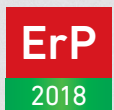


OPERATING AND INSTALLATION MANUAL COMPACT VENTILATION UNIT LG 740

**COMFORT
VENTILATION**



EU-regulation
1253/2014



EPREL



 **PICHLER**

Systematic ventilation.

Contents

GENERAL

1. Introduction	Page 4
2. General	Page 4
3. Functionality of the ventilation system	Page 5
4. Designated use	Page 5

INTENDED USE	PAGE 5
STIPULATIONS FOR OPERATION WITH FIREPLACES	PAGE 6
STIPULATIONS FOR OPERATION WITH EXTRACTOR HOODS	PAGE 6
LIABILITY	PAGE 7
WARRANTY	PAGE 7

USER

5. Safety	Page 8
SYMBOLS USED IN THIS DOCUMENT	PAGE 8
SAFETY REGULATIONS	PAGE 8
UNIT SET-UP	PAGE 9
ELECTRICAL CONNECTIONS	PAGE 9
SYSTEM OPERATION	PAGE 10

USER GUIDE **PAGE 11**

SPECIALIST PERSONNEL

6. Customer service	Page 11
7. Design of the ventilation unit	Page 11
8. MINI control unit	Page 12
9. TOUCH control unit	Page 13
10. Errors and notifications	Page 22
MINI CONTROL UNIT	PAGE 22
TOUCH CONTROL UNIT	PAGE 22

11. Pichler app and Pichler Connect	Page 22
EASY OPERATION WITH THE PICHLER APP	PAGE 22
REMOTE ACCESS / PICHLER CONNECT	PAGE 22
DATA PROTECTION	PAGE 23

12. Filter service	Page 23
FILTER NOTIFICATION ON THE MINI CONTROL UNIT	PAGE 23
FILTER NOTIFICATION ON THE TOUCH CONTROL UNIT	PAGE 23
FILTER CHANGE	PAGE 24

SPECIALIST PERSONNEL - ASSEMBLY / INSTALLATION **PAGE 26**

13. Scope of supply, transport, storage and disposal	Page 26
SCOPE OF SUPPLY	PAGE 26
TRANSPORT, STORAGE AND PACKAGING	PAGE 26
DISPOSAL	PAGE 26

14. Technical specifications	Page 27
VERSIONS	PAGE 27
ENERGY EFFICIENCY CLASSES	PAGE 27
DEVICE DATA	PAGE 28
ACOUSTIC SPECIFICATIONS	PAGE 29
CHARACTERISTIC CURVE EXTERNAL PRESSURE INCREASE – AIR VOLUME FLOW	PAGE 30
DEVICE STRUCTURE	PAGE 31
SAFETY DEVICES	PAGE 34



15. System description and extension options

FROST PROTECTION OPTIONS

SYSTEM EXTENSION FOR EXTERNAL SUPPLY AIR CONDITIONING

16. TOUCH control unit service level

TOUCH CONTROL UNIT TEST MODE

17. Mounting

PREREQUISITES FOR UNIT INSTALLATION

OPENING THE UNIT

UNIT ASSEMBLY

CONDENSATE CONNECTION

CONNECTING AIR DUCTS AND COMPONENTS

AIR TYPES LEGEND

18. Electrical connection

OPENING THE UNIT

CONTROL BOARD

MAINS CONNECTION AND REPLACEMENT OF THE INTERNAL DEVICE FUSE

CABLE INLETS

ELECTRICAL CONNECTION DIAGRAM

ELECTRICAL CONNECTION DIAGRAM MINI OR TOUCH CONTROL UNITS

ELECTRICAL CONNECTION DIAGRAM FOR EXTERNAL INPUTS

ELECTRICAL CONNECTION DIAGRAM SHUT-OFF VALVES

CONNECTING THE CONTROL UNIT WITH THE CONTROL BOARD

MINI CONTROL UNIT INSTALLATION

TOUCH CONTROL UNIT INSTALLATION

CIRCULATING PUMPS

19. Maintenance and cleaning

SAFETY INSTRUCTIONS

MAINTENANCE INSTRUCTIONS

HEAT EXCHANGER

FANS

ELECTRIC PRE-HEATING COIL (OPTIONAL)

CLEANING THE EQUIPMENT HOUSING INSIDE

CONDENSATE DRAINAGE

SERVICE TABLE

SPECIALIST PERSONNEL - COMMISSIONING - SERVICE

20. Commissioning

BASIC COMMISSIONING PROCEDURE

SETTING SYSTEM PARAMETERS

21. Installation/operation of service software and firmware updates

22. Error description

MINI CONTROL UNIT

TOUCH CONTROL UNIT

23. Spare parts and accessories

24. Changes reserved

25. Hygiene certificate

26. Product data sheets

27. EG-Konformitätserklärung (EC Declaration of Conformity)

Page 35

PAGE 35

PAGE 40

Page 44

PAGE 44

Page 46

PAGE 46

PAGE 47

PAGE 47

PAGE 48

PAGE 49

PAGE 49

Page 50

PAGE 50

PAGE 50

PAGE 51

PAGE 51

PAGE 51

PAGE 54

PAGE 56

PAGE 57

PAGE 58

PAGE 58

PAGE 58

PAGE 58

Page 59

PAGE 59

PAGE 59

PAGE 59

PAGE 60

PAGE 60

PAGE 61

PAGE 61

PAGE 62

PAGE 64

Page 64

PAGE 64

PAGE 64

Page 64

Page 65

PAGE 65

PAGE 65

Page 66

Page 67

Page 68

Page 69

Page 71





1. Introduction

The LG 740 compact ventilation unit complies with the state of the art. It is characterised by cost effectiveness, ease of use and reliability.

To operate your compact ventilation unit safely, properly and economically, please read this manual carefully and follow the instructions provided.

Use the ventilation unit only when in perfect condition and for its designated use, be aware of safety and any hazards and cognisant of all the notes and information contained in this manual. Always keep the model and serial number (see nameplate

on unit) at hand in the case of queries or when ordering spare parts.

		J. Pichler Gesellschaft mbH	AUSTRIA 9021 KLAGENFURT Karlweg 5 +43 (0) 463 32769 www.pichlerluft.at
			
Equipment type:	08LG740LFV	Year of manufacture:	
Volume flow:	max. 750 m ³ /h	Weight:	130 kg
Dimensions WxHxD:	1090x940x660 mm		
Voltage/frequency:	230 V / 50 Hz		
Performance:	max. 2800 W		
Order number:	123456789 A		
Serial number:	F2 202 00 001		



Please contact us if you have any further questions or if you lose your documentation.



J. Pichler Gesellschaft m.b.H.

9021 KLAGENFURT

Karlweg 5

T +43 (0)463 32769

2. General

This section contains general information on the LG 740 compact ventilation unit with the MINI or TOUCH control unit.



**READ THIS MANUAL CAREFULLY
BEFORE OPERATION.**

This manual contains notes and information regarding safe operation and proper installation of the LG 740 compact ventilation unit, as well as operation and maintenance. Furthermore, reference this manual during servicing to ensure proper execution of the tasks. Keep this operating manual readily available in a safe place.

Troubleshooting and procedures may be performed by an installation company (specialist company) only.

Changes reserved:

This manual has been compiled with the utmost care. This does not, however, imply any rights. We constantly strive to improve and optimise our products technically and we reserve the right to modify our apparatus or technical data fully or in part and without prior notification. Your unit may therefore vary slightly from the description in this manual.

Our "General terms and conditions" in their latest version apply.

3. Functionality of the ventilation system

With mechanically-controlled residential ventilation, used, damp extract air is conducted away from wet domestic areas, e.g. bathroom, toilet and kitchen, and is replaced with fresh, processed and filtered outdoor air in lounge areas, e.g. in living rooms and bedrooms.

Significant energy savings are achieved when the system is operated continuously thanks to highly efficient heat exchangers for heat recovery from extract air into the supply air and use of energy-efficient fans with the latest EC motor technology for air flow control. This technology is particularly effective in air-tight building shells

and with active thermal insulation. Heat recovery with an efficiency of over 90 % ensures highly efficient operation.

It is particularly important to ensure that the heat exchanger is protected by a suitably controlled frost protection strategy and that there is an effective condensate drain.

4. Designated use

INTENDED USE

The LG 740 compact ventilation unit is suitable for installation in air conditioning systems for the controlled mechanical ventilation of residential buildings, small residential complexes, offices and similar applications such as small and medium-sized classrooms with an adjustable air volume flow of up to 750 m³/h.

The purpose of controlled mechanical ventilation of domestic areas is to improve air quality and reduce the heating energy demand through the use of a highly efficient heat recovery system, and to influence indoor air humidity.

The scope and intended use for the unit are limited to the use in technical systems for the extraction of used air and the supply of fresh, tempered outdoor air at maximum flow media temperatures of -15 °C to +35 °C. Furthermore, the air conveyed must be free from aggressive vapours and substances enhancing wear.

Any other use shall be deemed contrary to designated use. The manufacturer shall accept no responsibility for damages or consequential damages arising from improper use. Designated use also includes adherence to our prescribed operating and installation manual.

This unit is available to the general public and is intended for installation in residential or industrial buildings. The unit is used for mechanical ventilation of indoor air and, combined with heating and cooling systems, also for auxiliary air heating/cooling.

This unit is not intended for use by persons, including children, with limited physical, sensory or mental capacities or lacking experience and/or knowledge, unless under supervision or instruction of a person responsible for their safety.

The unit is not suitable for outdoor installation and may be installed in suitable and frost-free interior areas only. The ventilation unit is not suitable for drying new buildings.



In order to prevent the uncontrolled formation of condensate in the unit, continuous operation with an extract air humidity of more than 50% has to be avoided at extract air temperatures above 25 °C and outdoor air temperatures below 0 °C (e.g. private spa area).

The compact ventilation unit is not a ready-to-use product. It must not be put into operation until it has been properly installed and connected to a ventilation system. Only qualified and instructed personnel may work on and with the unit.



Persons transporting, installing or working on the unit must have read and understood the operating instructions, in particular section 5, "Safety". The end user must also be instructed on potential hazards.

STIPULATIONS FOR OPERATION WITH FIREPLACES



The central ventilation units with heat recovery may only be installed in rooms, flats or utilisation units of a comparable size in which fireplaces dependent on room air are installed, if:

- simultaneous operation of room air-dependent fireplaces and the air extraction unit is prevented by safety devices, or
- the flue gas evacuation of the room air-dependent fireplace is monitored by special safety devices. In the case of room-air dependent fireplaces for liquid or gaseous fuels, activation of the safety device must lead to the switch-off of the fireplace or ventilation unit. In the case of room-air dependent fireplaces for solid fuels, activation of the safety device must lead to the switch-off of the ventilation unit.

The central ventilation units for the controlled ventilation of a flat or a comparable living unit must not be installed if room air-dependent fireplaces in the living unit are connected to exhaust gas systems, which themselves have multiple connections.

Normal operation of the ventilation systems established by means of the central ventilation units requires the possibility of shutting potentially available combustion air ducts as well as exhaust gas systems off from room air-dependent fireplaces. In the case of exhaust gas systems of fireplaces for solid fuels, it must be ensured that the shut-off device can only be operated manually. The position of the shut-off device must be identifiable by the setting of the operating handle. This specification is considered as complied with if a shut-off device against soot is used.

Fire protection requirements

With regard to the fire protection installation regulations for the set-up of the ventilation unit, the provisions of national law, in particular the building regulation concerning the fire protection requirements with regard to ventilation systems in the relevant latest version must be observed.

STIPULATIONS FOR OPERATION WITH EXTRACTOR HOODS

Due to the heavy load as well as the irregular operation, the extract air of an existing kitchen extractor hood must not be integrated into the dwelling's ventilation system. Extract air from such extractor hoods must be conducted separately by means of an exhaust air pipe over the roof. The supply air must be provided for separately (e.g. by window ventilation).

If an extractor hood without the separate provision of supply air is operated, the balance of the air volume in the dwelling is no longer kept and the proper function of the dwelling's ventilation system is no longer ensured (odour diversion, etc.). Another option is to operate the extractor hood in recirculation mode.

LIABILITY

The LG 740 compact ventilation unit was developed and manufactured for use in the controlled mechanical ventilation of residential buildings, larger residential units, offices and similar applications such as small and medium-sized classrooms.

Proper use of the ventilation systems established with the central ventilation units requires that combustion air lines and exhaust systems have the facility to be shut off from fireplaces dependent on ambient air.

Any other use shall be deemed improper and may cause personal injury or damage

to the ventilation unit, for which the manufacturer shall accept no liability.

The manufacturer accepts no responsibility for any damage due to:

- non-compliance with the safety, operating and servicing instructions given in this operating and installation manual.
- the installation of spare parts that have not been supplied by the manufacturer, the responsibility for the use of such spare parts being fully borne by the system builder/installer.
- normal wear and tear.

WARRANTY

The warranty period shall commence after the unit is put into operation, but no later than one month after delivery. Warranty details can be found in our "General terms and conditions" in their latest version as well as the merchant conditions of your respective country. The warranty shall be subject to proof of services performed as per our instructions and executed by a licensed installer/specialised company.

Warranty claims shall be limited to material and/or constructional defects occurring during the warranty period. In the event of a warranty claim, the LG 740 compact ventilation unit must not be dismantled without prior written authorisa-

tion from the manufacturer. The manufacturer's liability shall be limited to spare parts installed by an installation company approved by the manufacturer.

The warranty shall automatically lapse at the end of the warranty period, following improper operation such as operation without a filter, if parts other than original manufacturer-supplied parts are installed, or if unauthorised changes are made to the unit.

Furthermore, the warranty is automatically rendered void by failure to comply with the information in this operating and installation manual.

GENERAL

USER

SPECIALIST PERSONNEL

5. Safety

Read this operating and installation manual carefully and observe the safety instructions while you carry out installation, commissioning, servicing or general work on the ventilation unit. Keep the operating and installation manual near the unit for its entire service life.

Always observe the safety regulations, warnings, notes and instructions given in this operating manual. The specifications given in this document must not

be altered. Non-observance of these safety regulations, warnings, notes and instructions may lead to physical injury or damage to the compact ventilation unit.

The conclusion of a service contract is recommended to ensure that the unit will be checked at regular intervals. Ask your supplier about approved specialised companies/installers in your area.

SYMBOLS USED IN THIS DOCUMENT

The following safety symbols highlight text containing warnings in respect of danger and potential hazards. Please familiarise yourself with these symbols.



Attention! Ignoring this warning may lead to injury or threat to life and limb and/or damage to the unit.



Attention/Note!



Attention – High voltage! Ignoring this warning may lead to injury or threat to life and limb.

SAFETY REGULATIONS



Installation, initial start-up, maintenance and repairs must only be carried out by an authorised specialist company.

Over and above this operating and installation manual, local and national regulations and standards shall also apply to the operation of this unit without limitation.

Take instruction from your installer on the unit and on its control unit following installation. The ventilation unit may only be used in accordance with the information provided in **section 4 "Designated use"**.

All safety and danger notices attached to the unit and specified in this description must be observed.

In the event of malfunctioning, switch off the unit immediately and disconnect the power plug. The unit must be appropriately secured against restart. Faults must be remedied immediately.

After repairs and maintenance work, qualified personnel must verify that the unit is safe to operate.

Attachment or installation of additional parts and components is not permitted. Any modification of the compact ventilation unit is prohibited. Only original spare parts may be used.

Modifications and alterations to the ventilation unit are prohibited and absolve the manufacturer from all warranties and liability.

Ensure that children do not play with the unit.

UNIT SET-UP



The national and local regulations must be heeded when installing and setting up the unit. The unit may only be installed in compliance with national installation regulations.

Installation shall be carried out in accordance with the general local building, safety and installation regulations of the relevant community or the water and electricity department and other bodies.

The unit may only be installed in frost-free and dry rooms. The room temperature at the place of installation must be consistently between +5 °C min. and +35 °C max.

The unit is designed for free-standing installation and may only be set up on a suitable, load-bearing construction. The unit must not be exposed to vibration of any kind.

Suitable drainage of condensate arising during operation of the unit will be required, including effective odour blocking

traps (siphon). Installations for water, heating and condensate connections may be performed by a specialist only. The unit must be installed and executed appropriately so as to ensure seal-tightness and effective condensate drainage in order to exclude the possibility of building damage. Effective condensate drainage must be verified on-site prior to initial start-up and after servicing the unit.

The maximum permissible load must be observed when transporting the unit.

Components of the ventilation unit, e.g. air ducts which may need to be installed in unheated areas, must be suitably insulated to prevent heat loss or condensate formation (for temperatures under dew-point). Observe all locally-applicable construction and fire protection guidelines, regulations and standards. If necessary, appropriate suitable measures should be taken when installing the unit, e.g. installation of fire dampers in air ducts, etc.

ELECTRICAL CONNECTIONS



Warning: hazardous electrical voltage! Ignoring the danger may result in death, injuries or material damage. Before carrying out any work on live parts, the unit must always be disconnected completely from the power supply (all poles) and secured against being switched back on.

The shockproof connector system on the mains supply line allows for disconnecting all poles of the unit from the power supply.



Electrical connection work and work on the system's electrical components may be carried out by authorised electricians only, in compliance with national and local regulations.



Before opening the unit and when carrying out work on the unit, e.g. maintenance work and repairs, the unit must be isolated from the mains (all poles disconnected) and

secured against being switched back on for the duration of the work. The compact ventilation unit is designed for a voltage supply of 230 V / 50 Hz.



Work practices that could potentially damage the unit are prohibited. To ensure safe operation, safety devices must not be removed or bypassed.

Electrical equipment and the unit's warning and protective devices must be inspected regularly to ensure that they are in perfect working order. In the event of faults in the electrical power supply or identification of defects, e.g. loose connections or burnt cables, the unit must be switched off immediately.

Damaged or faulty power supply cables to the unit must be repaired immediately to avoid hazards.

SYSTEM OPERATION

The unit may not be operated until safe operational conditions are restored.

Fault finding and immediate remediation of electrical defects and malfunctions shall be carried out by authorised electricians only. All protective measures must

be inspected (e.g. earth resistance, etc.) after completion of electrical work on the unit. *For details, see Section 18: "Electrical Connection".*



Operation of the ventilation unit is permitted only if all built-in parts provided, e.g. silencers etc., have been properly connected.



In the event of any errors or defects that can cause harm to persons or property, the system must be put out of operation immediately. Further use must be actively prevented until the unit is fully repaired.

If error messages are output or in the case of damage, the ventilation unit must be switched off and disconnected from the mains immediately. Be aware of your safety and of hazards when opening the unit or removing cover plates. Any work practices that could potentially impair the safety of the unit are prohibited.



Operation of the unit is exclusively permissible with a connected air duct or mounted system components such as silencers, in order to ensure that, for example, fans or electrical installation parts, cannot be touched with the hand.

The compact ventilation unit may be operated only in accordance with the project documentation, which shall comply with the Equipment and Product Safety Act and the pertinent provisions of the EC Directives and Standards.

Consider environmental impacts and refrain from installing the ventilation unit in the vicinity of flammable liquids or gases, in swimming pools or in areas exposed to chemicals.

Never operate the ventilation unit without an air filter. Air filters must be checked regularly for dirt and damage and replaced, if necessary. The air filters must be changed at least every six months or when the "Change filter" message appears on the control unit. Use original replacement filters only. If the unit is not used in summer, the air filters must, for hygienic reasons, be replaced prior to restarting.

Comply with safety requirements and standards when operating the ventilation unit simultaneously with ambient air-dependent fireplaces. When using fireplaces dependent on ambient air, combustion air supply must be provided separately. *See the provisions in section 4, item "Rules for operation with fireplaces".*

Due to the heavy load as well as the irregular operation, extractor hoods must in no case be integrated into the extract air duct of the compact ventilation unit. *See the provisions in section 4, item "Rules for use with extractor hoods".* Exhaust air extractor hoods must be operated via separate air pipes with suitable air replenishment, e.g. by means of window ventilation or in air recirculation mode.

USER GUIDE

6. Customer service

Please contact the installer of your ventilation and air conditioning system or contact us directly for any questions relating to the delivered compact ventilation unit LG 740.



J. Pichler Gesellschaft m.b.H.

9021 KLAGENFURT

Karlweg 5

T +43 (0)463 32769

7. Design of the ventilation unit



The LG 740 compact ventilation unit is used for the controlled mechanical ventilation of residential buildings, larger residential units, offices and similar applications such as small and medium-sized classrooms and is suitable for free-standing installation in frost-free rooms.

The area of use extends to living space ventilation systems with a required air volume flow of 150 - 750 m³/h.

Operation is simple and intuitive and can also be done via the Pichlerluft app when connected to the Internet (LAN connection). *For details, see section 11 - Pichler app and Pichler Connect.*

The compact ventilation unit 740 includes:

- A compact, thermal bridge-free and heat-insulated casing made from galvanised sheet steel, exterior powder-coated in RAL 9003
- A highly efficient heat recovery system with an air/air counterflow heat exchanger
- An option for additional moisture recovery (enthalpy exchanger)
- An automatic 100% bypass to bypass the heat exchanger if necessary
- Energy-saving radial fans with the latest EC motor technology
- An integrated volume flow measurement, which guarantees balanced operation between the supply and extract air side. Even if the system pressure changes, the set air volume flow is maintained, e.g. if the filter is dirty
- An expansion option to implement constant pressure control is also optionally available.
- ISO ePM1 55% outdoor air filter and ISO Coarse 70% extract air filter

- Integrated filter monitoring: when the time interval is reached, the message "Change filter" appears on the control unit
- Filter cover for tool-free filter maintenance when the front of the device is closed.
- Internally wired control electronics
- Comes standard with the MINI control unit for setting the basic functions
- Optional, convenient TOUCH control unit, with an integrated room temperature sensor for extended operation and display, and with an optional swivelling console. The control unit can be attached directly to the ventilation unit.
- When connected to the Internet (LAN connection), operation via the Pichler app is possible.
- The unit can be optionally expanded by adding CO₂, humidity and indoor temperature sensors, which allows for demand-controlled ventilation operation.
- Optional connection of a heating, cooling or combination exchanger for additional conditioning of the supply air



8. MINI control unit

FUNCTIONS



The following compact ventilation unit functions can be configured with the "MINI" control unit:

- Selection of the operating mode standby or basic ventilation
- Ventilation level of the compact ventilation unit
- Switch between summer, winter or automatic mode
- Display of filter change messages
- Display of error messages via LED

BUTTONS AND LEDS

The ventilation unit is operated by means of four buttons.

Summer, winter or automatic mode



The two buttons on the left side switch between summer, winter and automatic mode.



Summer

Summer or bypass mode supports cooling of the living area. Under certain conditions, the heat exchanger is bypassed and the cooler outdoor air is introduced directly into the living space.



Winter

The outdoor air is always conveyed via the heat exchanger in winter operation.

Automatic mode on/off

By pressing the [Summer] and [Winter] buttons at the same time, you activate automatic mode. The system changes automatically between summer and winter mode depending on the outdoor air temperature. Active automatic mode is signalled by the summer and winter LEDs lighting up. Automatic mode is deactivated by pressing the [Summer] or [Winter] button.



