



# Packaged Rooftop Air Conditioners

---

**IntelliPak™ Rooftops with  
Evaporative-Cooled Condensers  
24 - 116 Tons — 60 Hz**





## Introduction

---

# IntelliPak™ Rooftops with Evaporative-Cooled Condensers

### Why Choose IntelliPak with Evaporative-Cooled Condenser?

For building owners and tenants the cost of energy for air conditioning may be their single, largest annual operating expense. Businesses continually seek energy efficient technologies that provide relief from these rising costs.

In many applications, the energy saving benefits of evaporative-cooled condensing reduces annual operating costs significantly enough to provide short-term payback on the initial investment. After the payback, it's all savings.

Reduced operating expense and worry-free comfort has convinced many building owners that packaged rooftop equipment with evaporative-cooled condensing is the right choice for their buildings.

Only Trane offers its years of experience, along with a tradition for technology and innovation, to bring total comfort to every building space. This specially designed IntelliPak Rooftop with evaporative-cooled condenser is a part of that tradition.

Trane's legacy for quality products and reliable performance carries through with this energy efficient solution for today's building systems.



# Contents

---

<b>Introduction</b>	2
<b>Features and Benefits</b>	4
<b>Application Considerations</b>	6
<b>Selection Procedure</b>	7
Model Number Description	7
<b>General Data</b>	8
<b>Performance Data</b>	14
<b>Controls</b>	18
<b>Electric Power</b>	19
<b>Dimension and Weights</b>	20
<b>Mechanical Specifications</b>	21



# Features and Benefits

This catalog contains information relating to IntelliPak evaporative-cooled condensers. For expanded details on IntelliPak rooftops, please see the standard Trane catalog RT-PRC010-EN.

## What is evaporative-cooled condensing?

Unlike air to air condensers, evaporative-cooled condensing is dependent on the ambient wet bulb, rather than dry bulb temperature. Wet bulb is generally several degrees lower than dry bulb temperature. Utilizing the lower wet bulb temperature to condense the refrigerant vapor can dramatically decrease compressor power consumption.

Evaporative-cooled condensers, like air-cooled, are designed with heat exchangers and fans. They also require a sump or basin to contain re-circulating water, a pump and water spray system. By re-circulating water over the condenser coils the heat transfer process is more efficiently maximized. As fresh air is drawn over the wet coils, heat is rejected into the atmosphere and the water used in the heat transfer process evaporates.

Because the wet bulb temperature is lower than dry bulb, condensing temperatures are naturally lowered. Lower condensing temperatures increase the system thermal efficiency by reducing compressor discharge pressure, which in turn reduces compressor energy usage.

Since evaporative-cooled condensers are typically more efficient than air-cooled, less coil surface area and airflow are required. This means reduced outdoor sound levels and even further energy savings.

## Solidly Efficient

The IntelliPak evaporative-cooled condenser combines a cooling tower shell with a multiple circuit heat exchanger and a variable speed drive controlled fan motor. Condenser coils are supported by a structural, welded aluminum frame and nested in a low

density, UV resistant, molded plastic housing.

Refrigerant gas enters each coil set where a three-dimensional, no clog, water spray wets the entire coil surface. Upward moving air is drawn over the wetted surface via a highly efficient large diameter composite propeller fan powered by a totally enclosed fan-cooled, variable speed drive controlled motor. The evaporative effect releases heat from the condenser coils to the atmosphere and the contained refrigerant gas condenses to liquid.

## Self-Cleaning

The unique Trane evaporative condenser design greatly reduces mineral scale buildup. Unlike ordinary evaporative-cooled condensers, the design allows the coils to flex during the refrigeration cycle; flexing creates a dynamic surface that reduces potential for scale buildup.

As the coils flex, mineral deposits that may be left behind in the evaporation process are rinsed away by the continuous water spray. Normally, no chemicals are needed and only minor annual maintenance may be required. Any scale present in the re-circulating water passes harmlessly through the sump pump and the unique, non-clogging cyclone jets.

Any mineral deposits that may remain in the sump can be periodically flushed away.

In areas with high mineral concentrations in supply water, customers may desire some level of chemical treatment to minimize scale buildup.

# Features and Benefits

---

## Shielded from UV Rays

The evaporative condenser is almost totally shielded from algae-promoting UV rays by its high-density shell and mist eliminators. The IntelliPak exterior louvered side panels and enclosed top panels provide further protection from sunlight.

Unlike heavy zinc coated evaporative-cooled condensers, Trane's condenser coils are designed with continuous copper tubing and require no corrosion protection. The exposed copper acts as a natural agent to inhibit algae growth.

For areas with local codes requiring treatment, Trane offers optional chemical feeder systems.

The IntelliPak with evaporative-cooled condenser is an engineered product specifically designed to save energy dollars, while delivering quiet, cool comfort.

## Trane Evaporative-Cooled Condenser Features

- Higher energy efficiency
- Low water usage
- Low sound levels when compared to air-cooled condensers
- Fewer internal solder joints
- Non-clogging water spray nozzles
- Easy maintenance access
- Corrosion resistance
- Copper coils
- Non-corroding construction
- Single or dual circuits
- Scale shedding coils
- Strong and resilient housing
- Low ambient control

- Condenser fan control
- Ambient changeover thermostat

## Evaporative-Cooled Condenser Options

- Sump flush water saving control
- Sump heater

## Choose Evaporative-Cooled Condensers

The IntelliPak Rooftop with evaporative-cooled condensers is an outstanding choice for:

- Areas with high energy costs
- Areas with restricted water usage, up to 40% less water usage with sump flush control
- Hot, dry climates
- Applications requiring reduced noise

This rooftop line is a natural and efficient comfort choice for Shopping Malls, Office Buildings and other small, medium and large commercial / industrial applications.



# Application Considerations

---

This catalog contains information relating to IntelliPak evaporative-cooled condensers. For expanded details on IntelliPak rooftops, please see the standard Trane catalog RT-PRC010-EN.

## Water Supply

Suspended particulate matter, mineral concentrations, trash and debris can adversely affect performance of any water-cooled device. If not managed, mineral concentrations can result in clogged water system hardware, heat exchanger restriction and heat transfer loss. Trane's evaporative-cooled condenser is designed to greatly minimize performance problems that may occur from the by-products of water evaporation.

## Incoming Water Supply Line

A float valve is provided to maintain sump water level during condenser operation. A field installed gate valve may be installed on the condenser water supply line. An 80 to 100 mesh field supplied strainer may be installed in the condenser water supply line to help prevent the introduction of debris. The condenser water supply line should be flushed thoroughly prior to connection to the unit. Local codes may require back-flow prevention on the condenser water supply line.

## Water Discharge and Drain Line

Care and judgment should be exercised in selecting a water discharge site.

**Local Site Discharge:** Rooftop or simple storm sewer discharge is generally acceptable. Do not routinely direct sump discharge onto areas where the byproducts of water evaporation or water treatment products are undesirable.

**Sewer Discharge:** The quantities of mineral and debris in the discharge water are actually very small, and do not cause problems when diluted in normal sewer flow. Check local codes to identify any special requirements for sewer discharge.

Regardless of the disposal method used, local codes, state or federal standards for water disposal must be followed.

## Freeze Protection

For operation in ambient temperatures below 32 F, optional sump heaters and controls are available to provide operation down to 20 degrees and 0 degrees F. In colder climates water supply line and drain piping may require field installed freeze protection. Generally low wattage heat tape on the water lines is sufficient protection.

## Make-up Water Considerations

**Traditional bleed method:** This method is employed with conventional evaporative condensers. Water is continuously drained and replaced to help reduce mineral concentrations in the condenser sump. Water level is maintained by internal float valve. Although not required with Trane's evaporative cooled condenser, the bleed method can be utilized. Water is usually drained from the sump at a rate equal to the rate of evaporation.

