

Comparative Technical Specification — Light Gauge Steel Framing Machines

Metal-Asia Industrial Solutions — Global Procurement Division Supply Chain Compliance · Factory-Direct Procurement · Turnkey Commissioning | EMEA · APAC · Americas

How to Select an LGS Roll-Forming Machine: A Technical Guide

Metal-Asia Industrial Solutions has compiled comprehensive technical specifications for the complete range of light-gauge steel framing equipment we deliver worldwide. This document provides side-by-side comparison tables, application guidance, and procurement recommendations for international distributors, EPC contractors, and capital-equipment buyers.

For organisations without in-house mechanical integration capability, we provide [turnkey installation and commissioning services](#) with full operator training and 12-month warranty coverage.

Supplier Overview

Parameter	Specification
Company	Metal-Asia Industrial Solutions
Website	www.metal-asia.pw
Specialisation	Direct factory procurement of industrial equipment from China
Coverage	EMEA, APAC, Americas
Experience	Since 2016
Design Software	Vertex Design (lifetime licence included with every machine)
Service Model	Turnkey installation, spare parts, remote diagnostics

Side-by-Side Model Comparison

General Machine Parameters

Parameter	XHH-5S-C89	Rollex-2020	XHH-5S-C75	XHH-89-JC	XHH-C140	XHH-C160	XHH-C310
Profile Model	C89	C89/91	C75	C89-JC	C140	C160	C305/310
Dimensions (L×W×H), mm	4,200×800×1,100	4,100×920×1,440	4,200×800×1,100	2,850×820×1,480	5,100×1,600×1,100	5,400×1,300×1,600	7,600×1,500×1,700
Main Drive, kW	7.5	7.5	7.5	5.5	11	15	22
Hydraulic Drive, kW	7.5	7.5	7.5	5.5	11	11	11
Total Power, kW	15	15	15	11	22	26	33
Power Supply	380V/50Hz/3Ph	380V/50Hz/3Ph	380V/50Hz/3Ph	380V/50Hz/3Ph	380V/50Hz/3Ph	380V/50Hz/3Ph	380V/50Hz/3Ph

Forming Parameters

Parameter	XHH-5S-C89	Rollex-2020	XHH-5S-C75	XHH-89-JC	XHH-C140	XHH-C160	XHH-C310	XHH-C75-160
Forming Stages	9	9	9	8	12	12	12	17
Line Speed, m/h	700	700	700	700	700	700	~500	2,100*
Shift Output	4–5 t/8h	4–5 t/8h	4–5 t/8h	2–3 t/8h	4–7 t/8h	4–7 t/8h	15 t/8h	—
Punch/Cut Tolerance	±0.5 mm	±0.5 mm	±0.5 mm	±0.5 mm	±0.5 mm	±1.0 mm	±1.0 mm	±1.0 mm
Forming Tolerance	±0.75 mm	±0.75 mm	±0.75 mm	±0.75 mm	±1.0 mm	±1.0 mm	±1.0 mm	±1.0 mm

*2,100 m/h in continuous mode (no punching/cutoff). Working speed with punching/cutoff ~700 m/h.

Profile Geometry

Parameter	XHH-5S-C89	Rollex-2020	XHH-5S-C75	XHH-89-JC	XHH-C140	XHH-C160	XHH-C310	XHH-C75-160
Profile Width, mm	89	89/91	75	89	140	160	305/310	75–140
Coil Width, mm	174	174	160	174	235	255	425	≤500
Flange Height, mm	38	38	38	38	41	41	50	41
Lip Radius, mm	9	9	9	9	10	9	12	10
Thickness, mm	0.6–1.2	0.6–1.2	0.6–1.0	0.6–1.2	0.8–1.5	0.8–2.0	0.95–2.5**	0.6–1.5

