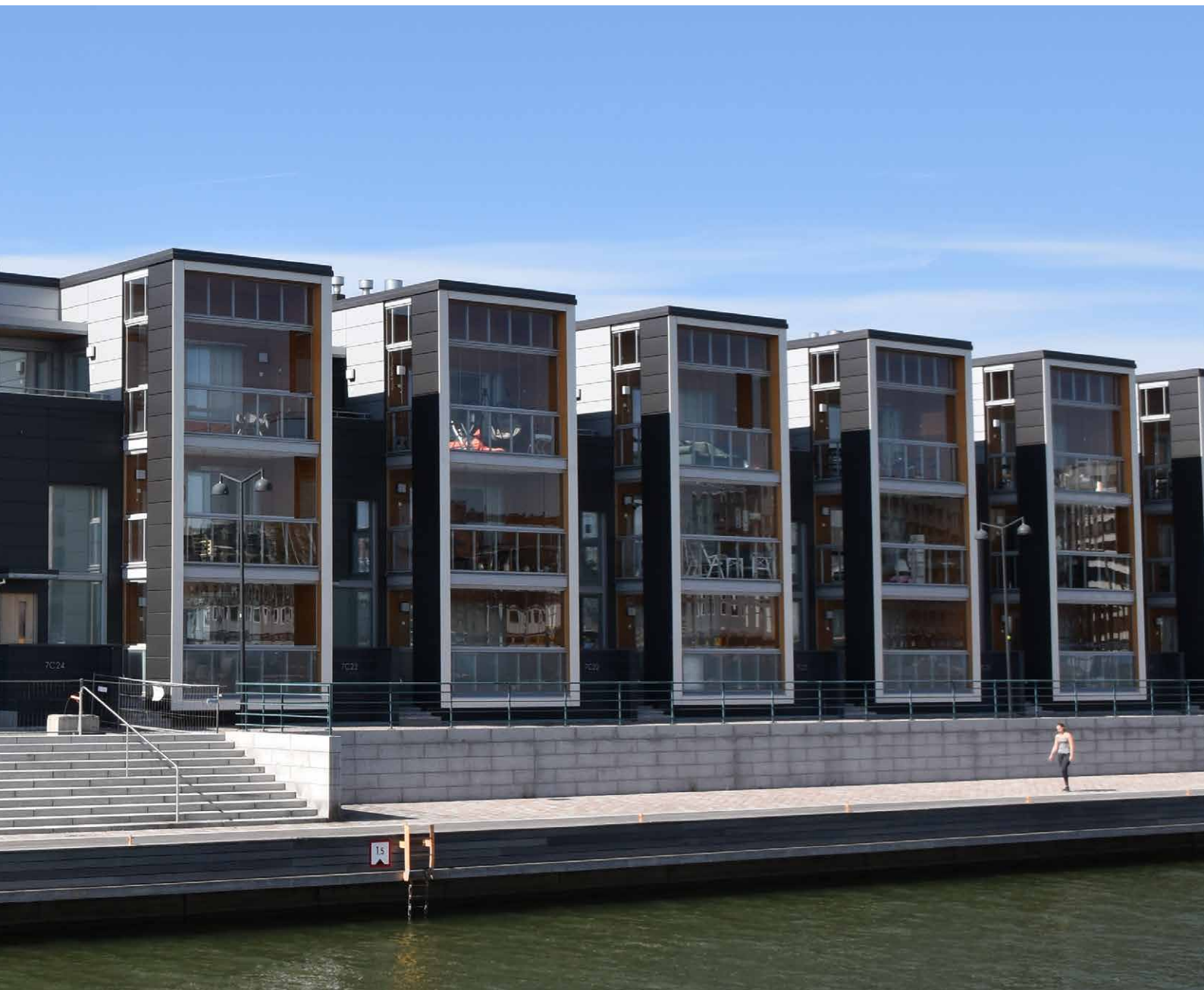


RESIDENTIAL VENTILATION

Vallox – the professional's choice



VALLOX
HOME *of* FRESH AIR

THE UNPARALLELLED FEATURES OF VALLOX VENTILATION

Vallox Oy is known as a manufacturer of durable, energy-efficient, and reliable ventilation units for apartments and, more recently, also operating premises.

The keys to Vallox's success are listening to customer needs, active investments in development work, and top-level expertise. From the customers' point of view, these are reflected in high quality products that make the indoor air fresh to breathe and ensure that properties remain structurally healthy in an energy-efficient manner.

Vallox ventilation units have been designed for the harsh Finnish climate, and, therefore, they also operate flawlessly in cold weather.

For the cell defrost, Vallox has developed a smart winter function. Defrosting only operates when needed and the defrost cycles are short. This way, heat recovery

operates at the maximum efficiency level for as much as possible.

The low electricity consumption and excellent heat recovery capacity of the ventilation system mean, at best, a very low need to use the actual heating system.

RELIABLE

Vallox products operate as designed, for which reason they rarely provide surprises during the procurement phase, at the design table, or during installation or use. Inconspicuousness is one of the best qualities of Vallox products and is the result of precise testing.

A UNIT FOR EVERY LOCATION



The wide selection of Vallox products include a suitable product for every location, ranging from one-bedroom apartments to operating premises, and from apartment buildings to detached houses. In addition to ventilation and air handling units, the selection includes air distribution systems and wall-mounted air blow-out devices.

CORRECT FEATURES



In the Vallox product development, special attention is paid to features that best serve the needs of the customers and the residents. For this reason, Vallox ventilation units contain, for example, automatics and cooling control, they can be installed on top of a washing tower and connected to house automation, and they can be controlled through a cloud service.

EASY SELECTION



Vallox provides tools for professionals that enable easier dimensioning of the ventilation system: Vallox MySelecta and Vallox MySelecta Pureo software. In addition to the technical information and material lists of the units, the software provides reliable calculation results.

RENOWNED AND FINNISH



The extensive experience in ventilation and investments in product development are visible in the high quality products and, above all, in the fact that the residents consider the indoor air to be of high quality. The Finnish Vallox products are designed and manufactured in Loimaa in Southwest Finland.

HIGH QUALITY SUPPORT



The Vallox technical support helps professionals all the way from the purchase to the maintenance. Assistance is available, for example, in matters related to the installation, setup, and warranty servicing of the unit.

TESTED FINNISH CUTTING-EDGE TECHNOLOGY

The thoroughly thought-out features of the Finnish ventilation units have been tested and researched. Special attention has been paid in the design to energy-efficiency and sound performance values.

Vallox invests in the development and maintenance of its products to ensure that they provide their users with the best possible indoor air quality. In product development, the wishes and needs of the customers are listened to, whether presented by the parties responsible for procurement or the installers, retailers, designers, or end users.

Vallox's own cold and acoustic laboratories that are used for measuring the air flows and acoustic properties of the units, as well as for testing the operation of the products even in challenging conditions, help in the product development work. As a result of carefully selected components and high-quality design, the Vallox ven-

tilation units operate in accordance with the specified performance values and are energy-efficient and quiet.

At the Vallox factory, products are manufactured efficiently in a modern environment. Every year, a total of 30,000 ventilation units are manufactured. The production is being developed constantly based on Lean business principles, with the aim of providing high quality, safe, and tested ventilation products. The quality of the products is assured after each work phase, and products are only packed and forwarded for sale when they have passed strict tests concerning electric safety, airtightness, and operation.



For Vallox, it is important to observe environmental aspects in its operations, as well as to develop, as a company, in a way that is reflected in high-quality products and high-level services.

The ISO 14001:2015 environmental management and the ISO 9001:2015 quality management certificates serve as proof of the high quality of the company's operations.

In addition, the Association for Finnish work has awarded Vallox's ventilation units and cooker hoods for apartments the Key Flag Symbol (Avainlippu) that indicates that the products are made in Finland.



Vallox invests in product development and listens carefully to the wishes of its customers. Tests implemented in the company's own acoustic laboratory help in product development work.

"With the measurements, we can easily test various attenuation materials and structures, and subsequently reduce the noise that comes through the unit envelope, as well as duct noises," says the Product Design Manager Petri Koivunen.

MYVALLOX – EASY VENTILATION CONTROL

MyVallox ventilation units make it easy to ensure fresh indoor air, which is adjusted based on the lifestyle and the needs of the residents. The ventilation system is smart: it operates automatically and energy-efficiently.

Easy mode control and diverse automatics

The adjustment of the efficiency of the MyVallox ventilation units is based on easy mode control. At home, Away, or Boost. The apartment-specific ventilation system is at its best when little attention needs to be paid to its use.

In MyVallox units, automatics will take care of the need-based boosting of ventilation. As standard features, the units have an integrated humidity and carbon dioxide sensor, the option to connect a VOC sensor to the system, and the option to lead information of the opening of the damper from the cooker hood to the unit, so that ventilation is boosted during cooking.

Thanks to the sensors, excessive humidity is removed quickly. This keeps the structures of the building

healthy, even though the residents would not consider this to be a worry.

The MyVallox ventilation units are equipped with a partial heat recovery bypass, which keeps the supply air temperature even. This is beneficial especially in the spring and autumn, when the outdoor temperature varies throughout the day and there is little need to heat the supply air. In the summer, MV units bypass the heat recovery cell automatically and use cooling.

