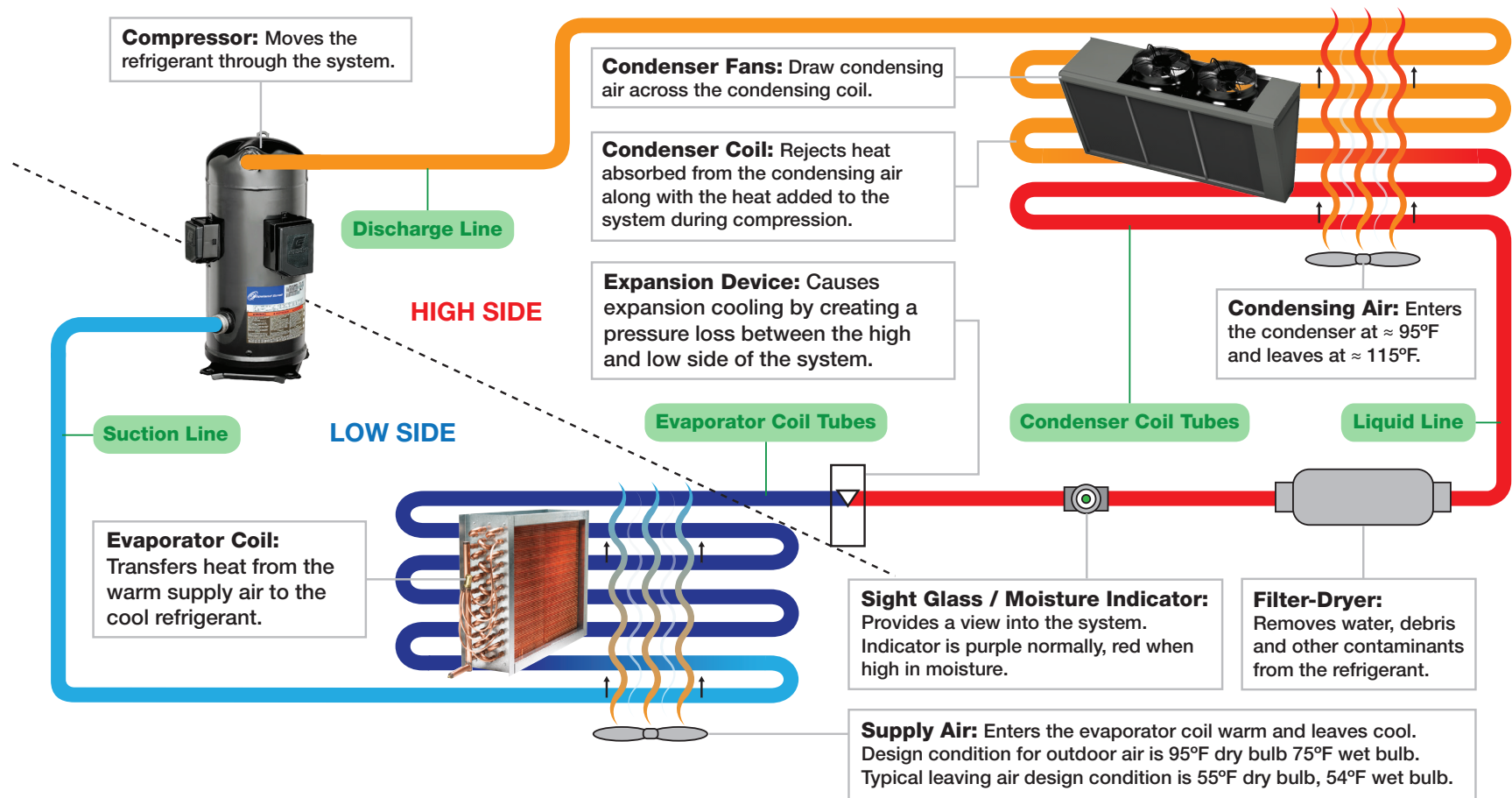


## Packaged Direct Expansion (DX) Cooling System



**SYSTEM TEMPERATURES AND PRESSURES**

Refrigerant State	T, °F	R-410A, psig	Superheat/Subcool
Low Pressure Saturated	45	131	
Low Pressure Superheated Vapor	55	131	Superheat = $T - T_{\text{sat}} = 55^\circ - 45^\circ = 10^\circ\text{F}$
High Pressure Gas	160	393	
High Pressure Saturated	115	393	
High Pressure Liquid	105	393	Subcool = $T_{\text{sat}} - T = 115^\circ - 105^\circ = 10^\circ\text{F}$

