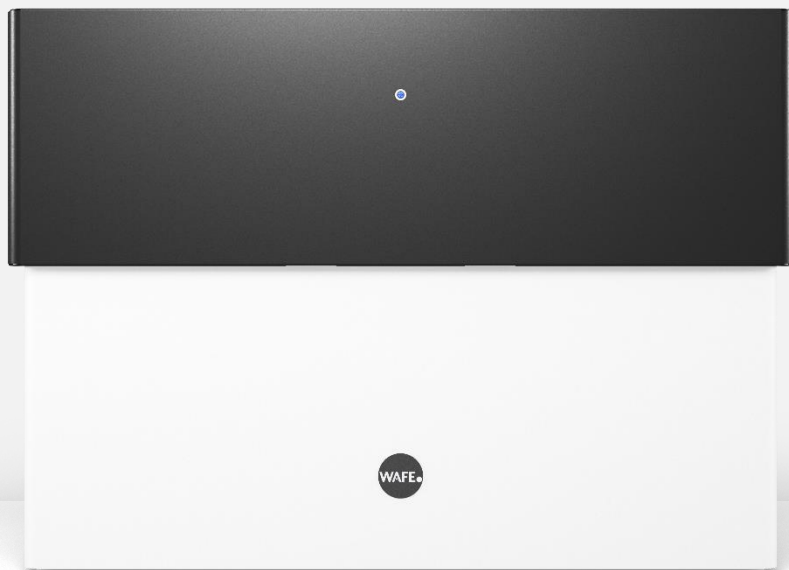




USER MANUAL v2.0

WAFE 350 EFS Energy Recovery Ventilation Unit



ABOUT THE DOCUMENT

Information stated in the *User manual: WAFE 350 EFS Energy recovery ventilation unit* (hereinafter “manual”) are to provide safe and economically efficient operation of WAFE 350 EFS energy recovery ventilation unit (hereinafter “unit”).

Read carefully, please.

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Manual is written, published and applicable exclusively for WAFE 350 EFS unit.

Original version of this document was created in Czech language. The producer is not responsible for any possible discrepancies due to the translation.

As we are constantly upgrading and improving our devices, your version of the unit might look different than the one portrayed in this manual.





The latest version of the manual can be found in our document database: www.wafe.eu/document


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Symbols used

-  Important information.
-  Unique feature differentiating your unit from the competition.
-  There is a danger of unit or ventilation system damage.
-  There is a danger of personal injury.

The numbers shown in box  refer to the *Figure 05: Exploded-view drawing of the unit* and *Table 03: List of components*.

Intended use

WAFE 350 EFS energy recovery ventilation unit is an air ventilation device with an active heat and humidity recovery function designed for comfortable and ecological ventilation management of living spaces up to an area of 250 m² and outside temperature of –30 to 40°C (for temperatures –15°C and below, it’s recommended to use external preheating).

The unit can be used only for the purposes for which it was developed and manufactured and for which it is technically eligible in accordance with the conditions specified by the manufacturer. Its design, implementation and technical condition adhere to general safety requirements.

Type designation

Nameplate is used to identify the precise model of the unit which is necessary for the safe use of the product. The nameplate is permanently located on the side of the unit.

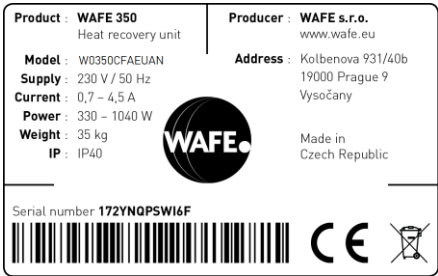




Figure 01: An example of a unit nameplate.


Manufacturer	W
Capacity	0350
Version	C
Recovery ventilation system	F
Versions of the electronics	A
Region	EU
Sheating	A
Preheating	N

Table 01: A structure of unit part number.

SAFETY INSTRUCTIONS

 **Before using the ventilation unit carefully read all the safety instructions below. By compliance with the following, chances of mechanical or bodily damage are minimised. Manufacturer is not responsible for any damages resulting from non-compliance with these instructions.**





- Ventilation unit must be installed in accordance with the general safety regulations valid in the place of installation.
- Ventilation unit must be installed, connected, operated and serviced only by a properly trained service technician, that is, a person with appropriate education, experience and knowledge of all the relevant regulations, standards and potential risks and dangers involved.
- When laying the wires connected to the unit it is necessary to make sure they are not exposed to any mechanical damage or detrimental environmental effects and that they do not interfere with the use of the space in which the unit is installed.
- In case of damaged power supply, it must be replaced by manufacturer, his service technician or equally qualified person.
- To prevent damage and injury when manipulating with the electrical plug, pull the plug head itself instead of its cable.
- The unit cannot be used by children under 8 years old and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they are supervised or instructed on the use of the unit in a safe way and understand the potential dangers.
- Children must not play with the unit or perform the cleaning and maintenance of it.

Disposal

Dispose the package material in an environmentally friendly way. Once the life cycle of WAFE 350 comes to its end choose an eco-friendly option for its disposal. The unit must not be disposed together with a regular household waste. The unit has been classified according to the **EU Directive 2012/19/EU**. The directive is valid throughout Europe and it sets a framework for returning and recycling procedures of disposed appliances.

WAFE

INTELLIGENT VENTILATION SPECIALIST

Welcome to the world of WAFE.

We are specialists on heat and energy recovery ventilation units. We do not produce radiators or humidifiers or smart home control systems. We focus on the one and only: designing and manufacturing advanced ventilation units that will operate flawlessly with minimal service for many years to come.



We know that ventilation is something you do not usually think of nor do you want to. There's more to life than that. WAFE products are developed and built so they would not interfere with your daily routine; you do not need to fiddle with numerous settings only to remember to unset them later. WAFE units operate in Intelligent mode and are equipped with reliable sensors and electric circuits taking care of unit's internal logic. We assemble our products from quality Czech, German and Dutch components from reputable sources.

