

NEW



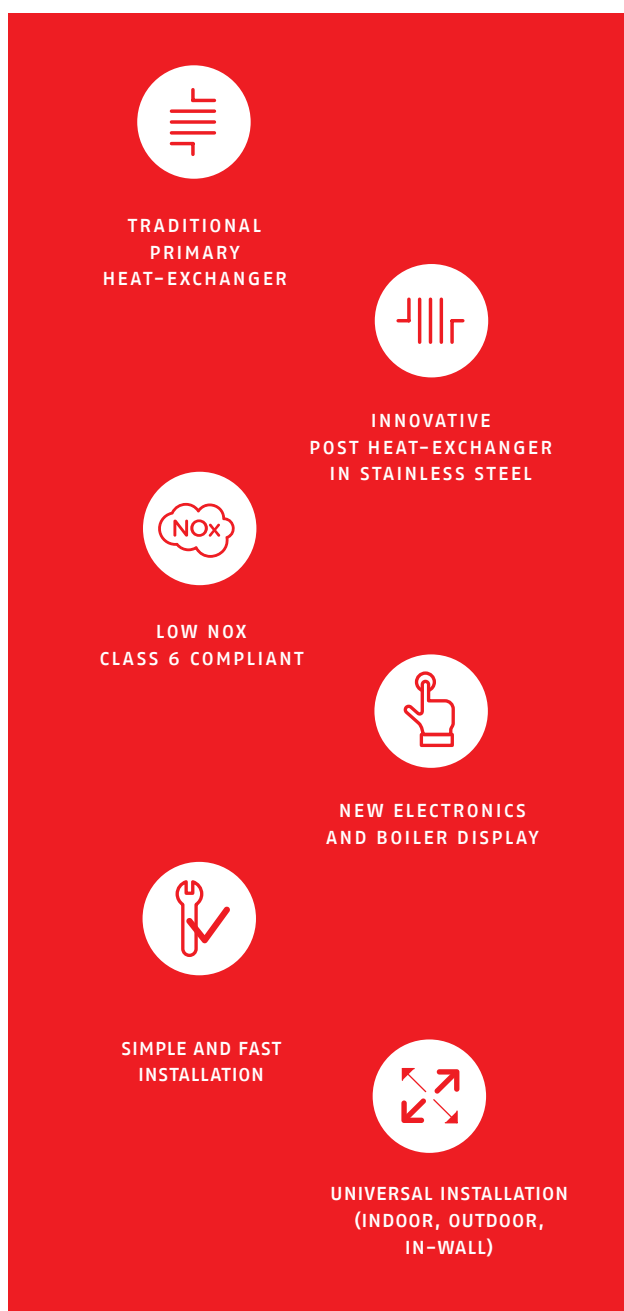
# START AR

Wall-hung condensing boilers

A Carrier Company

**RIELLO**  
Energy For Life

# RIELLO INTRODUCES THE NEW **START AR**, THE IDEAL SOLUTION FOR HIGH-TEMPERATURE SYSTEMS



START AR IS THE NEW CONDENSING RANGE BY RIELLO, SPECIFIC FOR REPLACEMENT IN TRADITIONAL SYSTEMS WITH RADIATORS.

Many new features compared to the previous range. First of all the new post heat-exchanger in stainless steel and composite material, which allows to pre-heat the return water from the primary circuit, using the residual heat of the exhaust fumes. The cooled hyperstoichiometric burner, the new electronics and interface, the possibility to install the boiler in-wall, even in small recesses, complete the innovative profile of this product, which is going to become the reference in the specific segment of replacement in traditional radiator systems.

The new range is available in two combi models with 25 kW output, respectively fuelled by natural gas and LPG. Both models are equipped with DIN standard hydraulic connections.

The compact size of START AR and its installation flexibility, together with its modern and linear design, in line with the latest generation of Riello boilers, allow it to easily integrate into any living environment, both inside the home and outside (in partially protected places) or in-wall, using dedicated accessories.



