

# Champion<sup>®</sup> Residential Split Systems Homeowner buying guide



**CHAMPION<sup>®</sup>**  
HEATING AND COOLING

# Outdoor products

You can mix and match indoor and outdoor equipment across tiers, creating a bespoke system perfect for your home. For optimal performance, we recommend pairing outdoor and indoor equipment with equivalent communication abilities.



## Air conditioners

Upfront Unit Cost	\$				\$\$\$\$
Model(s)	TCD2, TCE2	TCF2	HMCG2	AL19 (Momentum)	AL21 (Momentum)
<b>Platform</b>	Entry-level unit offers minimum efficiency at affordable pricing	Higher efficiency and eligible for rebates and/or tax credits at moderate pricing	High-efficiency and modulating performance with a 40% smaller footprint than vertical discharge units	Premium efficiency and smart thermostat compatible with lower sound and greater warranty	Most efficient unit with variable capacity and smart thermostat, and zoned communicating capability
<b>Efficiency*</b>	13.4 SEER2 (Model TCD2 for northern climates) 14.3 SEER2 (Model TCE2 for southern climates)	 15.2 SEER2	16.5 SEER2	 18+ SEER2	 19+ SEER2
<b>Cooling Stages</b>	Single-stage	Single- / Two-stage	Modulating	Two-stage	Variable capacity
<b>Controls/ Communication</b>	Conventional thermostat			Conventional, or communicating thermostat/sensors	Communicating thermostat/sensors
<b>Comfort Technology**</b>	-			Fine-tuning technology aligns with premium indoor units for enhanced humidity control. Easy-to-read digital LCD display for efficient diagnosis and servicing. Integrated refrigerant charge monitoring for simple installations	
<b>Sound***</b>	As low as 73 dBA	As low as 73 dBA	As low as 54dBA	As low as 68dBA Swept wing fan, composite base pan and factory-installed sound blanket for reduced sound	
<b>Warranties</b>	10-Year Compressor Limited / 10-Year Parts Limited			Lifetime Compressor Limited / 10-Year Parts Limited	

## Heat pumps

Upfront Unit Cost	\$				\$\$\$\$
Model(s)	THE2	THF2	HMH7	HL19 (Momentum)	HL20 (Momentum)
<b>Platform</b>	Entry-level unit offers minimum efficiency at affordable pricing	Higher efficiency and eligible for rebates and/or tax credits at moderate pricing	High-efficiency and modulating performance with a 40% smaller footprint than vertical discharge units	Premium efficiency and smart thermostat compatible with lower sound and greater warranty	Most efficient unit with variable capacity and smart thermostat, and zoned communicating capability
<b>Efficiency*</b>	14.3 SEER2 7.5 HSPF2	 15.2 SEER2 8.1 HSPF2	16+ SEER2 8.1 HSPF2	 18+ SEER2 8.1 HSPF2	 19+ SEER2 9.0 HSPF2
<b>Cooling Stages</b>	Single- / Two-stage	Single- / Two-stage	Modulating	Two-stage	Variable capacity
<b>Controls/ Communication</b>	Conventional thermostat			Conventional, or communicating thermostat/sensors	Communicating thermostat/sensors
<b>Comfort Technology**</b>	Maintain comfort during minimized defrost cycles			Fine-tuning technology aligns with premium indoor units for enhanced humidity control. Easy-to-read digital LCD display for efficient diagnosis and servicing. Integrated refrigerant charge monitoring for simple installations. Maintain comfort during minimized defrost cycles	
<b>Sound***</b>	As low as 73 dBA	As low as 72 dBA	As low as 54dBA	As low as 68dBA Swept wing fan, composite base pan and factory-installed sound blanket for reduced sound	
<b>Warranties</b>	10-Year Compressor Limited / 10-Year Parts Limited			Lifetime Compressor Limited / 10-Year Parts Limited	

\* Minimum efficiency ratings available in your area may vary as dictated by regional standards.

