RCI cast

Innovators for Casting

High-Precision Casting Systems Designed for Your Future
RCIcast combines engineering expertise with customer-driven solutions to shape the future of copper casting

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THE FUTURE OF CASTING IS HERE

RCIcast® delivers customized upward casting systems tailored to your needs. From design to installation and technical support, we provide solutions focused on your specific requirements.

About Our Company

RCIcast® presents continuous casting technologies that produce low manufacturing costs and high-quality non-ferrous products (copper, aluminum, copper alloys, and non-ferrous rods). RCIcast® systems have been designed for both kinds of raw materials: pure and recycled.

Innovative Concept

RCIcast® casting plant utilizes advanced technology to produce high-quality copper rods with consistent performance. We are committed to meeting the highest industry standards and exceeding customer expectations.

Efficiency

With RCIcast® casting plant, you can significantly increase your production efficiency. Our streamlined process ensures faster production times and lower energy consumption, saving you time and money in the long run.

Custom Design

RCIcast® understands that every customer has unique needs. That's why our casting designs offer customizable options to meet your specific requirements. From size and shape to alloy composition, we can tailor our production to suit your exact specifications.

LET'S TALK ABOUT WHY CHOOSE OUR SOLUTIONS

- **Eco-Friendly Practices:**

RCIcast® prioritizes sustainability. Our eco-friendly practices ensure that your copper production is not only efficient but also environmentally responsible. We have a commitment to a greener future.

- **Expert Team:**

Our team of experienced professionals is committed to delivering top-notch service and unparalleled results. From design to production, you can trust us to bring your vision to life with skill and expertise.

- **Consultation and Customization Options**
- **Installation and Training Process**
- **Ongoing Support and Maintenance Services**

Our advanced casting technologies are designed to enhance quality, improve efficiency, and support sustainable production. These applications offer reliable solutions tailored to the evolving needs of modern manufacturing.

STANDARD **PLANTS**

RCI-4000 / 4R.8-20

Furnace Type	MCF-5T/SD
Production Capacity	4,000 tons/year
Rod Diameter	Ø8mm ... Ø20mm
Final Product Oxygen Content	≤ 3 ppm
Casting Rate	535 kg/h
Casting Speed	0,1 - 6,0 m/min
Furnace Energy Consumption	~ 300 kWh/ton
Total Energy Consumption	≤ 360 kWh/ton
Take-Up Quantity	4

RCI-8000 / 8R.8-20

Furnace Type	MCF-12T/SD
Production Capacity	8,000 tons/year
Rod Diameter	Ø8mm ... Ø20mm
Final Product Oxygen Content	≤ 3 ppm
Casting Rate	1070 kg/h
Casting Speed	0,1 - 6,0 m/min
Furnace Energy Consumption	~ 290 kWh/ton
Total Energy Consumption	≤ 350 kWh/ton
Take-Up Quantity	8

RCI-12000 / 12R.8-20

Furnace Type	MCF-16T/SD
Production Capacity	12,000 tons/year
Rod Diameter	Ø8mm ... Ø20mm
Final Product Oxygen Content	≤ 3 ppm
Casting Rate	1600 kg/h
Casting Speed	0,1 - 6,0 m/min
Furnace Energy Consumption	~ 290 kWh/ton
Total Energy Consumption	≤ 350 kWh/ton
Take-Up Quantity	12

RCI-16000 / 16R.8-20

Furnace Type	MF-15T/DD, CF-4T/SD
Production Capacity	16,000 tons/year
Rod Diameter	Ø8mm ... Ø20mm
Final Product Oxygen Content	≤ 3 ppm
Casting Rate	2130 kg/h
Casting Speed	0,1 - 6,0 m/min
Furnace Energy Consumption	~ 280 kWh/ton
Total Energy Consumption	≤ 340 kWh/ton
Take-Up Quantity	16

RCI-20000 / 20R.8-20

Furnace Type	MF-16T/DD, CF-5T/SD
Production Capacity	20,000 tons/year
Rod Diameter	Ø8mm ... Ø20mm
Final Product Oxygen Content	≤ 3 ppm
Casting Rate	2400 kg/h
Casting Speed	0,1 - 6,0 m/min
Furnace Energy Consumption	~ 280 kWh/ton
Total Energy Consumption	≤ 340 kWh/ton
Take-Up Quantity	20

RCI-24000 / 24R.8-20

Furnace Type	MF-18T/DD, CF-5T/SD
Production Capacity	24,000 tons/year
Rod Diameter	Ø8mm ... Ø20mm
Final Product Oxygen Content	≤ 3 ppm
Casting Rate	3100 kg/h
Casting Speed	0,1 - 6,0 m/min
Furnace Energy Consumption	~ 280 kWh/ton
Total Energy Consumption	≤ 340 kWh/ton
Take-Up Quantity	24

RCIcast® **CUSTOMER SERVICE**

At RCIcast®, we believe that every project begins with a deep understanding of our customers' needs and expectations.

