

# SCV

Fire damper cartridge with finishing valve.



CE  
0749



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## Explanation of the abbreviations and pictograms

|                                   |   |  |
|-----------------------------------|---|--|
| Dn = nominal diameter             | o -> i = meets the criteria from the outside (o) to the inside (i)                                      | OP = option (delivered with the product)               |
| E = integrity                     | GKB (type A) / GKF (type F): "GKB"  | KIT = kit (delivered separately for repair or upgrade) |
| I = thermal insulation            | stands for standard plasterboards (type A according to EN 520) while "GKF"                              | DAS MOD = modular product                              |
| S = smoke leakage                 | plasterboards offer a higher fire resistance for a similar plate thickness (type F according to EN 520) | dB(A) = A-weighted decibel value                       |
| Pa = pascal                       | Sn = free air passage   | Lw oct = sound power level per octave midband          |
| ve = vertical wall penetration    | ζ [-] = pressure loss coefficient   | ΔL = correction factor                                 |
| ho = horizontal floor penetration | Q = air flow  |  |
| i <-> o = fire side not important | ΔP = static pressure drop   |  |
|                                   | v = air speed in the duct   |  |
|                                   | Lwa = A-weighted sound power level  |  |





fast installation


# DECLARATION OF PERFORMANCE

CE\_DoP\_Rf-t\_S4\_EN - C-03/2019

|  |  |
|--|--|
| 1. Unique identification code of the product-type:   | SCV  |
| 2. Intended use/s:   | Circular fire damper to be used in conjunction with partitions to maintain fire compartments in heating, ventilating and air conditioning installations. |
| 3. Manufacturer:   | Rf-Technologies NV, Lange Ambachtstraat 40, B-9860 Oosterzele  |
| 4. System/s of AVCP:   | System 1   |
| 5. Harmonised standard / European Assessment Document: notified body / European Technical Assessment, Technical Assessment Body, notified body; certificate of constancy of performance: | EN 15650:2010, BCCA with identification number 0749; BCCA-0749-CPR-BC 1-606-0464-15650.08-2517   |
| 6. Declared performance according to   | (Fire resistance according to EN 1366-2 and classifications according to EN 13501-3)   |

| Range               | Wall type     | Wall   | Sealing  | Installation | Performance                                 |                     |
|---------------------|---------------|--|--|--------------|---|---------------------|
|                     |               |  |  |              | Classification                              | Harmonised standard |
| SCV)Ø 100-200 mm    | Rigid wall    | Reinforced concrete ≥ 110 mm                             | Mortar   | 1            | EI 120 (V <sub>e</sub> , o → i) S - (300Pa) |                     |
|                     | Rigid floor   | Reinforced concrete ≥ 150 mm                             | Mortar   | 1            | E 120 (h <sub>2</sub> , o → i) S - (300Pa)  |                     |
|                     | Rigid wall    | Reinforced concrete ≥ 110 mm                             | Mortar   | 1            | EI 60 (V <sub>e</sub> , o → i) S - (300Pa)  |                     |
|                     | Rigid floor   | Reinforced concrete ≥ 110 mm                             | Mortar   | 1            | EI 60 (h <sub>2</sub> , o → i) S - (300Pa)  |                     |
| SCV)Ø 100-200 mm    | Flexible wall | Metal studs gypsum plasterboard Type A (EN 520) ≥ 100 mm | Stone wool ≥ 40 kg/m <sup>3</sup> + cover plates<br>Gypsum | 1            | EI 60 (V <sub>e</sub> , o → i) S - (300Pa)  |                     |
|                     | Rigid wall    | Reinforced concrete ≥ 110 mm                             | Mortar   | 1            | EI 90 (V <sub>e</sub> , o → i) S - (300Pa)  |                     |
|                     | Rigid floor   | Reinforced concrete ≥ 150 mm                             | Mortar   | 1            | EI 90 (h <sub>2</sub> , o → i) S - (300Pa)  |                     |
|                     | Flexible wall | Metal studs gypsum plasterboard Type F (EN 520) ≥ 100 mm | Stone wool ≥ 40 kg/m <sup>3</sup> + cover plates           | 1            | EI 90 (V <sub>e</sub> , o → i) S - (300Pa)  |                     |
| SCV)120Ø 100-200 mm | Rigid wall    | Reinforced concrete ≥ 110 mm                             | Mortar   | 1            | EI 120 (V <sub>e</sub> , o → i) S - (300Pa) |                     |
|                     | Rigid floor   | Aerated concrete ≥ 150 mm                                | Mortar   | 1            | EI 120 (V <sub>e</sub> , o → i) S - (300Pa) |                     |
|                     | Rigid wall    | Reinforced concrete ≥ 150 mm                             | Mortar   | 1            | EI 120 (h <sub>2</sub> , o → i) S - (300Pa) |                     |
|                     | Flexible wall | Metal studs gypsum plasterboard Type F (EN 520) ≥ 100 mm | Stone wool ≥ 40 kg/m <sup>3</sup> + cover plates           | 1            | EI 120 (V <sub>e</sub> , o → i) S - (300Pa) |                     |

