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 Beretta

THE STYLE OF BERETTA,  
THE PULSE OF  
STAINLESS STEEL



## MYNUTE X, THE NEW CONDENSING BOILER RANGE FULLY LOADED WITH CUTTING EDGE FEATURES AND REAL-WORLD ADVANTAGES

Beretta present MYNUTE X, a new wide range of condensing wall-hung boilers with many distinguishing innovations, from the new condensing heat-exchanger in stainless steel, to the ACC combustion up to the new electronic interface.

The range covers all comfort needs for residential application with its 7 models, available in different outputs from 20 to 40 kW, as “combination” and “heating only” versions.

High efficiency, flexibility of installation, low consumption and user-friendliness make Mynute X the winning choice, both for new installations and as a replacement of old boilers.

The new design of MYNUTE X highlights Beretta’s tradition of excellence and expertise, proven by over 40 years of experience in the heating industry. In family line with the style of Beretta last generation products, MYNUTE X blends easily into any setting, thank also to the compact dimensions and flexibility of installation.



### CO MONITOR

CO boiler level constantly monitored and calibrated for maximum safety



### INNOVATIVE STAINLESS STEEL HEAT EXCHANGER



### UNIVERSAL APPLICATION

Indoor, outdoor and recessed in-box application



### NEW DIGITAL INTERFACE

User-friendly interface with LCD backlit display and 7 push buttons



### QUICK & SIMPLE INSTALLATION

Casing removal is no longer required to make the electrical connections and calibrations



