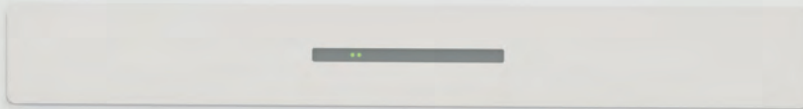


 THESAN

# Aircare ES

FRESH AIR ON DEMAND



Ductless Controlled Mechanical Ventilation system with heat recovery.

# Aircare ES

## Single Room Controlled Mechanical Ventilation system



Controls and assures the correct change of air in closed environments



Filters up to 99.9% of pollutants



Uses a heat exchanger to recover the thermal energy in the exhaust air

# Works for you 24/7:

## CHANGING INDOOR AIR

It protects you from hazardous but odourless and colourless pollutants by changing indoor air. Except with clean air.

Aircare replaces indoor air in just 2 hours.



## FILTERING THE AIR IN YOUR HOME

If the outside air is harmful, it must be filtered before you breathe it.

Aircare is the most efficient filtration system capable of simultaneously stopping smog and noise to protect your health.



## SAVING HOUSEHOLD ENERGY

Opening the windows wastes energy without improving the air. Do you want clean air in your home without spending too much?

Aircare is the perfect appliance to make you feel healthy and well and keep energy consumption down. It boosts your comfort but not your power bills.



# WHY CHOOSE AIRCARE ES?

Aircare ES is a sustainable choice

- > It assures the correct air exchange flow in new and refurbished residential buildings, offices, hotels and schools.
- > It keeps the quality of indoor air constant and controls the level of humidity.
- > Improves the building's energy rating which increases its value.
- > Low consumption and quiet operation.
- > No special maintenance required.
- > It's discreet, elegant and easily disguised.
- > It's perfect if you're not a fan of air-conditioning but you want to cool down rooms more naturally, particularly at night.

## AIRCARE GIVES YOU EVERYTHING YOU NEED



complete change  
of indoor air in  
2 hours



humidity  
control



high filtration  
levels - up to F9\*



heat  
recovery of  
up to 80%



App or remote  
controlled



5 speeds with  
automatic  
programme

← Stale indoor air  
is exhausted

→ The filtering system  
cleans the supply air

\* H11 available on request.



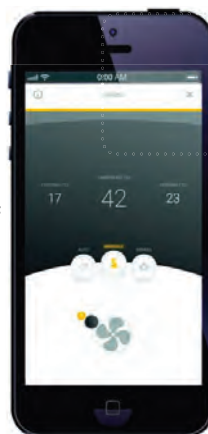
## POWER, SIMPLICITY AND CONTROL ARE ITS STRENGTHS.

Using and adjusting Aircare ES is a breeze.

The simple, convenient five-button remote control selects different speeds and controls functions:



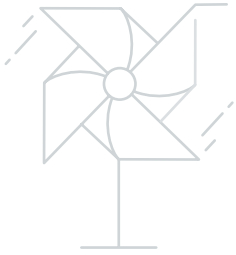
- > On/Off
- > Automatic mode
- > Pre-heating system start (if included)
- > Increase/Decrease speed
- > Enable/Disable BYPASS



DOWNLOAD THE APP  
(ANDROID AND IOS)



- > Remote control of all functions
- > Personalised configuration
- > Constant control of indoor temperature
- > Control and management of indoor humidity



## NOTHING PROTECTS YOU LIKE AIRCARE

Aircare ES **optimises wellbeing at home** because it filters up to 99.9% of outdoor pollutants.

**Indoor air** is often much more polluted than outdoor air, and this can cause **a lot of discomfort**, in the form of headaches, lack of concentration and drowsiness, as well as breathing difficulties.

### Advantages

- > Simultaneously stops smog and noise.
- > Constantly adjusts the levels of indoor humidity.
- > **Prevents growth of mould.**
- > Keeps rooms dry, healthy and uncontaminated.





It protects you from hazardous but odourless and colourless pollutants by changing the indoor air. **Except with clean air.**



**90%**

The time spent indoors where pollution is created (home, workplace, school)<sup>1</sup>



**20%**

Buildings with one or more signs of dampness, as indicated in studies in several European countries, Canada and the United States<sup>2</sup>



The air in homes, workplaces and schools is much more polluted than the air on the streets.

**OPEN  
WINDOWS**



**CLOSED  
WINDOWS**

Too cold or too hot

Waste of energy

Draughts

Outside noise

Possible break-ins

No filtration  
of supply air

Build-up of indoor  
pollution

No air change

Sealed building

High risk of mould

Persistence of  
unpleasant smells

Sick building  
syndrome



**2 mln**

Premature deaths every year, in the world, from fatal diseases caused by indoor air pollutants<sup>3</sup>



**Radon**

Second most common cause of lung cancer in the world<sup>4</sup>



## How can we protect ourselves?

By changing the air with controlled mechanical ventilation.

According to the World Health Organization guidelines for indoor air quality (2009), **a sufficient air change is necessary**, to guarantee acceptable levels of comfort and to protect the occupants from adverse health effects caused by an excess level of indoor-generated pollutants.

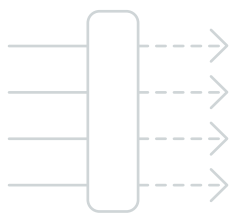
**Aircare ES is perfect: it filters, cleans and returns the air to you "ready to breathe".**

1. Unione Europea - ECA report n°23 Ventilation, Good Indoor Air Quality and Rational Use of Energy

2. WHO - Guidelines for indoor air quality: dampness and mould - 2009

3. WHO - World Health Organization

4. WHO - Handbook on indoor radon - 2009



## AIRCARE ES **FILTERS** A LOT. **FILTERS** FOR A LONG TIME. **FILTERS** FOR REAL.

Aircare ES is the most efficient filtration system on the market that can simultaneously stop smog and noise to protect your health.

It is fitted with a multi-system filter that eliminates 100% of fine particles with a diameter of more than 10 microns, in addition to pollen, dust mites, spore and even bacteria.

Aircare ES helps to eliminate CO<sub>2</sub>, as well as excess relative humidity indoors, VOCs and Radon.

The air supplied from outside is filtered and brought to the same temperature as the room, without causing sudden changes in temperature, to ensure a correct air change.



