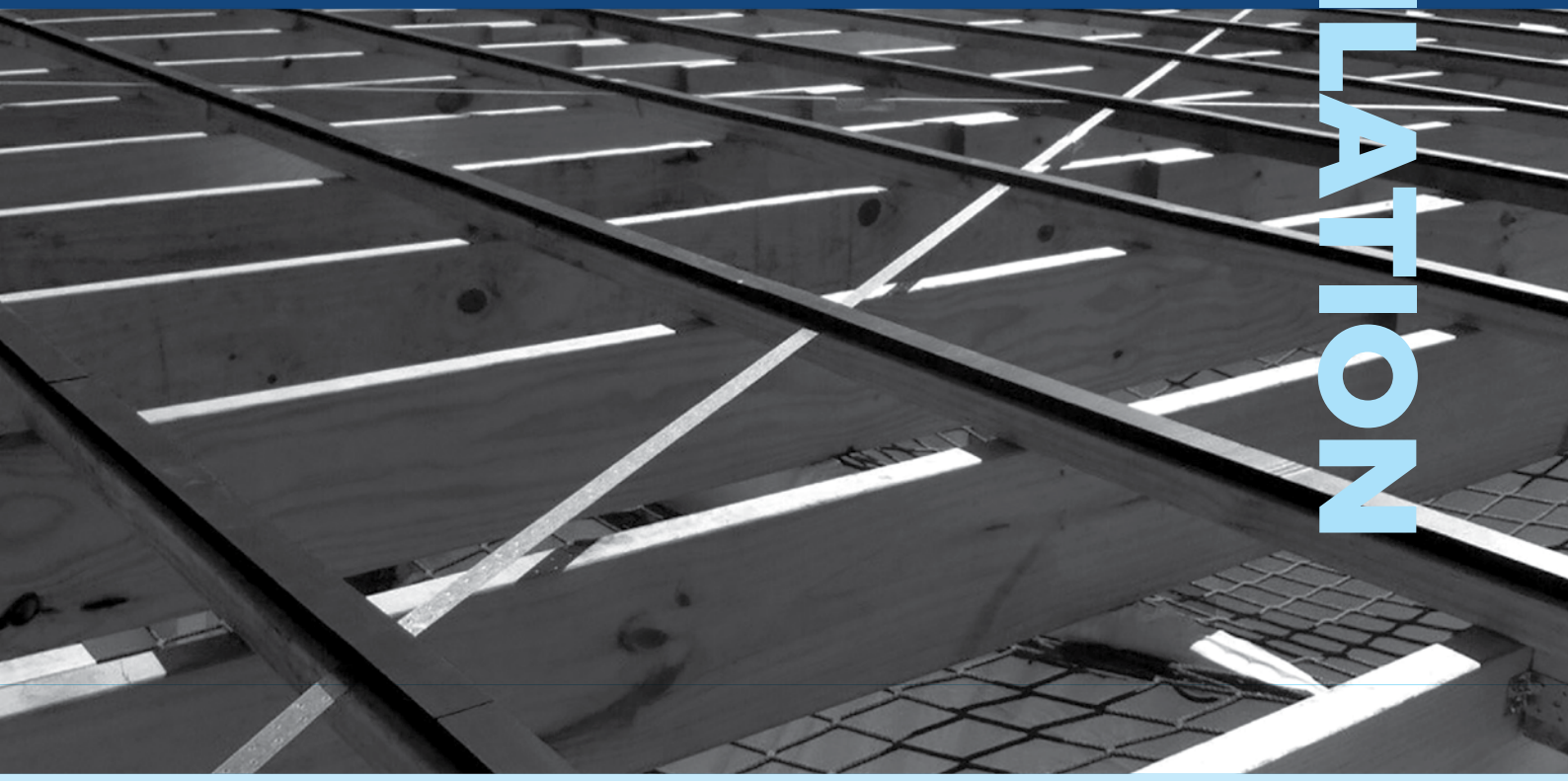
PASSIVE VENTILATION SYSTEMS

Reducing the risk of internal moisture with **VENT.**

MARCH 2021



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Please note: Products highlighted in various colours for illustration purpose only and not the actual colour of final product.

INTERNAL MOISTURE

Research shows that internal moisture & condensation in the roof space is a widespread and growing problem across New Zealand. With a continued focus on weather tightness, heating and insulation, it is more essential than ever that passive or natural ventilation is incorporated into building design.

Passive ventilation is a natural ventilation system that makes use of natural forces, such as wind and thermal buoyancy, to circulate air to and from an indoor space. These ventilation systems work to regulate the internal air temperature as well as bring fresh air in and send stale moist air out of the building envelope.

Moist building products, temperature variations (dew points), and occupancy behaviour - which are all sources of internal moisture and are largely unavoidable - can be easily managed. As a result, the risk of issues such as toxic moulds, structural building decays, saturated insulations and excessive heat build up can be mitigated by implementing passive ventilation.

