



HEATING & HOT WATER BOILER



Enjoying Your Felicity Life
Volcan Sereis

Volcan Series

Cost performance special supremacy



Are you searching for a kind of fuel gas wall-mounted boiler, which can bring you great comfort, and which is modernized with good quality at well? Definitely, MAXWELL VOLCAN series is the best choice.

VOLCAN series is a sealed heating system together with the hot water function, used for heating and for supplying hot water. It perfectly combines aspects of operation, reliability and security.

Easy Installation

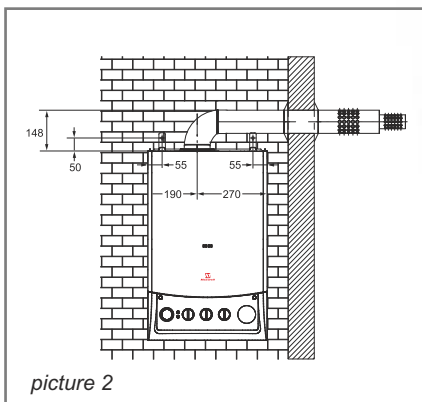
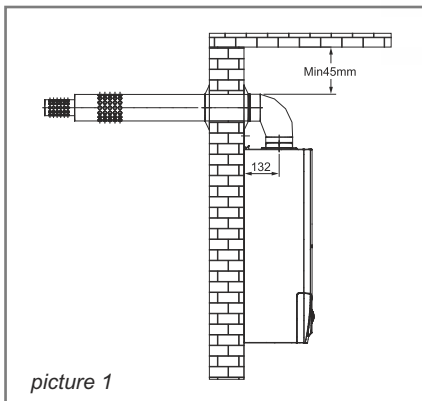
The structure of stove is very compact

Adopting advanced connecting technology, interior structure becomes more reasonable and compact.

Because of compactness, VOLCAN series can save space for installation. You can even set it in the closet and wall-salver. For example, the storeroom, bathroom or kitchen --- because there is no need to save the operating space at its side face.

At the same time, VOLCAN series adopts a new type of electric control device, which can make the unit work normally even although installed in low water-pressure or unstable water-pressure places. It is provided with a special device of controlling and safe protecting, which insures the convenience and reliability when being used.

● The schematics of installing boiler



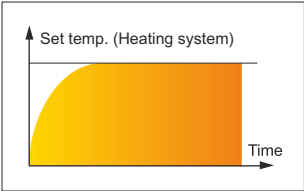
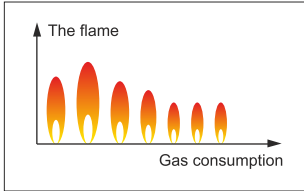
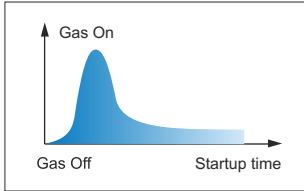
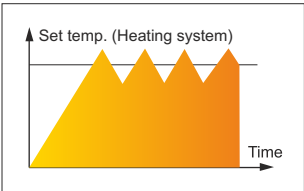
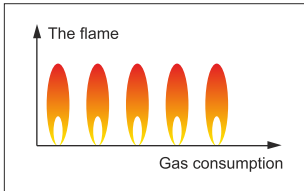
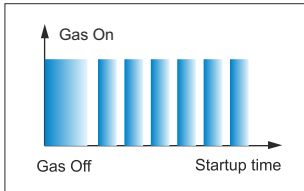
Novel in design, technology leading



Following the international fashion trend, novel in design, the modern fashion undoubtedly reflect in VOLCAN series: Graceful, advanced, fashion LCD operate area... you don't need to worry about the home decoration.

Mean while, VOLCAN series adopt the new-type electronic control equipment, it can start and run normally even install in the low water pressure or place where water pressure often changes. VOLCAN series has unique control devices and overall security protectors, which guarantee great comfort and safe reliability.

Perfect burning mode, high burning efficiency

	Temperature control	Hoter water control; Burning noise	Efficiency
VOLCAN series boiler	1. According the set temperature, the boiler keep the temperature steady. 2. The difference temperature between return water and outlet water is 10°C. 	The flame is changed by the set temperature, the boiler keep the invariable temperature. According to the temperature settled, the boiler consume the lowest gas, produce low noise. 	When the temperature teached the set ones, the boiler waste the least gas, but the rate of the heat efficiency can reach 92%. 
Common boiler	1. The steady temperature is not controled by the ON/OFF knob. 2. The temperature difference between return water and outlet water is variable. 	The temperature of the water is not steady because the flame is ON/OFF now and then when the boiler start, it consume the largest gas volume. Ignition frequently, leading to high noise. 	The boiler being ignited frequently, It will waste the gas and lead to low heat efficiency. 

