

# Prestige

## *Installation, Operating and Servicing Instructions*

Prestige Solo	24 - 32
Prestige AquaSpeed	24 - 32
Prestige Excellence	24 - 32



*excellence in hot water*

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## INTRODUCTION

### TARGET AUDIENCE

This manual is intended for:

- End users of the appliance
- The installer responsible for installing and starting the appliance
- The engineering department
- The installer responsible for maintaining or repairing the appliance

### SYMBOLS

The following symbols are used in this manual:



#### Essential instructions for correct operation of the system



#### Essential instructions for the safety of persons and the environment



#### Danger: risk of electrocution



#### Danger: risk of burning

### CERTIFICATION

The appliances carry the CE mark in accordance with the standards in force in the various countries (European Directives 92/42/EC "Efficiency", 90/396/EC "Gas appliances"). They also carry the "HR+" and "HR-TOP" labels (Gas condensation boilers).



## GENERAL INFORMATION AND SAFETY INSTRUCTIONS

### IF YOU SMELL GAS:

- Immediately shut off the gas intake
- Open windows to let in air
- Do not use any electrical appliances and do not switch on any switches
- Immediately notify your gas supplier and/or your installer

### General information

This documentation is part of the information delivered with the appliance and must be given to the user to be kept in a safe place!

An approved installer must carry out the assembly, commissioning, maintenance and repair of the system, in accordance with current standards in force.

ACV shall accept no responsibility for damage caused by non-compliant location of the system or by use of the parts or connections not approved by ACV for this application.

### Temperatures



This boiler is designed for central heating systems using a maximum start temperature of 90°C. The central heating pipes and the radiators can therefore reach this temperature.

The gas pipes may reach temperatures in excess of 100°C.

The domestic hot water output temperature may reach temperatures in excess of 60°C.

### Installation



Carefully read this manual prior to installing and commissioning the boiler.

Only an approved installer is authorised to install the appliance. It must be installed and located in accordance with the safety regulations and standards in force. The ventilation required for the room in which the appliance is installed, depending on the type of appliance, must be complied with and any air vents must be unobstructed at all times.

It is prohibited to carry out any modifications to the inside of the appliance without the manufacturer's prior, written agreement.

### Maintenance

To guarantee safe and correct operation of the appliance, it is important to have it serviced and maintained every year by an approved installer or maintenance company.

### Faults

Despite the strict quality standards imposed by ACV during the manufacture, inspection and transport of its appliances it is possible for faults to occur. Please notify your approved installer of any faults immediately. Remember to note the fault code displayed on the screen. (See also the list of faults on page 23)

The parts may only be replaced by genuine factory parts. Please see the list of spare parts and their ACV reference numbers from page 29 onwards.

**Important note:** ACV reserves the right to modify the technical characteristics and equipment of its appliances without prior notice.

**DIRECTIONS FOR USE**

Your system must be checked once a year by an approved installer or maintenance company.

**Starting the burner**

During operation, the burner starts automatically as soon as the boiler temperature drops under the required set point and it stops as soon as the boiler reaches that temperature.

**Control panel**



**Heating system**

It can happen sometimes that the CH circuit needs to be filled. The pressure gauge on the side of the boiler screen indicates this pressure.

The CH pressure must be a minimum of 1 bar and must be checked by the end user on a regular basis. If the pressure drops under 0.5 bar, the integrated water pressure switch blocks the appliance until the pressure in the system returns to a level above 0.8 bar. The connection of a fill valve is provided for underneath the appliance. The installer can also fit the system with a separate valve. Make sure that the appliance is powered off when filling the system. To do this, turn the on/off switch located on the left of the screen to Off. (see the Control panel).

For more information, please ask your installer when the system is delivered.

A safety valve is provided for underneath the appliance. If the system pressure exceeds 3 bars, this valve opens and drains the water from the system. In this case, please contact your installer.

**SETTING THE PARAMETERS**



Also see the user label located inside the valve on the control panel:

**The system's hot water temperature**

*(Hot water temperature)*

- Press **Mode**: The screen displays **PARA**.
- Press **Step**: the first character is 1 and the last two characters give the current hot water temperature setting.
- To change this temperature, press **+** or **-** until the last two digits show the desired temperature value.
- Press **Store** to save the new temperature setting.
- Press **Mode** twice to return to Pilot mode (normal operating mode).

**Enabling or disabling Hot water mode:**

*(hot water)*

- Press **Mode**: The screen displays **PARA**.
- Press **Step** twice: the first character is 2 and the last two characters give the current setting: **00** = disabled; **01** = enabled.
- To change this parameter, press **+** or **-** until the screen displays the desired value: **00** = disabled; **01** = enabled.
- Press **Store** to save.
- Press **Mode** twice to return to Pilot mode (normal operating mode).

**Enabling or disabling Central Heating mode:**

*(heating)*

- Press **Mode**: The screen displays **PARA**.
- Press **Step** three times: the first character is 3 and the last two characters give the current setting: **00** = disabled; **01** = enabled.
- To change this parameter, press **+** or **-** until the screen displays the desired value: **00** = disabled; **01** = enabled.
- Press **Store** to save.
- Press **Mode** twice to return to Pilot mode (normal operating mode).

**Setting the central heating temperature:**

*(maximum temperature for the heating circuit)*

- Press **Mode**: The screen displays **PARA**.
- Press **Step** four times: the first character is 4 and the last two characters give the current central heating temperature setting.
- To change this temperature, press **+** or **-** until the last two digits show the desired temperature value.
- Press **Store** to save the new temperature setting.
- Press **Mode** twice to return to Pilot mode (normal operating mode).

**Fault:**

The temperature setting for the appliance and the safety functions for its various parts are continuously monitored by a regulator controlled by a microprocessor (the MCBA). In the event of a fault, this MCBA disables the appliance and displays an error code: the screen flashes displaying **E** as the first character, followed by the error code.

**To reset the appliance:**

- Press **RESET** on the screen.
- Contact your installer if the fault happens again.

## DESCRIPTION

### DESCRIPTION OF THE PRESTIGE SOLO / AQUASPEED / EXCELLENCE

#### Description of the specifications

The Prestige is a wall-mounted condensing boiler meeting the requirements of the HR-Top standards in force in Belgium. The boiler is certified compliant with EC standards as a connected appliance (C13(x), C33(x), C43(x), C53, C63(x), C83(x)), but it can also be connected as an open appliance in category B23.

#### Lining

The boiler is protected by a steel lining that first of all undergoes a degreasing and phosphation process before being lacquered and burnt at 220°C. The inside of this lining is coated with a layer of thermal and acoustic insulation, reducing losses to a minimum.

#### Heat exchanger

The core of the **Prestige** features a new stainless steel heat exchanger. This piece of technology represents the fruit of exhaustive research and intensive laboratory testing. It reflects ACV's eighty years of experience in using stainless steel for heating and hot water functions. The particular geometry of the exchanger pipes is calculated to obtain a very large Reynolds number throughout its cycles. The **Prestige** achieves an exceptional output that remains stable throughout the boiler's life, given that it causes no oxidation on the exchanger, which is manufactured entirely from quality steel.

#### Burner

ACV uses its BG 2000-M burner for the **Prestige**: this is an air/gas premix burner providing safe and silent operation while limiting emissions (NOx and CO) to an incredibly low level. Although the ACV BG 2000-M boiler is very modern, it uses proven technology and is manufactured from standard spare parts that are normally available in the shops.

#### Temperature regulation

The basic version of the Prestige is fitted with a microprocessor-controlled regulator (MCBA) which takes over both the safety functions (ignition, monitoring the flame, limiting the temperature, etc.) and control of the boiler temperature. This MCBA also includes a weather-dependent regulator. All you need do is connect the outdoor temperature sensor available as an option to the device. However, this regulator can also operate with a standard room thermostat (enabled/disabled). In addition, with the combination of a weather-dependent regulator and a room thermostat, you can regulate the temperatures based on the weather with compensation for the indoor temperature.

There are 4 parameters accessible to users, enabling them to adjust the settings they need. By entering a special maintenance code, qualified installers can access several other parameters to adapt the boiler to special requirements. In principle, these parameters are factory set for all normal applications.

#### Production of hot water

##### • Solo:

The Prestige Solo is custom-designed to operate for heating alone or in combination with the whole range of ACV water tanks. The SmartLine range is the number one choice for domestic applications. To simplify this combination, ACV has designed a special mini-tank connection kit that is simple to incorporate into the lining of the appliance for rapid and reliable assembly.

##### • AquaSpeed:

The Prestige AquaSpeed has a constant supply of hot water from its 6-litre tank that is directly and immediately available. It combines all the advantages of hot-water storage and immediate production: instant hot water without the need to wait for the reserves. The Prestige 32 AquaSpeed provides 13.3 litres of hot water per minute at 40°C, instantly and without waste ( $\Delta T$  30°C). The AquaSpeed mini tank is made of stainless steel and the hot water is heated in a copper spiral in the tank.

##### • Excellence:

The Prestige Excellence combines all the advantages of ACV's Tank-in-Tank systems with the comfort and space saving of a wall-mounted boiler: In a 63-cm shell, it includes a 62-litre stagnation steel Tank-in-Tank. The Prestige 32 Excellence supplies 258 litres of water at a temperature of 40°C in 10 minutes: In addition to their exceptional hot water supply capability, the Prestige Excellence tank-in-tanks feature:

- **A solution for scale deposits:** in view of the fact that the hot water tank can dilate and contract during the heating cycle, the ring-shaped shell prevents the formation of scale.

- **A guarantee against the risk of Legionnaire's Disease and bacteria:** the hot water tank is completely immersed in the primary circuit and the hot water is constantly maintained at a maximum temperature of 60°C.

- **Exceptional resistance against corrosion and aggression:** provided by the stainless steel.

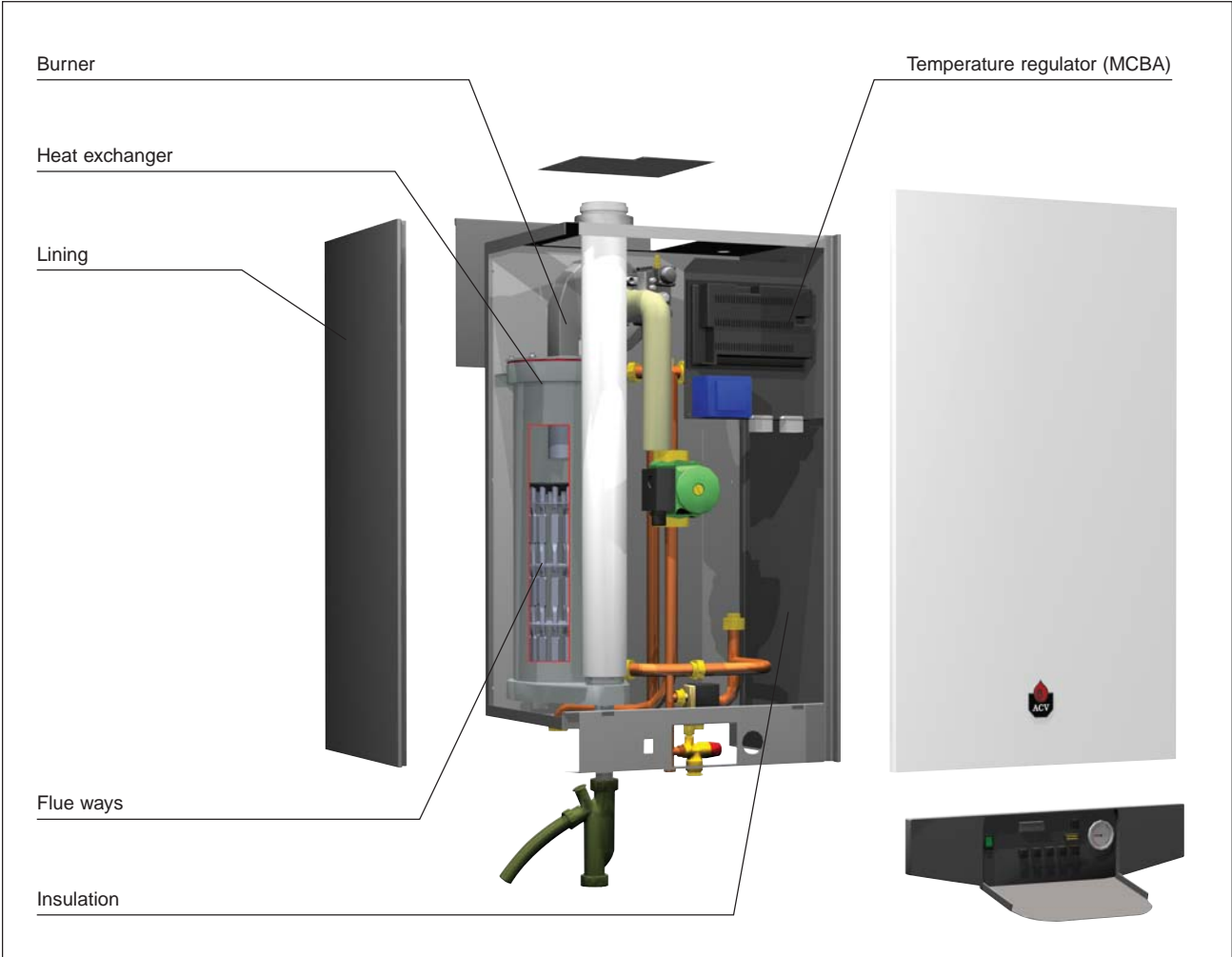
## FROST PROTECTION

The boiler is equipped with an integrated frost protection: as soon as the NTC 1 flow temperature drops below 7°C, the system activates the central heating pump. As soon as the NTC1 start temperature drops below 3°C, the system automatically ignites the burner until the temperature rises above 10°C. The pump continues to run for about 10 minutes.

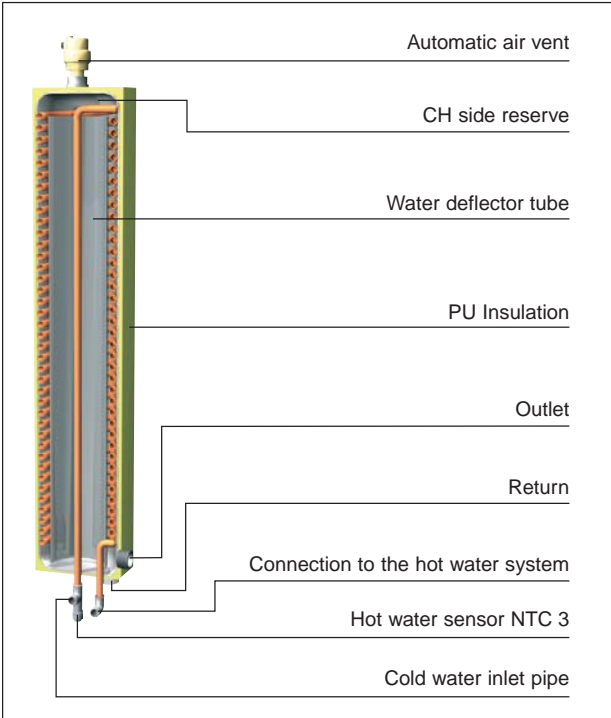
If an outdoor temperature sensor is connected to the system, the pump is activated as soon as the outside temperature drops below the specified threshold.

To provide efficient protection for the whole system, all of the valves on the radiators and the convectors should be completely open.

