Polypipe Ventilation
Specifiers Guide

• Mechanical Ventilation with Heat Recovery • Mechanical Extract Ventilation
• Intermittent Extract and Decentralised Mechanical Extract Fans • Rigid and Semi-Rigid Duct Systems
As a leading designer and manufacturer of energy saving ventilation systems, our exclusive Domus duct products and Silavent mechanical extract ventilation appliances offer a high quality solution for domestic and light commercial applications.

- Innovative
- High quality
- Trusted
- Energy efficient
- Reliable
- Compliant
- Practical

Innovative systems that give peace of mind...

At Polypipe we continuously strive to develop new products which not only improve indoor air quality and reduce household energy usage, but also make specifying and installing ventilation systems much easier.

Designed and manufactured in the UK, our systems include a range of patented & patent pending products, specifically engineered to meet the evolving requirements of the ventilation industry and provide optimum homeowner comfort.

We like to go that step further...

Understanding your ventilation requirements is integral to ensuring that we tailor our solutions to meet your needs.

Available to support you from the enquiry stage through to project completion, we will recommend the most suitable and compliant system for your project:
- Quotations and specifications
- FREE bespoke CAD drawings
- On-site engineering assistance
- Commissioning and servicing
- On-line training resource

Why ventilate?

All dwellings need a supply of fresh outdoor air, not just for the health and comfort of the occupants, but also to remove polluted air from inside a dwelling and replace it with fresh outdoor air.

In new energy efficient houses greater levels of air tightness leads to poor indoor air quality and other, more visible impacts such as condensation damage and mould growth.

To combat these issues, we offer a range of ventilation solutions which exceed current Building Regulation requirements and are suitable for a wide variety of property types.

Experience counts for everything...

Polypipe Ventilation have proudly been specified and our systems successfully installed on a number of projects ranging from the unique, high profile and large scale through to small and complex developments. For more information please visit:

www.polypipe.com/ventilation/case-studies

CPD training

To book or enquire on our CPD courses please email vent.marketing@polypipe.com or visit www.polypipe.com/ventilation/specification

We're here to help...

If you have an enquiry and would like a quotation from your local Area Specification Manager, please call 08443 715523 or email specifyvent@polypipe.com

To download our full product selector, visit www.polypipe.com/ventilation

1 Silavent Green Line HRX2 MVHR appliance. Our centralised range also includes the HRX MVHR unit and CMX MEV unit. See pages 4-7.
3 Domus Radial manifold. See page 12.
5 Domus Thermal rigid duct insulation. See page 11.
6 Domus rigid duct. See page 10.
7 Silavent Sapphire bathroom fan. See pages 15.* The Sapphire range also includes stylish dMEV units. See page 14.
8 External roof cowl terminal. Forms part of our Domus rigid duct systems. See page 10.

*This image is for illustration purposes only and intermittent extract fans should not be operated in conjunction with a centralised mechanical extract system.
Mechanical Ventilation with Heat Recovery (MVHR)

Silavent Green Line HRX and HRX2 Units

Our MVHR range is designed to improve indoor air quality through efficiently combining supply and extract ventilation into one centralised system. When installed with Domus ducting they provide the ultimate energy saving system.

Key benefits:
- Lower household energy consumption
- Help reduce the Dwelling Emission Rate (DER) to secure additional SAP points
- Improve indoor air quality through continuous balanced ventilation
- Provide peace of mind that the units exceed Building Regulations
- Easy and quick to install, commission and maintain

Key features:
- Distinct moulded lightweight EPP casing improves thermal efficiency and maximises air flow
- Wiring centre is mounted remotely, taking away the need to dismantle the unit to install and preventing moisture from damaging the electrics
- 100% summer bypass option maintains air flow performance
- Designed for left or right installation - no need for complex duct runs

In more detail:
- Modular bypass design removes any need to dismantle the unit during installation
- Recommended duct ancillaries; either: Domus Ø125mm round or 204 x 60mm rectangular rigid duct. See page 10
- Domus Radial house pack with semi-rigid duct and HRX unit. See page 12

The HRX

In more detail:
- Extremely low Specific Fan Power down to 0.46 W/(l/s)
- Heat exchange efficiency up to 95%
- Modular bypass design removes any need to dismantle the unit during installation

Installation:
- Floor area up to 275m²
- Fits inside a utility room or loft space
- Ideal for larger developments

Recommended duct ancillaries; either:
- Domus Ø150mm round or 220 x 90mm rectangular rigid duct. See page 10
- Domus Radial house pack with semi-rigid duct and HRX2 unit. See page 12

