

METASYS® BUILDING MANAGEMENT SYSTEM

- METASYS® SERVER**
Support of IT standards and technologies, Multi-platform web-based user interface, long-term storage
- NETWORK AUTOMATION ENGINE**
Family of IP connected network supervisory controllers for all sizes of building management systems
- NETWORK CONTROL ENGINE**
Family of IP connected supervisory controllers with onboard Input/Output (IO) points
- FIELD EQUIPMENT CONTROLLER**
Complete family of BACnet IP and MS/TP field controllers
- INPUT/OUTPUT MODULES**
Scalable family of configurable Input/Output (IO) modules
- VAV CONTROLLERS**
Complete family of programmable controllers suitable for all VAV applications
- TERMINAL UNIT CONTROLLER**
Complete local control of unitary equipment, plus supervisory communication
- INTEGRATED ROOM CONTROLLER**
Complete family of controllers and sensors for HVAC, light and sunblind
- FIELD USER INTERFACES**
Self configuring local touch screen display or web server user interface options allowing simplified access to equipment or controls
- WIRELESS COMPONENTS**
Wireless field buses and room temperature sensing systems designed with the latest wireless technology
- INTEGRATION SOLUTIONS**
Adapts legacy systems, proprietary systems and systems with standard protocols to the current METASYS open system architecture

YORK® FAN COIL UNITS

- YFCN / YFCN-ECM**
Cooling capacity: 0.7 – 7.6 kW
Cased and concealed, horizontal or vertical mounting, EC variable speed motor option
- LASER & LOW BODY / LASER & LOW BODY- EST**
Cooling capacity: 0.7 – 9.5 kW
Cased and concealed, horizontal or vertical mounting, EC variable speed motor option
- YEFB**
Cooling capacity: 2.8 – 31.5 kW
Horizontal mounting without case
- YHK / YHK-ECM**
Cooling capacity: 1.3 – 11.1 kW
Ceiling mounted cassette, 2 and 4 pipe versions available, EC variable speed motor option
- YFCC / YFCC-ECM**
Cooling capacity: 0.8 – 4.0 kW
Ceiling mounted coanda cassette, 2 and 4 pipe versions available, EC variable speed motor option
- YHVP / YHVP-ECM**
Cooling capacity: 1.17 – 3.81 kW
Residential wall mounted, infrared remote option, EC variable speed motor option

HVAC CONTROL PRODUCTS

- PEAK CONTROLLERS**
Family of controllers and accessories specifically designed for Original Equipment Manufacturers (OEMs)
- TERMINAL UNIT VALVES AND ACTUATORS**
Complete offering of valves and actuators for terminal unit applications
- CONTROL VALVES AND ACTUATORS**
Ball, globe and butterfly valves with pneumatic and electric actuators
- DAMPER ACTUATORS**
Spring and non-spring return rotary actuators for air, fire and smoke dampers
- PLANT SENSORS**
Plant Temperature, Humidity, CO₂, Dew point, Delta pressure
- ROOM SENSORS**
Room Temperature, Humidity, CO₂, Passive, Analog and Network models
- ALL IN ONE ROOM MODULE**
Temperature, Humidity and CO₂
- THERMOSTATS**
Line powered Fan Coils thermostats stand alone, Modbus and BACnet communicating
- SMART THERMOSTAT**
TEC family offers Proportional, ON/OFF, Multi-stage, autoadaptive controls through thermostats

YORK® CLOSE CONTROL AC UNITS

- YC-P SERIES**
Cooling capacity: 7.7 – 160 kW
Brushless DC compressors with inverter technology and brushless EC motor fans. Upflow or downflow options, R410A
- YC-G SERIES**
Cooling capacity: 43.0 – 183.5 kW
Downflow supply, R410A
- YC-R SERIES**
Cooling capacity: 20.6 – 36.2 kW
Horizontal supply, R410A

YORK® AIR HANDLING UNITS

- YMA ex-Italy**
Airflow range: 2,000-180,000 m³/h
2,000Pa Indoor / Outdoor application
Factory-packaged controls included with optional VSD
- YMA ex-Turkey**
Airflow range: 2,000-90,000 m³/h
2,000Pa Indoor / Outdoor application
Factory-packaged controls included with optional VSD
- YMB**
Airflow range: 500-100,000 m³/h
1,500Pa Indoor / Outdoor application
Factory-packaged controls included with optional VSD
- YBV**
Airflow range: 400-4,000 m³/h
Indoor application, pre-packaged units with integral heat recovery device and factory packaged controls

