

Air Conditioning Today



A Trade Publication for the Air Conditioning, Heating and Refrigeration Industry

VOLUME 8 / NUMBER 10 AUGUST 1994 TEXAS / NEW MEXICO / LOUISIANA EDITION



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TACCA UPDATE PAGE 14

- Upcoming TACCA Trade Show Events
- Certification Class Schedule
- New Members

For TACCA Info call 1-800-998-4822



Showgoers viewed the inner workings (controls & compressor) of the Cornellius ice machine displayed by Reliable Distributing of San Antonio. Shown above are Reliable's Ed Lauterstein (2nd from right) and Cornellius representative, Jim Jacobs at the recent TRA (Texas Restaurant Association) annual convention held at the George R. Brown Convention Center located in Houston. More photos on page 23.

RSI ships 50,000th "Hinge Curb"

In a recent interview Phil Rutledge, president of Rooftop Systems, Inc., revealed that their new patented "Hinge Curb" has already exceeded 50,000 units shipped to distributors throughout the nation.

"It's true! We could hardly believe it. It seems like just yesterday we got the patent and boom, we have already shipped 50,000 of them! Actually, we have been manufacturing the 'Hinge Curb' since mid-1992, and as contractors and distributors have seen the time saving and cost saving advantages of them, demand has steadily grown. However, we never expected to grow this fast," said Rutledge.

"I'm proud to say that in over 20 years of being in the industry, I have never been associated with a product that has resulted in contractors calling in to praise it. I know of projects where the contractor selected which equipment to use based on the 'Hinge Curb' because of its tremendous labor savings."

"It has also been amusing to see our competitors scrambling to develop a similar roof curb. They have tried clips, locks, bends and other methods, but nothing that I've seen even comes close to the ease of installation of our 'Hinge Curb.'"

"My greatest thanks go to

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TSTC listed as authorized testing site by EPA

It's summertime and the weather in Central Texas is HOT! Texas State Technical College is now helping cool off things by preparing and certifying technicians in refrigerant installation and maintenance.

The Environmental Protection Agency has notified the Air Conditioning and Refrigeration Technology (ACT) department at TSTC of its approval as an authorized testing site for the Section 608 Certification Program.

Section 608 of the Clean Air Act requires all persons who service, install or maintain stationary air conditioning and refrigeration equipment to be certified in handling certain refrigerants by Nov. 15, 1994.

The next test date on the TSTC campus is slated for 2 p.m. on June 25 at the IDEAS Center, located at Fourth Street and Airline Drive.

"We are the only testing site between Dallas, Houston and Austin," said David J. Wacker, ACT department chair.

TSTC is one of only five ap-

proved testing sites in the state of Texas; there are only 57 sites in the nation approved as testing centers.

Wacker said that there are three types of certification: small appliance; high pressure and very high pressure machines; and low pressure systems and machines.

A group of core questions will be included in the test, as well as additional questions for each level of certification.

The ACT department will administer the tests and will provide optional training for the various levels of certification. The training sessions, offered through the Continuing Education department before each testing cycle, will be taught by H. Jay Bryngelson, ACT senior instructor.

Wacker said: "We believe that this training and testing is a definite advantage to our campus and the ACT department. It will place the name of Texas State Technical College at Waco before the public, and in the air conditioning and refrigeration field."

The training session is optional, but will be "very helpful in passing the test the first time," Wacker said.

The cost of the continuing education training course is \$30, plus \$28.15 for the study guide textbook.

For more information, contact Wacker in the ACT department at 867-4850.

Texas State Technical College at Waco, with an extension in Marshall, is part of the only state-supported technical college system in Texas. With more than 40 instructional programs in the critical and emerging technologies, TSTC is preparing a workforce to meet the demands of business and industry. For more information, call direct, (817) 867-3371 or Texas toll free 1-800-792-8784.

OPENING SOON

Janitrol Distributors will be adding another Houston location in August to better serve the contractors. The newest store will be located at 9034A Scranton Street in the Scranton Industrial Warehouses just off the Gulf Freeway (Hwy. 75 South). Take the Airport exit to Mosley, left on Mosley to Scranton. Easy.

Overseeing this new location will be Todd Kennedy. Todd is experienced in air conditioning service, installation, warehousing, and city sales all of which will greatly enhance our service to the contractor. Todd is transferring from our Janitrol Shreveport operation to take this position. He was born and raised in Houston and is looking forward to "coming home" and seeing all of you.