|   |   |   |
|---|---|---|
| 1   | Type of installation: built-in inside a duct, 0-360°; Fire side = side opposite to the fusible link |   |
| <b>Nominal activation conditions/sensitivity:</b>   |   |   |
| Response delay (response time): closure time  | Pass  |   |
| Operational reliability: cycling  | Pass  |   |
| Durability of response delay  | 50 Cycles   |   |
| Durability of operational reliability   | Pass  |   |
| Protection against corrosion according to EN 60068-2-52:  | Pass  |   |
| Damper casing leakage according to EN 1751:   | NPD (no performance determined)   |   |
| The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above. | NPD (no performance determined)   |   |

Signed for and on behalf of the manufacturer by:  
**Mathieu Steenland**, Technical Manager  
  
 Oosterzele, 03/2019



## Product presentation SCV

Circular fire damper cartridge with a finishing valve for installation at duct's end. Fire resistance up to 120 minutes. The fire side is the side opposite to the fusible link. The circular fire damper cartridges are equipped with a fusible link that holds the two parts of the blade in the open position. When the temperature in the duct rises above 72°C, the fusible link melts and releases the two semi circular blades. The damper is now closed and two blocking hooks keep the blades in their safety position, which prevents any smoke or flames from passing through. The cartridge is inserted in a metal ventilation duct of the same diameter and stays in place thanks to its rubber sealing ring.

The circular fire damper cartridge is a compact fire resistant product for ducts with a small diameter. It is inserted inside ventilation ducts that cross walls in order to stop the propagation of fire. It is characterised by its easy installation. Two versions are available: the standard fire damper cartridge (technical datasheet S2/S3) and the cartridge equipped with a finishing ventilation valve 'V' (technical datasheet S4/S5) for installation at duct ends.

- ☑ easy to install
- ☑ no space is lost at the wall crossing



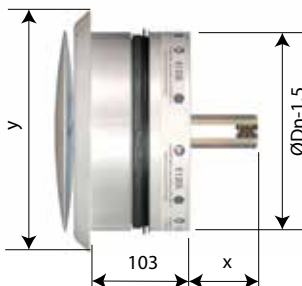
- lightweight
- tested according to EN 1366-2 up to 300 Pa
- suitable for rigid wall, rigid floor and light wall (metal stud gypsum plasterboard wall)
- maintenance-free
- for indoor use
- ambient temperature below 50°C

1. SC fire damper cartridge
2. ventilation valve V



## Range and dimensions SCVO

Circular fire damper cartridge with ventilation valve tested in one direction and without thermal insulation (I).  
exceeding blade: X

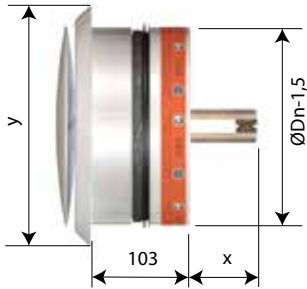


| ØDn (mm) | 100 | 125 | 160 | 200 |
|----------|-----|-----|-----|-----|
| x        | 18  | 31  | 49  | 69  |
| y        | 145 | 170 | 195 | 235 |

| ØDn (mm) | 100 | 125 | 160 | 200 |
|----------|-----|-----|-----|-----|
|          |     |     |     |     |

## Range and dimensions SCV60

Circular fire damper cartridge with ventilation valve with a fire resistance of 60 minutes. exceeding blade: X

