

RESEARCH AND DEVELOPMENT CENTRE

Research and development, one target: the absolute efficiency

CT Pasqualicchio Research and Development Centre

The CT Pasqualicchio R&D Centre has advanced technological laboratories and uses the professionalism of the expert researchers and talented young university students. Through these resources and structures, it develops the initiatives envisioned within the ambit of the G.E.Pro. (Green Energy Project) Company Research Programme, dealing with the analysis and development of technologies with the goal of producing clean energy at low cost. The approach to the programme is mainly experimental. In a first step, the technologies, processes and systems within the laboratories are studied in-depth. The experimental area has test plants dedicated to the study and testing of flame aerodynamics, movement of solid biomasses, combustion and handling of fumes. In phase two there is a test at prototype level of the experimental machines, which then will reach industrial application once the various tests in the most important European Certification Institutes have been passed.

Increasing investments in Research & Development

Since 1996, CT Pasqualicchio has constantly increased the research and development of innovative technologies with an increase with respect to the previous year of about + 18%. The commitment in research and development has been broken down as follows, with approximately 60% going to innovation in the energy efficiency field, in order to reduce the environmental impact (reduction of the emissions and increase of the efficiency of the machines), 20% for the optimisation of combustion processes (with a focus on ecological double combustion) and 20% regarding thermal efficiency programs.

Supply

There is an experimental station for combustion tests for studies and research into potential solid biomasses suitable for combustion. The centre has mobile grid boiler for experiments, suitable for the simulation of all operating conditions, including the continuous detection of the gaseous effects and emissions into the atmosphere. Monitoring the fumes allows to analyse the behaviour of the boiler and to set the excellent process parameters in order to reduce emissions and increase efficiency. Analysis of the ashes and dusts are an integral part of the tests.

The instruments used for the tests:

- » Hydraulic circuit flow rate measuring device for the determination of the power transferred to the water
- » Combustion analysers to measure CO, CO₂, NO, NO_x, dusts
- » Isoperibolic calorimeter for measuring the upper heat value
- » Truspec for Carbon, Hydrogen and Nitrogen Determinator
- » TGA -701 to determine moisture, volatile substances and ashes
- » Instruments for measuring fumes and air flow rate
- » Multi-channel thermometers
- » Scales

WHY PASQUALICCHIO?

10 reasons to choose CT Pasqualicchio, ecological heat

1. ENERGY SAVING

Thanks to the use of innovative materials, we can propose suitable solutions, able to reduce emissions. Our products combine performance, high quality and energy saving.



2. RESEARCH

Our products are designed to last through time. It is for this reason that we are at the forefront of research and in the study of techniques. Able to meet the customer's requirements with respect for the environment. Years of experience have allowed us to offer the best efficiency.

3. QUALITATIVE STANDARDS

CT Pasqualicchio has always considered quality as one of its priorities. To make quality available, for us means searching for reliable, strong and long-lasting materials, so that the price of the product reflects its effective value.



4. CERTIFICATIONS

CT Pasqualicchio is ISO 90001 and ISO 14001 European Quality System Certified. All of our products are in compliance with the European Standards with CE mark, tested and approved by the TUV laboratory according to EN 303-05, EN 13229, EN 14785 Standards.

5. EXCLUSIVE DESIGN

Most of our products are exclusive own design. The efficiency, together with the design and our passion, form the three basic pillars that have kept our business as a reference in the national and international market for 40 years. The most prestigious interior designers are among our clients.

EXCLUSIVE design



6. MADE IN ITALY

Pasqualicchio is an all Italian company, founded from family passion and a magical union between ourselves, which produce, and the people who choose us. Tradition, commitment and ambition have been the passwords of our professional and human experience. Our strong point is a Made in Italy aimed at the requirements of our customers with respect to the environment.

7. ASSISTANCE

Our philosophy is to give maximum reliability to the customer. We propose our after-sales service with a network of highly qualified technicians, trained directly within our company. They intervene immediately and efficiently to solve any type of problem.



