# INSTALLER MANUAL

PELLET THERMOSTOVE

EN



## IDRO PRINCE$^3$ 12-16-23-23H$_2$O-30-30H$_2$O - IDRO RIVER$^3$ 16-23-23H$_2$O - AQUOS$^3$ 16-23-23H$_2$O - IDRON 16-22 AIRTIGHT - MIRA 16-22 - TESIS 16-23 AIRTIGHT - HIDROFIRE 22.8 - MAYA$^3$ 16-24

# SUMMARY

# 1 MANUAL SIMBOLOGY

| | |
|---|---|
|  | **USER** |
|  | **AUTHORISED TECHNICIAN (ONLY to interpret or the Stove-manufacturer or the Authorized Technician of Technical Assistance Service approved by the Stove-manufacturer)** |
|  | **SPECIALIZED STOVE-REPAIRER** |
|  | **CAUTION: READ CAREFULLY THE NOTE** |
|  | **CAUTION: DANGER OR IRREVERSIBLE DAMAGE POSSIBILITY** |

- The icons with the stylized figures indicates whom the subject dealt in the paragraph is addressed to (between the User and/or the Authorized Technician and/or the Specialized Stove-repairer).
- WARNING symbols indicates an important note.

# 2 PACKAGING AND HANDLING

## 2.1 PACKAGING

- The packaging is made up of recyclable cardboard boxes according to RESY standards, recyclable expanded polystyrene inserts and wooden pallets.
- All packaging materials can be re-used for a similar use or eventually discharged as waste assimilable to the municipal solid ones, in accordance with current regulations.
- After having removed the packaging please assure you about the integrity of the product.

## 2.2 STOVE HANDLING

Both whether the stove is packed or not it is necessary to observe the following instructions for handling and transporting the stove from its sale point to its installation point and for any future movements:

- The stove must be handled with idoneous means paying attention to the existing safety regulations;
- do not turn the stove upside down and/or upset it on one side, but keep it in vertical position or as accorded with the constructor instructions;
- if the stove is made up of ceramic, stone, glass or any particularly fragile material components, all must be moved with the utmost care.

# 3 CHIMNEY FLUE

## 3.1 INTRODUCTION

This chapter about the Chimney Flue has been drawn up in cooperation with Assocosma (www.assocosma.org) and is based on European Standards (EN 15287 - EN 13384 - EN 1856 - EN 1443) and UNI 10683:2012.
It provides instructions for a good and correct execution of the chimney flue but it does not absolutely replace the current standards which the qualified manufacturer/installer should comply with.

## 3.2 CHIMNEY FLUE

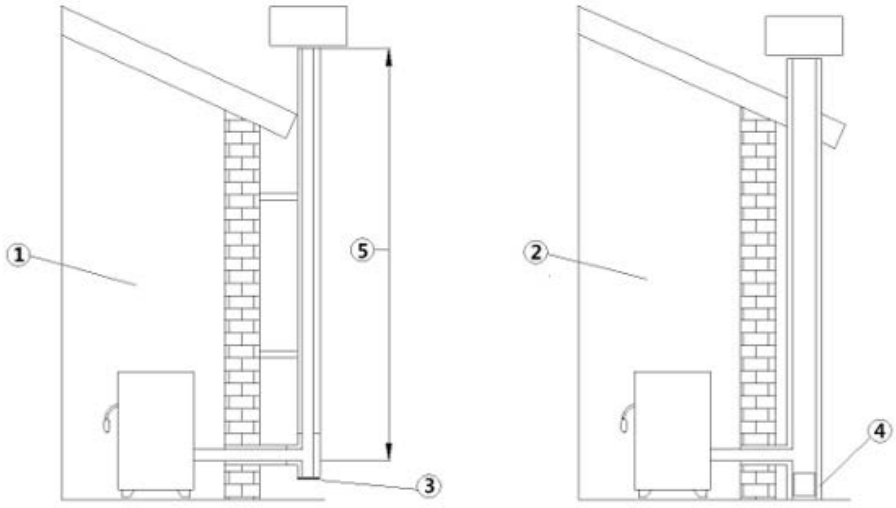


***Fig. 1 - Chimney Flues***

| *LEGEND* | *Fig. 1* |
|---|---|
| ***1*** | *Chimney flue with insulated stainless-steel pipes* |
| ***2*** | *Chimney flue on the existing chimney* |
| ***3*** | *Inspection plug* |
| ***4*** | *Inspection door* |
| ***5*** | *≥ 3,5 mt* |

- The chimney flue or chimney is of great importance for the correct running of the heating appliance.
- It is fundamental that the chimney flue is perfectly built and always maintained with a perfect efficiency.
- The chimney flue must be sole (see **Fig. 1**) with insulated stainless-steel pipes (1) or installed on the existing chimney flue (2).
- Both this solutions must be endowed with an inspection plug (3) and/or an inspection door (4).

## 3.3 TECHNICAL FEATURES

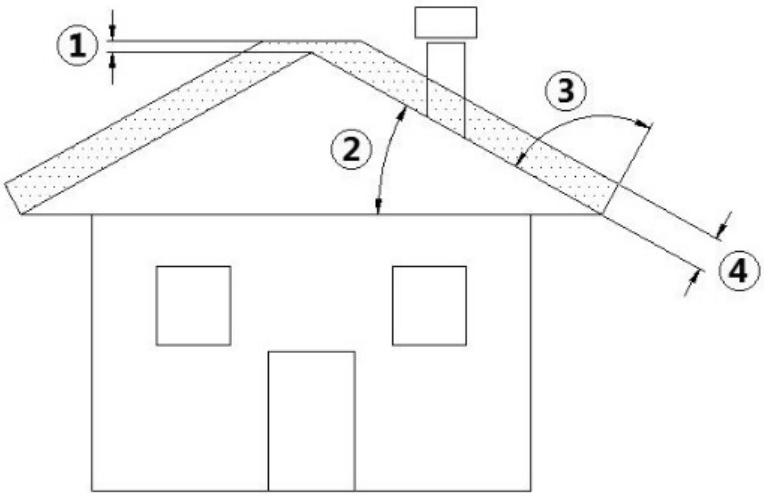


***Fig. 2 - Inclined roof***

| *LEGEND* | *Fig. 2* |
|---|---|
| ***1*** | *Height over the ridge of the roof = 0,5 mt* |
| ***2*** | *Roof inclination ≥ 10°* |
| ***3*** | *90°* |
| ***4*** | *Measured distance at 90° from the roof surface = 1,3 mt* |

- The chimney flue must be sealed from fumes.
- It must have a vertical run without narrowing. It must be realized with fume and condensation resistant materials with thermal insulation and able to last against usual mechanical stresses.

*It must be insulated to avoid condensation and to reduce fume cooling effects.*

- The stove must be spaced out from fuels or flammable materials with an air gap or with insulating materials. Check the distance with the chimney manufacturer.
- The chimney entrance must be placed in the same room where the appliance is installed or otherwise in the adjacent room and it must be provided with a solid and condensation collection chamber under the entrance, accessible through the sealed metal gate.
- Auxiliary exhaust fans cannot be installed neither along the chimney nor on the chimney pot.
- The inner section of the chimney flue can be round (the best one) or square and the jointed sides must have a minimum radius of 20 mm.
- The section dimension must be:
  - **minimun Ø100 mm**
  - **recommended max Ø180 mm**
- Made the efficiency of the chimney flue overhauled by an expert stove-repairer and if necessary cover the chimney flue with materials in compliance with current regulations.
- The flue system must be placed on the roof.
- The chimney flue must be provided CE in accordance with EN 1443 regulation. Please find attached an example of label:

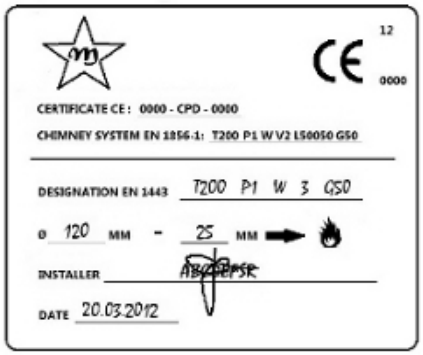


***Fig. 3 - Example of label***

## 3.4 HEIGHT-DEPRESSION

The depression (draught) of a chimney flue depends also on its height. Check the depression with the values provided at **FEATURES a pag. 48**. Minimum height 3,5 meters.

## 3.5 MAINTENANCE

- The fumes extraction pipes (fumes conduit + chimney flue + chimney pot) must always be cleaned, scrubbed and checked by an expert stove-repairer, in compliance with current regulations, with the instructions of the stove-manufacturer and the directives of your insurance company.
- In case of doubts, please follow the most restrictive regulations.
- Have your chimney flue and chimney pot checked and cleaned by an expert chimney sweep at least once a week. The chimney sweep has to release a written declaration about the security of the system.
- Not cleaning compromise safety.

## 3.6 CHIMNEY POT

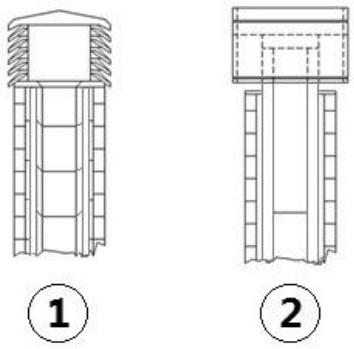


***Fig. 4 - Anti-wind chimney pots***

The chimney pot is important for the correct running of the heating appliance:
- We recommend using an anti-wind chimney pot, see **Fig. 4**.
- The hole width for fumes exhaust must be the double of the chimney flue width and fitted in a way that the fume exhaust is assured also in case of wind.
- It should prevent the infiltration of rain, snow and animals.
- The outlet height in the atmosphere must be away from the reflux area caused by the roof structure or by obstacles laying nearby (see **Fig. 2**).

## 3.7 CHIMNEY COMPONENTS

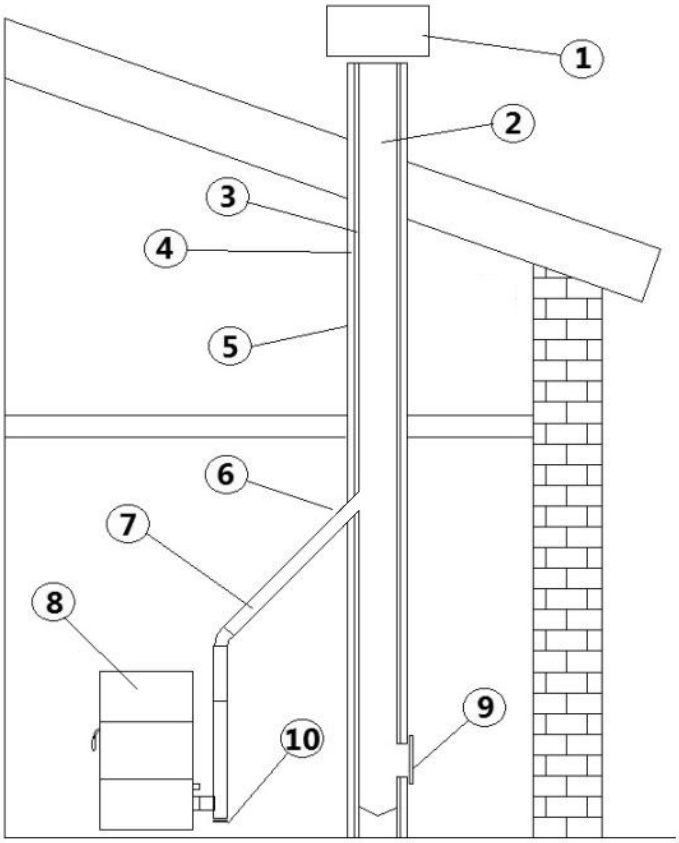


***Fig. 5 - Chimney components***

| *LEGEND* | *Fig. 5* |
|---|---|
| ***1*** | *Chimney pot* |
| ***2*** | *Fume outlet* |
| ***3*** | *Chimney flue* |
| ***4*** | *Termal insulation* |
| ***5*** | *External wall* |
| ***6*** | *Chimney union* |
| ***7*** | *Fume pipe* |
| ***8*** | *Heat generator* |
| ***9*** | *Inspection door* |
| ***10*** | *T-union with inspection plug* |

## 3.8 CHIMNEY FLUE CONNECTION

Your pellet stove works through a fume draught forced by a fan. It is obligatory to check that all pipes are realized in compliance with the following regulation on material selection: EN 1856-1, EN 1856-2 e UNI/TS 11278. All must be effected by specialized personnel or companies as provided by UNI 10683:2012.
- The connection between the appliance and the chimney flue should be short in order to favor the draught and to avoid condensation in the pipes.
- The fume conduit should be equivalent or longer than the outlet joint ones (Ø 80 mm).
- Some stove models are endowed with a lateral and/or back exhaust. Check that the unused exhaust is sealed with the plug given with standard equipment.

| SYSTEM TYPE | Ø80 mm PIPE | Ø100 mm PIPE |
|---|---|---|
| Minimum vertical length | 1,5 mt | 2 mt |
| Maximum length (with 1 union) | 6,5 mt | 10 mt |
| Maximum length (with 3 unions) | 4,5 mt | 8 mt |
| Maximum number of unions | 3 | 3 |
| Level section (minimum inclination 3%) | 2 mt | 2 mt |
| Installation at a height above 1200 m a.s.l. | NO | Obligatory |

- Use a plate pipe for stoves of Ø80 mm or Ø100 mm depending on the type of system and with silicone gaskets.
- It is forbidden to use metal, fibre cement or aluminium flexible pipes.
- For change of direction it is obligatory always to use a union (with angle > 90°) with inspection plug which enables an easy periodic cleaning of the pipes.
- Please assure you that after the cleaning the inspection plugs are sealed with its efficient gasket.
- It is forbidden to exhaust flue gases directly from the wall towards the outside and closed spaces also at open top.
- The fume conduit must be placed at a distance of minimum 500 mm from flammable or heat-susceptible components.
- It is prohibited to connect more than one wood/pellet (*) or any other type of appliance (vent cowling...) to the same flue.

(*) *unless there are national derogations (for instance in Germany), which under suitable conditions allow for the installation of several appliances in the same fireplace. In any case, strictly follow the product/installation requirements of the relative regulations/ legislation in force in that country.*

## 3.9 EXAMPLES OF CORRECT INSTALLATION

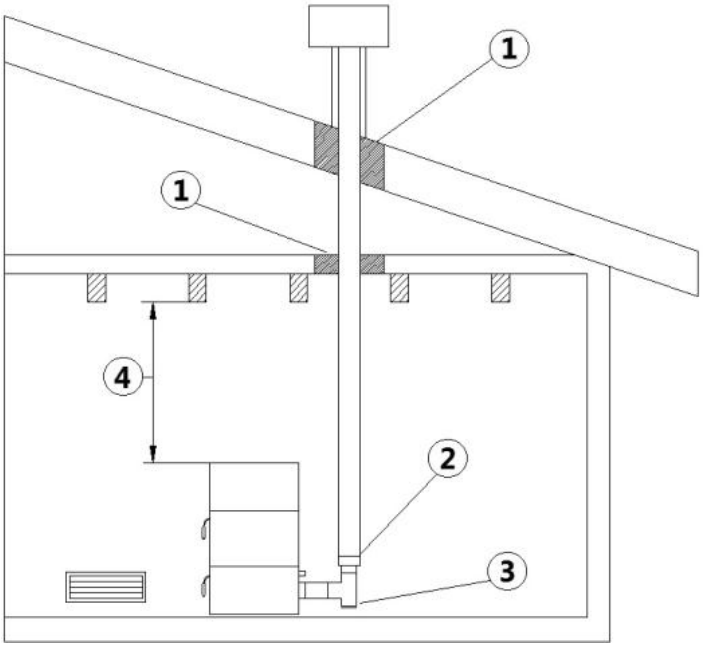


***Fig. 6 - Example 1***

| *LEGEND* | *Fig. 6* |
|---|---|
| ***1*** | *Insulating material* |
| ***2*** | *Reduction from Ø100 to Ø80 mm* |
| ***3*** | *Inspection plug* |
| ***4*** | *Minimum safety distance = 0,5 mt* |

- Chimney flue installation Ø100/120 mm with an enlarged drilling for pipe transit.

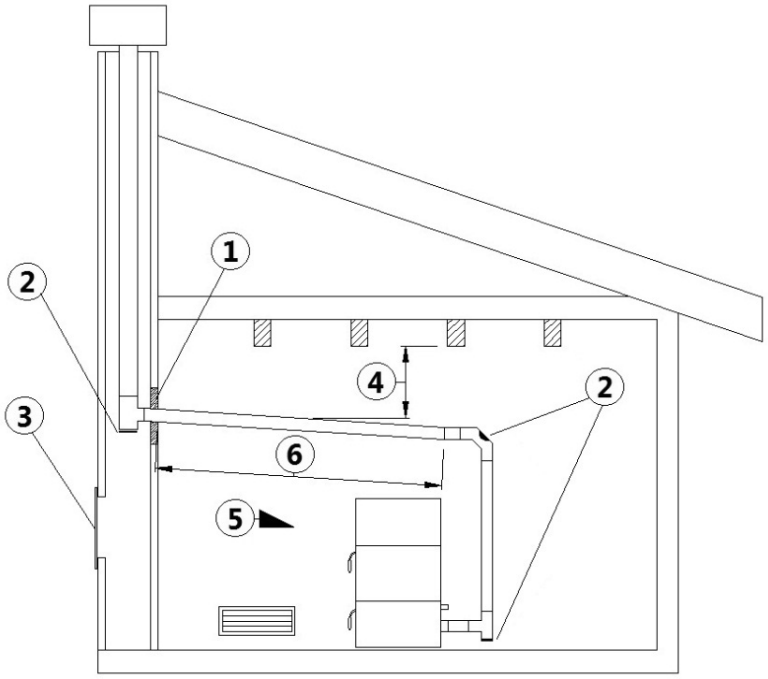


***Fig. 7 - Example 2***

| *LEGEND* | *Fig. 7* |
|---|---|
| ***1*** | *Insulating material* |
| ***2*** | *Inspection plug* |
| ***3*** | *Chimney inspection entrance* |
| ***4*** | *Minimum safety distance = 0,5 mt* |
| ***5*** | *Inclination ≥ 3°* |
| ***6*** | *Level section ≤ 1 mt* |

- Old chimney flue with an inserted pipe of minimum Ø100/120 mm and with an external door which enables the chimney cleaning.

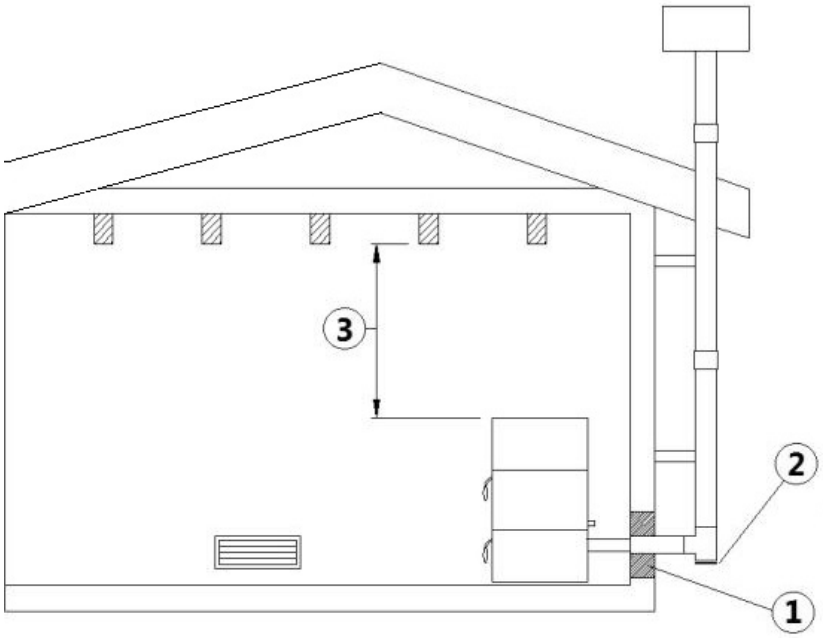


***Fig. 8 - Example 3***

| *LEGEND* | *Fig. 8* |
|---|---|
| ***1*** | *Insulating material* |
| ***2*** | *Inspection plug* |
| ***3*** | *Minimum safety distance = 0,5 mt* |

- External chimney flue entirely made up of insulated stainless steel pipes, i.e. with double wall of minimum Ø100/120 mm: all must be firmly attached to the wall. For chimney against wind effects please (see **Fig. 4**).
- Ducting system through T-unions which enables an easy cleaning without disassembling the pipes.

