

MODELS

SGT 30 G

SGT 40 G

INSTALLATION - AND USER INSTRUCTIONS

UNITED KINGDOM / IRELAND

HOT WATER STORAGE HEATERS

Read these installation instructions first before installing the appliance. Carefully read the user instructions before igniting the appliance. Failure to follow these instructions may lead to risk of explosion and/or fire and could cause material damage and/or bodily harm.

Installation and commissioning should be carried out by a qualified competent installer. The type of gas and the value at which the appliance is set standard in the factory are registered on the rating plate. The appliance may only be installed in a room if this room meets the ventilation requirements.

STATE WATER HEATERS accepts no responsibility for warranty, service and/or product liability in case of unauthorised alterations, product modifications or repair.

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1. GENERAL

1.1 Description of the appliance

Construction of the water heater is in accordance with the European standard for gas heated water storage heaters for sanitary application (EN89). The appliance thus meets the European Directory for Gas Appliances and is therefore entitled to carry the CE-marking.

This is a closed device without exhaust (type C11/31). The storage device is suitable to be used with an operating pressure of up to 8 bar. The tank is made of steel plate, which is glass lined on the inside. The tank is also provided with an anode to give extra protection against corrosion. A thick PU insulation layer, covered with a steel casing, prevents unnecessary heat loss.

If the storage device is completely filled with water, it will continuously be under water-feed pressure. When hot water is drawn off from the device, it is immediately topped up with cold.

To ensure an improved heat transfer, a vortex strip has been built into the fire tube. The flue gases are carried out via the draught hood and the vertical roof duct or the horizontal exterior-wall duct. The exhaust of the flue gases and the supply of combustion air is realised by means of a natural, thermal draught (see Fig. 1).

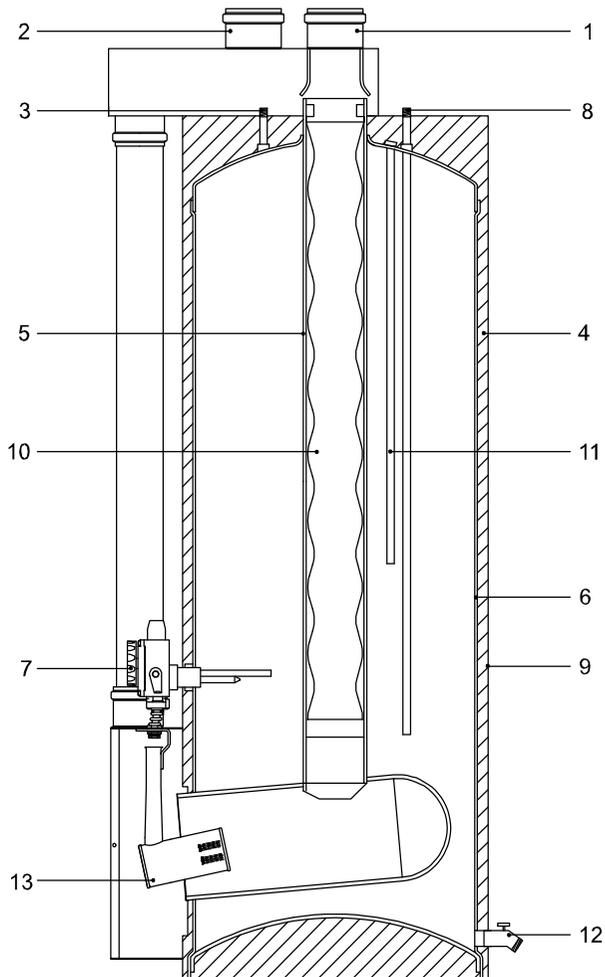
To create extra comfort in case of long pipelines, circulating piping with a circulating pump may be connected to the piping. The circulating pipeline can be connected to the cold-water supply.

1.2 Technical safety equipment

1.2.1 Gas control valve

The water heater has been fitted with a gas control block consisting of a

thermo-electrical pilot flame safeguard, pilot flame pressure regulator, burner pressure regulator, a control thermostat (adjustable between 30°C and 70°C) and a safety thermostat (82°C). This gas control block with its simple and secure control respectively switches the gas supply to the main burner on or off.



AOS 0563

Fig. 1 - Cross-section of the heater

- | | |
|-----------------------------|-----------------------|
| 1) Flue down draught device | 8) Cold-water inlet |
| 2) Verbrandingsluchttoevoer | 9) Outer casting |
| 3) Hot-water outlet | 10) Flue baffle |
| 4) Insulation | 11) Sacrificial anode |
| 5) Flue tube | 12) Drain valve |
| 6) Glass lined tank | 13) Burner |
| 7) Gas control valve | |

