Regeneration w/ Auto Restart Feature	Auto Regeneration w/ Auto Restart Feature
[5] 36 l O_2 Removal & 1300 g H_2O Removal	[5] 36 l O_2 Removal & 1300 g H_2O Removal	[5] 36 l O_2 Removal & 1300 g H_2O Removal
Automatic Box Pressure Control w/ Foot Switch (+15 mbar, -15 mbar)	Automatic Box Pressure Control w/ Foot Switch (+15 mbar, -15 mbar)	Automatic Box Pressure Control w/ Foot Switch (+15 mbar, -15 mbar)
[5] up to 88 m³/h	[5] up to 88 m³/h	[5] up to 88 m³/h
Stainless Steel 1.4301 (US Type 304)	Stainless Steel 1.4301 (US Type 304)	Stainless Steel 1.4301 (US Type 304)
Available	Available	Available
Available	Available	Available
Available	Available	Available
Available	Available	Available
Available	Available	Available
Available	Available	Available
Available	Available	Available
Available	Available	Available
Available	Available	Available
Available	Available	Available
Not Available	Not Available	Available
Not Available	Not Available	Available
Available	Available	Available
Available	Available	Available
Available	Available	Included
Available	Available	Available
Available	Available	Available

of 10 mbar at constant temperature (4.) Square antechamber, L-chamber and T-chamber designs are available. (5.) Technical Note: Dependent upon operating condition. For details refer to http://www.mbraun.com/Knowledge Center

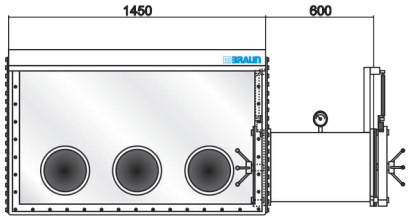
INTERNAL WORKING DIMENSIONS

LABstar
WORKSTATION

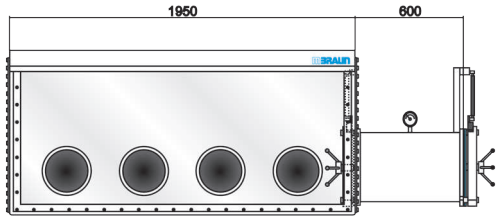
Weight = 400 kg / 550 kg



1200 mm (L) x 780 mm (D) x 920 mm (H)



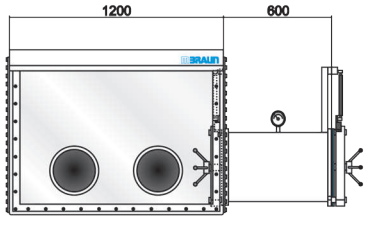
1450 mm (l) x 780 mm (D) x 920mm (H)



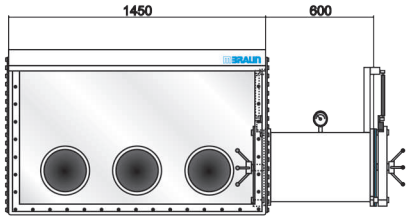
1950 mm (L) x 780 mm (D) x 920 mm (H)

UNIlab PLUS
WORKSTATION

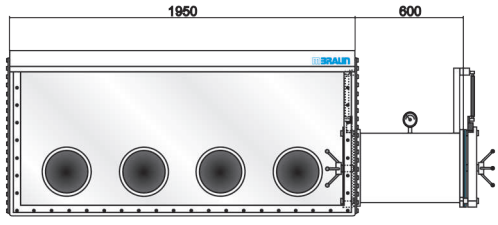
Weight = 400 kg / 600 kg



1200 mm (L) x 780 mm (D) x 920mm (H)



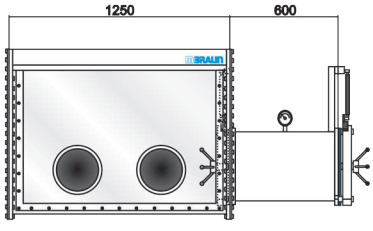
1450 mm (L) x 780 mm (D) x 920mm (H)



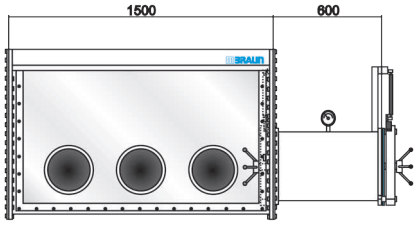
1950 mm (L) x 780 mm (D) x 920 mm (H)

