CCMC CANADIAN CODE COMPLIANCE EVALUATION

CCMC EVALUATION

CCMC 14083-R

CCMC Canadian code compliance evaluation

CCMC number:	14083-R
Status:	Active
Issue date:	2018-01-26
Modified date:	2022-06-16
Evaluation holder:	**GAF** 1 Campus Drive Parsippany NJ 07054 United States Website: www.gaf.ca Telephone: 855-492-8085
Product names:	• Cobra® Exhaust Vent • Cobra® Ridge Runner® Exhaust Vent • Cobra® Snow Country Advanced™ Exhaust Vent • Cobra® Snow Country™ Exhaust Vent
Code compliance:	NBC 2015
Evaluation requirements:	CCMC-TG-077226-15 "CCMC Technical Guide for Ridge Vents"

In most jurisdictions this document is sufficient evidence for approval by Canadian authorities.
Learn more about CCMC recognition

Code compliance opinion

National Building Code of Canada 2015

Code provision	Solution type
9.19.1.2. Vent Requirements	Alternative

The above opinion is based on the evaluation by the CCMC of technical evidence provided by the evaluation holder, and is bound by the stated conditions and limitations. For the benefit of the user, a summary of the technical information that forms the basis of this evaluation has been included.

Product information

Product names

- Cobra® Exhaust Vent
- Cobra® Ridge Runner® Exhaust Vent
- Cobra® Snow Country Advanced™ Exhaust Vent
- Cobra® Snow Country™ Exhaust Vent

Product description

The products are installed along the ridge of sloped roofs in combination with eave or soffit vents to provide natural ventilation of enclosed roof space.

Cobra® Exhaust Vent for Roof Ridge is a roll-style ridge vent product made from a non-woven matrix of polyester fibres bonded together to form a mat. The product is 19 mm thick for the hand nail version and 16 mm thick for the nail gun version. The product is available in widths of 267 mm or 299 mm and in rolls that are 6.1 m or 15.2 m long. For the hand nail version of the product, 64-mm Smart Nails are included, and 45 mm collated nails are included for the nail gun version.

Cobra® Ridge Runner® Exhaust Vent for Roof Ridge is a rigid roll-style vent made from polypropylene with ventilation openings along the sides of the roll and has a non-woven polymeric filter material. The product is 16 mm thick by 292 mm wide and is available in rolls that are 6 m long. The product also includes 45 mm collated nails.

Cobra® Snow Country™ Exhaust Vent for Roof Ridge is a rigid panel vent made from polypropylene with ventilation openings along the sides of the panel and has a non-woven fibreglass filter material. The product is 292 mm wide by 1.2 m long and available in thicknesses of 22 mm. The panels interlock with each other to form a continuous ridge vent.

Cobra® Snow Country Advanced™ Exhaust Vent for Roof Ridge is a rigid panel vent made from polypropylene with ventilation openings along the sides and has a non-woven fibreglass filter material. The product is 1.2 m long and is available in thicknesses of 22 mm and widths of 229 mm and 292 mm. The panels interlock with each other to form a continuous ridge vent. Each vent section also includes 76-mm ring shank nails.

Manufacturing plants

This evaluation is limited to products produced at the following plants:

Product names	Manufacturing plants		
	Acworth, GA, US	Cumming, GA, US	New Columbia, PA, US
Cobra® Exhaust Vent	◈	◈	◈
Cobra® Ridge Runner® Exhaust Vent	◈	◈	◈
Cobra® Snow Country Advanced™ Exhaust Vent	◈	◈	◈
Cobra® Snow Country™ Exhaust Vent	◈	◈	◈

◈ Indicates that the product from this manufacturing facility has been evaluated by the CCMC

Conditions and limitations

The CCMC's compliance opinion is bound by this product being used in accordance with the conditions and limitations set out below.

