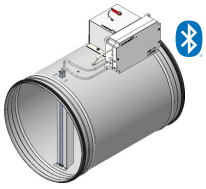
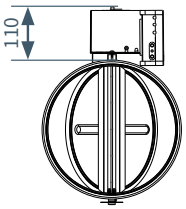
DELIVERY UNIT





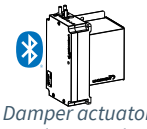
DCV-CFb circular

DCV-CFb – Circular

Delivered factory-mounted on a circular damper with SPMF flow meter (Ø100 to Ø500).

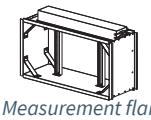
- Damper motor connected.
- Hoses for flow measurement attached.
- 8x5 hose (1.5 m) with 2 nipples for pressure measurement included.

Note: Circular Ø630 can only be delivered as a kit with a rectangular damper 700x700 with circular 630 connection and a circular measuring flange.



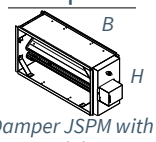
Damper actuator with regulator CFLb

+



Measurement flange SMRD

+



Damper JSPM with mounted damper actuator

Included with DCV-CFb Rectangular:

1 x Hose 8x5 (1.5 m) + 2 x Nipples:

- Transparent hose for connecting to the push nipple in the duct.
- 1 nipple for pressure measurement + 1 for reference measurement.

DCV-CFb – Rectangular

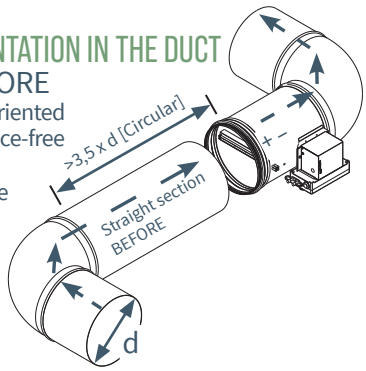
Delivered as a kit: Damper motor, regulator, measuring flange, and damper are assembled and connected during installation. For guidance, see illustrations and instructions for CFLb on the reverse side under installation steps 2 to 4.

- SMRD and JSPM are custom-made.
- Guide connections should be equipped with sealing strips.
- JSPM should be mounted with horizontal damper blades.
- The motor shelf on JSPM is adapted for DBA damper motor.

1. PLACEMENT AND ORIENTATION IN THE DUCT

Straight Section BEFORE

DCV-CFb must be correctly oriented and preceded by a disturbance-free straight duct section that corresponds to >3.5 times the duct diameter (d). After a silencer, with a deviating cross-sectional area, a straight section of >2.0 times the duct diameter (d) is required.



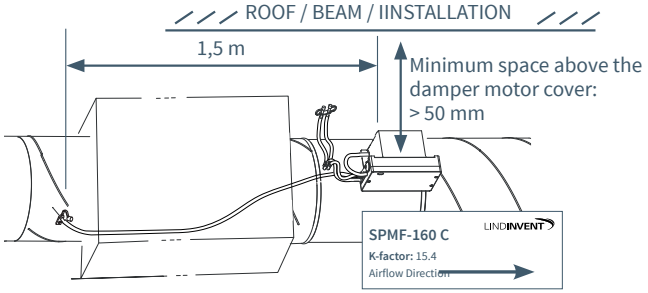
For rectangular duct: Straight sections as above are calculated based on the equivalent diameter (de);
de ≈ 1.15 x √ A (where A = B x H).

NOTE: Immediately after the measuring flange, no minimum distance to a subsequent bend or other disturbance is required.

Orientation of Damper & Placement of Push Nipple

- The DCV-CFb should be placed in the duct with the flow arrow on the measurement flange/damper in the direction of the airflow.
- NOTE: The top of the damper actuator cover should be positioned no more than 50 mm from the nearest structure to facilitate disassembly if needed. The total construction dimensions for the motor mount and damper actuator cover with the installed regulator are 110 mm.
- The distance from the regulator to the placement of the push nipple is 1.5 m.

