

# Grant Solo

## Fan Convectors

### Installation and User Instructions



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## IMPORTANT NOTE FOR INSTALLERS

These instructions are intended to guide installers on the installation, commissioning and servicing of the Grant Solo fan convectors. After installation, leave these instructions with the user.

User instructions to guide users in the operation of the fan convectors are given in Section X of these instructions.

## SPECIAL TEXT FORMATS

The following special text formats are used in these instructions for the purposes listed below:

### **! WARNING !**

**Warning of possible human injury as a consequence of not following the instructions in the warning.**

### **! CAUTION !**

**Caution concerning likely damage to equipment or tools as a consequence of not following the instructions in the caution.**

### **! NOTE !**

**Used for emphasis or information not directly concerned with the surrounding text but of importance to the reader.**

## PRODUCT CODES AND SERIAL NUMBERS COVERED

The serial numbers used on Grant Solo fan convectors consist of a twelve or thirteen digit code with the first two or three digits being the product identifier.

For example:

**G3H2818000027**

These instructions cover the following product codes and serial numbers:

Product code	Serial number identifier
SC03 - Solo Compact	G3
SC06MAX - Solo CompactMAX	G6
SCHW - Solo Hideaway	G3H



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# 1 INTRODUCTION

## 1.1 GENERAL

The Grant Solo range consists of two wall-mounted fan convectors, the Grant Solo Compact and Grant Solo CompactMAX, and the Grant Solo Hideaway model designed to fit under kitchen units or in other similar locations.

For heating capacity details on all three models refer to Section 2 of these Instructions.

Grant Solo fan convectors are supplied with a simple electronic control panel. Refer to Section 10 for further details and operating instructions. Each fan convector is individually controlled to provide a flexible and responsive means of heating each space.

They are designed to be integrated into low temperature heating systems using air source heat pumps, condensing oil, gas and biomass boilers, etc.

Each Solo fan convector requires a 3A fused 230V 1ph 50Hz electrical supply. Refer to Section 5 for further details.

A double pole mains ON/OFF switch is factory fitted to all Grant Solo units.

On the Solo Compact and CompactMAX models this is located under the right-hand end of the front casing. On the Solo Hideaway model this switch is located on the right-hand side of the unit.

The steel chassis of the Solo Compact and Solo CompactMAX is fixed directly to the wall. No wall mounting brackets are required, keeping the unit as close to the wall as possible.

With the Solo Hideaway unit, the steel chassis is fixed directly to the plinth or similar when fitting under kitchen units or other fixed units.

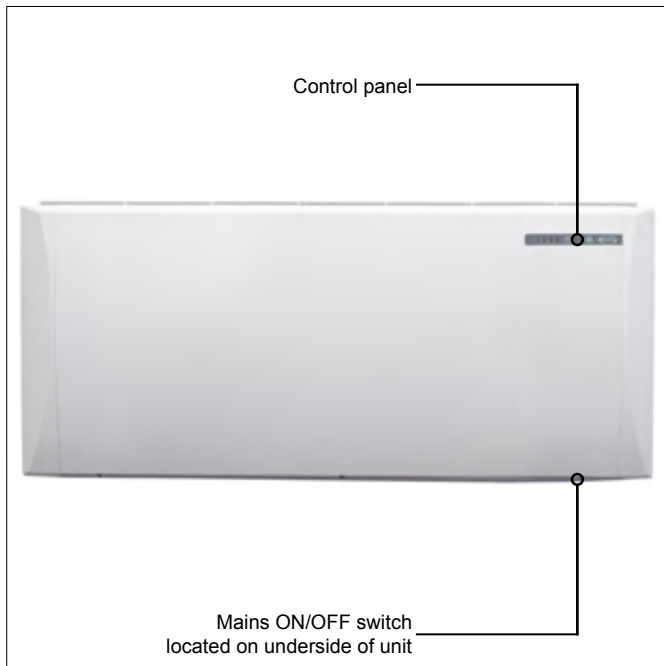


Figure 1-1: Solo Compact and CompactMAX wall hung fan convector

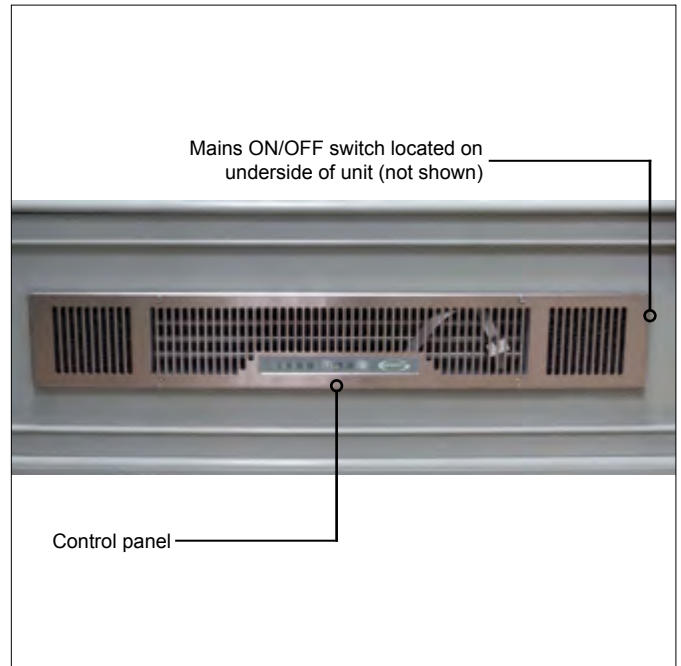


Figure 1-2: Solo Hideaway fan convector

## 1.2 OPERATING PRINCIPLES

The Grant Solo range of fan convectors use backward curved impellers and they are designed to ensure zero convection and therefore minimal heat emission when the fan is not running. This eliminates the need for any radiator control valves.

The heat exchanger does not touch the outer case but is insulated from it, providing a low casing surface temperature regardless of the water flow temperature. The top grille prevents contact with the heat exchanger.

With the electrical supply to the Solo fan convector switched on; when the water temperature sensor (located in the heat exchanger) detects that the water temperature entering the unit exceeds 29°C the unit will start.

The air temperature is then sampled over a 60 second period by the air temperature sensor located at the rear of the unit.

The user can then set the required room air temperature between 18 to 24°C via the control panel on the front of the unit. Refer to Section 10 - Operating Instructions for further details on setting the required air temperature.

The Grant Solo microprocessor control system predicts the air temperature at occupant level as low-level temperatures are always colder than at occupant level and would provide incorrect data on which to determine the level of heat output required.

If the difference between the sampled air temperature and the air temperature setting on the unit is greater than 1°C the heat output of the unit is increased with the fan running on the 'High' setting.

When the air temperature rises and the difference between the sampled air temperature and the air temperature setting on the unit is less than 1°C the heat output is decreased with the fan running on the 'Low' setting.

When the air temperature reaches the setpoint, the unit is switched off and enters a 'sleep' period for 8 minutes. After this the air temperature is then sampled over a 60 second period.

If there is no change and no heat output is required, the unit enters an 8 minute 'sleep' period again before sampling the air temperature for 60 seconds again, until a difference exists between the sampled air temperature and the air temperature setting on the unit.

The Grant Solo unit will then repeat the start-up sequence again.

### BOOST FUNCTION

The boost function is activated by pressing the Boost button on the control panel fascia. Refer to Section 10 - Operating Instructions.

The boost function overrides the normal temperature control and runs the fan at higher 'Boost' level for a period of 20 minutes to provide a greater heat output than the normal operation.

