

KOOLAIR



Smoke evacuation
damper



CEVH
CEVH-1P-DECO

Mounting instructions

www.koolair.com

CEVH / CEVH – 1P DECO

Smoke evacuation dampers

Installation instructions



SUMMARY











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PRODUCT TYPE REGULATORY DESIGNATION.

Duct Type	CEVH Remote Control 24/48 VDCC  24/48 VACC  220 VAC  + manual reset	CEVH 1P DECO Remote Control 24/48 VDCC  24/48 VACC  220 VAC  + manual reset	CEVH 1P DECO Remote Control 24/48 VDCC  24/48 VACC  220 VAC  + motorised reset 24/48 V 
Collective duct	X Except fail-safe	X Except fail-safe	X Except fail-safe
Single duct or manifold	X	X	X

CEVH/CEVH-1P-DECO Smoke evacuation dampers



Installation instructions

CERTIFIED CHARACTERISTICS SPECIFIC TO THE PRODUCT TYPE

CE certified characteristics		
	CEVH	CEVH-1P-DECO
Operating mode	Stored energy	
CONTROL MODE		
<i>Control mode</i>		
Remote control (shunt release) + manual reset	CE	CE
Remote control (shunt release) + motor-driven reset	Not applicable	CE
<i>Remote control mode</i>		
Open-circuit shunt release	Yes	
Closed-circuit shunt release	Yes (Single duct or manifold) No (Collective duct)	
<i>Uc voltage in VDC</i>		
Remote control (shunt release) + manual reset	CE : 24 VDC 24 VAC 48 VDC 48 VAC 220 VAC	
Remote control (schunt release) + motor-driven reset	Not applicable	CE : 24 V 48 V
<i>Continuous Power in W</i>		
Remote controlled (shunt release) + manual reset	Maximum value (o.c. shunt release): 3.5 W Maximum value (o.c. shunt release): 3.5 W Maximum value (c.c. shunt releasae): 1.6 W	
Remote control (shunt release) + motor-driven reset	Maximum value: 3.5 W	
ADDITIONAL FUNCTIONS		
Remote controlled (shunt release) + manual reset	<ul style="list-style-type: none"> - Single pole or two pole standby position contact (spare) - Single pole or two pole safety position contact (spare) 	
Remote control (shunt release) + motor-driven reset	Not applicable	<ul style="list-style-type: none"> - Single pole or two pole standby contact (spare) - Single pole or two pole safety position contact (spare) - Reset Motor 24/48 V
MODULAR	Not applicable	

CEVH/CEVH-1P-DECO Smoke evacuation dampers Installation instructions

CERTIFIED CHARACTERISTICS SPECIFIC TO THE PRODUCT TYPE

CE + NF certified characteristics	
	CEVH
Operating mode	Stored energy
CONTROL MODE	
<i>Control mode</i>	
Remote controlled (shunt release) + manual reset	
Remote control (shunt release) + motor-driven reset	Not applicable
<i>Remote control mode</i>	
Open-circuit shunt release	Yes
Closed-circuit shunt release	Yes (Single duct or manifold) No (Collective duct)
<i>Uc voltage in VDC</i>	
Remote controlled (shunt release) + manual reset	 24 VDC 48 VDC
Remote control (shunt release) + motor-driven reset	Not applicable
<i>Continuous Power in W</i>	
Remote controlled (shunt release) + manual reset	Maximum value (open-circuit shunt release): 3.5 W Maximum value (closed-circuit shunt release): 1.6 W
Remote control (shunt release) + motor-driven reset	Not applicable
ADDITIONAL FUNCTIONS	
Remote controlled (shunt release) + manual reset	- Single pole or two pole standby position contact (spare) - Single pole or two pole safety position contact (spare)
Remote control (shunt release) + motor-driven reset	Not applicable
MODULARITY	Not applicable

CEVH/CEVH-1P-DECO Smoke evacuation dampers



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CERTIFIED CHARACTERISTICS SPECIFIC TO THE PRODUCT TYPE

General characteristics of smoke evacuation dampers	
Damper for collective duct: Forbidden: - Change of state by remote control power supply disconnection is forbidden. Required: - Resettable after cold release. - Level 0 or 1 built-in manual opening control. - Safety position contact (end point limit switch) - Standby position contact (start point limit switch) Safety option: - Level 1 built-in manual opening and closing control	Damper for single duct or manifold: Required: - Resettable after cold release - Level 0 or 1 built-in manual control Safety options: - Safety position contact (end point limit switch) - Standby position contact (start point limit switch)
SERVICE LIFE	300 cycles
ALLOWED RANGE OF DIMENSIONS	
Clear cross-section area	See pages 7 and 8
Dimensions	See pages 7 and 8
FIRE RESISTANCE CLASSIFICATION	
Fire resistance rating	CEVH: EI 120(Ved i ↔o) S 1500 AA multi CEVH-1P-DECO: EI 120(Ved i ↔o) S 1500 AA C300 multi
Installation type	CEVH: RPK protective grille CEVH-1P-DECO: RPK protective grille or concealment plate
INSTALLATION	
Installation orientation	CEVH: Two blades with vertical axes CEVH-1P-DECO: Single blade with vertical axis
Direction of air movement	Any

