



**The new Xcell EC High
Efficiency Range**
Fresh air pure and simple



A photograph of a modern architectural interior. The space features a high ceiling with large, circular skylights that allow natural light to enter. The walls are made of light-colored concrete or plaster, and the floor is a smooth, light-colored surface. Several people are walking through the corridor, some carrying bags. The overall atmosphere is bright and open.

“saving energy,
saving money”



Introducing the NEW Xpelair Xcell EC High Efficiency range.

The Xcell EC high efficiency range of energy recovery ventilation units builds on the success of Xpelair's customised solutions, incorporating energy efficient technologies and modern control strategies within a standard range of four models.

With new energy efficiency regulations 2010, ERP 2013/15 and continuing demands to reduce energy usage, Xcell delivers, for both today and into the future. Xcell reduces heating & cooling requirements by up to 94% compared to conventional fan only ventilation systems, ensuring minimal energy wastage. The integral demand controlled ventilation feature further reduces energy consumption whilst optimising indoor air quality.



The new Xpelair Xcell

Xcell's Energy Efficiency Pedigree

Xpelair's new Xcell range of energy recovery units offers the highest efficiency ventilation solution.

Incorporating market leading technologies, Xcell has been designed with today's energy costs in mind, minimising wastage and using the latest demand controlled ventilation system to ensure optimum indoor air quality, whilst minimising energy consumption and reducing associated losses when compared to extract ventilation systems.

The energy saving technologies incorporated into each Xcell unit are:

Aluminium Counterflow heat exchanger

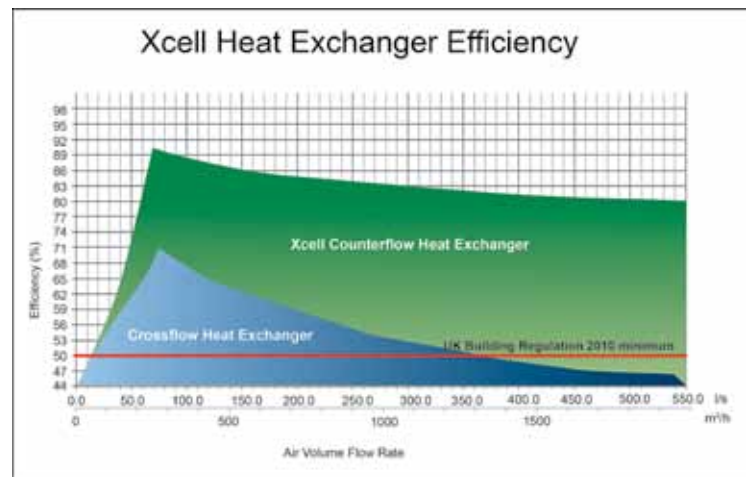
Xcell units incorporate a market leading Counterflow heat exchanger, with Eurovent certified ratings in accordance with EN308 of up to 90% and higher in the case of condensation, $\leq 94\%$.

The Counterflow heat exchangers with channelled airflow guides are made from seawater resistant aluminium and designed to achieve higher efficiencies over the entire volumetric range.

Precision engineered with a totally smooth outer surface to ensure optimum air-tightness. Sealing between plates is achieved through adhesive diffusion of the sealing substance. This ensures high levels of impermeability are maintained, preventing the transfer of odours or humidity.

There is no use of rivets or screws and the robust aluminium construction is insensitive to frost related damage and tolerant to pressure in-balance, unlike paper or plastic variants.

Extremely hygienic through optimum drainage of all condensate with no niches or areas which can retain water and therefore prevents the build up or spread of germs.



High Efficiency Motorised Impellers

High efficiency EC motors and backward curved impellers ensure minimum energy consumption and offer maximum efficiency (ErP 2015 compliant). Motor switching is undertaken electronically with no physical contacts reducing wear, heat losses and improving reliability.



The EC technology is also infinitely speed controllable and offers increased energy savings across the complete speed control range when compared with conventional inverter drive solutions.

The result is higher efficiency, reduced noise, accurate controllability, better speed control, less power and as a result better overall system performance.

Benefits include:

- Continuous speed control across the full operating range giving an increased tolerance to high and low pressure.
- Low noise compared to a step control motor.
- Improved service life.
- Power input lost as heat is reduced by a third compared to a conventional AC motor.

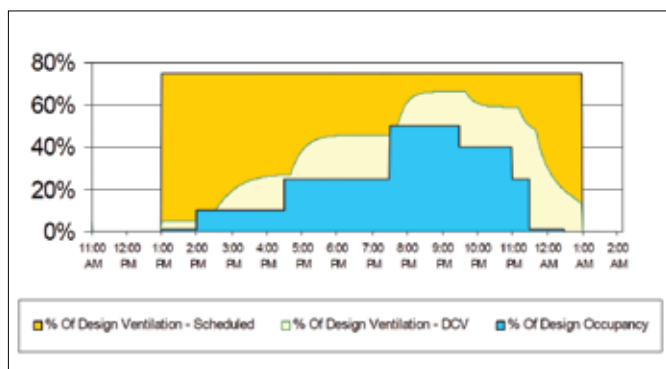
The ease of speed controllability of the EC motors makes the interaction with the inbuilt Demand Controlled Ventilation system simple, delivering a significant energy reduction when compared to AC Fans, which is significantly increased when the system operates under partial load.

Xcell's Energy Efficiency Pedigree

Demand Controlled Ventilation (DCV)

DCV is a ventilation control strategy that provides just the right amount of outside fresh air needed by the occupants. Active control of the ventilation system provides the opportunity to control indoor air quality.

The figure below shows the ventilation savings potential (area in gold) for a typical application where DCV replaces fixed scheduled ventilation.



Xcell's inbuilt DCV control offers significant running cost savings over conventional time-clock controlled fixed volume ventilation systems by automatically adjusting the ventilation rate to suit the occupancy of the ventilated area.

The minimum and maximum ventilation rates are set during commissioning, and then the chosen sensors automatically control the ventilation system.

Sensor options include:

PIR Sensor – senses occupancy in the ventilated area and turns the ventilation On or boosts ventilation rate.

CO₂ Sensor – measures the CO₂ produced by occupants and increases the ventilation rate proportionally to maintain IAQ.

Humidity Sensor – when the preset level is exceeded it automatically boosts the ventilation rate.

Air quality Sensor – senses contaminants such as cooking, toilet and body odours and when the preset level is exceeded it automatically boosts the ventilation rate.

Automatic bypass (100%)

Using in built temperature sensors, when energy recovery is not beneficial, the automatic damper operates to bypass the heat exchanger cell, to limit over/under temperature.

Night Cooling

When selected, this function takes advantage of lower night time temperatures, allowing pre-cooling of the building fabric prior to daytime occupation. This function helps to reduce building overheat in non air conditioned spaces or reduce start up loads in air conditioned spaces.

BMS integration

Available for building system integration are a range of BMS communication interfaces to suit proprietary communication protocols:

- N2 Open
- LONWORKS
- BACnet MS/TP
- RS-232C serial interface

Each unit also includes as standard three output relays, which can be user configured to the following options:

- General alarm
- Heat Demand
- Cool Demand
- Frost
- Shutdown command

The new Xpelair Xcell



Efficiency

With high efficiency EC long life motors reducing running costs as well as an aluminium counterflow energy recovery cell with efficiencies of up to 94%, the new Xcell range extends the Xpelair Carbonlite family even further.

Carbonlite Control Package

Each unit comes with a, BMS compatible, demand based ventilation control which can be customised with a range of sensors to suit specific application requirements, ensuring maximum flexibility whilst optimising IAQ with minimal energy usage.

Quiet Running

Manufactured from high quality 25mm double skinned panels, thermally and acoustically insulated to reduce noise break out.

Filter Protection

All Xcell units have G4 filters fitted as standard to both supply and extract. A user definable pre-warning function within the controls system advises when the filter requires replacement, ensuring optimum air quality and energy usage.

Easily Maintained

With bottom and side access as standard this complete range of energy recovery units can be easily maintained whatever the application.

Ancillaries

With a matching set of ancillaries including duct heaters the Xcell range is designed to meet your specification requirements.

The new Xpelair Xcell



Compact Energy Recovery Units



Key Features

Compact design.

Counterflow recuperator giving up to 94% energy recovery – Eurovent certified.

Ultra efficient EC motors with backward curved impellers for increased efficiency and reduced running costs.

BMS compatible, integrated demand control ventilation.

A comprehensive range of control sensors to suit application.

Xcell units are available as an external roof mounted model with factory fitted roof, plus inlet and discharge protection.

