

Caldaria 35, 75 & 100 Condensing

High Efficiency Wall-Hung Condensing Boilers

- ✓ 3 Models From 9.3 Up To 96.8 kW
- ✓ Efficiency Up To 108.7 %
- ✓ Fully Modulating Burner: 15% To 100%
- ✓ Very Low NOx Emissions
- ✓ Indoor Or Outdoor Installation
- ✓ Cascade Operation Up To 3,000 kW



Choosing an innovative product means to choose the technical characteristics that best combine efficiency and performances with ease of use and installation.

Why To Choose Caldaria Condensing

Efficiency

Wall-hung condensing boilers with high efficiency (up to 108%) and low power consumption typical of condensing gas boilers with sealed chamber. An innovative high-heat exchanger allows reduced contents of CO and NOx (about half of the highest class (V) according to the technical standard EN 297), making possible an outlet pipe of only 50 mm for each heating element, saving even on flue system costs.

Flexibility

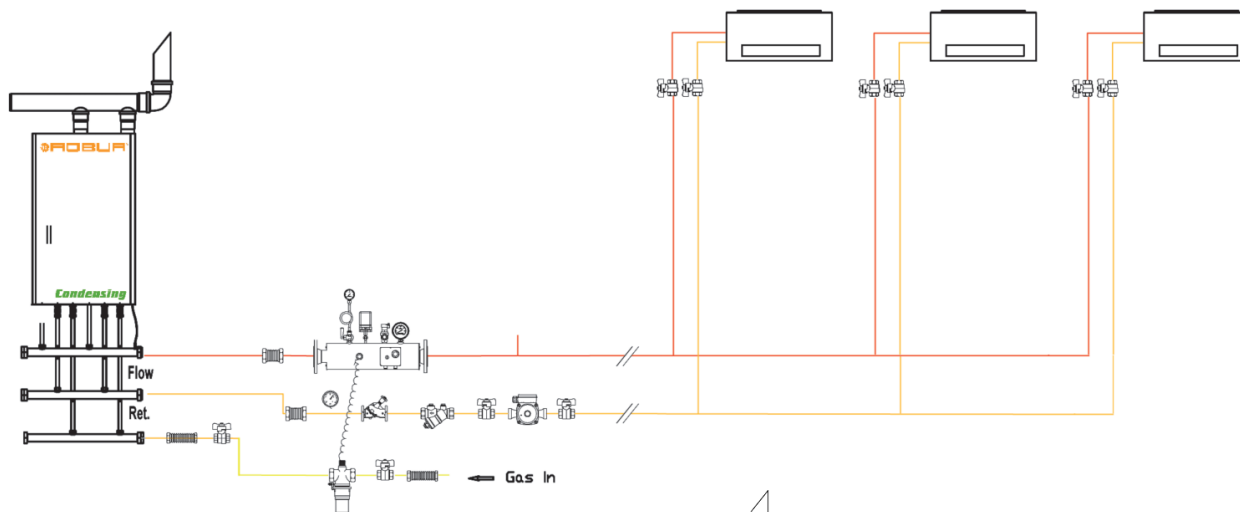
Thanks to the different models of Caldaria you can heat any building (residential, industrial, commercial and service sector such as supermarkets, public and sport buildings) with any distribution system. Models 75 & 100 can handle multiple heating circuits simultaneously, for instance high temperature (heaters, radiators), low temperature (floor heating), and for DHW production.

Indoor or Outdoor Installation

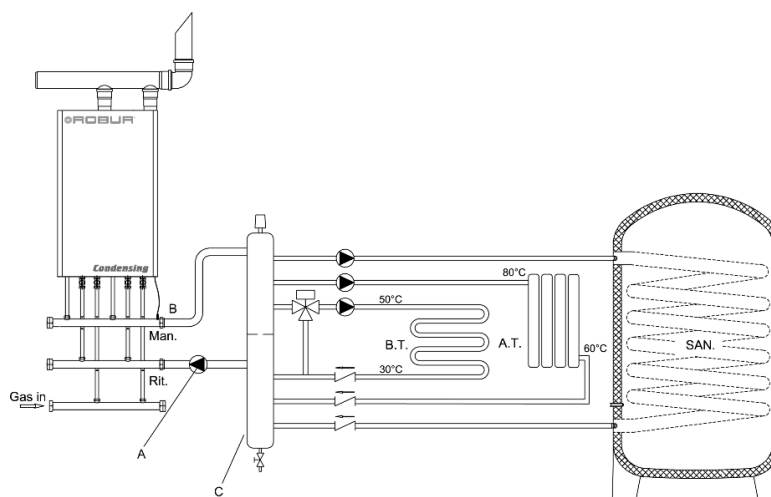
Caldaria Line is certified for indoor installation as well as for outdoor installation, and is equipped with safety devices for operation till -15 °C. Outdoor installation does not require any additional security accessory.

