

# WPL A2W Premium Cold Climate Heat Pumps

## Engineering specifications sheet

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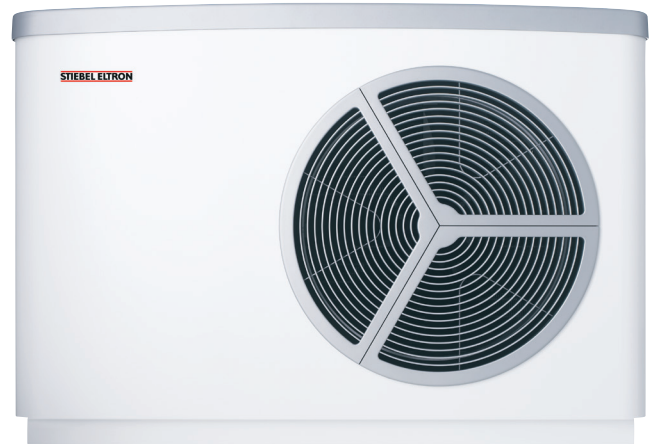
### WPL 15 A2W Premium

2 ton cooling, 23 kBTU/hr heating

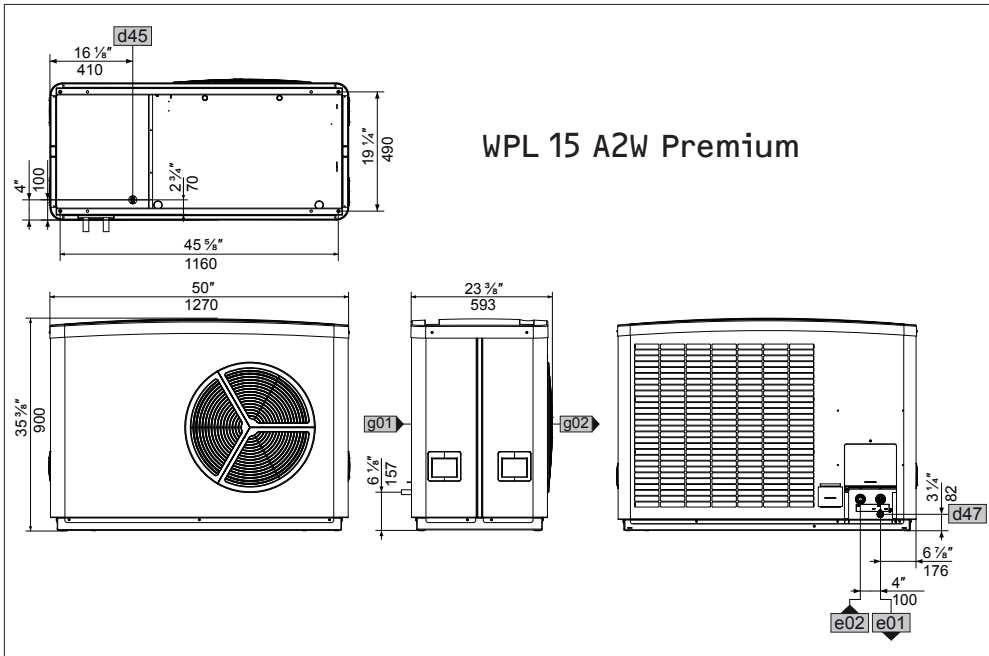
### WPL 25 A2W Premium

4 ton cooling, 50 kBTU/hr heating

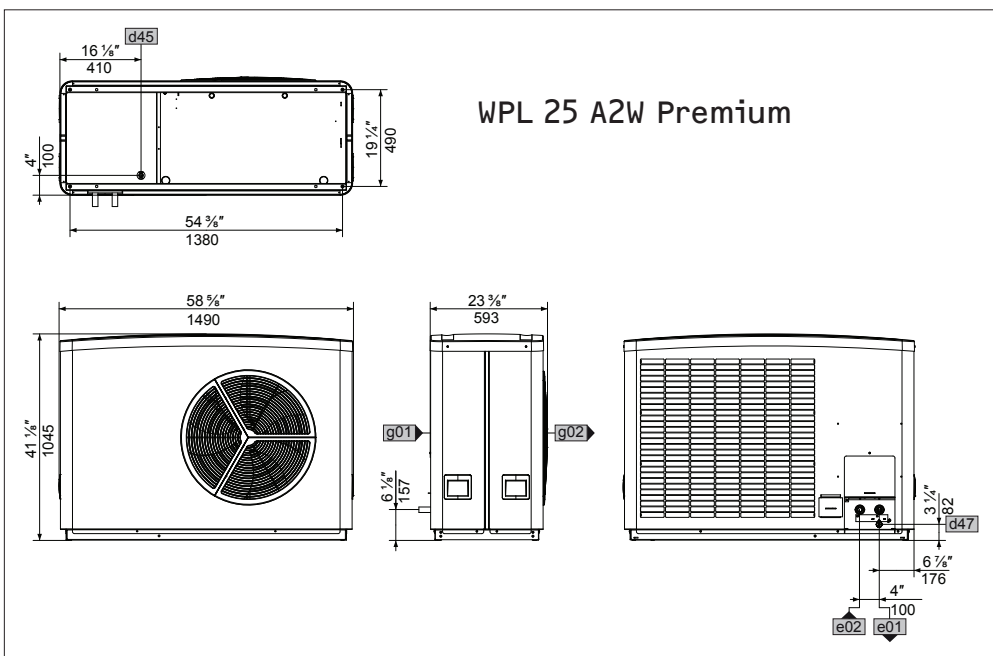
- Highly integrated & comprehensive cold climate heat pump
- Central heating and cooling plus DHW
- Hydronic glycol connection to tank, not refrigerant
- Monobloc with output-dependent control and efficient inverter technology
- Operation capability down to -4°F (-20°C) ambient using only heat pump
- EVI and saturated vapor injection allows 149°F/65°C flow temperature even at low ambient temperatures
- High flow temperature allows for use in modernization projects
- Inverter cooling function recovers waste heat and raises return temperature, increasing efficiency
- Demand-dependent defrosting is accomplished through circuit reversal
- Condensate pan is heated by the refrigerant circuit
- Electric defrost heating is not required due to hydrophilic coating on fan nozzle that prevents ice from forming
- Built-in backup electric element offers efficient supplemental heating when necessary
- Optimally matched components ensure high efficiency
- 3<sup>rd</sup> party lab tested to AHRI 550/590 requirements
- Top tier cooling efficiency with IPLV ratings of 15.68 (WPL 15) & 16.83 (WPL 25)
- Best-in-class Energy Star Cold Climate Efficiency of 2.77 COP for WPL 25
- Warranty: 7 years for compressor and 2 years for all other parts



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<b>e01</b> Heating flow	Type of connection	Push-fit connection
	Diameter	1 1/8" (28 mm) (adapter for 1" copper pipe)
<b>e02</b> Heating return	Type of connection	Push-fit connection
	Diameter	1 1/8" (28 mm) (adapter for 1" copper pipe)
<b>d45</b> Condensate drain	Diameter	1 3/16" (29.6 mm)
<b>d47</b> Drain		
<b>g01</b> Air intake		
<b>g02</b> Air discharge		



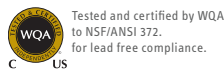
# WPL A2W Premium Cold Climate Heat Pumps engineering specifications sheet

