

INSTALLATION GUIDE

# ISODRIVE MOTOR

**S1** - 650m<sup>3</sup>/hr

**schweigen**

[www.schweigen.co.nz](http://www.schweigen.co.nz)

**Thank you for purchasing your new Schweigen Isodrive system.**

To get the maximum output from this unit, please read through this guide before use and installation.

This guide contains important information on the correct use and maintenance of the unit, as well as important safety notes. This will ensure your personal safety and the lasting value of your Isodrive system.

Please always retain your proof of purchase to aid in any warranty queries.

This appliance and its packaging are produced by processes that minimise waste and respect the environment.

Please help us to continue this effort to protect the environment by using the appliance efficiently and dispose of the packaging in a responsible manner.

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### RECEIVING YOUR RANGEHOOD

Please read this section thoroughly before attempting to operate the appliance. Inspect your product upon receipt. **Any damage or defects MUST be reported within 48 hours, or no claim will be recognised.**

#### **DO NOT INSTALL THIS APPLIANCE IF YOU FIND IT DAMAGED.**

If this product is installed damaged, the supplier, nor the retailer, will be responsible for the costs associated with the repair, replacement, removal or re-installation of the appliances.

This appliance is not intended for use by person/s (including children) with reduced physical, sensory or mental capabilities, or lack of experience and/or knowledge. Unless the person has been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance, it is not a toy.

### Before Installation

We recommend this appliance to be installed or repaired by a qualified Schweigen Home Appliances technician. Please see our website **[www.schweigen.co.nz](http://www.schweigen.co.nz)** for recommended installers.

It is dangerous to modify any part of this appliance. Modification of any kind, will immediately void the warranty.

Do not install Isodrive motor to a non-Schweigen and/or non-silent rangehood. If you fail to do so, your warranty will be voided.

The manufacturer declines all responsibility in case of failure to adopt proper safety measures.

Ensure that the location in which this appliance is installed, has good and permanent ventilation.

Please consult local laws and regulations and install in accordance.

Use an electrical connector with earth that is correct for your location.

Check that the voltage in your area corresponds to the appliance as indicated on the rating label.

### Electrical Cord

Ensure the supply cord is not exposed to heat, chemicals or sharp objects. If the supply cord is damaged, it must be replaced by the manufacturer, service agent or a similarly qualified person in order to avoid a hazard. The power supply cord connection **MUST BE** installed in such a way that access is easy in case of emergency.

This guide is for the installation of the motor used in the Isodrive systems after the canopy/rangehood or bathroom extraction grill has been mounted on the wall or ceiling. (Refer to canopy/rangehood or bathroom extraction unit installation manual).

**NOTE:** All PVC pipe and flexi ducting measurements are referring to inside measurements, unless otherwise mentioned.

### Motor Features

- Universal mounting, all position with IPX4 degree of weather protection
- Patented anti water intrusion system.
- Acoustic dome with super quiet, long vane, backward curved centrifugal fan.
- Airflow is dependant on installation and the ducting used.
- Using a single 150mm flexi duct run you should attain 650m<sup>3</sup>/hr depending on the ducting installation.
- The use of a smaller 125 pipe would result in a loss of airflow.
- Simple installation: - Mounts onto a 110mm (OSD) PVC pipe for ultimate strength and allows for easy Dektite roof sealing.
- Industrial quality motor and fan made in Germany and rated at 40,000 hours.
- Motor is a high efficiency PSC type and rated at 62W, costing around the same as a 60W light globe to run.
- WARRANTY 10 YEARS return to manufacturer. Covers faulty manufacturing or components. It does not cover normal wear and tear, chemical or storm damage, etc.

### General Notes on Installation and Use

This fan unit is designed to be installed using 110mm (OSD) PVC pipe as the initial connection duct to the fan module, and is supplied with a 110mm (OSD) PVC pipe to 150mm flexible duct bell-mouth adaptor.

This fan is suitable for connection to multiple duct runs with a minimum inlet area of 11000 mm<sup>2</sup>. Ducting runs should be more than 2 metres away from the unit and no more than 4 - 5 metres (check with supplier if longer duct length required). Flexible ducting must be extended sufficiently to present a smooth air passage with bends of at least the radius of twice the diameter of the duct.

**WARNING:** The Isodrive motor system must not be ducted into a wall cavity or a ceiling space, where a build up of grease can occur and become a potential fire risk. This will void your warranty.

**NOTE:** Fan module and dual foil flexi-duct are acoustically matched. Use of semi-rigid or rigid ducting will result in increased noise and void warranty. See installation instruction notes 'Why flexi-duct'.

### Recommended Installation Distance

For Isodrive 650 motor, a minimum of **3 metres (approx.)** is recommended.

**NOTE:** Installation closer than these distances may result in higher air noise level. Maximum duct length 4 - 5 metres. Check with supplier if longer length is required. Do not reduce the duct size at any time and avoid sharp bends.

## 2. Your Safety

### Minimum Mounting Height

This fan unit is intended for mounting at a minimum height of 2.1 metres (measured to the lower part of the fan impeller) above a floor or the ground.

### Avoidance of Back Flow

Care should be taken to avoid the back flow of gases into the room from the open flue of gas or other open fire appliances.

### Safety of Children

This fan is not intended for use by young children or infirm persons without supervision.

### Replacement of supply cord

If the supply cord is damaged, it must be replaced by a service agent or suitably qualified person in order to avoid a hazard.

### Why Flexi-duct

**Some internet sites strongly recommend the use of rigid ducting over fully flexible ducting. This may well be the case with conventional rangehoods with internal motor rangehood.**

Schweigen's unique Isodrive system works in the opposite way to conventional rangehoods, pulling air through the hood and acoustically matched ducting producing almost silent high volume flow. The use of a complete rigid or semi-rigid ducting system will allow an organ piping effect to occur; like a didgeridoo where a noise is produced at one end of a hollow rigid pipe and the noise is amplified out the other.

The Isodrive system puts the noise outside the house and it needs to be kept there.

Warning: Installation without the use of at least the minimum recommended length of acoustically matched flexi-ducting in the system will void performance expectations. Any installation problem must be reported to Schweigen. Call outs relating to incorrect installation will result in a service fee direct to the customer. Schweigen takes no responsibility for problems caused by faulty installation and may void warranty. A preferred installer list can be obtained from Schweigen website **[www.schweigen.co.nz](http://www.schweigen.co.nz)** or call **0800 200 510**.

## Isodrive Motor

### Included in the box:

1. Isodrive 650 motor (280W x 200H mm approx.)  
Approx. 3 metre, 10amp cable and standard male plug
2. Fire resistant 110mm (OSD) PVC riser pipe Note: Cable cut-out at the bottom end only
3. Flexible ducting  
Approx. 4 metres, 150mm (160mm OD<sup>1</sup>) diameter
4. Bell-mouth adaptor ring  
150mm duct to 100mm riser

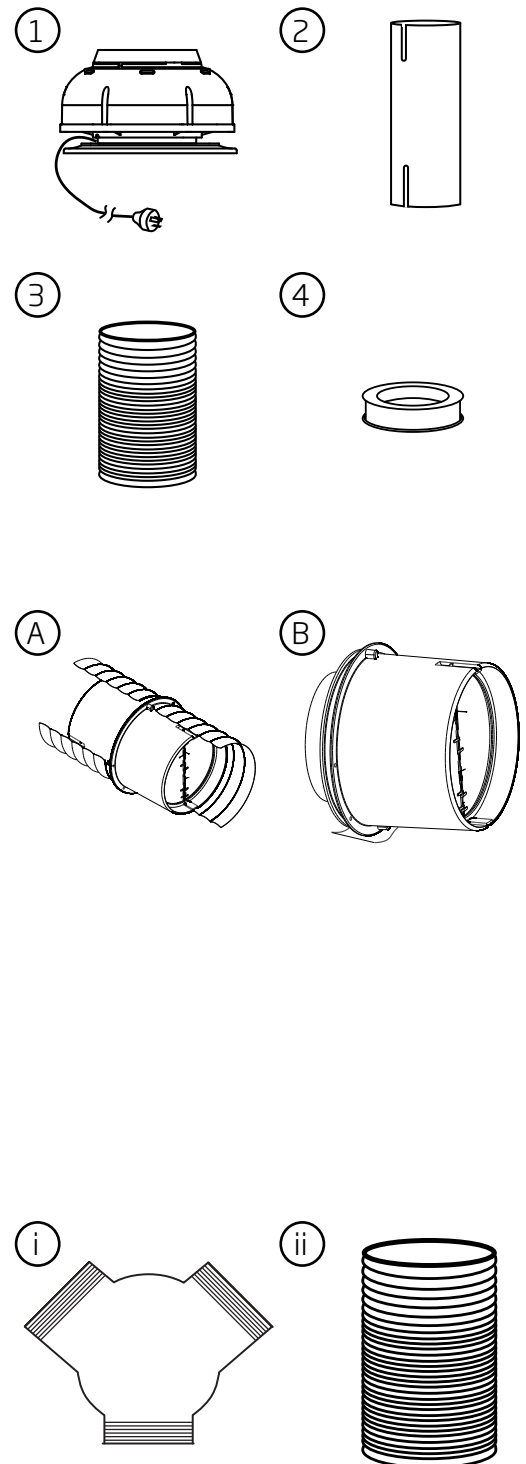
### Not included in the box:

- A. (Optional) Back draft shutter for 150mm ducting  
Refer to page 13 for more information.
  - B. (Optional) Back draft shutter fitment to bell mouth adaptor Refer to page 14 for more information.
- Roof seal kit / Dektite
  - Support straps for poly pipe which connects to the roof truss
  - Gaffer tape / electrical tape
  - Zip ties

### Additional S2 kit for twin 650 Isodrive motor:

- i. One 150mm x 150mm x 200mm Y joint
- ii. Flexible ducting  
Approx. 3 metre, 200mm (210mm OD<sup>1</sup>) diameter

<sup>1</sup> OD refers to outside dimension.