NOTE: The push nipple is always placed on the side facing the room/the served space.



2. CONNECT 24 VAC, NETWORK, AND OTHER DEVICES

See assembly step 4: Connection on the next page.

LINDINSIDE

Procedure for connecting to CFLb for Node ID assignment.

1. Download the App:

- LINDINSIDE is available for download on your smartphone from Google Play/App Store.
- Create a user account and log in to the LINDINSIDE app.
- Pull down to scan for available devices. LINDINSIDE will then list all Lindinvent devices equipped with Bluetooth® within signal range.

2. Select Device from the List

By selecting the desired device via the bell icon, a beep sound and blue blinking light from the control unit will confirm the connection to your smartphone.

3. Set Assigned Node ID*

Enter a unique Node ID between 1–239 according to the recommended Node ID assignment from Lindinvent.
Note that the Node ID must not be 0.

4. **Complete the Commissioning via the Quick Setup Screen:**
   - **Perform a damper motor test (Manual motor control):**
     - Check that the damper has fully opened. Confirm the position.
     - Check that the damper has fully closed. Confirm the position.
   - **Assign Flow Zone**
     [0]; 0 = no assigned flow zone
   - **Enter Duct Size or K-factor (G1 Duct dimension or G1 K-factor)**
     For circular ducts: Select from the list [315]
     For rectangular ducts: Enter the K-factor
   - **Specify Placement for Supply or Exhaust Air**
     Select sensor placement [Exhaust Air]
   - **Enter Normal Pressure (Normal pressure SP)**
     Normal pressure in Pa [100]

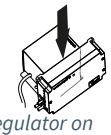
   After completing Quick Setup, the regulator is configured with other control parameters set to default values.

Scan the QR code for more information about LINDINSIDE.

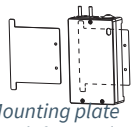
Smartphone with the LINDINSIDE app.

The DCV-CFb is pre-calibrated: no on-site flow calibration is required, but verification measurements are recommended. For accurate airflow representation, the current duct size (circular DCV) or k-factor (rectangular DCV) should be specified during commissioning.

EQUIPMENT: SELF-INSTALLATION OF CFLb



Regulator on damper motor



Mounting plate MPLb for regulator

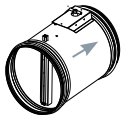
Damper motor DBA

Hose 8x5 + nipple:

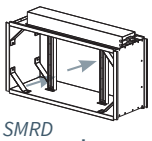
- Transparent hose: 1 piece for connecting the push nipple (1.5 m). + 1 piece for connecting the measuring device to the flow sensor (0.8 m).
- Trycknippel 2st: **1.5 meters from the regulator towards the serviced area**
- CFLb is typically mounted on the cover of the damper actuator.
- Can be ordered separately and used for separate mounting

Note: For separate mounting, the CFLb is installed in a location other than on the damper actuator

- Model DBA.

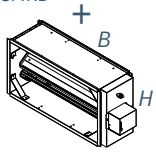


Circular damper SPMF



SMRD

+



JSPM with mounted damper motor

Installation in Circular Duct: SPMF

- CCircular damper with measuring flange SPMF (Ø100-500).
- Installation with CFLb and damper motor corresponds to DCV-CFb Circular.

Installation in Rectangular Duct: SMRD and JSPM

- Rectangular measuring flange SMRD and damper JSPM are custom-ordered.
- Ensure all guide connections are equipped with sealing strips.
- Rectangular damper JSPM should be installed with horizontal damper blades.
- Installation with CFLb and damper motor corresponds to DCV-CFb Rectangular.