CHANGING THE VENTILATION LEVEL



The two buttons on the right-hand side change the unit's ventilation level. Increase the ventilation level with the [+] button until level 3 is reached, which corresponds to a boost ventilation process. After 1 hour of operation at the highest ventilation level, normal ventilation mode (level 2) is automatically reset. Alternatively, you can end the boost ventilation process manually before one hour has passed. Simply press the [-] button on your control unit.

Standby or basic ventilation

If the ventilation level selected is less than I, the device switches to either standby or basic ventilation mode. *For details, see the "Ventilation levels" section in section 9.*

LEDs

The ventilation unit's various statuses are signalled via LEDs. Three LEDs display the current ventilation level.

On the left side, arranged next to the corresponding buttons, are the LEDs for summer, winter or automatic mode.

Filter change

The need to change the filter is signalled by the LED on the bottom left.

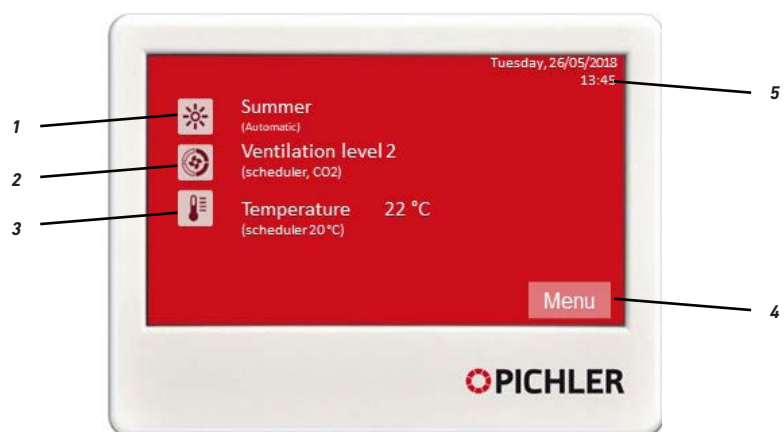
For details on changing the filter, see section 12 - "Filter maintenance".

Error messages

The LED for error messages is located on the lower right side. Please contact your installer! For details on error messages, see "Error description" in section 21.

9. TOUCH control unit

START MENU



- 1 Current operating mode
- 2 Ventilation level
- 3 Temperature (indoor air, supply air, extract air)

- 4 Menu
- 5 Date and time



**OPERATING MODE**

The active operating mode is displayed by various buttons. The selected operating mode can be changed by pressing the button. The following operating modes are available:

**Summer**

Summer or bypass mode supports cooling of the living area. Under certain conditions, the

heat exchanger is bypassed and the cold outdoor air is blown directly into the living room.

**Winter**

The outdoor air is always conveyed via the heat exchanger in winter operation.

Automatic

In automatic mode, the system switches automatically between winter and summer modes depending on the outdoor air temperature.

Automatic mode is shown in brackets below the current operating mode.

**VENTILATION LEVEL****In principle: "As much ventilation as required"**

Adjustment of air volume requires relevant expertise and is performed by a specialist during initial start-up.

The ventilation levels can be configured in standby or basic ventilation modes. Depending on these settings, the selection of the lowest ventilation level creates a standby or basic ventilation mode.

If ventilation is too low, poor indoor air quality or mould formation may result in living areas.

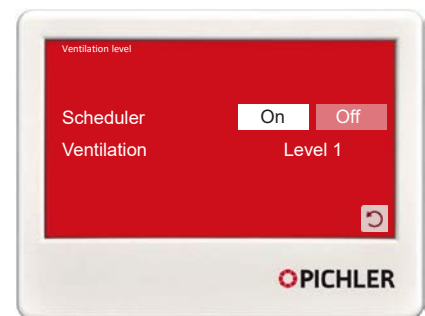
If ventilation is too high, indoor air may become too dry – particularly in the colder months.

The active ventilation level is displayed by various buttons. The selected ventilation level can be changed by pressing the button. The following selection options are available:

Scheduler

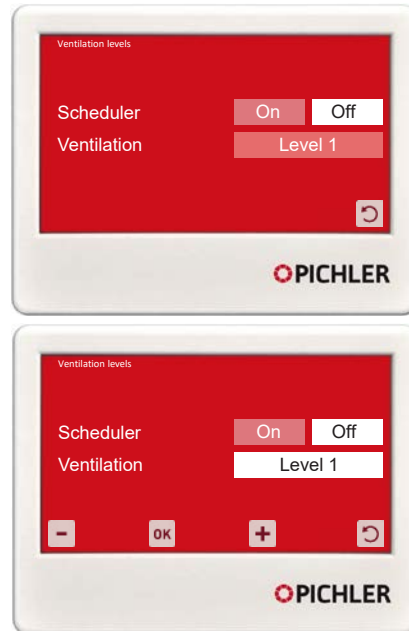
The system runs at the ventilation level that is currently programmed. The scheduler can be programmed in the [Menu] under [Settings].

At a higher level, demand-controlled air volume regulation takes place both in the time program and with manual selection of the ventilation level and with connected configured CO2 and/or humidity sensors. Programming takes place in the [Settings] > [Additional functions] menu item.



Manual selection

When the time program is deactivated [OFF], the ventilation level can be selected manually. This selection is carried out via the [+] or [-] button and via the [OK] button in the lower section of the control unit.



Configuration standby



Ventilation level 1

The system runs at ventilation level 1



Ventilation level 2

The system is running in ventilation level 2



Ventilation level 3

The system runs at ventilation level 3

By selecting ventilation level 3, you activate the boost ventilation function. After 1 hour of operation at the highest ventilation level, the system automatically resets to the previous ventilation level. Alternatively, by selecting a lower ventilation level, you can end the boost ventilation process manually before one hour has passed.



Standby

The system is in standby mode. The fans stand still.

Configuration basic ventilation



Ventilation level 1

The system runs at ventilation level 1



Ventilation level 2

The system is running in ventilation level 2



Ventilation level 3

The system is running in ventilation level 3

By selecting ventilation level 3, you activate the boost ventilation function. After 1 hour of operation at the highest ventilation level, the system automatically resets to the previous ventilation level. Alternatively, by selecting a lower ventilation level, you can end the boost ventilation process manually before one hour has passed.



Basic ventilation

The system runs with a minimum amount of air. The fans run at low speed.



DEMAND-CONTROLLED AIR VOLUME REGULATION

Higher-level ventilation regulation

There are various configurations and operating modes that result in your ventilation unit being operated with air volumes other than those set. These include:

CO₂-controlled regulation (Figure 1)

Acceptable indoor air should not exceed a CO₂ value of 1000 ppm, meaning that active ventilation should take place every 1 to 2 hours. A living room ventilation unit with CO₂ concentration-based control (CO₂ sensor module available as part of the accessories) automatically ensures that a defined CO₂ value of 900 ppm is not exceeded.

Humidity-controlled regulation (Figure 2)

The relative humidity is a factor that also contributes significantly to a comfortable living climate. Acceptable humidity is defined by a comfort window.

In the case of a ventilation unit with humidity concentration-based control (RH sensor module available as part of the accessories), a permanently defined **relative humidity setpoint of 65%** is stored. If this value is exceeded, the ventilation unit switches to the **highest ventilation level for 60 minutes**.

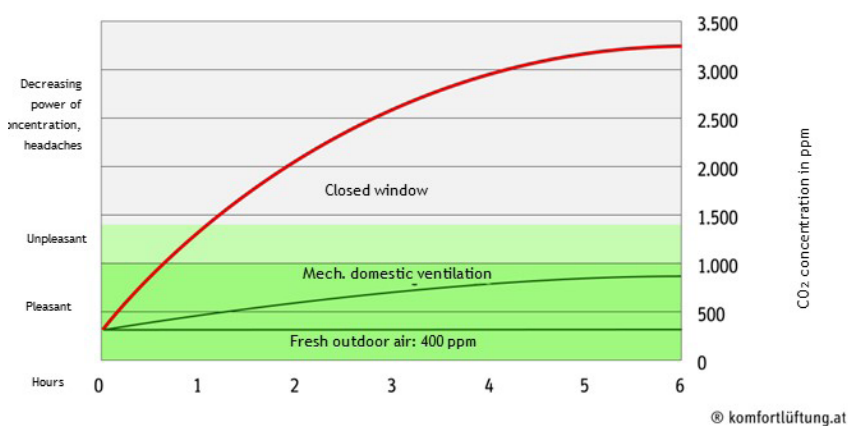


Figure 1: Schematic diagram showing the increase in CO₂ concentration in a flat/room with occupants with and without mechanical ventilation.

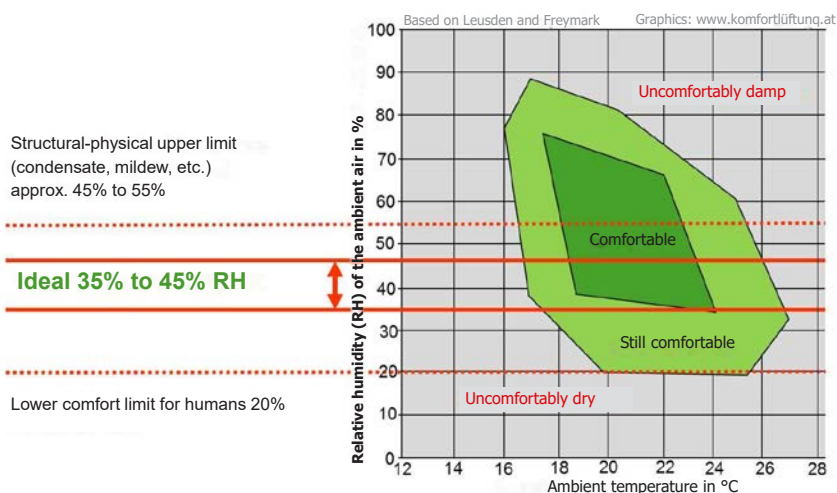


Figure 2: Representation of the comfort window as a function of the air temperature and relative humidity.

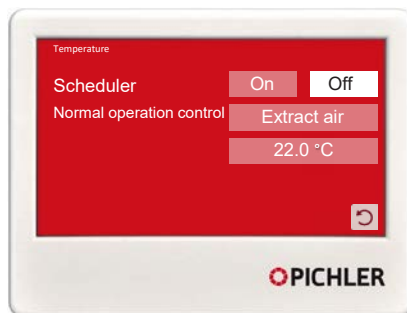




TEMPERATURE

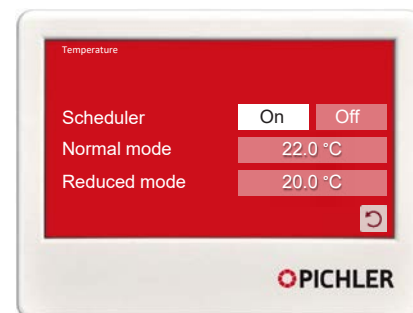
Depending on the setting, regulation is based on the indoor air, extract air or supply air temperature, the desired temperature can be entered via the control unit. For details see "Settings" under "Temperature control" in section 9.

Deactivated time program [OFF]



TARGET temperature in normal operation.
If the time program is deactivated, this is always the set temperature.

Activated time program [ON] (for different daily TARGET temperatures)



TARGET temperature in normal operation and in reduced operation.

If the time program is activated, the system switches between these two TARGET temperatures.



In the standard version of the ventilation unit, the temperature is controlled via the integrated bypass circuit and is limited by the outdoor air conditions without the use of the optionally available heating, cooling or combination exchanger in the supply air.

Menü MAIN MENU



The main menu is opened by pressing the Menu button. Information on the ventilation unit is displayed here, and various settings can be made and actions performed.



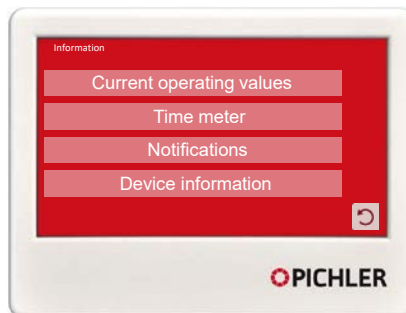
The user is returned to the Start menu by pressing the Home button.



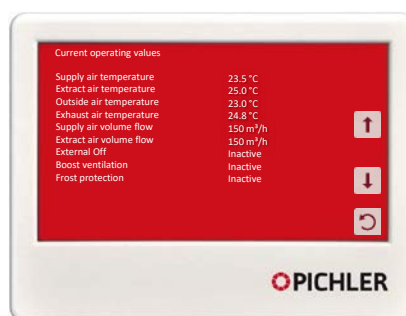


INFORMATION

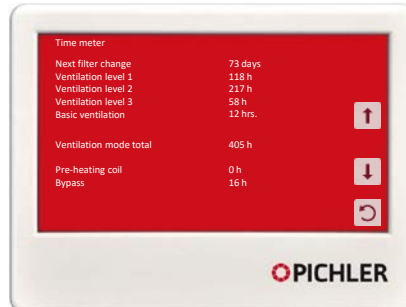
Current operating values, operating hours, messages and firmware versions can be retrieved under the [Information] menu item.



Current operating values

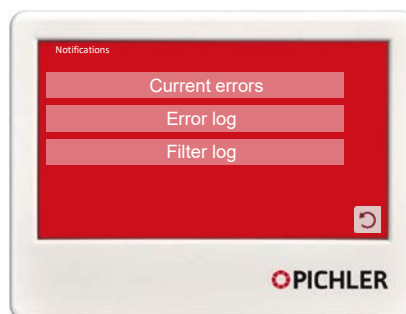


Operating hours meter



Notifications

Current errors and error and filter logs display here.



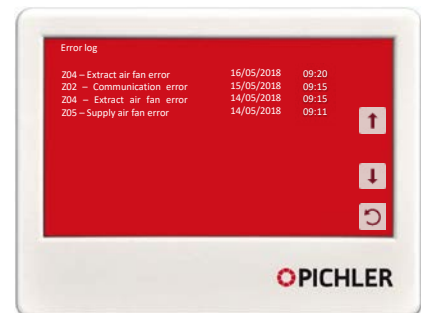
Current errors

Active errors are displayed here.



Error log

Here the last 100 errors are displayed in historical order.



Filter log

The filter changes carried out are documented here.



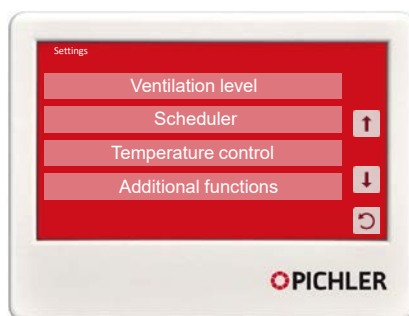
Device information

Firmware versions for the control and the operating unit as well as the type of ventilation unit are shown here. The device ID displayed is relevant for remote access via the Internet (remote maintenance) or if the Pichler app is used.



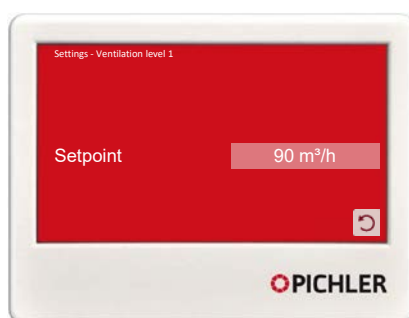
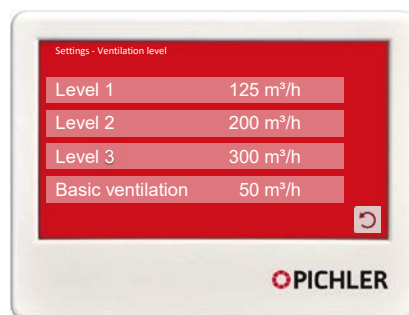


SETTINGS



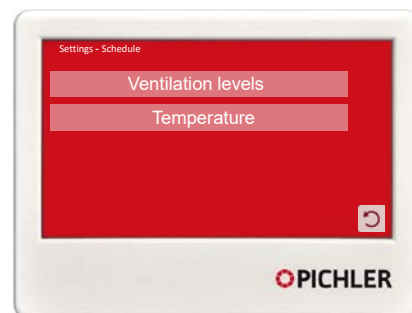
Volume flow per ventilation level

The volume flow can be set here for each individual ventilation level.



Scheduler

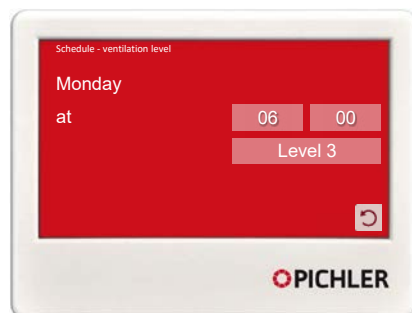
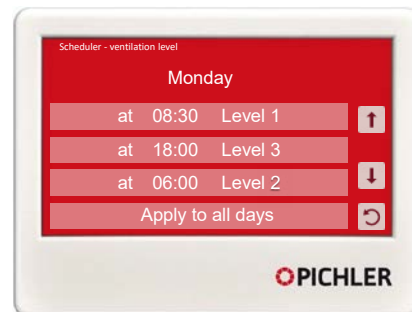
Different settings can be made here for ventilation levels and temperatures for each day of the week.



Time program ventilation levels

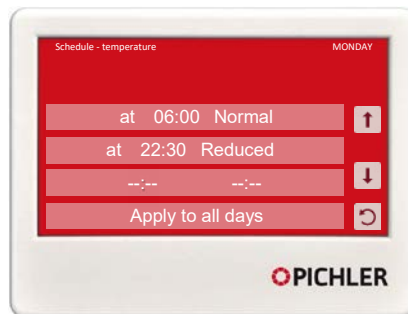
A total of three switching times are available for changing to a different ventilation level per day. With the button "Apply for all days" the switching points of the currently selected day can be applied to all other days of the week.

Switch time for operation with ventilation level 3.



Time program temperatures

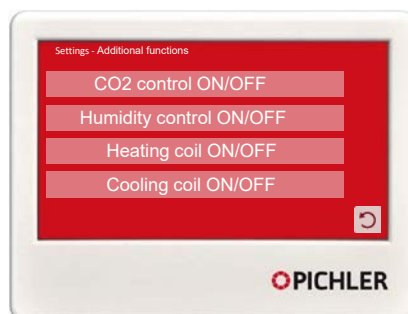
A total of three switching times are available for changing to a different TARGET temperature per day. With the button "Apply for all days" the switching points of the currently selected day can be applied to all other days of the week.

**Temperature control**

Depending on the setting, control is based on the room air, extract air or supply air temperature.

**Additional functions**

The additional functions configured by the specialist during commissioning can be activated and deactivated here. The prerequisite is the installation of the optional sensors or the heating, cooling or combination exchanger.

**CO₂ control**

Enables higher-level air volume flow control depending on the measured CO₂ concentration.

**Humidity control**

Automatically switches to ventilation level 3 as soon as the

measured relative humidity rises above 65%.

Heating coil

Enables the supply air to be reheated after the ventilation unit. This function is only available in winter mode.

Cooling coil

Enables the supply air to be cooled after the ventilation unit. This function is only available in summer mode.

When using a combination exchanger (cooling coil that can also be used for heating), the heating coil and the cooling coil must be activated here.

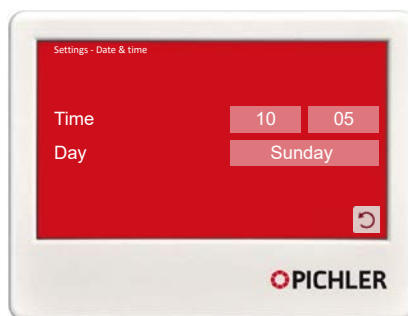
Date & time

In this menu item date and time settings can be selected.

**Date**

The current day and the current month are set in the date field. The active field has a white background. The value is changed by pressing the [+] or [-] button. The value is confirmed by pressing the [OK] button.



Time**Language**

You can switch between German, English, French, Dutch, Slovenian, Italian, Czech and Slovak.

**ACTIONS****Air filter changed**

If the air filters are changed outside the filter change interval defined – without any filter notification – the filter timer under [Menu] > [Actions] must be reset. This process is documented automatically in the filter log.

**Reboot device**

If a device restart is necessary, this can be carried out here. The system retains all settings. During the restart, the "Device information" is displayed on the control unit.



10. Errors and notifications

MINI CONTROL UNIT

The error notifications of the compact ventilation unit on the MINI control unit are indicated by red error LED blinking patterns. A detailed description of the blinking patterns can be found in *section 21 - "Error description"*.



For further processing please contact your installer.



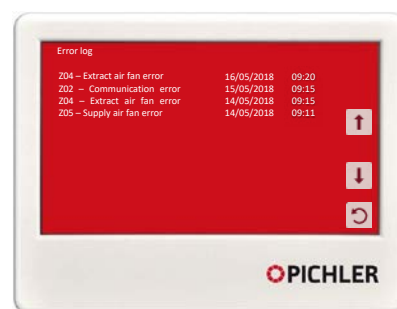
TOUCH CONTROL UNIT



By pressing the [Current errors] button, these are displayed in plain text in a new window.



In addition, these are stored chronologically in the error log.



If restarting the compact ventilation unit does not correct the error, please contact your installer.

11. Pichler app and Pichler Connect

EASY OPERATION WITH THE PICHLER APP

User-friendly: The compact ventilation unit can be operated easily with our free smartphone app for Android and iOS, whether you are at home or out and about.



REMOTE ACCESS / PICHLER CONNECT

Operational safety: Remote access allows the Pichler customer service to respond quickly and easily in the event of faults.



DATA PROTECTION

A sticker is attached to the device cover. As soon as a wired internet connection is established, we assume that you agree to the current data protection declaration. (See: <https://www.pichlerluft.at/data-privacy-statement.html>)



12. Filter service

FILTER NOTIFICATION ON THE MINI CONTROL UNIT

When the filter service life has elapsed (factory setting 90 days) the control unit reports the necessity of a filter check. This takes place via the LED provided for this purpose, which will then be lit yellow continuously.



CLEARING THE FILTER NOTIFICATION ON THE MINI CONTROL UNIT

Required filter change

Reset the filter counter after changing the filter.

Press the [+] button and the [-] button at the same time for 5 seconds in order to do this. The filter message disappears after entering this combination.

Premature filter change

If the air filters are replaced prematurely, the filter counter must be reset without a pending filter message.

To do this, you again press the [+] button and the [-] button simultaneously for five seconds.



FILTER NOTIFICATION ON THE TOUCH CONTROL UNIT

When the filter service life (factory setting 90 days) has expired, the control unit reminds you that it is necessary to check the filter. Filters must be replaced immediately if very dirty. Otherwise, they should be replaced at least every six months, depending on outdoor air pollution levels.



CLEARING THE FILTER NOTIFICATION ON THE TOUCH CONTROL UNIT

Required filter change

If the filters are changed, this must be confirmed by clicking the [Filter changed] button, which resets the filter service life.

If the filters remain in the device, the filter service life is extended by a further 90 days by clicking the [Remind me later] button.

Premature filter change

Reset the filter message on the control unit after every filter change.
(See "Actions" in section 9.)

FILTER CHANGE



Only original replacement filters of the specified filter class may be used for the filter replacement.



Ensure that operation periods of the compact ventilation unit without an air filter are kept as short as possible.



When replacing the air filters, avoid soiling the unit and its components. Dirty air filters must be immediately and suitably disposed of. The used air filters can be disposed of as residual waste.

