# Power HT+ 50-250 kW


- Wide modulation ratio up to 1:9 (1:5 mod. 1.130, 1.150, 1.200 and 1.250) better efficiency and noiseless operation
- The new models 1.130 and 1.150 have the same size of 90-110 kW models
- High efficiency wide modulation circulating pump available in the hydraulic connection accessory
- Heat exchanger, with combustion chamber and hydraulic circuit, composed by stainless steel coils
- Fanned flue models with coaxial or dual flue pipes
- Control panel with wide text display and protection cover
- Enhanced electronics allows to manage cascade installations up to 16 boilers
- Simplified maintenance operations: frontal access to the internal components
- Maximum operating pressure: 4 bar (6 bar mod. 1.130, 1.150, 1.200 and 1.250)
- Wide range of accessories

(1) Products with nominal output >70 kW are not subjected to energy labelling according to ErP regulation

## Hydraulic system

Stainless steel premixing burner with modulating fan
Stainless steel water/flue exchanger
System to prevent pump sticking operating every 24 hours
Flow and return NTC sensor

## Thermoregulation system

Built-in remote control and climatic regulator
Built-in climatic regulation (with outdoor sensor supplied as optional)
Mixed zones system (high and low temperatures) installation option
Cascade system installation option (up to 16 boilers)
NTC sensor for DHW cylinder control option

## Control system

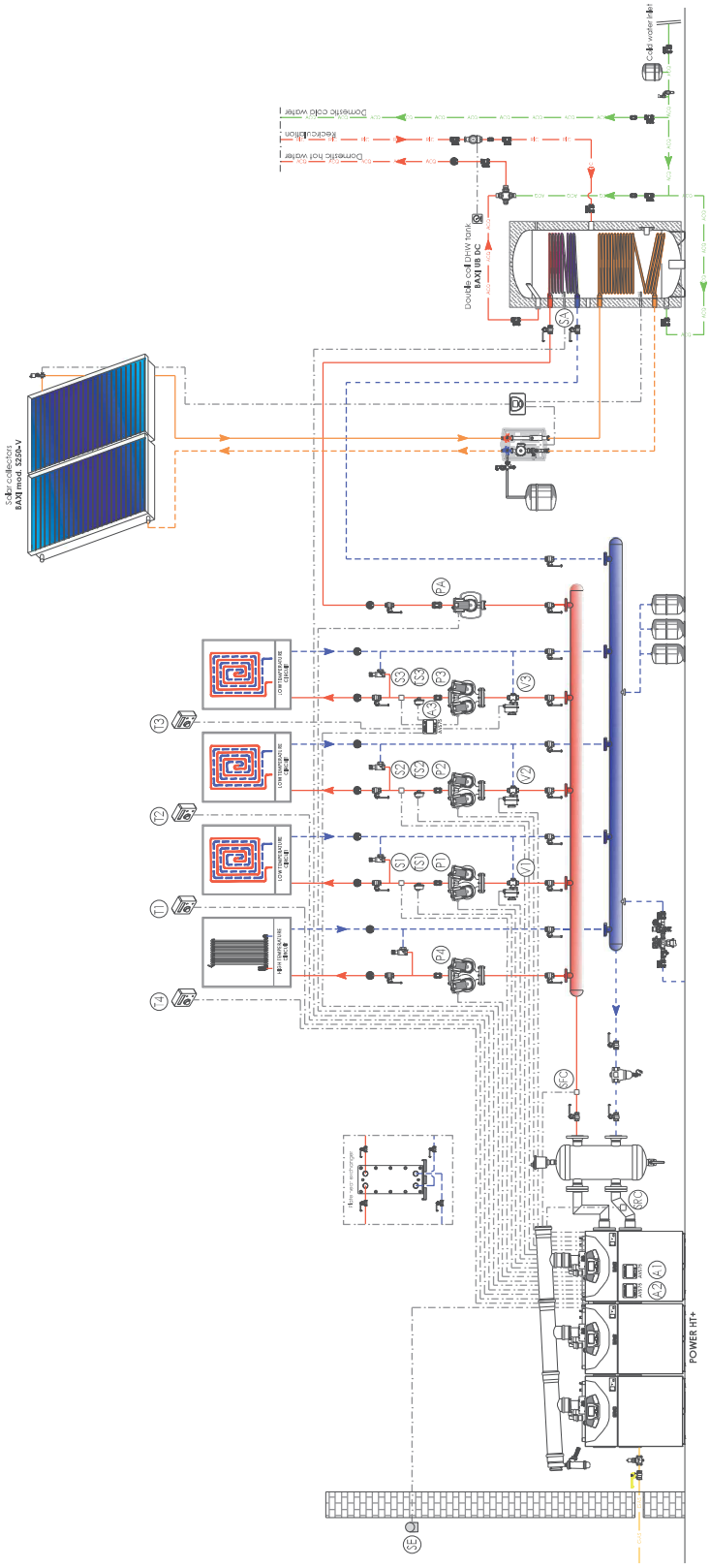
Programmable room unit for heating and DHW
Overheat limit thermostat of the water/flue exchanger
Low water pressure switch
Heating circuit digital manometer
Full anti-frost device
Control device for water circulation
Electronic thermometer
Complete range of accessories for single and cascade installations

