

THE FEATURES OF THESE PLANTS

- Automatic SPS melting processor
- Launder und mold melt-level control
- Most precise lowering control
- Variable stroke frequencies and stroke heights adjustment during casting
- Cleaning stroke function
- Adjustable secondary cooling zones
- Casting pit steam extraction
- Automatic discharge
- Latest SIEMENS control

ADDITIONAL OPTIONS FOR CASTING PLANTS

- Scrap charging system
- Mold drying equipment
- Mold mounting racks
- Mold cleaning units
- Redundant cooling water control with emergency cooling function
- In-Line HCC drum and face milling
- Peeling machines for bolts and tubes
- High-speed saw for bars and profiles
- Energy management system
- Protective gas supply units

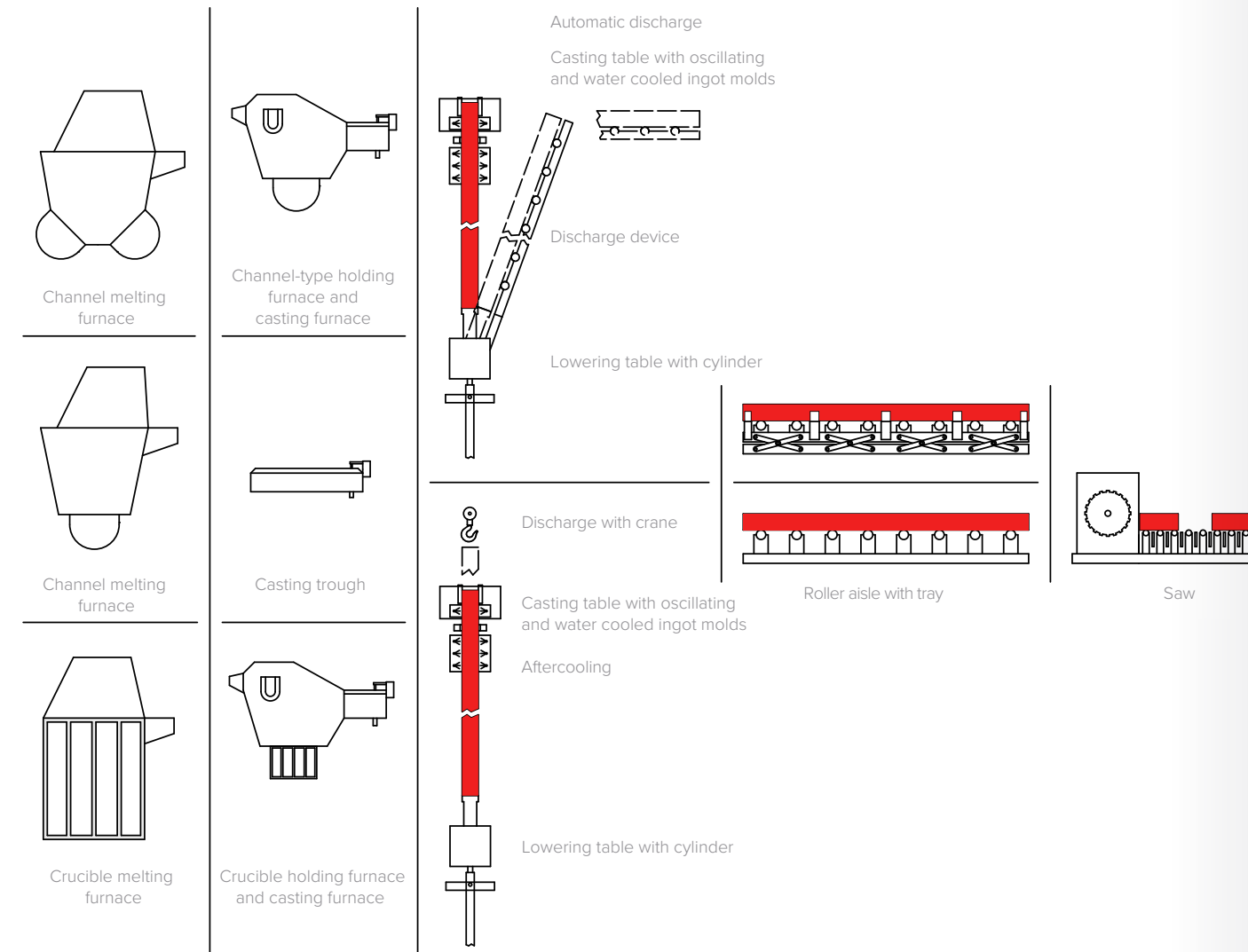
ADDITIONAL SERVICES

- Expand, overhaul, and modernize existing facilities.
- Service and maintenance of existing systems
- Maintenance and overhaul of molds and coolers
- Technical support for:

- Investigation of quality and process issues
- Process engineering: process development, process review
- Support in the planning and implementation of new systems
- Support in organizing production processes and material flow
- Employee training, process- and operator instruction

VERTICAL PLANT SETUPS

Thöni supplies vertical casting systems individually manufactured according to customer requirements. The schematic shows the main components in different system configurations. Individual components can also be integrated into existing systems.



