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DIVIO

Installation
Maintenance



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1. GENERAL

1.1 General information

Thank you for having chosen a CIAT Divio comfort unit for the heating and cooling of your rooms. Please read this installation manual carefully before installing and switching on the unit. Following the indications contained in this manual will ensure that the appliance continues to operate perfectly over time. The manufacturer guarantees the machine against failures due to manufacturing for a period of 36 months as from the date on which it leaves the factory. Excluded are all other problems linked to incorrect installation, extraordinary atmospheric events, non-compliant dimensioning or unauthorised interventions. (see CIAT's general warranty conditions)

1.1.1 Conformity

The CIAT Divio comfort units conform to European directives LVD, EMC, RoHS e RAEE: 2006/95/EC, 2004/108/EC, 2002/95/EC and 2002/96/EC

1.1.2 Symbols

The pictograms in the next chapter provide the necessary information for correct, safe use of the machine.

Important

- Paragraphs marked with this symbol contain very important information and recommendations, particularly as regards safety.



Failure to comply with them may result in:

- danger of injury to the operators
- loss of the warranty
- refusal of liability by the manufacturer.

Generic danger

- Signals that the operation described could cause physical injury if not performed according to the safety rules.




1.1.3 Equipment supplied :

- Divio,
- 2 adaptor connections,
- installation manual,
- user's manual

Not supplied :

- screws for wall mounting

1.2 General warnings

• After unpacking, make sure that all the components are present. Should this not be the case, this must be indicated on the delivery receipt and confirmed  to the carrier by registered letter within 3 days following the delivery.

• CIAT appliances must be installed by an authorised installer who, on completion of the work, will release a declaration of conformity to the client in accordance with the laws in force and the indications given by CIAT in the instructions leaflet supplied with the appliance.

• These units have been designed for the heating and cooling of rooms and must be used as such. CIAT accepts no responsibility, either contractual or extra-contractual, for any damage caused to persons, animals or property as a result of incorrect installation, adjustment or maintenance or improper use.

• In the case of leaks, switch off the Divio and cut off the water supply.
Call the company that installed the machine as soon as possible and don't intervene personally on the unit.

• If the appliance is not used for a long period of time, the following operations should be performed:
- Switch off the Divio unit
- Cut off the water supply
- If there is the risk of freezing, make sure that anti-freeze has been added to the system. Otherwise empty the system.

• In cooling mode, too low a temperature may be detrimental to health and is an unnecessary waste of energy.
Avoid prolonged contact with the direct air flow.

• Periodically open the windows to ensure a correct change of air.

• This instruction leaflet is an integral part of the appliance and consequently must be kept carefully and must ALWAYS accompany the appliance, even when it is passed to a new owner or user or transferred onto another system. Should the manual be lost or damaged, you may request a new copy by calling 0810810142 or via info@ciat.fr.

• Repairs or maintenance operations should be carried out by qualified personnel in accordance with the current manual. Do not modify or intervene on the appliance as this could create dangerous situations and the manufacturer will not be responsible for any damage caused.

1.3 Fundamental safety rules

- Remember that some fundamental safety rules should be followed when using a product that uses electricity and water, such as:
- It is forbidden for the appliance to be used by children or unassisted disabled persons.
- It is forbidden to touch the appliance with wet hands or body when barefoot.
- It is forbidden to carry out any cleaning before having disconnected the appliance from the electricity mains supply by turning the system master switch to "OFF".
- It is forbidden to modify the safety or adjustment devices or adjust without authorisation and indications of the manufacturer.
- It is forbidden to pull, cut or knot the electrical cables coming out of the appliance, even if it is disconnected from the mains supply.
- It is forbidden to poke objects or anything else through the inlet or outlet grills.
- It is forbidden to open the doors which access the internal parts of the appliance without first turning the system master switch to "OFF".
- It is forbidden to dispose of or leave the packaging materials in the reach of children which could become a source of danger.
- It is forbidden to climb on the unit and/or place any object whatsoever on it.
- The panels of the unit may reach temperatures above 70°C.



Danger from burns - take care when touching

1.4 Discover Divio, reversible comfort unit

Divio fig. 1

A - Supporting structure in high resistance electrogalvanised steel sheet.

B - Cold water heat exchange battery in copper pipes and aluminium fins with high efficiency turbulence. 3/4 eurokonus type threaded connections, + 3/4" GM flat adaptors (J)

C - Ventilating unit consisting of a tangential fan with unphased blades in synthetic material (extremely quiet) mounted on anti-vibration supports in EPDM, balanced statically and dynamically, and splined directly onto the motor shaft.

D - High efficiency direct current electric motor with resin-coated coil mounted on anti-vibration supports in EPDM.

E - Reversible air outlet grill in aluminium painted with epoxy powder paint (metallic silver colour) and oven-dried. The large size exalts its high mechanical resistance.

