
 United Technologies
turn to the experts 



A World of Comfort

A Quick Reference Guide to Sustainable Building Solutions



A World of Comfort

Founded by the inventor of modern air conditioning, Carrier is the world's leader in high-technology heating and air-conditioning solutions.

Carrier experts provide sustainable solutions, integrating energy-efficient products, building controls and energy services for commercial customers.

chillers

Air-Cooled



AquaSnap® 30RA Scroll Chillers
10 to 150 Tons
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1, AHRI Certified



AquaSnap® 30RB Scroll Chillers
60 to 390 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant, AHRI Certified
Heat Recovery Option



AquaForce® 30XA Screw Chillers
80 to 500 Tons
HFC-134a
Exceeds ASHRAE 90.1, AHRI Certified



AquaSnap® 30RB with Greenspeed® Intelligence Scroll Chillers
80 to 390 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant, AHRI Certified
Variable Speed Condenser Fans
Heat Recovery Option



AquaForce® 30XA with Greenspeed® Intelligence Screw Chillers
140 to 350 Tons
HFC-134a
Exceeds ASHRAE 90.1, AHRI Certified
Variable Speed Compressor and Condenser Fans

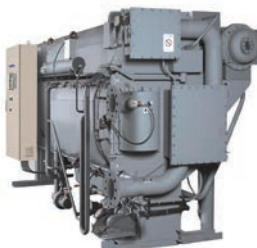


The AquaSnap 30RB with Greenspeed® Intelligence is the first air-cooled scroll chiller in the market to cross the 17.0 IPLV barrier.

Absorption



16TJ – Single-Effect Steam Chillers
100 to 700 Tons
7 to 15 PSIG Steam
COP 0.7



16NK – Double-Effect Steam Chillers
98 to 1,323 Tons
60 to 130 PSIG Steam
COP 1.28



16LJ – Single-Effect Hot Water Chillers
75 to 525 Tons
176 to 208 F Hot Water
COP 0.7



AquaEdge™ 19XR, XRV Constant or Variable-Speed Centrifugal Chillers Single-Stage

200 to 1,600 Tons
HFC-134a
ASHRAE 90.1 Compliant, AHRI Certified
ASME Certified



AquaEdge™ 19XR, 19XRV Constant or Variable Centrifugal Chillers Two-Stage

HFC-134a
ASHRAE Compliant, AHRI Certified
Wide Operating Envelope



AquaEdge™ 23XRV Variable-Speed Screw Chillers with Greenspeed® Intelligence

175 to 300 Tons
HFC-134a
Exceeds ASHRAE 90.1
Coming Soon



AquaEdge™ 23XR Variable-Speed Screw Chillers with GreenSpeed® Intelligence

250 to 550 Tons
HFC-134a
Exceeds ASHRAE 90.1, AHRI Certified*



The AquaEdge™ 23XRV is the world's leading efficiency screw chiller, 44% better than industry standard.



AquaForce® 30XW Screw Chillers

150 to 400 Tons
HFC-134a
ASHRAE 90.1 Compliant, AHRI Certified
Heat Recovery Option



AquaForce® 30HX Screw Chillers

75 to 265 Tons
HFC-134a
ASHRAE 90.1 Compliant, AHRI Certified*
Heat Recovery Option
Dual, Independent Refrigerant Circuits



AquaSnap® 30MP Scroll Chillers

15 to 45 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant, AHRI Certified*
Heat Recovery Option
Modular Design for Easy Installation



19XRD Dual Circuit Centrifugal Chillers

2,500 to 3,000 Tons
HFC-134a
ASHRAE 90.1 Compliant, AHRI Certified
ASME Certified



17DA Open-Drive Centrifugal Chillers

3,000 to 5,500 Tons
HFC-134a
ASME Certified

*AHRI certified for units within the scope of the AHRI 550/590 certification program.

air-handling units

Central Station Air Handlers



Aero® 39M

1,500 to 60,500 cfm
ASHRAE 62.1 Compliant, AHRI Certified



Aero® 39L

1,800 to 15,000 cfm
ASHRAE 62.1 Compliant, AHRI Certified



Aero® 39S

400 to 8,500 cfm
ASHRAE 62.1 Compliant, AHRI Certified



Custom Offering

Custom air-handling equipment for commercial, industrial, and health care applications.