4. Insert the new air filters and close the filter cover.



When inserting the new filters, observe the mounting position (direction of air).

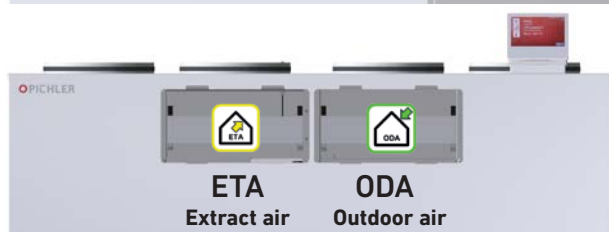
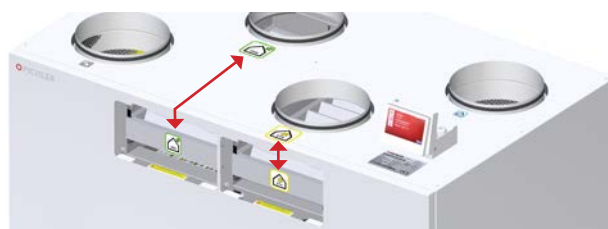
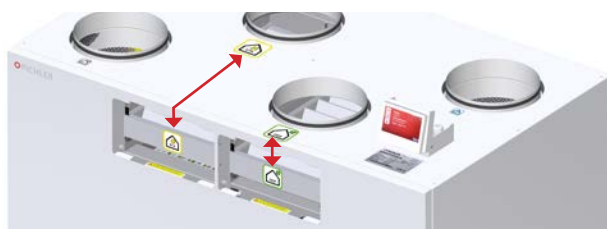
Procedure for the filter change:

1. Filter message on the control unit.
2. Remove the filter cover (item 1) by pressing the latches positioned at the sides towards the inside.
3. Pull out the two air filters (items 2 and 3) using the pull tabs.

Spare filter

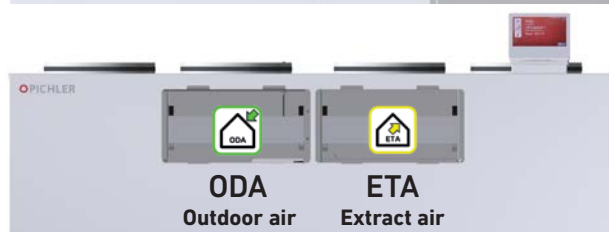


Symbol	Designation	Article number	Item
	ODA filter ISO ePM1 55% (outdoor air)	40LG0500024A	2
	ETA FILTER ISO Coarse 70% (extract air)	40LG0500025A	3



LG740L

Left-hand version
(see type plate)

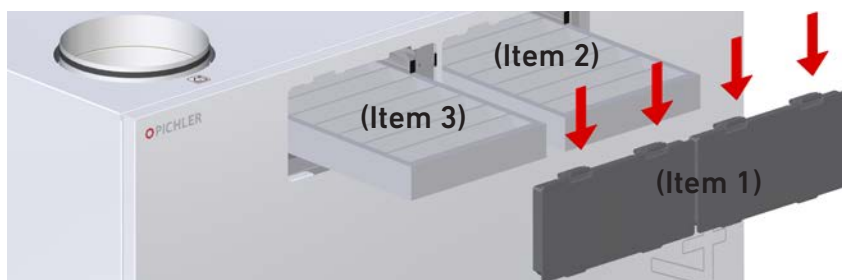


LG740R

Right-hand version
(see type plate)



LEFT-HAND VERSION (see type plate)



Filter cover (item 1)

PICHLER
Lüftung mit System.
www.pichlerluft.at



Filter LG 740
ISO ePM1 55%
40LG0500024A



Air direction / airflow

Outdoor air filter (ODA), installation in the right filter shaft (item 2)

PICHLER
Lüftung mit System.
www.pichlerluft.at



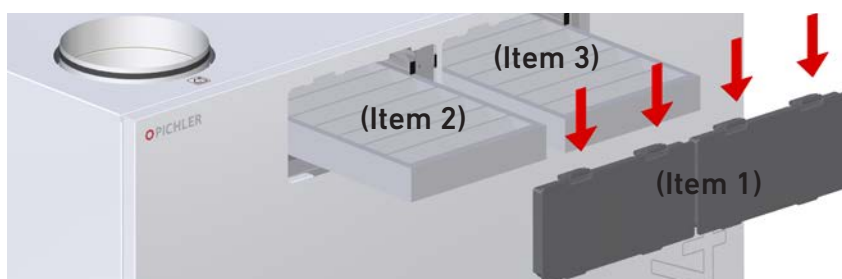
Filter LG 740
ISO Coarse 70%
40LG0500025A



Air direction / airflow

Extract air filter (ETA), installation in the left filter shaft (item 3)

RIGHT-HAND VERSION (see type plate)



Filter cover (item 1)

PICHLER
Lüftung mit System.
www.pichlerluft.at



Filter LG 740
ISO ePM1 55%
40LG0500024A



Air direction / airflow

Outdoor air filter (ODA), installation in the left filter shaft (item 2)

PICHLER
Lüftung mit System.
www.pichlerluft.at



Filter LG 740
ISO Coarse 70%
40LG0500025A



Air direction / airflow

Extract air filter (ETA), installation in the right filter shaft (item 3)



SPECIALIST PERSONNEL - ASSEMBLY/INSTALLATION

13. Scope of supply, transport, storage and disposal

SCOPE OF SUPPLY



The delivery includes:

- One plug-in compact ventilation unit including data cable for the control unit
- The MINI or TOUCH control unit (depending on the order)
- The operating and installation manual

- The height-adjustable feet for free-standing installation

After delivery of the unit, check that the type and serial number on the nameplate correspond with the information on the order and delivery documents, that the equipment is complete (optional accessories) and that all parts have been delivered in perfect condition.



Any transport damage and/or missing parts must be reported immediately in writing to the forwarder or supplier.

TRANSPORT, STORAGE AND PACKAGING



In order to prevent possible transport damage, handle the LG 740 compact ventilation unit with care and secure it correspondingly during transport.

Ensure that the unit is not damaged from being toppled or overturned. Avoid knocks and blows during transportation.

Applicable safety and accident regulations must be complied with during transportation.

If transported manually, ensure that necessary human lifting and carrying forces are reasonable.

The compact ventilation unit is delivered in a transport packaging. The safety markings on the packaging must be observed. The unit must be stored in its packaging in a suitable dry location.

DISPOSAL

The packaging materials must be disposed of in accordance with local regulations; wooden pallets or cartons must be recycled, for instance.







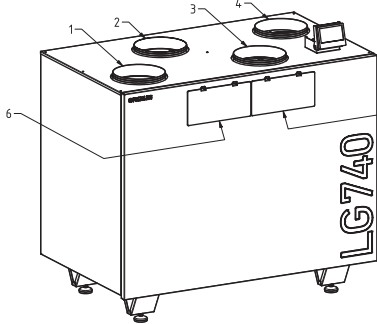
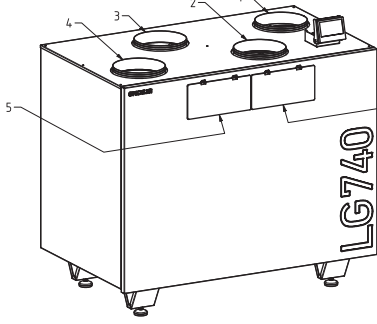
Units that are no longer in working order must be dismantled by a specialised company and properly disposed of via suitable collection centres in accordance with the waste electrical and electronic equipment ordinance (EAG-V0), which provides for the implementation of community law, Directive 2002/95/EC (RoHS) and Directive 2002/96/EC (WEEE Directive).



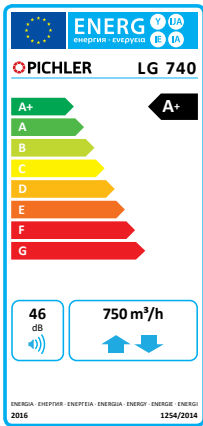
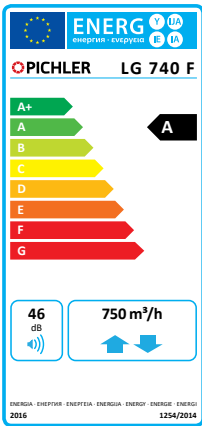
14. Technical specifications

VERSIONS

LG 740

Standing installation LG 740	Left-hand version	Right-hand version
Article no. without pre-heating coil	08LG740L	08LG740R
Article no. with integrated pre-heating coil	08LG740LV	08LG740RV
Article no. with enthalpy exchanger	08LG740LF	08LG740RF
Article no. with enthalpy exchanger and integrated pre-heating coil	08LG740LFV	08LG740RFV
 1 Supply air  2 Extract air  3 Outdoor air  4 Exhaust air 5 Filter revision outdoor air 6 Filter revision extract air		

ENERGY EFFICIENCY CLASSES

	LG 740 (V)	LG 740 F (V)
Manual control	A	A
Timer	A	A
Central demand control	A	A
Local demand control	A+	A
		



Download the product data sheets from www.pichlerluft.at



DEVICE DATA

Equipment type	LG 740 (V)	LG 740 F (V)
Heat exchanger	Standard	Enthalpy exchanger
Air volume flow min. - max. (adjustable in steps of 5 m ³ /h)	150 - 750 m ³ /h	150 - 750 m ³ /h

Characteristic values in compliance with EN13141-7:2011		
Temperature ratio $\eta_{\text{O,SU}}^{1,2}$	85.5%	80.5%
Temperature ratio $\eta_{\text{O,EX}}^{1,2}$	77.4%	72.5%
Specific power input SPI ^{1,2}	0.20 Wh/m ³	0.20 Wh/m ³
Humidity ratio η_{xSU}		70%
External leakage	< 1%	
Internal leakage	< 1%	

Classification of air filters in accordance with EN ISO 16890		
 ODA filter (outdoor air)	ISO ePM1 55%	
 ETA filter (extract air)	ISO Coarse 70%	

Operating conditions		
Permissible ambient temperature (place of installation)	+5 to +35 °C	
Permissible operating temperature (outside air)	-15 to +35 °C	

Electrical system		
Electrical connection	230 V / L/N/PE / 50 Hz / 16 A	
IP classification	IP40 with connected air ducts	
Max. power without pre-heating coil	400 W	
Max. power with pre-heating coil	2,800 W	

Materials		
Inner part	Polyethylene insulating materials and galvanized sheet steel	
Housing	Galvanised sheet steel and powder-coated in RAL 9003	
Heat exchanger	Aluminium counterflow exchanger	
Enthalpy exchanger	Aluminium and polymer membrane counterflow exchanger	

Housing		
Air line connections	4 x Ø 200 mm (nipples with SAFE double lip seal)	
Condensate drainage	Outside thread 1½"	
Dimensions (W x H x D)	1090 x 940 x 660 mm	
Weight without optional accessories	approx. 120 kg	

¹ with 70% of the max. volume flow

² according to the calculation basis according to prEN13171-7:2018 based on an air temperature of 20 °C



ACOUSTIC SPECIFICATIONS

LG 740		Item	Housing radiation			Outdoor air connectors			Supply air inlet			Exhaust air connectors			Extract air outlet		
		m ³ /h	300	525	750	300	525	750	300	525	750	300	525	750	300	525	750
		Pa	50	50	100	50	50	100	50	50	100	50	50	100	50	50	100
Midband frequency	125 Hz	L _w in dB	48	46	49	45	46	53	60	53	60	57	53	61	49	47	54
	250 Hz		41	54	62	40	59	59	53	69	77	48	62	76	41	58	60
	500 Hz		37	44	51	37	47	54	47	57	64	45	57	65	36	46	54
	1000 Hz		23	35	43	29	42	50	38	49	57	37	47	57	29	40	49
	2000 Hz		21	29	37	23	39	48	31	44	53	28	43	53	20	33	42
	4000 Hz		14	14	25	16	29	41	20	37	48	18	34	47	16	23	34
	8000 Hz		10	14	21	16	19	32	17	30	44	16	26	43	16	17	25
	Total L _{WA} in dB(A)		38	46	56	38	51	57	50	61	71	47	56	70	39	50	56

Note: Tolerances for sound data ± 2 dB, measured in compliance with EN ISO 9614-2

GENERAL

USER

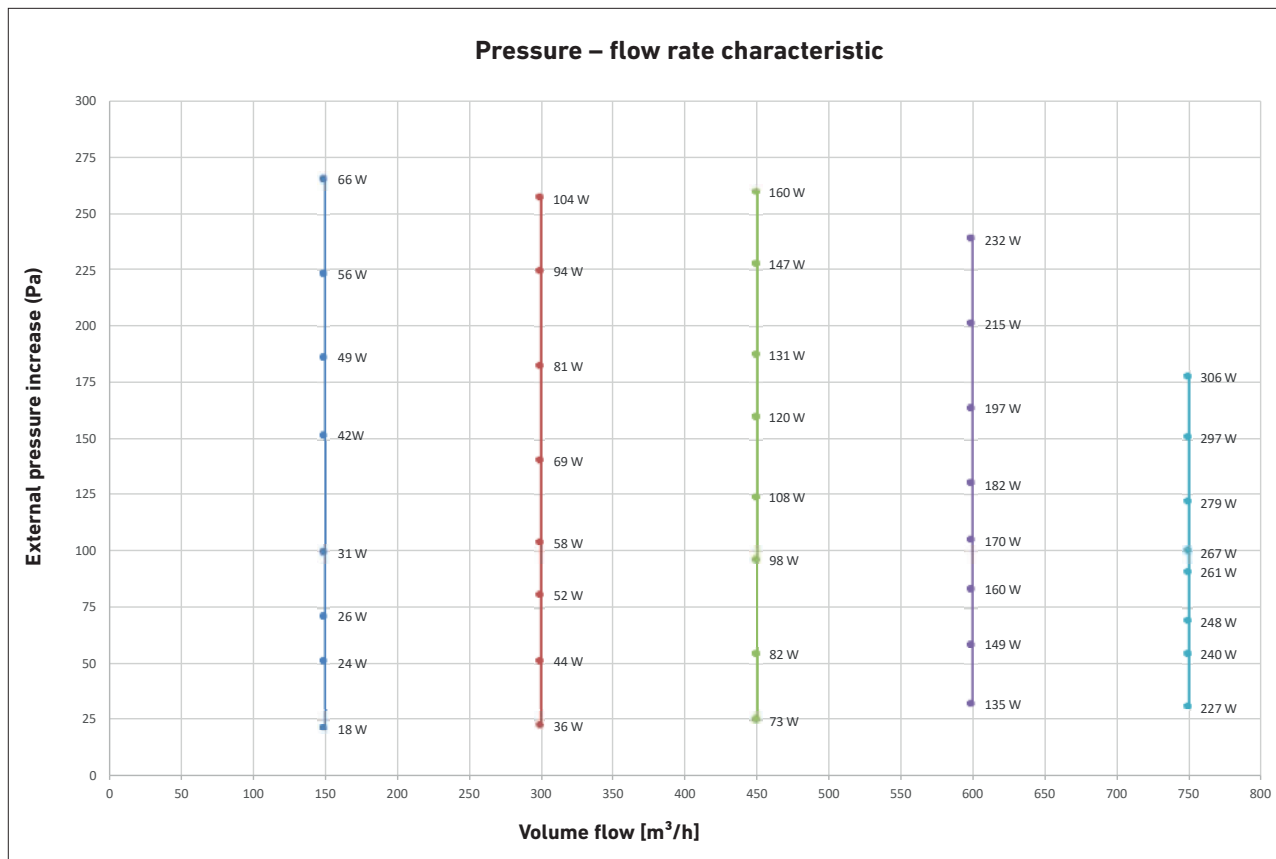
SPECIALIST PERSONNEL



CHARACTERISTIC CURVE EXTERNAL PRESSURE INCREASE – AIR VOLUME FLOW

The characteristic curves shown are valid for the device version with ODA filter ISO ePM1 55% (outdoor air) and ETA filter ISO Coarse 70% (extract air). The specified total output takes into account the power

consumption for the two fans in the supply and exhaust air as well as the power consumption of the control.



Note! Depending on the installed air duct system, the maximum air volume flow may not be achieved in bypass mode.

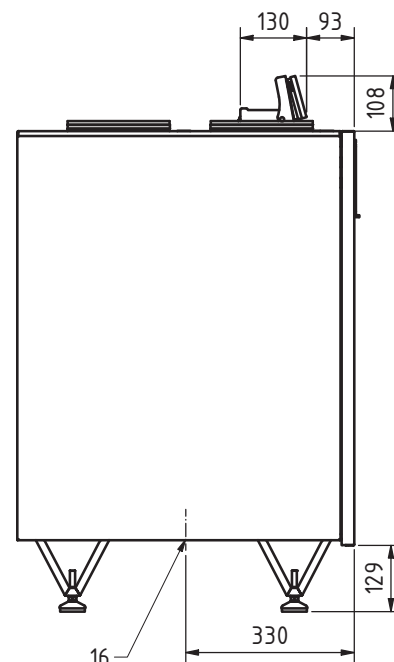
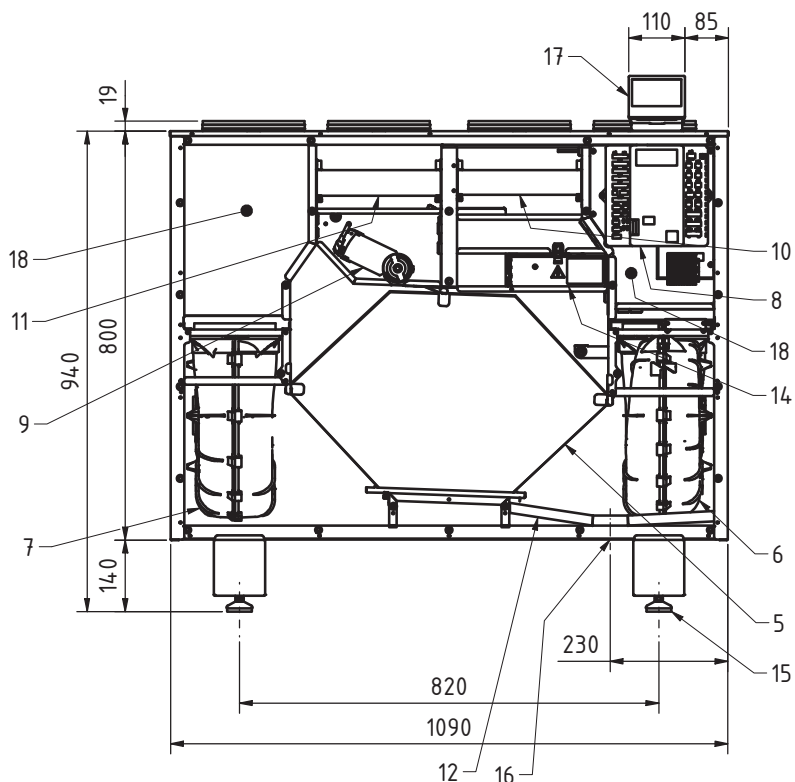


DEVICE STRUCTURE

LEFT-HAND VERSION

Dimensions: (W x H x D) 1090 x 940 x 660 mm

Air line connection: 4 x Ø 200 mm



- 1 Supply air DN200
- 2 Extract air DN200
- 3 Outdoor air DN200
- 4 Exhaust air DN200
- 5 Counterflow heat exchanger
(optionally with moisture recovery)
- 6 Exhaust air fan
- 7 Supply air fan
- 8 Controller
- 9 Bypass flap drive
- 10 ODA filter ISO ePM1 55%
- 11 ETA filter ISO Coarse 70%
- 12 Condensate tray
- 13 Cable inlets
- 14 Electric pre-heating coil (optional)
- 15 Height-adjustable feet
- 16 Hot water connection 1 1/4" outside thread
- 17 Mounting bracket for the MINI or TOUCH control units
- 18 Integrated acoustic dampeners (supply and exhaust air)

Illustration: LG 740 (left-hand version)

GENERAL

USER

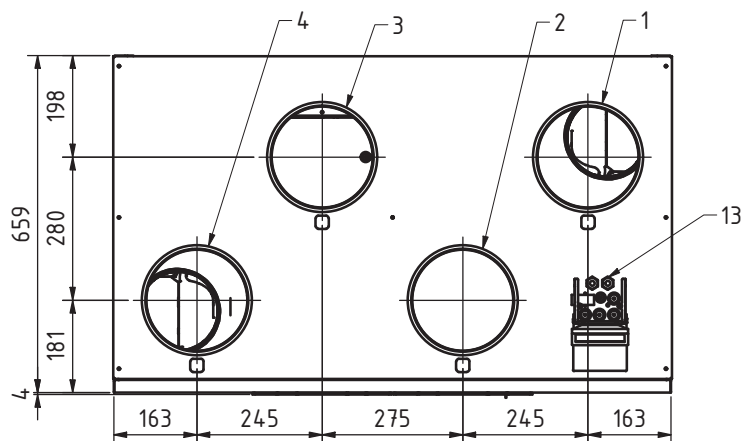
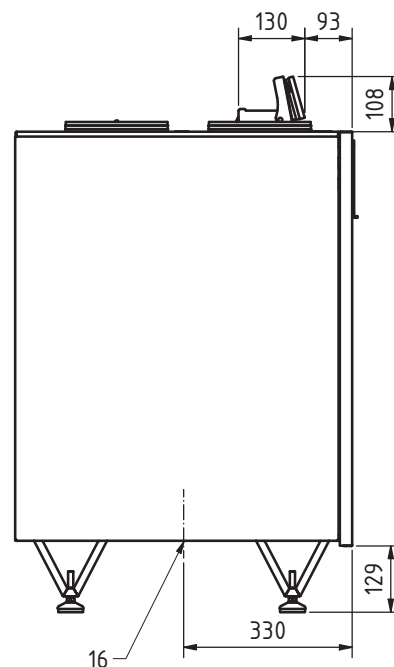
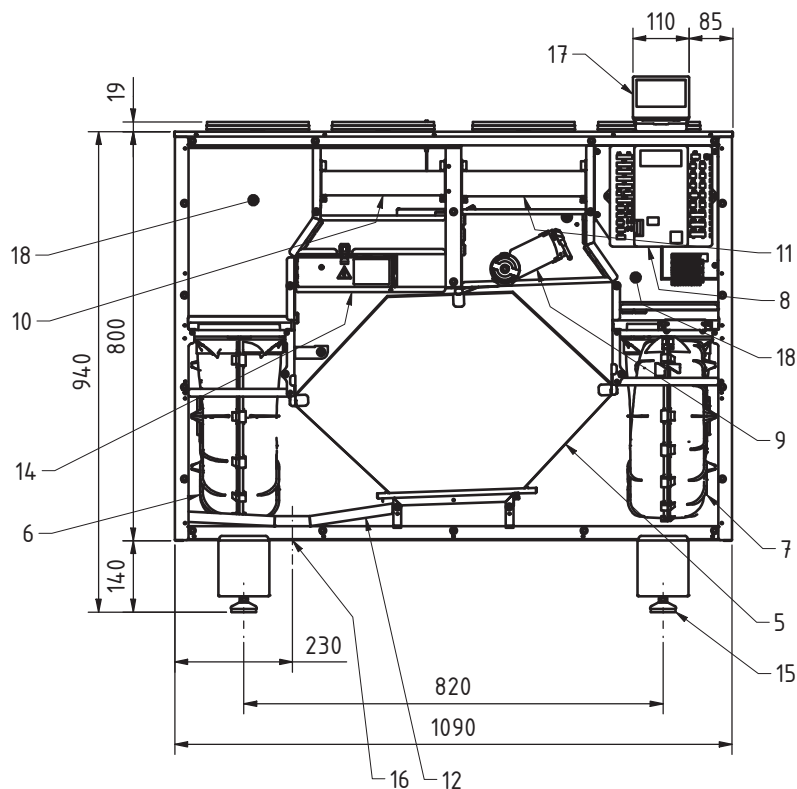
SPECIALIST PERSONNEL



