VASCO

PRODUCT DATA VENTILATION

SILENT VENTILATION

by Partel

Save energy. Build smart.

VASCOGROUP is a global supplier of heating and ventilation systems. The group's well-known brands include Vasco, Brugman and Superia. **Vasco is a leading manufacturer of designer radiators, ventilation systems and underfloor heating systems, and market leader in bathroom radiators (Benelux). Brugman** and **Superia** are quality brands for **panel radiators** and are leading providers in their market segment. The Vasco Group develops and optimises improved technologies and products for end user indoor climate regulation, all with special attention to the individual needs of the customer. Vasco has already won several awards and prizes in the search for alternative materials, new designs and innovative production methods. The head office is based in Dilsen, Belgium. The production facilities are located in Tubbergen (Netherlands), Zedelgem (Belgium), Dilsen (Belgium) and Legnica (Poland). The Vasco Group employs around 700 people and is part of the **Vaessen Industries** group of companies.

WHO SAYS COMFORT, SAYS HEALTHY AIR QUALITY

VASCO

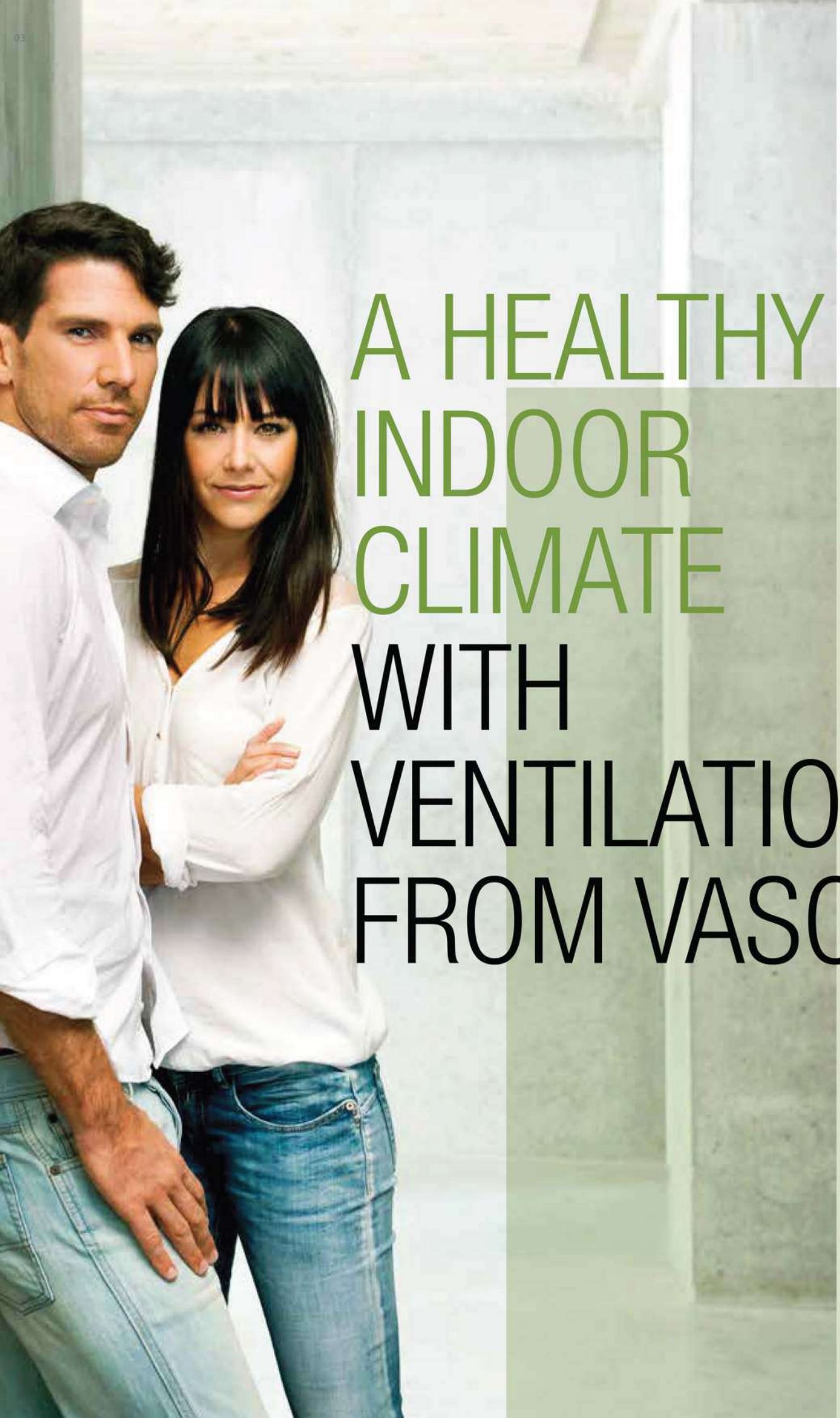
Vasco has been manufacturing radiators for more than 40 years, creating a perfect synergy between comfort and aesthetics. The company produces innovative and surprising products that are still easy to integrate into any facility. Vasco is therefore rightly the undisputed market leader in the **designer and bathroom radiator segment.**

The technical expertise that Vasco has acquired over the past 40 years as a 'comfort specialist' has led to the development of an **underfloor heating system** that focuses on tailor-made solutions. The result is optimum thermal comfort, which significantly reduces energy costs, as Vasco underfloor systems guarantee a quick and pleasant feeling of warmth and are particularly energy-saving thanks to the high heat output in a low-temperature system.

