

# /ALL-HUNG CONDENSING BOILERS with stainless steel heat exchanger



archiproducts AWARDS 2023 WINNER archiproducts AWARDS 2023 WINNER SUSTAINABILITY 

#### THE RANGE

MYNUTE EVO X range consists of 5 models, to satisfy the different comfort needs:

- MYNUTE EVO X 20R (heating only model)
- MYNUTE EVO X 25C (combi model)
- MYNUTE EVO X 30C (combi model)
- MYNUTE EVO X 30R (heating only model)
- MYNUTE EVO X 35C (combi model)

Thanks to the ACC adaptive system, no dedicated codes are needed in case of LPG, because the new MYNUTE EVO X is able to automatically adapt its operation to the type of fuel. All models are also certified for use with air propane.



# MYNUTE EVOX, INNOVATION AND EFFICIENCY FOR A RELIABLE COMFORT.



MYNUTE EVO X REPRESENTS THE LATEST EVOLUTION OF MYNUTE, ONE OF THE MOST REPRESENTATIVE BERETTA WALL-HUNG BOILERS FAMILIES IN TERMS OF RELIABILITY AND PERFORMANCE.

Deeply renewed in technology and design, MYNUTE EVO X features different advantages compared with the previous series: from the wide modulation range 1:10 on all models, to the new heat exchanger in stainless steel with renewed adaptive combustion system and up to the new touch control, just to mention the main ones.

Common denominator of the entire range is the **technological research aimed at saving energy, while offering higher comfort**: from silent operation to performance, there are many improved features of MYNUTE EVO X, which the user will not fail to appreciate.

The new range comes in completely renewed aesthetic lines, conveying a **modern and evolved character**, which harmonizes easily in different residential settings, both in replacement and in the new building.

Moreover, like all Beretta boilers of the new generation, MYNUTE EVO X is oriented towards the future: it is in fact **suitable to operate with blends of natural gas and hydrogen up to 20%**, thus helping to reduce the impact on environment and the emissions of condensing boilers in the coming years.



# STYLISH DIGITAL TOUCHPAD INTERFACE

#### COMMUNICATION THROUGH ICONS



MYNUTE EVO X features a **new digital touchpad interface characterized by an eye-catching design**, in line with the current aesthetic standards. Designed with a particular attention to ease of use, the control panel of MYNUTE EVO X provides **userfriendly access to all boiler and system settings and parameters** through a simple "touch" on seven points of its surface.

Each touch activates a buzzer, that generates an acoustic feedback as a confirmation of the operation. The **2,8**" **HMI display** communicates with the user and the installer through icons, allowing an immediate understanding of the displayed function.



#### D Beretta

## Hi Comfort, COMFORT AT YOUR FINGERTIPS

MYNUTE EVO X is suitable with Hi, Comfort IoT platform solutions, available as accessories, that allow to manage your home comfort in a simple and intuitive way via App.

#### Hi, Comfort T100

The platform includes the **Hi, Comfort T100**, which can function as a traditional thermostat or be used in smart mode through the Hi, Comfort App, when paired with the Hi, Comfort G100-W Wi-Fi Box. The App is available for free on Android and iOS systems and enables users to **remotely monitor the status, control the temperature of hot water and adjust** 

#### Hi, Comfort T300\*

MYNUTE EVO X is compatible with Hi, Comfort T300, the new room control featuring an elegant and modern design, which integrates advanced functions, up to the management, even remotely, of a hybrid system. The new advanced room control, with integrated gateway, can manage up to 3 zones through expansion cards and, in the case of a hybrid installation, operates as a true System Manager, for optimized consumption. All this also via Hi, Comfort App. boiler settings securely and easily. Installing the Hi, Comfort T100 is a quick and uncomplicated process, and it does not require any modifications to the electrical system if replacing an old thermostat. The T100 is powered by batteries and can be installed wirelessly if the installation is equipped with a radio frequency receiver.



Hi, Comfort T300\*

\* Available from 2<sup>nd</sup> quarter 2024

#### Hi, Comfort K100

Finally, the Beretta MYNUTE EVO X range comes ready for the **Hi, Comfort K100 Smart Key**, an accessory designed for the latest generation of Beretta boilers. The Key connects the boiler to the internet without the need to replace an old thermostat already installed (even if ON/OFF). **Through the proprietary App Hi, Comfort, it is**  possible to program the profile of the heating system from a mobile phone or tablet, find out the operating status parameters and activate special functions for domestic hot water production ("baby bottle", "cooking" and "wellness"), thus remotely.