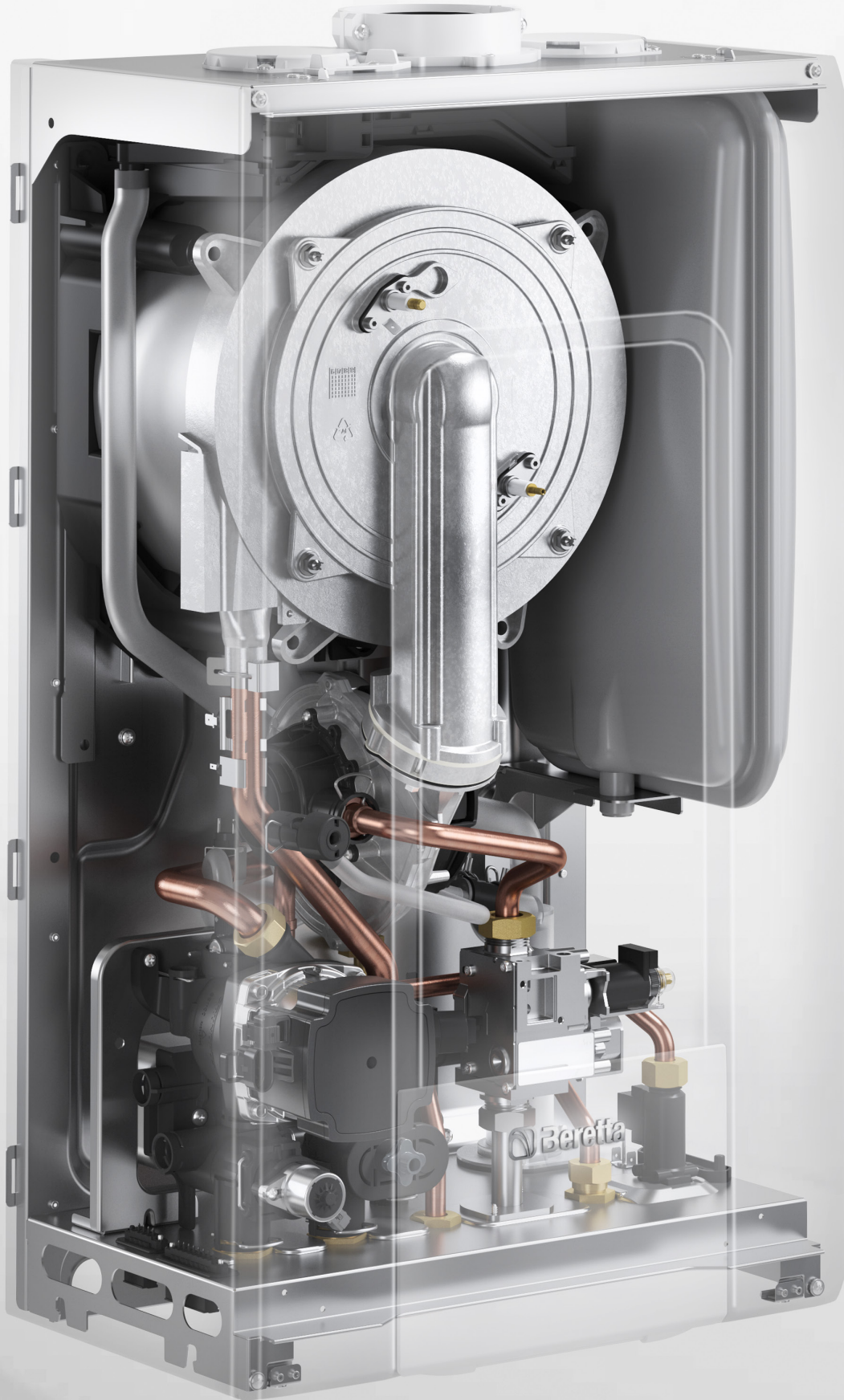
### SELF-CALIBRATING

Auto-adaptability of the boiler to different types and compositions of gas - NO mechanical calibrations



### HIGH EFFICIENCY

Ultra low consumption, thanks to the new primary heat exchanger, the modulating circulator and the ACC combustion



COMBI MODELS 25C 30C 35C 40C | HEATING ONLY MODELS 20R 30R 40R

# TECHNOLOGY AND ADVANTAGES

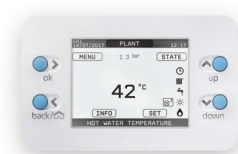
- › NEW CONDENSING **HEAT-EXCHANGER IN STAINLESS STEEL** WITH FRONTAL ACCESS
- › **ACTIVE COMBUSTION CONTROL** VIA ACC SYSTEM
- › **HIGH MODULATION** (UP TO 1:8)
- › **LOW ENERGY MODULATING CIRCULATOR** ( $EEI \leq 0,20$ ) ELECTRONICALLY ADJUSTABLE WITH FOUR MANAGEMENT MODES:
  - VARIABLE SPEED WITH PROPORTIONAL MODE (VELOCITY PROPORTIONAL TO BOILER OUTPUT)
  - VARIABLE SPEED WITH  $\Delta T$  MODE (TO KEEP CONSTANT FLOW-RETURN DIFFERENTIAL TEMPERATURE)
  - FIXED SPEED MODE AT MAXIMUM LEVEL
  - EXCEPTIONAL USE OF A STANDARD CIRCULATOR WHOSE SPEED CANNOT BE REGULATED
- › **BUILT-IN NON RETURN VALVE ON FLUES** ALLOWING MYNUTE X(\*) CERTIFICATION AS C<sub>10</sub> APPLIANCE(\*\*) FOR SHARING CHIMNEYS UNDER PRESSURE
- › **LOW NOX**: CLASS 6 (EN 15502)
- › **HYBRID READY** BOILER, THAT CAN BE INTEGRATED IN BERETTA MULTI-ENERGY SYSTEMS VIA REC 10H, AVAILABLE AS AN ACCESSORY
- › **FLEXIBILITY OF INSTALLATION**: INDOOR, OUTDOOR (IN PARTIALLY PROTECTED PLACES) AND IN-WALL APPLICATION
- › **CLICK-FIT FLUE CONNECTION: FAST AND SAFETY**
- › **HYDRAULIC CONNECTIONS AND OUTDOOR PROBE** AVAILABLE AS OPTIONAL
- › **FROST PROTECTION** AS STANDARD
- › **IPX5D** ELECTRICAL PROTECTION
- › LPG OPERATION SELECTABLE THROUGH DISPLAY PARAMETER. **LPG TRANSFORMATION KIT NOT NECESSARY**. THANKS TO THE ACC SYSTEM, THE GAS COMMUTATION IS VIA ELECTRONIC SETTING
- › **CAN BE MATCHED WITH BeSMART CONTROL** WORKING AS WIFI THERMOSTAT IN OTBUS COMMUNICATION, ALLOWING EXTENSIVE TOP ADVANTAGES

(\*) All models except for 40C and 40R.

