

E-VOLUTIONARY

Impregnation Technologies of HEDRICH



HEDRICH GROUP

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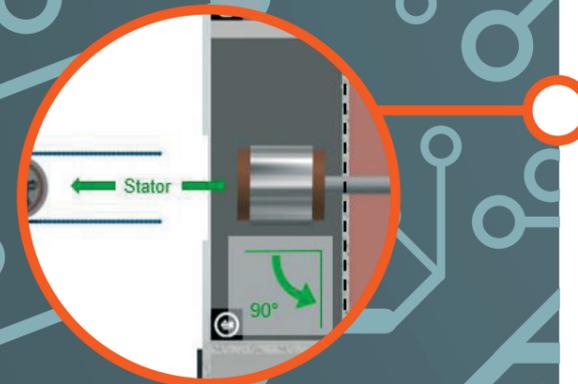
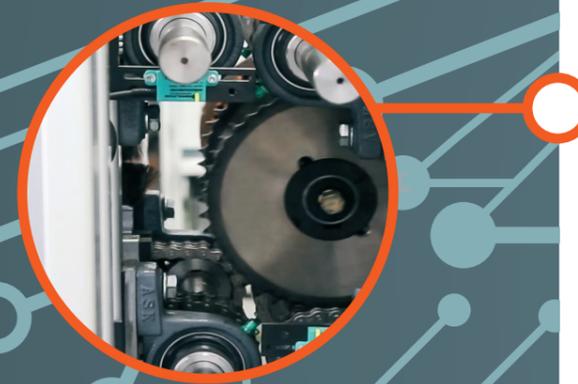
PIONEERING

IN THE MANUFACTURING OF E-MOTORS

The HEDRICH Group provides customized impregnation solutions for electrical components such as rotors and stators in electric mobility (e-mobility). By using the optimum technology, we strive to achieve the perfect result for our customers with process steps that are easy to handle.

Part of the portfolio are machines for **trickling** and **roll-dipping** as well as for **dip-impregnation** (if required involving the "Current/UV" technology).

Our eagerness for innovation embedded in our DNA has led the HEDRICH Group to develop a patented equipment concept that enables our customers to gain an unprecedented flexibility and individual response to production needs of electric-motor components.



Individual and modular equipment concept

The HEDRICH trickle-impregnation concepts with the individual arrangement of stations both in horizontal and vertical line make sure that the available space is exploited to the optimum extent. Distances of the components (stators) within the trickle equipment can be varied online. And it is possible to clamp the components both inside and outside.

Patented HEDRICH VarioDrive™ drive system

This innovative and low-maintenance handling system transports workpiece carriers without any bearing, which minimizes wear.

Every station holds a separate, individually adjustable drive that allows absolutely variable rotation and flow speeds of the components at each station in connection with the patented HEDRICH chain-drive system.

Flexible production 24/7

HEDRICH impregnation systems grant an automated and uninterrupted production allowing the infeed and outfeed as well as exchange of workpiece carriers while the process is running. Even different stator types can be changed at full production speed, thus eliminating any times for setting-up. With its capability to infinitely adjust tilting angles of the component, the programmable NC axis ensures optimum material flow and a perfect slot filling.

TRIHYBRID™ tempering system

This new and patented space- and energy-efficient heating technology saves up to 70% of the time needed for tempering (heating/cooling). Three different direct heating processes provide a uniform and fast heating-up of workpieces from different materials. And the continuous rotation ensures an absolutely homogeneous heating-up of the component.

The "Local Cooling" function puts a focus on a stronger cooling of the resin-free zones as well as materials with a high degree of thermal absorption, resulting in a uniformly fast cooling-down.

SPECIFICATIONS



Design	Modular
Drive	single drive (per station)
Heating (patented)	HEDRICH TriHybrid™ technology 3 stages up to 70% time saving
Heating range	30 – 180 °C
Conveying speed	max. 40 m/min.
Transfer speed	max. 22 m/min.
Rotation	1 – 50 min-1 (adjustable per station)
Pivoting angle	-15° bis +90°
Dosing quantity per nozzle	0,5 – 50 ml/min.
Resin preparation	1 – 1.000 mbar
Resin temperature	20 – 80°C
Clamping type workpiece carrier	Inside & Outside
Clamping range inside	40 – 200 mm
Clamping range outside	100 – 234 mm
Diameter of workpiece	60 – 450 mm
Length of workpiece	50 – 350 mm
Weight of workpiece	max. 40 kg
Distance workpiece to other	160 – 500 mm (variable adjustable)

PERFORMANCE- & PROCESS CHAIN AUTOMOTIVE