improve



Carrier air-handling units meet the demands of precise indoor environments, including clean rooms and high-tech processing areas.

air terminals

Overhead



Axis™ 35E Single Duct VAV Terminals

45 to 7,100 cfm
LineaCross Airflow Sensor
AHRI Certified



Axis™ 35J Retrofit Terminals

40 to 3,700 cfm

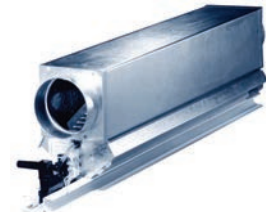
Axis™ 35K Bypass Terminals

110 to 4,400 cfm



Axis™ 35L,N Dual Duct VAV Terminals

50 to 7,100 cfm
Side-by-Side or Mixing Design
AHRI Certified



Axis™ 37HS Moduline® VAV Air Terminals

100 to 400 cfm
Integrated VAV Design
Duct Pressure Powered



Axis™ 45K/N Series/Parallel Quiet Flow Fan-Powered Terminal Units for VAV Systems

90 to 3,900 cfm



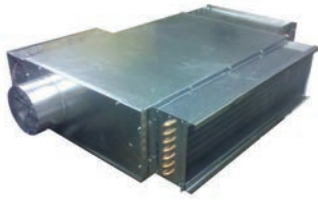
Axis™ 45J/M Series/Parallel Standard Flow Fan-Powered Terminal Units for VAV Systems

90 to 3,900 cfm
LineaCross Airflow Sensor



Axis™ 45Q/R Series/Parallel Low-Profile Fan-Powered Terminal Units for VAV Systems

100 to 2,000 cfm
Low Profile Design



Underfloor

45Q DOAS Terminal

90 to 1,550 cfm
ECM Motor
Sensible Cooling Approximately 3 Tons
AHRI Certified



Axis™ 35BF Diffusers for Variable-Volume Systems

50 to 325 cfm
High Impact Polymeric Construction
Meets 90B Structural Requirements



Axis™ 42KC Underfloor Perimeter Fan Coil Units

325 to 2,800 cfm
Hot Water or Electric Heat
Multiple Option Motors



Axis™ 45UC Underfloor Series Fan-Powered Units

280 to 1,200 cfm
Assists with High Interior Loads
Coated Insulation to Prevent Air Erosion



Axis™ 45XC Parallel Fan-Powered Zone Mixing Units

50 to 6,200 cfm
Mixes Primary and Return Air
Motor-Blower Isolation



AirStream™ 42B Belt Drive

600 to 4,000 cfm
ETL Listed
OSHDP Seismic Compliant



AirStream™ 42C Horizontal

200 to 1,200 cfm
AHRI Certified
ETL Listed
OSHDP Seismic Compliant



AirStream™ 42V Vertical

200 to 1,200 cfm
AHRI Certified
ETL Listed



AirStream™ 42D Ducted

600 to 2,000 cfm
ETL Listed
OSHDP Seismic Compliant



AirStream™ 42S Stack

300 to 2,000 cfm
AHRI Certified
ETL Listed



Gemini® 40RUA/Q

6 to 30 Tons
HFC Puron® Refrigerant (R-410A)
Energy Star

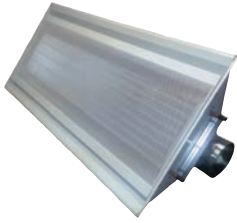
Hydronic Cassette Fan Coil Units



AirStream™ 42WKN Hydronic Cassette Fan Coil Units

3/4 to 3 Tons
ETL Listed

Induction Chilled Water



ActivAIR™ 36CB Chilled Beams

Active Models
Dry Coil Operation



ActivAIR™ 36IB Induction Beams

70 to 1,285 cfm
Independently Tested and Verified by ETL
AHRI Certified Coil Capacities



