

EASY-VENT® FX

Air supply unit for radiators, including single-panel, double-panel, and triple-panel types with duct connection behind or above the unit.

- › Filtered and preheated fresh air
- › For modern energy-efficient exhaust systems
- › The air unit is concealed behind the radiator and acts as a bracket for it
- › Easy installation without loose parts
- › Can be combined with wall duct and facade grille



Description

Air supply unit for installation with single-panel, double-panel, or triple-panel radiators. Easy-Vent FX is designed for duct connection behind or above the unit and comes standard with a Comfort Filter.

Easy-Vent FX fits most radiators

Easy-Vent FX fits radiators with a height of up to 600 mm. Easy-Vent FX also functions as a bracket for the radiator. Additional radiator brackets are only needed if the radiator length exceeds 1400 mm. Easy installation of Easy-Vent FX and the radiator.

Easy installation of Easy-Vent FX and radiator

Easy-Vent FX is a complete unit with no loose parts. Since the air unit also serves as a bracket for the radiator, both functions are installed in a single step. No tools are required to secure the radiator to the air unit.

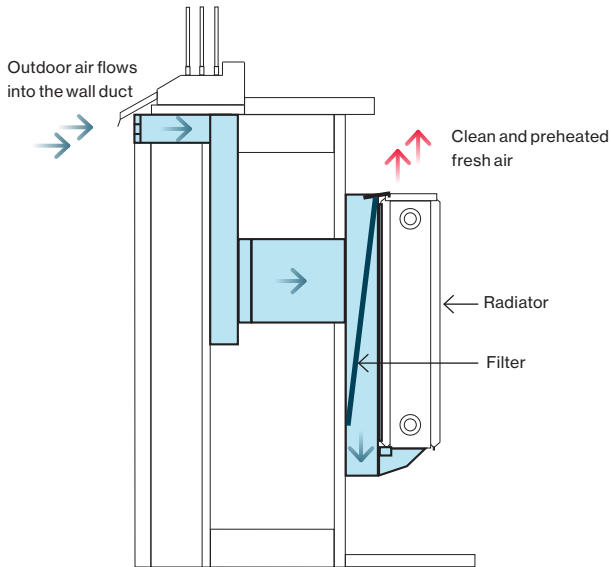
Product information

Product Information: The air unit is made of hot-dip galvanized steel sheet and is powder-coated in white color RAL 9016. The product is designed for our tough climate conditions and is manufactured in Sweden.

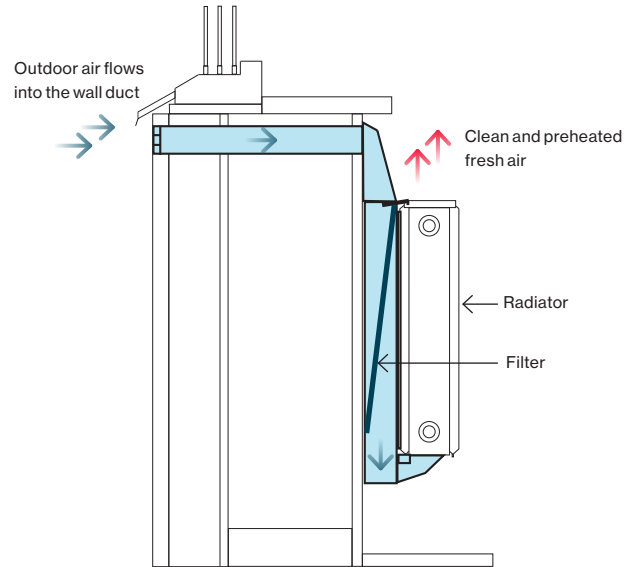
Function

Easy-Vent FX is used in buildings with exhaust and natural draft systems, primarily in residential areas. Used air from the home is extracted through a range hood and vents in the bathroom. Easy-Vent FX is positioned behind radiators in the living room and bedroom. Here, filtered and preheated fresh air is supplied.