APPLYING PRODUCT COMBINATIONS AND PRODUCTS

Based on tried and tested international best practice and now with a proven history of use dating back to 2015, VENT airflow calculations are determined by the pitch and design of the roof. There are a variety of product options & combinations which will provide passive ventilation requirements for new build & existing homes, schools and commercial buildings. Products must be used in combination as recommended in VENT technical details to ensure that essential calculated, continuous and unimpeded passive ventilation is achieved.

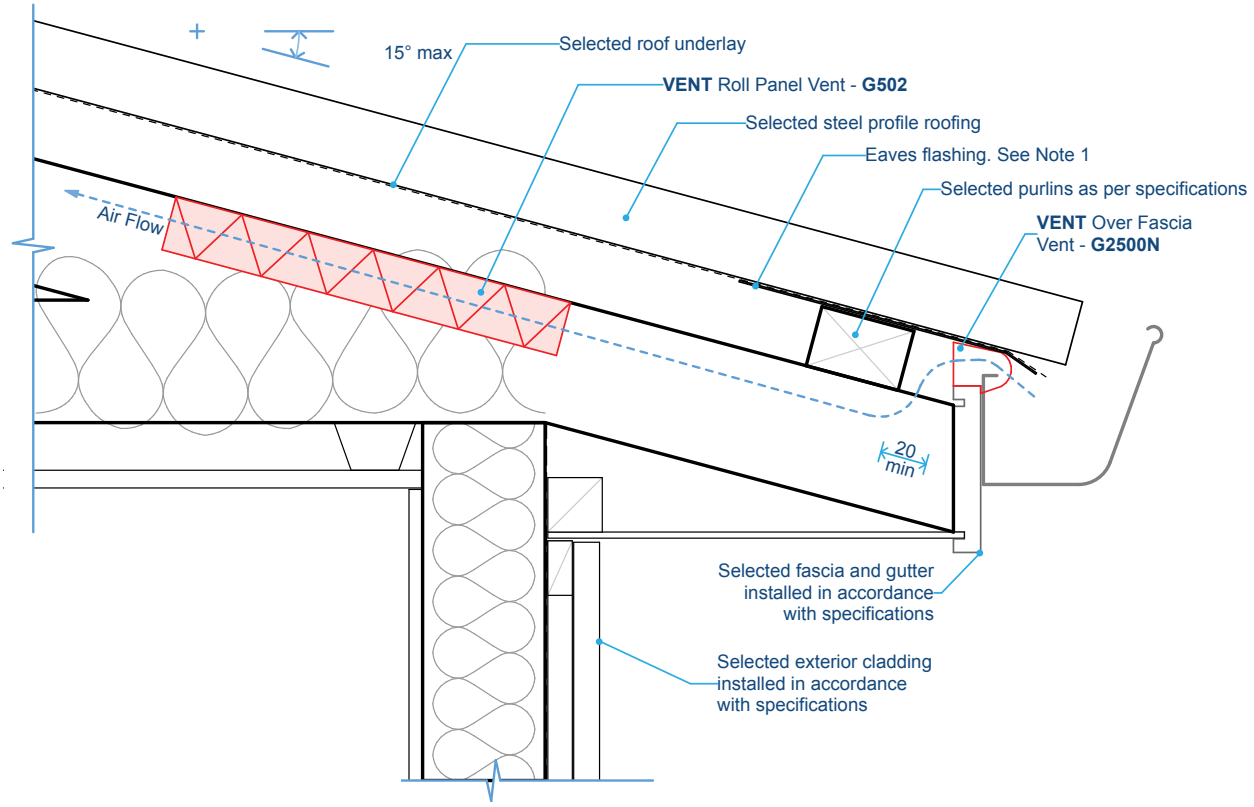
Disclaimer: VENT airflow recommendations detailed in this brochure are for traditional or skillion roof designs. Product placements and airflow rates may differ for warm roof or passive house design.

Recommended airflow is determined according to the pitch and the type of roof:

- Trussed Roof Pitches >15° require a calculated airflow of 10,000mm² per linear metre (or 1:300)
- Trussed Roof Pitches >30° require a calculated airflow of 10,000mm² per linear metre (or 1:300)
- Trussed Roof Pitches <15° require a calculated airflow of 25,000mm² per linear metre (or 1:150)
- Skillion Roof Pitches any degree pitch require a calculated airflow of 25,000mm² per linear metre (or 1:150)

Disclaimer: VENT ventilation recommendations are ideal for metal or concrete tiled roofs >5°.

