SOLID AIR®
INTERNATIONAL

02-2022
6220146-202112

Good climate, better performance!

INSTRUCTIONS FOR CONTRACTORS

TYPE: **CPL-C**
English | Subject to modifications

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TABLE OF CONTENTS

1. ABOUT THIS DOCUMENT

>> Read this document before you begin working on the appliance.
>> Follow the instructions in this document.
Failure to observe these instructions voids any Solid Air Climate Solutions warranty.

1.1 Scope

This document is for the Solid Air CPL-C-WRG ventilation units.

1.2 Target group

This document is intended for air conditioning, ventilation and electricity contractors.

1.3 Other applicable documents

- Wiring diagram for control.
- WRS-K instructions.
- Configuration assistant.
- Notes in the form of labels.
- The documents for all accessory modules and other accessories also apply where relevant.

1.4 Safekeeping of these documents

Documents must be kept in a suitable location and must be available at all times.
The user is responsible for the safekeeping of all documents.
The documents are provided by the contractor.

1.5 Symbols

The following symbols are used in this document:

Symbol	Meaning
>>	An action which must be taken..
1	Indicates a step in images: The numbering indicates the order in which steps are taken.
	A necessary requirement.
✓	The outcome of an action.
	Important information regarding the proper use of the appliance.
	A reference to other relevant documents.

Table 1.1 Meaning of the symbols.

1.6 Warnings

	"Safety information" identifies instructions that must be observed to the letter, to prevent risks and injuries to individuals and damage to the unit.
	Danger through 'live' electrical components. Please note: Turn off the ON/OFF switch before removing the casing. Never touch electrical components or contacts when the ON/OFF switch is in the ON position. There is a danger of electrocution, leading to a health risk or death. The main terminals are 'live', even when the ON/OFF switch is in the OFF position.
Please note	"Please note" designates technical instructions which you must observe to prevent malfunction or damage to the unit.

Table 1.2 Meaning of warnings.

2. SAFETY

2.1 Intended use

Solid Air CPL-C compact ventilation units are designed to heat and filter normal air. Use of these units in rooms with explosive atmospheres is not permissible. Handling very dusty or corrosive media is not permissible. Air intake temperatures from -20 °C to +40 °C

The ventilation units, which are intended for indoor installation, must be placed in rooms that meet the requirements of VDI 2050. (VDI 2050, Requirements for technical equipment rooms - Planning and execution.)

These requirements include:

- For safety reasons, the room temperature in technical equipment rooms must not fall below 5 °C (risk of frost) or exceed 40 °C.
- The unit should be operated in room conditions of between 22 °C and 28 °C at approx. 55 % relative humidity.
- Adequately sized maintenance areas must be provided.

Any on-site modification or improper use of the unit is not permissible and
Solid Air accepts no liability for any damage caused as a result.

2.2 Safety measures

>> According to DIN 1886, tools must be used to open the unit.
>> Wait for the fan to come to a standstill (2 minutes).
>> When the doors are opened, negative pressure may draw in loose objects, which could destroy the fan or even cause a risk to life if items of clothing are drawn in.

2.2.1 Power supply

Implement the electrical connection in accordance with local regulations.

Once electrical connection work is complete, the installation must be subjected to a safety test in accordance with VDE 0701-0702 and VDE 0700 part 500, as otherwise there would be a risk of electric shock that could result in injury or death.

Before working on the unit, shut it down via the isolator (accessories).
According to the Machinery Directive (2006/42/EC), this unit requires an isolator to be installed on site in the power cable.
The isolator must be:

- Lockable.
- Capable of interrupting all poles of the supply voltage.
- Designed as a supply disconnect device to EN 60204-1.

Voltage is still present at terminals and connections of the EC fans even when the unit has been shut down. This means there is a risk of electric shock that could result in injury or death.
Do not touch the EC fans for five minutes after disconnecting the power across all poles.

2.2.2 What to do in the event of a fire

The unit does not present a direct risk of fire. The small numbers of seals fitted inside the unit can burn away if subjected to external influences.

>> If there is a fire, disconnect the unit from the power supply, for example via an on-site smoke detector.
>> Wear respiratory equipment if you fight a fire.
>> The usual extinguishing agents such as water, extinguishing foam or extinguishing powder can be used to extinguish fires.

As there are only a small number of flammable seals, the amount of noxious substances that could be released in a fire is minimal.

2.3 General safety information

In addition to installation and maintenance instructions, there are notes attached to the unit in the form of labels. These must also be observed.

>> Only qualified and trained personnel may be appointed for the installation, commissioning, maintenance and operation of the unit.
>> Only qualified electricians are permitted to work on the electrical system.
>> VDE regulations [or local regulations] and those of your local power supply utility are applicable to electrical installation work.
>> Only operate the unit within its output range, which is stated in the technical documentation supplied by Solid Air.

>> Only operate the unit if it is in technically sound condition.
>> Any faults or damage that impact or might impact on the safety or correct function of the unit must be remedied immediately by qualified personnel.
>> Replace faulty components and equipment only with original Solid Air spare parts.

Please note

>> **The unit may only be used for handling air. This air must not contain any harmful, combustible, explosive, aggressive, corrosive or otherwise dangerous substances, as these would be distributed throughout the duct system or building, where they could cause a risk to the health of, or even kill the occupants, animals or plants living there.**

3. STANDARDS AND REGULATIONS

3.1 Applicable standards and regulations

The following standards and regulations apply to the ventilation units:

- Machinery Directive 2006/42/EC.
- Low Voltage Directive 2014/35/EU.
- EMC Directive 2014/30/EU.
- ErP Directive 2009/125/EC.
- RoHS Directive 2011/65/EU.
- DIN EN ISO 12100 ..... Safety of machinery - general principles for design
- DIN EN ISO 13857 ..... Safety of machinery - safety distances
- DIN EN 349 ..... Safety of machinery- minimum clearances
- DIN EN ISO 14120 ..... Safety of machinery - guards
- VDI 6022 ..... Hygiene requirements for ventilation and air conditioning systems and units
- DIN EN 1886 ..... Ventilation of buildings - central air handling units
- DIN ISO 1940-1 ..... Mechanical vibration - balance quality requirements
- VDMA 24167 ..... Fans - safety requirements
- DIN EN 60204-1 ..... Safety of machinery - electrical equipment of machines
- DIN EN 60730 ..... Automatic electrical controls
- DIN EN 61000 -6-2+3 ..... Electromagnetic compatibility
- DIN EN 60335-1 (VDE 0700-1) ..... Safety of electrical appliances - general requirements
- VDI 3803 ..... Central air conditioning systems - Structural and technical principles

3.2 For installation and maintenance, the following standards and regulations must be observed

- DIN EN 50106 (VDE 0700-500) ..... Safety of electrical appliances - tests
- DIN VDE 0100 ..... Regulations regarding the installation of high voltage systems up to 1000V
- DIN EN 50110-1 (VDE 0105-1) ..... Operation of electrical installations
- DIN VDE 0105-100 ..... Operation of electrical installations - general stipulations
- DIN VDE 0701-0702 ..... Inspection after repair, modification of electrical appliances, periodic inspection - repeat testing of electrical appliances
- VDI 2050 ..... Requirements for technical equipment rooms - Planning and execution

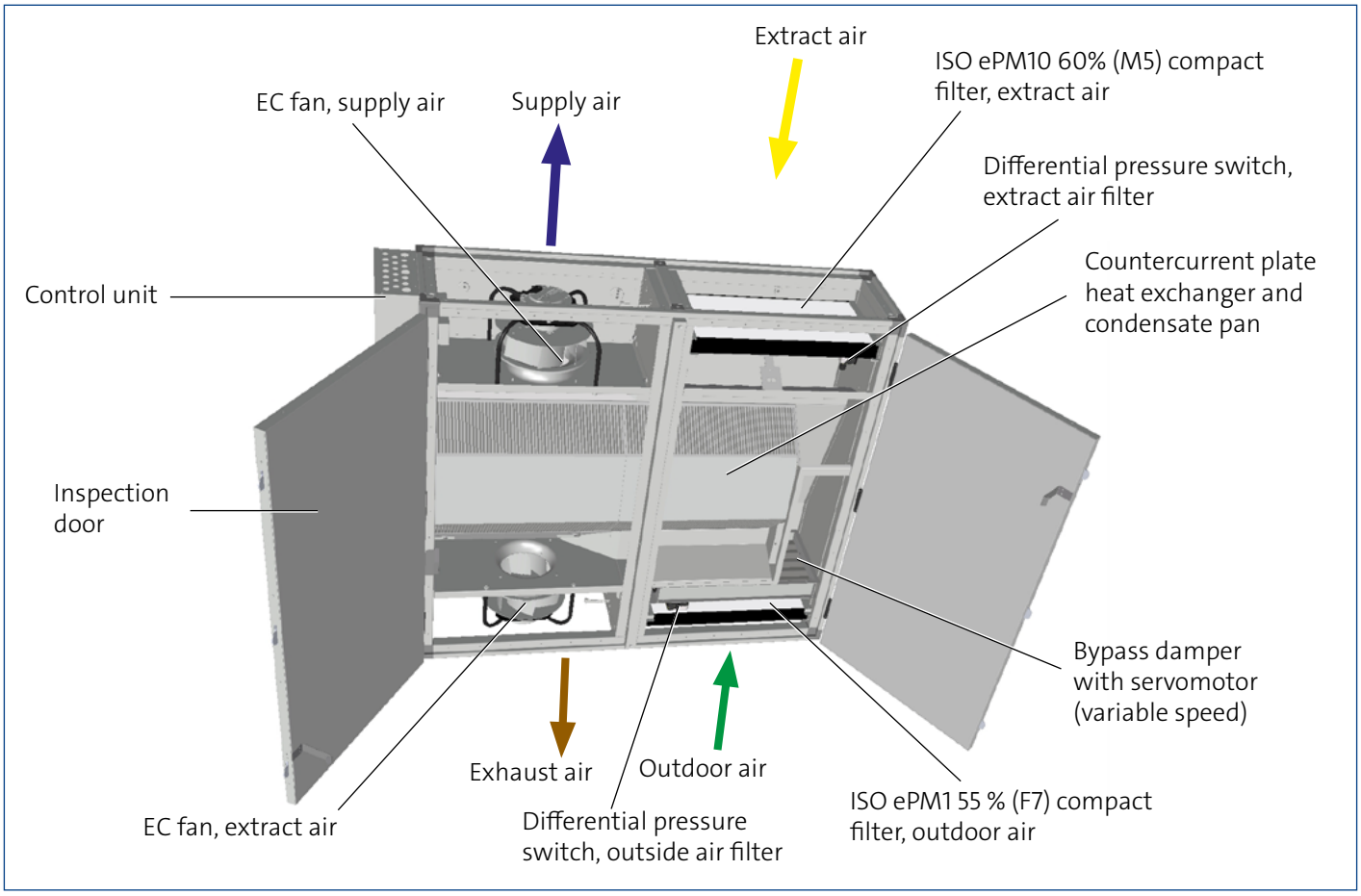
3.3 Warnings

>> Removal and disabling of safety and monitoring equipment is prohibited.
>> Only operate the system if it is in technically sound condition.
>> Ensure that any faults or damage that may impact on safety are rectified immediately.