WeatherMaster® 36S Induction Air Terminals

20 to 130 cfm
2 or 4 Pipe Designs

split systems

Unit Ventilators



AirStream™ 40UV, UH Unit Ventilators

500 to 2,000 cfm
AHRI Certified
ETL Listed

Ductless Split Systems



Highwall-Short Line RAS/GV Series

.75 to 3 Tons
15 to 23 SEER
ASHRAE 90.1 Compliant, AHRI Certified



Multi-Split Highwall GVM Series

1.5 to 3.5 Tons
16 SEER
ASHRAE 90.1 Compliant, AHRI Certified



Highwall-Long Line RAV/QN Series

1.5 to 3 Tons
13 to 19.5 SEER
ASHRAE 90.1 Compliant, AHRI Certified



Cassette/Underceiling RAV/QA Series

1.5 to 5 Tons
13 to 21 SEER
ASHRAE 90.1 Compliant, AHRI Certified



VRF Indoor Units MM-AP Series

0.6 to 4 Tons
Cassette, Underceiling, Highwall and Ducted
ASHRAE 90.1 Compliant, AHRI Certified

Variable Refrigerant Flow



VRF Heat Recovery and Heat Pumps MMY Series

6 to 20 Tons
208/230v and 460v 3-Phase
ASHRAE 90.1 Compliant, AHRI Certified

Condensing Units, Air-Cooled



Performance™ 24ACB

1.5 to 5 Tons
HFC Puron® Refrigerant (R-410A)
AHRI Certified



Gemini® Select 38AP

25 to 130 Tons
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1, AHRI Rated



Gemini® 38AUZ/D

6 to 25 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant,
AHRI Certified, Energy Star

Heat Pump Systems



Gemini® 38AUQ

6 to 20 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant,
AHRI Certified

Condensers, Air-Cooled



Direct Drive Outdoor Air-Cooled Condenser 09AW, AZ

1 to 20 Tons
HFC-134a



Outdoor Air-Cooled Condenser 09AZ

90 to 200 Tons
HFC-134a



Indoor Air-Cooled Condenser 09XC

HFC Puron® Refrigerant (R-410A)



Gemini® Select 09DP

18 to 130 Tons
HFC Puron® Refrigerant (R-410A)

packaged products

Packaged Rooftop Units



WeatherExpert™ 48LC, 50LC

3 to 23 Tons
Ultra High Efficiency
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1, AHRI Certified
Exceeds Energy Star, CEE



WeatherMaster® 48HC, 50HC

3 to 25 Tons
High Efficiency
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1, AHRI Certified
Exceeds Energy Star, CEE

WeatherMaster® 50HCQ

3 to 10 Tons
High Efficiency
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1, AHRI Certified
Exceeds Energy Star, CEE



WeatherExpert™ has the industry's highest part load performance - IEER ratings in the industry in the 3-5 ton range.



WeatherMaker® 48TC, 50TC

3 to 27.5 Tons
Standard Efficiency
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
AHRI Certified

WeatherMaker® 50TCQ

3 to 20 Tons
Standard Efficiency
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
AHRI Certified

Constant Volume/ VAV Rooftop Units



WeatherMaker® 48/50A Series

20 to 60 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
AHRI Certified



WeatherMaster® 48/50P Series

30 to 100 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
AHRI Certified



WeatherExpert™ 48/50N Series

75 to 150 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
AHRI Certified

Small Packaged Products



Performance™ 48VL

High Efficient 2 to 5 Tons
Packaged Cooling with
Gas Heat
HFC Puron® Refrigerant (R-410A)

Performance™ 50VL

High Efficient 2 to 5 Tons
Packaged Cooling with
Electric Heat
HFC Puron® Refrigerant (R-410A)



Comfort™ 48ES

Base Efficient 2 to 5 Tons
Packaged Cooling with Gas Heat
HFC Puron® Refrigerant (R-410A)

Comfort™ 50ES

Base Efficient 2 to 5 Tons
Packaged Cooling with Electric Heat
HFC Puron® Refrigerant (R-410A)



Comfort™ 48EZ

Base Efficient 2 to 5 Tons
Hybrid Heat Dual Fuel Heat Pump
HFC Puron® Refrigerant (R-410A)

Comfort™ 50EZ

Base Efficient 2 to 5 Tons
Packaged Heat Pump
HFC Puron® Refrigerant (R-410A)