Our upward casting systems go beyond standard solutions. They are custom-designed and engineered specifically for each project. From design and manufacturing to installation and after-sales support, we stand by our customers at every stage.

Our commitment doesn't end once the system is installed. Even after commissioning, our expert team remains ready to provide fast and effective solutions whenever needed.

Working with RCIcast® means reliability, continuous support, and a long-term partnership.

Visit our website to explore more!

Scan to contact us instantly!

info@**rcicast**.com

www.**rcicast**.com

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* All the above information has been calculated according to the 8mm rod as the final product.

THE RCIcast® **SOLUTIONS**

RCIcast® systems deliver an advanced copper casting process that combines efficiency, precision, and safety at every stage. From the raw material loading to the servo-controlled coiling system, each step is centrally managed through an integrated automation system.

• Cathode Loading System

Copper cathodes are placed into the furnace using a specialized loading system that ensures safe and efficient material handling.

• Efficient Copper Processing Furnace

The RCIcast® furnace is designed specifically for non-ferrous metal melting. Molten copper reaches 1160°C, while the exterior remains around 90°C offering both high performance and operator safety. Melt level and temperature are continuously monitored for precise process control.

• Casting Machine: Withdrawal Unit

Located on the upper surface of the furnace, the casting machine (also referred to as the withdrawal unit) includes crystallizer cooler pipes (CCPs). These pipes have cylindrical, graphite-coated interiors that promote clean and efficient copper solidification. Reverse osmosis (RO) water flows through the copper tubes to cool and solidify the molten copper. The inlet and outlet temperatures of the water are monitored to ensure that the cooling process is functioning effectively.

Our casting line benefits from a patented, adjustable, modular withdrawal unit, developed to enhance product variety in upward continuous casting processes, allowing for rapid transitions between products ranging from 8 mm to 20 mm in diameter.

The withdrawal unit allows the operator to manage drawing speed precisely via the HMI (Human-Machine Interface). The immersion depth of the crystallizer is also tracked by an encoder to ensure accurate vertical positioning. Individually controlled coilers ensure consistent rod shape and smooth operation.

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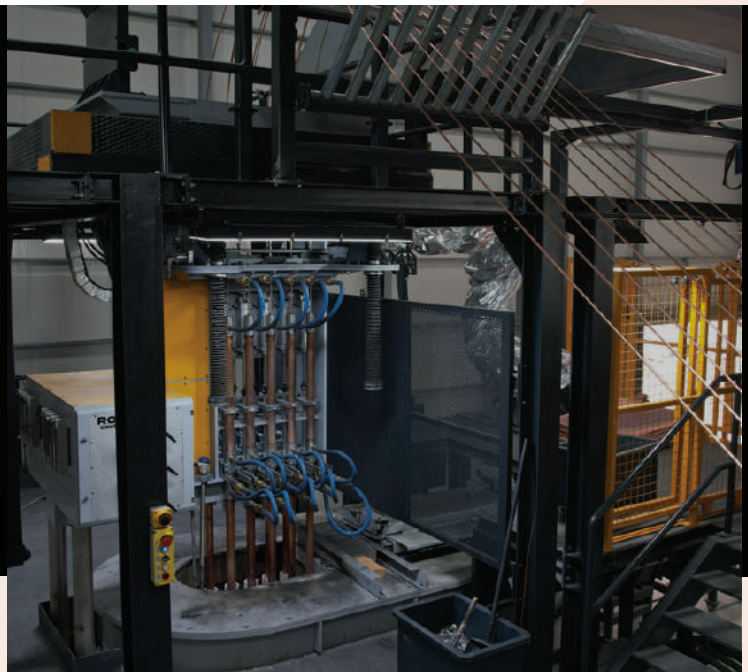
• CIS Power Control System