Connect and control through house automation

MyVallox ventilation units can be connected to house automation, e.g., through a Modbus or a KNX bus. The units can be connected to Modbus without a separate adapter. MV units can also be connected to the telecommunications network of the building. In such a

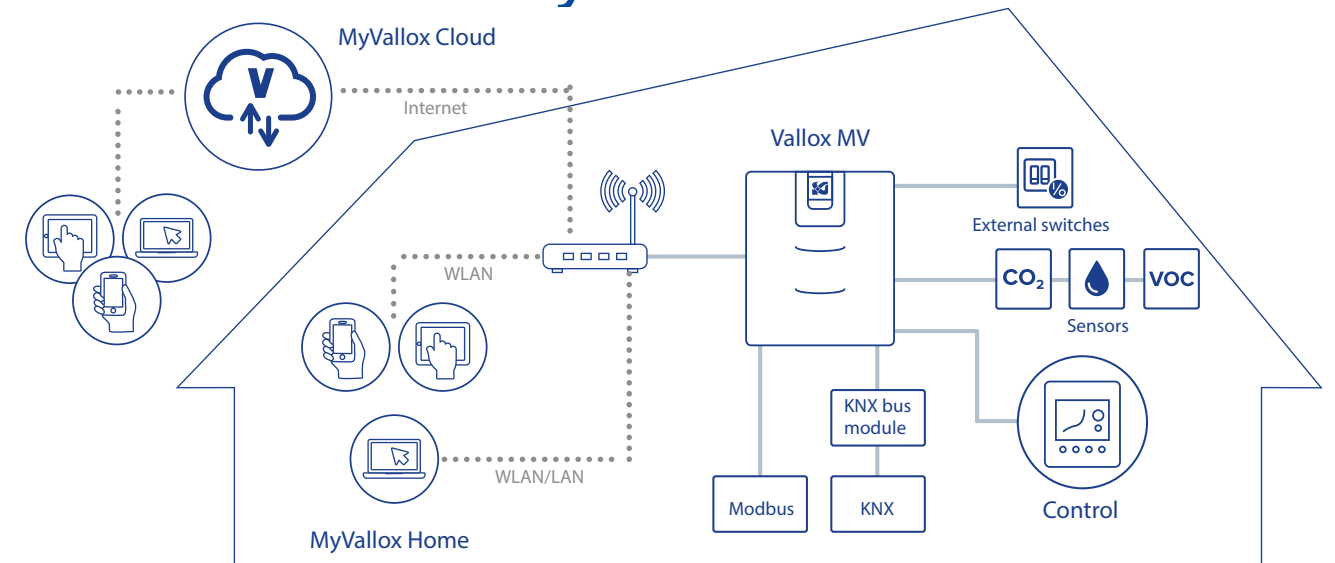
case, all functions of the unit can be controlled and monitored via a computer, a mobile device, or the Internet.

The units can also be controlled directly through analog (0-10 V DC) or digital outlets (0/24 V). Error information and maintenance reminders can be sent from the relay directly to the service centre, for example.

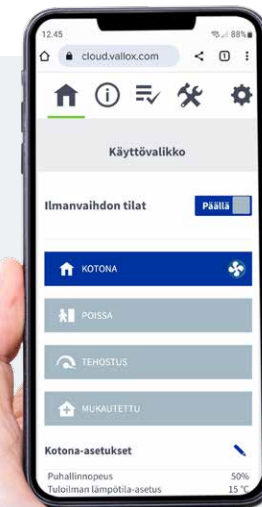
A unit connected to the cloud service does not need a control panel.

Traditionally, Vallox ventilation units have been installed with a control panel. However, a control panel is not compulsory for MyVallox units, as it can be controlled by using a free cloud service from any terminal device that is connected to the Internet; when a home network is used, not even an Internet connection is required.

MyVALLOX



STANDARD FEATURES



ONLINE CONTROL

The free browser-based MyVallox Cloud service enables the user to control ventilation anytime and anywhere when the unit has been connected to the Internet. The service also provides statistics on the status of the ventilation. In problem situations, Vallox's technical support can examine the functions of registered units remotely once it has been granted permission to do so. The software of MyVallox units that have been connected to the cloud service is updated automatically.

The unit can also be connected to the home network, allowing it to be controlled through a terminal device that

is connected to the home network via MyVallox Home service.

CARBON DIOXIDE SENSOR

The integrated carbon dioxide sensor boosts ventilation automatically when the carbon dioxide level increases. The air remains fresh, even with many people present in the apartment.

HUMIDITY SENSOR

The integrated humidity sensor boosts ventilation based on the need, e.g., after a sauna or shower. The sensor also reduces ventilation when excess moisture has been removed.

CONTROL PANEL

Wall-mounted control panels suited for MyVallox units: **MyVallox Control** and **MyVallox Touch** equipped with a touch screen.

ADDITIONAL CONNECTIONS

For instance, a separate fireplace switch, an At home/Away switch installed next to the front door, or a cooker hood that enables adjusting the efficiency of ventilation can be connected to the unit.

HOUSE AUTOMATION

MyVallox units can be directly connected to the Modbus bus. KNX can be used with a bus adapter.

EXTERNAL CO₂ and RH% SENSORS

Optional wall-mountable external sensors can be connected to MyVallox units. In larger apartments in particular, it may be useful to install bedroom-specific carbon dioxide sensors as well as humidity sensors in wet areas, so that the automatic boost will work faster and more efficiently.

EXTERNAL VOC SENSOR

The MyVallox VOC sensor monitors the indoor air quality, observing organic impurities that are emitted, e.g., from people, detergents, cooking, or building and interior decoration materials, and boosts ventilation based on the need when the levels increase. The sensor is available as an accessory to all MyVallox units.

Read more at:
www.vallox.com/en/why-choose-vallox-solutions/myvallox-easy-ventilation-control/



SIMPLE AND RELIABLE APARTMENT VENTILATION

The apartment-specific Vallox ventilation units are ready for use. They include the automatics of the desired level and connections to other elements of the house automation system.

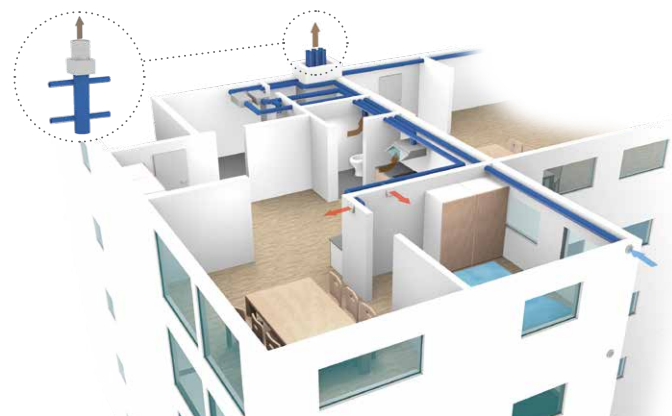
Energy savings and satisfied residents

Apartment-specific ventilation enables adjusting the ventilation based on the need and saving energy. People have different lifestyles, for which reason the same kind of ventilation does not meet everyone's needs. The number of persons living in a same sized apartment can vary greatly. A less-efficient ventilation system is sufficient in single person households as compared to large families. The residents may also be at home at different times of the day. The efficiency of the ventilation can be decreased when the apartment is empty and only boosted based on the need.

Elderly people, in particular, can be very sensitive to drafts. On the other hand, excessive heat or a too high indoor air temperature is often a problem in well-insulated modern apartment buildings. In a too hot apartment, the residents consider the indoor air

quality to be poor, even when the real problem is the temperature. Due to the above reasons, it is important that the residents can adjust the efficiency of the ventilation and the temperature of the supply air.

When the residents can adjust the efficiency of ventilation based on their own preferences, or the ventilation is adjusted automatically based on the need, the comfort of living is enhanced. In addition, significant volumes of heating energy and electricity can be saved. As the relative humidity of air increases due to showering or drying clothes, for example, the ventilation must be boosted. On the other hand, the efficiency of the ventilation can be lowered when the house is empty, for example. When the efficiency is halved, the energy consumption of ventilation drops by more than half. This makes it worthwhile to adjust the ventilation based on the need.



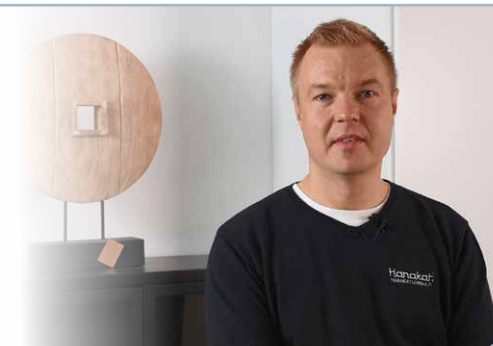
Outdoor air is usually taken in through an exterior wall near the unit, but there are various options for the extraction of the exhaust air. A separate exhaust air duct is led from each ventilation unit onto the roof. Alternatively, the exhaust air is led into a shared underpressurised duct.



Exhaust air can also often be blown outside through the wall of the apartment. The parts of the Vallox Out/in Vario wall-mounted air blow-out and intake device can be installed next to each other or on different sides of the building.



Watch a video of an apartment building
www.vallox.com/en/reference/loimaan-helmi-has-fresh-indoor-air/



Sensors, such as humidity, carbon dioxide and VOC sensors, can be harnessed to monitor the quality of the indoor air and to boost the ventilation based on the need. They also ensure that the efficiency of the ventilation is lowered when there is no longer need for boosting. Because the ventilation must never be turned off completely in apartments, needs-based ventilation is the most optimal solution both in terms of energy use and the comfort of living.

Controlling the indoor climate of the apartment

In a building that is equipped with apartment-specific ventilation units, the ventilation does not change when the outdoor temperature varies, as can happen in centralised ventilation systems that cover the entire house or staircase. When there is no duct connection between apartments, the so-called smokestack phenomenon cannot create overpressure in the upper floor apartments through the ventilation ducts in winter. The air extraction from the lower floor does not increase in below zero weather either. This way, no increasing underpressure, air leaks from the structures, or leaks are created.

Noises, smells, or possible combustion gases cannot travel via the ventilation system from one apartment to another, because there is no duct connection between the apartments.

Apartment-specific ventilation is suited to new and old buildings alike

The starting points of the apartment-specific ventilation system are simple, and it is also easy to adjust and quick to take into use. The speed of the DC fans can be adjusted steplessly, and the supply and extract air ratio can be adjusted independently. The system can be taken into use one apartment at a time as the ventilation installations progress; there is no need to wait for all the apartments to be complete.

A decentralised ventilation system is fire safe, also in older buildings. If all ducts are located in an individual apartment, no adjustment or fire dampers that require servicing or monitoring and whose operational faults are not always even noticeable will need to be installed in the ducts.



USEFUL PROGRAMS FOR PROFESSIONALS

Up-to-date technical specifications needed for apartment ventilation system design and the marketing of products can be found in the browser-based dimensioning software Vallox MySelecta. MyVallox Update Tool makes updating MyVallox ventilation units easier and faster.