(\*\*) A C<sub>10</sub> appliance means that it is designed to become connected to a common duct system, that is designed to operate under the conditions where the static pressure in the common flue duct might exceed the static pressure in the common air duct.



MYNUTE X features the new “hybrid ready” technology by Beretta, conceived to integrate and manage different energy sources (gas/electricity/renewables). Provided with the new communication BUS, MYNUTE X can manage a hybrid system with the heat pump HYDRONIC UNIT LE B through the REC 10H, the “brain” of the system, available as an accessory (while disabling the boiler interface).



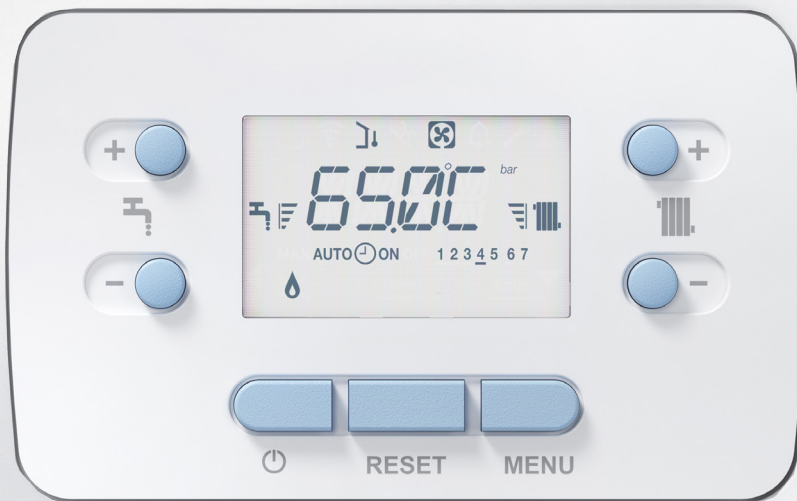
The **Energy Manager REC 10H** constantly controls the hybrid system, to always offer the best comfort in an efficient and effective way.

# NEW DIGITAL CONTROL PANEL

The control panel is one of the distinguishing and innovative elements of MYNUTE X product line. MYNUTE X functions can be accessed through a modern backlit LCD display, which communicates

with the user through intuitive icons. Thanks to seven push buttons with clear silkscreen, it is possible to easily access and set all MYNUTE X parameters.

MYNUTE X "GREEN LED": A small LED light bar shows the boiler's operation status, reflecting on the casing a green light, if the boiler is operating regularly.



increase the DHW temperature value.



decrease DHW temperature



select boiler status: Winter - Summer - Stand-by - OFF

**RESET**

restore functioning after a fault code/ access boiler parameters

**MENU**

access to INFO MENU and preheating function/enter-confirm a choice



increase CH temperature



decrease CH temperature

## MYNUTE X FUNCTIONS

- › **MANAGEMENT UP TO 2 HYDRAULIC CIRCUITS**  
HIGH TEMPERATURE AND/OR LOW TEMPERATURE, VIA OPTIONAL ACCESSORIES
- › **INTEGRATION WITH SOLAR THERMAL SYSTEMS** FOR DHW PRODUCTION (INSTANTANEOUS OR WITH INDIRECT TANK)
- › **PRE-HEATING**  
PRE-HEATING FUNCTION FOR DOMESTIC HOT WATER

- › **TOUCH & GO COMFORT FUNCTION**  
DHW PRE-HEATING ACTIVATED JUST WITH SHORT ON/OFF ON HOT WATER TAP. YOUR SHOWER IS READY!
- › **EMBEDDED TIME-CLOCK** (7-DAY)
- › **CONNECTION WITH DHW TANKS** (R MODELS) WITH LEGIONELLA PROTECTION FUNCTION