Models

Xcell 700 Product Reference: 92771AA

Designed to operate at airflows up to 700 m³/hr

Xcell 1200 Product Reference : 92772AA

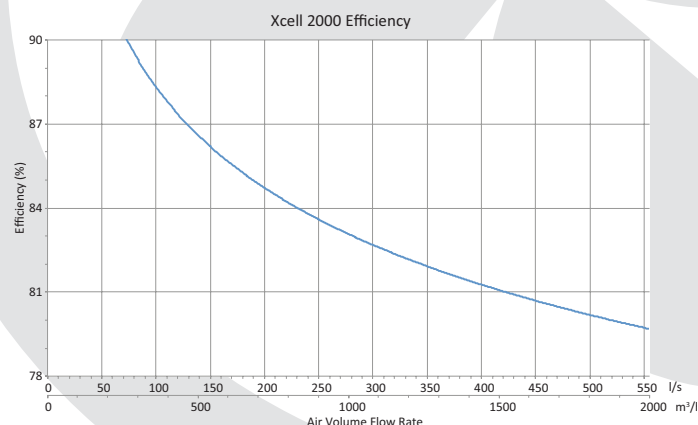
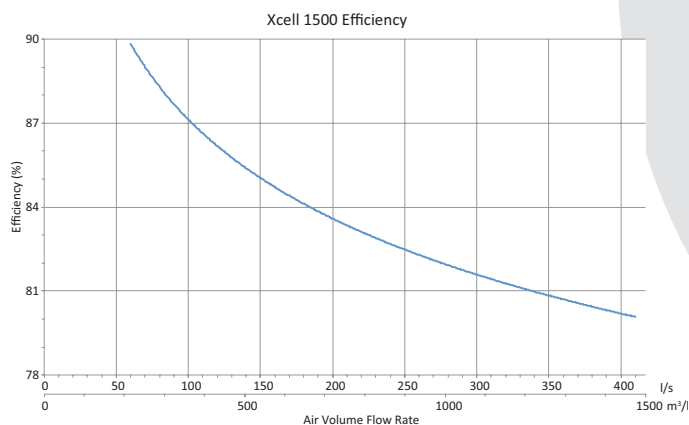
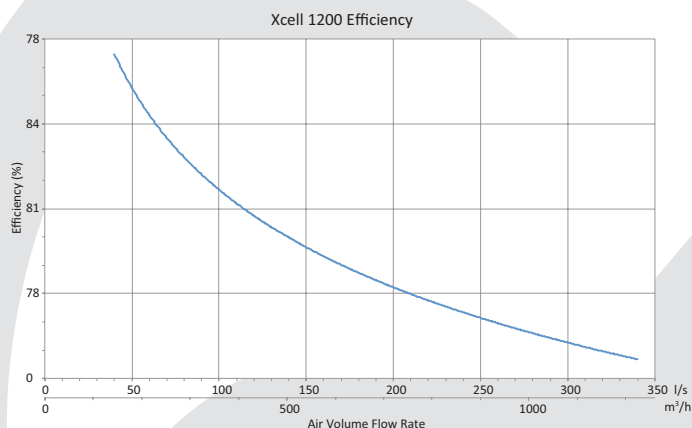
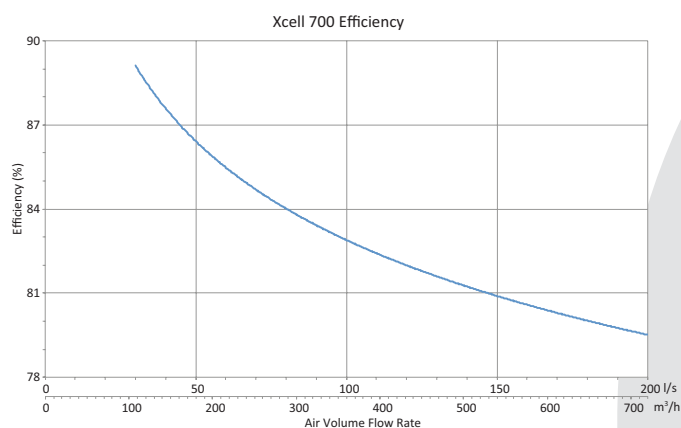
Designed to operate at airflows up to 1200 m³/hr

Xcell 1500 Product Reference: 92773AA

Designed to operate at airflows up to 1500 m³/hr

Xcell 2000 Product Reference: 92774AA

Designed to operate at airflows up to 2200 m³/hr



EN308 efficiency curves

The new Xpelair Xcell

Xpelair Xcell 700 Performance Selection

Technical data

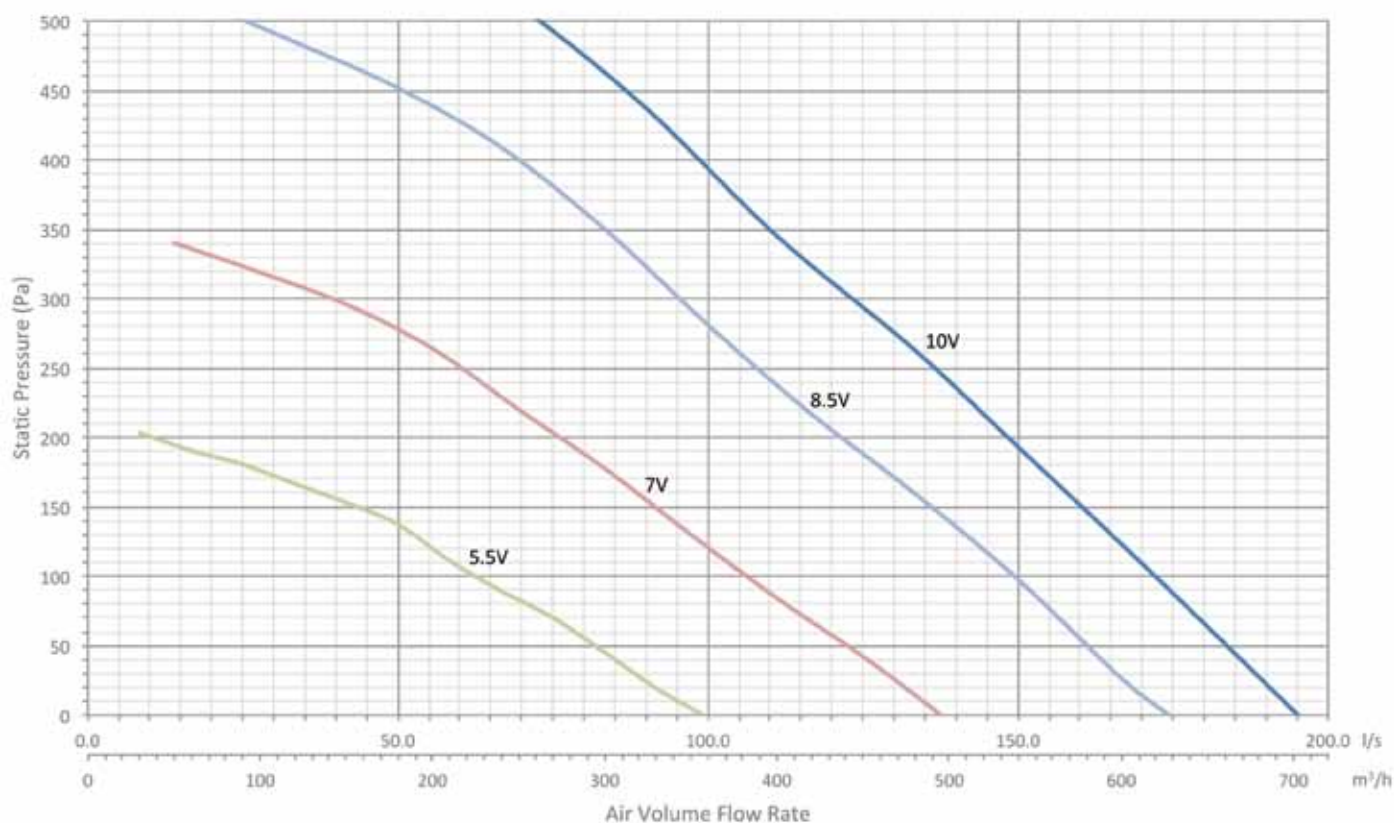
| Control Volts | Airflow l/s | Static Pressure Pa | Run Current A | Unit Power W | SFP W/l/s |
|---------------|-------------|--------------------|---------------|--------------|-----------|
| 5.5 | 45 | 150 | 0.31 | 72 | 1.60 |
| 7 | 92 | 150 | 0.62 | 146 | 1.59 |
| 8.5 | 135 | 150 | 1.05 | 254 | 1.88 |
| 10 | 160 | 150 | 1.37 | 340 | 2.13 |

Energy Recovery

| Ambient °C/%rh | Extract °C/%rh | Airflow l/s | Efficiency Wet/Dry % | Heat Recovered Wet/Dry kW | Supply Temp °C |
|----------------|----------------|-------------|----------------------|---------------------------|----------------|
| -5/86 | 22/60 | 45 | 94.7/87.4 | 1.40/1.30 | 20.6 |
| 28/70 | 22/50 | 45 | 86.3/86.3 | 0.30/0.30 | 22.8 |
| -5/86 | 22/60 | 160 | 90.5/81.0 | 4.70/4.20 | 19.4 |
| 28/70 | 22/50 | 160 | 80.0/80.0 | 0.90/0.90 | 23.2 |

Performance Graph

Supply 240V 50Hz



Case Breakout noise

| Distance (m) | Control Voltage | | | | | | |
|--------------|-----------------|----|----|----|----|----|----------|
| | 10 | 8 | 7 | 6 | 5 | 4 | 2.5 |
| 1 | 46 | 40 | 37 | 34 | 32 | 30 | 22 dB(A) |
| 1.5 | 42 | 37 | 34 | 31 | 29 | 26 | 19 dB(A) |
| 3 | 36 | 31 | 28 | 25 | 23 | 20 | 13 dB(A) |

