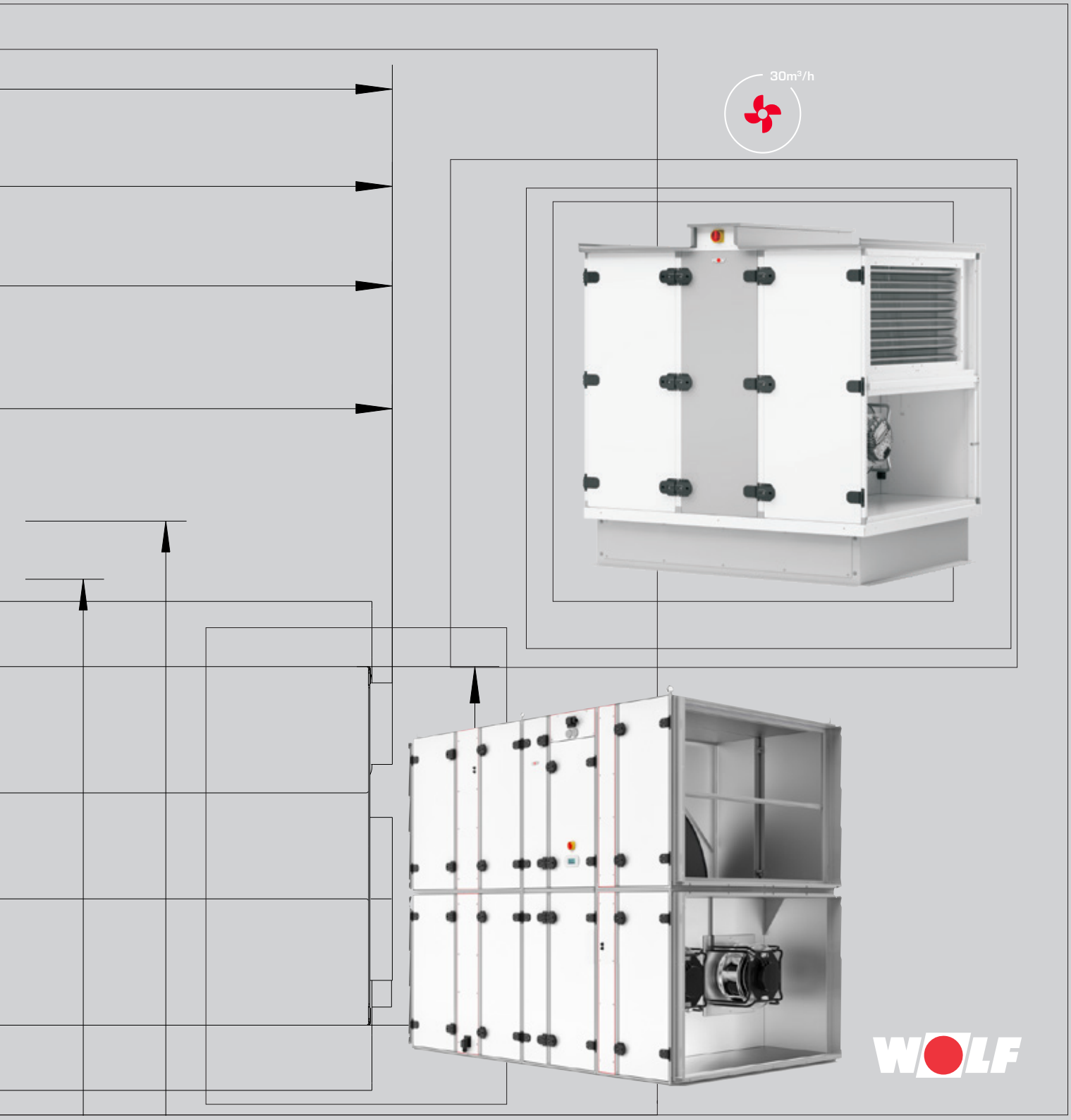
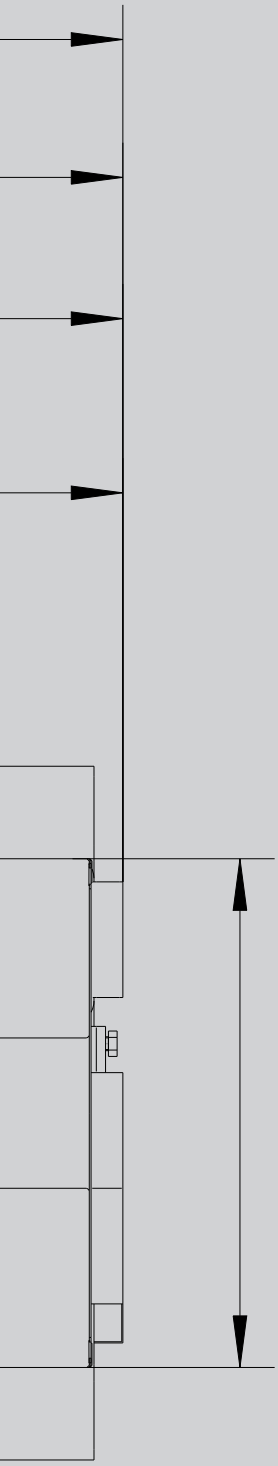
WOLF
COMFORT ROTARY HEAT EXCHANGER
VENTILATION UNIT

CRL/CRL EVO MAX FOR INDOOR INSTALLATION OR AS WEATHERPROOF VERSION





THE EXTENSIVE
EQUIPMENT RANGE

offered by system supplier WOLF provides ideal solutions for commercial
and industrial buildings, new build and modernisation projects alike.
The range of WOLF control units can meet any requirement for heating convenience.
All equipment is easy to operate, highly energy efficient and reliable.
Solar thermal systems can be swiftly integrated into existing systems.

WOLF equipment is easy and quick to install and maintain.

CRL - iD	
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CRL/CRL EVO MAX - iH	
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Heating, cooling and ventilation
in perfect harmony together with the optional WOLF Clima Split system

Numerous extension options,
e.g. silencers, heating and cooling coils or integration with building management systems

Outstanding quality
through the use of high-quality materials and powder coating as standard

Quick heating
of buildings thanks to integrated boost damper

Easy handling
thanks to compact dimensions, the ability to split up the unit (from CRL-3500) and the components of the WOLF Easy Lifting System

High level of flexibility
thanks to a wide range of duct connection options and the possibility of internal and external installation.

Outstanding overview
of your system(s) with additional WOLF Link Pro or BMK-T10

Cost-effective operation
through the use of highly-efficient EC fans and a rotary heat exchanger with patented WOLF labyrinth seal with a **leakage rate of less than 2%**

Play it safe
All devices are RLT and Eurovent certified, and meet the requirements of VDI 6022 and other relevant standards and guidelines.

9

ADVANTAGESOF THE WOLF COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER

CRL AND CRL EVO MAX FOR INDOOR INSTALLATION ALSO AS WEATHERPROOF VERSION

Connect & get going: The CRL and CRL evo max compact ventilation units were designed for ease of selection and commissioning. These units combine the advantages of plug and play compact ventilation units with a high level of variation thanks to a wide range of options. Ten sizes are available, from 1,300m³/h to 19,500m³/h, guaranteeing that you will find the right unit for any project.

Benefit from the advantages of WOLF thermal rotary heat exchangers

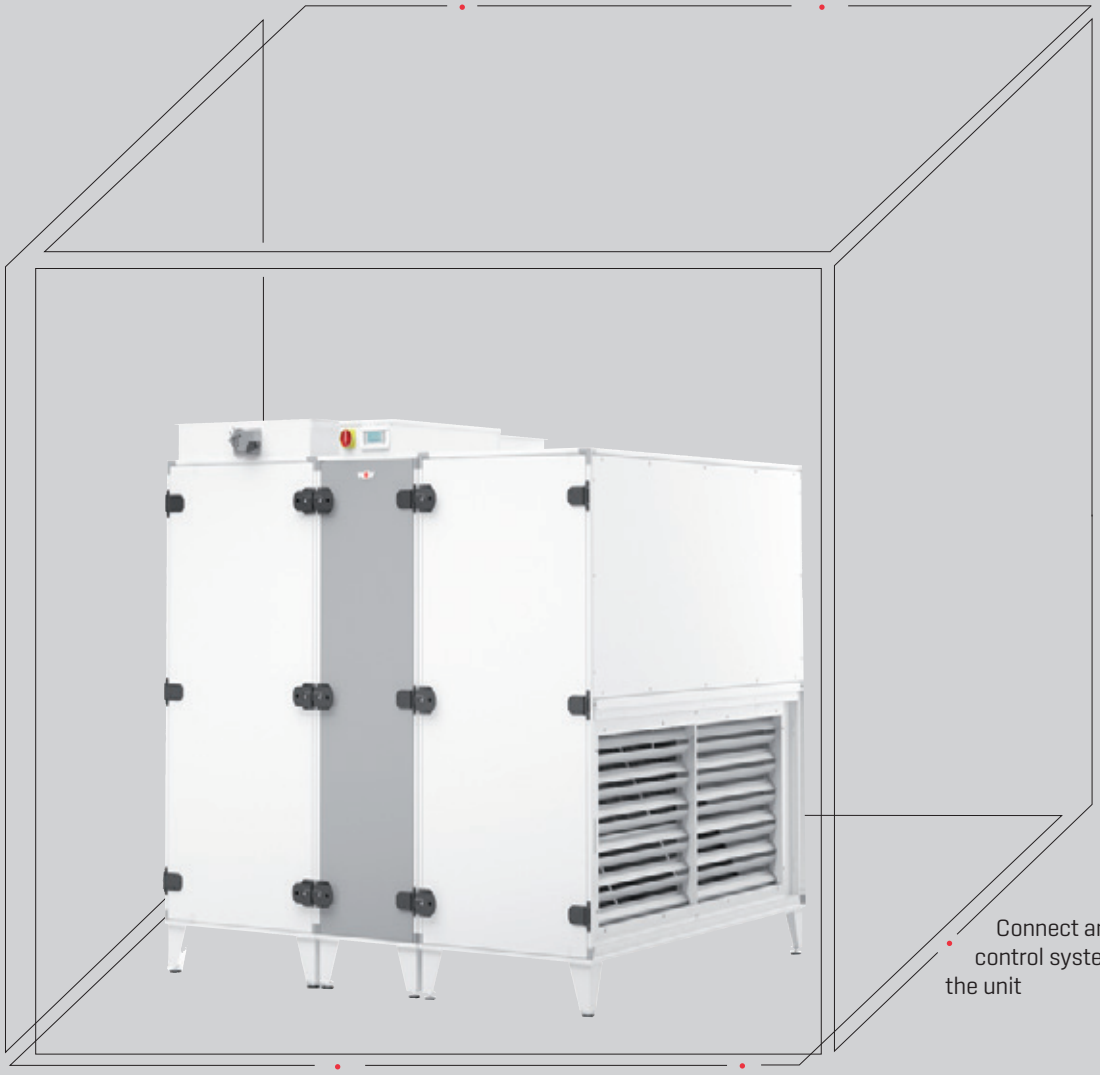
- The shortest possible installed length
- Tightness rate of 98% (the highest on the market) thanks to the patented WOLF labyrinth seal
- Perfect functionality together with the WOLF Clima Split system
- Frost-proof; little to no condensate through moisture extraction
- Much lower pressure drops than other heat recovery systems (HRS), leading to lower energy requirements
- No condensate removal required
- Available as condensation, enthalpy or sorption rotor (WOLF recommendation, with the additional effect of moisture recovery in winter and pre-cooling in summer)

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
SPECIFICATIONS
CRL - iD

FOR INDOOR INSTALLATION WITH VERTICAL/HORIZONTAL DUCT CONNECTION

Optimum efficiency through the use of rotary heat exchangers with patented WOLF labyrinth seal and a leakage rate of under 2%

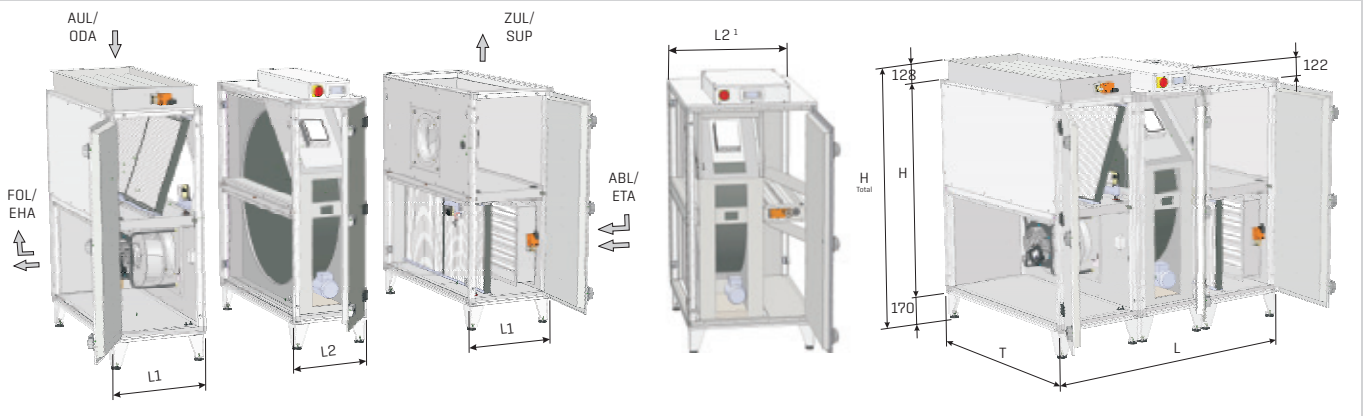
Easy handling thanks to compact dimensions, the ability to split up the unit (from CRL-3500) and the components of the WOLF Easy Lifting System



Connect and go with the control system customised to the unit

Numerous extension options, e.g. silencers, heating and cooling coils or integration with building management systems

Heating - cooling - ventilation in perfect harmony with the optional WOLF Clima Split system



TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-iD-1300 One piece 1	CRL-iD-2500 One piece 1	CRL-iD-3500 Three piece 1
Length L	mm	1525/1525[2]	1626/1626[2]	1626/1830[2]
Length L1	mm	-	-	508
Length L2 (rotor part)	mm	-	-	610/814[2]
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[1]	mm	612x409	815x612	1019x612
Duct connection dimensions, vertical air routing[1]	mm	596x307	799x307	1019x409
Nominal flow rate	m³/h	1300 at 460 Pa (ext.)	2500 at 600 Pa (ext.)	3500 at 980 Pa (ext.)
El. Nominal rating of both fans	kW	1.0	2.1	5.0
Max. Current draw of both fans	A	4.6	3.2	8.0
Power supply	V	1 x 230 (50/60 Hz)	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	3080	3400	2970
IP rating/ISO class		IP 55/ISO F	IP 55/ISO F	IP 54/ISO F
Weight of basic unit	kg	266/266[2]	381/381[2]	470/490[2] (130+210+130) (130+230+130)[2]

[1] clearance [2] with boost damper

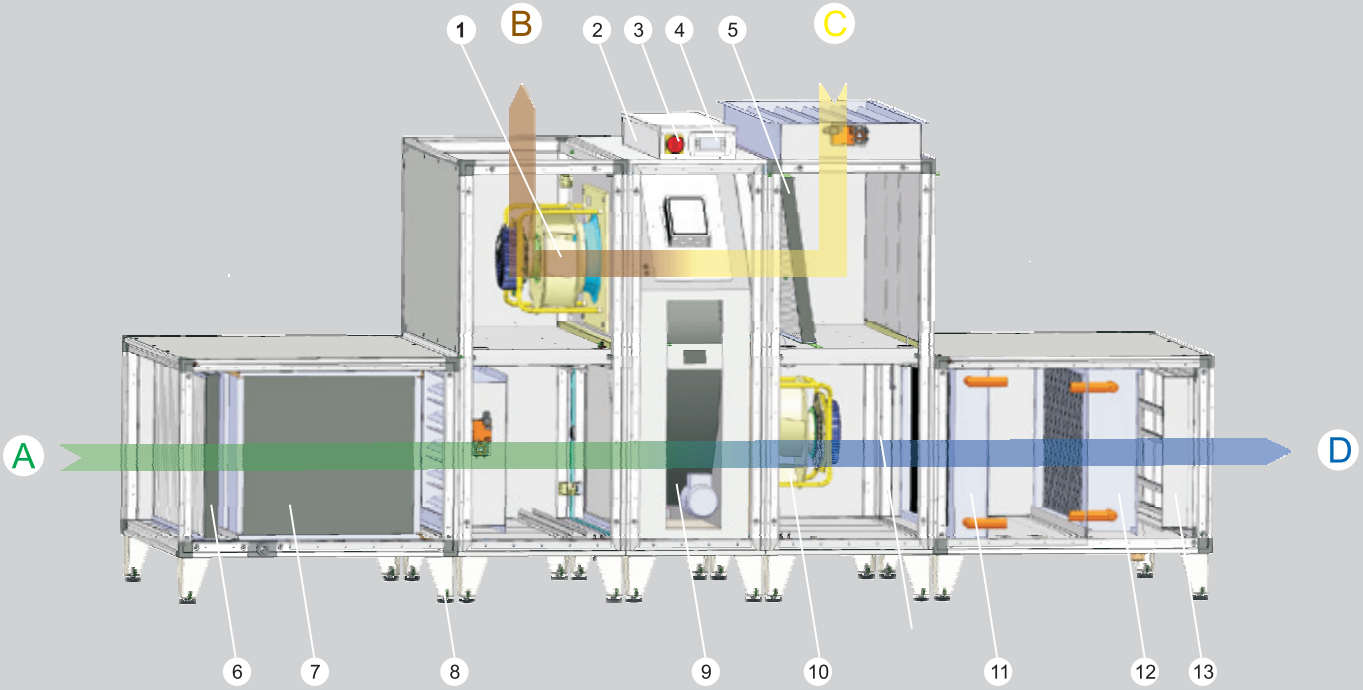
TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-iD-4800 Three piece 1	CRL-iD-6200 Three piece 1	CRL-iD-9000 Three piece 1
Length L	mm	1728	1932	2136
Length L1	mm	610	712	814
Length L2 (rotor part)	mm	508	508	508
Depth D (incl. locks)	mm	1360	1665	2070
Total height	mm	1722	1722	1925
Height H	mm	1424	1424	1627
Foot height	mm	170	170	170
Control unit height	mm	122	122	122
Duct connection dimensions, horizontal air routing[1]	mm	1222 x 612	1527 x 612	1934 x 714
Duct connection dimensions, vertical air routing[1]	mm	1222 x 510	1527 x 612	1934 x 714
Nominal flow rate	m³/h	4800 at 450 Pa (ext.)	6200 at 680 Pa (ext.)	9000 at 1000 Pa (ext.)
El. Nominal rating of both fans	kW	3.4	6.0	11.0
Max. Current draw of both fans	A	5.2	9.2	17
Power supply	V	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	2600	2550	2200
IP rating/ISO class		IP 54/ISO F	IP 54/ISO F	IP 54/ISO F
Weight of basic unit	kg	590 (180+230+180)	715 (220+275+220)	845 (275+295+275)

[1] clearance

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
SPECIFICATIONS
CRL - iD

To meet different thermodynamic (heating, cooling) and acoustic (sound) requirements, our CRL sizing program offers the option of individual configuration (specifications and delivery time on request).

