TERMOSTUFE A PELLETS

INSTALLERS MANUAL

1- Description

They are equipped with a chronothermostat making it possible for an automatic On/Off; the thermic potency developed is regulated automatically depending on the temperature of the area to be heated.

The water temperature that is sent into the thermic system can be regulated at 45°C – 75° C.
Ungaro thermostoves work exclusively with pellets, they are equipped with an exchange in copper which permits the development of a 90% return.

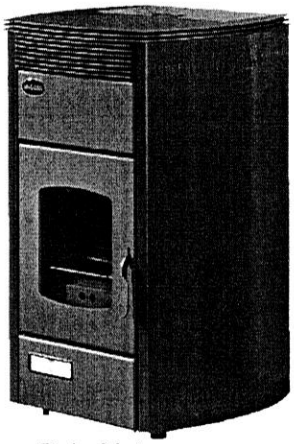
Ungaro thermostoves produce 60m̀/h of hot air thanks to a fan incorporated on the bottom part of the stove and permits a conventional heating of the area where stove is installed.

Thanks to an optional kit, these stoves produce continuous hot sanitary water in a healthy and secure way, automatically, without the need for accumulation.

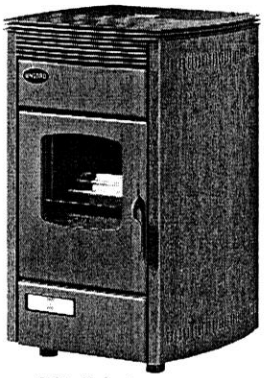
Ungaro thermostoves are equipped with sophisticated security devices that guarantee safe and practical use.

This thermostove is to be refuelled exclusively with pellets.

Maia – *fig. 1*



BabyMaia – *fig. 2*



MiniMaia – *fig. 3*

2 – GENERAL INSTRUCTIONS

Installation and maintenance should be done by qualified personnel only, in respect to existing laws on the subject and according to company indications.

Read instructions included carefully before using the product.

These thermostoves must be used only for the purposes in which they are made for therefore any damage caused to persons, animal or things for improper use is to be retained at the consumers expense.

The thermostove is to be installed by qualified personnel whom will assume all responsibility for instalment and proper functioning of the product. Ungaro srl has no responsibility when above precautions are not made.

Once product is unpacked, the consumer should make sure of the integrity and complete contents of the product; if not so the company should be contacted.

Before installation we suggest an accurate cleaning of all pipes in the system so that any residues, that could interfere with correct functioning, may be removed.

If the thermostove has not been in use for a long period of time it is advisable to procede with the following operations:

- Place the general switch in the 0 position;
- Close the systems water taps situated behind the stove;
- If there is risk of freezing empty the thermic and sanitary system.

Maintenance of the thermostove should take place at least once a year, to be scheduled with the service technician.

For your safety it is always good to remember that:

- The thermostove should not be used by children or disabled persons.
- Do not touch if barefoot and/or any part of body is wet or damp.
- It is forbidden to modify the security or adjustment devices without manufacturers indications or authorization.
- Do not pull, unplug, or twist the electric wires even if the stove is not connected to an electrical outlet.
- Avoid blocking windows doors etc where installation is because a ventilated room is necessary for a correct combustion.
- Do not leave packaging within reach of children or disabled persons.

