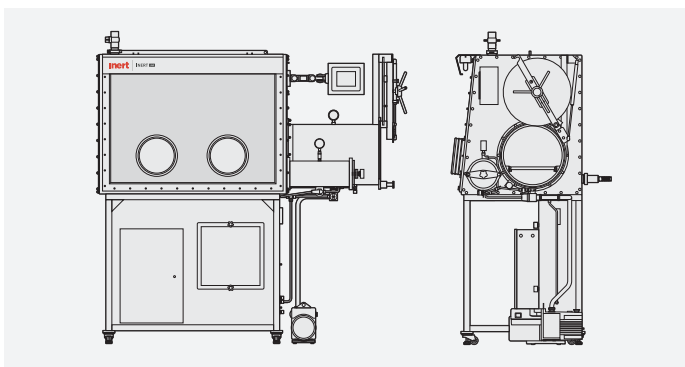


QUALITY YOU CAN COUNT ON.

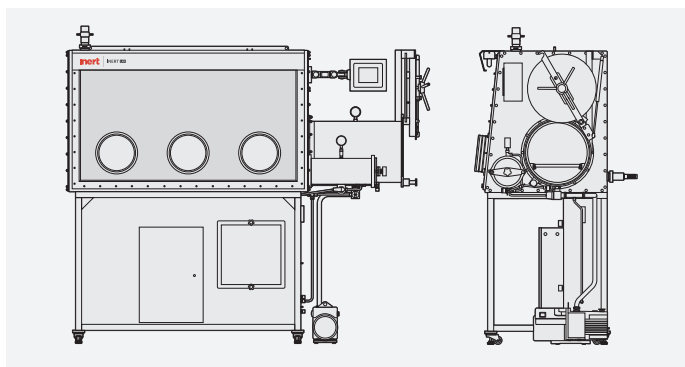
Inert's line of I-Lab Glovebox Systems are designed as an economical solution for inert research applications. As with all our Gloveboxes, I-Lab Gloveboxes are manufactured using the industry's finest components from globally recognized manufacturers.

I-LAB 2GB



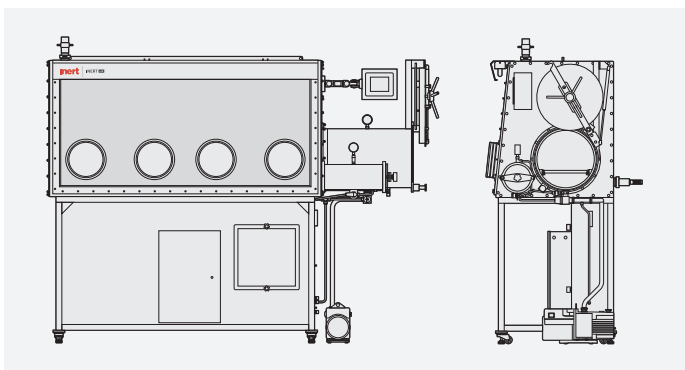
Internal Dimensions:
1213 mm W x 764 mm D x 897 mm H
External Dimensions:
2005 mm W x 1034 mm D x 2024 mm H

I-LAB 3GB



Internal Dimensions:
1524 mm W x 764 mm D x 897 mm H
External Dimensions:
2316 mm W x 1034 mm D x 2024 mm H

I-LAB 4GB



Internal Dimensions:
1803 mm W x 764 mm D x 897 mm H
External Dimensions:
2595 mm W x 1034 mm D x 2024 mm H

DESIGN OPTIONS

- Left Sided Antechambers
- Oval Glove Ports
- Polycarbonate Window
- Modular
- Dry Vacuum Pump
- Cold Wells
- PureSolv MD Integration

SPECIFICATIONS

Internal Finish: Type 304 stainless steel, #4

External surfaces: RAL 7035

Wall thickness: 0.105" (2.6 mm)

Feedthrough: 4 x DN 40 ISO-KF blank

Internal Power: 1 x electrical feedthrough

Internal Power: 1 x fuse protected 6 outlet power strip

Shelving: 2 x Height adjustable 304 stainless steel #4 finish.

