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VENTILATION UPDATE NCC COMPLIANCE 2019

WHAT IS THE NCC



The **National Construction Code (NCC)** provides the minimum necessary requirements for safety and health; amenity and accessibility, and sustainability in the design, construction, performance and livability of new buildings (and new building work in existing buildings) throughout Australia. It is a uniform set of technical provisions for building work and plumbing and drainage installations throughout Australia whilst allowing for variations in climate and geological or geographic conditions.

WHY THE NCC 2019 COMPLIANCE IS SO IMPORTANT



The 2019 revision of the **National Construction Code (NCC)** has introduced changes to the way that ventilation systems exhaust air into roof spaces. The ventilation of roof spaces now has a performance measure that must be met to mitigate the affect of damp air being exhausted into these spaces. The changes in the NCC may require a change in installation practices.

3.8.7.3 FLOW RATE AND DISCHARGE OF EXHAUST SYSTEMS:

- a.** An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of—
 - i.** 25 L/s for a bathroom or sanitary compartment; and
 - ii.** 40 L/s for a kitchen or laundry.

- b.** Exhaust from a bathroom, sanitary compartment, or laundry must be discharged—
 - i.** directly or via a shaft or duct to outdoor air; or
 - ii.** to a roof space that is ventilated in accordance with 3.8.7.4.

3.8.7.4 VENTILATION OF ROOF SPACES:

- a.** Where an exhaust system covered by 3.8.7.3 discharges into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings.

- b.** Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is more than 22°, or 1/150 of the respective ceiling area if the roof pitch is not more than 22°.

NEW FAN REGULATIONS

FLOW RATE AND DISCHARGE OF EXHAUST SYSTEMS



BATHROOMS

The regulations require a fan capable of a minimum extraction capacity of **25 litres per second** when installed.



KITCHENS

The regulations require a fan capable of a minimum extraction capacity of **40 litres per second** when installed.



TOILETS

The regulations require a fan capable of a minimum extraction capacity of **25 litres per second** when installed.



LAUNDRIES

The regulations require a fan capable of a minimum extraction capacity of **40 litres per second** when installed.

VENTILATION OF ROOF SPACES



The roof space must be ventilated to outdoor air through evenly distributed openings.

COMPLIANCY HPM RANGE

FLOW RATE REQUIRED BY THE NCC 2019

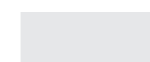
NCC REQUIREMENT	L/s	Equivalent in m³/h
Bathroom or Sanitary compartment	25	90
Kitchen or Laundry	40	144

HPM INLINE EXHAUST FANS

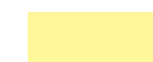
HPM INLINE EXHAUST FANS	DUCT SIZE MM	2M HORIZONTAL DUCTING (1M/SIDE)		5M HORIZONTAL DUCTING (2.5M/SIDE)		3M VERTICAL DUCTING (1.5m/side)		6M VERTICAL DUCTING (3m/side)	
		L/s	Equivalent in m³/h	L/s	Equivalent in m³/h	L/s	Equivalent in m³/h	L/s	Equivalent in m³/h
EFIL100 Speed 1	100	28	100	25	90	24	85	20	72
EFIL100 Speed 2	100	35	125	32	115	30	106	26	92
EFIL150 Speed 1	150	86	310	75	270	78	279	68	243
EFIL150 Speed 2	150	108	390	93	335	98	351	84	302

HPM DUCTED EXHAUST FANS

HPM DUCTED EXHAUST FANS	DUCT SIZE MM	3M HORIZONTAL DUCTING		6M HORIZONTAL DUCTING		3M VERTICAL DUCTING		6M VERTICAL DUCTING	
		L/s	Equivalent in m³/h	L/s	Equivalent in m³/h	L/s	Equivalent in m³/h	L/s	Equivalent in m³/h
EFD01 SERIES	150	69	250	63	225	66	238	56	203
BH SERIES	150	50	180	45	162	48	171	41	146
R621D1	100	44	160	33	120	38	136	27	96



Compliant with NCC



Below compliance measurement

INLINE FAN – EFIL SERIES

CEILING EXHAUST FAN - EFD01 SERIES



EFD01 Series

R621D1

Performance: EFIL100

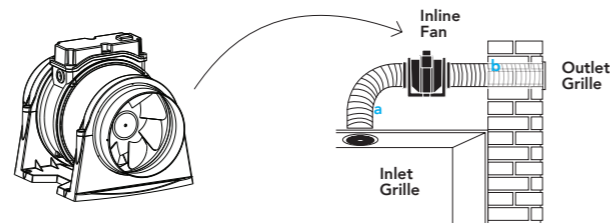
Speed I 90 m³/h with 5m horizontal or downward ducting