Thanks to our unique **Enthalpic Flap System (EFS™)** WAFE 350 EFS reaches the highest efficiency in its class at very low power consumption levels. Operating costs are minimal: you only replace the filters. We sell a complete package, too: installation doesn't require any additional expensive components you need to buy.

Here at WAFE - we think just like you do.

Petr Šec,
founder of WAFE

Prague, 30.3.2017

Heat recovery story

Housing standards in the Western world are continually rising. It's not only about comfort anymore: ease of maintenance, ergonomics and low operating costs do matter, too. Above all – we expect to live in a healthy and natural environment.

At first, we tried to solve this with better quality building materials, more efficient isolation and airtight door and window systems. Some heat savings were achieved but it soon became apparent that a sealed off indoor environment like this is far from healthy and natural. Levels of CO₂ kept rising due to an accumulated exhaled stale air inducing weariness and a loss of focus. Opening the window was the only solution. By doing so, however, we not only reversed any previous heat saving benefits but allowed the city pollution and noise back into our homes.

Ventilation with heat recovery became the only suitable alternative.

Heat recovery basics

Heat Recovery Ventilation (HRV) efficiently uses energy of waste stale air ejected out of the building (with high levels of CO₂) to warm up the fresh air coming from outside, thus creating a healthier and more comfortable environment for all the residents. In summer, on the contrary, the air flowing into the building is pleasantly cooled.

In addition to filtering out dust, smog elements and various allergens, superior forms of ventilation systems — like WAFE 350 EFS — recover not only heat but humidity, too. Devices like these — called **Energy Recovery Ventilation (ERV)** units — save us money on heating costs and, more importantly, create healthy and balanced home environment.

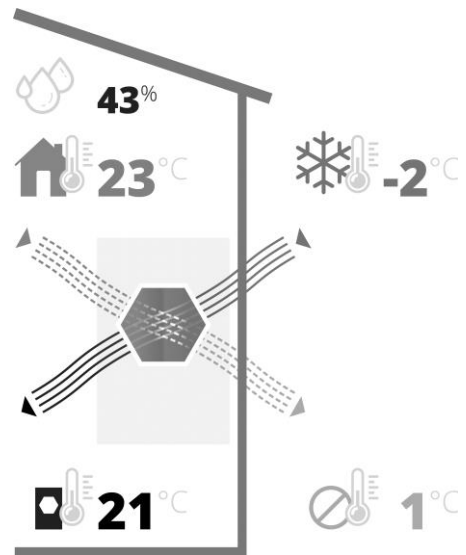


Figure 02: Flowing of air in and out of heat recovery ventilation system.

i Energy recovery ventilation is the new standard in the construction of modern houses, apartments and commercial properties.

	Outside temperature	°C	-2
	Intake air temperature	°C	21
	Inside temperature	°C	23
	Exhaust air temperate	°C	1

WAFE 350 EFS

ENERGY RECOVERY VENTILATION

Thank you for buying WAFE 350 EFS, our premium energy recovery ventilation unit. Energy recovery ventilation (ERV) is a smart way to ventilate your home without any significant loss of heat energy. WAFE introduces new concepts to the ventilation market and solves the most common industry problems.

WAFE 350 EFS energy recovery ventilation unit:

- doesn't need to pre-heat the incoming fresh air when temperatures are low, hence saving even more on electricity costs,
- keeps a natural and healthy levels of humidity in your home even without using expensive membrane heat exchangers,
- asks for a filter replacement only when it's actually necessary. Our competition still uses timers with fixed replacement intervals meaning that the filters are often replaced too late or way too early. Thanks to its inner sensors and advanced logic WAFE 350 EFS monitors a *real* state of your filters,
- operates autonomously and does not bother you with unnecessary and complicated functions.

WAFE 350 EFS fulfils the high standards of

modern



living.



Figure 03: Premium WAFE 350 EFS energy recovery ventilation unit with decorative pull-out cover.

WAFE 350 EFS Main benefits

Minimal required user interaction thanks to its highly **autonomous intelligence** capable of analysing changes in its surroundings.

Practical and beautiful design made of the highest quality European components will inspire you and faithfully serve you for years to come.

Enthalpic Flap System (EFS™) keeps healthy humidity in your home and does not need expensive pre-heating of intake fresh air during cold months.

Low investment costs – no more expensive accessories. Everything needed for the operation is already included.

Low operating costs - maximum filter life expectancy, no expensive electric pre-heating and heat exchanger that does not need to be replaced. Ever.

Wireless internet access gives the owner complete control over settings and costs of the unit and enables automatic sending of notifications and error messages.

WAFE 350 EFS Modes and functions

Intelligent mode

Sensors inside the unit analyse their surroundings, regulates the level of ventilation in the home and maintain desired values of CO₂ in the air; Recommended mode, which needs no user service.

Weekly mode

Unit runs in factory settings and ventilates constantly except during workdays between 8:00–16:00. Changes in the schedule can be done through my.wafe.eu web application.

Holiday mode [Out]

Unit is in low power mode and ventilates the house once a day. Suitable when leaving the ventilated areas for extended periods of time. Requires manual activation and deactivation through my.wafe.eu.

Sleep-mode[Stand-by]

Sleeping unit is in low power mode, still communicates over the internet (if connected) but does not ventilate – mode, technicians activates before performing specific maintenance operations. Requires manual activation and deactivation via my.wafe.eu.

Dehumidification

A mode designed to reduce relative humidity in the building. EFS flap system works in special mode. The installer company approves the mode. The dehumidification purpose is superior to heat recovery at low temperatures.

Night mode

When active, automatic initiation of Intense ventilation [Boost] (in Intelligent mode) and via external button is disabled during evening hours (10PM–7AM). Online initiation via my.wafe.eu is still possible. Night mode requires manual activation and deactivation via my.wafe.eu.

Summer mode [By-pass]

The unit intakes outside fresh air into the house without any heat exchange between the inside stale air. This mode launches automatically during summer months to prevent unwanted overheating of buildings.

Intense ventilation [Boost]

In the occurrence of sudden decrease of air quality (unpleasant smell, increased CO₂) unit can raise the intensity of ventilation for up to four hours. This function is either activated automatically (in the Intelligent mode), via separately installed external button or via my.wafe.eu web application.