Watch for the details of our August Grand Opening!!! Just a little footnote — a Northside Janitrol Houston location will be coming your way soon.

Condensate traps & indoor air quality

by Warren C. Trent, P.E. and Curtis Trent, Ph.D. Trent Technologies, Inc.

Indoor air quality has become and remains a major health issue, worldwide. The Environmental Protection Agency estimates that one in three buildings in the United States is "sick." Others have estimated 50 percent of the work force in North America and Europe suffers from "sick building syndrome."

The contaminants responsible for poor indoor air quality are numerous. From time to time, one or more of these contaminants has been implicated in building-related illnesses.

However, according to one authority, "Some 40 percent of ailments in most buildings are attributable to bacteria, mold, yeast, algae and other biological contaminants..."

Sources of these biological contaminants are found in many buildings, some more frequently than others. But there is a source of certain biological contaminants that is almost always present: Wet and moist surfaces inside heating, ventilating and air conditioning (HVAC) systems.

Current practice in the industry practically ensures wet and moist surfaces inside most HVAC systems. That practice

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PHIL RUTLEDGE, president of Rooftop Systems, Inc., proudly stands beside another shipment of "Hinge Curbs" about to be shipped from the Carrollton factory. "Our patented 'Hinge Curb' has exceeded 50,000 units shipped, and in 1995 we hope to ship over 100,000. It is in great demand because of its time saving and cost saving features," said Rutledge.

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CONDENSATE TRAPS

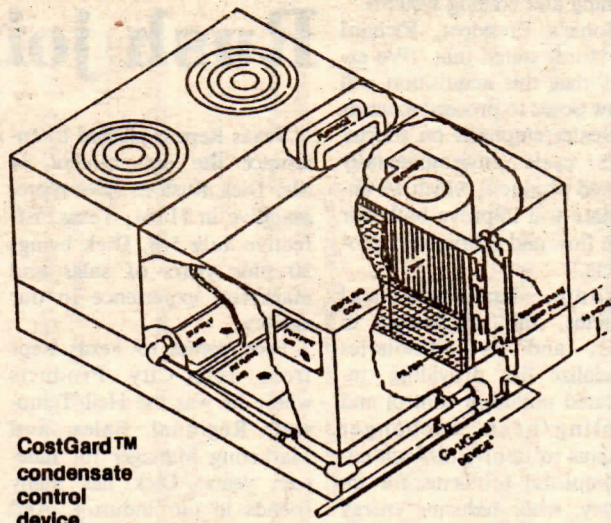
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is the use of a condensate trap to provide a seal against air ingestion through the condensate drain line and to control the flow of condensate from draw-through type HVAC systems virtually ensures wet and moist inside surfaces, and that these systems will become generators and disseminators of biological agents (bacteria, mold, mildew, yeasts and other fungi).

Until recently, few in the industry have associated the problems of indoor air quality with the mundane HVAC con-

densate trap. Yet, its use and misuse may cause more indoor air pollution than any other component in the entire system.

Unfortunately, despite extensive studies and other efforts by many government and private agencies during the past few years, no measurable and documented improvement in building indoor air quality has been reported. In fact, the incidence of reported illnesses, building closings, and costly health related litigation cases



CostGard™
condensate
control
device.

are proliferating.

A lot has been learned about the causes and sources of indoor air pollution, but remarkably little, it seems, has been learned about how to achieve suitable indoor air quality.

When building-related illnesses do occur, it is often possible to identify the contaminants and eliminate (or neutralize) their sources.

In certain buildings, however, it may be extremely difficult to identify and eliminate the source of biological agents (bacteria, mold, mildew, yeast and other fungi). These biological agents live and propagate on wet and moist surfaces such as walls, ceilings,

carpets, furniture and the internal components of the HVAC system.

When walls, ceilings, carpets, and furniture are involved, it is usually possible to find the cause of wetness and eliminate it.

However, finding the cause of wet and moist components inside a HVAC system is not a simple task; because, wetness inside HVAC systems is caused by a number of very complex conditions, including the following:

- Excessive airflow
- Deficient airflow
- Non-insulated refrigerant lines in the airflow path
- Improper blower (fan) location
- Unduly large condensate pans
- Inadequate seals on condensate drain lines.

