

## Marine Doors, Windows, Hatches

We supply high quality marine doors, windows and hatches. Product quality proved by our valuable users and major classification societies, such as CCS, BV, ABS, LR, RINA, NK, IRS, DNV.GL, RMRS, etc. For some fire resistant products we can provide type approvals.

### Main Category:

1. Watertight/weathertight/gastight doors/windows/hatches;
2. A60, A0 watertight/weathertight doors/windows/hatches;
3. Interior doors with fire rating A60, A0, B0, B15, A15, standard or customized.
4. Special product: hydraulic watertight sliding doors, lift-away hatch covers, folding hatch covers, ramps, side ports, stern doors, pilot doors, tender doors.

**Materials:** steel, aluminium, stainless steel. Window material can be brass.

Reference standard: Chinese standard. Non-standard products can be customized according to user's drawings.

**Example:** Our customized doors, windows and hatches for Navy project:



## Marine Doors



### Steel Single-leaf Weathertight Door for Ships

- Steel door with latch
- Weathertight hose test
- Clips: 6/8 for class A, B, C, 3/4 for class D
- For superstructure above freeboard deck or deck house
- Standard: GB/T3477-2008
- Leaf thickness: 6~8mm for class A, B; 4~6mm for class C, D
- $\phi$  250mm window available for class C, D
- Customized door size

Type	AF	AY	BF	BY	CF	CY	DF	DY
Name	Square Corner of Class A	Round Corner of Class A	Square Corner of Class B	Round Corner of Class B	Square Corner of Class C	Round Corner of Class C	Square Corner of Class D	Round Corner of Class D

Class A: First deck above freeboard deck; Class B: Second deck above freeboard deck;  
 Class C: Third deck above freeboard deck; Class D: Fourth deck above freeboard deck.



### Steel Single Handle Watertight / Weathertight Door

- Watertight or weathertight with lever handle
- With or without window, single or double-leaf
- Hydrostatic test pressure 0.05 MPa for watertight door; hose test for weathertight door
- Quick opening and closing
- Customized door size
- Different number of clips for option
- Used to superstructure above freeboard deck and deck house
- It can be fire resistant according to requirements
- The material can also be aluminium alloy

### Steel Handwheel Watertight / Weathertight Door

- Quick action mechanism
- Watertight or weathertight
- Hydrostatic test pressure 0.05 MPa for watertight door; hose test for weathertight door
- Customized door size
- For superstructure above freeboard deck and deck house
- With or without window
- Leaf thickness: 6~10mm





### Quick Acting Watertight / Weathertight Door

- Aluminium or steel material
- Watertight or weathertight
- Hydrostatic test pressure 0.03 MPa for watertight door; hose test for weathertight door
- Central handwheel with linkage system design, easy and quick to open and close
- Customized door size
- Can be directly welded to bulkhead or wall
- Meet GB/T3477-96 standard
- With or without fixed window

### Marine Hydraulic Watertight Sliding Door

- Including door body, electrical box, valve unit, motor, oil cylinder, wheelhouse control panel, button box, manual pump and electrical pump.
- Test pressure: 0.1 MPa or others
- Door can be opened and closed by hand and by electric power on both sides
- Optional: Class A-60 / A0, high pressure
- For watertight divisions under waterline
- CB/T3007-99
- Customized door size
- We can also provide hinged type hydraulic watertight door



### Marine Fire Door

- Steel single/double leaf fire resistant door
- Interior door used for A & B fireproof divisions
- Fire rating: A60, A30, A15, A0, B0, B15, B30, H120
- Optional accessories: Escape louver, ventilation grille, fireproof window
- Refer to standard CB\*3234-84
- Door leaf thickness 40 ~ 45 mm
- Fire resistant material inside
- Non-fireproof steel or aluminium door available
- Customized door size and type
- Type approval certificate such as CCS, BV, EC, ABS, etc. as per requirements



### Marine Wheelhouse Sliding Door

- Durable 304 or 316 stainless steel / aluminium / GRP /steel+ aluminium
- Light and low noise
- Single or double leaves
- Integral installation, easy to install
- Can have insulation material inside
- Customized door size
- Standard: CBM2055-8
- Water spray test will be carried out
- Thickness up to user's choice
- Gastight function for option

