TZANOΣ
SINCE 1982

3 years warranty

Energy efficiency with 690kW thermal output

Power adjustment 1:8

Savio
Futuradue HP

High Power Wall-Mounted Condensing Boiler in Cascade

Technical Characteristics Brochure

Made in Italy

www.tzanos.gr

Made in Italy

Futuradue HP

Savio launches **Futuradue HP**, the new high efficiency wall mounted condensing boiler with the **possibility of multi-unit connection** (Cascade System), ★★★★ under European Directive 92/42 / EEC on central heating.

Futuradue HP is a high-performance boiler that provides significant **energy savings**, combined with **low emissions, NOx5 class.**

Futuradue HP can meet maximum flexibility and reliability in facilities that require **thermal power up to 690 kW**, combining up to 6 wall units.

The individual **Futuradue HP** unit has a **thermal power of 34 kW to 115 kW** and is suitable for domestic heating installations, shopping malls, factories, and public buildings.

Basic Features

- Wide power range: 34, 55, 70, 95, 115 kW
- New high efficiency stainless steel, primary condensing exchanger, resistant to pressure up to 6 bar
- High power adjustment 1: 8
- Stainless steel total premix burner, NOx5 class
- High efficiency inverter pump featuring variable speed
- Control panel with graphic LCD display backlight
- Electronic board featuring a number of predefined functions
- 5 litre expansion vessel
- 5 bar safety valve
- High efficiency, ★★★★ according to the 92/42 / EEC European Directive
- Extensibility

Benefits

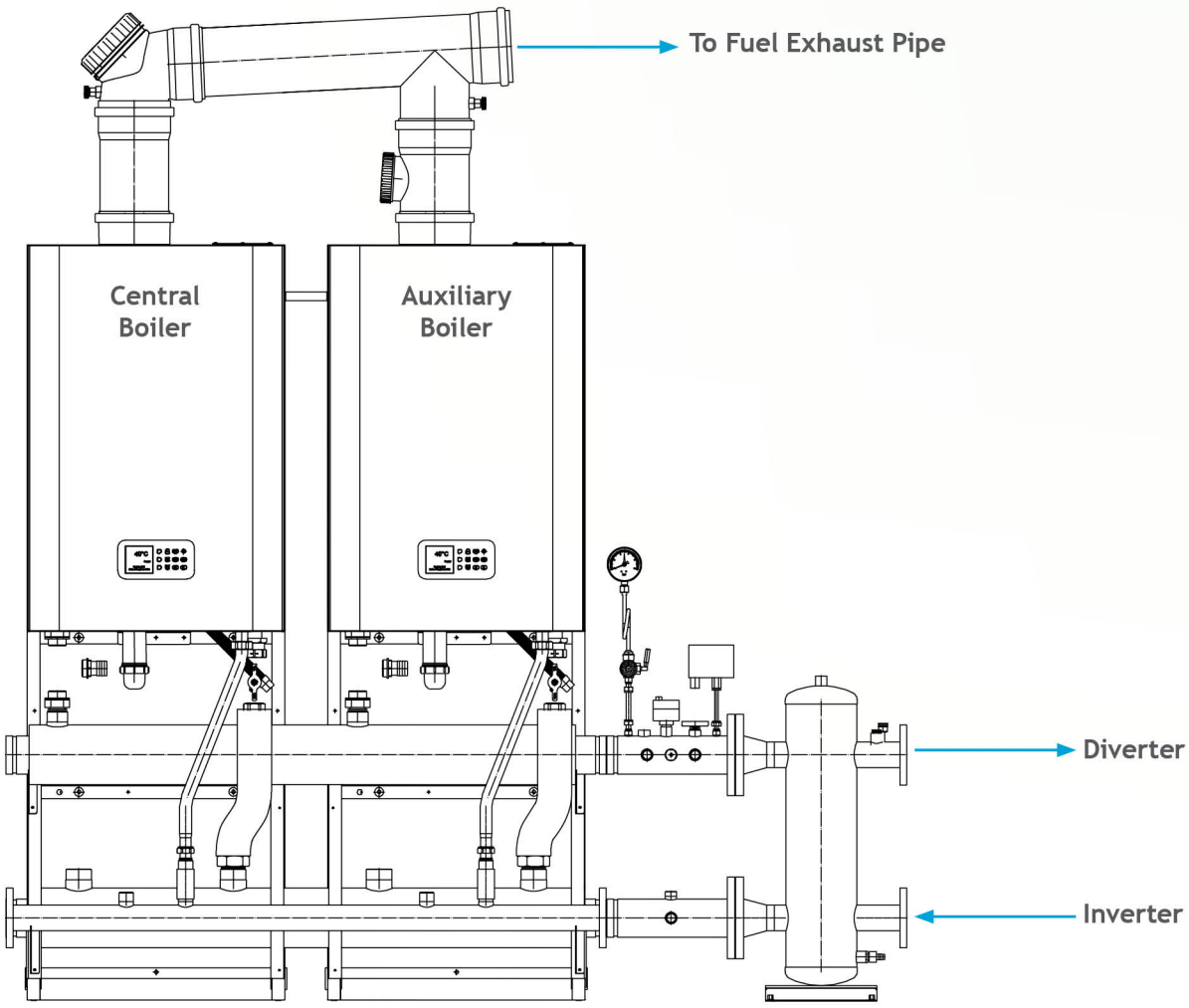
Using more condensing units in a cascade system is an option that offers significant benefits:

- Power can be adjusted to a wider range while maintaining very high efficiency. In case of installation of 6 boilers, continuous configuration of the available power can be achieved, from 2% to 100% with an almost flat output curve, drastically reducing intermittent losses and significantly increasing the average seasonal output, something that lately great attention is being attributed to.

- The power of the installation can be increased in successive stages until maximum output is reached (up to 690 kW). Thus, it is much easier to perform extension works on existing structures.

- In the event of a fault, the “worn” unit can be excluded, without affecting the whole system. This means that, even in the event of failure of one unit, the available power reserve remains high, and most importantly the system does not shut down no matter how much repair time is required. Thus, the system keeps working to an acceptable level.

- In case of renovation or on-site installation of more small and assembled units, the process of importing and moving them to a pre-existing central installation gets easier, avoiding or at least drastically reducing wall demolition. Ease of movement is larger even to inaccessible spaces, such as on the high floors of an apartment building. In case of exterior installations, the change of use of the boiler room is allowed.



Types of Installation

Futuradue HP systems are compatible with two types of installations:

1. Boiler Room

For installation in a boiler room, the units are mounted on the wall like common wall-mounted boilers, with installing appropriate support systems for hydraulic section.

Alternatively, Savio offers a specially designed frame, made of easily assembled welded tubular elements, allowing the design of hydraulic circuit before installing the wall-mounted units.

2. Outdoor Installation

In case of outdoor installation, the boilers are mounted on a roof locker for outdoor areas to be protected.

Each unit is equipped with a perforated base to be easily moved through straps and pipes. Boilers are already installed in a shell for additional protection of the hydraulic system and hearth.

Lockers are available with boilers of 34, 55, 70, 95, 115 kW. All power provisions are achieved through combinations of these two options.

Both types allow maximum hydraulic circuit flexibility, as the connections can be held either to the right or to the left of the cascade system.

