



GB

Installation and maintenance instructions **COMFORT VENTILATION UNIT WITH THERMAL WHEEL HEAT EXCHANGER**

CRL / CRL evo max

(Translation of the original)

English | subject to modifications!

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General information

These installation and maintenance instructions only apply to WOLF CRL / CRL evo max ventilation units. Authorised personnel should read these instructions before any commissioning or maintenance work. Comply with the specifications in this document. Installation, commissioning and maintenance work must only be carried out by trained personnel.

These instructions should be considered an integral part of the unit supplied, and should always be easily accessible.

Failure to observe these installation and maintenance instructions voids any WOLF GmbH warranty.

Reference symbols

The following reference symbols are used in these instructions. This important information concerns personal and operational safety as well as operational reliability.



“Safety information” identifies instructions that must be observed to the letter, to prevent risks and injuries to individuals and damage to the appliance.



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, resulting in a risk to health or death.

The main terminals are 'live', even when the ON/OFF switch is in the OFF position.

Note

"Please note" designates technical instructions which you must observe to prevent the unit malfunctioning or being damaged.

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 WOLF.



Only operate the appliance if it is in perfect technical condition. Any faults or damage that impact or might impact upon the safety or correct function of the unit must be remedied immediately by qualified personnel.

Only replace faulty components and equipment with original WOLF spare parts.

Note

It 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.

In accordance with DIN 1886, tools are required to open the unit. Wait for the fan to reach standstill (2 minutes wait). 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.

Electrical connection



Make 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.



Even when the unit has been shut down, voltage will still be present at terminals and connections of the EC fans. 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.

Intended use

Wolf CRL / CRL evo max ventilation units are designed to heat and filter normal air. Max. Max. air intake temperature: +40 °C. The use of these units in wet rooms or rooms with explosive atmospheres is not permissible. Handling very dusty or aggressive media is not permissible.

Any onsite modification or improper use of the unit is not permissible and WOLF GmbH accepts no liability for any damage caused as a result.

Ventilation units intended for internal installation must be placed in rooms that meet the requirements of VDI 2050 (VDI 2050, Requirements for technical equipment rooms - Planning and execution).

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. 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 level of pollutants that could be released in a fire is minimal.

Warnings

Removal and disabling of safety and monitoring equipment is prohibited.

The system must only be operated if it is in perfect technical condition. Ensure that any faults or damage that may impact on safety are rectified immediately.

Recommended temperatures

The ventilation unit is designed for air intake temperatures between -20 °C and +40 °C. 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.

Other technical documents

- Operating instructions WRS-K
- MicroMax 370W TWHE control unit operating instructions
- Wiring diagram
- Configuration assistant WRS-K
- Commissioning report / parameter list

Standards and regulations

- Machinery Directive 2006/42/EC
- Low Voltage Directive 2014/35/EU
- EMC Directive 2014/30/EU
- ErP Directive 2009/125/EC
- 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 953 Safety of machinery; Guards
- DIN EN 1886 Ventilation for 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

In addition, ÖVE regulations and the local building code apply to Austria.

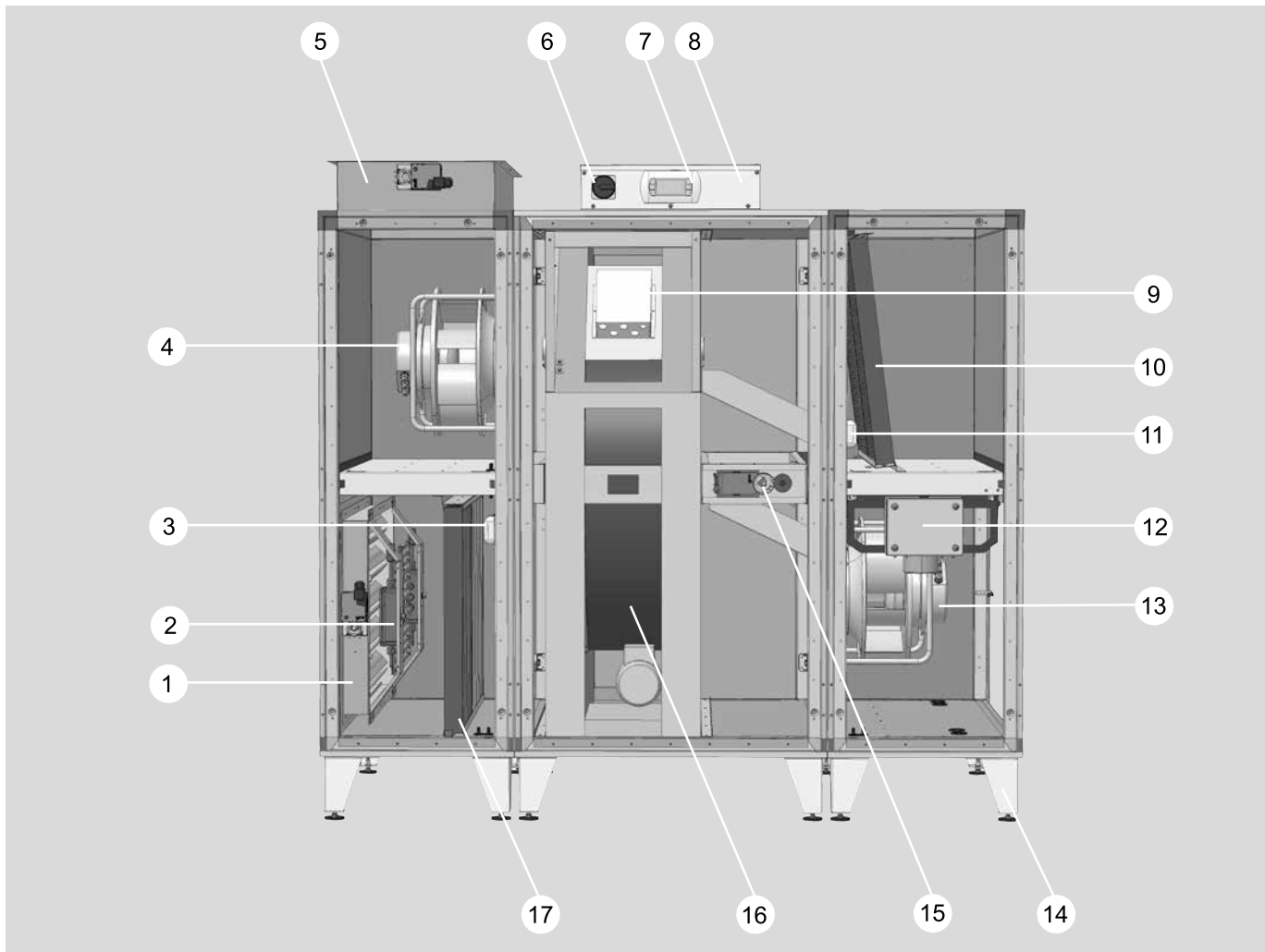
The following standards and regulations apply to installation and operation:

- DIN EN 50106 (VDE 0700-500) Safety of electrical appliances; tests
- DIN VDE 0100 Regulations regarding the installation of high voltage systems up to 1000 V
- DIN EN 50110-1 (VDE 0105-1) Operation of electrical installations
- DIN VDE 0105-100 Operation of electrical systems; general stipulations

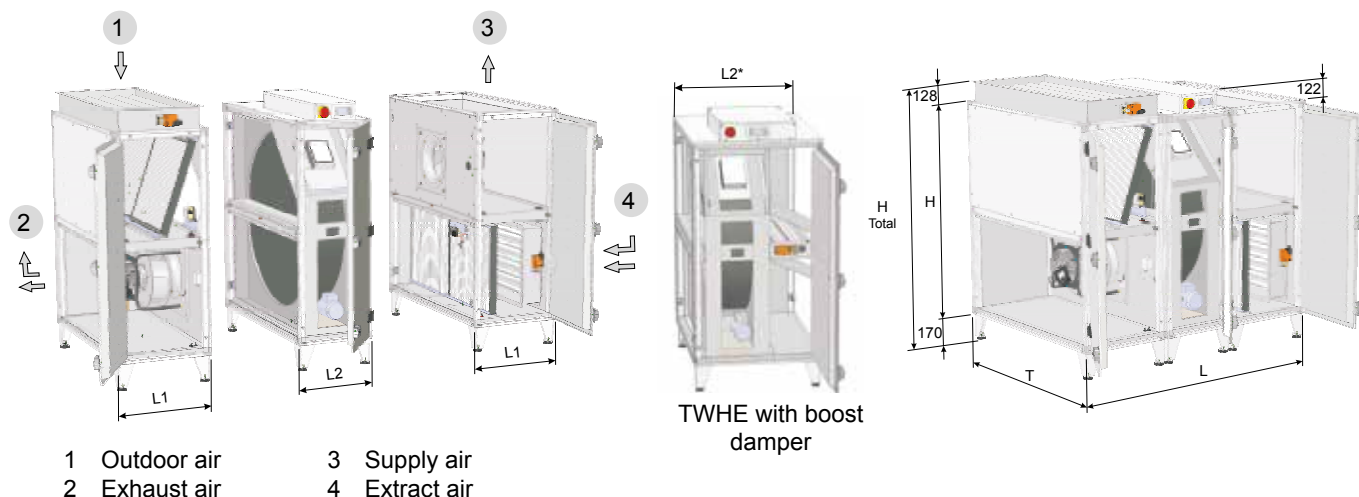
Disposal and recycling

When the unit reaches the end of its service life, it must only be dismantled by qualified personnel. Before starting to dismantle the unit, 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.

CRL-iD Comfort thermal wheel heat exchanger ventilation unit for internal installation with vertical/horizontal duct connection (example provided is CRL-iD-3500 with boost damper)



- | | |
|--|---|
| 1 Outdoor air damper with servomotor | 11 Differential pressure switch for filter monitoring |
| 2 Filter pre-dryer (accessory) | 12 Electric reheating coil available for CRL-1300/-2500/-3500 (accessory) |
| 3 Differential pressure switch for filter monitoring | 13 EC fan, supply air |
| 4 EC fan, extract air | 14 Adjustable feet |
| 5 Ventilation air damper with servomotor | 15 Boost damper with servomotor optional for CRL-1300/-2500/-3500 |
| 6 Repair switch | 16 TWHE thermal wheel heat exchanger |
| 7 BMK programming unit | 17 Compact filter, outdoor air |
| 8 control panel | |
| 9 TWHE control unit | |
| 10 Compact filter, extract air | |



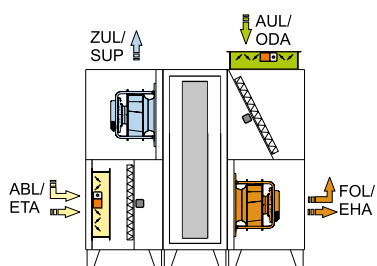
Type		CRL-iD-1300	CRL-iD-2500	CRL-iD-3500
Unit layout		Single piece	Single piece	Three piece
Length L	mm	1525 / 1525*	1626 / 1626*	1626 / 1830*
Length L1	mm	-	-	508
Length L2 (rotor part)	mm	-	-	610 / 814*
Depth D (incl. locks)	mm	750	950	1155
Total height	mm	1315	1722	1722
Height H	mm	1017	1424	1424
Foot height	mm	170	170	170
Control unit height	mm	122	122	122
Duct connection dimensions, horizontal air routing	mm	int. 612x409	Intl 815x612	Intl 1019x612
Duct connection dimensions, vertical air routing	mm	Intl 596x307	Intl 799x307	Intl 1019x408
Weight	kg	266 / 266*	381 / 381*	470 / 490* (130+210+130) (130+230+130)*
Nominal flow rate	m³/h	1300 at 460 Pa (ext.)	2500 at 600 Pa (ext.)	3500 at 980 Pa (ext.)

* with boost damper

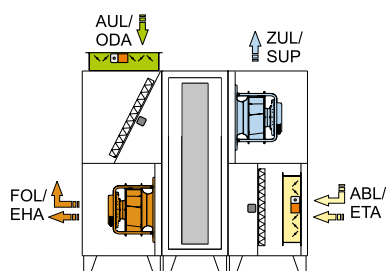
Type		CRL-iD-4800	CRL-iD-6200	CRL-iD-9000
Unit layout		Three piece	Three piece	Three piece
Length L	mm	1728	1932	2136
Length L1	mm	610	712	814
Length L2 (rotor part)	mm	508	508	508
Depth D (incl. locks)	mm	1360	1665	2070
Total height	mm	1722	1722	1925
Height H	mm	1424	1424	1627
Foot height	mm	170	170	170
Control unit height	mm	122	122	122
Duct connection dimensions, horizontal air routing	mm	intl 1222x612	intl 1527x612	intl 1934x714
Duct connection dimensions, vertical air routing	mm	intl 1222x510	intl 1527x612	intl 1934x714
Weight	kg	590 (180+230+180)	715 (220+275+220)	845 (275+295+275)
Nominal flow rate	m³/h	4800 at 450 Pa (ext.)	6200 at 680 Pa (ext.)	9000 at 1000 Pa (ext.)

Access side in supply air direction, left

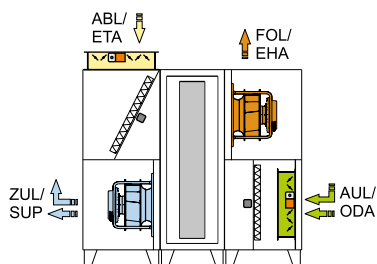
Access side in supply air direction, right



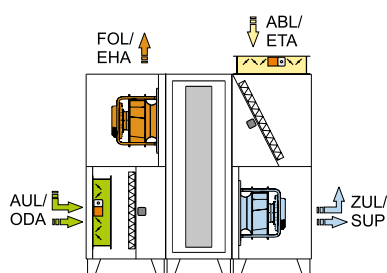
-L1



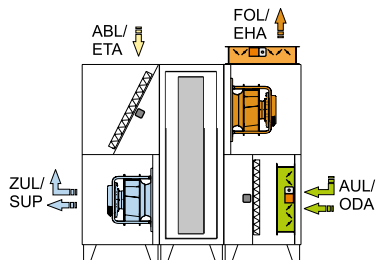
-R1



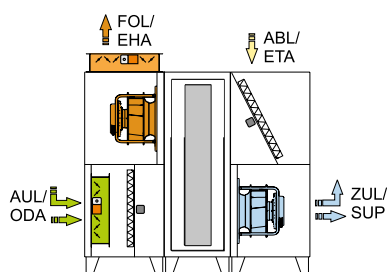
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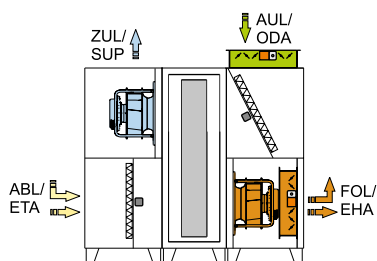
-R2



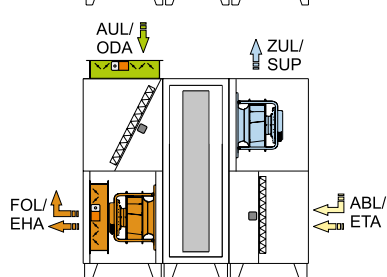
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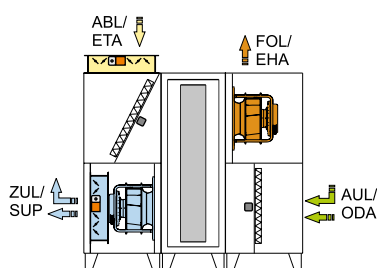
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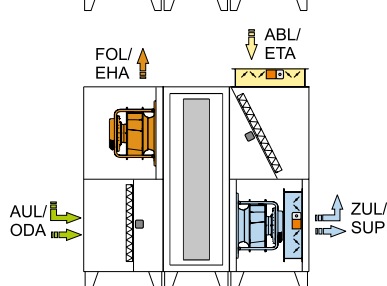
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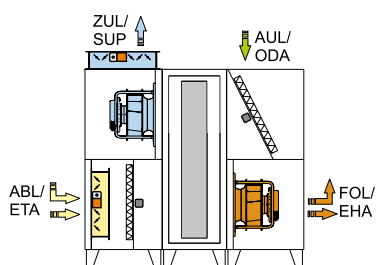
-R4¹