### Quick Acting Pressure Holding Watertight Door

- Used for engine room or other watertight divisions
- Hydrostatic water pressure test 0.08-0.17 MPa, according to installation positions water tightness requirement
- Customized door size
- Different kinds of mechanism designs and multiple clips
- Quick opening & closing handwheel on both sides of the door



## Marine Windows



### Brass Window and Side Scuttle

- Brass material can be used for glass holders, main frames, etc. for portholes, regular square windows and yacht windows
- Openable or fixed
- Toughened safety class
- Transparent or frosted glass
- Standard: GB/T14413-93
- Clear size for porthole 200-450 mm

### Side Scuttle for Ships

- Openable or fixed
- With or without storm cover
- Brass, steel or aluminium material
- Heavy, medium or light
- Bolted or welded installations
- Optional: fireproof
- SUS/aluminium yacht porthole available
- Standard: GB/T14413-93



### Marine Regular Window for Various Shapes

- Type: Openable, fixed, bolted, welded
- Material: steel, aluminum, brass
- Heavy or light
- Meet GB/T5746-2001
- Used for superstructure above freeboard deck and deck house
- Series: ordinary, fireproof, heating (with electrical heating glass)
- Window shape and size can be customized

### Marine Aluminum Horizontal Sliding Window

- With good tightness, widely used for various kinds of ships
- Aluminium alloy 2~6 leaves
- Square or round corner
- Customized size
- Optional: with insect screen
- Standard CB/T3765-1996
- The middle part can be fixed
- For wheelhouse and superstructure above the freeboard deck
- We have different designs for horizontal sliding windows, please send email to get drawings



### Ship Skylight

- Used for deckhouse on steel ship or superstructure on exposed deck
- Standard CB/T487-98 to substitute ZBU 26001-89
- Another similar skylight design is for engine room, driven by pneumatic, electric, hydraulic or mechanism, standard CB\*3038-78
- Aluminium skylight for yacht available



### Marine Aluminium Vertical Sliding Window

- Go up and down with balanced force
- It's advantages: flexible opening, light, good-looking appearance, reliable tightness, etc. Widely used on all kinds of ships
- Meet CB/T3755-1995 standard
- Round or rectangular corners
- Glass thickness 5~10 mm
- Nominal size 300\*425~1100\*800 mm, as per user's requirements.
- Option: short side or long side lifting



## Marine Hatches



### Steel or Aluminium Sunken Weathertight Hatch Cover

- Square, round or elliptic
- Used in main passage way of ship cabin or deck where needs to be flush.
- Light, good tightness, flexible operation
- Standard: CB958-80
- With or without hinge
- With pad eyes, clip handles, handwheel or single bar handle (completely flush)

### Manhole Cover for Ships

- Watertight manhole covers
- Coaming height as per user's requirements
- Long circle, oval, square, round shape
- Stud material stainless steel
- With external or embedded handles
- Meet CB/T19-2001 standard
- Optional: with shield cover, check hole, double covers
- Aluminium or steel material



### Round Rotating Oiltight Hatch Cover

- Two shapes: round & elliptic
- Watertight and oiltight
- Round shape clear size 600~1200, elliptic 750\*1200~850\*1500 mm
- Used for passage ways of oil tankers and cargo ships
- Meet CB/T282-94
- With inspection hole and wheel
- Rigging hatch cover available

### Small Steel Weathertight Hatch Cover

- Open from single or double sides
- Sunken or raised type
- Made of steel or aluminium
- Square or round shape
- Meet CB/T3728-1995 standard
- Optional: with butterfly clips, dog clips, quick action handwheel, long side or short side open
- Weathertight or non-weathertight breather hatch cover available



### Quick Open & Close Watertight/Weathertight Hatch Cover

- Hatch with handwheel can be watertight or weathertight.
- Watertight hatch cover can withstand pressure 0.2-0.3MPa, as per request
- Spring hinged, can be fire resistant
- Square or round
- Standard: CB/T3728-1995
- With central handwheel or clips
- Used for cargo hold, store, etc. quick open and close



### Hatch with Balance Weight

- Hatch for Suez Canal light refers to standard CB\*3200, common hatch refers to CB/T3728-1995
- With counterweight and butterfly nut or handwheel
- Weathertight Hose test
- Customized dimensions



\*Other bigger hatches available, please send email to get more information.



## Marine Ladders

We have a professional technical team for ladders. Our welders already got welder qualification certificate from CCS. Most ladders are made according to ISO and Chinese standards. Detailed drawings, material reports, test reports, photos and class certificates (if required) can be provided to users. Class certificates such as CCS, LR, BV, ABS, DNV.GL are available.