## 4. Installation

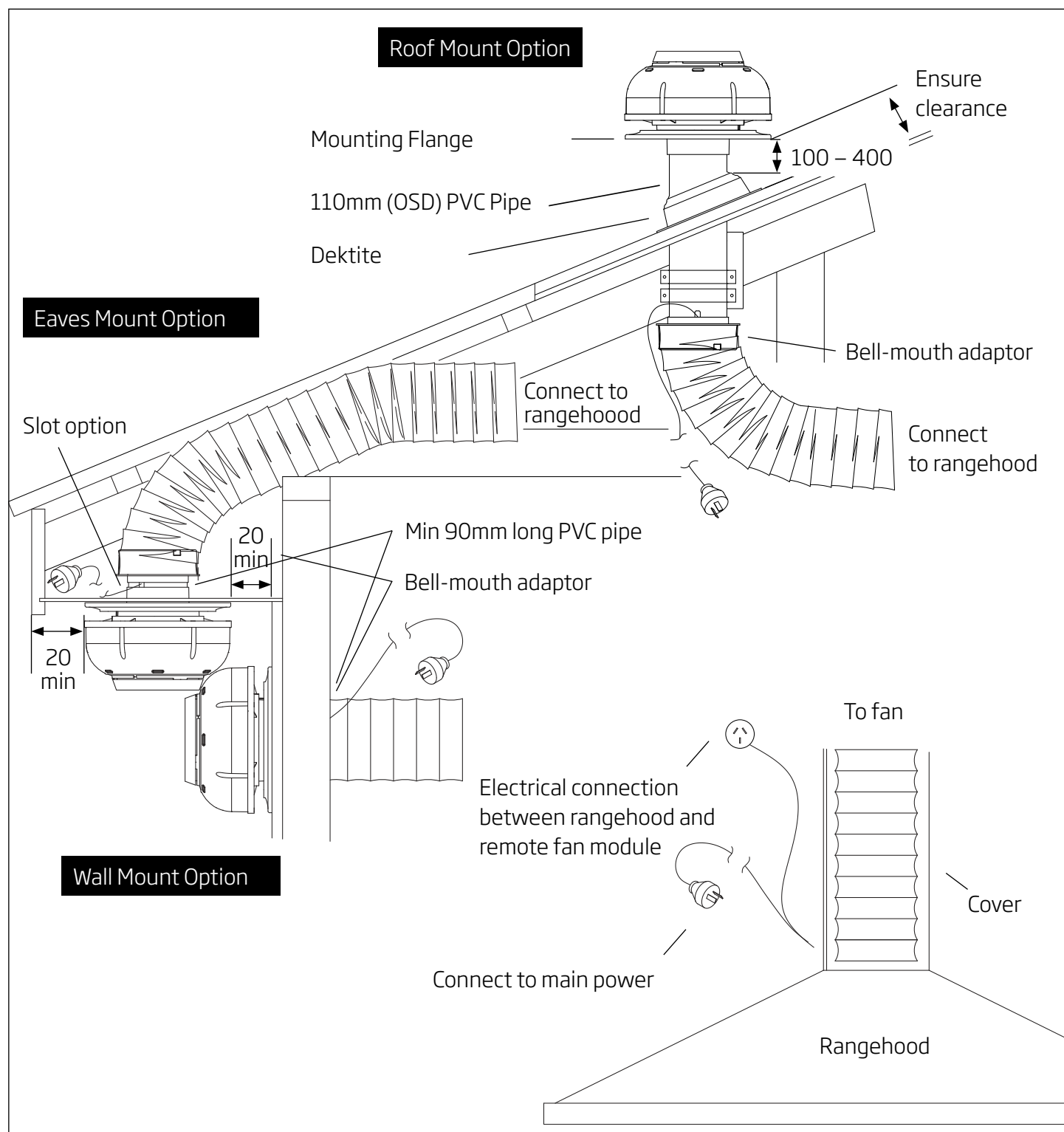


Figure 1 The three options for mounting the unit.



### IMPORANT

For more flexible ducting instructions, refer page 19.



## Roof Installation (Recommended duct length: 3 metre)

Mount the 110mm (OSD) mm rigid PVC pipe securely to the beams, trusses or other appropriate structures, refer figure 1.

The pipe should be mounted either vertical or perpendicular to the roof cladding with the roof penetration being sealed using a Dektite or other sealing device.

Ensure that the pipe protrudes a minimum of **80mm past the top of the Dektite**, checking that the mounting flange clears the roof cladding at upper edge as shown in figure 1 – Roof Mount Option.

Maximum recommended protrusion is 400mm. Fit mounting flange, refer figure 2, to pipe using silicon sealant, then tape in position until sealant has set.

Pass power cord and plug through mounting flange and pipe, then out the slotted end of the PVC pipe for connection to the female plug coming from the canopy/rangehood or authorized switching mechanism in bathroom application, refer figure 2.

Fit fan module to mounting flange by placing in position, rotating clockwise to engage bayonet fingers then secure by screwing in locking screw (while holding fan module firmly in the fully clockwise position), refer figure 2.

### Roof Installation

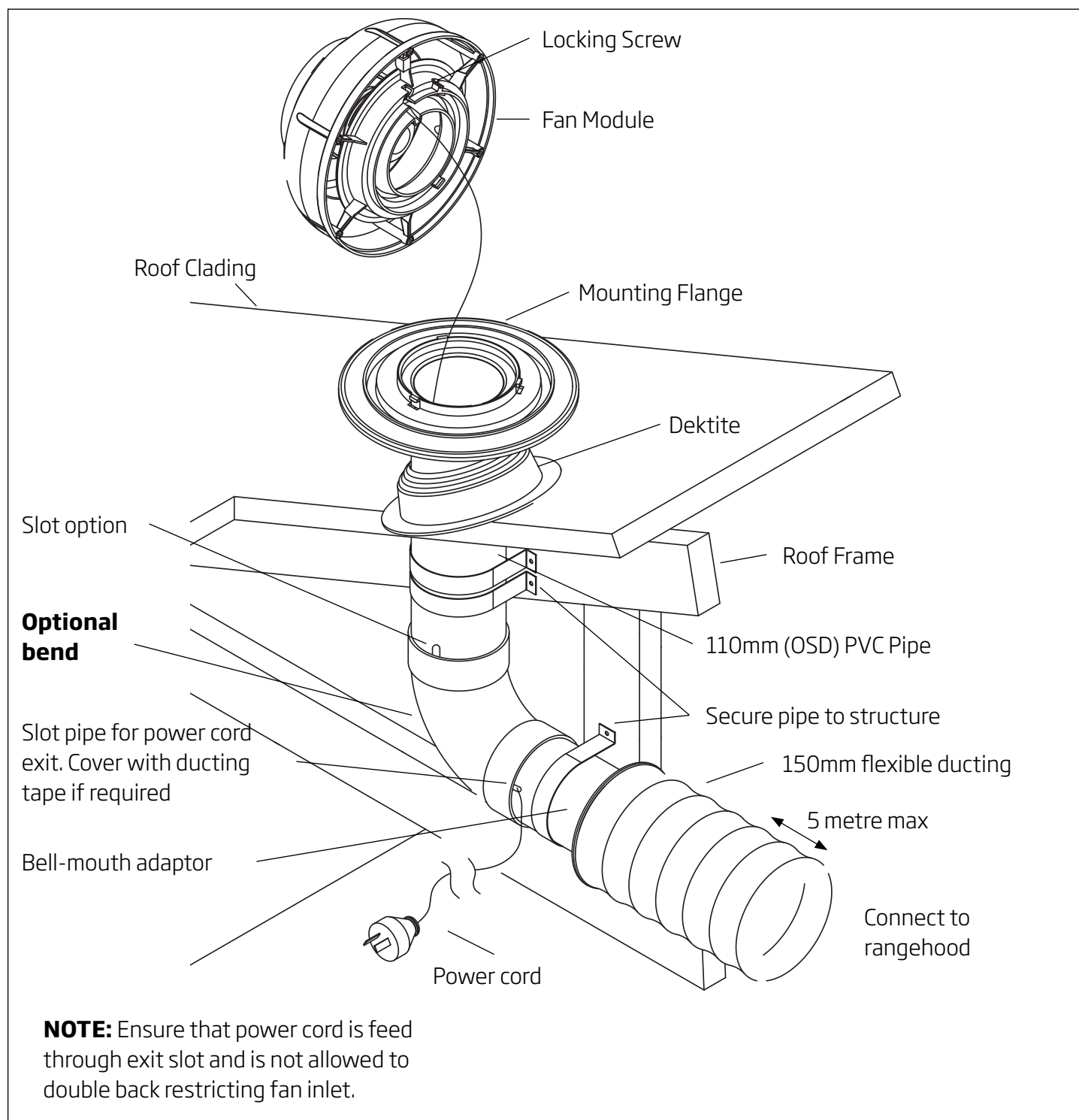


Figure 2



#### IMPORTANT

For more flexible ducting instructions, refer page 19.