Plastics and Stainless Steel Window of Emitting Smoke

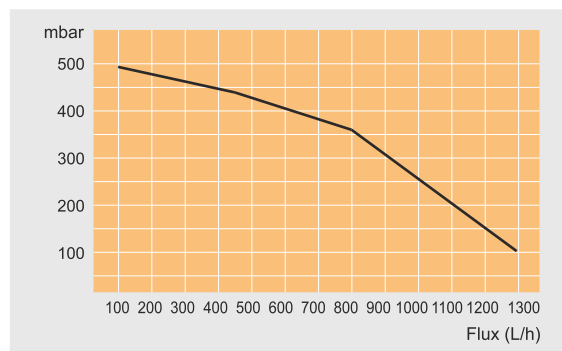


Window of emitting smoke adopt stainless steel material and puff plastics material imported from Europe as surface. Through the treatment of prevents ultraviolet ray, the colour will not fade forever and therefore service life will be longer.

Common window of emitting smoke always adopt 3 mm stainless steel while Klimaire VOLCAN series adopt 5 mm stainless steel and it is stronger and will not be deformed.



The run curve of circulation pump



(Considering the pressure lost along the line of the central boiler)

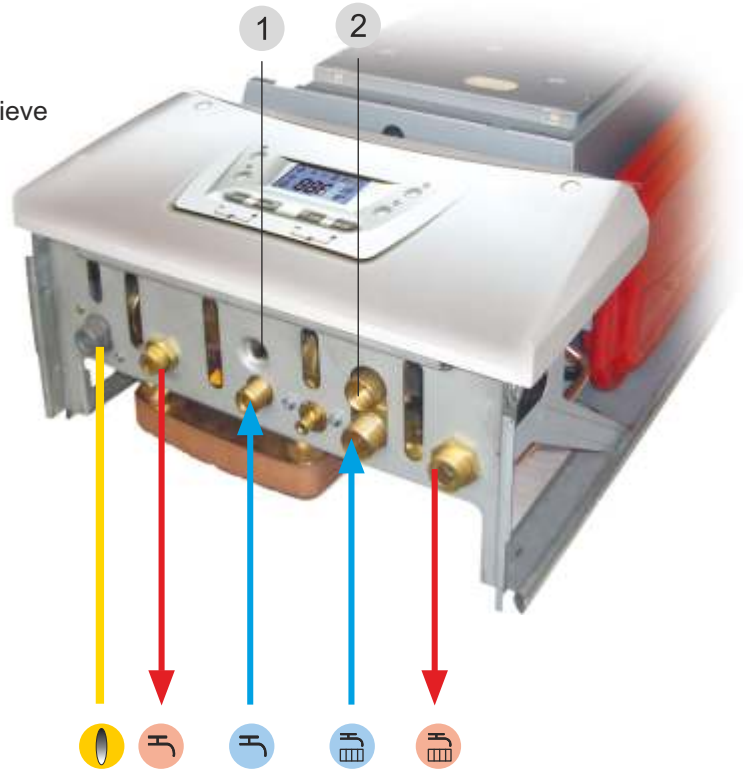
Practical in use and elegant in appearance



Make easier to operate

Once the heating technical expert debugs the hypothesis for you to finish, VOLCAN series can achieve you hoped heating comfortable degree. Summer/ The winter time system transforms only needs simply presses the button, then may with ease complete through the function switch, the heating water and the hygienic hot water temperature may establish voluntarily according to the need.

- 1 Affusion/Refilling water valve
- 2 Security valve
-  Gas inlet
-  Outlet of domestic hot water
-  Inlet of tap water
-  Inlet of return water for heating
-  Outlet of hot water of heating



More advanced technology, more comfort

 **Intelligentized computer control system**
Intergrate microprocessor PCB makes the boiler contain more human-based function.

 **Convenient to choose two heating mode**
Floor-heating: 25~60°C, radiator and fan coil system: 30~80°C.

 **Two stage intelligentized defrosting system**
When temperature is lower than 8°C, the circulating pump of the boiler starts. When temperature decreases to 3°C, the boiler will operate for several minutes at the lowest capacity.

 **Grundfos water pump system**
Powerful performance, to avoid the bad effect on the boiler from the scale.

 **Equipment to avoid the pump locked**
The boiler stops for 21 hours, the pump will operate for 2 minutes automatically, to avoid the pump locked.

 **Pump later operation function**
When the boiler stops, the pump will operate for 2 minutes, to avoid the pump and heat-exchanger overheat.

