

High-frequency Laminating Machine

GLUEX



A high-frequency laminating machine for joining a wide range of small-lot, mass-produced laminated wood and solid edge-glued panels in an energy-saving, high-quality manner.

VINITA

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Upright Laminated and Solid Edge-glued Joining Machine

GLUEX-40C

A device for performing solid edge-glued processing on lamina materials lined up horizontally and engineered wood processing on lamina materials lined up vertically. Laminating pressurization is performed on lamina material and high frequency waves are then applied to the joining layers in a vertical direction to join them together. In-line operation is an easy matter, and this is especially suited to lines that mass-produce a large variety of different products.

A standard machine that has achieved many results and that is suitable for processing a diversified range of laminated wood, including laminated wood with small, medium and large cross sections.

GLUEX Applications

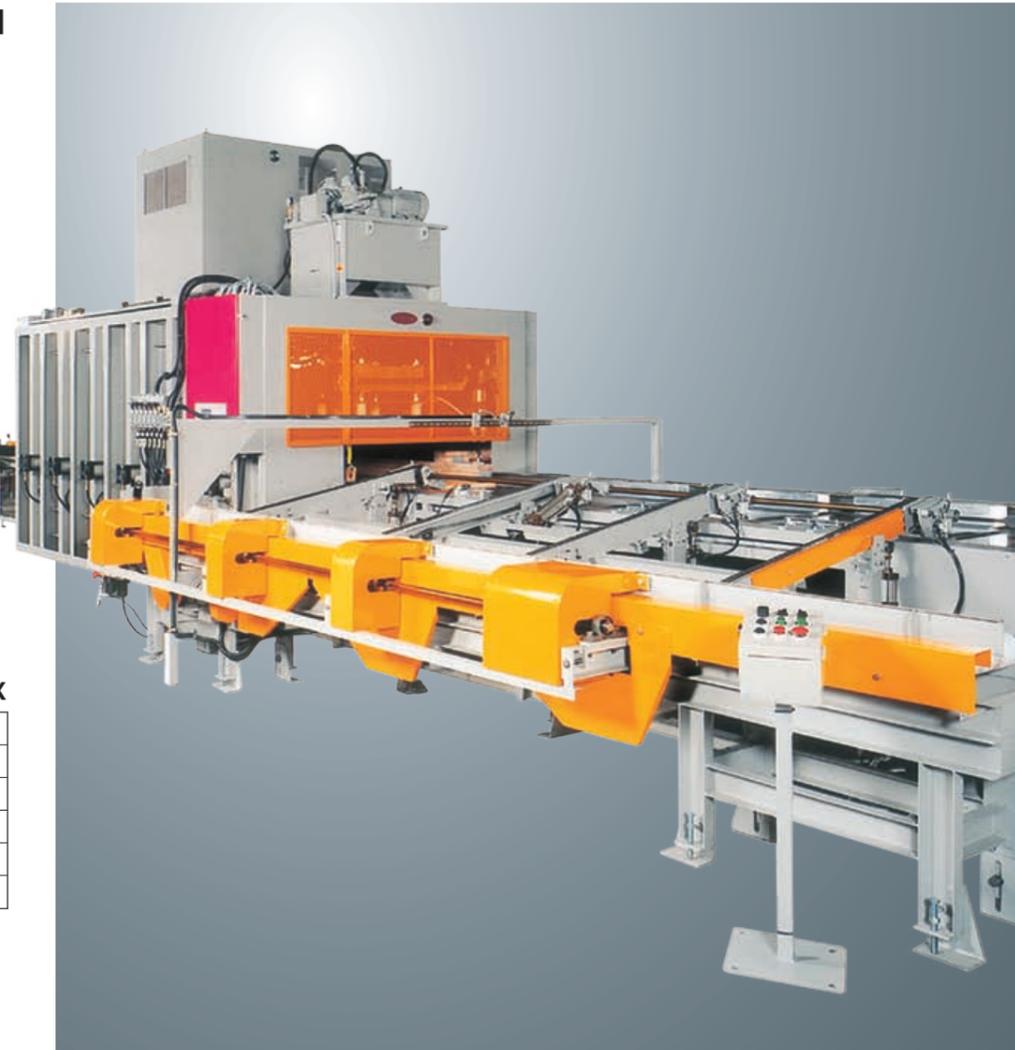
Structural glued laminated wood
Glued laminated wood for furnishing
Laminated board
CLT panels
Floor and wall panels

Adhesive Used with GLUEX

Resorcinol resins
Water based polymer-isocyanate
Urea-melamine resins
Polyurethane resins
Polyvinyl acetate emulsion
Phenolic resins

<Standard Processing Size>

Can be used for items up to 1,050mm x 4,200mm in size. Special orders available for sizes exceeding this.



Features of GLUEX

1 Speedy Joining

High-frequency heating is performed directly on the adhesive layers, so enables joining to be completed within a short period of time.

2 Uniform Heating

Possible to concurrently apply heat evenly from the surface material through to the central layers.