# MYNUTE X EVERYWHERE

L 420 mm

H 740 mm

Beretta



## BeSMART

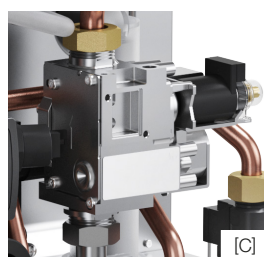
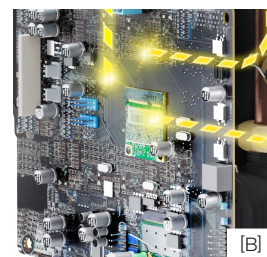
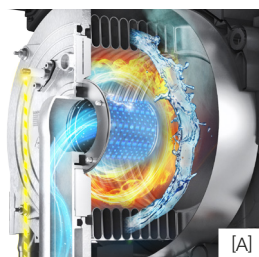
BeSMART, the smart WiFi thermostat by Beretta, is the quick and easy way to control your home heating from wherever you are from your Smartphone or Tablet, via a simple and intuitive App. MYNUTE X is compatible with all BeSMART's functions, also the most evolved ones.

# ACTIVE COMBUSTION CONTROL

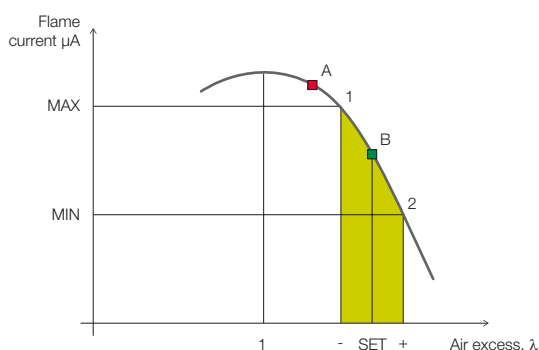


The ACC system, designed and developed by Beretta, allows to offer best-in-class functionality, efficiency and low emissions in all circumstances. Using a flame ionisation current detection sensor, that allows the electronics to continuously modulate the quantity of injected fuel, the system keeps the air/gas mix constant at the optimal values in the whole power output modulation field (constant CO<sub>2</sub> value).

Thanks to the sophisticated ACC system, combustion self-adjusts, thus eliminating the need of any calibration and allowing the boiler to operate with several gas compositions. Special attention is paid to CO emissions, through a self-diagnosis that operates on the burner before the threshold of emission permitted by the regulations is exceeded.



[A] BURNER WITH IONISATION SENSOR  
 [B] TRADITIONAL GAS VALVE WITH MODULATOR  
 [C] BURNER WITH IONISATION SENSOR  
 [D] MODULATING FAN WITH HALL EFFECT  
 INTEGRATED ELECTRONIC BOARD



Combustion control is designed to keep combustion values within the air excess optimal value required by combustion in the whole boiler modulation range (operating point B). The optimum operation limit is defined within the tract delimited by points 1 and 2.

If during the operation of MYNUTE X, in the course of periodic checks carried out by the combustion control, a value exceeding the preset firing rate is identified (e.g. point A), the control system immediately activates the air/gas ratio correction to bring combustion back within the set values.

## BENEFITS OF ACC SYSTEM

- › **SYSTEM SELF-ADAPTATION TO GAS TYPE AND COMPOSITION (ALSO INSTANTANEOUS).** GAS CONVERSION KITS NO LONGER REQUIRED
- › **NO MECHANICAL CALIBRATION OR MANUAL OPERATIONS ON COMBUSTION TO BE CARRIED OUT ON THE BOILER**
- › **STOICHIOMETRIC RATIO CONSERVATION.** CONSTANT AIR/GAS RATIO IN ANY CIRCUMSTANCE
- › **CONTINUOUS EMISSION CONTROL** IN COMPLIANCE WITH REGULATORY CONSTRAINTS
- › **MAXIMISED GAS SAVING** WITH RESPECT TO TRADITIONAL SYSTEMS THANKS TO THE CONSTANT PRESERVATION OF POWER MODULAR EFFICIENCY
- › **SELF-LEARNING.** OPTIMISED EFFICIENCY AND RELIABILITY OVER TIME THANKS TO SELF-LEARNING WITH COMPENSATION BY ACC SYSTEM