In-duct Return noise

| Control Volts | Frequency Hz | | | | | | | |
|---------------|--------------|-----|-----|-----|------|------|------|------|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 2.5 | 33 | 39 | 35 | 32 | 31 | 23 | 23 | 27 |
| 6 | 47 | 50 | 57 | 55 | 44 | 37 | 30 | 33 |
| 8 | 60 | 54 | 58 | 59 | 51 | 44 | 36 | 35 |
| 10 | 74 | 58 | 60 | 64 | 57 | 51 | 42 | 37 |

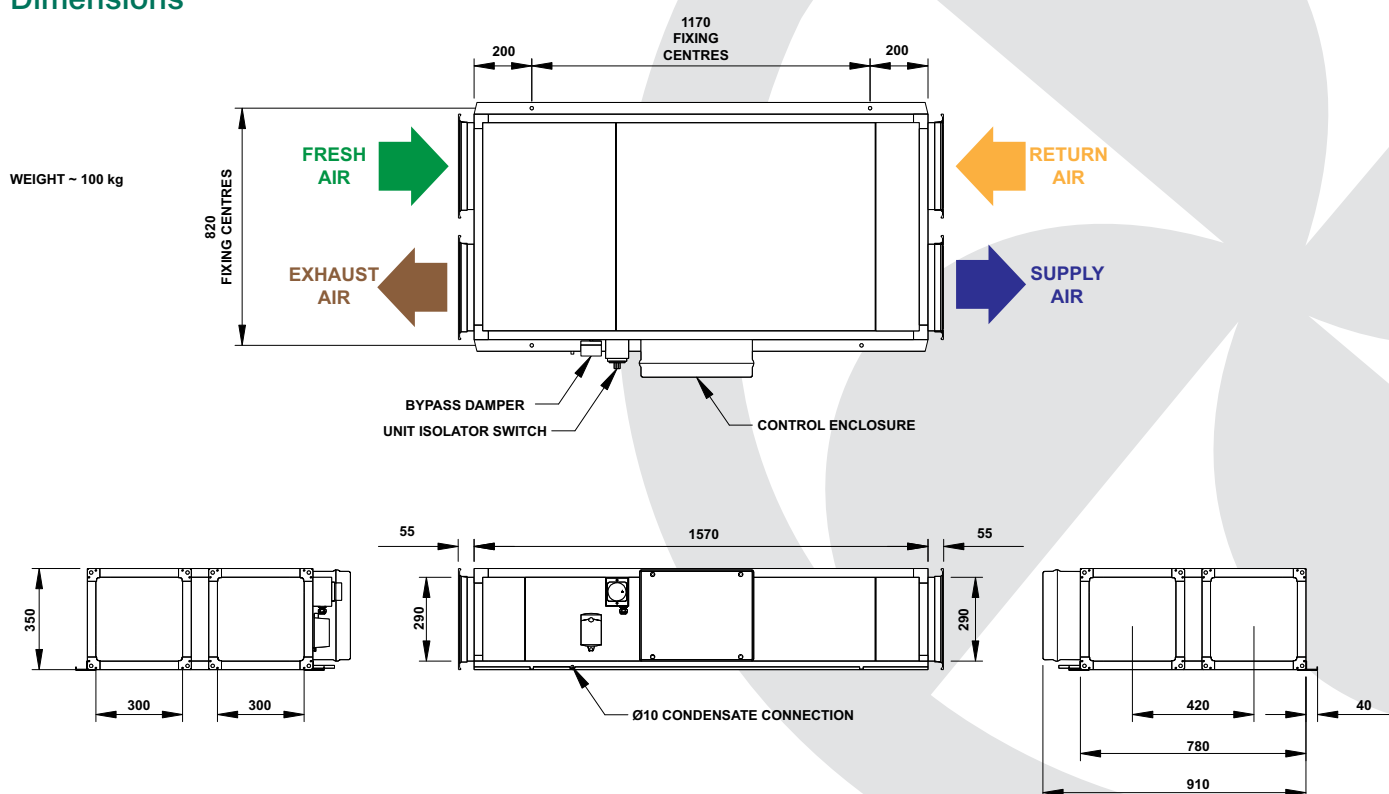
In-duct Supply noise

| Control Volts | Frequency Hz | | | | | | | |
|---------------|--------------|-----|-----|-----|------|------|------|------|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 2.5 | 35 | 33 | 33 | 30 | 28 | 21 | 20 | 27 |
| 6 | 46 | 43 | 58 | 54 | 49 | 43 | 27 | 27 |
| 8 | 57 | 48 | 60 | 62 | 56 | 51 | 35 | 28 |
| 10 | 67 | 54 | 61 | 70 | 63 | 59 | 44 | 29 |

Case breakout noise levels dB(A) are free field sound pressure levels at the specified distances assuming a hemispherical propagation at reference level of 2×10^{-5} Pa

In-duct noise levels dB are sound power levels at reference level of 10^{-12} W

Dimensions



The new Xpelair Xcell

Xcell 1200 Performance Selection

Technical data

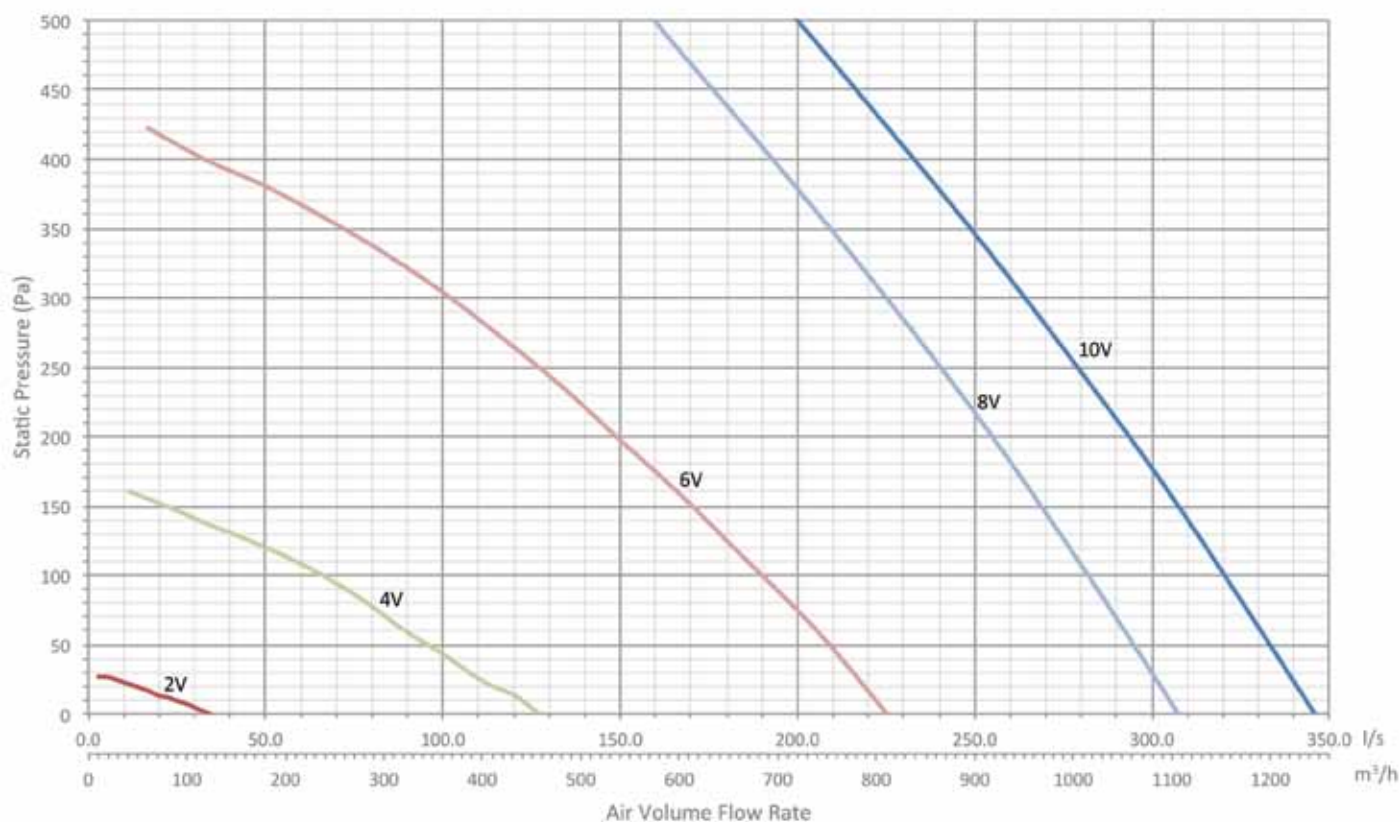
| Control Volts | Airflow l/s | Static Pressure Pa | Run Current A | Unit Power W | SFP W/l/s |
|---------------|-------------|--------------------|---------------|--------------|-----------|
| 4 | 20 | 150 | 0.62 | 76 | 3.80 |
| 6 | 172 | 150 | 2.1 | 306 | 1.78 |
| 8 | 268 | 150 | 4.6 | 720 | 2.69 |
| 10 | 308 | 150 | 6.2 | 920 | 2.99 |

