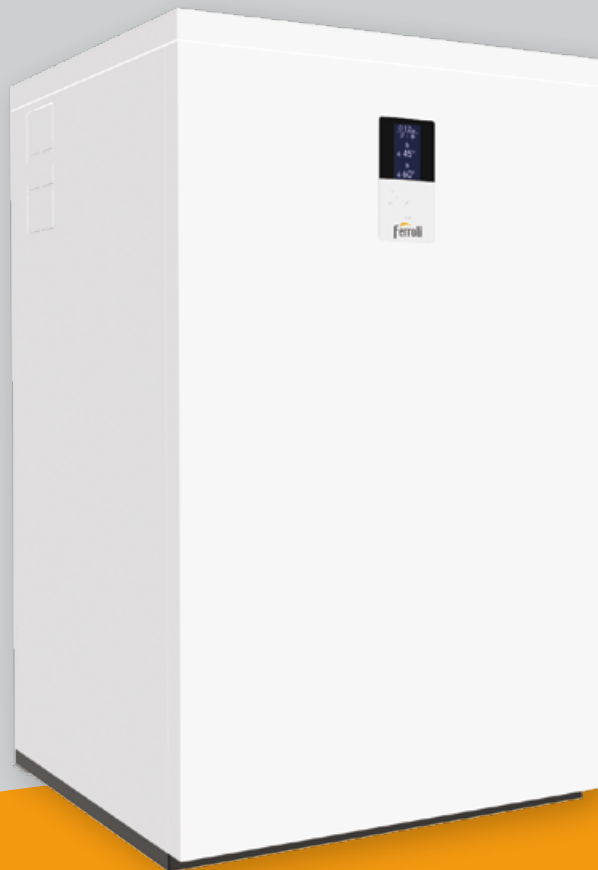


ferroli

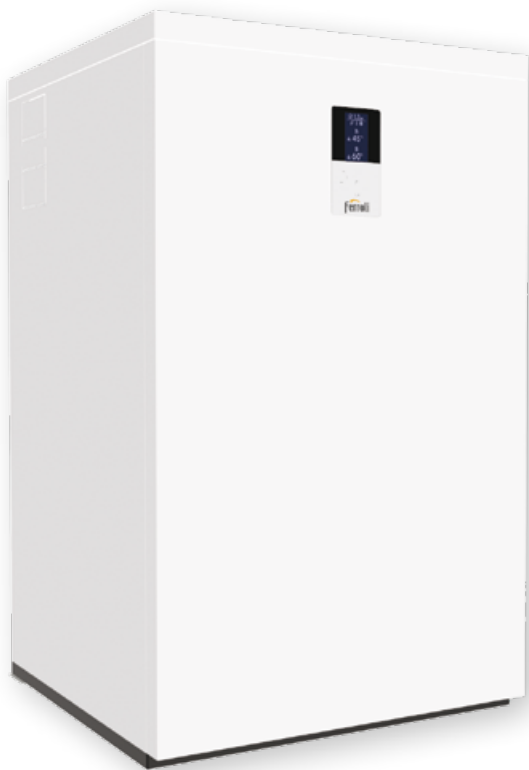


Bluehelix Hitech RRT B K 50

Condensation base boiler, stainless steel sanitary storage



BLUEHELIX HITECH RRT B K 50: EVOLUTION IS COMPLETE



The new range of BLUEHELIX HITECH RRT B K base boilers, with 50-litre stainless steel domestic hot water storage, is able to meet the demands of the most demanding customers in terms of domestic hot water production and more.

The user interface with “capsense” technology, without mechanical keys, is equipped with a 2.8” graphic display, allowing the user to interact with the product in an easy and extremely simple way.

Thanks to the **energy efficiency of room heating η_s 94%** among the highest in the category (Class A ErP) and the **combination with the Connect remote control**, able to read the outdoor temperature directly from the internet, **it reaches the A+ system energy class**.

Thanks to the **“Hydrogen plug-in”** system, one of its most important innovations, it is already able to regulate itself to work with mixtures of natural gas and hydrogen, which will soon arrive in Europe, to **combat global warming**.

Designed to fully meet the demands of a **“robust” product from every point of view** thanks **to the high-pass primary heat exchanger** able to guarantee **maximum efficiency and reliability over time** also, and not only, replacing old generators in particularly dirty systems.