START AR is available in two combi versions (KIS) of 25 kW:

**START AR 25 KIS - NG VERSION**

**START AR 25 KIS - LPG VERSION**

# NEW DIGITAL INTERFACE

The new digital interface of START AR, designed with particular attention to the ease of use, is equipped with a modern backlit display that allows an immediate and complete reading of the information about the operating status of the boiler, both for the user and the installer or

maintenance technician. Through six keys with intuitive functionality it is possible to easily adjust both the heating and DHW temperature, to access the configuration of the boiler parameters, or to reset the alarm status.



## THE KEYS

Six intuitive and easy-to-use keys, both for the user and the installer/maintenance technician. When pressed in certain combinations, they allow additional functions.



DHW temperature  
increase / decrease



central heating temperature  
increase / decrease



selection of boiler  
operating mode  
(SUMMER, WINTER,  
HEATING ONLY, OFF)



reset of any alarm status;  
enabling / disabling  
INSTALLER / BOILER  
CONFIGURATION mode



access for SERVICE

## THE ICONS

Through icon language, START AR communicates with the user and the installer in an immediate way, visualizing on the display all the information about the boiler status. In addition to the most common icons, some interesting new features have been introduced:



connection to an  
OT device



info menu entry



- presence of flame  
- flame lock



need for  
maintenance,  
contact Service



central heating  
function



DHW function



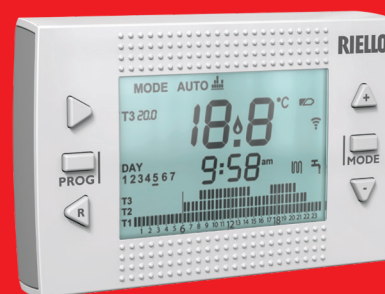
modulation range:  
- from 0 to 50%  
- from 51% to 100%



need for filling

# CONNECTIVITY WITH RiCLOUD

RIELLO START AR is compatible with all the functions of RiCLOUD, Riello smart remote control, even the most advanced ones. Through a free, simple and intuitive App, available for both iOS and ANDROID, you can check the status of the heating system, easily manage START AR on/off, temperature and operating times,



## SIMPLE

RiCLOUD is Riello easy and smart solution for your comfort and savings. Made with the latest technologies, RiCLOUD will surprise you with its ease of use and installation. Through the RiCLOUD App, managing the home comfort or controlling the new START AR boiler will be easier and more intuitive than ever.



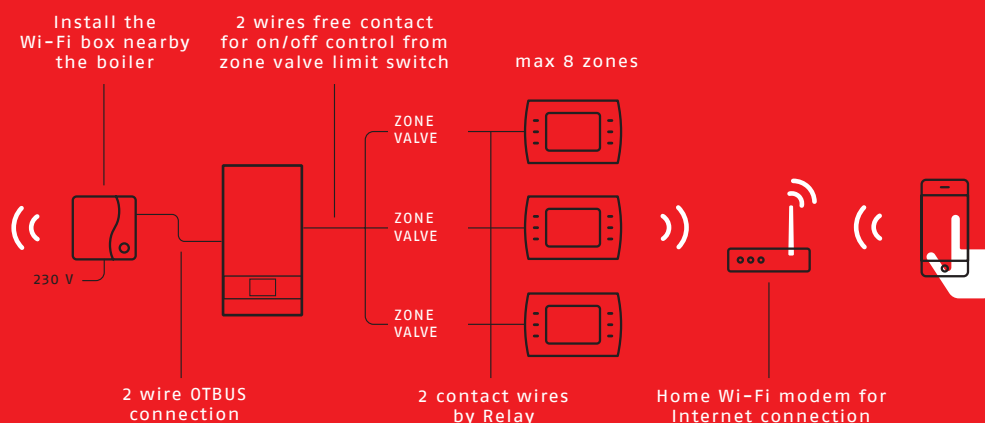
## CONNECTED

Leaving for your mountain home? Back from a business trip? Using your Smartphone or Tablet, via the RiCLOUD App you can check and change the programming mode of your heating system and the status of your new START AR boiler, wherever you are.



## EFFICIENT

In combination with START AR, with outdoor temperature reading, RiCLOUD allows the system to achieve energy efficiency class A + (Connection of at least 3 RiCLOUDs, according to European Regulation 811/2013). Furthermore, the possibility of connecting up to 8 RiCLOUDs, each capable of controlling a single room, allows to optimize the consumption of the heating system: in this way RiCLOUD pays quickly for itself.