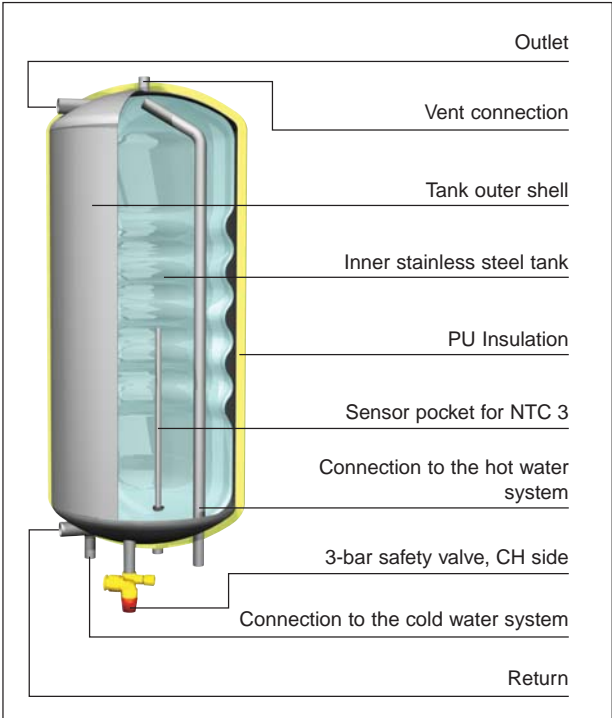
**PRESTIGE Solo**



**PRESTIGE AquaSpeed**



**PRESTIGE Excellence**



## TECHNICAL DATA

### NATURAL GAS MODEL

Central heating		Solo		AquaSpeed		Excellence	
		24	32	24	32	24	32
Max (intake) pressure	<b>kW</b>	24	32	24	32	24	32
Min (intake) pressure	<b>kW</b>	5.9	5.9	5.9	5.9	5.9	5.9
Max output 80/60°C	<b>kW</b>	23.3	30.8	23.3	30.8	23.3	30.8
Min. output 80/60°C	<b>kW</b>	5.8	5.8	5.8	5.8	5.8	5.8
Efficiency (high power) 80/60°C	<b>%</b>	97	96	97	96	97	96
Efficiency (low power) 80/60°C	<b>%</b>	98	98	98	98	98	98
Efficiency (high power) 45/30°C	<b>%</b>	105	104	105	104	105	104
Efficiency (low power) 45/30°C	<b>%</b>	107	107	107	107	107	107

Flue gases							
CO emissions CO (high power / min.)	<b>mg/kWh</b>	45 / 20	52 / 20	45 / 20	52 / 20	45 / 20	52 / 20
NOx emissions (EN483)	<b>mg/kWh</b>	66	66	66	66	66	66
NOx classification		5	5	5	5	5	5
Flue gas temperature — high power 80/60°C	<b>°C</b>	92	108	92	108	92	108
Flue gas temperature — high power 45/30°C	<b>°C</b>	-	77	-	77	-	77
Mass flow rate of combustion products	<b>Kg/h</b>	10.6	14.2	10.6	14.2	10.6	14.2
Flue gas pipe - Max. pressure drop	<b>mbar</b>	130	130	130	130	130	130
Concentric flue gas channel maximum length Ø 80 / Ø 125	<b>m</b>	20	20	20	20	20	20

Gas		I2E(S)B - I2Er - I2H - I2ELL					
Category (varies by country)							
Gas pressure — high power (E-Band)	<b>mbar</b>	20	20	20	20	20	20
Gas pressure — low power	<b>mbar</b>	25	25	25	25	25	25
G20 gas flow rate	<b>m³/h</b>	1.43	3.4	3.4	3.4	3.4	3.4
G25 gas flow rate	<b>m³/h</b>	3.9	3.9	3.9	3.9	3.9	3.9
CO <sub>2</sub> (high power) G20/25 (with front panel closed)	<b>% CO<sub>2</sub></b>	9.3	9.3	9.3	9.3	9.3	9.3
CO <sub>2</sub> (high power) G20/25 (with front panel open)	<b>%CO<sub>2</sub></b>	9.0	9.0	9.0	9.0	9.0	9.0
%CO <sub>2</sub> (low power) G20/25 (with front panel closed)	<b>% CO<sub>2</sub></b>	9.2	9.2	9.2	9.2	9.2	9.2

Hydraulic parameters							
Max. operating temperature	<b>°C</b>	90	90	90	90	90	90
Boiler water capacity	<b>l</b>	8	8	14	14	16	16
Domestic hot water circuit capacity	<b>L</b>	-	-	0.9	0.9	54	54
High operating power CC	<b>bar</b>	3	3	3	3	3	3
Heat exchanger pressure drop (ΔT = 20)	<b>mbar</b>	131	210	131	210	131	210

Dimensions							
Width	<b>mm</b>	500	500	500	500	630	630
Depth	<b>mm</b>	400	400	400	400	470	470
Depth (with backing)	<b>mm</b>	520	520	520	520	-	-
Height	<b>mm</b>	900	900	900	900	900	900
Weight	<b>Kg</b>	-	-	-	-	86	86

Electrical connection							
Class	<b>IP</b>	30	30	30	30	30	30
Supply voltage	<b>V/Hz</b>	230~/50	230~/50	230~/50	230~/50	230~/50	230~/50
Electrical power	<b>A</b>	0.8	0.8	1.2	1.2	1.2	1.2

**PROPANE MODEL**

<b>Central heating</b>		<b>Solo P</b>		<b>AquaSpeed P</b>		<b>Excellence P</b>	
		<b>24</b>	<b>32</b>	<b>24</b>	<b>32</b>	<b>24</b>	<b>32</b>
Max (intake) charge	<b>kW</b>	24	30.5	24	30.5	24	30.5
Min (intake) charge	<b>kW</b>	5.9	5.9	5.9	5.9	5.9	5.9
Max. output 80/60°C	<b>kW</b>	23.3	29.3	23.3	29.3	23.3	29.3
Min. output 80/60°C	<b>kW</b>	5.8	5.8	5.8	5.8	5.8	5.8
Efficiency (high power) 80/60°C	<b>%</b>	97	96	97	96	97	96
Efficiency (low power) 80/60°C	<b>%</b>	98	98	98	98	98	98
Efficiency (high power) 45/30°C	<b>%</b>	105	104	105	104	105	104
Efficiency (low power) 45/30°C	<b>%</b>	107	107	107	107	107	107

<b>Flue gases</b>							
CO emissions (high power / min.)	<b>mg/kWh</b>	-	-	-	-	-	-
CO/Nox emissions (low power)	<b>mg/kWh</b>	-	-	-	-	-	-
NOx classification		-	-	-	-	-	-
Flue gas temperature — high power 80/60°C	<b>°C</b>	92	108	92	108	92	108
Flue gas temperature — high power 45/30°C	<b>°C</b>	-	77	-	77	-	77
Mass flow rate of combustion products	<b>Kg/h</b>	10.9	14.6	10.9	14.6	10.9	14.6
Maximum pressure drop of the flue gas system	<b>mbar</b>	130	130	130	130	130	130
Max. length of the concentric flue gas system Ø 80 / Ø 125	<b>m</b>	20	20	20	20	20	20

<b>Gas</b>			<b>I3P</b>					
Category (varies by country)			30 / 37 / 50					
G31 pressure (propane)	<b>mbar</b>		30 / 37 / 50					
G31 gas flow rate (propane)	<b>m³/h</b>	0.98	1.3	0,98	1.3	0,98	1.3	
CO <sub>2</sub> (high power) G31 (with front panel closed)	<b>% CO<sub>2</sub></b>	10.5	10.5	10.5	10.5	10.5	10.5	
CO <sub>2</sub> (high power) G31 (with front panel open)	<b>% CO<sub>2</sub></b>	10.3	10.3	10.3	10.3	10.3	10.3	
%CO <sub>2</sub> (low power) G31 (with front panel closed)	<b>% CO<sub>2</sub></b>	10.4	10.4	10.4	10.4	10.4	10.4	

<b>Hydraulic parameters</b>							
Maximum operating temperature	<b>°C</b>	90	90	90	90	90	90
Boiler water capacity	<b>l</b>	8	8	14	14	16	16
Domestic hot water circuit capacity	<b>L</b>	-	-	0.9	0.9	54	54
Max. operating temperature CC	<b>bar</b>	3	3	3	3	3	3
Heat exchanger pressure drop (ΔT = 20)	<b>mbar</b>	131	193	131	193	131	193

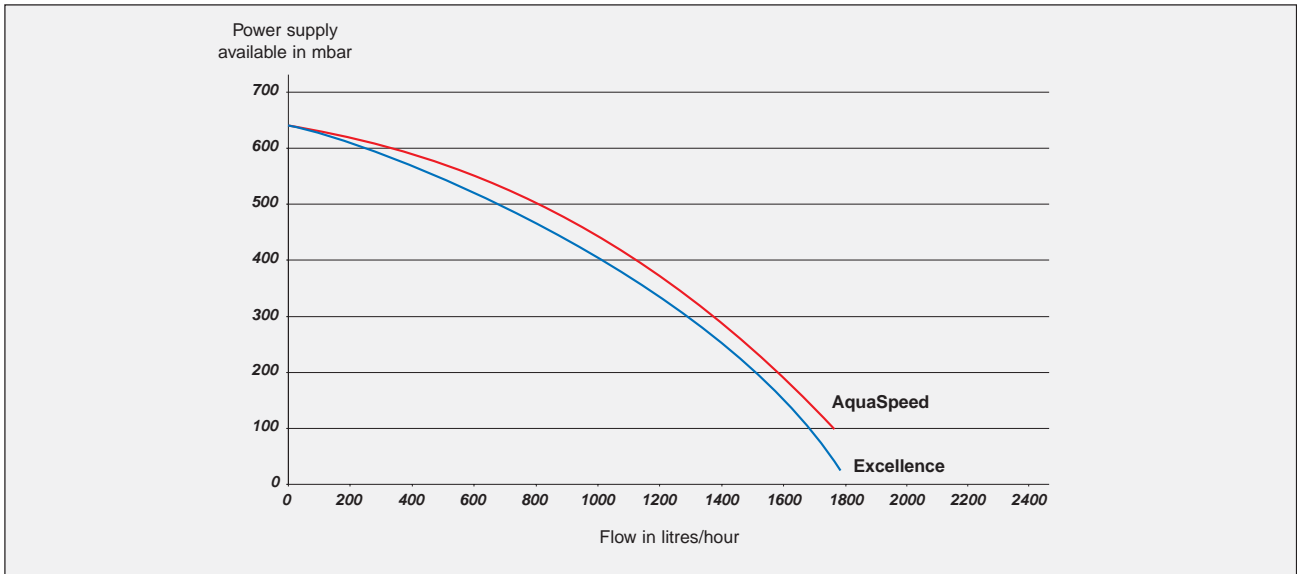
<b>Dimensions</b>							
Width	<b>mm</b>	500	500	500	500	630	630
Depth	<b>mm</b>	400	400	400	400	470	470
Depth (with backing)	<b>mm</b>	520	520	520	520	-	-
Height	<b>mm</b>	900	900	900	900	900	900
Weight	<b>Kg</b>	-	-	-	-	86	86

<b>Electrical connection</b>							
Class	<b>IP</b>	30	30	30	30	30	30
Supply voltage	<b>V/Hz</b>	230~/50	230~/50	230~/50	230~/50	230~/50	230~/50
Electrical power	<b>A</b>	0.8	0.8	1.2	1.2	1.2	1.2

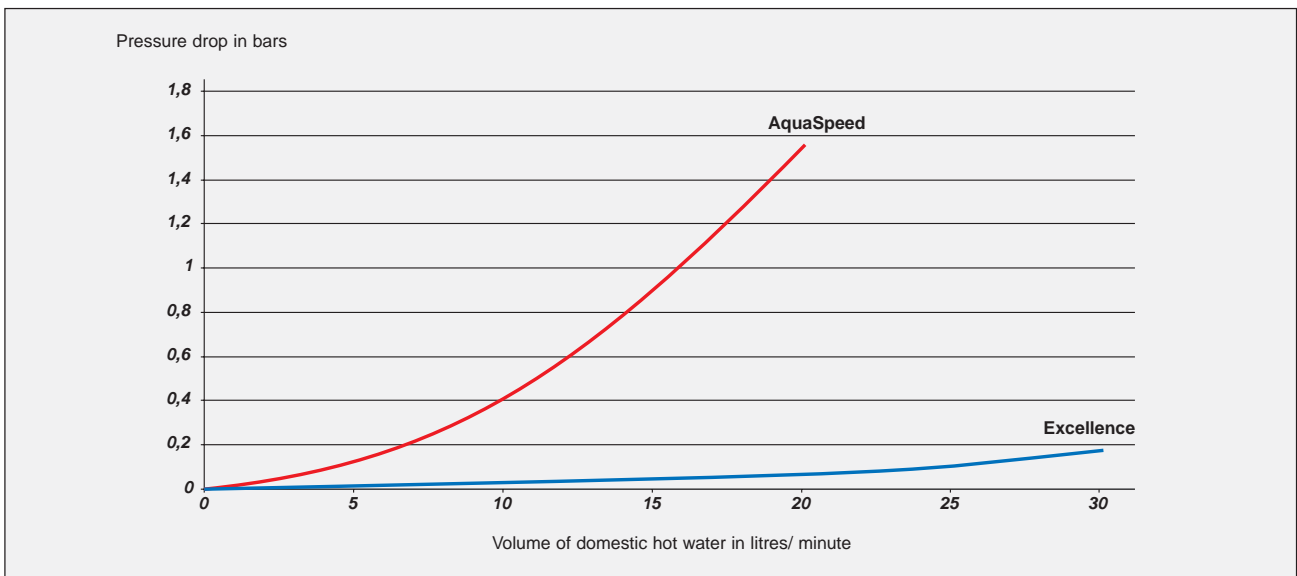


## TECHNICAL DATA

### DIAGRAM OF THE PUMP (output available for the CH circuit pump)



### DIAGRAM OF THE PRESSURE DROP ON THE DOMESTIC HOT WATER SIDE



### DOMESTIC HOT WATER FEATURES

		Prestige AquaSpeed	
Operating conditions at 80°C		24	32
Flow at 40°C (ΔT = 30°C)	<b>l/min</b>	11	14.5
Flow at 60°C (ΔT = 50°C)	<b>l/min</b>	6.6	8.3

		Prestige Excellence	
Operating conditions at 80°C		24	32
Peak flow at 40°C (ΔT = 30°C)	<b>L/10'</b>	175	224
Peak flow at 40°C (ΔT = 30°C)	<b>L/60'</b>	733	835
Constant flow at 40°C (ΔT = 30°C)	<b>L/hour</b>	653	745
Peak flow at 60°C (ΔT = 50°C)	<b>L/10'</b>	102	103
Peak flow at 60°C (ΔT = 50°C)	<b>L/60'</b>	352	353
Constant flow at 60°C (ΔT = 50°C)	<b>L/hour</b>	316	320
Pre-heat time	<b>minutes</b>	27	25

## INSTALLATION LOCATION

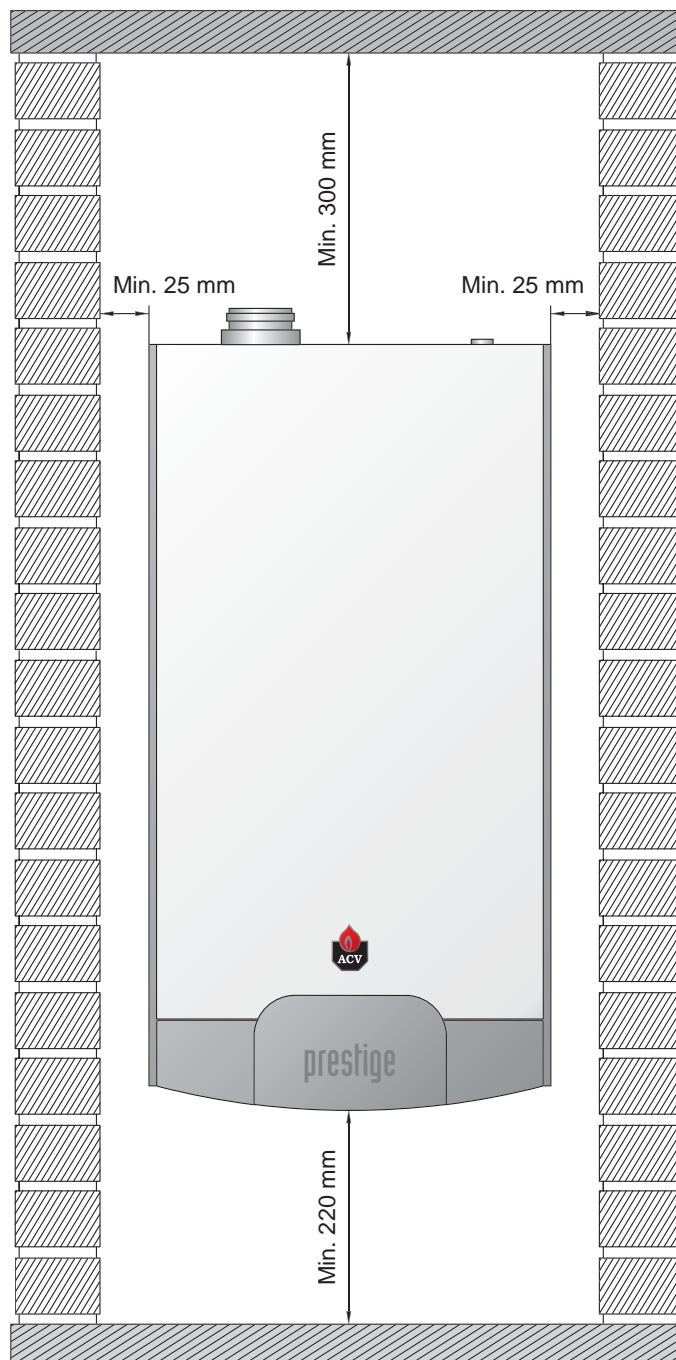
### Important:



- Make sure that all air vents are unobstructed at all times.
- Do not store any inflammable products in this room.
- Do not store any corrosive products, such as paint, solvents, salts, chlorine products and other detergent products near the appliance.
- If you smell gas, do not switch on any lights, turn off the gas tap at the meter, ventilate the rooms and contact your installer.

