

# Cincinnati Line Card

PRODUCTS & SYSTEMS SOLUTIONS



## Affiliated Products

### Annexair

Custom Packaged DX Rooftops  
[www.annexair.com](http://www.annexair.com)

### ArctiChill

Modular Chillers / Magnetic Bearing Chillers  
[www.arcticchillergroup.com](http://www.arcticchillergroup.com)

### BRD Noise Control

Noise and Vibration Control  
[www.hushcore.net](http://www.hushcore.net)

### Calmac

Thermal Battery Storage Systems  
[www.calmac.com](http://www.calmac.com)

### CaptiveAire

Commercial Kitchen Ventilation Systems  
[www.captiveaire.com](http://www.captiveaire.com)

### ClimateCraft

Custom Air Handlers  
[www.climatecraft.com](http://www.climatecraft.com)

### Dynamic Air Quality Solutions

Air Cleaners & Filters  
[www.dynamicaga.com](http://www.dynamicaga.com)

### Energy Wall

Energy Recovery Ventilation  
[www.energywall.com](http://www.energywall.com)

### enVerid

HEPA Air Purifier  
[www.enverid.com](http://www.enverid.com)

### Evapco

Heat Transfer Applications  
[www.evapco.com](http://www.evapco.com)

**YOUR SINGLE SOURCE SOLUTIONS PROVIDER**

### Trane Cincinnati

10300 Springfield Pike  
Cincinnati, Ohio 45215  
[Trane.com/Cincinnati](http://Trane.com/Cincinnati)

### Contact Us

### Office Hours

Monday - Friday  
7:00 AM - 4:00 PM

## Affiliated Products (Continued)

### Genesis Air

Photo Catalytic Oxidation (PCO) IAQ Solutions  
[www.genesisair.com](http://www.genesisair.com)

### Lakos

Filtration Solutions  
[www.lakos.com](http://www.lakos.com)

### Lynxpring Tridium Controls

Building Automation & Management Systems  
[www.lynxpring.com](http://www.lynxpring.com)

### MJC Air Rotation

Air Rotation Units, WC Modular Self Contained Units, Specialty Coatings  
[www.mjcinc.com/products](http://www.mjcinc.com/products)

### Movin Cool

Portable Cooling Units  
[www.movincool.com](http://www.movincool.com)

### MultiAqua

Small Air Cooled Chillers & DX Fan Coils  
[www.multiaqua.com](http://www.multiaqua.com)

### Napps

Compact Scroll Chillers  
[www.nappstech.com](http://www.nappstech.com)

### PoolPak

Pool Units  
[www.poolpak.com](http://www.poolpak.com)

### RenewAire

Energy Recovery Ventilation  
[www.renewaire.com](http://www.renewaire.com)

### Synexis

DHP Virus & Bacteria IAQ Solutions  
[www.synexis.com](http://www.synexis.com)

### Systecon

Packaged Pumping Systems / Chiller Plants  
[www.systecon.com](http://www.systecon.com)

### Thybar

Custom Curbs, AHU Modifications & Spring Isolation  
[www.thybar.com](http://www.thybar.com)

### UV Resources

UV-C Products for any HVAC Application  
[www.uvresources.com](http://www.uvresources.com)

## Formulas

**Sensible Load (Btu/hr)** = 1.08 x cfm x ΔT(db)

(1.08 = Density x Specific Heat x 60 min/hr)

**Latent Load (Btu/hr)** = 0.68 x cfm x Δ gr/lb(da)

(0.68 = Density x Latent Heat of Vaporization  
 x 60 (min/hr) / 7000 gr/lbw)

**Total Refrigeration Load**

**(Tons)** =  $\frac{4.5 \times \text{cfm} \times \Delta r \text{ (btu/lb(da))}}{12,000}$

(4.5 = Density x 60 min/hr)

**Coil Load (Btu/hr)** = 500 x gpm x ΔT

(500 = Specific Heat x Density x 60 min/hr)

**Pump Head (ft)** =  $\frac{2.31 \times \text{Pressure Drop (psi)}}{\text{Specific Gravity of fluid}}$

**Pump Power (hp)** =  $\frac{\text{gpm} \times \text{Head (ft)} \times \text{S.G. of fluid}}{3960 \times \text{Efficiency}}$

**Fan Power (hp)** =  $\frac{\text{cfm} \times \text{Static Pressure (in w.g.)}}{6356 \times \text{Efficiency}}$

## Conversions

1 Therm = 100,000 Btu = 100 cu ft of Natural Gas

1,000,000 Btu = 1,000 MBtu = 1 MMBtu

1 MCF = 10 CCF = 1,000 cu ft = 1,000,000 Btu

1 Ton = 12,000 Btu/hr

1 Therm = 29.3 kWh

1 kW = 3,413 Btu/hr = 3.413 MBh = 1,000 W

1 lb of steam = 1000 Btu

1 kWh = 3,413 Btu

1 Gallon of Fuel Oil #2 = 140,000 Btu

1 HP = 0.746 kW = 2,544 Btu/hr

7000 grains = 1lb mass water

1 lb of water vapor = 1076 Btu (latent heat of water vapor)

1 psi = 2.31 ft H<sub>2</sub>O = 27.72 in. H<sub>2</sub>O = 2.04 in Hg



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit [trane.com](http://trane.com) or [tranetechnologies.com](http://tranetechnologies.com).