## Eaves Installation

After ensuring sufficient clearance exists for the mounting flange and ducting, refer figure 1, cut a circular hole 165mm Ø, maintaining adequate clearances. The eaves sheeting should be reinforced.

Pre-drill mounting flange recess. Refer figure 3.

If access to the eaves space is restricted, before fixing mounting flange to eaves, preassemble mounting flange, PVC pipe, bell-mouth adaptor and flexi-duct then feed up into roof space. Remember to run power cord through the assembly and out the slotted PVC pipe wall, refer figure 3.

Fit fan module to mounting flange by placing in position, rotating clockwise to engage bayonet fingers then secure by screwing in locking screw (while holding fan module firmly in the fully clockwise position).

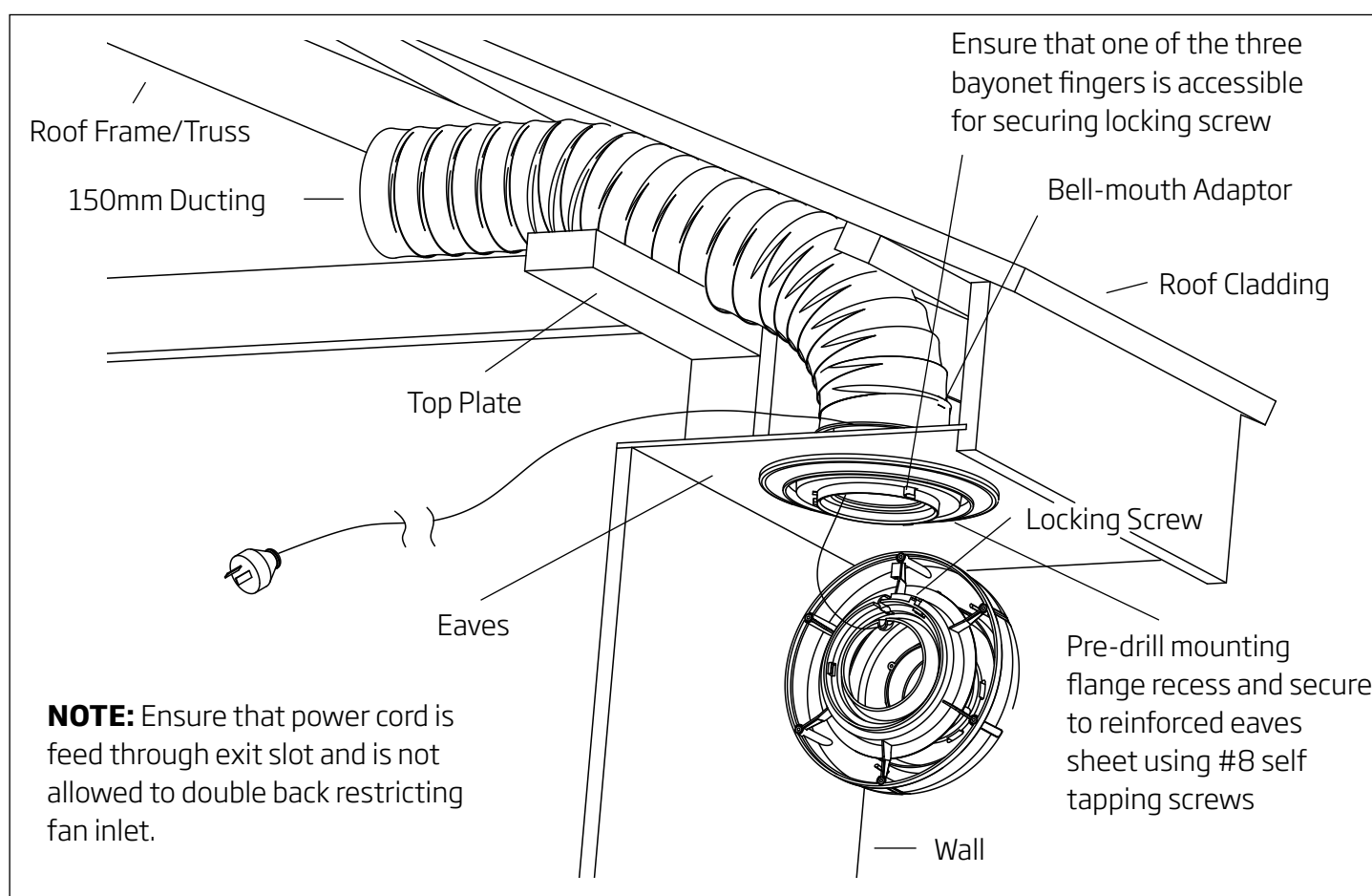


Figure 3



### IMPORANT

For more flexible ducting instructions, refer page 19.

## 4. Installation

### Wall Installation

The installation should be similar to eaves mounting if access to the inside is limited, but if unrestricted. Refer to EAVES INSTALLATION and figure 4.

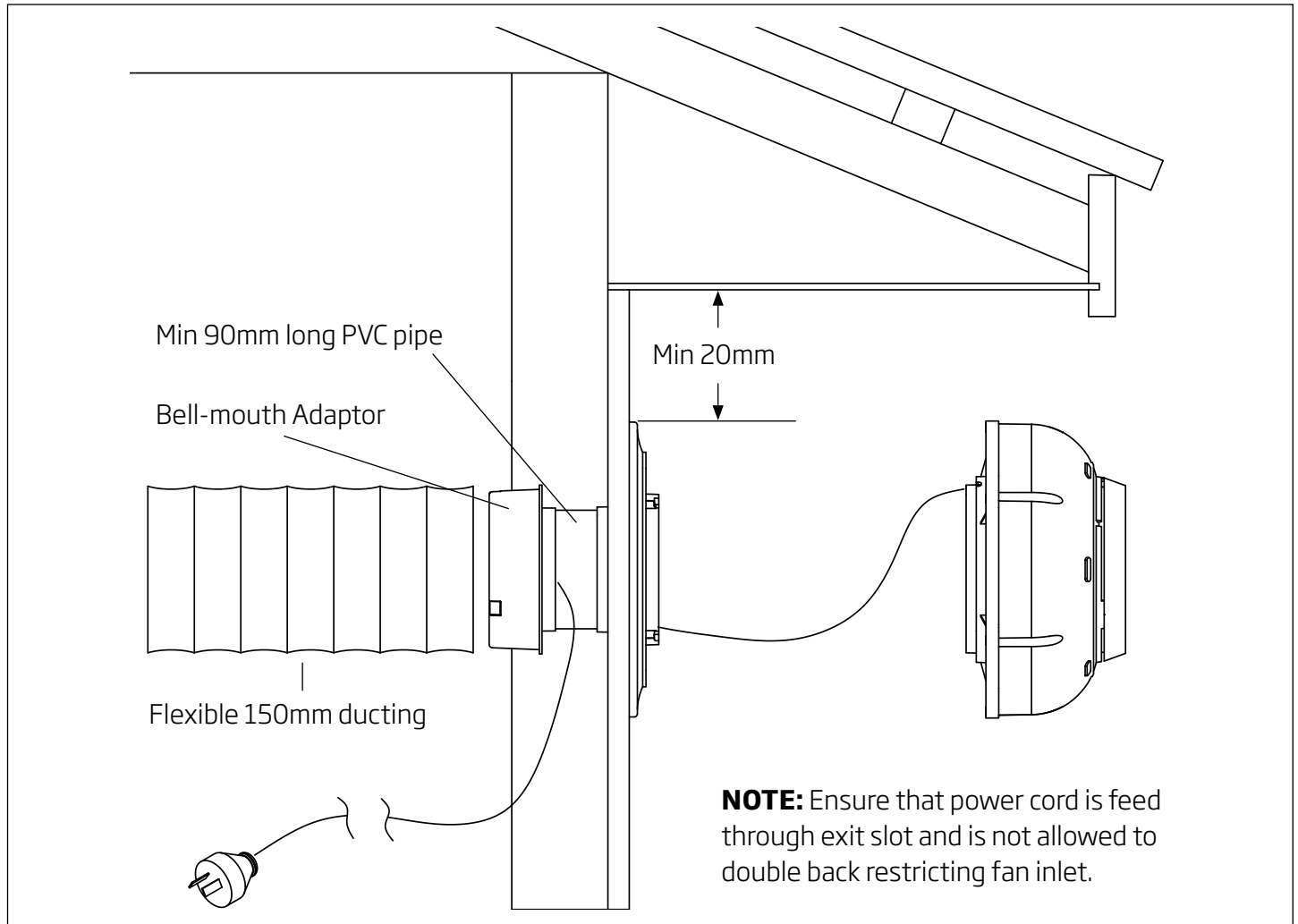


Figure 4



### IMPORANT

For more flexible ducting instructions, refer page 19.