Fireplace ventilation

Prevents a formation of negative pressure atmosphere when operating the unit along with the fireplace. Installer company activates it.

Circulation

Suitable for localised heating or aromatherapy; stops the intake of fresh outside air and only circulates the air between the rooms for 30 minutes.

Unit parameters

BASIC PARAMETERS	Airflow	m³ / h	80-350*		
	Temperature limits	°C	-30 to +40 (below -15°C with ext. preheating)		
	Heat recovery efficiency	%	86-97		
	Humidity recovery efficiency	%	60-95 (according to physical conditions)		
	External static pressure (ESP)	Pa	150-250		
	Energy efficiency class	A			
OPERATIONAL PARAMETERS	Airflow reference	m³ / h	120	180	270
	External static pressure (ESP) reference	Pa	100	100	100
	Heat recovery efficiency	%	96,70	92,80	91,20
	Acoustic pressure level ^{1 m distance}	dB	35,4	38	42
	Acoustic pressure level ^{2 m distance}	dB	31	33	37
	Power input	W	59	79	138
DESIGN	Weight	kg	35		
	Dimensions (w x h x d)	mm	1075 x 776 x 539		
INSTALLATION	Installation room temperature	°C	5-40		
	Installation room relative humidity	% at °C	<70 at 22		
	Installation position	Vertical installation			
COMPONENTS	Body	Expanded polypropylene (EPP)			
	Heat exchanger	Plastic duct counterflow			
	Fans	EC CF radial with forward curved blades Continuously adjustable			
	Flap system	Enthalpic Flap System (EFS™)			
	Filters (supply air / exhaust air)	M5 / M5			
	Control panel	Analog buttons and 4-line display			
	Sensors	Pressure, temperature and humidity, CO ₂			
	Sheathing	Aluminium plates with powder coating			
	Accessories ^(upcoming — sold separately)	SIGFOX Internet of Things network connectivity, wall remote controller, aromatic diffuser			
CONSTRUCTION READINESS	Ventilation	mm	DN 160/200 mm (inner/outer diameter)		
	High voltage	230 V AC, 50 Hz + 2 m cable with a standard euro connector			
	Low voltage ^(optional)	Ethernet / RJ45 + CAT5e cable Potential free (dry) one-way button for Intense ventilation [Boost] 24 V DC servo drive for façade flaps			
	Sanitary infrastructure ^(optional)	Condensate outlet with 5/4" external thread			
OPERATIONAL LOGIC	Modes	Intelligent mode Weekly mode Sleep mode [Stand-by]		Holiday [Out] Summer [By-pass] Night mode	
	Functions	Intense ventilation [Boost], Dehumidification Fireplace ventilation Circulation			

*Data may vary depending on filters used.

Table 02: Parameters of the unit.

Unit technical drawing

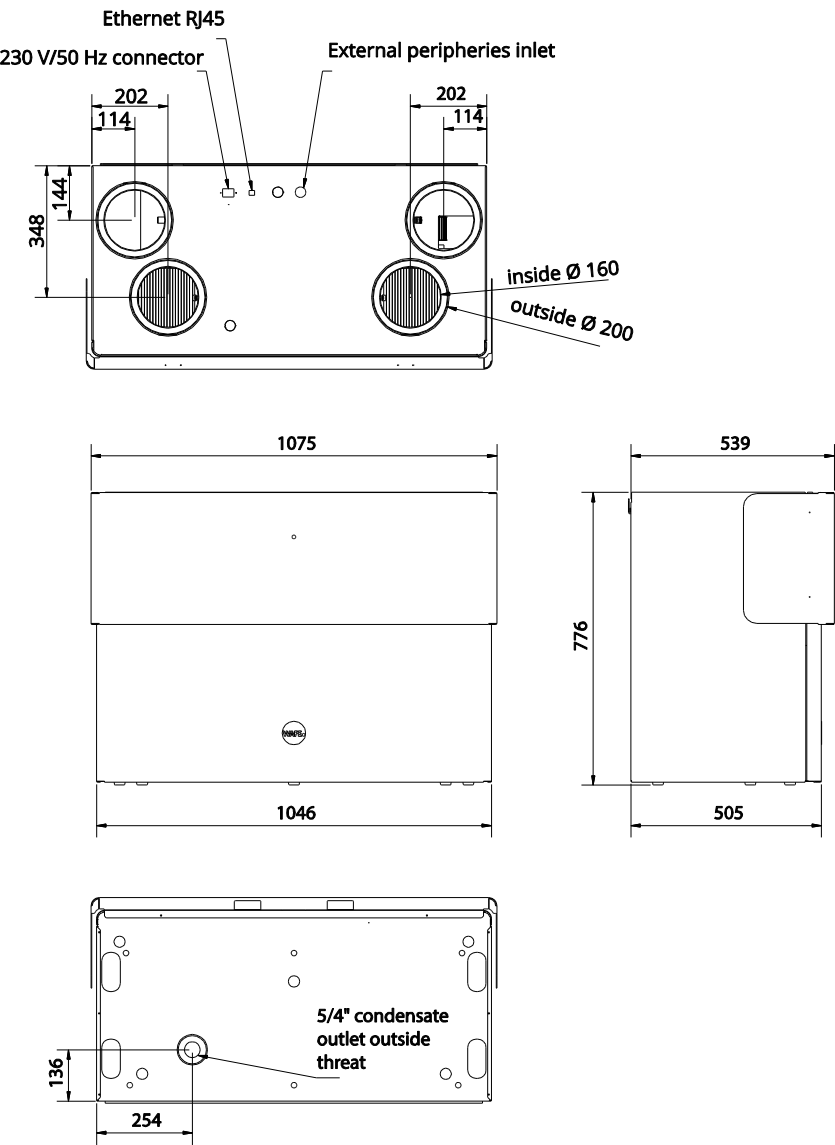


Figure 04: Technical drawing of the unit with decorative pull-out cover.