The HRX2

In more detail:
- Low Specific Fan Power down to 0.58 W/(l/s)
- Heat exchange efficiency up to 88%
- Compact and extremely lightweight (11.5kg)
- Winner of Housebuilder’s Best Services Product of the year

Installation:
- Floor area up to 180m²
- Fits inside a kitchen cupboard or loft space

Recommended duct ancillaries; either:
- Domus Ø125mm round or 204 x 60mm rectangular rigid duct. See page 10
- Domus Radial house pack with semi-rigid duct and HRX unit. See page 12

Specifications:

- Max. Extract Volume (m³/h): 260
- Max. Pressure (Pa): 72
- Max. Power (W): 184
- Supply Frequency (Hz): 50
- Max. Sound (dB/A) at 3m: 35
- Insulation Class: 1
- Weight (kg): 20
- Dimensions (HxWxD mm): 683 x 935 x 530
- Max Operating Temperature (ºC): 40

Performance:

Max. Extract Volume (m³/h) 260
Max. Pressure (Pa) 72
Max. Power (W) 184
Supply Frequency (Hz) 50
Max. Sound (dB(A)) at 3m 35
Insulation Class 1
Weight (kg) 20
Dimensions (HxWxD mm) 683 x 935 x 530
Max Operating Temperature (ºC) 40

Technical assistance: Call 08443 715523
Email: vent.marketing@polypipe.com

www.polypipe.com/ventilation/MVHR
Warranty: 2 yrs standard
Technical assistance: Call 08443 715523
Email: vent.marketing@polypipe.com

www.polypipe.com/ventilation
Mechanical Extract Ventilation (MEV)

Silavent Green Line CMX Unit

Designed to continually extract waste air from a property, the CMX at just 125mm in depth is one of the most versatile and energy efficient MEV solutions available on the market.

Key benefits
- Improves indoor air quality through continuous ventilation
- Helps reduce the Dwelling Emission Rate (DER) to secure additional SAP points
- Provides peace of mind that the unit exceeds Building Regulation requirements
- Easy and quick to install and maintain
- Fits into joist spaces

Key features
- Exceptionally compact (125mm deep) and lightweight (3.25kg), ideal for small ceiling void depths
- Distinct EPP casing reduces noise
- Extremely low Specific Fan Power down to 0.24 W/(l/s)
- In-line ports enable straightforward duct connection
- Flexible home owner control (3 speed options)

Installation:
- Floor area up to 275m²
- Flexible installation: can be fitted horizontally or vertically:
  - Inside a kitchen cupboard or utility room
  - Direct to a ceiling or in a loft space
  - Within a joist space

Recommended duct ancillaries:
- Domus CMX air supply kit with filter (CMX-ASK1). Brown (B) and white (W) versions available

Either:
- Domus 220 x 90mm rectangular or Ø150mm round rigid duct system. See page 10
- Domus Radial house pack with semi-rigid duct and CMX unit. See page 12

Specification documents available at www.polypipe.com/ventilation/specification

Specification 230V

<table>
<thead>
<tr>
<th>Application</th>
<th>SFP W/(l/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchen &amp; 1 wet room</td>
<td>0.24</td>
</tr>
<tr>
<td>Kitchen &amp; 2 wet rooms</td>
<td>0.25</td>
</tr>
<tr>
<td>Kitchen &amp; 3 wet rooms</td>
<td>0.29</td>
</tr>
<tr>
<td>Kitchen &amp; 4 wet rooms</td>
<td>0.35</td>
</tr>
<tr>
<td>Kitchen &amp; 5 wet rooms</td>
<td>0.43</td>
</tr>
<tr>
<td>Kitchen &amp; 6 wet rooms</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Performance

- Domus CMX air supply kit provides effective background ventilation

Technical assistance: Call 08443 715523
Email: vent.marketing@polypipe.com

www.polypipe.com/ventilation/MEV
Warranty: 2 yrs standard
Technical assistance: Call 08443 715523
Email: vent.marketing@polypipe.com

www.polypipe.com/ventilation
www.polypipe.com/ventilation

Silavent
EXTRACTS WASTE
A IR
PREMIUM
PATENT PENDING
MANUFACTURED IN THE UK

High airflow performance up to 120l/s

ONLY
125mm
DEEP

High Efficiency Green Line Rigid Duct Bends

Engineered to significantly reduce duct resistance, lower system noise and overall energy usage.