UNIlab PRO
MODULAR WORKSTATION

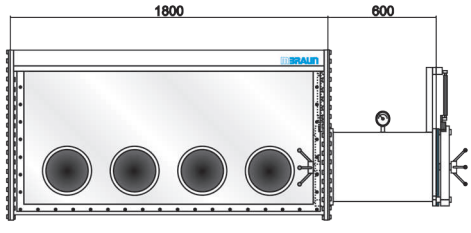
Weight = 400 kg / 600 kg



1250 mm (L) x 780 mm (D) x 900 mm (H)



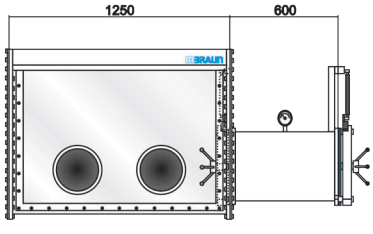
1500 mm (L) x 780 mm (D) x 900 mm (H)



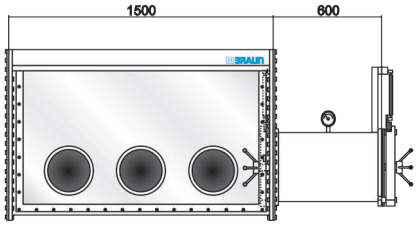
1800 mm (L) x 780 mm (D) x 900 mm (H)

LABmaster PRO
MODULAR WORKSTATION

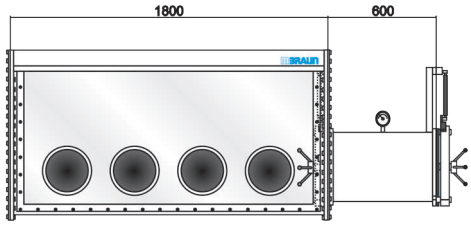
Weight = 400 kg / 600 kg



1250 mm (L) x 780 mm (D) x 900 mm (H)

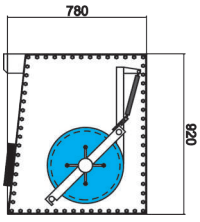


1500 mm (L) x 780 mm (D) x 900 mm (H)



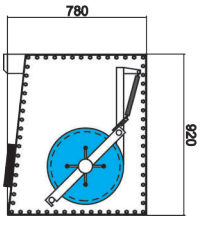
1800 mm (L) x 780 mm (D) x 900 mm (H)

EXAMPLES OF GLOVEBOX CONFIGURATIONS WITH GAS PURIFIERS



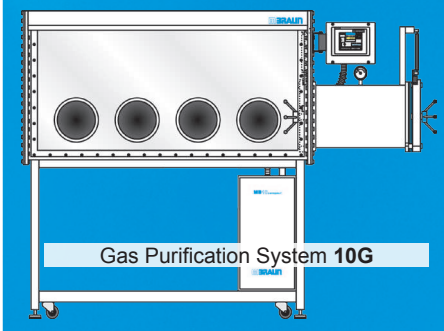
Volume:

1250 (L) = 0.8 m³
1450 (L) = 1.0 m³
1950 (L) = 1.4 m³

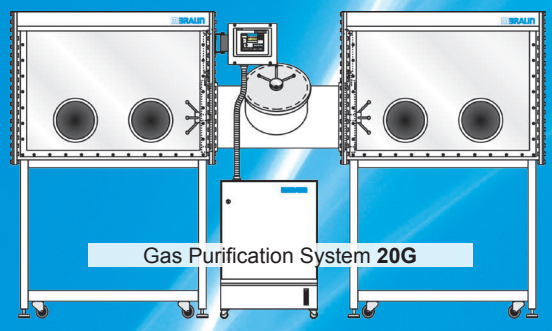


Volume:

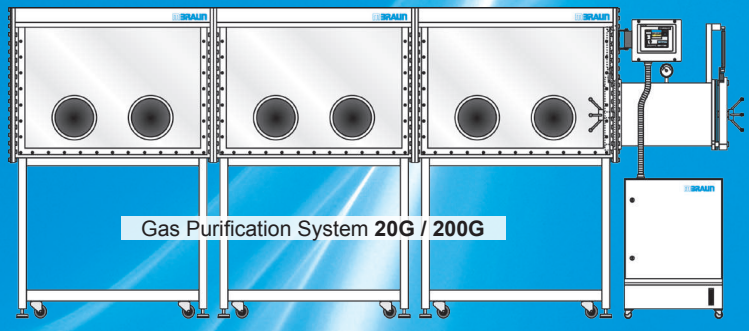
1250 (L) = 0.8 m³
1450 (L) = 1.0 m³
1950 (L) = 1.4 m³