The **Vasco ventilation systems** too, are the result of years of research and development. They ensure optimum control of the air quality in every living and working area - silent and with maximum energy savings guaranteed.

VENTILATION

VASCO



A HEALTHY INDOOR CLIMATE WITH VENTILATION FROM VASCO

WHY MECHANICAL VENTILATION IS A MUST FOR EVERY HOME

Quality of living does not just depend on your choice of interior and the space available. Comfort and well-being also play a role. And if we say well-being, we mean air quality too. An insufficient supply of fresh air to your home may lead to moisture-related problems with the associated mould and bacteria.
This inevitably has an effect on your health – from a dry throat to breathing difficulties and allergies. With a mechanical ventilation system you can avoid these problems.

TRADITIONAL "PASSIVE" VENTILATION IS NOT ENOUGH

Healthy air quality combines two factors: the removal of used - i.e. polluted - air and the supply of fresh air with a high oxygen content. In this way, you avoid musty odours and give condensation and mildew no chance.
In old houses it is often enough to open a window regularly, because the air can also circulate through the cracks and crevices in the building shell. This is of course not the case with a well-insulated house. The used air cannot escape in a natural way here, making mechanical ventilation absolutely necessary.

CHOOSING THE D VENTILATION SYSTEM

Mechanical ventilation systems automatically replace used indoor air with clean outdoor air. Nowadays, mainly ventilation systems with heat recovery are used.

With the D ventilation system, the fresh outside air is supplied and the used indoor air discharged by means of two fans. So there are no ventilation grilles in walls or windows. The fresh outside air is sucked in through valves.

The big advantage of the D ventilation system is that the outside air is first brought to a comfortable temperature before it reaches the interior. This has a positive effect on the energy consumption in your home, as no cold air comes inside anymore.

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HIGH COMFORT, LOW CONSUMPTION, SUPERSILENT

COMFORTABLE INDOOR CLIMATE

Vasco ventilation systems ensure a healthy and comfortable indoor climate throughout the year. They boast an **electrostatic and antibacterial filter** which keeps dust and pollen away.
Vasco is well known for its **Silent Ventilation** solution. Both outside and inside noise is quieted by the unique ducting system and the internal acoustic insulation in the ventilation unit. In addition, the extremely efficient fans in the Vasco ventilation system ensure low energy consumption.

SUMMER NIGHT VENTILATION

The unique heat exchanger supplies fresh outdoor air at a **comfortable temperature** to the inside of the home, preventing a cold sensation.

Furthermore, the full bypass provides **summer night ventilation**, ensuring the home is optimally ventilated on hot summer nights.

Bypass closed = heat recovery

Bypass open = no heat recovery
Summer night ventilation

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LOW CONSUMPTION

New construction projects must meet increasingly stringent energy efficiency requirements. When it comes to ventilation systems, the performance of the ventilation unit plays a crucial role hereby.

During the development process, Vasco paid extra attention to the energy values. That's why Vasco ventilation units with heat recovery are at the top of the market. The following factors contribute to this:

- **Low consumption of fans**
- **High efficiency of the heat exchanger**
- **Automatic regulation for guaranteed air volume**
- **Full bypass for summer night ventilation**

SILENT VENTILATION

Vasco developed its ventilation systems in order to make it possible to ventilate as quietly as possible. Vasco ventilation units are among the quietest on the market. **Vasco ventilation units use the highest quality fans.**

n

Thanks to their EC motor, these centrifugal fans with large, curved blades are extremely efficient, quiet and very easy to maintain.
The automatic fan control ensures a quiet start-up and a metered increase in speed. The combination of the Vasco ventilation units with the Vasco EasyFlow air ducts guarantees the ultimate comfort of a super-silent ventilation system.

Heat exchanger

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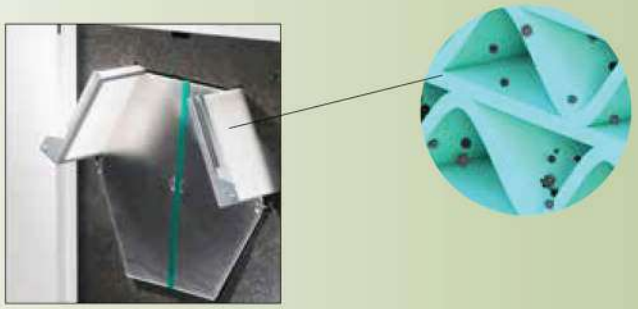
D SYSTEM

The fresh outside air is supplied and the used indoor air discharged fully mechanically, so there are no grilles in windows or walls. The fresh outside air flows through ventilation valves directly into living areas, bedrooms and offices. Likewise, the contaminated used indoor air disappears through valves. That is why the D system is also referred to as "equilibrium ventilation".

