INTEGRATED SOLUTIONS TO OPTIMIZE BUILDING'S PERFORMANCE

BUILDING SYSTEMS, SERVICES & SOLUTIONS

SERVICES & SOLUTIONS

- MAINTENANCE & REPAIR SERVICES
  - With over 400 locations and more than 12,000 highly skilled technicians across North America, help your facility perform at optimum levels, extend asset life, reduce repair costs, and achieve energy savings.

BUILDING WIDE SYSTEMS INTEGRATION (BWSI)

- We integrate building systems (HVAC, BMS, security), business systems (Finance, IT, communications and specialty systems [fire alarm, distance learning, scheduling]) into a unified, intelligent infrastructure.

TECHNOLOGY CONTRACTING

- Through the latest innovations in the concept through design—build phases, we bring an enterprise-wide perspective to the planning, design, installation, integration and operation of all technology. Along with our innovative partners, we reduce risk, minimize change orders and meet budgets and deadlines.

ENERGY SOLUTIONS

- We strive for efficiencies and a plan to prioritize repairs, upgrade equipment, reduce energy use and improve overall efficiency. Use tomorrow’s energy savings to pay for today’s upgrades.

SMART CONNECTED SOLUTIONS

- YORK® SMART CONNECTED BUILDING SYSTEM
- Simplify data collections from a variety of building systems to provide a single, integrated view of building and system performance.

METASYS® BUILDING AUTOMATION

- NETWORK SERVERS, ENGINES & CONTROLLERS
- Solutions, middleware-optimized user interface. Adapts legacy and proprietary systems to today’s open system architecture. Support IT & enterprise standards and technologies.

WIRELESS COMPONENTS

- Cloud-based access and management for system sensors designed with the latest wireless technologies.

VALVES, ACTUATORS & DAMPERS

- Global product family, broad selection, easy installation.

SINGOOLI, THERMISTORS & ARRAY MEASUREMENT

- Temperature, flow and CO2 sensors including analog, network, wireless and presence-free-to-digital.

ENERGY MANAGEMENT

- METASYS® ENERGY MANAGEMENT
- Visibility and control to easily implement advanced energy management strategies in an integrated environment.

METASYS® ENTERPRISE OPTIMIZATION

- Simplify data collections from a variety of building systems to provide a single, integrated view of building and system performance.

SUSTAINABLE SOLUTIONS

- YORK® SMART BUILDINGS
- Energy efficiency and sustainability are core components of YORK solutions.

REFRIGERANT, FUTURE COMPATIBLE WITH R-513A.

FREE-COOLING WITH INTEGRATED WATERSIDE ECONOMIZER, HFC-134a

VARIABLE-SPEED SCREW (YVAA, YCIV)

HFC-410A REFRIGERANT.

TWO-STAGE ABSORPTION (YPC)

ELECTRIC

THERMALLY DRIVEN

MAGNETIC BEARING VARIABLE SPEED CENTRIFUGAL (MBC**)

1,390-2,040 MBH

95-2,000 tons

0.5-30 tons

65-2,890 MBH

2-150 tons

5-105 tons

50–200 tons

2,000-120,000 CFM

2,000–200,000 CFM

2,000-120,000 CFM

15-1,500 CFM

15-1,500 CFM

9-90 CFM

9 Active models for concealed, exposed, recessed applications. Available in standard on all models.

ACTIVE CHILLED BEAMS

- Up to 1,300 BTU/h and 40 CFM per linear foot of Active models for concealed, exposed, recessed applications. Available in 2 – 30 foot lengths.

PASSIVE CHILLED BEAMS

- Up to 500 BTU/h per linear foot. Exposed and recessed models available in 2 – 30 foot lengths.

UNIT VENTILATORS

- 500 – 1,500 CFM

horizontal and vertical units, flexible factory-packaged controls.

ENERGY RECOVERY SYSTEMS

- ENERGY RECOVERY VENTILATORS
- 200-12,000 CFM

Indoor energy recovery ventilators with METASYS control & BASNet capabilities are available in a range of heating & cooling systems.

CENTRAL PLANT OPTIMIZATION

- COP 30 uses engineered software to save 30-20% energy (up to 80% when retrofitting), with real-time analytics to assure performance.

HEALTHCARE ENVIRONMENT OPTIMIZATION

- Optimize the operating room and improve the patient care environment by linking building automation with surgical scheduling.

