

GLOVES FOR ISOLATOR

ถุงมือยาวสำหรับตู้เตรียมตัวอย่าง



PIERCAN drybox gloves

Reference Guide:
Standard Models



To find the reference number
of the glove that meets your needs,
follow these steps.



- Medical
- Electronic
- Laboratory Testing
- Food Science Research
- Battery Vacuum Glove Box
- Pharmaceutical Research Labs
- Nuclear
- Humidity Control
- Industrial Research



บริษัท 3เอ อินสตรูเมนต์ จำกัด

เลขที่ 200/61 หมู่ 5 โทรทัศน์ 0 2046 0691-2

ตำบลบางรักน้อย 0 2046 2608

อำเภอเมืองนนทบุรี โทรสาร 0 2045 2608

จังหวัดนนทบุรี 11000 www.3ainstrument.com

มือถือ./Mobile Phone. +668 1508 1168, +666 3045 5536, +669 4539 5052

3A INSTRUMENT CO.,LTD.

200/61 Moo.5

Tambon Bangruknoi,

Amphur Muang Nonthaburi,

Nonthaburi 11000 Thailand

Tel. +66 2046 0691-2

+66 2046 2608

Fax. +66 2045 2608

E-mail: Sales@3ainstrument.com

Contact@3ainstrument.com



เกี่ยวกับเรา

ABOUT US

บริษัท 3เอ อินสตรูเมนต์ จำกัด ได้ก่อตั้งขึ้น เมื่อปี พ.ศ. 2556 โดยมีวัตถุประสงค์ เพื่อจำหน่ายเครื่องมือและอุปกรณ์วิทยาศาสตร์และเป็นผู้ผลิตสินค้าภายในประเทศ ได้แก่ ตู้ Glove Box โดยมุ่งเน้นพัฒนาสินค้าภายในประเทศอย่างมีคุณภาพ อีกทั้งยังเป็นผู้นำเข้าถุงมือยาว Gloves สำหรับ Dry Box, Isolator, Glove Box ยี่ห้อ Piercan ประเทศ ฝรั่งเศส ที่มีคุณภาพสูงและด้วยมาตรฐานการผลิต จึงเป็นที่ยอมรับและตอบสนองต่อความต้องการของลูกค้าในการใช้งานที่แตกต่าง เพื่อใช้ในอุตสาหกรรมประเภทต่าง ๆ เช่น Pharmaceutical, Medical, Nuclear, Hospital, Laboratories (Life Sciences) and Industries.

บริษัทฯ มุ่งเน้นการบริการและนำเสนอสินค้าและผลิตภัณฑ์ที่มีคุณภาพและตรงตามความต้องการของลูกค้า จึงได้พัฒนาจากการดูแลทางด้านปฏิบัติการ สู่การทำงานระบบควบคุมการผลิตใน Production ด้วยระบบ Sensor Online โดยมีทีมงานวิศวกรผู้เชี่ยวชาญในการออกแบบระบบและติดตั้งควบคุมระบบการทำงานด้วย PLC Program ตามจุดประสงค์ที่ลูกค้าต้องการควบคุมระบบการทำงานซึ่งช่วยให้ลดการสูญเสียของผลิตภัณฑ์ อีกทั้ง เพิ่มศักยภาพในการผลิตอีกด้วย.

ด้วยระยะเวลาในการทำงาน เราใส่ใจในการบริการและปัญหาลูกค้าเสมอมา ทางบริษัทฯ ต้องขอขอบพระคุณ ทุกท่านที่ได้ไว้วางใจและเชื่อมั่นในการให้บริการของเรา เราทีมงานจะพัฒนาการบริการให้ดียิ่งๆ ขึ้นไป จึงขอขอบพระคุณมา ณ โอกาสนี้

บริษัท 3เอ อินสตรูเมนต์ จำกัด

ผลิตภัณฑ์

PRODUCTS



อุปกรณ์พื้นฐานห้องปฏิบัติการ
(Lab consumables & Labware)



อุปกรณ์เครื่องแก้ว
(Glassware Laboratory)



ถุงมือยาวกันสารเคมี,
กับไฟฟ้าสถิตย์



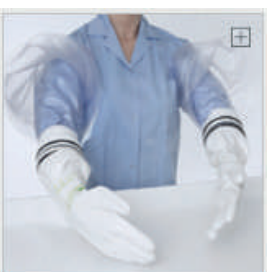
ถุงมือสำหรับตู้เตรียมตัวอย่าง
(Glove, Piercan France)



ตู้เตรียมตัวอย่าง (Glove Box)



เครื่องมือวัด ยี่ห้อ HANNA



Sleeves and Gloves for
Isolator



Sleeves PCV and glove
for ISOLATOR



Sleeves PCV and glove
for ISOLATOR



Half-Suit for production



เครื่องมือวิเคราะห์คุณภาพน้ำและ
เครื่องดื่ม



หมวดพลังงาน (Energy Saving)



อุปกรณ์สแตนเลสโรงงาน
(Stainless Steel for Industry)



Sensor Measurement Online and
PLC Programming Control



GLOVE BOX

PRODUCTION and *DISTRIBUTION*
of **GLOVE BOX** products and services that meet the
needs of customers.

GLOVE "PIERCAN"

The **PIERCAN** products are designed
in accordance with the main European
regulations concerning the PPE (Personal
Protective Equipment) such as: EN420,
EN374 (Rules concerning protection
against chemical products), EN388 (against
mechanical risks), etc...

We are a **STOCKING** distributor, and that includes
hard-to-find gloves.
made in **FRANCE**



SERVICES & SUPPORT FOR

3A INSTRUMENT CO.,LTD

PLC

Sensor and Process
Instrument System Control
with Programmable Logic Controller

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Isolator glove box **115 series**



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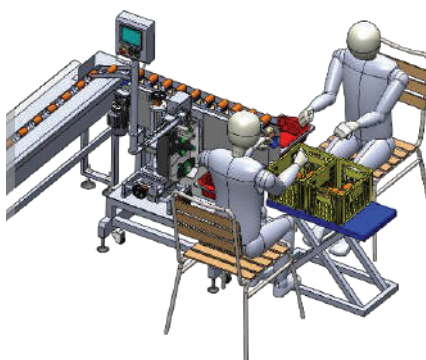
Services & Support For...

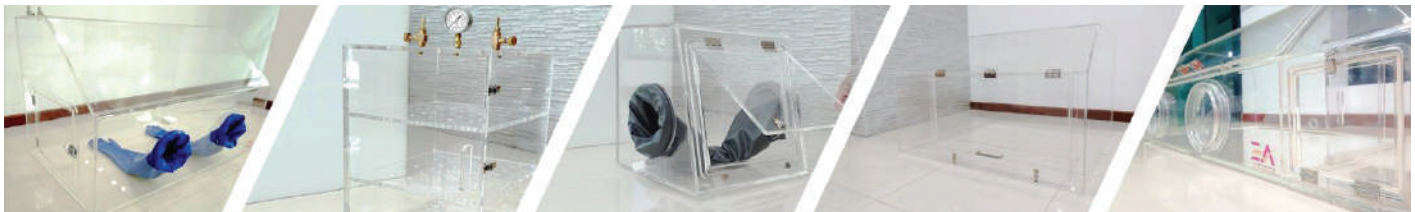
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- Glassware Laboratory
- Plasticware Laboratory
- Stainless Laboratory
- Analyzer Instrument
- Chemical Products
- Furniture For Laboratory
- Stainless Steel For Industrial

Programmable Logic controller (PLC)

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GLOVE BOX

*Clear Acrylic Gloves Box and Stainless Steel Gloves Box System
for reserch and Lab Control.*



VACUUM DESICCATOR CABINETS

Vacuum Desiccator Cabinets are vacuum chambers made of clear Acrylic designed for vacuum testing, degassing small parts, defoaming, mixed liquids and storing samples under intermediate vacuums.



**Desiccator Cabinet
W35**



**Vacuum Desiccator
W35 Type I**



**Vacuum Desiccator
W40 Type I**



**Vacuum Desiccator
W40 Type II**

Features:

- Materials clear Acrylic.
- 10 mm. Clear Polycarbonate box is a good choice for operations with many corrosive chemicals and alcohol.
- Vacuum gasket on door ensures airtight seal.
- Two vacuum valves mounted to top allow purging of the desiccator with nitrogen or dry air before vacuum is applied, barbed fittings included.
- Including vacuum gauge indicates vacuum level.
- Perforated acrylic shelf for Sample.

Specifications:

Model	Desiccator Cabinet W35	Vacuum Desiccator W35 type I	Vacuum Desiccator W40 type I	Vacuum Desiccator W40 type II
Material Clear Acrylic	Yes			
Thickness	20 mm.	20 mm.	20 mm.	20 mm.
Overall Dimensions (mm.)	W350 x D400 x H500	W350 x D400 x H500	W400 x D400 x H400	W400 x D400 x H400
Access Door	One side			
Gas Port: The gas port for inert gas such as nitrogen, argon, air, etc. 2 pcs.	No	Yes	Yes	Yes
Analog Pressure Gauge: 0 to 10 bar	No	Yes	Yes	Yes
Perforated Acrylic Shelf	3 Shelf	3 Shelf	2 Shelf	2 Shelf

Options:

One-stage chemistry diaphragm vacuum pumps are an excellent choice for applications with corrosive gases and vapors which do not require very deep vacuum levels. Typical applications are vacuum ovens, filtrations as well as concentration of solvents with low boiling points. All major parts in contact with pumped media are made of chemically resistant fluoroplastics. The well proven robust PTFE sandwich diaphragm provides outstanding reliability and operating life. The one-stage construction provides the advantageous combination of high pumping speed and low ultimate vacuum down to 70 mbar. Max. Pumping speed at 50/60 Hz 2.1 / 2.4 m³/h, Rated motor power 0.18 kW, Mains voltage and frequency 220 V 50 Hz.

OPTIONS:



3A INSTRUMENT CO., LTD.

200/61 Moo.5 Tambon Bangruknnoi,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



MINI GLOVE BOX W40 SERIES

Glove ports are located on the sides to allow a compact size. Compact glove box is an enclosed chamber with large front access door. The tilt-up window provides convenient viewing and accessibility. Available with and without gas ports. Inert gas such as nitrogen, argon can be used to control the oxygen and humidity level.



Mini Glove Box W40



Mini Glove Box W40A

They're portable and lightweight that can be setup anywhere. Available in cleanroom-safe materials including clear Acrylic, Static dissipative PVC and polycarbonate.

Features:

- They're portable and lightweight that can be setup anywhere. Available in cleanroom-safe materials including clear Acrylic, Static dissipative PVC and polycarbonate.
- 10 mm. Clear Polycarbonate glove box is a good choice for operations with many corrosive chemicals and alcohol.
- Overall dimensions (Main chamber): W400 X D400 X H400 mm.
- Lift-up front window with Clear Non dissipative window allows easy parts transfer from inside the Glove box.
- Two 150 mm. Diameter glove port use glove 156 mm. Diameter with O-Ring

Accessories:

- O-Ring for glove port 2 pcs.
- Analog Pressure gauge : 1-10 bar.
- Natural rubber glove. Diameter 156 mm. Length 500 mm.

Options:

- Digital Hygrometer and Thermometer. Data Logger for humidity and temperature
- Re-generable Silica gel desiccant cartridge
- Vacuum pump for purge control.
- Gas (N₂, O₂, or Air) gas in port Push-to Connect fitting and gas-out bleeding valve.
- Flow meter with adjusting valve.

Specifications:

Model	Mini Glove Box W40	Mini Glove Box W40A
Material Clear Acrylic	Yes	
Thickness	10 mm.	
Overall Dimensions	W400 x D400 x H400 mm.	
Port Diameter	Ø 150 mm. x 2	
Door Size	W330 x H330 mm.	
Gas Port : The gas port for inert gas such as nitrogen, argon, air, etc. 2 pcs.	No	Yes
Analog Pressure Gauge : 0 to 10 bar	No	Yes
Glove : PIERCAN., France., Type Natural Rubber (H)., shape 10, size 8 thickness 4/10 mm., length 500 mm., Glove port inner Diameter 150 mm.	Yes	

OPTIONS: PIERCAN, Mini glove box. There are many types of gloves to choose form application.



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Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

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Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
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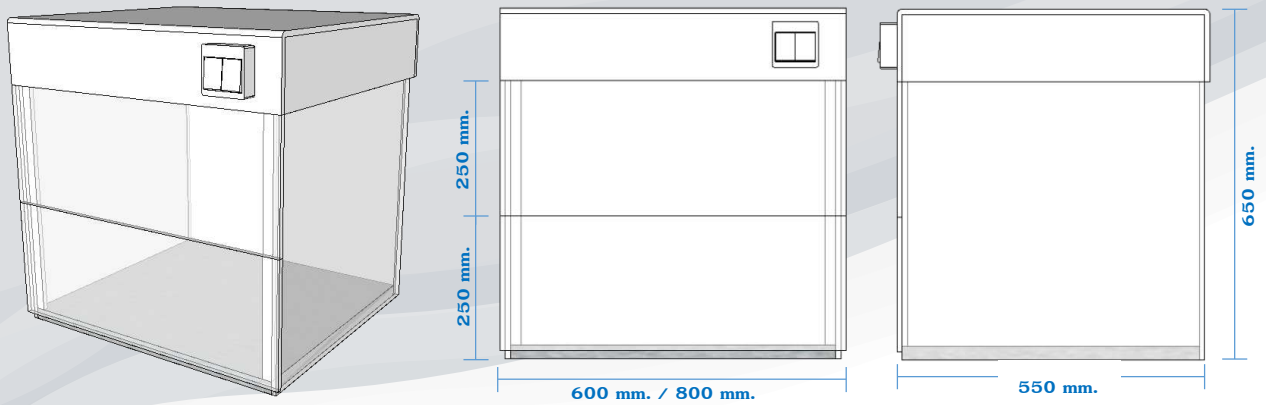


PCR Cabinet

- ✓ UV Protection 15 watts.
- ✓ Foldable door 2 step with magnetic safety lock.
- ✓ Stainless Steel Workstations.
- ✓ Chemical Resistant.
- ✓ Easy to Cleaning.



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200/61 Moo.5 T.Bangruknoi,
A.Muang Nonthaburi, Nonthaburi 11000.
Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608
WWW.3AINSTRUMENT.COM



รายละเอียดคุณลักษณะ

1. เป็นตู้สำหรับปฏิบัติงานพีซีอาร์
ทำจากอะครีลิคใส ความหนา 10 มิลลิเมตร
2. พื้นที่ปฏิบัติงาน ทำจากสแตนเลส 304
ขนาด 60 x 55 ซม. ทนสารเคมี และง่าย
ต่อการดูแลรักษา
3. หลอดอุลตราไวโอเลต (UVC) ขนาด 15 วัตต์
จำนวน 1 หลอด
4. หลอดแสงสว่างฟลูออเรสเซนต์ ขนาด 15 วัตต์
จำนวน 1 หลอด
5. สวิตช์เปิด-ปิด ชุดหลอดอุลตราไวโอเลต (UVC)
และหลอดแสงสว่าง
6. ประตูบานพับ 2 สเต็ป ล็อกด้วยแรงยัดแม่เหล็ก
7. ใช้ไฟฟ้า 220 โวลท์ 50 เฮิรตซ์
8. รับประกันคุณภาพ 1 ปี



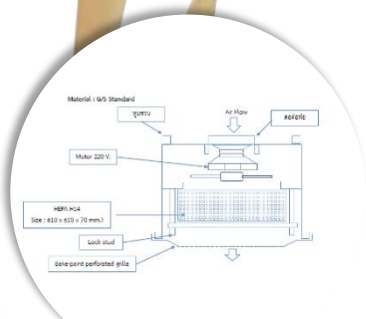
MODEL	Width (W)	Depth (D)	Height (H)	Area work station.
PCR-B60	60 cm.	55 cm.	65 cm.	60 x 55 cm.
PCR-B80	80 cm.	55 cm.	65 cm.	80 x 55 cm.

Cabinet Dry Glove Box

- ✓ **Close system for control Environment.**
- ✓ **Stainless Steel SUS 304 Workstations.**
- ✓ **Chemical Resistant Easy to Cleaning.**
- ✓ **User protection.**

Application

- Cabinet Close system testing for Laboratories of pharmaceuticals, Biological, Chemical.
- Weighing samples of Drug powders.
- Operation of various instruments requiring environmental control, such as Automatic titration, Volumetric/Culometric Karl Fischer Titration.



ឧបករណ៍ HEPA/Carbon FILTER



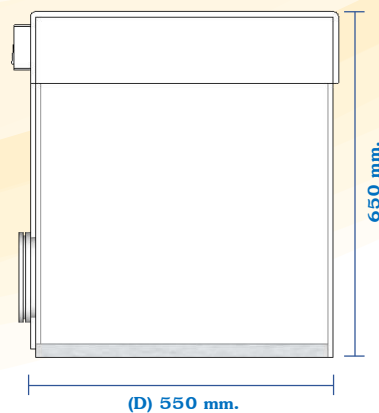
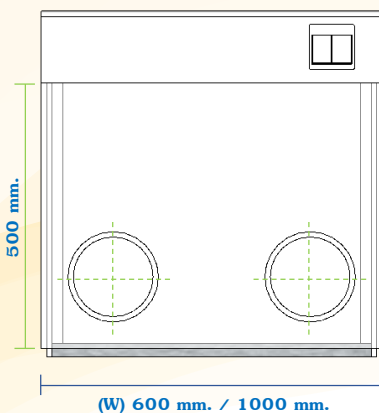
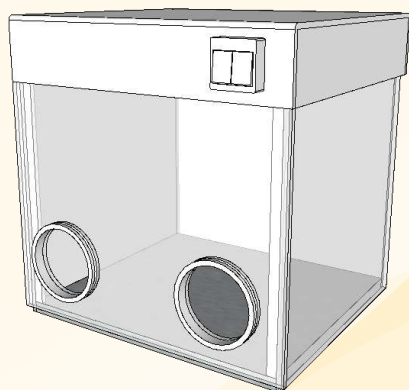
UVC Lighting 15 W



DRY GLOVES PIERCAN

Options.





รายละเอียดคุณลักษณะ

1. ตู้ปฏิบัติงานพร้อมถุงมือ ควบคุมสภาวะแวดล้อม
ขณะทำงาน เหมาะสำหรับเครื่องมือ อุปกรณ์
สารเคมี และเตรียมตัวอย่างอันตราย
2. ทำจากอะคริลิกใส ความหนา 10 มิลลิเมตร
3. พื้นที่ใช้ปฏิบัติงาน ทำจากสแตนเลส 304
ขนาด 60 x 55 ซม. ทนสารเคมี และง่าย
ต่อการดูแลรักษา
4. หลอดอุลตราไวโอเลต (UVC) ขนาด 15 วัตต์
จำนวน 1 หลอด (Options.)
5. หลอดแสงสว่างฟลูออเรสเซนต์ ขนาด 15 วัตต์
จำนวน 1 หลอด (Options.)
6. ช่องสวมถุงมือยาว ด้านหน้า พร้อมตัวล็อกถุงมือ
7. ปลั๊กไฟ 2 ช่อง สำหรับต่อฟ่วงอุปกรณ์เครื่องมือ
8. ใช้ไฟฟ้า 220 โวลท์ 50 เฮิรตซ์
9. รับประกันคุณภาพ 1 ปี

MODEL	Width (W)	Depth (D)	Height (H)	Area work station.
Cabinet-G60B-30	60 cm.	55 cm.	65 cm.	60 x 55 cm.
Cabinet-G100B-30	100 cm.	55 cm.	65 cm.	100 x 55 cm.

COMPACT GLOVE BOX 70

3A INSTRUMENT CO. LTD.

These basic compact glove boxes provide low-humidity, Oxygen free controlled environment when used with inert gas purging system. Glove boxes are ideal choice for laboratory, clean room, electronic assembly and other critical processing operations in such industries as semiconductor, Laboratory, Testing and pharmaceutical manufacturing. Operations in such industries as semiconductor and pharmaceutical manufacturing. Glove Box system designed for easy transfer of samples and substance, isolation, close system for dry glove box.



Model: 70A

Features:

- One access doors open inward (or outwards upon request) with door frame, hinge, one-piece non-adhesive sealing.
- Side door opening 350 x 350 mm. (Upgradable to larger door)
- Two 200 mm. OD glove ports for standard dry box gloves (Isolator glove) with 220 mm. size standard.
- The AIR BOX is air box is Accessories transfer samples into the glove box Size W300 x D300 x H300 mm. Side open window. The 240 x 240 mm. opening allows for parts to be easily placed inside the glove box with door slide. (Upon request.)

Accessories:

- O-Ring for glove port 2 pcs.
- Pressure gauge 1-10 bar.
- Natural rubber glove. Diameter 220 mm. Length 800 mm.

Options:

- Digital Hygrometer and Thermometer.
- Data Logger for humidity and temperature
- Re-regenerable Silica gel desiccant cartridge
- Vacuum pump for purge control.
- Gas (N₂, O₂, or Air) gas in port Push-to Connect fitting and gas-out bleeding valve.
- Flow meter with adjusting valve.
- Glove port with O-Ring 1 Set (4 pcs)



AIR BOX

Model	70	70A
Material Clear Acrylic :	Yes	
Thickness :	8 mm.	
Overall Dimensions (Main Chamber Glove box) :	W700 x D550 x H550 mm.	
Port Diameter :	Ø 200 mm. x 2	
Door size :	-	
- Side door open (Left) 400 x 400 mm.	Yes	Yes
- Side door open (Right) 240 x 240 mm. (** for Air Box. Upon request.)	No	Yes
Overall Dimensions (Air box) : W300 x D300 x H300 mm.	No	Yes
Gas port : The gas port for inert gas such as nitrogen, argon, air, etc. 2 pcs.	No	Yes
Pressure Gauge : 0 to 10 bar	No	Yes
Receptacle : 220V, 50-60 Hz	Yes	Yes
Glove : PIERCAN., France., Type Natural Rubber (H), shape 18, size 8 thickness 4/10., length 800 mm., Glove port inner Diameter 220 mm.	Yes	

Options.

PIERCAN., Glove for dry Glove box, Isolator, Good chemical resistance and options control.



Glove Box : G80 Series

for control environment with close system.

These basic compact Dry glove boxes provide low-humidity, low-oxygen Free controlled environment when used with Close system . Includes inlet-outlet gas port for inert gas condition testing . Dry Glove Box system *Glove boxes are ideal choice for laboratory testing cost system in such industries as Laboratory, Research Testing, pharmaceutical, Cosmetic, Semiconductor, Batteries, Electronic, Solar cell and University research.* tem designed for easy transfer of samples and close system for dry glove box.

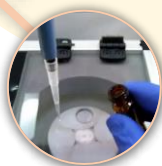
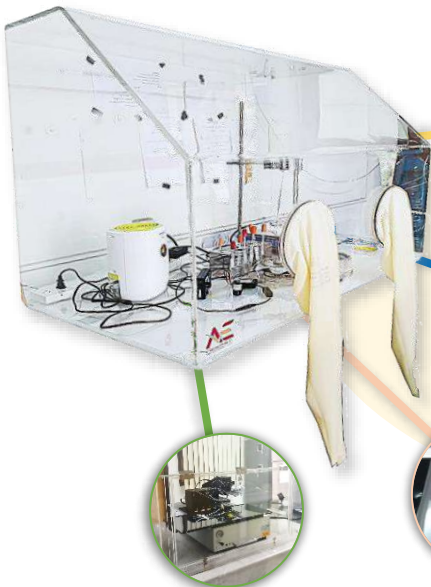
Features:

- Clear Acrylic thickness 10 mm with large opening.
- Can be cleaning inside system with the inert gas port.
- Two glove port diameter 200 mm.
- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Pass box allow convenient sample parts transfer.



Application

- Close system testing for Laboratories of pharmaceuticals, Biological, Chemical.
- Weighing samples of moisture sensitive drug powders.
- Experiments that require low-humidity conditions.
- Operation of various instruments requiring environmental control, Equipment Enclosure such as Automatic titration, Volumetric and Coulometric Karl Fischer Titration.



- Anaerobic Test Glove Box.
- Negative or positive pressure glove box.
- Vacuum Glove box.
- Biosafety Glove Box.
- Benchtop Glove Box for control Environment Equipment Enclosure.
- Gas control system nitrogen purge for low –humidity.
- Temperature and Humidity control.
- Programmable process Controller Temperature and Humidity.
- Basic Research Glove Box.

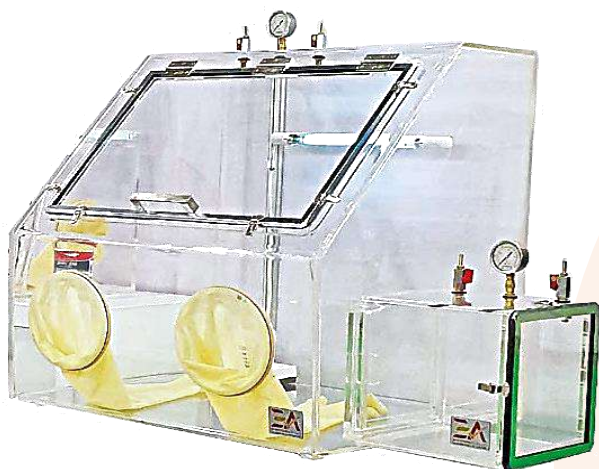
Basic Glove Box

- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Environment Equipment Enclosure for application Microscope , Balance.
- *Gas control system nitrogen purge for low –humidity*



Chamber

- Easy open and operate system .
- Glove Port ID 200 mm for use Long gloves Diameter 220 mm, Length 800 mm.
- *Gloves Box MODEL G80B-11 With ... is special system. There are 2 systems, namely the system that filters clean air (Can choose filters to the needs of the work) and automatic systems that control the temperature and humidity inside the gloves box.*
- Gas (N_2 , O_2 , or Ar) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system.
- Glove port with O-Ring 1 Set (2 pcs)



Pass Box

- The PASS BOX is Accessories to transfer samples into the inside glove box, with size W350 x D300 x H300 mm. Side open window.
- The 300 x 300 mm. opening allows for parts to be easily placed inside the glove box with door slide.
- *Gas (N_2 , O_2 , or Ar) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system.*

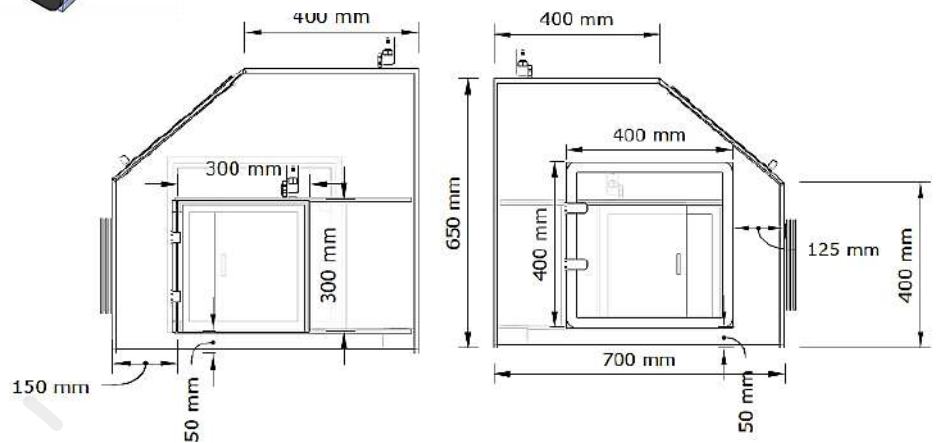
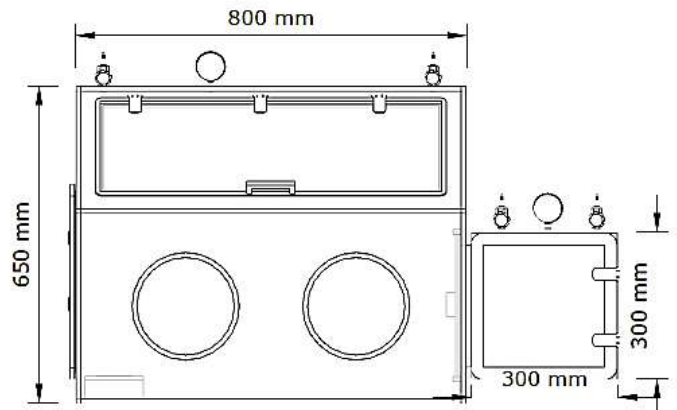
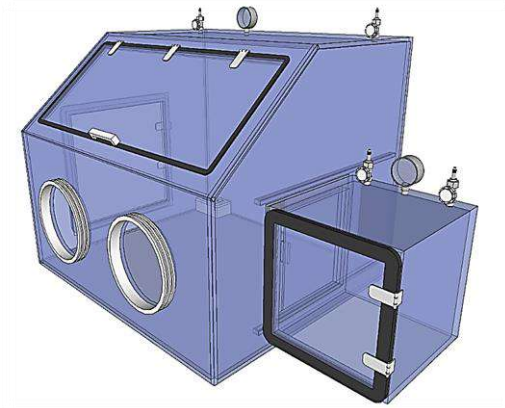
Specifications:

Model	G80B-00	G80B-01	G80B-11	G80B-1123	G80B-1124	G80B-1125	G80C-1127	G80C-1128
Material	Clear Acrylic							
Material Thickness (mm) :	10	10	10	10	10	10	12	12
External Dimensions (Main Chamber)	W 800 x D 700 x H 650 mm.							
UVC Lighting 15 W.	Option.							
Lighting 15 W .	Yes.							
Gas Port : for inert gas such as nitrogen, argon, air, etc. (2 pcs)	Yes.							
Analog Pressure Gauge : 0-10 bar	Yes.							
Door open big side :	-	-	W 600 x D 300 mm.					
Side Door right open :	Yes.	Yes.	-	-	-	-	-	-
Glove Port Diamention (2 pcs) :	ID 200 mm.							
Pass Box for sample transfer : - Size : W300 x D300 x H300 mm - Inlet/Outlet Gas Port , 2 pcs - Analog Pressure 0-10 bar, 1 pcs	-	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.
Carbon Filter with Blower	-	-	-	Yes.	-	-	-	
Hepa Filter with Blower	-	-	-	-	Yes.	-	-	
Auto Dry for low humidity	-	-	-	-	-	Yes.	-	
Temperature & Dehumidity Control - Thermoelectric Cooler - Anti-Condensation Heater - Dehumidifier	-	-	-	-	-	-	Yes.	-
Programmable process Controller - Control Temperature step - Dehumidity Control	-	-	-	-	-	-	-	Yes 99 step Yes
Power Socket : 220V,50-60 Hz,	Yes. (2 Channel.)							
Gloves: Port ID 220 mm,Length 800 mm	Yes. (Options) Material : Natural Rubber /Neoprene/CSM/BHP/PUR/EPDM							



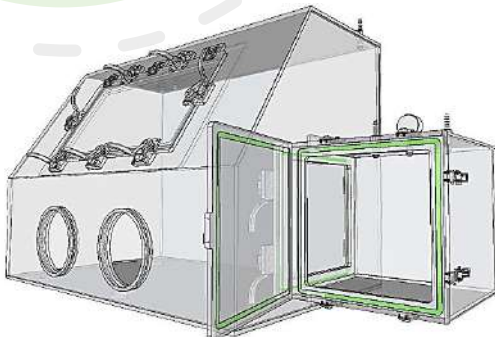
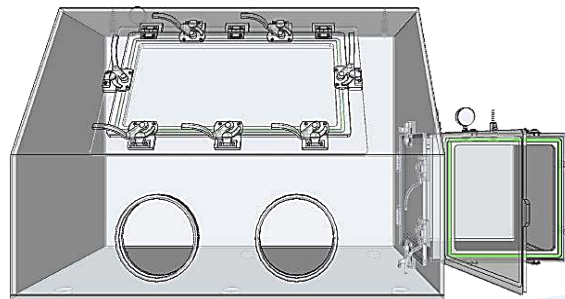
Drawing dimensions

Easy Maintenance and Testing



Main Chamber

- **External Chamber Dimension:**
W 800 x D 700 x H 650 mm.
- **Main Chamber: Clear Acrylic**
- **Thickness: 10 mm.**
- **Open Door internal Dimension:**
W600 x D300 mm.

