Adroit DV96

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021

Programme	The International EPD® System, www.environdec.com
Programme operator	EPD International AB
EPD registration number	S-P-10360
Publication date	2024-03-25
Valid until	2029-03-24

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

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General Information

ACCOUNTABILITIES FOR PCR, LCA AND INDEPENDENT, THIRD-PARTY VERIFICATION

Product Category Rules (PCR)	CEN standard EN 15804 serves as the Core Product Category Rules (PCR) Product Category Rules (PCR): PCR 2019:14-c-PCR-018 c-PCR-018 Ventilation components (c-PCR under PCR 2019:14) (Adopted from EPD Norway) PCR review was conducted by: Claudia A. Peña, ADDERE Research & Technology
Life Cycle Assessment (LCA)	LCA accountability: Aleksi Surakka, Comatec Mobility Oy www.comatec.fi e-mail: aleksi.surakka@comatec.fi phone: +358 40 184 2478
Third-party verification	Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☑ EPD verification by individual verifier Third-party verifier: Marcus Wendin, Miljögiraff AB Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☑ No

Programme	The International EPD® System
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The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact as Assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

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Compant Information

MORE THAN 60 YEARS OF EXPERIENCE

Founded in 1955, Airflow has grown from one man's expertise in fan design and air flow measurement into a thriving international group. Renowned for its innovative approach to new product development and air movement techniques, Airflow can offer you a variety of ventilation solutions to suit your needs.

With headquarters in High Wycombe, where the business was founded, Airflow has subsidiaries in Germany and the Czech Republic and has global distributors from Norway to New Zealand.

Airflow's knowledgeable and committed staff continually develop new and innovative products that raise standards and provide long term, reliable ventilation solutions.


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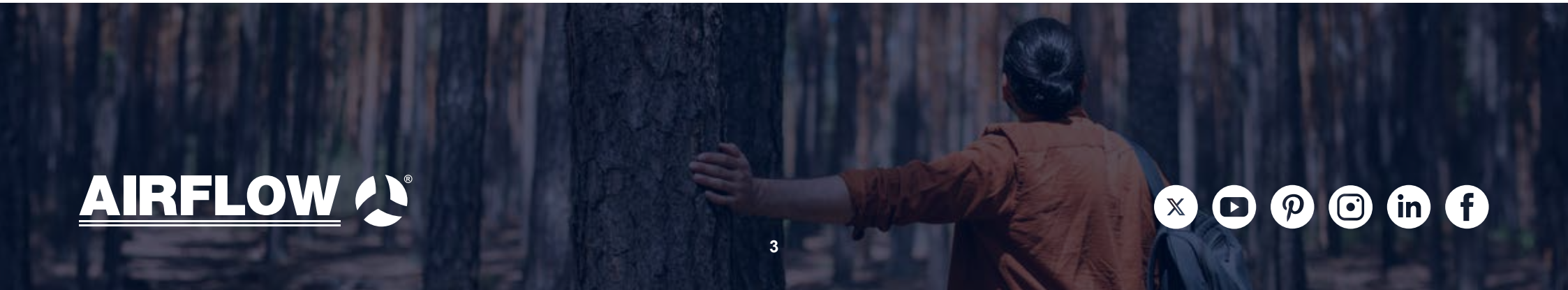
ISO 9001 Quality Matters!

ISO 9001 - Airflow was the 152nd company to achieve the ISO 9001 standard and is currently one of few companies with ISO 9001:2015 certification. This ensures that all products that Airflow produce are stringently tested to provide customers with quality ventilation systems.

ISO 14001 Environmental Matters!

ISO 14001 - Airflow is also commited to reducing its impact on the enviroment and has achieved the ISO 14001:2015 standard. This commitment sees Airflow striving to improve efficiency whilst reducing energy usage, waste and consumption.



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Adroit DV96

Mechanical Ventilation with
Heat Recovery Unit

Product Information

Adroit Range

DV96 Adroit (Integral CO2 Sensor) is a ventilation unit with state-of-the-art technology suitable for small houses up to 80 m2. Designed to provide essential ventilation and to save you money through its intelligent heat recovery facility, this system provides a cost-effective and environmentally friendly option for residential applications.

The casing is made of a galvanised steel, double-skin that is powder coated (excluding DV50 and DV80) both internally and externally to meet hygiene requirements. It contains significant insulation that avoids thermal bridging and significantly reduces noise levels.

All units include an easily accessible and removable heat exchanger that recovers the heat from the outgoing airstream and uses this heat to pre-warm the incoming fresh air. At no point does the supply and extract airstreams mix.

The thermal efficiency of all Adroit units can reach up to 93%. When equipped with the electric post-heater, all Adroit models achieve Passive House approval.