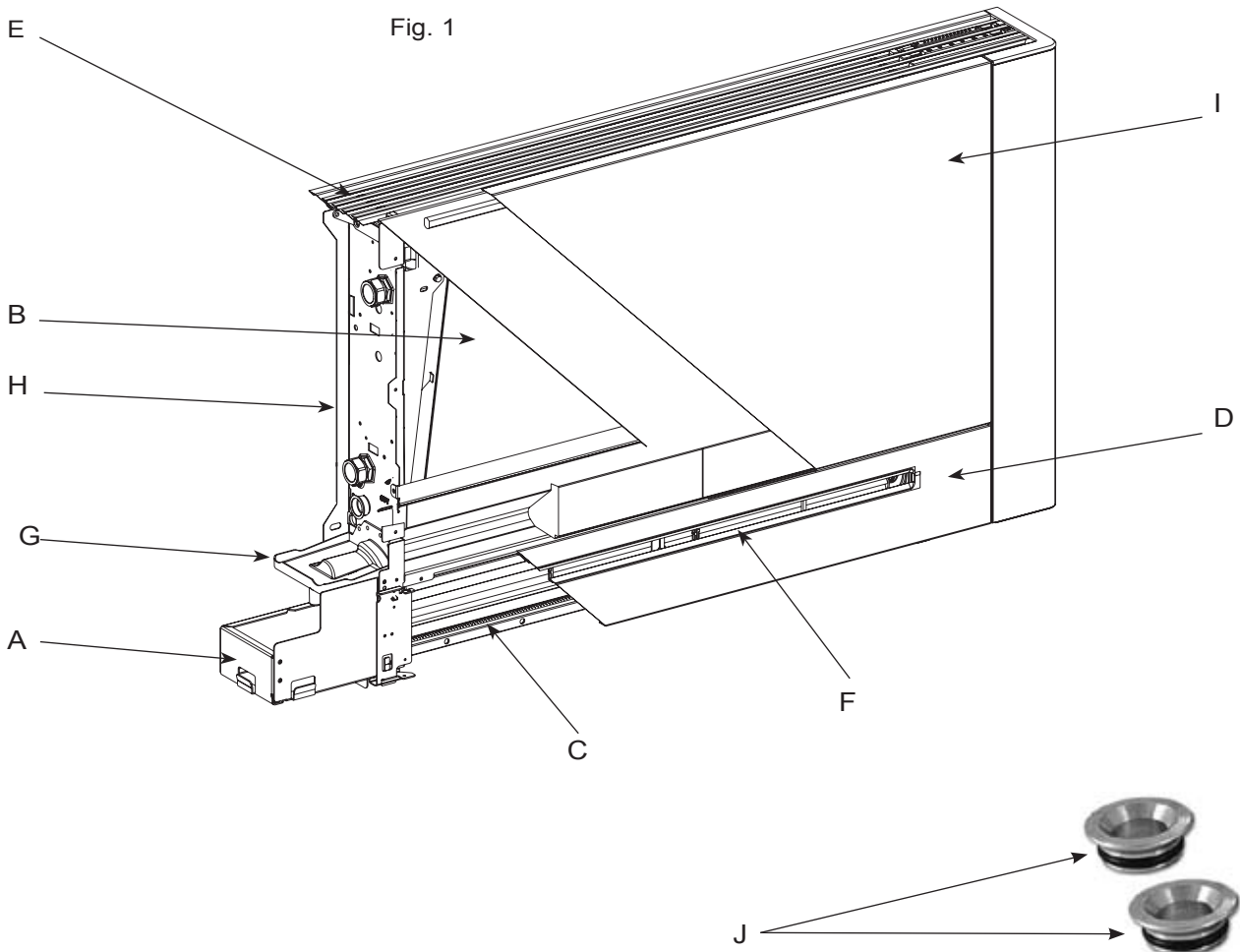
F - Air suction grill in electrogalvanised steel sheet painted with epoxy powders (RAL 9010) and oven dried, with rapid release device for filter cleaning and safety micro-switch.

G - Condensation collection basin for vertical installation, made from ABS and easy to remove for cleaning.

H - Structural insulated back-panel.

I - Dismountable front casing and lateral plates made from electro-galvanised steel sheet painted with epoxy powders (RAL 9010) and oven dried.

J - 3/4" flat male gas 3/4 eurokonus type threaded connections.



1.5 Overall dimensions and clearance

DIVIO		700	900
A	mm	697	897

Fig. 2 - Dimensions (in mm)

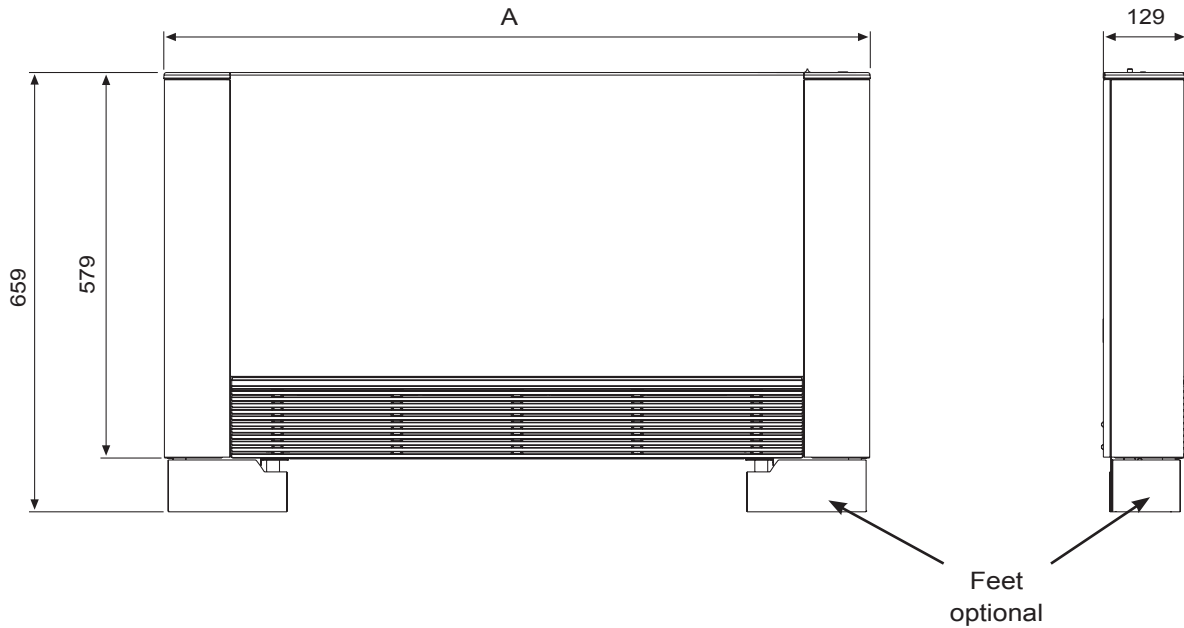
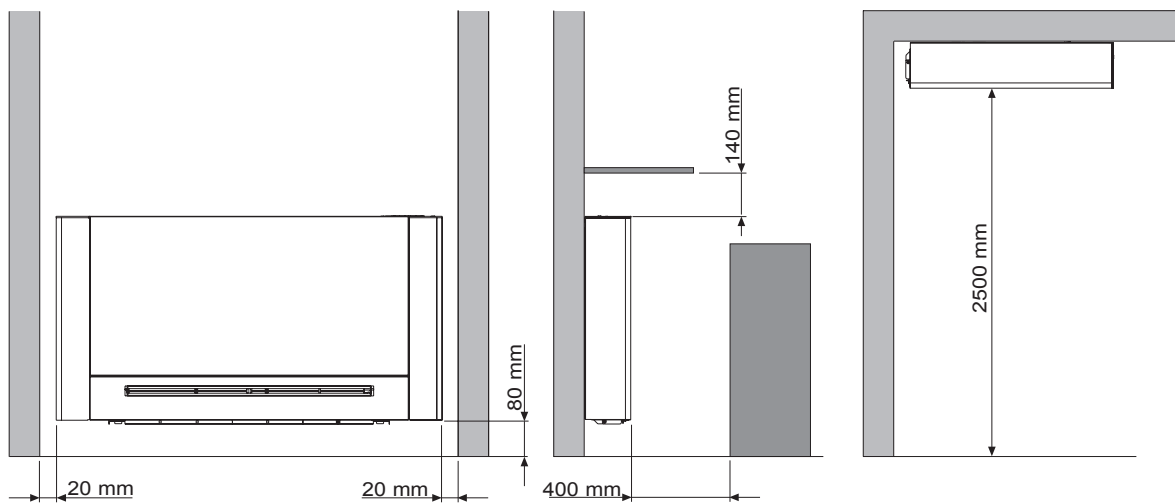