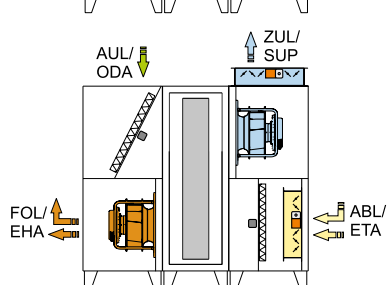
-L5



-R5



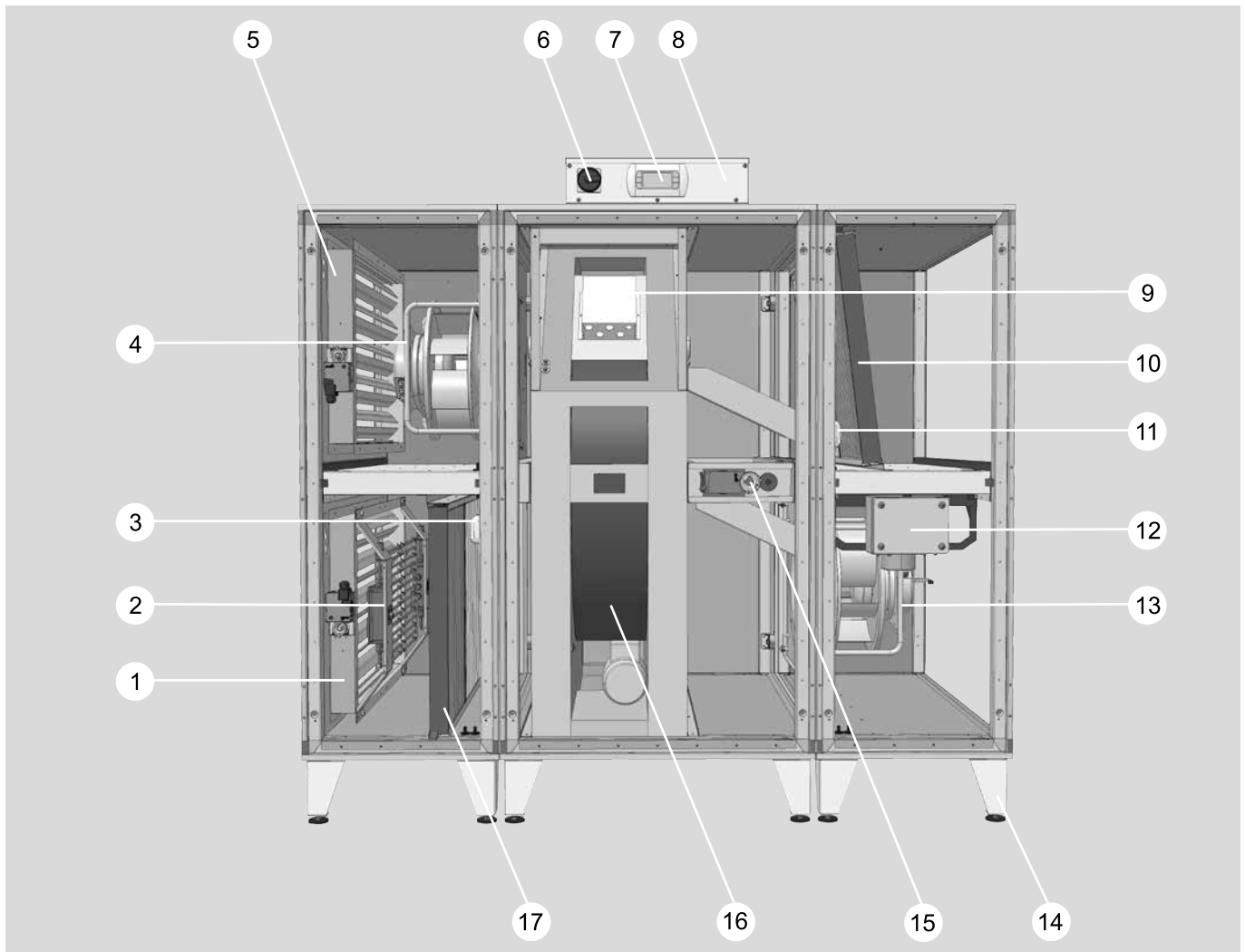
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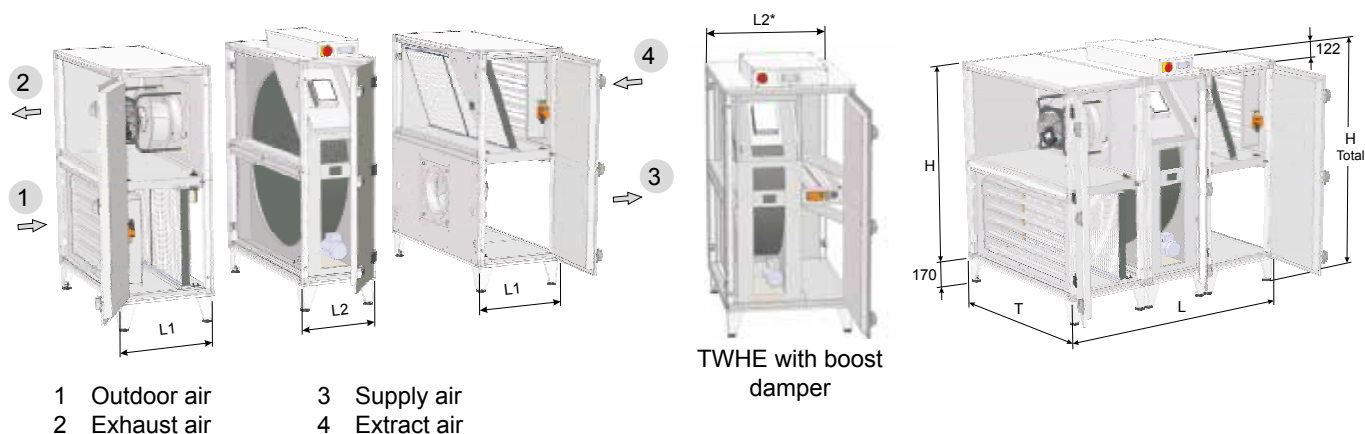
-R6

¹For CRL-1300/-2500/-3500, these versions are available with a boost damper.

CRL-iH Comfort thermal wheel heat exchanger ventilation unit for internal installation with horizontal duct connection (example provided is CRL-iH-3500 with boost damper)



- | | |
|--|---|
| 1 Outdoor air damper with servomotor | 11 Differential pressure switch for filter monitoring |
| 2 Filter pre-dryer (accessory) | 12 Electric reheating coil available for CRL-1300/-2500/-3500 (accessory) |
| 3 Differential pressure switch for filter monitoring | 13 EC fan, supply air |
| 4 EC fan, extract air | 14 Adjustable feet |
| 5 Ventilation air damper with servomotor | 15 Boost damper with servomotor optional for CRL-1300/-2500/-3500 |
| 6 Repair switch | 16 TWHE thermal wheel heat exchanger |
| 7 BMK programming unit | 17 Compact filter, outdoor air |
| 8 control panel | |
| 9 TWHE control unit | |
| 10 Compact filter, extract air | |



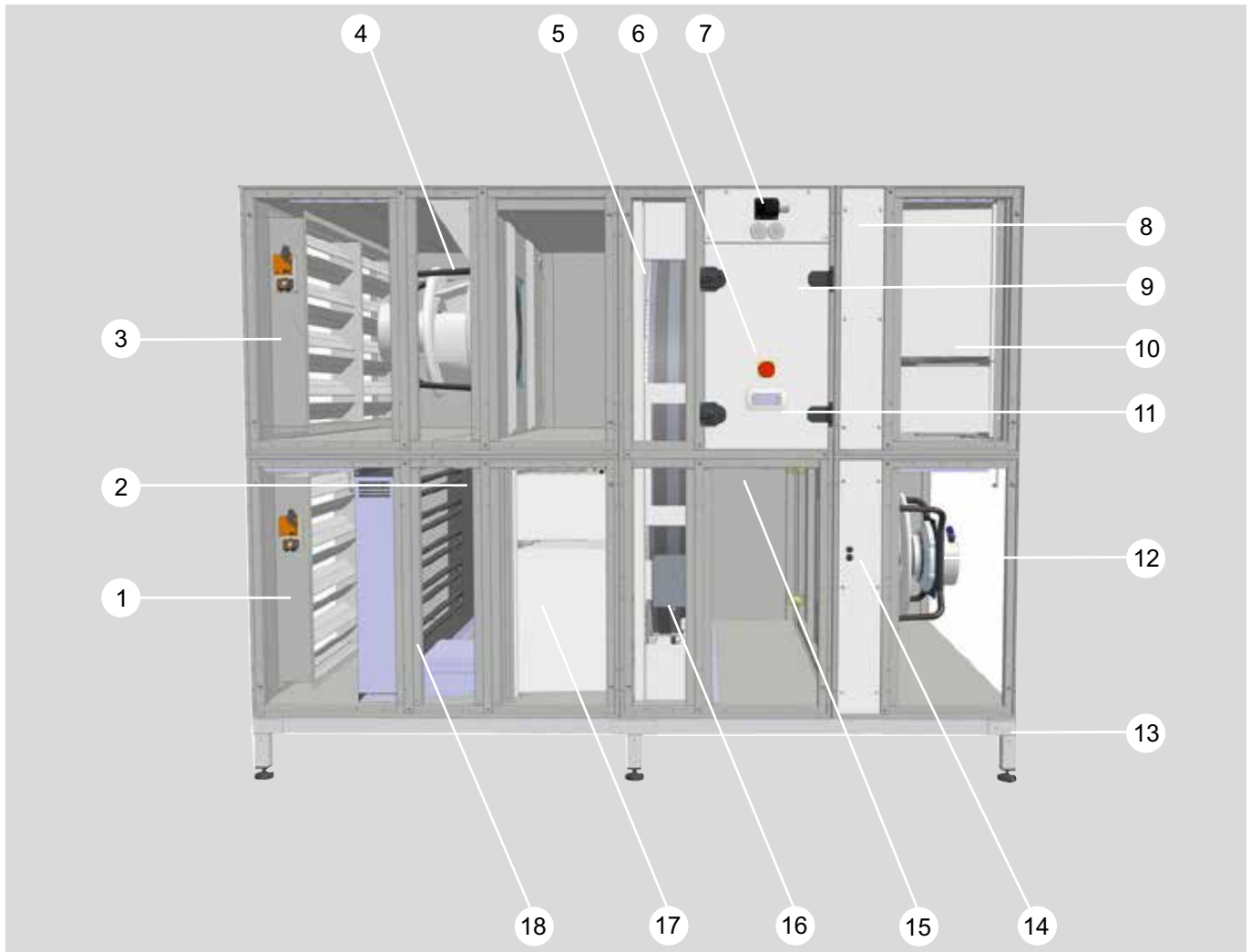
Type		CRL-iH-1300	CRL-iH-2500	CRL-iH-3500
Unit layout		Single piece	Single piece	Three piece
Length L	mm	1525 / 1525*	1626 / 1626*	1626 / 1830*
Length L1	mm	-	-	508
Length L2 (rotor part)	mm	-	-	610 / 814*
Depth D (incl. locks)	mm	750	950	1155
Total height	mm	1309	1716	1716
Height H	mm	1017	1424	1424
Foot height	mm	170	170	170
Control unit height	mm	122	122	122
Duct connection dimensions, horizontal air routing	mm	int. 612x409	Intl 815x612	Intl 1019x612
Weight	kg	266 / 266*	381 / 381*	470 / 490* (130+210+130) (130+230+130)*
Nominal flow rate	m³/h	1300 at 460 Pa (ext.)	2500 at 600 Pa (ext.)	3500 at 980 Pa (ext.)

* with boost damper

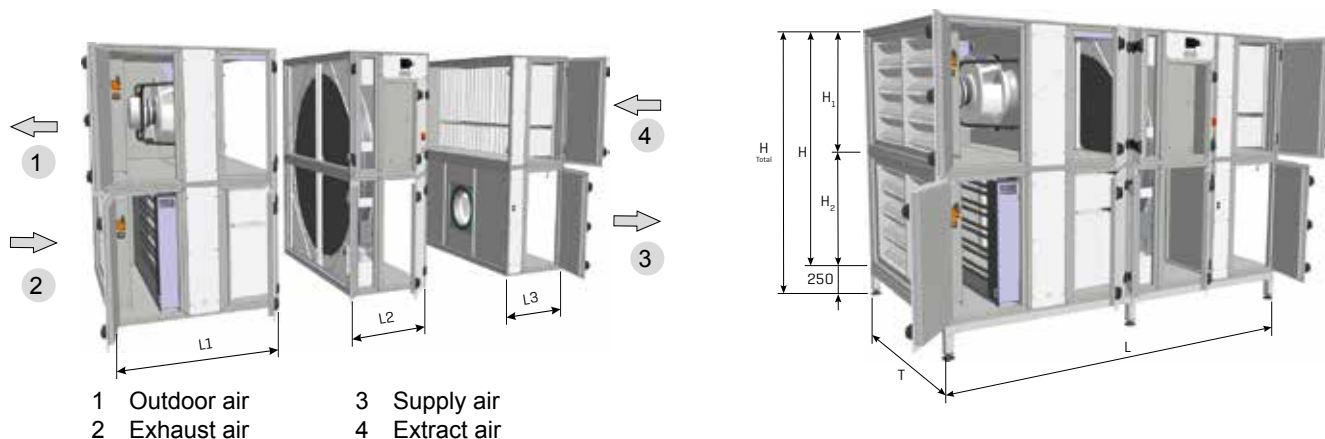
Type		CRL-iH-4800	CRL-iH-6200	CRL-iH-9000
Unit layout		Three piece	Three piece	Three piece
Length L	mm	1728	1932	2136
Length L1	mm	610	712	814
Length L2 (rotor part)	mm	508	508	508
Depth D (incl. locks)	mm	1360	1665	2070
Total height	mm	1716	1716	1919
Height H	mm	1424	1424	1627
Foot height	mm	170	170	170
Control unit height	mm	122	122	122
Duct connection dimensions, horizontal air routing	mm	intl 1222x612	intl 1527x612	intl 1934x714
Weight	kg	590 (180+230+180)	715 (220+275+220)	845 (275+295+275)
Nominal flow rate	m³/h	4800 at 450Pa (ext.)	6200 at 680Pa (ext.)	9000 at 1000Pa (ext.)

CRL-iH evo max

Comfort thermal wheel heat exchanger ventilation unit for internal installation with horizontal duct connection (example provided is CRL-iH-11000 evo max with boost damper)



- | | |
|--|---|
| 1 Outdoor air damper with servomotor | 10 Extract air filter |
| 2 Differential pressure switch for filter monitoring | 11 BMK programming unit |
| 3 Ventilation air damper with servomotor | 12 EC fan, supply air |
| 4 EC fan, extract air | 13 Base frame |
| 5 TWHE thermal wheel heat exchanger | 14 Test connector for flow rate calculation |
| 6 Repair switch | 15 Boost damper with servomotor (optional) |
| 7 Panel for onsite cable entry | 16 Control TWHE |
| 8 Differential pressure switch for filter monitoring | 17 Outdoor air filter |
| 9 control panel | 18 Filter pre-dryer incl. control cabinet (accessory) |



Type		CRL-iH-11000 evo max	CRL-iH-13500 evo max
Unit layout		Five piece	Five piece
Length L	mm	2950 / 2950*	2950 / 2950*
Length L1	mm	1424	1424
Length L2 (rotor part)	mm	814 / 814*	814 / 814*
Length L3	mm	712	712
Depth D (incl. locks)	mm	1970	1970
Total height	mm	2284	2894
Height H	mm	2034	2644
Internal frame (optional)	mm	250	250
Height H1 / H2	mm	1017	1322
Duct connection dimensions, horizontal air routing	mm	Intl 1832x917	Intl 1832x1222
Weight of standard unit	kg	1370 (590+460+320)	1550 (660+490+400)
Weight of base frame	kg	60	90
Nominal flow rate	m³/h	11000 at 1000 Pa (ext.)	13500 at 800Pa (ext.)

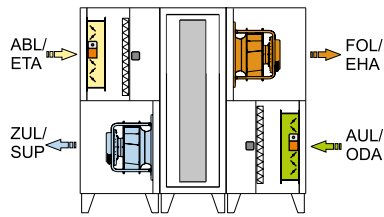
* with boost damper

Type		CRL-iH-16500 evo max	CRL-iH-19500 evo max
Unit layout		Five piece	Five piece
Length L	mm	2950 / 2950*	2950 / 2950*
Length L1	mm	1424	1424
Length L2 (rotor part)	mm	814 / 814*	814 / 814*
Length L3		712	712
Depth D (incl. locks)	mm	2275	2580
Total height	mm	2894	2894
Height H	mm	2644	2644
Internal frame (optional)	mm	250	250
Height H1 / H2	mm	1322	1322
Duct connection dimensions, horizontal air routing	mm	Intl 2137x1222	Intl 2442x1222
Weight of standard unit	kg	1790 (710+630+450)	2020 (790+720+510)
Weight of base frame	kg	110	120
Nominal flow rate	m³/h	16500 at 750 Pa (ext.)	19500 at 950 Pa (ext.)