Why they are needed

Due to the profile of a duct bend, air travelling through it can become turbulent, causing increased resistance and system noise. As a consequence, the mechanical extract appliance will need to work harder in order to meet the required air flow rates; therefore consuming more energy.

Domus Green Line high efficiency 90° duct bends have been specifically designed to enable a uniform flow of air through the section of duct, reducing the duct bend resistance by up to 60% and lowering the air speed. All of which results in a quieter and more efficient ventilation system.

Key features

• Smoothly channels air through the duct bend in a uniform flow
• Performance has been tested by the Building Research Establishment (BRE)

Key benefits

• Significantly reduces duct resistance by up to 60% for improved air flow and overall energy usage
• Reduces air speed through the bend to lower system noise

Range

To support the most popular rectangular rigid duct profiles, NEW Domus Green Line bends are available to install with 204x60mm (550-GL) and 220x90mm (950-GL) ducting.

Rigid Duct Plenum with Flow Control Device

Innovatively designed to include an integral flow control device; allowing connection to a range of stylish grilles.

Why is it needed

When installing a centralised mechanical extract system into a dwelling, the air flow rates will need to be balanced and commissioned at the internal terminals, to ensure the correct rates are achieved.

An integral flow control device allows the required air flow rates to be easily set and an architectural grille directly fitted to the plenum - regardless of the installation stage.

Key features

• Allows connection to architectural grilles – no air valves necessary
• Adjusting the air terminal for commissioning is quick and easy
• Enables commissioning to be carried out prior to fixing the ceiling boards

Key benefits

• Integral flow control device cannot be easily tampered with, thereby reducing the likelihood of negatively impacting system performance and indoor air quality
• Commissioning rates can be tested prior to ceilings being fixed; enabling peace of mind that the required air flow rates will be achieved (if fitted correctly) and less risk of costly remedial work
• Ability to integrate stylish grilles to fit interior design scheme

To help adjust the integral flow control device for commissioning and balancing, we also offer a Flow Control Adjustment Kit – code FCAK1.

Specifications documents available at www.polypipe.com/ventilation/specification

Pressure loss figures also available at www.polypipe.com/ventilation/pressureloss

www.polypipe.com/ventilation/pressureloss
Rigid Duct Systems

Supported by insulation, sound attenuation and fire stopping products.

Our market leading Domus duct systems help customers to achieve the highest possible efficiency from Silavent mechanical extract appliances. The range is manufactured to exacting tolerances, which virtually eliminates air leakage and minimises the pressure drop associated with ducting and consequently, system energy consumption.

Duct profiles

- Domus circular duct:
  - Ø100mm - EasiPipe 100
  - Ø125mm - EasiPipe 125
  - Ø150mm - EasiPipe 150

- Domus rectangular duct:
  - 110mm x 54mm - System 100
  - 204mm x 60mm - Supertube
  - 220mm x 90mm - Megaduct
  - 234mm x 29mm - PV Low Profile 225
  - 308mm x 29mm - PV Low Profile 300

Domus Microban Protected Silencers

Significantly reduce noise transmitted from centralised appliances and ‘cross talk’ travelling between rooms in duct systems.

Key features

- Excellent sound attenuation properties as verified by the Sound Research Laboratories (SRL)

Key benefits

- Help achieve Building Regulation recommendations

See Domus FireBrake in action at www.polypipe.com/ventilation/firebrake-video

Specification documents available at www.polypipe.com/ventilation/specification

Pressure loss figures available at www.polypipe.com/ventilation/rigidduct

Domus FireBrake

Domus FireBrake fire-stopping connectors are also available for each profile. FireBrake meets NHBC requirements and provides up to 2 hours of fire protection.

Key features

- Complies with Approved Document B of the Building Regulations
- Tested to BS476/EN 1366-3
- Acts as a connector between ducting and compartment wall

See Domus FireBrake in action at www.polypipe.com/ventilation/firebrake-video

Specification documents available at www.polypipe.com/ventilation/specification

NHBC guidelines have changed.
All duct insulation must have a specific thermal value.

Rigid Duct Insulation

As an integral part of Domus rigid duct systems, Domus Thermal is a unique and patented duct insulation system, designed specifically to radically improve the thermal insulation of rigid ducting in domestic properties.

Why Domus Thermal?

- Complies with 2010 Building Regulations and NHBC requirements*
- LABC registered
- Reduces heat loss and virtually eliminates the formation of condensation
- Insulates ducting passing through cold spaces and in the heated area of a dwelling
- Insulates both the exhaust and intake ducts into the MVHR unit
- An installer-friendly solution which can be fitted quickly and reliably without the need for gluing or tapping

Why is it needed? Quicker to install

Changes to current Building Regulations require that greater provision needs to be made for insulating ducting in domestic properties.

