

**UNIlab<sup>pro</sup> sp/dp**  
INERT GAS GLOVEBOX WORKSTATION



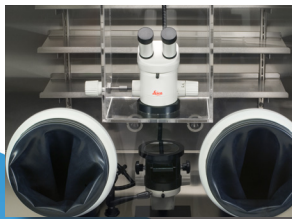
**INERTGAS TECHNOLOGY**

- Stainless steel enclosure with polycarbonate window
- Modular box design for easy extension
- Removal of oxygen and moisture, <1 ppm
- PLC-M. Braun controller with large color touch panel
- Simultaneous purification and regeneration with DP version
- Closed loop recirculation
- Negative and/or positive pressure operation
- Large antechamber with sliding tray
- Foot pedal switch for temporary pressure adjustment
- ECO Mode operation feature available
- Optional control and safety features available

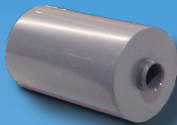




Freezer



Microscopes



Internal solvent vapor removal



Additional accessories available



Feedthroughs



Oxygen, moisture, and solvent sensor



External solvent vapor removal



Mini-antechamber

## 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, Double sided: 1000 or 1200 mm
Inside height.....	900 mm
Leak rate.....	< 0.05 Vol%/h
Inside surface.....	Brushed finish Ra < 1µm
Outside surface.....	Coated, white (RAL 9003)
Window.....	Scratch resistant polycarbonate window
Glove ports.....	POM, 220 mm diameter, O-ring sealed
Gloves.....	Butyl, thickness 0,4 mm
Light.....	Fluorescent lamp
Feedthroughs.....	4 / 5 DN40KF flanges (depending on the box depth)
Electrical feedthrough.....	1
Dust filter.....	HEPA H13 in/out
Shelves.....	3 modular shelves rear side or hanged (length: depending on box length)

**Optional:**

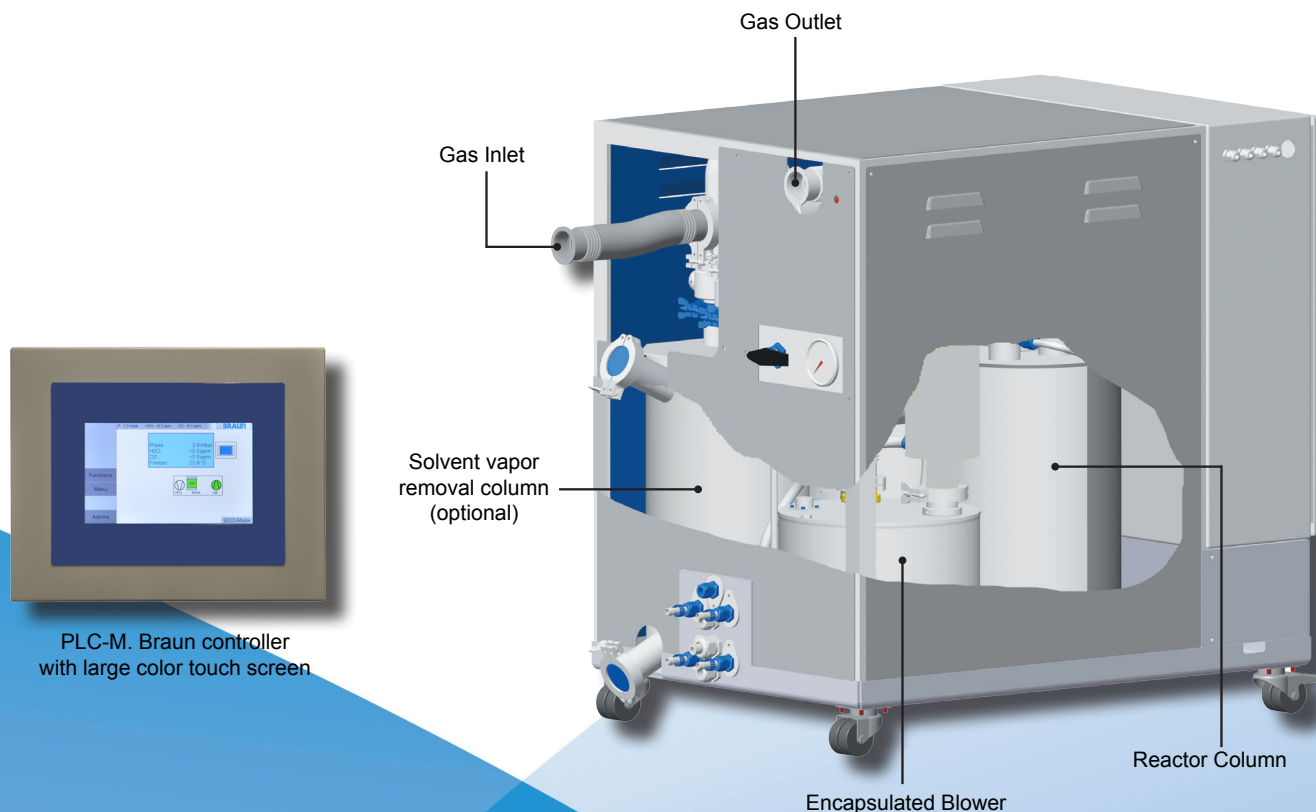
- Cold well
- Safety glass window
- Large choice of feedthroughs for signals, gas, liquids
- A variety of gloves (Hypalon, Neoprene and Butyl) and thickness sizes are available
- Specific shelves and storage arrangements....

