

# CENTRIFUGAL CEILING EXTRACT FAN

## Ceileo 200/250/300
## Ceileo 200/250/300 T/H/IR
## Ceileo 200/250/300 Light
## Ceileo 200/250/300 Light T/H/IR

EN USER'S MANUAL

BLAUBERG Ventilatoren

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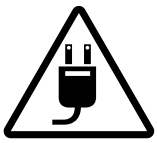
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This user's manual is a main operating document intended for technical, maintenance, and operating staff.
The manual contains information about purpose, technical details, operating principle, design, and installation of the Ceileio unit and all its modifications.
Technical and maintenance staff must have theoretical and practical training in the field of ventilation systems and should be able to work in accordance with workplace safety rules as well as construction norms and standards applicable in the territory of the country.
The information in this user's manual is correct at the time of the document's preparation.
The Company reserves the right to modify the technical characteristics, design, or configuration of its products at any time in order to incorporate the latest technological developments.
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## SAFETY REQUIREMENTS

- Please read the user's manual carefully prior to installing and operating the unit.
- All user's manual requirements as well as the provisions of all the applicable local and national construction, electrical, and technical norms and standards must be observed when installing and operating the unit.
- The warnings contained in the user's manual must be considered most seriously since they contain vital personal safety information.
- Failure to follow the rules and safety precautions noted in this user's manual may result in an injury or unit damage.
- After a careful reading of the manual, keep it for the entire service life of the unit.
- While transferring the unit control, the user's manual must be turned over to the receiving operator.

### UNIT INSTALLATION AND OPERATION SAFETY PRECAUTIONS



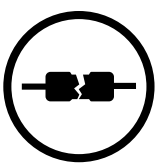
- Disconnect the unit from power mains prior to any installation operations.



- The unit must be grounded!



- Do not change the power cable length at your own discretion.
- Do not bend the power cable.
- Avoid damaging the power cable.
- Do not put any foreign objects on the power cable.



- Do not use damaged equipment or cables when connecting the unit to power mains.



- Unpack the unit with care.



- While installing the unit, follow the safety regulations specific to the use of electric tools.



- Do not lay the power cable of the unit in close proximity to heating equipment.



- Do not operate the unit outside the temperature range stated in the user's manual.
- Do not operate the unit in aggressive or explosive environments.



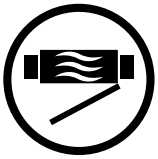
- Do not touch the unit controls with wet hands.
- Do not carry out the installation and maintenance operations with wet hands.



- Do not allow children to operate the unit.



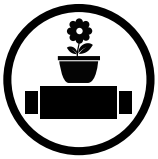
- Do not store any explosive or highly flammable substances in close proximity to the unit.



- Do not open the unit during operation.



- Do not block the air duct when the unit is switched on.



- Do not sit on the unit and avoid placing foreign objects on it.



- Do not wash the unit with water.
- Protect the electric parts of the unit against ingress of water.




- Disconnect the unit from power mains prior to any technical maintenance.




- When the unit generates unusual sounds, odour, or emits smoke, disconnect it from power supply and contact the Seller.



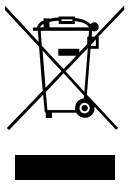
- Do not direct the air flow produced by the unit towards open flame or ignition sources.



- In case of continuous operation of the unit, periodically check the security of mounting.



- Use the unit only for its intended purpose.



**THE PRODUCT MUST BE DISPOSED SEPARATELY AT THE END OF ITS SERVICE LIFE.**
**DO NOT DISPOSE THE UNIT AS UNSORTED DOMESTIC WASTE.**

## PURPOSE

The centrifugal ceiling extract fan Ceileio is designed for extract ventilation of small to medium-sized premises.

**THE UNIT SHOULD NOT BE OPERATED BY CHILDREN OR PERSONS WITH REDUCED PHYSICAL, MENTAL, OR SENSORY CAPACITIES, OR THOSE WITHOUT THE APPROPRIATE TRAINING.**

**THE UNIT MUST BE INSTALLED AND CONNECTED ONLY BY PROPERLY QUALIFIED PERSONNEL AFTER THE APPROPRIATE BRIEFING.**

**THE CHOICE OF UNIT INSTALLATION LOCATION MUST PREVENT UNAUTHORIZED ACCESS BY UNATTENDED CHILDREN.**

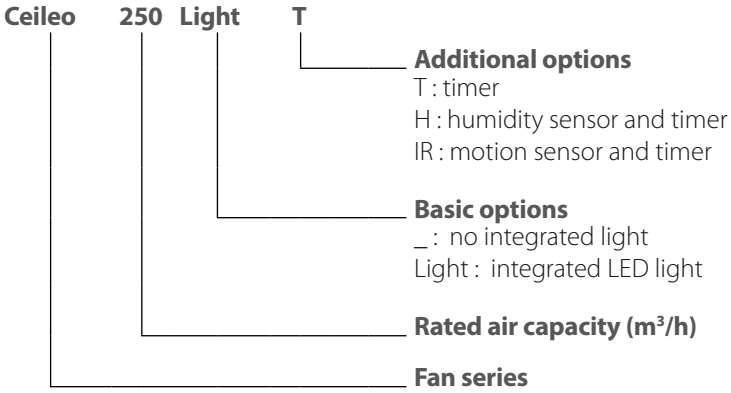
**THE UNIT MUST NOT BE OPERATED IN KITCHEN PREMISES.**

The unit is rated for continuous operation.
Transported air must not contain any flammable or explosive mixtures, evaporation of chemicals, sticky substances, fibrous materials, coarse dust, soot and oil particles or environments favourable for the formation of hazardous substances (toxic substances, dust, pathogenic germs).

