H & V Sales, Inc.

Providing integrated efficient solutions

H&V Sales, Inc. is committed to maintaining leadership in the HVAC industry by representing quality products that offer innovative, sustainable, efficient solutions to our clients' needs. We represent the following manufacturers in the Northwest Pennsylvania, Western New York, Genesee Valley and Central New York areas.

AFCO Systems
Datacenter Resource Solutions
Intelligent Facilitation.

Passive Enclosures, Active Enclosures up to 24kW, Cable Management, Power Distribution, Power – Space – Cooling Management Software, CFD Modeling and Data Center Planning Services

JOHNSON
Air Rotation®
Systems

AIR ROTATION® SYSTEMS (Heating and Cooling)
PURE-Aire™ Indirect Fired Heating and Ventilation Systems
DRAGON™ Direct Fired Make-up Air Systems

acme
ENGINEERING PROD. LTD.

Air Quality Controllers – CO_2, Diesel Fumes, V.O.C. Refrigerant Detection, Demand Ventilation Monitoring

MARCRAFT®
Custom Air
Handling Systems

Custom Air Handling Systems and Energy Recovery

KINETICS
Noise Control

Sound Attenuation Devices And Enclosures

SMARDT

Air and Water Cooled Chillers Utilizing Oil Free, VFD Controlled TURBOCOR Compressors with Magnetic Bearing Technology

E·TECH
Energy Savings Solutions

Applied Energy Recovery Systems, Industrial Dehumidifiers, Heat Pump Water Heaters, Pool Heaters and Dehumidifiers, Reverse Cycle Modular Chillers.

DELTA
Cooling Towers, Inc.

HDPE Plastic Cooling Towers – One Piece Molded Sump

ROBUR
caring for the environment

Gas Fired Air Source and Geothermal Absorption Heating and Cooling Systems

CGC
GROUP
HYBRID HEAT PUMP SYSTEM

STULZ
Air Technology Systems, Inc.

Precision Environmental Control Systems, Computer Room A/C Units, Chillers, Ultrasonic and Electrode Steam Humidification

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U.S. GREEN BUILDING COUNCIL MEMBER

DBIA UPSTATE NEW YORK REGION DESIGN-BUILD INSTITUTE OF AMERICA

- Total Heat (BTU/hr) = 4.5 x cfm x Δh (std. air)
- Sensible Heat (BTU/hr) = 1.08 x cfm x Δt
- Latent Heat (BTU/hr) = 0.69 x cfm x Δgr. (std. air)
- Total Heat (BTU/hr) = 500 x gpm x Δt (water)
- TONS = 24 x gpm x Δt (water)
- GPM cooler = (24 x TONS) / Δt (water)
- Fluid Mixture $T_m = (Xt_1 + Yt_2) / X + Y$ (this works for air or water)
- BTU/hr = 3.413 x watts = HP x 2546 = Kg Cal x 3.97
- Lb. = 453.6 grams = 7000 grains
- psi = ft. water/2.31 = in. hg/2.03 = in. water/27.7 = 0.145 x kPa
- Ton = 12,000 BTU/hr = 0.2843 x KW
- HP (air) = cfm x Δp (in.H2O)/6350 x Eff. ● HP (water) = gpm x Δp (ft.)/3960 x Eff.
- Gal. = $FT^3/7.48$ = 3.785 Liters = 8.33 lb. (water) = 231 $in.^3$
- Liter = 3.785 x gal = 0.946 x quart = 28.32 x ft^3
- Therm = 100,000 BTU = MJ/105.5
- Watt/sq. ft. = 0.0926 x W/M^2 ● ft/min = 196.9 x M/S
- gpm = 15.85 x L/S ● cfm = 2.119 x L/S
- yd. = 1.094 x M ● ft = 3.281 x M ● ft^2 = 10.76 x M^2 ● ft^3 = 35.31 x M^3

NOTE: Liter/sec is the proper SI term for liquid flow. M3/sec is the proper SI term for airflow. Due to the awkward nature of using M^3/S at low air flow rates (lots of decimal points), L/S is commonly used to express air flow for HVAC applications.

WEB SITES

General Engineering Information; www.engineeringtoolbox.com/

Free Converters and Calculators; www.barhamsoftware.com/Univerter/Download.htm

ca.geocities.com/dpaktunc@rogers.com/

www.allthesoft.com/home/science/

www.elitesoft.com/web/hvacr/elite_htools_info.html

AFCO SYSTEMS; www.afcosystems.com

ACME PRODUCTS; www.acmeprod.com

CGC GROUP: www.cgcgroup.ca

DELTA Cooling Towers; www.deltacooling.com

E-TECH; www.aers.com/etech_water_heating.html

JOHNSON / MARCRAFT; www.johnson-marcraft.com/

KINNETICS: www.kineticsnoise.com

ROBUR; www.robur.com/us/

SMARDT; www.smardt.com

STULZ; ats.stulz.com/