

Why U?

By Chris Johnson, DASMA

Why the industry is replacing R-values with U-factors

The garage door industry has been wrestling with providing accurate, useful thermal performance ratings for many years. Having evaluated the many options available, participants have focused on the following:

- What is best for the consumer? How can the industry provide relevant information that will help purchasers make educated decisions when comparing insulated garage doors?
- Since the use of R-values is clearly not working, what can the industry do to fix the situation?
- What are other industries with similar products doing?

After careful examination of the situation and investigation of many options, the industry has chosen to move to the use of U-factors as a means of rating the thermal performance of garage doors. To support this move, extensive work has been done to develop a Thermal Performance Verification Program and a marketing program that will support the industry's transition to the exclusive use of U-factors instead of R-values.

Over the last couple of years, many individuals have devoted significant time and effort to the process. Here is a summary of the rationale behind the move to using U-factors.

- **A level playing field.** Exclusive use of U-factors will level the playing field for all industry participants. This allows manufacturers to focus on other ways of honestly and meaningfully differentiating themselves, and it allows other parties, including architects, dealers, end users, etc., to focus on the benefits of insulated garage doors and other features that can be promoted by manufacturers.
- **National requirements.** The thermal performance of the building envelope is a

major national initiative and an increasing priority of multiple governmental, quasi-governmental, and advocacy groups. These entities are already looking for door thermal performance to be measured in terms of U-factors.



- **Inevitability.** DASMA recognizes that enforced labeling is inevitable. Currently, the ICC International Energy Conservation Code (IECC) *requires U-factor labeling and certifying "by the manufacturer" for commercial doors.* The market is increasingly demanding product ratings that are verified by an independent entity.
- **Credibility.** By operating a credible testing program that provides reliable, repeatable, and comparable results, code and regulatory entities will accept the DASMA program as satisfactory evidence of thermal performance values. Such recognition and acceptance should preclude the creation of other labeling programs outside of our control or influence.
- **Test reliability.** The U-factor testing standard for garage doors, ANSI/DASMA 105, is now reliable, providing repeatable and reproducible results. That reliability

has been proven through round-robin testing conducted at leading independent, third-party test labs. The 105 standard for U-factor testing has been ratified through a national consensus process.

- **Superior relevance.** U-factor numbers are a far superior means of providing relevant, useful information to architects, specifiers, and end users:
 - The U-factor is necessary for design professionals to perform building analyses. Computer programs such as ComCheck require garage door U-factors as part of their input data.
 - The U-factor number has a much higher degree of precision than an R-value number. The methods used to determine the U-factor result in values within +/- 0.03.
 - The U-factor, representing thermal transmittance, is a true measure of actual performance of a garage door. With U-factor, components such as section interfaces, stiles, and other metal parts are taken into consideration.
- **Related industries' use.** Other industries, including the window and entry door industries, have adopted the use of U-factors. Like garage doors, these products are assemblies that fill holes in a structure. The window industry has operated a third-party verification program for many years, and the entry door industry is now developing a program similar to the garage door program.

DASMA is working on the next steps in the development and promotion of the program and is planning an official launch in early 2020. Dealers and installers will play a key role in explaining the program to customers, and we are preparing materials to help in that regard. Look for further information over the next year. ■