KEY FEATURES

- Up to 90% thermal efficiency
- Triple filter design with two Coarse > 75% and one ISO ePM1 50% filters - ISO16890 compliant
- Automatic, 100% summer by-pass
- Integral humidity and carbon dioxide sensors
- Internet control by smartphone, tablet, or PC
- BMS connection
- Auto cut-out switch for extra safety

Product identification

Mechanical Ventilation with Heat Recovery Unit / Air handling units (AHU) as referred in standards NS-EN 1886, NS-EN 13053 and EN 13141-7.
The DV96 Adroit ventilation unit is manufactured from mainly steel, aluminium, electronics and plastics.

EPD follows additional requirements for construction products considered as Electronic or Electric Equipment (EEE).

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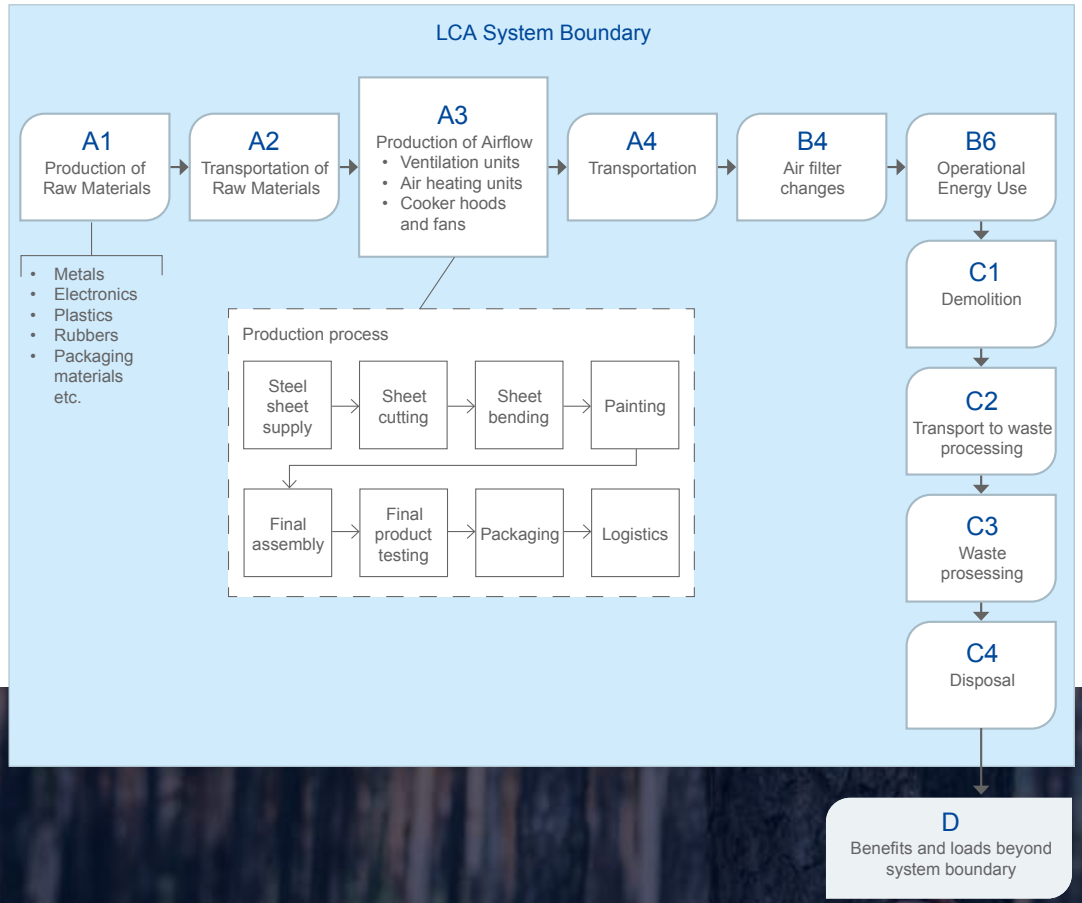
LCA Information



Declared unit	1 manufactured ventilation unit maintained for 25 years.
Reference service life	Reference service life for the air handling units is 25 years.
Time representativeness	2020–2022
Database(s) and LCA software used	LCA software: SimaPro 9.5 Majority of data from Ecoinvent 3.9.1. Steel LCI results from world-steel.
Description of system boundaries	Cradle to gate with options: A1-A3, A4, B4, B6, C1-C4 + D

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Product Information

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operation water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery Recycling potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules delcared	x	x	x	x	ND	x	x	x	x	x	x	x	x	x	x	x	x
Geography	EU	EU	FI	EU		EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Specific data used	<90%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	>10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

X = Module declared, ND = Not declared

B1-B3, B5 and B7 have no inputs or outputs during the life cycle of the ventilation unit. All environmental indicators for them are calculated as 0 as there is no activity in those modules that consider the ventilation unit. Zero values for these modules are not shown in the results tables.

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Mechanical Ventilation with
Heat Recovery Unit

Product Life Cycle – Used Data and Assumptions

Product stage (A1-A3)

The product stage considers the manufacturing of raw materials, their transportation to the production facility and the stages of the product manufacturing process.