*We recommend to check with your chimney flue manufacturer the safety distances which must be respected and the type of insulating material. The aforesaid regulations are valid also for holes made on the wall (EN 13501 - EN 13063 - EN 1856 - EN 1806 - EN 15827).*

# 4 COMBUSTION AIR

## 4.1 EXTERNAL AIR INLET

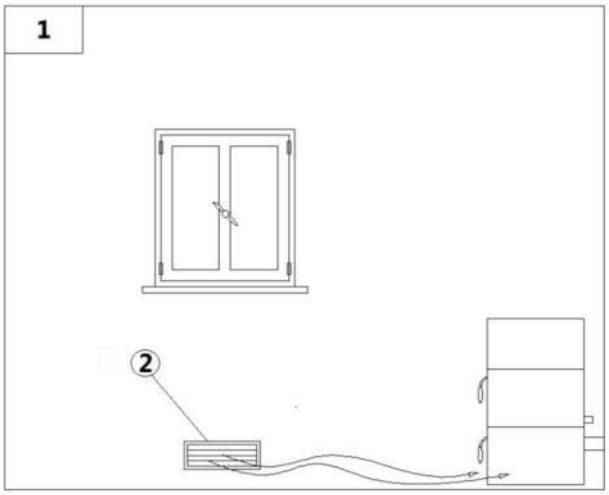


***Fig. 9 - Direct air inflow***

| *LEGEND* | *Fig. 9* |
|---|---|
| *1* | *Room to ventilate* |
| *2* | *External air inlet* |

- The room must be endowed with an external air recycling for a good climate in your ambient.
- The air inflow from outside to the inner occurs directly, through an opening on the external wall of the room (see **Fig. 9**).
- Bedrooms, garages, and store of flammable materials are excluded.
- The air inlet should have a total net surface of 80 sqcm$^2$: the aforesaid surface is to widen if inside the room there are other activated appliances (for example: electric ventilators for foul air suction, cooker hoods, other stoves, etc...) which depress the environment.
- At switched on appliance it is necessary to check that the pressure fall between the room and the outside does not exceed 4,0 Pa value: if necessary widen the air inlet (EN 13384).
- The air inlet must be realized at a height close to the floor with an external grid against birds. In such a way it cannot be obstructed by any object.
- **In case of installation with sealed-chamber the air inlet is not necessary.**

## 4.2 COMBUSTIBLE AIR INLET FOR SEALED-CHAMBER INSTALLATION

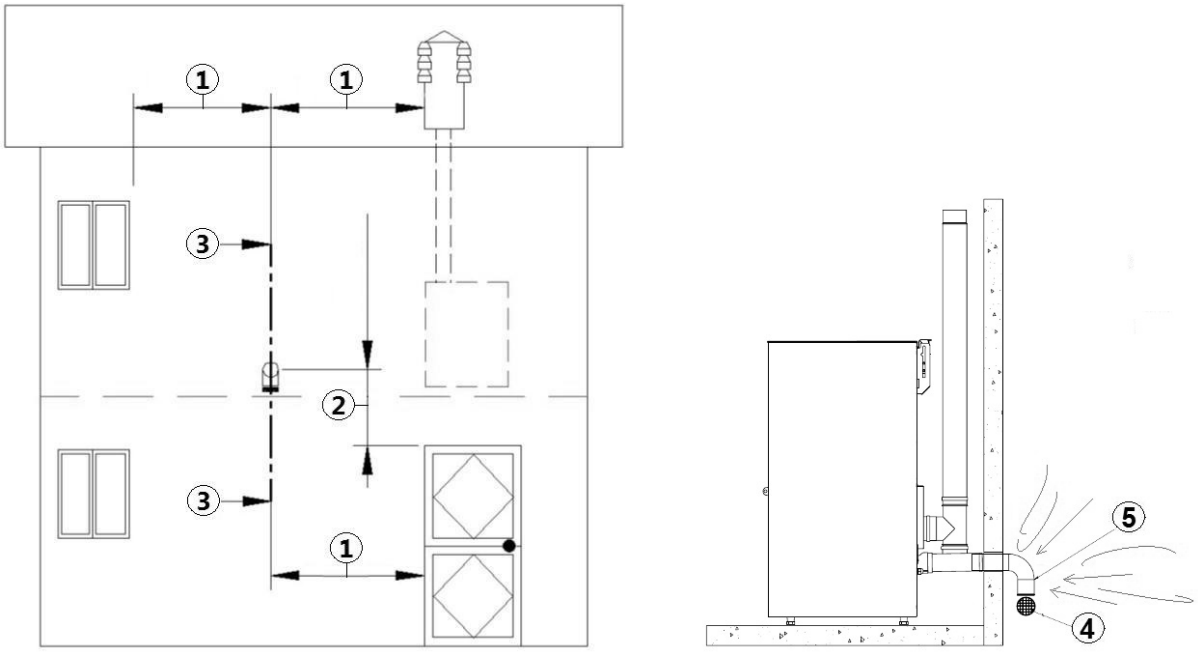


***Fig. 10 - Air inlet for sealed-chamber installation***

| *LEGEND* | *Fig. 10* |
|---|---|
| ***1*** | *≥ 1,5 mt* |
| ***2*** | *≥ 0,3 mt* |
| ***3-3*** | *Sectional view* |
| ***4*** | *Shield grid* |
| ***5*** | *Curve inlet to turn downwards* |

Check if the purchased stove has a sealed-chamber. If the stove is endowed with a sealed-chamber and you want also the whole installation with sealed chamber, please read the following instructions:

- It is necessary to extract the air for combustion directly from outside.
- Use a tube with minimum Ø60 mm and maximum 2 meters lenght; to connect see the back of the stove.
- French standards require installation in double-walled flues (concentric system). The combustion air is drawn from the cavity.
- During installation step is necessary to verify the minimum distances required for the combustible air inlet as (for example) an open door or window causes a vortex which could remove the combustible air necessary to the stove (see the underlying scheme).
- On the external wall it is necessary to install a curve at 90° to protect the combustible air inflow from wind effects: turn the curve inlet downwards, see **Fig. 10**.
- Endow the curve with an external shield grid against birds in such a way that it cannot be obstructed by any object.

*Check with your local authorities if exists any restrictive regulation regarding the combustible air inlet: if present, they must be applied*

*In some countries and/or regions the installation with sealed-chamber is obligatory: in case of doubt, please follow the most restrictive regulations.*

## 4.3 COMBUSTIBLE AIR INLET FOR SEALED-CHAMBER INSTALLATION

How to connect to the stove in the sealed chamber with concentric system:

***Fig. 11 - Phase1***

- Connect the air intake pipe to the combustion air pipe of the stove and tighten everything with a clamp (see [**Fig. 11**).

# 5 INSTALLATION AND ASSEMBLY

## 5.1 INTRODUCTION

- The assembly position must be chosen depending on environment, outlet, chimney flue.
- Check with local authorities if there are any restrictive regulations which regard the combustible air inlet, room ventilation, fume exhaust system together with chimney flue and chimney pot.
- Check if there is the combustible air inlet.
- Check the probable presence of other stoves or appliances which could depress the room.
- Check at switched on stove if there is the presence of CO in the room.
- Check if the chimney has the necessary draught.
- Check if during the fume passage all has been executed in safety (probable fume losses and distances from flammable materials, etc.…).
- The installation of the appliance must enable an easy access for appliance, fume exhaust pipes and chimney flue cleaning.
- The installation must enable en easy access to the electric connection plug.
- To install more appliances, the external air inlet must be correctly dimensioned (see **FEATURES a pag. 48**).

## 5.2 PREPARATION AND UNPACKING

The product is packaged in a recyclable cardboard box according to RESY standards, on a wood pallet. All the packaging materials can be reused for similar purposes or, in the event, disposed of as waste assimilable to urban solid waste, following the standards in force. After having removed the packaging, make sure the product is intact.

*Handle the product with appropriate means, respecting the safety standards in force. Do not overturn the packaging and use caution for the ceramic details.*

The stoves are delivered in a single package with ceramic panels or steel sides packaged along with the structure and positioned either on top or to the side. Open the packaging, remove the cardboard and any supporting polystyrene and place the stove in the selected location, making sure it complies with the requirements.
The stove body or single unit must always be handled upright exclusively using hand trucks. Be especially careful to protect the door and its glass from mechanical impacts that would compromise their integrity.
If possible, unpack the stove near the area in which it will be installed.
The packaging materials are neither toxic nor harmful.
To take the stove off the pallet, remove the two "U" screws and slide the "S" plate out from the stove foot. There are four "S" brackets (see below).

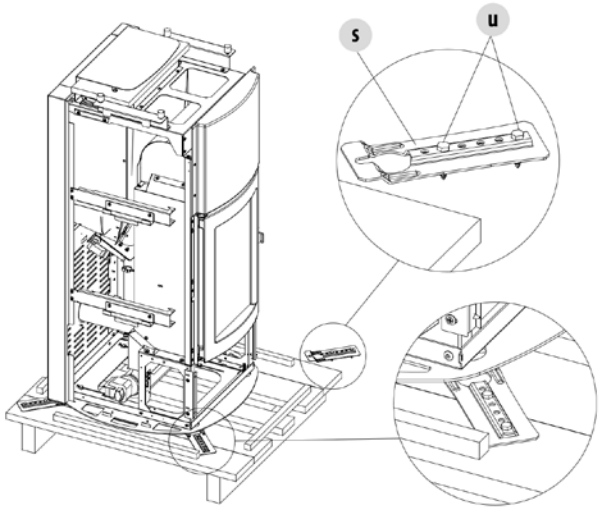


***Fig. 12 - Remove the fastening brackets***

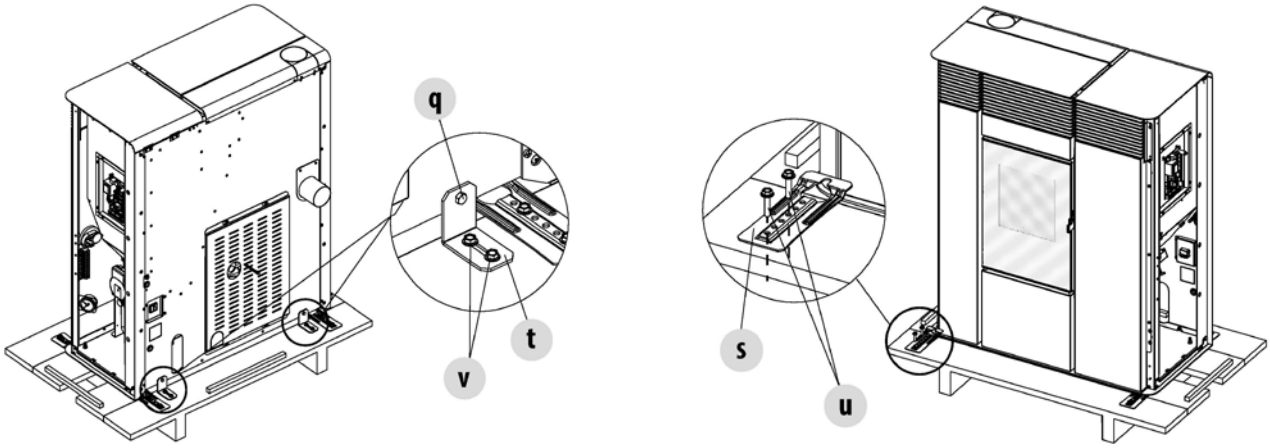


***Fig. 13 - Remove the fastening brackets***

Position the stove and connect it to the smoke duct. Adjust the 4 feet (J) to find the right level so that the smoke duct and pipe are coaxial. If the stove needs to be connected to an exhaust pipe that goes through the back wall (to go into the flue), be extremely careful not to force it.

*Forcing the stove smoke exhaust or using it improperly to lift or position the stove will irreversibly compromise its function.*

Turning the feet clockwise lowers the stove. Turning the feet anticlockwise raises the stove (see below).


***Fig. 14 - Foot adjustment***

## 5.3 OVERALL DIMENSIONS

### 5.3.1 IDRO PRINCE³ 12 DIMENSIONS

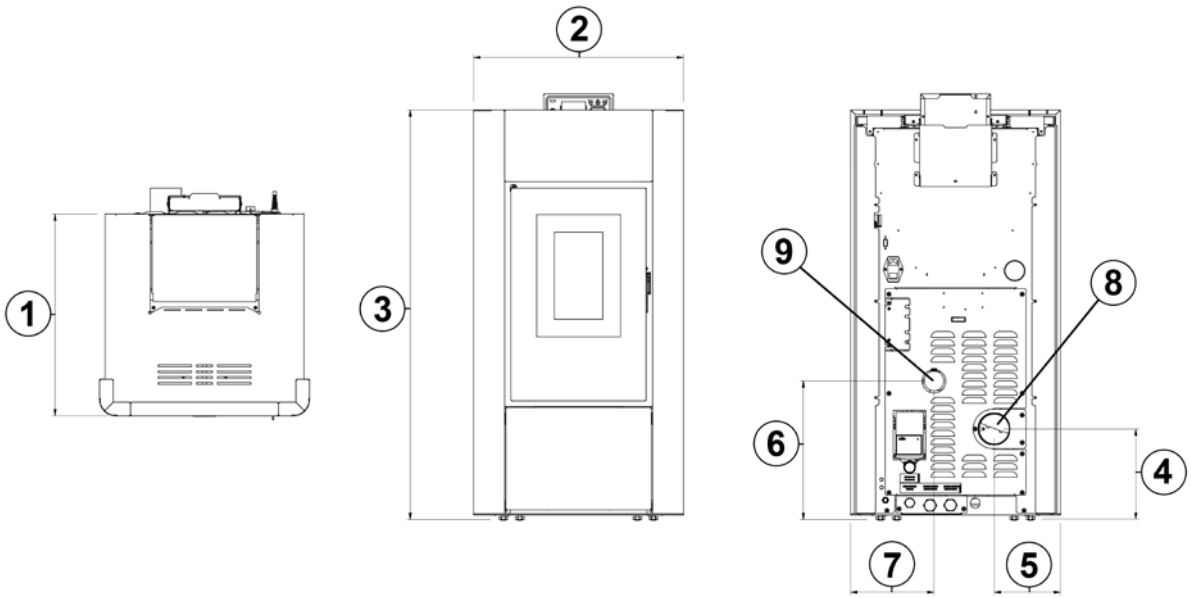


*Fig. 15 - Idro Prince³ 12*

| *LEGEND* | *Fig. 15* |
|---|---|
| *1* | *52 cm* |
| *2* | *52,7 cm* |
| *3* | *100 cm* |
| *4* | *22,3 cm* |
| *5* | *15,5 cm* |
| *6* | *33,5 cm* |
| *7* | *20,8 cm* |
| *8* | *Exhaust fumes d.8 cm* |
| *9* | *Hole combustion air inlet d.5 cm* |

### 5.3.2 IDRO PRINCE³ 16-23-23 $H_2O$ - IDRO RIVER³ 16-23-23 $H_2O$ DIMENSIONS

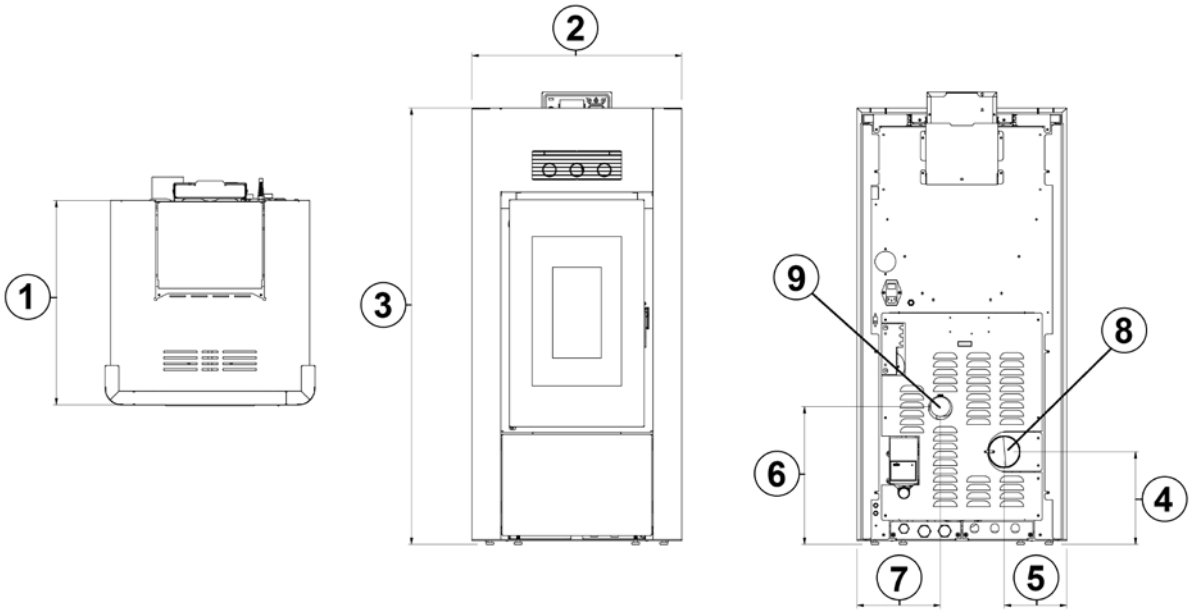


*Fig. 16 - IDRO PRINCE³ 16 - 23 - 23 $H_2O$ IDRO RIVER³ 16 - 23 - 23 $H_2O$*

| LEGEND | Fig. 16 |
|---|---|
| 1 | 52 cm |
| 2 | 53,5 cm |
| 3 | 111,5 cm |
| 4 | 23,5 cm |
| 5 | 15 cm |
| 6 | 35 cm |
| 7 | 20 cm |
| 8 | Exhaust fumes d.8 cm |
| 9 | Hole combustion air inlet d.5 cm |

### 5.3.3 DIMENSIONI STUFA IDRO PRINCE 30 - 30 $H_2O$

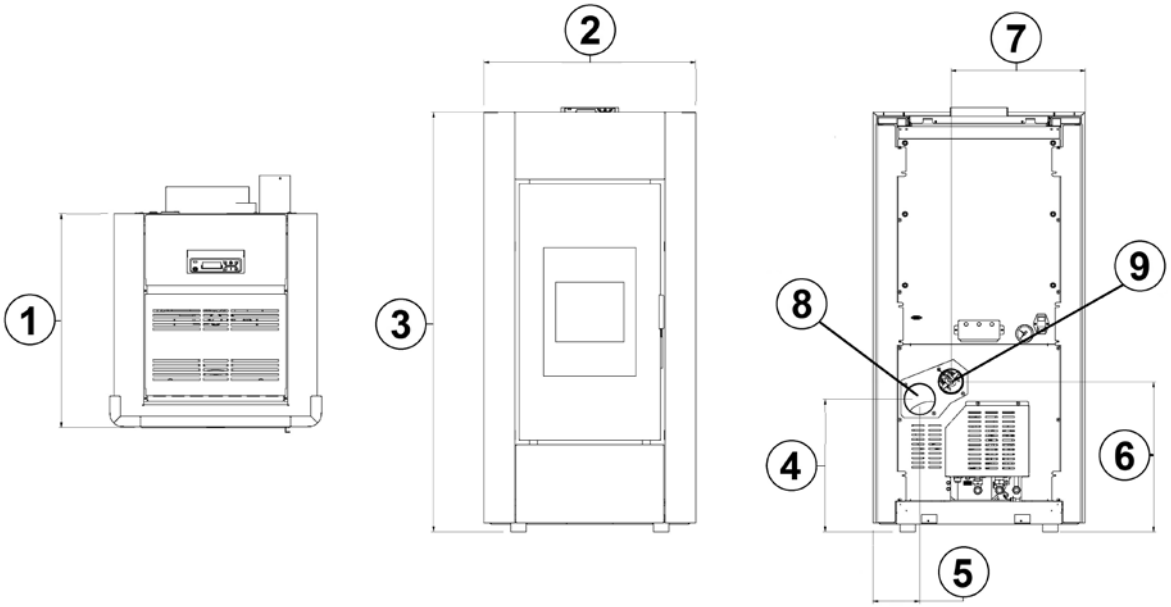


*Fig. 17 - Idro Prince 30-30 $H_2O$*

| LEGEND | Fig. 17 |
|---|---|
| 1 | 69 cm |
| 2 | 68,5 cm |
| 3 | 135,5 cm |
| 4 | 42,8 cm |
| 5 | 15,1 cm |
| 6 | 48,6 cm |
| 7 | 25,2 cm |
| 8 | Exhaust fumes d.10 cm |
| 9 | Hole combustion air inlet d.8 cm |