### Accessibility:

The appliance must be positioned in such a way as to be easily accessible at all times. In addition, the following minimum distances around the appliance must be complied with:

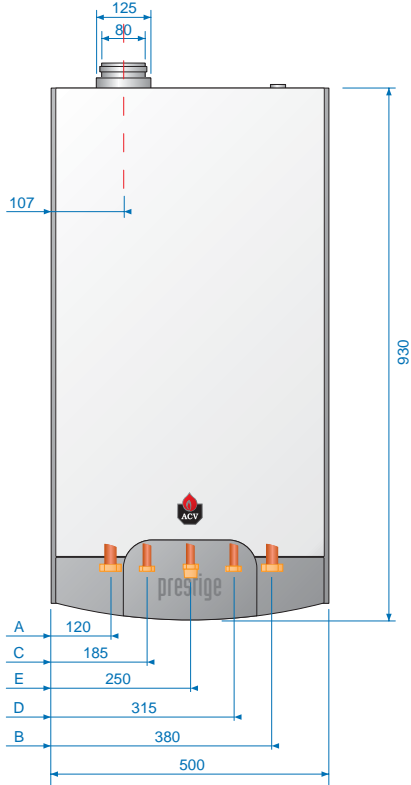


# INSTALLATION INSTRUCTIONS

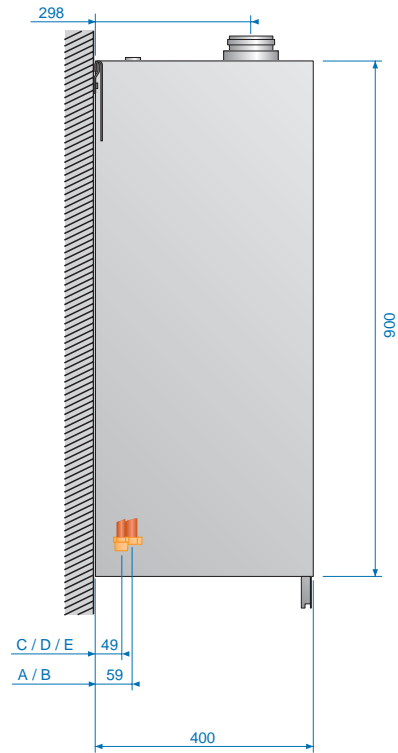
## DIMENSIONED SKETCH OF THE APPLIANCE

A = Outlet 1" Female | C = Hot water 1/2" Female | E = Gas 3/4" M  
 B = Return 1" Female | D = Cold water 1/2" Female

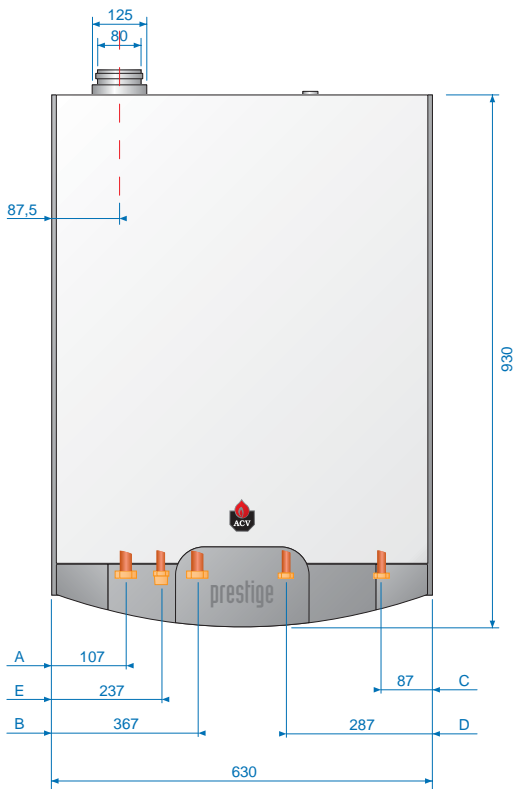
Solo / AquaSpeed — Front view



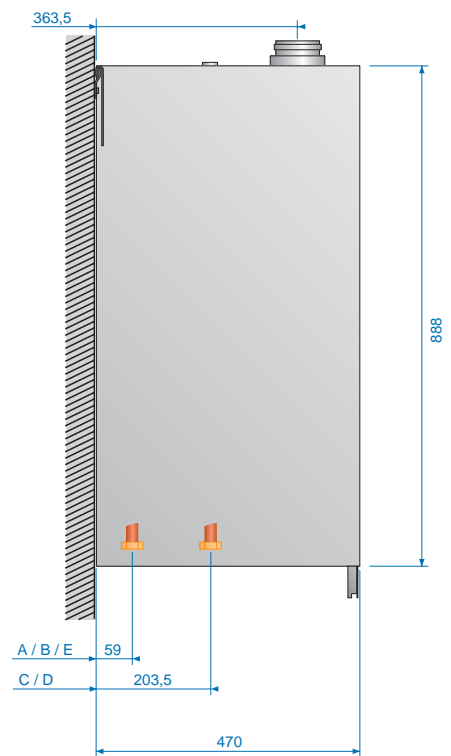
Solo / AquaSpeed — Side view



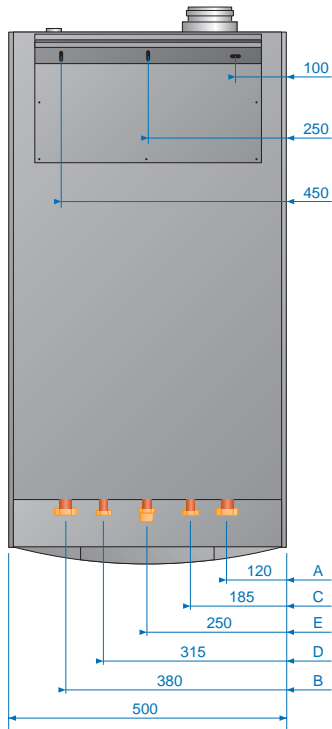
Excellence — Front view



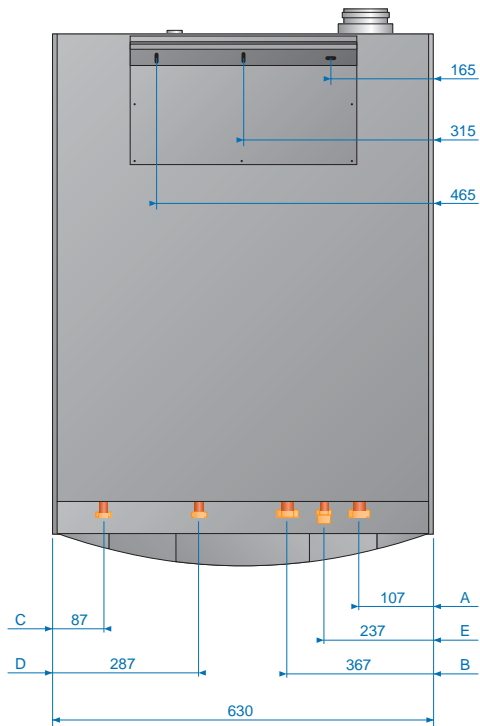
Excellence — Side view



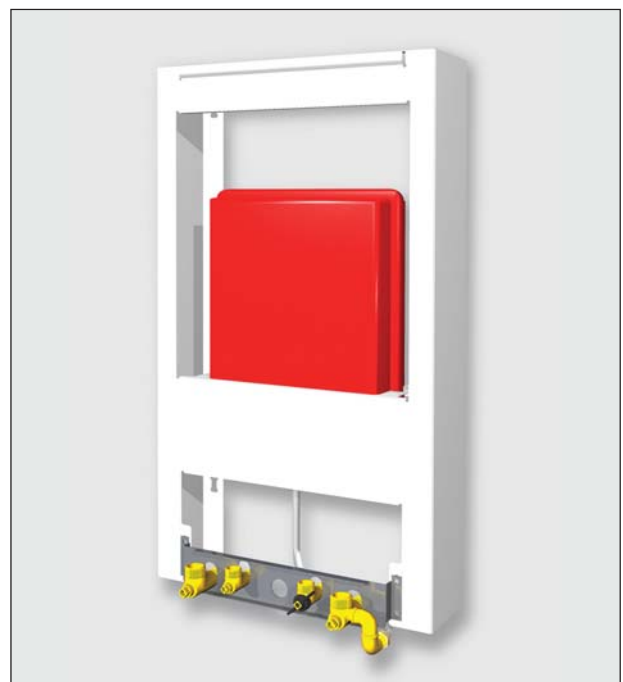
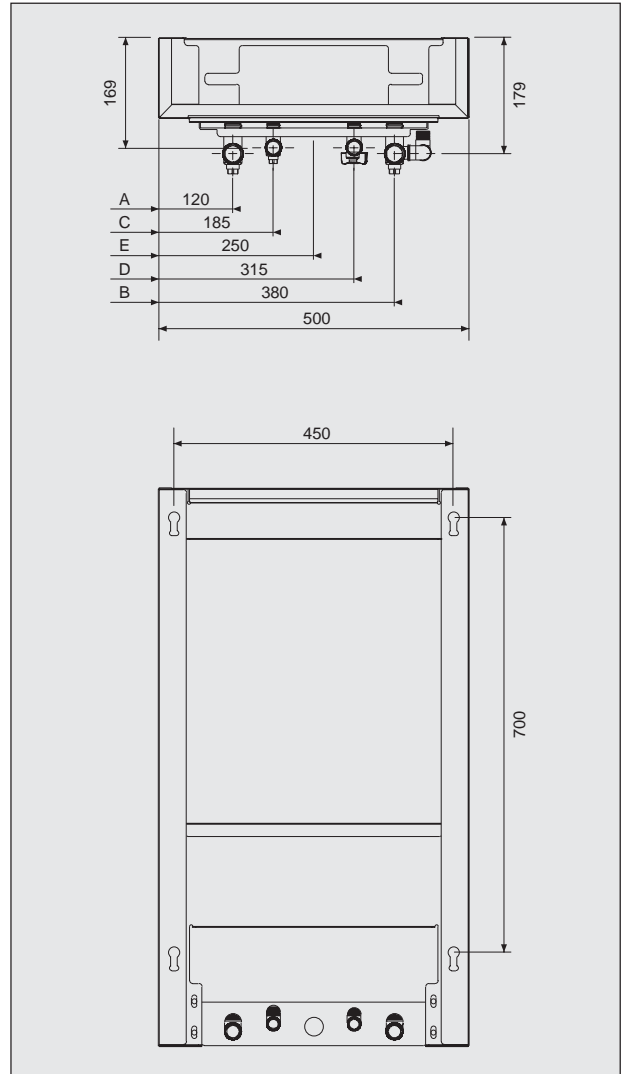
**Solo / AquaSpeed — Rear view**



**Excellence — Rear view**



**ASSEMBLY PANEL**



# INSTALLATION

## CONNECTION TO THE CHIMNEY



- The connection must be completed in compliance with the NBN D51-003 standard, taking into account the local energy supplier's instructions, fire regulations and regulations relative to "nuisance" to neighbours.
- The Prestige has an inbuilt gas/air ratio regulator, which makes it largely independent of the pressure drop in the air intake and flue gas extraction system. However, the maximum pressure drop for this system may not be exceeded, or the pressure will diminish. Nevertheless, the gas/air ratio regulator continuously guarantees optimum combustion with very low emission levels.
- The horizontal flue gas extraction pipes must always be installed after the appliance and they must have a sufficient fall back: 3° fall back = 5mm per metre of pipe
- There must be no obstacles or openings of any other appliances within a radius of 0.5 metres around the mouth of the Prestige.
- **The maximum flue resistance is 130 Pascal.** You can use the following table as the basis for calculating this value (please also refer to the specimen calculation presented under the table).