VARIABLE-SPEED DRIVE - 1, 2, 3 HP

Open, enclosed and bypass drives, optional factory mounting.

PACKAGED ROOFTOP UNITS - 0.5-15 tons

WV and single-zone WV applications, direct replacement options.

DEDICATED OUTSIDE AIR SYSTEMS - up to 100% outside air efficiency DX, energy recovery and hot gas reheat options.

COMMERCIAL SPLIT SYSTEMS

- 1-50 Ton Cooling only or heat pump outdoor units with matching cooling only, heat pump or electric heat indoor or handling units.

WATER SOURCE HEAT PUMPS

- 0.5-25 tons

vertical and horizontal (standard), high and premium efficiency, console, vertical stacked (high and premium efficiency), geothermal capable.

PACKAGED SPLIT & DUTCH DX SYSTEMS

REVERSIBLE CHILLERS

- 2-10 tons

Water-to-water heat pumps, 0-10 to 10-40 ton, modular application, geothermal capable.

WATER-COOLED SELF-CONTAINED UNITS - 1-500 tons

Indoor, WV application (>60 tons), various heating options.

AIR-COOLED SELF-CONTAINED UNITS - 2-25 tons

Indoor, WV application (>60 tons), rooftop alternative for dense building locations.

AIR-COOLED CONTINUOUS & FLUID COOLERS - 45-2,890 MBH

Water or glycol, multiple refrigerant options.

AIR HANDLING UNITS, COILS & FANS

YORK® SMART BUILDINGS

- YORK® WATER-COOLED CHILLERS
- York Chillers, reliability and performance using real-time data and analytics delivered through a cloud-base application to provide remote monitoring, access to operating information and predictive diagnostics.

ENERGY EFFICIENT SOLUTIONS

- YORK® AIR HANDLING UNITS, COILS & FANS
- Energy Star rated on select models. Inverter compressor standard on all models.

CONTROLLED SIZING

- YORK® AIR HANDLING UNITS
- Flexible factory-packaged valves and controls.

UNIT VENTILATORS

- Fan coil units in multiple styles (concealed, wall mount, ceiling cassette); ducted and non-ducted; sensor options.

CONTROL AND GATEWAYS

- Multiple single and control center options plus exclusive gateway for BASNet integration.

MINI-SPLIT SYSTEMS

- YORK MINI-SPLIT SYSTEMS
- Single cooling and with single indoor unit. Multiple styles, control options, capacities, operating ranges and efficiency ratings. Wi-Fi capable. Energy Star rated on select models. Inverter compressor standard on all models.

MULTI-ZONE

- YORK® AIR HANDLING UNITS
- Flexible factory-packaged valves and controls. Wi-Fi capable. Energy Star rated on select models. Inverter compressor standard on all models.
Psychrometric Chart for HVAC Analysis

Air-Conditioning Formulas and Conversion Factors

- Atmospheric pressure = 29.921" Hg. at sea level
- 1 BTU = Amount of heat required to raise (or lower) the temperature of one pound of water 1°F
- 1 ton of refrigeration = 12,000 Btu/hr = 200 Btu/min
- 1 watt = 3.414 Btu/hr

Fan hp = \( \frac{GPM \times \text{head}}{3960 \times \text{efficiency}} \) x specific gravity

Pump hp = \( \frac{GPM \times \text{head}}{3960 \times \text{efficiency}} \) x density of air

Fan hp = \( \frac{CFM \times \text{head}}{3960 \times \text{efficiency}} \) x density of standard air

Total cooling (Btu/hr) = \( CFM \times 4.5 \times \Delta h \)

Sensible cooling (Btu/hr) = \( CFM \times 1.085 \times \Delta t \)

Latent cooling (Btu/hr) = \( CFM \times 4840 \times \Delta w \)

CFM = airflow rate (ft³/min)

\( h = \) enthalpy (Btu/lb)

\( t = \) dry bulb air temperature (°F)

\( w = \) humidity ratio (lb water / lb dry air)

**Smart Equipment**

Signifies connectivity and intelligence of HVAC equipment technology. Provides seamless connection to a controls system, self-identifies without requiring programming tools, and connects data streams from equipment to the cloud for unprecedented insights into operations.

mySmartEquipment.com

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