

# HEATING AND AIR CONDITIONING



Coleman®
Residential Split Systems

Homeowner buying guide

## **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   | AC19 (Echelon)   | AC21 (Echelon)  |  |
| Platform                   | Entry-level unit offers<br>minimum efficiency at<br>affordable pricing | Higher efficiency and<br>eligible for rebates<br>and/or tax credits at<br>moderate pricing | High-efficiency and<br>modulating performance<br>with a 40% smaller<br>footprint than vertical<br>discharge units | Premium efficiency<br>and smart thermostat<br>compatible with<br>lower sound and<br>greater warranty           | Most efficient unit with variable capacity and smart thermostat, and zoned communicating capability   |  |
| Efficiency*                | 13.4 SEER2<br>(Model TCD2<br>for northern climates)                    | <u> </u>   | 16.5 SEER2  | 18+ SEER2  | 19+ SEER2   |  |
|                            | 14.3 SEER2<br>(Model TCE2<br>for southern climates)                    | 15.2 SEER2   |   |  |   |  |
| <b>Cooling Stages</b>      | Single-stage   | Single- / Two-stage  | Modulating  | Two-stage  | Variable capacity   |  |
| Controls/<br>Communication |  | Conventional thermosta   | at  | Conventional, or communicating thermostat/sensors  | Communicating<br>thermostat/sensors   |  |
| Comfort<br>Technology**    | -  | -  | -   | units for enhanced hi<br>digital LCD display for e<br>Integrated refrige                                       | y aligns with premium indoor<br>umidity control. Easy-to-read<br>afficient diagnosis and servicing.<br>Berant charge monitoring<br>able installations |  |
| Sound***                   | As low as 73 dBA   |  |   | As low as 68dBA<br>Swept wing fan, composite base pan and<br>factory-installed sound blanket for reduced sound |   |  |
| Warranties                 | 10-Year Compressor Limited / 10-Year Parts Limited                     |  |   | Lifetime Compressor Limited / 10-Year Parts Limited  |   |  |

### Heat pumps

| Upfront Unit Cost          | \$   |  |   |   | \$\$\$\$   |  |
|----------------------------|--|--|---|---|--|--|
| Model(s)                   | THE2   | THF2   | НМН7  | HC19 (Echelon)  | HC20 (Echelon)   |  |
| Platform                   | Entry-level unit offers<br>minimum efficiency at<br>affordable pricing | Higher efficiency and<br>eligible for rebates<br>and/or tax credits at<br>moderate pricing | High-efficiency and<br>modulating performance<br>with a 40% smaller<br>footprint than vertical<br>discharge units | Premium efficiency<br>and smart thermostat<br>compatible with<br>lower sound and<br>greater warranty  | Most efficient unit with<br>variable capacity and smart<br>thermostat, and zoned<br>communicating capability |  |
| Efficiency*                | 14.3 SEER2<br>7.5 HSPF2  | 15.2 SEER2<br>8.1 HSPF2  | 16+ SEER2<br>8.1 HSPF2  | 18+ SEER2<br>8.1 HSPF2  | 19+ SEER2<br>9.0 HSPF2   |  |
| <b>Cooling Stages</b>      | Single- / Two-stage  | Single- / Two-stage  | Modulating  | Two-stage   | Variable capacity  |  |
| Controls/<br>Communication | Conventional thermostat  |  |   | Conventional, or communicating thermostat/sensors   | Communicating thermostat/sensors   |  |
| Comfort<br>Technology**    | Maintain comfort during minimized defrost cycles                       |  |   | Fine-tuning technology aligns with premium indoor<br>units for enhanced humidity control. Easy-to-read<br>digital LCD display for efficient diagnosis and servicing.<br>Integrated refrigerant charge monitoring for<br>simple installations. Maintain comfort during<br>minimized defrost cycles |  |  |
| Sound***                   | As low as 73 dBA   |  |   | As low as 68dBA<br>Swept wing fan, composite base pan and<br>factory-installed sound blanket for reduced sound  |  |  |
| Warranties                 | 10-Year Compressor Limited / 10-Year Parts Limited                     |  |   | Lifetime Compressor Limited / 10-Year Parts Limited   |  |  |

<sup>\*</sup> 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.

<sup>\*\*\*</sup> Values for high-stage cooling.