Example: CRL with fitted silencer and heating coil - cooling coil - drop eliminator modules

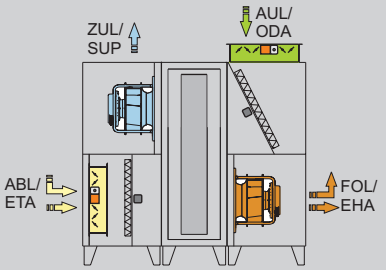


Key:

A Outdoor air (ODA)
B Exhaust air (EHA)
C Extract air (ETA)
D Supply air (SUP)
1 EC fan, extract air
2 Control panel
3 Repair switch
4 BMK programming unit
5 Extract air filter
6 Outdoor air filter
7 Outdoor air silencer module
8 Feet
9 Rotary heat exchanger
10 EC fan, supply air
11 Heating coil
12 Cooling coil
13 Drop eliminator

Access side in supply air direction, left

Access side in supply air direction, right



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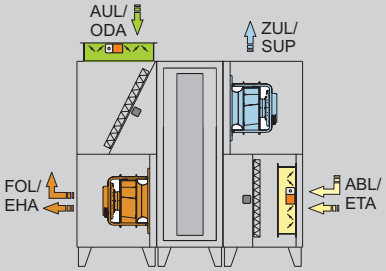
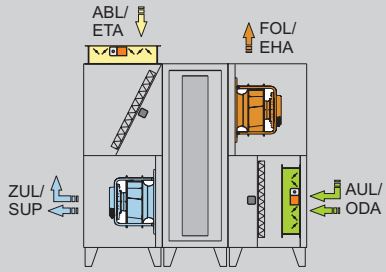
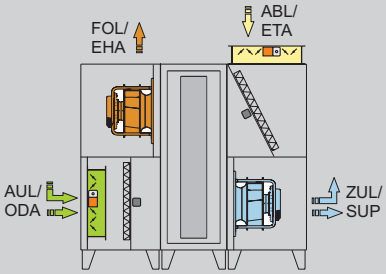


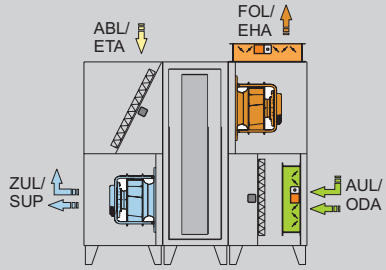
-R1



-L2



-R2



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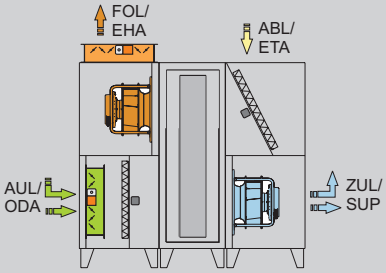
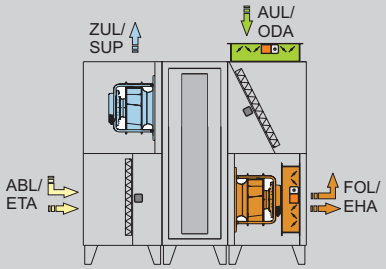


-R3[1]



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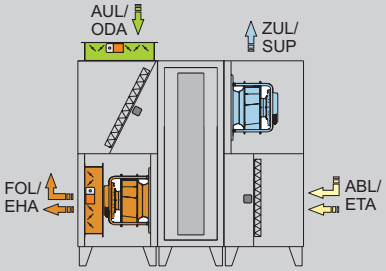
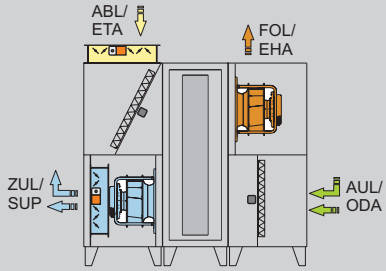
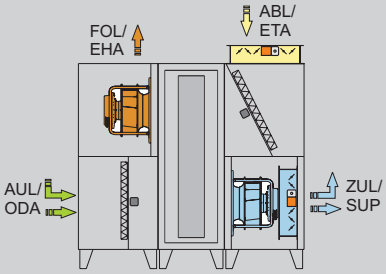


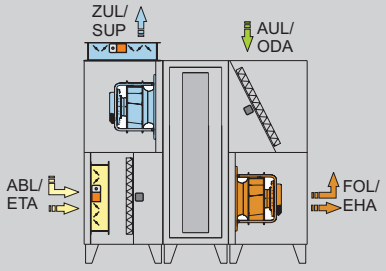
-R4[1]



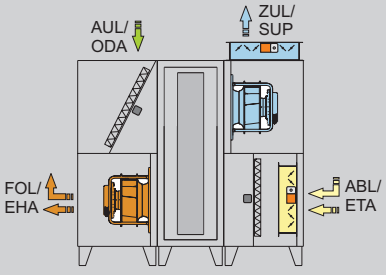
-L5



-R5



-L6



-R6

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

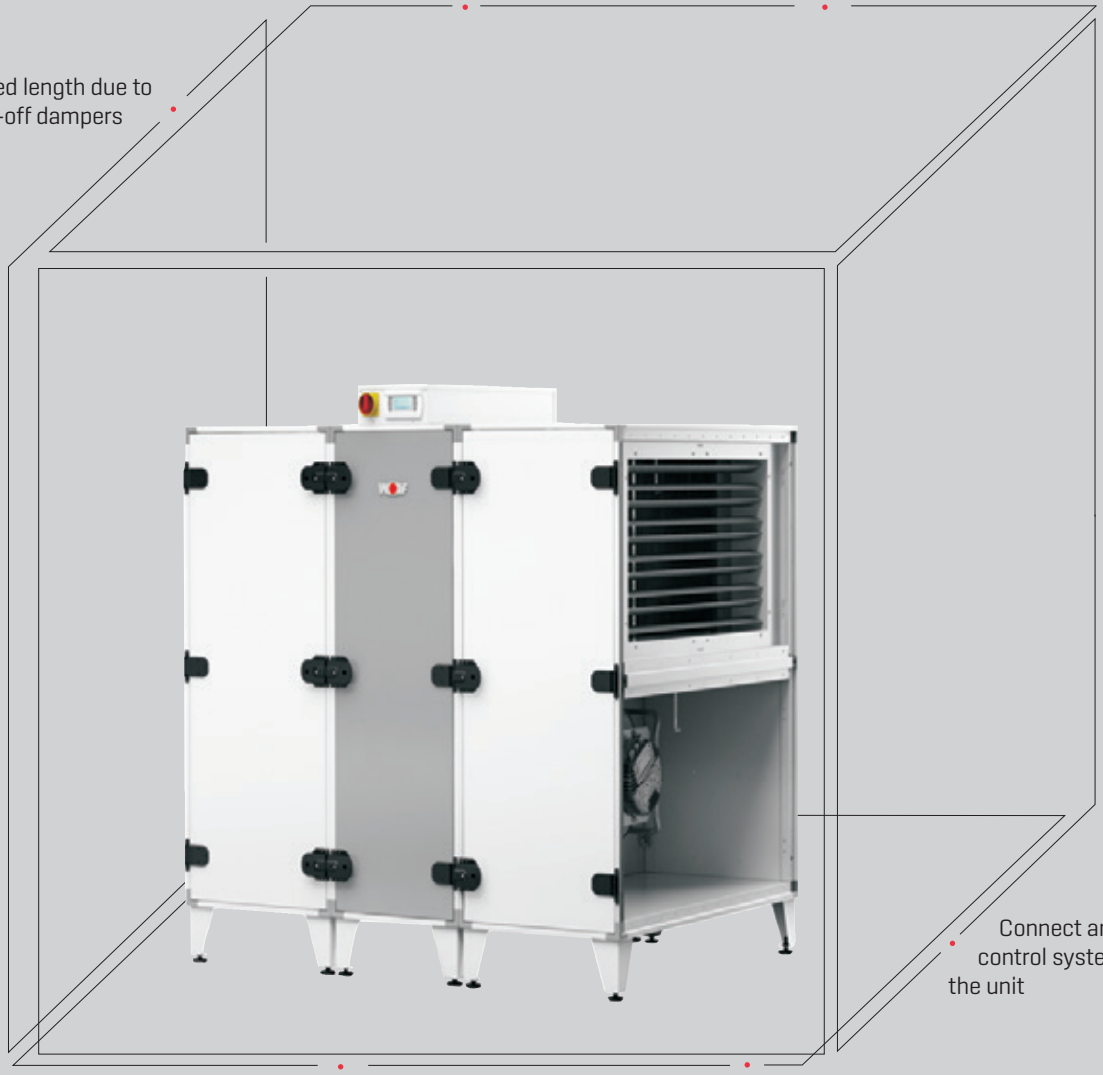
COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
SPECIFICATIONS
CRL - iH

FOR INDOOR INSTALLATION WITH HORIZONTAL DUCT CONNECTION

Optimum efficiency through the use of rotary heat exchangers with patented WOLF labyrinth seal and a leakage rate of under 2%

Easy handling thanks to compact dimensions, the ability to split up the unit (from CRL-3500) and the components of the WOLF Easy Lifting System

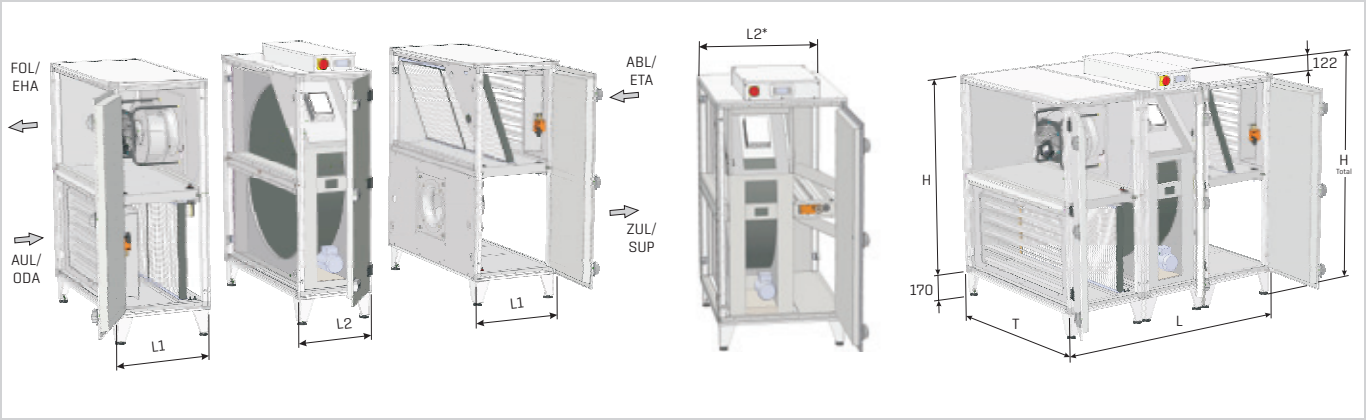
Short installed length due to internal shut-off dampers



Connect and go with the control system customised to the unit

Numerous extension options, e.g. silencers, heating and cooling coils or integration with building management systems

Heating, cooling and ventilation in perfect harmony with the optional WOLF Clima Split system



TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-iH-1300 One piece 1	CRL-iH-2500 One piece 1	CRL-iH-3500 Three piece 1
Length L	mm	1525/1525[2]	1626/1626[2]	1626/1830[2]
Length L1	mm	-	-	508
Length L2 (rotor part)	mm	-	-	610/814[2]
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[1]	mm	612x409	815x612	1019x612
Nominal flow rate	m³/h	1300 at 460 Pa (ext.)	2500 at 600 Pa (ext.)	3500 at 980 Pa (ext.)
El. Nominal rating of both fans	kW	1.0	2.1	5.0
Max. Current draw of both fans	A	4.6	3.2	8.0
Power supply	V	1 x 230 (50/60 Hz)	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	3080	3400	2970
IP rating/ISO class		IP 55/ISO F	IP 55/ISO F	IP 54/ISO F
Weight of basic unit	kg	266/266[2]	381/381[2]	470/490[2] (130+210+130) (130+230+130)[2]

[1] clearance [2] with boost damper

TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-iH-4800 Three piece 1	CRL-iH-6200 Three piece 1	CRL-iH-9000 Three piece 1
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[1]	mm	1222 x 612	1527 x 612	1934 x 714
Nominal flow rate	m³/h	4800 at 450 Pa (ext.)	6200 at 680 Pa (ext.)	9000 at 1000 Pa (ext.)
El. Nominal rating of both fans	kW	3.4	6.0	11.0
Max. Current draw of both fans	A	5.2	9.2	17
Power supply	V	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	2600	2550	2200
IP rating/ISO class		IP 54/ISO F	IP 54/ISO F	IP 54/ISO F
Weight of basic unit	kg	590 (180+230+180)	715 (220+275+220)	845 (275+295+275)

[1] clearance

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER

SPECIFICATIONS

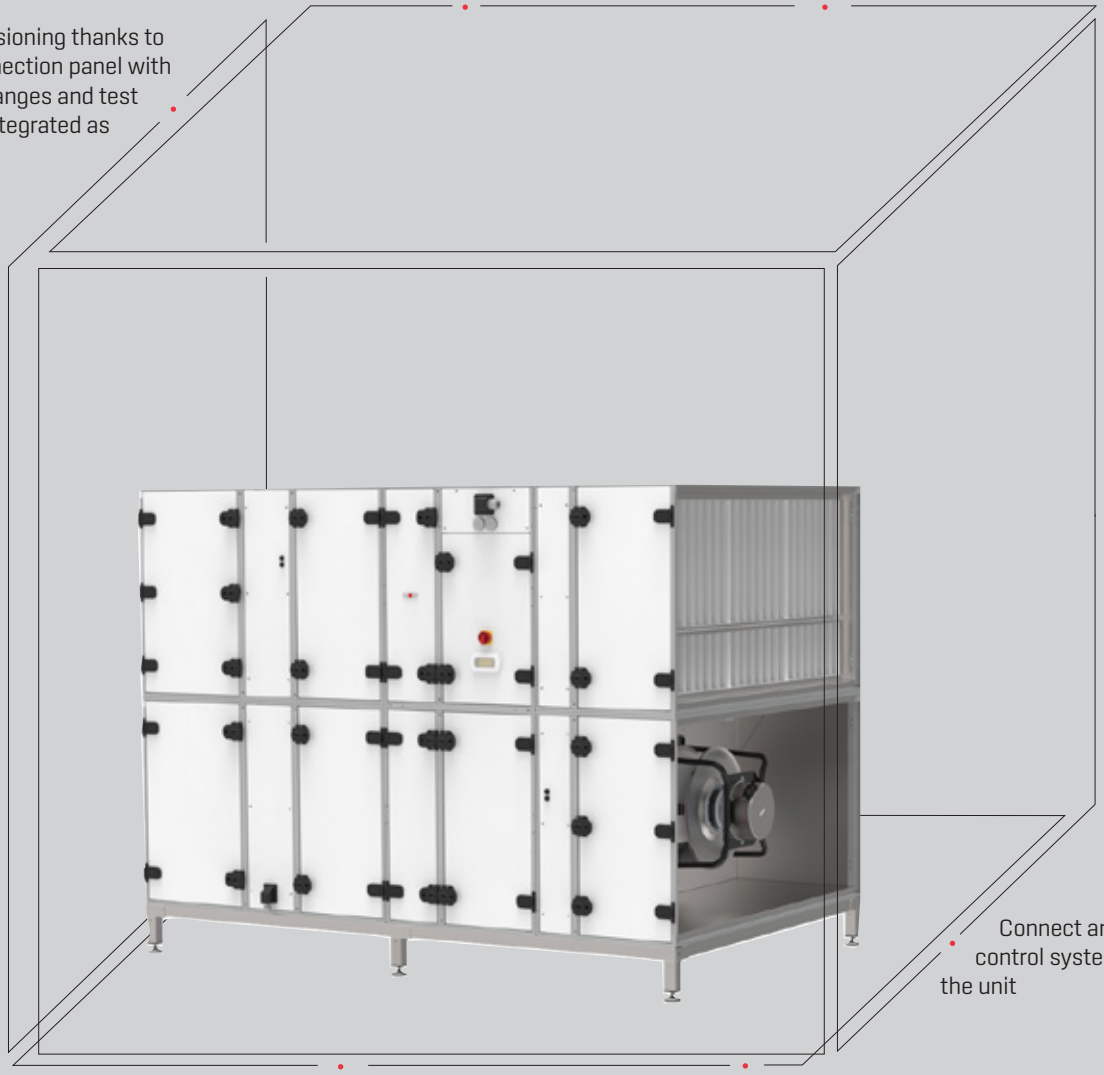
CRL - iH evo max

FOR INDOOR INSTALLATION WITH HORIZONTAL DUCT CONNECTION

Optimum efficiency through the use of rotary heat exchangers with patented WOLF labyrinth seal and a leakage rate of under 2%

Easy handling thanks to compact dimensions, the ability to split up the unit (from CRL-3500) and the components of the WOLF Easy Lifting System

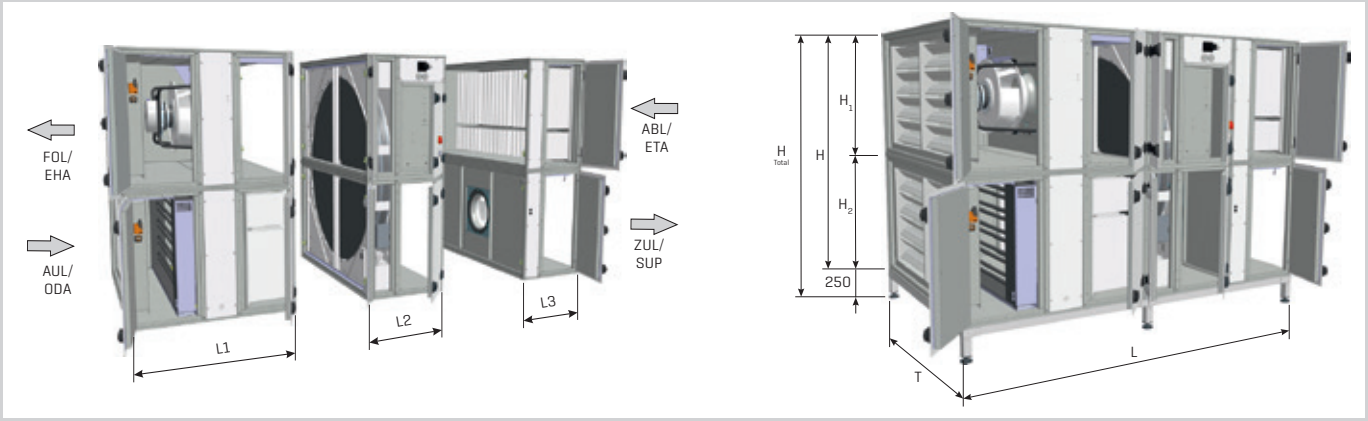
Easy commissioning thanks to installed connection panel with connection flanges and test connectors integrated as standard



Connect and go with the control system customised to the unit

Numerous extension options, e.g. silencers, heating and cooling coils or integration with building management systems

Heating, cooling and ventilation in perfect harmony with the optional WOLF Clima Split system



TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-iH-11000 evo max Five piece 3	CRL-iH-13500 evo max Five piece 3
Length L	mm	2950/2950[2]	2950/2950[2]
Length L1	mm	1424	1424
Length L2 (rotor part)	mm	814/814[2]	814/814[2]
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[1]	mm	1832x917	1832x1222
Nominal flow rate	m^3/h	11000 at 1000 Pa (ext.)	13500 at 800 Pa (ext.)
El. Nominal rating of fans	kW	11.40	14.40
Max. Current draw of fans	A	18	23.2
Power supply	V	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	2250	2260
IP rating/ISO class		IP 54/ISO F	IP 54/ISO F
Weight of basic unit	kg	1370 (590+460+320)	1550 (660+490+400)
Weight of base frame	kg	60	90

[1] clearance [2] with boost damper

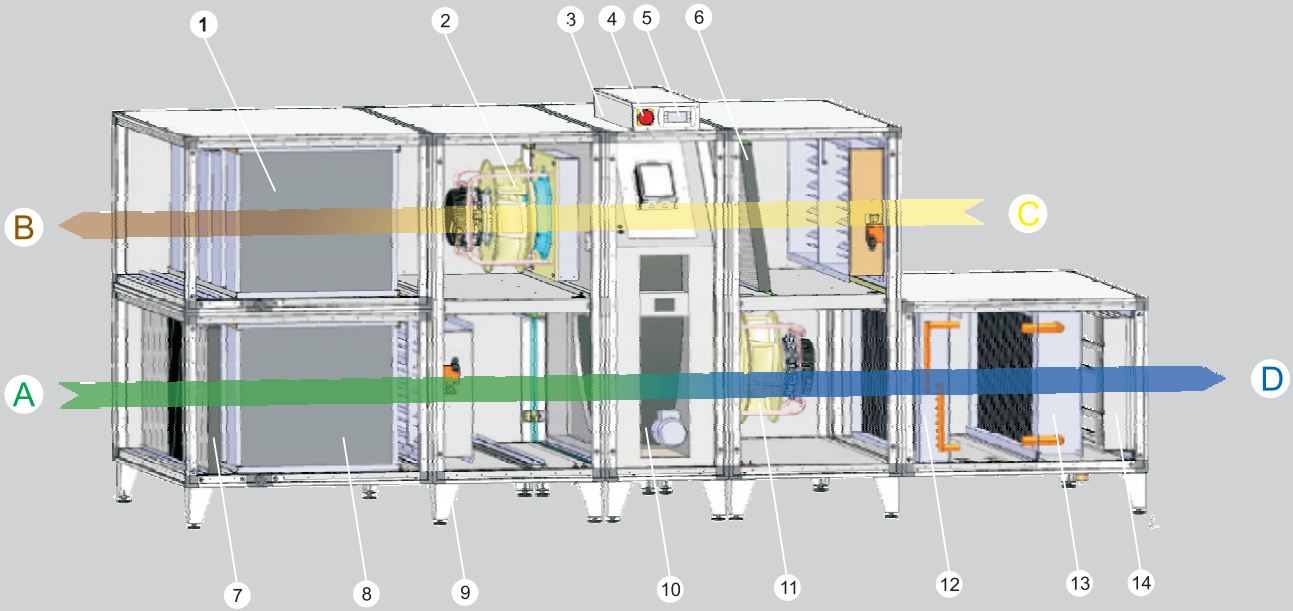
TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-iH-16500 evo max Five piece 3	CRL-iH-19500 evo max Five piece 3
Length L	mm	2950/2950[2]	2950/2950[2]
Length L1	mm	1424	1424
Length L2 (rotor part)	mm	814/814[2]	814/814[2]
Length L3	mm	712	712
Depth D (incl. locks)	mm	2275	2580
Total height	mm	2894	2894
Height H	mm	2644	2644
Internal frame (optional)	mm	250	250
Height H1/H2	mm	1322	1322
Duct connection dimensions, horizontal air routing[1]	mm	2137x1222	2442x1222
Nominal flow rate	m^3/h	16500 at 750 Pa (ext.)	19500 at 950 Pa (ext.)
El. Nominal rating of fans	kW	13.80	21.60
Max. Current draw of fans	A	21.2	34.4
Power supply	V	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	1910	2130
IP rating/ISO class		IP 54/ISO F	IP 54/ISO F
Weight of basic unit	kg	1790 (710+630+450)	2020 (790+720+510)
Weight of base frame	kg	110	120

[1] clearance [2] with boost damper

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
SPECIFICATIONS
CRL - iH

To meet different thermodynamic (heating, cooling) and acoustic (sound) requirements, our CRL sizing program offers the option of individual configuration (specifications and delivery time on request).

