

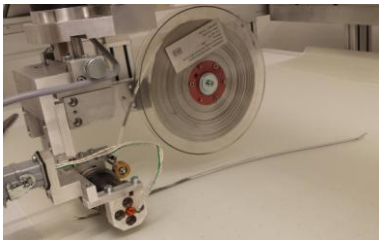


Table Type Machines for laying of busbars on PVB

With laminated glass raises the possibility to embed heating fields in glass products. These heating fields usually consist of very thin tungsten wires, which are placed on the interlaying PVB film. Busbars connect the wires and connectors are used to connect the busbars and wires to the electric power supply.

Hamacher is actually developing a machine to place the first and the second busbar on the PVB.

With the proven machine structure of our PST table wiring machine, we actually develop a machine that places both busbars on the PVB.



This machine is designed for high volume production in combination with our drum type wiring machines PSW.



The PVB sheets are placed on the table and held by vacuum. A busbar laying head holds the busbar spool, busbar guidances and a heating roller. The head performs movement with two linear and one rotary axes. It is fully CNC programmable and therefore not constrained to any busbar geometry.

The first busbar will be placed directly on the PVB and glued to it with low heat. This will not melt the busbar itself and just glue the busbar to the PVB.

The second busbar will be soldered to the PVB after the wiring process on the PSW drum machine. This soldering process is done with high temperature to melt the tin and connect the first busbar, the wires and the second busbar.

Due to temperature difference between the two processes and heat up and cool down time of approx. 10 min there are two possible configurations:

- 1 machine with 1 head: Slow production time due to heatup and cool down time
- 1 machine with 2 heads: fast production with first and second busbar on 1 machine
- 2 machines with 1 head: Fast production with a separate machine for each process

Technical specifications:

Product: PVB sheets with busbars

Table width: Up to 2m

Table length: Up to 3m

Busbar: Tinned copper busbar (actually tested 8mm width)

Mean laying speed first busbar: Approx. 10m/min

Mean laying speed second busbar: Approx. 5m/min

Programming: Full programmable CNC Contours

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