IN

OUT

### INDOOR POLLUTION

CO<sub>2</sub>  
SMOKE  
MOULD AND CONDENSATION  
RADON  
DAMPNESS  
VOC

### OUTDOOR POLLUTION

PM<sub>2.5</sub>  
FINE  
PARTICLES

PM<sub>10</sub>  
FINE  
PARTICLES

BACTERIA  
HYDROCARBONS (HC)  
POLLENS  
NOISE  
SMOG  
CO<sub>2</sub>



# AIRCARE ES CONSTANTLY SAVES YOU MONEY

AIRCARE ES pays for itself-

it's the smart choice **to drastically reduce:**

## > MAINTENANCE COSTS

Removing mould and dampness, repairing walls, painting walls.

## > ENERGY COSTS

Lower heating and cooling/air-conditioning costs.

## > PERSONAL COSTS

Medical examinations, tests and treatments for ailments caused by breathing polluted air.

In short, choosing Aircare ES is the **right choice**.

## CASACLIMA and TÜV guarantee the performance of Aircare ES

Aircare ES is:

- > the first **ductless mechanical DCV system** to obtain the CasaClima Quality Label
- > TÜV certified according to test standard UNI EN 13141.

Quality Certification issued by an independent Body (TÜV) is the only thing that guarantees that the device will do what it promises, meeting all the provisions of applicable legislation.

The CasaClima Quality Label:

- > **selects the best systems in the DCV market**
- > **clearly and transparently informs users and designers of the requirements that determine the quality of a DCV system.**

## QualityProduct

company: Thesan

product: AirCare ES

ID-Nr.: 4.2-001

category: non-ducted ventilation unit

Recuperative heat exchanger to transfer total thermal energy



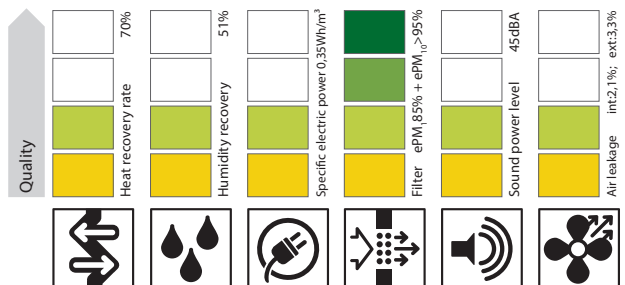
Airflow range  
 $Q_{\text{supply air}} = 15-41 \text{ m}^3/\text{h}$

☒ Ventilation

☐ Heating

☐ Cooling

☐ Dehumidification



Aircare ES is the perfect appliance to generate wellbeing and to minimise energy consumption.

## ECODESIGN energy label

Commission Regulation (EU) No 1253/2014 and Commission Delegated Regulation (EU) No 1254/2014 supplementing Directive 2010/30/EU establish energy labelling requirements for ventilation units.

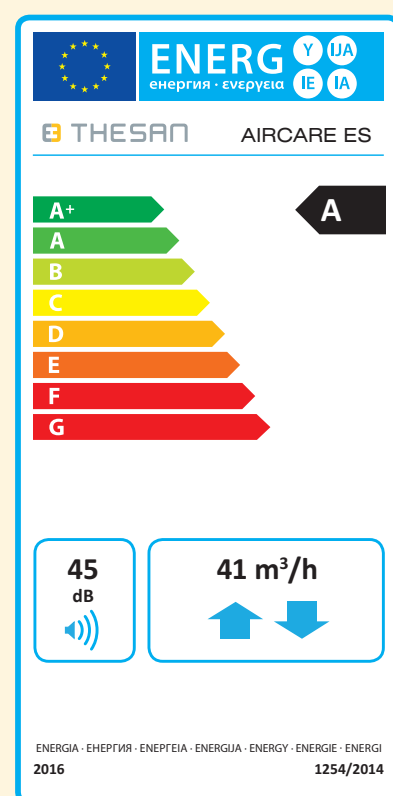
They encompass ecodesign requirements for systems with an electric power input of more than 30 W per air stream. Ventilation units (e.g. Single Room systems) with very low energy consumption are exempted from the labelling requirements.

Aircare ES does not require an energy label because it consumes no more than 20 W.

When Aircare ES is correctly sized for the home it is to be installed in, it assures the flow rate required by ISO 17772-1:2017 of 14.4 m<sup>3</sup>/h per person, with an excellent operating efficiency of 82%.

This performance level is extremely high for a single-point system; at the same time, it is fully compliant with the standard in terms of air change.

It is important to consider that, in order to achieve a higher level of efficiency, the correct air exchange required may be compromised, which in turn means not being compliant.



## BIO-SAFE® Validation Seal

The Certification of Environmental Health for residential skins is an important principle of prevention and protection of health.

We spend most of our time indoors and often we are unable to associate our daily ailments (headaches, drowsiness, irritability, insomnia, allergies or rhinitis just to name a few) with the suspicion that they may originate from the environment.

Aircare ES obtained the Bio-Safe® endorsement stamp, a mark that guarantees indoor living health and comfort.

Bio-Safe® certifies the health of rooms.

The products that received this validation were tested according to the Bio-Safe® protocol, as follows:

- > laboratory tests conducted in test chambers (UNI EN 16000) to verify their emissions potential;
- > environmental sampling (UNI EN 14412) to assess the level of indoor air purification achieved in the rooms equipped with the DCV system.





## AIRCARE ES DESIGN OBJECT

Aircare ES stands out for the **streamlined, elegant design**, that is typical of the unmistakable Pininfarina style. It seamlessly complements any architectural concept to become **part of the decor**.

*pininfarina*



## The almost invisible revolutionary resource

Aircare ES is almost invisible from the outside. Indoors it has a **practical and pleasantly high-tech look**.

It's perfect for:

- > **residential use** (apartments, single-family homes, living areas or bedrooms)
- > **non-residential use** (shops, bars, offices, hotels, patient rooms in health facilities and yachts).

Light and compact, Aircare ES **is quick and easy to install**, adapting to every need and every type of interior decor.



## Aircare ES

More versatile than any other system  
Shall we bet on that?