VENT OVER FASCIA VENT G1200N / G2500N



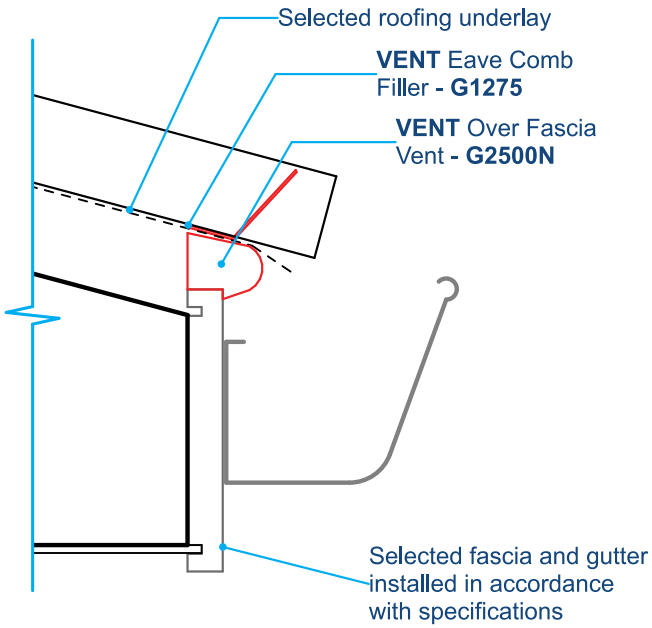
VENT Over Fascia Vents are the most practical and cost efficient method of ventilating the eaves. They are easy to install, discrete and are compatible with either timber or metal fascias. Over fascia vents are the only method of achieving eaves ventilation to buildings with no eaves or soffit.

The **G1200N & G2500N VENT Over Fascia Vents** are designed to discreetly ensure a positive airflow of 10,000mm^2 (or 1:300) and 25,000mm^2 (1:150) per linear metre, respectively, into the roof space between the roof membrane and the fascia board. This product is ideal for new build and re-roofing situations.

The application of either the **G1200N** or **G2500N** will depend on the pitch and design of roof construction. The **G1200N & G2500N** are designed with 4mm evenly spaced openings specifically sized to prohibit large insects gaining access but wide enough to prevent capillary action.

The **G1200N & G2500N** are to be used in conjunction with other specified VENT products, if unimpeded ventilation through the roof cavity is to be achieved. A minimum of 20mm gap between the bottom purlin and **Over Fascia Vent** must be realised for air flow into the roof cavity. For all skillion roof situations the **VENT G2500N** should be specified.

VENT EVES COMB FILLER G1275

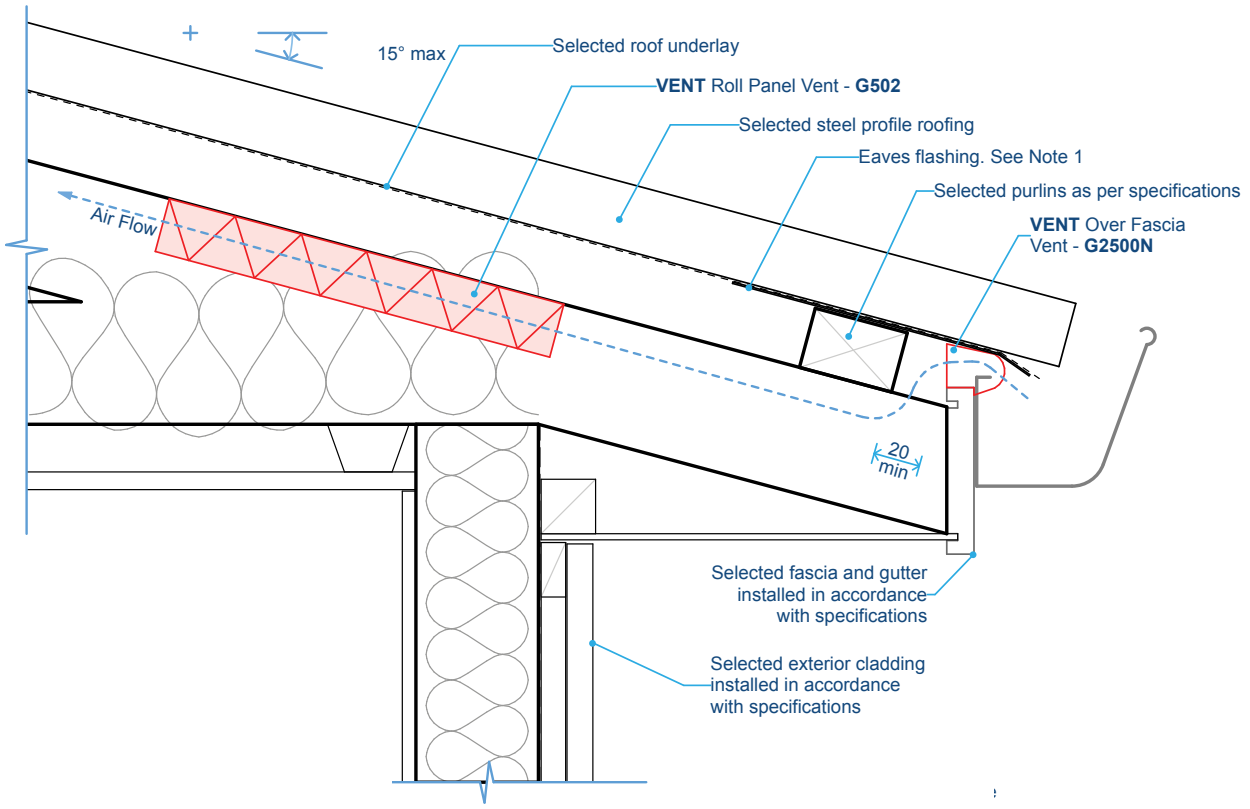


The **VENT Eaves Comb Filler G1275** is designed with flexible fingers which adjust to fill the gaps left when using profiled tiles or steel roof cladding. This prevents entry by birds and large insects beneath the tiles.