OUR RANGE

It consists of a model that operates with both methane and LPG

mod. 34

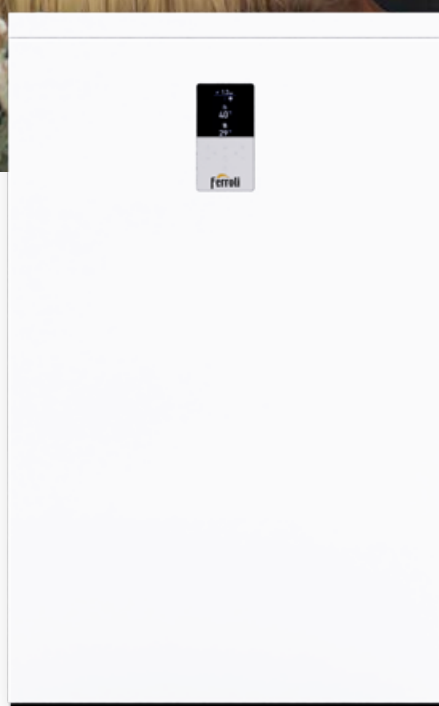
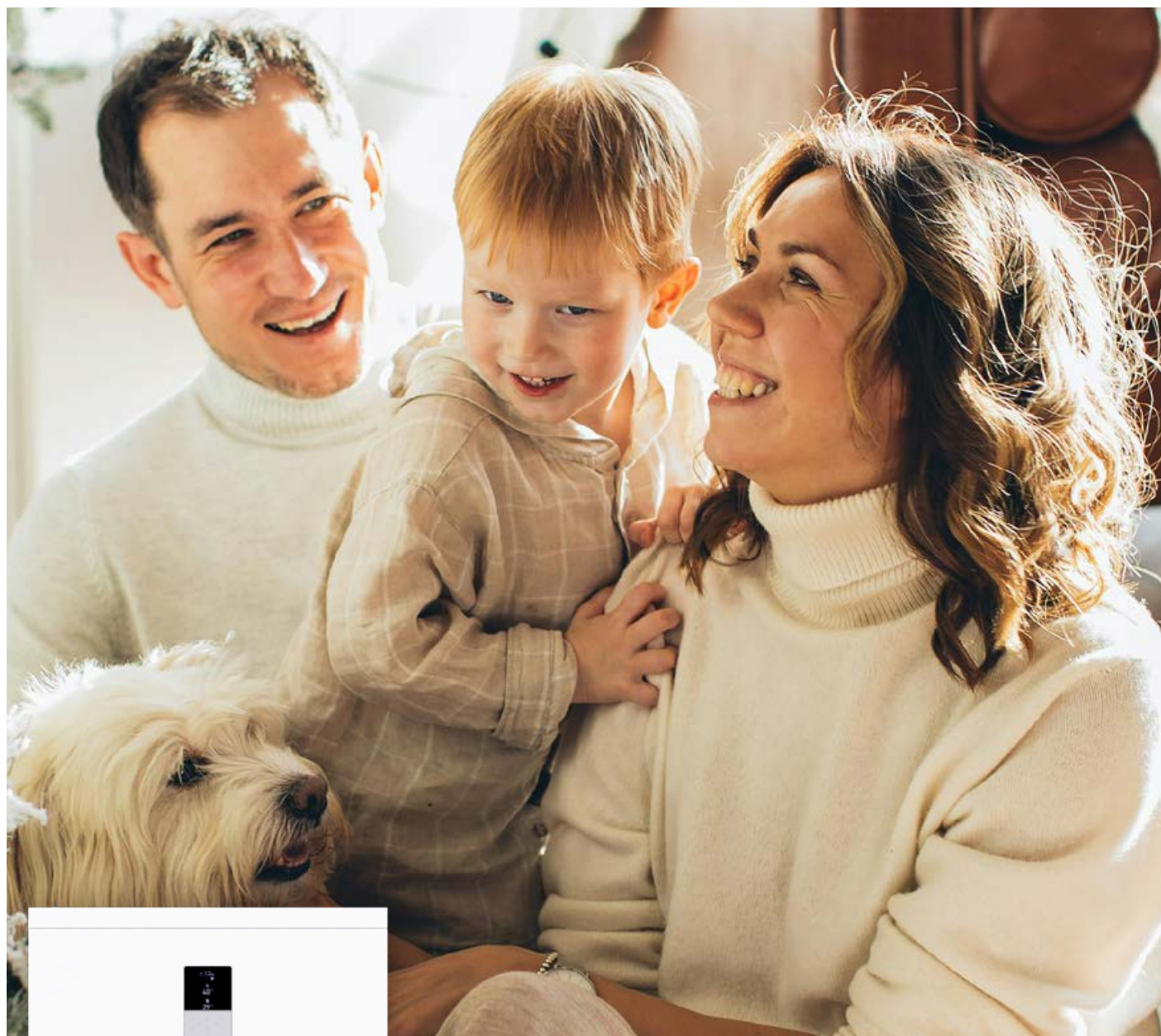
COMBINED (206 l/h at Δt 30°C)





TOP QUIETNESS

For maximum home comfort



The particularly careful design of BLUEHELIX HITECH RRT B K 50 has made it possible to achieve significant values in terms of **quietness and acoustic comfort**, so much so that it could almost be difficult to distinguish the background noise of a house from the noise produced by the boiler during normal operation.

It will be difficult to tell whether the boiler is on or off from its noise, as it used to be on the old generations of boilers, because the **on/off transistors have also been optimised according to acoustic comfort**.

Special attention was also paid to design, creating a 3 piece removable shell, which descends to cover the pipe connections.



BLUEHELIX HITECH RRT B K 50

Inside view

USER INTERFACE

With “Capsense” technology and 2.8” graphic display

HEAT EXCHANGER

Single-circuit **stainless steel heat exchanger with high passages**, resistant to clogging and easy to clean

BURNER

Exclusive special **stainless steel hemispherical burner** with **long-life gasket**

BURNER DOOR

Self-cooled burner **door** without insulating panel

CLAPET CHECK VALVE

Integrated flue gas clapet for connection to pressurised collective flue systems

VENTILATOR

Offset fan, to facilitate the **maintenance of the heating unit without disassembly**

