

Adroit Cooker Hood Ventilation

COMPACT MECHANICAL HEAT RECOVERY UNIT WITH INTEGRATED COOKER HOOD





MORE THAN 65 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 our headquarters in High Wycombe, Airflow has subsidiaries in Germany and the Czech Republic and has global distributors from Norway to New Zealand.

Understanding the requirements of our customer enables Airflow's knowledgeable and committed staff to continually develop new and innovative products that raise standards and provide long term, reliable ventilation solutions.



UNITED KINGDOM

High Wycombe (Head Office)

Our founder started the business in 1955, just one mile from the current site, which has been Airflow's headquarters since 1960, co-ordinating our global activities.



GERMANY

Airflow has been serving ventilation products and air measurement devices to the German and European markets for over 50 years. Operating near Cologne, Airflow Germany has their own customer service, sales and technical sales teams.



CZECH REPUBLIC

Founded in Prague over 20 years ago, the Airflow Czech Republic team offer sales and servicing of ventilation products for the Eastern European market.



IMPROVE YOUR INDOOR AIR QUALITY

Mechanical ventilation with heat recovery (MVHR) has been designed to improve indoor air quality. By achieving its main purpose, other benefits can also be added such as: lowering the risk of condensation, saving on energy costs and achieving a well-being state for the occupants by breathing fresh, oxygenated air. Removing unwanted odours such as cooking smells, food waste, etc is also important to achieve. Therefore, having a kitchen ventilation solution which will recover heat, ventilate the whole house and remove these unpleasant odours, would be an ideal solution for a small apartment.

The *DV51CH* Adroit kitchen MVHR unit has a new stylish and compact design. This kitchen unit achieves a high thermal efficiency of up to 84% by means of the counterflow Aluminium heat exchanger. The filters can be easily removed to clean or to replace.

The *DV51CH* Adroit cooker hood unit also has a guard function that sends an alarm to the house automation system or a separate alarm if the temperature rises exceptionally high. The unit is easy and quick to install in kitchen cabinets with a depth of 280-335 mm. The EC fans included in the cooker hood are quiet and energy efficient.



A VENTILATION UNIT WITH A COOKER HOOD

Adroit® DV51CH

DV51CH shown with no door



DV51CH shown in integrated kitchen unit

The DV51CH Adroit is a compact kitchen unit incorporating a cooker hood extractor, designed to perfectly combine ventilation and extraction of cooking odours.

The heat recovery unit is delivered with a slim and stylish cooker hood, both are manufactured from metal, providing a fire safe ventilation solution for kitchen installations. The DV51CH Adroit MVHR unit can be easily integrated into any kitchen design with the cooker hood available in white or stainless steel finish.

This kitchen ventilation solution is also a very efficient use of space in small apartments. The grease filter supplied as standard protects the MVHR unit against cooking particles and can be easily cleaned in soapy water.

A unique feature of the DV51CH Adroit is the benefit of recovering heat from the hob while most other available kitchen units directly exhaust the warm air, skipping the heat recovery process.

VENTILATION SOLUTION FOR SMALL APARTMENTS

Adroit® DV51CH

The DV51CH Adroit is fitted with a triple air filter facility which consists of two ISO Coarse > 75% (G4) and one ISO ePM1 50% (F7) filters - ISO 16890 compliant. The air filtration will prevent small pollen particles from entering indoors.

Adjusting the ventilation characteristics according to specific lifestyles has never been so easy and efficient. The ventilation in a small apartment can be fully controlled through different options on the controllers: a switch controller, capacitive touch buttons on the cooker hood front panel, a digital Adroit controller with 4 individual ventilation profiles or via the Internet or a local network using a laptop, smartphone, tablet etc.

The DV51CH Adroit can be integrated within the kitchen units and matched with other kitchen appliances offering an elegant overall style to the entire dwelling. This unit is ideally installed in one or two-bedroom flats or bungalows with a maximum floor area of 75 m². Saving space and energy, the DV51CH Adroit unit is also easy to maintain and service, having plenty of front access space to replace the filters and clean the grease filter.

The DV51CH Adroit units can be integrated with a Building Management System (BMS) via a Modbus connection or KNX, which allows the user to monitor and control the unit's functions via a central control system.