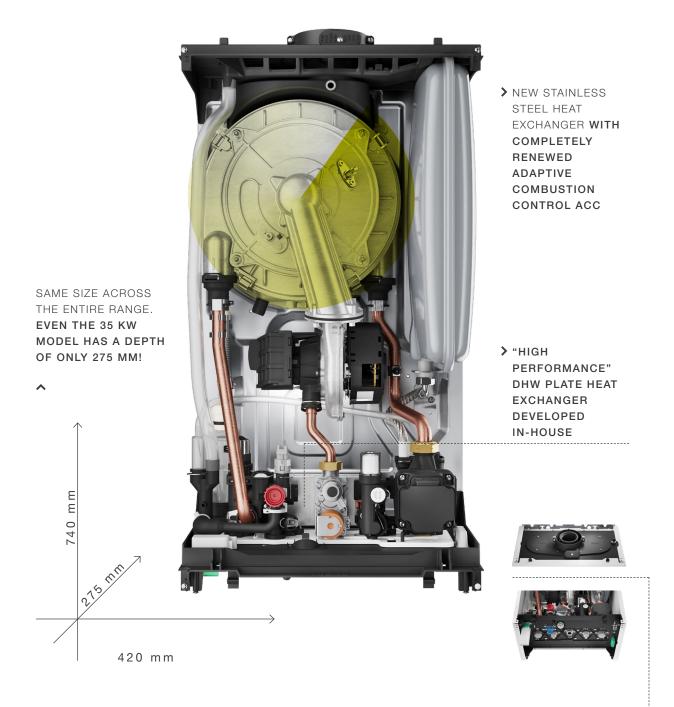


Easy and fast connection, by inserting the K100 Smart Key in the connector



FOR MORE DETAILS ON Hi, Comfort SOLUTIONS PLEASE VISIT THE SITE WWW.HI-COMFORT.COM

# HIGH EFFICIENCY FOR ENERGY SAVING



- > NEW FLUE FLANGE FEATURING FAST AND SAFE, CLICK-FIT CONNECTIONS.
- > LOW NOX EMISSIONS: CLASS 6 (EN 15502)
- HIGH MODULATION RATIO 1:10 ON THE WHOLE RANGE, FOR HIGH ENERGY SAVING
- > ENERGY EFFICIENCY 94%
- > SIDE EXPANSION VESSEL 9 LITRES

- TOP COVER AND BOTTOM SHELF MADE OF NEW CO-MOLDED MATERIALS TO HELP DURABILITY AND STRENGTH
- NEW MODULAR DIGITAL LOW ENERGY CIRCULATOR
- NEW HYDRAULIC GROUP WITH DIN TYPE CONNECTIONS SEQUENCE FOR EASY REPLACEMENT





# NEW ADAPTIVE ELECTRONIC COMBUSTION CONTROL



MYNUTE EVO X is equipped with a completely new intelligent combustion control system ACC (Active Combustion Control), which **can automatically adapt to the fuel (natural gas, LPG, etc.)** without use of specific codes or accessory conversion kits. **This innovative and sophisticated combustion control allows self-adjustment of combustion**, eliminating the need for initial calibration. The ACC system is also capable of adapting the boiler to operate with different configurations of gas, different pipe lengths and at different altitudes (within the allowed design limits). The ACC is also capable of self-diagnostics so that **combustion is always under control**, with emissions consistently well below regulatory limits.

#### "HIGH PERFORMANCE" DHW PLATE HEAT EXCHANGER

The MYNUTE EVO X "high performance" DHW exchanger, developed in-house, offers **excellent comfort, along with rapid set point attainment and temperature stability during drawing**.

#### SILENT OPERATION

Thanks also to the new materials introduced, **MYNUTE EVO X** stands out for its silent operation, an improved feature if compared to the previous homonymous range and particularly appreciable in the case of installation of the boiler inside the home. In fact, the noise level ranges from 45 db(A), for the 30C model, up to 48 db(A) for the 20R model.

# EASE OF INSTALLATION AND MAINTENANCE

The ACC system simplifies installation. During first ignition, **the new boiler does not require calibration** and it is sufficient to select the type of fuel gas used by the boiler via the interface, if different from the default (natural gas). The **small size and light weight make the product easily transportable during installation**. Frontal accessibility to the components also makes the product easier to maintain for the technician in charge, speeding up his intervention time.

#### INTEGRATION IN HYBRID SYSTEMS

MYNUTE EVO X can be integrated into Beretta's multi-energy systems (gas/electricity and renewables), through the offer of Hi, Comfort platform accessories.