### 5.3.4 AQUOS³ 16-23-23 $H_2O$ DIMENSIONS

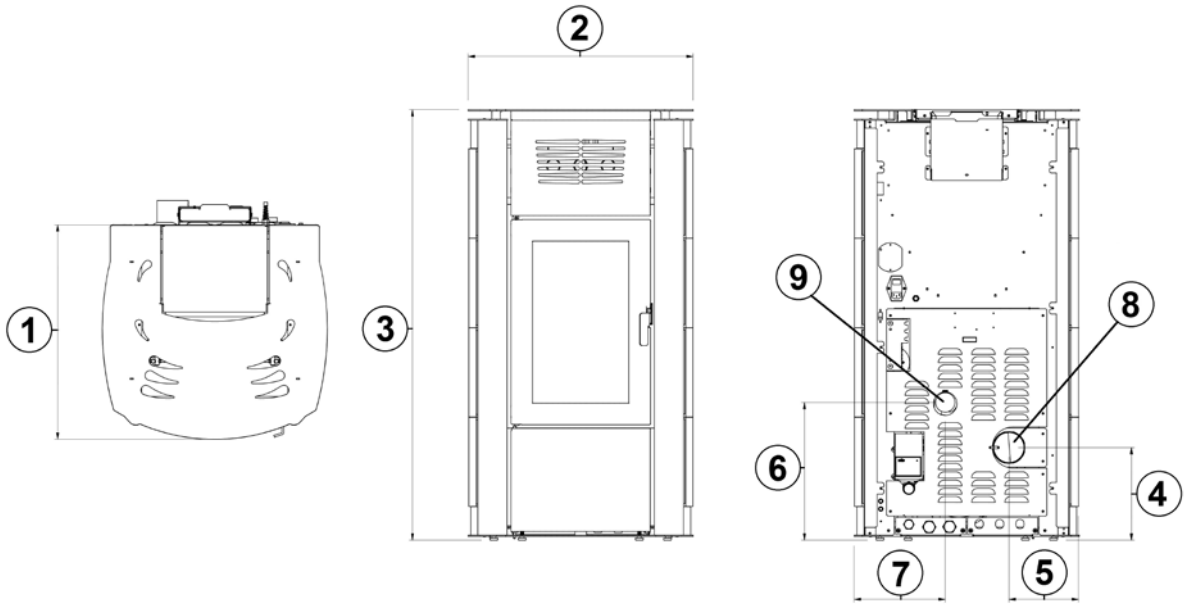


*Fig. 18 - Aquos³ 16-23-23 $H_2O$*

| *LEGEND* | *XREF-2:10645]* |
|---|---|
| ***1*** | *54,6 cm* |
| ***2*** | *57,5 cm* |
| ***3*** | *109,5 cm* |
| ***4*** | *23 cm* |
| ***5*** | *17,3 cm* |
| ***6*** | *34 cm* |
| ***7*** | *22,5 cm* |
| ***8*** | *Exhaust fumes d.8 cm* |
| ***9*** | *Hole combustion air inlet d.5 cm* |

### 5.3.5 IDRON 16-22 AIRTIGHT - HIDROFIRE 22.8 - MIRA 16-22 - TESIS 16-23 AIRTIGHT DIMENSIONS

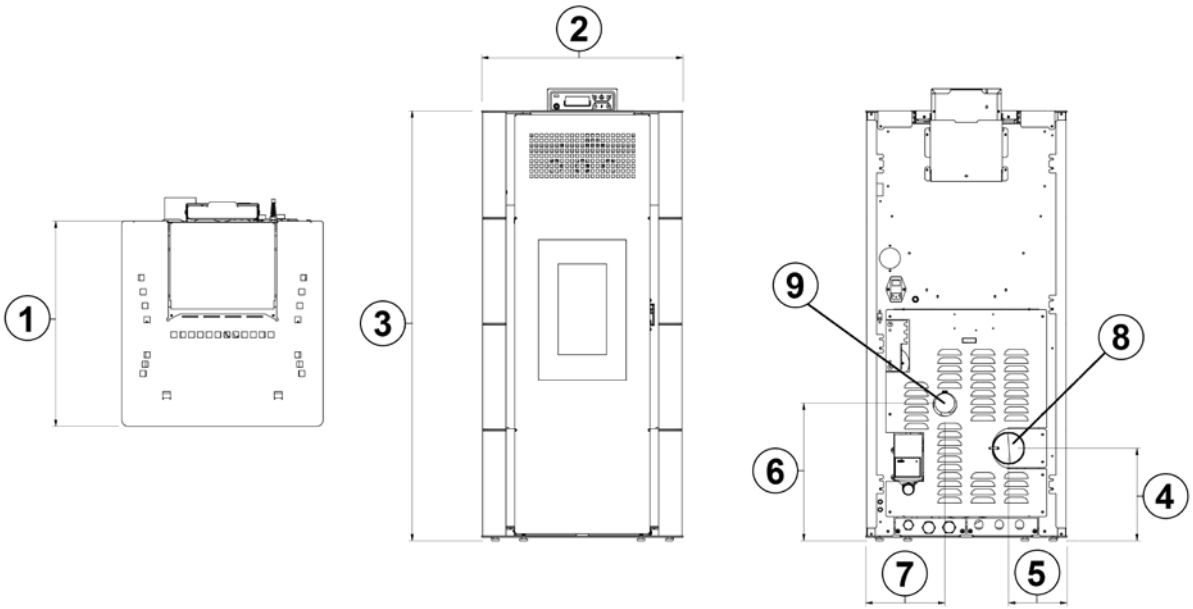


*Fig. 19 - Idron 16-22 Airtight / Hidrofire 22.8 / Mira 16-22 /Tesis16-23 Airtight*

| LEGEND | Fig. 19 |
|---|---|
| 1 | 52,5 cm |
| 2 | 51,5 cm |
| 3 | 109 cm |
| 4 | 23 cm |
| 5 | 14,5 cm |
| 6 | 34 cm |
| 7 | 20 cm |
| 8 | Exhaust fumes d.8 cm |
| 9 | Hole combustion air inlet d.5 cm |

### 5.3.6 MAYA³ 16 - 24 DIMENSIONS

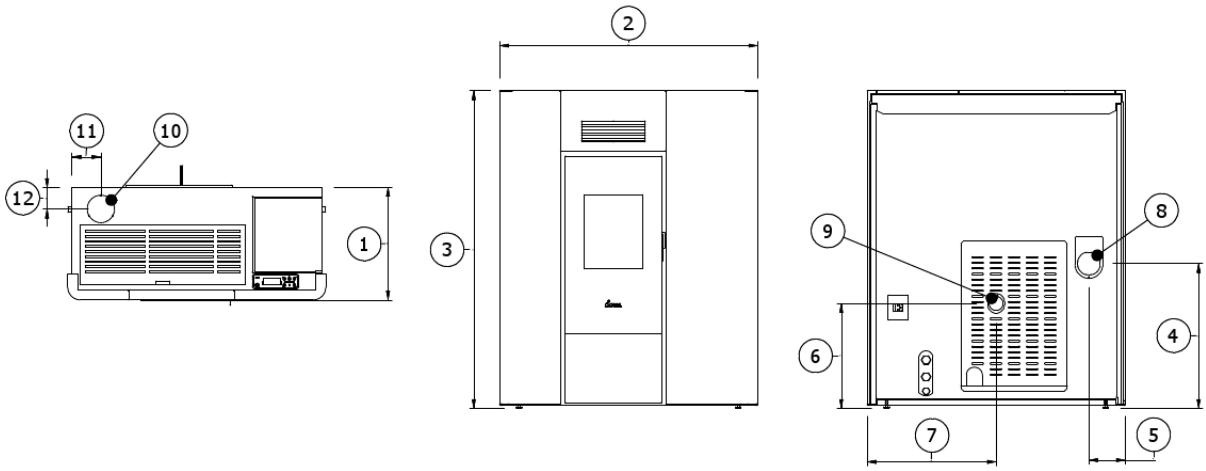


*Fig. 20 - MAYA3 16 - 24*

| LEGEND | Fig. 20 |
|---|---|
| 1 | 40.5cm |
| 2 | 92.5cm |
| 3 | 113.5cm |
| 4 | 57.5cm |
| 5 | 13cm |
| 6 | 37.5cm |
| 7 | 46cm |
| 8 | Scarico fumi d. 8 cm |
| 9 | Presa aria comburente d.5 cm |
| 10 | Scarico fumi superiore d.8 cm |
| 11 | 10,5 |
| 12 | 40,5 |

## 5.4 MINIMUM DISTANCES

We recommend installing the stove away from any walls and/or furniture with minimum air circulation to efficiently ventilate the appliance and properly distribute heat in the room. Respect the distances from flammable or heat-sensitive objects (sofas, furniture, wood finishes, etc.), as specified below. The front distance from flammable materials must be at least the value shown in the product technical data table.
For objects that are considered particularly delicate, like furniture, curtains, sofas, increase the distance from the stove accordingly.

*If there are wood floors, we recommend assembling a floor protector and, in any case, following the standards in force in the country.*

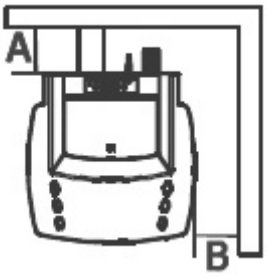


*Fig. 21 - Safety distance*

| MODEL | NON-FLAMMABLE WALLS | FLAMMABLE WALLS |
|---|---|---|
| IDRO PRINCE$^3$ 12 | A = 5 cm / B = 5 cm | A = 20 cm / B = 20 cm |
| IDRO PRINCE$^3$ 16-23-23 H2O | A = 5 cm / B = 5 cm | A = 20 cm / B = 20 cm |
| IDRO PRINCE 30-30 H2O | A = 5 cm / B = 5 cm | A = 20 cm / B = 20 cm |
| AQUOS$^3$ 16-23-23 H2O | A = 5 cm / B = 5 cm | A = 20 cm / B = 20 cm |
| IDRON 16-22 AIRTIGHT | A = 5 cm / B = 5 cm | A = 20 cm / B = 20 cm |
| HIDROFIRE 22.8 | A = 5 cm / B = 5 cm | A = 20 cm / B = 20 cm |

If the floor is made of combustible material, we recommend using a protector made of incombustible material (steel, glass) that also protects the front part from any falling burnt particles during cleaning.
The appliance must be installed on flooring that has an appropriate load-bearing capacity.
If the existing construction does not meet this requirement, appropriate measures must be taken (for example, a load distribution plate).

## 5.5 IDRO PRINCE$^3$ 12-16-23-23 $H_2O$-30-30 $H_2O$ - MIRA 16-22 - TESIS 16-23 AIRTIGHT FRAME ASSEMBLY

To assemble the frame, proceed as follows:

*Fig. 22 - Secure the strut*

*Fig. 23 - Secure the grate*

*Fig. 24 - Position the frame*

- Secure the strut with screws (see **Fig. 22**). Work on a table.
- Secure the grate with screws on the upper front (see **Fig. 23**).
- Hook the frame to the stove (see **Fig. 24**).

*Fig. 25 - Secure the frame*

*Fig. 26 - Put in the lower door*

*Fig. 27 - Close the door*

- Secure the frame to the lower part of the stove (see **Fig. 25**).
- Fit the lower door by putting the pins into the specific holes (see **Fig. 26**).
- Turn the door and close it (see **Fig. 27**).

## 5.6 FITTING THE METAL FRAME OF IDRO RIVER3 16-23-23 H2O

To assemble the frame, proceed as follows:

- Remove the top panel **Fig. 28**
- Remove the grid of the top panel by unscrewing the 4 screws **Fig. 29**
- Secure the top panel to the support (with the screws) and screw the grid back into place **Fig. 30**

*Fig. 28 - Remove the panel*

*Fig. 29 - Remove the grid*

*Fig. 30 - Secure the panel to the support*

*Fig. 31 - Attach the frame to the stove in the slots*

*Fig. 32 - 1st slot*

*Fig. 33 - 2st slot*

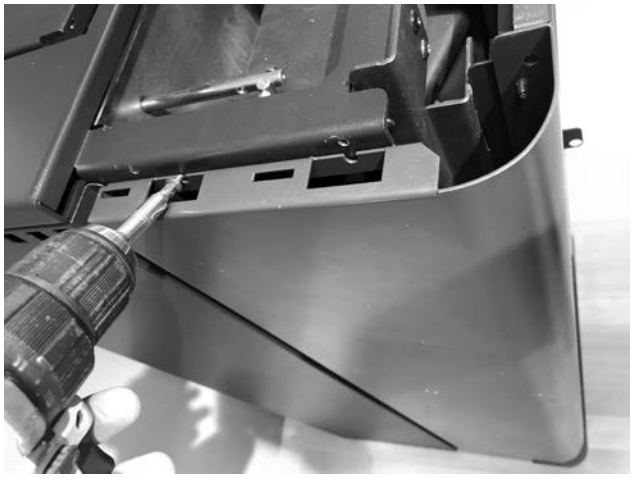

*Fig. 34 - Secure the frame*

## 5.7 FITTING THE MAIOLICA FRAME OF IDRO RIVER3 16-23-23 H20

To assemble the frame, proceed as follows:

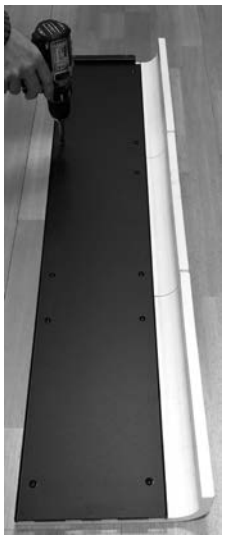

*Fig. 35 - Fitting the maiolica panels*

*Fig. 36 - Bottom slot*

*Fig. 37 - Attach the panel*

*Fig. 38 - Securing the panel*

## 5.8 ASSEMBLING THE TOP CLADDING AND BOTTOM DOOR

To assemble the cladding, proceed as follows:
Place the top panel on the stove (if maiolica).
Attach the top in the specific slots (if in metal).

*Fig. 39 - Placing the top panel*

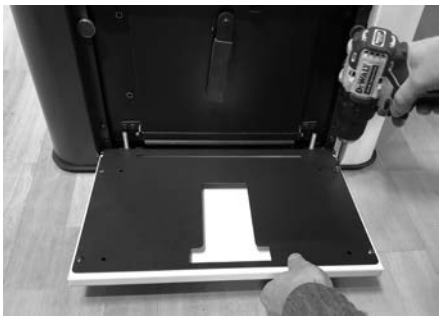

*Fig. 40 - Securing the bottom door panel*

*Fig. 41 - Adjust the magnet and block with the key*

## 5.9 MAYA3 16-24 FRAME ASSEMBLY

To assemble the frame, proceed as follows:

*Fig. 42 - Secure the strut*

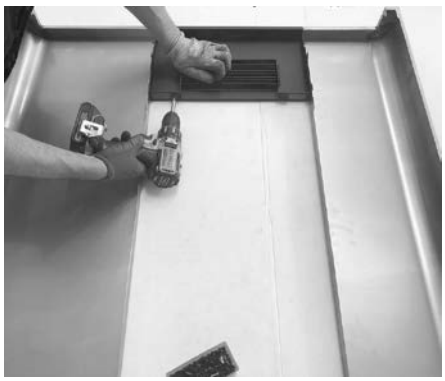

*Fig. 43 - Secure the grate*

*Fig. 44 - Unscrew the screw*

- Secure the strut with screws (see **Fig. 42**). Work on a table.
- Secure the grate with screws on the upper front (see **Fig. 43**).
- Unscrew the screw of the door (see **Fig. 44**).

*Fig. 45 - Remove the door*

*Fig. 46 - Position the frame*

*Fig. 47 - 1° slot*

- Remove the door (see **Fig. 45**).
- Hook the frame to the stove (see **Fig. 46**).
- Parts of gear joints ().

*Fig. 48 - 2° Slot*

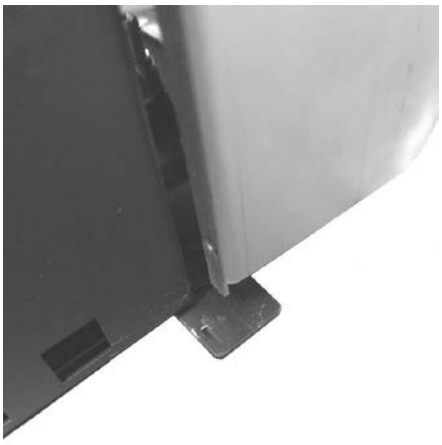

*Fig. 49 - 3° Slot*

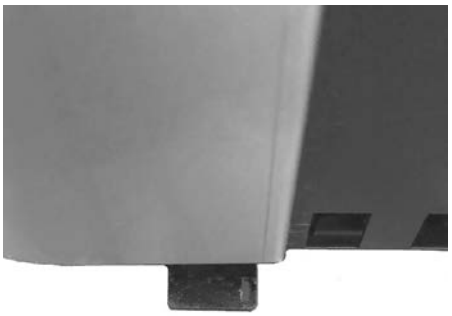

*Fig. 50 - 4° Slot*

## 5.10 ASSEMBLING AQUOS SIDE PANELS$^3$ 16-23-23 $H_2O$

To assemble the side panels, proceed as follows:

*Fig. 51 - Remove the cover*

*Fig. 52 - Remove the compensator*

*Fig. 53 - Put in the finish*

- Unscrew the screws on the cover and remove it (see **Fig. 51**).
- Remove the compensator from the side (see **Fig. 52**).
- Put in the painted / ceramic / stone panels, sliding them down the guides (see **Fig. 53**).

*Fig. 54 - Bend the supports*

*Fig. 55 - Position the compensator*

*Fig. 56 - Fasten the compensator*

- When you put in the finishes, bend the supports slightly to make up for any looseness in the metal/ceramic/stone panel. These supports are grooved along the guides (see **Fig. 54**).
- Reposition the compensator on the side (see **Fig. 55**).
- Secure the compensator (see **Fig. 56**) and reposition the cover with the screws.

## 5.11 ASSEMBLING THE IDRON 16-22 AIRTIGHT / HIDROFIRE 22.8 SIDE PANELS / TESIS 16-23 AIRTIGHT

To assemble the side panels, proceed as follows:

*Fig. 57 - Remove the screws*

*Fig. 58 - Hook the side panel*

- Unscrew the screws on the cover and remove it (see **Fig. 57**).
- Hook the teeth of the side panels into their grooves (see **Fig. 58**).

*Fig. 59 - Secure the front side panel*

*Fig. 60 - Secure the rear side panel*

- Secure the side panel on the front (see **Fig. 59**).
- Secure the side panel on the back of the stove (see **Fig. 60**).
- Reposition the cover with the screws.

## 5.12 ELECTRIC CONNECTION

*Warning: the appliance must be installed by an authorized technician!*

- The electric connection occurs through a cable with plug put in an electric socket which is able to support charge and tension specific of every model, as described in the technical datas table.
- The plug must be easily accessible when the appliance is installed.
- Please further assure you that your network is endowed with an efficient earth connection: if it does not exist or if it is not efficient, please endow you with one in compliance with the law.
- Connect the supply cable first on the back of the stove and then at a wall electric socket.
- Do not use extension cables.
- If the feeder cable is damaged, it must be replaced by an authorized technician.
- When the stove is not going to be used for a long period of time, it advisable to remove the plug from the socket on the wall.

## 5.13 STOVE POWER SUPPLY

The switch on the back of the stove is used to power the system.
There is a fuse holder compartment on the back of the stove, under the power plug. Use a screwdriver to open the fuse holder compartment cover and, if necessary, replace the fuses (3.15 A time delay).

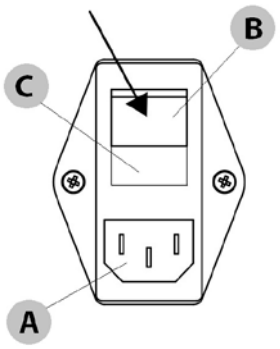


*Fig. 61 - Switch*

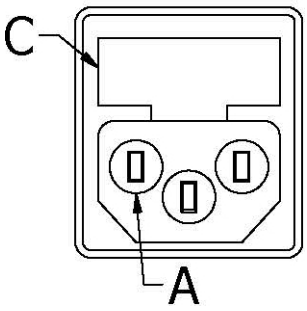


*Fig. 62 - Switch*

| *LEGEND* | *Fig. 62* |
|---|---|
| ***A*** | *Stove power supply* |
| ***B*** | *Stove On/Off switch* |
| ***C*** | *Fuse holder compartment* |

# 6 SMOKE OUTLET CONNECTION MAYA 3

## 6.1 GENERAL WARNINGS

The stove can have a rear or top smoke outlet. You must purchase the elbow (rear outlet) or the straight pipe (top outlet).

## 6.2 REAR OUTLET CONNECTION

To install the stove with rear smoke outlet, insert the elbow "A" (not supplied) into the inlet'"r" and pass it through the hole "f" on the back of the stove. Make the necessary connections to the flue.