Building Regulations demand:

- Min. thermal conductivity at 25mm insulation thickness.
  - ≤ 0.04 W/(m.K)
  - Maximum thermal resistance or R-value = 0.025/0.04 = 0.625 K/W.

Domus Thermal provides:

- ≤ 0.03 W/(m.K) thermal conductivity at 20mm insulation thickness.
  - Thermal resistance or R-value = 0.020/0.03 = 0.666 K/W.

Currently, compliant solutions are more labour intensive and require higher skill levels to install. Domus Thermal’s simple interlocking feature means that the system is quicker and easier to install. This revolutionary method can therefore significantly reduce installation costs.

The Silver EPS used to manufacture Domus Thermal provides a significantly improved thermal conductivity value due to the inclusion of carbon particles, which gives Domus Thermal its distinctive silver colour.
Radial Duct Systems

Our next generation of Domus Radial semi-rigid duct systems provide simple, quick and hassle free design and installation which saves time and money, whilst maximising in-situ performance.

What is different about Domus Radial?

- Suitable for multi-floor, single floor and apartment configurations
- **NEW** slimline manifold (12,5mm deep) enables easy installation between joists or in tight spaces
- Compact manifold size also allows for greater location flexibility
- **NEW** innovative outlet plenum with optional twin connection for increased air flow and lower energy usage
- Optional integral flow control device allows the outlet plenum to be connected directly to a stylish architectural grille – no air valve necessary
- Can integrate with Domus rigid duct systems to create versatile hybrid solutions
- Rapid fixing mechanism enables secure and air-tight connection with no leakages
- Corrugated construction and the unique formulation of semi-rigid duct resists stress cracking and on-site damage
- Fire-stopping and insulation components also available

Tested by the Building Research Establishment (BRE) for inclusion within the Product Characteristics Database, Domus Radial offers performance levels that not only are the equivalent to traditional rigid ducting in smaller builds but also exceed these levels in properties with four or more wet rooms.

<table>
<thead>
<tr>
<th>Key benefits</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simplified design layout makes the system ideal for new and refurbishment projects</td>
<td>Architectural Grilles</td>
</tr>
<tr>
<td>Increased air capacity for reduced air noise, lower duct losses and improved appliance efficiency</td>
<td>FireBrake</td>
</tr>
<tr>
<td>Ability to integrate stylish architectural grilles, to fit interior design scheme</td>
<td>Fire-Stopping Sleeve</td>
</tr>
<tr>
<td>Eliminates room-to-room cross talk, for a quieter home</td>
<td>Semi-Rigid Duct Insulation</td>
</tr>
<tr>
<td>Reduces installation time by up to 60%, thereby lowering project costs</td>
<td>Mix and match grille options to suit internal decor</td>
</tr>
</tbody>
</table>

Mix and match grille options to suit internal decor

Domus Radial is available as pre-selected house packs as well as individual parts. Download our full product selector for more information at [www.polypipe.com/ventilation](http://www.polypipe.com/ventilation)

Specification documents available at [www.polypipe.com/ventilation/specification](http://www.polypipe.com/ventilation/specification)

Pressure loss figures available at [www.polypipe.com/ventilation/radial](http://www.polypipe.com/ventilation/radial)

**Radial configuration options**
Decentralised Mechanical Extract Ventilation (dMEV)

Silavent Sapphire dMEV Units

Our highly efficient Silavent Sapphire dMEV range offers continuous low level ventilation – to a single wet room, coupled with virtually silent operation.

How it works

Decentralised Mechanical Extract Ventilation (dMEV) systems incorporate continuously running extract fans, designed to remove waste and moist air from a single wet room. dMEV fans continuously extract the waste air at both low trickle or boost speeds, as determined by the homeowner through a range of control options. Replacement fresh air is then drawn into the dwelling via background ventilators located in the habitable rooms.

Sapphire dMEV Range

Stylishly designed to discretely complement modern interior design schemes, our NEW dMEV Sapphire range offers exceptionally high levels of energy efficient performance and operates almost silently, ensuring homeowners are not disturbed whilst maintaining continuous and effective balanced ventilation.

As an added benefit to specifiers and developers, incorporating a dMEV system will also lower a property’s Dwelling Emission Rate (DER) and therefore provide a higher SAP rating.

