Humidification Online

Manufacturers of humidification equipment stock their websites with plenty of info about the several types of product lines out there. But what resources can a designer find on the Internet to create the right system for the application at hand? Interested engineers can use a plethora of online options, downloadable and otherwise, to help them get the right amount of moisture into the right space in the right way.

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DRISTEEM (*www.dristeem.com*) weighs in with the latest version of its own engineer software, Dri-calc Version 3.0. The software is designed to assist with load sizing and equipment sizing, writing specifications, generating instructions for installation, and creating equipment schedules for the company's products.

The latest version is reported to allow multiple humidifier schedules within one project file, and it also adapts to projects using either standard or metric measurements. Interested engineers will, however, need to fill out a request form to receive the software by mail.

Humidity Source (*www.waltonlabs.com*) doesn't offer any user software, but the website does include a back-to-basics "RH 101" page with attendant figures and equations illustrating the fundamentals.

Elsewhere, **Vapac Humidification** (*www.vapachumidification.com/*) serves up its own humidification calculation tool, but with one twist: the program is part of the website, not a separate download. Start by choosing between standard or metric systems. On the next page, the user fills in data for questions in three categories: design conditions, humidification load through ventilation, and humidification load from infiltration. Include the volume of space to be humidified (ach), and the site will recommend a humidification load.

At that point, the user has the option of filling in a few more option fields about ducts, water quality, humidifier type, etc., and asking Vapac to review the calculations and recommend a particular humidifier accordingly. (The site also offers what appears to be a fairly handy psychrometric calculator as well.)

Humidifirst, which focuses on ultrasonic humidifiers, joins the roster of companies assisting with sizing humidification systems at *www.humidifirst.com*. Unlike some guides that incorporate an array of factors, Humidifirst stresses two main areas: the ventilation, exhaust, and infiltration of air; and the air conditioning involved in the system in question. The company welcomes input regarding other circumstances but works on the assumption that the resulting effects of those factors will generally be minor.

Therefore, interested users have only a few project-related fields to complete on the "Humidifier Sizing Calculator" page, followed by their own contact information. Rather than offering an actual program for download or on the website for users to work with, Humidifirst asks visitors to fax the requested information to them for analysis and response.

Armstrong International (*www.armstrong-intl.com*) offers a free download of its own "Humid-A-ware™" sizing and selection software for industrial and commercial systems. The elements particular to this software reportedly include new installation bulletins, reformatted specifications, and a complete "Humidification Solution Source" handbook, all as PDF files. The manufacturer says other new features cover