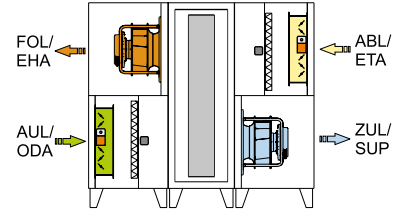
* with boost damper

Access side in supply air direction, left

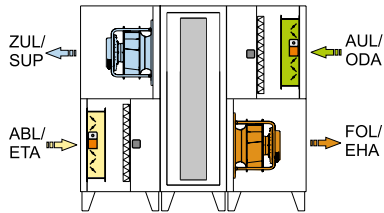
Access side in supply air direction, right



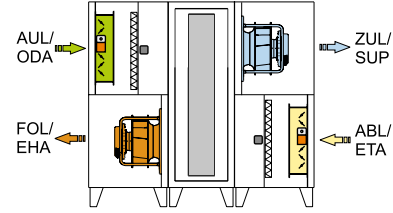
-L1



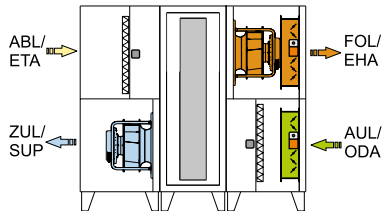
-R1



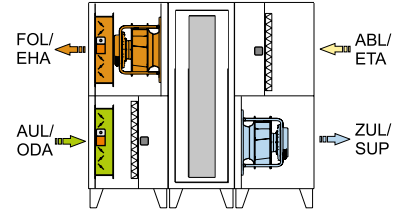
-L2



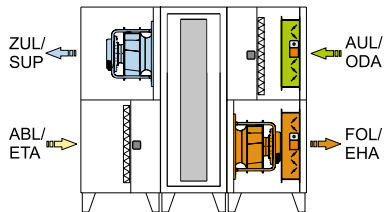
-R2



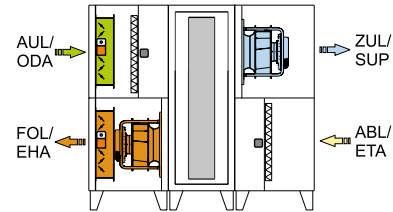
-L3^{1,2}



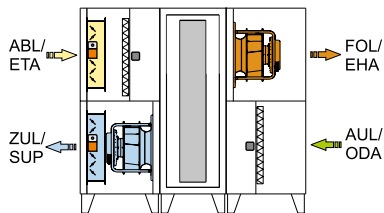
-R3^{1,2}



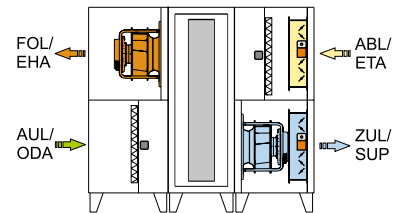
-L4^{1,2}



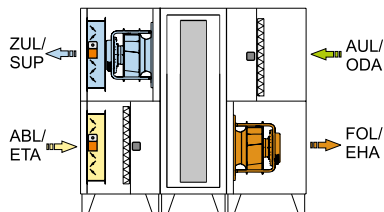
-R4^{1,2}



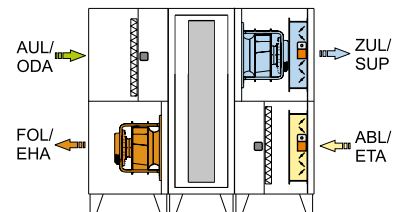
-L5



-R5



-L6

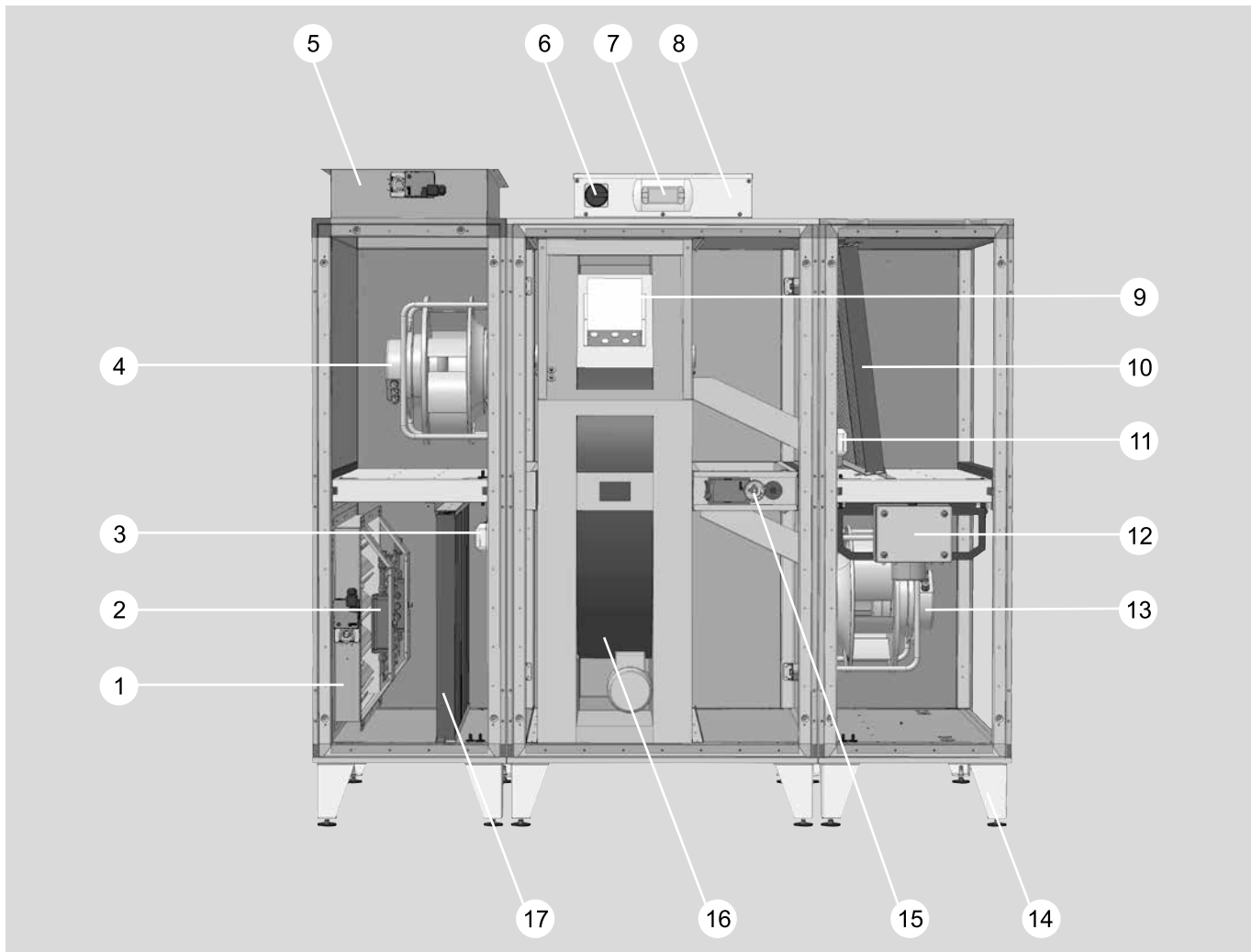


-R6

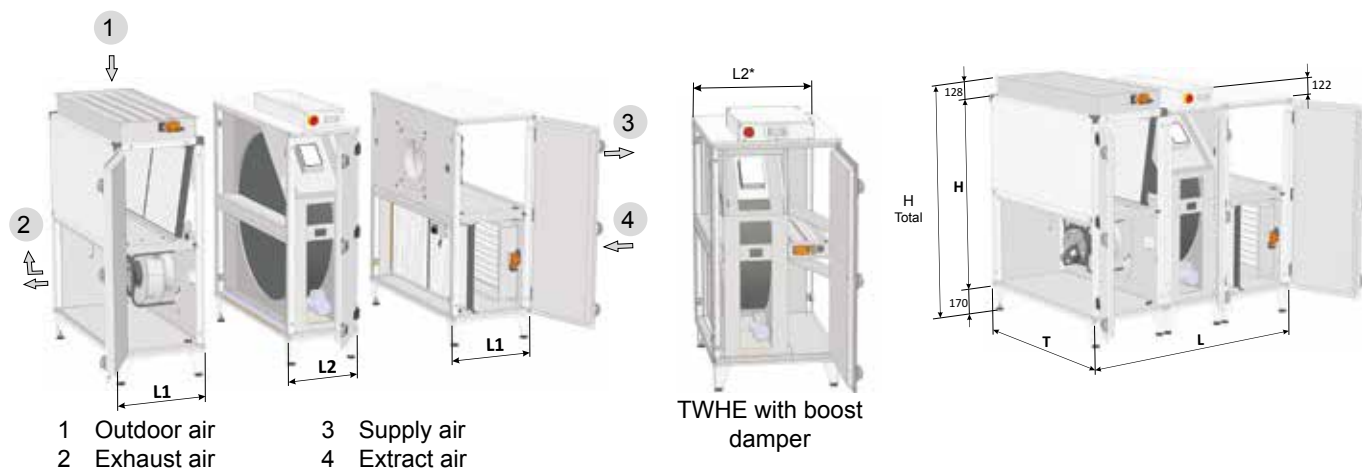
¹For CRL-iH-1300/-2500/-3500, these versions are available with a boost damper.

²CRL-iH evo max types are available in these versions

CRL-iDH Comfort thermal wheel heat exchanger ventilation unit energy efficient and comfortable ventilation with vertical/horizontal duct connection (example provided is CRL-iDH-3500 with boost damper)



- | | |
|--|---|
| 1 Outdoor air damper with servomotor | 10 Compact filter, extract air |
| 2 Filter pre-dryer (accessory) | 11 Differential pressure switch for filter monitoring |
| 3 Differential pressure switch for filter monitoring | 12 Electric reheating coil available for CRL-1300/-2500/-3500 (accessory) |
| 4 EC fan, extract air | 13 EC fan, supply air |
| 5 Ventilation air damper with servomotor | 14 Adjustable feet |
| 6 Repair switch | 15 Boost damper with servomotor optional for CRL-1300/-2500/-3500 |
| 7 BMK programming unit | 16 TWHE thermal wheel heat exchanger |
| 8 control panel | 17 Compact filter, outdoor air |
| 9 TWHE control unit | |



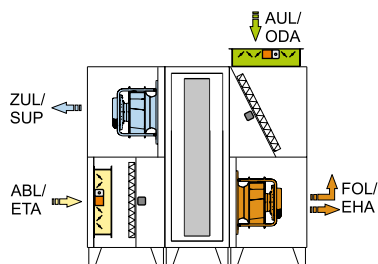
Type		CRL-iDH-1300	CRL-iDH-2500	CRL-iDH-3500
Unit layout		Single piece	Single piece	Three piece
Length L	mm	1525 / 1525*	1626 / 1626*	1626 / 1830*
Length L1	mm	-	-	508
Length L2 (rotor part)	mm	-	-	610 / 814*
Depth D (incl. locks)	mm	750	950	1155
Total height	mm	1315	1722	1722
Height H	mm	1017	1424	1424
Foot height	mm	170	170	170
Control unit height	mm	122	122	122
Duct connection dimensions, horizontal air routing	mm	int. 612x409	Intl 815x612	Intl 1019x612
Duct connection dimensions, vertical air routing	mm	Intl 596x307	Intl 799x307	Intl 1019x408
Weight	kg	266 / 266*	381 / 381*	470 / 490* (130+210+130) (130+230+130)*
Nominal flow rate	m³/h	1300 at 460 Pa (ext.)	2500 at 600 Pa (ext.)	3500 at 980 Pa (ext.)

* with boost damper

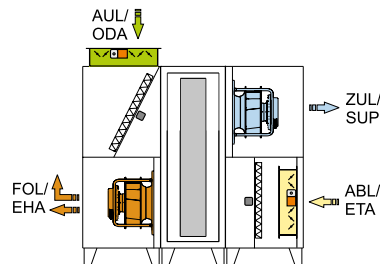
Type		CRL-iDH-4800	CRL-iDH-6200	CRL-iDH-9000
Unit layout		Three piece	Three piece	Three piece
Length L	mm	1728	1932	2136
Length L1	mm	610	712	814
Length L2 (rotor part)	mm	508	508	508
Depth D (incl. locks)	mm	1360	1665	2070
Total height	mm	1722	1722	1925
Height H	mm	1424	1424	1627
Foot height	mm	170	170	170
Control unit height	mm	122	122	122
Duct connection dimensions, horizontal air routing	mm	intl 1222x612	intl 1527x612	intl 1934x714
Duct connection dimensions, vertical air routing	mm	intl 1222x510	intl 1527x612	intl 1934x714
Weight	kg	590 (180 + 230 + 180)	715 (220 + 275 + 220)	845 (275 + 295 + 275)
Nominal flow rate	m³/h	4800 at 450 Pa (ext.)	6200 at 680 Pa (ext.)	9000 at 1000 Pa (ext.)

Access side in supply air direction, left

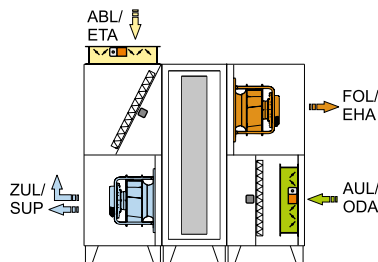
Access side in supply air direction, right



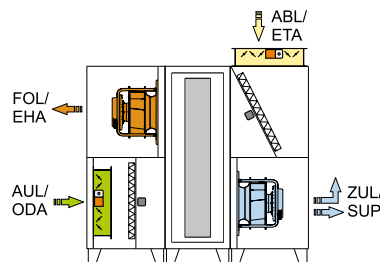
-L1



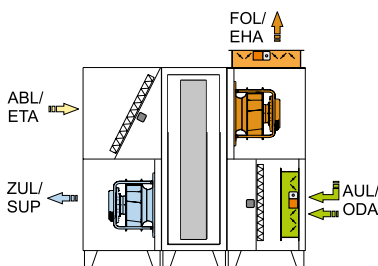
-R1



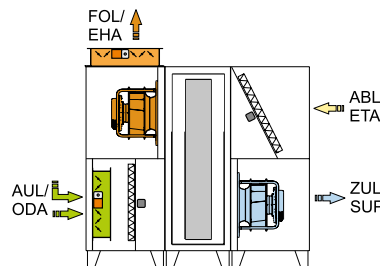
-L2



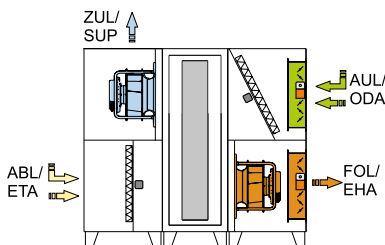
-R2



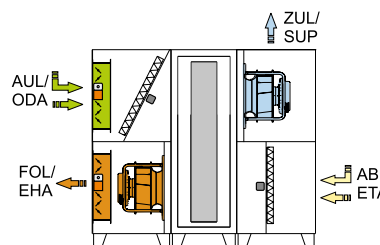
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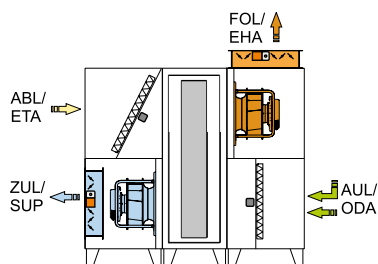
-R3¹



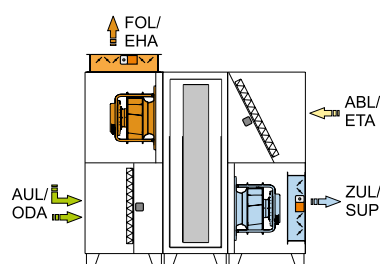
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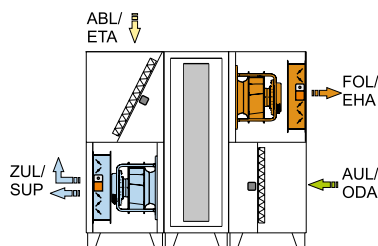
-R4¹



