Easy-Vent®

FÁLKINN ÍSMAR

Fresh air in homes

ACTICON
smarter ventilation

Easy-Vent is the air terminal device that provides dwellings with filtered and pleasantly temperate fresh air. Silent and draught-free. A reliable system that is ingenious, simple and completely natural. This is of course why Easy-Vent is the leader in residential ventilation with models for both new house production and existing dwellings in which refurbishment is being carried out.

Lillåudden / Västerås / Photo Pia Nordlander

TABLE OF CONTENTS

FRESH AIR WORTH BREATHING

We spend a lot of time indoors. This is why the quality of indoor air has such a great impact on our well-being. Allergies and hyper-sensitivity are only a couple of examples of problems that are considered to be environmentally related. Thinking about the quality of the food we eat and the water we drink are obvious for most people, but what about the air we breathe? An adult needs one kg of food, two litres of water and a full 25 000 litres of air each day. In lieu of this, it's easy to understand why a properly functioning ventilation system is so important.

We at Acticon think that air should be seen in the same light as food and beverages, i.e. it should be fresh and healthy, and handled carefully to ensure the best possible quality. It is with this in mind that we go about creating healthy indoor climates with fresh air worth breathing.

Filmstaden / Solna / Skanska / Photo Holger Staffansson, Skanska

SMARTER VENTILATION

We have the knowledge and experience to consistently create healthy and safe indoor climates. Air to live, work and thrive in. We have been developing and supplying what we think are the market's smartest solutions for almost twenty years. Smart, because we consider all aspects of the situation and no chain is stronger than its weakest link.

A superior ventilation system shall provide a high degree of comfort year after year. Research shows that systems that are difficult to understand and maintain gradually provide users with less and less comfort over the years.

This is why we consider it our challenge to make systems less complicated. We have decided that our products shall be easy to dimension, install, use and maintain. And this is how we create conditions that facilitate the design and installation of dependable and energy efficient ventilation.

But innovative products are of course only one reason why we are so successful. The other reason is our customers who return again and again, because they appreciate our genuine interest in them and our professional technical support. We are thankful for this, and it stimulates us to continue always delivering the best solutions possible.

This is what we call smarter ventilation!

Lillåudden / Västerås / Riksbyggen, Bostads AB Mimer, Peab, Kadesjö Projekt, Strängbetong / Photo Pia Nordlander

MODERN EXTRACT VENTILATION SYSTEMS

Believing that a complicated ventilation system is necessary to create energy efficient indoor climate can be a costly misunderstanding.

A mechanical extract ventilation system combined with an Easy-Vent air terminal device often provides a simpler and more economic solution. Filtering with the F7 filter and sound-damping ducts guarantees that pure, fresh air is delivered quietly and draught-free. The system is easy to dimension, install and maintain, as well as understand. There are only a few components, so operation is trouble free. Since there is no supply fan, no space is needed for the supply air ducts. Adjustment equipment is easy to operate. Fire resistance solutions are simplified as Easy-Vent acts as a decompression device. Easy-Vent has become the modern solution for dwellings with mechanical extract ventilation systems.

Easy-Vent is also an energy effective system that requires little electricity. The ventilation is easy to adapt according to needs and supplement with an exhaust air heat pump. Environmental impact is quite limited as there are few components in the system that require manufacturing and transport.

ENERGY CONSUMPTION IN MULTIPLE-UNIT DWELLINGS

The Swedish Association of Municipal Housing Companies, SABO, has analysed how much energy multiple-unit dwellings with different ventilation systems use. Of the 277 properties built between 1993 and 2002, 75 properties with a total of 4 260 "ordinary" apartments were analysed. The analysis shows that buildings with mechanical supply and extract ventilation with heat recovery consume more energy than mechanical extract ventilation systems without heat recovery.

	Mechanical extract ventilation without heat recovery **MEV**	Mechanical supply and extract ventilation with heat recovery **MVHR**	Mechnical extract ventilation with exhaust air heat pump **MEVHR-EHP**	Mechnical extract ventilation with bedrock heat pump **MEVHR-RHP**
Heat	146	134	53	42
Property electricity	17	36	50	39
Total energy	162	170	103	81

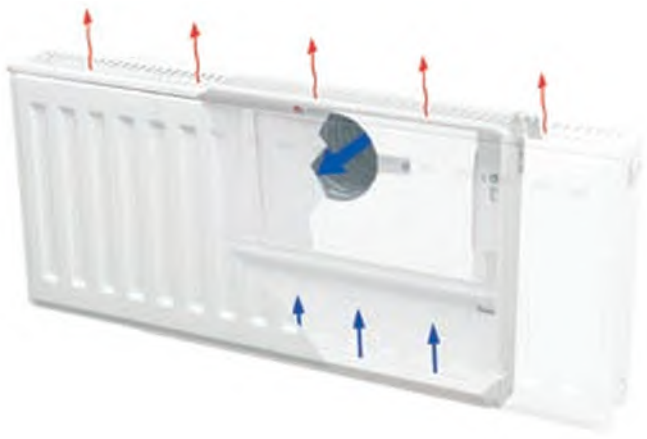
Energy consumption in kWh/m² living and premises area

Easy-Vent®

Easy-Vent is the ingenious air terminal device that supplies dwellings with fresh, pre-heated, filtered air. Quietly and draught-free. The air terminal device is installed together with the panel radiator of your choice and also functions as a bracket for the radiator. The patented Easy-Vent outdoor air intake is the market leader in ventilation for dwellings.

GENERAL DESCRIPTION

Fresh air is sensitive to changes and should be handled with care. It should be led into the dwelling through the shortest feasible passage. To provide the most comfort possible, air should be pure and have an agreeable temperature. This was the concept that we based the introduction of our Easy-Vent outdoor air intake on, more than fifteen years ago. It is a reliable solution that is easy to maintain and understand.



Easy-Vent installed on the wall behind the radiator (in cross-section). The filtered and pre-heated fresh air is supplied to the room at the radiator's upper edge.