**Water saver method:** A programmable flush cycle is initiated to remove mineral deposits and particulates from the sump. Fresh water can be cycled into the sump up to 12 times every 24 hours. Water level is maintained by internal float valve. The bleed method can be combined with the water saver method, but is not necessary. The water saver method can reduce water usage up to 40%.

## Water Treatment Considerations

Local codes may require the use of chemicals for water treatment. Different chemical feeder systems are available to fit a wide variety of requirements and budgets. Check with local code officials to determine requirements for your installation.

# Selection Procedure

# Model Numbers

## Selection Procedure

This section outlines a step-by-step procedure that may be used to select a Trane single-zone air conditioner. For additional selection information, please see RT-PRC010-EN.

The sample selection is based on the following conditions:

- Summer outdoor design conditions — 95 DB/75 WB ambient temperature
- Summer room design conditions — 78 DB/65 WB
- Total cooling load — 430 MBh (35.8 tons)
- Sensible cooling load — 345 MBh (28.8 tons)
- Outdoor air ventilation load — 66.9 MBh (5.6 tons)
- Return air temperature — 80 DB/67 WB

### Winter Design:

- Winter outdoor design conditions — 0 F
- Return air temperature — 70 F
- Total heating load — 475 MBh
- Winter outdoor air ventilation load — 133 MBh

### Air Delivery Data:

- Supply fan cfm — 18,000 cfm
- External static pressure — 1.2 in wg
- Minimum outdoor air ventilation — 1,800 cfm
- Exhaust fan cfm — 12,000 cfm
- Return air duct negative static pressure — 0.65 in wg

### Electrical Characteristics:

- Voltage/cycle/phase — 460/60/3 Unit Accessories:
- Gas fired heat exchanger — high heat module
- Throwaway filters
- Economizer
- Modulating 100 percent exhaust/return fan

## COOLING CAPACITY SELECTION

### Step 1 — Nominal Unit Size Selection

A summation of the peak cooling load and the outside air ventilation load shows: 430 MBh + 66.9 MBh = 496.9 MBh (41.4 tons) required unit capacity.

From Table PD-4 a 48 ton unit capacity with standard capacity evaporator coil at 80 DB/67 WB, 95 F outdoor air temperature and 18,000 total supply cfm is 675 MBh total and 488 MBh sensible. Thus, a nominal 48 ton unit with standard capacity evaporator coil is selected.

### Step 2 — Evaporator Coil Entering Conditions

Mixed air dry bulb temperature determination:

Using the minimum percent of OA (1,800 cfm ÷ 18,000 cfm = 10 percent),

determine the mixture dry bulb to the evaporator.

$$RADB + \% OA (OADB - RADB) = 80 + (0.10) (95 - 80) = 80 + 1.5 = 81.5 F$$

“Approximate” wet bulb mixture temperature:

$$RAWB + \% OA (OAWB - RAWB) = 67 + (0.10) (75 - 67) = 65 + 1.1 = 66.1 F$$

### UNIT ELECTRICAL REQUIREMENTS

Selection procedures for electrical requirements for wire sizing amps, maximum fuse sizing, and dual element fuses are given in the electrical service section of this catalog.

## Model Numbers

**S** \* **H** **F**

**S** \* **H** **G**

*For this tonnage evaporative-cooled condenser unit:*

<i>For this tonnage evaporative-cooled condenser unit:</i>	<i>Order this Standard IntelliPak unit</i>
24Ton	S_HFC20* w/Hi Cap Evaporator Coil Option
30Ton	S_HFC25* w/Hi Cap Evaporator Coil Option
36Ton	S_HFC30* w/Hi Cap Evaporator Coil Option
48Ton	S_HFC40* w/Hi Cap Evaporator Coil Option
59Ton	S_HFC50* w/Hi Cap Evaporator Coil Option
70Ton	S_HFC55* w/Hi Cap Evaporator Coil Option
73Ton	S_HFC60* w/Hi Cap Evaporator Coil Option
80Ton	S_HFC75* w/Standard Evaporator Coil
90Ton	S_HFC75* w/Hi Cap Evaporator Coil Option
107Ton	S_HGC90* w/Hi Cap Evaporator Coil Option
116Ton	S_HGD11* w/Hi Cap Evaporator Coil Option

This catalog contains information relating to IntelliPak evaporative-cooled condensers. For expanded details on IntelliPak rooftops, please see the standard Trane catalog RT-PRC010-EN.



# General Data

**Table GD-1— General Data — 24-48 Tons**

	24 Ton		30 Ton		36 Ton		48 Ton	
<b>Compressor Data<sup>3</sup></b>								
Number/Size (Nominal)	2/10 Ton		1/10 Ton, 1/15 Ton		2/15 Ton		4/10 Ton	
Model	Scroll		Scroll		Scroll		Scroll	
Unit Capacity Steps (%)	100/50		100/40		100/50		100/75/50/25	
RPM	3450		3450		3450		3450	
<b>Evaporator Fans</b>								
Number/Size/Type	2/15"/FC		2/15"/FC		2/18"/FC		2/20"/FC	
Number of Motors	1		1		1		1	
Hp Range	3-15		3-15		5-20		7 <sup>1</sup> / <sub>2</sub> -30	
Cfm Range <sup>1</sup>	4000-9000		5000-11000		6000-13500		8000-18000	
ESP Range — (In. WG)	0.25-4.0		0.25-4.0		0.25-4.0		0.25-4.0	
<b>Exhaust Fans</b>								
	50%	100%	50%	100%	50%	100%	50%	100%
Number/Size/Type	1/15"/FC	2/15"/FC	1/15"/FC	2/15"/FC	1/15"/FC	2/15"/FC	1/18"/FC	2/18"/FC
Hp Range	1.5-3	1.5-3	1.5-3	3-5	3-5	3-7.5	5-7.5	5-10
Cfm Range	2000-6000	4000-10000	2000-6000	4000-12000	2000-7000	4000-14000	3000-11000	7500-16000
ESP Range — (In. WG)	0.25-1.4	0.2-2.0	0.25-1.4	0.2-2.0	0.25-1.4	0.2-2.0	0.25-1.4	0.2-2.0
<b>Evaporative-Cooled Condenser Fans</b>								
Number/Size/Type	1/ 42"/Prop		1/42"/Prop		1/42"/Prop		1/47.5"/Prop	
Hp (Each) <sup>6</sup>	2		3		3		3	
Rpm / Cfm	1200/6,250		1200/7,500		1200/10,000		1200/13,750	
Cycle/Phase	60/3		60/3		60/3		60/3	
<b>Evaporator Coil — High Capacity</b>								
Size (Ft)	20.3		20.3		24.4		32.5	
Rows/Fin Series	4/148		4/148		4/148		4/148	
Tube Diameter/Surface	1/2/Enhanced		1/2/Enhanced		1/2/Enhanced		1/2/Enhanced	
<b>Copper Condenser Fins (Optional)</b>								
	3/144/ <sup>3</sup> / <sub>8</sub>		3/144/ <sup>3</sup> / <sub>8</sub>		3/144/ <sup>3</sup> / <sub>8</sub>		3/144/ <sup>3</sup> / <sub>8</sub>	
<b>Electric Heat</b>								
KW Range <sup>2</sup>	30-110		30-130		30-150		50-170	
Capacity Steps:	3		3		3		3	
<b>Natural Gas Heat</b>								
Standard Gas Heat								
Low Heat Input	235		235		350		350	
High Heat Input	500		500		500		850	
Standard Heating Capacity Steps:	2		2		2		2	
Modulating Gas Heat (Not Available on 24-48 Ton Models with Low Heat)								
High Heat - Limited Modulation <sup>4</sup>	See Table GD-5		See Table GD-5		See Table GD-5		See Table GD-5	
Heat Exchanger Type	Standard		Standard		Standard		Standard	
High Heat - Full Modulation <sup>5</sup>	See Table GD-5		See Table GD-5		See Table GD-5		See Table GD-5	
Heat Exchanger Type	Stainless Steel		Stainless Steel		Stainless Steel		Stainless Steel	
<b>Hot Water Coil</b>								
Size (Inches)	30x66x2 Row		30x66x2 Row		30x66x2 Row		42x66x2 Row	
Type	5W Prima-Flo E w/turbolators		5W Prima-Flo E w/turbolators		5W Prima-Flo E w/turbolators		5W Prima-Flo E w/turbolators	
High Heat (Fins/Ft)	110		110		110		110	
Low Heat (Fins/Ft)	80		80		80		80	
<b>Steam Coil</b>								
Size (Inches)	30x66x1 Row		30x66x1 Row		30x66x1 Row		30x66x1 Row & 12x66x1 Row	
Type	Type NS		Type NS		Type NS		Type NS	
High Heat (Fins/Ft)	96		96		96		96	
Low Heat (Fins/Ft)	42		42		42		42	





