

## Installation and maintenance manual

# COMBI 650/654 och 950/954 with double air flow grill



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! All technical data and dimensions shown are subject to change without prior notice from the manufacturer

## USE and storage of the manual



**Carefully read this manual before installing and operating the appliance.**

Keep the manual attentively to be able to consult it to have information about the use and maintenance of the unit.

## WARNINGS



**The manufacturer do not respond to changes and errors of hydraulic and Electrical connections.**

- The unit must be installed following the national safety rules, turning to the seller or to qualified specialists.
- The inobservance of the instructions below or the device improper use cause the immediate decay of the guarantee.
- The maintenance must be performed only by qualified specialists.
- Unplug the power supply before maintenance operations or access to internal parts of the unit.
- Do not install or use damaged devices.
- In case of malfunction, switch off the unit, unplug the power supply and turn to the seller or qualified specialists.
- Eliminate packaging material following the environmental regulations.

## Unit acceptance, handling and storage

- At the time of the delivery, verify the correspondence between the order and the indication on the delivery note.
- Verify the packaging integrity and, if inconsistencies with the order, damages or malfunctions are found, they must be reported on the delivery and promptly signaled to the manufacturing company.
- The unit must be stored in spaces protected from bad weather with a temperature between -10°C and 55°C.
- The handling and installation of the unit must be performed with the highest attention to prevent the damage of fragile parts; these operations can be facilitated with the help of a lifter.
- The unit must be grabbed from 3 sides , do not lift or move the unit from the hydraulic connections.

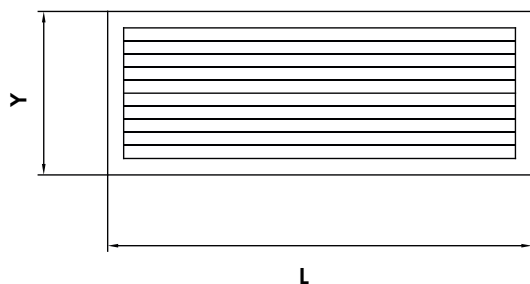
## UNIT DESCRIPTION AND DIMENSIONS



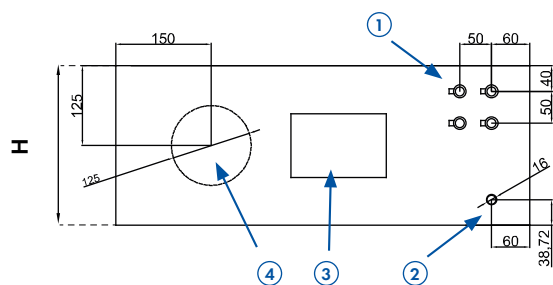
## UNIT DESCRIPTION AND DIMENSIONS

All dimensions in the drawings below are given in millimetres.

