



Energy Efficient Air Distribution Systems

VSPweb On-line Planner

Providing Duct Systems for:

- Mechanical Ventilation with Heat Recovery
- Mechanical Extract Ventilation
- Exhaust Air Heat Pumps

Through our network of
Ventilation Solution Providers



ON-LINE PLANNER

The VSPweb **On-line Planner** provides:

- Guidance on selecting an appropriate ventilation technology
- Help in selecting a suitable energy efficient appliance using the government's SAP Appendix Q website
- Duct selection to match the needs of the property and the appliance being used
- Advice on installation considerations to improve energy and performance efficiency

HOW IT WORKS

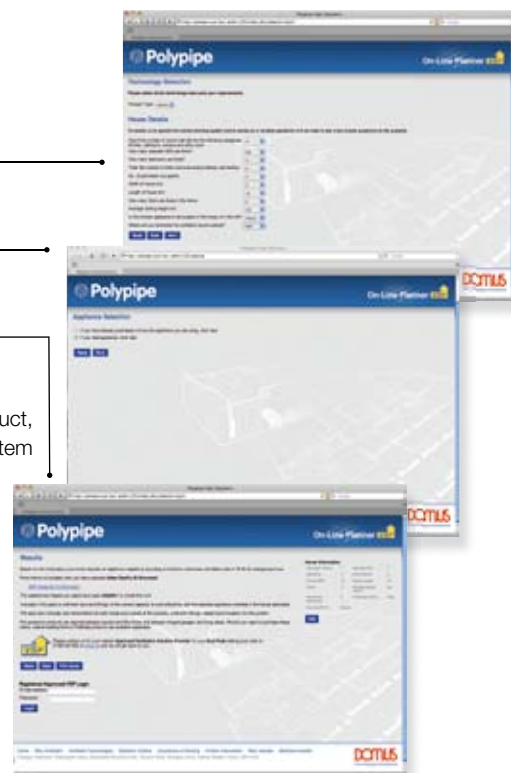
STEP 1: _____
Tell us about your property

STEP 2: _____
Select your appliance

STEP 3: _____
Duct Pack recommended

A **Duct Pack** includes sufficient appropriate duct, fittings and accessories to ensure that the system operates at its optimum efficiency.

Duct Packs are available to order from our national network of approved **Ventilation Solution Providers (VSPs)**.



