

PRODUCT APPLICATION GUIDE

A technical bulletin for engineers, contractors and students in the air movement and control industry.

The Importance of ARI Performance Certification for Energy Recovery Ventilators

Engineers rely heavily on manufacturers' performance data for product selection. The source of the data needs to be credible to ensure that engineers meet their design intentions. In the selection process, engineers typically review data from multiple manufacturers before settling on a final design. The accepted method for comparing data from different manufacturers is industry recognized certification organizations (ARI, AMCA). History has consistently demonstrated that product performance data that is not certified overstates actual performance.

The purpose of an industry recognized certification program is to give the buyer, specifier, and user the assurance that published ratings are reliable and accurate. All manufacturers' product ratings are based on standard test methods and procedures, and are subject to impartial, third party-testing.

Greenheck and other energy recovery equipment/component manufacturers participated in the development of an industry certification program for energy recovery ventilation equipment. This collaborative effort resulted in a new ARI rating standard, ARI 1060-2000. Components and packages certified to this new standard are shown in the ARI Certified Product Directory for Air-to-Air Energy Recovery Ventilation Equipment (AAERVE) published in January 2001. This process requires testing, rating, and independent verification of component performance (such as wheels, plates, and heat pipes) at standard conditions and rated airflow. Testing is in accordance with ASHRAE Standard 84.

ARI certified ratings include information that allows designers to fully characterize thermal and airflow performance of energy recovery devices. The program certifies the following:

- Energy transfer effectiveness at two airflows for both summer and winter (sensible, latent, & total)
- Pressure Drop
- Cross Leakage for three differential pressures across the airstreams. (displayed as EATR and OACF)

EATR – Leakage from exhaust to outdoor air (indicates how much to increase the outdoor air blower volume over design)

OACF – Leakage from outdoor air to exhaust (indicates how much to increase the exhaust air blower volume over design)

Manufacturers ratings of certified energy recovery ventilation equipment can be found at the ARI web site, www.ari.org/directories/erv.

The ARI industry performance program brings consistency to the rating process by requiring the same test procedures for all manufacturers. Required periodic performance verification tests and challenge procedures ensure that components continue to operate at documented levels. Engineers can protect **themselves** and their **clients** by writing specifications that require ARI Certification in accordance with the latest revision of ARI Standard 1060.