# General Data

**Table GD-1— General Data — 24-48 Tons Continued**

	24 Ton	30 Ton	36 Ton	48 Ton
<b>Filters</b>				
Panel Filters				
Number/Size (Inches)	12 — 20x20x2	12 — 20x20x2	16 — 20x20x2	16 — 20x25x2
Face Area (Ft)	33.3	33.3	44.4	55.5
Bag Filters				
Number/Size (Inches)	4 — 12x24x19	4 — 12x24x19	2 — 12x24x19	5 — 12x24x19
	3 — 24x24x19	3 — 24x24x19	6 — 24x24x19	6 — 24x24x19
Cartridge Filters				
	4 — 12x24x12	4 — 12x24x12	2 — 12x24x12	5 — 12x24x12
	3 — 24x24x12	3 — 24x24x12	6 — 24x24x12	6 — 24x24x12
Prefilters (For Bag & Cartridge)				
	4 — 12x24x2	4 — 12x24x2	2 — 12x24x2	5 — 12x24x2
	3 — 24x24x2	3 — 24x24x2	6 — 24x24x2	6 — 24x24x2
Face Area (Ft)	20	20	28	34
<b>Standard Unit Minimum Outside Air Temperature For Mechanical Cooling</b>				
Without Hot Gas Option	55 F	50 F	50 F	55 F
With Hot Gas Option	55 F	50 F	50 F	55 F
<b>Low Ambient Option Minimum Outside Air Temperature</b>				
Without Hot Gas Option	0 F	0 F	0 F	0 F
With Hot Gas Option	10 F	10 F	10 F	10 F

**Notes:**

1. For cfm values outside these ranges, refer to RT-EB-104.
2. Refer to Table PD-30 in standard catalog RT-PRC010-EN for availability of electric heat kw ranges by voltage.
3. 24-30 Ton models are single circuit, 48 Ton models are dual circuit.
4. The firing rate of the unit can vary from 33% of the Heater Mbh up to the nameplate rating of the unit.
5. The firing rate of the unit can vary from pilot rate of 125,000 Btuh up to the nameplate rating of the unit.
6. Condenser fan motors are totally enclosed, fan cooled (TEFC).



# General Data

**Table GD-2 — General Data — 59-90 Tons**

	59 Ton		70 Ton		73 Ton		80-90 Ton	
<b>Compressor Data<sup>3</sup></b>								
Number/Size (Nominal)	2/10, 2/15 Ton		4/15 Ton		4/15 Ton		4/10, 2/15 Ton	
Model	Scroll		Scroll		Scroll		Scroll	
Unit Capacity Steps (%)	100/80/60/30		100/75/50/25		100/75/50/25		100/72/44/22	
RPM	3450		3450		3450		3450	
<b>Evaporator Fans</b>								
Number/Size/Type	2/20"/FC		2/20"/FC		2/22"/FC		2/22"/FC	
Number of Motors	1		1		1		1	
Hp Range	7 <sup>1</sup> / <sub>2</sub> -30		7 <sup>1</sup> / <sub>2</sub> -30		10-40		10-40 <sup>6</sup>	
Cfm Range <sup>1</sup>	10000-22500		12000-24000		14000-27000		16000-27000	
ESP Range — (In. WG)	0.25-4.0		0.25-4.0		0.25-4.0		0.25-4.0	
<b>Exhaust Fans</b>								
	50%	100%	50%	100%	50%	100%	50%	100%
Number/Size/Type	1/18"/FC	2/18"/FC	1/18"/FC	2/18"/FC	1/20"/FC	2/20"/FC	1/20"/FC	2/20"/FC
Hp Range	5-7.5	5-15	5-7.5	5-15	5-7.5	5-20	5-7.5	5-20
Cfm Range	3000-11000	9000-20000	3000-11000	10000-21500	4000-13000	12000-27000	4000-13000	12000-27000
ESP Range — (In. WG)	0.25-1.4	0.2-2.0	0.25-1.4	0.2-2.0	0.25-1.4	0.2-2.0	0.25-1.4	0.2-2.0
<b>Evaporative-Cooled Condenser Fans</b>								
Number/Size/Type	1/47.5"/Prop		1/47.5"/Prop		1/47.5"/Prop		1/47.5"/Prop	
Hp (Each) <sup>7</sup>	5		5		7.5		7.5	
Rpm / Cfm	1200/16,250		1200/18,750		1200/20,000		1200/25,000	
Cycle/Phase	60/3		60/3		60/3		60/3	
<b>Evaporator Coil — Standard</b>								
Size (Ft.)	N/A		N/A		N/A		43.1	
Rows/Fin Series	N/A		N/A		N/A		4/148	
Tube Diameter/Surface	N/A		N/A		N/A		1/2/Enhanced	
<b>Evaporator Coil — High Capacity</b>								
Size (Ft.)	37.9		37.9		43.1		43.1	
Rows/Fin Series	4/148		4/148		4/148		5/148	
Tube Diameter/Surface	1/2/Enhanced		1/2/Enhanced		1/2/Enhanced		1/2/Enhanced	
<b>Copper Condenser Fins (Optional)</b>								
	3/144/ <sup>3</sup> / <sub>8</sub>		3/144/ <sup>3</sup> / <sub>8</sub>		3/144/ <sup>3</sup> / <sub>8</sub>		3/144/ <sup>3</sup> / <sub>8</sub>	
<b>Electric Heat</b>								
KW Range <sup>2</sup>	70-190		70-190		90-190		90-190	
Capacity Steps:	3		3		3		3	
<b>Natural Gas Heat</b>								
Standard Gas Heat								
Low Heat Input	500		500		500		500	
High Heat Input	850		850		850		850	
Standard Heating Capacity Steps:	2		2		2		2	
Modulating Gas Heat								
High/Low Heat - Limited Modulation <sup>4</sup>								
Heat Exchanger Type	See Table GD-5 Standard		See Table GD-5 Standard		See Table GD-5 Standard		See Table GD-5 Standard	
High/Low Heat - Full Modulation <sup>5</sup>								
Heat Exchanger Type	See Table GD-5 High Grade, Stainless Steel		See Table GD-5 High Grade, Stainless Steel		See Table GD-5 High Grade, Stainless Steel		See Table GD-5 High Grade, Stainless Steel	
<b>Hot Water Coil</b>								
Size (Inches)	42x66x2 Row		42x66x2 Row		42x90x2 Row		42x90x2 Row	
Type	5W Prima-Flo E w/turbolators		5W Prima-Flo E w/turbolators		5W Prima-Flo E w/turbolators		5W Prima-Flo E w/turbolators	
High Heat (Fins/Ft)	110		110		110		110	
Low Heat (Fins/Ft)	80		80		80		80	
<b>Steam Coil</b>								
Size (Inches)	30x66x1 Row		30x66x1 Row		30x90x1 Row		30x90x1 Row	
	12x66x1 Row		12x66x1 Row		12x90x1 Row		12x90x1 Row	
Type	Type NS		Type NS		Type NS		Type NS	
High Heat (Fins/Ft)	96		96		72		72	
Low Heat (Fins/Ft)	42		42		42		42	



