



EFD[®]
INDUCTION

Future proof
The New Generation Sinac[®] SM/SH



The Internet of Things: Explore the possibilities

The future is interconnected, bringing with it possibilities of access to real-time data, remote service and new ways to perform diagnostics and troubleshooting.

Interconnectivity

The extension of connectivity into industrial equipment allows devices to communicate over the Internet and be remotely monitored and controlled.

to retrieve vast amounts of information enables us to identify potential risks and prevent faults. We can also make reliable forecasts about the future behaviour of your equipment, which for you, means increased reliability, productivity and quality.

Automation and real-time data

In a world where the industry pace is increasing, you may need to access information quickly. Data automation and the ability to collect data in real-time can be critical to the success of your project. Now, EFD Induction service engineers can exploit real-time visualization of your data to optimize processes and find out how your equipment actually performs in situ.

Condition monitoring and alarming

Should anything occur, condition monitoring and alarms ensure that your service personnel are immediately notified when thresholds are exceeded or systems go into fault mode, enabling fast and targeted interventions. Comprehensive diagnostics ensures shorter service response time and you will have reduced outages and downtimes as well as reduced maintenance requirements.

Machine learning

Your equipment will have systems that can learn from the data, identify patterns and make decisions.

Remote service and augmented reality

The need for costly and time-consuming visits to your site will be reduced as experts have remote access to your equipment. Using augmented reality, they are able to blend interactive digital elements into your real-world environment, enhancing computer-generated information.

Advanced analytics and predictive maintenance

EFD Induction offer unique, comprehensive diagnostics, advanced machine audits and troubleshooting. The ability

DIGITAL TO THE CORE

EFD Induction has always been at the forefront of technological development and with the new fully digital control system, we set you up for the future.

Future-proof

The fully digital control system provides a solid foundation to build on. Easy-to-install software upgrades ensure that your induction equipment will always have the latest state-of-the-art technology.

Enhanced reliability

Your induction equipment will have extended life through our unique, advanced machine audits and troubleshooting. Enhanced diagnostics will protect you against unexpected costs.

Increased productivity

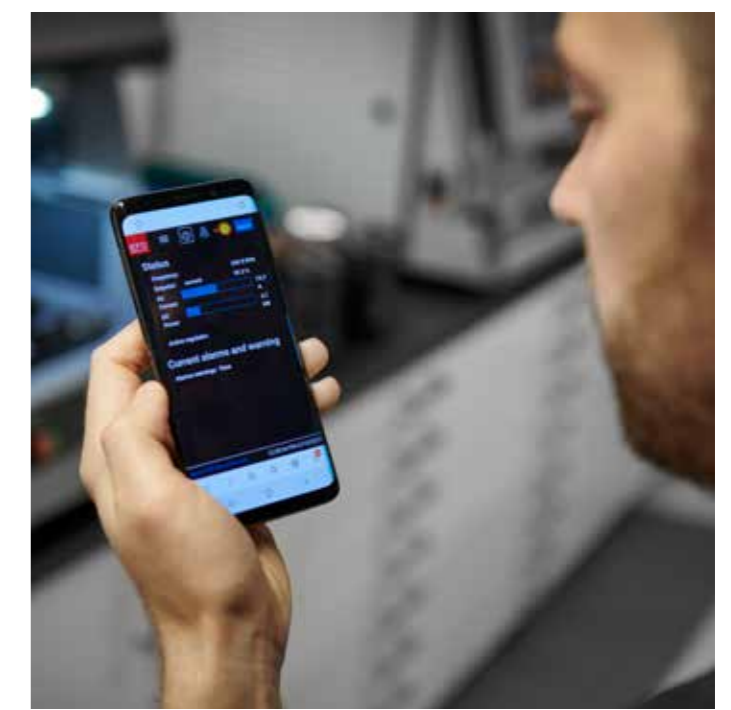
Better use of your machine data will increase your productivity. You will have unmatched control and efficiency, reduced maintenance requirements and shorter service response time.



PREPARED FOR INDUSTRY 4.0 THE INDUSTRIAL INTERNET OF THINGS

With easy updates to new features, your equipment is prepared for developments within:

- Advanced analytics and predictive maintenance
- Interconnectivity
- Condition monitoring and alarms
- Automation and real-time data
- Machine learning
- Remote service and augmented reality



EFD INDUCTION OFFER UNIQUE, COMPREHENSIVE DIAGNOSTICS, ADVANCED MACHINE AUDITS AND TROUBLESHOOTING.