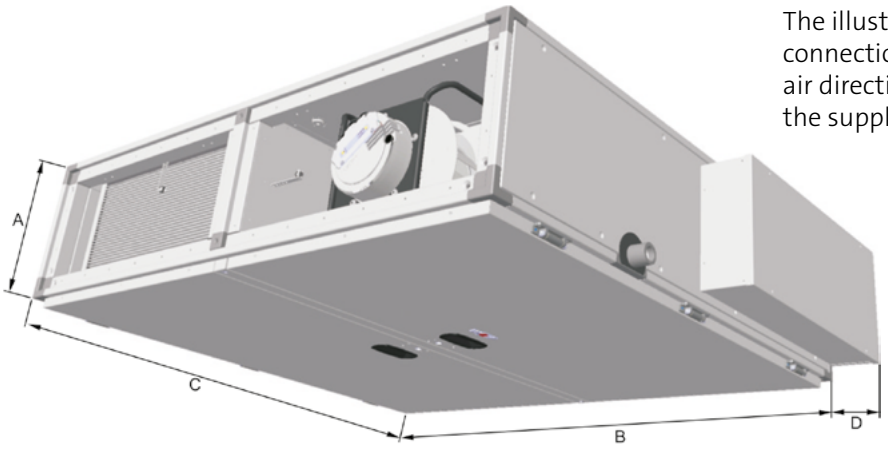
4. DESCRIPTION

4.1 CPL-C Comfort slimline ventilation unit (CPL-C 10/15/22)

Operating side, supply air right/supply air left = mirror inverted.



4.1.1 Dimensions

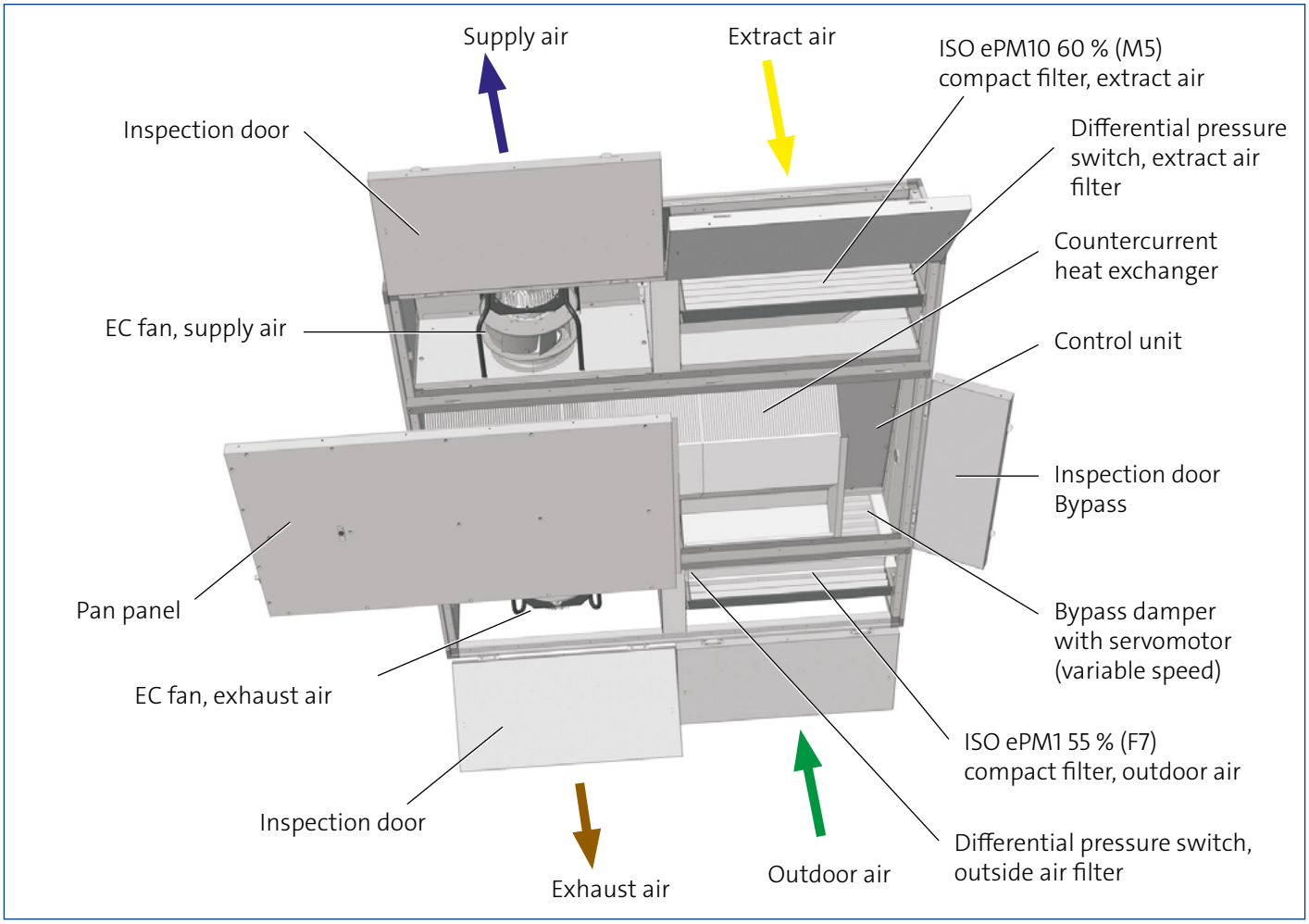


The illustration shows the unit with the connection side on the right in the supply air direction (Connection side on the left in the supply air direction is mirror inverted).

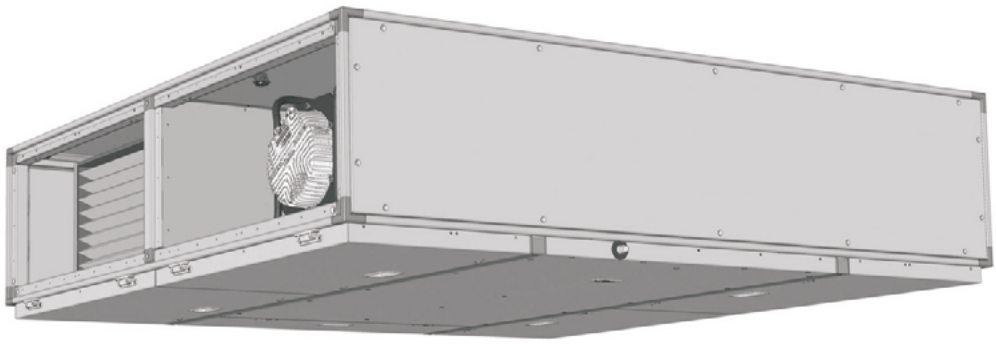
Type	CPL-C10-WRG	CPL-C15-WRG	CPL-C22-WRG
Height (A mm)	367	367	411
Width (B mm)	1017	1423	1830
Length (C mm)	1322	1322	1525
Control panel width (D mm)	115	115	115

4.2 CPL-C Comfort slimline ventilation unit (CPL-C 32)

Operating side, supply air right/supply air left = mirror inverted.



4.2.1 Dimensions



Type	CPL-C32-WRG
Height (A mm)	495
Width (B mm)	1932
Length (C mm)	1932

4.3 Specification

Size CPL-C	10-WTW	15-WTW	22-WTW	32-WTW
Max. air volume (m^3/h)	1000	1500	2200	3200
At available ext. pressure, supply air (Pa)	445	380	220	600
At available ext. pressure, extract air (Pa)	470	395	170	610
Heat recovery rate (%)	> 90	> 90	> 90	> 90
Height (A mm)	367	367	411	495
Width (B mm)	1017	1423	1830	1932
Length (C mm)	1322	1322	1525	1932
Control panel width (D mm)	115	115	115	-
Internal duct connection dimensions (mm)	409 x 247	612 x 247	815 x 291	866 x 354
Weight (kg)	140	180	240	360

Motor data for each fan CPL-C	10-WTW	15-WTW	22-WTW	32-WTW
Mains voltage (V)	1 x 230V	1 x 230V	1 x 230V	3 x 400V
Frequency (Hz)	50/60	50/60	50/60	50/60
Max. power consumption (W)	500	750	750	2100
Max. current consumption (A)	2,3	3,3	3,3	3,3
Speed (t/min.)	3080	3450	3000	3450
Energy efficiency class	IE4	IE4	IE4	IE4
IP rating	IP55	IP55	IP55	IP55
Protection class	Iso F	Iso F	Iso F	Iso F

Power cable CPL-C	10-WRG-PWW	15-WRG-PWW	22-WRG-PWW	32-WRG-PWW
Supply voltage (V)	1 x 230V	3 x 400V	3 x 400V	3 x 400V
Cable cross-section (mm^2)	3 x 1,5 mm^2	5 x 1,5 mm^2	5 x 1,5 mm^2	5 x 2,5 mm^2
On-site fuse (A)	16 A	16 A	16 A	20 A

Power cable CPL-C	10-WRG-E-Reg.	15-WRG-E-Reg.	22-WRG-E-Reg.	32-WRG-E-Reg.
Supply voltage (V)	1 x 230V	3 x 400V	3 x 400V	3 x 400V
Cable cross-section (mm^2)	3 x 1,5 mm^2	5 x 2,5 mm^2	5 x 2,5 mm^2	5 x 6 mm^2
On-site fuse (A)	16 A	20 A	20 A	35 A

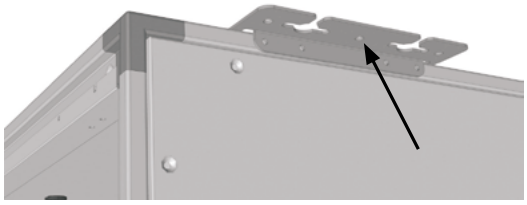
5. PLANNING

5.1 CPL-C installation location

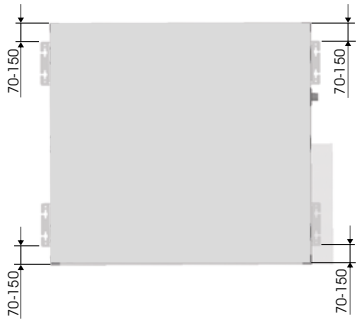
- The CPL-C is designed as an indoor unit and intended solely for ceiling installation.
- The ceiling where the unit will be mounted must be level and sufficiently load bearing (min. 500 kg/m^2).
- Only install the unit with the standard suspension brackets supplied, as shown in the illustration.
- For the CPL-C-32, we recommend using the drilled hole in the middle of the suspension bracket.
- The lifting lugs fitted to the CPL-C-32 as standard are intended for lifting and turning the unit. Never use them for mounting the unit on the ceiling. After use, the lifting lugs can be removed and the drilled holes sealed with the supplied blanking plugs.

