



Conveyor Cast

Automated Conveyor of cast iron molds
to receive molten metal

Smart Manufacturing for the Future



forging competitive clients™



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YouTube Video

Distinctive features

- Accommodating automated transport system of molds that receive hot molten metal.
- Diminishing and easing manual labor.
- Alleviating risk thank to the remote control command.
- Reducing costs.
- Eco-friendly.
- A T-Conveyor Cast is a modular system to cast precious or non-precious metals in anodes, ingots, bars, or any other customized mold required by the client.
- It is customized at the client's request.

The traditional method

The traditional way of emptying the crucible of a tilting furnace is to use one or two operators to carry out the casting operation. It is heavy work requiring a great investment of manual strength: a) positioning the molds under the melting crucible, b) handling the mold and then c) the removal of the casted metal of 10-15 and more kg. products.

The workplace is also dangerous due to the proximity of the operator to the blazing furnace.

The automated method

With automation the operator is a supervisor of the technical procedures. S/he needs only load the metal to be casted into the furnace, and then all successive steps are automated. The operator might be either male or female since no particular physical strength is necessary.

Ever so lightly

The bulk of the machine is a holding structure fixed on pneumatic lifters to position the conveyor to any height needed by means of

remote control, available also in wireless form. The height of the crucible of the tilting furnace determines how high it is necessary to fix the machine.

Its wheels sit on rails with a steering wheel to move it manually, if necessary, forward or backward on those rails. The machine is also available with larger wheels which facilitate movement.

The central part of the machine is a rotating conveyor belt with custom shaped cast iron molds attached, making it look similar to the track of a tank. At one end the mold is positioned just below the tilting crucible to receive the molten metal. It then moves along with the belt to position the following mold below the crucible. The filled molds are transported with the belt to the other end of the machine where the belt moves downward before returning along its track but upside down. When the filled mold rotates 45 degrees at the end of the track either an operator takes out the casted metal or there is optionally a foot lever controlled heavy duty striker which knocks the mold causing the casted metal to fall from the mold.

Tera also offers an optional customized wheeled trolley to receive the casted metal forms. The final cast from the crucible is transported directly to the end of the track in a shorter time than normal. However even in that short time the metal will have solidified sufficiently to be removed from its mold.

Benefits

There is a significant reduction in production time and therefore an increase in volume. It allows a discernable reduction in human error and in labor costs. An automated cast system guarantees consistency in the quality of the product. Automated machinery maximizes workplace health and safety, liberating the operator from dangerous activities to be re-directed to skilled activities.

Version	Power	Usable molds	Managing and control	Voltage supply	Dimensions (mm) (Without molds)	Weight
STANDARD	4,5 kW	Anodes molds (Au/Ag) Vertical casted bars (Au/Ag) Large bars Slug	Touch control panel & PLC	400V, 50 Hz, 3Ph	Min: 3000 x 760 x 1100 h Max: 3000 x 760 x 1900 h	2000 kg

OPTIONAL ACCESSORIES



Mechanical striker

This pedal operated accessory facilitates the extraction of the products from the mold.



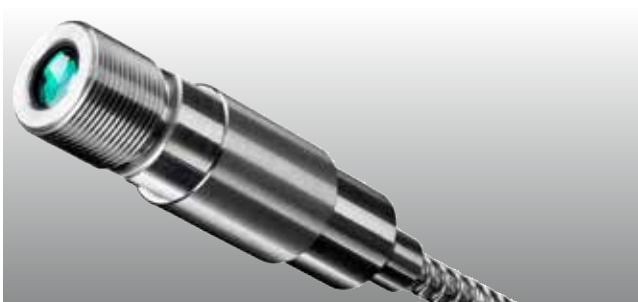
Customized wheeled trolley

This accessory is available for the recovery of products from the T-Conveyor Cast. It is complete with an internal metal box where the products are deposited. The box can be crane-lifted to transfer the products to the next work station.



Molds pre warming flame system

This accessory uses a small flame to pre-warm the molds before the blazing hot metal is poured into it. A cold mold that comes in immediate contact with blazing hot metal can cause splashes or eruptions and may be dangerous.



Self-regulated temperature by Pyrometer

This accessory monitors and regulates the casting temperature. It ensures a consistent and standard production.



Wireless remote control

This accessory substitutes the pushbutton panel.



Molds for anodes casting



PLC + HMI touch screen



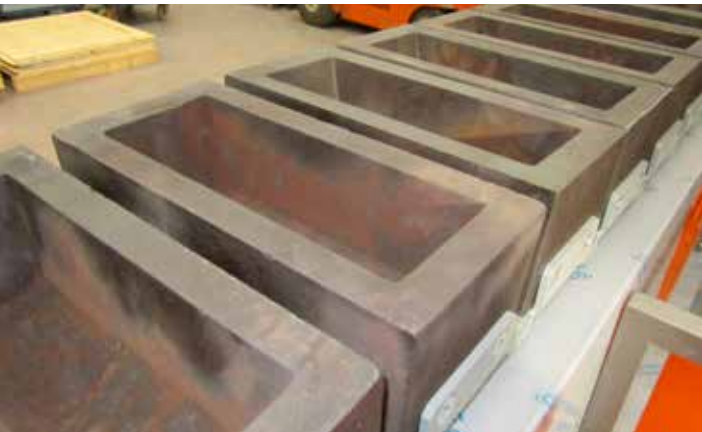
T-Conveyor Cast for vertical casting - Custom designed upon request



Mold for vertical casting



Tilting furnace + Mold ready for vertical casting



Molds for bars casting



Gold anodes



Silver anodes



Silver bar - Vertical casted



Silver bars



tera-automation.com

HEADQUARTER

Via Romena, 7/9, Loc. Porrena
52014 Poppi (AR) Italy

T. +39 0575 536 625

T. +39 0575 536 931

F. +39 0575 539 851

tera@tera-automation.com

TERA IN THE WORLD



U.S.A.

Korea & Japan

Hong Kong

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