BOILER

50-litre insulated stainless steel boiler

BOILER GUARD

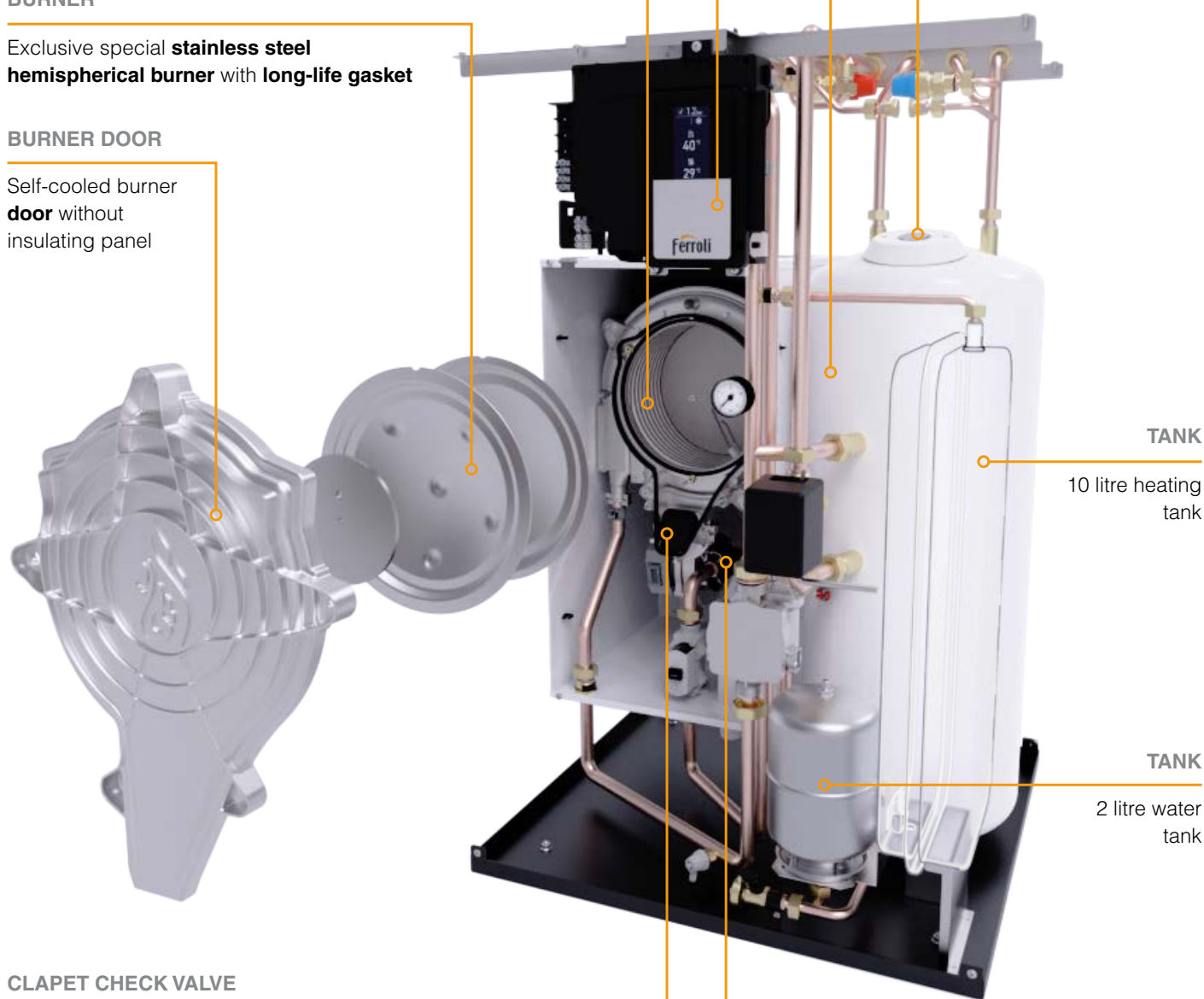
Magnesium anode

TANK

10 litre heating tank

TANK

2 litre water tank





CHARACTERISTICS

Product benefits

- > **Boiler** with high thickness stainless steel primary exchanger, with increased passages (at the top of the category) to guarantee durability and reduced maintenance, maintains high efficiency even on old plants with oxidation and dirt
- > **CONNECT SYSTEM**: thanks to the combination of the **CONNECT** modulating remote control and the reading of the external temperature directly from the internet, it achieves maximum **energetic efficiency of A⁺**
- > **MC²**: Multi Combustion Control, new combustion system with patented gas-adaptive technology of industrial derivation for a better adaptability of use to varying conditions of the gas network (e.g. fluctuations or reduced pressures)
- > **M.L.R**: Methane Lpg Ready, through a simple configuration the boiler is able to operate both methane and LPG without the use of additional conversion kits
- > Exclusive **heat exchanger-burning system with self-cooled door** (without insulation): simplifies maintenance and reduces cost thanks to fewer deteriorated parts
- > **Production of domestic hot water** with 50-litre stainless steel storage
- > Preparation for **recirculation attacks**
- > **Hydraulic connections** covered by the boiler mantle
- > Large **multifunction graphic display** with backlight for easy and correct parameter setting
- > **By-pass** as standard
- > Easily adapts to load conditions thanks to the **wide modulation range** that can reach up to 1:10
- > **Particularly suited for operating in flues requiring "heavy-duty" pipes thanks to approval for operation with flue gas exhaust pipes with a diameter of 50mm**
- > **F.P.S**: Flue Protection Systems. The **smoke clapper valve fitted as standard** on the boiler allows easy connection to collective pressure flue systems (e.g. in renovations), in accordance with UNI 7129 standard
- > Designed to **simplify and facilitate normal maintenance and cleaning**
- > **Range Rated" certified generator**: the maximum thermal flow in heating can be adapted to the thermal demand of the system while maintaining the efficiency values declared in the approval

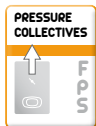
THE PRODUCT IN A NUTSHELL



Exclusive Ferrol
"Thermobalance"™



Operating with **hydrogen-enriched natural gas mixtures** already planned for distribution in Europe (*)
(*) mixtures of Natural Gas/Hydrogen 80%/20%



F.P.S: Flue Protection Systems. The flue clapper valve allows **easy connection to collective flue systems under pressure** (e.g. in remediation), in accordance with UNI 7129 standard



MC²: Multi Combustion Control, new combustion system with patented technology gas-adaptive



Stainless steel high-performance monothermal primary heat exchanger



Operation in a **partially protected place** with a minimum temperature of **-5°C** as standard



M.L.R: Methane Lpg Propanate Air Ready, through a simple configuration the boiler is able to operate both methane and LPG without the use of additional conversion kits



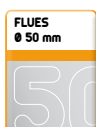
Appliance operating in **climatic regulation** at sliding system temperature (optional external temperature probe)



Appliance especially designed to be **particularly simple** to install and maintain



Modulation ratio between **P_{max}** and **P_{min}**



Approval for operation with **50mm diameter flue exhausts**



Achieves a seasonal space heating efficiency among the highest in its category: **η_s 94%**



Remote control of boiler parameters via remote control



The appliance is **"range rated"** certified according to EN 15502.



