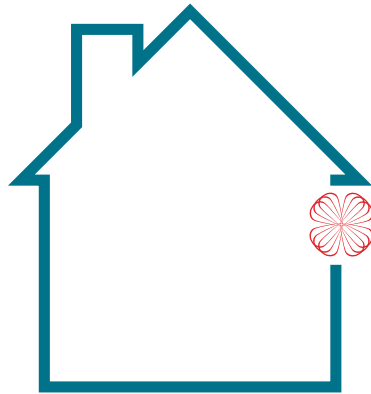


# Product Brochure

Central  
Vacuum  
Cleaning  
Systems

Mechanical  
Ventilation  
with Heat  
Recovery

Mechanical  
Extract and  
Positive  
Ventilation  
Systems



**BEAM**  
Vacuum & Ventilation  
*Built-in brilliance!*

# Welcome

to Beam – the company which revolutionised vacuum cleaning and mechanical ventilation of modern buildings.



Beam have been delivering dust and air movement systems to residential and industrial customers in Ireland and UK since 1977. We have designed and installed systems for all types of industrial clients, many large private home developers, hundreds of hotels, nursing homes, offices and religious buildings, as well as thousands of new build and existing homes.

From first contact, through to installation and after sales support, our trained, qualified and experienced staff and distributor / installers will advise, specify and provide a bespoke technical design of the correct and most energy efficient vacuum and/or ventilation system to suit your needs and budget, which fully complies with current building regulations.

## A Guarantee of Quality

We are accredited with Investors in People, ISO 9001, ISO 14001 and OHSAS 18001 Quality Standards, and are BPEC certified.

Our exclusive, high quality products are manufactured in the UK, USA and Europe by world leading manufacturers.

Our high power Beam Central Vacuum Systems by **Electrolux** when integrated into your home are more advanced, powerful, convenient and hygienic than any other cleaning system – that's **BUILT-IN CONVENIENCE**.

Our ultra energy efficient Axco Mechanical Ventilation systems when integrated into your home provide continuous clean, fresh, filtered air and will help reduce future energy bills – that's **BUILT-IN FRESHNESS**.

Beam have been delivering quality products and service for over 35 years. Which is why, when it comes to experience, expertise, customer support and market leading products at best value for money, 70,000+ customers throughout UK & Ireland trust Beam – that's **BUILT-IN BRILLIANCE**.



# Central Vacuum Cleaning Systems



# Beam Central Vacuum Systems



Beam Central Vacuum Systems, a modern cleaning concept, a new way of life! Vacuum faster, easier and more efficiently than ever before. Enjoy the benefits of a cleaner and healthier home. Save time, energy and money. No other cleaning system offers such versatility, guaranteed quality and built-in value for money.

Manufactured by **Electrolux** - the world's largest supplier of floor care appliances, innovative design developments have made Beam power units the quietest, most powerful and technically advanced built-in vacuum cleaning systems available and are compliant with new EU directive on power consumption for vacuum cleaners.

Beam systems are widely specified by architects and consulting engineers and installed as standard by quality house builders throughout UK and Ireland. We have a central vacuum system to suit your individual needs - from an apartment to a commercial building to a 300-bedroom hotel.

A Beam Central Vacuum System consists of three main elements: a vacuum power unit, concealed 50mm ducting network throughout the home or building to strategically placed wall inlets and a specialist set of cleaning tools and accessories. Our success is based on ensuring all three elements are of the best possible quality.

Greatly adding to the resale value of your home, you can install the system yourself, or our experienced team of Beam engineers will be happy to install the system for you.

## Cyclonic 2-stage Filtration

With a Beam Central Vacuum System there are no filters and no screens to clean or replace.

Beam power units utilize an exclusive permanent self-cleaning filtration material from the makers of Gore-Tex™ fabric. By using cyclonic forces to separate larger dirt particles and allergens from vacuumed air the permanent filter then removes the remaining tiny particles at a stunning 98% efficiency at 0.3 microns. The Beam self cleaning filter cleans itself every time the system is turned off.



## Vacpan®

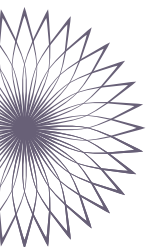
A standard feature of every Beam Central Vacuum System, a Vacpan®, located in the toe space of your kitchen is the ultimate in convenience.

Just sweep debris to the Vacpan®, activate the switch with your toe and dirt is whisked away. No more stooping or bending to use a dustpan.



## Vacuum Inlet Selection

Exclusive to us, our designer modern inlets complement any home with their stylish appearance. All central vacuum systems are supplied as standard with automatic white plastic inlets. Upgrades to matt Brass or matt Chrome are available.



# Benefits of a Beam Central Vacuum Cleaning System

## Light & easy

As the vacuum power unit is located away from the living area, simply insert the lightweight, crush-proof hose into the conveniently placed vacuum inlet. A switch on the handle allows your system to start automatically. Choose from the modern versatile range of cleaning attachments suitable for every surface. It's so easy to use, vacuuming becomes child's play with Beam.



## Healthy

Over 5.7 million people in UK and Ireland have severe asthma symptoms.\*

Clinical research has shown a Beam central vacuum system provides measurable relief for asthma and allergy sufferers.

Indoor air pollution is one of the most common problems for allergy sufferers.

Unlike conventional vacuums that can recirculate dust, a Beam central vacuum system removes dust, mites, pollen, animal dander and other allergens, and is superior to a conventional vacuum in providing relief from allergy symptoms.

Central Vacuum Systems are ideal to install with Mechanical Ventilation with Heat Recovery (MVHR) systems where you are assured of clean air, even after vacuuming.

\*Source: [www.asthma.org.uk](http://www.asthma.org.uk)



## Silent

You'll never have to listen to a noisy vacuum motor in your home again, as all noise is eliminated from the point of cleaning. Hear the doorbell and telephone ring, watch television, even vacuum whilst the children are asleep. Beam's exclusive Serenity Platinum Series is the ultimate in quiet cleaning performance.

