

Commercial Proposal for Supply

Foldable Modular Dwelling 20ft Double-Wing with Metal Cladding and Full Interior Fit-Out

Metal-Asia

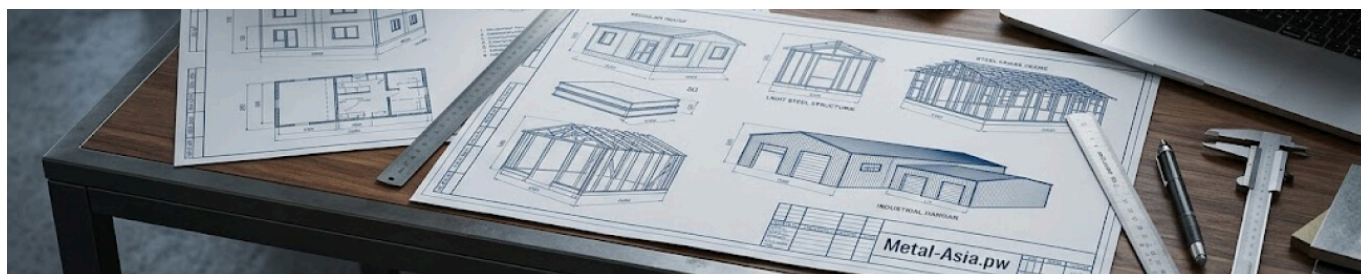
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Executive Summary

Metal-Asia.pw presents a turnkey foldable modular dwelling solution engineered for rapid deployment across global markets. The 20ft Double-Wing configuration expands from a transportable envelope into a 37.2 m² fully functional living or commercial space within 30 minutes using a four-person crew. All structural components carry CE and ISO9001 certification, with operational ratings spanning -45°C to +50°C. Hot-dip galvanization and powder-coat finishing ensure a 20–30 year service life under standard maintenance protocols.

This proposal is structured for international distributors, project procurement teams, and supply chain managers requiring transparent documentation, compliant logistics, and direct manufacturer access without intermediary markups.



Modular foldable housing for B2B procurement and construction projects

Product Technical Specifications

Parameter	Specification
Product Designation	20ft Double-Wing Foldable House (20)
Expanded Dimensions	5900 × 6300 × 2480 mm (L × W × H)
Folded Dimensions	5900 × 2200 × 2480 mm (L × W × H)
Gross Floor Area	37.2 m ²
Internal Ceiling Height	2240 mm
Unit Weight (Base Structure)	2000 kg

Parameter	Specification
Unit Weight (Full Fit-Out)	2500–3600 kg
Design Service Life	20–30 years
Seismic Resistance	Magnitude 8 (Chinese Standard)
Wind Load Rating	0.6 kN/m ² (up to 120 km/h)
Wall Thermal Conductivity	0.048 W/m ² ·K
Acoustic Insulation	≥ 20 dB
Operating Temperature Range	-45°C to +50°C
Floor Load Capacity	2.0 kN/m ²
Roof Load Capacity	0.9 kN/m ²
Fire Rating	Class A (Non-combustible materials)
Assembly Time	4 workers × 30 minutes = 1 unit

Structural Frame and Load-Bearing Components

Item	Component	Material	Specification	Qty	Remarks
1	Primary Frame	Steel Q235B	Section 80×100 mm, wall thickness 2.5–3.0 mm	1 set	Hot-dip galvanization ≥ 80 g/m ²
2	Floor Joists	Steel Q235B	Section 60×40×1.5 mm	1 set	Spacing 400 mm on center
3	Vertical Posts	Steel Q235B	Section 40×40×1.5 mm	1 set	Bolted connections
4	Corner Castings	Steel	4 pcs., thickness 4 mm	4 pcs.	Crane lifting points
5	Wing Hinges	Stainless Steel 304	Thickness 6 mm	8 pcs.	Reinforced pivot assemblies
6	Frame Finish	Powder Coating	RAL 9005 (Jet Black)	—	Two-layer application
7	Anchor Bolts	Steel Grade 8.8	M16×200 mm	16 pcs.	Foundation anchoring