CEVH/CEVH-1P-DECO Smoke evacuation dampers Installation instructions

DECLARATION OF SMOKE EVACUATION PERFORMANCE

		Dimensions (mm)	Installation location	Installation	Classification
	CEVH CE 0370 NF	L: 400 → 1100 H: 400 → 1100	Smoke exhaust duct	Vertical duct 1366-8 certified	EI 120 (Ved i↔o) S 1500 AA multi (500Pa)
	CEVH-1P-DECO CE 0370	L: 300 → 700 H: 385 → 1100	Smoke exhaust duct	Vertical duct 1366-8 certified	EI 120 (Ved i↔o) S 1500 AA C ₃₀₀ multi (500Pa)

EXPLANATION OF THE PRODUCT CODE

E = Thermal Integrity
 I = Thermal Insulation
 120 = Resistance time in minutes
 i ↔ o = Position of the mechanisms (fire side independent)
 Ved = Vertical duct
 S = Smoke leakage
 Pa = Pressure in Pascals

EXPLANATION OF THE MARKING CODE

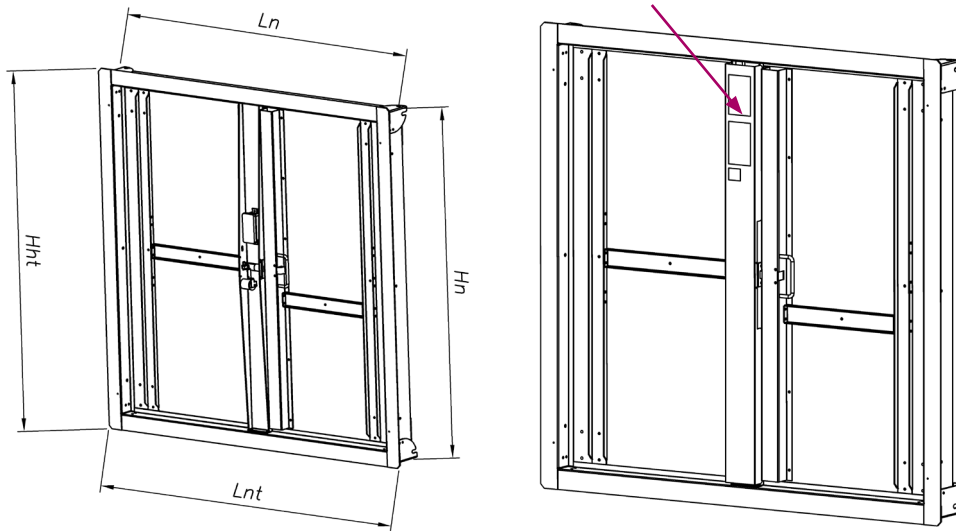
auto = automatic
 tele = remote controlled
 CC = collective duct
 CU = single duct
 Pa = Pressure in Pascals
 Dim.nom = nominal dimensions
 SL = free area
 E.ALIM = Power input
 E.TELE = remote control input
 E = open-circuit shunt release
 R = closed-circuit shunt release
 Vca or Vac = AC Voltage
 Vcc = DC Voltage