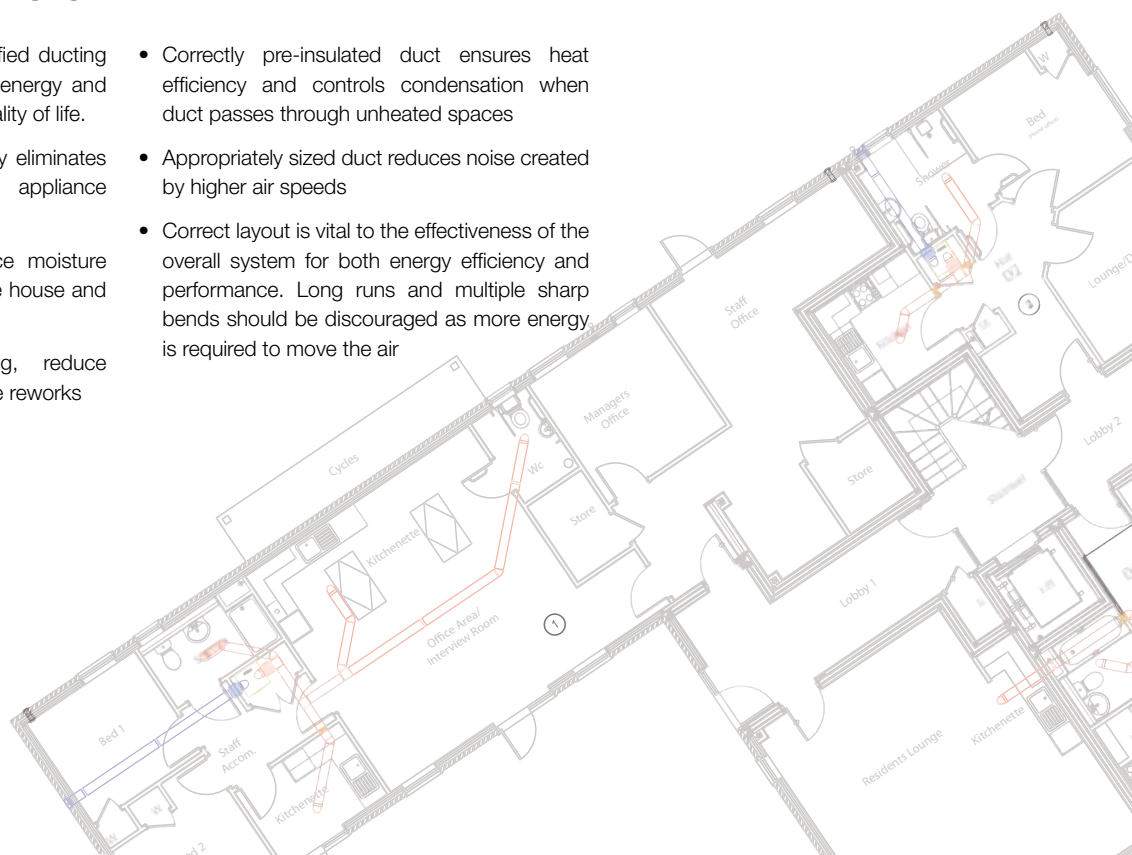
www.polypipe.com/ventilation

HOW CORRECT DUCTING HELPS THE EFFECTIVENESS AND EFFICIENCY OF THE SYSTEM

Installing high quality, correctly specified ducting provides quick payback in reduced energy and maintenance costs and increased quality of life.

- A high quality duct system virtually eliminates air leakage ensuring optimum appliance effectiveness and efficiency
- High quality duct systems reduce moisture leakage protecting the fabric of the house and reducing maintenance costs
- Engineered joints ease sealing, reduce installation time and eliminate future reworks

- Correctly pre-insulated duct ensures heat efficiency and controls condensation when duct passes through unheated spaces
- Appropriately sized duct reduces noise created by higher air speeds
- Correct layout is vital to the effectiveness of the overall system for both energy efficiency and performance. Long runs and multiple sharp bends should be discouraged as more energy is required to move the air



POLYPIPE VENTILATION

Polypipe Ventilation provides energy efficient ventilation duct systems to help our customers meet increasingly stringent building regulations and energy efficiency targets, supporting the following technologies:

- Mechanical Ventilation with Heat Recovery
- Mechanical Extract Ventilation
- Exhaust Air Heat Pumps



WHY CHOOSE A CENTRALISED VENTILATION SYSTEM?

Centralised ventilation is now specified in the build or refurbishment of many properties for the following reasons:

- Significantly increases the energy efficiency of the property
- Conforms to current building regulations
- Helps to achieve the higher levels of the Code for Sustainable Homes
- Guarantees occupant comfort
- Actively controls condensation and mould
- Removes pollutants
- Protects the fabric of the building
- Ensures safe and efficient operation of some combustion appliances

Our new **VSPweb On-line Planner** removes any confusion with selecting the correct duct components, system and appliance, which installers new to centralised ventilation systems may have.



Leave the ventilation specification to us

www.polypipe.com/ventilation



TECHNOLOGIES

Mechanical Extract Ventilation (MEV)

ENERGY SAVING TRUST ADVICE

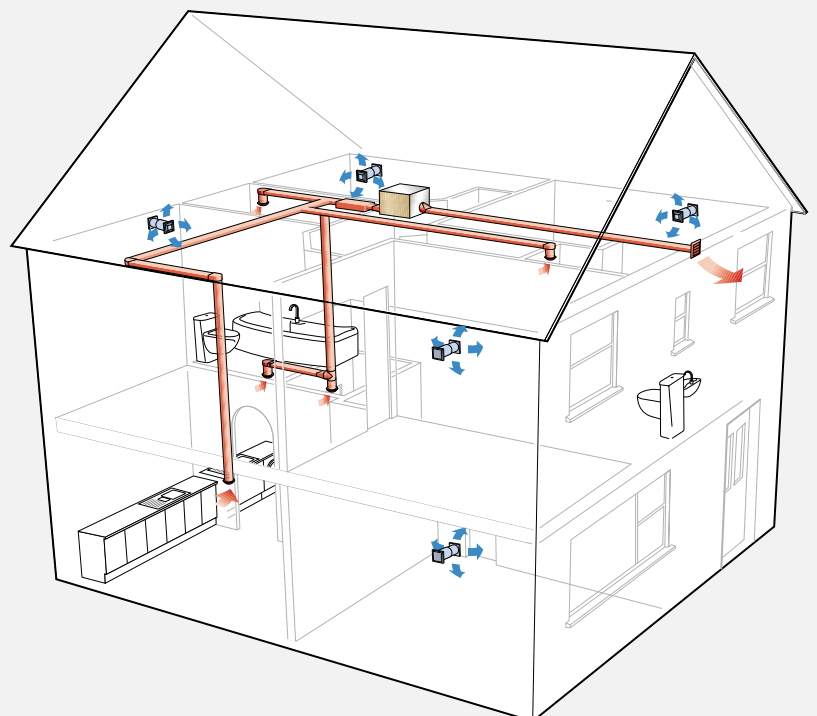
Best practice: New Build
Recommended: Major and minor refurbishment