THIS IS HOW EASY-VENT OPERATES

Easy-Vent is installed along with the panel radiator of your choice, and also acts as a bracket for the radiator. The outside air is led through the facade grille and duct into the air terminal device that is installed on the wall behind the radiator.

At the device's inlet there is a filter that prevents pollen and contaminants from following the fresh air into the room. The filtered air flows into the air terminal device and flows alongside the rear the radiator.

There is an ejector on the air terminal device's underside that guides the air up between the radiator's convection plates. When the air comes into contact with the hot radiator surface, it is effectively heated before it flows out over the top of the radiator. The room is supplied with temperate fresh air, soundlessly and without draughts.

PRE-HEATED FRESH AIR

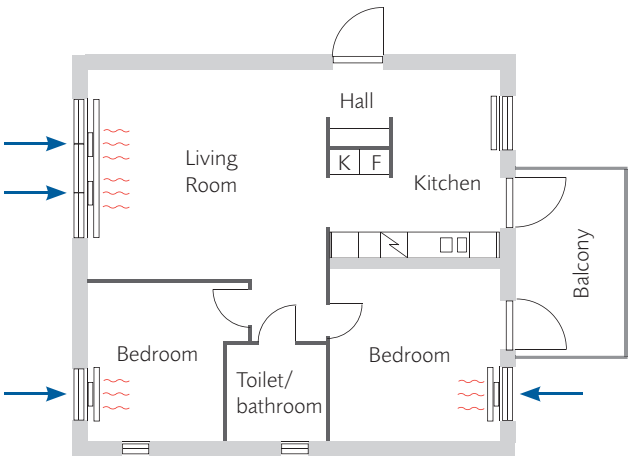
Easy-Vent increases the effectiveness of the radiator. Forced convection combined with a large temperature difference between the radiator and incoming air results in very effective heat transfer to the air. The size of the radiator can thereby be reduced with maintained thermal output.

Easy-Vent directs the supply air behind and between the radiator's panels at a high speed. The speed of the air flow results in warm indoor air being sucked in under the radiator, mixing with the incoming air and thus, further increasing the air temperature. This is especially important during the autumn and spring when outside temperatures can be low when the heating system of the dwelling is not in operation.

MECHANICAL EXTRACT AND NATURAL VENTILATION

Easy-Vent is an outdoor air intake device that is used in buildings with mechanical extract ventilation and natural ventilation systems, i.e. mostly dwellings.

Used air in the apartment is extracted via the kitchen hood, exhaust registers in the toilet or bathroom and sometimes the wardrobe. Filtered and pre-heated fresh air is supplied in its place by the Easy-Vents that are placed behind radiators in the living room and bedrooms. The fresh air flows through the dwelling and "captures" contaminants on its way to the kitchen hood and exhaust registers.



EASY-VENT IS SUITABLE FOR ALL RADIATORS

Being able to choose the radiator increases the possibilities of creating the best possible combination of ventilation, heating and cost effectiveness.

Easy-Vent can be used with all radiators with a height of up to 900 mm and a length of at least 600 mm. On some of the radiators from particular manufacturers, the factory mounted suspension brackets may need to be removed. Easy-Vent also acts as a bracket for the radiator. Only radiators whose length is more than 1400 mm need extra brackets.

PROVIDING ENOUGH AIR TO SMALLER AREAS

In smaller apartments it is often difficult to supply enough outside air without causing a draught. This problem is solved effectively with Easy-Vent by placing two air terminal devices behind the same radiator. This doubles the amount of pre-heated fresh air. The shortest centre-to-centre distance between the devices must be 550 mm. To ensure that both air terminal devices fit behind the radiator, the radiator must be at least 1200 mm in length.

QUIET DWELLINGS

We recommend using sound attenuating ducts in areas where there is a lot of traffic and noise. Aside from the different types of interior acoustic insulation, the intake ducts can be designed so that the outside wall's thermal insulation can also be used as a sound absorbent.

Acticon has a long history of working with acoustics and sound attenuation. In our acoustics laboratory we conduct tests to develop specific, customized solutions. Naturally, we assist you with acoustical calculations and dimensioning and provide you with CAD-drawn proposals.

FILTERING

Allergies and hyper-sensitivity are to a great extent considered to be environmentally related. Many difficulties caused by allergies can be eased and prevented by having a properly ventilated indoor environment. The outside air that is supplied into the dwelling should also be filtered to prevent pollen and other impurities from coming in.

RIGHT FILTER FOR RIGHT FUNCTION

Our F7 Comfort filter is a very effective filter in the F7 class. It consists of three layers of synthetic fibres with different densities. Its unique construction provides especially good dust retention capacity and it has a long service life. Both the F7 Comfort filter and the G2 Basic filter are heat resistant up to 100 °C, and are moisture resistant up to 100% relative humidity. They meet the requirements of the F1 fire resistance class, and do not emit any poisonous gases when incinerated. Both filters can be combined with active carbon filters. Easy-Vent is normally delivered with the F7 Comfort filter.

ORDERING OF NEW FILTERS

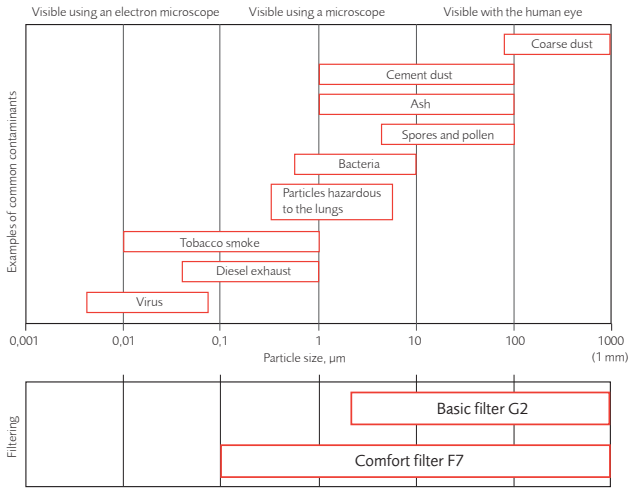
Filters should be replaced regularly to maintain good ventilation. Use Acticons original filters when changing filters. Then we can guarantee that the technical data that provides a basis for the determination of the air flow, air temperature and filtering is accurate.

