If you've heard a mini split success story and want to learn more about why they're growing in popularity, you've come to the right place. Read on to find out if your home is well-suited for a mini split system.

Ductless mini split heating and cooling systems have only recently emerged as an effective and viable alternative to conventional systems like <u>air conditioners</u>, <u>furnaces</u>, and boilers, so understanding how they work and what situations call for them is new territory for many people.

With so many different sources of information out there, getting a clear understanding of why more and more homeowners are opting for mini splits can be confusing.

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The team of HVAC professionals at Mattioni is highly skilled and regularly assists homeowners as they find and install new heating and cooling systems that deliver on expectations.

When it comes to mini splits, we're here to help you investigate this lesser-known system too.

Taking the time now to explore and learn about mini split systems might pay off in the long run as you may find yourself in one of the following situations, for which the unique advantages of a ductless system are well-suited:

- 1. Upgrading From a Window AC Unit
- 2. Adding a Supplementary Heating System to Baseboard Heaters
- 3. Additions, Basements & Garages That Lack HVAC Provisions
- 4. Small Homes, Condos, and Apartments with Limited Ductwork

After we review how mini splits function in this article, we'll also go over who is best suited for a mini split and finish with their benefits. This will give you all the information you need to evaluate if mini splits are a good option for your home.

A few common threads about ductless mini splits that will emerge are that they're incredibly versatile in creating a customizable system layout without ductwork, and that they have superior energy efficiency over several of your other heating options.

Let's start by looking at how mini splits can function to heat and cool your home without any ductwork.

How Does a Mini Split System Work? What Situations Are Mini Split Systems Well-Suited For? 1. Upgrading From a Window AC Unit 2. Adding a Supplementary Heating System to Baseboard Heaters 3. Additions, Basements & Garages That Lack HVAC Provisions 4. Small Homes, Condos, and Apartments With Limited Ductwork What Are the Benefits of Ductless Mini Split Systems? 1. Mini Splits Address Both Heating and Cooling 2. Mini Splits Utilize Efficient Electric Heating 3. Mini Splits Can Operate Entirely Without Ductwork 4. Mini Splits Are Well-Suited to Create Zones Within Your Home Deciding If A Mini Split System is Right for You

HOW DOES A MINI SPLIT SYSTEM WORK?

The functions of mini split systems can easily draw comparisons to both air conditioners and heat pumps:

- Much like air conditioners, mini splits utilize a <u>refrigerant</u> to absorb and transfer heat out of your home, resulting in cooler indoor temperatures.
- Much like heat pumps, mini splits can reverse this flow to absorb heat from the outdoor air and use it to heat your home. It
 might sound unnatural, or even impossible, for a heating system to be able to draw heat from freezing temperatures during
 the winter, however cold-weather refrigerants make this feat possible.

Here's the defining characteristic of mini splits: they do all of this without any ductwork whatsoever.

Mini split systems utilize indoor air handlers, or <u>heads</u>, that each contain their own evaporator coil. These air handlers are mounted to a wall, ceiling, or floor and serve as contact points for the indoor side of temperature moderation, instead of vents.

The majority of mini split systems can support up to four air handlers per outdoor compressor unit, however, some newer models can provide access to up to ten zones per outdoor unit. Each of these indoor heads must be joined to the outdoor unit via refrigerant lines.

Making these connections usually only requires one 4" hole to be drilled through your home's exterior, but some situations may call for multiple holes of this size.

The size and layout of the living space that needs heating and cooling will dictate how many indoor air handlers you'll need.

If you're only looking to address one room in your home, then you'll only need one head. If your home is large enough to warrant more than four heads, depending on the system model you choose, you may or may not have to install a second outdoor compressor unit.

WHAT SITUATIONS ARE MINI SPLIT SYSTEMS WELL-SUITED FOR?

Even with their superior heating efficiency, installing a ductless mini split system doesn't make sense for everyone. If you're a homeowner with an existing air conditioner and ducting network, the unique advantages that a mini split offers might not line up with the characteristics of your house.

There are, however, a few common situations that people find themselves in where a mini split is the best choice. The underlying similarity between all of them is that mini splits fill the gap left by a lack of ductwork. Here are four common instances that mini splits serve well:

1. UPGRADING FROM A WINDOW AC UNIT

The first situation that calls for a mini split is for homeowners looking to upgrade from a window AC unit. If you rely on a window unit, then you most likely don't have extensive ducting within your home.

In this case, mini splits offer a great resolution that helps you part ways with the clunky and loud window AC units that need to be hooked up and removed at the beginning and end of every summer.

Mini splits are also a thorough upgrade from window units in both efficiency and performance.

Another reason that mini splits are an upgrade from window AC units is they'll increase the number of cool air sources, via air handlers, within your home. Depending on your home's size and the system model you choose, you can install up to ten heads per outdoor compressor unit. This can go a long way in improving your home's comfort.

Homes with cooling systems that rely on window AC units are very well-suited for mini splits as there is no need to install new ductwork, which can be a project that requires extensive and costly work.

2. ADDING A SUPPLEMENTARY HEATING SYSTEM TO BASEBOARD HEATERS

Many homeowners with heating that utilizes combustion-based fuel like oil or propane and baseboard radiators, or even electric baseboard heating, are interested in adding supplementary heating. If you are one of these people, you also find yourself in a situation that's well-suited for mini splits, albeit for a different reason.

Among all supplementary heating options, including <u>heat strips</u>, mini splits offer the most BTU output at industry-leading efficiency levels. Each air handler can also be individually controlled, giving you optimal control over your home's comfort and energy usage.

Installing a mini split in this situation will elevate your home's heating to a Hybrid System, allowing you to flex your heating levels between your mini split and boiler or furnace.

