

Detroit Line Card

PRODUCTS & SYSTEMS SOLUTIONS



Affiliated Products

Airtite

Radiant Ceiling Systems
www.armstrongceilings.com

Annexair

Custom Packaged DX Rooftops
www.annexair.com

ArcticChill

Modular Chillers / Magnetic Bearing
Chillers
www.arcticchillergroup.com

Bousquet

Custom AHU/Gas Fired Make Up Air Units
www.bousquet.ca

Calmac

Thermal Battery Storage Systems
www.calmac.com

Dynamic Air Quality Solutions

Air Filtration
www.dynamicaqs.com

enVerid

HEPA Air Purifier
www.enverid.com

Envisor

Air Filtration
www.cityscapes.com

Filtrine

Specialty chillers
www.filtrine.com

Genesis Air

Photo Catalytic Oxidation (PCO) IAQ
Solutions
www.genesisair.com

YOUR SINGLE SOURCE SOLUTIONS PROVIDER

Trane Detroit

37001 Industrial Rd
Livonia, MI 48150
Trane.com/detroit

Contact Us

734-884-6416

Office Hours

Monday - Friday
7:30 AM - 4:30 PM

Affiliated Products (Continued)

Haakon

Custom Air Handlers
www.haakon.com

MJC Air Rotation

Air Rotation Units, WC Modular Self Contained Units, Specialty Coatings
www.mjcinc.com/products

MultiAqua

Chilled Water Air Conditioning Systems
www.multiaqua.com

Napps

Compact Scroll Chillers
www.nappstech.com

Nimbus

Adiabatic Coolers
www.nimbus.cool

PoolPak

Pool Units
www.poolpak.com

Synexis

DHP Virus & Bacteria IAQ Solutions
www.synexis.com

Systecon

Packaged Pumping Systems / Chiller Plants
www.systecon.com

Tandem

Chillers
www.tandemchillers.com

Temspec

Classroom Units
www.temspec.com

Thermax

Absorption Chillers
www.thermaxglobal.com

Tutco

Custom Heat
www.tutco.com

United Cool Air

Precision cooling systems/Mod Self Contained
www.unitedcoolair.com

Formulas

$$\text{Sensible Load (Btu/hr)} = 1.08 \times \text{cfm} \times \Delta T(\text{db})$$

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

$$\text{Latent Load (Btu/hr)} = 0.68 \times \text{cfm} \times \Delta \text{ gr/lb(da)}$$

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

Total Refrigeration Load

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

(4.5 = Density x 60 min/hr)

$$\text{Coil Load (Btu/hr)} = 500 \times \text{gpm} \times \Delta T$$

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

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

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

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

Conversions

$$1 \text{ Therm} = 100,000 \text{ Btu} = 100 \text{ cu ft of Natural Gas}$$

$$1,000,000 \text{ Btu} = 1,000 \text{ MBtu} = 1 \text{ MMBtu}$$

$$1 \text{ MCF} = 10 \text{ CCF} = 1,000 \text{ cu ft} = 1,000,000 \text{ Btu}$$

$$1 \text{ Ton} = 12,000 \text{ Btu/hr}$$

$$1 \text{ Therm} = 29.3 \text{ kWh}$$

$$1 \text{ kW} = 3,413 \text{ Btu/hr} = 3.413 \text{ MBh} = 1,000 \text{ W}$$

$$1 \text{ lb of steam} = 1000 \text{ Btu}$$

$$1 \text{ kWh} = 3,413 \text{ Btu}$$

$$1 \text{ Gallon of Fuel Oil \#2} = 140,000 \text{ Btu}$$

$$1 \text{ HP} = 0.746 \text{ kW} = 2,544 \text{ Btu/hr}$$

$$7000 \text{ grains} = 1 \text{ lb mass water}$$

$$1 \text{ lb of water vapor} = 1076 \text{ Btu (latent heat of water vapor)}$$

$$1 \text{ psi} = 2.31 \text{ ft H}_2\text{O} = 27.72 \text{ in. H}_2\text{O} = 2.04 \text{ in Hg}$$



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 or tranetechnologies.com.