



Willis Carrier

A SUSTAINING VISION

In 1902, Willis Carrier submitted his design for the first modern air-conditioning system, accomplishing a feat that was once thought to be impossible – **control of the indoor environment.**

His invention would give rise to a world leading heating, air-conditioning and refrigeration company and create an entire industry essential to global productivity and personal comfort.



A WORLD OF COMFORT

A Quick Reference Guide to Sustainable Building Solutions for North America Commercial HVAC



1-800-CARRIER
carrier.com/commercial

©2024 Carrier.
All Rights Reserved. Cat. no. 04-811-51009
Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.





A WORLD OF COMFORT

As a global leader in intelligent climate and energy solutions, Carrier innovates best-in-class products and services to help shape a better future for people and our planet. Carrier Commercial HVAC solutions provide innovative heating, cooling and building automation solutions and services to help you enhance building health, performance, energy efficiency and sustainability.

CARRIER UNIVERSITY

LEARN FROM THE EXPERTS

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

Carrier University offers comprehensive HVAC training in a wide range of areas including technical skills, HVAC system design, sustainability, sales and marketing skills and controls.

Immediate Applications

Carrier University has training courses for dealers, distributors, technicians, designers, contractors, consulting engineers, and sales and service personnel.

Industry Credibility

Our commitment to quality training has continued throughout our history and today Carrier University is an IACET®-accredited provider, which makes our courses eligible for continuing education credit. Carrier University is also a U.S. Green Building Council Approved Education Provider and AIA (American Institute of Architects).

Delivery Options

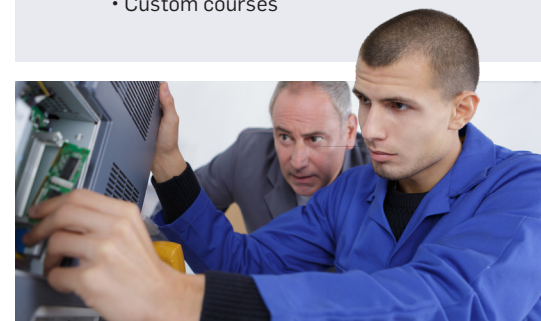
Carrier University delivers courses through traditional classroom settings, self-study training programs, remote training sessions, and online, web-based systems. Carrier University provides self-study training as well as training programs that may also be used to instruct others. We also have a growing library of online, web-based training.

Broad Curriculum Offering

- Equipment technical training
- HVAC systems design
- Controls and systems monitoring
- Residential, commercial
- Service

Local, Central, Virtual

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



To learn more, visit us at
carrier.com/carrieruniversity

CHILLERS

Air-Cooled



AquaSnap® 30RC Scroll Chiller

R-32 Refrigerant
10 to 60 Tons (60 Hz)
Exceeds ASHRAE 90.1 – 2022
MCHX or AlCu Condenser Coils
Variable Speed Condenser Fans



AquaSnap® 30RC Scroll Chiller

R-32 Refrigerant
60 to 250 Tons (60 Hz)
Exceeds ASHRAE 90.1 – 2022
DX or BPHE Evaporator
MCHX or AlCu Condenser Coils
Variable Speed Condenser Fans
Desuperheater



AquaForce® 30XV Screw Chiller

R-513A Refrigerant
140 to 500 Tons (50 & 60 Hz)
Exceeds ASHRAE 90.1 – 2019
MCHX or AlCu Condenser Coils
Variable Speed Condenser Fans



AquaForce® 30XV Screw Chiller with Waterside Economizer – 09FC

R-513A Refrigerant
140 to 500 Tons (50 & 60 Hz)
Meets Requirements of ASHRAE 90.1 – 2016 toward incorporating waterside economizer

Water-Cooled



AquaEdge® 19DV Advanced Two-Stage Compression with Ceramic Bearing and Greenspeed® Intelligence

350 to 800 Tons
R-1233zd(E)
Exceeds ASHRAE 90.1/FEMP
Heat Recovery, Free Cooling & Comfort Cooling



