



# ***R.I.N.O.***

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## ***INDUCTION HEATER***

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## THE COMPANY

Born in 2018 R.IN.O induction heater has developed a new generation machine for induction heating specifically designed for high frequency tempering and hot molding. We paid maximum attention to flexibility, and facility of use .

The company start in early 2018 with a project for an important customer in hot molding screw for building application, designign a portable induction machine for detect and heat a metal disk used for roof PVC coating.

The company is now rapidly growing due to the born of F50 series, a machine capable o 40kw power .



## THE QUALITY OUR MAIN BUSSINESS

We beleive in quality and customers care, we test all electronics cards first, following a procedure of aging periods and retesting after the first test. Once cards and parts are installed on equipment we proceed with a first test, followed by an aging period of 5 days at different temperature and then quality manager perform endurance test which consist of many steps until maximum power and current.

## F50 series

This series designed for application until 40kw is composed by:

- Main frequency converter
- Portable heating head

This ensure maximum portability helping for working in small spaces or useful to fit the main frequency converter in a different place of heating head, this is quite important on press machine where main equipent is located in it'own box.

They all have auto frequency tuning with galvanic insuation from grid and water cooling system and parallel resonant circuit.

All F50 series has pyrometer control in the range 300°C 1300°C

Four models, with different combination of inverter current and voltage

The HMI is done by a blue lcd and 7 push button  
The knob will act a potentiometer allowing to  
Change inverter voltage



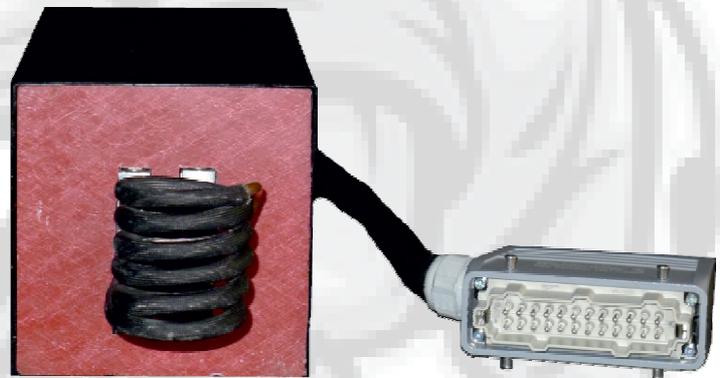
# F50 series

Front view



Rear view

- Remote control by blank contact and analog signals 4...20mA and 0...10V
- Removable Heating head
- Water cooling circuit



- Easy to use HMI each page show feedback setpoint and status of machine
- Intuitive interface by push button and analog potentiometer with dial to change heating process parameters
- High performances working at more than 200kHz and 40kw with temperature process controls