	WPL 15 A2W Premium	WPL 25 A2W Premium
Item No.	203252	203253
<b>Heating output</b>		
Full load capacity	23.04 kBtu/hr	50.4 kBtu/hr
A 47/LWT 105 °F (min/max)	11.26 kBtu/hr / 22.86 kBtu/hr	26.95 kBtu/hr / 41.18 kBtu/hr
A 17/LWT 105 °F (min/max)	8.19 kBtu/hr / 22.86 kBtu/hr	20.13 kBtu/hr / 43.16 kBtu/hr
A 5/LWT 110 °F (min/max)	7.51 kBtu/hr / 21.38 kBtu/hr	17.63 kBtu/hr / 45.34 kBtu/hr
A 4/LWT 149 °F (min/max)	15.28 kBtu/hr / 18.80 kBtu/hr	29.37 kBtu/hr / 36.17 kBtu/hr
<b>Cooling output</b>		
Full load capacity	2.13 ton	4.09 ton
Full load efficiency	1.65 kW/ton	1.51 kW/ton
A 95/LWT 44.6 °F (min/max)	0.61 ton / 2.13 ton	1.92 ton / 4.1 ton
A 80/LWT 44.6 °F (min/max)	0.72 ton / 2.38 ton	2.09 ton / 4.51 ton
<b>Power consumption, heating</b>		
A 47/LWT 105 °F (min/max)	0.87 kW / 1.73 kW	1.76 kW / 2.85 kW
A 17/LWT 105 °F (min/max)	0.92 kW / 2.29 kW	1.79 kW / 3.92 kW
A 5/LWT 110 °F (min/max)	1.07 kW / 2.50 kW	1.83 kW / 4.80 kW
A 4/LWT 149 °F (min/max)	2.97 kW / 3.65 kW	5.25 kW / 7.53 kW
Power consumption, emergency/booster heater	6.75 kW @ 240 V	6.75 kW @ 240 V
<b>Power consumption, cooling</b>		
A 95/LWT 44.6 °F (min/max)	0.9 kW / 3.52 kW	2.31 kW / 6.21 kW
A 80/LWT 44.6 °F (min/max)	0.73 kW / 2.71 kW	1.98 kW / 4.96 kW
<b>COP heating (maximum capacity)</b>		
A 47/LWT 105 °F	3.86	4.24
A 17/LWT 105 °F	2.93	3.22
A 5/LWT 110 °F	2.51	2.77
A 4/LWT 149 °F	1.51	1.79
<b>IPLV cooling*</b>		
IPLV	15.68	16.83
IPLV kW/ton	0.76	0.71
<b>Sound output</b>		
Sound Power Level (SWL), max. capacity	61 dB(A)	66 dB(A)
Sound Power Level (SWL), silent mode	50 dB(A)	54 dB(A)
<b>Application limits</b>		
Min. application limit, heat source	-4 °F (-20 °C)	-4 °F (-20 °C)
Max. application limit, heat source	104 °F (40 °C)	104 °F (40 °C)
Min. application limit on the heating side	59 °F (15 °C)	59 °F (15 °C)
Max. application limit on the heating side	149 °F (65 °C)	149 °F (65 °C)
Application limit, heat source at LWT 149 °F	-4 °F (-20 °C)	-4 °F (-20 °C)
Min. cooling mode application limit for outside temperature	59 °F (15 °C)	59 °F (15 °C)
Max. cooling mode application limit for outside temperature	104 °F (40 °C)	104 °F (40 °C)
LWT min. in cooling mode	44.6 °F (7 °C)	44.6 °F (7 °C)
Water hardness	143-152 ppm	143-152 ppm
Conductivity (softening water)	< 1000 µS/cm	< 1000 µS/cm
Conductivity (desalination)	20-100 µS/cm	20-100 µS/cm
Chloride	< 30 mg/l	< 30 mg/l
Oxygen 8-12 weeks after filling (softening)	< 0.02 mg/l	< 0.02 mg/l
Oxygen 8-12 weeks after filling (desalination)	< 0.1 mg/l	< 0.1 mg/l