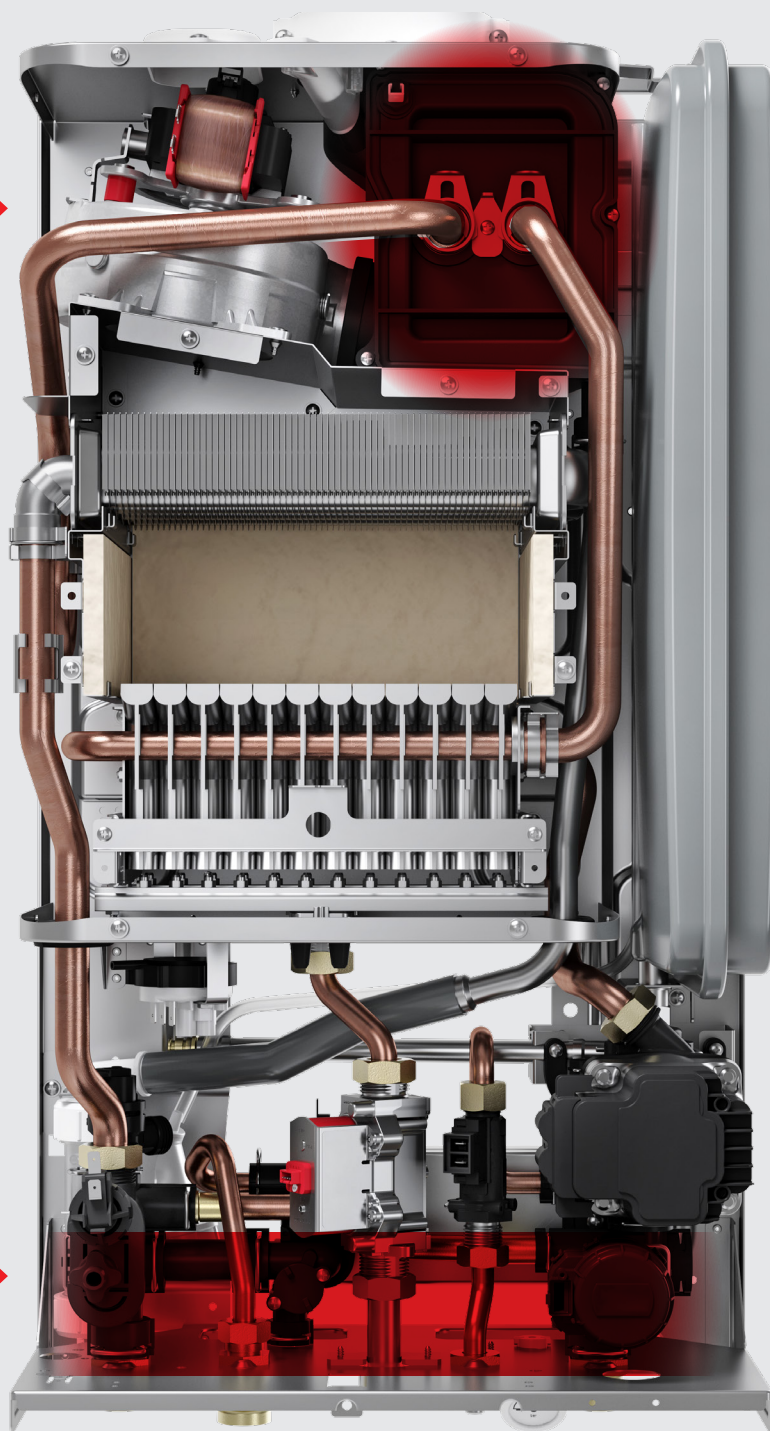


## COMPACT AND FLEXIBLE

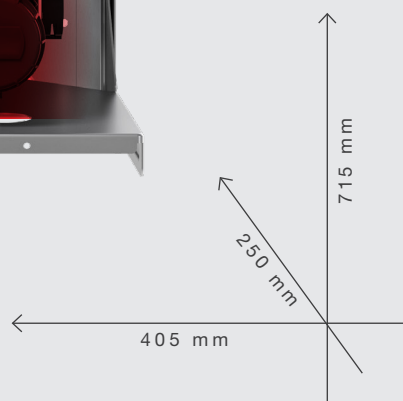
The new START AR range stands out for its compactness and installation flexibility, two important pluses which, together with the technical characteristics listed here, make it the ideal boiler for replacement in the segment of traditional high temperature systems.

