

Light Gauge Steel Framing Machine — XHH-89-JC

Commercial Proposal — Metal-Asia Industrial Solutions Global Procurement & Supply Chain
Compliance | B2B / B2C | EMEA · APAC · Americas

Executive Summary

The XHH-89-JC is an **entry-level roll-forming platform** designed for fabricators seeking to enter the light-gauge steel framing (LGS) market with controlled capital expenditure. It produces the industry-standard **89 mm C-section profile** used in floor joists and roof trusses for residential and light commercial structures up to 3 storeys.

The JC configuration differs from the full C89 specification by omitting the flange chamfering station and bolt-hole punching station. For the majority of startup operations, this is non-critical — flange chamfers can be processed manually in seconds, and bolt holes are typically drilled on a separate stationary press. The trade-off is a **significantly lower initial investment** with identical roll-forming output quality and line speed.

Metal-Asia Industrial Solutions provides **direct factory procurement** with **supply chain compliance**, pre-shipment FAT, and **turnkey installation & commissioning** globally. We also offer [equipment selection advisory](#) to ensure clients do not over-invest in capabilities that will remain unused during the first 24 months of operation.

Application Scope

Parameter	Specification
Construction Type	Cold-formed floor joists, roof trusses, light framing members
Building Height	2–3 storeys
Output Profile	C89 joists, C89 truss chords, lattice joists

Technical Specifications

Machine Dimensions & Weight

Parameter	Specification
Model	C89-JC
Overall Dimensions (L × W × H)	2,850 × 820 × 1,480 mm
Estimated Machine Weight	~1.8 t
Power Supply	380 V / 50 Hz / 3-Phase

Electrical Parameters

Parameter	Specification
Main Motor Power	5.5 kW
Hydraulic Motor	5.5 kW
Total Installed Power	11 kW

Forming Parameters

Parameter	Specification
Forming Stages	8 stands
Line Speed	up to 700 m/h
Shift Output Capacity	2–3 t per 8-hour shift

Profile Geometry

Parameter	Specification
Effective Profile Width	89 mm
Coil Width (Feed Stock)	174 mm
Flange Height	38 mm
Lip Radius	9 mm
Material Thickness Range	0.6 – 1.2 mm

Dimensional Accuracy

Parameter	Specification
Punching & Cutting Tolerance	±0.5 mm
Roll-Forming Tolerance	±0.75 mm

LGS Components Produced

This line manufactures the following structural cold-formed steel elements:

- **Floor Joists** (C89 joists for intermediate floors)
- **Roof Trusses** (C89 truss chords and webs)
- **Lattice Joists** (open-web joists for long-span floors)

Control System & Software

Component	Specification
Control Architecture	Industrial PC (IPC) with real-time CNC kernel
Design Software	Vertex Design — lifetime licence, no recurring fees
CNC Functionality	Full computer numerical control
Punch Position Control	Closed-loop servo positioning
Cut-to-Length Control	Servo-driven flying cutoff
Batch Quantity Control	Automated piece counting
Real-Time Monitoring	Live production dashboard
Remote Access	Secure VPN diagnostics
Remote Maintenance	Over-the-air software updates & support

Standard Scope of Supply

Item	Description	Qty
1	Main roll-forming machine	1 set
2	3-tonne powered decoiler	1 set
3	Servo drive system	1 set
4	Industrial PC controller (Lenovo)	1 unit
5	Production management software	1 licence
6	Vertex Design software (lifetime)	1 licence
7	Hydraulic post-cutoff station	1 set
8	Automatic ink-jet marking system	1 set
9	Product receiving table (4 m)	1 unit
10	Operator manuals & documentation	1 set

Comparison with Full C89 Specification

Parameter	C89-JC	C89 (Full)
Main Motor Power	5.5 kW	7.5 kW
Hydraulic Motor Power	5.5 kW	7.5 kW
Forming Stages	8	9
Shift Output	2–3 t / 8 h	4–5 t / 8 h
Overall Dimensions	2,850 × 820 × 1,480 mm	4,200 × 800 × 1,100 mm

Parameter	C89-JC	C89 (Full)
Flange Chamfering	No	Yes
Edge Trimming	No	Yes
Bolt Hole Punching	No	Yes

Tooling & Wear-Part Materials

Component	Material	Heat Treatment / Coating
Forming Rolls	Cr12 / SKD-11	Vacuum Hardened + Hard Chrome Plating
Roll Shafts	40Cr / SKD-11	Precision ground

Operating Environment

Parameter	Specification
Ambient Temperature	+5 °C to +45 °C
Relative Humidity	≤ 80% (non-condensing)
Supply Voltage	380 V ± 10%
Supply Frequency	50 Hz
Required Floor Area	15–25 m ²