## Indoor products



### **Furnaces**

| <b>Upfront Unit Cost</b>   | \$  |                                |   | \$\$\$\$  | \$                                  |                                 |   | \$\$\$\$  |  |
|----------------------------|---|--------------------------------|---|---|-------------------------------------|---------------------------------|---|---|--|
| Model(s)                   | TM8E<br>(Ultra-Low<br>NOx TL8E)                             | TM8Y                           | TM8V<br>(Echelon)   | CPLC<br>(Echelon)   | TM9E<br>(Ultra-Low<br>NOx TL9E)     | тм9Ү                            | TM9V<br>(Echelon)                       | CP9C<br>(Echelon)   |  |
| Blower Motor               |   | ficiency ECM,<br>i-speed motor | const   | ciency ECM,<br>ant CFM,<br>speed motor                      |                                     | ficiency ECM,<br>ti-speed motor | consta                                  | ciency ECM,<br>ant CFM,<br>peed motor   |  |
| Heating Stages             | Single-stage  | Two-stage                      | Two-stage   | Variable<br>speed   | Single-stage                        | Two-stage                       | Two-stage                               | Variable<br>speed   |  |
| Available<br>Heating Sizes | 40-130 MBH<br>(60-100 MBH<br>ULNOx)                         | 40-120<br>MBH                  | 60-120<br>MBH   | 60-120 MBH  | 26-120 MBH<br>(60-100 MBH<br>ULNOx) | 40-120 MBH                      | 40-120 MBH                              | 60-120 MBH  |  |
| Controls/<br>Communication | Conventional thermostat                                     |                                | Conventional or communicating   |   | Convention                          | al thermostat                   | Conventional o                          | r communicating   |  |
| Gas Burner<br>Efficiency*  | 80% AFUE  | 80% AFUE                       | 80% AFUE  | 80% AFUE  | 95% AFUE                            | 96% AFUE                        | 96% AFUE                                | 98% AFUE  |  |
| Heat Exchanger             | Non-condensing  |                                |   | Condensing  |                                     |                                 |   |   |  |
| Comfort<br>Technology**    | Blower fi   | ine-tuning                     | Premium variable-speed<br>ECMs contain blower<br>uning fine-tuning technology for<br>customized comfort based<br>on geographic region |   | E<br>Blower fine-tuning fine<br>cus |                                 | ECMs cor<br>fine-tuning t<br>customized | emium variable-speed<br>CMs contain blower<br>-tuning technology for<br>omized comfort based<br>n geographic region |  |
| Sound                      | Good  | Good                           | Better  | Best  | Good                                | Good                            | Better                                  | Best  |  |
| Warranties                 | Lifetime Heat Exchanger Limited***<br>10-Year Parts Limited |                                |   | Lifetime Heat Exchanger Limited***<br>10-Year Parts Limited |                                     |                                 |   |   |  |

<sup>\*</sup> 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 (Echelon)   | JHVV (Echelon)                                       |  |  |  |
| Efficiency                  | 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 |  |  |  |  |  |
| Blower Motor                | High-efficiency,<br>multi-speed ECM   | High-efficiency,<br>variable-speed motor   |  |  |  |  |
| Controls/<br>Communications | Conventional thermostat   | Communicating thermostat/sensors   | Conventional/<br>communicating<br>thermostat/sensors |  |  |  |
| Comfort Technology          | -   | Proprietary blower algorithm provides customizable comfort and IAQ/Humidity Enhancements |  |  |  |  |
| Warranties                  |   | 10-Year Parts Limited  |  |  |  |  |



#### Thermostats and controls













\$\$\$\$

#### **Upfront Unit Cost**

**Platform** 

Standard 24v thermostats

### Smart device accessibility (through Universal Adapter)

#### Hx<sup>™</sup>3 Touchscreen Thermostat

#### Hx™3 Communicating Zoning System

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

#### Primary Positioning







### 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 Coleman® 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.colemanac.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 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.colemanac.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.

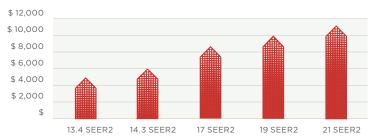
#### **AFUE**

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



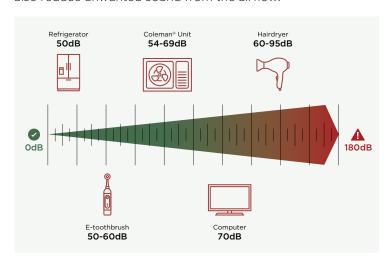
\* Assumptions: 20-year average lifespan, three-ton unit, \$0.14/kWh. National average of unit operation is 2,100 hours.

#### **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

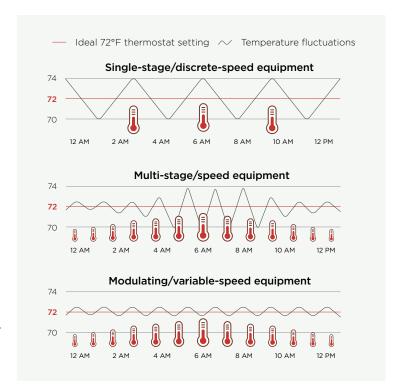
## Staged vs. variable capacity or modulating cooling and heating

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.

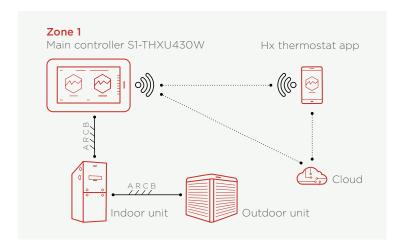
## Equipment performance at 72°F indoor setpoint



#### 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. 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.