 **Air-discharge system time lag function**
When the boiler stops, the fan motor will still operate for several minutes, to get rid of the remain hot air.

 **Water for bath comfortable mode**
The boiler can supply comfortable water for bath in a short time, stable water temperature and high precision.

 **Human-based operation**
It can be equipped with house-hold heating chamberlain, to realise multinomial-human-based operation.

 **Temp, malfunction code display**
Visible and safety temperature, to secure you and your family's comfort.

The helper of house heating & hot water



Heating comfortably

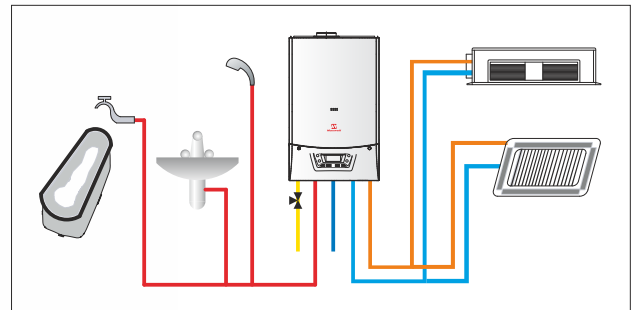
Adjusting the burning efficiency as per demand, feeling better of heating conditioning.

Except for the radiator, Household air conditioning system and floor radiating heating system can match the unit.

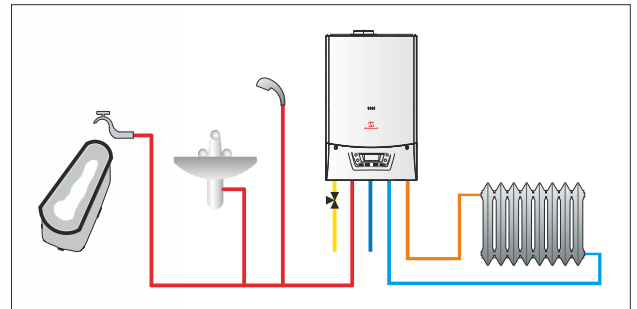
Domestic hot water

13.6Kg/m water flow can meet your daily demand.

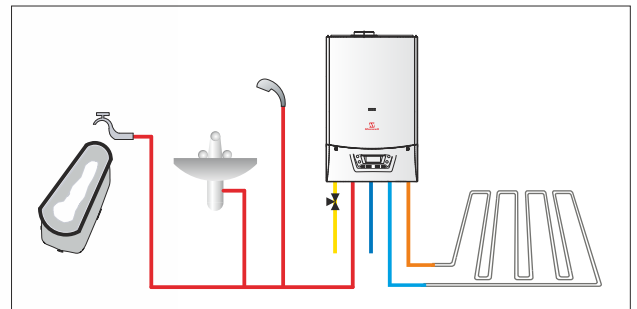
With the advanced intelligent temperature control system, it is easy to control the heating system even in the condition of low water pressure and frequent change of water pressure. Optional heat water tank can supply hot water for several washing room.



● Connecting with coilmotor of dust air conditioner



● Connecting with radiator



● Connecting with Land heating system



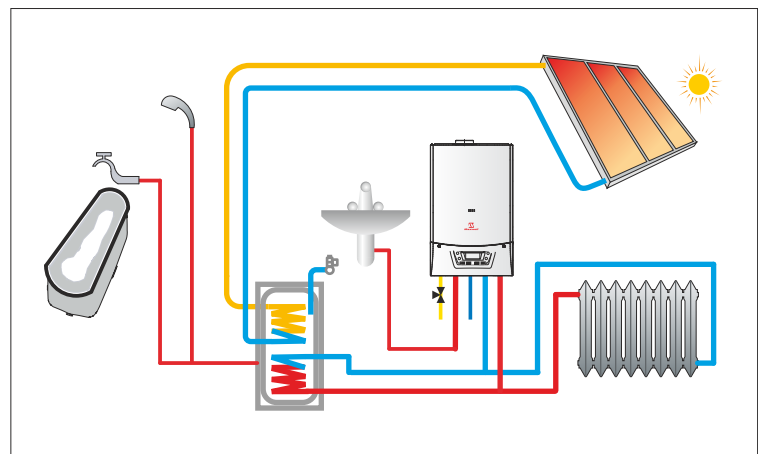
Multi-system adaptation



VOLCAN series boiler could supply kinds of high heating temperature, and three modes of pump operating. This design of boiler is convenient to connect with the radiator, floor radiator system and the central air conditioner.

Function expansion faucet

This faucet could be connected with series accessories to reach the hot water/heating water need of the customer.



