EN

Prestige

42 - 50 - 75 - 100 - 120 Solo

ACV
EXCELLENCE IN HOT WATER

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

for the Installer and the User

A1007856 - 664Y6200 • G

TABLE OF CONTENTS

NOTE

This manual contains important information with respect to the installation, the starting up and the maintenance of the appliance.

This manual must be provided to the user, who will read it carefully and keep it in a safe place.

We accept no liability should any damage result from the failure to comply with the instructions contained in this technical manual.

Essential recommendations for safety

- It is prohibited to carry out any modifications to the appliance without the manufacturer's prior and written agreement.
- The product must be installed by a qualified engineer, in accordance with applicable local standards and regulations.
- The installation must comply with the instructions contained in this manual and with the standards and regulations applicable to heating systems.
- Failure to comply with the instructions in this manual could result in personal injury or a risk of environmental pollution.
- The manufacturer declines all liability for any damage caused as a result of incorrect installation or in the event of the use of appliances or accessories that are not specified by the manufacturer.

Essential recommendations for the correct operation of the appliance

- In order to ensure that the appliance operates correctly, it is essential to have it serviced by a certified installer or maintenance contractor every year.
- In case of anomaly, please call your service engineer.
- Faulty parts may only be replaced by genuine factory parts.

General remarks

- The availability of certain models as well as their accessories may vary according to markets.
- The manufacturer reserves the right to change the technical characteristics and features of its products without prior notice. Please check for an updated version of this manual in the documentation page on the website www.acv.com.
- In spite of the strict quality standards that ACV applies to its appliances during production, inspection and transport, faults may occur. Please immediately notify your approved installer of any faults.

GENERAL SAFETY INSTRUCTIONS FOR GAS APPLIANCES

If you smell gas:

- Immediately isolate the gas supply.
- Open windows and doors to ventilate the area.
- Do not use any electrical appliances and do not operate any switches.
- Immediately notify your gas supplier and/or your installer.

DO NOT STORE ANY FLAMMABLE OR CORROSIVE PRODUCTS, PAINT, SOLVENTS, SALTS, CHLORIDE PRODUCTS AND OTHER DETERGENT PRODUCTS NEAR THE APPLIANCE.

THIS APPLIANCE CAN BE USED BY CHILDREN AGED FROM 8 YEARS OLD AND ABOVE AND PERSONS WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES OR LACK OF EXPERIENCE AND KNOWLEDGE, IF THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING THE USE OF THE APPLIANCE IN A SAFE WAY AND UNDERSTAND THE HAZARDS INVOLVED.

CLEANING AND USER MAINTENANCE SHALL NOT BE PERFORMED BY CHILDREN WITHOUT SUPERVISION.

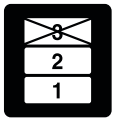
CHILDREN SHALL NOT PLAY WITH THE APPLIANCE.

A BYPRODUCT OF ANY GAS FIRED APPLIANCE IS CARBON MONOXIDE. ACV RECOMMENDS THE INSTALLATION OF A MINIMUM OF TWO (2) HARD-WIRED CARBON MONOXIDE DETECTORS WITH AN ALARM AND BATTERY BACK-UP; ONE IN THE MECHANICAL ROOM WHERE THE BOILER IS LOCATED AND ANOTHER INSTALLED IN THE LIVING AREA OUTSIDE THE BEDROOM(S) FOR ALL INSTALLATIONS.

General remarks

- The end user is only allowed to carry out the basic set-up operations mentioned in "Boiler Setup Guide" on page 8, after he has received all relevant instructions from the installer. Any other set-up must be carried out by an approved installer.
- If the end user misuses the installer code to access installer-specific parameters and makes changes that cause a system failure, any warranty claim will be void.
- To get additional information on how to use the ACVMAX interface, refer to the installer-specific settings, in the Installer's Handbook or the ACVMax System Control manual, according to the product build*. Both manuals are available from the website www.acv.com, under the "Documentation" section.
- * The Installer's Handbook is applicable to appliances manufactured from May 2016.

MEANING OF SYMBOLS

Symbols on the packaging	Meaning
	Fragile
	Keep dry
	Keep standing, up
	Danger of tipping over
	Hand truck or pallet truck required for transport
	Do not stack more than 2 boxes

Symbols on the appliance	Meaning
	Gas connection
	Condensate trap (ball syphon)
	Domestic Hot Water circuit
	Primary circuit
	Connection to the sewage system
	Electricity
	Alarm

Symbols in the manual	Meaning
	Essential recommendation for safety (of persons and equipment)
	Essential recommendation for electrical safety (electrical hazard)
	Essential recommendation for the correct operation of the appliance or the system
	General remark
	Safety valve connected to the sewage system
	Connection to the sewage system

BOILER MARKING

Location: Bottom face

The part number (Code) and serial number (N°) of the appliance are indicated on its rating plate and must be provided to ACV in case of warranty claim. Failure to do so will make the claim void.

Prestige 42 Solo

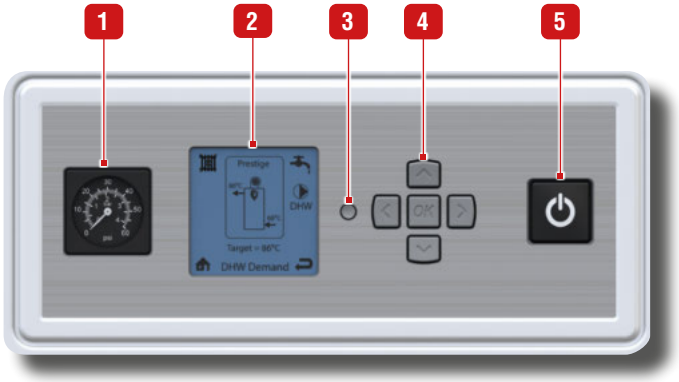
Prestige 75 Solo

Prestige 50 Solo

Prestige 100 Solo

Prestige 120 Solo

CONTROL PANEL AND DISPLAY



Panel Description

1. **Pressure gauge** - Indicates the primary circuit pressure (min. 1 bar when cold).
2. **ACVMAX LCD Display** - It is the setup interface of the boiler and indicates the parameter values, the error codes and the set-up status of the parameters. It displays a series of screens, each showing information and/or icons. The main icons are detailed below.
3. **Installer button** - Allows the installer to access the menus of the ACVMAX controller to set up the system.
4. **Arrow keys and OK key** - to browse through the screens of the ACVMAX controller, set up the boiler, increase and decrease the displayed values and validate the selections and access the Easy set-up screens. The OK key is also used to reset the boiler after a locking (follow the instructions on the screen).
5. **ON/OFF master switch of the boiler** - To turn the appliance ON and OFF.

Main settings of ACVMAX Display

- **Screen backlight** - it will illuminate when any button is depressed, and remain illuminated for five minutes.
- **Screen contrast** - it can be adjusted at the Home screen by pressing and holding the OK button, then pressing and holding the LEFT button along with the OK button. Press the UP and DOWN button to increase or decrease the contrast while holding the OK and LEFT buttons depressed. All buttons must be released and the procedure performed again to switch between increasing and decreasing contrast.

Main Icons of ACVMAX display

Central Heating - indicates information related to the CH circuit.

DHW - indicates information related to the Domestic Hot Water circuit.

Home - to go back to the main menu screen.

Back - to go back to the previous screen.

Warm weather shutdown - displays on the home screen when the outdoor temperature reaches the Warm Weather Shutdown preset temperature.

Reset - to reset the system to the factory settings.

Parameters - to access to the setup of controller parameters (language, units, etc.).

Easy setup - Indicates parameters that can be accessed through the EZ setup.

CH/DHW operation - To enable/disable the concerned circuit.

Information - To get information on the boiler.

Typical items appearing on the Home screen:

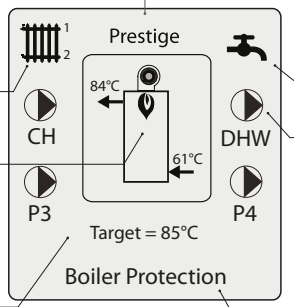
The boiler type is indicated at the top of the screen. The type and model are factory preset*.

The boiler is represented in the centre of the Home Screen. Basic operating information such as supply and return temperatures are displayed as well as current burner status.

Radiator icon: indicates that a central heating call has been received. A small number 1 or 2 indicates which CH calls are active.

A flame symbol is displayed when the unit is fired. The flame size changes to indicate the current firing rate.

Basic information. The user can toggle the items using the LEFT and RIGHT keys and view target, Supply, Return, Domestic, Outdoor and System temperatures.



Tap icon: indicates that a DHW call has been received.

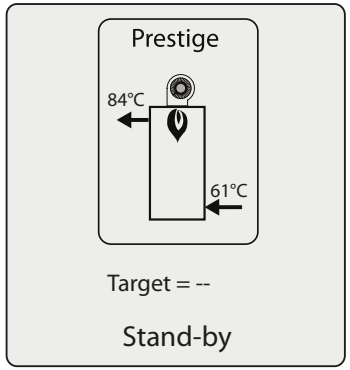
Circulator icons: indicate which circulators are currently powered.

Status line: displays the current operating state of the boiler. See "Status Messages" on page 7.

* For boilers manufactured after May 2016.

STAND-BY SCREEN

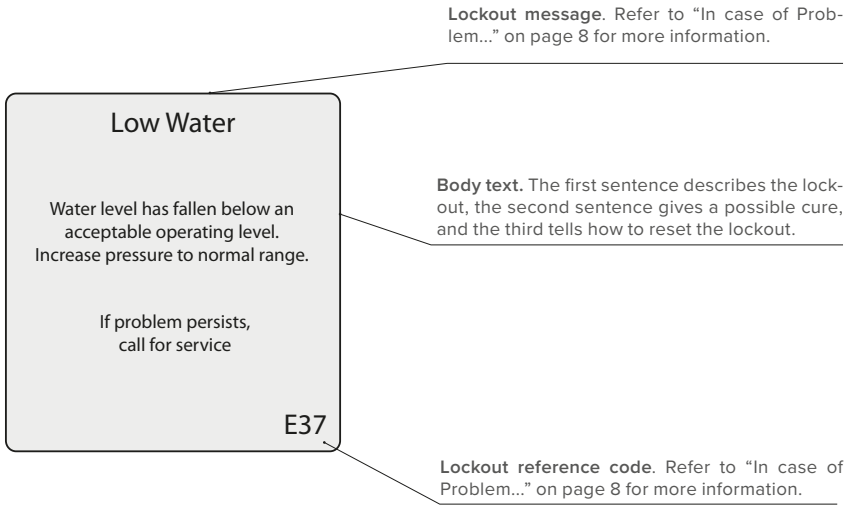
This screen is displayed at start-up. It indicates that the Prestige is ready to respond when a demand is received.



LOCKOUT SCREEN

If a problem occurs, the Lockout screen replaces the Home screen. The backlight also remains on as long as the problem is not solved. Pressing any arrow button will return to the Home screen.

Using the code located in the right bottom corner of the screen, troubleshoot the problem, either with the table located in paragraph "In case of Problem..." on page 8, or with the Lockout code, refer to "Locking codes" on page 45.



STATUS MESSAGES

Stand-by	Indicates that the Prestige is ready to respond when a demand is received.
CH Demand	A central heating call has been received.
DHW Demand	A domestic hot water call has been received.
CH / DHW Demand	Central heating and domestic hot water calls are being received simultaneously. Both calls are being satisfied simultaneously because domestic hot water priority has been disabled.
DHW Priority	Central heating and domestic hot water calls are being received simultaneously. Domestic hot water call is being satisfied first because it has priority over central heating calls.
Priority Timeout	Central heating and domestic hot water calls are being received simultaneously. The domestic hot water priority time limit has been exceeded. Priority will now switch back and forth between central heating and domestic hot water calls until one call is satisfied.
External Demand	An external modulation call has been received.
Slave Operation	The Prestige is a slave in a cascade system.
Manual Operation	The burner or circulators have manually been enabled in the Installer Menu.
CH Burner Delay	The burner will not fire until the call blocking time has elapsed.
DHW Burner Delay	The burner will not fire until the call blocking time has elapsed.
CH Setpoint Reached	The burner is not fired because the supply/system water temperature exceeds the setpoint. The central heating circulator continues to operate and the burner will fire again once the supply/system water temperature drops below the setpoint.
DHW Setpoint Reached	The burner is not fired because the supply/system water temperature exceeds the setpoint. The domestic circulator continues to operate and the burner will fire again once the supply/system water temperature drops below the setpoint.
CH Post Pump	The central heating circulator is running to remove heat from the Prestige at the completion of a call.
DHW Post Pump	The domestic hot water circulator is running to remove heat from the Prestige at the completion of a call.
Freeze Protection	The burner is fired because the freeze protection feature has been activated. Freeze protection will end once the supply/system water temperature is raised to16°C.
Boiler Protection	The burner firing rate is being reduced because of an excessive difference between the boiler supply and return temperatures. The firing rate will begin increasing once the temperature difference is less than 25°C.
Lockout Description	The lockout which currently has the Prestige shut down is displayed

WHAT TO CHECK ON A REGULAR BASIS

Essential recommendations for the correct operation of the appliance

ACV recommends to check the system at least every 6 months as follows:

- Check that the system water pressure is at least 1 bar when cold. If the pressure drops below 0.7 bar, the built-in pressure sensor blocks the appliance until the pressure exceeds 1.2 bar.
- If it is required to top up the system to maintain the minimum recommended water pressure, always turn the appliance off and only add small amounts of water at a time. If a large amount of cold water is added in a hot boiler, the boiler can be damaged definitively.
- If the system needs to be refilled repeatedly with water, please contact your installer.
- Check that there is no water on the floor under the boiler. If there is, please call your installer.
- If a condensate neutralisation system is installed, check it and have it cleaned regularly.
- Check regularly that there is no error message (lockout) on the screen. A typical lockout screen is explained on the previous page. Refer also to the Troubleshooting table below or call your installer as required.

IN CASE OF PROBLEM...

Check the list of faults and corresponding codes below for the solution(s). If no solution is provided, please contact your installer who will determine the correct solution by referring to"Locking codes" on page 45.

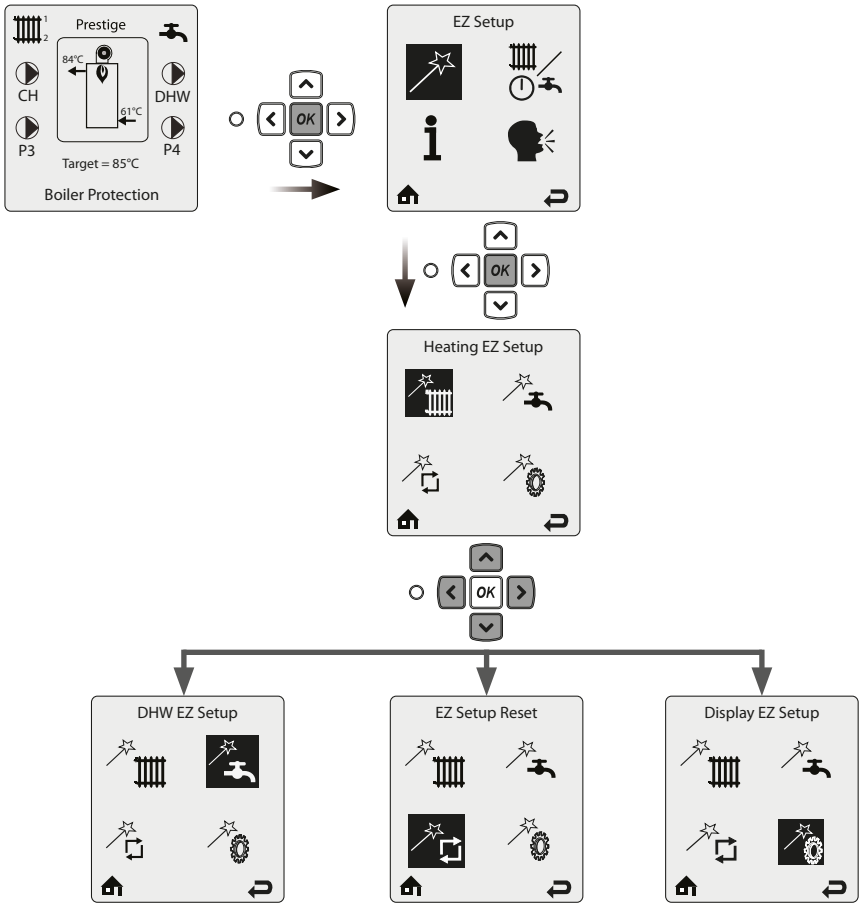
Fault code	Problem	Possible Cause(s)	Solution
-	The appliance does not turn on when pressing the ON/OFF Master switch	No power supply	Check the power supply and that the appliance power plug is connected to the network.
E 01	Failed ignition	The burner failed to light after 5 ignition attempts	Check gas supply to the boiler.
E 13	Reset limit reached	Resets are limited to 5 every 15 minutes	Turn unit OFF and ON to resume normal operation.
E 34	Low voltage	Line voltage has fallen below an acceptable operating level	The boiler will automatically reset once line voltage returns to normal.
E 37	Low Water	Water pressure has fallen below an acceptable operating level (0.7 bar)	Refill the system to reach a normal range pressure. The boiler will automatically reset once water pressure returns to normal.
E 94	Internal Display Fault	Display memory error	Turn appliance off and on to resume normal operation.

BOILER SETUP GUIDE

The main parameters of the Prestige boilers can be set up using the EZ (easy) setup function of the ACVMax controller. The EZ setup function allows the user/installer to quickly setup the appliance for immediate operation according to the system configuration*.

General remarks

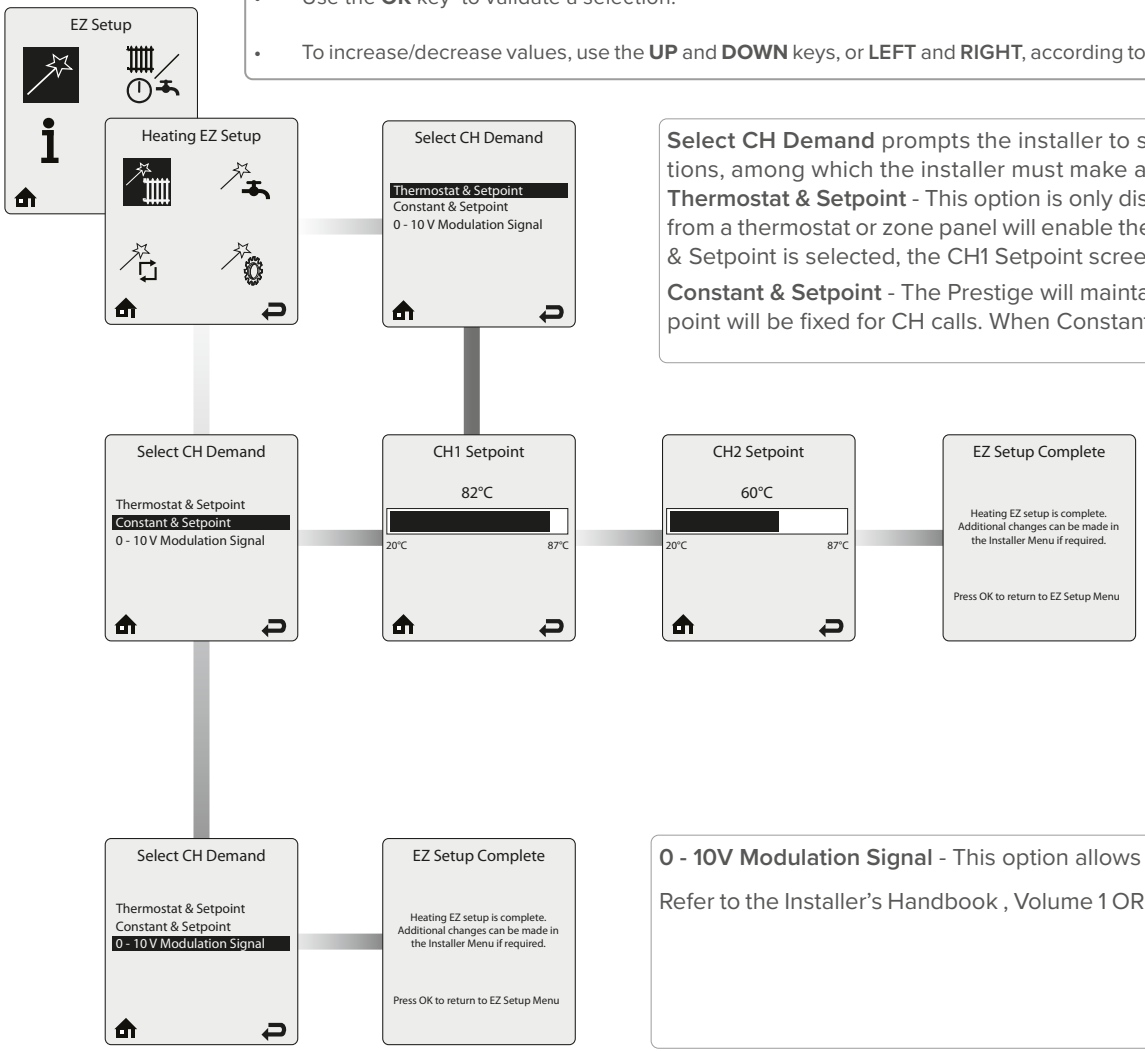
- To navigate on the screen, use the **UP**, **DOWN**, **LEFT** and **RIGHT** keys, then the **OK** key to validate a selection. A selection is marked by a black background under the selected icon/text.
- To increase/decrease values, use the **UP** and **DOWN** keys or the LEFT and RIGHT keys according to the situation.



