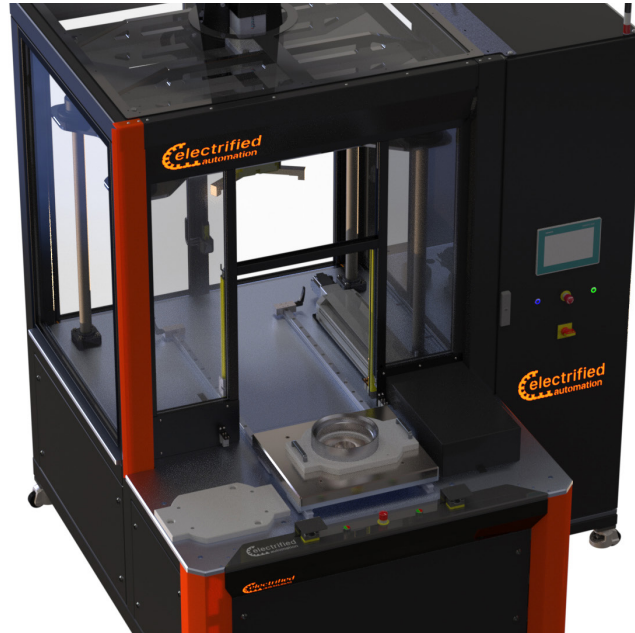


TECHNICAL SPECIFICATION



Equipment Dimensions: H: 3650mm W: 2200mm D:2070mm Weight: 2000Kg - Approx.

Product info

Electrified Automation's electric motor shrink fitting machine uses the latest in heating and press technology to deliver the perfect turnkey solution.

- Our entry level system comes as semi-automated as standard short repeatable cycle times.
- Parallel processing to reduce cycles.
- Product housings mean heated stators can be loaded into the system. Reduced process times compared to typical inline equipment.
- The press system can move up to 0.38 m/s which is extremely fast compared to other system available in today's market.
- With extremely accurate positioning of parts up to 0.01 (10 microns) all joining parts will be exactly where they need to be.

Fixture

- Future proof design with changeable fixtures.
- Quick product change and easy set-up.
- Equipment can be used across different product ranges.

Ergonomics

- Ergonomically designed to aid with fast product load and unload.
- Industrial manipulator arms or fully automated robot loading can be used to lift product on and off.
- The loading of motor housings and stators is at an ergonomic height to reduce operator fatigue.

TECHNICAL SPECIFICATION

Joining process

Servo controlled press technology gives rapid and controlled movement of parts up to 0.38 m/s and positional accuracy of 10 microns.

We are able to map the full joining process and create pass and fail criteria from force curve which are created and monitored during each cycle. Any abnormalities are quickly detected and the process can be stopped.

Pass and fail criteria is easily set using plus or minus percentages on the force curve. A final position can also be added to ensure perfect assembly.

Analysing the process is easy with visual graphs, reducing commissioning times and fault finding.

Industry 4.0 ready with easy data storing for analysis and quality monitoring.

Maximum joining loads up to 30kN.

Intuitive interface means new recipes can be created in minutes with minimal training.

Guarding

European safety components are used to ensure operator safety.

A double-handed engagement switch is used to mitigate accidental operations.

Light curtains and a fully guarded cell with rear interlocked door ensure 100% cell processing

Guarding is deliberately designed away from the loading area for future automated loading of products or gantry systems to be easily integrated into the manufacturing line.

Motor housing - heating

The latest in induction heating technology is used to give rapid and controlled heating. Typical heating ranges between 140° to 300°

Continual monitoring throughout the heating process and ramp up times can be adjusted to suit the application. Monitoring the part as the thermal expansion occurs gives the system real-time feedback to react to process/part variations.

A closed loop heating system keeps the part at set temperatures for controlled periods of time. Parameters can easily be adjusted then locked into the program for quality control.

Data logging

Process parameters for each moulding test cycle can be stored locally or sent to a central database.

Local memory storage on device with port capability for removing data (SD card or USB or ethernet)

Communication

ProfiNet

Modes

Semi-automated and fully automated options available

Control system

SIEMENS safety PLC with 10" HMI

TECHNICAL SPECIFICATION

Safety

UKCA Certified (which includes low voltage directive (LVD) (2014/35/EU), EMC Directive (Directive 2014/30/EU))

PUWER assessed

Meets Machinery Directive 2006/42/EC requirements

Guarding is fitted with interlocks to ensure user safety.

Machine limits

Stator 340mm Dia x 240mm

Housing 414mm Dia x 400mm, 30kg

Total weight assembly is estimated at 177.3kg, SWL 200kg

Housing 18.6kg

Rotor assembly estimated 50.3kg

Services required

Power: 230VAC/50Hz/1ph+N+E – 16A total kVA for system = 4.6kVA

Air supply: Clean dry compressed air at 6Bar minimum to standard quality class 5.4.3 or better according to DIN ISO 8573-1

Environment: Normal, clean, factory environment temperature 10-30oC, humidity 45-95% RH

Process Requirements

Process pressing force: 30 kN

Process assembly temperature: 150degC – 180degC

Process time: estimated at 5-10 mins –