Boiler
pre-mixed condensing with GAS ADAPTIVE system

Domestic Hot Water Production and Heating

VESUVIUS 24
VESUVIUM 28
VESUVIUM 33

NOX
Level Lower Than ErP Class 6

Erp

DOUBLE OVERSIZED HEAT EXCHANGER | **HIGH THERMAL-ACOUSTIC INSULATION** | **USABLE WITH BOTH NATURAL GAS AND LPG** | **MODULATION 1:7**

The VESUVIO boiler represents a state-of-the-art solution for domestic and industrial heating, designed to offer energy efficiency and durability. These boilers feature an advanced combustion system that ensures maximum heat output with reduced fuel consumption. The materials used for construction such as stainless steel, ensure corrosion resistance and a long service life. In addition, the integrated electronic control system enables precise temperature management and constant performance monitoring. The VESUVIO boiler is designed to be compatible with natural gas and LPG, making it a versatile choice for different energy needs.

TAX INCENTIVES FOR CONDENSING BOILERS

Condensing boilers can benefit from various tax incentives aimed at promoting energy efficiency and reducing polluting emissions. Among the main measures, there is the tax deduction (Eco-bonus) that allows for the recovery of up to 65% of the expenses incurred for the replacement of heating systems with condensing boilers. However, these boilers must meet specific energy efficiency requirements, such as the presence of an advanced thermoregulation system. In addition, the installation of condensing boilers contributes to achieving the standards required by European legislation on reducing emissions, thus supporting users in making a sustainable and cost-effective choice.

The VESUVIO boiler is the perfect choice for those who want a heating and domestic hot water production system that combines efficiency, innovation and respect for the environment. Choose the quality and reliability of a state-of-the-art product to transform your home into a comfortable and cosy environment.

VERSATILITY VESUVIO MET/LPG BOILER

The versatility of the VESUVIO boiler to run on both **NATURAL GAS** and **LPG** is a significant advantage in terms of adaptability and convenience. Thanks to its intelligent design and advanced control system, this boiler can easily switch between the two fuel types without requiring structural modifications. This is particularly useful in situations where gas supply may vary or where users need to switch to alternative fuels for economic reasons or availability. In addition, the option to use LPG, often called Liquid Propane Gas, also makes the boiler suitable for homes in remote geographical areas or those not connected to the natural gas network. This flexibility ensures that the boiler maintains high levels of efficiency and energy savings under all conditions of use.

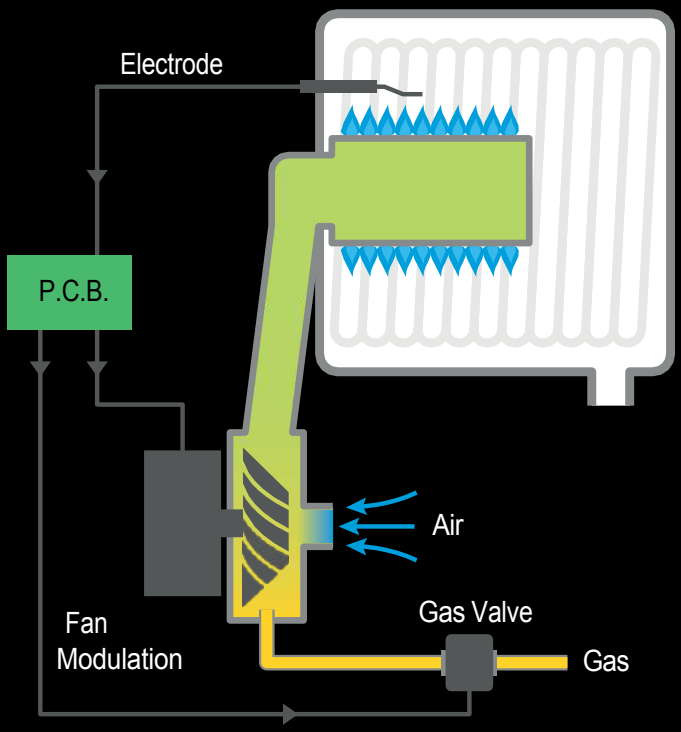
DOUBLE OVERSIZED HEAT EXCHANGER

The increased double heat exchanger of the VESUVIO boiler is designed to maximise the efficiency of heat transfer, supporting the continuous production of domestic hot water. Thanks to this innovative component, the boiler is able to generate up to 12 litres at a time.