AquaEdge® 19XR(V) Constant- or Variable-Speed Centrifugal Chillers Single-Stage

200 to 550 Tons
R-513A
ASHRAE 90.1 Compliant, AHRI Certified
ASME Certified



AquaEdge® 19XR(V) Constant- or Variable-Speed Centrifugal Chillers Two-Stage

600 to 3,400 Tons
R-513A
ASHRAE 90.1 Compliant, AHRI Certified
Wide Operating Envelope



AquaEdge® 19MV Advanced Two-Stage Compression with Roller Element Bearing or Magnetic Bearing and Greenspeed® Intelligence

150 to 700 Tons
R-515B or R-513A
Exceeds ASHRAE 90.1
AHRI Certified, ASME Certified,
Wide Operating Envelope



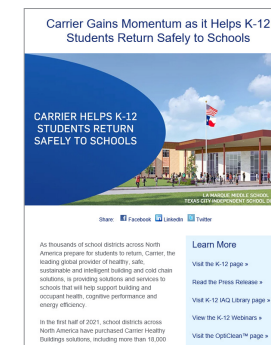
AquaEdge® 23XRV Variable-Speed Screw Chillers with Greenspeed® Intelligence

175 to 300 Tons
R-513A
Exceeds ASHRAE 90.1, AHRI Certified
Wide Operating Envelope



EXchange

EXchange is an electronic newsletter offering timely, informative and interesting news about Carrier eDesign Suite software. Delivered quarterly, each issue provides a wealth of information including technical articles, news about new software releases and software in development, training schedules and registration, and answers to frequently asked software questions.



HVAClips

HVAClips is a monthly newsletter for the consulting/specifying engineer. The publication provides an information-rich conduit for new product releases, case studies, training schedules, and updates to Carrier commercial products.

To find current and past issues, or to subscribe to Carrier's e-newsletters for up-to-date information on a range of topics, go to: carrier.com/commercial/en/us/literature/newsletters.



CASE STUDY: HAWTHORNE MALL

Chiller plant and controls upgrade help reduce energy costs and ensure shopper comfort

Project Objectives:

Hawthorn Mall is a top Chicago shopping center located in the northern suburb of Vernon Hills. As part of a \$50 million redevelopment project, the mall's owners determined that the existing, aging chiller plant needed to be upgraded. In addition, the entire chilled water system needed a modern controls solution to help reduce energy costs and increase operating efficiency.

Project Solution:

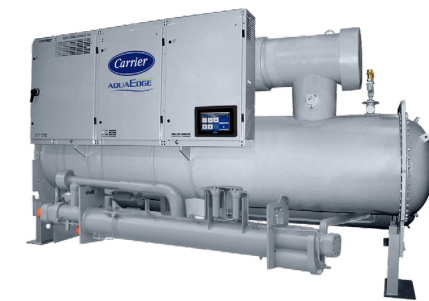
The management of Hawthorn Mall had a long service history with Carrier Commercial Service (Carrier) of Chicago and selected them to execute their chiller plant and accompanying system upgrade due to the trusted relationship with Carrier's sales and service staff. Carrier had been maintaining the existing three Carrier chillers for many years, and began discussions to update the chillers and controls to help improve the operating efficiency of the mall's entire heating, ventilating and air conditioning (HVAC) system. As problems with the chillers developed — one chiller lost its full refrigerant charge — plans accelerated to replace two of the mall's chillers and fully automate the plant with an i-Vu® control system.

It was determined that the entire retrofit project would be executed in phases. Phase one would replace the existing chillers, install new chilled water pumps with variable frequency drives (VFDs), add new condenser water pumps, and convert the chiller plant from constant flow to variable flow. In addition, i-Vu controls would be added to automate the plant. Phase two integrated other building systems (like AHUs and lighting) into the i-Vu control system. Phase three would optimize the entire chilled water plant.

Our case studies illustrate the power and scope of Carrier's products and systems. Read more about how Carrier systems were used to solve HVAC problems or meet the specific needs of our customers.