Please note

- Never drill holes or insert screws in the ceiling panels, as this may damage the electric cables under the panels.
- The installation location must meet the requirements of VDI 2050.
- Provide sufficient space below the unit for maintenance work.
- Site the unit in a room that is free from the risk of frost.
- Provide a drain connection for discharging any condensate that may be generated.

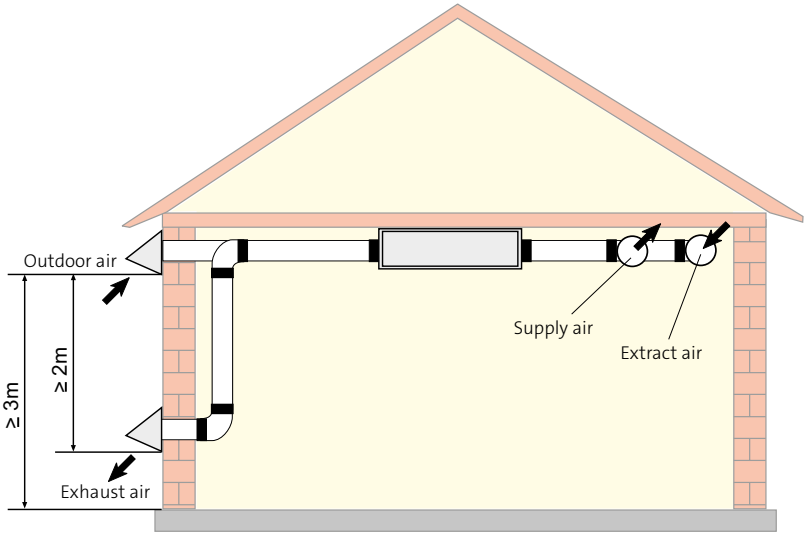


Suspension bracket for CPL-C 10/15/22/32

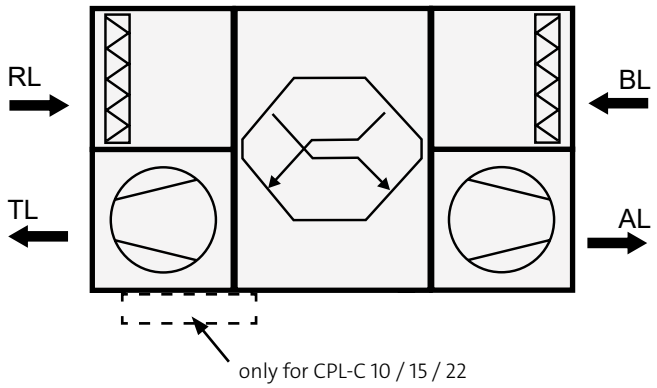
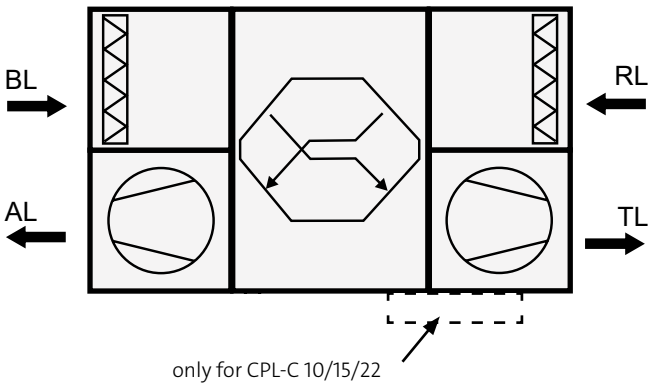


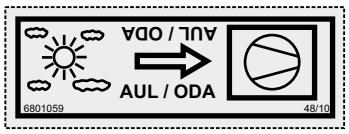
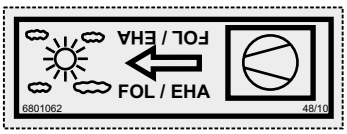
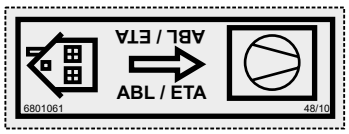
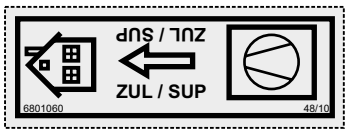
Dimensioning for CPL-C 10/15/22/32

Minimum clearance between outdoor air intake and exhaust air outlet to prevent an "air short circuit" (DIN 13779).



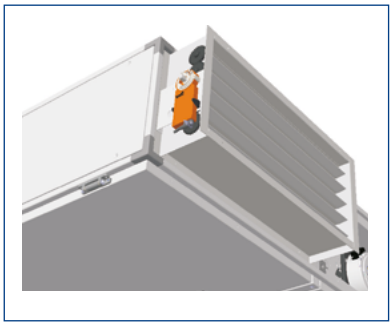
5.2 Air connection

Operating side, supply air left	Operating side, supply air right
Plan view	Plan view
	

Air duct connections are identified with the following labels:	
Outdoor air	Exhaust air
	
Extract air	Supply air
	

5.2.1 Louver dampers (CPL-C 10/15/22/32)

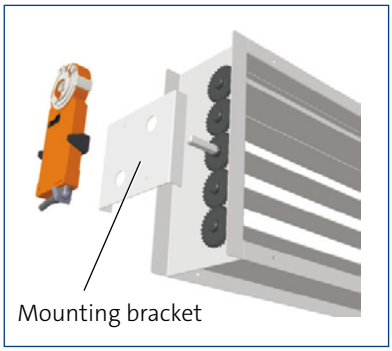
>> Always fit the louver dampers as shown in the illustration!



5.2.2 Servomotoren (CPL-C 10/15/22/32)

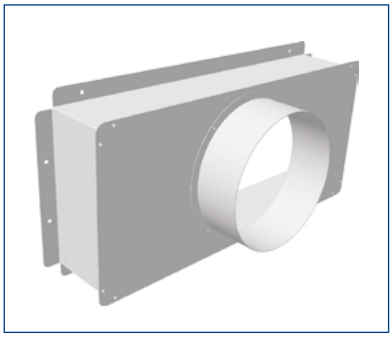
>> Secure servomotors with the supplied mounting bracket, as shown in the illustration.

>> For model size CPL-C-32, rivet the mounting bracket to the damper.



5.3 Duct connections (on site)

The connectors of the unit are rectangular. Round ducts can be connected directly to the connectors using an adaptor module from square to round (accessories). Insulate the ducts, including external dampers, flexible connections and insulating frames, in accordance with applicable regulations and industry standards.



5.4 Trap

The effective trap head h (mm) must be greater than the maximum under- or overpressure at the condensate connector (1 mm WC = 10 Pa).

h = 1,5 x p (mm WC) + 50 mm (min.)	
p	= Under- or overpressure in mmWC acc. to appliance design.
50 mm (WC)	= Reserve (inaccuracy in design, evaporation).
1,5	= Additional safety factor.

- Do not connect the trap drain line directly to the public sewage system.
- It must be able drain off freely.
- Vent longer drain lines to prevent condensate backing up in the line (provide additional opening in trap drain line).

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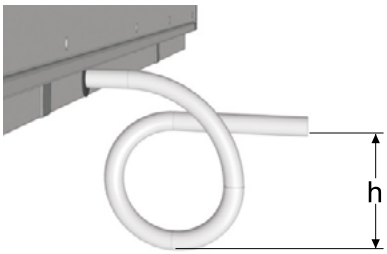

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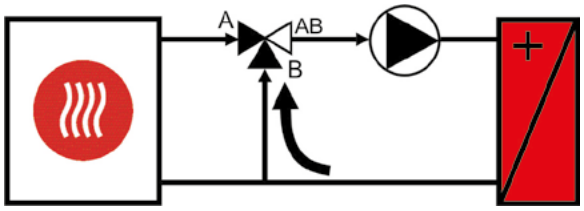
5.5 Hydraulic connection

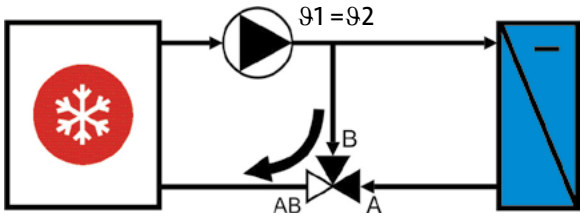
Heating coil (hydraulic connection example)

Admixing circuit
Benefits: good control characteristics, low risk of freezing.



Cooling coil (hydraulic connection example)

Diverting circuit
Benefits: constant flow temperature in cooling coil,
good dehumidification even at partial load.



Note: positioning valves close to the heat exchanger improves the control characteristics.

5.6 Electrical connection

5.6.1 Power supply

The electrical connection may only be implemented by electricians in accordance with local regulations.

When connecting the control unit and control accessories, observe the instructions and wiring diagrams provided.

Once electrical connection work is complete, the installation must be subjected to a safety test in accordance with VDE 0701-0702, as otherwise there may be a risk of electric shock that could result in injury or death.

Before working on the unit, shut it down via the isolator (accessories).

According to the Machinery Directive (2006/42/EC), this unit requires an isolator to be installed on site in the power cable.

The control panel on/in the unit features an aperture for connecting on-site cables.

Voltage is still present at terminals and connections of the EC fans even when the unit has been shut down. This means there is a risk of electric shock that could result in injury or death.

Do not touch the EC fans for five minutes after disconnecting the power across all poles.
Use a rubber mat if working on the unit when it is electrically charged.

Only use cables that meet local wiring regulations with regard to voltage, current, insulation material, load capacity, etc. Always fit an earth conductor.
Connecting cables, installation ducts or tubes, etc. must be protected from mechanical damage.

5.6.2 RCDs

Only AC/DC-sensitive fault current safety devices, type B, with 300 mA are permissible. There is no personal safety protection if the unit is operated with RCDs.
Press the test button every six months to check that the residual current devices (RCDs) are functioning properly.

Regularly check that all electrical equipment is working correctly.

Observe the specified electrical MCB/fuse protection ratings.

We accept no liability for any damage or loss resulting from technical modifications to Solid Air control units.