* In case of complex systems, the setup must be performed by an approved installer using the Installer's Handbook or the ACVMax System Control manual, according to the software build (refer to page 3 for more information).

Heating Easy setup (no outdoor sensor connected)

- To navigate on the screen, use the **UP**, **DOWN**, **LEFT** and **RIGHT** keys,
- Use the **OK** key to validate a selection.
- To increase/decrease values, use the **UP** and **DOWN** keys, or **LEFT** and **RIGHT**, according to the situation



Select CH Demand prompts the installer to select how a CH Demand is generated. There are three Select CH Demand options, among which the installer must make a selection.
Thermostat & Setpoint - This option is only displayed when no outdoor temperature sensor is connected. A central heating call from a thermostat or zone panel will enable the Prestige and the setpoint will be fixed for central heating calls. When Thermostat & Setpoint is selected, the CH1 Setpoint screen appears.

Constant & Setpoint - The Prestige will maintain setpoint without an external CH call from a thermostat or zone panel. The setpoint will be fixed for CH calls. When Constant & Setpoint is selected, the CH1 Setpoint screen appears.

CH1 Setpoint prompts to enter the fixed setpoint for a CH1 heating call when a Setpoint option is chosen in Select CH Demand. Press on **LEFT** or **RIGHT** button to adjust the required temperature setpoint then press **OK** to store the setting. The **CH2 Setpoint** screen appears.

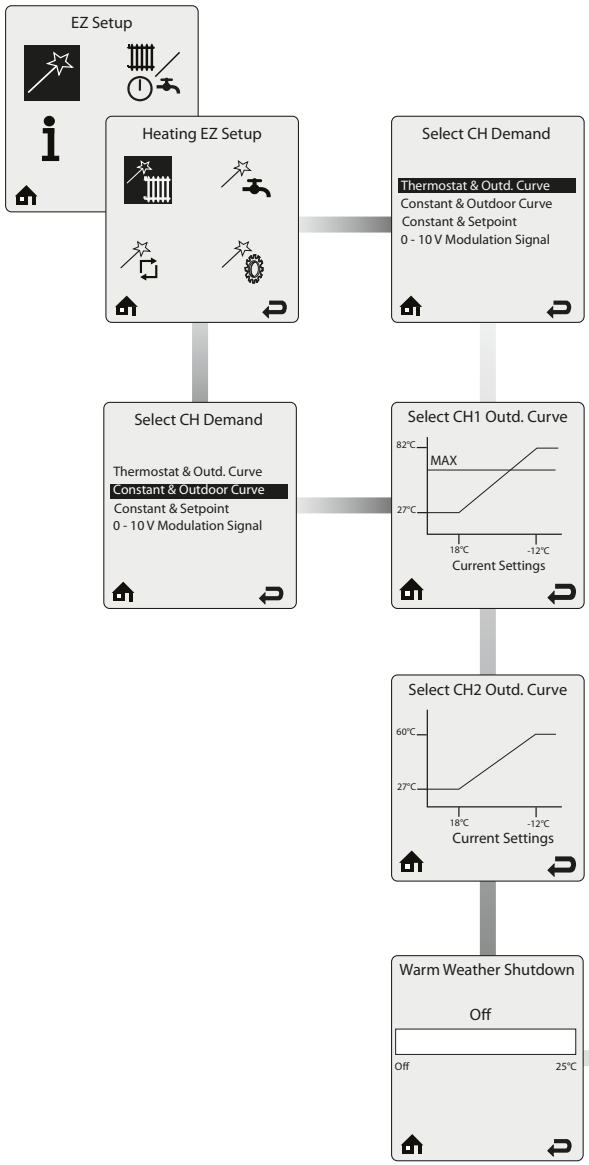
CH2 Setpoint prompts to enter the fixed setpoint for a CH2 heating call when a Setpoint option is chosen in Select CH Demand. Press on **LEFT** or **RIGHT** button to adjust the required temperature setpoint then press **OK** to store the setting and complete the Heating setting.

CH1 Default: 82°C.
CH2 Default: 60°C

0 - 10V Modulation Signal - This option allows the Prestige firing rate to be controlled by an external control system.

Refer to the Installer's Handbook , Volume 1 OR the ACVMax System Control manual for more information (see page 3 for details).

Heating Easy Setup (outdoor sensor connected)



Select CH Demand prompts the installer to select how a CH Demand is generated. There are several Select CH Demand options, among which the installer must make a selection.

Thermostat & Outd. Curve – This option is only displayed when the outdoor temperature sensor is connected. A central heating call from a thermostat or zone panel will enable the boiler and the setpoint will vary with the outdoor temperature for central heating calls..

Constant & Outdoor Curve - This option is only displayed when the outdoor temperature sensor is connected. The Prestige will maintain the setpoint without an external call from a thermostat or zone panel. The setpoint will vary with the outdoor temperature for central heating calls.

Select CH1 Outd. Curve prompts to select an outdoor curve for a CH1 heating call when an Outdoor Reset option is chosen in Select CH Demand. Outdoor curve presets are available to cover most applications. The outdoor curve can also be adjusted to any desired settings in the Installer Menu (refer to Installer's Handbook/System Control Manual, see page 3).

Press on **UP** or **DOWN** button to select the outdoor reset curve appropriate for the type of heating system, then press **OK** to store the setting.

Default: Systems with a temperature between 27°C and 82 °C.

Select CH2 Outd. Curve prompts to select an outdoor curve for a CH2 heating call when an Outdoor Reset option is chosen in Select CH Demand. Outdoor curve presets are available to cover most applications. The outdoor curve can also be adjusted to any desired settings in the Installer Menu (refer to Installer's Handbook/System Control Manual, see page 3).

Press on **UP** or **DOWN** button to select the outdoor reset curve appropriate for the type of heating system, then press **OK** to store the setting.

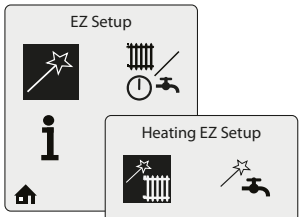
Default: Systems with a temperature between 27°C and 60 °C

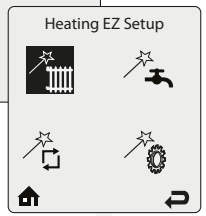
Warm Weather Shutdown allows to enter an optional outdoor temperature at which to disable the central heating function. The Prestige will continue to respond to a domestic hot water call or a 0- 10V Modulation Signal when the outdoor temperature exceeds the Warm Weather Shutdown Temperature setting.

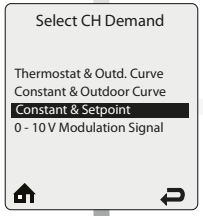
Press the **LEFT** or **RIGHT** buttons to adjust the Warm Weather Shutdown Temperature then press the **OK** button to store the setting and complete the Heating setting.

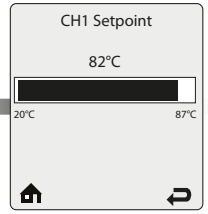
The Warm Weather Shutdown icon ( ) is displayed on the home screen when the outdoor temperature reaches the Warm Weather Shutdown preset temperature.

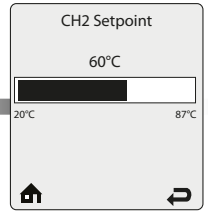
Default: OFF.

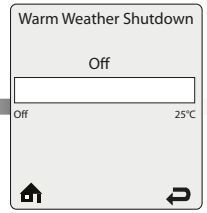


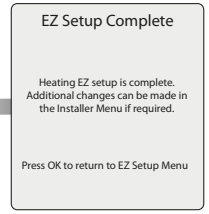




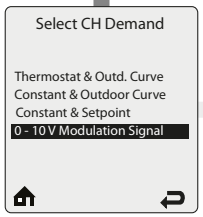






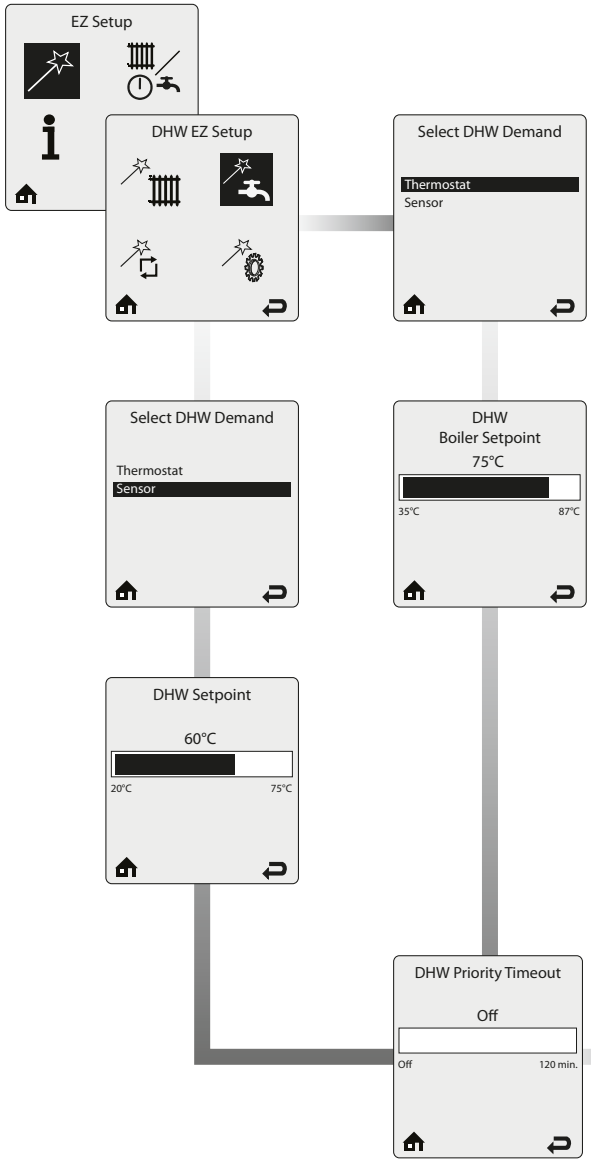


Refer to page 9 for screen descriptions.



Refer to page 9 for screen descriptions.

DHW Setup



Select DHW Demand prompts the installer to select how a DHW Demand is generated. There are two Select DHW Demand options, among which the installer must make a selection.

When **Thermostat** is selected in Select DHW Demand, a domestic hot water call from an aquastat or dry contact switch will enable the Prestige with a fixed setpoint for a domestic hot water call..

When **Sensor** is selected in Select DHW Demand, it requires the use of an optional Indirect Water Heater Sensor. The Prestige monitors the DHW storage temperature and generates a DHW call whenever the temperature drops below the DHW storage setpoint by 3°C.

Default : Thermostat

DHW Boiler Setpoint prompts to enter the fixed boiler setpoint temperature during a hot water call when the Thermostat option is selected.

Press on **LEFT** or **RIGHT** button to adjust the required temperature setpoint then press **OK** to store the setting.

Default: 75°C.

DHW Storage Setpoint prompts to enter the DHW storage setpoint temperature.

Press on **LEFT** or **RIGHT** button to adjust the required temperature setpoint then press **OK** to store the setting.

Default: 60°C.

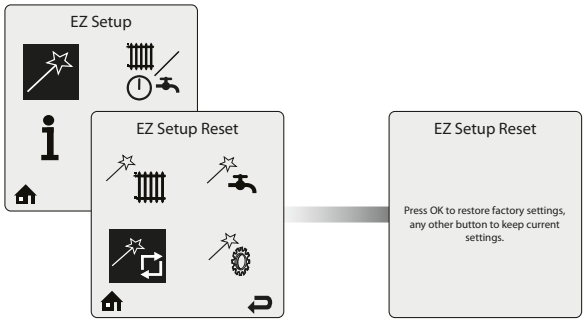
The DHW Storage Setpoint will automatically be set 15°C higher than the DHW Setpoint setting

DHW Priority Timeout prompts to enter an optional time limit that a domestic hot water call has priority over central heating call.

Press on **LEFT** or **RIGHT** button to adjust the required timeout value, if required, then press **OK** to store the setting and complete the DHW setting.

Default: Off

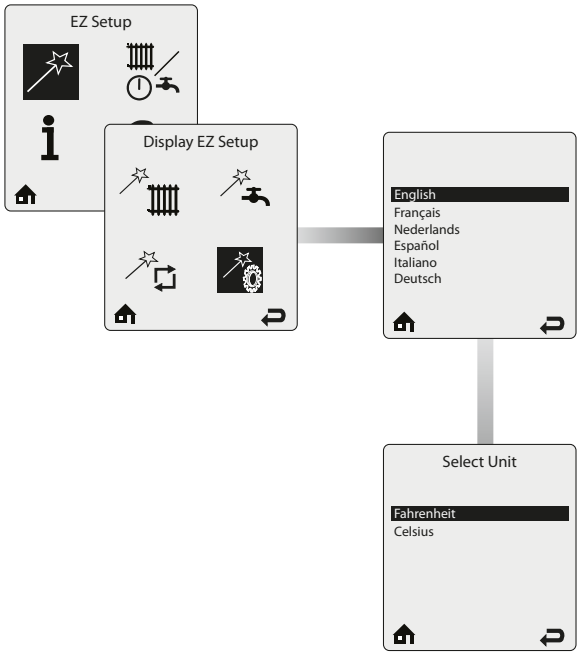
Easy Setup Reset



EZ Setup Reset allows to reset all EZ setup settings back to the original factory defaults.

Follow the on-screen instructions to reset all EZ setup settings.

Display Easy Setup



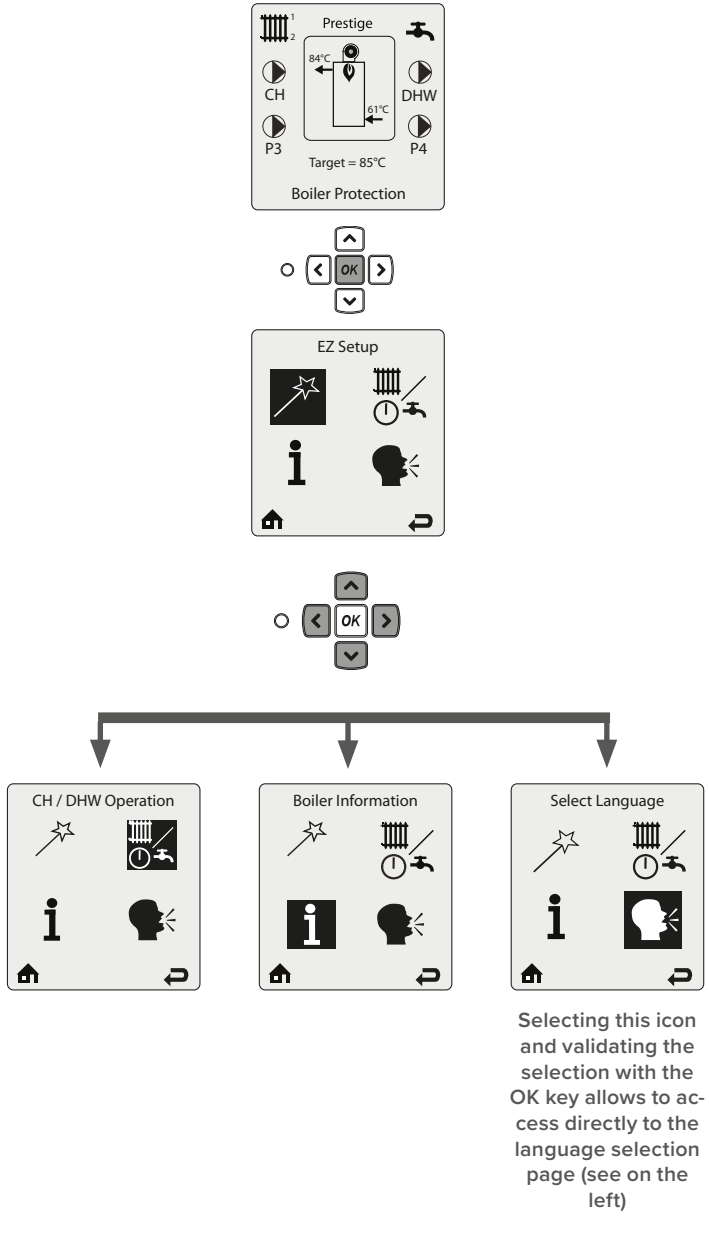
Display EZ Setup allows to select the interface language (Nine different languages: English, French, Dutch, Spanish, Italian, German, Czech, Polish and Russian).

Press on **UP** or **DOWN** button to select the required language then press **OK** to store the setting.

Display EZ Setup allows to select the interface temperature unit.

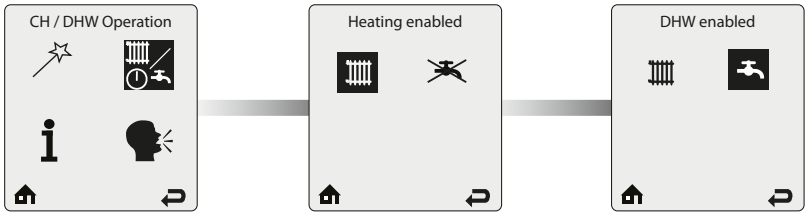
Press on **UP** or **DOWN** button to select the required unit then press **OK** to store the setting.

Starting from the Home screen :



Selecting this icon and validating the selection with the OK key allows to access directly to the language selection page (see on the left)

CH/DHW Operation



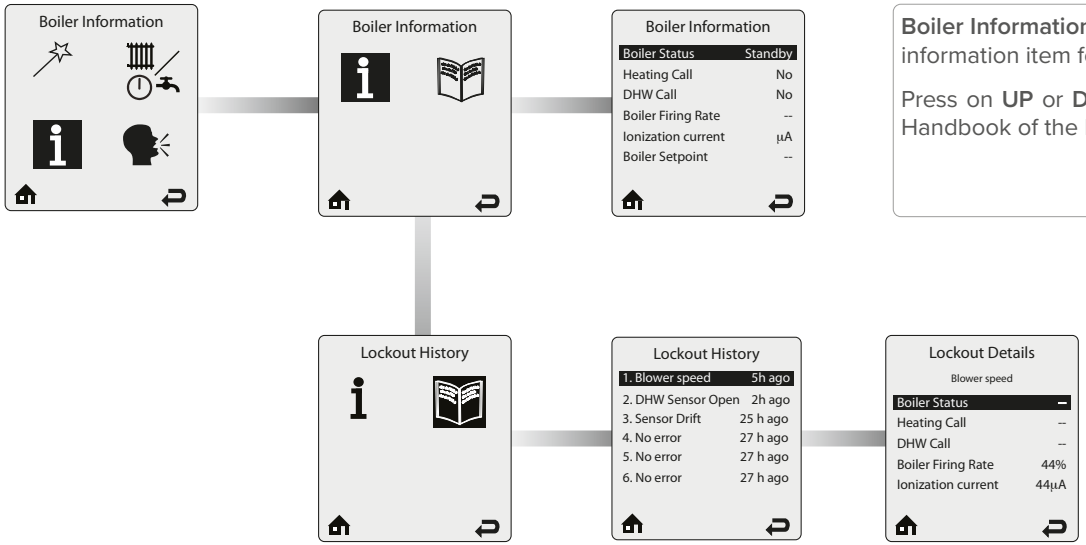
CH/DHW Operation provides a simple way to enable/disable either the CH or the DHW function of the Prestige.

Press on **LEFT** or **RIGHT** button to select the object (CH or DHW icon), then press **OK** to toggle between the enabled/disabled status. The status of the circuit is displayed at the top of the screen.

Using the arrow keys, select the **HOME** or **RETURN** icon at the bottom of the screen to go back either to the home page or to the previous screen respectively.

Default:

Boiler Information



Boiler Information screen provides real time operating information of the Prestige. Each line contains an information item followed by its current value. Six lines are displayed on the screen at one time.

Press on **UP** or **DOWN** button to scroll through the items. For more information, refer to the Installer's Handbook of the Prestige boilers.

Lockout History records the last eight lockouts. Six lines are displayed on the Lockout History screen at one time. Each line contains a lockout description followed by how long ago the lockout occurred.