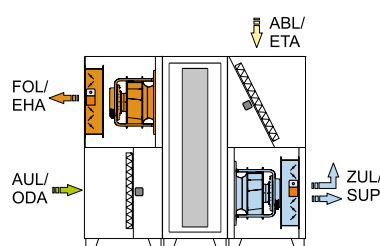
-L5



-R5



-L6

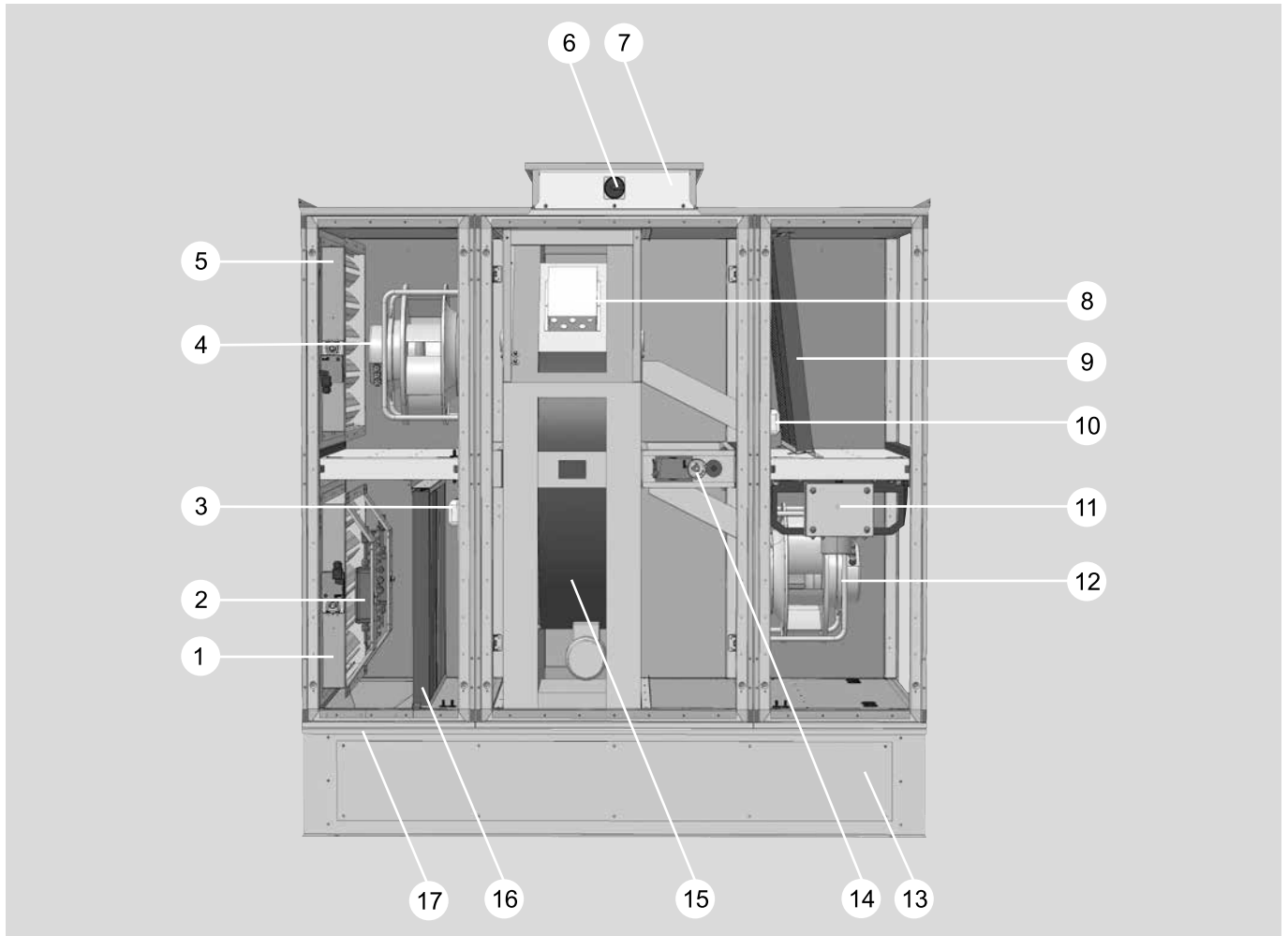


-R6

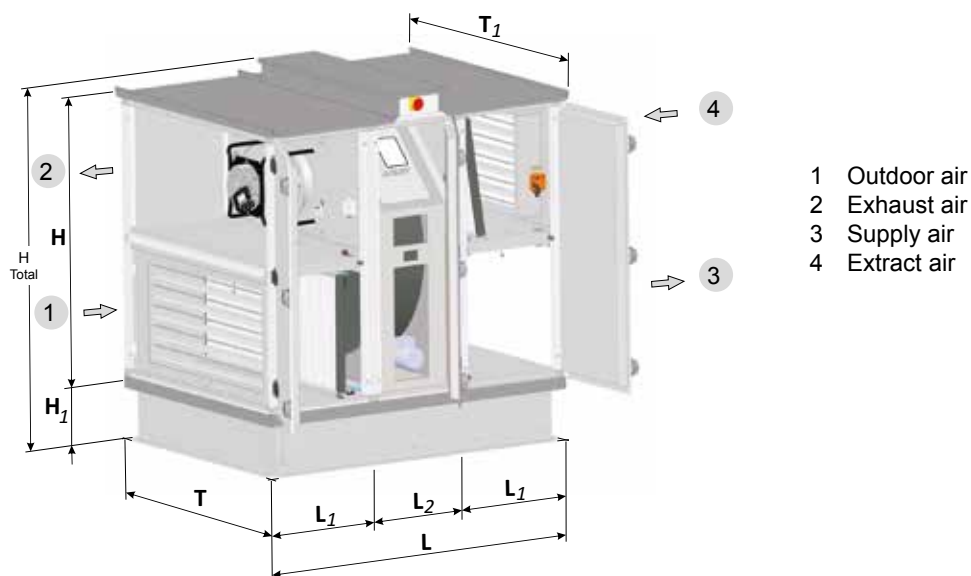
Other versions available; see the WOLF sizing program.

¹For CRL-1300/-2500/-3500, these versions are available with a rapid heat-up damper.

CRL-A Comfort thermal wheel heat exchanger ventilation unit for external installation (weather-resistant) with horizontal duct connection (example provided is CRL-A-3500 with boost damper)



- | | |
|---|---|
| 1 Outdoor air damper with servomotor | 11 Electric reheating coil available for CRL-1300/-2500/-3500 (accessory) |
| 2 Filter pre-dryer (accessory) | 12 EC fan, supply air |
| 3 Differential pressure switch for filter monitoring | 13 Base frame |
| 4 EC fan, extract air | 14 Boost damper with servomotor optional for CRL-1300/-2500/-3500 |
| 5 Ventilation air damper with servomotor | 15 TWHE thermal wheel heat exchanger |
| 6 Repair switch | 16 Compact filter, outdoor air |
| 7 control panel | 17 Connectors for DN 50 trap |
| 8 TWHE control unit | |
| 9 Compact filter, extract air | |
| 10 Differential pressure switch for filter monitoring | |



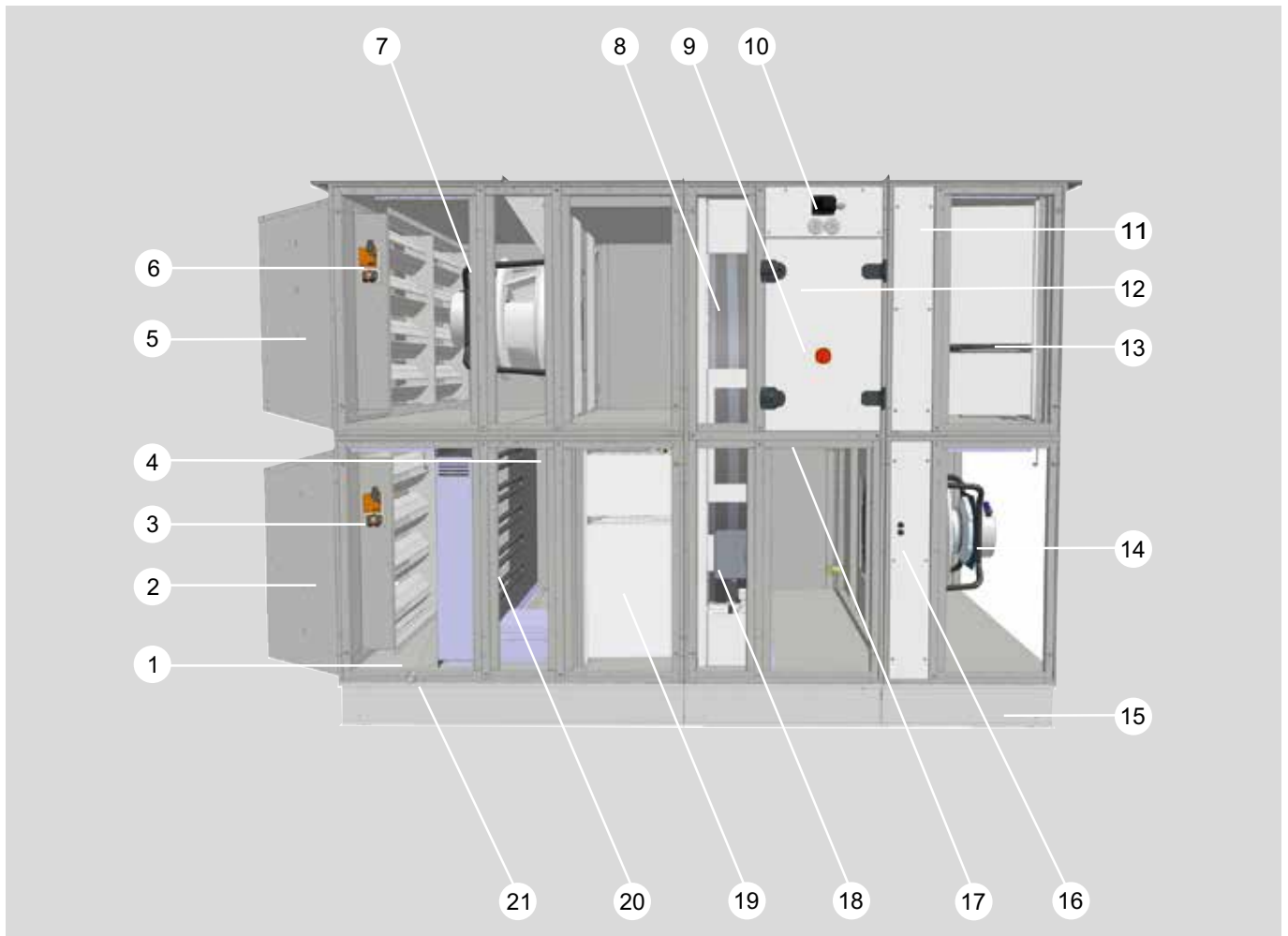
Type		CRL-A-1300	CRL-A-2500	CRL-A-3500
Unit layout		Single piece	Single piece	Three piece
Length L	mm	1525 / 1525*	1626 / 1626*	1626 / 1830*
Length L1	mm	-	-	508
Length L2 (rotor part)	mm	-	-	610 / 814*
Depth D	mm	712	915	1118
Total depth T1	mm	812	1015	1218
Total height	mm	1457	1864	1864
Height H	mm	1017	1424	1424
Base frame H1	mm	305	305	305
Duct connection dimensions, horizontal air routing	mm	int. 612x409	Intl 815x612	Intl 1019x612
Weight	kg	320 / 320*	445 / 445*	530 / 550*
Nominal flow rate	m³/h	1300 at 460 Pa (ext.)	2500 at 600 Pa (ext.)	3500 at 980 Pa (ext.)

* with boost damper

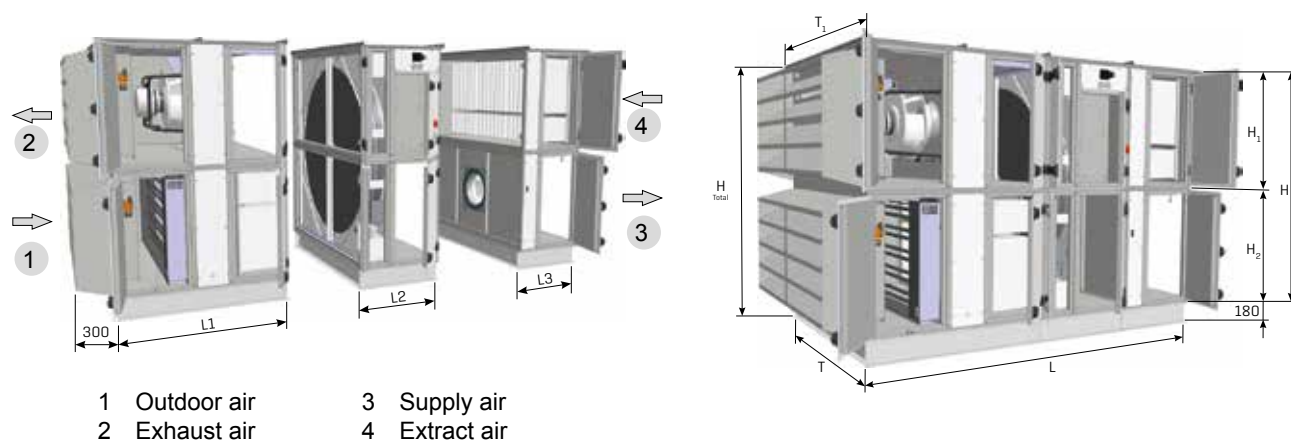
Type		CRL-A-4800	CRL-A-6200	CRL-A-9000
Unit layout		Three piece	Three piece	Three piece
Length L	mm	1728	1932	2136
Length L1	mm	610	712	814
Length L2 (rotor part)	mm	508	508	508
Depth D	mm	1322	1626	2034
Total depth T1	mm	1422	1726	2134
Total height	mm	1864	1864	2067
Height H	mm	1424	1424	1627
Base frame H1	mm	305	305	305
Duct connection dimensions, horizontal air routing	mm	intl 1222x612	intl 1527x612	intl 1934x714
Weight	kg	660	800	960
Nominal flow rate	m³/h	4800 at 450Pa (ext.)	6200 at 680Pa (ext.)	9000 at 1000Pa (ext.)

CRL-A evo max

Comfort thermal wheel heat exchanger ventilation unit for external installation (weather-resistant) with horizontal duct connection (example provided is CRL-A-11000 with boost damper)



- | | | | |
|----|--|----|--|
| 1 | Condensate pan | 11 | Differential pressure switch for filter monitoring |
| 2 | Intake hood with mist eliminator | 12 | control panel |
| 3 | Outdoor air damper with servomotor | 13 | Extract air filter |
| 4 | Differential pressure switch for filter monitoring | 14 | EC fan, supply air |
| 5 | Intake hood | 15 | Base frame |
| 6 | Ventilation air damper with servomotor | 16 | Test connector for flow rate calculation |
| 7 | EC fan, extract air | 17 | Boost damper with servomotor (optional) |
| 8 | TWHE thermal wheel heat exchanger | 18 | TWHE control unit |
| 9 | Repair switch | 19 | Outdoor air filter |
| 10 | Panel for onsite cable bushing | 20 | Filter pre-dryer incl. control cabinet (accessory) |
| | | 21 | Connectors for R 1 ^{1/4} trap |



Type		CRL-A-11000 evo max	CRL-A-13500 evo max
Unit layout		Five piece	Five piece
Length L	mm	2950 / 2950*	2950 / 2950*
Length L1	mm	1424	1424
Length L2 (rotor part)	mm	814 / 814*	814 / 814*
Length L3	mm	712	712
Depth D	mm	1932	1932
Depth T1 (incl. roof overhang)	mm	2032	2032
H1 / H2	mm	1017	1322
Total height	mm	2214	2824
Height H	mm	2034	2644
Base frame height	mm	180	180
Duct connection dimensions, horizontal air routing	mm	Intl 1832x917	Intl 1832x1222
Weight of standard unit	kg	1520 (710+470+340)	1720 (810+510+400)
Weight of base frame	kg	100	100
Nominal flow rate	m³/h	11000 at 1000 Pa (ext.)	13500 at 800 Pa (ext.)

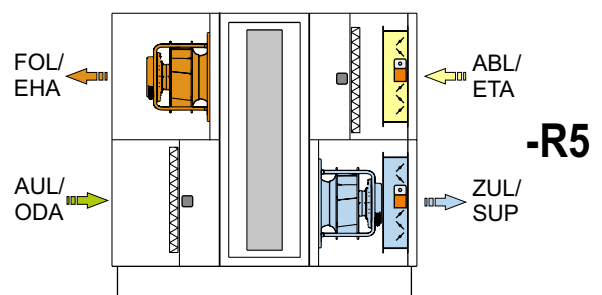
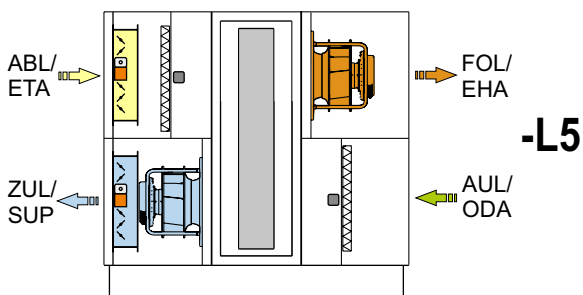
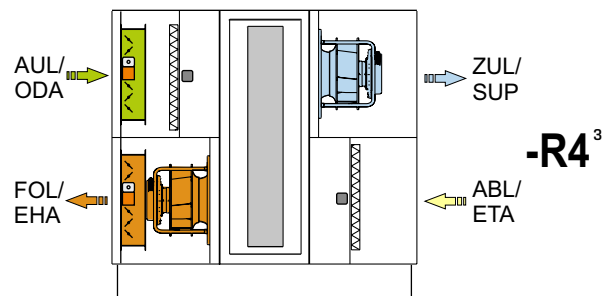
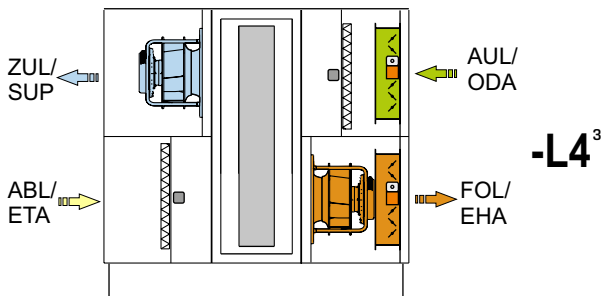
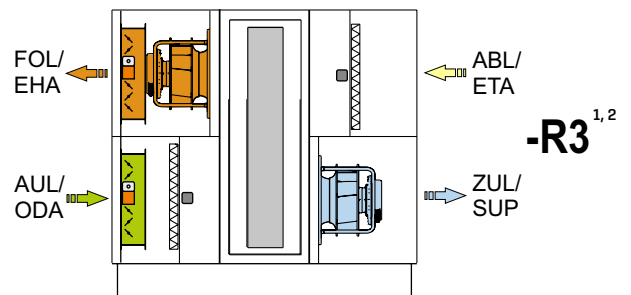
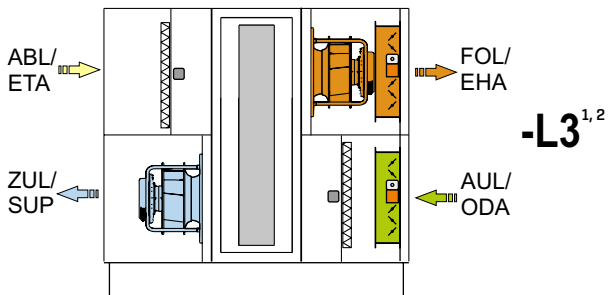
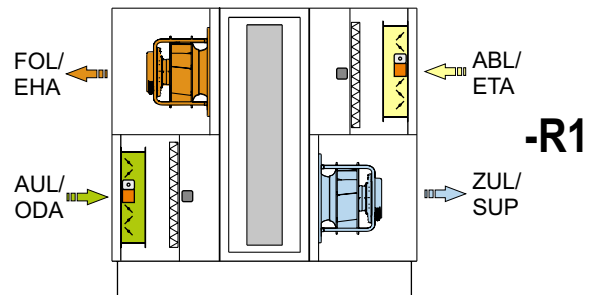
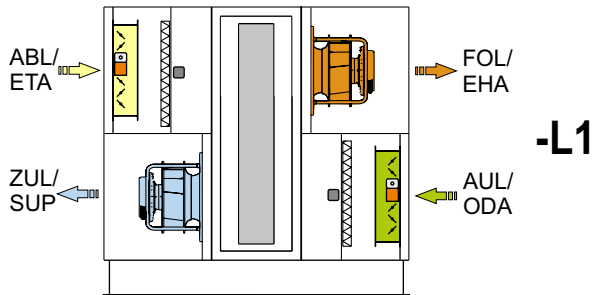
* with boost damper

Type		CRL-A-16500 evo max	CRL-A-19500 evo max
Unit layout		Five piece	Five piece
Length L	mm	2950 / 2950*	2950 / 2950*
Length L1	mm	1424	1424
Length L2 (rotor part)	mm	814 / 814*	814 / 814*
Length L3	mm	712	712
Depth D	mm	2237	2542
Depth T1 (incl. roof overhang)	mm	2337	2642
H1 / H2	mm	1322	1322
Total height	mm	2824	2824
Height H	mm	2644	2644
Base frame height	mm	180	180
Duct connection dimensions, horizontal air routing	mm	Intl 2137x1222	Intl 2442x1222
Weight of standard unit	kg	1990 (890+640+460)	2260 (990+750+520)
Weight of base frame	kg	110	120
Nominal flow rate	m³/h	16500 at 750 Pa (ext.)	19500 at 950 Pa (ext.)

