



Fig.: SVA-FF

SVA-FF Fire Damper Disc Valve

USABILITY CERTIFICATE

- **General building supervisory approval (abZ)**
Z-41.3-674
- **Certificate of conformity**

CLASSIFICATION AND STANDARD

- **Classification**
K90-18017
- **Application**
Ventilation systems in accordance with DIN 18017-3

PERFORMANCE DATA

- Preventing the transmission of fire from floor to floor

SPECIAL FEATURES

- Fire prevention
- Low pressure loss
- Low volume level
- Sheet steel design with epoxy resin powder coating (standard colour: RAL 9010 white; other RAL colours are possible upon request)
- A relatively high air inlet ring prevents soiled edges



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DESCRIPTION

The fire damper poppet valve SVA-FF is designed for **installation in ventilation systems in accordance with DIN 18017-3**.

Besides, the fire damper poppet valve can also be mounted into systems in accordance with DIN 18017-3, for which the supply air is introduced through ducts.

Its usage has been regulated by the general building supervisory approval (abZ) no. Z-41.3-674.

Proper installation prevents spreading fire across floors. The fire damper poppet valves have fire resistance class K90-18017.

The valve disc which is permanently fixed to the threaded spindle allows simple regulation and fastening of the valve. The thermal fusible link pre-tensioned by means of a spring closes the valve in the event of fire if the trigger temperature (70°C) is exceeded in the fusible link.

The mounting frame is made of galvanized sheet steel. It is included in the delivery and is easy to clean and maintain.

The fire damper poppet valve SVA-FF has fire resistance class K90-18017 if it is installed:

- in fire-resistant shaft walls classified as fire resistance class F90 or
- in vertical fire-resistant ventilation lines of fire resistance class L90 or
- outside of fire-resistant shaft walls classified as fire resistance class F90 or vertical fire-resistant ventilation ducts F90 with sheet steel air duct, or in walls without sheet steel air duct, or in suspended ceilings with no set requirements for fire resistance duration (if a galvanized sheet steel connection spigot without opening is installed between the shut-off device and the main air duct). The connection lines between the main line and the shut-off damper must not be longer than 6 m when shut-off dampers are mounted outside of shafts or vertical ventilation lines.

The approved article may also be installed in or out of fire-resistant shaft walls or in fire-resistant ventilation lines of a lower fire protection class than F90 or L90. In this case, the approved article has the same fire protection class as the fire-resistant shaft wall or the vertical fire-resistant ventilation line to be protected.

FASTENING

Valve fastening

- in mounting frame (-ER) with bayonet socket

CONSTRUCTION

Bracket, valve body and valve disc

- Sheet steel painted to RAL 9010 (white, standard)

- Optionally (at an extra charge)

- Other RAL colours available on request

Seal

Foam

Mounting frame (ER; included in the scope of delivery)

Galvanized sheet steel

APPLICATION

According to the local regulations regarding ventilation systems (in Germany, for example, LüAR), the fire damper poppet valve is designed for installation in centralised ventilation systems in accordance with DIN 18017-3.

Besides, the fire damper poppet valve can also be mounted into systems in accordance with DIN 18017-3, for which the supply air is introduced through ducts.

The valve can be used in aforementioned ventilation systems if they have the following characteristics:

- the ventilators of centralised ventilation systems must be installed in the roof area of the building above the top air connection duct,
- the first indent applies to ventilation ducts which are used for supply air, equally,
- individual main lines must be vertically guided through the floors with free return air flow vertically over the roof,
- used in ventilation lines of bathrooms and lavatories,
- only used in ventilation systems without heat recovery systems,
- also used in ventilation lines of bathrooms or lavatories which do not serve as residential buildings (e.g. hotels),
- the supply air may only be guided directly from the roof to the bathrooms or lavatories to be ventilated.

FUNCTIONAL CHECK

The function of all fire damper poppet valves must be checked every six months after commissioning of the ventilation system.

If two consecutive functional checks do not show any defects, the fire damper poppet valves only have to be tested once a year.

The fire damper poppet valve must be installed in a way to allow internal inspections, checks and cleanings are possible at any time.

For such purposes, the fire damper poppet valve can be extracted from the mounting frame.

Note

The proofs of usability, which are provided by us on request, are legally binding.