**Table of flue resistance in Pascal (1 Pascal = 0.01mbar)**

	Pipe concentric Ø 80/125 mm	Air intake separate Ø 80 mm	Air extraction separate Ø 80 mm
1m straight pipe	5.0	1.5	2.0
Pipe with a monitoring section	2.5	-	1.0
90° pipe bend	6.0	1.9	3.4
45° pipe bend	4.0	1.3	2.3
Side nozzle	20.0	-	-
Top nozzle	15.0	-	-

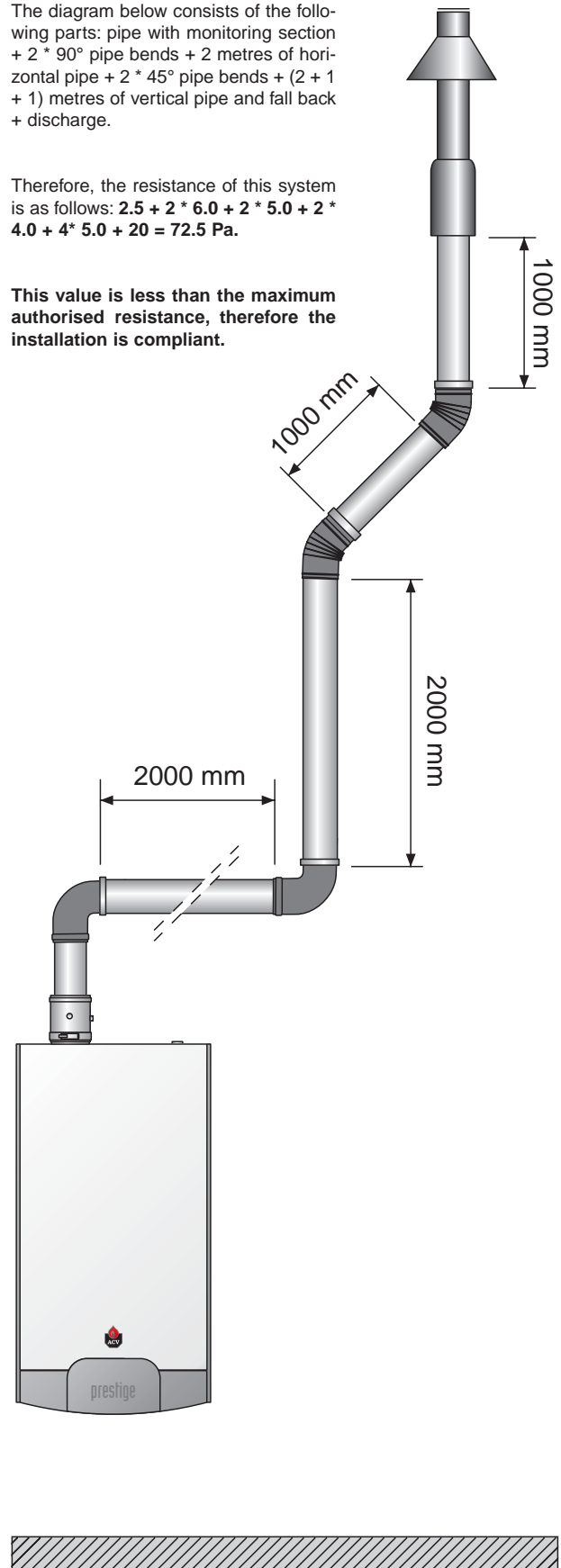
*This table is based on the equipment offered by ACV and cannot be applied generally.*

### Sample calculation:

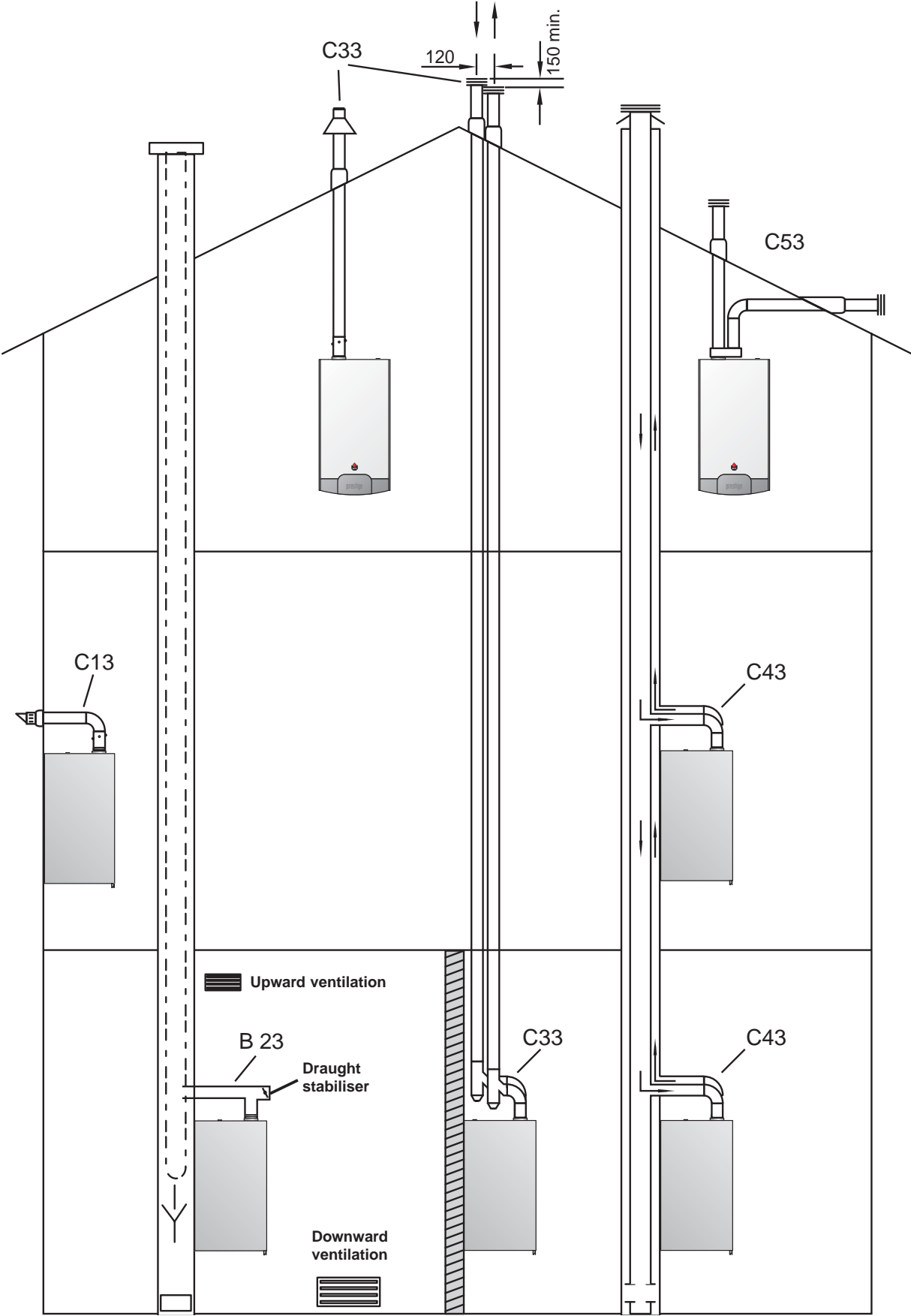
The diagram below consists of the following parts: pipe with monitoring section + 2 \* 90° pipe bends + 2 metres of horizontal pipe + 2 \* 45° pipe bends + (2 + 1 + 1) metres of vertical pipe and fall back + discharge.

Therefore, the resistance of this system is as follows:  $2.5 + 2 * 6.0 + 2 * 5.0 + 2 * 4.0 + 4 * 5.0 + 20 = 72.5 \text{ Pa}$ .

**This value is less than the maximum authorised resistance, therefore the installation is compliant.**

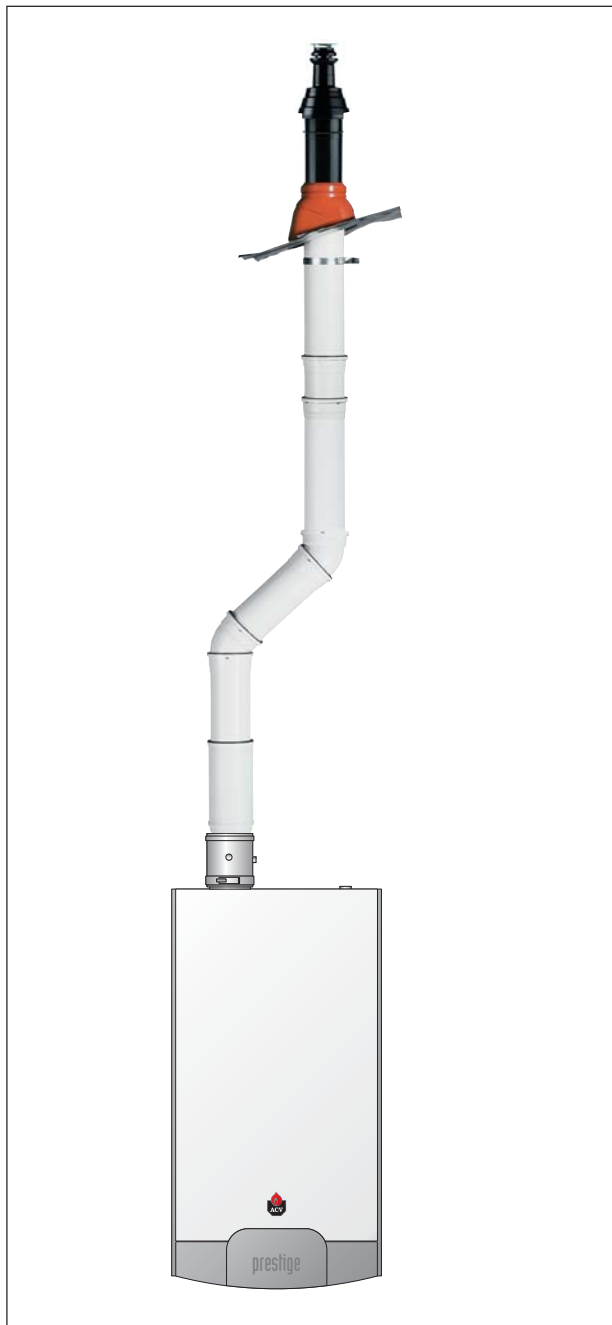


Options for connection to the chimney



# INSTALLATION

Type	ACV code
1 Vertical terminal	537D6184
2 Horizontal terminal	537D6185
3 250mm L pipe	537D6186
3 500mm L pipe	537D6187
3 1,000mm L pipe	537D6188
4 500mm L adjustable pipe Adjustable 325 - 400	537D6189
5 135° pipe bend	537D6190
6 90° pipe bend	537D6191
7 Condensation meter and sensor	537D6192
8 Sensor	537D6193
9 Ceiling plate with removable bearing	537D6194
9 Adjustable removable bearing	537D6195
10 125 mm attachment	537D6183



**CONNECTION TO THE HOT WATER SYSTEM**

Flush out the system before connecting it.



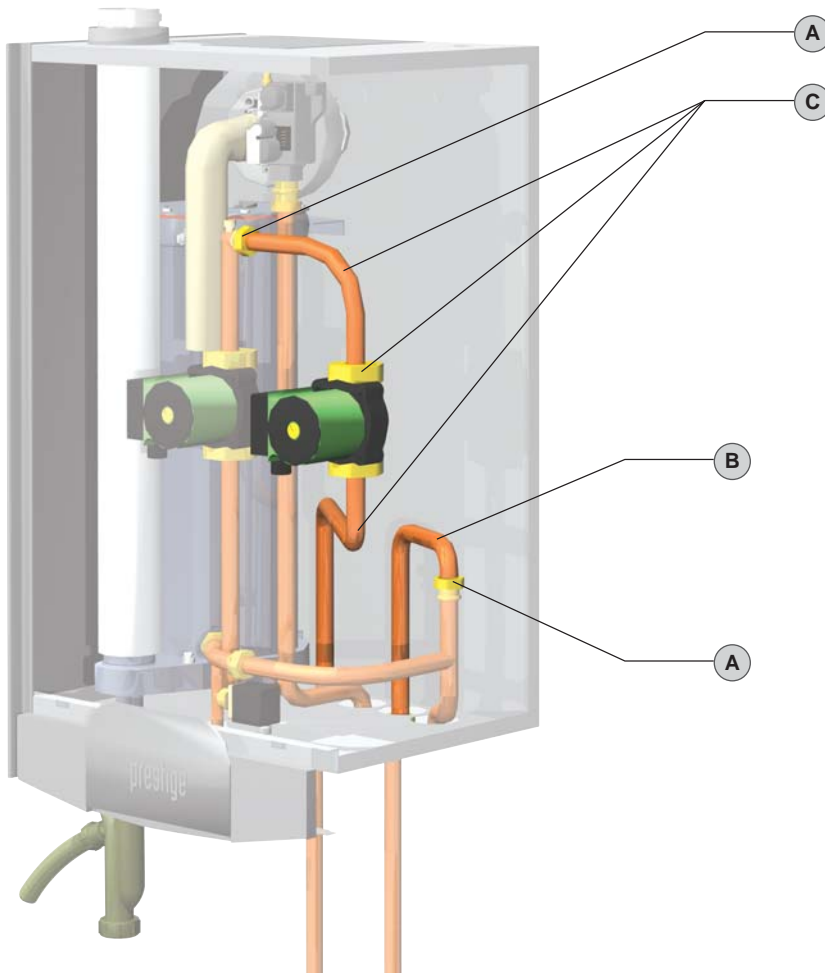
**Important**  
It is essential that the water tank is under pressure before the central heating circuit is filled.

**Prestige Solo**

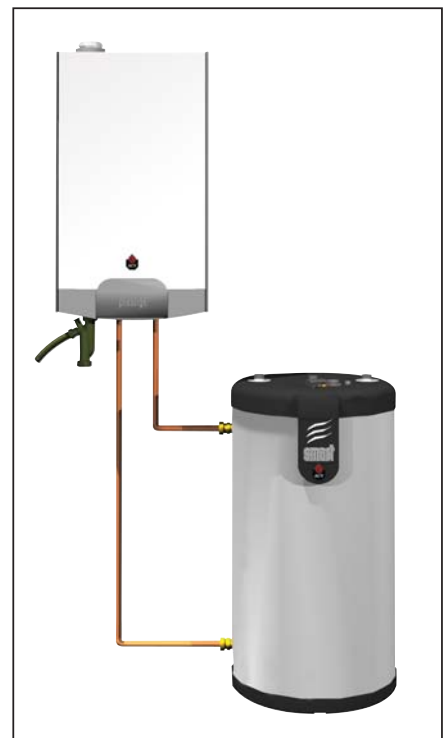
The Prestige Solo can easily be combined with all the ACV tanks using the optional kit available (ACV No. 10800079).

- Remove the two cowls (A) from the boiler and connect the water tank return pipe (B) after the exchanger and the flow pipe (C) to the charging pump and the non-return valve (see the diagram below).

- Connect the boiler taps intended to charge the tank to those intended for the tank flow and return. Fill the system and check that there are no leaks.
- Connect the 230V 3-pin plug located in the boiler to the pump socket.
- If the hot water control is operated by a water tank thermostat:
  - Connect the tank thermostat to clips 3 and 4 of the X3 connection pliers: see the electrical diagram on page 19.
  - Set parameter 2 to 1 to start the production of hot water.
  - Set the tank thermostat to the desired hot water temperature.
- If the hot water is controlled by a temperature sensor:
  - Insert the sensor in the tank sensor pocket.
  - Connect the sensor to clips 3 and 4 of the X3 connection pliers: see the electrical diagram on page 19.
  - Set parameter 1 to the desired hot water temperature.
  - Set parameter 2 to 1 to start the production of hot water.
  - Set parameter 35 to 12 to recognise the operation of the sensor.



*Prestige Solo + Smart Line*





## INSTALLATION

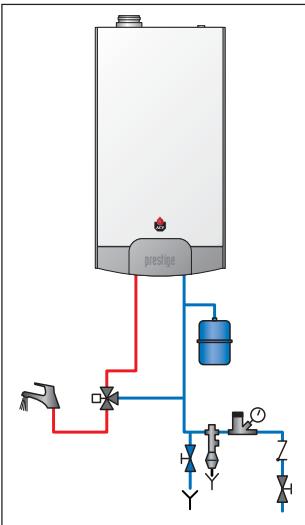


The hot water output temperature may reach temperatures in excess of 60°C, which can cause burns. We therefore recommend that you install a thermostatic mixer immediately after installing the appliance.



If stop valves are used in the domestic hot water system, they can cause pressure waves when closed. Use devices designed to reduce water hammer to avoid this phenomenon.

### Prestige AquaSpeed



The Prestige AquaSpeed can be connected directly to the domestic hot water circuit.

The connection measurements are given in the diagram on pages 10 - 11.

Flush out the system before connecting the domestic hot water part.

The installation must be fitted with an approved safety unit with a 6-bar safety valve, a non-return valve and a shut-off valve.

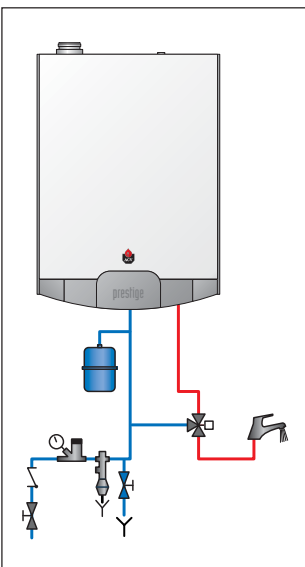
If the flow demands become too high, the desired water temperature will not be reached.

To avoid this phenomenon, we recommend that you place a

flow limiter in the cold water pipe just before the appliance.