Main Category:

Wharf ladders, accommodation ladders, pilot ladders, embarkation rope ladders, straight ladders, inclined ladders, bulwark ladders.

A complete set of accommodation ladder can be provided, including winch and steel parts.

Example: Our customized wharf telescopic gangway for one chemical company:

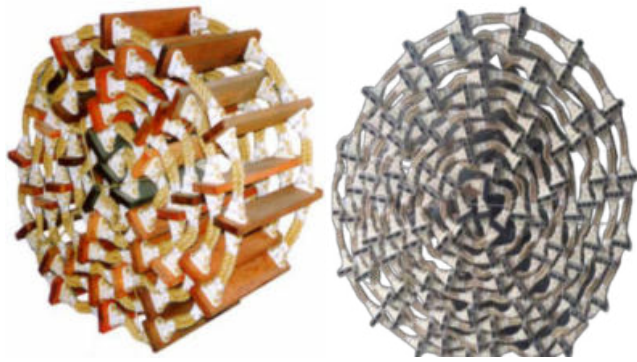


For other clients:



### Marine Embarkation Rope Ladder

- Application: used for crew and passengers to embark lifeboats & life raft when wrecking. Also used for crews to embark when anchoring
- Light weight, safe and reliable
- Standard: CB/T428-93, ISO5489
- Two types: aluminum step, wooden step
- Length: 3100~18500 mm



### Marine Wooden Step Pilot Rope Ladder

- Standard: CB/T3142-94
- Length: 1860~9300 mm, with stop plate 1~3 pcs
- The number of steps: 6~30 steps
- Strong structure, durable and safe
- The steps are made of hardwood with anti-slip grooves, lower four steps are made of rubber.
- Distance between two neighboring steps:  $310 \pm 5$ mm
- For pilots to embark or disembark from a ship

### Marine Aluminum Telescopic Ladder

- Hydraulic operated telescopic ladder, driven by user's hydraulic device
- Optional: 2 or 3 sections telescopic
- The third section (adjusted manually): for passengers to embark and disembark
- With strong fixed handrail and rollers
- Especially welded steps with big curvature, which can support ladder working angle:  $-15^\circ$  to  $45^\circ$



### Marine Aluminum Wharf Ladder

- Four types: flat type, bend type, fully-fixed type and detachable type
- Usually used to embark or disembark
- Standard: CB3116-82
- Length of ladder: 8000-15000 mm
- Checkered plate with stanchions and hand ropes
- Optional: safety net
- Safe working load: 408 kg/m<sup>2</sup>





#### Marine Aluminium Telescopic Flat Wharf Ladder

- 2 sections length extension
- Foldable aluminium stanchions
- Nylon hand ropes and rollers
- Standard: CB3116-82
- Optional: safety net
- Hooks on one side and rollers on the other side

#### Ship Aluminium Accommodation Ladder

- Strong fixed arc steps
- Safe working load: 75 kg for each step
- Anodized aluminium alloy ladder frame
- Handrail: rope and aluminum, foldable
- Standard: ISO 5488-1979 & CB/T14360-93
- Customized length
- Usage Angle: 0-55 degrees
- Used for various vessels of various sizes
- A complete set of accommodation ladder supplied: the ladder frame, the upper platform, the lower platform, davit, turning device, handrail, winch and other related devices
- Winch we can provide air winch or electric winch



## Marine Sanitary Units

The wet unit is composed of wall, ceiling panel, pipe system, hardware, etc. People take a shower, wash face and use toilet in the limited space. Our sanitary units can be made according to user's requirements. The fire rating of the whole unit can reach B15 class. It is energy saving, fast to produce, easy to clean and install.

We have some basic design examples for reference. The floor is usually composed of steel base plate and ceramic tiles. Floor heating system can be provided if users have special requests.