# General Data

**Table GD-2 — General Data — 59-90 Tons Continued**

	59 Ton	70 Ton	73 Ton	80-90 Ton
<b>Filters</b>				
Panel Filters				
Number/Size (Inches)	20 — 20x25x2	20 — 20x25x2	35 — 16x20x2	35 — 16x20x2
Face Area (Ft)	69.4	69.4	77.8	77.8
Bag Filters				
Number/Size (Inches)	3 — 12x24x19	3 — 12x24x19	6 — 12x24x19	6 — 12x24x19
	9 — 24x24x19	9 — 24x24x19	8 — 24x24x19	8 — 24x24x19
Cartridge Filters				
Number/Size (Inches)	3 — 12x24x12	3 — 12x24x12	6 — 12x24x12	6 — 12x24x12
	9 — 24x24x12	9 — 24x24x12	8 — 24x24x12	8 — 24x24x12
Prefilters (For Bag & Cartridge)				
Number/Size (Inches)	3 — 12x24x2	3 — 12x24x2	6 — 12x24x2	6 — 12x24x2
	9 — 24x24x2	9 — 24x24x2	8 — 24x24x2	8 — 24x24x2
Face Area (Ft)	42.0	42.0	44.0	44.0
<b>Standard Unit Min. Outside Air Temperature For Mechanical Cooling</b>				
Without Hot Gas Option	35 F	40 F	30 F	45 F
With Hot Gas Option	35 F	40 F	30 F	45 F
<b>Low Ambient Option Min. Outside Air Temp</b>				
Without Hot Gas Option	0 F	0 F	0 F	0 F
With Hot Gas Option	10 F	10 F	10 F	10 F

**Notes:**

1. For cfm values outside these ranges, refer to RT-EB-104.
2. Refer to Table PD-30 in standard catalog RT-PRC010-EN for availability of electric heat kw ranges by voltage.
3. 59-90 Tons models are dual circuit.
4. The firing rate of the unit can vary from 33% of the Heater Mbh up to the nameplate rating of the unit.
5. The firing rate of the unit can vary from pilot rate of 125,000 Btuh up to the nameplate rating of the unit.
6. 40 Hp available as standard in 460 volt only.
7. Condenser fan motors are totally enclosed, fan cooled (TEFC).



# General Data

**Table GD-3 — General Data — 107-116 Tons**

	107 Ton		116 Ton	
<b>Compressor Data<sup>3</sup></b>				
Number/Size (Nominal)	2/10, 4/15 Ton		6/15 Ton	
Model	Scroll		Scroll	
Unit Capacity Steps (%)	100/69/38/19		100/67/33/17	
RPM	3450		3450	
<b>Evaporator Fans</b>				
Number/Size/Type	2/28"/AF		2/28"/AF	
Number of Motors	2		2	
Hp Range	30-80		30-80	
Cfm Range <sup>1</sup>	27,000-45,000		31,000-46,000 <sup>4</sup>	
ESP Range — (In. WG)	1.0-4.75		1.0-4.70	
<b>Exhaust Fans</b>				
	50%	100%	50%	100%
Number/Size/Type	1/22"/FC	2/22"/FC	1/22"/FC	2/22"/FC
Hp Range	15	15-40	15	15-40
Cfm Range	12,000-20,000	28,000-40,000	12,000-20,000	28,000-40,000
ESP Range — (In. WG)	.25-2.5	.25-2.5	.25-2.5	.25-2.5
<b>Evaporative-Cooled Condenser Fans</b>				
Number/Size/Type	1 / 47.5"/Prop		1/47.5"/Prop	
Hp (Each) <sup>7</sup>	7.5		7.5	
Rpm / Cfm	1200/31,500		1200/33,250	
Cycle/Phase	60/3		60/3	
<b>Evaporator Coil — Standard</b>				
Dimensions	N/A		N/A	
Size (Ft)	N/A		N/A	
Rows/Fin Series	N/A		N/A	
Tube Diameter/Surface	N/A		1/N/A	
<b>Evaporator Coil — High Capacity</b>				
Dimensions	122.0 x 70.0		122.0 x 71.25	
Size (Ft)	59.3		59.3	
Hi-Capacity Rows/Fin Series	5/148		5/148	
Tube Diameter/Surface	1/2/Enhanced		1/2/Enhanced	
<b>Electric Heat</b>				
KW	190		190	
Capacity Steps:	3		3	
<b>Natural Gas Heat</b>				
Standard Heating -- MBh Input	1000		1000	
Capacity Steps:	2		2	
<b>Modulating Gas Heat</b>				
High Heat - Limited Modulation <sup>5</sup>	See Table GD-5		See Table GD-5	
Heat Exchanger Type	Standard		Standard	
High Heat - Full Modulation <sup>6</sup>	See Table GD-5		See Table GD-5	
Heat Exchanger Type	Stainless Steel		Stainless Steel	
<b>Hot Water Coil</b>				
Size (Inches)	(2) 30x84x2 Row		(2) 30x84x2 Row	
Type	5W Prima-Flo E w/turbolators		5W Prima-Flo E w/turbolators	
High Heat (Fins/Ft)	110		110	
Low Heat (Fins/Ft)	80		80	
<b>Steam Coil</b>				
Size (Inches)	(2) 30x84x1 Row		(2) 30x84x1 Row	
Type	Type NS		Type NS	
High Heat (Fins/Ft)	96		96	
Low Heat (Fins/Ft)	52		52	



# General Data

**Table GD-3 – General Data – 107-116Tons Continued**

	107 Ton	116 Ton
<b>Filters</b>		
Panel Filters		
Number/Size (Inches)	25-24x24x2	25-24x24x2
Face Area (Ft)	100.0	100.0
Bag Filters		
Number/Size (Inches)	3-12x24x19	3-12x24x19
Cartridge Filters		
Number/Size (Inches)	15-24x24x12	15-24x24x12
Number/Size (Inches)	3-12x24x12	3-12x24x12
Number/Size (Inches)	15-24x24x12	15-24x24x12
Prefilters (For Bag & Cartridge)		
Number/Size (Inches)	3-20x24x2	3-20x24x2
Number/Size (Inches)	15-24x24x2	15-24x24x2
Face Area (Ft)	66.0	66.0
<b>Standard Unit Min. Outside Air Temperature For Mechanical Cooling</b>		
Without Hot Gas Bypass	45 F	45 F
With Hot Gas Bypass	45 F	45 F

**Notes:**

1. For cfm values outside these ranges, refer to RT-EB-104.
2. Refer to Table PD-30 in standard catalog RT-PRC010-EN for availability of electric heat kw ranges by voltage.
3. 107-116 Ton models are dual circuit.
4. Max cfm for 116 Ton std is 44,000.
5. The firing rate of the unit can vary from 33% of the Heater Mbh up to the nameplate rating of the unit.
6. The firing rate of the unit can vary from pilot rate of 125,000 Btuh up to the nameplate rating of the unit.
7. Condenser fan motors are totally enclosed, fan cooled (TEFC).

