

PART 1

Material specifications



Material specifications

Structure



Main structure:

The main structure is made of fully-welded oil-free galvanized RHS ; Q355 steel, yield strength 345MPa, and with painting finish.



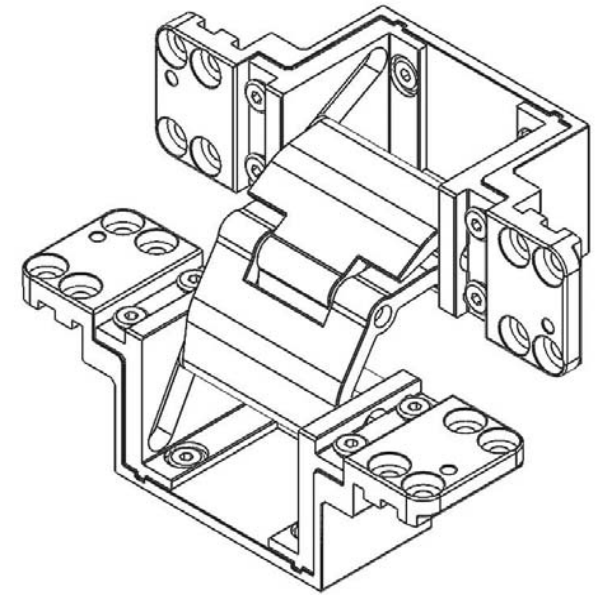
Aluminum wall frame:

The wall frame is made of 6063 reinforced aluminum alloy.
Color options for wall cladding: white, frosted dark coffee.



Aluminum alloy hinge:

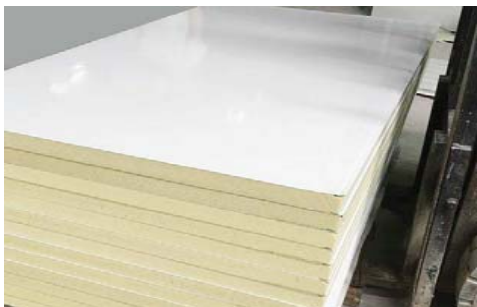
Hinge body: 6063 reinforced Aluminum alloy ; color: natural Aluminum
Hinge base: Q355 steel