- CONDENSING BOILER FOR HEATING AND DOMESTIC HOT WATER PRODUCTION, SPECIFIC FOR HIGH TEMPERATURE SYSTEMS
- NEW LAYOUT WITH COMPACT DIMENSIONS AND LOW WEIGHT (ONLY 31 KG !) TO FACILITATE PORTABILITY AND IN-WALL INSTALLATION
- TRADITIONAL PRIMARY EXCHANGER IN COPPER
- PLATE HEAT EXCHANGER WITH THE POSSIBILITY OF PRE-HEATING
- INNOVATIVE GAS-AIR COMBUSTION SUPERVISION SYSTEM, TO OFFER IDEAL OPERATION DEPENDING ON THE THERMAL LOAD OR FLUE GAS CONFIGURATIONS
- ROOM-SEALED COMBUSTION AND FORCED DRAFT WITH LOW NOX COOLED BURNER
- AUTOMATIC HYDRAULIC BY-PASS AS STANDARD
- MODULATION RANGE 1:3
- LOW CONSUMPTION CIRCULATOR ( $EEI \leq 0.20$ ), 6 m, WITH ANTI-BLOCKING
- LOW NOX EMISSIONS: CLASS 6 (UNI EN 15502-1)
- INNOVATIVE GAS VALVE ADJUSTMENT PROCEDURE
- ANALOGUE HYDROMETER AS STANDARD
- NEW AND ROBUST FINNED PACK POST HEAT EXCHANGER IN STAINLESS STEEL, WITH SHELL IN COMPOSITE MATERIAL
- MAXIMUM INSTALLATION FLEXIBILITY: INDOOR, OUTDOOR AND IN-WALL INSTALLATION (IN A PARTIALLY PROTECTED PLACE)
- KIT OF FREEZE-PROTECTION RESISTORS, HYDRAULIC CONNECTIONS AND EXTERNAL PROBE AVAILABLE AS ACCESSORIES
- DIN TYPE HYDRAULIC CONNECTION SEQUENCE, IDEAL FOR THE REPLACEMENT OF PRODUCTS WITH THE SAME TYPE OF CONNECTIONS
- NEW FLUE GAS FLANGE WITH CLICK-FIT CONNECTION, FAST AND SAFE. NO EXTERNAL COLLAR REQUIRED
- IPX5D ELECTRICAL PROTECTION LEVEL
- BOILER FIXING JIG SUPPLIED AS STANDARD
- COMPATIBLE WITH RICLOUD WIFI CONTROL AS A THERMOSTAT
- DEDICATED LPG CODE. FOR GAS TRANSFORMATION, PLEASE CONTACT THE RIELLO AUTHORIZED SERVICE CENTERS