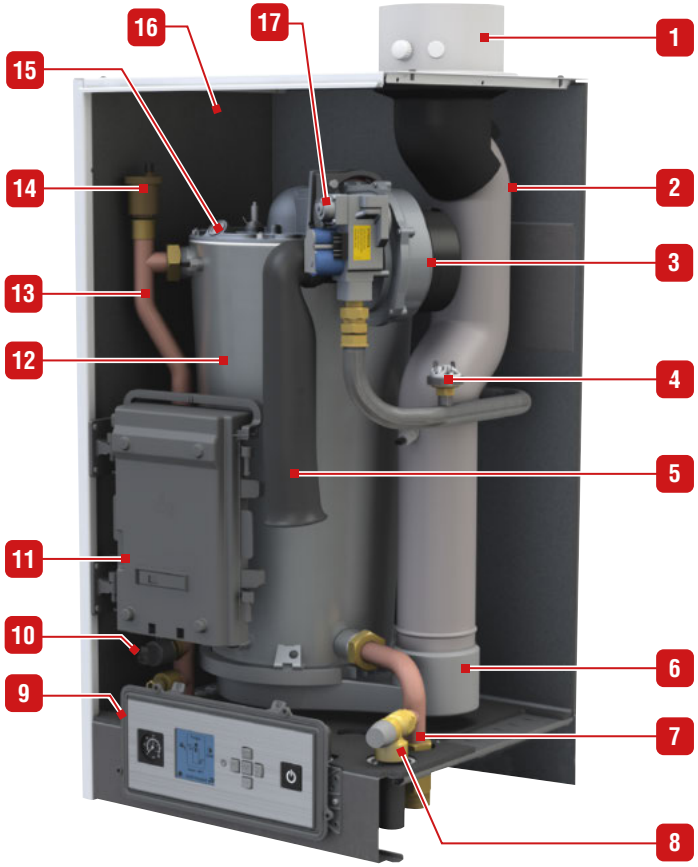
Press on **UP** or **DOWN** button to scroll through the items and on **OK** to select any of them and get more details through the **Lockout Details** screen. For more information, refer to the Installer's Handbook of the Prestige boilers.

MODELS - PRESTIGE 42 - 50 - 75 - 100 - 120 SOLO

The Prestige is a wall-hung condensing boiler meeting the requirements of current “HR-Top” standards in Belgium. The boiler is certified compliant with “EC” standards as a connected appliance: C13(x) - C33(x) - C43(x) - C53(x) - C63(x) - C83(x) - C93(x), but it can also be connected as an open appliance in category B23 or as an appliance of category B23P, which can operate with a positive pressure.

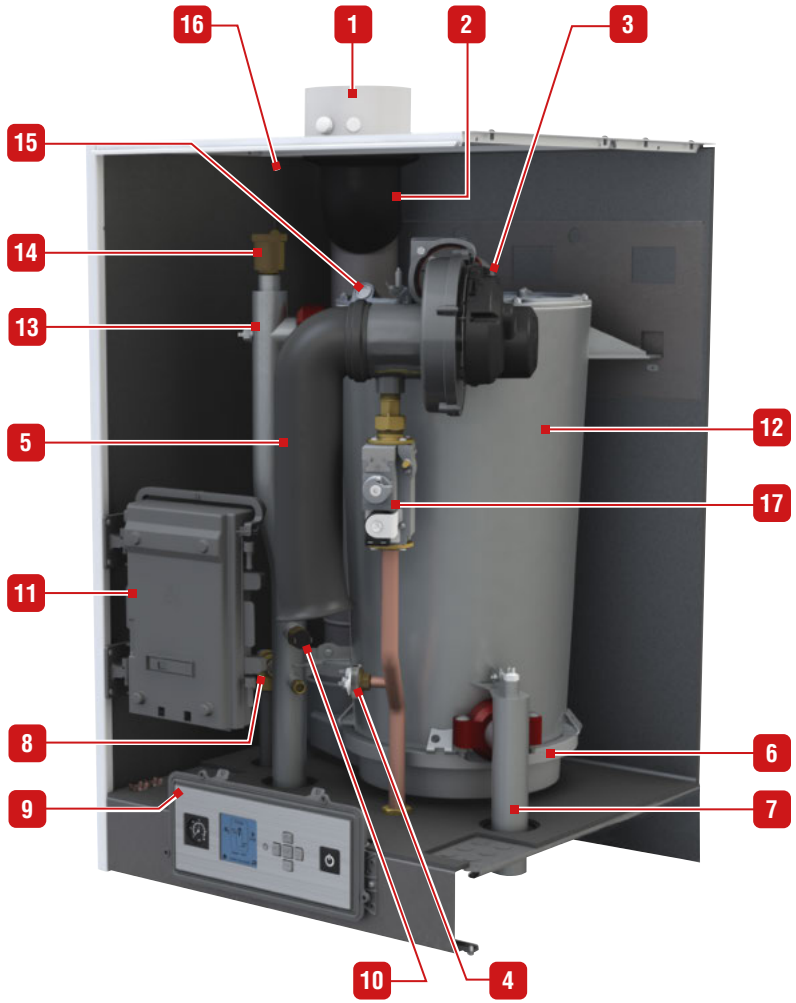
The boiler features a built-in frost protection mechanism: as soon as the flow temperature [NTC1 probe] drops below 7°C, the central heating pumps are activated. As soon as the flow temperature is at 5°C, the burner starts up until the flow temperature rises above 15°C. The pumps continue to run for around 10 minutes. The function can be enabled or disabled through the installer menu. When the frost protection is disabled, only the pumps operate.

An anti-freeze function is also available if an outdoor temperature sensor is connected, the pumps are activated when the outside temperature drops below the threshold defined through the Freeze protection function in the installer menu. In order to enable the Prestige boiler to protect the whole system against freezing, all the valves of the radiators and the convectors should be completely open.



Prestige 42 - 50 - 75 Solo

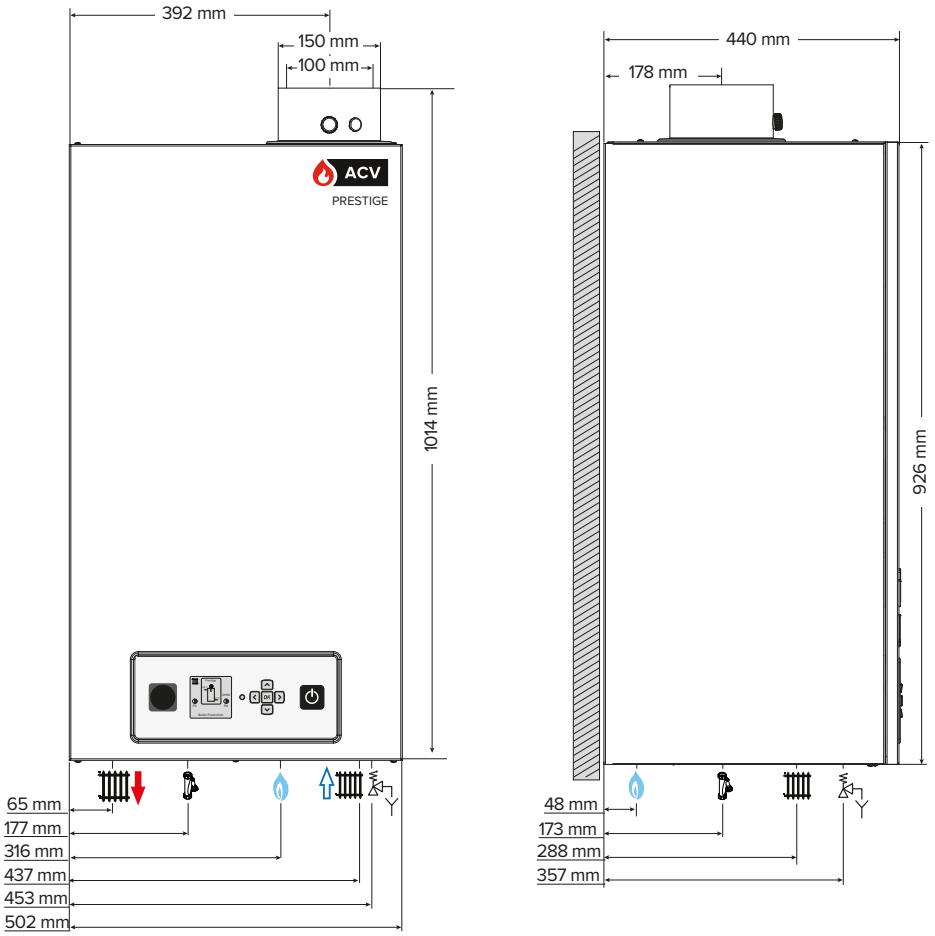
1. Concentric chimney connection ∅100 /150mm with measuring element
2. Chimney tube
3. Modulating Air/gas premix burner
4. Gas pressure switch
5. Air inlet
6. Condensate recovery dish
7. Heating return
8. Safety valve
9. Control panel with display and pressure gauge
10. Pressure sensor
11. Electrical panel.
12. Stainless steel heat exchanger
13. Heating supply
14. Auto air vent
15. Flame sight glass
16. Insulated casing
17. Gas valve



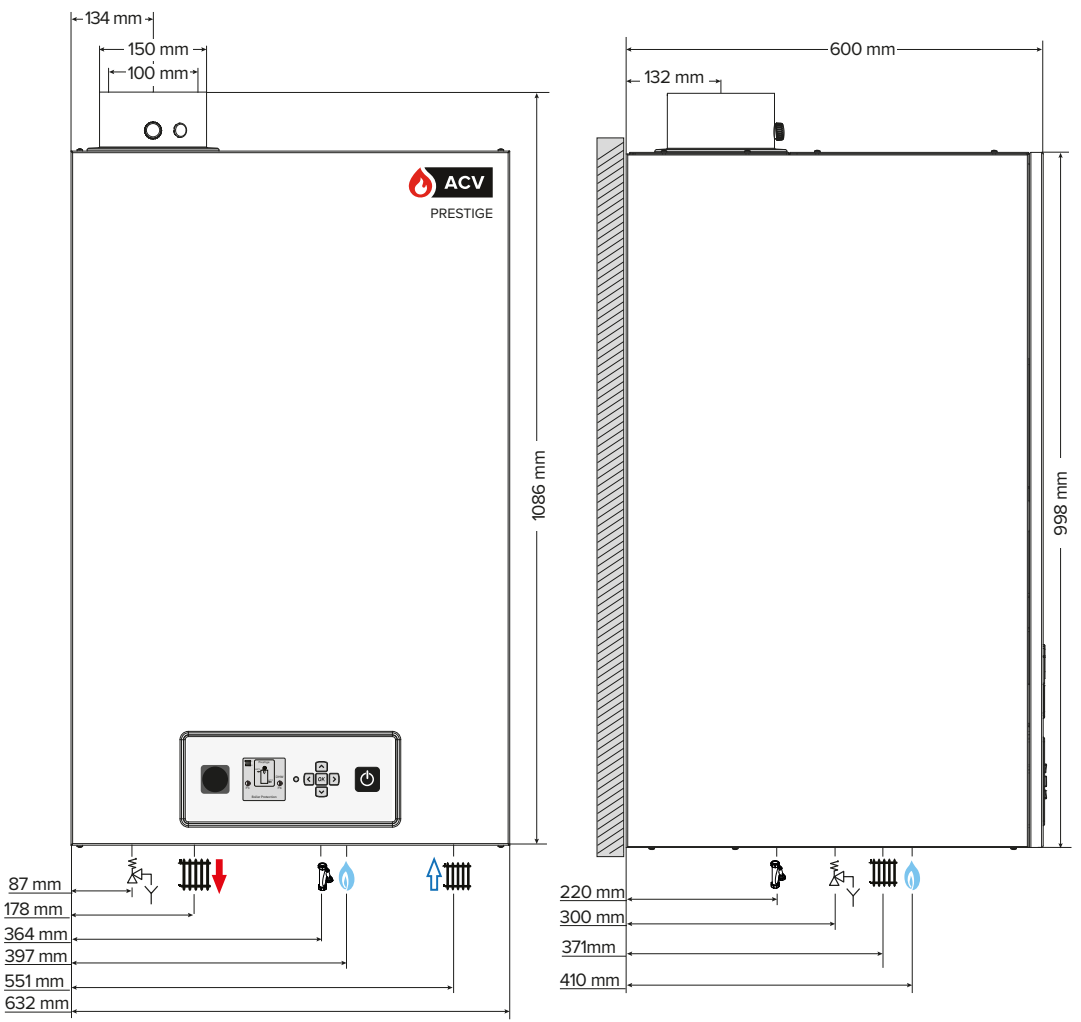
Prestige 100 - 120 Solo

DIMENSIONS

Prestige 42 - 50 - 75 Solo



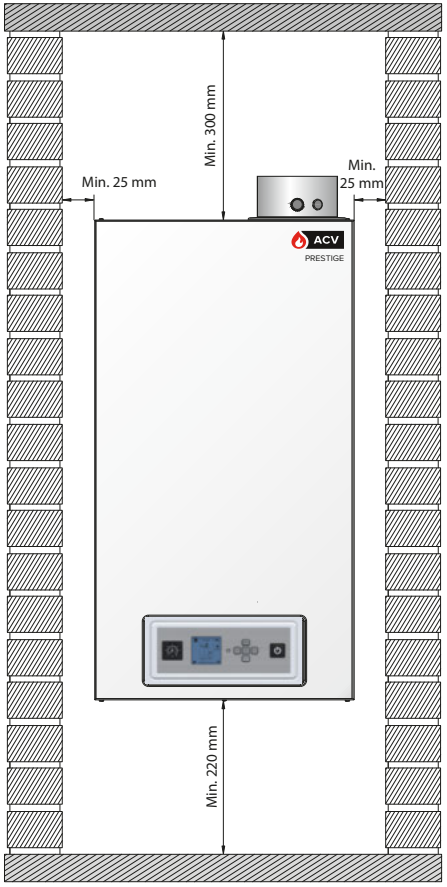
Prestige 100 - 120 Solo



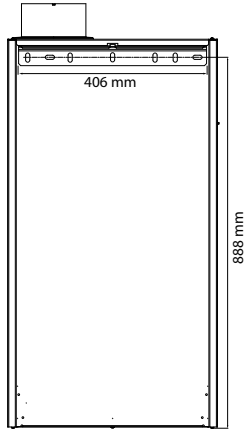
PRESTIGE SOLO

		42	50	75	100	120
[M]	"	5/4	5/4	5/4	1 1/2	1 1/2
[M]	"	3/4	3/4	3/4	1	1
Min. ∅ of flue pipe	mm	100	100	100	100	100
Drained weight	Kg	50	54	59	89	93

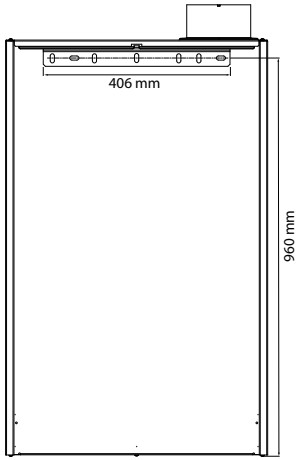
CLEARANCE



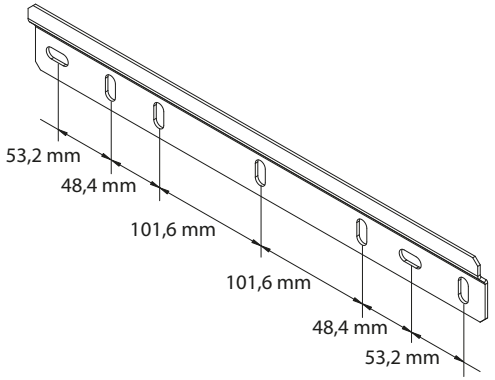
WALL MOUNTING - DIMENSIONS



Prestige 42 - 50 - 75 Solo



Prestige 100 - 120 Solo



For boiler mounting on the wall, refer to "Boiler Installation - Wall Mounting" on page 27.

COMBUSTION CHARACTERISTICS

			PRESTIGE SOLO									
			42		50		75		100*		120*	
			G20/G25	G31	G20/G25	G31	G20/G25	G31	G20/G25	G31	G20/G25	G31
Input (PCI)	max	kW	42.0	42.0	50.0	50.0	69.9	69.9	100.0	100.0	115.3	115.3
	min	kW	5.2	6.3	7.2	7.5	10.2	11.5	12.5	14.0	12.5	13.0
Output at 100%	(80/60°C)	kW	40.7	40.7	48.5	48.5	67.8	67.8	97.5	97.5	111.8	111.8
	(50/30°C)	kW	44.2	44.2	52.4	52.4	73.8	73.8	104.2	104.2	120.0	120.0
Efficiency at 100%	(80/60°C)	%	97.0	97.0	97.0	97.0	97.0	97.0	97.5	97.5	97.0	97.0
	(50/30°C)	%	105.3	105.3	104.9	104.9	105.6	105.6	105.3	105.3	104.3	104.3
Efficiency at 30% load (EN677)		%	108.5	108.5	109.0	109.0	108.5	108.5	108.2	108.2	108.0	108.0
NOx (Class 6) i.a.w. EN15502-1 + A1 : 2015	Weighted	mg/kWh	28.8	-	35.1	-	43.2	-	34.2	-	39.6	-
CO	Max. output	mg/kWh	86	94	70	99	92	105	70	134	74	112
CO_2 (without front panel)	Max. output	$\%CO_2$	8.7	10.2	8.8	10.4	8.8	10.4	8.7	10.3	8.8	10.4
	Min. output	$\%CO_2$	8.7	10.2	8.8	10.4	8.8	10.4	8.7	10.3	8.8	10.4
CO_2 (closed front panel)	Max. output	$\%CO_2$	9.0	10.5	9.1	10.7	9.1	10.7	9.0	10.6	9.1	10.7
	Min. output	$\%CO_2$	9.0	10.5	9.1	10.7	9.1	10.7	9.0	10.6	9.1	10.7
Max gas flow rate G20/G25	G20 (20 mbar)	m^3/h	4.4	-	5.3	_	7.4	-	10.5	-	12.2	-
	G25 (25 mbar)	m^3/h	5.2	-	6.1	-	8.6	-	12.2	-	14.2	-
Max. gas flow rate G31	30/37/50 mbar	Kg/h	-	3.3	-	3.9	-	5.4	-	7.7	-	8.9
	30/37/50 mbar	m3/h	-	1.7	-	2.0	-	2.9	-	4.0	-	4.7
Temp. of flue gases	Average	°C	80	80	80	80	80	80	80	80	80	80
	Max.	°C	110	110	110	110	110	110	110	110	110	110
	Min.	°C	30	30	30	30	30	30	30	30	30	30
Mass flow rate** of flue gases	Nominal	kg/h	70.5	69.4	83.9	82.6	117.3	115.5	166.1	163.6	193.0	190.1
	at min output	kg/h	8.7	10.4	12.1	12.4	17.1	19.0	21.0	23.1	21.0	21.5

*** To operate a Prestige 100 or 120 Solo with G25 gas, it is recommended to remove the factory-installed orifice in order to reach the normal performance values. Refer to "Conversion to Propane and G25 Natural Gas" on page 33 for the correct orifice removal procedure.**

**** Mass flow rate values were calculated for G20 and G31 with an air factor of 1.3.**

GAS CATEGORIES

Gas type		G20	G25		G20 ⇆ G25	G31			G30		G30 ⇆ G31	
Pressure (mbar)		20	20	25	20 ⇆ 25	30	37	50	30	50	28 - 30 ⇆ 37	50 ⇆ 67
Country code	Category											
AT	II2H3P	●						●				
	II2H3B/P	●								●		
BE	I2E(S)*				●							
	I2E(R)**				●							
	I3P						●					
CH	II2H3P	●					●	●				
	II2H3B/P	●								●		
	II2H3+	●									●	
CY	II2H3B/P	●							●			
	II2H3+	●									●	
CZ	II2H3P	●					●					
	II2H3+	●									●	
DE	II2E3B/P	●								●		
	II2ELL3B/P	●	●					●		●		
DK	II2H3B/P	●							●			
EE	II2H3B/P	●							●			
ES	II2H3P	●					●					
FI	II2H3B/P	●							●			
FR	II2Er3P	●		●			●	●				
	II2E+3+				●						●	
GB	II2H3P	●					●					
	II2H3+	●									●	
GR	II2H3P	●					●					
	II2H3+	●									●	
HR	II2H3P	●					●					
	II2H3B/P	●							●			
HU	II2H3B/P			●					●			
IE	II2H3P	●					●					
	II2H3+	●									●	

* Prestige 42 - 50 - 75 Solo

**Prestige 100-120 Solo

Gas type		G20	G25		G20 ⇆ G25	G31			G30		G30 ⇆ G31	
Pressure (mbar)		20	20	25	20 ⇆ 25	30	37	50	30	50	28 - 30 ⇆ 37	50 ⇆ 67
Country code	Category											
IT	II2H3P	●					●					
	II2H3B/P	●							●			
	II2H3+	●									●	
LT	II2H3P	●					●					
	II2H3B/P	●							●			
	II2H3+	●									●	
LU	II2E3B/P	●							●			
NL	II2L3B/P			●					●			
NO	II2H3B/P	●							●			
PL	II2E3B/P	●							●			
PT	II2H3P	●					●					
	II2H3+	●									●	●
RO	II2H3P	●				●						
	II2H3B/P	●							●			
	II2E3B/P	●							●			
SE	II2H3B/P	●							●			
SI	II2H3P	●				●						
	II2H3B/P	●							●			
	II2H3+	●									●	
SK	II2H3P	●					●	●				
	II2H3B/P	●							●	●		
	II2H3+	●									●	
TR	II2H3B/P	●							●			