8. WIDE RANGE OF PRODUCTS

We currently have 7 product lines and over 100 models in the products portfolio. Choose from the wide range of CT Pasqualicchio products for your requirements, for your comfort, for yourself.

9. TECHNOLOGY

The CT Pasqualicchio products have the highest technology in the sector. It is the result of the in-depth research developed and perfected by the prestigious CT Pasqualicchio Research and Development Centre.



10. 5 YEAR WARRANTY

Our products are designed to last through time. As well as the legal warranty of 2 years, CT Pasqualicchio offers a warranty covering the boiler body for 5 years from the date of purchase.

OUR HISTORY

A tale started in the 70's

The Pasqualicchio family's passion for the domestic "fireplace" is the milestone of an entrepreneurial experience that has its roots in the artisan production of domestic wood-burning stoves. All of this was kicked-off over 40 years ago by Vito Antonio Pasqualicchio. Innovative ideas took shape in his small laboratory, which reached industrial levels during the 90's, when Francesco Pasqualicchio and, successively his brother, Ruggiero, took over the company.

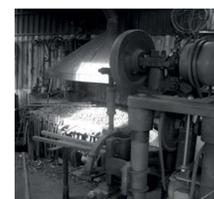
1971 - 1980

Vito Antonio Pasqualicchio started to create the first wood-burning stoves from his artisan laboratory. His products were a great success immediately. This encouraged Vito Antonio to introduce innovations and expand his business.



1981 - 1989

Thanks to an ever increasing number of satisfied customers and the desire to be brought into question, production started to expand to new products such as fireplace heating systems and boilers.



1990 - 1999

A high demand required a radical transformation of the activity: during the 90's the family business became a Company. In 1996 the CT Pasqualicchio brand name was created; Francesco and Ruggiero Pasqualicchio, the sons of Vito Antonio, took over the helm of the company.



2000 - 2007

The decades of experience in the thermo-technical field and the engineering of business processes give a strong input to the CT Pasqualicchio brand. The company became a leader in the production of boilers, thermo-stoves, fireplace heating systems and air generators.



2008 - 2012

The second establishment measuring over 14000 m² was built in 2008, provided with a centre specialising in Research and development and a state-of-the-art design department.



Pasqualicchio is ISO 9001 European Quality System Certified



Our Vision
"To take energy efficiency into every home"

Our Mission
"To identify solutions that respect the environment, creating products with reduced consumption, high efficiency and low emissions"

Paolisi, is situated in the heart of the South Italy, in the Province of Benevento. A small municipality in the South of Italy that is home to CT Pasqualicchio since the 70's. Offering biomass heating solutions for over 40 years. Currently, our offer includes 7 product lines: compact boilers, industrial boilers, multi-fuel boilers, air generators, air stoves, fireplace heating system and thermo-stoves. The company can count on a structure of over 18000 square metres, made up from a specialised research and development centre, three production plants and one state-of-the-art design department. Throughout the years, the business genius of the brothers Francesco and Ruggiero Pasqualicchio has established itself firmly on national and international markets, thanks to the dynamic company policy, typical of the market-pull. It has been the requests of satisfied customers that have given the correct imprinting to focus on higher product quality. Playing the thermo-technical know-how card as an integral part of the company's DNA was indispensable. For CT Pasqualicchio, innovation, quality and know-how go hand-in-hand; all aimed at offering products increasingly closer to the customer's requirements. It is for this reason that the company is constantly searching for synergies and collaborations with the main suppliers of state-of-the-art components and machinery.



SUSTAINABLE ENERGY

To identify solutions that respect the environment

Biomass, source of sustainable energy

The use of alternative fuel costs much less with respect to traditional fossil fuels because with parity of heat produced, it is much less expensive with respect to petroleum or methane gas. Heating costs have a considerable weight at the end of the financial year. There are small changes suggested by the installers to lower the level, however remarkable results are not attained. If all of these solutions should integrate a CT Pasqualicchio product, which works exclusively with solid fuels, there would be a real saving. In fact, in terms of percentages, from 34% to 70% can be saved on home heating costs.