Type A



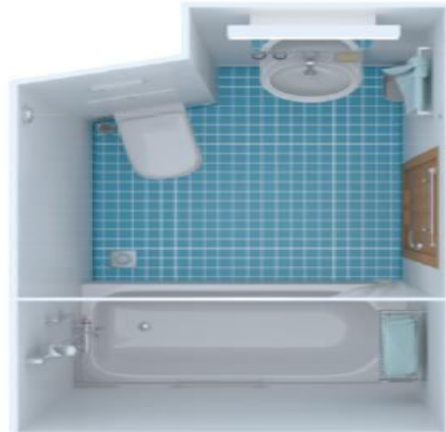
Type B



Type C



Type D



Type E



Type F

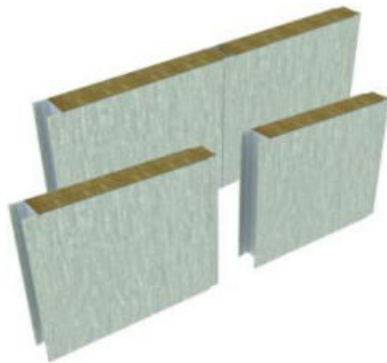


## Marine Wall Panels, Ceilings and Floors

We provide different types of composite rock wool wall panels, aluminium honeycomb wall panels, wet panels and ceilings with different connection modes for your option. The fire ratings options: A60, A30, B15, B0. Width is 600mm or 500mm, length customized (in 3000 mm). Sound reduction: 30-50dB. Surface usually PVC, steel or galvanized. Core material rock wool or glass wool or honeycomb and fireproof board.

We also provide A60 floating floors with rock wool core material and galvanized steel surface finish. Certificates such as CCS, ABS, BV, NK, DNV.GL etc. can be provided.

### Wall Panel



Type A Panel



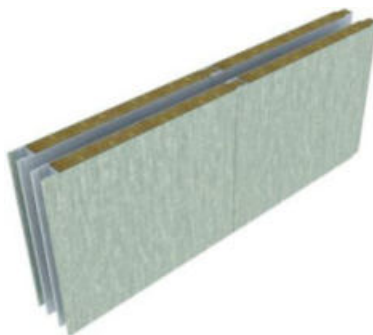
Type C Panel



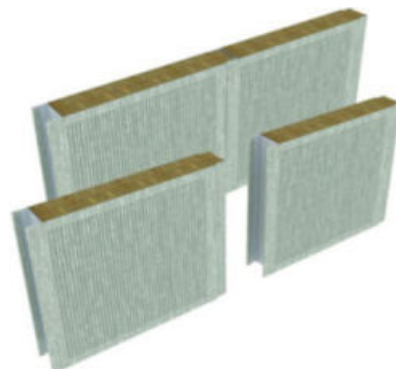
Type A/C Panel (with Cable Conduit)



Type A/C Acoustic Panel



Double-layer Acoustic Panel



Type A Perforated Sound Reduction Panel

### Ceiling



Type A Ceiling Panel



Type D Ceiling Panel



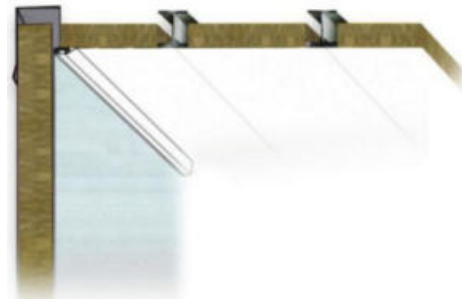
Type A Aluminium Cellular Ceiling Panel



Square Ceiling Panel



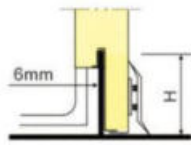
Hook Type Ceiling Panel



Type I Ceiling Panel

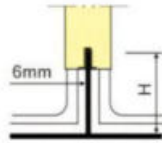


## Wet Room Panel



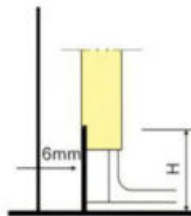
50mm Panels for Division Bulkhead Between Wet Room and Cabin Room **A**