MODELS AND DIMENSIONS

DIMENSIONS

SVA-FF

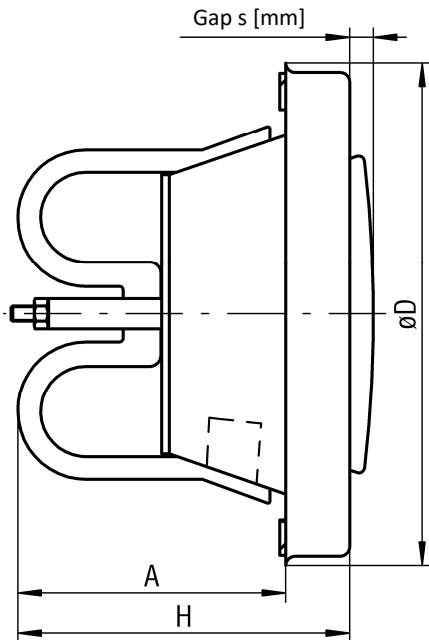


Figure 1, Dimensions SVA-FF

Available sizes

| Nominal size | øD [mm] | H [mm] | A [mm] | Weight [g] |
|--------------|---------|--------|--------|------------|
| 100 | 134 | 89 | 74 | 305 |
| 125 | 160 | 105 | 85 | 390 |
| 150/160 | 191 | 104 | 89 | 575 |
| 200 | 241 | 124 | 107 | 765 |

Table 1: Available sizes of SVA-FF

REPLACEMENT FUSIBLE LINK

Replacement fusible link 70°C, size-dependent model
When ordering, please state the nominal size of SVA-FF.

Mounting frame (-ER)

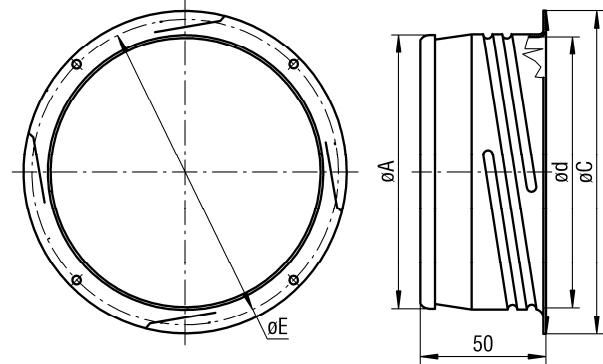


Figure 2: mounting frame (-ER)

| Nominal size | øA [mm] | øC [mm] | øE [mm] | øD [mm] |
|--------------|---------|---------|---------|---------|
| 100 | 99 | 125 | 119 | 98 |
| 125 | 124 | 150 | 144 | 123 |
| 150 | 149 | 175 | 169 | 148 |
| 160 | 159 | 185 | 179 | 158 |
| 200 | 199 | 225 | 218 | 198 |

Table 2: Dimensions of mounting frames (-ER)

INSTALLATION DETAILS

Installation

Installation of fire damper poppet valve type SVA-FF.

The mounting frame is fastened on the duct or pipe by means of rivets or tapping screws. The valve is fastened in the mounting frame by rotating it in such a way that the valve becomes clamped in the mounting frame.

To set the amount of air flow or change the gap width "s", (see Figure 1 page 4) rotate the valve disc.