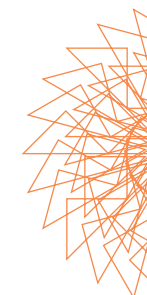
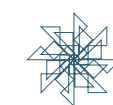
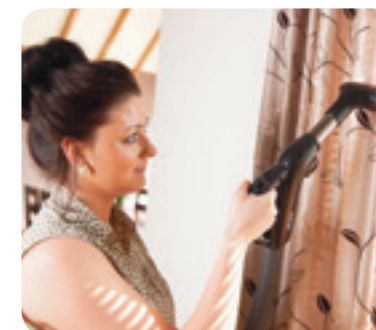


## Powerful

Our systems are up to 5 times more powerful with a much longer working life expectancy than traditional drag-around vacuum cleaners.

The industrial strength suction means a faster and more thorough pick-up of dust, providing deep and complete cleaning for every surface in your home.

Designed to last a Housetime®



# Beam *Alliance* Range – Breakthrough Vacuuming Innovation



The Beam *Alliance* range gives you breakthrough innovation that elevates vacuum cleaning to a new standard. It combines ultimate cleaning performance with visually attractive Smart Screen technology, providing direct link to hose handle display. A high efficiency motor is at the heart of every metal-bodied Beam *Alliance* system.

## Smart Screen Technology

The Advanced Smart Screen (Model 700TC) displays system performance, motor speed, empty bin notification, communication link icon, clock with system codes, LED screen & light ring with motion sensor and intuitive navigation buttons.



The Intelligent Smart Screen (Model 650TC) monitoring system with the unique 360° LED light ring provides continuous communication to the hose handle, displaying key system performance and operational elements.

## Beam *Alliance* Interface

Advanced Fingertip Controls electronically adjust the suction power and turns the entire system on/off with the push of a button. The exclusive double-D nozzle and fully sealed AeroPro® hose & wand provide quieter operation and superior suction.



## 3-in-1 Cleaning Tool

The right tool is always at hand with the exclusive 3-in-1 cleaning tool securely stored on the ergonomic hose handle. Easily converts from a dusting brush, to crevice nozzle and fabric tool.



## Quick Clean Valve

Opens easily with the touch of a finger. The powered Quick Clean Valve lets you turn on the system from the hose handle and is great for quick clean-ups around the power unit.



## Unique Press & Release Bin

Simply press down on any two points around the ring and pull down to empty bin. The bin lifts easily back into place with one hand.

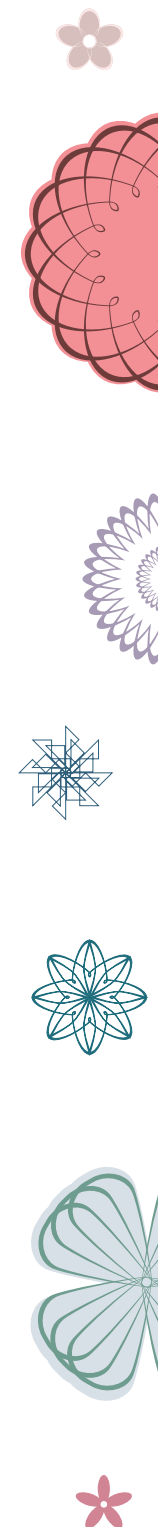
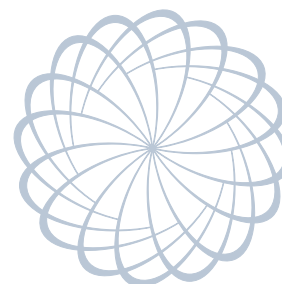


## Cleaning Hose & Tools:

- 9m *Alliance* hose with ergonomic, soft grip handle and variable speed control for energy savings
- Lightweight large diameter aluminium telescopic cleaning wand
- 3-in-1 cleaning tool easily converts from a dusting brush, to crevice nozzle to fabric tool
- The combo floor tool is used for general cleaning and has a convenient pedal switch to change from carpets to hard floor surfaces
- The hardfloor brush allows for quick and easy cleaning of wooden floors, vinyl, ceramic tiles and stone
- The hose hanger is used to easily coil and store the hose and cleaning tools



Model:	<i>Alliance 650TB</i>	<i>Alliance 700TC</i>
Airwatts	650	700
Airflow (l/s)	50.6	52.9
Waterlift (mm)	3430	3610
Input Watts	1650	1760
Motor	HE Flow-Thru	HE Flow-Thru
Size (W x H) (cm)	38 x 108	38 x 108
Features:		
Sound Level (without external exhaust)	68 dB	68 dB
Press & Release Bin	15 litre	15 litre
Powered Quick Clean Valve	✓	✓
Cyclonic Self Cleaning Gore-Tex™ Filtration	✓	✓
Manual On/Off Switch	✓	✓
Smart Screen	Intelligent	Advanced
System on indicator	-	✓
LED Backlit & Ring	✓	✓
Motion Sensor	✓	✓
Empty Bin Icon	✓	✓
Performance Bars Icon	-	✓
Motor Speed Display	-	✓
Hose Link Icon	✓	✓
Navigation Buttons	-	✓
Motor Fault Icon	✓	✓
Clock	-	✓
Power Unit Guarantee	5 years	5 years



# Beam Serenity Range – Classic Powerful Performance



Based on the original Beam platform, the Serenity range of vacuum units have large diameter metal bodies, self cleaning filters and commercial bypass motors. In a high gloss metallic alloy colour, the Beam Serenity range is the ultimate in quiet, cleaning performance.

## Digital Management System

Interactive Digital Management System available on some Serenity vacuum models - displays time, temperature, hours of use, motor performance, call for service and when the bin needs emptied.



## Bypass Motor

High performance, high efficiency bypass motor causes vacuumed air to be exhausted around the motor and not through it, prolonging motor life. An ECS control module with integrated soft start motor also helps extend motor life.

The variable speed motor provides 3 suction levels. An exhaust filter captures all motor carbon dust.

## Sound Reduction System

Patented Serenity Sound Reduction system with additional filtration from motor area. The 'Sound-Off' Muffler also reduces air noise to a whisper.