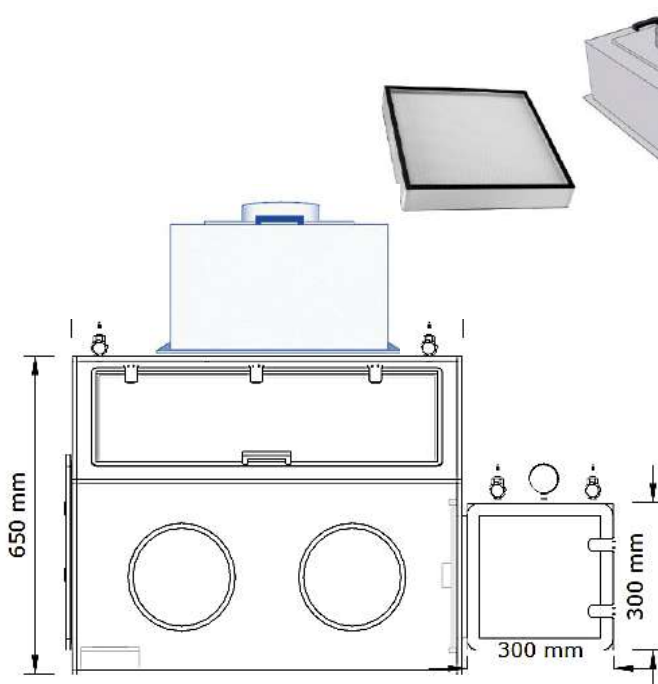


Gas port

- **Inlet / Outlet gas port for inert gas Ar_2 , N_2 .**
- **Needle Valve Stainless Valve.**



Drawing dimensions



Hepa/Carbon Filter

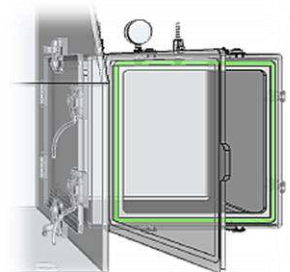
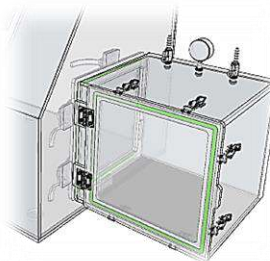
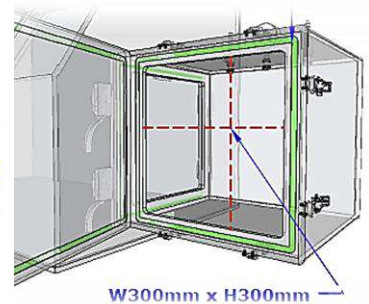
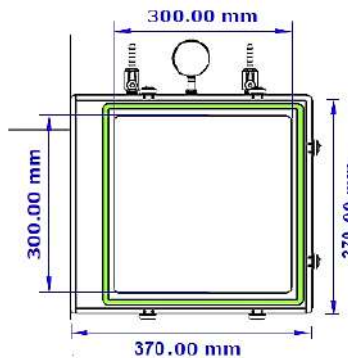
- **HEPA-Filtered with blower Glove Boxes** have inlet and outlet HEPA filters and provide barrier to protect the operator from hazardous airborne particulates and powders.
- **Carbon filter with Blower Glove Box** Helps prevent dust and chemicals.



Pass Box Transfer sample

Pass Box

- **Open Door internal Clear Acrylic:** W250 x D250 mm.
- **External Dimension:** W300 x D300 x H300 mm.
- Inlet/Outlet for inert gas Port 2 pcs.
- Pressure gauge 0-10 bar: 1 pcs.



Glove Box : G115 Series

for control environment with close system.

These basic compact Dry glove boxes provide low-humidity, low-oxygen Free controlled environment when used with Close system . Includes inlet-outlet gas port for inert gas condition testing . Dry Glove Box system *Glove boxes are ideal choice for laboratory testing cost system in such industries as Laboratory, Research Testing, pharmaceutical, Cosmetic, Semiconductor, Batteries, Electronic, Solar cell and University research.* tem designed for easy transfer of samples and close system for dry glove box.

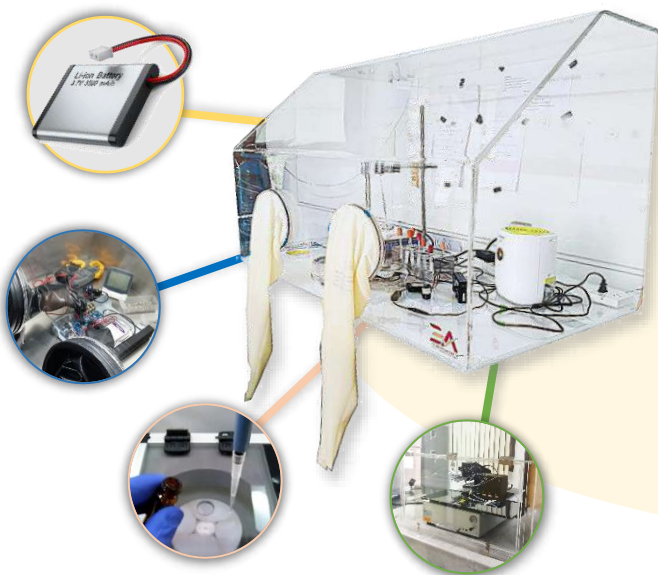
Features:

- Clear Acrylic thickness 10 mm with large opening.
- Can be cleaning inside system with the inert gas port.
- Two glove port diameter 200 mm.
- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Pass box allow convenient sample parts transfer.



Application

- Close system testing for Laboratories of pharmaceuticals, Biological, Chemical.
- Weighing samples of moisture sensitive drug powders.
- Experiments that require low-humidity conditions.
- Operation of various instruments requiring environmental control, Equipment Enclosure such as Automatic titration, Volumetric and Coulometric Karl Fischer Titration.



- Anaerobic Test Glove Box.
- Negative or positive pressure glove box.
- Vacuum Glove box.
- Biosafety Glove Box.
- Benchtop Glove Box for control Environment Equipment Enclosure.
- Gas control system nitrogen purge for low -humidity.
- Temperature and Humidity control.
- Programmable process Controller Temperature and Humidity.
- Basic Research Glove Box.

Basic Glove Box

- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Environment Equipment Enclosure for application Microscope , Balance.
- *Gas control system nitrogen purge for low –humidity*



Chamber

- Easy open and operate system .
- Glove Port ID 200 mm for use Long gloves Diameter 220 mm, Length 800 mm.
- *Gloves Box MODEL G115B-11 With ... is special system. There are 2 systems, namely the system that filters clean air (Can choose filters to the needs of the work) and automatic systems that control the temperature and humidity inside the gloves box.*
- Gas (N₂, O₂, or Ar) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system.
- Glove port with O-Ring 1 Set (2 pcs)



Pass Box

- The PASS BOX is Accessories to transfer samples into the inside glove box, with size W350 x D300 x H300 mm. Side open window.
- The 300 x 300 mm. opening allows for parts to be easily placed inside the glove box with door slide.
- *Gas (N₂, O₂, or Air) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system.*

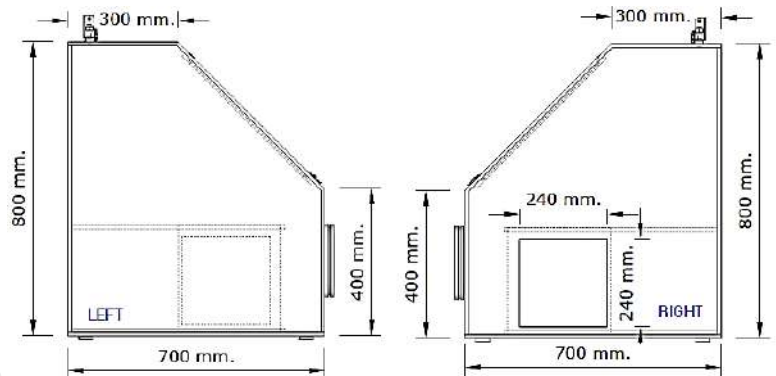
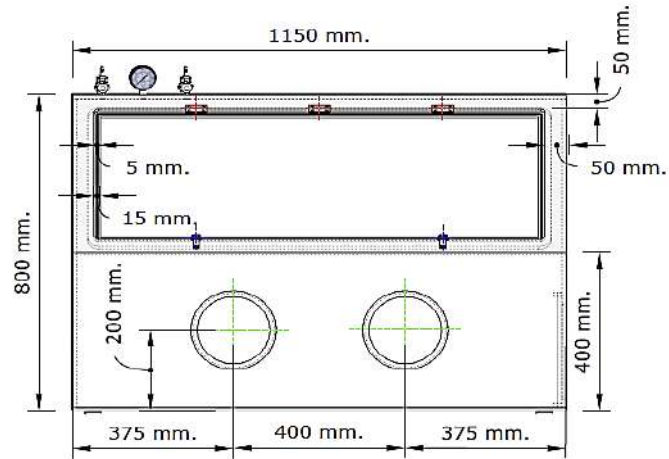
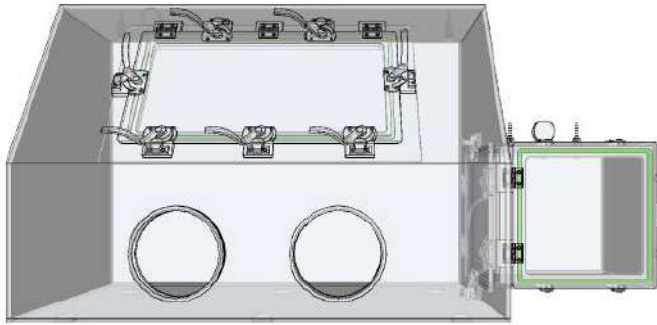
Specifications:

Model	G115B-00	G115B-01	G115B-11	G115B-1123	G115B-1124	G115B-1125	G115C-1127	G115C-1128
Material	Clear Acrylic							
Material Thickness (mm) :	10	10	10	10	10	10	12	12
External Dimensions (Main Chamber)	W 1150 x D 700 x H 800 mm.							
UVC Lighting 15 W.	Option.							
Lighting 15 W .	Yes.							
Gas Port : for inert gas such as nitrogen, argon, air, etc. (2 pcs)	Yes.							
Analog Pressure Gauge : 0-10 bar	Yes.							
Door open big side :	-	-	W 600 x D 300 mm.					
Side Door right open :	Yes.	Yes.	-	-	-	-	-	-
Glove Port Diamention (2 pcs) :	ID 200 mm.							
Pass Box for sample transfer : - Size : W300 x D300 x H300 mm - Inlet/Outlet Gas Port , 2 pcs - Analog Pressure 0-10 bar, 1 pcs	-	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.
Carbon Filter with Blower	-	-	-	Yes.	-	-	-	
Hepa Filter with Blower	-	-	-	-	Yes.	-	-	
Auto Dry for low humidity	-	-	-	-	-	Yes.	-	
Temperature & Dehumidity Control - Thermoelectric Cooler - Anti-Condensation Heater - Dehumidifier	-	-	-	-	-	-	Yes.	-
Programmable process Controller - Control Temperature step - Dehumidity Control	-	-	-	-	-	-	-	Yes 99 step Yes
Power Socket : 220V,50-60 Hz,	Yes. (2 Channel.)							
Gloves : Port ID 220 mm,Length 800 mm	Yes. (Options) Material : Natural Rubber /Neoprene/CSM/BHP/PUR/EPDM							



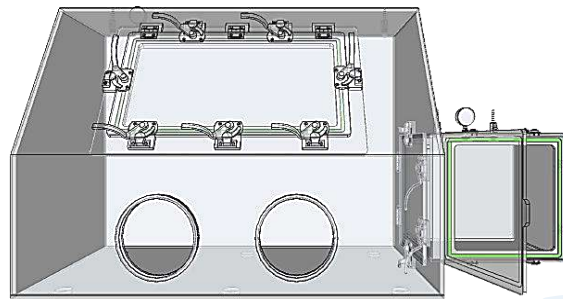
Drawing dimensions

Easy Maintenance and Testing



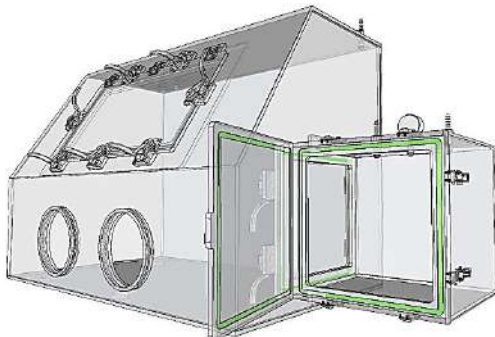
Main Chamber

- External Chamber Dimension:
W1150 x D700 x H800 mm.
- Main Chamber: Clear Acrylic
- Thickness: 10 mm.
- Open Door internal Dimension:
W600 x D300 mm.

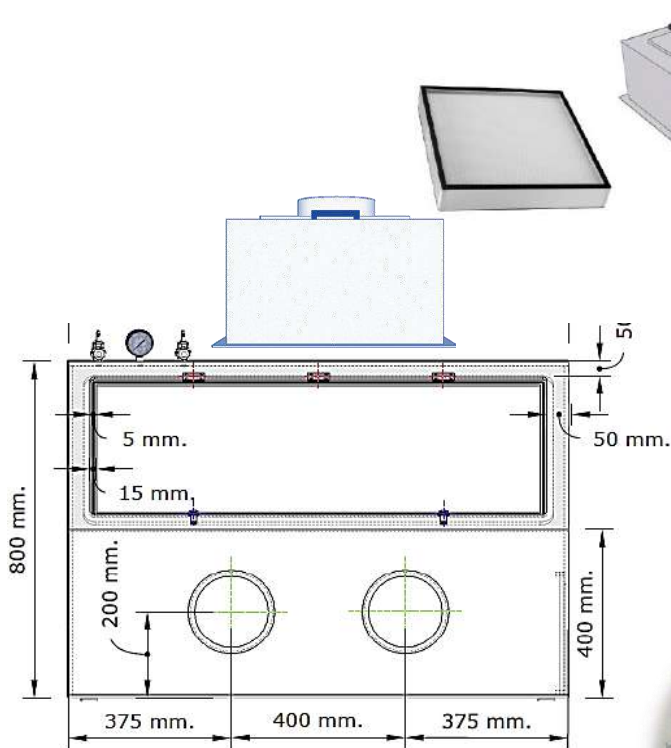


Gas port

- Inlet / Outlet
gas port for inert
gas Ar_2, N_2 .
- Needle Valve
Stainless Valve.



Drawing dimensions



Hepa/Carbon Filter

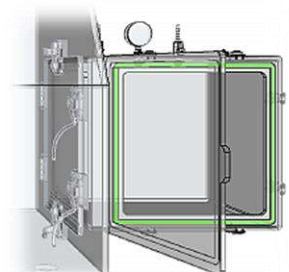
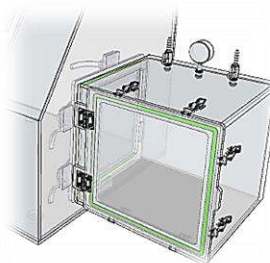
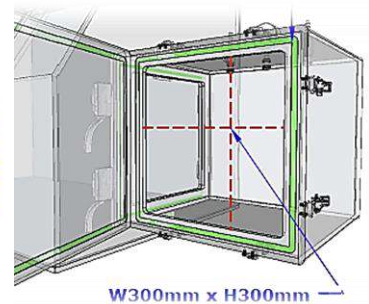
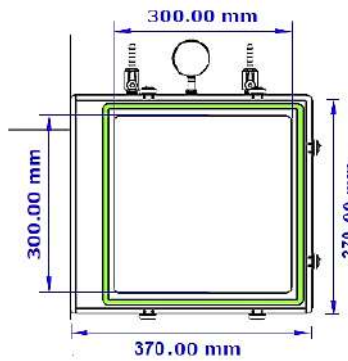
- **HEPA-Filtered with blower Glove Boxes** have inlet and outlet HEPA filters and provide barrier to protect the operator from hazardous airborne particulates and powders.
- **Carbon filter with Blower Glove Box** Helps prevent dust and chemicals.



Pass Box Transfer sample

Pass Box

- **Open Door internal Clear Acrylic:** W250 x D250 mm.
- **External Dimension:** W300 x D300 x H300 mm.
- Inlet/Outlet for inert gas Port 2 pcs.
- Pressure gauge 0-10 bar: 1 pcs.





Stainless Needle Valve



Molecular sieve

Molecular Sieve



Humidity Temperature Datalogger

Temp/Humidity Data logger



POM Glove Port

POM Glove Port



Long Gloves/ PIERCAN



Oil Free Laboratory Chemical Resistant Vacuum

Vacuum Pump



Ball Valve stainless steel

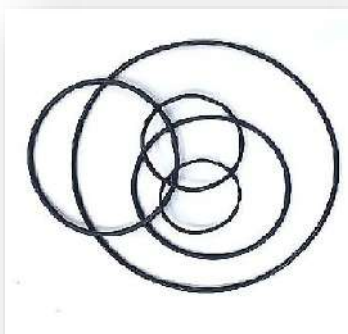


Ball Valve stainless steel



Vacuubrand MZ 2C NT 1.2CFM Chemistry Diaphragm Pump 110V - Chemical Resistance

Vacuum Chemical diaphragm



EPDM O-ring



Air to air thermoelectric Cooler

Thermoelectric cooler



Digital Temperature Controller

Digital Controller

Technical Dry Gloves for Glove Box

Technical Material gloves for all industrial and laboratory testing.



PIERCAN Glove is high quality product form France. The range of gloves that PIERCAN offers is very wide, comprising dry box gloves, sleeve, and isolator glove.



CSM

Chlorosulfonated Polyethylene glove (CSM).

- Resistance to ozone, UV and Sterilizing agents (VHP*).
- Excellent mechanical properties.
- Resistance to ionizing radiation and sterilizing process (Gamma and Beta Radiation).

VHP* (Vaporous hydrogen peroxide)



Black EPDM

Ethylene Propylene Diene Monomer glove.

- Antistatic
- Excellent Flexibility and dexterity.
- Excellent chemical properties, good mechanical properties.
- Composition in accordance with the FDA positive list (CFR 21 § 177. 2600).
- Resistance to AUTOCLAVE, GAMMA & VHP Sterilization 75 cycles of 30 minutes at 121 °C.



Natural Rubber

Natural rubber glove (polyisoprene)

- Excellent flexibility and dexterity
- Good resistance to alcohols, reducing acids and diluted bases.



DRY GLOVE

for the Pharmaceutical and Cosmetics manufacturing.



Neoprene

Polychloroprene glove

- Good mechanical properties.
- Good general resistance to chemical products.
- Very good resistance to sterilisation agents (hydrogen peroxide) and radiation sterilisation (Gamma and Beta rays).
- Good technical and cost-effective compromise
- Self- extinguishing.



POLYURETHANE

POLYURETHANE glove

- Excellent mechanical properties (punctures, tears, abrasion)
- Highly resistant to ozone and UV rays



POLYURETHANE / CSM

Two layer polyurethane and chlorosulfonated polyethylene glove.

- A glove that combines mechanical properties (polyurethane) with chemical resistance (CSM)
- Good resistance to chemical sterilising agents (CSM side)
- High resistance to ozone and UV. Good resistance to ionising radiation.
- Excellent resistance to disinfectants.



High Butyl Properties

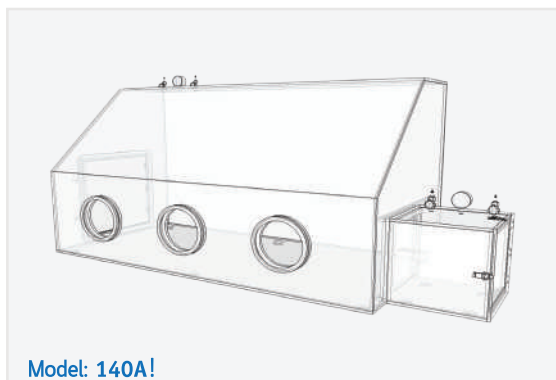
Polyisoprene isobutylene glove.

- Electrostatic dissipative glove in accordance with EN 16350.
- Highly impermeable to liquids and gases
- Good ability to withstand chemical products
- Highly resistant to ozone and UV rays
- Good flexibility and dexterity
- Antistatic (compliant with European standard EN 16350-2014)

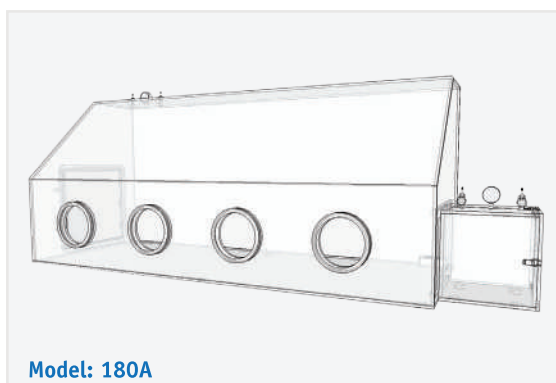


ISOLATOR GLOVE BOX SPECIAL

These basic compact glove boxes provide low-humidity, Oxygen free controlled environment when used with inert gas purging system. Glove boxes are ideal choice for laboratory, clean room, electronic assembly and other critical processing operations in such industries as semiconductor, Laboratory, Testing, Glove box for Lab research and pharmaceutical manufacturing. Operations in such industries as semiconductor and pharmaceutical manufacturing. Glove Box system designed for easy transfer of samples and substance, isolation, close system for dry glove box.



Model: 140A!



Model: 180A

Features:

- Two access doors open inward (or outwards upon request) with door frame, hinge, one-piece non-adhesive sealing.
- Side door opening 400 x 400 mm. (Upgradable to larger door)
- Slide open transfer between the main cabinet glove box and Air box. Side door opening 240 x 240 mm.
- Two 200 mm. OD glove ports for standard dry box gloves (Isolator glove) with 220 mm. size standard. Including O-Ring 1 set (4 pcs)
- Lift-up front window allows easy parts transfer from inside the Glove box.
- The AIR BOX is Accessories transfer samples into the glove box Size W300 x D300 x H300 mm. Side open window. The 240 x 240 mm. opening allows for parts to be easily placed inside the glove box with door slide.

- The auto dry is automatic controller set that can be controlled humidity inside the glove box, Allows precise humidity control with 20 to 90 % range RH.

Accessories:

- O-Ring for glove port 2 pcs.
- Analog Pressure gauge 1-10 bar.
- Natural rubber glove. Diameter 220 mm. Length 800 mm.

Options:

- Digital Hygrometer and Thermometer. Data Logger for humidity and temperature
- Re-regenerable Silica gel desiccant cartridge
- Vacuum pump for purge control.
- Gas (N₂, O₂, or Air) gas in port Push-to Connect fitting and gas-out bleeding valve.
- Flow meter for gas control system.
- Glove port with O-Ring 1 Set (4 pcs)



AIR BOX

Specifications:

Model	140A	180A
Material Clear Acrylic	Yes	
Thickness	10 mm.	
Overall Dimensions., mm. (Main Chamber Glove box)	W1400 x D700 x H800	W1800 x D700 x H800
Port Diameter	Ø 200 mm. x 3	Ø 200 mm. x 4
Door size :	-	
- Side door open (Left) 400 x 400 mm.	Yes	
- Side door open (Right) 240 x 240 mm. (** for Air Box. Upon request.)	No	
Overall Dimensions (Air box) : W300 x D300 x H300 mm.	W300 x D300 x H300 mm.	
Gas Port : The gas port for inert gas such as nitrogen, argon, air, etc. 2 pcs.	Yes	
Analog Pressure Gauge : 0 to 10 bar	Yes	
Auto Dry : (The auto dry is automatic controller set that can be controlled humidity inside the glove box., Power 220-240 VAC 50/60 HZ)	No	
Power Socket : 220V, 50-60 Hz, 2 channel.	Yes	
Glove : Piercan., France., Type Natural Rubber (H)., shape 18, size 8 thickness 4/10 mm., length 800 mm., Glove port inner Diameter 220 mm.	Yes	

OPTIONS: PIERCAN, Changeable sleeve and glove Combination, Other glove types are also available.



3A INSTRUMENT CO., LTD.

200/61 Moo.5 Tambon Bangruknnoi,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



Bechtop Glove Box : SUS80 Series



3A Instrument Co., Ltd.

for control environment with close system.

These basic compact Dry glove boxes provide low-humidity, low-oxygen Free controlled environment when used with Close system . Includes inlet-outlet gas port for inert gas condition testing . **Glove boxes are ideal choice for laboratory testing cost system in such industries as Laboratory, Research Testing, pharmaceutical manufacturing, Cosmetic, Semiconductor, Batteries, Electronic , Solar cell and University research.** Dry Glove Box system designed for easy transfer of samples and close system for dry glove box.

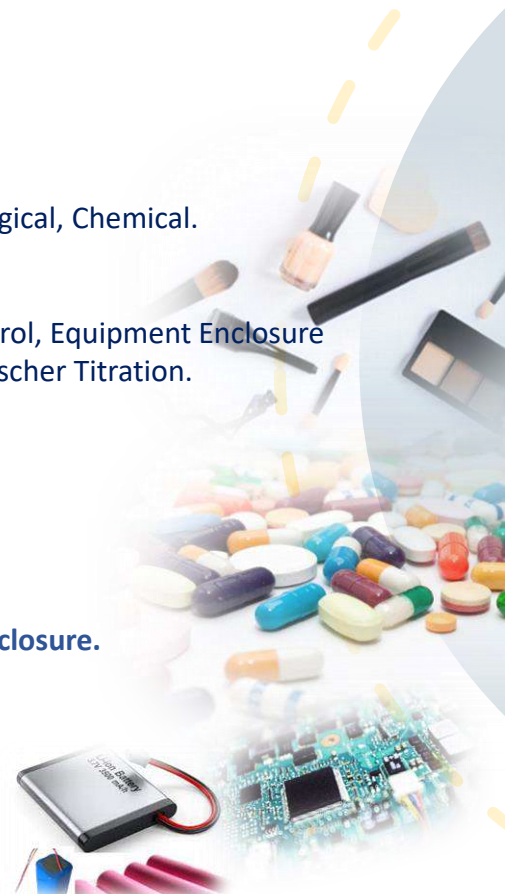
Features:

- **304 Stainless steel thickness 2.0 mm. Tilt - up front window clear Acrylic thickness 12 mm with large opening. Safety with shock-up**
- can be cleaning inside system with the inert gas port.
- Two glove port diameter 200 mm.
- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Pass box allow convenient sample parts transfer.



Application

- Close system testing for Laboratories of pharmaceuticals, Biological, Chemical.
- Weighing samples of moisture sensitive drug powders.
- Experiments that require low-humidity conditions.
- Operation of various instruments requiring environmental control, Equipment Enclosure such as Automatic titration, Volumetric and Culometric Karl Fischer Titration.
- **Anaerobic Test Glove Box.**
- **Negative or positive pressure glove box.**
- **Vacuum Glove box.**
- **Biosafety Glove Box.**
- **Benchtop Glove Box for control Environment Equipment Enclosure.**
- **Gas control system nitrogen purge for low –humidity.**
- **Temperature and Dehumidity control with PLC Controller.**
- **Basic Research Glove Box.**



Basic Glove Box

- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Environment Equipment Enclosure for application Microscope , Balance.