New filters and flexible hoses for cleaning the inside of the air terminal device and duct can be ordered from Acticon AB.

EASY TO REPLACE FILTERS

1. Remove the cleaning cover and pull the filter out
2. Place the new filter in the opening. Ensure that the filter's frame is facing the room and that the filter is slanted towards you.
3. Then fold back the "thumb grip" on the filter's frame. Replace the cap and push it until it locks in place.

The filter is pliant which makes it easy to replace even if the window sill is low.



The diagram shows all the contaminants that are captured by our filters

Filter	Description
Comfort Filter F7	Disposable filter in class F7. Delivered as standard. Filtration efficiency approx. 98% Dust spot efficiency > 80% Fire resistance F1 according to DIN 53438 Filter change: Annually or at least every second year
Comfort filter F7 + active carbon filter	Disposable filter consisting of two separate filters that can be replaced individually. Technical data, see Comfort filter F7 Filter change: Active carbon – twice a year
Basic filter G2	Class G2. Can be vacuumed. Should be replaced for more efficient filtering. Filtration efficiency > 65% Fire resistance F1 according to DIN 53438 Filter change: Annually or at least every second year
Basic filter G2 + active carbon filter	A combination of two separate filters that can be replaced individually. Technical data, see Basic filter G2 Filter change: Active carbon – twice a year

INSTALLATION AND ADJUSTMENT

Easy-Vent is a complete unit without separate, individual components. Since the air terminal device also acts as a bracket for the radiator, two functions are fulfilled at once. No tools are needed to mount the radiator on the air terminal device.

QUICK AND EASY INSTALLATION

Begin by making a whole in the facade wall and installing the intake duct and facade grille. After that, screw Easy-Vent to the wall. Ensure that the intake duct leads into the rectangular opening in the back of the device. Make sure that the device is level.

The radiator is placed on the two plastic coated radiator supports on the device's lower edge. Slide the radiator sideways so that it seals tightly against the device's seal. The radiator is fixed in place with the flexible catches at the device's upper edge. It is not necessary to remove the top grille of the radiator. Push down the catches so that the locking pins becomes visible. A clicking sound is heard when the catches are locked. The catches are now fixed in place and the radiator installed.

Remove the cleaning cover and place the filter in the opening. Ensure that the filter's frame is facing the room and that the filter is slanted towards you. Fold back the "thumb grip" on the filter's frame. Replace the cap and push it until it locks in place. Also make sure that the ejector at the device's lower edge is in the up position, against the radiator.

EASY LOCKING OF THE RADIATOR

The radiator is fixed against the air terminal device with two lockable catches. These catches are pushed down and lock automatically with a locking pin.

ADJUSTMENT AND OPERATION

Easy-Vent itself does not require any adjustment. The heating system's circulation pump should be interlocked with the extract fan. You then avoid cold outdoor air flowing in over the radiator in the event of pump failure. Use thermostatic radiator valves that cannot be set below freezing point.

ADJUSTABLE DAMPER

The damper is an accessory that is placed on the ejector at the device's lower edge. To close the air intake slightly, or close it entirely, pull the damper towards you. To open the damper, push it away from you. The damper can be installed on the device afterwards using the accompanying screw and flat plastic piece provided.

CLEANING

Easy-Vent is easily cleaned with a moist cloth. Aside from the regular replacement of the filter, no other cleaning is needed. In exceptional cases, the facade grille, duct and the device's interior can be cleaned with a flexible cleaning hose attached to a vacuum cleaner.

Catch in open position

Note that the locking pin is visible when the catch is locked in place.

The damper is easily adjusted using your fingertips. The picture shows the damper in the half-open position.

With the reversible adapter, the cleaning hose fits all vacuum cleaners.

MODELS AND DIMENSIONS

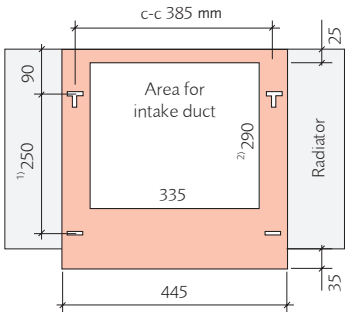
Easy-Vent is manufactured in heights adapted to chosen radiator.
The air terminal device is available in two models:
Easy-Vent-D for installation with double and triple panel radiators
Easy-Vent-E for installation with single panel radiators.

Intake duct's placement is indicated with an additional letter:
- **B** when the intake duct shall be behind the air terminal device
- **T** when the intake duct shall lead into the terminal's top connection.

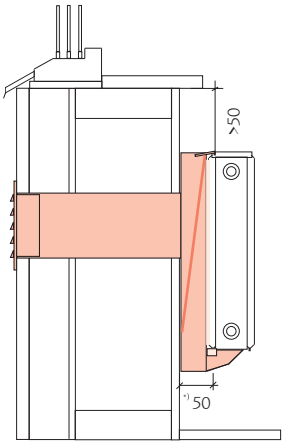
The top connection is available in two heights, 60 and 100 mm.