Indoor Self- Contained Systems



Omnizone™ 50XC Water-Cooled/Air-Cooled/Remote Air-Cooled

5 to 20 Tons
HFC Puron® Refrigerant (R-410A)
AHRI Certified



Omnizone™ 50XJ Water Cooled

60 to 100 Tons
HFC Puron Refrigerant (R-410A)
AHRI Certified



Omnizone™ 50BV

18 to 60 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
AHRI Certified



Room Top® 50AH Horizontal Indoor Single-Package Cooling Units

2 to 8 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
AHRI Certified

geothermal water source heat pumps



Aquazone™ 50PSH, PSV, PSD
Horizontal/Vertical Upflow;
Vertical Downflow
1/2 to 6 Tons
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1, AHRI Certified



Aquazone™ 50PTH, PTV, PTD
Horizontal/Vertical Upflow;
Vertical Downflow
2 to 6 Tons
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1, AHRI Certified



Aquazone™ 50PSW
Water-to-Water Units
3 to 30 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant



Aquazone™ 50HQP
Horizontal Large Capacity
6 to 10 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant, AHRI Certified

Aquazone™ 50VQP
Vertical Large Capacity
7 to 25 Tons
HFC Puron® Refrigerant (R-410A)
Standard and Extended Range Models
ASHRAE 90.1 Compliant, AHRI Certified



Aquazone™ 50PEC Console Unit
3/4 to 1-1/2 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant, AHRI Certified

energy recovery



Aquazone™ 50PCH, 50PCV
Compact Unit
1/2 to 5 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant



EnergyX System
Energy Recovery Ventilator (ERV)
WeatherMaster Rooftops



62E Packaged Energy Recovery
Ventilator
350 to 25,000 cfm
AHRI Certified

dedicated outdoor air products



62D Dedicated Outdoor Air Unit
6 to 35 Tons
HFC Puron® Refrigerant (R-410A)

62R Dedicated Outdoor Air Unit
with WSHP
6 to 35 Tons
HFC Puron® Refrigerant (R-410A)



User Interfaces

The i-Vu Building Automation System has a variety of user interfaces to make it easy for facility managers to monitor and control all of their building systems.

- i-Vu® web appliances
- i-Vu® web-based software for PC
- i-Vu® Touch local user interfaces



Application-Specific Controllers

Carrier has application-specific i-Vu controllers available for all of your system needs. All controllers come with pre-engineered and pre-programmed control algorithms, making equipment easy to configure, commission, and operate. All controllers speak native BACnet® and include built-in graphics, trends, and alarms for use with our i-Vu User Interfaces.

- VVT and VAV zoning
- Rooftop Units, Air-Handling Units, and Water Source Heat Pumps
- Fan Coils and Unit Ventilators
- Air and Water Cooled Chillers
- Chiller Plants



Programmable Controllers

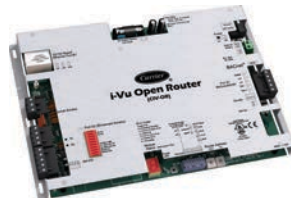
Our general purpose i-Vu controllers are used on HVAC equipment and other building systems so that the i-Vu system can monitor and control them. All controllers speak Native BACnet® and include built-in graphics, trends, and alarms for use with our i-Vu User Interfaces.

Typical Applications:

- Air Handlers
- Chiller Plants
- Meters
- Fans
- Lights
- Custom Control Sequences

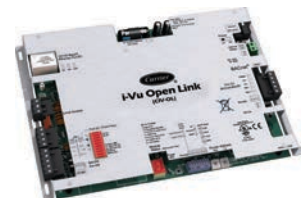


The i-Vu Open control system enables system optimization and energy efficiency by monitoring and measuring equipment and overall building performance.



Routers

Expand your control system easily using our i-Vu Routers. The i-Vu Open Router provides BACnet routing capabilities between our control system's Ethernet backbone (BACnet/IP), and a subnetwork of Carrier controllers (MS/TP or CCN). They install easily on the existing building LAN, and are a great way to bring the Carrier control system into any building.



Integration Modules

Our i-Vu Link allows you to integrate other manufacturers' equipment into the Carrier Control System. Support for BACnet, Modbus®, and LonWorks® protocols is standard, making it easy to tie in equipment such as VFDs, boilers, and lighting.