Graphical notes: annual yearly consumption for a house measuring 80 m² (average h 2.70 mt.) indicative value

What is the biomass pellet of vegetable origin?

For various reasons, the pellet is surely one of the most used biomasses. They are obtained through simple mechanical processes, subjecting the finely worked sawdust to very high pressures. Pellet is manufactured starting from virgin sawdust remaining from the processing of the wood, suitably dried and pressed at high pressure in a way to obtain small cylinders of various sizes. Thanks to the binding capacity of lignin, a natural substance contained in wood, no type of additive is necessary and thus a natural, environmentally friendly and high efficiency fuel is obtained. Ideal for powering heating appliances, pellets are clean, non-pollutant and CO₂ neutral. Burn completely with minimum ash residue, which can be used as a precious fertilizer for the garden. Given the pressing, in the production phase the energy density of the pellet is almost double that of wood. The pellets power the stoves for the heating of individual rooms and boilers for central heating. It is also used in district heating instead of wooden chips.

THE CERTIFICATIONS

Pasqualicchio quality system

CT Pasqualicchio follows the most stringent and strict procedures envisioned by the international Standards in order to obtain the highest company management quality and environmental standards as well as products with a high thermal efficiency and low emissions of carbon monoxide into the atmosphere.



Our certificates

ISO 9001

International Standard that defines the requirements of a quality management system for an organisation.

ISO 14001

International environmental management Standard that certifies that the company has a management system suitable to keep the environmental impact of its own company under control and they systematically seek improvement in a coherent, effective and above all sustainable manner.

Certification

CE

The CE mark indicates that the product is in compliance with all European Community provisions that envision its use: from design to manufacturing, introduction onto the market, commissioning of the product up to disposal. The CE mark governs the entire life cycle of the product from the time it is introduced onto the market.



EN 303-5

European Standard applied to heating boilers - including the connected safety devices - powered by solid fuels. The Standard defines requirements and test methods for safety, quality of combustion, operational features, marking and maintenance.



EN 14785

European Standard that specifies the requirements relative to design, manufacture, construction, safety and performance (efficiency and emissions), instructions and markings, as well as the relative test methods and fuels for the type test, for the pellet-burning heating appliances, also fed mechanically.



EN 13229

European Standard that specifies the requirements relative to design, manufacture, construction, safety and performance (emissions and yield), instructions and markings as well as the relative test methods for the type test, for inserts and fireplace heating systems also fed with solid fuel.



BAFA - Germany

Certification issued by the German Federal Office for economy and the control of export under the jurisdiction of the Federal Ministry of Economics and Technology (BMW).



15a BV-G - Austria

Certification for the respect of environmental safeguard measures



OFFICIAL SELLER



www.ctpasqualicchio.it



Compact Boilers

v.1

Pasqualicchio

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Made in Italy



Cantinola SV2

Certified product



Description

The new Cantinola SV2 boiler has been manufactured taking into consideration those customers that have limited space in the home and decide to make use of places such as the garage, cellar or utility room as a boiler area.

Features and main functions

- » DCS (Digital Combustion System): Combustion digital on/off setting
- » SPS (Supply Pellet System): feeding system with rotary valve
- » DFS Eco-tech (Double Fire System): ecological double combustion
- » SMSS (Smoke Safety System): special fumes safety system
- » GSM Control: on/off via Smartphone, tablet and mobile phone*
- » EAS (Easy Assemble System): easy connection to the plant
- » 5 year warranty: on the boiler body
- » Automatic timer on/off in the following modes: day, week and weekend
- » Three time bands available for each operating mode
- » High energy efficiency up to 93% and Large tank capacity up to 119 kg
- » Large heat exchange surface up to approx 3 m²
- » Combustion chamber ash-drawer
- » Heat exchanger ash-drawer
- » Fumes extractor with Silent System
- » Combustion chamber with exclusive Eco-Fireproof material

