Light Gauge Steel Framing Machine — XHH-5S-C75

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

Executive Summary

The XHH-5S-C75 is a compact roll-forming line engineered for economical production of **75 mm wide cold-formed steel profiles** — the optimal choice for light partition walls, single-storey structures, and non-load-bearing interior framing. By reducing profile width from the standard 89 mm to 75 mm, fabricators achieve **measurable material savings** (strip width reduced from 174 mm to 160 mm) while maintaining structural adequacy for 1–2 storey applications.

This machine is ideal for entry-level LGS fabricators, interior fit-out contractors, and developers of light-gauge modular structures where floor-to-floor heights do not exceed single-storey or low-rise parameters.

Metal-Asia Industrial Solutions provides **direct factory procurement** with **supply chain compliance**, pre-shipment FAT (Factory Acceptance Testing), and **turnkey installation & commissioning** globally.

For bundled steel procurement, we offer galvanised coil supply and structural steel grades through our Global Metals Programme.

Application Scope

Parameter	Specification
Construction Type	Light partition walls, non-load-bearing interior framing, single-storey enclosures
Building Height	1–2 storeys
Output Profile	C75 studs, C75 tracks, light floor joists, wall panels

Technical Specifications

Machine Dimensions & Weight

Parameter	Specification
Model	C75
Overall Dimensions (L × W × H)	4,200 × 800 × 1,100 mm
Estimated Machine Weight	~2.3 t
Power Supply	380 V / 50 Hz / 3-Phase

Electrical Parameters

Parameter	Specification
Main Servo Motor	7.5 kW
Hydraulic Motor	7.5 kW
Total Installed Power	15 kW

Forming Parameters

Parameter	Specification
Forming Stages	9 stands
Line Speed	700 m/h
Shift Output Capacity	4–5 t per 8-hour shift

Profile Geometry

Parameter	Specification
Effective Profile Width	75 mm
Coil Width (Feed Stock)	160 mm
Flange Height	38 mm
Lip Radius	9 mm
Material Thickness Range	0.6 – 1.0 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:

- **Vertical Studs** (C75 load-bearing studs for light framing)
- **Horizontal Tracks** (C75 top/bottom plates)
- **Floor Joists** (C75 joists for low-rise floors)
- **Roof Trusses** (C75 truss chords and webs)
- **Node Plates** (pre-punched connection plates)

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 automatic punching station	1 set
8	Hydraulic post-cutoff station	1 set
9	Automatic ink-jet marking system	1 set
10	Product receiving table (4 m)	1 unit
11	Operator manuals & documentation	1 set

Punching Capabilities

The hydraulic automatic punching station performs the following operations:

- Web notching (service penetrations)
- Swage / dimple embossing
- Service hole punching
- Flange chamfering (lip notching)

- Crimping / dimple creation
- Bolt hole punching (M12 / M16 clearance)

Key Technology Features

1. Compact Profile = Material Efficiency

The 75 mm profile width reduces strip consumption by 14 mm per profile compared to 89 mm equivalents. For high-volume fabricators, this translates into **direct material cost reduction** without compromising structural performance for low-rise applications.

2. Post-Cutoff & Post-Punch Technology

Post-punch and post-cut architecture delivers superior length accuracy and hole positioning compared to pre-punch configurations. This eliminates material stretch-induced dimensional drift.

3. Seamless End-Connection Geometry

Patented LGS FORMER geometry ensures the vertical stud web flows continuously into top and bottom track webs, creating a direct load-transfer path from floor to floor — a critical safety advantage over conventional framing.

4. Continuous Slotting Without Burr Extrusion

The post-punch system enables continuous web slotting in material as thin as 0.55 mm without burr extrusion, preventing jamming during roll-forming and maintaining coating integrity.