Stationary converters for companies on the move

Sinac universal heat generators are the most advanced and reliable induction heating systems on the market. They are ideal for jobs as diverse as brazing, shrink-fitting, hardening, curing, straightening, and many more.

In-line integration

The small, compact footprint saves valuable floor-space and simplifies in-line integration. A Sinac can be adapted to any robot, allowing quick, no-fuss integration into automated production lines. Handheld transformers (HHT) feature precise power control and are as easy to operate as a regular electric drill. Flexible, water-cooled cables connecting the HHT to the converter allow easy access to workpieces. The HHT can easily be mounted on a robot arm.

Flexible

The Sinac can be fitted with a practically limitless range of coil designs and coil fixtures, flexible cables, closed or separate cooling systems, specially designed heating cables, etc. EFD Induction provides a range of innovations and optional functions that further enhance productivity. We will equip the Sinac to fit any need.

Ready to use

All that has to be done upon delivery is:

- 1) attach a coil
- 2) connect supply voltage
- 3) connect cooling water

In models with closed cooling systems, you only need to connect the supply voltage.



RANGE OF COILS: EFD Induction are specialists at designing, testing and delivering customized, long-life coils.

Easy to operate

The operating panel with its 10-inch capacitive colour touch screen and latest technology in man-machine interface, is the most user-friendly on the market. The multi-language control panel provides access to all system functions, and any information you need can be quickly and easily displayed.

Setup is quick, and an improved heating sequence editor gives you full control of the induction parameters for your heating processes.

Handheld transformers (HHT) feature precise power control and are as easy to operate as a regular electric drill. Flexible, water-cooled cables connecting the HHT to the converter allow easy access to workpieces.

Twin power outputs

Many models come in a Twin version, featuring two independent power outputs that can operate simultaneously. The large touch screen enables side-by-side visualisation of both outputs.

Maximum output power

With the Sinac's maximum power feature you can, for limited periods of time, operate with an output power far in excess of the continuous output power.



ROBOT COMPATIBLE: A Sinac can be adapted to any robot, allowing quick, no-fuss integration into automated production lines.

10-inch capacitive colour touch screen

- latest technology in man-machine interface
- multi-language control panel
- side-by-side visualisation of twin outputs
- easy access to all system functions
- quick set-up
- full control of the induction parameters for your heating processes



Communication protocols

Sinac is delivered with the communication protocol of your choice

- Profibus DP
- Ethernet/IP
- ModBus/TCP
- DeviceNet
- Can Open
- Profinet

Twin power outputs

Many models come in a Twin version

Handheld transformer (HHT)

HHTs feature precise power control and are as easy to operate as a regular electric drill.

Flexible cables

Flexible, water-cooled cables connecting the HHT to the converter allow easy access to workpieces.



Range of coils

Sinac systems can be fitted with a practically limitless range of coil designs.

Complete range

Every EFD Induction Sinac includes a frequency converter, capacitors and, where necessary, a matching unit. The Sinac is suitable for virtually any induction heating application. The wide range of systems and technical features let you choose a solution that is just right for your particular needs.

SINAC SM

The Sinac SM is a range of serial-compensated power sources for medium-frequency heating applications. They are available with maximum intermittent output power of 10-80 kW (6-50 kW continuous) and a frequency range of 10-25 kHz.

SINAC SH

The higher frequency Sinac SH models—which combine high frequencies with small coils—are ideal for heating small, delicate and complex workpieces.



Sinac SM and Sinac SH models are available with various combinations of power outputs.



Sinac SH (100-400 kHz) is equipped with a customized high-frequency output unit.

SELECTION OF POWER OUTPUTS



PISTOL HAND GRIPS: The handgrip supports three different sizes of handheld transformers (HHTs).. Easy trigger operation allows the operator to scroll through the various menus and select different modes. A small, easy-to-read LCD screen on the side of the grip, provides the operator with on/off status, temperature and heat cycle duration, a menu choice and fault codes. The handgrip records and stores four different heating cycles of up to 99,9 seconds each.



Start button: Operate the output power with a small push button mounted directly on the HHT body.