The **G1275** eliminates the need to make or buy expensive purpose made profiled fillers that can block necessary airflow above roofing underlays, and that can trap any internal moisture in the roof spacing between underlay and roof cladding.

The **G1275** can easily be applied in conjunction with **VENT Over Fascia Vents** or directly to metal or timber fascias. It is an excellent product for residential, commercial or school buildings.

VENT ROLL PANEL VENT G502

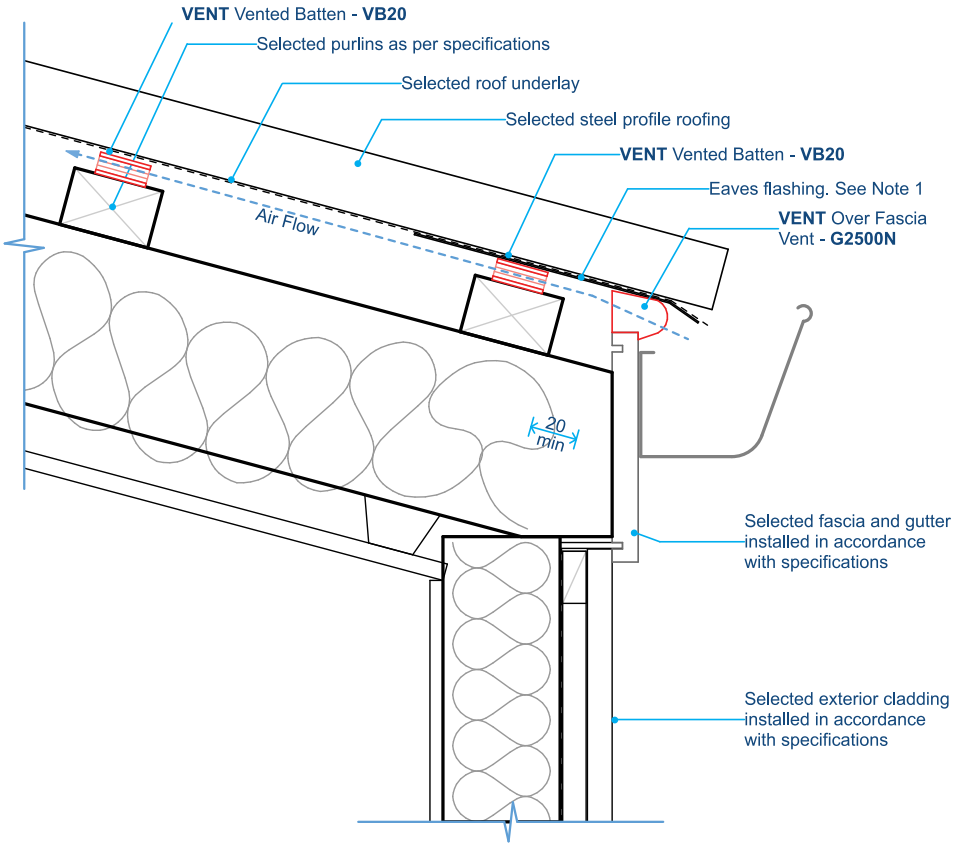


The **VENT Roll Panel Vent G502** is designed to ensure compliance with NZS4246-2016.6.2.10 by creating a 25mm air gap between the top of the insulation and the underside of the roofing underlay to ensure unimpeded airflow through the eaves into the roof cavity. With the **Roll Panel Vent** ensuring sufficient airflow, insulation batts can then be compressed into the eaves, above the wall plate with no gaps or stepped down layers. By applying the **G502** studies have shown that heat loss can be prevented by between 5% to 35%.

The **G502** castellated profile is easy to install laid across the top of the roof trusses/rafters, parallel with the eaves level for new build projects, and is able to be easily trimmed down and installed from within the roof cavity on retrofit projects.

The **G502** is to be used in conjunction with soffit or over fascia vents to create a complete roof ventilation system.

VENT VENTILATED CAVITY BATTEN
VB20 ROOF



The **VENT Ventilated Cavity Batten - VB20 Roof**, is a strong, durable purlin cavity batten that is designed to ensure that unimpeded airflow of 16,000mm^2 per linear metre is guaranteed through the roof cavity of a skillion roof design, enabling passive airflow around the entire building envelope.