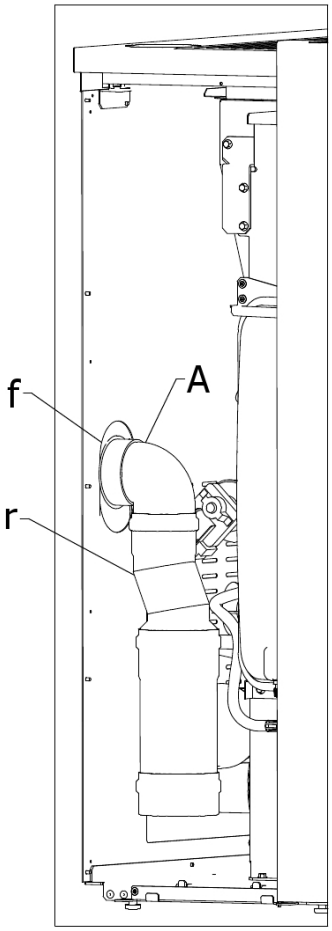


***Fig. 63 - Rear outlet***

## 6.3 TOP OUTLET CONNECTION MAYA 3

- insert the linear pipe "B" (not supplied) into the inlet "r" on the stove
- secure the pipe "B" to the stove using the hook "C" and screw "z"

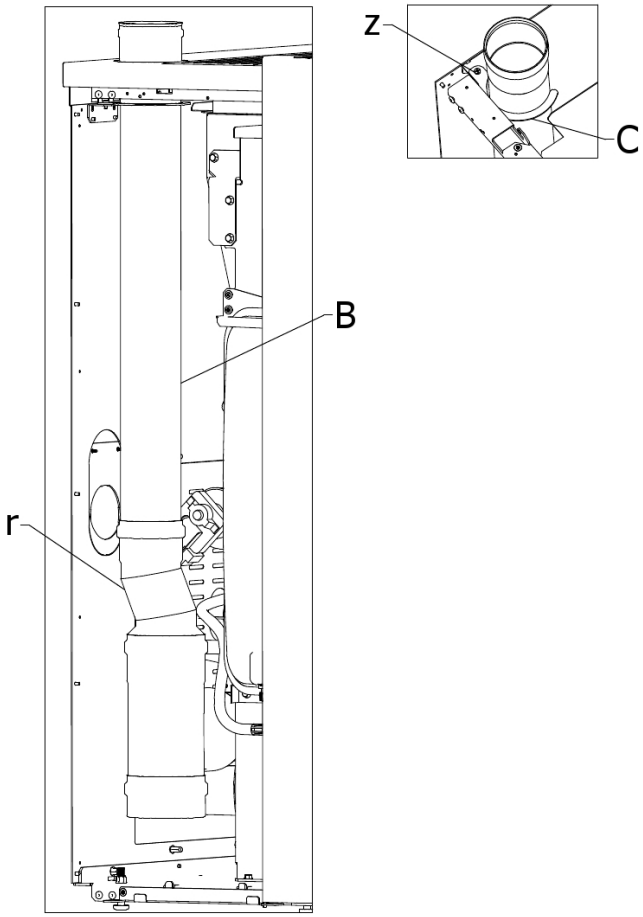


***Fig. 64 - Top outlet***

# 7 PLUMBING CONNECTION

## 7.1 PLUMBING SYSTEM CONNECTION

*IMPORTANT!*
*If installation of the product involves interaction with another, pre-existing system complete with heating equipment (gas boiler, methane boiler, diesel boiler, etc.), contact qualified personnel, who subsequently will be responsible for conformity of the system in compliance with the applicable law in force.*
*The Company declines all responsibility for damage to persons or things in the event of failed or incorrect operation, if the aforementioned warnings are not complied with.*

*IMPORTANT!*
*WE STRONGLY RECOMMEND WASHING THE ENTIRE SYSTEM BEFORE CONNECTING THE STOVE IN ORDER TO REMOVE RESIDUE AND BUILD-UPS.*
*Always install gate valves upstream of the stove to isolate it from the hydraulic system should it be necessary to move it for routine and/or special maintenance. Connect the stove using flexible hoses so as not to excessively bind the stove to the system and to allow it to be moved slightly.*
*The pressure discharge valve must always be connected to a water discharge pipe. The pipe must be suitable to withstand the high water temperature and pressure.*

## 7.2 CONNECTION DIAGRAM IDRO PRINCE³ 12

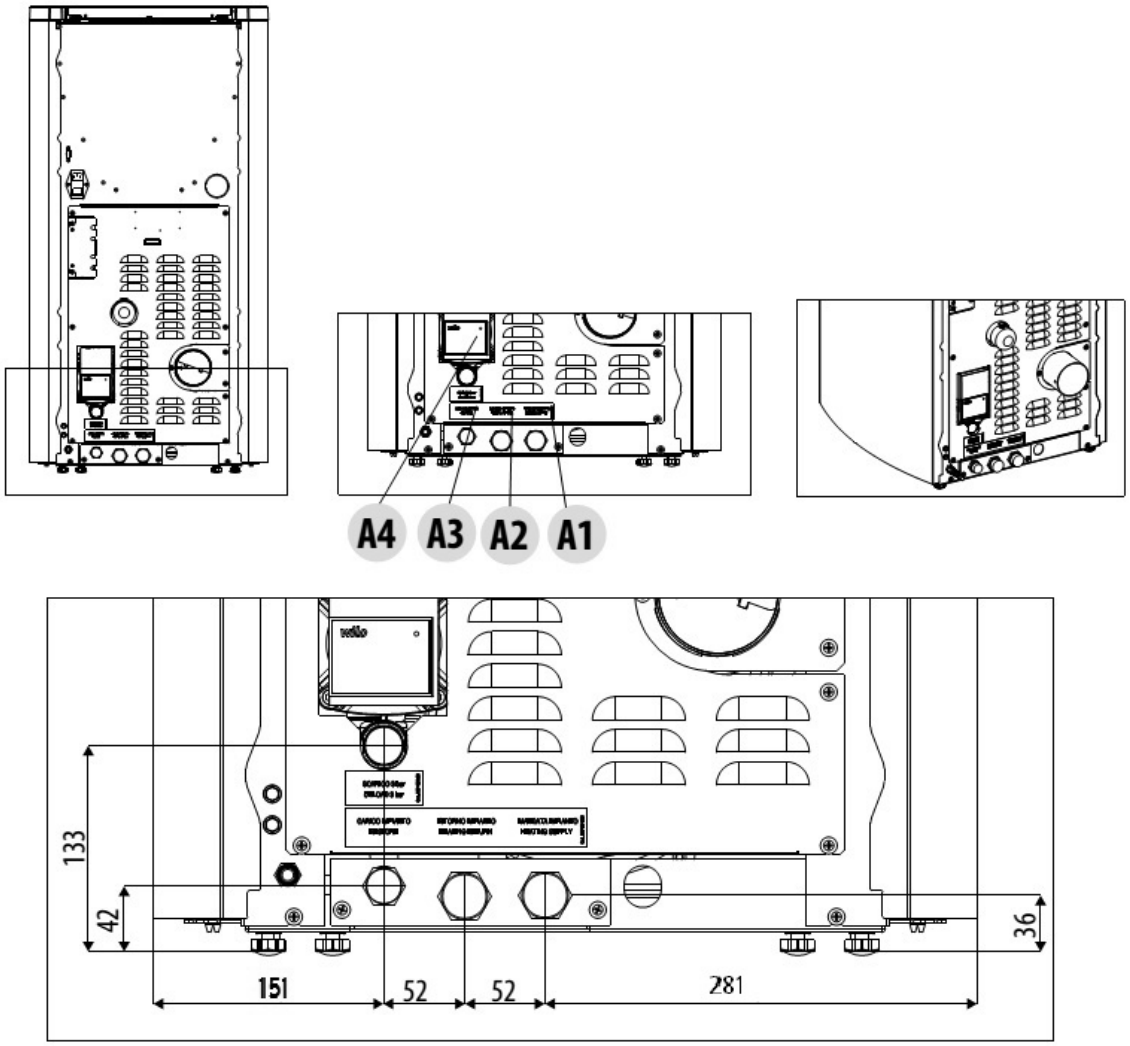


***Fig. 65 - Connection diagram***

| *LEGEND* | *Fig. 65* |
|---|---|
| ***A1*** | *3/4"M heating water delivery* |
| ***A2*** | *3/4"M heating water return* |
| ***A3*** | *System filling* |
| ***A4*** | *System draining* |

## 7.3 CONNECTION DIAGRAM IDRO PRINCE[3] 16-23 - IDRORIVER[3] 16 - 23 - AQUOS[3] 16-23 - IDRON 16-22 AIRTIGHT - HIDROFIRE 22.8 - MIRA 16-22 - TESIS 16-23 AIRTIGHT

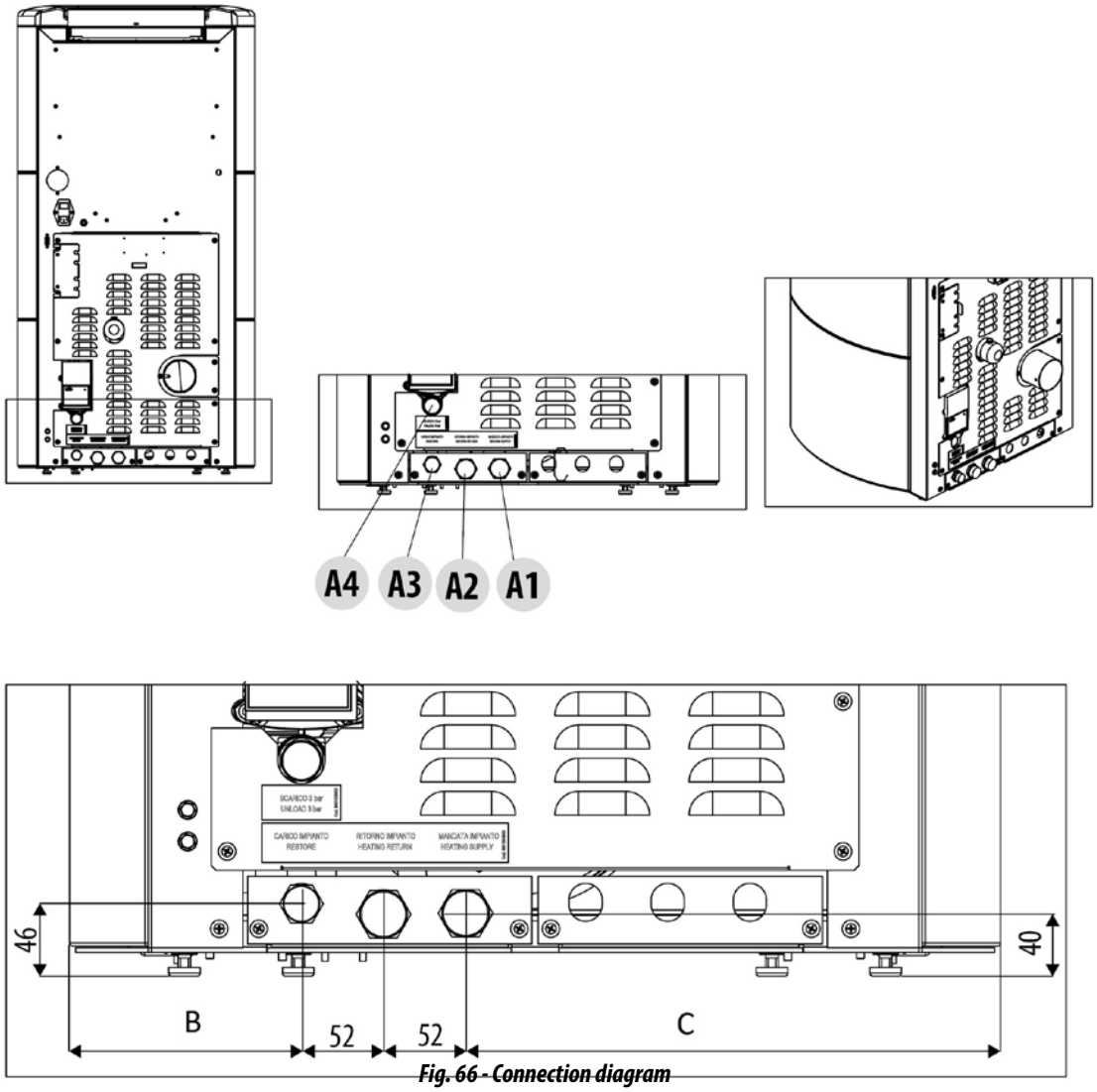


***Fig. 66 - Connection diagram***

| *LEGEND* | *Fig. 66* |
|---|---|
| ***A1*** | *3/4"M heating water delivery* |
| ***A2*** | *3/4"M heating water return* |
| ***A3*** | *System filling* |
| ***A4*** | *System draining* |
| ***B=139 - C=330*** | *Aquos 3-16-23* |
| ***B=120 - C=312*** | *Idroprince 3-16-23* |
| ***B=106,5 - C=298,7*** | *Idron 16-22 Airtight* |
| ***B=106,5 - C=298,7*** | *Tesis 16-23 Airtight* |
| ***B=106,5 - C=298,7*** | *Mira 16-22* |

## 7.4 CONNECTION DIAGRAM IDRO PRINCE 30

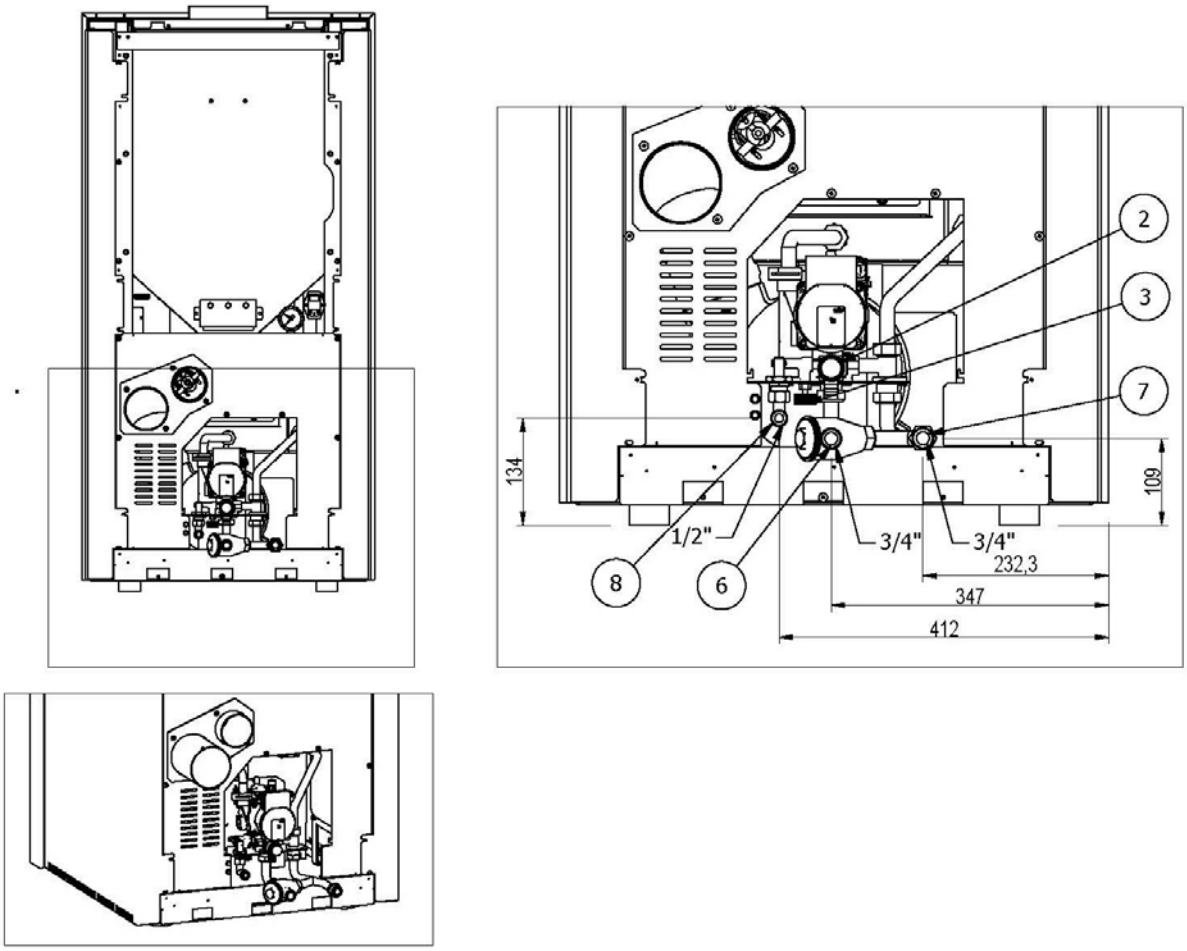


*Fig. 67 - Connection diagram*

| *LEGEND* | *Fig. 67* |
|---|---|
| ***2*** | *Safety valve* |
| ***3*** | *Filling valve* |
| ***6*** | *Heating return* |
| ***7*** | *Heating delivery* |
| ***8*** | *System filling water inlet* |

## 7.5 CONNECTION DIAGRAM (IDRO PRINCE$^3$ 23 $H_2O$, IDRORIVER$^3$ 23 $H_2O$, AQUOS$^3$ 23 $H_2O$)

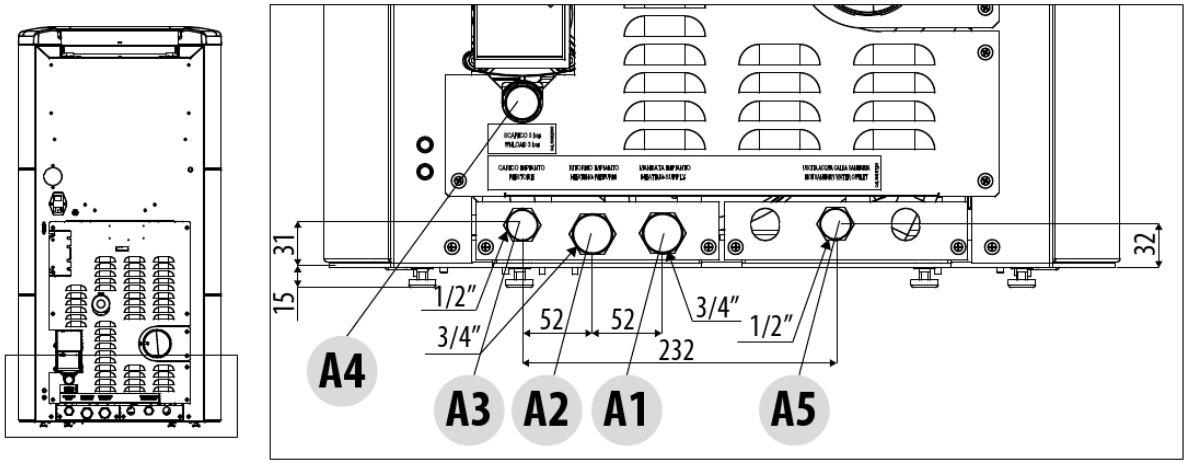


*Fig. 68 - Connection diagram ACS*

| LEGEND | Fig. 68 |
|---|---|
| A1 | 3/4"M heating water delivery |
| A2 | 3/4"M heating water return |
| A3 | System filling |
| A4 | System draining |
| A5 | Domestic hot water outlet |