**G300–G450: 0.95–2.5 mm; G550: 0.95–2.0 mm.

Application Matrix

Model	Construction Type	Building Height	Primary Output
XHH-5S-C89	Light-gauge steel framing	2–3 storeys	Studs, tracks, joists, trusses
Rollex-2020	Light-gauge steel framing	2–3 storeys	Trusses, joists, studs (+30% speed)
XHH-5S-C75	Light partition walls	1–2 storeys	Wall panels, light joists, trusses
XHH-89-JC	Floor joists, trusses	2–3 storeys	Joists, trusses (entry-level, no punching)
XHH-C140	Structural framing	1–6 storeys	Frames, trusses, beams
XHH-C160	Heavy studs and tracks	1–6 storeys	Studs, tracks, rigid frames, trusses
XHH-C310	Primary structural beams	Commercial/industrial	Wide beams, heavy trusses
XHH-C75-160	Universal production	1–6 storeys	All profile types 75–140 mm

Standard Scope of Supply Comparison

Component	C89	Rollex-2020	C75	C89-JC	C140	C160	C310	C75-160
Main machine	✓	✓	✓	✓	✓	✓	✓	✓
3-tonne decoiler	✓	✓	✓	✓	✓	✓	✓	✓
Servo drive	✓	✓	✓	✓	✓	✓	✓	✓
IPC (Lenovo)	✓	✓	✓	✓	✓	✓	✓	✓
Production software	✓	✓	✓	✓	✓	✓	✓	✓
Vertex (lifetime)	✓	✓	✓	✓	✓	✓	✓	✓
Hydraulic punch station	✓	✓	✓	✗	✓	✓	✓	✓
Hydraulic cutoff	✓	✓	✓	✓	✓	✓	✓	✓
Ink-jet marker	✓	✓	✓	✓	✓	✓	✓	✓
4-metre table	✓	✓	✓	✓	✓	✓	✓	✓
Documentation	✓	✓	✓	✓	✓	✓	✓	—

Tooling Material Specifications

Component	Standard Models (C89/C75)	Heavy-Duty Models (C140–C310)
Forming Rolls	Cr12 — vacuum hardening + hard chrome	SKD-11 — vacuum hardening + hard chrome
Roll Shafts	40Cr	SKD-11
Punch Tooling	Cr12MoV	SKD-11
Cutoff Blades	Cr12MoV	SKD-11

Procurement Recommendations

Use Case	Recommended Model	Rationale
Standard 2–3 storey residential (general purpose)	XHH-5S-C89	Optimal price-to-performance ratio
High-volume C89/C91 fabrication (+30% throughput)	Rollex-2020	Speed advantage, dual-profile capability
Partition walls, low-rise, material-conscious	XHH-5S-C75	Narrower strip = lower material cost per m ²
Entry-level production (minimum capital)	XHH-89-JC	Lowest initial investment, upgradeable

Use Case	Recommended Model	Rationale
Multi-storey (1–6 storeys), structural members	XHH-C140	140 mm web = 60% higher section modulus
Heavy-gauge studs/tracks, industrial buildings	XHH-C160	160 mm web, up to 2.0 mm material
Wide-span primary beams, commercial structures	XHH-C310	305/310 mm web, maximum load capacity
Job-shop: multiple profile families	XHH-C75-160	Four profiles, one machine, 40% lower CAPEX

Universal LGS Technology Features

Core Technology Advantages

- 1. Post-Punch & Post-Cutoff** — superior dimensional accuracy vs. pre-punch configurations
- 2. Seamless End-Connection Geometry** — patented LGS FORMER load-transfer path
- 3. Burr-Free Continuous Slotting** — works from 0.55 mm without material extrusion
- 4. Minimal Material Waste** — 0.02 m start waste, 1.0 m end waste
- 5. Strip Width Optimisation** — 170–174 mm (10 mm narrower than competing designs)
- 6. Remote Diagnostics & Maintenance** — secure VPN access, over-the-air updates
- 7. Vertex Design Integration** — lifetime licence, automated design-to-production workflow

Operating Environment (All Models)

Parameter	Specification
Ambient Temperature	+5 °C to +45 °C
Relative Humidity	≤ 80% (non-condensing)
Supply Voltage	380 V ± 10% / 50 Hz

HS Code & Customs Classification (All Models)

Parameter	Specification
HS Code	8462.29.10.00
Description	Numerically controlled machines for bending, folding, straightening or flattening
Import Duty	0–5% (destination-dependent)
VAT / GST	Per local jurisdiction
Certification	CE Declaration (Machinery Directive 2006/42/EC); ISO 9001 factory audit
Customs Lead Time	5–10 business days (DDP)

