



Via Spagna, 32-34  
Polo Industriale di Guasticce  
57017, Collesalveti (LI)

ph. +39 0586 983108  
info@nuovasimat.com  
www.nuovasimat.com

# HELIOS-35

BOLT INDUCTION HEATING

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# ABOUT HELIOS-35

A MAGNETIC INDUCTION HEATING UNIT FOR  
TIGHTENING AND LOOSENING HOLLOW BOLTS,  
TIE RODS, NUTS AND MORE.

## Power and efficiency.

The heating power of the previous versions of our magnetic induction machines was considerable and allowed to heat tie rods **reducing overall process time by 80%**. An outstanding result considering how slow and risky the old and obsolete resistance/free flame heating methods were. Helios-35 exceeds the previous versions, not only in terms of power and prompt heating, but also in terms of efficiency. Among the optional features, there is the possibility of enabling a **timer** to set the heating time, and a color display to facilitate the operations during consecutive loosening processes.



## All-in-one.

Differently from other bolt induction heating machines, Helios-35 **all-in-one**. Apart from being really **compact** in dimensions, it doesn't need *huge external cooling systems* to make it work. It simply relies on an internal cooling system, which guarantees long hours of continuous functioning.

## User-friendly and upgradable operating system.

It doesn't matter if you are using linear or ring-shaped inductors. Setting the operating parameters is a breeze. Thanks to the new graphic **colour display**, the setting procedures are guided and easy-to-read so that the functions of the machine can be easily managed,

## Training for the operators.

We provide specific training courses to understand and make the most of the potential of our bolt induction heating machines. The training course is held only by one of our specialized technicians **independently of location**.

# HOW DOES IT WORK?

1. The inductor is introduced into a hollow bolt and generates a **magnetic field**.

2. The effect of magnetic induction generates an **elongation** of the bolt through heating.

3. **Nut loosening** is easily accomplished.

a. NUT

b. HOLLOW BOLT

c. INDUCTOR

d. MAGNETIC FIELD

e. HEATING LENGHT

**9. EASY LOOSENING**  
Once the bolt undergoes elongation, it is possible to easily remove the nut

**10. THREAD IS SAFE**  
Thread is not affected by overheating

**11. INTEGRATED COOLING SYSTEM**  
The inner cooling system allows to use the inductors for several consecutive hours.

**12. CORE HEATING**  
The magnetic field acts on the bolt core only to generate the elongation

**13. CUSTOMIZED INDUCTOR**  
Inductors are built in accordance to custom technical specifications in order to fit perfectly into the bolt

# DATA SHEET/MODELS

Technical specifications.

|                        |                         |
|------------------------|-------------------------|
| <b>Power</b>           | 25 KVA                  |
| <b>Frequency range</b> | 5 ÷ 35 KH z             |
| <b>Supply</b>          | 400V AC-3PH-50Hz (60Hz) |
| <b>Electrical plug</b> | 32A 3P+E                |
| <b>Weight</b>          | 205 Kg                  |
| <b>Dimensions</b>      | 1000 x 830 x H 1000mm   |

## Available models.

Although the machine may look the same, it can be upgraded at any time thanks to additional features.



**Helios-35**  
Includes



**Base unit**

Everything you need to get started



**Helios-35 T**  
Includes



**Timer**

Allows to set the heating time



**Helios-35R**  
Includes



**Ring-Shaped Inductor**

**RSI\*** Allows to use ring – shaped inductors for the heating of male cylindrical parts (e.g. for the removal of seized nuts).



**Helios-35 TR**  
Includes



**Timer and RSI**

For exploiting the full capabilities of Helios-35

# INNOVATIONS

## Real-time diagnosis and system updates.

HELIOS-35 is aimed at 4.0 industry. In fact, it is possible to equip the machine with a **connectivity package** and exploit **remote connection** via Wi-Fi or modem. Through this function we are able to provide reports on the use of the machine to check if it is working correctly, while providing a **predictive maintenance service** to keep the machine working at its best. Furthermore, this feature allows us to communicate directly with the machine, so as to be able to provide direct assistance, even while the machine is operating on site.