Example: CRL with fitted silencer and heating coil - cooling coil - drop eliminator modules

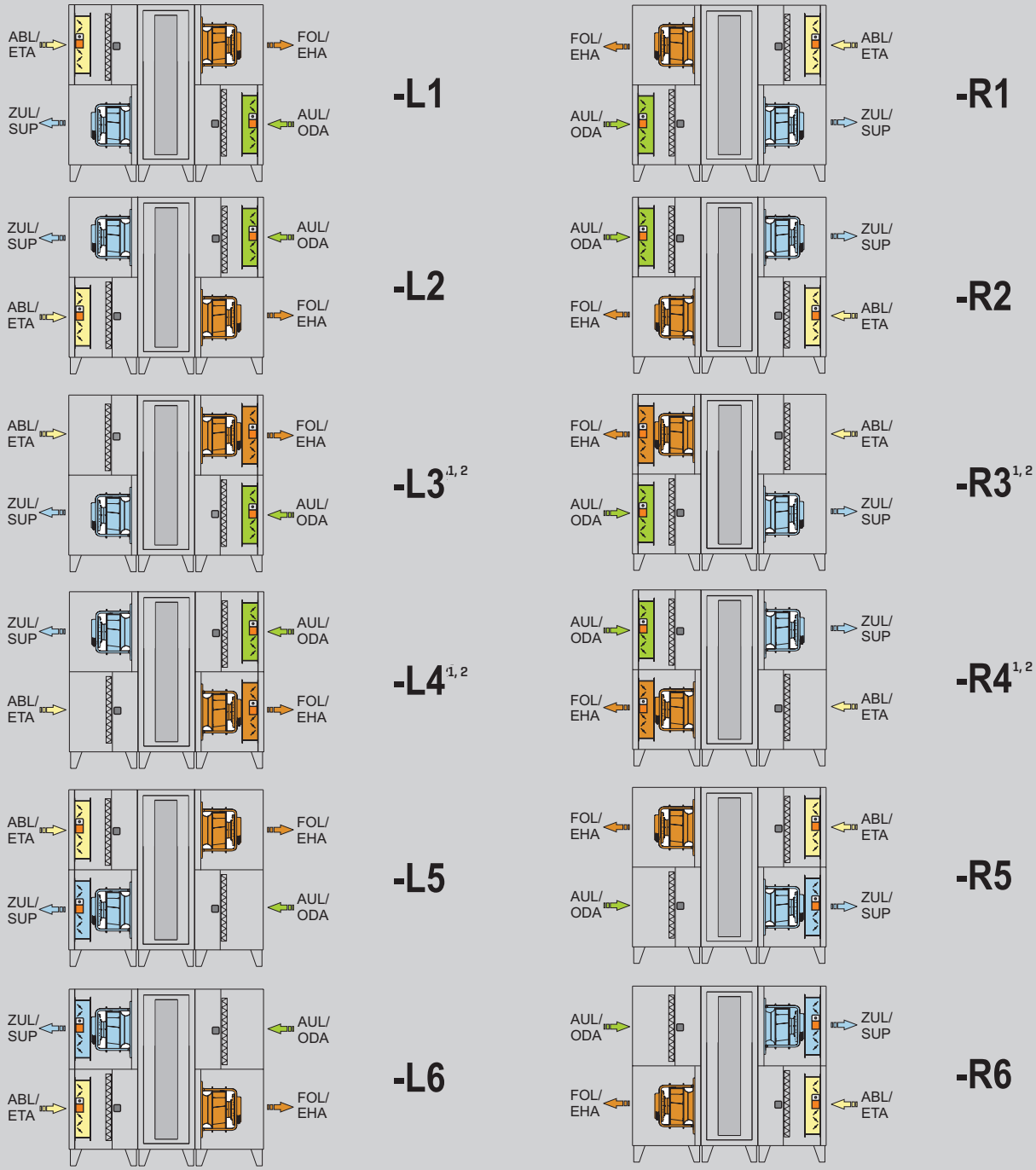


Key:

A Outdoor air (ODA)
B Exhaust air (EHA)
C Extract air (ETA)
D Supply air (SUP)
1 Exhaust air silencer section
2 EC fan, extract air
3 Control panel
4 Repair switch
5 BMK programming unit
6 Extract air filter
7 Outdoor air filter
8 Outdoor air silencer module
9 Feet
10 Rotary heat exchanger
11 EC fan, supply air
12 Heating coil
13 Cooling coil
14 Drop eliminator

Access side in supply air direction, left

Access side in supply air direction, right



[1]For CRL-iH-1300/-2500/-3500, these versions are available with a boost damper.
[2] CRL-iH evo max types are available in these versions.

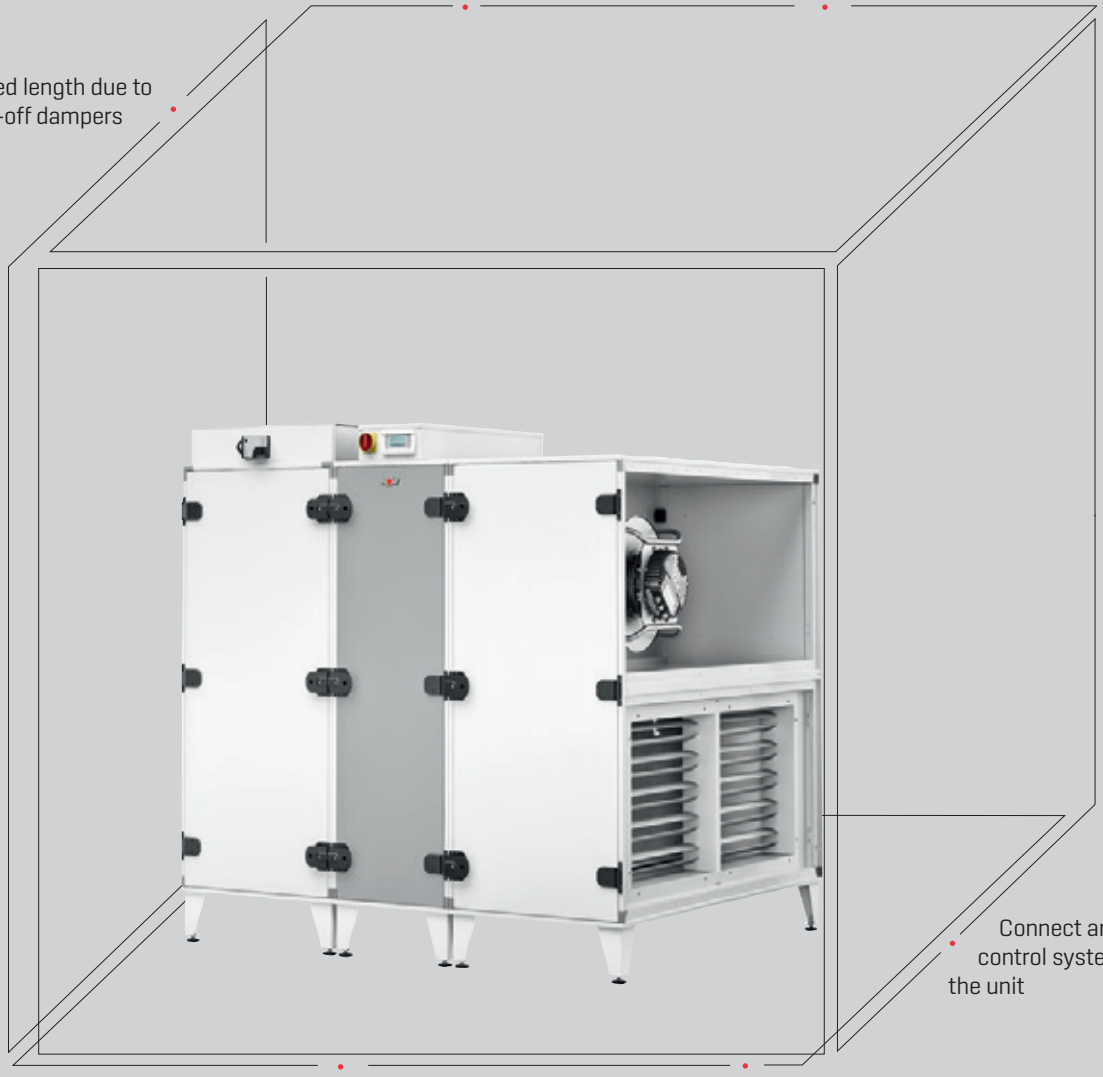
COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
SPECIFICATIONS
CRL - iDH

FOR INDOOR INSTALLATION WITH VERTICAL/HORIZONTAL DUCT CONNECTION

Optimum efficiency through the use of rotary heat exchangers with patented WOLF labyrinth seal and a leakage rate of under 2%

Easy handling thanks to compact dimensions, the ability to split up the unit (from CRL-3500) and the components of the WOLF Easy Lifting System

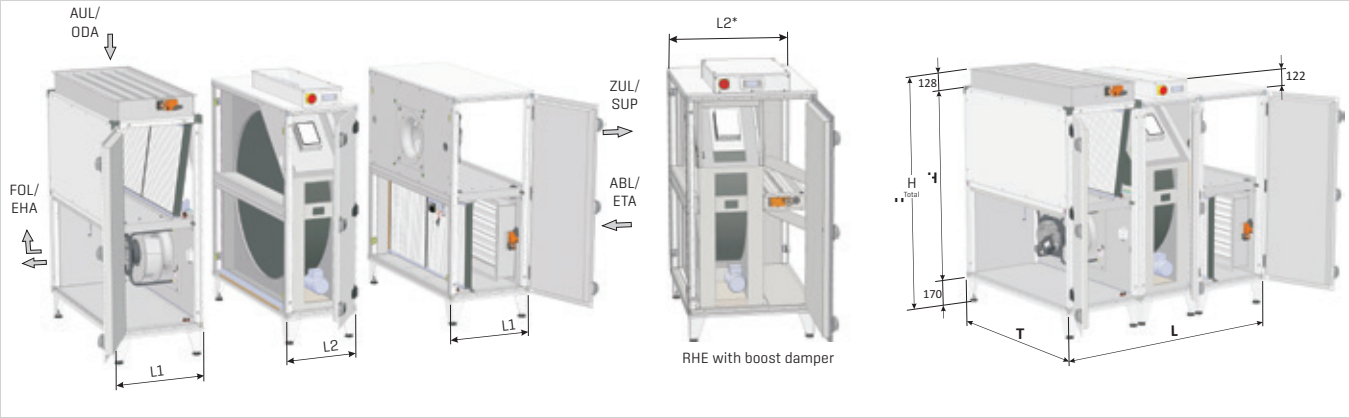
Short installed length due to internal shut-off dampers



Connect and go with the control system customised to the unit

Numerous extension options, e.g. silencers, heating and cooling coils or integration with building management systems

Heating, cooling and ventilation in perfect harmony with the optional WOLF Clima Split system



TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-iDH-1300 One piece 1	CRL-iDH-2500 One piece 1	CRL-iDH-3500 Three piece 1
Length L	mm	1525/1525[2]	1626/1626[2]	1626/1830[2]
Length L1	mm	-	-	508
Length L2 (rotor part)	mm	-	-	610/814[2]
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[1]	mm	612x409	815x612	1019x612
Duct connection dimensions, vertical air routing[1]	mm	596x307	799x307	1019x409
Nominal flow rate	m³/h	1300 at 460 Pa (ext.)	2500 at 600 Pa (ext.)	3500 at 980 Pa (ext.)
El. Nominal rating of both fans	kW	1.0	2.1	5.0
Max. Current draw of both fans	A	4.6	3.2	8.0
Power supply	V	1 x 230 (50/60 Hz)	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	3080	3400	2970
IP rating/ISO class		IP 55/ISO F	IP 55/ISO F	IP 54/ISO F
Weight of basic unit	kg	266/266[2]	381/381[2]	470/490[2] (130+210+130) (130+230+130)[2]

[1] clearance [2] with boost damper

TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-iDH-4800 Three piece 1	CRL-iDH-6200 Three piece 1	CRL-iDH-9000 Three piece 1
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[1]	mm	1222 x 612	1527 x 612	1934 x 714
Duct connection dimensions, vertical air routing[1]		1222 x 510	1527 x 612	1934 x 714
Nominal flow rate	m³/h	4800 at 450 Pa (ext.)	6200 at 680 Pa (ext.)	9000 at 1000 Pa (ext.)
El. Nominal rating of both fans	kW	3.4	6.0	11.0
Max. Current draw of both fans	A	5.2	9.2	17
Power supply	V	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	2600	2550	2200
IP rating/ISO class		IP 54/ISO F	IP 54/ISO F	IP 54/ISO F
Weight of basic unit	kg	590 (180+230+180)	715 (220+275+220)	845 (275+295+275)

[1] clearance

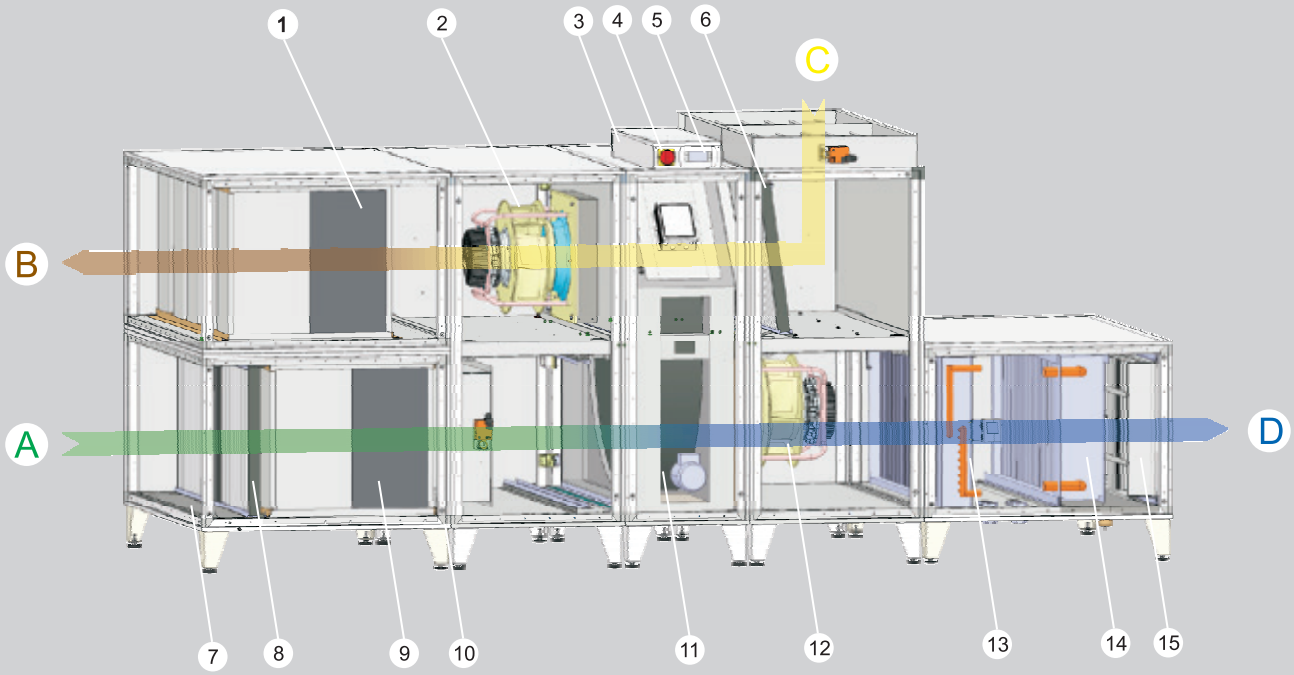
COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER

UNIT DESIGNS

CRL - iDH

To meet different thermodynamic (heating, cooling) and acoustic (sound) requirements, our CRL sizing program offers the option of individual configuration (specifications and delivery time on request).