Chamber

- Easy open and operate system .
- Glove Port ID 200 mm for use Long gloves Diameter 220 mm, Length 800 mm.
- Gloves Box Model S80PLUS With ... is special system. There are 2 systems, namely the system that filters clean air (Can choose filters to the needs of the work) and automatic systems that control the temperature and humidity inside the gloves box. .
- Gas (N₂, O₂, or Air) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system. Glove port with O-Ring 1 Set (2 pcs)



Pass Box

- The AIR BOX is Accessories transfer samples into the glove box Size W350 x D350 x H350 mm. Side open window. The 300 x 300 mm. opening allows for parts to be easily placed inside the glove box with door slide.
- Gas (N₂, O₂, or Air) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system. Glove port with O-Ring 1 Set (2 pcs)

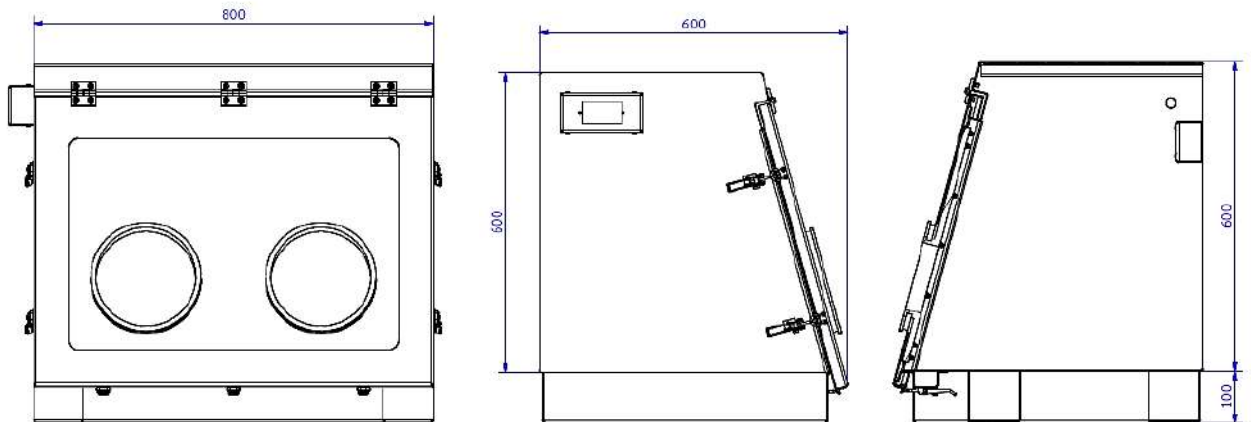


Specifications:

Model	SUS80 -30	SUS80 -31	SUS80 -3123	SUS80 -3124	SUS80 -3125	SUS80 -3127	SUS80 -3128	SUS80 -3129
Material Stainless Steel SUS304.	Stainless Steel SUS304							
Material SUS304 Thickness :	Thickness 2 mm							
External Dimensions (Main Chamber)	W 800 x D 600 x H 600 mm.							
Lighting 15 W .	Yes.							
Gas Port : for inert gas such as nitrogen, argon, air, etc.	Yes. (2 pcs.)							
Analog Pressure Gauge : 0-10 bar	Yes.							
Door open big side : form Acrylic Material Thickness 12 mm .	W 500 x D 720 mm.							
Glove Port Diamention (2 pcs) :	ID 200 mm							
Pass Box for sample transfer : - Size : W350 x D350 x H350 mm - Inlet/Outlet Gas Port , 2 pcs - Analog Pressure 0-10 bar, 1 pcs	-	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.	Yes./ 2 set
Carbon Filter with Blower	-	-	Yes.	-	-	-	-	
Hepa Filter with Blower	-	-	-	Yes.	-	-	-	
Auto Dry for low humidity	-	-	-	-	Yes.	-	-	
Temperature & Dehumidity Control - Thermoelectric Cooler - Anti-Condensation Heater - Dehumidifier	-	-	-	-	-	Yes	-	-
Programmable process Controller - Control Temperature step - Dehumidity Control	-	-	-	-	-	-	Yes 99 step Yes	-
PLC Controller	-	-	-	-	-	-	-	Yes.
O ₂ Purification units.	Options.							
Power Socket : 220V,50-60 Hz,	Yes. (2 Channel.)							
Gloves: Port ID 220 mm,Length 800 mm	Yes. (Options) Material : Natural Rubber /Neoprene/CSM/BHP/PUR/EPDM							

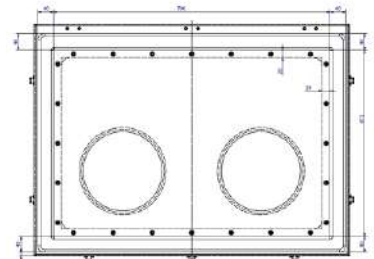
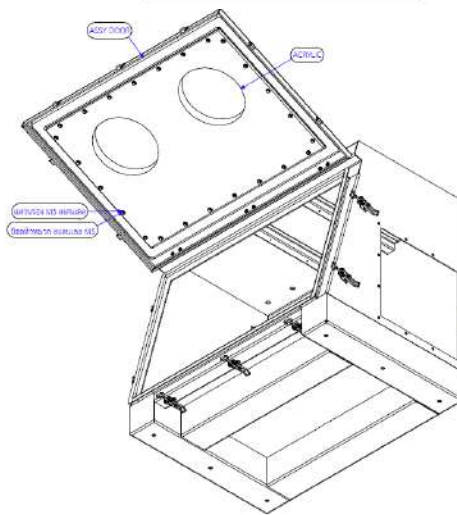


Drawing size dimensions



Main Chamber

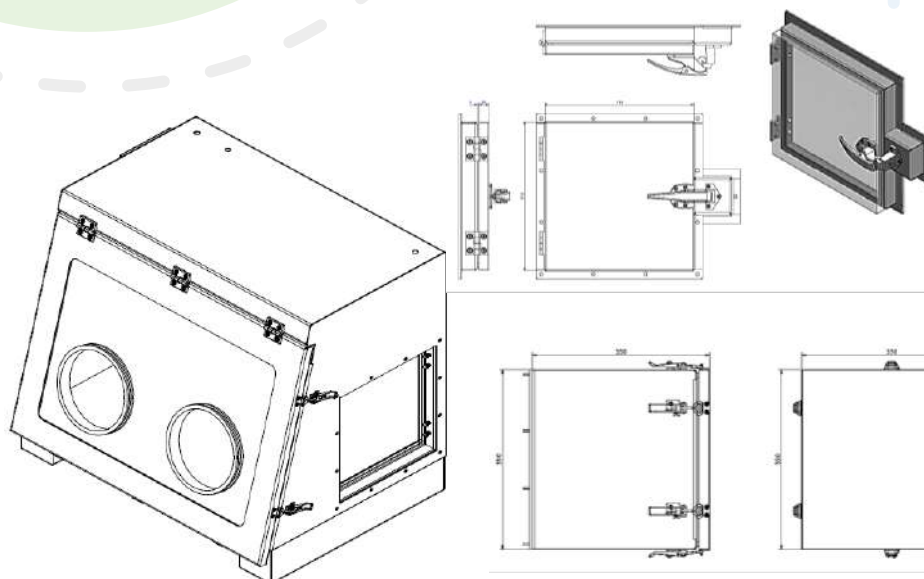
- **Door working area :**
Clear Acrylic : thickness 12 mm.
- **External Chamber Diamention :**
W 800 x D 600 x H 600 mm.
- **Main Chamber : Stainless Steel ,**
Thickness 2 mm
- **Open Door internal**
Diamention : 700 x 450 mm.



Pass Box

- **Door Clear Acrylic :**
thickness 25 mm.
- **External Diamention :**
350 x 350 x 350 mm.
- **Chamber Stainless steel 304**
- **Open Door internal**
Diamention : 300 x 300 mm.
- **Inlet/Outlet for inert gas**
Port 2 pcs.

Door Open Transfer sample



Glove Box : SUS100 Series

for control environment with close system.

These basic compact Dry glove boxes provide low-humidity, low-oxygen Free controlled environment when used with Close system . Includes inlet-outlet gas port for inert gas condition testing . **Glove boxes are ideal choice for laboratory testing cost system in such industries as Laboratory , Research Testing , pharmaceutical manufacturing , Cosmetic , Semiconductor , Batteries , Electronic , Solar cell and University research.** Dry Glove Box system designed for easy transfer of samples and close system for dry glove box.

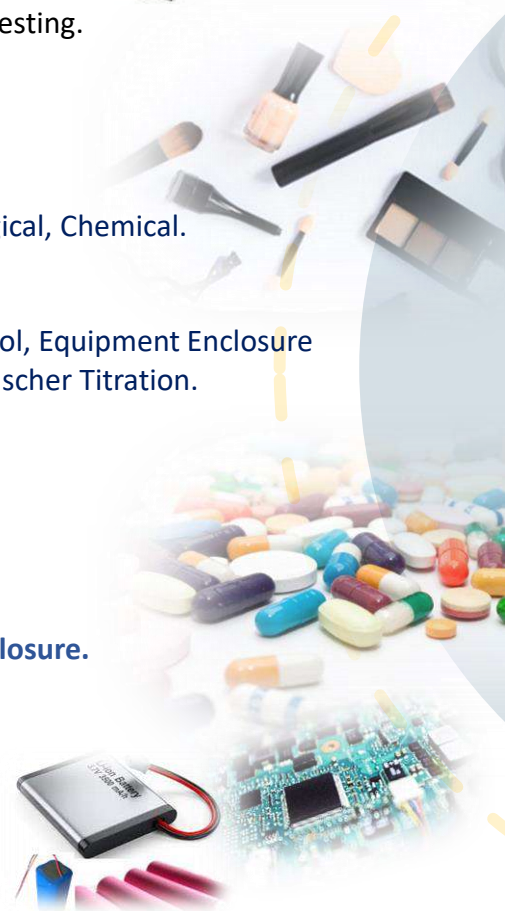
Features:

- **304 Stainless steel thickness 2.0 mm. Tilt-up front window clear Acrylic thickness 12 mm with large opening. Safety with shock-up**
- can be cleaning inside system with the inert gas port.
- Two glove port diameter 200 mm.
- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Pass box allow convenient sample parts transfer.



Application

- Close system testing for Laboratories of pharmaceuticals, Biological, Chemical.
- Weighing samples of moisture sensitive drug powders.
- Experiments that require low-humidity conditions.
- Operation of various instruments requiring environmental control, Equipment Enclosure such as Automatic titration, Volumetric and Coulometric Karl Fischer Titration.
- **Anaerobic Test Glove Box.**
- **Negative or positive pressure glove box.**
- **Vacuum Glove box.**
- **Biosafety Glove Box.**
- **Benchtop Glove Box for control Environment Equipment Enclosure.**
- **Gas control system nitrogen purge for low –humidity.**
- **Temperature and Dehumidity control with PLC Controller.**
- **Basic Research Glove Box.**



Basic Glove Box

- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Environment Equipment Enclosure for application Microscope , Balance.



Chamber

- Easy open and operate system .
- Glove Port ID 200 mm for use Long gloves Diameter 220 mm, Length 800 mm.
- Gloves Box Model S80PLUS With ... is special system. There are 2 systems, namely the system that filters clean air (Can choose filters to the needs of the work) and automatic systems that control the temperature and humidity inside the gloves box. .
- Gas (N₂, O₂, or Air) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system. Glove port with O-Ring 1 Set (2 pcs)



Pass Box

- The AIR BOX is Accessories transfer samples into the glove box Size W350 x D350 x H350 mm. Side open window. The 300 x 300 mm. opening allows for parts to be easily placed inside the glove box with door slide.
- Gas (N₂, O₂, or Air) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system. Glove port with O-Ring 1 Set (2 pcs)

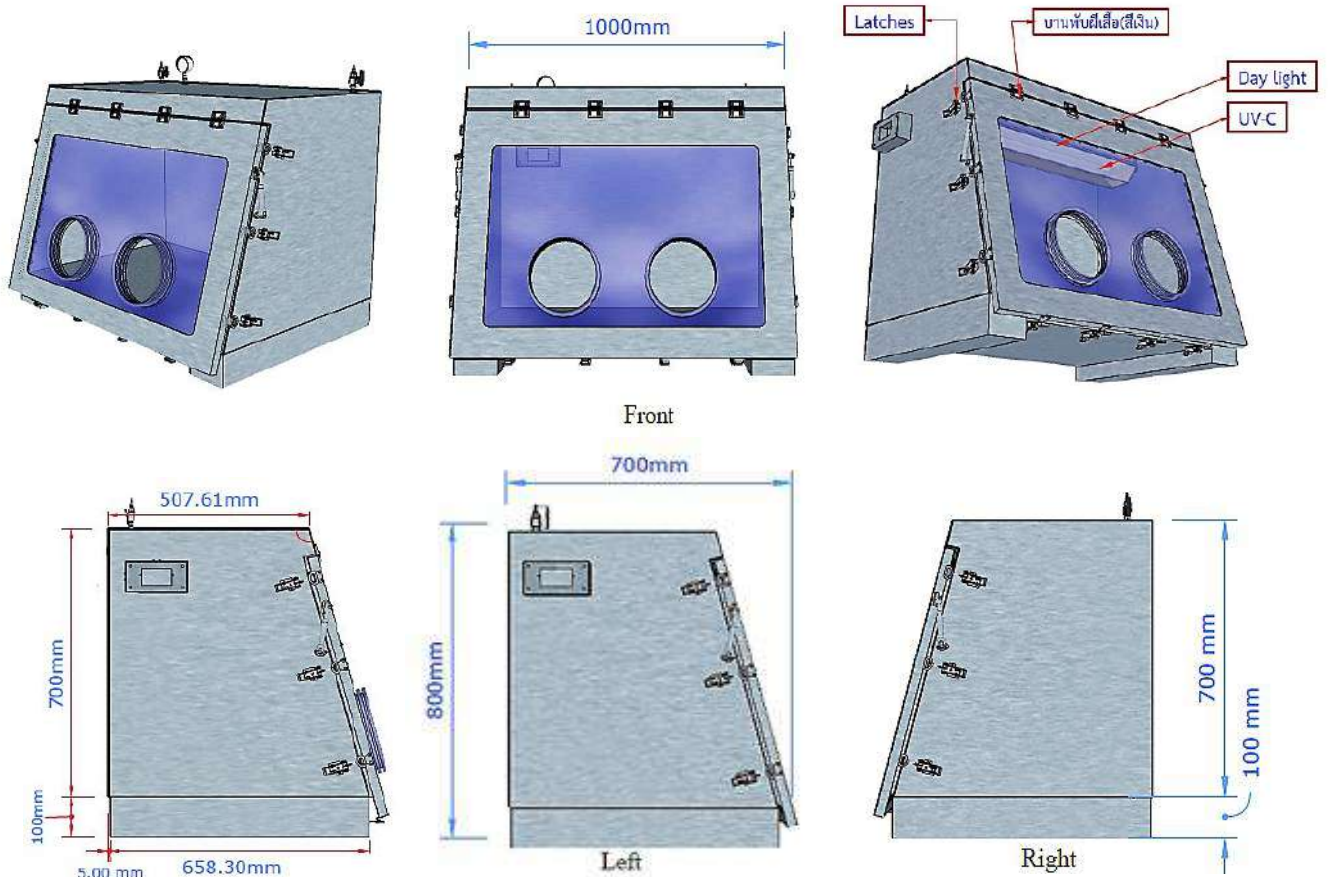


Specifications:

Model	SUS100 -30	SUS100 -31	SUS100 -3123	SUS100 -3124	SUS100 -3125	SUS100 -3127	SUS100 -3128	SUS100 -3129
Material Stainless Steel SUS304.	Stainless Steel SUS304							
Material SUS304 Thickness :	Thickness 2 mm							
External Dimensions (Main Chamber)	W 1000 x D 700 x H 800 mm.							
Working Area Dimensions	W 1000 x D 700 x H 700 mm.							
Lighting 15 W .	Yes.							
Gas Port : for inert gas such as nitrogen, argon, air, etc.	Yes. (2 pcs.)							
Analog Pressure Gauge : 0-10 bar	Yes.							
Door open big side : form Acrylic Material Thickness 12 mm .	W 600 x D 900 mm.							
Glove Port Diamention (2 pcs) :	ID 200 mm							
Pass Box for sample transfer : - Size : W350 x D350 x H350 mm - Inlet/Outlet Gas Port , 2 pcs - Analog Pressure 0-10 bar, 1 pcs	-	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.	Yes./ 2 set
Carbon Filter with Blower	-	-	Yes.	-	-	-	-	
Hepa Filter with Blower	-	-	-	Yes.	-	-	-	
Auto Dry for low humidity	-	-	-	-	Yes.	-	-	
Temperature & Dehumidity Control - Thermoelectric Cooler - Anti-Condensation Heater - Dehumidifier	-	-	-	-	-	Yes	-	-
Programmable process Controller - Control Temperature step - Dehumidity Control	-	-	-	-	-	-	Yes 99 step Yes	-
PLC Controller	-	-	-	-	-	-	-	Yes.
O₂ Purification units.	Options.							
Power Socket : 220V,50-60 Hz,	Yes. (2 Channel.)							
Gloves: Port ID 220 mm,Length 800 mm	Yes. (Options) Material : Natural Rubber /Neoprene/CSM/BHP/PUR/EPDM							



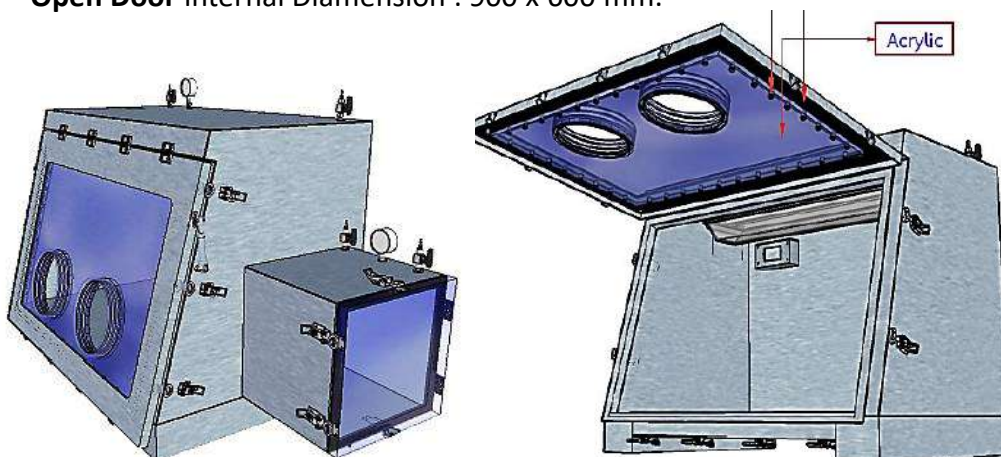
Drawing dimensions



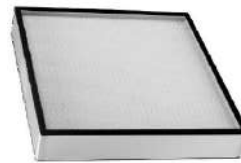
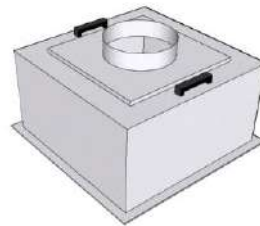
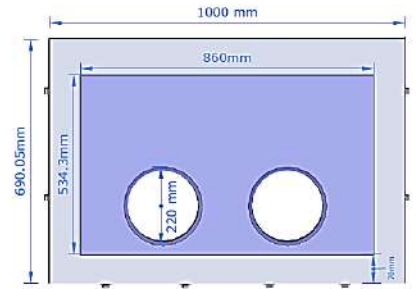
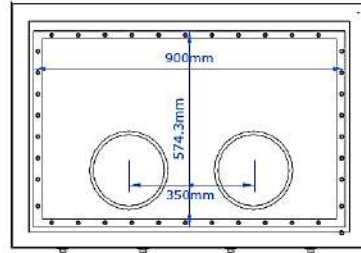
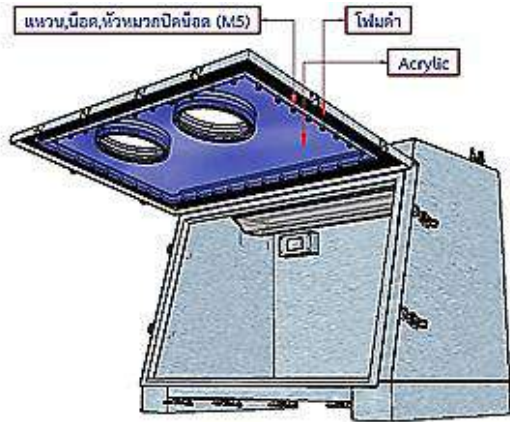
Main Chamber

Easy Maintenance and Testing

- **External Chamber Dimension :**
W 1000 x D 700 x H 800 mm.
- **Working Area Dimension :**
W 1000 x D 700 x H 700 mm.
- **Main Chamber : Stainless Steel Thickness : 2 mm**
- **Open Door internal Dimension : 900 x 600 mm.**

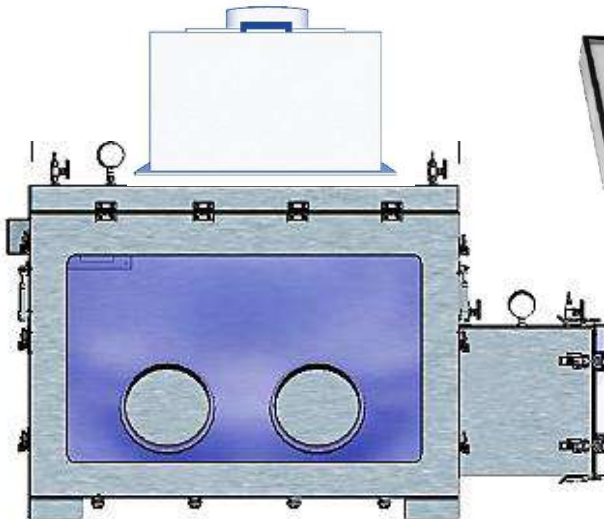


Drawing dimensions



Hepa Filter

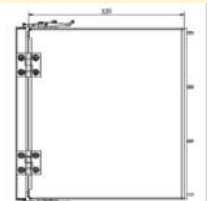
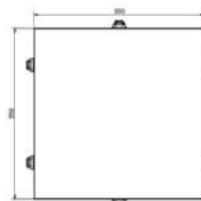
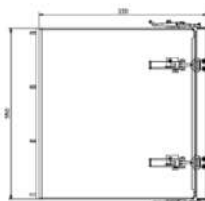
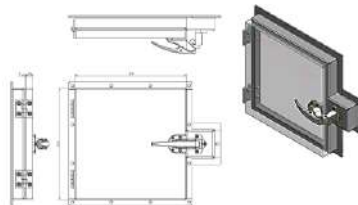
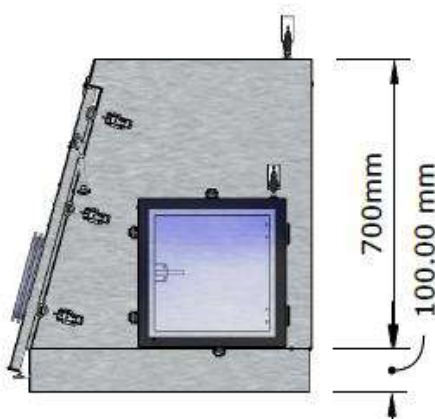
- **HEPA-Filtered with blower Glove Boxes** have inlet and outlet HEPA filters and provide barrier to protect the operator from hazardous airborne particulates and powders.
- **Carbon- filter with Blower Glove Box** Helps prevent dust and chemicals.



Pass Box

- **Door Clear Acrylic :** thickness 25 mm.
- **External Diamention :** 350 x 350 x 350 mm.
- **Chamber Stainless steel 304**
- **Open Door internal** Diamention : 300 x 300 mm.
- **Inlet/Outlet for inert gas** Port 2 pcs.

Pass box for Transfer sample



Glove Box : SUS120 Series

for control environment with close system.

These basic compact Dry glove boxes provide low-humidity, low-oxygen Free controlled environment when used with Close system . Includes inlet-outlet gas port for inert gas condition testing . ***Glove boxes are ideal choice for laboratory testing cost system in such industries as Laboratory , Research Testing , pharmaceutical , Cosmetic , Semiconductor , Batteries , Electronic , Solar cell and University research.*** Dry Glove Box system designed for easy transfer of samples and close system for dry glove box.

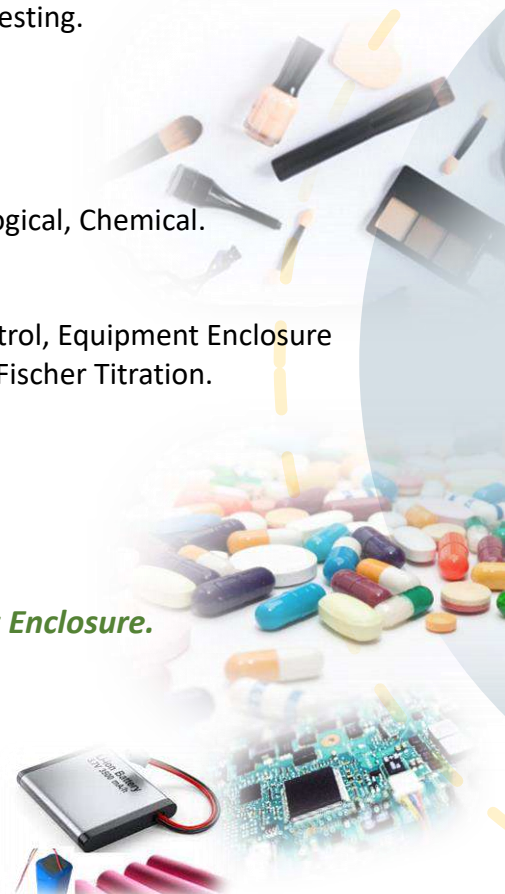
Features:

- **304 Stainless steel thickness 2.0 mm. Tilt-up front window clear Acrylic thickness 12 mm with large opening. Safety with shock-up**
- can be cleaning inside system with the inert gas port.
- Two glove port diameter 200 mm.
- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Pass box allow convenient sample parts transfer.



Application

- Close system testing for Laboratories of pharmaceuticals, Biological, Chemical.
- Weighing samples of moisture sensitive drug powders.
- Experiments that require low-humidity conditions.
- Operation of various instruments requiring environmental control, Equipment Enclosure such as Automatic titration, Volumetric and Coulometric Karl Fischer Titration.
- **Anaerobic Test Glove Box.**
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- **Benchtop Glove Box for control Environment Equipment Enclosure.**
- **Gas control system nitrogen purge for low –humidity.**
- **Temperature and Humidity control.**
- **Programmable process Controller Temperature and Humidity ..**
- **Basic Research Glove Box.**



Basic Glove Box

- Dry glove boxes provide low-humidity, controlled environment when used with Close system.
- Glove Box design for negative pressure and positive pressure testing.
- Environment Equipment Enclosure for application Microscope , Balance.



Chamber

- Easy open and operate system .
- Glove Port ID 200 mm for use Long gloves Diameter 220 mm, Length 800 mm.
- Gloves Box Model S80PLUS With ... is special system. There are 2 systems, namely the system that filters clean air (Can choose filters to the needs of the work) and automatic systems that control the temperature and humidity inside the gloves box. .
- Gas (N₂, O₂, or Air) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system. Glove port with O-Ring 1 Set (2 pcs)



Pass Box

- The AIR BOX is Accessories transfer samples into the glove box Size W350 x D350 x H350 mm. Side open window. The 300 x 300 mm. opening allows for parts to be easily placed inside the glove box with door slide.
- Gas (N₂, O₂, or Air) in port Push-to Connect fitting and gas-out bleeding valve. Flow meter for gas control system. Glove port with O-Ring 1 Set (2 pcs)



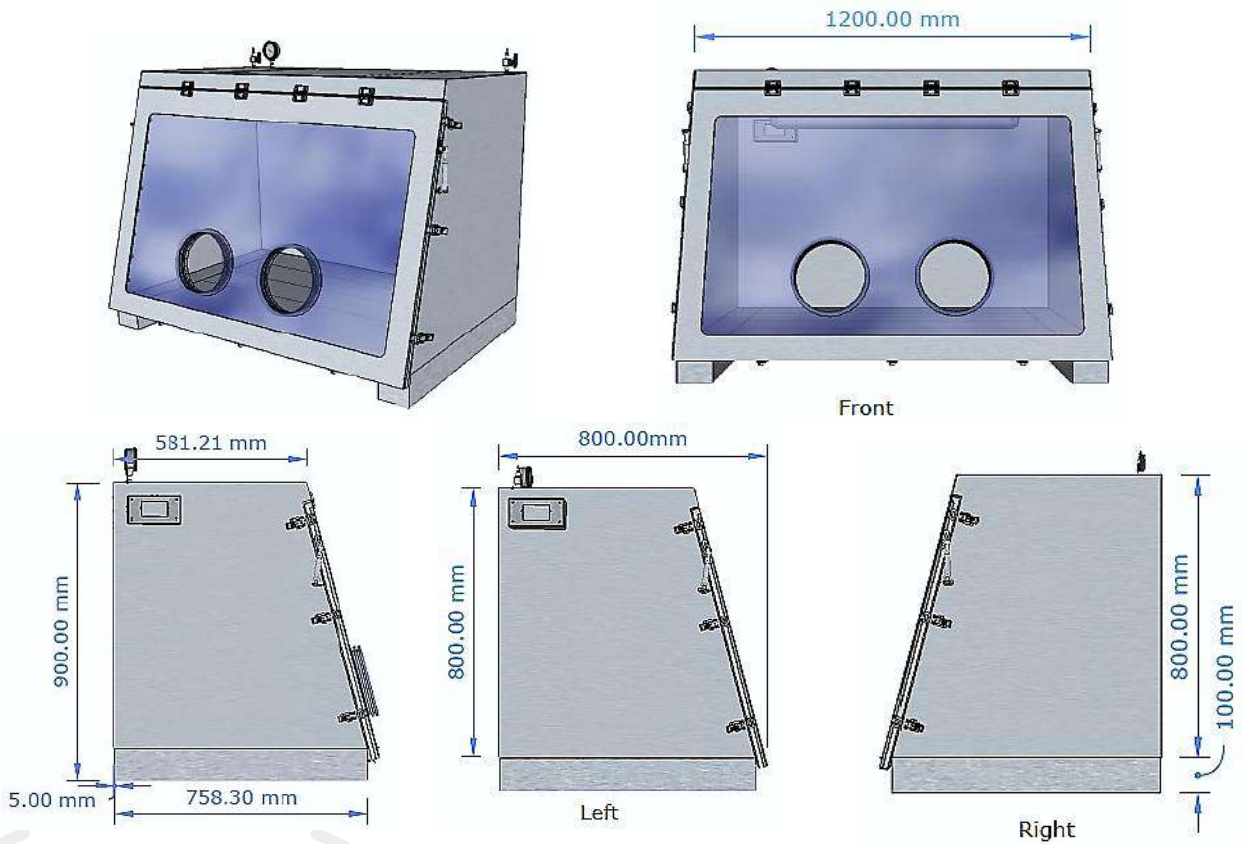
Specifications:

Model	SUS120 -30	SUS120 -31	SUS120 -3123	SUS120 -3124	SUS120 -3125	SUS120 -3127	SUS120 -3128	SUS120 -3129
Material Stainless Steel SUS304.	Stainless Steel SUS304							
Material SUS304 Thickness :	Thickness 2 mm							
External Dimensions (Main Chamber)	W 1200 x D 800 x H 900 mm.							
Working Area Dimensions	W 1200 x D 800 x H 800 mm.							
Lighting 15 W .	Yes.							
Gas Port : for inert gas such as nitrogen, argon, air, etc.	Yes. (2 pcs.)							
Analog Pressure Gauge : 0-10 bar	Yes.							
Door open big side : form Acrylic Material Thickness 12 mm .	W 1100 x D 900 mm.							
Glove Port Diamention (2 pcs) :	ID 200 mm							
Pass Box for sample transfer : - Size : W350 x D350 x H350 mm - Inlet/Outlet Gas Port , 2 pcs - Analog Pressure 0-10 bar, 1 pcs	-	Yes.	Yes.	Yes.	Yes.	Yes.	Yes.	Yes./ 2 set
Carbon Filter with Blower	-	-	Yes.	-	-	-	-	
Hepa Filter with Blower	-	-	-	Yes.	-	-	-	
Auto Dry for low humidity	-	-	-	-	Yes.	-	-	
Temperature & Dehumidity Control - Thermoelectric Cooler - Anti-Condensation Heater - Dehumidifier	-	-	-	-	-	Yes	-	-
Programmable process Controller - Control Temperature step - Dehumidity Control	-	-	-	-	-	-	Yes 99 step Yes	-
PLC Controller	-	-	-	-	-	-	-	Yes.
O2 Purification units.	Options.							
Power Socket : 220V,50-60 Hz,	Yes. (2 Channel.)							
Gloves: Port ID 220 mm,Length 800 mm	Yes. (Options) Material : Natural Rubber /Neoprene/CSM/BHP/PUR/EPDM							



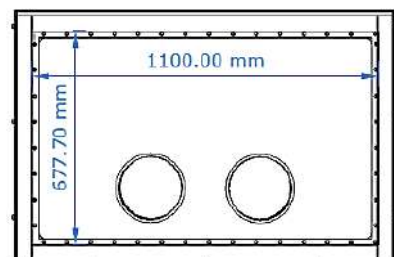
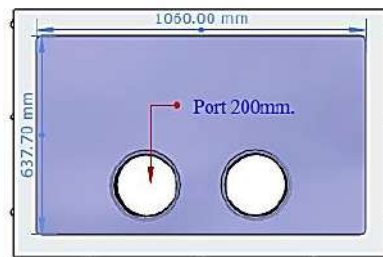
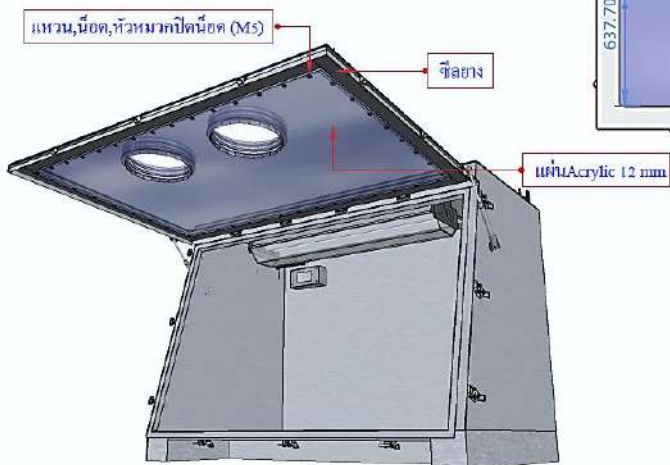
Drawing dimensions

Easy Maintenance and Testing

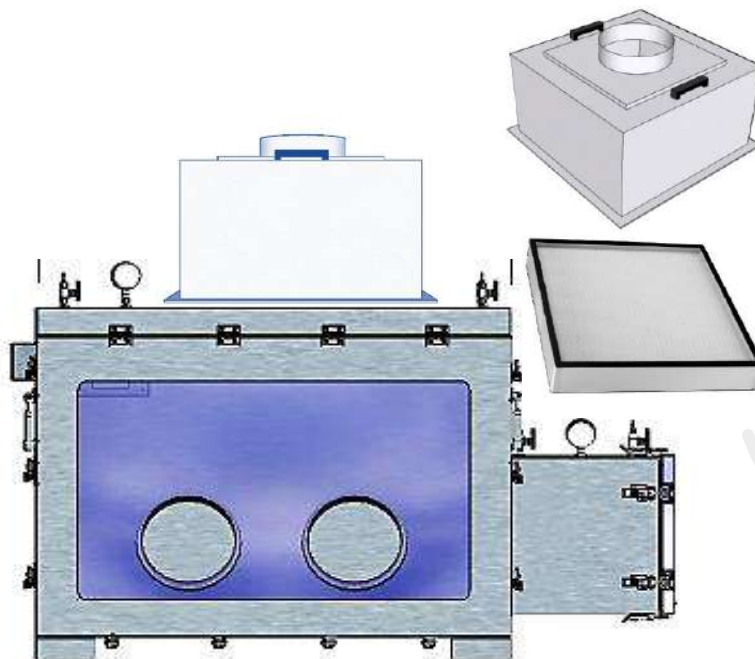
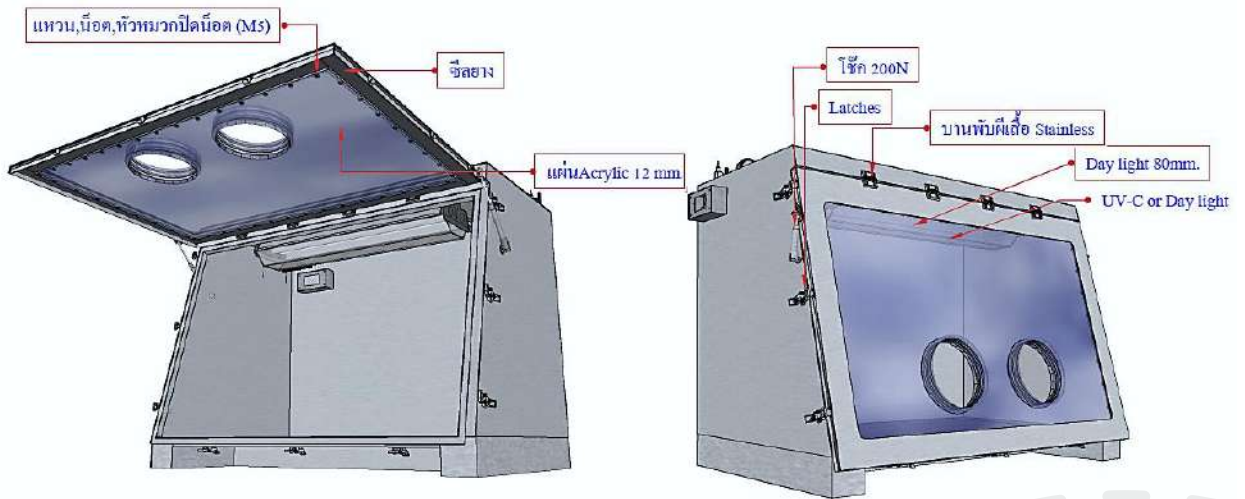


Main Chamber

- External Chamber Dimension :
W 1200 x D 800 x H 900 mm.
- Working Area Dimension :
W 1200 x D 800 x H 800 mm.
- Main Chamber : Stainless Steel
Thickness : 2 mm
- Open Door internal Dimension :
1100 x 700 mm.



