Dayton Line Card
PRODUCTS & SYSTEMS SOLUTIONS

Affiliated Products

Annexair
Custom Packaged DX Rooftops
www.annexair.com

ArctiChill
Modular Chillers / Magnetic Bearing Chillers
www.arcticchillergroup.com

BRD Noise Control
Noise and Vibration Control
www.hushcore.net

Calmac
Thermal Battery Storage Systems
www.calmac.com

CaptiveAire
Commercial Kitchen Ventilation Systems
www.captiveaire.com

ClimateCraft
Custom Air Handlers
www.climatecraft.com

Dynamic Air Quality Solutions
Air Cleaners & Filters
www.dynamicaqs.com

Energy Wall
Energy Recovery Ventilation
www.energywall.com

enVerid
HEPA Air Purifier
www.enverid.com

Evapco
Heat Transfer Applications
www.evapco.com

YOUR SINGLE SOURCE SOLUTIONS PROVIDER

Trane Dayton
7446 Webster Street
Dayton, Ohio 45414
Trane.com/Dayton

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

Lakos
Filtration Solutions
www.lakos.com

Lynxspring Tridium Controls
Building Automation & Management Systems
www.lynxspring.com

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

Movin Cool
Portable Cooling Units
www.movincool.com

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

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

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

UV Resources
UV-C Products for any HVAC Application
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) $= \dfrac{4.5 \times cfm \times \Delta r \ (btu/lb(da))}{12{,}000}$

(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) $= \dfrac{2.31 \times \text{Pressure Drop (psi)}}{\text{Specific Gravity of fluid}}$

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

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

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®

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*.