**Table GD-4 – Economizer Outdoor Air Damper Leakage (Of Rated Airflow)**

	$\Delta P$ Across Dampers (In. WC)	
	0.5 (In.)	1.0 (In.)
Standard "Low Leak"	1.5 %	2.5 %
Optional "Ultra Low Leak"	0.5 %	1.0 %

**Note:**

1. Above data based on tests completed in accordance with AMCA Standard 575 at AMCA Laboratories.

**Table GD-5 – Gas Heat Inputs/Input Ranges**

Standard Gas Heat (MBh)	Two-Stage Gas Heat		Modulating Gas Heat <sup>1</sup>	
	Low Fire Heat Input (MBh)	High Fire Heat Input (MBh)	Full Modulating Heat Input Range (MBh)	Limited Modulating Heat Input Range (MBh)
235	120	235	NA	NA
350	175	350	NA	NA
500	250	500	125 - 500	167 - 500
850	425	850	125 - 850	284 - 850
1000	500	1000	125 - 1000	334 - 1000

**Note:**

1. Modulating Gas Heat (Not Available on 24-36 Ton Models with Low Heat)



# Performance Data

## (24 to 70 Tons)

**Table PD-1— 24 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°							
CFM	ENT DB (F)	Entering Wet Bulb					
		61		67		73	
		CAP	SHC	CAP	SHC	CAP	SHC
4000	75	213	154	241	127	269	98
	80	211	175	241	150	269	120
	85	212	197	242	172	269	143
	90	221	221	242	195	269	165
6000	75	239	190	265	148	295	105
	80	242	223	266	181	295	138
	85	249	249	267	215	296	172
	90	262	262	270	248	296	206
7000	75	247	205	272	157	304	108
	80	253	239	273	196	304	147
	85	263	263	276	235	305	186
	90	277	277	280	270	305	224
8000	75	254	218	278	166	311	111
	80	262	253	279	211	311	155
	85	274	274	283	253	312	199
	90	289	289	289	289	312	241
9000	75	260	230	283	176	316	113
	80	270	264	285	223	316	163
	85	284	284	289	271	317	211
	90	300	300	297	306	318	258

**Table PD-2— 25 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°							
CFM	ENT DB (F)	Entering Wet Bulb					
		61		67		73	
		CAP	SHC	CAP	SHC	CAP	SHC
5000	75	269	194	304	160	338	124
	80	267	220	304	188	338	152
	85	268	249	305	216	339	180
	90	283	283	306	245	339	208
7000	75	295	229	327	180	365	130
	80	299	270	329	219	365	169
	85	308	308	331	259	366	208
	90	325	325	335	300	367	248
8500	75	309	255	339	194	378	134
	80	316	302	341	242	378	182
	85	330	330	344	291	379	229
	90	348	348	352	339	381	277
10000	75	319	278	348	208	388	138
	80	330	323	350	265	388	194
	85	346	346	356	322	389	250
	90	366	366	366	367	391	306
11000	75	325	290	352	217	393	141
	80	337	334	355	280	393	202
	85	356	356	362	343	394	263
	90	376	376	374	382	398	326

**Table PD-3— 36 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°							
CFM	ENT DB (F)	Entering Wet Bulb					
		61		67		73	
		CAP	SHC	CAP	SHC	CAP	SHC
6000	75	322	232	363	192	404	148
	80	320	264	364	225	405	181
	85	321	298	365	259	405	215
	90	338	338	366	293	406	249
9000	75	359	285	396	221	442	157
	80	365	338	398	272	442	207
	85	378	378	401	323	443	258
	90	399	399	407	376	444	308
10500	75	371	311	407	235	454	161
	80	381	366	409	294	454	220
	85	398	398	414	355	455	279
	90	420	420	423	412	457	338
12000	75	381	333	415	249	463	165
	80	394	386	418	317	464	232
	85	414	414	425	386	465	299
	90	438	438	437	439	468	367
13500	75	390	350	422	263	471	169
	80	406	402	426	339	472	244
	85	428	428	435	417	473	319
	90	453	453	450	461	477	396

**Table PD-4— 48 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°							
CFM	ENT DB (F)	Entering Wet Bulb					
		61		67		73	
		CAP	SHC	CAP	SHC	CAP	SHC
8000	75	428	308	484	255	538	197
	80	424	350	485	300	538	241
	85	425	396	485	345	539	286
	90	448	448	487	390	540	331
11000	75	467	362	520	285	579	206
	80	471	425	521	347	579	268
	85	485	485	524	409	580	329
	90	512	512	530	473	581	391
14000	75	493	415	542	313	604	215
	80	505	486	545	392	605	293
	85	527	527	551	472	606	371
	90	556	556	563	541	608	449
16000	75	507	440	554	332	617	220
	80	523	512	557	422	617	309
	85	549	549	565	512	619	398
	90	580	580	581	576	621	489
18000	75	519	463	563	350	627	225
	80	538	534	567	450	628	325
	85	567	567	577	547	629	425
	90	599	599	597	605	633	522

**Table PD-5— 59 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°							
CFM	ENT DB (F)	Entering Wet Bulb					
		61		67		73	
		CAP	SHC	CAP	SHC	CAP	SHC
10000	75	531	383	601	317	668	244
	80	526	436	602	373	669	300
	85	530	494	603	429	669	356
	90	558	558	605	486	670	412
14000	75	582	455	647	356	720	256
	80	588	536	649	435	720	335
	85	608	608	653	515	722	413
	90	641	641	661	596	723	491
17500	75	612	514	672	389	748	266
	80	627	608	675	488	749	363
	85	655	655	683	588	750	461
	90	691	691	699	672	753	560
20000	75	628	549	686	412	764	272
	80	648	641	690	525	765	384
	85	682	682	701	618	766	495
	90	720	720	722	714	770	609
22500	75	642	577	697	435	776	278
	80	664	664	703	560	777	404
	85	704	704	717	682	779	530
	90	744	744	742	747	785	652

**Table PD-6— 70 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°							
CFM	ENT DB (F)	Entering Wet Bulb					
		61		67		73	
		CAP	SHC	CAP	SHC	CAP	SHC
12000	75	647	465	733	386	813	297
	80	641	528	733	453	813	364
	85	650	600	734	520	814	431
	90	685	685	737	589	814	499
16000	75	698	536	778	424	863	308
	80	704	628	779	514	864	398
	85	728	728	784	605	865	487
	90	767	767	795	699	867	577
19000	75	726	587	801	452	889	316
	80	739	699	804	559	890	422
	85	771	771	812	668	891	528
	90	813	813	830	779	895	635
22000	75	747	637	819	479	910	323
	80	768	767	824	603	910	446
	85	807	807	836	730	912	569
	90	851	851	860	833	917	693
24000	75	760	670	830	497	921	328
	80	781	781	835	633	922	462
	85	826	826	850	772	923	596
	90	872	872	877	863	930	732



# Performance Data

(73 to 125 Tons)

**Table PD-7— 73 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°								
CFM	ENT DB (F)	Entering Wet Bulb						
		61		67		73		
		CAP	SHC	CAP	SHC	CAP	SHC	
14000	75	688	507	769	406	856	303	
	80	691	587	771	488	857	386	
	85	703	663	775	568	859	466	
	90	738	713	781	646	860	545	
18000	75	734	562	810	433	903	307	
	80	747	653	814	536	904	412	
	85	772	733	821	636	906	517	
	90	814	801	833	729	909	620	
21000	75	759	592	832	451	929	307	
	80	780	690	837	569	931	429	
	85	814	777	846	682	933	549	
	90	858	854	862	788	937	669	
24000	75	780	620	849	465	948	304	
	80	807	724	856	598	950	443	
	85	848	820	868	723	953	578	
	90	895	904	889	838	958	715	
27000	75	798	645	863	477	964	299	
	80	831	756	871	625	966	455	
	85	876	863	887	761	969	605	
	90	926	948	914	886	976	759	

