BIW welding lines, tooling and retooling

Body-shop equipment for car plants — supplied from China, delivered to Russia, Central Asia, the Middle East, North Africa and Southeast Asia



A body-in-white welding line built by our manufacturing partner. Plant identification removed.

3	65 / 54 / 180	60 JPH	4
projects delivered to Russian car plants	fixture sets and stands in those three	highest line rate we take	models on one line

We supply a complete welding line, the tooling for a new model on a line you already have, or the stand-by-stand retooling of an existing shop. The engineering and manufacturing are done by our body-shop partner in Wuhu; the contract, the commercial package, export documents, freight and the people on your site are ours. In all three delivered projects the plant kept its own robots and welding equipment.

> **A concept and a quotation come back within one week of complete data.** Prices are never published; every package is quoted itemised, per station, on EXW, FOB, CIF or DAP terms.

Five ways we are bought, largest first

Package	What it covers
Turnkey BIW welding line	A complete body shop or one line inside it — underbody, main framing, body-side, closures, cabin and adjustment — up to 60 JPH and up to 4 models on one line.
Knock-down assembly plant	A new SKD or CKD plant from an empty building: welding, conveying and general assembly in phases, starting with the minimum viable configuration.
Conveying and general assembly	Roller bed and skid, friction, EMS, slat, power-and-free, AGV and painted-body storage; trim, chassis, final, door and sub-assembly lines.
Line retooling	Stand by stand: reuse, rebuild, convert to pneumatic and electrical control, or replace — installation and commissioning priced per item.
Welding fixtures and tooling packages	You keep your robots and welding equipment; we supply fixtures, shared base plates, hangers, rotary and hemming tooling and the station control.

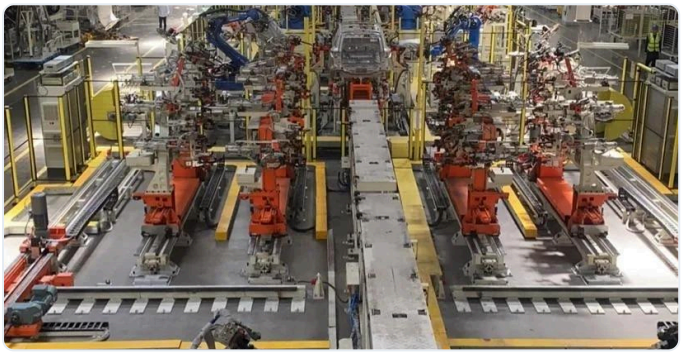
Who supplies what

Settled in writing before we quote. The “Either” rows move to whichever side makes the project cheaper for you.

Item	Normally supplied by	Notes
Welding and assembly fixtures	LIVESPOWER	Every station fixture, shared base plates, hangers and marking.
Robots	Either	Keep the brand your plant already runs, or we supply Chinese robots with the line.
Welding equipment	Either	Spot guns, transformers, arc sets, stud units, sealing pumps — yours or supplied by us.
Positioners and robot bases	Either	Supplied by us unless the plant has them.
Steel structure and platforms	LIVESPOWER	Fixture bases, gates, platforms, hoist tracks where they are in scope.
Conveying between stations	Either	Roller bed and skid, friction, EMS or manual hangers, depending on the rate.
Safety fencing and light curtains	Either	Supplied to the plant’s standard, or by the plant.
Line control and PLC	LIVESPOWER	Station control, safety circuit, HMI, ANDON interface.
Utilities to the cell	Plant	Power, compressed air, water and extraction to the connection points we mark.
Civil works and foundations	Plant	Floor loading, pits and anchor points, to our foundation drawings.
Export packing and shipping	LIVESPOWER	Packing list, container loading plan, export documents, freight to the agreed term.
Installation and commissioning	Shared	Plant supplies cranes, riggers and electricians; we supply the supervision, robot teaching and tuning.

