SHHAG®

SHHAG®
SHANDONG HUAJING GLASS CO.,LTD.

BROCHURE

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Alibaba   **SHHAG**   **TRADE**

HIGH PERFORMANCE PRODUCT INNOVATIVE DESIGN TRUSTED PARTNER

SHHAG manufactures cooler and freezer glass doors, provides innovative products, services and solutions for the commercial refrigeration industry.

COMPANY OVERVIEW

SHHAG Offers High-Quality And Reliable Cooler/Freezer Glass Doors And Accessories With Our Innovative Design And Advanced Technology. Our Expertise Enables Us To Apply Our Products To A Wide Variety Of Customers, Including Refrigeration Equipment Suppliers, Supermarkets, Wholesale Retailers, Convenience Stores And Cold Storage Warehouses.

We Can Take Oem And Customized Orders To Meet The Specific Needs Of Our Customers Around The World. All The Products Are Manufactured In Compliance With The Iso 9001:2008 Criteria And Also Certified By Ce, Etl, Doe, Rohs, Sgs, Saso And Ccc.

SHHAG Has Built A Reputation For Manufacturing Quality Products And Received The Satisfactions From Top Appliance Companies, Such As Haier, Carrier, Lotte, Epta, Panasonic, Frigrite, Sanyo, Etc. Our Products Have Been Exported To Many Countries Across Europe, North America, South America, Middle East And Southeast Asia.

CONTENT

CLASSIC GLASS DOOR AND FRAME

◆ CLASSIC GLASS DOOR

CD-01

- Features:
  - Double tempered glass with argon gas (cooler)
  - Triple tempered glass with argon gas (freezer)
  - Heated glass and frame technology
  - Aluminum alloy profile
  - Full length handle
  - Exclusive design hinge system
  - Hold Open and Doorstop
  - Magnetic door gasket seal
  - T-8 LED lighting
  - Easy Installation
- Options:
  - Reversible door swing
  - Cylinder lock Add-On
  - Customized logo
  - Temperature sensor for engrgy saving
  - Hydraulic damping closing device
  - Color:Black, Silver
- Application:
  - Walk-in cooler/Freezer
  - Reach-in cases
- Sizes:

Width:	24"	26"	30"
Height:	75"	79"	80"
Custom sizes available			

APPLICATION
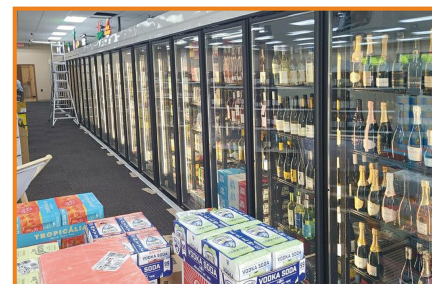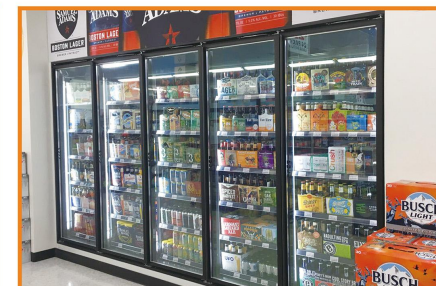
CLASSIC GLASS DOOR AND FRAME

CD-02

- Features:
    - Double tempered glass with argon gas (cooler)
    - Triple tempered glass with argon gas (freezer)
    - Heated glass and frame technology
    - Aluminum alloy profile
    - Slim line handle
    - Exclusive design hinge system
    - Hold Open and Doorstop
    - Magnetic door gasket seal
    - T-8 LED lighting
    - Easy Installation
- Options:
    - Reversible door swing
    - Cylinder lock Add-On
    - Customized logo
    - Temperature sensor for engrgy saving
    - Hydraulic damping closing device
    - Color:Black, Silver
- Application:
    - Walk-in cooler/Freezer
    - Reach-in cases
- Sizes:

Width:	24"	26"	30"
Height:	75"	79"	80"
Custom sizes available			

APPLICATION

CLASSIC GLASS DOOR AND FRAME

CD-03

■ Features:

Double tempered glass with argon gas (cooler)

Triple tempered glass with argon gas (freezer)

Heated glass and frame technology

Aluminum alloy profile

Slim line handle

Exclusive design hinge system

Hold Open and Doorstop

Magnetic door gasket seal

T-8 LED lighting

Easy Installation

■ Options:

Reversible door swing

Cylinder lock Add-On

Customized logo

Temperature sensor for engrgy saving

Hydraulic damping closing device

Color:Black, Silver

■ Application:

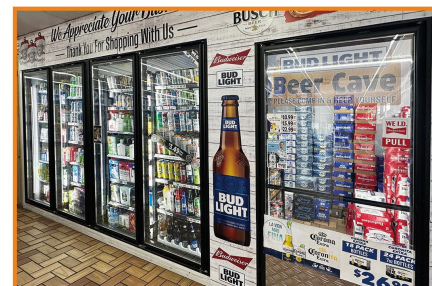Walk-in cooler/Freezer

Reach-in cases

■ Sizes:

Width:	24"	26"	30"
Height:	75"	79"	80"
Custom sizes available			

CLASSIC GLASS DOOR AND FRAME

CD-04

- Features:
  - Double tempered glass with argon gas (cooler)
  - Triple tempered glass with argon gas (freezer)
  - Heated glass and frame technology
  - Aluminum alloy profile
  - Slim handle
  - Exclusive design hinge system
  - Hold Open and Door stop
  - Magnetic door gasket seal
  - T-8 LED lighting Easy Installation
- Options:
  - Reversible door swing
  - Cylinder lock Add-On
  - Customized logo
  - Temperature sensor for engrgy saving
  - Hydraulic damping closing device
  - Color:Black, Silver
- Application:
  - Walk-in cooler/Freezer
  - Reach-in cases
- Sizes:
  - Custom sizes available

ENERGY SAVING GLASS DOOR AND FRAME

## ◆ EM COMPOSITE MATERIALS

EM-01

- Features:
  - Double tempered glass with argon gas (cooler)
  - Triple tempered glass with argon gas (freezer)
  - Heated glass and frame technology
  - Composite material profile
  - Full length handle
  - Exclusive design hinge system
  - Hold Open and Doorstop
  - Magnetic door gasket seal
  - Easy Installation
- Options:
  - Reversible door swing
  - Cylinder lock Add-On
  - Customized logo
  - Temperature sensor for engrgy saving
  - Hydraulic damping closing device
  - Color:Black
- Application:
  - Walk-in cooler/Freezer
  - Reach-in cases
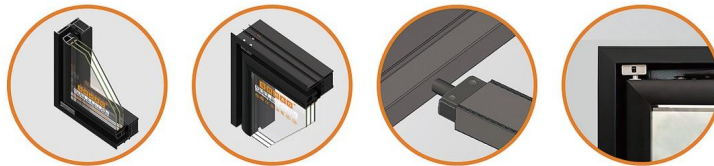
EXCELLENT PROPERTIES

