

Melting Furnaces

IKOI'S INDUCTION
MELTING FURNACES



IKOI
PRECIOUS METALS INGENUITY

Melting Furnaces

STATIC MELTING FURNACES (Z51_Series)

IKOI induction static melting furnaces for manual melting and casting of precious-metal alloys in pure graphite or silicon carbon graphite crucibles, with automatic temperature control.

The furnaces with static crucible are the best solution in the market for melting precious metals. The furnaces are designed to drastically reduce the electricity consumption while maintaining the production efficiency: this is possible because all of them are equipped with static frequency converters.

The temperature control is automatic and managed by a thermoregulation in the microprocessor; the furnace control is made by a control panel equipped with simple keys and back lighted display with liquid crystals.

FEATURES

- A. Start and stop
- B. Automatic control and settings of the power and temperature
- C. LPG gas crucible protection
- D. Alloy homogeneity
- E. Alarm messages and possibility to use different types of crucibles

ADVANTAGES

- 1) Fast melting cycles
- 2) Small dimensions
- 3) Stainless steel carpentry, avoiding the electromagnetic effects of the inductive field
- 4) Reduction of losses due to uniform temperature distribution in the molten material
- 5) Very low noise

ACCESSORIES (delivered with the furnace)

- N.1 PLIERS
- N.1 GAS BURNER FOR PROTECTION
- N.1 COMPLETE SET OF CRUCIBLES, LID AND GRAPHITE ROD
- N.1 SERIES OF FUSES



Melting Furnaces

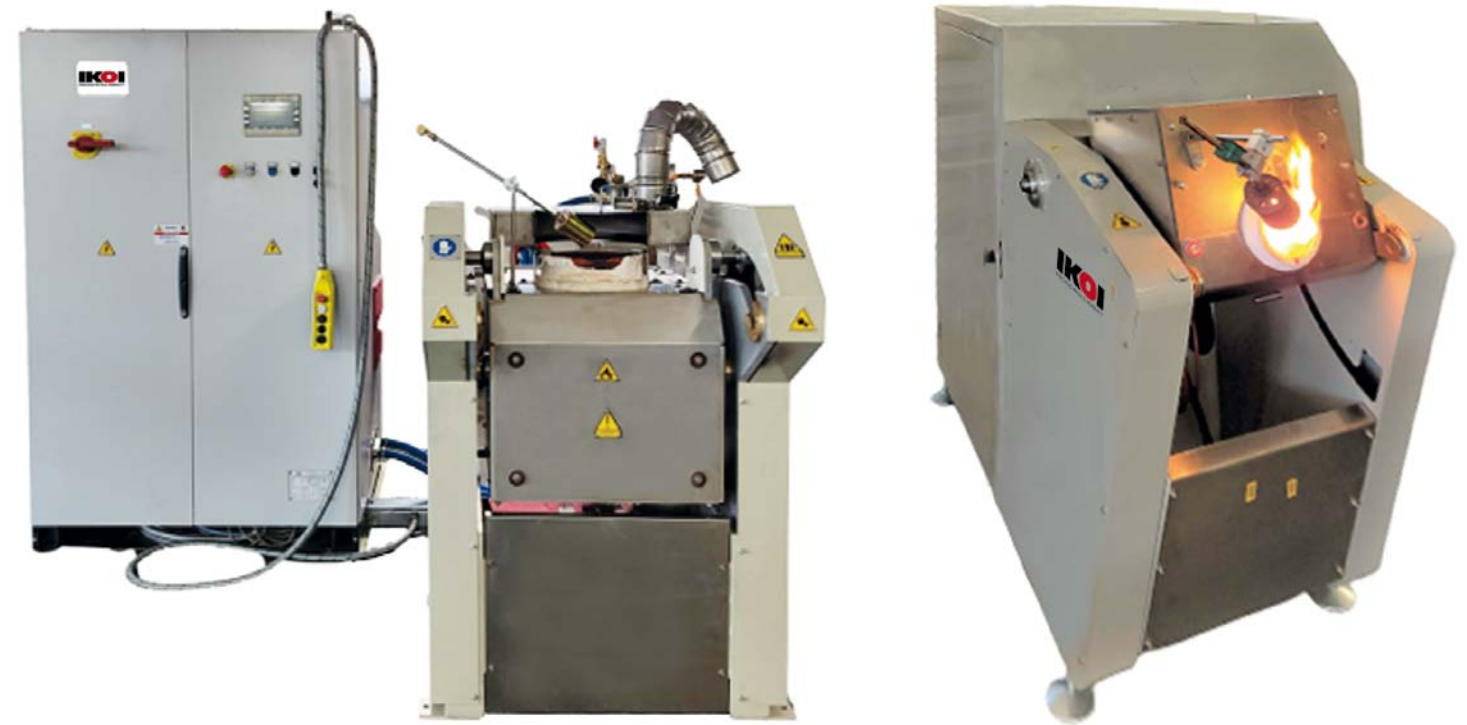
TILTING MELTING FURNACES (Z52_Series)