AIR QUALITY

Vasco's D system boast an electrostatic and antibacterial filter. Thus, the cleanest and freshest air flows into the living space, without any dust or pollen.



TEMPERATURE

Through heat recovery, the D system heats the supplied fresh air to a comfortable temperature. In addition, Vasco's D system also boasts a full bypass, which provides fresher summer night ventilation.

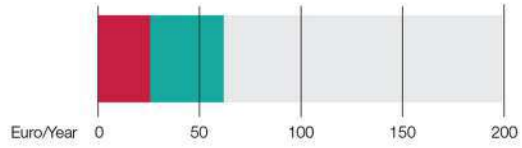
NOISE LEVEL

NOISE LEVEL FROM OUTSIDE
Fresh air comes in through the air ducts and passes through the noise-reducing ventilation unit. Then it is distributed through silent air ducts to the dry rooms.

NOISE LEVEL FROM INSIDE
Both the supply and the discharge process are mechanical, using two fans and two duct systems. The extremely quiet DC fans in combination with the internal acoustic insulation make this ventilation unit the market reference product.

CONSUMPTION

To keep the supply of fresh air and the discharge of used air in balance, the ventilation unit is equipped with two extremely economical fans. The consumption of these two fans, combined with the heat recovery feature, compensates significantly for the additional consumption of the supply air fan.



Heating costs to compensate for the heat losses with the D system
Power consumption of the ventilation unit with the D system

MAINTENANCE

The air filters in the D ventilation system are best cleaned with a vacuum cleaner every three to four months. Every 12 to 18 months the air filters need to be replaced.
You can do this yourself. Every eight years, the duct system must be checked and, if necessary, cleaned. Have this done by a specialist company.

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SYSTEM D

With a capacity of 150 to 500 m³/h, Vasco units are the ideal ventilation system with heat recovery for smaller to larger residential buildings.

The continuous supply of fresh air in combination with the discharge and heat recovery of heated air ensures a healthy indoor climate. The system is controlled via radio switch from any desired room.

These devices provide air suction in wet rooms, such as bathrooms, toilets, washrooms, storage rooms and kitchens. At the same time, fresh air is directed into the dry rooms, i.e. the living and bedrooms. Between the discharged and the supplied air, heat transfer takes place, making the apartment very energy efficient. The intelligent frost protection through periodic imbalance guarantees the perfect functioning of the ventilation system.

OVERVIEW OF D UNITS	D275EP II	X350	X500
House type	compact housing	medium-sized housing	large housing
Area (m²)	170-220	200-280	280-400
Number of bedrooms	2-3	3-5	5-6
Dimensions H x W x D (mm)	1183 x 592 x 300	724 x 764 x 560	
Weight (kg)	23	45	
Configurator (appartment connection)	left	reversible (right is standard)	
Energy label	B	A	
Energy label with 1 sensor	A	A	
Energy label with 2 sensors	A	A+	

All Vasco EP ventilation units are Passive House certified.

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D275EP II

THE VENTILATION UNIT FOR HOUSES AND APARTMENTS

This ventilation unit is ideal for living spaces with one living room, two or three bedrooms, an (open-plan) kitchen, one of two bathrooms and possibly a separate toilet. This ventilation unit can be mounted on a wall or in a suspended ceiling.

Standard model:

- Apartment connection on the top
- Housing made of very light EPP material (expanded polypropylene)
- Countercurrent heat exchanger made of PS plastic with an efficiency of >90%
- Radio switch
- Contact for fireplace / extractor hood
- Alarm contact
- Building automation
  - 3-position contacts for external control
  - 0-10 V signal for external control
- 2 x electrostatic air filters F6/G4 in a metal frame
- Air flow 240 m³/h at 150 Pa
- Efficiency according to DIBt : 93.2%
- Maximum power consumption = 168 W
- Full bypass
- Constant volume control

Incoming outside air
Intake of indoor air from wet rooms
Discharge of used indoor air
Fresh air / heat recovery

Optionally available with:

- On-demand control
- Preheating element

(Sensor = CO_2 sensor)

Closed ventilation unit

Access to air filter

Access to heat exchangers, fans and electronics

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X350 X500 NEW

THE VENTILATION UNIT FOR MEDIUM-SIZED TO LARGE HOUSES

The ventilation units are ideal for living spaces with one living room, two to five bedrooms, an (open-plan) kitchen, a laundry room, one or two bathrooms and possibly one or two separate toilets.