Easy-Vent-D-B

For double/triple panel radiators
Duct connection at the rear



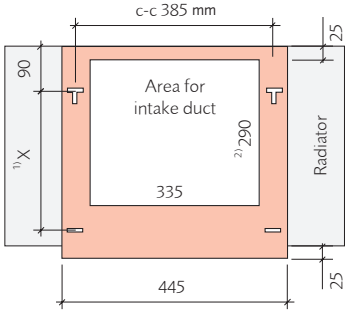
For radiators with a height of 300 mm:
1) 150
2) 190



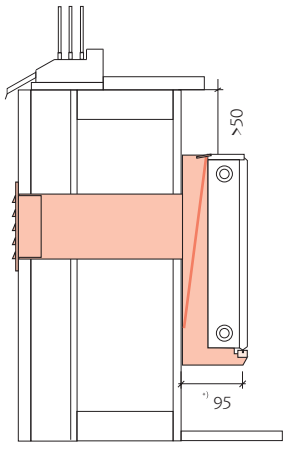
*) Distance from wall to the centre of the first radiator panel

Easy-Vent-E-B

For single panel radiators
Duct connection at the rear



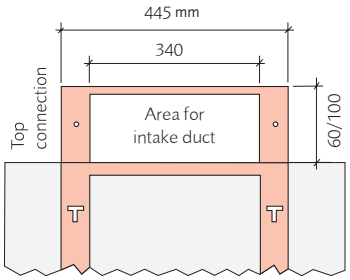
1) Radiator's height -95 mm
2) For radiators with a height of 300 mm, 190 mm is applicable



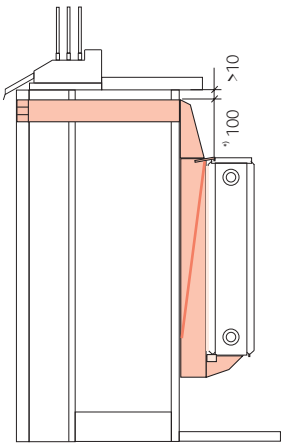
*) Distance from wall to the centre of the radiator panel

Easy-Vent-D-T and Easy-Vent-E-T

For double/triple and single panel radiators
Duct connection at top



Only the top connection is visible when the radiator is mounted



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

---

SEVERAL EASY-VENTS BEHIND THE SAME RADIATOR

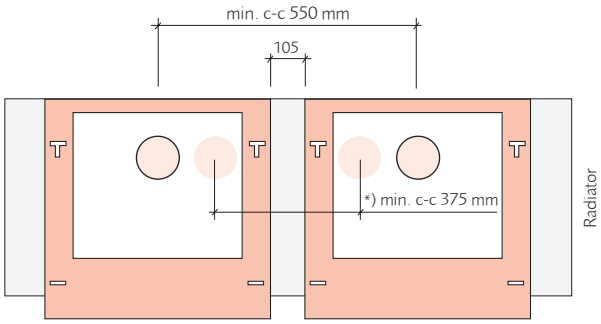
Placing several air terminal devices behind the same radiator works perfectly well. The shortest centre-to-centre measurement between devices must be 550 mm, which means that the distance between the devices will be 105 mm.

PRODUCT FACTS

Easy-Vent is patented and has a registered design in many countries including Sweden. The air terminal device is manufactured using hot-dip galvanized sheet steel and powder lacquered in white colour RAL9010. Air filter materials are manufactured using synthetic microfibre, and the intake duct and facade grille are made of Aluzink sheet metal. The sound absorbing material in the ducts is type-approved for cleaning, fibre-loss and emissions.

PROPOSAL FOR PROSPECTUS TEXT

Easy-Vent-D-B-400 with F7 Comfort filter manufactured by Acticon. Complete with circular sound attenuating duct CV 100 and facade grille KC100.



*) This applies when making a hole Ø 100-145 mm and if the holes are placed off centre as shown in the illustration above.

SPECIFICATION

Designation	Model	Duct connection	Radiator height
Easy-Vent	D	B	Stated in mm
Easy-Vent	D	T	Stated in mm
Easy-Vent	E	B	Stated in mm
Easy-Vent	E	T	Stated in mm

D - For double/triple panel radiators
E - For single panel radiators

B - Duct connection at rear
T - Duct connection at top

Kålgården / Jönköping / JM, HSB
Photo Örjan Henriksson

DUCTS AND FACADE GRILLES

Intake ducts and grilles are small, but central components in a building. They should be able to withstand continuous changes in heat, cold, moisture and wind. They should also be able to dampen outside noises – year in and year out. Obviously, this places great demands on design quality and choice of materials.

An example of concealed air intake below the window ledge flashing

THE INTAKE DUCT AND HIDDEN AIR INTAKE

Our ducts are delivered in many models. Sometimes the duct is connected to a visible facade grille, but just as often the duct is designed for hidden air intakes under the window ledge. The exact design is determined by the location of the building, the construction of the wall, specific sound reduction requirements and the requirements of the customer regarding appearance.

All of our ducts are manufactured using high-quality Aluzink sheet metal, a tough, long lasting material. The ducts are always sized to provide a perfect fit and easy installation. The installation can either be done at the building site, or installed in a pre-fabricated wall at the factory.

TYPE-APPROVED DAMPING MATERIAL

Great demands are placed upon sound absorbing materials in ducts with internal insulation. Aside from good sound absorption, it must also be able to handle moisture and great temperature variations. Obviously, the material cannot issue emissions or fibres. The surface layer must be wear resistant so that it can be mechanically cleaned. For this reason, all internal acoustic insulation in our ducts is type-approved with regard to cleaning, fibre-loss and emissions. This is especially important in consideration of the ducts long service life.

WE MAKE CAD DRAWINGS FOR YOUR DUCTS

We are more than happy to assist you with acoustical calculations and dimensioning, and always provide you with CAD drawings for our proposals.

The easiest thing to do is to e-mail a sectional drawing of your facade wall to us. We will then draw our proposal in your sectional diagram and return it to you by e-mail. Ready to use!

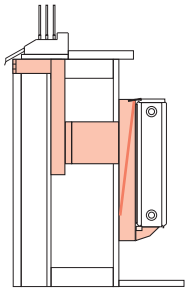
CLEAN DUCTS

The intake ducts are accessible for cleaning. If there are special demands regarding cleanliness, the Easy-Vent with the top connection is a great choice. Otherwise, the intake duct with the removable cleaning cover is another good idea. To ensure that cleaning is as easy as possible, the lower section of our rectangular ducts are bevelled to prevent dirt from fastening in difficult to reach corners.