GENERAL

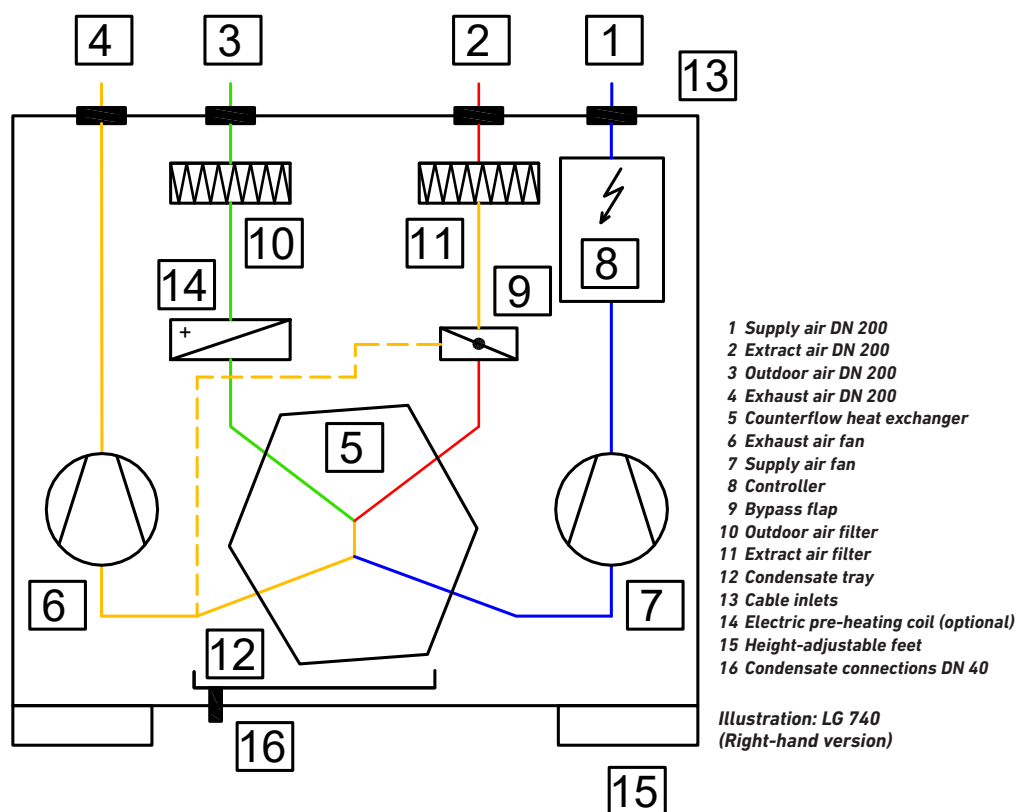
USER

SPECIALIST PERSONNEL

RIGHT-HAND VERSION*Dimensions: (W x H x D) 1090 x 940 x 660 mm**Air line connection: 4 x Ø 200 mm*

- 1 Supply air DN200
- 2 Extract air DN200
- 3 Outdoor air DN200
- 4 Exhaust air DN200
- 5 Counterflow heat exchanger
(optionally with moisture recovery)
- 6 Exhaust air fan
- 7 Supply air fan
- 8 Controller
- 9 Bypass flap drive
- 10 ODA filter ISO ePM1 55%
- 11 ETA filter ISO Coarse 70%
- 12 Condensate tray
- 13 Cable inlets
- 14 Electric pre-heating coil (optional)
- 15 Height-adjustable feet
- 16 Hot water connection 1 1/4" outside thread
- 17 Mounting bracket for the MINI or TOUCH control units
- 18 Integrated acoustic dampeners (supply and exhaust air)

Illustration: LG 740 (right-hand version)



1. Supply air connection (SUP)

Connection piece for the supply air line, through which the treated, fresh air is fed into the rooms.

2. Extract air connection (ETA)

Connection piece for the extract air line, through which the used air is routed out of the rooms.

3. Outdoor air connection (ODA)

Connection piece for the outdoor air line, through which the untreated air flows from the outside into the system.

4. Exhaust air connection (EHA)

Connection piece for the exhaust air line, through which the used air flows out of the system to the outside.

5. Counterflow heat exchanger (enthalpy exchanger)

The efficient heat exchanger serves to transfer heat from the warmer to the colder air. Enthalpy exchangers also ensure moisture transfer.

6. Exhaust air fan

Ensures the required air volume flow in the extract and exhaust air.

7. Supply air fan

Ensures the required air volume flow in

the outdoor and supply air.

8. Control

It is possible to connect a LAN cable and additional optional components (e.g. external sensors, pumps, flaps, etc.) to the control unit. Customer service can configure the operating parameters and any optional components via a micro USB interface.

9. Bypass flap with actuator

Used to bypass the heat exchanger if necessary.

10. Outdoor air filter

Dust and impurities are filtered out of the outdoor air via the outdoor air filter.

11. Extract air filter

Serves to filter the coarse impurities from the extract air, in order to protect the unit's interior from being contaminated.

12. Condensate tray

Condensate that accumulates in the heat exchanger during operation is collected via the condensate tray.

13. Cable inlets

The cable inlets are used to establish electrical connections to connect the control unit and optional accessories such as temperature sensors, etc.



SAFETY DEVICES

14. Electric pre-heating coil

The pre-heating coil function serves to protect condensate in the heat exchanger against freezing in the event of very cold outdoor air temperatures.



The optional electric pre-heating coil serves to preheat the outdoor air as a function of the outdoor and exhaust air temperature (*see "Safety devices" in section 5*).

If an optional water or brine coil is used to protect the heat exchanger from frost, the coil must be protected appropriately from freezing when frost is present.

15. Height-adjustable feet

Used to align the ventilation unit horizontally to ensure safe drainage of the condensate.

16. Condensate drain

The resulting condensate water is drained off via the connected condensate drain, which must be routed through an effective odour trap (siphon).



To ensure safe operation of the system, safety devices and covers must by no means be rendered inoperative; nor may measures be taken to bypass or dismantle them.

In the event of any errors or defects on the ventilation system, which may cause harm to persons or property, the system

must be put out of operation immediately or be protected against restart. Further use must be actively prevented until the unit is fully repaired.

The unit may only be repaired by a specialised company.



15. System description and extension options

FROST PROTECTION OPTIONS



There is a risk of the heat exchanger freezing on the exhaust air side during winter months with moderate to severe frost, depending on the extract air temperature and air humidity. Appropriate measures must be taken to protect the heat exchanger against ice formation at low outdoor air temperatures.

Various systems are available to monitor defrosting of the heat exchanger. Possible strategies to protect the heat exchanger against freezing are outlined below.

Frost protection by lowering the supply air volume flow



This operating mode is not suitable for frost protection in passive houses. This operating mode does not guarantee balanced air flow volume between supply air and extract air during defrosting.

- The system monitors the difference in temperature between extract air and supply air. The defrost process starts when the "Defrost differential" parameter setting is exceeded.

The compact ventilation unit is equipped with an automatic frost protection for the heat exchanger as standard.

Defrosting process:

The supply air volume flow is constantly reduced while the extract air volume flow remains the same and ultimately switches off. After the defrost pause period has elapsed, the rotational speed on the supply air fan is increased continuously.

Frost protection via extract air defrost:

- The defrosting strategy is only enabled when the outdoor air inlet temperature falls below -4°C .
- If the exhaust air temperature falls below the "Defrost on" parameter, the defrosting process starts.

Electric pre-heating coil



The LG 740 compact ventilation unit is optionally available with a built-in electrical pre-heating coil, which can preheat the cold outdoor air if required.

- If the ventilation unit with built-in pre-heating coil is switched off manually, the fans will continue to run after to cool down the pre-heating coil.

If the device is equipped with an enthalpy exchanger, the above values will differ.



Overheating protection

A mechanical safety temperature limiter is installed for the built-in pre-heating coil. It protects against overheating in the event of a malfunction. If a temperature of $+50^{\circ}\text{C}$ is reached, power supply to the electric coil is interrupted and the anti-freeze heating is switched off. The triggered safety temperature limiter is reset by pressing the white button on the pre-heating coil with a pointed object.

Frost protection via stepless control of the pre-heating coil:

- The pre-heating coil activates when the outdoor air intake temperature is below -4°C .
- The temperature in front of the heat exchanger is kept above the freezing point with the stepless control and activation of the pre-heating coil. This prevents the heat exchanger from freezing.
- If the outdoor air intake temperature rises above -3°C , the pre-heating coil switches off again.



Constant pressure control

The compact ventilation unit can also operate with constant pressure control. This requires the dual pressure sensor set (08LGDRUCK-DUALSET). A constant pressure control is for example used if volume flow controllers are installed.

The ventilation unit is factory-set with the fan control option "constant volumetric flow". In order to change the fan control to "constant pressure", a touch display (service login required) or the service software is necessary. For more detailed information, please refer to the separate instructions.

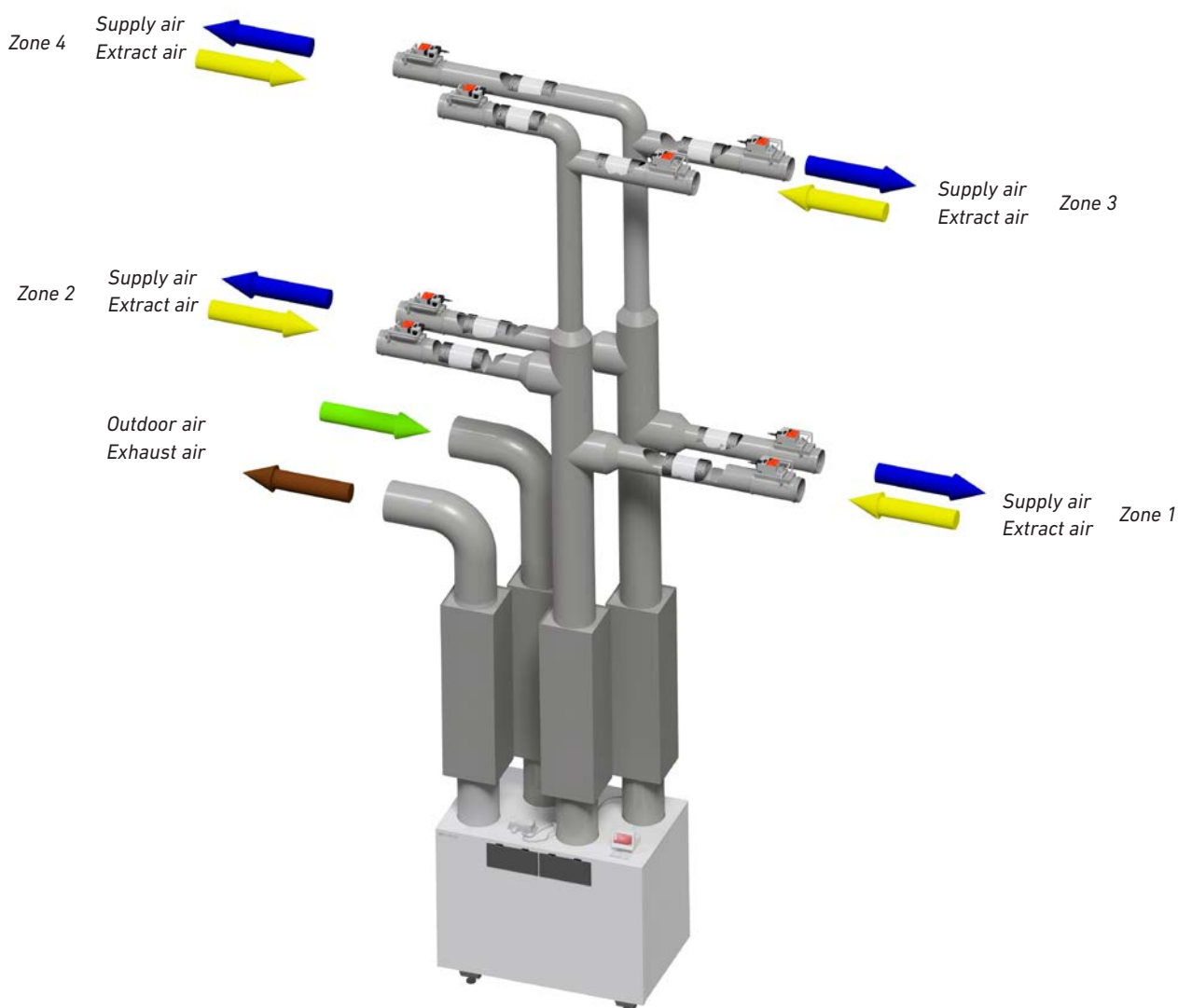


Illustration: Example of a central system solution: compact ventilation unit with constant pressure control and volume flow controllers



Geothermal heat exchanger

Optimal frost protection can be achieved with cold outdoor air temperatures by integrating a geothermal heat exchanger (GHE) into the ventilation system.

The following information must be observed for execution of a geothermal heat exchanger:

- The heat exchanger is laid in the ground with waterproof pipes at a frost-free depth with due consideration of the system's cleanability options.
- The manufacturer's guidelines must be observed.
- Condensate drainage must be provided.
- Sufficient slope for the condensate drain.
- If the air pipe is routed through an external wall, effective sealing against moisture ingress must be ensured.
- To avoid frost damage, adequate spacing from other structural components such as water pipes, foundations, etc must be ensured during installation.
- Indirect pre-heating via a circulatory system with frost-protected heat carrier, for instance, should preferably be used in ground containing hazardous substances (e.g. radon contamination).



To ensure energy efficiency and air hygiene, geothermal heat exchangers must be carefully planned and implemented. The relevant

guidelines and standards must be observed. In particular, ease of cleaning and a suitable filter concept must be ensured.

Support of a geothermal heat exchanger with a changeover flap must be specifically activated in the ventilation unit. PC software is used for this purpose.

Geothermal heat exchanger winter mode

The geothermal heat exchanger is connected via the changeover flap when the outdoor air temperature falls below the geothermal heat exchanger's set winter threshold value (optional outdoor temperature sensor required). In this case, the outdoor air is drawn in via the geothermal heat exchanger and pre-heated.

Geothermal heat exchanger summer mode

In summer, the geothermal heat exchanger is connected when the outdoor temperature exceeds the geothermal heat exchanger's set summer threshold value (optional outdoor temperature sensor required). In this case, the outdoor air is drawn in via the geothermal heat exchanger and is thus pre-cooled.



The effect of the geothermal heat exchanger depends largely on the local conditions, the mode of operation and its dimensioning.

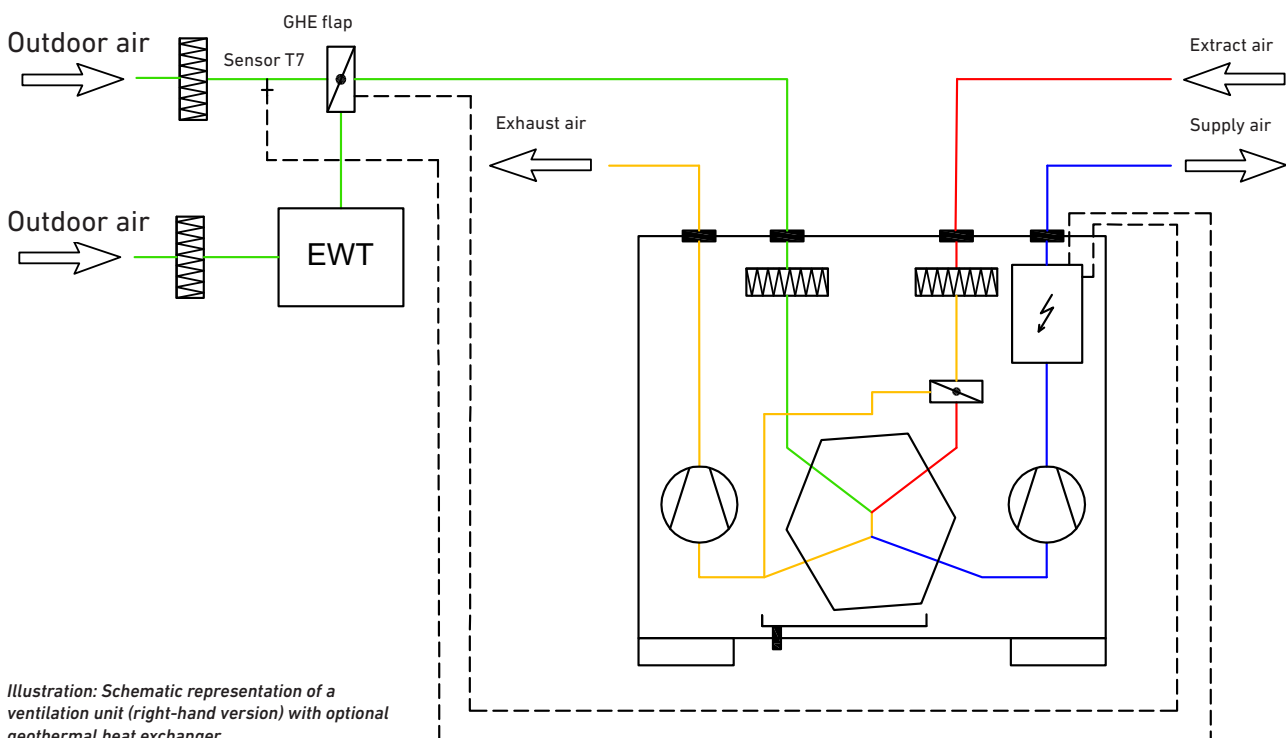


Illustration: Schematic representation of a ventilation unit (right-hand version) with optional geothermal heat exchanger



GENERAL

USER

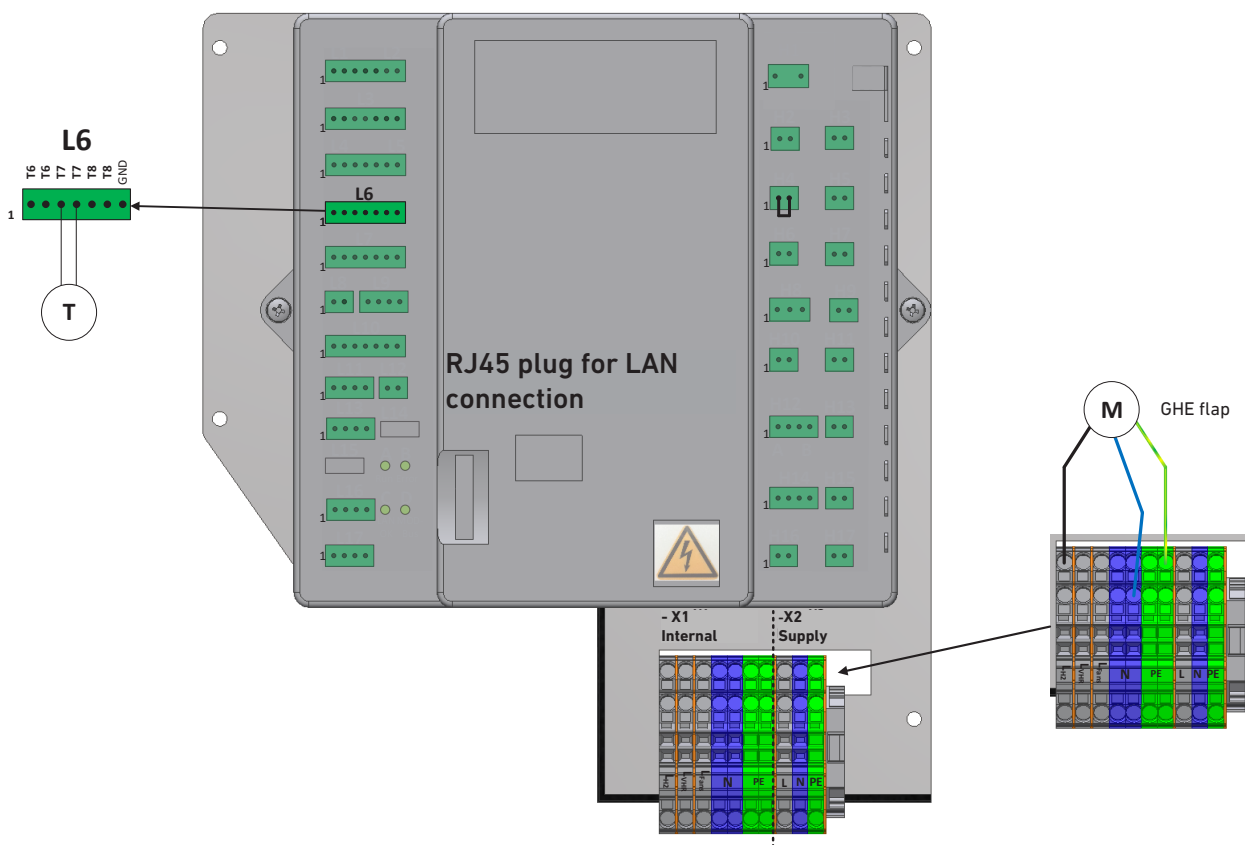


Illustration: Geothermal heat exchanger flap connections

Brine geothermal heat exchanger

Brine geothermal systems extract energy from the earth in winter via a brine pipe. The system may also be used for cooling in summer. The heat or cold is transferred indirectly into the outdoor air via an external air coil in the air duct system.

The advantage of brine geothermal systems over other frost protection mechanisms (e.g. electrical pre-heating batteries), is that little energy is required to operate them. Their advantages compared to the geothermal heat exchanger include hygienic aspects, simple installation and good controllability.



Indirect pre-heating via a circulatory system with frost-protected heat carrier, for instance, should preferably be used in ground containing hazardous substances (e.g. radon contamination).

The manufacturer's guidelines for implementation must be observed. The brine heater coil must be protected against contamination by an air filter integrated into the air pipe system. The brine pump is activated automatically, depending on the outdoor air temperature.

Support for a brine-geothermal system must be activated using the PC tool in the ventilation unit control. PC software is used for this purpose.

Brine geothermal heat: winter mode

If the outdoor air temperature falls below the geothermal heat exchanger's winter parameter, the relay switches on the brine pump (optional external temperature sensor required).

Brine geothermal heat: summer mode

If the outdoor air temperature exceeds the geothermal heat exchanger's summer parameter, the relay switches on the brine pump (optional external temperature sensor required).