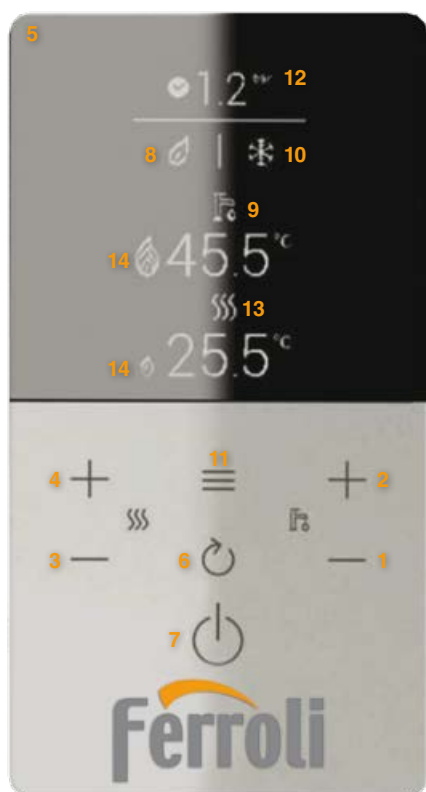
BOILER CONTROL

Control panel and functions

The user interface with “capsense” technology, without mechanical keys and equipped with a 2.8” graphic display, allows the user to interact with the product in an easy and extremely simple way, customising the operation of the appliance in order to manage environmental comfort according to every need.

Thanks to the **remote connection via bus**, this can also be done directly from the CONNECT remote control, even via smartphone.

The boiler is also designed to connect a **second room thermostat** on dedicated terminals to manage multi-zone systems.



LEGEND 1 DHW temperature setting decrease button 2 DHW temperature setting increase button 3 Heating system temperature setting decrease button 4 Heating system temperature setting increase button 5 Display 6 Return button 7 "Winter", "Summer", "device OFF", "ECO", "COMFORT" mode selection 8 Eco mode indication 9 DHW mode indication 10 Summer/Winter mode indication 11 Menu / confirmation button 12 System pressure indication 13 Heating mode indication 14 Burner on indication



CONNECT

Remote control

- Remote control supplied with kit code in class A+ to **manage home comfort also from Smartphone (*)**
- **Possibility to manage up to 8 zones** through the use of additional environmental units
- **Connection to the home WiFi network** via RF/WiFi receiver supplied
- CONNECT APP available for boiler on/off and **home comfort management** remote heating/hot domestic water via Smartphone (iOS and Android)
- **Maximisation of environmental comfort** with modulating regulation of the delivery temperature through the **Environment Climate Compensation (CCA) functions differentiated for each zone** and **External Climate Compensation (CCE)** through **external temperature detectable directly from the internet** (or from an optional external probe)
- **Improves average seasonal space heating efficiency by +4%**
- **Weekly hourly programming in 30-minute intervals** via the CONNECT APP
- **Operating mode:** Off, Holiday, Automatic, Manual
- **Three modifiable temperature levels:** Comfort, Economy, Antifreeze

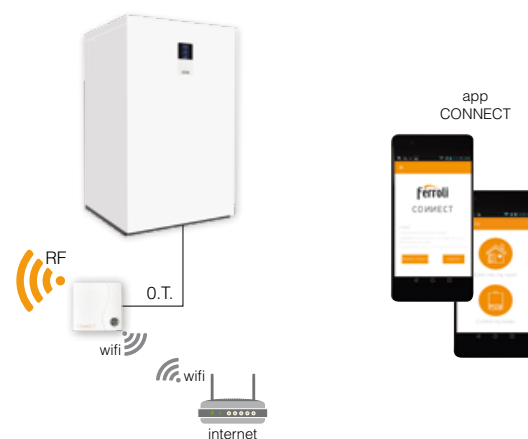
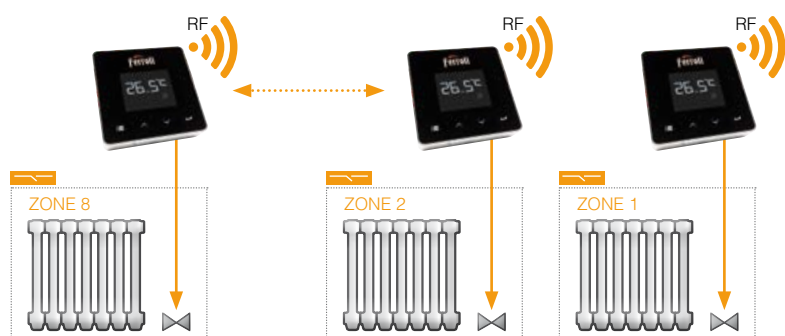


Commando

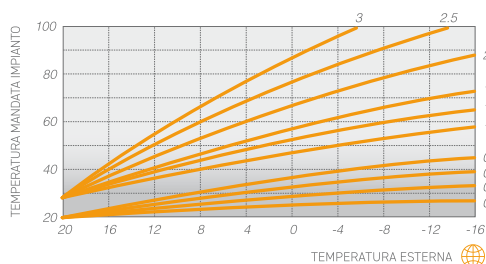


RF/WiFi Receiver

MULTI-ZONE MANAGEMENT

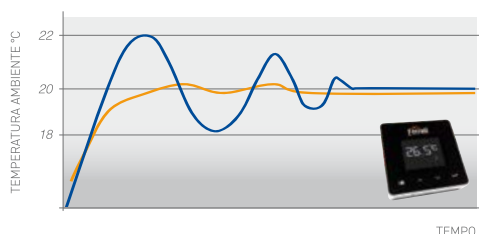


CLIMATE COMPENSATION



CCE WEB | EXTERNAL CLIMATE COMPENSATION

By reading the **external temperature directly from the internet** (or from the optional external probe) the system is able to vary the system temperature according to the external temperature measured on the basis of configurable climatic curves, thus guaranteeing the user maximum environmental comfort as external climatic conditions vary.