Your highly efficient mini split can be called upon in a couple of different situations:

• The first is during mildly cool weather in the spring and fall when you'll want some heating, but you don't quite need the BTUs that a boiler or furnace provides to stay comfortable. You'll be able to turn to your mini split for heating during these times, minimizing your use of high-cost fuels like oil or propane.

• The second is during the coldest days of the year when your home may need additional heating on top of the BTUs provided by your boiler to stay comfortable. During the coldest winter days, you'll be able to turn on your mini split simultaneously with your baseboard heaters, to stay comfortable and potentially limit high-cost fuel consumption as much as possible.

Upgrading to a Hybrid heating system is a great way to mitigate your utility costs and maximize your comfort. Many homes that are looking to add supplementary heat also rely on window AC units for cooling; these homes are perfect candidates for a mini split installation.

3. ADDITIONS, BASEMENTS & GARAGES THAT LACK HVAC PROVISIONS

Planning for an addition to your home is a tug-of-war between your list of wants and your budget, and frankly, extensive HVAC provisions don't always make the cut. If you couldn't include ductwork (or forgot about it...we've seen it happen) then a mini split with a few air handlers is likely the best solution for you.

Likewise when finishing a basement; if you end up with a basement that lacks HVAC provisions and needs heating and cooling, a mini split is among your top options. Once again, this is driven by a mini split's unique ability to deliver heating and cooling without relying on any ductwork.

Also, mini splits are one of the few heating and cooling options for your garage, as building codes frequently ban garage ductwork.

4. SMALL HOMES, CONDOS, AND APARTMENTS WITH LIMITED DUCTWORK

In general, mini splits serve smaller living spaces well; this goes for homes, condos, and apartments that haven't yet been fitted with ductwork. If you find yourself in this, or any of the previous situations, it might be time to get your questions answered by an HVAC professional.

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WHAT ARE THE BENEFITS OF DUCTLESS MINI SPLIT SYSTEMS?

Mini splits offer a few unique benefits to homeowners, starting with their dual functionality, but also surrounding their flexibility in creating <u>comfort zones</u> and their enhanced energy efficiency.

1. MINI SPLITS ADDRESS BOTH HEATING AND COOLING

The capability to both heat and cool your home is an advantage that can't be overstated. This ability allows mini splits to adequately address temperature needs when replacing a window unit, or operating in an addition or basement.

What does all of this mean for you? Mini split systems are your one-stop home HVAC shop that eliminates your need for two separate heating and cooling systems in areas of your home without ductwork.

2. MINI SPLITS UTILIZE EFFICIENT ELECTRIC HEATING

Since their heating mode is simply the reverse function of their cooling mode, mini split systems don't require any combustion-based fuel like oil, propane or natural gas. This is a big deal when it comes to how much you'll expect to pay for your heating.

The prices of combustion-based fuels can sometimes be volatile and are expensive when compared to the electric heating of mini splits. Mini splits can provide freedom from costly and sometimes unpredictable fuel prices, as well as your dependency on fuel delivery to your home.

As long as you have power, or a generator, you'll be able to heat your home in a cost-effective fashion.

3. MINI SPLITS CAN OPERATE ENTIRELY WITHOUT DUCTWORK

It also can't be overstated that the distinguishing feature of mini splits is that they don't use any ductwork in the heating and cooling process.

While there are some ducted mini splits out there, the design of ductless mini splits makes them not just a *good* option for homes without existing ductwork, but for many people it makes mini splits the *only* sufficient heating and cooling option.

Another perk of ductless systems is the prevention of temperature losses that can naturally occur as air moves through ducts. According to energy.gov, duct losses can account for 30% of an air conditioner's energy consumption.

By removing ducts from the equation, these systems retain much more heat as they transfer it, making ductless systems that much more energy efficient.

4. MINI SPLITS ARE WELL-SUITED TO CREATE ZONES WITHIN YOUR HOME

Since mini splits utilize individual air handlers instead of ductwork and ventilation, creating individual zones with different temperature outputs within your home is easily achieved. A zone can be one room, several adjacent rooms, or an entire floor.

With a mini split system, you'll be able to establish up to ten zones in your home per outdoor compressor unit, and access each of their temperatures individually.

This is an arrangement that many homeowners with traditional AC and heating systems long for as it enhances both comfort from room to room and, you guessed it, overall system efficiency.

DECIDING IF A MINI SPLIT SYSTEM IS RIGHT FOR YOU

While the versatility and energy efficiency of mini split systems make them uniquely advantageous, it's wise to consider all sides of owning one.

For instance, some homeowners don't like the appearance of the indoor air handlers throughout their house. While these are typically not as noticeable as a window unit, air handlers take up more space than vents from a central AC system do. In these cases, we recommend looking into concealed slim ducted mini splits.

Also, you may be satisfied with the quick blast of heat and comfort that an oil, propane, or natural gas system can provide. If this sounds like you, then installing an energy-efficient supplementary heating system might not be high on your list.

Nevertheless, it's important to consider that, in addition to the **long-term energy savings** and **flexibility to create comfort zones**, mini splits have several benefits including being **well-suited for additions**, **basements**, **garages and small apartments without ductwork**.

Whatever may be top of mind for you in your HVAC replacement search, we advocate speaking through your questions with a professional. We also believe scheduling an in-home consultation to have this conversation face-to-face can help keep your mini split system installation search on track.

If you find yourself in one of the situations covered in this article, the team of HVAC professionals at Mattioni is here whenever you're ready to dig deeper into mini splits as a heating and cooling option.

More and more people are catching on to the advantages of ductless systems; if you'd like to learn more about this modern approach to heating and cooling, reach one of our friendly service representatives at <u>484-617-3619</u>, or <u>schedule an appointment today</u>.