* with boost damper

Access side in supply air direction, left

Access side in supply air direction, right

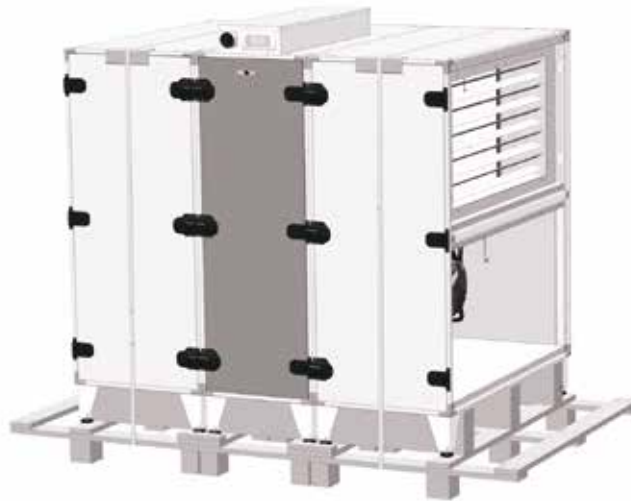


¹For CRL-A-1300/-2500/-3500, these versions are available with a boost damper.

² CRL-A evo max types are available in these versions

³ These versions are only available for CRL-A evo max units

Delivered condition



Delivery

CRL/CRL evo max 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 WOLF of the relevant facts without delay.

Dispose of the transport packaging in accordance with local regulations.

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.

General handling information

Units are supplied fully assembled and fully wired.

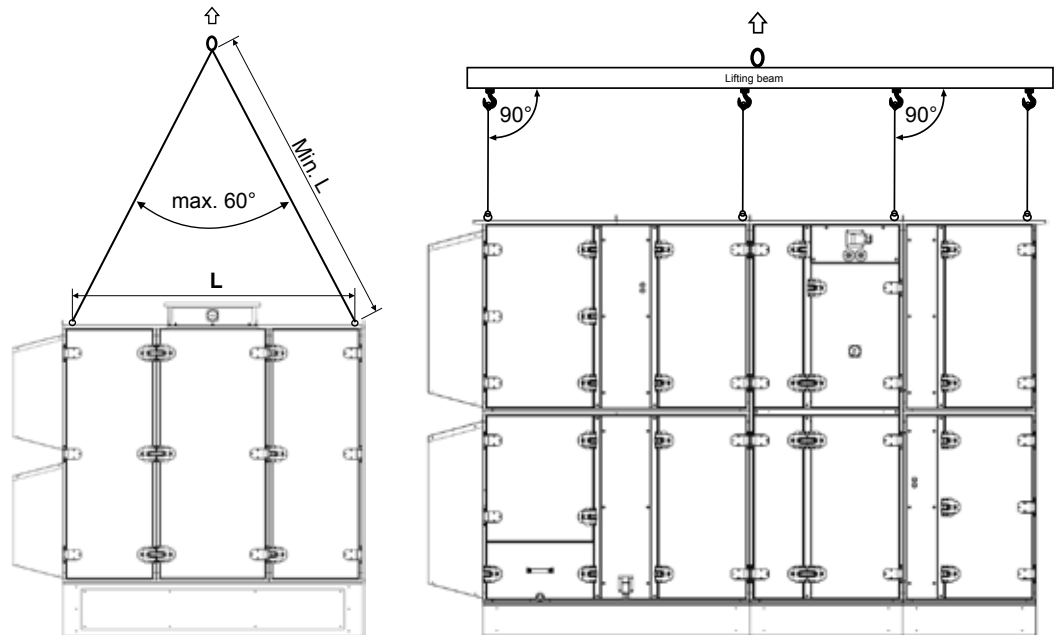
Only transport units in their installation position.

Never tilt the unit when transporting it through doorways or in narrow stairwells (lifts).

Failure to observe these instructions can damage internal components irreparably.

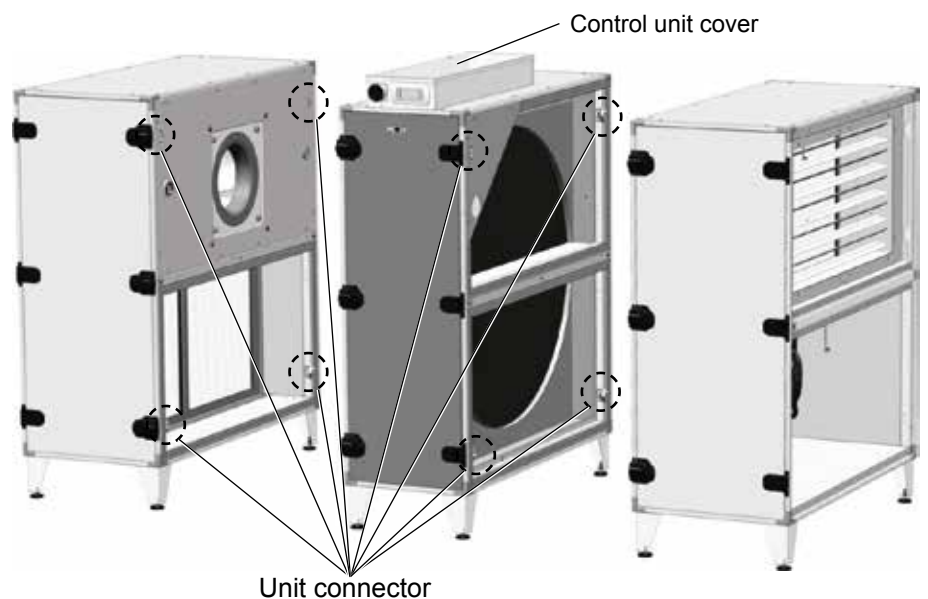
Transport external units

Transport ropes with a minimum length equivalent to the eye bolt distance L must be used when transporting external CRL units with eye bolts. The same applies to the individual transport units of the CRL evo max units. External CRL evo max units may only be lifted as an entire unit with a lifting beam when pulling equally and vertically on all available eye bolts.



Transport Internal units

The 3500, 4800, 6200 and 9000 versions of the CRL internal units can be split into three sections for easier handling. (Delivered as a transport unit) CRL evo max internal units are delivered in 3 transport units as standard. The procedure for connecting the units together is described in Item 13. Unit connectors, hexagon bolts and nuts are used to connect the parts together. Electric lines and control cables can be disconnected and connected again quite simply by means of plug-in connections in the control unit casing.

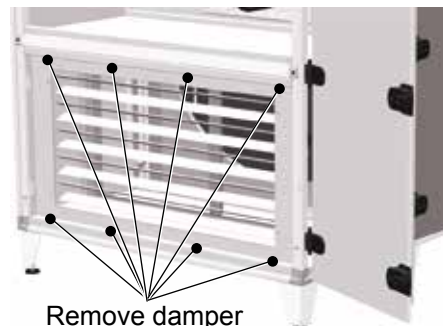


Disassembly of internal units CRL-3500/-4800/-6200/-9000

Undo the unit connector bolts with an SW13 spanner to dismantle the unit. Remove filters before dismantling in order to reach the rear unit connectors. It may be necessary to remove the dampers in order to gain better access to the rear unit connectors in this area.



Remove filter
Unit connector



Remove damper
fixing screws

Before dismantling the unit, disconnect the wiring harnesses from the control unit.

- Remove control unit cover
- Undo cable plug-in connections (fig. 1)
- Pull wiring harnesses into the slant of the thermal wheel heat exchanger (fig. 2)
- Pull wiring harnesses left and right into the external parts (fig. 3)



Fig. 1



Fig. 2



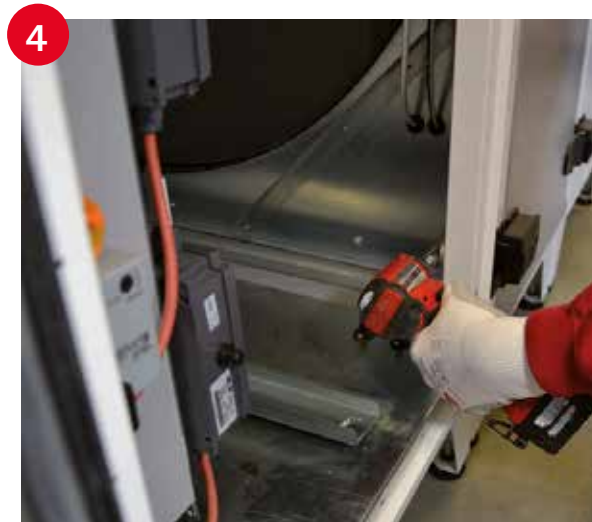
Fig. 3

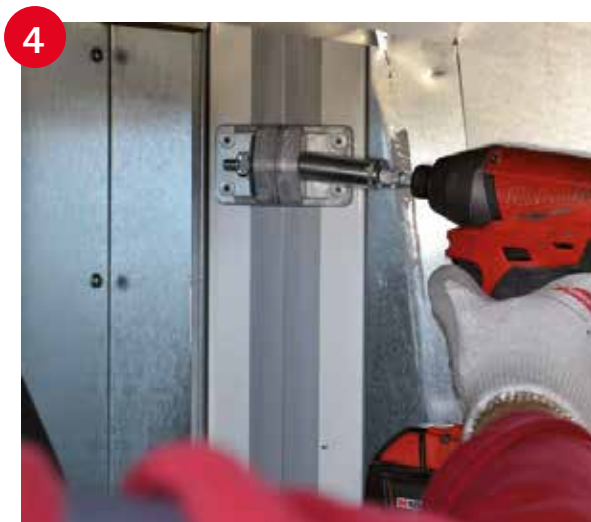
Assembling unit sections

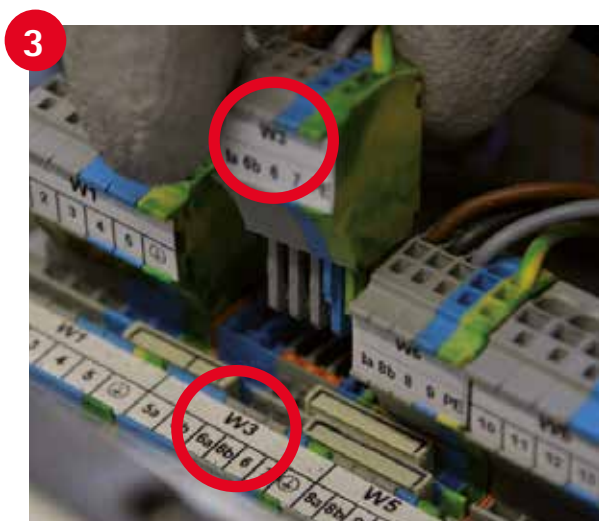
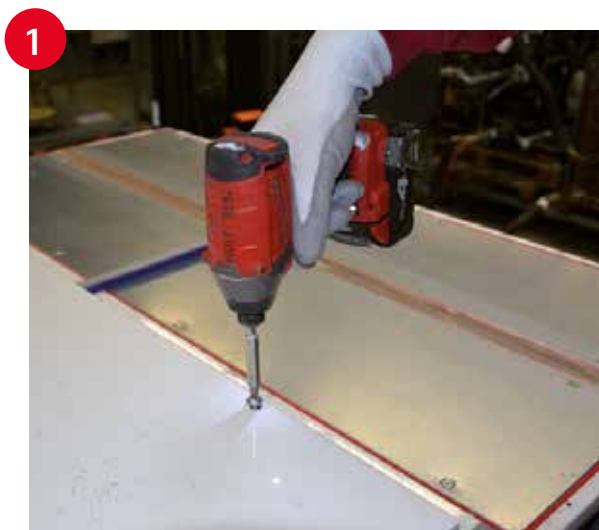
Before assembling the individual unit sections, ensure that they are pushed together completely.

The assembly of cube components can be simplified by using lashing straps. Position unit sections next to each other and pull them together with lashing straps. Then screw the components together via the unit connectors. In order to ensure a secure threaded connection, screw the hexagon bolts manually into the captive nuts during assembly. Only then should they be tightened, for example, with an electric screwdriver.

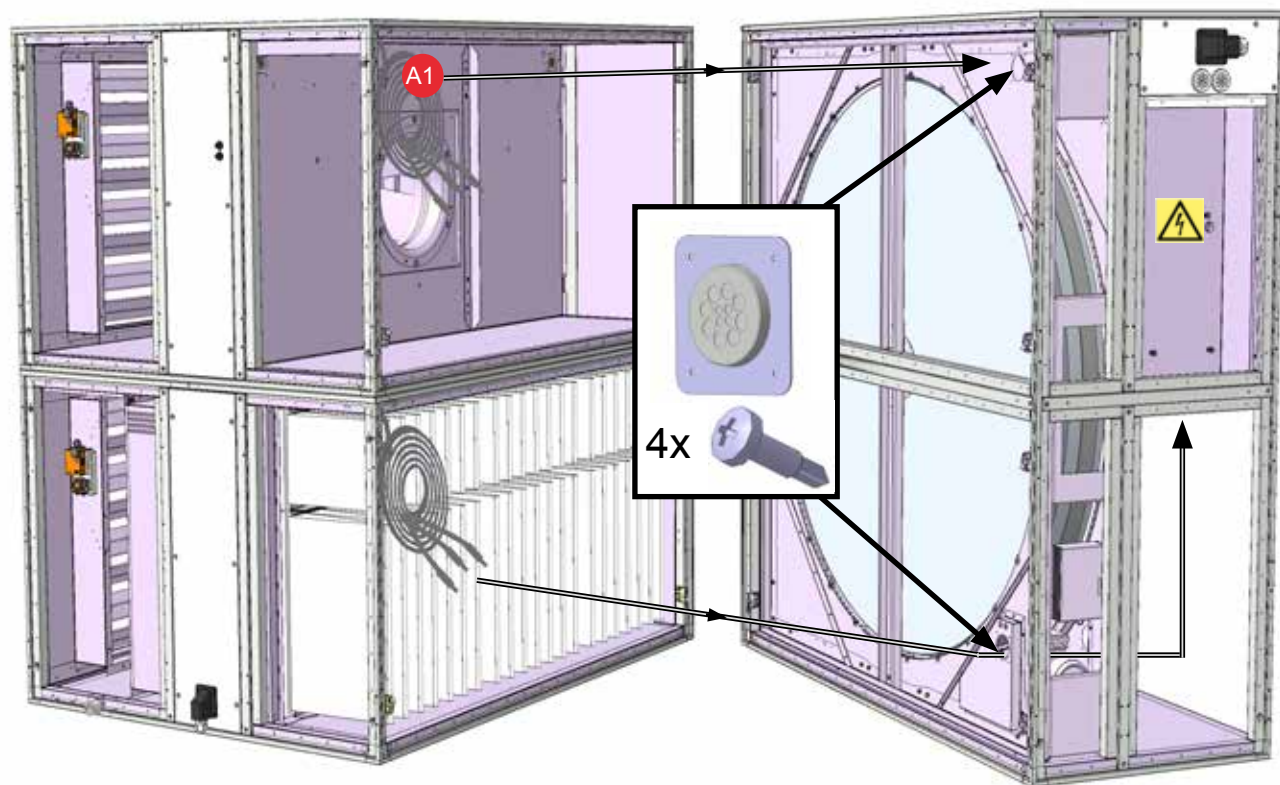
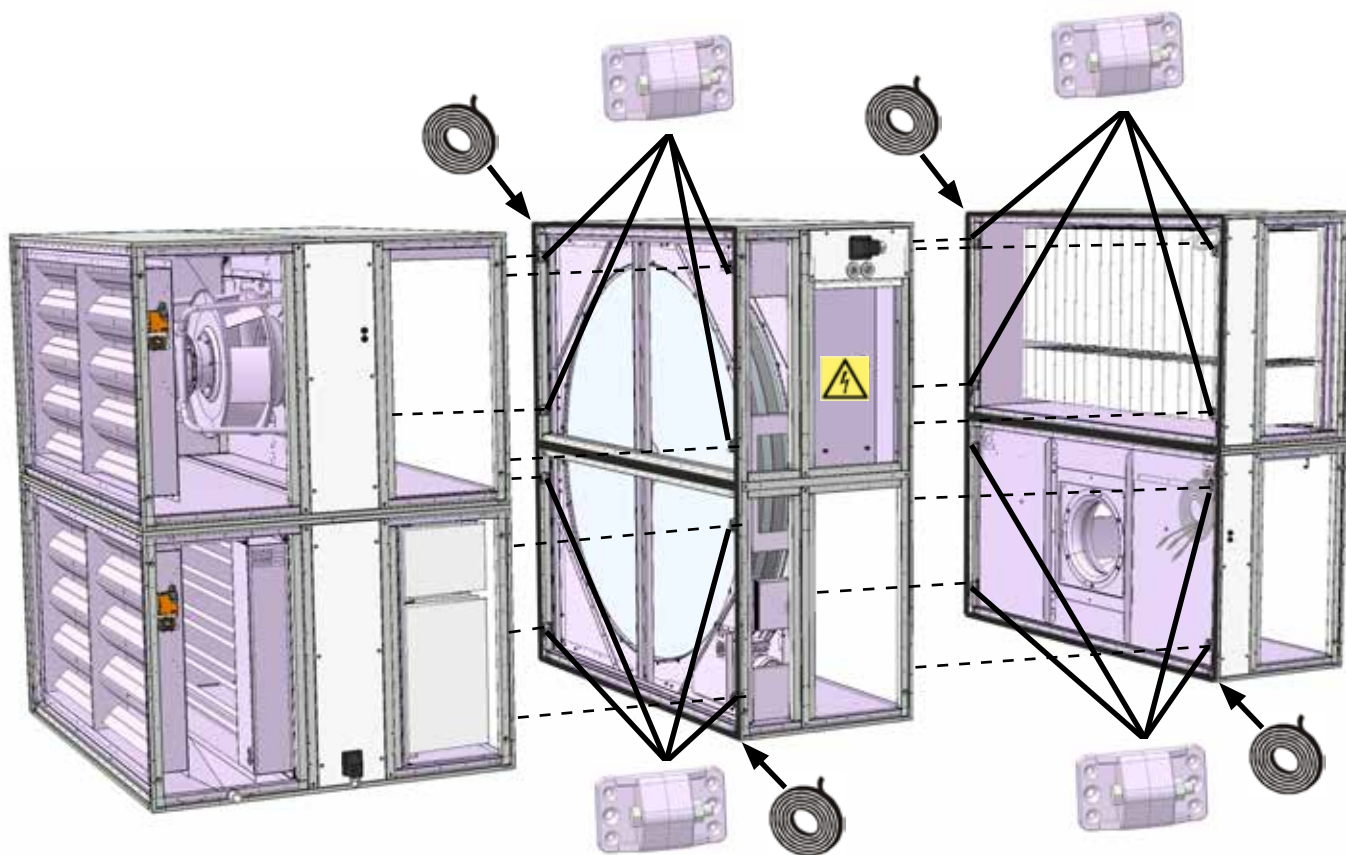
Subsequently, route the wiring harnesses back to the control unit and plug them in (observe the cable designations)!

