PINNACLE
DUCTWORK
Est 1992

SUITABLE FOR OVERHEATING AND AIR QUALITY PLANNING REQUIREMENTS IN RESIDENTIAL DWELLINGS

ResiDUCT™

Revolutionising ducting for residential ventilation system performance

#overheating #mvhr #PartO

The ResiDUCT™ range:

ResiDUCT™ is an innovative ducting solution designed to meet the increasing market demand for superior airflow performance and energy efficiency in residential homes.

The ducting offers a simple solution for MVHR systems where higher ventilation system rates are required due to **overheating planning conditions.**

ResiDUCT™ by Pinnacle:

- Metal ducting manufactured to DW144
- Available in a range standard sizes
- Innovative features to improve performance
- Bespoke sizes available

What are the benefits of ResiDUCT™?

Low Profile – High Performance for overheating planning conditions

Reduces Air Leakage for maximum system performance

Compatible with both pvc and metal ducting for hybrid designs

- **A MVHR units ability to reduce overheating depends on a number of factors, chief among them is duct size and install quality**
- **With continuous advancements in MVHR units, ResiDUCT™ provide a perfect partnership to deliver an efficient MVHR system in homes**
- **As ducting is significant in achieving installed system performance, ResiDUCT™ has been designed to maximise airflow**

The ResiDUCT™ Advantage

With innovative design features, ResiDUCT™ helps maximise ventilation system performance.

Superior Performance

52%

Reduction in air leakage with ResiDUCT™ when compare with typical ductwork.

Evergy Efficiency

34%

Reduction in MVHR fan speed for compliance to designed rates.

Cost Savings

40%

Reduction in costs compared to other metal ducting systems.

* Independent Air Pressure Testing. BSRIA calibrated certificate STD_152473. MVHR system tested comparing typical DW144 metal ductwork and ResiDUCT™.

MVHR and Part O Overheating
Higher Ventilation Rates = Larger Ductwork

Due to the increasing density of buildings, and energy efficiency regulations, **the risk of overheating has increased**, leading to poor comfort levels and impact on health and well-being of occupants.

Approved Document O: Overheating

The control of overheating is covered by Regulations (England & Wales) and the key requirements include;

- Design for comfort
- Limit solar gain
- **Provide adequate ventilation**
- Meet performance standards.

Calculating ventilation rates for Part O involves understanding specific parameters for airflow to ensure that internal spaces do not exceed comfortable temperature levels during the summer months.

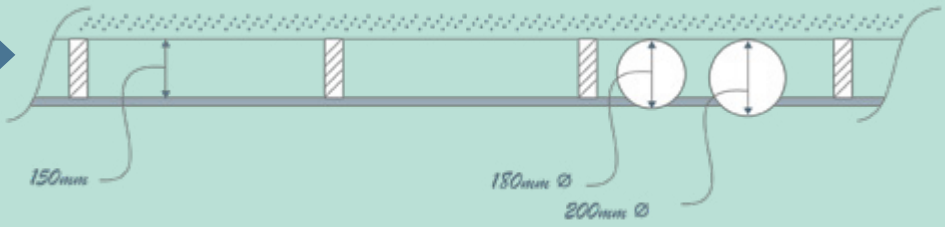
In many instances, overheating planning conditions result in increased ventilation rates that need to be achieved within the property.

How do increased airflow rates impact the ventilation system?

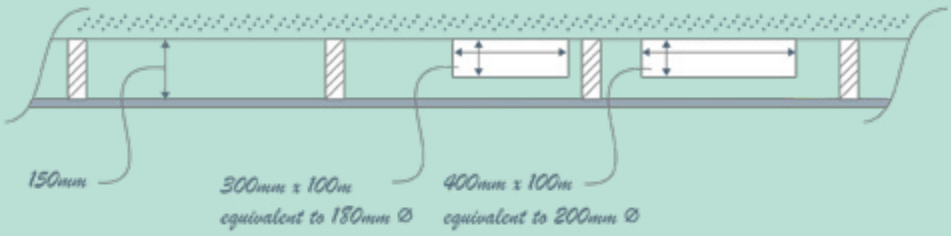
A MVHR unit may be powerful enough to deliver higher airflow rates, but achieving installed performance is also dependent on the ducting that is connected to it.