Example: CRL with fitted silencer and heating coil - cooling coil - drop eliminator modules

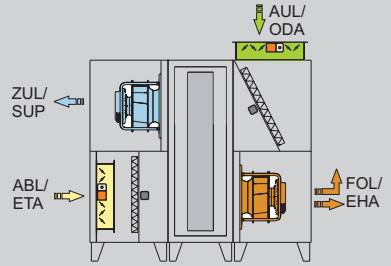


Key:

A Outdoor air (ODA)
B Exhaust air (EHA)
C Extract air (ETA)
D Supply air (SUP)
1 Exhaust air silencer section
2 EC fan, extract air
3 Control panel
4 Repair switch
5 BMK programming unit
6 Extract air filter
7 Condensate pan
8 Outdoor air filter
9 Outdoor air silencer module
10 Feet
11 Rotary heat exchanger
12 EC fan, supply air
13 Heating coil
14 Cooling coil
15 Drop eliminator

Access side in supply air direction, left

Access side in supply air direction, right



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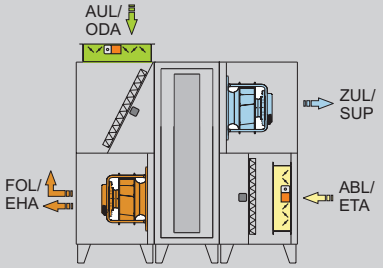

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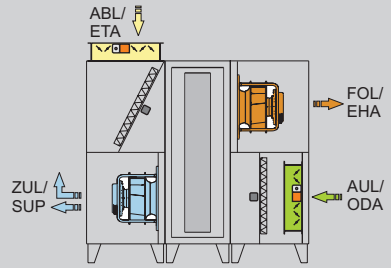

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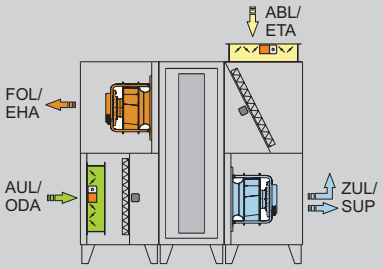

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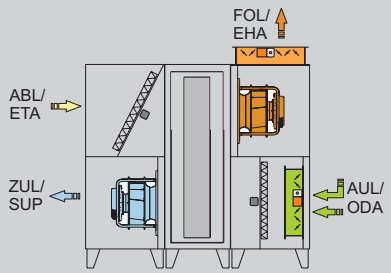

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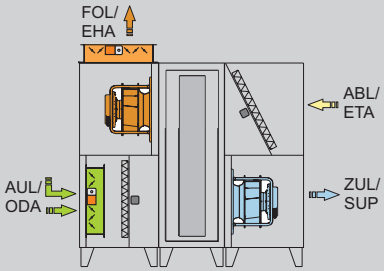

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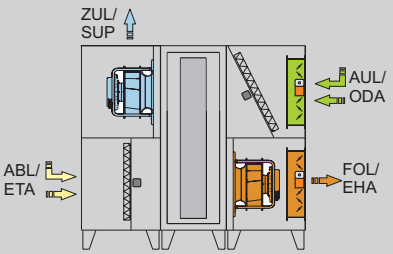

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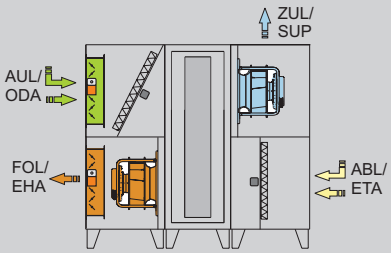

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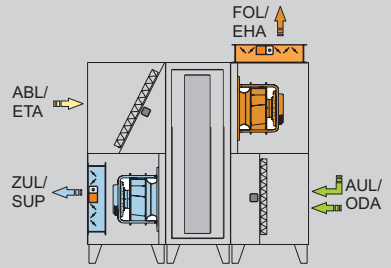
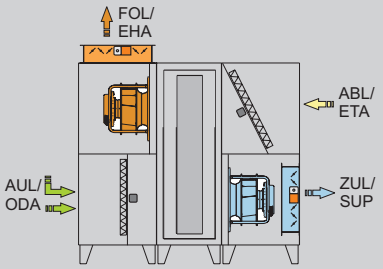
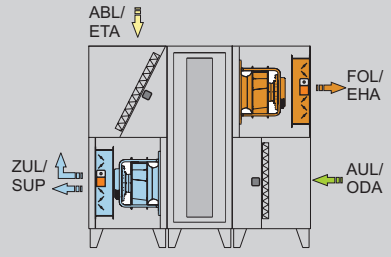


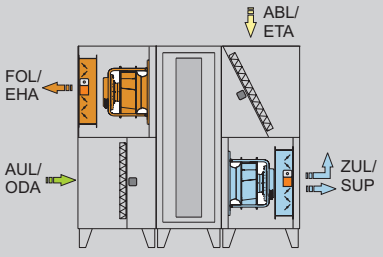
-L5



-R5



-L6



-R6

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

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
SPECIFICATIONS
CRL - A

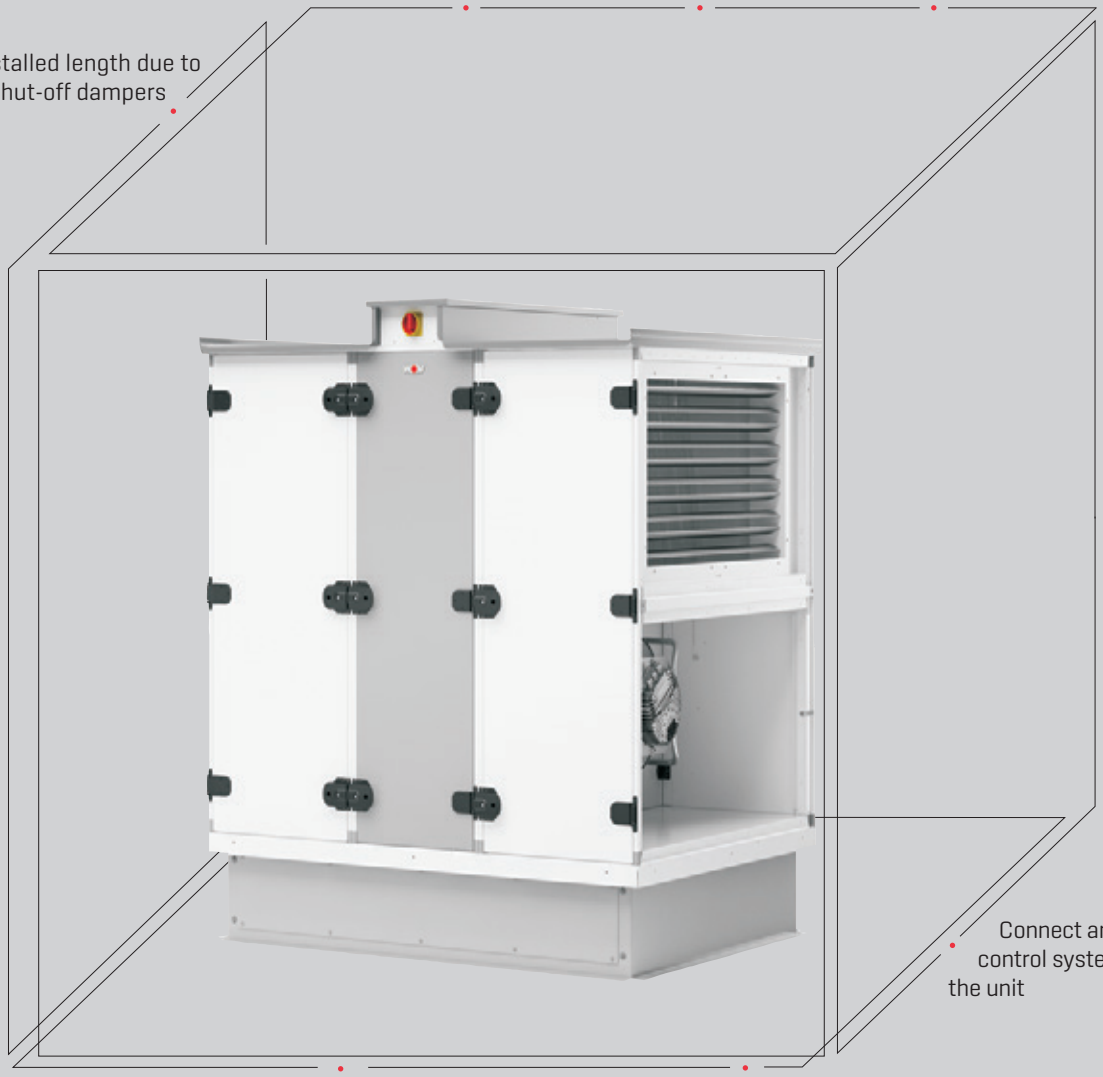
OUTDOOR UNIT (WEATHERPROOF) WITH HORIZONTAL DUCT CONNECTION

Optimum efficiency through the use of rotary heat exchangers with patented WOLF labyrinth seal and a leakage rate of under 2%

Equipped with lifting lugs from the Easy Lifting System as standard

Easy handling thanks to compact dimensions, the ability to split up the unit (from CRL-3500) and the components of the WOLF Easy Lifting System

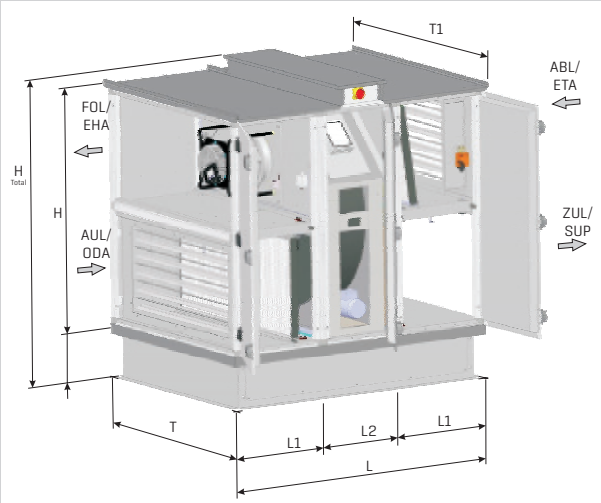
Short installed length due to internal shut-off dampers



Connect and go with the control system customised to the unit

Numerous extension options, e.g. silencers, heating and cooling coils or integration with building management systems

Heating, cooling and ventilation in perfect harmony with the optional WOLF Clima Split system



TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-A-1300 One piece 1	CRL-A-2500 One piece 1	CRL-A-3500 Three piece 1
Length L	mm	1525/1525[2]	1626/1626[2]	1626/1830[2]
Length L1	mm	-	-	508
Length L2 (rotor part)	mm	-	-	610/814[2]
Depth D	mm	712	915	1118
Depth T1 (incl. roof protection)	mm	812	1015	1218
Total height	mm	1457	1864	1864
Height H	mm	1017	1424	1424
Base frame height	mm	305	305	305
Duct connection dimensions, horizontal air routing[1]	mm	612x409	815x612	1019x612
Nominal flow rate	m^3/h	1300 at 460 Pa (ext.)	2500 at 600 Pa (ext.)	3500 at 980 Pa (ext.)
El. Nominal rating of both fans	kW	1	2.1	5.0
Max. Current draw of both fans	A	4.6	3.2	8.0
Power supply	V	1 x 230 (50/60 Hz)	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	3080	3400	2970
IP rating/ISO class		IP 55/ISO F	IP 55/ISO F	IP 54/ISO F
Weight of basic unit	kg	320/320[2]	445/445[2]	530/550[2]

[1] clearance [2] with boost damper

TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-A-4800 Three piece 1	CRL-A-6200 Three piece 1	CRL-A-9000 Three piece 1
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
Depth T1 (incl. roof protection)	mm	1422	1726	2134
Total height	mm	1864	1864	2067
Height H	mm	1424	1424	1627
Base frame height	mm	305	305	305
Duct connection dimensions, horizontal air routing[1]	mm	1222 x 612	1527 x 612	1934 x 714
Nominal flow rate	m^3/h	4800 at 450 Pa (ext.)	6200 at 680 Pa (ext.)	9000 at 1000 Pa (ext.)
El. Nominal rating of both fans	kW	3.4	6.0	11.0
Max. Current draw of both fans	A	5.2	9.2	17
Power supply	V	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	2600	2550	2200
IP rating/ISO class		IP 54/ISO F	IP 54/ISO F	IP 54/ISO F
Weight of basic unit	kg	660	800	960

[1] clearance

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
SPECIFICATIONS
CRL - A evo max

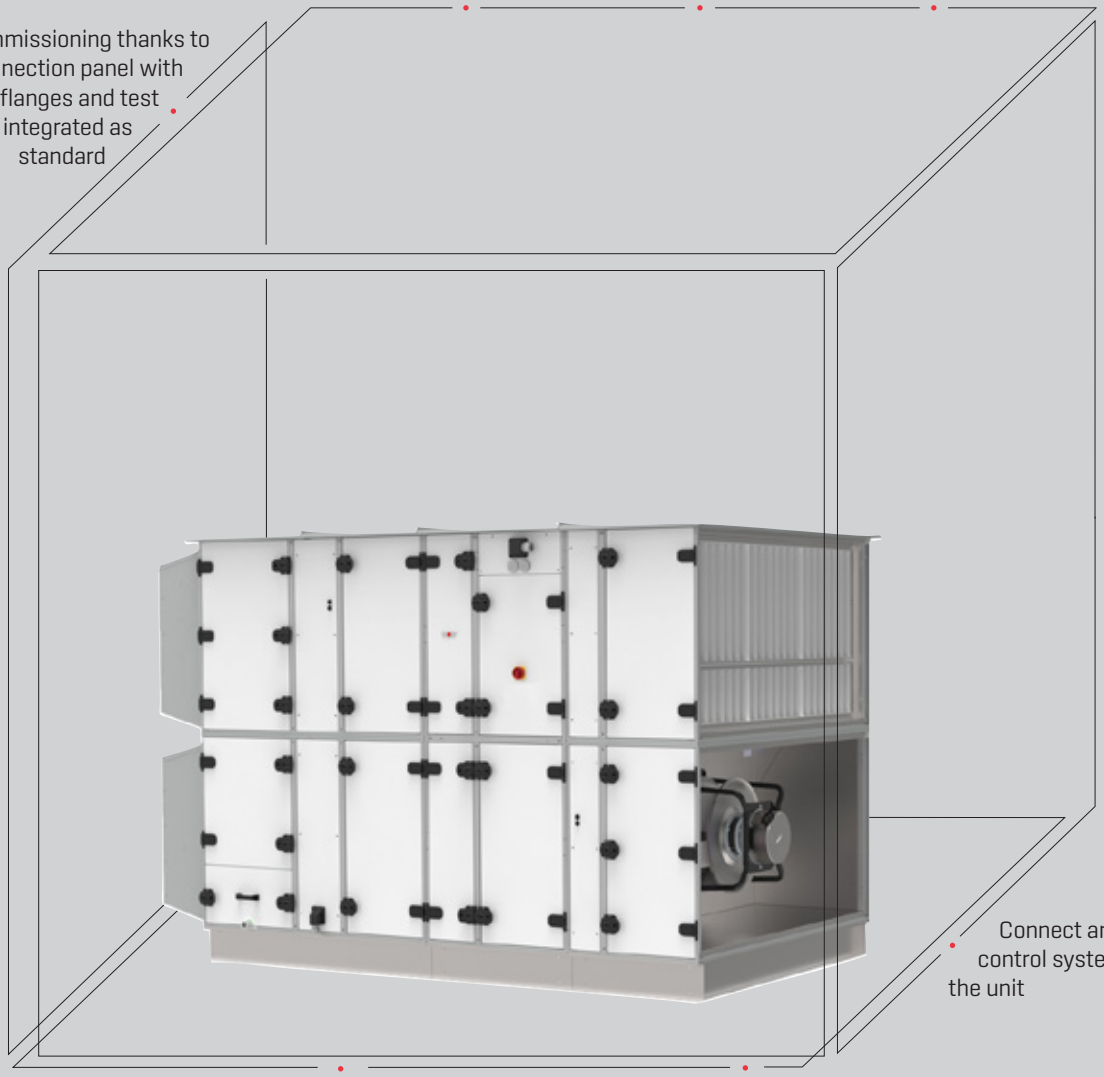
OUTDOOR UNIT (WEATHERPROOF) WITH HORIZONTAL DUCT CONNECTION

Optimum efficiency through the use of rotary heat exchangers with patented WOLF labyrinth seal and a leakage rate of under 2%

Short installed length due to internal shut-off dampers

Easy handling thanks to compact dimensions, the ability to split up the unit (from CRL-3500) and the components of the WOLF Easy Lifting System

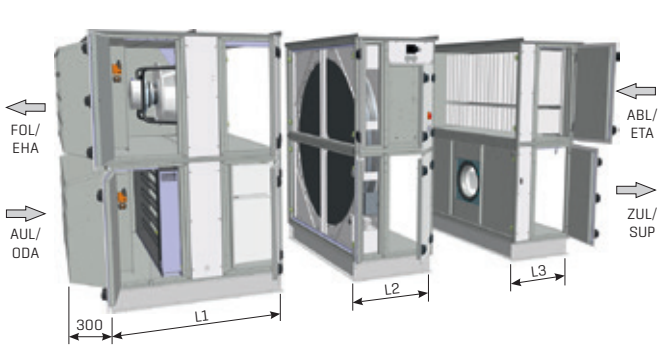
Easy commissioning thanks to installed connection panel with connection flanges and test connectors integrated as standard

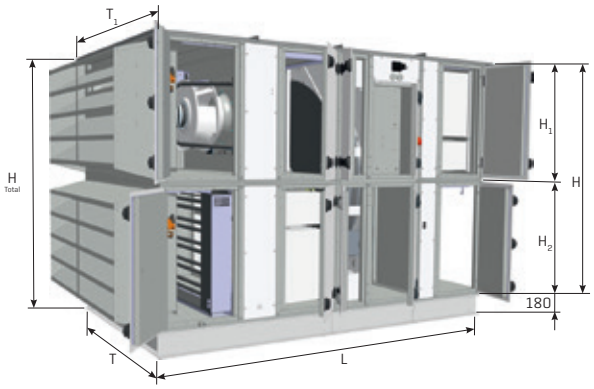


Connect and go with the control system customised to the unit

Numerous extension options, e.g. silencers, heating and cooling coils or integration with building management systems

Heating, cooling and ventilation in perfect harmony with the optional WOLF Clima Split system





TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-A-11000 evo max Five piece 3 (optional 1)	CRL-A-13500 evo max Five piece 3 (optional 1)
Length L	mm	2950/2950[2]	2950/2950[2]
Length L1	mm	1424	1424
Length L2 (rotor part)	mm	814/814[2]	814/814[2]
Length L3	mm	712	712
Depth D	mm	1932	1932
Depth T1 (incl. roof protection)	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[1]	mm	1832x917	1832x1222
Nominal flow rate	m^3/h	11000 at 1000 Pa (ext.)	13500 at 800 Pa (ext.)
El. Nominal rating of fans	kW	11.40	14.40
Max. Current draw of fans	A	18	23.2
Power supply	V	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	2250	2260
IP rating/ISO class		IP 54/ISO F	IP 54/ISO F
Weight of basic unit	kg	1520 (710+470+340)	1720 (810+510+400)
Weight of base frame	kg	100	100

[1] clearance [2] with boost damper

TYPE UNIT COMPONENTS NUMBER OF SHIPPING UNITS		CRL-A-16500 evo max Five piece 3 (optional 1)	CRL-A-19500 evo max Five piece 3 (optional 1)
Length L	mm	2950/2950[2]	2950/2950[2]
Length L1	mm	1424	1424
Length L2 (rotor part)	mm	814/814[2]	814/814[2]
Length L3	mm	712	712
Depth D	mm	2237	2542
Depth T1 (incl. roof protection)	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[1]	mm	2137x1222	2442x1222
Nominal flow rate	m^3/h	16500 at 750 Pa (ext.)	19500 at 950 Pa (ext.)
El. Nominal rating of fans	kW	13.80	21.60
Max. Current draw of fans	A	21.2	34.4
Power supply	V	3 x 400 (50/60 Hz)	3 x 400 (50/60 Hz)
Fan speed	rpm	1910	2130
IP rating/ISO class		IP 54/ISO F	IP 54/ISO F
Weight of basic unit	kg	1990 (890+640+460)	2260 (990+750+520)
Weight of base frame	kg	110	120

[1] clearance [2] with boost damper

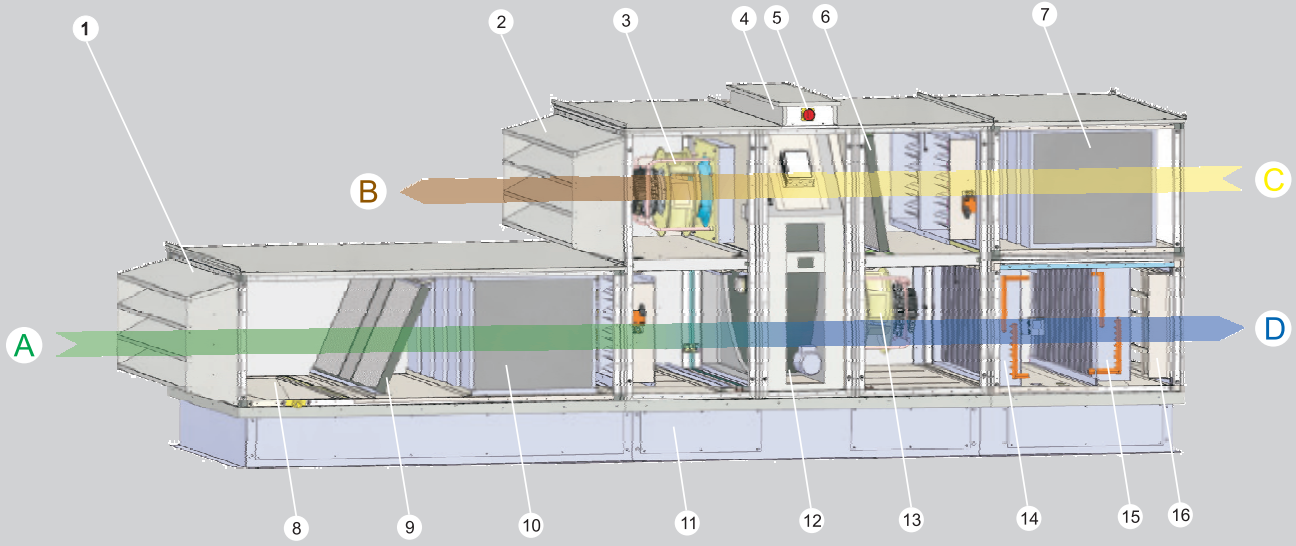
COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER

UNIT DESIGNS

CRL - A

To meet different thermodynamic (heating, cooling) and acoustic (sound) requirements, our CRL sizing program offers the option of individual configuration (specifications and delivery time on request).