SPECIALIST PERSONNEL



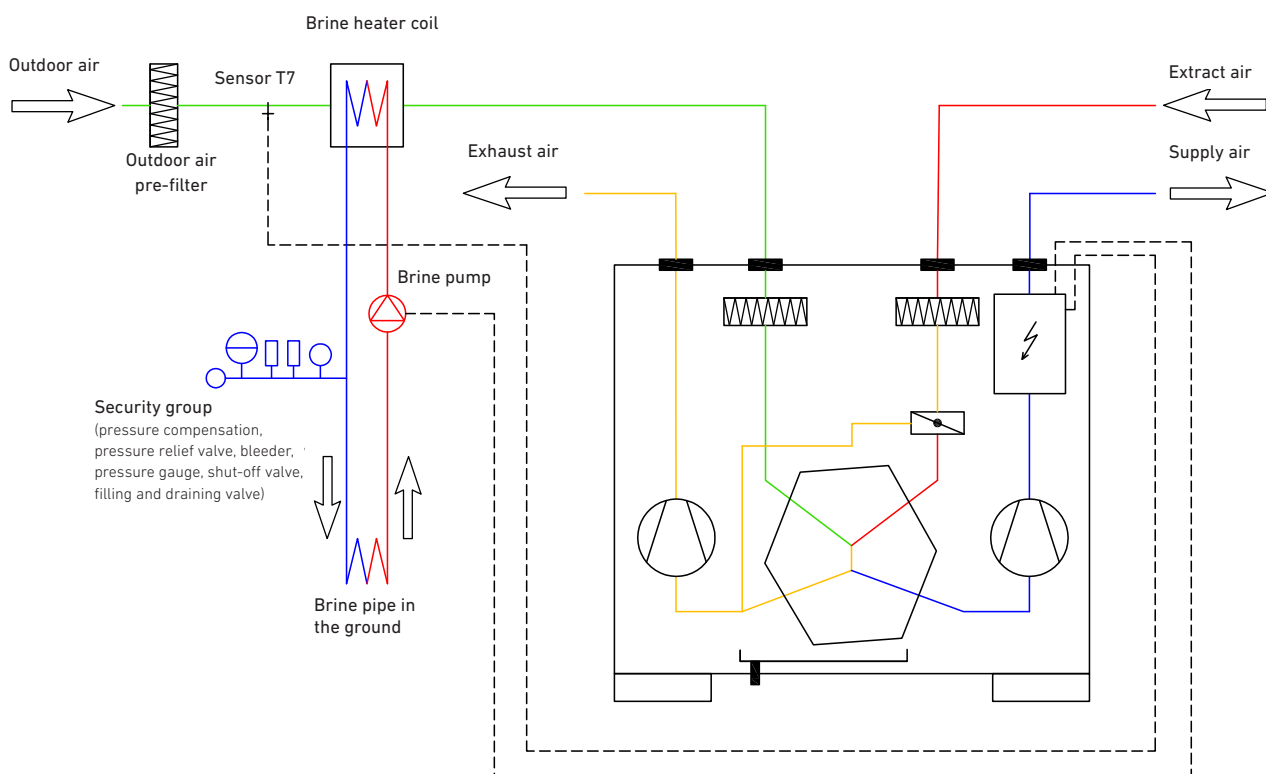


Illustration: Schematic representation of a ventilation unit (right-hand version) with optional brine geothermal heat exchanger

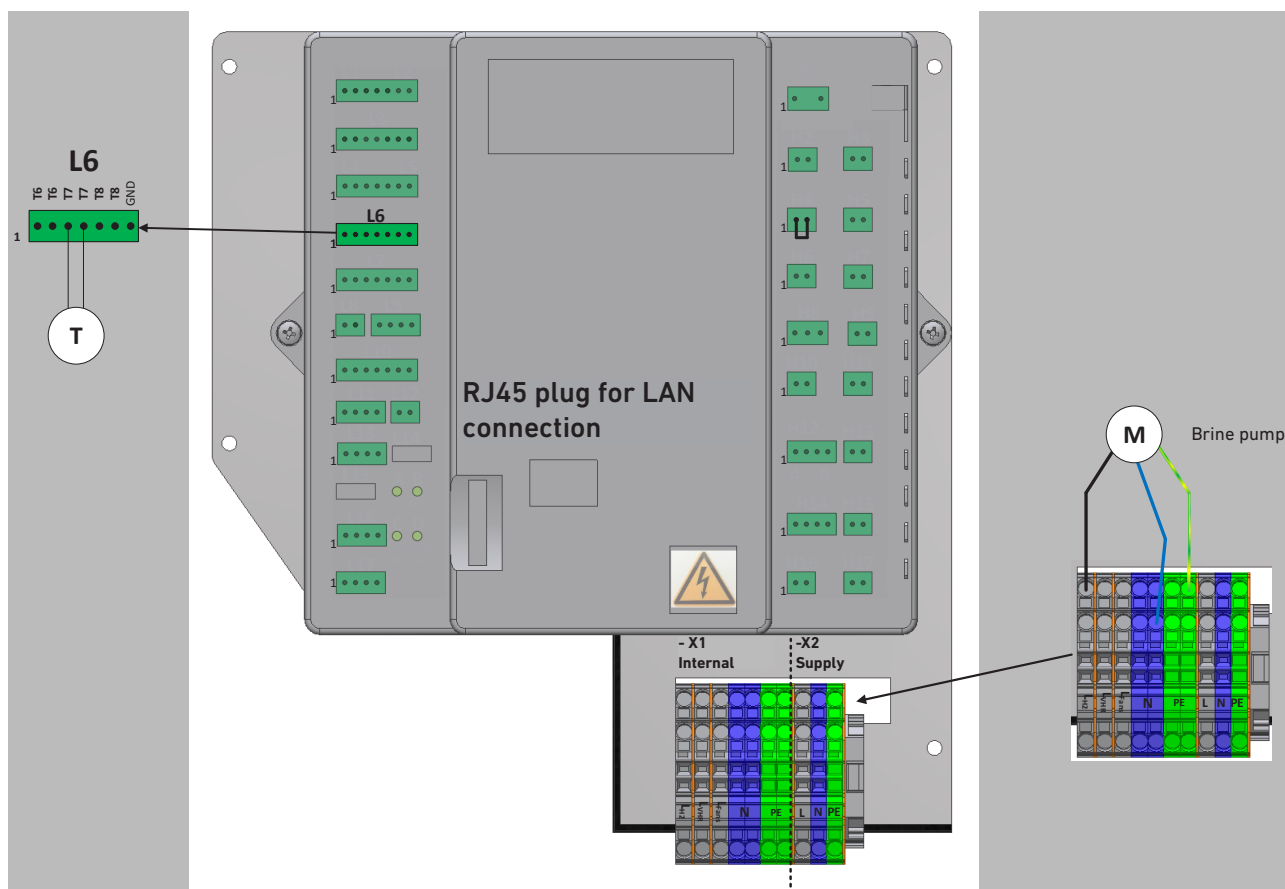


Illustration: Brine geothermal heat exchanger connections



SYSTEM EXTENSION FOR EXTERNAL SUPPLY AIR CONDITIONING

In order to raise or lower the supply air temperature for the living room, the system can control an external heating, cooling or combination exchanger.

Configuration takes place via the PC software. The value for the temperature is set and the room temperature is recorded using the TOUCH control unit. (See section 9, "Settings" and section 23, "Spare parts and accessories".)

External electric re-heating coil

The supply air temperature (T6) can be increased via an external, stepless electric heating coil, which is installed downstream of the ventilation unit in the supply air line.

An additional temperature sensor is required downstream of the coil to control the electrical re-heating coil. If no temperature sensor is connected, an error message is output.

If the electrical re-heating coil is active, the fan continues running for 120 seconds when the device is switched off.



The additional heating operating mode is only active in winter mode.



A separate power supply must be provided for the operation of the external electronic re-heating coil.

The heating coil is controlled via an external 230 V contactor and a 0-10 V signal.

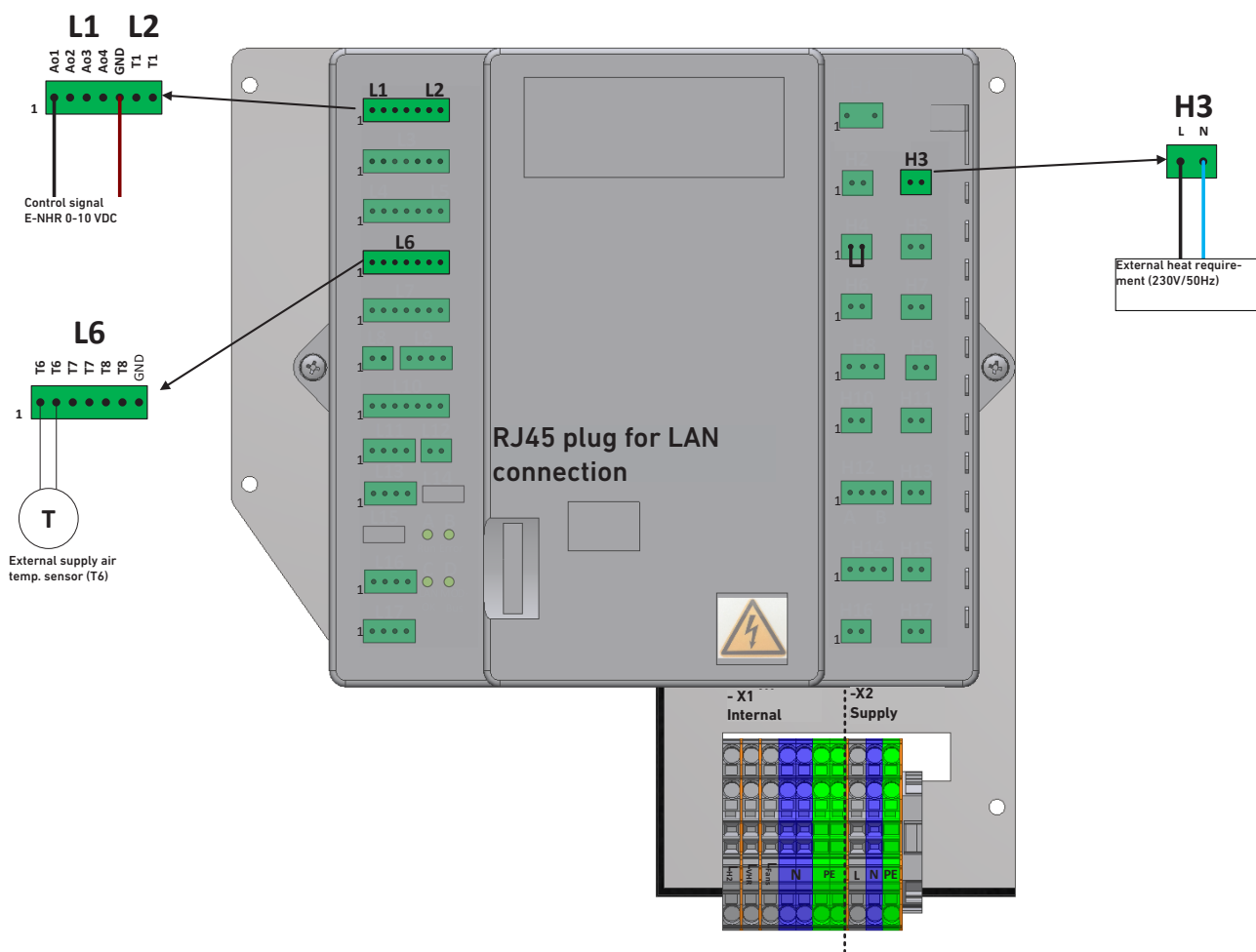


Illustration: External electronic re-heating coil connections



External hot water re-heating coil

The supply air temperature can be increased via an external hot water re-heating coil, which is installed downstream of the ventilation unit in the supply air line.

The mixer drive of the 3-way water valve is continuously regulated via a 0-10 V signal. The external supply air temperature sensor must be installed after the hot water heating coil and connected to the controller (T6). If no temperature sensor is connected, an error message is output.

Frost protection

If the hot water re-heating coil is configured in the control system, the input (Di3) can be used as a contact. This contact is used for frost protection of the re-heating coil.

If the contact is opened via an external frost protection thermostat, the ventilation unit switches to frost protection and reports an error. The frost protection thermostat must be positioned on the return line of the hot water re-heating coil.

In this error state, the mixer opens and the circulation pump activates. The fans are switched off until the frost danger message disappears again.

In addition, the same frost protection strategy is used if the temperature at the integrated supply air sensor is below 5 °C.



The additional heating operating mode is only active in winter mode.

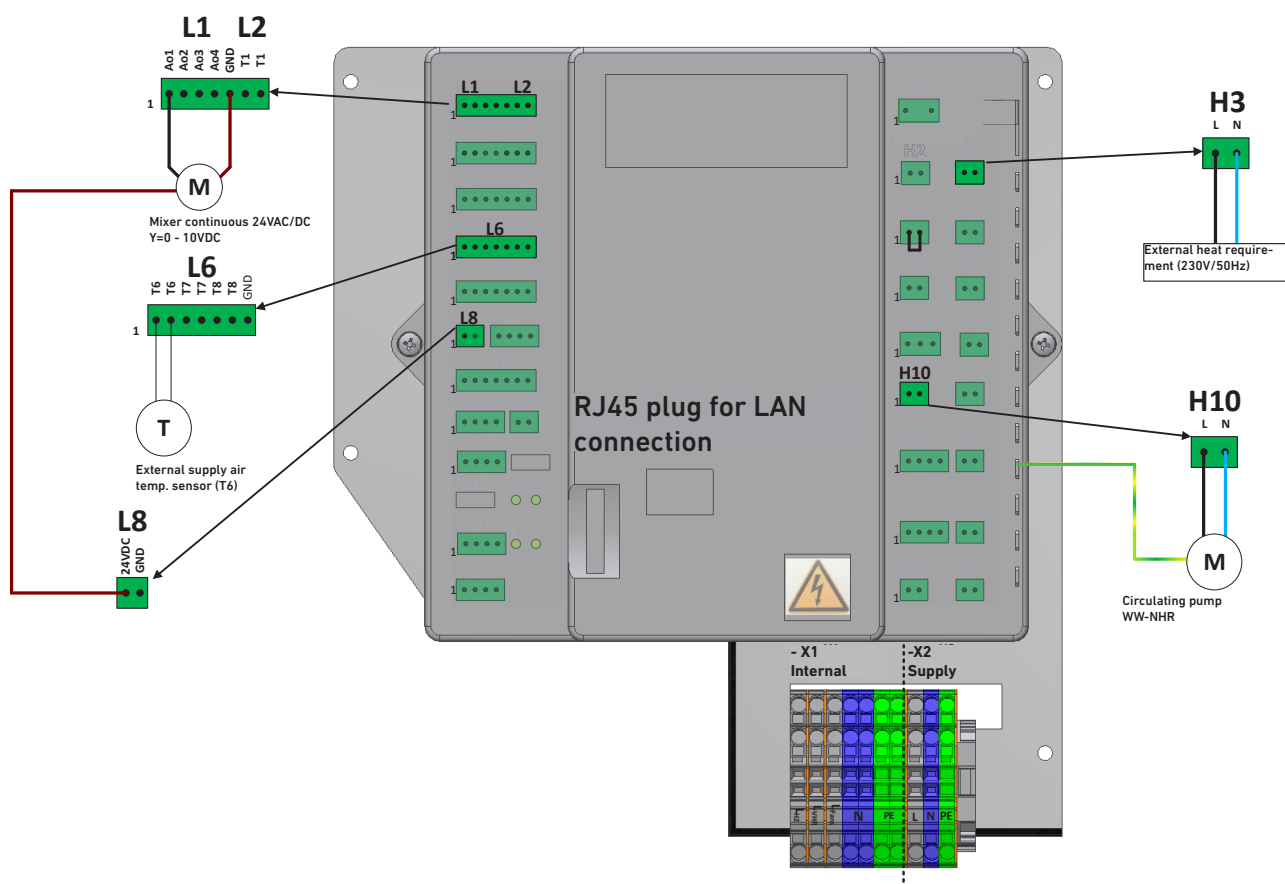


Illustration: External hot water re-heating coil connections



External cold water cooling coil

The supply air temperature can be decreased via an external cold water cooling coil, which is installed downstream of the ventilation unit in the supply air line.

The mixer drive of the 3-way water valve is continuously regulated via a 0-10 V signal. The external supply air temperature sensor must be installed after the cold water coil and connected to the controller (T6). If no temperature sensor is connected, an error message is output.



The cooling mode is only active in summer mode and is activated as soon as the temperature is 2 Kelvin above the set value for normal mode.



In cooling operation, a large amount of condensate can accumulate, which must be drained off via a condensate drain to be installed on site.

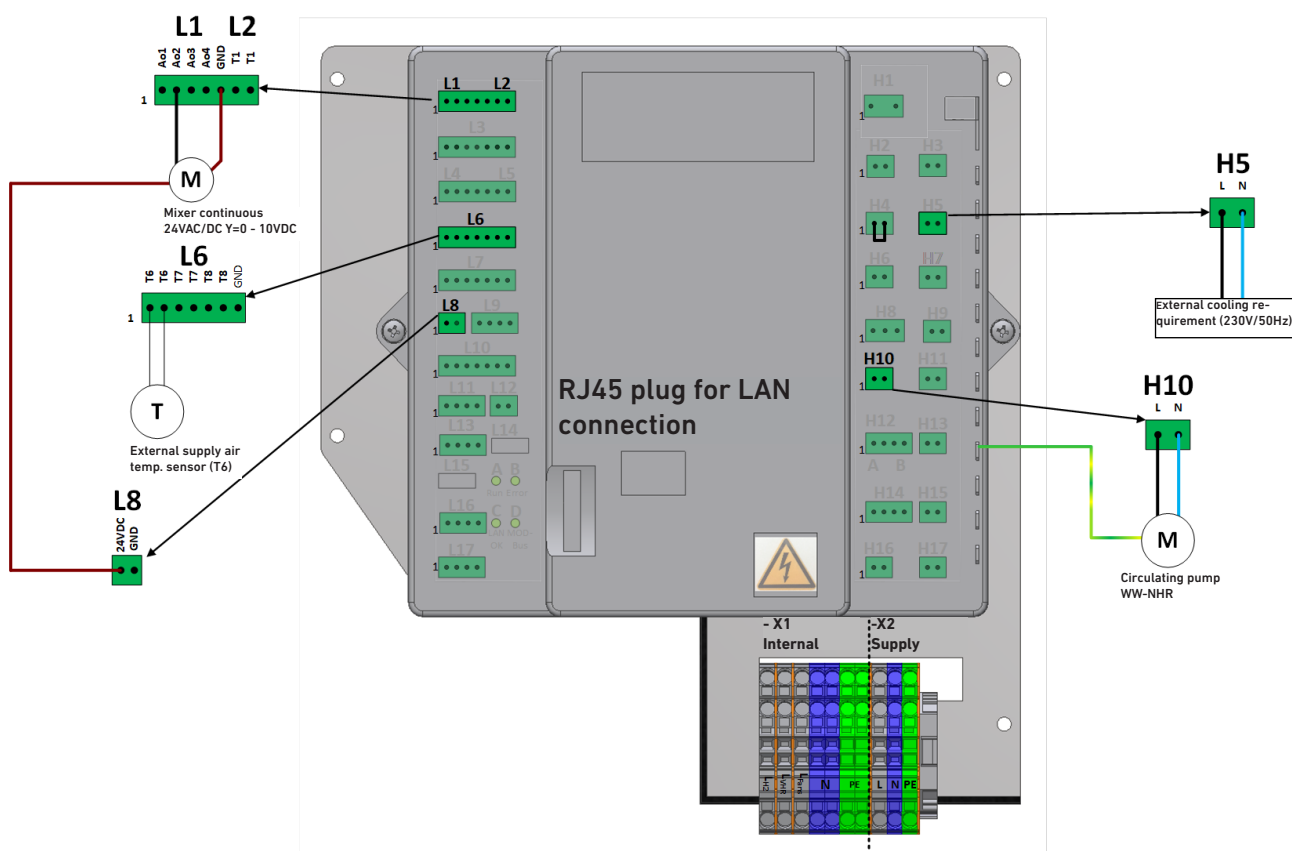


Illustration: External cold water cooling coil connections



External combination exchanger (hot or cold water)

The external combination exchanger combines the functions of a hot water re-heating coil and a cold water cooling coil in one component. The 230 V switch-

ing outputs H3 and H4 can be used for external hot or cold water requirements.

