

# ENGINEERING REPORT

## TOPIC: Louver Testing

Report No. 391:1

By Robert Van Becelaere

The industry standard for evaluating louver performance is AMCA (Air Movement and Control Association, Inc.) Standard 500, which establishes uniform test methods for water penetration, pressure drop, and air leakage performance. Recently, two important changes in product rating and testing requirements have been implemented.

### 1. Water Penetration Point

The AMCA rating requirement for water penetration had always been the zero water penetration point. AMCA required manufacturers to publish data to this requirement.

All louvers will carry some water under storm conditions. To allow for wind-driven rain (which was not considered a factor in the AMCA tests), louver manufacturers stopped using the zero water penetration point. Thus, the recommended specification for the water penetration point became .02 ounces of water per sq. ft.

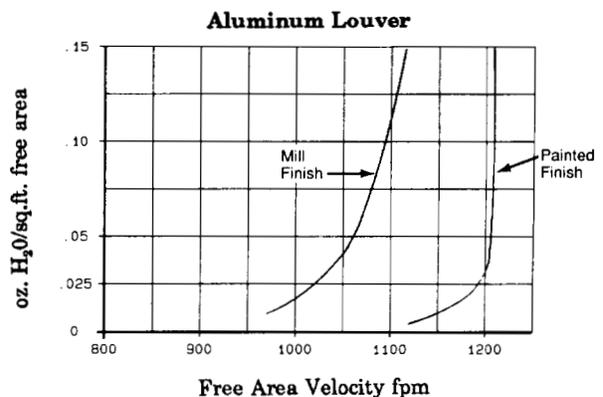
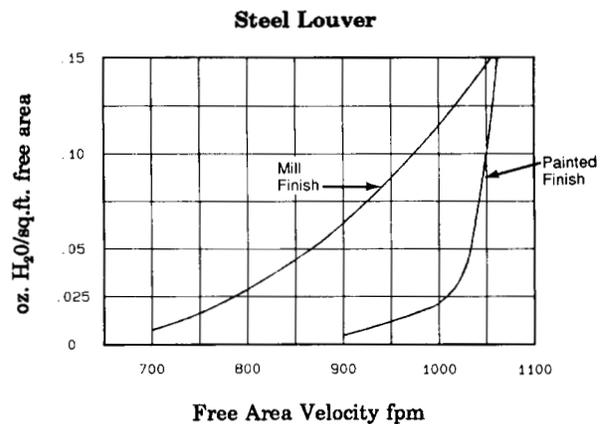
After much discussion, AMCA members agreed to rate their products at .01 ounces of water per sq. ft. More importantly, AMCA changed the testing procedure to carefully find this point during testing. At recertification testing, all AMCA certified louvers will be tested, certified, and rated at .01 ounces of water per sq. ft. water penetration.

### 2. Finish Requirements for Louver Testing

Previously, AMCA had no requirements for mill or painted finishes on tested louvers. Ruskin and most other manufacturers have always used mill finish louvers for testing;

while some have used louvers with a painted finish.

Ruskin discovered that a louver's test performance for water penetration drastically improves when the louver has a painted finish. When tested, both aluminum and galvanized steel louvers with painted finishes showed a 22% minimum improvement in water penetration performance over louvers with mill finish. The two charts below graphically show the performance difference.



When selecting louvers based upon water penetration performance, Ruskin does not recommend the use of performance data on louvers with a painted finish because performance diminishes as paint oxidizes.

To combat this discrepancy in the rating process, the AMCA Louver Engineer Committee recently voted to require certified louvers be tested with a mill finish.

When check tests are performed, manufacturers who have previously tested louvers with a painted finish will have to test products with mill finish and publish revised ratings.

These two changes in AMCA test procedures will result in more realistic comparison of manufacturers' products and in better product selection and application by the specifying engineer or architect.

**RUSKIN**®

3900 Dr. Greaves Rd.  
Kansas City, MO 64030  
(816) 761-7476  
FAX (816) 765-8955  
[www.ruskin.com](http://www.ruskin.com)