Fig. 3 - Minimum distances for assembly (in mm)



1.6 Nominal technical characteristics

Fig. 3

DIVIO	700	900
Water capacity of the coil	0,47 L	0,8 L
Maximum working pressure	10 bar	
Min/max water inlet temperature	4°C / 80°C	
Hydraulic inlets without - with connections supplied	Eurokonus 3/4 - 3/4"GM flat	
Electrical supply	230V - 1ph - 50Hz	
Weight	13 kg	15 kg
Input current	0,1 A	
Power input	9 W	19 W

2. INSTALLATION

2.1 Positioning the unit

 **Avoid installing the unit close to:**

- places subject to exposure to direct sunlight;
- sources of heat;
- damp areas or places likely to be in contact with water;
- places with oil fumes
- places subject to high frequencies.



Make sure that:

- the wall on which the unit is to be installed is strong enough to support the weight;
- the part of the wall in question does not have pipes or electric wires passing through;
- the wall in question is perfectly flat;
- the area is free from obstacles which could interfere with the inlet and outlet air flow;
- the installation wall is preferably an outside perimeter wall to allow the discharge of the condensation outside;

2.2 Installation modes

The following descriptions of the various mounting phase and the relative designs refer to a version of the machine with fixtures on the left. The descriptions for assembly operations.

To ensure that the installation is carried out correctly and that the appliance will perform perfectly, carefully follow the instructions indicated in this manual. Failure to respect the rules indicated will not only can cause the appliance to malfunction but will also void the warranty and hence CIAT shall not be responsible for any damage to persons, animals or property.

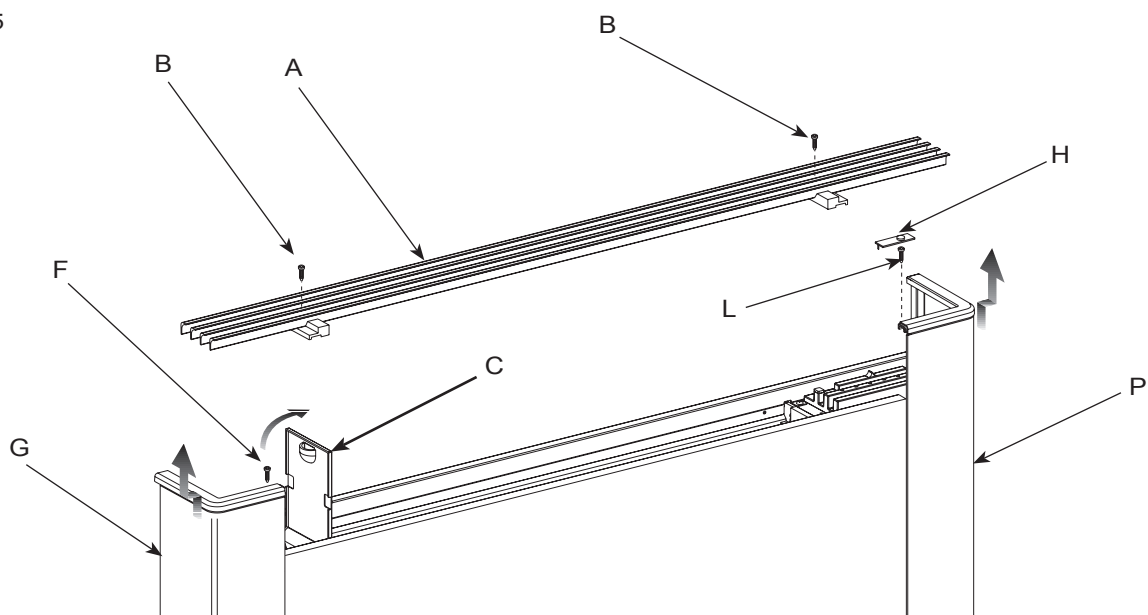
It is essential that the electrical installation is made according to the laws in force, respects the data indicated in the technical sheet and is correctly earthed.

The unit must be installed in a position which allows ordinary (cleaning of the filter) and extraordinary maintenance, as well as access to the bleeds that are accessible via the upper grille.

2.3 Opening of sides

- Dismount the upper grille (fig. 5 ref. A) by unscrewing the two fixing screws (fig. 5 ref. B).
- Open the side inspection flap (fig. 5 ref. C).
- On the left-hand side loosen the screw (fig. 5 ref. F) that fixes the left panel (fig. 5 ref. G), then lift it up and move it slightly to the left.
- On the opposite side, lift the cover (fig. 5 ref. H) that protects the screw (fig. 5 ref. L) and unscrew it.
- Move the side panel slightly to the right and lift it out (fig. 5 ref. P).

Fig. 5



2.4 Vertical installation: wall or floor mounted

For floor mounting with feet, consult the instruction sheets and manual provided.

Using the paper template, trace the position of the two fixing brackets on the wall (fig. 6). Use a suitable drill to make the holes with and insert the toggle bolts (2 for each bracket) (fig. 7 ref. A); fix the two brackets (fig. 7 ref. B). Do not over-tighten the screws so that the brackets can be adjusted with a spirit level (fig. 8).