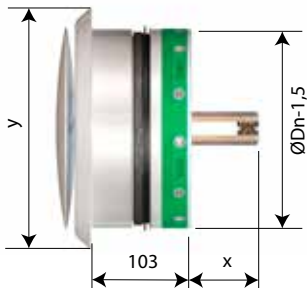


| ØDn (mm) | 100 | 125 | 150 | 160 | 200 |
|----------|-----|-----|-----|-----|-----|
| x        | 18  | 31  | 42  | 49  | 69  |
| y        | 145 | 170 | 185 | 195 | 235 |

| ØDn (mm) | 100 | 125 | 150 | 160 | 200 |
|----------|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|

## Range and dimensions SCV90

Circular fire damper cartridge with ventilation valve with a fire resistance of 90 minutes. exceeding blade: X

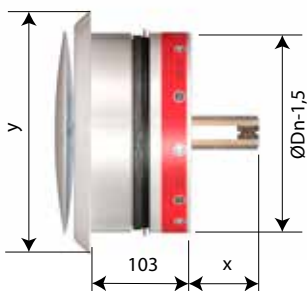


| ØDn (mm) | 100 | 125 | 160 | 200 |
|----------|-----|-----|-----|-----|
| x        | 20  | 33  | 51  | 71  |
| y        | 145 | 170 | 195 | 235 |

| ØDn (mm) | 100 | 125 | 160 | 200 |
|----------|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|

## Range and dimensions SCV120

Circular fire damper cartridge with ventilation valve with a fire resistance of 120 minutes. exceeding blade: X



| ØDn (mm) | 100 | 125 | 160 | 200 |
|----------|-----|-----|-----|-----|
| x        | 20  | 33  | 51  | 71  |
| y        | 145 | 170 | 195 | 235 |

| ØDn (mm) | 100 | 125 | 160 | 200 |
|----------|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|

## Evolution - kits



**KITS FT SC**

Fusible link 72°C (per set of 5 pieces)

## Storage and handling

### Storage and handling

As this product is a safety element, it should be stored and handled with care.

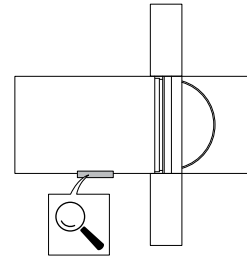
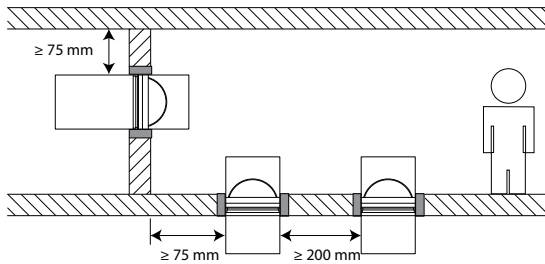
#### Avoid:

- any kind of impact or damage
- contact with water
- deformation of the casing

### Installation

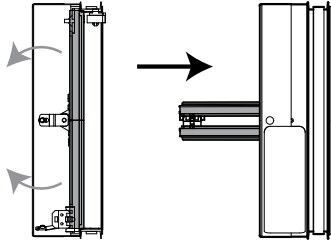
#### General points

- The installation must comply with the installation manual and the classification report.
- Verify if the blade can move freely.
- Mounting direction: mounting possible with the axis in any position (0-360°)
- Direction of the air flow: discretionary
- Rf-t fire damper cartridges are always tested in standardised constructions according to EN 1366-2. The achieved results are valid for similar supporting constructions with a fire resistance, thickness and density equal or superior to the supporting construction used during the test.
- The fire damper cartridge must remain accessible for inspection and maintenance.
- Please observe safety distances with respect to other construction elements.

