

to Distributors  
to Service Partners

Ref. No. **SAT\_012**

Palazzolo s/O June 19th, 2012

Subject: Firmware version v3.00

Please be informed that on week 25 the new version of firmware v3.00 will be available on the *download area* of our web site [www.ravelligroup.it](http://www.ravelligroup.it).

Please use your usual *user name* and *password* to download the new firmware.

The firmware v3.00 can be identified by the following descriptions:

<i>Series</i>	<i>Firmware</i>	<i>Main Board / User interface</i>
AIR	ECT2010RDS_MB_v.3.00_A11/A12	Electronic board
AIR	ECT2010RDS_UI_v.3.00A/B/C/D/E	Display with 3 keys
HYDRO	ECT2011IDRORDS_MB_v.3.00_A11/A12	Electronic board
HYDRO	ECT2011IDRORDS_UI_v.3.00A/B/C/D/E	Display with 3 keys
ECO (R70 and R120)	RAV_2010_ECO_RDS_V8.caf	Display with 6 keys

## INTRODUCTION

The new version of the RDS firmware allows the user to introduce certain important functions and new programmed settings. A brand new testing system for the stove is also introduced.

The following points list the various changes made:

### **1 - Operation of the RDS system**

The new system for RDS operation is the combination of the classic system with fixed revs and the innovative system to recognize clog-up of the brazier. Practically speaking, the stove works with the fixed-rev system programmed by the installer technician during the testing phase. As soon as the brazier begins to clog up, the RDS system increases the revs of the smoke extractor to restore combustion to the same operating conditions programmed during testing.

### **2 - Parameter TF47 "MIN. FLOW" as per factory settings**

This parameter determines the level to which the brazier is clogged; the stove signals that this value has been reached with the message "Clean brazier". When half the value of the MIN. FLOW is reached, the NO FLOW message is displayed (see point 3).

### 3 - "AL17 NO FLOW" Alarm

When the system reads a flow value equal to half the minimum programmed flow (see point 2), which clearly points to a loss of load due to inspections or to door or ash tray not closed properly, the stove warns the user by signaling the "AL17 NO FLOW" alarm.

### 4 - "Clean brazier" message

If the system detects a flow lower than the "TF47 MIN. FLOW" (value calculated in lab test by bringing the stove to a combustion crisis), the message "Clean brazier" is displayed to instruct the operator to restore proper combustion for stove operation.

### 5 - "Flame on" phase

The stabilizing time of the flame has been prolonged in this phase in order to guarantee that the pellet loaded during ignition is emptied out of the brazier. This phase allows the stove user to obtain a minimum combustion so as to avoid that while the stove is functioning, the pellet that has not been completely exhausted during the starting phase may accelerate a condition of clogged brazier. Moreover, a controlling device has been introduced on the combustion smoke that lowers the stabilizing time if an attempt is made to extinguish the flame, and the time the heater stays ON during this period has also been extended.

### 6 - Management of single duct line (not available on Eco version and Hydro version)

*Excerpt from the single duct line stove manual:*

a) Manual function (symbol on display 

Front ventilation, as in a common air stove, works at the same operating speed programmed. As described previously, the user can furthermore, with a simple operation on the display, program or disable the percentage of hot air to be used to heat the rear room. The procedure to change the duct line based on the user's requirements is described below.

- Referring to paragraph 7.2 of the manual for use and maintenance, follow the procedure to display the submenus of the USER main menu, move onto the icon (fig. 1) with key 2, access the "Air Front/Rear" function page (fig. 2) and press OK to display the setting (fig. 3).



Fig.1



Fig.2

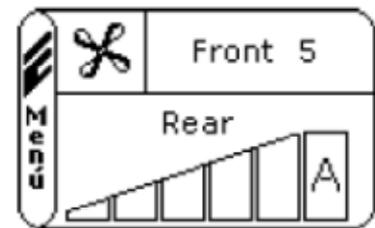


Fig.3

- Once you have accessed the page, the first column will show the speed of the front fan linked to the power of the stove, and the keys 1 and 2 will allow you to program the power of the duct line (viewable on the second column) between a minimum value of 0 (duct line off) to Auto (duct line power follows front ventilation); the intermediate values are 1 - 2 - 3 - 4 - 5.