The option, which can be enabled at any time, allows to obtain both **remote technical assistance** and a scheduled maintenance service with dedicated **reporting**.

## Color graphic display.

A brand new 4.3" color graphic display has been designed to provide the **easiest experience** possible, while setting up HELIOS-35 parameters. Thanks to its easy-to-read and practical layout it will guide you **step-by-step** toward the right procedure to start heating immediately.

## Power regulation.

Depending on the type of application, we produce two different types of inductors. **Linear inductors** for tie rods and hollow bolts and **ring-shaped inductors** for applications on cylindrical parts in general. Given the diversity of inductors, which are custom built, this machine is equipped with a power control system so as to guarantee that each inductor can always work at its best.

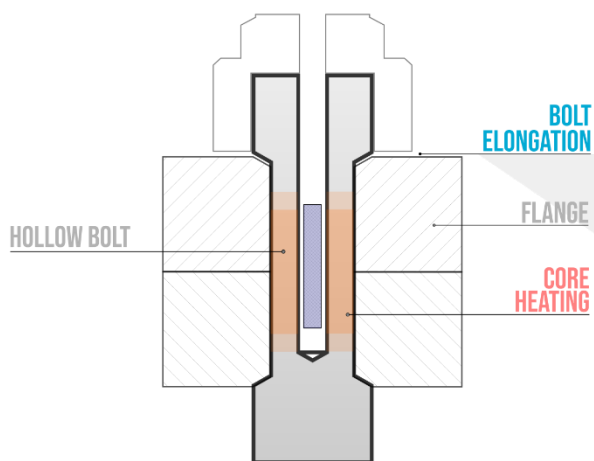




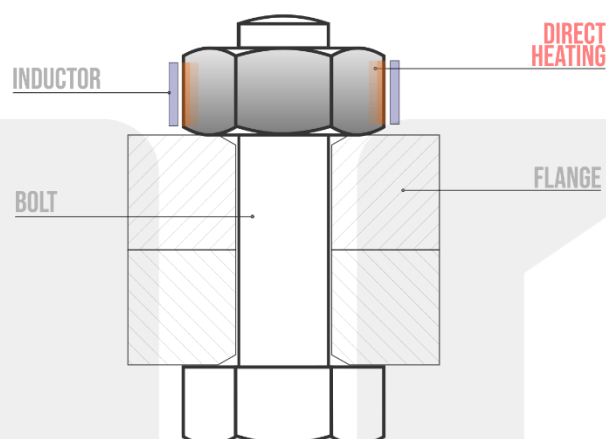
# INDUCTORS

## Common Application.

Inductors are mainly used in **Power Gen** and **Turbomachinery** context, where hollow bolts are commonly found. Standard dimensions start from  $\varnothing$  9mm and variable lengths.



*Application on hollow bolts*



*Application on stucked nuts.*

## Encoding and customization.

Independently from the shape of the inductor, if ring-shaped or axial, it is possible to **custom-build** each inductor so as to perfectly fit the specific application. Customization aims not only at external dimensions but also to specific heating requirement, in order to guarantee **thread** and **operator safety**.

## CONTACTS

**Ing. Mrs. Giulia Strambi**

[g.strambi@nuovasimat.com](mailto:g.strambi@nuovasimat.com)

Technical Department

Nuova Simat

+39 0586 983108

## LINKS

**Youtube Video about Helios-35**

[https://www.youtube.com/watch?v=Vv2L7n3kYul&t=1s&ab\\_channel=NuovaSimat](https://www.youtube.com/watch?v=Vv2L7n3kYul&t=1s&ab_channel=NuovaSimat)

**Our website**

[www.nuovasimat.com](http://www.nuovasimat.com)



Is a machine has been designed and set-up by



**Nuova Simat srl**

Via Spagna, 32-34 | Polo Industriale di Guasticce, 57017, Collesalveti (LI)  
Cod. Fiscale e P. IVA 01591210495 | ph. +39 0586 983108 | [info@nuovasimat.com](mailto:info@nuovasimat.com)

