bryant®
Heating & Cooling Systems

Cold Climate Heat Pumps

A choice you can
warm up to in any climate

featuring

Puron ADVANCE™

What is a Heat Pump and How Does It Work?

A versatile year-round comfort system, a heat pump can both heat and cool your home by extracting heat energy from the surrounding environment and moving it to another location.

- A heat pump system includes an indoor unit, an outdoor unit, and a thermostat.
- In the winter, a heat pump system extracts heat from the outdoor air and moves it inside to provide warmth and comfort.
- In the summer, it operates in reverse, taking heat energy (and some humidity) from indoor air and moving it outside the home – just like a central air conditioner.

However, traditional heat pumps are designed for milder climates and are not very efficient during extremely cold winter temperatures (below 5° F) and rely upon an auxiliary heating source during those times. Bryant cold climate heat pumps are an option you can warm up to, even in areas with more severe climates historically served by fossil fuel heating systems.

What is a Cold Climate Heat Pump?

Cold climate heat pump technology is designed to efficiently heat your home even in extreme cold, with systems capable of operating effectively in outdoor temperatures as low as -23° F (DOE CCHP). Unlike traditional heat pump systems, which often struggle to maintain efficiency during frigid conditions, cold climate heat pumps can still provide consistent warmth while using less energy. These advanced heat pumps work by extracting heat from the outdoor air, even at subzero temperatures, offering reliable performance without sacrificing comfort. Additionally, many of these systems are all-electric, providing a clean and efficient alternative to gas-powered heating systems for colder regions.

ADVANTAGES OF COLD CLIMATE HEAT PUMPS

In addition to offering efficient performance in cold climates, heat pump technology has evolved over the last 20 years to provide comfort improvements and overall benefits:

- Higher energy efficiency – up to 23.0 SEER2 during cooling and up to 12.5 HSPF2 during heating with properly matched equipment
- Maintain up to 100% of your system's heating output at 0° F
- Consistent temperature in the home for greater comfort with fewer up and down swings during use
- Advanced Defrost on select models that can potentially eliminate "cold blow" when heating is required
- Cold climate heat pump technology that allows for installation in all regions and provides warm, energy-efficient heating even when it's below freezing outside with some Bryant models operating down to -23° F
- Enhanced humidity control throughout the year – especially in the warmer, more humid summer months
- Help reduce a home's carbon footprint compared to a gas furnace/air conditioner system
- Potentially eligible for local utility rebates and federal incentives

What is an ENERGY STAR® Cold Climate Heat Pump?

To be considered an ENERGY STAR® Cold Climate heat pump, the equipment must meet the criteria as outlined below:

Ducted Cold Climate Heat Pump Requirements*

- 15.2 SEER2
- 8.1 HSPF2
- 1.75 COP at 5° F
- 70% capacity at 5° F (as compared to capacity at 47° F)

Ductless Cold Climate Heat Pump Requirements*

- 15.2 SEER2
- 8.5 HSPF2
- 1.75 COP at 5° F
- 70% capacity at 5° F (as compared to capacity at 47° F)

* Both ducted and ductless heat pumps must pass a Control Verification Procedure. This procedure is now required for all HVAC manufacturers. We must verify that the reported performance of our heat pumps under M1 testing procedures at 5° F is how the unit will perform in the home with a native control (either a standard thermostat or an Evolution™ System Control).

Below is a table showing Bryant heat pump model families that meet the ENERGY STAR Cold Climate Heat Pump requirements.

	Ducted Models		
	Family	**Air Handler**	**Furnace**
Evolution™ Series	293VAN	All Sizes	All Sizes
	291VAN	4.5	4.5
	290VAN	3T, 4T	All Sizes
Preferred™ Series	249VAN**	All Sizes	All Sizes

	Ductless Models	
	Heat Pumps	**ENERGY STAR® Certification**
Evolution Series	37MPRA, 37MAHA, 37MGHA	All Sizes / All Pairings
Preferred Series	37MUHA	All Sizes / All Pairings
	37MARA	9k, 12k, 18k, 24k
	37MGRA	18k, 24k, 30k, 36k, 48k
	37MURA	24k, 30k, 36k, 48k, 60k
Legacy™ Line	37MHRA	9k

** Available Q1 2026

What is a Department of Energy (DOE) Cold Climate Heat Pump (CCHP)?

Bryant participated in the DOE's CCHP Challenge to accelerate the development of cold climate heat pump technologies. It is important to note that the DOE challenge set requirements that were more demanding than the ENERGY STAR requirements. The challenge was designed by the EPA to drive heat pump technology that could perform in very cold climates.

To meet the DOE CCHP requirements, a heat pump must maintain more extreme efficiency requirements, be grid interactive, and use a refrigerant with a Global Warming Potential (GWP) of no more than 750. Specifically, the requirements are as follows:

Qualified Cold Climate Heat Pump Requirements*

- 8.5 HSPF2 in Region V
  - Ratings as we show them usually and in ES are Region 4 (which is easier)
- 100% capacity at 5° F
- COP of 2.1 at 5° F
- T-On/T-Off at -10 and -5 respectively
- Connected product (demand response) as stated by ENERGY STAR 6.0

Qualifying CCHP Product

- Evolution Series 291VAN heat pump

Comfort Without Compromise

In cold climates, reliable heating is about more than just comfort – it's a necessity. While gas furnaces have traditionally been the best option for low outdoor temperatures, innovations in gas-free heating have created new ways to deliver premium performance.

Bryant cold climate heat pumps are a great alternative to traditional gas HVAC systems for cold climates, delivering efficiency and energy savings without compromising comfort.

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For further information, please contact:
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