Plumbing: 304 stainless steel tubing

Filters: 1 x Inlet/ 1 x Outlet HEPA (99.99% vs 0.3 micron MPPS)

Lighting: External Fluorescent light

Power: 100-120 or 200-240 VAC 50/60 Hz 20 Amp

Overall System Leak Rate: <0.05vol%/h (ISO 10648-2)

Non-modular box design

Large Antechamber, 15" (381 mm) internal diameter x 24" (609 mm) internal length

Bolt on left or right side

Internal tray: 304 stainless steel #4 surface finish

Manual evacuate/refill valves

Leak rate: < 10⁻⁵ mbar l/s

Small Antechamber, 6" (152 mm) internal diameter x 17.3" (441 mm) internal length

Manual evacuate/refill valve

Leak rate: < 10⁻⁵ mbar l/s

Tempered safety glass window 3/8" (9.5 mm) thick.

Viewing size : 41.8" (1061 mm) Wide x 30.2" (767 mm) High

Circular glove ports

0.015" (0.4mm) thick butyl rubber gloves, hand size 9.75

I-Lab Gas Management System

Single column system purifies, recirculates, and analyzes inert atmosphere

<1ppm O₂ and <1ppm H₂O purity level

O₂ capacity = 43 L

H₂O capacity = 1800 g

Variable speed circulation blower: 60 cfm max flow rate blower

Siemens SIMATIC S7-1200 PLC control system

Siemens KTP400 4" (101.6 mm) color touch screen HMI

Automatic pressure control: (+/- 15 mbar)

Manual pressure control: Footswitch

Fully automatic regeneration sequence.

Manual purge valve

Vacuum pump: 10 cfm (17 m³/h) rotary vane pump with oil mist eliminator & oil return kit

Integrated oxygen analyzer: Range 0-1000 ppm
EOS-2 analyzer

Integrated moisture analyzer: Range 0-1000 ppm

Approvals:



OPTIONS

- 0-1000 ppm EOS-1 Analyzer
- 0-25% Zirconia Oxygen Analyzer
- 0-1000ppm Moisture Analyzer
- Auto Purge Valve
- Solvent Removal
- Rectangular Freezer: -35°C
Internal Volume = 20L (40L available)
- Coldwell
- Heat Exchanger
- Dry Scroll Pump
- Electrical Feedthroughs
- Fiberoptic Feedthroughs
- RS-232/USB/Ethernet Feedthroughs
- Binding Posts
- Optical View Ports For Laser Spectroscopy Applications
- Vacuum Ovens
- Solvent Purification Systems
- Microscope Systems - Internal and Window Mounted.
- Vacuum/Gas Feedthroughs
- Custom Feedthroughs
- Numerous Glove Options - Material, Thickness, Hand Size
- Static Eliminator (Benchtop Style)
- Probe Stations
- UV Ozone Cleaners

SYSTEM APPLICATIONS

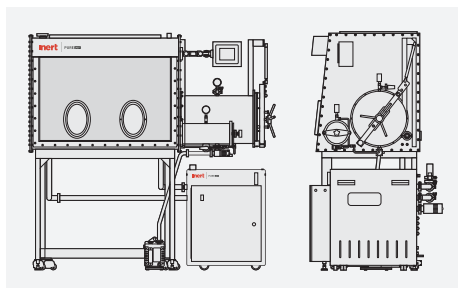
- Additive (3D) Manufacturing
- Aerospace
- Automotive
- Chemistry
- Lamp Manufacturing
- Lithium Ion Battery
- Medical Device
- Nuclear
- OLED
- Pharmaceutical
- Semiconductor
- Solar
- Specialty Chemical
- Thin Film
- Many other applications

QUALITY YOU CAN COUNT ON.

PureLab High Efficiency (HE) is our premium line of gloveboxes, designed specifically for production and research applications.

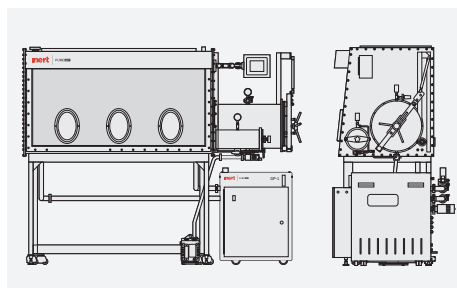
Time management and maximum efficiency are crucial, so this line is fully automated and is our most flexible platform, allowing for easy integration of OEM equipment.

