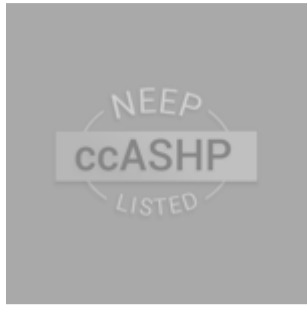


[Back to List](#)[Save PDF](#)

## TEMPSTAR

Central Air Conditioning Heat Pump (HP)

Singlezone Ducted, Centrally Ducted

AHRI Cert #\*: **215319085**

Outdoor Unit Model #\*: **D5CUHAH24AAK**

Indoor Model #\*: **D5FUHAH24XAK**

🔥 Maximum Heating Capacity (Btu/h) @5°F: **20,600**

🔥 Rated Heating Capacity (Btu/h) @47°F\*: **24,000**

❄️ Rated Cooling Capacity (Btu/h) @95°F\*: **24,000**

[Basic View](#) ⓘ[Advanced Data - System Sizing](#)

This tool is for preliminary product selection planning only. It is necessary to conduct full engineering capacity assessments that take line-length, multi-head impacts, and other factors into consideration. Use manufacturer's data and tools to finalize product sizing and selection determinations.

ZipCode

Heating Design Temp. (°F) ⓘ

Cooling Design Temp. (°F) ⓘ

Weather Station ⓘ

Heating Design Load (Btu/h) ⓘ

Cooling Design Load (Btu/h) ⓘ

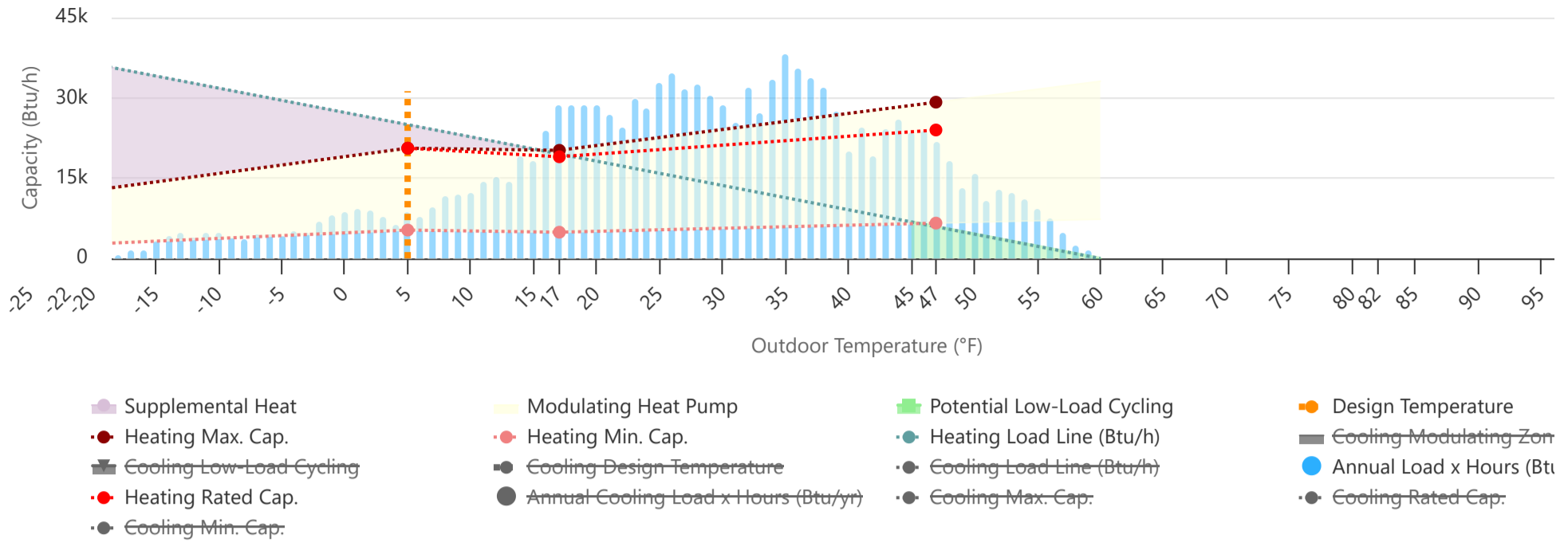
Advanced Search - Sizing for Heating and Cooling [User Guide](#) ⓘ and [Design Load Calculators](#)

[Click here for Optional Settings](#)

[Run System Sizing](#)

Graph Information ⓘ

### System Capacity, Heating and Cooling Load, and Weather Data Graph



#### Product Sizing For Heating

[View Oversizing Effects](#)