Drawing dimensions



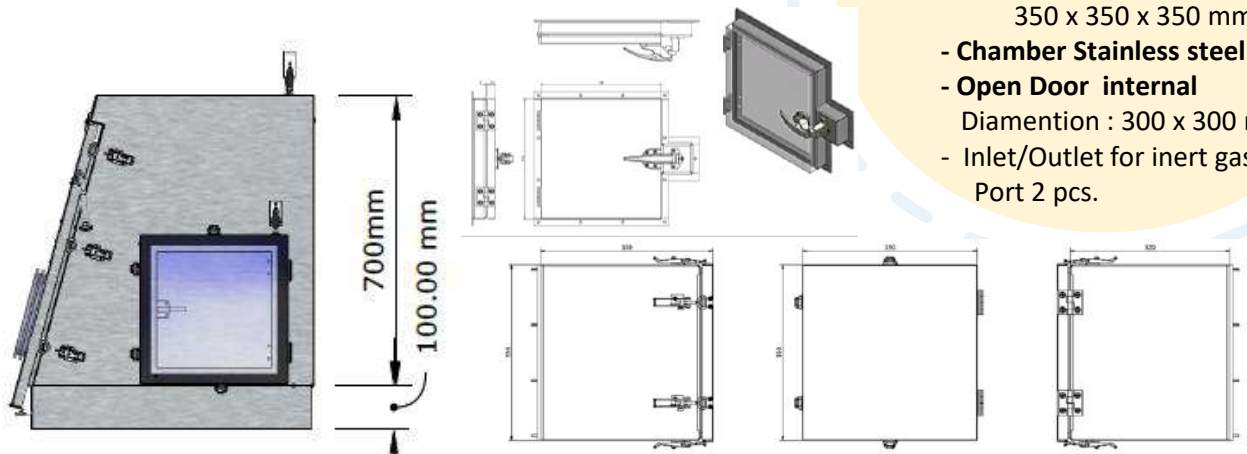
Hepa Filter

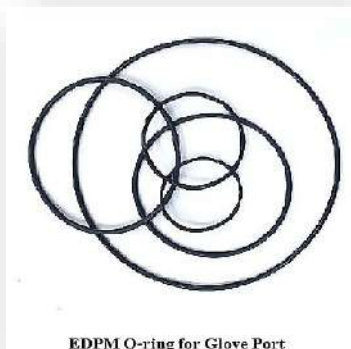
- **HEPA-Filtered with blower Glove Boxes** have inlet and outlet HEPA filters and provide barrier to protect the operator from hazardous airborne particulates and powders.
- **Carbon- filter with Blower Glove Box** Helps prevent dust and chemicals.

Pass Box

- **Door Clear Acrylic** : thickness 25 mm.
- **External Diamention** : 350 x 350 x 350 mm.
- **Chamber Stainless steel 304**
- **Open Door internal Diamention** : 300 x 300 mm.
- **Inlet/Outlet for inert gas** Port 2 pcs.

Door Open Transfer sample





Technical Dry Gloves for Glove Box

Technical Material gloves for all industrial and laboratory testing.



PIERCAN Glove is high quality product form France. The range of gloves that PIERCAN offers is very wide, comprising dry box gloves, sleeve, and isolator glove.



CSM

Chlorosulfonated Polyethylene glove (CSM).

- Resistance to ozone, UV and Sterilizing agents (VHP*).
- Excellent mechanical properties.
- Resistance to ionizing radiation and sterilizing process (Gamma and Beta Radiation).

VHP* (Vaporous hydrogen peroxide)



Black EPDM

Ethylene Propylene Diene Monomer glove.

- Antistatic
- Excellent Flexibility and dexterity.
- Excellent chemical properties, good mechanical properties.
- Composition in accordance with the FDA positive list (CFR 21 § 177. 2600).
- Resistance to AUTOCLAVE, GAMMA & VHP Sterilization 75 cycles of 30 minutes at 121 °C.



Natural Rubber

Natural rubber glove (polyisoprene)

- Excellent flexibility and dexterity
- Good resistance to alcohols, reducing acids and diluted bases.

DRY GLOVE

for the Pharmaceutical and Cosmetics manufacturing.



Neoprene

Polychloroprene glove

- Good mechanical properties.
- Good general resistance to chemical products.
- Very good resistance to sterilisation agents (hydrogen peroxide) and radiation sterilisation (Gamma and Beta rays).
- Good technical and cost-effective compromise
- Self- extinguishing.



POLYURETHANE

POLYURETHANE glove

- Excellent mechanical properties (punctures, tears, abrasion)
- Highly resistant to ozone and UV rays



POLYURETHANE / CSM

Two layer polyurethane and chlorosulfonated polyethylene glove.

- A glove that combines mechanical properties (polyurethane) with chemical resistance (CSM)
- Good resistance to chemical sterilising agents (CSM side)
- High resistance to ozone and UV. Good resistance to ionising radiation.
- Excellent resistance to disinfectants.



High Butyl Properties

Polyisoprene isobutylene glove.

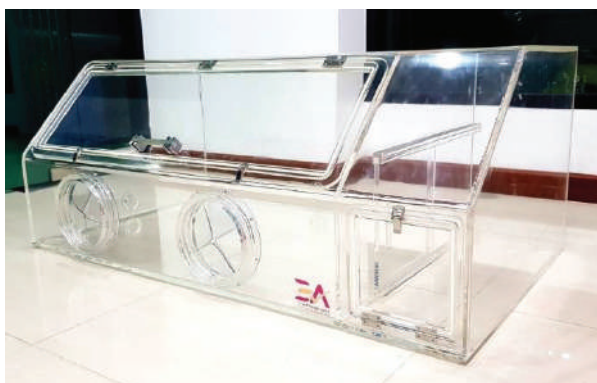
- Electrostatic dissipative glove in accordance with EN 16350.
- Highly impermeable to liquids and gases
- Good ability to withstand chemical products
- Highly resistant to ozone and UV rays
- Good flexibility and dexterity
- Antistatic (compliant with European standard EN 16350-2014)

MADE TO ORDER



COVER BOX

Material Clear Acrylic. Thickness 8 mm.
Size W1100 X D900 X H700 mm.



GLOVE BOX

Material Clear Acrylic. Thickness 10 mm.
Size W1250 X D700 X H500 mm.



GLOVE BOX

Material Clear Acrylic. Thickness 12 mm.
Size W1200 X D700 X H800 mm.



GLOVE BOX AND GAS SYSTEM

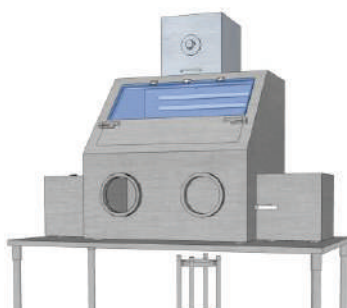
Material Clear Acrylic. Model 115A
With N₂ Gas and Ar Gass

MADE TO ORDER PROJECT GLOVE BOX STAINLESS STEEL



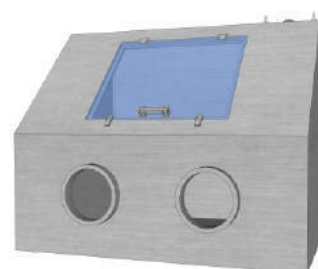
FUME HOOD GLOVE BOX

Material Stainless Steel with Acrylic
Opening Window
Size W1200 X D700 X H800 mm.



GLOVE BOX AND AIR FILTER

Material Stainless Steel with Acrylic
Opening Window and AIRLOCK
Size W1100 X D700 X H800 mm.



GLOVE BOX

Material Stainless Steel with Acrylic
Opening Window
Size W800 X D700 X H800 mm.



Isolator gloves and sleeves

Hands under **high security**



The range of gloves NUCLEAR PHARMACEUTICAL

The range of gloves that PIERCAN offers is very wide, comprising drybox gloves that may or may not be fitted to a support ring. From mid-2019, PIERCAN will be making its flagship models (the highest selling models) available as in stock items. The gloves that will be available in this way are those made from natural rubber and neoprene.

THE 3 TYPES OF GLOVES



1 • Drybox gloves: Also known as isolator gloves, these are one-piece seamless gloves that are used to handle objects in an enclosed environment.



2 • Sleeves: Sleeve systems offer the operator an ergonomic fit and perfect freedom of movement. The sleeve is connected to an ELS glove via the Secure Cuff Ring developed by PIERCAN.



3 • ELS gloves (or short gloves): ELS gloves are connected to sleeves. These ELS glove/sleeve systems are mainly used in pharmaceutical laboratories and hospitals.

Decontaminated and/or sterilised gloves

For over 10 years, PIERCAN has offered its customers decontaminated and/or sterilised gloves. This service is intended in particular for pharmacy environments (pharmaceutical laboratories, hospitals etc.) but it may also be for industries in which an extremely high level of cleanliness is now absolutely vital (space, military, research etc.). Please do not hesitate to request the documentation about this service.



3A INSTRUMENT CO., LTD.

200/61 Moo.5 Tambon Bangruknoi,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



The materials

CSM



- Very good ability to withstand chemical products and sterilising agents
- Highly resistant to ozone and UV rays
- Very good ability to withstand sterilisation (gamma and beta rays)



BLACK EPDM



- Excellent ability to withstand chemical products and chemical sterilising agents
- Antistatic
- Good mechanical properties
- Excellent ability to withstand steam sterilising

The composition of this glove is compliant with the FDA positive list (§ 1772600, CFR 21)



BLACK AND WHITE EPDM



- Excellent ability to withstand chemical products and chemical sterilising agents
- Good mechanical properties
- Excellent ability to withstand steam sterilising
- Specially adapted for the constraints of a pharmaceutical laboratory in terms of the exterior colour (white)

The composition of this glove is compliant with the FDA positive list (§ 1772600, CFR 21)



NEOPRENE



- Good general resistance to chemical products
- Good mechanical properties
- Good resistance to ozone and UV rays
- Good flexibility and dexterity
- Good technical and cost-effective compromise

Cytotoxic agents: efficacy of Neoprene



POLYURETHANE



- Excellent mechanical properties (punctures, tears, abrasion)
- Highly resistant to ozone and UV rays



POLYURETHANE/CSM



- A glove that combines mechanical properties (polyurethane) with chemical resistance (CSM)
- Good resistance to chemical sterilising agents (CSM side)



CSM/POLYURETHANE/CSM



- Excellent ability to withstand chemical products
- Good mechanical properties
- Highly resistant to ozone and UV rays
- Very good ability to withstand chemical sterilising agents



LEAD-FREE LOADED POLYURETHANE



- Excellent protection from ionising radiation (gamma and beta rays)
- High mechanical protections
- Highly resistant to ozone and UV rays



NATURAL RUBBER



- Excellent flexibility and dexterity
- Low cost



HIGH PERFORMANCE BUTYL



- Highly impermeable to liquids and gases
- Good ability to withstand chemical products
- Highly resistant to ozone and UV rays
- Good flexibility and dexterity
- Antistatic (compliant with European standard EN 16350-2014)



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200/61 Moo.5 Tambon Bangruknai,
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Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM





GLOVES MATERIALS GENERAL GUIDE

updated date : 31/10/2018

Material	Symbol	Density	Mechanical properties								Temperature range (°C)	Chemical resistance								Using	Sterilization process					
			Tensile strength (Mpa) *	Elongation at break (%) *	Softness / dexterity	Puncture	Tear resistance	Abrasion	Gases barrier	self extinguishing		Antistatic	Ultra violets , ozone	Alcohols	Acids / bases	Strongs oxydants	Ketonic solvents	Aromatic solvents	Aromatic solvents		Aliphatic solvents	Autoclave (steam sterilization 121 °Q number of cycles (30 minutes)	Autoclave (steam sterilization 134 °Q number of cycles (18 minutes)	Test in contact side immersion , 72h 23° C ISO 1817		Gamma radiation 25-55 kGry Vdmax 25 / 1 cycle
NATURAL RUBBER	H	0.94	> 20	> 500	++	+	++	++	+	+	-	-40 / +80	-	++	++	-	+	-	-	standard	1	0	+	-	-	+++
NEOPRENE	C, CNS	1.35	> 15	> 500	++	+	++	+	++	+	+	-20 / +100	++	++	++	+	+	-	-	polyvalent, self-extinguishing	15	15	+	+	+	+++
BUTYL HIGH PROPERTIES	BHP	1.07	> 13	> 400	++	+	++	+	++	+	++	-30 / +110	++	++	++	+	++	-	-	gases barrier, mechanical protection, ANTISTATIC	10	10	++	++	++	+
BUTYL HIGH PROPERTIES- Black EPDM	BHP-Eb Chim	1.04	> 13	> 400	++	+	++	+	++	+	++	-30 / +110	++	++	++	++	++	-	-	gases barrier, mechanical protection & good chemicals behaviour.	10	10	++	++	++	+++
POLYURETHANE	PUR	1.22	> 50	> 500	+	++	++	++	+	+	+	-20 / +90	++	++	-	-	-	-	+	Mechanical protection	0	0	+	-	-	+
POLYURETHANE- SHIELDING	PUR/CHSP	1.60	> 30	> 500	+	++	++	++	+	+	+	-20 / +90	++	++	-	-	-	+	++	mechanicals protection, ionizing radiations, beta and gamma rays	0	0	not tested	not tested	not tested	not tested
POLYURETHANE-CSM	PUR/Y	1.23	> 30	> 500	+	++	++	++	+	+	+	-20 / +120	++	++	++	++	-	-	+	mechanical protection and chemicals resistance	0	0	++ (CSM side)	++ (CSM side)	++ (CSM side)	+
CSM- POLYURETHANE-CSM	V/PUR/Y	1.26	> 15	> 300	++	++	++	++	+	+	+	-20 / +120	++	++	++	++	-	-	+	sterilizing agents	0	0	++	++	++	+++
CSM	Y	1.30	> 18	> 300	++	++	++	++	++	++	++	-20 / +120	++	++	++	++	-	-	+	sterilizing agents, nitric acid ...	25	25	++	++	++	+++
Black EPDM (comply with FDA CFR 21 §177.2600)	Eb	1.02	> 18	> 400	++	+	++	+	++	+	+	-30 / +120	++	++	++	++	++	-	-	sterilizing agents nitric acid ...ANTISTATIC Comply with FDA CFR 21 § 177.2600	75	75	++	++	++	+++ (compatible 3 cycles)
Black & White EPDM (comply with FDA CFR 21 §177.2600)	Eb/Ew	1.05	> 14	> 400	++	+	++	+	++	+	+	-30 / +120	++	++	++	++	++	-	-	sterilizing agents ... Comply with FDA CFR 21 § 177.2600	75	75	++	++	++	+++

* Iso 37 type 2

- not recommended

+ usable in some conditions

++ acceptable

+++ excellent

Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.



EN374-2003 Gloves providing protection against chemical and microorganism

Code	Category	Chemical	Natural rubber 4/10	Natural rubber 6/10	Neoprene	Butyl high properties	CSM	Poly urethane	Black EPDM
			H 4/10	H 6/10	C	BHP	Y	PUR	Ed
A	Primary alcohol	Methanol, Ethanol, Propan-1-ol, Isopropyl alcohol	Class 1 >10 minute	Class 2 >30 minute	Class 4 >120 minute	Class 6 >480 minute	Class 6 >480 minute	-	Class 6 >480 minute
	Acids / Bases	Perchloric acid, Hydrochloric acid, Hydroiodic acid, Sodium hydroxide, Potassium hydroxide	++	++	++	++	+++	-	+++
B	Ketone	Acetone, Butanone (MEK), 2-hexanone (MBK), Methyl isopropyl ketone (MIBK)	+	+	+	+++	-	-	+++
	Strong oxydant	Oxygen, Hydrogen peroxide, Nitric acid, Sulphur dioxide, Nitrous Oxide, Potassium nitrate	-	-	+	++	+++	-	+++
C	Nitrile compound	Acetonitrile, Dicyandiamide, Malonitrile, 4-Chlorobenzyl cyanide	-	-	Class 2 >30 minute	Class 6 >480 minute	-	-	-
D	Chlorinated paraffin	Dichloromethane	-	-	-	-	-	-	-
E	Carbon disulfide	Sulphur containing organic compound	-	-	-	-	-	-	-
F	Aromatic Solvent	Benzene, Chlorobenzene, Mesitylene, Nitrobenzene, Pyridine, Toluene, Xylene	-	-	-	-	-	+	-
G	Amine	Diethylamine	-	-	-	-	-	-	-
H	Heterocyclic and etheral	Tetrahydrouran (THF)	-	-	-	-	-	-	-
I	Ester	Ethyl Acetate	-	-	-	-	-	-	-
J	Saturated hydrocarbon	n-Heptane	-	-	-	-	-	-	-
	Aliphatic Solvent	Heptane, Hexane, Cyclohexane, Gasoline, Kerosene	-	-	++	-	+	++	-
K	Inorganic base	Sodium hydroxide, Magnesium hydroxide, Ammonium hydroxide, Potassium hydroxide	Class 6 >480 minute	Class 6 >480 minute	-	Class 6 >480 minute	Class 6 >480 minute	-	Class 6 >480 minute
L	Inorganic mineral acid	Sulfuric acid, Nitric acid, Perchloric acid, Hydrochloric acid, Carbonic acid	Class 3 >60 minute	Class 3 >60 minute	Class 3 >60 minute	Class 5 >240 minute	Class 6 >480 minute	-	Class 6 >480 minute

+ useable in some condition

++ acceptable

+++ excellent



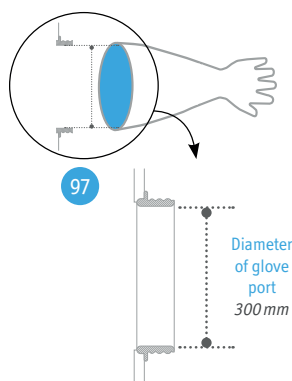


PIERCAN drybox gloves

Reference Guide: Standard Models



To find **the reference number** of the glove that meets your needs, follow **these steps**.

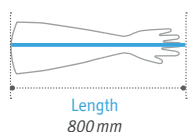


1

IDENTIFY THE FIRST 2 DIGITS OF THE REFERENCE

The choice of the shape and diameter of the glove port will give you the first two digits of the reference number. Measure the diameter of your glove port and refer to the table below.

SHAPE	DIAMETER OF GLOVE PORT					
	136mm	156mm	186mm	220mm	250mm	300mm
AMBIDEXTROUS						
Tapered		10	13/16	18	85	97
Accordion sleeve	14					
Accordion sleeve (wide wrist)	54					



2

STANDARD LENGTH OF YOUR GLOVE

Our gloves essentially come in the following standards lengths: 750 mm and 800 mm. For other lengths, please contact us.

97 800



Material
Black EPDM

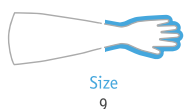
97 800 Eb

3

CHOOSE YOUR MATERIAL

Natural rubber	H
Neoprene	C
High Performance Butyl	BHP
CSM (previously: Hypalon®)	Y
Polyurethane	PUR
Polyurethane / CSM	PUR/Y
Black EPDM	Eb
Black and White EPDM	Eb/Ew





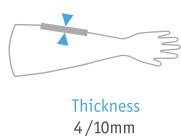
4

CHOOSE YOUR SIZE

In general, the sizes available depend on which material and model of glove is chosen.

97 800 Eb 9

Shape	Natural Rubber and Neoprene	Other materials
10 000	7 - 8 - 9 - 10	7.5 - 8.5 - 9.5
13 000	7 - 8 - 9 - 10	
14 000	6 - 7 - 8 - 9	
16 000		9 - 10 - 11
18 000	8 - 9 - 10	8.5 - 9.5 - 10.5
54 000		9.5
85 000		9 - 10
97 000	9	8.5 - 9 - 10.5



5

CHOOSE THE THICKNESS

PIERCAN offers two main thicknesses: 4/10 mm: **E4** and 6/10 mm: E6

97 800 Eb 9 **E4**

GLOVE MARKINGS

1. The marking consists firstly of **the reference number**.
For example, as shown opposite; the shape and the diameter of the glove port (97) the length (800), the material (Eb), the size (9), the glove thickness (E4) and the thickness of the cuff beading (5).
2. The reference number is followed by the **IT code** (003039), **issue number** (FR330010), the **lot number** (1901) and the **expiry date** (31/01/2022).



ONE PIECE GLOVES for Dry Box

The choice of the suitable glove depends on your specific needs with regard to working conditions, type of chemical products used, or mechanical requirements. This guide will help you making the most suitable choice.



Each glove for Dry Box is individually controlled and the severity of these controls guarantees a perfect safety for the user.

Isolators GLOVES

Short gloves to use with arm guards. This choice allows a quick change of the single short glove when necessary in order to use the most suitable size for the hands of the operator or to replace the glove after being in contact with different substances that need to be manipulated.



The new plastic ring of connection between gloves and arm guards makes the change very fast and secure.

3A INSTRUMENT CO., LTD.

200/61 Moo.5 Tambon Bangruknoi,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



The glove port BCS Piercan

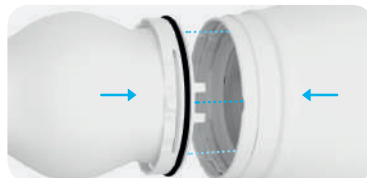
Secure your containment and **remain connected**

Simple and quick change

The ease of use ensures that any user can change the gloves without loss of containment, in a very short time, without effort, while retaining the safety sleeve.



1 • Insert the glove to be changed inside the safety sleeve.



2 • Position the 3 clips of the new glove opposite the grooves, thumb facing upwards (2 arrows on the upper side of the glove thumb).



3 • Press the glove to be installed by pushing on the port.



4 • Lock the port by pressing on the 3 clips.



5 • The used glove is ejected inside or outside the isolator.

PRODUCT BENEFITS

- *Extremely reduced efforts*

Changing the port requires a force of 70 N to install the glove and 110 N to remove it. This reduced force allows any user to change the gloves in an isolator or "RABS closed doors" and avoids the risk of musculoskeletal disorders.

- *Simplified training and authorisation of the personnel*

The simplicity of changing the glove significantly reduces training time. PIERCAN recommends changing the gloves on an isolator or school RABS, by verifying that the 3 studs of the glove port are properly positioned in the 3 slots provided for this purpose.

- *Increased endurance*

After 20 glove port changes, the mechanical strength of the glove safety sleeve body in the arm guard safety sleeve is not altered.

- *Two methods of changing the glove*

The change may be carried out through over-pressure (removing the glove towards the exterior), and also by under-pressure (removing the glove towards the interior of the isolator).

The BCS glove port, triple security

The risk of loss of containment is significantly reduced owing to the mechanical strength of the glove-port-safety sleeve assembly as regards the sealing obtained and the protection of the glove during operations and changing.

MECHANICAL STRENGTH

All the components of the port possess a mechanical strength 4 times higher than the EN 421 standard.



- The port prevents the gloves from coming loose.
- It cannot be removed without another glove port or a cover port, which prevents untimely loosening.

ENSURING INTEGRITY

The BCS port is in accordance with the standard EN 421 confirmed through a bacterial test which demonstrates the sealing level of the port over 5 glove changes.

The test consists of inoculating a suspension of *Brevundimonas diminuta* (concentration higher than 106 UGF/ml) at the lip seal, inside the safety sleeve, with a pressure of 50 Pa in the isolator. After 5 changes, the test demonstrates the absence of microbial growth between the body of the glove safety sleeve and the body of the arm guard safety sleeve near the lip seal.

As long as the old glove is not removed, the lip seal of its port ensures containment.

PROTECTION OF THE GLOVE

The BCS port protects the glove at the wrist. This assembly avoids cuts because the zone is no longer stretched and remains protected by the safety sleeve port.



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Technical characteristics



The BCS port is made of thermoplastic polyester PBT which is class VI ISP 23 biocompatible

PBT is compliant with the FDA requirements (CFR, Title 21, Part 177, Section 1660):

- The PBT is suitable for sterilisation through autoclaving and gamma or beta radiation.
- No significant development was observed in the breaking strength between PBT Celanex 2402 MT without sterilisation and with sterilisation through autoclaving or gamma radiation.
- The breaking strength of the material reduces at the most by 5 % after 3 gamma radiation procedures.
- Very high resistance to ionising radiations.

Excellent resistance of PBT to different sterilisation agents and systems in the market (autoclave, gamma and beta radiation, hydrogen peroxide, IPA):

- The traction and impact tests show that the mechanical properties of the PBT change at the most by 3 %.
- Isopropyl alcohol or hydrogen peroxide do not affect the weathering of PBT.

The D-value of the PBT is 1.20 min (this value allows measuring the time required to kill 90 % of the bacteria on a coupon).

The joint encapsulated in the thermoplastic elastomer SEBS (Thermolast M) is compliant with the FDA requirements (CFR, Title 21, Part 178, Section 2010).



ANY QUESTIONS, NEED FURTHER INFORMATION?

Please do not hesitate to call us or write to us, Piercan is at your disposal for your projects!

 **Telephone** +66 (0)8 1508 1168

 **E-mail** Piyanuch@3ainstrument.com



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200/61 Moo.5 Tambon Bangruknai,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

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THE PIERCAN SOLUTION

The BCS glove port is available for different models of gloves and safety sleeves.

• Choice of material for the gloves



CSM

- Excellent resistance to chemical products and sterilising agents



EPDM

- FDA approved material
- High resistance to sterilisation



NÉOPRÈNE

- High levels of protection against cytotoxic products



POLYURÉTHANE/CSM

- Extremely resistant elastomer
- Flexibility and dexterity

• Choice of material for the safety sleeves



CSM

- Excellent resistance to chemical products and sterilising agents



EPDM

- FDA approved material
- High resistance to sterilisation



NÉOPRÈNE

- High levels of protection against cytotoxic products



POLYURÉTHANE/CSM

- Extremely resistant elastomer
- Flexibility and dexterity



PVC

- Mechanical resistance

• Options for decontamination and sterilisation

CLASS 200 PARTICULATE DECONTAMINATION

The validation of the particulate decontamination of the port has been done as per the standard IEST-STD-C-1246D. The application of the PIERCAN standard for the particulate decontamination of the glove with its port and the safety sleeve with its port, is in compliance with the class 200 requirement.

GAMMA RADIATION STERILISATION

The validation of the port sterilisation was carried out as per the Vdmax25 method in compliance with the standards NF EN ISO 11137 and 11737.