Sensors

Sensors are the eyes and ears of the control system, allowing controllers to match comfort and indoor air quality requirements with equipment operation. Carrier offers the following sensors:

- Temperature
- CO₂
- Humidity
- VOC
- Any combination of the above

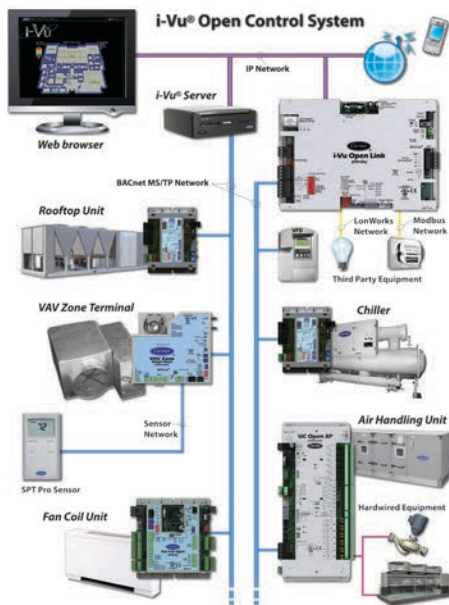
VVT® Zone Dampers

For variable volume/variable temperature systems, the VVT® system includes a selection of round and rectangular dampers. The factory-integrated VVT® zone controller maintains space temperature by modulating the supply airflow, while a separate bypass damper is used to modulate system pressure.

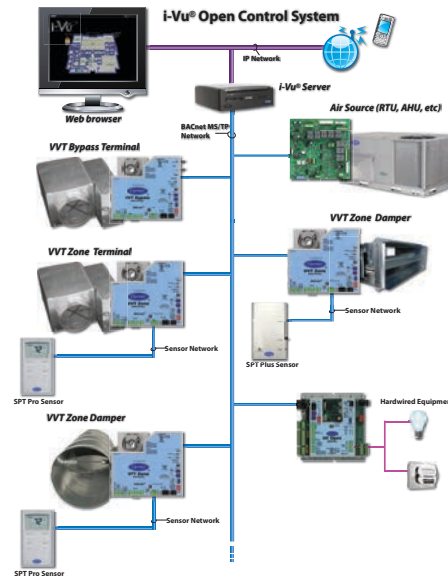
Edge® Pro and Comfort™ Pro Thermostats

Controls up to 3 stages heat and 2 stages cool
Compatible with gas/electric heat fan coils and heat pumps
7-Day programmable
Humidity control capable
Separate heating and cooling setpoints
Auto-changeover
Energy-saving smart fan
Large backlit displays
No batteries required
Flexible mounting options

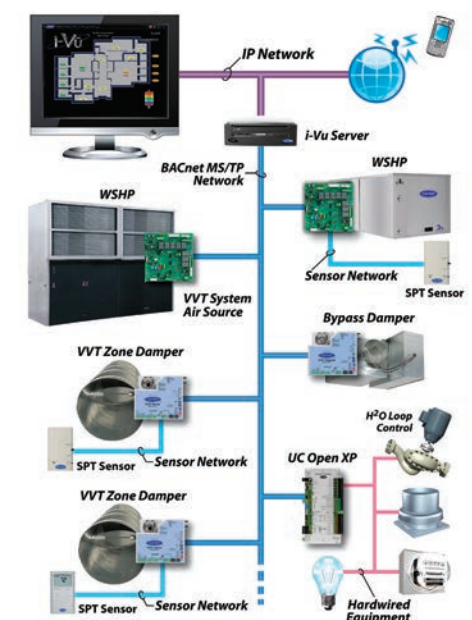
Chiller



Rooftop



Water Source Heat Pump





Leaders in HVAC engineering software

HVAC Analysis Tools. With its eDesign Suite software, Carrier has been an industry leader in providing HVAC engineering analysis tools since 1981. The flagship software tool in the eDesign Suite is the Hourly Analysis Program (HAP), a multifunctional tool which combines features for peak load estimating, system design, whole building energy analysis, LEED® Energy and Atmosphere Credit 1 analysis, and schematic design energy performance evaluation. Other eDesign Suite tools include System Design Load, a dedicated peak load and system design tool; Block Load, a peak load and system design tool streamlined for speed; Engineering Economic Analysis, a lifecycle costing tool; and Refrigerant Piping Design. eDesign Suite programs are licensed to users through local Carrier sales offices or Carrier distributorships. The software is continually updated to keep pace with the demands of our ever-changing industry.

