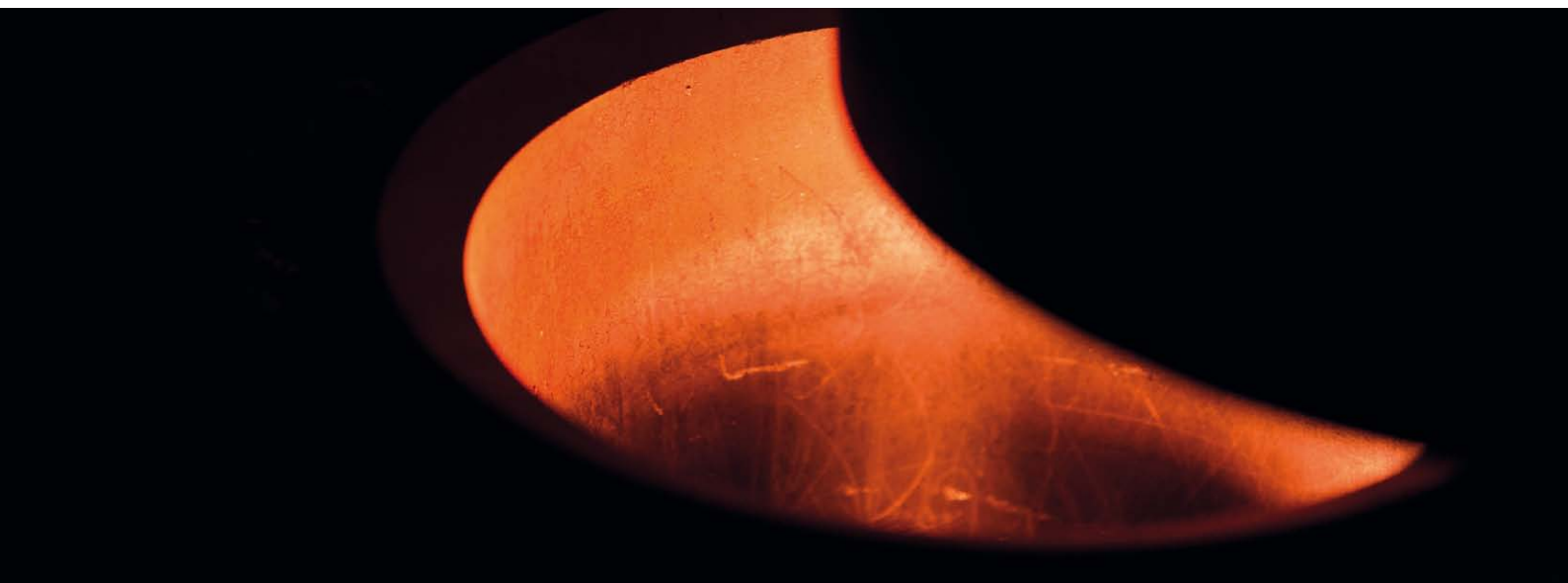


Prime Refining Unit



PRIME PRECIOUS
METAL VACUUM SEPARATION



IKOI's Prime Refining Unit is the result of ten years of experience in metal vacuum distillation. The technology is based on the physical principle of evaporation. It is a revolutionary green technology that can pre-refine precious metals without using acids or chemicals.

This plant is specifically designed for small and medium refiners who need flexible, fast and sustainable way to process a variety of feedstocks, including dore bars, jewellery scraps and industrial waste with precious metal content.



Prime Refining Unit removes silver and volatile elements from Au/Ag/Cu alloys using vacuum distillation technology.

The exceptional capabilities are essential to reduce silver content on Au/Ag/Cu alloys without any chemicals and without any by-products.

In this way, the alloy can be easily dissolved in a traditional Aqua Regia process or refined using gold electrolysis.

PRIME REFINING UNIT:

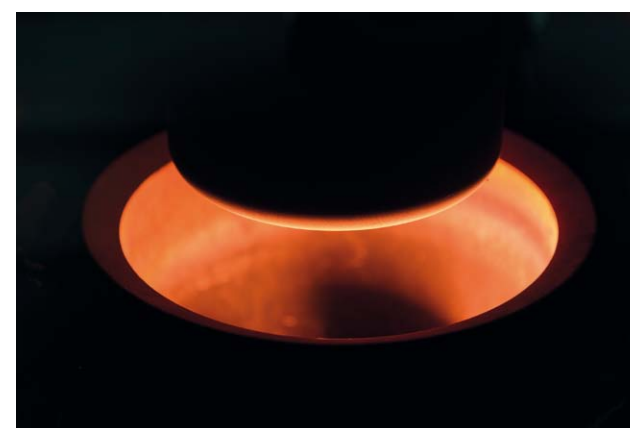
Features and Benefits:

- Completely automatic
- No metal loss
- No by-products that need further treatment
- Low operating costs
- Safe and easy to operate
- Efficient and flexible in treating different feedstock
- Fast processing time
- Green and sustainable technology
- Compliance to Industry 4.0.



Plug and Play

Self-contained, compact and easy to operate plant. The Prime Refining Unit can be easily installed in any environment thanks to the reduced footprint, no need of any special access to chemicals or fume extractions and no need of any lifting or handling device.



Fast and efficient

Thanks to the optimised design, the Prime refining unit can efficiently process multiple batches in a single shift. The plant minimises the use of power during the cycle and the consumable consumption over time.



Smart and simple

The Prime Refining Plant is equipped with an advanced control system and easy HMI. It can be connected to a remote control room both of operation monitoring and for maintenance. The unit is in compliance with Industry 4.0 standards.



TECHNICAL DATA

Crucible Capacity per batch (kg*)	15
Installed Power (kVA)	25
Power supply	400V – 3Ph – 50Hz
Crucible Material	Graphite
Weight loss (g/kg)	0,01
Heating technology	Induction
Dimensions** (L x W x H) (mm)	2600 x 900 x 2000

* Crucible capacity indicated is considering a feedstock density of 14 kg/dm³

** The dimensions do not include the vacuum pumps group, which can be installed separately according to plant layout needs.



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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.