After this period has elapsed the Solo unit automatically returns to the normal temperature control with the fan operating at either 'Low' or 'High' setting as dictated by the difference between the air temperature and the air temperature setting on the unit.

### 1.3 CONTROL PANEL OVERVIEW

Grant Solo fan convectors are supplied with a simple control panel. Refer to Figure 1-3 and Section 8.2 (control panel).

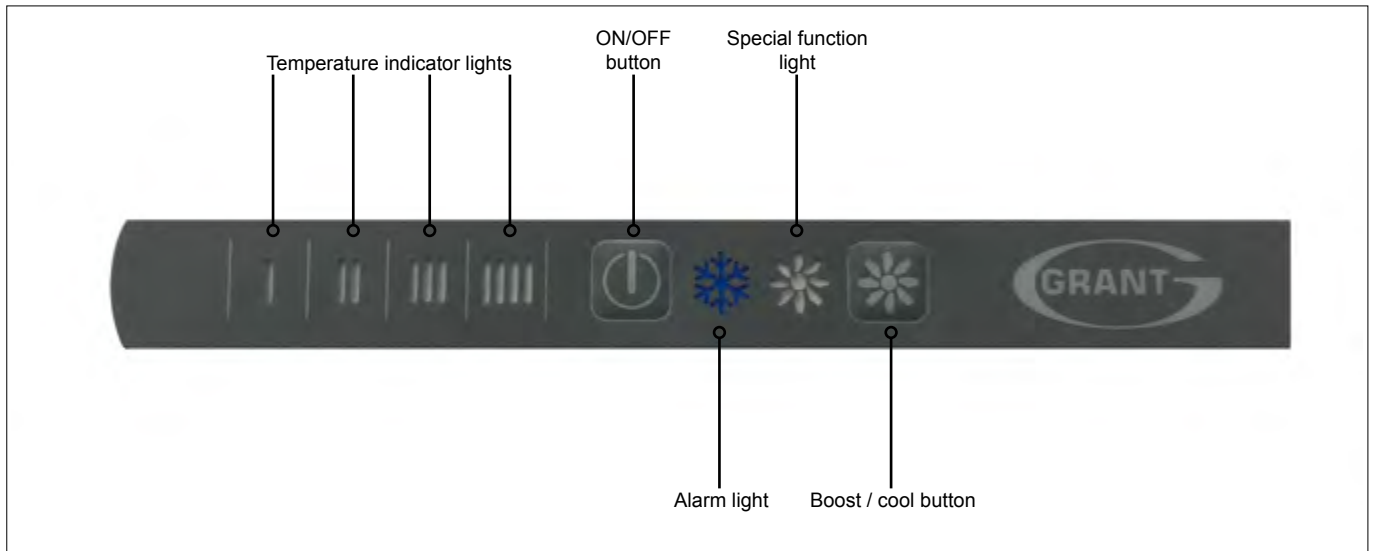


Figure 1-3: Solo fan convector control panel overview

## 2 TECHNICAL DATA

### 2.1 FAN CONVECTOR TECHNICAL DATA

**Table 2-1:** Fan convector technical data

	Units	Solo Compact	Solo CompactMAX	Solo Hideaway
Height	mm	410	410	120
Width	mm	610	985	700
Depth	mm	110	110	418
Water content	litres	0.15	0.30	0.15
Weight (empty)	kg	8.2	13.8	6.6
Weight (full)	kg	8.35	14.1	6.75
Flow and return pipe size	mm	15	15	15
Maximum water temperature	°C	85		
Maximum water pressure	bar	10		
Electrical supply		~230 1ph 50Hz 3A fused		
<b>Power input</b>				
Low speed	W	8	13	8
High speed	W	10	19	10
Boost	W	20	36	20
Standby power	W	4	4	4
<b>Sound pressure level at 1 metre (ISO 3744)</b>				
Low speed	dB(A)	18	18	18
High speed	dB(A)	22	23	22
Boost	dB(A)	38	39	38

### 2.2 PERFORMANCE DATA

**Table 2-2:** Heating capacity (BS EN ISO 16430) on high/low fan speed

Mean water temperature*	Units	Solo Compact		Solo CompactMAX		Solo Hideaway	
		High	Low	High	Low	High	Low
35°C	W	314	247	604	470	314	247
40°C	W	426	335	831	646	426	335
45°C	W	542	426	1,071	832	542	426
50°C	W	660	519	1,318	1,024	660	519
55°C	W	780	613	1,570	1,220	780	613
60°C	W	901	708	1,828	1,420	901	708
65°C	W	1,023	803	2,090	1,623	1,023	803
70°C	W	1,146	900	2,356	1,830	1,146	900

\* Mean water temperature = (flow temperature + return temperature) ÷ 2

## 3 INSTALLATION

### 3.1 INTRODUCTION

Each Solo fan convector requires a 3A fused 230V 1ph 50Hz electrical supply and is fitted with a terminal block for easy and quick electrical connection. Refer to Section 5 for further details.

Please ensure that Solo fan convectors are protected from dirt, rubble, etc. and it is suggested to wait for all other building and decorating works to be completed before finally fixing in the required location.

### 3.2 REGULATIONS

The installation of a Grant Solo fan convector must be in accordance with the following recommendations:

- Building Regulations for England and Wales or the Building Standards for Scotland, as appropriate.
- Any local Byelaws which you must check with the local authority for the area concerned.
- The Water Supply (Water Fittings) regulations 1999 or the water Supply (Fittings) (Scotland) Bylaws 2014, as appropriate.
- Applicable Control of Pollution Regulations.

The installation should also be in accordance with the latest edition of the following British Standard Code of Practice (and any relevant amendments):

- BS EN 12828 (Heating systems for buildings. Design for water-based heating systems).
- BS EN 14336 (Heating systems in buildings. Installation and commissioning of water-based heating systems).
- BS 7593 (Code of Practice for treatment of water in domestic hot water central heating systems).
- BS 7671 (Requirements for Electrical installations, IET Wiring Regulations).
- BS 7291 (Thermoplastic pipe and fittings systems for hot and cold water for domestic purposes and heating installations in buildings. General requirements).
- BS 7074-1 (Application, selection and installation of expansion vessels and ancillary equipment for sealed water systems. Code of practice for domestic heating and hot water supply).

### 3.3 LOCATION

Solo Compact and CompactMAX fan convectors should be positioned with the lower edge approximately 75-100mm above the skirting level.

The Solo Hideaway fan convectors are fitted into the plinth or baseboard of fixed units, e.g. kitchen units. Refer to Section 3.7 for dimension of the opening required. The lower edge of this opening must be at least 12mm above the finished floor level.

The outlet from all Solo fan convectors must be unrestricted, e.g. no shelves above the wall hung Solo Compact and CompactMAX units.

Ensure that heating system flow/return pipework is not run along the wall or skirting directly below either the Solo Compact or Solo CompactMAX fan convectors. The warm air rising from the pipework will affect the operation of the air temperature sensor fitted at the rear of the fan convector and may result in reduced heat output from it.

### 3.4 SYSTEM REQUIREMENTS

Grant Solo fan convectors can be used on either open vented or sealed central heating systems.

The pressure characteristics of the Grant Solo fan convectors were designed to facilitate even flow sharing by ensuring that the pressure drop at various flow rates considerably exceeds the pipework friction loss.

Care must therefore be taken to ensure that adequate pumping capacity exists to guarantee adequate flow through each fan convector unit. A 6metre head pump is suggested.

