Commercial Proposal No. CP-2026/MODULAR/HANGAR

Global Procurement of Modular Buildings, Container Units & Rapid-Build Hangars from China — Turnkey Delivery

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From: Metal-Asia (metal-asia.pw) — Direct-source modular construction procurement
To: Developers, construction contractors, industrial enterprises, agribusiness, retail chains, private clients
Date: April 2026
Format: B2B/B2C — From standard modules to bespoke architectural projects

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1. Market Context — Why Modular Construction is the Infrastructure Solution for 2026

The global modular construction market is projected to exceed **$215 billion by 2030**, growing at 6.5% CAGR. The residential construction segment alone generates over **6.3 million monthly searches** globally — and an increasing share points to modular and rapid-build solutions. Conventional construction timelines stretch across years; budgets inflate 30–50% above estimates; quality control remains site-dependent and inconsistent.

Factory-built modular construction from China resolves these structural inefficiencies. Production in controlled factory environments + on-site assembly measured in days rather than months = the optimal formula for organizations that value **Supply Chain Compliance** and capital efficiency.

All modules are manufactured at ISO 9001, ISO 14001, and CE-certified facilities. Structural frames use **S350GD Z275 galvanized steel** (EN 10346) — the same grade Metal-Asia supplies in coil form to leading European LSF manufacturers.

View modular building catalog

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2. Five Pain Points of Conventional Construction — Our Solutions

Pain Point 1: Schedule Overrun — "Quoted 3 months, now at 12 months"

The Problem: Conventional construction depends on weather, crew availability, material deliveries, and inspection scheduling. Each delay cascades: concrete pour delayed → formwork occupied → crew moves to another site.

Our Solution: Module fabrication runs parallel to site foundation preparation. Production: **20–30 days**. On-site assembly: **1–3 days**. Total cycle from contract to occupancy: **30–45 days** vs. 8–12 months conventionally.

Pain Point 2: Budget Uncertainty

The Problem: Final construction costs rarely match initial estimates. Change orders, material waste, design errors — all flow to your balance sheet.

Our Solution: Fixed contract pricing. Each module is a complete product with fixed unit cost. Budget variation > 3% only occurs through post-contract client change orders.

Pain Point 3: Inconsistent Site Quality

The Problem: On-site trades produce variable results: out-of-plumb walls, thermal bridging, incorrect waterproofing. Post-completion remediation becomes your liability.

Our Solution: Factory quality control at every stage: robotic welding (deviation ±1 mm), automated insulation placement, climate-controlled window installation. Every module undergoes electrical and plumbing operational testing before dispatch.

Pain Point 4: Seasonal Construction Windows

The Problem: In temperate climates, active outdoor construction is limited to 5–7 months annually. Winter conditions slow productivity by 50% or more.

Our Solution: Modular buildings install **year-round** at temperatures from –30°C to +45°C. Foundations use helical screw piles (installed in 1 day in winter conditions) or conventional strip footings where ground conditions permit.

Pain Point 5: Regulatory Complexity

The Problem: Building permits, occupancy certificates, utility connections — months of administrative processing.

Our Solution: Modular structures under 50 m² on screw piles typically qualify as **temporary structures** in most jurisdictions, exempting them from full building permit requirements. For permanent installations, Metal-Asia provides complete documentation packages: structural calculations, material certificates, CE/UL compliance data.

View shipping terms

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3. Complete Product Catalog

3.1. Site Offices & Container Units

Model	Floor Area, m²	Dimensions, mm	Specification	Price, USD (FOB)
SOC-01 Standard	15	6,000×2,500×2,500	Lighting, sockets, convector heater	2,800–3,200
SOC-02 Enhanced	18	6,058×2,438×2,591	Electrical, HVAC, ventilation	3,400–3,900
SOC-03 Office	21	7,000×3,000×2,800	AC, sanitary unit, kitchenette	4,500–5,200

Model	Floor Area, m²	Dimensions, mm	Specification	Price, USD (FOB)
SOC-04 Workforce	30	9,000×3,000×2,800	4 berths, shower, kitchen	6,200–7,100
SOC-05 Medical	18	6,058×3,000×2,800	Examination room, sink, UV lamp	4,800–5,500

Standard Technical Specifications:

Parameter	Specification
Frame	Galvanized steel profile S350GD Z275, 1.5–2.0 mm
External cladding	Corrugated metal with polymer coating 0.5 mm (RAL to choice)
Insulation	Mineral wool 100 mm (density 100 kg/m³), λ = 0.042 W/(m·K)
Internal finish	MDF 8 mm / gypsum board / PVC panels
Floor	CSP 22 mm + vinyl/laminate
Roof	Flat with internal drainage, PVC membrane waterproofing
Windows	PVC double-glazed 600×800 mm
Door	Insulated steel 900×2,000 mm
Electrical	Distribution board 16A, 4–8 sockets, 4–6 LED fittings
U-value (envelope)	0.38–0.45 W/(m²·K) — compliant with EN ISO 6946