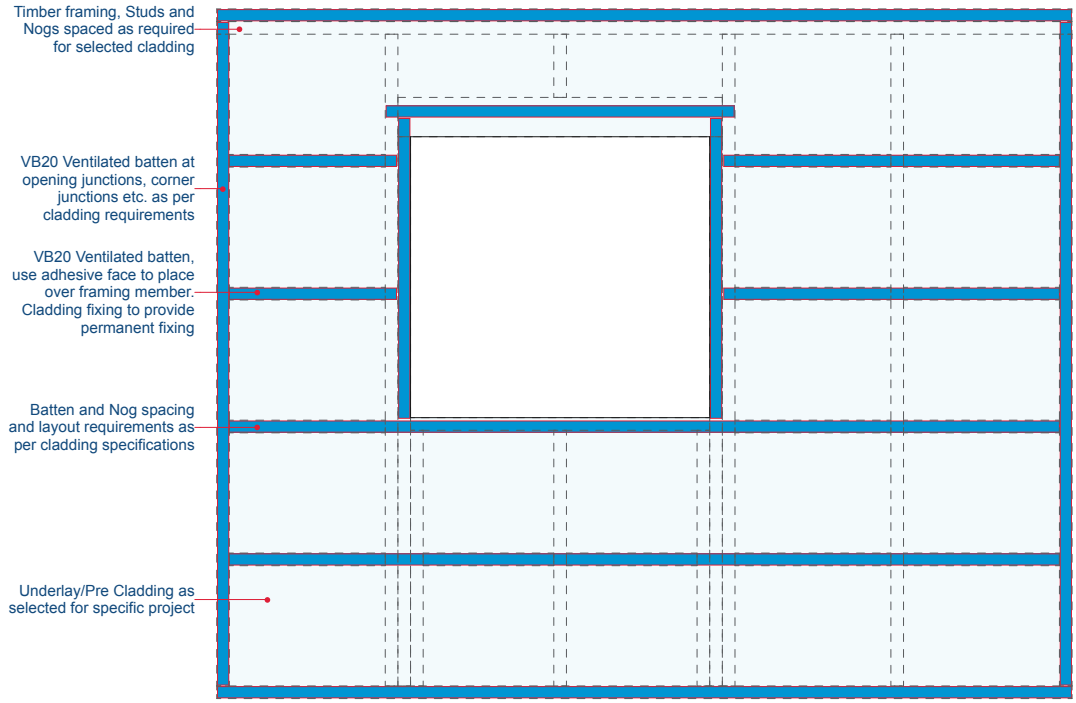
The **VB20** complies with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2 & 3

The **VB20** can easily be reduced to create 10mm or 15mm cavity battens.

The **VB20** is designed with 4mm evenly spaced openings specifically sized to prohibit large insects gaining access but wide enough to prevent capillary action. The **VB20** is easy to install and comes with an adhesive underside for ease of temporary fixings to metal or timber purlins.

The **VB20** is to be used in conjunction with other specified VENT products, if impeded ventilation through the roof cavity is to be achieved.

VENT VENTILATED CAVITY BATTEN
VB20 WALL



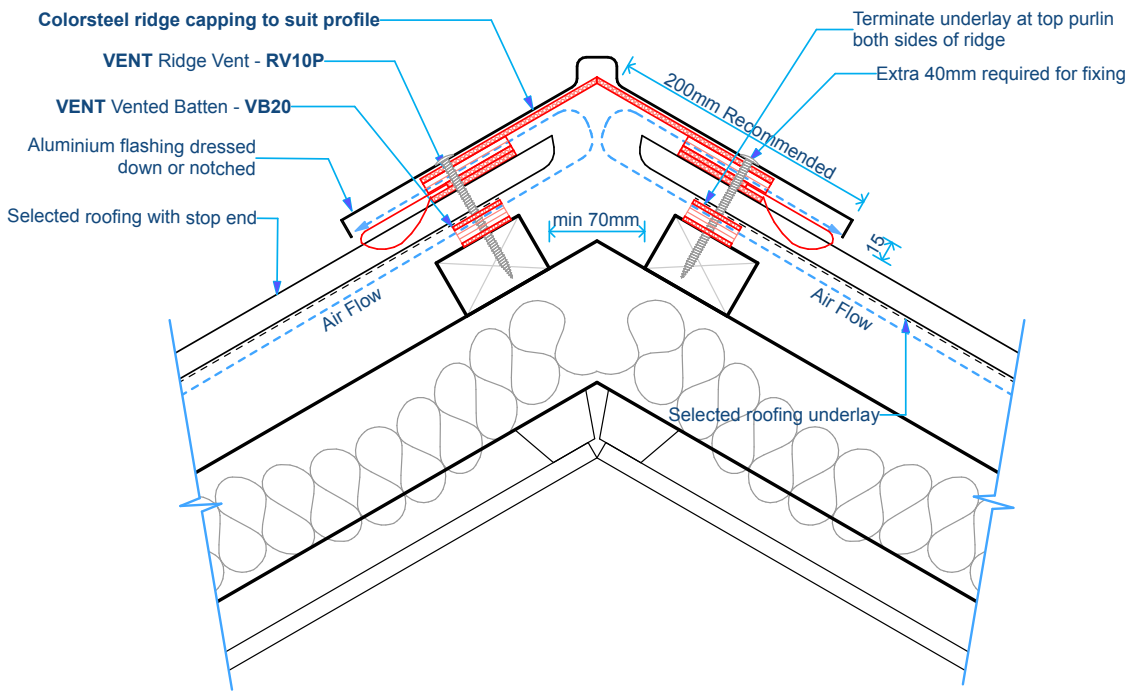
The **VENT Ventilated Wall Cavity Batten – VB20 Wall**, is the ideal product to create a 20mm cavity for ventilation and drainage in walls for both residential and commercial buildings. The **VB20** is designed for use as a non-structural cavity batten in cavity-based wall cladding systems and can be installed continuously in horizontal and vertical positions.