Roof system: 90mm thick

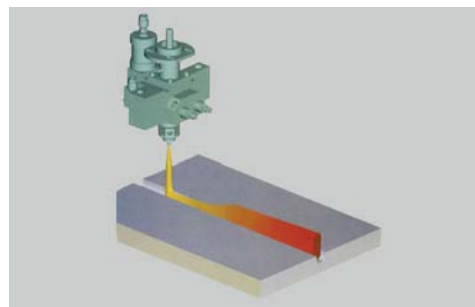
External skin

0.4mm steel sheet
AZM100g/m²+ harsh weather
proof painting 18/5um



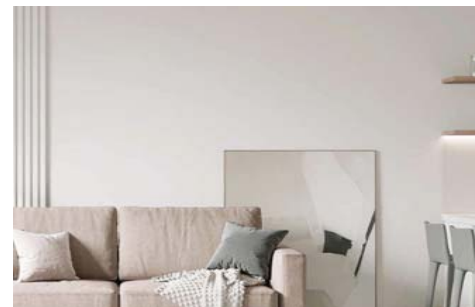
Middle insulation

Expansion
Polyurethane foam
55Kg/m³



Interior

6.5mm bamboo
fiber board



Frame

Welded and painted
RHS, Q355 steel

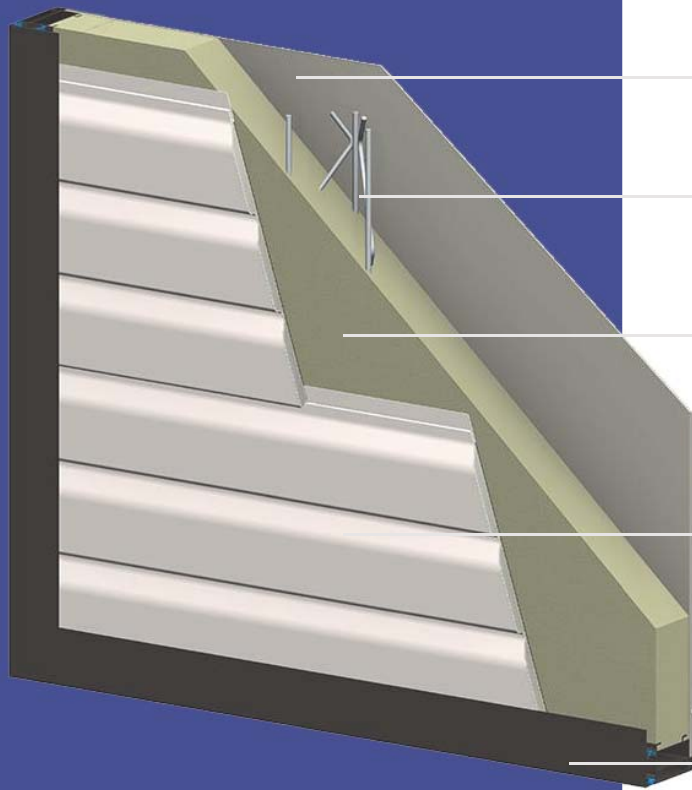


Wall system

Folding area 90mm, thermal insulation coefficient $K=0.34 \text{ W/m.k}$



High weather resistance and high strength wall structure



Internal wall cladding:
6.5mm bamboo fiber board

Intermediate support:
welded triangle trusses
(hot rolled reinforced bar)

Middle insulation:
expansion
Polyurethane foam
55Kg/m³

External wall cladding:
27mm thick embossed
steel cladding with PU
insulation

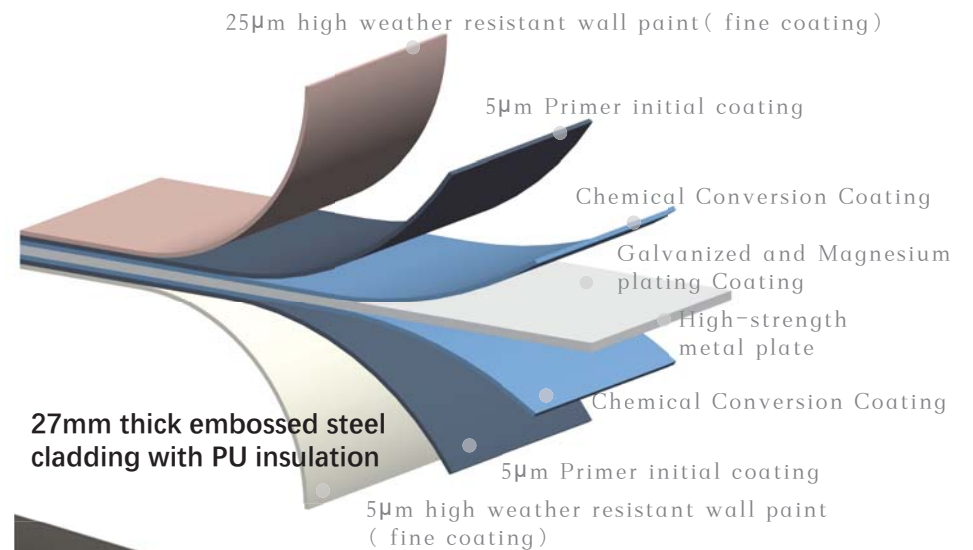
Structure:
Aluminum alloy profile
(6063 high-strength
Aluminum alloy)



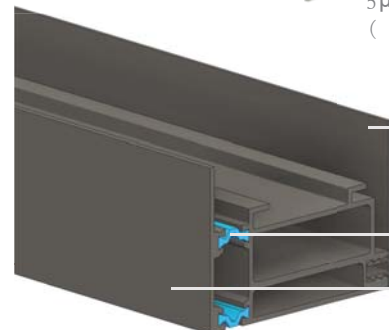
6.5mm bamboo fiber board

Upgraded solid structure
Further consolidate impact resistance

Thickened light luxury membrane coating
Waterproof and mildew proof texture
enhancement



**27mm thick embossed steel
cladding with PU insulation**



Aluminum alloy profile (6063 high-strength Aluminum alloy)