Energy Recovery

| Ambient °C/%rh | Extract °C/%rh | Airflow l/s | Efficiency Wet/Dry % | Heat Recovered Wet/Dry kW | Supply Temp °C |
|----------------|----------------|-------------|----------------------|---------------------------|----------------|
| -5/86 | 22/60 | 172 | 91.4/82.3 | 5.14/4.63 | 19.7 |
| 28/70 | 22/50 | 172 | 81.3/81.3 | 1.03/1.03 | 23.1 |
| -5/86 | 22/60 | 308 | 89.4/79.5 | 9.0/8.0 | 19.1 |
| 28/86 | 22/60 | 308 | 78.5/78.5 | 1.78/1.78 | 23.3 |

Performance Graph

Supply 240V 50Hz



Case Breakout noise

| Distance (m) | Control Voltage | | | | | | |
|--------------|-----------------|----|----|----|----|----|----------|
| | 10 | 8 | 7 | 6 | 5 | 4 | 2.5 |
| 1 | 57 | 55 | 52 | 50 | 32 | 31 | 30 dB(A) |
| 1.5 | 53 | 51 | 48 | 46 | 29 | 28 | 26 dB(A) |
| 3 | 47 | 45 | 42 | 40 | 23 | 22 | 20 dB(A) |

In-duct Return noise

| Control Volts | Frequency Hz | | | | | | | |
|---------------|--------------|-----|-----|-----|------|------|------|------|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 2.5 | 40 | 43 | 37 | 31 | 32 | 25 | 20 | 27 |
| 6 | 55 | 59 | 61 | 58 | 55 | 45 | 42 | 36 |
| 8 | 58 | 63 | 64 | 61 | 60 | 51 | 46 | 41 |
| 10 | 61 | 68 | 67 | 65 | 64 | 56 | 51 | 46 |

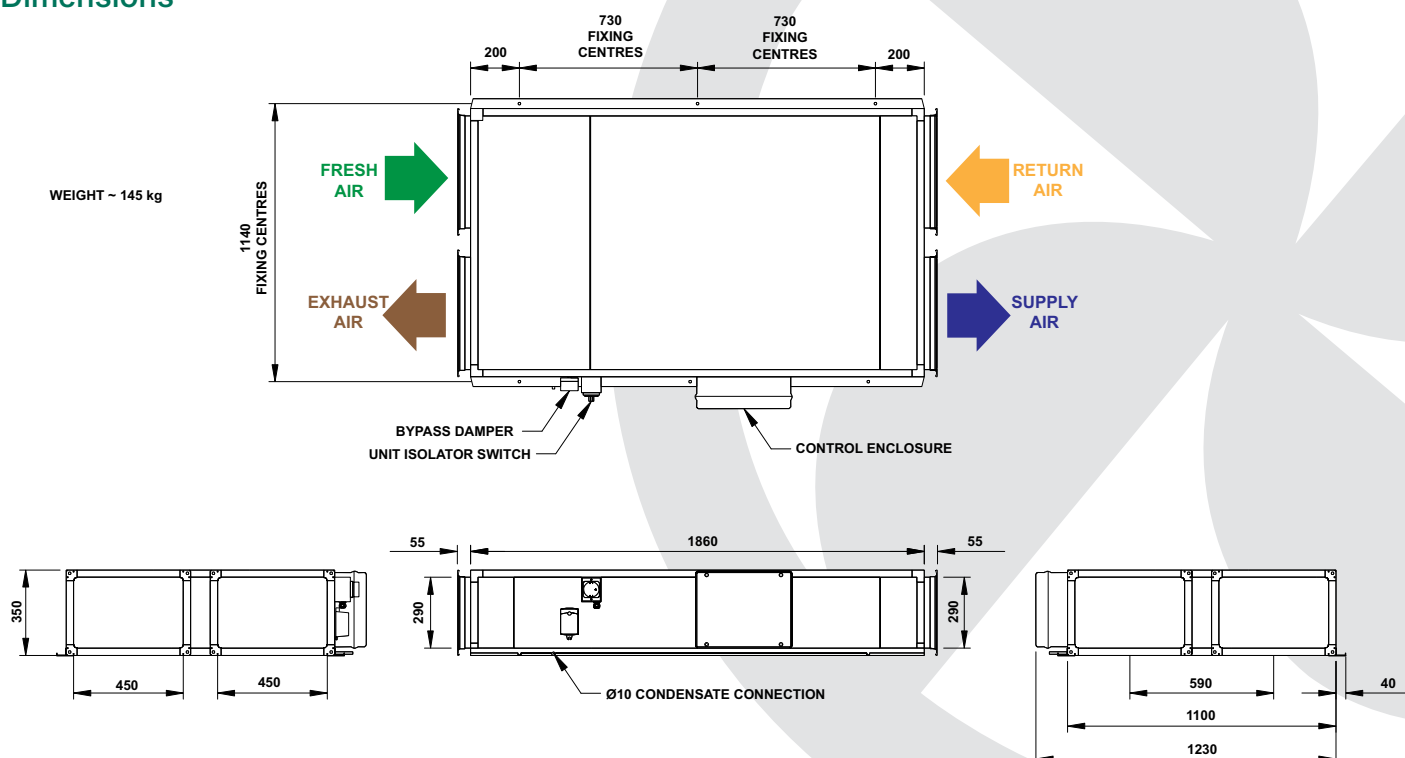
In-duct Supply noise

| Control Volts | Frequency Hz | | | | | | | |
|---------------|--------------|-----|-----|-----|------|------|------|------|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 2.5 | 38 | 38 | 39 | 38 | 38 | 26 | 20 | 27 |
| 6 | 53 | 57 | 61 | 64 | 61 | 56 | 37 | 28 |
| 8 | 57 | 61 | 66 | 68 | 66 | 61 | 42 | 31 |
| 10 | 60 | 65 | 70 | 72 | 71 | 67 | 48 | 34 |

Case breakout noise levels dB(A) are free field sound pressure levels at the specified distances assuming a hemispherical propagation at reference level of 2×10^{-5} Pa

In-duct noise levels dB are sound power levels at reference level of 10^{-12} W

Dimensions



The new Xpelair Xcell

Xcell 1500 Performance Selection

Technical data

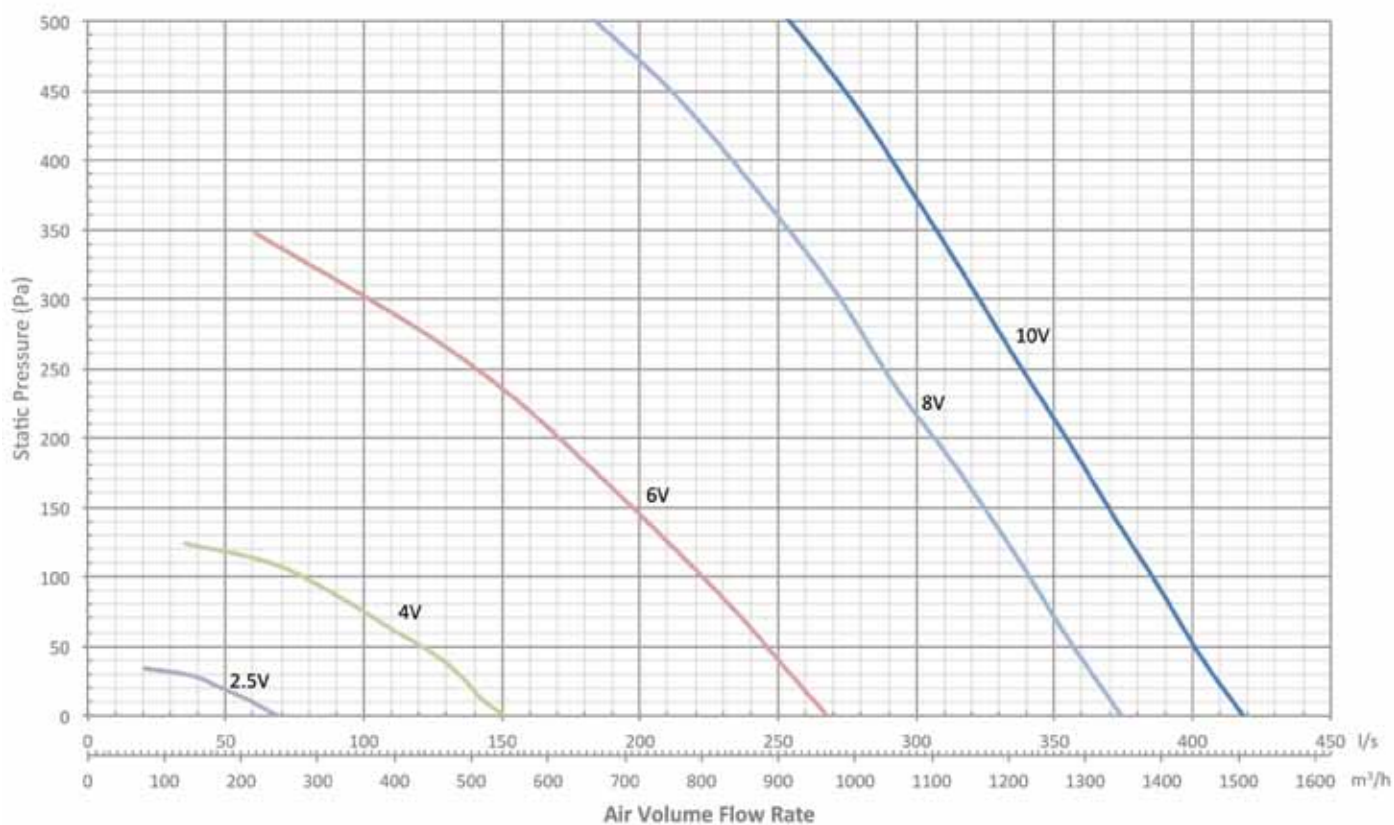
| Control Volts | Airflow l/s | Static Pressure Pa | Run Current A | Unit Power W | SFP W/l/s |
|---------------|-------------|--------------------|---------------|--------------|-----------|
| 4 | 78 | 100 | 0.8 | 110 | 1.41 |
| 6 | 196 | 150 | 2.0 | 320 | 1.63 |
| 8 | 324 | 150 | 4.2 | 710 | 2.19 |
| 10 | 370 | 150 | 5.6 | 920 | 2.49 |

