

INSTALLATION GUIDE

# ISODRIVE MOTOR

**SP2** - 1600 x 2 m<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.

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.

### Before Installation

We recommend this appliance to be installed or repaired by a qualified Schweigen Home Appliances technician.

Please see our website [www.schweigen.com.au](http://www.schweigen.com.au) for recommended installers.

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

### 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 Isodrive motor system after the rangehood has been mounted on the wall or roof. (Refer to rangehood installation manual on how to install the rangehood).

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

### Motor Features

- Roof and wall mounting with IPX4 degree of weather protection.
- Super quiet, long vane, backward curved centrifugal fan.
- Airflow is dependant on installation and the ducting used. Using single 200mm flex duct, you should attain up to 1600m<sup>3</sup>/hr. **The use of a smaller than 150mm (ISD) pipe would result in a loss of airflow and it is not recommended.**
- **Simple installation:** The motor mounts onto a 150mm 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 135W costing around the same as two 70W light globes to run.
- **WARRANTY 10 YEARS** return to manufacturer. Covers faulty manufacturing or components. It does not cover normal wear and tear.

### General Notes on Installation and Use

This fan unit is designed to be installed using 150mm (ISD) PVC pipe as the initial connection duct to the fan module, and is supplied with a 150mm (ISD) PVC pipe to 200mm (ISD) flexible duct bell-mouth adaptor.

This fan is suitable for connection to ducting runs with a minimum inlet area of 22,000mm<sup>2</sup> and length up to 15 metres maximum (check with supplier if longer duct length required). Where possible flexible ducting must be extended sufficiently to present a smooth air passage with bends of at least the radii of twice the diameter of the duct. **Excessive bends in the ducting will compromised extraction.**

**WARNING:** The rangehood 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 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 may void warranty. See installation instruction notes 'Why flexi-duct'.

### Recommended Installation Distance

Isodrive 1600 motor, **recommended 5 to 6 metres** of flexi ducting and with at least 2 bends.

**NOTE:** Although less than 5 to 6 metres will increase extraction power this will result in higher noise level. Maximum duct length is 10 to 15 metres. Check with supplier if longer duct length is required. Do not reduce the duct size **at any time** and **avoid sharp bends**.

### 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 but not with external 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 places the noise outside the house.

**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, this may void warranty. A preferred installer list can be obtained from Schweigen website [www.schweigen.com.au](http://www.schweigen.com.au) or by calling **1300 881 693**.

**NOTE**

For more flexible ducting instructions, refer page 19.

**Isodrive Motor****Included in the box:**

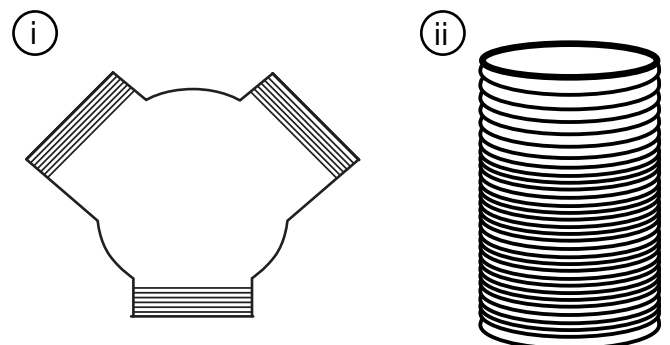
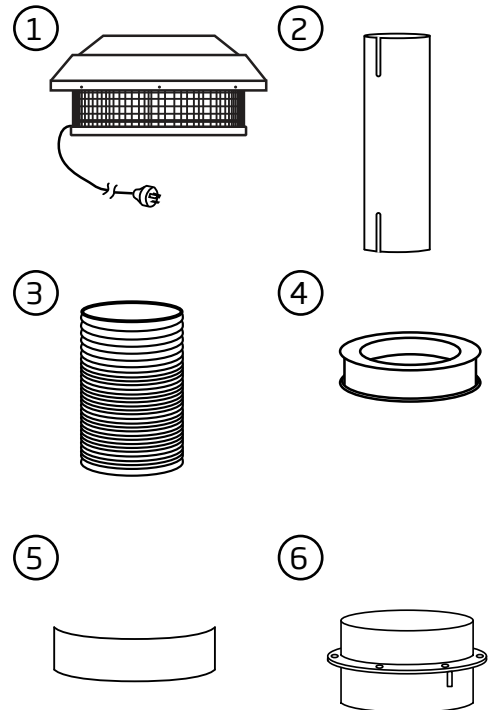
1. Isodrive 1600 motor (405W x 220H mm approx.)  
Approx. 3 metre, 10amp cable and standard male plug
2. Fire resistant 150mm (160mm OD<sup>1</sup>) PVC riser pipe  
**Note:** Cable cut-out at the bottom end only
3. Flexible ducting  
Approx. 6 metres, 200mm (210mm OD<sup>1</sup>) diameter
4. Bell-mouth adopter ring  
200mm duct to 150mm riser
5. Weather Shield  
Should be installed to prevent rain/water entering the unit
6. Back Draught Shutter

**Not included in the box:**

- Roof seal kit / Dektite
- Support straps for poly pipe which connects to the roof truss
- Aluminium Foil tape
- Hanging Bracket require for wall mount
- Wall Cover Plate (wall mount only)
- Zip ties

**Additional products will be required for a for twin 200mm outlet rangehood using a single 1600 Isodrive motor:**

- i. One 200mm x 200mm 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

### Roof Installation

Recommended duct length: 1600 motor – 5 to 6 metres.

Mount 150mm (ISD) rigid PVC pipe securely to beams, trusses or other appropriate structures: refer figure 1. The pipe should be mounted vertically with the roof penetration being sealed using a Dektite or other appropriate sealing membrane or device.

Ensure that the PVC pipe protrudes at least 50mm past the top of the Dektite, checking that the fan assembly clears the roof cladding at upper edge, refer figure 1.

Pass power cord and plug through mounting flange and pipe, then out the slotted PVC pipe for connection to the female plug coming from the canopy/rangehood. Refer to figure 4.

Do not insert plug into socket outlet or switch on until installation has been completed. Fit fan module to pipe and fix in position using side locking screw.

Certain external installation configurations may cause audible levels of noise to be heard due to the air being expelled from the motor. To minimize external noise disturbance you can use between 6 to 15 metres of flexi duct to place the Isodrive motor in an appropriate position.

Please be aware that the 1600 motor is capable of expelling air at 1600m<sup>3</sup>/hr.

For more information on environmental noise limit and conditions please contact your local Council. We have a list of recommended installers available on the Schweigen website.

Do not install the flexi ducting in a straight line and minimum of two gentle bends in the ducts is required.