### Back Draft Shutter System for 150mm Ducting

This back draft shutter suitable for Isodrive 650 motor only.

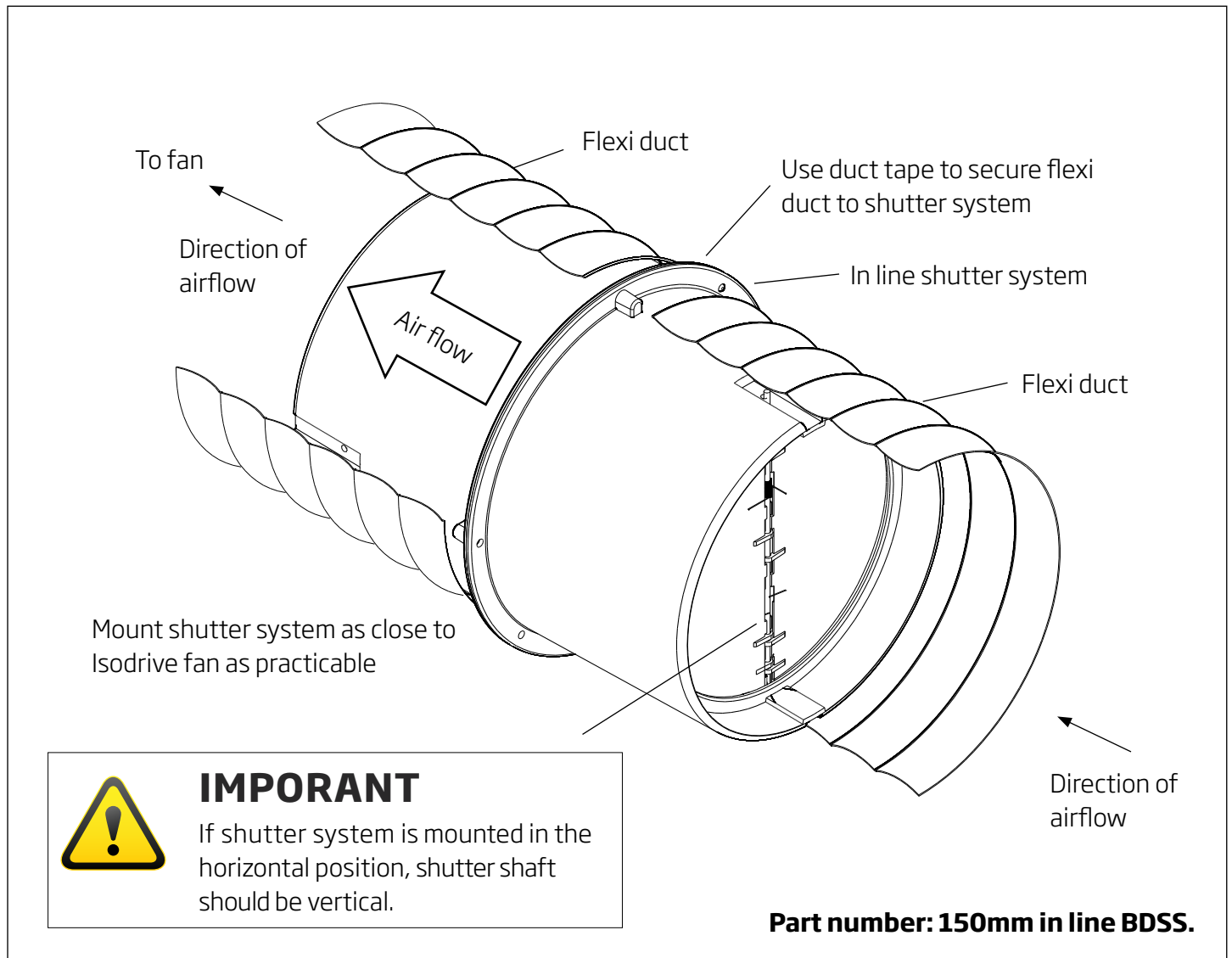


Figure 5

## 5. Back Draft Shutter System

### Installation Example for Back Draft Shutter System (150mm Ducting, refer to figure 5)

This back draft shutter suitable for Isodrive 650 motor only.

#### Vertical Installation

Figure 6 shows an example of vertical installation. If space is allowed, it could be installed near the rangehood outlet.

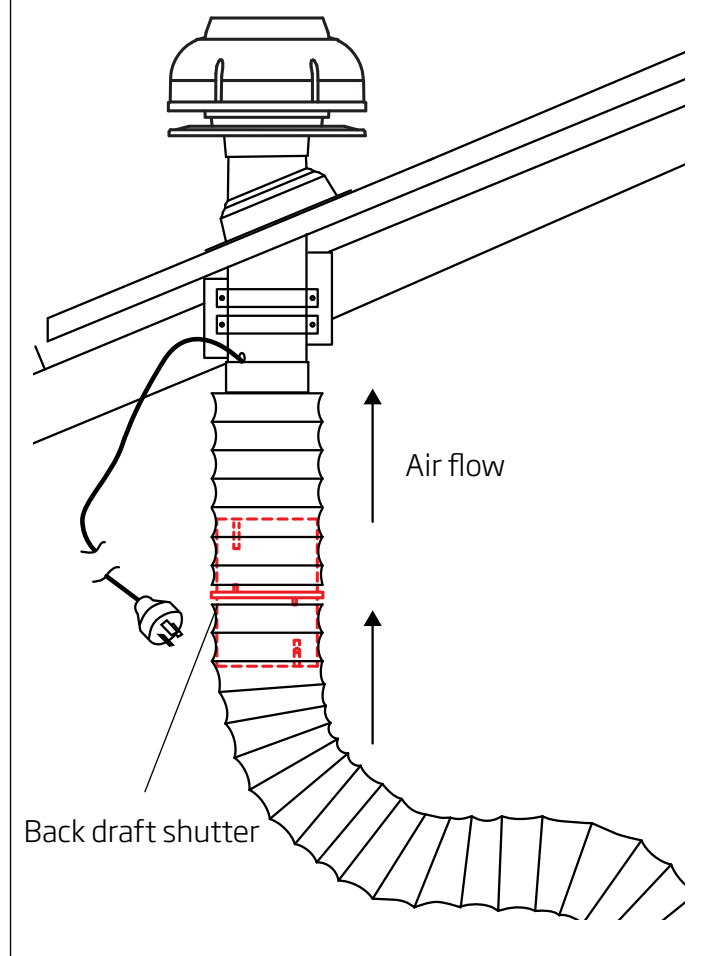


Figure 6

#### Horizontal Installation

If you have a narrow roof space, you can install the back draft shutter horizontally, refer to figure 7.

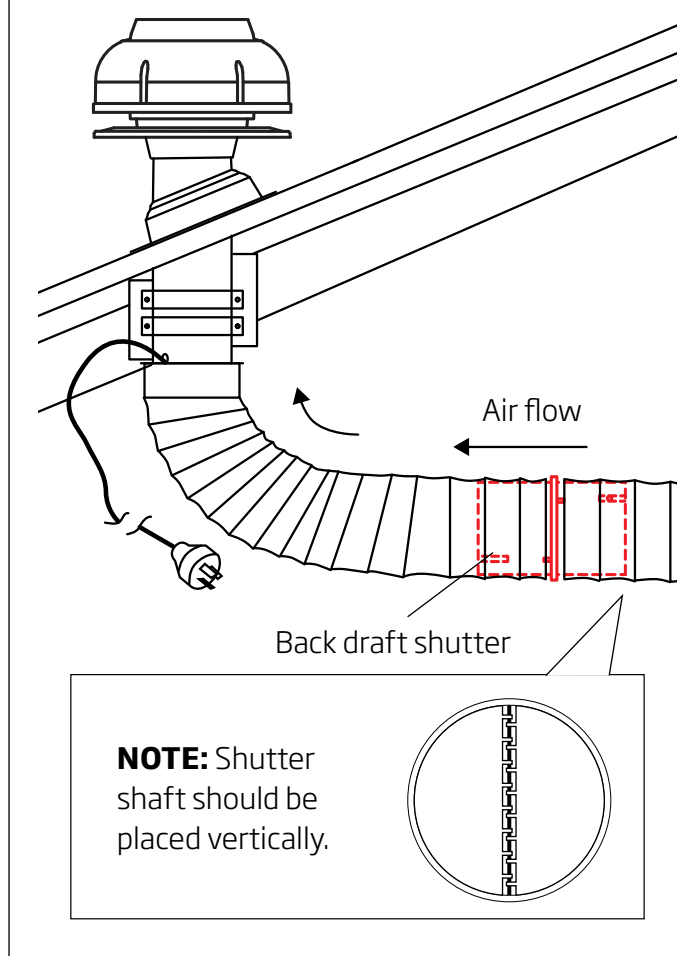


Figure 7

### Back Draft Shutter System Fitment to Bell-mouth Adaptor

This back draft shutter suitable for Isodrive 650 motor only. This back draft shutter system cannot be installed in eave type installation.