PENN® REFRIGERATION PRODUCTS

- PRESSURE SWITCHES & THERMOSTATS**
The pressure switches, thermostats and humidistats are designed for refrigeration, cooling, heating, ventilation and air-conditioning applications
- ELECTRONIC CONTROLS & TRANSDUCERS**
The controllers, are designed and provide a high quality long lasting solution for control of any commercial refrigeration unit (cold rooms, display cases, compressor rack,...) For use in a variety of applications (pressure, fan speed, temperature, humidity,...)
- WATER VALVES & FLOW CONTROLS**
These pressure actuated modulating valves control the quantity of water to a condenser by directly sensing pressure changes in a refrigerant circuit. The mechanical liquid flow switches can be used in liquid lines carrying water, sea water, swimming pool water, ethylene glycol or other liquids
- ELECTRONIC EXPANSION VALVES**
The combination of Quick Response Expansion Valves (QREV) and Precision SuperHeat Controller (PSHC) forms an electronically controlled expansion valve that will maximize evaporator efficiency

YORK® ROOFTOP EQUIPMENT

- VITALITY SPLIT ROOFTOP**
Cooling capacity: 19 – 86 kW
Axial fans, Cooling only, Heat pump, Scroll compressors, R410A
- ACTIVA ROOFTOP**
Cooling capacity: 17 – 84 kW
Cooling only, Heat pump, Cooling only + Gas heat, Heat pump + Gas heat, R410A
- LARGE ACTIVA ROOFTOP**
Cooling capacity: 100 – 175 kW
Cooling only (*), Heat pump (*) R410A
(* Gas version under development)

CENTRAL PLANT OPTIMIZATION™ (10)

- CPO 10**
Intelligent algorithms inherent in Metasys® leverage proven best practices and specific equipment efficiency characteristics to serve up to 15% energy versus standard automation

VERASYS™ SMART CONTROL SYSTEM

- SMART BUILDING HUB**
Web based control system that provides a mobile user interface to smart equipment branded controllers and thermostats
- SMART EQUIPMENT CONTROLLERS**
Family of controllers and accessories specifically designed for HVAC/R equipment optimization
- TERMINAL UNIT CONTROLLER PLUS**
Designed for local complete control of unitary equipment with BACnet supervisory communication
- SMART THERMOSTAT**
Family offers Proportional, ON/OFF, Multi-stage, autoadaptive controls through thermostats

YORK® CHILLERS

- AIR-COOLED**
 - YMAA**
Cooling capacity: 45 – 255 kW
DC Inverter technology, Scroll compressors, R410A
 - YCME**
Cooling capacity: 160 – 225 kW
Up to 8 modules, Screw compressor, R134a
 - YLA A**
Cooling capacity: 190 – 518 kW
Scroll compressors, hydro kit, R410A
 - YVAA**
Cooling capacity: 471 – 1,660 kW
Variable-speed screw compressors, R134a and R513a
 - YVFA**
Cooling capacity: 525 – 1,575 kW
Air-Cooled VSD Screw Free Cooling, R134a and R513a
- WATER-COOLED**
 - YMWA/YMRA**
Cooling capacity: 20 – 190 kW
Scroll compressor, R410A
 - YCSE/YCRE**
Cooling capacity: 140 – 240 kW
Up to 8 modules, Screw compressor, R134a
 - YCWL/YCRL**
Cooling capacity: 178 – 596 kW
Scroll compressor, R410A
 - YVWA**
Cooling capacity: 435 – 1,373 kW
Variable-speed screw compressors, R134a and R513a
 - YMC²**
Cooling capacity: 755 – 2,800 kW
Variable Speed Centrifugal, Magnetic Bearings, R134a and R513a
 - YK**
Cooling capacity: 800 – 11,250 kW
Centrifugal compressor, R134a and R513a

YORK® ABSORPTION CHILLERS R718 (Natural-Water)

- SINGLE STAGE HOT WATER OR STEAM-DRIVEN**
WFC SC / YHAU-CL / YHAU-C
Cooling capacity: 17.6 – 7,033 kW
- SINGLE EFFECT DOUBLE LIFT HOT WATER DRIVEN**
YHAU-CL-DXS - 40°C hot water outlet
Cooling capacity: 176 – 4,400 kW
- TWO STAGE STEAM DRIVEN**
YHAU-CW
Cooling capacity: 422 – 14,065 kW
- TWO STAGE DIRECT FIRED**
YHAU-F / YHAU-CG
Cooling capacity: 105 – 4,395 kW
- TWO STAGE EXHAUST GAS DRIVEN**
YHAU-CE
Cooling capacity: 527 – 3,516 kW
- SPECIAL TWO STAGE**
Exhaust gas & low temperature hot water
YHAU-CE-J
Cooling capacity: 527 – 3,516 kW
Two stage low leaving (-5°C)
YHAU-CW/CG/CHW-L
Cooling capacity: 176 – 1,758kW