# NEW SUSTAINABLE AND RECYCLABLE PACKAGING

Beretta's ongoing commitment to creating heating solutions that care about people and the environment now extends to packaging. MYNUTE EVO X, like all new generation Beretta boilers, is packaged in FSC-certified, plastic-free and fully recyclable cardboard, a further contribution to minimizing the environmental impact of our products.

THE CARDBOARD PACKAGING OF MYNUTE EVO X IS MADE FROM A MIXTURE OF MATERIALS FROM FSC-CERTIFIED FORESTS, RECYCLED MATERIALS AND/OR FSC CONTROLLED WOOD.

FSC (Forest Stewardship Council) is currently 'the most accredited forest certification system in the world in terms of number of certificates issued, robustness of the certification criteria and companies involved in the processes.'







ENERGY SAVING







PRODUCT RECYCLABILITY The packaging of MYNUTE EVO X is 'plastic free', as the plastic of the elements commonly used for packaging has been completely removed and replaced with compostable materials.

The packaging of MYNUTE EVO X also becomes a vehicle of communication, aimed at informing and sensitizing the user on the important issue of respecting the environment. On both sides of the box some icons, symbolically flanked by a stylized leaf, illustrate the features of MYNUTE EVO X and its packaging helping to reduce the product's carbon footprint.

#### PRODUCT RECYCLABILITY

Special attention is also paid to end-of-life product recycling, through the declaration of the recyclability index of the product on the packaging, equal to 78% on MYNUTE EVO X, an indicator which expresses the degree of material recovery, the so-called Secondary Raw Materials (MPS), useful to be reused in the production of new goods, thus contributing to the reduction of carbon footprint.

The product recyclability index was derived from internal estimates based on an independent study conducted in 2022 on a condensing boiler, Model 20139525 Residence 25 Kis\* (DOMESTIC AEE belonging to Grouping R4 of the WEEE regulations according to II D.Lgs. 49/2014), by ECOPED, the Italian Consortium for the Management of Waste of Electrical and Electronic Equipment (WEEE), Batteries and Accumulators (Ri.P.A.) and Sports and Leisure Equipment.



### BERETTA IS LOOKING TOWARDS THE FUTURE

EXCLUSIVE EVO X is born now, thinking of tomorrow. The new condensing range is, in fact, designed to operate with blends of natural gas and hydrogen - up to a maximum of 20% - a contribution towards the decarbonisation process started by the European Union.



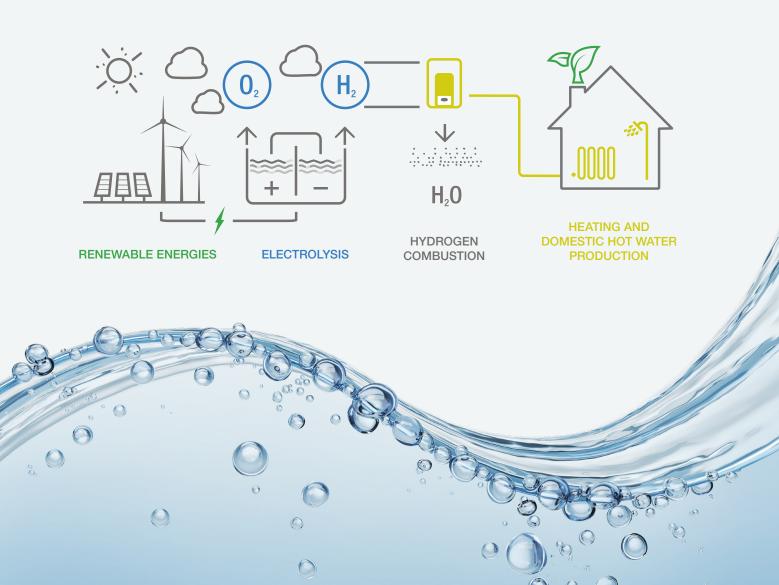
#### HYDROGEN USE CYCLE

Hydrogen is a safe and clean gas that, blended with natural gas up to a maximum ratio of 20 to 80 percent, makes it possible to generate heat and domestic hot water, with lower  $CO_2$  emissions than other fuels\*.

