



VIGOR GLOVEBOXES SG Series



- Ultra-low leak rate by patented leak free gaskets
- Fully equipped workstations, plug and work
- Wide range of options to be selected from our "toolbox"
- **Vigor Smart Box APP:** Remote control by mobile phone or PC

Workstations SG-Series

Description	Material	Dimensions	Specification
I. Glove Box			
1) Box enclosure	Stainless steel (US 304; EU 1.4301) Thickness 3mm	Please see page 2 for all available dimensions	Inside surface brushed, outside surface white painted
2) Extension modules	Stainless steel (US 304; EU 1.4301) Thickness 3mm	Please see page 2 for all available dimensions	Inside surface brushed, outside surface white painted
3) Detachable front window(s)	Safety glass	Thickness 8mm	Patented vacuum gasket (no-leak seal) for the interface with the box body
4) Glove ports	Anodised aluminium alloy	Φ8" / 203mm	Patented vacuum gasket (no-leak seal) for the interface with the window and the glove
5) Gloves	Butyl rubber	Φ200mm, Length 810mm	Ambidextrous (both hand use) gloves
6) Supporting frame(s)	Square steel tubing, height: 900mm, 4 castors for easy moving and 4 leveling feet for placing and leveling the box		Complete frame painted in white
7) Integrated KF-flanges for feedthrough's	Stainless steel (US 304; EU 1.4301)	KF40, outside length 20mm	Welded on the box body, single sided to the outside, blind flanged (including flange and clamp)
8) Height adjustable shelves	Stainless steel (US 304; EU 1.4301)	800mm(W)X170mm(D)	Adjustable or fix installed on demand
9) 1 Pneumatic purge valve		DN25	Outside connection, open KF40 on the top of the valve (possibility to connect to exhaust)
II. Technical Specification			
1) Leak Rate			< 0.001 vol%/hr
2) Purity Level of the Atmosphere			O ₂ < 1 ppm, H ₂ O < 1 ppm
3) Working Gases			Nitrogen, Argon, Special gas on request
III. Antechambers			
1) 1 Large antechamber	Stainless steel (US 304; EU 1.4301),	Φ370X600mm	Welded on the side panel of the box enclosure, leak free, auto-evacuation function controlled by the PLC, 1 removable sliding tray
2) 1 Mini ante-chamber	Stainless steel (US 304; EU 1.4301),	Φ150X300mm	Welded on the side panel of the box body, leak free, manually operated by 3-way valve, 1 removable tray
IV. Gas Purification System			
1) 1 Gas purification column, containing copper catalyst and molecular sieve			Absorption capacity: O ₂ = 60 liter and H ₂ O = 2 kg The column is regenerable and the regeneration is automatically controlled by the PLC
2) 1 Organic solvent adsorber			Activated carbon, pre-dried
3) 1 Gas tight circulation blower			Flow rate 60 m ³ /h, (110V: 45 m ³ /h)
4) Valves for circulation, regeneration and box pressure control			PLC controlled valves, enabling automatic control of the circulation, regeneration, and box pressure
5) 1 Vacuum Pump: RV 12 (Edwards)			Pumping speed 12 m ³ /h (Including oil mist filter)
V. System Control			
1) Power supply			Single phase 220-230 VAC, 50 Hz, 230 VA max
2) 1 Foot-switch			For individual adjustment of the box pressure by the user
3) Touch screen panel, color, 7"			Interface language: English or Chinese
4) 1 Electrical feedthrough and power strip installed in the box			Inside / outside connection with country specific plugs
5) Programmable logic controller			Siemens SIMATIC S7-200 SMART
6) Automatic evacuation of the large antechamber			Unattended operation, number of cycles settable by the user
7) Gas purification system works on demand controlled by oxygen and/or moisture analyzer			It typically works 5 minutes every hour. Saves energy and extend the blower lifetime
8) Fully integrated control of heated antechamber, freezer and box cooling			User settable target values
9) Automatic leak rate testing			Alerting users of damaged gloves or gaskets
10) Automatic box pressure control, working pressure user settable, range +10 to -10mbar			The PLC will automatically control the box pressure within the set range
11) Automatic purge			Activates the purge valve
12) Display of warning messages, alarms and error messages			Active messages and message log available
13) Recording and displaying of historical data			On screen for visual inspection, data export possibility
14) All operations are conditional			Preventing hazardous actions and damages on the glovebox

For options like antechamber on the left hand side panel, heated antechambers, T-antechambers, rectangular antechambers, extended antechambers, dual column gas purification systems and a wide range of feed-throughs, please see the related specific datasheets or contact your Vigor representative.