ELECTRICAL CHARACTERISTICS PRESTIGE 42 - 50 - 75 SOLO

		PRESTIGE SOLO		
Main Characteristics		**42**	**50**	**75**
Rated voltage	V~	230	230	230
Rated frequency	Hz	50	50	50
Electrical consumption	W	78	78	126
Class	IP	X4D	X4D	X4D

Key

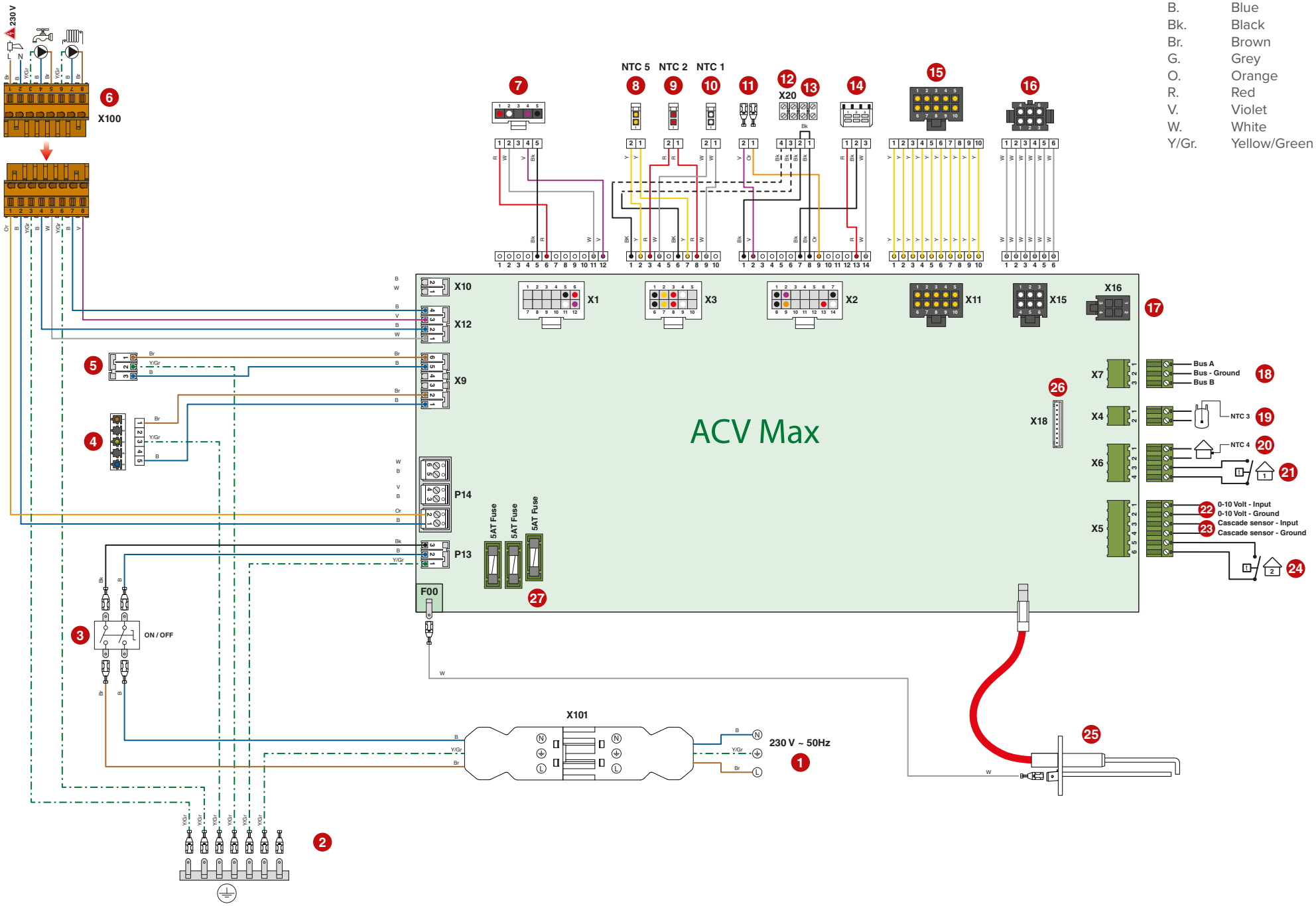
1. 230 V power supply plug
2. Ground
3. ON/OFF master switch
4. Gas valve rectified
5. Burner power supply
6. Terminal block for optional items
   - : Alarm (ERR terminal) **230 VAC OUTPUT !**
   - : CH circuit circulator pump (CH terminal)
   - : DHW circuit circulator pump (DHW terminal)
7. Burner PWM plug
8. NTC5 flue gas temperature sensor
9. NTC2 return sensor
10. NTC1 supply sensor
11. Gas pressure switch
12. NTC - Low temperature circuit

For low temp circuit operation, black wires from X3, terminals 1 & 6 must be routed to X20, terminals 3 & 4.

13. High limit switch
14. Low water pressure sensor
15. PCB (Display)
16. ACVMax programmation plug
17. Cascade harness connection terminal
18. A & B Modbus (option)
19. NTC3 DHW sensor (option)
20. NTC4 outdoor temperature sensor (option)
21. Room thermostat 1 (option)
22. 0-10 Volt (option)
23. Cascade temp. sensor (option)
24. Room thermostat 2 (option)
25. Ignition and ionization cable
26. Connection for Interface Control Unit (option)
27. 5AT slow-blow fuse (3x) for internal and optional circuits*

* 5AT slow-blow fuse (2x) for internal circuits and connection of CH, DHW and Flame output + 5AT slow-blow fuse (1x) for connection of Alarm, P3 and P4 (connector P14).

2 spare 5AT slow-blow fuses are located on the back side of the electrical box, for fuse replacement, if required.


B. Blue
Bk. Black
Br. Brown
G. Grey
O. Orange
R. Red
V. Violet
W. White
Y/Gr. Yellow/Green
230 V
L N
X100
NTC 5
NTC 2
NTC 1
X20
X10
X12
X9
P14
P13
X1
X3
X2
X11
X15
X16
X18
X7
X4
X6
X5
ACV Max
F00
5AT Fuse
5AT Fuse
5AT Fuse
ON / OFF
X101
230 V ~ 50Hz
Bus A
Bus - Ground
Bus B
NTC 3
NTC 4
0-10 Volt - Input
0-10 Volt - Ground
Cascade sensor - Input
Cascade sensor - Ground

ELECTRICAL CHARACTERISTICS PRESTIGE 100 - 120 SOLO

		PRESTIGE SOLO	
Main Characteristics		**100**	**120**
Rated voltage	V~	230	230
Rated frequency	Hz	50	50
Electrical consumption	W	150	180
Class	IP	X4D	X4D

Key

1. 230 V power supply plug
2. Ground
3. ON/OFF master switch
4. Gas valve
5. Burner power supply
6. Terminal block for optional items
   - : Alarm (ERR terminal) **230 VAC OUTPUT !**
   - : CH circuit circulator pump (CH terminal)
   - : DHW circuit circulator pump (DHW terminal)
7. Burner PWM plug
8. NTC5 flue gas temperature sensor
9. NTC2 return sensor
10. NTC1 supply sensor
11. Gas pressure switch
12. NTC - Low temperature circuit

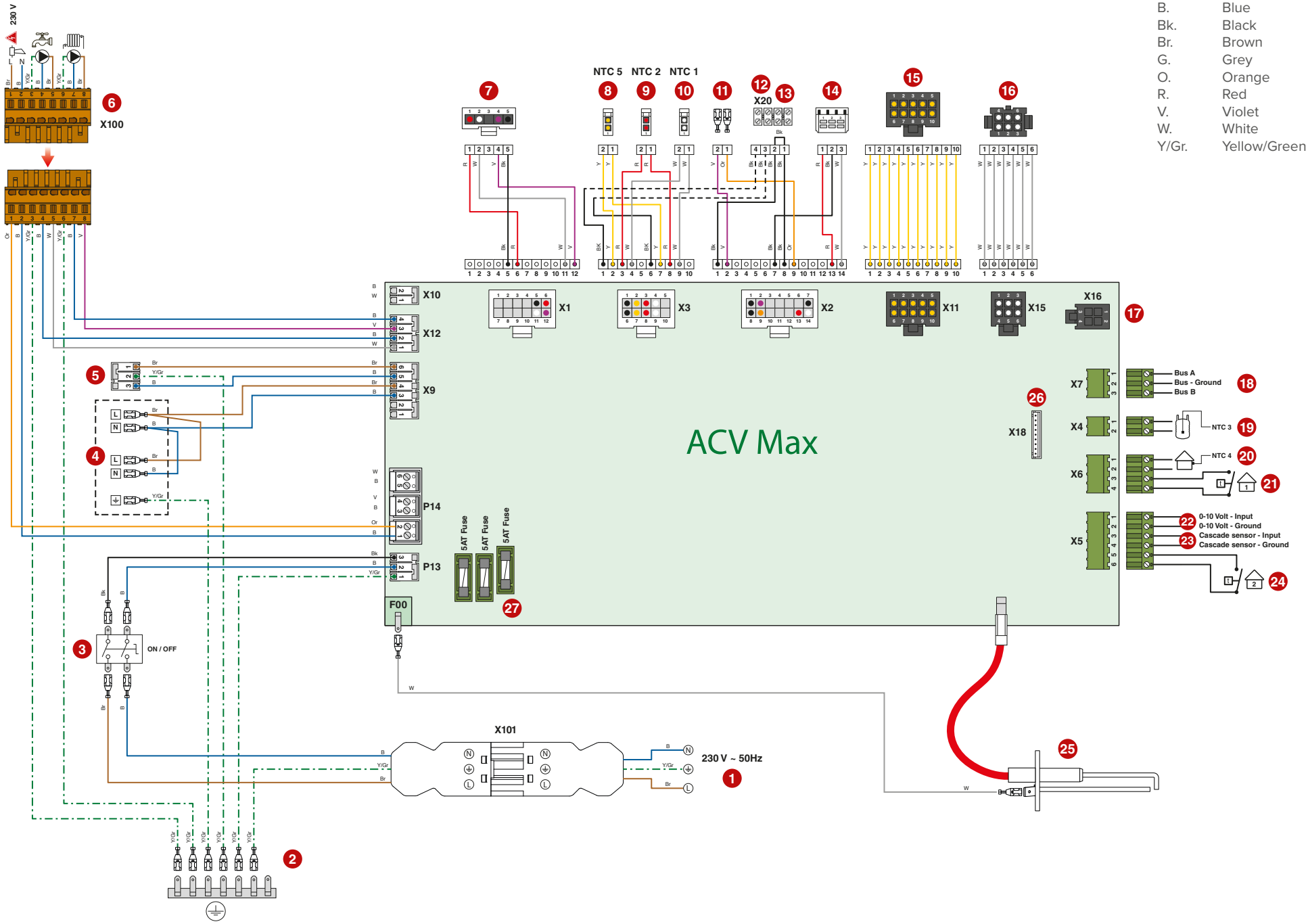
For low temp circuit operation, black wires from X3, terminals 1 & 6 must be routed to X20, terminals 3 & 4.

13. High limit switch
14. Low water pressure sensor
15. PCB (Display)
16. ACVMax programmation plug
17. Cascade harness connection terminal
18. A & B Modbus (option)
19. NTC3 DHW sensor (option)
20. NTC4 outdoor temperature sensor (option)
21. Room thermostat 1 (option)
22. 0-10 Volt (option)
23. Cascade temp. sensor (option)
24. Room thermostat 2 (option)
25. Ignition and ionization cable
26. Connection for Interface Control Unit (option)
27. 5AT slow-blow fuse (3x) for internal and optional circuits*

* 5AT slow-blow fuse (2x) for internal circuits and connection of CH, DHW and Flame output + 5AT slow-blow fuse (1x) for connection of Alarm, P3 and P4 (connector P14).

2 spare 5AT slow-blow fuses are located on the back side of the electrical box, for fuse replacement, if required.

B. Blue
Bk. Black
Br. Brown
G. Grey
O. Orange
R. Red
V. Violet
W. White
Y/Gr. Yellow/Green



HYDRAULIC CHARACTERISTICS

Main Characteristics		PRESTIGE SOLO 42	50	75	100	120
Capacity (primary)	L	15	20	17	28	28
Max. operating pressure of primary circuit	bar	4	4	4	4	4
Water pressure drop (primary circuit) (Δt = 20 K)	mbar	23	30	74	42	80
Min. required flow rate	L/h	1,800	2,200	3,300	4,300	5,200

MAXIMUM OPERATING CONDITIONS

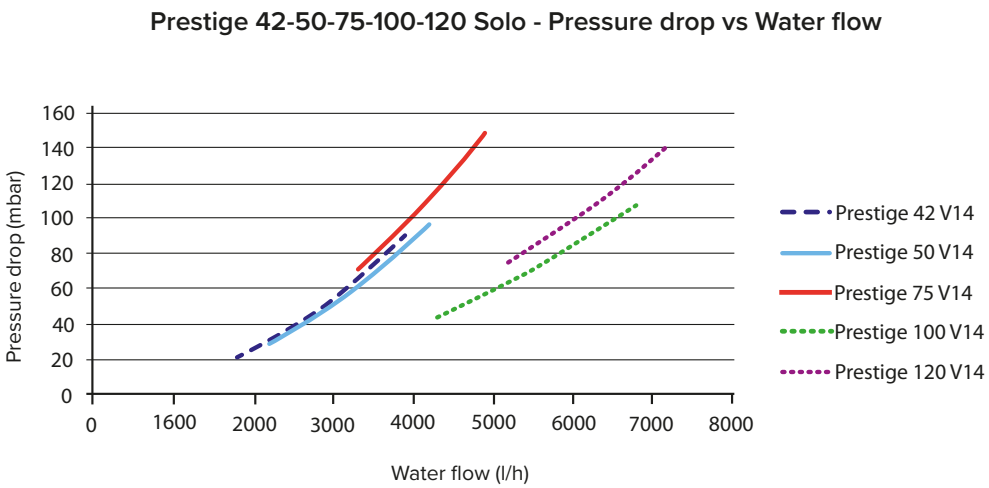
Maximum Service Pressure *
- Primary circuit : ..... 4 bar

Maximum Operating Conditions
- Maximum temperature (primary) : .....87°C

Water Quality

See "Recommendations for the Prevention of Corrosion and Scaling in Heating Systems" on the following page.

HYDRAULIC PRESSURE DROP CURVE OF THE BOILER



* The hydraulics of the boiler have been tested according to EN-15502, and the boiler is classified as a pressure class 3 appliance, according to EN-15502.

RECOMMENDATIONS FOR THE PREVENTION OF CORROSION AND SCALING IN HEATING SYSTEMS

How oxygen and carbonates can affect the heating system

Oxygen and dissolved gasses in the water of the primary circuit contribute to the oxidation and the corrosion of the system components that are made of ordinary steel (radiators, ...). The resulting sludge is then deposited in the boiler exchanger.

The combination of carbonates and carbon dioxide in the water results in the formation of scale on the hot surfaces of the installation, including those of the boiler exchanger.

These deposits in the heat exchanger reduce the water flow rate and thermally insulate the exchange surfaces, which is likely to damage them.

Sources of oxygen and carbonates in the heating circuit

The primary circuit is a closed circuit; the water it contains is therefore isolated from the mains water. When maintaining the system or filling up the circuit, water renewal results in the addition of oxygen and carbonates in the primary circuit. The larger the water volume in the system, the larger the addition.

Hydraulic components without an oxygen barrier (PE pipes and connections) admit oxygen into the system.

Prevention Principles

1. **Clean the existing system before installing a new boiler**
   - Before the system is filled, it must be cleaned in accordance with standard EN14336. Chemical cleaning agents can be used.
   - If the circuit is in bad condition, or the cleaning operation was not efficient, or the volume of water in the installation is substantial (e.g. cascade system), it is recommended to separate the boiler from the heating circuit using a plate-to-plate exchanger or equivalent. In that case, it is recommended to install a hydrocyclone or magnetic filter on the installation side.

2. **Limit the fill frequency**
   - Limit fill operations. In order to check the quantity of water that has been added into the system, a water meter can be installed on the filling line of the primary circuit.
   - Automatic filling systems are not recommended.
   - If your installation requires frequent water refilling, make sure your system is free of water leaks.
   - Inhibitors may be used in accordance with standard EN 14868.

3. **Limit the presence of oxygen and sludge in the water**
   - A deaerator (on the boiler flow line) combined with a dirt separator (upstream of the boiler) must be installed according to the manufacturer's instructions.
   - ACV recommends using additives that keep the oxygen in solution in the water, such as Fernox (www.fernox.com) and Sentinel (www.sentinel-solutions.net) products.
   - The additives must be used in accordance with the instructions issued by the manufacturer of the water treatment product.

4. **Limit the carbonate concentration in the water**
   - The fill water must be softened if its hardness is higher than 20° fH (11,2° dH).
   - Check regularly the water hardness and enter the values in the service log.
   - Water hardness table :

Water hardness	°fH	°dH	mmolCa(HCO3)2 / l
Very soft	0 - 7	0 - 3.9	0 - 0.7
Soft	7 - 15	3.9 - 8.4	0.7 - 1.5
Fairly hard	15 - 25	8.4 - 14	1.5 - 2.5
Hard	25 - 42	14 - 23.5	2.5 - 4.2
Very hard	> 42	> 23.5	> 4.2

5. **Control the water parameters**
   - In addition to the oxygen and the water hardness, other parameters of the water must be checked.
   - Treat the water if the measured values are outside the range.

Acidity	6,6 < pH < 8,5
Conductivity	< 400 µS/cm (at 25°C)
Chlorides	< 125 mg/l
Iron	< 0,5 mg/l
Copper	< 0,1 mg/l

SAFETY INSTRUCTIONS FOR THE INSTALLATION

Essential recommendations for safety

- Install the boiler on a level base or vertically plumb support made of non-combustible materials and of sufficient strength to support the boiler weight.
- Use extreme care not to drop the boiler or cause bodily injury while lifting or mounting the boiler onto the wall bracket or base. Once mounted, verify that the boiler is securely attached to the bracket and wall or safely set on its base.
- Do not use or store any flammable, explosive or corrosive products, such as paint, solvents, salts, chloride products and other detergent products near the appliance.
- Make sure that the condensate outlet is never obstructed and that a condensate neutralisation system is installed if required.
- Make sure that all air vents are unobstructed at all times.

Essential recommendations for the electrical safety

- Only an approved installer is authorized to carry out the electrical connections.
- Make sure that the appliance is connected to the earth.
- Install a 2-way switch and a fuse or circuit breaker of the recommended rating outside the appliance, so as to be able to shut power down when servicing the appliance or before performing any operation on it.
- Isolate the external electrical supply of the appliance before performing any operation on the electrical circuit.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless supervised or unless they have been given instruction concerning the use of the appliance by a person responsible for their safety.

Essential recommendations for the correct operation of the appliance

- All connections (electrical, flue pipe, hydraulic, gas/fuel) must be carried out in accordance with current standards and regulations in force.
- The boiler must be installed in a dry and protected area, with an ambient temperature comprised between 0 and 45°C.
- Install the appliance to ensure easy access at all times.
- Make sure that the mains water used to fill the boiler has a minimum pressure of 1.2 bar.
- Make sure to install a pressure reducing valve set at 4.5 bar if the mains supply pressure is in excess of 6 bar.
- If works need to be performed (in the boiler room or close to the air vents), make sure to turn off the boiler to prevent dust from entering and accumulating in the boiler heating system.

PACKAGE CONTENTS

The Prestige boilers are delivered assembled and packaged.

At product reception and after removal of packaging, check the package contents and that the appliance is free of damages.

Contents

- Boiler
- Installation, Operation and Maintenance Instructions
- Orifice for the natural gas to propane conversion + sticker
- Ball condensate trap to be installed
- Wall-mounting kit

TOOLS REQUIRED FOR THE INSTALLATION

BOILER INSTALLATION - WALL MOUNTING

Essential recommendations for the correct operation of the appliance

- The boiler must be mounted on a non-flammable surface.
- Noise may be amplified when the appliance is mounted on a lightweight material wall. Using rubber dampers may reduce this effect.
- Make sure the appliance support bracket is level at installation.

Install the appliance using the provided mounting bracket:

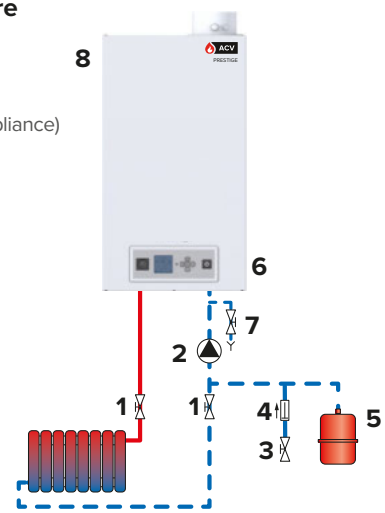
Refer to "Wall mounting - dimensions" on page 17 for the installation dimensions.

1. Drill two holes with a depth of 75 mm using a 10 mm drill bit, at the required height and following the spacing given below.
2. Fasten the wall mounting bracket using the supplied lag screws.
3. Attach the boiler to the wall mount.