PVC coating

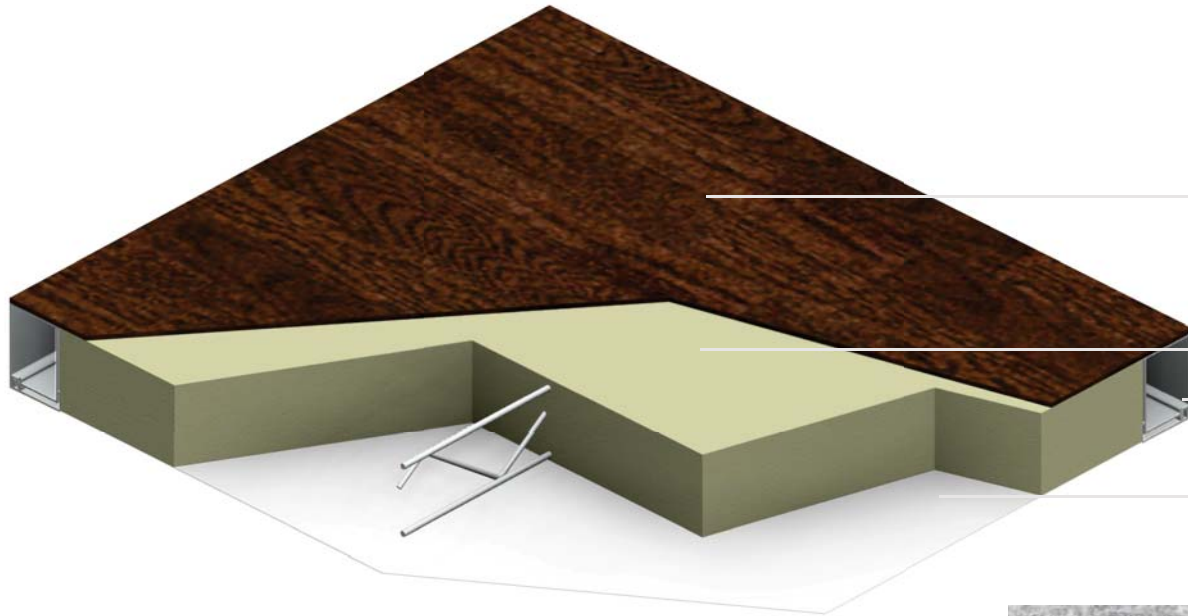
Nylon-66 insulation strip

High-strength aluminum alloy

Wall system (Kitchen and bathroom)



Floor system:125mm thick



Thermal insulation coefficient, $K=0.31W/m.k$

Exterior board:

5mm SPC floor (wood grain) for kitchen and living room;

5mm SPC Floor (Marble look) for bathroom

Insulation: PU foam (55Kg/m³)

Frame: RHS (Q355) / Aluminum alloy frame
(6063 high-strength Aluminum alloy)