Unit exploded-view drawing

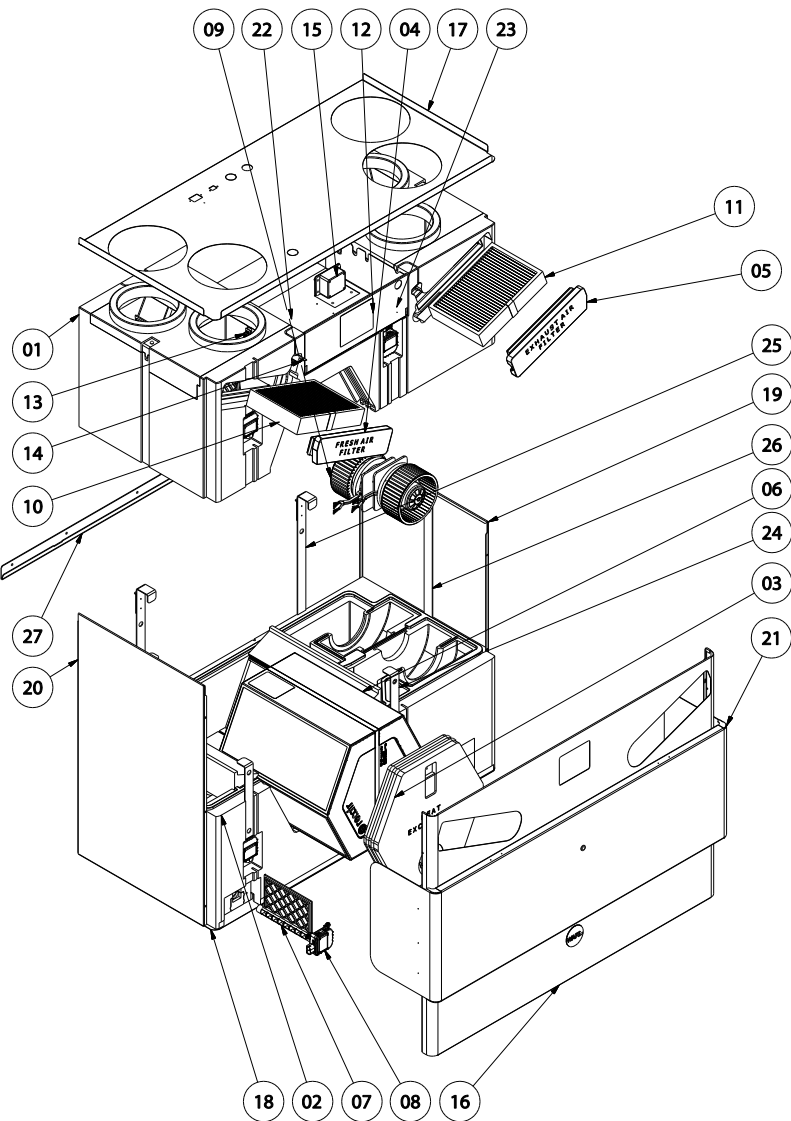


Figure 05: Exploded-view drawing of the unit with decorative pull-out cover.


BODY, TOP	01	1x
BODY, BOTTOM	02	1x
STOPPER, HEAT EXCHANGER	03	1x
STOPPER, FILTER — FRESH AIR	04	1x
STOPPER, FILTER — EXHAUST AIR	05	1x
HEAT EXCHANGER	06	1x
FLAP	07	4x
FLAP SERVO DRIVE	08	5x
FANS	09	2x
FILTER — FRESH AIR	10	1x
FILTER — EXHAUST AIR	11	1x
CONTROL PANEL	12	1x
SENSOR — HEAT AND HUMIDITY	13	4x
SENSOR— FILTER PRESSURE	14	2x
SENSOR — CO ₂	15	1x
PLATE — COVER, FRONT	16	1x
PLATE — COVER, TOP	17	1x
PLATE — COVER, BOTTOM	18	1x
PLATE — COVER, RIGHT	19	1x
PLATE — COVER, LEFT	20	1x
PLATE — COVER, DECORATIVE	21	1x
PLATE — HOUSING, ELECTRONICS	22	1x
PLATE— HOUSING, DISPLAY	23	1x
CLAMPING BELT, FRONT	24	2x
CLAMPING AND HANGING BELT, BACK	25	2x
CLAMPING BELT, SIDE	26	2x
WALL RAIL	27	1x

Unit anatomy

Body

The internal construction of the unit is made of high quality expanded polypropylene (EPP) body which guarantees perfect tightness and sound and temperature insulation without thermal bridges. It is a modern and premium alternative to now obsolete metal constructions.

Manufacturing process of all WAFE EPP bodies includes injecting a fine granulate under high pressure into massive aluminium moulds and subsequently hot steam baking them.

 **The result is a complex casting that allows us to offer the lightest, most compact energy recovery ventilation unit on the market in its category.**

Top body 01

The top EPP body consists of four air pipes and a space for mounting unit's electronic systems.

Bottom body 02

In addition to firmly anchoring unit's mechanical parts the bottom EPP includes a condensate outlet in case you plan to use it.

Table 03: List of components.

Stoppers 03 04 05

Filter and heat exchanger stoppers are manufactured with the same care as the rest of the EPP body. Do not be afraid to put more power into their handling and always make sure you plug them in as far as possible.

Recovery ventilation system

Heat exchanger and flaps 06 07

Heat exchanger inside your unit is the latest iteration of the classic duct counterflow type that has been improved and perfected over the years and is still considered to be the standard in air-to-air heat recovery.

Counterflow exchangers have the best parameters with regards to heat recovery efficiency and under normal conditions they never need to be replaced.

An alternative to counterflow heat exchangers are the membrane exchangers able to recover not only heat but also all the healthy humidity back into your home. This advantage is offset, however, by their low efficiency, high freezing temperature and the fact they need to be replaced every 5 to 6 years, thus increasing the costs of ventilation rapidly (average price of new membrane exchanger is about 670€).