HEATING CONNECTION

Typical connection - high temperature

Description
1. Isolating valve
2. Heating pump (not required if built in the appliance)
3. Filling valve
4. Check valve
5. Expansion vessel
6. Safety valve (built-in)
7. Drain valve
8. Automatic air vent (built-in)

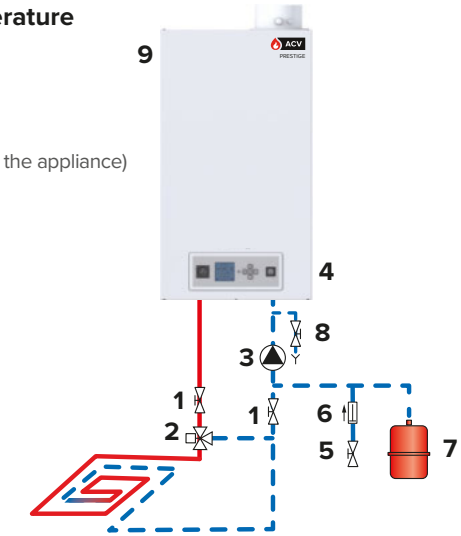


Cold water

Hot water

Typical connection - low temperature

Description
1. Isolating valve
2. 3-way mixing valve
3. Heating pump (not required if built in the appliance)
4. Safety valve (built-in)
5. Filling valve
6. Check valve
7. Expansion vessel
8. Drain valve
9. Automatic air vent (built-in)



Cold water

Hot water

The heating circuit must be designed so as to ensure a continuous flow in the boiler; this flow may be obstructed if all the thermostatic valves are closed. In this case, install a bypass.

For additional system configurations, refer to "Configuration and system set-up" on page 35 and to the Installer's Handbook (or the ACVMax System Control manual, depending on the boiler build, refer to page 3).

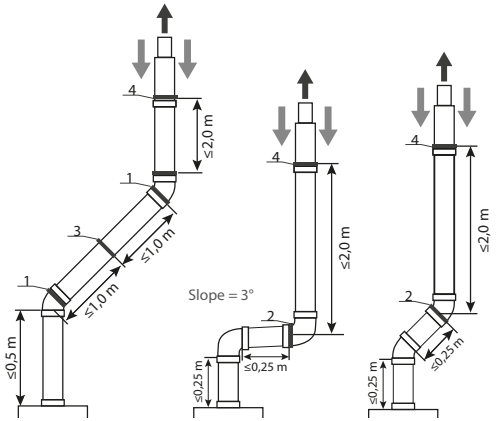
GENERAL RECOMMENDATIONS FOR CHIMNEY CONNECTION

Essential recommendations for safety

- Do not install the boiler into a common flue piping with any other gas or oil appliances. This will cause flue gas spillage or appliance malfunction.
- Verify installed combustion air and flue piping are sealed gas tight and meet all provided instructions and applicable codes and standards.
- Failure to properly support the flue system can cause the flue system to fail, resulting in substantial property damage, serious injury, or death.
- A byproduct of any gas/oil fired appliance is carbon monoxide. Failure to install carbon monoxide detectors with alarms can result in serious injury, or death. Refer to applicable local regulations.

Essential recommendations for the correct operation of the appliance

- A condensation outlet connected to the sewer must be fitted close to the boiler to prevent the condensation products from the flue pipe from running into the boiler.
- Install a condensate neutralisation system if required by national and/or local regulations and have it cleaned regularly.
- Only use flue system components from the same manufacturer to connect this appliance and ensure that the pipe and connection diameters all match.
- Make sure to secure the flue piping to a solid structure.
- Exclusively use provided brackets to support the flue system.
- Install the horizontal flue pipes with a slight slope of 5 cm per meter (3°), so that the acid condensation water flows to a condensate recovery container and does not damage the heating body.



1. Each elbow and straight element will be secured at the sleeve.
2. In case the straight element before or after the first elbow is shorter than 25 cm, secure the straight element after the elbow using a bracket.
3. In case a straight (horizontal or sloped) element is longer than 1 m, support the element in its center using a clamp, making sure to allow free movement of the pipe.
4. Secure with a clamp every 2 meters in vertical piping/1 meter in horizontal/sloped piping, making sure to distribute the clamps evenly on the length of piping.

- If the appliance is provided with a condensate drain assembly, make sure to install the complete assembly on the boiler. If the assembly is incomplete, replace the entire assembly.
- Make sure that the condensate drain assembly is filled with water before starting up the boiler and check regularly the water level. Fill with water as necessary.
- It is mandatory to ventilate the boiler room. The high or low air vent opening dimensions depend on the boiler power and the boiler room size. Refer to the local regulations in force.
- If the combustion air inlet is located in an area likely to cause or contain contamination, or if products which could contaminate the air cannot be removed, the combustion air must be repiped and terminated at another location.
- Pool, laundry, common household, and hobby products often contain fluorine or chlorine compounds, which can form strong acids and corrode the internal components and flue system.
- In the case of parallel flue systems, make sure to maintain sufficient distance (at least 40 mm) between the boiler flue piping and combustible materials, and between the flue pipe and air inlet pipe if the latter is made of plastic material.
- Do not use screws to fasten together any flue pipe elements or any PP air inlet elements.
- Do not bond piping elements together using glue (e.g. silicone) or foam (e.g. PUR).

General remark

- For safety reasons and to make assembly easier, it is recommended to prefer the use of concentric flue pipes when possible.
- It is recommended to isolate the flue piping in damp rooms to prevent condensation water from forming on the piping and drip.
- When cutting the pipes to dimension, make sure to cut squarely and deburr the edges to prevent seals from being incorrect or damaged.
- To make piping assembly easier, exclusively use a mixture of water and soap (1%) on the extremity of the pipe to be fit in.
- When fitting metal flue pipes, make sure to always fit the pipe into the sleeve to the end stop.
- When fitting plastic flue pipes, make sure to allow material expansion by leaving about 10 mm between the pipe end and the sleeve end stop.
- Make sure to install the piping without any strain.
- Make sure to install an inspection opening in the flue system.
- When connecting the flue pipes, make sure not to exceed the maximum length recommended for the product, otherwise the system power might decrease.
- ACV-approved components will be used for the chimney connection. Failure to do so will make any warranty claim void.
- For C63 connection type (not allowed in Belgium), make sure to use the correct piping material according to the resistance to temperature, pressure, chemical composition of flue, condensation and soot. A code (as explained in EN 1443), marked on the pipe, allows to determine if the material complies with the flue system requirements.

FLUE PIPE CONNECTION TYPES

It is mandatory to use ACV flue systems to connect the appliance.

B23P: : Connection to a combustion product exhaust system designed to operate with positive pressure.

B23 : Connection to an exhaust duct that discharges the combustion products outside the room where it is installed, with the combustion air being drawn directly from the boiler room.

C13(x) : Connection using pipes fitted with a horizontal terminal that simultaneously takes in combustion air for the burner and discharges combustion products outside through openings that are either concentric or close enough together to be subjected to similar wind conditions, i.e. openings shall fit inside a square of 50 cm for boilers up to 70 kW and inside a square of 100 cm for boilers above 70 kW.

C33(x) : Connection using pipes fitted with a vertical terminal that simultaneously takes in fresh air for the burner and discharges combustion products outside through openings that are either concentric or close enough together to be subjected to similar wind conditions , i.e. openings shall fit inside a square of 50 cm for boilers up to 70 kW and inside a square of 100 cm for boilers above 70 kW.

C43(x) : Connection using two pipes to a collective duct system serving more than one appliance; this system of collective ducts features two pipes connected to a terminal unit that simultaneously takes in fresh air for the burner and discharges the combustion products outside through openings that are either concentric or close enough together to be subjected to similar wind conditions. C43(x) boilers are suitable for a connection to a natural draught chimney only.

C53(x) : Connection to separate ducts for supplying combustion air and discharging combustion products; these ducts may end in zones with different pressure levels, but are not allowed to be installed on opposite walls of the building.

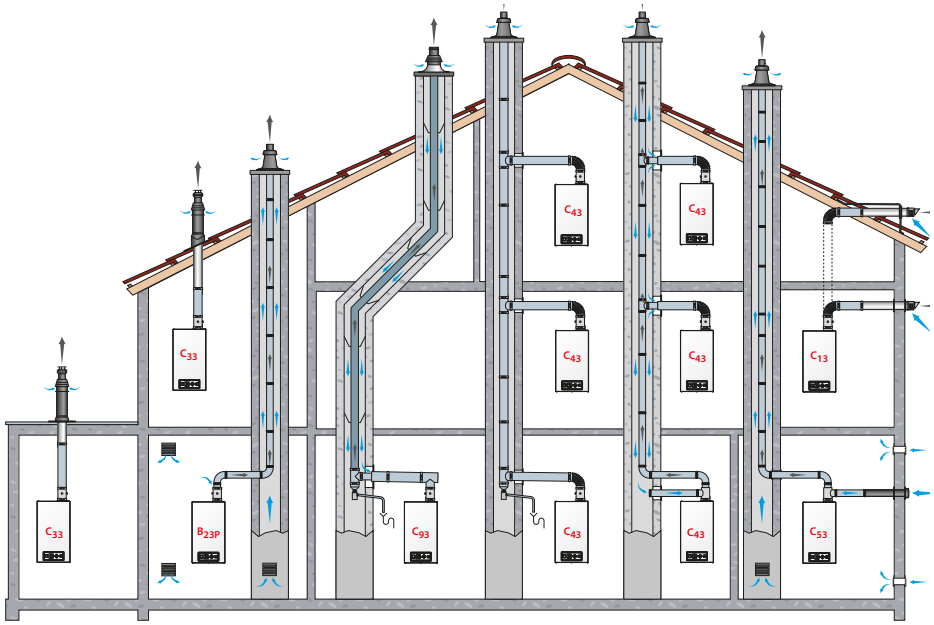
C63(x) : Type C boiler meant to be connected to a system for supplying combustion air and discharging combustion products, that is approved and sold separately **(Prohibited in some countries (e.g. Belgium) - refer to local regulations and standards in force)**. Terminals for the supply of combustion air and for the evacuation of combustion products are not allowed to be installed on opposite walls of the building. See also the following additional specifications:

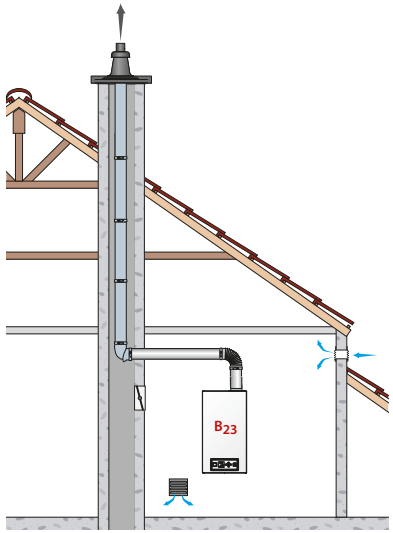
- Maximum allowable draught is 200 Pa.
- Maximum allowable pressure difference between combustion air inlet and flue gas outlet (including wind pressures) is 150 Pa (for P42/P50/P75) and 180 Pa (for P100/P120).
- Condensate flow is allowed into the appliance.
- Maximum allowable recirculation rate of 10% under wind conditions.

C83(x) : Connection using a single or double duct system. The system is made of a normal exhaust flue duct that discharges the combustion products. The appliance is also connected through a second duct fitted with a terminal, that supplies the burner with fresh outdoor air.

C93(x) : Connection using an individual system whose combustion product exhaust duct is installed in an exhaust duct that is integral with the building. The appliance, the exhaust duct and the terminal units are certified as an inseparable assembly. Minimum usable diameter for the vertical duct supplying the combustion air is 100 mm.

The C93 configuration enables airtight operation in a pre-existing chimney. The combustion air crosses the space between the tubing and the pre-existing chimney. Make sure to clean the pre-existing chimney thoroughly prior to installation, especially if there is soot or tar residue. Make sure that there is a clearance area for the combustion air at least equivalent to the area that would have been provided by separate concentric ducts or air intake ducts.





It is mandatory to ventilate the boiler room. The high or low air vent opening dimensions depend on the boiler power and the boiler room size. Refer to the local regulations in force.

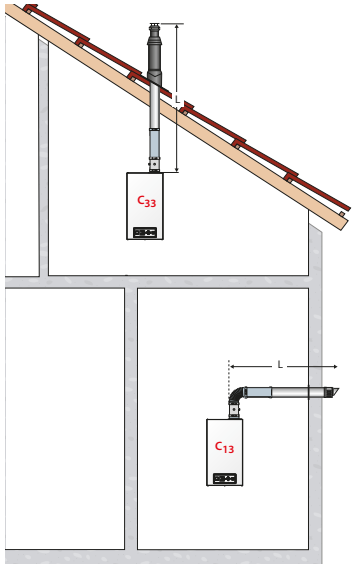
Boiler Models	Connexion type	Material / Ø (mm)	Available Chimney Components *						
			Terminals	Pipes	Extensions	Bends	Measurement and condensate recovery	Accessories	Adapters
Prestige 42-50-75	C93	PP Flex Ø 80	Set C93 Ø 80/125, (537D6287)	Flexible PP PP Ø 80, 25 m (537D6275)	—	—	—	• Connection sheath Alu for 80/125 (537D6266) • Connector Flex-Flex PP Ø 80 (537D6448)	—
Prestige 42-50-75	C13 C33	PP - Galva Ø 80/125	• Roof Terminal (537D6184) • Wall terminal kit (537D6185) • Wall terminal Kit (10800301)	Lengths : • 250 mm (537D6186) • 500 mm (537D6187) • 1000 mm (537D6188) • 2000 mm (537D6516)	Sliding extension , straight (+ 50 to 130 mm) (537D6189)	• 43° - 45° (537D6190) • 87° - 90° (537D6191)	• Measuring Tube (537D6193) • Measuring T-piece with inspection (537D6229)	• Weather Slate Steep (537D6182) • Bracket Ø 125 mm (537D6183) • Weather salte, flat roof (Ø 390 mm) (537D6194)	• Expander SST/Alu Ø 80/125 mm - 2 x Ø 80 mm (537D6231) • Expander PP/ALU, Ø 60/100 mm - Ø 80/125 mm (537D6405)
Prestige 42-50-75-100-120	C93	PP Flex Ø 100	Set C93 Ø 100/150, (537D6290)	Flexible PP Ø 100, 25 m (537D6271)	—	—	—	• Connection sheath Alu for Ø 100/150 (37D6267) • Adapter Flex-Flex PP Ø 100 (537D6451)	—
Prestige 42-50-75-100-120	C13 C33	PP - Galva Ø 100/150	• Roof Terminal (537D6300) • Wall terminal kit (537D6301)	Lengths : • 250 mm (537D6302) • 500 mm (537D6303) • 1000 mm (537D6304) • 2000 mm (537D6517)	Sliding extension, straight (+ 50 to 130 mm) (537D6305)	• 43° - 45° (537D6306) • 87° - 90° (537D6307)	• Measuring Tube (537D6308) • Measuring T-piece with inspection (537D6310)	• Weather Slate Steep 25°-45° (537D6209) • Bracket Ø 150 mm (537D6210) • Weather Slate, Flat roof (Ø 430 mm) (537D6208)	Concentric to parallel adapter Ø 100/150 mm - 2 x Ø 100 mm (537D6207)
Prestige 42-50-75-100-120	B23P C53	SST Ø 150	• Roof Terminal, flue Ø 150 (537D6211) • Wall terminal kit , flue, Ø 150 (537D6212) • Wall terminal kit, air, Ø 100 (537D6213)	Lengths, flue, Ø 150 : • 250 mm (537D6214) • 500 mm (537D6215) • 1000 mm (537D6216) Length, air, PVC Ø 100 : • 500 mm (537D6217)	Sliding extension, flue, Ø 150 (537D6218)	• Flue, Ø 150, 45° (537D6219) • Flue, Ø 150, 90° (537D6220) • Air, Ø 100, 45° (537D6221) • Air, Ø 100, 90° (537D6222)	Element for measurement and recovery of condensates, flue, Ø 150 (537D6223)	• Weather Slate Steep 25°-45° (537D6209) • Bracket Ø 150 mm (537D6210) • Weather Slate, Flat roof (Ø 430 mm) (537D6208)	• Expander Ø 100 - Ø 150 mm mandatory (537D6293) • Concentric to parallel adapter Ø 100/150 mm - 2 x Ø 100 mm (537D6207) • Adapter Ø 80 - Ø 100 mm, air (537D6172)
Prestige 42-50-75-100-120	C13 C33	SST - SST Ø 100/150	• Roof Terminal, (537D6197) • Wall terminal (537D6198)	Lengths : • 250 mm (537D6199) • 500 mm (537D6200) • 1000 mm (537D6201)	Sliding extension (280 to 395 mm) (537D6202)	• 43° - 45° (537D6203) • 87° - 90° (537D6204)	Element for measurement and recovery of condensates, flue, (537D6226)	• Weather Slate Steep 25°-45° (537D6209) • Bracket Ø 150 mm (537D6210) • Weather Slate, Flat roof (Ø 430 mm) (537D6208)	Concentric to parallel adapter Ø 100/150 mm - 2 x Ø 100 mm (537D6207)

CALCULATION OF THE FLUE PIPE LENGTH

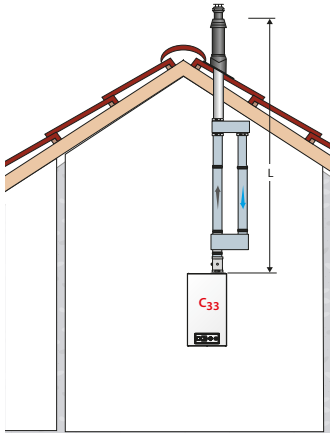
When connecting the flue pipes, make sure not to exceed the maximum length recommended for the product, otherwise the system pressure might decrease.

The flue pipe dimensions can be calculated using the method shown on the right. Please refer to the tables on the right indicating the equivalent length in meters of straight pipes, applied to each of the connection components. Then compare the calculation result to the recommended maximum flue pipe length for each type of Prestige model, as indicated below.

	Maximum length of flue pipes (in m) (terminals incl.)						
		Concentric flue pipe		Single wall connection		Flex connection	
	Ø 60/100	Ø 80/125	Ø 100/150	Ø 80	Ø 100	Ø 80	Ø 100
P 42	—	10	25	10	35	5	17
P 50	—	10	25	10	35	5	17
P75	—	10	25	10	35	5	17
P 100	—	—	20	—	30	—	15
P 120	—	—	20	—	30	—	15



Concentric connection



Parallel connection

Tables of equivalent length for the various connection accessories and connection types:

The following tables are based on ACV equipment and cannot be applied as a rule.

	Equivalent length for accessories			
	Prestige 42 - 50 - 75 - 100 - 120 Solo			
	Concentric flue pipe		Single wall connection	
	Ø 80/125	Ø 100/150	Ø 80	Ø 100
1 m straight pipe	1	1	1	1
90° elbow	1.43	1.72	2.16	3.6
45° elbow	0.81	1.14	0.91	2.23
Flex line	-	-	1.93	2.12

The equivalent length for pipes equipped with a measuring unit is equal to a 1 meter straight pipe

Example of calculation in the case of a concentric flue pipe :

This figure shows an example of connection proposed by an installer for a Prestige 50 Solo with a 100/150 concentric flue connection.

The assembly is comprised of: 2 x 90° elbows + 6 meters of straight pipes + 2 x 45° elbows.

The installer can check that the connection complies with the recommended value using the method below.

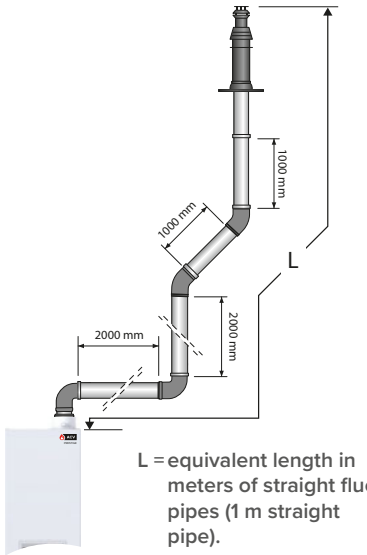
- **Method :**

a) Calculate the corresponding length in meters of pipes for the flue pipe assembly:

(2 x 1.72) + (6 x 1) + (2 x 1.140) = **11.72 m**

b) Compare the resulting value with the recommended length value (25 m).

The flue pipe length is within the recommended range.



L = equivalent length in meters of straight flue pipes (1 m straight pipe).

REMOVAL AND INSTALLATION OF THE FRONT AND TOP PANELS

Set-up conditions

- External power supply isolated

Removal Procedure

Front panel:

1. Release the screw (**1**) located at the bottom of the front panel. Retain for reinstallation.
2. Pull slightly the panel bottom towards you, then lift the whole panel to disengage the two upper lugs from the boiler casing mounting slots.

Top panel (Prestige 100-120 Solo only):

To remove the top panel, the front panel must be removed.

