MVHR Installation Tips for Self-Builders

THE AIR SHOP

This guide provides top-level essential tips to build a solid foundation in MVHR system installation.

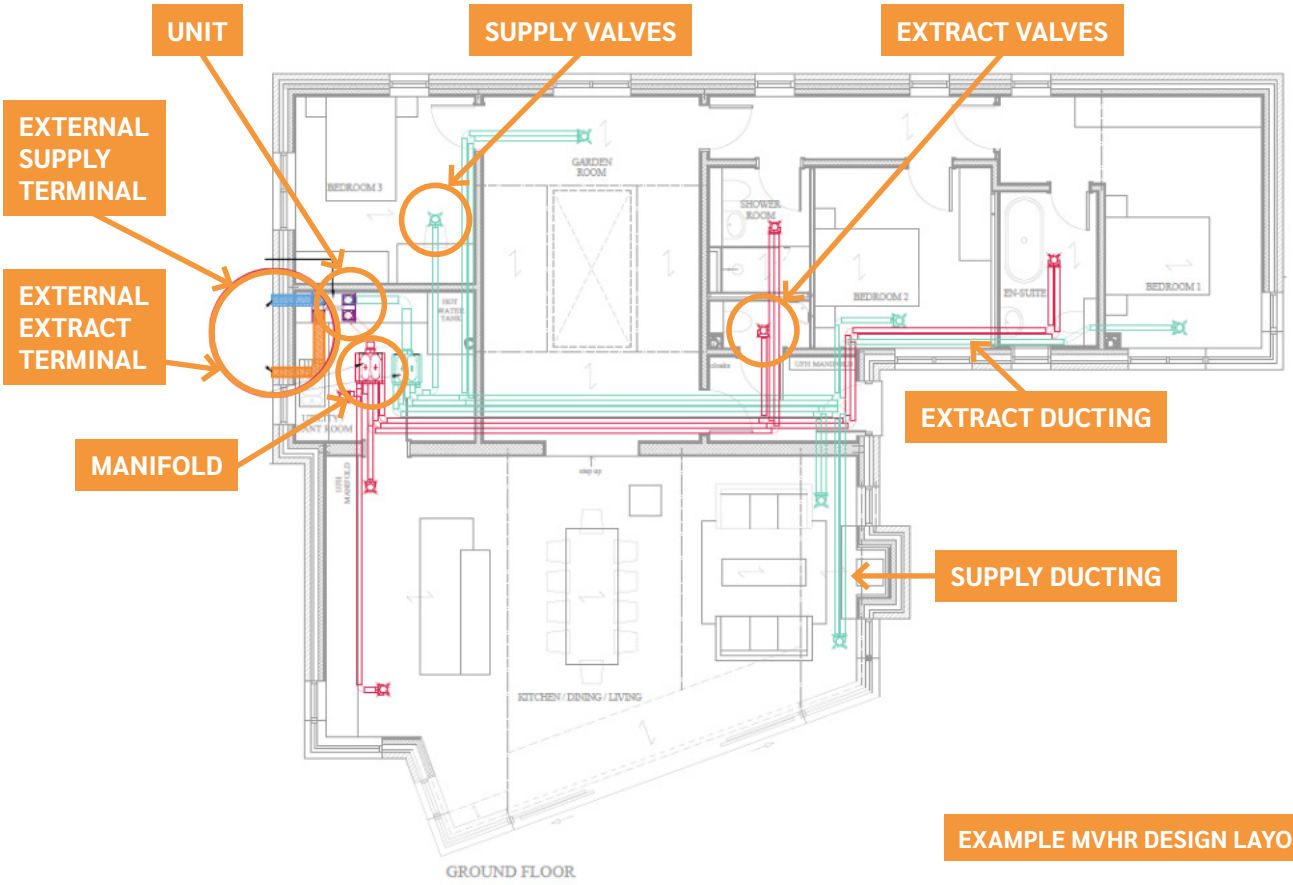
Prepare for Installation

When: First-fix stage

Key Tips:

1. Familiarise yourself with the design - confirm unit manifold locations and duct routers – refer to you MVHR design layout

   If you don't have a design layout you are at risk of not having the correct parts for you system or the correct unit for best performance in your property.



