

# Dual-Fuel 101: The Benefits of Pairing a Heat Pump with a Gas Furnace

Bryant Hybrid Heat® dual-fuel systems combine gas heating with electric heating and cooling for energy-efficient comfort all year long.

featuring





# What Exactly is a **HEAT PUMP?**

A heat pump is an all-electric indoor comfort system that provides both heating and air conditioning. It works as an air conditioner in hot weather but can also reverse the process and heat the home when cold weather arrives. A traditional heat pump system includes the heat pump, a fan coil, and a thermostat.



#### How does a traditional heat pump system work?

First, heat pumps do not create heat. They redistribute heat from the air or ground and use a refrigerant that circulates between the indoor fan coil and the outdoor compressor to transfer the heat.

In cooling mode, a heat pump works just like an air conditioner. It absorbs heat from indoor air, moves it outside, and returns the cooler air back into your home. In heating mode, it's the opposite. Heat from outdoor air is absorbed, and that heat is moved inside to provide warmth and comfort. Even when it's cold outside, there is often enough heat energy to efficiently heat your home.

#### What is a Hybrid Heat system?

A Hybrid Heat system is a fuel-saving alternative to a traditional heat pump system. Instead of combining a gas furnace with a central air conditioner, Hybrid Heat systems combine a furnace with a heat pump.

**Heat Pump:** The heat pump includes a fan, a compressor that pumps refrigerant through the system, and a large coil that helps transfer heat.

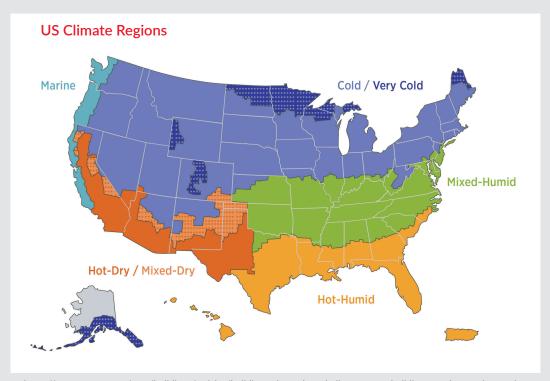




Gas Furnace: With a Bryant Hybrid Heat system, the indoor unit is a gas furnace with an attached indoor coil. The furnace generates heat using natural gas, ensuring your home remains warm in the colder months.

#### Heat pump usage across the United States

Heat pumps are currently more common in southern and coastal states where air conditioning seasons are longer and heating seasons are less demanding. In colder areas, homeowners frequently rely on a gas furnace because temperatures often drop below freezing in the winter. That's why a Hybrid Heat system makes so much sense. A Hybrid Heat system takes advantage of the best each system has to offer.



https://www.energy.gov/eere/buildings/articles/building-science-based-climate-maps-building-america-top-innovation

#### Why would a homeowner need two heat sources?

Heat pumps and furnaces both offer efficient and reliable heating for your home. Combining the two takes advantage of each system's strengths to create a better system for all seasons. And, doing so helps eliminate the need for the much less efficient electric resistance heating coils commonly used to supplement heat pumps in colder regions. Here's a look at their similarities and differences:

#### How They Heat:

A heat pump absorbs heat from outdoor air and moves it inside. A gas furnace generates heat from combustion.

#### How They Cool:

A heat pump reverses its operation to cool your home just as an air conditioner does. A furnace by itself provides heating only. For cooling you must include an air conditioner and an indoor coil.

#### **Fuel Source:**

A heat pump runs entirely on electricity. A gas furnace requires both electricity and natural gas (or propane).

#### Air Circulation:

Both systems use a fan to circulate heated (or cooled) air into your home through ductwork.

#### Fact or Fiction? Bryant clears the air

Fairly or unfairly, heat pumps have accumulated some common misperceptions over the years. Let's clear the air on five of the most frequently expressed issues associated with heat pumps:

| Gas furnaces are always more efficient than heat pumps.   | Fiction. During milder conditions, heat pumps are typically the most efficient option.   |  |
|---|--|--|
| Heat pumps are for heating only.  | Fiction. While the name leads you to believe it's a heating product, heat pump systems provide both heating AND cooling.                                 |  |
| Heat pumps are for warmer climates only.  Fiction. Many of today's heat pumps can deliver efficient heat at outdoor temperatures of 5° F or lower.  |  |  |
| Heat pumps blow cold air.   | Fiction. Gas furnaces tend to deliver warmer air from the heat vents, but today's heat pumps have stepped it up with warmer circulated air temperatures. |  |
| Fiction. While it's true that older heat pumps were a bit models are much quieter. Bryant heat pumps achieve so low as 55 dBA, which is quieter than a normal conversor https://www.nidcd.nih.gov/news/2020/do-you-know-how-loud-too-loud |  |  |



### Subsidize the system with tax credits and rebates

With a high-efficiency heat pump system, homeowners can enjoy energy-saving comfort that just might pay them back. Here's how:

- The Inflation Reduction Act of 2022 provides federal income tax credits for energy-efficient home improvements through 2032.
- Homeowners can receive a tax credit equal to 30% of the installed cost of a qualifying heat pump system, up to a cap of \$2,000.
- States, cities, and local utility companies are getting into the act as well, offering rebates on allelectric and ENERGY STAR®certified comfort systems.