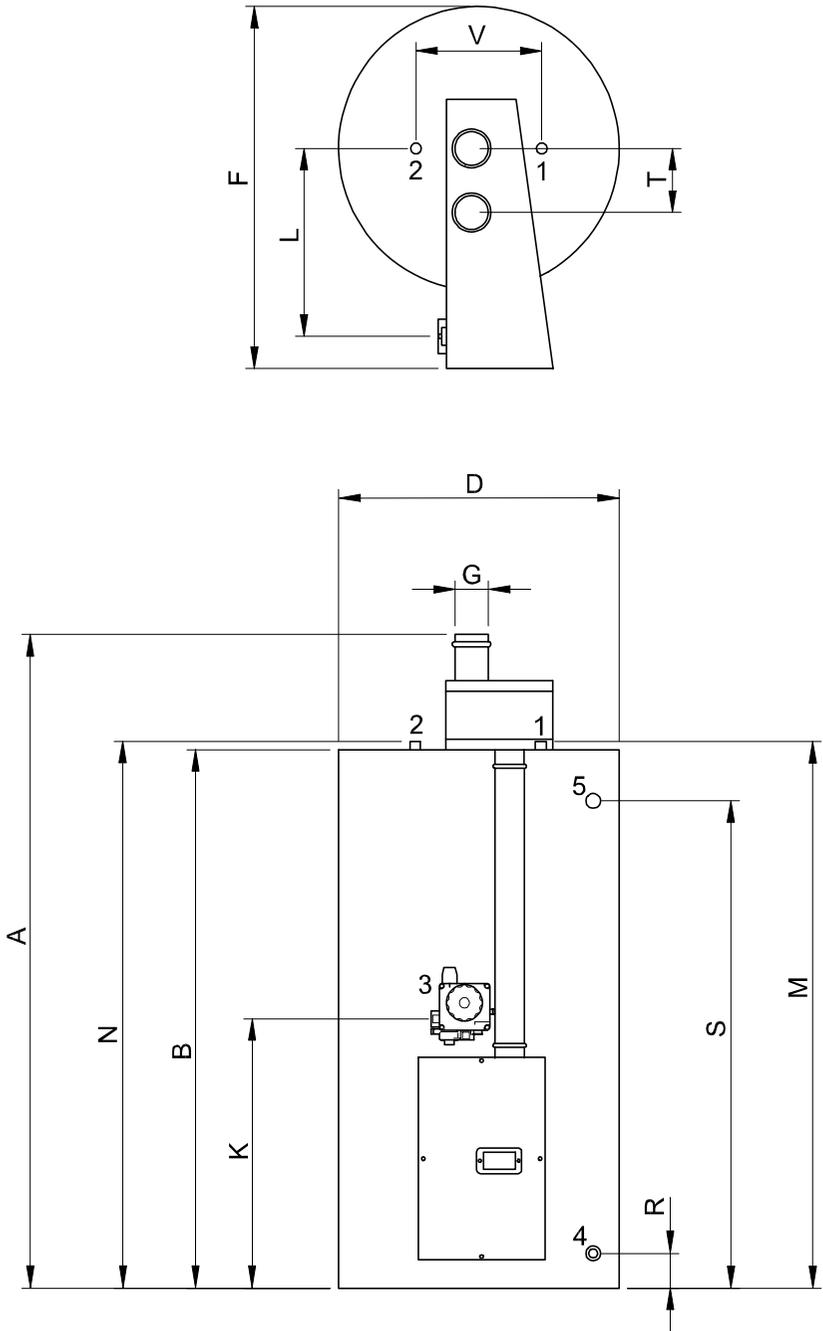
1.3 Technical description

1.3.1 Dimensions

The diameter of the flue-gas duct and the combustion-air supply duct is 80 mm (INT). The indicated ducts through roof and exterior wall have a 80-mm (INT) connection.

Dim.	SGT 30	SGT 40
A	1192	1455
B	1012	1275
D	465	465
F	585	585
G	80	80
K	470	470
L	280	280
M	1045	1310
N	1045	1310
R	80	80
S	835	1100
T	120	120
V	205	205
1	Cold water inlet	
2	Hot water inlet	
3	Gas control valve	
4	Drain valve	
5	T&P connection	

All dimensions are given in mm (rounded off on 5 mm).



IMD 0011

Fig. 2 - Dimensions

1.3.2 Technical description

Toestel categorie: I_{2L}

DESCRIPTION	Unit	SGT 30	SGT 40
DATA NATURAL GAS G20 - 20 mbar:			
Nominal load (gross)	kW	7,5	8,4
Nominal capacity	kW	6,5	7,6
Supply pressure	mbar	20	20
Burner pressure	mbar	12,5	12,5
Gas consumption *	m ³ /h	0,8	0,9
Diameter main orifice	mm	2,30	2,40
Diameter pilot orifice	mm	2 x 0,27	2 x 0,27
Heating time ΔT= 45 K	min.	56	63
GENERAL			
Storage capacity	litres	110	145
Water connections **	-	3/4"-14 NPT	3/4"-14 NPT
Gas connection	-	150 7/1 - Rp ½	150 7/1 - Rp ½
Drain valve	-	3/4"-14 NPT	3/4"-14 NPT
Anode	-	3/4"-14 NPT	3/4"-14 NPT
T&P-plug**	-	3/4"-14 NPT	3/4"-14 NPT
Maximum operation pressure	bar	8	8
Empty weight	kg	58	70

* Gas consumption at 1013,25 mbar and 15°C

** For a leak-proof sealed connection European coupling pieces can be used on the NPT-connection nipples with a pipe thread of ISO 228/1 - G 3/4 of ISO 7/1 - Rp 3/4.

2. FOR THE INSTALLER

2.1 Installation instructions

This water heater must be fitted in a location which will permit the provision of an approved flue system and adequate ventilation.

A service clearance of 15 cm at the sides and rear of the unit and 60 cm at the front of the unit should be allowed for ease of servicing. Adequate distance must be allowed between the top of the unit and any obstruction or ceiling to allow the flue baffle and anode to be inspected, cleaned or in the case of the anode replaced if necessary.

The water heater must stand on a level surface resistant to heat and with sufficient strength to support the weight of the unit when full of water.

This water heater must **not** be installed in a bath room, bedroom or in a cupboard opening on to such rooms. This water heater must **not** be installed in any area where flammable materials are used or stored.

Insufficient ventilation may give rise to a risk of fire, explosion or suffocation. If in doubt consult the national and local regulations governing the installation of gas appliances or your local British gas service department.

2.1.1 Installation

The installation of this water heater should be carried out by a suitably qualified competent person. It is a criminal offence for unqualified persons to install gas equipment.

Installation should be carried out in accordance with all local authority and building regulations, local water authority and fire regulations and the following British standards: 5440, 5546, 6644, 6700, 6798 and 6891. Some chemicals produce vapours

which can cause rapid failure of thermocouples, burners and storage tanks if they are drawn into the combustion air supply.