### Aircare ESI (recessed)



Horizontal  
installation  
above window



Vertical  
installation  
alongside  
window



Horizontal  
installation under  
window sill

Aircare ESI can be:

- > recessed into the separate counterframe or masonry work around the edges;
- > recessed into the shutter box (if there's room).

This option gives a **dual advantage**: glazing is not reduced, and existing doors and windows do not need to be replaced.

Aircare ES disappears, it is **completely hidden**: the only visible element is the cover panel, which **can be mounted flush or protruding**. Excellent performance combined with utmost respect for the decor.





*pininfarina*

## Aircare ESW wall-mounted

### Aircare ESL frame-fitted

Perfect option if replacing doors or windows.

- > Quick installation.
- > No special masonry work required.
- > A 10 cm space between the frame and the counterframe is all you need.
- > No added cost: the fitter will install Aircare ES at the same time as the window or door.

Perfect option in already occupied homes where no doors or windows are to be replaced and no masonry work is to be carried out.

Wall-mounted Aircare ES is easy to install on any wall with two simple holes.

It is in this option, where the device will protrude a little from the wall, that Aircare Es reveals its advantages of minimal look and adaptability to the decor in place.



# AIRCARE ES

## PERFECT BALANCE



### AIRCARE ES

## AIR CHANGE WITHOUT COMPROMISING

Aircare ES is equipped with an enthalpy heat exchanger, which enables latent and sensible heat recovery.

The heat exchanger guarantees:  
> Maximum thermal efficiency (82%)  
> > Total change of the air in 2 hours.

With enthalpy heat exchange technology, it would be possible to increase the efficiency rate to 90% but this would compromise the correct air change.

Aircare ES **prioritises** the correct air change ratio (as required by legislation), settling on an **optimal energy efficiency rate of 82%**.

Aircare ES **integrates perfectly** with all heating and climate control systems already present or planned.

Aircare ES **is super easy** to control, use and service.

# Everything you need to know about AIRCARE ES

Measurements taken in compliance with EN 13141-11



## Sound pressure

**LPA27dB at 3 m**  
in free-field conditions  
(less than the background  
noise in a library)



## Sound insulation

**Dnew=53 dB**  
with hoods open

**Dnew=55 dB**  
with hoods closed

sound insulation of a very  
efficient window  
**Dnew=45 dB**



## Thermal transmittance

**Max 0,3 W/m²K**  
(1.5 W/m²K for an  
efficient window)



## Humidity conditions

No water drainage  
required.



## Power supply

**110-230V / 50 - 60 Hz**



## Safety class

**II**



## Degree of protection

**IPX4**



## Acceptable operating temperature

**Min -20°**  
**Max 50°**

## The real comparison comes into play here:

(*) Speed	(*) Flow rate [m³/h]	(*) Sound Power Level LwA [dBA]	(**) Sound Pressure Lp (at 3 m under free-field conditions) [dBA]	(***) Sound pressure Lp (estimated for a normalised environment) [dBA]	(*) Thermal efficiency %	Power consumption [W]
<b>1</b>	15	37	19	30	82	4,6
<b>2</b>	20	40	22	33	-	5,8
<b>3</b>	30	45	27	38	74	10,3
<b>4</b>	35	48	30	41	-	14,6
<b>5</b>	41	51	33	44	69	20,6

(\*) Measurements taken in compliance with EN 13141-8

(\*\*) Data provided to enable comparison with the declarations of competitors

(\*\*\*) This evaluation refers to measurements taken in the middle of a room in a normalised environment. Here, a normalised environment has a reverberation time of 0.05 seconds.



# ESW



# ESL

# ESI



## AIRCARE ES

### ADAPTS TO YOUR NEEDS. ALL OF THEM

È imbattibile per :