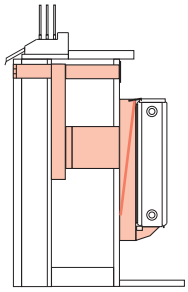
WALL SECTIONS WITH REDUCTION COEFFICIENT

The drawings show different variations of a complete installation consisting of facade grille, duct, air terminal device Easy-Vent and radiator. The coloured components are included in Acticons' deliveries.

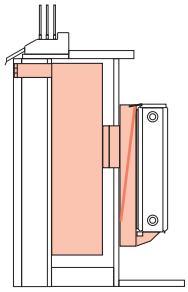
RECTANGULAR DUCT UNDER WINDOW LEDGE – HIDDEN AIR INTAKE



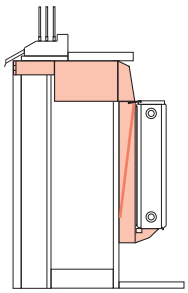
RVA, **RVB** and **RVC**. A practical solution in walls where a hidden air intake is desired, or which have high sound reduction requirements. The ducts are often factory installed in prefabricated walls.



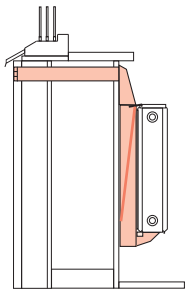
RVAL, **RVBL** and **RVCL**. These are suitable choices when it is especially important to be able to clean the ducts. They are accompanied by a white lacquered cleaning cover that can be removed from the interior of the building. Otherwise, their designs are identical to the RVA, RVB and RVC.



RVD. This duct meets very high sound reduction requirements. The reduction coefficient is $D_{n,e,w}$ 62 dB in both framed walls and concrete walls.

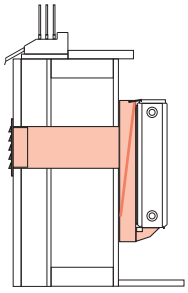


RTB. This model is often used in refurbishment projects with high sound reduction requirements.It is also used in new production in which cleanliness is considered especially important. It is used in conjunction with the Easy-Vent with top connection.

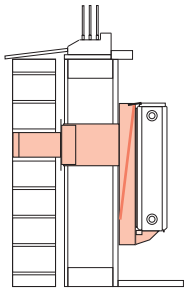


RA and **RB**. These are used in both new production and refurbishment projects. In framed walls the RB duct provides better sound damping. It is easy to clean and is used in conjunction with the Easy-Vent with top connection.

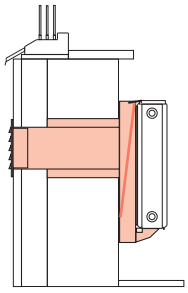
CIRCULAR DUCT WITH FACADE GRILLE



CS and **CV**. Circular ducts with accompanying facade grille. A simple and common solution for all types of walls. It can also be used in brick walls. If good sound attenuation in framed walls is a requirement, then the CV duct should be used. Then the wall's insulation can be used as a "free" sound absorbent.



CS, **CV** and **CI** with facade grille TG wall frame. This combination is only used in brick walls in which a grille is desired with the same dimensions as a single brick. The TG wall frame is used to provide firm and tight installation. Circular ducts in suitable models are connected to the boxes' sleeve coupling.



CI. A circular duct with accompanying facade grille. It is used in concrete walls which require good sound reduction. The duct´s external insulation does not continue through the entire wall. This is to avoid the need of making a large hole in the facade, which would impair the wall's acoustic properties. For this reason, design is determined in conjunction with Acticon.

SOUND REDUCTION EASY-VENT

The tables below show the reduction coefficient for a complete installation consisting of Easy-Vent, duct, facade grille, and radiator. The reduction coefficient $D_{n,e,w}$ ref. 10 m^2 is calculated in accordance with ISO 140-10 and SS-EN ISO 717. Get in touch with Acticon if you would like further information regarding actual modification terms.

RECTANGULAR DUCT UNDER WINDOW LEDGE

Easy-Vent with rear connection

$D_{n,e,w}$	Duct	Framed 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

RECTANGULAR DUCT UNDER WINDOW LEDGE

Easy-Vent with top connection

$D_{n,e,w}$	Duct	Framed wall with mineral wool	Concrete
49	RTB	X	X
46	RB	X	
37	RA	X	X

CIRCULAR DUCT WITH FACADE GRILLE

Easy-Vent with rear connection

$D_{n,e,w}$	Duct	Facade grille	Framed 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

MODELS AND DIMENSIONS – DUCTS

The air intake for Easy-Vent consists of either a rectangular duct with an integrated grille, which conceals the air intake, or a circular duct with facade grille. There are of course combinations of both available.

RECTANGULAR DUCTS

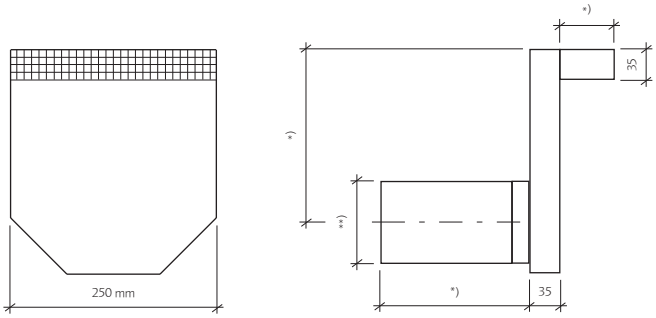
All rectangular ducts terminate under the window ledge. The ledge flashing also provides weather protection. Note that the hole through the wall shall be at least five (5) mm larger than the dimensions given below.

CS CV CI

CORRESPONDING CIRCULAR DUCTS

The suitable duct is chosen based upon the sound reduction requirements and the construction of the wall. It connects to the rectangular ducts sleeve coupling.

