



Part No. DOC19 REV03 January 2009

## USER INSTRUCTIONS

### General notes on using the programmer

The programmer automatically controls the times at which your boiler operates to provide heating and hot water. It also provides a permanent display of the time of day (24 hr or am/pm display) and day of the week. Indicators on the display show when both the hot water (indicated by a tap symbol) and heating (indicated by a radiator symbol) is either ON or OFF.

If the electricity supply to the boiler is interrupted, e.g. during a power cut, the display will remain and the programmer will retain the time and on/off program settings. It will not have to be reset when the supply is restored.

The programmer is supplied with three pre-set program options each giving different On/Off settings. Refer to page 3 – **To select and use a pre-set program**. Please note that these pre-set programs will switch **both** heating and hot water ON and OFF at the **same** times.

Alternatively, you can set your own program of On/Off settings, with different ON and OFF times for heating and Hot water as you require. Different On/Off settings for different days of the week can also be set. You can set up to 10 ON and 10 OFF commands throughout the week. Refer to page 5 – **Setting your own program**. Once set this program can be changed at any time as required.

When setting the times for the ON periods it is useful to remember that it might take up to an

hour for the house to become warm, especially in colder weather. Also the effect of the central heating will remain for a time when the central heating is turned off.

A hot water cylinder may take ½ hour or more to heat up fully. A well insulated cylinder will retain its heat for quite some time after the boiler is turned off.

When setting the time for the start of the first ON period it must be after midnight. The time for the end of the last ON period can be after midnight. Refer page 6 - for the '**Shift**' function section.

While setting any times, if a period of more than 1 minute elapses since the last key was pressed, the programmer automatically reverts back to the original program. Any changes made up to that point will be lost as they were not confirmed.

To temporarily override the current switching time, i.e. change OFF to ON or ON to OFF, use the '+' and '-' keys on the programmer. Pressing the '+' key will advance the heating to the next program operation and the '-' key will do the same for the hot water. The programmer will automatically return to the normal program at the start of the next program operation. Refer to page 6 - for '**To override automatic operation**' section.

For Summer use the central heating can be set to OFF by turning the room thermostat down to minimum setting.



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# EPKIT Fitting and User Instructions for Electronic Programmer

Suitable for  
Vortex Pro Kitchen/Utility and  
Vortex Pro Internal Combi e models

## IMPORTANT

These fitting Instructions must be read in conjunction with the wiring diagrams given in the Installation manual supplied with the boiler

## FITTING INSTRUCTIONS

### 1. Kit contents

The Electronic Programmer Kit (Ref. EPKIT) for Grant Vortex Pro Kitchen/Utility and Vortex Pro Internal Combi e boilers contains the following items:

1 x Grasslin 'Tactic' 7-day two channel electronic programmer

1 x Wiring harness – 5 x 400mm wires (Red, Yellow, Orange, Brown and Blue)

1 x Fitting and User instructions

### 2. Electrical connections

The wiring harness must be connected to the electronic programmer as follows:

**Blue wire:** To **Mains Neutral** terminal 2 on the programmer

**Brown wire:** To **Mains Line** terminal 1 on the programmer

**Orange wire:** To **Hot water On** terminal 3 on the programmer

**Yellow wire:** To **Hot water Off** terminal 4 on the programmer (see Section 4)

**Red wire:** To **Heating On** terminal 5 on the programmer

### 3. Fitting the programmer

**Important:** Ensure the electrical supply to the boiler has been isolated before fitting the programmer

#### Vortex Pro Kitchen/Utility – System & Non-system Models

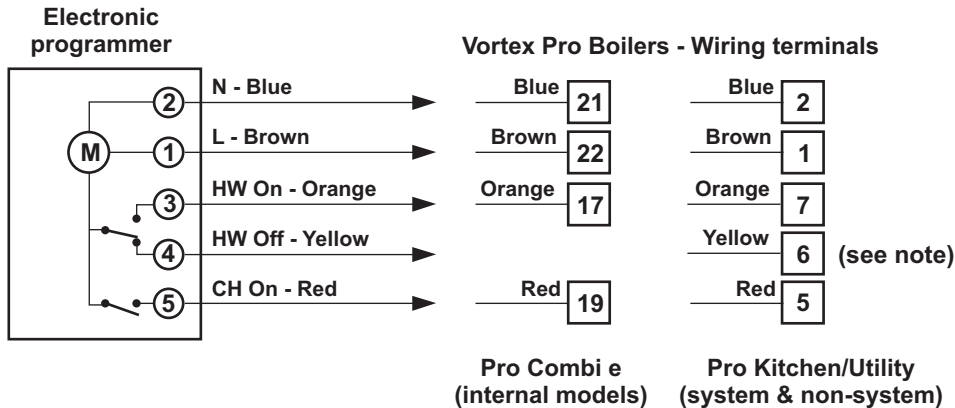
- Remove front and top boiler casing panels. Remove the four screws and lift off top cover from control panel.
- Remove Brown wire link from terminals 1 & 4 on the boiler terminal block.
- Carefully push through the square pre-cut 'knockout' section on the control panel front.
- Connect **five** wires provided to the terminals of the electronic programmer – refer to Section 2 above.
- Feed the wires through hole in control panel front and then up and to the left of the terminal block platform. Connect wires to terminals on control panel – refer to connection diagram in Section 4.
- Locate the electronic programmer in the square hole in control panel front – with the terminals pointing to the **right**. Secure by turning the two screws (in upper right and lower left corners) a quarter turn clockwise.
- Re-fit top cover to control panel and fasten with the four screws.

## Vortex Pro Combi – Internal Models

- Remove front and top boiler casing panels. Loosen (do not remove) the four screws securing control panel to the side panels. Hinge the panel forward to access top and rear of control panel.
  - Remove the two screws and lift off the terminal block cover from top of control panel.
  - Remove both the Red and Black wire links from terminals 17 & 18 and 19 & 20 on control panel.
  - Carefully push through and remove square pre-cut 'knockout' section in the control panel front.
  - Connect **four** wires provided to terminals of the electronic programmer – refer to Section 2 above.
  - Feed the wires through hole in control panel front and then up through rectangular opening in control panel top. Connect wires to terminals on control panel – refer to Connection diagram.
  - Locate the electronic programmer in the square hole in control panel front – with the terminals pointing to the **right**. Secure by turning the two screws (in upper right and lower left corners) a quarter turn clockwise.
  - Re-fit terminal block cover on control box and fasten with the two screws.
- Refer to the instructions on the following pages for operating and setting the programmer.
- IMPORTANT: After fitting the programmer leave these instructions with the User.**

Note that the **Yellow** wire supplied in the kit **must not be used**.