## Direct Utility Inlet

Convenient manually operated built-in utility inlet on power unit for vacuuming garage, car and surrounding area.



## Antibacterial Waste Bin

Alphasan® infused (anti-bacterial) twist off resin bin guards against odours and improves hygiene. The transparent bin allows easy viewing of dirt levels.





## Cleaning Hose & Tools

- 9m Progression hose with ergonomic, soft grip handle and variable speed control for energy savings
- Lightweight aluminium telescopic cleaning wand
- The combo floor tool is used for general cleaning and has a convenient pedal switch to change from carpets to hard floor surfaces
- The soft bristle round dusting brush makes dusting quick and easy
- The hardfloor brush allows for quicker and easier cleaning of wooden floors, vinyl, ceramic tiles and stone
- The upholstery brush is the perfect tool to clean any type of fabric, including curtains
- The crevice tool is ideal for narrow spaces and floor edges
- The hose hanger is used to easily coil and store the hose
- Handy tool caddy

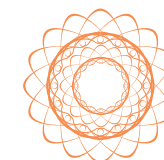
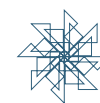
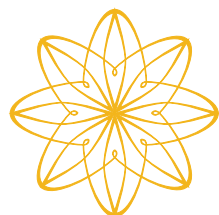
## Optional additional accessories include:

Turbo Brush (air driven) for use on carpets and rugs for deep thorough cleaning.

A car care kit complete with 5 metre standard hose and cleaning accessories.



Model:	Serenity 335	Serenity 385EB	Serenity 398EB
Airwatts	590	670	700
Airflow (l/s)	58.19	64.65	65.12
Waterlift (mm)	2962	3352	3350
Input Watts	1700	1800	1800
Bypass Motor	✓	✓	✓
Size (W x H) (cm)	28 x 89	29 x 106.5	36 x 106.5
Features:			
Sound Level (with external exhaust)	62 dB	62 dB	63 dB
Alphasan Twist off Bin	15 litre	15 litre	25 litre
Manual Utility Inlet	Manual	Manual	Manual
Cyclonic Self Cleaning Gore-Tex™ Filtration	✓	✓	✓
Manual On/Off Switch	✓	✓	✓
Digital Management System			
System on indicator	-	✓	✓
LED Backlit Screen	-	✓	✓
Empty Bin Icon	-	✓	✓
Motor Performance	-	✓	✓
Hours of Use	-	✓	✓
Call for Service	-	✓	✓
Clock	-	✓	✓
Navigation Buttons	-	✓	✓
Power Unit Guarantee	3 years	5 years or 500 hours	5 years or 500 hours



# Beam Mundo

## – Performance & Value

Our economy Beam Mundo vacuum unit features a strong motor performance with high suction power and long life. It comes with a high-grade electronics package with soft-start and integrated motor management – the best high-tech feature in a compact and affordable unit for smaller houses.

Comes complete with: Premium 9m standard hose, Telescopic cleaning wand, Crevice nozzle, Combo floor tool, Dusting brush, Hard-floor brush, Upholstery brush, Hose hanger and Caddy clip.

- Self Cleaning Gore-Tex™ filter
- Durable latches for reliable, secure fit of bin
- View window to easily monitor dirt level
- Metallic silver alloy colour

Model:	BEAM Mundo
Airwatts	605
Airflow (l/s)	56
Waterlift (mm)	2920
Motor	Flow-thru
Input Watts	1800
Size (W x H) (cm)	28 x 92
Features:	
Sound Level	63 dB
Latched Dirt Bin	15 litre
Utility valve	No
Cyclonic Self Cleaning Gore-Tex™ Filtration	✓
Manual On/Off Switch	✓
Power Unit Guarantee	3 years



# Axco Cube

## – Ultra Compact System

The Axco Cube compact central vacuum system unit is the 1st modular integrated central vacuum system ideal for homes and apartments where space is limited. The Axco Cube is easily installed under a kitchen area or in a utility or cupboard area and offers advanced modern home care, guaranteed quality and built-in value for money.

Comes complete with:

- Ultralightweight 9m standard hose
- Aluminium telescopic wand
- Crevice nozzle
- Dual angle dusting tool
- Multi-floor brush
- Hanger and caddy clip

Model:	Axco Cube
Airwatts	435
Airflow (l/s)	49.4
Waterlift (mm)	2250
Motor	Flow-thru
Input Watts	1000
Size (W x H x D) (cm)	30 x 27 x 34
Features:	
Sound Level	65 dB
Disposable Paper Bag	5 litre
Utility valve	No
Filtration	Permanent Safety Filter
Power Unit Guarantee	2 years



# Mechanical Ventilation with Heat Recovery



# Why Ventilate Your Home?



Effective energy efficient ventilation is now an essential element in the design and construction of all buildings which are now being constructed as airtight as possible with the highest level of insulation, all with the benefit of enhancing the u-value of the finished building and reducing the energy consumption.

Poor ventilation causes streaming windows, musty odours, dampness, condensation, mould growth and excessive carbon dioxide in the home - it is also the biggest cause of heat loss. Studies show there is a direct connection between the quality of air (caused by poor ventilation) and our ability to concentrate and perform productively, as well as the effect poor indoor air quality has on asthma or allergy sufferers.