1. Release four screws (**2**). Retain for reinstallation.
2. Lift the top panel to remove it from the boiler.

Installation procedure

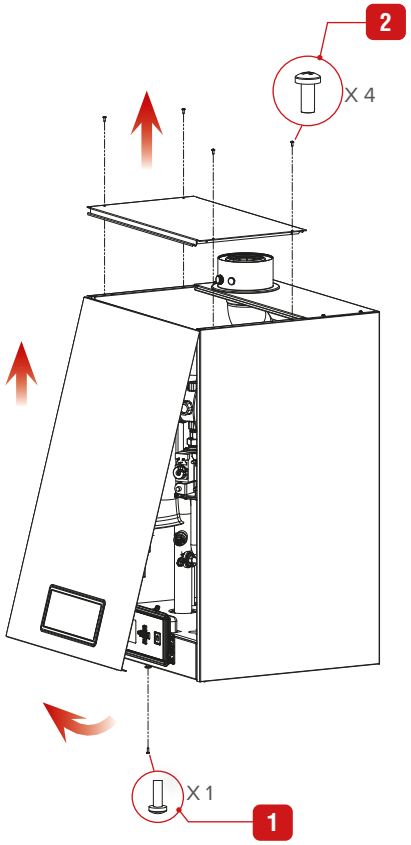
Top panel (Prestige 100-120 Solo only):

1. Put top panel in place and fasten using four retained screws (**2**).

Front panel:

To install the front panel, the top panel must be installed (Prestige 100-120 Solo only).

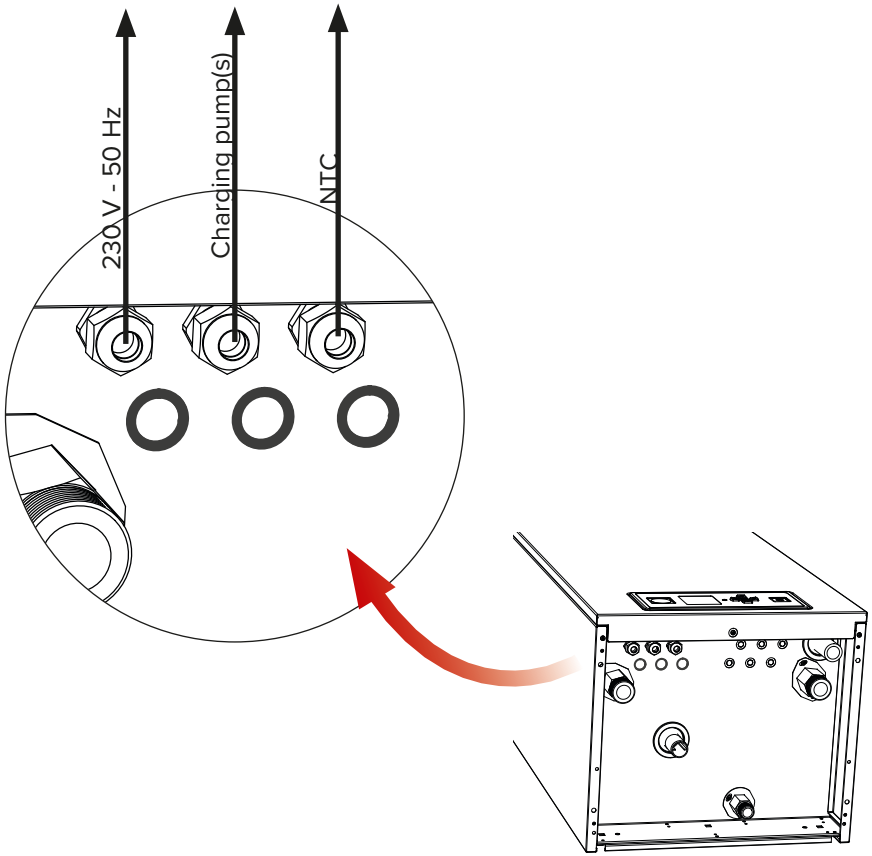
1. Hold the front panel at a slight angle to engage the upper lugs of the front panel in the boiler casing mounting slots.
2. Lower panel in the slots and push the bottom of the panel toward the boiler.
3. Install screw (**1**) retained at removal.



Follow-on tasks

None

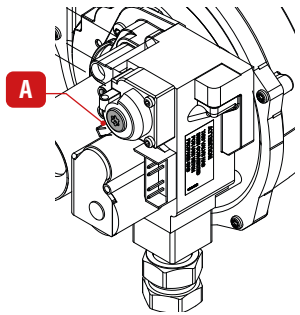
ELECTRICAL CONNECTION



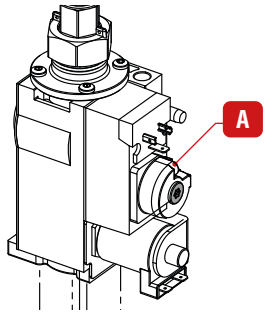
RECOMMENDATIONS FOR GAS CONNECTION

Essential recommendations for safety

- The gas connection must comply with all applicable local standards and regulations, and the circuit will be equipped with a gas pressure regulator as required.
- Do not check for gas leaks with an open flame. Use a gas detection device or bubble test.
- The gas burners are factory preset for use with natural gas [equivalent to G20]. Do not adjust or attempt to measure gas valve outlet pressure. The gas valve is factory-set for the correct outlet pressure and requires no field adjustment.
- The natural gas to propane conversion or the reverse is authorized in certain countries. Refer to the table of gas categories in the technical characteristics of this manual. In Belgium, please contact Groupe Atlantic Belgium for gas conversion.
- The gas orifice installed on the boiler must never be modified or replaced with a different size orifice, except in the case of a gas conversion process, which shall be performed according to the provided procedure and requirements.
- The CO_2, gas flow rate, air flow rate and air/gas supply parameters are factory-preset and may not be modified **in Belgium**, except for type I 2E(R)B boilers.
- Do not change the OFFSET (A) setting of the gas valve: it is factory-preset and sealed.



Prestige 42 - 50 - 75 Solo



Prestige 100 - 120 Solo

Essential recommendations for the correct operation of the appliance

- Refer to the technical characteristics of this manual or to the burner documentation to know the connection diameters.
- Bleed the gas duct and check thoroughly if all the boiler tubes, both internal and external, are tight.
- Check that the gas type and pressure from the distribution network are compatible with the appliance settings. Refer to the product type plate.
- Check the boiler electrical connection, the boiler room air vent system, the tightness of flue gas outlet pipes and of the burner chamber plate.
- Control the gas pressure and consumption at appliance start up.
- Check the boiler CO_2 adjustment (refer to the adjustment procedure and the technical data).
- Make sure to remove the P100/P120 orifice when operating the boiler with G25 gas, in order to reach the normal performance values.

CONVERSION TO PROPANE AND G25 NATURAL GAS

General remarks

- According to the indication on the type plate, the boiler is factory preset to operate with natural gas (G20/G25). Converting the boiler to propane is done through the addition/replacement of an orifice and adjustments. In Belgium, this conversion procedure can only be carried out by Groupe Atlantic Belgium personnel. Please contact Groupe Atlantic Belgium for further information.

Set-up conditions

- External power supply isolated
- Gas supply closed
- Front and top panels of the boiler open, refer to “Removal and Installation of the Front and Top Panels” on page 32

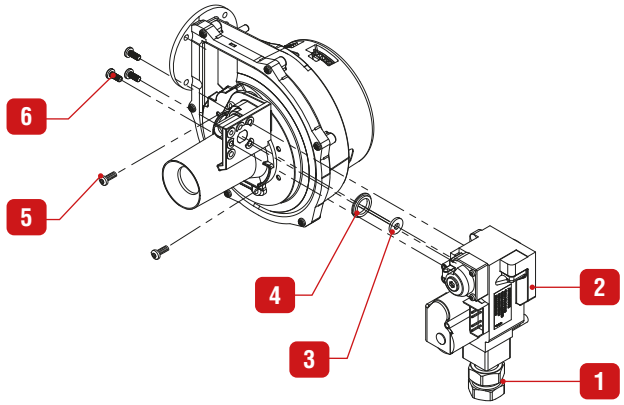
Procedure of orifice addition

Prestige 42 - 50 - 75 Solo

1. Disconnect the plug from the gas valve (**2**).
2. Disconnect the air inlet.
3. Disconnect the gas pipe connection (**1**) by releasing the union.
4. Remove the gas valve/venturi assembly by releasing two screws (**5**). Retain the screws for reinstallation.
5. Remove the gas valve from the venturi by releasing 3 screws (**6**). Retain the screws for reinstallation.
6. Install the orifice (**3**) in the center of the O-ring (**4**).

Make sure to position the O-ring correctly.

7. Reinstall the gas valve (**2**) on the venturi using three screws (**6**) and torque the screws (**6**) i.a.w. “Torque Values” on page 44.
8. Reinstall the gas valve/venturi assembly (**2**) on the fan assembly using 2 screws (**5**) and torque the screws i.a.w. “Torque Values” on page 44.



Prestige 42 - 50 - 75 Solo

Prestige 100 - 120 Solo

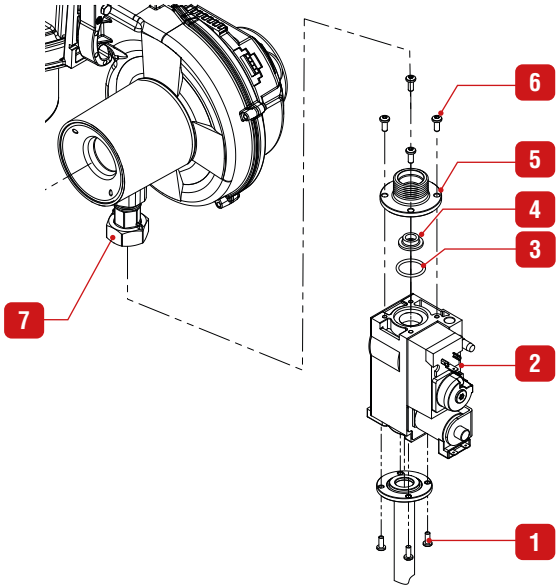
1. Disconnect the plugs and the grounding cable from the gas valve (**2**).
2. Disconnect the air inlet
3. Disconnect the gas pipe connection by releasing 4 screws (**1**). Retain for reinstallation.
4. Remove the gas valve assembly (**2**) by releasing the upper gas connection (**7**).
5. Remove the adaptation piece (**5**) by releasing four screws (**6**). Retain the screws for reinstallation.
6. Remove the natural gas orifice and install, as necessary, the propane orifice (**4**) in the center of the O-ring (**3**).

Make sure to position the O-ring correctly.

7. Reinstall the adaptation piece (**5**) on the gas valve assembly by torquing four screws (**6**) i.a.w. “Torque Values” on page 44.
8. Reinstall the gas valve assembly (**2**) by tightening the upper gas connection (**7**).

Follow-on tasks

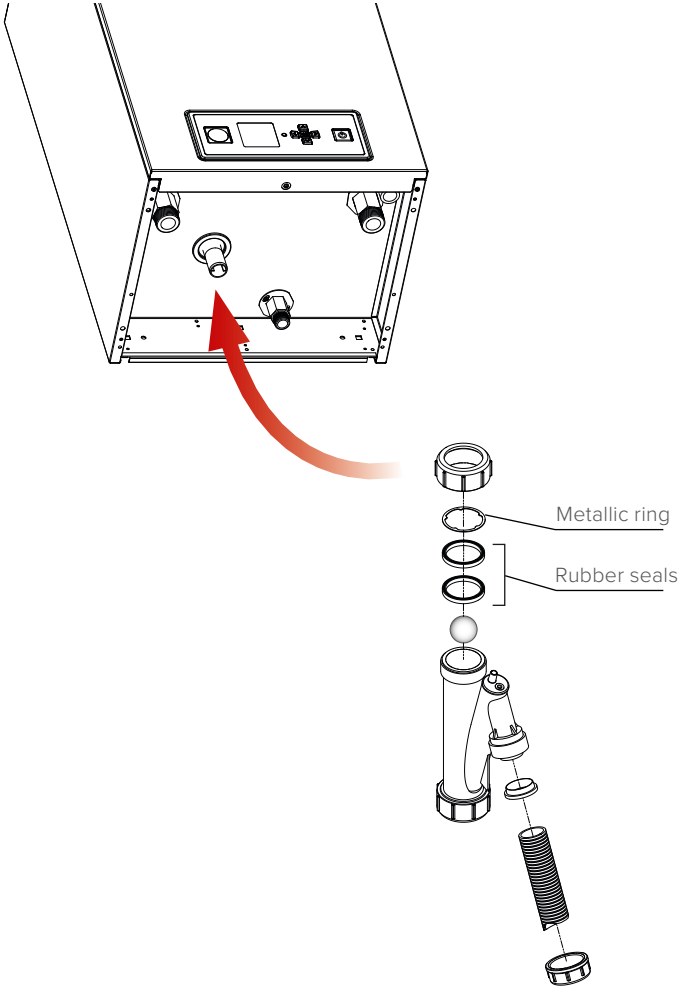
- Stick the yellow sticker «Propane» (617G0152) on the gas valve, as required.
- Reconnect gas pipe connection. Torque i.a.w. “Torque Values” on page 44
- Reconnect all disconnected plugs and grounding cable.
- Restart the boiler.
- If required, change the appliance code through the Installer menu, refer to the “Installer’s handbook”
- Carry out the CO_2 adjustment, (refer to “Checking and Adjusting the Burner” on page 39).
- Reseal the offset and the throttle screw, as required.



Prestige 100 - 120 Solo

Boiler	Natural gas (G20) orifice dia. (mm)	Natural gas (G25) orifice dia. (mm)	Propane orifice dia. (mm)
42 Solo	-	-	5.2
50 Solo	-	-	6.0
75 Solo	-	-	6.8
100 Solo	10.7	-	8.6
120 Solo	10.7	-	8.6

BALL CONDENSATE TRAP INSTALLATION



Fit the condensate trap, making sure to install the items in the correct sequence and connect the hose to the drain using a connection that can be inspected. Fill the trap with clean water. Make sure to prevent any risk of the condensates freezing.

SYSTEM CONFIGURATIONS

The Prestige Solo boilers can be setup in different types of systems, either high or low temperature, or both, with or without Domestic Hot Water tank. They can also be configured in a Cascade system (using a Prestige Box or not - see on the right).

It is up to the installer to determine the best solution for the results the user is expecting.

One basic configuration is shown in this manual (see following pages), with the required accessories, required electrical connections and ACVMAX setup using the EZ setup function.

Additional configurations requiring more advanced setup are shown in the Installer's Handbook (available on www.acv.com). The setup of those systems must be made exclusively by the installer using the installer code.

For any other configuration that is not mentioned in either manuals, please contact your ACV representative.

CASCADE

Several Prestige Solo boilers can be setup in a cascade configuration that is controlled by the ACVMAX Boiler Control System.

The boilers can operate together without the need for an external cascade controller. One Prestige will be selected as the Master and will be wired to accept all the low voltage control signals and all the system pumps. The other Prestige boilers will be designated as Slaves and will only have a communication cable connecting them to the other boilers in the Cascade System.

- The Cascade function allows up to four identical Prestige boilers to operate together in a single heating system.
- Parallel Modulation fires as many boilers as possible to maximize system efficiency.
- The Auto rotation function rotates the lead boiler every time a call for heat is received when a Thermostat option is chosen in CH Demand or every 24 hours when a Constant option is chosen in CH Demand.

For more information and system setup, refer to the Installer's Handbook manual (also available on www.acv.com).

PRESTIGE BOX

The Prestige Box is a heating system for commercial buildings. This complete heating module houses several boilers (up to 4) and consists of a specifically-designed insulated cabinet that can be located outdoors. It is also protected against frost in cold weather conditions through the anti-frost features of the boiler(s), and the insulation of the tubes.

The Prestige Box is comprised of a condensate neutralisation system, an expansion vessel, an electric box and safety devices among other things. Optional items can also be added in the cabinet. The front door(s) of the cabinet can be opened for easy access to the items located inside and for maintenance purposes.

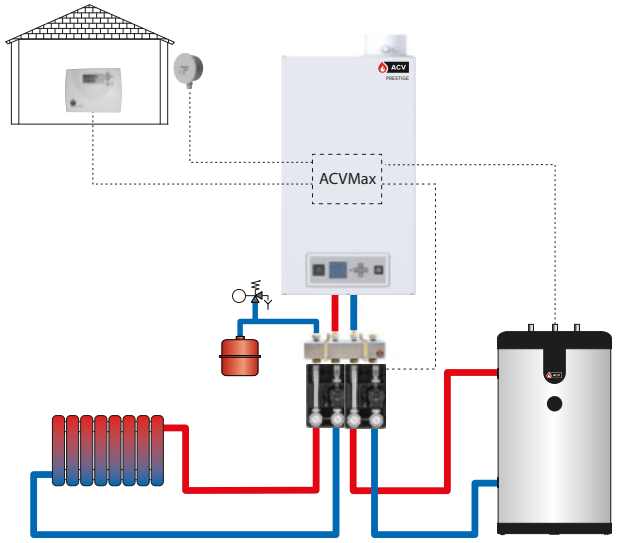
The cabinet contains several Prestige boilers (from 2 to 4), that are hydraulically and electrically connected to one another in a cascade configuration. Each boiler has however its own chimney connection. The system control is performed by the Master boiler in the cascade through the ACVMax processor. For more information on the cascade function of the ACVMax, refer to the Installer's Handbook, available on www.acv.com. (ref 660Y2900).

Prestige box models :

Prestige Box 200-250-300-350-400-500 LP (with plate-to-plate heat exchanger and connections on the left)

Prestige Box 200-250-300-350-400-500 RP (with plate-to-plate heat exchanger and connections on the right)

BASIC CONFIGURATION - PRESTIGE 42 - 50 - 75 SOLO: HIGH TEMPERATURE HEATING CIRCUIT WITH OPTIONAL DHW TANK AND CONTROL BY ROOM THERMOSTAT AND OPTIONAL OUTDOOR SENSOR.



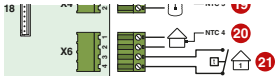
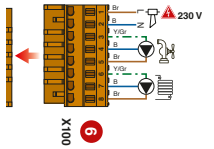
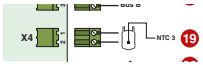
BLOCK DIAGRAM

The heating system (radiators) is controlled by an On/Off room thermostat.

The domestic hot water tank is controlled by an intermediate NTC sensor (optional). The domestic hot water priority is always active.

In this configuration, the boiler constantly adapts its operation to the outdoor temperature, if an outdoor temperature sensor is connected.

The heating pump is triggered as soon as the room thermostat generates a heat demand.

ITEM DESCRIPTION	QTY	ELECT. TERMINALS TO CONNECT TO**
Room thermostat	1	**X6** 3&4 
Outdoor temperature sensor, 12kΩ	1	**X6** 1&2
2 circuit manifold : Max power : 70 kW, With built-in wall mounts.	1	--
High temperature kit : Includes: a circulator pump, two isolation valves, a check valve and two thermometers.	2	 **X100** 3 to 8
By-pass kit : To read the flow rate more easily. To be installed in the HT or LT circuit, as required.	1	--
NTC Sensor 12kΩ with dry well: Monitors the external domestic hot water tank. Length : 3.2 m.	1	 **X4** 1&2

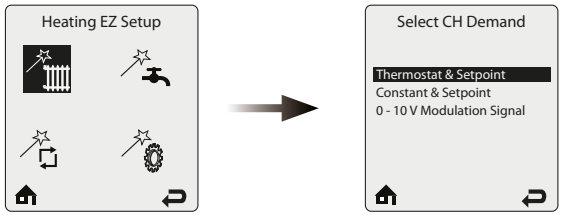
* For more details on the required accessories, refer to the latest ACV price list.

** For electrical detail, refer to wiring diagram in “Electrical Characteristics Prestige 42 - 50 - 75 Solo” on page 20.

SETTINGS FOR THE BASIC CONFIGURATION, USING THE EZ SETUP OF THE USER INTERFACE

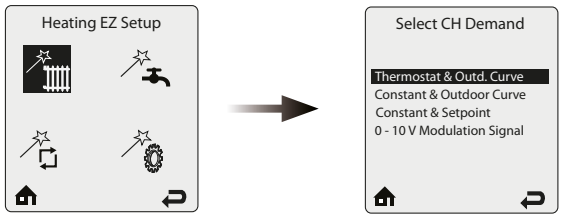
To set the system up for the configuration described on previous page, access the EZ setup menu pages below, as indicated in “Boiler Setup Guide” on page 8.

CH setting, with no outdoor sensor installed



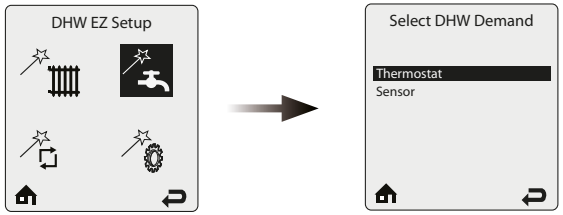
This menu is available when no optional outdoor temperature sensor is installed. Refer to the menu information and steps in “Boiler Setup Guide” on page 8.