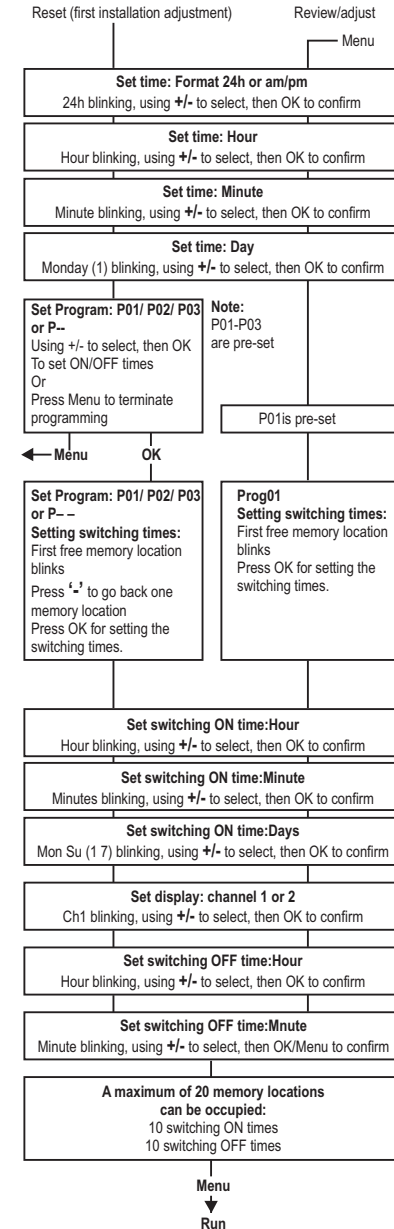
### 4. Connection diagram



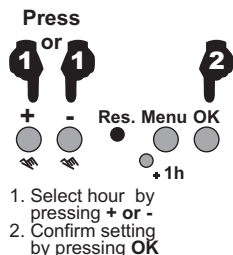
**NOTE:** When using the EP kit with an 'S-plan' type control system (using 2 x 2 - port zone valves) the YELLOW wire is not required and should not be used.

**IMPORTANT -** For Vortex Pro Combi e boilers the **YELLOW** wire must not be used.

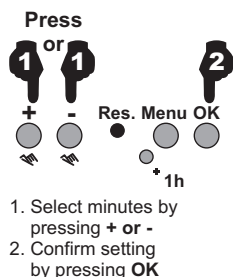
## Programming sequence diagram



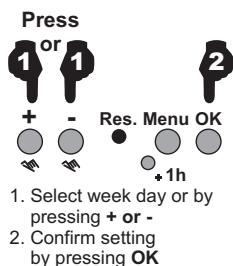
### 1.3 Set hour



### 1.4 Set minutes



### 1.5 Set week day



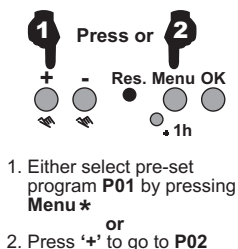
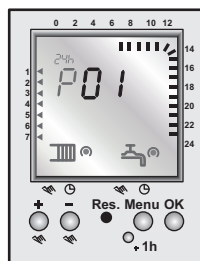
- 1 = Monday
- 2 = Tuesday
- 3 = Wednesday
- 4 = Thursday
- 5 = Friday
- 6 = Saturday
- 7 = Sunday

### 1.6 Select one of the pre-set programs

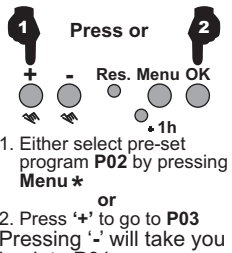
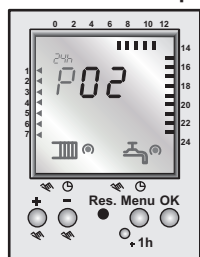
Use the following sequence after setting the time, week day etc.

\* If you wish to modify a pre-set program do NOT press Menu after selecting the program – but go to 1.7 To modify pre-set programs next.

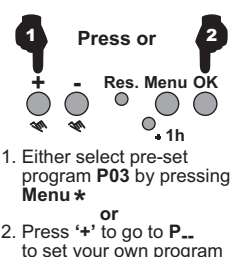
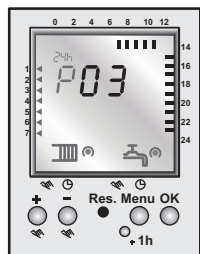
### 1.6a Select P01 preset program



### 1.6b Select P02 preset program



### 1.6c Select P03 preset program



### 1.7 To modify preset programs

First press OK. Then, using the OK key you can now run through the pre-set program and modify any of the ON/OFF settings.

Either: Use '+' or '-' keys to modify setting, then press OK to confirm new setting.  
Or: Accept pre-set setting by pressing OK to move on to next setting.  
Press Menu when you have completed your changes to the pre-set program.

e.g. after selecting P02 you should also program: Sa-Su 22.30 ON (prog 05) 23.00 OFF (prog 06)  
**Note:** Pressing Menu terminates programming

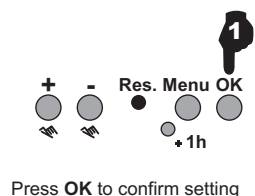
### 2. To set individual program P...