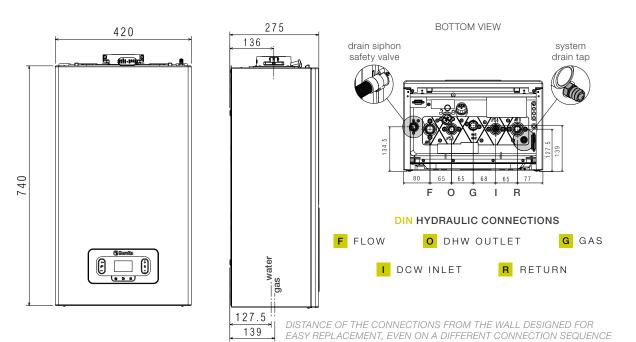
 $^{*}$  Data from E. A. Polman (2003) "Reduction of CO\_2 emissions by adding hydrogen to natural gas", IEA Greenhouse Gas R&D program, report number PH4/24.

| GAS                             | HIGH CALORIFIC POWER | RELATIVE CO <sub>2</sub><br>EMISSIONS |  |
|---------------------------------|----------------------|---------------------------------------|--|
| H <sub>2</sub> - content [vol%] | Relative Wobbe [%]   | [%]                                   |  |
| 0                               | 100                  | 100                                   |  |
| 20                              | 94,7                 | 93,7                                  |  |
| 100                             | 85,0                 | 13,3                                  |  |

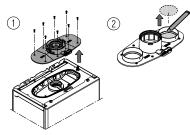
Variation of Wobbe index and  $CO_2$  reduction as a function of hydrogen content. The hydrogen is presumed to be made by large-scale steam reforming and that  $CO_2$  is captured with a recovery rate of 86,7% of  $CO_2$ .