## DELIVERY SET

| NAME | QUANTITY |
|---|---|
| Fan | 1 pc. |
| LED lamp (for fans with the Light option) | 2 pcs. |
| Cable gland | 1 pc. |
| Mounting bracket | 4 pcs. |
| Fastening kit | 1 pc. |
| User's manual | 1 pc. |
| Packing box | 1 pc. |

## DESIGNATION KEY



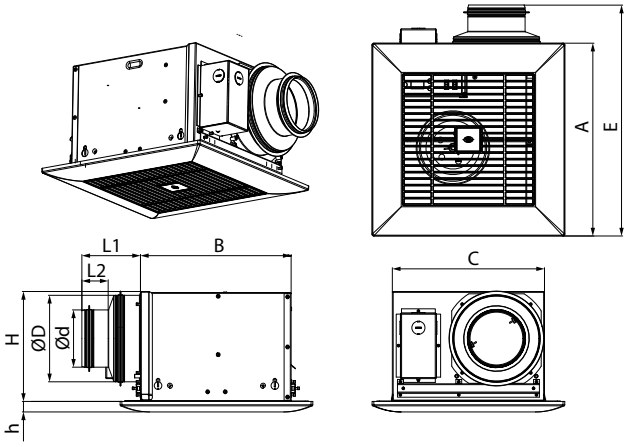
## TECHNICAL DATA

The unit is designed for indoor application at ambient temperature from +1 °C up to +40 °C at relative humidity up to 80 %.
Ingress protection rating against access to hazardous parts and water ingress is IP2X.

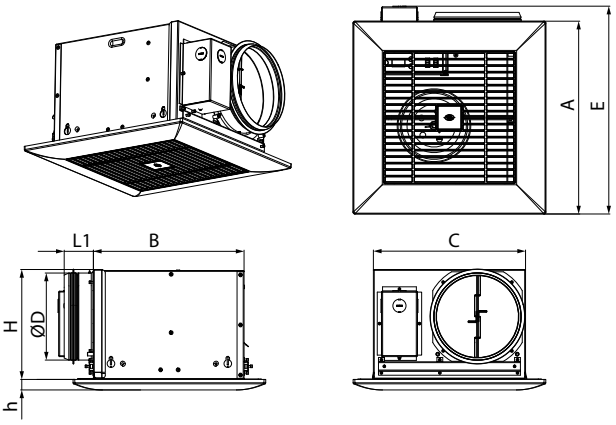
The unit design is constantly being improved, so some models may be slightly different from those ones described in this manual.

**OVERALL AND CONNECTION DIMENSIONS OF THE FANS**

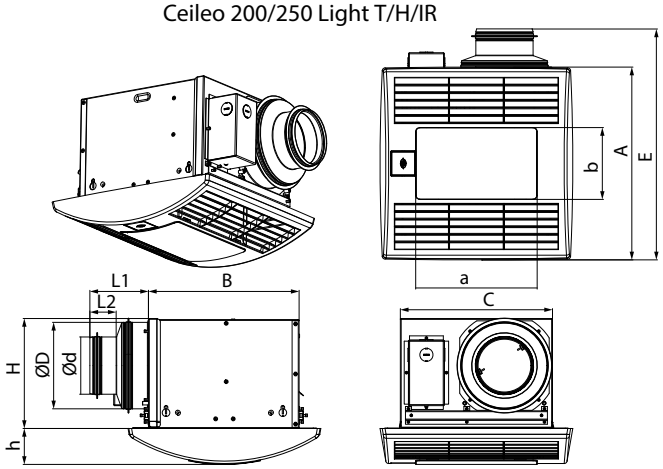
Ceileo 200/250
Ceileo 200/250 T/H/IR



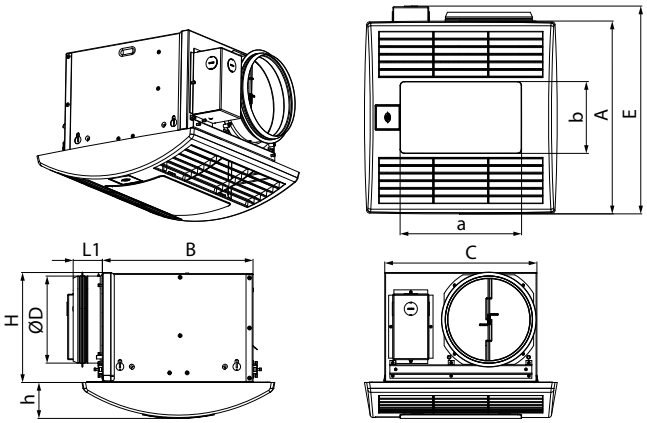

Ceileo 300
Ceileo 300 T/H/IR




Ceileo 200/250 Light
Ceileo 200/250 Light T/H/IR




Ceileo 300 Light
Ceileo 300 Light T/H/IR




| MODEL | DIMENSIONS, mm | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D | D | L1 | L2 | A | B | C | E | H | H | A | B |
| Ceileo 200/250<br>Ceileo 200/250 T/H/IR | 149 | 98 | 100 | 45 | 330 | 258 | 260 | 395 | 188 | 18 | - | - |
| Ceileo 200/250 Light<br>Ceileo 200/250 Light T/H/IR | 149 | 98 | 100 | 45 | 330 | 258 | 260 | 395 | 188 | 62 | 208 | 123 |
| Ceileo 300<br>Ceileo 300 T/H/IR | 149 | - | 50 | - | 330 | 258 | 260 | 395 | 188 | 18 | - | - |
| Ceileo 300 Light<br>Ceileo 300 Light T/H/IR | 149 | - | 50 | - | 330 | 258 | 260 | 395 | 188 | 62 | 208 | 123 |