CEVH/CEVH-1P-DECO Smoke evacuation dampers

Installation instructions

CEVH DAMPER DRAWING, DIMENSIONS AND FREE AREA

Product labelling



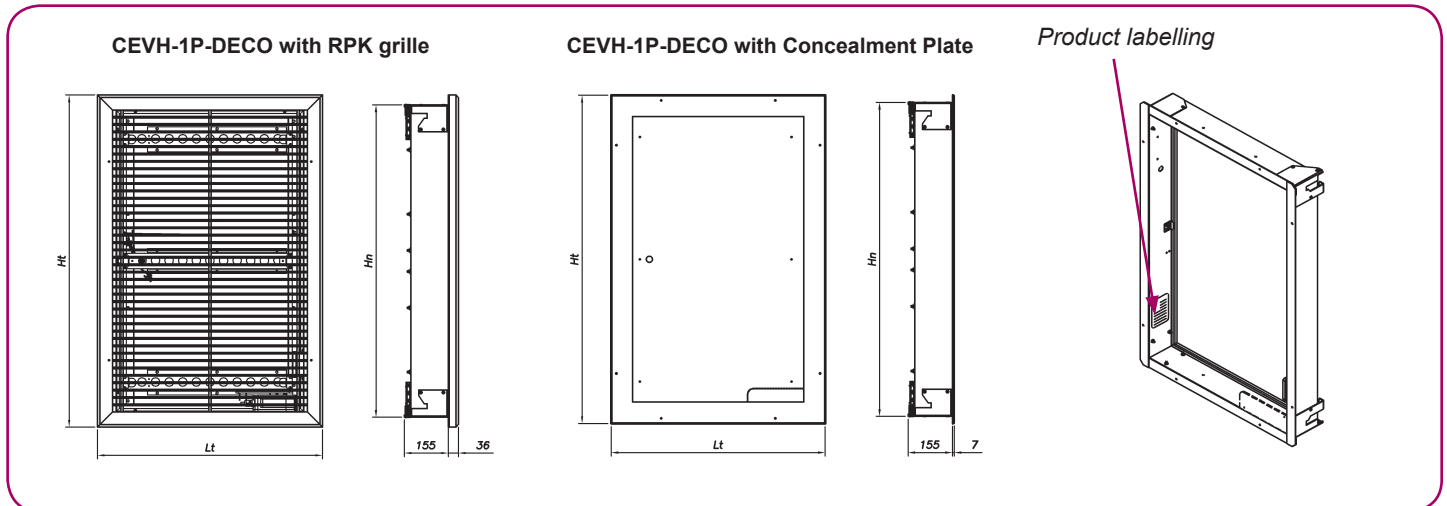
DIMENSIONS AND OPENINGS

Nominal length Ln [mm]	External length Lht [mm]	Nominal height Hn [mm]	External height Hht [mm]
400	429	400	429
450	479	450	479
500	529	500	529
550	579	550	579
600	629	600	629
650	679	650	679
700	729	700	729
750	779	750	779
800	829	800	829
850	879	850	879
900	929	900	929
950	979	950	979
1000	1029	1000	1029
1050	1079	1050	1079
1100	1129	1100	1129

Calculation of the free area (dm ²)		
Lht = Ln + 29	Hht = Hn + 29	Free area formula (dm ²)
Lpa = Lht - 239	Hpa = Hht - 125	(Hpa (mm) x Lpa (mm) / 10000)

CEVH/CEVH-1P-DECO Smoke evacuation dampers Installation instructions

CEVH-1P-DECO DAMPER DRAWING, DIMENSIONS AND FREE AREA-SECTION



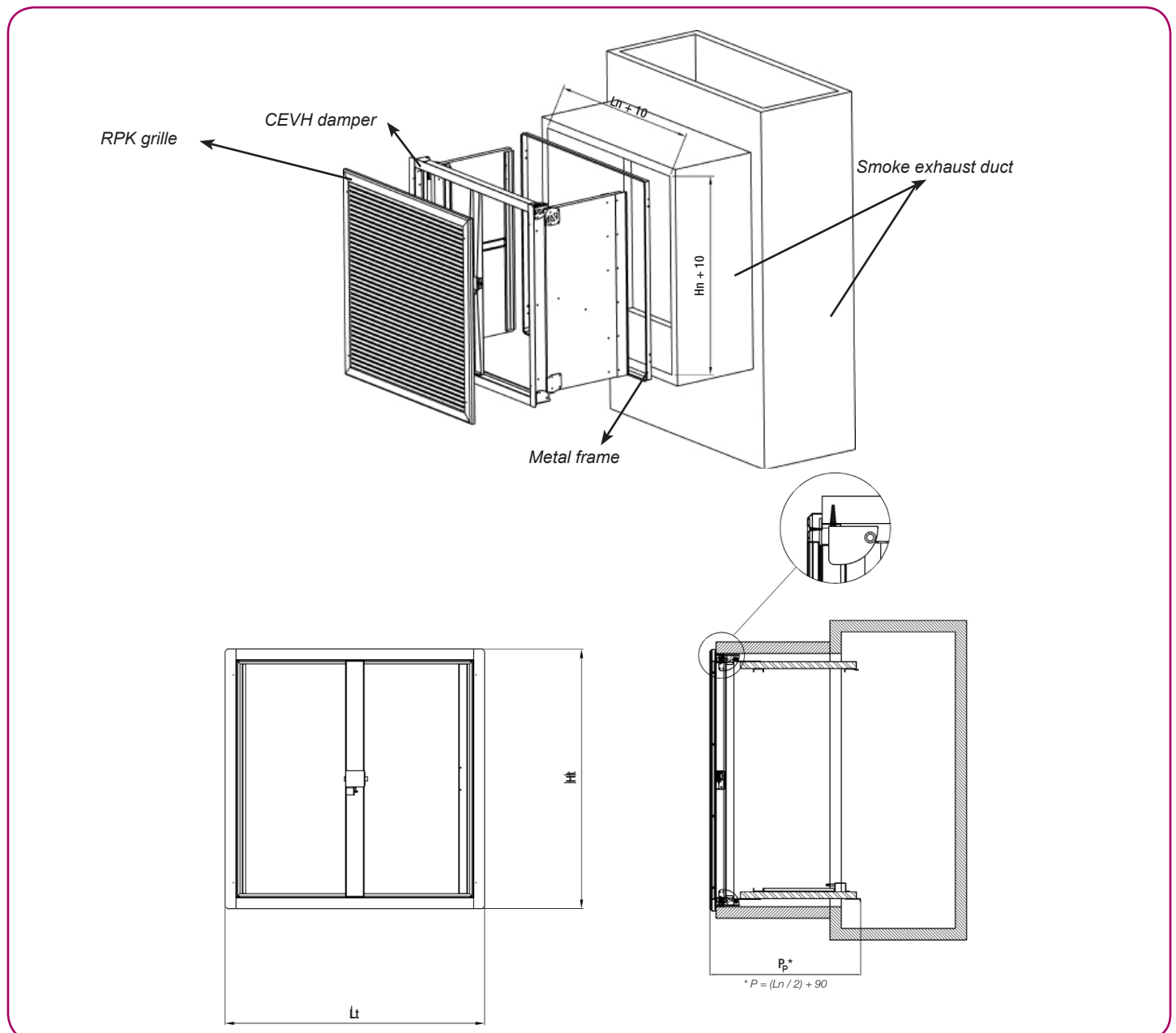
Nominal length Ln	External length Lt [mm]		Nominal height Hn	External height Ht [mm]	
	DECO	RPK		DECO	RPK
[mm]			[mm]		
400	450	494	400	450	470
450	500	544	450	500	520
500	550	594	500	550	570
550	600	644	550	600	620
600	650	694	600	650	670
650	700	744	650	700	720
700	750	794	700	750	770
			750	800	820
			800	850	870
			850	900	920
			900	950	970
			950	1000	1020
			1000	1050	1070