\*\* Refer to individual model literature for further explanation on the value of these features.

\*\*\* Values for high-stage cooling.

# Indoor products



## Furnaces

Upfront Unit Cost	\$				\$\$\$\$			
Model(s)	TM8E (Ultra-Low NOx TL8E)	TM8Y	TM8V (Momentum)	TPLC (Momentum)	TM9E (Ultra-Low NOx TL9E)	TM9Y	TM9V (Momentum)	TP9C (Momentum)
<b>Blower Motor</b>	Standard-efficiency ECM, discrete multi-speed motor			High-efficiency ECM, constant CFM, variable-speed motor	Standard-efficiency ECM, discrete multi-speed motor			High-efficiency ECM, constant CFM, variable-speed motor
<b>Heating Stages</b>	Single-stage	Two-stage	Two-stage	Variable speed	Single-stage	Two-stage	Two-stage	Variable speed
<b>Available Heating Sizes</b>	40-130 MBH (60-100 MBH ULNOx)	40-120 MBH	60-120 MBH	60-120 MBH	26-120 MBH (60-100 MBH ULNOx)	40-120 MBH	40-120 MBH	60-120 MBH
<b>Controls/ Communication</b>	Conventional thermostat			Conventional or communicating	Conventional thermostat		Conventional or communicating	
<b>Gas Burner Efficiency*</b>	80% AFUE	80% AFUE	80% AFUE	80% AFUE	95% AFUE	96% AFUE	96% AFUE	98% AFUE
<b>Heat Exchanger</b>	Non-condensing				Condensing			
<b>Comfort Technology**</b>	Blower fine-tuning		Premium variable-speed ECMs contain blower fine-tuning technology for customized comfort based on geographic region		Blower fine-tuning		Premium variable-speed ECMs contain blower fine-tuning technology for customized comfort based on geographic region	
<b>Sound</b>	Good	Good	Better	Best	Good	Good	Better	Best
<b>Warranties</b>	Lifetime Heat Exchanger Limited*** 10-Year Parts Limited				Lifetime Heat Exchanger Limited*** 10-Year Parts Limited			

\* Minimum efficiency ratings available in your area may vary as dictated by regional standards.

\*\* Refer to individual model literature for further explanation on the value of these features.

\*\*\* 20-year Heat Exchanger Limited Warranty (for Ultra-Low NOx models).

## Air handling units (modular blowers)

Upfront Unit Cost	\$		\$\$\$\$
Model(s)	JHET, JMET	JHVT, JMVT (Momentum)	JHVV (Momentum)
<b>Efficiency</b>	Air handlers partner with AC or HP outdoor units and, because of this, they do not have an independent efficiency rating. Speak to your contractor about pairing air handlers with ACs or HPs for optimal system efficiency		
<b>Blower Motor</b>	High-efficiency, multi-speed ECM	High-efficiency, variable-speed motor	
<b>Controls/ Communications</b>	Conventional thermostat	Communicating thermostat/sensors	Conventional/communicating thermostat/sensors
<b>Comfort Technology</b>	-	Proprietary blower algorithm provides customizable comfort and IAQ/Humidity Enhancements	
<b>Warranties</b>	10-Year Parts Limited		



## Thermostats and controls



Upfront Unit Cost	\$			\$\$\$\$
<b>Platform</b>	<b>Standard 24v thermostats</b>	<b>Smart device accessibility (through Universal Adapter)</b>	<b>Hx™3 Touchscreen Thermostat</b>	<b>Hx™3 Communicating Zoning System</b>
	Optimized functionality to control temperature on your HVAC equipment	Wider range of choice on control device with any 24V standard thermostat (or smart control device)	Complete control wherever you are. Works with most systems. Easy-access home and away modes. Intuitive, touch-based control. Exceptional energy savings. Always up to date	By combining our award-winning variable capacity premium efficiency units with unique quiet motor technology and our Hx3 communicating thermostats and sensors, you have the ability to minimize temperature swings in those rooms farther away from the primary thermostat, as well as set and consistently maintain different conditions in different rooms in your home
<b>Primary Positioning</b>				

## Indoor air quality (IAQ) products

Beyond temperature, factors such as proper humidity levels and the minimization of allergens can affect the health of the air in your home. The Champion® product portfolio provides a complete range of humidifiers, dehumidifiers, air filters and ultraviolet air purifiers to enhance your HVAC system. All IAQ products come with a five-year limited warranty on parts.