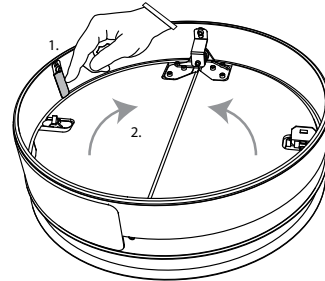


## Operation: manual opening

1

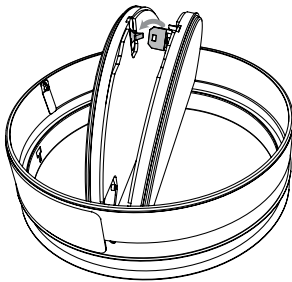


2



2. Press the two blocking hooks carefully to unlock the blades.

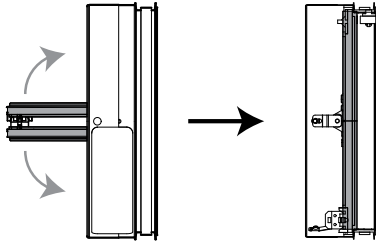
3



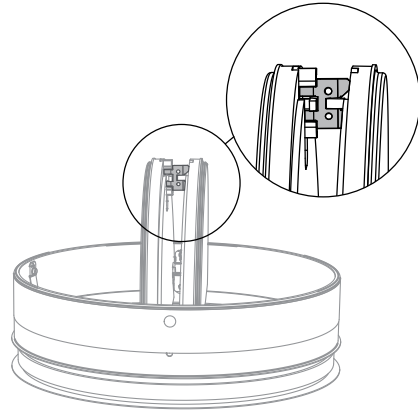
3. Click the fusible link into the holder to lock the blades.

## Operation: manual closing

1

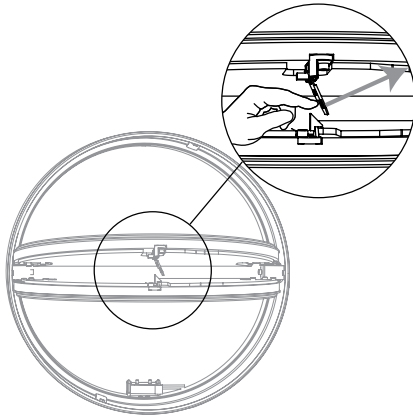


2



2. Unlock (close) the damper blades by pushing them towards each other. Carefully unlock the fusible link by pushing it sideways.

3



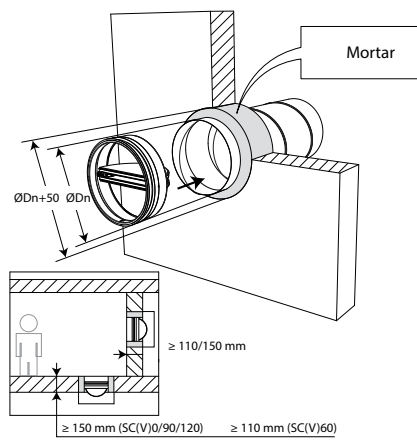


## Installation in rigid wall and floor

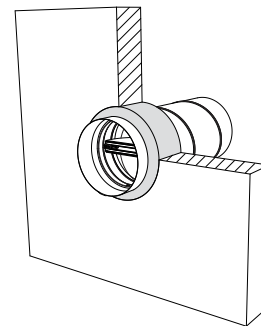
The product was tested and approved in:

| Range                 | Wall type   | Sealing                      | Classification                            |
|-----------------------|-------------|------------------------------|---|
| SC(V)0 Ø 100-200 mm   | Rigid wall  | Reinforced concrete ≥ 110 mm | E 120 (v <sub>e</sub> o → i) S - (300Pa)  |
| SC(V)0 Ø 100-200 mm   | Rigid floor | Reinforced concrete ≥ 150 mm | E 120 (h <sub>o</sub> o → i) S - (300Pa)  |
| SC(V)60 Ø 100-200 mm  | Rigid wall  | Reinforced concrete ≥ 110 mm | EI 60 (v <sub>e</sub> o → i) S - (300Pa)  |
| SC(V)60 Ø 100-200 mm  | Rigid floor | Reinforced concrete ≥ 110 mm | EI 60 (h <sub>o</sub> o → i) S - (300Pa)  |
| SC(V)90 Ø 80-200 mm   | Rigid wall  | Reinforced concrete ≥ 110 mm | EI 90 (v <sub>e</sub> o → i) S - (300Pa)  |
| SC(V)90 Ø 80-200 mm   | Rigid floor | Reinforced concrete ≥ 150 mm | EI 90 (h <sub>o</sub> o → i) S - (300Pa)  |
| SC(V)120 Ø 100-200 mm | Rigid wall  | Reinforced concrete ≥ 110 mm | EI 120 (v <sub>e</sub> o → i) S - (300Pa) |
| SC(V)120 Ø 100-200 mm | Rigid wall  | Aerated concrete ≥ 150 mm    | EI 120 (v <sub>e</sub> o → i) S - (300Pa) |
| SC(V)120 Ø 100-200 mm | Rigid floor | Reinforced concrete ≥ 150 mm | EI 120 (h <sub>o</sub> o → i) S - (300Pa) |