Fully tighten the four screws to block the two brackets. Check the stability by manually moving the brackets to the right and to the left, up and down.

Mount the unit, checking that it fits correctly onto the brackets and checking that it is stable (fig. 9).

Fig. 6

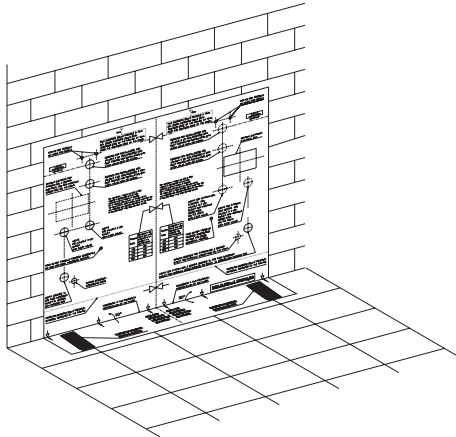


Fig. 7

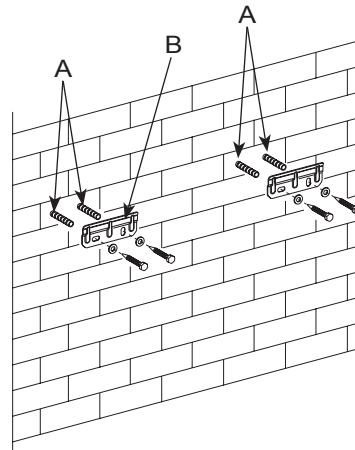


Fig. 8

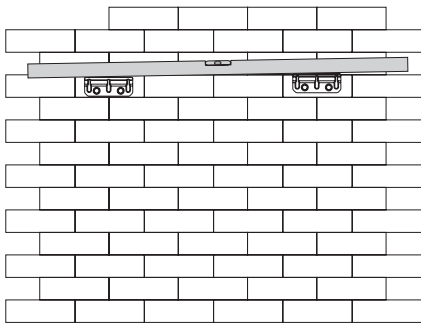
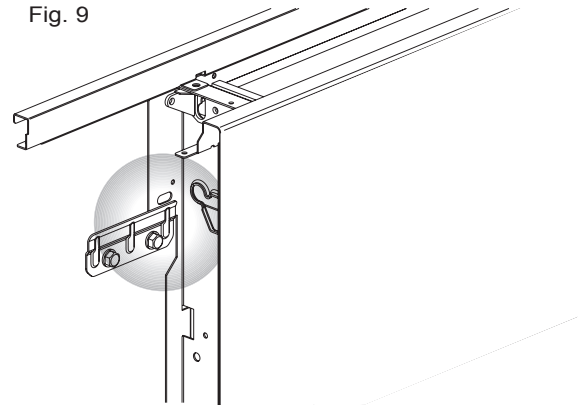


Fig. 9



2.5 Hydraulic connections

2.5.1 Pipeline diameter

The minimum internal diameter that must be respected for the pipelines of the hydraulic connections varies according to the model:

Divio 700	Ø12 mm
Divio 900	Ø14 mm

2.5.2 Connections

The choice and sizing of the hydraulic lines must be made by an expert who must operate according to the rules of good practice and the laws in force.

To make the connections:

- position the hydraulic lines
- assemble the adaptor connections provided if necessary (fig. 10 ref. A)
- tighten the connections using the “spanner and counter spanner” method (fig. 10 ref. B)
- check for any leaks of liquid
- coat the connections with insulating material.

The hydraulic lines and connections must be thermally insulated.

Avoid partially insulating the pipes.

Do not over-tighten to avoid damaging the insulation.

Use hemp and green paste to seal the threaded connections; the use of Teflon is advised when there is anti-freeze in the hydraulic circuit.



Fig. 10

2.6 Condensation discharge

The condensation discharge network must be suitably sized (minimum inside pipe diameter 16 mm) and the pipeline positioned so that it keeps a constant inclination, never less than 1%. The draining tube is connected to the drain base, placed at the bottom on the side frame under the hydraulic outlets.

- If possible, drain the condensates directly into a gutter.
- When discharging directly into the main drains, it is advisable to make a siphon to prevent bad smells returning up the pipe towards the room. The curve of the siphon must be lower than the condensation collection bowl.
- If the condensation needs to be discharged into a container, it must be open to the atmosphere and the tube must not be immersed in water to avoid problems of adhesiveness and counter-pressure that would interfere with the normal outflow.
- If a difference in level prevents the draining of condensates, a pump (not provided) must be assembled under the side drain pan. In any case, consult the specific instructions in the condensation discharge pump kit (not provided).



After the installation, check the condensates drain correctly by slowly pouring about 1/2 l water into the condensates drain pan for 5-10 minutes

2.6.1 Fitting the condensation discharge device.

Connect to the condensation collection tray discharge union (fig. 11 ref. A) a pipe for the outflow of the liquid (fig. 11 ref. B) blocking it adequately. Check that the drip-collector extension (fig. 11 ref. C) is present and correctly installed.

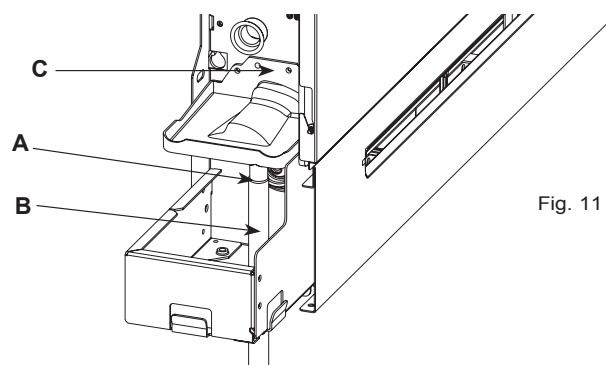


Fig. 11

2.7 Rotation for tubes on the right

The operations described and the relative images refer to a machine with fixtures on the left on which the fixtures on the right side must be rotated. If there is a machine available with right side fixtures that require rotation to the left, the sequence of the operations is the same, only the images are a mirror image.