The plants can be combined according to customer requirements and are suitable for billets and slabs.



THÖNI CASTING EQUIPMENT
METAL ON DESIGN
 VERTICAL CASTING SOLUTIONS (VSCC)

1. MELTING

The input material is melted in the melting furnaces. Depending on the alloy properties, the metals are heated to approx. 1.250°C. When the prescribed pouring temperature is reached, the melt is first analyzed and corrected. The melt is then transferred via a launder into the holding- and casting furnace.

MAINS FREQUENCY CHANNEL MELTING FURNACE

This melting furnace is characterized by its high efficiency and low energy consumption.

LOW FREQUENCY CRUCIBLE FURNACE

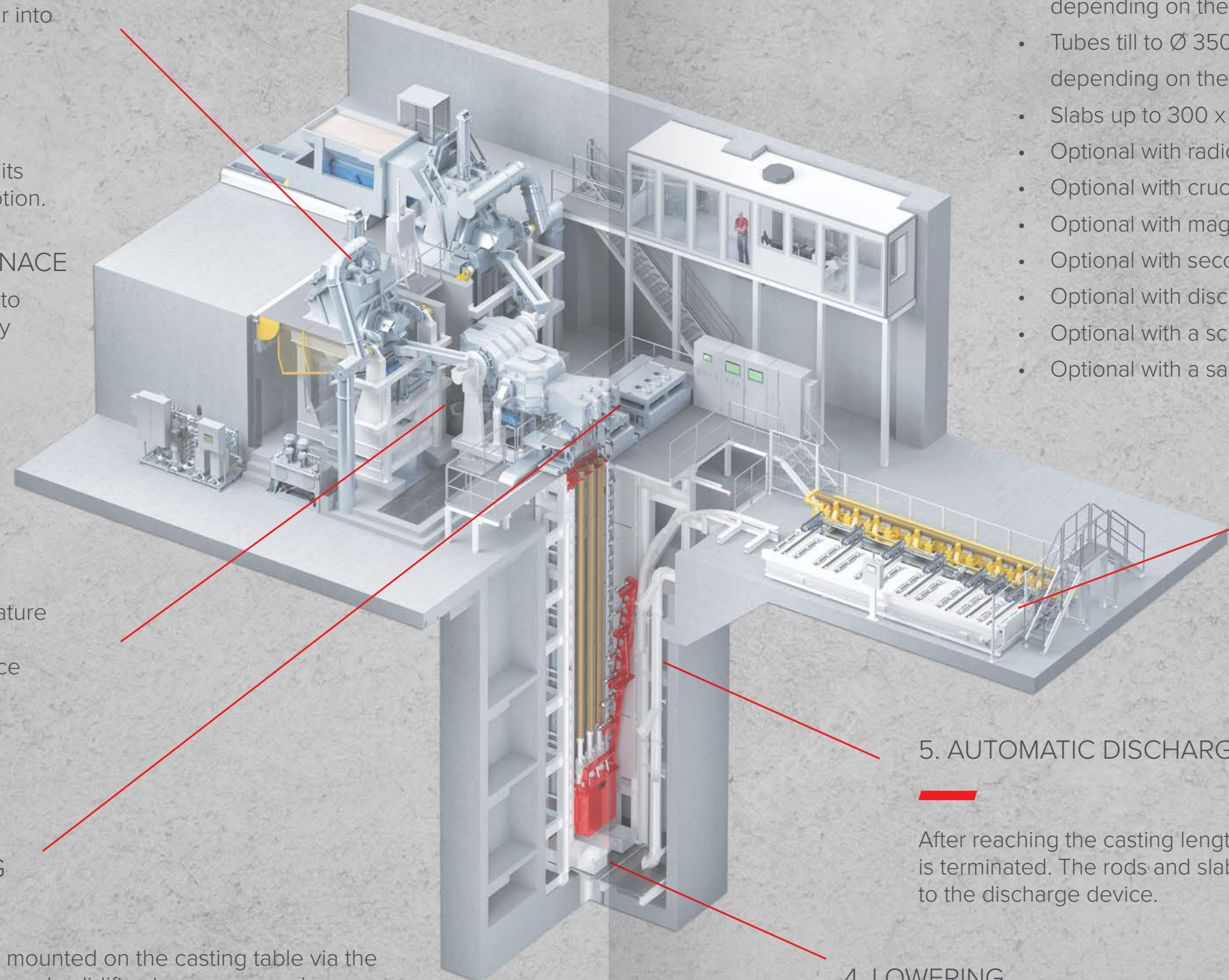
This melting furnace is mainly designed to melt chips. High steering is generated by using a low frequency.