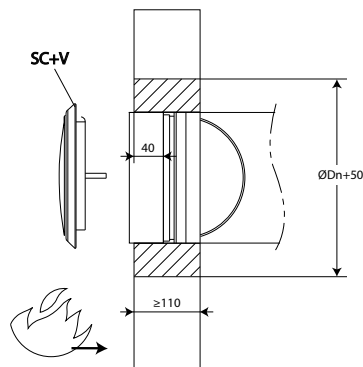
1



2



3

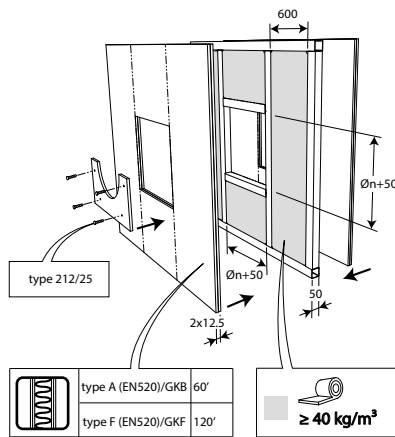


### Installation in flexible wall (metal stud gypsum plasterboard wall)

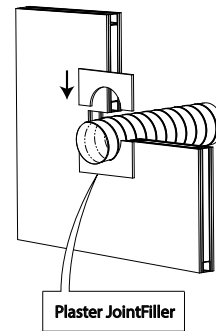
The product was tested and approved in:

| Range                 | Wall type     | Sealing   | Classification  |   |
|-----------------------|---------------|---|---|---|
| SC(V)60 Ø 100-200 mm  | Flexible wall | Metal studs gypsum plasterboard Type A (EN 520) $\geq 100$ mm | Stone wool $\geq 40$ kg/m <sup>3</sup> + cover plates | EI 60 (v <sub>e</sub> o → i) S - (300Pa)  |
| SC(V)90 Ø 80-200 mm   | Flexible wall | Metal studs gypsum plasterboard Type F (EN 520) $\geq 100$ mm | Stone wool $\geq 40$ kg/m <sup>3</sup> + cover plates | EI 90 (v <sub>e</sub> o → i) S - (300Pa)  |
| SC(V)120 Ø 100-200 mm | Flexible wall | Metal studs gypsum plasterboard Type F (EN 520) $\geq 100$ mm | Stone wool $\geq 40$ kg/m <sup>3</sup> + cover plates | EI 120 (v <sub>e</sub> o → i) S - (300Pa) |