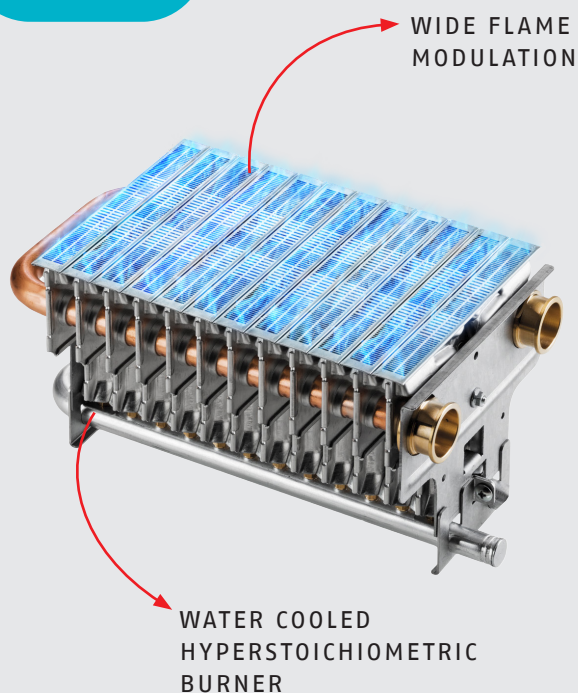
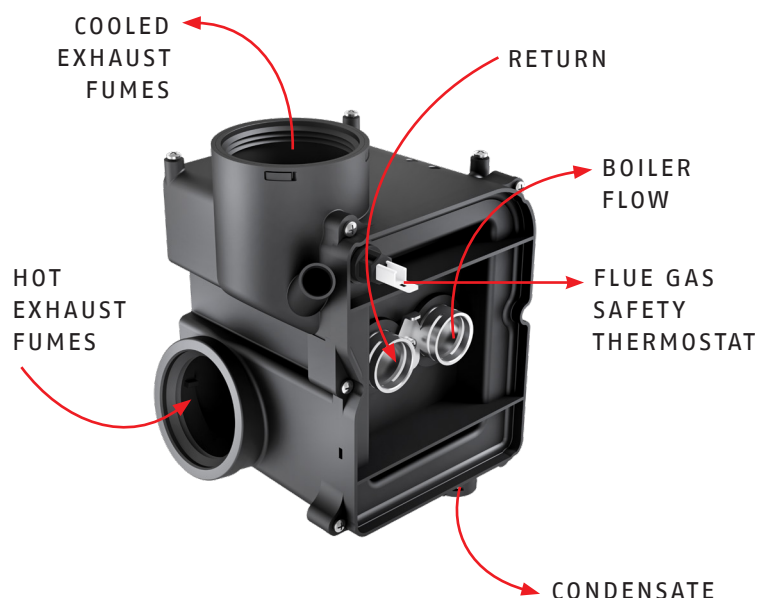
ONLY 31 KG!



# NEW COMBUSTION CHARACTERISTICS

## INNOVATIVE POST HEAT EXCHANGER

- HEAT RECOVERY UNIT with finned pack in stainless steel, in a shell in thermoplastic material.
- Ideal for use in high temperature systems.
- Pre-heating function of the primary circuit, using the residual heat of the exhaust fumes and of the cooled low NOX burner.
- Reduced need for cleaning, thanks to the use of technologically advanced materials.