Duct connection behind the radiator



Duct connection at the top of the unit



Outdoor air is led into the air unit through a channel in the facade wall. In the air unit, outdoor air is filtered and heated by the radiator. The clean and preheated fresh air flows into the room at the top of the radiator.

The "old" used air in the residence is extracted through the kitchen range hood and vents in the bathroom and sometimes the dressing room.

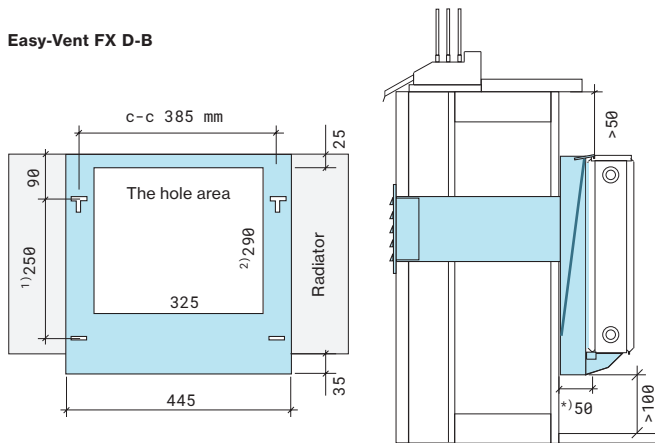
Variants

	Duct connection behind the radiator	Duct connection above radiators
Double or triple panel	 <p>Easy-Vent FX D-B Duct connection behind radiators with double or triple panels.</p>	 <p>Easy-Vent FX D-T Duct connection above radiators with double or triple panels.</p>
Single panel	 <p>Easy-Vent FX E-B Duct connection behind radiators with single panels</p>	 <p>Easy-Vent FX E-T Duct connection above radiators with single panels.</p>

Dimensions

Duct connection behind the radiator

Easy-Vent FX D-B



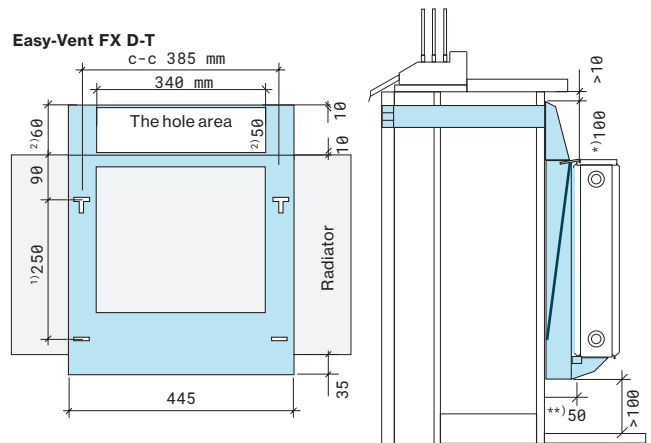
For radiators with a height of 300 mm, the following applies:

- 1) 150
- 2) 190

*) Distance from wall to center of the first radiator panel

Duct connection at the top of the unit

Easy-Vent FX D-T



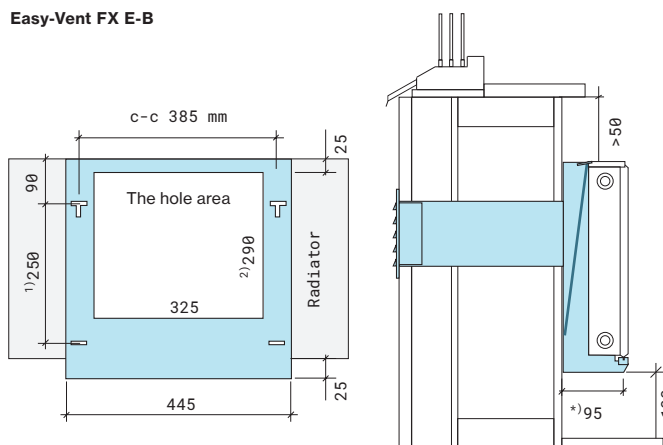
For radiators with a height of 300 mm, the following applies:

- 1) 150
- 2) The hole area for top connection height 100 mm: 340x85 mm

*) This applies to top connection 100. Top connection 60 extends 60 mm above the radiator