3 – Technical Characteristics and Dimension

		Maia	BabyMaia	Mini Maia	Maia Classic	BabyMaia Classic
Distance and Dimensions	depth	600	600	550	690	700
	A	750	700	630	770	740
	B	730	680	610	770	.....
	C	187	181	174	.....	.....
	D	300	280	249	300	280
	E	227	202	162	.....	.....
	F	1180	1080	970	1175	1140
	G	394	410	424	394	410
	H	214	181	150	243	.....
	I	65	65	65	65	65
	L	154	154	154	154	154
	M	65	65	65	65	65
	N	214	181	150	243	.....
	O	99	100	135	99	100
	P	367	350	359	367	350
Tank Capacity		kg. 40	kg. 35	kg. 25	kg. 40	kg. 35
Weight		kg 200 approx.	kg 170 approx.	.....	.....	.....
Diameter fume release tube		80 mm	80 mm	80 mm	80 mm	80 mm
Diameter air entry tube		60 mm	50 mm	60 mm	60 mm	50 mm
Diameter in/out water		3/4" filetto gas	3/4" filetto gas	3/4" filetto gas	3/4" filetto gas	3/4" filetto gas
Total Potency		30 KW approx.	22 KW approx.	14 KW approx.	30 KW approx.	22 KW approx.
Performance		90% approx.	90% approx.	90% approx.	90% approx.	90% approx.
Potential water return		90% approx.	90% approx.	90% approx.	90% approx.	90% approx.
Fuel consumption per hour	minimum	Kg. 0,5	Kg. 0,5	Kg. 0,5	Kg. 0,5	Kg. 0,5
	maximum	Kg. 6	Kg. 4	Kg. 3	Kg. 6	Kg. 4
Electric Supply		220 V. 50 Hz	220 V. 50 Hz	220 V. 50 Hz	220 V. 50 Hz	220 V. 50 Hz
Electric Absorment	minimum	W 30	W 30	W 30	W 30	W 30
	maximum	W 200	W 200	W 200	W 200	W 200
Produces hot sanitari water		yes	yes	yes	yes	yes