[Definition/Use Cases](#)

<b>Capacity Balance Point (°F)</b>	15
<b>Minimum Capacity Threshold (°F)</b>	45
<b>Maximum Capacity at Design Temp (Btu/h)</b>	20,600
<b>Percent Design Load Served</b>	82.4%
<b>Annual Heating Load (MMBtu)</b>	51.8
<b>Percent Annual Heating Load Served</b>	85.5%

[Definition/Use Cases](#)

<b>Annual Btu's Covered by Supplemental Heat (MMBtu)</b>	7.5
<b>Hours Requiring Supplemental Heat</b>	388
<b>Percent Hours Requiring Supplemental Heat</b>	7.3%
<b>Percent Annual Load Modulating</b>	70.8%
<b>Percent Annual Load with Low-Load Cycling</b>	12.9%

#### Product Sizing For Cooling

[View Oversizing Effects](#)

[Definition/Use Cases](#)

<b>Minimum Capacity Threshold (°F)</b>	90
<b>Maximum Capacity at Design Temp (Btu/h)</b>	26,492
<b>Percent Design Load Served</b>	353.2%
<b>Annual Cooling Load (MMBtu)</b>	5.3

[Definitions/Use Cases](#)

<b>Percent Annual Cooling Load Served</b>	562.3%
<b>Percent Annual Load Modulating</b>	13.8%
<b>Percent Annual Load with Low-Load Cycling</b>	83.0%

#### Information Tables

<b>Brand</b>	TEMPSTAR
<b>Series</b>	
<b>Ducting Configuration</b>	Singlezone Ducted, Centrally Ducted
<b>AHRI Certificate #*</b>	215319085

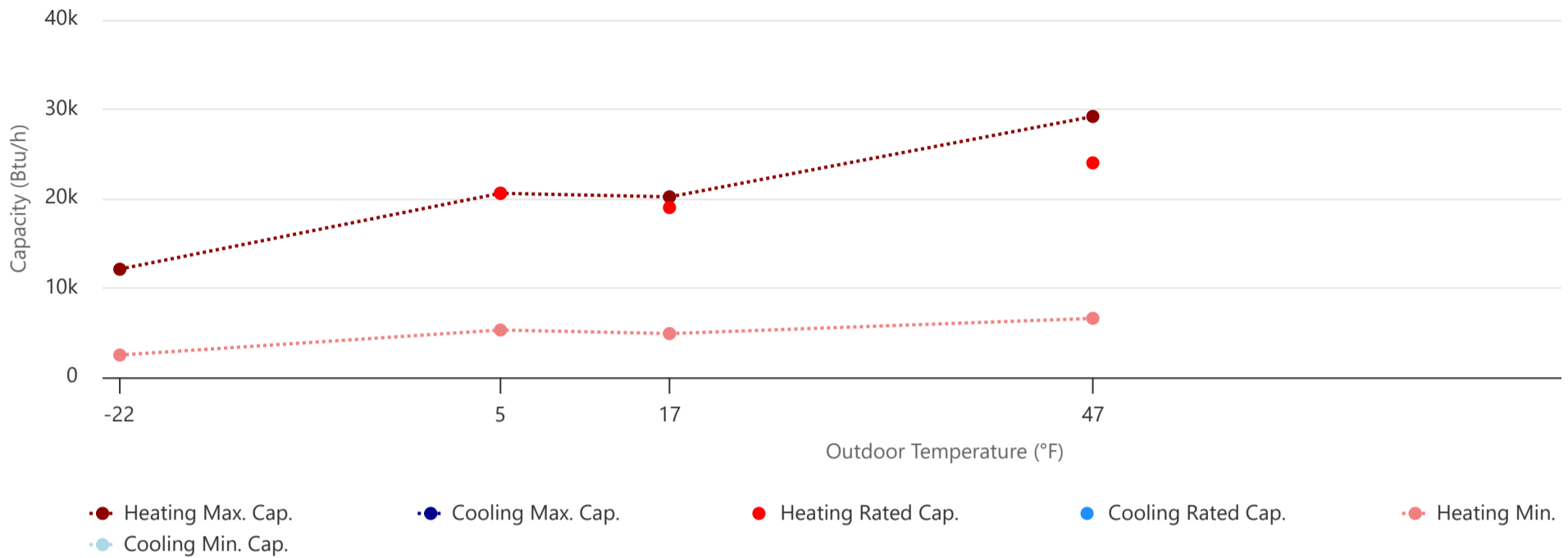
<b>Outdoor Unit Model #<sup>+</sup></b>	D5CUHAH24AAK
<b>Indoor Model #<sup>+</sup></b>	D5FUHAH24XAK
<b>Indoor Unit Type<sup>+</sup></b>	
<b>Furnace Model #<sup>+</sup></b>	
<b>EER<sup>+</sup></b>	
<b>SEER<sup>+</sup></b>	
<b>HSPF (Region IV)<sup>+</sup></b>	
<b>EER2<sup>+</sup></b>	12
<b>SEER2<sup>+</sup></b>	18.7
<b>HSPF2 (Region IV)<sup>+</sup></b>	10
<b>HSPF2 (Region V)</b>	8.1
<b>ENERGY STAR V6.1</b>	✓
<b>ENERGY STAR V6.1 Cold Climate</b>	✓
<b>ENERGY STAR V5.0</b>	✗
<b>Federal Tax Credit Eligibility North</b>	✓
<b>Federal Tax Credit Eligibility South</b>	✓
<b>CEE Tier 1 Path A (2025)</b>	✓
<b>CEE Tier 1 Path B (2025)</b>	✓
<b>Capacity Maintenance (Rated 17°F/Rated 47°F)</b>	79%
<b>Capacity Maintenance (Rated 5°F/Rated 47°F)</b>	85%
<b>Capacity Maintenance (Max 5°F/Rated 47°F)</b>	85%
<b>Variable Capacity</b>	✓
<b>Integration</b>	
<b>Connectivity</b>	
<b>Operational Diagnostics</b>	
<b>Refrigerant</b>	R-454B
<b>Created At</b>	2024-09-16
<b>Updated At</b>	2024-09-16
<b>Sold In<sup>+</sup></b>	USA, Canada