Induction melting medium frequency furnace for the pre-melting of precious-metal alloys in pure graphite or silicon carbon graphite crucible, with automatic temperature control.

The tilting melting head is used to pour metal into a mould or a die. The tilting movement is controlled either manually or through a joystick.

FEATURES

- Manual, electric or hydraulic tipping with double cylinder
- Shielding with magnetic cores
- Inspectable melting head with the furnace assembled and no guide cams in the rotation
- HMI Weintek with immediate remote assistance



ADVANTAGES

- Energy efficient
- Very low noise
- Compact design
- Stable casting point during rotation which makes casting easy even on small brackets/colanders; increased safety for the operator who does not have to push trolley equipment near the furnace.
- Safety for the operator and increased heating efficiency.
- Fast maintenance and short shutdowns machine for furnace restoration.

Melting Furnaces

Optionals

Joystick: facilitates the mechanical handling of the crucible. Controls speed, angle and timing of tilting and melting of the furnace.

Burners LPG: keep the crucible and the material warm - remove oxygen to prevent graphite and metal oxidation.

Optical pyrometer: controls the temperature inside the furnaces (optical pyrometer working range 650° to 1.800°).



STATIC MELTING FURNACES

	Z51_005	Z51_010
Electrical Power	5 kW	10 kW
Crucible	Graphite*	Graphite*
Handling	Manual	Manual
Crucible capacity	5 Kg Au 999	10 Kg Au 999
Internal dimension of the crucible	ø66 x 120 mm	ø78 x 154 mm
Machine dimensions (WxDxH)	410x410x950 mm	410x410x950 mm
Water cooling device	Optional upon request	Optional upon request
Water consumption	0,5m³/h; 8,3l/min	0,7m³/h; 11,6l/min
Weight	75 Kg	75 Kg

*Silicon carbide carbon bonded upon request.

TILTING MELTING FURNACES

	Z52_020	Z52_050	Z52_100	Z52_170
Electrical Power	18 kW	30 kW	45 kW	65 kW
Crucible	Silicon carbide carbon bonded*	Silicon carbide carbon bonded*	Silicon carbide carbon bonded*	Silicon carbide carbon bonded*
Tilting	Manual or electrical (on request)	Manual or electrical (on request)	Electrical	Hydraulic
Crucible capacity	20 Kg Au 999	50 Kg Au 999	100 Kg Au 999	170 Kg Au 999
Crucible inner dimensions	Ø110 x 235 mm	Ø130 x 300 mm	Ø175 x 435 mm	Ø210 x 450 mm
Machine dimensions (WxDxH)	1550x1100x1400 mm (including electric cabinet)	1550x1100x1400 mm (including electric cabinet)	Machine: 1000x800x1200 mm Electric cabinet: 1000x800x1900 mm	Machine: 900x1200x1200 mm Electric cabinet: 1000x1200x1900 mm
Water cooling device	Optional upon request	Optional upon request	Optional upon request	Optional upon request
Water consumption	1,5m³/h; 25l/min	2,4m³/h; 40l/min	3,6m³/h; 60l/min	6-8m³/h; 100-130l/min
Weight	500 Kg	500 Kg	Machine: 350 Kg Electric cabinet: 250 Kg	Machine: 680 Kg Electric cabinet: 675 Kg

The standard temperature of the machines is 1.300°C; electrical power supply is 230/400V – 50/60Hz 3phase.

*Graphite crucible upon request.



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IKOI is the leader in the pyrometallurgical processes for the precious metals refineries, mints and jewellery market, thanks to our technology for vacuum distillation, melting & casting, heat treatments and crystallization.

Our Vision is to create a Safe, Efficient and Green way to Process Precious Metals and our Mission is to bring Innovative and Sustainable Technology to Precious Metal Industry.

With more than 400 plants installed in more than 50 countries, we are a reference point for the industry.

Data here above are not binding and they could be changed during the studying or construction phase of the machine.