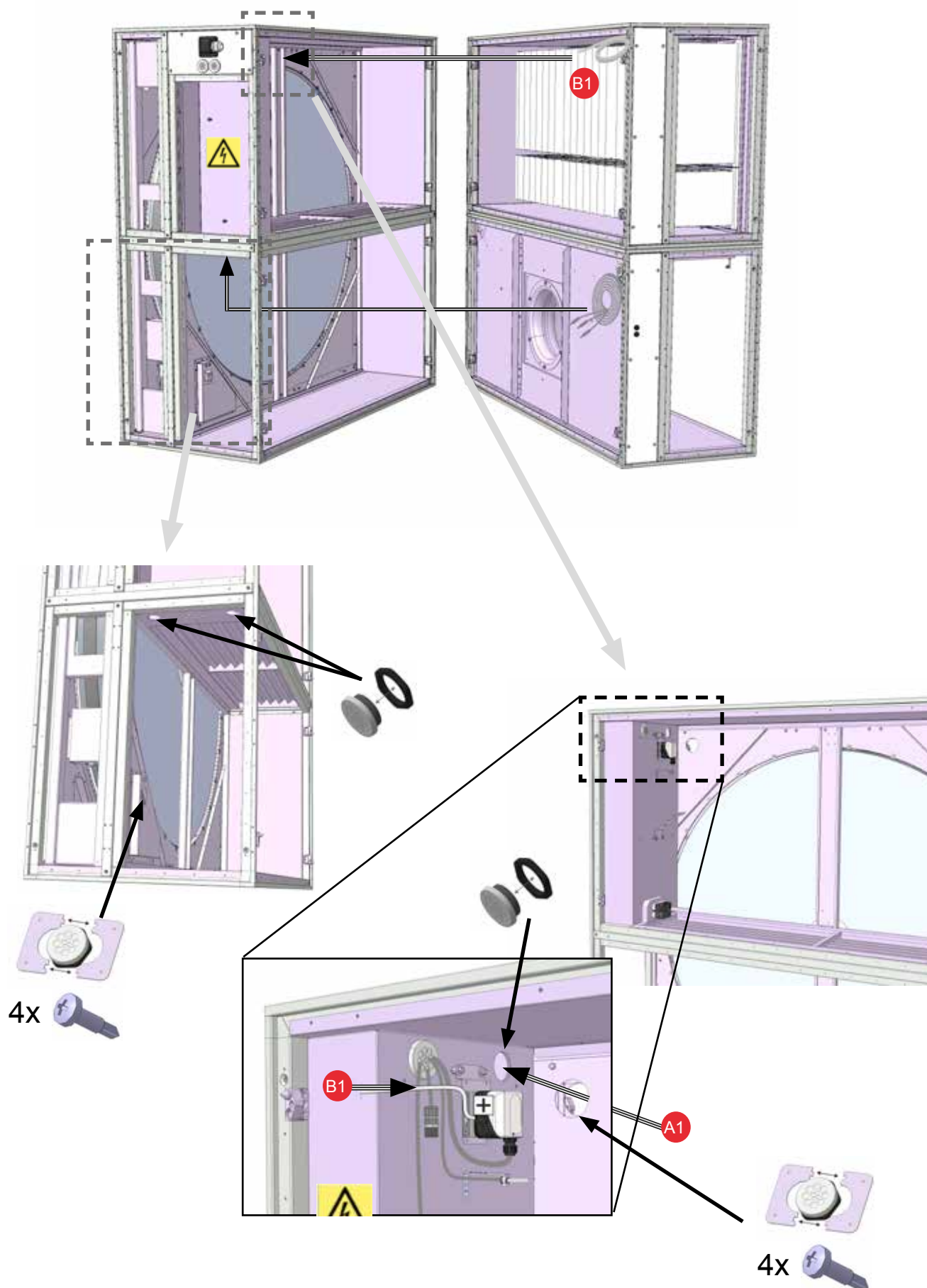


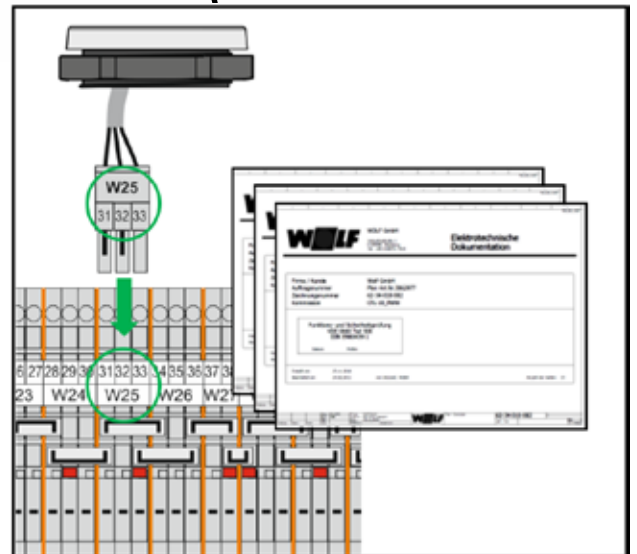
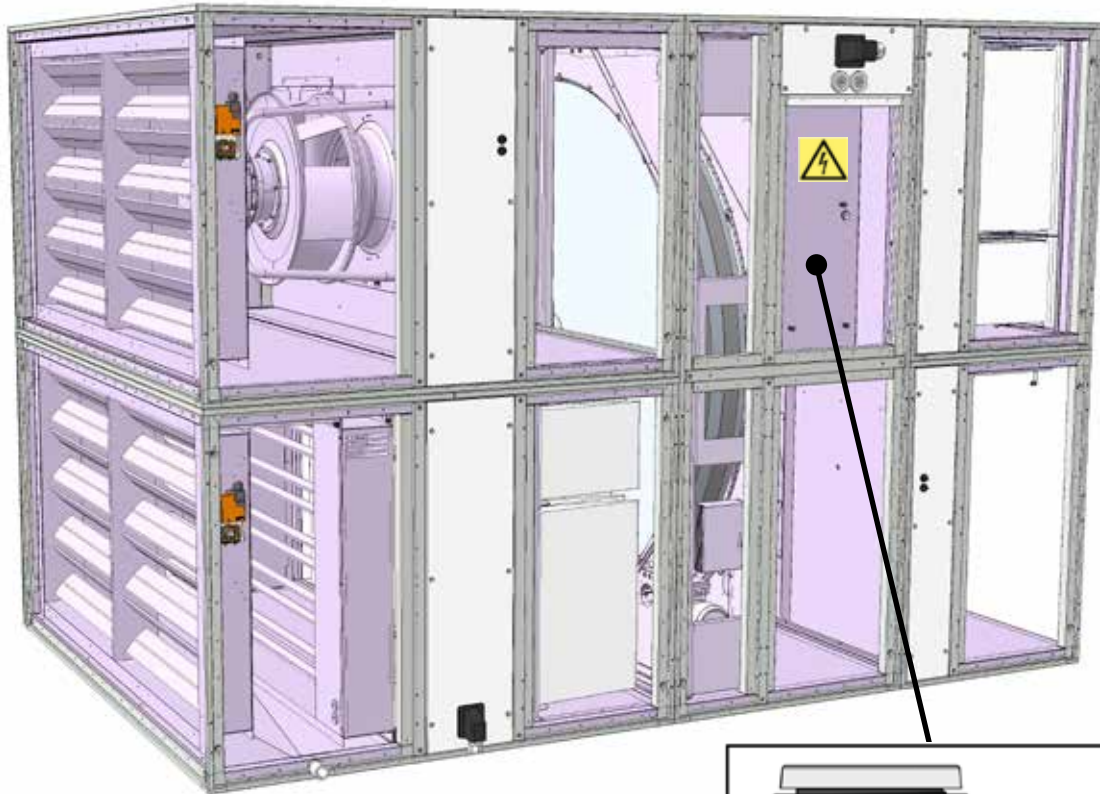




**1****2****3****4**







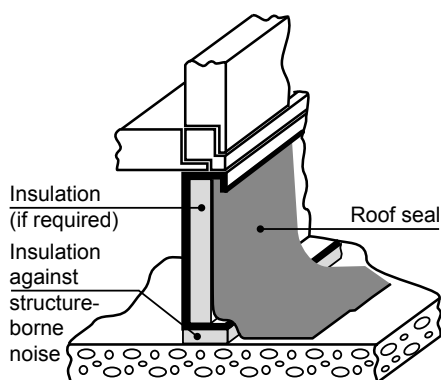


Weatherproof units must not be used for any load-bearing building functions or as a replacement for any part of the roof (VDI 3803 5.1 / DIN EN 13053 6.2).

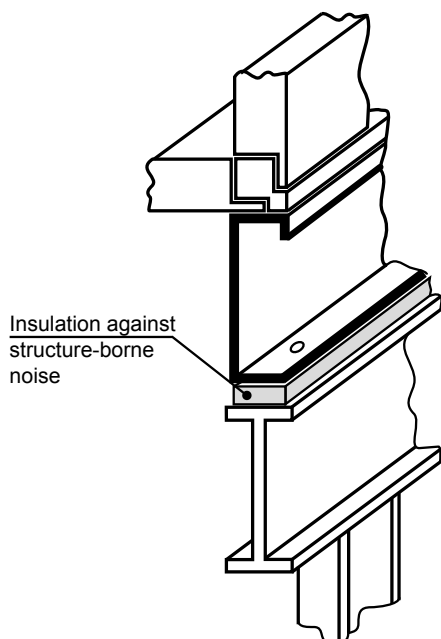
A level, horizontal load-bearing surface is required for siting and installing the external units.

Base frames must be levelled horizontally (check with a spirit level).

To prevent the inspection doors from jamming, the entire base frame must sit on the foundation; point loads are not permissible.



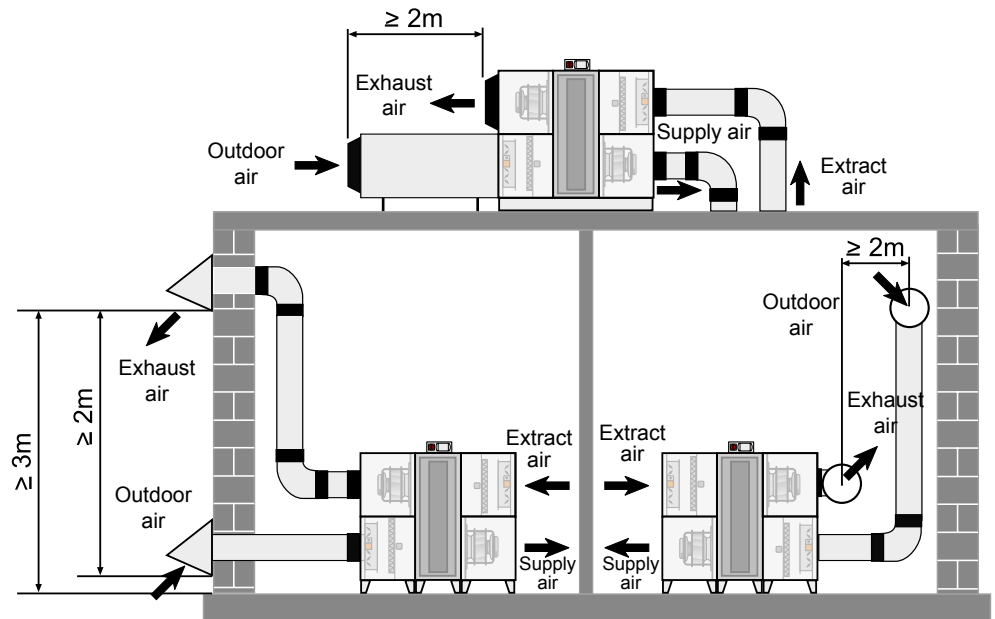
To prevent structure-borne noise transmission from the CRL to the building, insert a permanently flexible intermediate layer between the foundation and the base frame. This intermediate layer should preferably take the form of insulation strips, fitted lengthwise below the base frame.



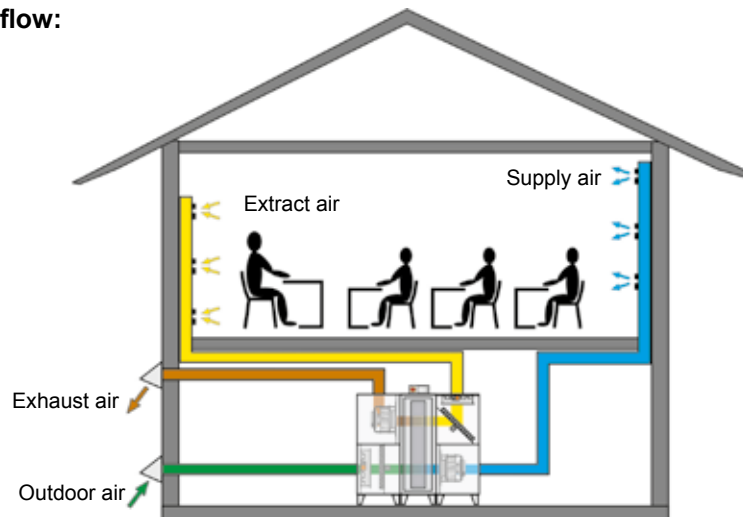
The WOLF base frame and its integration into the roof membrane must be insulated onsite.

In the case of elevated positioning (CRL on onsite framework), the CRL must be secured against wind load.

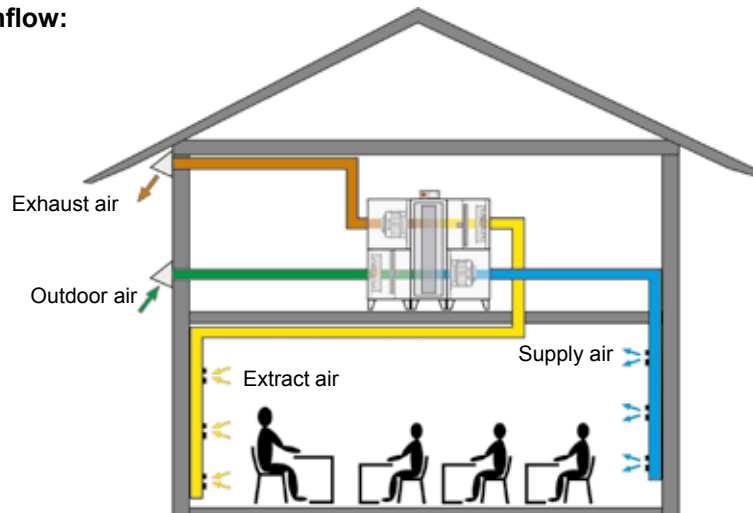
Minimum clearance between outdoor air intake and exhaust air aperture to prevent an "air short circuit" (DIN 13779)



Functional illustration of air inflow:
CRL-iD



Functional illustration of air inflow:
CRL-iH

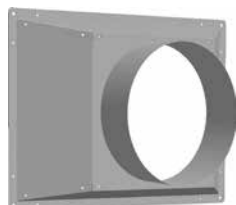


Installation location CRL Indoor unit

The installation location must be level and have adequate load bearing capacity (see data sheets for individual unit weights). Level the unit horizontally (align using the adjustable feet). The installation site must be able to bear the load of the ventilation unit without vibrations on a long term basis. Provide sufficient space at the front of the unit for maintenance work. Site the unit in a room that is free from the risk of frost!

