

Please ensure these instructions are read thoroughly before commencing installation and that all documentation is left with the home owner on completion of installation

CAUTION

- Before use, please check that the supply voltage and that of the appliance are the same (see product rating label).
- All wiring and wiring connections must comply with national wiring rules and regulations.
- Any changes or modifications made or attempted to this product, without the prior written approval of the manufacturer, will void any and all stated warranties.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are capable of, and have been given supervision or instruction concerning 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.
- In case of damage to the supply cord, switch off the device and do not tamper with it. Damaged supply cords must only be repaired or replaced exclusively by the manufacturer or by an appointed representative. Failure to comply with the above may endanger the safety of people and cause possible damage to the whole system.
- Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.

ELECTRICAL CONNECTION

NOTE: Junction box supplied is suitable for internal use and below roof installation (inside the building)

- Cut the roof flashing on the 240/255 marking and fit to the rigid duct before commencing (see separate installation sheet detailing this).
- For below roof terminations the motor lead exit hole should be as far down the rigid duct as is practical – allow enough lead to protrude from the duct as is required for termination. After fitting the roof flashing, drill an 8mm hole at a suitable point in the rigid duct and fit the supplied rubber grommet. The motor lead can then be passed through the grommet to the outside of the rigid duct.
- The assembly can now be placed in position in the roof penetration (see instructions on page 3). Once the assembly has been fastened to the roof by the roof flashing fastening procedure, the electrical connections can be made. The junction box can be fastened to the rigid duct if necessary.



Fig 1



Fig 2

Junction box is supplied for the following cowls and kits with an inline centrifugal fan: FAN2120 / FAN2122

Junction box is supplied for the following cowls and kits with an inline high performance centrifugal fan: FAN2121 / FAN2123

- You may find it more convenient to pull the whole assembly down as far as possible in the roof flashing to carry out the terminations (Fig 1). Once completed, the assembly can then be pushed back up through the Dektite. Ensure that a visual check is made above the roof afterwards to check that the roof flashing is sealing correctly around the rigid duct (Fig 2). Once the terminations are completed the rigid duct can then be fastened to a rafter or purlin with the supplied clamp for rigidity. Ducting connections can then be made.
- Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.

TECHNICAL



Duct (mm)	Fan Type	Max. Fan Watts (W)	Max. Fan Pressure (Pa)	Free Air Fan Performance		Specific Fan Power (W/l/s)	Sound dB(A)	Switching
				(l/s)	(m ³ /hr)			
250	Centrifugal	75	300	178	640	0.42	72	Standard
	Centrifugal (high performance)	135	545	265	954	0.51	70	Standard

REGULATIONS AND STANDARDS

New Zealand Building Code and Healthy Homes

The following two category requirements have been established for mandatory extraction ventilation in New Zealand.

The New Zealand Building Code for New Building Consents

The building regulatory system sets out a framework to promote good quality decisions being made during the Building Consent process. The legislation and regulations work together, as the building regulatory system. The functional clauses of the NZ Building Code are grouped and described by a letter and number. Clause G of the NZ Building Code covers services, with G4 setting out the performance requirements for ventilation. The Building Code is enshrined in law. The New Zealand Building Code, G4, has been changed. This is supported by Acceptable Solution G4/AS1 Fourth Edition that specifies mechanical ventilation in accommodation units that contain cooktops, showers and baths.

Residential Tenancy Regulations to the Healthy Homes Standards

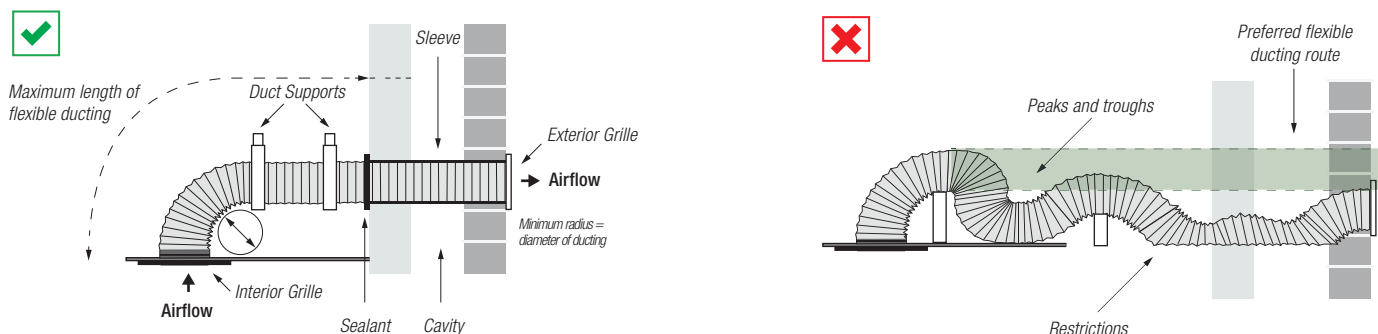
Residential Tenancy Regulations for rental properties only is changing to the Healthy Homes Standards, sub part 4 - Ventilation Standards.

