

Toledo Line Card

PRODUCTS & SYSTEMS SOLUTIONS



Affiliated Products

Alliance

Less than 20 ton self contained AC
www.allianceairproducts.com

Airtite

Radiant Ceiling Systems
www.armstrongceilings.com

Annexair

Custom Packaged DX Rooftops
www.annexair.com

ArctiChill

Modular Chillers / Magnetic Bearing Chillers
www.arcticchillergroup.com

Bousquet

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

Broad

Absorption Chillers
www.broad.net

Calmac

Thermal Battery Storage Systems
www.calmac.com

Camus

Boilers
www.camus-hydraulics.com

Carel

Steam and Adiabatic Humidification
www.carel.com

Carnes

Grilles, Diffusers
www.carnes.com

CDI

Curbs, Custom Accessories
www.CDI.com

CityScapes

Architectural Screening
www.cityscapesinc.com

ClimateCraft

Custom Air Handlers
www.climatecraft.com

Dynamic Air Quality Solutions

Air Filtration
www.dynamicaqs.com

EBM Pabst fan arrays

Fan Array Retrofits
www.ebmpapst.us/en

YOUR SINGLE SOURCE SOLUTIONS PROVIDER

Trane Toledo

1001 Hamilton Drive,
Holland, Ohio 43528
Trane.com/Toledo

Contact Us

419-228-2280

Office Hours

Monday - Friday
8:00 AM - 5:00 PM

Affiliated Products (Continued)

enVerid
HEPA Air Purifier
www.enverid.com

Filtrine
Specialty chillers
www.filtrine.com

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

Haakon
Custom Air Handlers
www.haakon.com

KCC
DX DOAS Air Handlers
www.trane.com

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

MultiAqua
Small Air Cooled Chillers & DX Fan Coils
www.multiaqua.com

Napps
Compact Scroll Chillers
www.nappstech.com

RenewAire
Energy Recovery Ventilation
www.renewaire.com

Synexis
DHP Virus & Bacteria IAQ Solutions
www.synexis.com

Systecon
Packaged Pumping Systems / Chiller Plants
www.systecon.com

Temspec
Classroom Units
www.temspec.com

Thybar
Custom Curbs, AHU Modifications & Spring Isolation
www.thybar.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)

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

(4.5 = Density x 60 min/hr)

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

(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 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 H2O = 27.72 in. H2O = 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 or tranetechnologies.com.