tab. 1

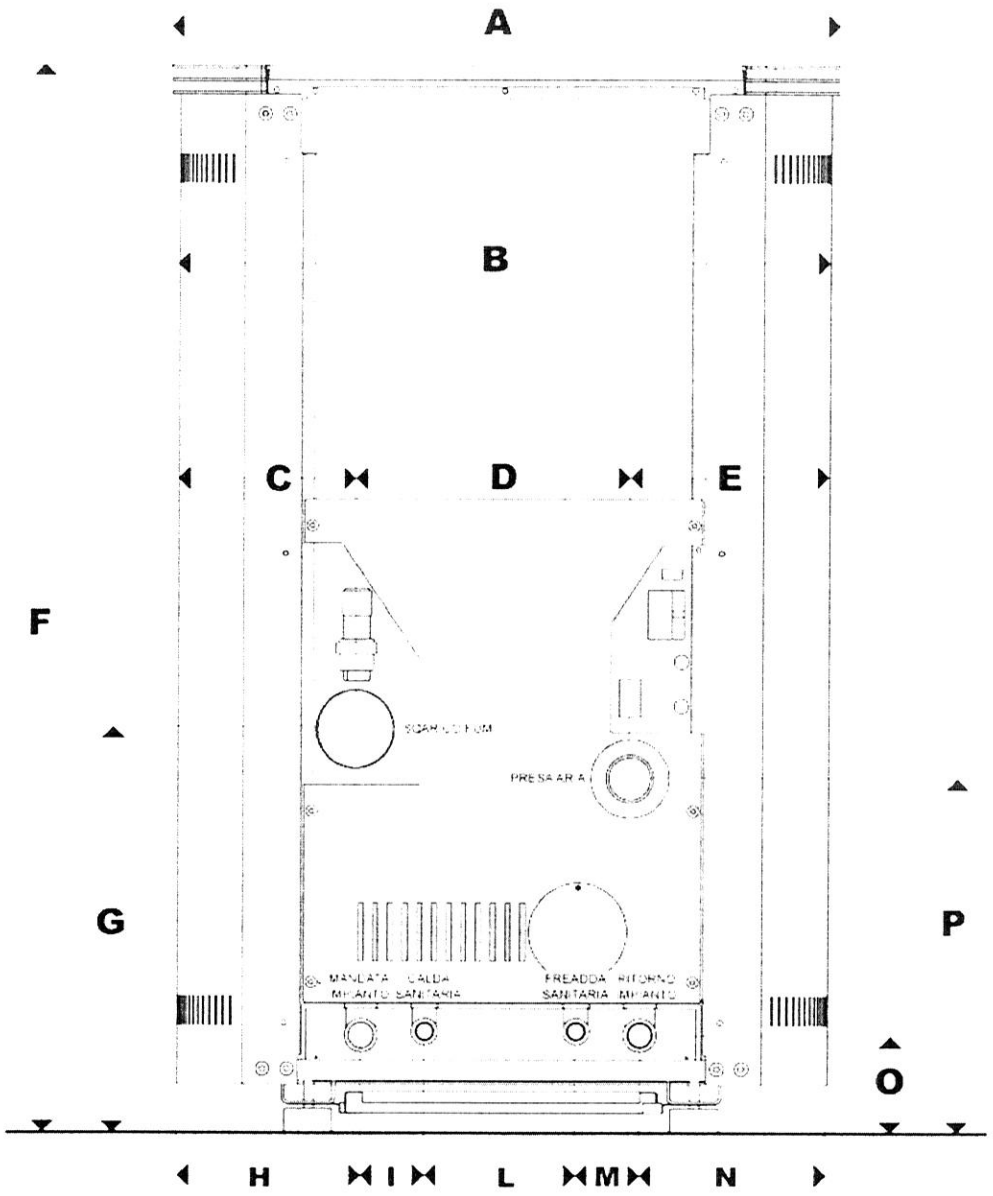

A
B
C
D
E
F
G
P
O
H
I
L
M
N
PRESA ARIA
MANDATA CALDA
MI.ANTO SANITARIA
FREADDA RITORNO
SANITARIA MI.ANTO

fig. 4

4 – Fuel Characteristics

Pellets are a solid fuel obtained by pressing small size wood residues, sawdust, bark etc. that belong to different wooden species. The pressing stage could be preceded by a drying up (exsiccating) stage or if wooden pieces are of an elevated size, they may be ground.

This way a solid fuel is obtained with a heating effect of 5160 Kcal/kg , resulting clearly superior to any other wood combustion. Pellets have a low content of humidity-6-10%- consequently low contents of ashes approx. 0,5%. The characteristics of the pellets that stand out compared to wood are that they present a practically constant volume and are low in porosity. This is due to the formation process of the pellets.

The stove has a tank in the superior part of the stove that contain these pellets; we advise not to place anything on top of the stove so that the cover is easily opened to refill tank when needed.

The potential efficiency of the Ungaro thermostoves can vary with the type and quality of the pellets used.

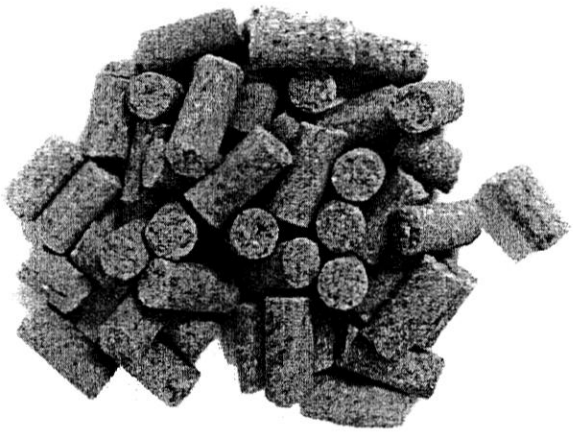


fig. 5

It is forbidden to use normal wood pieces that have not been mechanically processed in the form of pellets in our thermostoves.

5 – Security Device

5.1 Breakage of the exhaust fan

In case of blockage of the exhaust fan, the electronic card of the thermostove promptly stops the pellets from falling and an alarm system is visualized on the display.

5.2 Breakage of motor that refills pellets

In case of breakage of motor the refills pellets the thermostove stops working automatically.

5.3 Breakage of the circulation pump

In case of breakage of the motor that refills the circulation pump, the thermostove stops working automatically.

5.4 Thermostove does not turn ON

If the thermostove does not turn on during the starting phase "ALARM" will show up on he display D1 and on the display D2 "PUL BRAC-NO FIRE" will show up.
THIS ALARM IS A REMINDER THAT BEFORETHE STARTING PHASE BEGINS, MAKE SURE THAT THE BRACIER (grate inside drawer where pellets are released and then burn and where ashes collect in front of stove) is completely free of ashes, clean and in the correct position.
It is necessary that this procedure (cleaning the bracer) takes place only when the stove is completely cooled off.