A maximum of approximately six to eight Solo units on a circuit, with 22mm flow and return pipework with 15mm radiator tails, is recommended.

It is suggested that reverse return pipework be used where possible. Refer to Figure 2-4.

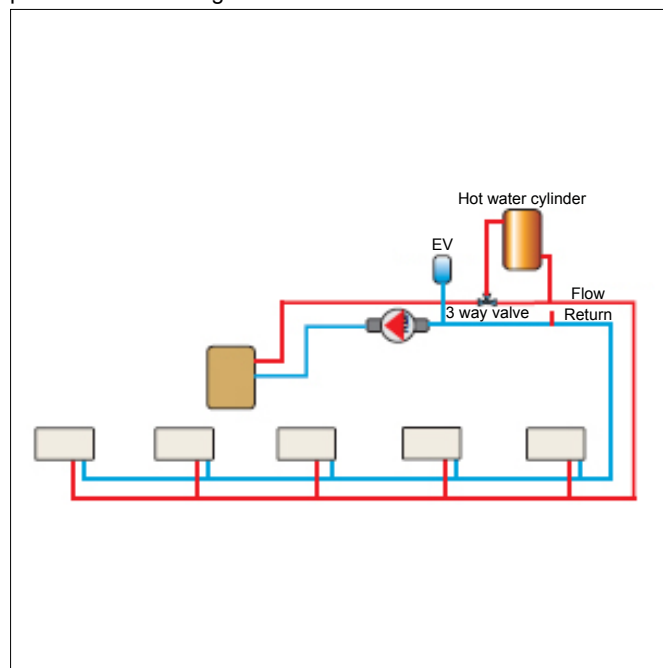


Figure 3-1: Conventional flow/return piping

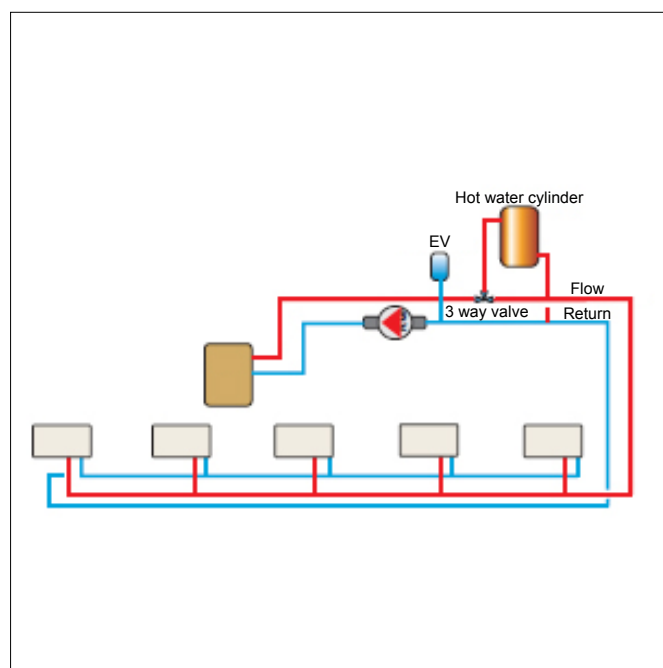


Figure 3-2: Reverse return piping

### OPERATION WITH RADIATORS

Grant Solo fan convectors are ultra-low water content heat emitters and should ideally not share heating circuits with conventional radiators, as this may result in a reduced flow through the fan convectors.

If this cannot be avoided and the fan convectors must be added to an existing radiator circuit the following requirements must be met:

- a) The flow and return pipework must be 22mm minimum. Smaller pipework will result in poor or no heat output from the fan convector(s).
- b) When installed, first shut off the conventional radiator(s) to check that the fan convector(s) operate correctly.

Then, turn on the radiator(s) and adjust the lockshield valve on each radiator and reduce the flow until the fan convector(s) operate.

### 3.5 PIPEWORK MATERIALS

The Grant Solo fan convectors can be used with both copper and plastic pipe. Where plastic pipe is used it must be of the oxygen barrier type and be the correct class (to BS7291-1) for the application concerned.

On sealed systems, if plastic pipe is to be used, the installer must check with the plastic pipe manufacturer that the pipe to be used is suitable for the temperatures and pressures concerned. Plastic pipe must be Class S to BS7291-1.

Two flexible hose connections will be required for installation of the Grant Solo Hideaway fan convector. These are supplied with the unit.

### 3.6 PIPE CONNECTIONS

#### SOLO COMPACT AND COMPACTMAX MODELS:

Remove the front cover to access the flow and return pipe connections. Refer to Section 3.6 or 3.7, as required, for details on removal of the front cover.

The flow and return connections are located at the left-hand side of the unit.

The flow and return pipework can enter/exit the unit either

- a) To the rear of the unit through the wall, or
- b) To the bottom of the unit, through the opening in the lower casing.

It is recommended that 15mm isolation valves (not supplied) are fitted to the flow and return connections before connecting the flow and return pipework. These valves must be of the 'full bore' type to ensure no added restriction to the flow and return pipework.

#### SOLO HIDEAWAY:

The flow and return connections are located on the right-hand side of the unit.

To allow the unit to be fully withdrawn from the plinth or base board in which it is fitted, without having to disconnect it from the system, two flexible hose connections (supplied) will be required for installation of the Grant Solo Hideaway fan convector. These are long enough to allow the fan convector to be completely removed from the plinth/baseboard when they are connected.

These will be connected between the system flow and return pipework, located at the rear of the fixed kitchen unit, and the 15 mm full bore valves on the flow and return connections on the fan convector.

### 3.7 INSTALLATION PROCEDURE: SOLO COMPACT AND SOLO COMPACTMAX MODELS

1. Carefully remove the Solo fan convector unit from the packaging.
2. Lay the unit on a flat surface (floor, table, etc.) with the front cover facing upwards.
3. Unscrew and remove the three fixing screws from along the lower edge of the front cover.
4. Lift the lower front edge of the front cover and then slide it forwards and off the unit.
5. Safely store the front cover for now where it will not be damaged or scratched for re-fitting after the Solo Compact or CompactMAX fan convector has been installed.
6. Position the unit against the wall so that the lower edge is approximately 75-100mm above the skirting level.
7. Use a spirit level on the top of the unit to ensure it is level and mark the position of the three fixing holes in the back plate onto the wall. Refer to Figure 2-5 Or 2-6 for the fixing hole positions.
8. Remove the unit from the wall and drill the three holes to take a suitable wall fixings (not supplied).
9. Securely fix the unit to the wall using three screws (not supplied).
10. Remove the rubber bungs from the flow and return connections on the fan convector and check that the bleed screws on the flow connection are both closed.

It is recommended that 15mm isolation valves (not supplied) are fitted to the flow and return connections before connecting the flow and return pipework.

These valves must be of the 'full bore' type to ensure no added restriction to the flow and return pipework.