**) Distance from wall to center of the first radiator panel

Easy-Vent FX E-B

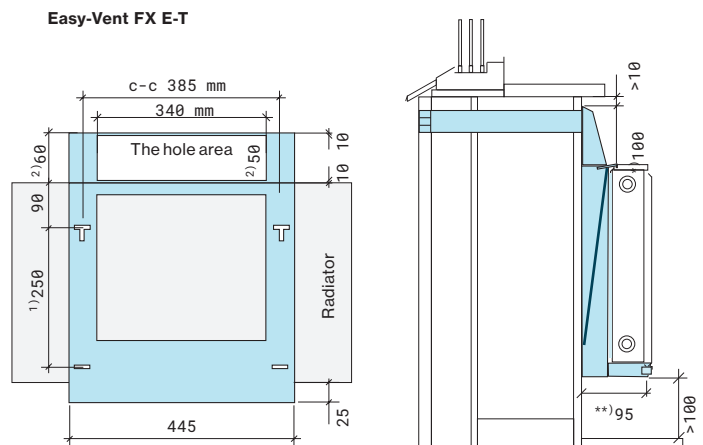


For radiators with a height of 300 mm:

- 1) 150
- 2) 190

*) Distance from wall to center of the radiator panel

Easy-Vent FX E-T



For radiators with a height of 300 mm, the following applies:

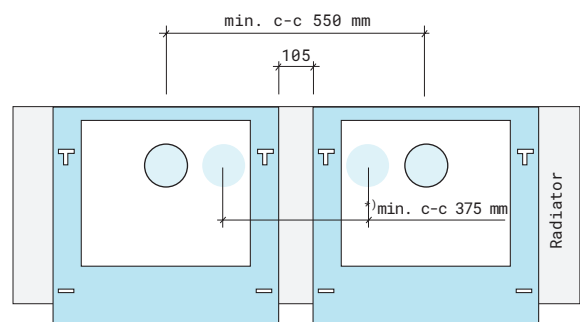
- 1) 150
- 2) The hole area for top connection height 100 mm: 340x85 mm

*) This applies to top connection 100. Top connection 60 extends 60 mm above the radiator

**) Distance from wall to center of the radiator panel

Multiple Easy-Vent FX units behind the same radiator

To increase the amount of supplied fresh air, it is possible to place several air units behind the same radiator. The minimum center-to-center distance between the units should be 550 mm, which means the distance between the units would be 105 mm. However, the radiator must be at least 1200 mm long to accommodate both air units.



*) This applies to Ø100-145 mm holes and if the holes are eccentricly placed as shown in the figure above.

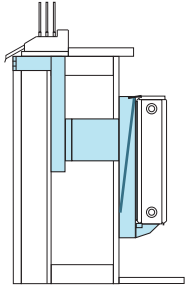
Installation Example

The drawings show various versions of facade walls in section with a complete installation of Easy-Vent FX. This consists of a facade grille, duct, and Easy-Vent FX air unit mounted behind a radiator.

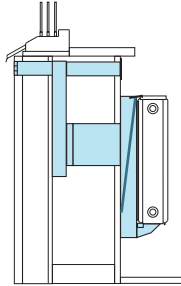
The color-coded parts are included in Acticon's delivery.

Easy-Vent FX with rear connection

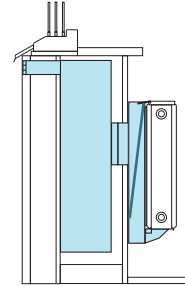
Rectangular duct under the window sill - concealed air intake



RVA, RVB and RVC. A practical solution in walls where concealed air intake is desired and/or high sound requirements are set. It is common to install parts of the duct in a prefab wall in the factory.

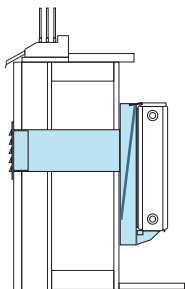


RVAL, RVBL and RVCL. If there are special requirements for cleanability, this is a suitable duct. It is complemented with a white-lacquered cleaning hatch that is opened from the inside. Otherwise, the design is identical to RVA, RVB, and RVC.