GOOD THERMAL INSULATION PERFORMANCE

LOW PRODUCTION ENERGY CONSUMPTION

HIGH TEMPERATURE RESISTANCE

ACID AND ALKALI RESISTANT

RESISTANT TO SALT SPRAY

SAFE AND NON-VOLATILE

GOOD FIRE RESISTANCE

HIGH STRENGTH

INSULATION

- Compared with the traditional aluminum alloy /PVC material, EM composite material has the characteristics of higher strength, high modulus, high impact, high flame retardant, high heat insulation and low expansion coefficient.
- EM composite material has excellent weather resistance, acid and alkali resistance, salt spray resistance, and is widely used in harsh environmental fields.
- EM composite material production low energy consumption, environmental protection, environmental friendly, safe and harmless, no TVOC volatilization.

FRAMELESS GLASS DOOR

◆ ACRYLIC FRAMELESS GLASS DOOR

FD-01

■ Features:
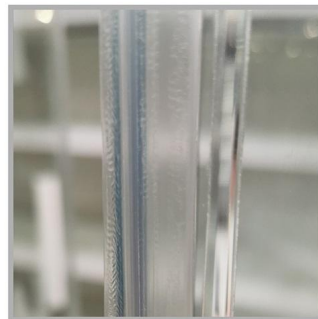
Non-heated Door

Silkscreen border

Acrylic spacer for more visibility

Acrylic slim handle

Self closing hinge system

Sealing strips

Magnetic Frame Gasket

■ Options:

Custom Color Available

Color:Black/silver

■ Application:

Walk-in cooler

FRAMELESS GLASS DOOR

FD-02

- Features:
  - Double tempered glass with argon gas (cooler)
  - Tripie tempered giass with argon gas (freezer)
  - Heated glass and frame technology
  - Silkscreen border
  - Exclusive design hinge system
  - Hold Open and Doorstop
  - Magnetic door gasket seal
  - T-8 LED lighting
  - Options:
  - Frame color:Black, Silver
- Handle:slim handle or full length handle
  - Silkscreen border color:Black or Gray
  - Reversible door swing
  - Cylinder lock Add-On
  - Customized logo
  - Temperature sensor for engrgy saving
  - Hydraulic damping closing device
- Application:
  - Walk-in cooler/Freezer
  - Reach-in cases
- Sizes:

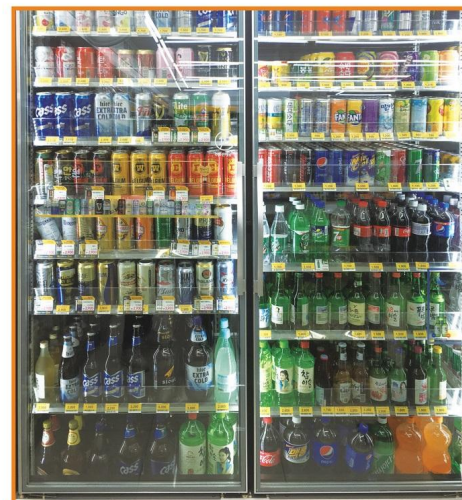| Width:	24"	26"	30"
Height:	75"	79"	80"
Custom sizes available			

FRAMELESS GLASS DOOR

FD-03

■ Features:
Double tempered glass with argon gas (cooler)
Tripie tempered giass with argon gas (freezer)
Heated glass and frame technology
Silkscreen border
Exclusive design hinge system
Hold Open and Doorstop
Magnetic door gasket seal
T-8 LED lighting
■ Options:
Frame color:Black, Silver
Handle:slim handle
Silkscreen border color:Black or Gray
Reversible door swing
Temp sensor for energy saving
Custom logo
Custom sizes available
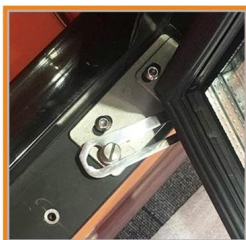
FRAMELESS GLASS DOOR
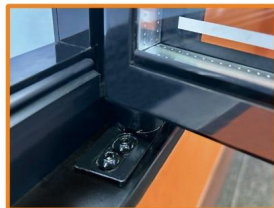
FD-04

◆ SELF-CLOSING GLASS DOOR

■ Features:
   Double tempered glass with argon gas (cooler)
   Heated frame technology
   Silkscreen border
   Magnetic door gasket seal
   Exclusive design hinge system
   T-8 LED lighting
   Sealing strips
■ Options:
   Frame color:Black
   Handle:slim handle
   Custom logo
   Custom sizes available

FD-05

◆ LAMINATED GLASS DOOR
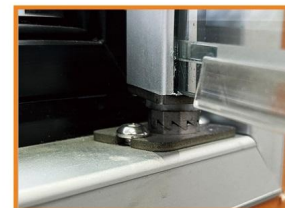
■ Features:
   Double tempered glass with argon gas (cooler)
   Heated glass and frame technology
   Self closing hinge system
   T-8 LED lighting
■ Options:
   Color:Black, Silver
   Handle:slim handle
   Custom logo
   Custom sizes available
■ Application:
   Walk-in cooler
   Reach-in cases

SLIDING GLASS DOOR

SL-D01

- Features:
  - Doubie tempered giass with argon gas
  - Non-heated aluminum frame door
  - Heat Reflective Low-E glass
  - Slider handle
  - Limit block
- Options:
  - Heated Door Rail
  - Self Closing Door
  - Buffer damping hinge
  - Custom sizes available
- Application:
  - Display cooler,Walk-in cooler
  - Convenience store beverage cabin
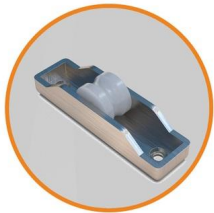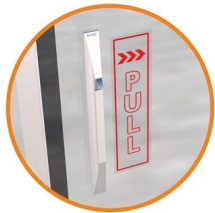
SL-D02