**LOAD CALCULATIONS**

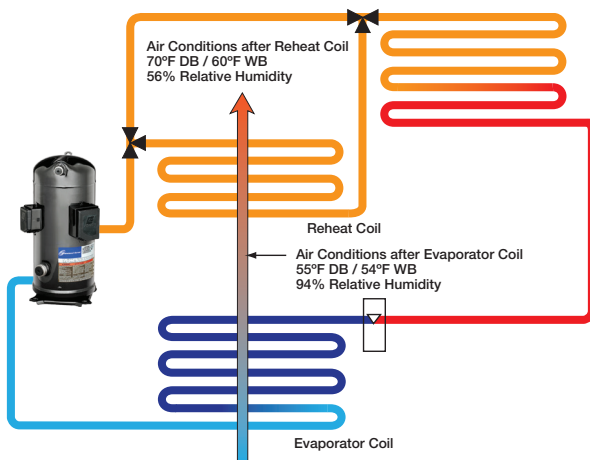
Condenser	$Q_{\text{out}} (\text{Btu/hr}) = 1.08 \times \text{SCFM} \times \Delta \text{ Temperature}$
Evaporator	$Q_{\text{in}} (\text{Btu/hr}) = 4.5 \times \text{SCFM} \times \Delta \text{ Enthalpy}$

## Packaged Direct Expansion (DX) Cooling System Options

**HOT GAS REHEAT:** Includes a condenser coil mounted in the supply airstream and a modulating refrigerant valve to control the supply air temperature and relative humidity.

**Benefit:** Controls the supply air temperature and relative humidity without the need for auxiliary post heat. Provides dehumidified air without overcooling the space.

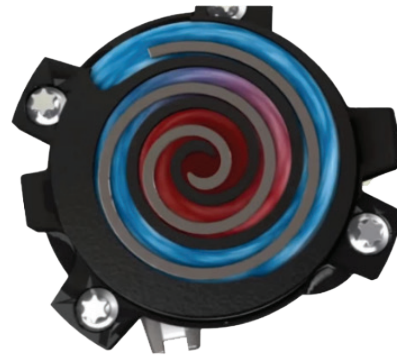
**Availability:** Optional on RV, RVE, and RVC



**INVERTER SCROLL COMPRESSORS:** Refrigerant flow varies with motor speed.

**Benefit:** Improved part load efficiency. Reduced sound levels. Precise temperature and humidity control. Integrated Energy Efficiency Ratio (IEER) up to 22.1, with an average improvement over a digital scroll compressor of 15 to 20%.

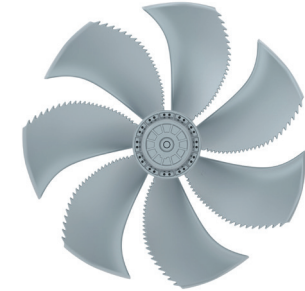
**Availability:** Optional on RV, RVE, and RVC



**LOW SOUND CONDENSER FAN(S):** Low-sound swept blade.

**Benefit:** Average sound power reduction of 5 to 8 decibels when compared to typical condenser fans. Reduces perceived noise by 50%.

**Availability:** Standard on RV, RVE and RVC



**MODULATING HEAD PRESSURE CONTROL:** The electronically commutated (EC) condenser fan(s) will modulate speed to maintain the optimal liquid line pressure using built-in control sequences within the factory controller.

**Benefit:** More reheat capacity at part-load conditions. Better cooling control for lower ambient temperatures. EC motors selectable on lead or all condenser fans.

**Lead:** An EC motor on the lead condenser fan will modulate to maintain a head pressure set point. Improves reheat capacity at part-load conditions.

**All:** The entire bank of condensing fans will have EC motors and will modulate in sync to maintain a head pressure set point. Improves sound performance and energy efficiency at part-load conditions.

**Availability:** Optional on RV, RVE, and RVC

