

R-410A for Air Conditioning

Smart for the *environment.*

Smart for your *business.*



EMERSON[™]
Climate Technologies

***The need to transition to R-410A is
now, not later.”***

-Tom Winstel, Engineering Excellence, Cincinnati, Ohio



Keep pace with tomorrow – *today*.

The phaseout of hydrochlorofluorocarbon (HCFC) refrigerants is nearly here, bringing change that will have a dramatic effect on the global HVAC industry – and on your business. Fueled by a worldwide demand for sustainable design and environmental concern, the move to new nonchlorine hydrofluorocarbon (HFC) refrigerants calls for:

- Phasing out R-22 in new equipment by January 1, 2010
- Stopping production of R-22 altogether by 2020

The leading choice to replace R-22 in air conditioning is R-410A, a more environmentally friendly refrigerant with zero ozone depletion and higher energy efficiency.

For your customers, R-410A means:

- Reduced maintenance expenses
- The most efficient systems for improved cost control
- Lower energy bills

And for contractors, the benefits of moving quickly to R-410A far outweigh the potential costs to your business by delaying the transition. Because:

- Using R-22 retrofit replacement refrigerants can mean lower cooling capacity and energy efficiency, as well as less comfort and satisfaction for your customers
- R-410A is the proven long-term choice for air conditioning applications. Other retrofit refrigerants have not been approved for air conditioning applications.

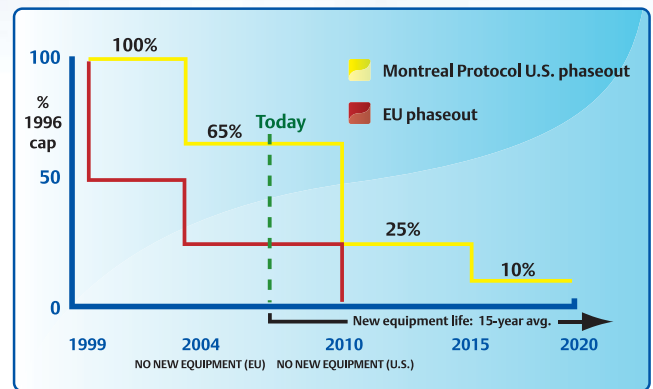
R-410A benefits at a glance

Key benefits of R-410A and the air conditioning systems that use it are:

- Higher EER (Energy Efficiency Ratio)
- Enhanced heat-pump performance
- Increased efficiency and reliability
- Cost-effective design
- Proven long-term HCFC replacement capability
- No ozone-depleting chemicals
- Lowest global warming TEWI (Total Equivalent Warming Impact)

R-22 phaseout timeline

- R-22 is banned from new U.S. system production in 2010.
- In 2015, R-22 production drops to 10% of 1996 levels.
- U.S. production of R-22 for service needs ends in 2020.



Smoothing out the transition

To ease the transition to R-410A, Emerson Climate Technologies has developed the broadest, most efficient R-410A scroll compressor lineup in the world. Our Copeland Scroll® compressors are optimized to deliver the best performance with R-410A. With over four million R-410A scroll compressors installed worldwide, more than 10 years of R-410A experience and the widest range of R-410A products from 1.5 to 30 horsepower, Copeland Scroll compressors are the leading choice for systems designed with R-410A. Plus, we support you with:

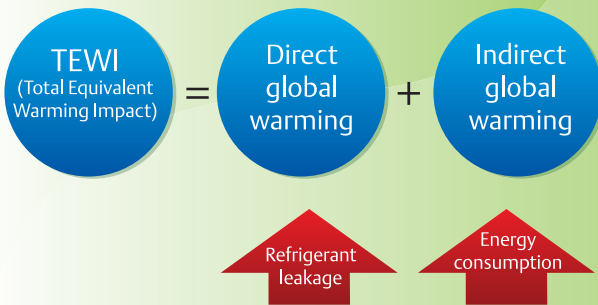
- Wholesaler and distributor aftermarket support, for maximum part and product selection
- Comprehensive training and education programs to help your personnel prepare for the changeover, at EmersonClimate.com/education.

The case for R-410A

Why is R-410A the leading choice to replace R-22? First, it's simply better for the environment. It has zero ozone-depleting potential and a lower global warming rating than R-22, as measured by Total Equivalent Warming Impact (TEWI). Plus, it's been specifically designed for new systems and is far less likely to break down, under even the harshest conditions.

Evaluating Refrigerants, Based on TEWI

Global warming impact



The overwhelming choice

Every major air conditioning manufacturer in the country has chosen R-410A to replace R-22 in residential and light commercial applications, and every major manufacturer uses Copeland Scroll technology in all or some portion of its equipment. They understand that the tough new energy and environmental standards against refrigerant leakage and greenhouse gas emissions mean that they have to find new ways to increase performance. For example, R-410A systems offer up to a five percent higher Energy Efficiency Ratio (EER) and better dehumidification than older R-22 systems.

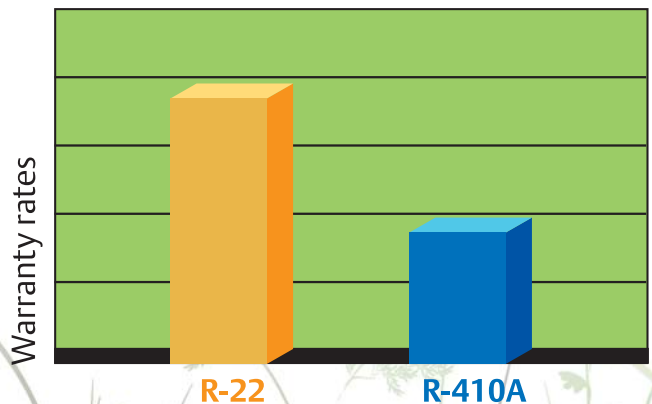
Building your business

Transitioning to R-410A can help you build a better business, by giving you the opportunity to:

- Offer your customers the most efficient systems, to improve comfort and control costs
- Save on projected service costs as R-22 is phased out
- Meet tomorrow's tough new energy and environmental restrictions today
- Avoid the potential losses in capacity and energy efficiency of drop-in refrigerant replacements

Safe and reliable

Contrary to popular belief, the higher pressures of R-410A are not unsafe and will not lead to more frequent breakdowns. In fact, air conditioning units using the new refrigerant have been thoroughly tested by their original equipment manufacturers (OEMs) and independent laboratories. And the millions of installations already up and running around the world offer critical field-trial proof that R-410A systems are more reliable than those using R-22.



We're ready. Are you?

Unequaled product availability


With Emerson Climate Technologies' global manufacturing, wholesaler and distribution networks, R-410A products and support are always close by, including:

- High-efficiency Copeland Scroll compressors, from 1.5–30HP
- Copeland Scroll tandem compressors, up to 60HP
- Copeland Scroll UltraTech™ two-stage compressors
- Copeland Scroll Digital™ compressors, from 3–10HP



End-to-end service and support

Emerson Climate Technologies offers you and your business everything you need to make the transition to R-410A productive – and profitable – including:

- Industry-leading research
- Application engineering support
- Focused North American Technician Excellence, Inc. (NATE) certified training programs 
- Educational services and scroll training seminars
- Specialized tools, such as R-410A pressure/temperature calculators
- Materials for Spanish-speaking contractors



Learn more.

To find out why R-410A is the clear-cut choice for tomorrow, visit CopelandScroll.com for more information, including a white paper on *Refrigerants for Residential and Commercial Air Conditioning Applications*.