VALLOX MySelecta

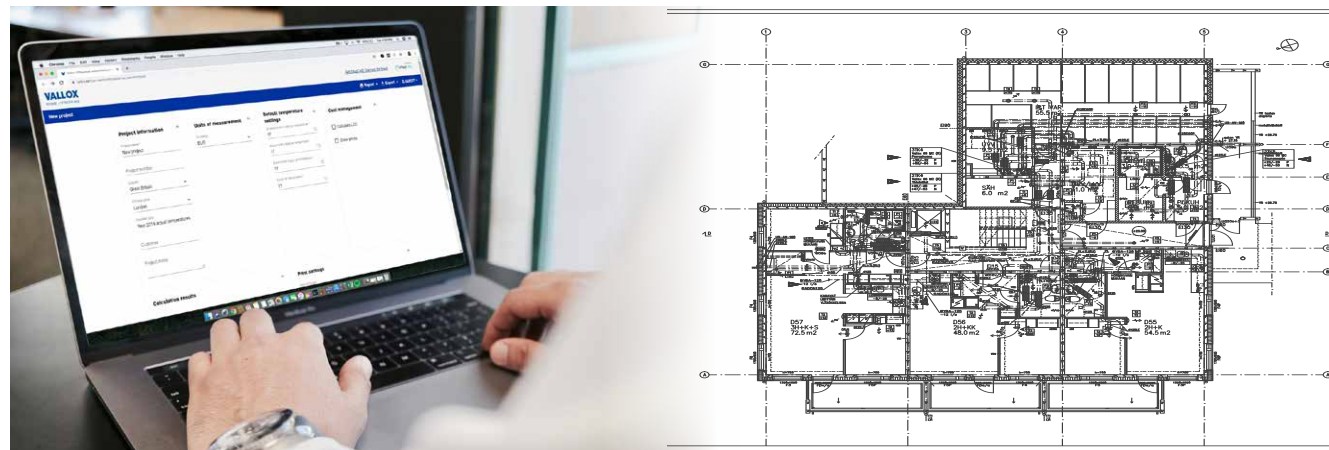
- Choosing a suitable Vallox ventilation unit.
- A two-way BIM integration with MagiCAD for AutoCAD and MagiCAD for Revit software.
- Own projects can be saved by using configured products.
- Diverse energy calculation, also for various climate zones.
- The annual efficiency and SFP calculation for ventilation units and SFP calculation for the entire system.
- Also includes sound and life cycle calculation (LCC).
- A printable material list with item and HVAC numbers.

www.vallox.com/en/pro/hvac-design/product-selection-and-calculation-software/

MyVALLOX UPDATE TOOL

- Easy and quick update of the software version of a MyVallox ventilation unit.
- With the program, the unit can be easily found in the local network.
- Quick opening of the MyVallox Home user interface to control the unit and view data.
- Makes starting up the ventilation unit easier, particularly if the unit does not have a control panel installed.

www.vallox.com/en/support-and-instructions/software-update/



CONSTANT FLOW FANS ENSURE A CONTINUOUSLY BALANCED AIR FLOW

A ventilation unit with constant flow fans can compensate for pressure differences, keeping air flows constant in any circumstances.

Manage pressure differences with constant flow fans

The pressure difference caused by factors such as winds and temperature differences increases with the height of the building. Pressure changes in the apartment can cause various problems for the residents and the building. Such problems may include the misting of windows and the migration of smells between apartments. An uncontrolled pressure difference may also result in impurities entering the indoor air and moisture accumulating in the structures of the building.

The constant flow fans are equipped with a vane anemometer that measures the air flow and can compensate for quite high pressure differences. The air flows remain constant, regardless of changes in pressure losses caused by wind, dirty filters or valves, the condensation or freezing of the HR cell and the defrost cycles.

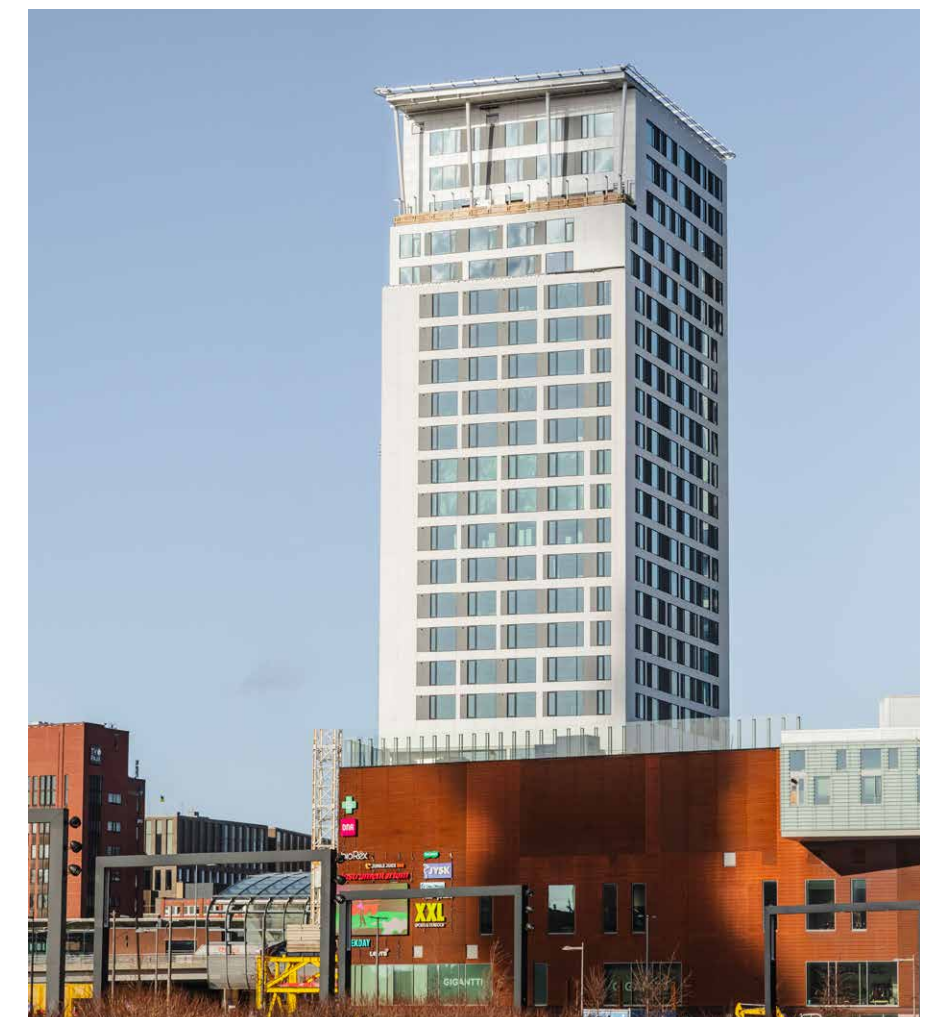
A ventilation unit equipped with a constant flow fan enables precise compensation for separate extractions.

A ventilation unit equipped with constant flow fans is an excellent solution for an apartment ventilation, particularly in high buildings. Despite windy conditions, constant flow fans always keep airflows as they were originally set.

Quick to install and start up

A ventilation unit equipped with constant flow fans is easy to install and start up. With constant flow fans, the traditional fan curves become straight lines in practice, which makes it easy to define the desired air flows from the graph. This makes startup easier and saves the installer's time and money.

When the constant flow feature is integrated into the fan of the unit, no separate installation work on the duct system is needed. When the anemometer measuring the air flow is in the fan, there is no fear of blocked measuring tubes either.



A VENTILATION UNIT WITH A LOW DESIGN, QUIETER THAN A WHISPER

The designing of the Vallox 99 MV ventilation unit was based on customers' needs. In addition to the basic model, the CF model was developed particularly for apartments in high buildings. It is equipped with constant flow fans that can compensate for pressure differences.

The low noise levels of the basic model Vallox 99 MV and the Vallox 99 MV CF model equipped with constant flow fans are enabled by the air technical design work by Vallox. The careful optimisation of air flows, carefully selected components, and excellent soundproofing of the frame ensure the tested* quietness of the Vallox 99 MV units.

With Vallox 99 MV units, the sound pressure level remains below 38 dB even when the air flow is above 70 l/s (LpA dB(A) 10m²). For this reason, it can be installed in larger apartments than other ventilation units with similar air volumes. Being able to install the same ventilation unit in all the apartments of a building, regardless of their size, enables easier ventilation design,

procurement, maintenance and user instruction.

The designing of the unit was based on customers' needs. The result is a unit with the lowest structure in the market, and is easy to install on top of a washing tower, for instance. When installed in a narrow space, there is no room for extra sound-absorbing structures. In the case of the Vallox 99 MV, there is no need for them either.

The Vallox 99 MV units have all the familiar features of MyVallox units, and they are very energy-efficient: the annual efficiency of heat recovery is 76%. In addition, thanks to the constant flow fans, the CF model always keeps airflows constant.

MyVALLOX 99 MV CF



A low and quiet ventilation unit can be placed on top of a laundry tower in the bathroom, for instance.

* Sound pressure levels have been tested in accordance with the ISO 5135:1997 and ISO 3741:2010 standards.

Air flow control grilles even out the air flow and reduce its tonal noise especially at low frequencies.

The exact design of air flows inside the unit reduces the pressure loss and the noise level.

The soundproofing of the frame enhances the quietness of the ventilation.



In the CF model, the unit's constant flow fans compensate for pressure differences, keeping airflows constant.

All the modern features of the MyVallox ventilation units: integrated RH and CO₂ sensors and diverse control options.

The efficient heat recovery with partial bypass and the EC fans that consume very little energy enable energy-efficient ventilation.

ENERGY-EFFICIENT AND MODERN REFURBISHMENT SOLUTION

The Vallox 125 MV ventilation unit will revolutionise ventilation refurbishment. Its different models can quickly and easily replace dozens of old ventilation unit models to achieve energy-efficient ventilation with modern features.

One unit, many different models

The new Vallox 125 MV ventilation unit comes in several models, with the duct outlet being the only difference between them. The duct outlets of the models are located similarly as in the old ventilation unit models or they require only minor changes to the ducts.

Different models of Vallox 125 MV ventilation units can replace models like the ones below directly, without any changes to the ducts: the Vallox MUH Ilmava, Vallox Digit, Vallox 75, Vallox 95 and Vallox 121 models and, for instance, Ilto 440 and Onnline 130 units made by other manufactures.

When the duct outlets of the new ventilation unit are similar to those of the old unit, the ventilation system can easily, quickly and cost-effectively be upgraded to a more energy-efficient modern solution.

Dozens of other old ventilation model units can be replaced with Vallox 125 MV with only minor changes to the ducts.

An energy-efficient unit with modern features

For those replacing an old unit, the features of Vallox 125 MV meet today's requirements perfectly. With the current EC motors, the electricity consumption of the energy-efficient Vallox 125 MV fans is very low. The advanced defrosting automation ensures that Vallox 125 MV will not stop the supply air fan even in the coldest weather. The heat recovery efficiency of the unit's cross-counter flow cell is excellent, even close to 80%.