Dual push button handgrip: Two-grip handle with dual start buttons for easy power control in different positions. Very robust design for universal operations.



Aluminium fixture holder: For easy and accurate installation, in-line operations or robot mount. The clamp brackets allows for quick assembly of the HHT without any tools.

TECHNICAL DATA

SINAC SM Medium-frequency models

Model	6/10	6/10 Twin	12/18	12/18 Twin	18/25	18/25 Twin	25/40	25/40 Twin	50/80
Max. output power	10 kW	2x10 kW	18 kW	2x18 kW	25 kW	2x25 kW	40 kW	2x40 kW	80 kW
Continuous output power	6 kW	2x6 kW	12 kW	2x12 kW	18 kW	2x18 kW	25 kW	2x25 kW	50 kW
Supply voltage 3 phase	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V
Recommended fuse	16* Amp	32* Amp	32* Amp	63 Amp	63 Amp	80Amp	63 Amp	125 Amp	125 Amp
Coolant	7 l/min	11 l/min	9 l/min	15 l/min	10 l/min	17 l/min	14 l/min	24 l/min	21 l/min
Weight	90 kg	120 kg	90 kg	120 kg	90 kg	120 kg	90 kg	120 kg	120 kg

Subject to modification

SINAC SH High-frequency models (50-100 kHz)

Model	6/10	6/10 Twin	12/18	12/18 Twin	18/25	18/25 Twin	25/40
Max. output power	10 kW	2x10 kW	18 kW	2x18 kW	25 kW	2x25 kW	40 kW
Continuous output power	6 kW	2x6 kW	12 kW	2x12 kW	18 kW	2x18 kW	25 kW
Supply voltage 3 phase	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V
Recommended fuse	16* Amp	32* Amp	32* Amp	63 Amp	63 Amp	80 Amp	63 Amp
Coolant	14 l/min	28 l/min	14 l/min	28 l/min	14 l/min	28 l/min	19 l/min
Weight	115 kg	150 kg	115 kg	150 kg	115 kg	150 kg	115 kg

Subject to modification

SINAC SH High-frequency models (100-400 kHz)

Model	6/10	6/10 Twin	12/18	12/18 Twin	18/25	18/25 Twin	25/40
Max. output power	10 kW	2x10 kW	18 kW	2x18 kW	25 kW	2x25 kW	40 kW
Continuous output power	6 kW	2x6 kW	12 kW	2x12 kW	18 kW	2x18 kW	25 kW
Supply voltage 3 phase	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V	400-480 V
Recommended fuse	32* Amp	32* Amp	32* Amp	63 Amp	63 Amp	80 Amp	63 Amp
Coolant	11-18**l/min	20-29**l/min	19**l/min	33**l/min	22**l/min	35**l/min	28**l/min
Weight	90kg	145 kg	90 kg	145 kg	90 kg	145 kg	125 kg

Subject to modification

* Tripping Characteristics: Type K
** Output circuit dependent

Versatile systems for various heating jobs

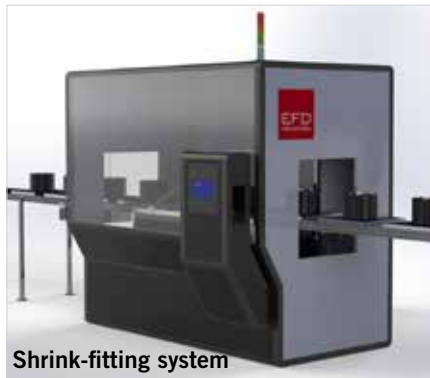
EFD Induction Sinac universal heat generators are the most advanced and reliable induction heating systems on the market, ideal for a wide range of applications like hardening, brazing, shrink-fitting, deck straightening and many others.



Deck and bulkhead straightening system



Brazing machine



Shrink-fitting system



Hardening system



Green and sustainable solutions

EFD Induction are dedicated to working for a cleaner and greener future. Our technology is eco-friendly and our incredibly efficient products ensure rational production and minimal pollution. Our new digital control system delivers predictive data and insights, enabling our customers to maximize their supply chain and asset performance. Reducing the use of energy and cutting operation costs allows for a sustainable and profitable production.

Visit our website to learn more about EFD Induction and our solutions that are boosting productivity for companies around the world.

www.efd-induction.com



PUTTING THE SMARTER
HEAT TO SMARTER USE