Case studies can be found on the Carrier Commercial public website here:
www.carrier.com/commercial/en/us/literature/case-studies

CHILLERS (CONTINUED)



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

250 to 550 Tons
Exceeds ASHRAE 90.1, AHRI Certified*
Wide Operating Envelope



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



AquaForce® 30XW Screw Chillers

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



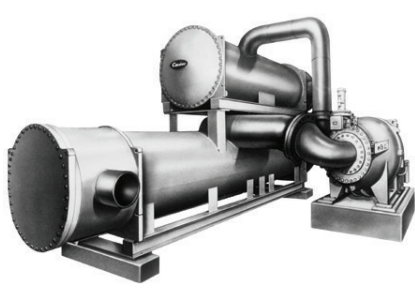
AquaForce® 30HX Screw Chillers

75 to 265 Tons
R-513A
ASHRAE 90.1 Compliant, AHRI Certified*
Heat Recovery Option
Dual, Independent Refrigerant Circuits



AquaSnap® 30MP Scroll Chillers

16 to 71 Tons
R-410A
ASHRAE 90.1 Compliant, AHRI Certified*
Heat Recovery Option
Modular Design for Easy Installation



AquaEdge® 17DA Open-Drive Centrifugal Chillers

3,000 to 5,500 Tons
Motor or Steam Turbine Driven
R-134a
ASME Certified

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



Carrier Custom AHU 39CC

10,000 cfm and above
Custom air-handling equipment for commercial, industrial and health care applications.

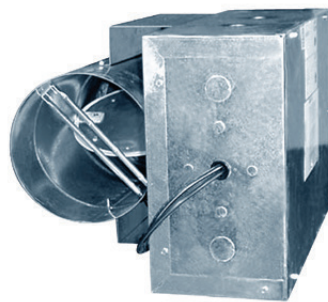
*AHRI certified for units within the scope of the AHRI 550/590 certification program.
**Among electric-driven, water-cooled chillers as mentioned by Integrated Part Load Value conditions based on ASHRAE 90.1 2010 minimum requirement.

AIR TERMINALS

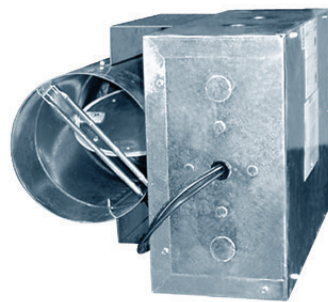
Overhead



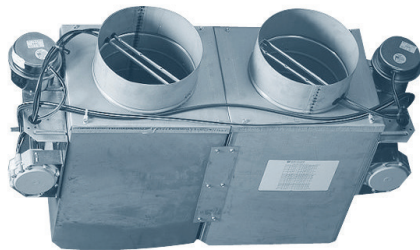
Axis™ 35E Single Duct VAV Terminals
40 to 7,000 cfm
AHRI Certified



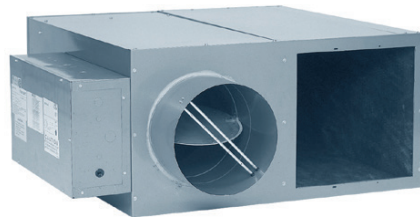
Axis™ 35J Single Duct Retrofit Terminals
40 to 3,700 cfm
AHRI Certified



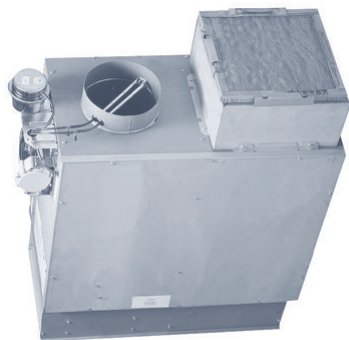
Axis™ 35K Bypass Terminals
110 to 4,400 cfm
AHRI Certified



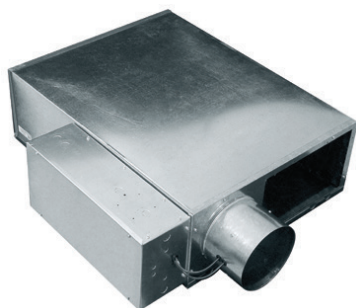
Axis™ 35L/N Dual Duct VAV Terminals
40 to 7,000 cfm
Side-by-Side or Mixing Design
AHRI Certified