Wall and Roof Panel Systems

Item	Position	Material	Thickness	Density/Property	Area	Remarks
1	External Walls (Primary)	EPS Sandwich Panel	75 mm	EPS density 12 kg/m ³ , facing 0.35 mm PPGI	42 m ²	Thermal insulation, moisture-resistant
2	External Walls (Facade)	Embossed Metal Cladding	16 mm	PU insulation, "Wenge Wood" grain finish	18 m ²	Decorative facing layer
3	Internal Partitions	EPS Sandwich Panel	50 mm	EPS density 12 kg/m ³ , facing 0.35 mm PPGI	24 m ²	For 2-bedroom layout
4	Ceiling	Bamboo Fiber Panels	8 mm	Density 850 kg/m ³	37 m ²	Eco-friendly interior finish
5	Internal Walls	Bamboo Fiber Panels	8 mm	Density 850 kg/m ³	56 m ²	Moisture-resistant
6	Subfloor	Glass Magnesium Board	18 mm	Density 1200 kg/m ³	37 m ²	Fire rating Class A
7	Floor Finish	SPC Stone-Plastic Composite	4.0 mm	Wear class AC4	37 m ²	Waterproof, anti-static
8	Roof	Galvanized Steel Sheet	2.0 mm	Hot-dip galvanization	37 m ²	With organized drainage

Door and Window Assemblies

Item	Position	Material	Dimensions	Qty	Glazing	Hardware
1	Entrance Door	Aluminum Thermal-Break ()	930×2040 mm	1 pc.	Tempered 5+12A+5 mm, Low-E coating	Lever handle with 3-key cylinder
2	External Windows	Aluminum Thermal-Break ()	930×1030 mm	6 pcs.	Tempered 5+12A+5 mm, Low-E coating	Outward casement + security mesh
3	Internal Doors	Aluminum Frame + MDF	800×2000 mm	2 pcs.	—	Magnetic latch, concealed hinges
4	Bathroom Door	Titanium-Magnesium Alloy	700×2000 mm	1 pc.	Frosted glass 8 mm	Sliding track system

Item	Position	Material	Dimensions	Qty	Glazing	Hardware
5	Bathroom Window	Aluminum Thermal-Break ()	500×500 mm	1 pc.	Tempered 5+9A+5 mm	Tilt-turn with insect screen

Wet Room Package (— Dry/Wet Separation)

Item	Component	Model/Material	Dimensions	Qty	Remarks
1	WC	JOMOO (), Ceramic	680×380×750 mm	1 pc.	Dual-flush 3/6 L, soft-close seat
2	Washbasin	Ceramic, Wall-Mounted	600×450 mm	1 pc.	With mixer tap and siphon
3	Mirror Cabinet	Aluminum + Mirror Glass	600×700×150 mm	1 pc.	LED backlight
4	Shower Set	Stainless Steel 304	—	1 set	Thermostatic mixer, 1.5 m hose
5	Floor Drain	Stainless Steel 304	100×100 mm	1 pc.	Dry trap design
6	Wet Room Walls	UV-Resistant Panels	8 mm	12 m ²	Waterproof, antibacterial
7	Wet Room Floor	SPC Stone-Plastic Composite	4.0 mm	4 m ²	Rubber base, anti-slip
8	Shower Partition	Tempered Glass	900×2000 mm, 8 mm thick	1 pc.	Sliding door, aluminum frame
9	Water Supply	PPR Pipes	Dn20/25 mm	1 set	Hot/cold, reinforced
10	Drainage	PVC Pipes	Dn50/110 mm	1 set	With backflow preventers
11	Water Heater	Electric Storage	50 L, 1.5 kW	1 pc.	Under-basin mounting

Kitchen Module

Item	Component	Material	Dimensions	Qty	Remarks
1	Kitchen Cabinet L-Shape	Particleboard E1 Emission Class	2400×1500×850 mm (overall)	1 set	Soft-close drawers, damper hinges
2	Sink	Stainless Steel 304	600×450×200 mm	1 pc.	Undermount, with siphon and overflow

Item	Component	Material	Dimensions	Qty	Remarks
3	Kitchen Mixer	Brass with Chrome Finish	—	1 pc.	360° swivel spout
4	Water Supply	PPR Pipes	Dn20 mm	1 set	Cold water, coarse filter
5	Drainage	PVC Pipes	Dn50 mm	1 set	With grease trap

Electrical System

Item	Component	Specification	Qty	Remarks
1	Distribution Panel	Plastic IP40, 12 modules	1 pc.	DIN rail mounting
2	Circuit Breakers	16A, 32A, Type C	6 pcs.	30 mA RCD for wet room
3	Cabling	Copper PVC insulated	1.5 mm ² (lighting), 2.5 mm ² (sockets), 4 mm ² (HVAC)	150 m
4	Power Sockets	European Schuko Standard, 16A, 220V	12 pcs.	Grounded, IP44 in wet room
5	Switches	European Standard, 1-gang/2-gang	8 pcs.	With locator LED
6	Ceiling Lights	LED, 18W, 4000K	6 pcs.	Recessed into ceiling
7	Wet Room Light	LED, 12W, 4000K, IP65	1 pc.	Moisture-proof
8	HVAC Socket	16A, 220V	1 pc.	Dedicated circuit
9	Water Heater Socket	16A, 220V	1 pc.	Dedicated circuit
10	Earthing	Copper Busbar 6×50 mm	1 set	Earth resistance ≤ 4 Ω