5.5 Lack (absence) of electricity

If there is a lack of electricity the thermostove shuts off and turns back on automatically when electricity returns; during this period it could be possible that a small amount of smoke escapes the stove.

If so don't worry, there is absolutely no security risk.

When electricity returns and the display D1 reads "ALARM" and display D2 reads "NO RETE" stove should cool down completely and afterwards cleaning of the bracer can be done; only after this can it be turned on again.

5.6 Electrical Security

In case of problems with electrical power the thermostove is protected by two fuses (2A 250V delayed) situated behind the stove. To substitute simply pull out small drawer under switch, remove burnt out fuse and replace with new one, reinsert drawer in place. (Fig. 6)

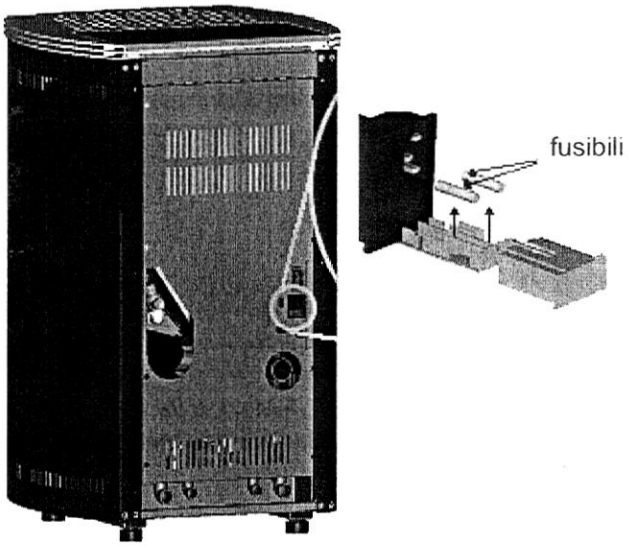


fig. 6

5.7 Security in releasing fumes

In case the piping that releases fumes is obstructed, the thermostove is automatically blocked.

5.8 Safety in Pellet Tank temperature

In case of high temperature in the pellets tank a device blocks the functioning of the stove; turning on the stove again is to be done manually and only by a qualified technician.

5.9 Pressure System Safety

The pressure system is controlled electronically and must be contained between 0,4-2 bar, if not the thermostove is automatically blocked and "ALARM PRESS" shows up on the display; to verify pressure system it is necessary to press P2 for a few seconds. In case the pressure is too low the thermostove is blocked, to increase or decrease pressure it is necessary to operate on automatic load or on the systems load valve (fig. 7). A security valve is placed inside the stove and permits it not to go over the 3 bar releasing pressure automatically.

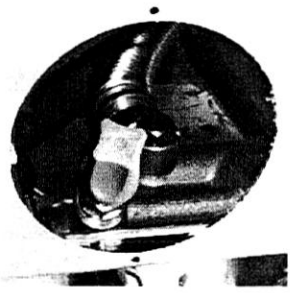


fig. 7 - systems manual load valve

6 - Installation

6.1 Assembling

Ungaro thermostoves are to be installed only by authorised personnel.

6.2 Smoke Release

Aspiration of combustion smoke takes place by a pump that works by producing a light depression in the combustion chamber. To avoid any leakage of gas it is necessary that the release pipe is hermetically sealed. This release pipe can have an internal or external route.

Installation of external pipe

Referring to fig. 4 and tab. 1, drill a hole in the wall (Ø 80mm) in order to insert the smoke release pipe forseeing the installation of a connecting T with inspection cap, cover with a chimney pot to protect from rain.

