



Total Control



Introduction

The **Total-Control or TC3** is an all electric product for the AGA brand. The external appearance is the same as a conventional AGA heat storage enamelled cast iron cooker.

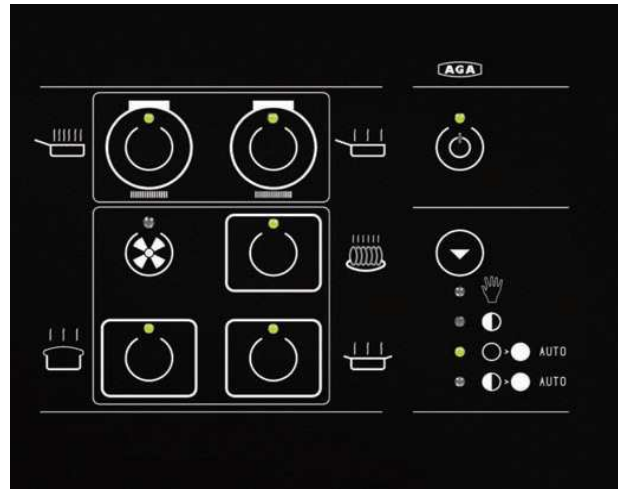
The oven cavities are variations on the standard cast iron cavities found in any AGA. The principle of operation differs from traditional AGA's as follows; in place of a single heat source, each cooking zone (hotspot or oven) has its own electrically heated cast iron element(s). This separation of cooking zones allows for greater control and economy from an AGA, as a user will be able to choose to turn the zones that are required for use.

The power of the heating elements is controlled by an electronic control system utilising **relays and triacs** to modulate the elements and **thermocouples** to monitor the zone temperatures.



Customer Interface

- The Touch Panel is discreetly housed behind the top left door of the AGA



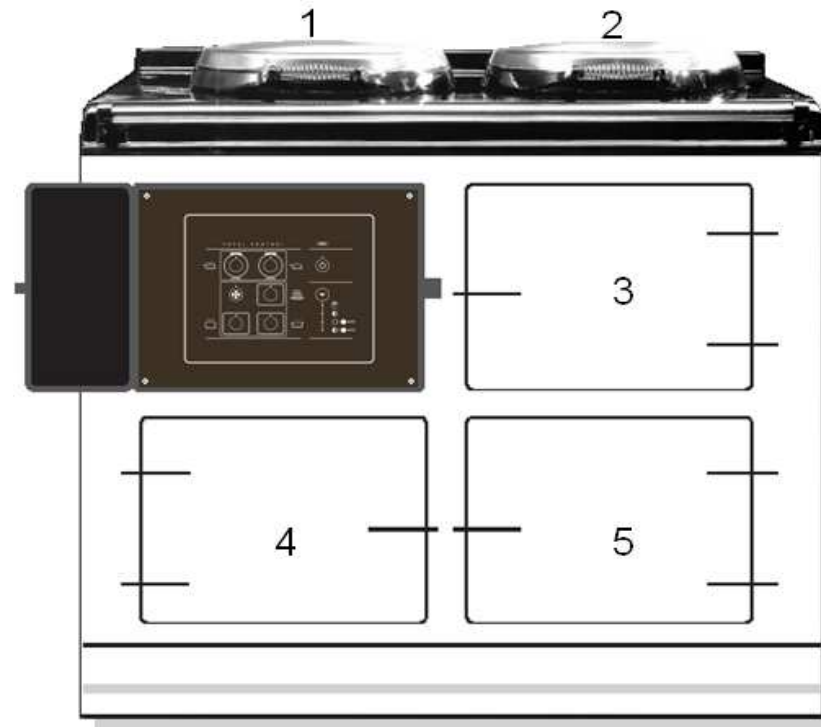
- You can program the cast-iron ovens for one or two cooking events per day, seven days a week Using the Handset.



Elements and Cooking zones

There are five fixed temperature cooking zones on the **TC**, three ovens and two hotplates.

- Zone 1 _ Hot spot _ 330°C_ single plate 2.5kW
- Zone 2 _ Simmer spot _ 200°C_ single plate 2.5kW
- Zone 3 _ Roast oven _ 230°C_ dual plates 2.5kW each (run at 2:1 power ratio top element to bottom element)
- Zone 4 _ Baking oven _ 175°C_ dual plates 2.5kW each (run at 2:1 power ratio top element to bottom element)
- Zone 5 _ Simmer oven _ 100°C_ single plate 2.5kW (run at a maximum of 50% power)



Power share

The electronic controls prevent the cooker from drawing too much power.

This is achieved by limiting the number of elements that can draw power at any time to three.

The controls will allow all zones to be selected, but the activation of the elements depends on an algorithm which takes zone demand, temperature and priority into account. In practice the user will not be aware of the controls doing this as when all zones are up to normal temperature three elements switched between all zones are sufficient to keep the zones at normal temp.