MEV provides continuous low rate extraction from wet rooms using central extraction appliances normally mounted in the loft space. Incorporates a boost facility to extract pollutants and supply fresh outdoor air at a higher rate.

Replacement air is drawn into the property using background ventilators.

Advantages

- Easy to install
- Provides continuous 'low-level' background ventilation
- Easy to understand operation



CRITERIA FOR APPLIANCE AND DUCT PACK SELECTION

Criteria for Appliance Selection

The VSPweb On-line Planner provides a bespoke duct system to match the chosen appliance. Either manually select the appliance from the SAP Appendix Q database or allow the planner to specify the most appropriate units on the market.

- Recommended options are based on a combination of the highest heat exchanger efficiencies and the lowest specific fan power at flow rates demanded by the dwelling specified. Calculations are based on the performance requirements of Energy Saving Trust approved appliances listed in the SAP Appendix Q database, formulas given in Approved Document F of the UK Building Regulations or advice given in Building (Scotland) Regulations 2004 and the house data you input into the planner software.
- The selection provided does not take into account the cost of the appliance or the ease of installation and no bias is intended for or against any particular manufacturer. All the information relating to individual appliances is taken from the public domain

Criteria for Ducting Selection

Using the information you provide about the property and the selected appliance:

- A Duct Pack is specified to match the number of inhabitants, size and type of the property as well as the installation and termination location of the appliance and average room sizes based on current building practice.
- Duct Packs are designed to provide a complete solution for most properties. In rare instances additional components may be required from the extensive Domus range.

General Guidance

Whilst every effort is taken to ensure that the information is both up to date and accurate, it is the responsibility of the installer to check that both the duct system installation and the appliance are suitable. Additional assistance is available from Polypipe Technical Support.

Tel: **01799 540602**
Email: **vent.tech@polypipe.com**



Mechanical Extract Ventilation with Heat Recovery (MVHR)

ENERGY SAVING TRUST ADVICE

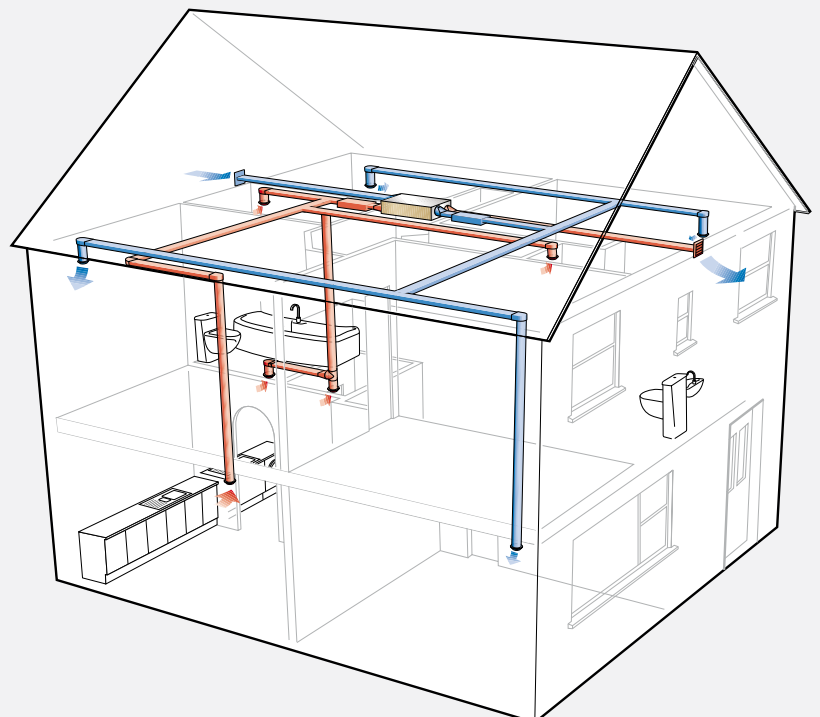
Best practice: New Build
Recommended: Major refurbishment

