VALLOX PUREO

Air handling units





AIR HANDLING UNITS

FOR VARIOUS PREMISES

vallox Pureo

The Vallox Pureo range consists of three product series that differ in e.g. the location of duct outlets and the heat recovery method.

Three series in the range

The Vallox Pureo range includes three different series:

- Vallox Pureo SX
- Vallox Pureo TX
- Vallox Pureo SR

The duct outlets in SX units are on the sides, and in TX units, on the top. Both SX and TX series units are equipped with a high-performance plate heat exchanger. The duct outlets in SR units are on the sides and the heat exchanger rotates.

All units offer efficient heat recovery and a standard post-heating liquid radiator. Units with a plate heat exchanger are also equipped with segment defrosting and bypass dampers with actuators.

Designed for Finnish conditions

All Vallox Pureo units are designed for the demanding Finnish climate conditions.

The units are suitable for offices, business premises, production and warehouse spaces, public premises such as day care centres and schools, as well as sports and leisure facilities. SX units are also a good solution for centralised ventilation in apartment blocks.

Thanks to their stylish appearance, the units can be installed in a visible location.

A structure that complies with requirements

Vallox Pureo units comply with all classifications required in Fin-

land and their structure has been designed to comply with the VDI 6022 hygiene standard. The soundproofing and cold insulation also function well: the airtightness (L1) and strength (D1) of the casing are top-notch. The excellent sealing of the casing ensures a noiseless operation, thanks to which the unit can be installed in work or living spaces without interrupting your daily life.

The thermal insulation capacity of the Vallox Pureo units is the best to be found on the market: the thermal insulation class is T2 and the thermal bridge class is TB2. The bypass-flow class of the filters is F9, the highest possible.

all classifications required in Fin
The control method can be selected based on the application.

Vallox Pureo control panel

Compatible connections to all existing house automation systems.

The delivery warehouse and technical support are located in Loimaa.

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Diverse control options

The control options of the unit can be selected based on the intended location and use. The units are delivered either as a terminal block unit without automatics or with automatics, including the electrical equipment and controls. The units can be connected to a Vallox Pureo control panel with a touch screen. The units can also be connected to existing house automation systems. Automation can be enhanced by adding presence sensors and humidity, CO², and VOC sensors.

Access from two sides ensures easy installation and maintenance.

Vallox Pureo has service doors on both long sides and can, therefore, be serviced from either side. This feature ensures that you don't need to consider the handedness of the unit in advance and the installation location can be chosen flexibly.

The smallest Vallox Pureo units are delivered as complete units, while the larger ones are delivered as modular components, which makes their handling easy on site.



•• Ventilation in the classrooms of a vocational education is taken care of by Vallox Pureo TX 500.

The complete Vallox control system (5-channel differential pressure transmitter, controller and Pureo control panel) was selected for the site. Ventilation in the facilities is mainly implemented on a weekly program according to the use of the facilities.

The staff at the vocational institution appreciated a ventilation system which had an easy installation process for both HVAC and maintenance personnel.





More information: vallox.com/en/ vallox-pureo





Thanks to its stylish appearance and excellent sealing, the Vallox Pureo can be installed in a visible location. In the left-most image, Vallox Pureo TX 1300 has been installed in a sports hall right next to the courts. In the right-most image, a Vallox Pureo TX 500 unit is being installed in a cabinet built into an office space. Excellent sealing guarantees noiseless operation so that you can enjoy your living and working spaces in peace.

Solution for various ventilation needs

The needs of different users and applications can be met by adjusting the features of the unit. A wide range of optional accessories are available for Vallox Pureo air handling units. The cloud-

based Vallox MySelecta Pureo calculation software makes their configuration effortless with an easy-to-run component list.

Support and spare parts quickly and reliably

Spare parts and technical support are available in connection to the Vallox factory in Loimaa. A strong installation and maintenance network also serves our customers throughout Finland.

Standard features

- EC fans
- Automation centre with terminal block units
- Bag filters
- Post-heating radiator (liquid)
- Segment defrosting and bypass dampers with actuators (TX and SX series)
- Internal sensors (NTC10, PT1000)
- Adjustable base
- Safety switch
- Dampers and actuators (SR and SX series)

Accessories

- Electrical equipment and controls
- Air flow meters
- Differential pressure transmitters of filters
- Duct pressure transmitter
- Silencer
- Duct cooling coil
- Silencer and duct cooling coil (SR series)
- Spare filters
- Heating group
- Transmitters (RH, CO², VOC)
- Electric pre- or post-heating coil
- Dampers and actuators (TX series)



In the most northern parts of Finland, the winter can get extremely cold. This is why the Vallox Pureo unit was installed at the fire station with the optional electric pre-heating feature to ensure operational ventilation even during the most freezing cold spells of winter.



During the installation, the Vallox Pureo unit installed in a mechanic's shop was equipped with rectangular silencers, a damper and an optional duct cooling coil.



The Vallox Pureo unit installed between the shelves at a metalworks was equipped with an electric post-heating coil instead of the standard liquid radiator as no hot water was available for the unit at the site.



HIGH-PERFORMANCE EXTRACTION

AT THE VESILAHTI FIRE STATION

The old fire station in Vesilahti was expanded in 2024. As heat recovery helps to heat up a significant portion of the supply air, it was built into the supply / extract air ventilation that was designed for the site.

