

High-frequency Flush Panel Joining Machine

BONDEx



A high-frequency panel joining machine for joining a wide range of small-lot, mass-produced flush panels in an energy-saving, high-quality manner.

vinita

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High-frequency Panel Joining Machine BONDEX-40L

A machine to join together two surface sheets over core material to produce flush panels. Laminating pressure is applied sequentially to one surface sheet, the core and then the other surface sheet, and high-frequencies are then applied horizontally to the adhesion layers 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 products, including inside doors, closet doors and partitioning panels.

BONDEX Applications

Inside doors
Closet doors
System kitchen doors
Entrance hall storage cabinet doors
Office/Shop/Marine furniture
Partitioning panels

Adhesive Used with BONDEX

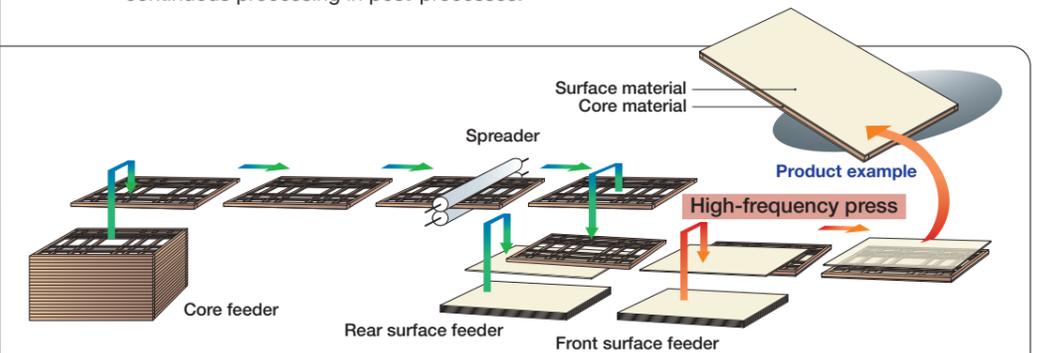
Water based polymer-isocyanate
Vinyl acetate urethanes

<Standard Processing Size>
Can be used for items up to 1,300mm x 2,700mm in size.
Special orders available for sizes exceeding this.



Features of BONDEX

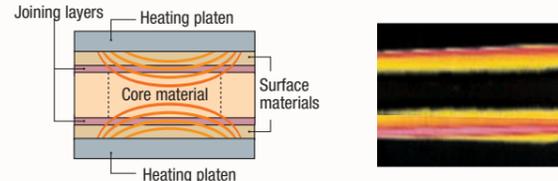
- Speedy Joining**
High-frequency heating enables joining to be completed in 20 to 30 seconds.
- High Quality**
Only the joining layers are heated, which minimizes warping as heat is not applied directly to the product.
- Supports Large-lot/Large-variety Production**
Joins products that are different every time, and supports small-lot, short-turnaround production and other forms of large-lot/large-variety production within short periods of time.
- Space Savings**
Products can be quick-joined on a single high-frequency joining machine and therefore saves space.
- In-line Operation**
After joining by the high-frequency joining machine, panels can be conveyed for continuous processing in post-processes.



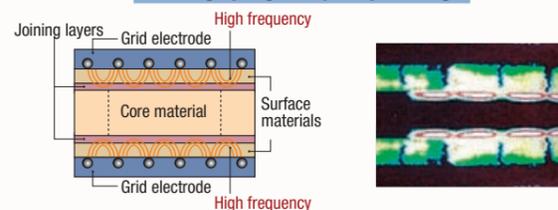
The core material automatically fed from the core feeder is transferred from the spreader feeder conveyor to the spreader and then coated with adhesive. The rear and front surface materials, which have been automatically set in the high-frequency panel joining machine, are then automatically transferred with the conveyor belt to enable one worker to perform all operations.

Selective Heating with High-frequency Heating

Joining by External Heating

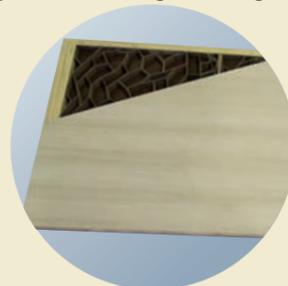


Joining by High-frequency Heating



High-Frequency Heating Technology

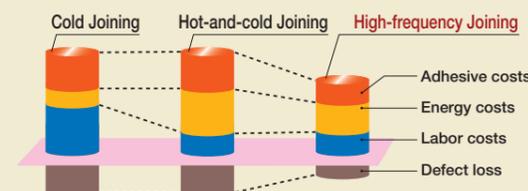
With "internal heating," the substance itself self-heats, and so the inside and outside of the substance are heated concurrently. Dielectric heating (high-frequency heating and microwave heating) falls under this category. Dielectric heating has various features. For instance, heating is quick, and there 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 flush panels 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 surfaces and core of the product, high-quality joining with minimal levels of core tracing and warping are possible, which results in high-quality and superior products with little loss caused to defects.

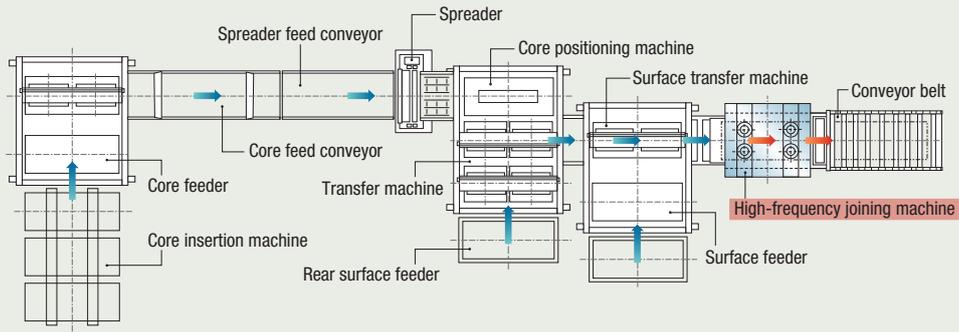
Joining Cost Comparison



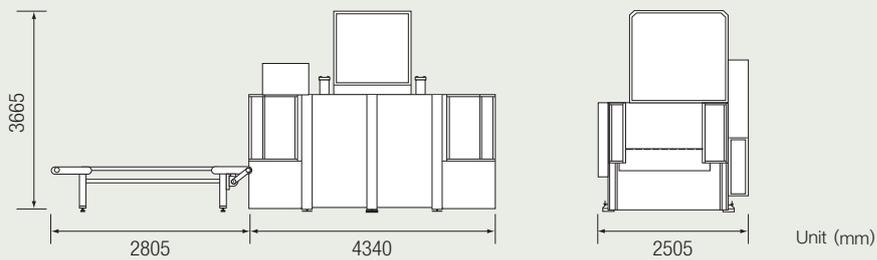
Comparison of BONDEX High-frequency Joining and Various Joining Methods

	Cold Joining	Hot-and-cold Joining	High-frequency Joining
Joining speed	×	○	◎
Energy costs	◎	×	○
Warping	×	×	◎
Core tracing	×	×	○
Initial adhesion strength	△	△	◎
Adhesive cost	△	△	◎
Space saving	×	△	◎
Working environment	×	△	◎
Small-lot, short-turnaround production	△	△	○

High-frequency Continuous Flush Panel Line Reference Diagram



BONDEX - 40L



Standard Specifications

Model	Power	Maximum Input	Maximum High-frequency Output	Processing Size (mm)	Machine Size (mm)	Weight
BONDEX-40L	3-phase 200V	68kVA	40kW	W1300×L2700×T10~100	2505×4340×H3665	7000kg



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

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