Incorporates supply and extract ventilation in one system. Warm air is extracted from wet rooms via ducting through a heat exchanger before being exhausted to the outside. Fresh incoming air is preheated via the same exchanger and ducted into habitable rooms.

The appliance is normally sited in a loft space or cupboard and connected to a rigid ducting system.

Advantages

- Controlled, preheated fresh air is pumped throughout the house
- Very high coefficient of performance (COP)
- Increases energy efficiency of property by reducing heating demand
- Filters incoming air from outside



SOURCES OF INFORMATION

The following organisations are recommended for additional information and/or data on the specification and selection of appropriate appliances or the necessary regulatory requirements.

Energy Saving Trust

www.energysavingtrust.org.uk

Building Regulations

www.communities.gov.uk
www.sbsa.gov.uk

SAP Q

www.sap-appendixq.org.uk

BRE

www.bre.co.uk

RVA (Residential Ventilation Association, part of HEVAC in turn part of FETA)

www.feta.co.uk

TEHVA (The Electric Heating and Ventilation Association)

www.tehva.org.uk

Data from these organisations has been used in this document and the VSPweb On-line Planner.

Polypipe Technical Support

Polypipe can provide additional guidance on optimum duct layout and also offer a full planning service for more detailed and complex requirements.



Exhaust Air Heat Pumps (EAHP)

ENERGY SAVING TRUST ADVICE

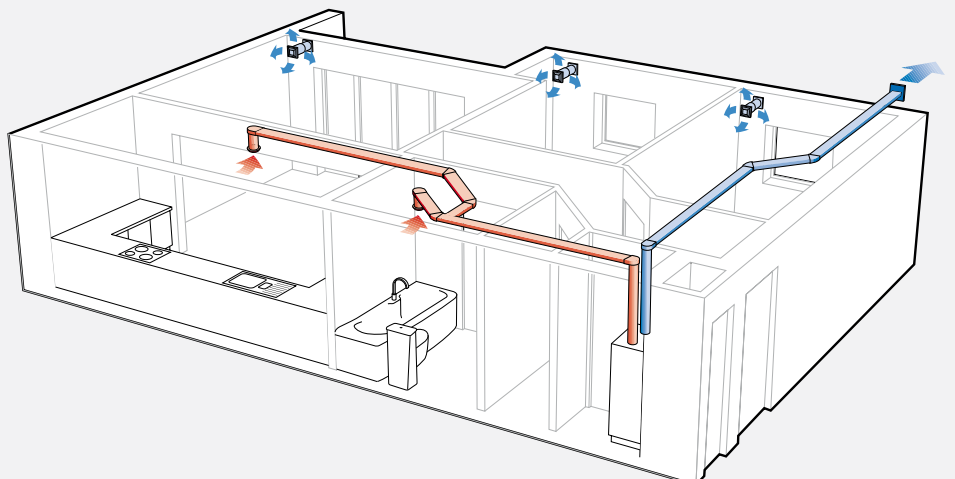
Best practice: New Build
Recommended: Major and minor refurbishment

As with MEV appliances, exhaust air heat pumps continuously extract air from wet rooms. Heat energy is extracted from the exhaust air to provide space and hot water heating.

Advantages

- Provides a combined ventilation and heating solution, particularly when used with energy efficient distribution systems such as under-floor heating
- High coefficient of performance (COP) compared to other heat pump technologies

NB: Please check with the manufacturer that the appliance has the capacity to heat the property prior to using the VSPweb On-line Planner.



Energy Efficient Air Distribution Systems



Distributor



Your nearest Approved Ventilation Solution Provider.

VSPweb On-line Planner

Polypipe Ventilation

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