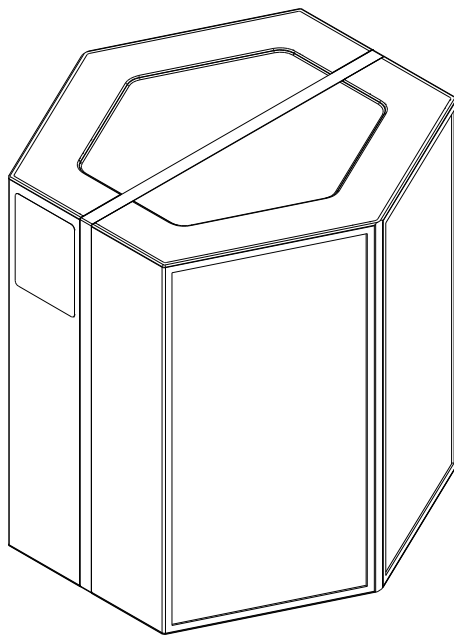


Figure 06: Counterflow exchanger provides a high efficiency heat recovery.

Due to our unique Enthalpic Flap System (EFS™) WAFE 350 EFS can recover both heat and humidity with a standard duct counterflow exchanger. Thanks to EFS™ you get the best of both worlds: low operating costs and reliability of the counterflow exchanger and the ability to recover humidity like with newer membrane exchangers.

Another great advantage of WAFE 350 EFS is elimination of the need to pre-heat the incoming fresh air: many other units do so at low temperatures to keep the water condensate inside them from freezing and to artificially increase their intake/outtake heat efficiency levels. Needless to say, they do so at the expense of overall economy of the unit's operation.

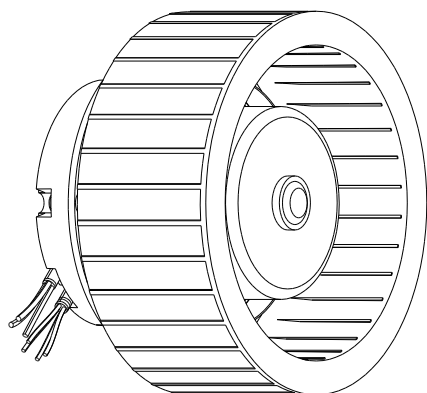


Figure 07: Powerful radial fan with forward curved blades propels the air inside and outside of your unit.

Fan 09

The unit is equipped with two electrically powered radial fans with forward curved blades and an integrated constant airflow function. Even at high speeds or sudden starts they remain quiet and reliable.

Filters 10 11

The production process of genuine WAFE filters is fully automated: their cardboard construction is cut by a German laser, synthetic filtration material is sliced at perfect right angles by Swiss blades and each piece is air-tightly isolated in the chamber vacuum sealer machine made in Italy.

End result is a precise product for the best price on the market.

WAFE 350 EFS filter portfolio currently contains four models with different fineness of filtration: **M5** (included) provide a high standard of air hygiene; **F9** is suited for areas with excessive levels of air pollution; and **F7/AC** composite filter with added active carbon particles filters out various odours and volatile organic compounds (VOC) produced by plants and animals as well as from cleaners, wall paints, new furniture and some building materials.

In contrast with other ventilation units that ask for filter replacement in pre-set time intervals (often too early or too late) WAFE 350 EFS — thanks to its just-in-time technology— monitors the *real* state of filter clogging. We do so by examining the growing pressure drop as detected by our pressure sensors and smart internal logic.

Earning money by selling you filters you don't really need is not what we do.

The need for filter replacement is indicated by yellow glowing diode on the control panel of the unit, digitally via e-mail or via personal notification on my.wafe.eu (if the unit is connected). For more information, see *WAFE 350 Maintenance / User maintenance / Replacing the filters*.

Control panel 12

Pulling down the black decorative plate (in case of unit Standard, The unit Optimum is without pull-out cover) reveals a simple four-line, two colour LCD WAFE 350 EFS control panel with two confirmation and two selection buttons and an information LED diode.

Nothing else is needed to control the basic functions of your unit - properly installed device (see chapter *WAFE 350 EFS Installation*) is capable of autonomous operation without any intervention from you.

i For advanced feature control such as Intense ventilation (without previously installed external button), Fireplace ventilation, Circulation and Night mode you need to log in to my.wafe.eu (see *WAFE 350 Operation / Unit control / Remote control via my.wafe.eu web application*).

The primary function of the panel is to provide a visual clue of your unit status. Blue glowing diode tells you: *"Do not worry. Just breathe. Live."* Any different colour requires your attention. See section *WAFE 350 EFS Operation / Unit control / Control via the LCD display*.

Sensors 13 14 15

WAFE 350 EFS is not only beautiful but smart and sensitive, too. Its complex logical operation is supplied with data from seven temperature, humidity, pressure and CO₂ sensors. Unit can then analyse the quality of air flowing through it and in **Intelligent mode** (see section *WAFE 350 EFS Operation / Operation modes*) respond flexibly to any changes, increase ventilation intensity on the fly or prevent potential damages.

Sheathing 16 17 18 19 20 21 22 23

Unit's cover plates are made of powder coated aluminium sheet. The top sheet has two break-in inlets for additional external accessories.

WAFE 350 EFS Standard is equipped with decorative pull-out cover. Version Optimum does not have decorative pull-out cover.

Their clean, beautiful lines are the result of creative collaboration between WAFE designers and engineers and the leading Czech design studio Anna Marešová Designers.

WAFE Anna holds several prestigious design awards in the field of product design: *Czech Grand Design Award* (2012, second place), *Dolce Vita Magazine/Prototype of the Year* (2011), *National Student Design Award* (2011, first place) and others. Her talent lends WAFE 350 EFS its industrial charm not often seen in devices to be installed in utility rooms.

Unit design, however, does not come at the expense of its practicality. The dominant black decorative plate is harmonized by central LED diode; pull the plate down along the side rails and you will reveal a simple control panel. Each cover plate (front, top, bottom and two lateral) is simple to remove and allows easy access to the interior of the unit.