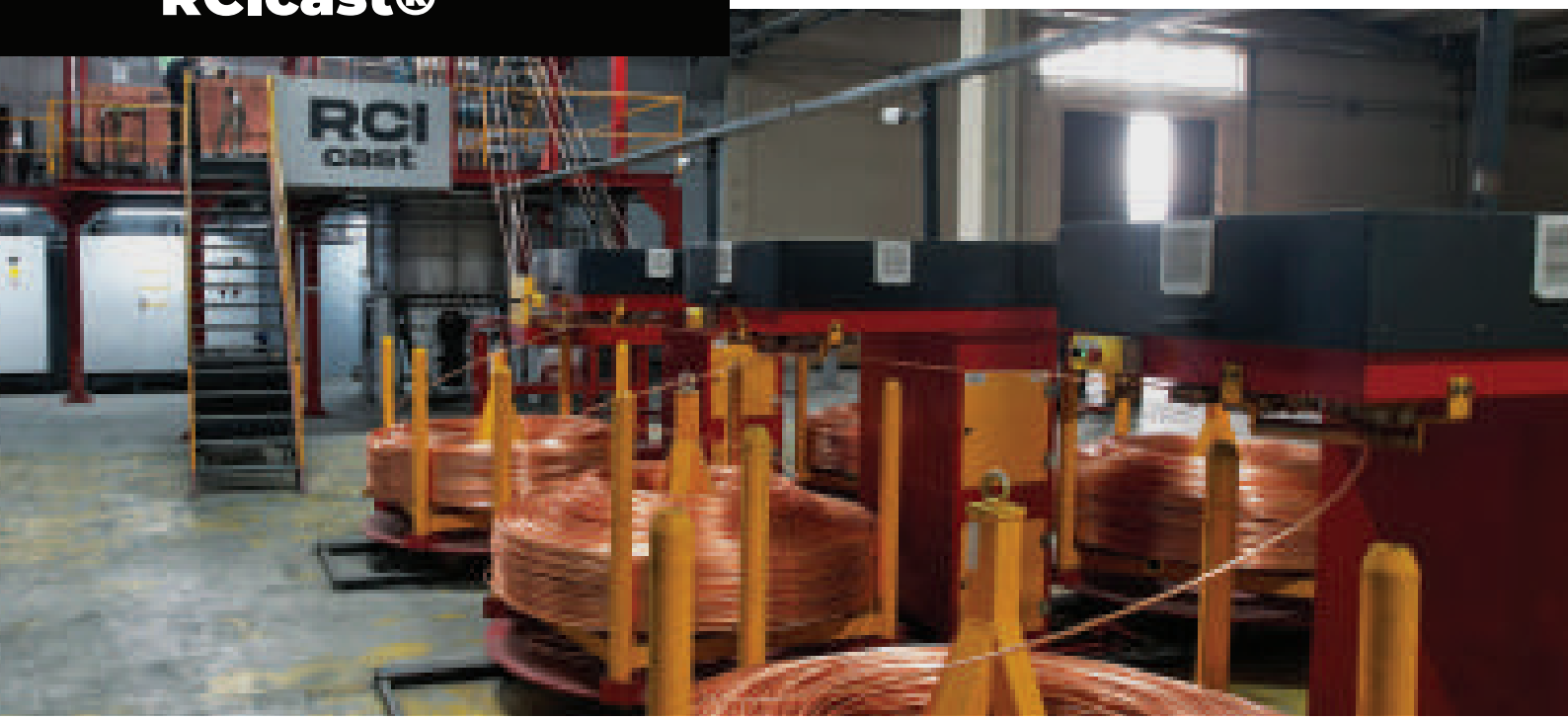
The furnace is controlled by a CIS electrical panel, which operates on the induction heating principle. A magnetic field generated in the induction coil initiates the heating process, while special converters regulate the power and frequency of the inductor for precise control of heating intensity and duration. The system features stepless power control, allowing smooth, continuous adjustments without abrupt changes, and integrates an advanced inverter system that ensures optimal frequency modulation and efficient power conversion for stable, high-performance operation.



• Cooling System

Effective cooling is essential for the inductor, CIS panel, and crystallizer cooler pipes (CCPs). The combined heat generated by these components is transferred to the customer's cooling system via a heat exchanger. To ensure optimal heat transfer and minimize resistance, the use of RO water is strongly recommended. The RO system adjusts water quality to meet required standards, maintaining system efficiency and stability.

INSIGHTS FROM
RCIcast®



• How was RCIcast® founded?

RCIcast® is built upon extensive experience in the cable and wire industry and a strong engineering background. For many years, technical service, maintenance, and field support were provided to companies that were using various brands of upward casting systems. Throughout this process, there was an opportunity to closely observe the challenges users faced and the core needs of the industry.