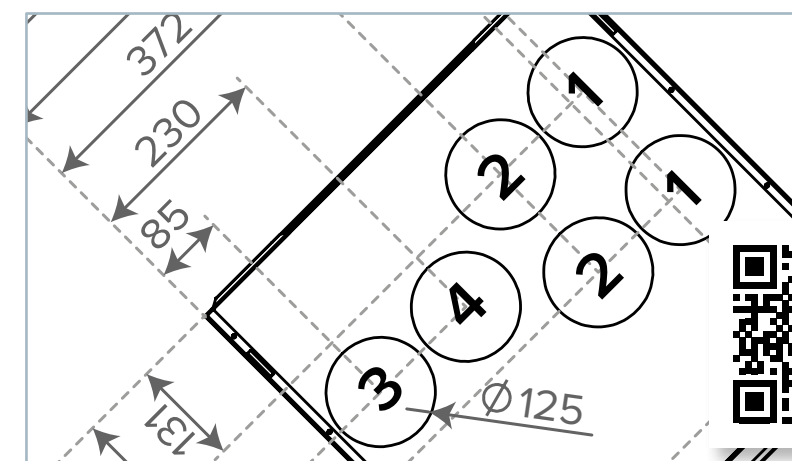
Vallox 125 MV includes all the features of MyVallox units, such as integrated carbon dioxide and humidity sensors and multiple control options.

MyVALLOX 125 MV

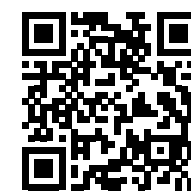
The unit is easy to replace

The Vallox 125 MV ventilation unit is delivered with a wall mounting plate for installation. Optional ceiling mounting plates and insulated attic floor penetration plates (excluding model B) are available for the Vallox 125 MV unit.

The ceiling mounting plate helps to place the ducts exactly in the right places before installing the unit, especially if the locations of ducts are even slightly misaligned with the duct outlets of the new unit. If the ceiling mounting plate can be suspended from the ceiling structures, it is easy to mount the heavy unit on the ceiling mounting plate that is in place.



Learn about the replacement compatibility of the models and watch a video on the installation of the unit: www.vallox.com/en/vallox-125-mv/

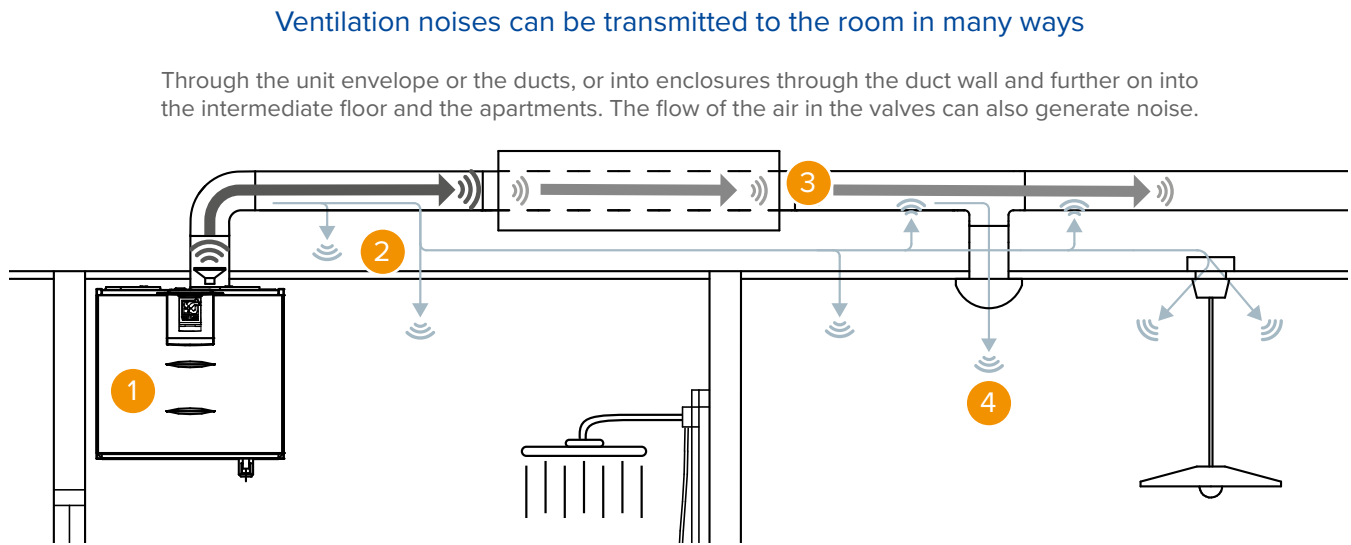


CONTROLLING NOISE THROUGH CORRECT DIMENSIONING AND LOCATION

Inside apartments, the sound level of ventilation has a huge impact on the comfort of living and, subsequently, the satisfaction of the residents with their apartment. The starting points of a quiet ventilation system include the correct dimensioning and sufficient sound-dampening of the ventilation unit and the ducts. The structures of the apartment affect the sound level.

The sound level permitted by regulations is often higher than the sound level that is considered to be disturbing by persons in the room. At night, people can consider even low but varying sounds to be unpleasant in the bedroom.

The noise generated by ventilation becomes louder when its efficiency increases. However, this noise is considered to be more acceptable, when it can be adjusted by the resident.



- 1 Through the unit envelope** The noise that comes through the unit envelope can be affected by selecting a high-quality and quiet ventilation unit that has a sufficiently high air flow capacity. This ensures that there will be no need to operate the unit at unnecessarily high fan speeds that increase the sound level.

Because the noise that it transmitted through the envelope is heard in the premises where the unit is located, the location of the ventilation unit is key. A separate technical space or, e.g., a house technology cabinet located in a staircase is always the best solution but is not always an option. A ventilation unit must never be located in connection to living spaces or bedrooms.

The hard surfaces of a small bathroom can also increase the sound level above

the values specified by the manufacturer, whilst in larger sound-dampening rooms the sound level remains lower.

2 Through the ducts Of the noise sources, the fan noise that is transmitted into the rooms through the ducts is the easiest to control. It can be almost completely eliminated by installing high-quality silencers in the ducts.

3 Through the envelope of the ducts Noise is transmitted into the surroundings of the ventilation unit also through the walls of the supply and exhaust air ducts that leave from the unit. The sound can be conducted into the rooms through dropped ceilings and enclosures. Open structures that extend from the technical space or the bathroom into the bedroom ceiling will provide a route for sound waves. The

ventilation unit must never be mounted on a hollow wall that will amplify the noise or on the other side of a bedroom wall.

4 The air flow in the valves can generate noise The ventilation valve dampens the noise that comes from the duct, but can also cause noise generated by the air flow. The correct adjustment of the air flows is key: the aim must be to achieve as low a fan speed as possible so that the valves can be left sufficiently wide open. The duct network must be designed so that the pressure between all valves is as similar as possible and the ducts are as short as possible. This ensures that the ventilation system operates quietly.

SMART DEFROSTING AUTOMATICS SAVE ENERGY

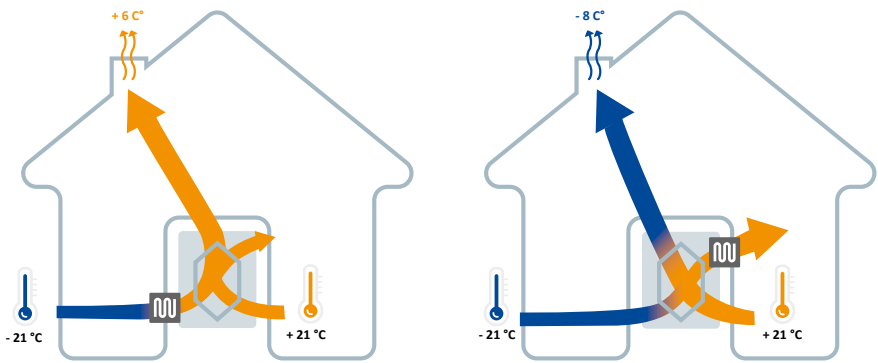
There are several different methods for defrosting the heat exchanger. One of the most popular methods used to be to preheat the supply air. However, because the heat exchanger does not know where the heat is coming from, up to 65% of the preheated energy can be transmitted into the extract air. In other words, a 1000 W pre-heater can transmit 650 W of the energy it has heated into the air that is blown directly outdoors.

Another defrosting method is to stop the supply air fan for the duration of the defrosting. In new airtight buildings, this can lead to problems related to the acquisition of replacement air.

In MyVallox ventilation units, defrosting is implemented smartly by using the thermal energy of the extract air, which is recovered by bypassing the supply air side of the heat exchanger and by heating the supply air with a preheater during the defrosting cycle. When the air is heated after it has passed through the heat recovery cell, 100% of the energy of the preheater is transmit-

ted into the supply air that is blown into the apartment, and no energy is wasted.

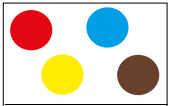
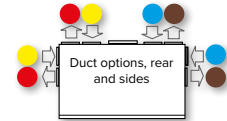
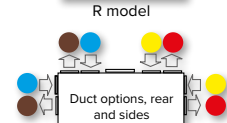
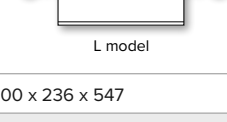
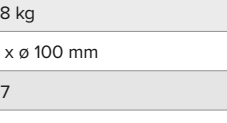
There is no preheating resistor in MyVallox ventilation units that are equipped with the need-based winter function. The Vallox winter function prevents unnecessary defrosting cycles, so that a better annual efficiency is achieved.



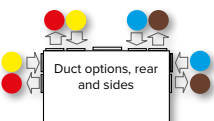
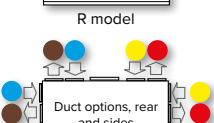
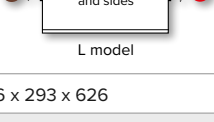
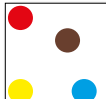
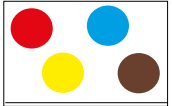
The preheating resistor heats the outdoor air before it passes through the heat recovery cell. Up to 65% of the heat generated by preheating can be lost in the extract air.

The Vallox need-based defrosting is only activated based on the need.