## 7.6 CONNECTION DIAGRAM (IDRO PRINCE 30 $H_2O$)

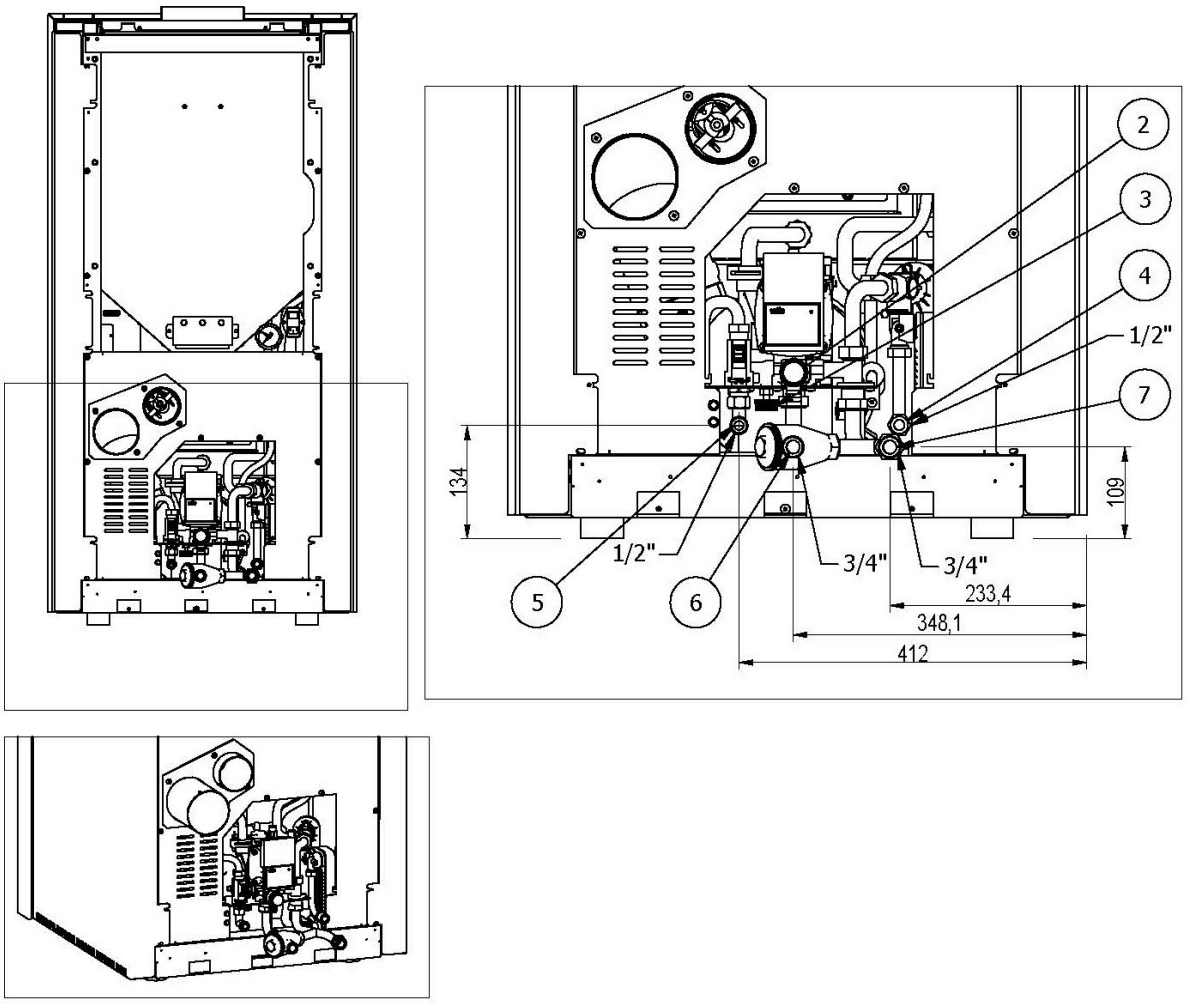


*Fig. 69 - Connection diagram*

| LEGEND | Fig. 69 |
|---|---|
| 2 | Safety valve |
| 3 | Filling valve |
| 4 | Domestic hot water outlet |
| 5 | Domestic hot water entry |
| 6 | Heating return |
| 7 | Heating delivery |

## 7.7 CONNECTION DIAGRAM MAYA[3] 16 - 24

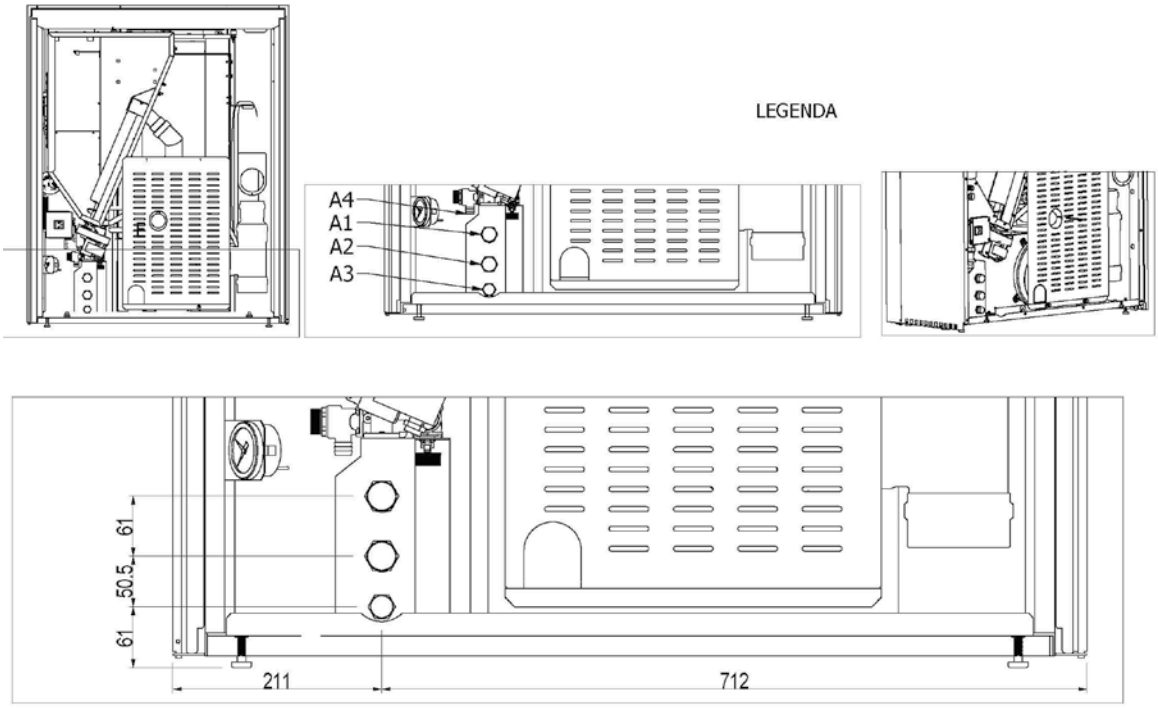


***Fig. 70 - Connection diagram***

| *LEGEND* | *Fig. 70* |
|---|---|
| ***A1*** | *3/4"M heating water delivery* |
| ***A2*** | *3/4"M heating water return* |
| ***A3*** | *System filling* |
| ***A4*** | *System draining* |

## 7.8 3 BAR DISCHARGE VALVE

There is a safety valve that can be inspected on the back of the stove under the pump. IT IS MANDATORY to connect a rubber hose that is resistant to temperatures up to 110°C (not supplied) to the safety exhaust and run it to the outside in case water is discharged.

*The manufacturer of the appliance is not liable for any flooding caused by the safety valves tripping if they are not properly coupled to the outside of the product or to an appropriate collection and extraction system.*

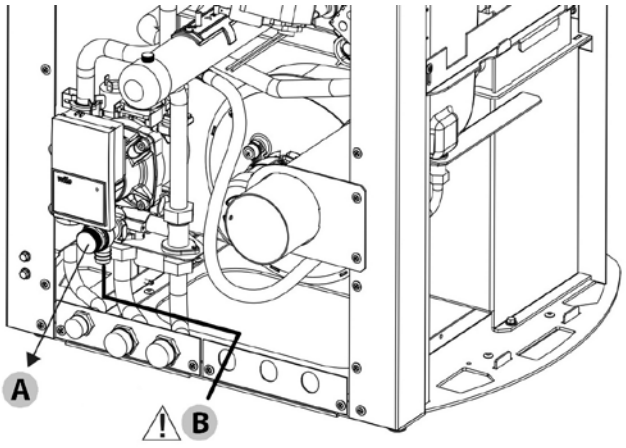


***Fig. 71 - Discharge valve***

| *LEGEND* | *Fig. 71* |
|---|---|
| ***A*** | *3 bar CE PN10, TMAX 110°C safety valve* |
| ***B*** | *ATTENTION: 110°C !!* |

## 7.9 WASHING THE SYSTEM

The connections must be easy to disconnect via pipe unions with swivel fittings.
Install suitable gate valves on the heating system pipes. A safety valve must be installed on the system.
To protect the heating system from harmful corrosion, build-ups or deposits, it is extremely important before installing the appliance to wash the system in compliance with the UNI 8065 standard (water treatment in heating systems for domestic use), using appropriate products.
The use of FERNOX PROTECTOR F1 (available at our authorised centres) product is recommended, this provides long-term protection of heating systems against corrosion and calcium build-up. It prevents the corrosion of the metal parts of the appliance, i.e. the ferrous metals, copper and copper and aluminium alloys. It also reduces the noise produced by the boiler. Refer to the instructions on the product. Cleaning should be performed by a qualified technician.
We also recommend the use of FERNOX CLEANER F3 and LEAK SEALER F4, always available from our authorised distribution centres.
FERNOX F3 is a neutral product for rapid and efficient cleaning of heating appliances. It has been designed to eliminate residues, oily deposits and incrustations from existing appliances of all ages. It can help restore the heating efficiency of the boiler and reduce the noise it generates.
FERNOX F4 is intended to be used with all heating appliances to seal micro fractures that cause small and inaccessible leaks.

## 7.10 FILLING THE SYSTEM

To fill the system, the stove may be equipped with a terminal (optional) with a non-return valve (D) to manually fill the heating system (if there is no terminal, use the filling valve on the main boiler). During this operation, the automatic bleed valve under the top ensures that any air in the system is expelled.
To allow the valve to bleed, we recommend loosening the grey cap by a turn and leaving the red cap tight (see figure). The filling pressure when the system is **COLD** must be **1 bar**. During operation, should system pressure drop (due to the gas dissolved in the water evaporating) below the above indicated minimum value, the user must bring it back to the initial value, using the filling valve.
For proper stove operation when it is **HOT**, pressure in the boiler must be **1.5 bar**.
**To monitor system pressure, the terminal (optional) is equipped with a pressure gauge (M).**
When filling is complete, always shut off the valve.

*Fit the system with a 2 bar safety valve connected to an accessible outlet.*

*It is normal for there to be noises and gurgling until all the air in the system has been expelled.*

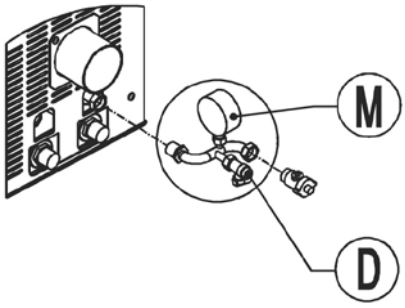


***Fig. 72 - Terminal with filling valve (D) and pressure gauge (M)***

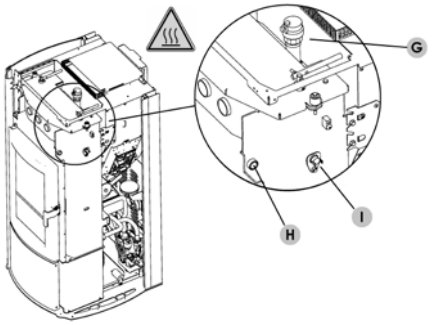


***Fig. 73 - Manual bleed valve (located under the top) (Idro Prince³ 16-23-23 H2O, Aquos³ 16-23-23 H2O, Idron 16-22 Airtight, Hidrofire 22.8)***

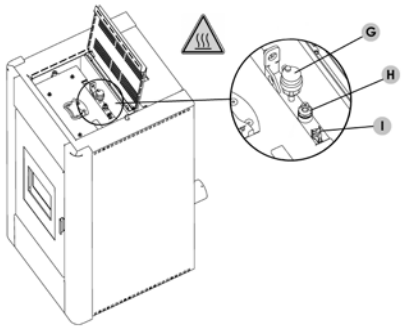


***Fig. 74 - Manual bleed valve (located under the top) (Idro Prince³ 30-30 H2O)***

## 7.11 WATER CHARACTERISTICS

The characteristics of the water used to fill the system are very important to prevent the build-up of mineral salts and the formation of incrustations along the pipes, in the boiler and in the heat exchangers.
Therefore, please ASK YOUR PLUMBER FOR HIS ADVICE CONCERNING:

*Hardness of water circulating in the system, to prevent problems of incrustation and limescale, especially in the domestic water heat exchanger. (> 25° French).*
*Installation of a water softener (if water hardness exceeds 25° French).*
*Filling the system with treated water (demineralised).*
*Possibly providing an anti-condensation circuit.*
*Installation of hydraulic shock absorbers to prevent water hammering along the fittings and pipes.*

If you have very extensive systems (with a large amount of water) or which require frequent refilling, the installation of water softening systems.

*It should be remembered that incrustations drastically reduce performance due to their extremely low thermal conductivity.*

## 7.12 SYSTEM CONFIGURATION

Upon installation, the product must be set according to the type of system, selecting the appropriate parameter in the "SETTINGS" menu.
The possible configurations are 5, as described below:

| CONFIGURATION | DESCRIPTION |
|---|---|
| 1 | Room temperature management via probe on the stove or by enabling an external room thermostat. |
| 2 | 2.1 Room temperature management via probe on the stove or by enabling an external room thermostat: instantaneous DHW production with plate exchanger. |
| | 2.2 Room temperature management via probe on the stove or by enabling an external room thermostat; DHW production for boiler or storage tank with thermostat (optional).<br>DISCONNECT ANY 3-WAY VALVES AND INTERNAL FLOW SWITCHES |
| 3 | Room temperature management via probe on the stove or by enabling an external room thermostat; boiler DHW production with ntc probe (10 kΩ ß3435).<br>DISCONNECT ANY 3-WAY VALVES AND INTERNAL FLOW SWITCHES |
| 4 | External Puffer management controlled by thermostat. |
| 5 | External Puffer management controlled by ntc probe (10 kΩ ß3435). |

## 7.13 SYSTEM WITH: DIRECT VENT PELLET STOVE AND ROOM PROBE

**Settable settings**

| SETTING | VALUES |
|---|---|
| ROOM TEMP. | 5°C - 35°C |
| WATER TEMP. | 30°C - 80°C |

**Parameters to set**

| SETTING | VALUES |
|---|---|
| Configuration | 1 |

**Hydraulic diagram**

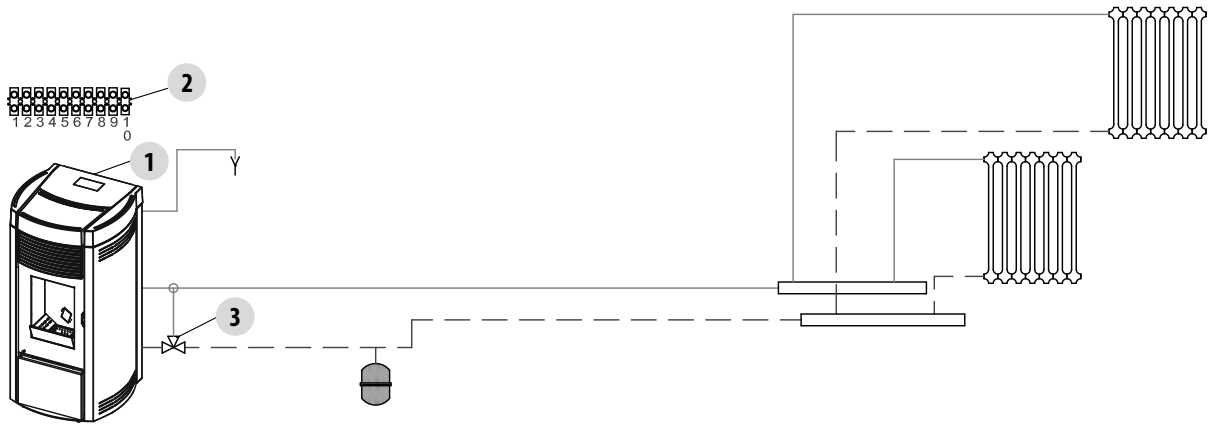


***Fig. 75 - System with: direct vent pellet stove and room probe***

| *LEGEND* | *Fig. 75* |
|---|---|
| ***1*** | *Pellet Boiler* |
| ***2*** | *Rear terminal board* |
| ***3*** | *Anti-condensate valve* |

## 7.14 SYSTEM WITH: DIRECT VENT PELLET STOVE AND ROOM THERMOSTAT

**Settable settings** :

| SETTING | VALUES |
|---|---|
| WATER TEMP. | 30°C - 80°C |

**Parameters to set** :

| SETTING | VALUES |
|---|---|
| Configuration | 1 |
| External thermostat | ON |

**Hydraulic diagram** :

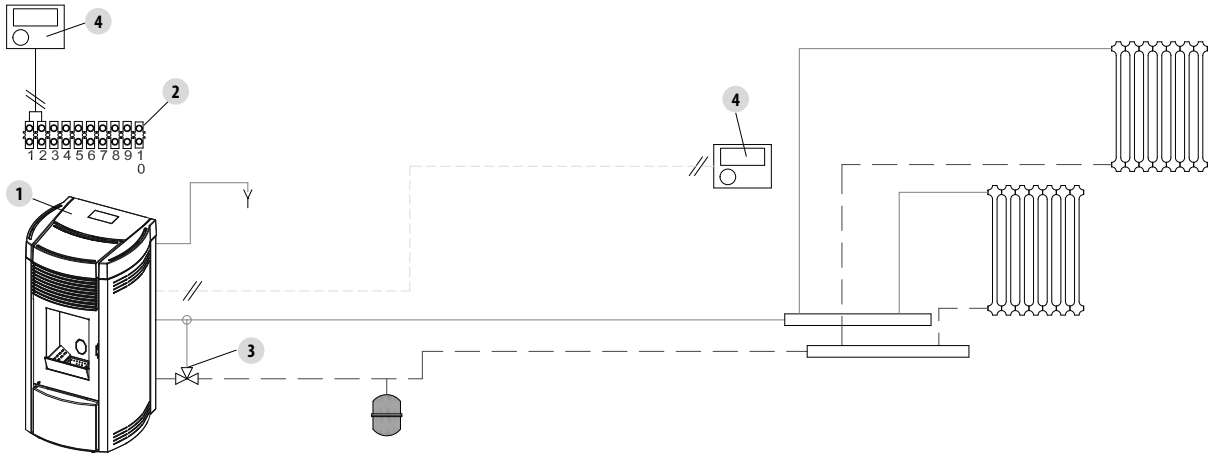


***Fig. 76 - System with: direct vent pellet stove and room thermostat***

| *LEGEND* | *Fig. 76* |
|---|---|
| ***1*** | *Pellet Boiler* |
| ***2*** | *Rear terminal board* |
| ***3*** | *Anti-condensate valve* |
| ***4*** | *Room thermostat* |

## 7.15 SYSTEM WITH: DIRECT VENT PELLET STOVE, ROOM PROBE, AND DHW BOILER

**Settable settings** :

| SETTING | VALUES |
|---|---|
| ROOM TEMP. | 5° C - 35°C |
| WATER TEMP. | 30° C - 80°C |
| BOILER TEMP. | 30° C - 80°C |

**Parameters to set** :

| SETTING | VALUES |
|---|---|
| Configuration | 3 |

**Hydraulic diagram** :

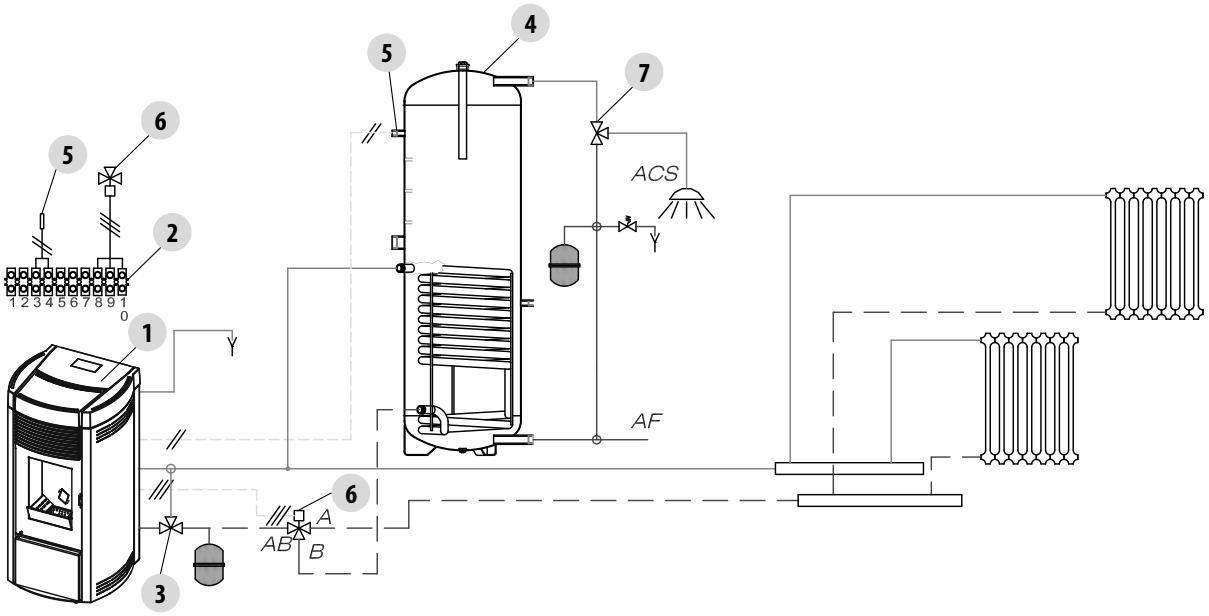


***Fig. 77 - System with: direct vent pellet stove, room probe, and DHW boiler***

| *LEGEND* | *Fig. 77* |
|---|---|
| ***1*** | *Pellet Boiler* |
| ***2*** | *Rear terminal board* |
| ***3*** | *Anti-condensate valve* |
| ***4*** | *DHW boiler* |
| ***5*** | *Boiler probe* |
| ***6*** | *3-way diverter valve* |
| ***7*** | *DHW Thermostatic Valve* |