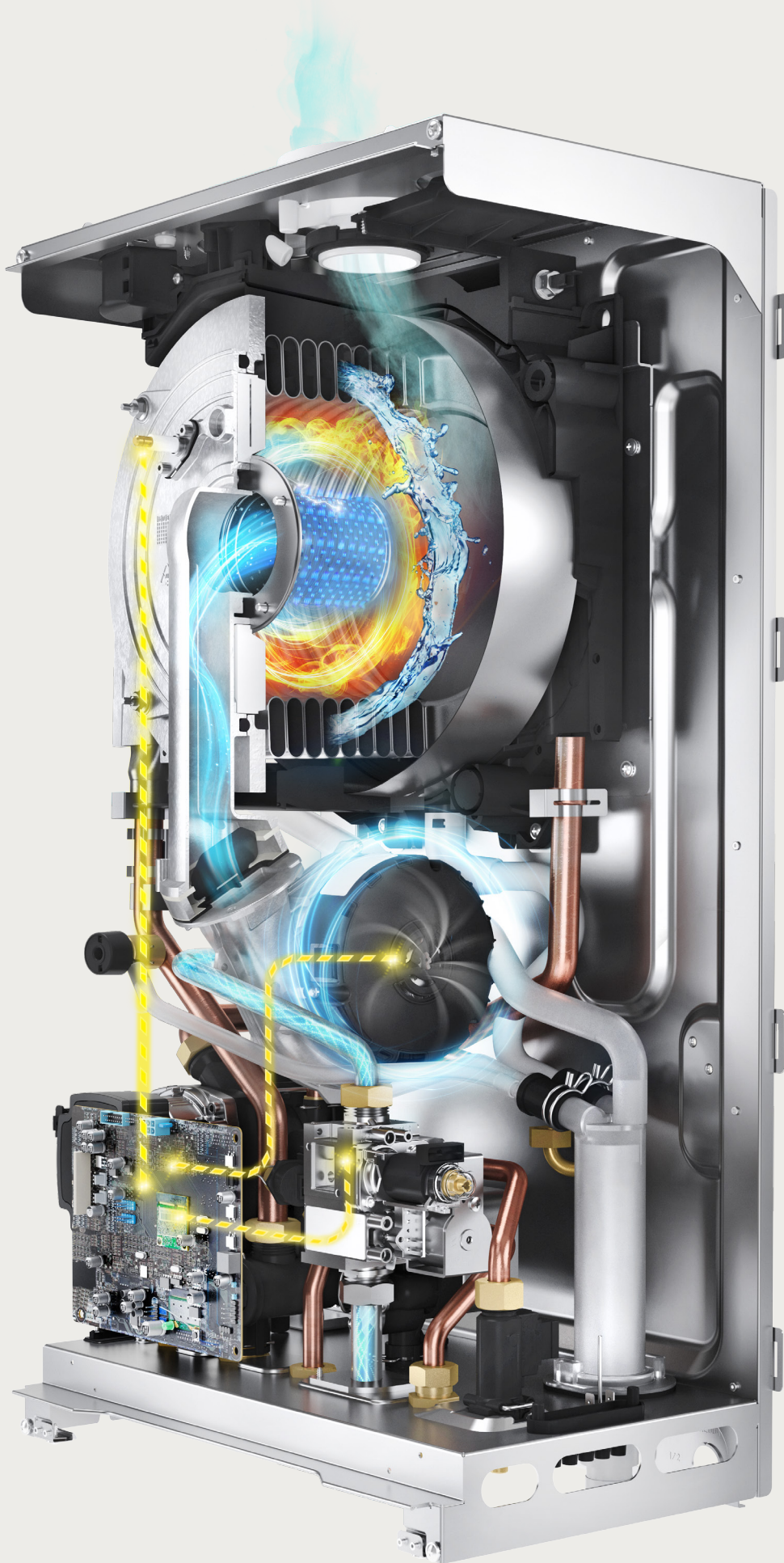
## NEW STAINLESS STEEL HEAT EXCHANGER



The innovative primary heat exchanger in stainless steel, made of a **coiled smooth tube with a large section**, ensures optimized efficiency of the combustion and **cleanness over time**.