PURELAB HE 2GB



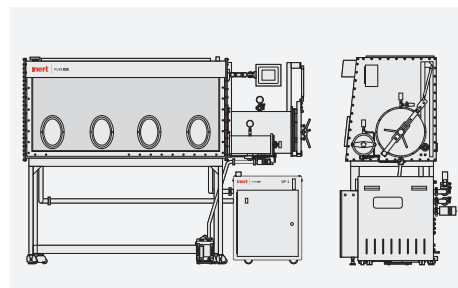
Internal Dimensions:
1250 mm W x 780 mm D x 900 mm H
External Dimensions:
2000 mm W x 1067 mm D x 1921 mm H

PURELAB HE 3GB



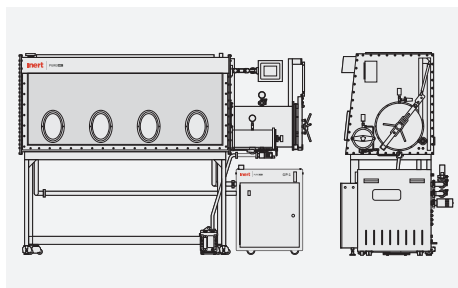
Internal Dimensions:
1500 mm W x 780 mm D x 900 mm H
External Dimensions:
2315 mm W x 1067 mm D x 1921 mm H

PURELAB HE 4GB 1800



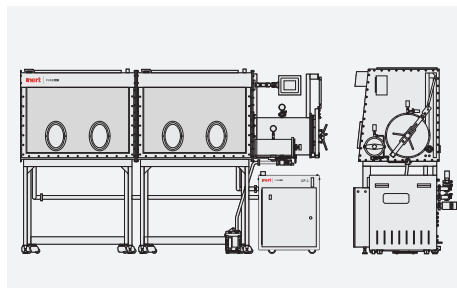
Internal Dimensions:
1800 mm W x 780 mm D x 900 mm H
External Dimensions:
2595 mm W x 1067 mm D x 1921 mm H

PURELAB HE 4GB 1950



Internal Dimensions:
1950 mm W x 780 mm D x 900 mm H
External Dimensions:
2741 mm W x 1067 mm D x 1921 mm H

PURELAB HE 4GB 2500



Internal Dimensions:
2500 mm W x 780 mm D x 900 mm H
External Dimensions:
3218 mm W x 1067 mm D x 1921 mm H

DESIGN OPTIONS

- Double Sided Access
- Left Sided Antechambers
- Through Flow Antechambers
- Laminar Flow
- Circular Glove Ports
- Polycarbonate Window
- Dry Vacuum Pump
- PureSolv MD Integration
- Other Customizations

SPECIFICATIONS

Internal Finish: Type 304 stainless steel, #4

External surfaces: RAL 7035

Wall thickness: 0.105" (2.6 mm)

Feedthrough: DN 40 ISO-KF blank and 3/8" compression bulkhead

Internal Power: Electrical feedthrough

Internal Power: Fuse protected 6 outlet power strip

Shelving: 3 x Height adjustable 304 stainless steel #4 finish

Plumbing: 304 stainless steel tubing

Filters: 1 x Inlet/ 1 x Outlet HEPA (99.99% vs 0.3 micron MPPS)

Lighting: External Fluorescent light

Power: 100-120 or 200-240 VAC 50/60 Hz 20 Amp

Overall System Leak Rate: <0.05vol%/h (ISO 10648-2)

Modular box design

Large Antechamber, 15" (381 mm) internal diameter x 24" (609 mm) internal length

Bolt on left or right side

Internal tray: 304 stainless steel #4 surface finish

Automatic control: Evacuate/refill 1-9 Cycles

Leak rate: < 10⁻⁵ mbar l/s

Small Antechamber, 6" (152 mm) internal diameter x 17.3" (441 mm) internal length

Internal tray: 304 stainless steel #4 surface finish

Manual evacuate/refill valve

Leak rate: < 10⁻⁵ mbar l/s

Tempered safety glass window 3/8" (9.5 mm) thick.