Calculation of the free-area (dm²)
$S.L \text{ (dm}^2\text{)} = \frac{(Hn - 100) \cdot (Ln - 100)}{10^4}$

CEVH/CEVH-1P-DECO Smoke evacuation dampers

Installation instructions

INSTALLATION AND ASSEMBLY (CEVH)

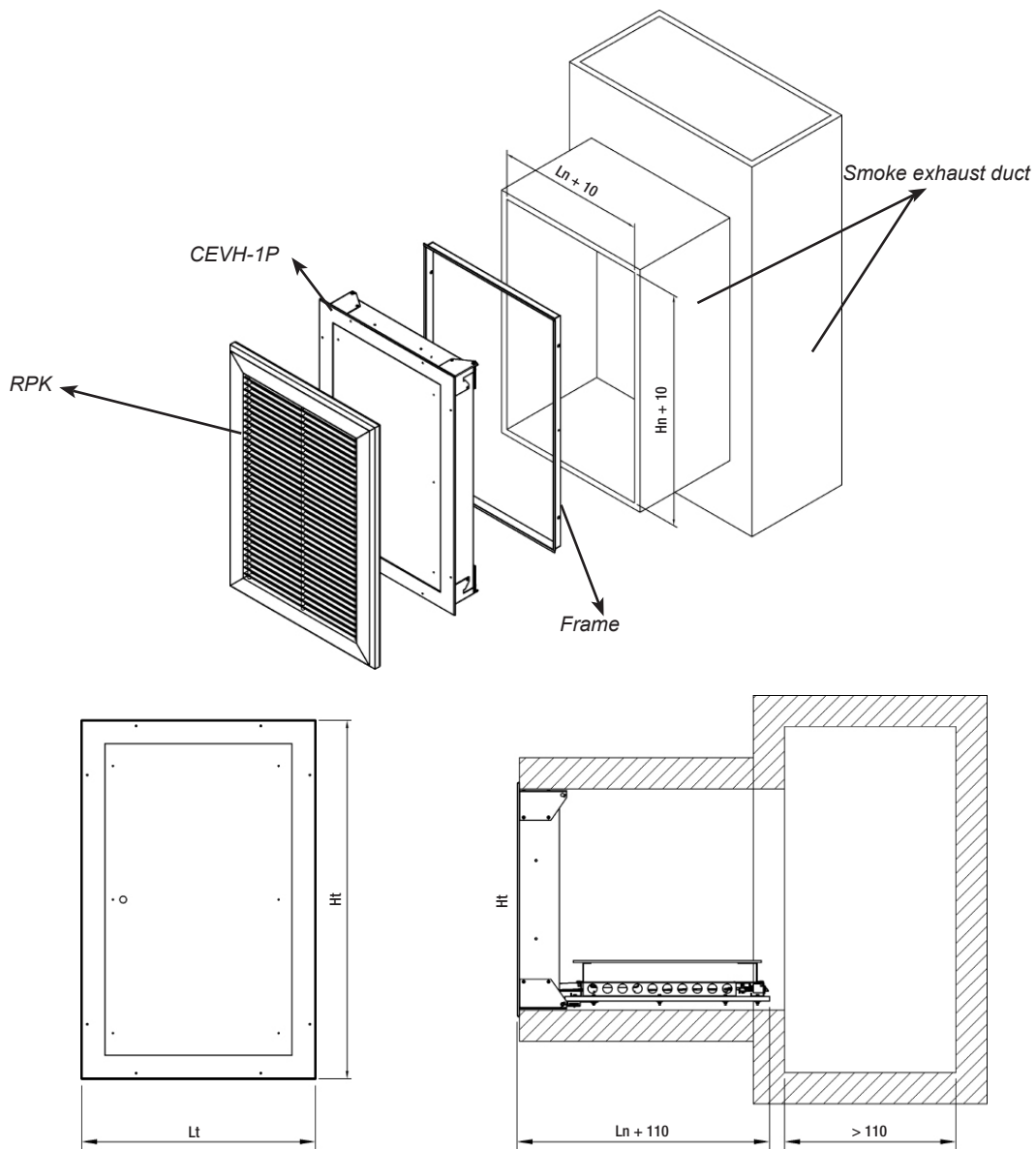


Installation in a duct whose internal dimensions are 1,100 mm (width) x 1,100 mm (height) maximum, 52 mm thick Promatect L500 shaped plate.