2.7.1 Dismounting panels

- Dismount the upper grill (fig. 12 ref. A) unscrewing the two fixing screws (fig. 12 ref. B).
- Open the side inspection hatch (fig. 12 ref. C).
- On the left-hand side loosen the screw (fig. 12 ref. F) that fixes the left panel (fig. 12 ref. G), then lift it up and move it slightly to the left.
- On the opposite side lift the cover (fig. 12 ref. H) and unscrew the screw (fig. 12 ref. L).
- Move the side panel slightly to the right and lift it out (fig. 12 ref. P).
- Remove the lower front grill (fig. 13 ref. A).
- Unscrew the screws (fig. 14 ref. A-B) fastening the front plate (fig. 14 ref. C).

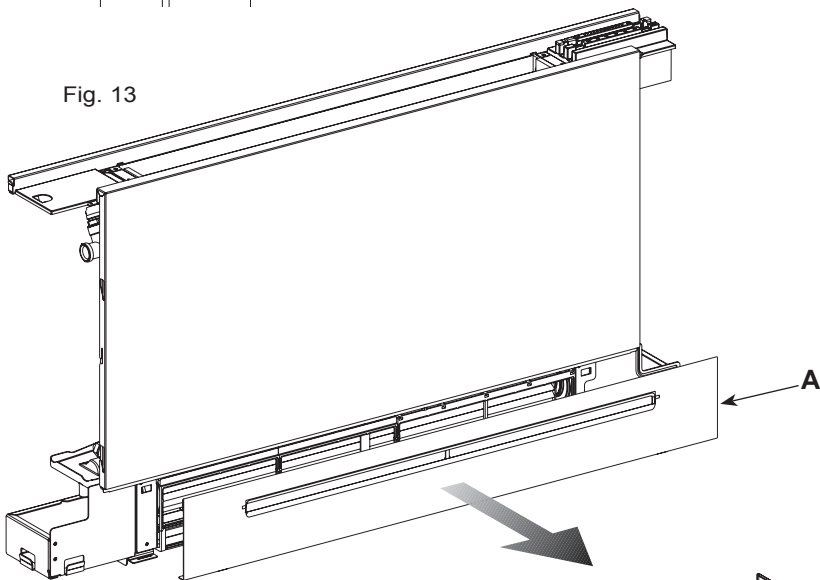
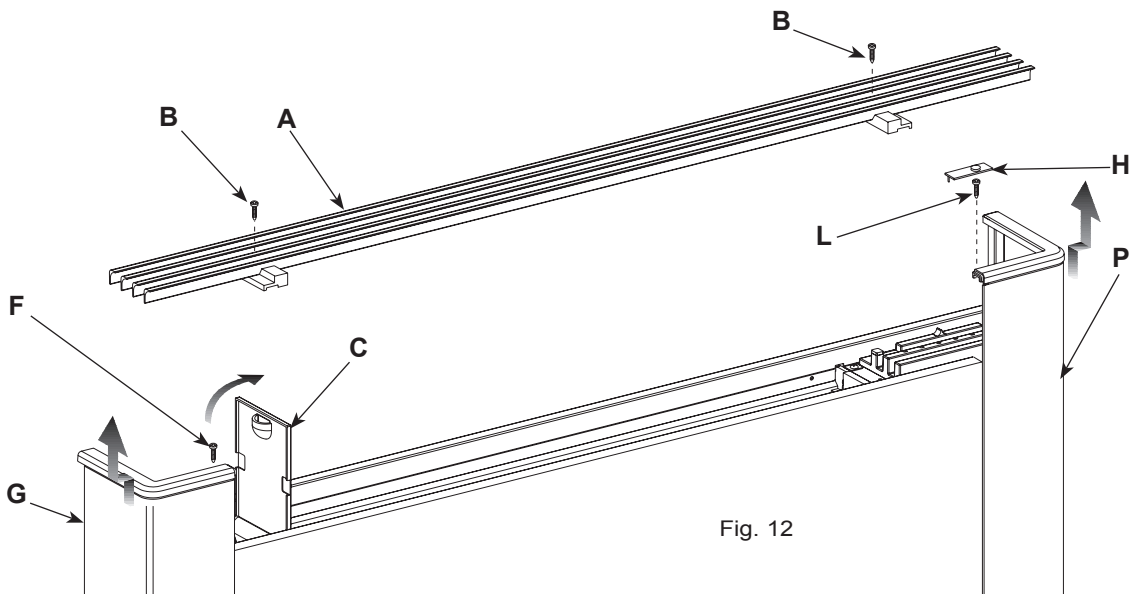
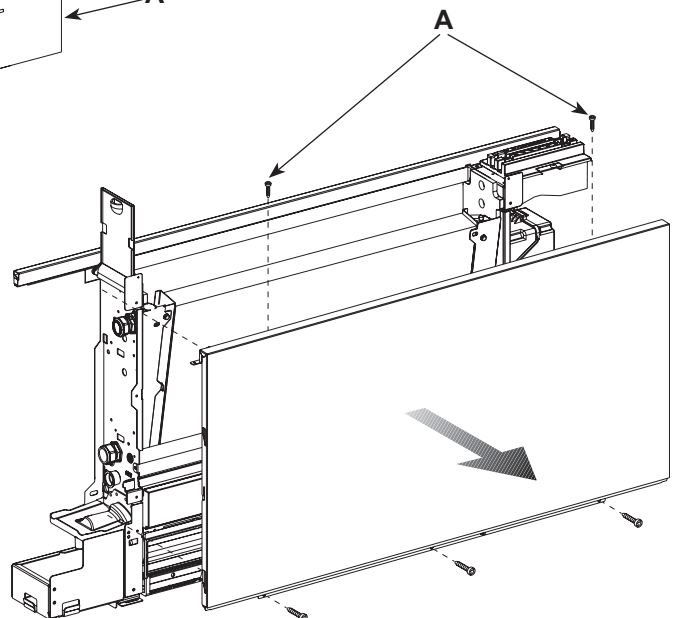


Fig. 14



2.7.2 Dismounting exchangers

- Unscrew the two side screws (fig. 14 ref. A) that fasten the front deflector (fig. 14 ref. B).
- Loosen the four screws that fix the exchanger (fig. 14 ref. C);
- remove the coil water probe;
- remove the exchanger (fig. 14 ref. F);
- remove the drip-collector extension from the central tray (fig. 14 ref. D);
- on the opposite side remove the plug on the condensation evacuation hole (fig. 14 ref. E);
- loosen the central condensation collection tray fixing screw (fig. 14 ref. G), move the tray and rest it on the opposite side so that the fixture mouth for the drip-collector extension comes out of the structure, and block the tray with the screw previously removed;
- re-insert the drip-collector extension and the plug on the opposite side;
- open the pre-cut hexagonal holes on the right side insulation and close with insulation the hexagonal holes on the left shoulder
- rotate the exchanger moving the fixtures to the opposite side, and reinsert it on the machine (fig. 15)
- tighten all the fixing screws of the exchanger

When all the operations described have been completed, remount all the components dismantled previously following the dismantling operations in the opposite order.