- Features:
  - Doubie tempered giass with argon gas
  - Non-heated aluminum frame door
  - Heat Reflective Low-E glass
  - Full length handle
  - Limit block
- Options:
  - Heated Door Rail
  - Self Closing Door
  - Buffer damping hinge
  - Custom sizes available
- Application:
  - Display cooler,Walk-in cooler
  - Convenience store beverage cabin

OUTSIDE MOUNT GLASS DOOR

OD-B01

- Features:
  - Double tempered glass with argon gas (cooler)
  - Triple tempered glass with argon gas (freezer)
  - Heated glass technology
  - Aluminum alloy door frame
  - Exclusive hinge system design
  - Top and bottom brackets
  - Magnetic door gasket seal
  - Easy Installation
- Options:
  - Frame color:Black, Silver
  - Handle:slim handle or full length handle
  - Cylinder lock Add-on
  - Custom sizes and logo available
- Application:
  - Beverage cooler
  - Beer and liquor cabinets

OUTSIDE MOUNT GLASS DOOR

ACPD-01

◆ ALUMINUM COATED PLASTIC GLASS DOOR

■ Features:

Triple tempered glass with LED strip inside

Black color silkscreen border

Aluminum alloy door frame

Self closing hinge system

Hold Open and Doorstop

Magnetic door gasket seal

Full length handle

HDMI/VGA/USB/SD Card

■ Options:

Cooler or Freezer

Frame color:Black, Silver

Touch function

WIFI Connection

PC Version Media box

Custom sizes available

■ Application:

Convenience store

Vending machine

Width:	550mm	600mm	650mm	700mm
Height:	1500mm	1600mm	1700mm	
Customized sizes available				

RD-01

◆ ASSEMBLED CURVED FRAMELESS DOOR

■ Features:

Rangle: can be customizable

Can with Led light, Light color can be customized

Double Tempered Glass With Argon Gas(Cooler)

Heated Glass Technology

Exclusive Design Hinge System

Magnetic Door Gasket Seal

Easy Connect

■ Optional features:

Frame Color: Black, Silver

Handle: Side door Handle or External door Handle

Custom Sizes and Logo Available

■ Application:

Beverage Cooler

Beer and Liquor Cabinet

Innovative design:

■ Embedded rebound buffer

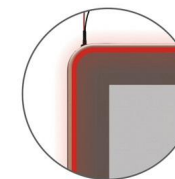Three-level buffer design

90° open limit and automatic return

TOP HINGE   **BOTTOM HINGE**   **GASKET**
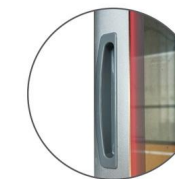
WHITE LED LIGHT   **INSIDE HANDLE**   **EXTERNAL HANDLE**
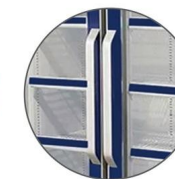
OUTSIDE MOUNT GLASS DOOR

FD-02-P

◆ ALUMINUM COATED PLASTIC GLASS DOOR

■ Features:

Triple tempered glass with LED strip inside

Black color silkscreen border

Aluminum alloy door frame

Self closing hinge system

Hold Open and Doorstop

Magnetic door gasket seal

Full length handle or Hidden handle

HDMI/VGA/USB/SD Card

■ Options:

Cooler or Freezer

Frame color:Black, Silver

Touch function

WIFI Connection

PC Version Media box

Custom sizes available

■ Application:

Convenience store

Vending machine
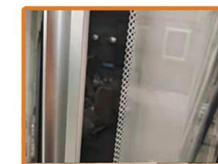
OUTSIDE MOUNT GLASS DOOR

PVCD-01

◆ PVC GLASS DOOR

■ Features:

PVC Frame2-Pane/3-Pane tempered glass

Low-E coated glass

Self Closing Hinge System

■ Options:

Custom sizes & color available

Inside LED Lighting available

■ Application:

Glass door beverage cooler, etc.
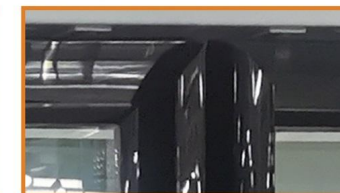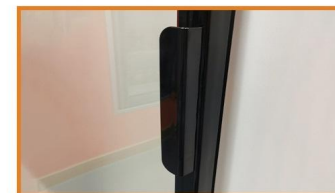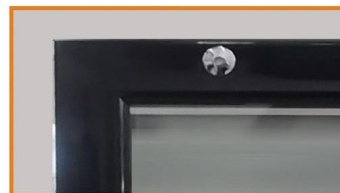
OUTSIDE MOUNT GLASS DOOR

OD-W01

◆ WINE CABINET GLASS DOOR

■ Features:
   Double tempered glass
   Heated glass technology
   Top and bottom brackets
   Aluminum alloy door frame
   Exclusive hinge system design
   Magnetic door gasket seal
   Easy Installation
   Silkscreen

■ Options:
   Frame color:Black, Silver
   Handle: Slim handle or full length handle
   Cylinder lock Add-on
   Custom sizes and logo available

■ Application:
   Wine cabinet

VD-01

◆ VENDING MACHINE GLASS DOOR

■ Features:
   Double tempered glass with argon gas (cooler)
   Triple tempered glass with argon gas (freezer)
   Glass heating technology
   Silkscreen printing

■ Conductive fabric on glass edges & Magnetic gasket
   Aluminum frame
   Slimline handle and recessed handle
   Custom sizes available
   Application:
   nack and beverage vending machine
   Support QR Code Payment

# ADVERTISING GLASS DOOR

AD–T01

◆ TLCD GLASS DOOR

■ Features:

Triple tempered glass with LED strip inside

Black color silkscreen border

Aluminum alloy door frame

Self closing hinge system

Hold Open and Doorstop

Magnetic door gasket seal

Full length handle

HDMI/VGA/USB/SD Card

■ Options:

Cooler or Freezer

Frame color:Black, Silver

Touch function

WIFI Connection

PC Version Media box

Custom sizes available

■ Application:

Convenience store

Vending machine

SCREEN SIZE (INCH)	MINIMUM DOOR SIZE ((WIDTH * HEIGHT MM)	DISPLAY AREA ((WIDTH * HEIGHT MM)
15	361.5 x 542.6	194 x 344
22	463 x 675	298 x 475
32	559.5 x 908	391 x 697
37	632 x 1031	460 x 819
42	692.5 x 1152	524 x 931
46	734 x 1225	574 x 1018
50	744 x 1294	617 x 1096

AD–L01

◆ LED LOGO GLASS DOOR

■ Features:

Customized Logo

Triple Insulating Glass (Double Tempered Glass+1 Pane Acrylic Panel)

LED Strip Inside Glass

Aluminum Alloy Door Frame

■ Options:

Heating Option Available

Customized LED Strip Color

Custom sizes available

PVC Profile Door Frame

COMMERCIAL FREEZER SLIDING LIDS

SL-01

◆ ASSEMBLY TYPE SLIDING LIDS

■ Features:
  4mm Low–E Glass
  Handle include
  Left–Right sliding
■ Options:
  Frame Color:Black/Grey/White
  Tempered Glass: Flat or Curved
  Lock and Key available
  Application:
  Ice Cream Freezer
■ Sizes:
  Custom sizes available

SL-02

◆ ASSEMBLY TYPE SLIDING LIDS

■ Features:
  4mm Low–E Glass
  Handle include
  Left–Right sliding
■ Options:
  Frame Color:Black/Grey/White
  Tempered Glass: Flat or Curved
  Lock and Key available
■ Application:
  Ice Cream Freezer
■ Sizes:
  Custom sizes available

COMMERCIAL FREEZER SLIDING LIDS

SL-03

◆ ASSEMBLY TYPE SLIDING LIDS

■ Features:

4mm Low-E Glass

Handle included

Left-Right sliding

■ Options:

Frame Color:Black/Grey/White

Tempered Glass: Flat or Curved

Lock and key available

Applications:

Ice Cream Freezer

■ Sizes:

Custom sizes available

SL-04

◆ PLASTIC DIE CASTING SLIDING LIDS

■ Features:

4mm Low-E Glass

ABS Injection frame

Handle included

Left-Right sliding

■ Options:

Frame Color:Black/Grey/White

Tempered Glass: Flat or Curved

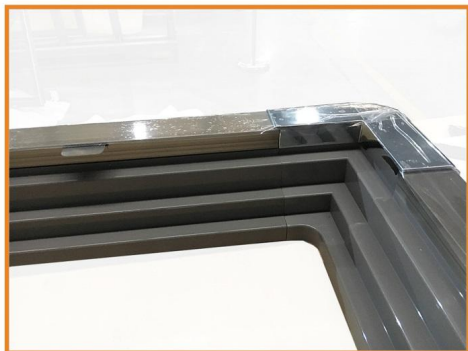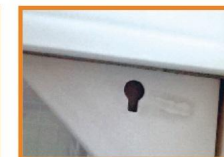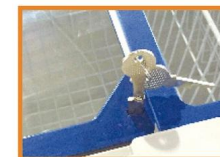Lock and key available

Applications:

Ice Cream Freezer

■ Sizes:

598*1094mm/598*1294mm

Custom sizes available

SUPERMARKET RETROFT GLASS DOOR

SR-01

◆ VERTICAL CABINET RETROFIT

■ Features:
  Flexible for various of showcases
  Heated glass and frame technology
  Double tempered glass
  Hold Open and door stop
  Torque and saq adjust
  Magnetic door gasket for tight seal
  T-8 LED lighting
  Full length handleEasy installation
  Self Closing hinge system
■ Options:
  Customized size and Logo
■ Application:
  Old or second-hand medium temperature multideck showcase

Before

After

SR-02

◆ DEEP CHEST FREEZER RETROFIT

■ Features:
  4mm Low-E Glass
  Eco-Friendly food grade PVC Profile & ABS Corner
  Collision BarsABS Profile
  Anti-Fog & Anti-Dew
■ Options:
  Frame Color: Grey or Blue
  Tempered Glass: Flat or Curved
  Sliding direction: UP-Down or Left-Right
  Custom sizes available
■ Application:
  Supermarket deep chest freezer

Before

After

GLASSES

IG-01

◆ INSULATED GLASS

■ Features:

3.2mm/4mm tempered glass

Aluminum space thickness(mm)

4A/5.5A/6A/7A/8A/8.5A/9A/10.5A/11.5A/14.5A/18A/19A/21A

Sufficient ECO-Friendly desiccant in the aluminum spacer(90%+)

Argon gas filled to prevent fog

Customized silkscreen logo

■ Options:

Low-E coated tempered glass or normal tempered glass

Double / Triple Hollow

Customized size (Length, Width & Thickness)

CG-01

◆ TEMPERED GLASS

■ Features:

4mm Low-E Glass

Eco-Friendly food grade PVC Profile & ABS Corner

Collision BarsABS Profile

Anti-Fog & Anti-Dew

■ Options:

Frame Color: Grey or Blue

Tempered Glass: Flat or Curved

Sliding direction: UP-Down or Left-Right

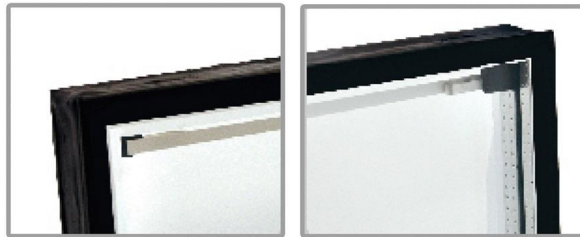Custom sizes available
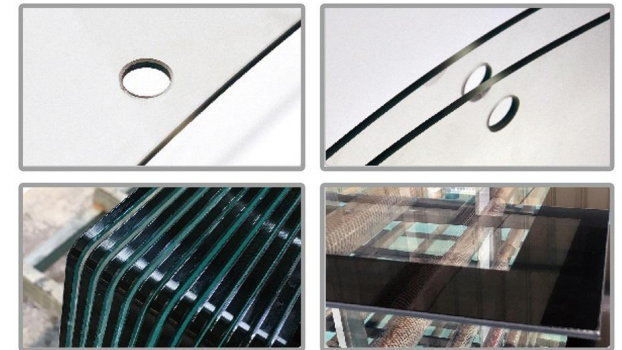
■ Application:

Supermarket deep chest freezer

COMMERCIAL COLD ROOM

CR-01

◆ WALK-IN COLD ROOM

■ Features:

Thickness: 50mm-200mm PU&PIR for Cooler/Freezer

Cam-Lock or Plug-in splice method

With display glass door & shelving system

■ Options:

Custom sizes available

Refrigeration units

Heated foaming swing entry door

■ Applications:

Supermarket /Convenience Store /Pharmaceutical Products Storage

Cold storage components

① Cold storage board

② Control system

③ Glass door with frame

④ Anti-skid pattern plate

⑤ SHELVING

⑥ Cold storage door

⑦ Refrigeration units

⑧ Glass service door
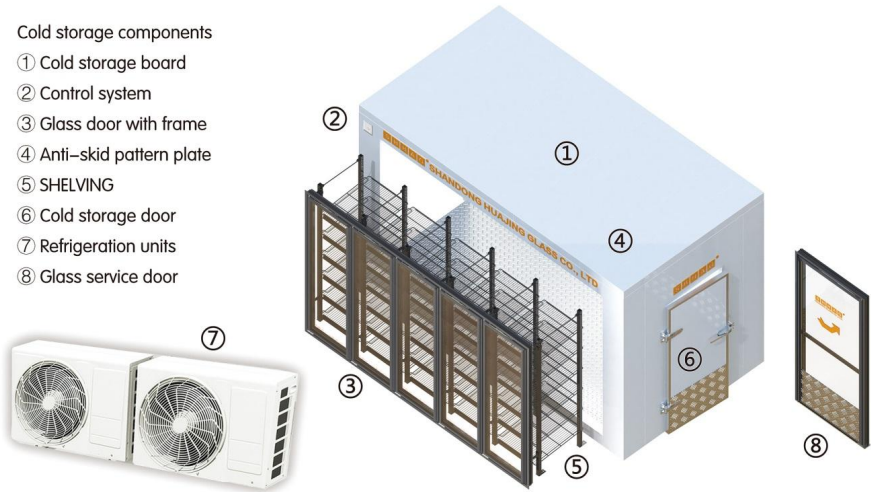
Comprehensive Overview			
Product	Walk in cooler，display cold room	Application	Supermarket/Hotel/Bar/Food/Medical treatment etc
Panel Size	Customized	Applicable Temperature Range	−75~+10℃
Applicable Voltage	110v,220v,380V	Power	Customized according to cold room area
Certificate	CE,ISO9001,CB,GS,ROHS	Warranty	2 years
Cold Room Door	Heated cooler&freezer glass door	Cold Room Panel	Polyurethane Sandwich Panel
PU Panel Specifications			
Metal Layer Specification	0.4/0.5/0.6/0.8mm	Panel Width	Customized
Metal Layer Material	Color steel/stainless steel/Embossed Aluminum etc	Panel Color	Regular grey white(can be customized)
PU Density	40 ± 2kg/m³	Panel Thickness	75mm, 100mm, 120mm, 150mm
Bending Strength	331MPa	Heat Transfer Coefficient	0.024W/m² · k
Fire Rating	B2	Connection Method	Plug in / cam lock
Base Plate Thickness Applicable Temperature Range			
High Temperature 0~(+5)℃	75mm	Medium Temperature (-5) ~(+10)℃	75mm/100mm
Low Temperature (-18)~(-30)℃	100mm/120mm/150mm	Ultra Low Temperature (-75)℃ or above	150mm

OTHER PARTS

DRL-01

◆ DOUBLE REFLECTOR LENS LAMP

- Color temperature: 3000K/4000K/6500K
- Working voltage: AC100~240V, DC24V
- Optical properties: CRI:94, R9:72, Rg:100, Rf:75
- Luminous maintenance rate: L90>554,000h , L70>100,000h
- Working temperature: −30℃~60℃

EN 55015, EN 61547, EN 60598-1
EN 60598-2-1, EN 60529,
GB 7000.1, GB4706.1
FCC part 15 Subpart B,
UL 8750

CE IP65

SIDE LIGHTS   **MIDDLE LIGHTS**

ERC-01

◆ ERC LIGHT

CE IP65

SIDE LIGHTS   **MIDDLE LIGHTS**

COLOR TEMP	PRODUCT SERIES	INPUT VOLTAGE	INPUT CURRENT	INPUT POWER	OUTPUT VOLTAGE	OUTPUT CURRENT	LUMINO US FLUX	LUMINOUS EFFICIENCY
3000K	1700 CENTER FIXTURE	24 V	542 mA	13 W	20 V	614 mA	1760 lm	135 lm/w
		220 V	118 mA	13 W	57 V	198 mA	1630 lm	125 lm/w
	1700 END FIXTURE	24 V	258 mA	6.2 W	19 V	309 mA	880 lm	142 lm/w
		220 V	56 mA	6.2 W	55 V	96 mA	790 lm	127 lm/w
	1400 CENTER FIXTURE	24 V	500 mA	12 W	21 V	537 mA	1610 lm	134 lm/w
		220 V	109 mA	12 W	46 V	226 mA	1490 lm	124 lm/w
	1400 END FIXTURE	24 V	500 mA	12 W	21 V	537 mA	1610 lm	134 lm/w
		220 V	238 mA	5.7 W	20 V	267 mA	810 lm	142 lm/w
4000K ↓ 6500K	1700 CENTER FIXTURE	24 V	542 mA	13 W	20 V	614 mA	1900 lm	146 lm/w
		220 V	118 mA	13 W	57 V	198 mA	1750 lm	135 lm/w
	1700 END FIXTURE	24 V	258 mA	6.2 W	19 V	309 mA	950 lm	153 lm/w
		220 V	56 mA	6.2 W	55 V	96 mA	850 lm	137 lm/w
	1400 CENTER FIXTURE	24 V	500 mA	12 W	21 V	537 mA	1730 lm	144 lm/w
		220 V	109 mA	12 W	46 V	226 mA	1600 lm	133 lm/w
	1400 END FIXTURE	24 V	238 mA	5.7 W	20 V	267 mA	870 lm	153 lm/w
		220 V	52 mA	13 W	44 V	111 mA	780 lm	137 lm/w

100-240VAC INPUT COOLER LIGHTING SYSTEM PARAMETERS

| ITEM	COLOR TEMP	INPUT VOLTAGE	LUMINOUS FLUX	INPUT POWER	COLOR RENDERING	LUMINOUS EFFICIENCY	COLOR TOLERANCE	WATERPROOF RATING
LED Middle Lights	0.77m|6500K	80-260 V	2100(LM)	18 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED Middle Lights	0.9m|3000-3500K	80-260 V	2100(LM)	18 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED Middle Lights	1m|3000K	80-260 V	2100(LM)	18 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED side lights	1m|3000K	80-260 V	1050(LM)	9 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED Middle Lights	1.2m|3000K	80-260 V	2100(LM)	18 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED side lights	1.2m|6500K	80-260 V	1050(LM)	9 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED Middle Lights	1.5m|6500K	80-260 V	4200(LM)	36 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED side lights	1.5m|6500K	80-260 V	2100(LM)	18 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED Middle Lights	1.7m|6500K	80-260 V	4200(LM)	36 (W)	≥80	140 (LM/W)	<5 SDCM	IP67
LED side lights	1.7m|6500K	80-260 V	2100(LM)	18 (W)	≥80	140 (LM/W)	<5 SDCM	IP67