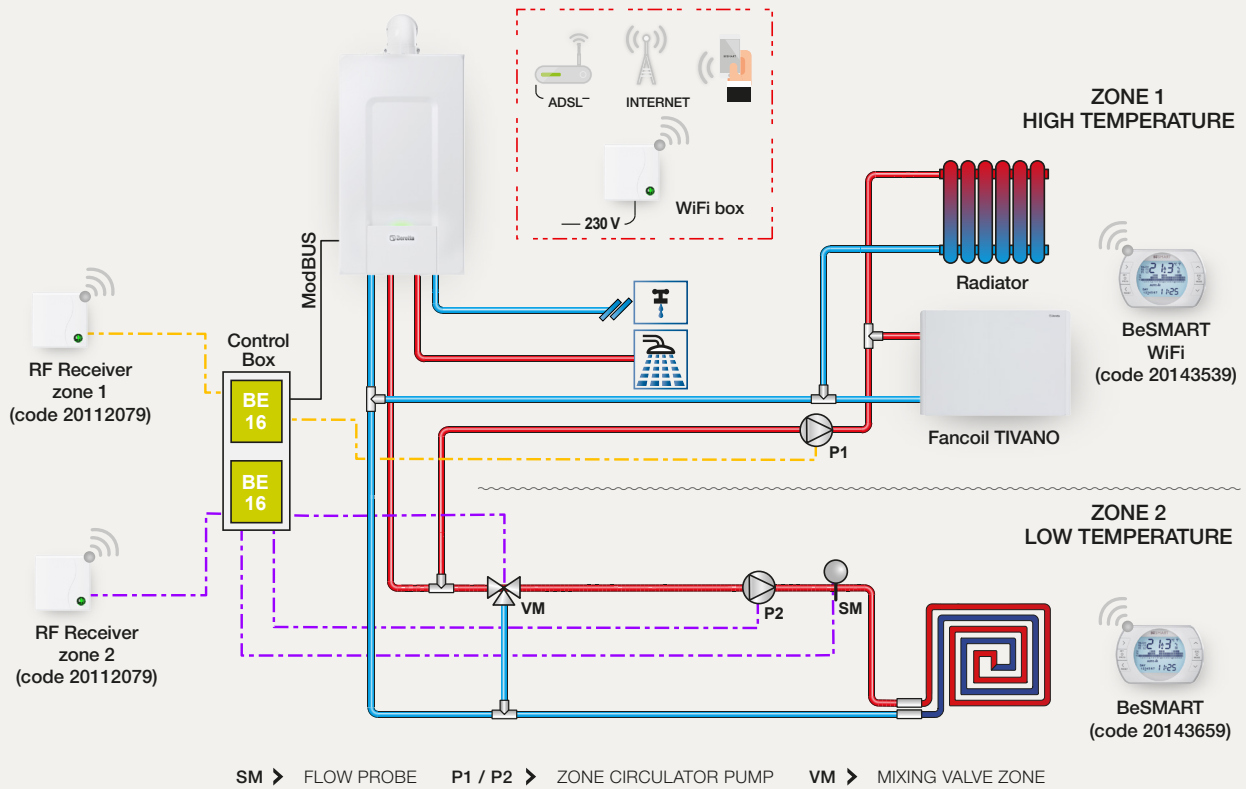
The stainless steel quality AISI 304 L provides **high resistance to corrosion** deriving from acid condensate. The large section of the tube and its **geometry as a unique coil** ensure a constant flow and prevent intrinsically from clogging.

The frontal access to heat exchanger enables ease of maintenance and cleaning of the combustion chamber.



