



# Raypak® Torin™ Commercial Air-to-Water Heat Pump

## Performance Data Sheet

### 120k BTU<sub>h</sub> (35kW)

#### Key Features

- Low Ambient Performance (-13°F)
- Delivers Hot Water Up to 150°F
- Inverter Technology
- Low GWP Refrigerant: R-454B
- Indoor or Outdoor Rated
- Single-pass or Multipass Configurations
- Industry Leading Footprint Design
- BMS Compatible
- User Friendly Touchscreen Platform
- Energy Star Certified

#### Key Specification Table

|                               |                                                 |
|-------------------------------|-------------------------------------------------|
| Voltage                       | 480 Volt/ 3 Phase / 60 Hz                       |
| Refrigerant                   | R454b                                           |
| COP*                          | 4.5                                             |
| Type Compressor/Fan           | Inverter / Axial                                |
| Max. Outlet Water Temperature | 150 °F                                          |
| Max. Operating Pressure, PSI  | 65                                              |
| Water Connections             | 1" Copper                                       |
| Approx. Shipping Weight, lbs  | 483                                             |
| Size L x W x H                | 40" x 40" x 59"                                 |
| Cabinet Construction          | 18 Gauge painted commercial steel outdoor specs |

\* DOE test standard, 80°F ambient with 63% humidity, inlet water temperature at 70°F, outlet water temperature at 120°F



#### Raypak® Torin™ Heat Pump (35kW Single Pass) RMHPHD120

| Ambient Air Temp [F] | Ambient Air Humidity [%] | Entering Water Temp [F] | Leaving Water Temp [F] | Heating Capacity [Btu/hr] | Heating COP | GPM |
|----------------------|--------------------------|-------------------------|------------------------|---------------------------|-------------|-----|
| -10                  | 63                       | 70                      | 120                    | 93,523                    | 1.25        | 4.8 |
| 0                    | 63                       | 70                      | 120                    | 103,315                   | 1.6         | 4.8 |
| 5                    | 63                       | 70                      | 120                    | 104,748                   | 3.1         | 4.8 |
| 10                   | 63                       | 70                      | 120                    | 119,727                   | 1.75        | 4.8 |
| 20                   | 63                       | 70                      | 120                    | 119,352                   | 2.04        | 4.8 |
| 30                   | 63                       | 70                      | 120                    | 120,273                   | 2.22        | 4.8 |
| 40                   | 63                       | 70                      | 120                    | 118,431                   | 2.45        | 4.8 |
| 50                   | 63                       | 70                      | 120                    | 123,821                   | 2.65        | 4.8 |
| 60                   | 63                       | 70                      | 120                    | 123,583                   | 3.08        | 4.8 |
| 70                   | 63                       | 70                      | 120                    | 121,433                   | 3.52        | 4.8 |
| 80                   | 63                       | 70                      | 120                    | 120,273                   | 4.52        | 4.8 |
| 90                   | 63                       | 70                      | 120                    | 117,646                   | 4.77        | 4.8 |
| 100                  | 63                       | 70                      | 120                    | 121,638                   | 4.53        | 4.8 |

Notes: 1. This table uses DOE test conditions with 63% humidity, inlet water temperature at 70°F, outlet water temperature at 120° F. For additional sizing assistance, please contact our applications team >> [Application Consulting Request Form](#).  
2. Values shown in the tables are based on these design flow rates. Actual flow rates will vary.





# Raypak® Torin™ Commercial Air-to-Water Heat Pump

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### 120k BTUh (35kW)