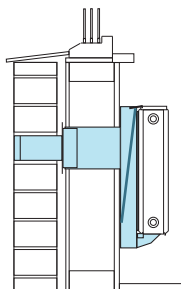


RVD. This duct satisfies very high requirements for noise reduction. Sound reduction index $D_{n,e,w}$ 62 dB in both stud walls and concrete walls.

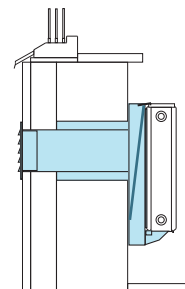
Cirkulär kanal med fasadgaller



CS and CV. Circular duct supplemented with a facade grille. A simple and common solution for all types of walls. It also works well in brick walls. If good sound absorption is desired in partition walls, channel CV is used. The wall's insulation is then utilized as "free" sound absorber.



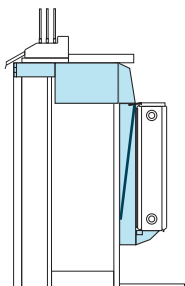
CS, CV and CI with facade grille TG and embedding box. This combination is only used in brick walls where a grille with the same dimensions as a brick is desired. To achieve a stable and tight installation, an embedding box TG is used. A circular duct in a suitable model is connected to the box's socket.



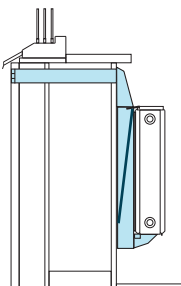
CI. Circular duct supplemented with a facade grille. Used in concrete walls with requirements for good sound reduction. The duct's external insulation does not go through the entire wall to avoid excessive hole drilling, which would degrade the wall's sound insulation. The duct's design is therefore determined in consultation with Acticon.

Easy-Vent FX with top connection

Rectangular duct under the window sill - concealed air intake



RTB. In ROT projects with high noise reduction requirements, this model is often used. It also occurs in new construction where cleanability is considered particularly important. Used together with Easy-Vent FX with a top connection.



RA and RB. A solution that is often used in both new construction and ROT projects. Better noise reduction is achieved with duct RB in stud walls. Easy cleaning. Used together with Easy-Vent FX with a top connection.

Noise Reduction Easy-Vent® FX

The tables below show the sound reduction index for a complete installation consisting of Easy-Vent FX, duct, facade grille, and radiator. The sound reduction index $D_{n,e,w}$ ref. 10 m² is measured according to ISO 140-10 and SS-EN ISO 717. Contact Acticon for information on current adaptation terms.

Easy-Vent® FX with rear connection

Rectangular duct under the window sill

$D_{n,e,w}$	Duct	Stud Wall with Mineral Wool	Concrete
62	RVD	X	X
56	RVC+CV	X	
55	RVB+CI	X	X
53	RVC+CS	X	
53	RVB+CS	X	X
52	RVA+CV	X	
48	RVA+CI	X	X
45	RVA+CS	X	X

Easy-Vent® FX with top connection

Rectangular duct under the window sill

$D_{n,e,w}$	Duct	Stud Wall with Mineral Wool	Concrete
49	RTB	X	X
46	RB	X	
37	RA	X	X

Circular duct with facade grille

$D_{n,e,w}$	Duct	Fasade grille	Stud Wall with Mineral Wool	Concrete
53	CV	VSC, KC, RC, TG	X	
47	CI	VSC, KC, RC, TG	X	X
42	CS	VSC, KC, RC, TG	X	X

Airflow and Pressure Drop

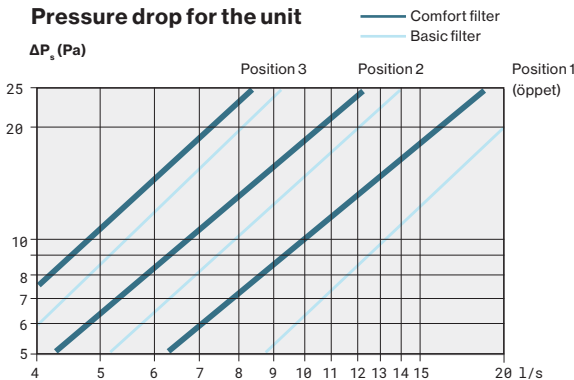
The diagram shows the static pressure drop across Easy-Vent FX with a filter and intake duct. The total pressure drop across a complete installation with a facade grille is obtained by adding values from the diagram and table below.