Incoming outside air
Intake of indoor air from wet rooms
Discharge of used indoor air
Fresh air / heat recovery

Standard model:

- Reversible apartment connection
- Painted metal housing
- Internal thermal and acoustic insulation
- Countercurrent heat exchanger made of PS plastic with an efficiency of >90%
- Radio switch
- Contact for fireplace / extractor hood
- Alarm contact
- Building automation
  - 3-position contacts for external control
  - 0-10 V signal for external control
- G4 air filter for discharge and F7 air filter for fresh air
- Full bypass
- Constant volume control

X350:

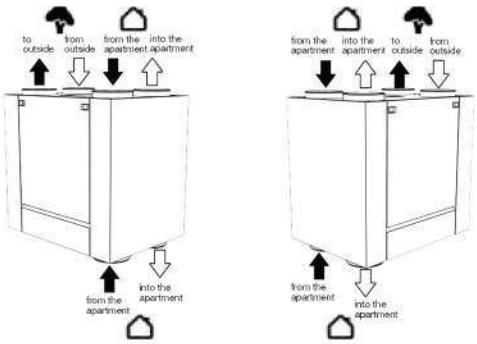
- Air flow 350 m³/h at 150 Pa
- Efficiency according to DIBt: 90.6%
- Maximum power consumption = 165 W

X500:

- Air flow 500 m³/h at 150 Pa
- Maximum power consumption = 333 W

Optionally available with:

- On-demand control
- Preheating element

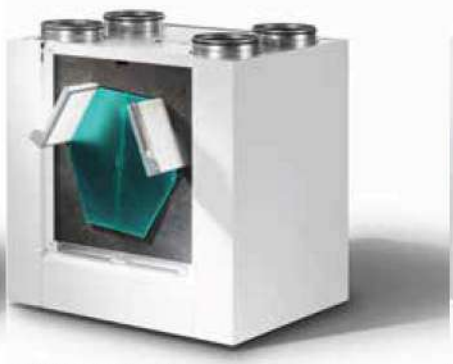


Apartment connection on the right side (standard)

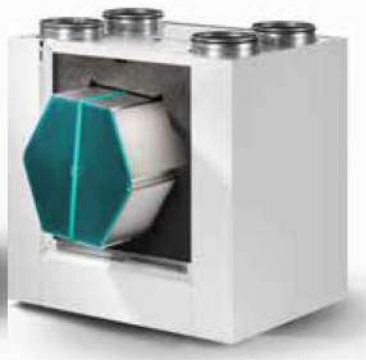
Apartment connection on the left side

Ideal for the renovation or replacement market: existing wired position switch can be maintained and new wireless radio switches (up to 20) can be added.

Closed ventilation unit



Access to air filter



Access to heat exchangers, fans and electronics

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CONTROLS		D275EP II	X350 / X500
	**3-position switch** • Wired operation • Wiring between switch and device • Includes surface-mounted housing		•	•
	**Wireless radio control** • Indication LED showing that the signal has been received • Timer function • Can be operated anywhere in the house with additional switches • Ideal for the renovation market • Battery life at least 15 years with normal use		•	•
	**On-demand control with humidity radio control** • With ECO and COMFORT positions that respond to changes in moisture content in your home • Battery: 2 x 1.5V AA		•	•
	**On-demand control with CO_2 radio control** • With ECO and COMFORT positions that regulate the CO_2 content in your home • Power voltage: 1 x 230 V + N		•	•
	**Timer module** • The Vasco timer module is a control unit with an LCD screen that allows you to operate the three positions of the ventilation unit. • Switching between these three ventilation positions can be done manually or based on a pre-programmed schedule.		•	•

Up to 20 radio switches can be connected to a ventilation unit.
Up to 3 ventilation units can be connected to a radio switch.

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EASYFLOW: A LOW-NOISE AIR DUCT SYSTEM

Vasco's EasyFlow air duct system, combined with Vasco ventilation, provides a unique, low-noise ventilation system.

A limited number of components and a well thought-out logistic concept ensure simple and trouble-free installation. The Vasco EasyFlow air ducts are made of durable HDPE. Assembly is fast, easy and flexible.

Each air valve has only one air duct, not several parallel air ducts, which makes cleaning easier.

EASYFLOW AIR DUCT SYSTEM

Flat and oval system

The Vasco EasyFlow air duct system is suitable for installation in suspended ceilings, insulating layers, insulating filling layers, lightweight filling layers and concrete floors. Vasco recommends that the EasyFlow air ducts should not be installed in flowing concrete layers.

No sawing or cutting required

The Vasco EasyFlow air ducts are pushed into each other so that the overall length from the terminal box to the valve connector is flexible. No sawing or cutting is required during installation.