18.2 litres of hot water per minute, ensuring a constant and abundant flow to meet the daily needs of users. This high capacity is especially advantageous for homes and commercial installations that require a fast and uninterrupted hot water supply, without waiting times or interruptions. The double heat exchanger not only improves the speed of hot water production, but also enables more efficient use of fuel, contributing energy savings and reducing operating costs in the long run.

PREMIXED WITH ADAPTIVE GAS SYSTEM

The premixing system with gas adaptability is a crucially advanced element of the **VESUVIO** boiler. This technology allows the boiler to automatically and continuously adjust the air-gas mix in relation to the quality of the feeding gas. This results optimal combustion efficiency, guaranteeing low NOx and CO2 emissions and a significant reduction in energy consumption. Automatic adaptation to changes in pressure and gas composition means that the boiler maintains stable and efficient operation, regardless of gas supply conditions. This advanced system not only improves performance, but also ensures
increased safety and durability of the boiler.



HIGH THERMAL-ACOUSTIC INSULATION

The VESUVIO boiler's high thermal-acoustic insulation is a key design feature to ensure a comfortable and quiet operating experience. This advanced insulation drastically reduces heat loss to the surrounding environment, improving boiler's overall energy efficiency. The high-quality insulation material used not only helps keep the heat inside the system, but also dampens the noise generated during operation. As a result, the boiler operates with a minimal noise level (52 dB), making it ideal for residential installations where acoustic comfort is a priority.

MODULATION 1:7

The 1:7 modulation of the VESUVIO boiler represents an advanced control system that allows the power output of the boiler to be varied between a minimum of approximately 14% up to a maximum of 100% of its total capacity. This means that the boiler can operate at lower intensities during periods of reduced demand, such as when continuous heating is not needed, greatly improving overall energy efficiency. The 1:7 modulation not only enables a more precise and optimised use of fuel, minimising waste, but also reduces mechanical wear due to frequent switching on and off cycles. In this way, the VESUVIO boiler ensures constant thermal comfort by adapting its effective output to the user's specific environmental needs, all contributing to a longer boiler life and lower operating costs.

ADVANCED ELECTRONIC BOARD MANAGEMENT

The electronic board of the VESUVIO boiler is designed to give absolute priority to the supply of domestic hot water over space heating. This function is particularly advantageous daily use, as it makes hot water immediately available for domestic needs such as showers and cooking, without compromising living comfort. The sophisticated control technology of the on-board electronics intelligently manages the distribution of heat, reacting immediately to hot water demands and ensuring a rapid and constant supply.

The ability automatically prioritise sani- tary water reduces waiting times and efficiency energy, facilitating more effective management of the entire system and ensuring greater comfort.

AXIS NOX

The VESUVIO boiler is equipped with advanced technologies that significantly reduce the production of these pollutants. Thanks to the adaptive pre-mixing system and sophisticated combustion management, the boiler achieves optimal thermal efficiency with extremely low NOx emissions. This not only contributes to improved air , but also ensures compliance with the strictest environmental regulations, making the boiler an environmentally friendly choice for heating.

