

Compact



AUTOMATED **BARS**
PRODUCTION PLANT

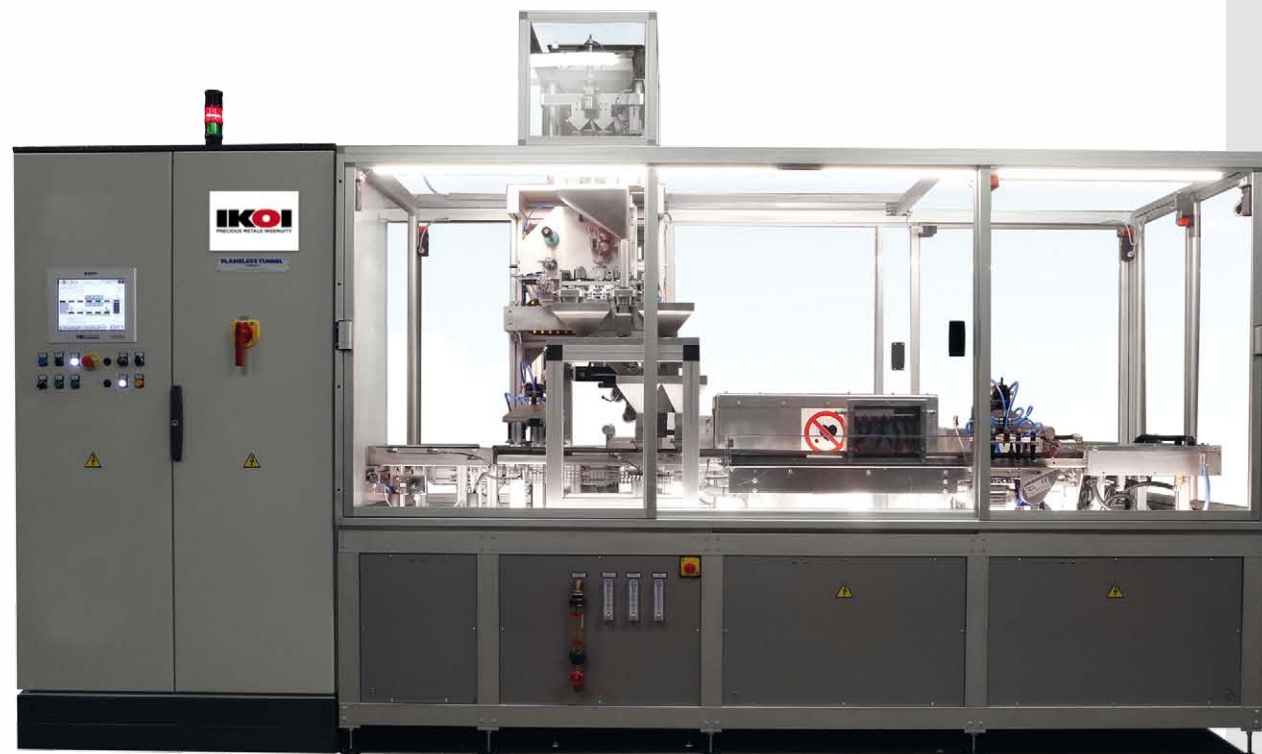


IKOI
PRECIOUS METALS INGENUITY

Compact

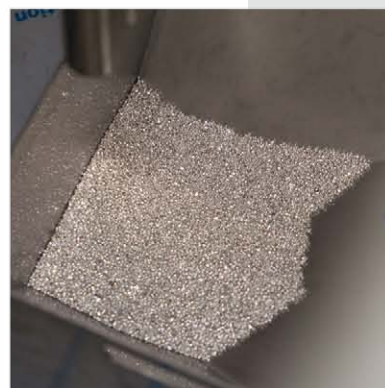
IKOI's COMPACT is the perfect combination of advanced automation, accurate weighting and dosing system and the FLAMELESS TUNNEL® technology to produce cast bars from 50 grams up to 100oz.

This AUTOMATED GOLD/SILVER BARS PRODUCTION PLANT includes all the latest technological developments which are all integrated in one small plant. The operator, or an automated vacuum-transferring system, has only to load the grains inside the hopper and the COMPACT plant provides the finished ingots directly to the output area.