Fig. 14

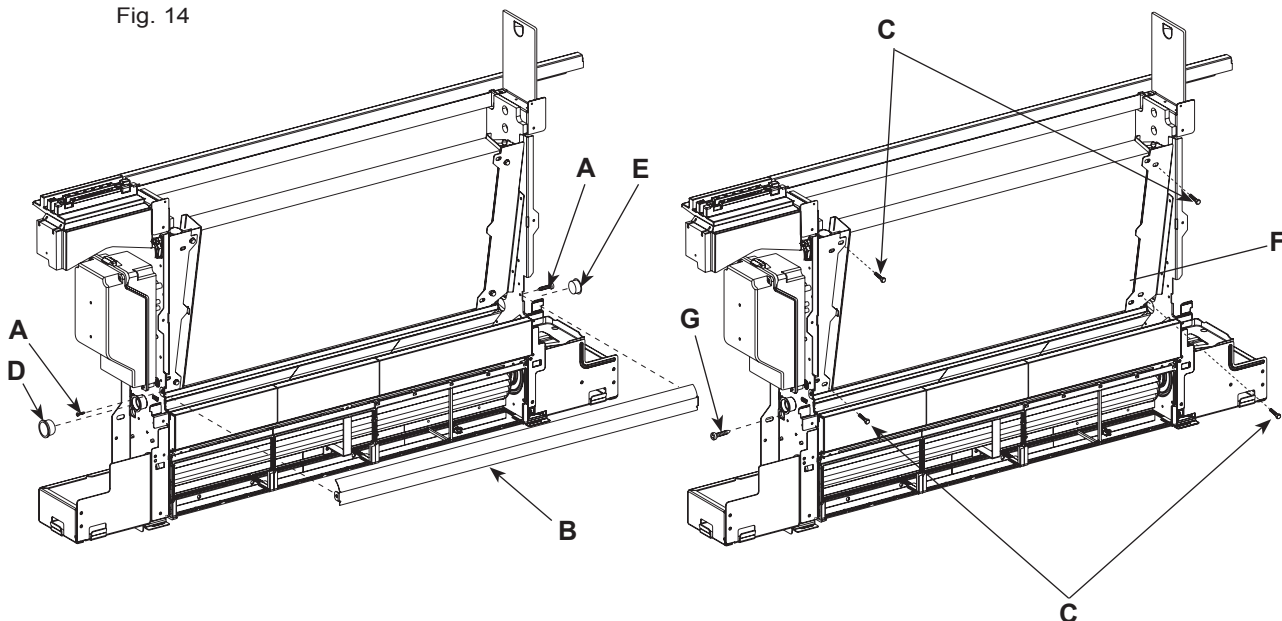
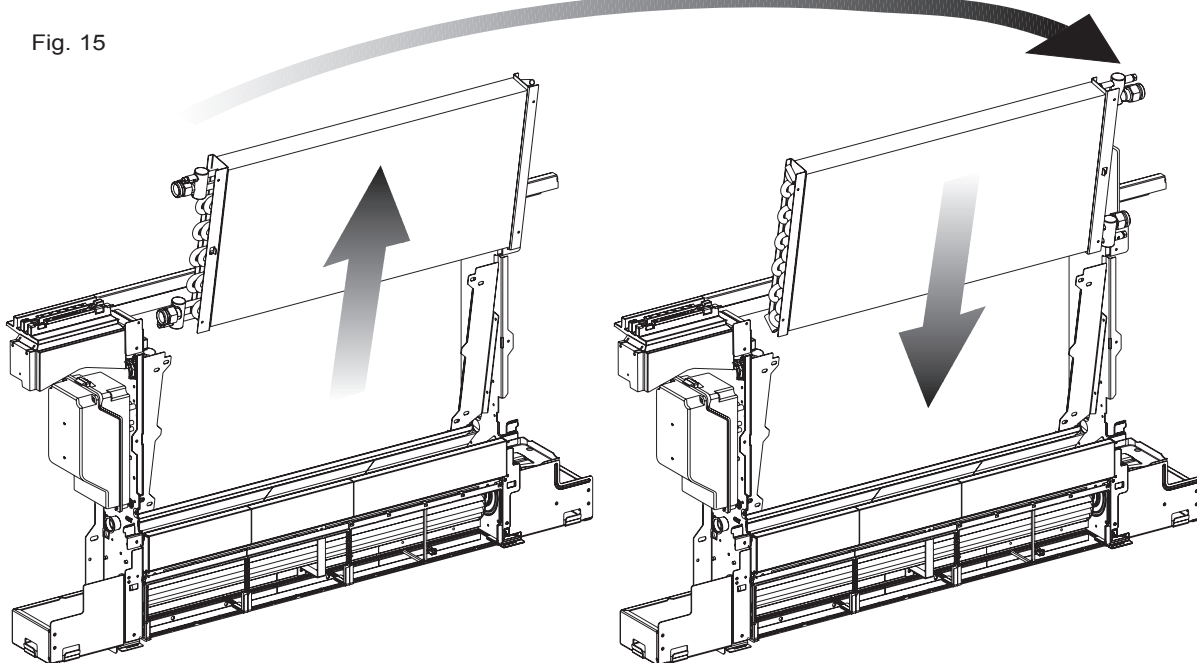