## Performance Specs

Heating / Cooling	Outdoor Dry Bulb	Indoor Dry Bulb	Unit	Min	Rated <sup>+</sup>	Max
Cooling	95°F	80°F	Btu/h <sup>+</sup>	6,400	24,000	28,800
			kW	0.83	2	2.85
			COP	2.26	3.52	2.96
Cooling	82°F	80°F	Btu/h <sup>+</sup>	8,900	-	22,800
			kW	0.41	-	1.17
			COP	6.36	-	5.71
Heating	47°F	70°F	Btu/h <sup>+</sup>	6,600	24,000	29,200
			kW	0.41	2.01	2.45
			COP	4.72	3.5	3.49
Heating	17°F	70°F	Btu/h <sup>+</sup>	4,900	19,000	20,200
			kW	0.7	2.11	2.64
			COP	2.05	2.64	2.24

Heating	5°F	70°F	Btu/h <sup>+</sup>	5,300	20,600	20,600
			kW	0.75	2.82	2.82
			COP	2.07	2.14	2.14
Heating	-22°F	70°F	Btu/h <sup>+</sup>	2,500	-	12,100
			kW	0.69	-	2.53
			COP	1.06	-	1.4

### Heating/Cooling Capacity Graph

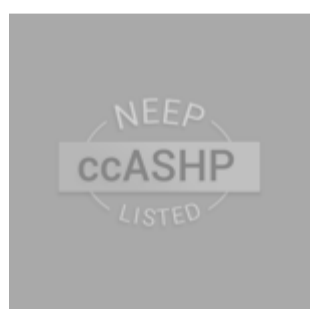
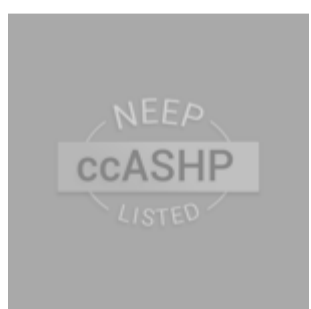
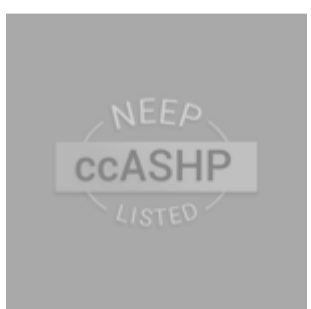
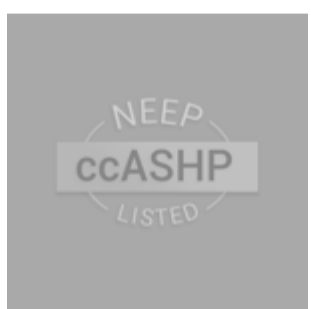
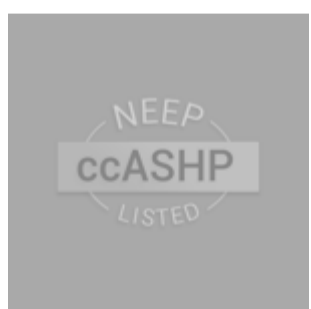


### Pan Heater

<b>Type</b>	Integrated
<b>Input Power (W)</b>	150
<b>Operation</b>	1. When the unit power is on/in heating mode, and if the outdoor temperature drops below 30C for 30 seconds, after running for 25mins, the base pan heater will be activated for 5 minutes. 2. In defrost mode and the outdoor temperature lower 10C for 10 seconds the base pan heater will be activated and will be 5 mins delay inactive after defrost.