5. Material Optimisation

Metric	Value
Coil Start Waste	0.02 m
End-of-Run Waste	1.0 m
Strip Width	160 mm (narrower than C89 equivalents)

6. Material Savings — 200 m² Building Example (Estimated)

Material Thickness	Steel Saved vs. C89
0.8 mm	~380 kg
1.0 mm	~480 kg

Tooling & Wear-Part Materials

Component	Material	Heat Treatment / Coating
Forming Rolls	Cr12 / SKD-11	Vacuum Hardened + Hard Chrome Plating

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Roll Shafts	40Cr / SKD-11	Precision ground
Punch Tooling	Cr12MoV / SKD-11	Hardened to 58–62 HRC
Cutoff Blades	Cr12MoV / SKD-11	Hardened to 58–62 HRC

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	20–30 m²

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

Metal-Asia Industrial Solutions provides comprehensive **Installation & Commissioning (I&C)** packages for clients without in-house mechanical integration capabilities.

Phase	Deliverables	Duration
Site Readiness Review	Foundation load analysis, electrical schematics, ventilation requirements	1–2 weeks pre-delivery

Phase	Deliverables	Duration
Mechanical Installation	Machine levelling, decoiler alignment, hydraulic connections, guarding installation	3–5 days
Electrical & Control Integration	Power hook-up, IPC commissioning, safety circuit verification	2–3 days
Calibration & Trial Run	Roll gap setting, punch-die alignment, cutoff calibration	2–3 days
Operator Training	Machine operation, Vertex Design fundamentals, preventive maintenance	3–5 days
Production Ramp-Up	Supervised first-batch production, quality verification	1–2 days
Warranty Period	12 months from FAT sign-off	12 months

Our field-service engineers are deployed globally. All travel and accommodation costs are included in the I&C package. For logistics details, refer to our Global Delivery Services.

Supply Chain Risk Management

Global procurement of capital equipment from Chinese manufacturers involves documented risks. Metal-Asia Industrial Solutions mitigates these through a formalised **Vendor Qualification & Supply Chain Compliance** programme.

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; photo/video evidence
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

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Incoterms 2020 — Delivery Options

Term	Scope	Lead Time
EXW	Ex-Works factory gate, Xiamen, China	45–60 days production
FOB	Free On Board, Xiamen port	45–60 days + 3 days loading
CIF	Cost Insurance Freight to destination port	45–60 days + 25–40 days ocean transit
DAP	Delivered At Place — door-to-door including customs clearance	75–100 days total
DDP	Delivered Duty Paid — comprehensive door-to-door	80–110 days total

Frequently Asked Questions (FAQ)

Q1: How does C75 differ from C89? A: Narrower profile (75 mm vs. 89 mm), narrower coil (160 mm vs. 174 mm), resulting in lower steel consumption per square metre of framed area. Maximum thickness is 1.0 mm (vs. 1.2 mm on C89). Optimal for light-gauge, low-rise structures.

Q2: What feedstock steel is required? A: Hot-dipped galvanised coil, 160 mm width, 0.6–1.0 mm thickness, G300–G550 grade per EN 10346 or ASTM A653. Available through our Global Steel Sourcing Programme.

Q3: Is C75 suitable for interior partition walls? A: Yes. C75 is the standard profile for non-load-bearing interior partitions in LGS construction. It carries partition loads without requiring additional structural reinforcement.

Q4: What does turnkey installation cost? A: Included in the DAP package. For other Incoterms, quoted separately. Submit your requirements for a detailed proposal.

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: Can we witness the Factory Acceptance Test (FAT)? A: Yes. Live video-streamed FAT sessions are standard. On-site visits to Xiamen with our escort can also be arranged.

Q8: How many operators are required? A: One operator per shift. The machine is fully automatic — load the coil, select the program, monitor production from the IPC panel.

Contact & Procurement

Detail	Information
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Website	www.metal-asia.pw

Detail	Information
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Office Locator	See Contact Directory

Request a Quotation: Submit your technical requirements through our main procurement portal or email procurement@metal-asia.pw. Our engineering team responds within 4 business hours.