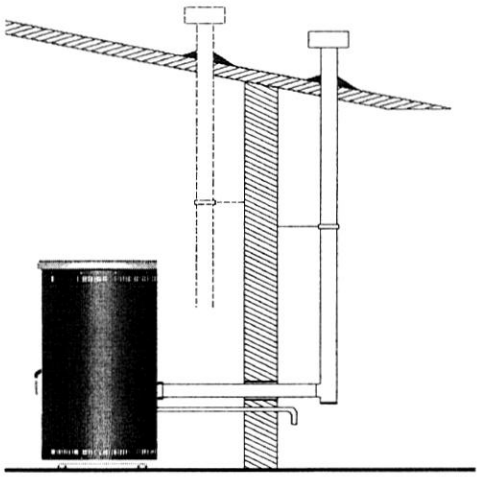


fig. 8

Smoke release through existing chimney

The thermostove can also be connected to existing chimney that has a 130 mm diameter. Drill a hole in the wall (Ø 80mm) and insert the smoke release pipe at a height from floor as shown in fig.4. After having connected the thermostove to chimney, hermetically seal space between hole in the wall and pipe release route.

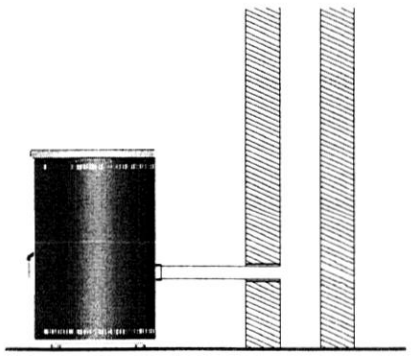


fig. 9

To keep pipes in place and isolated use material exclusively resistant to 300°C e.g. Alluminum tape , silicone for high temperature.

Note: All parts of piping should be removable and inspectable to make internal cleaning possible.

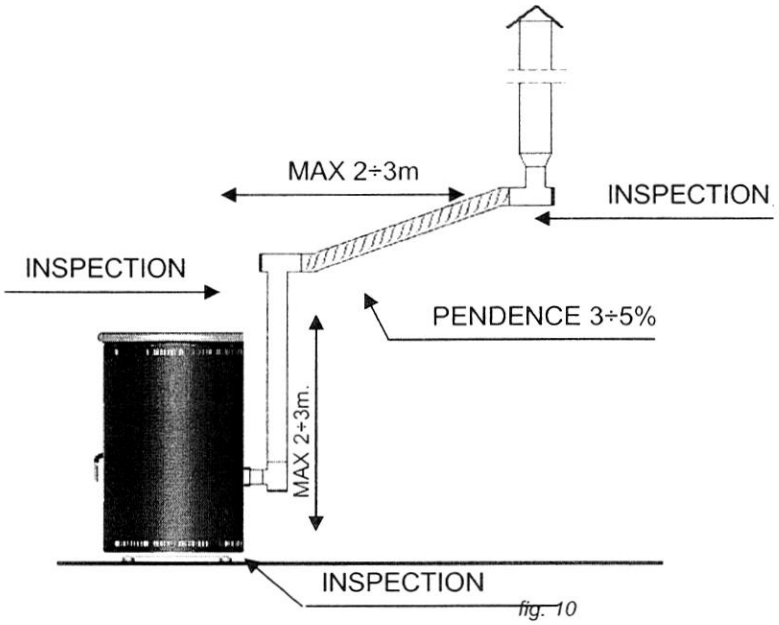


fig. 10

6.3 Electric connection

The thermostove is furnished with an electric cable to be connected to a 230V a 50Hz outlet. Avoid the cable coming into contact with hot surface of the stove.

6.4 Air Combustion

It is obligatory that air combustion be directly taken from outside.

Assembling aspiration pipe for external air

- Referring to fig.4-tab.1, drill a 7 cm hole in wall for aspiration pipe for external air.
- Connect thermostove with the outside through a steel pipe.

ATTENTION

- Only use steel pipes.
- It is not possible to use synthetic or alluminum pipes.
- To assure sufficient air flow, the route should not be longer than 1 meter and must not have too many elbows (curves).
- It is necessary that the external outer end with a vertical 90° curve that faces the ground or something for wind protection, see fig. 11.