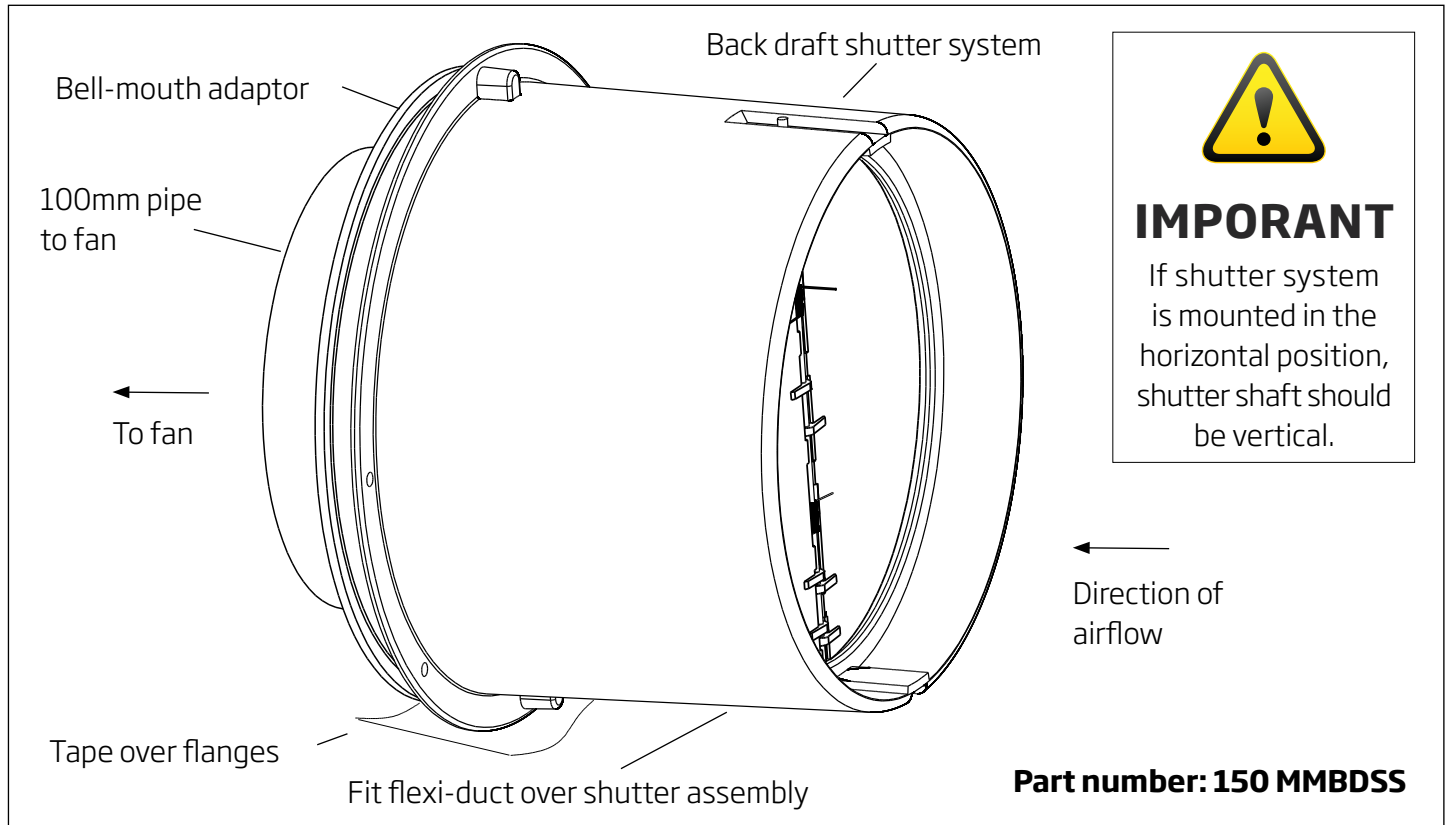


Figure 8

#### Vertical Installation

Figure 9 shows an example of vertical installation.