What a body shop is made of

Line	What it contains	Main processes
Underbody and floor line	Front floor, rear floor, floor frame with cross-members, underbody framing.	Spot, arc, stud, sealing
Main framing line	Main body framing gates, respot stations, roof loading.	Spot, MFDC spot, sealing
Body-side line	Body-side inner and outer, wheel house, A/B/C pillars, roof rails.	Spot, arc, hemming
Closure line	Front and rear doors, hood, tailgate, window frames, hemming and mastic.	Spot, hemming, sealing, mastic
Cabin and engine compartment	Engine compartment sub-assembly, shock-tower, upper beams, front-end module.	Spot, arc, CMT
Adjustment and finishing line	Gap and flush adjustment, respot, measuring station, repair bay.	Respot, measuring



Main line with station-to-station transfer.



Robot welding cells, sub-assembly area.

Process capability

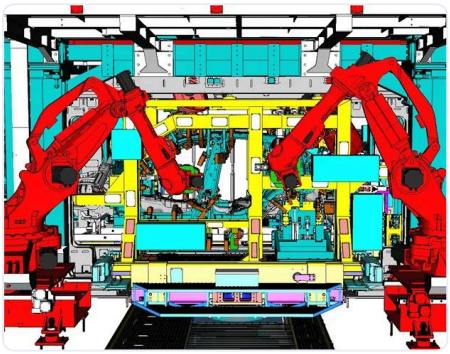
Process	How it is done
Spot welding	Pneumatic and servo guns, standard and MFDC transformers, robot-held and pedestal.
Arc welding and CMT	MIG/MAG on frames and thin-wall sections; Cold Metal Transfer for thin sheet and mixed materials.
Stud welding	Robot stud units for fasteners on floor pans, body-side and closures.
Sealing, mastic and hemming	Heated pumps and robot applicators; roller or table hemming for doors, hood, tailgate and wheel arches.
Handling, framing and measuring	Part loading, station transfer, roof loading, framing gates; in-line or off-line measuring.

The engineering chain

Step	What happens
Process planning	Manufacturability review, station split, weld-spot allocation, line balancing and capacity calculation.
Layout and simulation	Process Designer and Process Simulate for reachability, collision and cycle time; Plant Simulation for material flow, buffers and JPH verification.
Mechanical and electrical design	3D design of fixtures, grippers and steel structure, CAE verification, PLC and safety-circuit design.
Offline programming	Full-line robot programs — main and sub programs, weld and sealing routines, tip dressing and cap change, TCP and base-frame calibration.
Manufacturing	Gantry machining, laser cutting, welding and stress-relief annealing of fixture structures in the builder's own plant.
Pre-integration	The line is assembled, wired, taught and cycle-verified in the 15,000 m² workshop before anything is packed.
Inspection	Full-dimension CMM inspection of key fixtures; laser tracker for installation datums and positioning accuracy.
Installation and commissioning	Our engineers on site for installation, robot teaching, cycle tuning and hand-over, for as long as the project needs.



Layout of a complete line, in 3D.



Reach, collision and cycle checked before build.



Pre-integration workshop: a cell under build.

Who builds it

The lines and tooling are built by our manufacturing partner in Wuhu: a joint venture of a robot maker listed on the Shanghai STAR Market (688165.SH) and the municipal state-asset committee, founded in 2022 with a paid-in capital of RMB 50 million and a core team from that robot maker's former equipment division. We name it, and send its company documents, once a confidentiality agreement is in place.

- **Track record of the partner:** 66 BIW welding line projects delivered; 58 conveying and general-assembly projects delivered; 20+ OEM groups and tier-1 suppliers served; 3 countries of overseas delivery, including a knock-down assembly line in Algeria and a body shop in South Africa.
- **Workshop:** 15,000 m² assembly and commissioning workshop, able to pre-integrate two complete body-shop packages at the same time.
- **In-house machining:** 3 large CNC gantry machining centres, 2 large-format laser cutters, CNC boring and milling, plasma cutting and press brakes.
- **Measurement:** coordinate measuring machine, laser tracker and portable measuring arm.