Easy-Vent® FX

Example: What is the pressure drop across Easy-Vent FX with an open damper, Comfort Filter, and duct RVA with an integrated grille at an airflow of 8 l/s?

Solution: The diagram provides a pressure drop of approximately 7 Pa at 8 l/s. In the table, at 8 l/s and duct RVA, the value is 1.5, which means the total pressure drop is 7+1.5=8.5 Pa.

Pressure drop for the unit



The noise level is less than 25 dB(A) for airflows up to 15 l/s

Duct pressure drop, Pa

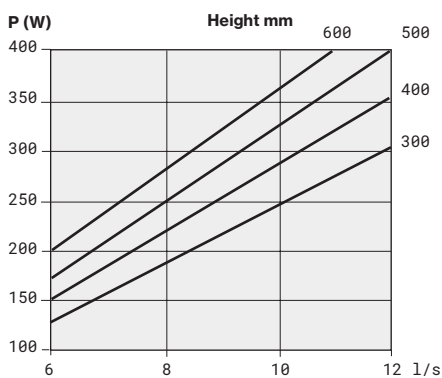
Model	8 l/s	10 l/s	12 l/s
*)RVA, RVB, RVC mfl	1,5	2,5	3,5
VSC	1	2	3
KC 100, RC 100, TG	3	5	7
RTB, RA, RB	1,5	2,5	3,5

*) Applies to all rectangular ducts with integrated grille

Increased Heating Efficiency

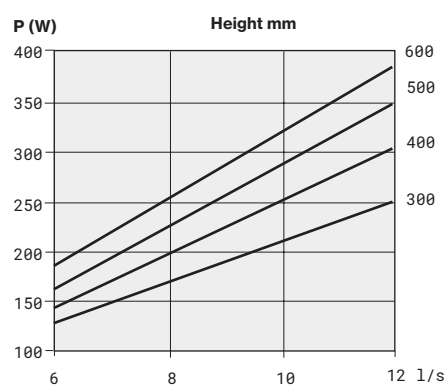
Easy-Vent FX optimally utilizes the radiator. Forced convection and a locally large temperature difference between the radiator and outdoor air increase the radiator's heating efficiency. The diagram shows the radiator's increase in efficiency as a function of the radiator's height and airflow.

Double/triple panel radiator (typ 21/22/33)



Conditions: Outdoor temperature -20°C, room temperature 20°C, and average water temperature 50°C. With the Easy-Vent Dim program, it is easy to simulate different operating scenarios.

Single-panel radiator with convector plate (typ 11)



Outdoortemp. °C	-10	-15	-20	-25	-30
Factor	0,88	0,93	1,0	1,07	1,14

Correction of the radiator's increase in efficiency at a different outdoor temperature than -20°C