Image: CPL-C 10/15/22

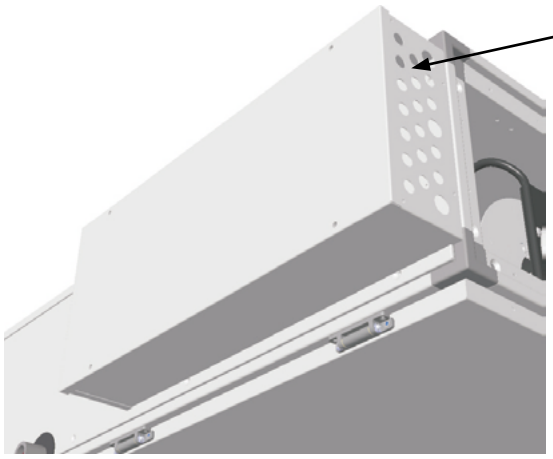
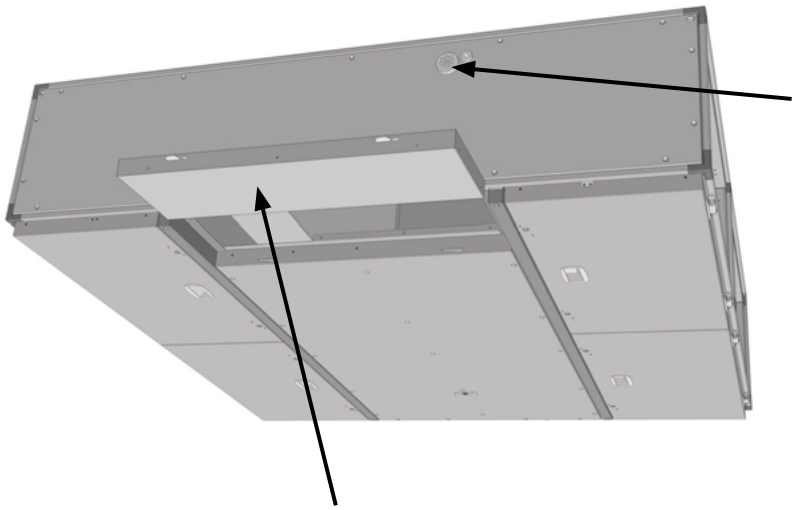
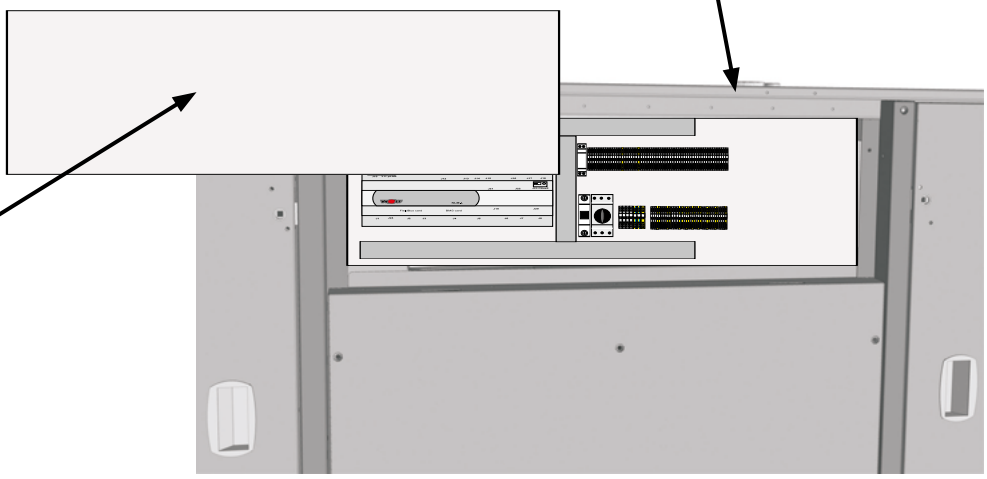


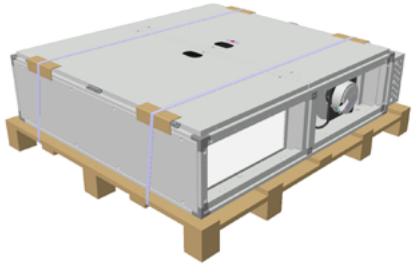
Image: CPL-C 32





6. INSTALLATION

6.1 Delivered condition



CPL-C 10/15/22

CPL-C 32

Fig. 6.1 CPL-C delivered condition

- CPL-C ventilation units are supplied in packaging that protects them from dirt and damage.
- Upon receipt of the goods, check the unit for possible transport damage.

>> If there is any damage or even a suspicion of damage, the recipient must indicate this on the consignment note and have it countersigned by the haulier. The recipient of the goods must notify Solid Air of the relevant facts without delay.

>> Dispose of the transport packaging in accordance with local regulations.

6.1.1 Storage

>> Only store the ventilation unit in dry rooms at an ambient temperature between -25 °C and +55 °C.

>> If it is stored for a long time, ensure that all apertures are sealed against air and water ingress.

6.2 Transport

When transporting units through doors or in narrow stairwells (lifts), tilt model sizes CPL-C 10/15/22 onto their narrow side. Ensure that the control cabinet and condensate drain are pointing upwards. The CPL-C-32 can optionally be equipped with a transport carriage for transporting the unit through low openings (e.g. clearance height of 1950 mm). This carriage simplifies movement of the unit without a shipping pallet, while protecting the unit surface from damage. Attachment points for pulling equipment are integrated in the transport carriage.

Image: CPL-C 10/15/22 tilted

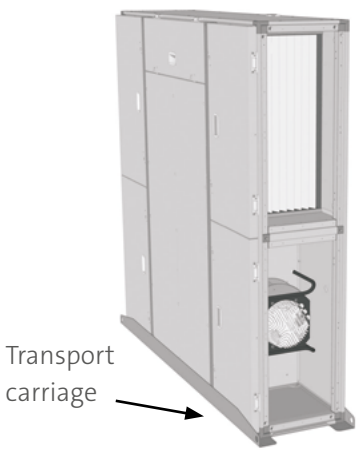


Image: CPL-C 32 on carriage

6.3 Disposal and recycling

>> When the appliance reaches the end of its service life, it may only be dismantled by qualified personnel.
>> Before starting to dismantle the appliance, disconnect the power supply.
>> Power cables must be removed by qualified electricians.
>> Sort and dispose of metal and plastic parts according to material types and in compliance with local regulations.
>> Dispose of electrical and electronic components as electrical waste.

7. COMMISSIONING

7.1 Commissioning regulations

Commissioning and maintenance work must only be carried out by trained personnel.

Only work on the unit when it is at zero volt.

According to EN 50110-1 (VDE 0105-1), only qualified electricians may carry out the installation and commissioning of the ventilation control unit and connected accessories.

Observe all regulations stipulated by your local power supply utility and all VDE regulations.
DIN VDE 0100 regulations regarding the installation of high voltage systems up to 1000 V
DIN VDE 0105-100 Operation of electrical installations

Only original Solid Air accessories may be used (electric coils, servomotors, etc.), otherwise Solid Air cannot accept any liability.

Before commissioning, check whether the operating data specified on the type plate is adhered to.

The unit must not be operated before all necessary safety equipment has been fitted and connected. Intake and discharge apertures must be connected to ensure contact protection. The CPL-C-WRG unit must be level and safely secured.
Commissioning must be carried out by authorised personnel (Solid Air Customer Service).
Record the date of commissioning, e.g. in a log book.

According to DIN 1886, tools must be used to open the unit. Wait for the fans to come to a complete standstill before opening the inspection doors. When opening the doors, negative pressure may draw in loose objects, which could damage the fan irreparably or even cause a risk to life if items of clothing are drawn in. Use tools to tightly seal the doors before commissioning (unit tightness).

7.2 Commissioning procedure

Connect the power cable and accessories in accordance with the wiring diagram provided.

A high leakage current can be expected due to the EC motors.
Ensure that a secure earth connection is in place before connecting the power supply and commissioning.

If control voltage is present or a set speed is saved, the EC fans will restart automatically, e.g. after a power failure.

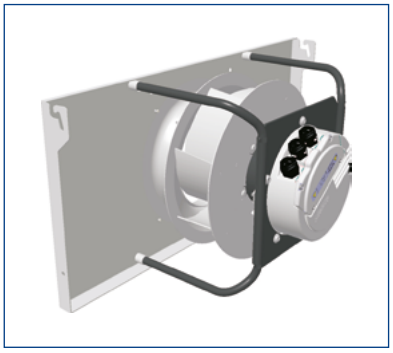
- Switch the isolator ON.
- Wait until the BMK programming unit initialises and changes to the display mode.
- Select the required operating mode at the BMK; the system will start with the preset parameters.
- To modify functions and parameters, see the installation and operating instructions provided.

Where the system is not commissioned by Solid Air, check all inputs and outputs for correct wiring and function:

- Frost protection function.
- Fan rotational direction.
- Outdoor air/extract air damper rotational direction.
- Plausible sensor values (room sensor, supply air sensor, extract air sensor, outdoor air sensor, ice sensor).
- Measure motor currents.
- Motor protection (thermal contacts/PTC thermistor).
- Airflow monitoring.
- Filter monitoring.
- Bypass damper function (rotational direction).
- Heating actuator.
- Heating circuit pump.
- As well as all other system-specific functions.

The Solid Air warranty will be void if the function test is not carried out correctly.

7.2.1 Fans



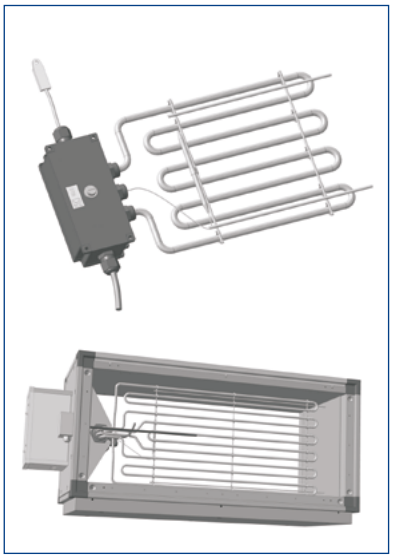
Use tools to tightly seal the doors before commissioning (unit tightness), otherwise there is a risk of motor overload

1 x 230 V/50 Hz; 2.3 A for CPL-C 10
1 x 230 V/50 Hz; 3.3 A for CPL-C 15
1 x 230 V/50 Hz; 3.3 A for CPL-C 22
3 x 400 V/50 Hz; 3.3 A for CPL-C 32

Please note

Carry out air flow rate tests with the doors closed.
Route test hose connections out of the unit (see flow rate calculation)
Changes are made via the BMK programming unit (see relevant operating instructions)

7.2.2 Filter pre-dryer (accessories)



>> To prevent overheating, never operate the CPL-C below a minimum air flow rate if an electric heating coil is installed.

>> Follow the relevant safety regulations for electric heating coils.
>> The electric heating coil must be protected from moisture and water.

