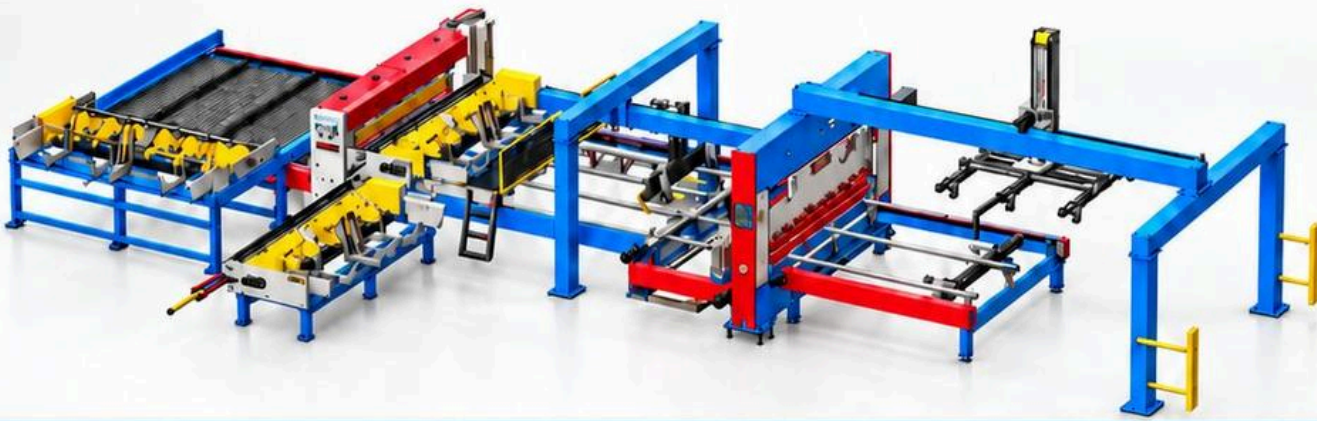




AUTOMATIC PANEL FENCE PRODUCTION LINE

Single • Double • High-Security • Hybrid

TEKNOSiS

One machine. More products. Less intervention.

Designed for flexible panel production, quick product changeovers, and repeatable quality.

