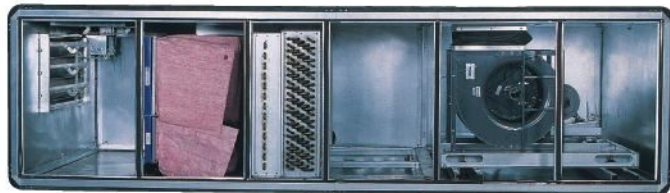
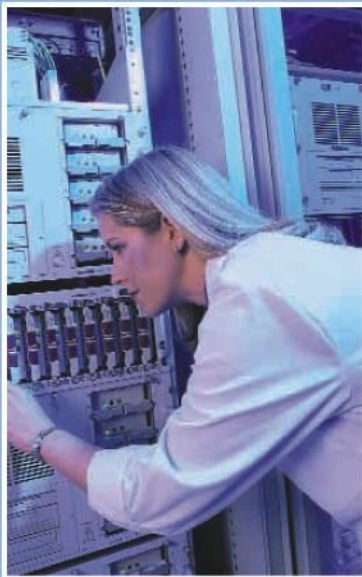


# HVAC&R Solutions for Data Centers





## Experience

Close control of temperature, humidity, air changes, and air cleanliness is critical in computer rooms, data support areas, UPS rooms, control rooms, server farms, PBX exchanges, and end-office communication centers to ensure reliable equipment operation and personnel comfort. YORK meets this challenge by providing expert engineering, technology, service, and support for bundled (packaged) projects, as well as discrete equipment. We offer solutions that minimize first cost and operating cost, accommodate flexible room usage, meet tight schedules, provide necessary redundancy, and ensure 24 x 365 system reliability.

### In-depth Understanding

As the world's largest independent manufacturer of heating, ventilation, air-conditioning, and refrigeration technology, YORK understands the issues associated with conditioning critical data center environments.

**Unique heat load:** Keeping computer and telecom equipment cool requires maintaining a specific humidity level and dry bulb temperature. Standard comfort air conditioning cannot be used, because it will excessively dehumidify the space. A balance between temperature and humidity is achieved by using specialized air-handling equipment, zoning, and controls.

**Room flexibility:** Computer and telecom environments change with changing needs. Equipment and personnel relocation, plus facility growth require a flexible installation, which can be accomplished with access (underfloor) air conditioning that uses moveable modules to accommodate room rearrangements.

**Air distribution:** Data center design often demands that air is distributed to the room from below using the access floor as the plenum and/or from overhead ductwork.

**Redundancy:** To ensure continuous cooling, a minimum redundancy from 25% to 100% is typically required.

**Air quality:** Occupied areas require fresh air, but even rooms with no occupants need filtration and fresh air to remove contaminants. Makeup air must be prepared to rehumidify, reheat, and refresh the supply air to exact requirements.

### Recognized Reputation

YORK has the depth of insight and breadth of experience to help you meet demanding requirements. Our Pace and Miller-Picking air-handlers meet both HEPA- and ULPA-filtration requirements. YORK knows how to work with your design/build or engineering/contractor team... as we have for many computer and telecom centers.

# Capability

Tight tolerances for computer and telecom facilities, along with competitive pressures to keep operations running continuously and economically, put tremendous pressure on the HVAC&R provider. In response, YORK provides world-class capabilities with genuine local assistance in engineering, design, procurement, installation, commissioning, service, and comprehensive financing options to ensure the success of your project.

## Single Source Solutions

Today's technology-based businesses rely on YORK as their single-source provider for HVAC&R solutions. Only YORK can focus world-class capabilities, local commitment, and creative financing to meet reduced lead times in fast greenfield projects, startup and commissioning in new installations, and constant uptime requirements in existing operations, and engineering and design consultation for future facilities.

## Manufacturing Capability

As a global manufacturer, YORK operates factory-owned offices in over 100 countries, plus ISO-9001-certified plants in all major geographic regions. Globalization makes it possible to meet any international wiring and pressure

vessel code, including China Code and GOST, as well as to source product from multiple plants to facilitate supply-chain management.

## Service Capability

To support daily operations, YORK Service offers the capabilities of the world's largest factory-owned HVAC&R service organization. Over 2,500 factory-trained technicians are located in strategic locations around the globe to handle startup, maintenance, training, repair, emergency, and enhancement needs. Regional stocking ensures spare parts are also available locally. To coordinate the needs of multi-facility customers, service can be arranged through a common national or international YORK Service account representative.



# Technology

YORK offers the broadest array of mechanical equipment to help create the required environments for your facility. As a global manufacturer, YORK operates wholly-owned offices in over 100 countries, over 40 ISO-9001-certified plants in all major geographic regions. And YORK Service offers the capabilities of the world's largest factory-owned HVAC&R service organization to support daily operations.



## Chiller Technology

**Centrifugal Chillers** minimize electric consumption at off-design conditions, which prevail in 99% of all operating hours. For maximum efficiency, YORK chillers can operate with Entering Condenser Water Temperature (ECWT) as low as 55°F.

Applications with air cooled radiators are available to address low sound level requirements. Variable-speed-drive models use an exclusive adaptive-capacity control to optimize compressor speed and prerotation vane position. Annual energy savings average 30% compared to a fixed-speed machine.

**Screw Chillers** can operate from 100% of capacity down to 15% thanks to a superior YORK compressor design.

**DX Chillers** that operate with low noise are available in air- and water-cooled DX models using reciprocating scroll and screw compressor technology.

## Controls

YORK centrifugal chillers and water-cooled or air-cooled DX chillers incorporate controls using open protocols that can be easily integrated into local zone controls, remote management, and building automation systems—a capability also provided by smart controllers available on select YORK air-handling units, fan coil boxes, and terminal units.



## Air-handling technology

YORK airside products include standard units that accommodate make-up air, laminar air flow,

filtration, and sealed-insulation construction. Our Miller-Picking and Pace custom air-handlers can be configured with make-up air modules, pre-filters, dehumidification, rehumidification, cooling and heating coil boxes; fans in both downflow and vertical airflow configurations; HEPA- and ULPA filtration systems; and electric, gas, or steam heat.



## FlexSys™

YORK also offers an access-floor air-conditioning system, which utilizes the area under the floor to accommodate the frequent air changes necessary in data centers, computer rooms, PBX exchanges and clean rooms.

**Let us add our experience, capabilities, and technology to help your team create the environment for success.**