**Table PD-8— 80 Ton Gross Cooling Capacities (Mbh) — STANDARD CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°								
CFM	ENT DB (F)	Entering Wet Bulb						
		61		67		73		
		CAP	SHC	CAP	SHC	CAP	SHC	
16000	75	781	577	880	469	977	353	
	80	780	666	882	559	978	442	
	85	799	764	884	649	979	532	
	90	842	842	891	742	980	621	
20000	75	827	648	919	507	1021	364	
	80	837	764	922	620	1022	476	
	85	869	869	929	734	1024	588	
	90	916	916	944	852	1027	700	
22000	75	845	682	935	526	1038	369	
	80	861	812	938	650	1039	492	
	85	897	897	947	776	1041	615	
	90	946	946	966	902	1045	739	
24000	75	862	716	948	544	1053	374	
	80	882	858	952	680	1054	508	
	85	922	922	964	818	1056	642	
	90	973	973	987	941	1061	777	
27000	75	882	768	965	572	1072	381	
	80	908	903	971	724	1073	532	
	85	955	955	986	880	1075	683	
	90	1008	1008	1015	991	1081	835	

**Table PD-9— 90 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°								
CFM	ENT DB (F)	Entering Wet Bulb						
		61		67		73		
		CAP	SHC	CAP	SHC	CAP	SHC	
16000	75	854	615	960	507	1068	390	
	80	853	704	962	597	1069	479	
	85	863	798	966	688	1071	569	
	90	910	910	973	780	1073	660	
20000	75	907	687	1008	545	1122	402	
	80	917	803	1011	658	1124	514	
	85	944	928	1019	773	1126	626	
	90	996	996	1031	890	1129	739	
22000	75	928	721	1026	564	1142	407	
	80	944	851	1030	689	1144	530	
	85	978	977	1040	815	1146	654	
	90	1031	1031	1056	944	1150	778	
24000	75	947	756	1041	583	1160	412	
	80	967	899	1047	719	1162	547	
	85	1007	1007	1058	857	1164	681	
	90	1062	1062	1079	999	1169	817	
27000	75	971	806	1061	610	1182	420	
	80	999	963	1068	763	1184	571	
	85	1045	1045	1083	920	1187	722	
	90	1104	1104	1110	1081	1193	875	

**Table PD-10— 107 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°								
CFM	ENT DB (F)	Entering Wet Bulb						
		61		67		73		
		CAP	SHC	CAP	SHC	CAP	SHC	
27000	75	1059	847	1168	654	1303	463	
	80	1079	1007	1173	807	1305	614	
	85	1122	1122	1184	961	1307	765	
	90	1183	1183	1204	1120	1310	917	
32000	75	1098	931	1201	701	1340	476	
	80	1130	1097	1208	881	1342	655	
	85	1184	1184	1224	1066	1344	834	
	90	1250	1250	1256	1239	1350	1014	
37000	75	1129	1003	1227	747	1369	489	
	80	1171	1158	1236	956	1371	695	
	85	1234	1234	1259	1170	1374	902	
	90	1304	1304	1299	1317	1383	1111	
42000	75	1155	1057	1248	793	1392	501	
	80	1206	1206	1261	1031	1394	735	
	85	1277	1277	1288	1273	1397	970	
	90	1350	1349	1338	1379	1411	1204	
45000	75	1169	1087	1259	820	1404	508	
	80	1223	1223	1273	1076	1406	759	
	85	1298	1298	1303	1326	1409	1010	
	90	1373	1373	1359	1407	1425	1253	

**Table PD-11— 116 Ton Gross Cooling Capacities (Mbh) — HIGH CAPACITY Evaporator Coil With Scroll Compressor**

Saturated Condensing Temperature 105°								
CFM	ENT DB (F)	Entering Wet Bulb						
		61		67		73		
		CAP	SHC	CAP	SHC	CAP	SHC	
31000	75	1177	955	1296	733	1444	513	
	80	1202	1138	1302	907	1446	686	
	85	1252	1252	1316	1085	1448	860	
	90	1321	1321	1343	1271	1452	1034	
35000	75	1207	1022	1322	770	1473	523	
	80	1240	1212	1329	967	1474	719	
	85	1300	1300	1348	1169	1477	914	
	90	1373	1373	1384	1347	1485	1112	
39000	75	1232	1085	1343	806	1496	533	
	80	1275	1264	1353	1027	1498	751	
	85	1342	1342	1376	1253	1501	969	
	90	1417	1417	1419	1411	1512	1189	
43000	75	1255	1131	1361	843	1516	543	
	80	1300	1300	1374	1087	1518	783	
	85	1378	1378	1401	1338	1521	1023	
	90	1456	1456	1452	1463	1535	1268	
46000	75	1270	1163	1373	870	1529	550	
	80	1322	1322	1387	1136	1531	807	
	85	1401	1401	1418	1391	1534	1063	
	90	1482	1482	1475	1496	1551	1317	



# Performance Data

---

**This Page left Intentionally Blank**





# Performance Data

**Table PD-14-1 – IntelliPak with Evaporative- Cooled Condenser – 78° design ambient wet bulb**

Models	CFM	CAP	SHC	SHR	*KW	KW Savings
73 ton hi cap	24000	856	598	0.699	46.7	31.9
90 ton hi cap	27000	1068	763	0.714	57.7	29.3
107 ton	37000	1236	956	0.773	66.1	29.3
116 ton	39000	1353	1027	0.759	74.4	34.8

**Table 14-2 – IntelliPak with Air Cooled Condenser – 95° design ambient dry bulb**

Models	CFM	CAP	SHC	SHR	*KW
75 ton hi cap	20000	922	635	0.689	78.6
90 ton	32000	1061	775	0.730	87
105 hi cap	35000	1238	936	0.756	95.4
115 ton	39000	1350	1028	0.761	109.2

**Table PD-15 – Air-cooled (95° DB) vs. Evaporative-cooled (78°WB ) cabinet size reduction**

Models	CFM	CAP	SHC	SHR	Models	CFM	CAP	SHC	SHR
60 Ton Hi Cap	24000	787	619	0.79	73 Ton Hi Cap	24000	856	598	0.70
75 Ton Hi Cap	27000	971	742	0.76	90 Ton Hi Cap	27000	1068	763	0.71
90 Ton Hi Cap	37000	1139	915	0.80	107 Ton Hi Cap	37000	1236	956	0.77
105 Ton Hi Cap	43000	1274	1041	0.82	116 Ton Hi Cap	43000	1374	1087	0.79
115 Ton	44000	1373	1092	0.80					

**Table PD-16 – Evaporative-cooled vs. Air-cooled Comparison Overview**

	CFM	CAP	SHR	EER	KW		CFM	CAP	SHR	EER	KW
90 Ton Hi Cap	37000	1139	0.80	15.3	91.2	107 Ton Hi Cap	37000	1236	0.77	21	66.3
							Capacity Increase	0.09		Power Reduction	0.27
<b>Cabinet Size Reduction</b>											
	Air-cooled Condenser						Evap-cooled Condenser				
	CFM	CAP	SHR	EER	KW		CFM	CAP	SHR	EER	KW
105 Ton Hi Cap	35000	1238	0.76	15.3	103	107 Ton Hi Cap	35000	1222	0.75	21	66.3
							Capacity Increase	-0.01		Power Reduction	0.36
<b>Humidity Control Solution</b>											
	Air-cooled Condenser						Evap-cooled Condenser				
	CFM	CAP	SHR	EER	KW		CFM	CAP	SHR	EER	KW
90 Ton Hi Cap	27000	1084	0.72	15.3	93	107 Ton Hi Cap	27000	1173	0.69	21	63.1
							Capacity Increase	0.08		Power Reduction	0.32



## Controls

This catalog contains information relating to IntelliPak evaporative-cooled condensers. For expanded details on IntelliPak rooftops, please see the standard Trane catalog RT-PRC010-EN.