Interior board: 0.40mm color steel sheet

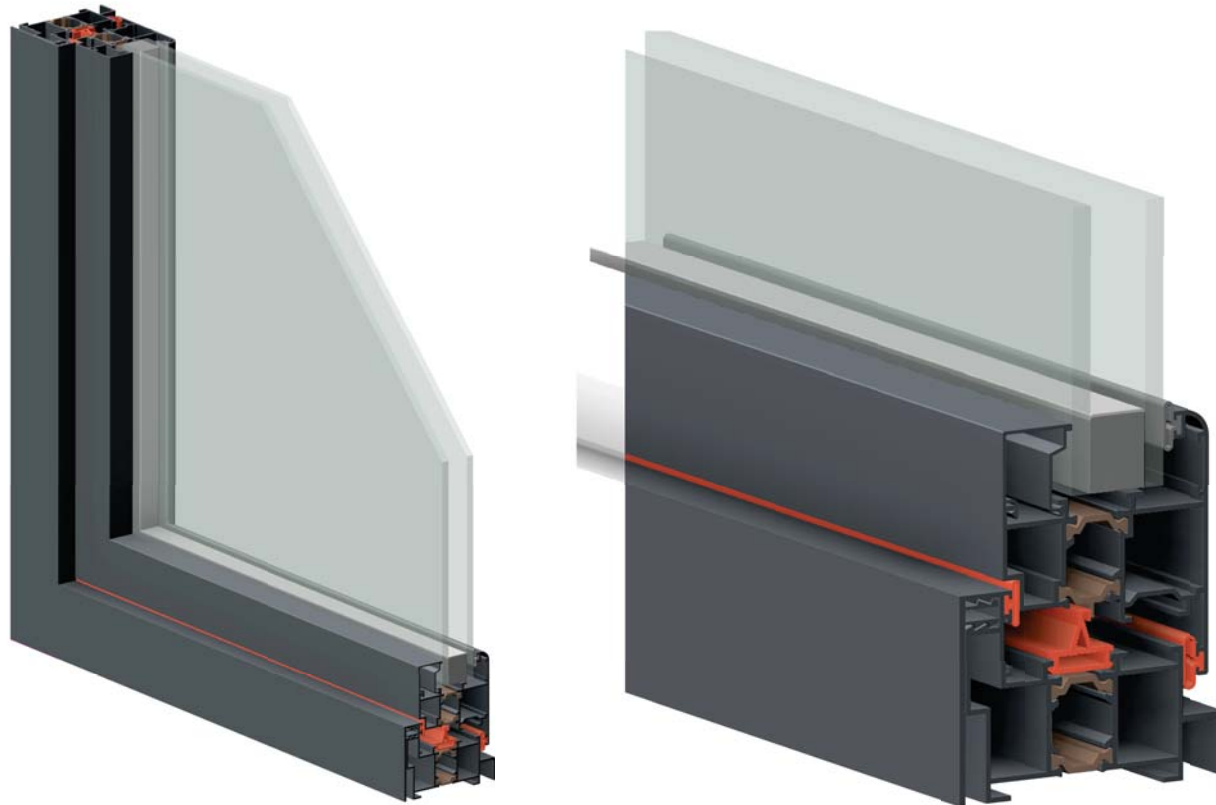


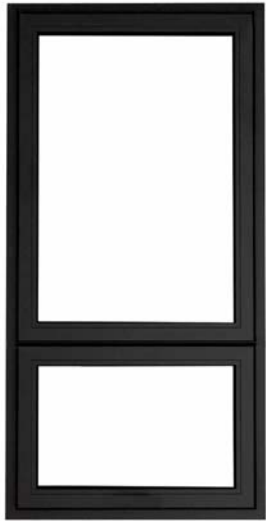


Window

Thermal insulation coefficient $K=2.9W/m.k$

Broken bridge Aluminum alloy: thermal insulation Aluminum alloy frame + double glaze (5+12A+5)





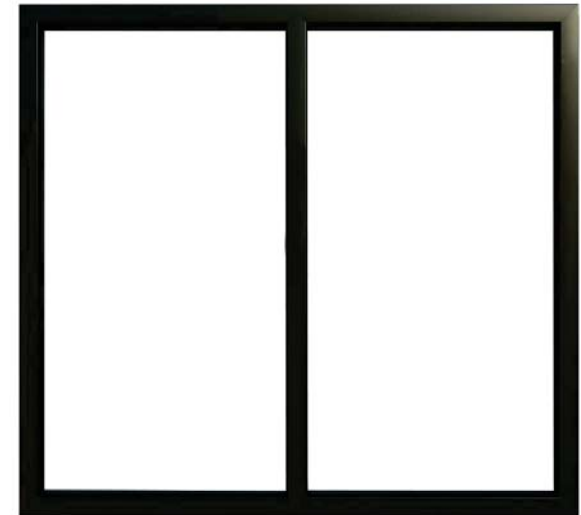
W1

Height 1500mm X width 900mm
Aluminum alloy + double hollow glass
combination window
(top part awning window, Lower
part fixed window)



W2

Height 1200mm X width 600mm
Aluminum alloy + double hollow
glass awning window



W3

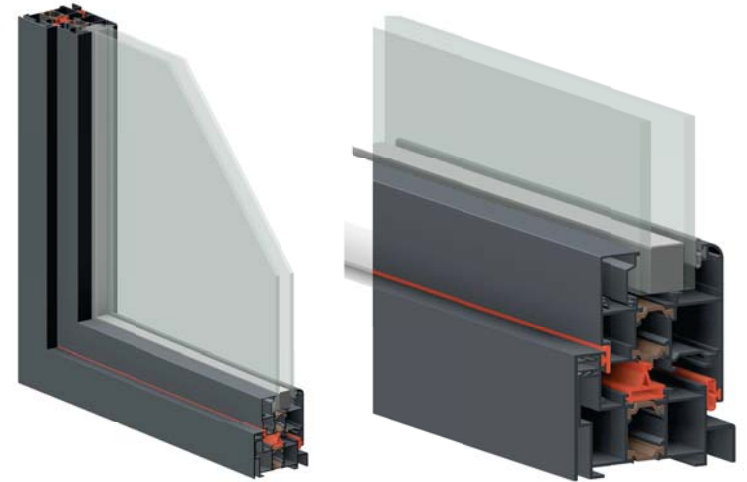
Height 21123mm X width 1800mm
Aluminum alloy + double hollow
glass fixed window