Therefore if this water heater will be used to supply hot water to:

- hairdressers,
 - dry cleaners
 - industrial degreasing processes
- or any other area where compounds containing halogens are used and stored, care should be taken that all primary and secondary air is drawn from outside atmosphere free of such contaminants.

For further advice contact STATE WATERHEATERS.

2.1.2 Water connection

STATE WATERHEATERS water heaters are suitable for connection to vented, unvented and pumped pressurised systems. In each case appropriate valves and fittings should be used to ensure the system complies with the requirements of the water by laws, and appropriate building regulations.

When fitting it is essential the rules of 'good practice' are applied at all stages of installation.

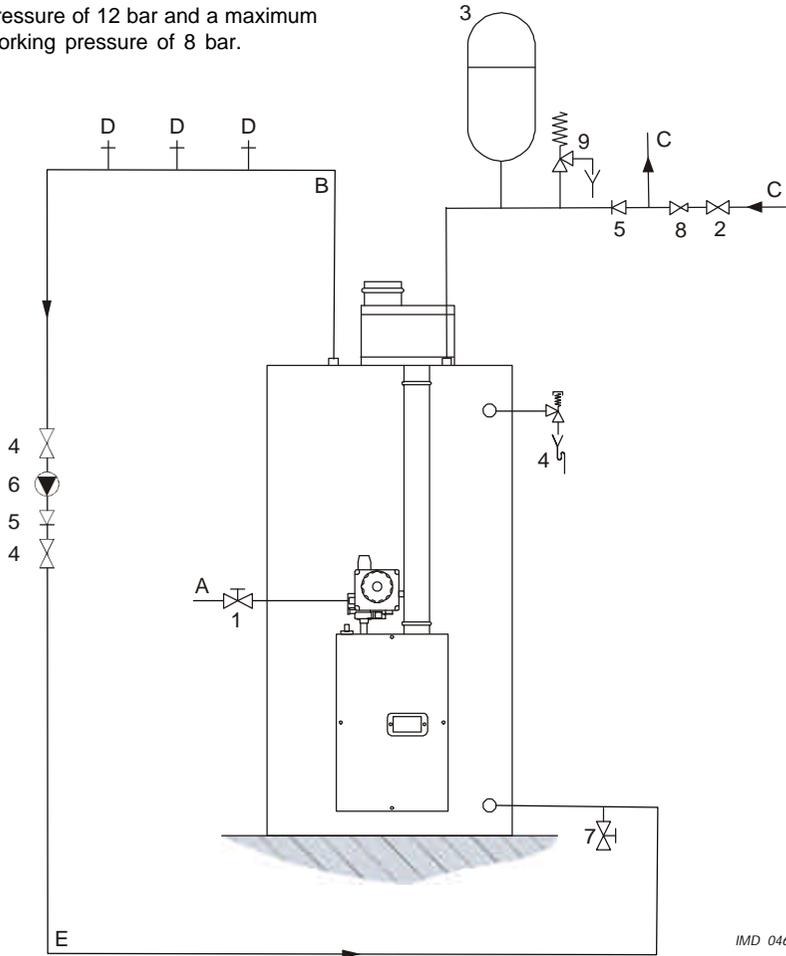
Vented systems

If the water heater is to be connected to a cold feed tank or cistern the hot water supply pipe must include an open vent which discharges over the cold feed cistern. The cold feed cistern must have an actual capacity of greater volume than the hourly recovery rate of the water heater(s) which it supplies. The minimum actual capacity is 50 gallons or 227 litres.

Unvented

To install an STATE WATERHEATERS water heater on an unvented cold water supply system a kit of valves and fittings listed by the water research centre and complying with part G3 of

See Figure 3.
 STATE WATER HEATERS water heaters are tested to a maximum pressure of 12 bar and a maximum working pressure of 8 bar.



IMD 0469

Figure 3 - Connection diagram
 (unvented system)

- | | |
|----------------------------|-----------------------|
| 1) Manual gas valve | A) Gas supply |
| 2) Stop valve | B) Hot water delivery |
| 3) Expansion vessel | C) Cold water inlet |
| 4) T&P safety valve | D) Hot water taps |
| 5) Non return valve | E) Return circulation |
| 6) Circulation pump | |
| 7) Drain valve | |
| 8) Pressure limiting valve | |
| 9) Expansion valve | |

the current building regulations should be used. Installation should be carried out generally as shown on the following diagram.

2.1.3 Gas connection

The gas supply to this appliance must be installed in accordance with BS 6891 (1988).

Fit the 1/2" gas supply cock supplied with this unit immediately before the gas control block. No heat or soldered joints should be applied in the vicinity of the gas control block, as they could cause damage to the control.

All connections and joints should be tested for gas soundness with a suitable leak detector (do not use a naked flame).

2.1.4 Flue-gas exhaust and air supply

The flue-gas exhaust and the air supply must be installed according to the tables.

Exterior-wall duct (see Fig. 4).

Type: M2000 MDV80

WI = 600

Piping material: thick/thin-walled aluminium with lip-ring sealing.

Pipe diameter: Ø 80 mm.

Bend: 90°

SGT 30 / SGT 40		
Size	Minimum	Maximum
A	500	1400
B	0	1000

All sizes are in mm.

Note: the fall of the horizontal piping to the device should be at least 5 mm per metre of pipe!