WAFE 350 EFS INSTALLATION

i Information in the following chapter assume that your WAFE 350 EFS unit will be installed by certified WAFE service technician.

Any other form of installation without a previous agreement with WAFE s.r.o. may affect the warranty on your device.

Planning the installation

Construction readiness

Purchase and delivery of WAFE 350 EFS is preceded by consulting the parameters of the construction project with a responsible person.

In addition to the initial handover of the project parameters between two parties, make sure that at the time of installation the place of installation is prepared in accordance to the document *Construction readiness: WAFE 350 EFS Energy recovery ventilation unit*.

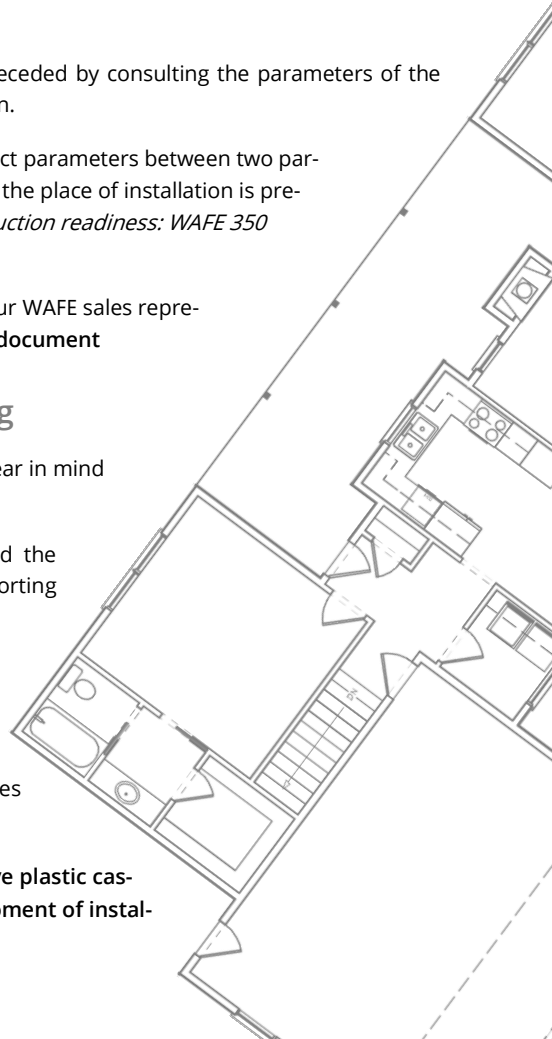
For the latest version of the document ask your WAFE sales representative or download it from www.wafe.eu/document

Transportation and unpacking

When transporting the unit, be careful and bear in mind the principles of working with heavy objects:

- Make sure that the transport path and the place of rest are empty before transporting the unit.
- Do not carry the unit over long distances on your own without a proper transportation aid.
- While lifting the unit up bend your knees and keep your back straight.

i The unit has to be stored in a protective plastic casing and in the original box until the moment of installation.



WAFE 350 EFS package includes:

- ❑ WAFE 350 EFS energy recovery ventilation unit
- ❑ M5 filter (supply air) / M5 filter (exhaust air)
- ❑ Wall rail
- ❑ Cardboard stoppers for air pipes (4x)
- ❑ 230 V/50 Hz cable
- ❑ User manual: WAFE 350 EFS Energy recovery ventilation unit
- ❑ Quick guide: WAFE 350 EFS Energy recovery ventilation unit

Report any missing components to your supplier immediately.

Installation and handover

Installation starts with the arrival of WAFE service technician and ends when the unit is handed over. The process consists of four steps requiring only minimum interaction from your side.

	TECHNICIAN ACTION	USER ACTION
ASSEMBLY OF THE UNIT ON THE WALL	Mounting the unit on the wall according to the project and building readiness.	None.
SETTING UP THE UNIT	Turning the unit on, setting it according to the project parameters via Setup menu directly in the unit.	None.
USER REGISTRATION	Creating a new user account and linking it to the identification number of the unit.	Filling required personal and contact data into a digital form together with WAFE service technician.
	Advantages available for registered users only: <ul style="list-style-type: none">• Remote control via my.wafe.eu web application• Access to mobile app• Dynamic user statistics• Automatic error message sending• Unit software updates resulting in new features and more efficient operation	
HANDING OVER THE UNIT	Final revision of the installation and filling the handover forms.	Signing the documents and taking the unit over.

Table 04: Unit installation process by WAFE service technician.

Congratulations! Your WAFE 350 EFS has been successfully installed.

WAFE 350 EFS OPERATION

WAFE 350 EFS has been designed for your maximum comfort. After installation and initial setup of operating values by WAFE technician (according to the construction project, see section *WAFE 350 EFS Installation / Installation and handover*), the unit needs little to no attention.

Operation modes

INTELLIGENT MODE	<p>The unit analyses its surroundings and through optimal ventilation keeps the CO₂ levels as low as possible.</p> <p>Recommended for general use.</p> <p>Requires manual activation and deactivation through my.wafe.eu.</p> <p>In case CO₂ sensors are damaged unit will automatically switch to the forced Weekly mode.</p>
WEEKLY MODE	<p>The unit provides ventilation according to its factory settings (constantly except for work-days from 8AM till 4PM) or according to its own time schedule set up at my.wafe.eu.</p> <p>Alternative to recommended general use.</p> <p>Requires manual activation and deactivation through my.wafe.eu.</p> <p>For other than default factory setting login to my.wafe.eu web application, activate the Weekly mode and set your own time schedule. Remember to confirm the new setting!</p>
HOLIDAY [OUT]	<p>Unit is in low power mode and ventilates the house once a day.</p> <p>Suitable when leaving the ventilated areas for extended periods of time.</p> <p>Requires manual activation and deactivation through my.wafe.eu.</p>
CIRCULATION	<p>The unit does not intake fresh air. The air circulates to spread out the heat or aroma in the building</p> <p>Activation and deactivation via my.wafe.eu.</p>
DEHUMIDIFICATION	<p>The unit primarily addresses the reduction of relative humidity in the building. EFS flap system remains in its position. The unit must be connected to the condensate drain. When temperature below -3°C, the unit can perform dehumidification function with SAFE DEHUM MODE.</p> <p>Activation of DEMUMIDIFICATION function and SAFE DEHUM is performed by technician in SETUP menu.</p>
ERROR	<p>The unit does not ventilate and is awaiting the error resolution.</p> <p>Automatically activated mode after encountering any errors.</p> <p>After switching to Error mode, please, follow the steps in section <i>WAFE 350 EFS Maintenance / Problem solving</i>.</p>

Table 05: Operation modes of WAFE 350 EFS.