Door

Thermal insulation coefficient $K=2.9W/m.k$

Broken bridge Aluminum alloy: thermal insulation aluminum alloy frame + double hollow glass;
Aluminum alloy double hollow glass swing door 2100mm X 1800mm (HxW)





Bathroom system

Washing stand

620*480+φ600mm cabinet-style porcelain wash basin + mixer faucet + mirror cabinet:
620*480mm+φ600mm round mirror



Shower room

1050*800*2.0mm glass shower room + sprayer, 8mm tempered glass with explosion-proof film



Toilet

Hole pitch 300mm, floor drainage

Electrical heater

40L



Bathroom heater light

3 in 1 bathroom heater light (lighting + ventilation + heating) +Bathroom Heater Light Bracket (600*300mm)







Kitchen system



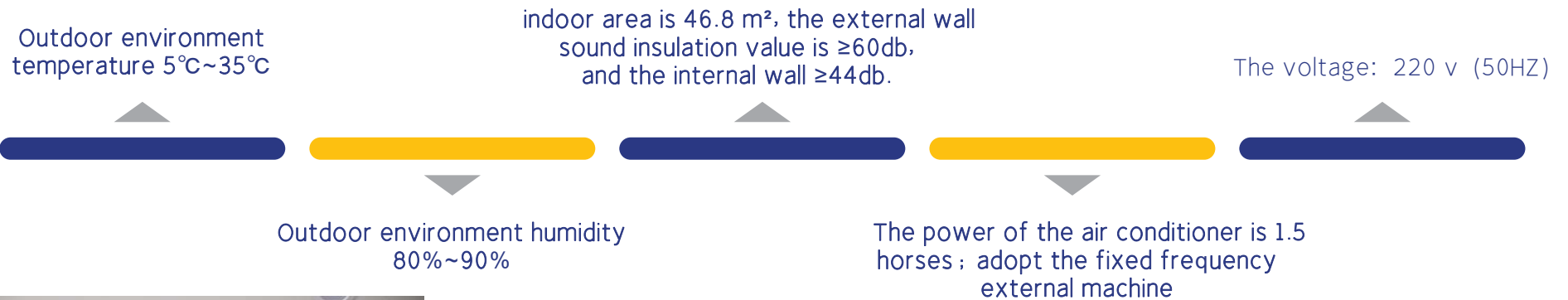
Kitchen cabinet: 1350*300mm+table top + floor cabinet: L (1420+1350) *600mm+ stainless steel sink + faucet

The max. clear length of the kitchen room is 1780mm, the max. clear width is 1713mm



5-Constant System (Fresh Air Air-Conditioning Unit)

5-Constant system includes constant temperature, constant humidity, constant oxygen, constant clean, and constant quiet. This system deals with temperature, humidity, PM2.5, oxygen balance, and noise, and controls them in the best range which is suitable for people, which makes people feel comfortable.



5constant system pipeline route map



Internal machine



Air outlet



Bedroom closet: 2681*2467 / 2590mm



PART 2

Product application scenarios



Product application scenarios



Holiday house







Backyard house







Disaster relief room



PART

3

Product performance



Product performance



Structural system

PSC+ overall folding



Wind and snow load

Wind load 200km/h (16 wind speed)