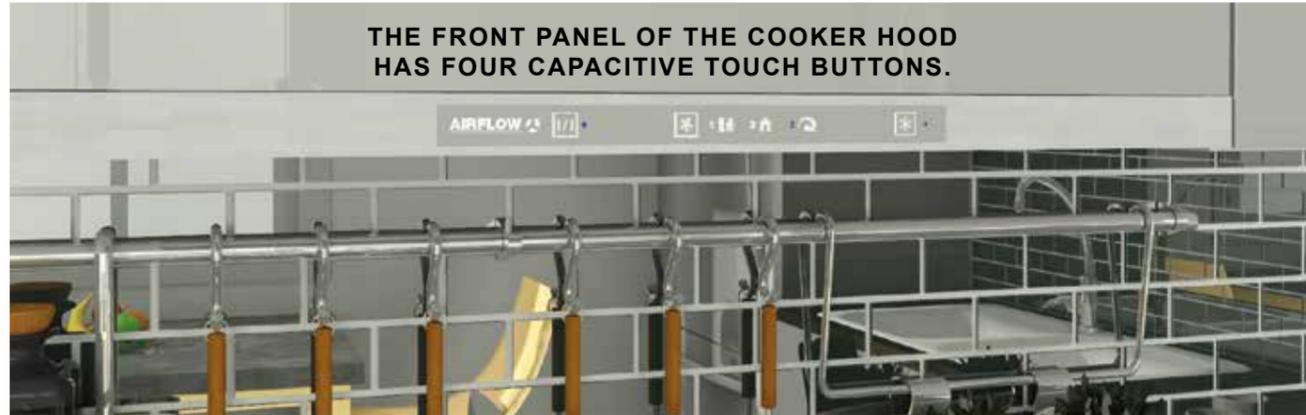
The internal humidity sensor ensures automatic boosting of the ventilation profile when required.

As the unique feature of this MVHR Adroit unit is recovering heat coming from the hob through the heat exchanger, a total energy class of A can be increased to A+ in a cold climate.



DIFFERENT VENTILATION PROFILES FOR THE COOKER HOOD UNIT

The Adroit DV51CH kitchen MVHR unit has several elegant details, such as a low front panel with capacitive touch buttons. It has been optimally designed to provide excellent smell absorption. An efficient and dimmable LED module lights the entire cooker top evenly and without glare.



THE FRONT PANEL OF THE COOKER HOOD HAS FOUR CAPACITIVE TOUCH BUTTONS.

Adjust the brightness of the cooker hood light

- 1 Turn on the light, close the damper, and set the ventilation to the Away profile.
- 2 Press the selection button for approximately 3 seconds until the setting mode, light switch starts to flash.
- 3 Adjust the brightness of the light by pressing the light switch until the brightness is adequate.
- 4 To save the setting, press the selection button for approximately 3 seconds until the setting mode, light switch stops to flash.



Damper position

The damper is opened by pressing the damper button (the light switch turns on). To close the damper, the damper button has to be pressed again or after 45- 120 min will automatically close (the light switch turns off).



Ventilation profiles

Select the profile by pressing the fan speed button repeatedly until the light switch indicates the required ventilation profile.



Away Profile

Use this ventilation profile when the apartment is unoccupied, e.g. during holiday.



At Home profile

Use this ventilation profile when the dwelling is occupied.



Boost profile

Use this profile to boost ventilation, eg when there are more people than usual in the dwelling.



Selection button

The selection button is used to adjust the brightness of the cooker hood LED light. It is roughly 2 cm to the left from the light switch.



Cooker hood light

Turn the light on or off by pressing the light switch. The brightness of the light can be adjusted.

In normal circumstances, the damper is closed (the light switch is off), which allows the unit to boost the extract air flow from other wet rooms. The damper should be open (the light switch is on) when the user wants to increase the extract air flow through the cooker hood, e.g. when the cooker top or oven are used; strong detergents are used to clean the kitchen; a large number of people are in the kitchen.



The ventilation unit can be connected to the Adroit Cloud service. This cloud service allows the user to have full control remotely using a smartphone, tablet or computer. Also, the unit software is updated automatically through the cloud service.