### Evaporative-cooled Condensers

#### Sump Water Control

The control automatically drains and fills the sump based on a field adjustable timer. This operation flushes scale and deposits down the drain and hinders algae growth. The frequency between flush cycles depends on water quality, daily operating hours and the amount of heat to be rejected. Typically the valve should remain open for one minute for every condenser connected to the common drain line; therefore, a unit having two condensers would have the drain valve remain open for 2 minutes. The timer is adjustable between one and twelve flushes per day, with a factory setting of two times per day.

Draining of the sump water is controlled through a motorized, full port ball valve, that is factory piped to the sump drain.

The valve actuator is:

- Factory wired to the unit control panel
- Housed within a NEMA 4 enclosure
- Features a spring return mechanism that automatically opens in the event of a power failure or the unit is disabled.
- Factory set to allow for a minimum amount of water to be bled from the sump during unit operation. Provides additional flushing of debris and sediment from the sump.

During the flushing cycle, the motor actuated full port ball valve is opened, allowing the sump to drain for the preset duration. The make up water valve is opened allowing fresh water into the sump. With the unit still operating, a sump float switch protects the pump from running dry. If the pump stops due to low water level in the sump, the system may experience high head pressure. To prevent this from occurring, the drain time should be monitored during startup to ensure that the water level switch does not shut the pump off.

#### Standard Low Ambient Control

**Ambient Changeover Thermostat** — An adjustable thermostat will drain the sump and close the makeup water solenoid valve when the outside temperature drops below the factory set point (typically 38° F). The set point can be field adjusted to meet local conditions, preventing freeze-up when the unit is not operating. Should additional cooling be required during low ambient conditions, an optional sump heater should be specified.

**Sump Freeze Protection** — An optional 3000-watt sump heater (per sump) can be specified for freeze protection. This option should be specified when the system operates in low ambient conditions (below 32° F). By keeping the sump water warm during shutdown, the system can restart without the potential low head pressure that can occur when cold water sprays over the coil.

#### Condenser Fan Control

In order to provide the optimum in energy efficiency and minimize noise, the condenser fan speed is modulated by a variable frequency drive, based on sump water temperature. The factory setpoint for the sump water temperature is 78 degrees F, and is adjustable from 65 to 85 degrees F on the variable frequency drive. As the sump water temperature rises above this setpoint, the fan speed increases. As the sump water temperature reaches setpoint the fan speed decreases to the minimum speed set on the variable frequency drive.



# Electric Power

This catalog contains information relating to IntelliPak evaporative-cooled condensers. For expanded details on IntelliPak rooftops, please see the standard Trane catalog RT-PRC010-EN.

**Table ED - 1— Electrical Service Sizing Data - Evaporator-Cooled Condenser Motors and Heaters**

Nominal Tons	Number of Evap Cond Modules	Evap Cond Models	Cond Fan HP	Cond Fan Motor - Per Evap Cond Module			
				Cond Fan FLA 200V	Cond Fan FLA 230V	Cond Fan FLA 460V	Cond Fan FLA 575V
24 ton HI	1	25	3	11.3	9.8	4.9	3.9
30 ton HI	1	35	5	17.3	15	7.5	6
36 ton HI	1	40	5	17.3	15	7.5	6
48 ton HI	1	55	5	17.3	15	7.5	6
59 ton HI	1	65	5	17.3	15	7.5	6
70 ton HI	1	75	5	17.3	15	7.5	6
73 ton HI	1	80	7.5	26.5	23	11.5	9.2
80 ton Std	1	90	7.5	26.5	23	11.5	9.2
90 ton HI	1	100	7.5	26.5	23	11.5	9.2
107 ton HI	1	90	7.5	26.5	23	11.5	9.2
116 ton HI	1	105	7.5	26.5	23	11.5	9.2

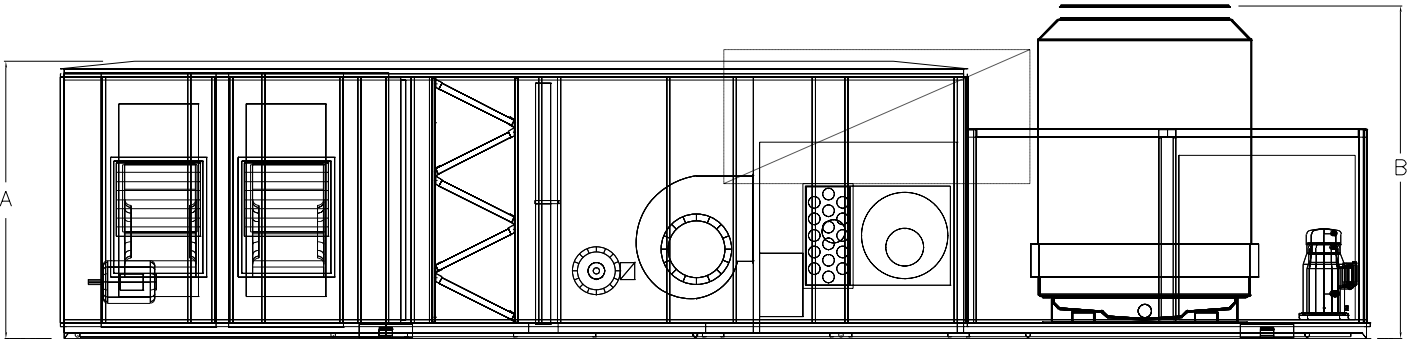
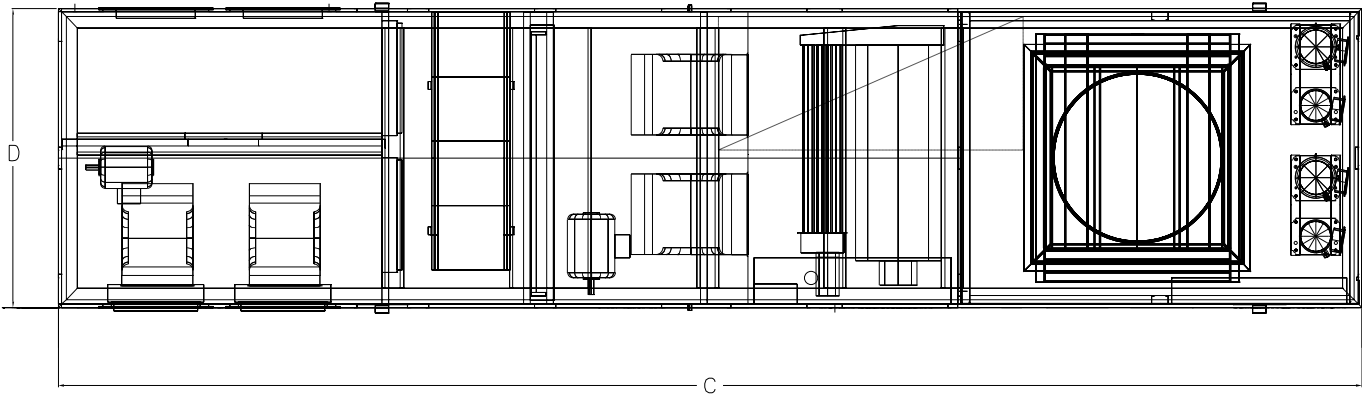
  