YORK® HEAT PUMPS

- AIR-COOLED**
 - YMPA**
Reversible, water up to 55°C
Heating capacity: 45 – 255 kW
DC Inverter technology, Scroll compressors, R410A
 - YHME**
Reversible, water up to 55°C
Heating capacity: 145 – 185 kW
Up to 8 modules, Twin screw compressor, R134a
 - YLRA**
Reversible, water up to 55°C
Heating capacity: 200 – 327 kW
Scroll compressors, R410A
 - YLPB**
Reversible, water up to 52°C
Heating capacity: 352 – 669 kW
Scroll compressors, R410A
- WATER-COOLED**
 - YMWA-HP**
Reversible, water up to 55°C
Heating capacity: 25 – 210 kW
Scroll compressor, R410A
 - YCSE**
Water up to 55°C
Heating capacity: 170 – 300 kW
Up to 8 modules, Screw compressor, R134a
 - YCWL**
Water up to 52°C
Heating capacity: 210 – 675 kW
Scroll compressor, R410A
 - YLCS**
Water up to 70°C
Heating capacity: 400 – 2,000 kW
Screw compressor, R134a
 - YVWA**
Water up to 65°C
Heating capacity: 650 – 1,250 kW
Variable-speed screw compressor, R134a and R513a
 - YMC² HP**
Water up to 65°C
Heating capacity: 1,600 – 3,000 kW
Variable Speed Centrifugal, Magnetic Bearings, R134a and R513a
 - YK**
Water up to 50°C (Std) / 70°C (HP)
Heating capacity: 1,000 – 9,000 kW
Centrifugal compressor, R134a and R513a
- ABSORPTION SINGLE STAGE**
 - YHAP-C**
Water up to 95°C
Heating capacity: 900 – 40,000 kW
Steam, Gas or Hot Water driven
R718 (Natural Water)

SABROE® HEAT PUMPS

- HeatPAC recip**
Water up to 70°C
Heating capacity: 200 – 2,000 kW
Recip compressor, fixed or variable speed
Ammonia (R717) (<50 kg charge)
- HeatPAC HPX recip**
Water up to 90°C
Heating capacity: 100 – 1,400 kW
Recip compressor, variable speed only, Ammonia (R717) (<50 kg charge)
- DualPAC**
Water up to 90°C
Heating capacity: 400 – 2,000 kW
Variable speed, Ammonia (R717)
- HeatPAC screw**
Water up to 90°C
Heating capacity: up to 1,600 kW
Screw compressor, variable speed only, Ammonia (R717)

SABROE® INDUSTRIAL REFRIGERATION

- RECIPROCATING COMPRESSOR UNITS**
 - CMO**
Capacity: 50 – 190 kW
Fixed or variable speed, Ammonia (R717), hydrocarbons (HCs), common HFCs and derived blends
 - SMC**
Capacity: 130 – 1,225 kW
Fixed or variable speed, Ammonia (R717), hydrocarbons (HCs), common HFCs and derived blends
 - HPO/HPC/HPX**
Heating capacity: 330 – 700 kW
Cooling capacity: 80 – 185 kW
Fixed or variable speed, Ammonia (R717), carbon dioxide (R744), hydrocarbons (HC), common HFCs and derived blends
- SCREW COMPRESSOR UNITS**
 - SAB, small**
Capacity: 120 – 180 kW
Fixed or variable speed, Ammonia (R717), carbon dioxide (R744), hydrocarbons (HCs), common HFCs and derived blends
 - SAB, large**
Capacity: 540 – 1,800 kW
Fixed or variable speed, Ammonia (R717), carbon dioxide (R744), hydrocarbons (HCs), common HFCs and derived blends
- AIR-COOLED CHILLER**
 - SABlight**
Cooling capacity: 95 – 400 kW
Screw compressor, variable speed only, Propane (R290)
- WATER-COOLED CHILLERS**
 - ChillPAC**
Cooling capacity: 100 – 1,400 kW
Recip compressor, fixed or variable speed, Ammonia (R717) (<50 kg charge)
 - ComPAC**
Cooling capacity: 200 – 2,200 kW
Screw compressor, fixed or variable speed, Ammonia (R717) (low charge)
 - PAC recip**
Cooling capacity: 50 – 1,400 kW
Recip compressor, fixed or variable speed, Ammonia (R717)
 - PAC screw**
Cooling capacity: 200 – 6,200 kW
Screw compressor, fixed or variable speed, Ammonia (R717)
 - CAFP low-temperature chiller**
Capacity: 85 – 790 kW
Fixed or variable speed, Ammonia/CO₂ (R717/R744)
- CONTROLS**
 - Unisab III**
Integrated systems controller for chillers and heat pumps
 - Chiller plant controller**
Plug-and-play control panel for plant integration of chillers
 - ISAC**
Monitoring and control interface configuration system for refrigeration installations
 - iRIS**
Intelligent reporting and documentation system for optimising refrigeration plant performance