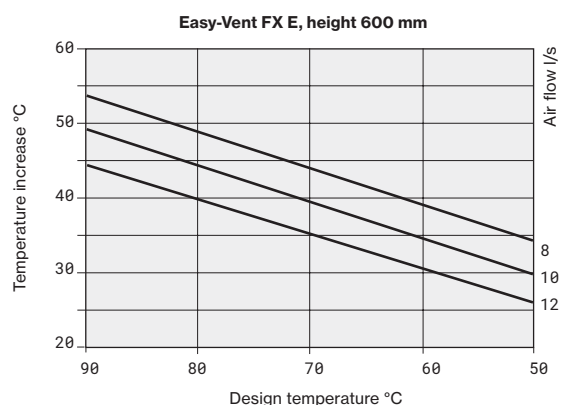
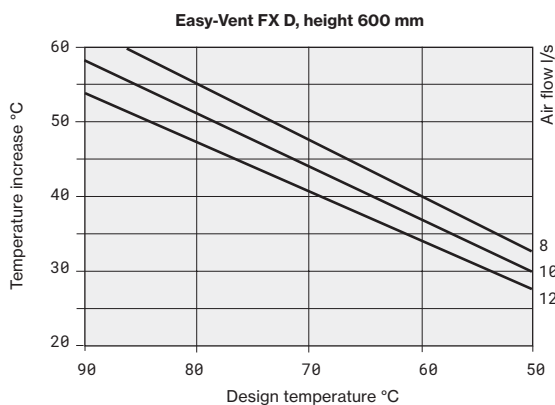
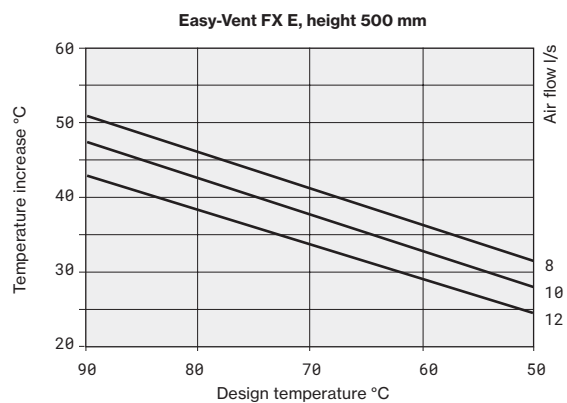
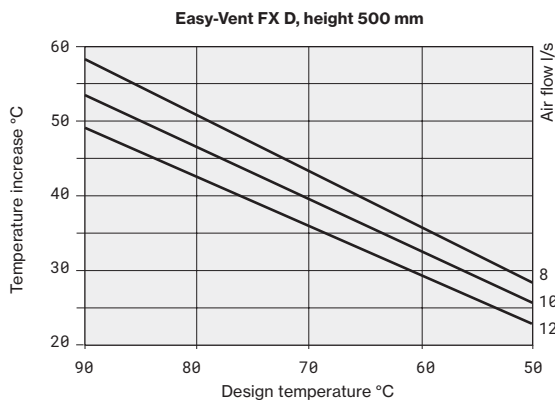
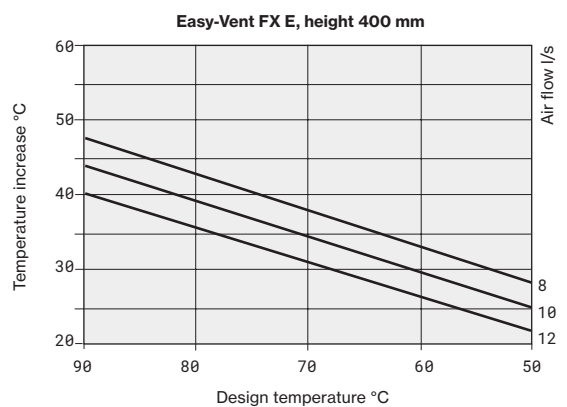
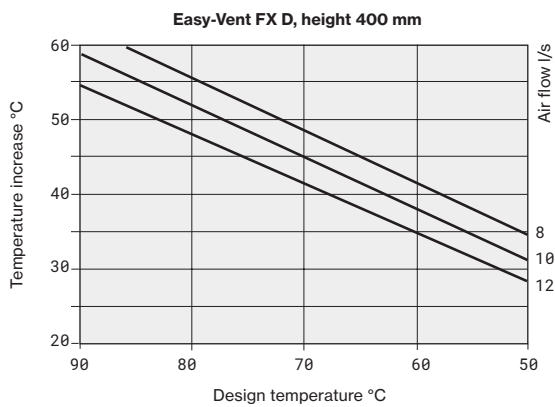
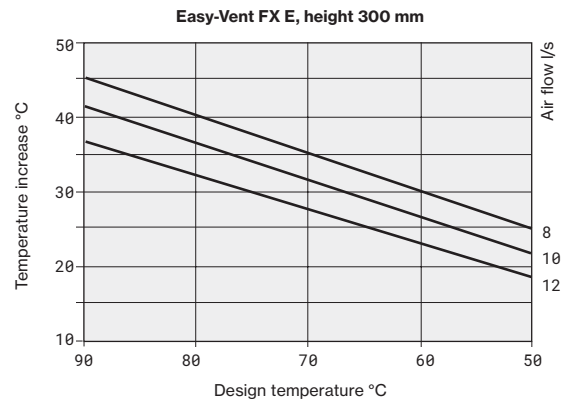
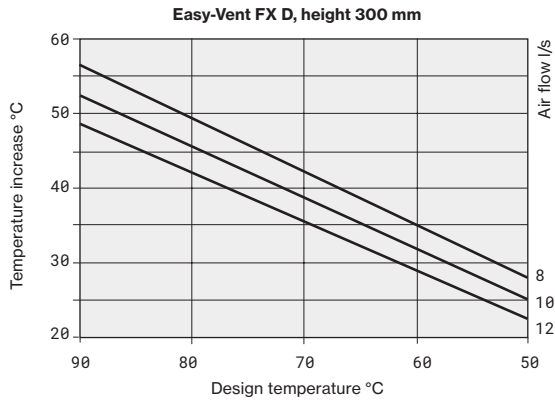
Inlet air temperature