Where overheating has increased airflow rates, duct size has to be increased, potentially up to 180 or 200mm, however it's not always that simple in residential applications.

The typical ceiling void in a residential dwelling is up to 150mm.
But the increased airflow rates call for larger ducting which is not always feasible



ResiDUCT™ provides a low profile solution that can help achieve higher airflows.



ResiDUCT™ Is Space Saving

ResiDUCT™ is a low profile system that provides high airflow in restriced or standard ceiling voids with ease

Available in a range of sizes to suit:

300 x 100mm = 180mm Ø	400 x 100mm = 205mm Ø
300 x 125mm = 200mm Ø	400 x 125mm = 230mm Ø

Installed Performance
Addressing Air Leakage for maximum system efficiency

ResiDUCT™ has been designed to maximise installed performance and ensure that the MVHR unit performance can be achieved efficiently and quietly.

Innovative design features focus on;

- Improving the quality of ducting connections
- Eliminating bowing of joined ducting
- Adding strength

52%

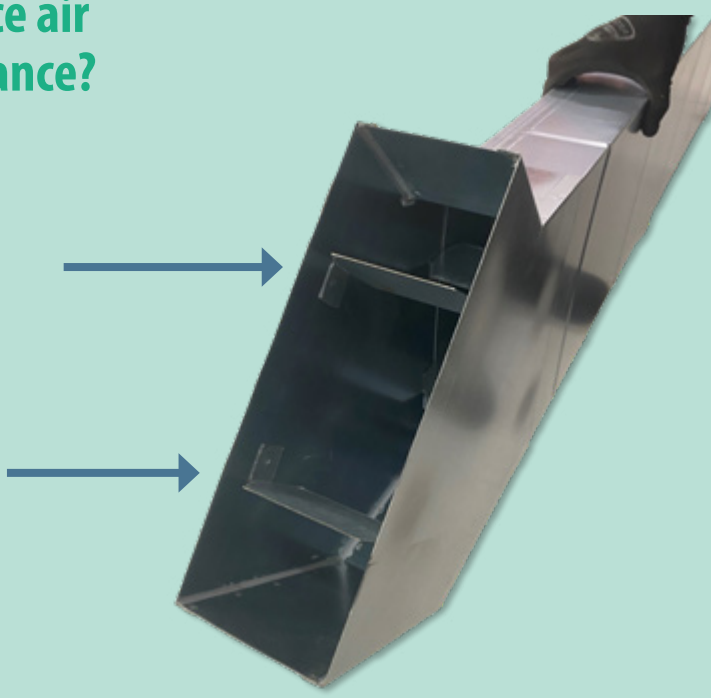
Reduction in Air Leakage within a typical MVHR system when compared to other ductwork

How does ResiDUCT™ help reduce air leakage and maximise performance?

1. Innovative Integral Stiffiners

A unique strengthening feature, a first for metal ductwork.

ResiDUCT™ stiffeners are manufactured into all female parts and connectors, offering a unique strengthening feature for the ductwork that enhances performance and reduces air leakage.



Integral Stiffeners in ResiDUCT™ female connectors

2. Socket Seal Joints

ResiDUCT™'s male and female parts are designed to fit seamlessly together with socket seal joints that prevent bowing and leakage gaps as the parts are pushed together.

Socket seal joints aid installation time and easily connect to plastic ducting systems.