> **Versatility:**

lots of different installation options

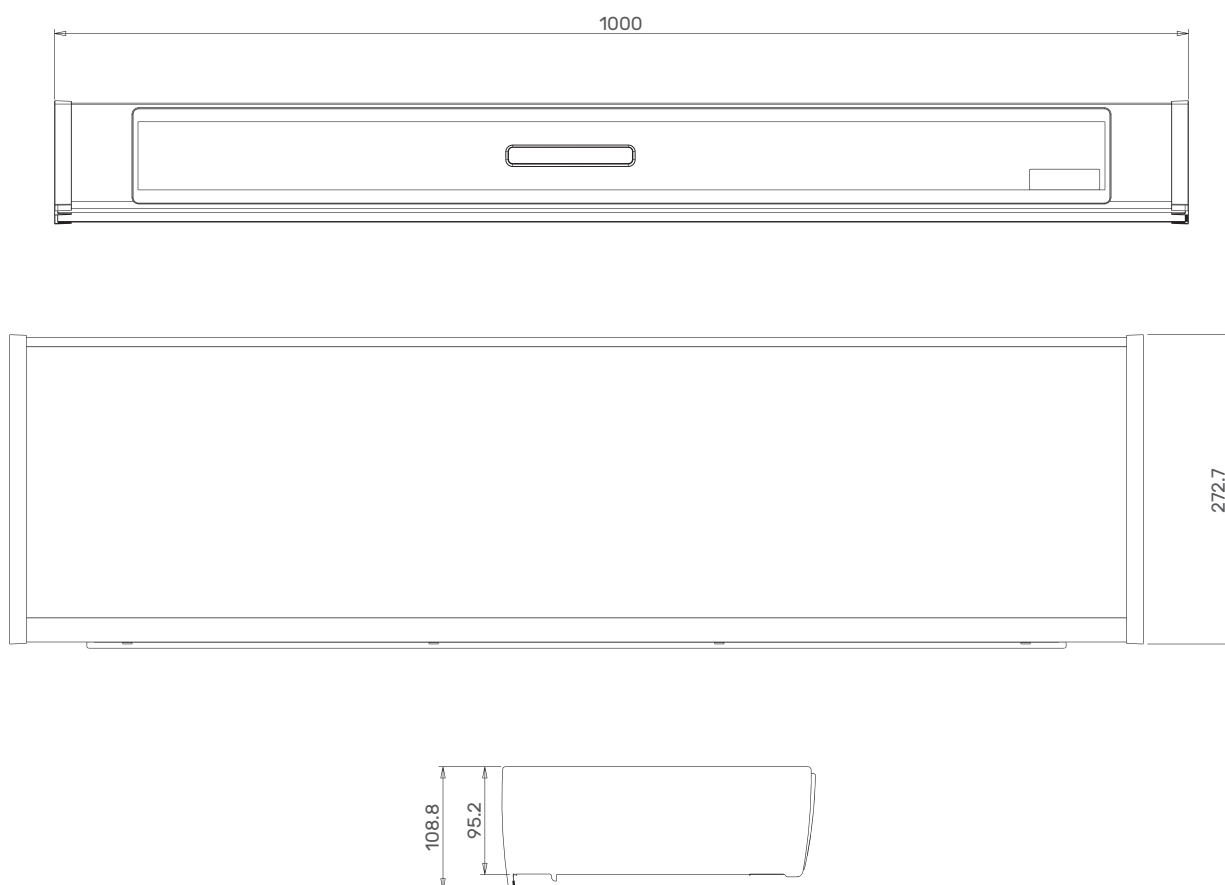
> **Compactness:**

best ratio between size of the device  
and its air change capacity

> **Customisation:**

the most comprehensive selection of  
port positions

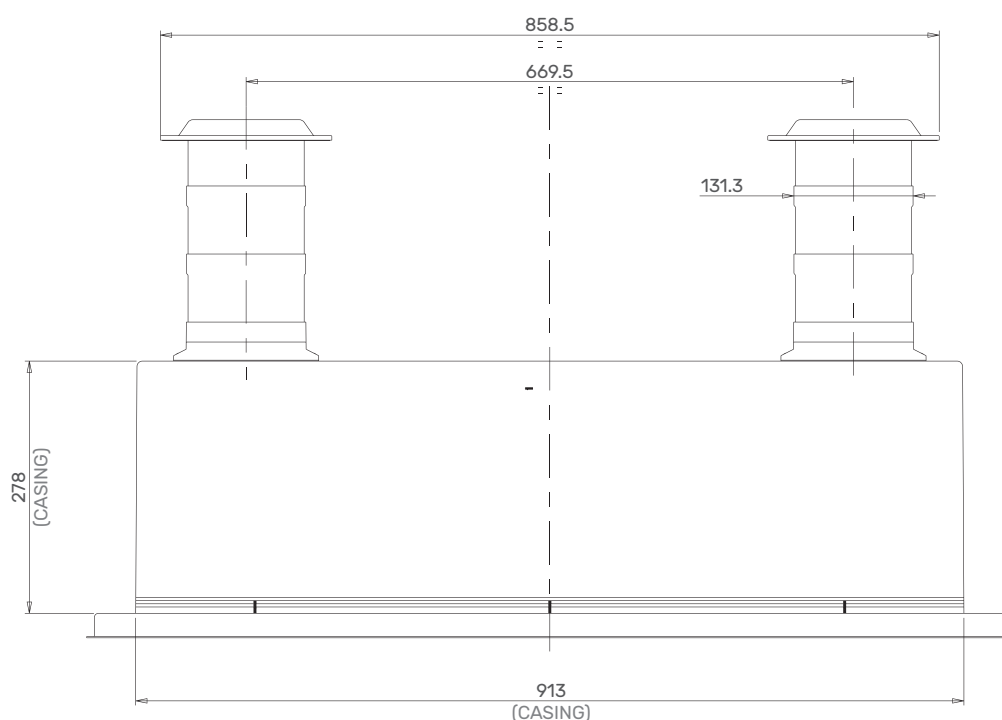
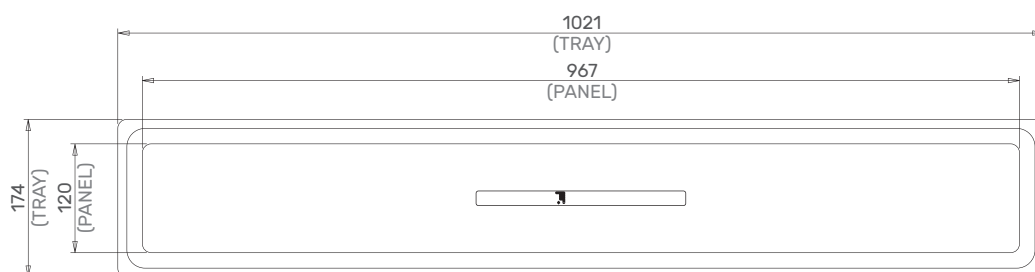
## AIRCARE ES (FRAME-FITTED)



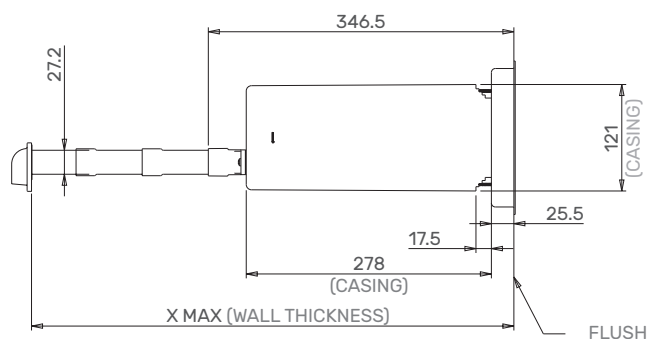
Minimum width of frame (1 m).  
For profiles of up to 170 mm thick.

## AIRCARE ES (RECESSED)

### Horizontal with flush panel



X MAX mm	PORT L = 70 mm	EXTENSION L = 75 mm
<b>396</b>	1 + 1	NO
<b>471</b>	1 + 1	1 + 1
<b>546</b>	1 + 1	2 + 2
<b>621</b>	1 + 1	3 + 3
<b>696</b>	1 + 1	4 + 4
<b>771</b>	1 + 1	5 + 5
<b>846</b>	1 + 1	6 + 6