CCA | ENVIRONMENT CLIMATE COMPENSATION

The CONNECT modulating function allows a **modulation of the boiler power** as the set **room temperature value** is reached. This improves the quality of comfort by eliminating heat spikes resulting in energy savings.

WITH REMOTE CONTROL CONNECT

WITH NON-MODULATING ROOM THERMOSTAT



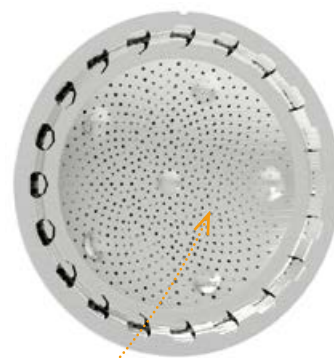
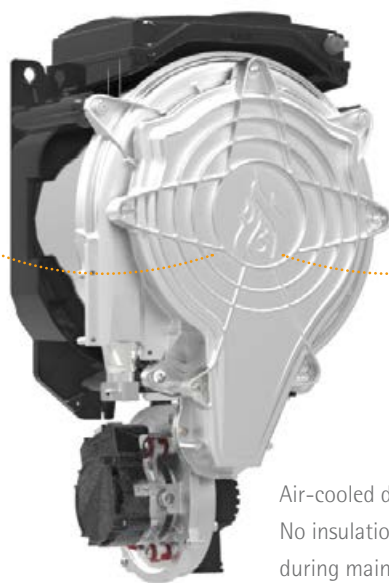
THE ENGINE

Combustion cell

The tube that makes up the BLUEHELIX HITECH RRT B K 50 heat exchanger is made of **stainless steel**, a material that makes it possible to create an **extremely smooth surface**, therefore less susceptible to fouling agents and deposits.



Extra enlarged section, smooth surface and coil path drastically decrease the percentage of deposits inside the tube and greatly lengthen the life of the exchanger



Exclusive hemispherical stainless steel burner

Air-cooled door.

No insulation panel (will not break during maintenance)

TOP EFFICIENCY

Even on old systems (replacements)



fig. A *



fig. B *

The **THERMOBALANCE™** heat exchanger of BLUEHELIX HITECH RRT K 50 (**fig. A**) compared to the more classic and widespread steel heat exchanger (**fig. B**).

This geometry allows the heat exchanger of the **THERMOBALANCE** thermal unit to operate almost at the maximum of the design efficiency even in conditions of partial clogging, while with the same amount of deposits and sediments (e.g. due to installation on old plants) the exchanger in **fig. B** tends to clog much faster in the part in contact with the flame due to the reduced passage area of the fluid, in which a real barrier of deposits* is formed that hinder the heat exchange and reduce the efficiency below the nominal values.

* Ref.: equal amount (5 gr.) of incrustations and deposits in the exchanger (A) and (B), with the same length of the pipe section. Scale 150% of actual measurement.

Section of heat exchange with the flame



MC²

Multi Combustion Control

The electronics control the flame ionisation current so as to ensure **optimal combustion** as air density or gas quality changes. The relationship between the air/gas ratio (λ) and the flame ionisation signal is used to control the air/gas ratio itself and therefore the combustion. **MC²: Multi Combustion Control**, the new combustion system with patented **gas-adaptive** technology improves the adaptability of use to varying conditions of the gas network (e.g. fluctuations or reduced pressures).



EASY MAINTENANCE

Trouble-free maintenance

At the time of the first maintenance, the technician can see the care with which every detail has been designed to facilitate their work. Thanks to the maximum accessibility of the main components, the **"Thermobalance"™ thermal unit** allows for extremely precise and quick maintenance. Some examples:



- The internal accessibility is facilitated by **the 3-piece shell** with removable sides
- The electrical box of the electronic board can be easily removed from the chassis leaving **free access to the internal parts**
- The **fan offset from the burner** and placed underneath, must not be disassembled to access the steel burner-exchanger unit
- The **burner door** is totally **self-cooled** by air and therefore does not require the insulating panel, avoiding the risk that this may be damaged or broken during disassembly for cleaning
- The **burner is disassembled by loosening only 3 bolts** leaving free access to the stainless steel heat exchanger
- The **extra-major heat exchanger** is designed to challenge the toughest waters and is **easily cleanable** thanks to the single tube with no collector
- Easy inspection and cleaning of the boiler thanks to the availability of a large two-bolt flange also containing the protection anode

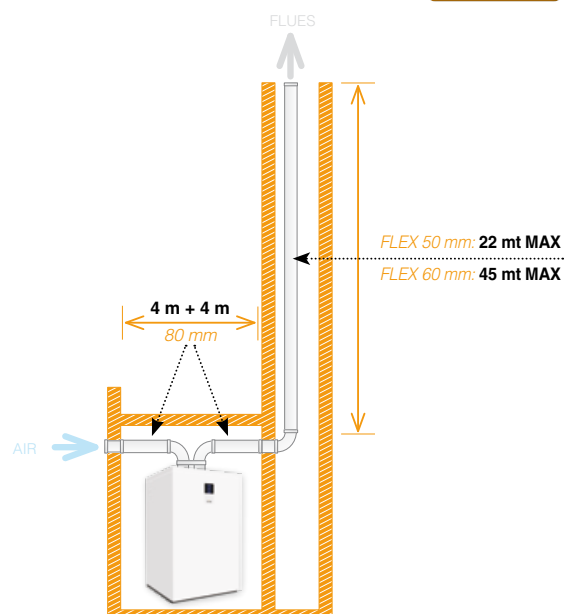
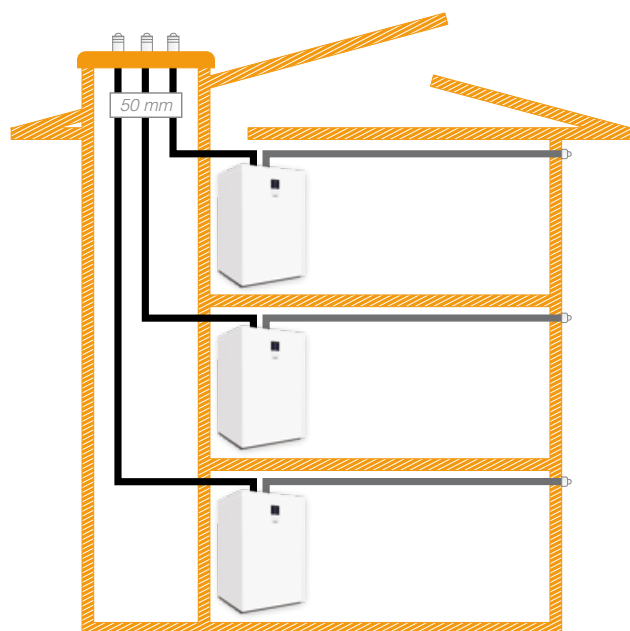
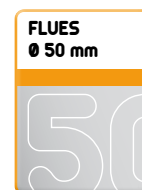