Heat recovery is also a significant step towards the station's planned transition to geothermal heat. Vallox Pureo air handling units have a post-heating liquid radiator as a standard feature which can be connected to the geothermal heating grid. This allows geothermal heat to support the ventilation unit in heating the supply air.

Fresh air for firefighters

The extension of the fire station also included the construction of appropriate facilities for washing, drying and storing gear, applying the Clean Cab model. After finishing an assignment, gear is taken to a separate space and washed

before moving the clean gear to storage. Firefighters enter the clean space only while wearing clean gear.

Extraction at the site ensures good ventilation, and potentially harmful substances as well as steam from washing equipment and gear are extracted efficiently, thanks to the humidity sensor of the Vallox Pureo air handling unit. The air handling unit's sensor detects rising levels of humidity in indoor air and, if necessary, enhances the ventilation. The ventilation unit manages the property automatically without human help.

Indeed, according to **Miikka Hellqvist** from Putkari Oy, who planned the HVAC installation, this is the clearest improvement that was achieved through appropriate ventilation. Humidity was a big problem in the old hall, and

in the summer, the temperature could easily rise to over 30 degrees Celsius. Contaminants in gear also caused bad odours. Now the indoor temperature of the hall no longer exceeds the outside temperature, and odours can be managed.

Fast delivery and easy to install

The Vallox Pureo installed on the site was Miikka Hellqvist's first encounter with the model: 'Easy to install - you just put the unit in place, connect the wires, and that's about it.' The HVAC planner had picked the unit in question for the ventilation plan. As the contractor, Miikka queried different options, but as the Pureo had a reasonable price tag and it was immediately available, there was no need to amend the plans.



Extractions at the site ensure that potential harmful substances and steam from washing gear are efficiently extracted from the premises.



A Vallox Pureo unit with built-in automation was selected for the site as there was no existing house automation system.



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Vallox Pureo SR

The units in the SR series come in six sizes with rated airflow ranging from 550 to 4,500 dm³/s.

The units in the SR series with a side outlet have a rotating heat exchanger with high annual efficiency. The rotating heat exchanger returns some moisture from the extract air back into the room air.

The compact size of the units in the SR series makes them suitable for locations with limited space.

Technical details: www.vallox.com/en/products/air-handling-units/vallox-pureo-sr-air-handling-units/

Vallox Pureo SR and SX series units available in 2025

- Vallox Pureo SR 550
- Vallox Pureo SR 1000
- Vallox Pureo SR 1500
- Vallox Pureo SR 2000
- Vallox Pureo SR 3000
- Vallox Pureo SR 4500
- ☑ Duct outlets on the sides
- ☑ Rotating heat exchanger



Vallox Pureo SX

The SX series comes in four different sizes with duct outlets on the sides. Their rated airflow ranges from 1000 to 3000 dm³/s.

The units in the SX series have an efficient plate heat exchanger and segment defrosting with a bypass duct. Thanks to the plate heat exchanger, air of various extract air classes can be led into the unit.

As the airflows are not mixed in the plate heat exchanger, the units are suitable for most sites.

Technical details: www.vallox.com/en/ products/air-handling-units/vallox-pureosx-air-handling-units/

- Vallox Pureo SX 1000
- Vallox Pureo SX 1500
- Vallox Pureo SX 2000
- Vallox Pureo SX 3000
- ☑ Duct outlets on the sides
- ☑ Plate heat exchanger



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Pureo

SR SERIES





Vallox Pureo TX

The units in the TX series come in five different sizes and have a vertical outlet. Their rated airflow ranges from 350 to 1800 dm³/s.

The units in the TX series have an efficient plate heat exchanger and segment defrosting with a bypass duct. Thanks to the plate heat exchanger, air of various extract air classes can be led into the unit.

As the airflows are not mixed in the plate heat exchanger, the units are suitable for most sites.

Technical details: www.vallox.com/en/products/air-handling-units/vallox-pureo-tx-air-handling-units/

- Vallox Pureo TX 350 * coming in 2025
- Vallox Pureo TX 500
- Vallox Pureo TX 900
- Vallox Pureo TX 1300
- Vallox Pureo TX 1800
- ☑ Duct outlets on the top
- ☑ Plate heat exchanger



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MySelecta Pureo

SELECTION SOFTWARE



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Pureo

TX SERIES

valloxselect.com

- The browser-based calculation software is always available and up-to-date without logging in.
- Adjusting the air handling unit for the site is quick and easy.
- You can save the calculations, export them into different software, and restore them at any time (saving requires logging in).
- Easy configuration of accessories.
- A component list is defined according to each user's choices.
- Detailed calculation results and fan curves.



Sales



Juuso Nyström Key Account Manager +358 10 7732 245



Jani Lehtola Key Account Manager +358 107 732 224



Jani Saastamoinen
Back Office Sales,
Offer calculation
+358 10 7732 274



Juho Mäki
Product Specialist,
air handling units
and roof fans
+358 10 7732 296



Markku Marttala Sales Manager

Technical support



Sami Mattila Technical Specialist +358 10 7732 270



Olli Löppönen Technical Specialist +358 10 7732 270

CONTACT US





PRODUCT AND SPARE PART SALES

+358 10 7732 200 myyntitilaukset@vallox.com

TECHNICAL SUPPORT AND WARRANTY MATTERS

+358 10 7732 270

Guarantee service request:

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

Contact request:

 $\underline{www.vallox.com/en/pro/contact-us/contact-request/}$



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