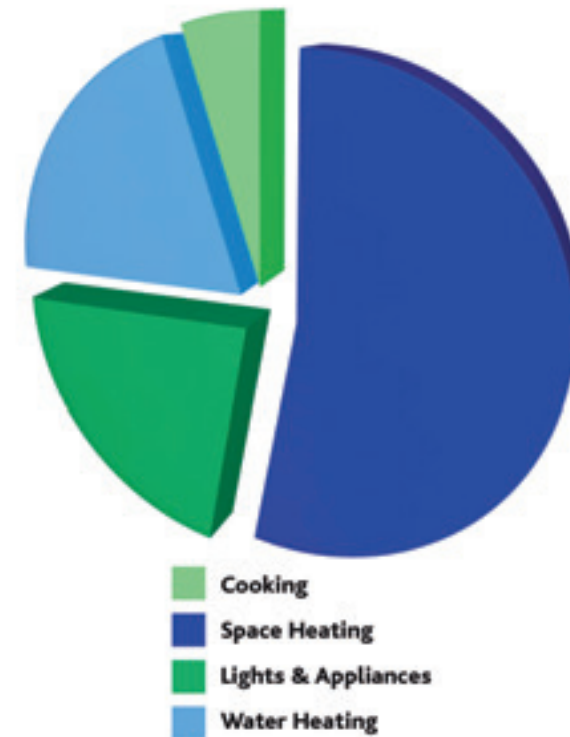
Presently ventilation (required by Building Regulation) in houses is provided by:

- Mechanical Ventilation with Heat Recovery (MVHR)
- Mechanical Extract Ventilation (MEV)
- Positive Input Ventilation (PIV)
- Basic ventilation (windows & doors, trickle vents/extractor fans)

Energy efficient homes of today have high levels of insulation, are built as close as possible to airtight standards and contain an energy efficient mechanical ventilation system.

All mechanical ventilation systems provided by Beam conform to requirements of UK statutory Building Regulations and Technical Standards for Ventilation and BRE 398.

## Home Energy Consumption



Source: Defra, The 2008 Climate Change Programme

- Energy used for heating accounts for 53% of all energy use in the home.
  - **Of this 80% is lost through ventilation**
- A MVHR system recovers up to 95% of this heat energy whilst providing essential fresh air for the home

# What is an Axco Mechanical Ventilation with Heat Recovery (MVHR) system?



Fresh air is continuously drawn into the home via a low energy Axco MVHR unit located in the roofspace/utility area of the building. The ventilation unit filters the incoming air to remove pollutants and insects. Once passed through the high efficiency heat exchanger within the ventilation power unit, the warmed, clean, fresh filtered air is distributed around the building through a series of ducts which run to each habitable room i.e. living room, bedrooms etc.

An MVHR system is considered to be the most energy efficient method of providing balanced ventilation in newly constructed dwellings with high levels of insulation.

Moist, stale, warm air from wetrooms (such as bathrooms, kitchens, wc's) is continuously extracted to the outside via a highly efficient heat exchanger in the Axco Ventilation unit which is located in the roofspace / utility area.

Up to 95% of the heat from the extracted air is transferred within the heat exchanger to a continuous flow of fresh, filtered air from outside. This warmed filtered air is continuously supplied to all habitable rooms such as living areas and bedrooms.

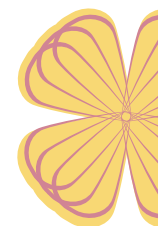
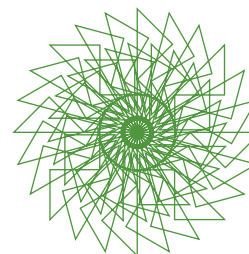
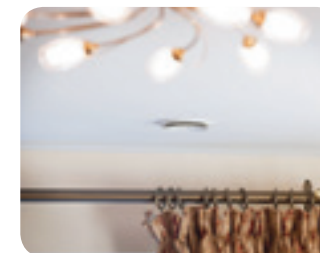
The heat recovered within the system will off-set some of the home heating costs, thus reducing future energy bills. A low energy Axco MVHR system provides balanced continuous ventilation without the need for opening windows, extract fans or window trickle vents.

It is vital that an MVHR system is installed and commissioned correctly according to the strict guidelines set by building regulations today.

Filters within an MVHR unit should be changed annually to maintain system efficiency.

The Benefits of MVHR:

- Contributes to the energy efficiency of the home
- Constant clean warmed, fresh filtered air reduces symptoms for asthma and allergy sufferers
- Reduces / eliminates surface condensation
- Improves indoor air quality throughout
- Enhances heat distribution
- Eliminates mould & mildew
- Removes musty odours
- No need to open windows
- Quiet in operation
- Aids Radon Dispersion



# Axco MVHR C range

The Axco MVHR C range of ventilation units are manufactured in the UK for Beam Vacuum & Ventilation to the highest standards and are Energy Saving Trust (EST) Best Practice Compliant. The combination of extremely low power consumption and a highly efficient heat exchange is specifically designed to enhance the building's energy performance via SAP/DEAP assessment procedures.

- Extremely low power consumption. Latest EC motors with SFP (Specific Fan Power) from 0.4 wls-1. Energy Saving Trust compliant.
- Highly efficient heat exchange. Best in class performance - up to 92% efficient.
- Demand controlled ventilation when a rise in humidity. Manual control boost switch also provided. Setback option for unoccupied periods.
- Fully adjustable boost overrun timer 0-60 minutes. Automatic/manual set to suit occupants lifestyle.
- Unique design temperature controlled summer bypass with SummerBoost assists comfort cooling in summertime.
- G4 filters as standard. Low cost filter refills are available.
- Intelligent frost protection - built-in to prevent freezing.
- Internally insulated in high density Expandable Polypropylene.
- Manufactured in Zintec® steel complete with high gloss baked resin finish for long life.



## Remote Control Options:

Auralite® is a low voltage remote hard wired LED ventilation system status indicator, which allows access in living area to visible information on ventilation unit performance.



- Normal Running • Frost Protection • Filter Change
- Boost Speed • Summer Bypass • Fault

Aurastat® is an advanced remote Programmable controller and display and is connected to the MVHR system via a wired connection, typically located in central location:



- Fault Alert indicator • Filter Change Alert • Fan Speed Display
- Frost Protection Programme • MVHR run timer • Holiday Mode
- Temperature display • Boost Dual Overrun • Boost Dual Timer
- Boost Dual Delay • Boost Inhibit • Digital Humidity control

Unit	Axco MVHR C75	Axco MVHR C100	Axco MVHR C130
EST Compliant	✓	✓	✓
Specific Fan Power (SFP)	0.4 wls-1	0.4 wls-1	0.5 wls-1
% Heat Exchange Efficiency (HEE)	91%	91%	92%
Pressure (pa max)	230	550	975
Flow (max)	50m3h-1	415m3h-1	500m3h-1
Summer Bypass	✓	✓	✓
Demand Control / Manual Boost System	✓	✓	✓
G4 Filters	✓	✓	✓
Condensate Drain Required	✓	✓	✓
Inlet Diameter (mm)	150	150	150
Weight (kg)	24	24	31
Dimension (W x H x D) (mm)	715 x 490 x 426	715 x 490 x 426	790 x 665 x 495
SAP Appendix Q Listed	✓	✓	✓