Under the Menu option P... you have the option of creating your own user defined program. This program can be changed at any time. There are up to 20 memory locations available for 10 OFF 10 ON commands throughout the week. You can allocate a corresponding week day or week block to each memory location.

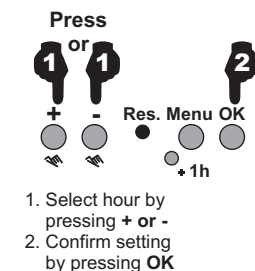
#### Setting your own program

Follow this sequence after setting the time, week day, etc. as shown in steps 1.1 to 1.5 then press '+' three times until 'P...' shows on the display. Then press OK.

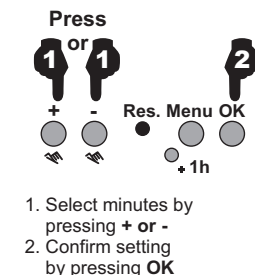
#### 2.1 Select first program ON time (prog 01)



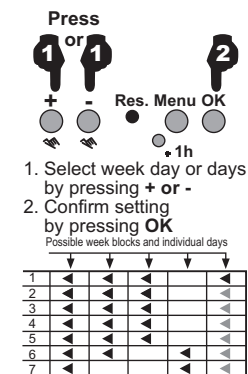
#### 2.2 Set hour ON



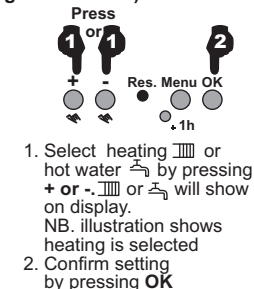
#### 2.3 Set minutes ON



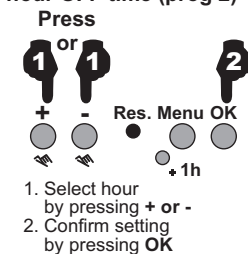
### 2.4 Set week day ON



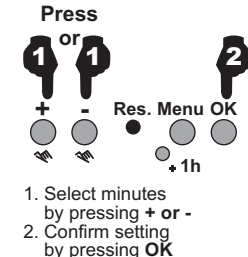
#### 2.5 Set channel (heating or hot water)



#### 2.6 Set first program hour OFF time (prog 2)



#### 2.7 Set minutes OFF



## 2.8 Set week day OFF



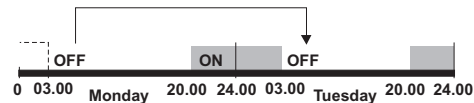
- Press **1** or **2**
- Select week day by pressing **+ or -**
  - Confirm setting by pressing **OK** and go to Prog 03 or press Menu to end program

Should the **OFF** setting be the same day as the **ON** setting then press **Menu** to quit the programming mode, or select **OK** to go to a new program **ON** setting.

Repeat this process to set second program **ON** time (prog 03) and second program **OFF** time (prog 04) and so on.

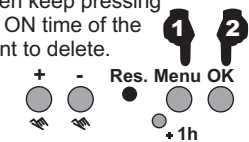
**Shift:** Should the **OFF** setting be in the day following the **ON** setting press **+** key. Then press **Menu** or **OK**.

e.g.  
**Mo-Fr** 20.00pm - 03.00am ON → **Mo-Fr** 20.00pm - 03.00am ON  
**Tu - Sat** 03.00am - 20.00pm OFF → **Tu - Sat** 03.00am - 20.00pm OFF



## 3. To delete a program

- 3.1** Press **Menu**. Then keep pressing **OK** key until the ON time of the program you want to delete.