EXAMPLE MVHR DESIGN LAYOUT

2. Identify the fresh air intake and exhaust terminal positions as per MVHR design (See diagram). Prepare openings in external walls for terminals.

3. Position where the air supply and extract valves will be in each room to run ducting to the termination housing. Coordinate with other ceiling fixtures (e.g. lights, smoke detectors).

4. Get the right tools ready – you'll need:
   - Impact driver/battery drill
   - Tape measure
   - Pencil/market
   - Hand saw for cutting ductwork
   - Stanley knife and level

Tip: Mark duct routes and unit location before any other services are installed to avoid major clashes and having to re-route as you go

Installing Ductwork including important Insulation

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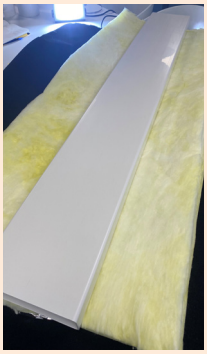
When: First Fix

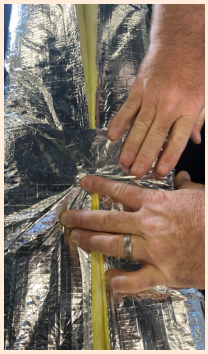
Key Tips:

1 **Follow the MVHR design** to minimise bends and long lengths of duct runs that impact resistance within the system

2 **Identify which ducts require insulation**

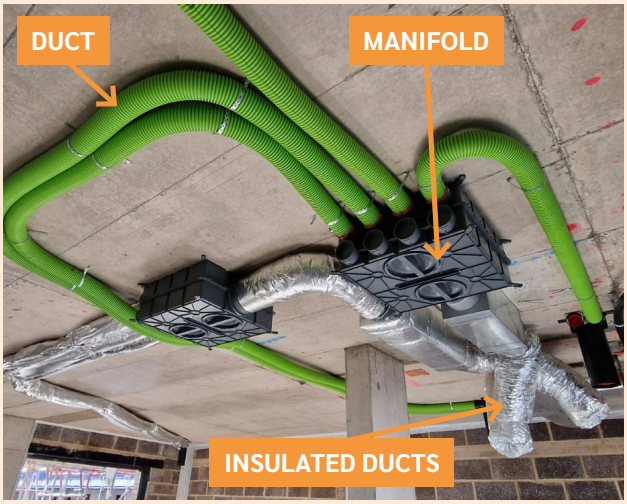
- This is ducting running through unheated areas in addition to supply and exhaust ductwork
- Where not using pre-insulated ducting use insulating wrap
- This makes sure there is a complete vapour seal to avoid condensation from forming inside the ducting.





3 **Where using manifolds** ensure they are mounted in the correct orientation for connection to the unit and the simplest routes for ducting e.g. for supply air and extract air - Refer to MVHR design

Consider access hatches for manifolds for maintenance and cleaning



4 **Ensure airtight, secure duct connections to prevent leakage.**

Rigid ducting requires sealant, screws and tape
Semi-Rigid ducting e.g. click fit or use sealing rings (Refer to manufacturer guidelines)


5 **Duct Support:** Ensure you use adequate support (metal strap band) to avoid sagging or vibration – recommended at 1m intervals


6 **Avoid flexible ducting**, but where necessary do not use more than 300mm

7 **When installing grille plenums/ drops** be careful not to cut too short before plasterboard is installed to avoid issue with grille/ diffuser connections

8 **Once ducting is installed**, cover up any openings exposed to avoid excessive dust build up inside ducting before system is turned on

2nd fix

Install the MVHR Unit

When: As soon as the area is weather-tight

Key Tips:

- Mount securely to a wall or floor on vibration-dampening mounts
- Leave space for service access (especially filters and control panel)
- Connect condensate drain (falls to gravity, with a water trap). See below for details
- Wire power supply, controls, and any sensors (e.g., humidity or CO_2)