Use of the CEVH damper in installations with ducts other than those tested under certified conditions:
For multi-compartment systems (multi), ducts tested according to the EN standard were used in each case, or ducts made from a material with a density equal to or greater than those used in the certification tests. The duct must be installed according to the manufacturer's current drawings.

CEVH/CEVH-1P-DECO Smoke evacuation dampers Installation instructions

INSTALLATION AND ASSEMBLY (CEVH-1P-DECO)



Use of the CEVH-1P-DECO damper in installations with ducts other than those tested under certified conditions:

For multi-compartment systems (multi), ducts tested according to the EN standard were used in each case, or ducts made from a material with a density equal to or greater than those used in the certification tests. The duct must be installed according to the manufacturer's current drawings.

CEVH/CEVH-1P-DECO Smoke evacuation dampers

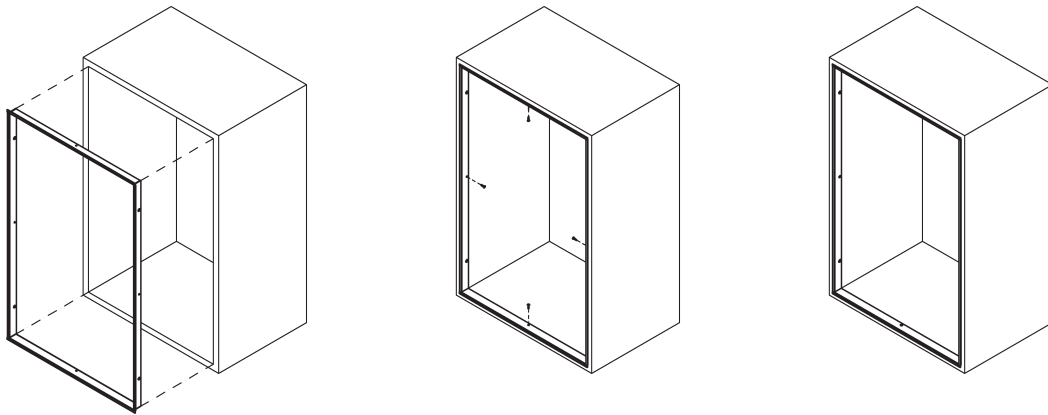
Installation instructions

INSTALLATION AND ASSEMBLY: MOUNTING SUB-FRAME

Caution:

- Make sure that the sub-frame is perfectly square before installing.
- Fix the sub-frame to the duct with 4 screws (supplied with the frame).
- Drill a hole in the duct for the connection cables to pass through.

EN 1366-8 compliant duct



Install the frame and fix with 4 screws.

CEVH/CEVH-1P-DECO Smoke evacuation dampers

Installation instructions

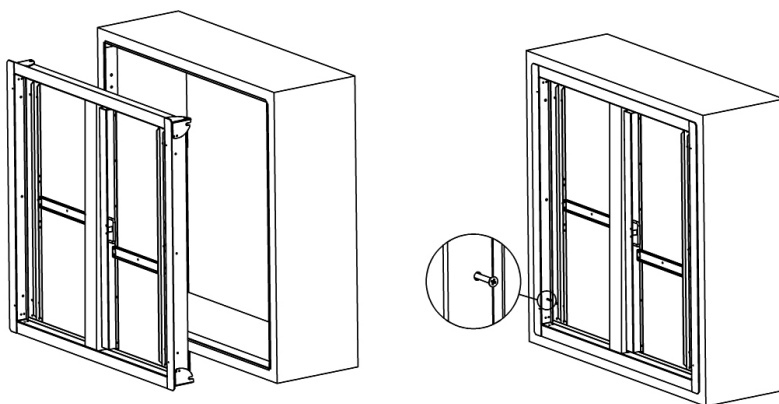
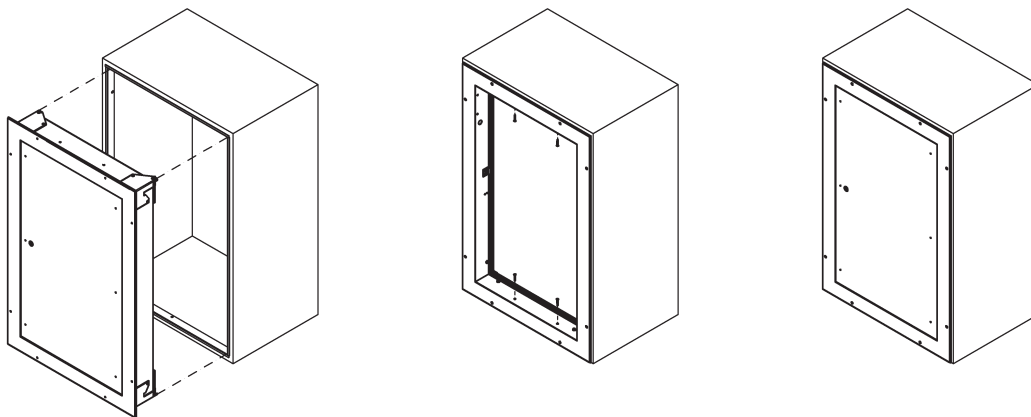
INSTALLATION AND ASSEMBLY: MOUNTING THE DAMPER

- Fix the damper into the sub-frame. The damper's folding legs will act as a stop.
- Fix the damper to the sub-frame with 4 screws (supplied with the damper).
- Finally, fill all the holes with intumescent mastic.