- The ridge vent alone may not provide the minimum unobstructed vent area. In such cases, the total unobstructed vent area must not be less than 1/300 of the insulated ceiling area in accordance with Sentence 9.19.1.2.(1) of Division B of the NBC 2015.
- The products must be used in conjunction with venting located at a point lower than the product within the vented space.
- The products are not intended to be used with gable-end louvres, turbines, roof vents or power vents.
- The distribution of the venting must be in accordance with Sentence 9.19.1.2.(3) of Division B of the NBC 2015.
- The minimum roof slope for Cobra® Exhaust Vent for Roof Ridge 1 in 6.
- The minimum roof slope for Cobra® Ridge Runner® Exhaust Vent, Cobra® Snow Country™ Exhaust Vent, and Cobra® Snow Country Advanced™ Exhaust Vent for Roof Ridge is 1 in 4.
- Truss lateral braces at the ridge must not interfere with the free opening of the feeder slot of the ridge vent.
- The products must not be installed on roof hips.
- The use of the products is limited to combustible construction.
- When used on semi-detached houses where the separating firewalls run perpendicular to the ridge, the feeder slot of the ridge vent must end at least 910 mm from either side of the firewall.
- Annual inspection and maintenance to remove debris from vents is recommended.
- The products must be installed in accordance with the manufacturer's installation instructions.
- When designing for overall required venting, a reduction factor, such as 50%, should be applied to the measured effective venting area of the ridge vent.
- The product packaging must be clearly identified with the phrase "CCMC 14083-R." The CCMC evaluation is required to be on-site for verification that the product being installed is CCMC-certified and listed in CCMC 14083-R.

Technical information

This evaluation is based on demonstrated conformance with the following criteria:

Criteria number	Criteria name
CCMC-TG-077226-15	CCMC Technical Guide for Ridge Vents

Technical Evidence

The evaluation holder has submitted technical documentation for the CCMC evaluation. Testing was conducted at laboratories recognized by CCMC. The corresponding technical evidence for this product is summarized below.

Performance Requirements

Table 1. Results of testing the effective venting area of the products

Property	Unit	Cobra® Exhaust Vent	Cobra® Exhaust Vent	Cobra® Ridge Runner® Exhaust Vent	Cobra® Snow Country Advanced™ Exhaust Vent	Cobra® Snow Country Advanced™ Exhaust Vent	Cobra® Snow Country™ Exhaust Vent
Width	mm	267	299	292	229	292	292
Effective venting area	m^2	0.0085	0.0068	0.0114	0.0191	0.0199	0.0191

Table 2. Results of testing the performance of the products

Property	Requirement	Cobra® Exhaust Vent	Cobra® Ridge Runner® Exhaust Vent	Cobra® Snow Country™ Exhaust Vent
Traffic load – 900 N over 125 mm × 125 mm	No crack, split, shatter or tear	Pass	Pass	-
Wind uplift – 40 cycles of 0 to 600 Pa	No damage	Pass	Pass	Pass
Wind uplift – 70 cycles of 0 to 1 200 Pa	No damage	Pass	Pass	Pass
Wind uplift – 20 cycles of 0 to 1 800 Pa	No damage	Pass	Pass	Pass
Wind uplift – 20 cycles of 0 to 2 500 Pa	No damage	Pass	Pass	Pass
Watertightness – 80 km/h @ 15 mins	No water penetration	Pass	Pass	Pass
Watertightness – 0 km/h @ 5 mins	No water penetration	Pass	Pass	Pass
Watertightness – 100 km/h @ 15 mins	No water penetration	Pass	Pass	Pass
Watertightness – 0 km/h @ 5 mins	No water penetration	Pass	Pass	Pass
Watertightness – 120 km/h @ 15 min	No water penetration	Pass	Pass	Pass
Watertightness – 0 km/h @ 5 mins	No water penetration	Pass	Pass	Pass
Watertightness – 140 km/h @ 15 min	No water penetration	Pass	Pass	Pass

Property	Requirement	Cobra® Exhaust Vent	Cobra® Ridge Runner® Exhaust Vent	Cobra® Snow Country™ Exhaust Vent
Watertightness – 0 km/h @ 5 mins	No water penetration	Pass	Pass	Pass
Watertightness – 170 km/h @ 15 min	No water penetration	Pass	Pass	Pass
Watertightness – 0 km/h @ 5 mins	No water penetration	Pass	Pass	Pass

