AN ARISTA BUYERS GUIDE

REPAIR VS REPLACE: A GUIDE TO MAKING AN INFORMED CHOICE WHEN YOUR HVAC SYSTEM IS DOWN







Introduction

You can tell by the technician's face that the news is not good. Your air conditioner needs an expensive repair, he tells you. You can either fix it or buy a new one. The choice is yours.

It's an age-old problem: things break down and you're not always sure how much life is left in them. Are you throwing good money after bad by fixing something that's likely to break again soon? Or are you unnecessarily draining your bank account for a new system when the old one could have lasted another couple of years? How can you make such a decision without a crystal ball to see into the future?



To make matters worse, it's well known that there are disreputable service vendors out there who will try to sway your decision based on their own business goals. If a company stands to make more money by selling you a new system, you may be told that it's time for a replacement when the unit has a minor issue that's easily fixable.

Or, if a particular vendor's business is focused on repairs rather than installations, they may convince you to keep throwing money into a unit that's long past its useful life. If you don't know from compressors, condensers and capacitors, how do you know if the advice you are hearing is valid and based on your best interest?

Even if your service provider is trustworthy, you may not get much help making a decision. After all, if the vendor is not familiar with your business and your equipment's history, they may not have enough information to give you good advice. You'll be handed two estimates and you're on your own figuring out what to do.

Today there's a new factor impacting repair or replace decisions. The refrigerant known as R-22 or Freon (used by most systems installed before 2010) is being phased out as per the EPA. Before you make a decision about an older system, you must know if it uses R-22 and how that might affect your options.





The Cost of Getting it Wrong

It's no wonder that everyone dreads making a decision like this. You probably feel like you are flying blind, and the consequences of making the wrong choice can be significant.

Let's say you decide to go ahead and fix the unit because the cost of repair, while a lot more than you expected, is still less than the cost of buying a new one. The technician said "it's just a compressor," right? You expect it to be fixed quickly and to work fine for at least another couple of years.

Unfortunately, that's not what happens. The next thing you know, the unit is dead again. Your employees are wilting in the heat, your customers are walking out, and the repair tech tells you that the new compressor has failed again due to an "underlying problem." Now you have to shell out the price of a new system after all.

Or, your system works fine for a while, then develops a refrigerant leak (which is not uncommon for an older system). If it uses R-22 refrigerant, that repair could be much more expensive than in the past. As R-22 is phased out the available quantities are decreasing and the price is skyrocketing as a result. You may find that it's not worth the cost of making that repair, and now you're facing a replacement.

What about the consequences of the other choice, replacing the unit with a new one? You may never know if that older unit could have lasted another year, giving you the time to plan for the expense and research the best deal on a new system. When you're replacing a broken unit during a heat wave, you often need to get what's available in a hurry, which is rarely a bargain.

So what can you do, other than hire a fortune teller to look into







your air conditioner's future? Use the guidelines provided here to think through the many factors impacting your decision and how much it will ultimately cost you either way. At that point, you'll be in a much better position to make an informed choice that's the best one for your bottom line.

The Dollars and Sense Factors

AGE OF EQUIPMENT AND EXPECTED LIFE SPAN

Commercial air conditioners are typically built to last 15 to 20 years. When they reach about 75% of that life span, they start to become less reliable. Parts are older and more worn, and you are more likely to experience breakdowns. Also, parts for these older systems may be more difficult to obtain and more costly. So if your air conditioner is less than 10 years old, it may make sense to take a chance on fixing it, since it's more likely to last a few more years. However, if it's approaching 12 to 15 years or older, sinking a lot of money into repairs may not gain you the time you're hoping for. Also keep in mind that certain conditions, like exposure to smog, salt air or other corrosives, can decrease the expected life span.

A good rule of thumb (also taking into account the other factors listed here) is that if your unit has reached 75% of its expected life span, and the repair cost is more than a third the cost of a replacement, you are better off going with a new system.