1000 Hz MFDC + 1600 kVA

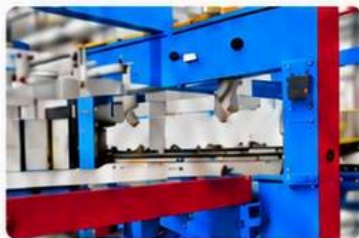
100% Hydraulic-Free

Up to 10 wires per second

Up to 3000 × 3000 mm



**High-Speed
Wire Preparation**



Servo Bending Press



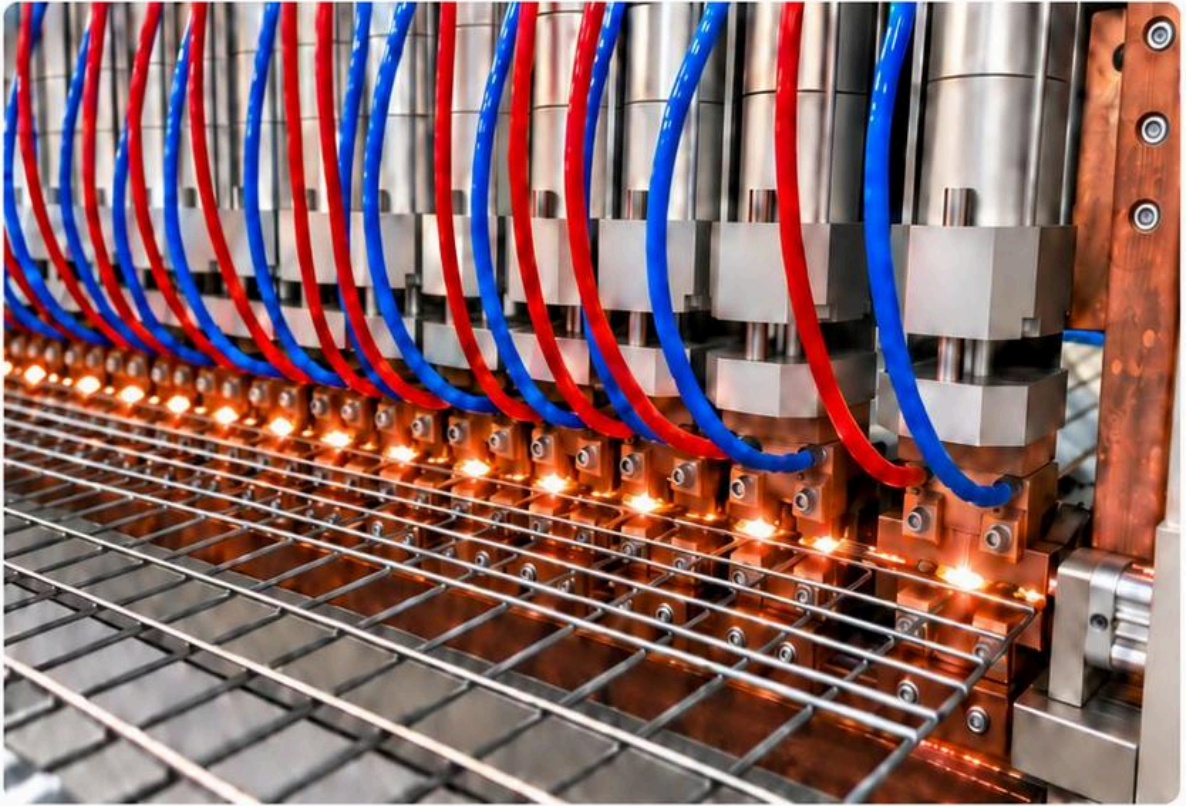
**1000 Hz DC Phase-Shifted
Inverter**

Next-Generation Solutions for Next-Generation Products

Designed for manufacturers seeking flexibility through fast and practical production adjustments.

1000 Hz MFDC EtherCAT Communication

1000 Hz MFDC welding technology combines with spot-welding piston combinations.



MFI-400 / DC 1000 Hz

1000 Hz

MFDC Welding

3-phase 400 V AC • water-cooled •
Phase-Shifted Power Control

1600 kVA

Installed Welding Power

61-point welding station • up to 122
electrodes

100%

Hydraulic-Free

Servo press + optional servo punch •
no hydraulic system

Why It Matters

- There is no variation in oil temperature, viscosity, or hydraulic pressure in forming and punching systems.
- Servo motion provides repeatable positioning and makes setup changes easier to reproduce.
- Servo welding-jaw positioning can adapt to wire diameter without requiring routine mechanical readjustment.

Teknosys Process Control Feature

- Determines the step size.
- Different horizontal wires within the same panel can use different piston-sequence combinations with current and welding time set individually for each wire.
- By controlling heat distribution, the system helps compensate for distortion caused by welding; it especially improves Double-panel flatness and repeatability.

High-Speed Wire Laying and Palletized Loading

The wire system keeps wire laying flexible and repeatable while its speed and accuracy are unmatched.



10 wires/s

Wire laying speed

High-speed wire laying with dynamic centering compensation

1–2 s

Magazine transfer

Drops prepared wires rapidly from the buffer

61

Optional longitudinal wires

Main industrial range requested by large panel manufacturers



Parallel Wire Pre-Loading

- While the arrangement axis is running, the magnetic pallet system prepares the next wire group in the damper/buffer magazine.
- When the arrangement magazine needs wire, the prepared group is transferred in approximately 1–2 seconds.
- The goal is to prevent production time loss by refilling the arrangement system continuously and repeatedly.



Flexible Laying Logic

- Wire spacing can be entered individually or in groups; for example, 5 wires at 50 mm, 10 wires at 60 mm, then 2 wires at 100 mm.
- Installed wire channel positions can be taught with the laying-carriage sensor instead of measuring each channel manually.
- Wire drop timing is dynamically compensated using offset values to keep the wire centered at high speed.

2D, 3D, High-Security and Hybrid Panels

Changes its behavior based on the recipe instead of requiring mechanical conversion.