ResiDUCT™ socket seal jointing

ResiDUCT™ socket seal jointing

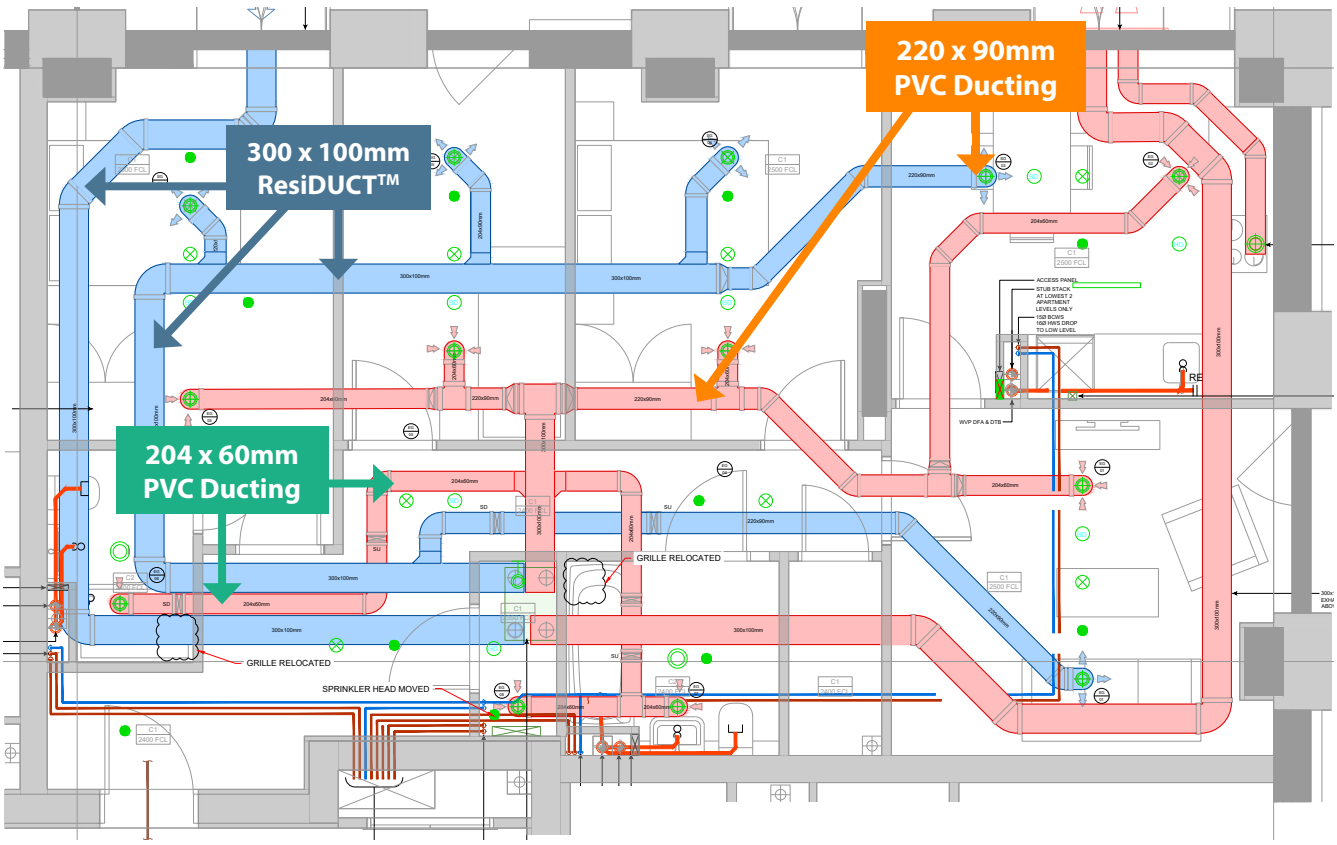
Compatible with Modern Ventilation System Design

With higher ventilation rates required in homes as a result of overheating planning conditions, the use of a hybrid ducting system is common.

Both metal and PVC ducting are designed to work together to help strike a balance between flexibility and airflow performance.