A1: Raw materials refer to materials and sub-assembled components used to manufacture the ventilation units.

A2: Transportation of the raw materials and sub-assembled components to the production facility in Europet. Details on the transportation scenarios can be found later in this EPD.

A3: Manufacturing and packaging of the ventilation units at the production facility. In this case, manufacturing means assembling and testing of the ventilation units from sub-assembly parts. Stage A3 covers the energy (electricity and heating) use during the production process and waste generated during manufacturing of the units.

Electricity was modelled with an GWP100 results of 0,398 kgCO_2eq/kWh.Heating energy is district heating mainly produced by burning wood chips (79%) and heat recovery (17%). The amount of energy and heat of each product was determined according to the weight of the product.
Manufacturing waste streams include wood waste, cardboard, combustible waste, mixed waste and metal scrap (iron, aluminium, copper). Cardboard, metal scrap and combustible waste are reusable and recyclable waste, and they are sent for material recovery. The amount of waste was determined by the weight of the product.

Construction process stage (A4)

A4: Transportation to use was calculated as a conservative scenario as indicated in c-PCR-018 Ventilation components.

Use (B)

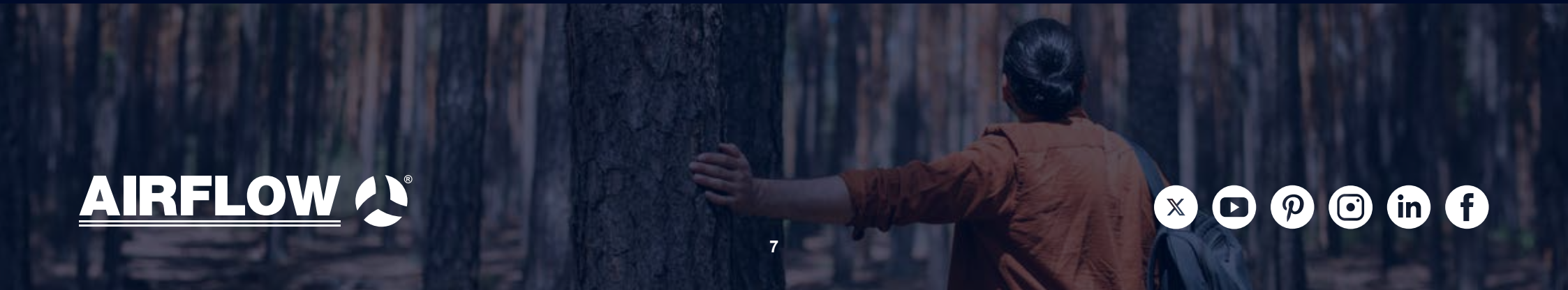
B4: Filters are replaced by assumption twice per year during the life cycle of the ventilation unit. Filters are manufactured for use in Europe, used and disposed as municipal solid waste after use in Europe. Transports of the filters were also included and the transport scenario was similar to A4.

B6: The Adroit Ventilation Units are connected to a 230 V / 50 Hz electrical power supply. Electric current is mostly used to control the fan motor(s) and the heating resistor(s) of the ventilation unit. The energy consumption thus, in module B6 comes from the usage of the blower fan and the resistor. The varying need for heating incoming air is dependent on the climate and annual electricity consumption can differ from the one stated in this EPD.

Annual electricity consumption is based on calculations complying with Commission Delegated Regulation (EU) No 1254/2014 of 11 July 2014. For a more detailed calculation report please see the ErP fiche and label on our website: **www.airflow.com**

Energy Label Certificates for each product can be found by clicking on the relevant product and navigating to the downloadable files.

As the ventilation units are used all over Europe, an average market dataset for European low voltage electricity was used. The GWP100 factor for the used dataset was 0,362kg CO_2-eq/kWh.



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Mechanical Ventilation with
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Product Life Cycle – Used Data and Assumptions

Material	C3 Waste Processing	C4 Waste Disposal
Plastic, rubber	Municipal incineration with energy recovery (100% of material)	Landfilling of ashes from incineration
Metal	Central sorting of mixed construction waste. Recycling of metals. (99% of material)	Landfilling of wasted product in sanitary landfill
Electronics	Waste of Electrical and Electronic Equipment (WEE) recycling. Incineration of non-recycled parts. (83% of material)	Landfilling of ashes from incineration and residu-als from recycling/sorting
Paper, board	Recycling (98% of material)	Incineration and landfilling
Other		Incineration and landfilling

Life Cycle Transport Scenarios

Life Cycle Phase/ Module	Scenario assumptions	Road transport	Road transport
A2	Based on distances between supplier locations	transport, freight, lorry 16-32 metric tons, EURO6	transport, freight, lorry 16-32 metric tons, EURO6
A4	As in c-PCR-018: From Vallox Factory to Helsinki, Finland (~155km).300km conservative distance to non-specified distributor	transport, freight, lorry 16-32 metric tons, EURO6	
C2	100km to nearest waste pro-cessing centre	transport, freight, lorry 16-32 metric tons, EURO6	

End of life cycle (C1-C4)

C1: De-construction/demolition is assumed to be close to zero as the ventilation units are manually removed from the buildings.