## Outputs from 50 to 250 kW

| | | Heating only | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Power HT+ | | 1.50 | 1.70 | 1.90 | 1.110 | 1.130 | 1.150 | 1.200 | 1.250 |
| Maximum heat input (heating) | kW | 46,3 | 66,9 | 87,4 | 104,9 | 123,8 | 143 | 191 | 240 |
| Minimum heat output | kW | 5,1 | 7,4 | 9,7 | 11,7 | 24,8 | 28,6 | 31,8 | 40 |
| Rated heat output (80/60°C) *Prated* | kW | 45 | 65 | 85 | 102 | 121,5 | 140,3 | 185,9 | 232,8 |
| Minimum heat output (80/60°C) | kW | 5 | 7,2 | 9,4 | 11,4 | 24,3 | 28,1 | 31 | 38,8 |
| Maximum heat output (50/30°C) | kW | 48,6 | 70,2 | 91,8 | 110,2 | 130,6 | 150,9 | 200 | 250 |
| Minimum heat output (50/30°C) | kW | 5,4 | 7,8 | 10,2 | 12,3 | 26,2 | 30,2 | 33,1 | 41,7 |
| Useful heat output at 30% of rated heat output and low temperature regime** $P_1$ | kW | 15 | 21,7 | 28,3 | 34 | 40,4 | 46,6 | 36 | 46 |
| | | | | | | | | | |
| Seasonal space heating energy efficiency class | | A | A | | | | | | |
| Efficiency Pn (lower calorific value) - Average temperature 70°C | % | 97,4 | 97,2 | 97,3 | 97,2 | 98,1 | 98,1 | 97,32 | 97,02 |
| Efficiency at 30% (lower calorific value) - Return temperature 30°C | % | 108,4 | 108,1 | 108,2 | 108,1 | 108,5 | 108,5 | 109,1 | 109,1 |
| Useful efficiency at rated heat output and high temperature regime* $\eta 4$ | % | 87,7 | 87,6 | 87,7 | 87,6 | 88,4 | 88,4 | 87,7 | 87,4 |
| Useful efficiency at 30% of rated heat output and low temperature regime** $\eta 1$ | % | 97,7 | 97,4 | 97,5 | 97,4 | 97,8 | 97,8 | 98,3 | 98,3 |
| Seasonal space heating energy efficiency $\eta s$ | % | 93 | 93 | 93 | 93 | 93 | 93 | 94 | 94 |
| NOx emissions | mg/kWh | 27 | 31 | 36 | 22 | 17 | 23 | 37 | 39 |
| Maximum pressure heating circuit | bar | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 |
| Maximum inlet temperature heating circuit | °C | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| Heating temperature range | °C | 25-80 | 25-80 | 25-80 | 25-80 | 25-80 | 25-80 | 25-80 | 25-80 |
| | | | | | | | | | |
| Water content | l | 2,81 | 4,98 | 8,34 | 9,83 | 10 | 11 | 13 | 15 |
| Dual flue system | mm | 80 | 80 | 110 | 110 | 110 | 110 | 150 | 150 |
| Maximum flue mass flow rate | kg/s | 0,075 | 0,111 | 0,144 | 0,169 | 0,201 | 0,23 | 0,322 | 0,411 |
| Minimum flue mass flow rate | kg/s | 0,007 | 0,014 | 0,018 | 0,018 | 0,043 | 0,05 | 0,054 | 0,069 |
| Maximum flue temperature | °C | 92 | 76 | 70 | 70 | 70 | 70 | 80 | 80 |
| | | | | | | | | | |
| Dimensions (hxwxd) | mm | 904x600x681 | | | 1221x600x681 | | | 1238x600x1410 | |
| Net weight | kg | 60 | 70 | 104 | 109 | 126 | 132 | 212 | 232 |
| Gas type | | Natural Gas/LPG | | | | | | | |
| Power consumption | W | 100 | 117 | 146 | 185 | 187 | 283 | 242 | 369 |
| Auxiliary electrical power consumption - Full load *elmax* | kW | 100 | 117 | 146 | 185 | 187 | 283 | 242 | 369 |
| Auxiliary electrical power - Partial load *elmin* | kW | 23 | 24 | 24 | 24 | 51 | 52 | 47 | 48 |