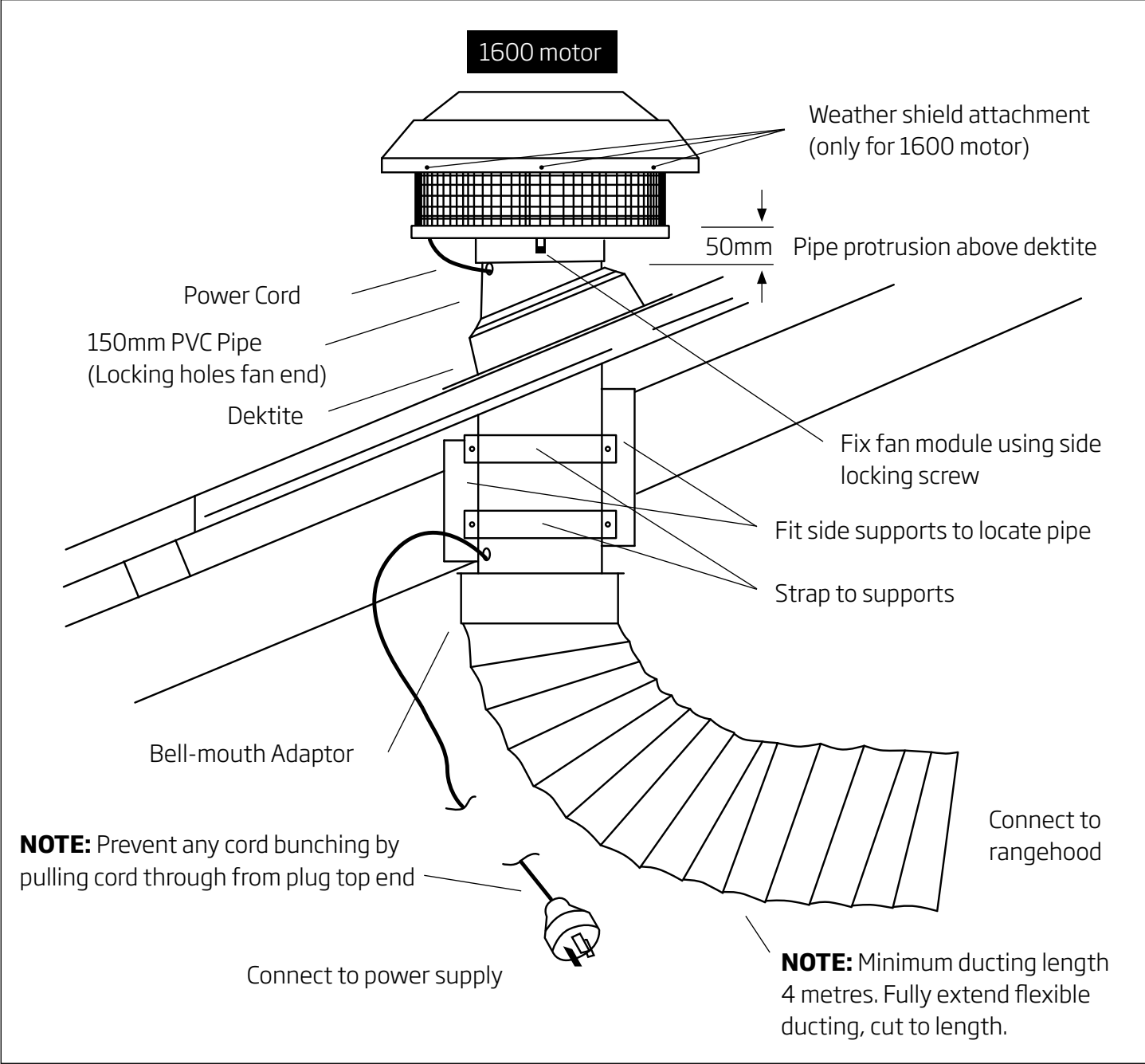


Figure 1 Roof Mount Option

## 4. Installation

### Wall Installation

This type of installation is similar to roof mounting, ensuring that the pipe extends at least 50mm past the wall surface refer figure 2. If the pipe length is shortened, reproduce the power cord exit slot on the inside of the wall.

**IMPORTANT FOR 1600 MOTOR:** Weather shield must be fitted to the top cover of the side flange using the 3 screws provided. Also, it is required to use the hanging bracket for wall mount installation, for more information please refer to page 15.

**NOTE:** By decreasing the length of the flexi duct from which specified (refer to installation instructions) there will be an increase in airflow and noise levels as a result. This increase in airflow can cause movement of air to be heard through the system and inhibit the system to run silently.

