

# COMFORT ZONE

ISSUE 2: VOL 2



## ISS KITCHEN

### Fall Off The Bone Baby Back Ribs

1 (2 lb.) rack of baby back pork ribs	Pepper
1/2 c. of your favorite barbeque sauce	Paprika
	Garlic salt
	Onion powder

Preheat oven to 325°. Season both sides of the ribs liberally with pepper, paprika, garlic salt. Add onion powder as desired. Wrap ribs in aluminum foil. Place in oven for one hour. Take ribs out of foil and place on grill. Grill for ten minutes. While ribs are on the grill, baste with barbeque sauce. Take off the grill and enjoy!

## THE UNIFIED GROUP

We are an independent association of the country's elite HVAC commercial contractors. We help our members increase productivity, profitability and customer retention, and we also provide a network for national and regional customer business solutions. Visit us at [www.theunifiedgroup.com](http://www.theunifiedgroup.com).



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## 10 THINGS TO KNOW ABOUT REFRIGERANTS AND PHASE-OUT

For years, CFCs and HCFCs provided the chemical stability and efficiency required for air conditioning systems. However, they contain chlorine, and chlorine damages the Earth's ozone layer. The Montreal Protocol of 1987 targets CFCs and HCFCs as ozone depleting substances and requires their phase-out over a 40-year period that began in 1995.

In response, a new family of refrigerants was developed. HFCs are ozone-friendly and won't be phased out. But, the phase-out of CFCs and HCFCs requires owners and managers to take the long view when making decisions about their capital investments.

1. **The phase-out schedule affects current and future cooling system decisions.** Deciding whether to repair existing equipment or replace it are key decisions.
2. **HVAC life expectancy extends beyond the phase-out schedule.** If your rooftop uses HCFC-22, in 2020 you will be servicing it with refrigerant reclaimed from systems no longer in operation.
3. **Refrigerants have safety classifications.** ASHRAE Standard 34 classifies safety levels based on toxicity and flammability.
4. **Efficiency is a function of the system, not the refrigerant.** Although different refrigerants have different heat transfer properties, a chiller rated at 0.5 kw per ton offers this rated efficiency regardless of the refrigerant.
5. **"Green" refrigerants qualify for LEEDS points.** Refrigerants can earn a point for LEED certification.
6. **HFC-134a, 407C and 410A are efficient and available for the foreseeable future.** They have lower toxicity, no flame propagation, no phase-out date, don't contain chlorine and have no ozone depletion potential.
7. **HCFC-22 is still available, but future support will decrease.** It cannot be used in new equipment after 2010.
8. **HCFC-123 is available for new equipment until 2020.** You will be able to operate HCFC-123 equipment for its useful life, but the refrigerant won't be available for new equipment after 2020.
9. **"Green" refrigerants are available today for both large and small systems.** Large cooling systems are being designed for HFC-134a and 407C. In small systems, HFC-410A replaces HCFC-22.
10. **Take action for the future.** Your best preparation is to take a refrigerant inventory, determine which are being phased out, and recommend replacement alternatives.



ISS is a leader in the commercial, healthcare and industrial air conditioning and refrigeration industry. We excel through our commitment to protect the health, safety and welfare of our clients and our employees.

## INNOVATIVE SERVICE SOLUTIONS

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ONE LINK OF THE CHAIN



**REDUCING HVAC COSTS**

Plug in the numbers below to determine the total cost of owning and operating a rooftop HVAC unit.

Installed unit cost	
Cost for energy to operate unit *	
Cost for preventive maintenance *	
Cost for repairs *	
<b>Total HVAC cost (add 1-4)</b>	

\* During the life of the unit

Take the total cost and divide it by the number of years the equipment is in service; the result is your unit cost per year. (The industry standard for the useful economic life expectancy of a rooftop HVAC unit is 12 to 15 years.) A rooftop unit is expensive to purchase, maintain, operate and replace. By instituting a comprehensive preventive maintenance program, you will increase your efficiency, ultimately spending less money and experiencing fewer breakdowns. The goal is not to spend more money, just to spend your money differently and more wisely.