GANTS DE BOITE A GANT EN EN CAOUTCHOUC NATUREL

DRY BOX GLOVES MANUFACTURED IN NATURAL RUBBER



SPÉCIFICATIONS TECHNIQUES

- **Composition chimique**
 - Gant en caoutchouc naturel (polyisoprène).
- **Caractéristiques / Avantages**
 - Tenue correcte aux acides réducteurs, bases diluées et alcools.
 - Très grande résistance au froid (jusqu'à -40°C).
 - Très bonne souplesse et dextérité.
 - Faible coût d'utilisation.
- **Domaines d'application**
 - Sciences de la vie (industries pharmaceutiques / médical)
 - Industries nucléaires
- **Gamme proposée**

CODE MATÉRIAU	H
COULEUR	Blond
MODÈLE	Ø rond de gant intérieur : 136 mm - 156 mm - 186 mm - 220 mm - 300 mm
FORME DE MAIN	Ambidextre ou anatomique
TAILLE	Selon modèle
LONGUEUR (mm)	Standard : 750-800 (+/- 20)
ÉPAISSEUR (mm)	4/10 nominal min 3/10 - max 5,5/10 6/10 nominal min 5/10 - max 7/10 8/10 nominal min 7/10 - max 10/10
BOURRELET (mm)	Standard 6 +/- 1 (sf cas particulier)

TECHNICAL SPECIFICATIONS

- **Chemical composition**
 - Glove manufactured in natural rubber (polyisoprene).
- **Characteristics / Advantages**
 - Good behavior to acids, diluted bases and alcohols.
 - Very high resistance to cold conditions (till -40°C).
 - Very good flexibility and dexterity.
 - Cost saving for end users.
- **Fields of Application**
 - Life sciences (Pharmaceutical / Medical)
 - Nuclear industries
- **Options**

MATERIAL CODE	H
COLOR	Blond
MODEL	Dry box gloves port ID : 5" - 6" - 8" - 9" - 12"
HAND SIZE	Ambidextrous or left hand/right hand
SIZE	According to the model
LENGTH (inch)	Available : 30" - 32" (+/- 1")
THICKNESS (mil)	15 mil nominal min : 11.8 - max : 22 24 mil nominal min : 20 - max 28 32 mil nominal min : 28 - max 35.5
BEAD (inch)	Typically : 0.24" +/- 0.04" (except in special cases)

- Conforme à la directive européenne E.P.I. catégorie 3

- Complying with European Directive PPE Category 3

CE 0333				
4/10 mm - 15 mil				
	EN 421-1994 	EN 374-1-2003 	EN 388-2003 	X100
6/10 mm - 24 mil et 8/10 mm - 32 mil				
	EN 421-1994 	EN 374-1-2003 	EN 388-2003 	X111



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Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



GANTS DE BOITE A GANT EN CAOUTCHOUC NATUREL

DRY BOX GLOVES MANUFACTURED IN NATURAL RUBBER



• Propriétés mécaniques / *Mechanicals properties*

Module 100% ⁽¹⁾ 100% Modulus ⁽¹⁾	Résistance rupture ⁽¹⁾ Tensile strength ⁽¹⁾	Allongement rupture ⁽¹⁾ Elongation at break ⁽¹⁾	Perforation (6/10 mm) ⁽²⁾ Puncture resistance (24 mil) ⁽²⁾
< 1,5 MPa	> 20 MPa	> 500 %	> 20 N

⁽¹⁾ Iso 37 type 2 ⁽²⁾ EN 388

• Propriétés physico-chimiques / *physico-chemical properties*

- Plage de température : -40 à +80° C

- Temperature range : -40 to +176° F

Produits / Products	Performances ^(*) Performances ^(*)
Stérilisation en autoclave (120° C) / Autoclave sterilisation (248° F)	++
Alcools / Alcohols	++
Acides, bases / Acids, bases	++
Oxydants forts / Strong oxidizers	-
Ozone, UV, radicaux libres, vieillissement naturel / Ozone, UV, free radicals, natural ageing	-
Solvants cétoniques / Cetonc Solvents	+
Solvants chlorés / chlorinated Solvents	-
Solvants et huiles aromatiques / Aromatic solvents and oils	-
Solvants et huiles aliphatiques / Aliphatic solvents and aliphatic oils	-

^(*) - Déconseillé / Not recommended + Utilisable sous certaines conditions / Usable in some conditions ++ Convenable / Acceptable +++ Recommandé / Excellent

• Options

- Livrable en version décontaminée ou décontaminée-stérile (stérilisation au rayonnement Gamma).

• Emballage

- Par paire dans une pochette noire.
- Notice d'instruction CE qui précise les conseils d'utilisation, le marquage porté sur le gant et sur l'emballage.

• Conseils d'entretien

- Stockage dans l'emballage d'origine entre + 5°C et + 25°C.
- Date de péremption de 1 an dans l'emballage d'origine.
- Lavage à l'eau savonneuse, rinçage à l'eau claire puis séchage dans un courant d'air à basse température (<40°C).

• Traitement du gant

- Non recyclable.
- Elimination comme un simple déchet non toxique si non souillé par un produit dangereux.

• Options

- Can be delivered decontaminated or decontaminated-sterile (Gamma ray sterilisation).

• Packaging

- By pair inside a black pouch.
- Instructions for use required by the CE marking gives advices to the end user, explains the marking on the glove and the packaging.

• Storage advice

- Storage condition in the original packing must be between + 5°C and + 25°C (35° F to 85° F).
- Shelflife : 1 year in its original bag pouch.
- Wash with soapy water, rinse with clean water and low temperature dry (<40° C).

• Glove disposal

- Non recyclable.
- Classified as non-toxic waste providing they have not been contaminated during use.



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Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



GANT DE BOITE A GANT EN NEOPRENE®

DRY BOX GLOVE MANUFACTURED
IN NEOPRENE®



SPÉCIFICATIONS TECHNIQUES

Composition chimique

- Gant en polychloroprène.

Caractéristiques / Avantages

- Bonne résistance aux produits chimiques (polyvalence).
- Bonne protection mécanique.
- Bonne résistance à l'ozone et aux UV.
- Grande souplesse et excellente dextérité.

Domaines d'application

- Industries nucléaires
- Sciences de la vie (industries pharmaceutiques / médical / hôpitaux : manipulation de cytotoxiques, se référer au guide)

Gamme proposée

CODE MATÉRIAU	C
COULEUR	Noir
MODÈLE	Ø rond de gant intérieur : 136 mm - 156 mm - 186 mm - 220 mm - 300 mm
FORME DE MAIN	Ambidextre ou anatomique
TAILLE	Selon modèle
LONGUEUR (mm)	Standard : 750-800 (+/- 20)
ÉPAISSEUR (mm)	4/10 nominal Minimum 3/10 - Maximum 5,5/10 6/10 nominal Minimum 5/10 - Maximum 7/10 8/10 nominal Minimum 7/10 - Maximum 10/10
BOURRELET (mm)	Standard : 6 +/- 1

Conforme à la directive européenne E.P.I. catégorie 3

TECHNICAL SPECIFICATIONS

Chemical composition

- Glove manufactured in polychloroprene rubber.

Characteristics / Advantages

- Good chemical resistance (polyvalent).
- Good mechanical protection.
- Good behavior to ozone and UV.
- Offers excellent dexterity and flexibility.

Fields of Application

- Nuclear industries
- Life sciences (Pharmaceutical / Medical / Hospitals : handling cytotoxics, refer to the guide)

Options

MATERIAL CODE	C
COLOR	Black
MODEL	Dry box gloves port ID : 5" - 6" - 8" - 9" - 12"
HAND SIZE	Ambidextrous or left and/right hand
SIZE	According to the model
LENGTH (inch)	Available : 30" - 32" (+/- 1")
THICKNESS (mil)	15 mil nominal Minimum : 11.8 - Maximum : 22 24 mil nominal Minimum : 20 - Maximum : 28 32 mil nominal Minimum : 28 - Maximum : 39
BEAD (inch)	Typically : 0,24" +/- 0.04"

Complying with European Directive PPE Category 3

CE 0333				
4/10 mm - 15 mil				
	EN 421-1994	EN 374-1-2003	EN 388-2003	
				X100
6/10 mm - 24 mil				
	EN 421-1994	EN 374-1-2003	EN 388-2003	
				X100
8/10 mm - 32 mil				
	EN 421-1994	EN 374-1-2003	EN 388-2003	
				X111



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GANT DE BOITE A GANT EN NEOPRENE®

DRY BOX GLOVE MANUFACTURED IN NEOPRENE®



Propriétés mécaniques / Mechanical properties

Module 100% ⁽¹⁾ 100% Modulus ⁽¹⁾	Résistance rupture ⁽¹⁾ Tensile strength ⁽¹⁾	Allongement rupture ⁽¹⁾ Elongation at break ⁽¹⁾	Perforation (6/10 mm) ⁽²⁾ Puncture resistance (24 mil) ⁽²⁾
< 2 MPa	> 15 MPa	> 500 %	> 20 N

⁽¹⁾ Iso 37 type 2 ⁽²⁾ EN 388

Propriétés physico-chimiques / physico-chemical properties

- Plage de température : -20 à +100° C

- Temperature range : -4 to +212° F

Produits / Products	Performances ^(*) Performances ^(*)
Stérilisation en autoclave (120° C) / Autoclave sterilisation (248° F)	+++
Alcools / Alcohols	++
Acides, bases / Acids, bases	++
Oxydants forts / Strong oxidizers	+
Ozone, UV, radicaux libres, vieillissement naturel / Ozone, UV, free radicals, natural ageing	++
Solvants cétoniques / Cetonic Solvents	+
Solvants chlorés / chlorinated Solvents	-
Solvants et huiles aromatiques / Aromatic solvents and oils	-
Solvants et huiles aliphatiques / Aliphatic solvents and aliphatic oils	++

(*) - Déconseillé / Not recommended + Utilisable sous certaines conditions / Usable in some conditions ++ Convenable / Acceptable +++ Reconnu / Excellent

Poudrage

- Standard : gants non poudrés.
- Option : poudrage intérieur ou extérieur.

Options

- Livrable en version décontaminée ou décontaminée-stérile (stérilisation au rayonnement Gamma).

Emballage

- Par paire dans une pochette noire.
- Notice d'instruction CE qui précise les conseils d'utilisation, le marquage porté sur le gant et sur l'emballage.

Conseils d'entretien

- Stockage dans l'emballage d'origine entre +5°C et +25°C
- Date de péremption de 2 ans dans l'emballage d'origine.
- Lavage à l'eau savonneuse, rinçage à l'eau claire puis séchage dans un courant d'air à basse température (<40°C).

Traitement du gant

- Non recyclable.
- Elimination comme un simple déchet non toxique si le gant n'a pas été souillé par un produit dangereux.



Powdering

- Available : without powder gloves.
- Option : inside or outside powder.

Options

- Can be delivered decontaminated or decontaminated-sterile (Gamma ray sterilisation).

Packaging

- By pair inside a black pouch.
- Instructions for use required by the CE marking gives advices to the end user, explains the marking on the glove and the packaging.

Storage advice

- Storage condition in the original packing must be between +5°C and +25°C (41°F to 77°F).
- Shelflife : 2 years in its original bag pouch.
- Wash with soapy water, rinse with clean water and low temperature dry (<40°C).

Disposal of gloves

- Non recyclable.
- Classified as non-toxic waste providing they have not been contaminated during use.

GANT POUR ISOLATEUR ELS EN NEOPRENE® NON TACHANT

ISOLATOR GLOVE MANUFACTURED IN NON STAINING NEOPRENE®



SPÉCIFICATIONS TECHNIQUES

Composition chimique

- Gant en polychloroprène non tachant.

Caractéristiques / Avantages

- Bonne protection mécanique.
- Bonne tenue aux produits chimiques (polyvalence).
- Grande souplesse et excellente dextérité.
- Très bonne tenue aux agents de stérilisation (eau oxygénée) et aux systèmes de stérilisation (rayons Gamma et Beta).
- Permet de réduire les coûts de fonctionnement chez les utilisateurs.

Domaines d'application

- Sciences de la vie (industries pharmaceutiques / médical / hôpitaux : manipulation de cytotoxiques, se référer au guide)

Gamme proposée

CODE MATÉRIAU	CNS
COULEUR	Noir
MODÈLE	Modèle unique (ELS 10300)
FORME DE MAIN	Ambidextre
TAILLE	5-6-7-8-9-10-11
LONGUEUR (mm)	330 (+/- 30) 360 (+/- 30) T 10 et 11
ÉPAISSEUR (mm)	Existe en : 3/10 - 4/10 - 5/10 - 6/10 - 7/10 - 8/10
BOURRELET (mm)	Nous consulter

TECHNICAL SPECIFICATIONS

Chemical composition

- Glove manufactured in non staining polychloroprene.

Characteristics / Advantages

- Good mechanical protection.
- Good chemical resistance (various).
- Good behavior to UV and ozone.
- Offers excellent dexterity and flexibility.
- Excellent resistance to sterilisation processes (Gamma and Beta radiations).
- Costs saving for the end users.

Fields of Application

- Life sciences (Pharmaceutical / Medical / Hospitals : handling cytotoxics, refer to guide)

Options

MATERIAL CODE	CNS
COLOR	Black
MODEL	Single model (ELS 10330)
HAND SIZE	Ambidextrous
SIZE	5-6-7-8-9-10-11
LENGTH (inch)	13" (+/- 0.4") 14.2" (+/- 0.4") Size 10 - 11
THICKNESS (mil)	Available : 12 - 15 - 20 - 24 - 28 - 32
BEAD (inch)	Contact us

Conforme à la directive européenne E.P.I. catégorie 3

Complying with European Directive PPE Category 3

CE 0333				
3/10 mm - 12 mil				
	EN 421-1994	EN 374-1-2003		
4/10 mm - 15 mil et 5/10 - 20 mil				
	EN 421-1994	EN 374-1-2003	EN 388-2003	
			X100	
6/10 mm - 24 mil et 7/10 - 28 mil et 8/10 - 32 mil				
	EN 421-1994	EN 374-2003	EN 388-2003	
		ACK	X100	



3A INSTRUMENT CO., LTD.

200/61 Moo.5 Tambon Bangruknoi,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



GANT POUR ISOLATEUR ELS EN NEOPRENE® NON TACHANT

ISOLATOR GLOVE MANUFACTURED IN NON STAINING NEOPRENE®



Propriétés mécaniques / Mechanical properties

Module 100% ⁽¹⁾ 100% Modulus ⁽¹⁾	Résistance rupture ⁽¹⁾ Tensile strength ⁽¹⁾	Allongement rupture ⁽¹⁾ Elongation at break ⁽¹⁾	Perforation (6/10 mm) ⁽²⁾ Puncture resistance (24 mil) ⁽²⁾
< 2 MPa	> 15 MPa	> 500 %	> 20 N

⁽¹⁾ Iso 37 type 2 ⁽²⁾ EN 388

Propriétés physico-chimiques / physico-chemical properties

- Plage de température : -20 à +100° C

- Temperature range : -4 to +212° F

Produits / Products	Performances ^(*) Performances ^(*)
Stérilisation en autoclave (120° C) / Autoclave sterilisation (248° F)	+++
Alcools / Alcohols	++
Acides, bases / Acids, bases	++
Oxydants forts / Strong oxidizers	+
Ozone, UV, radicaux libres, vieillissement naturel / Ozone, UV, free radicals, natural ageing	++
Solvants cétoniques / Cetonc Solvents	+
Solvants chlorés / chlorinated Solvents	-
Solvants et huiles aromatiques / Aromatic solvents and oils	-
Solvants et huiles aliphatiques / Aliphatic solvents and aliphatic oils	++

^(*) - Déconseillé / Not recommended + Utilisable sous certaines conditions / Usable in some conditions ++ Convenable / Acceptable +++ Reconnu / Excellent

Poudrage

- Standard : gants non poudrés.
- Option : poudrage intérieur ou extérieur.

Options

- Livrable en version décontaminée ou décontaminée-stérile (stérilisation au rayonnement Gamma).

Emballage

- Par paire dans une pochette noire.
- Notice d'instruction CE qui précise les conseils d'utilisation, le marquage porté sur le gant et sur l'emballage.

Conseils d'entretien

- Stockage dans l'emballage d'origine entre +5°C et +25°C
- Date de péremption de 2 ans dans l'emballage d'origine.
- Lavage à l'eau savonneuse, rinçage à l'eau claire puis séchage dans un courant d'air à basse température (<40°C).

Traitement du gant

- Non recyclable.
- Elimination comme un simple déchet non toxique si le gant n'a pas été souillé par un produit dangereux.

Powdering

- Available : without powder gloves.
- Option : inside or outside powder.

Options

- Can be delivered decontaminated or decontaminated-sterile (Gamma ray sterilisation).

Packaging

- By pair inside a black pouch.
- Instructions for use required by the CE marking gives advices to the end user, explains the marking on the glove and the packaging.

Storage advice

- Storage condition in the original packing must be between +5°C and +25°C (41°F to 77°F).
- Shelflife : 2 years in its original bag pouch.
- Wash with soapy water, rinse with clean water and low temperature dry (<40°C).

Disposal of gloves

- Non recyclable.
- Classified as non-toxic waste providing they have not been contaminated during use.



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Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



GANT DE BOITE A GANT EN BUTYL HAUTES PROPRIÉTÉS

DRY BOX GLOVE MANUFACTURED IN
BUTYL HIGH PROPERTIES



ANTISTATIQUE

SPÉCIFICATIONS TECHNIQUES

Composition chimique

- Gant en polyisoprène isobutylène à haut niveau de propriétés.

Caractéristiques / Avantages

- Gant à conductivité électrique n'attirant pas poudre et poussière.
- Gant à dissipation de charge électrostatique.
- Bonne tenue aux produits chimiques.
- Bonne résistance à l'ozone et aux UV.
- Grande souplesse et excellente dextérité.
- Excellente imperméabilité aux liquides et gaz.

Domaines d'application

- Industries nucléaires
- Sciences de la vie (industries pharmaceutiques / médical)
- Industries diverses
- Industries en milieu ATEX

Gamme proposée

CODE MATÉRIAU	BHP
COULEUR	Noir
MODÈLE	Ø rond de gant intérieur : 136 mm - 156 mm - 186 mm - 220 mm - 250 mm - 300 mm - 350 mm
FORME DE MAIN	Ambidextre ou anatomique
TAILLE	Selon modèle
LONGUEUR (mm)	Standard : 750-800 (+/- 20)
ÉPAISSEUR (mm)	4/10 nominal Minimum 3/10 - Maximum 6/10 ou 6/10 nominal Minimum 4/10 - Maximum 8/10
BOURRELET (mm)	Standard 5 +/- 1

Conforme à la directive européenne
E.P.I. catégorie 3

TECHNICAL SPECIFICATIONS

Chemical composition

- Glove made in high properties Isobutylene Polyisoprene rubber.

Characteristics / Advantages

- Conductive gloves: do not attract powder and dust.
- Electrostatic dissipative Glove (ESD)
- Good chemical resistance.
- Good resistance to ozone and UV.
- Offers excellent flexibility and dexterity.
- Excellent impermeability against gas and liquids.

Fields of Application

- Nuclear industries
- Life sciences (Pharmaceutical / Medical)
- Various Industries
- Explosive proof environment industries

Options

MATERIAL CODE	BHP
COLOR	Black
MODEL	Dry box gloves port ID : 5" - 6" - 8" - 9" - 10" - 12" - 14"
HAND SIZE	Ambidextrous or left hand/right hand
SIZE	According to the model
LENGTH (inch)	Available : 30" - 32" (+/- 1")
THICKNESS (mil)	15 mil nominal Minimum: 11.8 - Maximum: 24 or 24 mil nominal Minimum: 15.7 - Maximum: 31.4
BEAD (inch)	Typically : 0,2" +/- 0.04"

Complying with European Directive
PPE Category 3

CE 0333				
4/10 mm - 15 mil				
	EN 421-2010	EN 374-2003	EN 388-2003	
		CKL	3X11	
6/10 mm - 24 mil				
	EN 421-2010	EN 374-2003	EN 388-2003	
		CKL	3X11	



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WWW.3AINSTRUMENT.COM



GANT DE BOITE A GANT EN BUTYL HAUTES PROPRIÉTÉS

DRY BOX GLOVE MANUFACTURED IN BUTYL HIGH PROPERTIES



Propriétés mécaniques et électriques / Mechanical & electrical properties

Module 100% ⁽¹⁾ 100% Modulus ⁽¹⁾	Résistance rupture ⁽¹⁾ Tensile strength ⁽¹⁾	Allongement rupture ⁽¹⁾ Elongation at break ⁽¹⁾	Perméabilité à l'Hélium ⁽²⁾ Helium permeability ⁽²⁾	Résistance électrique de surface ⁽³⁾ Surface electrical resistance ⁽³⁾
< 2,5 MPa	> 13 MPa	> 400 %	$7.10^{-17} \text{ m}^2.\text{Pa}^{-1}.\text{s}^{-1}$	< 1.10^8 Ohms

⁽¹⁾ Iso 37 type 2 ⁽²⁾ NF ISO 2782 ⁽³⁾ NF EN 1149-1

Les gants de protection à dissipation électrostatique ne sont efficaces que si l'utilisateur est relié à la terre.
Only efficient if the user is grounded

Propriétés physico-chimiques / Physico-chemical properties

- Plage de température : -30 à +110° C

- Temperature range : -22 to +230° F

Produits / Products	Performances (*) Performances(*)
Stérilisation en autoclave (120° C) / Autoclave sterilisation (248° F)	+++
Alcools / Alcohols	+++
Acides, bases / Acids, bases	++
Oxydants forts / Strong oxidizers	++
Ozone, UV, radicaux libres, vieillissement naturel / Ozone, UV, free radicals, natural ageing	+++
Solvants cétoniques / Cetonic Solvents	+++
Solvants chlorés / chlorinated Solvents	-
Solvants et huiles aromatiques / Aromatic solvents and oils	-
Solvants et huiles aliphatiques / Aliphatic solvents and aliphatic oils	-

(*) - Déconseillé / Not recommended + Utilisable sous certaines conditions / Usable in some conditions ++ Convenable / Acceptable +++ Recommandé / Excellent

Emballage

- Par paire dans une pochette noire avec insert recyclable.
- Notice d'instruction CE qui précise les conseils d'utilisation, le marquage porté sur le gant et sur l'emballage.

Packaging

- By pair inside a black pouch with recyclable insert.
- Instructions for use required by the CE marking gives advices to the end user, explains the marking on the glove and the packaging.

Conseils d'entretien

- Stockage dans l'emballage d'origine entre +5°C et +25°C.
- Date de péremption de 3 ans dans l'emballage d'origine.
- Lavage à l'eau savonneuse, rinçage à l'eau claire puis séchage dans un courant d'air à basse température (<40°C).

Storage advice

- Storage condition in the original packing must be between + 5°C and + 25°C (41°F to 77°F).
- Shelf Life : 3 years in its original bag pouch.
- Wash with soapy water, rinse with clean water and low temperature dry (<40°C).

Traitement du gant

- Non recyclable.
- Elimination comme un simple déchet non toxique si non souillé par un produit dangereux.

Glove disposal

- Non recyclable.
- Classified as non-toxic waste providing they have not been contaminated during use.



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WWW.3AINSTRUMENT.COM



GANTS DE BOITE A GANT EN POLYURETHANE

DRY BOX GLOVE MANUFACTURED IN POLYURETHANE



SPÉCIFICATIONS TECHNIQUES

Composition chimique

- Gant en polyuréthane.

Caractéristiques / Avantages

- Propriétés mécaniques exceptionnelles (perforation, déchirure, coupure).
- Haute résistance à l'ozone et aux UV.
- Souplesse et dextérité.
- Excellent comportement aux radiations ionisantes.
- Très faible surface spécifique évitant la rétention et l'accrochage de poudre en surface.

Domaines d'application

- Industries nucléaires
- Sciences de la vie (industries pharmaceutiques et médicales)

Gamme proposée

CODE MATÉRIAU	PUR
COULEUR	Bleu
MODÈLE	Ø rond de gant intérieur : 136 mm - 156 mm - 186 mm - 220 mm - 250 mm - 300 mm - 350 mm
FORME DE MAIN	Ambidextre ou anatomique
TAILLE	Selon modèle
LONGUEUR (mm)	Standard : 750 - 800 (+/- 20)
ÉPAISSEUR (mm)	4/10 nominal Minimum 3/10 - Maximum 6/10
BOURRELET (mm)	Standard 5 +/- 1

TECHNICAL SPECIFICATIONS

Chemical composition

- Glove manufactured in polyurethane.

Characteristics / Advantages

- Exceptional mechanical properties (puncture, tear, cut).
- High resistance to ozone and UV.
- Flexibility and dexterity.
- Excellent behavior against ionising radiations.
- Very low specific surface which prevents to catch and retain powder.

Fields of Application

- Nuclear industries
- Life sciences (pharmaceutical / medical)

Options

MATERIAL CODE	PUR
COLOR	Blue
MODEL	Dry box gloves port ID : 5" - 6" - 8" - 9" - 10" - 12" - 14"
HAND SIZE	Ambidextrous or left and/right hand
SIZE	According to the model
LENGTH (inch)	Available: 30" - 32" (+/- 1")
THICKNESS (mil)	15 mil nominal Minimum : 11.8 - Maximum 23.6
BEAD (inch)	Typically : 0.2" +/- 0.04"

Conforme à la directive européenne
E.P.I. catégorie 3

Complying with European Directive
PPE Category 3

CE 0333				
4/10 mm - 15 mil				
	EN 421-1994 	EN 388-2003 		
		4122		



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Fax. +66 2045 2608,

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WWW.3AINSTRUMENT.COM



GANTS DE BOITE A GANT EN POLYURETHANE

DRY BOX GLOVE MANUFACTURED IN POLYURETHANE



Propriétés mécaniques / Mechanicals properties

Module 100% ⁽¹⁾ 100% Modulus ⁽¹⁾	Résistance rupture ⁽¹⁾ Tensile strength ⁽¹⁾	Allongement rupture ⁽¹⁾ Elongation at break ⁽¹⁾	Perforation (5/10 mm) ⁽²⁾ Puncture resistance (20 mil) ⁽²⁾
< 3,5 MPa	> 50 MPa	> 500 %	> 70 N

⁽¹⁾ Iso 37 type 2 ⁽²⁾ EN 388

Propriétés physico-chimiques / Physico-chemical properties

- Plage de température : -20 à +90° C

- Temperature range : -4 to +194° F

Produits / Products	Performances ^(*) Performances ^(*)
Stérilisation en autoclave (120° C) / Autoclave sterilisation (248° F)	-
Alcools / Alcohols	-
Acides, bases / Acids, bases	-
Oxydants forts / Strong oxidizers	-
Ozone, UV, radicaux libres, vieillissement naturel / Ozone, UV, free radicals, natural ageing	+++
Solvants cétoniques / Cetonic Solvents	-
Solvants chlorés / chlorinated Solvents	-
Solvants et huiles aromatiques / Aromatic solvents and oils	+
Solvants et huiles aliphatiques / Aliphatic solvents and aliphatic oils	++

(*) - Déconseillé / Not recommended + Utilisable sous certaines conditions / Usable in some conditions ++ Convenable / Acceptable +++ Reconnu / Excellent

Emballage

- Par paire dans une pochette noire avec insert recyclable.
- Notice d'instruction CE qui précise les conseils d'utilisation, le marquage porté sur le gant et sur l'emballage.

Packaging

- By pair inside a black pouch with recyclable insert.
- Instructions for use required by the CE marking gives advices to the end user, explains the marking on the glove and the packaging.

Conseils d'entretien

- Stockage dans l'emballage d'origine entre +5° C et + 25° C.
- Date de péremption de 3 ans dans l'emballage d'origine.
- Lavage à l'eau savonneuse, rinçage à l'eau claire puis séchage dans un courant d'air à basse température (<40° C).

Storage advice

- Storage condition in the original packing must be between + 5° C and + 25° C (35° F to 85° F).
- Shelf Life : 3 years in its original bag pouch.
- Wash with soapy water, rinse with clean water and low temperature dry (< 40° C).

Traitement du gant

- Non recyclable.
- Elimination du gant comme un simple déchet non toxique si non souillé par un produit dangereux.

Glove disposal

- Non recyclable.
- Classified as non-toxic waster if they have not been contaminated during use.



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GANT DE BOITE A GANT EN POLYURETHANE / CSM

DRY BOX GLOVE MANUFACTURED IN POLYURETHANE / CSM



SPÉCIFICATIONS TECHNIQUES

Composition chimique

- Gant bi-couche en polyuréthane et polyéthylène chlorosulfoné / CSM (la couche CSM est côté boîte à gant).

Caractéristiques / Avantages

- Performances mécaniques (perforation et déchirure) exceptionnelles.
- Excellente tenue aux produits chimiques.
- Haute résistance à l'ozone et aux UV.
- Souplesse et dextérité.
- Bon comportement aux radiations ionisantes.

Domaines d'application

- Industries nucléaires
- Sciences de la vie (industries pharmaceutiques / médical)

Gamme proposée

CODE MATÉRIAU	PUR/Y
COULEUR	Bleu intérieur / blanc extérieur
MODÈLE	Ø rond de gant intérieur : 136 mm - 156 mm - 186 mm - 220 mm - 250 mm - 300 mm - 350 mm
FORME DE MAIN	Ambidextre ou anatomique
TAILLE	Selon modèle
LONGUEUR (mm)	Standard : 750-800 (+/- 20) 850 (-20/+0)
ÉPAISSEUR (mm)	5/10 nominal Minimum 3,5/10 - Maximum 7/10
BOURRELET (mm)	5 (+/- 1) pour longueurs 750-800 3,5 (-0,5/+1) pour longueur 850

Conforme à la directive européenne
E.P.I. catégorie 3

TECHNICAL SPECIFICATIONS

Chemical composition

- Glove manufactured with 2 layers : polyurethane and chlorosulfonated polyethylene (CSM) (the CSM layer is side box).

Characteristics / Advantages

- Exceptional level of mechanical properties (puncture and tear).
- Excellent chemical resistance.
- High resistance to UV and ozone.
- Offers good dexterity and flexibility.
- Good ageing against ionising radiation.

Fields of Application

- Nuclear industries
- Life sciences (pharmaceutical / medical)

Options

MATERIAL CODE	PUR/Y
COLOR	Inside blue / outside white
MODEL	Dry box gloves port ID: 5" - 6" - 8" - 9" - 10" - 12" - 14"
HAND SIZE	Ambidextrous or left and/right hand
SIZE	According to the model
LENGTH (inch)	Available : 30" - 32" (+/- 1") 33,5" (-0,79/+0")
THICKNESS (mil)	20 mil nominal Minimum : 13,8" - Maximum : 27,5"
BEAD (inch)	0,2" (+/- 0,04") length 30" - 32" 0,14" (-0,02/+0,04") length 33,5"

Complying with European Directive
PPE Category 3

CE 0333				
5/10 mm - 20 mil				
	EN 421-2010 	EN 388-2003  4122	EN 374-2003  AKL	EN 374-2003 



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WWW.3AINSTRUMENT.COM



GANT DE BOITE A GANT EN POLYURETHANE / CSM

DRY BOX GLOVE MANUFACTURED IN POLYURETHANE / CSM



Propriétés mécaniques / Mechanicals properties

Module 100% ⁽¹⁾ 100% Modulus ⁽¹⁾	Résistance rupture ⁽¹⁾ Tensile strength ⁽¹⁾	Allongement rupture ⁽¹⁾ Elongation at break ⁽¹⁾	Perforation (6/10 mm) ⁽²⁾ Puncture resistance (25 mil) ⁽²⁾	Déchirure pantalon (6/10 mm) ⁽²⁾ Tear resistance (25 mil) ⁽²⁾
< 3 MPa	> 30 MPa ⁽³⁾	> 500 %	> 60 N	> 25 N

⁽¹⁾ Iso 37 type 2 ⁽²⁾ EN 388 ⁽³⁾ > 25 MPa (Pour les gants décontaminés stériles / for decontaminated-sterile gloves)

Propriétés physico-chimiques / Physico-chemical properties

- Plage de température : -20 à +120° C

- Temperature range : -4 to +248° F

Produits / Products	Performances ^(*) Performances ^(*)
Stérilisation en autoclave (120° C) / Autoclave sterilisation (248° F)	-
Alcools / Alcohols	+++
Acides, bases / Acids, bases	+++
Oxydants forts / Strong oxidizers	+++
Ozone, UV, radicaux libres, vieillissement naturel / Ozone, UV, free radicals, natural ageing	+++
Solvants cétoniques / Cetonic Solvents	-
Solvants chlorés / chlorinated Solvents	-
Solvants et huiles aromatiques / Aromatic solvents and oils	-
Solvants et huiles aliphatiques / Aliphatic solvents and aliphatic oils	+

^(*) - Déconseillé / Not recommended + Utilisable sous certaines conditions / Usable in some conditions ++ Convenable / Acceptable +++ Reconnu / Excellent

Options

- Livable en version décontaminée-stérile (stérilisation au rayonnement Gamma).

Options

- Can be delivered decontaminated or decontaminated-sterile (Gamma ray sterilisation).

Emballage

- Par paire dans une pochette noire avec insert recyclable.
- Notice d'instruction CE qui précise les conseils d'utilisation, le marquage porté sur le gant et sur l'emballage.

Packaging

- By pair inside a black pouch with recyclable insert.
- Instructions for use required by the CE marking gives advices to the end user, explains the marking on the glove and the packaging.