### Installation Without Back Draught Shutter

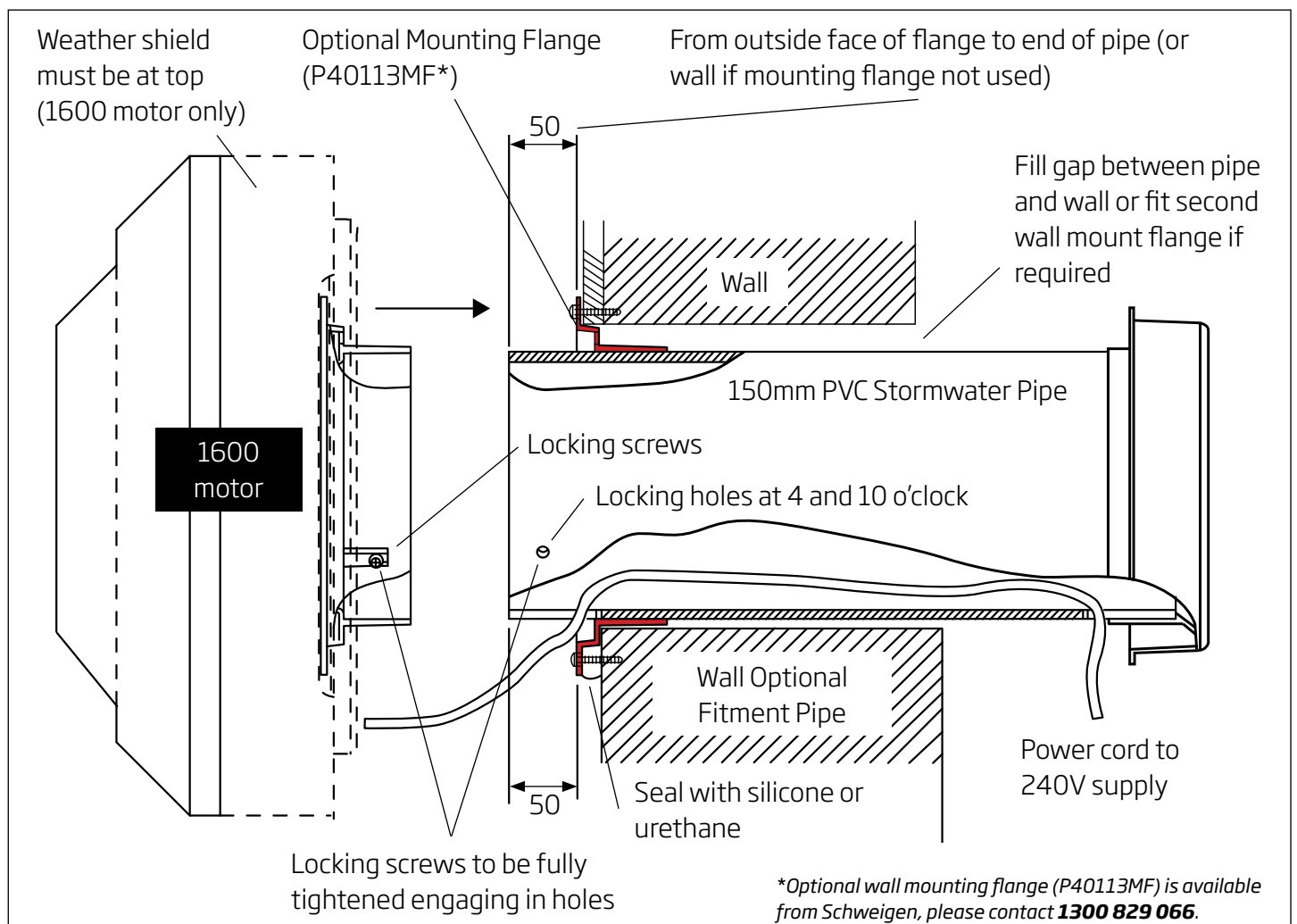


Figure 2 Wall Installation

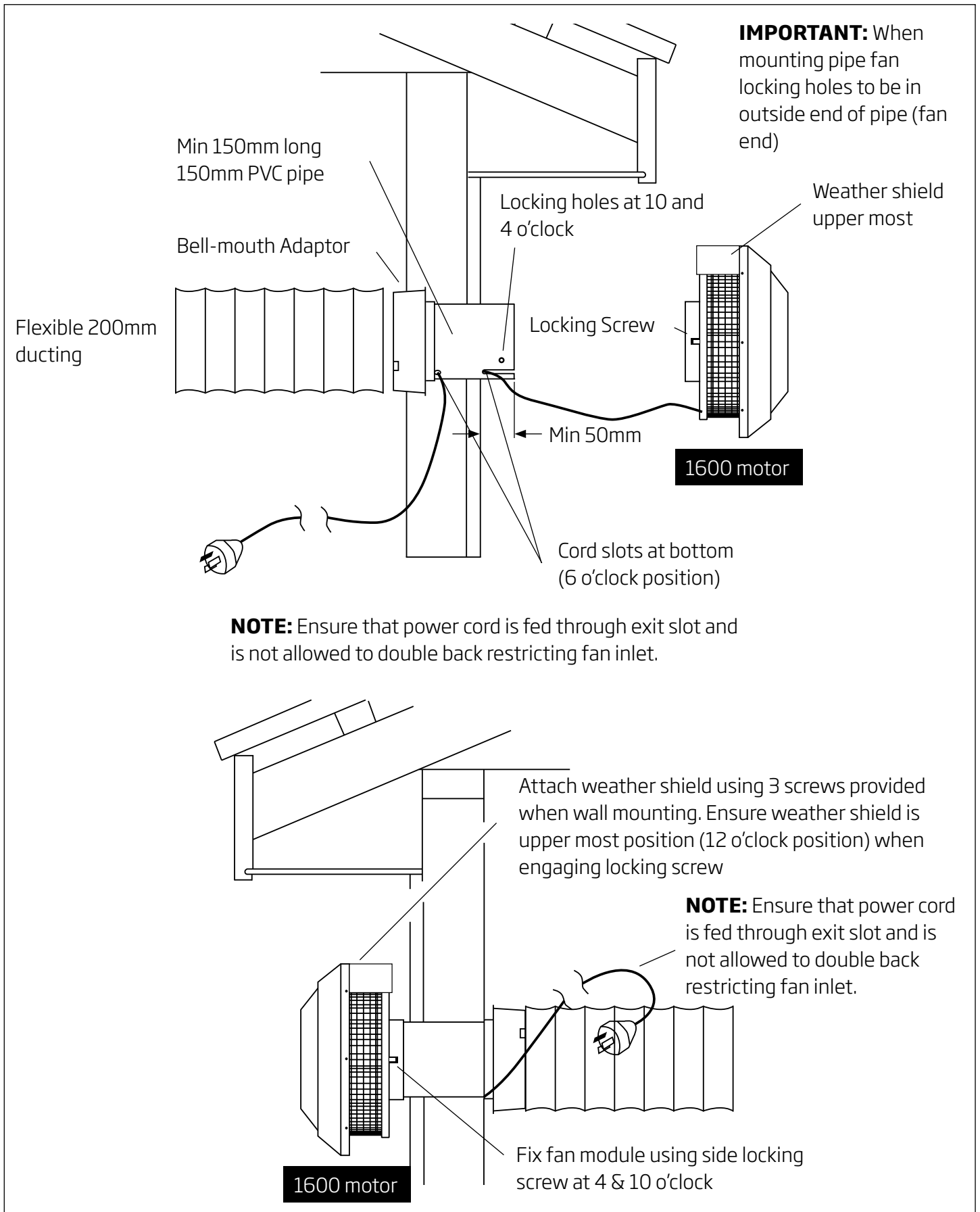


Figure 3 Wall Mount Option

## 4. Installation

### Installation Through Wall with Back Draught Shutter

Due to the weight and to create stability for the Isodrive 1600 motor, it is required to use a hanging bracket. Warranty will be void if a hanging bracket is not used.

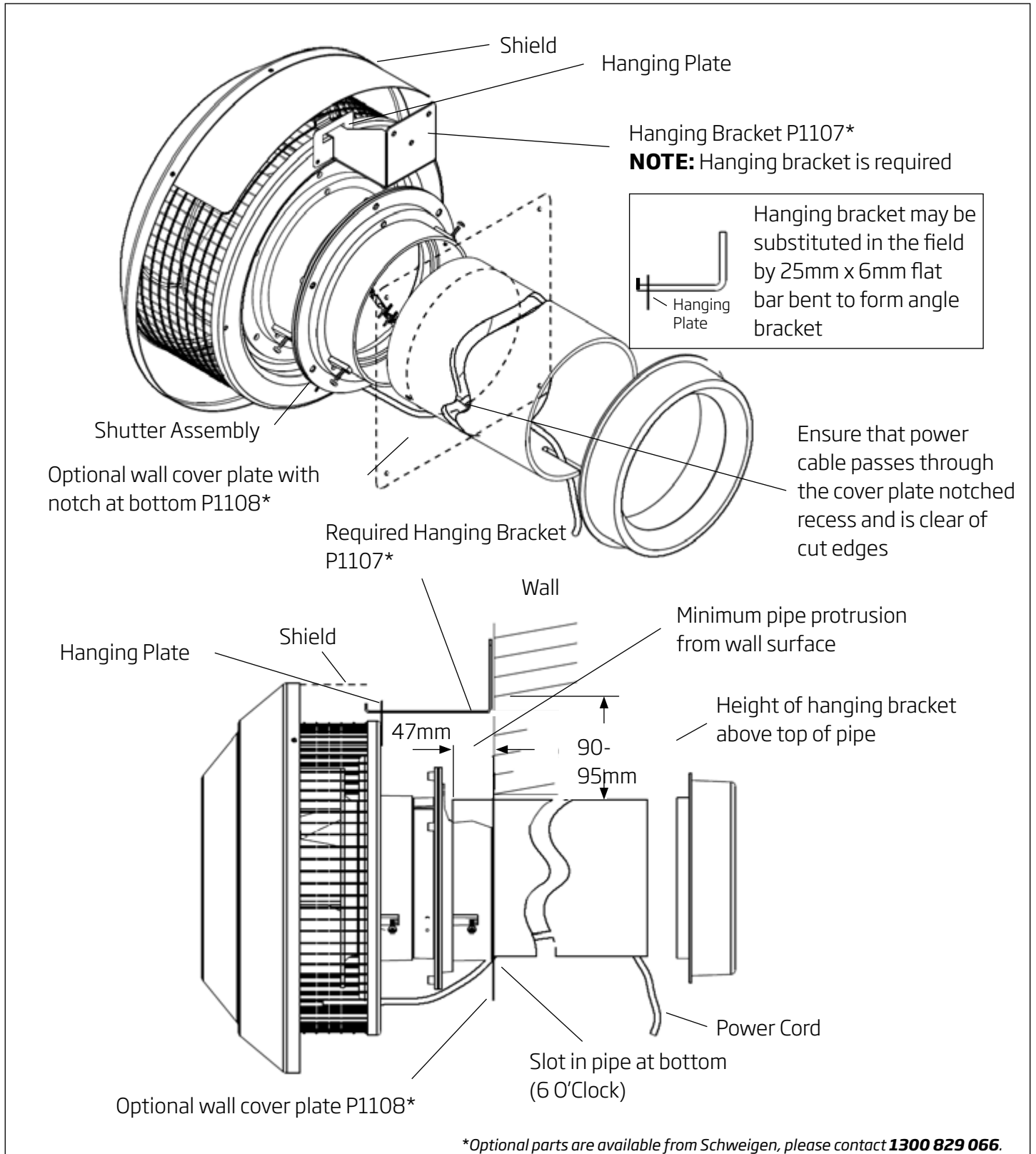
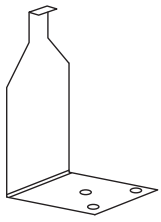


Figure 7



**IMPORANT**

It is a requirement to use the hanging bracket for all wall mount installations. Please refer to the manual for more information.

**Flat Roof Installation**

Flat roof mounting using optional mounting flange\*.