C2: Transport to waste processing was calculated with an distance assumption of 100km.

C3-C4: Waste processing and disposal was mod-eled as a conservative scenario as indicated in c-PCR-018 and the share of materials entering different waste treatment was retrieved from Eurostat waste databases. An average of 27 EU countries was used. Additionally paper and board used for the product were assumed to be recycled. For alu-minum and steel recycling processes an assump-tion of 100km of transportation was used.

Resource recovery stage (D)

The benefits of recycled steel and aluminum in module C3 were considered to have a possible en-vironmental benefit as substituted material.

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Content Information

Product components	Weight, kg	Post-consumer material, weight %	Biogenic material, weight % and kg C/kg
Steel	32.55	0	0
Aluminium	5.5	0	0
Plastics	2.37	0	0
Electronics	4.89	0	0
Other	3.95	0	0
Packaging materials		Weight % (versus the product)	Weight biogenic carbon, kg C/kg
Cardboard	1.74	3.55	0.45
Paper (manuals etc)	0.1	0.19	0.43
Wooden pallet (24 kg, mass allocation between 6 units and 20 use cycles)	0.15	0.31	0.47
TOTAL (excl. wooden pallet)	51.1		

No substances that appear in the REACH candidate list of SVHC (Candidate List of Substances of Very High Concern) are present or used in the products concerning this EPD.

Wooden pallets are allocated between units that on average are placed on it during transport and average number of use cycles. Weight of the wooden pallet is 24kg.

*62.85% of used plastic comes from post-industrial and post-consumer sources. As EPD rules state that only post-consumer material is declared in the content information, the value is declared as 0

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Mechanical Ventilation with
Heat Recovery Unit

Results of the Environmental Performance Indicators

Mandatory impact category indicators according to EN 15804, results per declared unit

Indicator	Unit	A1-A3 total	A4	B4	B6	C1	C2	C3	C4	D
GWP-fossil	kg CO_2 eq.	2.85E+02	4.30E+00	4.53E+01	3.29E+02	0.00E+00	9.44E-01	8.40E+00	4.64E-02	-9.06E+01
GWP-biogenic	kg CO_2 eq.	2.88E+00	3.94E-03	1.35E+00	9.69E+03	0.00E+00	8.65E-04	6.80E-04	1.09E+00	-7.91E-02
GWP-luluc	kg CO_2 eq.	1.22E+00	2.12E-03	8.06E-02	2.42E+01	0.00E+00	4.66E-04	1.03E-03	1.52E-05	-8.99E-01
GWP-total	kg CO_2 eq.	2.89E+02	4.30E+00	4.67E+01	1.00E+04	0.00E+00	9.45E-01	8.40E+00	1.13E+00	-9.16E+01
ODP	kg CFC 11 eq.	5.29E-06	9.36E-08	1.90E-05	1.84E-04	0.00E+00	2.06E-08	1.89E-08	3.65E-10	-1.11E-06
AP	mol H+ eq.	1.80E+00	9.39E-03	1.50E-01	5.55E+01	0.00E+00	2.06E-03	1.31E-02	1.77E-04	-3.59E-01
EP-freshwater	kg P eq.	1.38E-01	3.05E-04	7.88E-03	9.18E+00	0.00E+00	6.71E-05	2.10E-04	1.05E-05	-2.16E-02
EP-marine	kg N eq.	5.22E-01	2.37E-03	4.56E-02	8.98E+00	0.00E+00	5.21E-04	5.25E-03	1.74E-03	-5.21E-02
EP-terrestrial	mol N eq.	2.77E+00	2.41E-02	3.55E-01	8.12E+01	0.00E+00	5.29E-03	5.69E-02	4.77E-04	-4.83E-01
POCP	kg NMVOC eq.	9.24E-01	1.46E-02	1.43E-01	2.61E+01	0.00E+00	3.20E-03	2.44E-02	4.64E-04	-2.16E-01
ADP-minerals&metal*	kg Sb eq.	1.87E-02	1.40E-05	2.08E-04	1.16E-01	0.00E+00	3.09E-06	5.40E-06	6.37E-08	-2.00E-04
ADP-fossil*	MJ	3.87E+03	6.10E+01	1.02E+03	2.19E+05	0.00E+00	1.34E+01	1.45E+01	3.37E-01	-1.08E+03
WDP*	m^3	3.39E+02	2.52E-01	2.21E+01	2.47E+03	0.00E+00	5.53E-02	1.04E-01	8.58E-03	-6.76E+02
Acronyms	GWP-fossil=Global Warming Potential fossil fuels; GWP-biogenic=Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

*Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

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Mechanical Ventilation with Heat Recovery Unit

Resource use indicators, results per declared unit

Indicator	Unit	A1-A3 total	A4	B4	B6	C1	C2	C3	C4	D
PERE	MJ	4.03E+02	7.25E-01	1.94E+01	2.28E+04	0.00E+00	1.59E-01	5.59E-01	2.35E-02	-2.30E+02
PERM	MJ	1.41E+02	1.11E-01	3.83E+01	2.52E+04	0.00E+00	2.44E-02	4.72E+00	1.19E-03	1.47E+01
PERT	MJ	5.44E+02	8.36E-01	5.77E+01	4.79E+04	0.00E+00	1.84E-01	5.28E+00	2.47E-02	-2.16E+02
PENRE	MJ	3.98E+03	6.49E+01	1.10E+03	2.30E+05	0.00E+00	1.43E+01	1.54E+01	3.58E-01	-1.14E+03
PENRM	MJ	1.21E+02	0.00E+00	0.00E+00	1.41E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENTR	MJ	4.10E+03	6.49E+01	1.10E+03	2.30E+05	0.00E+00	1.43E+01	1.54E+01	3.58E-01	-1.14E+03
SM	kg	1.49E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	4.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.85E+00	8.79E-03	5.75E-01	1.73E+02	0.00E+00	1.93E-03	4.68E-03	3.67E-04	-1.89E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

Additional mandatory and voluntary impact category indicators, results per declared unit

Indicator	Unit	A1-A3 total	A4	B4	B6	C1	C2	C3	C4	D
GWP-GHG*	kg CO_2 eq.	2.87E+02	4.30E+00	4.67E+01	9.76E+03	0.00E+00	9.45E-01	8.40E+00	8.51E-01	-9.16E+01
Ecotoxicity, freshwater	CTUe	3.32E+03	3.02E+01	1.78E+02	3.68E+04	0.00E+00	6.63E+00	7.06E+01	3.50E+00	-1.73E+02
Human toxicity, cancer	CTUh	4.13E-07	1.96E-09	1.34E-08	4.52E-06	0.00E+00	4.30E-10	5.40E-08	8.92E-10	-1.36E-07
Human toxicity, non-cancer	CTUh	1.32E-05	4.33E-08	3.10E-07	1.80E-04	0.00E+00	9.52E-09	1.74E-07	6.15E-08	-1.03E-06
Land use	Pt	1.39E+03	3.69E+01	2.24E+02	4.29E+04	0.00E+00	8.11E+00	7.50E+00	6.55E-01	-1.66E+01
Particulate matter	disease inc.	1.55E-05	3.20E-07	1.64E-06	2.03E-04	0.00E+00	7.04E-08	2.90E-06	2.20E-09	-4.83E-06

*This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

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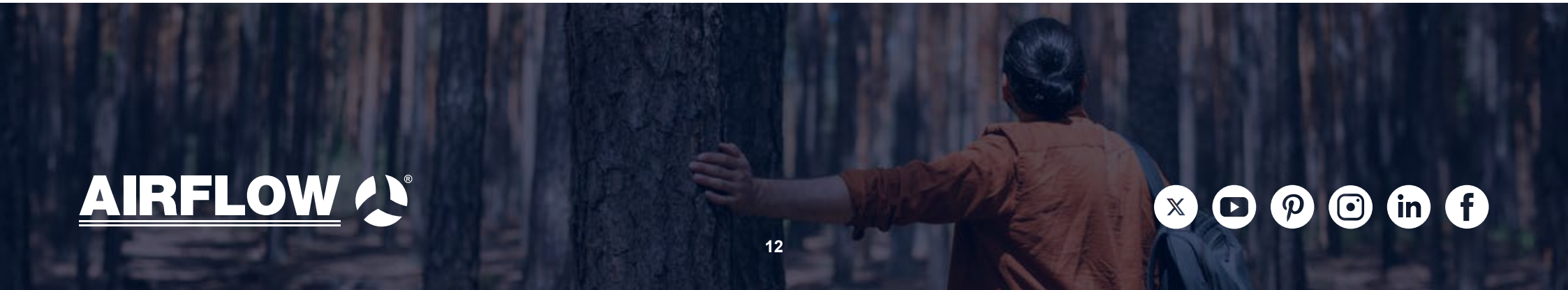
Mechanical Ventilation with Heat Recovery Unit

Waste and output flow indicators, results per declared unit

Indicator	Unit	A1-A3 total	A4	B4	B6	C1	C2	C3	C4	D
Hazardous waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-hazardous waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Radioactive waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	1.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.79E+01	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