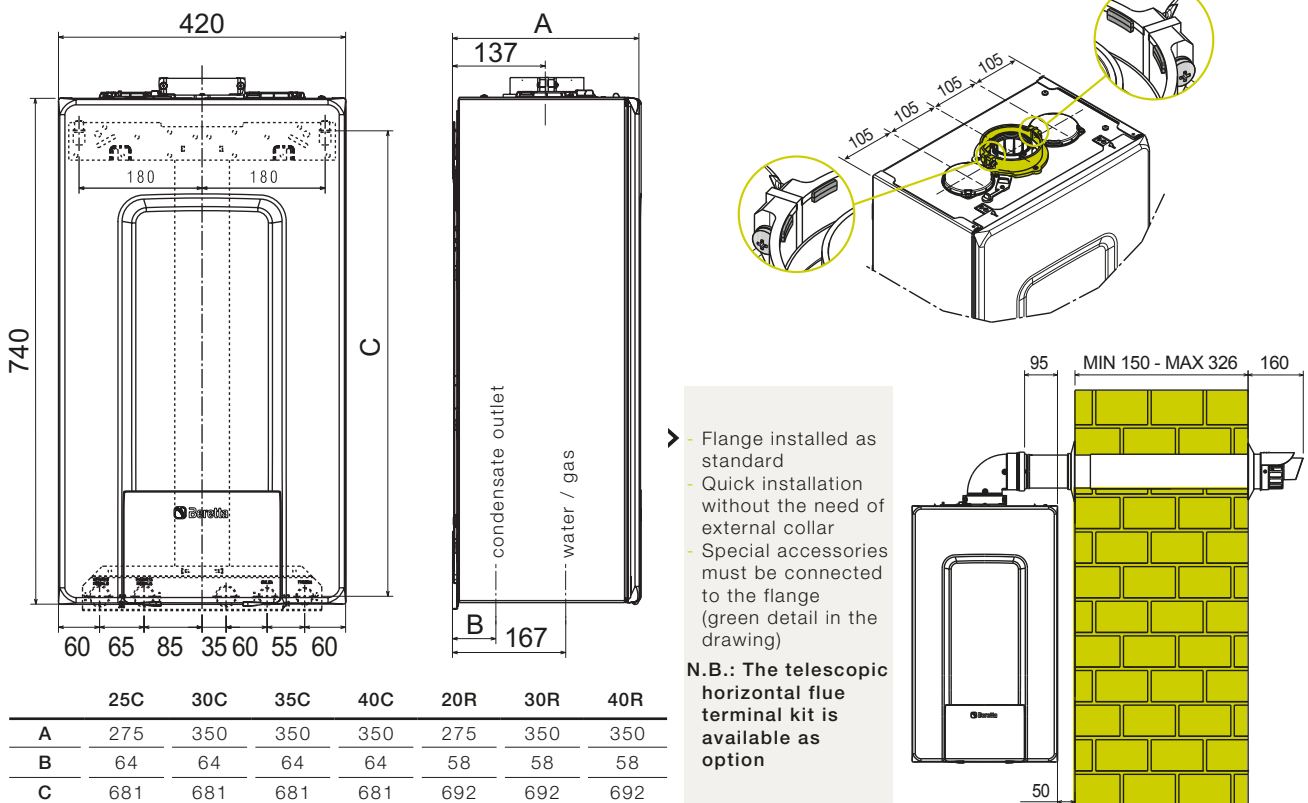
# TWO TEMPERATURE LEVEL ZONES MANAGEMENT

MYNUTE X can manage up to 2 temperature zones: mixed and/or direct. See example here below.






➤ (\*) CONTROL BOX (BE16 accessories); Kit zone 1 code 20132795 + kit zone 2 code 20132796.  
Kit zone 1: electric box with wiring and connections.  
Kit zone 2 has to be installed in the control box and allows to expand the nr. of zones up to 2.

## TECHNICAL DRAWINGS



# MAIN FLUES KITS

CODE	REF	DESCRIPTION
20134830		Flue adapter kit from Ø60/100 to Ø80+80 (air inlet swelling position)
20129175		Ø60/100 horizontal flue terminal kit with reduced concentric bend (90° lowered bend code 20129172 included)
20129176		Ø60/100 telescopic horizontal flue terminal kit with reduced concentric bend (90° lowered bend code 20129172 included)