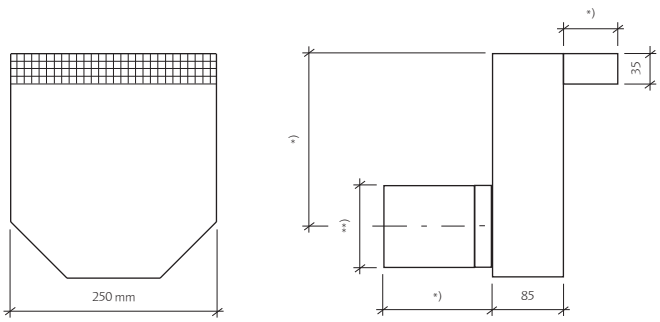
Duct RVA, i.e a vertical duct VA with a sleeve coupling and a G inlet duct with an integrated grille. In the picture RVA is supplemented with a circular duct CS.



RVA AND RVC

These ducts consist of a G inlet duct with an integrated grille and a VA vertical duct (RVA) or a sound attenuating VC vertical duct (RVC). RVA and RVC are always used with a circular duct. The G inlet duct terminates in the facade wall, and the vertical duct is equipped with a sleeve coupling that has a rubber seal. The circular duct that leads to the back of the air terminal device is connected to it, and circular ducts are available in three models: CS ,CV and CI.

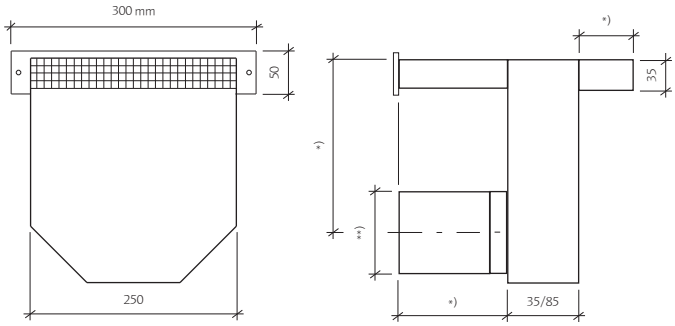
*) The dimensions are adapted to the actual measurements of the wall construction.
**) Ø100 mm with CS duct and CV. Ø140 mm with CI duct



RVB

The duct is constructed in the same way as the RVA and RVC above. The only difference is that the VB vertical duct has interior acoustical insulation.

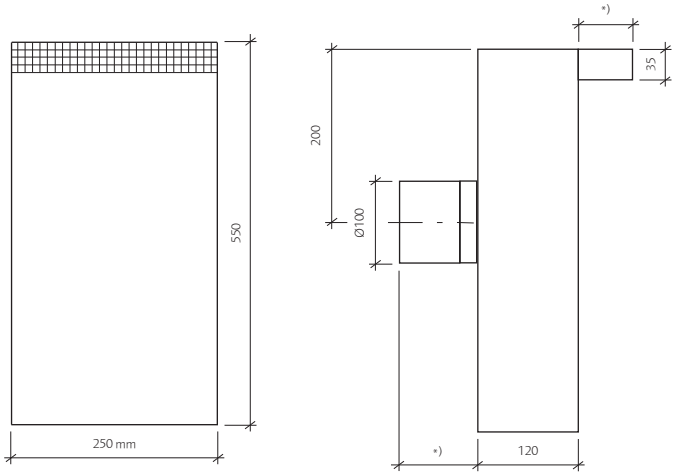
*) The dimensions are adapted to the actual measurements of the wall construction.
**) Ø100 mm with CS duct and CV. Ø140 mm with CI duct



RVAL, RVBL AND RVCL

The ducts are constructed in the same way as the RVA/RVB/RVC models, but supplemented with a white lacquered cleaning cover. This makes it possible to access all of the ducts for mechanical cleaning from the inside of the building.

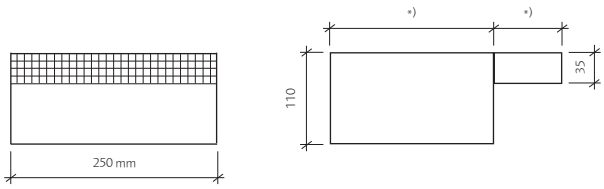
*) The dimensions are adapted to the actual measurements of the wall construction.
**) Ø100 mm with CS duct and CV. Ø140 mm with CI duct



RVD

A rectangular duct with integrated grille and internal acoustic insulation. This duct is used when very high sound reduction capabilities are required.

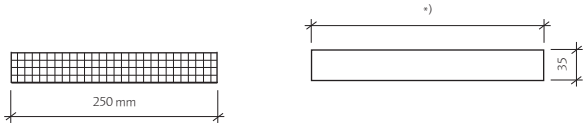
*) The dimensions are adapted to the actual measurements of the wall construction.



RTB

A rectangular duct with integrated grille and internal acoustic insulation. This duct is used together with the Easy-Vent with top connection

*) The dimensions are adapted to the actual measurements of the wall construction.



RA AND RB

RA and sound attenuating RB are rectangular ducts with integrated grilles and tabs for mounting on the wall. These ducts are used in conjunction with the Easy-Vent with top connection.

*) The dimensions are adapted to the actual measurements of the wall construction.

CIRCULAR DUCTS

There are three basic models made of Aluzink sheet metal. They are equipped with foldable tabs for easy installation in the wall and are always delivered in the actual length needed. The circular ducts are either used in combination with the rectangular ducts, or as a lead-through duct in the facade wall. In the latter case, a facade grille is added.

CS 100
The CS is in sturdy, smooth sheet-metal with tabs for mounting in the wall. Its diameter is 100 mm and it is suitable for all types of walls, as well as embedding. The hole diameter should be Ø105 mm.

CV 100
The CV is in perforated Aluzink with "fibre-safe" protective fabric and mounting tabs. The diameter is 100 mm. The sheet-metal's perforation and woven protective fabric's technological characteristics have been thoroughly tested in our laboratory to provide the best possible sound attenuating effects. The hole diameter should be Ø105 mm.

