Semi-automatic heat staking machine for joining of thermoplastics

The semi-automatic heat staking machine is designed modularly and meets all typical requirements of the automotive (electronics) industry on process reproducibility, shortest possible cycle times, and flexibility.

Due to the separation of the process steps heating and forming into two process stations and the magnetic transportation system, the cycle time can be reduced to a minimum and is only depending on the heating time and/or the loading/unloading time of the operator. After manual assembly, the product is placed automatically onto the magnetizing transportation system and after processing automatically lifted to unloading position. The machine can be integrated into a lean manufacturing line. The modular design and quick-exchangeable tooling allows to produce different products on the same machine. The special riveting tooling design ensures highest quality and strength of the rivet without flash throughout all tolerance-related pin volume differences.

Using a touch panel PC, the process can be programmed intuitively and quickly, and the actual values for each process step are displayed. Process, product and machine data are continuously monitored and can be passed on to a database for each component.

> Two-step Hot Air Riveting Technology
> High output on small footprint
> Quick-exchange tooling modules for multiple product production
> Highest rivet strength
> Maximum process control
> Alternative heating methods for reduced temperature impact on product
HEAT STAKING MACHINE B7712 BHS

BHS HOT AIR® PRINCIPLE

MODULAR EXTENSIONS

- Up to 12 riveting pins per product
- Pressing station for PCB pressing before riveting
- Pin detection before riveting
- Rivet inspection after riveting
- Unit in loading area for assembly PCB with housing
- Two product processing on one workpiece carrier
- Traceability via MES communication
- Additional tooling for other products

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Machine dimensions (WxDxH) / Weight</th>
<th>1200 x 1475 x 2200 mm / 1.400 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Control Cabinet with cable bridge</td>
<td>Distance to machine max. 700 mm, approx. 1200 mm x 300 mm x 2200 mm</td>
</tr>
<tr>
<td>Max. product dimensions / weight</td>
<td>WPC size 240 x 240 mm / max. 500 gr</td>
</tr>
<tr>
<td>Working height</td>
<td>approx. 950 mm +/-50 mm</td>
</tr>
<tr>
<td>Access on rear side for tool exchange by folding doors</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Beckhoff or OpCon PLUS</td>
</tr>
<tr>
<td>Operation</td>
<td>Touch panel, colored; bdtronic software visualization or OpCon PLUS</td>
</tr>
<tr>
<td>Electrical power supply</td>
<td>CEE plug 400 VAC 3P/N/PE, 50 Hz, 32 A</td>
</tr>
<tr>
<td>Pneumatic supply</td>
<td>min bei 5 bar, nominal diameter 7.2 mm</td>
</tr>
<tr>
<td>Linear transportation system with 6 movers for product nest</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>RAL 7035 (ESD)</td>
</tr>
</tbody>
</table>

SOFTWARE

- Standard languages German and English
- User management
- Error management with clear text messages
- Data logging of error messages
- Maintenance function

(Service hotline (German/English/French)
Response service MO - FR
Spare parts service
Service and maintenance
Process and component optimization in in-house development centers
Trials and development in well equipped technical centers
Training for machine user, machine setter and maintenance personnel
Seminars for machines user, machine setter and maintenance personnel)

Errors and changes reserved, as of January 2019)