#### Raypak® Torin™ Heat Pump (35kW Multi-Pass) RMHPHD120

| Ambient Air Condition | Entering Water Temp [F] | Leaving Water Temp [F] | Heating Capacity [Btu/hr] | Heating COP | GPM   |
|-----------------------|-------------------------|------------------------|---------------------------|-------------|-------|
| -10°F<br>64% RH       | 55                      | 60                     | 56,394                    | 2.80        | 18.00 |
|                       | 60                      | 75                     | 69,528                    | 2.61        | 18.00 |
|                       | 70                      | 85                     | 72,664                    | 2.13        | 18.00 |
|                       | 80                      | 95                     | 85,934                    | 2.43        | 18.00 |
|                       | 90                      | 105                    | 67,890                    | 1.65        | 18.00 |
|                       | 100                     | 115                    | 81,607                    | 1.91        | 18.00 |
|                       | 110                     | 125                    | 54,910                    | 1.15        | 18.00 |
|                       | 120                     | 135                    | 69,891                    | 1.27        | 18.00 |
| 5°F<br>64% RH         | 55                      | 60                     | 61,100                    | 3.83        | 18.00 |
|                       | 60                      | 70                     | 86,746                    | 3.48        | 18.00 |
|                       | 70                      | 80                     | 90,916                    | 3.34        | 18.00 |
|                       | 80                      | 90                     | 99,253                    | 3.28        | 18.00 |
|                       | 90                      | 100                    | 99,898                    | 2.98        | 18.00 |
|                       | 100                     | 110                    | 107,626                   | 2.89        | 18.00 |
|                       | 110                     | 120                    | 112,458                   | 2.72        | 18.00 |
|                       | 120                     | 135                    | 118,972                   | 2.63        | 18.00 |
| 15°F<br>64% RH        | 55                      | 60                     | 60,546                    | 5.99        | 18.00 |
|                       | 60                      | 70                     | 90,028                    | 4.70        | 18.00 |
|                       | 70                      | 80                     | 106,657                   | 3.70        | 18.00 |
|                       | 80                      | 90                     | 105,572                   | 3.43        | 18.00 |
|                       | 90                      | 105                    | 114,818                   | 3.31        | 18.00 |
|                       | 100                     | 115                    | 115,287                   | 3.03        | 18.00 |
|                       | 110                     | 125                    | 118,623                   | 2.83        | 18.00 |
|                       | 120                     | 135                    | 117,797                   | 2.58        | 18.00 |
| 25°F<br>64% RH        | 55                      | 60                     | 93,196                    | 5.51        | 18.00 |
|                       | 60                      | 70                     | 106,880                   | 4.32        | 18.00 |
|                       | 70                      | 80                     | 114,298                   | 4.27        | 18.00 |
|                       | 80                      | 90                     | 115,800                   | 3.98        | 18.00 |
|                       | 90                      | 100                    | 116,438                   | 3.85        | 18.00 |
|                       | 100                     | 110                    | 118,729                   | 3.71        | 18.00 |
|                       | 110                     | 120                    | 119,513                   | 3.41        | 18.00 |
|                       | 120                     | 135                    | 122,965                   | 3.13        | 18.00 |



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### 120k BTUh (35kW)

| Ambient Air Condition | Entering Water Temp [F] | Leaving Water Temp [F] | Heating Capacity [Btu/hr] | Heating COP | GPM   |
|-----------------------|-------------------------|------------------------|---------------------------|-------------|-------|
| 35°F<br>64% RH        | 50                      | 60                     | 78,836                    | 6.43        | 18.00 |
|                       | 60                      | 70                     | 110,200                   | 5.50        | 18.00 |
|                       | 70                      | 80                     | 122,850                   | 4.91        | 18.00 |
|                       | 80                      | 90                     | 114,912                   | 4.33        | 18.00 |
|                       | 90                      | 100                    | 118,412                   | 4.12        | 18.00 |
|                       | 100                     | 110                    | 121,158                   | 3.81        | 18.00 |
|                       | 110                     | 125                    | 123,944                   | 3.55        | 18.00 |
|                       | 120                     | 135                    | 122,977                   | 3.20        | 18.00 |
| 45°F<br>64% RH        | 50                      | 65                     | 112,126                   | 7.82        | 18.00 |
|                       | 60                      | 75                     | 111,248                   | 6.55        | 18.00 |
|                       | 70                      | 85                     | 110,471                   | 5.53        | 18.00 |
|                       | 80                      | 95                     | 109,930                   | 4.67        | 18.00 |
|                       | 90                      | 105                    | 109,134                   | 4.05        | 18.00 |
|                       | 100                     | 115                    | 107,986                   | 3.49        | 18.00 |
|                       | 110                     | 125                    | 107,133                   | 3.08        | 18.00 |
|                       | 120                     | 135                    | 106,720                   | 2.71        | 18.00 |
| 55°F<br>64% RH        | 50                      | 65                     | 122,221                   | 7.20        | 18.00 |
|                       | 60                      | 75                     | 118,459                   | 6.45        | 18.00 |
|                       | 70                      | 85                     | 116,768                   | 5.70        | 18.00 |
|                       | 80                      | 95                     | 115,853                   | 4.50        | 18.00 |
|                       | 90                      | 105                    | 114,628                   | 3.98        | 18.00 |
|                       | 100                     | 115                    | 112,551                   | 3.58        | 18.00 |
|                       | 110                     | 125                    | 112,372                   | 3.14        | 18.00 |
|                       | 120                     | 135                    | 111,611                   | 2.77        | 18.00 |
| 65°F<br>64% RH        | 50                      | 65                     | 129,388                   | 7.47        | 18.00 |
|                       | 60                      | 75                     | 125,262                   | 7.05        | 18.00 |
|                       | 70                      | 85                     | 115,642                   | 5.71        | 18.00 |
|                       | 80                      | 95                     | 114,830                   | 4.65        | 18.00 |
|                       | 90                      | 105                    | 114,250                   | 4.02        | 18.00 |
|                       | 100                     | 115                    | 114,677                   | 3.64        | 18.00 |
|                       | 110                     | 125                    | 114,840                   | 3.09        | 18.00 |
|                       | 120                     | 135                    | 113,534                   | 2.83        | 18.00 |