Product Selection Tools. Carrier also offers the Carrier Electronic Catalog (E-CAT), a fully integrated suite of tools for selecting, configuring, and generating thermal, electrical and acoustical performance data for Carrier commercial HVAC products. Tools in this suite cover rooftop units, split systems, dedicated outdoor air (DOAS) units, self-contained units, fan coils, unit ventilators, water source heat pumps, induction terminals, and air terminals. These tools are continually updated to keep pace with new product introductions. They can be downloaded without charge from the Carrier commercial HVAC web site www.commercial.carrier.com.

Software Support and Training. All Carrier eDesign Suite and E-CAT software is backed by e-mail and toll-free support for users with a currently active license. In addition, for-free software training is offered in cities across the US and Canada every year. Training covers peak load estimating and system design, whole building energy simulation, applying HAP to the LEED Energy and Atmosphere Credit 1 analysis, and Advanced Modeling Techniques. Support and training are provided by a dedicated team of HVAC engineers, part of Carrier University™, who have decades of experience as consulting engineers, application engineers and HVAC sales engineers.

eDesign Suite HVAC Analysis Software Tools

- Hourly Analysis Program (HAP)
- System Design Load (peak loads, system design)
- Block Load (peak loads, system design)
- Engineering Economic Analysis (lifecycle costing)
- Refrigerant Piping Design

Hourly Analysis Program (HAP) Capabilities

- Peak load estimating
- System design
- Whole building energy simulation
- LEED Energy and Atmosphere Credit 1 analysis
- Schematic design energy performance evaluations

E-CAT Product Selection Tool Capabilities

- Equipment selection per operating requirements
- Product configuration of options and accessories
- Thermal, electrical, and acoustical performance data
- Certified drawings

eDesign Suite Software Training

- Peak load estimating and system design
- Whole building energy analysis
- Advanced Modeling Techniques
- HAP for LEED EA Credit 1 analysis
- Advanced Modeling Techniques

To learn more, visit us at www.carrier.com

Carrier Commercial HVAC Mobile Apps



Carrier Rooftops app

The first of its kind in the industry, the Carrier Rooftops app enables you to perform on-the-spot selection of light commercial rooftop units for replacement or new construction.

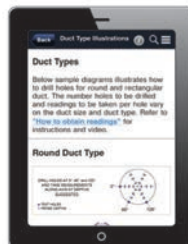
- Estimates potential energy savings
- Provides contact information for your local sales office
- Provides roof-curb adapter info on replacement jobs



Carrier Chillers app

Enables customers to perform on-the-spot selection of water- or air-cooled chillers for replacement or new construction projects.

- Displays product information including options and accessories
- Provides contact information for your local sales office
- Sends a detailed product page through email



Carrier Airflow Measurement app

Guides users through the airflow measurement process and automatically calculates airflow in a round or square duct.

- Determines number and locations of measurements to be taken and calculates airflow based on measurements
- Email the results
- Provides step-by-step process and video on how to take accurate readings



Technical Literature app

A great tool for sales or service, this app places Carrier technical literature at your fingertips. You can search the library and download the literature you need.

- Download and view Commercial Technical Literature
- Select Current or Obsolete Literature
- Search by Document Type or Title



Leaders in training

Training Legacy: In the early 20th century, Willis Carrier began his legacy of heating, ventilation and air-conditioning (HVAC) innovation—and Carrier has trained the industry ever since. Carrier University™ is the premier learning organization in the HVAC industry.

Relevant Courses: With locations throughout the world, Carrier University offers comprehensive HVAC training in a wide range of areas including technical skills, HVAC system design, sustainable and green building, sales and marketing skills, business management, customer service, and controls.