HS Code & Customs Clearance

Parameter	Specification
HS Code (Harmonised System)	8462.29.10.00
Customs Description	Machines for bending, folding, straightening or flattening — numerically controlled
Import Duty Rate	0–5% (varies by country of destination)
VAT / GST	Per local jurisdiction
Required Certification	CE Declaration of Conformity (Machinery Directive 2006/42/EC); ISO 9001 factory audit
Customs Lead Time	5–10 business days (DDP shipments)
Packaging	Vacuum-sealed moisture barrier + plywood crate + steel strapping

Installation & Commissioning — Turnkey Services

Phase	Deliverables	Duration
Site Readiness Review	Foundation load analysis, electrical schematics, ventilation requirements	1–2 weeks pre-delivery
Mechanical Installation	Machine levelling, decoiler alignment, connections, guarding	2–4 days
Electrical & Control Integration	Power hook-up, IPC commissioning, safety circuit verification	1–2 days
Calibration & Trial Run	Roll gap setting, cutoff calibration, test run	1–2 days
Operator Training	Machine operation, Vertex Design fundamentals	2–3 days
Production Ramp-Up	Supervised first-batch production	1 day
Warranty Period	12 months from FAT sign-off	12 months

Our field-service engineers are deployed globally. All travel and accommodation costs are included. For logistics details, refer to our [Global Delivery Services](#).

Supply Chain Risk Management

Risk Category	Consequence Without Compliance Partner	Our Mitigation Protocol
Unverified Factory	Substandard equipment, missing documentation	Factory Qualification Audit — ISO 9001, Machinery Directive, 5-year trading history
Specification Drift	Equipment without ordered options	Pre-Shipment FAT — run against signed specification
Logistics Complexity	Port delays, incorrect HS classification	In-house customs brokerage. Global Trade Compliance
Post-Sales Vacuum	Breakdown with no local support	Regional service hubs. Spare Parts Inventory
Communication Errors	Mismatched technical requirements	Bilingual engineering team. Technical Specification Development
Payment & FX Risk	Frozen funds, fraud	Trade Finance & Escrow — letters of credit, milestone payments
Regulatory Non-Compliance	Fails CE/UL certification	Technical Compliance Audit — destination-market verification

Incoterms 2020 — Delivery Options

Term	Scope	Lead Time
EXW	Ex-Works factory gate, Xiamen, China	35–50 days production
FOB	Free On Board, Xiamen port	35–50 days + 3 days loading
CIF	Cost Insurance Freight to destination port	35–50 days + 25–40 days ocean transit
DAP	Delivered At Place — door-to-door including customs clearance	65–90 days total
DDP	Delivered Duty Paid — comprehensive door-to-door	70–95 days total

Frequently Asked Questions (FAQ)

Q1: Why is the JC variant less expensive than the standard C89? A: Lower motor power (11 kW vs. 15 kW), smaller footprint, and the absence of the punching/flange-chamfer station. For startups, these represent optimal trade-offs. Upgrade modules can be retrofitted during subsequent service visits.

Q2: Can punching stations be retrofitted later? A: Yes. The C89-JC chassis is mechanically compatible with bolt-hole punching and flange-chamfer modules. We can install these during a scheduled service visit.

Q3: What feedstock steel is required? A: Hot-dipped galvanised coil, 174 mm width, 0.6–1.2 mm thickness, G300–G550 grade. Available through our [Global Steel Sourcing Programme](#).

Q4: How much lower is the throughput? A: 2–3 tonnes per 8-hour shift vs. 4–5 tonnes on the full C89. For startup volumes below 300 m²/month, this is adequate.

Q5: What warranty coverage is provided? A: 12 months from Factory Acceptance Test (FAT) sign-off. Includes replacement parts, remote diagnostics, and on-site engineer dispatch.

Q6: Do you maintain a spare parts inventory? A: Yes. 1–3 business days dispatch from regional hubs. Full catalogue: [Industrial Automation & Spare Parts](#).

Q7: How much floor space is required? A: Only 15–25 m². The C89-JC is the most compact machine in the range — suitable for small workshops.

Q8: Is a dedicated foundation required? A: No. At 1.8 tonnes, the machine requires only a standard industrial concrete floor (minimum 150 mm thickness).

Contact & Procurement

Detail	Information
Company	Metal-Asia Industrial Solutions
Website	www.metal-asia.pw
Division	Global Procurement — Light Gauge Steel Equipment

Detail	Information
Email	procurement@metal-asia.pw
Office Locator	See Contact Directory

Ready to start LGS production with minimal capital outlay? Email procurement@metal-asia.pw — we will prepare a proposal for the C89-JC and advise on [equipment selection based on your technical requirements](#) within 4 hours.