Oval glove ports: Black Delrin, 8" glove port
Internal glove port cover
0.015" (0.4mm) thick butyl rubber gloves, hand size 9.75

PureLab HE Gas Management System

Purifies, recirculates, and analyzes inert atmosphere, available as single and dual column system, with and without external solvent removal

<1ppm O₂ and <1ppm H₂O purity level

O₂ capacity = 43 L per purifier column

H₂O capacity = 1800 g per purifier column

Variable speed circulation blower: 120 cfm max flow rate blower

Siemens SIMATIC S7-1200 PLC control system

Siemens KTP700 7" (177.8 mm) color touch screen HMI

Automatic pressure control: (+/- 15 mbar)

Manual pressure control: Footswitch

Fully automatic regeneration sequence.

Auto Purge valve: O₂ Level, Timer or manually controlled

Vacuum pump: 10 cfm (17 m³/h) rotary vane pump with oil mist eliminator & oil return kit

Integrated oxygen analyzer: Range 0-1000 ppm
EOS-2 analyzer

Integrated moisture analyzer: Range 0-1000 ppm

Eco Mode Features

Vacuum pump timer: Shuts pump off for energy reduction

Automated Blower speed control: O₂ level adjusts blower speed

Approvals:



OPTIONS

- 0-1000 ppm EOS-1 Analyzer
- 0-25% Zirconia Oxygen Analyzer
- 0-1000ppm Moisture Analyzer
- 0-25% Helium in Argon Analyzer
- 0-25% Helium in Nitrogen Analyzer
- Vacuum Pumps
- Solvent Removal
- Rectangular Freezer: -35°C
Internal Volume = 20L (40L available)
- Custom Coldwell
- Numerous Antechamber Options
- Thermoelectric Box Cooling System
- Heat Exchanger
- Dry Scroll Pump
- Vacuum Ovens
- Solvent Purification Systems
- Microscope Systems
- Custom Shelving
- Electrical Feedthroughs
- Fiberoptic Feedthroughs
- RS-32/USB/Ethernet Feedthroughs
- Quartz Window for Solar Simulator Testing
- Optical View Ports for Laser Spectroscopy
- Vacuum/Gas Feedthroughs
- Custom Feedthroughs
- Door Interlocks
- Automated Doors
- Vacuum Cleaner
- Polycarbonate Window
- Evaporation System Integration
- Quick Release Window System
- Gloveport Covers
- 250°C Hot Plates
- Static Eliminator - Benchtop Style
- Inkjet Printers
- Probe Stations
- UV Ozone Cleaners
- Static Eliminator - Ceiling Mounted
- Optical View Ports for Laser Spectroscopy
- Binding Posts

SYSTEM APPLICATIONS

- Additive (3D) Manufacturing
- Aerospace
- Automotive
- Chemistry
- Lamp Manufacturing
- Lithium Ion Battery
- Medical Device
- Nuclear
- OLED
- Pharmaceutical
- Semiconductor
- Solar
- Specialty Chemical
- Thin Film
- Many other applications

QUALITY YOU CAN COUNT ON.

Inert Oxygen and Moisture sensors offer unparalleled performance in the monitoring of oxygen and moisture levels in critical process applications. We can provide oxygen and moisture measuring solutions for use with any Glovebox system. Ask about our exchange program.

EOS-1 ZIRCONIA OXYGEN SENSOR



Key features:

- Measurement range: 0-1000 ppm Oxygen
- Economical Zirconia Sensor
- Rugged Housing with KF-40 Process Connection

EOS-2 ELECTROCHEMICAL OXYGEN SENSOR



Key features:

- Measurement range: 0-1000 ppm Oxygen
- Economical Electrochemical Sensor
- Rugged Housing with KF-40 Process Connection

MOISTURE SENSOR



Key features:

- Measurement range: 0-1000 ppm moisture
- Advanced ceramic sensor technology
- Rugged housing with 5/8" UNF connection. KF-40 flange adapter available

EOS-1 & EOS-2 SPECIFICATIONS

Gas type/range: Oxygen 0-1000ppm

Response time (0-90%): Approximately 10 seconds

Power requirements: 24VDC+/-10%, max 160mA

Compatibility:

EOS-1 not suitable for use in the presence of solvents or volatile metal-organics