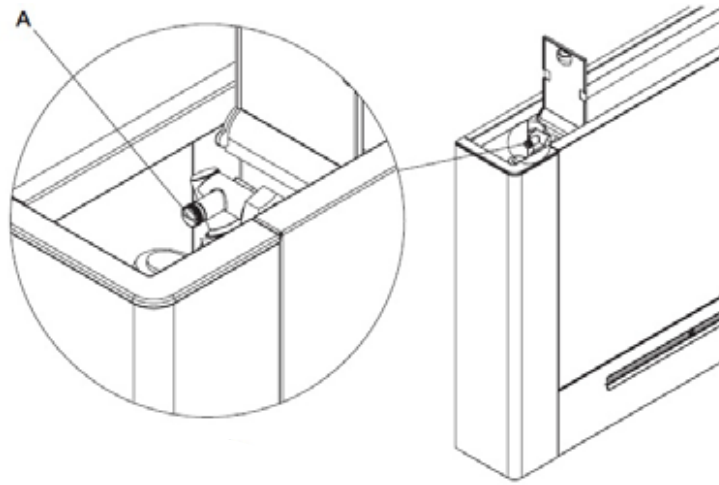
Fig. 15



2.8 Evacuating air while filling the system

- Open all the system interception devices (manual or automatic);
- Start the filling by slowly opening the system water filling tap;
- Use a screwdriver on the coil bleeder located above (fig. 17 réf. A) .

Fig. 17



- When water starts to leave the unit's bleeder, close them and continue to load up to the nominal value intended for the system.

Check the hydraulic seal of the gaskets.

It is advisable to repeat these operations after the appliance has been running for a few hours and periodically check the pressure of the system.

2.9 Maintenance

Regular maintenance is essential to keep the Divio unit operating correctly and safely for as long as possible. Biannual, or for some maintenance operations annual, interventions can be carried out by a technically qualified professional; in addition, original spare parts may be provided.

2.10 Cleaning the outside

Switch off the Divio unit before cleaning or carrying out any maintenance operations.

Wait until the parts have cooled down to avoid the risk of burns.

When necessary, clean the outer surfaces of the Divio comfort unit with a soft damp cloth (fig.18).

Do not use abrasive sponges or abrasive or corrosive detergents to avoid damaging the painted surfaces.

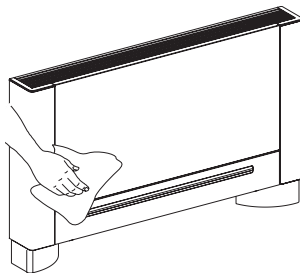


Fig. 18

2.11 Cleaning air suction filter

When alarms trigger on the machine control panels that require the filter to be cleaned (if the signal is enabled), or when the system is to be re-started after a period of inactivity, proceed as described below.

2.11.1 Extraction of filter cells



Before opening the intake grille, switch off the machine and cut the power.

- Extract the front grille by lifting it slightly (fig. 19 ref. A) and turn it until it comes right out of its seat (fig. 19 ref. B);
- Extract the filter (fig. 19 ref. C), pulling it horizontally outwards (fig. 19 ref. D).

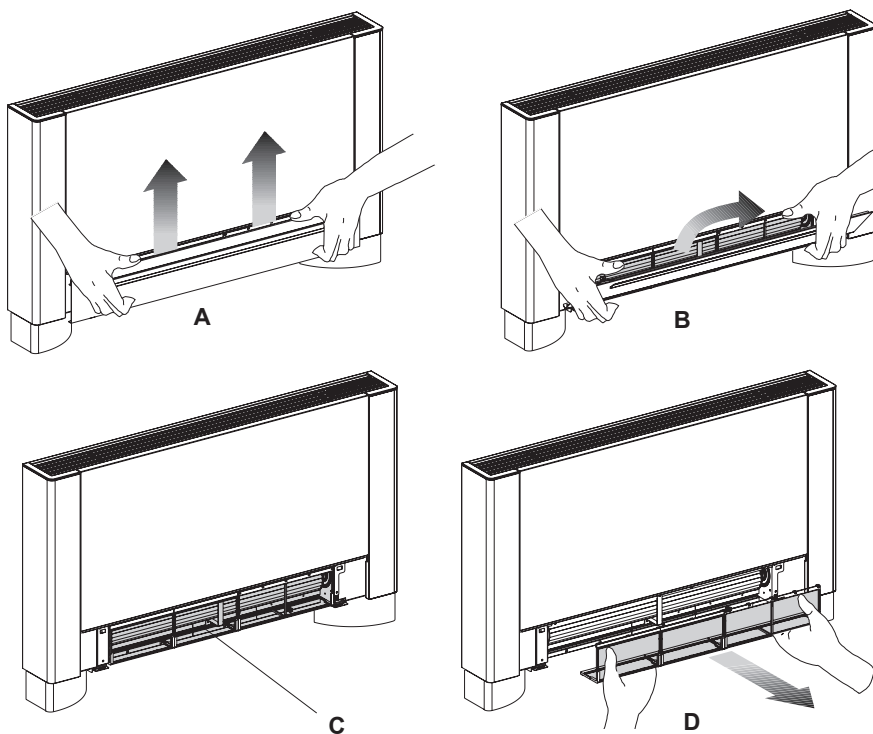


Fig. 19

2.11.2 Cleaning filtering seats

- suck up the powder with a vacuum cleaner (fig. 20 ref. A)
- wash the filter (fig. 20 ref. B) with running water without using detergents or solvents, and leave to dry.
- Reassemble the filter (fig.21 ref. A) taking care to insert the lower side (fig. 21 ref. B) into its groove.

