



FOXMECC

COSTRUZIONI MECCANICHE

INDUCTIONMAG



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What is INDUCTIONMAG?

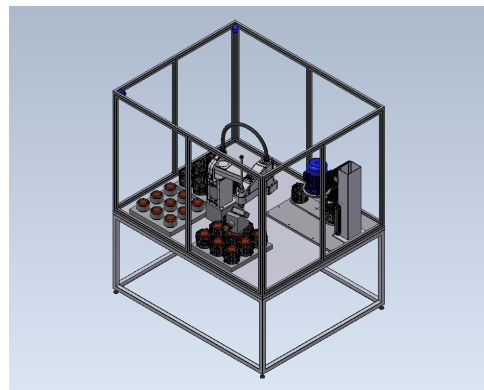
INDUCTIONMAG is an innovative system based on a new concept of electro-thermal technology designed to heat aluminium stator housing of electrical motors. The stator housing is heated by inducing electric current via a system of permanent magnets.

Currently, to insert the stator into the housing, the housing is heated by a gas oven or by electric induction. Electric induction heating has the advantage of having better temperature control than gas ovens, but it has the disadvantage that it has a very low efficiency when applied to metals with high electrical conductivity, such as copper, aluminium, etc. With aluminium there is an efficiency of less than 50%

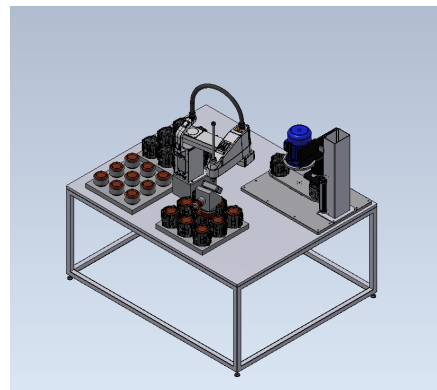
The magnetic induction heating system allows to heat the housing quickly, with an efficiency of 90% on aluminium and with excellent temperature control.

INDUCTIONMAG transforms mechanical energy into thermal energy by means of the eddy currents induced by magnetic induction produced by the magnetic system.

INDUCTIONMAG allows to achieve high efficiencies that mainly depend on the efficiency of the magnetic system control.



Automated system for inserting the stator into the housing



ADVANTAGES COMPARED TO GAS OVENS

INDUCTIONMAG allows for more precise temperature control, takes up less space, heats faster, and is much more efficient. Traditional gas ovens have an average efficiency of 23%. While **INDUCTIONMAG** has an efficiency of 90%. It does not require smoke evacuation systems, it does not require safety systems inherent to the use of gas.

ADVANTAGES COMPARED TO TRADITIONAL ELECTRIC INDUCTORS

On aluminium **INDUCTIONMAG** has a 40% higher efficiency than traditional electric inductors. It does not require a cooling system.

INDUCTIONMAG has very reliable components, this allows for reduced maintenance.

APPLICATION EXAMPLE

Heating of a 1kg aluminium case from 20 ° C to 250 ° C

Efficiency **INDUCTIONMAG** on aluminium 90%

Efficiency Traditional induction on aluminium 50%

Efficiency Gas oven 23%

ENERGY NEEDED TO HEAT A HOUSING OF 1KG

INDUCTIONMAG	0,23 MJ	0,07 KWh
TRADITIONAL INDUCTION	0,42 MJ	0,12 KWh
GAS OVEN	0,9 MJ	0,03 cubicmeters Gas + 0,04KWh

INDUCTIONMAG ENERGY SAVING COMPARED TO CLASSICAL INDUCTION 45%

INDUCTIONMAG ENERGY SAVING COMPARED TO GAS OVEN 61%

INDUCTIONMAG CO2 EMISSIONS SAVINGS VS TRADITIONAL INDUCTION 45%

INDUCTIONMAG CO2 EMISSIONS SAVINGS VS GAS OVEN 85%