

# Department of Energy tests conclude...

**Closed vents and mechanical ventilation is the best way to maintain a dry and healthy crawl space with the added benefit of energy savings.**



*Humidex is proven mechanical ventilation!*



A research project was conducted to show how crawl space moisture levels can be controlled and reduced. The project was funded by the U.S. Department of Energy. The test monitored 12 identical homes to compare traditional crawl spaces with foundation wall vents to closed crawl spaces without foundation vents but with mechanical ventilation.

### General Findings of Study

- Foundation vents add excess moisture to crawl spaces during humid and wet weather, particularly in the summer. This excess moisture promotes conditions conducive to mold growth.
- Ground vapor retarders by themselves do not keep crawl spaces dry enough to prevent mold growth.
- Closed crawl spaces without foundation vents and with mechanical ventilation stay dry all year round.

### Lower RH in Closed Crawl Spaces with Mechanical Ventilation

This chart shows that the wall vented crawl spaces stayed above 70% RH nearly 90% of the time while closed crawl spaces rarely exceeded 70% RH and were most often below 60% RH. To effectively prevent mold growth crawl space moisture levels should be kept below 70% RH.

RH Threshold	2002		2003		2004	
	Vented	Closed*	Vented	Closed*	Vented	Closed*
Above 90 %	0%	0%	23%	0%	7%	0%
Above 80 %	39%	0%	86%	0%	70%	0%
Above 70 %	79%	0%	98%	5%	92%	0%
Above 60 %	94%	0%	100%	64%	100%	13%
Above 50 %	100%	100%	100%	100%	100%	100%

\* Closed crawl spaces with mechanical ventilation.

### Lower Energy Costs with Closed Vents & Mechanical Ventilation

	Wall Vented	Closed	% kWh Savings
Heating & Cooling	4,396 kWh	3,665 kWh	17%

Due to the fact that drier air is much easier to condition, homes with closed, mechanically-vented crawl spaces required less electrical output, thus saving homeowners on utility costs.