Terrace and Canopy

Item	Component	Material	Dimensions	Qty	Remarks
1	Terrace Platform	Aluminum Profile + Composite Decking	2000×5900 mm	1 pc.	2 m width, full facade length

Item	Component	Material	Dimensions	Qty	Remarks
2	Terrace Railing	Aluminum Profile + Tempered Glass	Height 1100 mm	11.8 lm	1.1 m height, 10 mm glass
3	Terrace Canopy	Aluminum Frame + Polycarbonate	2000×5900 mm	1 pc.	Cellular polycarbonate 8 mm, UV coating
4	Fixings	Stainless Steel 304	M10×80 mm	32 pcs.	For attachment to primary frame

Packaging and Marking

Item	Component	Packaging Type	Material	Dimensions (mm)	Gross Weight
1	Primary Module (Folded)	Full Wrap	Stretch film 23 µm + PP straps 19 mm + cardboard corner protectors	5950×2250×2530	2200 kg
2	Side Wings (Separate)	Palletized	Wooden pallet 1200×800 + stretch film	3000×2200×200	400 kg/pc
3	Doors/Windows	Crated	12 mm plywood + 20 mm foam	1200×800×150	25–40 kg/pc
4	Sanitary Ware	Crated	5-ply corrugated cardboard + foam	800×600×500	15–30 kg/crate
5	Electrical	Boxed	Corrugated cardboard + PE bags	400×300×200	5–8 kg/box
6	Finish Panels	Bundled	Stretch film + cardboard corners	2400×600×100	15 kg/bundle
7	Terrace/Canopy	Packaged	Stretch film + PP straps	2500×500×300	120 kg/set

Logistics Parameters

Parameter	Specification
Transport Configuration	5900 × 2200 × 2480 mm
Transport Volume	32.2 m ³
Gross Weight (Full Fit-Out)	3200–3600 kg
40HQ Container Capacity	2 units

Parameter	Specification
20GP Container Capacity	Not compatible (5900 mm > 5898 mm internal)
40GP Container Capacity	Not compatible by height (2480 mm > 2393 mm internal)
Recommended Container	40HQ (High Cube)
Incoterms	FOB (China), CIF, DAP
Manufacturing Lead Time	15–25 working days
Sea Freight Transit	25–40 days

Harmonized System (HS) Codes

Component	HS Code	Description
Steel Frame	7308.90.00	Structures and parts of structures, of iron or steel
Sandwich Panels	7308.90.80	Metal structures with filling
Aluminum Windows/Doors	7610.10.00	Doors, windows and their frames and thresholds, of aluminum
Tempered Glass	7007.19.00	Safety glass, toughened (tempered)
Ceramic Sanitary Ware	6910.10.00	Ceramic sinks, wash basins, baths, water closet pans
Mixer Taps	8481.80.00	Taps, cocks, valves for pipes
Copper Cables	8544.49.20	Electric conductors, of copper, for a voltage not exceeding 80V
Sockets/Switches	8536.50.90	Electrical apparatus for switching or protecting electrical circuits
SPC Flooring	3918.10.00	Floor coverings of plastics
Bamboo Panels	4418.79.00	Builders' joinery and carpentry of wood

Global Procurement Services

Metal-Asia.pw operates as a direct procurement gateway for industrial and modular construction supplies sourced from certified Chinese manufacturers. For complex projects requiring technical validation, our [Engineering Audit](#) service delivers detailed specification reviews and risk mitigation prior to order placement. The full spectrum of [B2B Supply Chain Services from China](#) covers manufacturer selection, negotiation, quality control, and end-to-end logistics coordination.

All customs clearance and international freight matters are managed through our dedicated [Customs and Logistics Division](#), ensuring compliance with destination-country regulations. Corporate buyers may engage our [B2B Supplier Audit Program in China](#) for on-site facility verification and production-capacity assessment.

Our engineering team provides [Comprehensive Equipment Sourcing and Procurement](#) tailored to project-specific requirements, alongside [Integrated Engineering Systems Documentation](#) for installation and commissioning.

For buyers developing technical specifications for Chinese manufacturing partners, we recommend reviewing our guide on [Technical Specification Preparation for Chinese Manufacturers](#). A detailed explanation of specification structures and requirements is available in the [Technical Requirements \(TR\) Documentation](#) section.

