

## UNIT SPECIFICATON - DV51CH ADROIT

The mechanical ventilation with heat recovery unit with a cooker hood shall be the DV51CH Adroit as manufactured by Airflow, shall be sized as indicated on the drawings and shall be in accordance with the specification.

The unit shall be fully insulated to provide optimum thermal and acoustic performance and shall include an Aluminum counterflow heat exchanger with a 84% thermal efficiency. The heat exchanger shall be protected by a unique triple filter design containing two ISO Coarse>75% (G4) grade filters and one ISO ePM1 (F7) filter on the supply and extract air flow path. The air filtration shall help prevent small pollen particles from entering indoors. Also, the grease filter shall protect the unit against cooking particles and shall be easy to clean and access.

The unit shall have low energy consumption EC fans providing a quiet operation and achieving low specific fan power values. The sound power level requirements shall be detailed by the unit's manufacturer and in accordance with the ventilation equipment operation schedule.

The unit shall benefit from a unique feature of recovering the heat from the hob by means of its slim and stylish cooker hood, manufactured from metal providing a fire safe ventilation solution for kitchen installations. The cooker hood capacitive touch front panel shall be easy to integrate within the kitchen units as per the two options available: white and brushed stainless steel.

The unit shall be equipped with an automatic, 100% bypass which totally isolates the heat exchanger so that no air passes through it. This prevents overheating the dwelling in the summer season. The unit shall be supplied with a 12 mm insulated condensation trap. The unit shall be suitable for 125 mm (4 ports) duct diameter installed at the top entry. The unit shall have a dead man's switch preventing the fans from still running, which will enable the filters to be changed and maintained, avoid particulates matter as could cause damage to the heat recovery cell; also for operational safety reasons.

The unit shall be DV51CH Adroit as manufactured by DV51CH and shall be SAP eligible. The Adroit DV51CH can be right or left handed as per the manufacturer's technical datasheet.

### KEY FEATURES

- For use in dwellings up to 75 m<sup>2</sup>
- Up to 84% thermal efficiency and low SFP
- 'A' energy rating
- Internet control by smart phone, tablet or PC
- Triple filter design with ePM1(F7) pollen filter and a grease filter
- Automatic, 100% summer by-pass
- Built-in humidity and carbon dioxide sensors as standard
- White coated galvanised steel casing with 10 mm insulation
- BMS (Modbus / KNX) connection
- Optional LCD digital controller with four independent environmental profiles
- Unique full heat recovery for the whole dwelling
- Slim and stylish extractor hood
- Can be integrated into a standard 600 mm wide kitchen unit
- Optional remote access feature through the Adroit Cloud
- Optional VOC (Volatile Organic Compounds) sensor
- Auto cut-out switch for extra safety
- Optional built-in electric post-heater
- Cooker hood available in white and stainless steel
- Fits neatly as part of an integrated solution
- Complies with Building Regulations

## OPERATION

The supply and extract sides shall be positioned as indicated on the project's drawing and shall be in accordance with the ventilation unit's schedule.

The mechanical ventilation with heat recovery unit shall extract stale air from all wet rooms such as bathroom, kitchen, en-suite, W.C., utility rooms and supply fresh warm air to all habitable rooms such as bedrooms and living areas. The heat of the extract air from above the hob going through the cooker hood shall be recovered within the heat exchanger and transferred to the incoming air. The supply air shall be warmed up by the extracted indoor air through the highly efficient heat exchanger. Also, both air flow paths, the extract and supply sides, shall be filtered in order to protect the heat exchanger.

The ventilation unit shall be controlled by using the cooker hood that is connected to the unit or one of the control options available. The cooker hood shall be designed to be used above the hob as a general extraction valve in the kitchen and as a ventilation system control panel.

## CONTROL OPTIONS - DV51CH ADROIT SLIM-LINE

The DV51CH Adroit unit shall be controlled by one of the following:

- Manual controller
- Adroit digital controller
- Adroit Cloud through the Internet or local network using laptop, smartphone, tablet, etc.
- BMS via LON or KNX through a PC or a central control system
- On-demand ventilation through built-in humidity and CO<sub>2</sub> sensors
- Additional external sensors achieving on-demand ventilation
- Switched live signal from light/remote switches
- Cooker hood intuitive control panel

## ADROIT DIGITAL CONTROLLER

The Adroit digital controller is compatible with the Adroit DV51CH heat recovery unit and shall be an add-on digital controller providing the following features:

- 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 LON or KNX
- Self diagnostic via fault signal relay
- On-demand control via humidity, CO<sub>2</sub> and VOC 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