Specifying Cascade Condensing Units

What you need to know when choosing a cascade condensing unit for your unique application

Identify the Load

- The first and most important step is to identify the lowest desired temperature and the amount of heat to be removed at that temperature.

If you need help with this calculation we offer consulting services to calculate the load.

- Temperature in degrees C, F or K _____
- Heat load in Watts, BTU or Tons _____

Voltage, Frequency & Phase

- If you have a specific voltage, frequency and phase that you need to operate with then list them. Otherwise we can suggest the best choice for your application.
- Voltage _____
- Frequency _____
- Phase _____

Evaporator Temperature Range

- You need to identify the temperature range that the evaporator will need to operate at in degrees C or F.

- Ambient to -86°C (-122°F)
- +175°C to -86°C (+347°F to -122°F)
- Other _____

Type of Heat Rejection

- You need to identify the method that the heat is rejected from the condensing unit.
- Air-cooled Condenser; List max. and min. ambient temperature range and humidity range
- Water-cooled condenser; List cooling water max. & min. temperature range

Refrigeration Controls

- The evaporator temperature range you have selected will give us a good idea of the general refrigeration controls that are necessary. However, if precise and or varied evaporator temperature control is required then we will need to know if we are supplying the controls for that or not. If you are supplying the controls we will need to know the kind of control interface required i.e. relay/contactor, I/O logic or remote digital communications.

Unitary or Split System

- We will need to know if the condensing unit and evaporator are close coupled (unitary) or a “split” type system where the evaporator is located a specific distance from the condensing unit. If it is a split system we will need to know the total linear distance between the evaporator & condensing unit and the amount of that distance that is vertical both up and down.

Check List

Please complete the specification list below and return it to us with your inquiry

1. Minimum evaporator temperature_____
2. Heat removal load at minimum evaporator temperature_____ (load consulting available)
3. Main system power supply: Voltage_____ Frequency_____ (50 or 60 Hz) Phase____ (1 or 3)
4. Evaporator temp. range: ___Ambient to -86°C (-122°F) ___+175°C to -86°C (+347°F to -122°F) Other_____
5. If air-cooled heat rejection: cooling air temp range_____ humidity range_____
6. if water-cooled heat rejection: cooling water temperature range _____
7. Is evaporator temperature set point control required: ___Yes ___No
8. If customer supplies controls interface is: ___relay/contactor ___I/O logic ___digital comms.
9. ___ Unitary or ___Split system: If split then split distance is_____ total vertical distance is____
10. Other requirements:_____