Energy Recovery

| Ambient °C/%rh | Extract °C/%rh | Airflow l/s | Efficiency Wet/Dry % | Heat Recovered Wet/Dry kW | Supply Temp °C |
|----------------|----------------|-------------|----------------------|---------------------------|----------------|
| -5/86 | 22/60 | 78 | 95.5/88.9 | 2.43/2.27 | 20.8 |
| 28/70 | 22/50 | 78 | 87.8/87.8 | 0.50/0.50 | 22.7 |
| -5/86 | 22/60 | 370 | 90.4/80.9 | 10.93/9.78 | 19.4 |
| 28/70 | 22/60 | 370 | 79.9/79.9 | 2.17/2.17 | 23.2 |

Performance Graph

Supply 240V 50Hz



Case Breakout noise

| Distance (m) | Control Voltage | | | | | | |
|--------------|-----------------|----|----|----|----|----|----------|
| | 10 | 8 | 7 | 6 | 5 | 4 | 2.5 |
| 1 | 57 | 55 | 52 | 49 | 44 | 38 | 27 dB(A) |
| 1.5 | 53 | 51 | 48 | 46 | 38 | 34 | 23 dB(A) |
| 3 | 47 | 45 | 42 | 39 | 34 | 28 | 17 dB(A) |

In-duct Return noise

| Control Volts | Frequency Hz | | | | | | | |
|---------------|--------------|-----|-----|-----|------|------|------|------|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 2.5 | 37 | 43 | 36 | 32 | 30 | 25 | 19 | 26 |
| 6 | 55 | 63 | 58 | 53 | 52 | 44 | 35 | 33 |
| 8 | 58 | 66 | 62 | 58 | 57 | 49 | 40 | 38 |
| 10 | 61 | 69 | 66 | 63 | 61 | 54 | 45 | 41 |

In-duct Supply noise

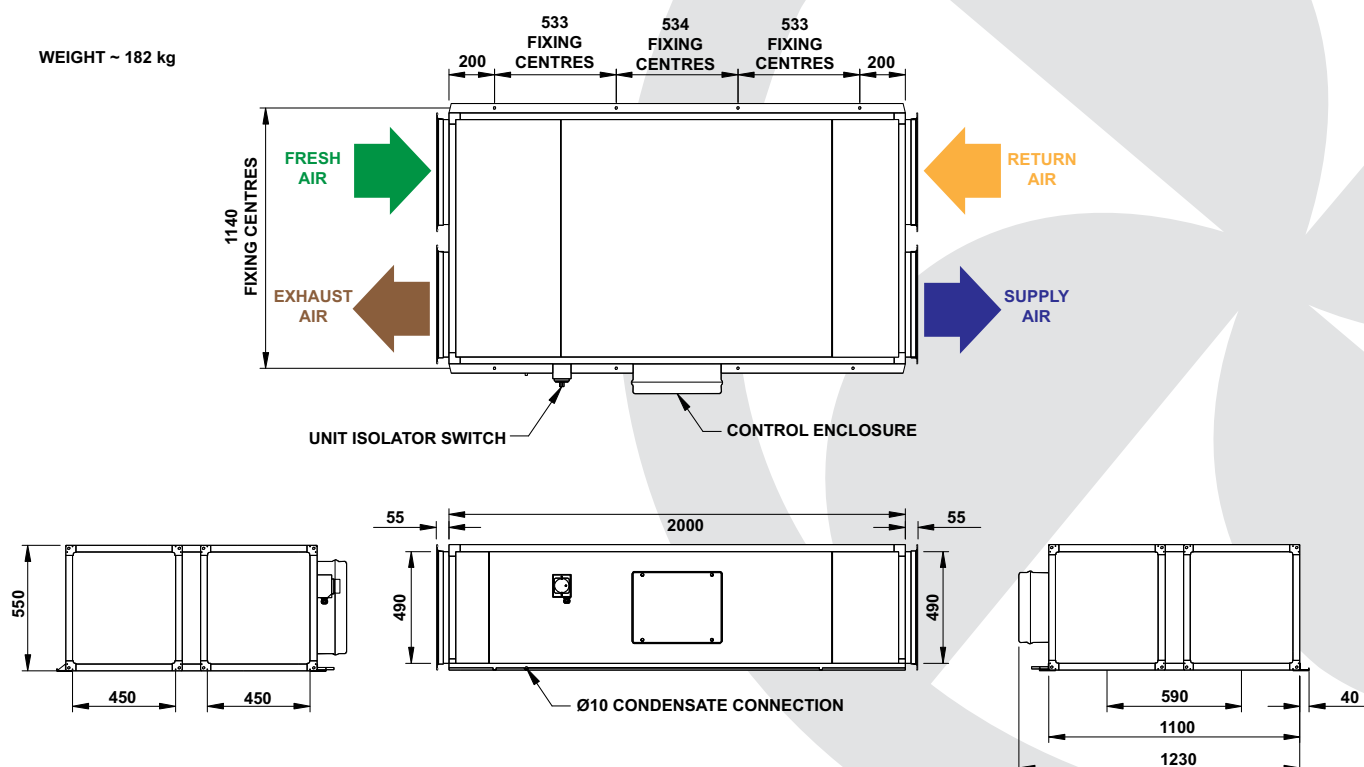
| Control Volts | Frequency Hz | | | | | | | |
|---------------|--------------|-----|-----|-----|------|------|------|------|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 2.5 | 37 | 46 | 41 | 46 | 42 | 41 | 19 | 26 |
| 6 | 54 | 62 | 63 | 64 | 62 | 58 | 39 | 30 |
| 8 | 58 | 66 | 66 | 68 | 66 | 63 | 45 | 34 |
| 10 | 63 | 69 | 70 | 71 | 71 | 68 | 51 | 38 |

Case breakout noise levels dB(A) are free field sound pressure levels at the specified distances assuming a hemispherical propagation at reference level of 2×10^{-5} Pa