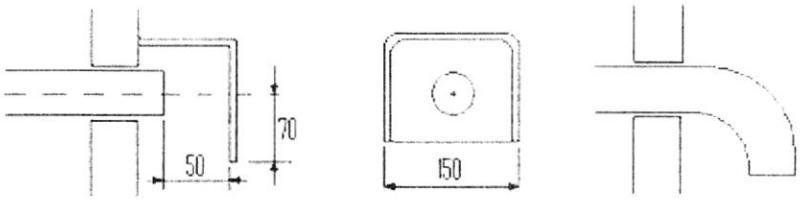


fig. 11

6.5 Dimension and Security distances

The thermostove should be placed on heat resistant flooring. If it is placed on a possibly inflammable floor it is necessary for it to be placed on a surface on top of the floor.
The following table shows the minimum size that the extra surface should have and the relevant security distances in mm.

REFERENCES	Inflamable Objects	Non-Inflamable Objects
A	200	100
B	800	400
C	200	100

tab. 2

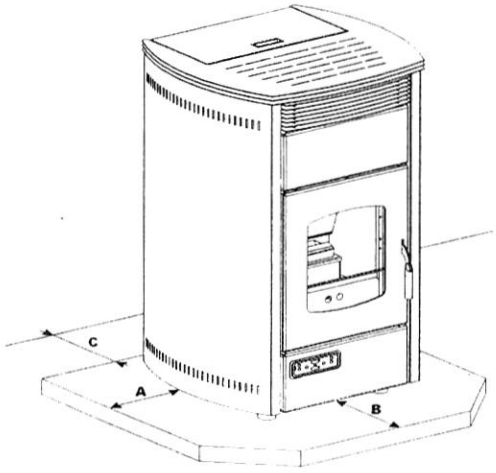


fig. 12

The thermostove is to be placed so that electric and plumbing attachments are easily accessible.

If stove is placed as in fig. 13 a minimum distance of 20 cm from walls is necessary.

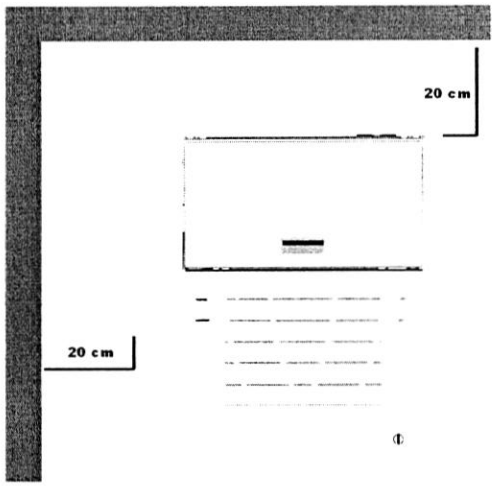


fig. 13

If stove is positioned as in fig. 14 a minimum distance of 10 cm from walls is necessary.

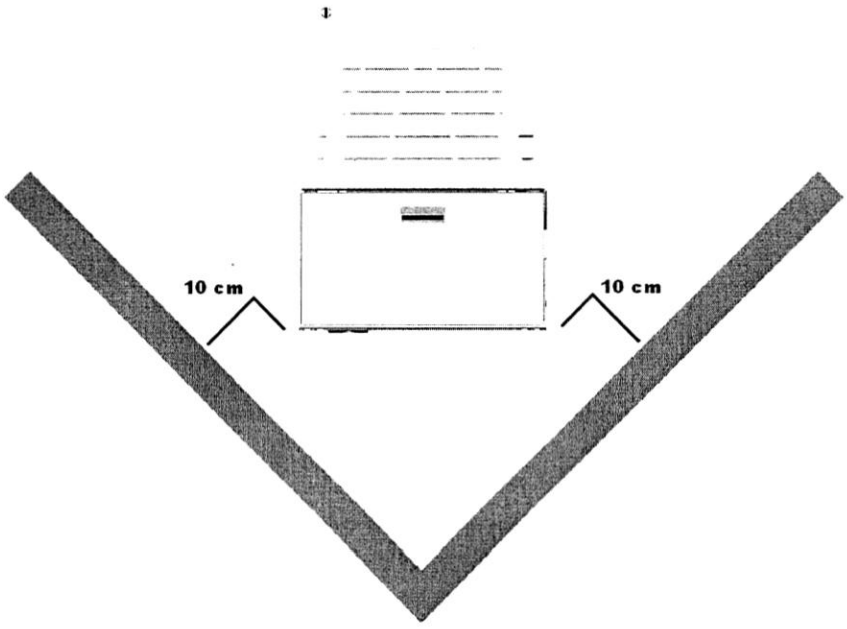


fig. 14

7 – Starting the Thermostove

ATTENTION!!
It is necessary to clean the bracer every time before turning on the stove.