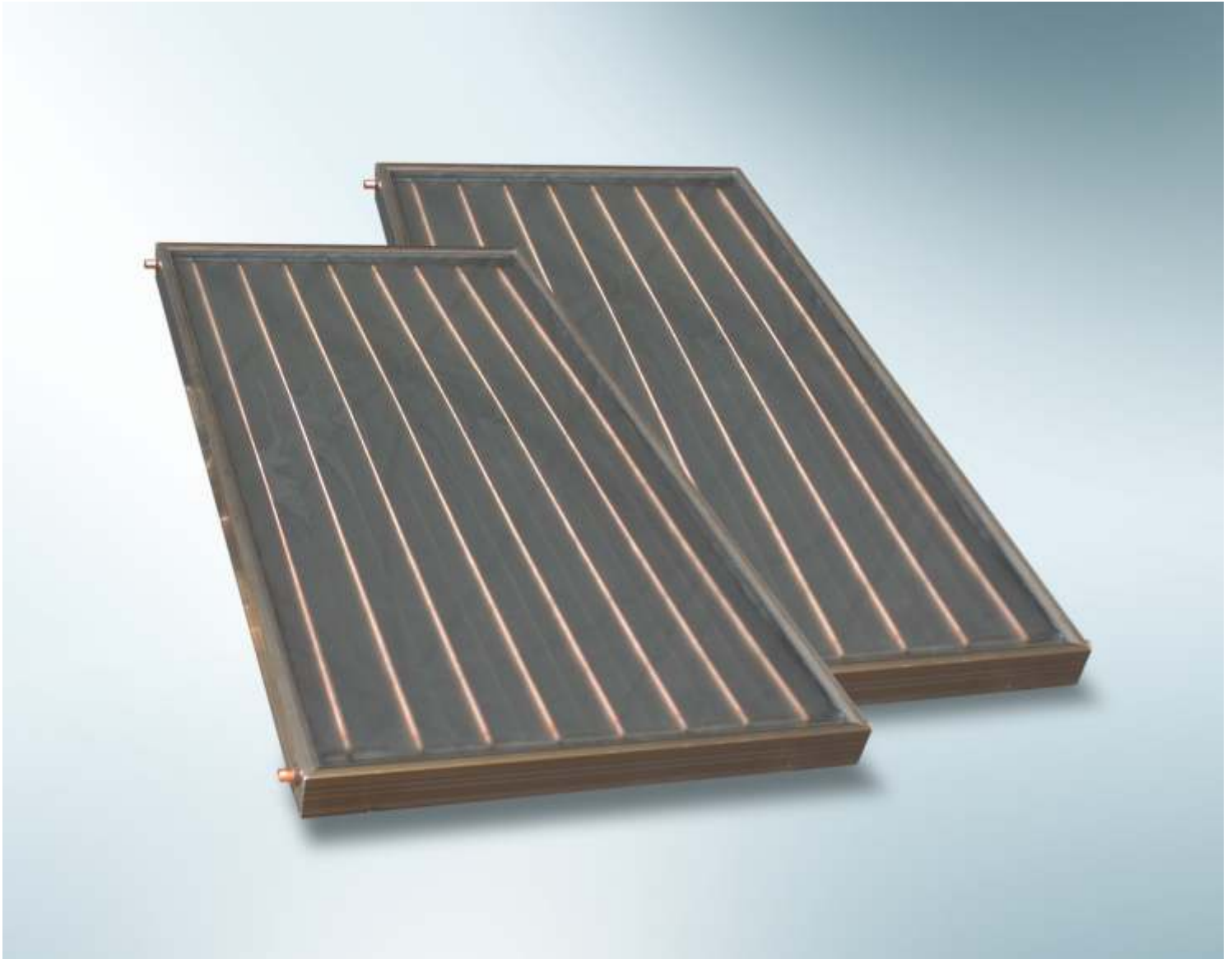
● Connecting with solar energy

Flexible power enactment

1. VOLCAN series power adjusting equipment could adjust the rated equipment input power and heating output power
2. Abundant domestic hot water and steady heating supply.
3. Economic gas consumption, long life-span.
4. Great domestic hot water and nice heating system supply.