In-duct noise levels dB are sound power levels at reference level of 10^{-12} W

Dimensions

WEIGHT ~ 182 kg



The new Xpelair Xcell

Xcell 2000 Performance Selection

Technical data

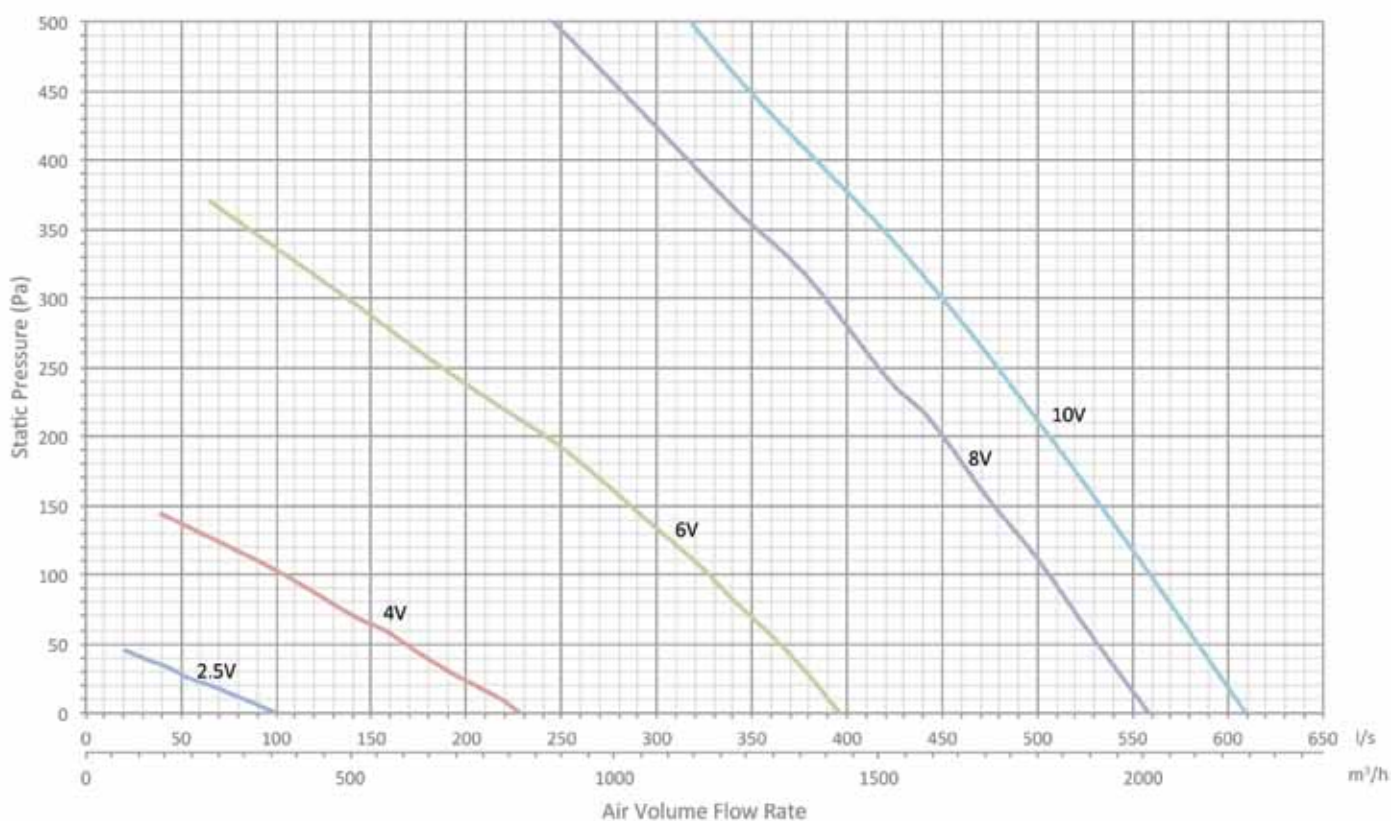
| Control Volts | Airflow l/s | Static Pressure Pa | Run Current A | Unit Power W | SFP W/l/s |
|---------------|-------------|--------------------|---------------|--------------|-----------|
| 4 | 100 | 100 | 0.8 | 110 | 1.10 |
| 6 | 285 | 150 | 2.4 | 380 | 1.33 |
| 8 | 475 | 150 | 5.0 | 840 | 1.77 |
| 10 | 520 | 150 | 6.3 | 1040 | 2.00 |

Energy Recovery

| Ambient °C/%rh | Extract °C/%rh | Airflow l/s | Efficiency Wet/Dry % | Heat Recovered Wet/Dry kW | Supply Temp °C |
|----------------|----------------|-------------|----------------------|---------------------------|----------------|
| -5/86 | 22/60 | 100 | 95.4/88.8 | 3.12/2.90 | 20.8 |
| 28/70 | 22/50 | 100 | 87.6/87.6 | 0.64/0.64 | 22.7 |
| -5/86 | 22/60 | 520 | 90.0/80.3 | 15.62/13.94 | 19.3 |
| 28/70 | 22/50 | 520 | 79.3/79.3 | 3.10/3.10 | 23.2 |

Performance Graph

Supply 240V 50Hz



Case Breakout noise

| Distance (m) | Control Voltage | | | | | | |
|--------------|-----------------|----|----|----|----|----|----------|
| | 10 | 8 | 7 | 6 | 5 | 4 | 2.5 |
| 1 | 54 | 50 | 46 | 42 | 40 | 37 | 21 dB(A) |
| 1.5 | 50 | 47 | 43 | 39 | 36 | 34 | 17 dB(A) |
| 3 | 44 | 41 | 37 | 33 | 31 | 28 | 11 dB(A) |

In-duct Return noise

| Control Volts | Frequency Hz | | | | | | | |
|---------------|--------------|-----|-----|-----|------|------|------|------|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 2.5 | 42 | 37 | 35 | 31 | 27 | 18 | 18 | 25 |
| 6 | 52 | 64 | 62 | 52 | 49 | 42 | 32 | 27 |
| 8 | 55 | 63 | 66 | 55 | 52 | 46 | 37 | 32 |
| 10 | 58 | 62 | 70 | 58 | 54 | 49 | 42 | 36 |

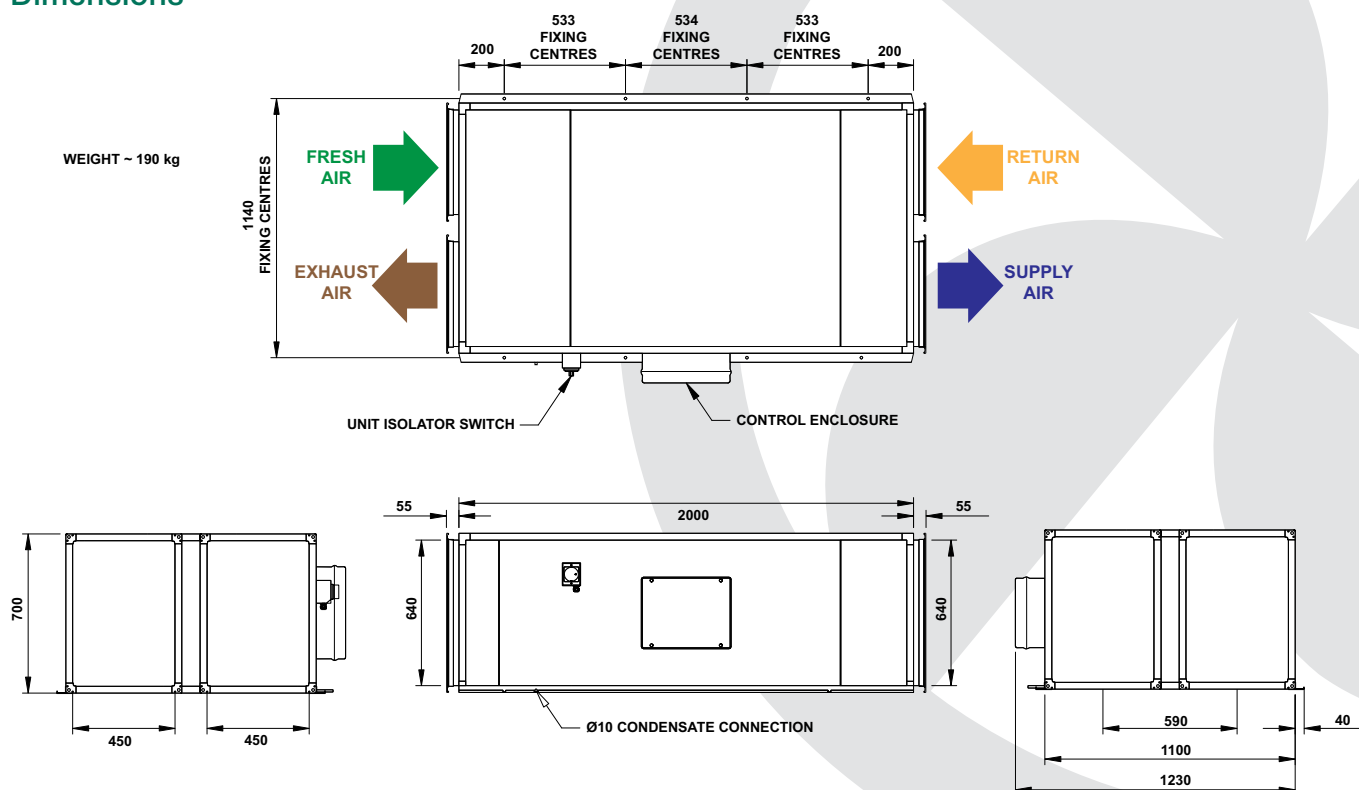
In-duct Supply noise

| Control Volts | Frequency Hz | | | | | | | |
|---------------|--------------|-----|-----|-----|------|------|------|------|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 2.5 | 42 | 35 | 34 | 33 | 30 | 23 | 18 | 25 |
| 6 | 51 | 63 | 57 | 56 | 54 | 49 | 36 | 26 |
| 8 | 55 | 62 | 62 | 62 | 60 | 55 | 44 | 33 |
| 10 | 58 | 62 | 67 | 67 | 66 | 60 | 52 | 39 |

Case breakout noise levels dB(A) are free field sound pressure levels at the specified distances assuming a hemispherical propagation at reference level of 2×10^{-5} Pa

In-duct noise levels dB are sound power levels at reference level of 10^{-12} W

Dimensions





The new Xpelair Xcell

Units for External Mounting



All Xcell units for external mounting are factory fitted with a pitched weather protection roof, two channel base rails, control enclosure for full protection, intake louver and exhaust cowl.