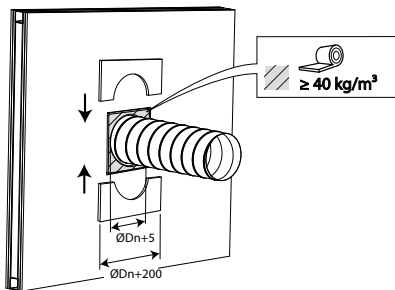
1



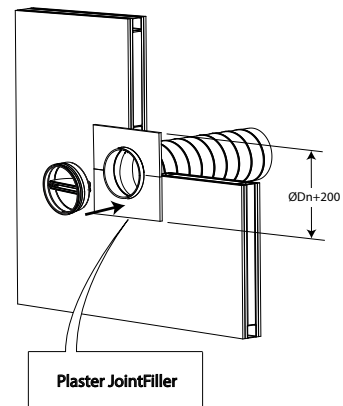
2



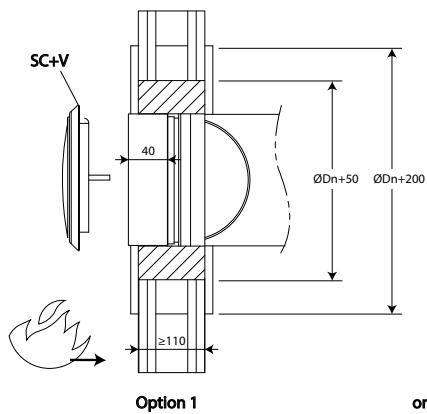
3



4

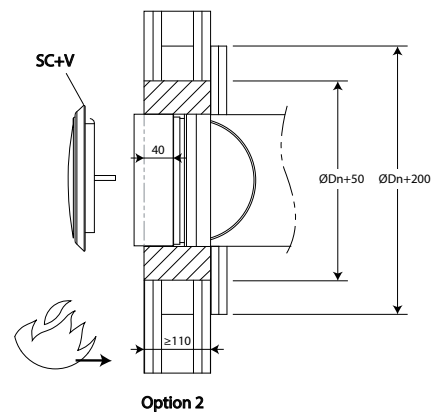


5



or

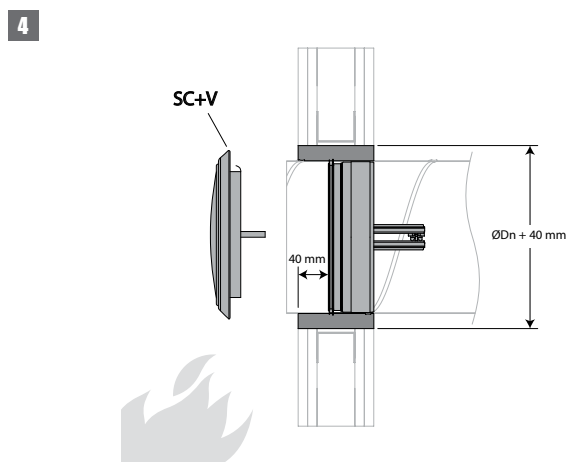
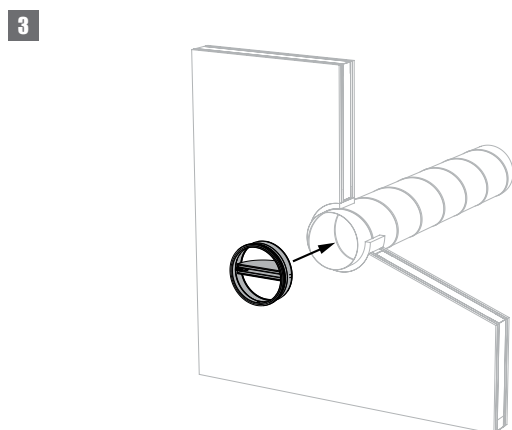
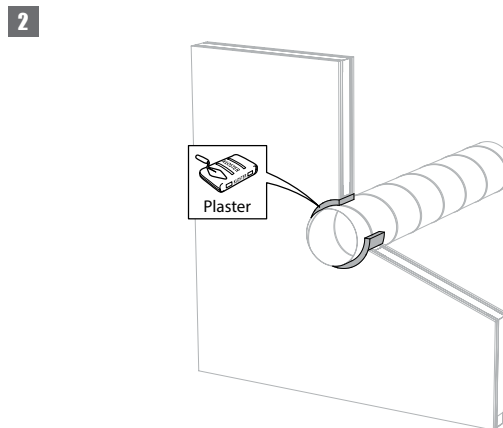
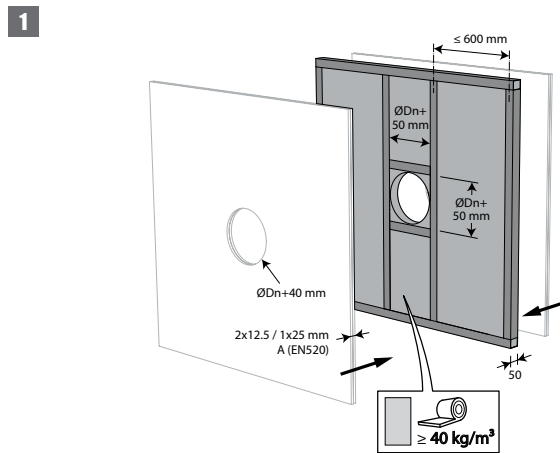
6