SIMPLIFIED REPLACEMENT

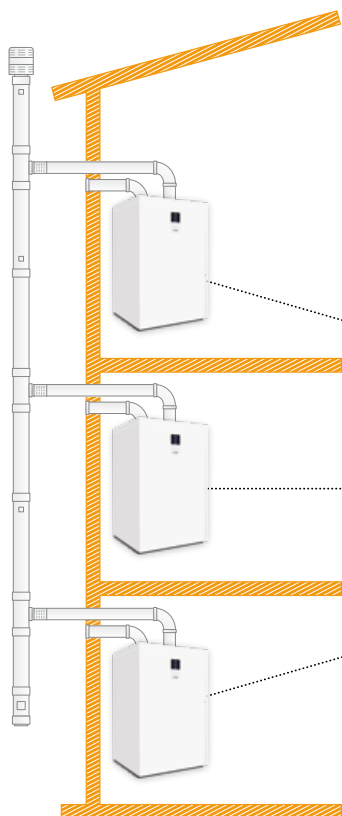
Flue exhaust $\varnothing$ 50 mm

The new boiler can also be installed with 50mm diameter intubation drains.

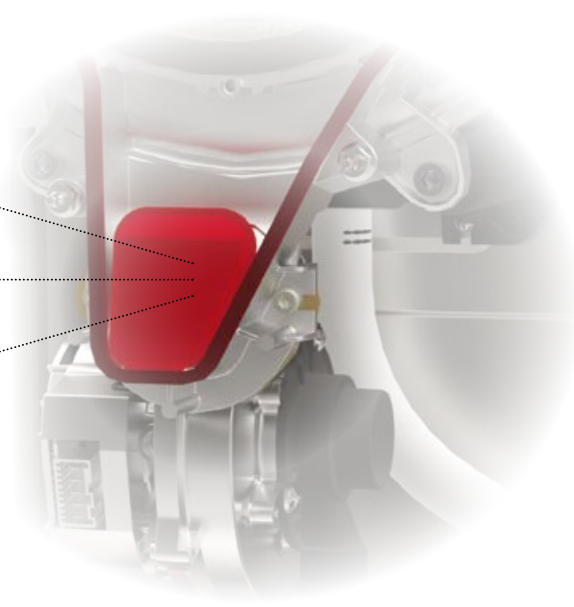
Particularly important in **the replacement market** in the frequent case of collective flues that require “heavy” **intubation** where it is necessary to have a **high flue gas expulsion capacity** even with reduced diameters.



Pressure collectors



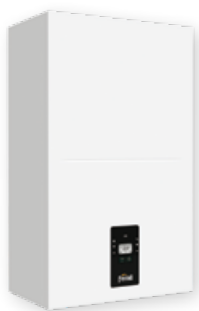
F.P.S.: Flue Protection System. The smoke clapper valve (installed as standard) allows an **easy connection to collective flue systems under pressure** (e.g. in renovations), in accordance with UNI 7129. **For installers**, the solution of the collective pressure rod **is cheaper** (reduction of chimney diameters).