Nominal Tons	Number of Evap Cond Modules	Evap Cond Models	Sump Pump HP	Sump Pump			
				Pump FLA 200V	Pump FLA 230V	Pump FLA 460V	Pump FLA 575V
24 ton HI	1	25	1	4.7	4.4	2.2	1.8
30 ton HI	1	35	1	4.7	4.4	2.2	1.8
36 ton HI	1	40	1	4.7	4.4	2.2	1.8
48 ton HI	1	55	1	4.7	4.4	2.2	1.8
59 ton HI	1	65	1	4.7	4.4	2.2	1.8
70 ton HI	1	75	1	4.7	4.4	2.2	1.8
73 ton HI	1	80	1	4.7	4.4	2.2	1.8
80 ton Std	1	90	1	4.7	4.4	2.2	1.8
90 ton HI	1	100	1	4.7	4.4	2.2	1.8
107 ton HI	1	90	1	4.7	4.4	2.2	1.8
116 ton HI	1	105	1	4.7	4.4	2.2	1.8

Nominal Tons	Number of Evap Cond Modules	Evap Cond Models	Sump Heater KW	Sump Heater			
				Sump Htr. FLA 200V	Sump Htr. FLA 230V	Sump Htr. FLA 460V	Sump Htr. FLA 575V
24 ton HI	1	25	3	8.7	7.5	3.8	3.0
30 ton HI	1	35	3	8.7	7.5	3.8	3.0
36 ton HI	1	40	3	8.7	7.5	3.8	3.0
48 ton HI	1	55	3	8.7	7.5	3.8	3.0
59 ton HI	1	65	3	8.7	7.5	3.8	3.0
70 ton HI	1	75	3	8.7	7.5	3.8	3.0
73 ton HI	1	80	3	8.7	7.5	3.8	3.0
80 ton Std	1	90	3	8.7	7.5	3.8	3.0
90 ton HI	1	100	3	8.7	7.5	3.8	3.0
107 ton HI	1	90	3	8.7	7.5	3.8	3.0
116 ton HI	1	105	3	8.7	7.5	3.8	3.0

# Dimensions and Weights



**Table W-1 Dimensions (ft./in.) and Shipping/Operating Weights<sup>1</sup> (Lbs.)**

Nominal Tons	Dimensions				Shipping Wts Min/Max <sup>2</sup>	Operating Wts Min/Max <sup>2</sup>
	A	B	C	D		
<b>SAHF/S*H*</b>						
24 Hi Cap	5-8 <sup>15</sup> / <sub>16</sub>	8-5	24-5 3/4/26-5 3/8	7-6 1/2	5884/7154	6382/7652
30 Hi Cap	5-8 <sup>15</sup> / <sub>16</sub>	8-5	24-5 3/4/26-5 3/8	7-6 1/2	6087/7367	6585/7865
36 Hi Cap	6-2 <sup>3</sup> / <sub>8</sub>	8-5	24-5 3/4/26-5 3/8	7-6 1/2	6739/8139	7237/8637
48 Hi Cap	6-7 <sup>3</sup> / <sub>8</sub>	8-5	27/30-2 1/2	7-6 1/2	8162/10182	8660/10680
59 Hi Cap	5-8 <sup>7</sup> / <sub>8</sub>	8-5	27/30-2 1/2	7-6 1/2	9142/11272	9640/11770
70 Hi Cap	5-8 <sup>7</sup> / <sub>8</sub>	8-5	27/30-2 1/2	7-6 1/2	9364/11504	9862/12002
73 Hi Cap	6-7 <sup>3</sup> / <sub>8</sub>	8-5	27/30-2 1/2	9-8	10731/12901	11395/13565
80 Std	6-7 <sup>3</sup> / <sub>8</sub>	8-5	27/30-2 1/2	9-8	11320/13510	11984/14174
90 Hi Cap	6-7 <sup>3</sup> / <sub>8</sub>	8-5	27/30-2 1/2	9-8	11422/13612	12086/14276
107 Hi Cap	6-9 <sup>3</sup> / <sub>8</sub>	8-5	NA/35-3 3/4	11-8 1/16	14532/18467	15196/19131
116 Hi Cap	6-9 <sup>3</sup> / <sub>8</sub>	8-5	NA/35-3 3/4	11-8 1/16	15180/18787	15816/19451

Notes:  
 1. For other unit or component dimensions, please see standard Trane catalog RT-PRC010-EN.  
 2. The weights shown are approximate for high heat gas units. Weights will vary depending on the heat type and model configuration. For component weight information, please see standard Trane catalog RT-PRC010-EN.



# Mechanical Specifications

**This catalog contains information relating to IntelliPak evaporative-cooled condensers. For expanded details on IntelliPak rooftops, please see the standard Trane catalog RT-PRC010-EN.**

## General

Units shall be specifically designed for outdoor rooftop installation on a roof curb and be completely factory assembled and tested, piped, internally wired, fully charged with R-22, compressor oil and shipped in one piece. Units shall be equipped with evaporative-cooled condenser(s) for cooling only, or cooling with natural gas, electric, hot water or steam heating. Filters, outside air system, exhaust air system, optional non-fused disconnect switches and all operating and safety controls shall be furnished factory installed. All units shall be factory run tested. All units shall have decals and tags to aid in service and indicate caution areas. Electrical diagrams shall be printed on long life water-resistant material and shall ship attached to control panel doors.

## Casing

Exterior panels shall be zinc coated galvanized steel, phosphatized and painted with a slate grey air-dry finish durable enough to withstand a minimum of 500 hours consecutive salt spray application in accordance with standard ASTM B117. Screws shall be coated with zinc-plus-zinc chromate. Heavy gauge steel hinged access panels with tiebacks to secure door in open position shall provide access to filters and heating sections. Refrigeration components, supply air fan and compressor shall be accessible through removable panels as standard. Unit control panel, filter section, and gas heating section shall be accessible through hinged access panels

as standard. Optional Double Wall Construction hinged access doors shall provide access to filters, return/exhaust air, heating and supply fan section. All access doors and panels shall have neoprene gaskets. Interior surfaces or exterior casing members shall have 1/2 inch Tuf-Skin® fiberglass insulation. Unit base shall be watertight with heavy gauge formed load bearing members, formed recess and curb overhang. Unit lifting lugs shall accept chains or cables for rigging. Lifting lugs shall also serve as unit tiedown points.

## Evaporative-Cooled Condenser

### Housing

The housing shall be constructed of corrosion and UV resistant, low-density linear polyethylene.

### Pump

Low maintenance sump pump is fully accessible through the evaporative-condenser access panel. For an adequate water flow, water is pumped at approximately 100 GPM.

### Fan

Compact fan controlled by a variable frequency drive with a totally enclosed fan cooled motor that operates at nominal 1200 RPM.

### Coils

Durable copper 5/8", .035 wall tubing provides strength and resilience for expansion and contraction for scale shedding.

### Sump Float Level Switch

Protects the sump pump by preventing the pump from running dry.

### Optional Sump Heater

3000-watt sump heater provides freeze protection in low ambient conditions.







**TRANE®**

**Trane**  
**A business of American**  
**Standard Companies**  
**[www.trane.com](http://www.trane.com)**

*For more information contact your  
local distributor (dealer), local district  
office, or e-mail us at  
[comfort@trane.com](mailto:comfort@trane.com)*

Literature Order Number	RT-PRC018-EN
File Number	PLRTS*HF/S*HG-24-116TONS-RT-PRC0018-EN-0606
Supersedes	RT-PRC018-EN 0306
Stocking Location	Electronic Only

*Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.*