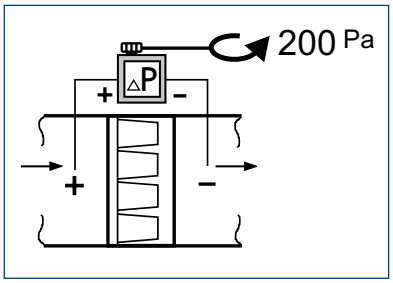
>> The filter pre-dryer starts automatically at outside temperatures below 0 °C.

7.2.3 Reheater (accessories)

>> The electric reheater is switched by the temperature controller.
>> Before commissioning, check the manually resettable high limit safety cut-out.
>> Reset the high limit safety cut-out by pressing the reset button.

Recomm. min. air flow rate.
CPL-C-10 = 300 m^3/h
CPL-C-15 = 600 m^3/h
CPL-C-22 = 800 m^3/h
CPL-C-32 = 1400 m^3/h

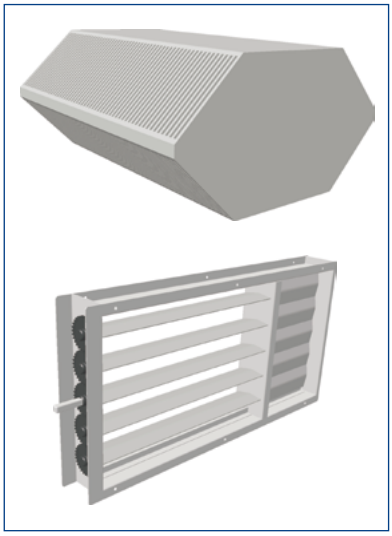
7.2.4 Filter monitoring



>> Before commissioning the CPL-C, set the differential pressure switches on the outdoor air and extract air filters to a value of 200 Pa (scale dial).

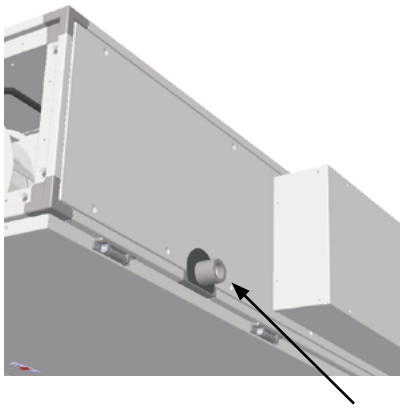
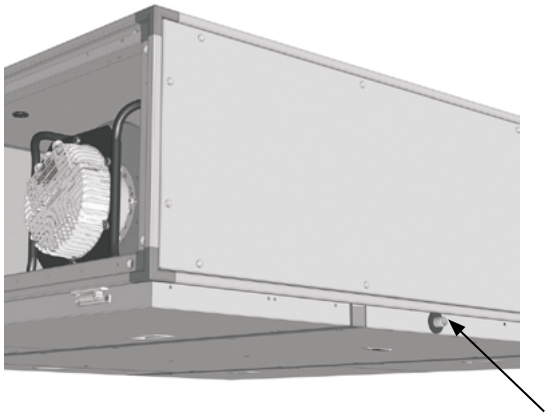
7.2.5 Countercurrent plate heat exchanger/bypass damper

The countercurrent plate heat exchanger is generally maintenance-free. During commissioning, check whether the servomotor for the bypass damper is rotating in the correct direction (bypass/HR mode).



7.2.6 Condensate pan

>> Provide a trap for the condensate drain and route the condensate into the sewerage system.
>> Protect the condensate drain from frost.
>> Fill the trap with water.

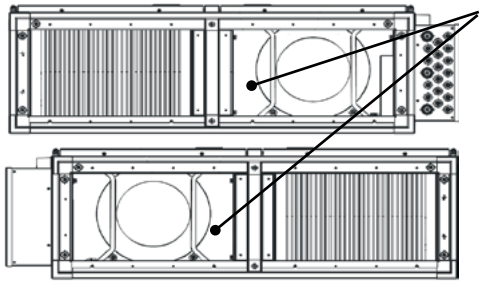
Image: CPL-C 10/15/22	Image: CPL-C 32
	

7.3 Flow rate calculation

The flow rate is calculated using the effective pressure method. This involves comparing the static pressure upstream of the inlet nozzle with the static pressure in the inlet nozzle.
The flow rate can be calculated from effective pressure Δpw (differential pressure of the two static pressures) using the following equation.
The doors must be closed to determine the correct flow rate. Route the test hoses to the outside when conducting the test. Due to the installation conditions of the fans, K values differing from the manufacturer's specifications must be used for flow rate determination.

$$\dot{V} = k \cdot \sqrt{\Delta p_w}$$

$\dot{V}$ in [m³/h] und Δp_w in [Pa]



7.3.1 Effective pressure calculation

Δp = Effective pressure (symbolic representation).

7.3.2 Effective pressure CPL-C 10

K value of fan 110.

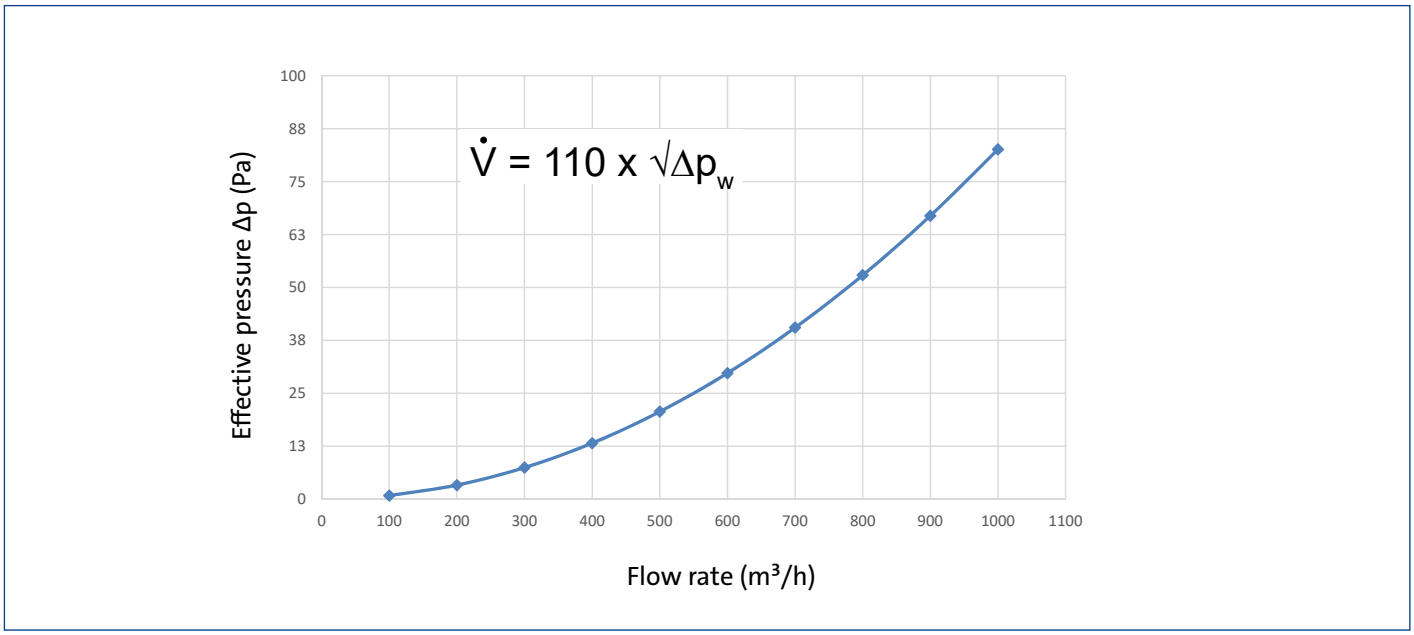


Fig. 7.1 Effective pressure CPL-C 10

Δp	(Pa)	1	3	7	13	21	30	40	53	67	83
V̇	(m³/h)	100	200	300	400	500	600	700	800	900	1000

7.3.3 Effective pressure CPL-C 15

K value of fan 69.

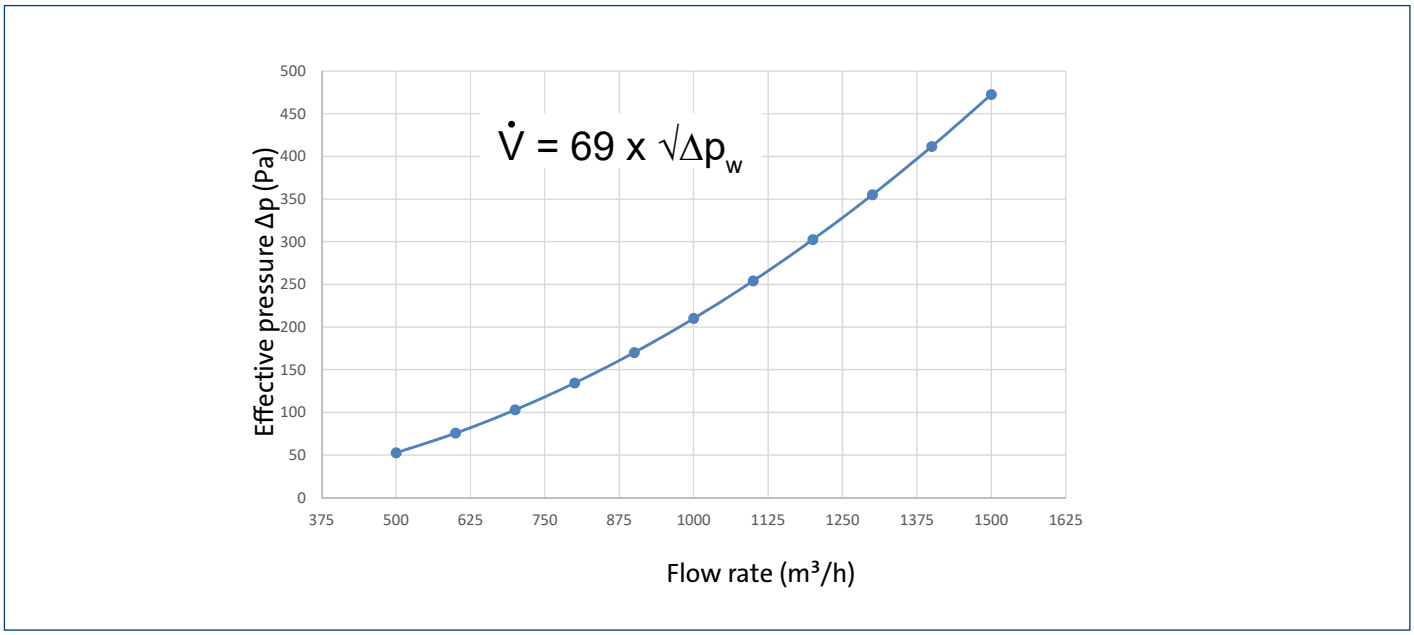


Fig. 7.2 Effective pressure CPL-C 15

Δp	(Pa)	53	76	103	134	170	210	254	302	355	412	473
V̇	(m³/h)	500	600	700	800	900	1000	1100	1200	1300	1400	1500

7.3.4 Effective pressure CPL-C 22

K value of fan 123.