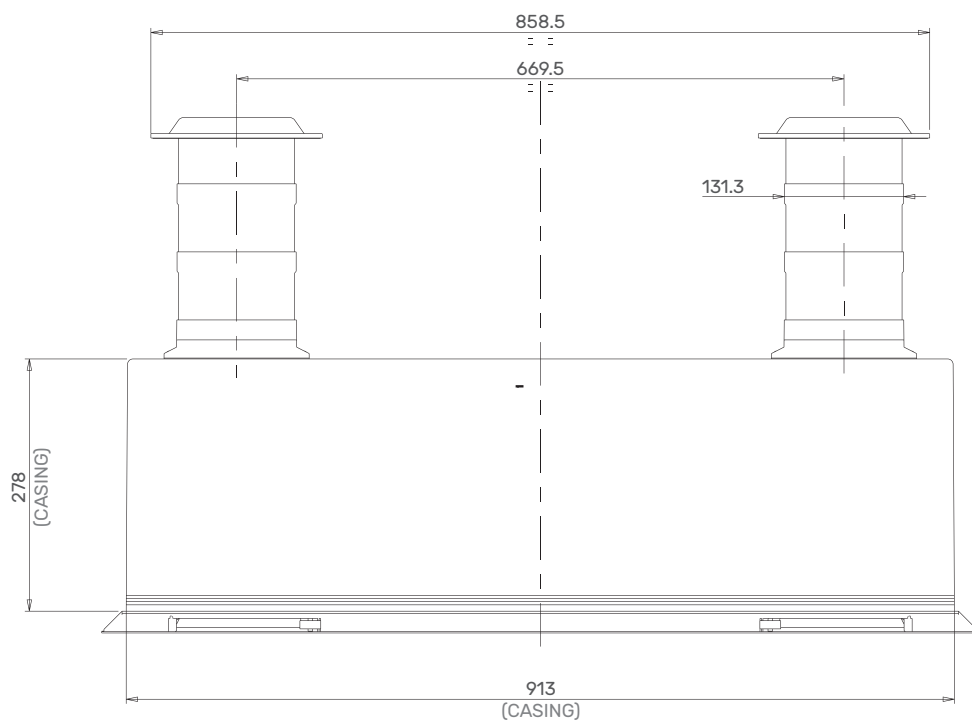
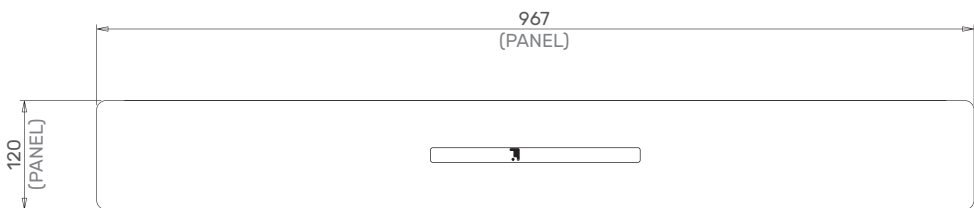
If the wall is thinner than the thicknesses in the table, just file down the extension or the port when installing.



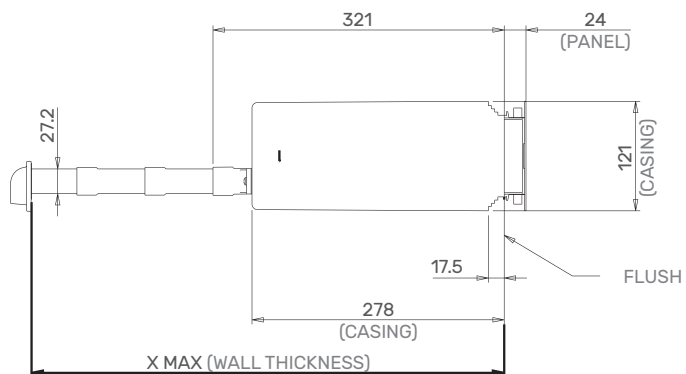
Vertical installation also possible



AIRCARE ES (RECESSED)  
Horizontal with protruding panel



X MAX mm	PORT L = 70 mm	EXTENSION L = 75 mm
<b>371</b>	1 + 1	NO
<b>446</b>	1 + 1	1 + 1
<b>521</b>	1 + 1	2 + 2
<b>596</b>	1 + 1	3 + 3
<b>671</b>	1 + 1	4 + 4
<b>746</b>	1 + 1	5 + 5
<b>821</b>	1 + 1	6 + 6