## 7 - Programming the timer functions

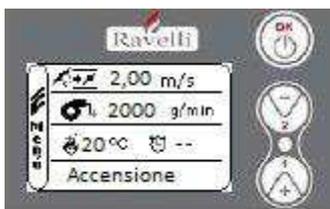
This upgrade to the firmware allows the user to enable a total of 4 programmed settings, with the same system used to program the single timer functions.

## 8 - New stove testing system (not available on Eco version)

This special method for adjustment of the RDS allows the user to set the parameters of the oxygen supplied for combustion almost entirely automatically. The peculiar feature of the new firmware is the warning message "Adjust RDS system" that is displayed when the stove is turned on and whenever the user wants to turn it either on or off: the message, which is displayed for a few seconds, does not compromise stove operation.

This message will disappear only when the installer technician has carried out the operations listed below.

- **Start process for RDS system adjustment:** the icon you must click on to start RDS adjustment is the following  and it appears on the main menu (slightly press the OK from STAND-BY status). Click on the icon and type in the password "C2" to start the process (the figure shown below will appear on the screen).



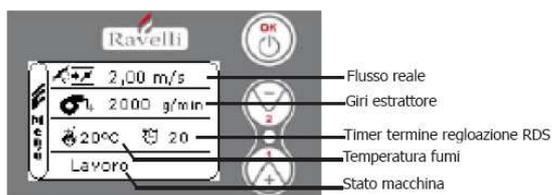
- **Adjustment of smoke extractor revs in the various ignition phases of the stove: the page "RDS System Adjustment" indicates in "Machine status" the various phases in their order from ignition to operating status.**

These phases are: Flame Ignition/Stand-by, Flame ON, Work. The rpm can be adjusted during any one of the single phases with the keys 1(-) and 2(+) in the "extractor revs" entry, so that you may program the ideal operating conditions of the stove in the various statuses.

*Flame stand-by:* as soon as you shift to this phase, the number of rpm will appear (on the second row of the screen); the installer changes this value with keys 1 and 2 to improve stove ignition.

*Flame ON:* as soon as you shift to this phase, the number of rpm will appear (on the second row of the screen); the installer changes this value with keys 1 and 2 to improve flame stabilizing (see point 5).

*Work:* the stove shifts to maximum power and a sound signal, accompanied by the number of rpm shown on the display (second row of the screen), indicates that the value can be changed in order to improve combustion and have the ideal flame. From this moment on, the timer 20' begins count-down; this time will prove useful to the flow-meter to read the correct value (hot RDS adjustment) and for ideal operation.



Schermata "Regolazione sistema RDS"

- **Changes to parameters blocked and flow sampling initiated:** two minutes before the timer reaches 0, the system blocks any changes to the rpm (revs per minute) and starts sampling the reading of the flow-meter.

- **Test end and automatic save of various powers:** when the stove shifts to the classic stand-by display, the system has found the value of the flow at maximum power (specific value for installation and for the type of pellet used) and all the flow values at lower power have been automatically calculated (0.05 m/s for the flow and 100 rpm for the smoke extractor revs). The RDS is also automatically restarted with the new parameters.

***PLEASE NOTE: In the event of an alarm during the process, the system will exit the test mode. It will therefore be necessary to restart the procedure and to eliminate the message "Adjust RDS system". Whenever a firmware update will be run, the obligatory parameter resetting phase will make the "Adjust RDS system" appear and you will have to restart stove testing.***

#### **9 - "VOLT MAX" parameter added on**

AIR series: TF53

Hydro series: TF56

Adding this parameter allows the user to program the maximum voltage in the adjustment of room ventilation (e.g. ITA -> 230v; USA -> 110v).

#### **NOTE:**

Serial numbers of stove equipped with new firmware version v3.00 will be informed with next newsletters.