## MAIN ANTECHAMBER TECHNICAL DATA:

Type.....	Cylindrical
Material.....	Stainless steel
Dimensions.....	390 x 600 mm (D x L)
Inside surface.....	Brushed finish
Outside surface.....	Coated, white (RAL 9003)
Leak rate.....	< 10E-5 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 display
Vacuum / Refill process.....	Manual operation via hand valves
Valves.....	Hand valves (DN40 vacuum line / DN8 refill line)

**Optional:**

- Time controlled antechamber operation
- Round mini antechambers (side or bottom mounted)
- Rectangular square antechamber
- L-shaped square antechamber
- Round T-shaped antechamber
- Square T-shaped antechamber...



PLC-M. Braun controller with large color touch screen

## GAS PURIFIER UNIT TECHNICAL DATA:

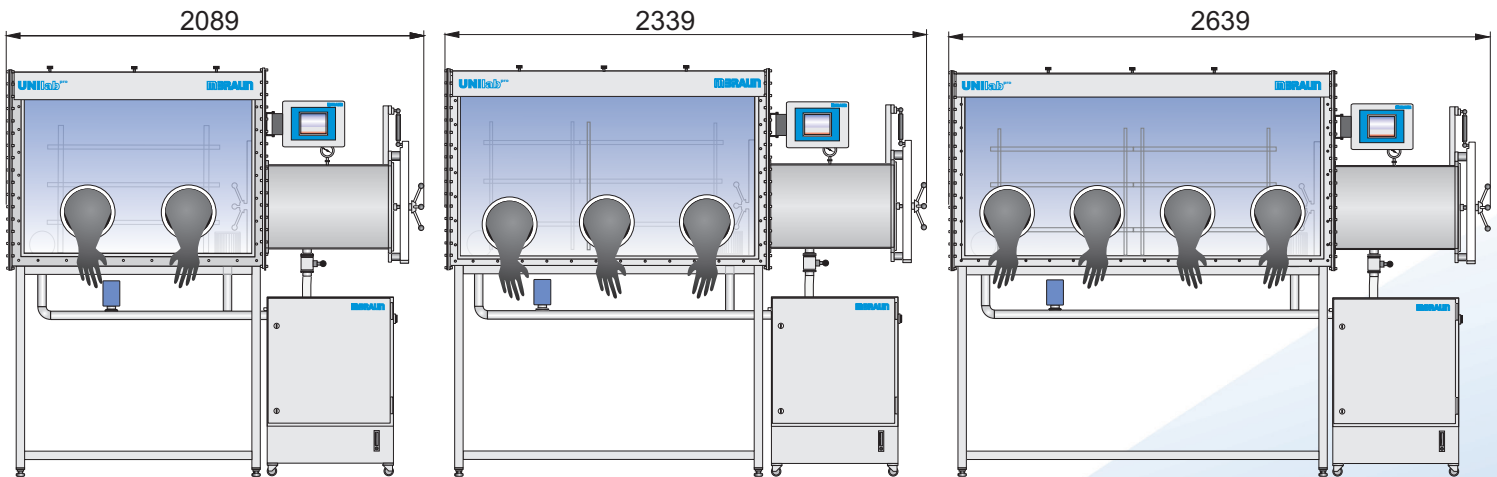
Operation principle.....	Closed loop recirculation
Attainable purity level.....	Moisture < 1 ppm, Oxygen < 1 ppm
Recommended enclosure volume.....	Up to 5 m <sup>3</sup>
Number of purification lines per purifier.....	1 for sp / 2 for dp
Number of reactor columns per line.....	1
Number of reactor columns per purifier.....	1 for sp / 2 for dp
Reactor capacity per purification line*	
(O <sub>2</sub> ) Oxygen.....	36 l
(H <sub>2</sub> O) Moisture.....	1350 g
Regeneration.....	Automatic regeneration sequence
Control unit.....	PLC - M. Braun
Display.....	Large color touch panel
Box pressure control.....	Automatic pressure control with foot switch (± 15mbar)
Vacuum pump*.....	Rotary vane pump with 17 m <sup>3</sup> /h (10 CFM)
Blower (50 Hz / 60 Hz)*.....	Frequency controlled up to 88 m <sup>3</sup> /h
Main and side piping.....	Stainless steel 1.4301 (SUS 304)
Main and control valves.....	Electro-pneumatic
Regeneration gas.....	N <sub>2</sub> /H <sub>2</sub> mix. or Ar/H <sub>2</sub> mix. (H <sub>2</sub> 2-10 %)
Working gas.....	Nitrogen, Argon or Helium
Size.....	820 mm x 600 mm x 847,5 mm (L x W x H)
Optional feature.....	Moisture and oxygen analyzer
Optional feature.....	ECO Mode
Optional feature.....	Solvent vapor removal
Optional feature.....	Regenerable solvent vapor removal
Optional feature w/ MBRAUN glovebox.....	Recirculation chiller for optimal working environment (RCC)
Optional feature w/ MBRAUN glovebox.....	Integrated heat exchanger
Optional feature w/ MBRAUN glovebox.....	Dry pump upgrade
Optional feature w/ MBRAUN glovebox.....	Automatic box purge unit
Optional feature w/ MBRAUN glovebox.....	Antechamber automatic (time controlled or pressure controlled)
Optional feature w/ MBRAUN glovebox.....	Freezer or box cooling