7.1 Control Pad

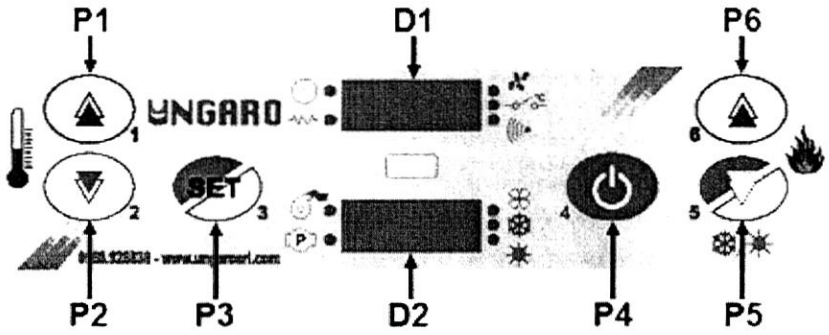


fig. 15

In the above fig. 15 the control pad is shown.

P4—allows to turn stove on and off, lets you out of the program and unblocks the alarms.

P3—Sets the temperature and program functions.

P5-P6—Regulates heat potency.

P1-P2—Regulates temperature and operates upon program functions.

D1-D2—Display that visualizes various messages.

STEP 1- Preliminary checking
Before turning on stove it is necessary to be sure that
- The pellet tank is refilled
- The combustion area is clean
- The glass door is closed
- The electrical switch is in outlet and switch behind stove is in the 1 position.

Also check the inside pressure by pressing a few seconds the P2 button , on the display "1.0b" will show up.

fig. 16

We advise to keep a pressure between 0,8 – 1,2 on a cool system, it could be increased or decreased acting upon automatic load or on the systems load valve.

DO NOT USE DAMP PELLETS.

STEP 2 – Circulator refillment

After verifying the systems pressure start up the circulator manually pressing P1 and P2 together for a few minutes, this way the circulator is filled with water, meanwhile the systems air is released through vent valves positioned on the radiators.

STEP 3 – Starting

Press P4 for a few seconds until stove starts, on display "FAN ASP" will show up and in this phase a diagnosis is carried out for about 20 seconds.

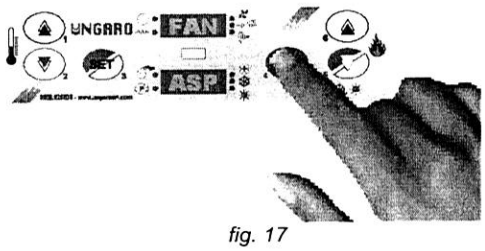


fig. 17

Afterwards the display will read "LOAD WOOD", at this point pellets are loaded and stove prepares for starting.

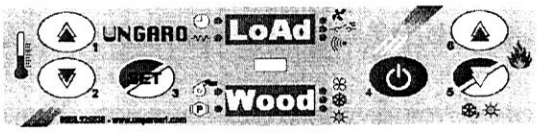


fig. 18

When temperature is high enough the stove goes to the "FIRE ON" mode, a transition phase where the function parameters are checked out.

fig. 19

At this point the D1 display shows the pellets capacity, which should be set at 9 (through keys P5 and P6), while the D2 display visualizes the water temperature which in turn should be set at 65° C, to regulate water temperature press once the "set" key and use P2 and P1 to increase or decrease.

In this phase the flame varies until it stabilizes. Also in the phase if the temperature is more than the temperature originally set or the stove happens to turn off, it is necessary to release air from the plumbing system (hydraulic).
To do this proceed with STEP 4.