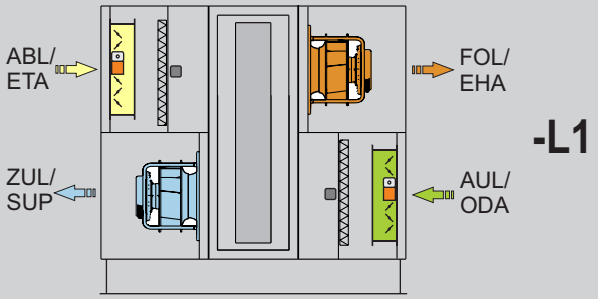
Example: CRL with fitted silencer and heating coil - cooling coil - drop eliminator modules



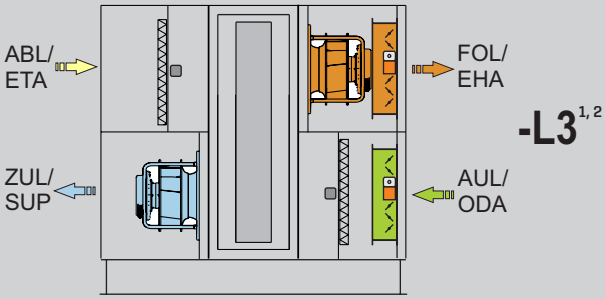
Key:

A Outdoor air (ODA)
B Exhaust air (EHA)
C Extract air (ETA)
D Supply air (SUP)
1 Intake hood with mist eliminator
2 Discharge hood
3 EC fan, extract air
4 Control panel
5 Repair switch
6 Extract air filter
7 Extract air silencer module
8 Condensate pan
9 Outdoor air filter
10 Outdoor air silencer module
11 Base frame
12 Rotary heat exchanger
13 EC fan, supply air
14 Heating coil
15 Cooling coil
16 Drop eliminator

Access side in supply air direction, left



-L1



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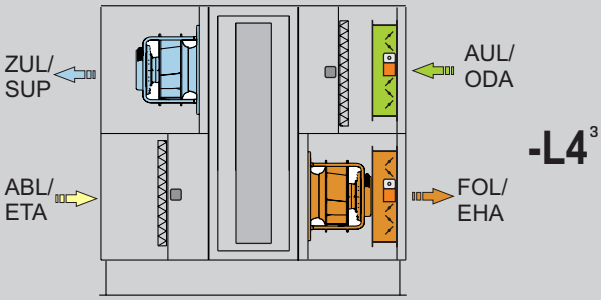

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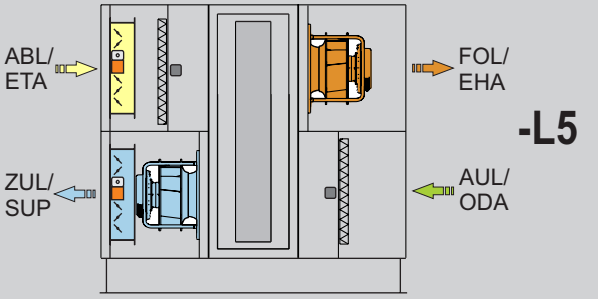
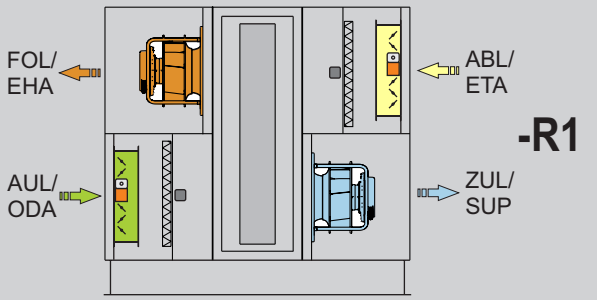
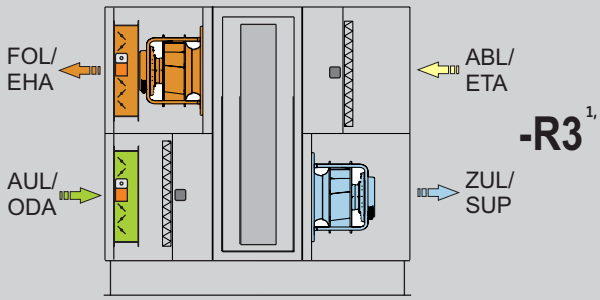


-L5

Access side in supply air direction, right



-R1



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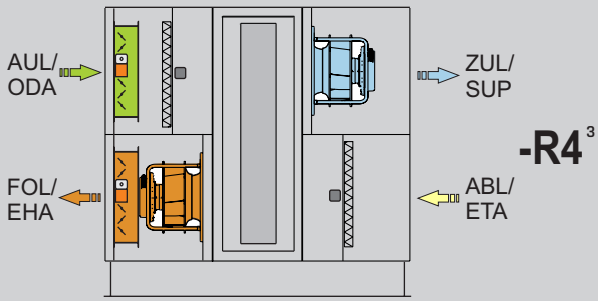

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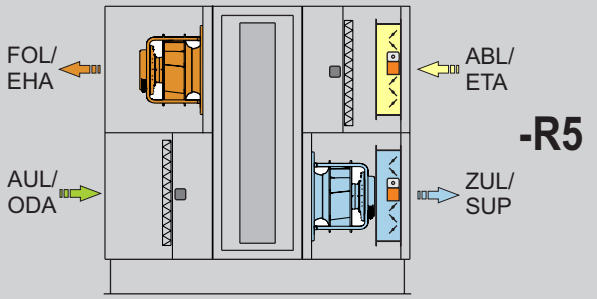


-R5

[1] For 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.

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
COMPONENT DESCRIPTION

CASING

CRL-iD/iH/iDH with feet as standard, height 170 mm (height adjustable to 30 mm), CRL-A with base frame height 305 mm.

CRL-iH evo max with optional internal frame, height 250 mm (height adjustable).

CRL-A evo max with C base frame as standard, height 180 mm. With optional structural base frame for lifting from beneath, height 200 mm.

Duplex casing/inspection doors/panels made of powder-coated sheet steel, with core of 50 mm thick thermal insulation.
Colours: traffic white RAL 9016 and silver RAL 9006.

Optimum sound and thermal insulation through mineral wool, building material category A1, non-combustible to DIN 4102.

Inspection doors extending across the entire operating height of the unit ensure excellent access to fitted parts. The access side can be selected.

MOTOR/FAN UNIT FOR SUPPLY AND EXTRACT AIR

High efficiency, free-running fans with single sided intake, directly connected to EC motors with low energy consumption, infinitely variable (0-10 V)
Complete motor/fan unit statically and dynamically balanced
Fan/motor combination with very low noise levels
Anti-blocking protection
Soft start
Short circuit protection
Excess temperature protection for motor and electronics

HEAT RECOVERY

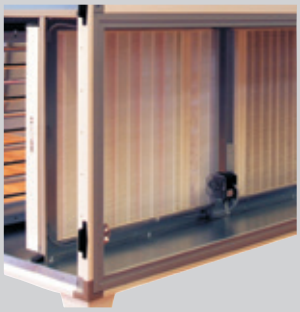
Heat recovery via high performance rotary heat exchanger (RHE)

- Temperature transfer rate up to 90% (dry)
- Maximum tightness thanks to labyrinth seal that rotates with rotor
- Two central seals in multistage cascade (upstream and downstream)
- Tightness rate of over 98% in accordance with VDI 3803/5, improving efficiency of fans
- Heat exchanger made from corrosion-resistant aluminium alloy
- Self-cleaning heat exchanger based on countercurrent principle
- Variable control of rotor speed for optimised performance

Summer mode for cooling recovery and energy-efficient night ventilation

Optionally:

- Sorption rotor for increased transfer of air humidity and heat/cold with return humidity coefficients of over 90%
- Enthalpy rotor for transfer of air humidity and heat/cold
- Condensation rotor for heat/cold transfer



Outdoor air filter (fine dust and pollen filter)

Long service life thanks to extensive filter surface area
Temperature-resistant to 60°C

Differential pressure limiter for filter monitoring fitted and wired as standard. Easy to replace filter, washable

Extract air filter

Long service life thanks to extensive filter surface area
Temperature-resistant to 60°C

Differential pressure limiter for filter monitoring fitted and wired as standard. Easy to replace filter, washable

Boost damper

Optional quick heating damper integrated into the unit

For energy-efficient and quick heating to the set temperature

The microprocessor-controlled control unit with isolator (located within the unit for CRL evo max and on the unit for CRL) is fully assembled and wired at the factory. It controls and regulates the fans, heat recovery, temperatures, flow rates and operating times, as well as a variety of internal functions and alarms.

Function	Description
Languages	Language selection with menu prompts
Preheating program	When outside temperatures are low (adjustable setting), the heating circuit will heat up first when the system is started up. This ensures that when there is a risk of frost the heating coil is not damaged and cold air is not blown in
Backup mode, heating and cooling	In off mode; minimum and maximum room temperature limits are maintained (unoccupied periods)
Night ventilation/cooling function	The building can be cooled to an adjustable set value during the night, using cooler outdoor air (unoccupied periods)
Burner demand via contact	Heat demand is issued to Wolf boilers via the floating contact
Summer compensation	As outside temperatures rise, the set value for the room temperature is adjusted to track the outside temperature
Alarm history	Date and time of faults are logged (10 messages)
Standstill protection	To stop mixers and pumps seizing up, they are activated once a week (service function, adjustable start time)
CO_2 or VOC control	The speed is matched as appropriate via the CO_2 content of the air
Constant pressure control	Constant pressure control in the extract or supply air duct possible, differential pressure sensor mounted in the unit
Flow rate control	Differential pressure sensor mounted in the unit to control constant air volume
Time program for the day	Setting of four day programs, each with five switching times with different set values for temperature, speed and pressure
Switching times per day	Five start times and five stop times can be set
Filter monitoring (contamination check)	Checks the barometric cells for supply and extract air (adjustable start time, service function)
Fire alarm connection	When fire alarm devices are triggered, the system shuts down (adjustable)
Outdoor/exhaust air damper switching	230 V OPEN/CLOSE switching by controller
Outside temperature sensor	Outside sensor for direct connection to controller (always required)
Supply air temperature control	Supply air is controlled according to the set value.
Supply air - indoor air control	Room temperature control via room sensor
Supply air - extract air control	Room temperature control via extract air sensor
Floating central fault message contact	All accumulating faults are transferred via this contact
Variable valve control, cooling/heating	Control of valve drives with 0-10 V DC
External system start	Remote On/Off
Operating modes	Automatic mode, manual mode, off mode (unoccupied periods), standby (Off), BMS mode
Infinitely variable motor control	Balance adjustment option for fans (extract air management)
RHE, cooling via HR (heat recovery)	RHE with 0-10V DC control
Quick heating function	Air flow to 100% with boost damper ODA/EHA damper closed. Extr. fan out of action
Electric preheating coil (filter pre-dryer)	Start point + 5°C
Frost protection function, heating coil (PWW)	Frost stat on the heating coil; when triggered, the fan switches off and the heating coil is purged
Holiday program	Additional time program for the aforementioned operating modes
Summertime/winter time change	Automatically subject to date
Supply air minimum limit	Included in all control unit versions; the supply air temperature does not fall below an adjustable limit
Programming unit with FSTN graphics	The programming unit can also be used as a remote control with display function

AIR QUALITY SENSOR

Plug-in design; mixed gas sensor for capturing air quality in offices, hotels, homes, businesses, restaurants, etc.

Supply voltage:	24V AC/DC
Sup. ambient temperature:	0-50°C
IP rating:	IP30
Dimensions:	81 x 79 x 26 mm

CO2 SENSOR (ALTERNATIVE TO AIR QUALITY SENSOR)

Plug-in design, for capturing the CO2 content

Supply voltage:	24V AC/DC
Sup. ambient temperature:	0-50°C
IP rating:	IP30
Dimensions:	95 x 97 x 30 mm

ROOM TEMP SENSOR

Wall mounted, 2-pole, terminals up to 1.5 mm²

Sensor:	NTC5K
Measuring range:	-30°C to +50°C
IP rating:	IP54
Dimensions:	100 x 60 x 33 mm

OUTSIDE TEMP SENSOR

Wall mounted, 2-pole, terminals up to 1.5 mm²

Sensor:	NTC5K
Measuring range:	-30°C to +50°C
IP rating:	IP54
Dimensions:	100 x 60 x 33 mm

DUCT HYGROSTAT

Type KH-10U with wall retainer WH-20, internal setting

Measuring range:	35 to 100% RH
IP rating:	IP65
Dimensions:	107 x 70 x 97 mm

ROOM HYGROSTAT

Type RH-2U for wall mounting or on flush box, internal setting

Measuring range:	25 to 95% RH
IP rating:	IP30
Dimensions:	95 x 97 x 30 mm

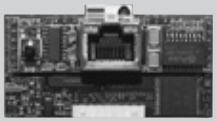
WOLF LINK PRO

External LAN/WLAN interface module for remote access over the local network or Internet.

Operation	App (Android or iOS), Browser, PC application
Encryption	TLS1.2
Mounting type	Wall mounting
IP rating	IP30
Dimensions	160 x 83 x 31 mm (H x W x D)

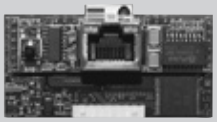
LON INTERFACE FOR WRS-K FOR PLUGGING INTO THE CONTROLLER KLM

For communication between the control unit and the building management system using LON standard network variables, designed as an expansion card, integrated into the DDC control unit. Transceiver FTT-10A/78 kbit/s. Connection via plug-in/ screw terminals.
Module is integrated into the existing BMS on site.



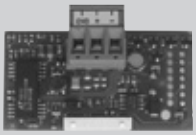
BACNET INTERFACE FOR WRS-K FOR PLUGGING INTO THE CONTROLLER KLM

For communication between the control unit and the building management system, designed as an expansion card, integrated into the DDC control unit.
Supported protocols: BACnet Ethernet/BACnet IP. Connection via RJ45 interface.
Module is integrated into the existing BMS on site.



ETHERNET INTERFACE FOR WRS-K FOR PLUGGING INTO THE CONTROLLER KLM

For linking the control unit into an Ethernet network (LAN), designed as an expansion card, integrated into the DDC control unit.
Supported protocols: HTTP/FTP. Connection via RJ45 interface.
Module is integrated into the existing network on site.



MODBUS INTERFACE FOR WRS-K FOR PLUGGING INTO THE CONTROLLER KLM

For communication between the control unit and the building management system, designed as an expansion card, integrated into the DDC control unit.
Supported protocols: BACnet Ethernet/BACnet IP. Connection via RJ45 interface.
Module is integrated into the existing BMS on site.

KNX INTERFACE FOR WRS-K FOR PLUGGING INTO THE CONTROLLER KLM

For communication between the control unit and the building management system, designed as an expansion card, integrated into the DDC control unit.
Connection via screw terminals, 2-pole.
Module is integrated into the existing network on site.

BMK-T10 TOUCH PANEL

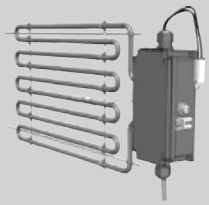
Enables operation of several CRL units, trend recordings, front installation on site

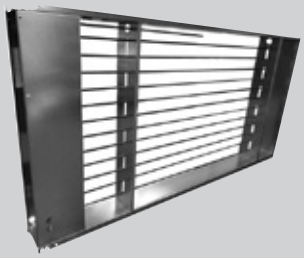
BMK-F REMOTE CONTROL

For wall mounting with integral room temperature sensor

Six function keys: On/Off, manual/auto, speed, fresh air, utilisation time extension, intermittent ventilation. LCD display. Fault indication, 24 V AC power supply, RS485 interface (pLAN), IP rating IP 30. Functions: Switching the unit on/off, speed setting, specifying fresh air proportion, activating utilisation time extension, activating intermittent ventilation, adjusting set temperature. Dimensions: 135x86x30 mm

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
HEATER BANK

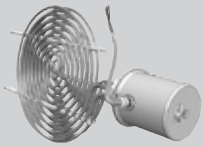




ELECTRIC PREHEATING COIL

- Single stage for filter pre-drying, fully wired with HLSC
- Frost stat and mounting bracket; activates when temperature goes below 5°C
- Can be retrofitted to standard unit

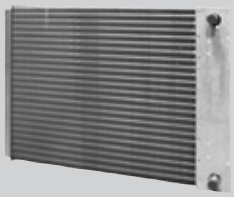
Size	Output (kW)	Voltage
CRL-1300	1	1x 230 V/50 Hz
CRL-2500	2	2x 230 V/50 Hz
CRL-3500	4	2x 230 V/50 Hz
CRL-4800	4	2x 230 V/50 Hz
CRL-6200	6	3x 400 V/50 Hz
CRL-9000	8	3x 400 V/50 Hz
CRL-11000 evo max	13.5	3x 400 V/50 Hz
CRL-13500 evo max	18	3x 400 V/50 Hz
CRL-16500 evo max	18	3x 400 V/50 Hz
CRL-19500 evo max	24	3x 400 V/50 Hz



ELECTRIC REHEATING COIL

for increasing supply air temperature, installed and fully wired

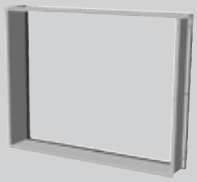
Size	Output (kW)	Voltage
CRL-1300	1	1x 230 V/50 Hz
CRL-2500	4	3x 400 V/50 Hz
CRL-3500	8	3x 400 V/50 Hz



PWW HEAT EXCHANGER (PUMPED HOT WATER)

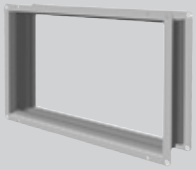
- for CRL standard unit horizontal air routing for supply air versions can be retrofitted below
- CU-Al heat exchanger for supply air re-heating, wired with frost protection

Size	
CRL-1300	Frost thermostat fully wired
CRL-2500	Frost thermostat fully wired
CRL-3500	Frost thermostat fully wired
CRL-4800	Frost thermostat fully wired
CRL-6200	Frost thermostat fully wired
CRL-9000	Frost thermostat fully wired



INSULATING FRAME,
Length 70 mm, from CRL external edge 60 mm

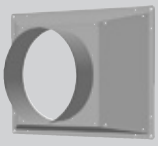
Size	Piece/Dimensions
CRL-iD-1300	2 pieces, 596 x 307 2 pieces , 612 x 409
CRL-iH-1300	4 pieces, 612 x 409
CRL-iDH-1300	1 piece, 596 x 307 3 pieces , 612 x 409
CRL-A-1300	2 pieces, 612 x 409
CRL-iD-2500	2 pieces, 799 x 307 2 pieces, 815 x 612
CRL-iH-2500	4 pieces, 815 x 612
CRL-iDH-2500	1 piece, 799 x 307 3 pieces, 815 x 612
CRL-A-2500	2 pieces, 815 x 612
CRL-iD-3500	2 pieces, 1019 x 409 2 pieces , 1019 x 612
CRL-iH-3500	4 pieces, 1019 x 612
CRL-iDH-3500	1 piece, 1019 x 409 3 pieces, 1019 x 612
CRL-A-3500	2 pieces, 1019 x 612
CRL-iD-4800	2 pieces, 1222 x 510 2 pieces, 1222 x 612
CRL-iH-4800	4 pieces, 1222 x 612
CRL-iDH-4800	1 pieces, 1222 x 510 3 pieces , 1222 x 612
CRL-A-4800	2 pieces, 1222 x 612
CRL-iD/iH/iDH-6200	4 pieces, 1527 x 612
CRL-A-6200	2 pieces, 1527 x 612
CRL-iD/iH/iDH-9000	4 pieces, 1934 x 714
CRL-A-9000	2 pieces, 1934 x 714
CRL-iH-11000 evo max	4 pieces, 1832 x 917
CRL-A-11000 evo max	2 pieces, 1832 x 917
CRL-iH-13500 evo max	4 pieces, 1832 x 1222
CRL-A-13500 evo max	2 pieces, 1832 x 1222
CRL-iH-16500 evo max	4 pieces, 2137 x 1222
CRL-A-16500 evo max	2 pieces, 2137 x 1222
CRL-iH-19500 evo max	4 pieces, 2442 x 1222
CRL-A-19500 evo max	2 pieces, 2442 x 1222