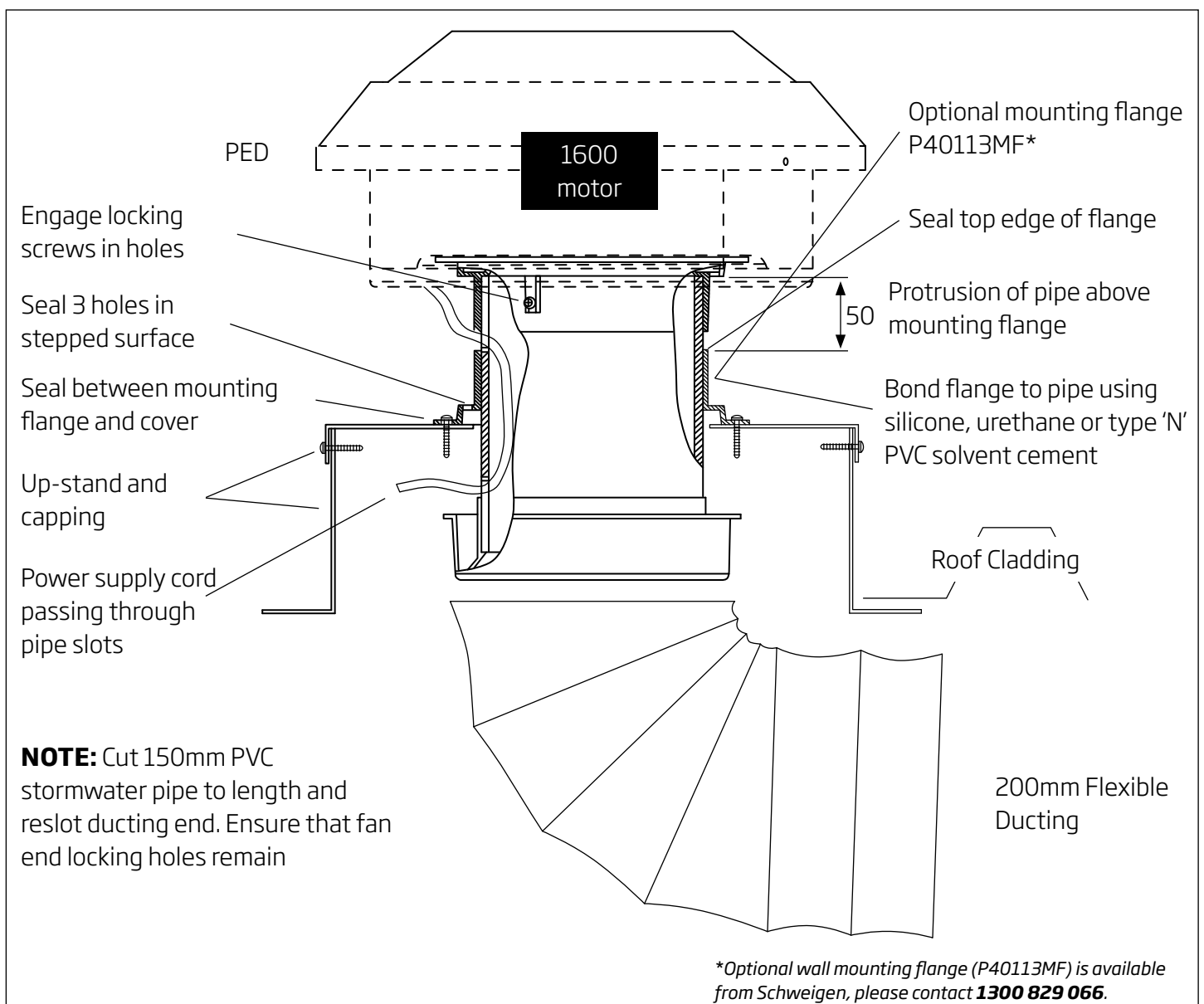


Figure 4

## 4. Installation

### Fan Unit Shutter Assembly for Isodrive 1600

1. Assemble by fitting shutter assembly into fan inlet shroud moulding, ensuring that attaching screws align with holes. Alignment can be checked visually by folding in shutter flaps.
2. Fully tighten both screws and re-check fitment into holes.
3. Fit assembly to duct pipe as per installation instructions supplied.

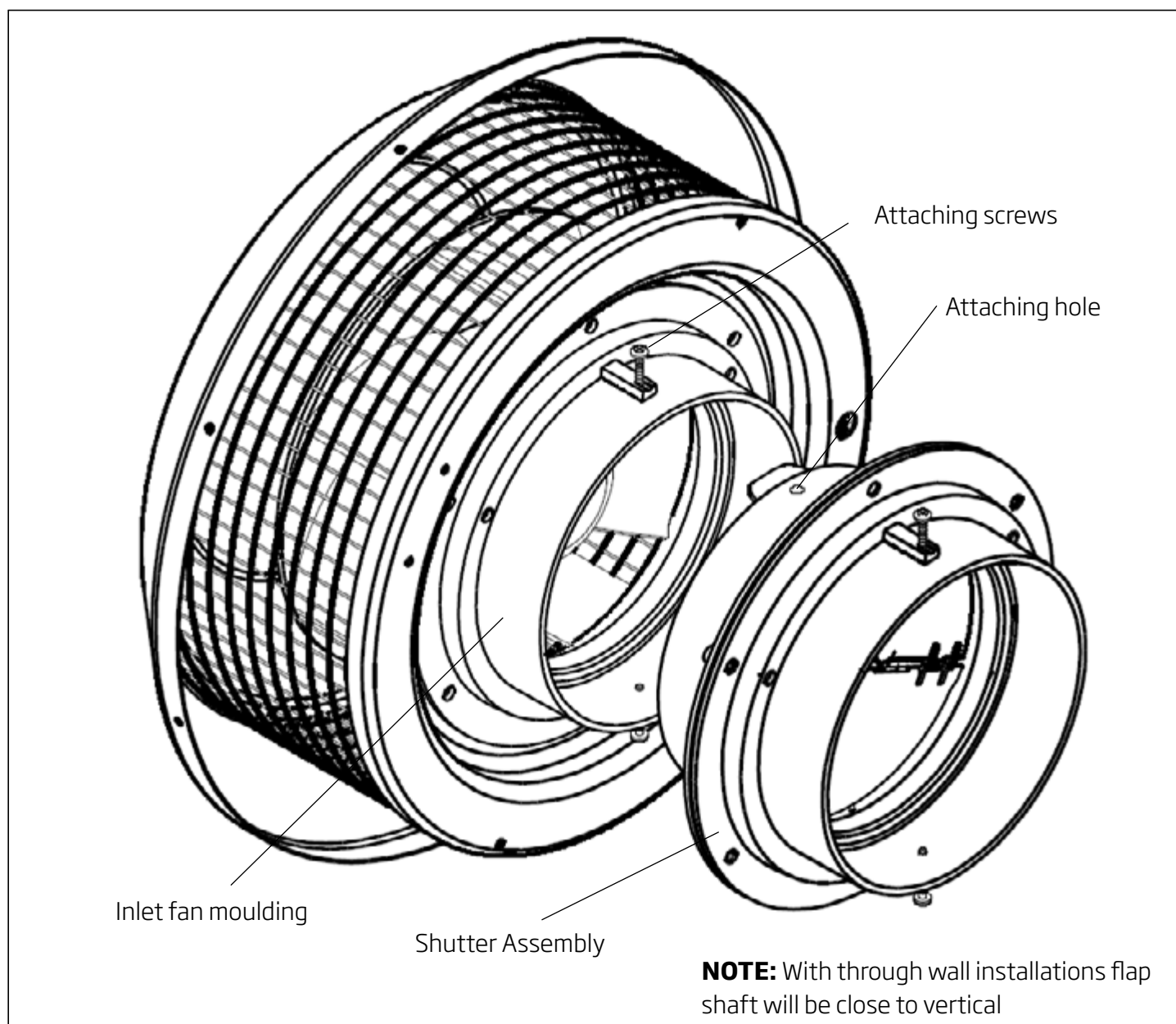


Figure 8

## Twin Motor Installation (suitable for rangehoods with two 200mm outlets)

Where two motors are to be used, follow the method below. Each motor should have a separate flue pipe. Refer figure 9. The two motors can be wired by an electrician.

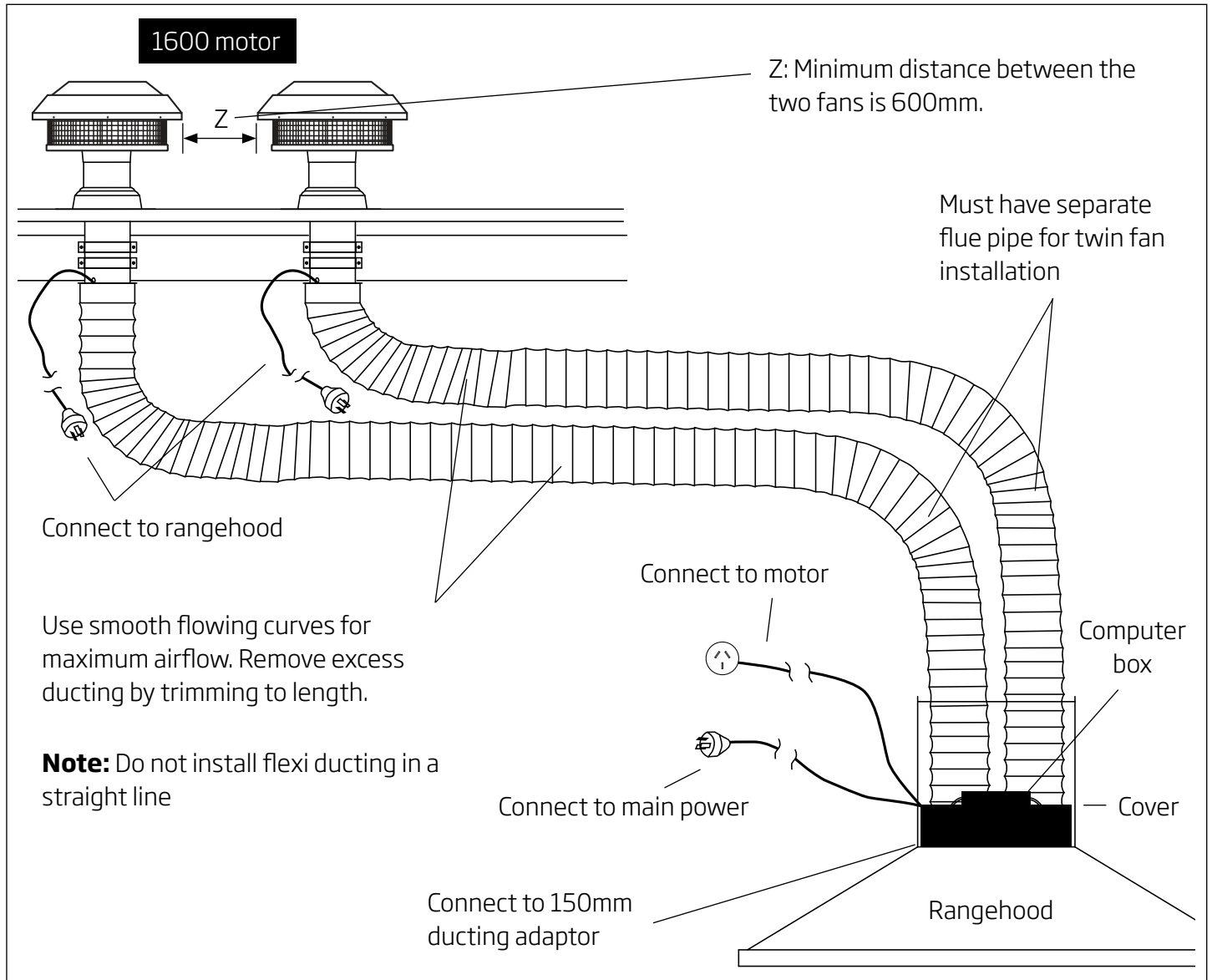


Figure 9 Roof mount option

## 4. Installation

### Twin Motor Installation (suitable for rangehoods with one 200mm outlets)

Where two motors are to be used and there is only one 200mm outlet, follow the below methods for each motor then join into the "Y" piece prior to joining ducting to the canopy / rangehood. Refer figure 10.

