

THE DASMA THERMAL PERFORMANCE VERIFICATION PROGRAM HAS BEEN APPROVED

Answers to your questions

The Thermal Performance Verification (TPV) program was initiated and developed by the members of DASMA. After years of collective work and coordination, the program was approved on Jan. 25, 2022 and is scheduled to launch by no later than July 1, 2023.

At Expo 2022, DASMA Technical Director Dave Monsour provided a “Thermal Performance Verification Program” seminar defining the program and outlining how it will directly affect the industry in the future. The following Q&A with Monsour highlights everything you need to know about the program.



What is the Thermal Performance Verification Program?

A voluntary program to certify and label the thermal transmittance (“U-factor”) of some door products via third-party testing and inspection.

Which manufacturers are participating in the program?

As of April 2022, there are 11 manufacturers that have signed onto the program: Amarr, C.H.I., Clopay, Garaga, Haas, Midland, North Central, Overhead Door, Raynor, Safe-Way, and Wayne Dalton.

What are the requirements needed to be a program participant?

The core of the program is third-party testing,

certification, and quality control, along with common agreements on certain marketing practices.

What products are affected by the program?

The program applies to residential and commercial sectional garage doors. The program does not apply to rolling or high performance doors. Doors that meet the criteria of “highly thermally efficient” must be listed. Doors that do not meet those criteria are permitted to be listed.

To be considered “high thermally efficient,” the door must consist of an insulated core and have a meeting rail design that incorporates a thermal break.

How are glazed doors handled in the program?

Adding glazing to an insulated door may or may not invalidate the U-factor label. When small amounts of glazing are added, the solid door label may still be used. When a lot of glazing is incorporated to the door, the solid door label may not be used.

What amount of glazing is OK?

The dividing line is 16% of the door area. Cutting away more than 16% of the door area to add glazing will invalidate the solid door label. If a door with that much glazing is to be listed, a separate test and listing are required.

How is thermal performance assessed?

U-factor is a tested measurement of the thermal transmittance of an installed door assembly. The lower the U-factor, the better the insulation. Units are Btu/hr-ft²·°F.

R-value is a calculated estimate of the thermal resistance of a manufactured door section. The higher the R-value, the better the insulation. Units are hr-ft²·°F/Btu.



How do you differentiate between U-factor and R-value?

For garage doors, the U-factor is not the reciprocal of the R-value. U-factor will be governed by the program, and R-value will not be governed by the program.

U-factor is tested and measured and applies to the entire door assembly as installed. R-value is calculated based on an individual section of the door as manufactured.

Why can't R-value be tested?

For garage doors, the standard R-value test methods, such as ASTM C 177, C 518, and C 976, are not always suitable. For example, the sections of the door are not always flat, making it unsuitable for proper testing. In addition, estimating the value based on one small section of the door versus the complete door assembly does not offer a complete picture.

Are program participants permitted to use R-value?

Program participants must use U-factor for their “highly thermally efficient” doors and are permitted to use R-value for “highly thermally efficient” doors under certain conditions.

Under what conditions are program participants permitted to use R-value?

There are provisions in the program to de-emphasize R-value and subordinate it to U-factor as an expression of thermal performance. For example, R-value, if presented, will be in tandem with U-factor and the R-value will be shown less prominently on labeling and marketing materials.

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What about U-value? Is that just another way of saying U-factor?

The term U-value is used in a variety of ways by different industries. Some garage door manufacturers have presented U-value as the reciprocal of R-value, which further complicates the thermal performance picture and confuses the marketplace. Building codes use the term U-factor for doors and windows. U-factor will be used in DASMA's TPV program. U-value will not be used in the program, and program participants that currently use this term in any context will no longer do so.

What about air leakage?

For now, the program is limited to U-factor. Air leakage is next on the agenda.

What about solar heat gain?

Solar heat gain and other glazing properties are not included. There are no current plans to include solar heat gain in the existing program.

Why is the industry moving toward U-factor?

The primary reason is to help create a level playing field. Thermal performance is a key selling point for manufacturers, and R-value has not provided an even playing field for our industry. With established, standard test procedures and third-party administration of the tests, it is fairer.

Each participant must adhere to the same rules, and the testing is mediated by an objective third-party. The U-factor-centric program will also allow architects, dealers, end users — everybody concerned — to focus on the benefits of insulated garage doors and the

other features that can be promoted by manufacturers.

Is U-factor more accurate than R-value?

Yes. Through testing and measuring (versus calculating and estimating), we can determine a true measure of the actual thermal performance of a garage door. Components such as section interfaces, perimeter seals, thermal breaks, stiles, and hardware are accounted for with U-factor, and again, the entire door is considered.

The U-factor is also necessary for design professionals to perform building analyses. Computer programs such as ComCheck require garage door U-factors as part of their input data.

Does the program offer increased credibility?

Yes, a test program governed by a third party that demonstrates repeatable and reliable results offers instant credibility. External code and regulatory agencies will see the industry policing itself, which will in turn lead to increased recognition and acceptance. There will be no need for others to impose labeling programs outside of our control or influence.

What industries already use U-factor?

The window and entry door industries have adopted the use of U-factors. The window industry has operated a third-party verification program for years, and the entry door industry has developed a program like ours.

So, was moving to U-factor inevitable?

Probably. The International Energy Conservation Code (IECC) has required U-factor labeling for

commercial doors since 2018. We are moving forward with the program, and ultimately, we want to convert our industry from R-values to U-factors. R-value is ingrained in the industry. It's been around for many decades. During the transition, we will have to work together to educate and accommodate our customers.

What does the IECC require?

The U-factor required for commercial doors is ≤ 0.31 . Higher values are permitted for residential doors and doors with glazing.

Who is doing the 3rd party certification?

Intertek will be responsible for administration, verification, certification, and quality control.



Third-party verification company responsible for administration, verification, certification, and quality control.

Is there a common test standard?

The common standard test is ANSI/DASMA 105 Test Method for Thermal Transmittance and Air Infiltration of Garage Doors and Rolling Doors.

How does the program affect dealers and installers in the industry?

Dealers are crucial in the thermal performance of doors because they are providing installation, maintenance, repair, and in some cases, accessories. They will also play a key role in explaining the program to customers. DASMA is in the process of preparing materials to offer dealers to help properly educate their customers. ■



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