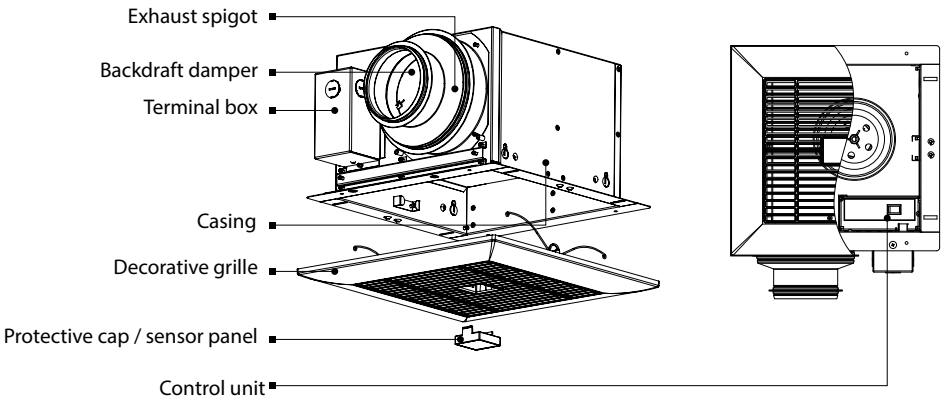
### TECHNICAL DATA

| PARAMETER | Ceileo 200<br>Ceileo 200 T/H/IR<br>Ceileo 200 Light<br>Ceileo 200 Light T/H/IR | | | | Ceileo 250<br>Ceileo 250 T/H/IR<br>Ceileo 250 Light<br>Ceileo 250 Light T/H/IR | | | | Ceileo 300<br>Ceileo 300 T/H/IR<br>Ceileo 300 Light<br>Ceileo 300 Light T/H/IR | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Frequency [Hz] | 50 | | 60 | | 50 | | 60 | | 50 | | 60 | |
| Speed | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| Voltage, V | 220-240 | | | | | | | | | | | |
| Fan power, W | 20 | 29 | 21 | 34 | 23 | 39 | 25 | 50 | 31 | 49 | 35 | 63 |
| Lamp power [W]* | 2 x 10 | | | | | | | | | | | |
| Fan current @ 230 V, A | 0,1 | 0,13 | 0,11 | 0,15 | 0,12 | 0,18 | 0,14 | 0,22 | 0,15 | 0,22 | 0,17 | 0,28 |
| Max airflow, $m^3/h$ | 130 | 210 | 130 | 225 | 170 | 260 | 160 | 270 | 220 | 300 | 200 | 320 |
| Max airflow, l/s | 36 | 58 | 36 | 63 | 47 | 72 | 44 | 75 | 61 | 83 | 56 | 89 |
| SFP, W/l/s | 0,55 | 0,50 | 0,58 | 0,54 | 0,49 | 0,54 | 0,56 | 0,67 | 0,51 | 0,59 | 0,63 | 0,71 |
| Weight [kg] | 5.3(6.4) | | | | 5.3(6.4) | | | | 5.1(6.2) | | | |
| IP | 2X | | | | | | | | | | | |
| SEC class | D | | | | C | | | | C | | | |

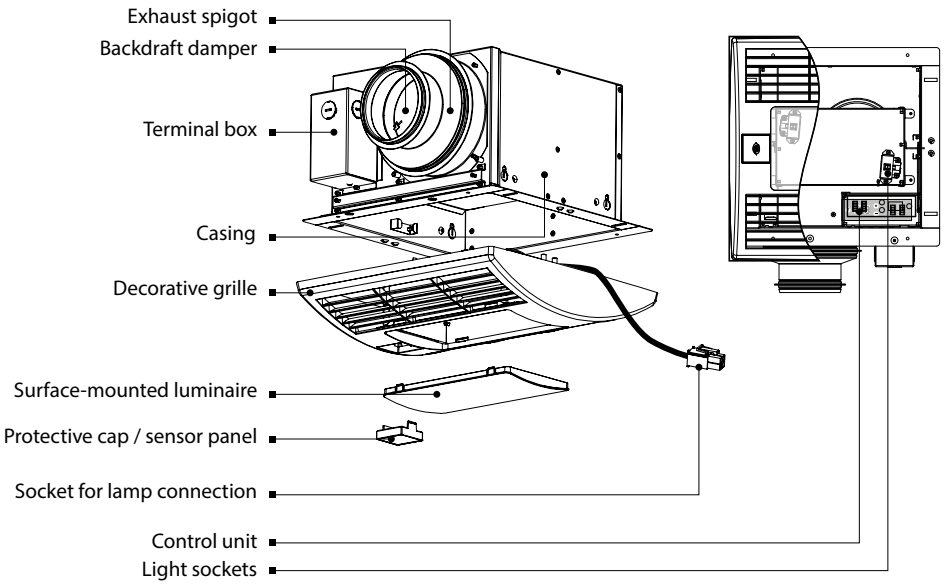
* For fans with light only

## DESIGN AND FUNCTIONING

**Ceileo 200/250/300 T/H/IR**




**Ceileo 200/250/300 LIGHT T/H/IR**



The fan casing is made of galvanized steel. The fan casing includes an exhaust spigot with a back draft damper to prevent back air flow. The terminal box comprises the terminals for wiring of the fan and is attached to the fan casing. The decorative grille is fixed to the casing via the springs inserted to the holders. The front panel is fixed via the grille slots. A single-phase electric motor with a centrifugal impeller with forward curved blades is fastened inside of the casing. Depending on the fan model the fan may be equipped with a LED lamp, a timer, a humidity or motion sensor.

**Timer (T)**

After an external switch, e.g. a light switch is turned off, the fan is turned on or goes to high speed after countdown of a set turn-on delay time, adjustable from 0 to 3 minutes.

After the fan is turned off it keeps running for a set turn-off delay time, adjustable from 1 to 90 minutes and the reverts to the initial operation status.

**Motion sensor (IR)**

In case of activation of the motion sensor the fan turns on or switches to the higher speed.

After no motion is detected more the fan keeps running for a set turn-off delay time, adjustable from 1 to 90 minutes, and the reverts to the initial operation status.

**Humidity sensor (H)**

If the indoor humidity exceeds the set humidity point adjustable from 50 % up to 90 %, the fan either turns on or goes to the higher speed.

After indoor humidity drops down the fan keeps running for a set turn-off delay time, adjustable from 1 to 90 minutes and the reverts to the initial operation status.

## MOUNTING AND SET-UP

**READ THE USER'S MANUAL BEFORE INSTALLING THE UNIT.**

The fan is a component part and is not designed for stand-alone operation.

The fan is constructed for ceiling installation in the floor slab and fixation to the inter joist with the distance between the ceiling joists from 270 mm (10 $^{5}/_{8}$") up to 680 mm (20 $^{3}/_{4}$") using the removable fixing brackets or the fastening holes in the fan casing.