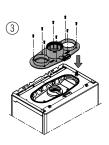


# **TECHNICAL DRAWINGS**



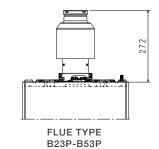
FLUE GAS FLANGE DISASSEMBLY

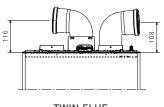




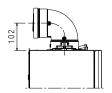
TOP VIEW

FLUE OPTIONS

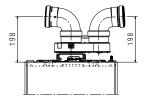




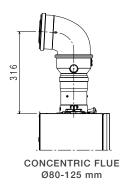
TWIN FLUE Ø80-80 mm

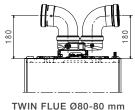


CONCENTRIC FLUE Ø60-100 mm



TWIN FLUE Ø80-80 mm WITH ADAPTER





TWIN FLUE Ø80-80 mm WITH COMPACT ADAPTER

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# **TECHNICAL DATA**

| ENERGY LABELLING SPECIFICATIO<br>(according to ErP regulations) | NS         | UOM                     | 25 C        | 30 C             | 35 C        | 20 R (*)    | 30 R (*)   |
|---|------------|-------------------------|-------------|------------------|-------------|-------------|------------|
| Seasonal space heating energy efficiency class                  |            | $D \rightarrow A+++(1)$ | A           | A                | A           | A           | A          |
| Water heating energy efficiency class                           |            | $F \rightarrow A+(2)$   | A           | A                | A           | _           | -          |
| Rated heat output   | pnominal   | kW                      | 20          | 24               | 29          | 20          | 29         |
| Seasonal space heating energy efficiency                        | ŋs         | %                       | 94          | 94               | 94          | 94          | 94         |
| USEFUL HEAT OUTPUT  |            |                         |             |                  |             |             |            |
| At rated heat output, high-temperature regime (**)              | P4         | kW                      | 19,5        | 24,4             | 29,3        | 19,5        | 29,3       |
| At 30% of rated heat output and                                 | P1         | kW                      | 6,5         | 8,2              | 9,8         | 6,5         | 9,8        |
| low-temperature regime (***)                                    |            | 1.000                   | 0,0         | 0,2              | 0,0         | 0,0         | 0,0        |
| At rated heat output and  |            |                         |             |                  |             |             |            |
| high-temperature regime (**)                                    | <b>ŋ</b> 4 | %                       | 87,9        | 87,9             | 87,9        | 87,9        | 87,9       |
| At 30% of rated heat output and                                 | ŋ1         | %                       | 98,0        | 98,0             | 97,9        | 98,0        | 97,9       |
|   | .).        | ,0                      | 00,0        | 00,0             | 01,0        | 00,0        | 01,0       |
| AUXILIARY ELECTRICITY CONSUMPTION                               | .1         | 14/                     |             | 01.1             | 44.0        |             | 44.0       |
| At full load  | elmax      | W                       | 30,0        | 31,1             | 44,3        | 30          | 44,3       |
| At part load  | elmin      | W                       | 12,2        | 13,3             | 13,6        | 12,2        | 13,6       |
| In Stand-by mode  | PSB        | W                       | 3,7         | 3,7              | 3,7         | 3,7         | 3,7        |
| OTHER PARAMETERS  |            |                         |             |                  |             |             |            |
| Stand-by heat losses  | Pstby      | W                       | 29,9        | 35,2             | 35,2        | 29,9        | 35,2       |
| Annual energy consumption                                       | QHE        | GJ                      | 60,0        | 76,0             | 91,0        | 60,0        | 91,0       |
| Sound power level, indoors                                      | LWA        | dB                      | 48,0        | 45,0             | 47,0        | 48,0        | 47,0       |
| NOx emissions   | NOx        | mg/kWh                  | 22,0        | 19,0             | 35,0        | 22,0        | 35,0       |
| FOR COMBINATION HEATERS   |            |                         |             |                  |             |             |            |
| Declared load profile   |            |                         | XL          | XL               | XL          | /           | /          |
| Water heating energy efficiency                                 | ŋwh        | %                       | 85          | 85               | 87          | /           | /          |
| Daily electricity consumption                                   | Qelec      | kWh                     | 0,173       | 0,138            | 0,102       | /           | /          |
| Daily fuel consumption  | Qfuel      | kWh                     | 23,014      | 23,010           | 22,524      | /           | /          |
| Annual electricity consumption                                  | AEC        | kWh                     | 38          |                  | 22          | /           | /          |
| Annual fuel consumption   | AFC        | GJ                      | 17          | 17               | 17          | /           | /          |
| OTHER SPECIFICATIONS  |            |                         |             |                  |             |             |            |
| CH Heat INPUT (max-min)   |            | kW                      | 20,0- 2,5   | 25,0-3,0         | 30,0-3,5    | 20,0-2,5    | 30,0-3,5   |
| DHW heat nominal INPUT (max-min)                                |            | kW                      | 25,0-2,5    | 30,0- 3,0        | 34,9-3,5    | 20,0-2,5    | 34,9-3,5   |
| Power supply voltage  |            | V-Hz                    | 230-50      | 230-50           | 230-50      | 230-50      | 230-50     |
| Degree of protection  |            | IP                      | IPX5D       | IPX5D            | IPX5D       | IPX5D       | IPX5D      |
| NOX class   |            |                         | 6           | 6                | 6           | 6           | 6          |
| СН  |            |                         |             |                  |             |             |            |
| Max pressure-temperature  |            | bar-°C                  | 3-90        | 3-90             | 3-90        | 3-90        | 3-90       |
| Pump: max available head (flow rate 1000 l/h)                   |            | mbar                    | 400         | 400              | 400         | 400         | 400        |
| ()<br>Mombrano ovnansion tank                                   |            |                         | 9           | 9                | 9           | 9           | 9          |
| Membrane expansion tank DHW                                     |            | I                       | 9           | 9                | 9           | 9           | 9          |
|   |            | bor                     | 8           | 8                |             | /           | /          |
| Max pressure<br>DHW production at ΔT=25°C / 30°C / 35°C         |            | bar                     |             | 0 17,2/14,3/12,3 |             |             | /          |
|   |            | l/min                   |             |                  |             |             | /          |
|   |            | l/min                   | 2           | 2                | 2           | /           | /          |
|   |            |                         | 00.07       | 00.07            | 00.07       | 00.07       | 00.07      |
| Inlet gas pressure (G20-G31)                                    |            | mbar                    | 20-37       | 20-37            | 20-37       | 20-37       | 20-37      |
| CH Flow - Return / Gas inlet                                    |            |                         | 3/4"        | 3/4"             | 3/4"        | 3/4"        | 3/4"       |
| DHW Inlet - Outlet / DHW tank Flow - Return                     |            | Ø                       | 1/2''       | 1/2''            | 1/2''       | 3/4''       | 3/4''      |
| DIMENSIONS, WEIGHT  |            |                         |             | 7.00.075.100     |             |             |            |
| Boiler dimensions (HxDxW)                                       |            | mm                      | 740x275x420 | 740x275x420      | 740x275x420 | 740x275x420 | 740x275x42 |
| Net weight  |            | kg                      | 29          | 30               | 30          | 28          | 29         |
| FLUE PIPES AND AIR INTAKE                                       |            |                         |             |                  |             |             |            |
| Max length for concentric flue (Ø60-100 mm)                     |            | m                       | 10          | 8                | 8           | 10          | 8          |
| Max length for twin flue (Ø80 + 80 mm)                          |            | m                       | 69+69 (A)   | 36+36 (B)        | 36+36 (B)   | 69+69 (A)   | 36+36 (B)  |

(1) The range of energy efficiency class of this products category is between D and A+++.
(2) The range of energy efficiency class of this products category is between F and A+.
(\*) 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 means for condensing boilers 30°C, for low-temperature boilers 37°C and for other heaters 50°C return temperature (at heater inlet).
A) up to 75+75 m with swelling adapter available as option
B) up to 39+39 m with swelling adapter available as option
(\*\*\*\*) data not confirmed at the time of publication

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