Installation of the air ducts with application of a ceiling mortar

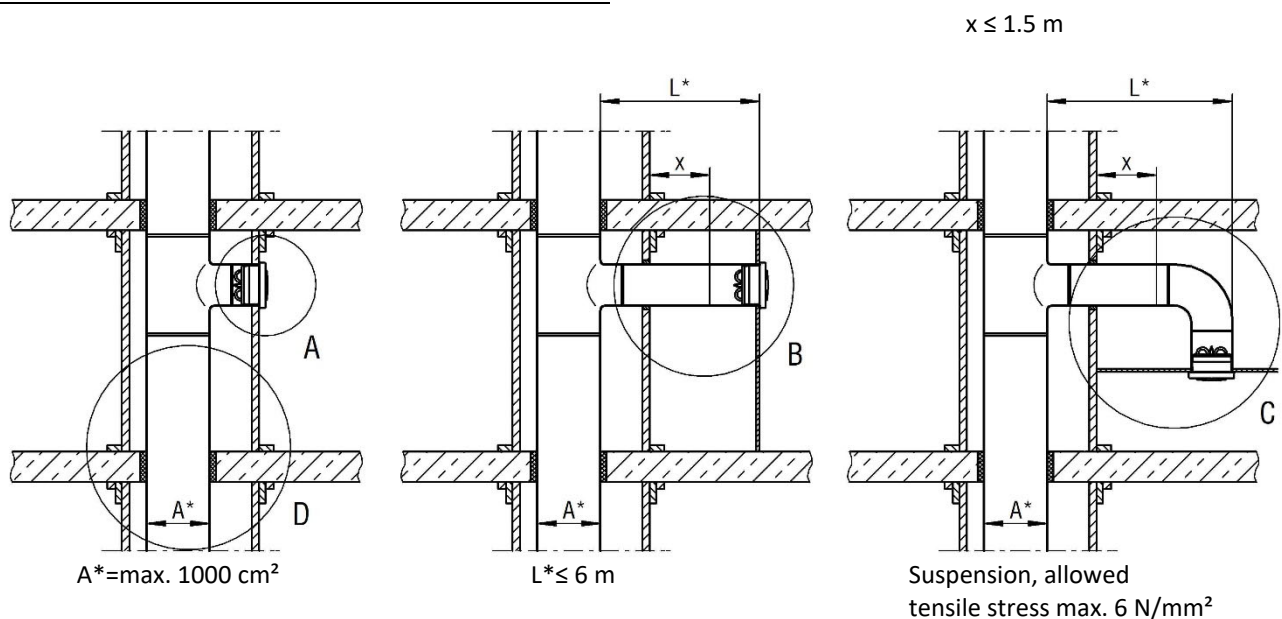
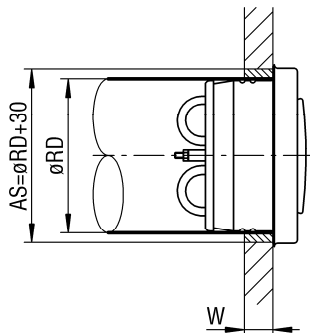