Excessive airflow can cause condensate to be blown from the cooling coil and onto internal surfaces, before it can drain to the condensate pan. Too little air flow reduces the supply-air temperature and can cause moisture to form on supply grilles. Cool non-insulated refrigerant lines condense moisture that can drip onto the floor of the HVAC unit. An unduly large condensate pan extends the wet surface area, which in addition to promoting growth of contaminating organisms, promotes the growth of algae. It also catches debris which can block flow through a condensate trap.

Each of the above conditions, with the exception of an "inadequate seal on condensate drain line," can be remedied by applying known design procedures. The current practice of installing a condensate trap on the drain line to form the required seal has been a dismal failure.

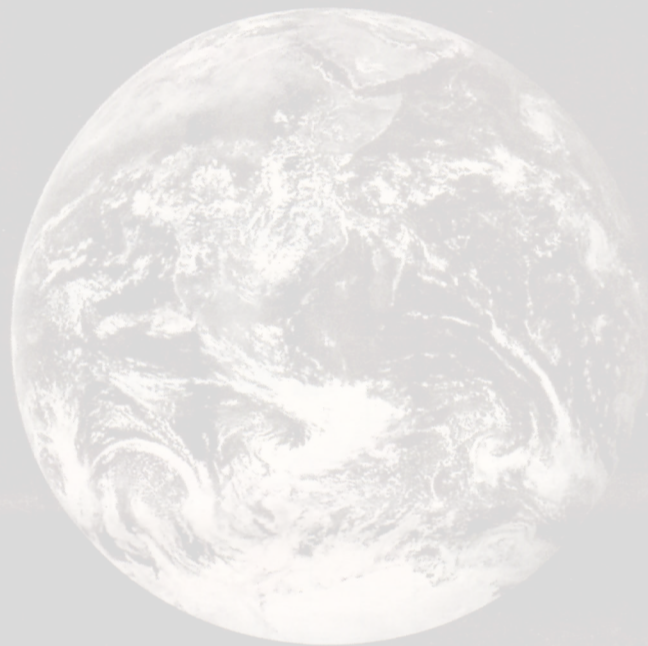
Under many field conditions, the condensate trap allows the ingestion of air and polluting gases. At the same time, it allows the blowing of condensate into the HVAC system, creating serious health problems and causing excessive property damage.

Unfortunately, in addition to its effect on indoor air pollution and property damage, the condensate trap is responsible of undue and excessive service, maintenance, and litigation.

The problems caused by the condensate trap have been largely ignored by the HVAC industry and academia. The greatest awareness of the harm caused by the condensate trap is among owners and users, who generally assess the problem as a necessary evil and try to live with it. For them the trap creates serious and costly problems.

Fortunately, for the HVAC user, there is now a device on the market that negates the problems associated with the condensate trap. The device uses air (instead of water) as a seal to prevent the ingestion of outside air through the condensate drain line. The device, named CostGard™, is manufactured by Trent Technologies, Inc. of Tyler, Texas. It has no moving parts and is self regulating. For information on the CostGard Condensate Control Device, contact Trent

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Putting Earth first is an important principle at Ice-O-Matic. We have long been known for technical innovation and reliable ice making equipment. And, in fact, Ice-O-Matic is the first company to produce a complete line of "CFC free" refrigerant cube ice makers – the Genesis Ice Systems. These are well established as the benchmark for reliable production and high capacity utilizing HFC refrigerants.

Because HFC refrigerants have a ZERO OZONE DEPLETION factor, we are now incorporating our field-proven technologies into



the Ice-O-Matic product line. Our newly introduced Environmental-Series cube ice makers have been carefully designed to yield maximum production with "CFC-free" refrigerants.

We invite you to see for yourself why Ice-O-Matic ice makers are the best ice makers for Earth. Call us for the location of the Ice-O-Matic representative nearest you.

We promise it will change your world.

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Fax: 210/490-2426

Cook promoted at Serviceman Supplies

According to a recent announcement, Danny Cook has been promoted at Serviceman Supplies to manager at the N. Richland Hills branch.

A native of Euless, Texas, Danny Cook began working in the summer during school doing installation work for various companies and then got a job driving a truck for Serviceman Supplies.