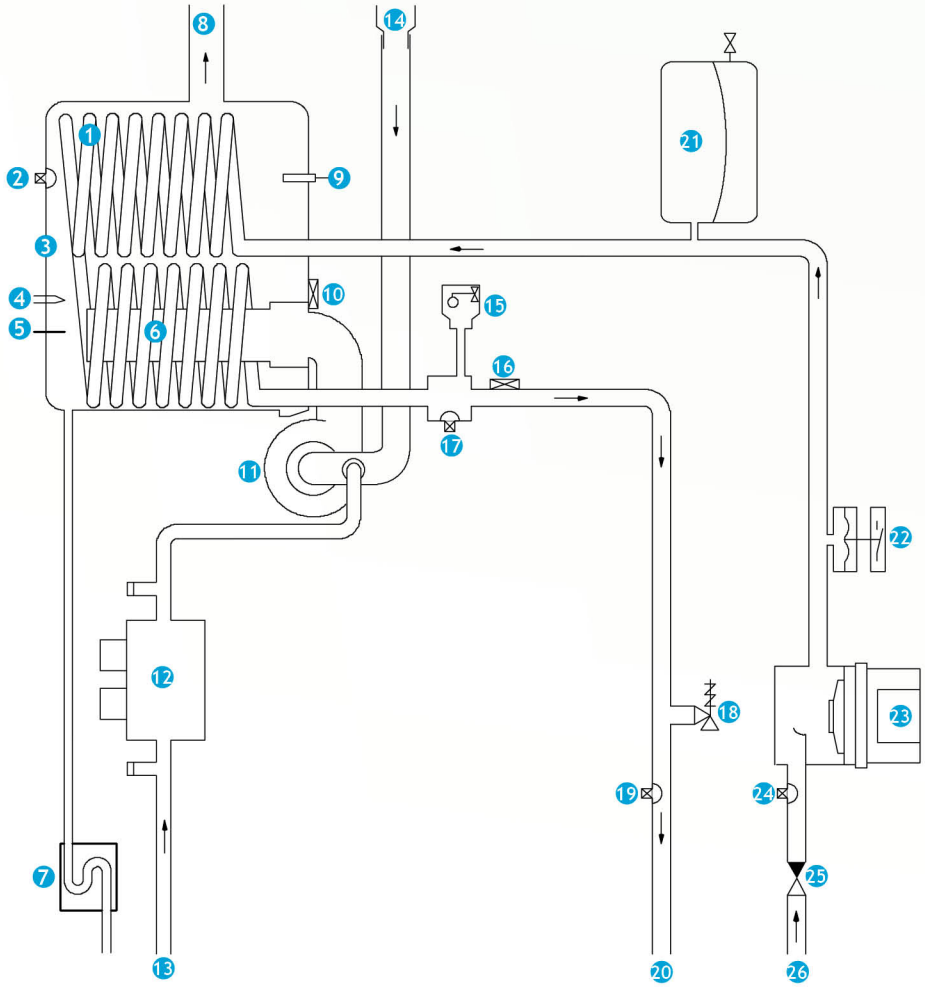
Compensation

User-friendly control panel with LCD screen featuring icons and clues, as well as failure system history display.

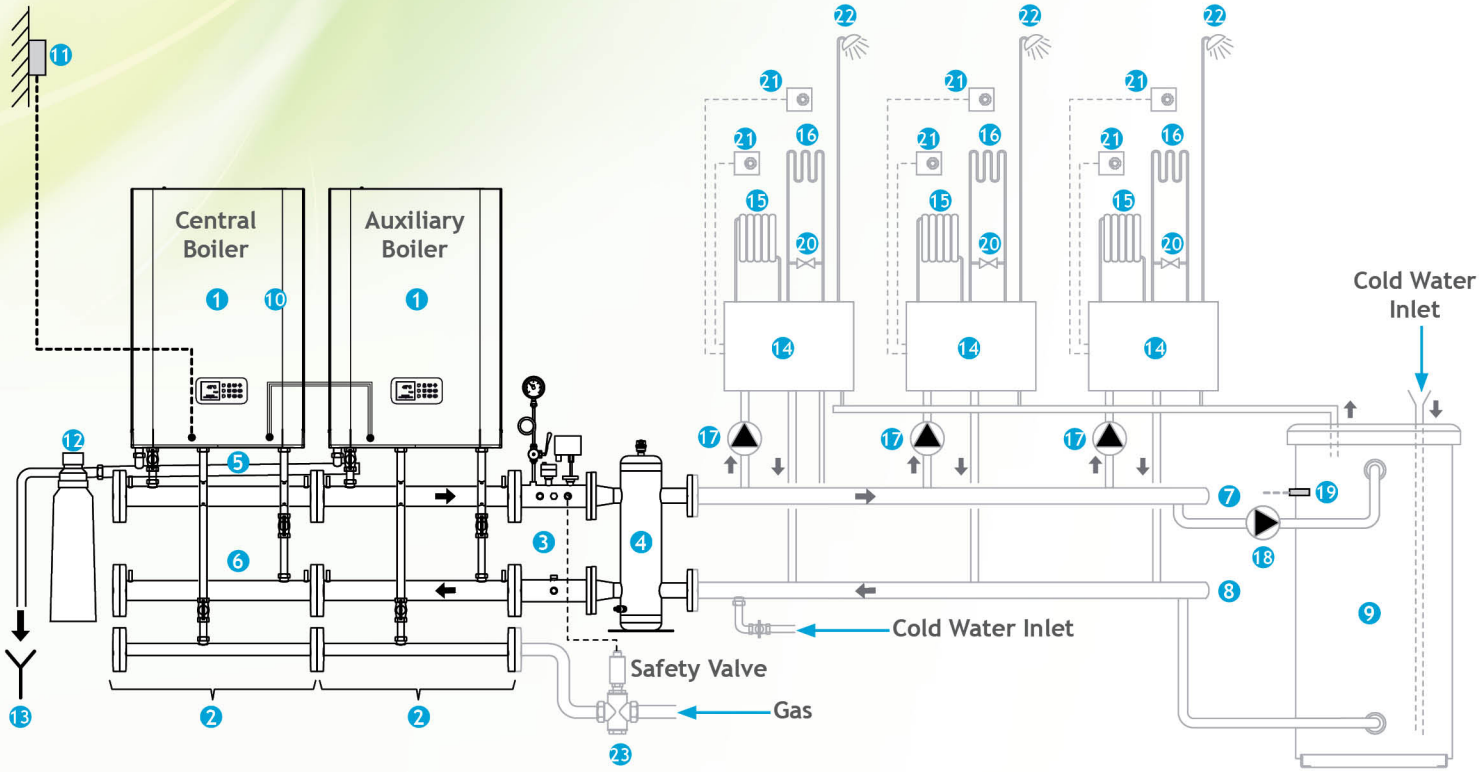
By installing an outdoor sensor, it is possible to use compensation,adjusting the inverter temperature to external climatic conditions.