Material Physical Properties

Table 3. Physical properties of the roll-style ridge vent

Property	Unit	Requirement	Result
Thickness	mm	≤ 5% from nominal as stated by the manufacturer	Pass
Width	mm	≤ 1% from nominal as stated by the manufacturer	Pass
Mass per unit area	kg/m^2	Report nominal value	1.01

Table 4. Physical properties of the rigid plastic ridge vent

Property	Unit	Requirement	Result
Thickness of liner or shell	mm	≤ 5% from nominal as stated by the manufacturer	Pass
Overall height	mm	≤ 5% from nominal as stated by the manufacturer	Pass
Width	mm	≤ 5% from nominal as stated by the manufacturer	Pass
Length	mm	≤ 5% from nominal as stated by the manufacturer	Pass
Density	kg/m^3	≥ 905	906
Tensile strength (yield)	MPa	≥ 19	10.4 (1)
Izod impact resistance at 23°C	J/m	≥ 70	254.4
Coefficient of linear expansion	µm/(m×°C)	< 150	84.8
Classification – deflection temperature under load	°C	Report value	82.7 @ 0.455 Mpa
Classification – melt flow rate	g/10 mins	Report value	26.2

Note:

1 Deemed acceptable as the product meets the performance requirements and retains more of its tensile strength after durability aging.

Durability

Table 5. Results of testing the durability of the roll-style ridge vent

Property	Unit	Requirement	Result @ 10% compresion	Result @ 25% compression
Compressive strength – initial	kPa	Report value	1.92	5.73
Compressive strength after UV weathering	% retention of original	≥ 90	171	153
Compressive strength after UV weathering and heat aging	% retention of original	≥ 80	132	122

Table 6. Results of testing the durability of the rigid plastic ridge vent

Property	Unit	Requirement	Result
Dimensional change after heat aging – thickness	% of original	≤ 2	1.8
Dimensional change after heat aging – height	% of original	≤ 2	-0.2
Dimensional change after heat aging – width	% of original	≤ 2	0.5
Dimensional change after heat aging – length	% of original	≤ 2	-0.1
Tensile strength after heat aging	% retention of original	≥ 90	111
Izod impact after heat aging	% retention of original	≥ 80	121
Izod impact after heat aging and UV weathering	% retention of original	≥ 80	135

Administrative information

Disclaimer

This evaluation is issued by the Canadian Construction Materials Centre (CCMC), a part of the Construction Research Centre at the National Research Council of Canada (NRC). The evaluation must be read in the context of the entire CCMC Registry of Product Assessments and the legislated applicable building code in effect.

The CCMC was established in 1988 on behalf of the applicable regulator (i.e., the provinces and territories) to ensure—through assessment—conformity of alternative and acceptable solutions to regional building codes as determined by the local authority having jurisdiction (AHJ) as part of the issuance of a building permit.
It is the responsibility of the local AHJs, design professionals, and specifiers to confirm that the evaluation is current and has not been withdrawn or superseded by a later issue. Please refer to the website or contact:

Canadian Construction Materials Centre
Construction Research Centre
National Research Council of Canada
1200 Montreal Road
Ottawa, Ontario, K1A 0R6
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The NRC has evaluated the material, product, system or service described herein only for those characteristics stated herein. The information and opinions in this evaluation are directed to those who have the appropriate degree of experience to use and apply its contents (i.e., AHJs, design professionals and specifiers). This evaluation is only valid when the product is installed in strict compliance with the stated conditions and limitations of evaluation and the applicable local building code. In circumstances where no applicable local building permit is issued and that no confirmation of compliance ‘for use in the intended field application’ is undertaken, this evaluation is null and void in all respects. This evaluation is provided without representation, warranty, or guarantee of any kind, expressed, or implied, and the NRC provides no endorsement for any evaluated material, product, system or service described herein. The NRC accepts no responsibility whatsoever arising in any way from any and all use and reliance on the information contained in this evaluation with respect to its compliance to the referenced code(s) and standard(s). The NRC is not undertaking to render professional or other services on behalf of any person or entity nor to perform any duty owed by any person or entity to another person or entity.

Language

Une version française de ce document est disponible.
In the case of any discrepancy between the English and French version of this document, the English version shall prevail.