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
- A double GPO powered from the canopy

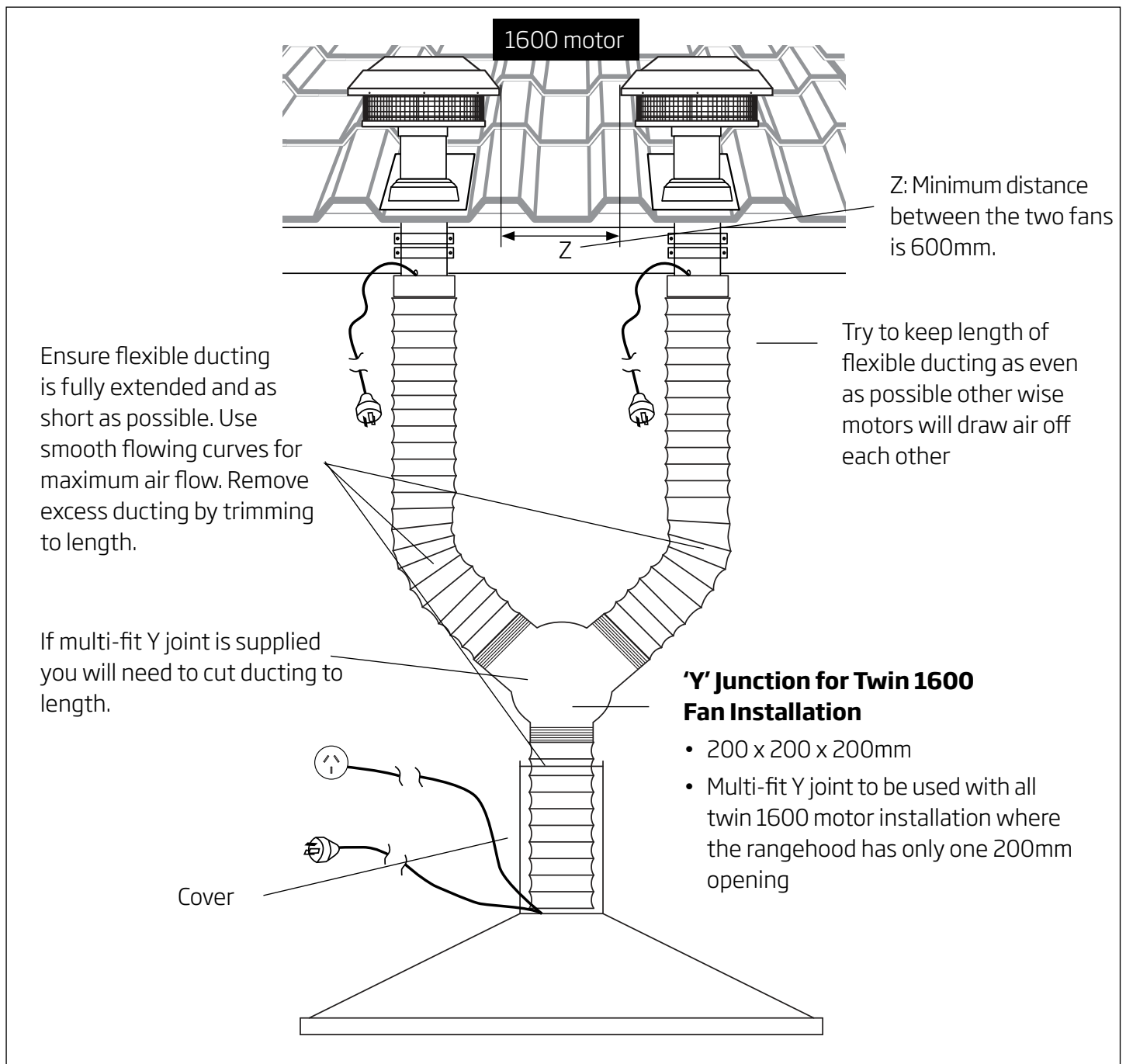


Figure 10 Roof mount option



## Single Motor Installation Twin 200mm Outlet

(suitable for rangehoods with two 200mm outlets and one 1600 Isodrive motor)

This is for use where one motor is to be used and there are two 200mm outlets, refer figure 11.