Conseils d'entretien

- Stokage dans l'emballage d'origine entre +5°C et +25°C.
- Date de péremption de 3 ans dans l'emballage d'origine.
- Lavage à l'eau savonneuse, rinçage à l'eau claire puis séchage dans un courant d'air à basse température (<40°C).

Storage advice

- Storage condition in the original packing must be between +5°C and +25°C (35°F to 85°F).
- Shelf Life : 3 years in its original bag pouch.
- Wash with soapy water, rinse with clean water and low temperature dry (<40°C).

Traitement du gant

- Non recyclable.
- Elimination comme un simple déchet non toxique si non souillé par un produit dangereux.

Gloves disposal

- Non recyclable.
- Classified as non-toxic waste if they have not been contaminated during use.



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GANT DE BOÎTE À GANT EN CSM

DRY BOX GLOVE MANUFACTURED
IN CSM



SPÉCIFICATIONS TECHNIQUES

Composition chimique

- Gant en polyéthylène chlorosulfoné : CSM.

Caractéristiques / Avantages

- Excellente tenue aux produits chimiques.
- Haute résistance à l'ozone et aux UV.
- Grande souplesse et excellente dextérité.
- Excellent comportement aux radiations ionisantes.
- Très bonne tenue aux agents de stérilisation (eau oxygénée) et aux systèmes de stérilisation (rayons Gamma et Beta).

Domaines d'application

- Industries nucléaires
- Sciences de la vie (industries pharmaceutiques / médical)

Gamme proposée

CODE MATÉRIAU	Y
COULEUR	Blanc
MODÈLE	Ø rond de gant intérieur : 136 mm - 156 mm - 186 mm - 220 mm - 250 mm - 300 mm - 350 mm
FORME DE MAIN	Ambidextre ou anatomique
TAILLE	Selon modèle
LONGUEUR (mm)	Standard : 750-800 (+/-20)
ÉPAISSEUR (mm)	4/10 nominal Minimum 3/10 - Maximum 6/10 ou 6/10 nominal Minimum 4/10 - Maximum 8/10
BOURRELET (mm)	Standard : 5 (+/- 1)

TECHNICAL SPECIFICATIONS

Chemical composition

- Glove in CSM-Chlorosulfonated polyethylene.

Characteristics / Advantages

- Excellent chemical resistance.
- High resistance to ozone and UV.
- Offers excellent flexibility and dexterity.
- Excellent behavior against ionising radiations.
- Excellent resistance to sterilisation agents (hydrogen peroxyde) and sterilisation processes (Gamma and Beta radiations).

Fields of Application

- Nuclear industries
- Life sciences (Pharmaceutical / Medical)

Options

MATERIAL CODE	Y
COLOR	White
MODEL	Dry box gloves port ID: 5" - 6" - 8" - 9" - 10" - 12" - 14"
HAND SIZE	Ambidextrous or left hand/right hand
SIZE	According to the model
LENGTH (inch)	Available : 30" - 32" (+/- 1")
THICKNESS (mil)	15 mil nominal Minimum: 11.8 - Maximum: 23.6 or 24 mil nominal Minimum: 15.7 - Maximum: 31.4
BEAD (inch)	Typically: 0.2" (+/- 0.04")

Conforme à la directive européenne
E.P.I. catégorie 3

Complying with European Directive
PPE Category 3

CE 0333				
4/10mm - 15 mil				
	EN 421-2010 	EN 388-2003 3XX1	EN374-1-2003 AKL	EN 374-1-2003 NQA < 0,65
6/10mm - 24 mil				
	EN 421-2010 	EN 388-2003 3X11	EN374-1-2003 AKL	EN 374-1-2003 NQA < 0,65



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GANT DE BOÎTE À GANT EN CSM

DRY BOX GLOVE MANUFACTURED IN CSM



Propriétés mécaniques / Mechanical properties

Module 100% ⁽¹⁾ 100% Modulus ⁽¹⁾	Résistance rupture ⁽¹⁾ Tensile strength ⁽¹⁾	Allongement rupture ⁽¹⁾ Elongation at break ⁽¹⁾	Perforation (4/10 mm) ⁽²⁾ Puncture resistance (15,7 mil) ⁽²⁾
< 3 MPa	> 18 MPa	> 300%	> 30 N

⁽¹⁾ Iso 37 type 2 ⁽²⁾ EN 388

Propriétés physico-chimiques / physico-chemical properties

- Plage de température : -20 à +120° C

- Temperature range : -4 to +248° F

Produits / Products	Performances ^(*) Performances ^(*)
Stérilisation en autoclave (120° C) / Autoclave sterilisation (248° F)	+
Alcools / Alcohols	+++
Acides, bases / Acids, bases	+++
Oxydants forts / Strong oxidizers	+++
Ozone, UV, radicaux libres, vieillissement naturel / Ozone, UV, free radicals, natural ageing	+++
Solvants cétoniques / Cetonic Solvents	-
Solvants chlorés / chlorinated Solvents	-
Solvants et huiles aromatiques / Aromatic solvents and oils	-
Solvants et huiles aliphatiques / Aliphatic solvents and aliphatic oils	+

^(*) - Déconseillé / Not recommended + Utilisable sous certaines conditions / Usable in some conditions ++ Convenable / Acceptable +++ Reconnu / Excellent

Options

- Livable en version décontaminée ou décontaminée-stérile (stérilisation au rayonnement Gamma).

Options

- Can be delivered decontaminated or decontaminated-sterile (Gamma ray sterilisation).

Emballage

- À l'unité sous pochette soudée avec ouverture facile.
- Notice d'instruction CE qui précise les conseils d'utilisation, le marquage porté sur le gant et sur l'emballage.

Packaging

- By unit under welded bag with easy opening.
- Instructions for use required by the CE marking gives advices to the end user, explains the marking on the glove and the packaging.

Conseils d'entretien

- Stockage dans l'emballage d'origine entre +5°C et +25°C (face opaque de la pochette sur le dessus).
- Date de péremption de 3 ans dans l'emballage d'origine.
- Lavage à l'eau savonneuse, rinçage à l'eau claire puis séchage dans un courant d'air à basse température (<40°C).

Storage advice

- Storage condition in the original packing must be between + 5°C and + 25°C (35°F to 85°F) (black side of the bag on the top).
- Shelf Life : 3 years in its original bag pouch.
- Wash with soapy water, rinse with clean water and low temperature dry (<40°C).

Traitement du gant

- Non recyclable.
- Elimination comme un simple déchet non toxique si non souillé par un produit dangereux.

Glove disposal

- Non recyclable.
- Classified as non-toxic waste if they have not been contaminated during use.



3A INSTRUMENT CO., LTD.

200/61 Moo.5 Tambon Bangruknai,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM



GANT DE BOITE A GANT EN EPDM NOIR

DRY BOX GLOVE MANUFACTURED IN BLACK EPDM



SPÉCIFICATIONS TECHNIQUES

Composition chimique

- Gant en EPDM Noir (Éthylène Propylène Diène Monomère)
- Sans halogène
- Sans phtalate
- Sans thiurame

Caractéristiques / Avantages

- Excellente tenue aux produits chimiques (H_2O_2 , Oxonia, Acide Péracétique, Acide Nitrique,...).
- Compatible avec de multiples stérilisations à la vapeur d'eau.
- Haute résistance à l'ozone et aux UV.
- Très bonne souplesse et dextérité.
- Antistatique.
- En conformité avec FDA CFR 21 § 177.2600.

Domaines d'application

- Sciences de la vie (industries pharmaceutiques / médical / laboratoire)
- Industries nucléaires

Gamme proposée

CODE MATÉRIAU	Eb
COULEUR	Noir
MODÈLE	Ø rond de gant intérieur : 136 mm - 156 mm - 186 mm - 220 mm - 250 mm - 300 mm - 350 mm
FORME DE MAIN	Ambidextre ou anatomique
TAILLE	Selon modèle
LONGUEUR (mm)	Standard : 750-800 (+/- 20)
ÉPAISSEUR (mm)	4/10 nominal Minimum : 3/10 - Maximum : 6/10 6/10 nominal Minimum : 4/10 - Maximum : 8/10
BOURRELET (mm)	Standard 5 (+/- 1)

TECHNICAL SPECIFICATIONS

Chemical composition

- Glove manufactured in Black EPDM (Ethylene Propylene Diene Monomer)
- Halogen free
- Phtalate free
- Thiuram free

Characteristics / Advantages

- Excellent chemical resistance (H_2O_2 , Oxonia, Peracetic acid, Nitric acid,...).
- Compatible with water steam, multiple sterilisations.
- High resistance to ozone and UV.
- Very good flexibility and dexterity.
- Antistatic.
- In compliance with FDA CFR 21 § 177.2600.

Fields of application

- Life sciences (Pharmaceutical / Medical / Laboratories)
- Nuclear industries

Options

MATERIAL CODE	Eb
COLOR	Black
MODEL	Dry box gloves port ID : 5" - 6" - 7" - 8" - 10" - 12" - 14"
HAND SIZE	Ambidextrous or left hand/right hand
SIZE	According to the model
LENGTH (inch)	Available : 30" - 32" (+/- 1")
THICKNESS (mil)	15 mil nominal Minimum : 11.8" - Maximum : 23.6" 24 mil nominal Minimum : 15.7" - Maximum : 31.4"
BEAD (inch)	Typically : 0,2" (+/- 0.04")

Conforme à la directive européenne E.P.I. catégorie 3

Complying with European Directive PPE Category 3

CE 0333				
4/10 mm - 15 mil				
	EN 421-2010 	EN 374-2003 	EN 388-2003 	
		AKL	3XX1	
6/10 mm - 24 mil				
	EN 421-2010 	EN 374-2003 	EN 388-2003 	
		AKL	3XX1	



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Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
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GANT DE BOITE A GANT EN EPDM NOIR

DRY BOX GLOVE MANUFACTURED IN BLACK EPDM



Propriétés mécaniques et électriques / Mechanical and electrical properties

Module 100% ⁽¹⁾ 100% Modulus ⁽¹⁾	Résistance rupture ⁽¹⁾ Tensile strength ⁽¹⁾	Allongement rupture ⁽¹⁾ Elongation at break ⁽¹⁾	Perforation (5/10 mm) ⁽²⁾ Puncture resistance (20 mil) ⁽²⁾	Résistivité électrique ⁽³⁾ Electrical resistivity ⁽³⁾
< 2,5 MPa	> 18 MPa	> 400 %	> 20 N	< 1.10 ⁹ Ohms

⁽¹⁾ Iso 37 type 2 ⁽²⁾ EN 388 ⁽³⁾ EN 1149-1

Propriétés physico-chimiques / Physico-chemical properties

- Plage de température : -30 à +120° C

- Temperature range : -22 to +248° F

Produits / Products	Performances (*) Performances(*)
Stérilisation en autoclave (120° C) / Autoclave sterilisation (248° F)	+++
Alcools / Alcohols	+++
Acides, bases / Acids, bases	+++
Oxydants forts / Strong oxidizers	+++
Ozone, UV, radicaux libres, vieillissement naturel / Ozone, UV, free radicals, natural ageing	+++
Solvants cétoniques / Cetonic Solvents	+++
Solvants chlorés / chlorinated Solvents	-
Solvants et huiles aromatiques / Aromatic solvents and oils	-
Solvants et huiles aliphatiques / Aliphatic solvents and aliphatic oils	-

(*) - Déconseillé / Not recommended + Utilisable sous certaines conditions / Usable in some conditions ++ Convenable / Acceptable +++ Recommandé / Excellent

Emballage

- Par paire dans une pochette noire avec insert recyclable.
- Notice d'instruction CE qui précise les conseils d'utilisation, le marquage porté sur le gant et sur l'emballage.

Packaging

- By pair inside a black pouch with recyclable insert.
- Instructions for use required by the CE marking gives advices to the end user, explains the marking on the glove and the packaging.

Conseils d'entretien

- Stokage dans l'emballage d'origine entre +5°C et +25°C.
- Date de péremption de 3 ans dans l'emballage d'origine.
- Lavage à l'eau savonneuse, rinçage à l'eau claire puis séchage dans un courant d'air à basse température (<40°C).

Storage advice

- Storage condition in the original packing must be between + 5°C and + 25°C (41°F to 77°F).
- Shelf Life : 3 years in its original bag pouch.
- Wash with soapy water, rinse with clean water and low temperature dry (<40°C).

Traitement du gant

- Non recyclable.
- Elimination comme un simple déchet non toxique si non souillé par un produit dangereux.

Glove disposal

- Non recyclable.
- Classified as non-toxic waste providing they have not been contaminated during use.



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Exacting quality control for our gloves

PIERCAN guarantees the quality of these products because they are subject to a quality control procedure consisting of a number of steps that remains very strict through the processes of design, manufacture, testing and dispatch, while complying with PPE regulations.

1. TESTING ON RECEIPT

- Raw materials
- Checking compliance with the specifications
- Tooling

2. TESTING DURING PRODUCTION

- Physical and chemical parameters tested by the quality control laboratory
- Dipping parameters tested by the operatives

3. PROPERTIES OF THE GLOVE TESTED

- BY AN EXTRENAL LABORATORY
- Checking that the gloves comply with the claims made

4. FINAL TESTING OF THE GLOVE IN 6 STEPS:



•Length check:

Done by sampling, 1 glove per box. If the sample glove is non-compliant, testing is expanded and every glove is checked.



•Beading check:

By sampling, 1 glove per box. At the mid-point between the sides and at the fold of the glove.



•Thickness check:

By sampling, 1 glove per box. Thickness is measured in 5 places.



•Visual inspection:

100% are checked. Each glove undergoes inspection to detect any visual imperfections.



•Glove integrity testing:

100% are checked. Each glove is leak tested under negative pressure in line with the standard EN 421.



•Marking:

This ensures the total traceability of the finished product, from raw materials to the inspector.

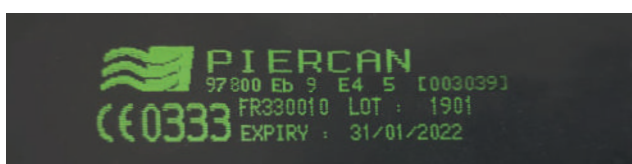
Standards

THE CE STANDARD

The framework of the CE legislation on PPE (Personal Protective Equipment) has changed a great deal over the past few years. The gloves sold by PIERCAN are compliant with the new European Regulation 2016/425, which came into force definitively in 2019, and permanently replaces Directive 89/686/EEC.

PIERCAN gloves meet the following standards worldwide:

- EN 420: general requirements for gloves
- EN 374: chemical risks
- EN 388: mechanical risks
- EN 421: nuclear risks



ISO CERTIFICATIONS



PIERCAN has been ISO 9001 certified for a number of years. Quality is therefore a core concept at a Group level.



PIERCAN has been ISO 14001 certified since 2010. Rooted in sustainable development, the PIERCAN company is conscious of the environmental impact of its industrial operations and wishes to reduce these negative effects as far as possible.

THE FDA STANDARD

The latest development in the PIERCAN range is the EPDM glove. This is also the only PIERCAN glove with a composition that is compliant with the FDA positive list (§ 1772600, CFR 21).



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SAFETY GLOVES STANDARD

LEGISLATION FOR PERSONAL PROTECTIVE EQUIPMENT (PPE)

TWO DIRECTIVES FOR PPE :

I DIRECTIVE 89/656/EEC OF 30 NOVEMBER 1989

This directive defines the minimum health and safety requirements for PPE users. Personal protective equipment must:

- Be suited to the risks to prevent, without incurring itself an increased risk.
- Take into consideration workers' ergonomic and health requirements.
- Be comfortable to wear, after making the necessary adjustments.
- Be used only for the intended purpose.
- Conform to instructions.

II DIRECTIVE 89/686/EEC OF 21 DECEMBER 1989.

This directive applies to PPE manufacturers. It defines the manufacturer's obligations.

1) PPE certification procedure:

Before marketing a PPE, the manufacturer must submit a technical dossier, along with some sample gloves, to the notified body, that performs an EC type examination.

2) Control of manufactured PPE

There are 3 categories of PPE:

- Category 1: minimum risks; no EC examination required.
- Category 2: intermediate risks.
- Category 3: irreversible and deadly risks; all PPE sold by PPE-ROAM falls into this category.

Each year, samples are collected from production. The collected samples must achieve, at the least, the same performance results as those of the initial AFI. If this is not the case, the notified body can go as far as to demand withdrawal of the concerned reference.

III ASSOCIATED STANDARDS

EN 420:2003+A1:2009 - Protective gloves - General requirements and test methods

This standard defines the general requirements and relevant test procedures for glove design and construction, resistance to water penetration, haptics, comfort and dexterity, marking, and information supplied by the manufacturer that is applicable to all protective gloves. This European Standard does not address the protective properties of gloves and therefore should be used in combination with the appropriate European standards.

This standard describes the following requirements:

- Gloves must offer the greatest possible degree of protection.
- If the glove features seams, they should not reduce the glove's performance.
- pH levels should be between 8.5 and 9.5.
- Chromium (VI) content should be below detection (X 30ppm).
- Natural rubber gloves should be tested on extractable proteins to ensure they do not cause allergic reactions.
- If cleaning instructions are provided, the level of performance must not be reduced even after the maximum number of washes.

EN 420 also concerns the glove's overall fit and feel by testing:

- Sizing and length.
- Finger dexterity.

Sample gloves are suspended from their middle fingers and measured from the fingertip to the bottom of the cuff to determine their length. EN 420 includes a list of minimum lengths for each glove size. Variances (i.e., gloves designed for specific purposes) are permitted provided the manufacturer can demonstrate the design's intent. Overall glove sizing and dexterity are also tested. Gloves are fitted on the appropriate hand sizes. The wearer will then try to pick up pins of varying sizes to measure the glove's dexterity. These pins range in size from 0mm to 1.1mm in diameter; the smaller the diameter, the greater the glove's dexterity.

The levels of performance are as follows: 1 = minimum, 2 = good, 3 = very good, 4 and 4+ = excellent, 0 = no protection, X = performance not measured.

Working gloves are divided into three categories:

Category I: Gloves designed to protect against minimal risks only

Examples of glove types are household gloves for cleaning and for protection against warm objects or temperatures that do not exceed 50°C, gloves for gardening, and light-duty cotton or leather gloves. The gloves are tested and certified in accordance with EN 420. This standard defines the general requirements for protective gloves and establishes a guarantee for CE-marking. Manufacturers are permitted to test and certify gloves themselves.

Category II: Gloves designed to protect against intermediate risks

Gloves in this category provide protection against risks that are more severe than minimal, but not considered mortal. These gloves must be subjected to independent testing and certification by a Notified Body, who then issues a CE-marking indicating the glove's protective capacities. Gloves in this category are general handling gloves requiring good puncture and abrasion performance in accordance with EN 388.

Category III: Gloves with complex designs that protect against irreversible injuries and mortal risks

Gloves in this category are designed to protect against the highest levels of risk (e.g., highly corrosive acids) and must be independently tested and certified by a Notified Body approved by the European Commission.



EN 420

EN 374-1:2003 Gloves providing protection against chemicals and microorganisms - Part 1: Terminology and performance requirements

This standard specifies the requirements for gloves that protect the wearer against chemicals and microorganisms and defines relevant terminology. The standard should be used in conjunction with EN 420 and is superseded by EN-EN ISO 374-1:2016 Gloves providing protection against dangerous chemicals and microorganisms - Part 1: Terminology and performance requirements for chemical risks. Accordingly, this standard indicates the capacities of gloves to protect the wearer against chemicals and microorganisms.



EN 374-1

SAFETY GLOVES STANDARD

LEGISLATION FOR PERSONAL PROTECTIVE EQUIPMENT (PPE)

TWO DIRECTIVES FOR PPE :

Definitions:

Degradation is determined according to the change in a material's integrity following its exposure to chemicals. The rate of degradation depends on the chemical the glove has come in contact with.

Penetration is the flow of chemicals and microorganisms through porous materials, seams, small holes, and material defects.

Permeation occurs when a chemical passes through a material on a molecular level and is defined as the penetration of a chemical's molecule through a glove's outer surface. This process takes place in three phases:

• Absorption of the flow of molecules in contact with the glove's outer surface.

• Diffusion of molecules through the glove's material.

• Desorption or the outward flow of molecules from inside the glove.

The waterproof/low chemical resistance pictogram:



The waterproof/low chemical resistance pictogram appears on gloves that have not achieved an EN 374-3 breakthrough time of, at minimum, 30 minutes against at least three of the 12 designated chemicals indicated in the EN 374-2 penetration test list.

The chemical resistance pictogram:



ABC

The chemical resistance pictogram must be accompanied by a code, generally consisting of three letters, that indicates which of the 12 designated chemicals the glove has achieved a breakthrough time of at least 30 minutes against (see EN 374-3).

The microorganism glove pictogram:



The microorganism pictogram indicates that a glove has achieved a performance level of X through the penetration test described in EN 374-2.

EN 374-2: 2014 Gloves that provide protection against dangerous chemicals and microorganisms - Part 2: Determining resistance to penetration

dangerous chemicals and microorganisms. The microorganism pictogram indicates that glove is waterproof, resistant to microorganisms, and an effective barrier against the liquids that harbor microorganisms. Protection levels assigned to EN 374-2 gloves range from 1 to 3, with 1 being the lowest and 3 being the highest (e.g., gloves assigned a protection rating of 1 are waterproof while gloves with ratings of 2 and 3 provide protection against microorganisms).

Requirements:

- Minimum liquid proof section: the size of this section of the glove must equal the length specified in EN 420.
- Penetration: a glove must not leak when subjected to an air and/or water leak test and must be evaluated against the acceptable quality level (AQL).



Performance level	AQL unit	Inspection levels
Level 3	<0.65	G1
Level 2	<1.5	G1
Level 1	<4.0	S4

EN 374-3: 2003 Gloves providing protection against chemicals and microorganisms - Part 3: Determination of resistance to permeation by chemicals

This standard specifies the methods used to determine the resistance of protective glove materials to permeation by potentially hazardous non-gaseous chemicals that the glove has been in continuous contact with. Since these test methods do not endeavor to replicate conditions likely to be found on worksites, use of the results from these tests should be restricted to general comparisons of materials' durability (e.g. breakthrough times). Gloves with the chemical resistant symbol have obtained a Level 2 protection score in the EN 374-2 test (see EN 374-2) in which gloves must achieve the same protection scores when exposed to water and any three of the following chemicals:



SAFETY GLOVES STANDARD

LEGISLATION FOR PERSONAL PROTECTIVE EQUIPMENT (PPE)

TWO DIRECTIVES FOR PPE :

Code letter	Chemical	CAS number	Category
A	Methanol	67-56-1	Primary alcohol
B	Acetone	67-64-1	Ketone
C	Acetone nitrile	75-05-8	Nitrile compound
D	Dichloromethane	75-69-2	Chlorinated paraffin
E	Carbon disulfide	75-15-0	Sulphur containing organic compound
F	Toluene	108-88-3	Aromatic hydrocarbon
G	Diethylamine	109-89-7	Amine
H	Tetrahydrofuran (THF)	109-99-9	Heterocyclic ether
	Ethyl acetate	141-78-6	Ester
I	n-Hexane	142-85-5	Saturated hydrocarbon
K	Sodium hydroxide 40%	1310-73-2	Inorganic base
L	Sulfuric acid 96%	7664-93-9	Inorganic mineral acid

Permeation: Each chemical tested is classified according to its breakthrough time (i.e., performance levels 0 to 6)

Measured breakthrough time	Protection index	Measured breakthrough time	Protection index
>10 minutes	Class 1	>120 minutes	Class 4
>30 minutes	Class 2	>240 minutes	Class 5
>60 minutes	Class 3	>480 minutes	Class 6

EN 388 - Gloves protecting against mechanical hazards (EN 388:2016 supersedes 388:2003.)

This standard specifies the methods used to determine the resistance of protective glove materials to permeation by potentially hazardous non-gaseous chemicals that the glove has been in continuous contact with. Since these test methods do not endeavor to replicate conditions likely to be found on work sites, use of the results from these tests should be restricted to general comparisons of materials' durability (e.g., breakthrough times). Gloves with the chemical resistant symbol have attained a level 2 protection score in the EN 374-2 test (see EN 374-2) in which gloves must achieve the same protection scores when exposed to water and any three of the following chemicals:

This European Standard specifies requirements, test methods, marking, and information that must be provided for gloves that protect against abrasion, blade cut, tear, and puncture. This standard is applicable only in conjunction with EN 420. The test methods described in this standard may apply to protective equipment (e.g., arm protectors) that does not constitute a glove or apparel.

In accordance with EN 388:2004, all tests must be conducted on the material in the glove's palm area and on the material combination used in the glove's construction. Protection against mechanical hazards is expressed by a pictogram followed by four numbers (i.e., performance levels), each representing test performance against a specific hazard.

A - Resistance to abrasion

Based on the number of cycles required to abrade through the sample glove (e.g., abrasion by sandpaper under a specified pressure). The protection factor is then indicated on a scale from 1 to 4 depending on how many revolutions are required to make a hole in the material. The higher the number, the better the protection (See table below).

B - Blade cut resistance

Based on the number of cycles required to cut through the sample glove at a constant speed. The protection factor is then indicated on a scale from 1 to 5.

C - Tear resistance

Based on the amount of force required to tear the sample. The protection factor is then indicated on a scale from 1 to 4.

D - Puncture resistance

Based on the amount of force required to pierce the sample with a standard-sized point. The protection factor is then indicated on a scale from 1 to 4.

Note: results marked with an X indicate that the glove was not tested against this hazard; not tested; results marked with an O indicate that the glove did not pass the test.



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SAFETY GLOVES STANDARD

LEGISLATION FOR PERSONAL PROTECTIVE EQUIPMENT (PPE)

Levels of performance:

Test	Level 1	Level 2	Level 3	Level 4	Level 5
Abrasion resistance (No. of cycles)	100	500	2000	8000	-
Blade cut resistance (index)	1.2	2.5	5.0	10.0	20.0
Tear resistance (Newton)	10	25	50	75	-
Puncture resistance (Newton)	20	60	100	150	-

The 2016 update to EN 388 retains the four categories (A to D) and specifies additional hazard categories:

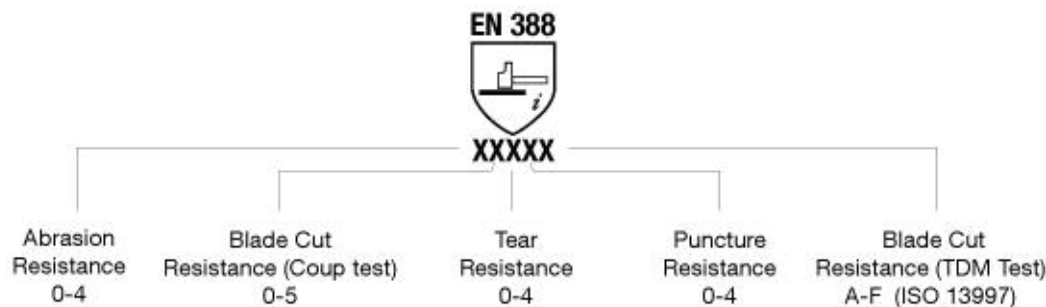
E - Blade cut resistance (EN ISO 13997)

Using only sharpened straight blades (i.e., no cut or pulling blades), this test measures the durability of the sample glove against cutthrough inside a distance of 20mm, allowing for the calculation of a score from A to F, with F being the highest rating. This test is used primarily for specialized products (e.g., firefighters' gloves).

F - Impact protection

The letter P is used to indicate that a sample glove has passed the impact protection test. Conversely, the letter F is used to indicate that a sample glove has failed the impact protection test.

	Test	A	B	C	D	E	F
E	EN ISO 13997 (Newton)	2	3	5	15	22	30
F	Impact protection	Passed (P) or Failed (F)					



Warning: Observe caution when working with moving mechanical parts as material can become entangled and cause injury. Gloves must not be worn if there is a risk of entanglement by moving mechanical parts.

EN 421:2010 Gloves that protect against ionizing radiation and radioactive contamination

This European Standard specifies the requirements and test methods for gloves that protect against ionizing radiation and radioactive contamination. The standard applies to gloves that provide hand protection and protection for arms and shoulders, gloves that are mounted in permanent containment enclosures, and intermediary sleeves used between gloves and permanent containment enclosures (report to 4.7.2.3). The requirements of this European Standard do not apply to gloves that protect against X-ray radiation.



Protection and protective qualities are indicated by pictograms:



Pictogram indicating protection against radioactive particles



Pictogram indicating protection against ionizing radiation

- To protect against radioactive contamination, the glove has to be liquid-proof and must pass the penetration test defined in EN 374.
- In addition, gloves used in containment enclosures must pass an air pressure leak test and must provide a high level of resistance against water vapor penetration (1 – most; 5 – least).
- Materials may be marked according to their resistance to ozone cracking. This test is optional and can be used as an aid in glove selection (1 – least; 4 – most).
- To protect from ionizing radiation, gloves must contain specific amounts of lead or equivalent metals (i.e., lead equivalence). Lead equivalence must be marked on each glove with a measurement in millimeters and a statement concerning test conditions.

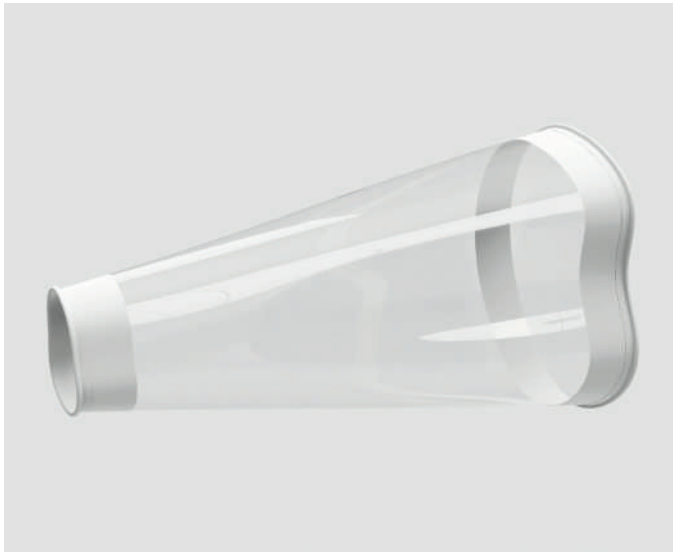
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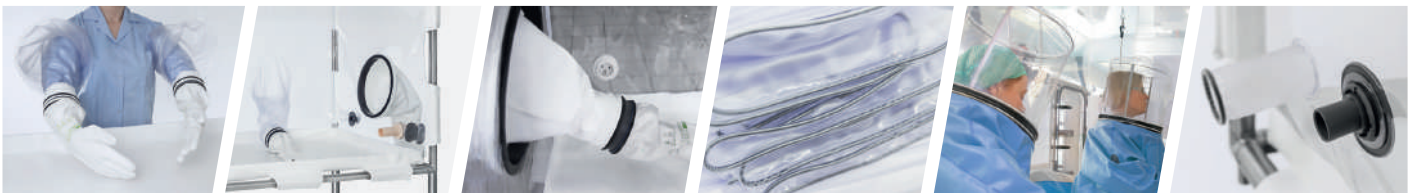
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Plastunion range

Soft plastic
for **inflexible** security



Products **tailored** to your challenges

Whether you are looking for a particular product or a solution that requires the expertise of a specialist in the plastics industry, Plastunion offers the right answer. For specific requests, our engineers will accompany you in the development of your customized product. In addition, an extensive catalog of "standard" parts and patterns is available.