CH setting, with an outdoor sensor installed



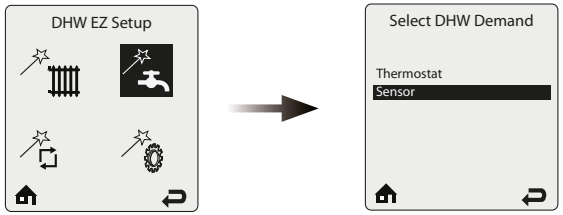
This menu is available when an optional outdoor temperature sensor is installed. Refer to the menu information and steps in “Boiler Setup Guide” on page 8.

DHW settings, when no optional water heater sensor is installed with the DHW tank



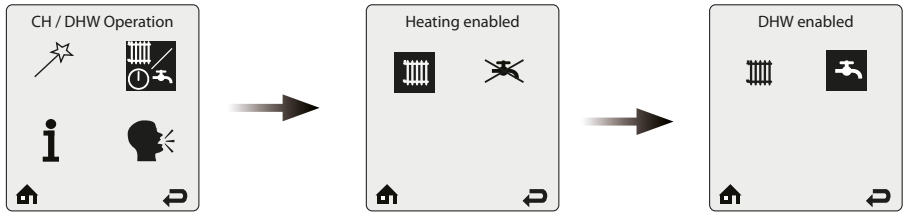
Select **Thermostat** when no optional water heater sensor is installed. Refer to the menu information and steps in “Boiler Setup Guide” on page 8.

DHW setting, when an optional water heater sensor is installed with the DHW tank



Select **Sensor** when an optional water heater sensor is installed. Refer to the menu information and steps in “Boiler Setup Guide” on page 8.

Enabling the CH / DHW circuit



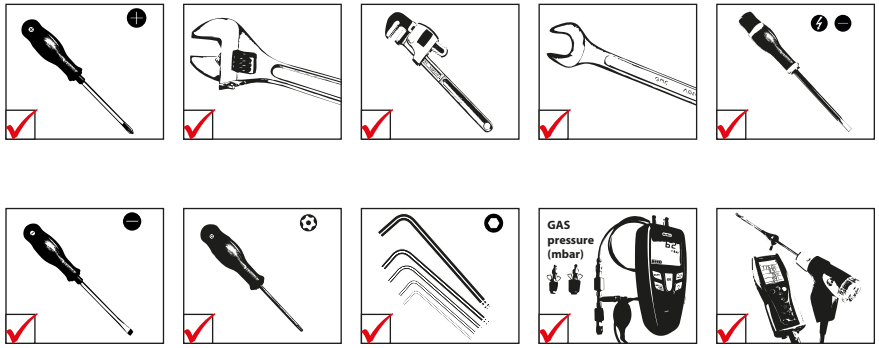
SAFETY INSTRUCTIONS FOR STARTING UP

Essential recommendations for safety

- The components inside the control panel may only be accessed by an approved installer.
- Set the water temperature in accordance with usage and local plumbing codes.
- Make sure that the heating circuit filling valve is closed once the starting up process is complete.
- If there is a drain assembly, make sure that the condensate drain assembly is filled with water before starting up the boiler. Fill with water as necessary.
- Make sure that all connections are made and tight.

General remark

TOOLS REQUIRED FOR STARTING UP



CHECKS BEFORE STARTING UP

Essential recommendation for safety

- Check the tightness of the flue pipe connections.

Essential recommendation for the correct operation of the appliance

- Control the tightness of the hydraulic circuit connections.

FILLING THE HEATING CIRCUIT

If the system is fitted with an external hot water tank, first put the DHW circuit under pressure before pressurizing the heating (primary) circuit. Refer to the hot water preparation tank manual for more information.

Set-up conditions

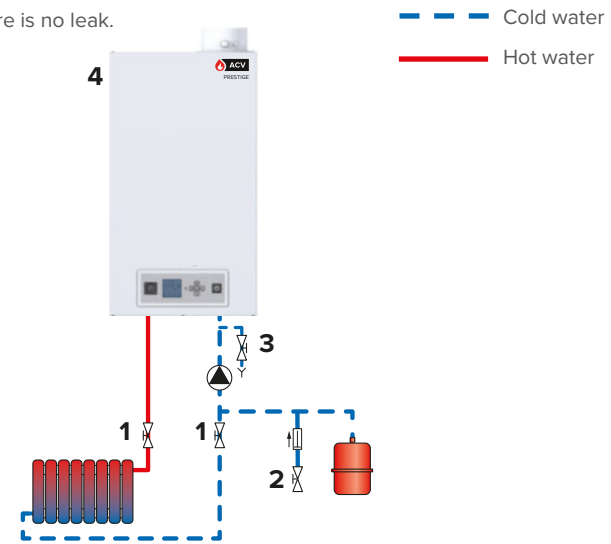
- External power supply isolated
- DHW circuit (if any) under pressure

Filling procedure

1. Open boiler front panel (refer to applicable procedure in the manual).
2. Open the isolating valves (**1**).
3. Make sure that the drain valve (**3**) is tightly closed.
4. Open the filling valve (**2**).
5. Make sure the air vent (**4**) is open, as required.
6. Once the system is bled from air, bring the pressure to the static pressure between1.5 bar and 2 bar.
7. Close the filling valve (2)

Follow-on tasks

1. Check there is no leak.



STARTING UP THE BOILER

Set-up conditions

- All connections made
- Gas conversion carried out as required
- Condensate trap full of water
- Electrical power supply on
- Gas supply open
- Hydraulic circuit full of water

Procedure

1. Check that there is no gas leak.
2. Push in the ON/OFF master switch (⏻).
3. If a room thermostat is installed, possibly increase the temperature set-point to generate a demand.
4. Check the gas pressure and allow the boiler to heat up for a few minutes
5. Check and adjust the burner according to local standards and regulations, refer to “Checking and Adjusting the Burner” on page 39.
6. Set the central heating temperature to the required value using the control panel. Refer to “Boiler Setup Guide” on page 8 and to the Installer’s Handbook (or the ACVMax System Control manual, depending on the boiler build, refer to page 3.)
7. After 5 minutes of operation, bleed the heating circuit until all air is evacuated and restore a 1.5 bar pressure.
8. Bleed the central heating circuit once again and top it up with water to get the required pressure, if necessary.
9. Make sure that the central heating system is properly balanced and, if needed, adjust the valves to prevent certain circuits or radiators from getting a flow rate that is far above or below the set rate.

Follow-on tasks

1. Check that there are no leaks.
2. Check that the flow rate in the appliance is sufficient as follows :
   - Operate the boiler at maximum power
   - Once the temperatures are stable, read out the supply and return temperatures
   - Check that the difference between the supply and return temperature is equal or less than 20k.
   - If the Delta T is higher than 20k, check the pump settings/specifications.

CHECKING AND ADJUSTING THE BURNER

When the burner operates at full power, the CO_2 rate must be within the limits mentioned in the technical characteristics, (see “Combustion Characteristics” on page 18).

Set-up conditions

- Operating boiler

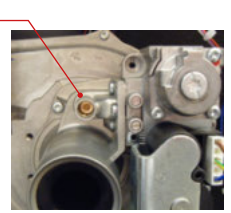
Procedure

1. Check if the ACVMAX parameters are set to meet the user’s requirements (refer to “Boiler Setup Guide” on page 8), and change them if required.
2. Put the boiler to maximum power mode (Refer to the Installer’s Handbook (or the ACVMax System Control manual, depending on the boiler build, refer to page 3)).
3. Using a pressure tester, check that the dynamic gas pressure at the gas valve is at least 18 mbar.
4. Allow the appliance to heat for a few minutes until it reaches at least 60°C.
5. Make sure that the front panel is closed.
6. Measure the burner combustion by placing the flue gas analyser probe into the measurement unit port on the flue pipe and compare the CO and CO_2 values displayed with those indicated in the combustion characteristics table. Refer to “Combustion Characteristics” on page 18.
7. Open the front panel, refer to “Removal and Installation of the Front and Top Panels” on page 32.
8. Measure the CO_2. If the difference in CO_2 Max power with and without front panel is > 0.4% (absolute), then check the flue system for recirculation.
9. If the CO_2 value (front panel closed) differs by more than 0.3% from the value mentioned in the “Combustion Characteristics” on page 18, carry out the adjustment mentioned in the procedure below.
10. Then put the boiler to the minimum power mode (Refer to the Installer’s Handbook (or the ACVMax System Control manual, depending on the boiler build, refer to page 3)). Allow the boiler to stabilize for a few minutes.
11. Measure the CO_2 level. It must be equal to the value at full power, or lower than that value by 0.5% maximum. In case of significant deviation, please contact ACV's maintenance department.

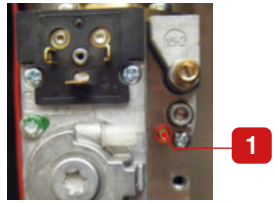
CO2 adjustment procedure

To adjust the CO_2 rate, rotate the venturi screw (**1**) :

- to the left (counter-clockwise) to increase the CO_2 rate.
- to the right (clockwise) to decrease the CO_2 rate.



Prestige 42 - 50 - 75 Solo



Prestige 100 - 120 Solo

Follow-on tasks

None

The CO_2 adjustment screw (1) of the Prestige 100 - 120 Solo is a worm screw, whose rotation in a direction causes the CO_2 rate to cyclically increase to the maximum, then decrease to the minimum, then increase again, and so on. To adjust, monitor the value change on the analyzer to determine whether the rotation in the selected direction causes the CO_2 value to increase or decrease

RECOMMENDATIONS FOR THE BOILER MAINTENANCE

Essential recommendations for the electrical safety

- Before opening the boiler for maintenance, turn off the boiler by pushing on the ON/OFF master switch.
- Isolate the external power supply of the appliance before performing any operation, unless it is required to take measurements or perform system setup.

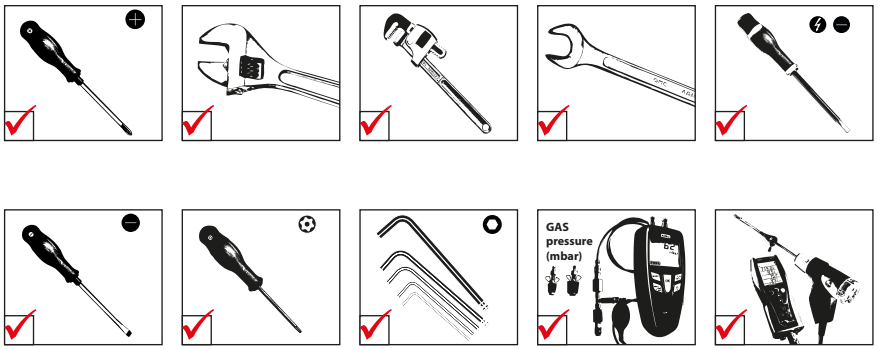
Essential recommendations for safety

- Water flowing out of the drain valve may be extremely hot and could cause severe scalding.
- Do not use solvents to clean any of the burner components. The components could be damaged, resulting in unreliable or unsafe operation.
- Check the tightness of the flue pipe connections.

Essential recommendations for the correct operation of the appliance

- It is recommended to have the boiler and the burner serviced at least once a year or every 1,500 hours by a qualified technician, preferably at the start of the heating season. More frequent servicing may be required depending on boiler use. Please consult your installer for advice.
- The boiler and burner maintenance will be carried out by a qualified engineer, and the defective parts may only be replaced by genuine factory parts.
- Make sure to replace any gaskets or seals on the removed components before reinstalling them.
- To ensure maximum efficiency and reliability of the unit, it is recommended that the end-user perform the periodic checks mentioned in the Safety section of this manual.
- Control the tightness of the hydraulic circuit connections.
- Make sure to apply the correct torque value when tightening components. Refer to "Torque Values" on page 44.

TOOLS REQUIRED FOR MAINTENANCE



BOILER SHUT-DOWN FOR MAINTENANCE

1. Switch the boiler off using the ON/OFF master switch and isolate the external power supply.
2. Close the gas supply valve of the boiler.

PERIODIC BOILER MAINTENANCE TASKS

	Tasks	Frequency		
		Periodic inspection	1 year	2 years
		End-user	Professional	
1.	Make sure that the system water pressure is at least 1 bar when cold. Top up the system if necessary, adding small quantities of water at a time. In case of repeated fills, call your installer.	X	X	
2.	Check that there is no water on the floor under the boiler. Call your installer if there is.	X	X	
3.	Check that no error code is displayed on the control panel. Call your installer if necessary.	X	X	
4.	Check that all gas, hydraulic and electrical connections are correctly fastened and tight, refer to “Torque Values” on page 44.		X	
5.	Check the flue gas exhaust: correct fastening, correct installation, no leaks or clogging.		X	
6.	Check that there is no discoloured or cracked area on the burner chamber plate .		X	
7.	Check the combustion parameters (CO and CO2), see “Checking and Adjusting the Burner” on page 39.		X	
8.	Check visually the heating body: no evidence of corrosion, soot deposits or damages. Carry out all required cleaning tasks, repairs and replacements that might be required.		X	
9.	Check the electrode, see “Removal, Check and Installation of the Burner Electrode”, page 41.			X
10.	Remove the burner and clean the exchanger, see “Removal and Installation of the Burner”, page 42 and “Cleaning the Exchanger” on page 44.			X
11.	Check that the condensate trap is not clogged. If it is, remove it, clean it, and reinstall it i.a.w. “Ball condensate Trap Installation” on page 34.		X	
12.	If a condensate neutralisation system is installed, check it and have it cleaned.	X	X	

DRAINING THE HEATING CIRCUIT OF THE BOILER

Essential recommendations for safety

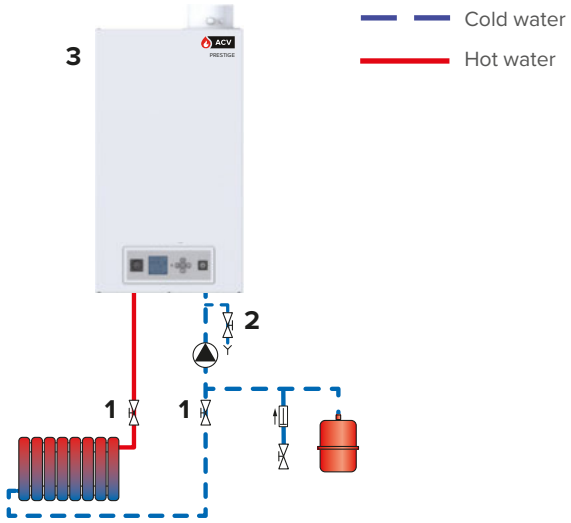
- **If the system is fitted with an external hot water tank, isolate the DHW circuit before draining the heating (primary) circuit.**
- **Water flowing out of the drain valve may be extremely hot and could cause severe scalding. Keep people away from the hot water discharge.**

Set-up conditions

- Boiler switched off using the ON/OFF master switch
- DHW circuit (if any) isolated
- External power supply isolated
- Gas supply closed

Heating circuit draining procedure

1. Close the isolating valves (**1**).
2. Connect the drain valve (**2**) to the sewer with a hose.
3. Open the drain valve (**2**) to empty the heating circuit of the boiler.
4. If possible, open the circuit air vent (**3**) to accelerate the draining process.
5. Close the drain valve (**2**) and the air vent (**3**) once the heating circuit of the boiler is empty.



REMOVAL, CHECK AND INSTALLATION OF THE BURNER ELECTRODE

Essential recommendations for the correct operation of the appliance

- **It is recommended to remove the electrode from the burner hood before removing the burner from the boiler.**
- **Remove the electrode to control it in case of ignition problems.**

Set-up conditions

- Boiler shut down
- External power supply isolated
- Gas supply closed
- Front and top panels open, as required, refer to “Removal and Installation of the Front and Top Panels” on page 32.

Removal procedure

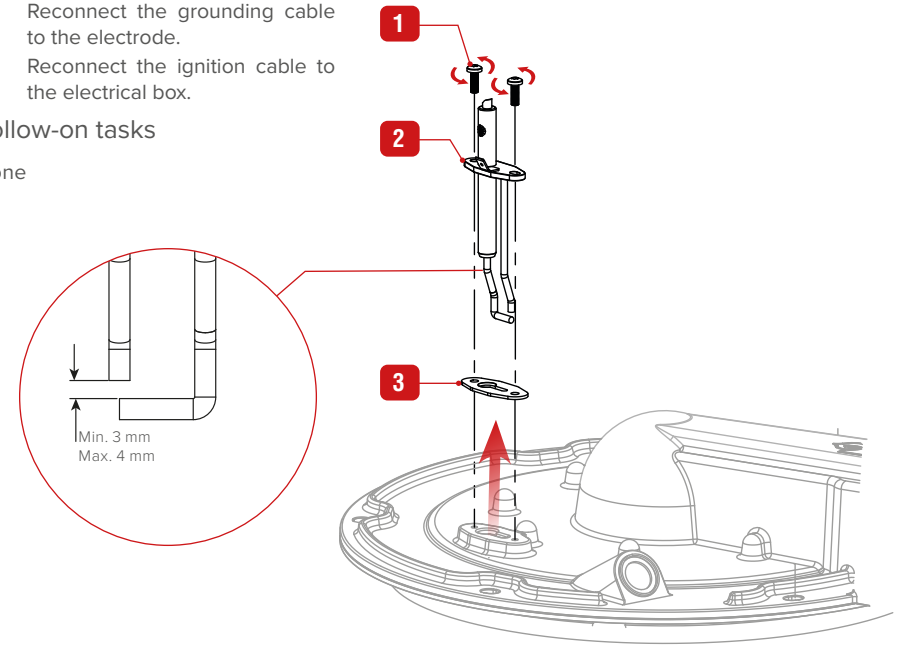
1. Disconnect the electrode grounding plug from the electrode.
2. Disconnect the electrode ignition cable from the electrical box.
3. Remove two mounting screws (**1**) and retain them for reinstallation.
4. Remove the electrode (**2**).
5. Check the correct alignment of the electrode ends and that the gap corresponds to the values indicated in the illustration below.

Installation procedure

1. Install a new gasket (**3**).
2. Install the electrode (**2**) using the two screws (**1**), torque i.a.w. “Torque Values” on page 44.
3. Reconnect the grounding cable to the electrode.
4. Reconnect the ignition cable to the electrical box.

Follow-on tasks

None



REMOVAL AND INSTALLATION OF THE BURNER

Set-up conditions

- Boiler shut down
- External power supply isolated
- Gas supply closed
- Front and top panels removed (refer to “Removal and Installation of the Front and Top Panels” on page 32), as required.
- Electrode removed (refer to “Removal, Check and Installation of the Burner Electrode” on page 41).

Removal procedure

1. Disconnect the plugs from the fan assembly (**5**) and from the gas valve (**6**).
2. Disconnect the air inlet (**8**).
3. Release the gas connection (**7**).
4. Disconnect the fan assembly (**5**) from the burner hood (**1**) by unscrewing the screw at the fan seal clamp (**3**). Discard fan seal.
5. Using an open-end spanner, release the burner hood attaching nuts (**2**) and retain for reinstallation.
6. Lift the burner assembly with the burner hood insulation (**10**). For the Prestige 42-50-75 Solo, rotate it slightly to get it out of the exchanger.

Try not to damage the insulation block in the exchanger, nor the burner hood.

7. Check the insulation block condition and replace it if required.

Check that there is no discoloured or cracked area on the burner hood. If there is, contact ACV's maintenance department.

8. Remove and replace the seals and gaskets.
9. If required, clean the exchanger, see “Cleaning the Exchanger” on page 44.