Further technical specification available on request

# Axco MVHR HERU Range

## Remote Control:

Axco Heru MVHR systems are operated via a wireless remote control with an operating range of approximately 50m and works through walls and floors. The intuitive programmable remote control displays performance information including:



- Fresh air intake, exhaust air, supply air and extract air temperatures
- Fan speeds / RPM
- Rotating heat exchanger diagnostics
- Heating / Cooling requirement, status
- Optional Carbon Dioxide / relative humidity level
- Holiday mode
- Ventilation boost on/off

The Axco MVHR HERU range of ventilation systems incorporates the latest heat recovery technology with a Rotating Heat Exchanger. Designed and built in Sweden for Beam Vacuum & Ventilation, this exclusive award winning technology offers many practical advantages over conventional systems.

- High efficiency aluminium Rotary Heat Exchanger provides automatic climate control and requires no condensate drain. Recuperates moisture & heat energy, improving Indoor Air Quality and comfort.
- Programmable hand held interactive wireless remote control with an operating range of approximately 50m.
- Remote warning & service diagnostics available through handset for total assurance on system performance.
- Large surface long-life Pollen Grade F7 filter (inlet and outlet) is the highest specification available for any ventilation system.
- Enersave® (Automatic Temperature Guidance) sets control for heat recovery in winter and summer seasons.
- Works in conjunction with automatic summer cooling. System runs at minimal energy consumption during warmer summer months.
- Low energy, high performance EC fans.
- Heavy duty commercial grade construction in zinc galvanised steel. Insulated with 50mm dense mineral wool for quietness and facilitates use in any cold space.



Axco HERU S



Axco HERU T

Unit	100S	100T	130S	160T	180S
Flow (max)	425m3h-1	425m3h-1	600m3h-1	650m3h-1	790m3h-1
Pressure (pa max)	825	850	800	875	680
Specific Fan Power (SFP)	1.0 wls-1	1.2 wls-1	1.0 wls-1	1.0 wls-1	1.1 wls-1
% Heat Exchange Efficiency (HEE)	83%	83%	80%	81%	75%
Dimension (L x W x H) (mm)	1077 x 555 x 474	455 x 771 x 673	1255 x 605 x 575	905 x 552 x 793	1344 x 715 x 683
Weight (kg)	62	65	100	91	135
Inlet Diameter (mm)	160	125	200	160	250
Installation	Floor	Wall	Floor	Wall	Floor
Remote Control System	✓	✓	✓	✓	✓
Enersave® (temp guidance system)	✓	✓	✓	✓	✓
Temperature & Climate Control	✓	✓	✓	✓	✓
Non-Condensing Rotar Technology	✓	✓	✓	✓	✓
SAP Appendix Q Listed	✓	✓	✓	✓	✓

Further technical specification available on request



# Dantherm Passive House MVHR Range



Our Passive House range of MVHR systems, manufactured by Dantherm Air Handling are certified by the PassivHaus Institut and feature the latest energy saving technology.

- Certified component for Passive House
- Durable & efficient aluminium counterflow heat exchanger
- High efficiency – up to 95%
- EC motors with extremely low energy consumption (low SFP)
- G4 / F7 Pollen filters available
- Demand-controlled ventilation with integrated humidity sensor
- Built-in by-pass module ensures automatic fresh air cooling of the house in warmer weather
- High end manufacture in corrosion resistant Aluzinc® steel



Differential pressure measurement across the heat exchanger is used to adjust the fan settings ensuring very high accuracy and performance of the ventilation system.

## Controls:

The Dantherm HCV/HCH range of MVHR units is supplied with demand controlled automation and integrated humidity sensor. The control panel has options to adjust individual default settings to suit the occupants.

## Advanced Demand Control:

Unique to Dantherm, incorporated intelligent humidity control adjusts ventilation rate due to ultra accurate parameter setting in response to both high and low humidity levels.

## Control Panel:

The 3 push buttons of the control panel give access to:

- Manual control of ventilation speed
- Automatic control of ventilation speed
- Manual by-pass/cooling

## Remote control:

The wireless remote control gives the user access to:

- Automatic demand control
- Manual operation
- Week programme operation
- Away operation
- Night operation
- Firelighting operation



Unit	HCV5	HCH5	HCH8
Passive House Certified Component	✓	✓	✓
Certified for air flow rates	99-220m3H-1	99-220m3H-1	135-340m3H-1
Effective Heat Recovery Rate	nHR, eff 81%	nHR, eff 81%	nHR, eff 83%
Electric power consumption	0.27 wh/m3	0.27 wh/m3	0.26 wh/m3
Flow (max)	425m3h-1	450m3h-1	650m3h-1
Summer Bypass	✓	✓	✓
Control System	demand control	demand control	demand control
Inlet Diameter (mm)	160	160	250
Weight (kg)	57	66	84
Dimension (W x H x D) (mm)	590 x 1055 x 566	1180 x 600 x 580	1180 x 600 x 780
SAP Appendix Q Listed	✓	✓	✓
Condensate Drain Required	✓	✓	✓

Further technical specification available on request



# Ventilation Ducting System

One of the most important aspects of a well planned, low energy highly efficient MVHR system is the ducting type, design and the quality of installation.

Careful consideration to the design and choice of installation materials ensures your MVHR system delivers the correct ventilation rate and energy efficiency to your home.

The best practice is to use larger 125mm diameter branch lines and up to 250mm diameter main lines, which can carry the necessary high volumes of air at low velocity and resistance (depending on size of system).

The use of rigid, large diameter ducting is industry best practice providing a smooth flow of air with the least resistance, causing less noise (from both fans and air turbulence) and **costing less to run**. A minimum of 25mm aluminium foil backed wool insulation to ducting in a cold space is essential to retain high heat efficiency and avoid condensation forming in the ductwork.