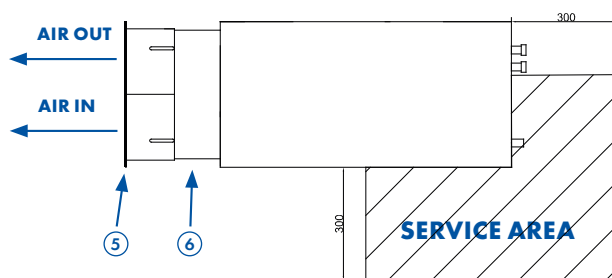
Front view



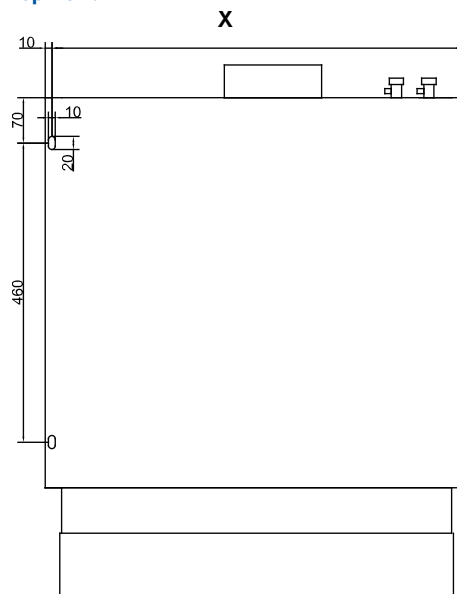
Rear view



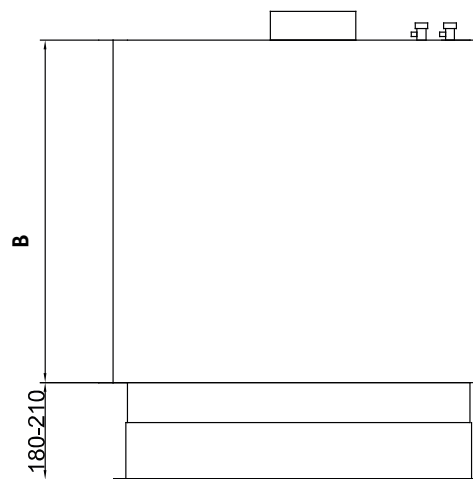
Side view:



Top view:



Below view:



- ① Hydronic connections (1/2" F).
- ② Condensate drain (Ø 16)
- ③ Electric board
- ④ Fresh air arrangement (Ø 125)
- ⑤ Telescopic plenum
- ⑥ Double flow air grill

### Operating limits:

Maximum/minimum inlet water temperature: 70 / 4°C.

Maximum working pressure: 15 bar.

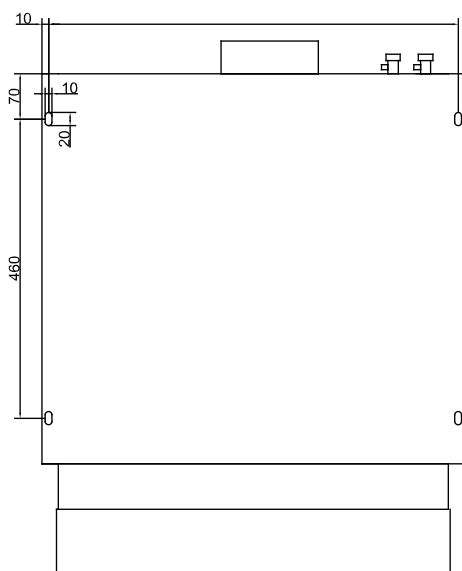
Maximum/minimum room temperature: 40 / 4°C.

Storlek	B	L	H	X	Y
COMBI 950/954	600	950	250	930	270
COMBI 650/654	600	650	250	630	270

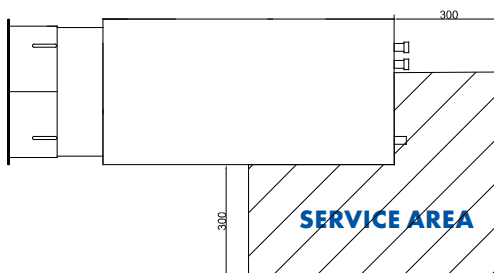
## INSTALLATION

**FIGURE A) Top view:**

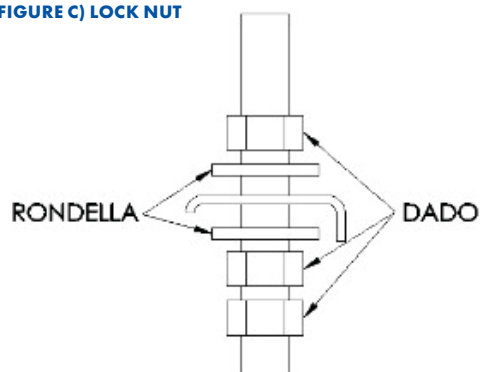
630 mm (strl 650/654) / 930 mm (strl 950/954)



**FIGURE B) Side view:**



**FIGURE C) LOCK NUT**



### IMPORTANT!

For safety reasons, the instructions below must be followed during installation.

#### Installation

- Fix the unit on the ceiling or on a solid support and without vibrations.
- Do not install the unit in a direct exposed point to the sun's rays or near heat sources, vapour or flammable gases.
- Install the fan coil unit in a position that the air intake and air outlet openings are not obstructed; the air must circulate freely throughout the room to be air-conditioned.
- Install the unit in an easily accessible position so as not to disturb the maintenance operations.