Turnkey Installation & Commissioning (All Models)

Phase	Deliverables	Duration
Site Readiness Review	Foundation, electrical, ventilation, crane specifications	1–2 weeks pre-delivery
Mechanical Installation	Levelling, alignment, connections, guarding	2–7 days
Electrical & Control	Power, IPC, network, safety circuits	1–3 days
Calibration & FAT	Roll gap, punch alignment, cutoff calibration	1–5 days
Operator Training	Machine operation, Vertex Design, maintenance	2–7 days
Warranty	12 months from FAT sign-off, remote + on-site support	12 months

For logistics details, refer to our [Global Delivery Services](#).

Supply Chain Risk Management

Risk Category	Impact	Mitigation Protocol
Unverified Factory	Substandard equipment, missing documentation	Factory Qualification Audit — ISO 9001, Machinery Directive, 5-year history
Specification Drift	Missing options, unauthorised substitutions	Pre-Shipment FAT — tested against signed specification
Logistics & Customs	Port delays, incorrect classification	In-house brokerage. Global Trade Compliance
Post-Sales Support	No local service, long response times	Regional hubs. Spare Parts Inventory
Communication	Specification errors, mismatched expectations	Bilingual engineering team. Technical Specification Development

Risk Category	Impact	Mitigation Protocol
Payment & FX	Frozen funds, fraud exposure	Trade Finance & Escrow — L/C, milestone payments
Regulatory	CE/UL/local certification failure	Technical Compliance Audit — pre-order verification

Incoterms 2020 — Delivery Options

Term	Scope	Lead Time
EXW	Ex-Works, Xiamen, China	35–60 days production
FOB	Free On Board, Xiamen port	35–60 days + 3 days loading
CIF	To destination port	35–60 days + 25–40 days ocean
DAP	Door-to-door with customs clearance	65–100 days total
DDP	Door-to-door, all duties and taxes paid	70–110 days total

Frequently Asked Questions (FAQ)

Q1: Which model is recommended for a new LGS fabricator? A: For 90% of startup operations, the C89. It offers the optimal balance of capital cost, throughput, and versatility. For constrained budgets, the C89-JC provides a lower entry point.

Q2: Can additional machines be added to an existing line later? A: Yes. All Vertex Design-controlled machines are software-compatible. One operator training programme covers the entire range. Production expansion does not require retraining.

Q3: What is the full project timeline from purchase order to production? A: 75–100 days total: production (45–60 days) + ocean freight (25–40 days) + customs clearance (5–10 days) + installation (7–10 days).

Q4: Do you supply feedstock steel coils? A: Yes. We offer [galvanised coil procurement](#) and [structural steel grades](#) through our [Global Metals Programme](#).

Q5: What is the minimum workshop footprint for one machine? A: 80 m² minimum for a C89 (production + coil storage + finished goods + office). For C310, plan for 200 m².

Q6: Is a manufacturing licence required for LGS production? A: Requirements vary by jurisdiction. In most markets, standard business registration and adherence to local building codes (e.g., Eurocode 3, AISI S100, AS/NZS 4600) are sufficient.

Q7: What warranty coverage is provided? A: 12 months from Factory Acceptance Test (FAT) sign-off. Includes replacement parts, remote diagnostics via secure VPN, and on-site engineer dispatch for critical failures.

Q8: Is equipment financing available? A: Yes. We work with leading equipment financiers globally. Documentation for credit approval can be prepared upon request.

Contact & Procurement

Detail	Information
Company	Metal-Asia Industrial Solutions
Website	www.metal-asia.pw
Division	Global Procurement — Light Gauge Steel Equipment
Email	procurement@metal-asia.pw
Office Locator	See Contact Directory
LGS Line Catalogue	metal-asia.pw/catalog/liniya-lstk

Require assistance selecting the optimal machine for your project? Email procurement@metal-asia.pw — our engineering team will conduct a [complimentary technical audit](#) and recommend the most cost-effective configuration for your volume, product mix, and budget constraints.