## 7.16 SYSTEM WITH: DIRECT VENT PELLET STOVE, ROOM THERMOSTAT, AND DHW BOILER

**Settable settings** :

| SETTING | VALUES |
|---|---|
| WATER TEMP. | 30° C - 80°C |
| BOILER TEMP. | 30° C - 80°C |

**Parameters to set** :

| SETTING | VALUES |
|---|---|
| Configuration | 3 |
| External thermostat | ON |

**Hydraulic diagram** :

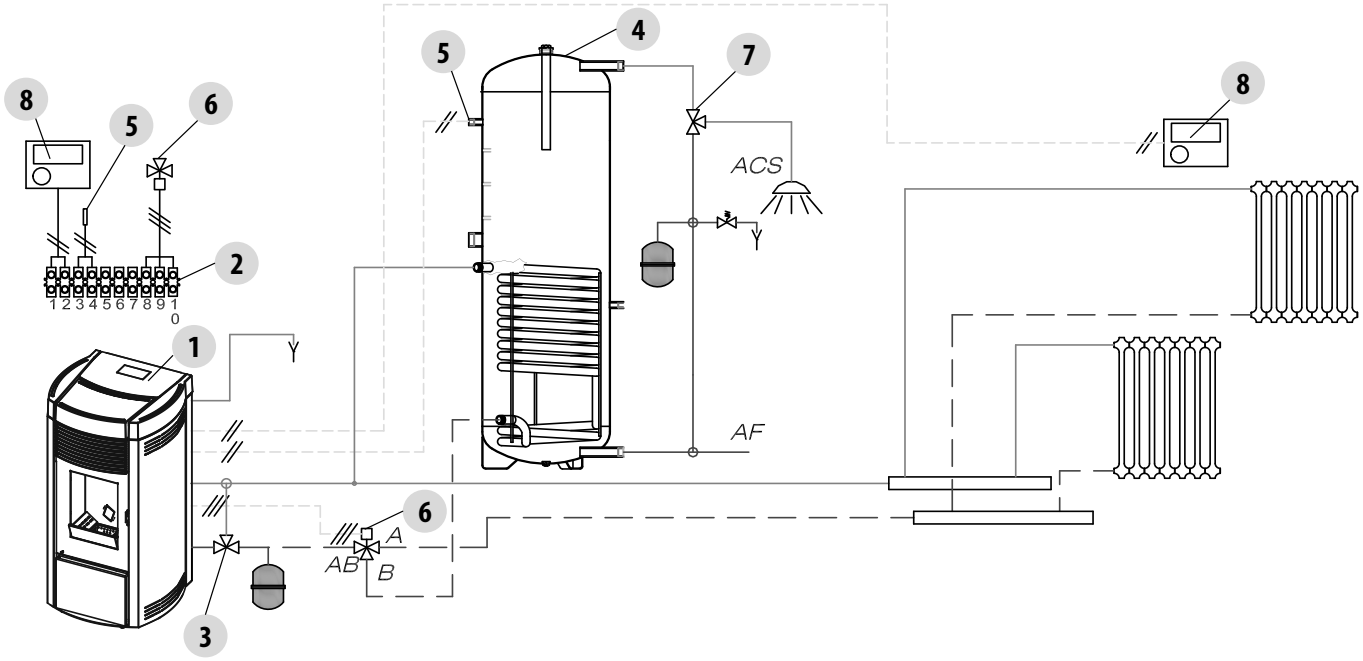


***Fig. 78 - System with: direct vent pellet stove, room thermostat, and dhw boiler***

| *LEGEND* | *Fig. 78* |
|---|---|
| ***1*** | *Pellet Boiler* |
| ***2*** | *Rear terminal board* |
| ***3*** | *Anti-condensate valve* |
| ***4*** | *DHW boiler* |
| ***5*** | *Boiler probe* |
| ***6*** | *3-way diverter valve* |
| ***7*** | *DHW Thermostatic Valve* |
| ***8*** | *Room thermostat* |

## 7.17 SYSTEM WITH: PELLET STOVE AND PUFFER

**Settable settings** :

| SETTING | VALUES |
|---|---|
| PUFFER TEMP. | 55° C - 75°C |

**Parameters to set** :

| SETTING | VALUES |
|---|---|
| Configuration | 5 |

**Hydraulic diagram** :

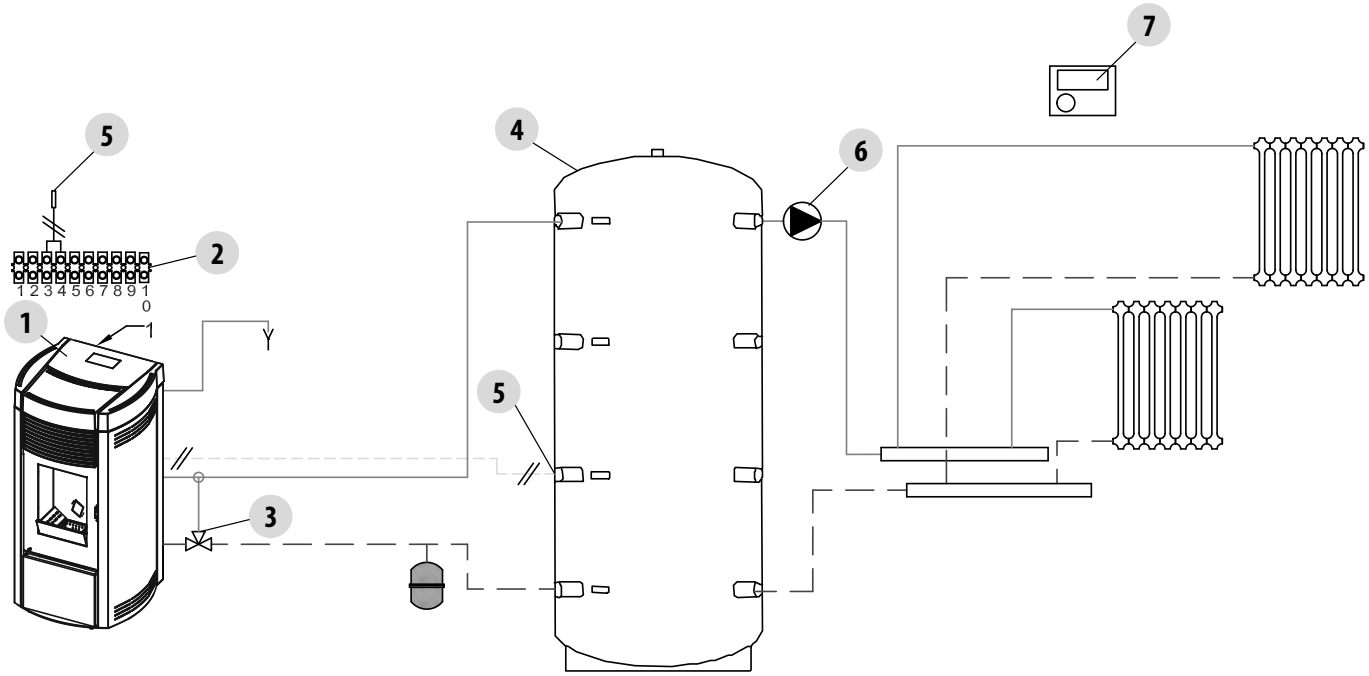


***Fig. 79 - System with: pellet stove and puffer***

| *LEGEND* | *Fig. 79* |
|---|---|
| ***1*** | *Pellet Boiler* |
| ***2*** | *Rear terminal board* |
| ***3*** | *Anti-condensate valve* |
| ***4*** | *Puffer* |
| ***5*** | *Puffer probe* |
| ***6*** | *System pump* |
| ***7*** | *Room thermostat* |

## 7.18 SYSTEM WITH: PELLET STOVE, PUFFER, AND AUXILIARY BOILER (WALL MOUNTED)

**Settable settings** :

| SETTING | VALUES |
|---|---|
| PUFFER TEMP. | 55° C - 75°C |

**Parameters to set** :

| SETTING | VALUES |
|---|---|
| Configuration | 5 |
| Auxiliary Boiler | ON |

**Hydraulic diagram** :

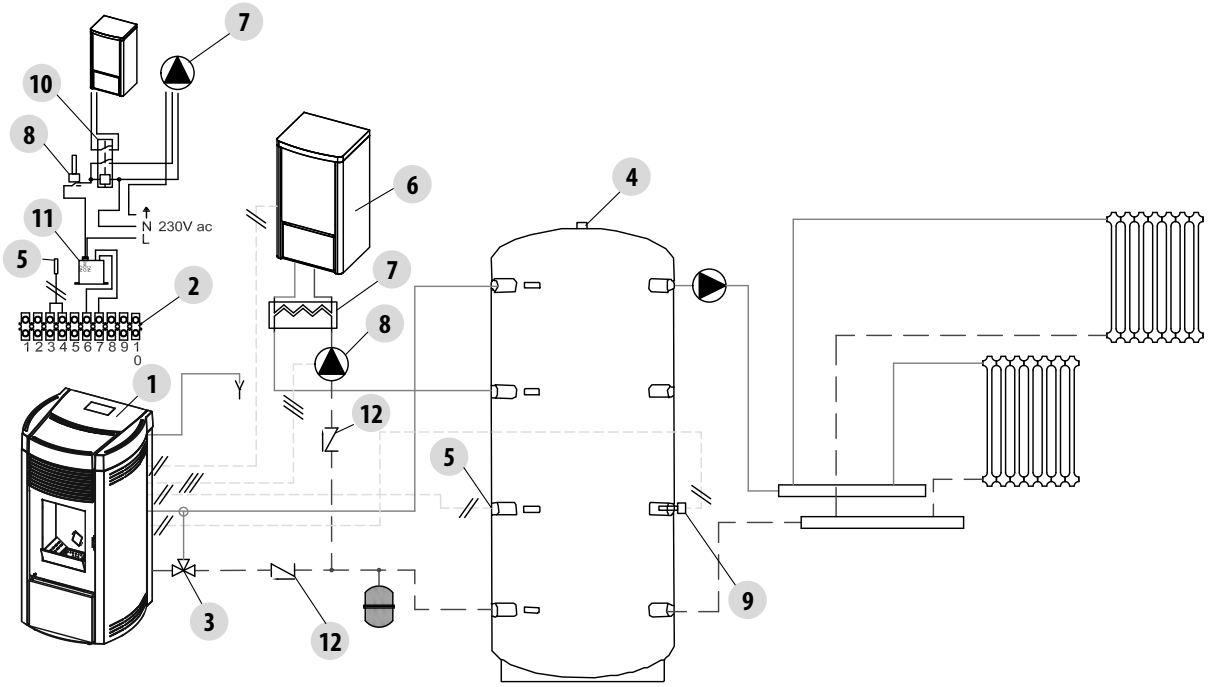


***Fig. 80 - System with: pellet stove, puffer, and auxiliary boiler (wall mounted)***

| *LEGEND* | *Fig. 80* |
|---|---|
| ***1*** | *Pellet Boiler* |
| ***2*** | *Rear terminal board* |
| ***3*** | *Anti-condensate valve* |
| ***4*** | *Puffer* |
| ***5*** | *Puffer Probe* |
| ***6*** | *Auxiliary boiler* |
| ***7*** | *Plate exchanger* |
| ***8*** | *System pump* |
| ***9*** | *Auxiliary boiler thermostat* |
| ***10*** | *Activation relay* |
| ***11*** | *Aux boiler connection module* |
| ***12*** | *Non-return valve* |

## 7.19 OPERATING MODE

The operating mode for hydro boilers is AUTOMATIC only (manual mode is not envisioned). Flame modulation is managed according to the "System configuration" of the room probe placed on the rear of the appliance (see drawing), by the external thermostat, by the boiler water temperature or by the NTC probes.

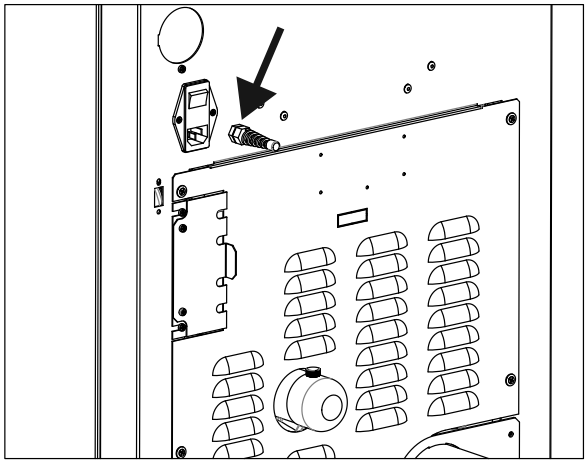

***Fig. 81 - Probe position***

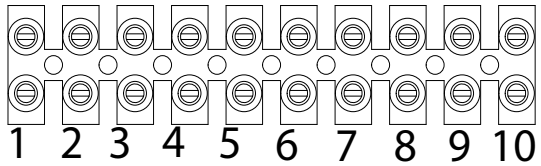


***Fig. 82 - 10-pole terminal board***

## 7.20 ELECTRICAL CONNECTIONS

Terminal board contacts (see **Fig. 82**):

| CONTACTS |
|---|
| POS.1-2 EXTERNAL THERMOSTAT/PUFFER THERMOSTAT |
| POS.3-4 PUFFER/BOILER PROBE |
| POS.5 EARTHING |
| POS.6-7 ADDITIONAL BOILER |
| POS.8 3-WAY VALVE NEUTRAL |
| POS.9 3-WAY VALVE PHASE (DHW) |
| POS.10 3-WAY VALVE PHASE (heating) |

To access the "W" terminal board, remove the cap as shown in part 1 of the manual (in the paragraph dedicated to removing the back), then loosen the two "z" screws and remove the "W" terminal board. Make the necessary connections and reassemble everything.

**The connections to the terminal board must be made with cables with a maximum length of 3 metres (regardless of whether they are signal or power cables).**

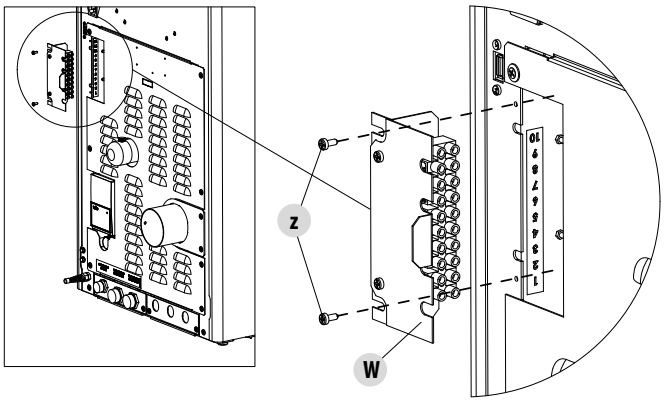


*Fig. 83 - Connections*

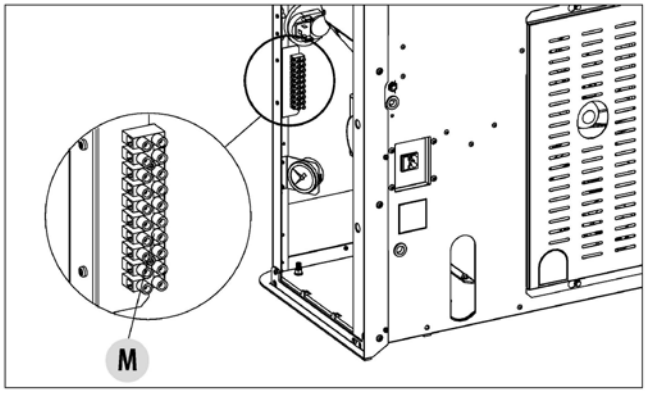


*Fig. 84 - Connections*

**- The water manostat cables that are prearranged in the boiler must be connected to the hydraulic kit (optional).**
**- The flow switch cables are prearranged in the boiler for connection to the hydraulic kit (optional) with domestic water.**

## 7.21 REAR PANEL

If maintenance must be performed on a component of the stove, the rear panel can be removed (if the distances from the walls allow it), otherwise, the maintenance can be performed by removing the side of the stove.
To remove the rear panel, remove the seven rear screws "a" and pull panel "L" away.
The "L" panel can also be removed with the stove installed since its shape corresponds with the smoke outlet pipe. Plate "L1" supports the flue pipe as it is secured to the stove using the two screws "a". With the stove installed you must only remove plate "L1" if the smoke pipe must be removed, otherwise remove only plate "L".

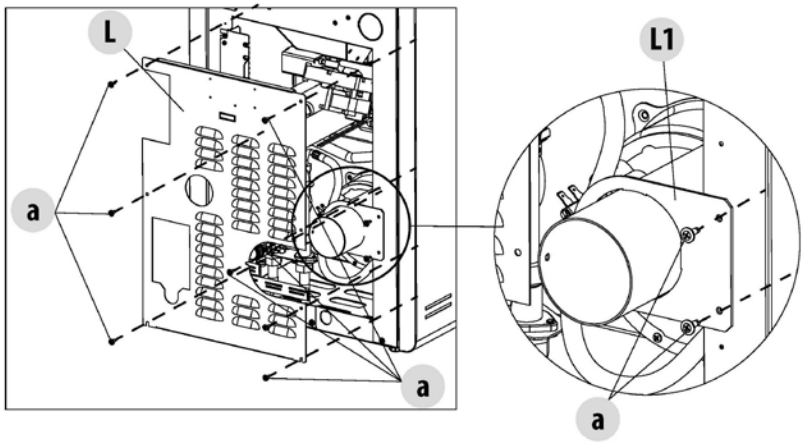


***Fig. 85 - back panel***

# 8 SPECIAL MAINTENANCE

## 8.1 INTRODUCTION

For a long working life of the stove, have a periodic cleaning of the stove as described in the following paragrafs.

- Fume outlet pipes (fume conduit + chimney flue + chimney pot) must always be cleaned, scrubbed and checked by an authorized technician in compliance with local regulations, with the instructions of the manufacturer and those of your insurance company.
- It is also necessary to have the combustion chamber, motors and fans cleaned and to have the gaskets and the electronical elements checked at least once a year.

*All these operations must be planned in time with your Autorized Technical Assistance Service.*

- After a long ineffective time, before turning on the stove check if there are obstructions in the fume exhaust.
- If the stove had been using continuously and intensely, the whole system (chimney included), must be cleaned and checked more frequently.
- In case of replacement of damaged pieces please ask for the original spare part at the Autorized Retailer.

## 8.2 FUME CONDUIT CLEANING

The exhaust system must be cleaned every 2/3 months.

***Fig. 86 - Fume conduit cleaning***

- Remove the inspection lid of the T-union (see **Fig. 86**).
- Extract the ash which has accumulated in the inner.
- After cleaning repeat the operation in reverse order, checking the condition and efficiency of the gasket, and if necessary replace it.

*It is important to sealed the cap othrwise noxiuous fumes will propagate among the room.*

## 8.3 SMOKE EXTRACTOR COMPARTMENT CLEANING

At the back of ash drawer "D", you will find smoke cover "E", which must be removed to clean the smoke extractor. Therefore:

- loosen screws "s"
- remove smoke cover "E"

At this point, use a vacuum cleaner nozzle to remove the ash and soot that have accumulated in the lower exchanger shown by the arrow. Before reinstalling cover "E", we recommend replacing gasket "F"
Before vacuuming the ash, we recommend cleaning the inner walls of the stove with a scraper.

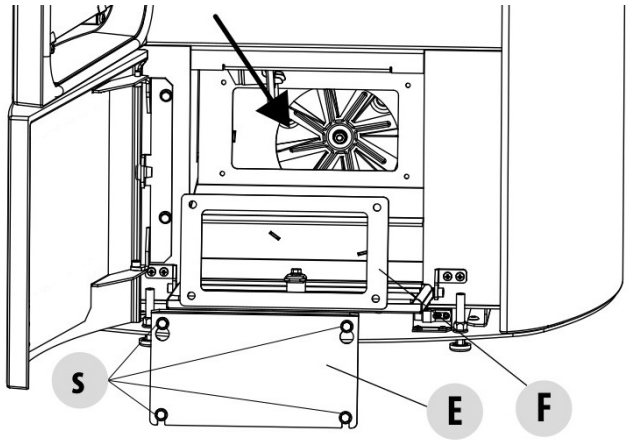


***Fig. 87 - Lower compartment cleaning***

## 8.4 CLEANING THE SMOKE EXTRACTION SYSTEM AND GENERAL CHECKS

**Clean the smoke exhaust system especially near the "T"-fittings, elbows, and any horizontal sections of the smoke duct. Contact a qualified chimney sweep to periodically clean the flue.**
Check the ceramic fibre gasket seal on the stove door. If necessary, order new gaskets from the dealer for replacement or contact an authorised service centre to perform the entire operation.