### Whole home air cleaners



**Media air cleaner**

Available in up to MERV 16, media air cleaners are an excellent choice for keeping high-efficiency furnaces and air handlers operating at peak performance. They effectively remove dust, pollen, fungi, mold and pet dander.



**Hybrid electronic air cleaner**

Available in MERV 16, hybrid electronic air cleaners are highly effective at removing up to 99 percent of mold spores, viruses and bacteria. They are easy to install and offer all the benefits of a media air cleaner, plus much more.

### Ultraviolet (UV) lights



UV lights support the killing of mold, fungus and bacteria. They keep your indoor coils clean for improved efficiency and extended operating life.

### Whole home dehumidifiers



Our dehumidifiers support the removal of excess moisture from the air throughout your home.

### Whole home humidifiers



**Bypass humidifier**

This unit uses the HVAC system blower to move air through the humidifier. Recommended for homes up to 4,000 square feet.



**Fan power humidifier**

Our fan power humidifier uses an internal fan to move warm air from the furnace through the humidifier. It uses water more efficiently and is ideal for larger spaces. Recommended for homes up to 4,000 square feet.



**Steam humidifier**

For applications with milder winter climates and best for spaces where the units are in attics, crawl spaces and closets. Recommended for homes up to 5,000 square feet.

### Energy recovery ventilators



Energy recovery ventilators improve indoor air quality by removing contaminants and off-gassing. They replace stale indoor air with fresh, conditioned and filtered outdoor air.

# HVAC concepts and definitions

Being familiar with these terms means, together with your contractor, you can make an informed decision about your next heating, ventilation and air conditioning (HVAC) system



## Heat pumps and air conditioners

A heat pump (HP) is a high-performance air conditioner (AC). It provides heat by using a valve to reverse the refrigeration cycle that provides cool air.

**Did you know?** Installing a heat pump can offset your use of fossil fuels to heat your home which can cut down on your energy bills and is friendlier to the environment. The US Federal Government has recently extended and enhanced tax credits and rebates for upgrading your outdoor units, particularly with a heat pump. Find out what you could be eligible for by visiting: [www.championhomecomfort.com/residential-equipment/rebates-and-savings](http://www.championhomecomfort.com/residential-equipment/rebates-and-savings)



## Tonnage

Tonnage measures the cooling capacity, or the size, of an outdoor HVAC unit. Your contractor can recommend the appropriate tonnage for optimal comfort and performance in your home.



## Efficiency

Efficiency measures the input - in this case, electrical power - needed to achieve a certain output - heating or cooling.

Extremely energy-efficient HVAC units usually cost more upfront than conventional units. However, they generally achieve more significant reductions in lifetime operating costs. Investigate your local utility rates to discover when you will start to see the savings from a more efficient unit.

**Did you know?** Many localities offer rebates on the purchase of higher efficiency equipment to encourage energy conservation. Learn more at: [www.championhomecomfort.com/residential-equipment/rebates-and-savings](http://www.championhomecomfort.com/residential-equipment/rebates-and-savings)

## Energy ratings and operational efficiencies

### SEER2

Seasonal Energy Efficiency Ratio (SEER2) is a rating system of AC cooling capacity to power input. The most energy-efficient cooling units have the highest SEER2 ratings.