Unit control

Control via LCD display

The unit's control panel consists of an LCD display, four buttons with symbols and a LED diode.

Confirmation button—left/right (see *Figure 08*) are used to choose between **Option 1 (Left)/2 (Right)** (see *Figure 09*). Pressing the Confirmation button always activates the option on the topmost line of unit display. To select a different option, scroll the menu by pressing **Selection button—up/down** so that your desired option is displayed on the topmost line of unit display.

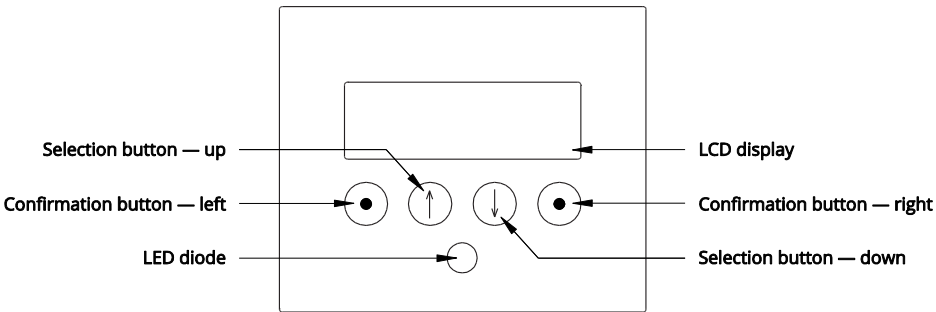


Figure 08: Buttons on the control panel.

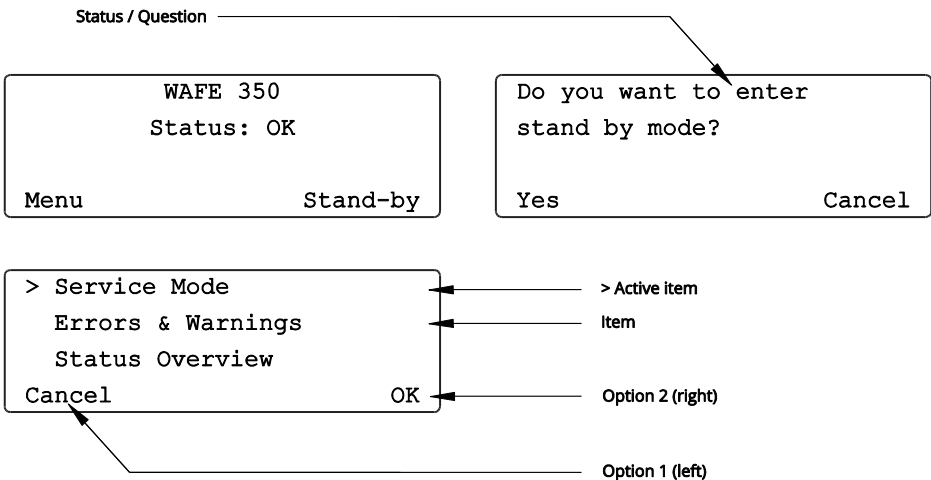


Figure 09: The menu structure.

Control panel LED diode has four light modes.

LED COLOUR		UNIT STATE	REQUESTED ACTION
Blue	Glowing	The unit is on. Everything is ok.	Breathe. Live.
Yellow	Glowing	The unit is on: incoming message.	Check the LCD display or my.wafe.eu web application.
Red	Glowing	The unit is off: Error!	Check the LCD display or my.wafe.eu web application and follow the instructions in section <i>WAFE 350 EFS Maintenance / Problem solving</i> .
Green	Flashing	The unit did not change its state; green flashing light signal an ongoing data transfer.	Nothing. Do not unplug the unit from the power grid!

Table 06: LED light modes and related unit states.

Remote control via my.wafe.eu web application

Remote control of the unit is possible only if:

- The unit is connected to internet.
- You have been successfully registered as WAFE user and linked to your unit.

To control the unit remotely login to **my.wafe.eu** web application with your user identification data.

i Any command entered through **my.wafe.eu** might take up to one minute to reach the unit.

First login to web application

After your user account registration, you'll receive an activation email with your login details. After you first log in and choose a new password the unit is ready for remote control via **my.wafe.eu** web application.


Special cases

Anti-freeze protection

Thanks to its unique flap system, WAFE 350 EFS can operate down to -15 °C temperatures without the need to pre-heat the incoming outside air. If the outside temperature goes below this level, the fan turns off and the ventilation stops in order to protect the unit. The unit resumes its operation once the temperature returns within the -15 to +40 °C limit.

Operation of the unit along with the fireplace

WAFE 350 EFS energy recovery ventilation unit is pressure-neutral: the volume of fresh air brought in is equal to the volume of waste air ejected from the building. In contrast, fireplace systems are pressure-negative. To avoid the formation of negative pressure inside your home when operating the unit along with the fireplace, the **Fireplace ventilation** function must be activated during the whole time the fireplace is active. You can do so through my.wafe.eu web application (requires user registration, see *WAFE 350 EFS Installation / Installation and hand-over*).

 **Do not forget to turn the function off once the fireplace is extinguished!**

In case a heat or energy recovery ventilation unit like WAFE 350 EFS is operated simultaneously with the fireplace (stove, kiln, etc.), all applicable regulations and standards must be complied with. Separate fresh air intake for the fireplace must be provided. We also recommend having the ability to close the fireplace to minimise the possibility of negative pressure build up in the combustion chamber or of fumes from the fireplace leaking into the interior.