* High temperature regime: 60°C return temperature at heater inlet and 80°C flow temperature at heater outlet
** Low temperature: 30°C return temperature (at heater inlet)
***Data not required for boilers with nominal output > 70 kW
▲To connect Ø 160 accessories, an adaptor is required

# Cascade installation scheme

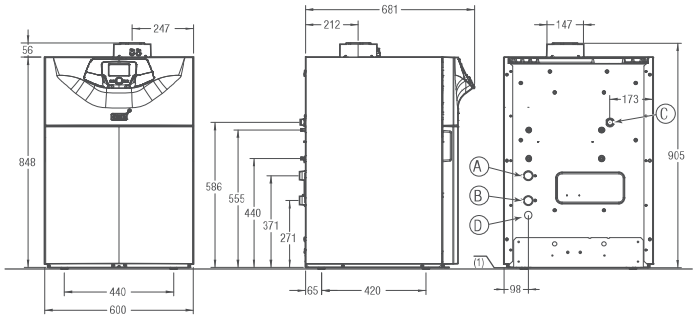



HYDRAULIC SCHEME - CONNECTIONS

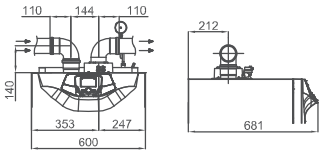
Cascade of Power HT+ boilers for heating (1 direct zone + 3 mixed zones), solar system for DHW production with double coil tank and boiler integration.

# Dimensions Power HT+ 50-250 kW

## Power HT+ 1.50 - 1.70



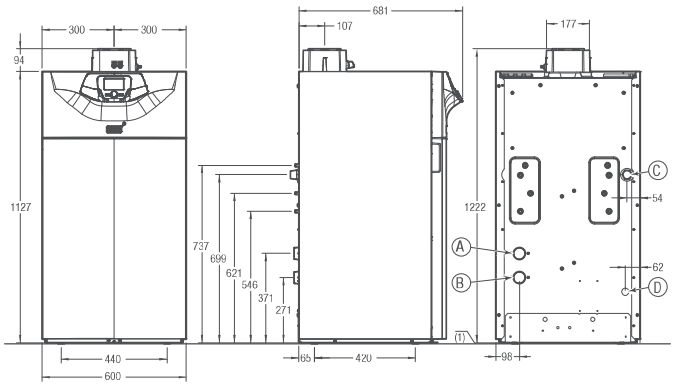

1 Heating system return (G1")
2 Heating system flow (G1")
3 Gas inlet (G3/4")
4 Condensing trap (DN18)
(1) Adjustable feet



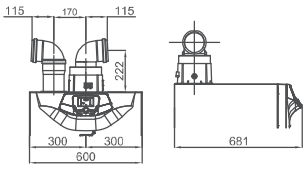

Concentric flue: Ø 80/125Condotti
Dual flue: Ø 80

## Power HT+ 1.90 - 1.110 - 1.130 - 1.150

Hydraulic connections Power HT+ 1.90 - 1.110

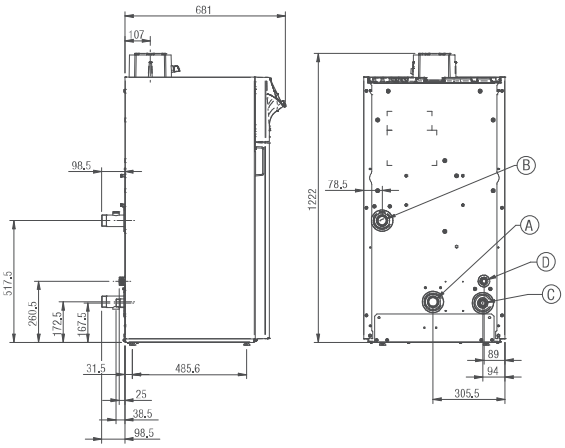



A Heating system return (G1-1/2")
B Heating system flow (G1-1/2")
C Gas inlet (G1")
D Condensing trap (DN18)
(1) Adjustable feet