Figure 3: Installation of the air ducts with application of a ceiling mortar

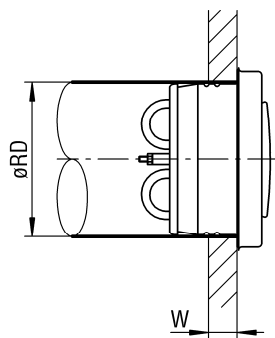
Detail A



F90: $W = \text{min. } 40 \text{ mm}$

Figure 4: Detail A

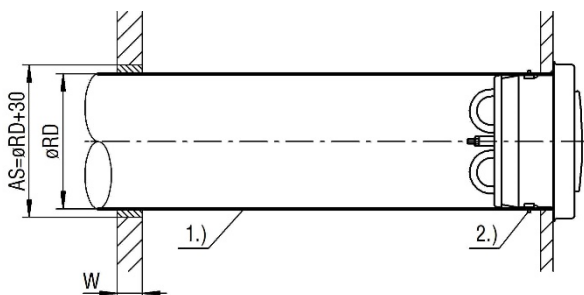
Detail A alternatively



F90: $W = \text{min. } 40 \text{ mm}$

Figure 5: Detail A alternatively

Detail B

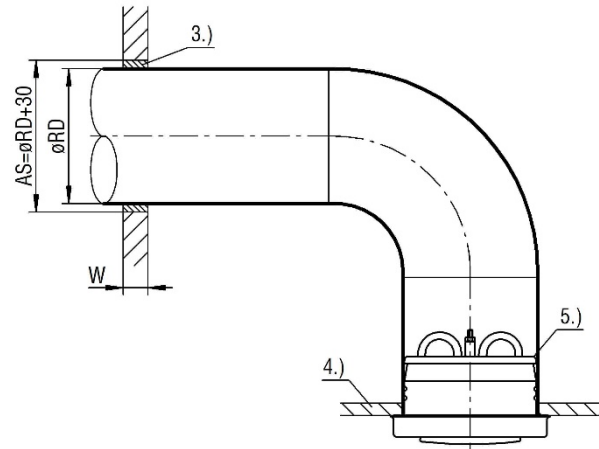


F90: $W = \text{min. } 40 \text{ mm}$

F30: $W = \text{min. } 24 \text{ mm}$

Figure 6: Detail B

Detail C



F90: $W = \text{min. } 40 \text{ mm}$

F30: $W = \text{min. } 24 \text{ mm}$

Figure 7: Detail C

Detail D

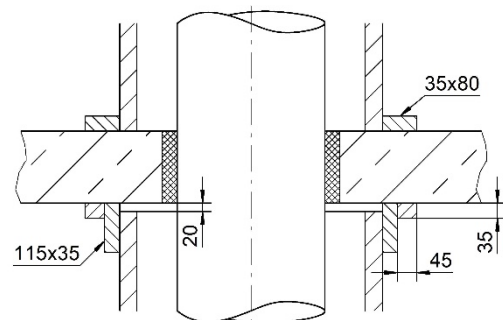


Figure 8: Dimensioning of firestop boards

AS = section
 $\varnothing RD$ = nominal size (NG)
 W = wall thickness

- 1.) Spiral duct or flexible sheet steel duct
- 2.) The mounting frame is riveted from the inside to the standard spiral duct using steel rivets 3x6
- 3.) Mortar MG II-III or plaster mortar
- 4.) Non-fire-resistant suspended ceiling
- 5.) Shut-off damper