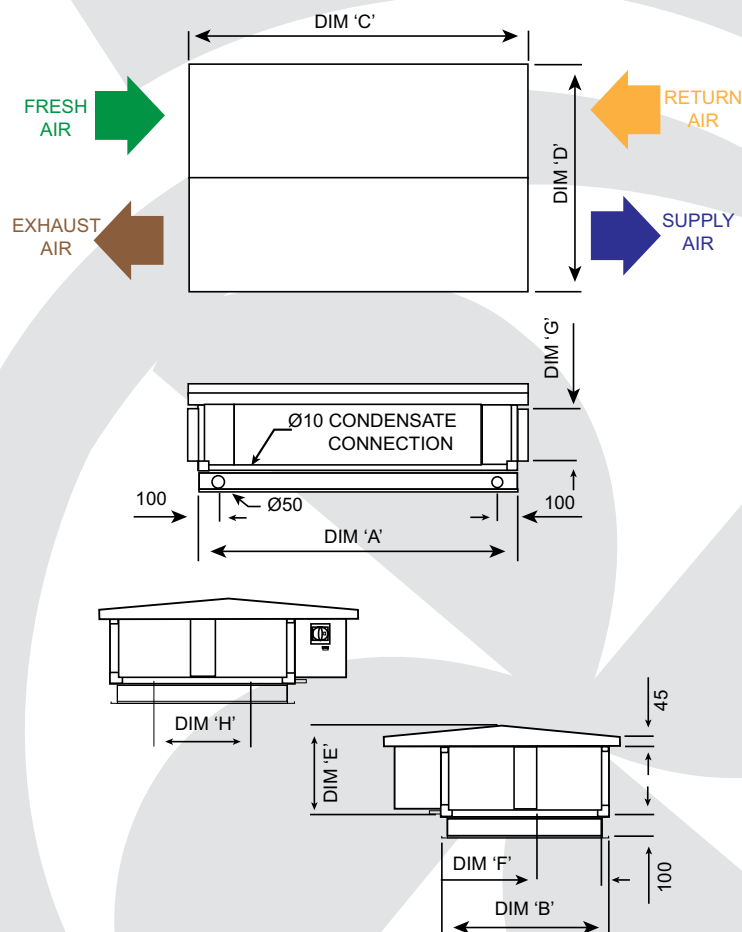
Model

Xcell 700WP External Unit
Xcell 1200WP External Unit
Xcell 1500WP External unit
Xcell 2000WP External Unit

Product Reference

92757AA
92758AA
92759AA
92760AA

Dimensions



Weather cowl (WPC)



Intake Louvre (ITL)

| UNIT | A' | B' | C' | D' | E' | F' | G' | H' | Weight (kg) |
|------|------|------|------|------|-----|-----|-----|-----|-------------|
| 700 | 1570 | 780 | 1670 | 1100 | 420 | 300 | 290 | 420 | 134 |
| 1200 | 1860 | 1100 | 1960 | 1420 | 420 | 450 | 290 | 590 | 190 |
| 1500 | 2000 | 1100 | 2100 | 1420 | 620 | 450 | 490 | 590 | 223 |
| 2000 | 2000 | 1100 | 2100 | 1420 | 770 | 450 | 640 | 590 | 261 |

Please contact our sales office for options not listed.

The new Xpelair Xcell

Integral Control Specification

Frost Protection

Frost protection is standard. If conditions arise that could lead to the heat exchanger freezing the unit will start an anti-frost cycle. The supply air volume will be reduced to prevent frost from forming.

Automatic 100% bypass

The bypass section is controlled by interrogating the current operating conditions, and automatically opening or closing the integral damper. This ensures the air supplied to the space is as close as possible to the required control temperature.

Speed Control



The individual speed control seen on the controller interface, allows for infinitely variable speed adjustment on both supply and extract air flow to suit site conditions

Controller



The Inbuilt controller has 17 physical inputs / outputs and supports a wide range of temperature sensors and actuating devices. Active optional sensors for the measurement of humidity, pressure, and other variables are also supported.

The controller includes an onboard real-time clock. This enables the time scheduling of start and stop commands and occupancy mode changes. Schedule commands can be configured to run on one or more days of the week. An exception day calendar allows alternative time schedules for holidays or during special periods in the year. The real-time clock can run for at least 10 days without power at room temperature.

Onboard Inputs and Outputs

Up to 17 physical inputs and outputs can be connected to the controller, including:

Four Analogue Inputs (AIs)

- Fresh air temperature sensor (Factory fitted)
- Return air temperature sensor (Factory fitted)
- Supply air temperature sensor (Factory fitted)
- Spare 0-10 VDC (For humidity or CO2 sensor connection)

Five Digital (Binary) Inputs (DIs) Voltage free contacts pre-configured for:

- Supply fan failure (Factory fitted)
- Extract fan failure (Factory fitted)
- Boost 1 command (Site wired)
- Boost 2 command (Site wired)
- Shutdown command (Site wired)

Six Digital (Binary) Outputs (DOs)

- Two triacs (24 V),
- 24 V Switched bypass damper output

Three selectable output configurations, Relay Outputs (24 V or VFC) user configurable from the following options:

- General alarm
- Heat demand
- Cool demand
- Frost
- Shutdown command

Night cooling

Typically used in schools and office buildings, when unoccupied at night. This user selectable option allows the circulation of cooler night time air, to reduce the temperature of the building fabric. As a consequence the heat that has built up during the previous day is removed without using expensive cooling equipment.

The new Xpelair Xcell

Optional Controls and Ancillaries



Network Room Module (NRM) Product Ref: 92775AA



The NRM is an intelligent device that communicates with the inbuilt controller via the serial display bus, it features a built-in, platinum sensor for accurate measurement of space temperature.

The front face of the NRM has operating controls and a backlit LCD, allowing the user to easily control and manage the following:

- View the space (room) temperature.
- Manually override the fan
- See when the controller is in OFF or AUTO mode
- Adjust the temperature set point, to a physically achievable level
- Maintenance condition alert

Occupancy Detection Product Ref: 21871AA Passive Infrared Sensor XPIRA



Senses occupancy by detecting the difference between heat emitted from the human body in motion and the background space. The passive infrared sensor is capable of 100% cut off coverage, when provided with clear line of site.

Humidity Sensor Product Ref: 96040AA



Duct mounted version available to special order. Automatically increase the ventilation rate when the RH rises above a preset level.

Air Quality Sensor Product Ref: 92097AW



Detects contaminants such as body, cooking and toilet odours, and activates the boost ventilation rate when the selectable threshold is exceeded.

Remote Medium User Interface (MUI). Product Ref: 92776AA



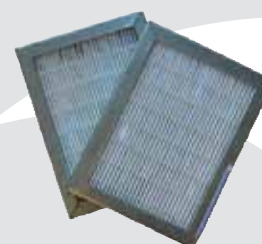
The controller supports a remote Medium User Interface. The MUI can be flush mounted up to 300m from the controller and can be used for both commissioning the Xcell unit and monitoring ongoing performance

CO2 Detection Product Ref : 92777AA



Duct mounted version available to special order. Carbon Dioxide sensing range from 0 to 2,000 ppm. With the built in Demand Control Ventilation (DCV) strategy potential energy savings from 10 to 70% can be realised.

F5 Pollen Filter sets



Product Ref:

| | |
|-------------------|---------|
| Xcell 700 – F5X7 | 92767AA |
| Xcell1200 – F5X12 | 92768AA |
| Xcell1500 – F5X15 | 92769AA |
| Xcell2000 – F5X20 | 92770AA |

LPHW Duct heaters LPHW

Product Ref:

| | |
|----------------|---------|
| Xcell 700LPHW | 92763AA |
| Xcell 1200LPHW | 92764AA |
| Xcell 1500LPHW | 92765AA |
| Xcell 2000LPHW | 92766AA |

Manufactured from solid drawn copper tubes with aluminium fins. Hydraulically tested to 30 bar. Suitable for operating pressures up to 12 bar static head. Fitted with manually operated key pattern air vents and drains (Available up to 12kW, please specify kW required as well as post or pre recovery cell upon order)

Communication Card Options

The integral controller can be fitted with a communication card to provide various types of remote network access. The controller supports N2Open, LONWORKS, BACnet Master Slave/Token-Passing (MS/TP), or RS-232C networking communication card options.

Communication Card types

N2 Open Product Ref: 92778AA

Connects controller to the N2 bus of a compatible supervisory controller. This allows network access to its control system variables and parameters.

LONWORKS Product Ref: 92779AA

Integrates controller into a LONWORKS network. This allows peer-to-peer communication with other LONWORKS compatible devices on the network and data access from a supervisory system.