**ECO Mode operation**

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

\*Technical note: Depending upon operating conditions

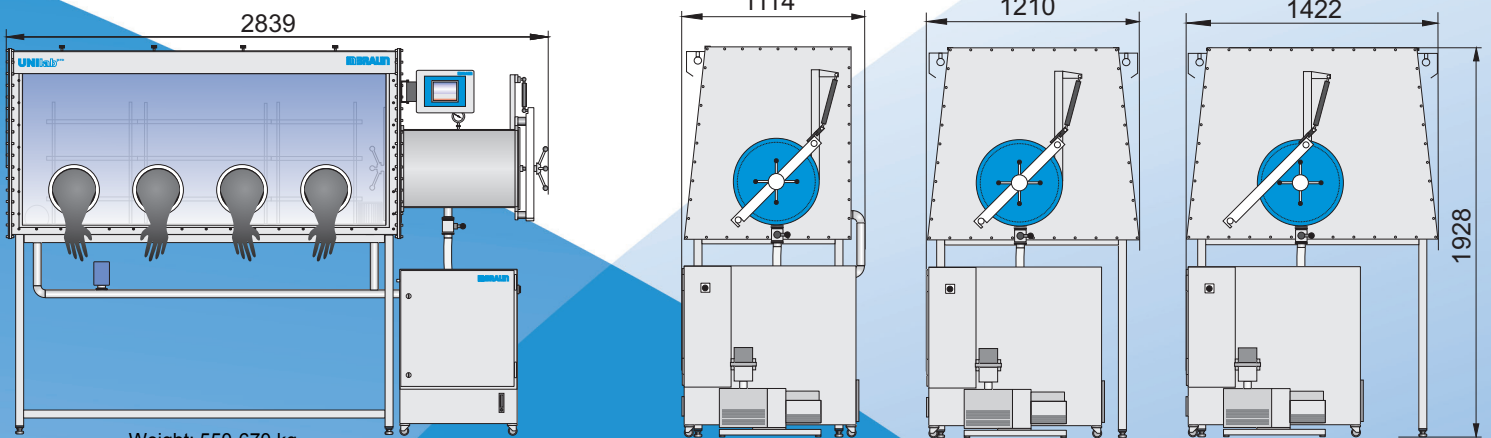
Dimensions in mm



Weight: 440-540 kg

Weight: 475-570 kg

Weight: 520-625 kg  
for version 1800 mm box length



Weight: 550-670 kg  
for version 2000 mm box length

Side views

### VOLUMES:

	Box depth: 780 mm	Box depth: 1000 mm	Box depth: 1200 mm
Box length: 1250 mm	0,8 m <sup>3</sup>	1,1 m <sup>3</sup>	1,3 m <sup>3</sup>
Box length: 1500 mm	1,0 m <sup>3</sup>	1,3 m <sup>3</sup>	1,6 m <sup>3</sup>
Box length: 1800 mm	1,3 m <sup>3</sup>	1,6 m <sup>3</sup>	1,9 m <sup>3</sup>
Box length: 2000 mm	1,4 m <sup>3</sup>	1,8 m <sup>3</sup>	2,1 m <sup>3</sup>

### UTILITIES:

	Medium (or type)	Pressure	Flow rate	Connection
Working gas	Nitrogen, Argon or Helium	6 bars	250 l/min	Swagelok Ø 10 mm
Regeneration gas	N <sub>2</sub> /H <sub>2</sub> mix. or Ar/H <sub>2</sub> mix. (H <sub>2</sub> 2-10 %)	0.3 - 0.4 bars	10-20 l/min	Swagelok Ø 10 mm
Regeneration gas exhaust	Flexible hose, 9 x 3mm			
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, 8 A or 115 V/50-60, 16 A or 100 V/50-60 Hz, 18.5 A			

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