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History and Condition of Equipment

When you're trying to figure out if your unit is at 75% of its life span, how do you know if that life span will be 15 or 20 years? Looking at your equipment's maintenance and repair history is almost as good as having that crystal ball:

- Has your HVAC equipment been regularly cleaned and maintained by experienced professionals? If so, the life span of your equipment may be increased by several years.
- Has the unit been reliable, or has it experienced numerous breakdowns? Sometimes people assume if a unit has never had problems that it's "due" to breakdown, but the opposite is true. If the parts are in good condition and the equipment has worked reliably, it's more likely to keep being reliable longer.
- Is it a quality brand, or is it a lesser quality builder's model?
 If it's a better brand, you can expect a longer life span.

WHAT REFRIGERANT DOES IT USE?

Due to regulatory changes, R-22 refrigerant (also known as Freon) is being phased out and will be banned in the US by 2020. In the meantime, prices are already rising significantly. If your system uses R-22 and needs repairs that require adding







refrigerant (many do), it will cost increasingly more now than you might expect. Any further repairs that it needs in the next couple of years will cost even more. And come Jan 2020 it will become impossible to fix at any price.

In many cases, the cost of the repair is not worth investing in an old system. You might have the option to retrofit or convert your older system to use a new refrigerant; an HVAC expert can inspect and let you know if that's a possibility for your equipment. Or you may find that replacement is the most cost-effective choice.

If you are facing a decision about a system that uses R-22 refrigerant, get this helpful resource to learn more: **R-22 Refrigerant Phase Out: Do You Need to Replace Your AC?**

ENERGY COSTS

You've probably heard that newer air conditioners are more energy efficient and can reduce your electric bill. What you may not realize is how much you can save and how quickly that savings can make up for the cost of new equipment. According to the U.S. Environmental Protection Agency (EPA), every dollar invested in energy efficiency can produce a double or triple return on investment. If your equipment is over 10 years old, upgrading to high efficiency equipment can pay for itself in a surprisingly short period of time.

Check the SEER rating (Seasonal Energy Efficiency Ratio), which measures the efficiency of cooling equipment. Today's most efficient systems have ratings above 30, with the minimum at 13 for the northern part of the country. Your older model may only be rated 5 to 10. A newer cooling system with a SEER rating of 16 costs half as much to operate as a unit with a rating of 8.

Check out these resources to calculate how much you can save:

HVAC OpCost

Energy Saving Calculators from ENERGY STAR

When you install a new, energy efficient air conditioner, you could be eligible for rebates from your utility company. To learn more about the rebate opportunities, check out the following resources:

Database of State Incentives for Renewables & Efficiency (New York)

How to Capitalize on Billions in Available Energy Incentives, a white paper published by Ecova

The U.S. Department of Energy (search for Rebates for your state)







BE A HERO: When you install a new, energy efficient air conditioner, you could be eligible for rebates from your utility company.

What's Broken?

It pays to understand just a bit about the things that can go wrong and which ones are probably not worth fixing. Some problems are relatively minor, and if your system is otherwise in good condition, you can reasonably expect that it will continue to function reliably once the problem is taken care of. However, there are certain issues that often indicate underlying issues that are not always easy to diagnose. If you fix the immediate issue without finding the cause, the problem will recur. Some examples:

COMPRESSOR

In certain cases, experienced professionals will not recommend replacing a failed compressor. The compressor's job is to compress the refrigerant gas (hence the name) so that it can travel through the condenser coil and facilitate the removal of heat from the air. It's the heart of the system and expensive to replace. Not only that, but a failed compressor can be caused by any number of underlying issues, including oil or refrigerant leaks, contaminants in the system, and electrical problems. If you put in a new compressor without fixing the problem that caused it to fail, the new compressor may fail again.

LEAKY COILS

If your unit's condenser coils have numerous leaks or severe corrosion, it can be an expensive fix. Even if your tech finds and repairs all the leaks, it's likely new ones will continue to crop up, and each time you not only need to fix the leak but







keep adding expensive refrigerant to replace what's been lost. It's probably more cost effective to replace your unit with a new model. That's especially true if your old unit uses R-22 refrigerant, which is becoming more expensive every day.

BONUS: the newer equipment uses less costly and more environmentally-friendly refrigerants.