TAILOR-MADE BY PLASTUNION

- Analysis of your specifications by the design office
- Advice and service on the use of products
- Choice of material
- Choice of finish (hem, seals...)
- Tools development (patterns, cutting shapes)

A production unit is dedicated to the production of Plastunion products (prototypes and series).

AN EXTENSIVE **CATALOG** OF PRODUCTS

For your standard requests, the Plastunion catalog has a wide selection of flexible plastic structures and accessories. Catalog products are available quickly and at competitive prices.

In addition, Plastunion offers you a wide choice of patterns, so you can select the right shape and material for you.

PLASTUNION'S **HIGHLIGHTS**



Advice and support



Plastunion design office



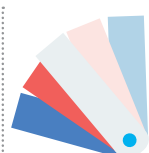
Large choice of materials



Prototypes and full series

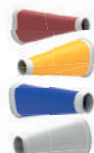


Large stock of raw materials



25
TYPES OF
TECHNICAL
SHEETS

200 000
INTERVENTION
ARTICLES
per year



4
TYPES OF
PVC COATED
FABRICS

100
UNIQUE
PROTOTYPES
per year



850
EXISTING
PATTERNS



ADVICE AND EXPERTISE

Whether customized or catalog parts, Plastunion advises you on the development of your product line and its implementation within your production units.

Plastunion has the expertise to develop and qualify innovative solutions.

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NUCLEAR PHARMACEUTICAL

Half-suits

The half-suit is the extension of the glove-sleeve concept applied to the upper body. This system offers a large area of operation that allows the user to have control of his/her movements.



Secure your preparations and productions offering flexibility of handling

All models are doubled for ventilation.

- 1 • **Interchangeable helmet:** good optical quality of the visor, 180 degree field of vision, prolonged use of the half suit.
- 2 • **Welded helmet:** two front and back visors (for production isolators), good optical quality of the visor, 180 degree field of vision.

OPTIONS

- Two sizes available (large and small)
- Simple fabric or PVC lined fabric
- Different colors

Materials

LIGHT FABRIC HEAVY FABRIC

Our strengths

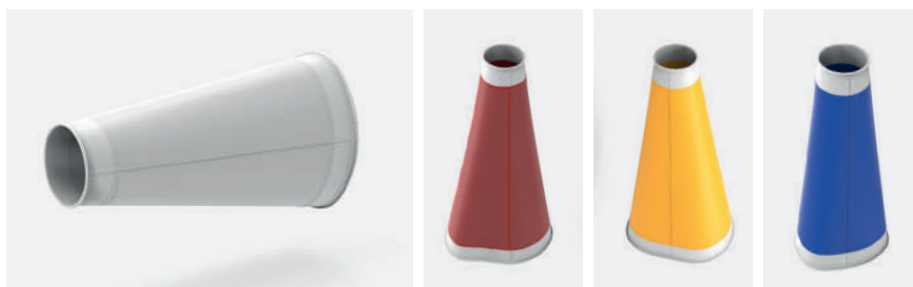
- + great flexibility in uses and manipulations
- + effective barrier against pollutants and contaminants
- + protection of operators, safety of preparations and installations
- + compatible with cleaning agents and surface decontamination



NUCLEAR PHARMACEUTICAL

Sleeves

The sleeve systems are key to the process of handling inside the isolator and offer the operator ideal ergonomics and freedom of movement.



The combination of a sleeve and glove can be replaced without compromising containment thanks to the "wrist ring with O-ring" connection interface. Our sleeves are available in different materials and sizes.

OPTIONS

- Two categories of materials: calendered PVC (translucent or transparent) and coated fabrics (different colors)
- Different shapes (straight conic, oblique conic or ovoid)
- Different sizes, lengths and diameters

Materials

LIGHT FABRIC HEAVY FABRIC PVC

Our strengths

- + great flexibility
- + effective barrier against pollutants and contaminants
- + protection of operators, safety of preparations and installations
- + compatible with cleaning agents and surface decontamination



Classification of materials - The pharmaceutical and other range

			Physical data										Chemical data					Recommendation and guarantee	
			Saturated steam solution <20% at a temperature <50 ° C																
Family	Materials <i>the thicknesses are given in mm</i>	Products standards and specific	Transparency Optical Quality	Mechanical performance	Flexibility Lengthening	Acides de fortes normalités dilués	Acids with strong diluted normalities	Compatibility with cleaning agents	Compatibility with disinfectants	Aromatic and ketone solvents	Other solvents	Oils and greases	Recommended temperature of use	Guarantee of storage away from light, closed original carton					
PVC p Vinyl polychloride / flexible plasticized	PVC [1] 0,2 TA - Grain n°4	Bellows - Caps - Others [*] - Lining	++	1,3 - 11 N/mm	100 - 400 %	++	++	+++	+++	+	++	++	15 °C - 30 °C	24 months					
	PVC [1] 0,3 TA - Grain n°4	Half-Suits																	
	PVC [1] 0,5 TA - Grain n°4	Bellows - Caps - Others [*]																	
	PVC [1] 0,15 - Pink - M1	Other parts on specific requests	Not concer- ned																
	PVC [1] 0,2 - Pink [2] - M1	Other parts on specific requests																	
	PVC [1] 0,3 - Whitish satin, M1	Other parts on specific requests																	
	PVC [1] 0,15 - White	Other parts on specific requests																	
	PVC [1] 0,3 - Red - Grain n°4	Other parts on specific requests																	
PVC [1] 0,5 - White	Bellows - Caps - Others [*]																		
PVC [1] 0,75 - White	Bellows - Caps - Half-Suits Skirt - Others [*]																		
Cristal PVC p Crystal polychloride vinyl p / plastified	PVC [1] Soft crystal 0,15	Other parts on specific requests	++	4 - 20 N/ mm	> 300 %	++	++	+++	+++	+	++	++	15 °C - 30 °C	24 months					
	PVC [1] Soft crystal 0,3	Bellows - Caps - Insulators - Others [*]																	
	PVC [1] Soft crystal 0,4	Bellows - Caps - Insulators - Others [*]																	
	PVC [1] Soft crystal 0,48	Bellows - Caps - Front of Insulators - Others [*]																	
	PVC [1] Crystal pressed 1		+++																
Polyurethane	PUR [3] 0,2 - Translucent "N G" [4]	Other parts on specific requests	++	7,5 -19 N/mm	680 % to 800 %	+	+	+	+	+	++	++	-30 °C - 90 °C	48 months					
	PUR [3] 0,3 - Translucent "N G" [4]																		
	PUR [3] 0,2 - Translucent "G" [5]		+++																
	PUR [3] 0,3 - Antistatic Translucent "G" [5]																		
Lightweight coated fabric	Coated Fabric: Pes/PVC [6] 320g/m² - White	Half-Suits - Sleeves	Not concer- ned	1,5 - 9 N/mm	55 % - 200 %	++	++	+++	+++	+	++	++	15 °C - 30 °C	24 months					
	Coated Fabric: Pes/PVC [6] 320g/m² - Blue																		
	Coated Fabric: Pes/PVC [6] 320g/m² - Yellow																		
	Coated Fabric: Pes/PVC [6] 320g/m² - Red																		
Heavy coated fabric	Coated Fabric: Pes/PVC - 590g/m² - Blue	Half-Suits - Sleeves	Not concer- ned	1,5 - 9 N/mm	55 % - 200 %	++	++	+++	+++	+	++	++	15 °C - 30 °C	24 months					
	Coated Fabric: Pes/PVC - Laqué - 590g/m² - Yellow																		
	Coated Fabric: Pes/PVC - Laqué - 590g/m² - White																		
Other Polyolefins	EBA / EVA [5] - Translucent	Cover of Half-Suits - Others [*]	+	2,5 - 6,5 N/mm	400 % - 800 %			+++	+++	+++	+++	++	15 °C - 30 °C	24 months					
	PE bd [7] Polyethylene low density	Packaging bags and other parts on specific requests																	
	Rubber seal and rope "Nitrile"	Half-Suits - Sleeves - Bellows - Caps																	

[*] Other technical parts on request [1] Polyvinyl chloride [2] Self-extinguishing [3] Polyurethane [4] Non-slippery [5] Slippery [6] Polyester / Polyvinyl chloride / Ethylene Vinyl Acetate or Vinyl acetate [7] Low density polyethylene

Family	Products standards and specific	Symbol	Mechanical data										Type of sterilization				
			Resistance rupture (Mpa)**	Elongation rupture (%)**	Flexibility / dexterity	Perforation	Tear	Abrasion	Gas impermeability	Self extinguishing	Antistatic	Temperature range (°C)	Autoclave: steam sterilization 121 ° C Maximum number of cycles: 30 minutes	Autoclave: steam sterilization 134 ° C Maximum number of cycles: 18 minutes	H ₂ O ₂ 35%	H ₂ O ₂ 50%	Peracetic acid 3%
Rubber latex high temperature	General purpose	H	> 20	> 500	+++	++	+++	+++	+			-40+80	1	0	++	+	+
Neoprene	Versatile, Compromised Techno-economic, Self-extinguishing	C, CNS	> 15	> 500	+++	++	+++	++	++	• optional		-20+100	15	15	++	++	++

[*] ISO 37 type 2 [**] Hydrogen peroxide [+] Unsatisfactory quality [++] Limited quality [+++] Satisfactory quality

3A INSTRUMENT CO., LTD.

200/61 Moo.5 Tambon Bangruknai,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

Tel. +66 2046 0691-2, +66 2046 2608
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Classification of materials - The nuclear range

			Physical data				Chemical data							Recommendation and guarantee	
			Saturated steam solution <20% at a temperature <50 ° C												
Family	Materials <i>the thicknesses are given in mm</i>	Products standards and specific	Transparency Optical Quality	Mechanical performance	Flexibility Lengthening	Acides de fortes normalités dilués	Acids with strong diluted normalities	Compatibility with cleaning agents	Compatibility with disinfectants	Aromatic and ketone solvents	Other solvents	Oils and greases	Recommended temperature of use	Guarantee of storage away from light, closed original carton	
PVC p Vinyl polychloride / flexible plasticized	PVC [1] 0,2 TA - Grain n°4	Bags - Single sleeves - Sleeves to glove - Filter bags - Sheaths - Bellows - Bag shutters - Others [*]	++	1,3 - 11 N/mm	100 - 400 %	++	++	+++	+++	+	++	++	15 °C - 30 °C	24 months	
	PVC [1] 0,3 TA - Grain n°4														
	PVC [1] 0,5 TA - Grain n°4														
	PVC [1] 0,15 - Pink - M1	Bags - Sheath - Filter Bags - Layering	Not concerned												
	PVC [1] 0,2 - Pink [2] - M1	Garbage bag - Filter bags - Cable ducts - Remote manipulator outlet sheath													
	PVC [1] 0,3 - Whitish satin, M1	Garbage bag - Filter bags - Cable ducts - Remote manipulator outlet sheath													
	PVC [1] 0,15 - White	Other parts on specific requests													
	PVC [1] 0,3 - Red - Grain n°4	Critical waste drum bags													
	PVC [1] 0,5 - White	Other parts on specific requests													
Cristal PVC p Crystal polychloride vinyl p/ plastified	PVC [1] 0,75 - White	Other parts on specific requests	++	4 - 20 N/ mm	> 300 %	++	++	+++	+++	+	++	++	15 °C - 30 °C	24 months	
	PVC [1] Soft crystal 0,15	Trading - Cases - Small Accessories													
	PVC [1] Soft crystal 0,3	"B to G" bags - Glove bags - Sleeves - Filter bags													
	PVC [1] Soft crystal 0,4	"B to G" bags - Glove bags - Others [*]													
	PVC [1] Soft crystal 0,48	"B to G" bags - Glove bags - Others [*]													
Polyurethane	PVC [1] Crystal pressed 1		+++												
	PUR [3] 0,2 - Translucent "N G" [4]	Bags - Single sleeves - Sleeves to glove - Filter bags - Sheaths - Bellows - Bag shutters - Others [*]	++	7,5 -19 N/mm	680 % to 800 %	+	+	+	+	+	++	++	-30 °C - 90 °C	48 months	
	PUR [3] 0,3 - Translucent "N G" [4]		++												
	PUR [3] 0,2 - Translucent "G" [5]		+++												
PUR [3] 0,3 - Antistatic Translucent "G" [5]	+++														
Lightweight coated fabric	Coated Fabric: Pes/PVC [6] 320g/m² - Blanc	Other parts on specific requests	Not concerned	1,5 - 9 N/mm	55 % - 200 %	++	++	+++	+++	+	++	++	15 °C - 30 °C	24 months	
	Coated Fabric: Pes/PVC [6] 320g/m² - Bleu														
	Coated Fabric: Pes/PVC [6] 320g/m² - Yellow														
	Coated Fabric: Pes/PVC [6] 320g/m² - Red														
Heavy coated fabric	Coated Fabric: Pes/PVC - 590g/m² - Blue	Other parts on specific requests	Not concerned	1,5 - 9 N/mm	55 % - 200 %	++	xx	+++	+++	+	++	++	15 °C - 30 °C	24 months	
	Coated Fabric: Pes/PVC - Lacquered - 590g/m² - Yellow														
	Coated Fabric: Pes/PVC - Lacquered - 590g/m² - White														
Other Polyolefins	EBA / EVA [5] - Translucent	Other parts on specific requests	+	2,5 - 6,5 N/mm	400 % - 800 %								15 °C - 30 °C	24 months	
	PE bd [7] Polyethylene low density	Bags of packaging and others [*]													
	Rubber seal and rope "Nitrile"	Bags - Single sleeves - Sleeves to glove - Filter bags - Sheaths - Bellows - Bag shutters - Others [*]													

[*] Other technical parts on request [1] Polyvinyl chloride [2] Self-extinguishing [3] Polyurethane [4] Non-slippery [5] Slippery [6] Polyester / Polyvinyl chloride / Ethylene Vinyl Acetate or Vinyl acetate [7] Low density polyethylene

Family	Products standards and specific	Mechanical data											Chemical data								
		Symbol	Densité	Resistance rupture (Mpa)*	Elongation rupture (%)**	Flexibility / dexterity	Perforation	Tear	Abrasion	Gas impermeability	Selfextinguishing	Antistatic	Temperature range (°C)	Ultra violet, ozone	Alcohols	Acids / bases	Strong oxidizers	Ketonic solvents	Chlorinated solvents	Solvents / Aromatic oils	Aliphatic solvents / oils
Rubber latex high temperature	General purpose	H	0,94	> 20	> 500	+++	++	+++	+++	+			-40+80	+	+++	+++	+	++	+	+	+
Neoprene	Versatile, Compromised Techno-economic, Self-extinguishing	C, CNS	1,35	> 15	> 500	+++	++	+++	++	++	●	en option	-20+100	+++	+++	+++	++	++	+	+	+++

[*] ISO 37 type 2 [•] Unsatisfactory quality [•+] Limited quality [+++] Satisfactory quality

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Half-Suits: available options

Materials

HEAVY COATED FABRIC

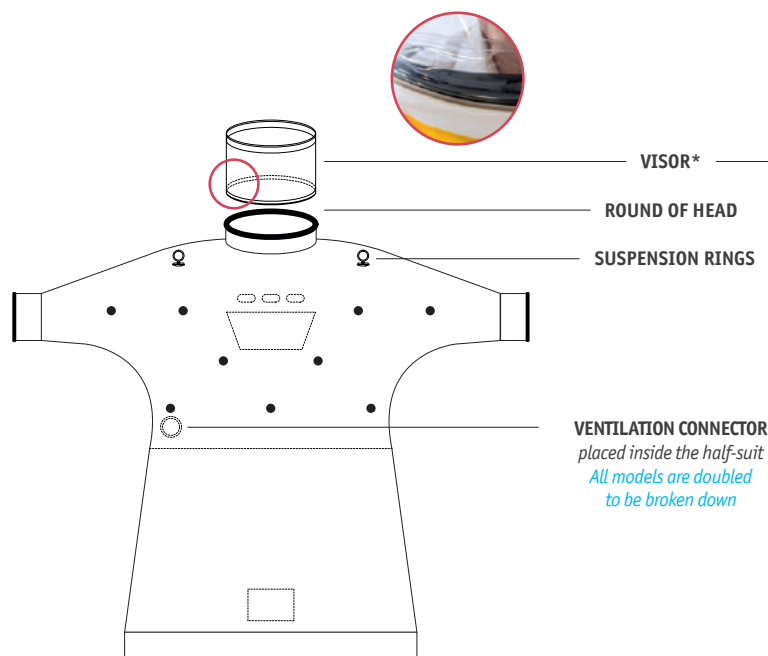
LIGHTWEIGHT COATED FABRIC

CALANDRE PVC

PVC CRYSTAL

INTERCHANGEABLE HELMET

The **visor *** in **pressed PVC / crystal** ensures a good optical quality with a 360° field of view and prolonged use of the half-suit.

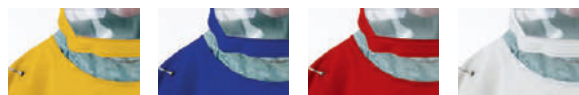
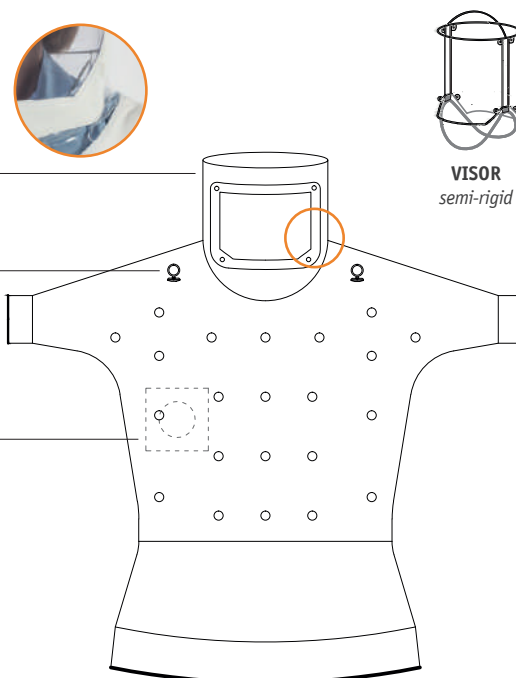


OPTIONS

- Two sizes (large and small), possibility of tailor-made
- Simple fabric or PVC lined fabric
- Different colors available

WELDED HELMET

Two visors * front / back (for isolator production) in **pressed PVC / crystal** ensures a good optical quality with a 180° field of view.



OPTIONS

- Two sizes (large and small), possibility of tailor-made
- Simple fabric or PVC lined fabric
- Different colors available

Accessories for half-suits: available options

PIERCANTECH offers **multiple accessories** for the half-suit. The accessories include the fan connector, the head round, the connection ring and the glove.



HEAD ROUND for interchangeable helmet



CONNECTOR of FAN



ROUND OF WRIST of JOINTS



GLOVES

OUR **STRONG POINTS**

- + Great flexibility in uses and manipulations
- + Effective barrier against polluting agents and contaminants

- + Protection of operators, safety of preparations and installations
- + Compatible with cleaning agents and surface decontamination



Unique performance

The flexible isolators of PIERCABTECH guarantee tight spaces of intervention with a controlled atmosphere. They can be connected to other containment devices and are interchangeable on new and existing installations.

Areas of application



UNIVERSITY – RESEARCH



NUCLEAR



FOOD



HEALTH – PHARMACEUTICAL



HEALTH – HOSPITAL

Approvals meeting
the specifications of the
health-pharmaceutical sector



SANOFI PASTEUR



THEY TRUSTED US...
They use PiercanTech insulators



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NUCLEAR PHARMACEUTICAL AGRIFOOD HOSPITAL RESEARCH

Isolators

Plastunion's flexible isolators fit comfortably in tight spaces within a controlled atmosphere. They can be connected to other containment devices and are interchangeable on new and existing installations.



They are available with or without structures and accessories.

- 1 • Flexible isolator:** it is a working enclosure with flexible and transparent walls, which offers a panoramic view of the working area. Ideal when protection against materials, sensitizers or chemical compounds is required, it provides respiratory and skin protection.
- 2 • Intervention glove box:** it is a multifunctional flexible wall insulator made of high quality engineered plastic films. Assembled in a few minutes, it can be used anywhere. Transportable and lightweight, it can meet many needs in the laboratory or on site, in the nuclear or medical fields.

Materials

CRYSTAL PVC

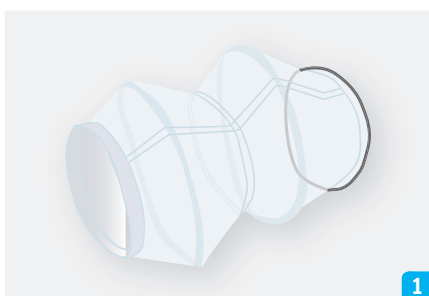
Our strengths

- + quick and easy implementation
- + flexibility in use and handling, compatible and adaptable to any installation
- + effective barrier against pollutants and contaminants
- + compatible with cleaning agents and surface decontamination

NUCLEAR PHARMACEUTICAL

Capes / Bellows

Capes and bellows are soft accessories used primarily on isolators to plug entrances or serve as a link between two containment units.



These soft accessories are made of quality engineered plastic sheets, calendered and crystal. Different types of plastic sheets can be used: crystal PVC (ep.0.3 to 0.48mm), white PVC (ep.0.5 to 0.75mm) and azure translucent PVC (ep.0.3 to 0.5mm).

- 1 • Connecting bellows:** variable number of teeth (on request).
- 2 • Capes.** There are four types of capes: cape without flange, cape without flange with seal, cape with flange, cape with flange and gasket. The cape with flange can be equipped with fixing eyelets. All capes can be equipped with soft or rigid accessories.

Materials

PVC CRYSTAL PVC

Our strengths

- + versatile accessories:
 - decontamination SAS entry / exit
 - round glove shutter
- + compatible with surface cleaning and decontamination agents

Isolators

Secure your containment
with the **flexibility of handling**



Materials

PVC PVC CRYSTAL PUR EBA/EVA

NUCLEAR SCIENTIFIC POLICE

INTERVENTION GLOVE BOX

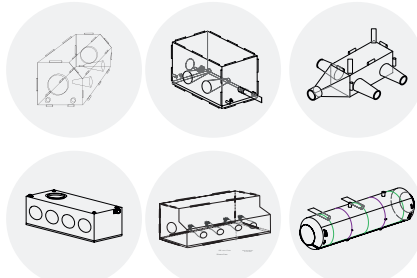
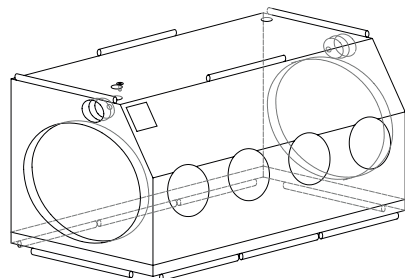
It is a **flexible**, multifunctional **wall** isolator made of high quality engineered plastic films. Assembled **in minutes**, **mountable and removable** it can be used **anywhere**. **Transportable** and **lightweight**, it can meet many laboratory or field requirements in the field mainly in the «healthpharmaceutical» and «hospital-health» sectors.

Available options

HEALTH – PHARMACEUTICAL

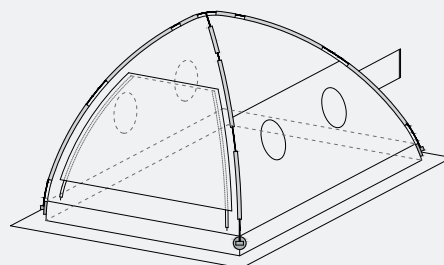
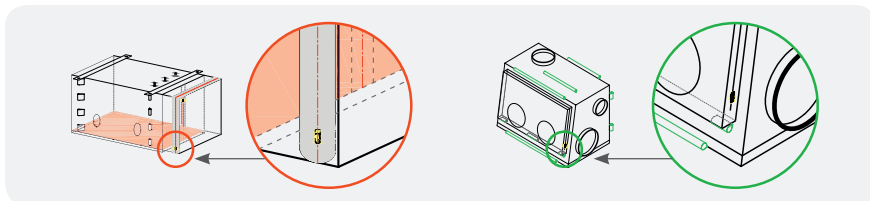
They are available with or without structures and accessories

It is a **working enclosure** with flexible, transparent walls, which offers a **panoramic view** of the environment. Ideal when protecting against materials, sensitizers or chemical compounds is required it provides respiratory and skin protection. It corresponds to many needs in the field of «health-pharmaceutical» mainly but also in the «hospital-health» sectors and «University-research.»



OPTIONS

- Wide possibility of tailor-made
- Technical plastic sheets of quality, calendered and crystal to guarantee a good optical quality
- Waterproof closure possible



OPTIONS

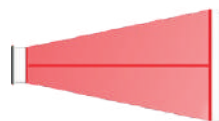
- Wide possibility of tailor-made
- Technical plastic sheets of quality, calendered and crystal to guarantee a good optical quality

Accessories for flexible isolator

The insulator accessories are made of colored or transparent technical plastic sheets, with or without support. They have good mechanical properties and are impervious to liquids and low concentration chemicals..



LIAISON BELLOW



HANDLING SLEEVE



"INTERNAL" CAP
with gasket



"EXTERNAL" CAP
without gasket

OUR STRONG POINTS

- + Quick and easy implementation
- + Great flexibility in use and handling, compatible and adaptable to any installation
- + Effective barrier against pollutants and contaminants
- + Compatible with cleaning agents and surface decontamination

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NUCLEAR PHARMACEUTICAL CONSTRUCTION

Intervention isolator / Bags and glove bags

This equipment is used in specific situations, such as, difficult maintenance on installations, sanitation sites and decommissioning (nuclear, maritime and fossil energy sectors).



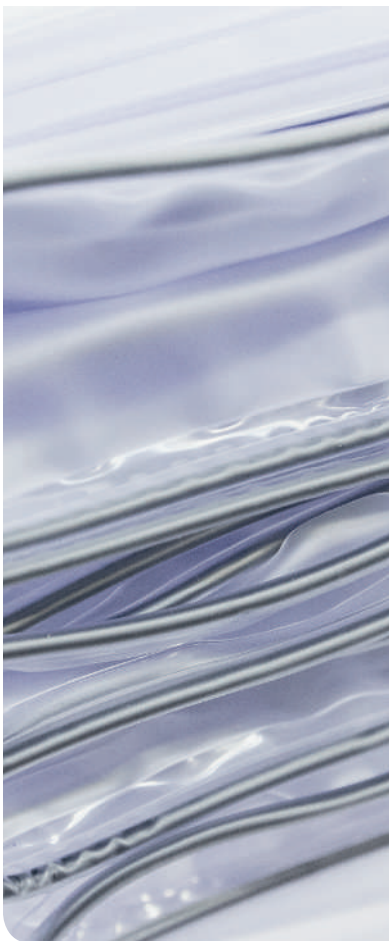
This equipment is designed through concepts and scenarios provided by our customers. The materials used are often high-performance noble materials (fluorinated polyvinyl, multilayer, polyurethane). They are compatible with technical parts and may be used as integral parts of the products (bellows, partitions penetrations, gloves, mittens, flanges, airlock, filters).

Materials

PVC CRYSTAL PVC PUR

Our strengths

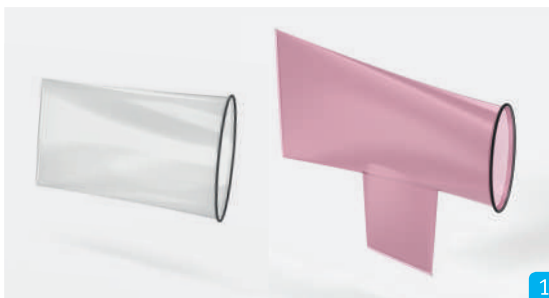
- + mastered and validated confection
- + compatible and adaptable to many solutions of depollution, asbestos removal and deconstruction
- + protection of operators, safety of preparations



NUCLEAR PHARMACEUTICAL

Bags / Tunnel sleeves / Sheath

Accessories that are flexible or weldable plastics. They can be used for the storage and transfer of materials and substances from a clean environment to a difficult one, or vice versa.



- 1 • **Bags.** Plastunion offers a wide range of bags:
 - bags for analysis (sampling of gas and feces).
 - garbage bags.
 - transfer bags used for storing and transferring objects from one environment to another.
 - filter bags used to change and store contaminated filters.
- 2 • **Tunnel sleeves** may have one or two O-rings.
- 3 • **Sheath** serve as double protection. They are wound on a cardboard roll (70 mm inside diameter).

Materials

ALL KINDS OF PVC PUR

Our strengths

- + flexibility in use and manipulations, adaptable to all equipment
- + effective barrier against pollutants and contaminants
- + operator protection
- + environmental protection

From design to the final piece

Based on your requirements, whether it is custom parts or parts from the catalog, Piercan offers you the best solution via a controlled process - design, manufacturing, inspection. Quality has always been the focus of all our attention.

DESIGN



• **Design office:** Analyzes your requests and assists you in finding the most suitable solution. The design office also plays a role in developing new products in three stages:

- Choice of material: nature, color, transparency and physicochemical properties.
- Product development: draw the shape according to the shaping technique.

• **Prototyping:** form taking and dimensioning, creation of drawings, cutting of templates, development of tools, realization.

• **Economic optimization:** the study of solutions adapted to your needs integrates quality factors, delays and production costs, thus facilitating the economic optimization of your project.

MANUFACTURING



• The cut

For cutting, we use circular blades and vibrating blade scissors.

Semi-automatic end cutting:

- Cutting in mattress format
- Cut to size
- Unit cut to the shape



• The welding

- Manufacture by high frequency welding (chemical bonding of the materials by molecular stirring created by a high frequency field).
- Technology that guarantees perfect sealing of the assemblies.
- Powerful, extensive welder pool suitable for containment items.
- Wide range of electrodes.

• Properties

- Compatible with cleaning, decontamination and disinfection agents.
- Glove box and insulator handling welds: strong, flexible, smooth and resilient.



AVAILABLE MATERIALS



Crystal or translucent soft sheets

PVC [VINYL POLYCHLORIDE]

M1⁽¹⁾ pink quality / M2⁽¹⁾ crystal quality / Antistatic crystal quality / Enhanced quality

PUR [POLYURETHANE]

Non-slip quality / Sliding quality / Antistatic quality

PeEBA [POLYETHYLENE ETHYLENE BUTYL ACETATE]

Single-sided coated fabrics

LIGHT FABRIC [320g/m²] - M2⁽¹⁾ QUALITY

Colors: blue / white / red / yellow

HEAVY FABRIC [580g/m²] - M2⁽¹⁾ QUALITY

Colors: blue / white / yellow

THREE-STAGE INSPECTION

We guarantee the quality of our products by supervising every stage of the manufacturing process:



1 • Prior inspection of the raw materials and tools along with a check of the custom dimensions using our production management software.

2 • Inspection of the physicochemical parameters by the quality control laboratory and the production parameters by the operators during production.

3 • Inspection of the finished product



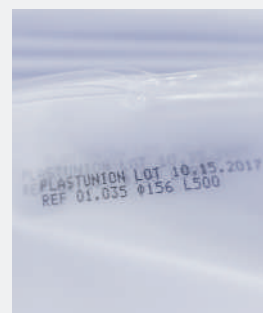
Sealing control

Leak detection (70 to 100 mm CE pressure, 700 to 1000 Pascal).



Weld control

Visual check following photo library.



Marking

Identification of the inspected part for complete traceability.

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(1) M1 - M2 : CLASSIFICATION REACTION TO FIRE ACCORDING TO NF P92-507



Technical parts

Piercan, the **solution** for your **elastomer parts** since 1948

Parts that **meet** your requirements

Whether you are looking for a particular product or a solution requiring the expertise of an elastomer specialist, Piercan will offer you the most appropriate solution. For specific requests, our engineers help you in the development of your customised product. Furthermore, a vast catalogue featuring parts and "standard" moulds is also available for your reference.