## WPL A2W Premium Cold Climate Heat Pumps engineering specifications sheet

	WPL 15 A2W Premium	WPL 25 A2W Premium
<b>Electrical data</b>		
Rated voltage	220-240 V	220-240 V
Breaker size, compressor (DP)	20 A	35 A
Breaker size, controller (DP)	15 A	15 A
Breaker size, backup element (DP)	30 A	30 A
Starting current	7 A	10 A
Locked rotor current	17 A	35 A
Max. operating current	19.5 A	30 A
<b>Refrigerant data</b>		
Type	R410A	R410A
Charge	9.26 lb (4.2 kg)	12.13 lb (5.5 kg)
IP rating	IP 14B	IP 14B
Condenser material	1.4401 Cu	1.4401 Cu
Evaporator material	Aluminum/copper	Aluminum/copper
<b>Dimensions</b>		
Height	35 <sup>3</sup> / <sub>8</sub> " (900 mm)	41 <sup>1</sup> / <sub>8</sub> " (1045 mm)
Width	50" (1270 mm)	58 <sup>11</sup> / <sub>16</sub> " (1490 mm)
Depth	23 <sup>3</sup> / <sub>8</sub> " (593 mm)	23 <sup>3</sup> / <sub>8</sub> " (593 mm)
Weight	309 lb (140 kg)	386 lb (175 kg)
Connection size tube expanded to 29.1 mm diam.	28 mm (adapter expanded to 1" coupling size)	28 mm (adapter expanded to 1" coupling size)
<b>Miscellaneous</b>		
Min heating flow rate at A 45F/LWT 95F and 9F delta	3.1 gpm (11.7 l/min)	4.4 gpm (16.7 l/min)
Max operating pressure, heating circuit	43.5 psi (0.3 MPa)	43.5 psi (0.3 MPa)
Circulation rate, heat source side	1354 cfm (2300 m <sup>3</sup> /hr)	2354 cfm (4000 m <sup>3</sup> /hr)
Internal pressure difference	0.87 psi (60 hPa)	1.6 psi (110 hPa)
<b>Installation location</b>		
Maximum altitude for installation	6,562 ft (2000 m)	6,562 ft (2000 m)
Minimum distance to salt water body	> 1640 ft (> 500 m)	> 1640 ft (> 500 m)

\* According to AHRI Standard 550/590 Energy Star performance test  
 [A45: Ambient air temperature = 45°F (7.2°C)]  
 [LWT95: Leaving water temperature = 95°F (35°C)]

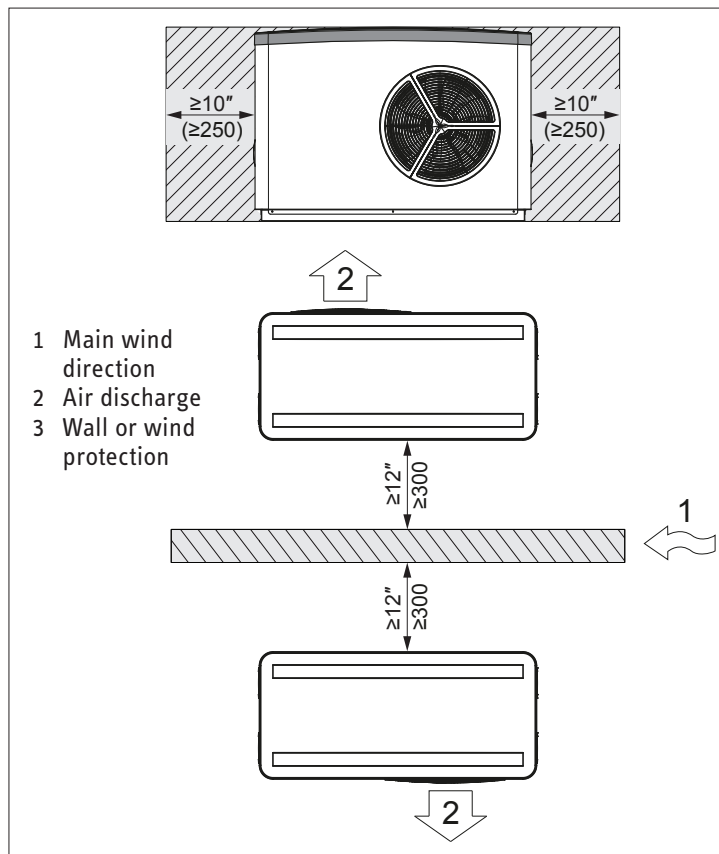
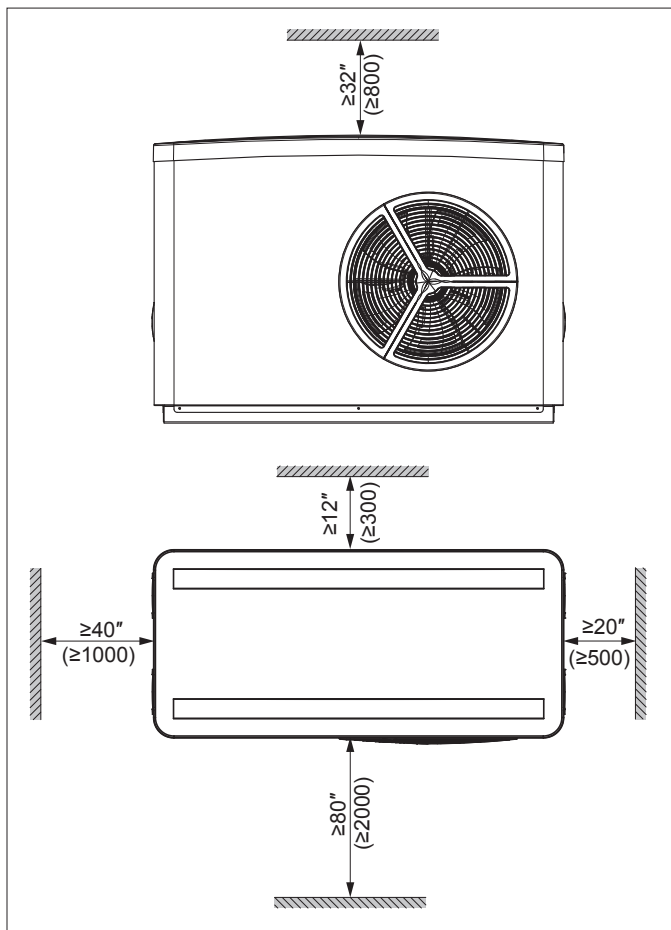