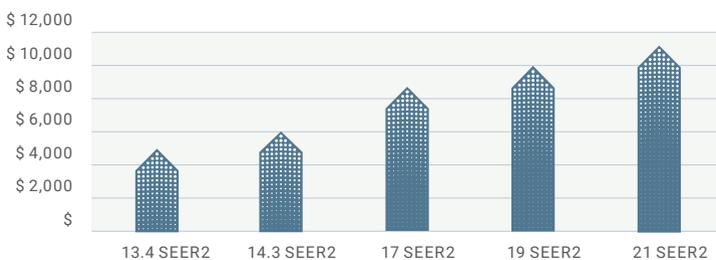
### AFUE

Annual Fuel Utilization Efficiency (AFUE) measures how efficiently a furnace converts gas to heat. This efficiency is expressed as a percentage. The closer this number is to 100 percent, the more efficient the furnace.

### HSPF2

Heating Seasonal Performance Factor (HSPF2) is another rating given to heat pumps because they provide heating and cooling. HSPF2 calculates the electricity used to generate heat output for a typical heating season. The most energy-efficient heating units have the highest HSPF2 ratings.

### 20-year average household savings by efficiency level



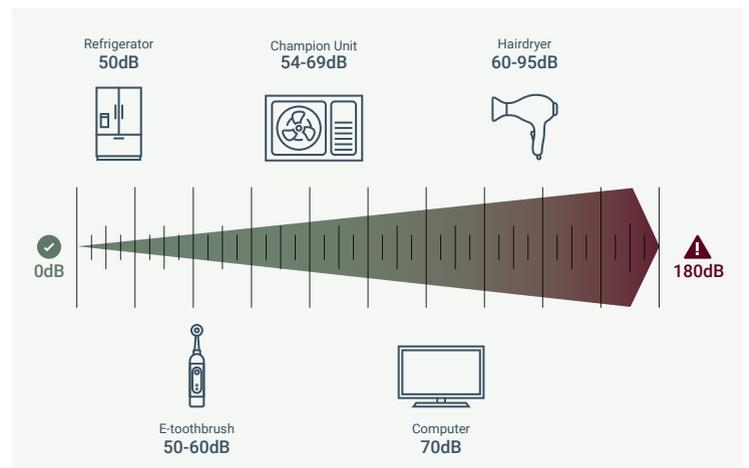
\* Assumptions: 20-year average lifespan, three-ton unit, \$0.14/kWh. National average of unit operation is 2,100 hours.

### MERV

Minimum Efficiency Reporting Value (MERV) measures the effectiveness of filters at trapping airborne particles.

### Sound levels in HVAC systems

Sound is generated by the HVAC equipment itself or the airflow reverberating through the ductwork of each system. However, most obtrusive noise occurs when HVAC units are switched on and off. Modulating or variable-speed component units can reduce noise and control the system with lower speeds to also reduce unwanted sound from the airflow.



## Features impacting comfort, efficiency and performance in residential HVAC systems

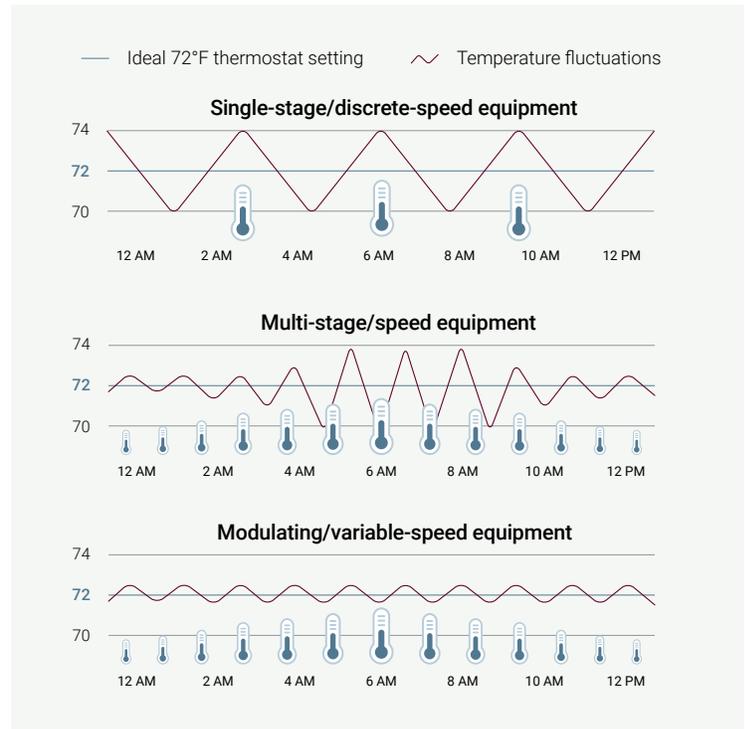
### Staged vs. variable capacity or modulating cooling and heating