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Heat Recovery Unit

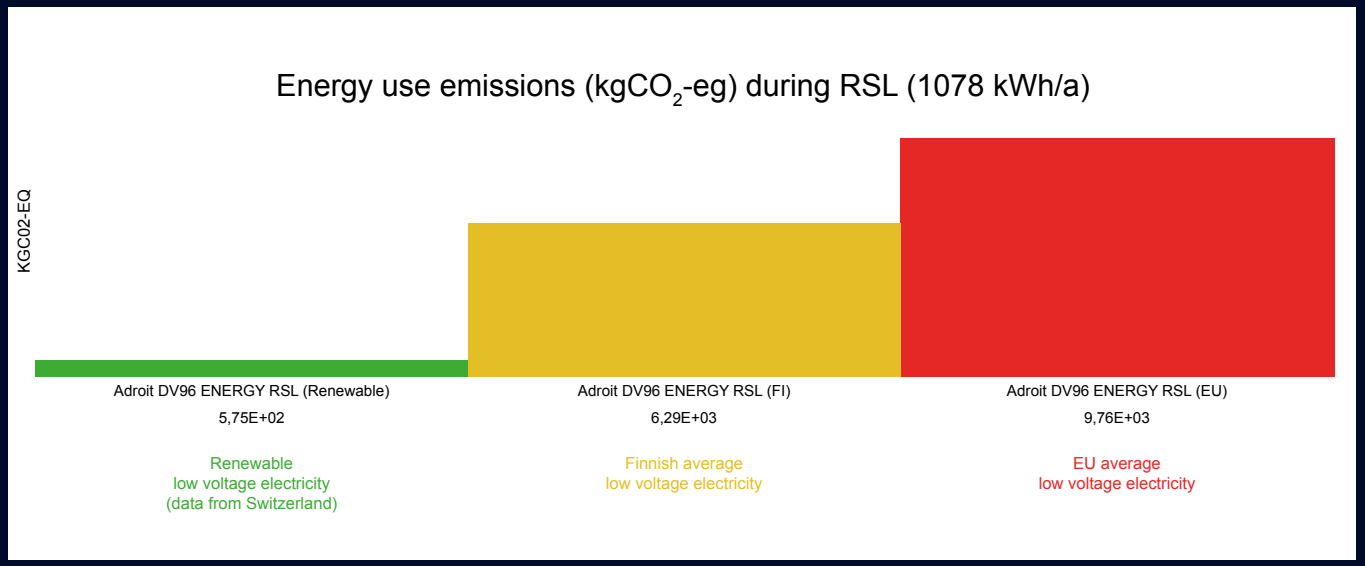
Additional LCA Results (B6)

Energy use during use-phase

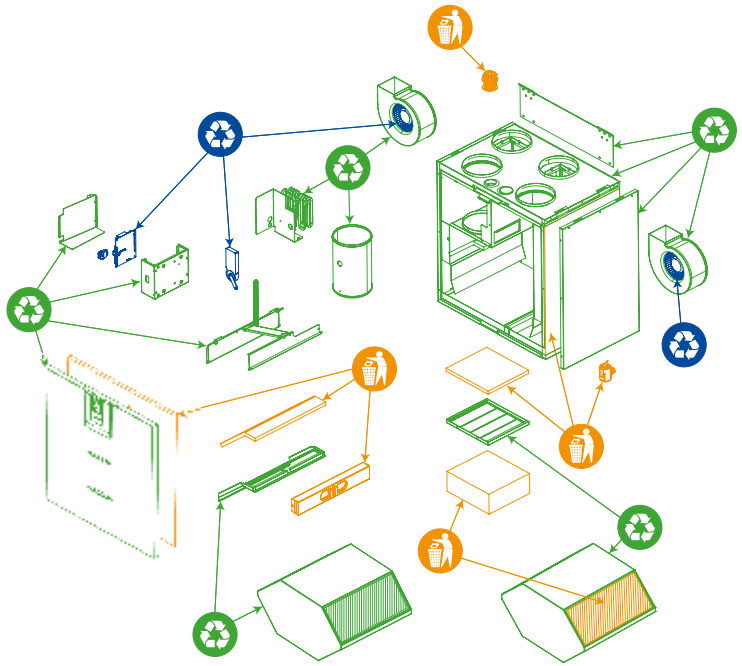
Airflow has no impact on the energy source of their ventilation units. B6 was declared with the average EU electricity but in addition, other electricity mixes (Finnish and renewable electricity from Switzerland) were inspected to see the impact of different energy sources.

The calculation assumptions for all electricity scenarios are same as for the declared B6 Operational Energy use.

Only GWP100 results are included in this EPD to show the effect of energy source on environmental impacts. Based on these assessment results Airflow recommends using energy sources with lower environmental impact where possible.



Additional Environmental Information



Legend:

- Metal recycling
- Electronic components waste
- General waste

To maintain an optimised efficiency of the ventilation unit during its life cycle, Airflow recommends a filter replacement at least twice a year.

It is also recommended that the heat recovery cell of the units is cleaned annually as instructed in the manual. Always refer to the manual when performing maintenance for the ventilation units.