Installation in or outside of ventilation shafts

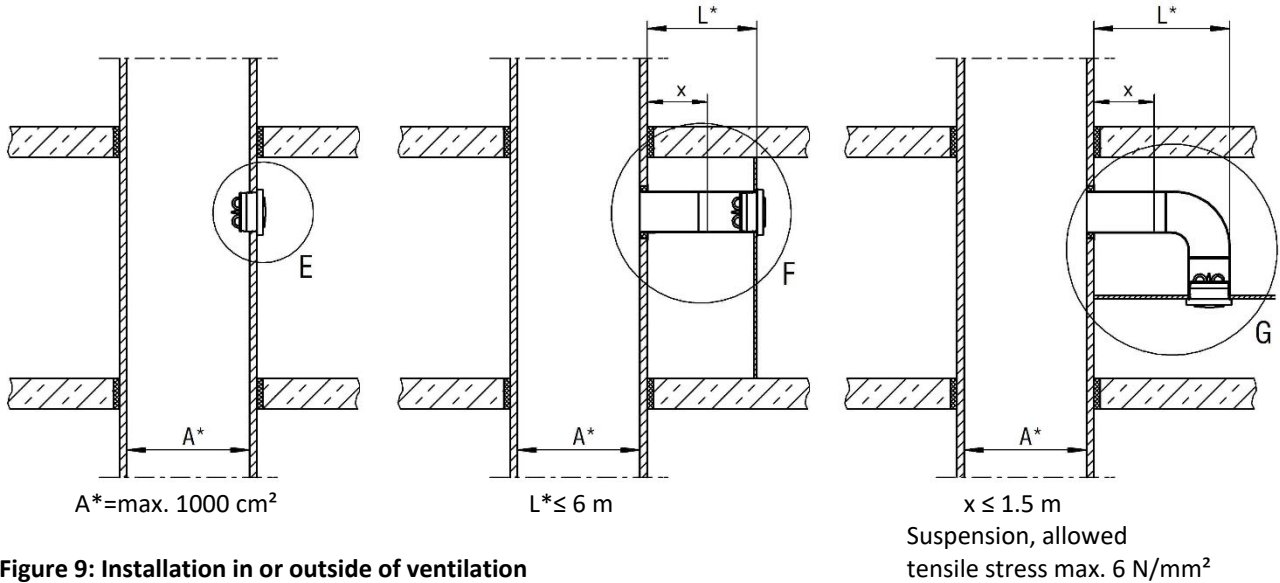


Figure 9: Installation in or outside of ventilation shafts

Detail E

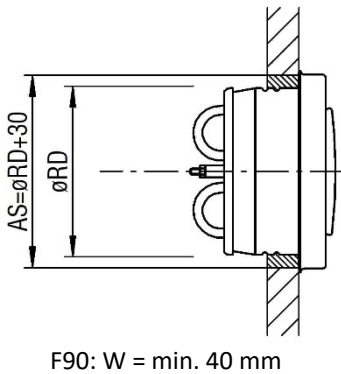


Figure 10: Detail E

Detail F

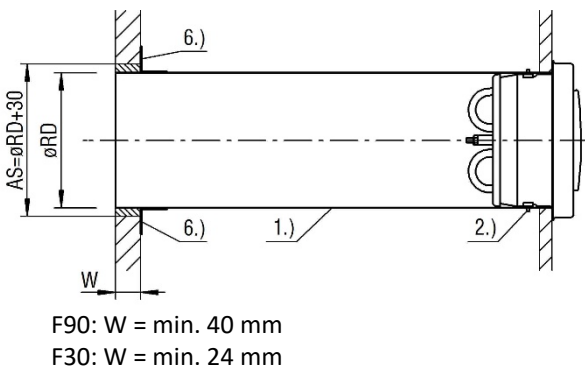


Figure 11: Detail F

Detail G

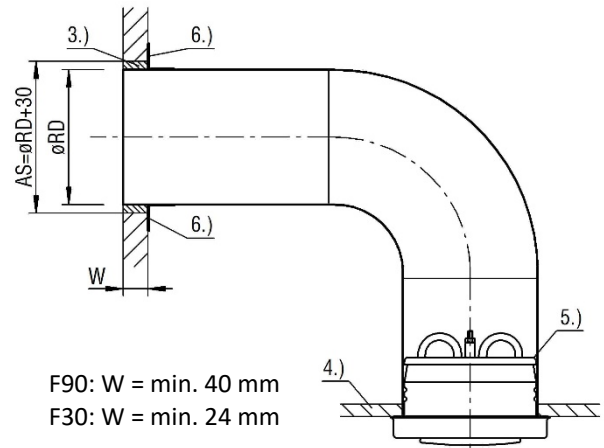


Figure 12: Detail G

AS = section
 øRD = nominal size (NG)
 W = wall thickness

- 1.) Spiral duct or flexible sheet steel duct
- 2.) The mounting frame is riveted from the inside to the standard spiral duct using steel rivets 3x6
- 3.) Mortar MG II-III or plaster mortar
- 4.) Non-fire-resistant suspended ceiling
- 5.) Shut-off damper
- 6.) Three brackets made of sheet steel, displaced at 120° , tightened by screws