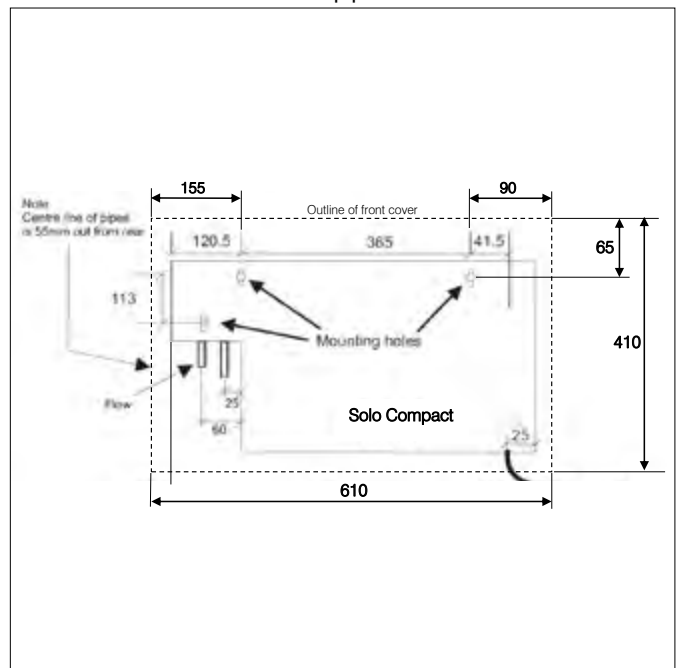
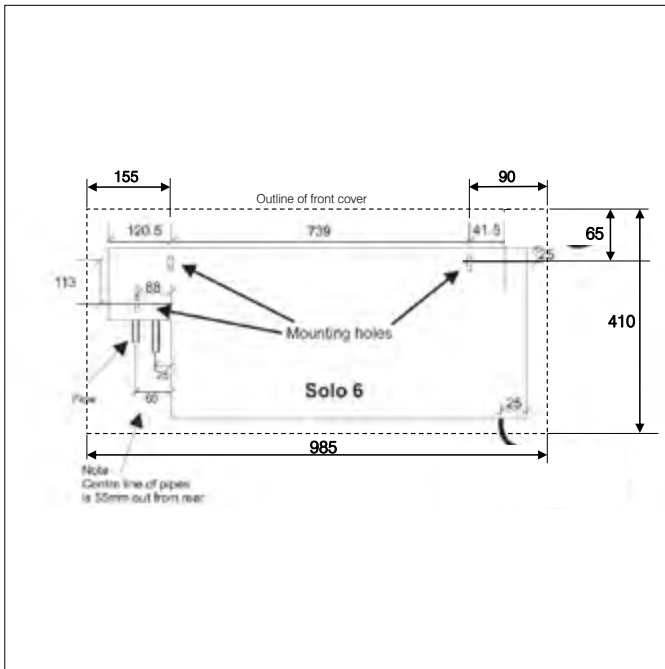


Figure 3-3: Solo Compact fixing holes (viewed from the front)





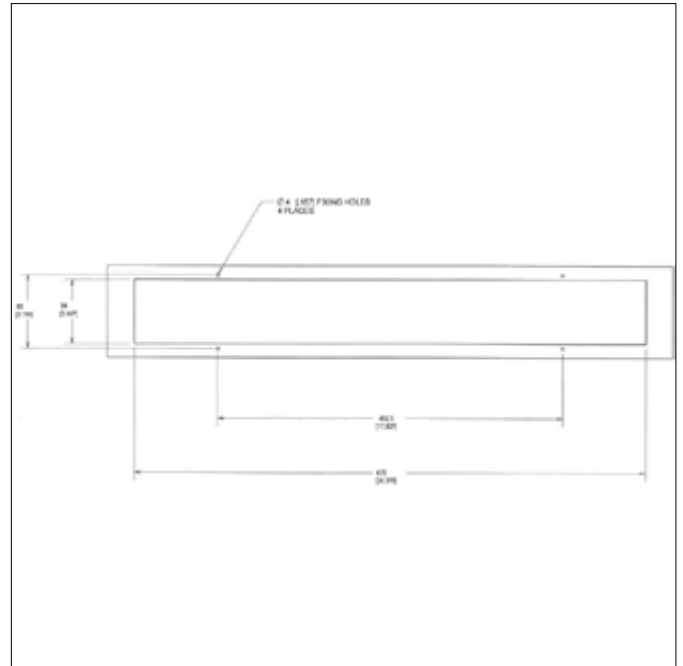
**Figure 3-4:** Solo CompactMAX fixing holes (viewed from the front)

11. Connect the heating system flow and return pipes to the corresponding flow and return connections on the Solo fan convector unit via the isolation valves.
12. Connect the electrical supply to the Solo fan convector unit. Refer to Section 4 (Electrical).
13. When all the Solo fan convectors have been connected to the system pipework, the system can be filled.
14. Once the system is filled, open the HIGHEST of the two bleed screws on the flow pipe to vent the fan convector heat exchanger. Repeat this with all other fan convectors on the system.
15. Refit the front cover and secure along the lower front edge using the three screws previously removed.
16. When all the installation of all the Solo fan convectors has been completed they can be commissioned. Refer to Section 5 (Commissioning).

### 3.8 INSTALLATION PROCEDURE: SOLO HIDEAWAY MODEL

Accurately mark and cut the opening required in the plinth or panel into which the Grant Solo Hideaway unit is to be fitted. The bottom edge of the opening **MUST** be at least 12mm above the finished floor level.

Refer to Figure 2-7 for the dimensions of the opening.



**Figure 3-5:** Solo Hideaway cut-out and fixings holes

**! NOTE !**

**If the height of the opening above floor level is greater than 12mm, it may be necessary to place packing under the two rubber feet at the rear of the fan convector to support the unit.**

Carefully remove the Solo Hideaway fan convector unit from the packaging and lay it on a flat surface.

Unscrew and remove the four fixing screws. Refer to Figure 2-8. Keep these screws in a safe place as they will be required later to re-fit the grille.



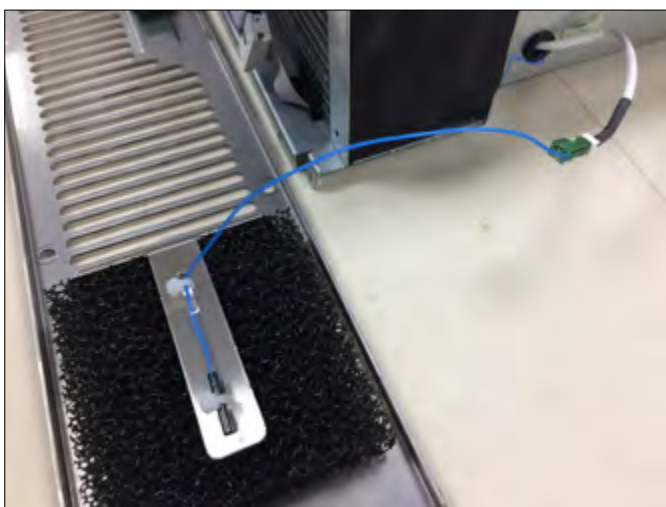
**Figure 3-6:** Solo Hideaway grille fixing screws

Carefully remove the grille and lay it flat in front of the unit. Disconnect the control panel ribbon connector from the plug. Refer to Figure 2-9.



**Figure 3-7:** Solo Hideaway control panel ribbon connector and plug

Disconnect the air temperature sensor lead at the small plug. Refer to Figure 2-10.



**Figure 3-8:** Solo Hideaway air temperature sensor and plug

Once disconnected, safely store the front grille for now where it will not be damaged or scratched for re-fitting after the Solo Hideaway fan convector has been installed.

Position the Solo Hideaway unit into the opening in the plinth/baseboard. Mark the centres of the four fixing holes. Refer to Figure 2-5.

Withdraw the Solo Hideaway unit from the plinth/baseboard and drill the four fixing holes to suit the fixing screws to be used (not supplied).

Remove the rubber bungs from the flow and return connections on the fan convector and check that the bleed screws on the flow connection are both closed.