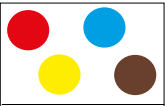
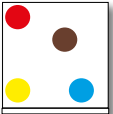
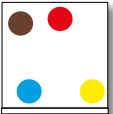
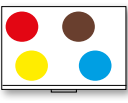
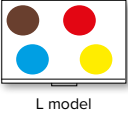
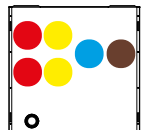


TECHNICAL SPECIFICATIONS			
	Vallox 51 MV	Vallox 51K MV	Vallox TSK Multi 50 MV
All models have energy-saving EC fans. BIM models of Vallox products can be downloaded for free for Revit and AutoCAD, and also MagiCAD and CADS are supported. ● = Standard delivery ▲ = Accessory			
Indicative maximum floor area of the apartment ¹	75 m ²	75 m ²	80 m ²
● = supply air ● = extract air ● = outdoor air ● = exhaust air Explanation of the symbols  front side Dimensions of the units and duct outlets can be found in the technical instructions for each type of unit.	R model  L model 	R model  L model 	Duct options, rear and sides  R model  Duct options, rear and sides  L model 
Dimensions (w x h x d) without a siphon	598 x 668 x 349	598 x 802 x 349	900 x 236 x 547
Weight	45 kg	51 kg	48 kg
Duct outlets	4 x ø 125 mm	4 x ø 125 mm	8 x ø 100 mm
The maximum extract airflow ² (dm ³ / s / 100 Pa)	51	51	57
The maximum supply airflow ² (dm ³ / s / 100 Pa)	46	46	49
Specific energy consumption (SEC) in a cold climate	A+	A+	A+
Specific energy consumption (SEC) in an average climate	A	A	A
Annual efficiency of heat recovery from extract air*	77%	77%	79%
Specific fan power* of the ventilation unit (kW/m ³ /s)	1.04	1.04	1.3
Type of heat exchanger	Cross-counter flow	Cross-counter flow	Cross-counter flow
HR cell bypass	Automatic	Automatic	Automatic
Post-heating	Electrical resistor	Electrical resistor	Electrical resistor
Control options			
Control methods	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC
Compatible cooker hood	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Integrated Vallox Captura cooker hood	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA
Defrosting			
Defrosting automatics	●	●	●
HR cell bypass	●	●	●
Stopping the supply fan			
Accessories			
Ceiling mounting plate	▲		
Attic floor penetration plate			
Carbon dioxide sensor	● ▲	● ▲	● ▲
Humidity sensor	● ▲	● ▲	● ▲
VOC sensor	▲	▲	▲
Fireplace switch function	●	●	●

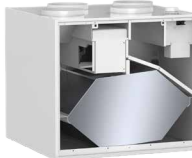
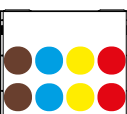
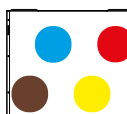
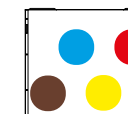
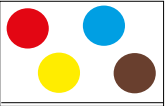
1) The floor areas provided are indicative. The dimensioning must be based on a ventilation plan designed by an experienced professional.

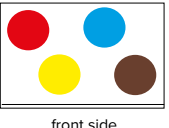
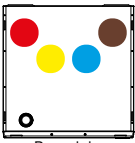
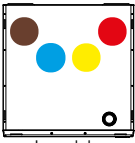
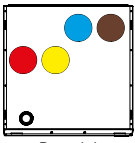
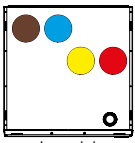
TECHNICAL SPECIFICATIONS			
Vallox TSK Multi 80 MV	Vallox 096 MV	Vallox 99 MV	
			All models have energy-saving EC fans. BIM models of Vallox products can be downloaded for free for Revit and AutoCAD, and also MagiCAD and CADS are supported. ● = Standard delivery ▲ = Accessory
120 m ²	140 m ²	150 m ²	Indicative maximum floor area of the apartment ¹
Duct options, rear and sides  R model  L model 	R model  L model 	R model  L model 	● = supply air ● = extract air ● = outdoor air ● = exhaust air Explanation of the symbols  front side Dimensions of the units and duct outlets can be found in the technical instructions for each type of unit.
1026 x 293 x 626	600 x 545 x 428	598 x 442 x 625	Dimensions (w x h x d) without a siphon
62 kg	47 kg	62 kg	Weight
8 x ø 125 mm	4 x ø 125 mm	4 x ø 125 mm	Duct outlets
93	86	99	The maximum extract airflow ² (dm ³ / s / 100 Pa)
76	81	92	The maximum supply airflow ² (dm ³ / s / 100 Pa)
A+	A+	A+	Specific energy consumption (SEC) in a cold climate
A	A	A	Specific energy consumption (SEC) in an average climate
80%	77%	76%	Annual efficiency of heat recovery from extract air*
1.26	1.48	1.12	Specific fan power* of the ventilation unit (kW/m ³ /s)
Cross-counter flow	Cross-counter flow	Cross-counter flow	Type of heat exchanger
Automatic	Automatic	Automatic	HR cell bypass
Electrical resistor	Electrical resistor	Electrical resistor	Post-heating
Control options			
Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control methods
Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Compatible cooker hood
Defrosting			
●	●	●	Defrosting automatics
●	●	●	HR cell bypass
			Stopping the supply fan
Accessories			
	▲	▲	Ceiling mounting plate
	▲	▲	Attic floor penetration plate
● ▲	● ▲	● ▲	Humidity sensor
● ▲	● ▲	● ▲	Carbon dioxide sensor
▲	▲	▲	VOC sensor
●	●	●	Fireplace switch function

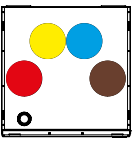
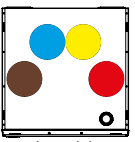
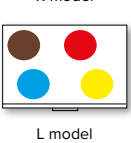
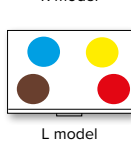
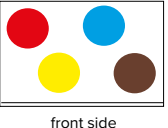
2) The actual airflow during operation is around 50-60 % of the maximum airflow.

TECHNICAL SPECIFICATIONS			
	Vallox 99 MV CF	Vallox 110 MV	Vallox 125A MV
All models have energy-saving EC fans. BIM models of Vallox products can be downloaded for free for Revit and AutoCAD, and also MagiCAD and CADS are supported. ● = Standard delivery ▲ = Accessory			
Indicative maximum floor area of the apartment¹	150 m²	170 m²	180 m²
● = supply air ● = extract air ● = outdoor air ● = exhaust air Explanation of the symbols  front side Dimensions of the units and duct outlets can be found in the technical instructions for each type of unit.	 R model  L model	 R model  L model	 R model  L model
Dimensions (w x h x d) without a siphon	598 x 442 x 625	638 x 678 x 472	598 x 525 x 601
Weight	62 kg	60 kg	66 kg
Duct outlets	4 x ø 125 mm	4 x ø 160 mm	6 x ø 125 mm
The maximum extract airflow ² (dm³ / s / 100 Pa)	93	108	127
The maximum supply airflow ² (dm³ / s / 100 Pa)	88	103	111
Specific energy consumption (SEC) in a cold climate	A+	A+	A+
Specific energy consumption (SEC) in an average climate	A	A	A
Annual efficiency of heat recovery from extract air*	76%	79%	75%
Specific fan power* of the ventilation unit (kW/m³/s)	1.15	1.26	1.52
Type of heat exchanger	Cross-counter flow	Cross-counter flow	Cross-counter flow
HR cell bypass	Automatic	Automatic	Automatic
Post-heating	Electrical resistor	Electrical resistor	Electrical resistor
Control options			
Control methods	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC
Compatible cooker hood	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA
Defrosting			
Defrosting automatics	●	●	●
HR cell bypass	●	●	●
Stopping the supply fan			●
Accessories			
Ceiling mounting plate	▲	▲	▲
Attic floor penetration plate	▲	▲	▲
Carbon dioxide sensor	● ▲	● ▲	● ▲
Humidity sensor	● ▲	● ▲	● ▲
VOC sensor	▲	▲	▲
Fireplace switch function	●	●	●

¹Working point defined in the Ecodesign Directive (2009/125/EC), Southern Finland, Helsinki-Vantaa TRY year 2020.

TECHNICAL SPECIFICATIONS			
Vallox 125B MV	Vallox 125C MV	Vallox 125D MV	
			All models have energy-saving EC fans. BIM models of Vallox products can be downloaded for free for Revit and AutoCAD, and also MagiCAD and CADS are supported. ● = Standard delivery ▲ = Accessory
180 m²	180 m²	180 m²	Indicative maximum floor area of the apartment¹
 R model  L model	 R model  L model	 R model  L model	● = supply air ● = extract air ● = outdoor air ● = exhaust air Explanation of the symbols  front side Dimensions of the units and duct outlets can be found in the technical instructions for each type of unit.
598 x 525 x 601	598 x 525 x 601	598 x 525 x 601	Dimensions (w x h x d) without a siphon
66 kg	66 kg	66 kg	Weight
8 x ø 125 mm	4 x ø 160 mm	4 x ø 160 mm	Duct outlets
127	127	127	The maximum extract airflow ² (dm³ / s / 100 Pa)
111	111	111	The maximum supply airflow ² (dm³ / s / 100 Pa)
A+	A+	A+	Specific energy consumption (SEC) in a cold climate
A	A	A	Specific energy consumption (SEC) in an average climate
75%	75%	75%	Annual efficiency of heat recovery from extract air*
1.52	1.52	1.52	Specific fan power* of the ventilation unit (kW/m³/s)
Cross-counter flow	Cross-counter flow	Cross-counter flow	Type of heat exchanger
Automatic	Automatic	Automatic	HR cell bypass
Electrical resistor	Electrical resistor	Electrical resistor	Post-heating
Control options			
Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control methods
Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Compatible cooker hood
Defrosting			
●	●	●	Defrosting automatics
●	●	●	HR cell bypass
			Stopping the supply fan
Accessories			
	▲	▲	Ceiling mounting plate
	▲	▲	Attic floor penetration plate
● ▲	● ▲	● ▲	Humidity sensor
● ▲	● ▲	● ▲	Carbon dioxide sensor
▲	▲	▲	VOC sensor
●	●	●	Fireplace switch function