The controls follow the following priority mostly at warm up....

Zone 1 - Hotspot – element 1

Zone 2 - Simmer spot – element 2

Zone 3 - Roast Oven – element 3&4

Zone 4 - Baking Oven – element 5&6

Zone 5 - Simmering Oven – element 7

The Cooking zones



Boiling plate

The boiling plate is on the left-hand side. It is the hotter of the two hotplates. From cold, the boiling plate takes approximately 11 minutes to reach its operating temperature (approximately 330°C).



Simmering plate

The simmering plate is on the right-hand side. It is the cooler of the two hotplates. From a cold start, the simmering plate will achieve its operating temperature (approximately 200°C) in just 8 minutes.



Roasting oven

The roasting oven on the AGA Total Control grills and roasts beautifully. But new technology means it is possible to use only the roasting oven or to use it alongside either or both of the other two ovens. From a cold start, the roasting oven takes around 35 minutes to reach its operating temperature. From the slumber setting, this is reduced to approximately 15 minutes.

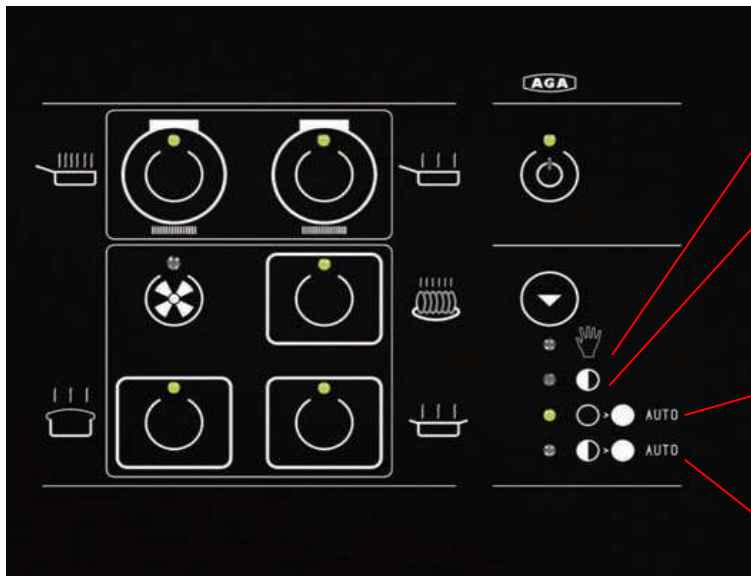
Baking oven

A moderate oven for baking bread, cakes and biscuits, baking fish, lasagne or a shepherd's pie, the AGA Total Control baking oven is truly flexible. And cooking sweet and savory dishes together is no problem as the flavours do not mix. From a cold start, the baking oven takes around 22 minutes to reach its operating temperature. From the slumber setting, this is reduced to approximately 15 minutes.

Simmering oven

The AGA Total Control simmering oven is ideal for slow cooking, allowing flavours to develop and making even the toughest meats tender. Its large capacity allows several pans to be stacked and a number of dishes to be cooked simultaneously. From a cold start, the simmering oven takes around 45 minutes to reach its operating temperature.

The Four Modes



Manual (you choose)

Each zone (an oven or a hotplate) can be operated individually in manual mode. Any zone selected will remain on until switched off.

Slumber (ovens only)

In this mode all three ovens are active, pre-set at a simmering heat. Slumber setting is ideal for slow cooking and giving a gentle heat into the kitchen, creating that unmistakable ambient AGA warmth. When the ovens are in slumber mode they take less time to reach full heat.

Auto (ovens only)