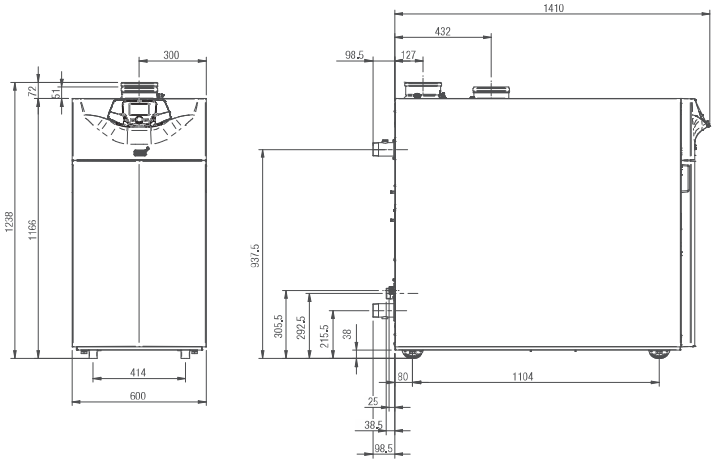

Concentric flue: Ø 110/160
Dual flue: Ø 110

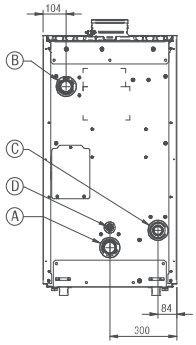
Hydraulic connections Power HT+ 1.130 - 1.150




A Heating system return (G1-1/2")
B Heating system flow (G1-1/2")
C Gas inlet (G1")
D Condensing trap Ø 30

## Power HT+ 1.200 - 1.250

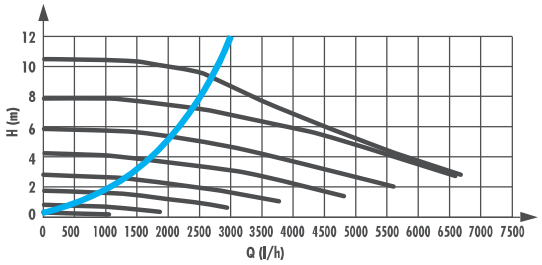


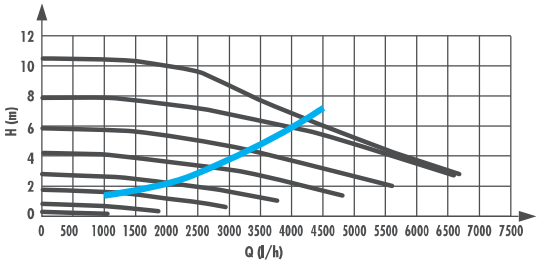

A Heating system return (R 2")
B Heating system flow (R 2")
C Gas inlet (G 1 1/2")
D Condensing trap Ø 30

Dual flue: Ø 150

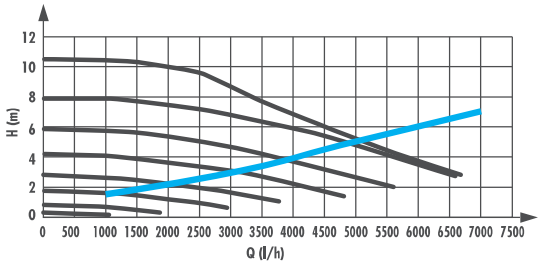
## Power HT+ 1.50



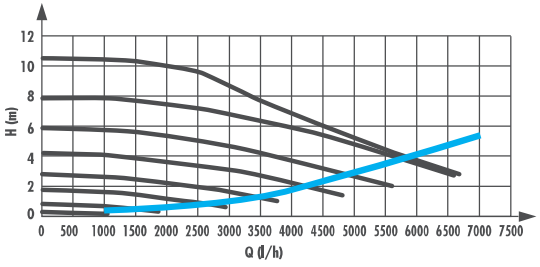

## Power HT+ 1.70




## Power HT+ 1.90




## Power HT+ 1.110




Hydraulic exchanger losses  Pump head (in the hydraulic accessory)