During the heating process, the domestic hot water dilates and the pressure increases. As soon as the pressure exceeds the safety valve setting, the valve opens and discharges a small quantity of water. Using a hot water expansion vessel (2 litres at least) will prevent this phenomenon and reduce water hammer.

### Prestige Excellence



The Prestige Excellence can be connected directly to the domestic hot water circuit.

The connection measurements are given in the diagram on pages 10 - 11. Flush out the system before connecting the domestic hot water part.

The system must be fitted with an approved safety unit with a 6-bar safety valve, a non-return valve and a shut-off valve.

During the heating process, the domestic hot water dilates and the pressure increases.

As soon as the pressure exceeds the safety valve setting, the valve opens and discharges a small quantity of water. Using a hot water expansion vessel (5 litres at least) will prevent this phenomenon and reduce water hammer.

Drain the tank by turning on a hot water tap. Beware: the discharge of water and air at the same time causes the water to flow in fits and starts.

## CONNECTION TO THE GAS



- The Prestige is fitted with a 3/4" M connector, to which you can connect the gas tap.
- You must comply with the NBN D51-003 standard for connections to the gas and, if applicable, with the other standards in force in the location of the connection.
- Where there is a risk of dirt stemming from the network, place a gas filter upstream from the connection.
- Drain the gas pipe and check in minute detail that all the boiler pipes, both inside and outside, are sealed.
- Check the gas pressure in the system. Consult the technical data table on pages 6 and 7.
- Check the gas pressure and consumption when commissioning the appliance.

## CONNECTIONS TO THE CENTRAL HEATING

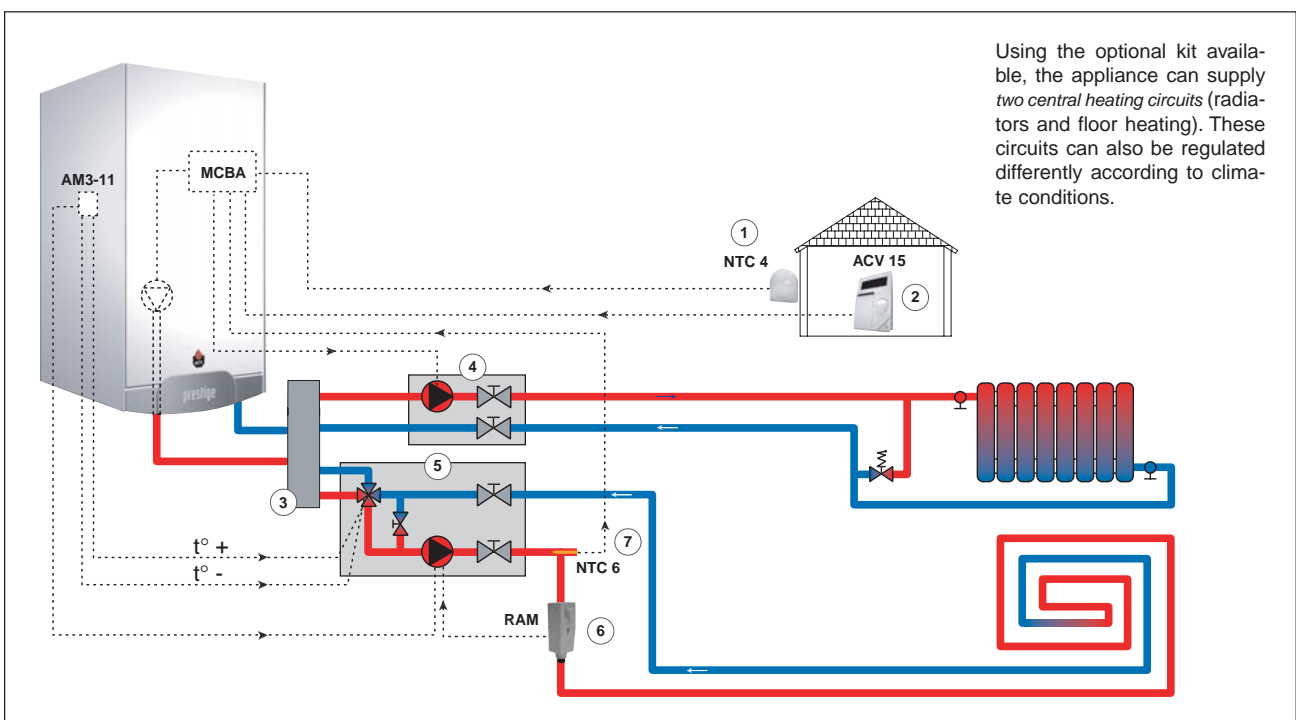
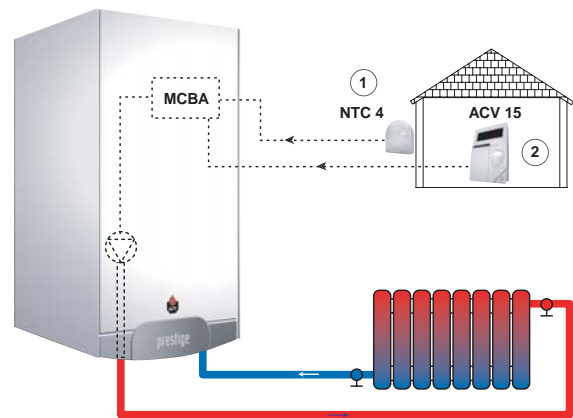
- All of the central heating system must be meticulously flushed out with clear water before the appliance is connected.
- Set up the automatic air vent above the appliance close to the Prestige AquaSpeed. You will find this in the polystyrene packing.
- Fit the device level, using the hook provided or the optional assembly panel for the Prestige AquaSpeed. See also the assembly plan on pages 10-11.
- You may find increased noises if the appliance is fitted against a wall made of wood or other lightweight construction. Using the rubber feet can reduce this effect.
- The connections to the central heating system and the domestic hot water system are fitted with nuts provided, enabling swift assembly using the optional AquaSpeed panel. If you do not use the assembly panel, then you must use swivel connectors with an edge and flat seals for the connections.
- The central heating safety valve is incorporated under the appliance and can be linked to the drain with an open connection (to allow inspection).
- The central heating pump is inside the appliance and you can change its speed according as required using the three-way switch, if there are noises in the pipes. Please go to page 8 for the diagram showing the system's efficiency.
- The Prestige AquaSpeed assembly panel is fitted with an integrated 12-litre hot water expansion vessel. This is sufficient for systems with a capacity of approximately 120 litres for the central heating. For larger-capacity systems, you can add a suitable expansion vessel to the AquaSpeed, the Prestige Solo and the Prestige Excellence for the central heating.
- Fill the system with fresh mains water. Contact your ACV representative about the use of inhibitors.
- It is possible that the pumps may be blocked due to the presence of residual water from tests completed on the appliance. Therefore, we recommend that you unblock the pumps before filling the appliance.
- You will find the connection for the filling valve and/or drainage valve on the bottom of the appliance. Fill the appliance to a minimum pressure of one bar. Drain the whole system and re-fill the appliance to a pressure of one bar.
- The system must be designed to ensure that there can be a continuous flow through it for the central heating.

If this flow is not guaranteed, for example if using electrostatic valves, you should install a pressure-dependent bypass in the system.

- Fit the siphon, fill it with tap water and connect the hose to the drain using a connection with an inspection section. Make sure you avoid the formation of condensation or water from condensation to prevent the risk of freezing.

	Description	ACV code
1	NTC4 Outdoor temperature sensor	10510100
2	ACV 15 Room thermostat	10800018
3	Two-circuit hydraulic kit	10800077
4	Direct circuit connection kit	-
5	Mixed circuit connection kit	-
6	System thermostat	10501900
7	NTC Sensor (to be fitted in the sensor pocket)	54769003

The Prestige can be used to feed only one circuit directly (radiators or floor heating). Depending on climate conditions, these circuits can be supplied using a room thermostat or a combination of an outdoor temperature sensor and a room thermostat.



Using the optional kit available, the appliance can supply two central heating circuits (radiators and floor heating). These circuits can also be regulated differently according to climate conditions.

# INSTALLATION

## ELECTRICAL CONNECTION

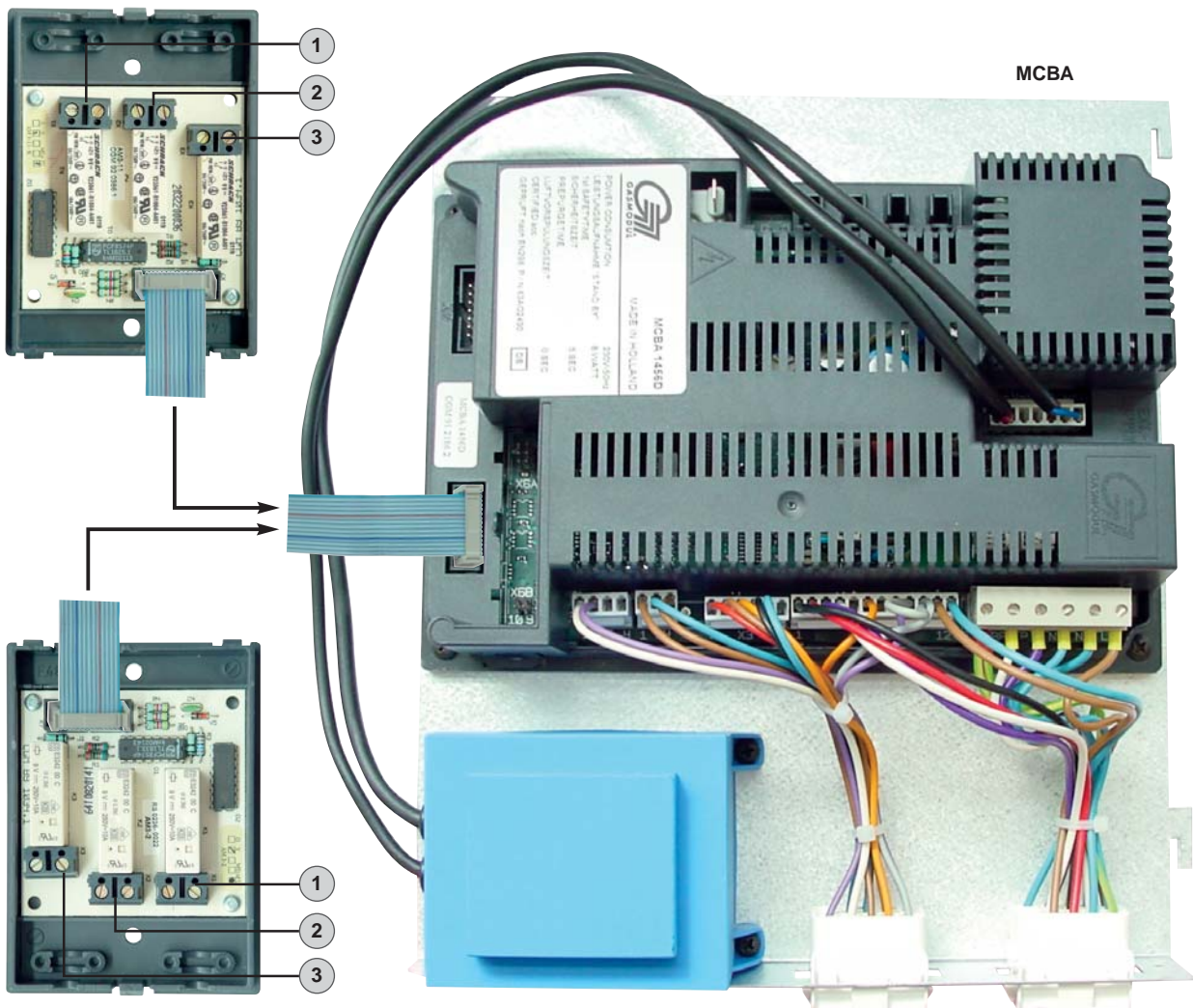
- The system must be connected in accordance with national and local regulations in force.
- The appliance is fitted with the standard network power supply cable with a lateral earth and a prong earth. Plug the cable into a wall socket connected to the earth.
- The appliance is designed to be used at 230V 50Hz.
- Use of the appliance can be adapted to climate conditions using the outdoor temperature sensor, available as an option. (art. No. 10510100). The sensor should be placed on the north wall of the house, at a height of approximately two metres. In addition, the sensor should be connected to socket X3, connection 3-4 (see page 19).
- You can connect a standard enabled/disabled room thermostat with a contact without potential. We offer a room thermostat as part of option art. No. 10800018. Connect this to socket X3, connection 1-2 (see page 19).

- The AM 3-11 unit, available as an option, allows you to connect a second circuit. This unit is connected to socket X8 on the MCBA using the connection cable supplied. This unit has a relay to supply the pump for the second central heating circuit, a relay to open the external three-way valve, and a relay to close this valve. The MCBA is set in the standard manner for the three-way valves, with a 150-second time delay for the control. Please see the connection diagram below.
- You can also connect the AM3-2 alarm unit to the MCBA as an option. This unit emits a signal through a relay when the burner is operating and the boiler breaks down.

Please see the connection diagram below.

### Alarm unit: AM 3-11

1. This switch cuts out when the pump for the second central heating circuit is powered on.
2. This switch cuts out to close the three-way valve for the second central heating circuit.
3. This switch cuts out to open the three-way valve for the second central heating circuit.



### Alarm unit: AM 3-2

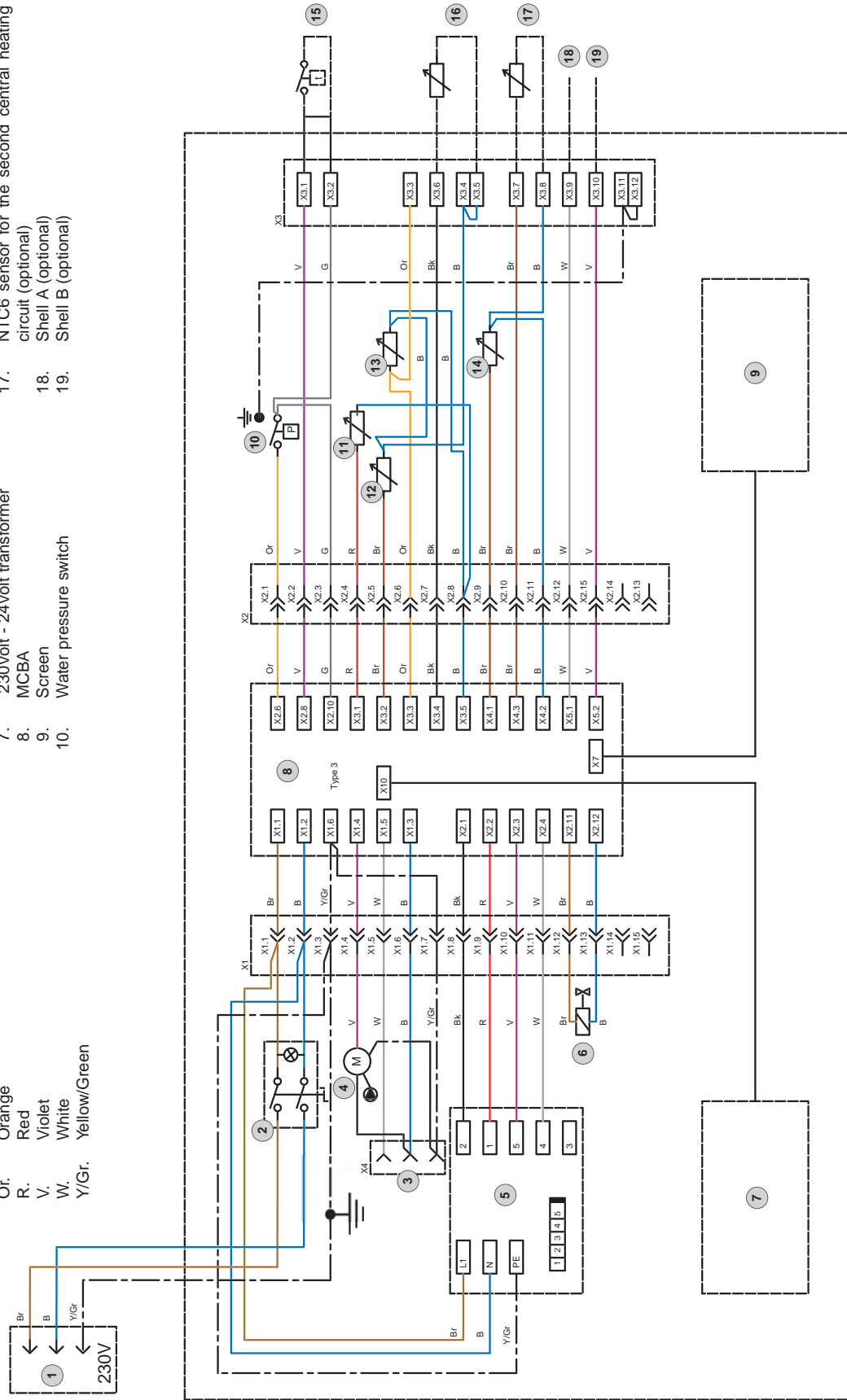
1. Alarm: the switch cuts out when the MCBA is locked.
2. External gas valve or burner run indicator lamp: the switch cuts out when fan is on.
3. Not used: the switch cuts out when there is a demand for hot water.