The performance data apply for new appliances with no fouling (dirt) on the heat exchanger. The power consumption data are maximum values and may vary due to the operation condition, auxiliary consumption for components like circulation pump are not included. The performance data

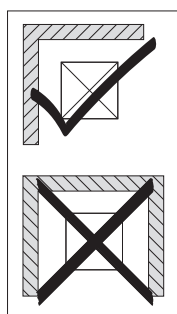
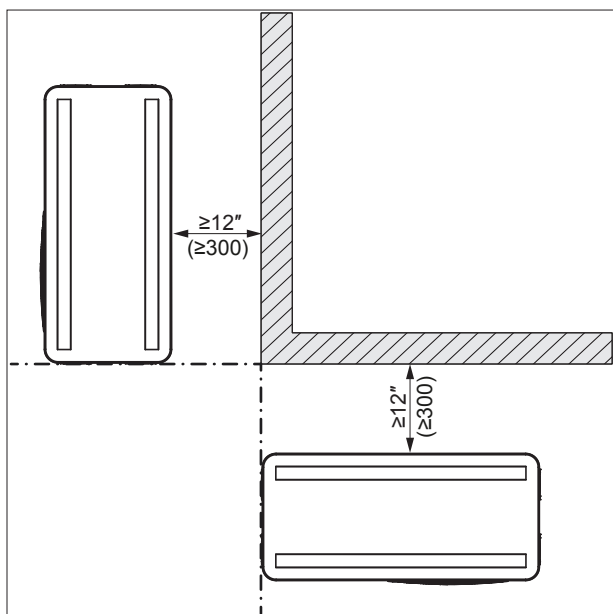
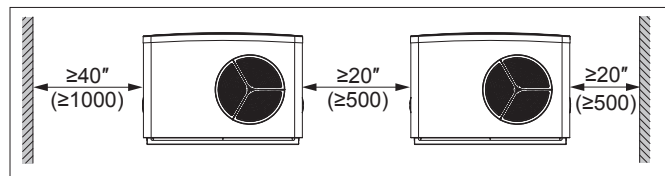
are based on 100% water for heat transfer. The usage of polypropylene glycol with a minimum concentration of 30% is required. Depending on the glycol concentration the performance values may vary.