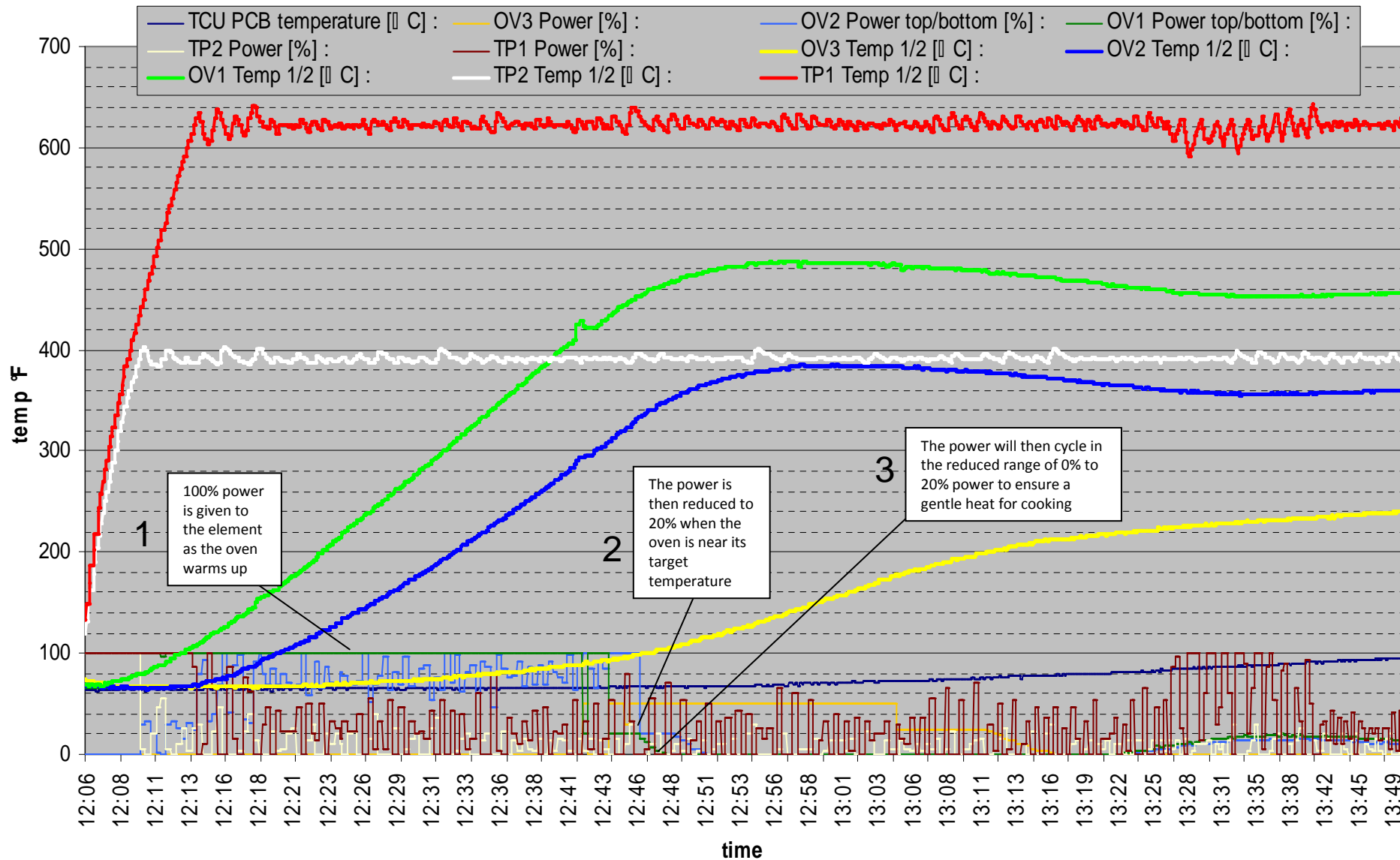
Selecting the auto function brings selected ovens up to full heat when a program is set. Each oven can be selected to operate once or twice each day, with the start and finish time of each of these 'cooking cycles' set by the user.

Auto slumber (ovens only)

Choosing this setting automatically brings selected ovens up to full heat from slumber mode. Each oven zone can be selected to operate once or twice each day.

Oven power delivery – Max power (100%) during warm up, 20% power after derate for ovens, power share between zones

USA TC3 - All zones demand from ambient



Servicing and Analysis

USING THE ENGINEER'S HANDSET

A special handset is supplied to AGA Total Control engineers, as a diagnostic tool. This can be recognised by its orange coloured trim.

(AGA Part No AE4M280323)

It will show the serial number of the RF electronic unit to which it is connected and can then display the temperatures of each heating zone as currently seen by the cooker's software.



To 'handshake' and communicate to a particular cooker press the '+' button.

The cooker serial number will then be displayed and you will be asked to confirm by pressing '+-' again.

Pressing buttons '1, 2, 3, 4, or 5' call up the specific zones as follows:-

1. Boiling Plate
2. Simmering Plate
3. Roasting Oven
4. Baking Oven
5. Simmering Oven

Each zone has two thermocouples measuring temperatures and both values are shown. They should normally be within about 2 deg of each other.

If there is an error present the code number will also be displayed.

It also displays any error codes relative to each zone and their explanations.

Press the 'E' Button.

Scroll down to highlight each code number for an error description.

The screen also confirms continuing communication with the cooker by means of arrows in top right hand corner.

Battery condition is displayed in top left hand corner.

To disconnect and finish monitoring, press '-'

Not connected
+ to connect

#0000080
+ to Connect
- to Reject

Simmering oven		
TC1	TC2	Error
102 C	102 C	

#0000080

HHC Error Num
134

⚠

Error Codes

132
133
134 Simmering oven defective triac
140

Specialist Software for laptops and service engineers
Handsets are available to engineers for servicing/fault finding and analysis of the TC3 control boards