

# LABstar

## INERT GAS GLOVEBOX WORKSTATION



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

# LABstar

## GLOVEBOXES AND ACCESSORIES



Freezer



Feedthroughs



Microscopes



Oxygen, moisture and solvent sensor



Internal solvent vapor removal



Mini-antechamber



External solvent vapor removal, regenerable

### GLOVEBOX TECHNICAL DATA

Type of construction	Side panels bolted on the box body
Material	Stainless steel (US 304, 1.4301)
Inside lengths	1200 / 1450 / 1950 mm
Inside depth	780 mm
Inside height	920 mm
Leak rate	< 0.05 Vol%/h
Inside surface	Brushed finish Ra 1.2 µm
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	2 / 3 / 4 DN40KF flanges (depending on box length)
Electrical feedthrough	1
Dust filter	HEPA H13 in/out
Shelves	3 modular shelves (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-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 display
Vacuum / Refill process	Manual operation via hand valves
Valves	Hand valves (DN40 vacuum line / DN8 refill line)

### OPTIONAL

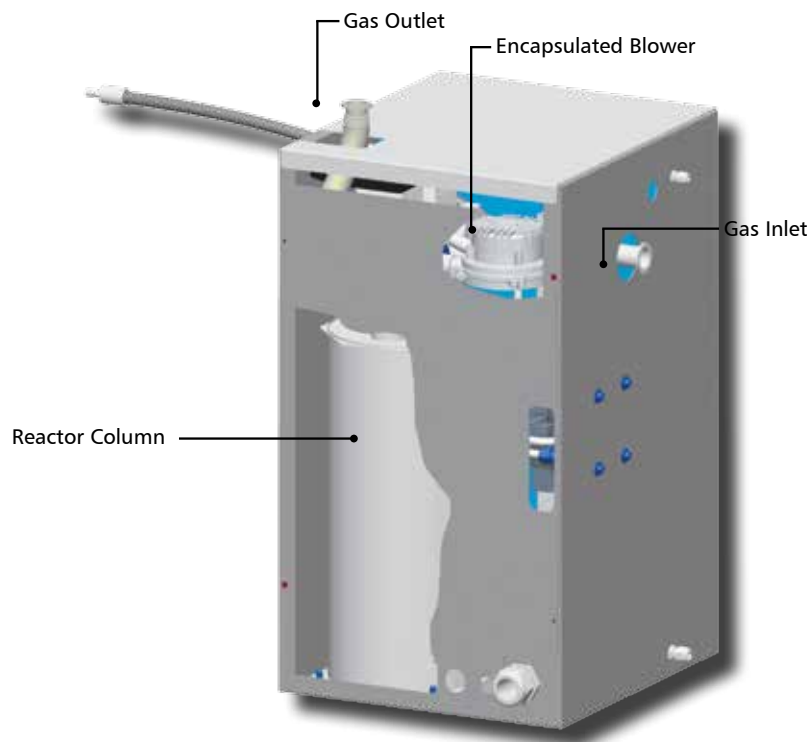
Time controlled antechamber operation
Round large main antechambers
Round mini antechambers (side or bottom mounted)
Rectangular square antechamber
L-shaped square antechamber
Round T-shaped antechamber
Square T-shaped antechamber...

# LABstar

## GAS PURIFIER UNIT



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 2 m <sup>3</sup>
Number of purification lines per purifier	1
Number of reactor columns per line	1
Number of reactor columns per purifier	1
Reactor capacity per purification line*	
(O <sub>2</sub> ) Oxygen	20 l
(H <sub>2</sub> O) Moisture	900 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)*	Variable speed up to 22 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	472 x 459 x 705 mm (L x W x H)

### Mode operation

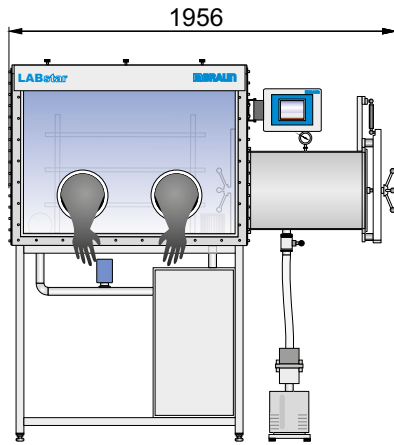
The ECO mode option is designed to reduce noise emission and reduce power consumption up to 90%\*.