The **VB20** complies with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2 & 3

The **VB20** can easily be reduced to create 10mm or 15mm cavity battens.

The **VB20** is designed with 4mm evenly spaced openings specifically sized to prohibit large insects gaining access but wide enough to prevent capillary action. When installed horizontally and continuously, the **VB20** provides vermin proofing to the bottom of the drained cavity. If a durable life of more than 15 years is required, vermin proofing must be installed at the base of the cavity.

VENT RIDGE VENT RV10P/RV10DT



The **VENT Ridge Vent** is designed to release warm air from the roof void using the natural convection of rising warm air or by means of negative pressure created by wind blowing over the roof.

The **RV10P & RV10DT** have an adhesive and flexible aluminium flashing which forms to roofing profiles, preventing water ingress on any pitch roof

NOTE: for deep trough or trapezoidal profiles 'snipping' or 'crimping' of the soft edge may be required.

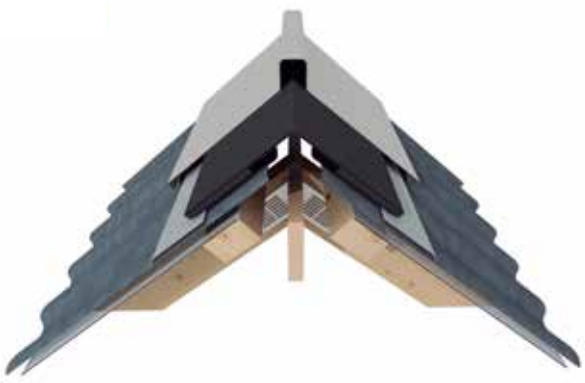
The **RV10P & RV10DT** both form part of a passive ventilation system that works year round with no moving parts or energy consumption.

The **RV10P** is designed to be compatible with roof cladding profiles with a trough depth of <34mm.

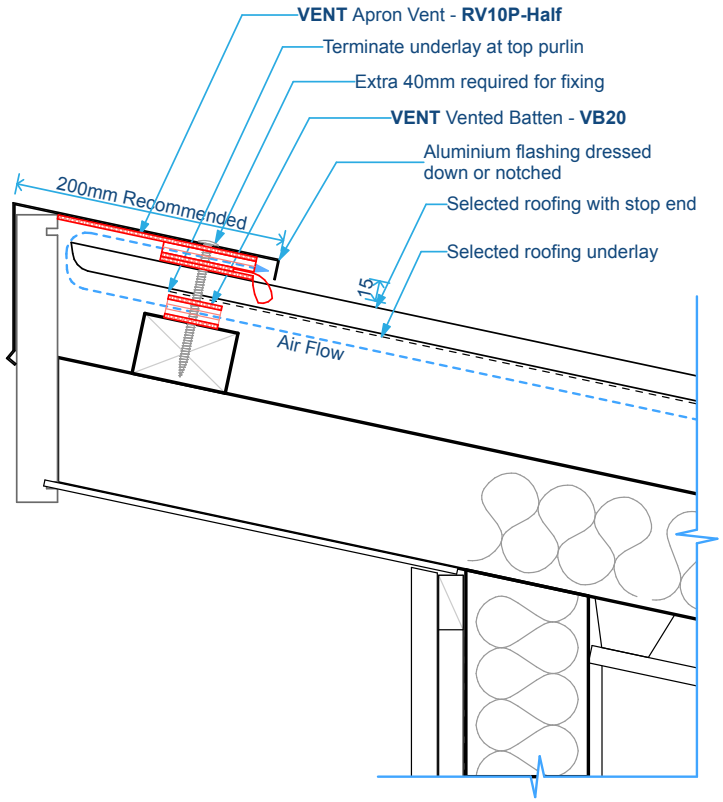
The **RV10DT** is designed to be compatible roof cladding profiles with a trough depth of >34mm.

The **RV10P** and **RV10DT** are to be used in conjunction with other specified VENT products, if unimpeded ventilation through the roof cavity is to be achieved.

The metal ridge cap is supplied by the roof cladding supplier. The capping can be extended to 200mm to hide the soft edge flashing, if required.



VENT APRON BATTEN
RV10P HALF/RV10DT HALF



The **VENT Apron or Barge Vent** is created by simply cutting the **VENT Ridge Vent** in half which creates the perfect ventilation product for both abutment or mono pitch barge details. The vents are designed to release warm air from the roof void using the natural convection of rising warm air or by means of negative pressure created by wind blowing over the roof.

The **RV10P Half & RV10DT** Half have an adhesive and flexible aluminium flashing which forms to roofing profiles, preventing water ingress on any pitch roof.