### Additional Heat Pump Images

#### Related Products

				
<p><b>LUXAIRE</b> HMH7 AHRI #<sup>+</sup>: <b>211660714</b> Singlezone Ducted, Centrally Ducted Central Air Conditioning Heat Pump (HP) 🔥 <b>15,400</b> Max Btu/h @5°F 🔥 <b>22,600</b> Rated Btu/h @47°F<sup>+</sup> ❄️ <b>21,200</b> Rated Btu/h @95°F<sup>+</sup> COP @5°F: <b>2.97</b> HSPF2<sup>+</sup>: <b>7.8</b> Outdoor Unit Model</p>	<p><b>COMFORTMAKER</b> HORIZONTAL VS HP AHRI #<sup>+</sup>: <b>211637411</b> Singlezone Ducted, Centrally Ducted Central Air Conditioning Heat Pump (HP) 🔥 <b>16,300</b> Max Btu/h @5°F 🔥 <b>25,600</b> Rated Btu/h @47°F<sup>+</sup> ❄️ <b>24,600</b> Rated Btu/h @95°F<sup>+</sup> COP @5°F: <b>1.88</b> HSPF2<sup>+</sup>: <b>8.1</b> Outdoor Unit Model #<sup>+</sup>: <b>DLCURAH24AAK</b></p>	<p><b>AIRQUEST</b> DELUXE 19 VS HP AHRI #<sup>+</sup>: <b>214241598</b> Singlezone Ducted, Centrally Ducted Central Air Conditioning Heat Pump (HP) 🔥 <b>16,900</b> Max Btu/h @5°F 🔥 <b>22,200</b> Rated Btu/h @47°F<sup>+</sup> ❄️ <b>23,200</b> Rated Btu/h @95°F<sup>+</sup> COP @5°F: <b>1.92</b> HSPF2<sup>+</sup>: <b>8.1</b> Outdoor Unit Model #<sup>+</sup>: <b>HVH825GKA3*</b> Indoor Model #<sup>+</sup>: <b>EN(A,D)4X24L17**+WALLCON</b></p>	<p><b>HEIL</b> HORIZONTAL VS HP AHRI #<sup>+</sup>: <b>212973108</b> Singlezone Ducted, Centrally Ducted Central Air Conditioning Heat Pump (HP) 🔥 <b>16,100</b> Max Btu/h @5°F 🔥 <b>24,600</b> Rated Btu/h @47°F<sup>+</sup> ❄️ <b>23,600</b> Rated Btu/h @95°F<sup>+</sup> COP @5°F: <b>1.82</b> HSPF2<sup>+</sup>: <b>8.1</b> Outdoor Unit Model</p>	<p><b>FRASER-JOHNSTON</b> HMH7 AHRI #<sup>+</sup>: <b>211659941</b> Singlezone Ducted, Centrally Ducted Central Air Conditioning Heat Pump (HP) 🔥 <b>15,500</b> Max Btu/h @5°F 🔥 <b>22,800</b> Rated Btu/h @47°F<sup>+</sup> ❄️ <b>21,200</b> Rated Btu/h @95°F<sup>+</sup> COP @5°F: <b>2.91</b> HSPF2<sup>+</sup>: <b>7.8</b></p>

#\*: **HMH72B241**  
Indoor Model #\*:  
**JHVTB24CBAC2N1**

Indoor Model #\*:  
**EA\*4X36L21A\***

[VIEW DETAIL](#)

#\*: **DLCURAH24AAK**  
Indoor Model #\*:  
**EA\*4X36L17A\***

Outdoor Unit Model  
#\*: **HMH72B241**  
Indoor Model #\*:  
**XAFC30CXXN1+TXV**

[VIEW  
DETAIL](#)

[VIEW DETAIL](#)

[VIEW  
DETAIL](#)

[VIEW DETAIL](#)

\*AHRI certified and verified product information. Rated capacity information is certified and verified by AHRI, input power is manufacturer reported and COP is calculated. Source: [ahridirectory.org](http://ahridirectory.org)