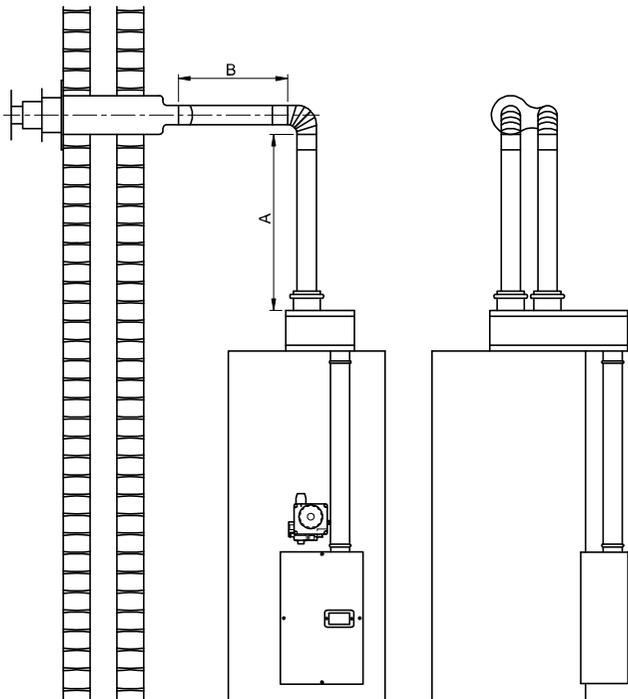


Fig. 4 – Size exterior-wall duct

IMD 0016

Roof duct (see Figs. 5 and 6).

Type:

Pressure balance Ø 80 VR EW;
supplier Burgerhout-Assen, art. no.:
0700GT-71.

Pressure balance Ø 80 VR DW,
supplier; Burgerhout-Assen, art. no.:
0700GT-63.

Piping material: thick/thin-walled
aluminium with lip-ring sealing.
Pipe diameter: Ø 80 mm.
Bend: 90°/30°/15°

SGT 30 / SGT 40		
Size	Minimum	Maximum
A	500	7000
B	0	2000
C	1,5 x B	-
A+B+C	-	7000

All sizes are in mm.

Note: the fall of the horizontal piping to
the device should be at least 5 mm per
metre of pipe!

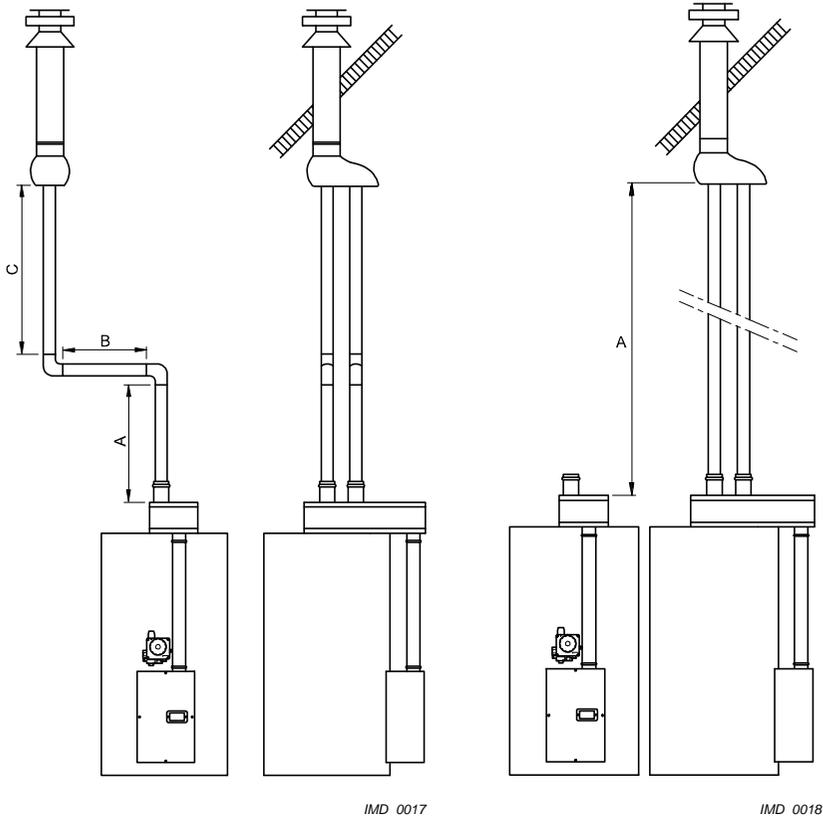


Fig. 5/6 – Size roof duct

Size roof duct (see Fig. 7).

Type:

Pressure balance Ø 80 VR EW,
supplier; Burgerhout-Assen,
art. no.: 0700GT-71.

Pressure balance Ø 80 VR DW,
supplier; Burgerhout-Assen,
art. no.: 0700GT-63.

Piping material: thick/thin-walled
aluminium with lip-ring sealing.

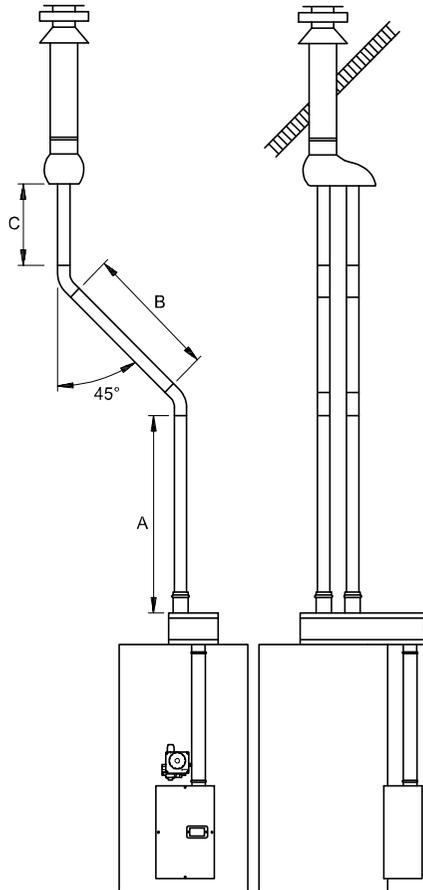
Pipe diameter: Ø 80 mm.

Bend: 45°

SGT 30 / SGT 40		
Size	Minimum	Maximum
A	500	7000
B	0	2000
C	> B	-
A+B+C	-	7000

All sizes are in mm.

Note: the fall of the horizontal piping to
the device should be at least 5 mm per
metre of pipe!