NOTE: for deep trough or trapezoidal profiles 'snipping' or 'crimping' of the soft edge may be required.

The **RV10P Half & RV10DT Half** both form part of a passive ventilation system that works year round with no moving parts or energy consumption.

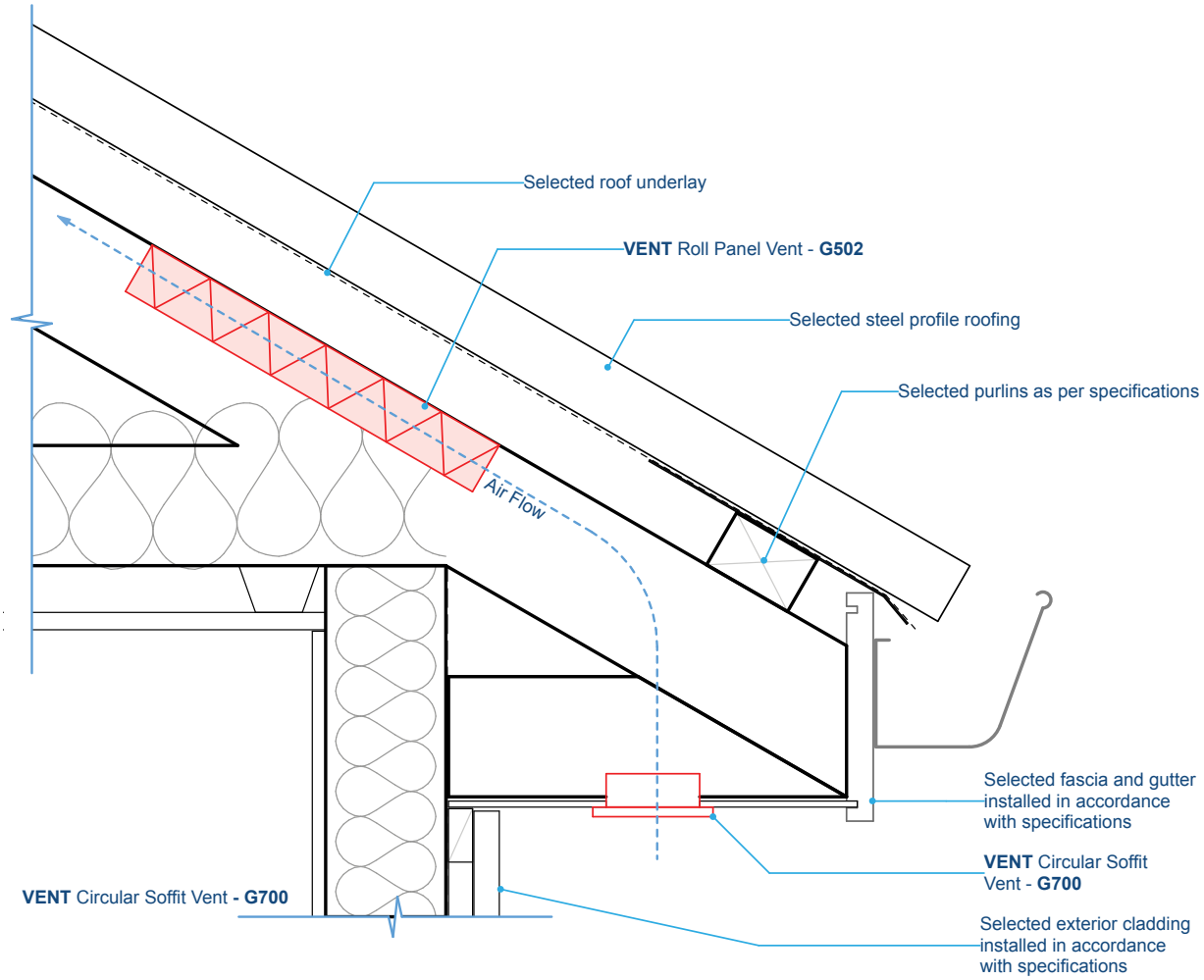
The **RV10P Half** is designed to be compatible with roof cladding profiles with a trough depth of <34mm.

The **RV10DT Half** is designed to be compatible roof cladding profiles with a trough depth of >34mm.

The **RV10P Half** and **RV10DT Half** are to be used in conjunction with other specified VENT products, if unimpeded ventilation through the roof cavity is to be achieved.

The metal barge or apron flashings are supplied by the roof cladding supplier. The flashings can be extended to 200mm to hide the soft edge flashing ,if required.

VENT CIRCULAR SOFFIT VENT G700

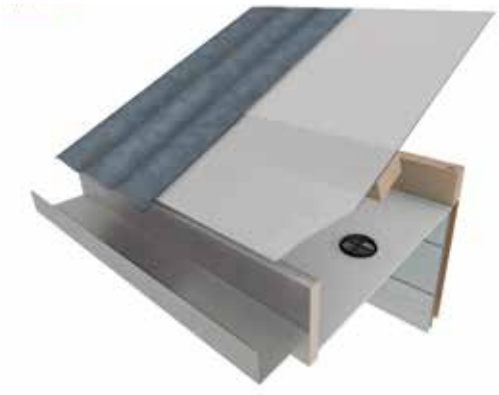


The **VENT Circular Soffit Vent G700** is designed to provide passive airflow into the roof cavity to reduce the risk of moisture build-up.