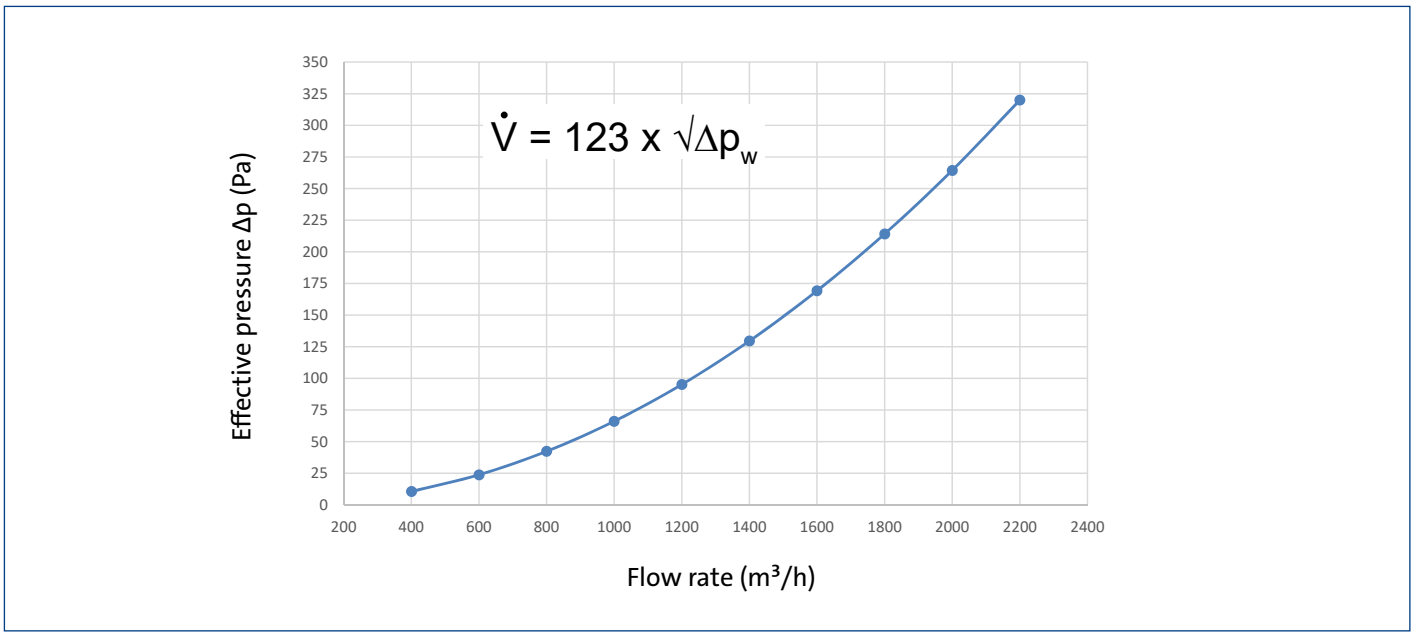


Fig. 7.3 Effective pressure CPL-C 22

Δp	(Pa)	11	24	42	66	95	130	169	214	264	320
V̇	(m³/h)	400	600	800	1000	1200	1400	1600	1800	2000	2200

7.3.5 Effective pressure CPL-C 32

K value of fan 100.

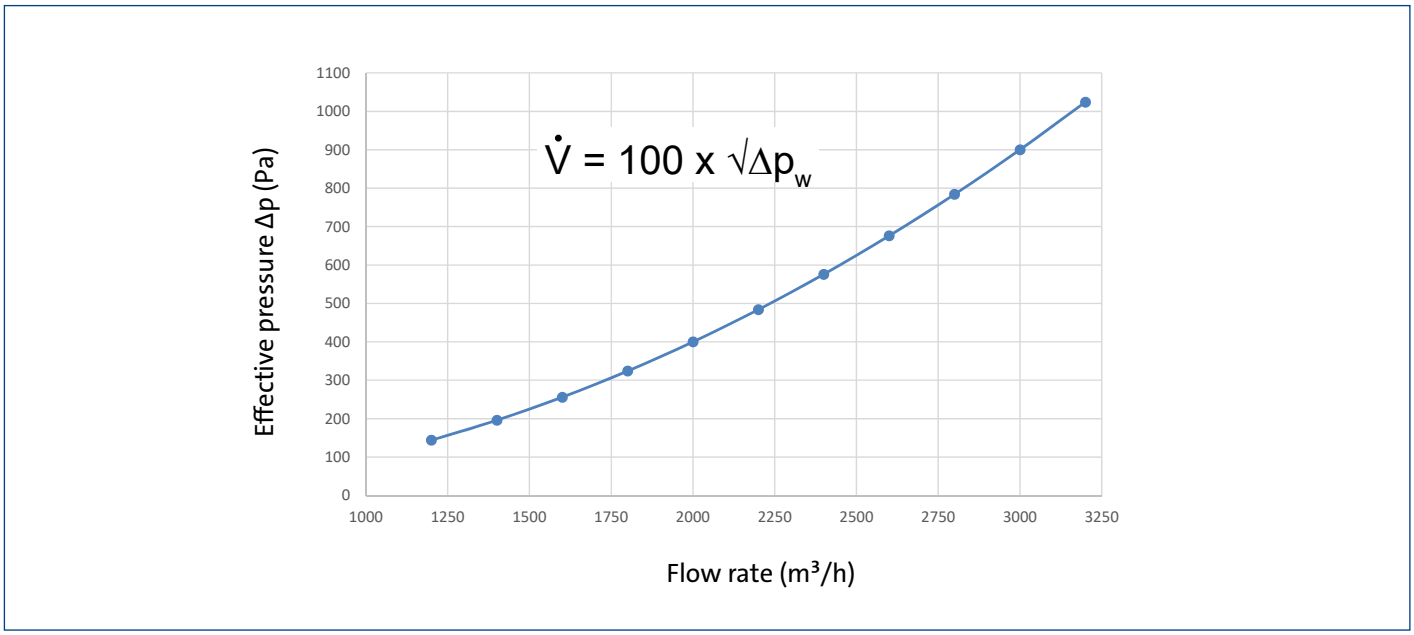
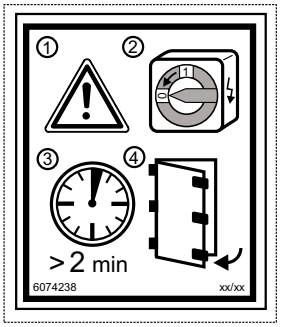


Fig. 7.4 Effective pressure CPL-C 32

Δp	(Pa)	144	196	256	324	400	484	576	676	784	900	1024
V̇	(m³/h)	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200

8. MAINTENANCE

8.1 Maintenance shutdown



>> ① Before starting any maintenance work, switch OFF the mains isolator and safeguard against unauthorised reconnection. If the isolator is switched back on unintentionally, maintenance staff or others in the vicinity could be at risk from rotating parts.

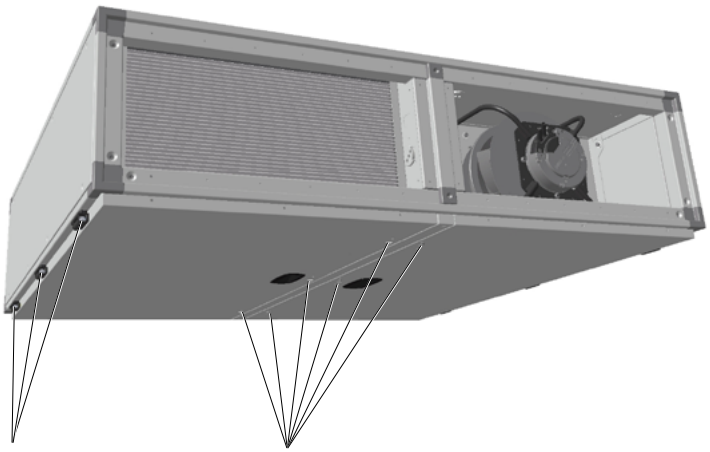
>> ② ③ Wait for the fans to come to a complete standstill before opening the doors (approx. 2 minutes). Also observe the clearly visible warning on the unit.

>> ④ When the doors are opened, negative pressure may draw in loose objects, which could destroy the fan or even cause a risk to life.

Voltage is still present at terminals and connections of the EC fans even when the unit has been shut down. This means there is a risk of electric shock that could result in injury or death.

- Do not touch the EC fans for five minutes after disconnecting the power across all poles.
- Use a rubber mat if working on the unit when it is electrically charged.

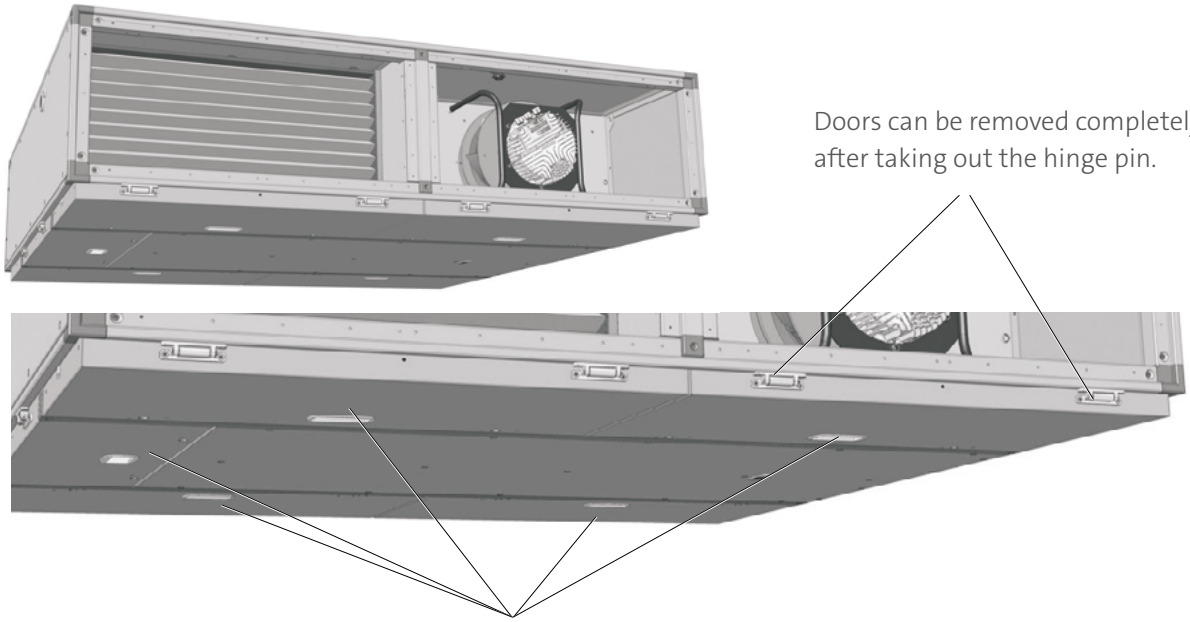
CPL-C 10/15/22



Doors can be removed completely after taking out the hinge pin.