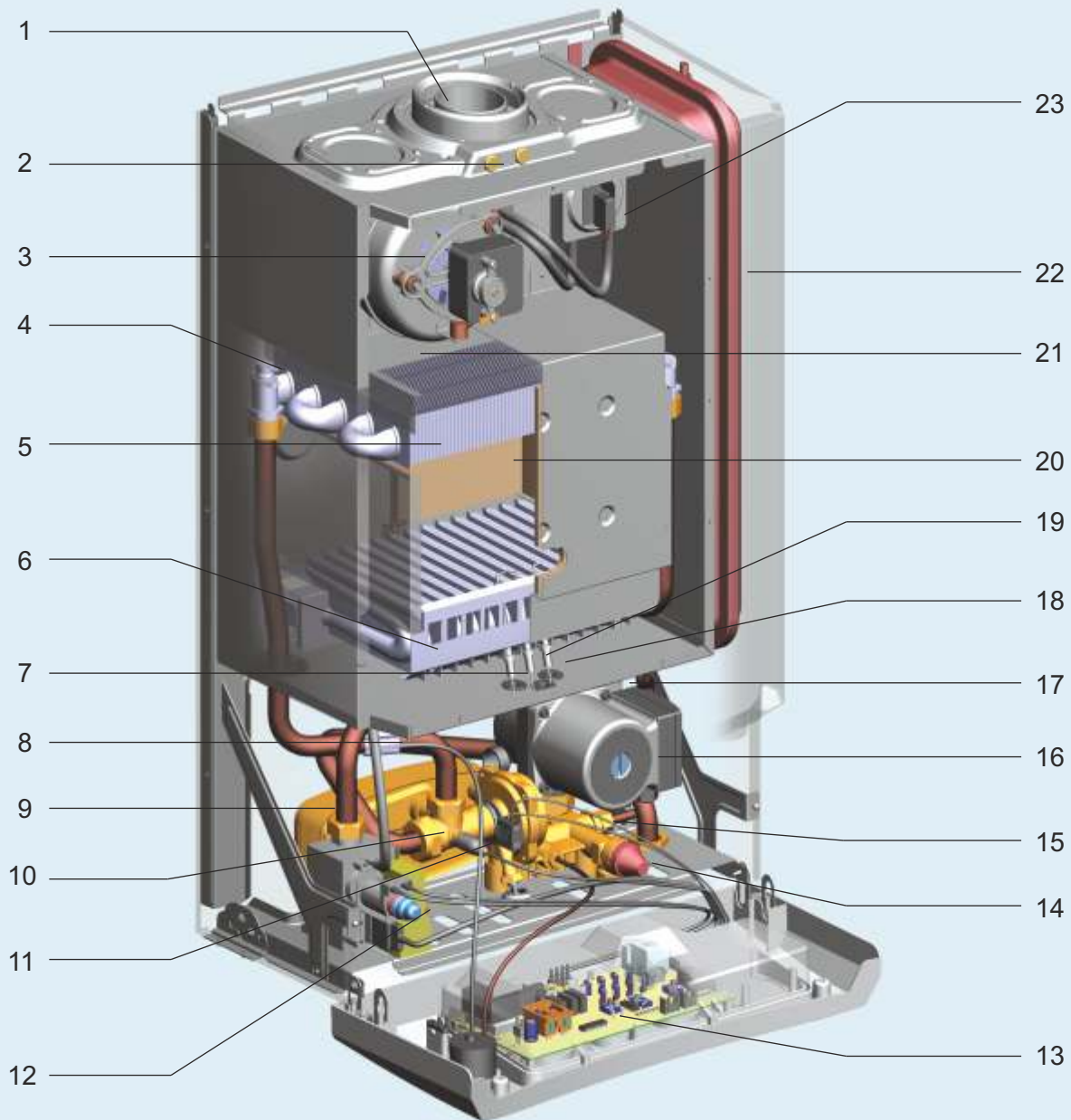
Solar energy collector

The energy of future: No-Polluting Green Energy



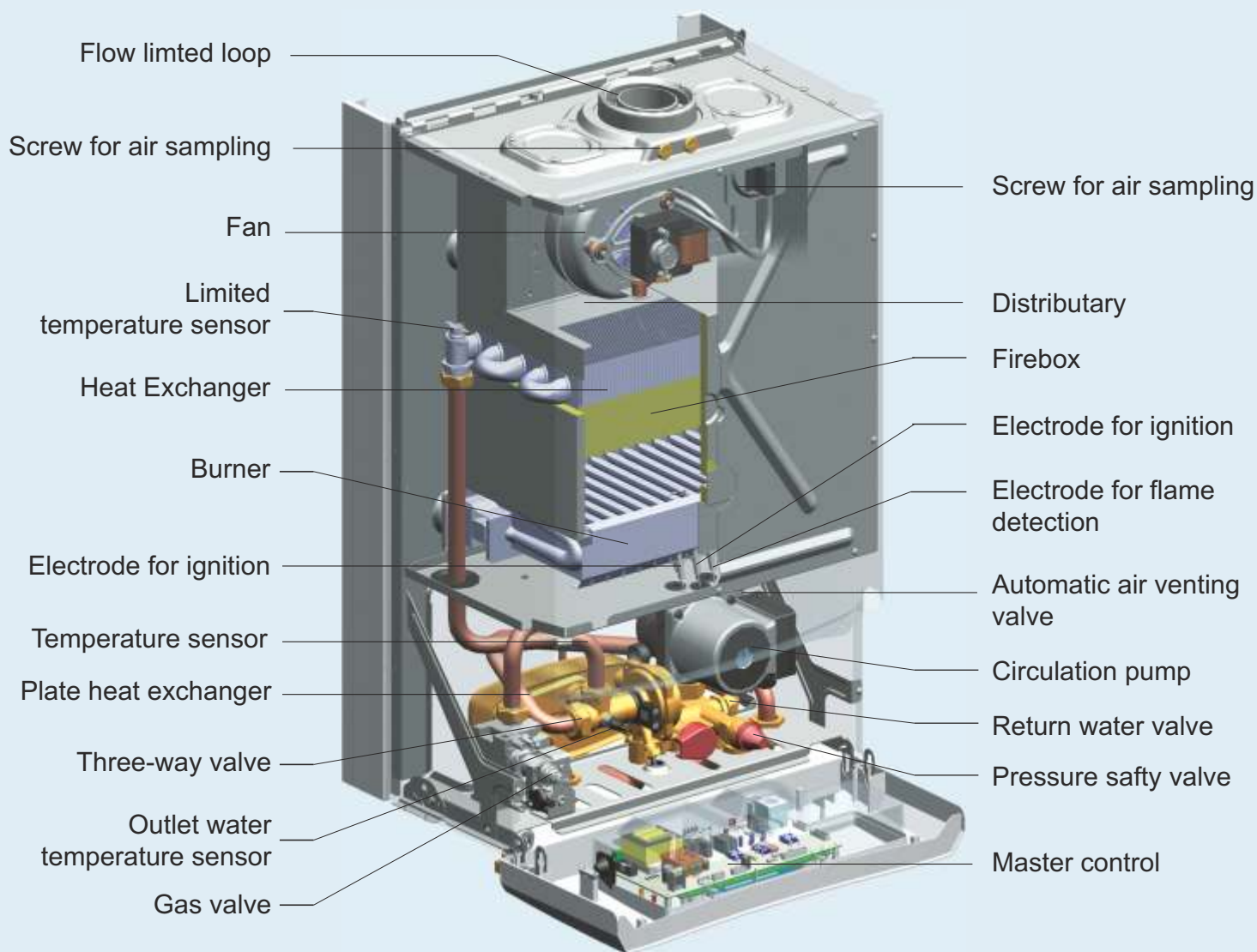
- The solar energy collector should be connected to VOLCAN series to use.

MGBWA070 and MGBWA090



- | | | |
|------------------------------|------------------------------------|----------------------------------|
| 1 Flow limited loop | 9 Plate heat exchanger | 17 Automatic air venting valve |
| 2 Screw for air sampling | 10 Three-way valve | 18 Electrode for flame detection |
| 3 Fan | 11 Outlet water temperature sensor | 19 Electrode for ignition |
| 4 Limited temperature sensor | 12 Gas valve | 20 Firebox |
| 5 Heat Exchanger | 13 Master control | 21 Distributary |
| 6 Burner | 14 Pressure safety valve | 22 Expansion-tank |
| 7 Electrode for ignition | 15 Back-water valve | 23 Air/gas pressure switch |
| 8 Temperature sensor | 16 Circulation pump | |

MGBWA100N



Come from Europe best home boiler manufacturer



The quality is remarkable, the main key component uses the world famous brand, such as Italy Imit, Germany Grundfos, etc.



Typeface heat interchanger

Uses France ALFALA VAL the stainless steel system beat heat interchanger.

Master control

Uses the Italian famous brand, brings the microprocessor the electrically controlled board, regardless of warming up in production health hot water period all may the most family way conditioning burner fuel gas current capacity.