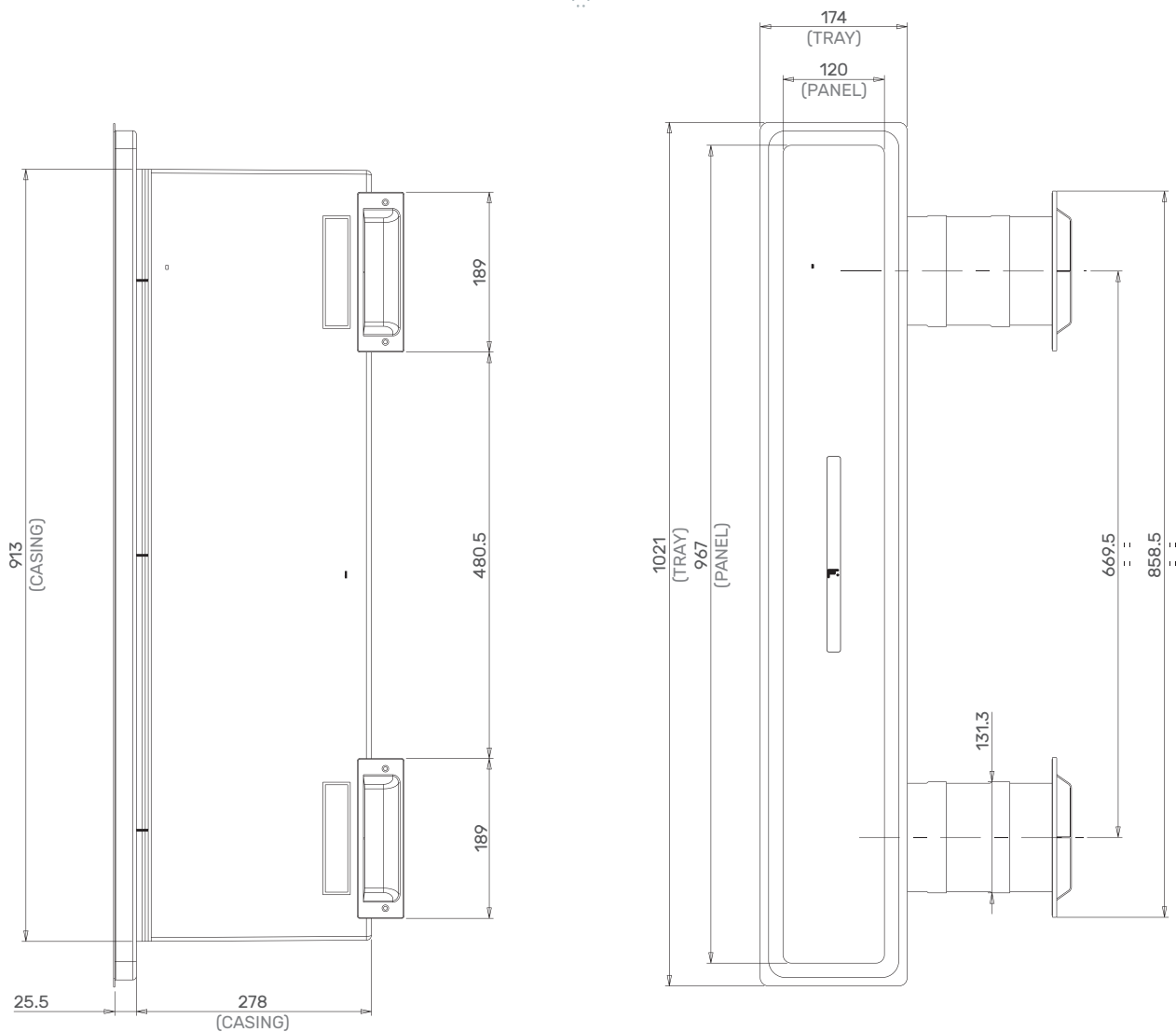


If the wall is thinner than the thicknesses in the table, just file down the extension or the port when installing.

➡ Vertical installation also possible

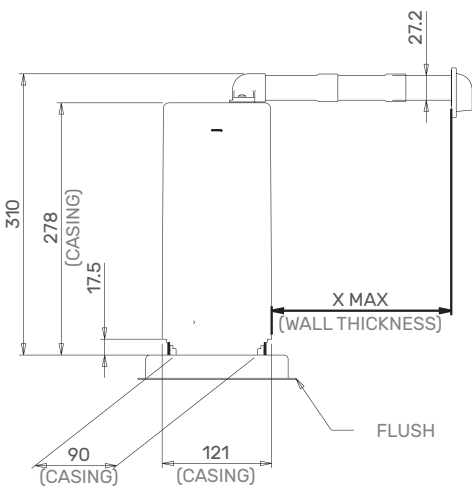
# AIRCARE ES (RECESSED)

## Vertical with flush panel



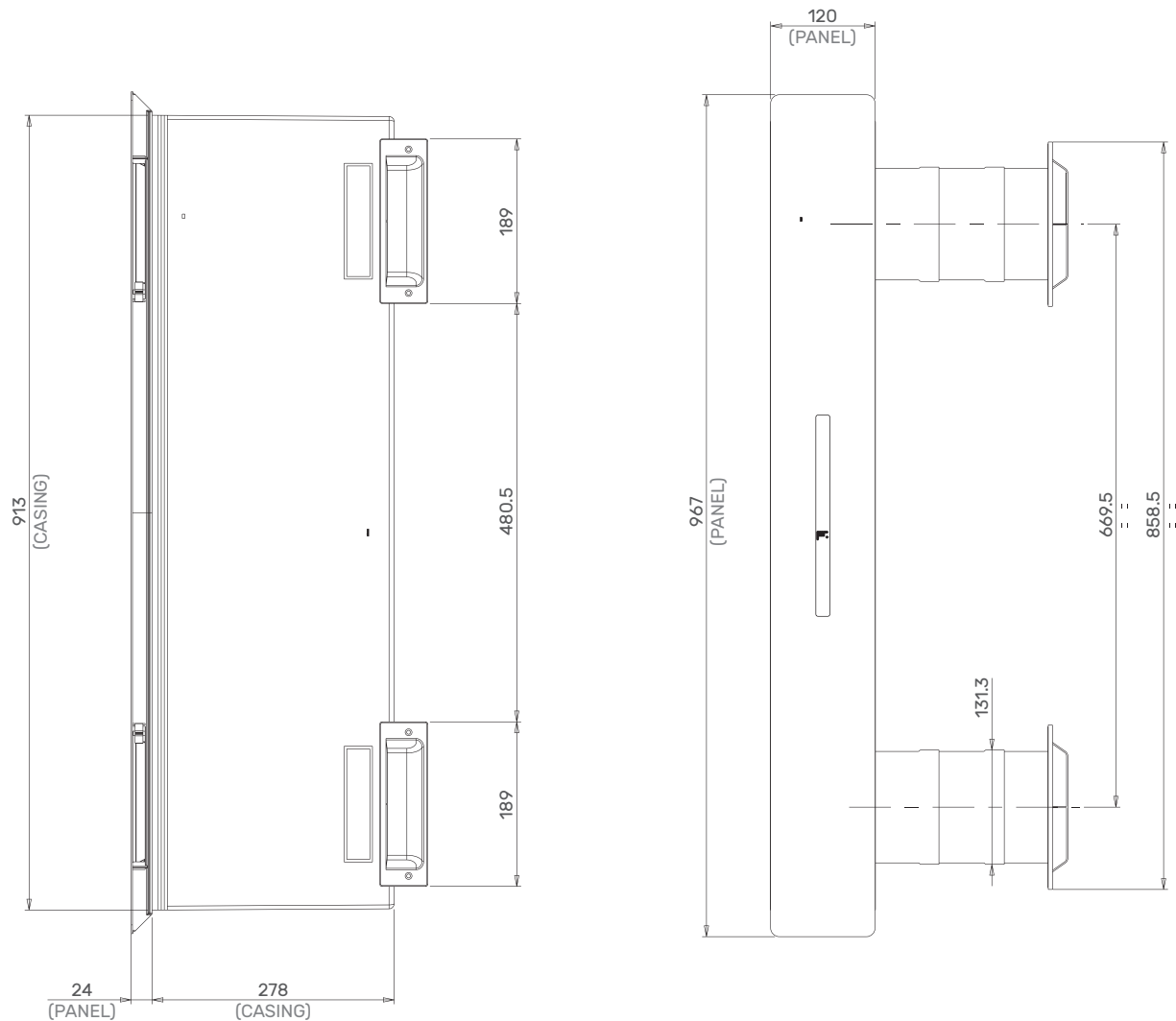
X MAX mm	PORT L = 70 mm	EXTENSION L = 75 mm
48	1 + 1	NO
123	1 + 1	1 + 1
198	1 + 1	2 + 2
273	1 + 1	3 + 3

If the wall is thinner than the thicknesses in the table, just file down the extension or the port when installing.