These valuable insights from the field led to the development of more efficient, user-friendly, and cost-effective solutions. It was with this motivation that RCIcast® was established to bring a fresh perspective to the industry. The goal is not only to manufacture equipment but to offer innovative systems that redefine production processes through digitalization, automation, and advanced engineering. At every step, innovation is at the core of efforts to promote sustainable, efficient, and technologically transformative solutions in the sector.

• What unique advantages do the systems bring to the industry?

When developing systems, the focus is not only on performance but also on ensuring an excellent and intuitive user experience. Highly homogeneous melting, precise temperature control, and full automation integration are consistently offered. In addition, many smart and practical design improvements that simplify operations have been carefully developed by the engineering team, for example, systems that allow for coil replacement without tilting the entire furnace, and service-friendly modular structures like patented casting designs.

• What is the approach to R&D?

At RCIcast®, a continuous improvement mindset is adopted. R&D efforts focus on efficiency, digitalization, and sustainability. Projects involving Industry 4.0 integration, sensor-based monitoring and software optimization are actively developed. This enables the provision of always up-to-date and cutting-edge technologies to customers.

• What are the design and engineering criteria?

The design and engineering processes are centered around efficiency, durability, and user focus. Each component of the system undergoes detailed engineering analysis. Thermal analysis, magnetic field simulations, and custom inductor designs are essential tools used to maximize performance.

Moreover, every system is customized for the specific application, enabling the delivery of the most suitable solution tailored to each customer's needs.

• How is quality ensured in production?

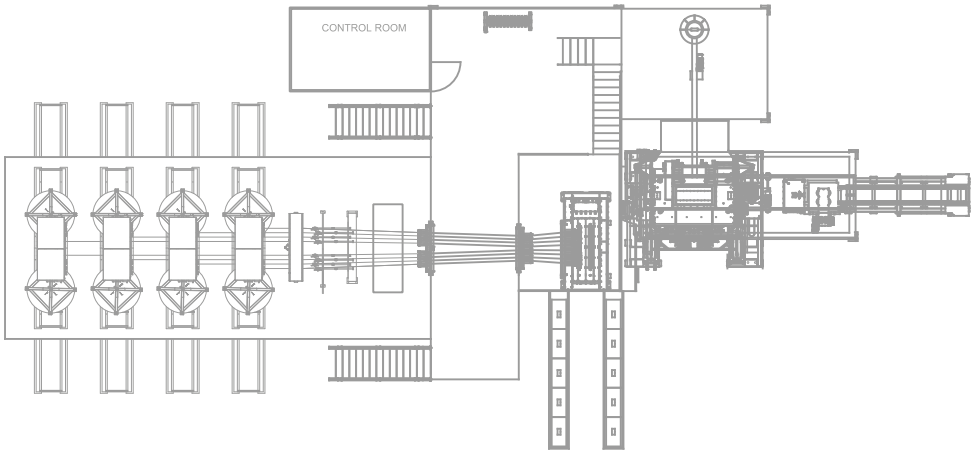
All production processes are carried out in compliance with international quality standards. Every product is rigorously tested through Factory Acceptance Tests (FAT) and on-site commissioning processes. Quality is treated as an ongoing process to ensure products deliver maximum performance in the field.

• What sets RCIcast® apart from competitors?

What truly distinguishes RCIcast® from others is the ability to provide application-specific designs, fast technical support, and highly durable systems with a low carbon footprint. The plants are designed and manufactured entirely in-house, eliminating external dependency and allowing for fully integrated, reliable systems. The in-house engineering team can provide rapid remote support and resolve issues efficiently.

Furthermore, by using globally available industrial-standard components, it is ensured that customers can maintain operations without dependency on RCIcast for spare parts. Nevertheless, we also support our customers in procuring any spare parts they may require.

Additionally, many system features are designed to simplify operations. For instance, a specially developed core-changing device allows coil replacement without tilting the entire furnace, significantly reducing maintenance time. Also, the patented CCP designs enable the most effective cooling and crystallization processes. Combined with modular structures, these thoughtful engineering solutions provide customers with both time and cost advantages in production. An advanced R&D approach and comprehensive after-sales technical support further distinguish RCIcast®. Following installation, RCIcast® commits to delivering fast and effective technical assistance, whether remotely or on-site, whenever needed.



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From tailored design to lifetime support - we're with you every step of the way

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