All Axco Mechanical Ventilation systems with Heat Recovery (MVHR) systems have been independently tested at the Building Research Establishment (BRE). As well as ensuring clean, fresh filtered air throughout the home, our ventilation units:

1. Are SAP Appendix Q Listed
2. Help improve SAP/BER ratings
3. Comply with all building regulations
4. Are Energy Savings Trust compliant (Axco C units)
5. Are Passive House Certified Component (Dantherm units)



# Design & Installation

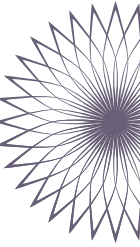
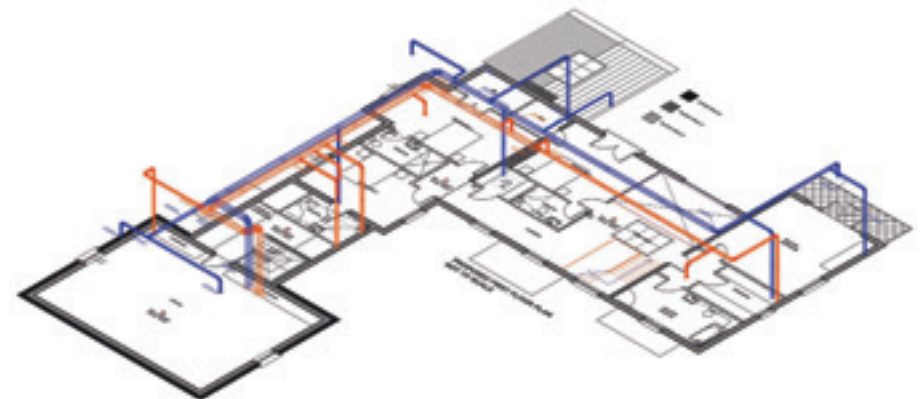


All systems are designed by an experienced technical team and are installed by Beam engineers or our nationwide distributors/installers. We will install your MVHR ventilation system with smoothflow rigid ducting throughout, providing better heat efficiency, lower energy use and a quieter system. Solid ducting is resistant to crush damage during construction and thereafter can be cleaned and maintained if required.

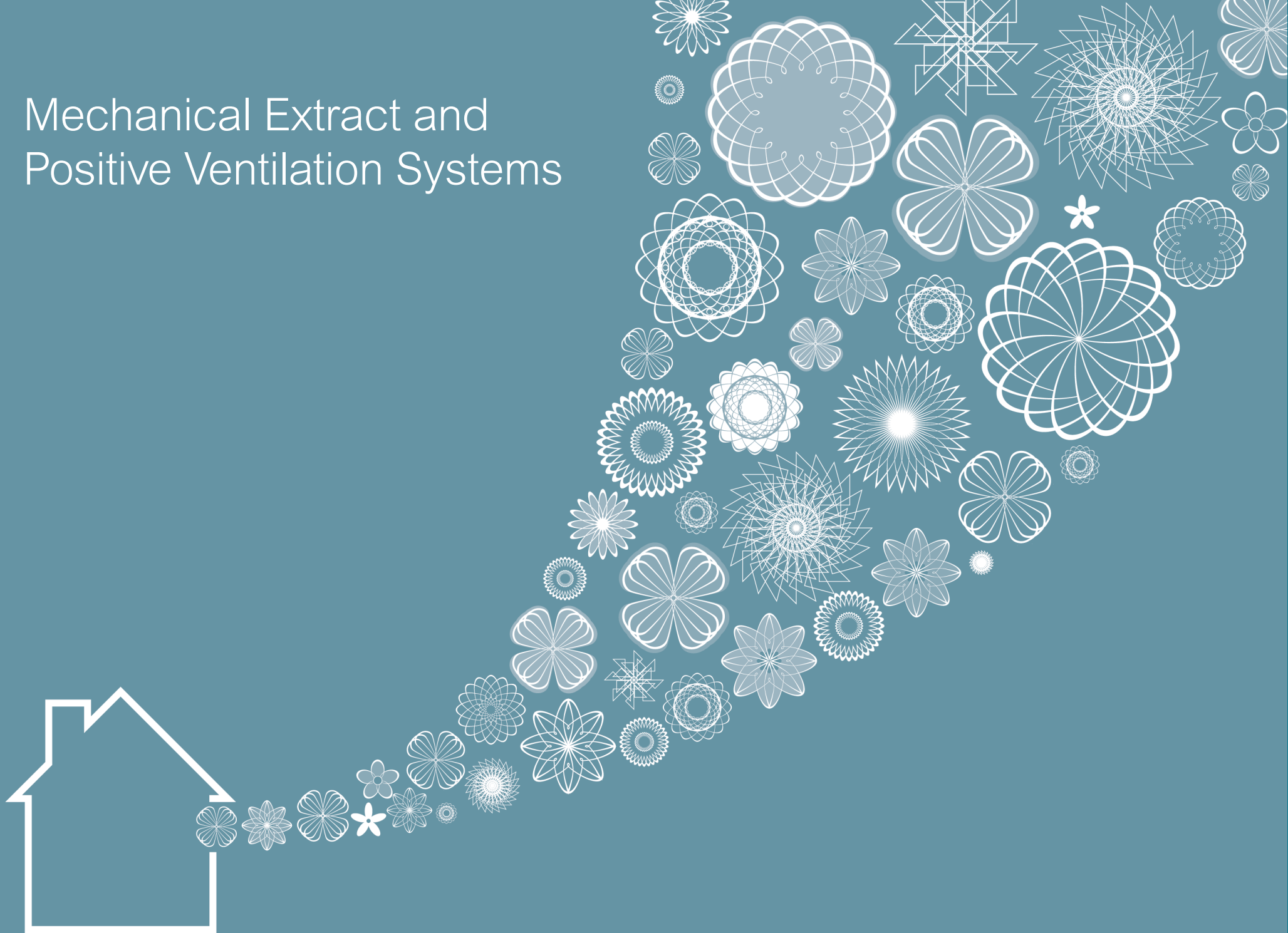
We only use precision engineered metal and plastic ducting, fitting and silencers mechanically fastened and sealed at every joint for air-tightness.