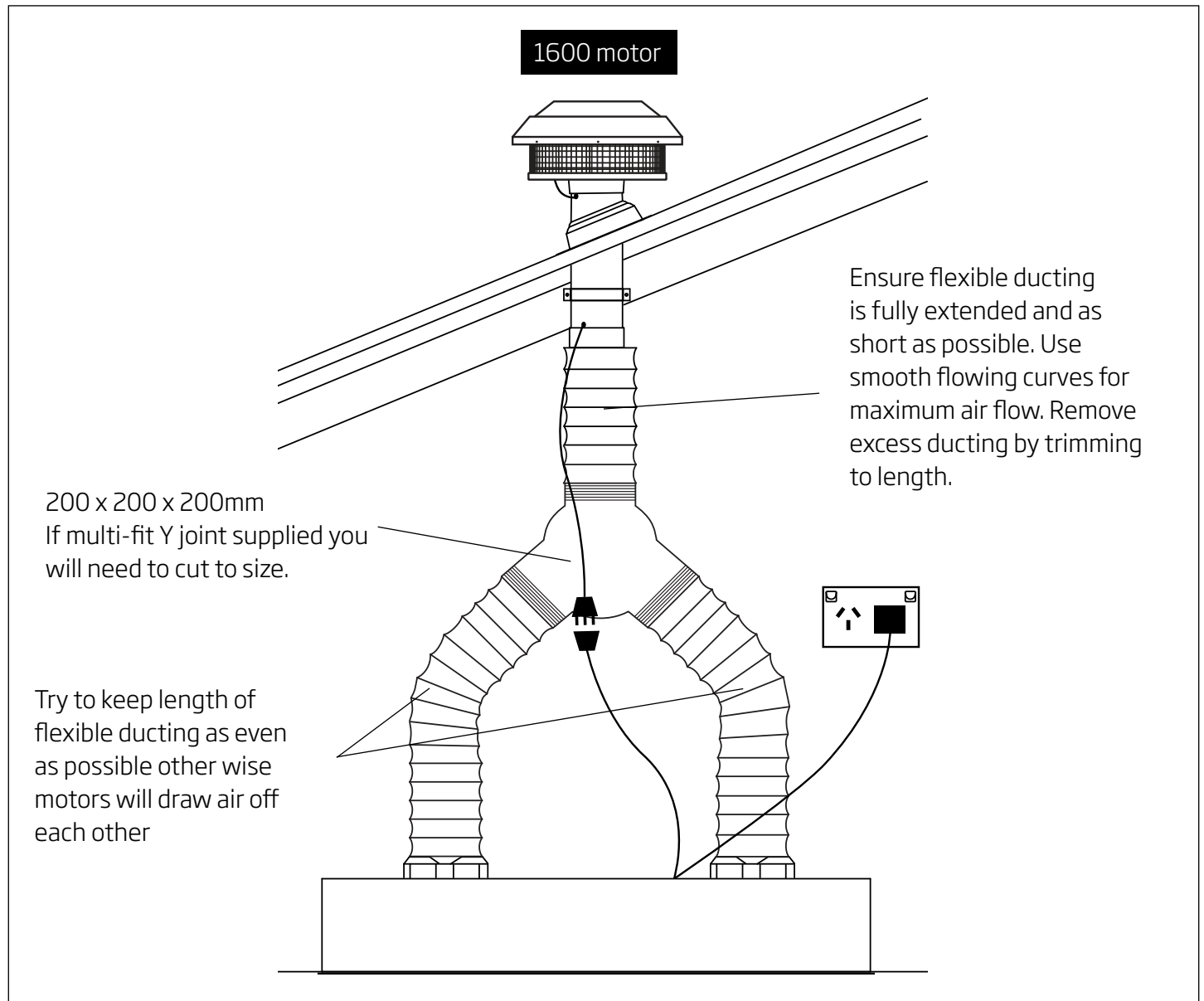
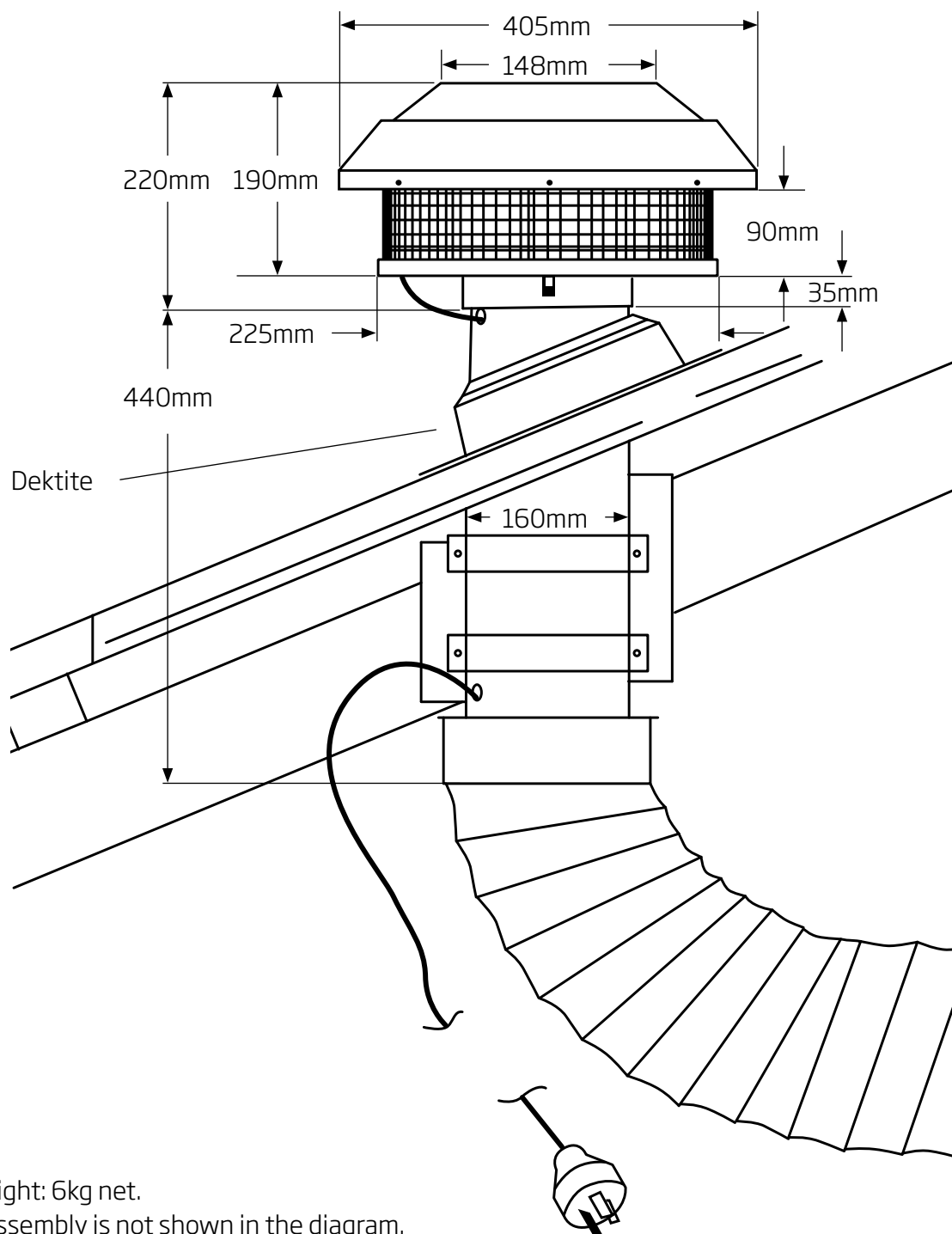


Figure 11 Roof mount option

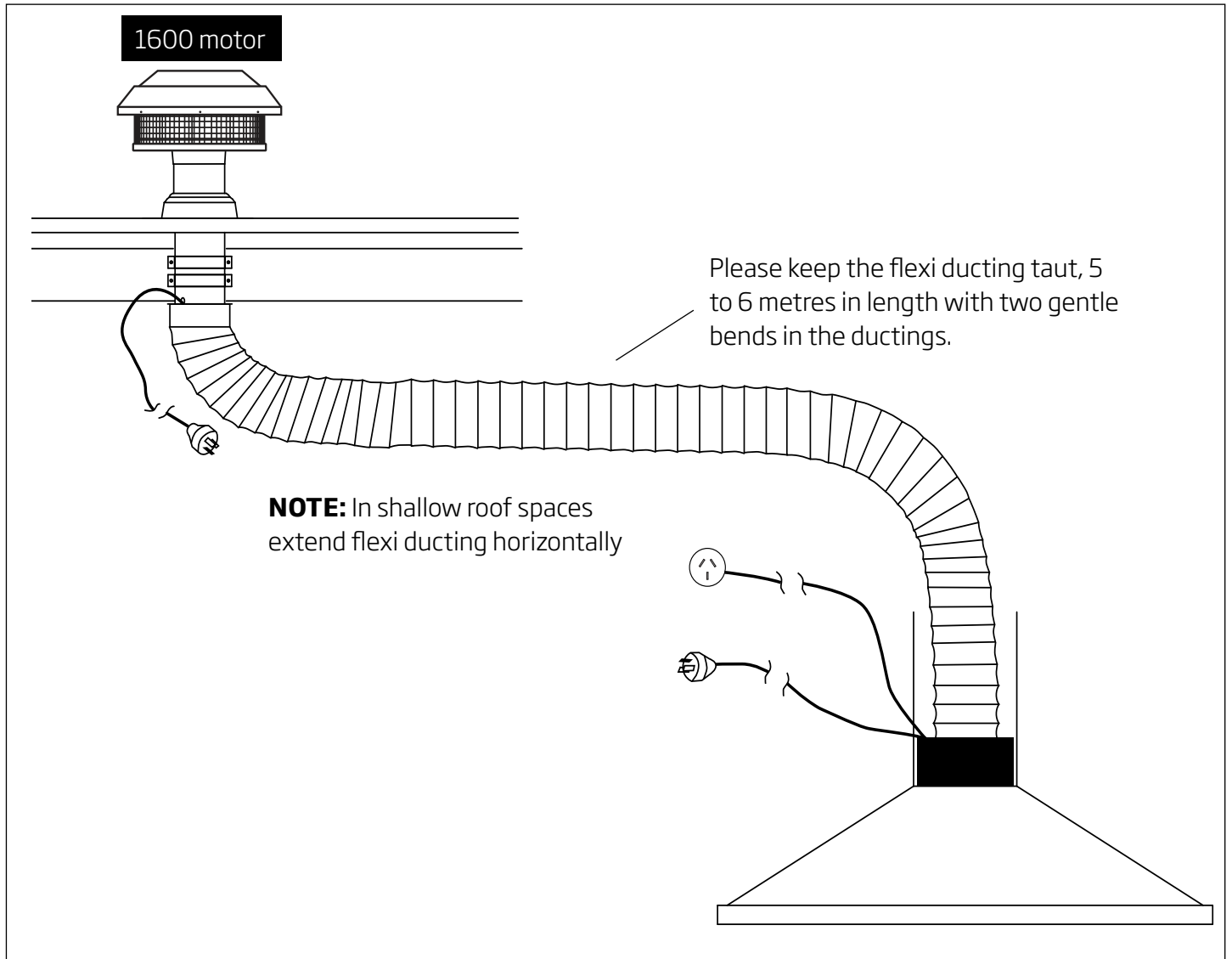
## Measurements for Isodrive 1600 (Not to Scale)



Motor weight: 6kg net.  
Shutter assembly is not shown in the diagram.

## Flexible Ducting

Flexible ducting must be fully extended and cut to the required length upon installation. 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. **A list of preferred Schweigen installers can be obtained from the Schweigen website [www.schweigen.com.au](http://www.schweigen.com.au).**



### Shallow Roof Space

In shallow roof spaces, do not crush or kink flexible ducting, as it will reduce air flow severely. 90 degree curve made of PVC or galvanise can be used as a substitute for the bend, refer to figure 12.