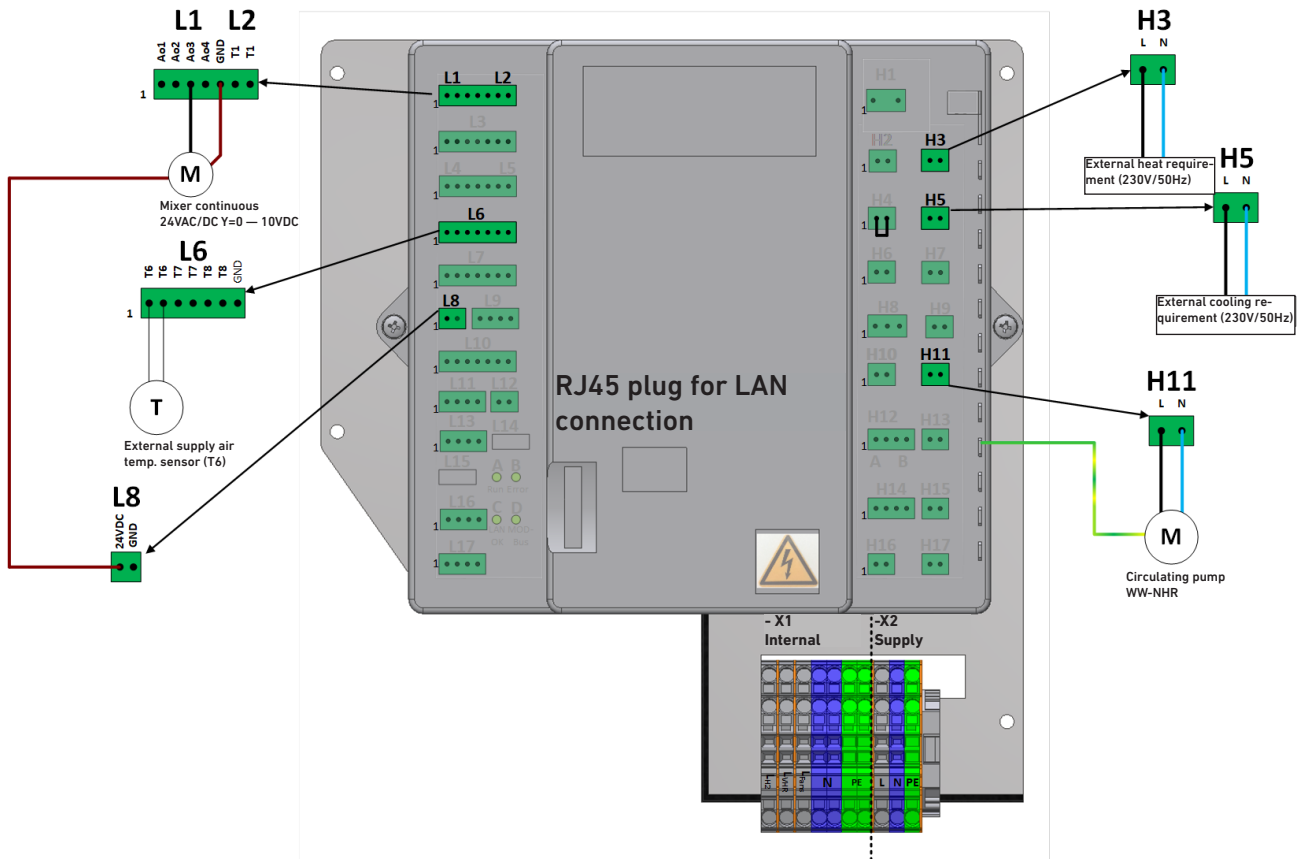


Illustration: External combination exchanger (hot or cold water) connections

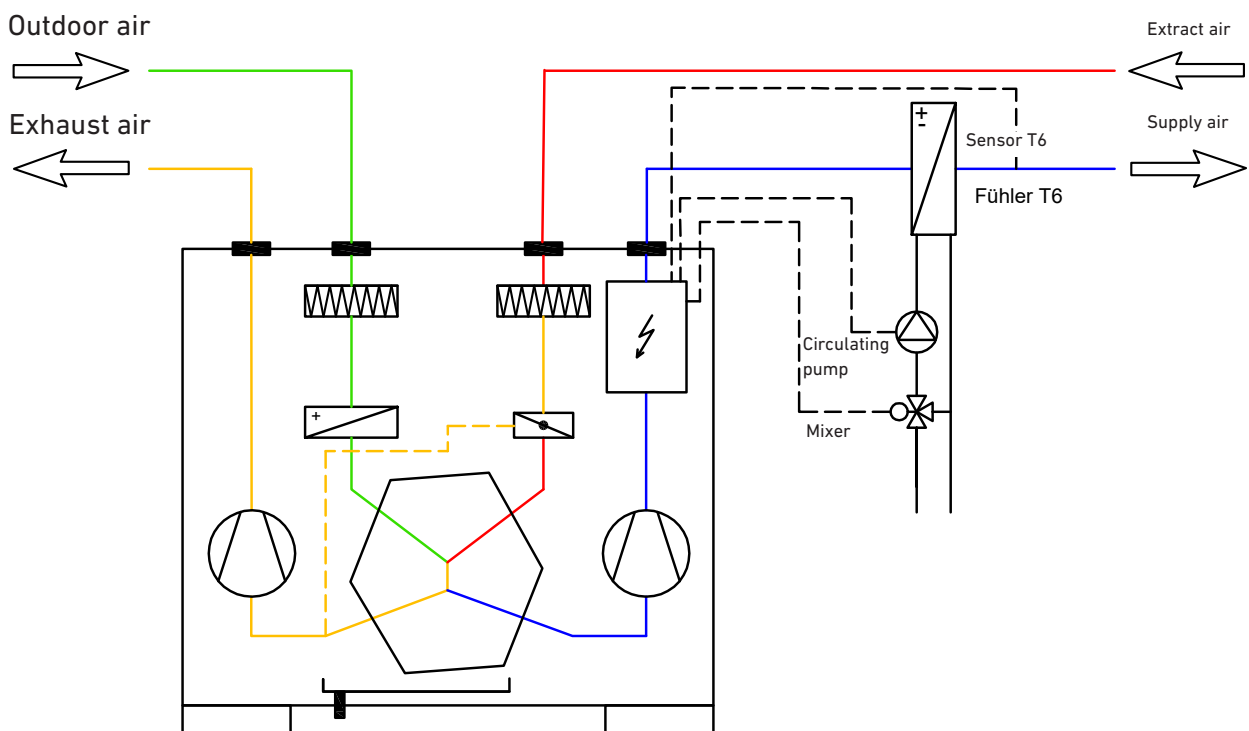


Illustration: Schematic representation of a ventilation unit (right-hand version) with optional hot water re-heating, cold water cooling or combination exchanger

GENERAL

USER

SPECIALIST PERSONNEL



16. TOUCH control unit service level

The Service menu is activated by pressing the [Menu] button for an extended period (min. 5 seconds) and entering the password.



The Service menu is indicated with an "S" in the top left edge of the screen. The technician can change the unit's parameters after activating the Service menu.



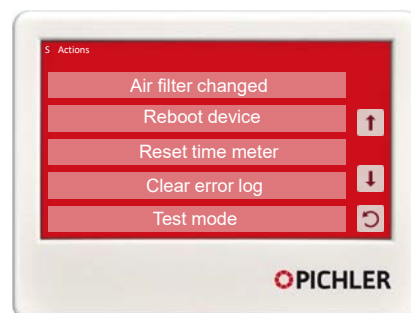
Information / Current operating values

All of the unit's parameters can be checked in the Main menu > [Information] > [Current operating values].

Actions

Pressing [Menu] > [Actions] expands the menu with the following menu items.

- Reset operating time meter
- Delete message overview
- Test mode: test the unit's basic functions

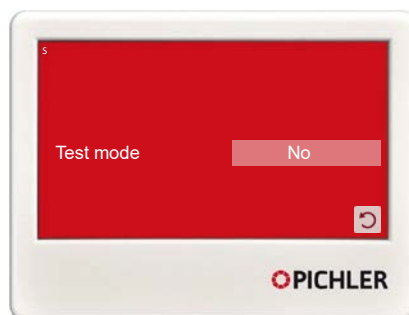


- Update the system's firmware



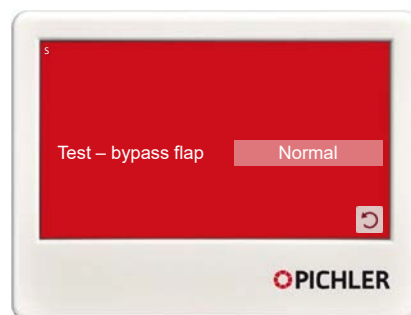
TOUCH CONTROL UNIT TEST MODE

Activate test mode



Activate the test mode here with [Yes] and deactivate with [No]. The individual outputs can be controlled with the relays H2, H3, H5, H67, H9, H10, H11, H12A and H12B

Test – bypass flap

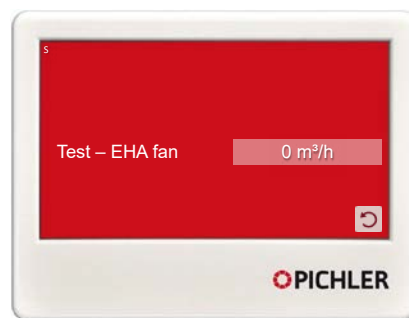


The bypass flap can be manually moved to the heat recovery or bypass position using the Test – bypass flap function. Press [Normal] to return to automatic mode.



Test – SUP fan

To test the supply air fan manually, the test mode must first be activated with [Yes]. The volume flow can then be specified manually under Test – SUP fan. To end the test mode, the test mode must be deactivated with [No].

Test – EHA fan

To test the exhaust air fan manually, the test mode must first be activated with [Yes]. The volume flow can then be specified manually under Test – EHA fan. To end the test mode, the test mode must be deactivated with [No].

GENERAL

USER

SPECIALIST PERSONNEL



17. Mounting

PREREQUISITES FOR UNIT INSTALLATION

The LG 740 compact ventilation unit must be installed in accordance with the general and locally applicable safety and installation regulations and to the specifications in this manual. Mounting and installation work may be performed by authorised specialist personnel only.

The ventilation unit may only be installed in a frost-free room, e.g. in a cellar or loft, with ambient temperatures ranging between +5 °C and +35 °C. Accumulating condensate must be discharged, frost-free and safely, via a gradient and using effective siphoning to block odours. The unit's installation position must allow sufficient space for air ducts, electrical connections, condensate drain connection and maintenance and inspection.

Leave at least 1 m free space in front of the unit to allow for operation and servicing.

The ventilation unit must be set up on an even and sufficiently firm installation surface. A sufficiently suitable dimensioning (statics) of the load-bearing components must be ensured.

The following connection facilities must be available in the installation area:

- Air duct connections for supply, extract, outdoor and exhaust air
- Electrical mains connection 230 V/50 Hz, 16 A fuse
- Condensate drainage line with effective siphoning to block odours (siphon)

All on-site work (drainage, floor structure etc.) must be completed before installing the ventilation unit. The ventilation unit will be firmly in position once the air ducts have been connected and cannot be moved.

The outdoor air and exhaust air ducts, e.g. between the ventilation unit and the roof feed-through, must be sufficiently insu-

lated for energy reasons and to prevent condensate formation. Condensate must not be allowed to form on the air ducts and roofing. Any lines running outside the thermally insulated building shell must be adequately insulated in cold areas.

To ensure proper and functional operation of the unit, suitable thermal and sound insulation and installation materials must be provided as per the planning documentation and technical data, such as sound absorbers of adequate size, supply air and extract air valves, overflow openings etc. All equipment connectors should in principle be fitted with sound absorbers to ensure appropriate acoustic damping.

Air duct lines through walls or ceilings must be isolated against structural vibrations.

To protect the unit from coarse soiling such as foliage, leaves or insects, a fine wire mesh grating must be provided as a pre-filter directly at the central inlet point for outdoor air. The protective grating must be checked and cleaned at regular intervals, if necessary, especially in spring and autumn.

Inspection openings should be provided in the air duct system to facilitate cleaning and maintenance of the unit.



OPENING THE UNIT

To open the device, proceed as follows:

1. Remove the filter cover by pressing the two latches towards the inside.
2. Lift the front of the device until the upper suspension tabs are completely out of the device cover and then pull the front of the device forwards.
3. Carefully set the front of the device aside and make sure it is secure.



Before opening the unit and when carrying out work on the unit, e.g. maintenance work and repairs, the unit must be isolated from the mains (all poles disconnected) and secured against being switched back on for the duration of the work.

4. Use a Phillips screwdriver to loosen the screwed connections on the sealing front and remove it.

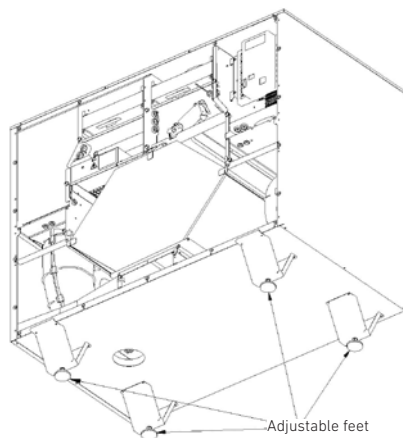
5. To close the device, proceed in reverse order and ensure that the sealing front is tightly seated.

UNIT ASSEMBLY



The safety instructions in “*Safety*” in *section 5* of this manual must be heeded at all times when performing any work.

Free standing



After placing the unit in its position, it must be aligned.

To do this, the four height-adjustable feet included in the scope of delivery must first be installed on the underside of the device.

To install the adjustable feet, the device must be tilted slightly.

To begin with, screw in the adjustable feet completely. Ensure the horizontal alignment of the device by gradually unscrewing the adjustable feet. Use a spirit level for this.



The ventilation unit must be installed horizontal and secure. Optimum drainage of the condensate is only guaranteed if the alignment is exact. The alignment of the device is easily possible via the adjustable feet.

The device is designed in such a way that a standard ball siphon can be connected to the condensate drain.



CONDENSATE CONNECTION

To prepare the condensate drain, the front of the device must first be opened (*see section 17, "Opening the unit"*).

The drain line for the condensate should use rigid piping and a sufficient gradient must be created for safe drainage of the water. Otherwise, the resulting condensate cannot drain properly from the device, which can possibly lead to water damage.

For a proper connection, we recommend the condensate siphon type HL136.3 as device siphon.

The siphons must be filled with water at all times to prevent the spread of odours and leakage.



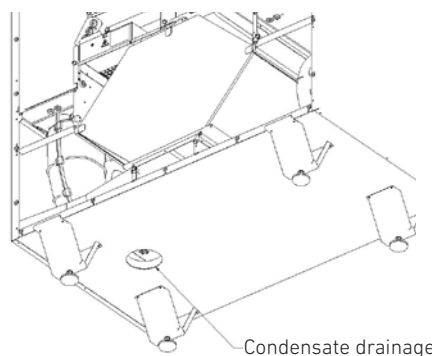
Perfect functioning of the condensate drainage must be checked and ensured before putting the compact ventilation unit into operation. To do this, fill the condensate tray with enough water and check its drainage and the tightness of all connections.



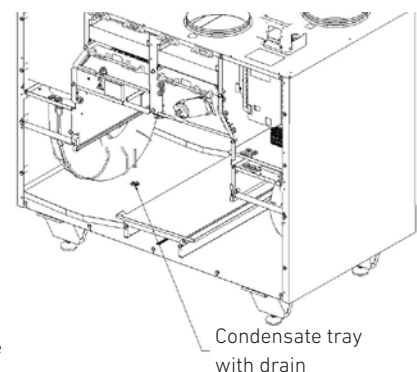
In order to ensure an airtight and condensate-tight seal, when closing the sealing front, ensure that there is sufficient and secure sealing to the device housing.



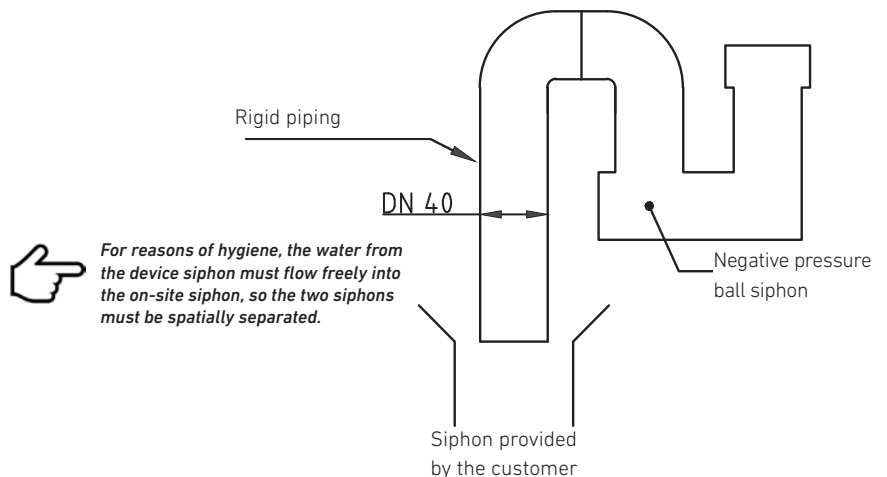
When using an enthalpy exchanger, the use of a dry siphon is recommended due to the small amount of condensate.



Condensate drainage



Condensate tray with drain



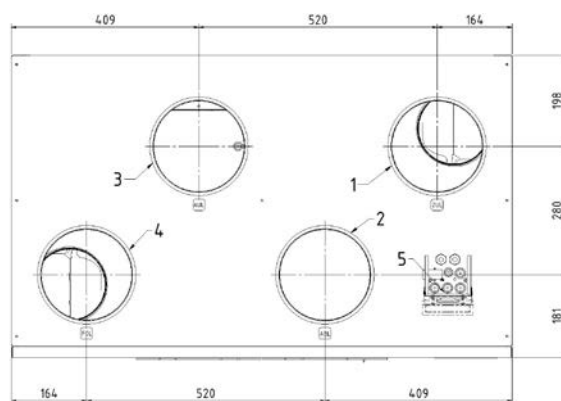
CONNECTING AIR DUCTS AND COMPONENTS

The air lines are to be connected to the overhead connection piece (Ø 200 mm, nipple with double lip seal, SAFE system). Sufficient air tightness is to be ensured.

Air pipes and attachments such as sound absorbers etc. may only be attached to the ventilation unit using adequately dimensioned elements for mounting to suitable solid wall or ceiling structural components. Avoid using flexible hoses for connections to the unit.



When making connections, ensure in particular that no tools or assembly material will fall into the connections to the unit or onto the unit itself. This could damage components, e.g. fans. Air duct and installation components must be suitably and adequately insulated in accordance with project specifications.



1. Supply air connection ø 200 mm
2. Extract air connection ø 200 mm
3. Outdoor air connection ø 200 mm
4. Exhaust air connection ø 200 mm
5. Cable inlets

Illustration: LG 740

AIR TYPES LEGEND

The corresponding air type for each connection piece on the ventilation unit is marked by means of a symbol.



Extract air



Outdoor air



Exhaust air



Supply air



18. Electrical connection



The performance of all electrical work requires compliance with the safety instructions provided in *section 5, "Electrical connections"*.



Electrical connections and work on electrical components may only be carried out by authorised electricians.

The relevant national and local regulations and standards must be complied with during assembly and electrical installation.

The LG 740 compact ventilation unit is designed for a voltage supply of 230 V / 50 Hz.

- The electrical connection must be in accordance with the relevant connection diagram (*see "Electrical connection diagram" in this section*).
- The cable cross-sections indicated are minimum cross-sections for copper lines and do not take cable length or site conditions into account.
- Cable type, cable cross-sections and

laying must be determined by an authorised electrician.

- Low-voltage cables must be laid separately from mains cables; alternatively, screened cables must be used.
- The pre-fuse of the supply line must have isolating characteristics.
- A separate cable inlet must be used for each cable.
- Unused cable inlets must be hermetically sealed.
- All cable entries must be strain-relieved.
- Potential equalisation must be put in place between the unit and the air duct system.
- All safety measures must be tested following electrical connection (earth resistance, etc.).
- In order to prevent the activation of unsuitable residual current-operated protective devices, we expressly recommend the use of earth leaking circuit breakers that are sensitive to pulsating current or AC/DC sensitive (type A or B) with delayed tripping.

OPENING THE UNIT

See *"Opening the unit" in section 17*.

CONTROL BOARD

The control board is located in the upper right half of the device.



Before working on the control board, the unit must be isolated from the mains (all poles) and

protected from being switched back on. The terminals for the control lines and the electrical input fuse are accessible after opening the device.



MAINS CONNECTION AND REPLACEMENT OF THE INTERNAL DEVICE FUSE

The ventilation unit is supplied ready for use. The power cord is around 3 m long and equipped with a safety plug. The mains connection is to be established professionally on site using a suitable protective contact socket.



The shockproof connector system on the mains supply line guarantees the disconnection of all poles of the unit from the power supply.



The ventilation unit may be operated with the rated voltage indicated on the nameplate only, 230 V / 50 Hz. The back-up fuse for the supply line should be max. 16 A and have isolating properties.

The supply pipe must be dimensioned by an authorised electrician in full compliance with the relevant guidelines.

In order to prevent the activation of unsuitable residual current-operated protective devices, we expressly recommend

the use of earth leaking circuit breakers that are sensitive to pulsating current or AC/DC sensitive (type A or B) with delayed tripping.



Before working on the control board, the unit must be isolated from the mains (all poles) and protected from being switched back on. After unscrewing the sealing front, the mains connection and the electrical fuses are accessible.

Internal fuse:

Ceramic fuses on the control board
2 pieces T500mA H Ø 5 x 20 mm
1 piece T5A H Ø 5 x 20 mm

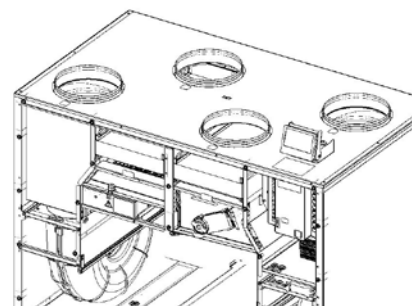
To replace the fuses, all plug connections and the PE wire must first be disconnected from the ground bar. The plastic housing of the controller can then be carefully removed and the fuses checked and replaced if necessary.

CABLE INLETS

Connection cables must be fed through the cable glands on the top of the ventilation unit in order to connect the cables for the relevant control unit as well as optional system components such as external reheating or external sensors.

All lines of external components such as sensors, actuators, pumps, etc. must be connected according to the connection diagram, *see "Electrical connection diagram" in this section.*

Lines must be dimensioned by an electrician. Low-voltage cables must be laid separately from mains cables; alternatively, screened cables must be used.



ELECTRICAL CONNECTION DIAGRAM

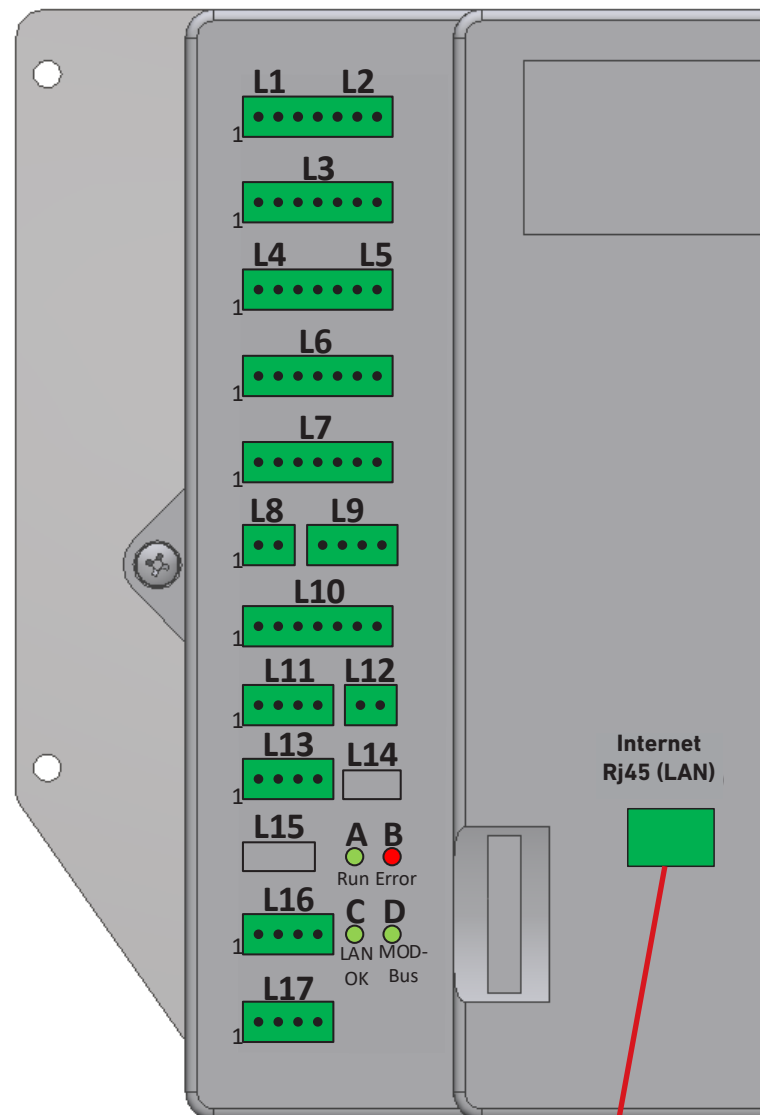


In general, external system components, extension components and temperature sensors required must be connected in accord-

ance with the electrical connection diagram. The control system automatically recognises when the outdoor temperature sensor T7 is connected.