ELECTRICAL ISSUES

In most cases, electrical issues are relatively easy to fix and thus repair is usually preferable.

FAN MOTOR

Most of the time this is a relatively simple repair, and in some cases it's just a matter of a good maintenance.

If you're reading this, chances are you're not an HVAC expert. So how do you know which broken parts are signs of future trouble and not worth fixing? If you're not sure about the advice you've been given, get a second opinion. Look for MSCA Star and NATE certified professionals to make sure you're dealing with knowledgeable experts.

Soft Costs & Intangibles

COMFORT AND AIR QUALITY

Consider how well your air conditioner was working even before it broke down. Have you experienced any of the following problems?

- Variations in temperature at different times and in different parts of your building
- Air quality problems such as high humidity, mold growth, or even "sick building" symptoms





- Noisy operation of the unit that's disruptive to building occupants
- Poor air quality, temperature variance and high noise levels can cost you a bundle in reduced worker productivity and can even drive away customers. If you're experiencing any of these issues, the gains in comfort may be worth the cost of investing in a new system.

SPACE CHANGES

It's also important to think about how your space may have changed since you installed the current air conditioning system. Have you renovated, changed the size, or modified the layout of the space that the equipment is cooling? If so, your system may no longer be correctly sized for the space. Installing a new system gives you the opportunity to choose a unit that's appropriately sized for your needs.

PEACE OF MIND

It's hard to put a price tag on this one, but you can start by considering how much it may cost you the next time your older air conditioner breaks down. If you have a store or a restaurant, you could lose a day's worth of business or more while you wait for it to be fixed again. Then consider the cost to your reputation when the word gets around. Think about the time you lose (your own and your employees) dealing with recurring issues. Not to mention the effect on your blood pressure and your stress level. Is it really worth trying to save that old piece of equipment?







DO YOU TRUST YOUR SERVICE PROVIDER?

How much do you know about your current service provider's business model? What do they stand to gain from your decision to repair or replace older equipment? Do they even have the expertise to fix an older model? They could be recommending replacement simply because they don't know how to fix the one you have. It's always a good idea to consult with more than one company when faced with a repair or replace decision for a mission-critical system like your air conditioner.

Here at Arista, we've been installing air conditioning systems and handling all aspects of commercial and residential equipment service for over 40 years. Our technicians will never pressure you to make a decision based on what's better for us. When Arista sends a technician out to evaluate your unit, he will take a look at all your equipment and your building, and understand its usage and how it affects your business before giving you a recommendation to repair or replace. Be sure to ask questions about the factors in this guide that are important to you. Our technicians are knowledgeable experts who will help you understand your options, consider the impact of each, and make an informed decision.



ARISTA

ABOUT ARISTA

Whether you're responsible for the installation of a new HVAC system or inherited legacy equipment, Arista has the experience to service and maintain any system throughout its lifecycle. Across the tri-state area, we're recognized as one of the region's most respected and referred HVAC experts. When you purchase a preventive maintenance



service agreement from Arista, you're backed by an industry leader with that has earned its reputation through decades of trustworthy business conduct and quality service.

Peace of mind at a fair price

Your account is managed by a senior Arista technician and backed by an expert staff of over 160 highly trained professionals. Arista boasts a comprehensive program of continuous staff training and professional development on state-of-the-art practices and processes.

Arista clients also enjoy these benefits:

- Quick-to-respond, accessible workforce and a fleet of 100+ vehicles
- 24/7 emergency standby service
- 30,000 sq. ft. corporate warehouse facility stocked with over 55,000 parts
- Industry recognition as the only NY state company to earn both the prestigious MSCA STAR and GreenStar designations
- LEED Accredited Professionals to assist in making smarter HVAC choices

Questions? Call Arista today.

We hope you've found this guide to be a handy reference.

We invite you to call us for a quote on your equipment purchase or service needs. We think you'll agree that hearing what we have to say will be one of the best decisions you make in researching your HVAC needs. Reach an Arista HVAC specialist today at 718-937-4001 or email info@aristair.com.

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