Single-stage operation means operating on a simple on/off basis. The two-stage operation can be thought of as low/high/off. Fully modulating or variable capacity means the unit can ramp up or down across the entire heating or cooling capacity range. Each incremental increase in the number of stages allows for improved comfort and performance by minimizing temperature swings and the energy that must be used to overcome them. This contributes to better efficiency, the reduction of annual energy costs and a more comfortable home.

### Discrete-speed vs. variable-speed blower motors

Blower motors are what circulate the warm or cool air throughout your home. Discrete-speed motors operate in an on/off or low/med/high fashion. Variable-speed motors can dial their operation to the exact speed needed, consume less energy over time and contribute to reduced noise levels. This provides for a more comfortable space and more efficient unit operation.

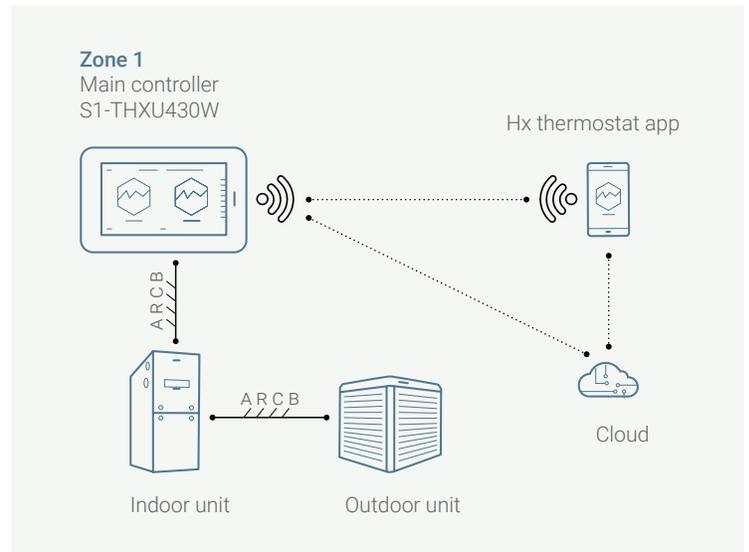
## Equipment performance at 72°F indoor setpoint



### Communications and HVAC systems

Conventional, non-communicating systems operate with basic thermostats and staged/discrete-speed equipment. Though they have some limitations compared to communicating systems, they can adequately meet the comfort needs of a more cost-conscious purchase.

Using communicating thermostats and room monitoring devices is the only way to take full advantage of premium modulating/variable-speed HVAC equipment, in terms of comfort and higher efficiency. They also enable higher-level control capabilities, such as zoning, for improved comfort, convenient smart device control and remote monitoring.



\* To receive the extended 10-year parts warranty or premium system warranty for qualifying units, you must register online at [www.upgproductregistration.com](http://www.upgproductregistration.com). Registration must be completed within 90 days of installation or 90 days of the closing date for new home construction. Failure to register online within 90 days results in a standard 5-year parts warranty. Failure to return the registration card does not affect rights under the standard warranty.



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