It is recommended that 15mm isolation valves (not supplied) are fitted to the flow and return connections before connecting the flow and return pipework. These valves must be of the 'full bore' type to ensure no added restriction to the flow and return pipework.

Connect the heating system flow and return pipes to the corresponding flow and return connections on the Solo fan convector unit using the two flexible hoses (supplied). These are long enough to allow the fan convector to be completely removed from the plinth/baseboard when they are connected.

Connect the electrical supply to the Solo fan convector unit. Refer to Section 4 (Electrical).

## ! NOTE !

**Do NOT fit the Solo Hideaway unit into the opening until the system has been filled and the fan convector(s) vented.**

When all the Solo fan convectors have been connected to the system pipework, the system can be filled.

Once the system is filled, open the HIGHEST of the two bleed screws on the flow pipe to vent the fan convector heat exchanger. Repeat this with all other fan convectors on the system.

Set the mains ON/OFF switch, on the right-hand side of the unit, to ON.

Position the Solo Hideaway unit into the opening and carefully push fully into place.

## ! NOTE !

**Ensure that the space into which the Solo Hideaway is being fitted is clear of any debris, fluff, dust, etc.**

Whilst fitting the fan convector into the opening ensure that the flexible hoses are not kinked or twisted.

Secure the Solo Hideaway unit to the plinth/baseboard using four screws (not supplied) in the previously drilled holes.

Lay the grille face down in front of the Solo Hideaway unit. Reconnect the control panel ribbon connector and the air temperature sensor lead at the small plug.

Position the grille on the front of the Solo Hideaway unit and secure using the four fixing screws previously removed.

Carefully remove the protective covering from the grille.

When all the Solo fan convectors have been installed they can be commissioned. Refer to Section 5 - Commissioning.

## 4 ELECTRICAL

### 4.1 GENERAL

Grant Solo fan convectors require a ~230V 1ph 50Hz electrical supply protected by a 3 Amp fuse.

A fused double pole switch, with contact separation of at least 3mm in both poles, should be used for connection to the mains electrical supply, serving the boiler and heating system controls only.

For the Solo Compact and Solo CompactMAX this switch can be located on the wall next to the fan convector.

For the Solo Hideaway, this switch can be located in a convenient position for the user to access when necessary, e.g. on the wall above kitchen unit/worktop level or inside the kitchen unit.

For the UK, the electrical installation must be carried out by a competent installer in accordance with the requirements of the Electricity at work Regulations 1989 and BS7671:2018 – IET Wiring Regulations 18th Edition.

If installed in the Republic of Ireland, the wiring installation must comply with all ETCI rules. All the wiring and supplementary earth bonding external to the boiler must be in accordance with the above-mentioned wiring regulations.

Do NOT interrupt the electrical supply to the Grant Solo with any external controls.

### 4.2 ELECTRICAL CONNECTIONS

Connect the electrical supply to the fan convector as follows:

#### SOLO COMPACT AND SOLO COMPACTMAX

Remove the front cover from the fan convector (if not already removed).

To do this, unscrew and remove the three fixing screws from along the lower edge of the front cover.

Pull outwards the lower front edge of the front cover and then lift it off the unit.

The electrical supply terminal block is located at the lower right-hand side of the fan convector. Refer to Figure 4-1.

Pass the cable through the hole with grommet and the cable restraint – both located at the right-hand end of the fan convector. See Figure 4-1.

Connect the mains supply cable (from the fused double pole switch) to the terminal block as follows:

- Terminal L: Live – Brown wire
- Terminal N: Neutral – Blue wire
- Terminal PE: Earth – Green/yellow wire

Secure the cable in the cable restraint to prevent it being pulled out of the terminal block.

Replace the front cover on the fan convector and secure with the three screws along the lower edge.

Switch on the electrical supply to the fan convector at the fused double pole switch.

#### SOLO HIDEAWAY

The Solo Hideaway is supplied with a pre-wired 1mm<sup>2</sup> 3-core cable 1,300mm long for connection to the electrical supply.

This can be connected directly to a fused double pole switch located under the kitchen unit.

Alternatively, a 3-pin 13A plug (fitted with a 3A fuse) can be fitted to the cable for connection to a 3-pin socket under the kitchen unit and this socket is fed from a fused double pole switch located either within a kitchen unit or above the worktop level, as required.

Switch on the electrical supply to the fan convector at the fused double pole switch.

## 5 COMMISSIONING

Ensure that the system is filled and vented and that each Solo fan convector has also been vented. Refer to either Section 3.6 or 3.7 as required.

Switch on the mains electrical supply to the fan convector at the fused isolator.

Switch the mains ON/OFF switch to ON.

On the Solo Compact and CompactMAX models, the mains switch is located under the right-hand end of the front casing. Refer to Figure 8-1.

On the Solo Hideaway model, the mains switch is located on the right-hand side of the unit and should have been set to the ON position before being finally fitted in to the plinth/baseboard. Refer to Figure 8-2.

Switch the boiler or heat pump on and set the heating system controls to call for heat.

Operate the heating system to raise the flow temperature

### REFERRING TO SECTION 8 – OPERATING INSTRUCTIONS

Check the operation of the Solo fan convector(s) as follows:

Press and hold the ON/OFF button on the Solo fan convector control panel to switch the unit on.

The Alarm/Boost light will flash until the water flow temperature reaches 29°C.

When the flow temperature reaches at 29°C the Alarm/Boost light will stop flashing and one of the temperature Indicator lights will be lit – either flashing or constant.

Using the ON/OFF button, set the air temperature to each one of the four settings in turn to check their operation and then finally set the air temperature to the required setting.

### ! NOTE !

**It is NOT possible to adjust the temperature setting if the water flow temperature is at less than 29°C.**

Press the Boost/Cool button to check the boost function operation. Press the Boost/Cool button again to switch the boost function off. Set the heating system controls to the user's requirements.

# 6 FAULT FINDING

## 6.1 INITIAL CHECKS

If your Grant Solo fan convector appears not to be operating correctly, please first carry out the following simple checks before seeking further assistance.

Symptoms	Check	Actions
No heat output from fan convector	Are there any lights on the control panel?	<ul style="list-style-type: none"> <li>▶ If NO: Check mains ON/OFF switch is set to ON Check power supply to unit is switched ON at fused isolator switch Check fuse in power supply fused isolator</li> </ul>
	Is the Alarm/Boost light flashing? (refer to Section 8.2)	<ul style="list-style-type: none"> <li>▶ If YES: Heating system water temperature is less than 29°C (refer to Section 8.2).</li> </ul>
	Is the boiler or heat pump operating?	<ul style="list-style-type: none"> <li>▶ If NO: Check the boiler/heat pump controls are correctly set for it to operate If the boiler/heat pump is faulty, contact your installer/service engineer If YES: Wait for the system water temperature to reach at least 29°C.</li> </ul>
	Is the heating system circulating pump operating?	<ul style="list-style-type: none"> <li>▶ Check and contact your installer to investigate if there is a problem</li> </ul>
Low room temperature	Is the required air temperature correctly set on the control panel? (refer to Section 8.2)	<ul style="list-style-type: none"> <li>▶ Set required air temperature using the ON/OFF button on the control panel.</li> </ul>
	Is the required temperature setting indicator light flashing? (refer to Section 8.2)	<ul style="list-style-type: none"> <li>▶ Set point temperature has not yet been reached. Wait until indicator light stops flashing</li> </ul>
Low heat output from fan convector	Is the water flow through the fan convector too low?	<ul style="list-style-type: none"> <li>▶ Check for low water flow A simple test for low flow is if there is a noticeable temperature difference to the touch between the flow and return pipes when the unit is operating</li> </ul>
	Are the isolating valves on the flow and return connections open?	<ul style="list-style-type: none"> <li>▶ Check and open valves if necessary</li> </ul>
	Are the flow and return connections reversed?	<ul style="list-style-type: none"> <li>▶ Check - the flow and return connections are indicated on the fan connector. The flow pipe should be hotter to the touch than the return pipe when the unit is operating</li> </ul>
	Has the fan convector been completely bled of air?	<ul style="list-style-type: none"> <li>▶ Check by bleeding any remaining air - as described in either Sections 3.7 or 3.8, as appropriate for the model of fan convector.</li> </ul>
	Are the flexible hoses twisted or kinked (Solo Hideaway model only)?	<ul style="list-style-type: none"> <li>▶ Remove unit from plinth and check. Rectify as necessary. (Refer to Section 3.7)</li> </ul>