	CRL	1300	2500	3500	4800	6200	9000	11000	13500	16500	19500
Clearance for opening the inspection doors	mm	700	700	700 / 900*	700	800	900	900	900	900	900
Clearance for changing the thermal wheel heat exchanger	mm	800	1000	1200	1400	1700	2100	2000	2000	2300	2600
Clearance for air duct connections above the unit	mm	500	500	600	700	800	900	-	-	-	-
* Unit with boost damper											

Duct connections (onsite)



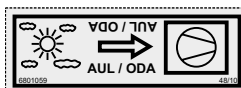
The unit connectors are rectangular.

Round ducts can be connected directly to the connectors using an adaptor insulating collar (from square to round). Insulate the ducts in accordance with applicable regulations and industry standards.

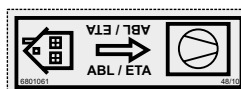
Adaptor insulating collar for round duct connection on internal unit with vertical and horizontal duct connection (accessory)

Air duct connections are identified with the following labels:

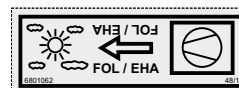
Outdoor air:



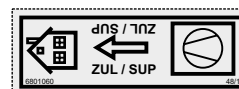
Extract air:



Exhaust air:

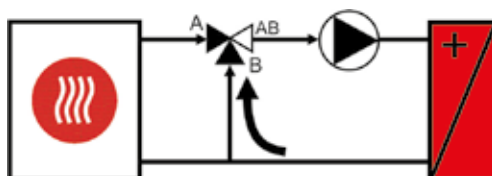


Supply air:



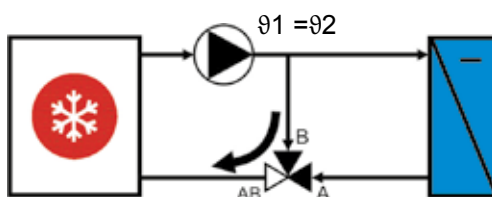
Hydraulic connection

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

Electrical connection

Inlet for onsite cables



CRL



The electrical connection may only be made 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 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.

The control panel has cable entries for connecting the onsite cables.

Entry for onsite cables



CRL evo max



Even when the unit has been shut down, voltage will still be present at terminals and connections of the EC fans. 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 etc. Always fit an earth conductor.

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.

Regularly check the perfect function of all electrical equipment.

Observe the specified electrical fuse/MCB protection ratings.

Any damage or loss resulting from technical modifications to WOLF control units is excluded from our warranty.

Size	Standard units without Integral Elec. heating coil		Standard units with Integral Elec. heating coil	
	Power cable	Onsite fuse/ MCB	Power cable	Onsite fuse/ MCB
CRL-1300	3 x 1.5 mm ²	16 A	5 x 1.5 mm ²	10 A
CRL-2500	5 x 1.5 mm ²	16 A	5 x 2.5 mm ²	20 A
CRL-3500	5 x 2.5 mm ²	20 A	5 x 6.0 mm ²	35 A
CRL-4800	5 x 2.5 mm ²	20 A	-	-
CRL-6200	5 x 4.0 mm ²	25 A	-	-
CRL-9000	5 x 6.0 mm ²	35 A	-	-
CRL-11000	5 x 4.0 mm ²	25 A	-	-
CRL-13500	5 x 6.0 mm ²	35 A	-	-
CRL-16500	5 x 6.0 mm ²	35 A	-	-
CRL-19500	5 x 10 mm ²	50 A	-	-

Size	Rated voltage	max. Fan power consumption	max. Current consumption fans	Fan speed	IP rating / protection class
CRL-1300	1 x 230V (50/60Hz)	1.0kW	4.6A	3080 rpm	IP55 / Iso F
CRL-2500	3 x 400V (50/60Hz)	2.1kW	3.2A	3400 rpm	IP55 / Iso F
CRL-3500	3 x 400V (50/60Hz)	5.0kW	8.0A	2970 rpm	IP 54 / Iso F
CRL-4800	3 x 400V (50/60Hz)	3.4kW	5.2A	2600 rpm	IP 54 / Iso F
CRL-6200	3 x 400V (50/60Hz)	6.0kW	9.2A	2550 rpm	IP 54 / Iso F
CRL-9000	3 x 400V (50/60Hz)	11.0kW	17A	2200 rpm	IP 54 / Iso F
CRL-11000	3 x 400V (50/60Hz)	11.4kW	18A	2250 rpm	IP 54 / Iso F
CRL-13500	3 x 400V (50/60Hz)	14.4kW	23.2A	2260 rpm	IP 54 / Iso F
CRL-16500	3 x 400V (50/60Hz)	13.8kW	21.2A	1910 rpm	IP 54 / Iso F
CRL-19500	3 x 400V (50/60Hz)	21.6kW	34.4A	2130 rpm	IP 54 / Iso F

Commissioning regulations

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

Only work on the unit with it being at zero volt.



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

Observe all local EMC regulations 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 systems

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

In addition, ÖVE regulations and the local building code apply to Austria.

Before commissioning, check whether the operating data 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 unit must be level and safely secured.

Commissioning must be carried out by authorised personnel (WOLF service).

Record the date of commissioning, e.g. in a log book.



In accordance with DIN 1886, tools are required 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).

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 commencing commissioning.



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

- Switch ON the unit isolator.
- Wait until the BMK programming unit initialises and switches to 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 WOLF, 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)
- Check motor currents
- Motor protection (thermal cut-outs / thermistors)
- Air flow monitoring
- Filter monitor
- Actuator, heating / cooling
- Heating circuit pump / cooling circuit pump
- As well as all other system-specific functions



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

Fans

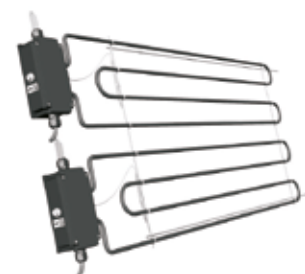


Use tools to tightly seal the doors before commissioning (unit tightness), otherwise there is a risk of motor overload.

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).

Filter pre-dryer (accessory)



To prevent the electric heating coil from switching off, never operate the CRL below its minimum air flow rate.

Follow the relevant safety regulations for electric heating coils.

The electric heating coil must be protected from moisture and water.

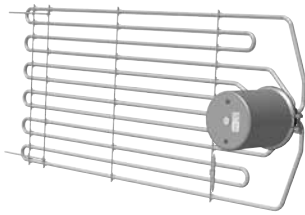
The filter pre-dryer starts automatically at outside temperatures below 5 °C.

Type	CRL	1300	2500	3500	4800	6200	9000
Recomm. Minimum air volume	m ³ /h	600	1200	1800	2400	3100	4500



Type	CRL evo max	11000	13500	16500	19500
Recomm. Minimum air volume	m ³ /h	5500	6500	8000	9500

Electric reheating coil (accessory)



To prevent the electric heating coil from switching off, never operate the CRL below its minimum air flow rate.

Follow the relevant safety regulations for electric heating coils.

The electric heating coil must be protected from moisture and water.

Type	CRL	1300	2500	3500
Recomm. Minimum air volume	m³/h	600	1200	1800

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.

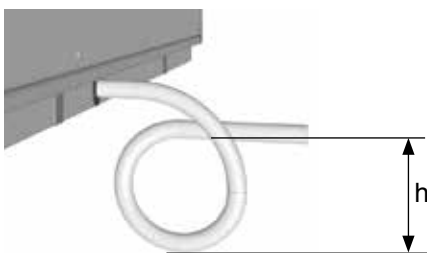
Trap



The effective height of the trap h (mm) must exceed the maximum underpressure or overpressure at the condensate connector (1mm WC = 10Pa).

$$h = 1.5 \times p \text{ (mmWC)} + 50 \text{ mm (min.)}$$

p	=	Under- or overpressure in mmWC according to appliance design
50 mm (WC)	=	Reserve (imprecision in design, evaporation)
1.5	=	Additional Safety factor

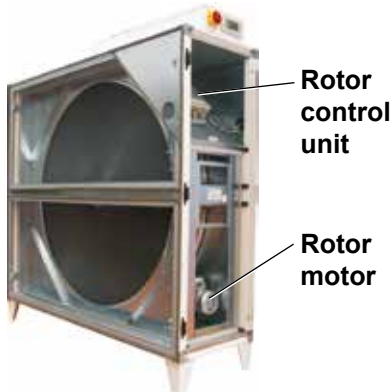


The trap drain line must not be connected directly to the public sewage system, but rather must be able to run out freely. Vent longer drain lines to prevent condensate backing up in the line (provide additional vent in trap drain line).

Heat recovery function with thermal wheel heat exchanger

A rotating cylinder mass (rotor material corrosion-resistant aluminium alloy, wound in corrugated and smooth layers) absorbs heat from the extract air flow and transfers it to the outdoor air. The rotor mass is sealed by a circumferential labyrinth seal. Output is controlled by varying the speed of the drive motor. Force is transmitted from the motor to the rotor by a circumferential V-belt. There is no need for frost protection, a defrosting device or air preheating.

Layout and function of the TWHE control unit



The MicroMax 370W rotor control unit includes the following functions:

- Automatic interval mode
- Variable speed control
- Acceleration and deceleration ramp
- Motor brake on standstill
- Rotation monitor with rotation sensor
- Alarm relay
- Test switch

In principle, the thermal wheel heat exchanger is maintenance-free.

The rotational direction of the TWHE has no effect on heat recovery. When the TWHE control unit is switched off, interval mode ensures further rotation in order to prevent fin soiling.

Function for mode Quick heat-up (optional for CRL-1300/-2500/-3500 and CRL evo max units)



100 % of the extract air flows over the rapid heat-up damper and is routed directly back into the room. In order to achieve the required set room temperature as quickly as possible, the air temperature is raised to a maximum via a reheating coil.

In this operating mode, the ODA and EHA dampers are completely closed; the ETA fan and heat recovery (TWHE) are not operational. The SUP fan is running and delivers the required flow rate.

When the set room temperature has been achieved, the unit switches back into standard control mode.

Flow rate calculation

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

\dot{V} in [m³/h] and Δp_w in [Pa]

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.

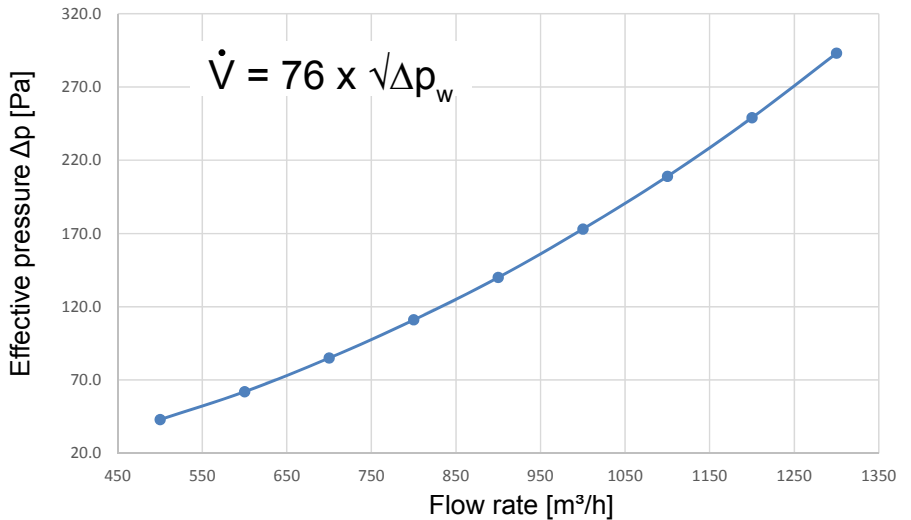
The flow rate can be calculated from the effective pressure Δp_w (differential pressure of the two static pressures) using the following equation. The doors must be closed to determine the correct flow rate. Guide the test hoses over the test connectors towards the outside.

CRL-1300 effective pressure



Δp = effective pressure
(symbolic representation)

The fans used for the CRL-1300 have a k value of 76.



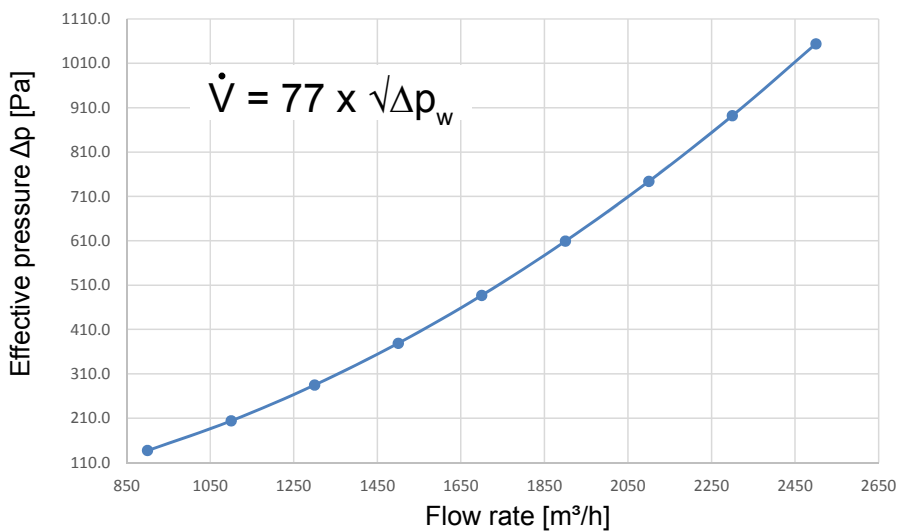
Δp	[Pa]	43	62	85	111	140	173	209	249	293
\dot{V}	[m³/h]	500	600	700	800	900	1000	1100	1200	1300

CRL-2500 effective pressure



Δp = effective pressure
(symbolic representation)

The fans used for the CRL-2500 have a k value of 77.



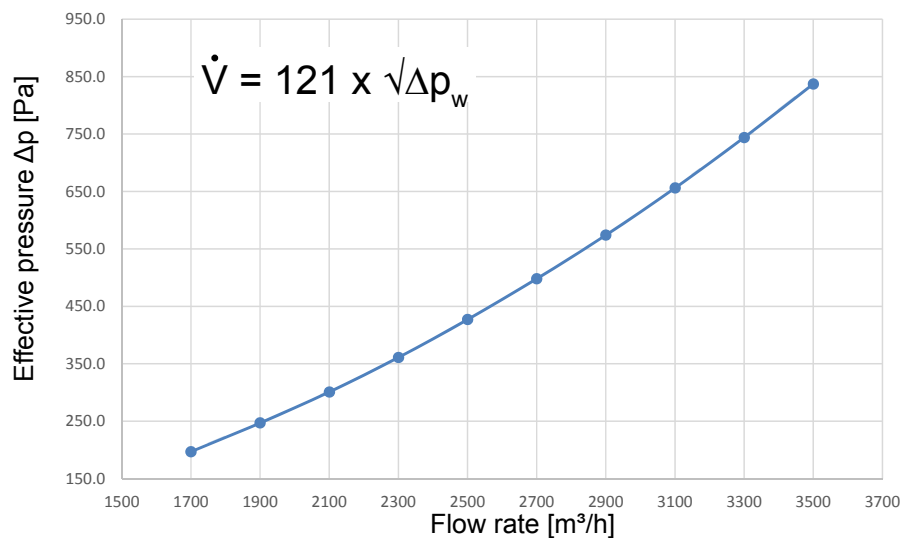
Δp	[Pa]	137	204	285	379	487	609	744	892	1054
\dot{V}	[m³/h]	900	1100	1300	1500	1700	1900	2100	2300	2500

CRL-3500 effective pressure



Δp = effective pressure
(symbolic representation)

The fans used for the CRL-3500 have a k value of 121.



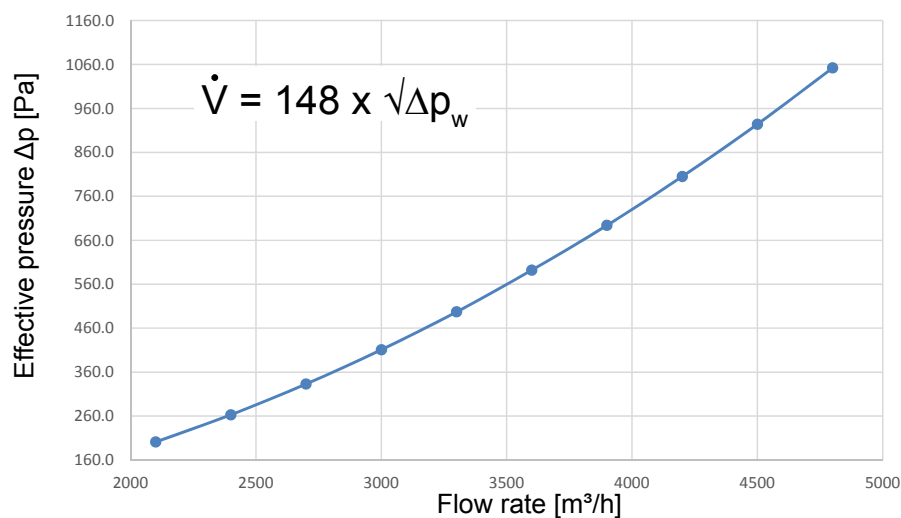
Δp [Pa]	197	247	301	361	427	498	574	656	744	837
\dot{V} [m³/h]	1700	1900	2100	2300	2500	2700	2900	3100	3300	3500

CRL-4800 effective pressure



Δp = effective pressure
(symbolic representation)

The fans used for the CRL-4800 have a k value of 148.