Modularity

Flexibility Also With High Power. Caldaria boilers are designed to be installed in battery, controlled by one Master Card (standard supplied with every boiler). You can therefore match up to 31 Caldaria Condensing Units in cascade, in order to achieve power stations with 3,000 kW installed power.



Example of installation of one Caldaria Condensing 75 or 100 with one single primary circuit of fan-coils (see the image above) or with 3 circuits: high temperature, low temperature and for DHW (see the image on the right).



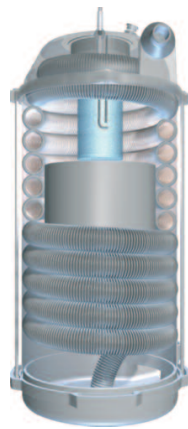
- A Water Pump for Primary Circuit
- B Flow Water Sensor
- C Vertical Water Collector
- A.T. High Temperature Circuit
- B.T. Low Temperature Circuit
- SAN. Production of Domestic Hot Water

The Features That Make The Difference

Special Thermal Module with bimetallic heat exchanger (inner copper: side water, outside steel: side flue) that allows a high heat exchange between the flue gas circulating outside and the water of the plant circulating internally in countercurrent. This special heat exchanger with high efficiency (4 stars according to the Boiler Efficiency Directive 92/42/EEC) allows for a delta T of only 3° C between the return water temperature and the flue temperature, with considerable savings even in high temperature plants such as radiators.

Caldaria 35 is equipped with one modulating thermal module, Caldaria 75 & 100 are equipped with two thermal

modules with independent modulation, managed by a single control system in cascade.



Microprocessor Card for the modulation of the flame (from 15% to 100% of the power in the models 75 & 100) in order to provide a heat output proportional to the real heating demand.

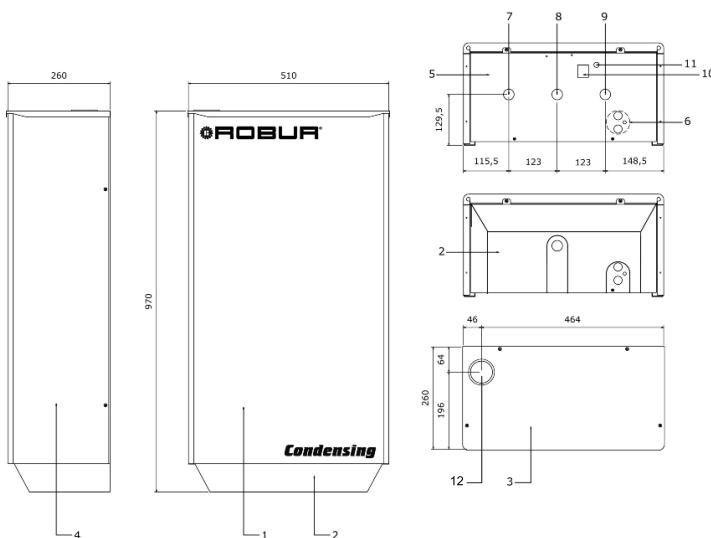
Outdoor Temperature Probe.

Caldaria Condensing can work with the principle of outdoor reset curve that allows to automatically vary the flow temperature in relation to the external air temperature (the sensor is standard for models Caldaria 75 and 100).

Circulation Pump and Secondary Circuit Control.

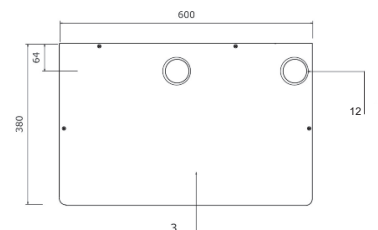
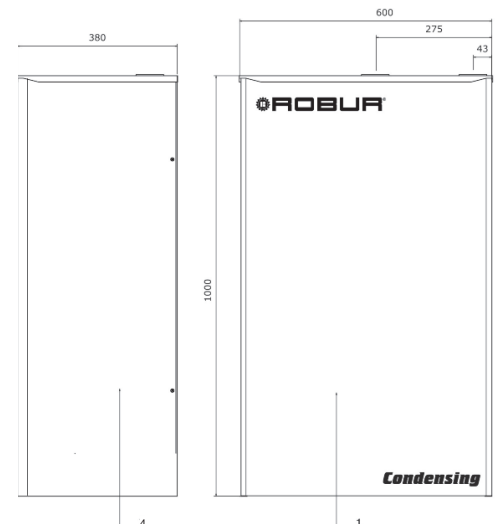
Caldaria 35 is already equipped with a modulating water pump controlled by the control board and can regulate the Delta T between flow and return temperature. Master electronic board of Caldaria 75 and 100 is able to control and activate the pumps of up to three heating circuits, even with different temperatures (high temperature loop, pre-mixed low temperature loop and DHW).