G700 Vents can be utilised for new build & refurbishment projects. They are an easy retro fit solution for existing soffits on both skillion and trussed roof designs with condensation problems. Standard fixing for this product is a simple push twist action into a 70mm hole drilled in the soffit board.

The **G700** are designed with 4mm evenly spaced openings specifically sized to prohibit large insects gaining access but wide enough to prevent capillary action. The **G700** comes in white, black or brown.

The **G700** is to be used in conjunction with other specified VENT products, if unimpeded ventilation through the roof cavity is to be achieved.

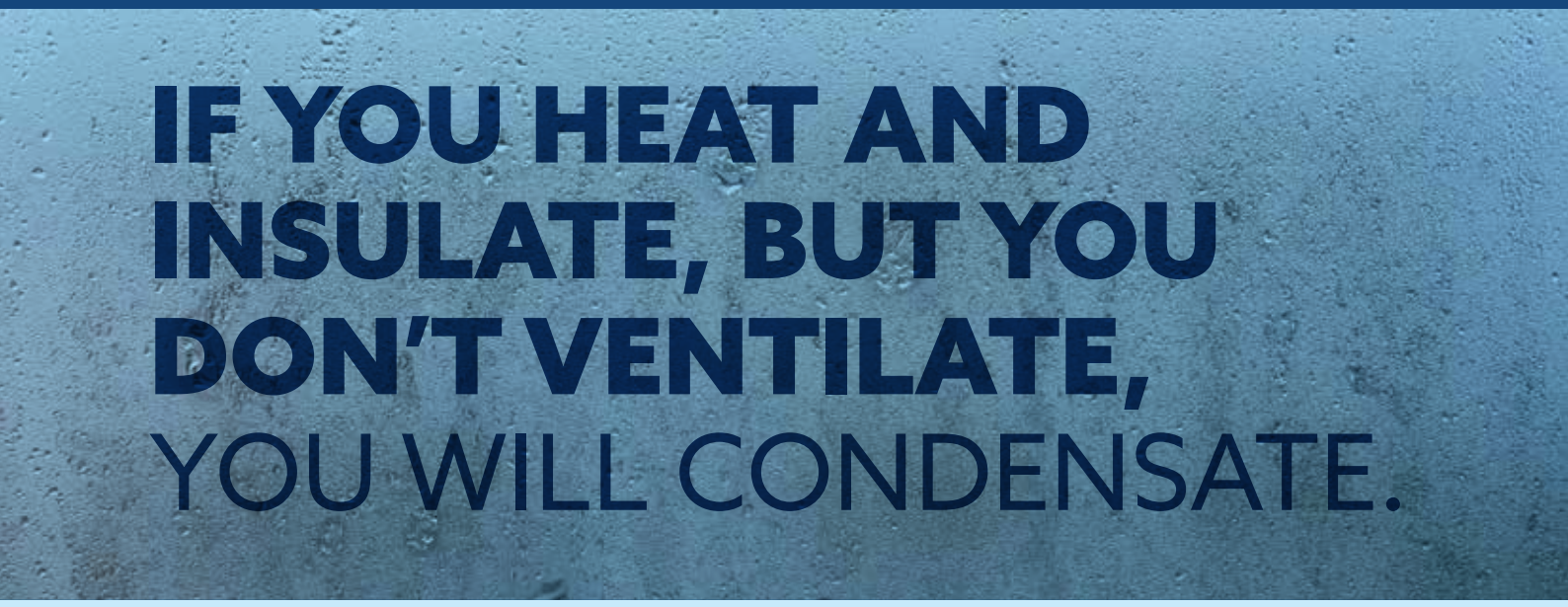


VENT

EXPERTS IN PASSIVE VENTILATION.

VENT is New Zealand's leading specialist in the supply of passive ventilation systems and products. VENT was created as a direct result of the misconception that the 'Leaky Homes' disaster that gripped New Zealand was caused solely by external moisture penetration and product failure. The pre-occupation with making homes increasingly more weather tight without incorporating balanced ventilation into the design over the last few decades has prevented our buildings from breathing . Without a combination of balanced and passive ventilation houses are increasingly susceptible to the risk of internal moisture and associated issues.

VENT systems are specifically tailored for New Zealand buildings and our extreme climatic conditions. VENT products have a proven history of use and are tried, tested and designed to avoid compromising the thermal envelopes of our buildings. It is VENT's mission to see the quality of New Zealand buildings improve significantly by simply allowing our buildings to breathe again. It is essential that buildings achieve balanced airflow through both the habitable and non habitable areas of the building before they can start to be considered as a healthy home, a healthy working environment or a healthy learning environment.



VENT
PASSIVE VENTILATION

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