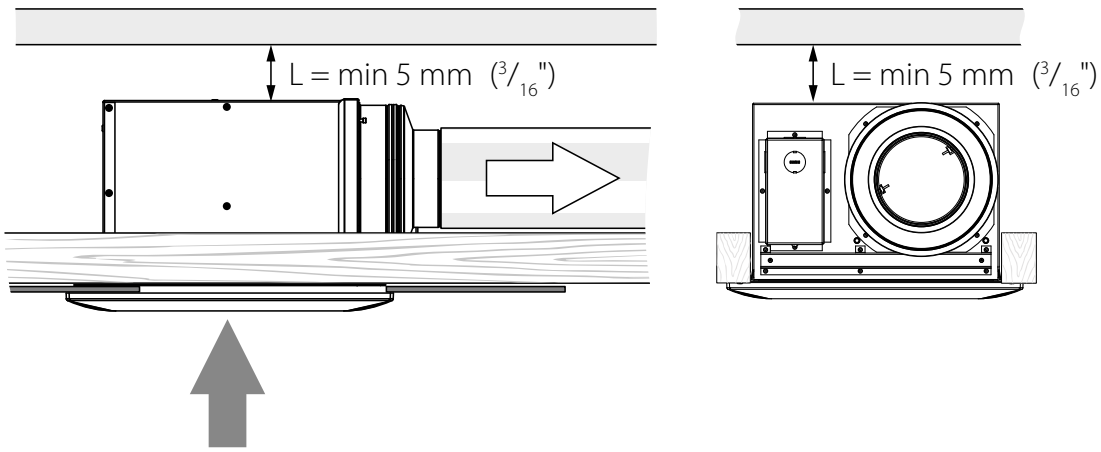
The installation place must be in compliance with local construction norms for units of this type.

Check the fan for mechanical damages prior to mounting .

Make sure that the casing comprises no foreign objects, such as paper or foil.

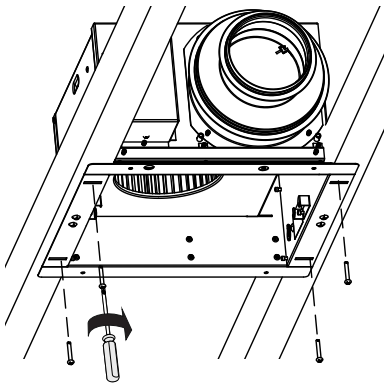
While mounting the fan sufficient service access for maintenance or repair operations must be provided.

The minimum gap between the fan and the ceiling is 5 mm ($^{3}/_{16}$").

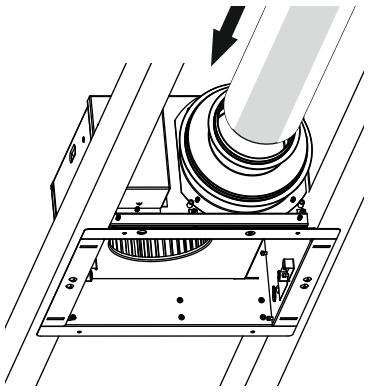


**MOUNTING STEPS**

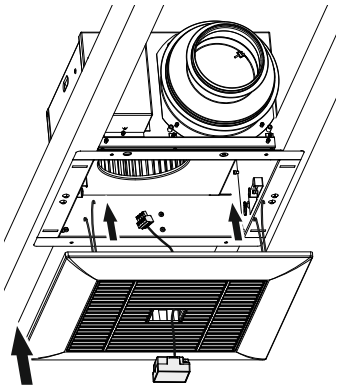
1. Attach the fan to the interjoist using the screws.

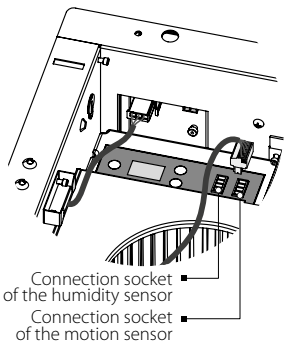


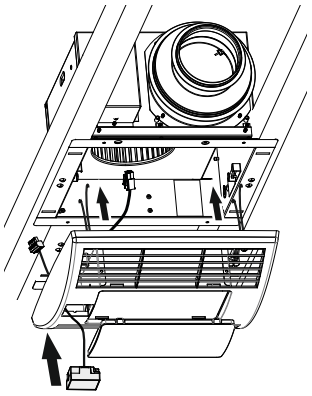
2. Connect the fan of a required diameter.

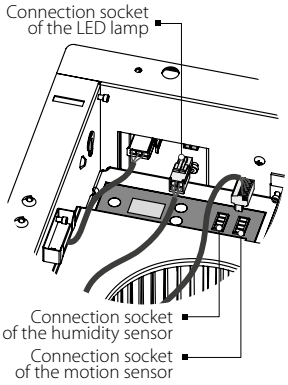


3. Connect the LED lamps (included in the delivery set) for the Light models.
Option: connect the humidity sensor or the motion sensor (specially ordered accessory).
For the Light models: connect the power socket of the LED lamp and the respective sockets in the terminal box.
For the H models with a humidity sensor: remove the protective cap from the grille prior to its installation.
Route the contact socket of the sensor H or IR via the opening in the grille and connect the sensor socket to the respective contact socket on the control unit.
Fix the sensor in the grille opening and cover the opening with a protective cap.