3 High Quality

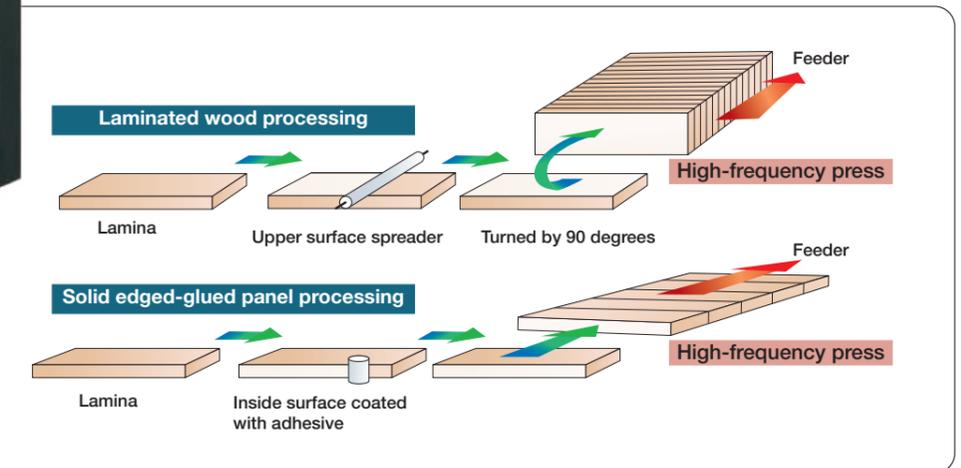
Only the joining layers are heated, which minimizes warping as heat is not applied directly to the product.

4 Space Savings

Products can be quick-joined on a single high-frequency joining machine within a short period of time and therefore saves space.

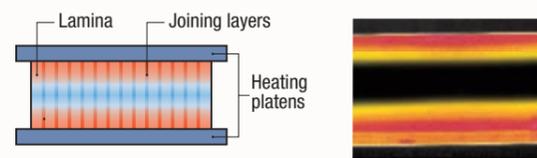
5 In-line Operation

After joining by the high-frequency joining machine, panels can be conveyed for continuous processing in post-processes.

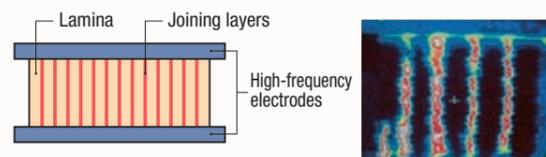


Selective Heating with High-frequency Heating

Joining by External Heating



Joining by High-frequency Heating



High-Frequency Heating Technology

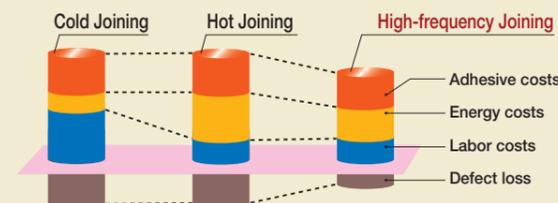
With "internal heating," the substance itself self-heats, and so the inside and outside of the substance are heated concurrently. Dielectric heating (high-frequency heating and microwave heating) falls under this category. Dielectric heating has various features. For instance, heating is quick, and there is little difference in the surface and core temperatures of the substance, allowing uniform heating centering on the joining layers.



Energy-Saving, High-Quality

Joining laminated wood with high-frequency heating is only performed for the joining layers, only for the required amount of time, and with only the required amount of energy, and this enables rapid and uniform heating to guarantee heat efficiency and thereby save energy. Also, as heating is not applied to the lamina, high-quality joining with minimal levels of cracking and warping is possible.

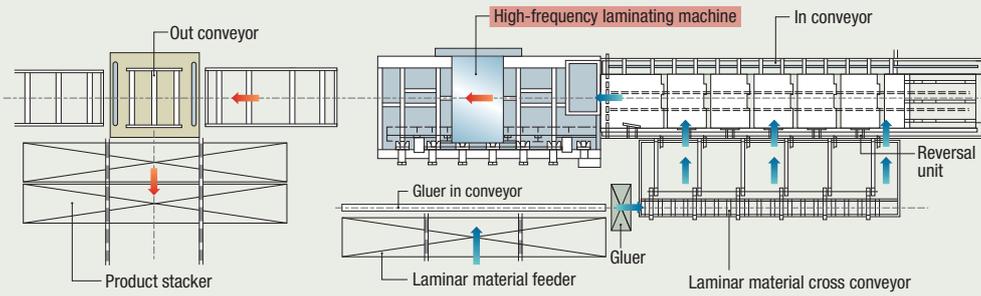
Joining Cost Comparison



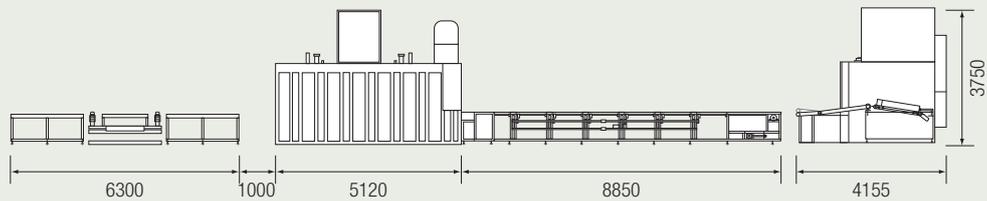
Comparison of GLUEX High-frequency Joining and Various Joining Methods

	Cold Joining	Hot Joining	High-frequency Joining
Joining speed	×	△	○
Energy costs	◎	×	○
Warping	×	×	◎
Initial adhesion strength	△	○	◎
Space saving	○	○	◎
Working environment	○	×	◎
Small-lot, large variety production	×	△	○

High-frequency Engineered Wood Laminating Line Reference Diagram



GLUEX - 40C



Unit (mm)

Standard Specifications

Model	Power	Maximum Input	Maximum High-frequency Output	Processing Size (mm)	Machine Size (mm)	Weight
GLUEX-40C	3-phase 200V	80kVA	40kW	W1050×L42000×T90~160	4155×5120×H3750	20000kg



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<http://www.vinita.co.jp>

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