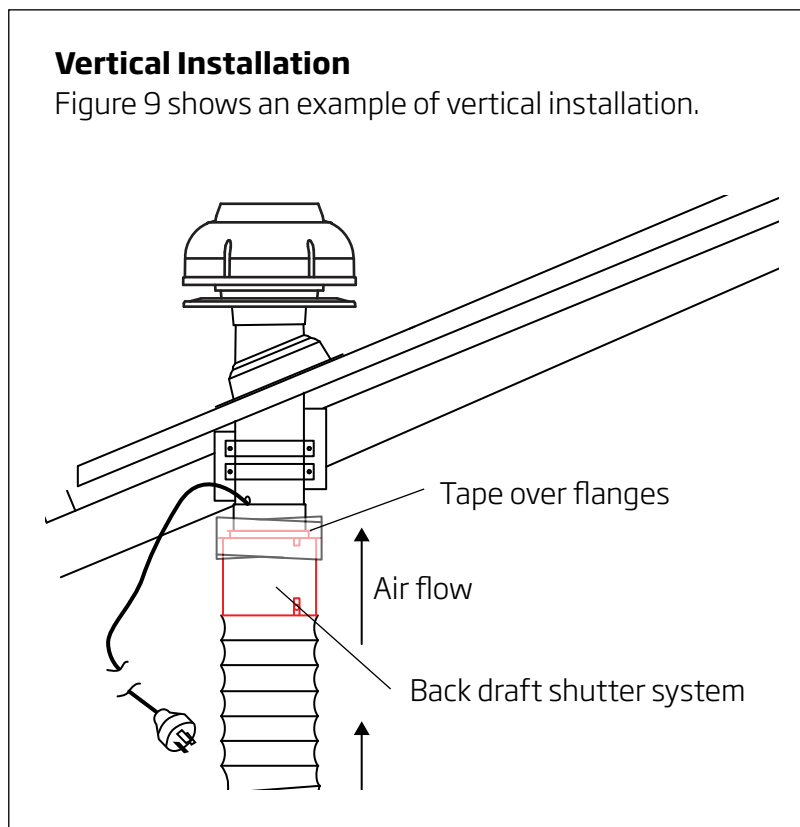


Figure 9

## 6. Installation Examples

### Single Motor Installation Example

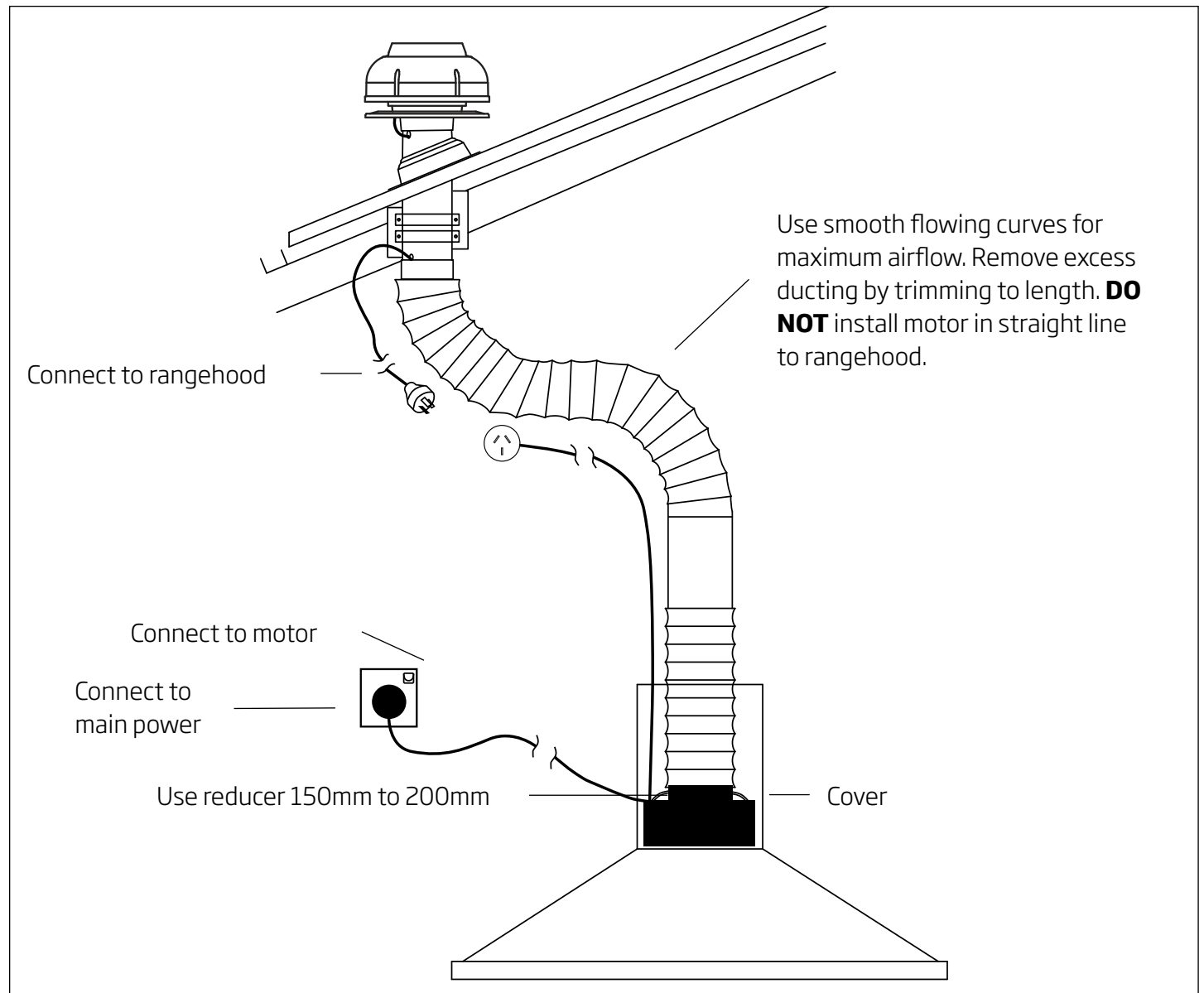


Figure 10



## Twin Motor Installation Example

Where two motors are to be used, follow the below methods for each motor then join into the "Y" piece prior to joining ducting to the canopy / rangehood. Refer figure 11.

The two motors can be wired by one of the following methods:

- Wired into one plug by an electrician
- A double adaptor plugged into the lead from the canopy / rangehood

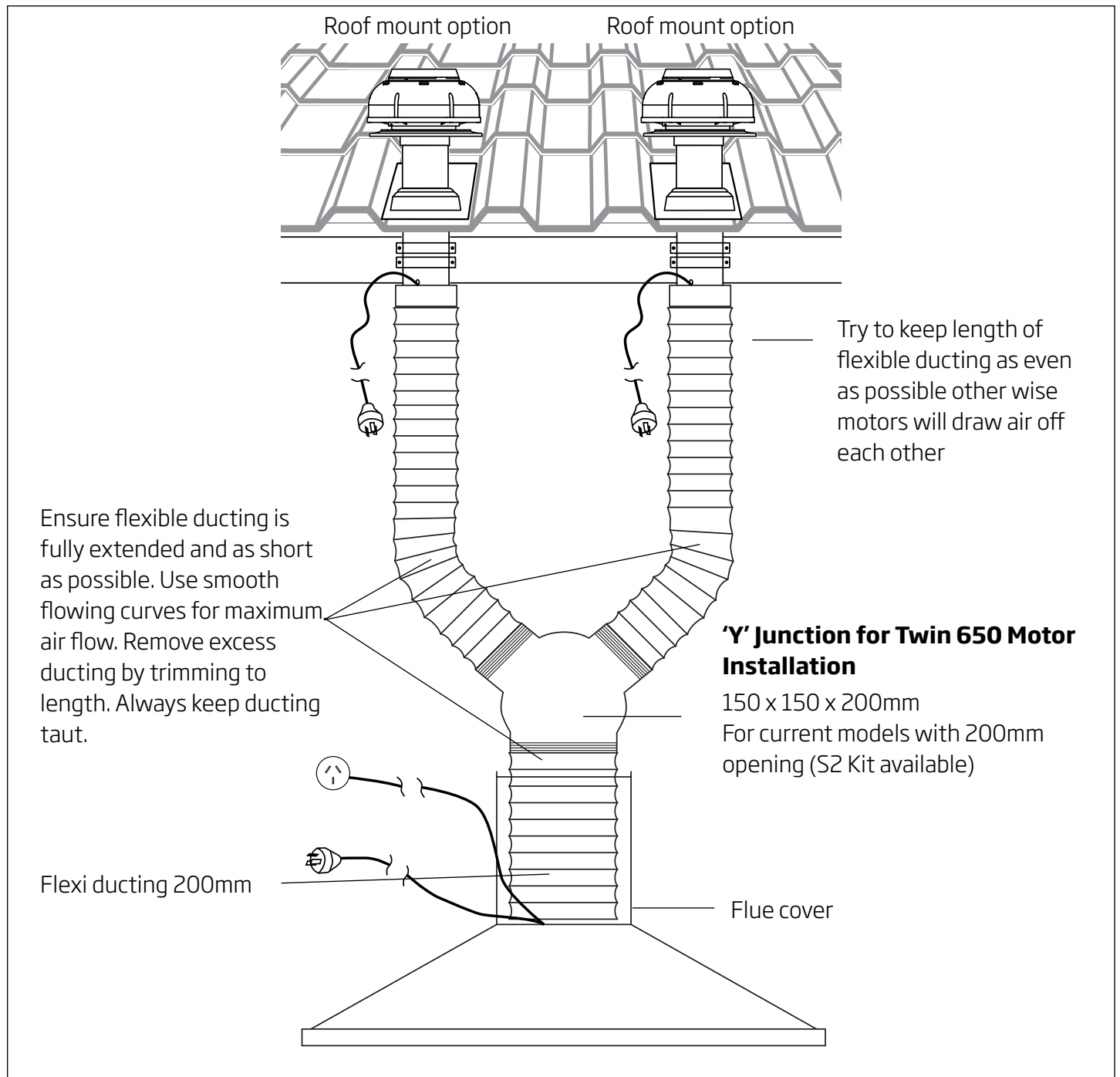


Figure 11

### Measurements for Isodrive 650

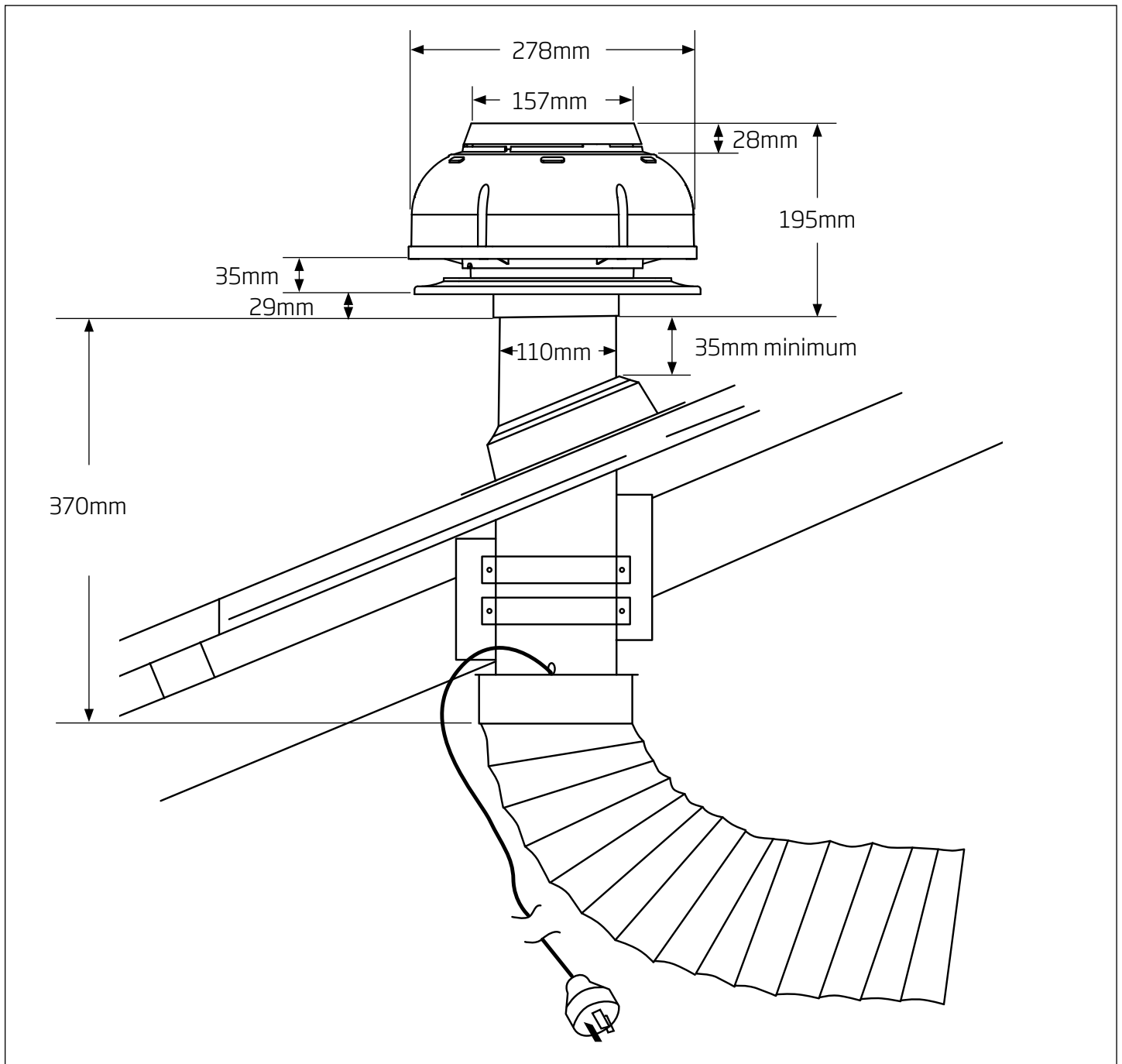


Figure 12

## Flexible Duct

Flexible ducting must be fully extended and cut to the required length upon installation, refer to figure 13. Maximum fan performance will not be achieved unless the ducting is fully extended. Failure to fully extend ducting results in a smaller air passage and lower airflows. Incorrect installation may reduce airflow or increase noise levels. Call outs relating to incorrect installation will result in a service fee directed to the customer. Schweigen will take no responsibility for problems caused by faulty installation. Installation should be done by a qualified technician. A preferred installer list can be obtained from Schweigen website [www.schweigen.co.nz](http://www.schweigen.co.nz).