Proportional Gas Control Valve

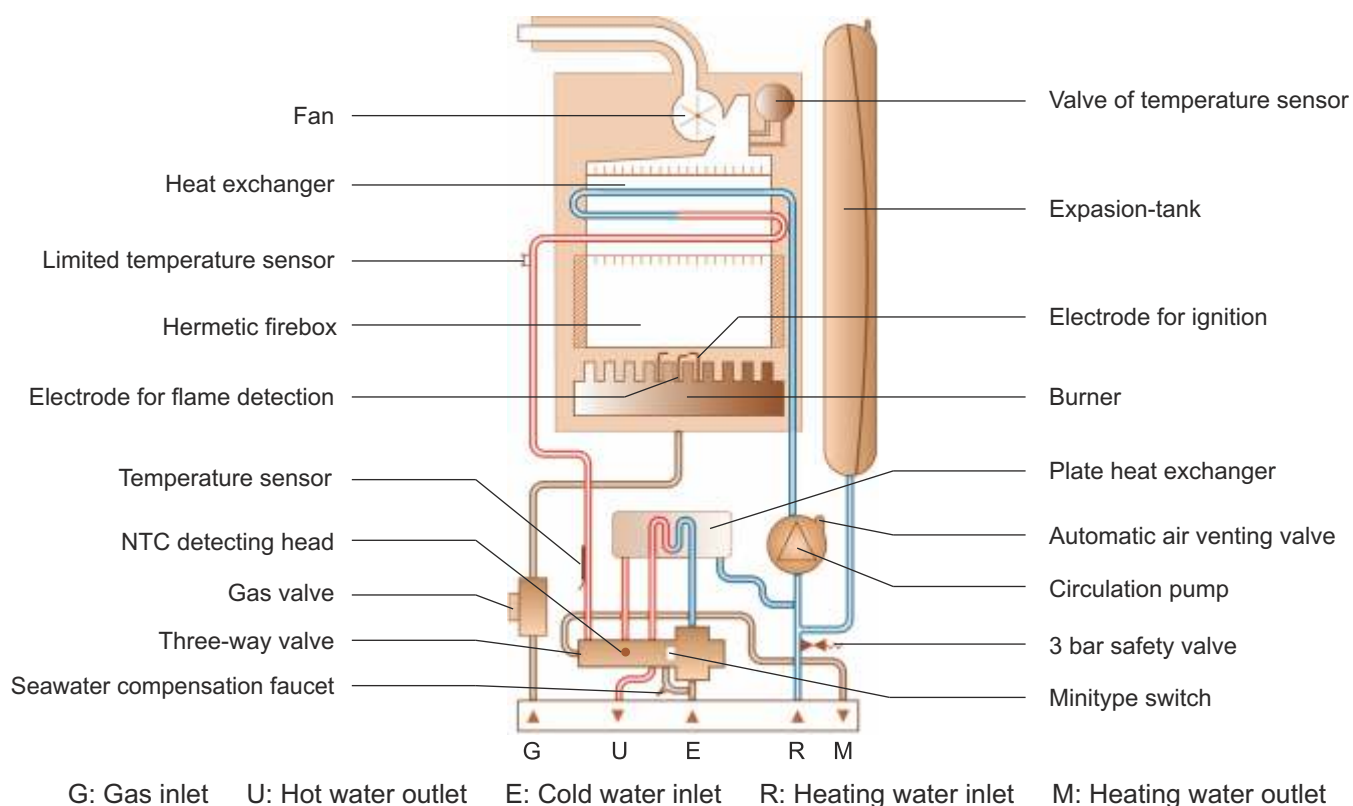
Adopt Italy SIT proportional gas control valve which can control gas supplies automatically depending on the information from master control unit.