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| Ambient Air Condition | Entering Water Temp [F] | Leaving Water Temp [F] | Heating Capacity [Btu/hr] | Heating COP | GPM   |
|-----------------------|-------------------------|------------------------|---------------------------|-------------|-------|
| 75°F<br>64% RH        | 50                      | 65                     | 128,638                   | 9.60        | 18.00 |
|                       | 60                      | 75                     | 128,877                   | 7.12        | 18.00 |
|                       | 70                      | 85                     | 120,449                   | 5.70        | 18.00 |
|                       | 80                      | 95                     | 118,777                   | 4.60        | 18.00 |
|                       | 90                      | 105                    | 119,016                   | 3.95        | 18.00 |
|                       | 100                     | 115                    | 119,050                   | 3.46        | 18.00 |
|                       | 110                     | 125                    | 118,162                   | 3.10        | 18.00 |
|                       | 120                     | 135                    | 117,992                   | 2.80        | 18.00 |
| 85°F<br>60% RH        | 50                      | 65                     | 134,165                   | 9.50        | 18.00 |
|                       | 60                      | 75                     | 129,388                   | 8.14        | 18.00 |
|                       | 70                      | 85                     | 128,262                   | 7.79        | 18.00 |
|                       | 80                      | 95                     | 124,373                   | 6.12        | 18.00 |
|                       | 90                      | 105                    | 120,210                   | 4.98        | 18.00 |
|                       | 100                     | 115                    | 119,323                   | 4.20        | 18.00 |
|                       | 110                     | 125                    | 118,162                   | 3.75        | 18.00 |
|                       | 120                     | 135                    | 120,073                   | 3.32        | 18.00 |
| 95°F<br>64% RH        | 50                      | 65                     | 160,082                   | 9.70        | 18.00 |
|                       | 60                      | 75                     | 150,233                   | 7.47        | 18.00 |
|                       | 70                      | 85                     | 135,231                   | 7.10        | 18.00 |
|                       | 80                      | 95                     | 124,194                   | 6.85        | 18.00 |
|                       | 90                      | 105                    | 122,530                   | 6.32        | 18.00 |
|                       | 100                     | 115                    | 123,771                   | 4.80        | 18.00 |
|                       | 110                     | 125                    | 120,140                   | 4.10        | 18.00 |
|                       | 120                     | 135                    | 121,567                   | 3.66        | 18.00 |

Notes: 1. All systems require adequate storage based on individual building demand. For additional sizing assistance please contact our applications team >> [Application Consulting Request Form](#).  
2. This heat pump is UL certified (Cert #SA7930), NSF 372/61 certified (Cert #80287023), ENERGY STAR compliant. Title 24 / CEC listing pending..