Technical Diagram

1. Primary Condensing Exchanger
2. Thermal Safety Valve
3. Combustion Chamber
4. Ignition Electrode
5. Flame Detection Electrode
6. Burner
7. Condensation Drain Siphon
8. Flue Exhaust Pipe Connector
9. NTC Thermistor Temperature and Exhaust System Sensor
10. Combustion Chamber Overheating Thermostat
11. Fan
12. Gas valve
13. Gas inlet
14. Air Suction Duct with Muffler
15. Automatic Ventilation Valve
16. System Safety Thermostat
17. NTC * System Sensor
18. 5 bar Safety Valve
19. NTC * Heat Intake Sensor
20. Heating Inverter Pipe
21. Expansion Vessel
22. Piezostat
23. Inverter Pump
24. NTC * Heating Inverter Sensor
25. Basic Equipment Reversing Valve
26. Heating Inverter Pipe



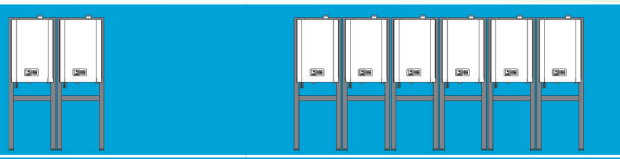
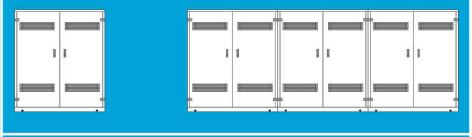
Installation Diagram



1. Boiler
2. Gas Inverter - Diverter Pipes
3. Gas Safety Element
4. Hydraulic Separator or Plate Heat Exchanger
5. Installation Diverting Collector
6. Installation Inverting Collector
7. Terminal Diverting Collector
8. Terminal Inverting Collector
9. Main Boiler
10. Communication point between Boiler & External Control Panel
11. External Sensor
12. Condenser Inactivator
13. Condenser Exhaust Pipe
14. Thermal Energy & Hot Water Meter (DHW)
15. High Temperature Zone
16. Low Temperature Zone
17. High Temperature Circulators
18. Boiler Circulator
19. Boiler Sensor
20. Low Temperature Mixing Valve
21. Room Thermostat
22. Hot Water Outlet (DHW)
23. Gas Stop Valve

Boiler Cascaded System

Each system can combine multiple units ranging from 2 to 6, to which a technical unit is added of a size equivalent to the individual boiler, equipped with a control panel and a hydraulic switch or plate heat exchanger.

Type of Installation			
	Boiler Room Installation		Outdoor Installation
Dimensions	**Cascade System**	***"Back-to-back"***	
Width Calculation[1]	$L_{arrangement}$ = 700 x (No. Of Units + 1)	**Even No. Of Units:** $L_{arrangement}$ = 700 x (No. Of Units/ 2 + 1) **Odd No. Of Units:** $L_{arrangement}$ 3 Units = 2100 mm $L_{arrangement}$ 5 Units = 2800 mm	$L_{arrangement}$ = 700 x (No. Of Units + 1)
Height	H = 1760 mm[2]	H = 1760 mm[3]	H = 1750 mm[2]
Depth	P = 586 mm[2]	P = 1020 mm[4]	P = 600 mm[2]

[1]To calculate the width of each cascade, you must multiply the width of each unit by the number of units present in the cascade increased by 1.
[2]Both the height and depth of the cascade remain the same as the individual unit.
[3]The height remains constant and equal.
[4]The depth remains constant and equal.