Airtight connections

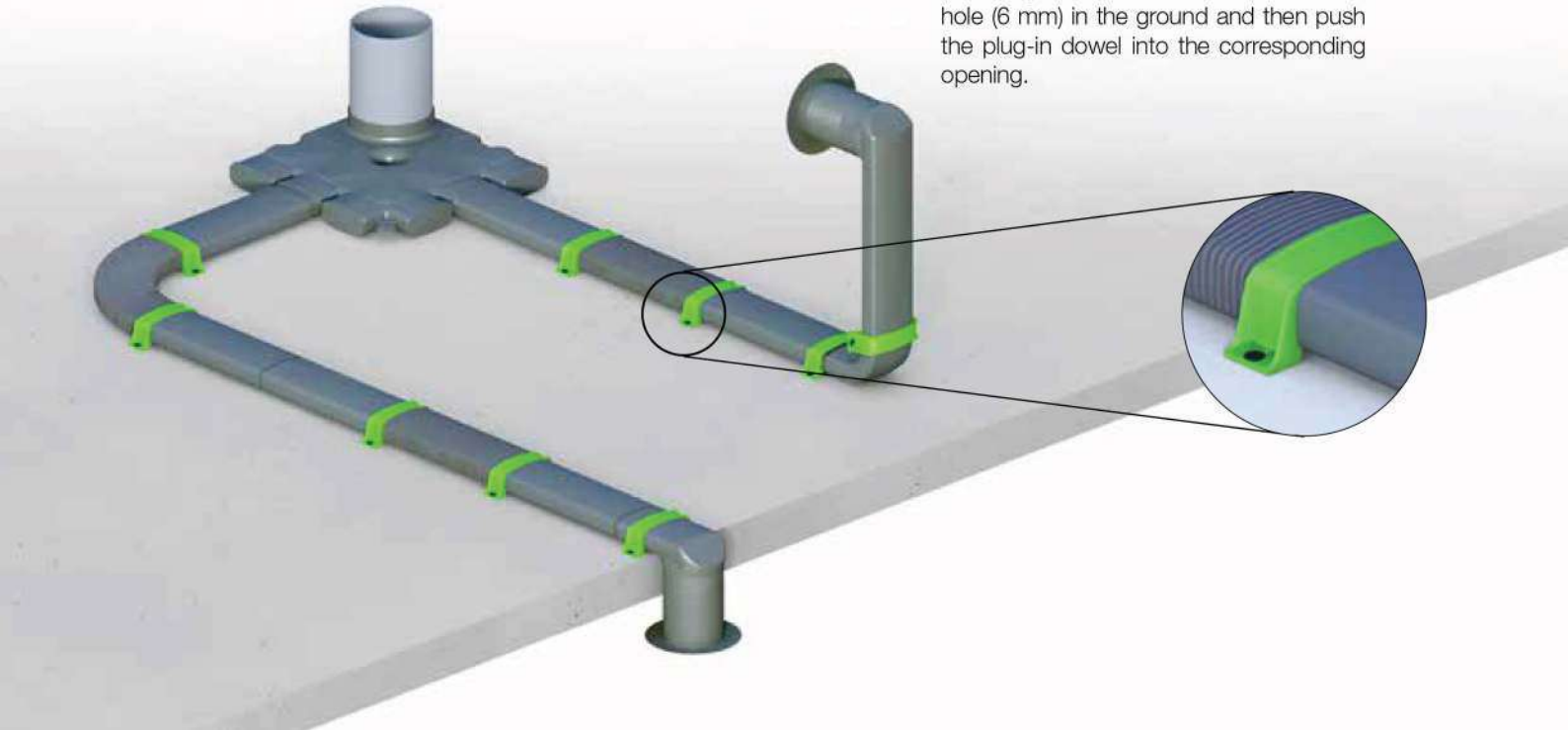
Thanks to the pre-assembled rubber seals, the Vasco EasyFlow air duct system offers certified air tightness of the highest class.

Mounting bracket

Vasco supplies standard mounting brackets for easy installation.

Plug-in dowels

Plug-in dowels make it easy to attach the mounting brackets. It is sufficient to drill a hole (6 mm) in the ground and then push the plug-in dowel into the corresponding opening.



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EASYFLOW COMPONENTS

Terminal box

The terminal box connects the ventilation unit with the EasyFlow air ducts.
The terminal box with vertical connection of Ø180 mm has a maximum of 6 connections.
The terminal box with horizontal connection of Ø150 mm has a maximum of 4 connections.
Thanks to the flexible mounting lips, the terminal boxes can be easily mounted.

Air duct

The air duct has a flexible segment, making it easy to install bows. One end has a rubber seal, while the other end has a matching edge. The air ducts are telescoped into one another and are airtight.

90° vertical bend

The 90° vertical bend is a special auxiliary piece to create a vertical bend in the EasyFlow air duct system. In combination with the valve connector, this can be easily connected to the wall valve.

Valve connector, right-angled and straight

A Ø125 mm adjustment valve is connected to the valve connector.

Transition piece

The transition pieces help to create a transition to Ø125 mm.