Because it is a safety component, the damper must be stored and handled with care.

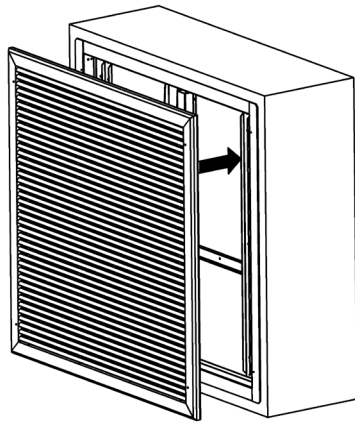
Cautions:

- Store in a dry place free of damp.
- Avoid contact with water.
- Do not allow the body of the damper to be warped during installation and sealing
- Avoid the damper being struck and carry it well-balanced.
- The use of the mounting sub-frame is recommended to make the installation of the damper easier (See page 11).

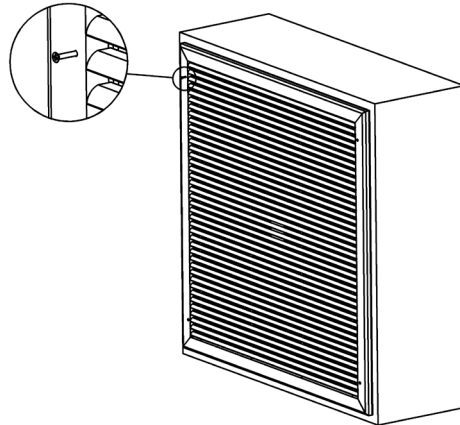


CEVH/CEVH-1P-DECO Smoke evacuation dampers Installation instructions

INSTALLATION AND ASSEMBLY: INSTALLING THE RPK GRILLE



RPK

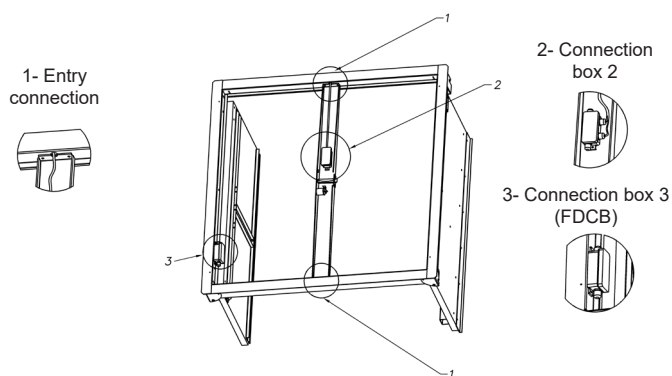


x4 Screw Ø 3.9x38 DIN

CEVH/CEVH-1P-DECO Smoke evacuation dampers Installation instructions

ELECTRICAL CONNECTIONS CEVH:

CEVH: **CE** **NF**
Conformément de la norme NF EN 12101-2-2



Electrical connections:

Access to the electrical connections inside the connection box:

- Electromagnetic lock
- Start and end limit switches contact
- Reset motor (an option for CEVH-1P-DECO).

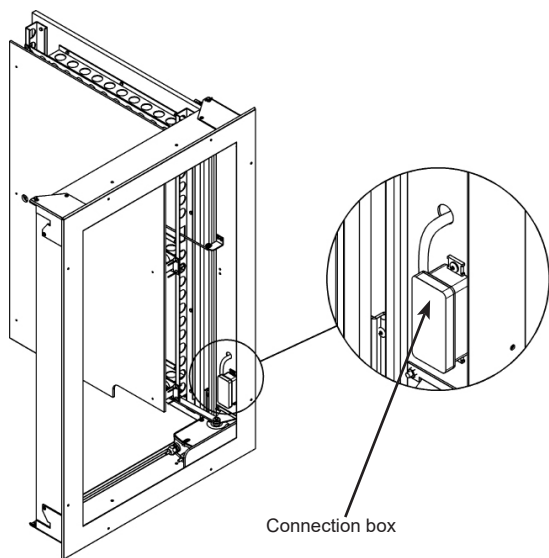
FCU: Single pole end limit switch contact (safety position)

DCU: Single pole start limit switch contact (standby position)

FCB: Two pole end limit switch contact (safety position)

DCB: Two pole start limit switch contact (standby position)

CEVH-1P-DECO: **CE**



Triggering:

Triggered by open-circuit shunt release (CEVH and CEVH-1P-DECO) or closed-circuit shunt release (CEVH) with manual/motor-driven reset:

Available shunt releases:

24 Vcc 48 Vcc	CE / CE NF <small>Conformément de la norme NF EN 12101-2-2</small>
24 Vca 48 Vca 230 Vca	CE

Reset motor:

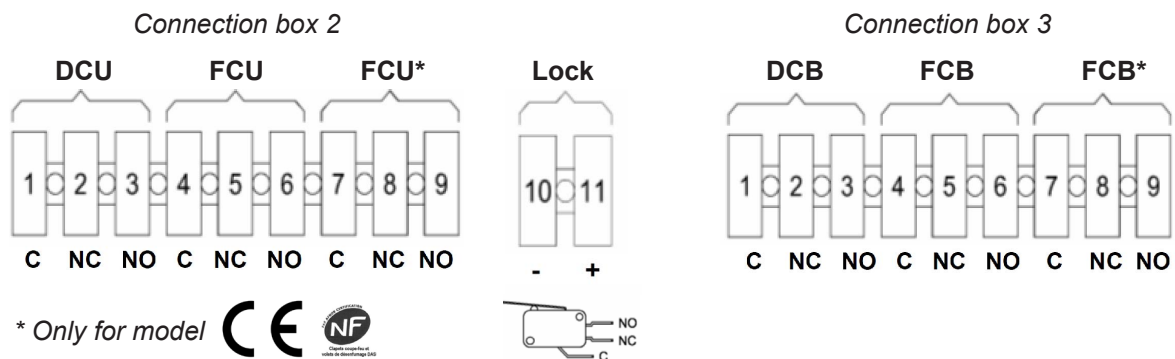
24 / 48 V	CE / CE NF <small>Conformément de la norme NF EN 12101-2-2</small>
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CEVH/CEVH-1P-DECO Smoke evacuation dampers

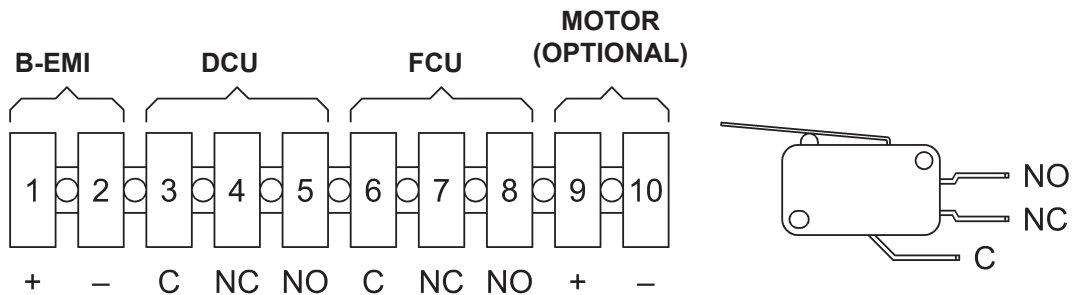
Installation instructions

ELECTRICAL CONNECTIONS

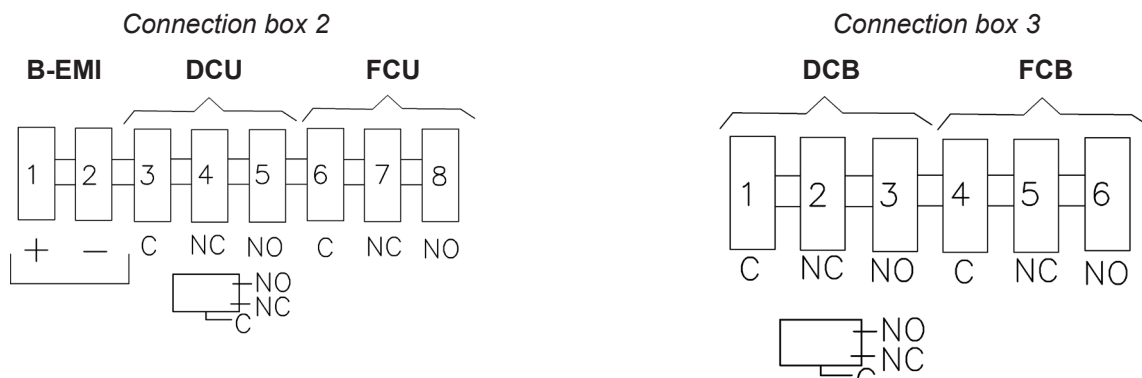
CEVH CONNECTION: /



CEVH-1P-DECO (SINGLE POLE CONTACTS):



CEVH-1P-DECO (TWO POLE CONTACTS)



CEVH/CEVH-1P-DECO Smoke evacuation dampers

Installation instructions

USER INSTRUCTIONS

It is recommended that the dampers be fixed into a sub-frame already sealed to the duct. The assembly must be kept perfectly square during the installation. The CEVH and CEVH-1P-DECO dampers must be installed in a vertical orientation.

When positioning the damper, protect it from any sealant splashing and handle it with care.

Before starting the installation, remove all traces of dust and dirt to avoid damaging the vanes. The shunt release is a particularly sensitive part of the mechanism.