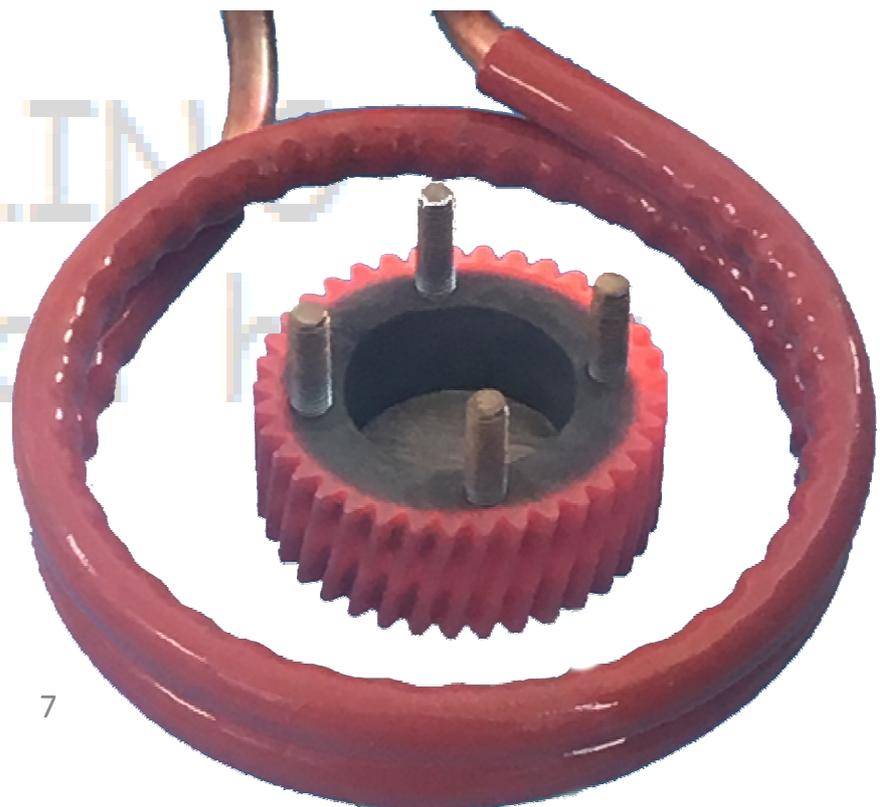
## F50 series

	F50-30	F50-40
<b>INVERTER MAXIMUM POWER</b>	30KW	40KW
<b>INVERTER MAXIMUM VOLTAGE</b>	500Vrms	500Vrms
<b>INVERTER MAXIMUM CURRENT</b>	60A	80A
<b>ADVAIABLE TANK CAPACITANCE</b>	0.66uF; 1.3uF;2.6uF;5.2uF	0.66uF; 1.3uF;2.6uF;5.2uF
<b>INVERTER OPERATING FREQUENCY</b>	20khz to 200khz	20khz to 200khz
<b>FREQUENCY CONTROL TECNOLOGY</b>	digital PFD	digital PFD
<b>INVERTER POWER DEVICES</b>	Hiper FET	Hiper FET
<b>COOLING SYSTEM</b>	water and glycol	water and glycol
<b>MINIMUM FLOW ELECTRONICS</b>	8 lt/min	8 lt/min
<b>MINIMUM FLOW HEATING COIL</b>	5 lt/min	5 lt/min
<b>MAX INLET WATER TEMPERATURE</b>	30°C	30°C
<b>POWER SUPPLY TECNOLOGY</b>	current mode phase shift	current mode phase shift
<b>FEEDER POWER DEVICES</b>	IGBT	IGBT
<b>MAXIMUM LINE CURRENT</b>	<40A	<53A
<b>SUPPLY GRID VOLTAGE</b>	400Vrms	400Vrms
<b>AUTO TEMPERATURE CONTROL</b>	Yes by pyrometer	Yes by pyrometer
<b>REMOTE CONTROL</b>	analog remote control	analog remote control
<b>DIGITAL REMOTE CONTROL</b>	on request	on request
<b>SIZE OF CONVERTER</b>	600x360 h 600 [mm]	600x360 h 600 [mm]
<b>SIZE OF HEATING HEAD</b>	320x150 h 300 [mm]	320x150 h 300 [mm]
<b>WEIGHT OF CONVERTER</b>	<40kg	<40kg
<b>WEIGHT OF HEATING HEAD</b>	<12kg	<12kg
<b>MAXIMUM CONNECTION CABLE</b>	6 mt	6 mt

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- Hot molding
- Tempering
- Plastic hot molding
- Heat process
- Metal heat treatment
- Brazing (iron, steel, copper, aluminium)
- Pipe welding
- Electrical cable heating
- Heat post treatment
- Industrial plants eg: automotive robot plants
- Industrial food sugar thermal treatment
- Buildings and constructions
- Goldsmith industries and gold process
- Forging
- Sit Bearings heater
- Bolts and screw removing tools