IMD 0019

Fig. 7 – Size roof duct

2.2 Commissioning

2.2.1 Filling the water heater

1. Close the drain tap.
2. Open the cold water tap to the water heater and open all taps where hot water can be drained for de-aeration. The water heater is filled as soon as cold water flows from all taps.
3. Close all hot water taps.

2.2.2 Putting into operation

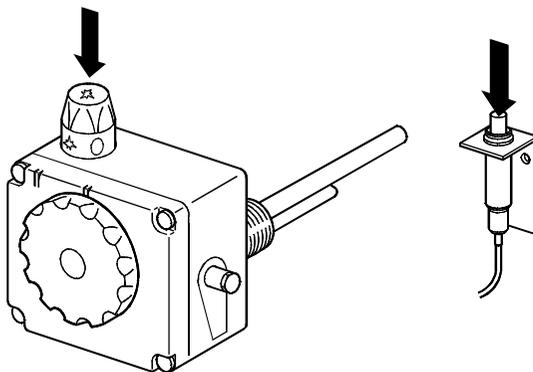
1. Make sure the device is filled with water and the gas pipe to the boiler is open.
2. Turn the temperature-control knob fully to the right and turn the control knob to the position 'PILOT FLAME' (*).
3. Keep the control knob depressed and press the piezo igniter a few times until the pilot flame is burning (see Fig. 8.)
4. Keep the control knob (*) depressed for about 20 seconds. When released, the pilot flame should continue to burn. Should the pilot flame go out, wait 5 minutes before repeating the ignition procedure. The size of the pilot flame

may be adjusted (see also 'Adjusting the pilot flame').

5. Turn the control knob to the 'ON' (I) position.
6. Turn the temperature-control knob to the desired position, preferably to position 4 (approx. 60°C). The device will now operate automatically.
7. Check the burner pressure setting (see Fig. 10) and adjust if required based on the technical information (see page 10)

2.3 Adjusting the pilot flame

The pilot flame is adjusted using the adjusting screw underneath the plastic covering plate on the right side of the gas-control block. The pilot flame should be adjusted in such a way that the pilot flame correctly surrounds the thermocouple element and the pilot-flame burner is burning. After adjustment of the pilot flame, replace the covering plate (see Fig. 9). Turning clockwise will reduce the gas supply; turning anticlockwise will increase the gas supply.



AOS 0484

Fig. 8 – Operation gas-control block

2.4 Putting out of operation

For a short period:

1. Turn back the control knob to 'PILOT FLAME' (✱); the pilot flame will continue to burn. The main burner cannot ignite.

For a longer period:

1. Turn the control knob to 'OFF' (●); the pilot flame will go out.
2. Shut the gas valve in the supply pipe. In case of very long intervals, in combination with a risk of frost, it is recommended to also shut off the cold-water supply and to drain the cooled-down device by opening the drain valve – a drain hose may be connected to it – and opening the nearest hot-water tap for aeration.

2.5 Temperature regulation

The appliance is under water supply pressure (maximum 8 bar). The amount

of cold water that is added is equal to the amount of hot water used. The gas control block automatically regulates the gas supply. The main burner will ignite as soon as a reduction in water temperature is sensed by the thermostat. The main burner will shut down as soon as the preset temperature is achieved.

Position 1 = approximately 30°C

Position 2 = approximately 40°C

Position 3 = approximately 50°C

Position 4 = approximately 60°C

Position 5 = approximately 70°C

At high water temperatures there is more scale buildup in the appliance. It is for this reason that it is recommended to place the temperature control knob in position 4 as the accumulation of scale will be reduced. In addition a safety thermostat has been fitted. This thermostat completely shuts off the gas supply if the water temperature reaches 82°C, also extinguishing the pilot burner.

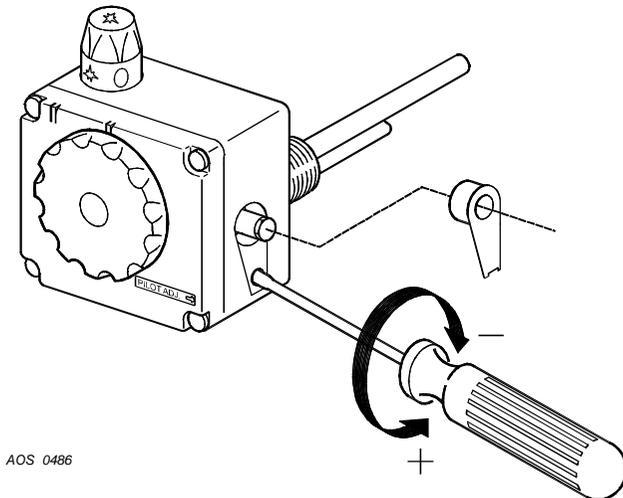


Fig. 9 - Setting the pilot

2.6 Setting the nominal heat input

The gas control has been factory preset to the water heater nominal heat input.

A further check of the burner pressure should be carried out during the commissioning of the unit after installation. The following procedure should be followed.

1. Remove the protruding cover screw on the right side of the gas control block and connect a U-gauge manometer to the outlet.
2. Put the appliance into operation and ignite the burner.
3. Check the burner pressure and, if necessary, reset by means of the adjusting screw "pr adj" (pressure adjustment; see Figure 10). To make this possible the temperature control knob should be removed by pulling it straight forward, making the "pr adj" visible. Turning clockwise reduces the pressure; turning anti clockwise increases the pressure. It is recommended to check the heat input by means of the gas meter.

4. Turn off the appliance and remove the manometer hose and replace the adjusting screw.
5. Replace the thermostat control knob.
6. Put the appliance into operation.

