aircycle 4.1

OPERATION

The MVHR system shall operate by extracting air from all wet rooms (Bathroom, kitchen, WC, utility etc.) whilst simultaneously supplying fresh pre-heated, filtered air to the habitable rooms (bedrooms, living room, dining room etc.) via a highly efficient counter flow heat exchanger with a thermal efficiency of up to 93%.

The system shall operate at the whole dwelling supply rate (trickle rate) as standard and shall offer a boost facility which increases the ventilation rate in line with Technical Guidance Document Part F.

Boost control shall be by means of a switched live signal from light switches in wet rooms/ bathroom areas, an integral humidistat within the MVHR system and manual two-way boost switches in the Kitchen area (or as required).

MVHR UNIT SPECIFICATION

MVHR unit and controllers shall be manufactured by Brookvent Ltd. or equal and approved. Alternative products may be installed by written consent of the mechanical consultant.

The MVHR unit shall be listed on the SAP Appendix Q database and should comply with Eco Design requirements.

The MVHR unit should have a highly efficient counter flow heat exchanger with a thermal efficiency of up to 93%.

The MVHR system shall contain low energy EC fan/ motor assemblies with sealed for life bearings and the impellers shall be the backward curved centrifugal type resulting in a specific fan power (SFP) down to 0.45 W/l/s.

The heat exchanger shall be protected by 2 no. G2/3 grade filters. Filter access to be 'tool free' on the front of the system ensuring ease of maintenance.

The MVHR system shall have 100% variable, independent fan speed control (General and boost settings for each fan) enabling precise on-site commissioning.

The system shall also come complete with automatic frost protection to protect the internal heat exchanger from extreme temperatures.

The MVHR system shall have an automatic tempering summer bypass facility which offers 100% filtration. The summer bypass facility shall operate by diverting 100% filtered, external, air around the heat exchanger thereby avoiding heat recovery and ensuring occupier comfort during summer months.

The MVHR unit shall be manufactured from EPP (Expanded Polypropylene) material with excellent thermal and acoustic properties. The system shall be wall or floor mounted in accordance with the design

requirements. The system also shall be capable of on-site inversion of the external and internal ducting connections and shall come complete with top and side mount ducting connections for ease of installation.

The MVHR unit shall be supplied with anti-vibration mounting bracket Anti-Vibration mounting. 100% separation between the unit and mounting surface via the anti-vibration material.

The system shall be complete with a dedicated condensate tray and drainage connection.

MVHR UNIT CONTROLS SPECIFICATION

The MVHR unit must come complete with a hard wired, remote, digital controller to ensure the controller can be situated in a location visible to the user, as per Technical Guidance Document Part F 1.2.3.12.

The controller must indicate to the occupant that the system is operating correctly, if a fault has occurred on the system, and if maintenance is required.

The controller must include 4 Airflow modes (100% variable): Night, General, Boost & Purge.

Night mode must allow occupier to disable boost mode during set hours.

The MVHR controller must have a variable Boost over-run timer (0- 99 mins)

The MVHR system shall also be complete with an integral humidistat that continuously monitors the RH% of the air being extracted from the wet rooms. The humidistat shall automatically operate the boost when the set RH% is reached (Factory Set: 70% RH). The RH boost level must be adjustable to adjust for dilution of the extract air.

The system shall have the facility to operate its boost mode upon receiving any 230V switched live signal (as required). The system shall also come complete with an in-built, automatic boost over-run timer of 15 minutes with the ability to disable as or adjust the length of time up to 15 minutes.

The controller must indicate when the unit is in frost protection mode or summer bypass mode.

The controller must have an engineer's section with PIN protection to avoid accidental changing of settings.

Filter reminders notifications require PIN number input (found on the filter label) to ensure filters are checked annually by the occupant.

UNIT MODELS

AS 90-0401-WDS-01	aircycle 4.1 Wall Mounted Digital – Standard Configuration
AS 90-0401-WDS-01V	aircycle 4.1 Wall Mounted Digital – Inverted Configuration
AS 90-0401-FDS-01	aircycle 4.1 Floor Mounted Digital – Standard Configuration
AS 90-0401-FDS-01V	aircycle 4.1 Floor Mounted Digital – Inverted Configuration

AM 90-02-301	Digital Controller
AM 90-02-299	Anti vibration mount