FLEXIBLE CONNECTION

Length 130 mm, from CRL external edge 120 mm

Size	Piece/Dimensions
CRL-iD-1300	2 pieces, 592 x 303 2 pieces , 608 x 405
CRL-iH-1300	4 pieces, 608 x 405
CRL-iDH-1300	1 piece, 592 x 303 3 pieces, 608 x 405
CRL-A-1300	2 pieces, 608 x 405
CRL-iD-2500	2 pieces, 795 x 303 2 pieces, 811 x 608
CRL-iH-2500	4 pieces, 811 x 608
CRL-iDH-2500	1 pieces, 795 x 303 3 pieces, 811 x 608
CRL-A-2500	2 pieces, 811 x 608
CRL-iD-3500	1 pieces, 1015 x 405 3 pieces, 1015 x 608
CRL-iH-3500	4 pieces, 1015 x 608
CRL-iDH-3500	1 pieces, 1015 x 405 3 pieces, 1015 x 608
CRL-A-3500	2 pieces, 1015 x 608
CRL-iD-4800	2 pieces, 1218 x 506 2 pieces, 1218 x 608
CRL-iH-4800	4 pieces, 1218 x 608
CRL-iDH-4800	1 piece, 1218 x 506 3 pieces, 1218 x 608
CRL-A-4800	2 pieces, 1218 x 608
CRL-iD/iH/iDH-6200	4 pieces, 1523 x 608
CRL-A-6200	2 pieces, 1523 x 608
CRL-iD/iH/iDH-9000	4 pieces, 1930 x 710
CRL-A-9000	2 pieces, 1930 x 710
CRL-iH-11000 evo max	4 pieces, 1828 x 913
CRL-A-11000 evo max	2 pieces, 1828 x 913
CRL-iH-13500 evo max	4 pieces, 1828 x 1218
CRL-A-13500 evo max	2 pieces, 1828 x 1218
CRL-iH-16500 evo max	4 pieces, 2133 x 1218
CRL-A-16500 evo max	2 pieces, 2133 x 1218
CRL-iH-19500 evo max	4 pieces, 2438 x 1218
CRL-A-19500 evo max	2 pieces, 2438 x 1218



INSULATING ADAPTOR CONE

for connecting from rectangular to round channel connection

Size	Piece/Dimensions
CRL-iD/iH/iDH-1300	4 pieces, D = 315 mm
CRL-A-1300	2 pieces, D = 315 mm
CRL-iD/iH/iDH-2500	4 pieces, D = 450 mm
CRL-A-2500	2 pieces, D = 450 mm
CRL-iD/iH/iDH-3500	4 pieces, D = 500 mm
CRL-A-3500	2 pieces, D = 500 mm
CRL-iD/iH/iDH-4800	4 pieces, D = 560 mm
CRL-A-4800	2 pieces, D = 560 mm
CRL-iD/iH/iDH-6200	4 pieces, D = 560 mm
CRL-A-6200	2 pieces, D = 560 mm

OUTDOOR AIR SILENCER MODULE - MODULE (INDOOR UNIT)

with integrated filter, CRL-iD/iH with condensate pan,
mineral fibre splitters in a zinc-plated steel frame, abrasion-resistant surface,
non-combustible design A1

Type	Length	Module depth (incl. closure)	Module Height	Foot height
CRL-iD/iH/iDH-1300	1017	750	508	170
CRL-iD/iH/iDH-2500	1017	955	712	170
CRL-iD/iH/iDH-3500	1017	1155	712	170
CRL-iD/iH/iDH-4800	1017	1360	712	170
CRL-iD/iH/iDH-6200	1017	1665	712	170
CRL-iD/iH/iDH-9000	1322	2070	814	170

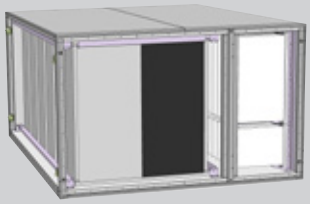
Type evo max	Length	Module depth (incl. closure)	Module Height	Internal Base frame Height
CRL-iH-11000	1424	1970	1017	250
CRL-iH-13500	1424	1970	1322	250
CRL-iH-16500	1424	2275	1322	250
CRL-iH-19500	1424	2580	1322	250

OUTDOOR AIR SILENCER MODULE - MODULE, LONG (OUTDOOR UNIT)

with integrated filter, CRL-A with condensate pan,
mineral fibre splitters in a zinc-plated steel frame, abrasion-resistant surface,
non-combustible design A1

Type	Length	Module depth (incl. closure)	Module Height	Base frame Height
CRL-A-1300	2034	750	508	305
CRL-A-2500	2034	955	712	305
CRL-A-3500	2034	1155	712	305
CRL-A-4800	2034	1360	712	305
CRL-A-6200	2034	1665	712	305
CRL-A-9000	2034	2070	814	305

Type evo max	Length	Module depth (incl. closure)	Module Height	Base frame Height
CRL-A-11000	1424	1970	1017	180
CRL-A-13500	1424	1970	1322	180
CRL-A-16500	1424	2275	1322	180
CRL-A-19500	1424	2580	1322	180



EXTRACT AIR SILENCER MODULE - MODULE (INDOOR UNIT AND OUTDOOR UNIT)

with integrated filter, mineral fibre splitters in a zinc-plated steel frame, abrasion-resistant surface, non-combustible design A1

Type	Length	Module depth (incl. closure)	Module Height	Foot height CRL-iD/iH	Base frame height CRL-A
CRL-1300	1017	750	508	170	305
CRL-2500	1017	955	712	170	305
CRL-3500	1017	1155	712	170	305
CRL-4800	1017	1360	712	170	305
CRL-6200	1017	1665	712	170	305
CRL-9000	1322	2070	814	170	305

Type evo max	Length	Module depth (incl. closure)	Module Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	1628	1970	1017	250	180
CRL-13500	1628	1970	1322	250	180
CRL-16500	1628	2275	1322	250	180
CRL-19500	1628	2580	1322	250	180

SUPPLY AIR/EXHAUST AIR SILENCER MODULE (INDOOR UNIT AND OUTDOOR UNIT)

Mineral fibre splitters in a zinc-plated steel frame, abrasion-resistant surface, non-combustible design A1

Type	Length	Module depth (incl. closure)	Module Height	Foot height CRL-iD/iH	Base frame height CRL-A
CRL-1300	1017	750	508	170	305
CRL-2500	1017	955	712	170	305
CRL-3500	1017	1155	712	170	305
CRL-4800	1017	1360	712	170	305
CRL-6200	1017	1665	712	170	305
CRL-9000	1017	2070	814	170	305

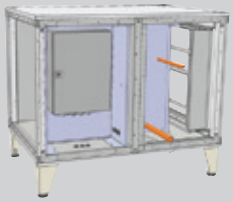
Type evo max	Length	Module depth (incl. closure)	Mod-ule Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	1119	1970	1017	250	180
CRL-13500	1119	1970	1322	250	180
CRL-16500	1119	2275	1322	250	180
CRL-19500	1119	2580	1322	250	180

HEATING COIL - COOLING COIL - DROP ELIMINATOR SECTION (EKTA) (INDOOR UNIT AND OUTDOOR UNIT)

Heating coil (Cu/Al)
Cooling coil/direct expansion coil (Cu/Al)
Drop eliminator

Type	Length	Module depth (incl. closure)	Module Height	Foot height CRL-iD/iH	Base frame height CRL-A
CRL-1300	1017	750	508	170	305
CRL-2500	1017	955	712	170	305
CRL-3500	1017	1155	712	170	305
CRL-4800	1017	1360	712	170	305
CRL-6200	1017	1665	712	170	305
CRL-9000	1017	2070	814	170	305

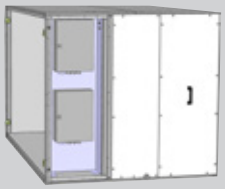
Type evo max	Length	Module depth (incl. closure)	Module Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	1424	1970	1017	250	180
CRL-13500	1424	1970	1322	250	180
CRL-16500	1424	2275	1322	250	180
CRL-19500	1424	2580	1322	250	180



HEAT PUMP EKTA MODULE (HP EKTA) (INDOOR UNIT AND OUTDOOR UNIT)

- Horizontal air routing for version with supply air below
- Consisting of direct expansion coil/condenser coil, inverter-controlled heat pumps, outdoor unit and control kit integrated into the module

Type	Length	Module depth (incl. closure)	Module Height	Foot height CRL-iD/iH	Base frame height CRL-A
CRL-1300	1017	750	508	170	305
CRL-2500	1017	955	712	170	305
CRL-3500	1017	1155	712	170	305
CRL-4800	1017	1360	712	170	305
CRL-6200	1017	1665	712	170	305
CRL-9000	1017	2070	814	170	305



Type evo max	Length	Module depth (incl. closure)	Module Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	1424	1970	1017	250	180
CRL-13500	1424	1970	1322	250	180
CRL-16500	1424	2275	1322	250	180
CRL-19500	1424	2580	1322	250	180

HEAT PUMP - OUTDOOR UNIT

Dimensions H x W x D	Rated output outdoor unit heating/cooling
640 x 871 x 290mm	4.0/4.5 kW
640 x 871 x 290mm	5.0/6.0 kW
640 x 871 x 290mm	6.1/6.7 kW
750 x 968 x 340 mm	7.1/8.0 kW
640 x 871 x 290mm	10.0/11.2kW
640 x 871 x 290mm	12.5/14.0kW
750 x 968 x 340 mm	14.0/16.0 kW

HEAT PUMP - OUTDOOR UNIT

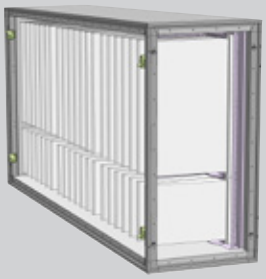
Dimensions H x W x D	Rated output outdoor unit heating/cooling
1300 x 970 x 370 mm	19.0/22.4 kW
1505 x 970 x 370 mm	24.0/27.0 kW

EMPTY SECTION (INDOOR UNIT AND OUTDOOR UNIT)

To support upper unit draw or to compensate for differences in length between upper and lower unit draw.

Type	Length	Module depth (incl. closure)	Module Height	Foot height CRL-iD/iH	Base frame height CRL-A
CRL-1300	1017/2034	750	508	170	305
CRL-2500	1017/2034	955	712	170	305
CRL-3500	1017/2034	1155	712	170	305
CRL-4800	1017/2034	1360	712	170	305
CRL-6200	1017/2034	1665	712	170	305
CRL-9000	1017/1322/2034	2070	814	170	305

Type evo max	Length	Module depth (incl. closure)	Module Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	305/509/610	1970	1017	250	180
CRL-13500	305/509/610	1970	1322	250	180
CRL-16500	305/509/610	2275	1322	250	180
CRL-19500	305/509/610	2580	1322	250	180



FILTER MODULE, SHORT (INDOOR UNIT AND OUTDOOR UNIT)

Additional filter stage

Type evo max	Length	Module depth (incl. closure)	Module Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	509	1970	1017	250	180
CRL-13500	509	1970	1322	250	180
CRL-16500	509	2275	1322	250	180
CRL-19500	509	2580	1322	250	180

EMPTY SECTION, SHORT (INDOOR UNITS AND OUTDOOR UNITS)

For downward air routing

Type	Length	Module depth	Module Height	Foot height CRL-iD/iH	Base frame height CRL-A
CRL-1300	1017	750	508	170	305
CRL-2500	1017	955	712	170	305
CRL-3500	1017	1155	712	170	305
CRL-4800	1017	1360	712	170	305
CRL-6200	1017	1665	712	170	305
CRL-9000	1017	2070	814	170	305
CRL-9000	1322	2070	814	170	305

Type evo max	Length	Module depth (incl. closure)	Module Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	915	1970	1017	250	180
CRL-13500	915	1970	1322	250	180
CRL-16500	915	2275	1322	250	180
CRL-19500	915	2580	1322	250	180

COOLING COIL SECTION (INDOOR UNITS AND OUTDOOR UNITS)

Type	Length	Module depth (incl. closure)	Module Height	Foot height CRL-iD/iH
CRL-iD/iH/iDH-1300	610	750	508	170
CRL-iD/iH/iDH-2500	610	955	712	170
CRL-iD/iH/iDH-3500	610	1155	712	170
CRL-iD/iH/iDH-4800	610	1360	712	170
CRL-iD/iH/iDH-6200	610	1665	712	170
CRL-iD/iH/iDH-9000	610	2070	814	170

Type evo max	Length	Module depth (incl. closure)	Mod-ule Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	610	1970	1017	250	180
CRL-13500	610	1970	1322	250	180
CRL-16500	610	2275	1322	250	180
CRL-19500	610	2580	1322	250	180

DIRECT EXPANSION COIL MODULE (INDOOR UNITS AND OUTDOOR UNITS)

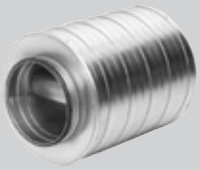
Type	Length	Module depth (incl. closure)	Module Height	Foot height CRL-iD/iH
CRL-iD/iH/iDH-1300	610	750	508	170
CRL-iD/iH/iDH-2500	610	955	712	170
CRL-iD/iH/iDH-3500	610	1155	712	170
CRL-iD/iH/iDH-4800	610	1360	712	170
CRL-iD/iH/iDH-6200	610	1665	712	170
CRL-iD/iH/iDH-9000	610	2070	814	170

Type evo max	Length	Module depth (incl. closure)	Module Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	610	1970	1017	250	180
CRL-13500	610	1970	1322	250	180
CRL-16500	610	2275	1322	250	180
CRL-19500	610	2580	1322	250	180

HEATING COIL MODULE (INDOOR UNITS AND OUTDOOR UNITS)

Type	Length	Module depth (incl. closure)	Module Height	Foot height CRL-iD/iH
CRL-iD/iH/iDH-1300	305	750	508	170
CRL-iD/iH/iDH-2500	305	955	712	170
CRL-iD/iH/iDH-3500	305	1155	712	170
CRL-iD/iH/iDH-4800	305	1360	712	170
CRL-iD/iH/iDH-6200	305	1665	712	170
CRL-iD/iH/iDH-9000	305	2070	814	170

Type evo max	Length	Module depth (incl. closure)	Mod-ule Height	Internal base frame height CRL-iH	Base frame height CRL-A
CRL-11000	305	1970	1017	250	180
CRL-13500	305	1970	1322	250	180
CRL-16500	305	2275	1322	250	180
CRL-19500	305	2580	1322	250	180



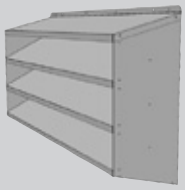
INLINE SILENCER

Length 600 mm, all-round insulation 90 mm

CRL-1300	D = 315 mm	Attenuation 8 dB/250 Hz
CRL-2500	D = 450 mm	Attenuation 6 dB/250 Hz
CRL-3500	D = 500 mm	Attenuation 5 dB/250 Hz
CRL-4800	D = 560 mm	Attenuation 5 dB/250 Hz
CRL-6200	D = 560 mm	Attenuation 5 dB/250 Hz

INTAKE HOOD WITH DROP ELIMINATOR

CRL-A-1300	L = 280 mm
CRL-A-2500	L = 280 mm
CRL-A-3500	L = 280 mm
CRL-A-4800	L = 280 mm
CRL-A-6200	L = 280 mm
CRL-A-9000	L = 300 mm
CRL-A-11000 evo max	L = 300 mm
CRL-A-13500 evo max	L = 300 mm
CRL-A-16500 evo max	L = 300 mm
CRL-A-19500 evo max	L = 300 mm



DISCHARGE HOOD

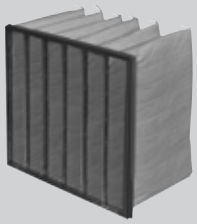
CRL-A-1300	L = 280 mm
CRL-A-2500	L = 280 mm
CRL-A-3500	L = 280 mm
CRL-A-4800	L = 280 mm
CRL-A-6200	L = 280 mm
CRL-A-9000	L = 300 mm
CRL-A-11000 evo max	L = 300 mm
CRL-A-13500 evo max	L = 300 mm
CRL-A-16500 evo max	L = 300 mm
CRL-A-19500 evo max	L = 300 mm

COMPACT PANEL FILTER ISO ePM10 60% (M5)

Depth 48 mm fine dust filter

592 x 404 mm (1 piece) 592 x 287mm (1 piece)	for basic unit CRL-1300 (set = 1 piece) for extension module CRL-1300 (set = 1 piece)
592 x 490mm (1 piece) 592 x 287mm (1 piece)	for CRL-2500 (set = 2 pieces)
592 x 592 mm (1 piece) 592 x 404 mm (1 piece)	for CRL-3500 (set = 2 pieces)
592 x 592 mm	for CRL-4800 (set = 2 pieces)
592 x 592 mm (2 pieces) 592 x 287mm (1 piece)	for CRL-6200 (set = 3 pieces)
592 x 490 mm (3 pieces) 592 x 287 mm (3 pieces)	for CRL-9000 (set = 6 pieces)

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER
DEVICE ACCESSORIES

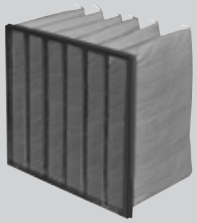


BAG FILTER ISO ePM10 50% (M5 - ENERGY SAVING)
Slide-in frame with clamping lever

592 x 592 mm (3 pieces) 287 x 592 mm (3 pieces)	for CRL-11000 evo max (set = 6 pieces)
592 x 592 mm (6 pieces)	for CRL-13500 evo max (set = 6 pieces)
592 x 592 mm (6 pieces) 287 x 592 mm (2 pieces)	for CRL-16500 evo max (set = 8 pieces)
592 x 592 mm (8 pieces)	for CRL-19500 evo max (set = 8 pieces)

COMPACT PANEL FILTER ISO ePM1 55% (F7)
Slide-in frame with clamping lever

592 x 404 mm (1 piece) 592 x 287mm (1 piece)	for basic unit CRL-1300 (set = 1 piece) for extension module CRL-1300 (set = 1 piece)
592 x 490mm (1 piece) 592 x 287mm (1 piece)	for CRL-2500 (set = 2 pieces)
592 x 592 mm (1 piece) 592 x 404 mm (1 piece)	for CRL-3500 (set = 2 pieces)
592 x 592 mm	for CRL-4800 (set = 2 pieces)
592 x 592 mm (2 pieces) 592 x 287mm (1 piece)	for CRL-6200 (set = 3 pieces)
592 x 490 mm (3 pieces) 592 x 287 mm (3 pieces)	for CRL-9000 (set = 6 pieces)



BAG FILTER ISO ePM1 55% (F7 - ENERGY SAVING)
Slide-in frame with clamping lever

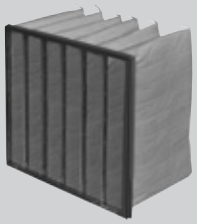
592 x 592 mm (3 pieces) 287 x 592 mm (3 pieces)	for CRL-11000 evo max (set = 6 pieces)
592 x 592 mm (6 pieces)	for CRL-13500 evo max (set = 6 pieces)
592 x 592 mm (6 pieces) 287 x 592 mm (2 pieces)	for CRL-16500 evo max (set = 8 pieces)
592 x 592 mm (8 pieces)	for CRL-19500 evo max (set = 8 pieces)

COMPACT V FILTER CARBON ISO ePM2.5 65% (F7 - ACTIVE CARBON)
Slide-in frame with clamping lever

592 x 592 mm (3 pieces) 287 x 592 mm (3 pieces)	for CRL-11000 evo max (set = 6 pieces)
592 x 592 mm (6 pieces)	for CRL-13500 evo max (set = 6 pieces)
592 x 592 mm (6 pieces) 287 x 592 mm (2 pieces)	for CRL-16500 evo max (set = 8 pieces)
592 x 592 mm (8 pieces)	for CRL-19500 evo max (set = 8 pieces)