2.7 Conversion to another type of gas

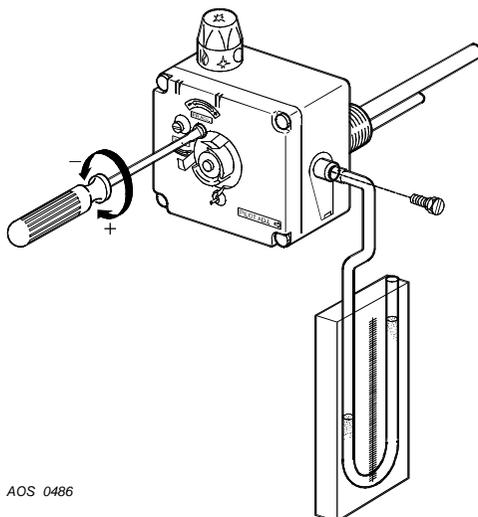
The SGT boiler is only suitable for use with natural gas.

2.8 Maintenance

To ensure safe and efficient operation of the water heater it is recommended that it is cleaned and serviced at least once a year by a qualified competent person.

2.8.1 Sacrificial anode

The life of the anode is determined by the quality and the quantity of water flowing through the device. It is recommended, therefore, to have the anode checked and, if necessary, replaced once a year.



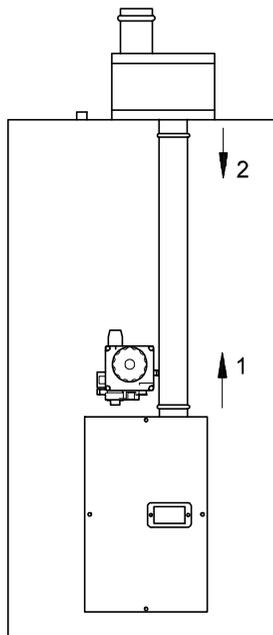
AOS 0486

Fig. 10 - Setting the nominal load

Replacement is necessary if the anode has dissolved for more than 60%. If the anode is not replaced in time, this may negatively affect the life of the tank.

To replace, follow these steps:

1. Shut off the water tap in the cold-water supply line.
2. Open up the nearest hot-water tap so that the water pressure in the boiler and pipeline drops.
3. Loosen the anode using a correct spanner.
4. Check the anode and replace if necessary.
5. Replace the anode in a water-tight way. **Attention:** the anode should be in contact with the tank (metal to metal). If there is no contact between anode and tank, for example as a result of an applied sealant, the anode will not be able to fulfil its function.

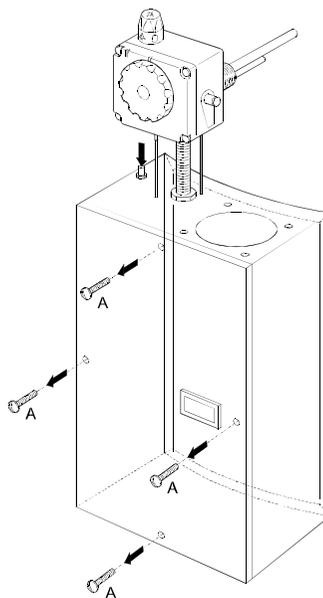


IMD 0020

Fig. 11 – Removing the air-supply pipe

2.8.2 Cleaning

1. Shut off the gas supply.
2. Slide the air-supply pipe into each other so that it can be removed (see Fig. 11).
3. Unscrew the 4 bolts (A) from the aeration chamber lid and remove these (see Fig. 12).
4. Remove the pilot-flame pipe and thermocouple from the gas-control block (see Fig. 13).
5. Remove the main burner from the flexible burner-pipe connection. This must be done from the aeration chamber (see Fig. 13).
6. Now unscrew the 4 bolts (B) from the aeration chamber and pull these out a little (see Fig. 12). Make sure not to damage or displace the packing.
7. The burner-chamber guard can now be removed (see Fig. 14). Remove the whole aeration chamber, together with the guard.
8. After removing the nut from the back, the burner can be tilted out of the guard (see Fig. 15). If necessary, the burner can be freed completely by removing the



AOS 0871

Fig. 12 – Removing the aeration chamber and lid

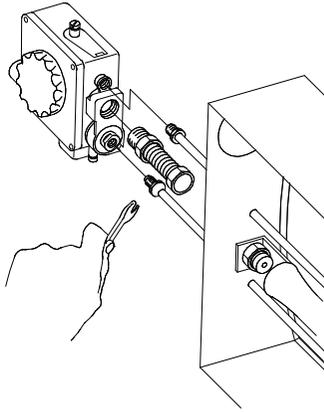


Fig. 13 – Removing the burner, pilot-flame pipe and thermocouple

AOS 0572

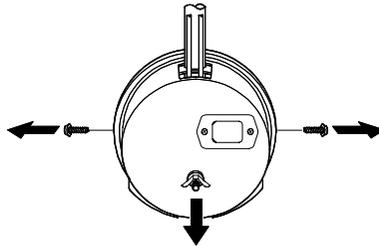


Fig. 14 – Removing the burner-chamber guard

AOS 0276

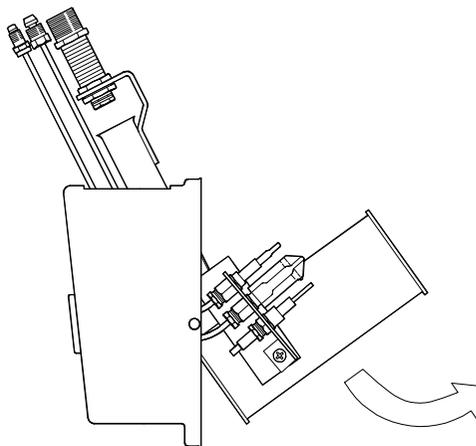


Fig. 15 – Removing the burner

AOS 0278

- pilot flame from the bracket.
- Clean the main burner with a soft brush.
 - Check the pilot-flame burner and clean if necessary.
 - Check the burner chamber, flue-gas duct, and vortex strip and clean if necessary.
 - Replace in reverse order.
Hand-tighten the thermocouple connection on the gas-control block and tighten with a spanner for a further 1/4 turn at the most – it only has to make contact. After cleaning, check the operation of the pilot-flame burner and the main burner. If necessary, adjust the burner pressure of the main burner.