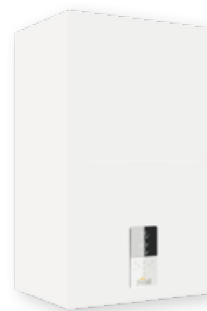
FERROLI FAMILY LINE

A complete range



BLUEHELIX ALPHA

24C - 28C - 34C



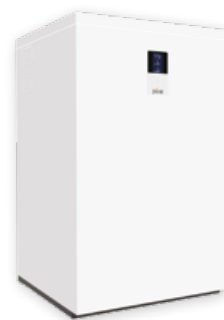
BLUEHELIX HITECH RRT

24C - 28C - 34C - 28H - 34H - 45H



BLUEHELIX HITECH RRT K 50

28 - 34



BLUEHELIX HITECH RRT B K 50

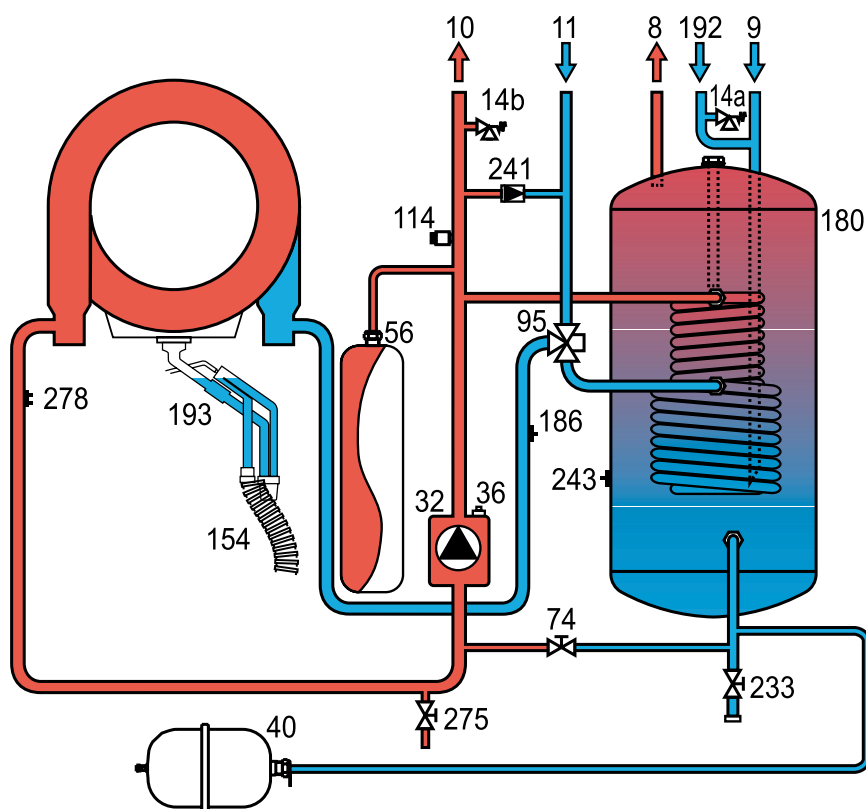
34



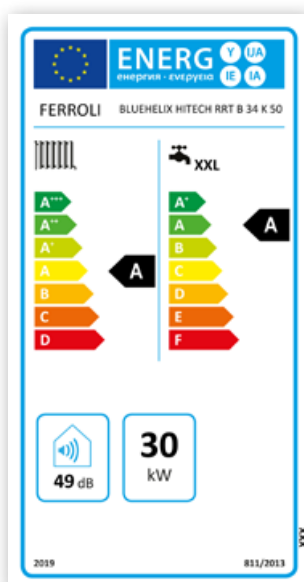


CHARACTERISTICS

Hydraulics - Energy label



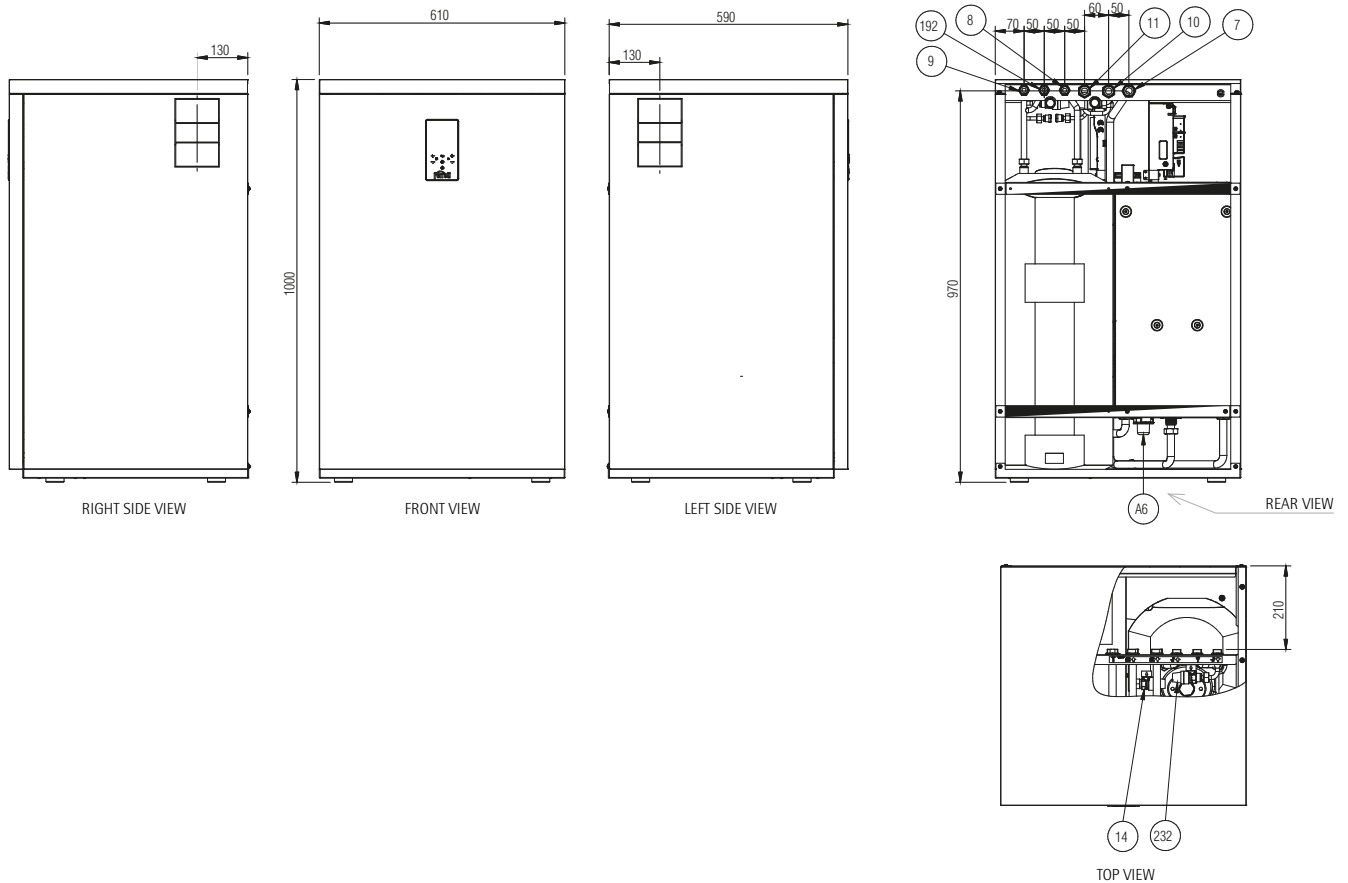
LEGEND 8 Domestic hot water outlet 9 Domestic hot water inlet 10 System delivery 11 System return 14a Domestic hot safety valve 14b System safety valve 32 Heating circulator 36 Automatic air vent 40 Domestic hot water expansion vessel 56 Expansion vessel 74 System fill tap 95 Diverter valve 114 Water pressure switch 154 Condensate drain tube 180 Boiler 186 Return sensor 192 Recirculation 193 Siphon 233 Boiler drain tap 241 Automatic bypass 243 Boiler temperature sensor 275 Heating system drain tap 278 Double sensor (Safety + Heating)