CALDARIA CONDENSING 35



- 1 Front Panel
- 2 Underneath Removable Panel
- 3 Above Panel
- 4 Side Panel
- 5 Connections Panel (after removing panel n.2)
- 6 Condensate Drainage and Safety Valve
- 7 Flow
- 8 Gas
- 9 Return
- 10 Power Supply Plug
- 11 Gland for Activation Signal Cable (Remote Control)
- 12 Flue diameter 50 mm

CALDARIA CONDENSING 75/100



CALDARIA CONDENSING			35	75	100
Nominal heat input (Hs)	max	kW	35.0	75.0	100.0
	min	kW	10.5	11.0	16.0
Nominal heat input (Hi)	max	kW	31.5	67.5	89.9
	min	kW	9.5	9.9	14.4
Nominal heat output 100%	80/60 °C	kW	30.9	65.5	88.3
	60/40 °C	kW	32.9	72.1	95.4
	50/30 °C	kW	34.1	73.2	96.8
Efficiency at full load	80/60 °C	%	98.0	97.0	98.2
	Av.T = 50 °C (60/40 °C)	%	104.5	106.6	106.1
	50/30 °C	%	108.1	108.3	107.7
Efficiency at reduced load 30%	80/60 °C	%	98.0	99.4	98.7
	Av.T = 50 °C (60/40 °C)	%	105.5	106.4	106.6
	50/30 °C	%	109.2	108.6	108.7
Electrical supply		230 V 1N – 50 Hz			
Installed wattage		W	180	335	335
Hydraulic connections diameter		"M	3/4	--	--
Flow/Return water pipe manifold diameter		"M	--	1	1
Inlet gas pipe diameter		"M		3/4	
Flue manifold diameter		n./mm	1/50	2/50	2/50
Condensate pipe diameter		mm		18	
Flue temperature			+5 °C + H ₂ O Return T	+3 °C + H ₂ O Return T	
Empty weight		kg	47	70	90
Dimensions	Width	mm	450	600	600
	Height	mm	850	1000	1000
	Depth	mm	350	380	380

STANDARD OPERATION FEATURES

Pre-mix Burner With Low NOx	S	S	S
Burner Modulation Control System (70% Caldaria 35 - 85% Caldaria 75 & 100)	S	S	S
Bimetallic Heat Exchanger Water/Flue	S	S	S
Condensate Trap On Board	S	S	S
Digital Display On Board (For Boiler Parameters Setting)	S	S	S

STANDARD / OPTIONAL EQUIPMENT

Wall Support Bracket	S	S	S
Drilling Template	S	S	S
Remote Digital Control Unit (w/Hourly Programming, Errors Signalization and Setting of Both Boilers and Ambient Parameters)	O	O	O
Digital Programmable Thermostat	O	O	O
Outdoor Temperature Probe	O	S	S
Flow Temperature NTC Probe	S	S	S
Secondary Circuit NTC Probe	--	O	O
Circulation Pump	S	--	--
2-Way Valve Kit for Hydraulic Circuits	--	O	O
Water/Gas Distribution Manifolds Kit Ø 45	--	O	O
Flue/Air Pipes and Curves Ø 50 mm or 80 mm	O	O	O
Flue Gas PP Manifold (2 inlets Ø 50 mm, outlet Ø 125 mm)	--	O	O
Condensate Drainage Kit for Flue Gas Manifold Ø 125 mm	--	O	O
Flue Exhaust Terminal in PP Ø 50 mm (for outdoor installation of the boiler)	O	O	O
Aluminium Flue Pipe Adapter Ø 50/80 mm	O	O	O
Wall- or Roof-External Terminal Ø 80 mm (for indoor installation of the boiler)	O	O	O
Inlet Air Supply Kit (for indoor installation with sealed combustion circuit)	O	O	O

S: Serie - O: Optional

Due to continuous product innovation and development, Robur reserves the right to change the product specifications without prior notice.