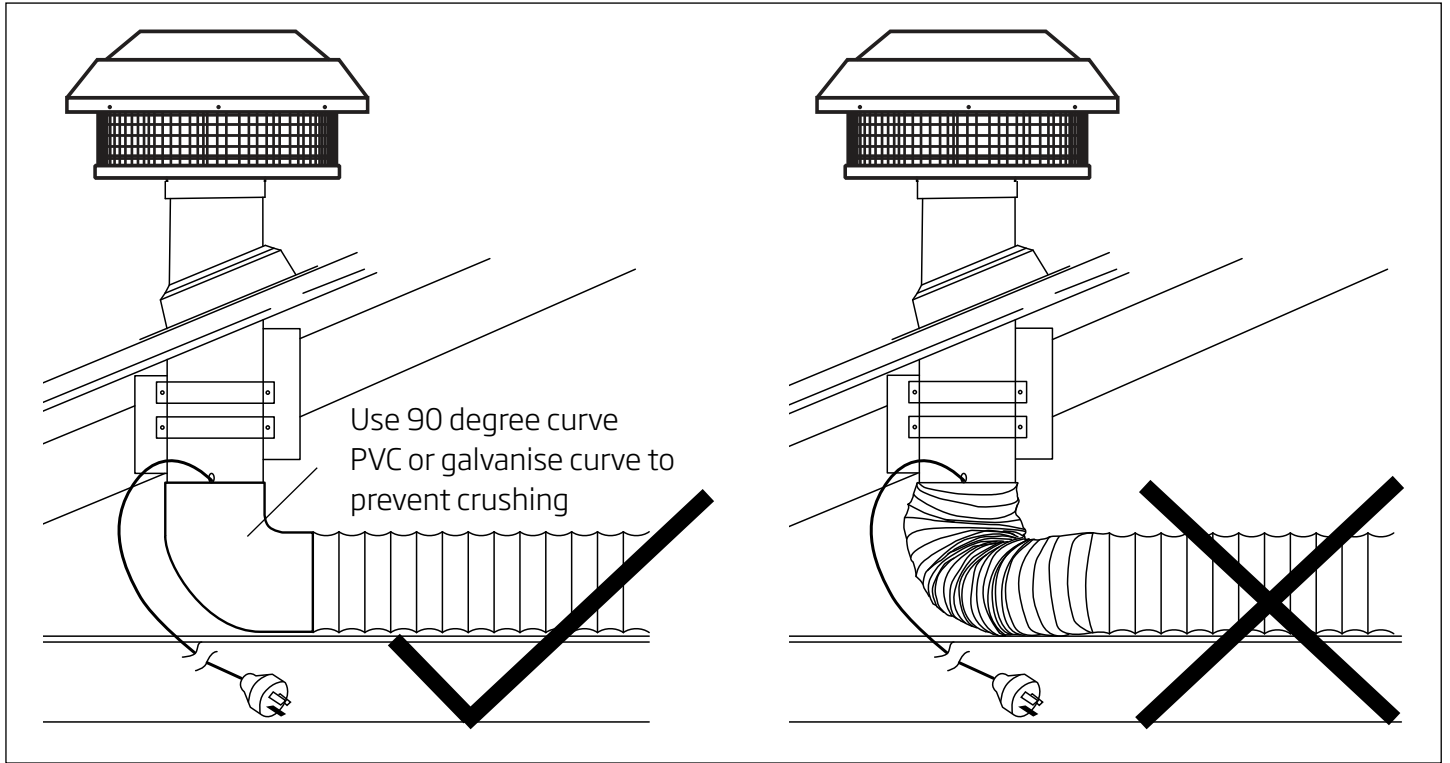


Figure 12

### 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.

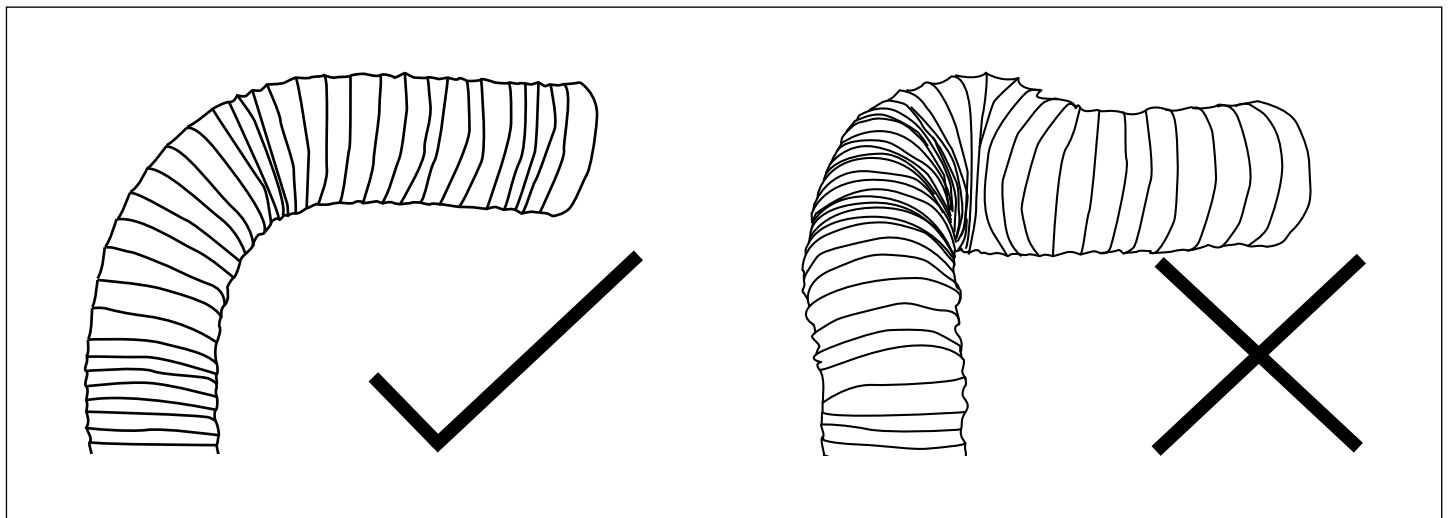


Figure 13

## Securing Flexible Duct

Flexible duct must be installed with supports at maximum intervals of 1.5 metres. Flexible ductwork can be supported by using good quality gaffer or aluminium foil 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 required, see option 2.