Three projects, anonymised

Quantities are counted from the quotations and contract appendices. Customer names, contract values and locations below country level are not published — the same confidentiality your project would get.

BIW tooling package for an electric model — 65 fixture sets, 29 stations — Russia, 2024

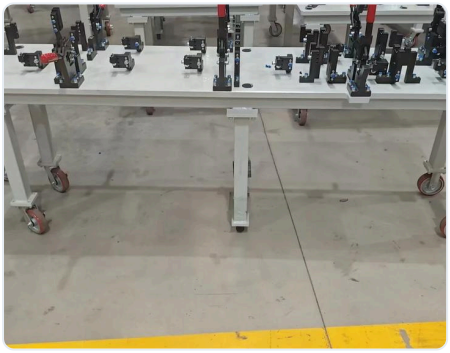
29 stations of sub-assembly and main framing tooling for a new electric model at a passenger-car assembly plant in western Russia. The plant supplied its own arc-welding robots, positioners, welding sets, fume extraction and fencing; we supplied every fixture, hanger, shared base plate and the control interface, pre-assembled and CMM-inspected in China, packed and shipped with the export documents.

A second model at the same plant — 54 fixture sets, 20 stations — Russia, 2026

The same plant came back about eighteen months later for a compact electric car: 20 stations, six of them robot welding stations, with nine hangers, four manual rotary fixtures and six station-level control conversions. Payment ran over six milestones, one of them tied to completing the first round of equipment inspection in China — the plant signs the inspection off before anything ships.

Body-shop retooling for a model change — about 180 welding stands — Russia, 2025

A model change at a passenger-car plant in north-west Russia: about 180 welding stands, hanging jigs and special stations — wheel-arch hemming, door inner-panel welding, boot-lid mastic application — newly built or renovated, with pneumatic and electrical control converted to a jig-box scheme. Every item was matched to the plant's own asset codes and priced with its own installation and commissioning line, so the changeover could be staged shop by shop. Built by our body-shop partner; the customer interface, commercial documents and export chain were ours.



A finished station fixture before packing.



Lifting spreader supplied with the fixtures.



Export crates before loading.

> **Nothing ships before you have seen it run.** On the second project for the same plant, a payment milestone was tied to the first round of equipment inspection in China — the plant signed the inspection off, and only then did the containers load.

What we ask for before quoting

- Body 3D data — STEP or CATIA — and the weld-spot or weld-seam information if you have it.
- Rate in JPH, shift pattern, annual volume, and any phase-two capacity the line must reach later.
- How many models share the line, and whether they run mixed or in batches.
- Which robots, welding sets, positioners and fencing you already have, and their brand and age.
- Building drawing: available area, column pitch, clear height, crane capacity, supply voltage and frequency, compressed air.
- The month you need it in production, the Incoterm, and the port or plant address.

The requirement survey

The full bilingual survey — Chinese and English, eight sections — is open at **livespower.com/request-quote/biw-body-shop/**, online or as a Word file. A completed survey usually turns into a proposal instead of three rounds of questions.

How a project is contracted

Item	How we work
Contract	LIVESPOWER contracts and delivers; manufacturing is subcontracted back to back to our body-shop partner.
Quotation	Itemised per station, never a lump sum, so scope can be moved or phased.
Payments	Milestones, with one normally tied to your sign-off of the inspection round in China.
Terms	EXW, FOB, CIF or DAP. Packing list, container loading plan and export documents issued by us.
Site work	Our engineers on site for installation supervision, robot teaching, cycle tuning and hand-over; visas and overseas labour arrangements organised by us.
After delivery	Mechanical and electrical spare-parts lists with the project; design changes quoted item by item as they arise.

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