TECHNICAL SPECIFICATIONS			
	Vallox 125E MV	Vallox 125F MV	Vallox 125G MV
All models have energy-saving EC fans. BIM models of Vallox products can be downloaded for free for Revit and AutoCAD, and also MagiCAD and CADS are supported. ● = Standard delivery ▲ = Accessory			
Indicative maximum floor area of the apartment¹	180 m²	180 m²	180 m²
● = supply air ● = extract air ● = outdoor air ● = exhaust air Explanation of the symbols  front side Dimensions of the units and duct outlets can be found in the technical instructions for each type of unit.	 R model  L model	 R model  L model	 R model  L model
Dimensions (w x h x d) without a siphon	598 x 525 x 601	598 x 525 x 601	598 x 525 x 601
Weight	66 kg	66 kg	66 kg
Duct outlets	4 x ø 125 mm	4 x ø 160 mm	4 x ø 125 mm
The maximum extract airflow ² (dm³ / s / 100 Pa)	127	127	127
The maximum supply airflow ² (dm³ / s / 100 Pa)	111	111	111
Specific energy consumption (SEC) in a cold climate	A+	A+	A+
Specific energy consumption (SEC) in an average climate	A	A	A
Annual efficiency of heat recovery from extract air*	75%	75%	75%
Specific fan power* of the ventilation unit (kW/m³/s)	1.52	1.52	1.52
Type of heat exchanger	Cross-counter flow	Cross-counter flow	Cross-counter flow
HR cell bypass	Automatic	Automatic	Automatic
Post-heating	Electrical resistor	Electrical resistor	Electrical resistor
Control options			
Control methods	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC
Compatible cooker hood	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA
Defrosting			
Defrosting automatics	●	●	●
HR cell bypass	●	●	●
Stopping the supply fan			
Accessories			
Ceiling mounting plate	▲	▲	▲
Attic floor penetration plate	▲	▲	▲
Carbon dioxide sensor	● ▲	● ▲	● ▲
Humidity sensor	● ▲	● ▲	● ▲
VOC sensor	▲	▲	▲
Fireplace switch function	●	●	●

TECHNICAL SPECIFICATIONS			
Vallox 125H MV	Vallox 145 MV	Vallox 245 MV	
			All models have energy-saving EC fans. BIM models of Vallox products can be downloaded for free for Revit and AutoCAD, and also MagiCAD and CADS are supported. ● = Standard delivery ▲ = Accessory
180 m²	250 m²	430 m²	Indicative maximum floor area of the apartment¹
 R model  L model	 R model  L model	 R model  L model	● = supply air ● = extract air ● = outdoor air ● = exhaust air Explanation of the symbols  front side Dimensions of the units and duct outlets can be found in the technical instructions for each type of unit.
598 x 525 x 601	717 x 748 x 578	1038 x 1241 x 773	Dimensions (w x h x d) without a siphon
66 kg	80 kg	181 kg VKL 187 kg	Weight
4 x 160 mm	4 x ø 200 mm	4 x ø 250 mm	Duct outlets
127	160	271 VKL 269	The maximum extract airflow ² (dm³ / s / 100 Pa)
111	142	247 VKL 229	The maximum supply airflow ² (dm³ / s / 100 Pa)
A+	A+	A+	Specific energy consumption (SEC) in a cold climate
A	A	A+	Specific energy consumption (SEC) in an average climate
75%	79%	82%	Annual efficiency of heat recovery from extract air*
1.52	1.25	0.68 VKL 0.70	Specific fan power* of the ventilation unit (kW/m³/s)
Cross-counter flow	Cross-counter flow	Cross-counter flow	Type of heat exchanger
Automatic	Automatic	Automatic	HR cell bypass
Electrical resistor	Electrical resistor	Electrical resistor / liquid radiator (VKL)	Post-heating
Control options			
Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control panel, Cloud service, LAN, Modbus, KNX, 0-10 VDC	Control methods
Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Delico PTD EC, KTD A X-Line PTXP MC, X-Line PTXPA MC, X-Line KTXA	Compatible cooker hood
Defrosting			
●	●	●	Defrosting automatics
●	●	●	HR cell bypass
			Stopping the supply fan
Accessories			
▲			Ceiling mounting plate
▲	▲		Attic floor penetration plate
● ▲	● ▲	● ▲	Humidity sensor
● ▲	● ▲	● ▲	Carbon dioxide sensor
▲	▲	▲	VOC sensor
●	●	●	Fireplace switch function

COOKER HOODS AS PART OF THE VENTILATION SYSTEM

A cooker hood that has a good smell absorption capacity and is installed sufficiently low, together with a loose dimensioning of the duct of the cooker hood, enables the efficient removal of cooking smells. The automated boosting of the ventilation when the damper of the cooker hood is opened helps avoid errors in the use of the removal of cooking smells.

A cooker hood equipped with a duct fan or a cooker hood made from a house extract fan by plugging removes cooking smells more efficiently than

a cooker hood connected to a ventilation unit. However, a cooker hood that has been connected to the ventilation unit is the most common solution used in, e.g., apartment buildings, because it does not require a separate extract air duct running from the cooker to the roof. If the removal of cooking smells has, at the cooker hood, been connected to a ventilation unit, the air that is extracted by the cooker hood must also pass through the heat recovery cell in order for the cell to remain defrosted in cold winter weather and for the ventilation to operate flawlessly.

Vallox Delico cooker hood series

Vallox Delico cooker hoods are installed inside the kitchen cabinet, which merges the hood seamlessly with the kitchen. The steam collection part slides smoothly and when the hood is not being used, it is pushed inside the hood. Only the glass front panel of the device is then visible. LED lighting is even and non-glaring. Aluminium grease filters effectively collect the grease that is generated during cooking. The touch buttons of the front panel have been lit and are designed to be user-friendly.



Vallox X-Line cooker hood series

Vallox X-Line cooker hoods are installed inside the kitchen cabinets. They have a large steam collection part and a fixed glass. All X-Line cooker hoods have a large and metal machine-washable grease filter and efficient LED lighting.



VALLOX
X-Line



SELECTION OF THE COOKER HOOD

In the selection of a cooker hood, it is important to determine what kind of ventilation system the apartment has. Is the cooker hood used to control a roof fan or a ventilation unit? Is a house extraction fan needed in the kitchen? Or does the apartment building have a joint extraction system?

Apartment-specific ventilation

- If the cooker hood is used in the apartment for the controlling of the ventilation unit or a roof fan, either the **Vallox Delico PTD** or the **Vallox X-Line PTX** should be chosen. Determine whether the ventilation unit/roof fan has AC or EC fans and select the model accordingly.
- If no fan control is needed for the apartment-specific ventilation unit, either the **Vallox Delico KTD A** or the **Vallox X-Line KTXA** should be chosen.

A joint duct system*

- If there is a joint duct system in the apartment, which is adjusted in a single step by means of a joint duct valve: Select the **Vallox Delico KTD** or **Vallox X-Line KTX** cooker hood.
- If the apartment has a joint duct system, a cooker hood with a timer damper, i.e., either the **Vallox Delico KTD A** or the **Vallox X-Line KTXA** should be chosen. For fire safety reasons, a **Vallox Smoke limiter must also be connected to them.**



* No cooker hood with a separate motor must ever be installed in a joint duct system, because this may cause the cooking smells to be transmitted into the adjacent apartments.

Separate removal of cooking smells

- If the cooker hood of the apartment is not connected to the ventilation system, select either the **Vallox X-Line TTX** (plug the extract air ducts) or **Vallox Delico PTD EC + Vallox Duct fan *** combination (plug two extract air collars).

Extract air ventilation

- If a detached or a terraced house has been equipped with extract air ventilation (and there are, possibly, also extract air ducts that have been led from the wet area to the cooker hood), select the **Vallox X-Line TTX** or the **Vallox Delico PTD EC + Vallox Duct fan***.



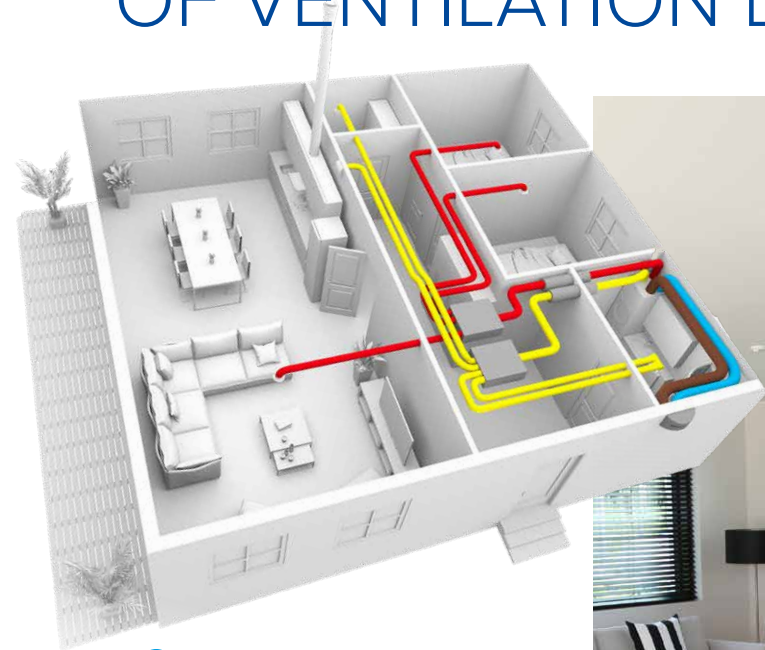
*A duct fan can be installed inside kitchen cabinets or, where required, inside roof structures, and can be connected to any cooker hood that is suited to controlling EC fans. It is also possible to leave the cooker hood unconnected to the duct fan, in which case the duct fan provides the general ventilation in the kitchen and a circulating air fan can be used for the removal of cooking smells.



Read more about our selection in the 'Vallox Cooker hoods and fans' brochure



EASY AND QUICK INSTALLATION OF VENTILATION DUCTS



- Outdoor air duct system
- Exhaust air duct system
- Supply air duct system
- Extract air duct system



Vallox BlueSky is a flexible, sound-dampening, and easy-to-install ventilation duct system.

The Vallox BlueSky duct system is an easy and cost-efficient solution for renovated and new buildings. The Vallox BlueSky is perfect for narrow spaces, as its outer diameter is only Ø 75 mm.

The Vallox BlueSky can be installed in an enclosure, inside a dropped ceiling, in the roof space or intermediate floor, or even inside cast concrete. When the framework of the building is being constructed, Vallox BlueSky can usually be installed inside construction components similarly to electrical installations and the sewage system. No additional insulation is usually needed when installed inside blown wool insulation.

Vallox BlueSky duct is easy and quick to install. Thanks to its flexibility and quick couplings, no drilling or riveting is needed. Because the duct can be easily extended, very little material is wasted.

The ducts are hygienic and easy to clean, as the ducts have a smooth, antistatic, and anti-bacterial inner surface.

When the Vallox BlueSky system is used, the structure of the duct network is airtight and the pressure loss is small. This ensures that the energy consumption of the fans remains low.