Ao1: Mixer heating Ao2: Mixer cooling Ao3: Mixer combination exchanger GND: T1: Outdoor air temp. sensor	
T3: extract air temp. sensor	
Di1: External off / fire alarm system Di2: External fan level 3 Di3: frost protection thermostat GND: Ai1: Sensor 1 (CO2 or RH) T5: Pre-heating coil T sensor	
T6: External supply air T sensor T7: External outdoor air T sensor Q8: External room T sensor	
Ai2: Sensor 2 (CO2 or RH) GND:	
L8: 24VDC, GND L9: Not in use	
L10: Not in use	
L11: External Modbus for central building control system L12-NPN2: Pre-heating coil control	
L13: Modbus connection Control units L14: Micro USB for service	
L15: Not in use	
L16: Modbus connection Fans	
L17: Modbus connection external sensors (CO2 / RH) (max. 2 sensors)	



[www.pichlerluft.at/
datenschutz.html](http://www.pichlerluft.at/datenschutz.html)

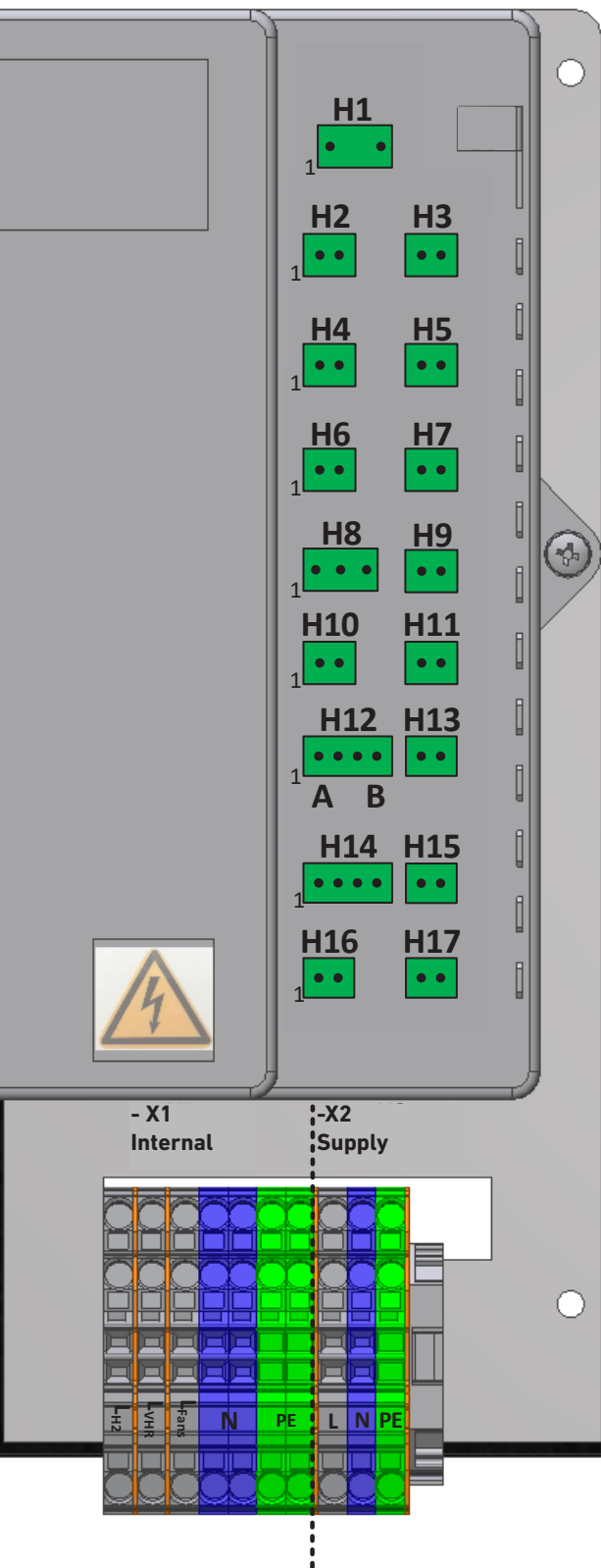
[www.pichlerluft.at/data-
privacy-statement.html](http://www.pichlerluft.at/data-privacy-statement.html)



A sticker is attached to the device cover. As soon as a wired internet connection is established, we assume that you agree to the current data protection declaration. (See: <https://www.pichlerluft.at/datenschutz.html>)

Sensor configuration == 0 (CO2 + RH):
Ai1 = CO2; Ai2 = RH





230V / 50 Hz

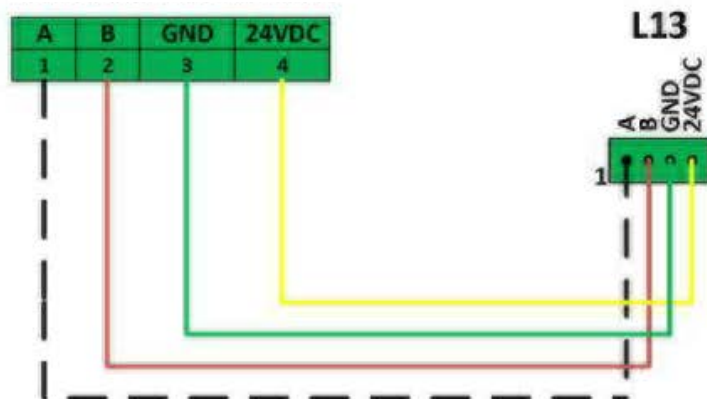
	H1 H1: Supply Max. on-site back-up fuse = 16 A
	H2 H2: pre-heating coil / brine pump / GHE flap
	H3 H3: Heating requirement
	H4 H4: Bridged contact
	H5 H5: Cooling requirement
	H6 H6: Not in use
	H7 H7: Fans
	H8 H8: Bypass flap
	H9 H9: ODA and EHA flap
	H10 H10: Re-heating coil pump
	H11 H11: Combination exchanger or cooling coil
	H12 H12A: Error message (potential-free) H12B: Filter message (potential-free)
	H13 H13: Not in use
	H14 Not in use
	H15 Not in use
	H16 Not in use
	H17 Not in use

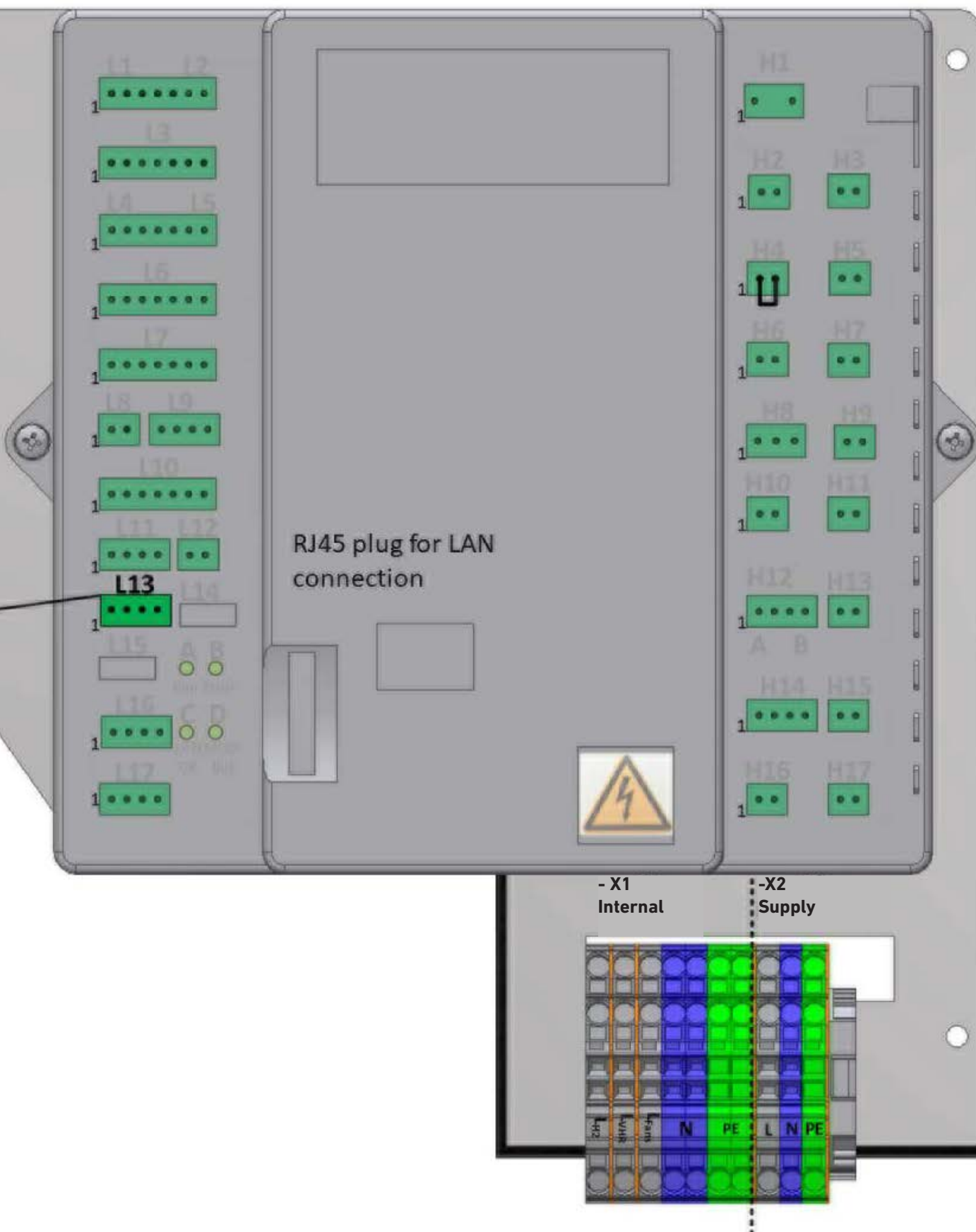
GENERAL

USER

SPECIALIST PERSONNEL



**ELECTRICAL CONNECTION DIAGRAM
MINI OR TOUCH CONTROL UNITS****Control unit rear panel**



GENERAL

USER

SPECIALIST PERSONNEL



ELECTRICAL CONNECTION DIAGRAM FOR EXTERNAL INPUTS

Digital input 1 (Di1)

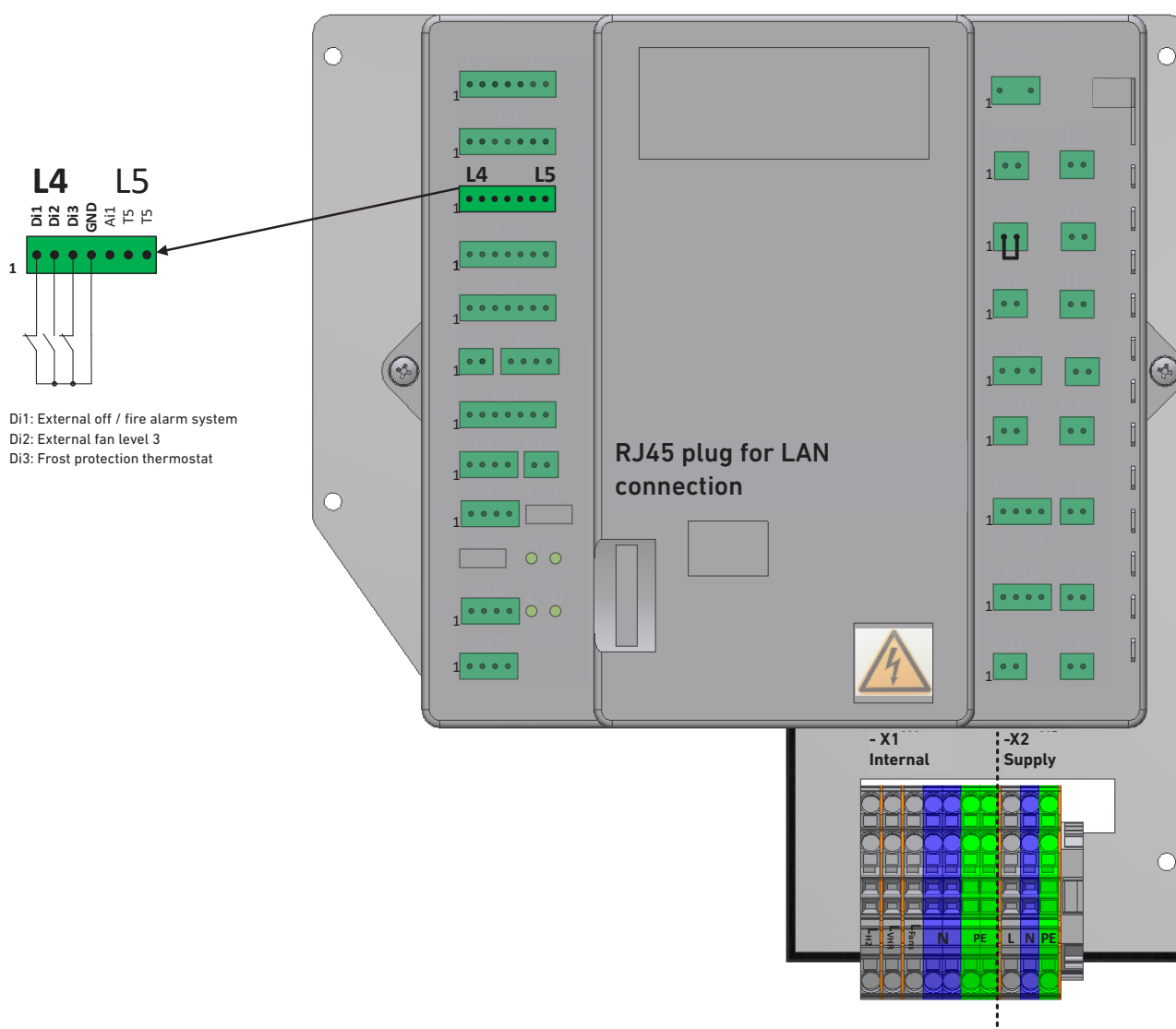
Used for external shutdown (external off), e.g. by a fire alarm control panel (fire alarm system). The contact is designed as a normally opened (NC) contact and is bridged when delivered.

Digital input 2 (Di2)

Serves for the external requirement of boost ventilation. If this contact (normally closer, NO) is closed, the ventilation unit switches to fan speed 3. A run-on time of 30 minutes is set as standard for the boost ventilation function.

Digital input 3 (Di3)

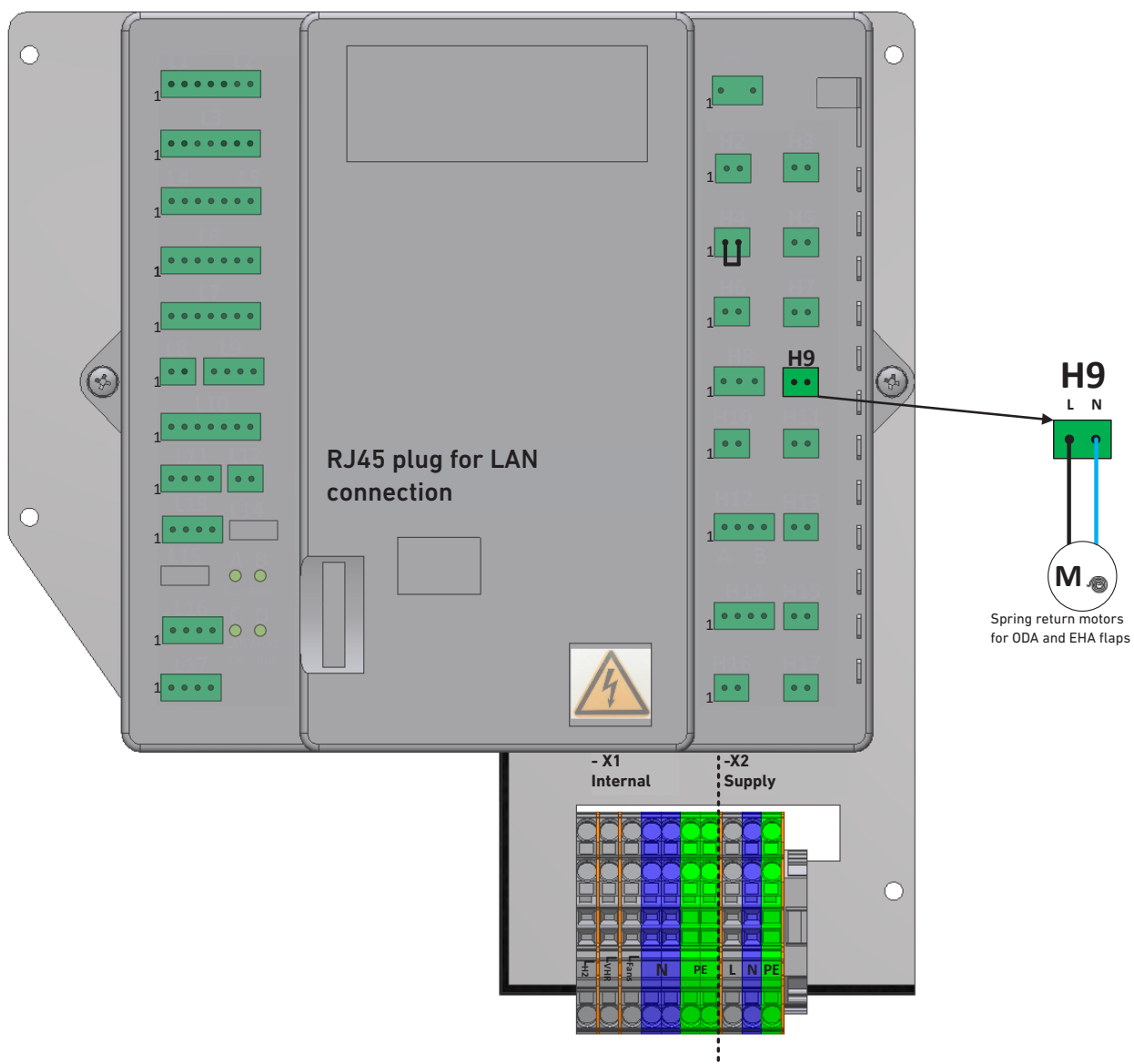
Used to connect an external frost protection thermostat. If the contact (opener NC) is opened, the ventilation unit switches off with an error message. The error message "Frost protection (Di3)" is displayed on the touch display. This contact must be activated via the service software and is only checked if a re-heater battery is configured.



ELECTRICAL CONNECTION DIAGRAM SHUT-OFF VALVES

When switched off, the outdoor and exhaust air lines of the ventilation unit are closed by two motorised shut-off flaps. The spring-return actuators ensure closing

even in the event of a power failure. This avoids the inflow of cold air.



GENERAL

USER

SPECIALIST PERSONNEL



CONNECTING THE CONTROL UNIT WITH THE CONTROL BOARD

The control system consists of a control board and a control unit. The control board needs to be connected to the control unit using a bus connection. The control board can communicate internal statuses and operating and fault messages to the control unit via this line connection.

A screened cable J-Y(ST)Y2x2x0.8 is required to establish the connection. Cable length must not exceed 100 m. The

screening must be connected to the ventilation unit's PE protective earthing. The connection cable is included with delivery.

The plug is connected to the control board and the MINI or TOUCH control unit with a box header.

MINI CONTROL UNIT INSTALLATION

The MINI control unit does not have an integrated temperature sensor. This must be installed externally if required and connected to the control system.

The MINI control unit is installed by screwing the mounting bracket supplied into an ordinary electrical installation wall socket.

The control unit and cover frame are attached to the mounting bracket after plugging in the connection cable.

The mounting bracket must be installed on a flat surface with countersunk head screws to ensure an optimal fit of all components.

TOUCH CONTROL UNIT INSTALLATION

Illustration: TOUCH control unit wall installation



The temperature sensor is located on the underside of the control unit. To ensure accurate and conclusive temperature measurement, it is important to place the control unit in a vertical position and in a location that:

- is not exposed to direct sunlight.
- is not located directly above or close to a direct source of heat (e.g. room heater).

The TOUCH control unit is installed by screwing the mounting bracket supplied into an ordinary electrical installation wall socket. The control unit and cover frame are attached to the mounting bracket after plugging in the connection cable.

Swivel console: The TOUCH control unit can be attached directly to the ventilation unit on a swivel console.



Figure: with swivel console (optional)

CIRCULATING PUMPS

Pumps connected to the control system must be intrinsically safe and stallproof. Electrical connection with $U = 230 \text{ VAC}$ and $I_{\text{max}} = 2 \text{ A}$.



19. Maintenance and cleaning

SAFETY INSTRUCTIONS



For all cleaning or servicing work on the ventilation unit, always pull the mains plug or fully disconnect the unit from the mains (all poles)!

Other unit parts and components, e.g. geothermal heat exchanger, pre- and re-heater coil, sound absorbers, etc. must be serviced and cleaned in accordance with the regulations and instructions. Be acutely aware of hazards and safety when opening or unscrewing the front hood or covers. If possible, use a vacuum cleaner to remove dirt and dust. Applying force or using compressed air for cleaning may damage components and surfaces.

Never use aggressive or solvent-containing cleaning agents.

The electrical components must not be exposed to moisture or wet conditions.

The **"safety information" in section 5** and in particular the item on electrical connections must be observed when performing any electrical work.

MAINTENANCE INSTRUCTIONS



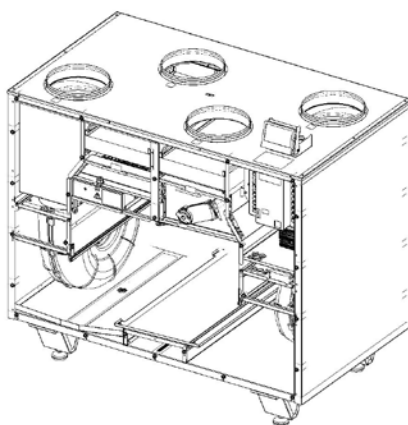
Only specialists are allowed to carry out the work specified below on the ventilation unit. Any defects detected during servicing

must be remedied immediately to ensure safe operation of the unit. Only original spare parts may be used for repairs and replacements.

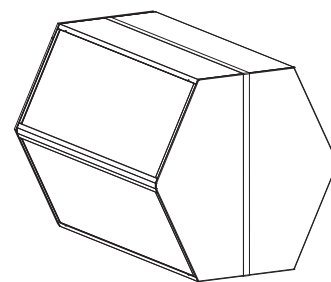
HEAT EXCHANGER

Annual cleaning is recommended at the least, depending on the degree of soiling of the heat exchanger.

When maintenance work is performed, the heat exchanger must be carefully removed from the unit.



Clean by rinsing with warm water (maximum temperature 50 °C). By no means blow through the enthalpy exchanger using compressed air. This might damage the device!



FANS

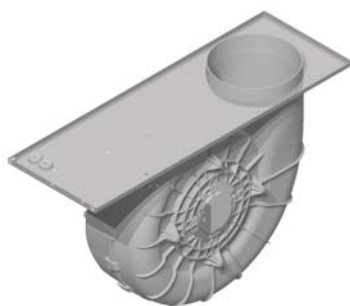
Only the fan manufacturer has the right to open the motor housing and do work on the motor's electrical components. If the fan is defective in any way, it must be replaced with a new, original fan.

Cleaning may be required depending on the level of soiling.

Maintenance and cleaning work on the fan is restricted to the fan housing.

The fan unit must be carefully pulled out of the housing. Pay attention to the electrical connecting cable to the motor. It must not be damaged.

Avoid causing damage to the fan blades. Do not remove or damage wheel balance weights as this may cause an imbalance of the rotor which, in turn, may increase noise and vibration levels.

**ELECTRIC PRE-HEATING COIL (OPTIONAL)**

Annual cleaning is recommended at the least, depending on the degree of soiling of the pre-heating coil.