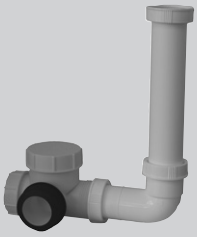
COMPACT PANEL FILTER ISO ePM1 80% (F9)
Depth 48 mm fine dust and pollen filter

592 x 404 mm (1 piece) 592 x 287mm (1 piece)	for basic unit CRL-1300 (set = 1 piece) for extension module CRL-1300 (set = 1 piece)
592 x 490mm (1 piece) 592 x 287mm (1 piece)	for CRL-2500 (set = 2 pieces)
592 x 592 mm (1 piece) 592 x 404 mm (1 piece)	for CRL-3500 (set = 2 pieces)
592 x 592 mm	for CRL-4800 (set = 2 pieces)
592 x 592 mm (2 pieces) 592 x 287mm (1 piece)	for CRL-6200 (set = 3 pieces)
592 x 490 mm (3 pieces) 592 x 287 mm (3 pieces)	for CRL-9000 (set = 6 pieces)



BAG FILTER ISO ePM1 85% (F9 - ENERGY SAVING)
Slide-in frame with clamping lever

592 x 592 mm (3 pieces) 287 x 592 mm (3 pieces)	for CRL-11000 evo max (set = 6 pieces)
592 x 592 mm (6 pieces)	for CRL-13500 evo max (set = 6 pieces)
592 x 592 mm (6 pieces) 287 x 592 mm (2 pieces)	for CRL-16500 evo max (set = 8 pieces)
592 x 592 mm (8 pieces)	for CRL-19500 evo max (set = 8 pieces)



TRAP WITH NON-RETURN DEVICE
1¼", for intake and pressure sides, supplied separately, for modules with condensate drain

Frost protection for trap
CRL-A

MIXING VALVES FOR HEAT EXCHANGER loose type depending on heat exchanger design

DN	10	RCS	0.63
DN	10	RCS	1.0
DN	10	RCS	1.6
DN	15	RCS	2.5
DN	20	RCS	4.0
DN	25	RCS	6.3
DN	25	RCS	10
DN	32	RCS	16
DN	40	RCS	25

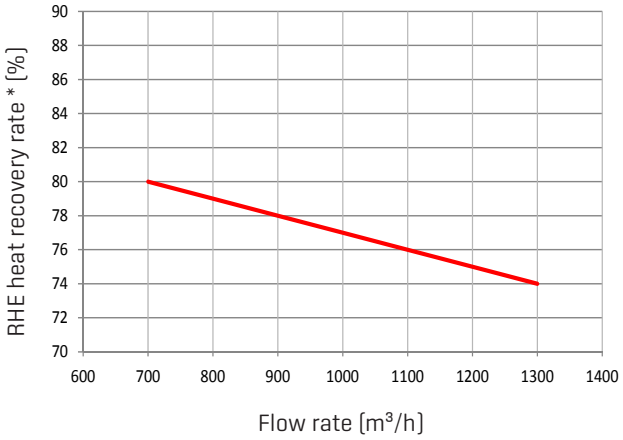
Mixing valve drive, loose
24V DC, 0-10 V control signal

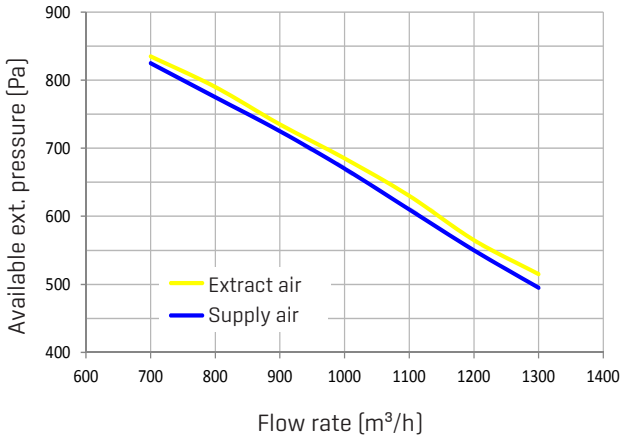
THREADED CONNECTION SET FOR MIXING VALVES FOR HEAT EXCHANGER consisting of:
Three union nuts, three inlay nuts and three flat gaskets

½"	DN	10	RCS	0.63
½"	DN	10	RCS	1.0
½"	DN	10	RCS	1.6
¾"	DN	15	RCS	2.5
1"	DN	20	RCS	4.0
1¼"	DN	25	RCS	6.3
1½"	DN	25	RCS	10
2"	DN	32	RCS	16
2¼"	DN	40	RCS	25

EXACT SPECIFICATIONS CAN ONLY BE SUPPLIED SPECIFIC TO EACH PROJECT.

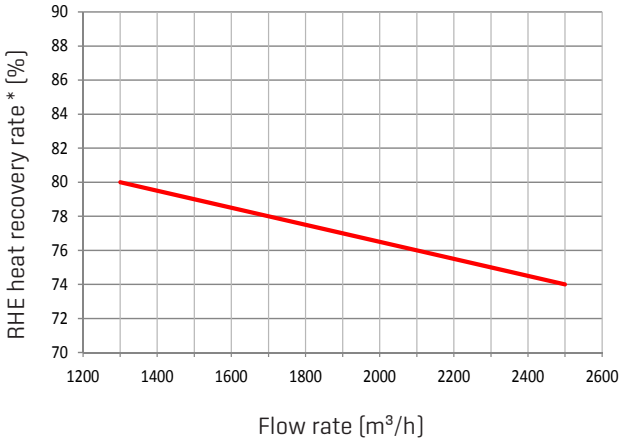
CRL-1300

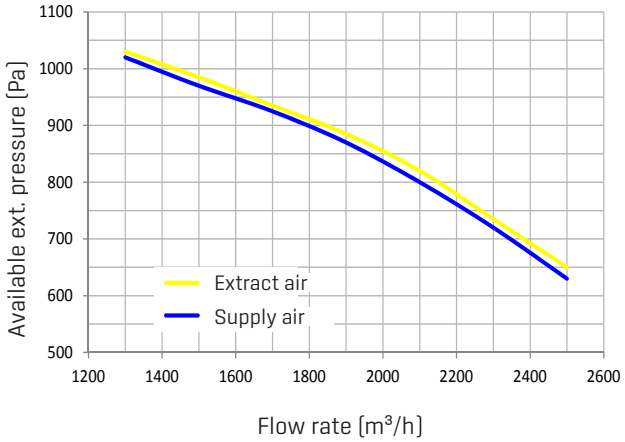




*Condensation RHE
EN 308 conditions

CRL-2500



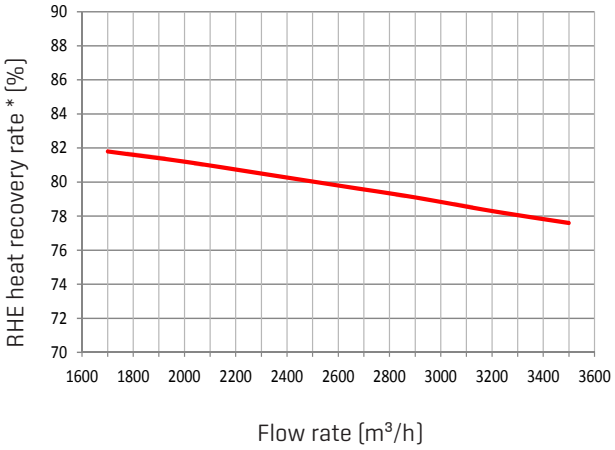


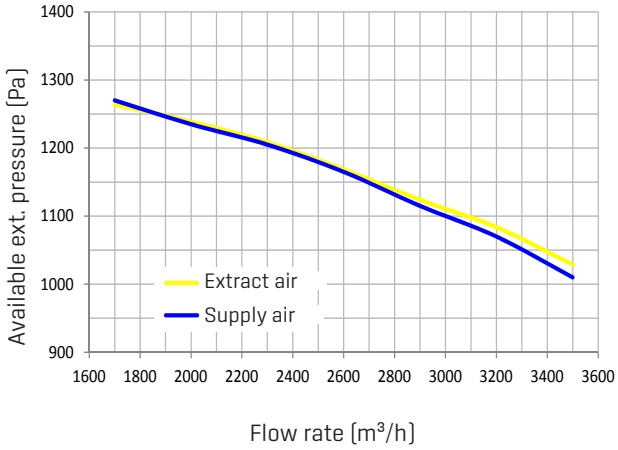
*Condensation RHE
EN 308 conditions

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER

EXACT SPECIFICATIONS CAN ONLY BE SUPPLIED SPECIFIC TO EACH PROJECT.

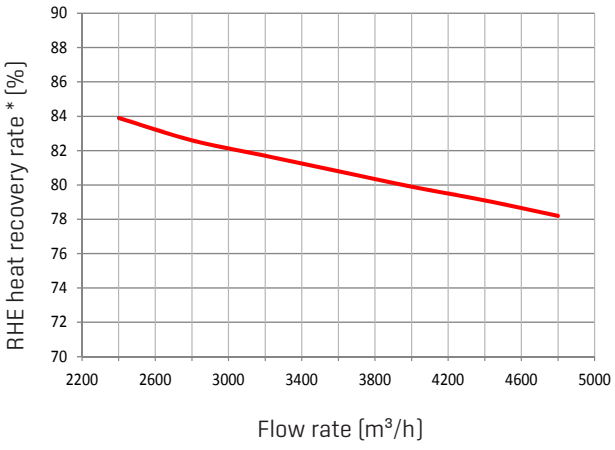
CRL-3500

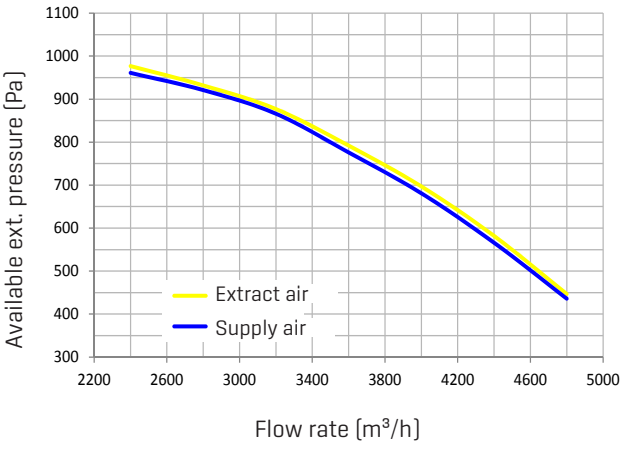




*Condensation RHE
EN 308 conditions

CRL-4800

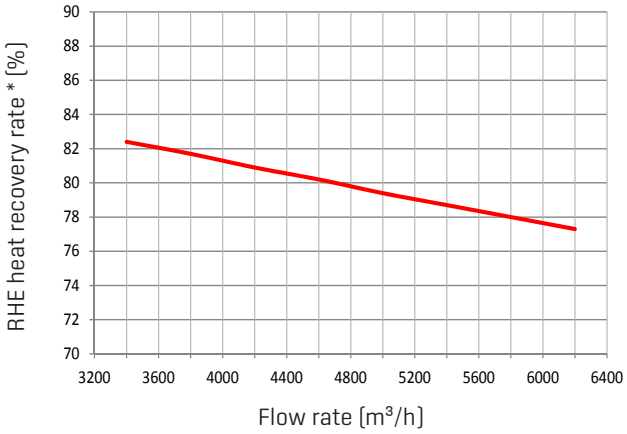


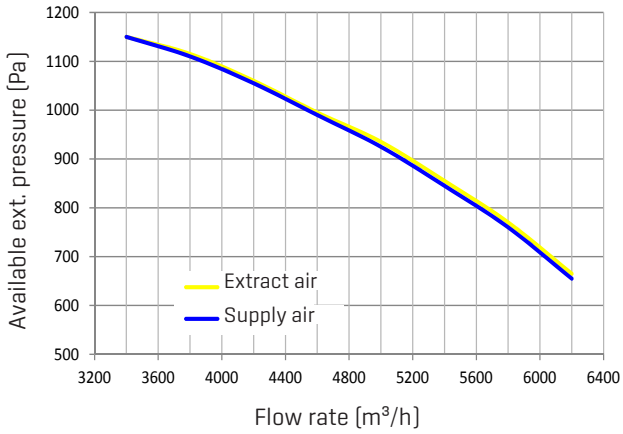


*Condensation RHE
EN 308 conditions

EXACT SPECIFICATIONS CAN ONLY BE SUPPLIED SPECIFIC TO EACH PROJECT.

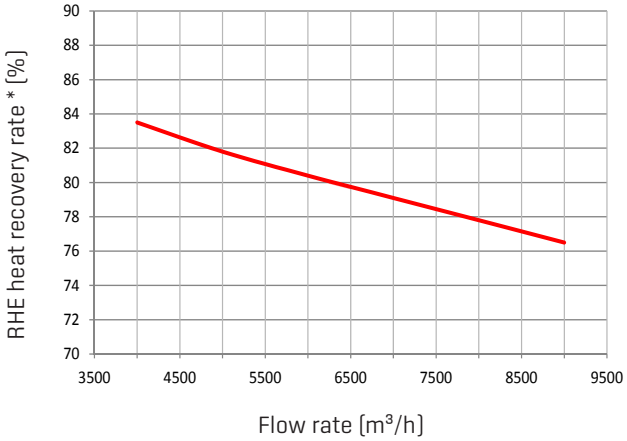
CRL-6200

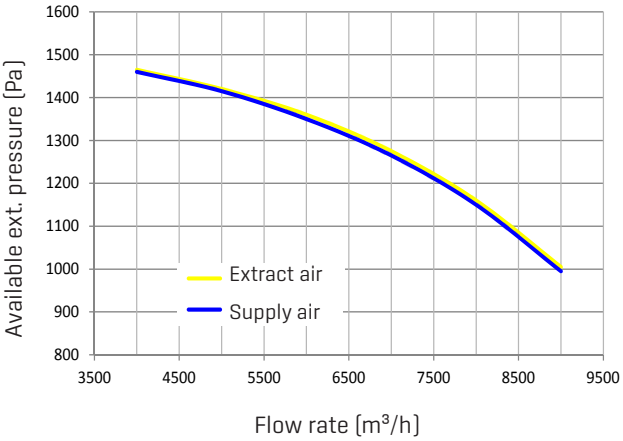




*Condensation RHE
EN 308 conditions

CRL-9000



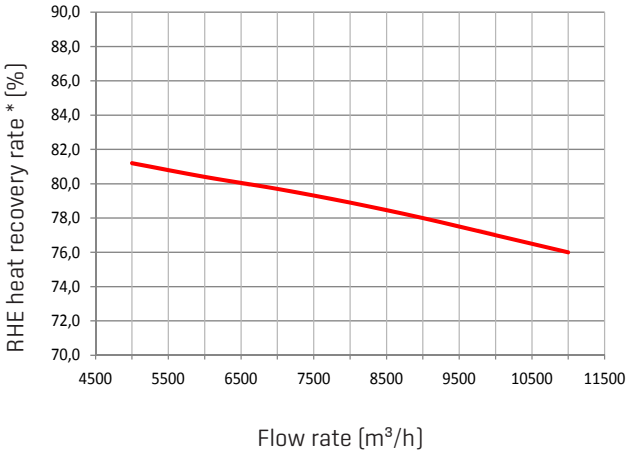


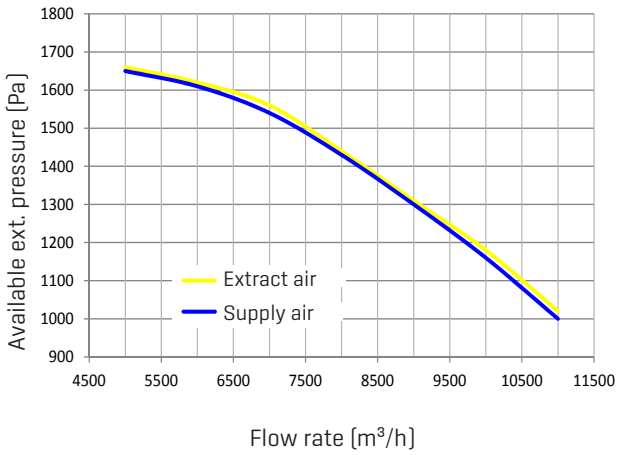
*Condensation RHE
EN 308 conditions

COMFORT VENTILATION UNIT WITH ROTARY HEAT EXCHANGER

EXACT SPECIFICATIONS CAN ONLY BE SUPPLIED SPECIFIC TO EACH PROJECT.

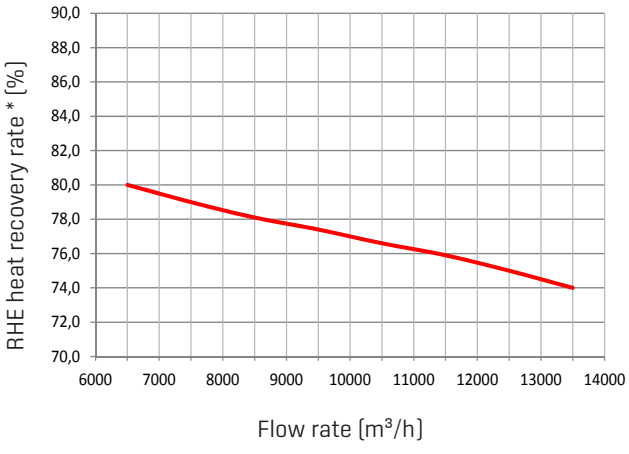
CRL-11000 evo max

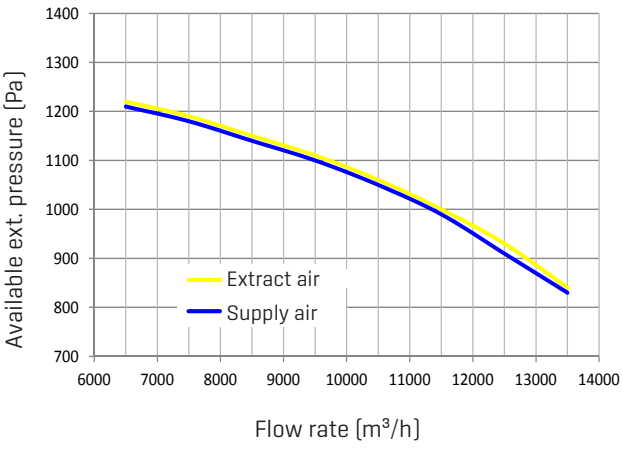




*Condensation RHE
EN 308 conditions

CRL-13500 evo max

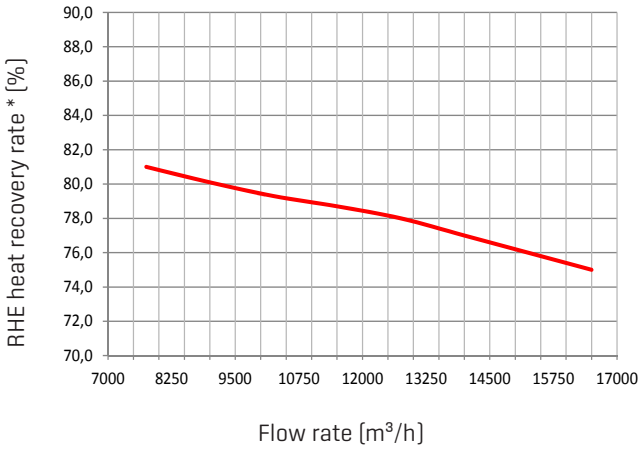


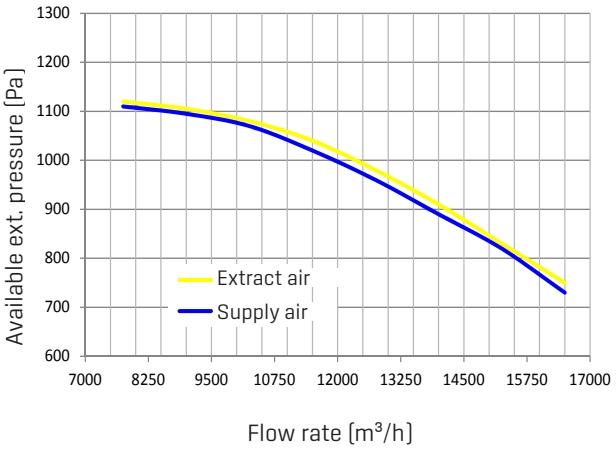


*Condensation RHE
EN 308 conditions

EXACT SPECIFICATIONS CAN ONLY BE SUPPLIED SPECIFIC TO EACH PROJECT.