A COMPLETE PRODUCT RANGE TO COVER SOLUTION NEEDS FOR YOUR FACILITIES



The merger of Johnson Controls and Tyco brings together best-in-class products, technology and service capabilities across **Controls, Fire, Security** and **HVAC-R** to serve various end markets including large institutions, commercial buildings, retail, industrial, small business and residential.

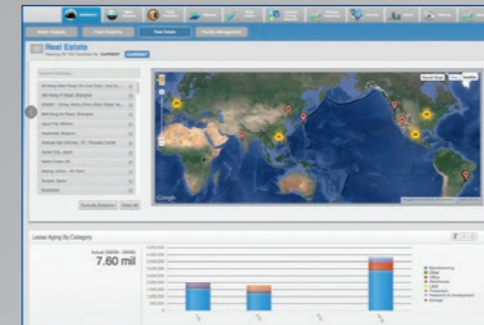
Find additional solutions at www.johnsoncontrols.com and www.tyco.eu



PLUG-AND-PLAY CONTROL SYSTEM FOR LIGHT COMMERCIAL BUILDINGS

Verasys is a straight-forward, easy way to control and optimize single/multi-site enterprises. All Smart Equipment seamlessly connect to it and self-identify without requiring programming tools. Moreover Verasys allows remote connectivity to the sites and as a result, you can take advantage of a new level of insight and provide facilities that better serve occupants.

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ADVANCED INTEGRATION

Building intelligence open IT tool suite dedicated to multisystem Real estate and Equipments portfolio for detailed Analytics, Smart automation, Energy optimization, Workflows and Dashboards.



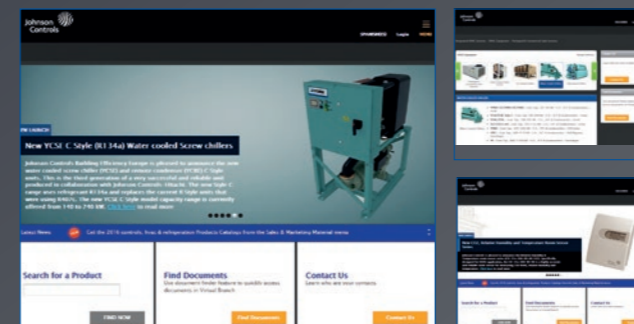
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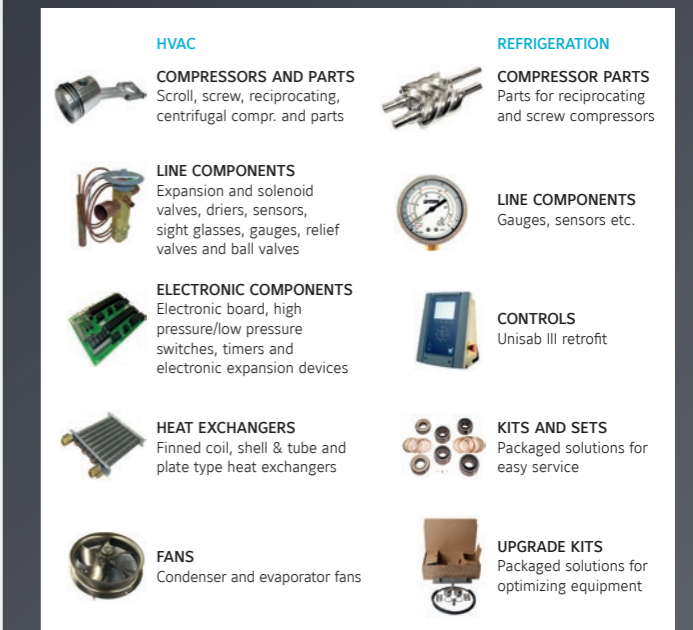


ENERGY SOLUTIONS



There is focus on reducing carbon footprints and being good stewards of the environment. Customers are being asked to deliver all of that and more with budgets that have never been tighter. We have a long history of partnering with public and private entities to deliver innovative, guaranteed solutions that meet their triple bottom line. Create quality environments. Manage building energy. Maximize energy and water efficiency. Provide clean, renewable energy. And save millions!

SPARE PARTS



For more information contact your local Johnson Controls representative or visit us at www.johnsoncontrols.com