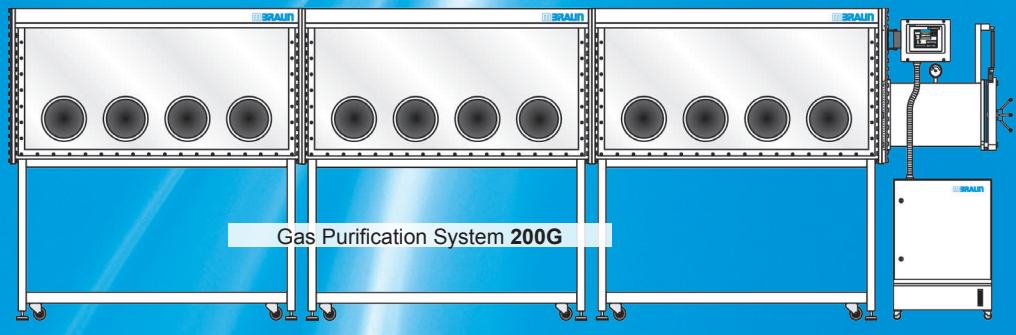
Gas Purification System **10G**



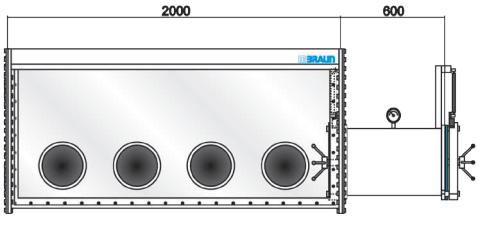
Gas Purification System **20G**

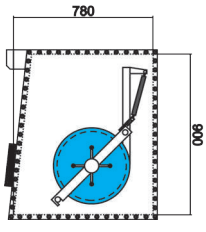


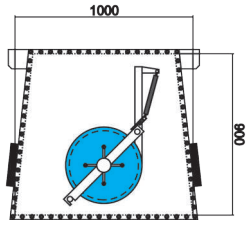
Gas Purification System **20G / 200G**

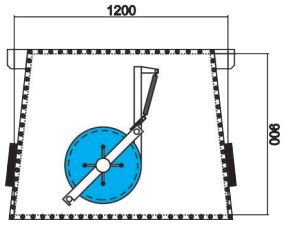


Gas Purification System **200G**

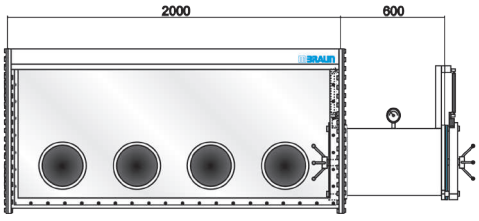


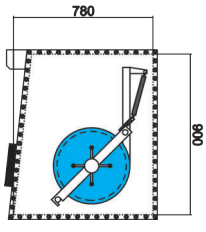


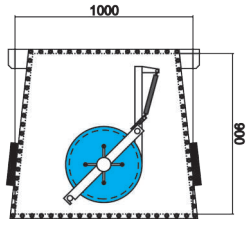


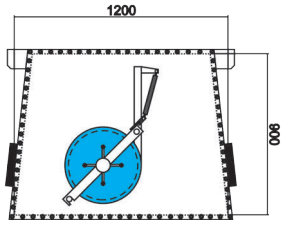


2000 mm (L) x 780 mm (D) x 900 mm (H)	Volume:	Volume:	Volume:
	1250 (L) = 0.8 m³ 1500 (L) = 1.0 m³ 1800 (L) = 1.2 m³	1250 (L) = 1.0 m³ 1500 (L) = 1.2 m³ 1800 (L) = 1.5 m³	1250 (L) = 1.2 m³ 1500 (L) = 1.5 m³ 1800 (L) = 1.8 m³









2000 mm (L) x 780 mm (D) x 900 mm (H)	Volume:	Volume:	Volume:
	1250 (L) = 0.8 m³ 1500 (L) = 1.0 m³ 1800 (L) = 1.2 m³	1250 (L) = 1.0 m³ 1500 (L) = 1.2 m³ 1800 (L) = 1.5 m³	1250 (L) = 1.2 m³ 1500 (L) = 1.5 m³ 1800 (L) = 1.8 m³

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