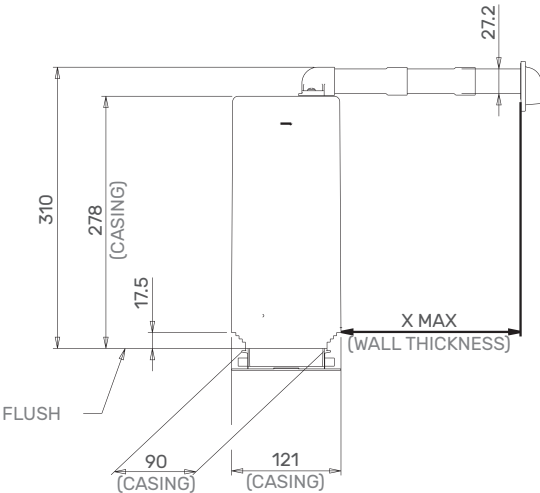
# AIRCARE ES (RECESSED)

## Vertical with protruding panel



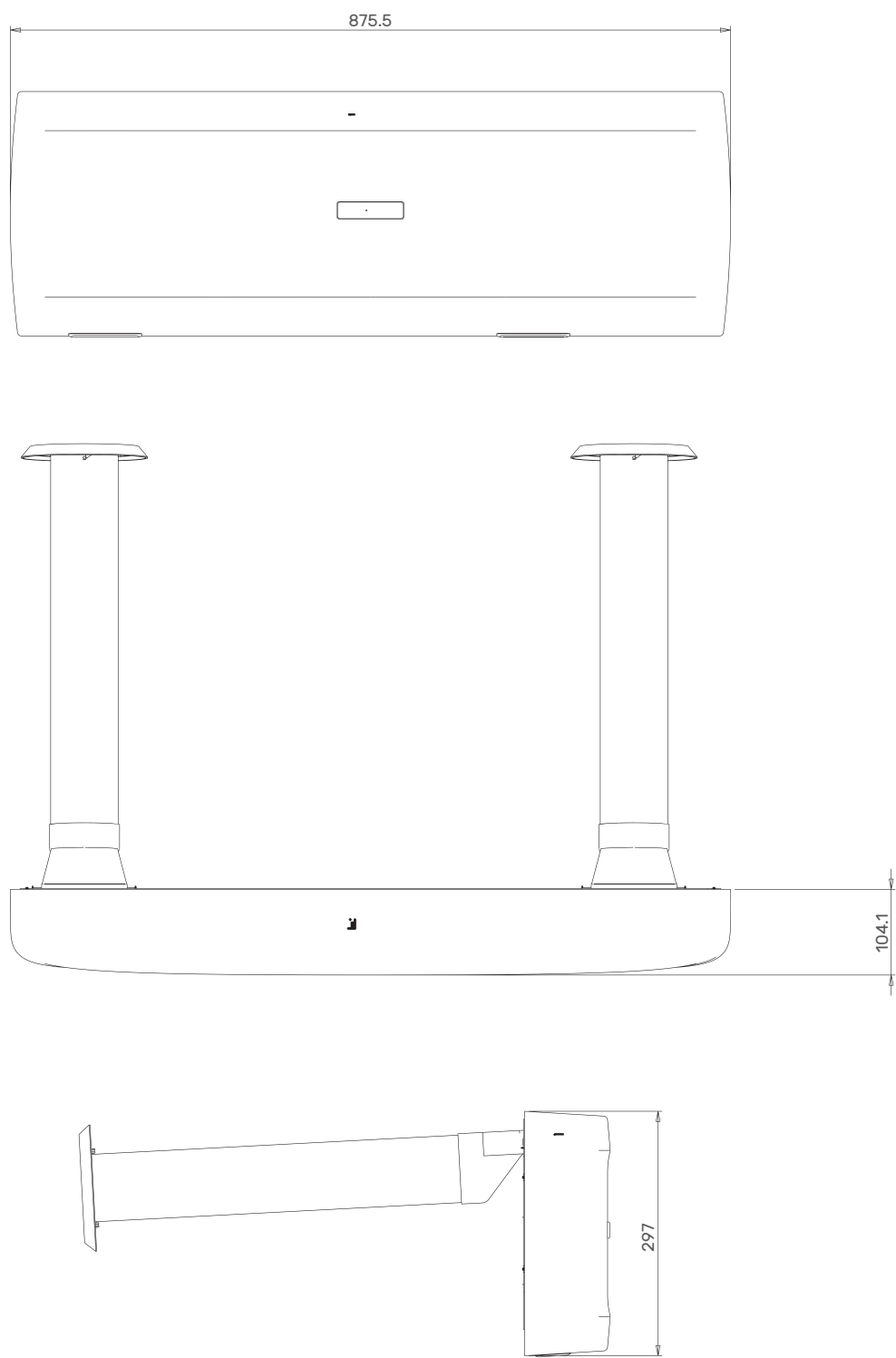
X MAX mm	PORT L = 70 mm	EXTENSION L = 75 mm
48	1 + 1	NO
123	1 + 1	1 + 1
198	1 + 1	2 + 2
273	1 + 1	3 + 3

If the wall is thinner than the thicknesses in the table, just file down the extension or the port when installing.



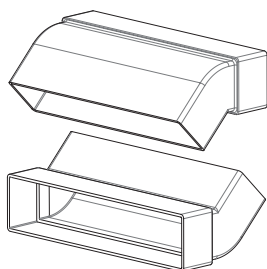


AIRCARE ES (WALL-MOUNTED)

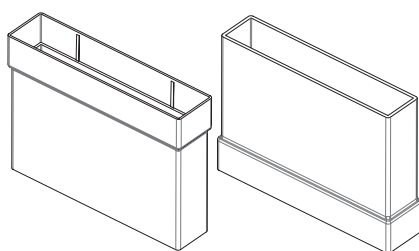


# Accessories and spare parts

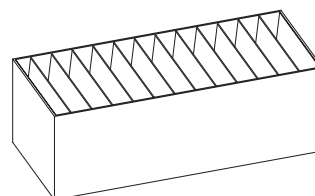
Complete line of accessories and spare parts, **easy to use or replace**, handy to complete the correct installation of Aircare ES or to adapt it to structural requirements.