Immediate Applications: Carrier University has training courses for dealers, distributors, technicians, designers, contractors, consulting engineers, and sales and service personnel. Carrier University delivers these courses through traditional classroom settings, self-study literature programs, remote training sessions, and online, web-based systems.

Industry Credibility: Our commitment to quality training has continued throughout our history and today Carrier University is an IACET®-approved provider, which makes our courses eligible for continuing education credit. Carrier University is also a U.S. Green Building Council Approved Education Provider.

Sustainability Focus: For those seeking sustainability education, the Carrier University Institute for Sustainability focuses on professional development, technical training and application tools.

Delivery Options: For those who cannot attend classes, Carrier University provides self-study training as well as literature programs that may also be used to instruct others. Carrier University's literature programs include books, CD-ROMs, and PowerPoint presentations. We also have a growing library of interactive computer-based training and online, web-based training.

Broad Curriculum Offering

- Equipment technical training
- HVAC systems design
- Controls and systems monitoring
- Sustainable design and green building
- Residential, light commercial, commercial

Local, Central, Virtual

- Traditional classroom
- Online learning
- Self-directed programs
- Remote, on-site training
- Custom courses

To learn more, visit us at
www.carrieruniversity.com



Carrier Commercial Service

Leaders in service

As Carrier's own servicing entity, we provide a broad portfolio of services from maintenance to retrofits and optimization with factory-trained certified technicians trained on products, customer service and safety.

Operation, Service and Protection

- Start-up service
- Extended warranty protection
- Service agreements
- Predictive maintenance
- Refrigerant management
- Rental solutions

Retrofits, Upgrades and Optimization

- Equipment overhaul and modernization
- Turnkey retrofit solutions
- Equipment optimization
- Energy savings solutions
- Building management solutions
- Engineered services



Carrier Rental Systems

Leaders in temporary HVAC solutions

Carrier Rental Systems' factory-trained experts deliver turnkey temperature control, dehumidification and power solutions along with 24-hour customer care.

Solutions

- Commercial Applications
- Industrial Applications
- Special Events
- Disaster and Recovery Planning

Industries Served

- Airports
- Construction
- Food Processing
- Packaging
- Pharmaceutical
- Senior Housing and Assisted Living
- Sporting Events
- TV and Movie Production



To learn more, visit us at www.carrier.com

To learn more, visit us at www.carrierrentals.com

Kensington High School (Education)

Philadelphia, PA

LEED® Certified



Challenge: Create a bright, comfortable, inspirational environment to facilitate education and empower students and teachers; provide sustainable heating, cooling and ventilation in a dense urban setting; attain LEED® Platinum certification.

Solution: Specify reliable units that offered individually controlled outside air to each classroom, with minimal maintenance and space requirements.

Equipment:

77 Aquazone™ water source heat pumps, including 50PSH, 50PTH and 50PTV

North Carolina Central University (Higher Education)

Durham, NC

LEED® Certified



Challenge: Construct a new residence hall that complements the historic complex, provides a safe and comfortable learning environment for students, meets state-mandated energy efficiency marks, and achieves LEED® certification.

Solution: Combine quiet, reliable, efficient chillers that excel at part-load performance and have a small footprint with horizontal fan coil units located in residence units that students can adjust +/- 4 degrees for individual comfort.

Equipment:

Two AquaForce® 30XW water-cooled screw chillers; AirStream™ 42C horizontal fan coils

Mater Hospital, Queensland (Health Care)

Townsville, Australia



Challenge: Provide reliable comfort to patients and staff while also delivering superior efficiency, as measured both in energy consumption and power demand.

Solution: Upgrade the chiller plant with units in a series counterflow arrangement that provides superior efficiency performance and low operating costs. The new plant also provides N+1 redundancy, the highest standard for health care applications, and leaves room for the hospital to expand.

Equipment:

Two Evergreen® 23XRV chillers in series counterflow arrangement

Waterville TG (Manufacturing)

Quebec, Canada



Challenge: Replace an outdated ammonia-cooled chiller with a new unit that can operate efficiently in a range of conditions and loads, accommodate new production needs, and meet the environmental goals of the company.

Solution: Install a chiller with variable speed drive that is able to operate efficiently at very low speeds, uses an environmentally balanced HFC-134a refrigerant, and is known for its efficiency and reliability.