OTHER PARTS

CR-01

◆ SHELVING

■ Features:

Low-Carbon steel material

Powder Surface Coating for Post

Plastic surface dipping for wire mesh shelf

Weight capacity: 100KG/Layer

■ Options:

Color:Black/White

Price tag, Bracket,Stabilizer bar

Gravity roller plate

■ Applications:

Walk-in Cooler & Freezer in Supermarket

Display refrigerator

■ Sizes:

TP	A	B	C
Width	24"	30"	30"
Depth	27"	27"	36"
Custom sizes available			
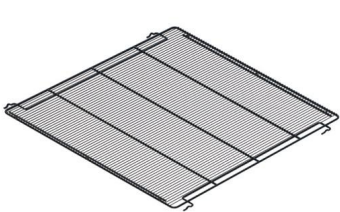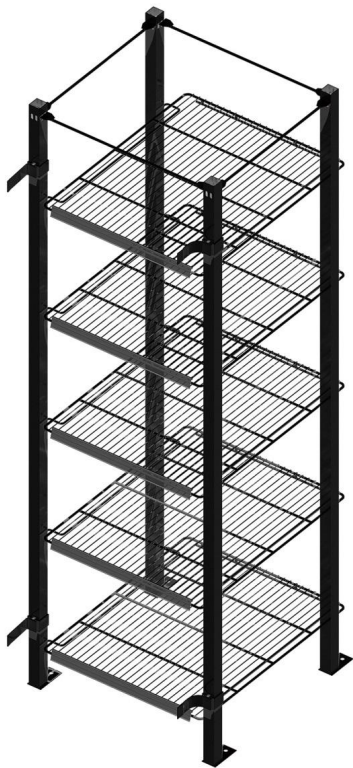
SHELVES
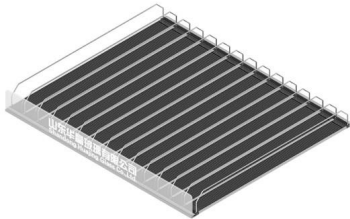
GRAVITY FLOW SHELVES

OTHER PARTS

◆ CONDUCTIVE UPPER DOOR SHAFT

■ You can quickly install the door on the door frame without a tool.

■ Only one pointed nose pliers are needed to quickly remove the door body.

■ Support reversible door system.

■ Double layer protection with male sealing ring and female sealing plug,

■ wterproof grade IP67,Salt Mist Test> 72H.

■ Safety voltage withstand test>3000V ,

■ Level 4 protection for male lead wires ,

■ SUS304 shaft shell thickness> 2mm,

■ PA66 high-pressure glue injection protection,RVV sheath wire,

■ UL1332 18AWG PTFE wear-resistant, high-temperature,

■ resistant (200 C) special wire,

■ Level 3 protection for female lead wires ,

■ PA66 high-pressure glue injection protection,

■ UL1332 18AWG Double Wall PTFE Special Wire,

■ 30mm heat shrink tubing protection for outlet wire.

■ The lock tongue uses 0.8mm high-strength steel,

■ deduction load 500kg,

■ 6A continuous current temperature rising<5K,

■ Anti fatigue door opening and closing>300000 times.

■ The electrodes and cases are stainless steel riven technology,

■ tensile strength> 1000MPa,

■ SUS304 shaft shell subject thickness> 3mm.

IP68

HIGH PROTECTION   HIGH SECURITY   HIGH RELIABILITY   HIGH STRENGTH

OTHER PARTS

◆ ADJUSTABLE BOTTOM HINGE

- No tools required for assembly
- The adjustment tool is a 4mm Allen wrench
- The locking tool is a 3mm Allen wrench
- The lubricating grease of the internal mechanism is fully wrapped,
- and the movement mechanism is not affected after being immersed in water for 48 hours,
- Salt Mist Test> 48H.
- Adjust the point Y–to realize the left and right adjustment of the door body,
- easily adjust the gap between the door body.
- Adjust point S–to realize pre tightening of the bottom door shaft,
- while also having the function of locking the bottom door shaft,
- Adjustment point Z–realizes the up and down adjustment of the door body,
- easily solving the problem of uneven height of the door body,
- Bottom positioning rotary plate with shell locking/unlocking logo,easy to replace.
- The reliability of the regulating mechanism reaches 10KC,
- Anti fatigue door opening and closing>300000 times.
- Processing accuracy of 0.02mm,
- effectively ensuring smooth transmission.
- HIGH STRENGTHHigh strength zinc alloy integrated die cast shell,
- effective load>5000N.
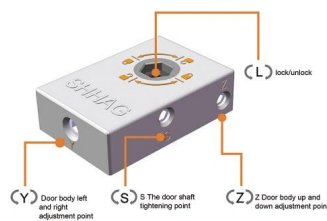
Y： Counterclockwise : move towards the handle side
Clockwise : move towards the door hinge side.
Note: The moving distance is ± 2mm.

S： Counterclockwise : increase torque Increase rebound force of the door body.
Clockwise : reduce torque Reduce rebound force of the door body.
Note: When removing the door, the torque needs to be adjusted to 0 Adjust the torque to open the door at 30° and automatically rebound.

Z： Counterclockwise : Door lowered (right opening) Door raised (left opening)
Clockwise : door raised (right opening) Door lowered (left opening)
Note: The moving distance is 4mm

L： Counterclockwise : tightening – fixed
Clockwise : tightening remove

(Y) Door body left and right adjustment point
(S) S.The door shaft tightening point
(Z) Z Door body up and down adjustment point
(L) lock/unlock