## 3.2



- Press **2** or **1**
- Press **OK**. The hours flash
  - Press **+** or **-** until **--** appears

## 3.3



- Press **2** or **1**
- Press **OK** to confirm
  - Press **Menu** to quit the programming mode

**Note:** Program settings are deleted in ON-OFF pairs. If you delete a single **ON** setting, the corresponding **OFF** setting is also deleted.

## 4. To change from Summer to Winter time

To quickly alter the time setting of the programmer when changing from Summer to Winter time, or back.



- Press **+** or **-**
- The **+1h** key is for the changeover from summer to winter time.

By pressing the **+1h** key 1 hour is added to the current time.

**+1h** is shown on the display.

By pressing **+1h** again 1 hour is subtracted from the current time.

## 5. To override automatic operation

If you want to override the automatic operation of the programmer and set either the Heating or Hot water channel to ON or OFF, use the **+** or **-** keys as follows:



- Pressing the **+** key overrides the **Heating** control - either switching it ON or OFF.



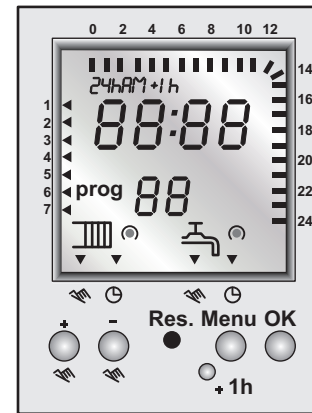
Pressing the **-** key overrides the **Hot Water** control - either switching it ON or OFF.

NB. The programmer will automatically return to the set program at the next ON/OFF switching operation.

Automatic or manual operation of both Heating and Hot water is indicated at the lower part of the display.

## USER INSTRUCTIONS

### PROGRAMMER DISPLAY AND KEYS



|  |                                     |  |                                       |
|--|-------------------------------------|--|---------------------------------------|
|  | Overview of daily switching program |  | Switching status display ON           |
|  | Setting of 24h or am/pm             |  | Switching status display OFF          |
|  | Summer/winter clock changes         |  | Manual operation/ fixed ON/ fixed OFF |
|  | Heating                             |  | Automatic operation                   |
|  | Hot water                           |  | Weekday display                       |

**+/-** : Adjustment keys: By pressing the key longer than 2 sec you can adjust the timer in steps of 5 units

**Res:** Reset - press using a ballpoint pen or paperclip until it 'clicks'

**Menu:** By pressing the menu key programming is terminated and the system reverts to automatic operation

**OK:** Confirmation of programming

### Note

By pressing the **Menu** key you can adjust/review the values for:

- 24h or AM/PM
- Time (hours/minutes)
- Day of the week
- Pre-set programs P01 to P03

## SETTING THE PROGRAMMER

**Note:** The boiler ON/OFF switch must be set to **ON** before setting the programmer.

The method of setting the programmer depends on whether you wish to use the pre-set ON/OFF programs or set your own operating program as follows:

### 1. To select and use a pre-set program

Three different programs (P01, P02 & P03) are pre-set to switch **both** the Heating and Hot water ON and OFF at the same times.

These will switch the Heating and Hot water ON and OFF at the times shown on the diagrams below e.g. P01 switches ON at 06.00 and OFF at 22.00 where P02 switches ON at 07.00 OFF at 12.00 ON again at 14.00 and OFF at 20.00.

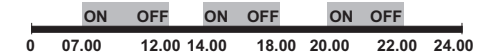
#### P01: Mo-Su. 1xON/OFF setting per day



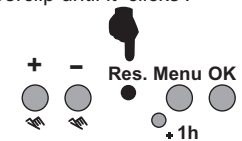
#### P02: Mo-Su. 2xON/OFF settings per day



#### P03: Mo-Su. 3xON/OFF settings per day



- 1.1** Press the **Reset** key using a ballpoint pen or paperclip until it 'clicks'.



### 1.2 Set display to 24 hour or AM/PM



- Press **1** or **2**
- Select 24h for 24 hour display or 'pm' for am/pm display by pressing **+ or -**
  - Confirm setting by pressing **OK**