Speed II 115 m³/h with 5m horizontal or downward ducting

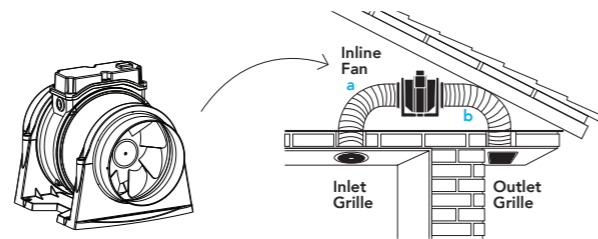
(length of ducting a+b)

INSTALLATION EXAMPLES

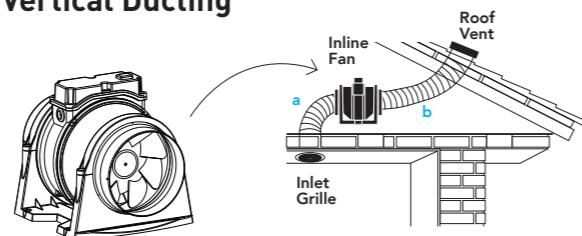
Horizontal Ducting



Downward Ducting



Vertical Ducting*



NOTE: Vertical ducting with roof vents may result in reduced fan performance, increased noise and condensation/dripping.

Performance: EFD01 Series

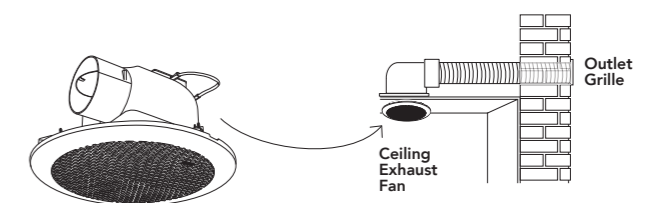
250 m³/h with 3m horizontal ducting

Performance: R621D1

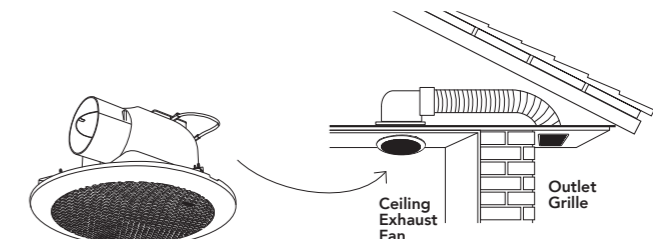
160 m³/h with 3m horizontal ducting

INSTALLATION EXAMPLES

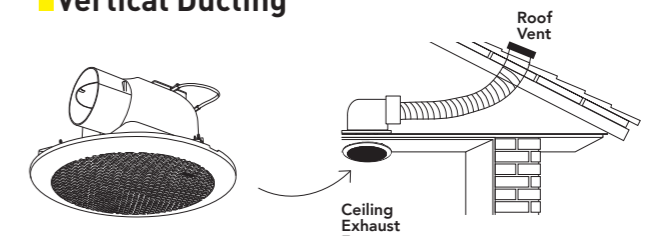
Horizontal Ducting



Downward Ducting



Vertical Ducting



NOTE: Vertical ducting with roof vents may result in reduced fan performance, increased noise and condensation/dripping.

