



# SkuttleButt™

Skuttle IAQ products make an ordinary house a “Happy House”

## Blue Is **GREENER** than Red

by Earl Lewis and John D. Riley

### Skuttle and Honeywell Steam Humidifiers Compared

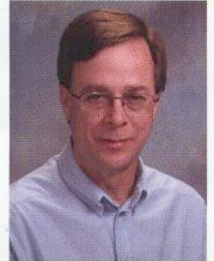
It's no secret that Honeywell has created quite a stir in residential indoor air quality this season with its new TrueSTEAM™ humidifier. And well they should. Preliminary reports indicate that all three models (HM506, HM509 and HM512) are capable humidifiers with remote mounting options and sleek plastic styling. Nevertheless, there are some important factors contractors and homeowners ought to consider when comparing the new Honeywell units to Skuttle Model 60s—the long-standing leaders in residential steam humidification.

While these comparisons are by no means all inclusive, they raise important issues that could and should influence buying decisions. For instance...

*The basic Skuttle unit is significantly less expensive to operate than the basic Honeywell unit.*

Using ARI Formula 610 (the industry standard of measurement for output capacity as it relates

to humidification area), our engineering staff determined that the Honeywell 6-gallon HM506 steam humidifier (apparently the best seller of the three HM units) requires more time, energy and expense to humidify the same space<sup>1</sup> as our 13-gallon 60-1 unit<sup>2</sup>. The cost differences indicated on the bar chart on page 2 are due to the longer blower motor running time necessary for the Honeywell unit to do the job. The savings in energy costs over time by using the larger Skuttle humidifier are substantial—not to mention the savings derived from less wear and tear on the blower motor. (continued on page 2)



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Skuttle steam units are appropriately sized for typical American homes.

The same ARI formula clearly shows that Skuttle steam humidifiers are better sized than Honeywell TrueSTEAM units to accommodate normal-sized homes. (See the "Home Size Capacities" table, below.) Again, better sizing translates to energy efficiency and savings.

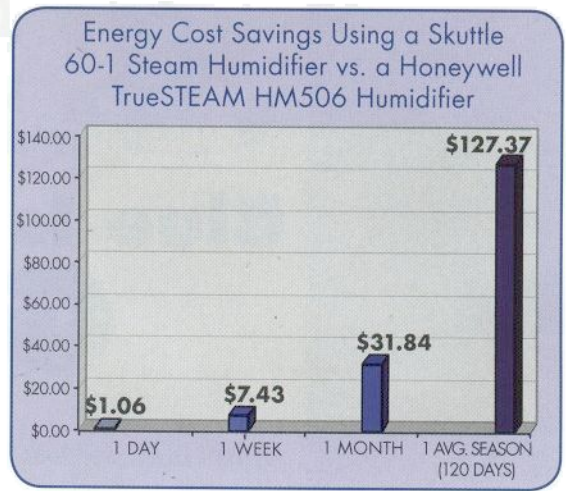
Skuttle's flushing technology does a superior job of conserving water and energy.

Both Honeywell TrueSTEAM and Skuttle F-Series humidifiers come factory-equipped with programmable flushing capability<sup>3</sup>. Both brands do a thorough job of flushing, although they employ different techniques and are based on different flushing ideologies. When comparing factory settings for the two brands, it's quickly apparent that Skuttle's flushing technology does a far superior job of saving water and electricity. (See "Factory-Set Flushing Differences" Table, page 3.)

Honeywell product claims need to be taken in context.

For example, Honeywell literature claims that TrueSTEAM is the most eco-friendly way to humidify a home, because it uses up to 70 percent less water than traditional whole-house humidifiers. While this may be true when compared to flow-thru humidifiers, it is not true when compared to whole-house drum humidifiers. Since both steam and drum technologies rely on evaporation, equal-sized units use approximately the same amount of water to humidify identical homes. And, as we've already shown, the popular 6-gallon TrueSTEAM is less eco-friendly than the 13-gallon Skuttle 60-1, because of the substantial differences in energy and water consumption.

Honeywell literature also claims that, "while other humidifiers rely on moisture-filled pads that can be susceptible to bacteria growth in the water and



the airstream, TrueSTEAM delivers 'true steam'—the cleanest form of humidification."<sup>4</sup> This is a dangerously exaggerated claim on two levels.

First of all, bacteria may grow inside the body of a flow-thru or drum humidifier (both of which Honeywell sells), but not to an extent that it is problematic with regular maintenance. The concern, however, that pad-based humidifiers eject bacteria into the air stream is absolutely false. As noted on Skuttle's homeowner website<sup>5</sup>...