100mm Energy Efficient Axial

**SAPPHIRE RANGE**

**GREEN LINE PRODUCTS**

- Provides very quiet levels of continuous ventilation to a single wet room, down to 12 dB(A)
- Comply with current Building Regulation requirements
- Stylish fascia to fit interior design scheme
- Extremely low SFP down to 0.19 W/(l/s)
- Ability to interchange fascia options

Axial dMEV Accessories

- 1K Wall Fitting Kit
- TFF100-CF1BM Fascia, Curved, Brushed Metal Finish, 210x190mm
- TFF100-CF1S Fascia, Curved, Silver Finish, 210x190mm
- TFF100-CF1W Fascia, Curved, Gloss White Finish, 210x190mm
- TFF100-DT1W Fascia, Circular Indent, Gloss White Finish, 200x200mm
- TFF100-DT1S Fascia, Circular Indent, Silver Finish, 200x200mm

Specification documents available at www.polypipe.com/ventilation/specification

- www.polypipe.com/ventilation/dmev
- Warranty: 2 yrs standard
- Technical assistance: Call 08443 715523
- Email: vent.marketing@polypipe.com

100mm Energy Efficient Centrifugal

**SAPPHIRE RANGE**

**GREEN LINE PRODUCTS**

- Provides very quiet levels of continuous ventilation to a single wet room, down to 16 dB(A)
- Comply with current Building Regulation requirements
- Stylish fascia to fit interior design scheme
- Extremely low SFP down to 0.29 W/(l/s)

150mm Energy Efficient Axial

**SAPPHIRE RANGE**

**GREEN LINE PRODUCTS**

- Ideal for longer duct runs
- Extract up to 19l/s (230V)
- Comply with current Building Regulation requirements
- Provides effective ventilation

100mm Energy Efficient In-Line Axial

**SAPPHIRE RANGE**

**GREEN LINE PRODUCTS**

- Ideal for shower applications
- Extract up to 23l/s (230V)
- Comply with current Building Regulation requirements
- Provides effective ventilation

Mix and match stylish axial fascia options to suit the interior design scheme!

Intermittent Extract Fans

Silavent Sapphire Fans

Our quiet range of stylish Silavent Sapphire bathroom and kitchen fans provides rapid local extraction and includes axial, centrifugal and in-line options.

How it works

Intermittent extract is a classic method of ventilating a home, either under occupant or automatic control.

Sapphire Intermittent Fan Range

- Stylish modern design to suit internal décor
- Very quiet performance levels
- Include energy efficient models that reduce carbon emissions and comply with latest Building Regulations
- Ability to interchange or mix and match 100mm axial fascia options for discreet integration

100mm Axial

**SAPPHIRE RANGE**

**GREEN LINE PRODUCTS**

- Quiet in operation down to 32 dB(A)
- Stylish fascia to fit interior design scheme
- Ability to mix and match fascia options
- Extract up to 23l/s (230V)
- Ideal for short duct runs

Energy Efficient Standard

**GREEN LINE PRODUCTS**

- Comply with current Building Regulation requirements
- Offer a low SFP down to 0.22 W/(l/s)
- Reduce carbon emissions

150mm Axial

**SAPPHIRE RANGE**

**GREEN LINE PRODUCTS**

- Quiet in operation down to 38 dB(A)
- Stylish fascia to fit interior design scheme
- Extract up to 19l/s (230V)
- Ideal for longer duct runs

Energy Efficient Standard

**GREEN LINE PRODUCTS**

- Comply with current Building Regulation requirements
- Offer a low SFP down to 0.39 W/(l/s)
- Reduce carbon emissions

100mm Centrifugal

**SAPPHIRE RANGE**

**GREEN LINE PRODUCTS**

- Quiet in operation down to 38 dB(A)
- Stylish fascia to fit interior design scheme
- Extract up to 19l/s (230V)
- Ideal for shorter duct runs

Energy Efficient Standard

**GREEN LINE PRODUCTS**

- Comply with current Building Regulation requirements
- Offer a low SFP down to 0.22 W/(l/s)
- Reduce carbon emissions

100mm Axial Fascia Options

- TF100-CF1W Fascia, Curved, Gloss White Finish, 210x190mm
- TF100-CF1S Fascia, Curved, Silver Finish, 210x190mm
- TF100-CF1BM Fascia, Curved, Brushed Metal Finish, 210x190mm
- TF100-DT1W Fascia, Circular Indent, Gloss White Finish, 200x200mm
- TF100-DT1S Fascia, Circular Indent, Silver Finish, 200x200mm

Very quiet ventilation combined with style and efficiency!