*ATTENTION:*
*The fume exhaust system cleaning frequency depends on stove use and its installation.*
*We recommend contacting an authorised service centre for the end-of-season cleaning and maintenance operations because the centre will perform an overall check of the parts, as well as the above-mentioned operations.*

## 8.5 DOOR CLOSING FUNCTIONALITY PERIODIC CHECK

Check that door closing assures a correct seal (by means of the "paper sheet" test) and that when the door is closed, the closing block (X in the figure) does not protrude from the sheet metal it is fixed to. In some products it will be required to remove the aesthetic coating in order to evaluate any anomalous protrusion of the block with the door closed.

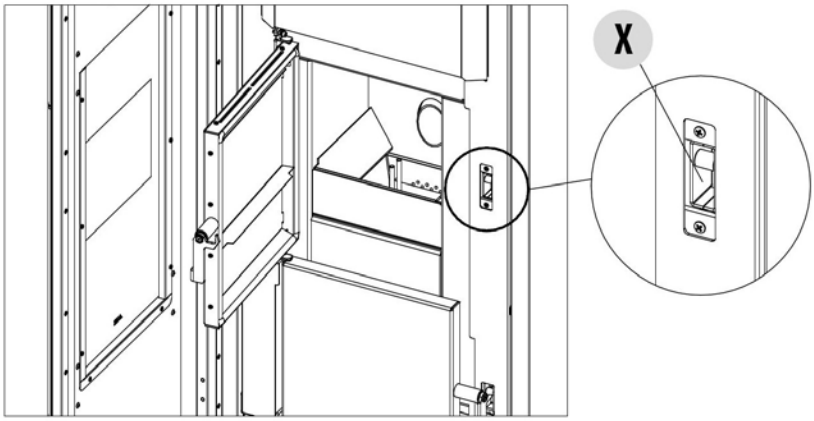


*Fig. 88 - Door closing*

## 8.6 REPLACING THE OVERPRESSURE RELIEF VALVE FOR THE COMBUSTION CHAMBER

Combustion chamber overpressure rubber spacer "G" (fig.A) may become worn and/or damaged, thereby requiring replacement once a year to ensure proper system operation.
Replace by following the instructions below:

- Remove the top
- Remove the first ceramic or steel side panel (depending on the type of stove)
- Unscrew the screw-washer-rubber spacer-roller shown in fig.A/C (on both sides of the cover). Then assemble the new kit:
- Align the screw-washer-rubber spacer-roller as shown in fig.C and screw it into the structure.
- Tighten the screw completely.

Now make sure that rubber spacer compression is correct, using the template supplied with the kit:

- Place the template on the cover (fig.B); the head of the screw must barely touch the upper reference. Otherwise, tighten or loosen the screw until it does.

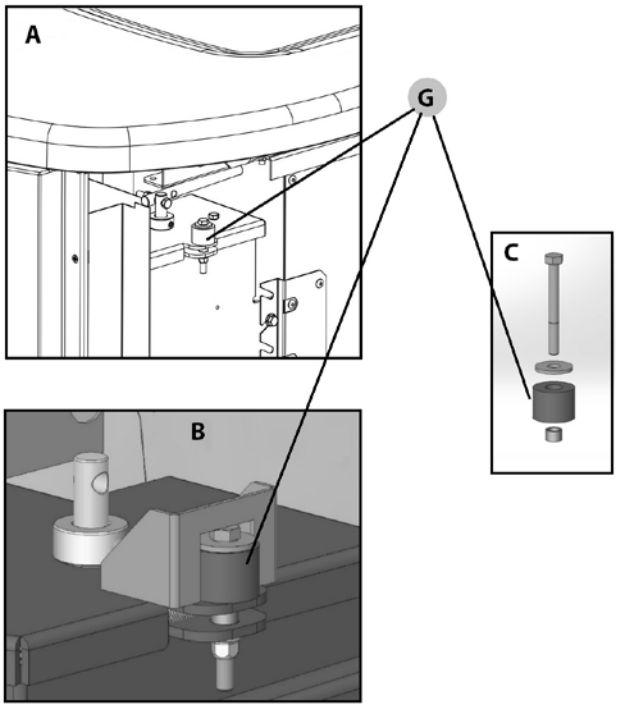


*Fig. 89 - Rubber spacer (Idro Prince³ 16-23-23 H2O, Aquos³ 16-23-23 H2O, Idron 16-22 Airtight, Hidrofire 22.8)*

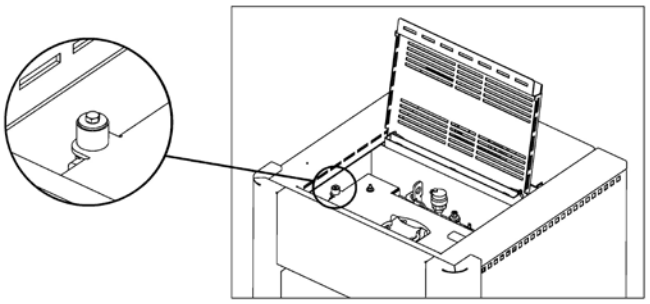

*Fig. 90 - Rubber spacer (Idro Prince³ 30-30 H2O)*

## 8.7 FUME PIPES ANNUAL CLEANING

Clean annually from soot with brushes.
The cleaning operation must be executed by a specialized stove-repairer who will provide for the cleaning of fume pipe, chimney flue and chimney pot. He will also check their eficiency and will release a written declaration of the safety of the appliance. This operation must be executed at least once a year.

## 8.8 GASKET REPLACEMENT

In case of deterioration of fire door, hopper or fume chamber gaskets, it is necessary to replace them by an autorized technician in order to guarantee the good running of the stove.

*Use exclusively original spare parts.*

# 9 IN CASE OF ANOMALY

## 9.1 PROBLEM SOLVING

*Before of every Authorized Technician intervention, the same Technician has the duty to check if the parameters of the mother board correspond to those of the table you own.*

*In case of doubts regarding the use of the stove, please contact ALWAYS the Authorized Technician on order to avoi irreparable damages!*

| PROBLEM | CAUSE | SOLUTION | INTERVENTION |
|---|---|---|---|
| The control display does not switch on | The stove is without power supply | Check if the plug is connected. |  |
| | Burned protection fuse in the electric socket | Replace the protection fuses in the electric socket (3.15A-250V). |  |
| | Faulty control display | Replace the control display. |  |
| | Faulty flat cable | Replace the flat cable. |  |
| | Faulty electronic board | Replace the mother board. |  |
| Pellets do not reach the combustion chamber | Empty hopper | Full the hopper. |  |
| | Open fire door or open pellet door | Close fire door and pellet door and check that there are no pellet grains at the gasket level. |  |
| | Clogged stove | Fume chamber cleaning |  |

| PROBLEM | CAUSE | SOLUTION | INTERVENTION |
|---|---|---|---|
| | Auger blocked by a foreign object (for example nails) | Clean the auger. |  |
| | The auger geared motor is out of order | Replace the geared motor. |  |
| | Check if on the display there is an "ACTIVE ALARM" | Have the stove checked. |  |
| The fire extinguish and the stove stops | Empty hopper | Full the hopper. |  |
| | Auger blocked by a foreign object (for example nails) | Clean the auger. |  |
| | Bad quality pellets | Try other types of pellets. |  |
| | Pellet drop value too low "phase 1" | Adjust the pellet loading. |  |
| | Check if on the display there is an "ACTIVE ALARM" | Have the stove checked. |  |
| | The pellet temperature safety probe has tripped | Let the boiler cool down, reset the thermostat until the problem is resolved, then switch the boiler back on; if the problem persists, contact customer service |  |
| | The door does not close perfectly or the gaskets are worn | Close the door and have the gaskets replaced with other original ones |  |
| | Unsuitable pellets | Change the type of pellets with one that is recommended by the manufacturer |  |
| | Broken or defective manostat | Replace the manostat |  |
| | Ignition step is not completed | Repeat ignition |  |
| | Temporary power outage | Wait for automatic restart |  |

| PROBLEM | CAUSE | SOLUTION | INTERVENTION |
|---|---|---|---|
| | Clogged smoke duct | Clean the smoke duct |  |
| | Defective or broken temperature probes | Check and replace probes |  |
| | Faulty spark plug | Check and, if necessary, replace the spark plug |  |
| Flames are weak and orange coloured, pellets do not burn properly and the glass blackens | Not sufficient combustion air | Check as following: probable obstructions of the combustible air inlet from the back or from the bottom of the stove; burning pot obstructed holes with too ash remains. Have the fan blades and auger cleaned. |  |
| | Obstructed exhaust | The exhaust chimney is partially or totally obsturcted. Contact an expert stove-repairer who checks the stove from the exhaust up to the chimney pot. Provide immediately for stove cleaning. |  |
| | Obstructed stove | Provide immediately at the inner cleaning of the stove. |  |
| | The fume fan is out of order | The pellets can burn also thanks to chimney flue depression without the aid of the fume fan. Have the fume fan immediately replaced. It can be noxious to health to let the stove running without fume fan. |  |
| | Damp or unsuitable pellets | Change the type of pellet |  |
| The exchanger fan continues to turn even though the stove has just cooled | Faulty fume temperature probe | Replace the fume probe. |  |
| | Faulty mother board | Replace the mother board. |  |
| Ash remains along the stove | Faulty or out of order door gaskets | Replace the gaskets. |  |
| | Not sealed fume pipes | Contact an expert stove-repairer who will immediately provide for sealing the junctions with high-temperature silicone and/or for replacing pipes with those in compliance to current regulations. A not sealed fume channelisation can be noxious to health. |  |
| The stove is at its highest power but does not heat up. | Ambient temperature reached. | The stove is at its minimum value. Increase the desired ambient temperature. |  |

| PROBLEM | CAUSE | SOLUTION | INTERVENTION |
|---|---|---|---|
| Stove running and display showing "Smoke Overtepe-rature" | Reached fume outlet limit tempe-rature | The stove runs at minimum. NO PROBLEM! |  |
| The smoke extrac-tion motor is not working | No power to the boiler | Check the mains voltage and the protective fuse |  |
| | The motor is broken | *Check the motor and capacitor and, if necessary, replace them* |  |
| | The motherboard is defective | *Replace the electronic board* |  |
| | The control panel is broken | *Replace the control panel* |  |
| The stove's smoke duct produces condensation | Low smoke tempe-rature | Check that the flue is not clogged. |  |
| | | Increase stove power to minimum (pellet drop and fan revs). |  |
| | | Install condensation collection cup. |  |
| Stove running and display showing "SERVICE" | Routine main-tenance alert (it does not block the system) | When this flashing message appears upon start-up, it means that the preset operating hours have elapsed before mainte-nance. Contact the service centre. |  |

## 9.2 PROBLEM SOLVING (THERMOSTOVE)

| PROBLEM | POSSIBLE CAUSES | SOLUTIONS | INTERVENTION |
|---|---|---|---|
| In automatic position, the boiler always works at maximum power | Thermostat set to the minimum | Reset the thermostat temperature |  |
| | Room thermostat in a position that always detects cold | Change the position of the thermostat |  |
| | Faulty temperature detection probe | *Check and, if necessary, replace the probe* |  |
| | Defective or broken control panel | *Check and, if necessary, replace the panel* |  |
| The boiler does not start | Power outage | Make sure the power cable is plugged in and the main switch is in the "I" position. |  |
| | Blocked pellet probe | *Release it via the rear thermostat. If it happens again, call customer service.* |  |
| | Broken fuse | Replace the fuse |  |
| | Broken manostat (block signal) | Low water pressure in the boiler |  |
| | Clogged smoke duct or exhaust | Clean the smoke exhaust and/or smoke duct |  |
| | Water temperature probe has tripped | Call customer service |  |

| PROBLEM | POSSIBLE CAUSES | SOLUTIONS | INTERVENTION |
|---|---|---|---|
| Temperature does not increase with the boiler working | Improper combustion adjustment | Check recipe and parameters |  |
| | Dirty boiler/system | Check and clean the boiler |  |
| | Insufficient boiler power | Make sure the boiler is appropriately proportional to the system requirements |  |
| | Poor quality pellets | Use quality pellets |  |
| Condensate in the boiler | Improper temperature adjustment | *Adjust the boiler to a higher temperature* |  |
| | Insufficient fuel consumption | *Check the recipe and/or technical parameters* |  |
| Radiators cold in the winter | Room thermostat (local or remote) adjusted too low. If remote thermostat, check whether it is defective | *Adjust it to a higher temperature. Replace it if necessary (if remote).* |  |
| | The circulator does not turn because it is blocked | *Release the circulator by removing the cap and turning the shaft with a screwdriver.* |  |
| | The circulator does not turn | *Check its electrical connections, replace it if necessary.* |  |
| | Air inside the radiators | *Bleed the radiators* |  |
| No hot water comes out | Circulator (pump) blocked | Release the circulator (pump) |  |
| Noise and gurgling | Air in the system | Vent the air and fill the system |  |

# 10 ELECTRONIC BOARD

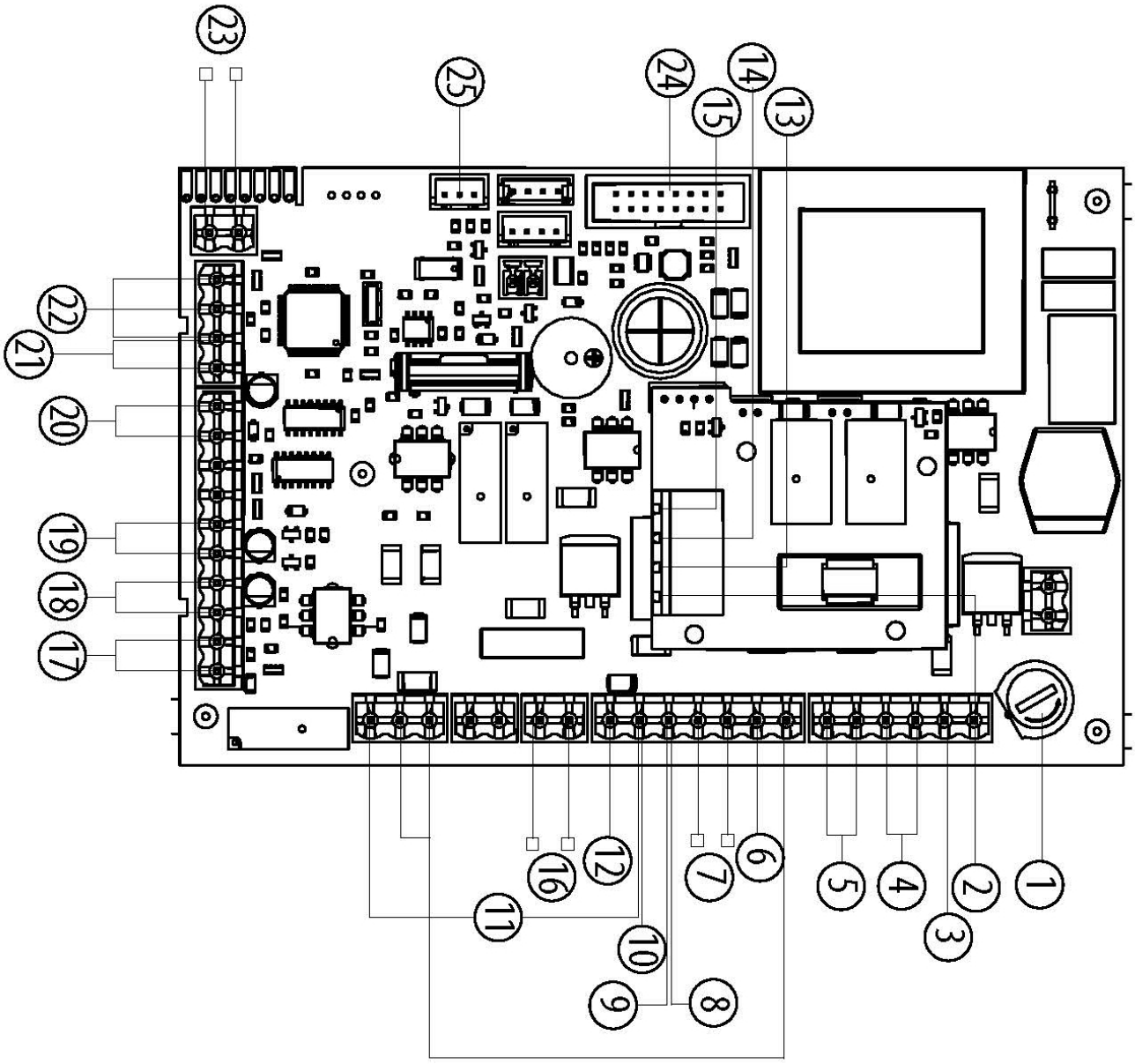


***Fig. 91 - Electrical board***

| *LEGEND* | *Fig. 91* | | *Fig. 91* |
|---|---|---|---|
| ***1*** | *FUSE* | *14* | *3-WAY VALVE PHASE (SANITARY)* |
| ***2*** | *CARD PHASE* | *15* | *3-WAY VALVE PHASE (HEATING)* |
| ***3*** | *NEUTRAL BOARD* | *16* | *ADDITIONAL BOILER CONNECTION (TERMINAL BLOCK)* |
| ***4*** | *SMOKE EXTRACTOR* | *17* | *SMOKE PROBE* |
| ***5*** | *ROOM FAN* | *18* | *EXTERNAL THERMOSTAT CONNECTION (TERMINAL BLOCK)* |
| ***6*** | *WATER SAFETY THERMOSTAT* | *19* | *INTERNAL ROOM PROBE* |
| ***7*** | *CANDLE* | *20* | *PUFFER / BOILER PROBE CONNECTION (TERMINAL BLOCK)* |
| ***8*** | *PELLET SAFETY THERMOSTAT* | *21* | *BOILER WATER TEMPERATURE PROBE* |
| ***9*** | *AIR PRESSURE* | *22* | *SMOKE EXTRACTOR FAN SPEED CONTROL* |
| ***10*** | *WATER PRESSURE SWITCH* | *23* | *FLOW SWITCH OR KETTLE THERMOSTAT TO BE CONNECTED TO THE HYDRAULIC KIT (ACCESSORY)* |
| ***11*** | *AUGER* | *24* | *CONTROL PANEL* |
| ***12*** | *NEUTRAL PUMP* | *25* | *EASY CONNECT (ACCESSORY)* |
| ***13*** | *PUMP PHASE* | | |

**N.B. The wiring of the individual components is fitted with pre-wired connectors of different sizes.**

# 11 FEATURES

| DESCRIPTION | IDRO PRINCE$^3$ 12 | IDROPRINCE$^3$+IDRORIVER$^3$ (16) | AQUOS$^3$ 16 |
|---|---|---|---|
| Effective rated power | 11,8 kW (10.148 kcal/h) | 16,2 kW (13.932 kcal/h) | 16,2 kW (13.932 kcal/h) |
| Effective rated power ($H_2O$) | 10,2 kW (8.772 kcal/h) | 12,9 kW (11.094 kcal/h) | 12,9 kW (11.094 kcal/h) |
| Minimum effective power | 3,2 kW (2.752 kcal/h) | 4,7 kW (4.042 kcal/h) | 4,7 kW (4.042 kcal/h) |
| Minimum effective power ($H_2O$) | 2,2 KW (1.892 kcal/h) | 3,1 KW (2.666 kcal/h) | 3,1 KW (2.666 kcal/h) |
| Performance at Max | 91,8% | 93,3% | 93,3% |
| Performance at Min | 92,4% | 96,5% | 96,5% |
| Exhaust smoke temperature at Max | 114°C | 118°C | 118°C |
| Exhaust smoke temperature at Min | 64°C | 60°C | 60°C |
| Particulate / OGC / Nox (13%$O_2$) | 18 mg/Nm$^3$ – 2 mg/ Nm$^3$ - 109 mg/Nm$^3$ | 19 mg/Nm$^3$ – 2,2 mg/Nm$^3$ - 109 mg/Nm$^3$ | 19 mg/Nm$^3$ – 2,2 mg/ Nm$^3$ - 109 mg/Nm$^3$ |
| CO at 13% $O_2$ at Min and at Max | 0,038 — 0,003% | 0,011 — 0,006% | 0,011 — 0,006% |
| $CO_2$ at Min and at Max | 4,7% – 9,8% | 7,7% – 11,7% | 7,7% – 11,7% |
| Smoke mass | 9,4 g/sec | 10,5 g/sec | 10,5 g/sec |
| Maximum operating pressure | 2 bar – 200 kPa | 2 bar – 200 kPa | 2 bar – 200 kPa |
| Recommended draft at Max*** power | 0,12 mbar – 12 Pa*** | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** |
| Minimum draft permitted at Min power | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa |
| Hopper capacity | 31 litri | 40 litri | 40 litri |
| Type of pellet fuel | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm |
| Hourly pellet consumption (min ~ max) | 0,7 kg/h * ~ 2,6 kg/h * | 1,0 kg/h * ~ 3,5 kg/h * | 1,0 kg/h * ~ 3,5 kg/h * |
| Range (min ~ max) | 29 h * ~ 8 h * | 29 h * ~ 8 h * | 29 h * ~ 8 h * |
| Heatable volume m$^3$ | 254/40 – 290/35 – 338/30 ** | 348/40 – 398/35 – 464/30 ** | 348/40 – 398/35 – 464/30 ** |
| Air intake for combustion | Ø 50 mm | Ø 50 mm | Ø 50 mm |
| Smoke outlet | Ø 80 mm | Ø 80 mm | Ø 80 mm |
| Air vent | 80 cm$^2$ | 80 cm$^2$ | 80 cm$^2$ |
| Rated electrical power (EN 60335-1) | 75W (max 390W) | 115W (max 370W) | 115W (max 370W) |
| Power supply voltage and frequency | 230 Volt / 50 Hz | 230 Volt / 50 Hz | 230 Volt / 50 Hz |
| Net weight | 141 kg | 151,5 kg | 136 - 145 - 181 kg |
| Weight with packaging | 156 kg | 167,5 kg | 149 - 158 - 195 kg |
| Distance from combustible material (back/side/bottom) | 200 mm / 200 mm / 0 mm | 200 / 200 / 0 mm | 200 / 200 / 0 mm |
| Distance from combustible material (ceiling/front) | 750 mm / 1000 mm | 750 / 1000 mm | 750 / 1000 mm |

