

## Universal assembly machine

### What is it

Universal assembly machine is a machine into which you can put exchangeable jigs which can be used in various assembly operations with manual assistance.

### How does it work

Operator puts assembled parts into jig, front cover is closed and movable plate of machine with fix upper plate of jig moves down. After finish of the assembly operation movable plate of machine rises to the upper position and front cover is opened.

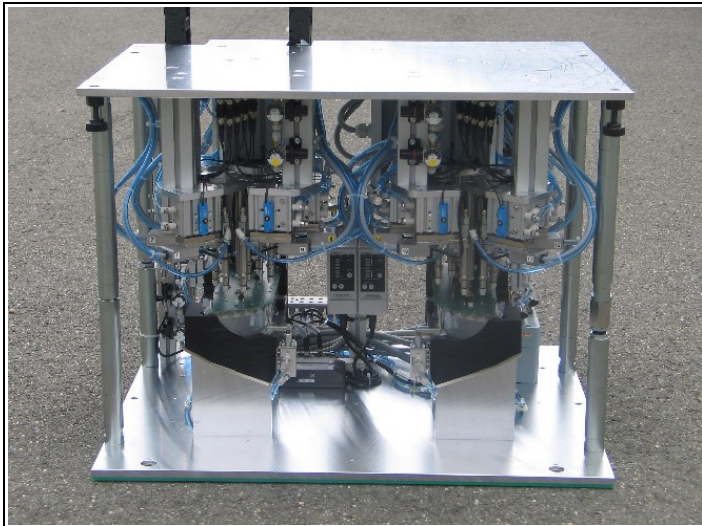
### Design

Universal machine consists of lower and upper fixed plate in a frame. Between fixed plates is via pneumatic cylinder lifted

Movable plate on the linear bearing, (principle of press). On the lower plate is inserted fixture with demanded assembly technology. The machine is equipped with a PLC and valves to control the jig. Machine has safety covers, front sliding cover for the operator and rear slide cover for adjustment and maintenance.

### Jig

The lower plate of jig is fixed to the lower plate of universal machine, the upper plate of jig is fixed on the movable plate of universal machine. Jig can be fixed manually or automatically. Lower and upper plate of jig are connected via energy chain, therefore, only one place of energy supply is necessary. Pneumatic and electrical connectors can be contacted manually or automatically while fixture is inserted into machine.



### Technologies that can be placed in universal machine

- Heat Staking – joining of plastic part by thermal riveting
- Joining of plastic part by stapling
- Measuring dimensions of shaped parts
- Crimping operation
- Screw operations
- Leak test

### Technical specifications

- Height×width×depth 2700×1000×650 mm
- Moving down front cover is able to safely detects a collision with operator and automatically runs up
- Movable plates, cylinders  $\phi 80$  (3 000 N), stroke 500 mm
- Maximum opening 1000 mm (lower – movable plate)
- Possibility of locking for higher press force
- Pneumatic valves for control of the fixture are part of machine
- PLC for control of the fixture is part of machine
- Possibility of connection fixture with PLC of machine via I / O or fieldbus
- Touch panel 5,7" at the operator place