Rated Thermal Power (kW)	No. of Units		Model
	No. of Units	No. of Elements x kW	
68	2	2x34	**Futuradue HP 70**
86	2	1x34 + 1x55	**Futuradue HP 90**
104	2	2x55	**Futuradue HP 110**
128	2	1x34 + 1x95	**Futuradue HP 130**
146	2	1x55 + 1x95	**Futuradue HP 150**
165	2	1x55 + 1x115	**Futuradue HP 170**
188	2	2x95	**Futuradue HP 190**
207	2	1x95 + 1x115	**Futuradue HP 210**
226	2	2x115	**Futuradue HP 230**
240	3	1x55 + 2x95	**Futuradue HP 245**
282	3	3x95	**Futuradue HP 285**
301	3	2x95 +1x115	**Futuradue HP 305**
339	3	3x115	**Futuradue HP 345**
376	4	4x95	**Futuradue HP 380**
414	4	2x95 + 2x115	**Futuradue HP 420**
452	4	4x115	**Futuradue HP 460**
470	5	5x95	**Futuradue HP 475**
527	5	2x95 + 3x115	**Futuradue HP 535**
565	5	5x115	**Futuradue HP 575**
621	6	3x95 + 3x115	**Futuradue HP 630**
678	6	6x115	**Futuradue HP 690**

TECHNICAL CHARACTERISTICS						
FUTURADUE HP		**34 S**	**55 S**	**70 S**	**95 S**	**115 S**
Rated Thermal Power - Heating 80°/60°C	kW	32,8	49,9	66,5	90,4	109,3
Minimum Thermal Power - Heating 80°/60°C	kW	5,9	5,9	11,2	11,2	13,4
Rated Net Power Output 50°/30°	kW	36,5	55,2	72,8	99,0	119,8
Minimum Net Power Output - Heating 50°/30°C	kW	6,9	6,9	12,6	12,5	15,1
Rated Output 80°/60°C	%	96,6	96,0	96,4	96,2	96,7
Minimum Output 80°/60°C	%	91,4	91,4	94,8	94,8	95,0
Rated Output 50°/30°C	%	107,3	106,1	105,5	105,3	106,0
Minimum Output 50°/30°C	%	105,9		106,3	106,3	107,3
Energy Class				★★★★		
Adjustable Heating Temperature	°C	25 - 85				
Max. / Min. Heating Pressure	bar	6/ 1,3				
Heating Expansion Vessel Total Capacity	lt	5				
Degree of Protection as per EN 60529		IPX4D				
Voltage / Input	V/ W	230/ 106	230/ 142	230/ 202	230/ 260	230/ 472
Height x Width x Depth	mm	900x600x450				
Weight	kg	66,5		86,0		105,0
Minimum / Maximum Exhaust Gas Flow[1]	kg/ s	0,0151 - 0,0031	0,0231 - 0,0031	0,0306 - 0,0055	0,0426 - 0,0056	0,0517 - 0,0067
Minimum / Maximum Air Flow[1]	kg/ s	0,0144 - 0,0029	0,0220 - 0,0029	0,0292 - 0,0053	0,0407 - 0,0053	0,0495 - 0,0064
Maximum Fuel Temperature 50°/30°C[1]	°C	46	59	46	58	55
Heat Loss from Boiler Housing to the Environment with Burner ON	Pd (%)	1,4	1,5		1,2	
Heat Loss to Exhaust System with Burner ON	Pf (%)	2,0	2,5	2,9	2,1	
Heat Loss to Exhaust System with Burner OFF DT 50°C	Pfbs (%)	0,1				

[1]Test values: 60/100 mm 0.9m coaxial cable & G20 methane with 80°/60°C production / return temperature.

The company

K. TZANOS SA was established in 1982 and it is a well-established trading company specialised in the field of plumbing, heating, natural gas, and green energy, maintaining long-term partnerships with well-known European and International houses. K. TZANOS SA is operating under the umbrella of TZANOS Group of companies, while owns since 1997 ISOPIPE SA, a factory specialising in the production of insulation material ISOPIPE and TORRENT cast iron condensing boilers. In 2008, TZANOS SA created the H-IT brand aiming at manufacturing high quality-products at affordable prices, for water supply and heating systems.
All products represented by TZANOS Group of Companies are CE certified.

ΤΖΑΝΟΣ SINCE 1982

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01.2020