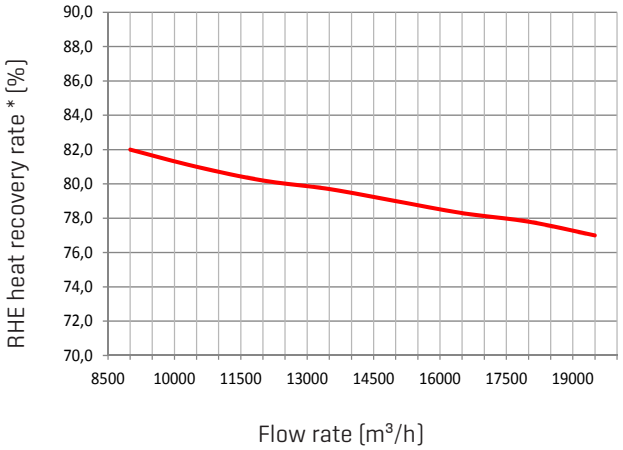
CRL-16500 evo max

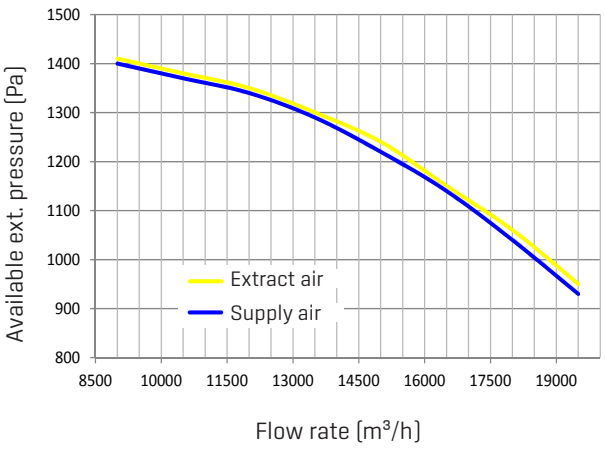




*Condensation RHE
EN 308 conditions

CRL-19500 evo max





*Condensation RHE
EN 308 conditions

Indoor air quality

Indoor air quality is determined by the following three factors (see also EN 15251 or EN 13779):

- **Emissions from persons and their activities**
  Carbon dioxide emissions from persons' respiration, biological vapours, smoking, personal hygiene products, etc.
- **Emissions from the room**
  Vapours from furniture, carpets, paint, adhesives, etc.
- **Outdoor air conditions**
  Rural areas, urban areas, dust, fine dust, pollen, etc.

Design criteria

In accordance with EN 15251, various categories are used for indoor air quality and ventilation rate criteria.

Description of the applicability of the various Categories

Category	Description
1	High level of expectation is recommended for spaces occupied by very sensitive and fragile persons with special needs like disabled, sick, very young children and elderly persons.
2	Standard level of expectation should be applied to new and renovated buildings.
3	An acceptable, moderate level of expectation may be applied to existing buildings.
4	Values outside the criteria for the above categories: This category should only be accepted for a limited part of the year.

As the carbon dioxide concentration rises, the ability to concentrate and perform declines, tiredness increases and people feel uncomfortable.
Carbon dioxide is a natural constituent of the earth's atmosphere and is found in outdoor air in concentrations ranging from around 350 ppm (rural areas) to around 500 ppm (urban areas).

CO_2 level in indoor environments to EN 15251 or EN 16798-3

The following table from DIN EN 16798-3 shows the recommended minimum values for the outdoor air flow rate per person. The design air flow rate also takes emissions from other sources into account, such as building materials and furniture.

			Outdoor air flow rate							
			Non-smoking area				Smoking area			
Category	Unit		Standard area		Standard value		Standard area		Standard value	
1	l/s/person	m³/h/person	> 15	> 54	20	72	> 30	> 108	40	144
2	l/s/person	m³/h/person	10-15	36-54	12.5	45	20-30	72-108	25	90
3	l/s/person	m³/h/person	6-10	21.6-36	8	28.8	12-30	43.2-108	16	57.6
4	l/s/person	m³/h/person	< 6	< 21.6	5	18	< 12	< 43.2	10	36

Minimum air volumes per person (basis max. CO_2 demand)

	Age-dependent rates		
For approx. age	Target 1200 ppm	Target 1000 ppm	Target group
0-6	19 m³/h	25 m³/h	Kindergarten
6-10	19 m³/h	25 m³/h	Primary school
10-14	23 m³/h	30 m³/h	Secondary school
14-19	24 m³/h	33 m³/h	Technical college
Adults	28 m³/h	37 m³/h	

Example calculations

$l/s \times 3.6 = m^3/h$

Example 1:

School, two classrooms, each with 30 children aged 6-10 and one teacher

Required air volume per room, according to max. CO_2 requirement of 1200 ppm

Calculation:	2 x 30 people x 19 m^3/h	=	1140 m^3/h
	2 x 1 teacher x 28 m^3/h	=	56 m^3/h
	Required outdoor air volume:	=	1196 m^3/h

Example 2:

Required interior category: 3 - Non-smoking area (standard value)
40 people

Air volume per room:
Calculation: 40 people x 8 l/s = 320 l/s

Required outdoor air volume: = 320 l/s = 1152 m^3/h

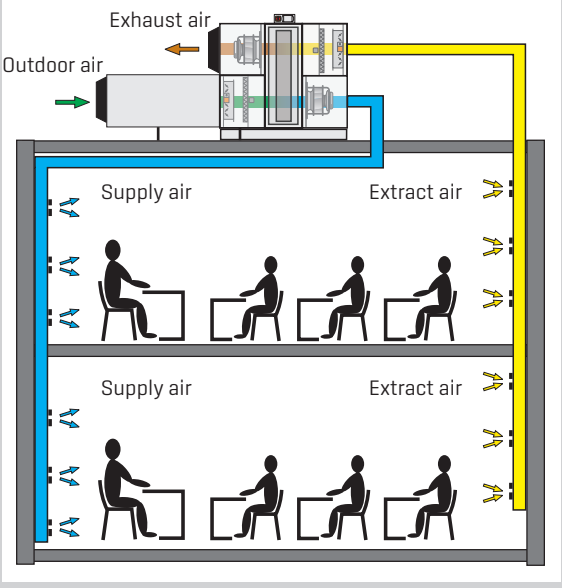
Notes:

If greater air volumes are required, units from our KG Top range of air handling units can be used.

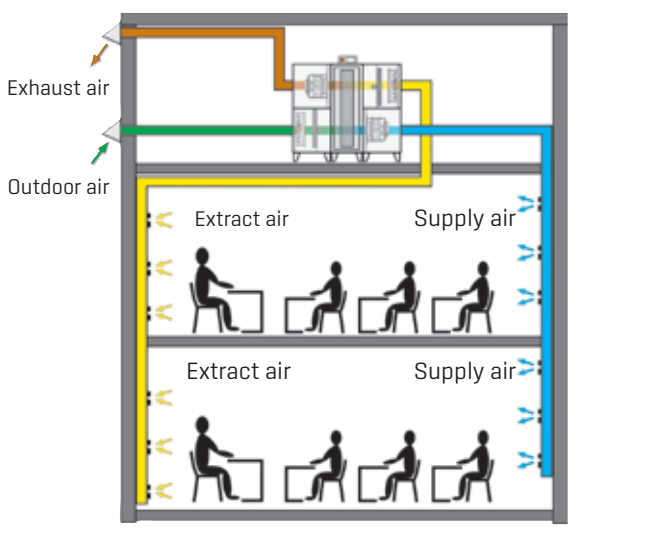
Criteria for indoor noise levels according to DIN EN 15251 or DIN EN 16798-3

Type of building/room	Recommended sound pressure range (dB(A))
Open-plan office	35-45
Conference room	30-40
Classroom, kindergarten	35-45
Cafeterias/Restaurants	35-50
Shops	35-50

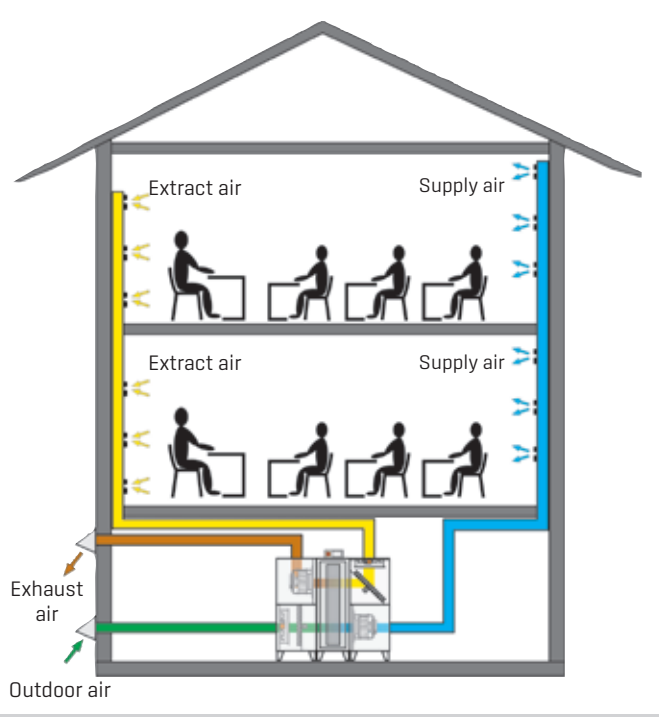
Functional illustration of air inflow: CRL-A



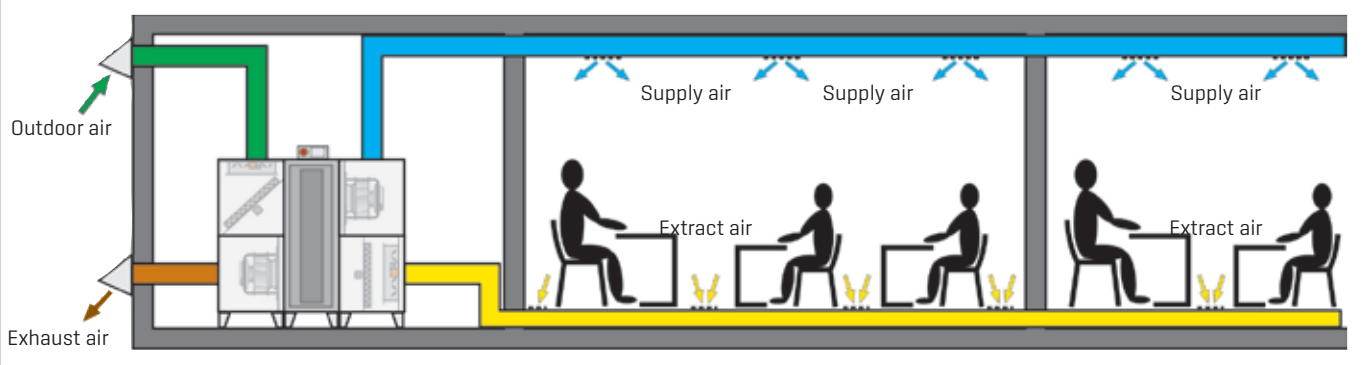
Functional illustration of air inflow:
CRL-iH



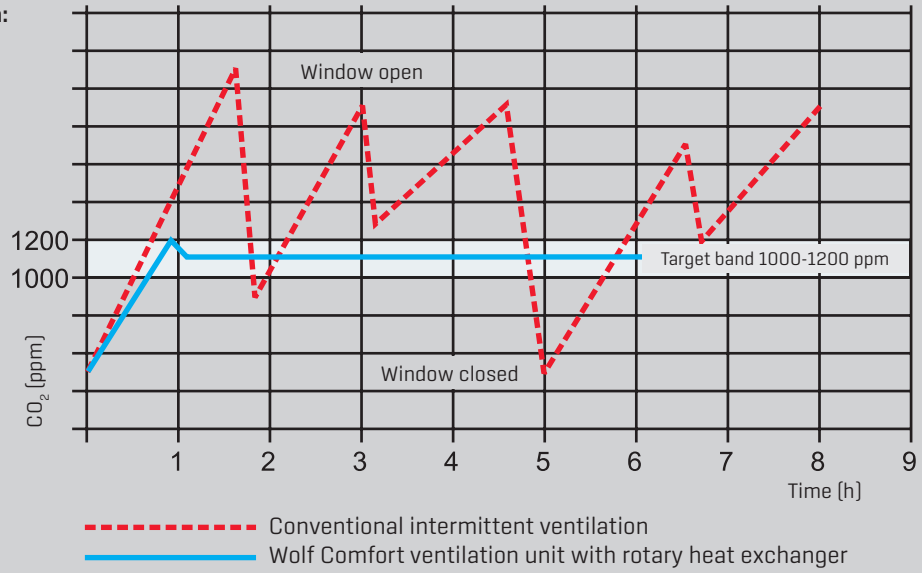
Functional illustration of air inflow:
CRL-iD



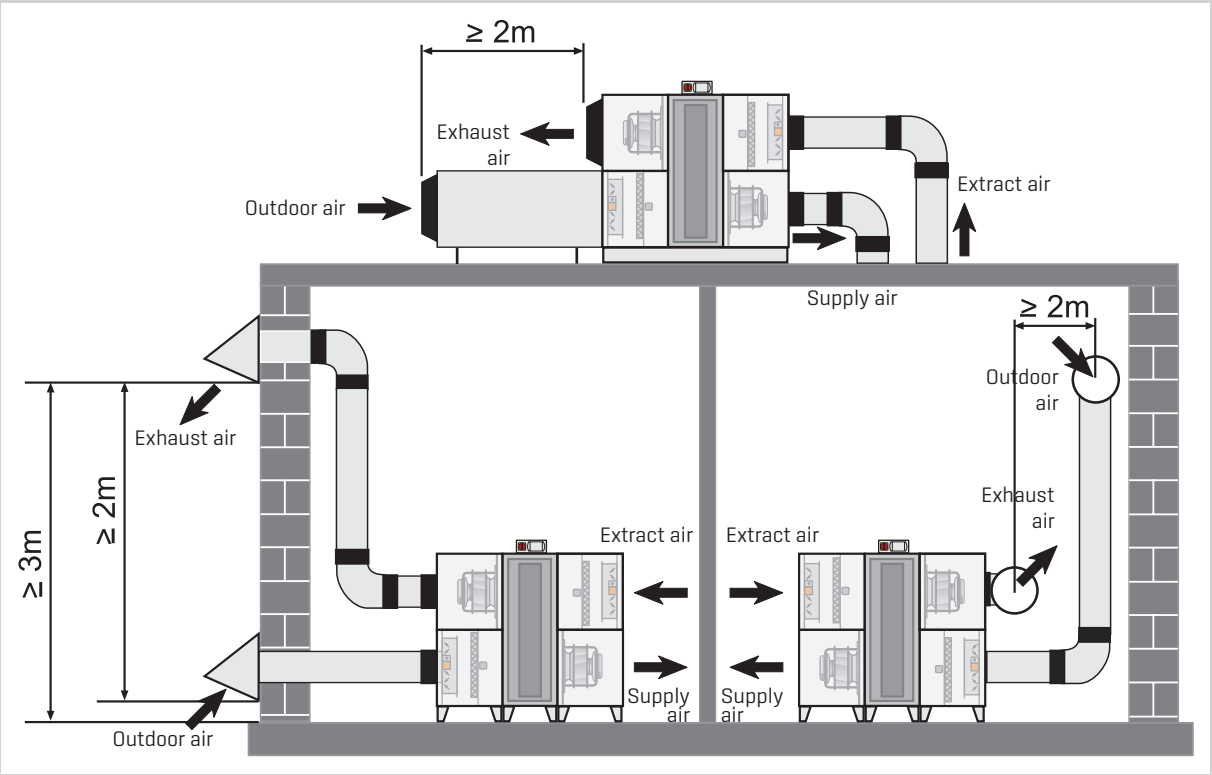
Unit positioned in adjoining room



Comparison with intermittent ventilation:



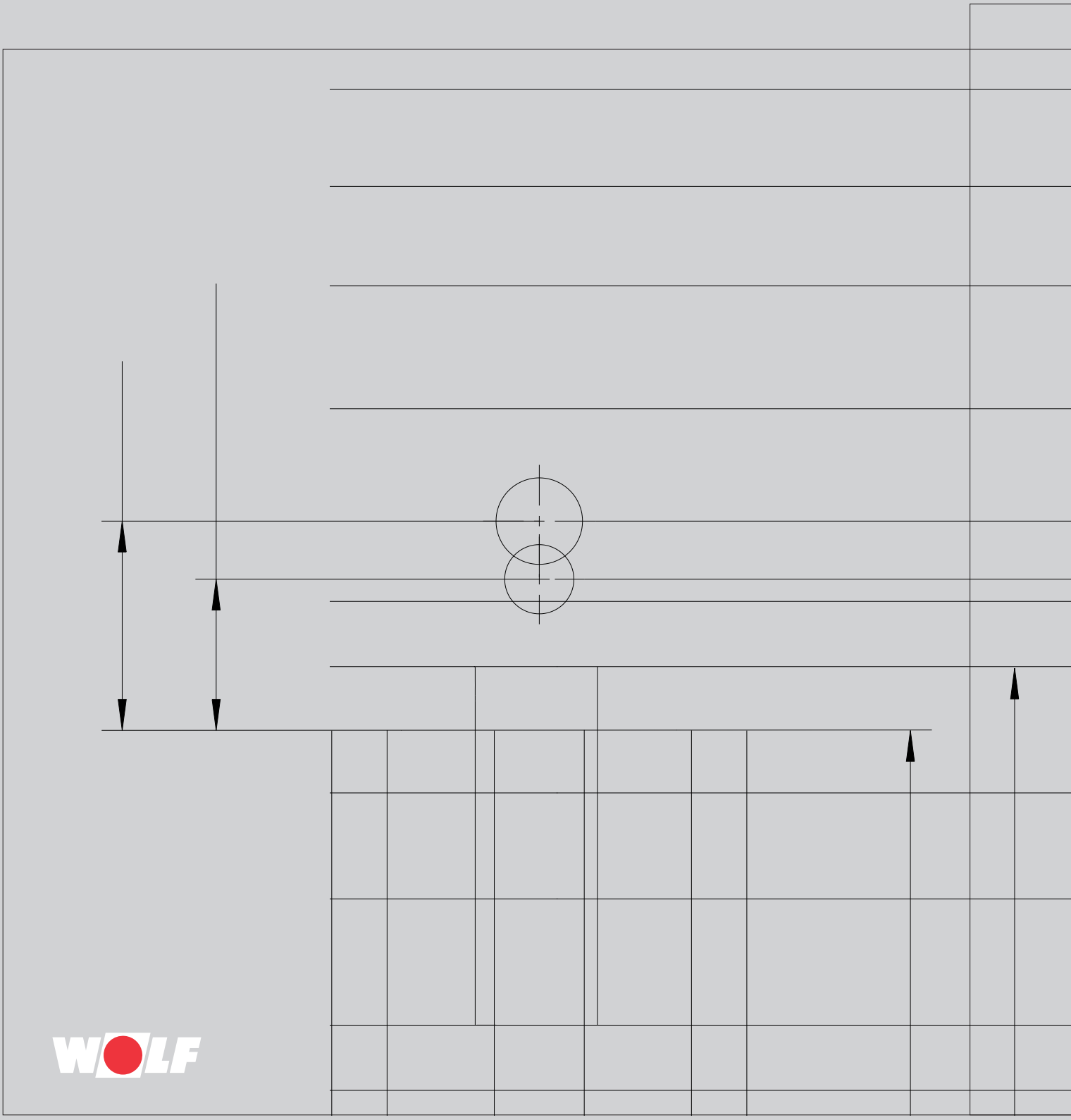
Minimum clearance between outdoor air intake and exhaust air discharge to prevent an air short circuit (DIN EN 16798-3)



NOTES

Dealer address:

WOLF GMBH/POSTFACH 1380/D-84048 MAINBURG/TEL. +49.0.875174-0/FAX +49.0.875174-1600/www.WOLF.eu



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