Notes: (*) supplied with operations sim card

Powers and heatable spaces

Available with the following rated thermal inputs/ m²/ m³heatable*:

CANTINOLA SV2 15 » 15 kW » up to 125 m² » up to 375 m³

CANTINOLA SV2 18 » 18 kW » up to 150 m² » up to 450 m³

CANTINOLA SV2 22 » 22 kW » up to 190 m² » up to 570 m³

CANTINOLA SV2 27 » 27 kW » up to 225 m² » up to 675 m³

CANTINOLA SV2 31 » 31 kW » up to 270 m² » up to 810 m³

Notes: (*) on the basis of the model and for homes built in compliance with Law 10/91 and with heating requirement of 35 W/m² and rooms with height of 3m.

Standard accessories

- Automatic ignition
- Electronic control unit LCD
- EAS (Easy Assemble System)
- Expansion tank
- Cast iron burn pot
- Pump
- Fumes withholding turbulators*
- Cleaning System

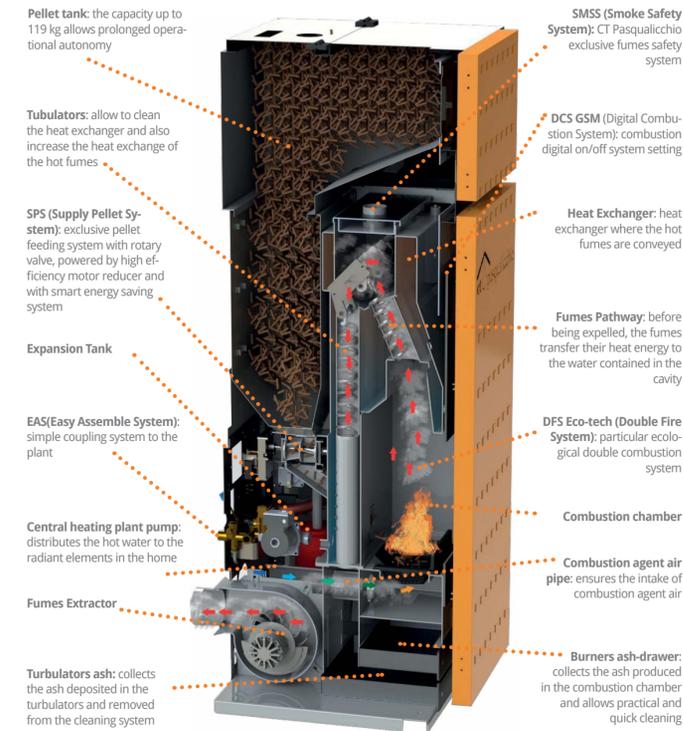
Optional accessories

- Domestic hot water*
- Steel plate for olive pits
- Remote Display
- GSM Control

Notes: (*) standard and optional accessories not present on 15 kW models



Cantinola SV2 » Operating layout



The Cantinola biomass boiler generates heat through combustion. The solid fuel, stored in the relevant tank, is withdrawn with the aid of a rotary valve conveying system and introduced into the cast iron burner, positioned inside the combustion chamber, by falling. The combustion processes start here thanks to the use of an ignition electric resistor. The development of both the flame and combustion fumes produces the heat supplied to the water present inside the cavity of the stove. On passing through the heat exchanger, the hot fumes are expelled by the flue thanks to an extractor. This creates the necessary negative pressure inside the combustion chamber as long as there is the correct intake of air; indispensable for combustion. Thanks to the pump, all of the energy transmitted to the water during the combustion phase is then transferred to the rooms through the heating elements. Thermo-stove operation is managed entirely by an electronic heat regulator.

Cantinola SV2 » Further details regarding components



Automatic management

The Cantinola SV2 biomass boiler is supplied with a latest generation electronic digital control unit. Programming can be managed with weekly ignition and switch-off times. Moreover, it allows the management of different operating levels: ignition, maximum power and modulation. The latter is activated when the temperature set is reached.