INSTALLATION &DISASSEMBLY STEPS

◆ DOOR INSTALLATION PROCEDURE

- Step1：Remove the protective cover of the conductive door shaft male pole on the door, refer to FIG.1
- Step2：Insert the bottom door shaft into the bottom hinge plate/adjustable bottom hinge shaft hole, refer to FIG.2
- Step3：Insert the male pole of the conductive door shaft on the door into the female pole of the conductive door shaft on the frame, and push it in with force. When you hear a "click", it means it is locked. The matching gap be–tween the male pole and the female pole of the conductive door shaft is <0.5mm. Gently pull the door outward to ensure secure locking, and rotate the door to ensure normal movement. Refer to FIG.3
- Step4：According to the flatness of the door, the left and right gaps of the door can be adjusted through the Y adjustment point, and the Z adjustment point adjusts the upper and lower heights of the door to be consistent. For details, see the instructions in "Leading Module – Adjustable Bottom Hinge".
- Step5：Install the door stopper into the stopper hole on the top of the door. After fixing, open it twice. If it can stop smoothly, it is qualified. Refer to FIG.4
- Step6：Open the door to 30°, adjust the door shaft preload and increase the torque until the door can automatically close. Repeat the opening to 30° twice. If it can close smoothly, it is qualified. Refer to FIG.5
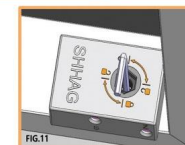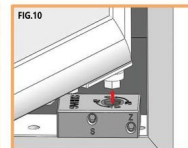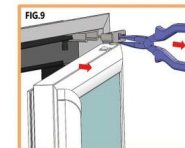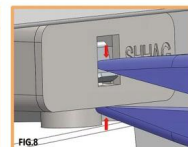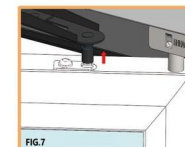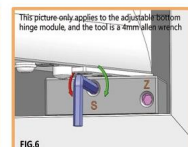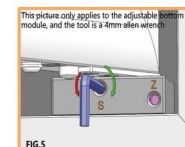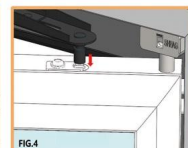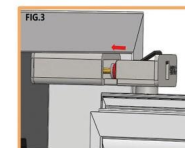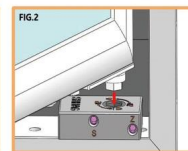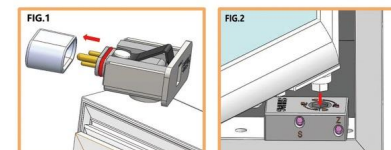
◆ DOOR DISASSEMBLY STEPS

- Step1：Adjust the bottom hinge torque to 0, refer to FIG.6
- Step2：Slightly open the door, detach the door stopper from the door and adjust the stopper to a position that does not interfere with the door, refer to FIG.7
- Step3：Use needle–nose pliers to clamp the upper edge of the lock tongue and the lower edge of the conductive door shaft male pole, and press the lock tongue to the maximum limit, refer to FIG.8
- Step4：Keep the needle–nose pliers clamped, and push outward together with the door to release the male pole of the conductive door shaft and separate it from the female pole of the conductive door shaft, refer to FIG.9
- Step5：Lift the door out from the bottom hinge shaft hole, refer to Fig.10

FIG.1
FIG.2
FIG.3
FIG.4
This picture only applies to the adjustable bottom hinge module, and the tool is a 4mm allen wrench
This picture only applies to the adjustable bottom hinge module, and the tool is a 4mm allen wrench
FIG.5
FIG.6
FIG.7
FIG.8
FIG.9
FIG.10
FIG.11

OTHER PARTS

◆ INTELLIGENT TEMPERATURE CONTROL SYSTEM

Wi Fi

REMOTE CONTROL   **REAL-TIME OPERATION**

SMART COLD CHAIN

SMART INTEGRATION   PATENTED ALGORITHM   IOT CLOUD   QUICK TO IMPLEMENT

■ SMART INTEGRATION
SHHAG anti-condensation intelligent electric heating temperature control system is integrated with multi functions: temperature and hu-midity display, defogging stability control, lighting control (can control 30A light start/stop), door switch detection, etc. It can achieve auto-matic real-time heating power control based on real-time environmental temperatures and humidity, dew point setting and real-time sensing temperature of door system. The dew point can be set by users, which is convenient for different users operate this system ac-cording to the actual conditions and requirements on site, meet individual needs.

■ PATENTED ALGORITHM
SHHAG has been serving the cold chain industry for 20 years and know the pain points of users very well. The system uses SHHAG's unique invention patent algorithm, which is different from on-off or pulse control commonly used in the industry. It can calculates the glass door dew point temperature automatically based on the environment changes, and maintain the dew point temperature by controlling the glass door heating. Realizing real-time detection and controlling of door surface temperature. This system solves the high energy con-sumption situation of traditional electric heating, which uses high power to maintain the door surface temperature much higher than the dew point temperature throughout the entire period. The comprehensive energy saving reaches more than 40%.

■ IOT CLOUD
Monitoring and operation can be realized through the Tuya Smart APP on the mobile phone and the display component to achieve re-al-time monitoring and control. The system can integrate remote control communication functions and can be customized according to different customer requirements to realize remote collection of information such as door switch times statistics, remote inspection, remote control, power monitoring, product video, on-site audio, etc.

■ QUICK TO IMPLEMENT AND SIMPLE TO OPERATE
The entire system is integrated into an integrated electric control box. Whether it is newly installed or upgraded, each group of cabinets only needs to connect one door temperature probe and one door power supply wire (door switch times counting function needs to be connect-ed separately). Parameter setting can be operated through the 7-inch touch screen or mobile APP.

PARAMETER SETTING

■ TOUCH SCREEN OPERATION
Dew point temperature correction adjustment: Press the "⚙" key on the first page to enter the adjustment page, and then press the or key to change the value and save it. On the second page, press and hold the "Parameter Setting" button for three seconds, enter the parameter setting page > pa-rameter area, select the "up" and "down" keys, display E1 ~ CE in sequence, select the parameter to be adjusted > value area, select " Up" and "Down" keys modify the setting value. It will automatically exit after 15 seconds without pressing any key or press an "Exit" key to exit and save the new set value. On the second page, press the "Light Control" button to activate or cancel the light control function.
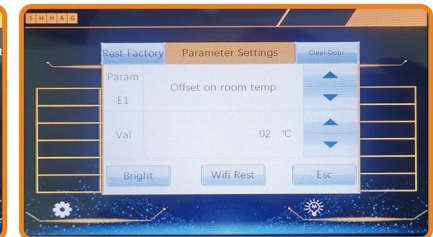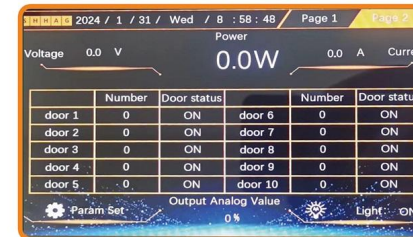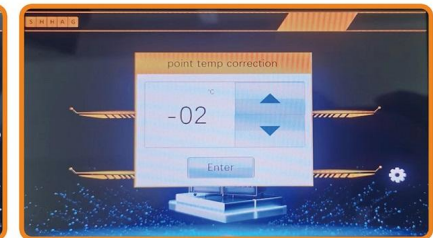
■ APP OPERATION
The first network configuration needs to be operated on the touch screen. Enter the parameter setting page on the second page > Network distribution button. After multiple network configurations, the connection will be completed. After one connection, the network configuration will be fixed until the next time the network is configured again. Home page of the APP. Displays ambient temperature/ambient humidity. Press the "Set-tings" button in the lower right corner to enter the second page, where you can set the dew point compensation value (range: -5-+5℃) and lighting; at the same time, it displays cabinet glass door temperature, dew point temperature, voltage, current, power and other real-time data and 1-10 glass door switch count statistics, with clearing function. On the historical data page, historical temperature, humidity data and alarm data are displayed.