The diagrams show the increase in outdoor air temperature after passing through Easy-Vent FX. The design temperature is the difference between the radiator's average water temperature and outdoor temperature.

Example: The water supply temperature is 55°C, and the return temperature is 45°C. The outdoor temperature is -20°C. The design temperature is $(55+45)/2 - (-20) = 70^\circ\text{C}$.

Easy-Vent FX model D, height 500 mm, provides a temperature increase of 50°C at an airflow of 10 l/s.

Easy-Vent FX model E, height 500 mm, provides a temperature increase of 37°C at an airflow of 10 l/s.



Accessories for Easy-Vent® FX with rear connection

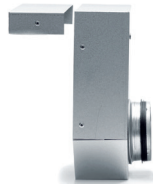
Air intake can consist of a rectangular duct with an integrated grille for concealed air intake or a circular duct with a facade grille. A common practice is to use a combination of both.

Rectangular duct with concealed air intake

The duct terminates under the window sill, which then acts as weather protection. Rectangular ducts are always combined with a circular duct, model CS, CV, or CI.



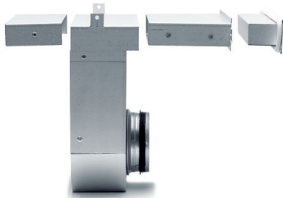
RVA
basic model



RVB
Sound-dampening



RVC
Sound-dampening



RVAL, RVBL och RVCL

The ducts are structured similarly to RVA/RVB/RVC but complemented with a white-lacquered cleaning hatch.



RVD
RVD Sound-dampening duct for very high noise requirements

Circular duct

Circular ducts are used in combination with rectangular ducts or as a pass-through duct in the facade wall. In the latter case, the duct is complemented with a facade grille.



CS 100/CS-F 100
Smooth plate



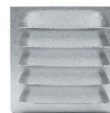
CV 100/CV-F 100
Sound-dampening duct



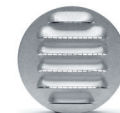
CI 100/CI-F 100
Sound-dampening duct

Fasade grille

Our facade grilles are made of galvanized steel sheet and come with small animal-resistant mesh. All grilles can be painted in a color of your choice.



KC 100



RC 100



Weather protection
VSC



TG with embedding box

Accessories for Easy-Vent® FX with top connection

Air intake consists of one of the following rectangular ducts with an integrated grille for concealed air intake.

Rectangular duct with concealed air intake

The duct terminates under the window sill, acting as weather protection.



RTB
Rectangular duct with an integrated grille and internal sound insulation.



RA
Rectangular duct with an integrated grille and mounting brackets for wall fixation.



RB
Sound-dampening rectangular duct with an integrated grille and mounting brackets for wall fixation.