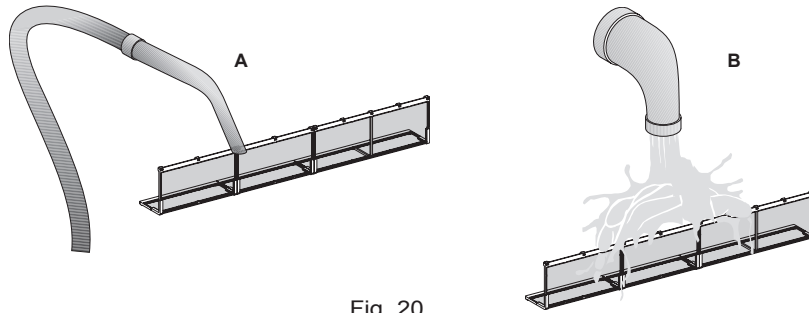


Fig. 20

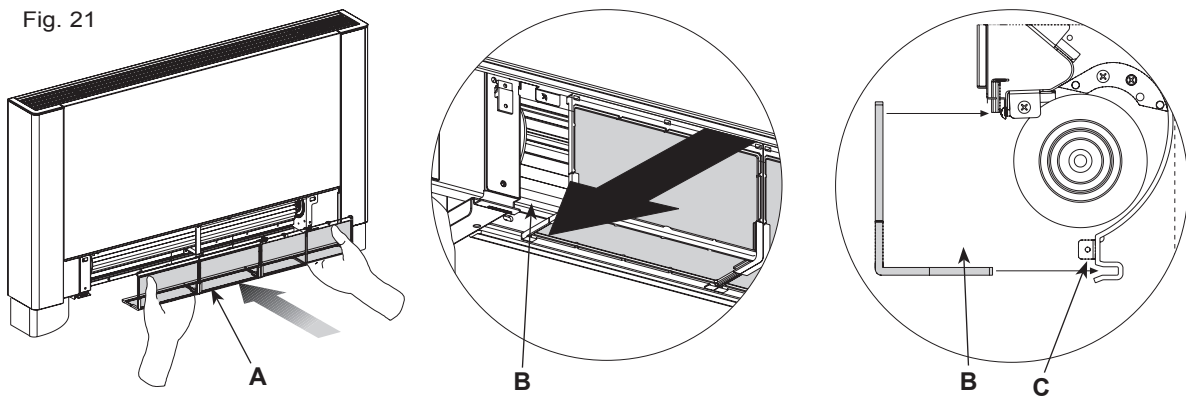



Fig. 21

 It is forbidden to use the unit without the net filters.

 The appliance is fitted with a safety switch that prevents the operation of the fan whenever the intake grille is not fitted. After finishing the cleaning of the filter, check that the panel is mounted correctly.

2.11.3 Ending Cleaning Operations

Insert the two lugs (fig. 22 ref. A) into the special slots (fig. 22 ref. B), turn it and hook it up with a slight tap on the upper part.

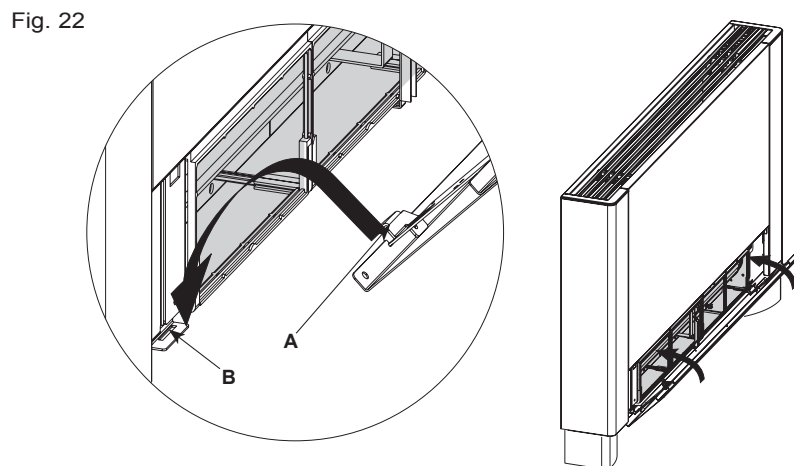


Fig. 22

2.12 Energy saving tips

- Always keep the filters clean;
- Where possible, leave the doors and windows of the room to be heated or cooled closed.
- limit where possible the effect of direct sun rays in the rooms being cooled (use curtains, shutters etc.)

3. TROUBLESHOOTING



Should leaks occur or in the case of abnormal operation, immediately cut off the electrical supply and shut off the water inlet.



If you notice any of the following faults, contact a qualified technician and do not intervene yourself.

- The ventilation is not activated even if there is hot or cold water in the hydraulic circuit.
- The appliance leaks water during heating .
- The unit leaks water during cooling.
- The appliance makes excessive noise.
- Condensation forms on the front panel.
- The blue and red LEDs at the end of the thermostat cursor flash.

3.1 Table of faults and remedies

Servicing should be carried out by a qualified installer only.

Effect	Cause	Remedy
The ventilation speed increases or decreases automatically.	- The electronic control adjusts the comfort level regularly.	- Wait for the temperature adjustment or if needed select the silent function.
The appliance is not activated the ventilation.	- No hot or cold water in the system.	- Ensure that the heating generator (heat pump, boiler...) is operating
The ventilation is not activated even if there is hot or cold water in the hydraulic circuit.	- the fan motor is blocked or burnt out. - the micro-switch that stops the ventilation when the filter grill is opened does not close correctly. - the electrical connections are not correct.	- Check the working efficiency of the valve by powering it separately with 220V. If it activates the problem could be the electronic control. - Check the windings of the motor and the free rotation of the fan. - Check that by closing the grill the micro-switch contact is activated. - Check the electrical connections.
The appliance leaks water during heating.	- Leaks in the hydraulic connections of the system.	- Check the leak and fully tighten the connections. - Check the state of the gaskets.
Condensation forms on the front panel.	- Thermal insulation has come unstuck.	- Check the correct positioning of the thermo-acoustic insulation paying attention to that in the front above the finned battery.
There are drops of water on the air outlet grill.	- In situations of high humidity (>60%) condensation could form, especially at the minimum ventilation speeds.	- As soon as humidity starts falling the phenomenon disappears. In any case the presence of a few drops of water in the appliance does not indicate a malfunction.
The appliance leaks water during cooling.	- The condensation pan is blocked. - The condensation discharge does not need an inclination for correct drainage. - The connecting pipes are poorly insulated.	- Slowly pour a bottle of water in the low part of the battery to check the drainage; if necessary, clean the pan and/or increase the inclination of the drainage pipe. - Check the insulation of the pipes.
The appliance makes a strange noise.	- The fan touches the structure. - The fan is unbalanced.	- Check for any interference by manually rotating the fan. - The unbalancing causes excessive vibrations of the machine; replace the fan.
All the LEDs flash at the same time (if the signal is enabled).	- Dirty filters.	- Clean the filters and reset the signal by pressing the MODE key for at least 5 seconds.



Siège social

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