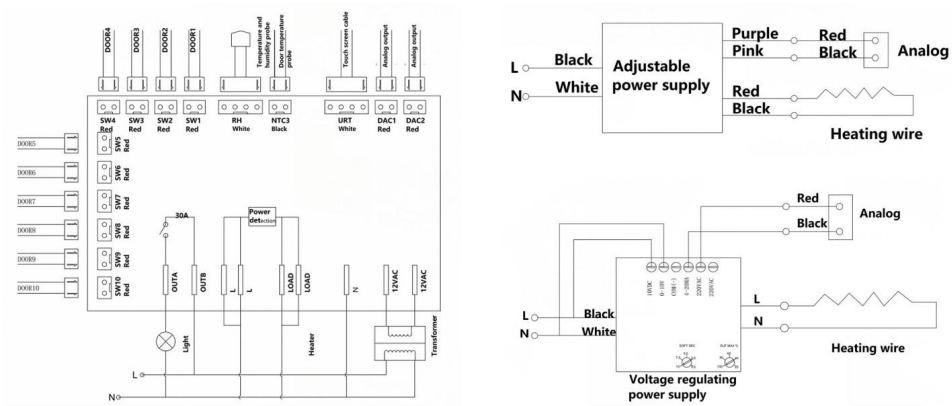# OTHER PARTS

◆ INTELLIGENT TEMPERATURE CONTROL SYSTEM

BASIC PARAMETERS

POWER SUPPLY	TEMP RANGE	ACCURACY	AMBIENT TEMP	RELATIVE HUMIDITY
AC12V	−45 ~ 99℃ (−49 ~ 210℉)	± 1℃(± 2℉)	−10 ~ 60℃(14 ~ 140℉)	20% ~ 90%

OVERALL DIMENSIONS		SCREEN SIZE	
L217MM*W150MM*D21MM		L131MM*W76MM	
INPUT SIGNAL		OUTPUT CONTROL	
Environment temperature and humidity probe x1 Door ntc temperature probe*1 10 sets of door switch signals		Lighting: Normally on 30a/250vac Two heating signals: 0~10vdc.	

ELECTRONIC CONTROL LAYOUT

APPLICATIONS

■ This product uses Glass WG12, online coated glass for testing. (6 pieces in total), laser film removal equipment is used on the four sides of the glass for film removal and insulation treatment, and 1mm laser film removal is used in the middle of the glass to cut the glass resistance value.

■ The normal resistance of glass of this size is: 33.8Ω . By cutting it in the middle, the resistance increases 3.7 times to 125Ω .
■ The glass wastested for heating stability test. The glass surface heats evenly. Conduct a dielectric withstand voltage insulation test on the product (1800/2S, leakage current≤4mA/dielectric withstand voltage 500v/≥100MΩ), and the product reaches the qualified standard.
■ Equipment glass door dew point control compensation +2℃.
■ Test conditions

TEST CONDITIONS	THEORETICAL DEW POINT	TEST CONDITIONS	THEORETICAL DEW POINT
26℃/60%RH	17.6℃	30℃/75%RH	26.2℃
27℃/70%RH	21.1℃	34℃/80%RH	32.1℃
28℃/70% RH	25.1℃	36℃/85%RH	34.1℃

■ **TEST CONCLUSION**
The technical specifications are consistent with the actual measured values because there is energy–saving automatic control. When the lowest temperature on the surface of the glass door is lower than the dew point temperature, the glass door automatically changes power to heat, and there is no condensation in the process. Through the temperature and humidity sensing probe, the system automatically controls the heating power of the glass door, which can maximize energy saving effects and reduce the power by 46%.
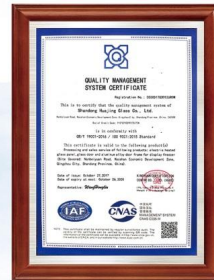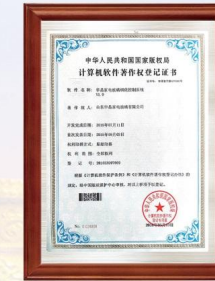
COMPANY STRENGTH

◆ CERTIFICATION

The company has obtained more than 10 patents and also the certificates of CE, ETL, DOE, ROHS, SGS, SASO and CCC. All the products are manufacturedin compliance with the ISO 9001:2008 criteria.

COMPANY STRENGTH

◆ PROFESSIONAL PACKAGING AND DELIVEPY SERVICES

◆ FACTORY AREA

AUTOMATIC GLASS CUTTING –1

AUTOMATIC GLASS CUTTING –2

AUTOMATIC GLASS CUTTING –3

GLASS TEMPERED MACHINE

AUTOMATIC INSULATED GLASS PRODUCTION LINE

CNC PROFILE CUTTING LINE

AUTOMATIC PUNCHING LINE

DUST–FREE WORKSHOP

DEVELOPMENT COURSE

SHHAG&NAI SIDE

GUANGDONG BOHUA FACTORY

CD FACTORY IN THAILAND

PD FACTORY IN GEORGIA

WAREHOUSE IN LOS ANGELES

PD FACTORY IN GEORGIA

BOHUA FACTORY IN GUANGDONG

CD FACTORY IN THAILAND

2012

2020

2022

2024

2019

2021

2023

BETTER FUTURE

SHHAG

NAISIDE FACTORY IN SHANDONG

WAREHOUSE IN LOS ANGELES

Based on Shandong Huajing Glass Co., LTD., PD International was established in the United States in 2018. In 2020, Shandong Neside Cold Chain Technology Co., Ltd. was established in Shandong, and in 2021, Guangdong Bohua Refrigeration Technology Co., LTD was established in Guangdong. An overseas warehouse in Los Angeles was established in 2022, and a CD workshop in Thailand was established in 2023.