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CCMC recognition

The Canadian Construction Materials Centre (CCMC) assesses compliance with Canadian building, energy and safety codes. We are the only construction code compliance service supported and operated by the Government of Canada. Trusted by over 6,000 regulators across Canada.

> Most Canadian authorities having jurisdiction (AHJs) consider CCMC product assessments acceptable as evidence for product approval.

CCMC assessments are recognized by construction authorities across Canada:

Alliance of Canadian Building Official Associations (ACBOA)	(Alliance of Canadian Building Official Associations (ACBOA))
First Nations National Building Officers Association (FNNBOA)	(First Nations National Building Officers Association (FNNBOA))
Canadian Home Builders' Association (CHBA)	(Canadian Home Builders' Association (CHBA))
Alberta Building Officials Association (ABOA)	(Alberta Building Officials Associations (ABOA))
Saskatchewan Building Officials Association (SBOA)	(Saskatchewan Building Officials Association (SBOA))
Manitoba Building Officials Association (MBOA)	(Manitoba Building Officials Association (MBOA))
Ontario Building Officials Association (OBOA)	(Ontario Building Officials Association (OBOA))
New Brunswick Building Officials Association (NBBOA)	(New Brunswick Building Officials Association (NBBOA))
Nova Scotia Building Officials Association (NSBOA)	(Nova Scotia Building Officials Association (NSBOA))

The CCMC provides code compliance assessments to Canadian code requirements, consulting nationwide with construction regulators to elicit regional variations in code requirements as well as provincial and local interpretations. Users are advised to review the technical information presented in CCMC assessments when making approval decisions. Learn more about how the CCMC provides a unique service for Canada.

For more information, contact the CCMC by phone at (613) 993-6189 or by email at ccmc@nrc-cnrc.gc.ca

Code compliance as an acceptable solution

Code Compliance via Acceptable Solutions

> If a building design (e.g. material, component, assembly or system) can be shown to meet all provisions of the applicable **acceptable solutions** in Division B (e.g. it complies with the applicable provisions of a referenced standard), it is deemed to have satisfied the objectives and functional statements linked to those provisions and thus to have complied with that part of the Code.
>
> — **National Building Code of Canada, Sentence A-1.2.1.1.(1)(a)**

The CCMC has determined that compliance with this provision of the Code has been demonstrated as an **Acceptable Solution**. The evaluation report provides a summary of the basis of CCMC's compliance opinion.

CCMC's code compliance opinions

All CCMC evaluation reports are opinions of code compliance established in accordance with the National Building Code of Canada, Subsection 1.2.1. "Compliance with this Code," which requires compliance to be achieved by:

- complying with the applicable acceptable solutions in Division B, or
- using an alternative solution that will achieve at least the minimum level of performance required by Division B in the areas defined by the objective and functional statements attributed to the applicable acceptable solutions.

The CCMC assesses compliance with Canadian building, energy and safety codes, and is trusted by over 6,000 regulators across Canada.

Code compliance as an alternative solution

Code Compliance via Alternative Solutions

> Where a design differs from the acceptable solutions in Division B, then it should be treated as an "**alternative solution**." A proponent of an alternative solution must demonstrate that the alternative solution addresses the same issues as the applicable acceptable solutions in Division B and their attributed objectives and functional statements. However, because the objectives and functional statements are entirely qualitative, demonstrating compliance with them in isolation is not possible. Therefore, Clause 1.2.1.1.(1)(b) identifies the principle that Division B establishes the quantitative performance targets that alternative solutions must meet. In many cases, these targets are not defined very precisely by the acceptable solutions [...] Nevertheless, Clause 1.2.1.1.(1)(b) makes it clear that an effort must be made to demonstrate that an alternative solution will perform as well as a design that would satisfy the applicable acceptable solutions in Division B—not “well enough” but “as well as.”
>
> — **National Building Code of Canada, Sentence A-1.2.1.1.(1)(b)**

The CCMC has determined that compliance with this provision of the Code has been demonstrated as an **Alternative Solution**. The evaluation report provides a summary of the basis of CCMC's compliance opinion.

CCMC's code compliance opinions

All CCMC evaluation reports are opinions of code compliance established in accordance with the National Building Code of Canada, Subsection 1.2.1. "Compliance with this Code," which requires compliance to be achieved by:

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