

Grand Rapids Line Card

PRODUCTS & SYSTEMS SOLUTIONS



Affiliated Products

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

Bulldog

Heat Pumps

www.bulldogheatpump.com

Calmac

Thermal Battery Storage Systems

www.calmac.com

CDI

Curbs, Custom Accessories

www.CDI.com

ChangeAir

Classroom Units

www.changeair.com

ConsERV

Energy Recovery

www.conserv.com

Dynamic Air Quality Solutions

Air Filtration

www.dynamicaqs.com

enVerid

HEPA Air Purifier

www.enverid.com

YOUR SINGLE SOURCE SOLUTIONS PROVIDER

Trane Grand Rapids

5005 Corporate Exchange BLVD.S.E.

Grand Rapids, MI 49512

Trane.com/westmichigan

Contact Us

616-900-6244

Office Hours

Monday - Friday

7:00 AM - 4:00 PM

Affiliated Products (Continued)

Envisor

Air Filtration

www.cityscapes.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

MJC Air Rotation

Air Rotation Units, WC Modular Self Contained Units, Specialty Coatings

www.mjcin.com/products

MultiAqua

Chilled Water Air Conditioning Systems

www.multiaqua.com

Nimbus

Adiabatic Coolers

www.nimbus.cool

Napps

Compact Scroll Chillers

www.nappstech.com

PoolPak

Pool Units

www.poolpak.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

SystemAir

Ventilation Solutions

www.systemair.com

Thermax

Absorption Chillers

www.thermaxglobal.com

Thybar

Curbs, Custom Accessories

www.thybar.com

United Cool Air

Precision cooling systems/Mod Self Contained

www.unitedcoolair.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 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.