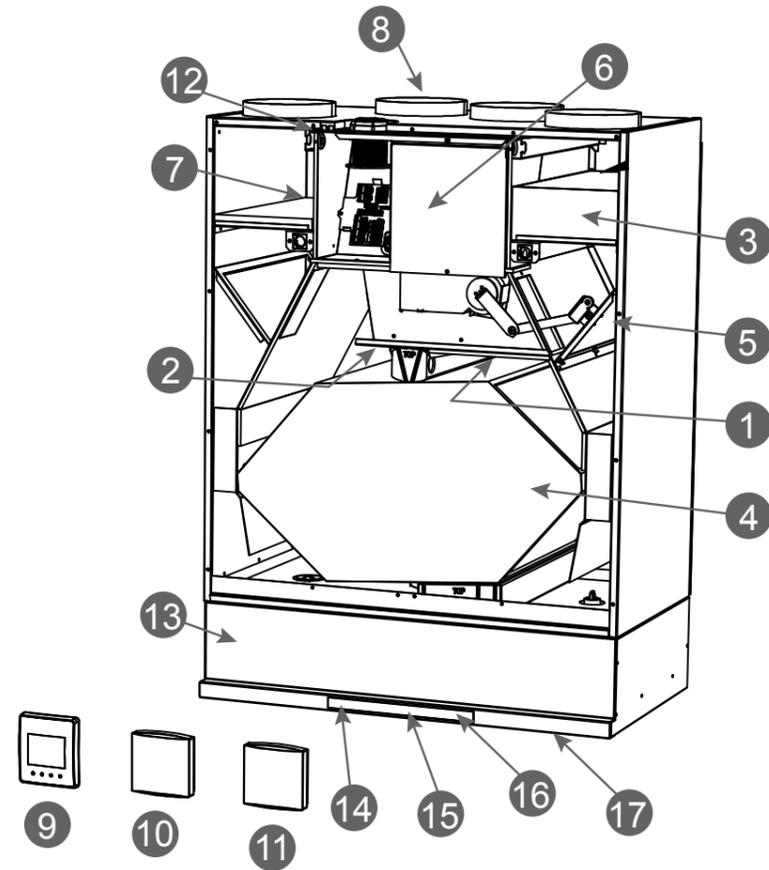
To connect to the cloud service, the ventilation unit must be connected to the internet via LAN and registered with the cloud service. At the same time, you can create an Adroit Cloud account for yourself. You can visit www.airflowadroitcontrol.com to know more about the service.

TECHNICAL DATA

When selecting a cooker hood, attention should be paid not only to the design but also on its features and benefits to improve indoor air quality. The DV51CH Adroit heat recovery unit, incorporating a cooker hood, combines a stylish design with all the advantages

of having a heat recovery ventilation unit. Providing the unit is installed as per recommendations and instructions (Please see the DV51CH Adroit instruction manual at www.airflow.com), the distance between the cooker hood and the hob surface must be

kept between 500-750 mm depending upon the hob. For electric hobs the recommended distance between the cooker hood and hob surface must be at least 500-600 mm. For gas hobs, the distance must be at least 650-750 mm.



- | | | | | | |
|------------------------------|---|-----------------------------------|----|-------------------|----|
| Extract air fan | 1 | Coarse filter for extract air | 7 | Cooker hood | 13 |
| Supply air fan | 2 | Post heater resistor | 8 | Damper button | 14 |
| Fine filter for supply air | 3 | Control panel (optional) | 9 | Fan speed buttons | 15 |
| Heat exchanger | 4 | CO ₂ sensor (optional) | 10 | LED light button | 16 |
| Automatic bypass damper | 5 | Humidity sensor (optional) | 11 | Grease filter | 17 |
| Coarse filter for supply air | 6 | Internal humidity sensor | 12 | | |

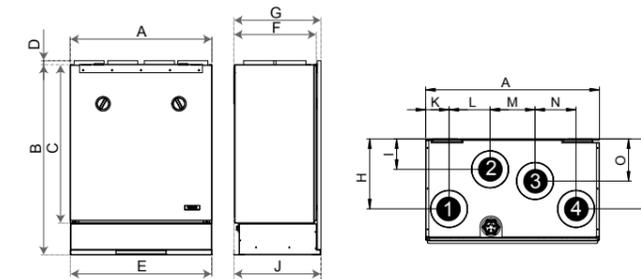
TECHNICAL DATA

The unit is easy and quick to install in kitchen cabinets with depth of 280-335 mm. The EC fans included in the cooker hood are quiet and energy efficient. Also, the grease filter is easy to remove and can be washed in the dishwasher.