CI 100
The CI with exterior acoustical insulation and mounting tabs. The interior and exterior diameters are 100 and 140 mm respectively. The duct is excellent for embedment. The hole diameter for the inside wall should be Ø145 mm and Ø105 mm through the outer portion of the facade. Before holes are actually drilled, check with Acticon

---

FACADE GRILLES

Our facade grilles are manufactured using Aluzink sheet metal and are equipped with small-gauge, animal-proof mesh. All grilles can be lacquered in the colour of your choice.

KC 100
Suitable for most facades. It is installed in circular ducts with a diameter of 100 mm. It has a sleeve coupling with a rubber ring seal. Its exterior dimensions are 135x135 mm (W x H)

RC 100
Suitable for most facades. It is installed in circular ducts with a diameter of 100 mm. The sleeve coupling has a rubber ring seal and its exterior dimension is Ø135 mm.

WEATHER PROTECTION VSC
Suitable for areas with strong winds. It is installed in circular ducts with a diameter of 100 mm. The sleeve coupling has a rubber ring seal and the exterior dimensions are 165x150 mm (WxH)

TG GRILLE WITH WALL FRAME
It is used in brick walls when a rectangular facade grille is desired. The wall frame is plastered into the brick wall and connected to a circular duct Ø100 mm. The TG grille is pushed against the wall frame and plastered into the brick wall.

TG facade grille
Exterior dimensions 250x65 mm (WxH)

TG wall frame
Depth excluding sleeve coupling 130 mm.
End dimension is 310x135 mm (WxH)

TECHNICAL DATA

The dimensioning of Easy-Vent with accompanying filter, duct and facade grille can be done manually using the graph and tables below. However, we recommend using our Easy-Vent Dim program to make the process faster and easier. Note that the sound reduction coefficient is dealt with on page 21.

DIMENSIONING WITH EASY-VENT DIM

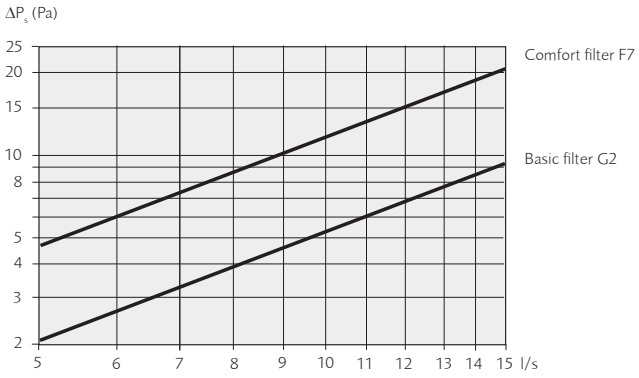
We have a practical dimensioning program that you can download from our website. The program helps you to quickly and easily dimension the correct number of Easy-Vents, pressure drop, supply air temperature and increase in output.

AIR FLOW AND PRESSURE DROP

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

Example: What would the pressure drop across Easy-Vent with the F7 Comfort filter and the RVA duct with integrated grille be at an air flow of 8 l/s?

Solution: The graph below shows a pressure drop of about 8.5 Pa at 8 l/s. In the table it can be seen that at 8 l/s, and with the RVA duct, we get 1.5, i.e. the total pressure drop is 8.5 +1.5=10 Pa.



The sound level is less than 25 dB (A) at an airflow of up to 15 l/s

Model	8 l/s	10 l/s	12 l/s
*) RVA, RVB, RVC a.o	1,5	2,5	3,5
VSC	1	2	3
KC 100, RC 100, TG	3	5	7

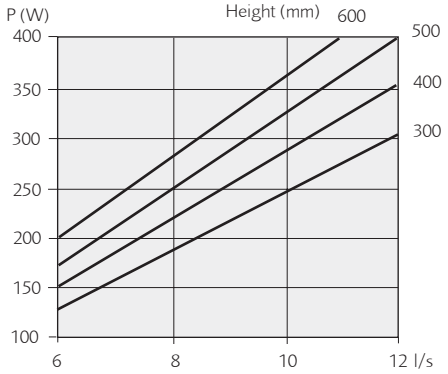
*) Applies to all rectangular ducts with integrated grilles

INCREASED THERMAL OUTPUT

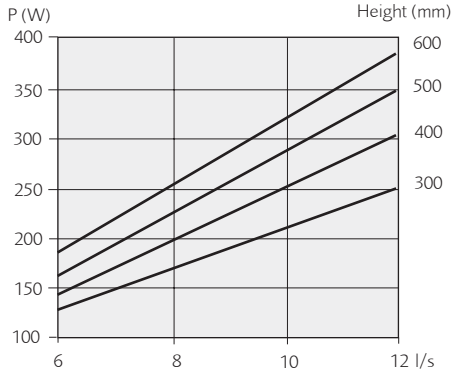
Easy-Vent uses the radiator optimally. Forced convection and the large differences in temperatures between the radiator and the outdoor air increase the radiator's thermal output. The graph shows the radiator's increased thermal output as a function of its height and air flow.

Conditions: Outdoor air temperature -20 °C, room temperature 20 °C and mean water temperature 50 °C. Using the Easy-Vent Dim dimensioning program makes it easy to simulate different operational scenarios.

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



Single panel radiator (type 11)



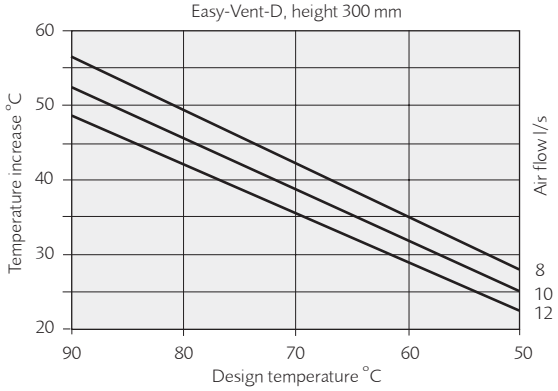
Outdoor temp.	-10	-15	-20	-25	-30 °C
Factor	0,88	0,93	1,0	1,07	1,14

The adjustment of the radiator's increase in thermal output at outdoor temperatures other then -20 °C.