Open inspection doors using a quadrant key

CPL-C 32



Doors can be removed completely after taking out the hinge pin.

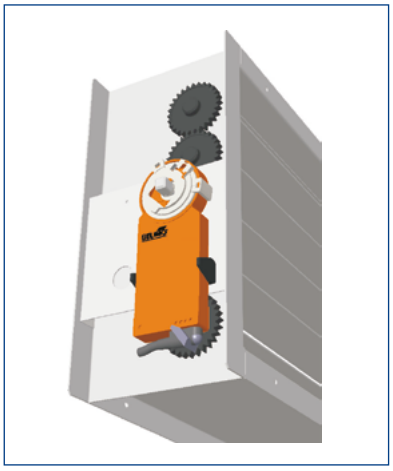
Open the inspection cover using a quadrant key

8.2 Maintenance instructions

8.2.1 Electrical equipment

>> Regularly check the electrical equipment of the unit.
- Replace loose connections and faulty cables immediately.
- Regularly check the earth conductor.

8.2.2 Servomotors on the dampers



- The motors are maintenance-free.

>> At regular intervals, check that the connection from the servomotor to the damper drive is firmly seated.

8.2.3 Trap

- Regularly check the DN 50 trap (accessories) for possible soiling and clean if required (see checklist).

>> Refill the trap with water before returning into use.

8.2.4 Countercurrent plate heat exchanger (PHE)

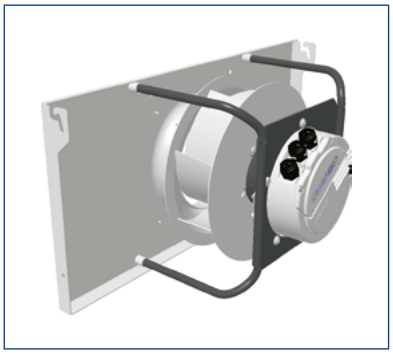
Check and clean at regular intervals.
Cleaning the heat exchanger (possible without replacing the PHE):
- Vacuum, taking care not to bend the fins.
- Clean with water (non-pressurised) or a soapy solution

Removal of the plate elements is possible using an appropriate retaining rail set.

Please note

- Cleaning methods that use high pressure (e.g. steam jet/high pressure washer) carry a risk of irreparable mechanical damage to the plate heat exchanger.
- Before restarting, replace the factory-fitted seal on the condensate pan if this was removed during maintenance on the plate heat exchanger.

8.2.5 Fan motor unit



Motor and bearing are maintenance-free.
If necessary, clean the impeller with a soapy solution.

Please note

Check that the test lead (if fitted) is seated firmly at the test connector on the inlet nozzle.
Loose seating can result in faulty measurements.

The integral installation aid facilitates removal of the complete fan/motor unit with front plate.

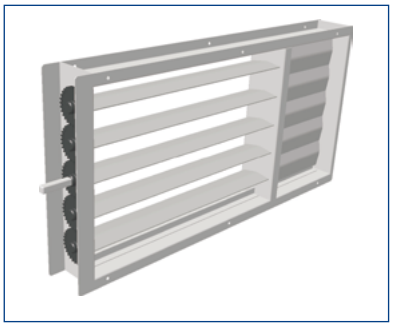
8.2.6 Filter pre-dryer (accessories)/reheater (accessories)

>> Check and clean at regular intervals.
>> Check whether the manually resettable high limit safety cut-out responds.
>> Reset the high limit safety cut-out by pressing the reset button.
>> Cleaning the electric coils:
- Vacuum, taking care not to bend the indirect coils
- Blast with compressed air, max. 1 bar

Please note

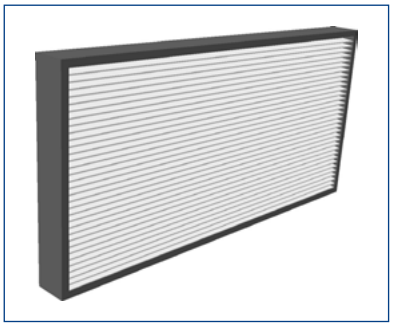
>> If the cleaning pressure is too high, there is a risk of irreparable mechanical damage to the electric coils.
>> The electric coils must be protected from moisture and water.

8.2.7 Bypass damper/extract air damper/outdoor air damper



>> Check the dampers for ease of movement.
>> Never lubricate the dampers.This could destroy the plastic used and compromise the damper function.
>> To clean, wipe down with a soapy solution; otherwise maintenance-free.

8.2.8 Compact filter



- The compact filters cannot be regenerated.
- They must be replaced when they are dirty, or no later than after 12 months.
- The compact filters can be removed from the unit casing once the inspection doors have been opened (see spare parts).

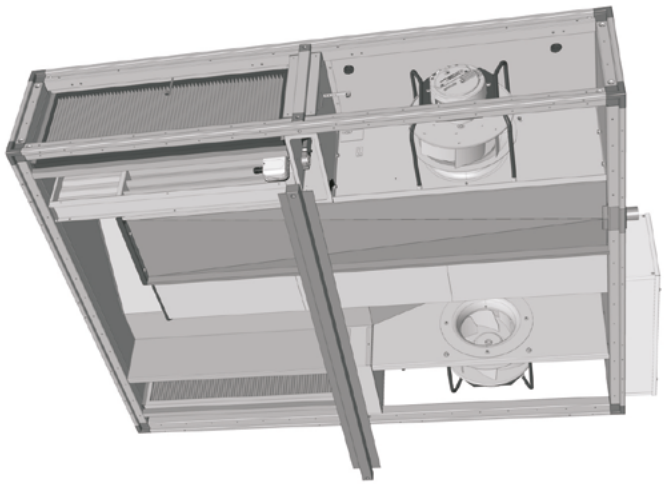
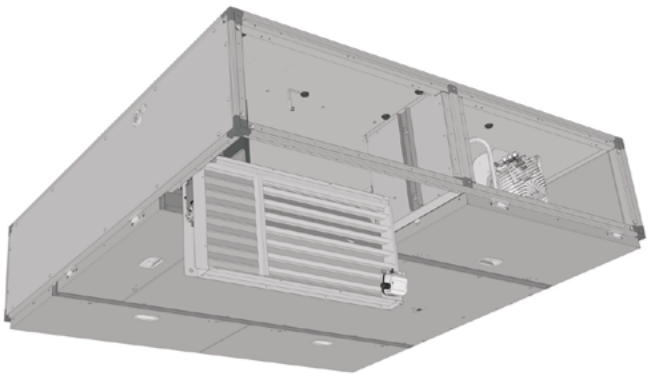
Please note

>> **Never operate the CPL-C ventilation unit without filters.**

8.2.9 Bypass servomotor

The motors are maintenance-free.

>> At regular intervals, check that the connection from the servomotor to the bypass is firmly seated.

CPL-C 10/15/22	CPL-C 32
	

8.2.10 Condensate pan

>> Regularly check the condensate pan for possible soiling and clean if required (see checklist).

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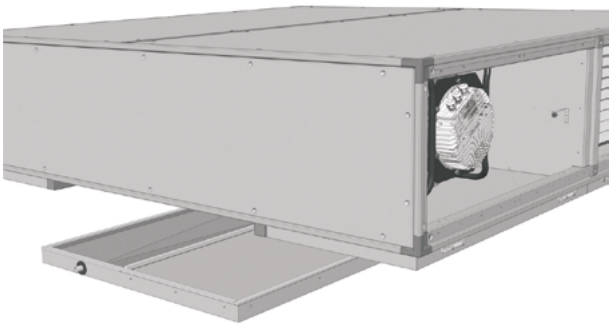
	

8.3 Hygiene checklist

Regularly check that the ventilation unit is functioning correctly.
Replace the air filters in the unit at least once a year.
Wear a suitable dust mask when handling the air filters.
Dispose of the air filters in accordance with local regulations.

Hygiene checklist (extract from VDI 6022, sheet 1)
System commissioned: Date

Activity	Action if required	Months				
		1	3	6	12	24
Hygiene inspection.						X
Outdoor air intakes						
Check for contamination, damage and corrosion.	Clean and repair.				X	
Structural units/unit casing						
Check for contamination, damage and corrosion on the air side.	Clean and repair.				X	
Check for condensation.	Clean.			X		
Check casing for contamination, damage and corrosion.	Clean and repair.				X	
Air vents						
Check air vents, integral perforated plates, wire mesh or sieves for contamination, damage and corrosion (spot check).	Clean or replace.				X	
Spot check filter.	Replace.				X	
Spot check air vents with indoor air induction and extract air intakes for deposits.	Clean.				X	
Air filters						
Check for impermissible contamination, damage (leaks) and odours.	Changing the affected filters (Never operate the unit without filters!).		X			
Longest filter replacement interval.					X	
Air ducts						
Check accessible air duct sections for damage.	Repair.				X	
Check inner air duct surface for contamination, corrosion and condensation at two or three representative points.	Inspect the duct network at further points and decide whether cleaning is necessary (not only the visible areas).				X	
Silencer						
Check silencers for contamination, damage and corrosion.	Repair or replace; contact spotting if required.				X	
Fan						
Check for contamination, damage and corrosion.	Clean and repair.			X		
Heat exchanger (including heat recovery)						
Visual inspection of air/air plate heat exchanger for contamination, damage and corrosion.	Visual inspection.			X		
	Clean, remove if necessary (undo spacer and clean out plate heat exchanger).				X	
Heating coil: Check for contamination, damage, corrosion and tightness.	Clean and repair.			X		
Check condensate pan for contamination, corrosion, damage and tightness.	Clean and repair.		X			
Check the function of the drain and trap.	Clean and repair.		X			

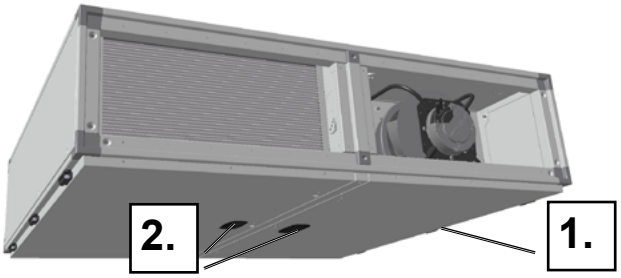
Repairs
>> Only qualified personnel may remove faults or repair damage.
>> Only replace faulty components with original Solid Air spare parts.