Installation procedure

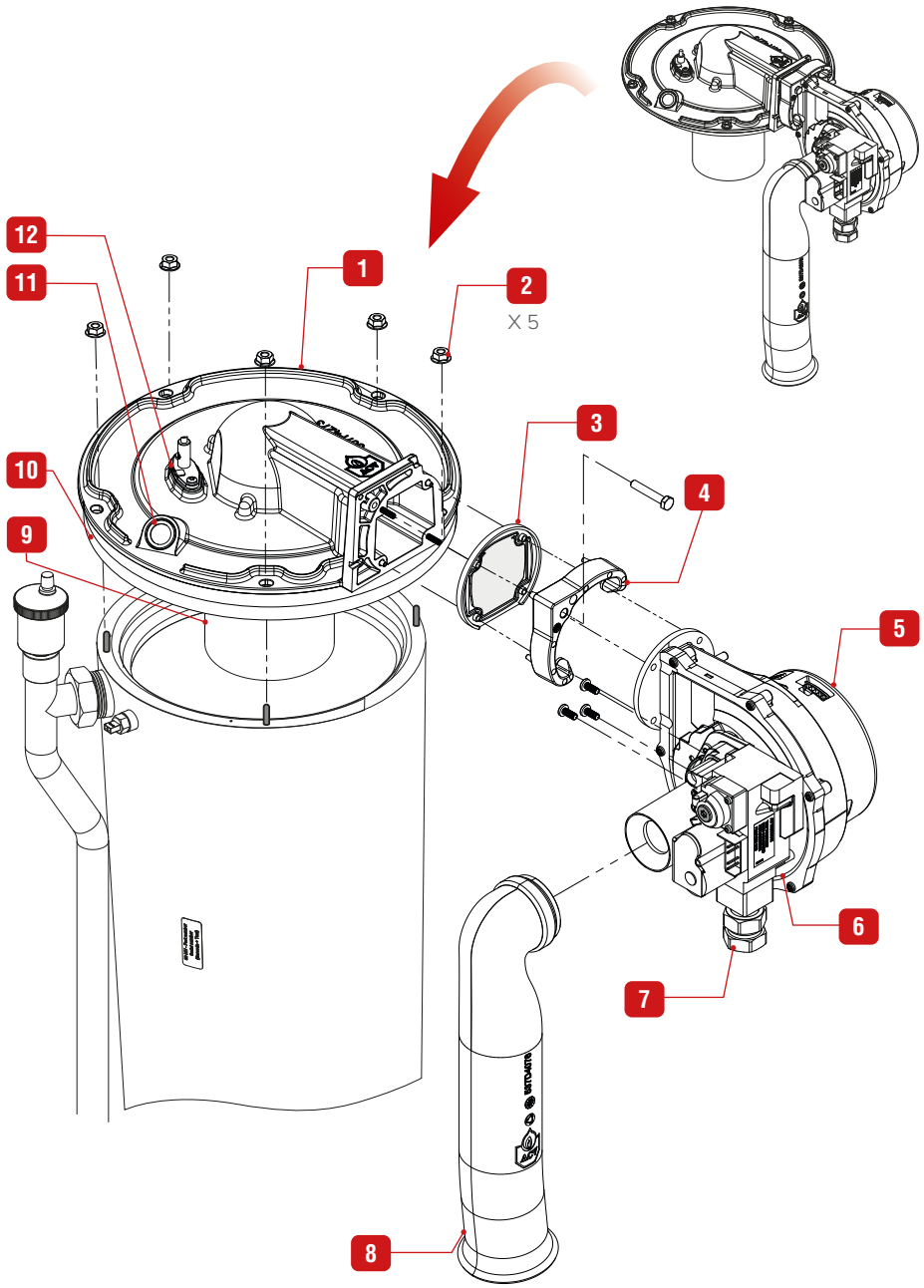
1. Reinstall the burner hood insulation block (**10**) under the burner hood (**1**).
2. Reinstall the burner assembly into the exchanger.
3. Install the attaching nuts (**2**) and fasten them in a crosswise pattern at the required tightening torque (refer to “Torque Values” on page 44).
4. Reinstall the fan assembly (**5**), with the new fan seal (**3**), on the burner hood (**1**) by torquing the screw on the fan seal clamp (**4**). Refer to “Torque Values” on page 44.
5. Reconnect the gas connection (**7**).
6. Reconnect the air inlet (**8**).
7. Connect the plug(s) on the gas valve (**6**) and fan assembly (**5**).

Follow-on tasks

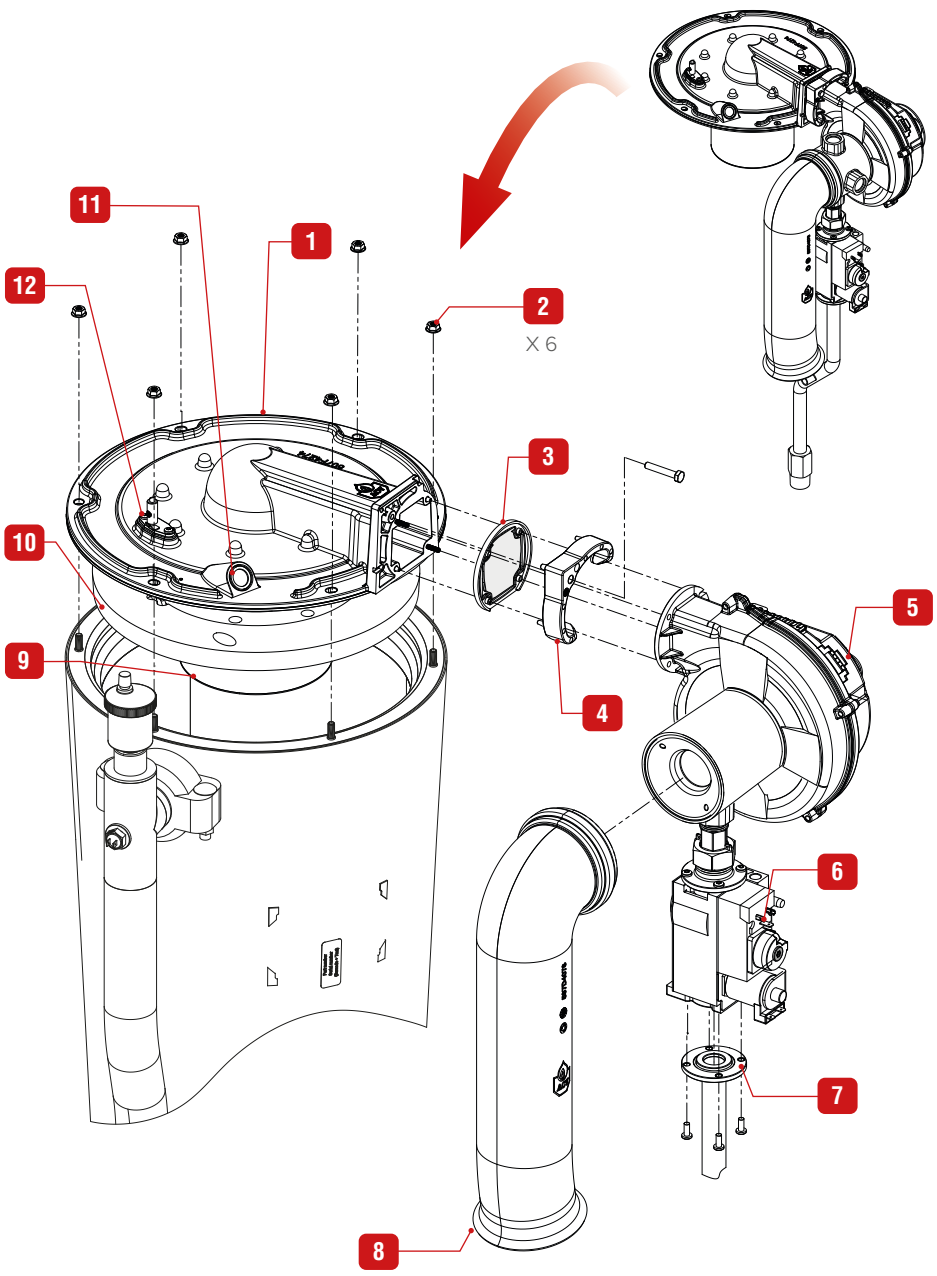
1. Install the electrode on the burner assembly, refer to “Removal, Check and Installation of the Burner Electrode” on page 41

Detail of burner components

1.	Burner hood
2.	Attaching nuts
3.	Fan seal with check valve
4.	Fan clamp with 1 attachment screw
5.	Fan assembly
6.	Gas valve / Venturi assembly
7.	Gas connection
8.	Air inlet
9.	Burner tube
10.	Burner hood insulation
11.	Flame sight glass
12.	Electrode assembly



Prestige 42 - 50 - 75 Solo



Prestige 100 - 120 Solo

CLEANING THE EXCHANGER

Set-up conditions

- Boiler shut down
- External power supply isolated
- Gas supply closed
- Burner removed i.a.w. procedure “Removal and Installation of the Burner” on page 42.
- Front and top panels open, as required, refer to “Removal and Installation of the Front and Top Panels” on page 32.

Procedure

1. Brush and vacuum clean the chamber.
2. Pour some water in the chamber to flush away any foreign deposits that may be present in the turbulators and flue pipes.
3. Remove and clean the condensate trap.
4. Reinstall the condensate trap, refer to “Ball condensate Trap Installation” on page 34.

Follow-on tasks

1. Reinstall the burner according to procedure “Removal and Installation of the Burner” on page 42.
2. Restart the boiler in accordance with procedure “Restarting after Maintenance” on page 44.

When replacing a condens dish or taking it apart from the heat exchanger, the installer should check for leaks. In presence of leaks, a new gasket must be installed.

RESTARTING AFTER MAINTENANCE

Set-up conditions

- All removed components reinstalled
- All connections made
- Power supply
- Gas supply open
- Hydraulic circuit(s) full of water

Procedure

1. Make sure there is no gas leak at the gas connections.
2. Switch the appliance on using the ON/OFF master switch.
3. Set the appliance at maximum power and check the absence of gas leaks.
4. Check the gas pressure and CO_2 adjustment in accordance with “Checking and Adjusting the Burner” on page 39.

Follow-on tasks

None

TORQUE VALUES

	Tightening torque (Nm)	
Description	Min.	Max.
Burner flange nuts	5	6
Burner tube screws	3	3.5
Fan clamp screws	7	8
Gas valve screws	3.5	4
Venturi screws	3.5	4
Electrode screws	3	3.5

Codes	Description of the fault	Solution for the fault
E 01	**Failed ignition**: The burner failed to light after 5 ignition attempts.	1. Check gas supply to appliance. 2. Check Ignition cable connection in control box. 3. Check electrode for defects, and distance between the pins. 4. Check gas valve and electrical connections to gas valve.
E 02	**False flame:** Flame detected prior to ignition.	1. Check good electrical ground connection to unit. 2. Check electrode for pollution and deposition of dirt.
E 03	**High Boiler temp.** : The boiler temperature exceeds 105°C	Correct condition which caused high temperature or limit to open. 1. Check water flow in the system (radiator valves). 2. Check Pump and pump electrical connections.
E 05	**Blower speed**: Blower speed not correct or speed signal is not received by ACVMax.	1. Check blower and wiring harness. 2. Under normal condition if actual fan speed is 1000 rpm different from set fan speed an error is displayed (after 60sec in running and after 30 sec. at startup). 3. Only exception when actual fan speed > 3000 rpm at max. PWM.
E 07	**High Flue temp.**: Flue temperature exceeds high limit.	1. Heat exchanger may require cleaning. 2. Appliance will automatically reset once flue temperature returns to normal range.
E 08	**Flame Circuit Error**: Flame circuit test failed	1. Turn appliance off. 2. Check and clean the electrode. 3. Check ignition and grounding cables are firmly connected.
E 09	**Gas valve circuit error**: Gas valve circuit test failed.	1. Check the gas valve and wiring harness. 2. If the problem persists replace the “ACVMax” circuit board.
E 12	**Internal Fault**: EEPROM misconfiguration	1. Turn unit off and on to resume normal operation. 2. If the problem persists replace the “ACVMax” circuit board.
E 13	**Reset limit reached**: Resets are limited to 5 every 15 minutes.	1. Turn unit off and on to resume normal operation. 2. If the problem persists replace the “ACVMax” circuit board.
E 15	**Sensor Drift**: Supply or return sensor reading has drifted.	Check supply and return temperature sensors and wiring harness.
E 16	**Supply Sensor Stuck**: Supply sensor reading is not changing.	1. Check supply temperature sensor and wiring harness for shortcuts or other defects. 2. Check waterflow and the temperature balance in the system, because CH supply temperature does not change.
E 17	**Return Sensor Stuck**: Return sensor reading is not changing.	1. Check return temperature sensor and its position, check wiring harness for shortcuts or other defects. 2. Check waterflow and the temperature balance in the system, because CH return temperature does not change. 3. Failure may happen at low output capacity when supplying from a big tank !
E 18	**Sensor Failure**: Supply or return sensor reading changed very rapidly.	Check supply and return temperature sensors and wiring harness.
E19	**Flame Failure**: Flame failure during start up phase	Flame loss after start up of the appliance. 1. Check the flue system for blockage and check the adjustment of the appliance (CO2 high 8.8 +/-0.2%, CO2 low 8.6+/-0.2% measured with front casing open). 2. Also check the Ignition / Ionisation rod (distance to the burner / pollution)
E 21	**Internal Control Fault**: A / D conversion error.	Turn unit off and on then press OK to resume normal operation.
E 25	**Internal Control Fault**: CRC check error.	Turn unit off and on to resume normal operation.
E 30	**Supply Sensor Shorted**: A short circuit has been detected in the appliance supply temperature sensor circuit	1. Check supply temperature sensor and wiring harness for a short circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem, reset the appliance and resume normal operation.

Codes	Description of the fault	Solution for the fault
E 31	**Supply Sensor Open**: An open circuit has been detected in the appliance supply temperature sensor circuit	1. Check supply temperature sensor, connectors and wiring harness for an open circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 32	**DHW Sensor Shorted:** A short circuit has been detected in the DHW temperature sensor circuit	1. Check DHW temperature sensor and wiring harness for a short circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 33	**DHW Sensor Open**: An open circuit has been detected in the DHW temperature sensor circuit	1. Check DHW temperature sensor, connectors and wiring harness for an open circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 34	**Low Voltage**: Line voltage has fallen below an acceptable operating level.	The appliance will automatically reset once line voltage returns to normal.
E 37	**Low Water:** Water level has fallen below 0.7 bar.	1. Increase pressure to normal range. 2. The appliance will automatically reset once water level returns to normal.
E 43	**Return Sensor Shorted**: A short circuit has been detected in the appliance return temperature sensor circuit.	1. Check return temperature sensor and wiring harness for a short circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem, reset the appliance and resume normal operation.
E 44	**Return Sensor Open**: An open circuit has been detected in the appliance return temperature sensor circuit.	1. Check return temperature sensor, connectors and wiring harness for an open circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem, reset the appliance and resume normal operation.
E 45	**Flue Sensor Shorted**: A short circuit has been detected in the appliance flue temperature sensor circuit	1. Check flue temperature sensor and wiring harness for a short circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 46	**Flue Sensor Open**: An open circuit has been detected in the appliance flue temperature sensor circuit.	1. Check flue temperature sensor, connectors and wiring harness for an open circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E47	**Water pressure sensor error**: Water pressure sensor is disconnected or broken	1. Check water pressure sensor, connectors and wiring harness. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 76	**Gas pressure switch open**	1. Check both the static and the dynamic gas pressures. 2. Correct condition which caused the pressure switch to open 3. Appliance will automatically reset once the pressure switch is closed.
	External Limit Open: An external automatic reset appliance limit has opened.	1. Correct condition which caused limit to open. 2. Appliance will automatically reset once external limit closes
E 77	**High temperature mixing circuit**	Check if the mixing valve functions correctly.
E 78	**Mix circuit sensor shorted**	1. Check Mix circuit temp. sensor and wiring harness for a short circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 79	**Mix-circuit sensor Open**	1. Check Mix circuit temp. sensor and wiring harness for an open circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 80	**Return > Supply**: Return temperature is higher than supply temperature.	Confirm water flows in appliance return and out appliance supply.
E 81	**Sensor Drift**: Supply and return temperatures are not equal.	1. Check water is flowing through appliance. 2. Wait a few minutes for the water to equalise the temperature, the appliance will automatically reset once temperatures become equal. 3. If appliance doesn't reset, check the NTC's and check the wire harness, replace if necessary.

Codes	Description of the fault	Solution for the fault
E82	**Delta T protection blocking** - Delta T too high	1. Verify flow in the system. 2. Check pump for blockage and obstructions, unblock it as required. Replace if neccessary.
E83	**Delta T protection Lock-out** - Lock-out due to Delta T value.	1. Verify flow in the system. 2. Check pump for blockage and obstructions, unblock it as required. Replace if neccessary.
E 85	**Pump operation: warning** - Appliance pump is running out of limits.	Pump is running out of its limits. Check pump for blockage and obstructions, replace if neccessary
E 86	**Pump hard fault**: Pump Failure	Pump Failure, check if pump PWM-feedback wire is properly connected, replace pump when neccessary
E 87	**External Limit Open**: An external appliance limit has opened.	1. Correct condition which caused limit to open, then reset appliance. 2. The appliance needs to be reset once external limit closes.
E88	**Pump Blocking**: Pump attempts to restart.	Check pump for blockage and obstructions, unblock it as required. Replace if neccessary.
E 89	**Incorrect Setting**: A parameter setting is outside the settings range.	1. Review CH & DHW settings and correct as necessary. 2. The appliance will automatically reset once corrected.
E 90	**Firmware Mismatch**: Control module and display firmware versions are incompatible.	One or several components are not compatible with the system. Replace mismatched component(s).
E 91	**System Sensor Shorted**: A short circuit has been detected in the system temperature sensor circuit	1. Check system temperature sensor and wiring for a short circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 92	**System Sensor Open**: An open circuit has been detected in the system temperature sensor circuit.	1. Check system temperature sensor and wiring for an open circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 93	**Outdoor Sensor Shorted**: A short circuit has been detected in the outdoor temperature sensor circuit.	1. Check outdoor temperature sensor and wiring for a short circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 94	**Internal Display Fault**: Display memory error	Turn unit off and on to resume normal operation.
E 95	**Supply Sensor Error**: Supply sensor reading is invalid	1. Check wiring between display and control module. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 96	**Outdoor Sensor Open**: An open circuit has been detected in the outdoor temperature sensor circuit.	1. Check outdoor temperature sensor and wiring for an open circuit. 2. If necessary replace the sensor, or the wire harness. 3. After fixing the problem reset the appliance and resume normal operation.
E 97	**Cascade Mismatch**: Cascade configuration has changed.	1. Run autodetection if change was intentional, or else check wiring between appliances. 2. Appliance will automatically reset once repaired.
E 98	**Cascade Bus Error**: Communication with other appliances has been lost.	1. Check wiring between appliances. 2. Appliance will automatically reset once repaired.
E 99	**Controller Bus Error**: Communication between appliance display and control module has been lost.	1. Check wiring between components. 2. Appliance will automatically reset once repaired.

SERVICE LOG

Service date	CO2 %	Flue gas T°	Efficiency	Remarks	Name	Signature

DECLARATION OF CONFORMITY

EXCELLENCE IN HOT WATER

CE

DECLARATION OF CONFORMITY TO STANDARDS

1/1

Product type:	**Condensing boiler**
Name and address of manufacturer:	**ACV International** SA / NV **Oude Vijverweg, 6** **B-1653 Dworp** **Belgium**

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Model:	**Prestige 42 Solo V14** **Prestige 50 Solo V14** **Prestige 75 Solo V14** **Prestige 100 Solo V14** **Prestige 120 Solo V14**

We declare hereby that the appliance specified above is conform to the following directives:

Directives	Description	Date
2009/125/EC	Ecodesign Directive (implemented by EU regulation 813/2013)	21.10.2009
2009/142/EC	Gas Appliance Directive	30.11.2009
2006/95/EC	Voltage Limits Directive	12.12.2006
2004/108/EC	Electromagnetic Compatibility Directive	15.12.2004

Relevant harmonised standards :

EN 15502-1	EN 677	EN 61000-3-2
EN 15502-2	EN 55014-1	EN 61000-3-3
EN 60335-2-102	EN 55014-2	

The notified body, (Technigas [0461], Chaussée de Vilvoorde 156, B-1120 Brussels) performed a Type examination and issued the certificate(s) : E1415/5646 - Rev. 1 ID # **0461CQ1035**

Signed for and on behalf of
ACV International SA/NV

Dworp, 19/12/2017

R&D Director
Sara Stas

ECODESIGN DATA

Boiler type and model	Prestige		42 Solo	50 Solo	75 Solo	100 Solo	120 Solo
Condensing boiler			☑	☑	☑	☑	☑
Low temp boiler			☑	☑	☑	☑	☑
Combination heater			☐	☐	☐	☐	☐
Useful heat output							
at 30% of rated heat output	P_1	kW	12.2	14.6	20.3	29.3	33.6
at rated output and high-temp re-gime	P_4	kW	40.7	48.5	67.8	97.5	111.8
Useful efficiency							
at 30% of rated heat output	η_1	%	97.7	98.2	97.7	97.4	97.3
at rated output and high-temp re-gime	η_4	%	87.3	87.3	87.3	87.8	87.3
Auxiliary electricity consumption							
At full load	**elmax**	W	82	77	125	142	178
At part load	**elmin**	W	17	19	29	21	26
In standby mode	P_{SB}	W	3	3	3	3	3
Standby heat loss	P_{stby}	W	76	74	70	139	130

Product Fiche: Prestige
Referring to Commission Delegated Regulation N° 811/2013

Model	Prestige 24 Solo	Prestige 24 Excellence	Prestige 32 Solo	Prestige 32 Excellence	Prestige 42 Solo	Prestige 50 Solo	Prestige 75 Solo	Prestige 100 Solo	Prestige 120 Solo
Medium temperature application	condensation	condensation	condensation	condensation	condensation	condensation	condensation	condensation	condensation
Declared load profile for water heating	-	XL	-	XL	-	-	-	-	-
Seasonal space heating energy efficiency class	A	A	A	A	A	A	A	A	A
Water heating efficiency class	-	B	-	B	-	-	-	-	-
Rated heat output (kW)	23	23	31	31	41	48	68	97	112
Annual energy consumption for space heating (kWh)	11599	11599	15128	15128	19437	23390	32886	46742	55496
Annual energy consumption for water heating (kWh)	-	5821	-	5821	-	-	-	-	-
Seasonal space heating efficiency (%)	93	93	93	93	93	93	93	93	92
Water heating efficiency (%)	-	69	-	69	-	-	-	-	-
Sound power level indoors LWA (dB):	59	59	58	58	62	58	59	62	62
Able to work only during off-peak hours:	No	No	No	No	No	No	No	No	No

ACV International Oude Vijverweg, 6 1653 Dworp (Belgium)
05/10/2017
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