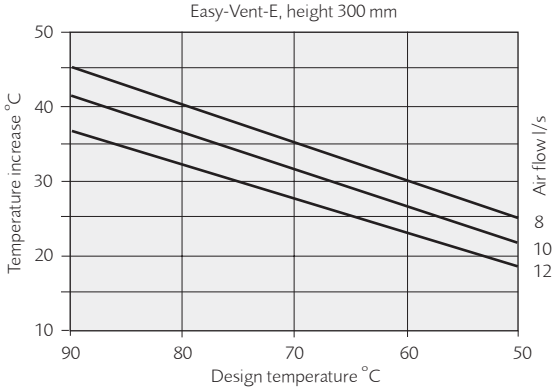
SUPPLY AIR TEMPERATURE

The increase in the temperature of the outdoor air after passing through Easy-Vent can be seen below. The design temperature in the graph is the difference between the radiator's mean water temperature and the temperature of the outdoor air. Example: The inlet water temperature is 55 °C and the exit water temperature is 45 °C. The outdoor temperature is -20 °C. The design temperature will be (55+45)/2-(-20) =70 °C. Easy-Vent model D, height 500 mm provides a temperature increase of 50 °C at an air flow of 10 l/s.

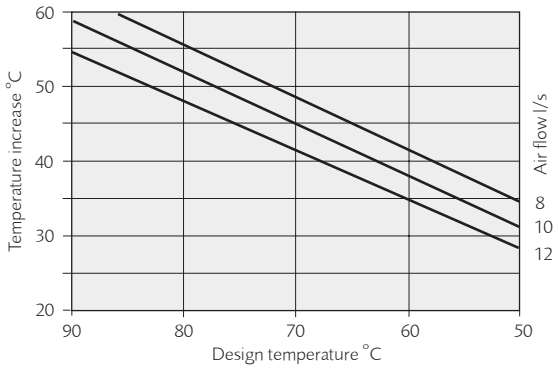
Easy-Vent-D, height 300 mm



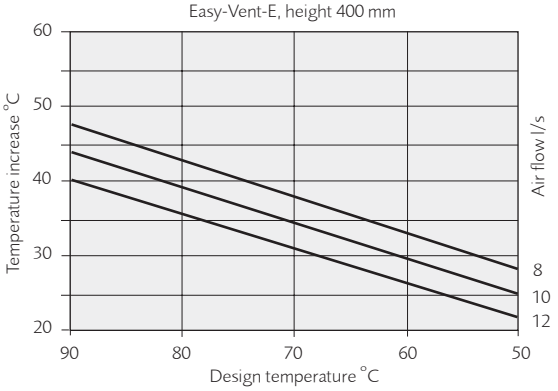
Easy-Vent-E, height 300 mm



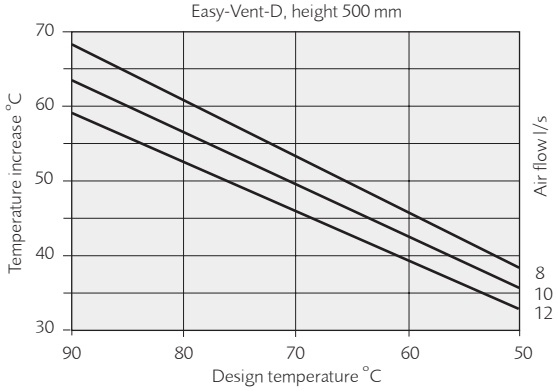
Easy-Vent-D, height 400 mm



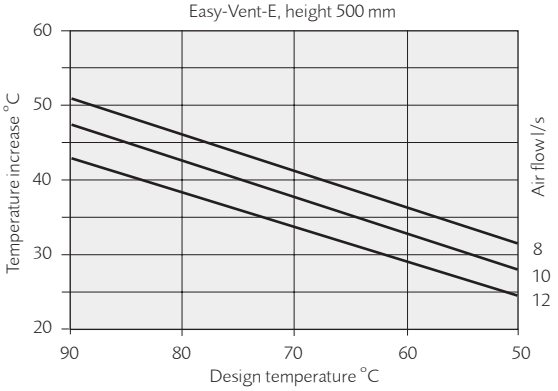
Easy-Vent-E, height 400 mm



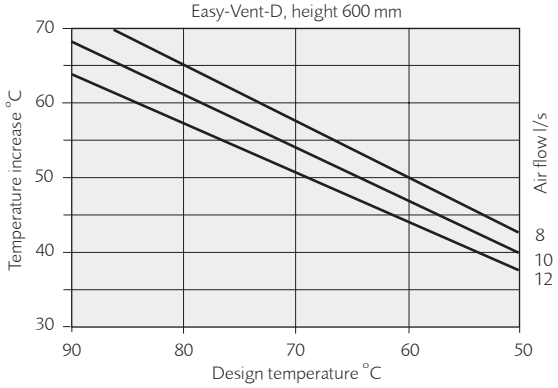
Easy-Vent-D, height 500 mm



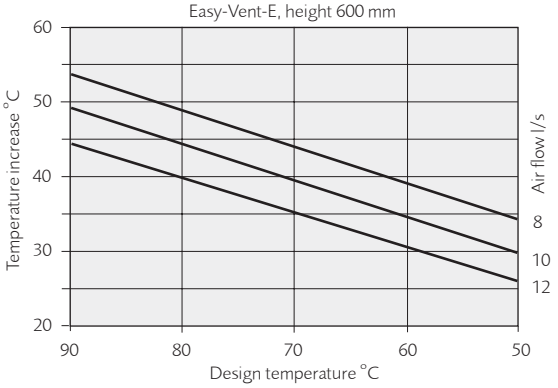
Easy-Vent-E, height 500 mm



Easy-Vent-D, height 600 mm



Easy-Vent-E, height 600 mm



JESPER DESIGN Photo Örjan Henriksson

Acticon AB
Sjöåkravägen 30
SE-564 31 Bankeryd
Sweden
Tel +46 (0)36 370790
Fax +46 (0)36 370745
www.acticon.se