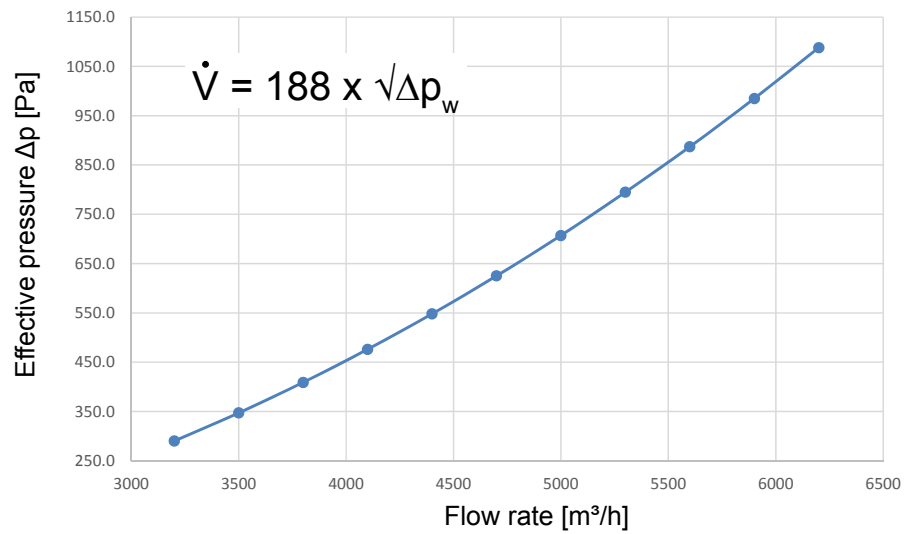
Δp [Pa]	201	263	333	411	497	592	694	805	924	1052
\dot{V} [m³/h]	2100	2400	2700	3000	3800	3600	3900	4200	4500	4800

CRL-6200 effective pressure



Δp = effective pressure
(symbolic representation)

The fans used for the CRL-6200 have a k value of 188.



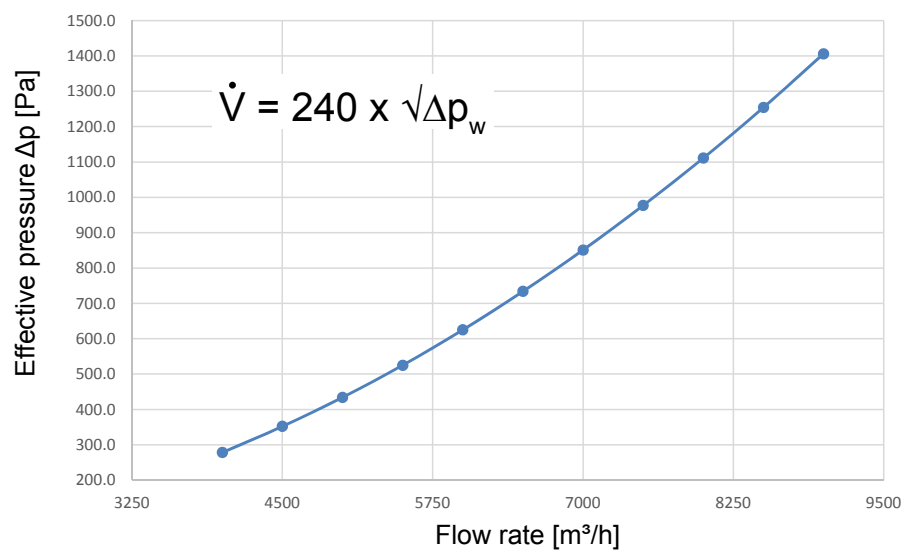
Δp [Pa]	290	347	409	476	548	625	707	795	887	985	1088
\dot{V} [m³/h]	3200	3500	3800	4100	4400	4700	5000	5300	5600	5900	6200

CRL-9000 effective pressure



Δp = effective pressure
(symbolic representation)

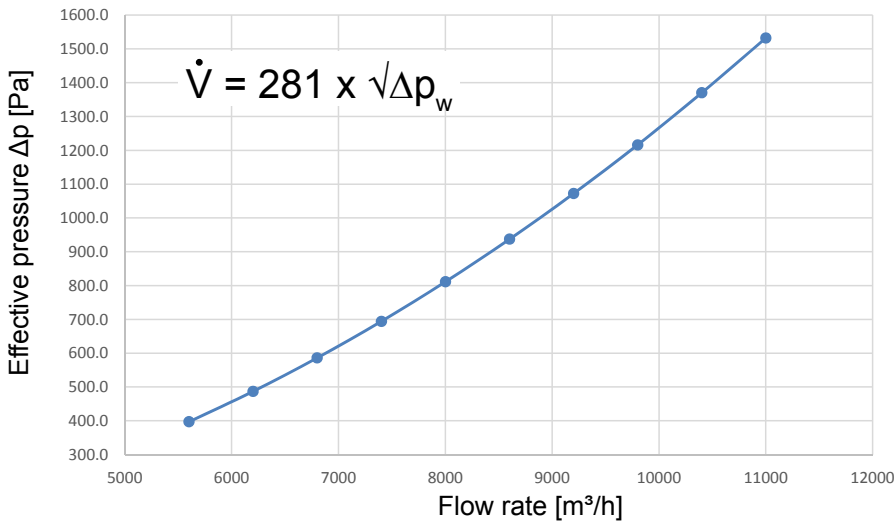
The fans used for the CRL-9000 have a k value of 240.



Δp [Pa]	278	352	434	525	625	734	851	977	1111	1254	1406
\dot{V} [m³/h]	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000

CRL-11000 evo max effective pressure

The fans used for the CRL-11000 have a k value of 281.

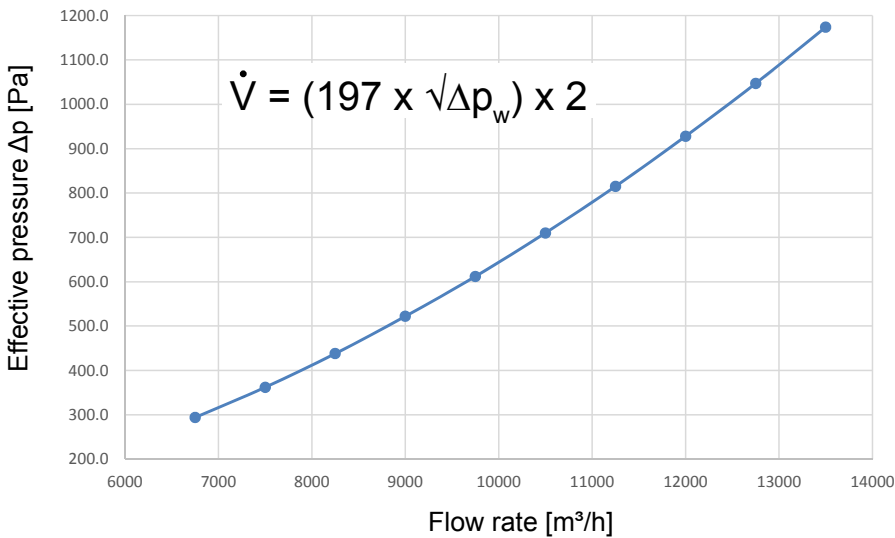


Δp = effective pressure
(symbolic representation)

Δp [Pa]	397	487	586	694	811	937	1072	1216	1370	1532
\dot{V} [m³/h]	5600	6200	6800	7400	8000	8600	9200	9800	10400	11000

CRL-13500 evo max effective pressure

The fans used for the CRL-13500 have a k value of 197.



Δp = effective pressure
(symbolic representation)

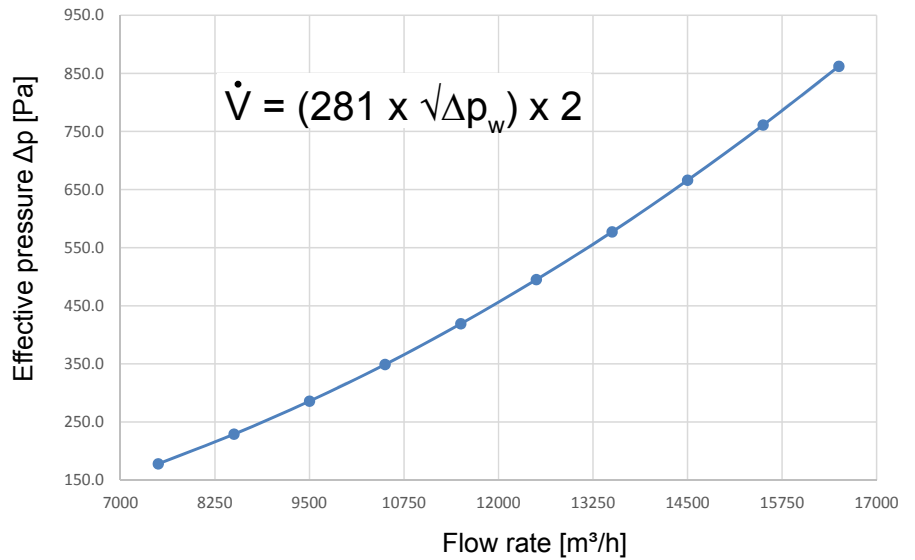
Δp [Pa]	294	362	438	522	612	710	815	928	1047	1174
\dot{V} [m³/h]	6750	7500	8250	9000	9750	10500	11250	12000	12750	13500

CRL-16500 evo max effective pressure



Δp = effective pressure
(symbolic representation)

The fans used for the CRL-16500 have a k value of 281.



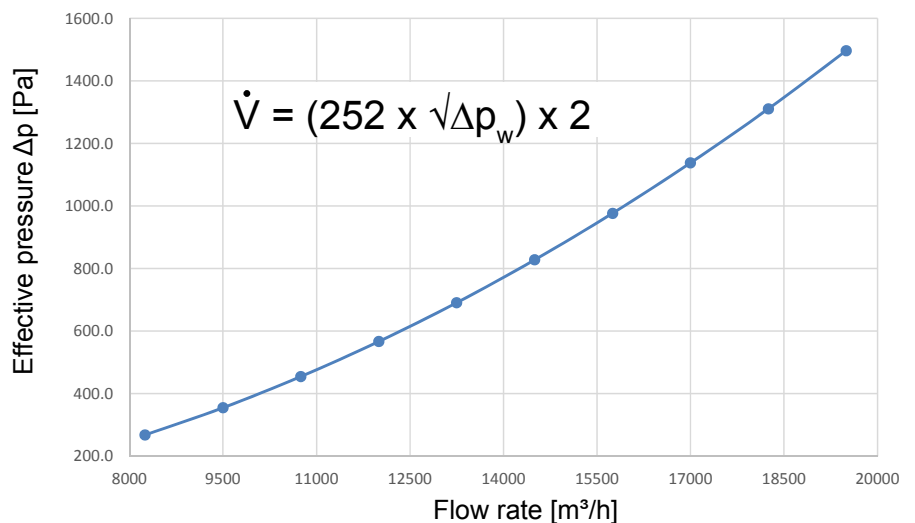
Δp [Pa]	178	229	286	349	419	495	577	666	761	862
\dot{V} [m³/h]	7500	8500	9500	10500	11500	12500	13500	14500	15500	16500

CRL-19500 evo max effective pressure



Δp = effective pressure
(symbolic representation)

The fans used for the CRL-19500 have a k value of 252.



Δp [Pa]	268	355	455	567	691	828	977	1138	1311	1497
\dot{V} [m³/h]	8250	9500	10750	12000	13250	14500	15750	17000	18250	19500

Further settings for the BMK and accessories

Further settings for the BMK programming unit can be found in the operating instructions for the WRS-K control unit.

Accessories are installed in accordance with separate instruction manuals which are provided with the relevant accessories.

Decommissioning

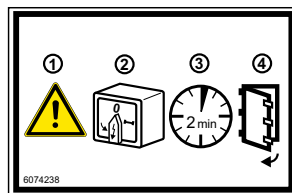
Before starting any maintenance work, switch OFF the isolator and safeguard against unauthorised reconnection. If the isolator is switched back on unintentionally, maintenance staff or others in the vicinity could be at risk from rotating parts.

Wait for the fans to come to a complete standstill before opening the doors (approx. 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.



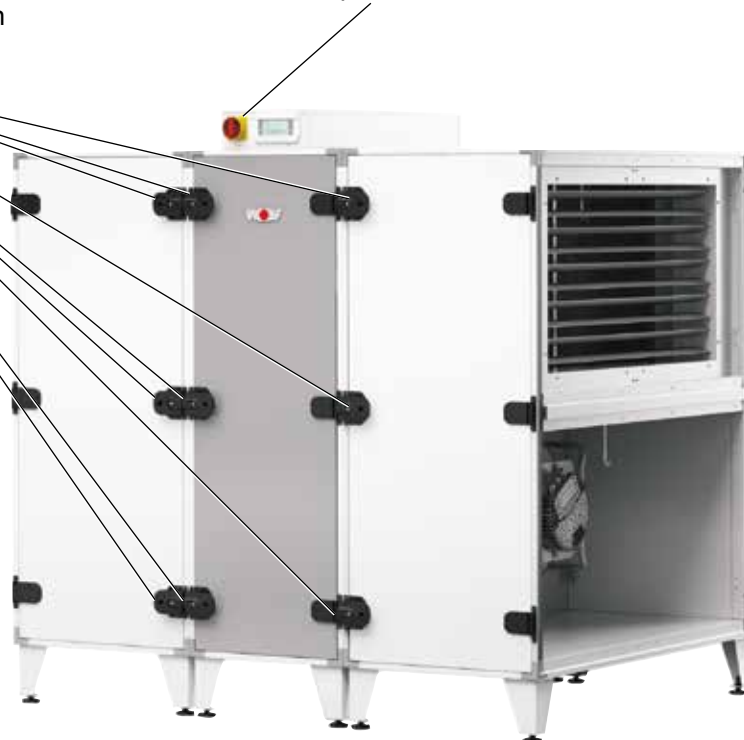
Even when the unit has been shut down, voltage will still be present at terminals and connections of the EC fans. This means there is a risk of electric shock that could result in injury or death.

- 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.



Open inspection doors with quadrant key

Repair switch



Maintenance

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 commissioning: date _____

Activity	Action if required	1 month	3 months	6 months	12 months	24 months
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 fleece	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 countercurrent 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. Replace faulty components only with original WOLF spare parts.

Fan motor unit

**Note**

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

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

Electrical equipment



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

Thermal wheel heat exchanger (TWHE)



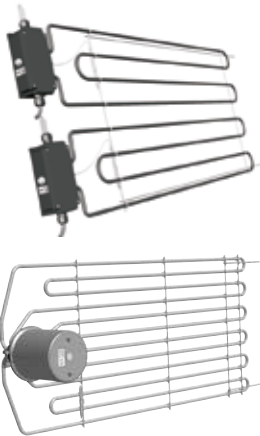
In normal operating conditions, the actuator and rotor bearing are maintenance-free.

Before starting any maintenance work, disconnect the power supply across all poles and secure against reconnection, so that the persons charged with maintenance work cannot be exposed to any risk of crushing or abrasion injuries due to the rotor starting up suddenly if it is switched on unintentionally, the automatic cleaning run commences or the rotor restarts automatically after power failure.

Maintenance work (approx. every 3 months or more frequently if required)

- Check rotor cylinder mass for hygienic condition, damage, corrosion, contamination and foreign bodies, and clean if required.
Compressed air (max. pressure 5 bar) or, for stubborn contamination, a pressure washer (water only; no chemical additives) may be used for cleaning the rotor cylinder mass.
When cleaning, ensure that the cleaning jet hits the cylinder mass at an angle of 90°. Remove dirty water carefully.
- Check seals for hygienic condition, contamination and foreign bodies, and clean if required.
- Check drive belt for wear and tension.
If necessary, have it adjusted or replaced by a contractor or the manufacturer.
- Check rotor for imbalance and lateral trueness, and balance or realign it if required.
- Check bearing for impermissible heating, vibration and bearing noise.
If necessary, have it replaced by a contractor or the manufacturer.

electric coil (accessories)

**Note**

Check and clean at regular intervals.

Cleaning the electric coils:

- Vacuum, taking care not to bend the heating coils
- Blast with compressed air, max. 1 bar

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.

Air dampers



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.

Filter



The filters are not renewable. They must be replaced when they are dirty, or no later than after 12 months.

The filters can be removed from the unit once the inspection doors have been opened (see spare parts).

The clamping levers must be opened (pulled) before pulling out the filters for the CRL evo max units.

Never operate the CRL ventilation unit without filters!

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.

Condensate pan



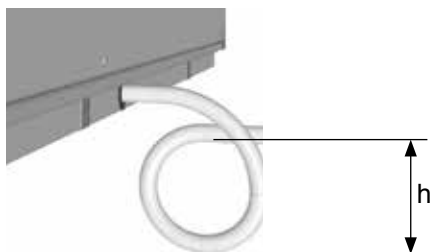
Regularly check the condensate pan for possible soiling and clean if required (see checklist).

Trap



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

Refill the trap with water before returning into use.





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