AIR DUCTS

Insulated air ducts

Vasco's insulated air ducts are suitable both for connecting the ventilation unit to the outside and for connecting to the Vasco EasyFlow air duct system.
These air ducts are made of high-quality, vapour-proof insulating foam with a hard, impact-resistant PE outer jacket.

In addition to a high thermal insulation value to avoid condensation, the duct system is also very noise-reducing.

Roof and wall ducts

The Vasco ventilation unit is connected to the outside through the roof or outside wall. The design of the components and connections ensures airtight and watertight assembly.

Please consult our ventilation price list for a detailed technical description of all components.

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AIR VALVES, THAT FIT INTO ANY INTERIOR

The Vasco Smiley adjustment valve has been designed for 125 mm diameter supply and discharge connections. With the Vasco Smiley adjustment valve, the required air flow can easily be adjusted manually depending on the calculated air flow. This setting is set once during commissioning.

The adjustment valve contains sound absorbing material, which also improves the acoustic comfort in the home.

The Vasco design air valves are designed exclusively for the Vasco Smiley adjustment valve. These air valves can be easily mounted and dismounted on the adjusting valve with a turning system and without any tools. The adjustment valve remains in the ceiling or wall and will not be adjusted.

The Vasco air valves are made of aluminium and are both pre-painted and powder-coated with a textured RAL9016 varnish. The valves can be painted over and can be colour-matched to any interior.

Smiley adjustment valve

Ceiling and wall, round

Ceiling, round

Ceiling, straight square

Ceiling and wall, curved square

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D UNITS		D275EP II			X350			X500		
Fan Position		1	2	3	1	2	3	1	2	3
Capacity	m³/h	130	185	240	190	270	350	270	385	500
Pressure	Pa	52	95	150	44	90	150	44	89	150
Power	W	37	76	140	45	92	162	80	176	336
Electricity	A	0.35	0.63	1.10	0.35	0.69	1.20	0.78	1.60	2.92
Voltage	V	230			230			230		
Max. power consumed	W	168			165			333		
Max. electricity	A	1.30			1.25			2.31		

Pa = Pascal / W = Watt / A = Ampère / V = Volt

ITEM	DESIGNATION	ITEM NO.	UNIT
1	**VENTILATION UNIT TYPE D WITH HEAT RECOVERY**		
D275EP II *	Ø 150 mm / ceiling-/wall-mounted model	11VE00015	1 Pc.
X350 *	Ø 180 mm / wall-mounted model	11VE00029	1 Pc.
X500 *	Ø 180 mm / wall-mounted model	11VE00028	1 Pc.

* *with radio switch*
E / X350 / X500 optionally expandable with electric preheating element
P Passive House compatible

D275EP II *D400EP II* *X350 / X500*

OPTIONS

Electric preheating element			
X350 / X500 self-regulating	Ø 180 mm / installation	11VE44130	1 Pc.
D275EP II	Ø 180 mm / L 150 mm	11VE44100	1 Pc.

Silencer	Ø 180 mm / L 600 mm	11VE43100	1 Pc.

3-postion switch (wired)		11VE20011	1 Pc.

Radio switch		11VE20012	1 Pc.
CO_2-radio switch		11VE20013	1 Pc.

Radio switch with humidity measurement		11VE20014	1 Pc.

Timer module (wired)		11VE20015	1 Pc.

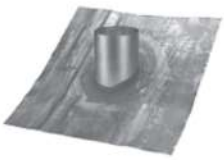
ITEM	DESIGNATION	ITEM NO.	UNIT

2 ROOF AND WALL DUCTS D275EP II / X350 / X500

Aluminium roof hood	Ø 160-125 mm / L 1000 mm	11VE42120	1 Pc.
	Ø 200-170 mm / L 1000 mm	11VE42110	1 Pc.

ROOF AND WALL DUCTS D275EP II / X350 / X500

Mounting brackets for roof hood	Ø 160 mm	11VE42202	1 Pc.
	Ø 200 mm	11VE42200	1 Pc.



Lead collar for roof hood	Ø 200 mm 18-22 gr.	11VE42217	1 Pc.
	Ø 200 mm 23-27 gr.	11VE42218	1 Pc.
	Ø 200 mm 28-32 gr.	11VE42219	1 Pc.
	Ø 200 mm 33-37 gr.	11VE42220	1 Pc.
	Ø 200 mm 38-42 gr.	11VE42221	1 Pc.
	Ø 200 mm 43-47 gr.	11VE42222	1 Pc.
	Ø 200 mm 48-52 gr.	11VE42223	1 Pc.

Adjustable lead collar for roof hood	Ø 160 mm 25-45 gr.	11VE42226	1 Pc.

Hinged cap for adjustable lead collar	Ø 160 mm	11VE42227	1 Pc.

Roof hood for flat roof	Ø 160 mm	11VE42242	1 Pc.
	Ø 200 mm	11VE42240	1 Pc.

