

HML Haseneder Maschinenbau e.K.



TFA 90
**Horizontal laminating press system
for technical laminates**

Automated pressing system for technical laminates

The concept of the TFA 90 is a lamination system that allows quick production cycles for technical laminates with a combination of a hot- and cold press with a rotating tool handling included.

The continuous circulation of the tools in the automation solution of the TFA 90 ensures optimized and user-friendly processes with high throughput rates.

Application and function

At the layup station area of the TFA 90, the operator prepares the respective superstructures for the lamination process in special tool systems. As soon as the tool carrier is loaded, the operator moves the loaded tool into the feed chamber for the press beginning the cycle.

The system recognizes the tool which is ready for pressing and pushes it into the press system in an automated manner.

The entire process sequence is fully automated. Continuation of the tool from heating to cooling press and discharge of the finished tool on motorized roller conveyors back to the layup station area happens in uninterrupted flow.

The respective processes within the press cycles are monitored by means of a programmable control system. Current states of the cycles and of the system are output in real time on the monitor of the connected terminal. Process flows can be archived on disk.

Technical Data

Hot Press

Pressure Force	Max. 900 kN / Min. 20 kN
Qty. Of Openings	1 / 2 Platten
Clear width	147 mm
Clear width with Vacuum frame	105 mm
Heating plate format	680 x 850 mm
Max. Laminating area	600 x 750 mm
Parallelism	Min. $\pm 50 \mu\text{m}$
Max. Temperature	250°C, infinitely adjustable
Heating rates	appr. 10°C p. Minute / empty
Heating capacity per plate	28,8 kW
Vacuum	$\leq 10 \text{ mbar}$
Evacuation time	$\leq 10 \text{ Seconds}$
Total requirement HP	62 kW
Current HP	94 A
Mains connection	3 x 400 V, 50 Hz
Mass HP	3000 kg
Dimensions HP	appr. 1200 x 1100 x 1500 mm

Cold Press

Pressure Force	Max. 900 kN / Min. 20 kN
Qty. Of Openings	1 / 2 Platten
Clear width	147 mm
Cooling plate format	680 x 850 mm
Max. Laminating area	600 x 750 mm
Parallelism	Min. $\pm 50 \mu\text{m}$
Total requirement KP	2 kW
Current KP	10 A
Mains connection	3 x 400 V, 50 Hz
Mass KP	2000 kg
Dimensions KP	appr. 1200 x 1100 x 1500 mm

Time to open	appr. 10 Seconds
Time to close	appr. 15 Seconds
Oty. Of press tools	6
In circulation	(Tools sold separately)
Control	System interface based on Windows 10 Professional
Languages	German / Englisch further versions on request

Applications	Technical laminates compression of technical polymers and bondable compounds
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Front view



Hot- / Cold Press



Vacuumframe in Hot Press



Presstool