Complying with the Acceptable Solution G4/AS1

To comply, the mandatory mechanical extract system must deliver minimum airflow rates for the complete installed ventilation system. This means that airflow rates must deliver the airflow after resistance of the ducting, internal and external grilles, as well as all other accessories, such as backdraught shutters, are included.

Fan selection is important as some types are far better at overcoming ducting system pressure drops.

Additionally, the quality of the ducting system installation can be all important. Rigid duct systems (see page 102) are best as they are the most efficient. Good installation practice is vital for flexible duct systems.



Choosing the Right Fan to Comply

Fans cannot be selected on the basis of free-air performance only. Fans must now be selected on the basis of the complete installed system performance for a designated room as per the table below.

Room	Airflow Rate (min.)	
	Intermittent	Continuous
Toilet ¹⁾	25 l/s	10 l/s
Bathroom/shower	25 l/s	10 l/s
Laundry ²⁾	40 l/s	-
Kitchen	50 l/s	12 l/s

1) Toilets only require ventilation if they have no openable windows

2) Simx recommends 40 l/s for laundries with unvented non-condensing tumble dryers as covered in AS 1668: Part 2 2012

Recent unregulated extract fan practices in New Zealand has trended to basic, low pressure axial fan products, as installed system performance has not been defined for independent inspection testing and compliance signed off by local authorities.

Bathroom

25 l/s

		Metres of Ducting									
		1	2	3	4	5	6	7	8	9	10
No. of Bends	1	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC
	2	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC
	3	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC
	4	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC	Hyper150 EC
	5	Mixflo 150	Mixflo 150	Mixflo 150	Mixflo 150	Mixflo 150	Mixflo 150	Mixflo 150	Mixflo 150	Mixflo 150	Mixflo 150

Fan Selection

Hyper150 EC

Mixflo 150

Kitchen

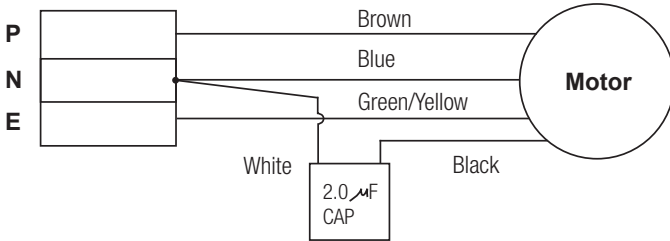
50 l/s

		Metres of Ducting									
		1	2	3	4	5	6	7	8	9	10
No. of Bends	1	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet
	2	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet
	3	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet
	4	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet
	5	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet	Blue Jet