Airflow is an ISO 14001 certified company aiming to improve its overall sustainability. Making LCA's and EPD's for the Adroit products is one of the many efforts Airflow is developing to reduce the environmental impact of the Airflow products and the organization.

More information about Airflow, product manuals and recycling instructions for the ventilation units can be found on our website: **www.airflow.com**.

References

Ecoinvent database version 3.9.1

General Programme Instructions of the International EPD® System. Version 4.0.

EPD International (2023): PCR 2019:14. Construction products 2019:14. Version 1.3.3

PCR 2019:14-c-PCR-018 c-PCR-018 Ventilation components (c-PCR under PCR 2019:14)
(Adopted from EPD Norway)

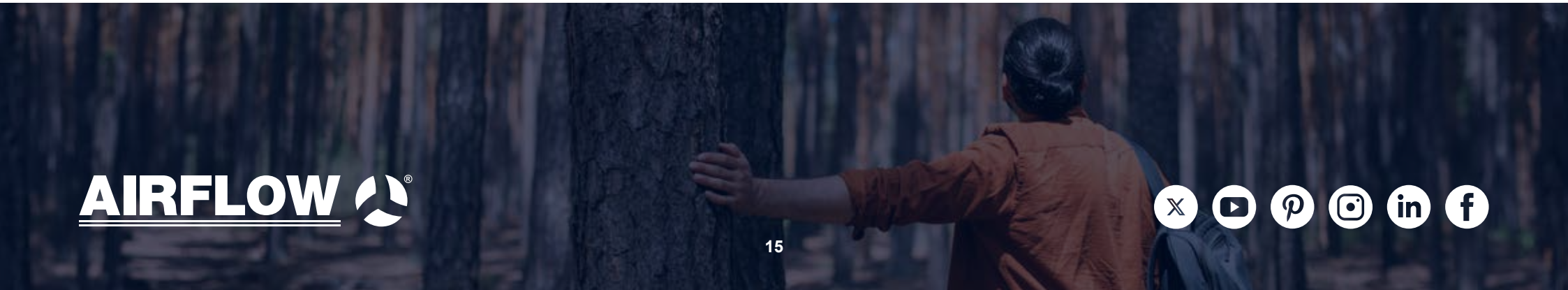
EN15804-A2:2019. Sustainability of construction works - Environmental Product Declarations -
Core rules for the product category of construction products

ISO 14025:2010 Environmental labels and declarations -
Type III environmental declarations Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

Eurostat. (n.d.). Waste Database. Retrieved May 2, 2023, from European Commission website:
https://ec.europa.eu/eurostat/web/waste/data/database



Annex 1. Different Product Configurations

Standard Unit	Product code
DV96 (R) Adroit	90001265
DV96 (L) Adroit	90001266
Units with built-in post heater (optional)	Product code
DV96 (R) Adroit EPH	90001265EPH
DV96 (L) Adroit EPH	90001266EPH

"The double-skin casing minimises noise, maximises heat recovery and maintains long-term optimum performance."

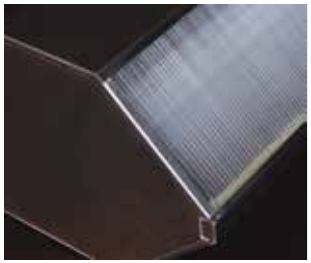
"The unique combination of ISO Coarse > 75% (G4) and ePM1 50% (F7) filters give you the highest air quality to breathe."

"An added value feature is the ability for you to "fine tune" the air flow rates during the initial commissioning process "

"Adroit does not allow you to change the filters without isolating the unit first, the unit stops as you remove the door."

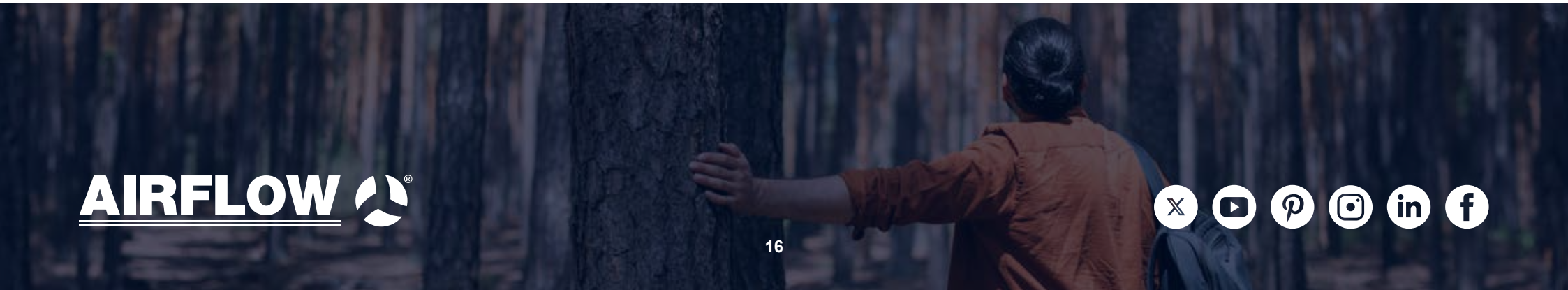
"Reduce the impact of overheating in your home with the automatic, 100% by-pass "

"Smart Frost Protection helps Adroit to keep you cosy during the winter."