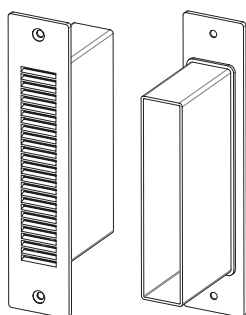
45° elbow  
for ports



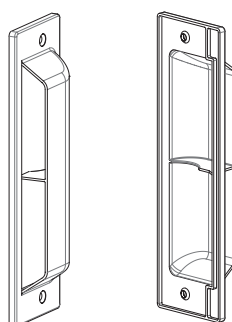
Extension  
for ports



Dual layer F9  
Air filter



External port  
(for facade)



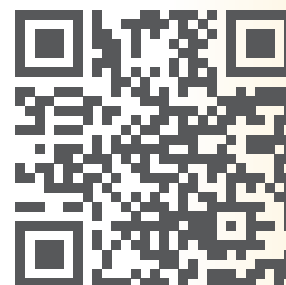
External port  
cover



## DOWNLOAD AREA

Select and download all the information you might need to find out more about world of Aircare ES, including technical data and installation instructions.

[www.thesan.com/en/download](http://www.thesan.com/en/download)



# Product datasheet (ErP)

a	Supplier's name	SAVIO THESAN S.p.A.		
b	Model identifier (Code)	AIRCARE ES		
c	Specific energy consumption (SEC)	<div> <div>cold</div> <div>A+ -77</div> </div>	<div> <div>average</div> <div>A -37</div> </div>	<div> <div>warm</div> <div>E -14</div> </div> <div>kWh/(m<sup>2</sup>*a)</div>
d	Typology	<input checked="" type="checkbox"/> RVU <input type="checkbox"/> NRVU <input checked="" type="checkbox"/> BVU <input type="checkbox"/> UVU		
e	Type of drive installed or intended to be installed	<input type="checkbox"/> single speed <input type="checkbox"/> 2-speed <input checked="" type="checkbox"/> multi-speed <input type="checkbox"/> VSD <input type="checkbox"/> installed <input type="checkbox"/> intended to be instal.		
f	Type of heat recovery system	<input type="checkbox"/> recuperative <input checked="" type="checkbox"/> regenerative <input type="checkbox"/> none		
g	Thermal efficiency of heat recovery $\eta_o/\eta_s$	74/70	%	
h	Maximum flow rate	40.6	m <sup>3</sup> /h	
i	Electric power input of the fan drive	20.8	W	
j	Sound power level (LWA)	45	dB[A]	
k	Reference flow rate	28.4	m <sup>3</sup> /h	
l	Reference pressure difference in Pa	0	Pa	
m	SPI in W/(m <sup>3</sup> /h)	0,35	W/(m <sup>3</sup> /h)	
n	Control factor and control typology	<div>CTRL</div> <div>0.65</div>	<div>MISC</div> <div>1,21</div>	<div>X-Value</div> <div>2</div>
o	Declared maximum internal and external leakage rates (%)	2.1%	internal	3.3% external
p	Mixing rate	0.5%	indoor	0.3% outdoor
q	Position and description of visual filter warning	Front cover LED		
r	Installation instructions	Available		
s	Internet address with preassembly and disassembly instructions	<a href="http://www.thesan.com/download.php">http://www.thesan.com/download.php</a>		
t	Airflow sensitivity to pressure variations a +20 Pa and -20 Pa	6.0	%	
u	Indoor/outdoor air tightness	1,6	m <sup>3</sup> /h	
v	Annual electricity consumption (AEC)	<div>cold</div> <div>2.0</div>	<div>average</div> <div>2.0</div>	<div>warm</div> <div>2.0</div> <div>kWh/a</div>
w	Annual Heating Saving (AHS)	<div>cold</div> <div>82.5</div>	<div>average</div> <div>42.2</div>	<div>warm</div> <div>19.1</div> <div>kWh/a</div>





## AIRCARE ES

# INTRODUCES YOU TO THE REST OF THE FAMILY

### Aircare AF (Air Filtration)

#### Ductless Controlled Mechanical Ventilation and air filtration system

Aircare AF ensures the correct air change in new and refurbished residential buildings, offices, hotels and schools.

Aircare AF is designed without a heat exchanger to make it more suitable for moderate climates (A-B-C).

The device controls the relative humidity indoors, eliminating the risk of condensation, mould and fungus growth with extremely low energy consumption; it incorporates a filter that eliminates 100% fine particles with a diameter of more than 10 microns.

It lowers the level of excess CO<sub>2</sub>, dilutes VOC and completely eliminates the risk of Radon.

Aircare AF comes in 3 versions:

- > AFL to fit into door and window frames for profiles of up to 170 mm thick (AF-i version available for profiles of up to 80 mm thick)
- > AFI to recess inside the wall or in the available space, in shutter boxes or built-in
- > AFG to fit into the glazing of fixed doors windows or French windows.



### Aircare AE (Air Extractor)

#### Ductless controlled mechanical ventilation and air extraction system

Aircare AE ensures the rapid and efficient elimination of undesirable odours and condensation from bathrooms and kitchens in new and refurbished residential buildings, offices, hotels and schools.

It can be controlled on demand, and in the event of particular spikes in humidity it can be operated manually to fix the issue. It is the perfect accessory for Aircare ES.

Aircare AE comes in 2 versions:

- > to fit into door and window frames for profiles of up to 170 mm thick (AF+ version available for profiles of up to 80 mm thick)
- > to recess inside the wall or in the available space, in shutter boxes or built-in.





**THESAN**

*Designed and produced in Italy with Care*

SAVIO THESAN S.p.A.

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**Tel.** +39 011 964 34 64

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[www.thesanaircare.com](http://www.thesanaircare.com) - [www.thesan.com](http://www.thesan.com)