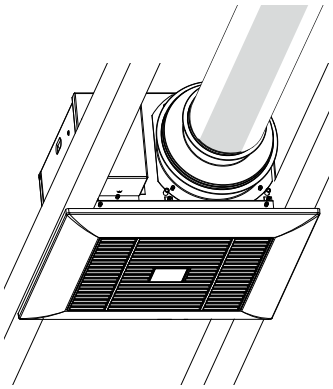


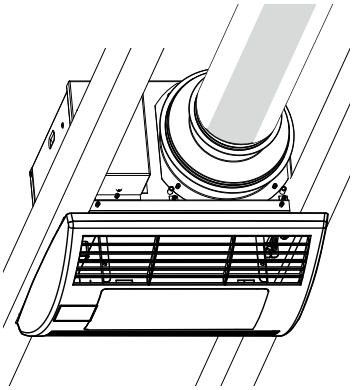




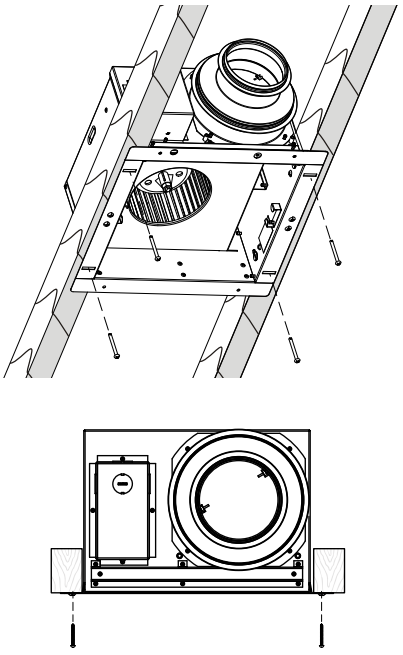

4. Install the decorative grille on the fan casing using the holders on the casing.



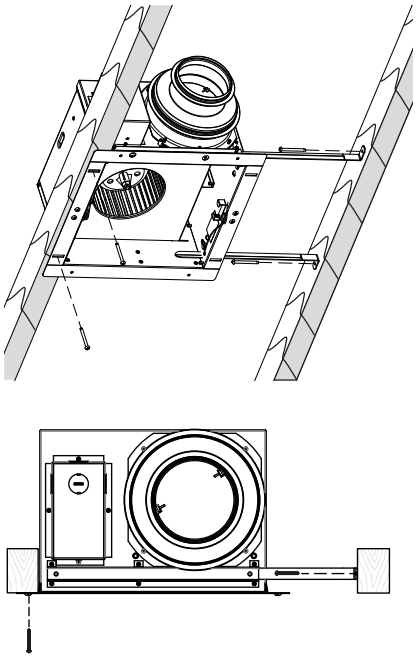


**BASIC FAN INSTALLATION OPTIONS**

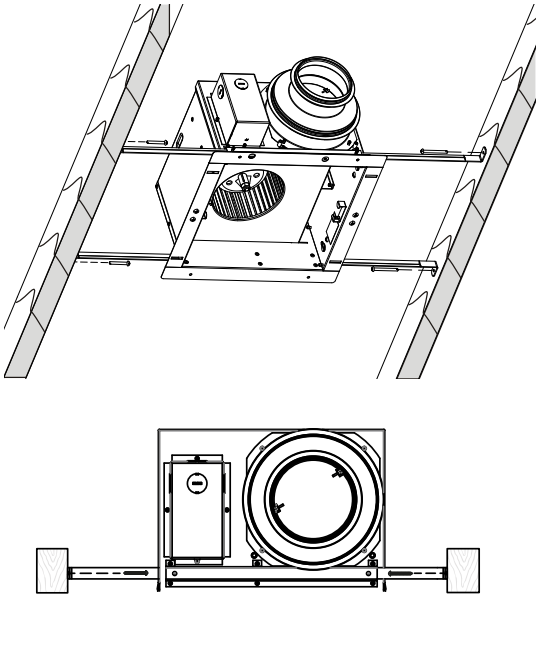
Installation between the ceiling joists



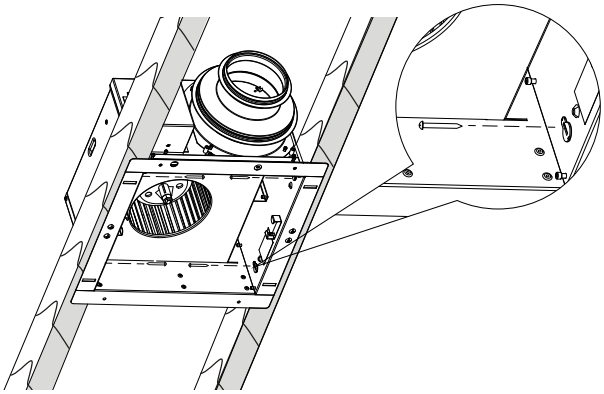
Side fixation to one of the ceiling joists



Fixation between the ceiling joists using the mounting brackets



Additional fastening holes in the fan casing may be used for mounting purposes



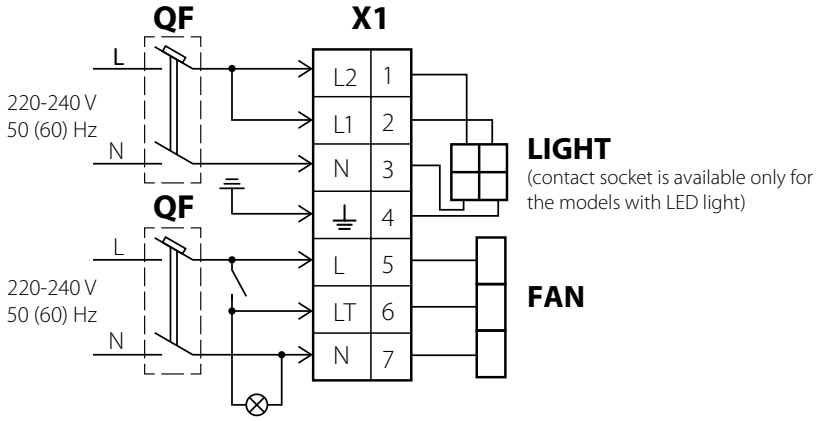
## CONNECTION TO POWER MAINS

**POWER OFF THE POWER SUPPLY PRIOR TO ANY OPERATIONS WITH THE UNIT.**
**THE UNIT MUST BE CONNECTED TO POWER SUPPLY BY A QUALIFIED ELECTRICIAN.**
**THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE GIVEN ON THE MANUFACTURER'S LABEL.**

**ANY TAMPERING WITH THE INTERNAL CONNECTIONS IS PROHIBITED AND WILL VOID THE WARRANTY.**

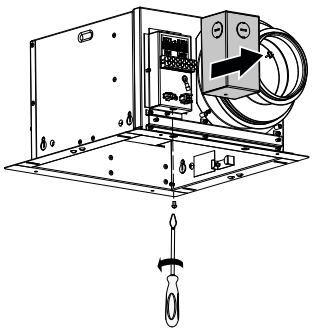
The fan is rated for connection to single-phase AC 220-240 V/ 50/ (60) Hz power supply.
The fan must be connected to power mains using durable, insulated and heat-resistant conductors (cables and wires) via the circuit breaker QF integrated into the house cabling system.
The external circuit breaker installation place must ensure unhampered access for emergency shutdown of the unit.