**Extensive, objective tests at Penn State University proved conclusively that water evaporated from these humidifiers leaves impurities (such as calcium, iron, lime and bacteria) behind. In other words, these contaminants are not dispersed into the living environment and cause no adverse health effects. In fact, the humidified air exiting properly maintained evaporative-type units was found to be cleaner and more healthful than when it entered.** [Boldface added.]

Secondly, all steam humidifiers produce true steam, and steam humidification is no purer in the air stream than flow-thru or drum humidification.

(continued on page 3)



Home Size Capacities for Skuttle and Honeywell Steam Humidifiers							
Manufacturer	Gallons Per Day	Tight House		Average House		Loose House	
		Square Feet	Cubic Feet*	Square Feet	Cubic Feet*	Square Feet	Cubic Feet*
Honeywell	6 - HM506	1,429	11,429	909	7,273	652	5,217
	9 - HM509	2,143	17,143	1,364	10,909	978	7,826
	12 - HM512	2,857	22,857	1,818	14,545	1,304	10,435
Skuttle	13 - (F) 60-1	3,095	24,762	1,970	15,758	1,413	11,304
	17 - (F) 60-2	4,048	32,381	2,576	20,606	1,848	14,783

\*Based on 8 ft. ceiling height

"We've built our reputation for safe, effective residential steam humidification on durable, nonflammable welded stainless steel construction."



## Factory-Set Flushing Differences

	 <b>Honeywell</b>	 <b>Skuttle</b>
<b>Flush Frequency</b>	<b>Every 10 hours</b> Can be reprogrammed to flush after 20 or 30 hours of operation.	<b>Every 2 hours</b> Frequency cannot be altered.
<b>Duration per Flush</b>	<b>Approx. 15 minutes</b> Duration cannot be altered. Flushing process replaces all water in tank. Complete reheating is necessary.	<b>10 seconds</b> Can be reprogrammed to 20- or 30-second flushes. Flushing process dilutes the water concentration and retains most of the built-up heat.
<b>Cumulative Duration per Day</b>	<b>Approx. 36 minutes</b>	<b>2 minutes</b>
<b>Gallons Used per Flush</b>	<b>2.45</b>	<b>0.125</b>
<b>Gallons Used per Day</b>	<b>5.88</b> (based on 2.4 flushings per day)	<b>1.50</b> (based on 12 flushings per day)

### Skuttle remains proud of its stainless reputation.

Beyond a responsible use of natural resources, we've built our reputation for safe, effective residential steam humidification on durable, nonflammable, welded stainless steel construction. Installers and homeowners alike can feel more secure, because Skuttle Steam Humidifiers are engineered to withstand the potential caustic effects of heat, water and steam.

1 Calculations are based upon a 7,200 cu. ft. (900 sq. ft.) home with an 8 ft. ceiling height and average insulation. Although this is considerably smaller than virtually all US humidified homes, industry standards specify that it is the appropriate size dwelling to be humidified by a 6-gallon unit.

2 Skuttle furnace-mount steam humidifiers are available only in 13- and 17-gallon capacities. A 13-gallon unit will humidify a 13,758 cu. ft. home with average insulation; a 17-gallon unit will humidify a 20,606 cu. ft. home.

3 Flushing timers are not included in Skuttle's non-F-series steam humidifiers (60-1 and 60-2), which are intended for installations where no drain is available.

4 <http://yourhome.honeywell.com/Consumer/Cultures/en-US/Products/Humidifiers/Humidifiers/Professionally-Installed/Steam/Default.htm>

5 <http://www.skuttle.com/faq.html#environment>

### More Reasons to Buy and Install Skuttle

*...the Long-Standing Leader  
in Residential Steam Humidification*

Skuttle 60-series steam humidifiers are engineered to withstand the potential caustic effects of heat, water and steam.

Additional features include:

- Four furnace-mount models to accommodate different floor plans, heating systems and water types
- Tank capacities to humidify medium-to-large homes with energy efficiency
- No plastic parts exposed to direct heat

- Fast, easy, onsite service, thanks to...
  - a sturdy slide-out tray for easy access
  - several standard, off-the-shelf replacement parts
  - 100 percent field-replaceable components
- A set-it-and-forget-it humidistat that automatically adjusts indoor relative humidity to the outdoor temperature
- A fan control relay to simplify fan operation wiring
- A safety control shutoff to prevent humidifier operation if the furnace blower fails
- A Skuttle automatic flushing timer (in F-Series units) to keep the humidifier cleaner longer
- UL and ULC listings on all Skuttle steam humidifiers