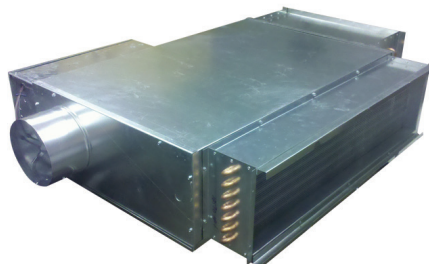
Axis™ 45K/N Series/Parallel Quiet Flow Fan-Powered Terminal Units for VAV Systems
50 to 3,000 cfm
AHRI Certified



Axis™ 45J/M Series/Parallel Standard Flow Fan-Powered Terminal Units for VAV Systems
100 to 3,900 cfm
AHRI Certified



Axis™ 45Q/R Series/Parallel Low-Profile Fan-Powered Terminal Units for VAV Systems
170 to 1,970 cfm
AHRI Certified



45Q DOAS Terminals
150 to 1,625 cfm
ECM Motor
Sensible Cooling
AHRI Certified



The extensive Axis air terminal product offering provides the ideal amount of design flexibility to minimize installation tasks, lower maintenance costs and supply the consistent comfort that **Carrier customers deserve.**

SPOT COOLERS



Spot Coolers offers convenience and efficiency through portable HVAC solutions. Our team helps facility managers keep their operations moving forward when faced with heating and cooling failures, planning for scheduled outages or simply needing supplemental capacity. Spot Coolers experts deliver and install trusted units such as portable air conditioners, electric heaters, dehumidifiers, and more to answer your needs when and where you need them. All units fit through standard commercial doors and are available 24/7 with lift-gate equipped box-truck delivery from our nationwide locations.

THE SPOT COOLERS DIFFERENCE



Intelligent design and smart engineering that creates efficiency and cuts costs



High quality standards backed by industry leader Carrier



Minimal maintenance requirements



Little or no installation costs – just plug in and go



Easy portability



What we offer:

- 1 – 12 Ton Air-Cooled, Water-Cooled, Heat Pump Portable AC
- 1.5 – 60kw Electric Heat
- Dehumidifiers
- Negative Air Machines
- Custom Solutions
- Rentals and Sales
- All units stored indoors



Spot-Coolers.com | 800-367-8675 | spotcoolers@carrier.com



Carrier is the leading provider of cooling, heating, dehumidification and power generation rental equipment and is dedicated to providing engineered turnkey solutions for temporary HVAC-related requirements. With the most progressively trained service technicians in the industry and extensive experience in integrating rental equipment effectively, the Carrier Rental Systems team has a variety of solutions that fit into a broad range of places and spaces. Carrier delivers an immediate response for emergency or planned HVAC needs nationwide and ensures that it is maintained appropriately for the duration of the project.

Carrier Service Rentals:

Equipment
Delay Support

Contingency
Planning

Planned
Maintenance or
Shutdown

Emergency
Response

Supplemental Heating and
Cooling Needs



Air Cooled
Skid Mounted



Air Cooled
Trailer Mounted



Water Cooled
(Containerized)



Industrial



Ultra Portable



Small Skid
Mounted



Large Skid
Mounted



Industrial



Compact



Cold Storage



Vertical



High Volume

CHILLERS

- Air-cooled chillers: 10 to 500 tons
- Water-cooled chillers: 150 to 1,000 tons
- Low Temperature Chillers 30 to 1,100 HP
- Explosion Proof Units
- Screw, Reciprocating, Centrifugal, Industrial Chillers to -40F
- Pumps, Transformers, Flexible Hose
- Tanks & Heat Exchangers

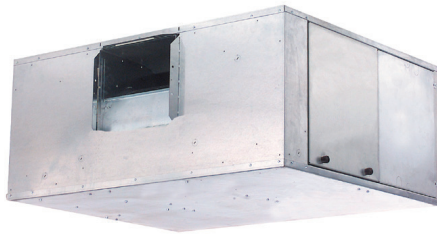
AIR CONDITIONERS

- 5 to 80 tons
- Reheat Available
- Industrial/High Static Units
- Explosion Proof Units

AIR HANDLERS

- 6,000 to 70,000 cfm
- High Static Units Available
- Hot Water/Steam Coils Available
- Cold Storage Units with Automatic Defrost