Wall duct	Ø 160-125 mm	11VE42320	1 Pc.
	Ø 200-170 mm	11VE42310	1 Pc.
Basement wall duct	Ø 200 mm	11VE42360	1 Pc.

OVERVIEW OF AIR DUCTS		D275EP II / D400EP II	X350 / X500
External connection Type Roof and wall ducts Air ducts		 Insulated Ø 200-170 mm Ø 200-170 mm	 Insulated Ø 200-170 mm Ø 200-170 mm
Apartment connection Insulated air ducts* EasyFlow air duct system		 Ø 200-170 mm ✔	 Ø 200-170 mm ✔

* *Extra sound reducing*

ITEM	DESIGNATION	ITEM NO.	UNIT
REPLACEMENT FILTER			
Electrostatic filter set = 2 filters			
X350 / X500	495x186 mm green	11VE50358	1 Set
D275EP II	252x213 mm green	11VE50353	1 Set
D275EP II	252x213 mm white	11VE50354	1 Set
filter set = 2 x 1 filter			
X350 / X500	495x186x25 mm	11VE50359	1 Set

3 INSULATED AIR DUCTS D275EP II / X350 / X500

Air duct	Ø 160-125 mm / L 2000 mm	11VE41120	1 Pc.
	Ø 200-170 mm / L 2000 mm	11VE41110	1 Pc.

INSULATED AIR DUCTS D275EP II / X350 / X500

90° bend, divisible	Ø 160-125 mm / 90° - 2x45°	11VE41220	1 Pc.
	Ø 200-170 mm / 90° - 2x45°	11VE41210	1 Pc.

T-piece	Ø 160-125 mm	11VE41270	1 Pc.
	Ø 200-170 mm	11VE41260	1 Pc.

Coupling sleeve	Ø 160-160 mm	11VE41320	1 Pc.
	Ø 200-200 mm	11VE41310	1 Pc.

Connection sleeve, symmetrical			
D275EP II	Ø 200-150 mm	11VE41510	1 Pc.

	ITEM	DESIGNATION	ITEM NO.	UNIT
4	**EASYFLOW AIR DUCT SYSTEM**			
	**Air duct**			
	with 2 mounting brackets	L 1160 mm	11VE40100	6 Pc.
		L 1160 mm	11VE40110	24 Pc.
	90° vertikal bend			
	with mounting bracket		11VE40500	4 Pc.
	**Terminal box, 6 connections**	Ø 180 mm	11VE40300	2 Pc.
	**Terminal box, 4 connections**	Ø 150 mm	11VE40310	2 Pc.
	**Valve connector, right-angled**			
	with mounting bracket		11VE40400	2 Pc.
			11VE40410	5 Pc.
	**Valve connector, straight**			
	with mounting bracket		11VE40401	2 Pc.
			11VE40411	5 Pc.
	**EasyFlow transition piece**			
	with mounting bracket	Ø 125 mm	11VE40501	2 Pc.
			11VE40502	5 Pc.
	**Mounting bracket**		11VE40200	10 Pc.
	Plug-in dowels		11VE57001	100 Pc.
	**EasyFlow seal**		11VE40210	10 Pc.
	**Seal**	Ø 125 mm	11VE40211	10 Pc.
	**EasyFlow mounting spray**		11VE40600	1 Pc.
			11VE40601	12 Pc.

ITEM	DESIGNATION	ITEM NO.	UNIT
5 AIR VALVES			
 **Ceiling valve, round**			
with Smiley	Ø 230 mm, colour S600	11VE30150	1 Pc.
 **Ceiling or wall valve, round**			
with Smiley	Ø 230 mm, colour S600	11VE30250	1 Pc.
 **Ceiling valve, square**			
with Smiley	230x230 mm, colour S600	11VE30100	1 Pc.
 **Ceiling or wall valve, square**			
with Smiley	230x230 mm, colour S600	11VE30200	1 Pc.
 **Smiley adjustment valve**			
		11VE30300	1 Pc.
6 ACCESSORIES			
 **Galva sleeve**	Ø 150 mm	11VE43121	1 Pc.
	Ø 180 mm	11VE43120	1 Pc.
 **Galva reduction**	Ø 150-125 mm	11VE43152	1 Pc.
	Ø 180-125 mm	11VE43151	1 Pc.
	Ø 180-150 mm	11VE43150	1 Pc.

3-position switch
Switch that puts the ventilation unit into a low, medium of high ventilation position.

Fan blades that are bent backwards or curved
Larger fan blades, which allow for a better displacement of the air and thus ensure less resistance and less noise. These fans are less susceptible to pollution than standard fans.

Bypass
Diversion around the heat exchanger, causing no transfer of heat to take place. Is deployed during summer nights, if the indoor temperatures are warm and the outside temperatures is lower than the indoor temperature. See also 'Summer night ventilation'.