2.8.3 Descalcification

Formation of lime scale depends on the quality and quantity of the water used. In addition higher water temperatures lead to more deposit in the appliance. A temperature setting of 60°C is recommended in order to keep the calcification at a low level. Decalcification should be attempted with the proper means. For extensive information a decalcification instruction is available.

2.8.4 Spare parts

To be able to order spare parts it is important to note the type of appliance as well as the serial number of the appliance. Based on this information the data concerning the spare parts can be determined.

2.9 Inlet combination

Not applicable in U.K. and Ireland.

2.10 Troubleshooting

In case of a failure, check the following points before calling in a fault-clearing service:

2.10.1 Safety thermostat

All devices are equipped with a safety thermostat, which shuts off the gas supply in case of too high a water temperature. The safety thermostat will remain switched on until the water temperature has dropped to below the safe temperature level. After that, the device should be put back into operation, because the main burner and pilot-flame burner will have extinguished as a safety precaution. Next, adjust the control thermostat to a lower water temperature. If the pilot flame is repeatedly extinguished, at higher water temperatures than normal, this demonstrates that the safety thermostat is switched on.

2.10.2 Hot-water temperature is not correct

- Check the settings of the temperature-control knob.
- Make sure the pilot flame is lit. If necessary, light it (see 'Putting into operation').
- Check for leaks or taps that are left running.
- Have your installer or power company check to make sure there is sufficient gas supply and pressure. A load that is insufficient will cause water temperatures that are too low.
- Perhaps the hot-water consumption is greater than was calculated earlier.
- Check to make sure the cold-water inlet pipe is correctly positioned.

2.10.3 Hot water temperature too high

Check whether the control thermostat is set too high.

2.10.4 Possible water leakage

- Check whether the drain tap is fully closed.
- Check whether all water connections are water tight.
- Check whether the possible water leakage could be caused by condensation.

2.11 Gas smell

Warning

Immediately shut the main gas tap. Do not light any fire or switch on any lights, do not use any electrical switches or alarm bells. Open windows. Thoroughly inspect all gas connections and, if the gas smell persists, alert the local gas company and/or your installer.

2.12 Condensation

If the appliance is filled with cold water or if the hot water consumption is very high, condensation of flue gasses will occur on the cold surfaces of the combustion chamber and the flue tube. The water drops will fall on the burner and cause a sizzling noise. This is a normal phenomenon that will disappear as soon as the appliance reaches its normal operating temperature.

Important warning

The appliance should NEVER be taken into operation with a closed cold water supply!
Provision should always be made for expansion.

3. FOR THE USER

3.1 Commissioning

Warning

Installing and commissioning (for the first time) of this water heater should only be carried out by a qualified competent heating engineer.

3.1.1 Filling the water heater

1. Close the drain tap.
2. Open the cold water tap to the water heater and open all taps where hot water can be drained for de-aeration. The water heater is filled as soon as cold water flows from all taps.
3. Close all hot water drain taps.

3.1.2 Putting into operation

How to put into operation:

1. Make sure the device is filled with water and the gas pipe to the boiler is open.
2. Turn the temperature-control knob fully to the right and turn the control knob to the position 'PILOT FLAME' (*).
3. Keep the control knob depressed and press the piezo igniter a few times until the pilot flame is burning (see Fig. 8).
4. Keep the control knob (*) depressed for about 20 seconds. When released, the pilot flame should continue to burn. Should the pilot flame go out, wait 5 minutes before repeating the ignition procedure. The size of the pilot flame may be adjusted (see also 'Adjusting the pilot flame').
5. Turn the control knob to the 'ON' (♣) position.
6. Turn the temperature-control knob to the desired position, preferably to position 4 (approx. 60°C). The device will now operate automatically.

3.1.3 Use

The appliance is under water supply

pressure (with a maximum of 8 bar).

The amount of cold water that is added is equal to the amount of hot water used. The gas control block automatically regulates the gas supply. The main burner will ignite as soon as a reduction in water temperature is sensed by the control thermostat. The main burner will shut down as soon as the water temperature returns to the preset temperature.

Position 1 = approximately 30°C

Position 2 = approximately 40°C

Position 3 = approximately 50°C

Position 4 = approximately 60°C

Position 5 = approximately 70°C

Higher water temperatures will cause more scale build up in the appliance. It is for this reason that it is recommended to place the temperature control knob in position 4 as the accumulation of scale will be reduced at lower temperatures. In addition a safety thermostat has been fitted. This thermostat completely shuts off the gas supply if the water temperature reaches 82°C, also extinguishing the pilot burner.

3.1.4 Putting out of operation

For a short period:

1. Turn back the control knob to 'PILOT FLAME' (*); the pilot flame will continue to burn. The main burner cannot ignite.

For a longer period:

1. Turn the control knob to 'OFF' (♣); the pilot flame will go out.
2. Shut the gas valve in the supply pipe. In case of very long intervals, in combination with a risk of frost, it is recommended to also shut off the cold-water supply and to drain the cooled-down device by opening the drain valve – a drain hose may be connected to it – and opening the nearest hot-water tap for aeration.

3.1.5 Maintenance

The inlet combination has to be tested regularly by relieving it (via the relief button). The water has to flow out in a forceful jet. Check whether the discharge pipe is open. We recommend a service agreement on an annual basis.

To be able to order spare parts it is important to note the type of appliance as well as the serial number of the appliance. Based on this information the data concerning the spare parts can be determined.