FAN COILS



AirStream™ 42B Belt Drives

600 to 4,000 cfm
ETL Listed
IBC Seismic Compliant



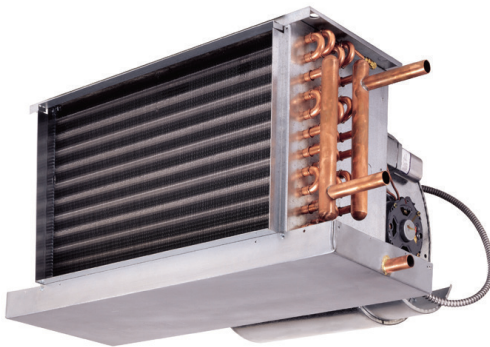
AirStream™ 42C Horizontal

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



AirStream™ 42V Vertical

200 to 1,200 cfm
AHRI Certified
ETL Listed



AirStream™ 42D Ducted

600 to 3,000 cfm
AHRI Certified
ETL Listed
IBC Seismic Compliant



AirStream™ 42S Stack

300 to 2,000 cfm
AHRI Certified
ETL Listed

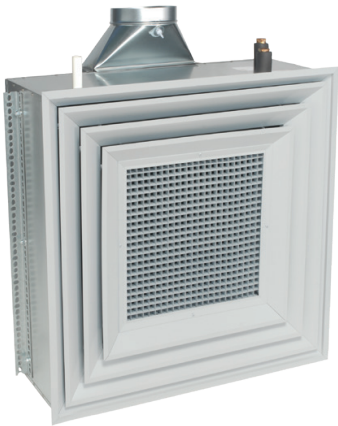


Hydronic Cassette
Fan Coil Units

AirStream™ 42WKN Hydronic Cassette
Fan Coil Units

0.75 to 3 Tons
ETL Listed

Induction Chilled Water



ActivAIR™ 36IB Induction Beams

70 to 1,285 cfm
Active Models
Sensible and Latent Cooling Capability



WeatherMaster® 36S
Induction Air Terminals

20 to 130 cfm
2 or 4 Pipe Designs

Unit Ventilators



AirStream™ 40UV, UH Unit Ventilators

750 to 1,500 cfm
AHRI Certified
ETL Listed

SPLIT SYSTEMS

Ductless Systems,
Single Zone



MP High Wall Systems

0.75 to 1 Ton
Up to 42.0 SEER/15.0 HSPF
ASHRAE 90.1 Compliant, AHRI Certified

38MA*R Heat Pumps

0.75 to 3 Tons

40MAQ High Wall
40MBCQ Cassette
40MBDQ Ducted
40MBFQ Floor Consoles

Up to 25.0 SEER/12.0 HSPF
ASHRAE 90.1 Compliant, AHRI Certified

MH High Wall Systems

0.75 to 2 Tons
Up to 17.5 SEER/9.0 HSPF
ASHRAE 90.1 Compliant, AHRI Certified

Ductless Systems,
Multi-Zone



MGR Systems

Up to 5 Zones
1.5 to 4 Tons
Up to 23.8 SEER/10.5 HSPF
ASHRAE 90.1 Compliant, AHRI Certified

Ductless Systems,
Light Commercial



RAV*AT

1.5 to 3.5 Tons

RAV*KRT High Wall
RAV*UT Cassette
RAV*BT Ducted
RAV*CT Underceiling

Up to 21.0 SEER/11.9 HSPF
ASHRAE 90.1 Compliant, AHRI Certified

MBR Ducted Systems

3 to 5 Tons
Up to 17.4 SEER/10.5 HSPF
ASHRAE 90.1 Compliant, AHRI Certified

Carrier Variable Refrigerant
Flow Systems



24AHA4 Cooling Only
25HHA Heat Pumps

1.5 to 5 Tons

MK*B High Wall
MK*C Cassette
MK*F Underceiling

14.0 SEER/8.2 HSPF
ASHRAE 90.1 Compliant, AHRI Certified

38VMH-1P Heat Pumps

3 to 5 Tons
Up to 19.2 SEER/Up to 10.0 HSPF

38VMH Heat Pumps

6 to 36 Tons
Up to 23.6 IEER/Up to 4.29 COP

38VMR Heat Recover

6 to 28 Tons
Up to 24.6 IEER/Up to 30.0 SCHE

40VM Indoor Units

0.6 to 8 Tons
ASHRAE 90.1 Compliant, AHRI Certified



Flexible BluEdge Services to Fit Your Needs.