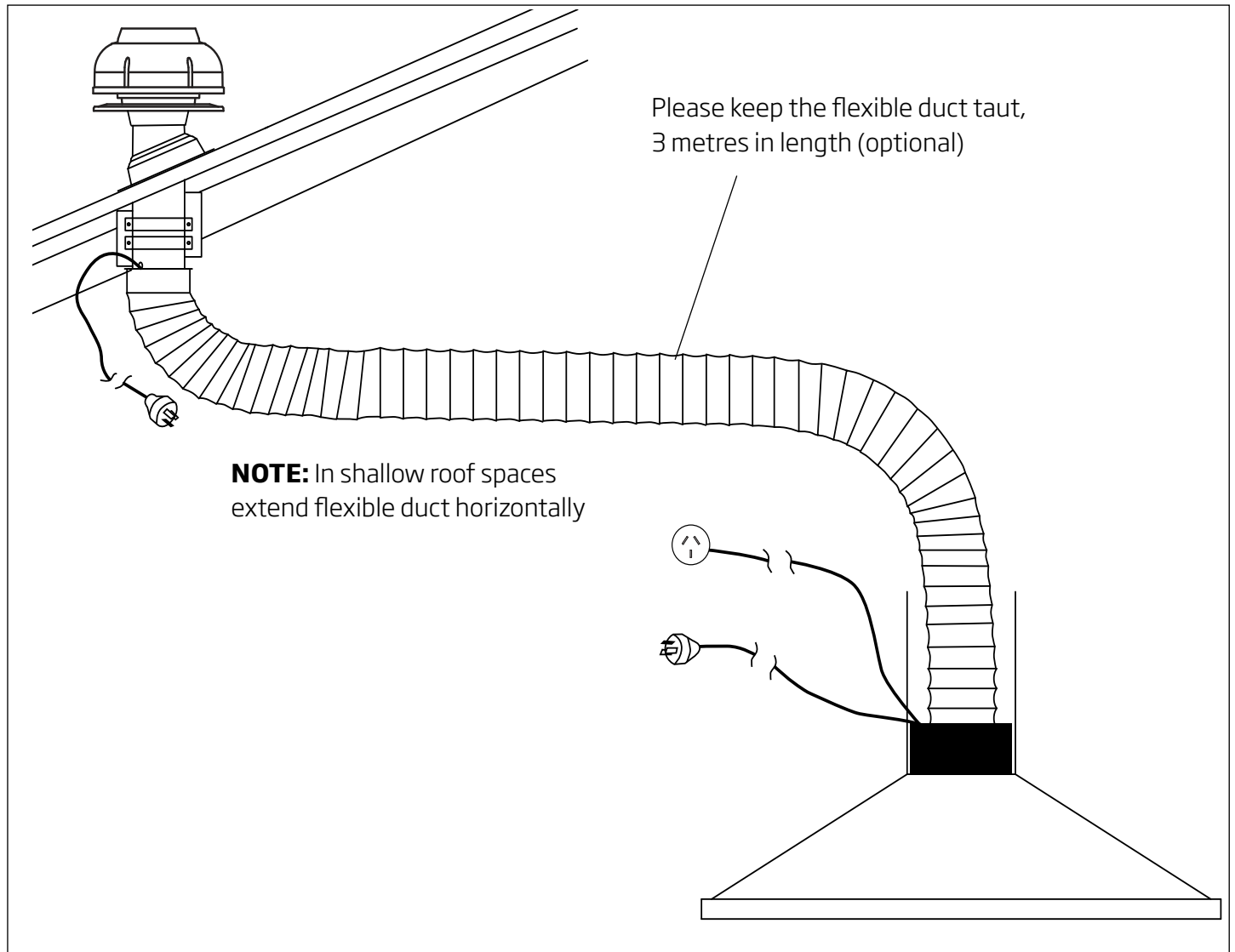


Figure 13

## 8. Flexible Duct

### Shallow Roof Space

In shallow roof spaces, do not crush or kink flexible ducting, as it will reduce air flow severely. 90 degree curve PVC or galvanise curve can be used as a substitute for the bend, refer to figure 14.

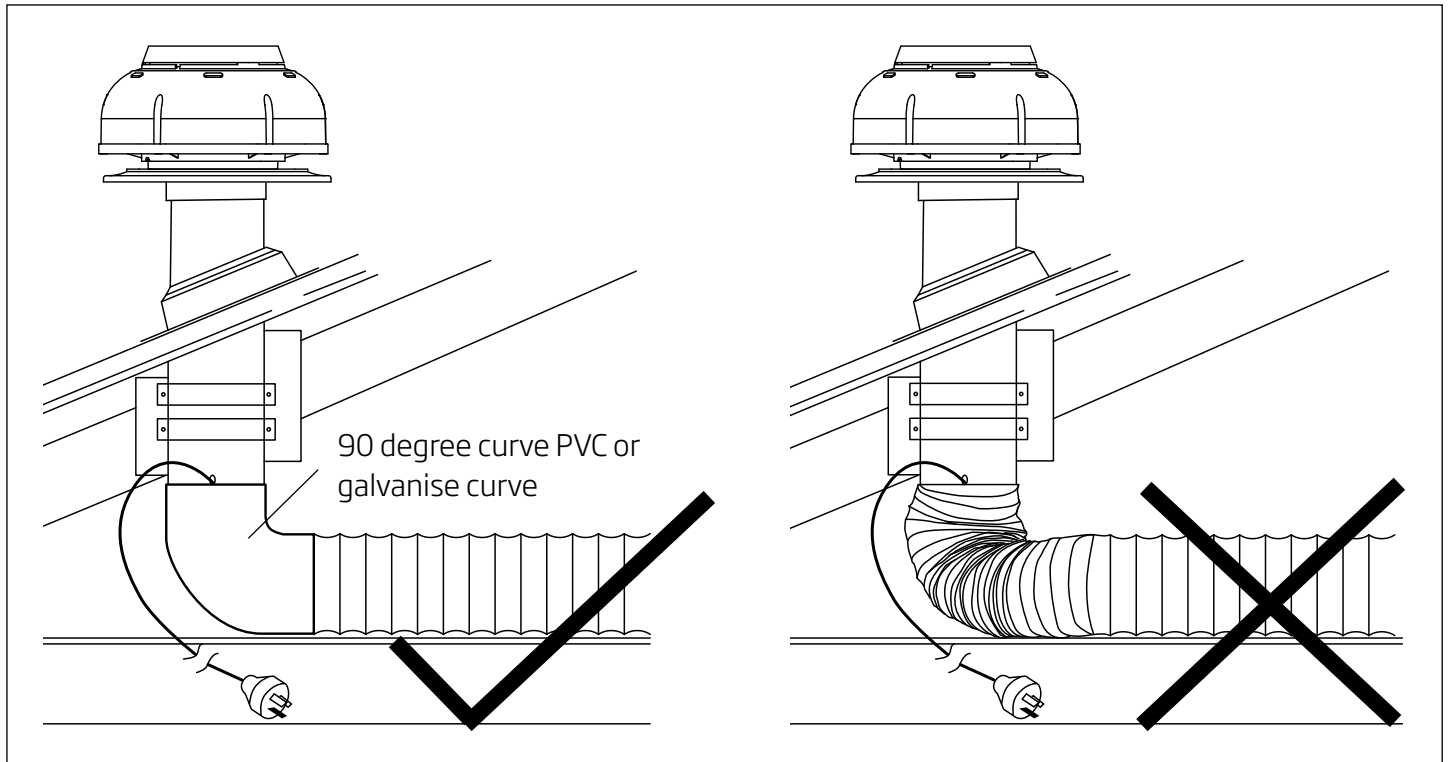


Figure 14

### Important Note

Please do not crush or kink flexible ducting, as it will reduce air flow and may cause noise to occur through the system. Ducting needs to be kept taut at all times.