TECHNICAL DATA

Pressure loss and noise level

SVA-FF 100

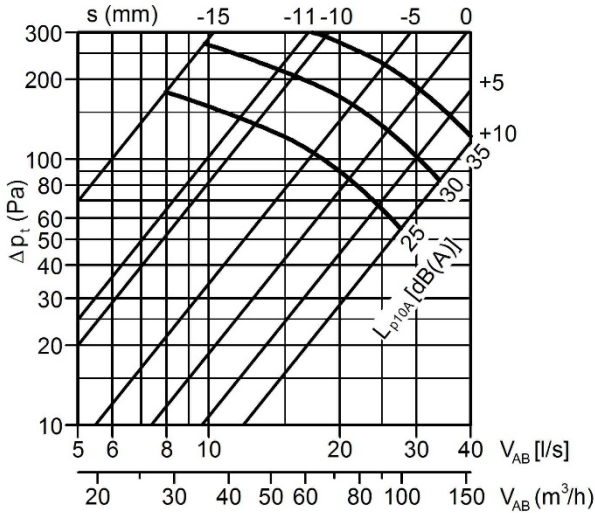


Diagram 1: Pressure loss and noise level of SVA-FF 100

SVA-FF 150/160

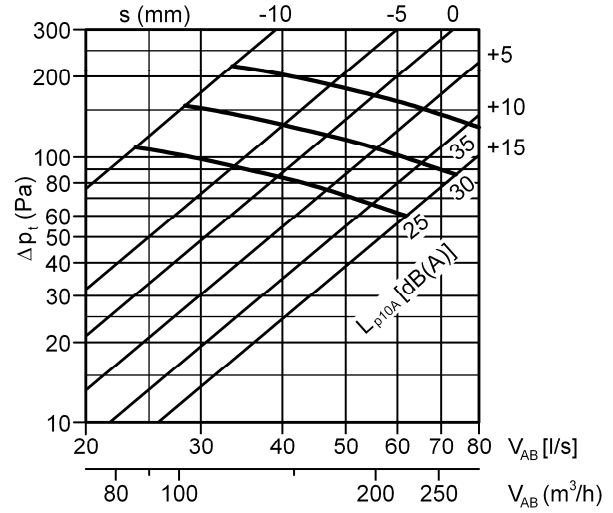


Diagram 3: Pressure loss and noise level of SVA-FF 150/160

SVA-FF 125

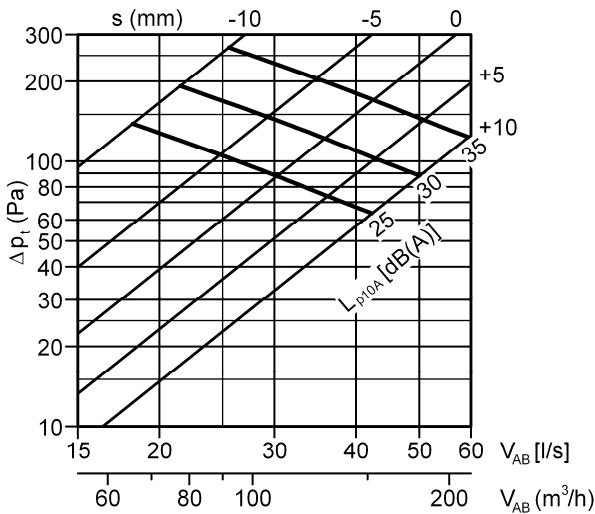


Diagram 2: Pressure loss and noise level of SVA-FF 125

SVA-FF 200

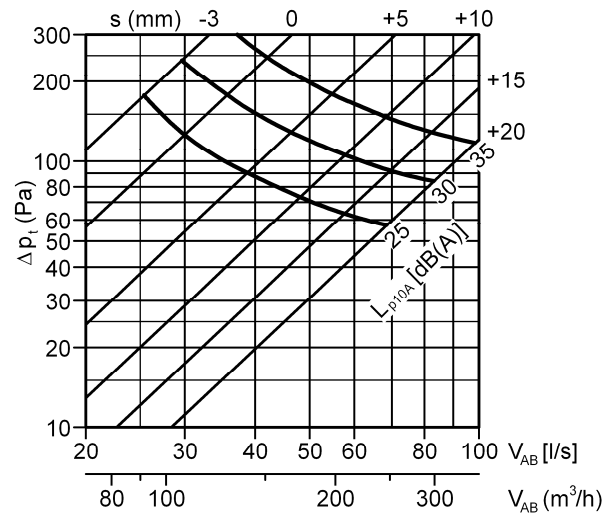


Diagram 4: Pressure loss and noise level of SVA-FF 200

Sound power level

| Nominal size | KF [dB] | | | | | | |
|--------------|---------------------|-----|-----|------|------|------|------|
| | f _m [Hz] | | | | | | |
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | -2 | 1 | -1 | 1 | -4 | -8 | -22 |
| 125 | -3 | -3 | -3 | -2 | 0 | -7 | -24 |
| 150/160 | 0 | -3 | -1 | 2 | -7 | -11 | -25 |
| 200 | 1 | -3 | -4 | 3 | -8 | -12 | -29 |

Table 3: Sound power level

To determine the sound power level in the octave band, the correction factor given in the table has to be added to the sound power level L_{p10A} , dB(A) according to the following formula.

$$L_w = L_{p10A} + KF$$

The correction factor (KF) represents an average value for the entire application range of the SFA-FF.