BluEdge is a best-in-class lifecycle solution including customizable plans to ensure your equipment's peak performance and longevity is backed by unmatched expertise and the latest technology for years to come.

PREVENTIVE

FULL COVERAGE

⚙️ CORE	⊕ ENHANCE	🌟 ELITE
An economical solution for customers with IoT-enabled equipment that collects real-time data to improve staff efficiency and reduce unplanned downtime.	Complete preventive maintenance and technical expertise including proactive monitoring of health, efficiency and performance with actionable insights to identify opportunities for reducing operating costs and avoiding failures.	Our Elite plan is the ultimate worry-free, peace of mind program for clients. Realizing building comfort, efficiency and operational goals with Carrier turn-key solutions powered by predictive analytics and OEM expertise.
ABOUND HVAC PERFORMANCE ✓	✓	✓
24/7 EMERGENCY SUPPORT & PRIORITIZATION ✓	✓	✓
OPERATIONAL INSPECTIONS ✓	✓	✓
ANNUAL MAINTENANCE —	✓	✓
ON-SITE PREDICTIVE MAINTENANCE —	+	✓
IAQ OFFERINGS —	+	+
PREVENTIVE MAINTENANCE —	+	+
UNSCHEDULED REPAIRS, PARTS & LABOR —	—	✓

✓ INCLUDED ⊕ ADD ON — NOT INCLUDED

ABOUND | HVAC Performance

Abound HVAC Performance provides solutions that empower your team to visualize, advise, and optimize the lifecycle and outcomes of your HVAC system.

📊 Visualize

Empower facility teams with digital tools and dashboards to monitor HVAC assets

- ✓ Customer Portal
- ✓ Digital Dashboards
- ✓ Access to Command Center
- ✓ Vibration Analysis

💡 Advise

System experts to analyze data to deliver proactive health and performance insights

Visualize plus:

- ✓ Alarm and Alert Management
- ✓ Analytics to Predict and Diagnose
- ✓ Advanced Models Driving Repair Strategy

🔄 Optimize

Predictive analytics and dispatch to optimize key outcomes

Visualize and Advise plus:

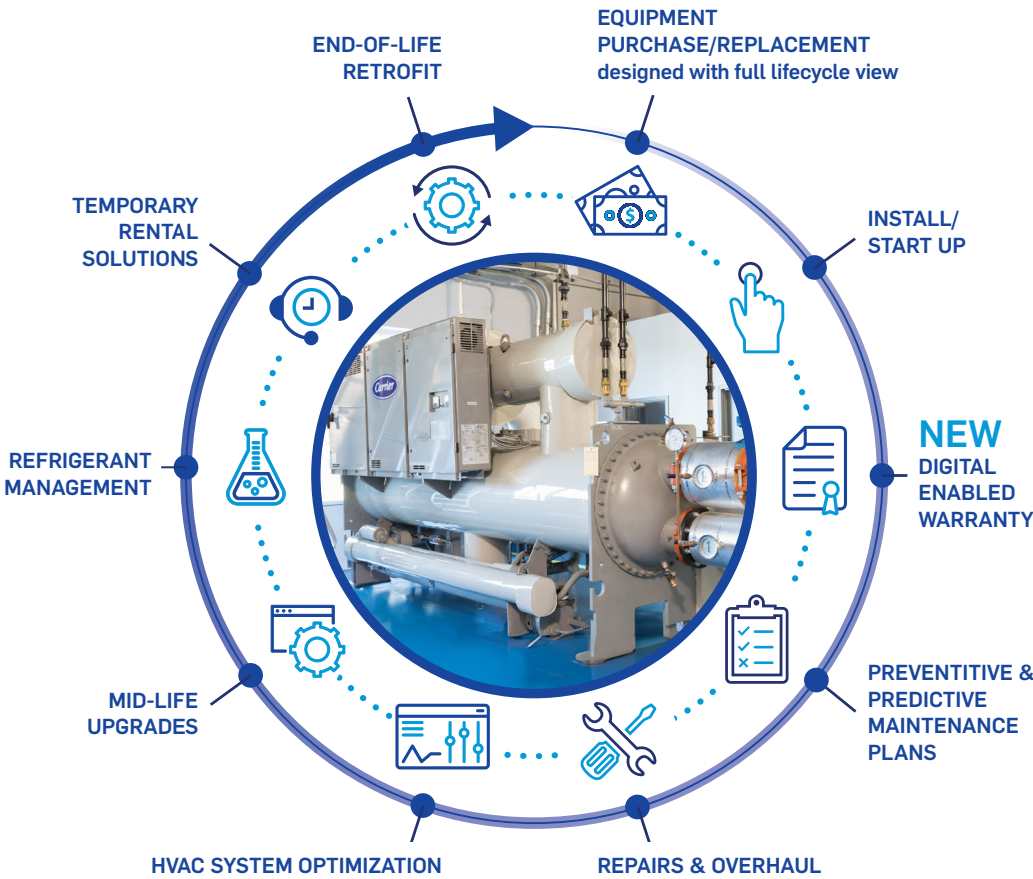
- ✓ Maximize Uptime and Availability
- ✓ Improved Energy Performance
- ✓ Condition-based Maintenance