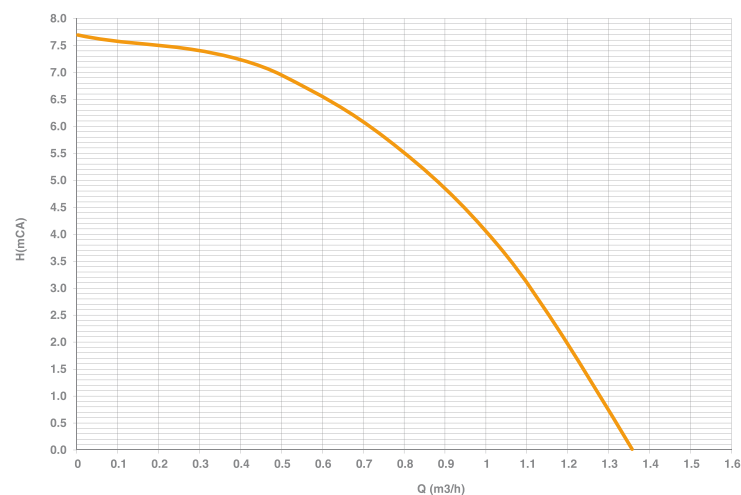
TECHNICAL DATA

Dimensions - Load losses/hydraulic head



LEGEND 7 Gas inlet - $\varnothing$ 3/4" 8 Domestic hot water supply - $\varnothing$ 1/2" 9 Domestic hot water inlet - $\varnothing$ 1/2" 10 System supply - $\varnothing$ 3/4" 11 System return - $\varnothing$ 3/4" 14 Heating safety valve 192 Recirculation - $\varnothing$ 1/2" 232 Domestic hot water safety valve A6 Condensate drain connection

BLUEHELIX HITECH RRT B K 50





TECHNICAL DATA

Summary Table

BLUEHELIX HITECH RRT B K 50		34
ERP Class		
	 XXL	
Max. heating thermal input	kW	30.6
Min. heating thermal input	kW	3.5
Max. heating thermal output (80 / 60°C)	kW	30.0
Min. heating thermal output (80 / 60°C)	kW	3.4
Max. heating thermal output (50 / 30°C)	kW	32.5
Min. heating thermal output (50 / 30°C)	kW	3.8
Max. domestic hot water thermal input	kW	34.7
Min. domestic hot water thermal input	kW	3.5
Max. domestic hot water thermal output	kW	34.0
Min. domestic hot water thermal output	kW	3.4
Pmax efficiency (80 / 60°C)	%	97.9
Pmin efficiency (80 / 60°C)	%	98.0
Pmax efficiency (50 / 30°C)	%	106.1
Pmin efficiency (50 / 30°C)	%	107.5
Efficiency 30%	%	109.6
Leaks to the chimney with burner ON (80 / 60°C)	Pmax / Pmin %	2.02 / 1.47
Leaks to the cover with burner ON (80 / 60°C)	Pmax / Pmin %	0.26 / 1.44
Leaks to the chimney with burner ON (50 / 30°C)	Pmax / Pmin %	0.92 / 0.61
Leaks to the cover with burner ON (50 / 30°C)	Pmax / Pmin %	0.6 / 1.05
Leaks to the chimney with burner OFF (50K / 20K)	%	0.02 / 0.01
Leaks to the cover with burner OFF (50K / 20K)	%	0.15 / 0.06
Flue gas temperature (80/60 °C) - Pmax / Pmin	°C	66 / 60
Flue gas temperature (50/30 °C) - Pmax / Pmin	°C	52 / 45
Flue gas flow - Pmax/Pmin	g/s	14.0 / 1.7
Supply gas pressure G20	mbar	20
Gas nozzle G20	Ø	-
Gas flow rate G20 - max / min	m³/h	3.67 / 0.4
CO ₂ - G20	%	9 ± 0.8
Supply gas pressure G31	mbar	37
Gas nozzle G31	Ø	-
Gas flow rate G31 - max / min	kg/h	2.7 / 0.3
CO ₂ - G31	%	10 ± 0.8
NOx emission class		6 (< 56 mg/kWh)
Max Heating Operating Pressure	bar	3.0
Min Heating Operating Pressure	bar	0.8
Max. heating adjustment temperature	°C	95
Heating water content	litres	4.2
Heating Expansion Tank Capacity	litres	10
Heating expansion tank preload pressure	bar	0.8
Max Domestic Hot Water Operating Pressure	bar	9.0
Min Domestic Hot Water Operating Pressure	bar	0.3
Continuous domestic hot water input Δt 25°C	l/min	19.5
Continuous domestic hot water input Δt 30°C	l/min	16.2
Domestic hot water content	litres	41
Specific input in 10 min (Δt 30°C)	litres	206
Protection rating	IP	IPX4D
Supply voltage	V/Hz	230V~50Hz
Electric power absorbed	W	105
Empty weight	kg	65.0
Type of appliance	-	C(10)3-C(11)3-C13-C23-C33-C43-C53-C63-C83-C93-B23-B33
Chimney installation pressure C(10)3-C(11)3	Pa	94.0



NOTES



NOTICE FOR SALES AGENTS:

With a view to constantly improve its production range and customer satisfaction levels, the Company hereby specifies that aesthetic and/or dimensional features, specifications and accessories may be subject to changes.

Please place the utmost care to ensure all technical and/or sales documents (lists, catalogues, brochures, etc.) provided to the final Customer are updated according to the latest edition.

Ferroli SpA

37047 San Bonifacio (VR) Italy - Via Ritonda 78/A

tel. +39.045.6139411

fax +39.045.6100233

www.ferroli.com

export@ferroli.com