SINGLE

DOUBLE

HIGH SECURITY

HYBRID / FREE DESIGN

Top and Bottom Wire Combination

- Top and bottom wire equipment is integrated into the same machine instead of being treated as separate equipment sets.
- The line can use top wire only, bottom wire only, both together, or different combinations in different sections of the same panel.
- This architecture enables special hybrid products that are difficult to manufacture on conventional fixed Single/Double machines.

Custom Panel Flexibility

- Different diameters can be used for longitudinal and transverse wires.
- Groups with different wire spacing can change continuously within a single product length.
- Single, Double and bottom-wire-only zones can be combined in one panel using different welding strategies and parameter sets.
- Transitions between standard products are based on quick sliding and locking adjustments instead of time-consuming equipment changes.

Significantly more flexibility with the same machine architecture to create different products.

Multi-language HMI with recipe-based control

Supports mechanical flexibility, calculates motion, stores product information and reduces operator dependency with software.



HMI Language Count: 10

- Ten selectable languages support international operators and service teams.
- Operators can select the interface language directly from the HMI.
- Multilingual use reduces training difficulty and communication errors during export installations.

Teknos Process Control Feature

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Automatic Motion Calculation

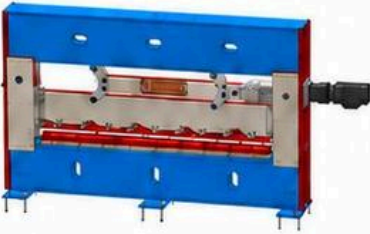
- Product geometry designed on the PC automatically calculates gripping, release and transfer positions for optimum operation.
- Entry and exit robot movements are optimized to reduce unnecessary travel and repetitive teaching.
- Even if wire spacing changes along the product length, punch and trim positions are calculated automatically.

Automatic Adjustment

- Servo wire feeders independently control the laying wire, bottom wire and top wire.
- The servo jaw automatically positions itself according to wire diameter without operator intervention.
- Automation priority: less operator intervention, less setup work and more error-free production.

Servo-Controlled Bending Press and Punch

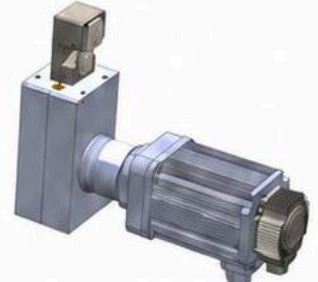
The same philosophy continues after welding: fast adjustment, repeatable motion and minimum operator intervention.



Servo bending press



Servo punch (optional)



Servo trim module

Fast-Adjustable Bending Die

- The servo-driven press repeats the bending position with 0.01 mm accuracy without the temperature or viscosity effects of hydraulics.
- An adjustable die, scale and handwheel allow the bending depth to be changed in seconds without removing the die or adding spacers.

Punch and Trimming Modules

- The punch unit can be added as a modular unit; its moving axis automatically positions itself, and the cutting action is also servo-driven.
- For special post-mounting geometries, edge-bending areas are cleared before pressing.
- High-security panel positions are automatically calculated and trimmed even with variable wire spacing.



Pallet Robot and Precision Stacking

- 2.5 m telescopic Z axis and 6 m Y axis for pallet stacking.
- Controlled approach and lowering speeds place panels accurately rather than simply dropping them.
- Double-row pallet stacking and quick gripper adjustments reduce handling and product-change time.

Real Production Values and Operating Range

These values are based on typical practical results and the current machine configuration.

20–25 s

Single panel

2 m height • 4 bends

25–30 s

Double panel

2 m height

60–80/min

Welding cycle

Determines the step size



Operating Range

- Panel working width: 500–3000 mm.
- Longitudinal wire length: 500–3200 mm.
- Wire diameter (full working range): Ø3.5–8.0 mm.
- Panel capacity: up to 3000 × 3000 mm.
- Up to 61 longitudinal wires and 61 welding stations.
- Electrode capacity: up to 122 electrodes (61 upper + 61 lower).

Why TEKNOSIS

- Minimal operator intervention across a wide range of panel products.
- Fast changeover between Single, Double, High-Security and Hybrid products.
- Servo-driven power and control systems for repeatability and easier maintenance.

TEKNOSİS

Panel Fence Production Technology

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Planning • Installation • Commissioning • Operator Training • Technical Support



SCAN WEBSITE