Protection against high humidity

If the customer requires activation of dehumidification on the unit, the unit will work in special mode, which will reduce internal relative humidity in the building. In such configuration the unit must be connected to the condensate drain. The unit is not industrial dehumidifier, and in some combinations of external and internal conditions the condensation is so large that it can cause a leakage from the condensate drain. It is therefore not recommended to permanently use the device in an environment with relative humidity higher than 70%. Extended option (SAVE DEHUM) allows the removal of humidity without the use preheating with the limitation of heat recovery at temperatures below -3°C.

WAFE 350 EFS MAINTENANCE

In order to provide your unit long and problem-free life, periodic maintenance by a WAFE service technician is necessary.

As a user you need to take care of only two regular maintenance procedures: exchanging the filters and cleaning the façade outlets.

Maintenance by user

Replacing the filters

Newly purchased WAFE 350 EFS comes with **M5** filter filter (supply air) and **M5** filter (exhaust air) already preinstalled. Thanks to sensitive pressure sensors and internal logic your unit can accurately detect the amount of clogging in each filter.

- ❶ Blue glowing LED diode in the middle of the decorative plate **21** of the unit signals a problem-free operation of the unit. That does include still having both filters clean.
- ❷ Yellow glowing LED diode accompanied with a notification *„Fresh/Exhaust filter is near the end of a lifetime“* on the unit display or on my.wafe.eu signals that fresh (M5)/exhaust (M5) filter has exceeded a recommended degree of clogging. The unit remains functional until the filter clogging reaches the critical level.

If you do not have a stock of replacement WAFE filters, contact us promptly at www.wafe.eu/filters or call +420 273 139 700. Make sure to use high-quality WAFE filters only. Original filters can be identified by a WAFE logo.

- ❸ Red glowing LED light accompanied with an error message *„Fresh/Exhaust filter lifetime ended. Please, replace now!“* on the unit display or at my.wafe.eu signals completely clogged fresh M5/exhaust M5 filter. The unit switches into Error mode and will not operate until the filters are replaced.

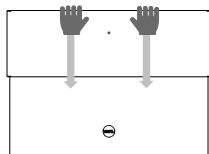
Replacing the filters is necessary in two cases, whichever comes first:

- 12 months have passed since the last filter replacement.
- The unit has switched to an **Error mode** (identifiable by the glowing red LED diode and an error message on the unit display).

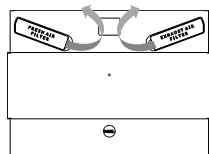
⚡ The unit cannot operate without filters.

Filter replacement procedure

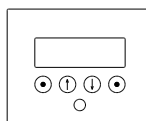
- ⚡ **Before starting the filter replacement procedure make sure the unit is in Filter replacement mode. You can activate it only via unit display by selecting and confirming the appropriate option**



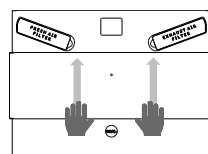
01 Press the decorative cover downwards with both hands until it reaches its lower end position and check the message on the display. Follow the instructions on the screen.



02 Pull the corresponding filter stopper out of the unit body as shown in the picture above. Pull out the old filter by its strap and insert a new one. Mind the correct position of the insertion according to the instructions on the filter. Return the stopper as far to the back as it fits.



03 Confirm the completion of the replacement procedure on the display keyboard as instructed. The unit will resume its operation.



04 Use both hands to push the decorative cover upwards. The cover will automatically move into its upper end position.

The unit Optimum is not equipped with the sliding decorative cover. The filter plugs are freely accessible. When replacing the filters, proceed from step 02.

Cleaning the air diffusers

Air diffusers optimise the direction and flow of intake and exhaust air. For better air permeability, it is required to provide periodic cleaning of both interior and exterior air diffusers at least once per 6 months. To do so wipe the edges and insides of the diffusers and remove any sediment dirt with a dry cloth. Avoid using water and chemicals unless absolutely necessary.

Technical support

In case of an error contact WAFE customer service immediately at +420 273 139 700.

For easier problem identification, note the error code number (displayed on the unit display) and the type of your unit (see the nameplate on the side of the unit).

While the unit is not operating due to the error, your home is left without ventilation. This results in the reduction of indoor air quality and can lead to increased humidity or moulding. Avoid prolonged shutdowns of your ventilation system.

- ❗ **During shorter periods of absence, it is appropriate to leave the unit in Intelligent mode. During longer breaks leave the unit in Holiday mode [Out].**

WARRANTY AND RESPONSIBILITY

Warranty

The warranty does not cover the damage of the unit or its individual components caused by:

- improper handling or storage,
- non-compliance with the instructions provided in the manual,
- incorrect assembly not provided by the manufacturer,
- arbitrary tampering and misuse,
- neglecting the prescribed mandatory maintenance (such as a failure to replace clogged filters, etc.),
- use or installation of parts that have not been approved in writing by the manufacturer (e.g. operating the unit using non-original WAFE filters),
- non-compliance with the requirements for connected devices supplied by a third party (protection, security, etc.),
- violent damage, natural disaster or extreme operating conditions and influences, the effects of electromagnetic interference, etc.

The warranty also does not cover normal wear and tear.

Responsibility

WAFE 350 EFS energy recovery ventilation unit has been developed and manufactured for use in ventilation systems for residential applications. Any other way of installation and operation than the one approved by the manufacturer is considered inappropriate and can cause damage to the unit or property or personal injury for which the manufacturer cannot be held responsible.

 The manufacturer shall not be held responsible or liable for damages caused by:

- non-compliance with a proper installation and safety instructions stated in this manual and applicable regulations,
- failure to follow the instructions for operation, service and maintenance,
- the use of spare parts and accessories not supplied or prescribed by the manufacturer,
- improper, incompetent or incorrect installation,
- pollution of the system,
- normal wear and tear,
- expiration of the warranty period.

NOTES

[illegible]

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



USER MANUAL: WAFE 350 EFS ENERGY RECOVERY VENTILATION UNIT
v2.0

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