BACnet MS/TP

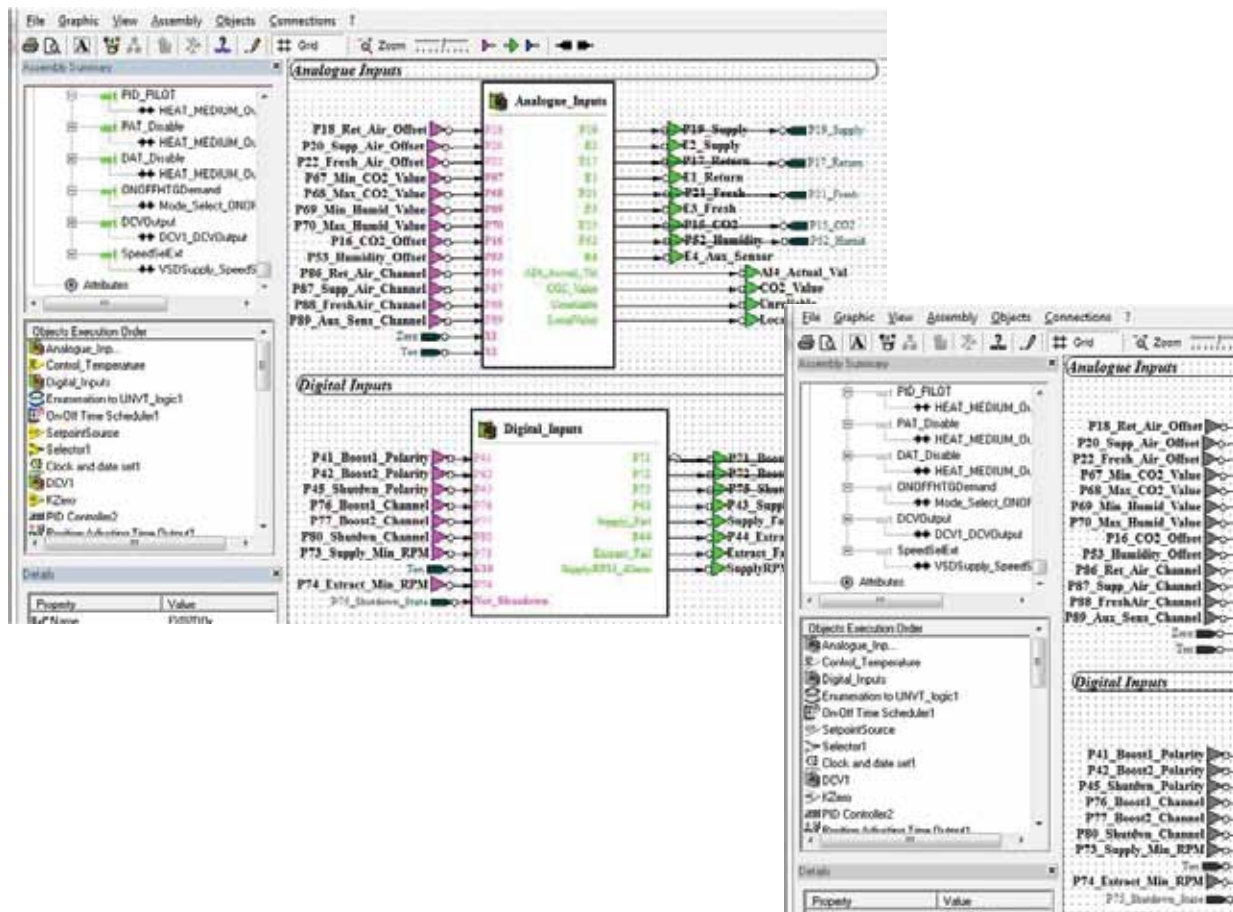
Product Ref: 92780AA

Connects the controller to a BACnet compliant BAS. This allows network access to the controller control system variables and parameters. The controller supports peer-to-peer communication with other controllers on the BACnet network and change-of-value reporting to monitoring stations.

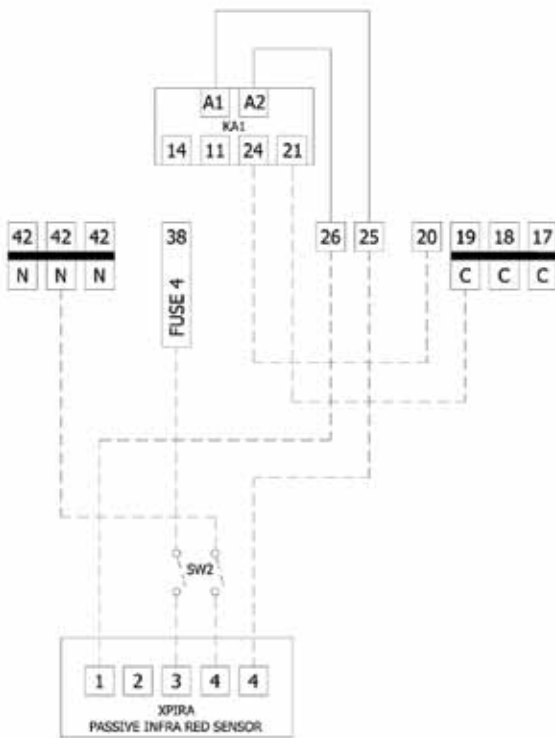
RS-232C Serial

Product Ref: 92781AA

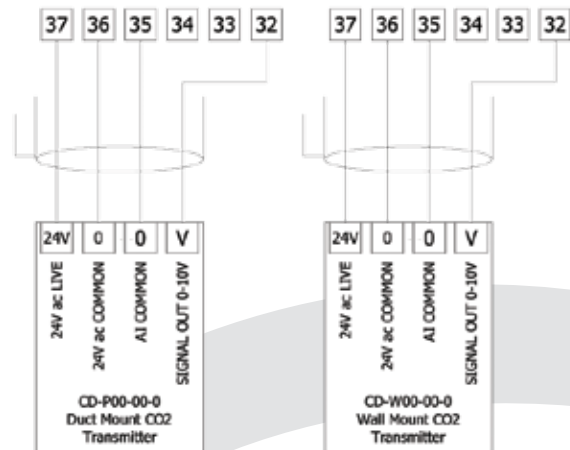
Connects the controller to a Global System for Mobile (GSM) modem. When an application event goes into the active or alarm state, the controller sends out text messages in SMS format to a prioritized list of destinations, such as to a telephone service centre or directly to a mobile telephone.



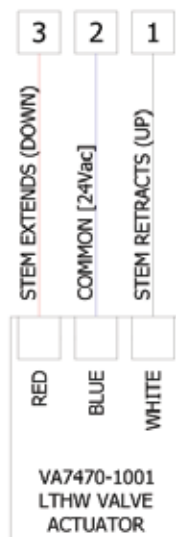
XPIRA PIR



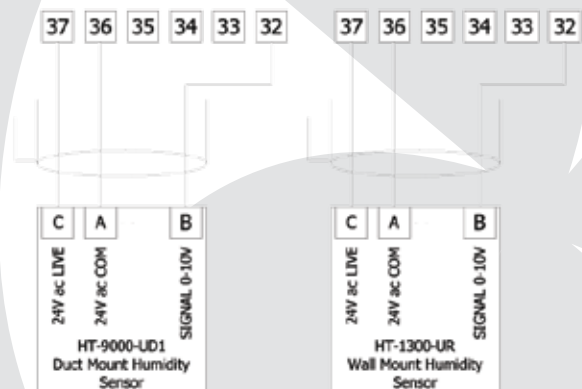
CO₂ Sensor



LTHW Actuator



Humidity Sensor



The new Xpelair Xcell

Xcell 700/1200/1500/2000 Typical Specification

Operation

The supply and extract ventilation unit shall be as the Xcell EC unit manufactured by Xpelair. Unit size and performance shall be as indicated on the drawings and shall be in accordance with the particular fan schedule in this specification.

Supply air to the room shall be pre-heated/pre cooled by the extract air via the integrated aluminium counterflow energy recovery cell. Where specified an integral heating element shall raise the temperature of the incoming air into the room(s) being supplied.

The energy recovery unit shall utilise a demand control strategy, automatically adjusting the ventilation rates, to suit the conditions relayed by the connected sensors. The controller should be capable of varying the motor speeds either proportionally, or by the more traditional trickle / boost option.

Each motor shall be individually commissioned for minimum and maximum ventilation rates via the onboard, infinitely adjustable, speed.

Unit Specification

Units shall be manufactured from high quality 25mm double skinned, thermally and acoustically insulated GSM panels. Reinforced slotted safety fixing points shall be incorporated to facilitate drop rods or mounting bolts. The unit shall incorporate a high efficiency, Eurovent certified, counterflow energy recovery cell, manufactured from sea water resistant aluminium, which is protected by G4 or improved supply & extract filters.

Bypass operation is to be fully automatic, with control dependent upon prevailing conditions.

The energy recovery unit shall include motorised impeller assemblies, consisting of a single inlet, backward curved impeller, directly mounted to an EC motor via long life, low energy, maintenance free ball bearings. A condensate drain tray is fitted as standard, and can be supplied with an optional condensate pump if required.

The unit shall include integrated fully automatic frost protection control. The supply air volume shall reduce to prevent frost from forming on the energy recovery cell should outside temperatures fall below freezing.

Where maintenance is required, the ventilation unit shall come complete with removable side and bottom access panels to ensure clear routes to the following:

- Supply and extract fan
- Supply and extract filter
- Heat recovery cell
- Frost heater
- Heater battery temperature adjustment (where included).
- LPHW Heater pipe connections (where included).
- Speed control commissioning adjustment (min & max).

Control Specification

All versions shall incorporate the following functions integrally mounted, pre-wired and factory fitted by the manufacturer:

- 0-10V speed adjustment.
- Integral run on timer.
- On/Off, Min/Max or Automatic ventilation control
- Infinitely variable fan speed control
- Two separate boost demand inputs with individual delay and overrun timers.
- Automatic 100% heat recovery cell bypass when heat recovery is not required.
- Automatic frost control

There are three dedicated volt free contacts, which can be configured to relay a selection of the following conditions to the BMS:

- General alarm
- Heat demand
- Cool demand
- Frost condition
- Shutdown command

Night cooling function

On/Off time scheduler with up to 21 timed On/Off events
Night set-back feature, to automatically reduce the heat/cool setpoints during un-occupied periods.

Mains Voltage

All units are suitable for use with 240V, single phase 50/60Hz power supply

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Sales Fax: 0844 372 7760

International Sales

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