

# The Cold Facts

Fall 2004

## RSC Website Updated!

RSC introduces our latest upgrade to the RSC website. You'll note that we've added several new pages for easy access and information, as well as a fresh, new look. If you haven't seen the site, please take a look at [www.rsc-gc.com](http://www.rsc-gc.com).

By the way, the RSC e-mail convention is the RSC employee's firstinitiallastname@rsc-gc.com.



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## Did The Dealer Give You The Keys To The Car?

**W**hen you purchased your last car, did the dealer give you the keys? Of course, he did! Now, suppose the car had a lock on the engine compartment that required a key to get access. And...suppose that access was necessary to service the engine, check the oil, or fill the washer fluid, etc. What would your reaction be if the dealer kept that key, then explained that he was the only authorized company to do any repairs? Most likely it would be anger, as ours would be.

So where are we going with this? Well, we were just asked to quote a project where the previous supplier provided an adequate control system, but now, when it's time to expand, the supplier refused to provide all of the software passwords. In other words, no one could make changes or additions to the system except them.

Obviously, we can replace the system, but how cost effective is that? So, now we're asking every one of our current and prospective new clients if they have been given the keys/passwords to their control systems. And we don't mean the passwords to change set points—we mean the password (*key* to the engine compartment) to allow someone to change the control strategy, or add another component, such as an evaporator or condenser, if you wanted to.

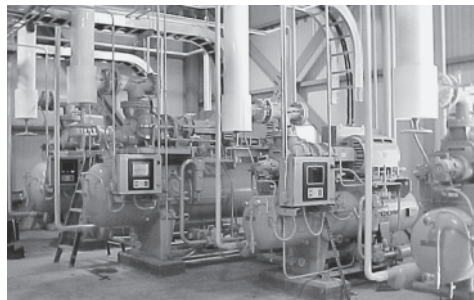
If your supplier kept the key, you can't:

- Make any desired changes yourself.
- Obtain service from any other qualified servicing contractor.
- Ask another contractor to make changes or additions for you.

RSC is proud of the service that we provide and we hope that we can help you with all your needs now and for years to come. Therefore, any control system that we provide includes *all* of the hardware and software keys. No secrets! No hidden agendas! Just simply a first quality, state-of-the-art control system that's easily managed, operated, maintained and upgraded! To boot, we offer all the help you may need to change your system as much or as little as you want in the future.

Why does RSC include all of the information?

- 1) This is an industrial business, where the proper operation of your system is vital to the success of your business.
- 2) It is ethical to provide the buyer with *all the keys* to the system they've purchased.
- 3) We strive to provide excellent and competitive service, and we hope that this combination will help us earn your business.



*Mississippi Beef Processors project nearing completion*

## Mississippi Beef Processors Project Wrap-Up

RSC is proud to have been a part of the construction of the newest beef processing plant in the United States. The plant processed its first product in August. This marks the culmination of several years of hard work by the owner, Richard Hall, his family and many friends, an effort that will eventually put several hundred people to work in an area that has been otherwise depressed. A welcome addition to central Mississippi, the project is an excellent example of win-win for the people of Mississippi and the Hall family. We'd also like to publicly thank them for the opportunity to help with their project and congratulate them on their success.

# What Is The Best Solution For Under-Floor Heating System Design?

This is a question that's frequently asked when we're discussing a new freezer. You're already familiar with the issue in freezers—keeping the ground moisture under the floor from freezing? If the moisture freezes, it expands and will cause the concrete floor to crack and heave. Once this problem starts, it's time-consuming and expensive to remedy. So, the correct measure is to design the under-floor heating system properly from the beginning. But, what is the best design?

Over the last 40+ years, we have seen the industry change in several areas. The advances in technology have led to improvements in specific practices. It is the same in construction.

Years ago, the primary method of freezer floor heating was to add several circuits of plastic drain pipe installed below the floor. In some cases, each circuit was vented to the ambient air, providing natural air convection/flow to give the required heat. In other cases, the air feeding each circuit was artificially heated and forced into the under-floor grid. Another method of controlling the temperature was to employ electric-resistance heat cable laid in a similar grid arrangement.

The late comer to the common designs (introduced about 15 years ago) was the use of warm glycol circulated through heavy wall PVC tubing. This tubing is similar to the 50-year-life tubing used for well-water applications. The glycol is frequently heated by the refrigerant compressor's discharge but could also be artificially heated. There have also been some variations on how the circuits are installed. The grids have been laid directly in the soil, covered with sand and encased in concrete. We have done all of them.

Now, the magic question: "What is the best choice?"

Let's look at each system and attempt to highlight the differences:

The electric-resistance system is simple to install and allows for easy replacement of the resistance cable if it's ever required. Nevertheless, it requires special electrical wiring and it uses electric, not a cheap alternative.

The gravity airflow system is typically laid in the sub-soil but is not particularly well suited to the colder climates where warm air is not always available. Also, plant expansion is not easy since there is a maximum distance from one side of the grid to the other to facilitate drainage of any accumulated moisture. To boot, during the warmest time of the year, the floor is being over-heated—not desirable in a freezer application. The forced air system has all of the disadvantages of the gravity air flow system, plus the cost of heating the air artificially.

The circulated glycol system has a low first cost, rivaling the gravity air system. While typically installed in a 3" concrete under-floor slab, it could be installed in sand or the sub-soil, can maintain the glycol temperature just above the freezing point, which is ideal, and costs little to operate because the heat source is free "compressor discharge heat."

As you might expect, our preference is circulated glycol. But you be the judge!

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