**Benefits of preventive maintenance programs include:**

- Increased employee productivity by providing a comfortable, clean work environment. By introducing outside or fresh air, you will flush out volatile organic compounds and improve your indoor air quality. If your air filters are changed regularly and the proper amount of outside or fresh air is introduced into your facility, your employees will be healthier.
- Providing a comfortable workplace can reduce employee turnover. If an employee is uncomfortable on the job he might begin looking for better working conditions.
- A steady flow to your operation because there is no disruption to perform scheduled maintenance.
- Cost savings - surveys indicate that breakdown repairs cost three times more than preventive maintenance.
- The potential for increased sales because the customer is more comfortable and is willing to spend more time in your store.

Comprehensive maintenance will extend the useful economic life of your units, reduce your energy costs and reduce your breakdown repair costs.

**THE SIX R'S OF REFRIGERANT MANAGEMENT**

1. Know the rules you have to comply with.
2. Review your equipment and record the maintenance history, including refrigerant, charge size and age.
3. Repair leaky equipment.
4. Retrofit - choose a refrigerant that will meet your performance needs, such as cooling capacity and system durability.
5. Replace old equipment. New equipment can often provide significant energy and maintenance cost savings.
6. Retire older, less efficient equipment, especially if the cooling demand has been reduced significantly since the equipment was first installed.



**PERCEPTION EQUALS REALITY**

The heating, ventilating, air conditioning and refrigeration (HVAC/R) industry is facing a dwindling work force. Guidance counselors who believe working with your hands is not glamorous, are guiding young people away from the trades and into college. There is some truth in that belief.

When we hear the term service professional, we often think of a doctor or lawyer. The HVAC/R service professional is compared to the auto mechanic; after all, the car engine and air conditioning compressor function similarly and look the same. Why would we compare him to a doctor? Being a doctor is perceived as a glamorous position. He doesn't have to climb in an attic or replace a motor. But if you don't have cooling or heating, or if your food isn't refrigerated, your health, safety and welfare rapidly decline. It takes training and skill to identify and correct these conditions.

The doctor saves lives by performing skilled procedures. The service technician performs critical procedures on sick systems to provide a clean, healthy and safe environment. He proactively identifies issues like mold and mildew intrusion that affect your health and well-being, and energy waste that affects your financial well-being.

The doctor needs continuing education to stay certified. Did you know that every mechanical contractor must complete continuing education to keep a current license?

What isn't being said is that the HVAC/R industry is undergoing dramatic changes in both technology

and image. A building's environment (which includes indoor air quality issues as well as rising energy costs) is the driving force for equipment manufacturers to find solutions that solve the health, safety and welfare issues facing building owners and tenants. Changing technologies are creating challenging opportunities. These challenges are being answered through education and training opportunities offered to the "hands on" guy. From computers diagnosing the equipment to total building automation systems, the service technician has entered the computer age.

At Innovative Service Solutions we offer continuous training to our technical staff through weekly training classes in the winter months, manufacturer sponsored programs, and a peer driven OJT program led by senior technicians. Our supervisors attend training put on by The Unified Group, an independent contractor organization focused on educating mechanical service contractors. ISS actively participates in industry organizations focused on raising the professional image of "hands on" service providers.

Our goal remains focused on protecting the health, safety and welfare of our clients.

**EMPLOYEE SPOTLIGHT**

**Name:** Vinnie Mangru  
**Position:** Service Technician  
**Years in the HVAC Industry:** 10; **Years at ISS:** 1  
**Major job responsibilities:** Managing the service and maintenance needs of the clients.  
**A perfect day at work:** Completing all work and satisfying the client.  
**Most challenging part of my job:** Dealing with difficult clients.  
**Town:** Ocoee, FL  
**Hobbies/Past times:** Reading, and hands on projects.