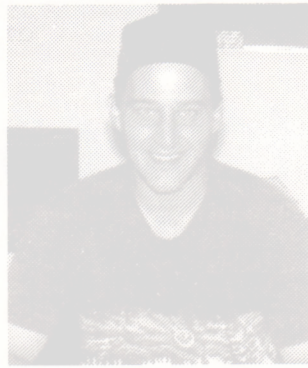
After attending Southwest Texas State for two years, Cook returned to the area in

1986 and worked in the restaurant industry for 3 years.

In 1990 he went to work for Ed Taylor at the Richardson branch of Serviceman Supplies.

"Then about 3 weeks ago they promoted me to manager of the N. Richland Hills branch," said Cook.

"I would like all of our customers in my area to come by for coffee and see our Heil equipment. We also have almost every part and ac-



DANNY COOK

cessory you could need and if we don't, we get it A.S.A.P. for you," concluded Cook.

Cook is married and lives in Lewisville. ■

Ultimate designed icemaker

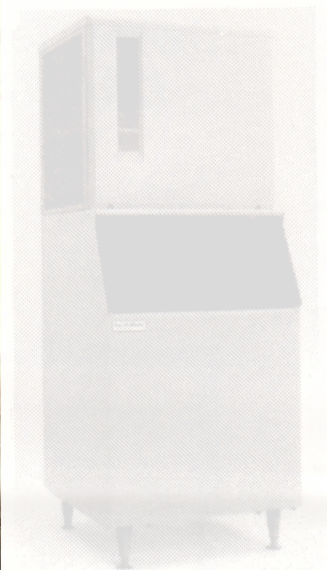
Ice-O-Matic announces a revolutionary new icemaker: the Genesis Ice Systems Model GC750 series. Every aspect of this icemaker has been designed to provide maximum reliability and production with minimum energy and water usage. And, the individual ice cubes that are produced (sized approximately 1-3/8" wide, 1-3/8" deep and 3/8" high) are perfect for a wide variety of uses.

The 30" wide, model GC750 produces up to 755 lbs. of cube

ice per day and is available with an air, water or remote cooling condenser. This icemaker features a fully insulated (foamed-in-place) one piece, double wall rotocast cabinet — no rust, no leaks, no paint peeling ... ever! Also, a laser welded, formed stainless steel vertical evaporator (utilizing single wall heat transfer design and has no plating on the evaporator!) keeps this icemaker the energy efficiency leader — the air cooled GC756 uses only 5.6 KWH per 100 lbs.

of ice (tested at 70° water and 90° air temperatures). A unique water management system keeps water usage to a minimum — the air cooled GC756 uses only 13 gallons per 100 lbs. of ice (tested at 70° water and 90° air temperatures). The computer controls keep the entire system operating efficiently and reliably, while the front panel status indicator lights give the owner instant operating status. And, the GC756 is very environmentally friendly, in that it incorporates the use of an HFC refrigerant (R404a) that has a zero ozone depletion factor!

There are many more new and revolutionary aspects to the Genesis Ice Systems GC750 series. To learn more contact your Ice-O-Matic Representative or call Ice-O-Matic at (303) 371-3737. ■



The Genesis Ice Systems Model GC750 series.

Only 19 ounces.



But you'd be amazed at the weight it carries.

It should really come as no surprise. After all, energy efficiency can certainly weigh heavy on the minds of home buyers. Which explains why we've spent so much time promoting E-Wise homes. Plus, we've designed materials to help you promote your own homes. Ad slicks. Yard signs. Logos. Every thing is here for the taking.

And considering the incentives we offer for building E-Wise homes, it's no wonder

so many builders are planting E-Wise signs in their yards. So, when you get right down to it, installing high-efficiency equipment, like heat pumps, really does pay.

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CONDENSATE CONTINUED FROM PAGE 4

Technologies, Inc., 535 WSW Loop 323, Suite 301, Tyler, Texas 75701, Telephone: (903) 509-4843, Fax: (903) 561-0169.

Until the ingestion of outside air and gases through the drain line of draw-through HVAC systems is controlled, suitable levels of indoor air quality cannot be achieved, excessive damage to the HVAC system and its surroundings will continue unabated, and HVAC owners and users will continue to experience unnecessary maintenance costs and exposure to costly litigation. ■

*Based on a paper by the same authors presented at the "Ninth Symposium on Improving Building Systems in Hot and Humid Climates."