HYBRID

A hybrid ducting design includes metal and plastic ducting of varying sizes to achieve the airflow with high levels.



Design provided by client

ResiDUCT™ is hybrid ready

The ResiDUCT™ range of metal ducting can be installed in conjunction with PVC ducting with ease as a result of innovative socket seals which help bridge the gap between materials with seamless connections, no matter the set up.

ResiDUCT™ can be manufactured to be installed with PVC ductwork sizes including;

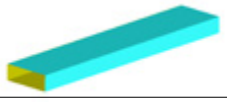
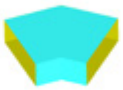
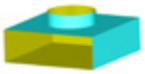
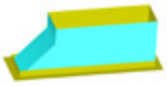
- 204 x 60mm
- 220 x 90mm
- 110 x 54mm

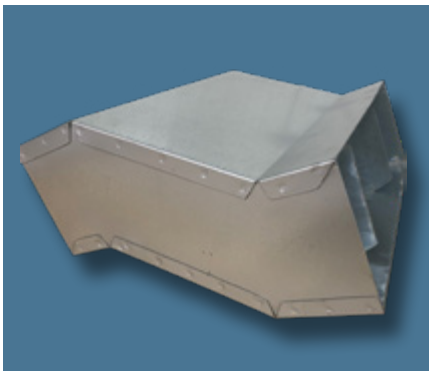
Technical specification

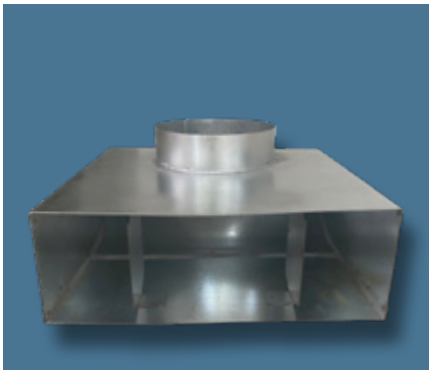
ResiDUCT™ is a high-performance duct range suitable for use with residential ventilation systems.

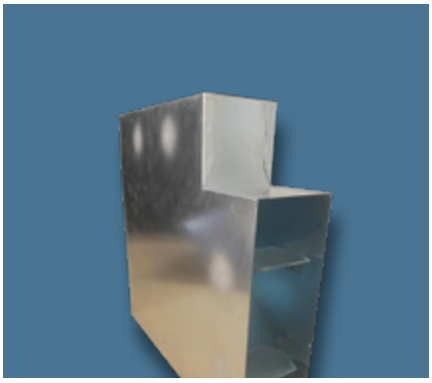
- All parts are made to order based on client drawings and specifications
- Manufactured to DW144 Standards
- Independently tested by BSRIA
- Available in standard sizes
- Bespoke sizes available on request

Note: All rectangular metal ducting is manufactured to size. If you require bespoke sized transitions and plenums, please send drawings. The pieces below provide examples of what we can manufacture:

ResiDUCT™	300 x 100mm	300 x 125mm	400 x 100mm	400 x 125mm
Duct Length 1.5m 	●	●	●	●
Duct Connector 	●	●	●	●
90° Horizontal Bend – high efficiency 	●	●	●	●
45° Horizontal Bend 	●	●	●	●
Plenum Elbow 	●	●	●	●
90° Vertical Bend – High Efficiency 	●	●	●	●
45° Vertical Bend 	●	●	●	●
Horizontal Equal T Piece 	●	●	●	●
Flat Shoe 	●	●	●	●
Taper – (varying options) 	●	●	●	●
Offset 	●	●	●	●







- All technical performance data sheets and REVIT files are available on request or download from www.pinnacleductwork.co.uk
- Air Leakage and Airflow test completed by third parties.
- Design Registrations UK 6369531, 6369532, 6369533, 6369534. 6369535, 6369536, 6369537, 6369538

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