Before commencing any work on the electrical heater batteries, the ventilation unit must be disconnected completely from the power supply (all poles) and secured against being switched back on.

For cleaning purposes, the pre-heating unit must be carefully pulled out of the ventilation unit. Pay attention to the electrical connection. It must not be damaged. Use compressed air, a vacuum cleaner or a soft brush to remove dust.

When cleaning external electrical pre-heating coils, it is essential that the pre-filter is also checked (if present) and that it is replaced if soiled.

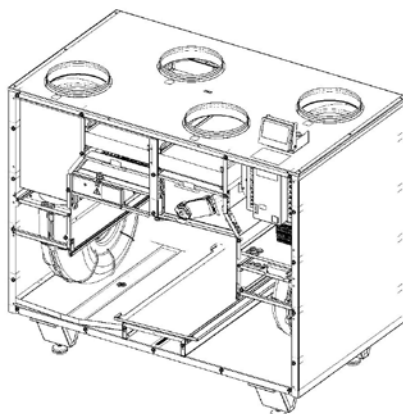


After completing the cleaning work, it must be ensured that the safety temperature limiter has not triggered.



CLEANING THE EQUIPMENT HOUSING INSIDE

We recommend cleaning at least once a year, depending on the level of soiling.



Handle the device surface with care when cleaning it. Using excessive force during cleaning, e.g. wiping or scrubbing, can cause damage to insulating surfaces. Preferably use a damp cloth or a vacuum cleaner to remove dust.

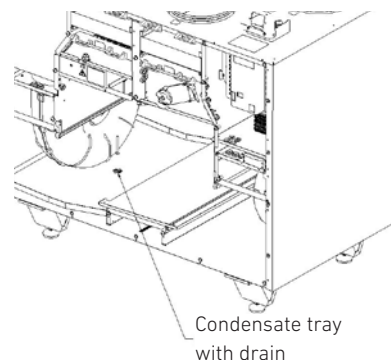
Electrical components may not be exposed to moisture or wet conditions. Be particularly careful not to damage the temperature sensors and the electrical wiring.

CONDENSATE DRAINAGE

Depending on the level of soiling and on temperatures, cleaning the condensate drain, drainage pipe and siphon at least once a year is recommended.

The condensate drainage pipes and systems must operate perfectly to ensure proper operation of the plant. Remove any deposits or blockages in the discharge pipe and siphon. Clean the condensate cup with a damp cleaning cloth. It is essential that a functional test of the condensate drainage system is conducted after completion of cleaning.

Fill the condensate tray with sufficient water to do this. Make sure that the water in the tray flows safely into the drain via the condensate drainage pipe. Ensure that the system is watertight.



Fill the odour trap (siphon) with water before switching the unit back on to prevent unpleasant smells and leaks.



GENERAL

USER

SPECIALIST PERSONNEL

SERVICE TABLE

In order to document maintenance works,
this table must be completed after performance of works on the unit:

System commissioned by:			Date
No.	Maintenance work (e.g. filter change)	Performed by (signature)	Date
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

GENERAL

USER

SPECIALIST PERSONNEL



SPECIALIST PERSONNEL - COMMISSIONING - SERVICE

20. Commissioning



The ventilation system must be complete, connected and ready for operation before it is put into operation for the first time. The unit can be put into operation and system settings can be configured only when all work on the system is complete.

The factory settings on the control unit may only be changed by a specialised company. Incorrect settings may cause the unit to malfunction.

- Are all air ducts and components fully installed and airtight?

Ventilation level	Operating mode	Designation	Volume flow LG 740	Recommendation for air exchange
Standby / basic ventilation		Depending on the configuration of the ventilation unit, the device is in standby or basic ventilation mode with minimum aeration of the building.	150 m ³ /h	-
1	Reduced ventilation	Reduced ventilation with minimum aeration of the building	200 m ³ /h	approx. 0.3 1/h
2	Standard ventilation	Ventilation level active if no other ventilation level is selected manually or automatically	400 m ³ /h	approx. 0.5 1/h
3	Boost ventilation	Operation with increased volume flow, boost ventilation for short, intensive building ventilation	600 m ³ /h	approx. 0.8 1/h

Factory setting ventilation levels

BASIC COMMISSIONING PROCEDURE

- Are all system components fitted and electrically connected?
- Is the electric wiring complete and the control unit fitted?
- Is the control unit provided with a proper electrical connection?
- Is the condensate drainage system complete?
- Are the air vents, inlet and outlet valves properly installed and open?
- Has the device been levelled to ensure safe condensate drainage?
- Are the air filters in the ventilation unit correctly installed and clean?
- Are the air filters in the geothermal heat exchanger correctly installed and clean?
- Are all fire dampers open (if applicable)?
- Is the outdoor air and exhaust air line properly and adequately insulated?
- Has the safety temperature limiter of the pre-heating coil been reset?

SETTING SYSTEM PARAMETERS

- Check system components and correct settings where necessary
- Set system parameters, e.g. adjust volume flow/ventilation level
- Set time
- Set time of day programs as required
- Configure system extensions correctly

21. Installation/operation of service software and firmware updates

The control unit must be connected to a laptop via the micro-USB cable in order to perform troubleshooting.

Further information on installation/operation of service software and firmware

updates is available for certified partners on request.

Service hotline: +43 (0)463 32769-290
Email: service@pichlerluft.at



22. Error description

MINI CONTROL UNIT

Error descriptions are provided for the corresponding light patterns in the following table.

Errors can be located precisely using the service software (available to specialist personnel only).

Pattern	Error
Error LED flashes once	Z05 (supply air fan), Z24, Z25 (supply air pressure), Z32
Error LED flashes 2 times	Z04 (exhaust air fan), Z26, Z27 (extract air pressure)
Error LED flashes 3 times	Z06, Z07, Z08, Z09, Z10, Z11, Z12, Z13 (temperature sensor)
Error LED flashes 4 times	Z01, Z03, Z21 (frost warning), Z28, Z31
Error LED flashes 5 times	Z14 (communication fans), Z22, Z23 (communication external sensors)
Error LED flashes 6 times	Z15 (low supply air temp.), Z17 (low pre-heating coil temp.)
Filter LED lights up	Z16 (Filter time elapsed), Z29 (supply air filter), Z30 (extract air filter)
Error LED flashes on the Mini control unit / touch display shows no values	Z02 (communication control unit)

Error	Description	Auto-reset
Z01	Temperature difference geothermal heat exchanger	
Z02	Control unit	x
Z03	Frost protection re-heating coil (Din3)	x
Z04	Exhaust air fan	
Z05	Supply air fan	
Z06	T1 outdoor air	x
Z07	T2 exhaust air	
Z08	T3 extract air	x
Z09	T4 supply air	
Z10	T5 pre-heater	x
Z11	T6 supply air external	x
Z12	T7 outdoor air external	x
Z13	T8 room external	x
Z14	Communication fans	
Z15	Low supply air temp.	x
Z16	Filter message	
Z17	Low pre-heating coil temp.	
Z21	Re-heating coil frost protection (supply air T4 < 7 °C, supply air T4 < 5 °C switch off of the unit)	x
Z22	Communication CO2 sensor	x
Z23	Communication pressure sensor	x
Z24	Low supply air duct pressure	x
Z25	High supply air duct pressure	x
Z26	Low extract air duct pressure	x
Z27	High extract air duct pressure	x

For resetting errors that are not automatically reset, switch the ventilation

unit to "standby" and switch it on again.

TOUCH CONTROL UNIT

Active errors are indicated as plain text on the TOUCH control unit. In addition, the errors are documented in an error log.

Please see *section 9 "Current errors" and "Error log"*.



GENERAL

USER

SPECIALIST PERSONNEL

23. Spare parts and accessories



Only original spare parts may be installed or used for replacements and repairs. Dependable

operation is ensured only if original spare parts are used.!

CONTROL ELEMENTS

Item	Article number
STANDARD: MINI control unit for LG 740	08LGMINI740
OPTIONAL: TOUCH control unit for LG 740	08LG740T
Swivel bracket for attaching the TOUCH or MINI control unit directly to the ventilation unit	40LG350BG142
External dual pressure sensor set	08LGDRUCKDUALSET
CO ₂ -sensor	07RCO248330
Humidity sensor	07RHF49360
Room temperature sensor	07RTF49357
Room temperature, humidity and CO ₂ sensor with Modbus communication (Modbus cable not included)	07RTRHCO248401
Wireless room temperature and humidity sensor for surface installation	07MIWIRTRH
Wireless room temperature, humidity and CO ₂ sensor for surface installation	07MIWIRTRHCO2
Shielded connecting cable J-Y(ST)Y 2 x 2 x 0.8	40LG040340
Presence detector	07UPPM360

SYSTEM COMPONENTS LG 740

COIL FOR INSTALLATION INTO THE SUPPLY LINE

Recommended below 500 m ³ /h	
Item	Article number
Combination exchanger (cold water coil) for duct installation Ø 200 mm	01CWK200
Hot water heating coil for duct installation Ø 200 mm	01VBC200
Additionally for water coils: DN15 KVS 1.00 three-way valve with LR24ASR actuator	07R30151SLR24ASR
Electric heating coil for duct installation	08CV2012MTXL
Refrigerant coil (heating or cooling) for duct installation ø 200 mm	01CWDX200
Additionally for refrigerant coils: Coupling relay with screw terminals 2W, 8A, 230VAC	40LG0400100A

Recommended over 500 m ³ /h	
Item	Article number
Combination exchanger (cold water coil) for duct installation ø 250 mm	01CWK250
Hot water heating coil for duct installation ø 250 mm	01VBC250
Additionally for water coils: DN15 KVS 1.00 three-way valve with LR24ASR actuator	07R30151SLR24ASR
Electric heating coil for duct installation ø 250 mm	088CV25181MTXL
Refrigerant coil (heating or cooling) for duct installation ø 250 mm	01CWDX250
Additionally for refrigerant coils: Coupling relay with screw terminals 2W, 8A, 230VAC	40LG0400100A



SPARE FILTER

Item	Article number
ETA filter ISO Coarse 70% (extract air)	40LG0500025A
ODA filter ISO ePM1 55% (outdoor air)	40LG0500024A

EXTERNAL CABLE TEMPERATURE SENSOR

Item	Article number
NTC thermistor sensor, length 2 m	40LG041920

CONDENSATE SIPHON

Item	Article number
Condensat siphon HL 136.3 DN 40 x 5/4"	40LG030620

SHUT-OFF VALVE

Item	Article number
Shut-off valve AKR Ø 200 mm with MOTOR LF 230	02AKR200LF230
Shut-off valve AKR Ø 250 mm with MOTOR LF 230	02AKR250LF230

DEFLECTION SILENCER

Item	Article number
Deflection sound absorbers	08USD200G

GATEWAY

Item	Article number
MODBUS/KNX-GATEWAY	08KNXGAB
MODBUS/MiWi-GATEWAY	07GATEWAYMIWI
BACnet-GATEWAY	08BACGAES2020

24. Changes reserved

It is our constant endeavour to technically improve and optimise our products and we reserve the right to change the design

of the units or the technical specifications without prior notice.



25. Hygiene certificate

The design meets hygiene requirements in accordance with the specifications of VDI 3803, SWKI VA104-01 and ÖNORM H 6021 in accordance with the hygiene

assessments carried out. Safety-related inspection with ÖVE (Austrian Federation for Electrical Engineering) safety mark in compliance with the test report.

Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie

Director: Dr. Thomas-Benjamin Seiler

Legal Entity: Verein des Hygiene-Instituts des Ruhrgebiets e.V.

Hygiene-Institut - PO Box 10 12 55 - DE 45812 Gelsenkirchen - Germany



Address:
Rotthausen Str. 21, DE 45879 Gelsenkirchen
Switchboard +49 (0)209 9242-0
Telefax +49 (0)209 9242-222
Internet www.hyg.de

Our reference: W-386099e-24-Zd
Contact person: B. Zeidler

Gelsenkirchen, 08.05.2024

Test - certificate

hygiene-conformity check to the design requirements of selected regulations

Test institute: Hygiene Institut des Ruhrgebiets
Institut für Umwelthygiene und Toxikologie
Rotthausen Straße 21
45879 Gelsenkirchen

Test object: "LG 740"

Manufacturer: J. Pichler Lufttechnik Gesellschaft m.b.H.
Karlweg 5
A-9021 Klagenfurt
Österreich



Basis of the examination: ✓ VDI 6022, sheet 1 (01/2018) ✓ ÖNORM H 6021 (01/2023)
✓ SWKI VA104-01 (01/2019)

Validity period: 5 years 05/2024 – 05/2029

Test report: W-386099-24-Zd

In conclusion it can be stated that the examined "LG 740", as specified in the test report W-386099-24-Zd, is in compliance with the above mentioned regulations.

(B. Zeidler)
clerk of the Department hygienic building technology

(J. Rolle B. Eng.)
clerk of the Department hygienic building technology

issued 08.05.2024, Gelsenkirchen

Within the framework of the conformity check the hygiene-relevant requirements of the above mentioned regulations was examined. Requirements of other regulations that refer to the above mentioned regulations were not part of the examination. Additionally, the conformity check does not include a toxicological or sensory testing of the introduced materials.

Legal Entity: Verein des Hygiene-Instituts des Ruhrgebiets e.V., Register: VR 519 Local Court Gelsenkirchen (Germany); VAT ID: DE125018356
Directorate: Prof. Dr. Jürgen Kretschmann (Head), Andrea Henze, Joachim Lächte, Dr. Frank Obenaus, Dr. Thomas-Benjamin Seiler (Executive Member), Dr. Dirk Waider



26. Product data sheets

PRODUCT DATA SHEET: LG 740 F

	manual control	clock control	central demand control	local demand control	
Specific energy consumption (SEC)					
cold climate	-71,6	-72,8	-75,2	-79,5	[kWh/(m ² ·a)]
average climate	-36,1	-37	-38,7	-41,9	[kWh/(m ² ·a)]
warm climate	-13,1	-13,8	-15,2	-17,7	[kWh/(m ² ·a)]
Specific energy consumption class	A	A	A	A	
Type	"residential ventilation system", "bidirectional ventilation system"				
Motor and drive					
variable speed			x-value	2	[-]
Type of heat recovery system	recuperative (with moisture recovery)				
Thermal efficiency of heat recovery			η_t	80,5%	[-]
Maximum flow rate			q_{Vd}	750	[m ³ /h]
Electric power input of the fan drive, including any motor control equipment, at maximum flow rate			P_E	254,3	[W]
Sound power level			L_{WA}	46	[dB(A)]
Reference flow rate			q_{Vn}	525	[m ³ /h]
Reference pressure difference			p_{tU}	50	[Pa]
Specific power input			SPI	0,2	[W/(m ³ /h)]
Ventilation control (CTRL)					
local demand control	1	0,95	0,85	0,65	[-]
Maximum air leakage rate referred to reference flow rate					
internal			q_{vi} / q_{Vn}	0,8%	[-]
external			q_{ve} / q_{Vn}	1,5%	[-]

Filter change

The filters are to be replaced as soon as:

- the warning light appears on the operator control unit "MINI"
 - the command to replace the filters appears on the display of the operator control unit "TOUCH"
- (marked red in the pictures alongside)



Operator control unit "MINI"



Operator control unit "TOUCH"

CAUTION:

If the filters are not changed regularly, the system can not work efficiently and the power consumption increases.

Waste disposal

Units that are no longer in working order have to be dismantled and properly disposed of by a specialized company via suitable collection centres and in compliance with the waste electrical and electronic equipment ordinance (WEEE), which provides for ratification of community law, directive 202/95/EC (RoHS) and the directive 2002/96/EC (the WEEE directive).

Annual electricity consumption (AEC)	3,0	2,7	2,3	1,5	[kWh electricity/a]
Annual heating saved (AHS)					
cold climate	83,7	84,3	85,5	88,0	[kWh primary energy/a]
average climate	42,8	43,1	43,7	45,0	[kWh primary energy/a]
warm climate	19,4	19,5	19,8	20,3	[kWh primary energy/a]

Information based on the current state of knowledge of EU Regulations 1253/2014 and 1254/2014

Download from: www.pichlerluft.at



PRODUCT DATA SHEET: LG 740

Specific energy consumption (SEC)	manual control	clock control	central demand control	local demand control	
cold climate	-74,7	-75,8	-77,8	-81,5	[kWh/(m ² ·a)]
average climate	-37,7	-38,5	-40,1	-42,9	[kWh/(m ² ·a)]
warm climate	-13,8	-14,5	-15,9	-18,2	[kWh/(m ² ·a)]

Specific energy consumption class	A	A	A	A+ (most efficient)
-----------------------------------	---	---	---	---------------------

Type

"residential ventilation system", "bidirectional ventilation system"

Motor and drive

variable speed	x-value	2 [-]
----------------	---------	-------

Type of heat recovery system

recuperative

Thermal efficiency of heat recovery	η_t	85,5% [-]
-------------------------------------	----------	-----------

Maximum flow rate	q_{Vd}	750 [m ³ /h]
-------------------	----------	-------------------------

Electric power input of the fan drive, including any motor control equipment, at maximum flow rate

P_E	265,5 [W]
-------	-----------

Sound power level	L_{WA}	46 [dB(A)]
-------------------	----------	------------

Reference flow rate	q_{Vn}	525 [m ³ /h]
---------------------	----------	-------------------------

Reference pressure difference	p_{tU}	50 [Pa]
-------------------------------	----------	---------

Specific power input	SPI	0,2 [W/(m ³ /h)]
----------------------	-----	-----------------------------

Ventilation control (CTRL)

local demand control	1	0,95	0,85	0,65	[-]
----------------------	---	------	------	------	-----

Maximum air leakage rate referred to reference flow rate

internal	q_{vi} / q_{Vn}	0,4% [-]
external	q_{ve} / q_{Vn}	0,5% [-]

Filter change

The filters are to be replaced as soon as:

- the warning light appears on the operator control unit "MINI"
 - the command to replace the filters appears on the display of the operator control unit "TOUCH"
- (marked red in the pictures alongside)



Operator control unit "MINI"



Operator control unit "TOUCH"

CAUTION:

If the filters are not changed regularly, the system can not work efficiently and the power consumption increases.

Waste disposal

Units that are no longer in working order have to be dismantled and properly disposed of by a specialized company via suitable collection centres and in compliance with the waste electrical and electronic equipment ordinance (WEEE), which provides for ratification of community law, directive 2002/95/EC (RoHS) and the directive 2002/96/EC (the WEEE directive).

Annual electricity consumption (AEC)	3,0	2,7	2,3	1,5	[kWh electricity/a]
--------------------------------------	-----	-----	-----	-----	---------------------

Annual heating saved (AHS)

cold climate	86,8	87,3	88,2	90,0	[kWh primary energy/a]
average climate	44,4	44,6	45,1	46,0	[kWh primary energy/a]
warm climate	20,1	20,2	20,4	20,8	[kWh primary energy/a]

Information based on the current state of knowledge of EU Regulations 1253/2014 and 1254/2014

Download from: www.pichlerluft.at



27. EG-Konformitätserklärung (EC Declaration of Conformity)

Hersteller / Manufacturer: J. Pichler Gesellschaft m.b.H.
Anschrift / Address: Karlweg 5
 9021 Klagenfurt am Wörthersee
Bezeichnung / Product description: Compact ventilation unit with integrated control
Ausführungen / Types: LG 740 / LG 740 F
 with MINI or TOUCH control unit

Die bezeichneten Produkte stimmen in der von uns in Verkehr gebrachten Ausführung mit den Vorschriften folgender europäischen Richtlinien überein:

The products described above in the form as delivered are in conformity with the provisions of the following European Directives:

- | | |
|--------------------|--|
| 2014/35/EU | Zur Harmonisierung der Rechtsvorschriften der Mitgliedsstaaten über die Bereitstellung elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen auf dem Markt
<i>On the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits</i> |
| 2014/30/EG | Zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit
<i>On the harmonisation of the laws of the Member States relating to electromagnetic compatibility</i> |
| 2009/125/EG | Richtlinie des Europäischen Parlaments und des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten zur Schaffung eines Rahmens für die Festlegung von Anforderungen an die umweltgerechte Gestaltung energieverbrauchsrelevanter Produkte
<i>Council Directive on the approximation of the laws of the Member States establishing a framework for the setting of ecodesign requirements for energy-related products</i> |

Die Konformität mit den Richtlinien wird nachgewiesen durch die Einhaltung folgender Normen und Verordnungen:

Conformity to the Directives is assured through the application of the following standards and regulations:

VO 1253/2014/EU Verordnung (EU) der Kommission zur Durchführung der Richtlinie 2009/125/EG des Europäischen Parlaments und des Rates hinsichtlich der Anforderungen an die umweltgerechte Gestaltung von Lüftungsanlagen

Commission Regulation (EU) implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for ventilation units

VO 1254/2014/EU zur Ergänzung der Richtlinie 2010/30/EU des Europäischen Parlaments und des Rates im Hinblick auf die Kennzeichnung von Wohnraumlüftungsgeräten in Bezug auf den Energieverbrauch

Commission Regulation 1254/2014/EU supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of residential ventilation units

ÖVE / ÖNORM EN 60335-1	ÖVE / ÖNORM EN 62233
ÖVE / ÖNORM EN 60335-2-30 (analogously)	ÖVE / ÖNORM EN 55014-1
ÖVE / ÖNORM EN 60335-2-65 (analogously)	ÖVE / ÖNORM EN 55014-2
ÖVE / ÖNORM EN 60335-2-80 (analogously)	ÖVE / ÖNORM EN 61000-3-2
ÖVE / ÖNORM EN 50366	ÖVE / ÖNORM EN 61000-3-3

Eine vom Lieferzustand abweichende Veränderung des Gerätes führt zum Verlust der Konformität.

Product modifications after delivery may result in a loss of conformity.

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien, ist jedoch keine Zusicherung von Eigenschaften. Die Sicherheitsinformationen der mitgelieferten Produktdokumentation sind zu beachten.

This declaration certifies conformity with the specified directives but contains no assurance of properties. The safety documentation accompanying the product shall be considered in detail.

J. Pichler Gesellschaft m.b.H.
 Geschäftsleitung / General Manager

Klagenfurt, 3 October 2022



**ErP 2018**

Fulfils the requirements of the Ecodesign Directive in accordance with EU Regulation 1253/2014.

**EPREL**

Our LG 740 compact ventilation unit is listed in the EPREL - European Product Database for Energy Labelling.



Responsible for the content: J. Pichler Gesellschaft m.b.H.

Photos: Ferdinand Neumüller, Archiv J. Pichler Gesellschaft m.b.H. | Text: J. Pichler Gesellschaft m.b.H.
All rights reserved | All photos are generic photos | Subject to change without notice | Version: 10/2024 eh



Systematic ventilation.

J. PICHLER
Gesellschaft m.b.H.

office@pichlerluft.at
www.pichlerluft.at

AUSTRIA
9021 KLAGENFURT
AM WÖRTHERSEE
Karlweg 5
T +43 (0)463 32769
F +43 (0)463 37548

AUSTRIA
1100 VIENNA
Doerenkampgasse 5
T +43 (0)1 6880988
F +43 (0)1 6880988-13

Sales offices
in Slovenia and Serbia.
Sales partners in Europe.