## 6.2 FAULT DIAGNOSIS FLOW CHART

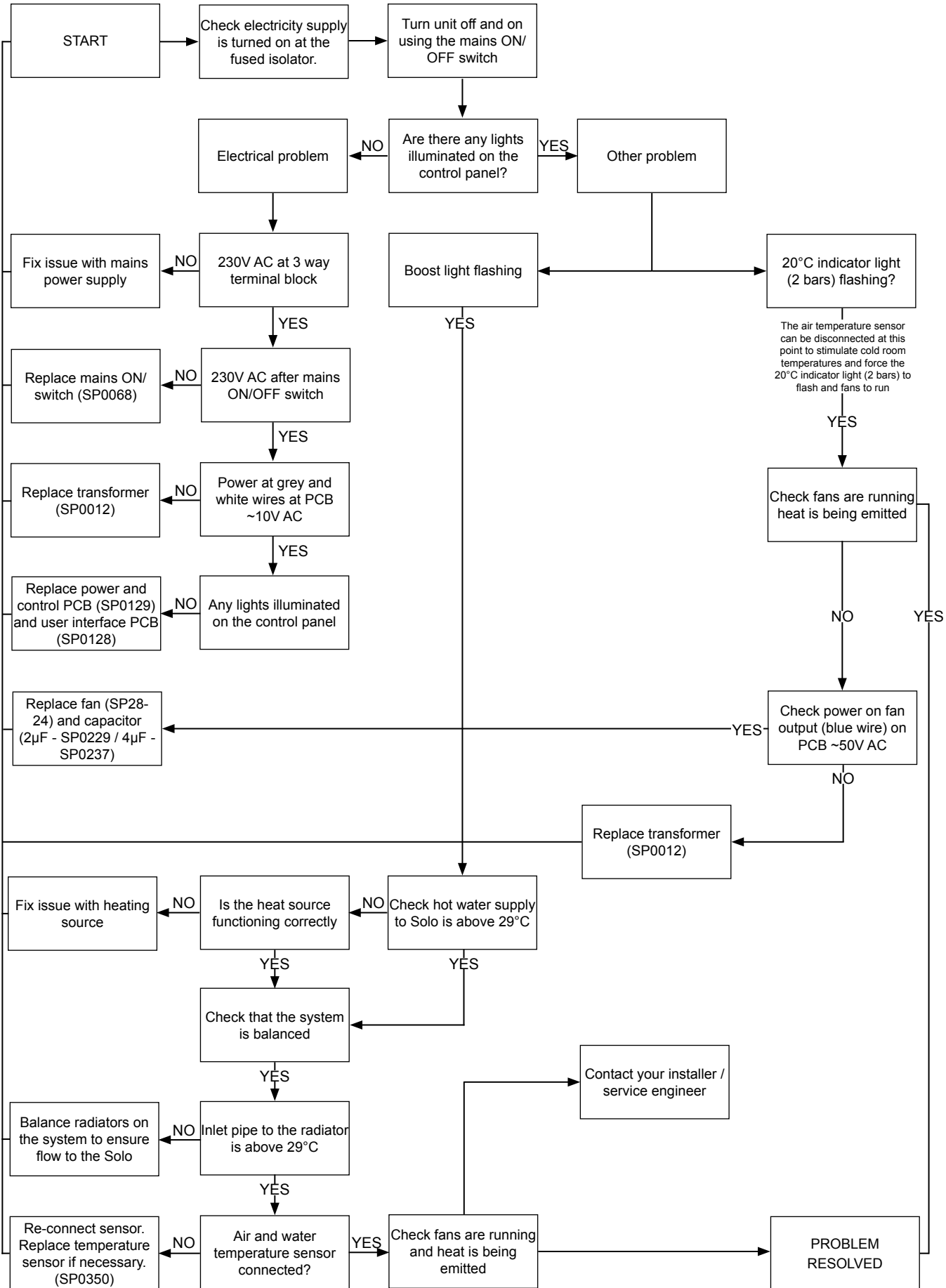
The following flowchart can be used to determine and rectify a fault in the operation of a Grant Solo fan convector.

Please first carry out the simple checks, as detailed in Section 6.1, before using the flow chart below.

! WARNING !

**Exposure to live electrical connections.**

**The following fault-finding procedures should only be conducted by a suitably qualified competent person using the correct test equipment.**



# 7 SPARE PARTS

## 7.1 FAN CONVECTOR PARTS LIST

**Table 7-1:** Fan convector parts list

Description	Grant UK product code	Solo Compact	Solo CompactMAX	Solo Hideaway
User interface PCB	SP0128	•	•	•
Power and control PCB	SP0129	•	•	•
Plug-in microprocessor board	SP0133	•	•	•
Mains ON/OFF switch	SP0068	•	•	•
Fan	SP28-24	•	•	•
Transformer	SP0012	•	•	•
Temperature sensor	SP0350	•	•	•
Capacitor 2 $\mu$ F	SP0229	•		•
Capacitor 4 $\mu$ F	SP0237		•	
Flexible hose - 900 mm	SP-MB90			•

# 8 OPERATING INSTRUCTIONS

## 8.1 MAINS ON/OFF SWITCH

Grant Solo units have a factory-fitted double pole mains ON/OFF switch.

### SOLO COMPACT AND COMPACTMAX MODELS:

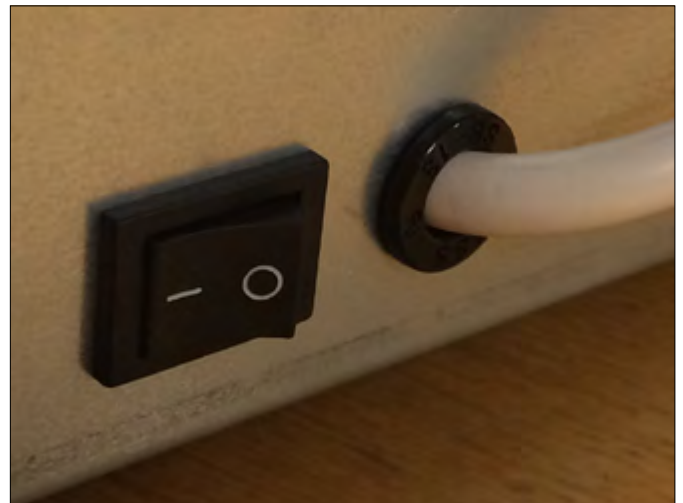
This switch is located under the right-hand end of the front casing. Refer to Figure 10-1.