Commercial Terms

Parameter	Specification
Unit Price (Variant 1)	75,500 CNY
Payment Terms	30% deposit, 70% before shipment (T/T) or L/C
Price Includes	Packaging, container loading
Price Excludes	Freight, insurance, customs duties, VAT, on-site assembly
Structural Warranty	1 year
Frame Coating Warranty	20 years (galvanization integrity)
Minimum Order Quantity	2 units (1×40HQ container)
Contract Currency	CNY / USD / EUR

Product Gallery



Prefabricated modular buildings and garages for rapid deployment

Frequently Asked Questions

Q1: Is a foundation required for installation? A: For temporary deployment, a level hardstanding surface or concrete paving slabs 200×200 mm is sufficient. For permanent installation, a 300 mm strip foundation or pile-and-beam system is recommended. Anchor bolts are included in the supply.

Q2: Can the unit operate at -30°C winter conditions? A: Yes. The structure is rated for -45°C to +50°C. For year-round occupancy in cold climates, we recommend upgrading EPS panels to 100 mm mineral wool or adding external insulation cladding.

Q3: What is the on-site assembly time? A: With a crane or forklift and a four-person crew, full structural deployment takes 30–60 minutes. Electrical and plumbing connections require an additional 2–3 hours.

Q4: Can the unit be shipped in disassembled (CKD) format? A: Yes. Complete Knock-Down (CKD) shipment is available. In this configuration, up to 4 frame sets and finish materials can be loaded into one 40HQ container.

Q5: What is the service life of the frame and coating system? A: The steel frame undergoes hot-dip galvanization at $\geq 80 \text{ g/m}^2$ followed by two-layer powder coating. Guaranteed frame service life is 20 years; actual performance exceeds 30 years under standard maintenance.

Q6: Is furniture included in the base price? A: No. Furniture is available as an optional package including beds, wardrobes, table, chairs, and sofa. Full furniture fit-out adds 8,000–12,000 CNY per unit.

Q7: Can the layout be modified (e.g., remove one bedroom, enlarge living area)? A: Yes. Layouts are fully customizable at the production stage. Options include: 1-bedroom + living, 3-bedroom, open-plan studio, or commercial office configuration. Layout changes do not affect pricing if total partition area remains constant.

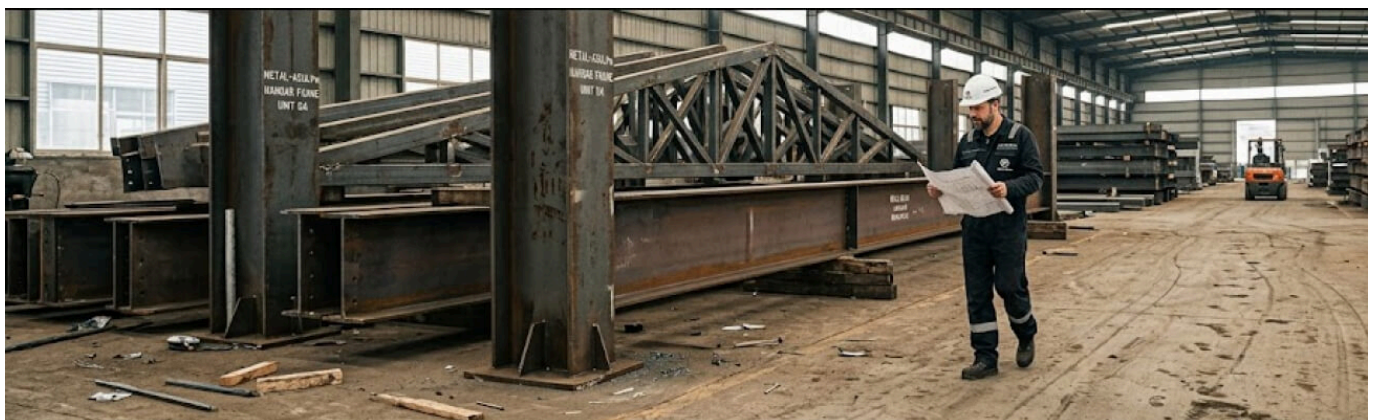
Q8: What documentation is provided for customs clearance? A: The supply package includes: Commercial Invoice, Packing List, Certificate of Origin (Form A), Manufacturer Quality Certificate, Technical Passport (English), and TR EAEU Declaration of Conformity (for EAEU destinations, minimum 5-unit orders).

Contact Information

For comprehensive service details, visit [Metal-Asia.pw](https://www.metal-asia.pw).

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Order foldable modular housing with direct supply chain compliance from China