Specification	DV51CH (R) Adroit	DV51CH (L) Adroit
Suitable for dwellings up to m ²	75	75
Air flow m ³ /h / l/s @100 Pa	170 / 47*	170 / 47*
Thermal efficiency	Up to 84%	Up to 84%
Heat exchanger	Counterflow (Aluminium)	Counterflow (Aluminium)
Fans	EC	EC
Summer bypass damper	100% automatic	100% automatic
Frost protection	Stop supply fan	Stop supply fan
Controls	Capacitive buttons with 3 speed profiles (on cooker hood)	Capacitive buttons with 3 speed profiles (on cooker hood)
Digital controls	Optional digital - 4 profiles, 100% adjustable	Optional digital - 4 profiles, 100% adjustable
Mounting	Wall	Wall
Sound level @ 3m (dB(A))	28	28
Duct diameter (mm)	4 x 125	4 x 125
Condensate discharge (mm)	12	12
Electrical supply	230 V / 1 ph / 50 Hz	230 V / 1 ph / 50 Hz
Max. power consumption	119 W	119 W
Filter class**	2 x ISO Coarse > 75% (G4) and 1 x ISO ePM1 50% (F7) filters	2 x ISO Coarse > 75% (G4) and 1 x ISO ePM1 50% (F7) filters
Built-in electric post-heater (optional)	900 W	900 W
Protection class	IP34	IP34
Casing insulation (mm)	10	10
Weight (kg)	66.2 (including cooker hood)	66.2 (including cooker hood)
Dimensions (L x D x H) (mm)	598 x 349 x 802 (including cooker hood)	598 x 349 x 802 (including cooker hood)
Part No.	90001174 (white) 90001172 (stainless steel)	90001175 (white) 90001173 (stainless steel)

**Complies with ISO 16890

DIMENSIONS



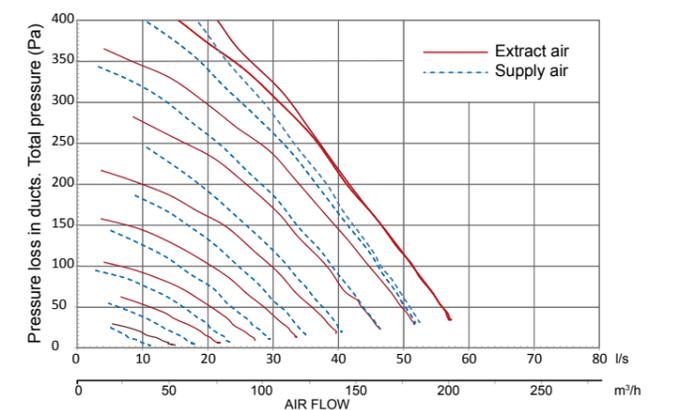
Duct outlets, Model R

- Inner diameter of female outlet collar ø125 mm
1. Extract air from the apartment to the unit
 2. Supply air from the unit to the apartment
 3. Exhaust air flowing outdoors from the unit
 4. Outdoor air to the unit

Duct outlets, Model L

- Inner diameter of female outlet collar ø125 mm
1. Outdoor air to the unit
 2. Exhaust air flowing outdoors from the unit
 3. Supply air from the unit to the apartment
 4. Extract air from the apartment to the unit

PERFORMANCE



* Guidance only. Dependant upon system pressure.

Model	A	B	C	D	E	F	G	H	I
DV51CH	598	802	668	17	597	249	368	241	105
	J	K	L	M	N	O	P		
	598	81	141	155	141	145	241		

DESIGN

The DV51CH Adroit cooker hood has a modern and intuitive front panel which blends in with the kitchen furniture design. Two colours are available for the cooker hood: white and stainless steel. In addition, the unit can be customised furthermore by covering the unit with a kitchen door in a preferred colour. The kitchen door will have the standard width of 600 mm.