**Figure 8-1:** Solo Compact and CompactMAX mains ON/OFF switch (underside of unit)

### SOLO HIDEAWAY MODEL:

This switch is located on the right-hand side of the unit. It should have been set to the ON position before being finally fitted in to the plinth/baseboard.



**Figure 8-2:** Solo Hideaway mains ON/OFF switch (right-hand side of unit)

For the unit to operate, ensure that this switch is set to ON and the power supply to the Solo fan convector is on, i.e. the switch on the fused spur serving the unit is set to ON.

## 8.2 CONTROL PANEL

Grant Solo fan convectors are supplied with a simple control panel. Refer to Figure 1-3.

This allows each Solo unit to be individually set to suit the room or area in which it is installed.

The functions of the buttons and indicator lights are as follows:

### ON/OFF BUTTON

When the ON/OFF button is pressed for at least 1 second it will start the operation of the Grant Solo unit – provided that the water flow temperature is at least 29°C AND the room air temperature is low enough (i.e. below the air temperature setting of the Solo unit). See section on 'Temperature indicator lights' below.

To stop the unit operating, press the ON/OFF button for at least 1 second.

### TEMPERATURE INDICATOR LIGHTS

There are four temperature indicator lights that display the air temperature setting of the Solo unit, and whether that temperature setting has been achieved or not.

These indicate increasing temperature settings from the lowest on the left to the highest on the right, as follows:

- 18°C – indicator light with single bar
- 20°C – indicator light with two bars
- 22°C – indicator light with three bars
- 24°C – indicator light with four bars

### TO SET THE REQUIRED AIR TEMPERATURE

Press the ON/OFF button momentarily – the lowest (single bar) indicator light will flash slowly indicating that the air temperature setting is 18°C.

### TO INCREASE THE SETTING

Press the ON/OFF button again momentarily – the next (two bars) indicator light will now flash slowly indicating that the air temperature setting is now 20°C.

Press the ON/OFF button again momentarily to increase the setting further (if required) – the next (three bars) indicator light will now flash slowly indicating that the air temperature setting is now 22°C.

Press the ON/OFF button again momentarily (if required) and the right hand (four bars) indicator light will now flash slowly indicating that the air temperature setting is now at the maximum (24°C).

Pressing the ON/OFF button again momentarily will return the air temperature setting to the minimum (18°C) and the left hand (single bar) indicator light will now flash slowly.

The selected indicator light will continue to flash slowly whilst the temperature is being raised. When the air temperature reaches the setpoint, the indicator light will stop flashing and become continuous. The Grant Solo unit will then stop heating until needed again.

## ! NOTE !

**It is NOT possible to adjust the temperature setting if the water flow temperature is at less than 29°C.**

### ALARM LIGHT

The Alarm light will flash if the water flow temperature is less than 29°C.

### BOOST/COOL BUTTON

Press this button momentarily whilst the Solo unit is operating and the normal Solo temperature control will be overridden for a period of 20 minutes to provide a higher output than available in normal operation.

The temperature indicator light will go off and the Alarm/Boost light will come on to indicate the Solo unit is operating in the Boost mode.

#### To stop the Boost function

Press the Boost button momentarily at any time during the 20 minute boost period.

After 20 minutes have elapsed, the Solo unit will automatically revert to the normal temperature control. The Alarm/Boost light will go off and the temperature indicator light will revert to the original setting.

Momentarily pressing the Boost button again will re-start the boost function for another 20 minutes.

### SUMMER COOLING FUNCTION

In the summer Solo fan convectors can be used to provide air movement to give passive cooling.

To use this function, press BOTH the ON/OFF and Boost buttons at the same time for more than 1 second.

The water temperature control will be ignored and the fan will run at the highest (boost) level for maximum air flow until the Solo unit is switched off. The Alarm/Boost light will come on in this mode.

To switch off the summer cooling function, press BOTH the ON/OFF and Boost buttons at the same time for more than 1 second.

## ! NOTE !

**The Summer cooling function will NOT automatically switch off after a fixed period (as with the Boost function) but will remain on until BOTH the ON/OFF and Boost buttons are pressed at the same time.**

### SPECIAL FUNCTION LIGHT

This light is not used and will not be lit during the operation of the fan convector. This does NOT indicate a fault with the fan convector.

## 9 CLEANING

Whilst it is not necessary for the Grant Solo fan convectors to be regularly serviced, a limited amount of cleaning is required from time to time.

Only use a moist cloth to clean the outer surfaces of the Solo fan convectors. Do NOT use any abrasive cleaners, cleaning liquids or aerosols.

The warm air outlet grille on the top of the Solo Compact and Solo CompactMAX and the front grille of the Solo Hideaway can be vacuumed clean.

The air inlet filters on the Solo Hideaway (located either side of the warm air outlet grille) are not removeable or replaceable. They can be vacuum clean from the front.

# 10 DECLARATION OF CONFORMITY

## EC DECLARATION OF CONFORMITY

We: Grant Engineering (UK) Limited  
Hopton House  
Hopton Industrial Estate  
Devizes  
SN10 2EU

Declare that:

**Equipment:** Solo Fan Convactor Radiators  
**Model name/number:** Solo Compact, Solo CompactMAX and Solo Hideaway

In accordance with the following Directives:

**Low Voltage Directive:** 2014/35/EU

**EMC Directive:** 2014/30/EU

**Radiator and Convactor Standards:**

EN 442-2 1997

EN 16430-2 2014

**EMC Standards:**

EN 55014-1 2002

EN 55014-2 2003

EN 61000-3-2 2006

EN 61000-3-3 1995, +A1:2001, +A2:2001

EN 61000-4-2 2009

EN 61000-4-3 2006, +A1:2007, +A2:2010

EN 61000-4-4 2004, +A1:2010

EN 61000-4-5 2006

EN 61000-4-6 2009

EN 61000-4-11 2004

EN 62233 2008

I hereby declare that the equipment named above has been tested and found to comply with the relevant sections of the above referenced specifications. The unit complies with all essential requirements of the Directives.

Responsible Person: Neil Sawers  
Position: Technical Manager  
Signature:



Date: 5th October 2018

# 11 HEALTH AND SAFETY INFORMATION

Under the Consumer Protection Act 1987 and Section 6 of the Health and Safety at Work Act 1974, we are required to provide information on substances hazardous to health (COSHH Regulations 1988).

Adhesives, sealants and paints used in the manufacture of the product are cured and present no known hazards when used in the manner for which they are intended.

**! WARNING !**

**Isolate the fan convactor from the electrical supply before removing any covers.**



## 12 END OF LIFE INFORMATION

### GENERAL

Grant Solo fan convectors incorporate components manufactured from a variety of different materials.

The majority of these materials can be recycled whilst the smaller remainder cannot.

Materials that cannot be recycled must be disposed of according to local regulations using appropriate waste collection and/or disposal services.

### DISASSEMBLY

There is little risk to those involved in the disassembly of this product. Please refer to and follow the Health and Safety Information given in these instructions.

For guidance on the disassembly of the fan convector refer to the information given in the Servicing section of these instructions.

### RECYCLING

Many of the materials used in Grant fan convectors can be recycled, these are listed in the table below:

<b>COMPONENT</b>	<b>MATERIAL</b>
Chassis and casing	Mild steel (galvanised)
Heat exchanger	Copper tubes, Aluminium fins
Front casing panel (wall hung units)	Polycarbonate
Connection pipework	Copper
Foam insulation	Semi closed cell polyester
Electrical wiring	Copper/plastic
Printed Circuit boards	Copper/plastic
Transformer	
Fans	WEEE electrical recycling (Disassemble)

### DISPOSAL

All materials other than those listed above must be disposed of responsibly as general waste.