3.2 Fault overview

Fault	Possible cause	Corrective action
Gas smell		If you smell gas you should immediately close the main gas tap you should not light any fire or switch on light, electrical switches or bells. Open windows and immediately contact your installer or the local gas company.
Pilot extinguishes	Blocked pilot burner	Clean the pilot burner
	Blocked chimney	Find the cause and remove it.
	Safety thermostat	Set the temperature regulator at a lower temperature.
	Thermocouple defective	Replace the thermocouple
	Thermocouple makes no contact	Restore the connection
	Gas supply closed	Open the gas tap
	The thermostat is not connected to the thermocouple	Connect the two wires to the thermocouple
Insufficient hot water, or none at all	Temperature is set too low	Set the temperature regulator at a higher temperature
	Control knob in position (✱) (pilot burns)	Turn the temperature regulator completely clockwise; turn control button to "on" (♠); turn the temperature regulator to the desired position, preferably position 4. The appliance now operates fully automatically.
	Control knob in position (●)	Put the appliance into operation.
	Flue safety device closed the gas supply	Press the reset button - if present - on the safety thermostat and put the appliance into operation. If this occurs more often then you should inform your installer.
	Gas supply closed	Open the gas tap and put the appliance into operation.

Fault	Possible cause	Corrective action
Insufficient hot water, or none at all	Safety thermostat has closed the gas supply because the water temperature was too high	Set the temperature regulator at a lower temperature and reignite the pilot burner.
	Hot water storage empty	Reduce the consumption of hot water. Allow the appliance time to heat the water.
	Cause cannot be determined	Turn the control button to the (●) position. Close the gas tap and inform your installer.
Water leakage	Condensation of (flue) gasses	See "Condensation".
	Insufficient sealing of the water connections (thread)	Tighten the threaded connections.
	Leakage from other water- appliances or pipes near by	Trace the cause.
	Condensation leakage from the underside of the appliance (usually during the first warming-up period).	Reduce your hot water use. Allow the appliance enough time to warm up water.

4. WARRANTY (CERTIFICATE)

In order to register your warranty, please fill in the enclosed warranty card and return it to us. We will then send you a warranty certificate.

This certificate will provide the owner with a warranty as described below for a boiler delivered by STATE WATER HEATERS, who will be committed to provide the owner with this warranty.

4.1 Warranty general

If, within one year of the original installation date, after investigation and exclusive evaluation by STATE WATER HEATERS, a boiler delivered by STATE WATER HEATERS turns out to have a part, with the exception of the tank, not function as it should as a result of manufacturing or material faults, STATE WATER HEATERS will replace or repair this part.

4.2 Warranty tank

If, within five years of the original installation date, after investigation and exclusive evaluation by STATE WATER HEATERS, a boiler delivered by STATE WATER HEATERS turns out to have a steel glass-lined tank that is leaking as a result of rust or corrosion from the water side, STATE WATER HEATERS will replace the whole boiler by a completely new one of similar size and quality. The replacement boiler will have a warranty that will be valid for the remaining period of the warranty for the original boiler delivered.

Notwithstanding the provisions in Article 2, the warranty term will be reduced to one year after the original installation date if unfiltered, softened water is flowing through the boiler or left in it.

4.3 Conditions of installation and use

The warranty referred to in Articles 1 and 2 only apply if the following conditions are met:

- a) that the boiler is installed according to the installation instructions of STATE WATER HEATERS for the specific model, as well as according to the local and national installation and building regulations, instructions and rules;
- b) that the boiler will remain installed in the original installation position;
- c) that only drinking water is used, which is allowed to circulate freely at all times (a separately installed heat exchanger is requisite for the heating of saline or corrosive water);
- d) that the tank has been defurred to remove harmful scale deposits by means of periodic maintenance;
- e) that the boiler-water temperatures do not exceed the maximum settings of the thermostats that are part of the boiler;
- f) that the water pressure and/or heat load do not exceed the maximum values indicated on the boiler's identification plate;
- g) that the boiler has not been installed in a corrosive atmosphere or environment;
- h) that the boiler has been provided with an inlet combination, approved by an authorised body, of sufficient capacity, not greater than the operating pressure indicated on the boiler, and, if applicable, with a temperature and pressure relief valve, also approved by an authorised body, which has been mounted according to the installation instructions of STATE WATER HEATERS that apply to the specific boiler model, as well as according to the local and national instructions, regulations and rules;
- i) that the anodes are replaced and renewed if and when they are worn for 60% or more.

4.4 Disclaimer

The warranty referred to in Articles 1 and 2 does not apply:

- a) if the boiler has been damaged by an external cause;
- b) in case of abuse, neglect (including freezing), modification, incorrect and/or deviating use of the boiler and if leaks have been attempted to repair;
- c) if contamination or other impurities were allowed to flow into the tank;
- d) if the conductivity of the water is less than 150 μ S and/or the hardness of the water is less than 6°DH;
- e) if unfiltered, recirculated water flows through or is stored in the boiler;
- f) if the owner has attempted to repair a defective boiler himself;

4.5 Extent of the warranty

STATE WATER HEATERS commitments pursuant to the warranty provided are confined to the delivery free of charge of the boiler to be replaced or any parts thereof ex the Veldhoven warehouse. Any costs involved with transport, labour, installation or any other capacity connected to the replacement cannot be charged to STATE WATER HEATERS.

4.6 Claims

A claim based on the warranty provided must be deposited with the dealer from whom the boiler was purchased or any other dealer who sells products manufactured by STATE WATER HEATERS. The investigation carried out on the boiler, as referred to in the Articles 1 and 2 will take place in an STATE WATER HEATERS laboratory.

4.7 No other commitments for STATE WATER HEATERS than those determined in this certificate

Concerning its boilers or any boiler replacement part supplied, respectively, STATE WATER HEATERS

will not provide any warranty or guarantee other than the warranty explicitly stated in this certificate. STATE WATER HEATERS is not liable, pursuant to the warranty or otherwise, for any injuries to persons or damage to materials caused by a boiler or replacement boiler, or any part thereof, or the steel glass-lined tank thereof, respectively, supplied by STATE WATER HEATERS.

This warranty applies to the following models:

- SGT 30 G
- SGT 40 G