VALLOX
BlueSky

Watch a video on installing a BlueSky system in a detached house under renovation
www.vallox.com/en/reference/bluesky-airdistribution-installation/



A PATENTED WALL-MOUNTED SOLUTION FOR AIR BLOW-OUT

The Vallox Out/in Vario wall-mounted air blow-out and intake device enables implementing apartment-specific ventilation easily in both new and old apartment buildings. In tall buildings, in particular, an air blow-out system means that no space-taking vertical conduits need to be constructed.

A patented structure - a smaller pressure loss!

The patented structure of the wall-mounted air blow-out and intake device reforms the adjustment of the blow-out speed: the device enables multi-step adjustment, as the result of which, the required 5 m/s initial speed is achieved with a

minimum pressure loss. Thanks to its structure, the water-separation ability of the device is good and it does not freeze easily. This significantly enhances the operation of the ventilation unit. The device is easy and quick to install and does not require maintenance.

New opportunities for structural planning

The Vallox Out/in Vario's air blow-out and intake parts do not need to be installed on the same side of the building. This adds flexibility to structural planning and makes it easier to comply with the minimum clearances from factors that reduce air quality (such as rubbish bin shelters and nearby balconies). The handedness of the device can be easily changed.

The device is available in four different colours: white, brick red, grey, and black. The colour options enable making the wall-mounted air blow-out device less visible in the facade, as it cannot, based on a regulation, be hidden in an inset or a corner.



A PATENTED STRUCTURE!

ENERGY SMART PLANNING

The principal task of the ventilation system is to provide healthy indoor air in a healthy building. Correct ventilation solutions can save significant amounts of energy. Vallox ventilation and air handling units are, in themselves, energy-efficient and their efficient heat recovery reduces the heating need of the building.

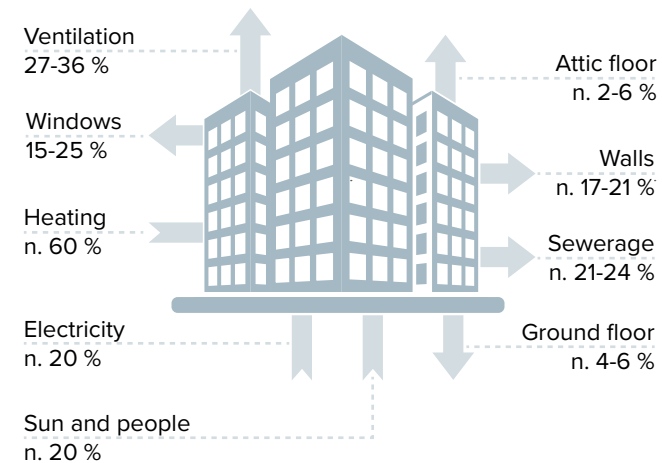
Heat recovery saves energy

In ventilation, heating of the supply air accounts for most of the energy consumption during cold seasons. If no heat is recovered from the extract air, energy is lost in connection to the ventilation.

In houses with natural or extraction ventilation, ventilation takes up roughly 20–40 percent of the energy used for heating.

The energy-efficiency of the ventilation system has a significant impact on the heating costs of the building. The plate heat exchanger of Vallox units enables the recovery of up to 75% of the energy that is used to heat the replacement air from the extract air.

Modern DC fans consume very little electricity. The same amount of electricity that is needed to heat up an electric sauna stove once is sufficient to operate the fans of the ventilation unit for up to several weeks. For the coldest days of the year, Vallox ventilation units have usually been equipped with an electrical resistor for the additional heating of the supply air, but, thanks to the efficient heat recovery, it is rarely needed. The air handling units have a liquid radiator for post-heating and also the largest ventilation unit of the series is available with a liquid radiator (the Vallox 245 MV VKL model).



Heating energy balance in a typical apartment house built in the 1950s-1970s. Source: KIMULI Final report 31 May 2010

Protect the duct network from cold and heat

When the ventilation duct network is installed completely on the inside of the vapour barrier, e.g., inside dividing walls, the air passing through the network will not cool down or warm up once it has left the ventilation unit. In addition, the airtightness of the building is not reduced by feedthroughs. The Vallox BlueSky air distribution system provides an excellent solution to this.

The supply air should not warm up in the ventilation ducts. If the supply air ducts have been installed, e.g., in the intermediate floor of the bathroom or sauna, where the temperature is high, the supply air temperature will increase when it passes through the duct. The location of heating or hot domestic water pipes close to the outdoor air ducts can also significantly increase the heat load of the apartment.

Getting the most out of geothermal heat

To get the most out of the heat provided by a geothermal heat or passive circuit, it can be used for the preheating of the supply air in winter and for cooling in summer by means of a Vallox MLV duct radiator that is connected to the ventilation unit. If the sun heats the apartment, e.g., due to large windows, the cooling capacity of the ventilation is not sufficient. In such a case, a separate cooling device, such as an air-to-air heat pump, is a perfect addition to the ventilation unit.

As regards the cooling need, the aim should be to reduce or eliminate the heat radiation through the location of the windows or by covering them with, e.g., awnings or other structural solutions.

Switch for the better

The energy-efficiency of ventilation units has improved significantly. The old units had a much poorer heat recovery ability than the modern ones, and they also consumed more energy. For this reason, it can be worthwhile, depending on the location of the unit, to invest in a new more energy-efficient unit.

A 40 l/s air flow and a +18°C supply air temperature were used in the calculation, *

	Old Digit SE	New Vallox 110 MV
Heat energy that bypasses the HR cell	2,800 kWh/a	1,600 kWh/a
Needed post-heating energy (above 18°C)	1,200 kWh/a	200 kWh/a
Fan energy	600 kWh/a	300 kWh/a
Energy loss/ consumption, total	4,600 kWh/a	2,100 kWh/a

*The energy consumption of the ventilation and, subsequently, the energy savings depend on the volume of the air that is replaced. The energy consumption of the post-heating, on the other hand, essentially depends on the set supply air temperature.

A CHECKLIST FOR APARTMENT VENTILATION DESIGNERS

- 1. At home/Away/Boost**
When standard ventilation is dimensioned according to the At home mode, the ventilation is also sufficient in the bedrooms. The ventilation plan must include the boost values, and when the plan also specifies the air flows in the Away mode, the installer does not need to guess.
- 2. The intake/blow-out of fresh indoor air**
The outdoor and exhaust air ducts should be designed to be as short as possible. The Vallox Out/in Vario intake and blow-out unit enables this, even in tall buildings.
- 3. Automatics implemented by means of sensors**
Air quality sensors enable smart and user-friendly ventilation. The integrated humidity and carbon dioxide sensors of the MyVallox units can be supplemented, e.g., with an external VOC sensor.
- 4. External electrical connections**
Inform the designers of other sub-areas of the required connections. Cable types can be found in the instructions of the ventilation units and from the external wiring diagrams
 - The power connection of the ventilation unit: plug/ fixed
 - The location and cable type of the control panel
 - The cable type required by the cooker hood control and, where required, the own power feed of the cooker hood
 - The cable type of the contact data of the cooker hood damper to the ventilation unit
 - The location and cable types of any external switches or sensors
 - A LAN network cable for the Internet connection

Heat recovery provides housing companies with a significant energy saving potential.

Weather information of Southern Finland has been used in the energy-saving calculations. The more north the building is located, the more the heat recovery saves. Calculation: Vallox 096 MV (Extract air flow 38 l/s)

Energy needed per apartment to heat the replacement air	5,790 kWh/a
The energy saved by the HR cell (75%)	4,340 kWh/a
Electricity consumption of the ventilation unit:	
Heat recovery (plate heat exchanger)	0 kWh/a
Power consumption of the fans	365 kWh/a
Energy consumption of the supply air post-heating resistor	58 kWh/a
Energy savings in a housing company of 30 apartments:	
Heating energy saved (30 x 4,340 kWh)	130,200 kWh/a
Electricity consumption of the ventilation units (30 x 423 kWh/a)	12,690 kWh/a
Savings potential	117,510 kWh/a

INSTALLATION OPTIONS FOR EVERY LOCATION

The ventilation unit should be installed in a location where it does not cause a noise disturbance and is easy to maintain. Removing the heat recovery cell for cleaning and replacing the filters require space. It is advisable to reserve space for repair measures. Space should also be reserved for the maintenance of external equipment, such as duct radiators.

Mount on the ceiling or the wall, or place it on the floor

Depending on the model of the ventilation unit, it can be mounted on the wall, on the ceiling structures by using a ceiling mounting plate, or on a base on the floor. The installation options are unit-specific and some of the installation accessories are optional.

Technical space

The higher the air flows of the ventilation unit, the larger it is also in terms of dimensions. Therefore, it is often easiest to locate large units in a separate technical space, for example.

A unit for wet areas

A bathroom or a utility room, for example, are natural locations for a unit, as this enables short ducts and easy leading of condensing water into the drain.

A ventilation unit for a separate technology cabinet

In an apartment building, a separate technology cabinet is a handy solution, which the servicing company can access directly from the staircase. This makes it easier to replace the filters and service the unit, as there is no need to enter the apartments.

The ventilation unit can also be hidden in the kitchen

In a small apartment, the ventilation unit can be hidden, e.g., inside the kitchen cabinet. The Vallox 51K MV, installed above the cooker hood inside the kitchen cabinets combines ventilation and the removal of cooking smells. In the kitchen, it is out of view yet easy to use and service.



The Vallox 51 K MV has been installed on top of the kitchen cabinets, where it elegantly out of the view.

Bathroom element

The bathroom element is suited to new construction and includes a ready bathroom. The bathroom element has water and sewer pipes ready installed, as well as the connections to the ventilation ducts. All fixed bathroom fixtures and taps and the ventilation unit have been installed inside the element.

A dropped ceiling

In connection to renovations, in particular, a dropped ceiling in the lobby, for example, can be the best location for the ventilation unit. An adequately large maintenance door should be left for replacing the filters and carrying out other maintenance measures.

Watch a video of the ceiling mounting of a Vallox ventilation unit.
www.vallox.com/en/reference/mounting-the-vallox-101-mv-ventilation-unit-on-the-ceiling-by-using-the-ceiling-mounting-plate/



A CHECKLIST FOR THE VENTILATION INSTALLER

1. Inspect the connections of the ventilation unit and select the settings to correspond to the operating method of the ventilation plan.
2. Check the handedness of the ventilation unit before installation.
3. Check the condensate insulation between the ceiling mounting plate and the unit, i.e., ensure that the insulation sleeves of the ceiling mounting plate are in place.
4. Put the supports of the heat recovery cell back in place after the unit has been installed.
5. Always complete the air flow adjustment by using clean filters.
6. Ensure that the CO₂ and RH% sensors are not on during the air flow adjustment, as they can increase the fan speed.
7. Remember that the setup of MyVallox ventilation units can also be completed without a control panel by using a computer.
8. Remember that no insect net should be installed on the outdoor grille.
9. Remember to instruct the resident in the use of the system.