潮湿房间—舱室



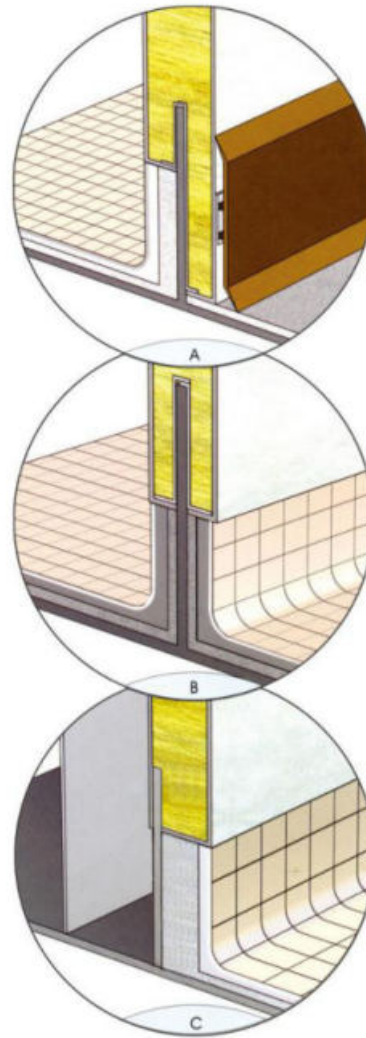
50mm Panels for Division Bulkhead Between Wet Rooms **B**

潮湿房间—潮湿房间



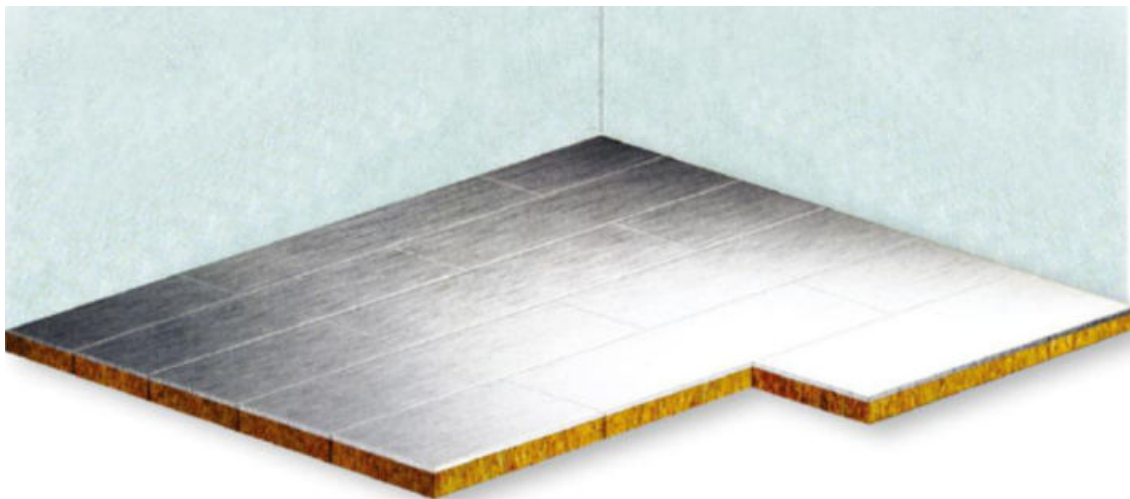
30mm Panels for Lining Bulkhead Between the Steel Wall and Wet Room **C**

钢围壁—潮湿房间



## Floating Floor

The width is 450mm, length customized (in 3000 mm). The thickness is 52.5 mm, including 50 mm rock wool with density 140 kg/m<sup>2</sup> and 2.5 mm steel plate. Sound reduction 51dB.

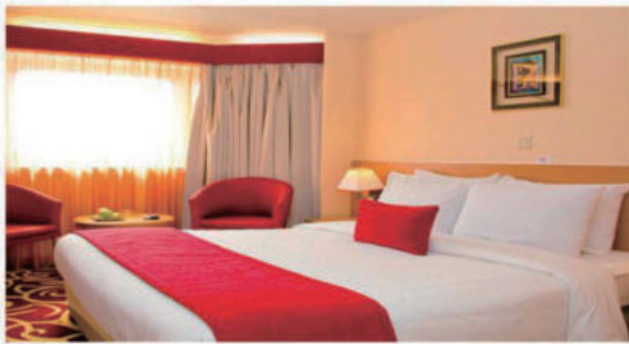


## Cabin Unit System

Modular cabin units are a kind of prefabricated cabin room consisting of panels, fireproof door, wet unit, furniture, electrical devices, curtains and hardware. It can help to reduce the complexity of site work, rework and can reduce the cost of shipbuilding. It's fast to produce, quick to install.

The structure is reliable and configuration is flexible (according to user's requirements). It's mainly used for the construction of luxury cruise ships, passenger ships, etc. There are three types of our cabin unit system: one-man room, two-men room and four-men room. Here are some basic design examples for reference:

One-man Room



Two-men Room



Four-men Room