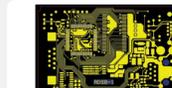
Plate heat exchanger

The Ct Pasqualicchio 16 plate heat exchanger allows the instantaneous production of domestic hot water. The system is managed directly from the control unit, programmed to give priority to the domestic hot water plant with respect to the central heating plant.



Easy Assemble System - EAS

The entire hydraulic system, including pump and closed expansion tank, is assembled as per standard inside the panelling. Just connect the plant flow and return pipes.



Modulation

Once the ideal temperature has been set in the environment, the boiler automatically modulates the flame via extraction ventilation and optimises the consumption of the fuel, thus reducing costs and waste. On reaching the temperature requested, there are just smouldering embers present in the boiler ready to re-light at every temperature increase request coming from a room thermostat.



Feeding system with rotary valve - SPS

The Ct Pasqualicchio rotary valve is our invention. It has been designed to end the annoying noise caused by the mechanical friction of screw feeder movement. Laboratory tests also revealed another peculiarity: the possibility of dosing the fuel regularly allowing flame continuity and optimisation of efficiency.



Software e GSM Control

The innovative software allows programming with ignition and switch-off times, allowing to use the boiler even when you are not at home. If the electronic control unit is connected to the GSM Control module (optional), the boiler can be ignited via tablet or mobile phone.



Burn pot in cast iron as per standard and in steel as an optional

The Ct Pasqualicchio cast iron burn pot for pellets has a shape studied to distribute the heat uniformly. The flame touches the exchange walls and expands homogeneously in order to guarantee high efficiency. It is made entirely in cast iron to ensure long duration through time. The steel plate for combustion of the olive pit can be installed as an optional. It is realised with geometry optimised to allow regular heat distribution.

Notes: product operation is guaranteed only with washed, ventilated and dried olive pit.



Steel plate for olive pits



Compact 09

Certified product



Description

Compact 09 is the multi-functional boiler. It can heat rooms in the home and produce domestic hot water for the bathroom and kitchen.

Features and main functions

- » DCS (Digital Combustion System): combustion digital on/off system
- » SPS (Supply Pellet System): exclusive rotary valve feeding
- » ACS (Auto Cleaning System): intelligent cleaning system
- » DFS Eco-tech (Double Fire System): ecological double combustion
- » GSM Control: switch-on and switch-off via Smartphone and tablet*
- » EAS (Easy Assemble System): easy connection to the plant
- » Fuel level sensor
- » Large tank capacity up to 65 kg
- » Ash extraction drawer
- » 5 year warranty on boiler body
- » Expansion tank
- » Pump
- » Inverter
- » Pasqualicchio Quad-Fuel technology

Notes: (*) supplied with operations sim card

Powers and heatable spaces

Available with the following rated thermal inputs/ m²/ m³heatable*:

COMPACT 09 » 24.0 kW » up to 220 m² » up to 660 m³

COMPACT 09 » 32.0 kW » up to 280 m² » up to 840 m³

Notes: (*) on the basis of the model and for homes built in compliance with Law 10/91 and with heating requirement of 35 W/m² and rooms with height of 3m.