UNIT-SPECIFIC MANUALS TO SUPPORT INSTALLATION

Unit-specific manuals can be found on the Vallox website to help in the installation of the unit. The manuals of all MyVallox ventilation units can also be found online in the WebHelp.

INSTRUCT THE RESIDENT TO MAINTAIN THE SYSTEM REGULARLY

Once the installation is complete, the resident should be provided with instructions on the use and maintenance of the system. Regular maintenance ensures the correct operation of the ventilation unit.

In detached buildings, the resident is responsible for all maintenance measures of the ventilation system. In housing companies, the company is responsible for the condition, maintenance and repairs of the ventilation unit, and for replacing the grease filters of the cooker hood. The shareholder, on the other hand, is responsible for cleaning the grease filters and valves.

Replacing the filters of the ventilation unit

The filters should be replaced at least twice a year or even more frequently where needed. It is important to explain to the residents that the grade, dimensions and flow resistance of the original Vallox filters suit the Vallox ventilation units. If the replaced filter differs from the original, this has an impact on the air flows and the changes can create under- or overpressure inside the home.

Cleaning of the HR cell

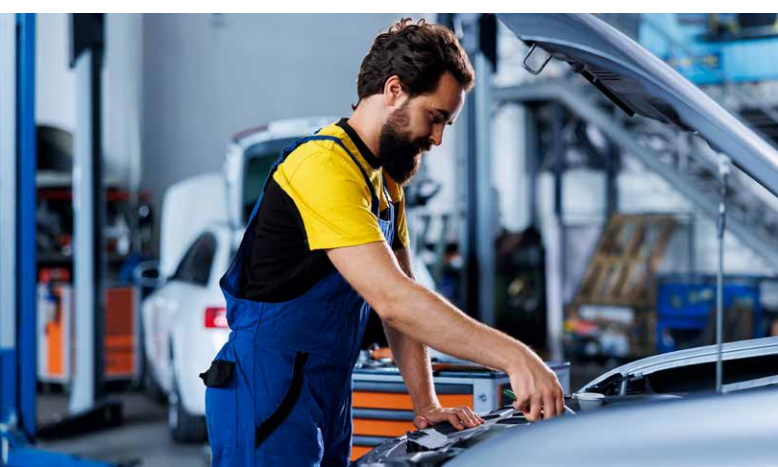
The heat recovery cell can be cleaned with warm water and hand dishwashing liquid. In most cases, washing the cell once in every couple of years is sufficient. There are no moving or wear-out parts in the plate heat exchanger, and it does not require any other maintenance than washing.

Grease filter of the cooker hood

The grease filter of the cooker hood must be washed sufficiently often - depending on the use, even twice a month.

VALLOX ALSO SUPPLIES FRESH AIR TO OFFICE, BUSINESS AND PUBLIC PREMISES

Read more about Vallox ventilation solutions for business and public premises at www.vallox.com/en/ventilation-solutions-for-public-and-business-premises/



VALLOX Exxeo

ROOF FANS



The variety of sizes and control methods, along with the elegant design, make Vallox's new Vallox Exxeo roof fans an excellent choice for any location.

The series consists of seven roof fans with different air volumes (150-4,100 l/s) and three models with different control methods.

Read more:
www.vallox.com/en/vallox-exxeo/

VALLOX Pureo

AIR HANDLING UNITS



The compact Vallox Pureo air handling units are suitable for office, business and public buildings. Typical applications include business premises, offices, sports halls, day care centres and schools.

The range includes four different sizes (500-1,800 l/s), and the units are available with automation or as a terminal block unit.

Read more:
www.vallox.com/en/vallox-pureo/



VALLOX ASSISTS PROFESSIONALS

As an equipment manufacturer, Vallox serves ventilation professionals. Product-specific instructions, product selection software, topical trainings, and skilled personnel are at the disposal of our professional customers.

Various support materials linked to products, such as adjustment charts, operation descriptions, fan curves, and wiring diagrams, have been compiled on the Vallox website for the use of the professionals. The website also includes documents and instruction videos related to the installation and setup of Vallox products.

Our skilled and capable personnel are also at the disposal of our professional customers. The contact details of the product and spare part sales, technical support, regional sales representatives, and tender calculation can be found on our website.

Technical support and warranty matters

The technical support of Vallox assists and serves Finnish customers and importers in various matters related to ventilation and Vallox products.



Vallox grants its products a twenty-four-month guarantee that is calculated from the delivery of the product. A guarantee service request must be filled, if the product needs to be repaired during the warranty period. The form can be found on our website.

Webinars on topical matters and products

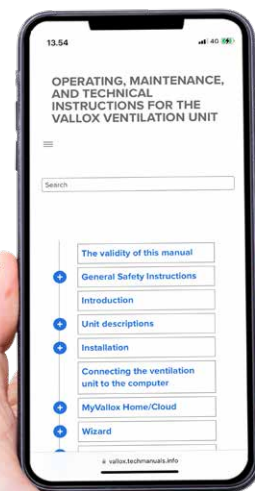
The free Vallox webinars focus on topical matters and guide professionals in the sale and design of our products.

Upcoming webinars and the recordings of past webinars can be found in the professional section of our website, under Support materials. Information can also be found about them in our newsletters!

We also organise company-specific trainings and product introductions. Contact our training manager, customer service, or your regional manager to learn more.

WebHelp contains the manuals of all Vallox units

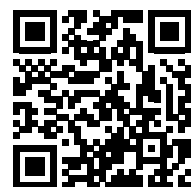
WebHelp contains the manuals of all Vallox ventilation units. The online-based WebHelp can be used anytime and anywhere. When used on a smart phone, WebHelp assists in the setup, maintenance, use, and installation of the units.



MATERIALS FOR PROFESSIONALS

The professional section of the Vallox website includes webinar recordings, pricelists, design software and instruction videos for HVAC professionals.

www.vallox.com/en/pro/



VALLOX SALES IN FINLAND – RESIDENTIAL VENTILATION

A

Northern Finland and Åland
Taina Ilviita
Area Manager

B

Eastern Finland
Marko Puranen
Area Manager

C

Southern and Western Finland
Arto Satumäki
Area Manager

Juuso Nyström
Key Account Manager,
project sales

Jani Lehtola
Key Account Manager,
project sales

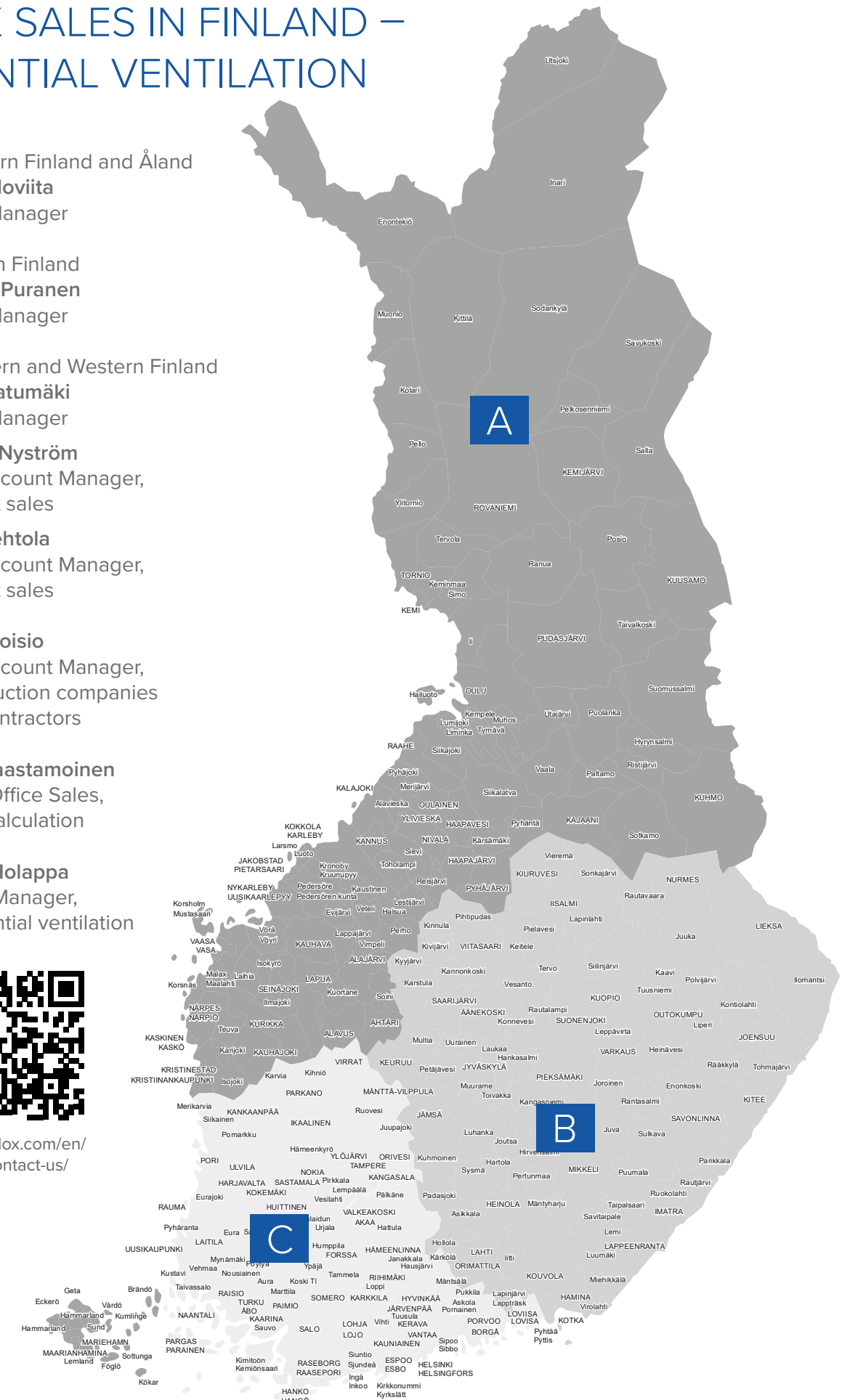
Mika Koisio
Key Account Manager,
construction companies
and contractors

Jani Saastamoinen
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Jussi Holappa
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www.vallox.com/en/pro/contact-us/



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Guarantee service request:

www.vallox.com/en/pro/service/warranty-service-request/

Contact request:

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