Constant volume control
Air flow control of the ventilation unit, which ensures a correctly supplied air flow in relation to the specified air flow.

Flow openings
Openings between the supply and discharge points of a ventilation system. If air is discharged from a bathroom, a ventilation grille is installed, e.g. in the bathroom door, in order to facilitate air supply.

EC motor of brushless DC motor
Very economical and low-noise DC motor with electronic rather than mechanical controls.

EPP or expandable polypropylene
Insulating plastic with the following main features: good thermal insulation, impact-resistant, low weight, closed cell structure with low water absorption, high thermal resistance, propellant free, environmentally friendly and 100% recyclable.

DIBt
German standard for measuring the efficiency of a ventilation unit with heat recovery.

Elektrostatic air filter
Electrostatically charged filter which filters very small dust particles, as well as pollen and bacteria. Very small particles are attracted by the statically charged air filter. This air filter captures up to 99% of the dust particles.

DC Fans
Fans that are operated by a DC motor rather than an AC motor. The main feature of a DC motor is that the rotation speed is very easy to regulate. This is not possible with AC motors. DC motors are also more economical and quieter than traditional AC motors.

HDPE or high-density polyethylene
Plastic with the following properties: hard, strong, very tough (almost unbreakable), no harmful substances when burned and 100% recyclable.

Smiley adjustment valve
Valve with regulation according to required calculated air flow.

Smart frost protection
Contact of cold and warm air can lead to condensation in the heat exchanger. In very cold outdoor conditions, this condensation can freeze. To prevent that too much condensation freezes, a periodic short defrost cycle is launched. The smart frost protection feature regulates this defrost cycle. During the defrost cycle, a periodic imbalance occurs.

Air filters
***G4** is a filter class according to the EN779 standard. This means that the filter catches 90% of the dust particles on average.*
***F7** is a filter class according to the EN779 standard. This fine dust filter stops 80% to 90% of 0.4 mm.*
***F6** is a filter class according to the EN779 standard. This fine dust filter stops 60% to 80% of dust particles with a size of at least 0.4 mm.*

Surface-mounted housing
Housing for mounting on the wall. A 3-position switch can be mounted in this housing.

Passive House certificate
Certificate issued by the Passive House Institute. The certificate is only issued if very stringent requirements are met.

PE or polyethylene
Plastic with the following properties: dust-resistant, water-resistant, propellant-free, environmentally friendly and 100% recyclable.

PET or polyethylene terephthalate
Plastic with the following main features: low weight, strong, tough (difficult to break) and 100% recyclable.

Terminal box
Collection point from which all air ducts lead separately to each air valve.

PS or polystyrene
Plastic with the following main features: low weight, closed cell structure with low water absorption, propellant-free, environmentally friendly and 100% recyclable.

Periodic imbalance
During the defrost cycle, the ventilation unit is imbalanced for a very short period of time. During this period, only the exhaust fan is running. This thaws any frost in the heat exchanger through warm indoor air. See also 'Smart frost protection'.

Centrifugal fans
Fans in which the fan blades are affixed at an aerodynamic angle in order to achieve high efficiency and low noise levels.

Radio switch
Switch that works with radio frequency. This switch works wirelessly.

Flowing concrete
Flowing concrete is sometimes used as a filler layer. Concrete is poured in a liquid state onto the underfloor.

Thermal insulation
To reduce the transfer of thermal energy (heat) between two sides of the material to a minimum.

Counterflow heat exchanger
Heat exchanger in which two air streams flow in the opposite direction of flow in relation to each other. Due to the countercurrent principle, this makes a much more complete transfer of the heat possible.

Filling layer
Layer in the ground where the electrical, sanitary and ventilation ducts are laid. This layer is levelled by applying insulating or non-insulating filling material.

On-demand control
Control based on an additional measurement in the room to be ventilated. CO_2 and moisture are the most commonly used on-demand control systems. The sensor that detects an increase in the CO_2 or moisture content in a room "asks" for an increase in air flow.

Heat exchanger
Part of the ventilation unit that transfers heat separated from the warmer air separated to the colder air. With a heat exchanger, it is possible to warm up cold fresh outside air using warm indoor air.

Summer night ventilation
A situation that occurs during summer nights and with no exchange of heat in the ventilation unit. In case of warmer indoor temperatures and lower outside temperatures, fresh air comes directly into the apartment. See also 'Bypass'.

Operating instructions, technical data, DIBt and Passive House certificates can be found on our website: www.vasco.eu

Photography: Studio PSG, design: Studio Segers

TECHNICAL APPROACH TO VENTILATION SYSTEM DESIGN

Partel's complimentary service provides a complete design, air flow rates, package list – all while adhering to Building Regulations, and without compromising interior aesthetics.

We hold the knowledge to build an optimised controlled ventilation system that is particularly suitable for all living spaces.

Our in-house technical design team is prepared to handle any project, large or small, residential or commercial, retrofit or new build.

Partel
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