WHITE
(with kitchen door)



STAINLESS STEEL
(without kitchen door)



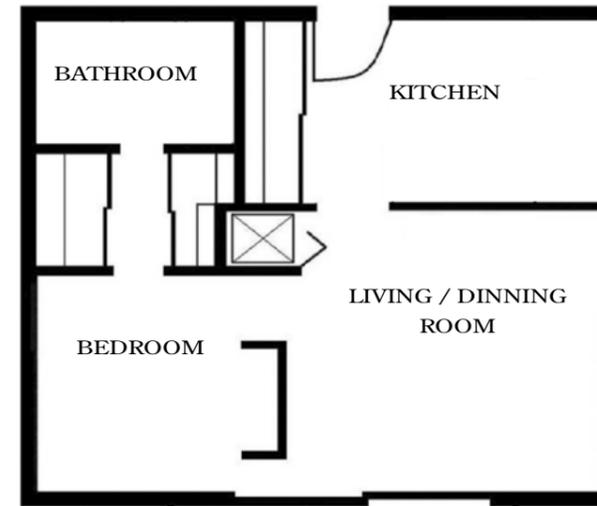
- Flow rate up to 47 l/sec (170 m³/h) at 100 Pa
- Up to 84% thermal efficiency and low SFP
- Internet control by smart phone, tablet or PC
- Two ISO Coarse > 75% (G4) and one ISO ePM1 50% (F7) filters - ISO 16890 compliant
- Full heat recovery for the whole dwelling
- Slim and stylish extractor hood
- Can be integrated into a standard 600 mm wide kitchen unit

- Optional LCD digital controller with four independent environmental profiles
- Optional built-in electric heater
- Complies with Building Regulations
- Cooker hood available in white and stainless steel
- Fits neatly as part of an integrated solution
- Built-in humidity sensor
- 5 year warranty+

+ excludes motors. Motor warranty one year from date of purchase



INSTALLATION



One example of where the DV51CH Adroit unit can be installed to provide a whole-house ventilation solution as shown in a one bedroom flat.

The DV51CH Adroit unit is installed in the kitchen above the hob. Also, the distribution box is located above the cooker hood unit where the ducting runs towards the other rooms. A maximum flow area of 75 m² can be served so that correct extraction rates are achieved to meet building regulations.



ADROIT CONTROL AND SENSOR OPTIONS

The Adroit *DV51CH* has different controls and sensor options, it also has a Fireplace guard function that sends an alarm to house automation or a separate alarm system if the temperature rises exceptionally high.



Adroit Boost Switch

A rocker switch that can be used to manually boost the ventilation rate of the Adroit system.



Adroit Speed Controller

Wall mounted, 3 speed (independently adjustable) rotary switch air flow controller.



Adroit Digital Controller

Wall mounted, LCD display with four independent adjustable air flow profiles (Home, Away, Boost and Custom). A range of indoor parameters; air flow rates, temperature, humidity, summer by-pass, time clock settings, CO₂ sensor and filter alert that are all adjustable to suit your indoor environment. The Adroit Cloud user interface is easy to use with all devices.



Adroit CO₂ Transmitter

A sensor that actively monitors the CO₂ levels of rooms where occupancy levels typically varies, such as living rooms and bedrooms. This sensor enables the level of ventilation to be adjusted based on the CO₂ levels relative to occupancy so that it remains within healthy levels.



Adroit Humidity Transmitter

This wall mounted transmitter can be installed in wet rooms such as bathrooms and kitchens where relative humidity varies according to usage. It will automatically activate boost speed when required.



VOC Sensors

VOC (Volatile Organic Compounds) sensors can be used as an option to control a ventilation system. The VOC sensors can detect different types of gases mixed in the indoor air. Sources which produce toxic gases in the air are; furniture, carpet, and cleaning products.