Equipment:

One Evergreen® 23XRV water-cooled screw chiller

Crate & Barrel (Retail)

Durham, NC



Challenge: Allow store personnel to control both lighting and heating, ventilation and air conditioning systems in a precise, flexible manner to preserve customer comfort and suitable humidity levels for optimum product quality.

Solution: Design a control system with BACnet® controls installed on all the equipment in the store. Integrate the Carrier i-Vu® Open Control System on all components and provide a user-friendly web interface that enables fluid scheduling of both lighting and HVAC systems, providing store personnel with the capacity to maximize conditions for customers and products.

Equipment:

i-Vu® Open Plus web user interface

The Resurrection Center (Multi-Purpose Bldg.)

Wilmington, DE



Challenge: Replace outdated heating and cooling system with efficient, reliable unitary system without disrupting occupants of the heavily used building. Obtain remote monitoring and troubleshooting capabilities.

Solution: Select rooftop units known for quality, efficiency and reliability that can be installed zone-by-zone without disruption to daily activities, preserving heating, cooling and ventilation service to all parts of the building at all times.

Equipment:

Eight WeatherMaster® 48HC packaged rooftop units; i-Vu web-based user interface

award winning factories

Carrier is committed to providing energy-efficient building solutions to help customers reduce costs and minimize their impact on the environment. Those same standards apply internally, ensuring green products are produced in green factories.

Carrier audits overall energy performance at each factory and implements programs to reduce consumption. Ways we have conserved include converting to high-efficiency, low-mercury content bulbs, implementing alternative transportation plans and employing green housekeeping.

Carrier has even taken advantage of free behavior-changing ideas to drive savings, such as instituting night power outage plans and shutting down power in all circuits not used during evening hours.

Industry organizations such as the U.S. Green Building Council, Industry Week, and Underwriters Laboratories® (UL), have recognized Carrier for its leadership in reducing its environmental impact at its manufacturing facilities. Customers can be confident that the products they purchase from Carrier are not only energy-efficient and environmentally responsible but also that they are manufactured at best-in-class sustainable factories.



Charlotte, North Carolina
Chillers and Split Systems
LEED® certification
Industry Week's Best Plants winner



Huntington, Indiana
Controls
LEED® Gold certification
Industry Week's Best Plants winner



Monterrey, Mexico
Rooftops, Split Systems and Air Handlers
LEED® Gold certification

Carrier's newest manufacturing facility in Monterrey, Mexico, earned Gold certification under the LEED® for New Construction rating system



Stone Mountain, Georgia
Compressors
Industry Week's Best Plants winner



Willis Carrier was the company's **earliest sustainability leader**. Utilizing precise cooling processes, his invention would enable countless industries to avoid waste and preserve resources for future generations.

Willis Carrier

a sustaining vision

One hundred and twelve years ago, a humble but determined engineer solved one of mankind's most elusive challenges by controlling the indoor environment. A leading engineer of his day, Carrier would file more than 80 patents over the course of his career. His genius would enable incredible advancements in health care, manufacturing processes, research, building capacities, food preservation, transportation, art and historical conservation, general productivity, indoor comfort and much more.

Carrier's foresight changed the world forever and paved the way for over a century of once-impossible innovations. Yet, in addition to being an accomplished inventor, he was also an avid outdoorsman. Carrier recognized the power and beauty of the natural environment. This appreciation of our world and its resources continues to guide Carrier today.

Harnessing the same vision and determination Willis did so many years ago, the men and women of Carrier work every day to accomplish more with less, and preserve resources for future generations. We have a unique willingness to develop new technology, the confidence to revise proven designs, and the ability to deliver results with every new installation.

Above all, we will never rest on our accomplishments, but instead consistently look for ways to improve—our products, our environment and our world.

Willis wouldn't have it any other way.

The Future of the World Depends on Our Ability... to Sustain it.

The word "improve" represents Carrier's belief in continuous improvement of our products and services, our customers' experience and our environmental impact.



Whether it's reducing our greenhouse gas impact, leading the phase-out of ozone-depleting refrigerants, or introducing many of the world's most energy-efficient building solutions, at Carrier, we incorporate sustainability into all that we do. To us, it's only natural.



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