

WHAT'S THE DIFFERENCE BETWEEN U-FACTOR AND R-VALUE

And why it matters

What is R-value? What is U-factor?

Highly visible in garage door advertising and brochures, R-value continues to be the best-known measurement for thermal performance. However, R-value only evaluates thermal resistance as measured through the center of a door section. The higher the R-value, the better the insulation. More and more, however, you'll start hearing more about U-factor instead because U-factor is a more comprehensive measure of thermal performance. U-factor measures the rate of heat transfer from the warmer side to the colder side, through the complete door assembly including the solid panels, windows, and perimeter. Lower U-factor values indicate better thermal performance equating to less energy loss from conditioned spaces. For garage doors, U-factors are usually less than 1.0.

Why is U-Factor important?

There's more to a garage door than only one panel. U-factor considers both conduction (the transfer of heat through a material or substance) and convection (heat transfer through air movement) and measures actual heat loss through the comprehensive door materials. R-value only considers the resistance of insulation to heat flow but ignores heat transfer through air movement and doesn't account for the performance of the door as a whole.

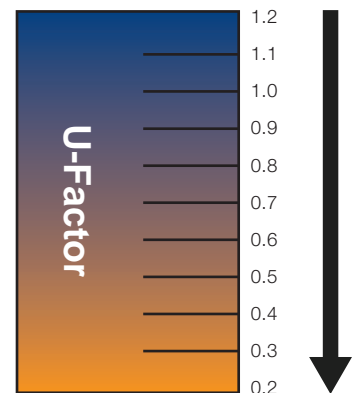
Which types of doors have a low U-Factor?

Look for doors with polyurethane or polystyrene insulation. Thicker doors usually provide better insulation. If windows are desired, opt for double-glazed or insulated glass.

How can I improve my door's U-Factor?

If you're not yet ready to upgrade to a new door with higher insulation properties, these tips will help maximize the energy saving potential in the meantime:

- Have a door professional service your door and make sure the panels are securely connected and the door runs smoothly in the tracks.
- Replace or repair weatherstripping so the door is completely sealed.
- Use caulk or expanding foam to seal other gaps around the door opening.
- Apply reflective foil insulation to the interior side of the door. The foil reflects heat and helps maintain a more consistent garage temperature.
- Consider applying a garage door insulation kit. Kits include insulation materials.
- Consider adding insulation to walls adjacent to the garage door.



A smaller number means less heat loss.