* Values that can vary depending on the type of pellet used
** Heatable volume depending on the power required per m$^3$ (respectively, 40-35-30 Kcal/h per m$^3$)
*** Value recommended by the manufacturer (not binding) for optimal product performance
**Tested according to EN 14785 in compliance with the European Construction Product regulation (EU 305/2011)**

| DESCRIPTION | IDRON 16 AIRTIGHT | MIRA 16 | TESIS 16 AIRTIGHT |
|---|---|---|---|
| Effective rated power | 16,2 kW (13.932 kcal/h) | 16,2 kW (13.932 kcal/h) | 16,2 kW (13.932 kcal/h) |
| Effective rated power ($H_2O$) | 12,9 kW (11.094 kcal/h) | 12,9 kW (11.094 kcal/h) | 12,9 kW (11.094 kcal/h) |
| Minimum effective power | 4,7 kW (4.042 kcal/h) | 4,7 kW (4.042 kcal/h) | 4,7 kW (4.042 kcal/h) |
| Minimum effective power ($H_2O$) | 3,1 KW (2.666 kcal/h) | 3,1 KW (2.666 kcal/h) | 3,1 KW (2.666 kcal/h) |
| Performance at Max | 93,3% | 93,3% | 93,3% |
| Performance at Min | 96,5% | 96,5% | 96,5% |
| Exhaust smoke temperature at Max | 118°C | 118°C | 118°C |
| Exhaust smoke temperature at Min | 60°C | 60°C | 60°C |
| Particulate / OGC / Nox (13%$O_2$) | 19 mg/Nm$^3$ – 2,2 mg/Nm$^3$ - 109 mg/Nm$^3$ | 19 mg/Nm$^3$ – 2,2 mg/Nm$^3$ - 109 mg/Nm$^3$ | 19 mg/Nm$^3$ – 2,2 mg/Nm$^3$ - 109 mg/Nm$^3$ |
| CO at 13% $O_2$ at Min and at Max | 0,011 — 0,006% | 0,011 — 0,006% | 0,011 — 0,006% |
| $CO_2$ at Min and at Max | 7,7% – 11,7% | 7,7% – 11,7% | 7,7% – 11,7% |
| Smoke mass | 10,5 g/sec | 10,5 g/sec | 10,5 g/sec |
| Maximum operating pressure | 2 bar – 200 kPa | 2 bar – 200 kPa | 2 bar – 200 kPa |
| Recommended draft at Max*** power | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** |
| Minimum draft permitted at Min power | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa |
| Hopper capacity | 40 litri | 40 litri | 40 litri |
| Type of pellet fuel | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm |
| Hourly pellet consumption (min ~ max) | 1,0 kg/h * ~ 3,5 kg/h * | 1,0 kg/h * ~ 3,5 kg/h * | 1,0 kg/h * ~ 3,5 kg/h * |
| Range (min ~ max) | 26 h * ~ 8 h * | 26 h * ~ 8 h * | 26 h * ~ 8 h * |
| Heatable volume m$^3$ | 348/40 – 398/35 – 464/30 ** | 348/40 – 398/35 – 464/30 ** | 348/40 – 398/35 – 464/30 ** |
| Air intake for combustion | Ø 50 mm | Ø 50 mm | Ø 50 mm |
| Smoke outlet | Ø 80 mm | Ø 80 mm | Ø 80 mm |
| Air vent | 80 cm$^2$ | 80 cm$^2$ | 80 cm$^2$ |
| Rated electrical power (EN 60335-1) | 115W (max 370W) | 115W (max 370W) | 115W (max 370W) |
| Power supply voltage and frequency | 230 Volt / 50 Hz | 230 Volt / 50 Hz | 230 Volt / 50 Hz |
| Net weight | 140 kg | 140 kg | 140 kg |
| Weight with packaging | 150 kg | 150 kg | 150 kg |
| Distance from combustible material (back/side/bottom) | 200 / 200 / 0 mm | 200 / 200 / 0 mm | 200 / 200 / 0 mm |
| Distance from combustible material (ceiling/front) | 750 / 1000 mm | 750 / 1000 mm | 750 / 1000 mm |

* Values that can vary depending on the type of pellet used
** Heatable volume depending on the power required per m$^3$ (respectively, 40-35-30 Kcal/h per m$^3$)
*** Value recommended by the manufacturer (not binding) for optimal product performance

**Tested according to EN 14785 in compliance with the European Construction Product regulation (EU 305/2011)**

| DESCRIPTION | IDROPRINCE$^3$+IDRORIVER3 (23-23H2O) | AQUOS$^3$ 23-23 H2O | IDRON 22 AIRTIGHT |
|---|---|---|---|
| Effective rated power | 22,8 kW (19.608 kcal/h) | 22,8 kW (19.608 kcal/h) | 22,8 kW (19.608 kcal/h) |
| Effective rated power ($H_2O$) | 18,7 kW (16.082 kcal/h) | 18,7 kW (16.082 kcal/h) | 18,7 kW (16.082 kcal/h) |
| Minimum effective power | 4,7 kW (4.042 kcal/h) | 4,7 kW (4.042 kcal/h) | 4,7 kW (4.042 kcal/h) |
| Minimum effective power ($H_2O$) | 3,1 kW (2.666 kcal/h) | 3,1 kW (2.666 kcal/h) | 3,1 kW (2.666 kcal/h) |
| Performance at Max | 91,3% | 91,3% | 91,3% |
| Performance at Min | 96,5% | 96,5% | 96,5% |
| Exhaust smoke temperature at Max | 150°C | 150°C | 150°C |
| Exhaust smoke temperature at Min | 60°C | 60°C | 60°C |
| Particulate / OGC / Nox (13%$O_2$) | 19 mg/Nm$^3$ – 3 mg/Nm$^3$ – 114 mg/Nm$^3$ | 19 mg/Nm$^3$ – 3 mg/Nm$^3$ – 114 mg/Nm$^3$ | 19 mg/Nm$^3$ – 3 mg/Nm$^3$ – 114 mg/Nm$^3$ |
| CO at 13% $O_2$ at Min and at Max | 0,011 — 0,014% | 0,011 — 0,014% | 0,011 — 0,014% |
| $CO_2$ at Min and at Max | 7,7% – 12,5% | 7,7% – 12,5% | 7,7% – 12,5% |
| Smoke mass | 13,9 g/sec | 13,9 g/sec | 13,9 g/sec |
| Maximum operating pressure | 2 bar – 200 kPa | 2 bar – 200 kPa | 2 bar – 200 kPa |
| Recommended draft at Max*** power | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** |
| Minimum draft permitted at Min power | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa |
| Hopper capacity | 40 litri | 40 litri | 40 litri |
| Type of pellet fuel | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm |
| Hourly pellet consumption (min ~ max) | 1,0 kg/h ~ 5,0 kg/h * | 1,0 kg/h ~ 5,0 kg/h * | 1,0 kg/h ~ 5,0 kg/h * |
| Range (min ~ max) | 26 h * ~ 5 h * | 26 h * ~ 5 h * | 26 h * ~ 5 h * |
| Heatable volume m$^3$ | 490/40 – 560/35 – 654/30 ** | 490/40 – 560/35 – 654/30 ** | 490/40 – 560/35 – 654/30 ** |
| Air intake for combustion | Ø 50 mm | Ø 50 mm | Ø 50 mm |
| Smoke outlet | Ø 80 mm | Ø 80 mm | Ø 80 mm |
| Air vent | 80 cm$^2$ | 80 cm$^2$ | 80 cm$^2$ |
| Rated electrical power (EN 60335-1) | 115W (max 370W) | 115W (max 370W) | 115W (max 370W) |
| Power supply voltage and frequency | 230 Volt / 50 Hz | 230 Volt / 50 Hz | 230 Volt / 50 Hz |
| Net weight | 151,5 kg | 136 - 145 - 181 kg | 140 kg |
| Weight with packaging | 167,5 kg | 149 - 158 - 195 kg | 150 kg |
| Distance from combustible material (back/side/bottom) | 200 / 200 / 0 mm | 200 / 200 / 0 mm | 200 / 200 / 0 mm |
| Distance from combustible material (ceiling/front) | 750 / 1000 mm | 750 / 1000 mm | 750 / 1000 mm |

* Values that can vary depending on the type of pellet used
** Heatable volume depending on the power required per m$^3$ (respectively, 40-35-30 Kcal/h per m$^3$)
*** Value recommended by the manufacturer (not binding) for optimal product performance

**Tested according to EN 14785 in compliance with the European Construction Product regulation (EU 305/2011)**

| DESCRIZIONE | IDROFIRE 22.8 | MIRA 22 | TESIS 23 AIRTIGHT |
|---|---|---|---|
| Effective rated power | 22,8 kW (19.608 kcal/h) | 22,8 kW (19.608 kcal/h) | 22,8 kW (19.608 kcal/h) |
| Effective rated power ($H_2O$) | 18,7 kW (16.082 kcal/h) | 18,7 kW (16.082 kcal/h) | 18,7 kW (16.082 kcal/h) |
| Minimum effective power | 4,7 kW (4.042 kcal/h) | 4,7 kW (4.042 kcal/h) | 4,7 kW (4.042 kcal/h) |
| Minimum effective power ($H_2O$) | 3,1 kW (2.666 kcal/h) | 3,1 kW (2.666 kcal/h) | 3,1 kW (2.666 kcal/h) |
| Performance at Max | 91,3% | 91,3% | 91,3% |
| Performance at Min | 96,5% | 96,5% | 96,5% |
| Exhaust smoke temperature at Max | 150°C | 150°C | 150°C |
| Exhaust smoke temperature at Min | 60°C | 60°C | 60°C |
| Particulate / OGC / Nox (13%$O_2$) | 19 mg/$Nm^3$ – 3 mg/$Nm^3$ – 114 mg/$Nm^3$ | 19 mg/$Nm^3$ – 3 mg/$Nm^3$ – 114 mg/$Nm^3$ | 19 mg/$Nm^3$ – 3 mg/$Nm^3$ – 114 mg/$Nm^3$ |
| CO at 13% $O_2$ at Min and at Max | 0,011 — 0,014% | 0,011 — 0,014% | 0,011 — 0,014% |
| $CO_2$ at Min and at Max | 7,7% – 12,5% | 7,7% – 12,5% | 7,7% – 12,5% |
| Smoke mass | 13,9 g/sec | 13,9 g/sec | 13,9 g/sec |
| Maximum operating pressure | 2 bar – 200 kPa | 2 bar – 200 kPa | 2 bar – 200 kPa |
| Recommended draft at Max*** power | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** |
| Minimum draft permitted at Min power | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa |
| Hopper capacity | 40 litri | 40 litri | 40 litri |
| Type of pellet fuel | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm |
| Hourly pellet consumption (min ~ max) | 1,0 kg/h *~ 5,0 kg/h * | 1,0 kg/h *~ 5,0 kg/h * | 1,0 kg/h *~ 5,0 kg/h * |
| Range (min ~ max) | 26 h * ~ 5 h * | 26 h * ~ 5 h * | 26 h * ~ 5 h * |
| Heatable volume $m^3$ | 490/40 – 560/35 – 654/30 ** | 490/40 – 560/35 – 654/30 ** | 490/40 – 560/35 – 654/30 ** |
| Air intake for combustion | Ø 50 mm | Ø 50 mm | Ø 50 mm |
| Smoke outlet | Ø 80 mm | Ø 80 mm | Ø 80 mm |
| Air vent | 80 $cm^2$ | 80 $cm^2$ | 80 $cm^2$ |
| Rated electrical power (EN 60335-1) | 115W (max 370W) | 115W (max 370W) | 115W (max 370W) |
| Power supply voltage and frequency | 230 Volt / 50 Hz | 230 Volt / 50 Hz | 230 Volt / 50 Hz |
| Net weight | 151,5 kg | 136 - 145 - 181 kg | 140 kg |
| Weight with packaging | 167,5 kg | 149 - 158 - 195 kg | 150 kg |
| Distance from combustible material (back/ side/bottom) | 200 / 200 / 0 mm | 200 / 200 / 0 mm | 200 / 200 / 0 mm |
| Distance from combustible material (ceiling/ front) | 750 / 1000 mm | 750 / 1000 mm | 750 / 1000 mm |

* Values that can vary depending on the type of pellet used
** Heatable volume depending on the power required per $m^3$ (respectively, 40-35-30 Kcal/h per $m^3$)
*** Value recommended by the manufacturer (not binding) for optimal product performance

**Tested according to EN 14785 in compliance with the European Construction Product regulation (EU 305/2011)**

| DESCRIZIONE | IDROPRINCE 30 | IDROPRINCE 30 H20 |
|---|---|---|
| Effective rated power | 28,6 kW (19.608 kcal/h) | 28,6 kW (19.608 kcal/h) |
| Effective rated power ($H_2O$) | 26,9 kW (16.082 kcal/h) | 26,9 kW (16.082 kcal/h) |
| Minimum effective power | 7,7 kW (4.042 kcal/h) | 7,7 kW (4.042 kcal/h) |
| Minimum effective power ($H_2O$) | 6,28 kW (2.666 kcal/h) | 6,28 kW (2.666 kcal/h) |
| Performance at Max | 93,6% | 93,6% |
| Performance at Min | 94,7% | 94,7% |
| Exhaust smoke temperature at Max | 89°C | 89°C |
| Exhaust smoke temperature at Min | 56,8°C | 56,8°C |
| Particulate / OGC / Nox (13%$O_2$) | 18 mg/$Nm^3$ – 2 mg/$Nm^3$ – 127 mg/$Nm^3$ | 18 mg/$Nm^3$ – 2 mg/$Nm^3$ – 127 mg/$Nm^3$ |
| CO at 13% $O_2$ at Min and at Max | 0,018 — 0,008% | 0,018 — 0,008% |
| $CO_2$ at Min and at Max | 4,71% – 8,05% | 4,71% – 8,05% |
| Smoke mass | 25,2 g/sec | 25,2 g/sec |
| Maximum operating pressure | 2 bar – 200 kPa | 2 bar – 200 kPa |
| Recommended draft at Max*** power | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** |
| Minimum draft permitted at Min power | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa |
| Hopper capacity | 72 litri | 72 litri |
| Type of pellet fuel | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm |
| Hourly pellet consumption (min ~ max) | 1,7 kg/h * ~ 6,33 kg/h * | 1,7 kg/h * ~ 6,33 kg/h * |
| Range (min ~ max) | 28 h * ~ 7 h * | 28 h * ~ 7 h * |
| Heatable volume $m^3$ | 613/40 – 700/35 – 817/30 ** | 613/40 – 700/35 – 817/30 ** |
| Air intake for combustion | Ø 80 mm | Ø 80 mm |
| Smoke outlet | Ø 100 mm | Ø 100 mm |
| Air vent | 100 $cm^2$ | 100 $cm^2$ |
| Rated electrical power (EN 60335-1) | 92W (max 380W) | 92W (max 380W) |
| Power supply voltage and frequency | 230 Volt / 50 Hz | 230 Volt / 50 Hz |
| Net weight | 265 kg | 265 kg |
| Weight with packaging | 287 kg | 287 kg |
| Distance from combustible material (back/ side/bottom) | 150 / 200 / 0 mm | 150 / 200 / 0 mm |
| Distance from combustible material (ceiling/front) | 750 / 1000 mm | 750 / 1000 mm |

* Values that can vary depending on the type of pellet used
** Heatable volume depending on the power required per $m^3$ (respectively, 40-35-30 Kcal/h per $m^3$)
*** Value recommended by the manufacturer (not binding) for optimal product performance

**Tested according to EN 14785 in compliance with the European Construction Product regulation (EU 305/2011)**

| DESCRIPTION | MAYA³ 16 | MAYA³ 24 | . |
|---|---|---|---|
| Effective rated power | 16,2 kW (13.932 kcal/h) | 22,8 kW (19.608 kcal/h) | |
| Effective rated power ($H_2O$) | 12,9 KW (11.094 kcal/h) | 18,7 kW (16.082 kcal/h) | |
| Minimum effective power | 4,7 KW (4.042 kcal/h) | 4,7 kW (4.042 kcal/h) | |
| Minimum effective power ($H_2O$) | 3,1 KW (2.666 kcal/h) | 3,1 kW (2.666 kcal/h) | |
| Performance at Max | 93,3% | 91,3% | |
| Performance at Min | 96,5% | 96,5% | |
| Exhaust smoke temperature at Max | 118°C | 150°C | |
| Exhaust smoke temperature at Min | 60°C | 60°C | |
| Particulate / OGC / Nox (13%$O_2$) | 19 mg/Nm³ – 2,2 mg/Nm³ - 109 mg/Nm³ | 19 mg/Nm³ – 3 mg/Nm³ – 114 mg/Nm³ | |
| CO at 13% $O_2$ at Min and at Max | 0,011 — 0,006% | 0,011 — 0,014% | |
| $CO_2$ at Min and at Max | 7,7% – 11,7% | 7,7% – 12,5% | |
| Smoke mass | 10,5 g/sec | 13,9 g/sec | |
| Maximum operating pressure | 2 bar – 200 kPa | 2 bar – 200 kPa | |
| Recommended draft at Max*** power | 0,10 mbar – 10 Pa*** | 0,10 mbar – 10 Pa*** | |
| Minimum draft permitted at Min power | 0,02 mbar – 2 Pa | 0,02 mbar – 2 Pa | |
| Hopper capacity | 40 litri | 40 litri | |
| Type of pellet fuel | Ø 6 mm 3÷40 mm | Ø 6 mm 3÷40 mm | |
| Hourly pellet consumption (min ~ max) | 1,0 kg/h * ~ 3,5 kg/h * | 1,0 kg/h ~ 5,0 kg/h * | |
| Range (min ~ max) | 26 h * ~ 8 h * | 26 h * ~ 5 h * | |
| Heatable volume m³ | 348/40 – 398/35 – 464/30 ** | 490/40 – 560/35 – 654/30 ** | |
| Air intake for combustion | Ø 50 mm | Ø 50 mm | |
| Smoke outlet | Ø 80 mm | Ø 80 mm | |
| Air vent | 80 cm² | 80 cm² | |
| Rated electrical power (EN 60335-1) | 115W (max 370W) | 115W (max 370W) | |
| Power supply voltage and frequency | 230 Volt / 50 Hz | 230 Volt / 50 Hz | |
| Net weight | 160 kg | 151,5 kg | |
| Weight with packaging | 175 kg | 167,5 kg | |
| Distance from combustible material (back/side/bottom) | 200 / 200 / 0 mm | 200 / 200 / 0 mm | |
| Distance from combustible material (ceiling/front) | 750 / 1000 mm | 750 / 1000 mm | |

* Values that can vary depending on the type of pellet used
** Heatable volume depending on the power required per m³ (respectively, 40-35-30 Kcal/h per m³)
*** Value recommended by the manufacturer (not binding) for optimal product performance

Tested according to EN 14785 in compliance with the European Construction Product regulation (EU 305/2011)

# *NOTE*

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