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SEER2 and EER2 application

Purpose

This notice provides approximate acceptable SEER2/EER2 values compared to the required SEER/EER rating required in the 2015 National Building Code (NBC) and the 2017 National Energy Code for Buildings (NECB 2017) for determining the energy efficiency of HVAC equipment which provide cooling such as air conditioners and heat pumps.

Discussion

The rating and testing requirements for HVAC equipment which provide cooling has changed. The SEER/EER rating to determine the energy efficiency, as specified in the NBC and NECB, will be replaced by the SEER2 /EER2 rating on new equipment. This means all equipment tested to the new criteria will indicate a SEER2 or EER2 rating.

As the new rating system applies to AC units and heat pumps manufactured after December 31, 2022, existing appliances aren't covered. Consumers and contractors looking to install a new air conditioner, heat pump, or any HVAC equipment which provide cooling will only see the SEER2/EER2 ratings on the equipment manufactured after December 31, 2022.

Definitions

Seasonal energy-efficiency ratio (SEER) means the total cooling in Btu provided by a central air conditioner or heat pump during its normal annual usage period for cooling, divided by its total electric power usage in watt-hours, during that same period.

Energy-efficiency ratio (EER) for refrigerating equipment or a heat pump in the cooling mode means the ratio of net cooling capacity in Btu/h to the total rate of electric input in watts under designated operating conditions,

Sentence 9.36.3.10.(1) states:

9.36.3.10. Equipment Efficiency

1) HVAC equipment and components shall comply with the performance requirements stated in Table 9.36.3.10.

NECB 2017 Sentence 5.2.12.1.(1) states:

5.2.12.1. Unitary and Packaged HVAC Equipment

1) Unitary and packaged HVAC equipment and components with the capacities listed in Table 5.2.12.1. shall comply with the performance requirements stated therein.

Application

This notice applies to equipment indicating the SEER2 or EER2 ratings as applicable to the NBC and NECB 2017 efficiency rating for SEER or EER.

1. The attached Tables provides the cross reference of SEER to SEER2 and EER to EER2 values for code compliance.
2. For ratings not referenced in the Tables one can interpolate from the table for such applications or you can contact our office at OFM@novascotia.ca for assistance.

In Table 9.36.3.10. for split systems, a minimum SEER specified is 14.5, the new SEER2 rating of 13.8 would be acceptable.

Joe Rogers P.Eng
Building Code Coordinator

SEER Rating:	SEER2 Rating:
12 SEER	11.5 SEER2
13 SEER	12.4 SEER2
14 SEER	13.4 SEER2
14.5 SEER	13.8 SEER2
15 SEER	14.3 SEER2
16 SEER	15.3 SEER2
17 SEER	16.2 SEER2
18 SEER	17.2 SEER2
19 SEER	18.1 SEER2
20 SEER	19.1 SEER2
21 SEER	20.1 SEER2
22 SEER	21.0 SEER2
23 SEER	22.0 SEER2
24 SEER	22.9 SEER2
25 SEER	23.9 SEER2
26 SEER	24.8 SEER2
27 SEER	25.8 SEER2
28 SEER	26.7 SEER2
29 SEER	27.7 SEER2
30 SEER	28.7 SEER2

EER Table

EER Rating:	EER2 Rating:
6 EER	5.8 EER2
7 EER	6.7 EER2
8 EER	7.7 EER2
9 EER	8.6 EER2
10 EER	9.6 EER2
11 EER	10.5 EER2
12 EER	11.5 EER2
13 EER	12.5 EER2
14 EER	13.4 EER2
15 EER	14.4 EER2
16 EER	15.3 EER2
17 EER	16.3 EER2
18 EER	17.3 EER2
19 EER	18.2 EER2
20 EER	19.2 EER2