Container unit catalog

3.2. Modular Residential Buildings

Model	Floor Area, m²	Bedrooms	Bathrooms	Turnkey Price, USD
MR-45 Compact	45	1	1	28,000–34,000
MR-60 Family	60	2	1	38,000–46,000
MR-80 Comfort	80	2	1	52,000–62,000
MR-100 Premium	100	3	2	68,000–82,000
MR-120 Estate	120	3	2	82,000–98,000

Modular houses are assembled from **2–4 transportable modules**, each up to 14×3.5 m (road transport dimensions). On-site modules are joined to form a monolithic structure. Internal joints are finished with decorative trim; external joints are sealed with EPDM gaskets and clad with facade cassettes.

Technical Parameter	Specification
Load-bearing frame	LSF profiles S350GD Z275, 1.2–2.0 mm

Technical Parameter	Specification
Wall insulation	Mineral wool 150 mm + wind barrier + vapor barrier
Roof insulation	Mineral wool 200 mm
Foundation	Helical screw piles Ø108 mm (included in price)
Roofing	Monterrey metal tile or standing seam
Facade	Vinyl siding / HPL facade cassettes / brick-effect panels
Engineering	380V / 15 kW electrical, water supply, sewage, heating
Glazing	Triple-glazed PVC, Low-E coated
Design life	50+ years (with facade maintenance)

View modular homes from China

3.3. Rapid-Build Hangars & Warehouses

Model	Floor Area, m²	Span, m	Height, m	Price, USD
HNG-200 Light	200	12	4.5	18,000–22,000
HNG-500 Standard	500	18	5.5	35,000–42,000
HNG-1000 Industrial	1,000	24	6.5	62,000–75,000
HNG-2000 Logistics	2,000	30	8.0	115,000–138,000
HNG-Crane (with overhead crane)	500+	18	8.5+	On request

Structural System:

Component	Material	Standard
Columns	Welded I-beam / tube Ø325×8	EN 10346, S355J2H
Roof trusses	Tube Ø89×3.5 + flat bracing	EN 10219, S235JRH
Bracing	Angle 63×63×5	EN 10056
Wall cladding	Sandwich panels 100 mm (PUR/mineral wool)	EN 14509
Roof cladding	Sandwich panels 150 mm + waterproofing	EN 14509
Wind bracing	Galvanized angle L40×40×3	EN 10056
Foundation	Reinforced concrete column bases	Project-specific

Engineering: Hangars designed for snow load 180–240 kg/m² (EN 1991-1-3, snow zones II–V), wind load to 48 m/s (EN 1991-1-4). Truss assembly uses high-strength bolts (Class 10.9) — no on-site welding required, assembly speed 3× faster.

View hangar catalog

3.4. Workforce Camps & Modular Accommodation

Model	Capacity	Modules	Floor Area, m²	Price, USD
WFC-24 Mini	24 persons	6	144	52,000–62,000
WFC-50 Standard	50 persons	12	300	98,000–118,000
WFC-100 Complex	100 persons	24	600	185,000–220,000
WFC-200+ (with mess hall)	200+	50+	1,500+	On request

Standard camp configuration includes: dormitory modules (2–4 persons/room), Ablution & Changing Module (ACM) with showers and lockers, mess hall (50+ seats), laundry, medical point, security post. All equipment is factory-certified with CE marking.

View workforce camp options

3.5. Modular Offices & Retail Kiosks

Model	Floor Area, m²	Application	Price, USD
OF-20 Kiosk	20	Retail point / F&B outlet	12,000–15,000
OF-36 Office	36	Sales office / agency	22,000–27,000
OF-72 Double	72	Office + showroom	38,000–46,000
OF-150 Business Hub	150	6–8 workstations + meeting room	72,000–88,000

Office & commercial modules

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4. Supply Chain Risk Management — Modular Construction

Risk 1: Appearance Discrepancy vs. Website Photos

Mitigation: Pre-shipment video call from factory. Photo of every completed module with order number placard. Client representative inspection welcome (accommodation covered for orders ≥ $100,000).

Risk 2: Transit Damage

Mitigation: Marine-grade packaging — timber frame around module, tarpaulin, steel strapping. Cargo insurance at 110% of invoice value. Zero damage claims across 4 years of shipments.

Risk 3: Electrical Incompatibility

Mitigation: All distribution boards assembled with ABB/Schneider components (230V/400V, 50/60 Hz). EU/US standard sockets with earth. Copper wiring H05RR-F 1.5–2.5 mm². Insulation resistance test report (megger) provided on delivery.