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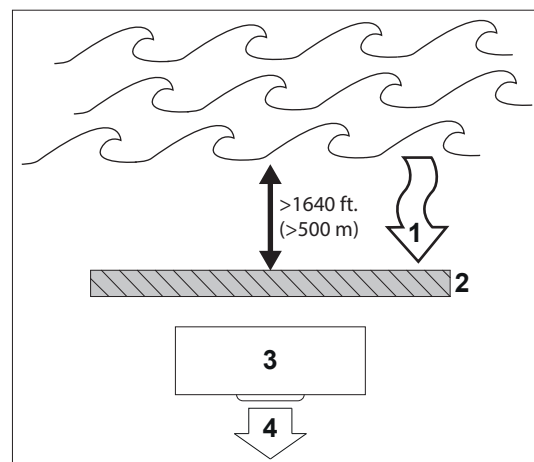
## Minimum clearances



## Minimum clearances with cascades

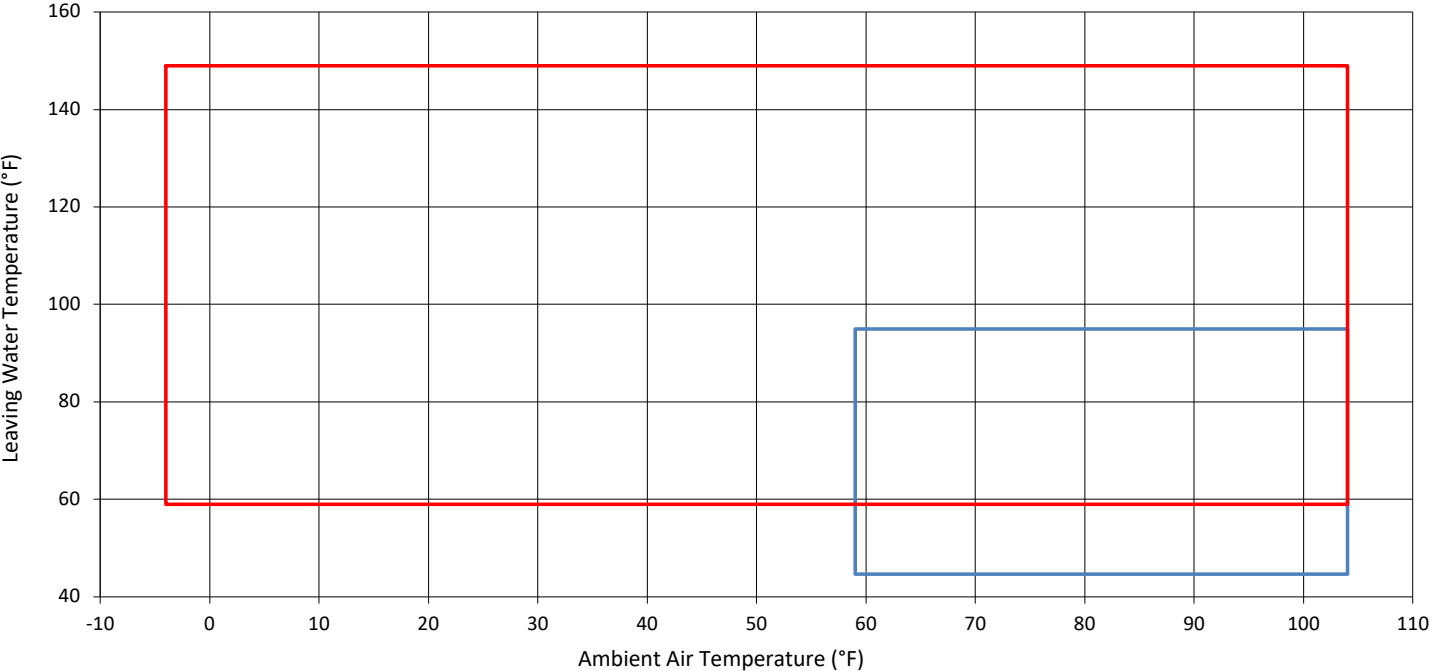


