KENDRION

KENDRION SOLUTIONS

Be a visionary.

Inductive and emission-free heating

PRECISION. SAFETY. MOTION.

Future pressures

Competitive pressure in mechanical engineering is forcing the industry to act. Heating strategies with oil are not only a waste of resources, but are also unsustainable for the future. CO_2 emissions must be reduced in order to withstand competition and cause little harm to the environment.

Look ahead - and start using inductive, emission-free heat with Kendrion.

Precise performance – high efficiency

With Kendrion inductive heating systems you can expect efficient, precise, and clean solutions for your heated rollers or cylinders.

In addition to uniform, fast, and emission-free heating, our inductive heating systems also offer you a long service life, low unproductive time, and high reproducibility.

Inductive heating – key facts

Maximum machine availability

- Fast heat-up time
- Quick start of production
- Maintenance-free, no oil changes, no slip-ring wear
- Simple tool change thanks to rapid cooling
- Very long service life thanks to cool bearings

Optimum temperature control

- Reproducible heating process (high quality assurance)
- Temperature measurement directly in the surface with max. 4 measuring points
- Uniform heating due to multi-zone design
- Low unproductive time, as heat is generated directly in the surface

Excellent automation capabilities

- Modern microprocessor-controlled electronics
- Fieldbus capable: Profinet®, CANopen, EtherCAT®
- Numerous diagnostic functions

Safety and cleanliness

- No machine contamination due to escaping media
- Lower injury risk (e.g. due to hot oil)

CO_2 reduction

- Emission-free heating
- High efficiency
- No heat loss (e.g. from oil pipes)
- No heating of unnecessary masses (e.g. oil)
- No cooling unit required

Let‘s shape the future together!

With Kendrion you have a future-oriented partner at your side.

Inductive heating with Kendrion

Our system components

Kendrion induction generators are designed as a modular system. They consist of a controller and up to 7 induction generators that can be connected in series. The controller can be integrated into the control unit of a machine via fieldbus interface (e.g. Profinet®). The individual induction generators and the retrieval of status messages for all connected generators are controlled via the central controller. Depending on the configuration, the controller can also regulate the heating channels with integrated PID controllers. The devices are designed for control cabinet installation.

The controller

- 24 VDC supply voltage
- Independent control of up to 7 MHS induction generators
- System monitoring and temperature control
- Integrated I/Os and CAN system bus
- Possible fieldbus interfaces: Profinet®, CANopen, Ethercat®

The induction generator

- 3 x 400 VAC supply voltage
- Up to 6 channels controllable individually
- 26 kW continuous power
- High efficiency thanks to optimisation of the operating point
- Compact design

Your customized inductor

The inductor specifically generates the magnetic field that generates the heat in the surface of the cylinder. There is no direct heat input to the cylinder bearings and receptacles. Losses are thus minimised.

The induction coils are fixed inside the cylinder and do not rotate with it. The electrical connection is made directly with cables. No slip rings are required for energy transmission.

An inductor can be designed axially in several zones to heat different areas of the cylinder separately.

The induction coil

- No slip rings required
- Divided into independently controllable axial segments

Optional: electrical integration

For quick and easy electrical commissioning, Kendrion offers the option to have the induction generator and a panel PLC installed in a switch cabinet. The panel PLC has a touch display. The user program is programmed with CODESYS. Kendrion transducers can be connected to the controller with four measuring points to measure the surface temperature directly. The transducers are installed inside the cylinder.

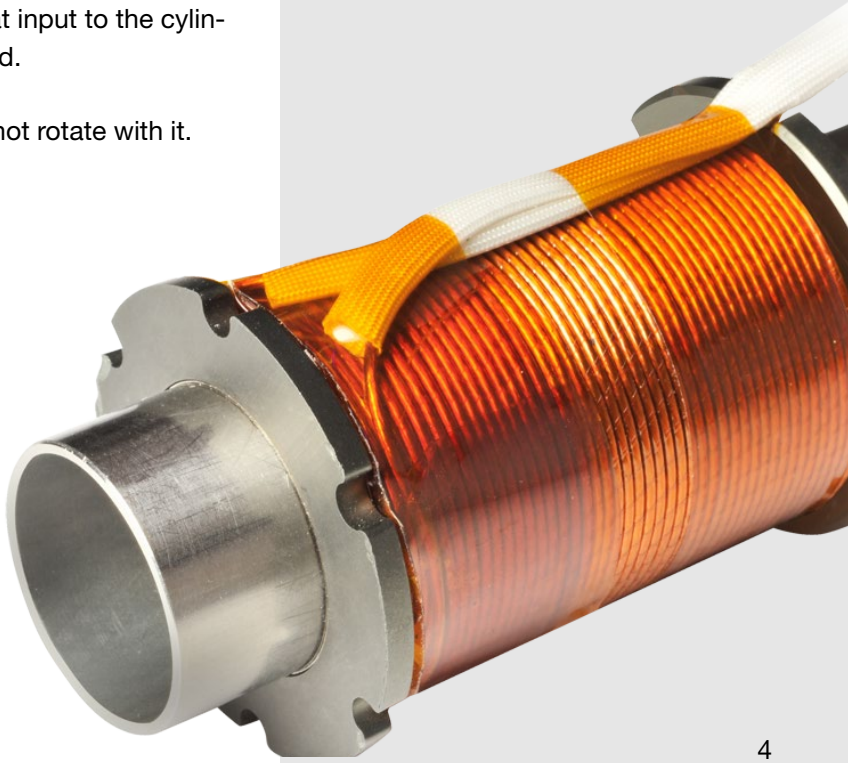
- Adjustable CODESYS PID controller
- Selection temperature setpoint
- Display diagnostic data
- Save parameter settings
- Display actual temperature values

Optional: Mechanical integration

We optionally offer ready-to-use rollers and cylinders with an integrated inductor and transducers.

In cooperation with our development partner, we can coordinate and implement your mechanical customisations.

- Ready to use solution
- Minimum development expenses
- Adaptable to your specific requirements
- Many years of experience in design and manufacturing



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