FUNCTIONAL DIAGRAM

- 11. NTC1 flow sensor
- 12. NTC2 return sensor
- 13. NTC3 domestic hot water sensor
- 14. NTC5 flue gas temperature sensor
- 15. Room thermostat (optional)
- 16. NTC4 outdoor temperature sensor (optional)
- 17. NTC6 sensor for the second central heating circuit (optional)
- 18. Shell A (optional)
- 19. Shell B (optional)

- 1. 230V connection cord
- 2. Start/Stop switch
- 3. Water tank charging pump socket
- 4. Pump
- 5. Burner
- 6. Gas valve
- 7. 230Volt - 24Volt transformer
- 8. MCBA
- 9. Screen
- 10. Water pressure switch

- Colour key**
- B. Blue
  - Bk. Black
  - Br. Brown
  - G. Grey
  - Or. Orange
  - R. Red
  - V. Violet
  - W. White
  - Y/Gr. Yellow/Green



## COMMISSIONING THE SYSTEM



- Slowly fill the tank and drain it by turning on the hot water tap. Drain all the taps and check that there are no leaks in the domestic hot water system.
- Fill the whole system up to a minimum pressure of 1 bar (preferably 1.5 bar), using the boiler's fill valve. Fill the system slowly and drain it using the central heating flow pipe manual air vent. Also check that the automatic air vent (AquaSpeed) on the tank is working. Check that there are no leaks in the central heating system.
- Turn on the gas tap, drain the pipe and check that there are no leaks in the system.
- Check that the siphon is filled.
- Connect the plug to the wall socket and power on the appliance. If need be, place the room thermostat to its highest position. The boiler should start. Check the gas pressure and allow the boiler to heat up for a few minutes. Set the boiler to High Power mode and check the CO<sub>2</sub> device (see the technical data on page 6-7). Then, set the boiler to Low Power mode and check the CO<sub>2</sub> device again (see technical data page 6-7).
- Set the central heating and hot water temperatures following the values given in the Directions for Use.
- Drain the central heating system again and, if necessary, re-fill it.
- Make sure the central heating system is correctly balanced and, if necessary, adjust the valves to prevent a greater or lesser flow than planned to some circuits or radiators.

### Checking the settings

- Check that the parameters are set in accordance with the user's needs: see page 3, Directions for Use.
- Check the boiler settings: this task can only be carried out by an ACV-trained installer or by the ACV maintenance department.

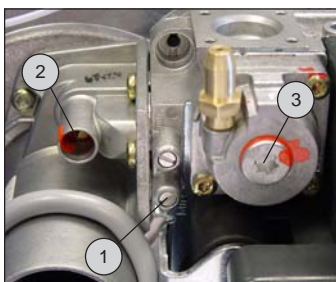
Set the appliance to High Power mode by simultaneously pressing the mode and Plus keys. Check the dynamic gas pressure at the gas valve (see diagram below, ref. 1). This must be at least 18 mbars.

Wait a few minutes for the appliance to heat up to a minimum temperature of 60°C. Check the CO<sub>2</sub> setting using a measurement instrument. Please see the technical data table on page 6-7 for the optimum value. To increase the CO<sub>2</sub> value, turn the venturi screw anti-clockwise; turn it clockwise to reduce the value (see diagram below ref. 2)

Then put the appliance to High Power mode by simultaneously pressing the mode and Plus keys. Wait a few minutes for it to stabilise. Check the CO<sub>2</sub> value. It should be either equal to the full power value or a maximum of 0.5% less than this value. If you record a significant deviation, please contact the ACV maintenance department.

### Ref.3

The gas valve offset setting is a sealed factory setting. In principle, it may not be modified.



## INSPECTION AND MAINTENANCE



**ACV recommends that you have your boilers inspected and cleaned if need be at least once a year.**

Plug out the appliance before undertaking any work, even if only recording measurements and adjusting the settings.

- Check that the siphon is not fouled, fill it, if need be, and check that there are no leaks.
- Check that the safety valves are operating correctly.
- Drain the whole system and if necessary re-fill the appliance to a pressure of 1.5 bar.
- Check the boiler charge in High Power mode. If there is a big difference between this value and the original setting, the deviation could mean a blockage in the air intake pipes or flue gas extraction pipes, or that the exchanger has become fouled with an accumulation of dirt.
- AquaSpeed: Check the domestic hot water flow and the temperature. These values could indicate a poorly regulated flow limiter (new setting) or, in areas where the water is very hard, gradual scale formation in the exchanger. To clean the AquaSpeed mini-tank with chemicals, you can connect the descaling pump directly to the hot and cold water connection. Follow the manufacturer's instructions for using the descaler and the descaling product or contact your ACV distributor for more information.



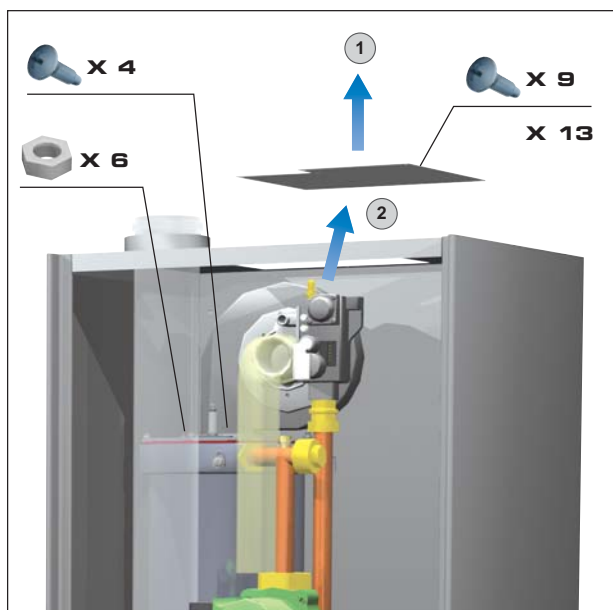
### Cleaning the exchanger

- Dismantle the burner following the instructions on page 21
- Remove the boiler insulation.
- Clean the chamber using an aspirator.
- Dismantle the connection from the chimney to the exchanger.
- Check that the condensation tank is not fouled and clean it if need be.
- Check the burner insulation and seal. Replace them if necessary.
- Check the electrode and replace if necessary.
- Assemble the burner and check that there are no leaks.
- Power on the appliance. Put the appliance to High Power mode and make sure there are no leaks.
- Check the gas pressure and the CO<sub>2</sub> setting following the instructions in the preceding section.

## DISMANTLING THE PARTS

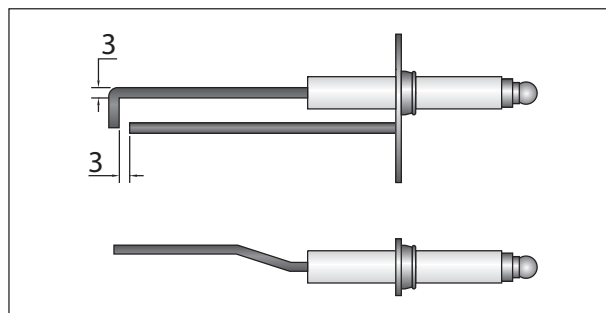
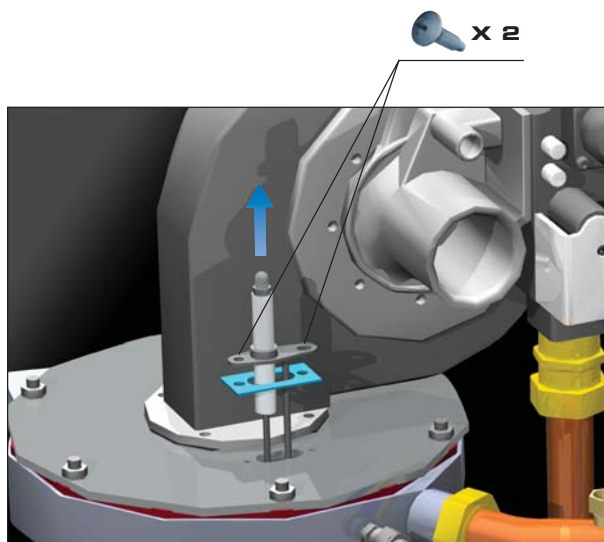
### Dismantling the burner

- Remove the top cover (1) of the boiler (*unscrew 9 screw in place*).
- Unplug the fan plugs (24V and 230V), the ignition cable, the gas valve control and the ignition electrode earth.
- Loosen the 6 burner nuts using a ratchet wrench.
- Unscrew the three-way coupling on the gas pipe.
- In one unit, lift up the burner with the fan and the gas valve to remove them from the exchanger. Be careful not to damage the burner insulation in the exchanger.
- Dismantle the burner via the top cover of the appliance.
- Check the condition of the insulation and the seals and replace them if necessary before re-assembling the burner following the same procedure but in the reverse order.



### Dismantling and checking the electrode

- Remove the ignition cable.
- Remove the two fixing screws.
- Remove the electrode earth but make sure the serrated washer is fixed between the earth cable and the electrode when re-assembling.
- Check the condition of the seals and replace them if necessary before re-assembling the electrode following the same procedure but in the reverse order.



### Dismantling the exchanger

- Drain the water from the central heating system using the connection under the appliance.
- Allow the appliance to drain completely.
- Dismantle the electrical connections downstream from the burner, as well as the NTCs.
- Dismantle the exchanger central heating flow pipes and return pipes. Exercise caution when dismantling the parts as residual water may escape from the exchanger.
- Dismantle the connection at the siphon and remove the nut between the siphon and the exchanger.
- Lift up the exchanger in one piece standing upright. The exchanger detaches from its hook and is fully released.
- Check the condition of the seals and replace them if necessary before re-assembling the exchanger following the same procedure but in the reverse order.

### AquaSpeed: Dismantling the inverted tank

- Disconnect all the central heating connections as well as all the hot and cold water pipes connected to the boiler.
- Drain the central heating system using the fill/drain valve located under the appliance.
- Disconnect the electrical connection for the charging pump by pulling out the plug.
- Remove the MCBA assembly plate.
- Unscrew the central heating flow pipe using the three-way coupling located on top of the charging pump.
- Unscrew the mini-tank return pipe.
- Disconnect the hot and cold water pipes from the mini-tank.
- Remove the air vent located above the mini-tank, as well as the nut located below.
- Remove the mini-tank from the lining and tilt it forwards to remove it completely.
- Check the condition of the seals and replace them if need be before re-assembling the mini-tank.

# MCBA FOR THE SPECIALIST: INSTALLER, MAINTENANCE TECHNICIAN




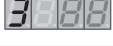
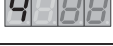
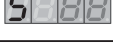

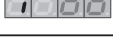
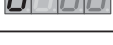

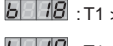
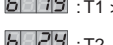
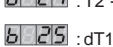

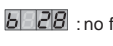
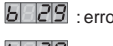
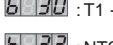
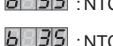
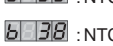

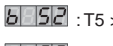
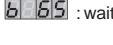
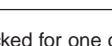
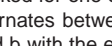
## PILOT MODE

Pilot mode 

After you power down the appliance the screen displays Pilot mode, as shown in the figure above.




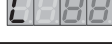

This is the standard MCBA mode. The MCBA automatically returns to this mode after 20 minutes if no keys have been pressed on the screen. Any parameters that were modified are then enabled.

The first character shows the current status of the boiler depending on the condition of both the boiler and the burner. The last 2 characters indicate the start temperature.

Status	Boiler function
	Pilot, no demand for heat
	Fan first, fan after
	Ignition
	Operation of the boiler burner for the heating
	Operation of the boiler burner for the domestic hot water
	Air pressure limit or obtaining the number of start revolutions.
	The burner goes out when the specified value is reached. A demand for heat is present nonetheless.
	Pump over-run time after the demand for domestic hot water
	Pump over-run time after the demand for central heating
	<b>Burner blocked:</b> <ul style="list-style-type: none"> <li>•  : T1 &gt; 95°C</li> <li>•  : T1 &gt; 95°C</li> <li>•  : T2 - T1 &gt; 10.20 or 40°C after a time of xx</li> <li>•  : dT1/dt &gt; maximum gradient T1</li> <li>•  : water pressure switch not off</li> <li>•  : no fan signal</li> <li>•  : erroneous fan signal</li> <li>•  : T1 - T2 &gt; max Delta</li> <li>•  : NTC3 short-circuit</li> <li>•  : NTC5 short-circuit</li> <li>•  : NTC3 interrupt</li> <li>•  : NTC5 interrupt</li> <li>•  : T5 &gt; T5max</li> <li>•  : wait for the fan to start</li> </ul>

If the burner is blocked for one of the reasons mentioned above, the screen display alternates between a 9 followed by the temperature (two last digits) and b with the error code.

Once the cause of the blockage has been resolved, the burner starts automatically within 150 seconds at most.

Status	Boiler function
	Internal check — three-way valve
	Boiler burner in hot water ready function
	Test function: Central heating high power
	Test function: Central heating low power
	Test function: Boiler with fixed number of revolutions

## MCBA FOR THE SPECIALIST: INSTALLER, MAINTENANCE TECHNICIAN

### SAFETY STOP (ERROR MODE)

If a fault occurs while the appliance is running, the system locks and the screen starts to flash. The first character is an E and the next two characters give the code for this fault, as illustrated in the table below.



#### To unlock the system:

- Press **RESET** on the screen.
- Contact your installer if the fault happens again.