SG Series

Workstation SG series					
Model	Dimensions	Side	Glove port No.	Technical Specification	Included Items
SG1200/750TS	1200mm(L)x750mm/(D)x900mm(H)	Single	2	Leak Rate: < 0.001 vol%/hr Purity Level of the Atmosphere: O ₂ < 1 ppm, H ₂ O < 1 ppm	Large Antechamber & Mini Antechamber Gas Purification System Edwards RV12 Vacuum Pump System Control Other Parts -Glove Port Cover -Electrical Power Strip Feedthrough
SG1500/750TS	1500mm(L)x750mm/(D)x900mm(H)	Single	3		
SG1800/750TS	1800mm(L)x750mm/(D)x900mm(H)	Single	4		
SG2000/750TS	2000mm(L)x750mm/(D)x900mm(H)	Single	4		
SG2400/750TS	2 x 1200mm(L)x750mm/(D)x900mm(H)	Single	4		
SG1200/1000TS	1200mm(L)x1000mm/(D)x900mm(H)	Double	4	Leak Rate: < 0.002 vol%/hr Purity Level of the Atmosphere: O ₂ < 1 ppm, H ₂ O < 1 ppm	
SG1500/1000TS	1500mm(L)x1000mm/(D)x900mm(H)	Double	6		
SG1800/1000TS	1800mm(L)x1000mm/(D)x900mm(H)	Double	8		
SG2000/1000TS	2000mm(L)x1000mm/(D)x900mm(H)	Double	8		
SG1200/1200TS	1200mm(L)x1200mm/(D)x900mm(H)	Double	4		
SG1500/1200TS	1500mm(L)x1200mm/(D)x900mm(H)	Double	6		
SG1800/1200TS	1800mm(L)x1200mm/(D)x900mm(H)	Double	8		
SG2000/1200TS	2000mm(L)x1200mm/(D)x900mm(H)	Double	8		

Note: All SG workstation series can be extended via related SG series extension module.

Extension Module SG series					
Model	Dimensions	Side	Glove port No.	Technical Details	
SG1200/750E	1200mm(L)x750mm/(D)x900mm(H)	Single	2	For left or right modules: One welded side panel on left or right side of enclosure One box connection flange	
SG1500/750E	1500mm(L)x750mm/(D)x900mm(H)	Single	3		
SG1800/750E	1800mm(L)x750mm/(D)x900mm(H)	Single	4		
SG2000/750E	2000mm(L)x750mm/(D)x900mm(H)	Single	4		
SG1200/1000E	1200mm(L)x1000mm/(D)x900mm(H)	Double	4	For center modules: Two box connection flanges	
SG1500/1000E	1500mm(L)x1000mm/(D)x900mm(H)	Double	6		
SG1800/1000E	1800mm(L)x1000mm/(D)x900mm(H)	Double	8		
SG2000/1000E	2000mm(L)x1000mm/(D)x900mm(H)	Double	8		
SG1200/1200E	1200mm(L)x1200mm/(D)x900mm(H)	Double	4	Box Connection Flanges: With removable vacuum gasket patented no-leak seal for the interface between the two box bodies.	
SG1500/1200E	1500mm(L)x1200mm/(D)x900mm(H)	Double	6		
SG1800/1200E	1800mm(L)x1200mm/(D)x900mm(H)	Double	8		
SG2000/1200E	2000mm(L)x1200mm/(D)x900mm(H)	Double	8		

Note: All SG extension module series can be connected with related SG series extension module.

Our Toolbox:

Optional Items			
Purification System		Pictures	
Upgrade to Dual Column Gas Purification System		Feedthrough	Pictures
Upgrade to Regenerable Solvent Vapor Removal		Electrochemical Feedthrough	
Vigor Smart Box		Electrochemical Feedthrough with Alligator Clips or Banana Connector	
Heated Antechamber with PLC Integrated Control		BNC Feedthrough	
Large Antechamber(150 C)		Electrical Power Feedthrough (Single phase 220-230 VAC, 50 Hz, 230 VA max)	
Large Antechamber(200 C)		Fiber Optics Feedthrough	
Mini Antechamber(150 C)		USB Feedthrough(Micro USB)	
Freezer with PLC Integrated Control		USB Feedthrough(Type-C)	
Freezer (Minimum temperature: -35 C)		Gas/Liquid/Vacuum Feedthrough	
Box Cooling System with PLC Integrated Control & Heat Exchanger		Analyzer	
Box Cooling System (Between 22-25 C)		Moisture Analyzer (-100 to 20 C)	
Heat Exchanger on Circulation (Water Chiller required)		Oxygen Analyzer (0-10, 100, 1000, 10000 ppm)	
Cold Well		Spin Coater & Hot plate	
Cold Well		Sawatec SM-150 Spin Coater	
Dewar for Cold Well		Sawatec HP-150 Hot Plate	
		Nikon Microscope	
		Edwards XDS10i Dry Vacuum Pump	

Please refer to individual leaflets for details

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