COMPACT PLANT FEATURES:

- 01 Fully automatic
- 02 Compact, accurate and fast weighing machine;
- 03 Safe and easy to operate;
- 04 High productivity;
- 05 No metal loss;
- 06 No open flames;
- 07 Efficient and flexible production of different bar sizes;
- 08 Containment of inductor electromagnetic radiation;
- 09 Compliance to Industry 4.0.



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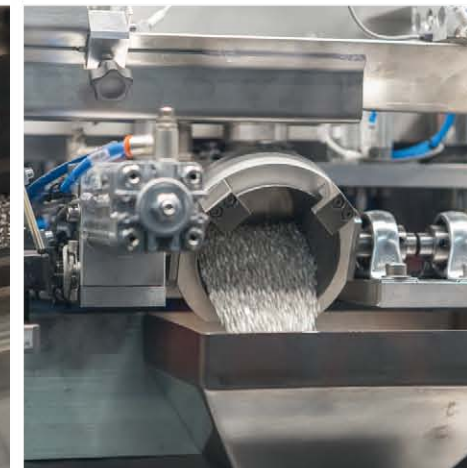
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The system is composed by three different functional units to achieve a completely automated gold and silver bar casting system in a single compact unit:



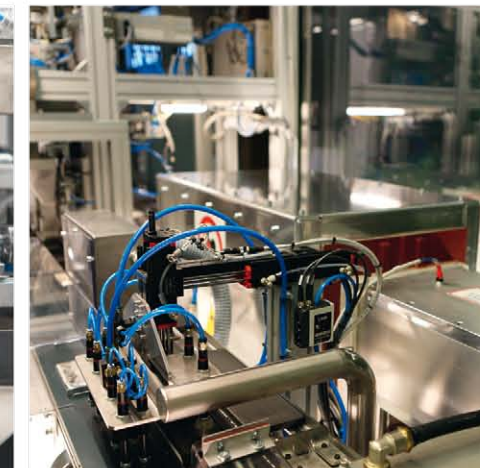
01 ADVANCED AUTOMATION

Gold and Silver grains are automatically loaded into the system by a vacuum transferring system. The product discharge and moulds handling are completely automated without any need of human intervention, allowing cost savings and increased productivity.



02 ACCURATE WEIGHTING AND DOSING

The system includes an automated weighting and dosing system (+0.02 grams on a Kilobar). The weighting and dosing module uses a two-stage weighting method, using grains in the first step, to allow fast operation and wire or powder for the second stage, to achieve accurate weighting and dosing.



03 FLAMELESS TUNNEL® TECHNOLOGY

FLAMELESS TUNNEL® system is used to melt, solidify and cool the gold and silver bar. IKOI's FLAMELESS TUNNEL® is the most advanced technology for bars production, without any metal loss and with a superior bar surface quality.



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MODULAR DESIGN

COMPACT plant is based on a modular design platform and three levels of automation which can be implemented in separate stages without changing the overall plant footprint.

BASE COMPACT

This solution includes an improved "L-shaped" FLAMELESS TUNNEL® and a return channel for the moulds. With this entry-level option, dosing, filling of moulds and product unloading is done manually by the operator.

AUTOMATED WEIGHTING AND DOSING

The second level of automation for the Compact system includes an automatic weighting and dosing station and a vacuum transferring system from the hopper on the ground to the dosing machine. In this way the operator has only to unload the bars and handle the mould's lids.

COMPLETE COMPACT PLANT

This complete solution allows the completely automated production of bars starting from silver and gold grains. This plant includes all the functional modules, including the vacuum grain transferring system. The only necessary intervention by the operator is the filling of a hopper on the ground, connected to the vacuum suction system.

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AUTOMATED BARS PRODUCTION PLANT



TECHNICAL DATA	compact 30	compact 60	compact 120
Power (kw)	70	115	180
Production capacity of 1 kg ingots per hour Gold/Silver	30	60	120
Production capacity of 500g ingots per hour Gold/Silver	30	60	120
Production capacity of 250g ingots per hour Gold/Silver	60	120	240
Production capacity of 100g ingots per hour Gold/Silver	120	240	480
Production capacity of 50g ingots per hour Gold/Silver	120	240	480
Weight Loss g/kg	0,01	0,01	0,01
Moulds	GRAPHITE		
Heating technology	INDUCTION		
Power Supply	230/400/480V 3-ph 50-60 Hz	230/400/480V 3-ph 50-60 Hz	230/400/480V 3-ph 50-60 Hz
Dimensions mm (L x W x H)	5000x1350x2200	5000x1350x2200	6200x1600x2200



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.

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