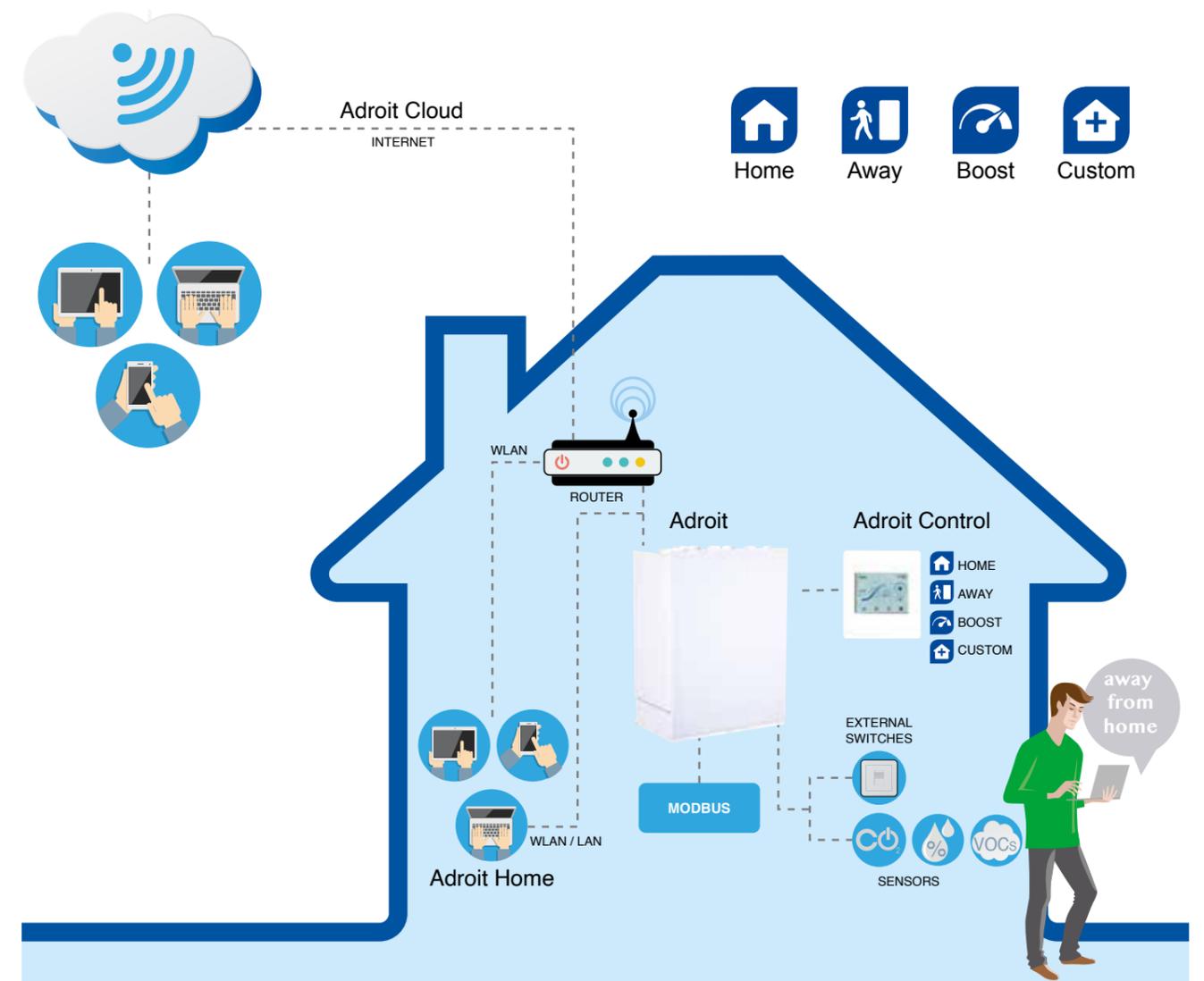
KNX Converter

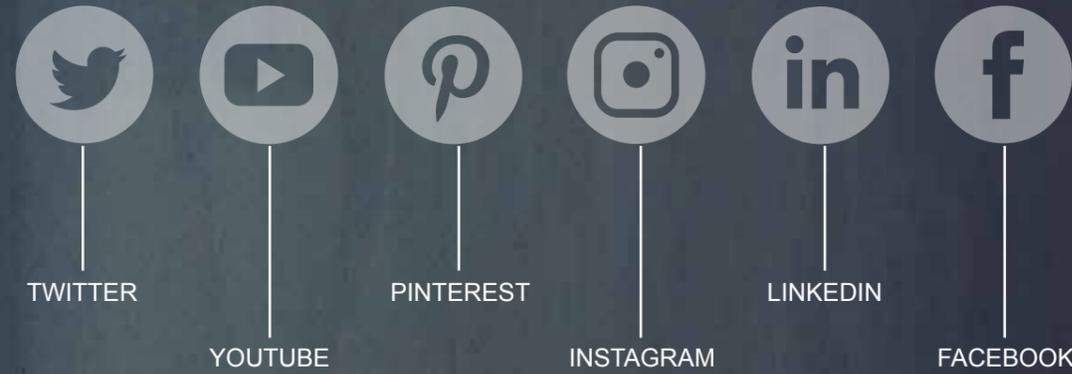
The KNX-Converter enables the Adroit system to be connected to a Building Management System via Modbus.