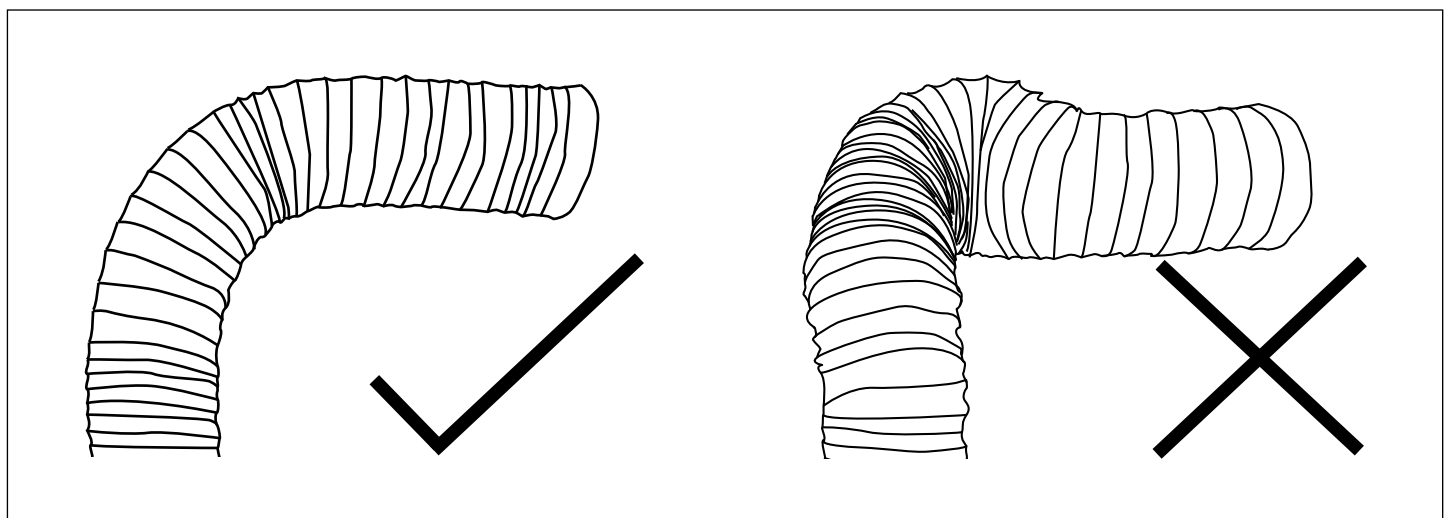


Figure 15

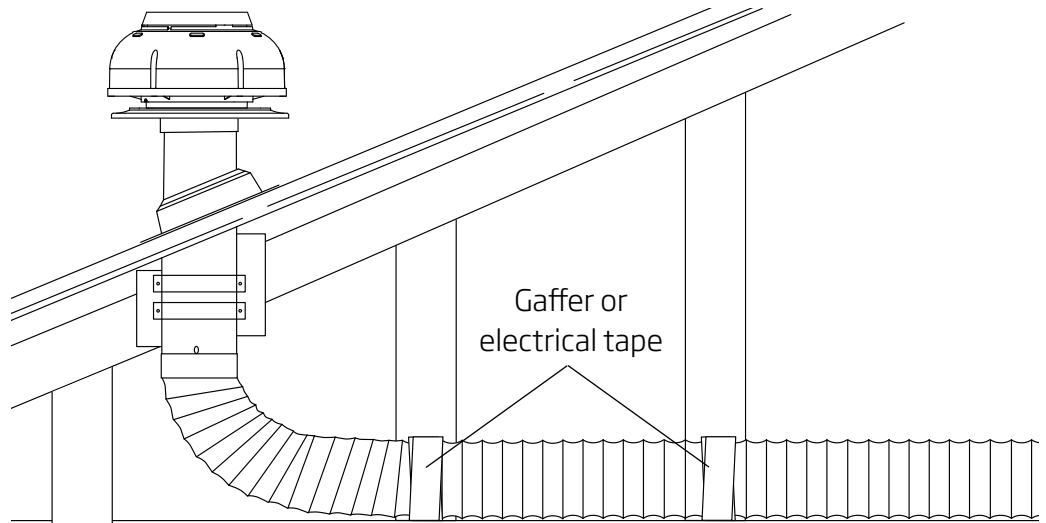
## Securing Flexible Duct

Flexible duct must be installed with supports at maximum intervals of 1.5 metres. Flexible ductwork can be supported by using gaffer or electrical tape. Provided that it does not restrict the internal diameter of the ducting. Ducting installed looped over hanging beams should be installed in such a manner as to ensure the changes of direction are gradual. Support of the ducting with the use of hangers may be require, see option 2.

**NOTE:** Ducting should be kept taut at all times.

### Option 1

Secure the flexible duct to the beam



### Option 2

Support flexible duct by using hangers.

**NOTE:** Care shall be taken to minimize sagging or snaking of the duct between supports.

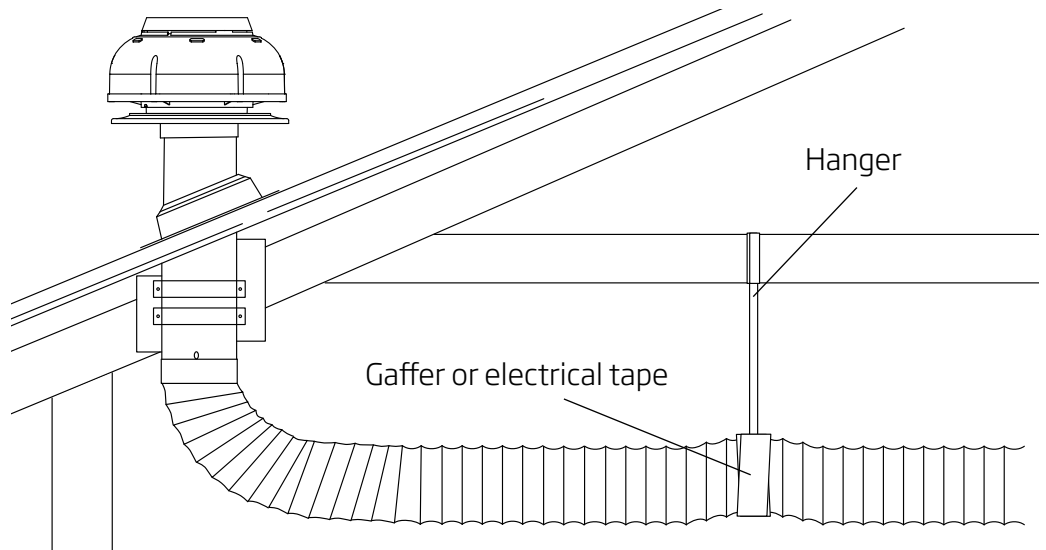


Figure 16 Examples of securing ducting

### Roof Restoration or Cleaning

Before doing your roof restoration or cleaning, please completely cover the outside motor system and avoid all chemical contact.

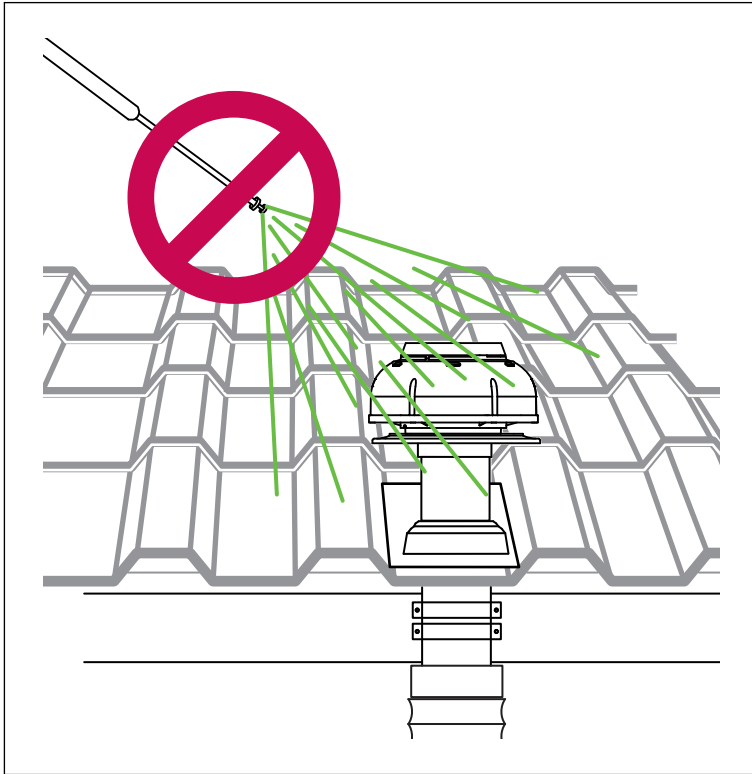


Figure 17 Avoid chemical contacted to motor system



#### **IMPORANT**

Any damages caused by the use of chemical products are not covered by warranty.

### **Warranty** (See warranty for more information)

Isodrive motor has a 10-Year replacement product warranty. This is a change over warranty. The consumer is responsible for any charges associated with removal of the faulty unit and installation of the new unit. The customer is also responsible for any freight charges incurred in this change over process.

### **Disclaimer**

Under our policy of continuous product development, product specifications may change without notice. Prospective purchasers should therefore check with the retailer to ensure this publication correctly describes the products being offered for sale. All information supplied is to be used for general reference purposes only and is on the understanding that Schweigen Home Appliances will not be liable for any loss, liability or damage of whatever kind arising as a result of any reliance upon such information. All pictures used in the guide are for illustrative purposes only.

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