Insertion loss

| Nominal size | s [mm] | D _e [dB] | | | | | | | |
|--------------|--------|---------------------|-----|-----|-----|------|------|------|------|
| | | f _m [Hz] | | | | | | | |
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 100 | -10 | 22 | 19 | 16 | 16 | 16 | 18 | 9 | 9 |
| | 0 | 22 | 18 | 13 | 12 | 12 | 13 | 6 | 7 |
| | 10 | 22 | 17 | 12 | 9 | 8 | 11 | 4 | 6 |
| 125 | -10 | 21 | 18 | 15 | 14 | 15 | 14 | 10 | 7 |
| | 0 | 19 | 17 | 12 | 11 | 11 | 10 | 6 | 5 |
| | 10 | 20 | 16 | 10 | 9 | 9 | 8 | 5 | 5 |
| 150/160 | -10 | 19 | 16 | 14 | 14 | 14 | 16 | 8 | 8 |
| | 0 | 18 | 14 | 11 | 11 | 11 | 13 | 5 | 7 |
| | 10 | 18 | 14 | 10 | 9 | 9 | 11 | 4 | 6 |
| 200 | -10 | 15 | 15 | 14 | 14 | 16 | 15 | 10 | 9 |
| | 0 | 14 | 12 | 11 | 10 | 12 | 12 | 7 | 7 |
| | 10 | 13 | 11 | 8 | 8 | 9 | 10 | 6 | 6 |

Table 4: Insertion loss

The average values of the insertion from the duct to the room for ceiling installation are shown in the above table.

Legend

| | |
|------------------------------------|---|
| V_{AB} [m ³ /h] [l/s] | = Return air volume |
| Δp_t [Pa] | = pressure loss |
| L_{p10A} [dB(A)] | = Sound pressure level with 10m ² sab room damping (=4 dB) |
| L_w [dB(A)] | = Sound power level |
| D_e [dB] | = Insertion loss (from the duct to the room) |
| KF [dB] | = correction factor |
| S [mm] | = gap distance |

ORDER CODE

ORDER CODE OF SVA-FF

| 01 | 02 | 03 |
|----------------|--------------|-------|
| Type | Nominal size | Paint |
| Example | | |
| SVAFF | -200 | -9010 |

EXAMPLE

SVAFF-200-9010

Fire damper poppet valve type SVA-FF | Nominal size = **200** mm | **9010** = coating RAL 9010

ORDER DETAILS

01 - TYPE

SVAFF = Fire damper poppet valve SVA-FF

02 - NOMINAL SIZE

100 - 125 - 150 - 160 - 200
in mm - always three digits

03 - PAINT

9010= RAL colour white (standard)
xxxx = RAL colour on request (always with 4 digits)

SPECIFICATION TEXTS

Fire damper poppet valve for mounting into ventilation systems in accordance with DIN 18017-3, or ventilation systems according to DIN 18017-3, for which the supply air is introduced through ducts. Fire resistance class K90-18017.

The valve is fixed in the mounting frame (-ER; included in the scope of delivery) by means of detachable bayonet socket.

Continuous volumetric flow rate control

Installation inside/outside fire-resistant ventilation ducts or shafts.

Valve body and disc, made of sheet steel painted to RAL 9010 (white).

Approval certificate number: **Z-41.3-674**

Make: SCHAKO **type SVA-FF**

Alternative model (upon request and at an extra charge)

Valve body and disc, made of sheet steel, painted to RAL colours

SERVICE

Checking the function, cleaning, repair

Polluted and damp air can impair the continuous operational safety. This is why, after commissioning the ventilation installation, all shut-off devices must be subjected to a functional test at a six-month interval according to section 5 of the general building supervisory approval Z-41.3-674.

If two consecutive functional tests show no defects, the shut-off devices only have to be tested at a yearly interval.

There is a risk of injury during functional tests. Therefore, to avoid any cutting, crushing, impact or other possible injuries, personal protective equipment (PPE) must be worn.

1. Functional check

Carefully perform the required cleaning work, for example in order to avoid damage to the sealings, etc. If defects have been detected during functional check, they must be eliminated immediately.

- Carefully remove the fire damper poppet valve from the mounting frame (-ER; pos. 1) by turning it to the left.
- Check for possible damages.
- Mark the valve disc (pos. 2) setting or remeasure using a setting tool.
- Check the gap between the valve disc (pos. 2) and the valve body (pos. 4) for soiling, remove the counter nut (pos. 5) on the fusible link (pos. 6), if necessary, and remove the valve disc (pos. 2) from the fusible link (pos. 6) by turning it to the left.
- Check fusible link (pos. 6) for damage. It has to be replaced if it shows damage (Replacement fusible link 70°C, size-dependent model. When ordering, please state the nominal size of SVA-FF).