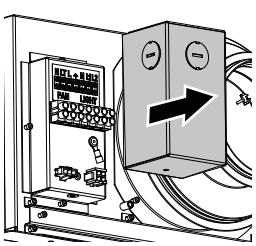
### WIRING DIAGRAMS



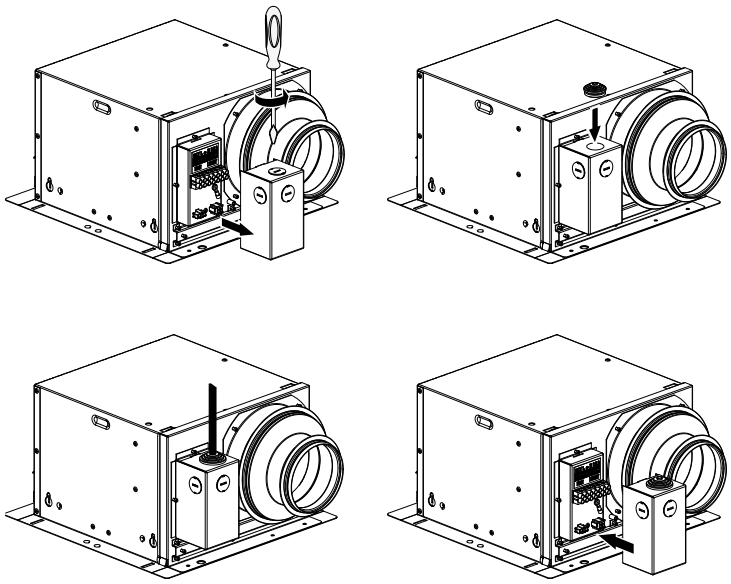

### ACCESS TO THE TERMINAL BOX FOR WIRING THE FAN

Remove the decorative grille.
For accessing the connection terminals loosen the screw on the terminal box lid and take the lid off.



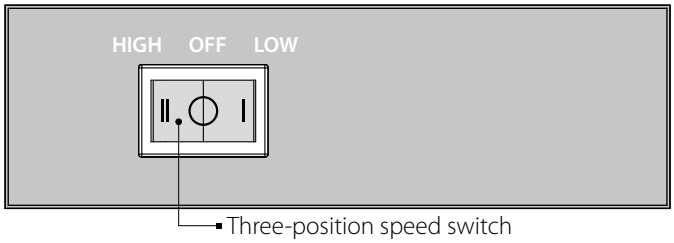


Remove the protective cap and install the cable gland.



## CONTROL

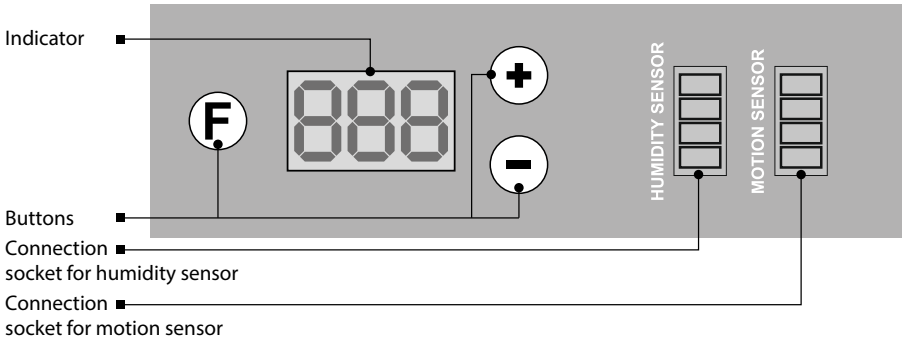
### CONTROL UNIT WITH A SPEED SWITCH




The fan with AC motor is controlled by a three-position switch. The switch has three positions:
**OFF** — the fan is turned off.
**LOW** — the fan operates at reduced performance (speed 1).
**HIGH** — the fan operates at maximum performance (speed 2).
When the power is turned on the fan will operate in one of the above modes.

### MICROPROCESSOR CONTROL UNIT WITH INDICATION

The AC fan motor is operated by a microprocessor control unit. The front panel of the control unit comprises a light indicator, control buttons and two connectors for connection of the humidity and motion sensors.




After the fan is connected to power supply, the indicator displays `---` for two seconds. After that the light indicator goes off and the fan starts operating in set mode. Once the button (F) is pressed the indicator displays the turn-off delay timer setting `-t-`, the first Setup menu entry. Use (+) or (−) buttons to navigate in the Setup menu. Press (F), to select a current entry in the Setup menu. After that the indicator displays the selected parameter value (e.g., turn-off delay timer setting). Use (+) or (−) to change the value. Press (F) to come back to the Setup menu. If no button is pressed for 60 seconds, the indicator goes down.

**Example**
The indicator displays `-t-`. Once the button (−) is pressed, the Setup menu list goes one position down and the symbol `-d-` is displayed (refer to the Setup menu). Once the button (F) is pressed, the indicator displays the turn-on delay timer setting, which can be edited with the buttons (+) and (−). Once the button (F) is pressed again, the Setup menu is displayed again and the edited value is saved.
To reset the menu to the factory settings press and hold the buttons (F) and (+) synchronously. In 5 seconds the indicator displays `dEF`, and goes off. The fan keeps running in a normal mode with the factory settings.

### INDICATOR SYMBOLS OF THE MICROPROCESSOR CONTROL UNIT

-t- — turn-off delay timer adjustable from 1 to 90 minutes (default setting 15 minutes).
-d- — turn-on delay timer adjustable from 0 to 180 seconds with the increment of 10 seconds (default setting 0).
-h- — humidity set point adjustable from 50 % up to 90 % (default setting 75 %).
AFL — access to submenu of the fan operation mode.
Operation mode SP.1 — the fan operates without any activation signal from the switch, humidity or motion sensor.
Operation mode SP2 — the fan operates with activation signal from the switch, humidity or motion sensor.
ESC — back to the upper setup menu level.