## Installation in flexible wall (metal stud gypsum plasterboard wall), sealing with gypsum

The product was tested and approved in:

| Range                | Wall type     | Sealing  | Classification                           |
|----------------------|---------------|--|--|
| SC(V)60 Ø 100-200 mm | Flexible wall | Metal studs gypsum plasterboard Type A (EN 520) ≥ 100 mm | Gypsum                                   |
|                      |               |  | El 60 (v <sub>e</sub> o → i) S - (300Pa) |



## Maintenance

- No specific maintenance required.
- Schedule at least two running visual checks each year.
- Remove dust and all other particles before start-up.
- Follow the local maintenance regulations (i.e. BS9999 Annex V; NF S 61-933) and EN13306.
- Warning: butterfly dampers, in their closed position, can move in the duct when placed under too high pressure.

## Weights

## SCV0

| ØDn [mm] | 100 | 125 | 160 | 200 |  |  |  |  |  |  |
|----------|-----|-----|-----|-----|--|--|--|--|--|--|
| kg       | 0,4 | 0,5 | 0,6 | 1,0 |  |  |  |  |  |  |

## SCV60

| ØDn [mm] | 100 | 125 | 150 | 160 | 200 |  |  |  |  |  |
|----------|-----|-----|-----|-----|-----|--|--|--|--|--|
| kg       | 0,4 | 0,5 | 0,5 | 0,6 | 1,0 |  |  |  |  |  |

## SCV90

| ØDn [mm] | 100 | 125 | 160 | 200 |  |  |  |  |  |  |
|----------|-----|-----|-----|-----|--|--|--|--|--|--|
| kg       | 0,4 | 0,5 | 0,7 | 1,0 |  |  |  |  |  |  |

## SCV120

| ØDn [mm] | 100 | 125 | 160 | 200 |  |  |  |  |  |  |
|----------|-----|-----|-----|-----|--|--|--|--|--|--|
| kg       | 0,4 | 0,5 | 0,7 | 1,0 |  |  |  |  |  |  |

## Selection graphs

a = number of complete revolutions of the valve. a = 0 = closed valve

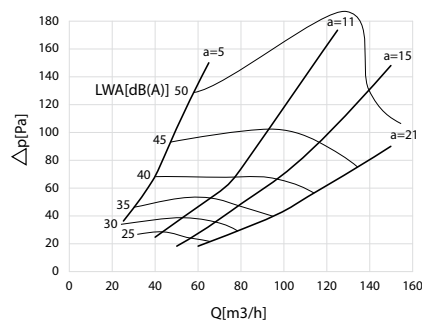
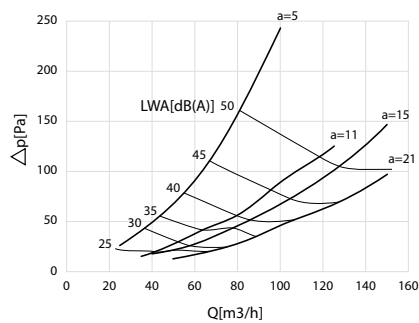


air exhaust

Ø 100



air supply

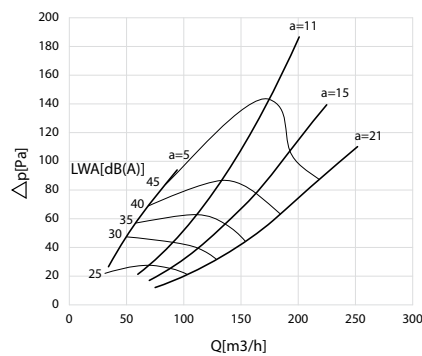
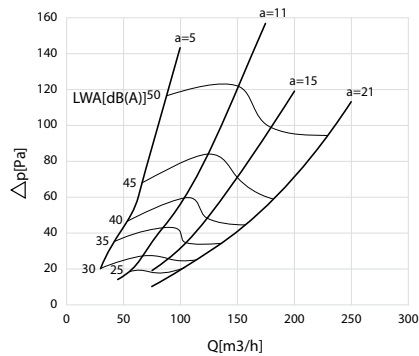


