

A stylized logo consisting of three horizontal bars of varying lengths, stacked vertically. The top bar is light gray, the middle bar is black, and the bottom bar is light gray.

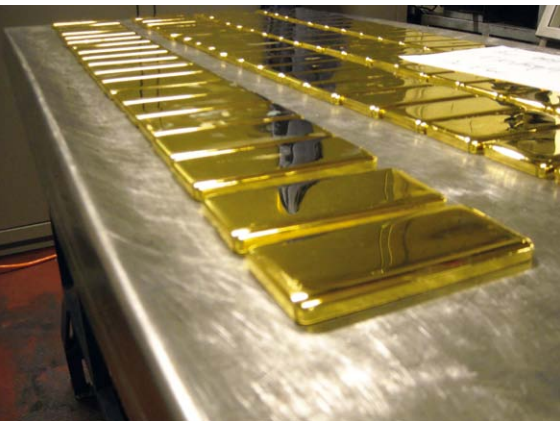
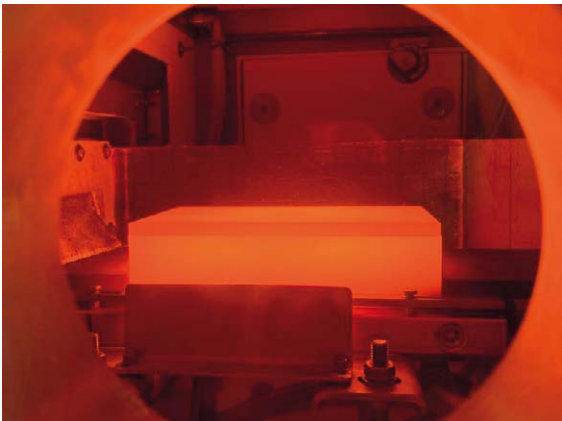
INNOVATIVE CASTING SYSTEM FOR CAST AND GOOD DELIVERY BARS



The Flameless Tunnel® is the perfect solution for casting gold or other precious metals ingots and bars from grains, scraps or sand. The innovative induction furnace works without any open flames or external heat producing superior quality bars without any metal loss and in complete safety for the operators.



The Flameless Tunnel® set a standard in gold and silver bars manufacturing. The original Flameless Tunnel furnace has been introduced by IKOI more than 15 years ago and still represents a fantastic solution for bar casting, thanks to the many advantages of our technology.



1. Cancellation of Precious Metal losses
2. Approved by LBMA Good Delivery rules
3. Fast production times
4. Very low radiant and convective heat loss
5. Very low electricity consumption

6. Reduction of the labour time for the production
7. Safer for the operators
8. Sustainable for the environment (Green technology)
9. Significant reduction of rejects due to increased quality of the bars

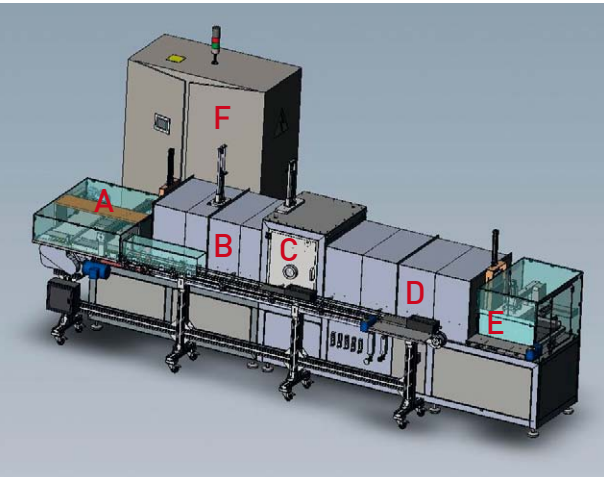


Straight type continuous electric induction system furnace for the production of gold or silver bullion in controlled atmosphere, suitable for working with graphite ingot moulds.

FEATURES OF FLAMELESS TUNNEL:

- High efficiency custom designed generators (design owned by IKOI)
- High quality material for all components
- Water cooled frame
- Water cooled Copper plate solidification chamber
- Perfect Nitrogen atmosphere containment
- Long life moulds (low opex)
- Compliant with EU standards

The furnace is composed of 6 parts:



- A. Loading zone of the ingot moulds (already charged with metal)
- B. Heating zone for the melting of the material in the ingot moulds
- C. Solidification Zone
- D. Cooling zone
- E. Unloading zone of the ingot moulds
- F. Power and control cabinet

	Z41_004	Z41_012	Z41_030	Z41_060	Z41_120	Z41_200	Z44_015	Z44_030
Melting Power	16 kW	25 kW	60 kW	110 kW	170 kW	240 kW	125 kW	150 kW
Production of 100 Oz bars per hour Gold/Silver	-	-	-	-	-	-	15	30
Production of 1 Kg ingots per hour Gold/Silver	4	12	30	60	120	200	60	90
Production of 500 g ingots per hour Gold/Silver	4	12	30	60	120	200	60	90
Production of 250 g ingots per hour Gold/Silver	8	24	60	120	240	400	120	180
Production of 10 tolas ingots per hour Gold/Silver	16	48	120	240	480	800	240	360
Production of 100 g ingots per hour Gold/Silver	16	48	120	240	480	800	240	360
Production of 50 g ingots per hour Gold/Silver	16	48	120	240	480	800	Up to 300	Up to 400
Production of 1 Oz bars per hour Gold/Silver	16	48	120	240	480	800	Up to 300	Up to 400
Loss of weight g/kg	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Moulds	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
Heating technology	Induction	Heating Elements	Induction	Induction	Induction	Induction	Induction	Induction
Mould movement	Automatic							
Power supply	230/400V 3-ph 50-60 Hz							
Water cooling device	Optional upon request							

	Z47_004	Z47_006	Z48_002	Z48_004	Z48_006	Z49_006
Melting Power	85 kW	115 kW	75 kW	140 kW	220 kW	300 kW
Production of 1000 Oz Silver G.D. bars per hour	-	-	2	4	6	6
Production of 400 Oz Gold G.D. bars per hour	4	6	4	8	12	-
Production of 1Kg bars per hour Gold/Silver	50	70	-	-	-	-
Loss of weight g/kg	0.1	0.1	0.1	0.1	0.1	0.1
Moulds	Graphite					
Heating technology	Induction					
Mould movement	Automatic					
Power supply	230/400V 3-ph 50-60 Hz					
Feedstock	Grains		Grains			Crystals

*Production achievable only by adding the optional "SWITCH" to the furnace

*All the technical data specified are subject to change due to the continuous technological improvement

*All furnaces are suitable for grains except Z49, in which crystals are used



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