Risk 4: Customs Classification

Mitigation: Metal-Asia trade compliance team prepares Binding Tariff Information (BTI) pre-shipment. Classification examples:

- Ready container units: **8609.00**
- Modular buildings in kit form (panels + frame): **9406.20**
- LSF steel frames: **7308.90**

Risk 5: Installation Crew Incompetence

Mitigation: Complete assembly drawing set with step-by-step instructions (IKEA-style). Optional: Chinese supervisor deployment (basic English + technical translator). Installation partner network in EU, Middle East, and Southeast Asia.

View international shipping routes

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5. Customs Documentation Package

Product	HS Code	Documentation
Ready container unit	**8609.00**	CE marking, factory certificate
Modular building (kit form)	**9406.20**	CE/UL conformity assessment
LSF steel frame	**7308.90**	EN 10346 mill certificate
Sandwich panels	**7308.90**	Fire test report (EN 13501-1)
Metal roofing tile	**7210.70**	Coating certificate
Sanitary equipment	Various	WRAS/NSF certification where applicable

Standard Documentation Package:

- Factory Quality Certificate per module
- Fire test report for insulation (EN 13501-1: Class E or better)
- Electrical insulation resistance protocol
- Hygienic certificate for finishing materials
- Certificate of Origin (Form A or EUR.1 where applicable)
- Assembly and operation manual (English)
- Lifting and handling instructions

View payment options

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6. Project Implementation Timeline

Phase	Duration	Activities
1. Consultation & Quotation	1–3 days	Requirements capture, model selection, preliminary estimate

Phase	Duration	Activities
2. Design Development	5–10 days	Layout, elevations, MEP design. 3D visualization approval
3. Contract & Deposit	1–2 days	Contract execution, specification annex, 30% deposit
4. Production	20–35 days	Factory module fabrication, photo/video reporting
5. Quality Control	2–3 days	Acceptance testing, electrical integrity, watertightness
6. Shipment & Delivery	25–45 days	Ocean freight to destination port, customs clearance
7. Installation	1–7 days	Foundation placement, module connection, commissioning
8. Warranty Service	24 months	Phone/email support, site visit for critical defects

7. Comparative Analysis — Modular vs. Conventional Construction

Parameter	Modular from China	Masonry/Block	On-site Timber Frame
Construction time (100 m²)	35–45 days	8–12 months	4–6 months
Turnkey cost per m²	600–900 USD	1,200–2,000 USD	900–1,500 USD
Structural warranty	50 years (frame)	5 years (typical)	10–15 years
Wall U-value	0.38–0.45 W/(m²·K)	0.5–0.8	0.35–0.5
Seismic resistance	9 intensity (MSK)	6–7 intensity	7–8 intensity
Sustainability	100% recyclable steel	High carbon footprint	Dependent on insulation
Relocatable	Yes (dismantle in 1–2 days)	No	Partially
Year-round construction	Yes	May–September	March–October

Conclusion: Modular construction delivers **6–8× faster** completion, **1.5–2× lower** cost, and **1.3–1.5× superior** seismic resistance. Transport limitation: module width 3.5 m, length 14 m (road transport).

View ready-to-ship homes from China

8. Frequently Asked Questions

Q: What foundation is required for a modular house?
A: Helical screw piles Ø108 mm (installed in 1 day) or shallow strip footings (400–600 mm depth).

Foundation design is based on your site geotechnical report.

Q: Can multiple modules be combined into a single large house?
A: Yes — this is standard practice. A 100 m² house typically comprises 3–4 modules. Inter-module joints are sealed and trimmed, creating a continuous living space without thermal bridging.

Q: What heating system is used?
A: Electric convector heaters (standard) or electric boiler with wet radiator system (upgrade). For extreme cold climates (below –30°C), underfloor heating is available as an option in all rooms.

Q: Are your modules suitable for extreme climates?
A: Yes. Wall insulation of 150–200 mm mineral wool achieves U-value 0.38 W/(m²·K), compliant with EN ISO 6946 for Climate Zone IV (Scandinavia, Northern Canada, Alaska). Upgradeable to 250 mm insulation on request.

Q: Can internal layouts be modified?
A: In panel-built modular homes, the layout is fixed (load-bearing walls). Metal-Asia also supplies LSF frame homes where partitions are non-load-bearing and layouts are fully flexible.

View flat-pack house options

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9. Next Steps — Request Your Quotation

To receive a tailored commercial proposal:

1. Define building type (container / house / hangar / office / camp)
2. Specify approximate floor area or occupancy
3. Indicate destination region (for snow/wind load calculations)
4. Submit inquiry via our contact form or email

Our engineering team will prepare your proposal within **24 hours**.

Yours sincerely,
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SEO Clusters: modular building China, prefab house supplier, rapid-build warehouse, modular office container, workforce accommodation camp, flat-pack house China, modular home price, steel frame hangar, sandwich panel building, turnkey modular construction, site office container, rapid-build shed, EN 1090 modular structure, CE certified prefab building, global modular procurement.