Once the switch is turned on or the humidity or motion sensor is activated, the fan switches from the mode SP.1 to the mode SP2. After a signal is no more received from the sensor in case of the indoor humidity normalization, or no more motion is detected in case of the fan shutdown, the fan keeps running for a set turn-off delay time and then switches from the mode SP2 to the mode SP.1.

### SETUP OF THE OPERATION MODES SP.1 AND SP2

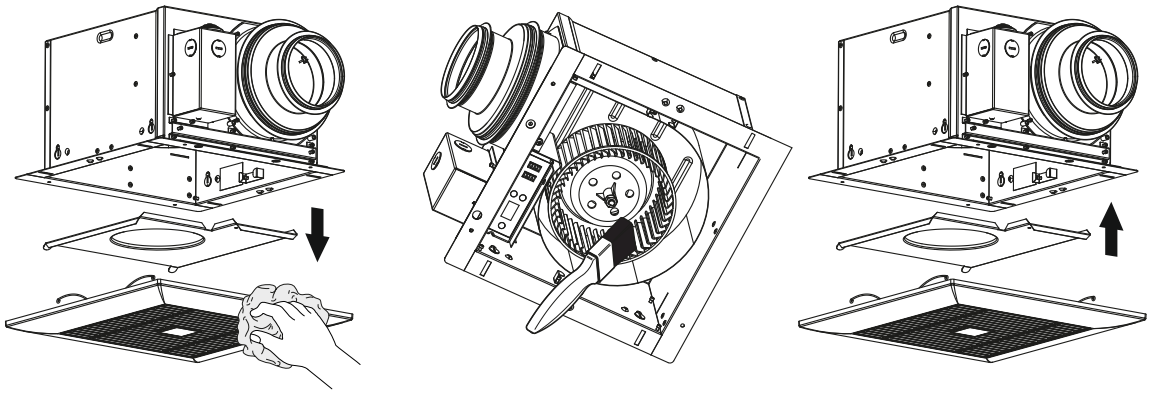
The SP.1 and SP2 modes can take the following values for the fan with an AC motor:
OFF — the fan is turned off.
Lo — the fan operates at reduced performance.
Hi — the fan operates at maximum performance.

**Example 1**
SP.1 = OFF, SP2 = Lo — with these activated settings the fan is constantly turned off. Once the switch is turned on or a sensor is activated, the fan starts to run at reduced performance.
**Example 2**
SP.1 = Lo , SP2 = Hi — with these activated settings the fan runs at reduced performance. Once the switch is turned on or a sensor is activated, the fan starts to run with the maximum capacity. This setting is factory set and is the default setting.

## TECHNICAL MAINTENANCE

**DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!**

The fan maintenance includes regular cleaning of the surfaces of dust and dirt. Replace the filter as required, but at least every 6 months. The impeller cleaning is shown below. Clean the impeller blades thoroughly every 6 months.

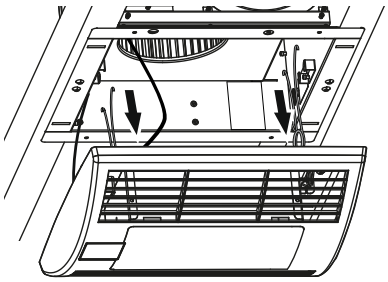


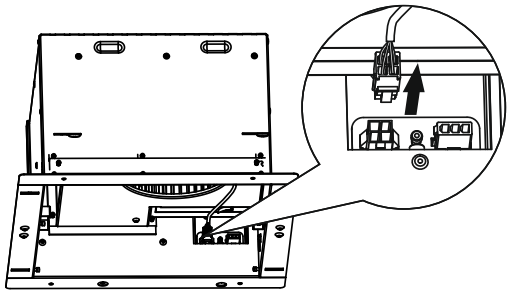
## LAMP REPLACEMENT

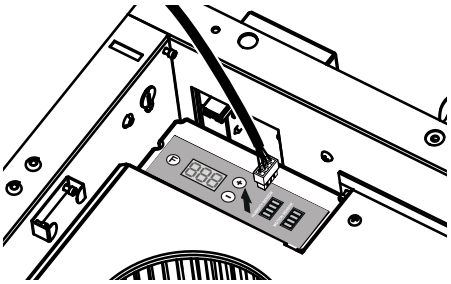
**DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!**

1. Remove the decorative grille:

- Pull the grille to release the springs from the holders on the casing.
- Take out the lamp power socket from the respective socket on the casing.
- Take out the power socket of the sensors from the respective sockets on the control unit (applicable for TH and TP models).

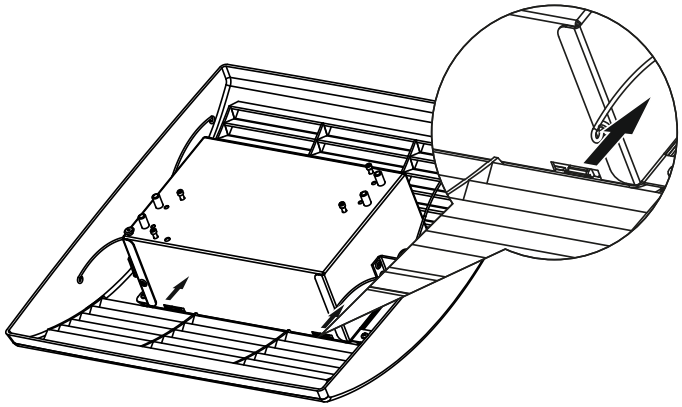


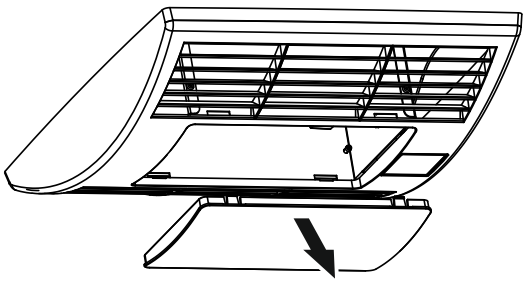




2. Take off the surface-mounted luminaire.

Press the holders on the reverse side of the grille frame and take off the surface-mounted luminaire.