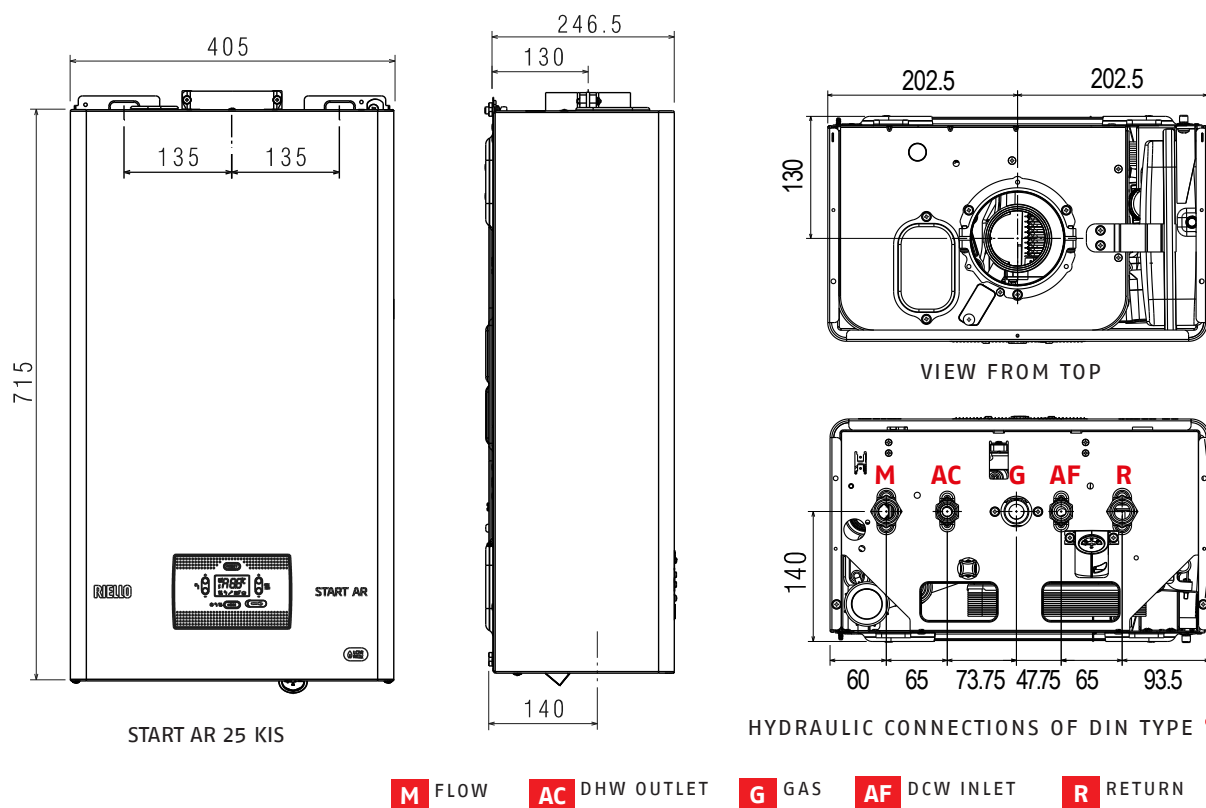
## LOW NOX BURNER

START AR is able to meet the most demanding requirements in terms of low emissions, in order to make heating appliances more and more efficient and less polluting.

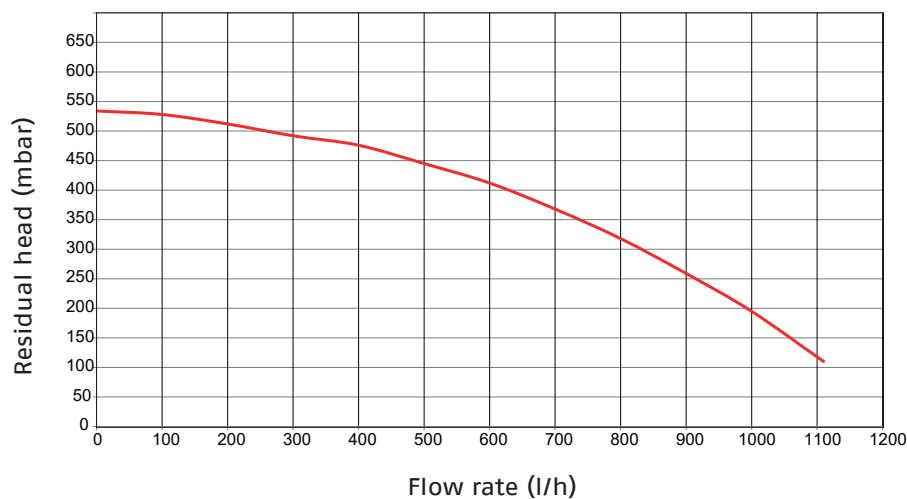
Thanks to the innovative burner of START AR, of hyperstoichiometric type, the flame is fed by an air-gas mixture in excess of that required for combustion, obtaining a very low flame temperature as a result. This characteristic, in combination with the cooling of the burner through the water of the heating circuit, produces a significant lowering of the polluting values of carbon monoxide and nitrogen deriving from combustion, such as to satisfy with full marks the new limits set by the legislation (EU Regulation 814/2013).



# TECHNICAL DRAWINGS



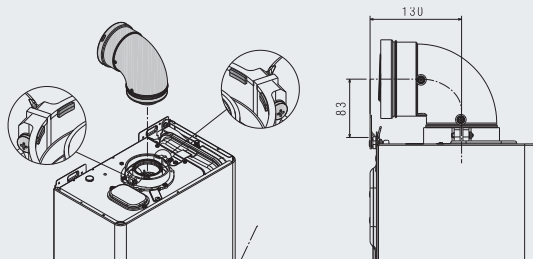
## LOW CONSUMPTION CIRCULATOR



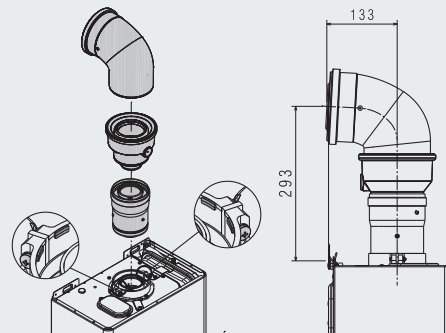
START AR IS  
EQUIPPED  
WITH A LOW  
CONSUMPTION  
CIRCULATOR  
(EEI ≤ 0.20),  
6 m, WITH  
ANTI-LOCK