Neil Sawers  
Technical Manager

## 13 GUARANTEE

You are now the proud owner of a Grant Solo fan convector from Grant Engineering (UK) Limited which has been designed to give years of reliable, trouble free operation.

Grant Engineering (UK) Limited guarantees the manufacture of the fan convector including all electrical and mechanical components for a period of **twelve months from the date of installation<sup>4</sup>**, provided that the fan convector has been installed and operated in full accordance with the installation and user instructions issued.

This will be extended to a total period of **five years** if the fan convector is registered with Grant Engineering (UK) Limited **within thirty days of installation**. See main Terms and Conditions below.

### Registering the product with Grant Engineering (UK) Limited

Please register your Grant Solo fan convector with Grant Engineering UK Limited **within thirty days of installation**. To do so visit [www.grantuk.com](http://www.grantuk.com) and follow the links to the 'Register a Product', where you can register your fan convector for a further **four years** guarantee (giving **five years** from the date of installation<sup>4</sup>). This does not affect your statutory rights<sup>1</sup>.

### If a fault or defect occurs within the manufacturer's guarantee period

If your fan convector should fail within the guarantee period, you must contact Grant Engineering (UK) Limited who will arrange for the repair under the terms of the guarantee, providing that the fan convector has been correctly installed and commissioned by a competent person and the fault is not due to tampering, debris, system water contamination, misuse, trapped air or the failure of any external components not supplied by Grant Engineering (UK) Limited, e.g. motorised valves, etc.

**This five-year guarantee only applies if the fan convector is registered with Grant Engineering (UK) Limited within thirty days of installation<sup>4</sup> and is installed and operated in full accordance with the installation and user instructions.**

### In the first instance

Contact your installer to ensure that the fault does not lie with the system components or any incorrect setting of the fan convector or system controls that falls outside of the manufacturer's guarantee otherwise a service charge could result. Grant Engineering (UK) Limited will not be liable for any charges arising from this process.

### If a fault covered by the manufacturer's guarantee is found

Ask your installer to contact Grant Engineering (UK) Limited Service Department on +44 (0)1380 736920 who will arrange for a competent service engineer to rectify the fault.

### Remember - before you contact Grant Engineering (UK) Limited

- Ensure the fan convector has been installed and commissioned by a competent person in accordance with the installation and user instructions.
- Ensure there is an electrical supply to the fan convector.
- Ensure the problem is not being caused by the heating system or its controls.

### Free of charge repairs

During the **five year** guarantee period no charge for parts or labour will be made provided that the fan convector has been installed and commissioned correctly in accordance with the manufacturer's installation and user instructions and it was registered with Grant Engineering (UK) Limited within thirty days of installation<sup>3</sup>.

Proof of purchase must be made available to Grant Engineering (UK) Limited on request.

### Chargeable repairs

A charge may be made (if necessary following testing of parts) if the breakdown is due to any fault(s) caused by the plumbing or heating system, e.g. contamination of parts due to system contamination, sludge, scale, debris or trapped air. Refer to 'Extent of manufacturer's guarantee'.

### Extent of manufacturer's guarantee

The manufacturer's guarantee does NOT cover the following:

- If the fan convector has been installed for over **five years**.
- If the fan convector has not been installed and commissioned by a competent person in accordance with the installation and user instructions.
- Instances where the serial number has been removed or made illegible.
- Fault(s) due to accidental damage, tampering, unauthorised adjustment, neglect, misuse or operating the fan convector contrary to the manufacturer's installation and user instructions.
- Damage due to external causes such as bad weather conditions (flood, storms, lightning, frost, snow, or ice), fire, explosion, accident or theft.
- Fault(s) due to incorrectly sized expansion vessel(s), incorrect vessel charge pressure or inadequate expansion on the system.
- Fault(s) caused by external electrics and external components not supplied by Grant Engineering (UK) Limited.
- Heating system servicing, de-scaling or flushing.
- Checking and replenishing system pressure.
- Electrical cables and plugs, external controls not supplied by Grant Engineering (UK) Limited.
- Heating system components, such as radiators, pipes, fittings, pumps and valves not supplied by Grant Engineering (UK) Limited.
- Use of spare parts not authorised by Grant Engineering (UK) Limited.

### Terms of manufacturer's guarantee

- The Company shall mean Grant Engineering (UK) Limited.
- The fan convector must be installed by a competent person and in full accordance with the relevant Codes of Practice, Regulations and Legislation in force at the time of installation.
- The fan convector is guaranteed for **five years** from the date of installation<sup>4</sup>, providing that the fan convector was registered with the Company within thirty days of installation. Any work undertaken must be authorised by the Company and carried out by a competent service engineer.
- The fan convector is operated correctly, in accordance with the Installation and user instructions.
- Grant Engineering (UK) Limited **strongly recommends** that a Grant Mag-One in-line magnetic filter/s (or equivalent<sup>5</sup>) is fitted in the heating system pipework. This should be installed and regularly serviced in accordance with the filter manufacturer's instructions. We reserve the right to ask for proof of installation – failure to provide this may result in the guarantee becoming invalid.
- Proof is provided that the system has been flushed or chemically cleaned where appropriate (refer to BS 7593) and that the required quantity of a suitable corrosion inhibitor added.
- Proof of annual heating system servicing (including the checking of any expansion vessels and pressure relief valves) must be provided if and when requested by the Company.
- This guarantee does not cover breakdowns caused by incorrect installation, neglect, misuse, accident or failure to operate the fan convector in accordance with the manufacturer's installation and servicing instructions.
- The fan convector is registered with the Company within thirty days of installation. Failure to do so does not affect your statutory rights<sup>1</sup>.
- The balance of the guarantee is transferable. Grant Engineering (UK) Limited must be informed of the new owner's details.
- The Company will endeavour to provide prompt service in the unlikely event of a problem occurring but cannot be held responsible for any consequential losses.
- This guarantee applies to Grant Engineering (UK) Limited fan convectors purchased and installed on the UK mainland, Isle of Wight, Channel Islands and Scottish Isles only<sup>2</sup>. Provision of in-guarantee cover elsewhere in the UK is subject to agreement with the Company.
- All claims under this guarantee must be made to the Company prior to any work being undertaken. Invoices for call out/repair work by any third party will not be accepted unless previously authorised by the Company.
- Proof of purchase and date of installation, commissioning and service documents must be provided on request.
- If a replacement fan convector is supplied under the guarantee (due to a manufacturing fault) the product guarantee continues from the installation date of the original fan convector and not from the installation date of the replacement.
- Breakdown/failure due to system water contamination will not be covered by this guarantee.
- The replacement of a fan convector under this guarantee does not include any consequential costs, such as the removal or replacement of kitchen units, etc.
- The fan convector must not be sited in a location where it may be subjected to frost.

### Foot notes

1. Your statutory rights entitle you to a one-year guarantee period only.
2. The UK mainland consists of England, Scotland and Wales only. Please note that for the purposes of this definition, Northern Ireland is not considered part of the UK mainland.
3. We recommend that your heating system is serviced every twelve months (even when the guarantee has expired) to prolong the lifespan and ensure it is operating safely and efficiently.
4. The guarantee period will commence from the date of installation, unless the installation date is more than six months from the date of purchase, in which case the guarantee period will commence six months from the date of purchase.
5. As measured by gauss. The MagOne magnetic filter has a gauss measurement of 12,000.



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