## Installation near ocean/salt water



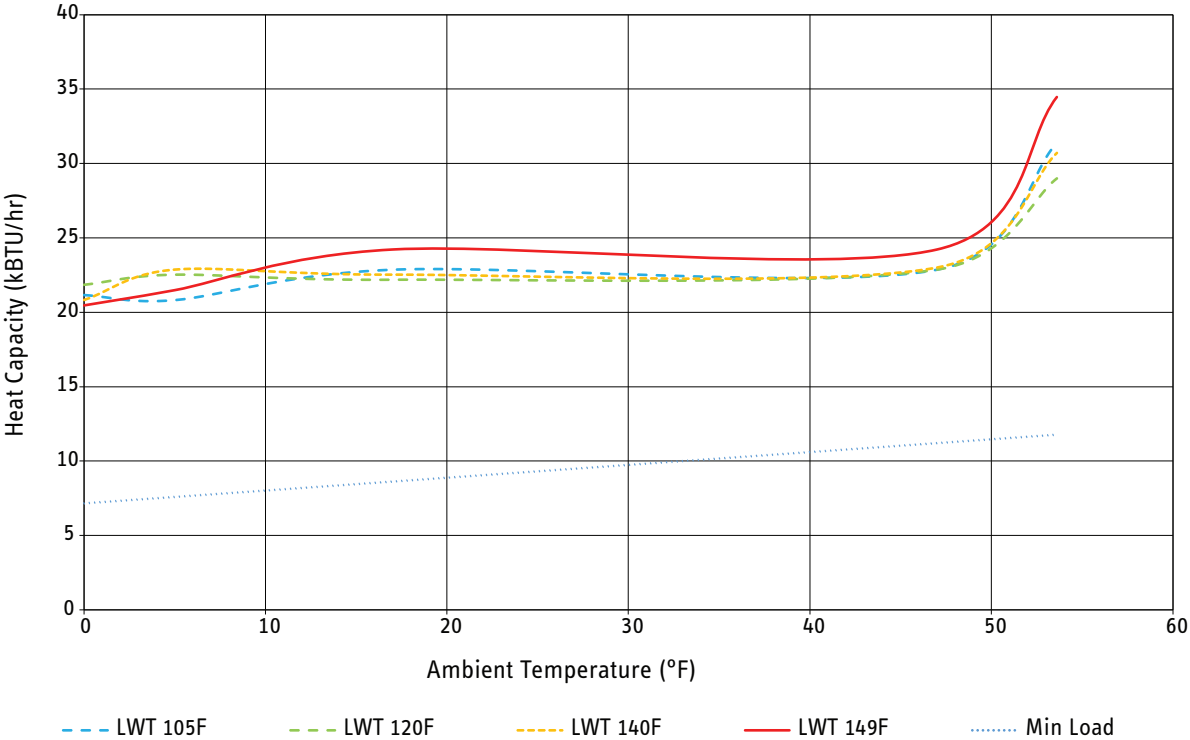
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## Heating & cooling field of operation