# FLUE OPTIONS

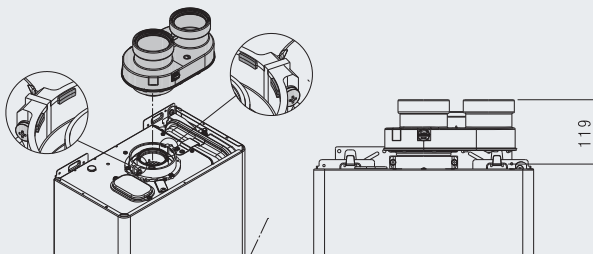
- Flange installed as standard;
- Quick installation without the need for an external collar;
- Boiler departure with RIELLO specific flue options.



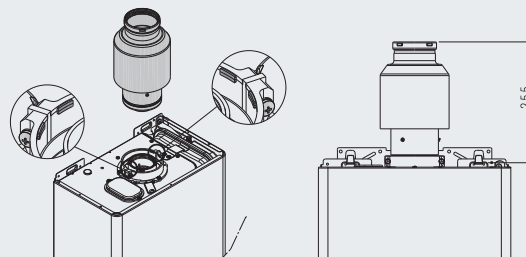
Concentric flue ø60-100 mm



Concentric flue ø80-125 mm



Twin system ø80 mm



Flue outlet pipe ø80 mm  
(type B23P-B53P)

# TECHNICAL DATA

BOILER MODEL	UOM	START AR 25 KIS (NG and LPG)
ENERGY LABEL SPECIFICATIONS ACCORDING TO EUROPEAN DIRECTIVE ErP		
Energy efficiency heating	Class	B
Domestic water seasonal energy efficiency class	Class	A
Domestic water load profile	-	XL
Nominal heat output	kW	24
Seasonal heating efficiency	%	87
CHARACTERISTICS		
Nominal heat input	kW	25,00
Nominal heat output (80°- 60°)	kW	23,95
Reduced heat output (80°-60°)	kW	7,06
Reduced heat input	kW	7,50
NOx	Class	6,00
Total electrical power	Watt	102,00
Supply voltage / frequency	Volt / Hz	230/50
Electrical protection level	IP	IPX5D
Useful efficiency at max. - min. nominal heat input (80°-60°C).	%	95,8-94,1
Useful efficiency at max. nominal heat input (30° return)	%	101,40
CENTRAL HEATING OPERATION		
Maximum pressure and temperatures	bar/°C	3/90
Heating temperature selection range	°C	30/80
Pump: pump head available for the system	mbar	314
at flow rate of	l / h	800
Expansion vessel capacity	litres	8
DHW OPERATION		
Maximum pressure	bar	8
Minimum pressure	bar	0,15
Quantity of hot water with $\Delta t = 25^{\circ} \text{C}$	litres / min	14,3
Minimum domestic water flow rate	litres / min	2
DHW temperature selection range	°C	35-60
CONNECTIONS		
Central heating flow - return	Ø	3/4 "
DHW inlet - outlet	Ø	1/2 "
Gas inlet	Ø	3/4 "
CONCENTRIC FLUE and AIR INTAKE PIPES		
Diameter	mm	60-100
Maximum length	m	3,5
Loss due to insertion of a 90 ° / 45 ° bend	m	1,3/1,6
Diameter	mm	80-125
Maximum length	m	9
Loss due to insertion of a 90 ° / 45 ° bend	m	1/1,5
TWIN FLUE and AIR INTAKE PIPES		
Diameter	mm	80
Maximum length	m	14+14
Loss due to insertion of a 90 ° / 45 ° bend	m	1/1,5
DIMENSIONS, WEIGHT		
Boiler size (HxWxD)	mm	715x405x250
Weight	kg	31



START AR

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As the company is constantly engaged in the continuous improvement of its entire production, the aesthetic and dimensional features, technical data, equipment and accessories can be subject to variation.

# RIELLO