PREHEATING

Preheating is an advanced technology adopted by the VESUVIO boiler to further improve the efficiency of domestic hot water production. This system allows the boiler to keep a small amount of water always hot in the internal circuit when not in use, thus eliminating the waiting time for hot water to become available the moment a tap is turned on. This approach allows for an immediate supply of hot water, increasing comfort and significantly reducing energy and water wastage, as water does not have to be expelled until the desired temperature is reached. The pre-heating system is particularly advantageous in environments with frequent water demands, reducing the impact of demand on the boiler and maintaining a fast and efficient response. This ability to anticipate needs of the user results in a better utilisation of energy resources and a significant reduction of operating costs in the long term, making the VESUVIO boiler a key element in the panorama of modern and ecologically responsible heating solutions.

COMPOSITE HYDRAULIC BLOCK

The hydraulic block made of composite material increases the service life of the boiler and reduces the risk of corrosion, maintaining optimal performance over time.

STAINLESS STEEL HEAT EXCHANGERS

Stainless steel heat exchangers are synonymous with long life and corrosion resistance, ensuring reliable operation for many years. **COMPACT DIMENSIONS**

Despite its extraordinary technical features, the VESUVIO boiler maintains compact dimensions that make it easy install in any domestic environment.

Easy to use
With intelligent display

With its illuminated 2" digital LCD screen and 6-button control panel, it offers easy operation with a modern and stylish appearance.

ERP BOILER DIFFERENCE?

• The circulation pumps of ErP condensing boilers combined with the frequency converter can adjust the pump speed in line with your heating system. It reduces electricity consumption by up to 50 %.

-ErP condensing boilers comply with EU directives and have lower energy consumption.

• ErP-compliant products are labelled according to their energy class. You can tell how much more economically efficient your boiler is by the label on your product.

TECHNICAL DATA		VESUVIUS 24				VESUVIUM 28				VESUVIUM 33			
GAS CIRCUIT		NG	NG	LPG	LPG	NG	NG	LPG	LPG	NG	NG	LPG	LPG
GAS TYPE		G20	G25	G30	G31	G20	G25	G30	G31	G20	G25	G30	G31
GAS SUPPLY PRESSURE		20	25	30	37	20	25	30	37	20	25	30	37
MAXIMUM GAS CONSUMPTION	m³/h	2.38	2.85	0.73	0.92	3.05	3.05	1.18	1.18	3.4	3.4	1.3	1.3
MINIMUM GAS CONSUMPTION	m³/h	0.37	0.43	0.11	0.11	0.4	0.4	0.14	0.14	0.43	0.43	0.17	0.17
ROOM HEATING SEASONAL ENERGY EFFICIENCY CLASS		A				A				A			
SEASONAL ENERGY EFFICIENCY OF SPACE HEATING	%	92				92				92			
USEFUL EFFICIENCY AT NOMINAL HEAT OUTPUT AND HIGH TEMPERATURE REGIME	%	87.6	87.6	87.6	87.6	87.6	87.6	88.5	88.5	87.6	87.6	87.6	87.6
USEFUL EFFICIENCY AT 30% OF THE NOMINAL HEAT OUTPUT AND LOW TEMPERATURE REGIME	%	97.5	97.5	97.5	97.5	97.3	97.3	97.8	97.8	96.7	96.7	97.2	97.2
RADIATOR CIRCUIT		G20	G25	G30	G31	G20	G25	G30	G31	G20	G25	G30	G31
MAXIMUM HEAT OUTPUT PN (50/30 °C)	kW	25	25	24.7	25	30	30	30	30	36	36	36	36
MINIMUM HEAT OUTPUT PN (50/30 °C)	kW	3.6	3.6	3.55	2.9	3.9	3.9	3.9	3.9	3.6	3.6	3.6	3.6
MAXIMUM HEAT OUTPUT (PN) (80/60 °C)	kW	23.7	23.7	23.6	23.7	28	28	28	28	33	33	33	33
MINIMUM HEAT OUTPUT (PN) (80/60 °C)	kW	3.0	3.0	3.2	2.5	4.9	4.9	4.9	4.9	5.7	5.7	5.9	5.9
TEMPERATURE SELECTION RANGE (MIN÷MAX) HIGH TEMPERATURE	°C	25÷ 80											
TEMPERATURE SELECTION RANGE (MIN÷MAX) LOW	°C	25÷ 47											
OPERATING PRESSURE (MAXIMUM/MINIMUM)	bar	3/0.5				3/0.5				3/0.5			
VOLUME OF THE EXPANSION TANK	L	7/8				7/8				7/8			
MAXIMUM PUMP HEAD (Q= 0 M3/H)	mH2O	6,2				7.6				7.6			
MAX. PUMP CAPACITY	m³/h	2,3				2,5				2,5			
PUMP ENERGY EFFICIENCY INDEX	EEI	≤ 0.20				≤ 0.20				≤ 0.20			
DOMESTIC HOT WATER CIRCUIT													
ENERGY EFFICIENCY CLASS		A				A				A			
DECLARED LOAD PROFILE		L		XL		XL				XL			
ENERGY EFFICIENCY	%	81		84		83				82			
MAXIMUM GAS CONSUMPTION	m³/h	2.38	2.85	0.73	0.92	3.05	3.05	1.18	1.18	3.4	3.4	1.3	1.3
MODULATION RATE		14/100				14/100				14/100			
MAXIMUM HEAT INPUT ACS	kW	25.8				35				38.8			
MINIMUM HEAT INPUT ACS	kW	3.5				3.75				4.35			
MAX. MINIMUM/(MAXIMUM) ACS FLOW RATE: Δt: 30°C/: 35°C)	L/min	1.5/(12/11)				1.5/(16.5/14)				1.5/(18.2/15.5)			