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

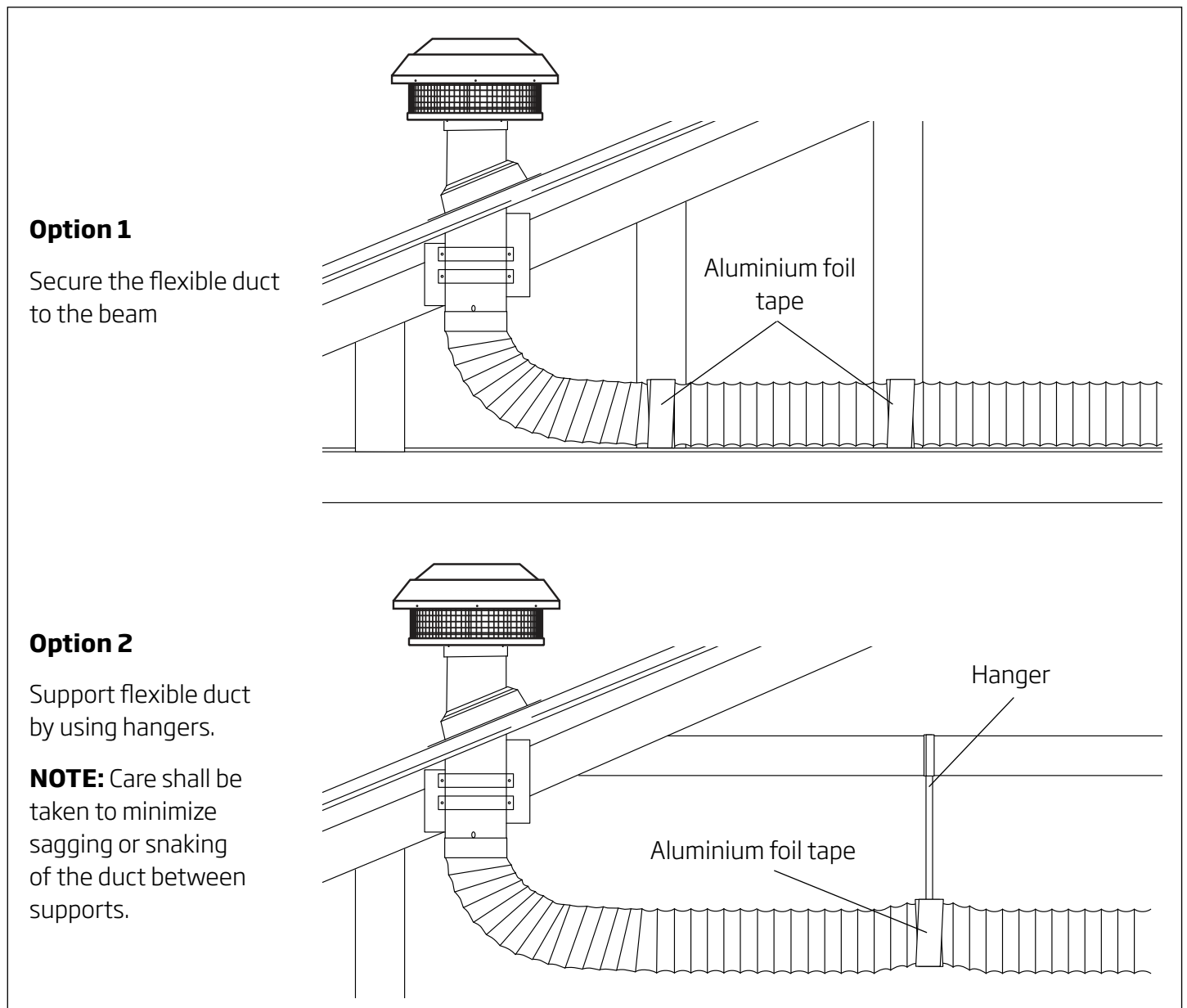
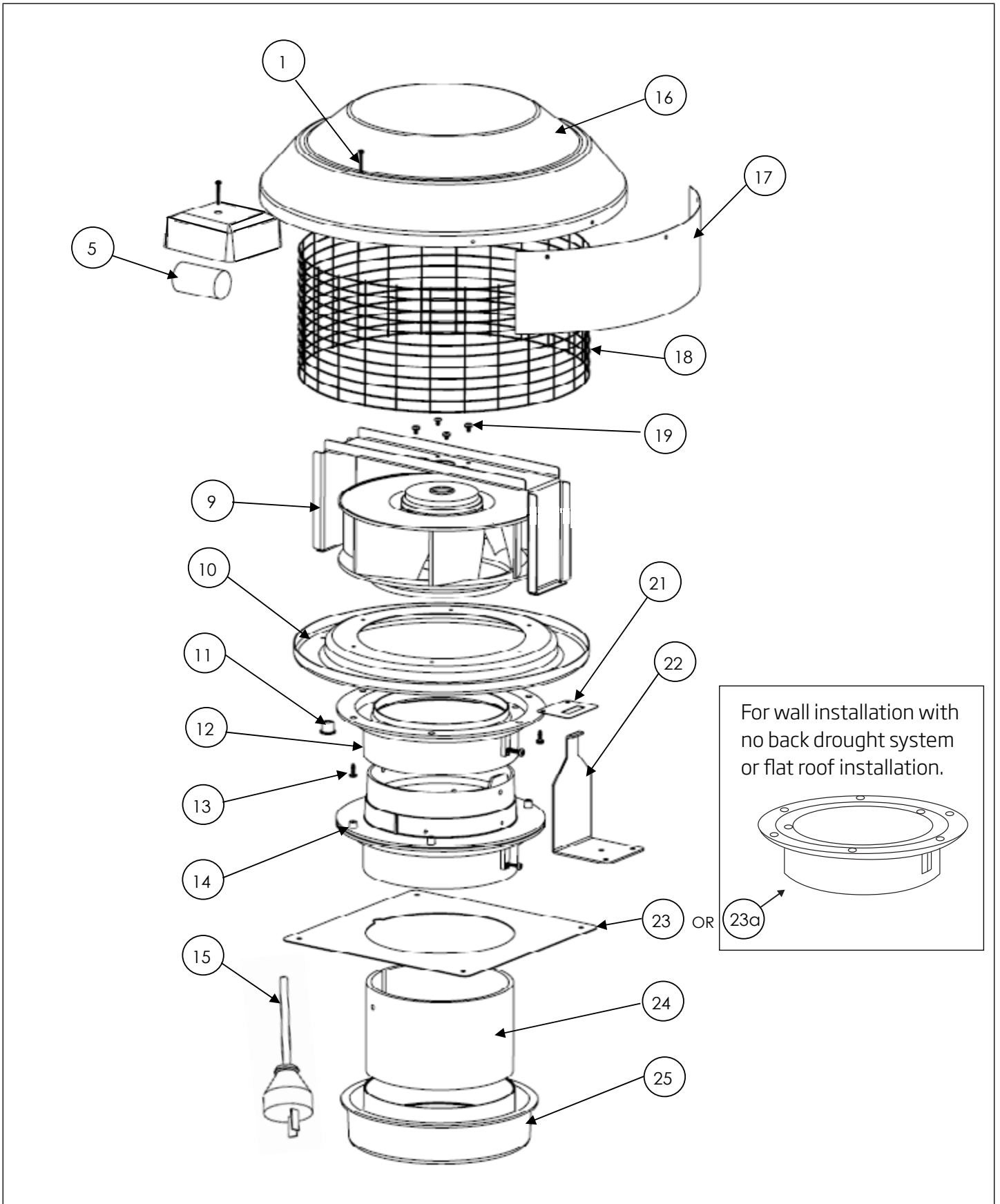


Figure 14 Examples of securing ducting

# Parts List for Isodrive 1600



## Parts List for Isodrive 1600

Number	Part Number	Description	Quantity
1	P1120	M4X160mm Pan Head Screw	4
	P1120N	M4 KEPS Nut (not shown in figure)	4
5	P1114	Capacitor 3.5 $\mu$ F	1
9	P1100	Fan Motor Mounting Bracket	1
10	P1102	Fan Base Spinning	1
11	P1113	Heyco Snap Bushing	1
12	P40113	Base Moulding	1
13	P1124	M4X12mm Hex Washer S/T Screw	11
14	200MM BDSS BUILD ASS	Shutter Assembly	1
15	P1111	Power Cable 3 Core	1
16	P1101	Fan Top Spinning	1
17	P1104	Side Mount Cover Weather Shield	1
18	P1105	Fan Guard	1
19	P1126	M4X8mm Machine Screw with Spring Washer	4
20	P1110R	Centrifugal Fan/Motor Unit	1
21	P1106	Hanging Plate	1
22	P1107	Hanging bracket (Optional)	1
23	P1108	Wall Cover Plate (Optional)	1
23a	P40113MF	Mounting Flange (Optional)	1
24	P1069	Slotted Pipe (150mmX455mm)	1
25	P40114	Bell Mouth Adaptor	1

### Roof Restoration or Cleaning

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

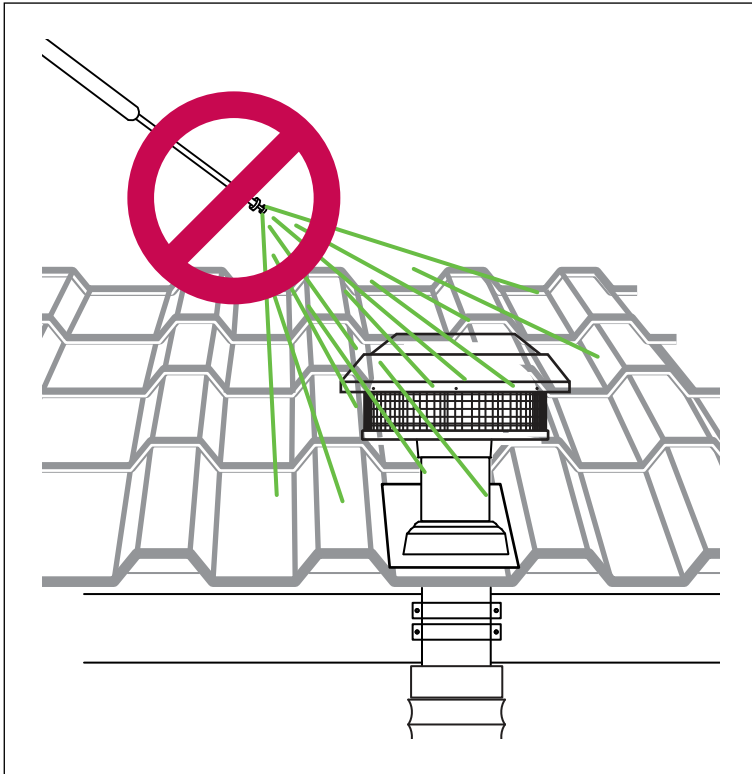


Figure 15 Avoid chemical contact to motor system



#### **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. 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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