## TECHNICAL DATA



### ENERGY LABELLING SPECIFICATIONS (according to ErP regulations)

	UOM	25C	30C	35C	40C	20R*	30R*	40R*	
Boiler order code		20149446	20149447	20149448	20149449	20149450	20149451	20149452	
Seasonal space heating energy efficiency class		A	A	A	A	A	A	A	
Water heating energy efficiency class		A	A	A	A	-	-	-	
Rated heat output	pnominal kW	19	24	29	29	19	29	29	
Seasonal space heating energy efficiency	ηs %	93	93	93	93	93	93	93	
<b>USEFUL HEAT OUTPUT</b>									
At rated heat output, high-temperature regime (**)	P4 kW	19,5	24,3	29,2	29,2	19,5	29,2	29,2	
At 30% of rated heat output and low-temperature regime (***)	P1 kW	6,5	8,1	9,7	9,7	6,5	9,7	9,7	
<b>USEFUL EFFICIENCY</b>									
At rated heat output and high-temperature regime (**)	η4 %	87,6	87,3	87,8	87,8	87,6	87,8	87,8	
At 30% of rated heat output and low-temperature regime (***)	η1 %	97,7	97,6	97,5	97,5	97,7	97,5	97,5	
<b>AUXILIARY ELECTRICITY CONSUMPTION</b>									
At full load	elmax W	28,0	28,0	28,0	28,0	28,0	28,0	28,0	
At part load	elmin W	14,0	14,0	14,0	14,0	14,0	14,0	14,0	
In Stand-by mode	PSB W	3,0	3,0	3,0	3,0	3,0	3,0	3,0	
<b>OTHER PARAMETERS</b>									
Stand-by heat losses	Pstby W	34,0	32,0	32,0	32,0	34,0	32,0	32,0	
Pilot flame energy consumption	Pign W	-	-	-	-	-	-	-	
Annual energy consumption	QHE GJ	36	45	53	53	36	53	53	
Sound power level, indoors	LWA dB	50	50	52	52	50	52	52	
NOx emissions	NOx mg/kWh	46	32	37	37	46	37	37	
<b>FOR COMBINATION HEATERS</b>									
Declared load profile		XL	XL	XL	XL	-	-	-	
Water heating energy efficiency	ηwh %	86	84	85	85	-	-	-	
Daily electricity consumption	Qelec kWh	0,139	0,145	0,138	0,148	-	-	-	
Daily fuel consumption	Qfuel kWh	22,668	23,484	23,046	22,884	-	-	-	
Annual electricity consumption	AEC kWh	30	32	30	32	-	-	-	
Annual fuel consumption	AFC GJ	17	18	17	17	-	-	-	
<b>OTHER SPECIFICATIONS</b>									
CH Heat INPUT (max-min)	kW	20,00-3,60	25,00-4,90	30,00-4,90	30,00-4,90	20,00-3,60	30,00-4,90	30,00-4,90	
DHW heat nominal INPUT (max-min)	kW	25,00-3,60	30,00-4,90	34,60-4,90	40,00-4,90	20,00-3,60	34,60-4,90	40,00-4,90	
Power supply voltage	V-Hz	230 - 50	230 - 50	230 - 50	230 - 50	230 - 50	230 - 50	230 - 50	
Degree of protection	IP	X5D	X5D	X5D	X5D	X5D	X5D	X5D	
NOX class		6	6	6	6	6	6	6	
<b>CH</b>									
Max pressure-temperature	bar-°C	3 - 90	3 - 90	3 - 90	3 - 90	3 - 90	3 - 90	3 - 90	
Pump: max available head (flow rate 1000 l/h)	mbar	286	286	286	286	286	286	286	
Membrane expansion tank	l	9	9	9	9	9	9	9	
<b>DHW</b>									
Max pressure	bar	8	8	8	8	-	-	-	
DHW production at ΔT=25°C/30°C/35°C	l/min	15,1/12,5/10,8	18,1/15,1/12,9	20,8/17,4/14,9	24,1/20,1/17,2	-	-	-	
DHW minimum flow rate	l/min	2	2	2	2	-	-	-	
<b>GAS, CONNECTIONS</b>									
Inlet gas pressure (G20-G31)	mbar	20-37	20-37	20-37	20-37	20-37	20-37	20-37	
CH Flow - Return / GAS	Ø	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	
DHW Inlet - Outlet	Ø	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	
<b>DIMENSIONS, WEIGHT</b>									
Boiler dimensions (HxWxD)	mm	740x420x275	740x420x350	740x420x350	740x420x350	740x420x275	740x420x350	740x420x350	
Net weight	kg	35	37	37	40	34	36	39	
<b>FLUE PIPES AND AIR INTAKE</b>									
Max length for concentric (Ø60-100mm)	m	10	6	6	6	10	6	6	
Max length for twin	m	60 + 60	33 + 33	35 + 35	28 + 28	60 + 60	35 + 35	28 + 28	

\* The 'Only heating' models are supplied with a three-ways valve. Filling tap is not available.

\*\* High-temperature regime means: 60°C Return and 80°C Flow of the boiler.

\*\*\* Low temperature regime means for condensing boilers 30°C, for low-temperature boilers 50°C return temperature (at heater inlet).

C COMBINATION MODEL (CH + DHW)  
R HEATING ONLY MODEL (CH)



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