

DC wholehouse heat recovery unit



The Xpelair Xcell 270 is one of a new breed of high efficiency MVHR units designed to save energy and function reliably with extremely low running costs.

Key features

- **Type:** Mechanical ventilation with heat recovery
- **Application:** Wholehouse system
- **Control options:** 3 speed
- **Legislation:** Building Regulations BRE Digest 398 (1994)

The range

- New building regulations are striving to improve energy efficiency in the home and reduce CO₂ emissions.
- Part L places greater emphasis on airtightness in new homes to reduce the energy loss through uncontrolled air leakage, so the need for an intelligent controlled ventilation strategy is becoming more critical.
- Wholehouse ventilation with heat recovery, is often referred to as MVHR.
- It provides a constant background flow of fresh tempered air to the living spaces of a 'tight home' whilst extracting condensation, smells, tobacco smoke and volatile organic compounds via kitchens, bathrooms and toilets.
- The resultant lower humidity deprives the house dust mite the conditions in which to breed, thus contributing to a healthier environment.
- The Xpelair Xcell 270 is one of a new breed of high efficiency MVHR units designed to save energy and function reliably with extremely low running costs.
- It maintains a cosy indoor environment during the colder months and provides an 'aired' feeling even when the building has been closed up for long periods.
- The Xpelair cell is housed in an insulated cabinet and integral filters are designed to make access to the cell unnecessary – keeping maintenance to a minimum.
- Xpelair LongLife DC fan units not only ensure a low running cost but they are also much more efficient than ac motors – keeping energy usage down.
- A choice of ten preset performance programmes enables flexible control over air quality and when combined with a manual switch or automatic sensor, the ventilation rate can be increased temporarily to reduce humidity – perfect for bath and shower rooms.
- Fitted with a fan failsafe interlink, if one fan is stopped, the other will automatically switch off - particularly important in homes with open fires or unvented boilers.
- Housed in a stylish cabinet, the Xcell 270 can be unobtrusively mounted in an airing cupboard, on a kitchen wall or within a roof space.
- Xcell 270 Whole House Mechanical Ventilation and Heat Recovery (MVHR) unit
- Wall hanging bracket provided
- Steel powder coated cabinet
- Beige finish
- High density foam insulated cabinet lining/scroll construction with built in double sided condensate tray with choice of drain positions
- Polymeric, robotically assembled heat recovery cell with bonded seals to eliminate cross air leakage
- ContraFlow cell design providing heat recovery efficiently up to 95% (Independent TZWL laboratory tests)
- Two stage 1 G4 filters, which are removable for easy cleaning
- Hinged access door for access to the cell and filters
- 3 speeds from 10 available (via on board dip switches to suit dwelling volume) or low with switched higher speed. Factory set at the three most popular outlet settings
- Motors are LongLife DC, maintenance free with sealed for life bearings
- The integrated electronic control system ensures equal constant outputs from both sides of the ducted resistances of the unit
- XFFI system automatically switches both fans off if one fan fails to rotate
- Complete with pre-wired connection cable

Models

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- **Xcell 270BP with Summer Bypass Ref. 91265AW** All the features of Xcell 270 plus a built in summer bypass which diverts the incoming air directly into the dwelling without passing through the heat exchange cell. During hot periods this ensures that comparatively cooler incoming fresh air is not further heated by warmer air exhausted from the dwelling. This is particularly useful on summer evening when the outside temperature falls faster than that inside
- **Controllers: Three speed selector switch Ref. 91266AW** Three speed selector switch for low (night-time), medium (daytime) and high (boost setting). **Dimensions:** 152 x 81 x 62mm

Technical specification

- The unit is to be supplied from the Xpelair Xcell range by Applied Energy Products Ltd. Morley Way, Peterborough PE2 9JJ
- Tel. +44 (0)1733 456789
- Model Ref
- Xcell 270 91264AW
- Xcell 270BP 91265AW
- The MVHR unit shall be designed for installation in well insulated dwellings
- The unit shall be wall mounted using a wall bracket provided with 150mm duct spigots ready for connection to supply and return air ducts and ductwork to a wall or roof termination
- The cabinet shall be manufactured in steel and powder coated in beige
- The inner components and scroll shall be made from non hygroscopic high density structural foam mouldings with an integral double condensate tray. Provision shall be made for alternative condensate drain off points

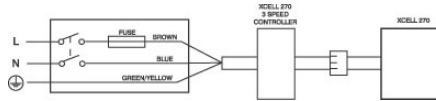
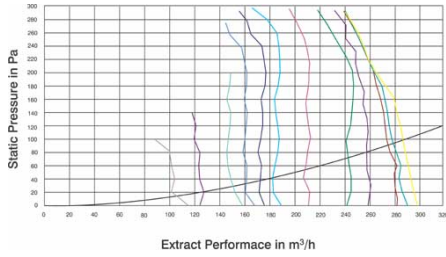


- A hinged door shall be provided on the front of the cabinet for access to the stage 1 G4 filters and occasional visual inspection of the cell
- The unit shall have 3 speed from a choice of ten to match the volume of the dwelling in order to provide half an air change per hour continuous ventilation including the choice of a boost speed if required. As a result the heat recovery cell shall be up to 93% efficient -certified by TZWL, depending on chosen speed. The fans shall be electronically balanced to provide equal extraction and air supply
- The motors shall be LongLife DC motors with maintenance free greased for life ball bearings
- A supply lead shall be provided to facilitate wiring
- Overall dimensions HxWxD 712x692x454mm add 55mm for spigots

Product variations

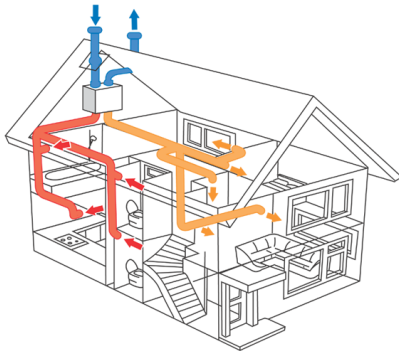
	Xcell270BP	Xcell270
Code	91265AW	91264AW
Max house volume (m ³)	540	540
Summer bypass	yes	no
Longlife dc motor	yes	yes
Efficiency (%)	90	90
3 speeds selected during installation	yes	yes
Typical Performance (m ³ h) - High	290	290
Typical Performance (m ³ h) - Medium	175	175
Typical Performance (m ³ h) - Low	110	110
Max static pressure (Pa)	300	300
Max sound pressure (dBA@3m)	40	40
Power (W) - high	180	180
Power (W) - low	40	40
Wall mounting	yes	yes
Roof space fitment	yes	yes
Spigot (mm)	150	150
Colour	beige	beige
Weight (kg)	28	28
Guarantee (years)	5	5

Xcell270:



Wiring:

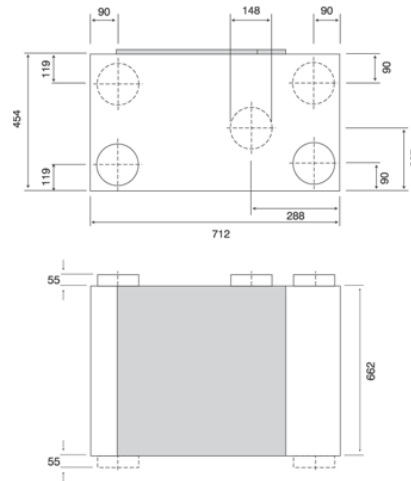
Performance:



Schematic diagram of a typical wholehouse MVHR installation

Installation:

Xcell



Dimensions: All dimensions in mm