Snow load: 0.50 kn/m²

Floor load: 2.0kn/m²



Product service life

50 years



Sound insulation parameters

Silence volume ≥ 60db



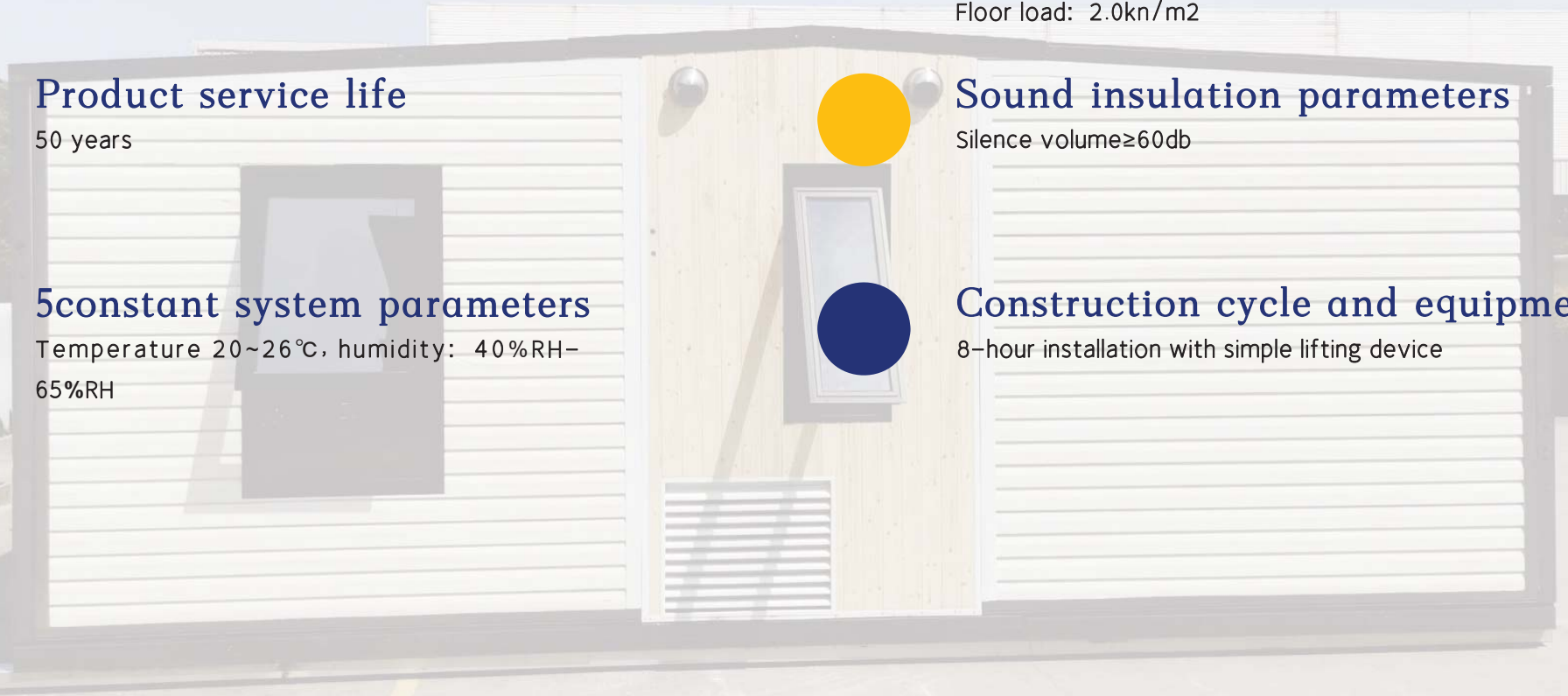
5constant system parameters

Temperature 20~26°C, humidity: 40%RH-
65%RH



Construction cycle and equipment

8-hour installation with simple lifting device



4

PART

Material performance and advantages



Material performance and advantages



The frame system includes the integral steel frame and the Aluminum frame composite wall structure system. Each structural part has undergone industrialized design and precise calculation. Equipped with digital production and processing technology, thus ensuring the product to have high structural strength and high stable performance.



The steel frame is the Q355 low-alloy carbon structural steel, cold-formed, with high structural strength, and lightweight. The aluminum frame is made of 6063-T5 reinforced aluminum alloy, which is extruded at high temperature and is of high strength, good toughness, and great corrosion resistance. After the processing, the surface is smooth and clean, which is convenient for surface oxidation and coloring. Also, it has high colorfastness.



The windows and door glass are made of hollow double glass. The two pieces of glass are bonded by butyl glue, and the outer edge is sealed with polysulfide glue to isolate the air between the two layers of glass from the outside to form a vacuum, which makes the hollow double glass better than the single glass on the performance of heat insulation, sound insulation, and heat preservation.



The interior floor is SPC floor, which is more natural and environmentally friendly than traditional wood floors. The main material of the floor is natural stone powder without any radioactive elements. This material has no side effects on the human body and it can be recycled. It is light and thin, which reduces the weight of the product. It is also wear-resistant. The special transparent wear-resistant layer on the surface of the inner floor could minimize the damage of the ground to the human body. Besides, the surface of the floor has a great antibacterial performance. It is anti-bacteria treated which could inhibit the reproduction of bacteria.