MORE ABOUT THE ADROIT CONTROL

The Adroit *DV51CH* is an ideal ventilation solution for kitchens providing sufficient space for the occupants, and it's easy to integrate it to other kitchen units. In addition to all the benefits, the unit can be controlled with the highest Adroit technology by registering on the Adroit Cloud website. This will give you easy control on the whole house ventilation by using any smart device.

- 4 ventilation profiles, 100% adjustable
- Internet connection available
- Automatic boost function with delay timer
- Filter maintenance reminder via counter clock (standard)
- Heater control for optional post heater
- Connection to BMS via Modbus or KNX
- Self-diagnostic via fault signal relay
- On-demand control via humidity and CO₂ sensors
- Separate fan control for ease of commissioning
- Weekly ventilation programming allows users to pre-set the ventilation levels scheduled for different days
- Indoor temperature control based on extract air temperature or supply air temperature
- 100% adjustable speed levels
- User friendly for quick and simple control





AIRFLOW CONNECTING

Stay up-to-date with the latest developments and updates affecting your Adroit unit via Airflow's social media channels



CONNECTING INTUITIVELY

Airflow believes in building long-lasting relationships with our customers. These relationships are key in understanding the needs of our customers and help us to improve our products and the services that we offer. One of the main methods Airflow uses to achieve this is through numerous social media channels.

With the world increasingly on-the-go and connected, our social media

channels give you the opportunity to keep up-to-date with the latest developments surrounding air pollution and indoor air quality, as well as being notified about software updates to your Adroit unit and updates about the rest of the Airflow product range.

Airflow provides regular updates across our channels so that you can keep abreast of the latest legislation changes that could have a knock on

effect on you. There will be articles and blog posts shared that help you better understand some of the terminology used within the ventilation industry and also opportunities for you to provide your feedback about how we're doing.

Simply go to any social media link to follow Airflow and keep up-to-date with all things ventilation and air quality.

FIELD SUPPORT

Field support



Airflow do not view our customers just as a short term arrangement. We believe that by working together in partnership we can achieve better results in realising our shared objectives to deliver efficient, effective and reliable ventilation solutions so that you and your tenants are living in a healthy environment.

Our knowledgeable, trained technicians can provide support to ensure your ventilation projects run smoothly and where issues arise they can advise on the most suitable course of action to provide a successful outcome.

Airflow offers full field support across the UK, our after sales team can deal with any post sale needs and requirements. For any pre sale needs and requirements then our technical sales team can assist.



Contact us



Airflow Developments Limited

Tel: 01494 525252
e-mail: info@airflow.com

Customer Services

Tel: 01494 560800
e-mail: customer_services@airflow.com

Technical Support

Tel: 01494 560950
e-mail: technical_sales@airflow.com

Sales

Tel: 01494 560800
e-mail: sales@airflow.com

Airflow Developments Limited

Aidelle House, Lancaster Road,
Cressex Business Park,
High Wycombe, Buckinghamshire,
United Kingdom, HP12 3QP

airflow.com





UNITED KINGDOM (head office)

Airflow Developments Limited
Aidelle House, Lancaster Road
Cressex Business Park
High Wycombe, Bucks. HP12 3QP.

Tel: +44 (0) 1494 525252
Email: info@airflow.com
Web: airflow.com

GERMANY

Airflow Lufttechnik GmbH
Wolbersacker 16
53359
Rheinbach, Germany

Tel: +49 (0) 2226 92050
Email: info@airflow.de
Web: airflow.de

CZECH REPUBLIC

Airflow Lufttechnik - Praha
Hostynska 520
10800 Praha 10
Prague, Czech Republic

Tel: +42 (0) 2747 72230
Email: info@airflow.cz
Web: airflow.cz