TECHNICAL DATA		VESUVIUS 24				VESUVIUM 28				VESUVIUM 33			
ACS PRESSURE (MINIMUM/MAXIMUM)	bar	0.5/10											
TEMPERATURE ADJUSTMENT RANGE	°C	35-60											
ELECTRICAL CIRCUIT/PROTECTION INDEX	IP	IPX5D											
ELECTRICITY	V	230 V +%10; -%15											
ELECTRICITY (MIN./MAX.)	Watts	55/95				104/60				115/65			
EXHAUST GAS CIRCUIT		G20	G25	G30	G31	G20	G25	G30	G31	G20	G25	G30	G31
(80/60 °C) EXHAUST GAS TEMPERATURE (MIN./MAX.)	°C	69/71	65/70	57/70	60/70	61/66		58/65		57/62		58/67	
(50/30 °C) EXHAUST GAS TEMPERATURE (MIN./MAX.)	°C	49/51	48/49	43/57	47/51	45/45		43/45		47/44		49/49	
MAXIMUM EXHAUST GAS TEMPERATURE [MAXIMUM ACS MODE].	°C	70				70				70			
WEIGHTED NOX VALUE (GCV) (NOX CLASS: 6)	mg/kWh	20	19	42	31	41		49		34		53	
DIMENSIONS (H X W X D)	mm	725x420x288											
SOUND LEVEL	dB(A)	52				54				50			
MAXIMUM FLUE LENGTH (Ø60/100 MM) [HORIZONTAL*/(VERTICAL*)	m	10/11				10/11				10/11			
NET WEIGHT/PACKED WEIGHT	kg	32.6/33.8				34.7/35.9				35.5/36.7			
TYPE		B23, B23P, B33, B33P, B53, B53P, C13, C33, C43, C53, C63, C83, C93, C103											

1. Low temperature means for condensing boilers 30 °C, for low-temperature boilers 37 °C and for other heaters a return temperature of 50 °C.
2. High-temperature operation means a return temperature of 60 °C at the heater inlet and a supply temperature of 80 °C at the heater outlet.

* At the maximum chimney distance, the length of the chimney must be reduced by 1 metre for each 90° bend and by 0.5 metres for each 45° bend.