"One of the most effective and easy to maintain heat exchangers can be found in Adroit."

"The additional sensors automate your ventilation, leaving you to carry on with your day."

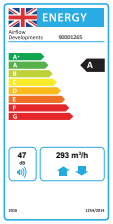


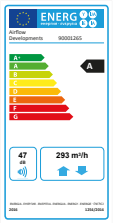
Adroit DV96

Mechanical Ventilation with Heat Recovery Unit

ErP RATING

Adroit units meet the requirements set out by the Energy Related Products (ErP) Eco Design Directive 2009/125/EC 2016. Adroit also complies with the more stringent 2018 ErP with models achieving an A rating for reduced energy usage. You can find more information regarding the ErP Directive as well as the Energy Rating technical data information reports (Fiche and Labels) for Adroit units at: **www.airflow.com**





TUV

The Adroit range is certified by TÜV, a European technical certification body that offers independent third-party assessments to EN308. This technical standard defines test procedures for establishing the performance of air to air heat recovery devices in accordance with published criteria and provides the customer with the confidence that Adroit units have been independently verified to deliver outstanding performance with quality manufacture.

PASSIVE HOUSE CERTIFICATION

All Adroit units are tested and certified by the Passive House Institute based on the following criteria:

- Outstanding thermal performance
- Effective heat recovery
- Electric power consumption
- Air tightness
- Balancing adjustability
- Sound insulation
- Indoor air quality
- Frost protection.

Adroit units achieve Passive House approval when equipped with the optional electric post-heater.

SAP

Adroit units are tested and certified by the BRE (Building Research Establishment) and are eligible for the SAP Q. Details about the SAP Q test results of all Adroit units can be found on their product page on the Airflow website: **www.airflow.com**

VTT CERTIFICATE

A certificate given by an independent organisation, such as VTT Technical Research Centre of Finland Ltd in Finland, is proof of the energy efficiency of a ventilation unit, i.e. on the annual efficiency of heat recovery and Specific Fan Power. It also shows that the defrost function of the unit operates reliably and that the characteristics related to heat, flow, tightness, filtering and sound fulfil the requirements set forth for the certification process.

The certificates given by VTT show that Vallox (Adroit) ventilation units have a top-class annual efficiency and SFP.

ISO 9001 2015

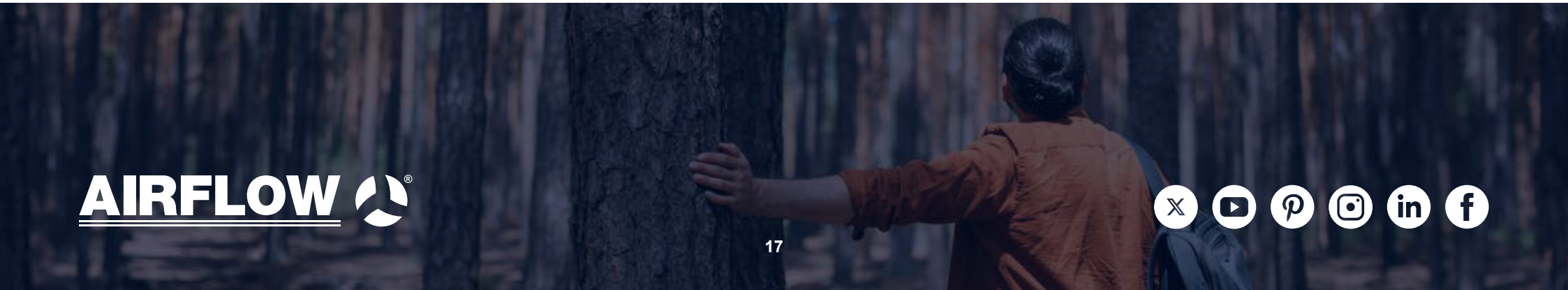
ISO 14001 2015

WARRANTY

All Adroit units come with a standard 7 year warranty (excluding motors which are for one year)

The warranty is only available by ensuring that your Adroit unit and Airflex Pro System is fitted by a qualified installer who is registered under the Competent Ventilation Installer Scheme operated by the NICEIC. Installers who are registered with this scheme have demonstrated a high degree of competence in MVHR Installation. They are audited annually and for you, as a customer, there is the peace of mind of a Platinum Promise Guarantee provided by NICEIC so that in the unlikely event of a problem with the installation NICEIC will, at their own expense, bring the installation up to the required standard.

Visit https://**www.niceic.com/find-a-contractor/platinum-promise**



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