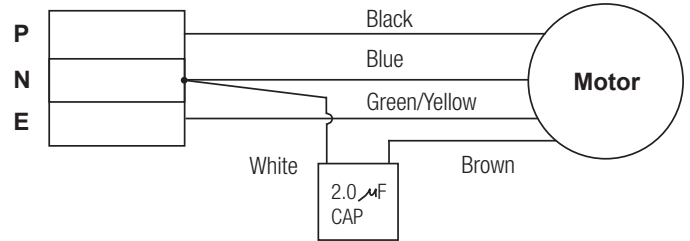
Blue Jet

WIRING CONNECTIONS

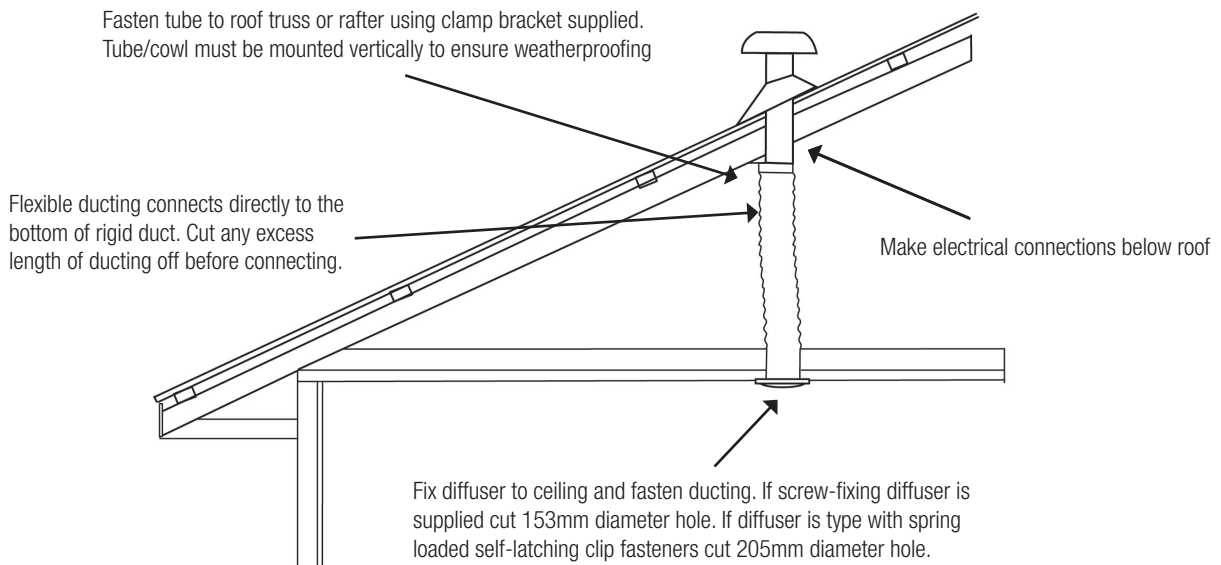
For inline centrifugal fan models:
FAN2120 / FAN2122



For inline high performance centrifugal fan models:
FAN2121 / FAN2123



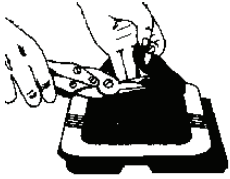
TYPICAL INSTALLATION



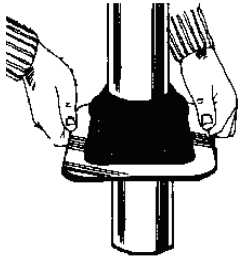
NOTE

- The roof flashing supplied is not suitable for fitting directly on to tiled roofs.
- As per the E2 Building Code, a roof soaker flasher plate is required for roof penetrations greater than 60mm diameter. Please refer to E2 Building Code for more details.

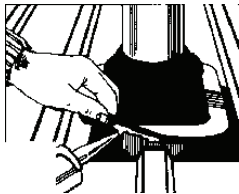
ROOF INSTALLATION



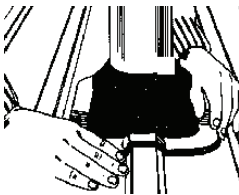
Cut the large roof flashing sleeve where indicated on the sleeve for the relevant tube size: 240/255mm



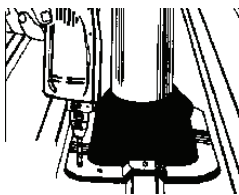
Slide the roof flashing down over the tube. Water can be used as a lubricant.
Position the top end of the tube into the cowl.
The top edge should sit 20mm inside the cowl.
Drill through the three pilot holes and screw the cowl to the tube.



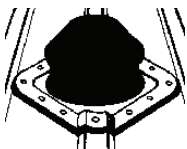
You can now proceed to the actual roof installation.
Cut a 280mm diameter hole in the roofing with minimal clearance for the tube.
Insert the tube through the hole.
Apply a neutral cure silicon sealant on the underside of the flange.
Turning the flexible flange back makes this simple.



Press the roof flashing into the contours of the roof configuration.



Fasten the roof flashing to the roof using the tek screws supplied.
Drill a 5mm clearance hole in the flange for each screw.
The screws can be driven into the roof without the need for a pilot drill hole.
Fit the screws progressively outward in opposing pairs to avoid gaps in the seal.



In certain applications it may be advantageous to install the flashing on the **diamond** or bias.
This particular installation method is especially suitable when having to seal enlarged holes, for penetrations on steep pitched roofs.

FAN INSTALLATION



Drill a hole on the flat, round indent at the bottom of the tube to pass cable from inside the tube.

Reseal hole around the cable as required.



Place the fan (or cowl) onto the top of the tube.

The airflow direction can be reversed depending on whether it is required to extract or supply, air comes out from the fan, as indicated (9) directional arrow is label.



Bring the cable up to the top from inside the tube.



Rest the cable on the groove on the edge of the lip, and gently place the cowl onto the top of the tube.



Alternatively, use the small roof flashing to run the cable through the roof panels at a suitable location.



If required, cut all the way down the flashing to pass cable through



Crimp metal clips onto the lip of the flashing to reseal.



Fit the small roof flashing in the similar fashion to the large one.



Secure the fan onto the tube using the screws provided.

Place the cowl onto the fan housing, and secure using the 5 long screws provided.