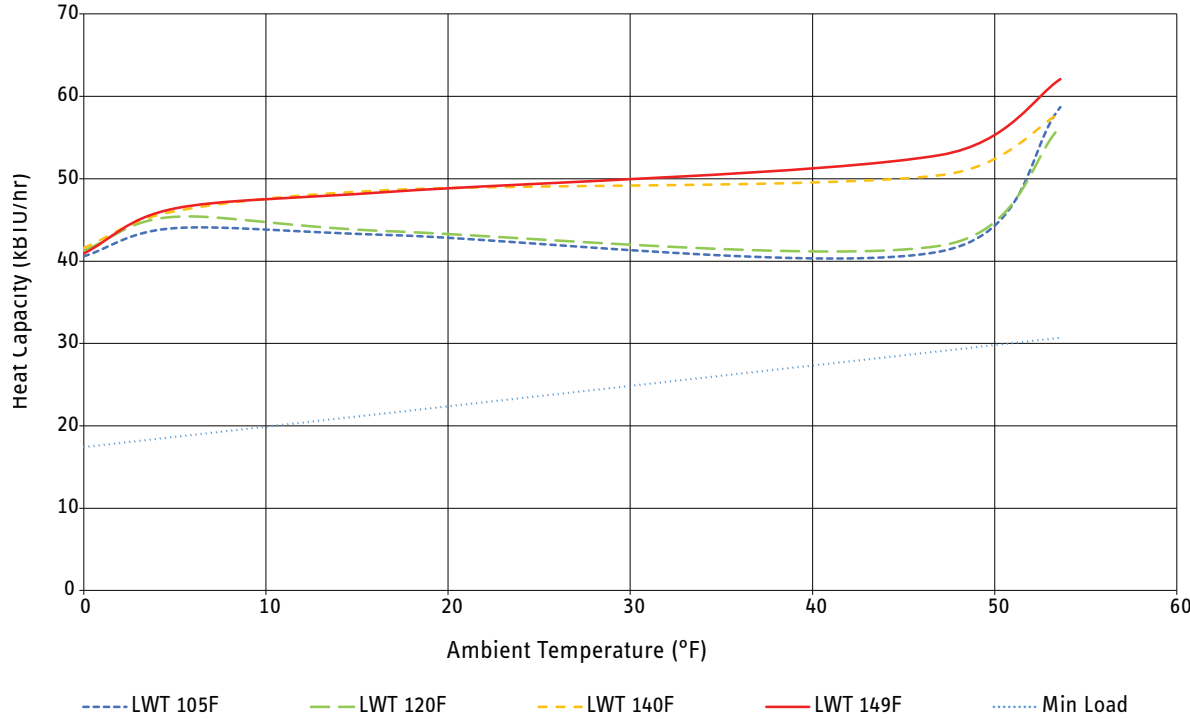


WPL A2W Premium Cold Climate Heat Pumps engineering specifications sheet

Heating capacity WPL 15 A2W Premium

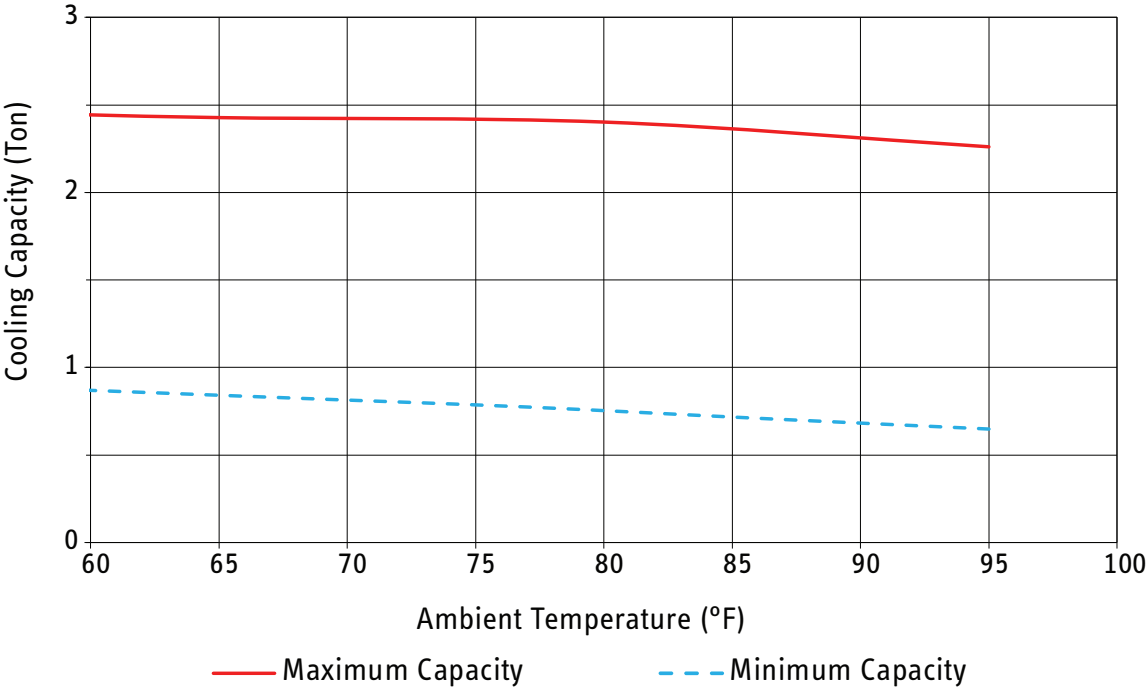


Heating capacity WPL 25 A2W Premium



# WPL A2W Premium Cold Climate Heat Pumps engineering specifications sheet

Cooling capacity WPL 15 A2W Premium | LWT 47°F



Cooling capacity WPL 25 A2W Premium | LWT 47°F