### OPTIONAL

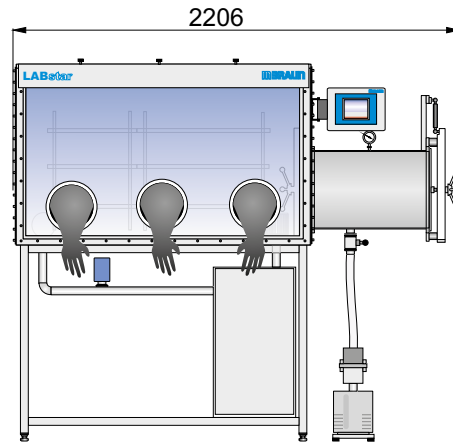
Moisture and oxygen analyzer
ECO Mode
Solvent vapor removal
Dry pump upgrade
Box purge function
Antechamber automatic (time controlled)
Freezer

\*Technical note: Depending upon operating conditions

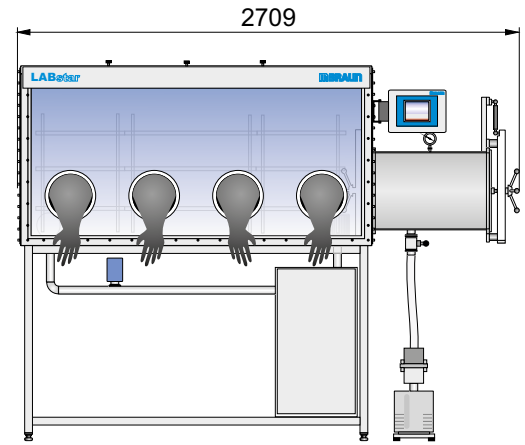
## SIZES AND CONFIGURATION



Weight: 325 kg



Weight: 360 kg



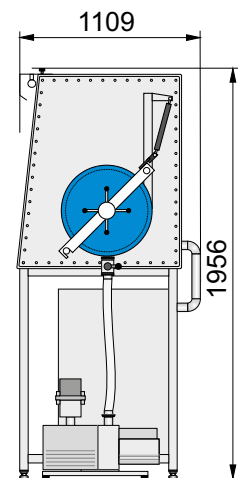
Weight: 460 kg

### GLOVEBOX VOLUMES

Box length: 1200 mm	0.8 m <sup>3</sup>
Box length: 1450 mm	1.0 m <sup>3</sup>
Box length: 1950 mm	1.3 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 - 0.5 bars	15-20 l/min	Swagelok Ø 10 mm
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)	230 V/50-60 Hz, 6 A or 115 V/50-60 Hz, 12 A or 100 V/50-60 Hz, 13 A			



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](http://www.mbraun.de)  
 E-Mail Sales: [info@mbraun.de](mailto:info@mbraun.de)  
 E-Mail Service: [service@mbraun.de](mailto: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](http://www.mbraunusa.com)  
 E-Mail Sales: [info@mbraunusa.com](mailto:info@mbraunusa.com)  
 E-Mail Service: [service@mbraunusa.com](mailto: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](http://www.mbraunchina.com)  
 E-Mail: [info@mbraunchina.com](mailto:info@mbraunchina.com)

### M. BRAUN ENGINEERING COMPETENCE

With 40 years of engineering  
 experience and world-class  
 core technology, we develop  
 and produce individual, custo-  
 mer-specific large-scale plants.  
 Discover the possibilities:  
[www.mbraun.com](http://www.mbraun.com)