Should you decide to install a MVHR system from Beam on a DIY basis, we provide design layout, commissioning and support throughout the installation.

Beam MVHR systems carry a full 2 year parts and labour warranty.



# Mechanical Extract and Positive Ventilation Systems



# Axco Mechanical Extraction Ventilation (MEV) system



The system is also Energy Saving Trust Best Practice Compliant, with a Specific Fan Power (SFP) down to 0.18 w/l/s. The occupier can make significant energy savings as there is no need for noisy, multiple extractor fans in each wetroom which create multiple breakout points in the building, creating draughts, air leakage and heat loss. It is also more economical to run one fan instead of multiple single fans. Guaranteed for 3 years, the high quality EC motor has a long-lasting performance, compared to low cost wall fans (some of which have a limited life cycle).

### The Benefits:

- Eliminate condensation & mould growth
- Improve Indoor Air Quality
- Remove musty odours
- Save energy
- No need for noisy extractor fans – quiet ventilation
- No draughts from extractor fan openings



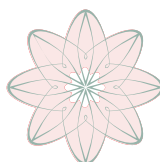
### Axco CEV130:

Exhaust Terminal Configuration*	Fan Speed Setting	Specific Fan Power (SFP)	Energy Saving Trust Compliant	SAP Appendix Q Listed
Kitchen + 1 additional wetroom	100% Variable	0.20	✓	✓
Kitchen + 2 additional wetrooms	100% Variable	0.18	✓	✓
Kitchen + 3 additional wetrooms	100% Variable	0.18	✓	✓
Kitchen + 4 additional wetrooms	100% Variable	0.19	✓	✓
Kitchen + 5 additional wetrooms	100% Variable	0.22	✓	✓
Kitchen + 6 additional wetrooms	100% Variable	0.25	✓	✓

Figures taken from the BRE Test Results \*Number of wetrooms is based on SAP Q test criteria and does not correlate directly with regulatory performance requirements

Unit dimensions: 390mm W x 252mm H x 450mm D

Primarily for use in dwellings with six wetrooms or fewer (dwellings up to 300m<sup>2</sup>/3200sq.ft), the quiet and compact Axco central mechanical extraction ventilation system is usually installed in a roof space or cupboard and ducted to all wetrooms. The low energy unit runs continuously at a low normal ventilation rate, extracting stale polluted air from rooms where the most moisture is generated e.g. kitchens and bathrooms. A flow of fresh air from outside is supplied by a Positive Input Ventilation unit/s or window trickle vents to match boost extract rate from MEV fan.



# Axco Positive Input Ventilation (PIV) systems



The AXCO positive ventilation units are sophisticated energy efficient whole home ventilation and condensation control units designed to continuously gently ventilate the home from a central position on the landing or the central hallway. Moisture-laden air is diluted, displaced and replaced with subtle fresh filtered air, forcing contaminants out of the property through leakages or extract points in wetrooms (if applicable). A PIV system is the ideal solution for condensation and mould issues in existing homes.

## The Benefits:

- Eliminate condensation & mould growth
- Stop streaming windows
- Improve Indoor Air Quality
- Remove musty odours
- Save energy
- No need for trickle / window vents if dwelling air tightness level is above Level 5
- Aids radon dispersion
- Suitable for existing and new homes

## Health Benefits

With improved building features in our homes, such as cavity wall and room insulation, double glazing and draught proofing 'natural ventilation' is reduced. Stale air is trapped causing streaming windows and high moisture, which ultimately leads to musty smells, dampness and mould growth. These mould spores are known allergens and become airborne at the slightest disturbance which can be inhaled and can trigger respiratory problems such as asthma, dust allergies and hayfever.

The Axco positive ventilation units draw fresh air into the dwelling and filters it before being gently delivered into the property. Moisture laden air is diluted, displaced and replaced with clean, tempered and filtered air. This promotes free air circulation and eliminates or reduces surface condensation, which causes mould growth, providing a significant improvement in the health of asthma sufferers and general indoor air quality.

## Energy Efficiency

Powered by an Ultra Low Watt Brushless DC Motor, the Axco positive ventilation units utilise the latest technology to ensure minimum energy consumption and long term trouble free life, achieving up to 80% more efficiency than a traditional AC fan.

Warm air accumulates at ceiling level. This air can be up to 7°C higher temperature than the internal air at floor level. By introducing a subtle filtered air supply into the dwelling, the unit helps to redistribute heat around the home and thus reduce space heating costs. In weather conditions below 10°C, the incoming air is lightly heated to prevent cold draughts.

During the heating season significant energy loss occurs by opening windows to reduce humidity and condensation. By installing a positive ventilation system and providing fresh filtered air to the home humid air is displaced without opening windows and thus making a significant saving to the occupier.



## Filters

A synthetic fibre based, long-life filter made to G4 standard is used on the Axco PIV units. G4 filters will remove a high proportion of airborne particles, such as pollens and are constructed from selected high performance non-breakable fibres in a progressive density multi-layering technique all in accordance with EN779 standard ratings. The filter conforms to all European Union and US fire classification standards (e.g. DIN 53438-F1 and UL900-class 2) and is self-extinguishing. The Axco wall mounted unit is fitted with an integral insect filter.

## Integral pre-heater (applicable to both loft and wall units)

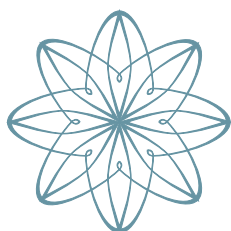
- Designed to temper the incoming air during periods of low external temperatures to prevent the air falling below 10°C. A sensor monitors incoming air temperature and pulses the built-in low energy heater to ensure temperatures are held to pre-set minimums.
- Three independent safety cut-out devices shut down the heater in the event of fan failure.
- The heater facility is controlled independently from the fan by a conveniently positioned enable / disable switch.

## Hours Run Meter

For monitoring of operational life and verification of usage, an integrated Hours Run Meter is fitted. The hours run meter retains its memory in the event of a power failure and restarts at existing reading when power is restored.