3. Replace the lamps.
4. Reassemble the unit in the reverse order.

## TROUBLES AND TROUBLESHOOTING

| TROUBLE | POSSIBLE REASONS | TROUBLESHOOTING |
|---|---|---|
| The fan does not get started. | No power supply. | Check the electric connections and the operation status of the circuit breaker. |
| | Motor jam. | Turn the fan off. Troubleshoot clogging of the impeller. Restart the fan. |
| Automatic circuit breaker tripping during the unit turning on. | Over current as a result of short circuit in the electric circuit leads to tripping of the circuit breaker. | Disconnect the fan from power supply and contact the product Seller. Do not turn the fan on again! |
| Low air flow. | Air ducts or other components of the ventilation system are clogged. The impeller is clogged. The air ducts are damaged. The air dampers are closed. | Clean the air ducts, the impeller and other components of the ventilation system. Make sure that the air ducts are not damaged. Make sure that the air dampers and louvre shutters are open. |

## STORAGE AND TRANSPORTATION REGULATIONS

- Store the unit in the manufacturer's original packaging box in a dry closed ventilated premise with temperature range from +5 °C to + 40 °C and relative humidity up to 70 %.
- Storage environment must not contain aggressive vapors and chemical mixtures provoking corrosion, insulation, and sealing deformation.
- Use suitable hoist machinery for handling and storage operations to prevent possible damage to the unit.
- Follow the handling requirements applicable for the particular type of cargo.
- The unit can be carried in the original packaging by any mode of transport provided proper protection against precipitation and mechanical damage. The unit must be transported only in the working position.
- Avoid sharp blows, scratches, or rough handling during loading and unloading.
- Prior to the initial power-up after transportation at low temperatures, allow the unit to warm up at operating temperature for at least 3-4 hours.

## MANUFACTURER'S WARRANTY

The product is in compliance with EU norms and standards on low voltage guidelines and electromagnetic compatibility. We hereby declare that the product complies with the provisions of Electromagnetic Compatibility (EMC) Directive 2014/30/EU of the European Parliament and of the Council, Low Voltage Directive (LVD) 2014/35/EU of the European Parliament and of the Council and CE-marking Council Directive 93/68/EEC. This certificate is issued following test carried out on samples of the product referred to above.
The manufacturer hereby warrants normal operation of the unit for 24 months after the retail sale date provided the user's observance of the transportation, storage, installation, and operation regulations. Should any malfunctions occur in the course of the unit operation through the Manufacturer's fault during the guaranteed period of operation, the user is entitled to get all the faults eliminated by the manufacturer by means of warranty repair at the factory free of charge. The warranty repair includes work specific to elimination of faults in the unit operation to ensure its intended use by the user within the guaranteed period of operation. The faults are eliminated by means of replacement or repair of the unit components or a specific part of such unit component.

**The warranty repair does not include:**
- routine technical maintenance
- unit installation/dismantling
- unit setup

To benefit from warranty repair, the user must provide the unit, the user's manual with the purchase date stamp, and the payment paperwork certifying the purchase. The unit model must comply with the one stated in the user's manual. Contact the Seller for warranty service.

**The manufacturer's warranty does not apply to the following cases:**
- User's failure to submit the unit with the entire delivery package as stated in the user's manual including submission with missing component parts previously dismounted by the user.
- Mismatch of the unit model and the brand name with the information stated on the unit packaging and in the user's manual.
- User's failure to ensure timely technical maintenance of the unit.
- External damage to the unit casing (excluding external modifications as required for installation) and internal components caused by the user.
- Redesign or engineering changes to the unit.
- Replacement and use of any assemblies, parts and components not approved by the manufacturer.
- Unit misuse.
- Violation of the unit installation regulations by the user.
- Violation of the unit control regulations by the user.
- Unit connection to power mains with a voltage different from the one stated in the user's manual.
- Unit breakdown due to voltage surges in power mains.
- Discretionary repair of the unit by the user.
- Unit repair by any persons without the manufacturer's authorization.
- Expiration of the unit warranty period.
- Violation of the unit transportation regulations by the user.
- Violation of the unit storage regulations by the user.
- Wrongful actions against the unit committed by third parties.
- Unit breakdown due to circumstances of insuperable force (fire, flood, earthquake, war, hostilities of any kind, blockades).
- Missing seals if provided by the user's manual.
- Failure to submit the user's manual with the unit purchase date stamp.
- Missing payment paperwork certifying the unit purchase.

**FOLLOWING THE REGULATIONS STIPULATED HEREIN WILL ENSURE A LONG AND TROUBLE-FREE OPERATION OF THE UNIT.**

**USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.**

## CERTIFICATE OF ACCEPTANCE

| | |
|---|---|
| **Unit Type** | Centrifugal ceiling extract fan |
| **Model** | Ceileo _____ |
| **Serial Number** | |
| **Manufacture Date** | |
| **Quality Inspector's Stamp** | |

## SELLER INFORMATION

| | |
|---|---|
| **Seller** | |
| **Address** | |
| **Phone Number** | |
| **E-mail** | |
| **Purchase Date** | |
| This is to certify acceptance of the complete unit delivery with the user's manual. The warranty terms are acknowledged and accepted. | |
| **Customer's Signature** | |

Seller's Stamp

## INSTALLATION CERTIFICATE

| | | |
|---|---|---|
| The Ceileo _____ unit is installed pursuant to the requirements stated in the present user's manual. | | |
| **Company name** | | |
| **Address** | | |
| **Phone Number** | | |
| **Installation Technician's Full Name** | | |
| **Installation Date:** | **Signature:** | |
| The unit has been installed in accordance with the provisions of all the applicable local and national construction, electrical and technical codes and standards. The unit operates normally as intended by the manufacturer. | | |
| **Signature:** | | |

Installation Stamp

## WARRANTY CARD

| | |
|---|---|
| **Unit Type** | Centrifugal ceiling extract fan |
| **Model** | Ceileo _____ |
| **Serial Number** | |
| **Manufacture Date** | |
| **Purchase Date** | |
| **Warranty Period** | |
| **Seller** | |

Seller's Stamp

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