# PYROMETER AND TEMPERATURE CONTROLS

RINO is cooperating with delta strumenti and use DIASinfrared system pyrometer

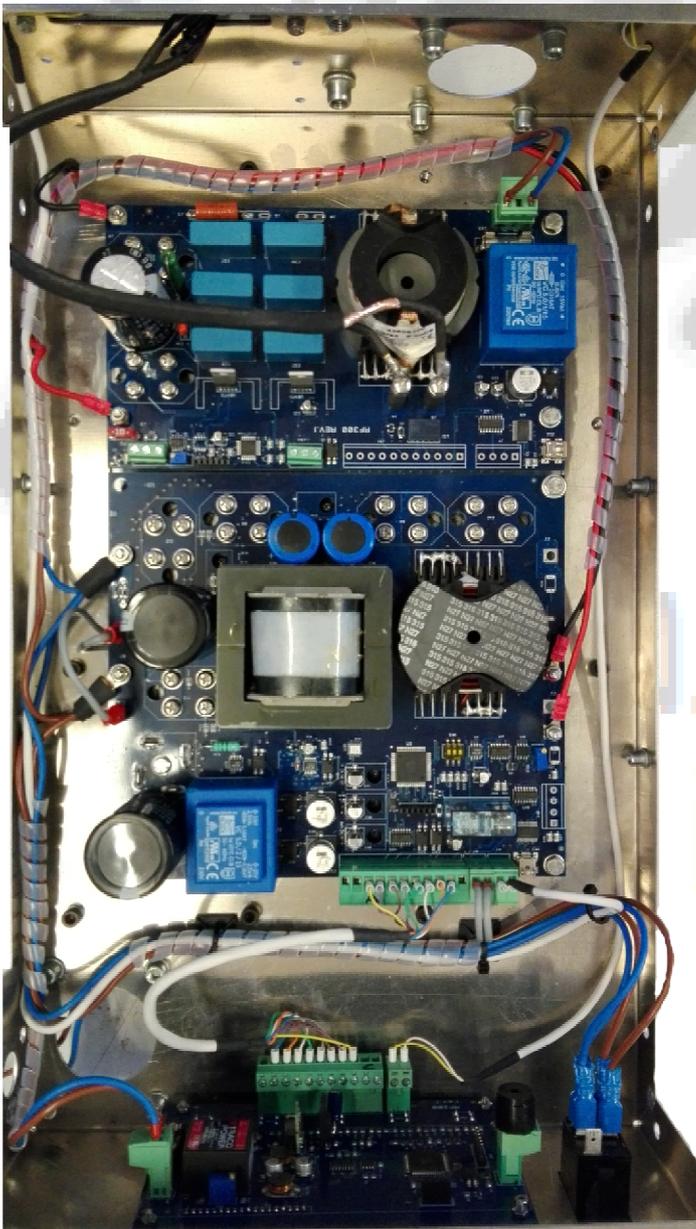


	DG4N			
	4041041211	4041041221	4041041212	4041041222
TEMP RANGE	250->1300 °c	250->1300 °c	350->1800 °c	350->1800 °c
SPECTRAL RANGE	1.5um 1.8um	1.5um 1.8um	1.5um 1.8um	1.5um 1.8um
CABLE LENGHT	2.5mt	5mt	2.5mt	5mt
SIZE	110x80x40 mm	110x80x40 mm	110x80x40 mm	110x80x40 mm
PS	24Vdc	24Vdc	24Vdc	24Vdc



## GEKO series

GEKO equipments are a series of induction heaters with low cost and designed for specific use eg: building PVC roof Coating  
The power of gekos series doesn't exceed 2.5kw.



GEKO	
INVERTER POWER	2.5kw
INVERTER CURRENT	10A
INVERTER VOLTAGE	250Vrms
COOLING	air
INVERTER FREQUENCY	85khz 110khz
FEEDER TECNOLOGY	Switching current mode
SIZE	440x280 h180
WEIGHT	14kgs