- Check connection opening and mounting frame (pos. 1) for soiling and clean them, if necessary.
- Check the sealing (circumferential, pos. 3) on the valve for soiling and damage.
- Check the valve disc (pos. 2) setting once again before mounting.
- Insert the fire damper poppet valve into mounting frame (-ER; pos. 1) by turning it to the right.

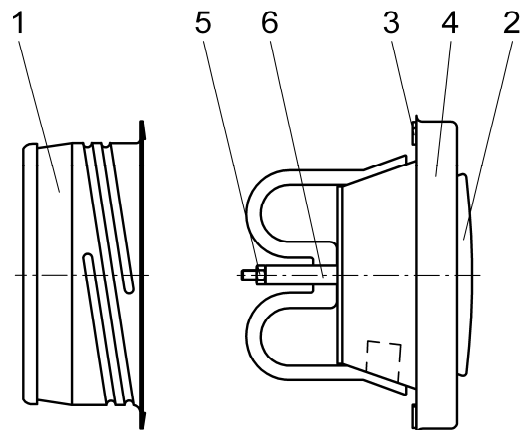


Figure 13: SVA-FF and mounting frame (-ER)

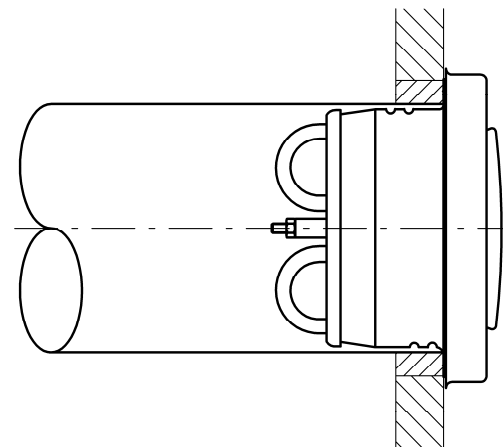


Figure 14: SVA-FF mounted

SAMPLE OF FUNCTIONAL TEST PROTOCOL

SCHAKO
 Ferdinand Schad KG
 Steigstrasse 25-27
 D-78600 Kolbingen
 Phone: +49- (0)7463 / 980-0
 Fax: +49- (0)7463 / 980-200
 E-Mail: info@schako.de
 Web: www.schako.de

Sample
 Functional test protocol for _____

Cons. No. _____

Usability certificate: _____

Series: _____

Release device: _____

| The following functional steps have been carried out according to the documents installation, mounting and operating instructions | Prior to commissioning | next function test check in: _____ | next functional test in: _____ | next functional test in: _____ | next functional test in: _____ |
|---|------------------------|------------------------------------|--------------------------------|--------------------------------|--------------------------------|
| External check: System: _____ Item: _____ | | | | | |
| Internal check: System: _____ Item: _____ | | | | | |
| Additional check: System: _____ Item: _____ | | | | | |
| without defects Date / tester | | | | | |
| with defects (see back) Date / tester | | | | | |
| without defects Date / tester | | | | | |

SAMPLE

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Fax: +49- (0)7463 / 980-200
E-mail: info@schako.de
Web: www.schako.de

Sample

Functional test protocol for _____

Cons. No. _____

Defects found during the test on: _____

Sluggishness due to soiling.

Defects found during the test on: _____

Defects found during the test on: _____

Defects found during the test on: _____

SAMPLE

FOREIGN BRANCH OFFICES

| | | | |
|--|--|---|---|
| Belgium SCHAKO S.A.R.L. 165, rue des Pommiers L-2343 Luxembourg Phone: +352 / 403 157 1 Fax: +352 / 403 157 66 info@schako.be www.schako.be | Denmark Venti AS Banevænget 3 8362 Hørring Phone: +45 / 86 92 22 66 Fax: +45 / 86 92 22 26 info@venti.dk www.venti.dk | England SCHAKO Ltd. Index House St Georges Lane, Ascot SL5 7EU Berkshire Phone: +44 / 13 44 63 63 89 Fax: +44 / 13 44 87 46 58 admin@schako.uk.com www.schako.co.uk | France SCHAKO s.a.r.l. 16 Boulevard de la Croix Rousse F-69001 Lyon Phone: +33 / 4 / 78 34 97 34 Fax: +33 / 4 / 78 34 97 31 contact@schako.fr www.schako.fr |
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