Circulating water gang

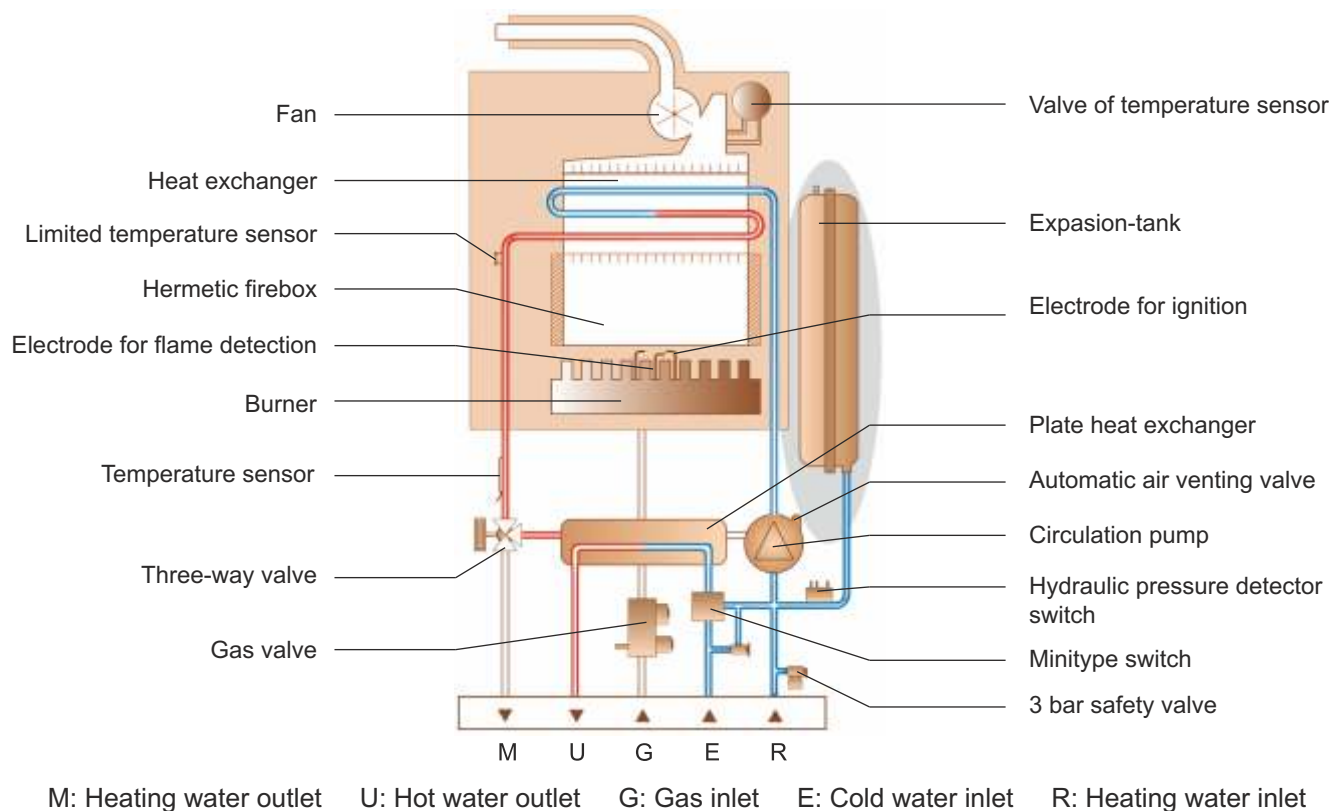
Germany GRUNDFOS the circulating water approaches, belt automatic exhaust steam valve, if in the water circulating system has the few air, then discharges the air, guarantees the superior thermal conductivity.



MGBWA070 and MGBWA090 Operational Principle



MGBWA100 Operational Principle



Heating System

Model	MGBWA070	MGBWA090	MGBWA0100
Gas type	Natural gas, LPG, Artificial coal gas		
Rated input capacity (Btu/h)	70.000	90.000	100.000
Rated output capacity (Btu/h)	63.000	81.000	93.300
Min. input capacity for heating (Btu/h)	36.000	38.000	38.000
Min. output capacity for heating (Btu/h)	32.000	34.200	35.800
Min. input capacity for hot water (Btu/h)	33.000	33.500	33.500
Min. output capacity for hot water (Btu/h)	27.000	27.600	27.600
AFUE (%)	90.1	90.1	93.3
Working pressure of heating system (PSI)	7~43	7~43	7~43
Max. heating water temperature (°F)	194	194	194
Adjustment range of heating water temperature (°F)	86~176	86~176	86~176
Rated electric power (W)	125	125	125
Electrical protection (IP)	X4D	X4D	X4D
Expansion tank volume (L)	6	6	8
Expansion tank prelead (PSI)	14.5	14.5	14.5
Heating area (ft²)	500~1650	650~2200	850~2700
Power supply	110V/60Hz	110V/60Hz	110V/60Hz
Reference Natural Gas (12T) consumption (gom)	4~8.5	5.4~11.4	6.3~13.3
Lpg (20Y) (Lb/h)	1.65~3.45	2.2~4.6	2.55~5.4
Net weight (Lb)	80	83	88

Domestic Hot Water System

Model	MGBWA070	MGBWA090	MGBWA0100
Max. working pressure (PSI)	100	100	100
Min. working pressure (PSI)	7.25	7.25	7.25
Hot water capacity with $\Delta t=45$ F (ILb/min)	23	30	35
Hot water temperature adjustment range ($\pm 3^{\circ}\text{F}$) (°F)	86~140	86~140	86~140
Min. hot water flow for starting (Lb/min)	5.5	5.5	5.5
Limited flow (Lb/min)	22	22	22

Rated Gas Pressure

Model	MGBWA070	MGBWA090	MGBWA0100
Natural gas (PSI)	0.3	0.3	0.3
LPG (PSI)	0.4	0.4	0.4
Artificial Coal gas (PSI)	0.15	0.15	0.15



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