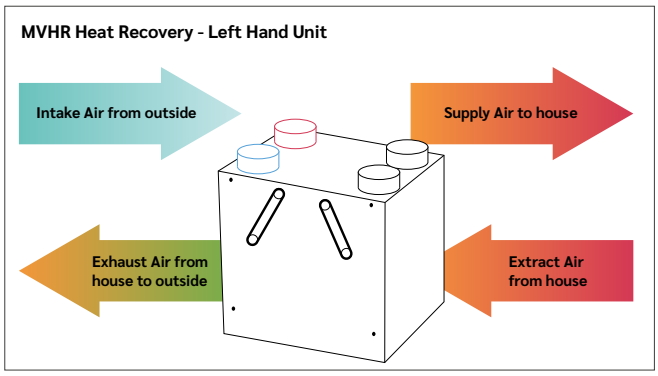
Handing the MVHR unit

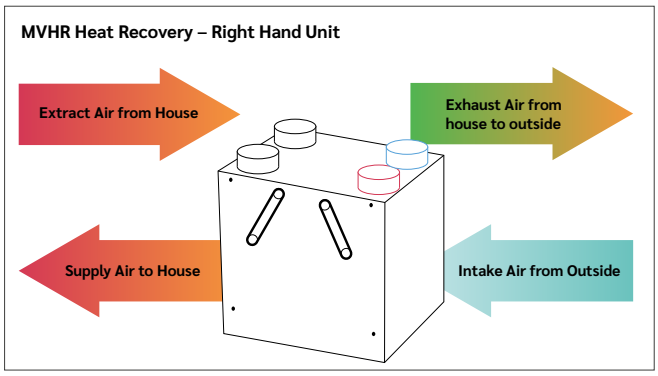
Familiarise yourself with the handing of your MVHR Unit.

If you have had a MVHR design, the unit handing would have been chosen based on the optimal layout for the system. Some units are delivered already handed and some can be handed onsite.

It is important you understand which spigot you need to connect each duct to to avoid supplying air where you should be extracting and vice-versa.

Please check your specific unit manufacturer's instructions as this can vary on certain models. This can be found in the downloads product information section of our website





Please note this may not be the same for all units

Connect External Intake and Exhaust Ducts

When: After roof or wall penetrations are ready

Key Tips:

- Fit external terminals with weather hoods and fly mesh
- Ensure intake and exhaust are at least 1.5m apart (avoid recirculation)
- Seal all penetrations to maintain airtightness
- Use insulated ducting through cold zones (e.g., loft or soffit)

Commission the System

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When: After all building works are complete

Commissioning of your MVHR system should be carried out by a BPEC or NICEIC - accredited engineer to ensure compliance with UK Building Regulations and to guarantee the system performs as designed.

A BPEC-qualified professional has undergone specialist training in ventilation system design, installation, and commissioning, and understands the critical importance of correctly balancing airflow rates, checking ductwork integrity, and verifying unit performance.

Resources

Here's a collection of practical guides and expert advice to help you better understand your MVHR systems and their installation

How to Install Zehnder Comfosystems Part 1 – HRV

An in-depth, step-by-step video guide showing the installation process of the Zehnder Comfosystems ventilation system. Filmed on a real job site for practical insights.

How to Install Zehnder Comfosystems Part 2 – HRV

The second part of the Zehnder installation walkthrough, continuing the practical setup and configuration of a full HRV system.

Complete Guide to MVHR | Homebuilding Advice

A comprehensive guide to MVHR systems—what they are, how they work, and why they're crucial in airtight, energy-efficient homes. Includes expert advice from Paul Heat Recovery Scotland.

MVHR Installation with ComfoTube Ducting – 3 Bed Terraced House

This case study follows the installation of a Zehnder MVHR system using ComfoTube semi-rigid ducting in a typical three-bedroom home.

Fast Track Ducting Installation | Semi-Rigid Ducting

EnviroVent demonstrates their quick-install semi-rigid ducting, designed to reduce installation time even for those with less experience.

Robin Installs the Lindab MVHR System – Capel #13

Follow along as Robin installs a Lindab MVHR system in a real home renovation project. Offers helpful insight into product handling and practical techniques.