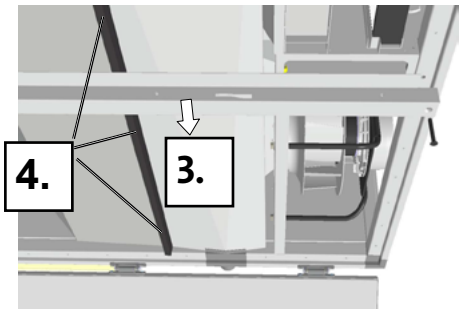
9. APPENDIX

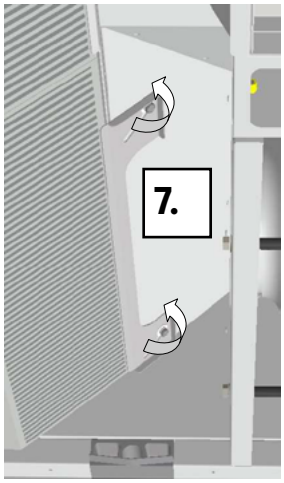
9.1 CPL-C 10/15/22

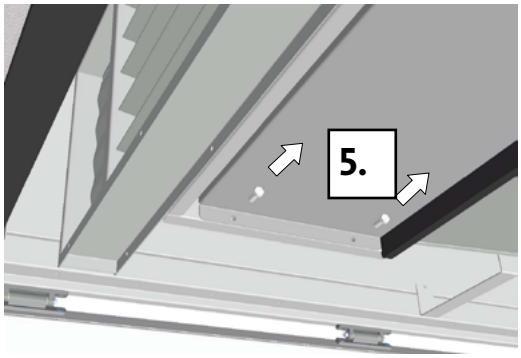
1. Disconnect trap drain connection
2. Open inspection doors
3. Undo unit partition screws and remove partition
4. Remove seals (sealant) from condensate pan and condensate drain
5. Undo condensate pan threaded connection
6. Remove condensate pan by lowering slightly (side where screws have been removed) and pulling
7. Slightly loosen tensioning bracket screws
8. Push tensioning bracket upwards
9. Remove first part of countercurrent plate heat exchanger
10. Push further parts along the guide and remove them as well
11. Reassemble in reverse order (re-establish seal with sealant)

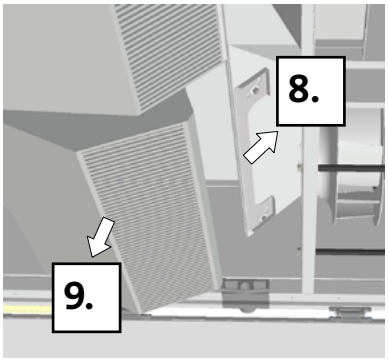
CPL-C 10/15/22

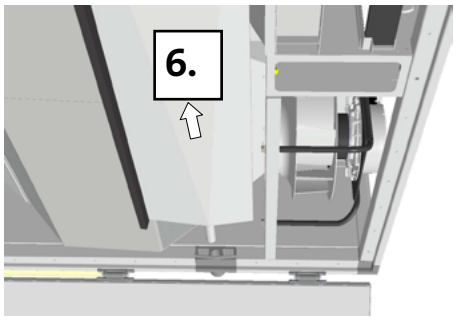


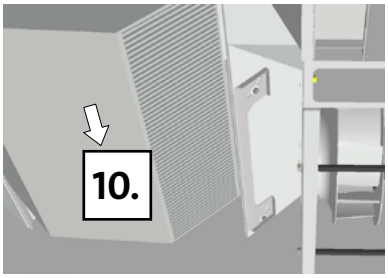








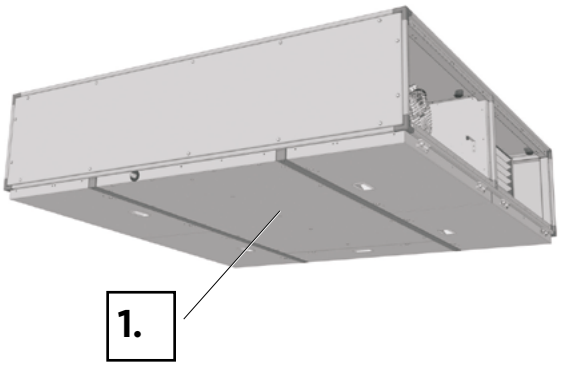


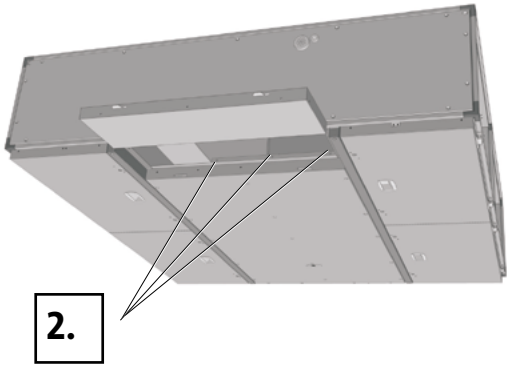


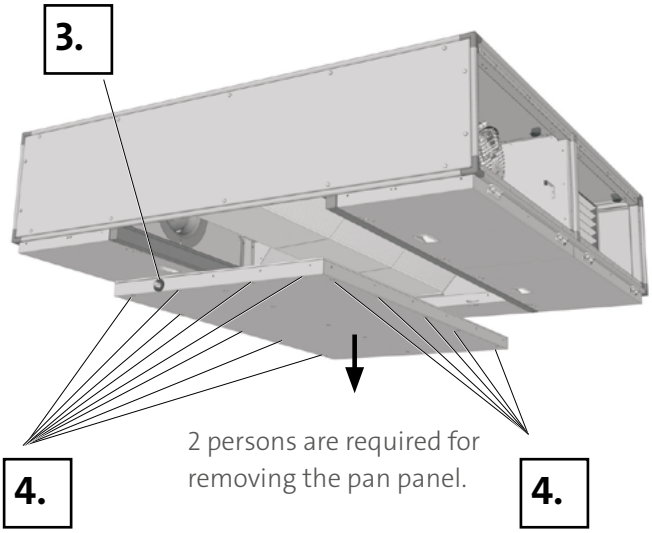
9.2 CPL-C 32

1. Disconnect trap drain connection
2. Open bypass inspection door
3. Remove pan panel connecting screws (3x)
4. Undo screws at side of pan panel and remove pan panel
5. Slightly loosen tensioning bracket screws
6. Push tensioning bracket upwards
7. Remove first part of countercurrent plate heat exchanger
8. Push further parts along the guide and remove them as well
9. Reassemble in reverse order!

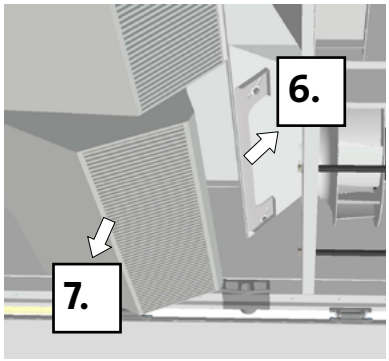
CPL-C 32

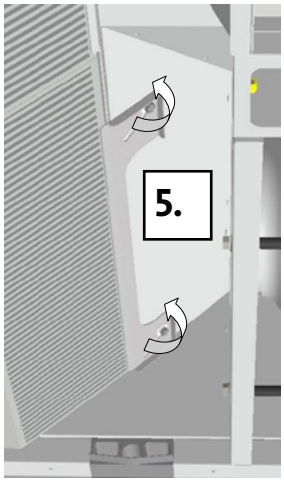


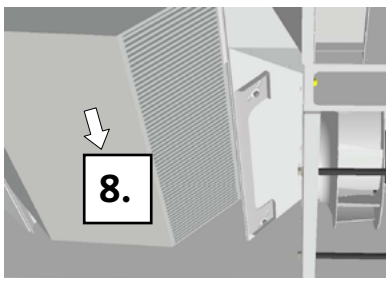




2 persons are required for removing the pan panel.







10. SPARE PARTS LIST

CPL-C 10 - WRG		
Pos.	**Designation**	**Comments**
1	Supply air fan incl. front plate	CPL-C250-0,50-3080
2	Extract air fan incl. front plate	CPL-C250-0,50-3080
3	ISO ePM10 60 % (M5) compact filter, extract air	B287 x H389 x D48
4	ISO ePM1 55 % (F7) compact filter, outdoor air	B287 x H389 x D48
5	Differential pressure switch	A2G-40
6	Countercurrent plate heat exchanger	GS 30/390
7	Servomotor for bypass damper	CM24-SR-F-T-L
8	Pluggable temperature sensor	
9	Inspection door partition	
10a	CPL-C inspection door, operating side, supply air right	
10b	CPL-C inspection door, operating side, supply air left	

CPL-C 15 - WRG		
Pos.	**Designation**	**Comments**
1	Supply air fan incl. front plate	CPL-C250-0,75-3450
2	Extract air fan incl. front plate	CPL-C250-0,75-3450
3	ISO ePM10 60 % (M5) compact filter, extract air	B592 x H287 x D48
4	ISO ePM1 55 % (F7) compact filter, outdoor air	B592 x H287 x D48
5	Differential pressure switch	A2G-40
6	Countercurrent plate heat exchanger	GS 30/570
7	Servomotor for bypass damper	CM24-SR-F-T-L
8	Pluggable temperature sensor	
9	Inspection door partition	
10a	CPL-C inspection door, operating side, supply air right	
10b	CPL-C inspection door, operating side, supply air left	

CPL-C 22 - WRG		
Pos.	**Designation**	**Comments**
1	Supply air fan incl. front plate	CPL-C280-0,75-3000
2	Extract air fan incl. front plate	CPL-C280-0,75-3000
3	ISO ePM10 60 % (M5) compact filter, extract air	B795 x H333 x D48
4	ISO ePM1 55 % (F7) compact filter, outdoor air	B795 x H333 x D48
5	Differential pressure switch	A2G-40
6	Countercurrent plate heat exchanger	GS 35 / 500
7	Servomotor for bypass damper	CM24-SR-F-T-L
8	Pluggable temperature sensor	
9	Inspection door partition	
10a	CPL-C inspection door, operating side, supply air right	
10b	CPL-C inspection door, operating side, supply air left	

CPL-C 32 - WRG		
Pos.	**Designation**	**Comments**
1	Supply air fan incl. front plate	CPL-C310-2,10-3450
2	Extract air fan incl. front plate	CPL-C310-2,10-3450
3	ISO ePM10 60 % (M5) compact filter, extract air	B406 x H842 x D48
4	ISO ePM1 55 % (F7) compact filter, outdoor air	B406 x H842 x D48
5	Differential pressure switch	A2G-40
6	Countercurrent plate heat exchanger	GS 45 / 520
7	Servomotor for bypass damper	CM24-SR-F-T-L
8	Pluggable temperature sensor	
9	Inspection door partition	
10a	CPL-C inspection door	
10b	CPL_C inspection door, bypass	