EOS-2 suitable for use in the presence of solvents or volatile metal-organics

Output signal: Factory configured option: 0-+10VDC or 4-20mA

Accuracy: ±0.1ppm from 0-10 ppm; ±1ppm from 10-100ppm, ±10ppm from 100-1000ppm

Sensitivity: 0.1ppm

Drift: At 10ppm; 10%/year

Pressure range: 800 to 1200mbar absolute

Process connection: KF-40 flange

Temperature range: +15 to +35°C

Weight: 0.57Lbs/0.260Kg

MOISTURE SPECIFICATIONS

Gas type/range: Moisture 0-1000ppm

Response time: 5 mins to T95 (dry to wet)

Power requirements: 12-28 V DC 20mA max current consumption

Output signal: 4-20mA

Accuracy: ±0.2ppm from 0-10 ppm

Sensitivity: 0.1ppm

Pressure range: 800 to 1200mbar absolute

Process connection: 5/8" UNF connection. KF-40 flange adapter available

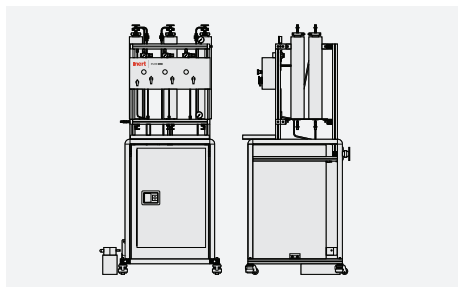
Temperature range: +15 to +35°C

Weight: 0.33Lbs/0.150Kg

QUALITY YOU CAN COUNT ON.

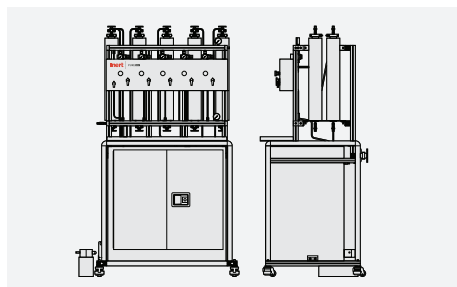
Inert Solvent Purification Systems enable you to work quickly and safely. These systems are safe alternatives to thermal distillation, alleviating risk of injury to your staff or fire damage to your lab. They allow for air-free collection of ultra-dry and de-oxygenated solvents, while eliminating cross-diffusion of solvent vapors.

PURESOLV MD3



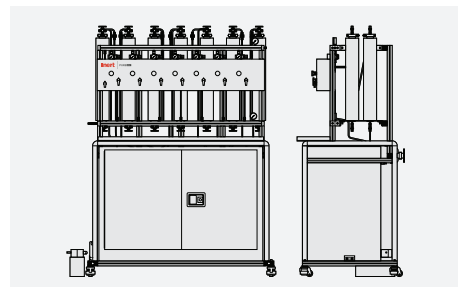
Dimensions:
947.4 mm W x 835.7 mm D x 1945.9 mm H

PURESOLV MD5



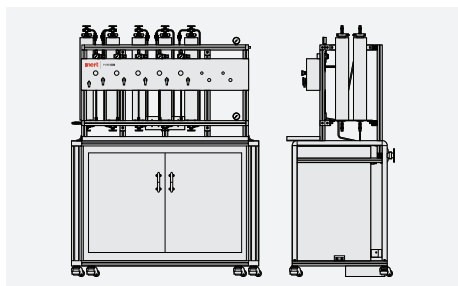
Dimensions:
1267.5 mm W x 835.7 mm D x 1945.9 mm H

PURESOLV MD7



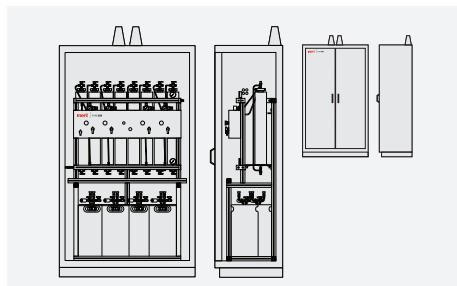
Dimensions:
1610.4 mm W x 835.7 mm D x 1945.9 mm H

PURESOLV EN 1-7 BASE



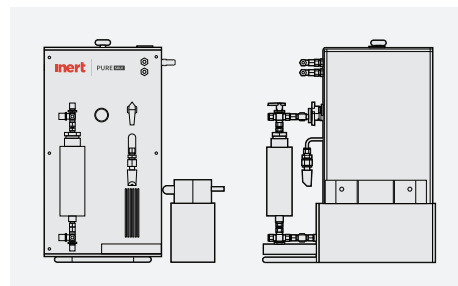
Dimensions:
1455.4 mm W x 932.2 mm D x 1945.9 mm H