Be sure to research all local rebate opportunities as well as any potential tax credits\* available for any system you are considering.

<sup>\*</sup> Homeowners should always consult with a qualified tax professional to determine how tax credits may apply in their circumstance.

#### The Bryant heat pump advantage

Bryant offers a variety of heat pump options to fit a variety of homeowner needs. Of course, the pinnacle of our heat pump lineup is our Evolution<sup>TM</sup> Extreme<sup>TM</sup> heat pumps. Evolution Extreme heat pumps provide heating efficiencies up to 23.0 SEER2 and 10.0 HSPF2.

With smart electronics and variable-speed operation, they provide additional benefits of precision load matching, easy integration with utility company energy curtailment systems, soft start-up and more. And Bryant Evolution Extreme heat pumps offer Bluetooth® connectivity built-in for enhanced serviceability and troubleshooting at the outdoor unit. That means a contractor can troubleshoot, service, and even "push" software updates to the outdoor unit with fewer, if any, trips into the home.

|                          | Evolution System   | Preferred™ Series                                       | Legacy™ Line                                   |
|--------------------------|--|---|--|
| Motor<br>Performance     | Variable-speed rotary<br>and variable-speed scroll<br>compressors available                    | Two-stage and single-stage scroll compressors available | Single-stage<br>scroll compressor              |
| Efficiency               | Up to 23.0 SEER2<br>and 10.0 HSPF2 ratings   | Up to 18.0 SEER2 and<br>Up to 8.5 HSPF2 rating          | Up to 16.0 SEER2 and<br>Up to 8.1 HSPF2 rating |
| Diagnostic<br>Technology | Evolution fully<br>communicating system<br>Bluetooth connectivity built-in                     | InteliSense™<br>connected system                        | -  |
| Durability               | DuraGuard™ Plus<br>cabinet protection  | DuraGuard Plus cabinet protection                       | DuraGuard™<br>cabinet protection               |
| Sound                    | AeroQuiet™ System II,<br>dBA as low as 55<br>Quiet Mode Feature                                | dBA as low as 70  | dBA as low as 69                               |
| Recommended<br>Control   | Evolution™ Connex™<br>System Control   | ecobee for Bryant<br>Smart Thermostat                   | Bryant<br>Smart Thermostat                     |
| Limited<br>Warranty      | 10-year parts <sup>2</sup><br>10-year unit replacement<br>(293V, 291V compressor failure only) | 10-year parts²  | 10-year parts²                                 |

<sup>&</sup>lt;sup>1</sup> Control sold separately, other options available.

<sup>&</sup>lt;sup>2</sup> Upon timely registration. The warranty period is five years if not registered within 90 days of installation except in jurisdictions where warranty benefits cannot be conditioned upon registration. See limited warranty certificate for complete details and restrictions.



## Gain more control with a complete

# PREFERRED SYSTEM

Ask your Bryant dealer about how you can maximize your home comfort system with additional Bryant products.

EVOLUTION EXTREME SYSTEM CONTROL

PREFERRED FURNACE

EVAPORATOR COIL

AIR PURIFIER

**HUMIDIFIER** 

VENTILATOR



Capable of managing a complete home comfort system including humidity, ventilation and zoning.<sup>1,2</sup>



Properly matched with your outdoor unit to convert heating and cooling energy into greater indoor comfort.



Matches to the proper outdoor unit to provide top cooling efficiency and years of reliable service.



Our patented Captures and Kills® technology treats 100% of the air flowing through your system.<sup>3</sup>



Alleviates dry air by adding moisture.



Transfers heating and cooling energy to the incoming fresh air.

- <sup>1</sup> When connected to the Internet through a Wi-Fi® network.
- <sup>2</sup> Zoning system sold separately.
- <sup>3</sup> The Evolution air purifier has demonstrated effectiveness against the murine coronavirus, based on third-party testing (2020) showing a >99% inactivation, which is a virus similar to the human novel coronavirus (SARS-CoV-2) that causes COVID-19. Therefore, the Evolution air purifier can be expected to be effective against SARS-CoV-2 when used in accordance with its directions for use. Third-party testing (2012, 2007) also shows ≥99% inactivation for the type of virus that causes common colds, Streptococcus pyogenes and human influenza. Airborne particles must flow through your HVAC system and be trapped by the MERV 15 Evolution filter to be inactivated at 99%. Learn how it works at Bryant.com/purifier.





For further information, please contact:

**Bryant.com** 

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