**Table of error codes and how to resolve them**

Codes	Description of the fault	Resolution of the fault
	Abnormal flame signal	- Check the wiring ( <i>short-circuit in the 24V wiring</i> ) - check the electrode/ replace the MCBA ( <i>water damage</i> ).
	No flame signal after five attempts at firing the boiler	- Check the ignition cable, the electrode and the position of the electrode. - Check that there is gas at the burner.
	Persistent lock	- Press RESET
	EPROM error	-If the problem persists after two RESET attempts, replace the MCBA.
	Max input, thermostat open or 24V fuse gone.	- Check the wiring and check the 24V fuse on the MCBA.
 To 	Internal error	- If the problem persists after two RESET attempts, replace the MCBA.
	T1 > 110°C	- Check the NTC wiring and replace if necessary.
	T2 > 110°C	- Check the NTC wiring and replace if necessary.
	T1 gradient too high	- Check that the pump is turning. If there is no problem with the pump, drain the system.
	No fan signal present	- <b>If the fan is working:</b> • Check the fan control connection and the fan wiring • if the problem persists after 2 RESET attempts, replace the fan • if the problem persists, replace the MCBA.  - <b>If the fan is not working:</b> • Check that the fan 230V connection. If the problem persists, replace the fan.
	NTC 1 short-circuit	- Check the connection and the NTC1 wiring If the problem persists, replace the NTC1.
	NTC 2 short-circuit	- Check the connection and the NTC2 wiring If the problem persists, replace the NTC2.
	NTC 3 short-circuit	- Check the connection and the NTC3 wiring If the problem persists, replace the NTC3.
	NTC 1 connection open	- Check the connection and the NTC1 wiring If the problem persists, replace the NTC1.
	NTC 2 connection open	- Check the connection and the NTC2 wiring If the problem persists, replace the NTC2.
	NTC 3 connection open	- Check the connection and the NTC3 wiring If the problem persists, replace the NTC3.
	Internal error	- If the problem persists after two RESET attempts, replace the MCBA.
	Error while reading the parameters	Press RESET. If the error persists, replace the MCBA.
	Problem with the power supply to the fan	Check the MCBA power supply voltage. If it is OK, replace the fan.



# MCBA FOR THE SPECIALIST: INSTALLER, MAINTENANCE TECHNICIAN

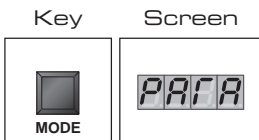
## SETTING THE PARAMETERS









Parameter mode **PARA**

To access Parameter mode when the system is in Pilot mode, press **MODE** once.






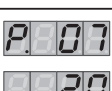

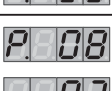

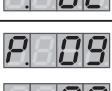

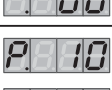
To scroll through the list of parameters, simply press "step". To modify a parameter value, use the + or - keys. Then press "Store" to save the value you just changed. The screen flashes once to confirm the data has been saved.

To activate the parameters you changed, press Mode once more (which brings you into Info mode). However, if you do not press a key, the system returns to Pilot mode after 20 minutes and automatically enables the changes.





















Key:	Screen	Description of parameters	Factory setting		
			Solo	AquaSpeed	Excellence
 STEP		Adjusting the hot water temperature	60	60	60
 STEP		Production of hot water 00 = Stop 01 = Start 02 = Stop + pump continuously on 03 = Start + pump continuously on	00	01	01
 STEP		Turn on/Turn off the heating 00 = Stop 01 = Start 02 = Stop + pump continuously on 03 = Start + pump continuously on	01	01	01
 STEP		Maximum temperature in Central Heating mode	85	85	85















### Parameters for the specialist: only accessible by using the Code

Key	Screen	Description of parameters	Factory setting		
			Solo	AquaSpeed	Excellence
 STEP		Minimum central heating temperature when using an outdoor sensor	30	30	30
 STEP		Minimum outdoor temperature (adjust the heating curve)	- 10	- 10	- 10
 STEP		Maximum outdoor temperature (adjust the heating curve)	18	18	18
 STEP		Frost protection temperature	01	01	01
 STEP		Correction based on the outdoor temperature	00	00	00
 STEP		Blockage T 0 = Disabled	00	00	00









## MCBA FOR THE SPECIALIST: INSTALLER, MAINTENANCE TECHNICIAN

Key	Display	Description of parameters	Factory setting		
			Solo	AquaSpeed	Excellence
 STEP		Acceleration time lag 00=Stop (min)	10	10	10
 STEP		Parallel shift of the central heating temperature	10	10	10
 STEP		Maximum number of fan revolutions in CH mode (rpm x 100)	Prestige 32 natural gas Prestige 24 natural gas Prestige 32 propane Prestige 24 propane	55 43 - -	55 43 - -
 STEP		Maximum number of fan revolutions in CH mode (rpm)	Prestige 32 natural gas Prestige 24 natural gas Prestige 32 propane Prestige 24 propane	50 00 - -	50 00 - -
 STEP		Max. number of revs in domestic hot water mode (rpm x 100)	Prestige 32 natural gas Prestige 24 natural gas Prestige 32 propane Prestige 24 propane	55 43 - -	55 43 - -
 STEP		Maximum number of fan revolutions in domestic hot water mode (rpm)	Prestige 32 natural gas Prestige 24 natural gas Prestige 32 propane Prestige 24 propane	50 00 - -	50 00 - -
 STEP		Minimum number of fan revolutions (rpm x 100)	Prestige 32 natural gas Prestige 24 natural gas Prestige 32 propane Prestige 24 propane	15 15 00 00	15 15 00 00
 STEP		Minimum number of fan revolutions (rpm)	Prestige 32 natural gas Prestige 24 natural gas Prestige 32 propane Prestige 24 propane	00 00 - -	00 00 - -
 STEP		Number of fan revolutions at ignition (rpm x 100)	Prestige 32 natural gas Prestige 24 natural gas Prestige 32 propane Prestige 24 propane	36 36 36 36	36 36 36 36

# MCBA FOR THE SPECIALIST: INSTALLER, MAINTENANCE TECHNICIAN

Key	Display	Description of parameters	Factory setting		
			Solo	AquaSpeed	Excellence
 STEP	P. 20 0010	CH pump over-run 0 = 10sec (step = 1 min)	05	05	05
 STEP	P. 21 0030	Domestic hot water pump over-run time (step = 10.2 sec)	16	01	16
 STEP	P. 22 0005	CH modulation hysteresis enabled	03	03	03
 STEP	P. 23 0005	CH modulation hysteresis disabled	03	03	03
 STEP	P. 24 0005	Domestic hot water modulation hysteresis enabled	00	-02	00
 STEP	P. 25 0005	Domestic hot water modulation hysteresis disabled	06	08	06
 STEP	P. 26 0003	Domestic hot water hysteresis detection enabled	10	10	10
 STEP	P. 27 0003	Detection of domestic hot water hysteresis disabled	00	00	00
 STEP	P. 28 0000	CH blockage time (sec x 10.2)	05	05	05
 STEP	P. 29 0000	Domestic hot water blockage time (sec x 10.2)	00	00	00
 STEP	P. 30 0006	Domestic hot water → CH blockage time (sec x 10.2)	24	06	24
 STEP	P. 31 0025	Re-modulate the difference T1 - T2	20	20	20
 STEP	P. 32 -001	Shell address (-1 = disabled)	- 01	- 01	- 01
 STEP	P. 33 0020	Temperature increase set point for the production of hot water	13	10	13
 STEP	P. 34 0000	Position 1: 2nd CH circuit: 0 = disabled 1= enabled (slave) 2 = enabled (master)  Position 2: the demand for heat comes from: 0 = the room thermostat 1 = the outdoor sensor	00	00	00

**MCBA FOR THE SPECIALIST: INSTALLER,  
MAINTENANCE TECHNICIAN**

Key	Display	Description of parameters	Factory setting		
			Solo	AquaSpeed	Excellence
 STEP	P.35 03	Position 1: Domestic hot water pump (1) or three-way mixer tap (2)  Position 2: tank with NTC3 probe (2) or tank with thermostat (3)	13	12	12
 STEP	P.36 -01	Manual fan number of revolutions	- 01	- 01	- 01
 STEP	P.37 41	Position 1: Fan control pump level during burning in Position 2: Fan control pump level during over-run time	11	11	11
 STEP	P.38 00	Minimum boiler start temperature	00	00	00
 STEP	P.39 35	Maximum temperature for the start heating curve for the 2nd circuit	50	50	50
 STEP	P.40 10	Minimum temperature for the start heating curve for the 2nd circuit	20	20	20
 STEP	P.41 01	2nd circuit temperature hysteresis	06	06	06
 STEP	P.42 00	Position 1: Special pump (0 = disabled) Position 2: Minimum disable cycle (0 = disabled)	00	00	00

# MCBA FOR THE SPECIALIST: INSTALLER, MAINTENANCE TECHNICIAN

## ENTERING THE CODE

Code mode

You can access the following parameters by entering the service code:

- Parameters 5 - 42
- Communication mode
- Fan Speed mode
- ERROR mode

To access Code mode, press **MODE** and **STEP** simultaneously (only from Standby mode!).

Press **STEP** once and the system displays **C** in position 1, followed by arbitrary characters in positions 3 and 4.

Press **+** or **-** to change the code.

or

Press **STORE**, the screen flashes briefly to indicate that the code has been accepted.

Press **MODE** until the system displays the correct mode.

Only ACX authorised installers know the access code.

For further information, please contact our after-sales department.

## REQUEST FOR INFORMATION ON THE INSTALLATION

Info mode

To switch from Pilot mode to Info mode, press Mode twice.

Key	Display
 MODE	
 MODE	


Press **STEP** until the system displays the information you need. The point located behind the first position flashes to indicate that the boiler is in **INFO** mode.


Key	Display	Description of parameters
 STEP		Start temperature T1 in °C
 STEP		Return temperature T2 in °C
 STEP		Hot water temperature T3 in °C
 STEP		Outdoor temperature T4 in °C
 STEP		Flue gas temperature
 STEP		Start temperature calculated in °C
 STEP		Rate of increase in the start temperature in °C/s
 STEP		Rate of increase in the return temperature in °C/s
 STEP		Rate of increase in the hot water temperature in °C/s
 STEP		Start temperature of the 2nd central heating circuit

## MCBA FOR THE SPECIALIST: INSTALLER, MAINTENANCE TECHNICIAN



### COMMUNICATION MODE (with code)

When in this mode, the system displays the communication between the boiler and the control module, the optional interface kit or the optional programmable room thermostat.

Key	Display
 MODE	COMM


Key	Display	Description of parameters
 STEP	. . . .	No communication
	. . . .	Communication between the boiler module and the optional control modules only
	. . . .	Communication between all the devices connected







### FAN MODE (with code)

Key	Display	Description of parameters
 MODE	FAN	Fan speed
 STEP	5500	The current fan speed is 5,500 rpm.

### ERROR MODE (with code)

ERROR **mode** indicates the most recent error, as well as the status of the boiler and its readings at the time this error occurred.

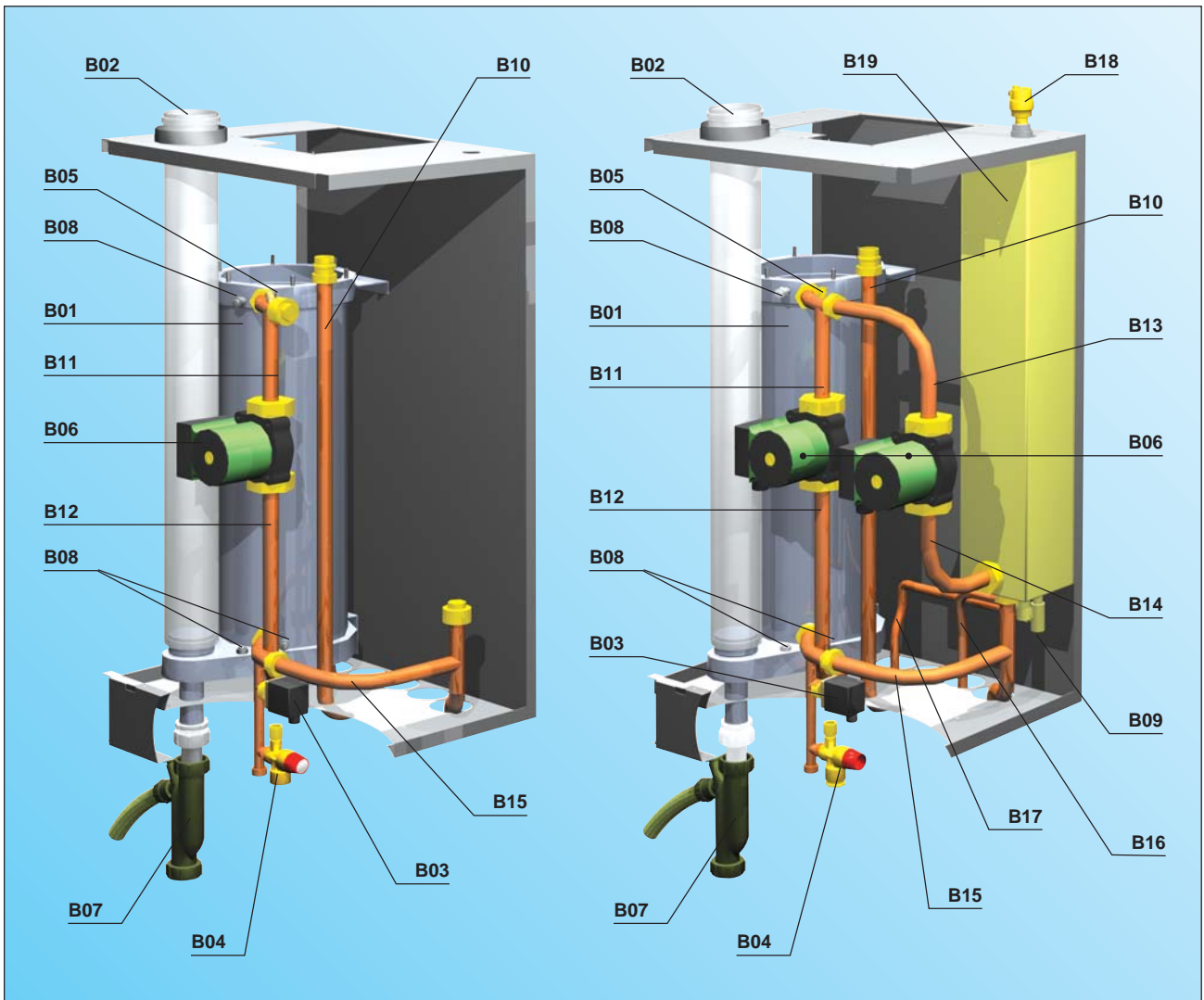
Key	Display
 MODE	E F F 0

Key	Display	Description of parameters
 STEP	1 3 3 6	<b>Code mode</b> (See the table on page 23 for a full list)
 STEP	2 3 0 0	Status of the boiler at the time of the error (See the table on page 22)
 MODE	3 3 0 0	Start temperature T1 at the time of the error
 STEP	4 3 0 0	Return temperature T2 at the time of the error
 STEP	5 3 0 0	Hot water temperature T3 at the time of the error
 STEP	6 3 0 0	Outdoor temperature T4 at the time of the error

### Temperature sensor resistance tables

Temp. °C	R Ω	Temp. °C	R Ω
-20	98200	40	6650
-15	75900	45	5520
-10	58800	50	4610
-5	45900	55	3860
0	36100	60	3250
5	28600	65	2750
10	22800	70	2340
15	18300	75	1940
20	14700	80	1710
25	12000	85	1470
30	9800	90	1260
35	8050	95	1100
		100	950