Standard accessories

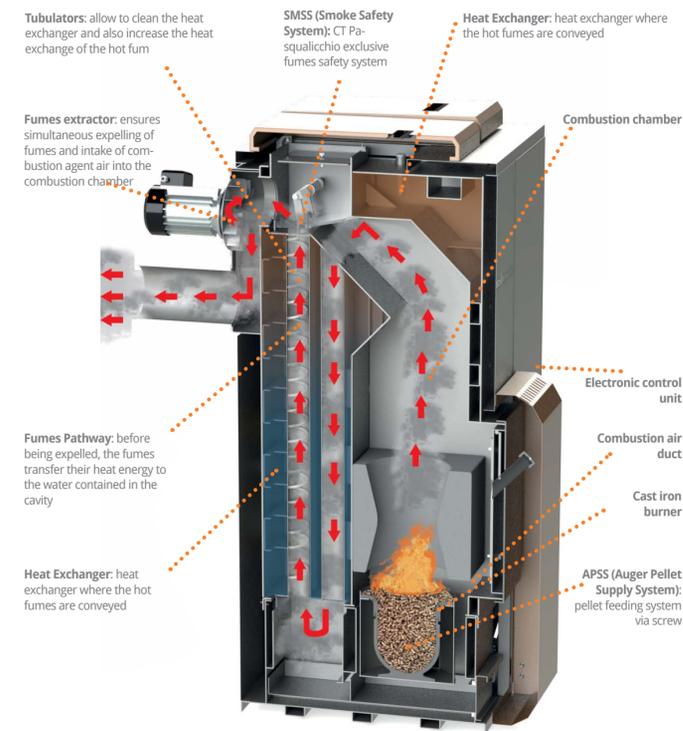
- Automatic switch-on
- Cast iron burner
- Pump
- Fumes withholding turbulators
- ACS (Auto Cleaning System)
- Electronic control unit
- Pellet level sensor
- Expansion tank

Optional accessories

- Domestic hot water
- External loading device
- GSM Control



Compact 09 » Operating layout



The Compact 09 boiler generates heat through combustion. The solid fuel, stored in the appropriate tank, is withdrawn with the aid of a rotary valve conveying system. It falls into the relevant duct from where it is conveyed by a screw into the cast iron burner, positioned inside the combustion chamber. Thanks to the use of a resistor, on passing through the heat exchanger, the hot fumes are expelled by the flue thanks to an extractor. This creates the necessary negative pressure inside the combustion chamber, as long as there is the correct intake of air. Thanks to the pump, all of the energy transmitted to the water during the combustion phase is then transferred to the rooms through the heating elements. The ignition electric starts the combustion processes. The development of both the flame and combustion fumes produces the heat supplied to the water present inside the cavity of the boiler. Boiler operation is managed entirely by an electronic heat regulator.

Compact 09 » Further details regarding components



Automatic management

The new digital control unit, supplied as per standard, allows the boiler to be autonomous. The control unit is managed by innovative software, studied ad hoc to satisfy any requirements. The software allows management of the different operating stages of the boiler: ignition, maximum power, modulation and maintenance. The electronic control unit can manage plants already existing in the house (with cylinder and puffer) via external thermostats. Finally, it constantly controls all of the boiler operating parameters, detecting any possible anomalies.



Software

The boiler has innovative software studied to optimise the combustion. This operates on the machine components, especially on the extractor and fuel dosage - obtained through the inverter - thus allowing to reduce waste and attain large savings.



GSM Control

If the electronic control unit is connected to the GSM Control module (optional), it allows ignition via tablet or mobile phone. Moreover, start-up can be programmed if it is connected to a room thermostat.



Modulation

Once the ideal temperature has been set in the environment, the boiler automatically modulates the flame via extraction ventilation and optimises the consumption of the fuel, thus reducing costs and waste. On reaching the temperature requested, there are just smouldering embers present in the boiler, ready to re-light at every temperature increase request coming from a room thermostat.



Plate heat exchanger

The 16 plate heat exchanger allows the instant production of domestic hot water, which can be used in the bathroom and the kitchen.



Cast iron burner

It is the "heart" of the entire structure. Combustion takes place in the burner. It is realised completely in cast iron, while the upper part is in refractory material to keep the flame hot and, therefore, increase efficiency. The fuel is stored in the burner via the rotary valve and screw system. This constitutes the base of every boiler and is formed from an external thick steel case that encloses a water cavity, within which the combustion agent air and the secondary air are conveyed.



Feeding system with rotary valve - SPS

The Ct Pasqualicchio rotary valve is our invention. It has been designed to end the annoying noise caused by the mechanical friction of screw feeder movement. Laboratory tests also revealed another peculiarity: the possibility of dosing the fuel regularly allowing flame continuity and optimisation of efficiency.