INSTANT HEAT CEILING EXHAUST FAN BH SERIES

ROOF OR EAVE VENTILATION WITH COMBINATION OF EXHAUST FANS WITH ONE INLINE FAN



BH2DWE



BH4DWE

Performance: BH2DWE

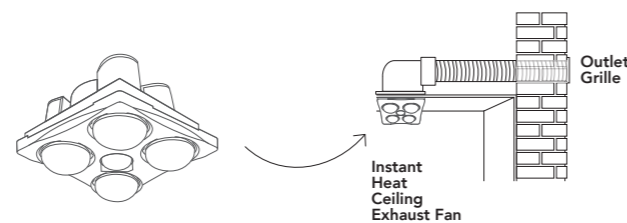
180 m³/h with 3m horizontal ducting

Performance: BH4DWE

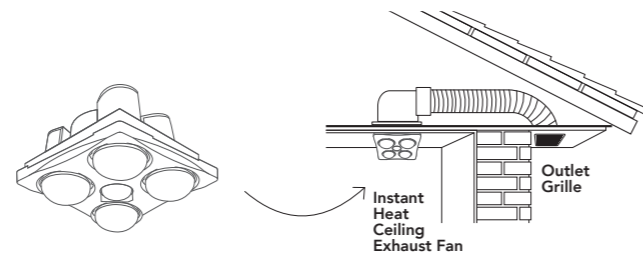
180 m³/h with 3m horizontal ducting

INSTALLATION EXAMPLES

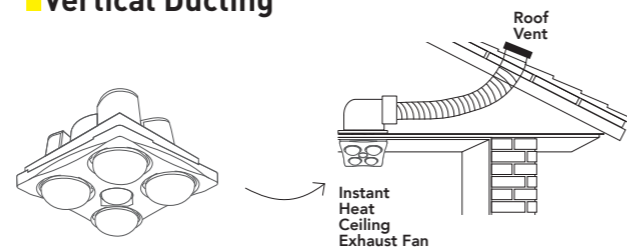
Horizontal Ducting



Downward Ducting



Vertical Ducting



NOTE: Vertical ducting with roof vents may result in reduced fan performance, increased noise and condensation/dripping.



EFD01 Series

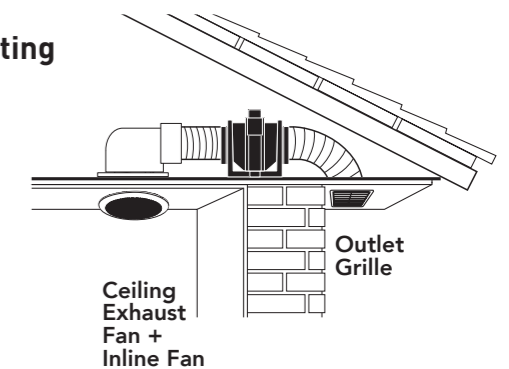
R621D1

INSTALLATION EXAMPLES

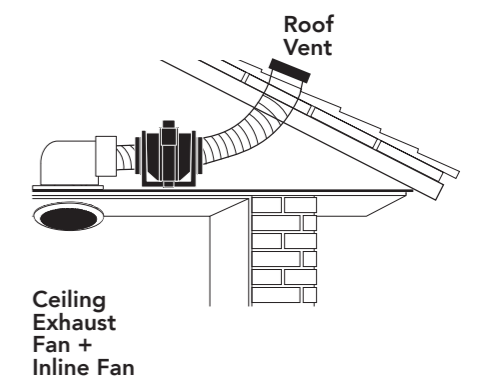
Combination 1 Ceiling Exhaust fan + 1 Inline Fan

Optimum Performance

Downward Ducting



Vertical Ducting



NOTE: Vertical ducting with roof vents may result in reduced fan performance, increased noise and condensation/dripping.

WHY VENTILATION IS SO IMPORTANT

It is important to understand what contributes to poor indoor air quality and the potential affects and harm that can be caused by poor ventilation in a home. Poor ventilation can cause a number of problems such as condensation, mould, allergies, dust mites and air pollutants (odours). These can potentially lead to structural building issues and health problems for residents. A properly ventilated home can create a safe, comfortable and healthier environment.



MOISTURE that is not properly ventilated can cause mildew and mould formation, which can potentially lead to structural and health problems. Exhaust ventilation solutions from HPM remove humidity at the source to help maintain the optimal humidity balance of 40 to 60 percent.



OFF-GASSING from construction materials, carpeting, adhesives and synthetic materials—as well as solvents from common household cleaners—can accumulate in tightly built homes.



PARTICULATES from dust, allergens, pet dander, and more can contribute to poor indoor air quality. This can lead to 100 times dirtier air than the air outside. With a properly ventilated home, you can create a more enjoyable, comfortable, and healthier environment.



COOKING EFFLUENTS from food preparation can infiltrate the whole house in minutes. Grease, oils and aromas settle permanently into carpets, furniture, clothing and other surfaces. Kitchen ventilation solutions help eliminate cooking effluents for a cleaner, more comfortable and healthier environment.

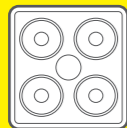
VENTILATION SOLUTIONS FOR EVERY ROOM



IN-LINE EXHAUST FAN

Inline fan is designed to extract steam and odours from a bathroom and expel it to the exterior through an eave outlet.

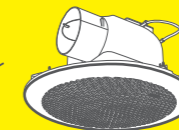
EFIL100SQWE, EFIL150SQWE, EFTIL150SQWEKIT



INSTANT HEAT – DUCTED

2 or 4 lamp ducted centrifugal exhaust fans and light

BH2DWE, BH4DWE



CEILING EXHAUST FANS DUCTED

Ducted centrifugal fan

EFD01RDWE, EFD01RDMS, EFD01SQWE, EFD01RDWEKIT