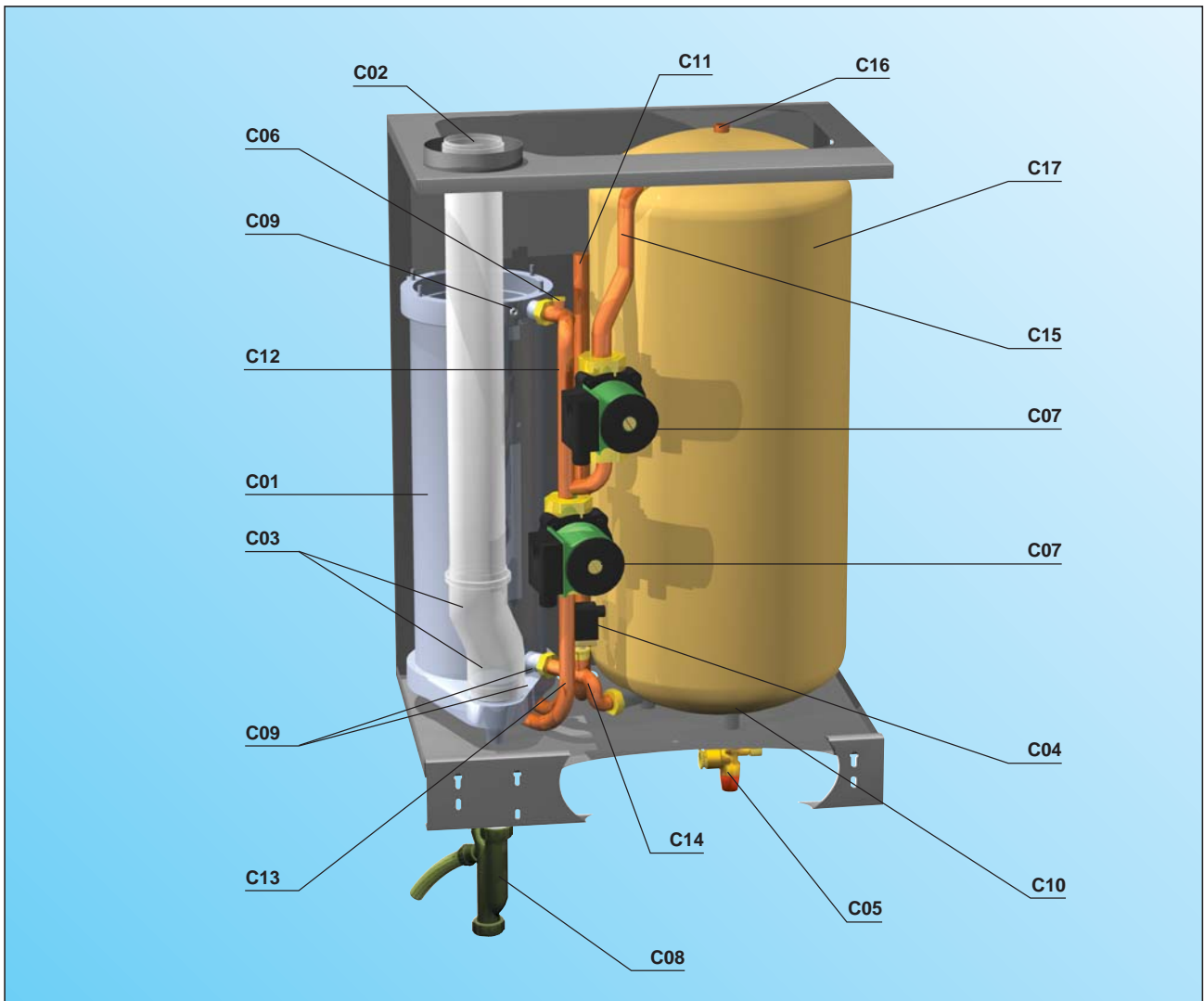


**Codes**

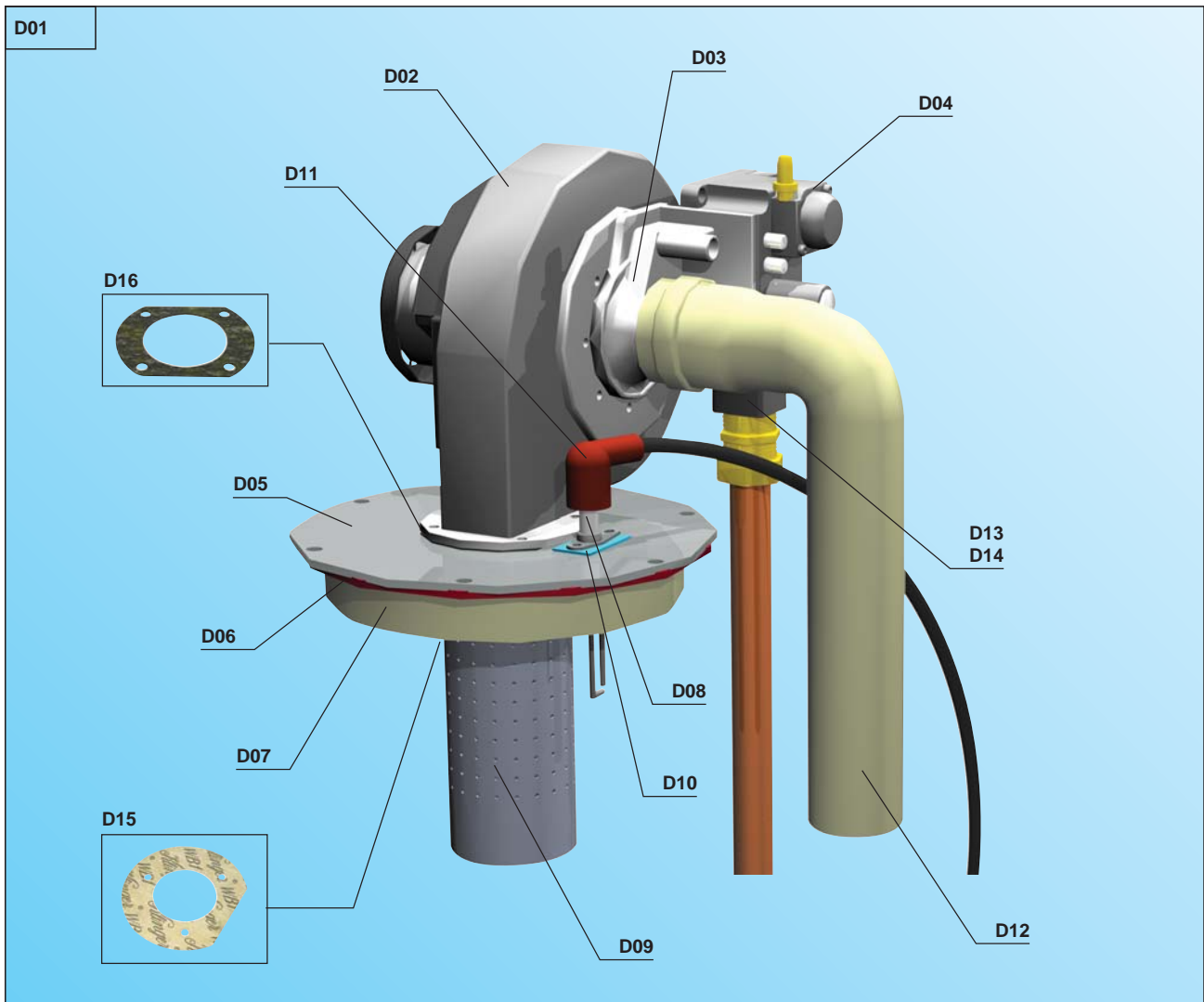
No.	Parts	Codes	
		Solo 24 - 32	AquaSpeed 24 - 32
B01	Heat exchanger	63962009	63962009
B02	Ø 80mm flue gas pipes	497B0026	497B0026
B03	Water pressure switch	557D3011	557D3011
B04	3 bar Ø 1/2" safety valve	55426017	55426017
B05	Ø 1/8" manual air vent	55445001	55445001
B06	1" L 130mm pump	557A4012	557A4012
B07	5/4" L 300mm siphon	557B4002	557B4002
B08	NTC 1, 2 and 5 sensor ( 5x18 )	5476G008	5476G008
B09	NTC 3 Ø 1/4" sensor	-	5476G009
B10	Gas pipes	507F4055	507F4055
B11	Flow tube 1	507F4048	507F4048
B12	Flow tube 2	507F4049	507F4049
B13	Flow tube 3	-	507F4050
B14	Flow tube 4	-	507F4051
B15	Flow tube 5	507F4052	507F4052
B16	Cold water inlet pipe 6	-	507F4053
B17	Domestic hot water 7 pipe	-	507F4054
B18	Automatic air vent	-	55445007
B19	Mini-tank	-	407F4035



## SPARE PARTS



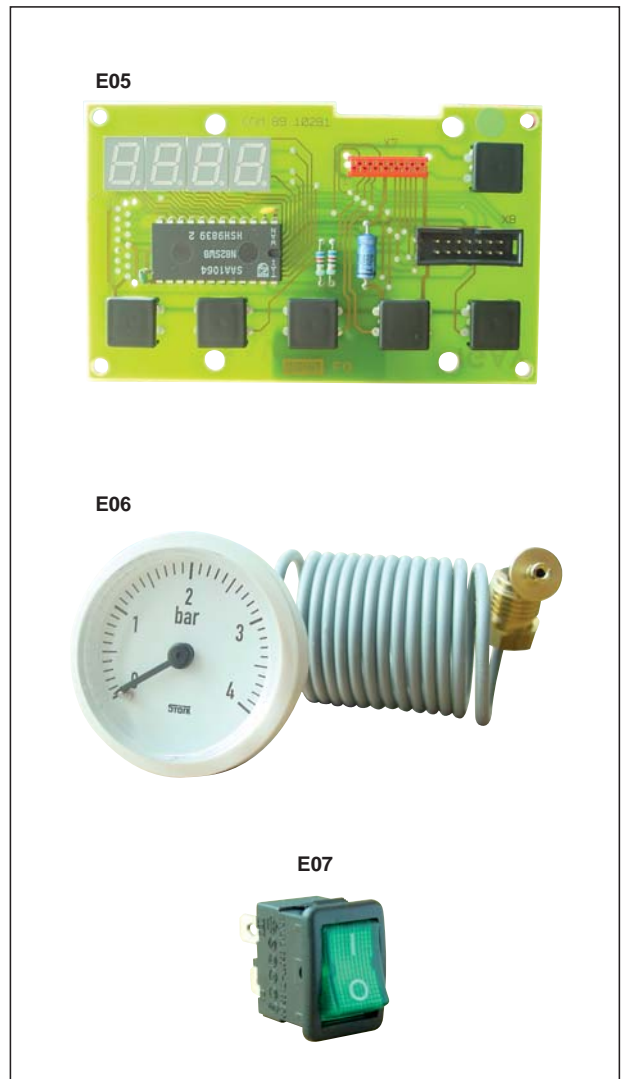
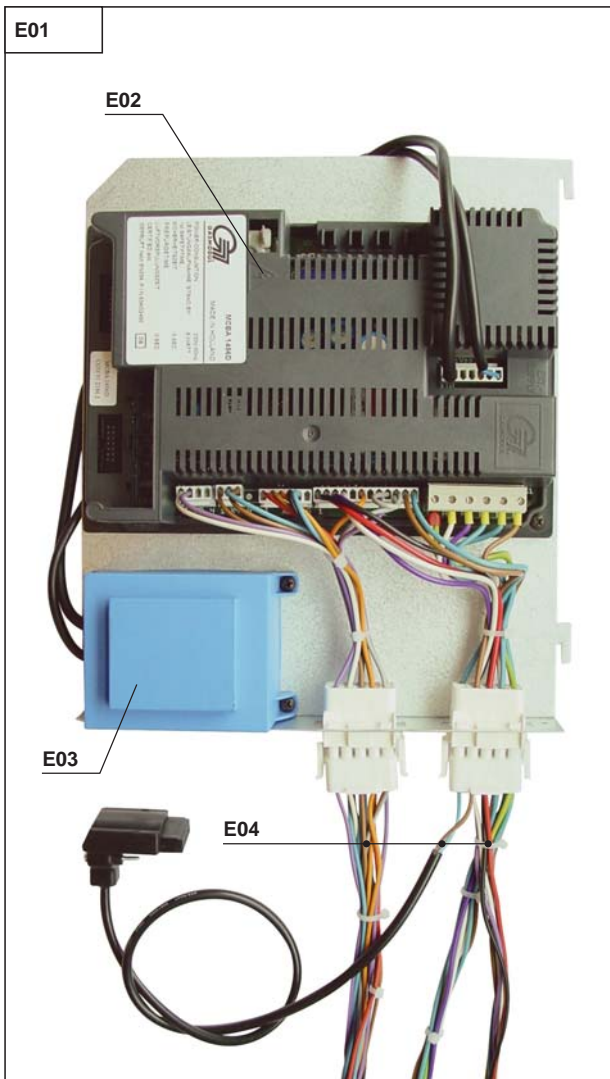
No.	Parts	Codes Excellence 24 - 32
C01	Heat exchanger	63962009
C02	Ø 80mm flue gas tubes	497B0030
C03	Ø 80 45° pipe bend	537D6227
C04	Water pressure switch	557D3011
C05	3 bar Ø 1/2" safety valve	55426017
C06	Ø 1/8" manual air vent	55445001
C07	1" L 130mm pump	557A4012
C08	5/4" L 300mm siphon	557B4002
C09	NTC 1, 2 and 5 sensor ( 5x18 )	5476G008
C10	NTC 3 Ø 1/4" sensor	5476G009
C11	Gas pipes	507F4045
C12	Heat exchanger — pump intake	507F4041
C13	Intake pump	507F4042
C14	Return tubes	507F4043
C15	Water tank — pump intake	507F4044
C16	Ø 1/2" manual air vent	55445006
C17	62-litre water tank	06617401



Codes

No.	Burner parts	Codes			
		Solo / AquaSpeed 24 - 32 Natural gas	Solo / AquaSpeed 24 - 32 Propane	Excellence 24 - 32 Natural gas	Excellence 24 - 32 Propane
D01	Burner	237D0114	237D0117	237D0115	237D0116
D02	Fan	537D3027	537D3027	537D3027	537D3027
D03	Venturi	537D4034	537D4034	537D4034	537D4034
D04	Gas valve	537D4033	537D4033	537D4033	537D4033
D05	Burner flange	507F4038	507F4038	507F4038	507F4038
D06	Ø 210mm burner gasket	557A0037	557A0037	557A0037	557A0037
D07	Burner flange insulation	51700037	51700037	51700037	51700037
D08	Ignition electrode	537DZ023	537DZ023	537DZ023	537DZ023
D09	Burner rod	537DZ025	537DZ026	537DZ025	537DZ026
D10	Electrode seal	557A0012	557A0012	557A0012	557A0012
D11	Ignition cable	537D5004	537D5004	537D5004	537D5004
D12	Venturi intake tube	497B0025	497B0025	497B0025	497B0025
D13	Ø 1/2" right-hand plate gas valve (Solo / AquaSpeed)	42710001	42710001	-	-
D14	Ø 1/2" perpendicular plate gas valve (Excellence)	-	-	42710000	42710000
D15	Burner rod seal	557A0048	557A0048	557A0048	557A0048
D16	Fan seal	55700026	55700026	55700026	55700026

## SPARE PARTS



No.	Setting / wiring	Codes		
		Solo 24 - 32	AquaSpeed 24 - 32	Excellence 24 - 32
E01	Full electrical wiring harness + MCBA + 24V Transformer	24614125	24614125	24614131
E02	MCBA	537D8016	537D8016	537D8016
E03	24V transformer	547D3021	547D3021	547D3021
E04	Wiring	-	-	-
E05	Screen	537D3020	537D3020	537D3020
E06	0 - 4 bars pressure gauge	54763010	54763010	54763010
E07	Two-piece connector	54766016	54766016	54766016

**INSTALLATION DETAILS**

Date installed :	Flue gas T° :	Model :
% CO <sub>2</sub> (min. load) :	Efficiency :	Serial number :
% CO <sub>2</sub> (max. load) :	Gas pressure :	Heating system pressure setting :
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

**SERVICE RECORD**

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

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## SERVICE RECORD

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Date serviced:	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

---

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

---

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

---

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

---

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

---

Date serviced :	Flue gas T° :	Remarks :
% CO <sub>2</sub> (min. load) :	Efficiency :	
% CO <sub>2</sub> (max. load) :	Gas pressure :	
<input type="checkbox"/> Gas		
<input type="checkbox"/> LPG	Name and signature :	

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**SIMETAL INDUSTRIA E COMERCIO DE FERRAMENTAS LTDA**  
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#### CHINA

**BEIJING HUADIAN HT POWER TECHNOLOGY DEVELOPMENT CO. LTD**  
ROOM B-912, TOWER B, COFCO PLAZA  
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