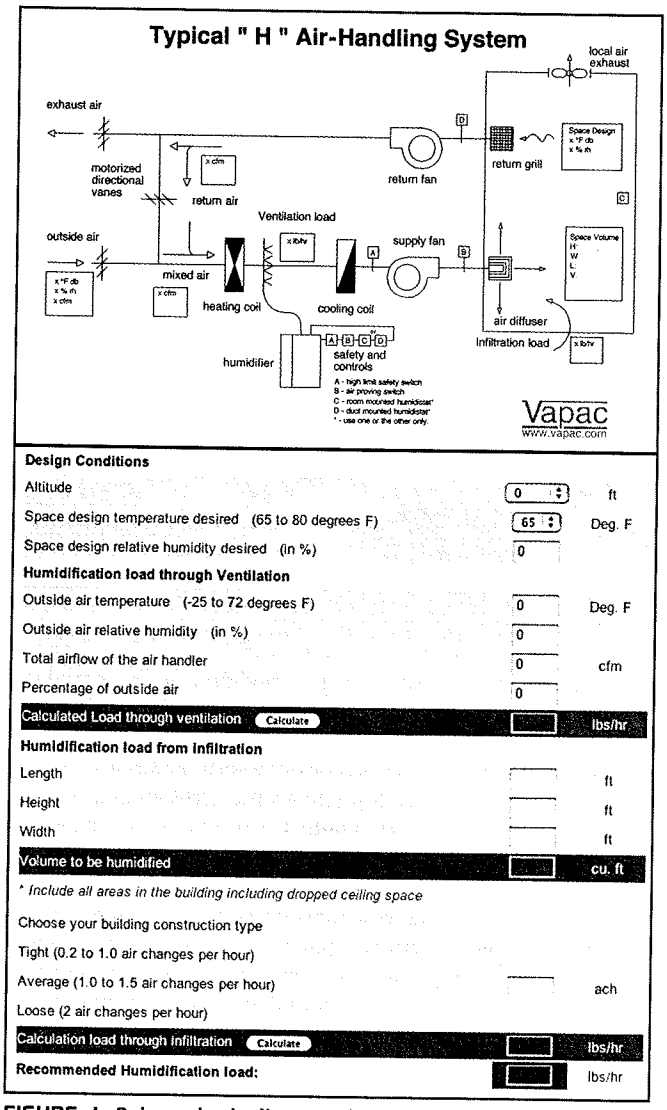

FIGURE 1. Below a basic diagram, the calculator at Vapac Humidification's website takes a variety of project details into account to recommend a humidification load. Users may then enter some optional information and preferences to receive specific equipment recommendations, if they like.

the HumidiClean line, new electric HumidiClean and steam-to-steam humidifiers, and ManiPack multiple-manifold systems.

Users can also use the package to create and customize equipment and data schedules, convert calculations between IP and SI formats, calculate humidification load, and calculate non-wetting distance. Engineers who cannot (or prefer not to) download the software can register on the site and request a free CD-ROM mailing.

Axair Nortec posts its "H.E.L.P." software for free download at *www.humidity.com*. The package starts predictably with a large database of the company's products and options. Engineers can also sign up for e-mail notification for product line changes, according to the website.

From there, the suite moves on to offer its "Engineering Binder" to assist with design calculations. Once the user selects a technology option (adiabatic, gas, electrode/electric steam, steam exchange, or steam injection), the program walks the user through project-specific questions. The tools listed include weather data, automatic schedule and specifications, and interactive psychrometric chart. This section also touts the company's Short Absorption Manifold with enhanced performance (SAM-e).

Axair Nortec rounds out the suite with a cost analyzer for engineers who would like to compare paybacks offered by the different humidification technologies available. Registration, download via a cable connection, and installation took about seven minutes.

"Humidifier C-Lect 2.03" is the online software offering from **Carnes Company, Inc.** (*www.carnes.com*). After naming a given project, it allows users, who may not know a project system's air volumes, to enter room dimensions instead if they prefer. From there, it walks designers through the usual questions to establish recommendations for the basic system plus any additional options. In our run-through, registration was brief, followed by exceptionally quick download and installation.

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For something a little different, **Skuttle Manufacturing Co.** (*www.skuttle.com*) focuses on the residential end of humidification, but the company's site does offer a quick reference table illustrating the relationship between outdoor temperature, outdoor humidity, and indoor rh. Relevance to commercial applications may vary, but the site also mentions equipment appropriate for residences up to 38,000 sq ft. (Apparently, even if you think of your home as your castle because it really is a castle, proper humidification is still possible.)

Finally, a visit to **Carrier's** website (*www.carrier.com*) did reveal the expected info for individual products, but it did not turn up any software specifically dedicated to humidification. However, the site does offer a page featuring the company's extensive "New Hourly Analysis Program (HAP) Building Wizard." Humidifiers do play a role in that program's system design component.

On the downside, obtaining the HAP program is not free like some of the others mentioned in this article. Users must fill out a licensing agreement (available as a PDF file) and then submit that info along with payment to the local Carrier commercial sales office, or directly to Carrier Software Systems. The website indicates that users pay a yearly licensing fee, which also covers program updates and customer support. Selecting Software > HVAC System Design > Ordering will steer the user to the necessary page. **ES**