air exhaust

Ø 125



air supply



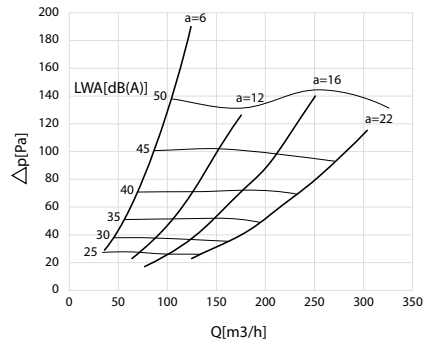
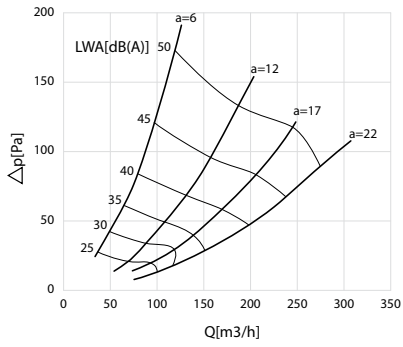


air exhaust

Ø 150



air supply

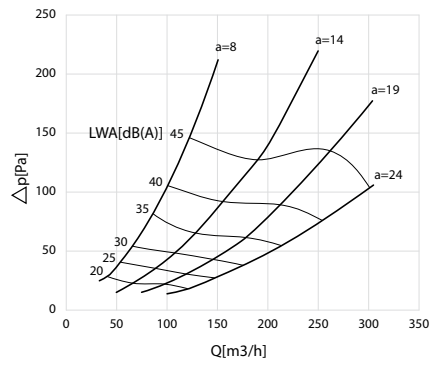
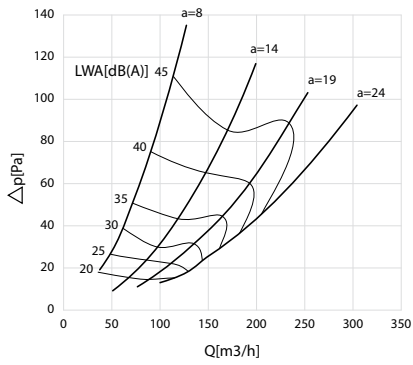


air exhaust

Ø 160



air supply

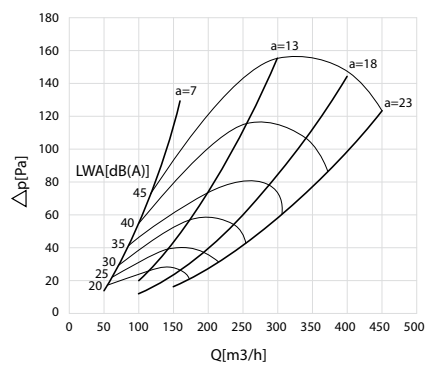
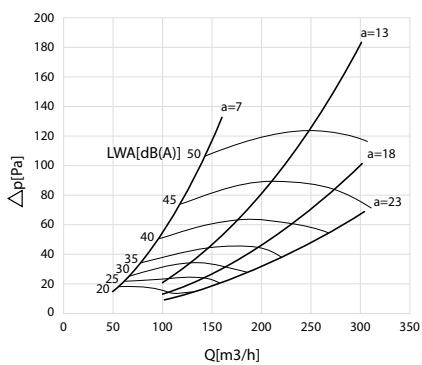


air exhaust

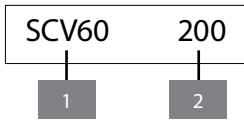
Ø 200



air supply



## Sample order



1. product
2. diameter

## Approvals and certificates

All our products are submitted to a number of tests by official test institutes. Reports of these tests form the basis for the approvals of our dampers.



BCCA-0749-CPR-BC1-606-0464-15650.08-2517



18.27

The NF-label guarantees: conformity with the standard NF S 61-937 Parts 1 and 5: "Systèmes de Sécurité Incendie Dispositifs Actionnés de Sécurité"; conformity with the national decree of March 22, 2004, changed on 14 March 2011 for the classification of fire resistance; the values of the characteristics mentioned in this document. Organisme Certificateur: AFNOR Certification, 11 Rue Francis de Pressensé, F93571 La Plaine Saint-Denis Cedex; Website: <http://www.afnor.org> <http://www.marque-nf.com>; Phone: +33 (0)1.41.62.80.00, Fax: +33 (0)1.49.17.90.00, Email: [certification@afnor.org](mailto:certification@afnor.org)