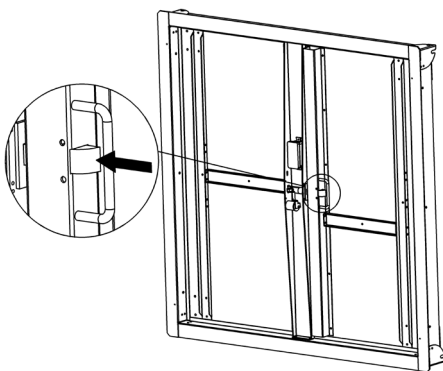
The front part must have a protection grille (CEVH and CEVH-1P-DECO) or a fibrosilicate plate (CEVH-1P-DECO) to preserve the degree of fire-cut.

Note: Sense of indifferent air (extraction and supply of air).

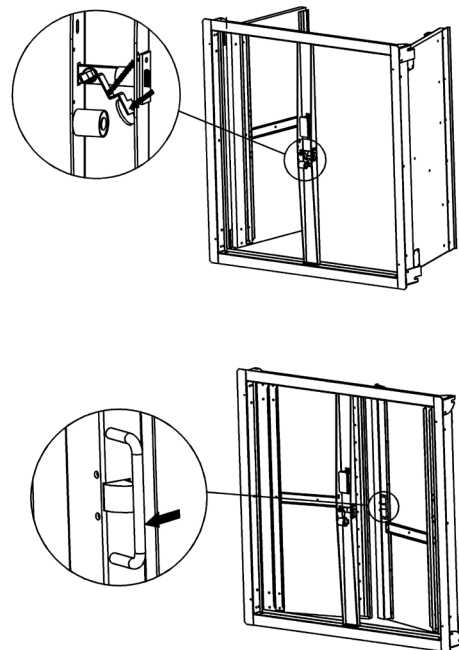
To manually operate and rearm the CEVH and CEVH 1P DECO gates, proceed according to the following illustrations:

CEVH :  /  

Triggering



Resetting

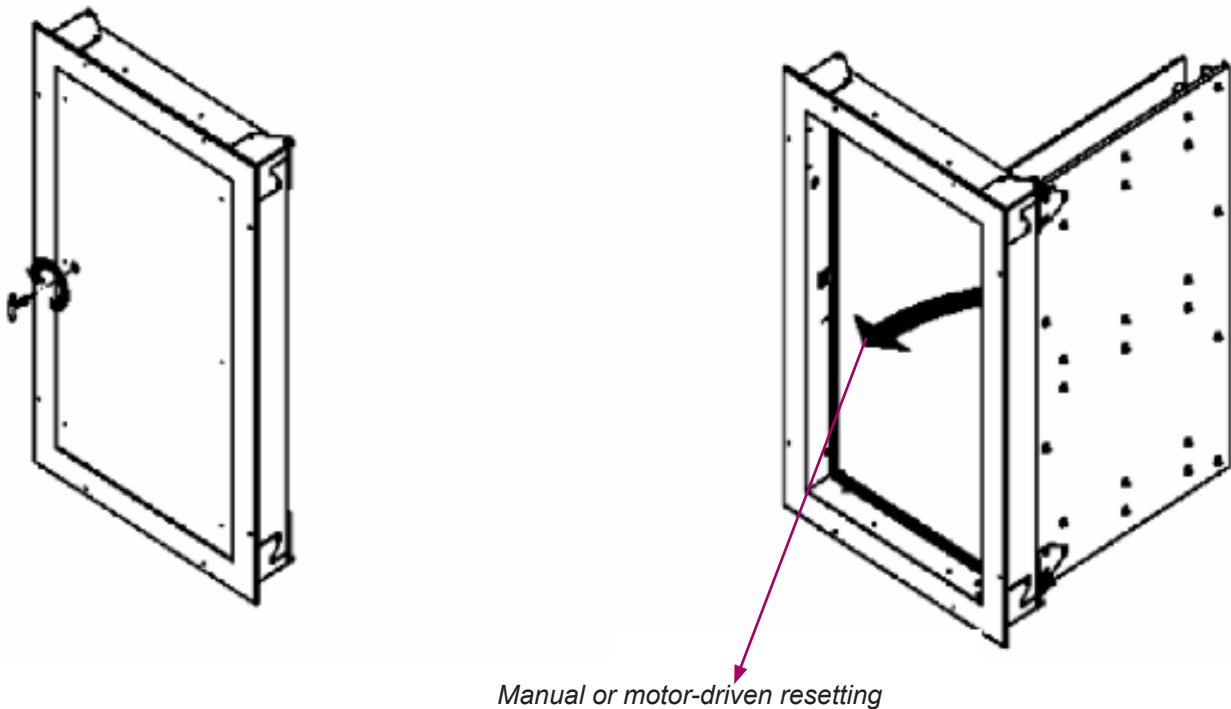


CEVH/CEVH-1P-DECO Smoke evacuation dampers

Installation instructions

USER INSTRUCTIONS

CEVH-1P-DECO: 



To perform a motor-driven reset, power the motor with a 24 V or 48 V supply (See page 14: "Electrical connections").

MAINTENANCE AND GUARANTEE INSTRUCTIONS.

The CEVH damper does not require any specific maintenance. Perform at least one functional check per year.

Koolair will not be held liable if the assembly, installation and electrical connections have not been carried out in accordance with these technical instructions. In that event, the guarantee may not apply.

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