PURESOLV EN 1-4 ENCLOSED



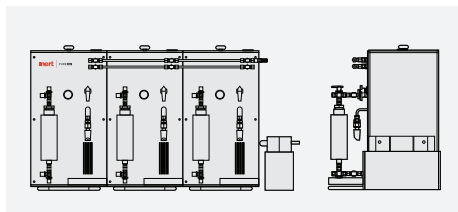
Dimensions:
2500 mm W x 780 mm D x 900 mm H

MICRO



Dimensions:
302.3 mm W x 439.4 mm D x 566.4 mm H

MICRO MULTI



Dimensions:
302.3 mm W x 439.4 mm D x 566.4 mm H

DESIGN OPTIONS

- PS-MD-3 Platform available with 1-3 Solvents
- PS-MD-5 Platform available with 1-5 Solvents
- PS-MD-7 Platform available with 1-7 Solvents
- Glovebox Integration
- Bench Top Design
- Fume Hood Design
- Dispensing Joint Options
- Custom Glassware
- Other Customizations

SPECIFICATIONS

Frame: Extruded aluminum

Vacuum manifold: Integrated in frame

Inert gas manifold: Integrated in frame

Main system Pressure relief : 70 psi

Electrical ground: Fully bonded system

Copper plate for attachment to building ground

Retractable grounding reel for solvent reservoir filling

Dispensing:

Evacuate/Refill/Dispense: 5-way valve for ease of use and safety

Eliminates possibility of dispensing solvent into the vacuum pump

Solvent metering valve: Stainless steel needle valve

Collection flask inert gas refill: Individual low pressure regulator

7psi pressure relief valve

Check valve

Collection flask connection joint: Stainless steel 24/40 is standard. Other sizes available.

Horizontal clamping post for collection flask: Height adjustable

Drying Columns :

PS-MD – All Permutations

Dual purifying column design:

Drying columns: 4" (101mm) OD x 25" (635mm) L

Internal Volume: 1 US gallon (4L)

PS-Micro – All Permutations

Single purifying column design:

Drying columns: 2.5" (63.5mm) OD x 7.0" (177.8mm) L

Internal Volume: (0.5L)

Inlet/Outlet Valves: 3-way 1/4" stainless steel. Allows easy troubleshooting

Drying capacity:

PS-MD – All Permutations: 800L based on HPLC grade solvent

PS-Micro – All Permutations: 80L based on HPLC grade solvent

Particle filter: Stainless steel, 7 micron

Solvent Reservoir:

PS-MD – All Permutations

304 Stainless Steel

17L Volume

PS-Micro – All Permutations

304 Stainless Steel

4L Volume

Flammable storage cabinet: Integrated in the lower section of the system frame

Vacuum pump: Solid Teflon and Kalrez for maximum solvent compatibility

2, 4 and 6 Solvent Systems are also available.

OPTIONS

- Karl Fischer Titrator
- Air Free Glassware
- Stainless Steel 14/20 Tapered Joint
- Stainless Steel 19/24 Tapered Joint
- Stainless Steel 24/29 Tapered Joint
- Stainless Steel 24/40 Tapered Joint
- Stainless Steel 29/32 Tapered Joint
- Stainless Steel 28/12 Ball Joint with O-Ring
- Luer Lock Needle Adapter
- Quick Disconnect Adapter
- Column Regeneration Kits
- Copper Columns

AVAILABLE SOLVENTS

Aromatic & Aliphatic Hydrocarbons

- Pentane
- Hexane
- Cyclo-Hexane
- Heptane
- Toluene
- Benzene
- Ethers
- Diethyl Ether
- THF
- DME

Chlorinated Solvents

- Dichloromethane
- Chloroform
- Chlorobenzene
- Amines
- Triethylamine
- Pyridine
- Diisopropylethylamine

Alcohols

- Methanol
- Ethanol

Other Common Solvents

- Acetonitrile
- DMF
- DMSO

Note: This list of solvents is not exhaustive. Other analogous compounds are available upon request.