STEP 4 – Release air circulator

To diminish capacity press P5 a few times, remove top of stove and act on the circulator unscrewing the screw for air release situated in the back; this way the circulator fills with water and then starts up. Afterwards, screw back on the screw and reposition top of stove.
After this operation if the circulator continues to not start up please contact Ungaro srl.

****Please note: The first time a thermostove is to be turned on only by authorized personnel.**

In case the stove continuously does not turn on, but pellets fall in regularly, there could be a problem with breakage of a spark plug. In this case while waiting for the technician, the stove can be turned on manually using exclusively solid combustion cubes.

7.2 Starting up manually

- Open door.
- Take a solid combustion cube and place inside bracer together with a handful of pellets.
- Light a match and light up the cube inside bracer.
- Close door.
- Follow STEP 3 for starting up.

ATTENTION

- Do not use inflammable liquid for starting up stove.
- Do not place sack of pellets near hot stove when refilling pellet tank.

7.3 Sign descriptions of control board

	Signal indicates that chronothermostat is working.
	Starting sparkplug is active.
	Is turned on when refilling pellets.
	Indicates a supplementary thermostat is connected.
	Is turned on when receiving command from remote.
	Smoke release motor is active.
	Water circulator functioning.
	When turned on fan is functioning.
	When turned on winter function is active.
	When turned on sanitari hot water function is active.

tab. 3

7.4 Parameter Regulation

Through P5 –P6 the heating potency is regulated (adjusted), the water temperature set is obtained automatically.
To set water temperature press P3 once, when "SET H2o" appears on display press P1 – P2 to set temperature that is desired.

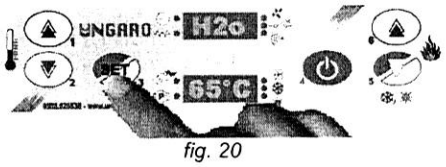


fig. 20

To set air temperature press P3 twice, when "SET ARIA" appears press P1 – P2 to set temperature desired.

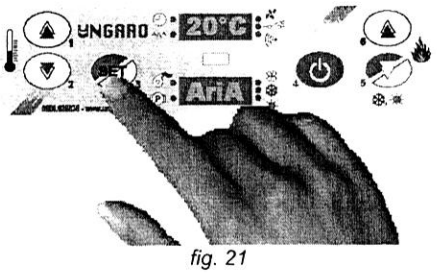


fig. 21

7.5 Turning OFF Thermostove

To turn off stove press P4 for a few seconds until "OFF" appears on display D1.

fig. 22

In this phase the cochlea (Resistance) is stopped promptly while other components from the respective thermostats turn off after thermostat is cooled off. Even when stove is completely cold the completed arrest of the stove takes place after at least 10 minutes.

NOTE: This thermostove has a system that permits automatic cleaning of the bracer after a certain period of time, when this happens a lower flame is seen and "PUL FIRE" shows up on display, as in Fig, 23, after a few minutes the stove starts functioning regularly as before.

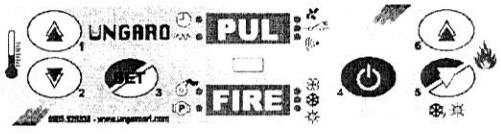


fig. 23

During the turning off phase never disconnect the switch from the electrical outlet to turn off the stove; in this phase the fan has a protracting function in order to expel combustion residues.

In case there is no electricity, the internal switchboard will provide expelling the smoke residues, increasing the velocity of the exhaust fan and "NO RETE" will show up on the display, when stove has cooled off it is necessary to clean the bracer.

ATTENTION!
During the first two or three times that the stove is turned on it may give off a bad odour, at this point we advise to air out the room several times.

8 – Remote Control

. With the remote it is possible to regulate water temperature and potency and also turn the stove on and off

fig. 24

To turn on/ off press together keys 1 and 6.

Pressing 1 and 2 regulates water temperature while 5 and 6 regulates heating potency.

To substitute batteries, unscrew the back of the remote , open and substitute batteries.

fig. 25