2. CASTING

Task of the holding- and casting furnace is to maintain a constant casting temperature with a low deviation of less than (+/-3°C). This process step has significant influence on the quality of the melt.

3. SOLIDIFICATION AND COOLING

The liquid metal then reaches the molds mounted on the casting table via the fore-hearth, in which it receives its shape and solidifies homogeneously as possible by the means of heat extraction. The strand emerges from the mold on the underside at approx. 300 to 650°C and can immediately brought to room temperature by a subsequential cooling system. A special feature of the casting table is that the oscillation frequency and stroke amplitude can be manipulated during production.



**VERTICAL SEMI-CONTINUOUS CASTING (VSCC)
VERTICAL CASTING PLANTS FOR RODS AND SLABS**

- Rods from Ø 120 – 350 mm (single or multiple strands, depending on the diameter)
- Tubes till to Ø 350 mm (single or multiple strands, depending on the diameter)
- Slabs up to 300 x 900 mm.
- Optional with radiometric mold level control
- Optional with crucible monitoring system
- Optional with magnetic stirrer
- Optional with second casting tables
- Optional with discharge system
- Optional with a scrap charging system
- Optional with a saw

6. STORAGE

After being discharged from the pit, the strands are guided to the deposit and deposited.

5. AUTOMATIC DISCHARGE

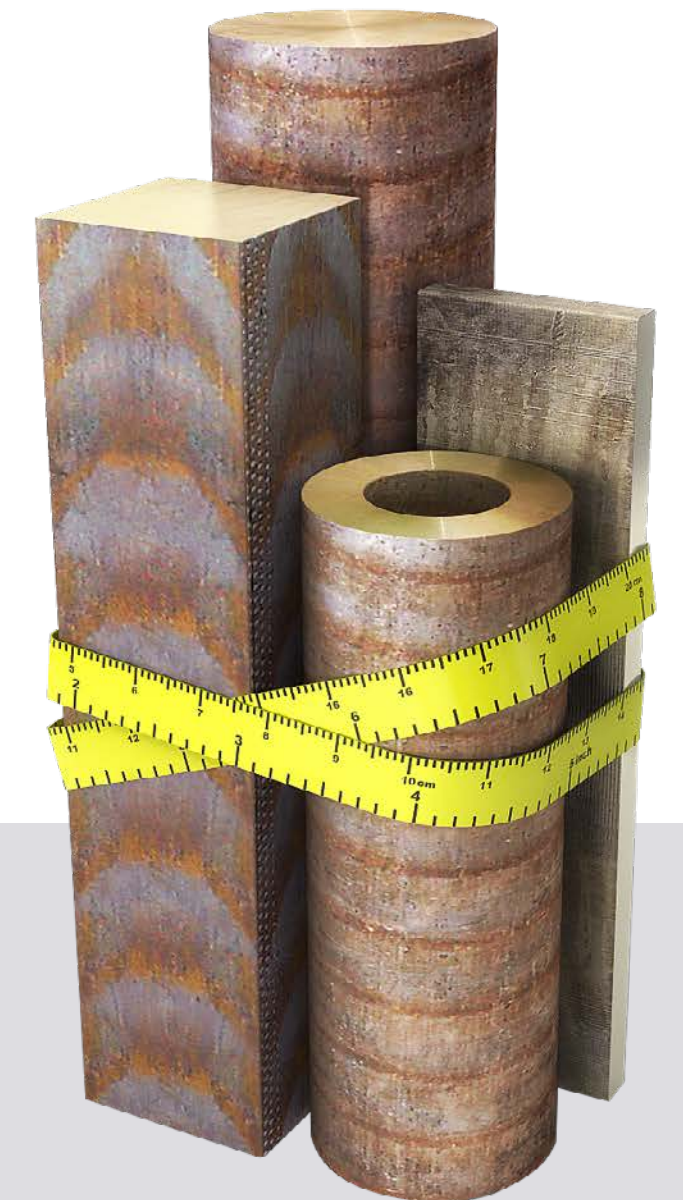
After reaching the casting length, the casting process is terminated. The rods and slabs are transferred to the discharge device.

4. LOWERING

With the lowering table attached to the cylinder, the strand is lowered with a precisely reproducible movement to change the melt in the solidification zone from liquid to solid state of aggregation.

THÖNI CASTING EQUIPMENT

has designed, manufactured and delivered horizontal continuous casting plants and vertical semi-continuous plants for the production of strips, profiles and round formats of copper and copper alloys, aluminum-tin and precious metals for decades. Technical competence and many years of experience of our employees guarantee our customers the highest quality.



**Head of Casting Equipment /
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