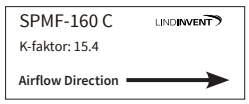
1. PLACERING OCH ORIENTERING AV MÄTFLÄNS OCH SPJÄLL

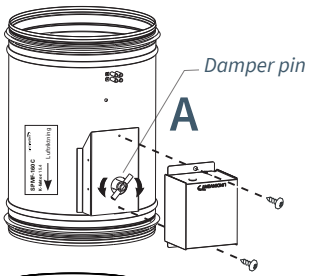
- Ensure sufficient straight run before the measuring flange.
- Mount in the correct orientation relative to the marking with an arrow for air direction.
- Circular damper: Position the motor shelf for access to the controller and, if possible, with a clear view of the RGB LED.
- Ensure there is free space above the top of the damper motor cover. A minimum of 50 mm is required to allow the removal of the damper motor with the controller.

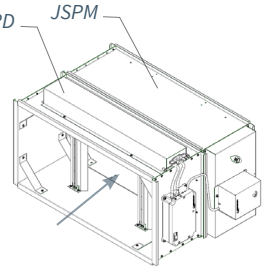
Refer to the instructions under installation step 1 on the reverse side.

2. INSTALLATION ON DAMPER

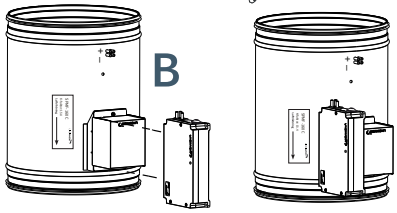
- The damper motor (A) is mounted on the damper's motor shelf so that the damper pin fits into the damper motor.
  Before installation: Ensure that the damper pin and therefore the damper can rotate freely.
- Circular and rectangular: The controller (B) is mounted on the damper motor by aligning the mounting slots on the back of the controller with the protruding ends on both sides of the motor cover. Choose the appropriate side of the motor cover.
- Rectangular: The controller can be mounted directly on the end of the adjacent, and in the air direction preceding, measuring flange SMRD.







Rectangular DCV with damper motor mounted on JSPM damper and regulator mounted directly on SMRD measuring flange.

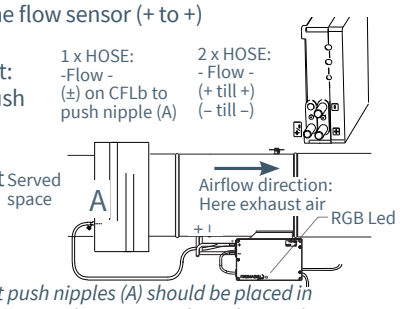


Circular DCV with damper motor and regulator mounted on damper with SPMF measuring flange.

Illustration 1M: Mounting the Damper Motor and Controller on a Circular Damper

3. CONNECT HOSES

- Flow Measurement: Cut the hose (5x8) and connect the measuring flange to the flow sensor (+ to +) and (– to –).
- Pressure Measurement: Install the provided push nipples on the duct or silencer (A) facing the serviced area. Connect to (±) on CFLb using the provided hose (5x8; length 1.5m).

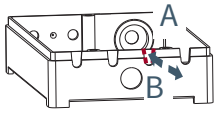


Note: *Pressure measurement push nipples (A) should be placed in the duct at a distance of approximately 1.5 meters from the regulator, always on the side facing the serviced area.*

4. WIRING

Connections should be made following the external connection diagram for CFLb: Refer to the inside of the controller cover.

- The controller is connected to 24 VAC and the network (CAN) via Lindinvent's standard cable, which has 2 conductors for power supply and 2 conductors for communication. Lindinvent's standard cable is also used for connecting occupancy sensors and several other pieces of equipment.
- Make an opening/outlet for each cable: Use wire cutters to create openings for the cables as illustrated below.
- During wiring: Use a bi-conductor sleeve for shielding.
- After making the connections: Replace the cover, ensuring it clamps the cables sufficiently for a secure attachment.



A: Cutting x 2
B: Bend back and forth/break off (Cut/clean opening with wire cutters)

Illustration 1I: Instructions for Openings in the Enclosure