#### Unit fixing

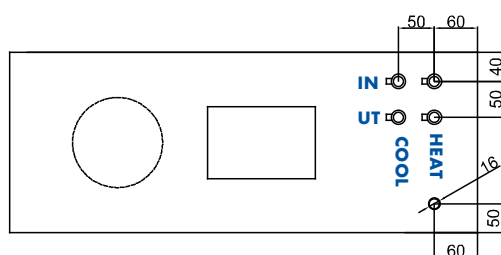
Choose the installation place so that the maintenance area will be observed as reported in **figure B**; also check that the unit and its connecting pipes do not interfere with the existing system (electrical or plumbing).

**The unit must be fixed to the ceiling using threaded rods with suitable dowels according to the type of frame (not supplied) as described:**

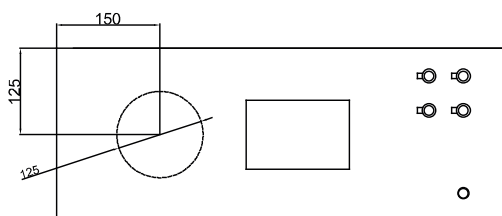
- mark the 4 positions on the structural ceiling and then drill the holes for the threaded rods (distances are shown in **fig. A**)
- fix the threaded rods firmly to the ceiling (their length depends on the distance between the structural ceiling and the installation position).
- raise the unit by inserting the threaded rods into the fixing slots and secure it using suitable locks and nuts (the arrangement is shown in **figure C**)
- check, using a leveller, that the unit is in a perfectly horizontal position and then secure the nuts and locknuts.

## INSTALLATION continuing

FIGURE D) Rear view



Flange installation



### Hydraulic connections

It is very important to proceed with a correct installation, including the anti-condensation insulation on the water pipelines (connectors 1/2" F).

Pay attention to use always suitable keys and lock-keys, in order to avoid any fittings breaking. Water connectors position **fig. D**

### Condensate drain connections

We recommend to fix the discharge pipe with a minimum inclination of 2 cm/m for its proper operation.

Position of the condensate drain connection (Ø 16mm) **fig. D**

The manufacturer is not liable in case of any eventual condensate leakage, caused by a wrong discharge connection.

### Fresh air connection (optional)

The rear arrangement allows the separate realization of a fresh air connection.

### Flange installation

Remove the sheet metal frame (as reported in the beside image). Use the connection flange Ø125mm (supplied as an option) and connect a suitable air duct (we recommend a closing flange if the fan coil unit is switched off).

### Electrical connections



**The electrical connections must be performed by specialists, according to the national electrical standards in force.**

**Before making any connection the power must be turned off.**

Use the appropriate wire gauge to the maximum drawn current as shown on the label of the technical data on the unit.

Connect respecting the instructions given in the scheme attached, according to the unit typology and accessories.

**The incorrect connection and/or the failure to respect the National regulations void the guarantee and any other responsibility of the manufacturer.**

## CLEANING AND MAINTENANCE

Only skilled and involved staff is allowed to do the maintenance!

**Disconnect the power supply from the unit before proceeding with any kind of maintenance.**

It is necessary to clean and to do the maintenance only on the air filter, which is installed on the air intake (unless there is a failure of other components).

To perform this operation, simply remove the front grille (it is magnetic so a simple frontal pull is enough); then slide it towards the side of the grille to remove it.

Carry out the reverse operation for assembly.

**Remember to always install the filter after cleaning it, before restarting the unit.**



## MALFUNCTIONS AND CORRECTIVE ACTIONS

### MALFUNCTIONS:

#### 1: Fan does not run

##### Corrective actions:

- make sure that the machine is powered;
- check if some switches or fuses are;
- check the correct wiring of the unit (qualified personnel only)
- check if the thermostat is set in the right way.

#### 2: Low air flow.

##### Corrective actions:

- select an higher fan speed;
- replace or clean the filter.

#### 3: The application leaks water.

##### Corrective actions:

- monitor and improve the insulation of the water pipes;
- tighten the water attacks;
- fix the unit perfectly horizontally;
- clean the dip tray;
- check and clean the pipe of the condensate drain;
- monitor the proper functioning of the condensate drain pump;

#### 4: The unit does not cool/heat

##### Corrective actions:

- lower/raise the set temperature on the thermostat;
- check that the chiller/boiler and circulation pump are turned on;
- bleed the water pipes;
- check if the thermostat is not installed in a warmer/cooler area;
- clean the air filter.



## Contact us if you have any questions

We are with you all the way, from design to inspection!

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