## Radon

Radon, a natural radioactive gas that, in some areas of the country, comes from the earth, has been found to cause lung cancer. In areas where radon levels are quite high, indoor radon levels can rise above the Action Level. For more details, visit [www.bre.co.uk/radon](http://www.bre.co.uk/radon). An Axco positive ventilation system dilutes the air entering the house and helps to reduce the amount of contamination drawn into the house from the ground.



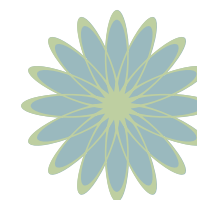
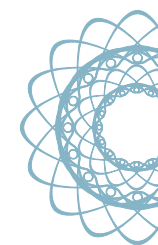
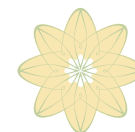
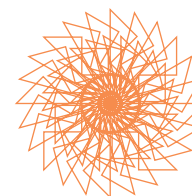
## Ceiling Air Diffuser

Exclusive to Beam, our fully adjustable 4-sided opening modern slimline ceiling air diffuser distributes air evenly, without causing draughts.

In a smoothflow, easy clean, white uPVC, the ceiling diffuser is suitable for most valve locations including close proximity to smoke alarms (as one side of the diffuser can be closed).

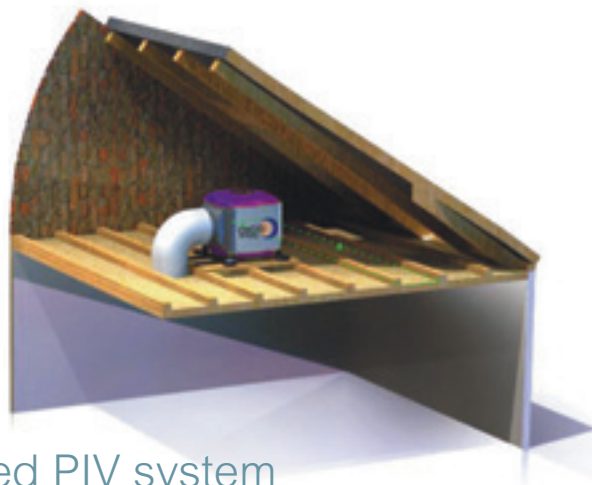
## Guarantee

The Axco positive ventilation units are covered by a full five year warranty and are designed to provide a long and trouble free use over many more years. The unit will be programmed according to the size of the property and will operate continuously.





# Axco Positive Input Ventilation Systems



## Axco Loft Mounted PIV system

The loft mounted unit takes maximum advantage of the benefits of solar gain from within the loft space – the natural accumulation of heat from the sun on bright days. Temperatures in the loft space are on average 3°C higher than outside, and as the loft mounted unit draws fresh air from the loft and delivers it into the property via the innovative diffuser, this results in a relative saving of around 150 Watts of heat energy per day in an average modern family home.



## Axco Air-Source PIV system

Ideal for homes with a small or unventilated loft space, the Axco Air-Source PIV unit has the facility to source cooler air from outside the building when the temperature in the loft space rises above 25°C. Detecting the rise in temperature, the unit starts to draw air from the atmosphere. This not only provides efficient perception cooling into the property during warmer weather, but also maintains the required level of ventilation continuously throughout the year. This facility is greatly beneficial for properties affected by high levels of Radon.

Axco Air-Source PIV units have the additional facility to draw air from the atmosphere during the warmer months of the year.



## Axco Wall Mounted PIV system

Suitable for apartments/flats, the wall mounted unit has an air inlet from outside (inlet can be left or right handed to the side or rear of the unit). The unit also benefits from a double skin carcass for improved insulation.

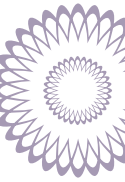
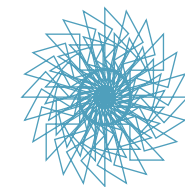
	Speed	Loft PIV	Wall PIV	Air-Source PIV
Airflow	Trickle	19	9	23
	Boost	47	20	46
Watts	Trickle	3.03	3.4	3.2
	Boost	9.76	6.1	8.0
Specific Fan Power (SFP)	Trickle	0.15	0.39	0.14
	Boost	0.20	0.30	0.17
Unit Dimensions (W x H x D) (mm)		325 x 415 x 330	505 x 380 x 185	515 x 576 x 481
Integral comfort Pre Heater		✓	✓	✓
Integral G4 filter		✓	✓	✓
Square Ceiling Valve (mm) 300 x 300 x 30		✓	✓	✓

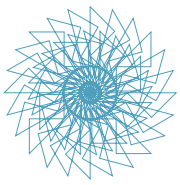
# Beam Vacuum & Ventilation



For over 35 years, Beam have specialised in the supply and installation of central vacuum and low energy mechanical ventilation systems, providing a complete solution for clean, healthy energy efficient homes, commercial and industrial buildings.

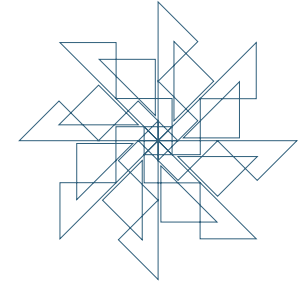
With unrivalled experience, over 70,000 installations throughout Ireland & UK, a dedicated skilled workforce and extensive network of trained distributors, Beam continue to be the supplier of choice to specifiers, developers and self builders.





# BEAM

Vacuum & Ventilation  
*Built-in brilliance!*



## **Beam Vacuum & Ventilation**

Opus Business Park  
35 Aughrim Road, Magherafelt  
BT45 6BB, NI

Tel: (NI & UK) +44 (0)28 7963 2424

Tel: (Rol) +353 (0)1 833 0668

Fax: (NI & UK) +44 (0)28 7963 2425

E: [info@beamcentralsystems.com](mailto:info@beamcentralsystems.com)

W: [www.beamcentralsystems.com](http://www.beamcentralsystems.com)

Full design, sales, installation and service  
available throughout Ireland & UK.