OUR TRUSTED CLIENTS



CUSTOMISED PARTS BY PINERCAN

- Analysis of your specifications by the design department
- Choice of the material (single or multilayer, natural rubber, neoprene, etc.)
- Choice of the technique (dipped elastomers, calendering, injection or extrusion)
- Tooling (moulds)

One production unit only manufactures technical parts (prototypes and series).

AN EXTENSIVE CATALOGUE OF PARTS

For your standard requests, the Piercan catalogue offers you a large choice of technical elastomer parts. The parts featuring in the catalogue are readily available and come at an attractive price.

Furthermore, Piercan offers you a large choice of moulds where you can choose the shape you require. All you have to do is choose the type of elastomer.

PIERCAN'S STRENGTHS

-  Consulting and support
-  Piercan design department
-  Wide choice of materials
-  Prototypes and large series



	200,000 HOISTING RINGS per year		100 UNIQUE PROTOTYPES per year	
50 MODELS OF BELLOWES		4 TYPES OF DIPPED LATEX available		850 EXISTING MOULDS

CONSULTING

Whether it is customised parts or parts from the catalogue, Piercan guides you in finalising your solution and its implementation in your production units.

Piercan can also assist you during audits or in the setting up of production lines integrating elastomeric transformation, or can advise you about the physicochemical properties of the materials.

3A INSTRUMENT CO., LTD.

200/61 Moo.5 Tambon Bangruknoi,
Amphur Muang Nonthaburi, Nonthaburi 11000, Thailand.

Tel. +66 2046 0691-2, +66 2046 2608
Fax. +66 2045 2608,

Email: Contact@3ainstrument.com, Sales@3ainstrument.com,
WWW.3AINSTRUMENT.COM

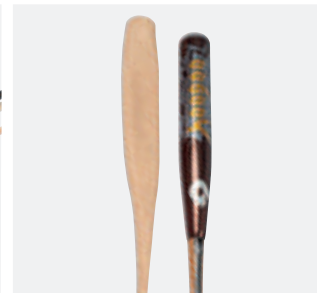




CUSTOMISED

Compression bladders

Piercan specialises in manufacturing high temperature natural rubber latex bladders used for moulding by compressing composite material items.



We manufacture bladders in complex shapes, and small or large sizes (e.g. a spoiler auto of 1.5 x 0.5 x 0.2 m), used in the sports industry (competitive and non-competitive), automobile industry (Formula 1 and mainstream), cycling (competitive and non-competitive), aerospace industry, marine industry and in any other field whenever a hollow composite part is designed.

Precision is a priority: for high precision products, Piercan uses state-of-the-art technology, such as manufacturing of 3D printed moulds.

Price is a priority: for mass production, Piercan optimises every stage to offer you competitive rates.

Materials



Our strengths

- + innovative complex shapes
- + reduced manufacturing cost
- + reusable bladders
- + reduction in the finishing costs
- + perfect thickness control of the composite layer



CUSTOMISED CATALOGUE

Compression (isostatic) of powders

To compress powders, Piercan manufactures dipped natural rubber parts, whose mechanical properties (resistance to high pressures) are perfectly controlled.



Isostatic compression of powders is used for:

- Metallic or ceramic powders mixture for sintering
- Tungsten carbide compression (pressure 2000 bars)
- Creation of high density counterweights (F1, aircrafts)

The bladders offered include:

- Large-sized (up to 2 m long)
- Very thick (up to 3 mm)

Materials



Our strengths

- + controlling the mechanical properties of natural rubber and dipped neoprene parts
- + multiple shapes, multiple moulds

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WWW.3AINSTRUMENT.COM





CUSTOMISED CATALOGUE

Animal health /Veterinary

Piercan has developed a know-how renowned in the domain of animal health and reproduction.



We manufacture a number of customised objects or items mentioned in the catalogue meant for animal reproduction. These items are meant either for semen collection (condoms for bulls, ponies, etc.), or to stimulate the male breeding animal (artificial rabbit vagina, etc.), via systems such as specific textures or integrated liquid containers.

These parts are made with dipped elastomers or by cutting, pasting, etc.

Materials



Our strengths

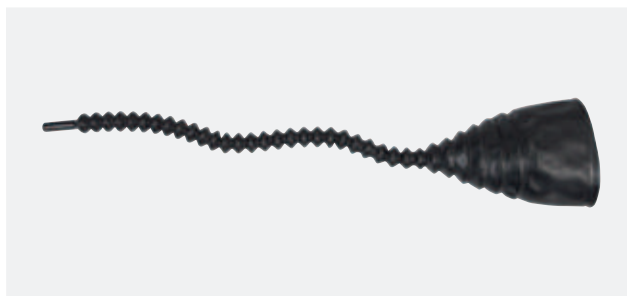
- + a product catalogue whose effectiveness has been amply demonstrated



CUSTOMISED CATALOGUE

Bellows (telemanipulators)

World leader in glovebox gloves, Piercan is in fact a key player in the field of telemanipulator bellows. In this case, it is about protecting a mechanical arm in a glovebox.



The bellows have the same application as the glovebox gloves: pharmaceutical laboratories, nuclear, semi-conductors, research, hospitals, etc.

The bellows can be manufactured by dipping, by injection or by moulding.

Materials



Our strengths

- + wide choice of moulds and shapes
- + appropriate regulation of the physicochemical properties of single layer or multilayer elastomers.



CUSTOMISED CATALOGUE

Tubes

A multitude of thicknesses, diameters, and materials. Our extensive range of tubes allows you to choose the tube best suited to your use. We can also manufacture tubes based on measurements taken by you.



Catalogue of tubes manufactured by dipping:

- Open or closed, round, flat, conical tubes, etc.
- 5000 moulds in stock
- Diameters ranging from 2 mm to over 650 mm
- Thicknesses from 2/10 to 30/10 mm
- The crossing of these parameters results in a wide range
- Varied shapes: straight tubes, U shaped, S shaped, curved, etc.

Other possibilities:

If you require tailor-made tubes, other dimensions, other materials, other techniques (extrusion, etc.) we will support throughout the entire manufacturing process.

Materials



Our strengths

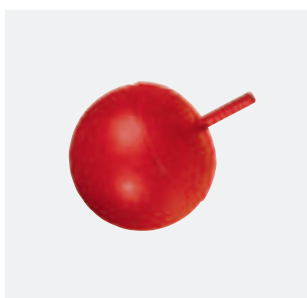
- + wide choice of materials
- + large number of existing moulds
- + tubes for holding samples in measuring devices/ open tubes (sprues)
- + experience, key manufacturer



CUSTOMISED CATALOGUE

Miscellaneous

The examples cited below shall give you a better idea about our ability to adapt to the requirements of elastomer technical parts of all kinds and for all types of activities.



All elastomers, all shapes, all techniques.

Examples:

- Fighter pilot's face masks
- Safety hoods
- Embolectomy bulbs
- Membranes for Carmat artificial hearts
- Hoisting rings for parachutes (220,000/year)
- Elastomer plates
- Protective caps for switch
- etc.

Materials



Our strengths

- + know-how
- + ability to adapt
- + as someone who offers solutions, we always have an answer for your questions
- + manufacturing PVC parts via our subsidiary Plastunion

INSTRUMENTS And Equipment Supply for Laboratory.



CHEMICAL PRODUCTS

FURNITURE FOR LABORATORY



อุปกรณ์พื้นฐานห้องปฏิบัติการ



Amber Glass Bottles

Amber Bottles prevent from UV light to penetrate inside the bottle. Inscription are in white enamel which is specially designed for glass.



Wide-Mouth Bottles

HDPE Large Wide-Mouth Bottles are specifically designed for application where large volumes require autoclaving-large cap makes it easy to access contents



Vials & Caps & Septas

Manufactured from high quality polypropylene to exact manufacturing tolerances and lined in a controlled manufacturing environment, tested by head space GC.



Nalgene Lab Quality Narrow-Mouth Bpttles

Nalgene™ Lab Quality Bottles are specifically designed for demanding lap use. High-density polyethylene, polypropylene screw closure



Amber Glass wide-Mouth Bottle

Amber Bottles prevent from UV light to penetrate inside the bottle. Inscription are in white enamel which is specially designed for glass.



Nalgene Lab Quality Narrow-Mouth Bpttles

Nalgene™ Lab Quality Bottles are specifically designed for demanding lab use. polypropylene screw closure



Bottles "borosilicate glass"

Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals. Autoclavable at 121° C and 1.1 bar for 30 minutes.



Amber WideMouth Bottles

Nalgene™ Amber Wide-Mouth Bottles reduce UV light transmissions to protect light-sensitive contents.



Clear BOTTLES "borosilicate glass"

Clear bottles prevent from UV lights to penetrate inside the bottle. 1, 2, 4, 10 and 20 lite



Nalgene Large Wide-Mouth Bottles

Large Wide-Mouth Bottles are specifically designed for applications where large volumes require autoclaving-large cap makes it easy to access contents



Amber Glass Bottle

Clear bottles prevent from UV lights to penetrate inside the bottle. 1, 2, 4, 10 and 20 lite



Wide-Mouth Bottles

Nalgene™ Lab Quality Bottles are specifically designed for demanding lab use. High-density polyethylene



BOTTLES "borosilicate glass"

Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals. Autoclavable at 121 C and 1.1 bar for 30 minutes.



Amber Wide-Mouth Bottles PP

Nalgene™ Lab Quality Bottles are specifically designed for demanding lab use. High-density polyethylene



Bottles "borosilicate glass"

Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals. Autoclavable at 121°C and 1.1 bar for 30 minutes.



Jars glass

Manufactured from neutral glass with thick wall and crush-resistant corners. Volume 40, 105, 370, 720, 1000 ml.



Bottles Dropping

Dispensing tip provides similar size drops at all time. Volume 10, 15, 20 and 30 ml.



Aspirator Bottles

Manufactured from polyethylene with UV stabilized heavy walls with stable carrying handles. Amber bottles prevent from to penetrate inside the bottle. 1, 2, 4, 10 and 20 lite



Clear BOTTLES "borosilicate glass"

Clear bottles penetrate inside the bottle. 1, 2, 4, 10 and 20 lite. Brand DURAN, PIREX, BOROSIL



Bottle Dropping

Dispensing tip provides similar size drops all times. Alternative 2 product: Clear bottles and Amber Bottles. Volume 50 ml and 100 ml



BOD Bottle

BOD Bottle size 60 ml and 300 ml



Filter paper

These cellulose filters are used in qualitative analytical techniques to determine and identify materials.



Bottle square wide neck polyethylene

Nalgene™ Lab Quality Bottles are specifically designed for demanding lab use. High-density polyethylene inside the bottle, 50, 100, 250, 500 ml, 1 and 2 lite



Jerrycans polyethylene

Nalgene™ Lab Quality Bottles. Manufactured from UV Stabilised, thick polyethylene with sturdy carrying handles inside the bottle. 2, 3, 5 and 10 lite



ASPIRATOR BOTTLES with stopcock

Manufactured from polyethylene with UV stabilized heavy walls with stable carrying handles. Volume 5, 10 and 20 L



Jerrycans polyethylene BOTTLES with stopcock

Manufactured from polyethylene with UV stabilized heavy walls with stable carrying handles. Volume 20, 30 and 60 L



WASH BOTTLES narrow neck

Manufactured from highly translucent and semi-rigid polyethylene with walls and crush-resistant corners. Bottle color red, yellow, green, blue Volume 500 ml.



WASH BOTTLES

Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.



WASH BOTTLES

Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.



WASH BOTTLES

Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.



Clear BOTTLES "borosilicate glass "Wide-Mouth

Clear bottles penetrate inside the bottle.
Size 250 ml, 500 ml, 1, 2, 4, 10 and 20 liter



Beaker Plastic

NALGENE with easy-to-read scale and large labeling field for easy marking in fired-on, highly durable, white ceramic.



Bottle Dropping

Dispensing tip provides similar size drops all times. Amber Bottles Volume 30 ml and 60 ml



WASH BOTTLE

Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.



Dropper

Dispensing tip provides similar size drops all times. (500 pcs/pack)



WASH BOTTLE

Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.



SPATULAS

Most commonly used spatula for general laboratory applications. Manufactured from high quality (AISI 304) polished stainless steel.



WASH BOTTLE

Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.



SPATULAS

Most commonly used spatula for general laboratory applications.



VAPORATING DISHES / Crucibles

Manufactured from porcelain as round bottom according to DIN 12907. Externally and internally manufactured from glazed porcelain except the spout.



PATULAS

Most commonly used spatula for general laboratory applications. Manufactured from high quality (AISI 304) polished stainless steel.



VAPORATING DISHES / Crucibles

Manufactured from porcelain as round bottom according to DIN 12907. Externally and internally manufactured from glazed porcelain except the spout.



FUNNELS / Separating Funnels

Manufactured from borosilicate glass 3.3. Graduations are in white enamel. Supplied with P.P stoppers.



VAPORATING DISHES / Crucibles

Manufactured from porcelain as round bottom according to DIN 12907. Externally and internally manufactured from glazed porcelain except the spout.



Condensers

Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.



VAPORATING DISHES / Crucibles

Manufactured from porcelain as round bottom according to DIN 12907. Externally and internally manufactured from glazed porcelain except the spout.



Petri Dishes

The dish and the lid are free of bubbles and the edges are fire polished. All petri dishes are manufactured under germ-free, sterile conditions of class 10.000 sterile area with extreme sterility control



VAPORATING DISHES / Crucibles

Manufactured from porcelain as round bottom according to DIN 12907. Externally and internally manufactured from glazed porcelain except the spout.



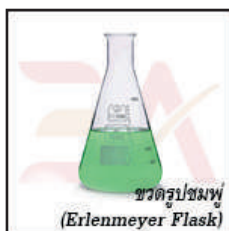
Beaker

DURAN, PYREX, KIMA, BOROSIL with easy-to-read scale and large label-ling field for easy marking in fired-on, highly durable, white ceramic.



Beaker Plastic

NALGENE with easy-to-read scale and large label-ling field for easy marking in fired-on, highly durable, white ceramic.



Erlenmeyer Flask

Reinforced rims to prevent breaking during washing and transportation. Inscriptions are in white enamel.



Beaker Plastic

NALGENE with easy-to-read scale and large label-ling field for easy marking in fired-on, highly durable, white ceramic.



Cylinders

Manufactured from borosilicate glass 3.3 with either glass hexagonal base with excellent stability or with polypropylene base which eliminates risk of breakage.



Cylinders Plastic

Manufactured from plastic with either hexagonal base with excellent stability or with polypropylene base which eliminates risk of breakage.



Volumetric Flasks

Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals. "glass" - "class A" - "clear" All volumetric flasks are supplied with P.P stoppers.



Volumetric Flasks

Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals. "glass" - "class A" - "clear" All volumetric flasks are supplied with P.P stoppers.



Amber Volumetric Flasks

Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals. "glass" - "class A" - "clear" All volumetric flasks are supplied with P.P stoppers.



Stopper Flasks Plastic / จุกปิดขวด flask

Manufactured from plastic. "All volumetric flasks are supplied with P.P stoppers and Glass Stopper.



Pipettes Glass Graduated

Manufactured from neutral tubing according to ISO 835 and DIN 12699 standard. Calibrated according to DIN/ISO Class "AS" Standard.



Bunsen Burner / ตะเกียงเบนเซน

Manufactured from steel and chromed brass. Preferably used if higher heating capacity is required.



Pipettes Glass serological polystyrene

Manufactured from virgin polystyrene with excellent optical transparency.



Foil Roll Aluminium / อลูมิเนียมฟอยล์

Manufactured from polished, pure aluminium sheet for wrapping and sealing of various labware. roll width 300 mm x roll length 45 m.



Pipettes Glass Volumetric / ปีเปต ไปเปต

Manufactured from neutral tubing according to ISO 648 and DIN 12687 standard. Calibrated according to DIN/ISO Class "AS" Standard

ปีเปตแบบปริมาตร
(Volumetric Pipette)



Parafilm /Sealing Film

Most common sealing film used in the laboratories. Conforms to FDA provisions when used below 55°C and GMP.



Flask Clear glass round bottom

Manufactured from borosilicate glass 3.3 according to ISO1773 standard. Thick wall heavy base and reinforced rim prevent breakage during washing and transportation.

ขวดก้นกลม
(Round Bottom Flask)



Cling Film

Manufactured from PVC based resin with extremely good stretching and adhesion characteristics. roll width 300 mm x roll length 90 m.

ฟิล์มเหนียวอาหาร
(Cling Film)



Flasks "flat & round bottom" glass

Reinforced rims are used to prevent breakage during washing and transportation.

ขวดก้นเรียบ
(Flat Bottom Flask)



Bags Autoclavable Imprinted

Commonly used for safe disposal of contaminated laboratory waste such as used petri dishes, test tubes, sample vials, cultureware and other biohazardous product.

ถุงใส่ขยะติดเชื้อ
(Autoclave Bag)



Burets straight class A / บิวเรต

Manufactured from pre-vacuum calibrated borosilicate 3.3 glass tubes. Supplied with grease free and self lubricating PTFE stopcocks.

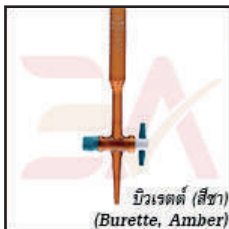
บิวเรตต์
(Burette)



Bags "with wire closure" Sterile

Unique metal closure system guarantees leak-proof closure preventing odors and any leakage to exterior environment.

ถุงซีป
(Zip Lock Bag)



Burets Automatic class A / บิวเรต อัตโนมัติ

Manufactured from pre-vacuum calibrated borosilicate glass. Permanent quality control through all steps eliminates possible deviations from nominal values.

บิวเรตต์ (สีชา)
(Burette, Amber)



BAG SEALERS

Bag sealer can easily seal both polypropylene and polyethylene bags and sheets and foils.

เครื่องซีลปิดปากถุง
(Bag Sealers)



STANDS - rectangular, triangle, horse shoe.

Highly stable laboratory stand due to the triangular base which is stove enamel coated.

ขาตั้ง (Stand)



Burette Clamp

Steel burette clamps are made out of steel and can hold one burette at a time.

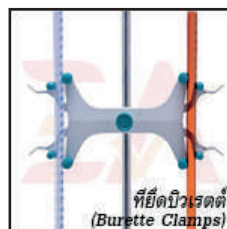
ที่ยึดบิวเรตต์ (พลาสติก)
(Burette Clamps, PP)



Burette Clamp

Steel burette clamps are made out of steel and can hold one burette at a time.

ที่ยึดบิวเรตต์
(Burette Clamps)



Burette Clamp

Steel burette clamps are made out of steel and can hold one burette at a time.

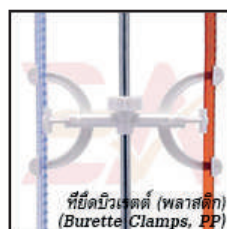
ที่ยึดบิวเรตต์
(Burette Clamps)



Burette Clamp

Steel burette clamps are made out of steel and can hold one burette at a time.

ที่ยึดบิวเรตต์ (พลาสติก)
(Burette Clamps, PP)



Burette Clamp

Steel burette clamps are made out of steel and can hold one burette at a time.

ที่ยึดบิวเรตต์ (พลาสติก)
(Burette Clamps, PP)



BURETTES "automatic"

All automatic burettes have an intermediate PTFE stopcock which enables fast and best accurate measurement.



Clear BURETTES "schilling"

The entire system consists of a burette tubing with automatic zeroing system together with a valve stopcock, a reservoir bottle and a bottle stand. Volume 10 ml, 25 ml and 50 ml.



BURETTES "automatic"

All automatic burettes have an intermediate PTFE stopcock which enables fast and best accurate measurement.



Amber BURETTES "schilling"

The entire system consists of a burette tubing with automatic zeroing system together with a valve stopcock, a reservoir bottle and a bottle stand. Volume 10 ml, 25 ml and 50 ml.



Clamps / Bossheads

Two separately adjustable clamps enables perfect control of holding pressure and precise positioning of the objects.



PIPETTE PUMP "electrical"

Force liquid out of pipettes by setting the unit to low or high speed blow-out mode, or flip to gravity mode for use with "to contain" pipettes and dispense the liquid without motor.



DISPENSER

Provides high precision with consistent delivery. Reliable measuring results with bubble-free dispensing.



PIPETTE PUMP "electrical"

Manufactured from UV resistant resin powered with a long lasting motor for quick but also sensitive aspiration and dispensing of liquids. Can be used with all pipettes from 0,1 ml to 100 ml volume.



DIGITAL BURETTES "digitrate"

Combines high precision with consistent delivery. Reliable measuring results with bubble-free dispensing. DISPENSER "repetitive"



DISPENSER "repetitive"

Repetitive dispenser is an ergonomic hand dispenser for quick and simple repetitive dispensing of liquids.



BURETTE "digital" "motor driven"

The most advanced digital burette featured with motor controlled piston movement. Conforms ISO 8655. Dispensing can be performed by a touch at the screen and stops immediately when the touch is removed.



DISPENSER "repetitive"

Repetitive dispenser is an ergonomic hand dispenser for quick and simple repetitive dispensing of liquids.



DIGITAL BURETTES "digitrate"

Brand Combines high precision with consistent delivery. Reliable measuring results with bubble-free dispensing.



MICROPIPETTES "adjustable volume"

ISOLAB -9 models cover volume range from 0,25 µl to 10 ml and combines all the requirements of a modern pipette.



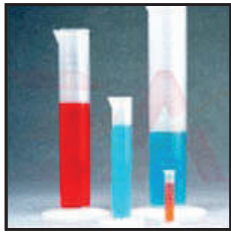
Erlenmeyer Flask /ขวดรูปชมพู่

Reinforced rims to prevent breaking during washing and transportation. Inscriptions are in white enamel.



MICROPIPETTES "single channel" "fully autoclavable" for research

8 models cover volume range from 0,2 µl to 5 ml and fulfill all the requirements of a modern pipette.



Cylinders Plastic / กระบอกตวงพลาสติก

Manufactured from plastic with either hexagonal base with excellent stability or with polypropylene base which eliminates risk of breakage.



PIPETTE WASHING SET / ชุดล้างไปเปต

Washing system is ideal for gentle cleaning of pipettes based on pipetting principle. Solves the problem of washing pipettes quickly and safely.



BUCKET "stainless steel"

Perfect choice for applications where durability and long-lasting service are mandatory.



WASH BOTTLES / ขวดน้ำล้าง

Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.



Filter paper Whatman / กระดาษกรอง

These cellulose filters are used in qualitative analytical techniques to determine and identify materials. Prepleated qualitative filters are also available, which give improved flow rate and increased loading capacity compared to equivalent flat filters.



NIPRO / เข็ม กระบอกฉีดยา

Is a leader in manufacturing hypodermic needles and syringes for medical .



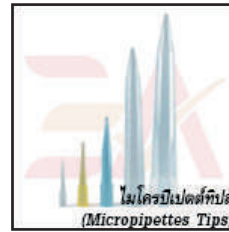
BLOW LAMP "with gas cartridge"

High performance, multi purpose and portable blow lamp offers practical and convenient solutions where connection to a gas pipe line is not existing.



SILICA - GEL DESICCANT BEADS

Silica-Gel beads can be re-generated when heated at a temperature of maximum 120°C.



Nalgene Lab Quality Amber Wide-Mouth Bottles

/ขวดพลาสติกปากกว้างสีชา

Nalgene™ Amber Wide-Mouth Bottles reduce UV light transmissions to protect light-sensitive contents.



MICROPIPETTES "8 channel"

8 channel pipettes share same features of single channel pipettes.4 models cover volume range from 0,5 µl to 300 µl and fullfill all the requirements of a modern pipette.



MICROPIPETTES "12 channel"

12 channel pipettes share same features of single channel pipettes.4 models cover volume range from 0,5 µl to 300 µl and fullfill all the requirements of a modern pipette.



PIPETTE FILLER "pi-pump"

A simple practice pipette filler for liquid handling of graduated and volumetric pipettes from 1 ml to 25. Easily dismantled for easy and practical cleaning.



Dropper / หลอดหยด

Dispensing tip provides regular drops at all times.



Transfer pipette

Repetitive dispenser is an ergonomic hand dispenser for quick and simple repetitive dispensing of liquids.



Dropper / หลอดหยดพร้อมขวดสีชา

Dropping bottles with glass dropper are manufactured from borosilicate glass.)



PIPETTE FILLER

Bulb manufactured from natural rubber. Most common pipette filler for all types of pipette up to 10 ml volume.



Syringe filters Wathman

Syringe filters are specially designed for HPLC sample operations. High flow rate and filtration in both directions, so the liquid can not go over the filter membrane.



Syringe filters

Syringe filters are specially designed for HPLC sample operations. High flow rate and filtration in both directions, so the liquid can not go over the filter membrane.



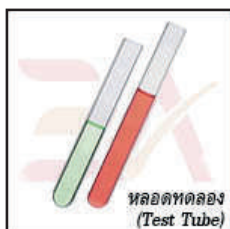
Filter paper / กระดาษกรอง Whatman

These cellulose filters are used in qualitative analytical techniques to determine and identify materials.



Parafilm / SEALING FILM

Most common sealing film used in the laboratories. Conforms to FDA provisions when used below 55°C and GMP.



TEST TUBES "glass" / หลอดทดลอง

Manufactured by automated machines with consistent length and thickness. Due to the properties of borosilicate glass highly recommended for over heated applications.



TEST TUBES "glass" with screw cap

Manufactured from neutral glass featured with a polypropylene screw cap.



MAGNETIC STIRRING BARS / cylindrical

Cylindrical magnetic stirring bars have high magnetic strength and long life due to magnetic cores.



FUNNELS / Separating Funnel

Manufactured from borosilicate glass 3.3. Graduations are in white enamel. Supplied with P.P stoppers.



PIPETTE FILLER

Very easy to use: Before attaching the pipette first squeeze the bulb and release the air inside. Then attach the pipette.



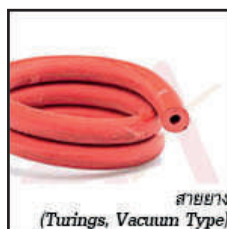
Tubings / ท่อซิลิโคน, ท่อสายยาง, ท่อ PTFE, ท่อ PVC

Rubber with durometer 45 A with temperature stability -25°C to +70°C. Silicone with durometer 60A with temperature stability -60°C to +170°C., PTFE with excellent chemical resistivity with temperature stability -200°C to +260°C.



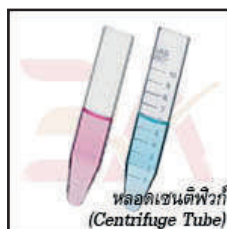
Tubings / ท่อซิลิโคน, ท่อสายยาง, ท่อ PTFE, ท่อ PVC

Rubber with durometer 45 A with temperature stability -25°C to +70°C. Silicone with durometer 60A with temperature stability -60°C to +170°C., PTFE with excellent chemical resistivity with temperature stability -200°C to +260°C.



Tubings / ท่อซิลิโคน, ท่อสายยาง, ท่อ PTFE, ท่อ PVC

Rubber with durometer 45 A with temperature stability -25°C to +70°C. Silicone with durometer 60A with temperature stability -60°C to +170°C., PTFE with excellent chemical resistivity with temperature stability -200°C to +260°C.



TUBES "centrifuge"

Autoclavable at 121°C for 20 minutes. Caps should not be kept closed during autoclaving process. Otherwise tubes can be deformed. Manufactured from neutral glass with wall thickness 1,0 - 1,1 mm.



TUBES "centrifuge"

Cap inner design ensures hermetical and leak-proof closure. Caps can be opened and closed with single hand. A 3/4 turn of the cap will be sufficient for full closure.



Test Tube Racks / หลอดทดลอง

CENTRIFUGE TUBES - "glass" anufactured from neutral tubes with a wall thickness between 1,0 - 1,1 mm.



Test Tube Racks / หลอดทดลอง

CENTRIFUGE TUBES - "glass" anufactured from neutral tubes with a wall thickness between 1,0 - 1,1 mm.



ADAPTERS "with screw thread & cap"

Manufactured from borosilicate 3.3 glass according to DIN 12257 standard with socket size larger than cone size.



SCISSOR

Offers a clean and sharp cut of all kinds of hoses with external diameter range 6 mm to 25 mm.



Desiccators / โถดูดความชื้น

Vacuum desiccators designed to be use under vacuum up to 10 Torr and excellent smooth grinded flanges prevent vacuum leaks and do not need any greasing.



DESICCATOR LIDS Glass"vacuum"

Manufactured thick, robust and heat resistant borosilicate 3.3 glass with a vacuum stopcock.



Desiccators / โถดูดความชื้น

Vacuum desiccators designed to be use under vacuum up to 10 Torr and excellent smooth grinded flanges prevent vacuum leaks and do not need any greasing.



Gallon PLastic PE / แกลลอนพลาสติก

Gallon size 1, 2, 3, 4, 5, 10, 20, 30 and 60 lites



VACUUM FILTER SET

Supplied complete with filter funnel of 300 ml volume capacity, support base with sintered disc, vacuum connection side arm, connecting clamp and vacuum flask of 1000 ml volume capacity.



BOTTLES "aluminium"

These odour-natural, imprevious to light and rust proof bottles are manufactured from aluminium for storing, transporting and delivery of samples and products which have to be stored totally unhaltered.



BEAKERS "stainless steel"

Manufactured from high quality, chemical and corrosion resistant AISI 304 grade stainless steel. Robust seamless construction guarantees a long life cycle.



ถ้วยใส่สารพร้อมฝาปิด

Stainless Steel



BEAKERS "stainless steel"

Manufactured from high quality, chemical and corrosion resistant AISI 304 grade stainless steel. Robust seamless construction guarantees a long life cycle.



ถ้วยใส่สารพร้อมฝาปิด

Stainless Steel



BEAKERS WITH HANDLE "stainless steel"

Highly polished smooth interior enables much easier cleaning. Easily stackable due to the tapered body form for reducing storage space.



BUCKET "stainless steel"

Perfect choice for applications where durability and long-lasting service are mandatory.



Aluminium Cup / ถ้วยอลูมิเนียม



Stainless Steel Cup / ถ้วยสแตนเลส



STAINLESS STEEL FOR INDUSTRIAL

We are the manufacturer of the products that the customers want. Most products are made of stainless steel and shaped in various forms. Which customers want to have variety Work order made in the form to match the purpose, want to use In terms of quality, we always emphasize that it is important. In addition, we also provide services to supply all kinds of materials and equipment used in industrial plants according to the advanced standards of the industry. Design and install for kitchen, stainless steel work, gas stove, sink, floating cabinet, built-in kitchen cabinet, made to order according to the area, durable with stainless steel, 1.5 mm thick, NO.304 and NO.316 for industrial. Works great. Easy to cleaning and modern.





บริษัท 3เอ อินสตรูเมนต์ จำกัด

ผู้ผลิตตู้เตรียมตัวอย่าง (Glove Box) และจัดจำหน่ายถุงมือสำหรับตู้ ISOLATOR
นำเข้าจากประเทศฝรั่งเศส

ติดต่อสอบถาม

คุณปิยะนุช โพธิ์หล้า	Piyanuch@3ainstrument.com	08 1508 1168
คุณประทุมพร คุณล้าน	Sales@3ainstrument.com	09 4559 5052
คุณอภิสิทธิ์ ละครลำ	Apisit@3ainstrument.com	06 1152 9338
คุณวัชรพงษ์ สิทธิน้อย	Info@3ainstrument.com	09 3543 5103



LINE ID : @3ainstrument