Under development and testing

LIFECYCLE AND SERVICE SOLUTIONS
TAILORED TO YOUR BUILDING'S NEEDS

Partnering with Carrier Commercial for your service and lifecycle needs brings with it the security of knowing that every facet of your investment is being carefully monitored, analyzed, maintained and documented.

Let our knowledge and experience guide you in finding the right service agreement for your facility; one that supports you with the proper servicing and upgrades to maximize uptime, extend the life of your equipment, and reduce your total cost of ownership.



CARRIER COMMERCIAL SERVICE
OFFERINGS ALSO INCLUDE:

- **Preventive and Predictive Maintenance** with BluEdge service agreements and maintenance offerings such as coil cleaning, tube brushing, filter changes, and more.
- **Building Management Solutions** with Carrier i-Vu controls system
- **Equipment Replacement Solutions** for end of life retrofits or replacement parts
- **Modernization, Retrofits and Optimization** with digital connectivity, Variable Frequency Drive upgrades, energy audits and more

Toshiba Carrier Variable
Refrigerant Flow Systems



MCY7 Heat Pumps
3 to 5 Tons
Up to 22.7 SEER/Up to 11.5 HSPF

MMYH-U Heat Pumps
6 to 40 Tons
Up to 29.0 IEER/Up to 4.5 COP

MMYF-1P Heat Recover
6 and 12 Tons
Up to 26.6 IEER/Up to 31.3 SCHE

MMYF Heat Recovery
6 to 38 Tons
Up to 28.3 IEER/Up to 34.9 SCHE

MM-UP Indoor Units
0.6 to 10 Tons
ASHRAE 90.1 Compliant, AHRI Certified

Condensing Units,
Air-Cooled



Performance™ 24ACB
1.5 to 5 Tons
R-410A
AHRI Certified

Gemini® Select 38APD/S
25 to 130 Tons
R-410A
Exceeds ASHRAE 90.1, AHRI Rated

Gemini® 38AUZ/D
38AUZ 6 to 20 Tons
38AUD 6 to 25 Tons
R-410A
ASHRAE 90.1 Compliant,
AHRI Certified, Energy Star®



Gemini® 40RUA/Q/S
12.5 to 30 Tons

Gemini® 40RFA/Q/S
6 to 10 Tons

Heat Pump Systems



Gemini® 38AUQ
6 to 20 Tons
R-410A
ASHRAE 90.1 Compliant, AHRI Certified

Condensers,
Air-Cooled



Outdoor Air-Cooled Condensers 09AZ
90 to 200 Tons
R-134a

Indoor Air-Cooled Condensers 09XC
5 to 20 Tons
R-410A

Gemini® Select 09DP
18 to 130 Tons
R-410A

Carrier.com/Service | 800-379-6484

PACKAGED PRODUCTS

Packaged
Rooftop Units



WeatherExpert® 48LC, 50LC

6 to 23 Tons (VAV available)
Ultra High Efficiency
R-410A
Exceeds ASHRAE 90.1, IECC Compliant, AHRI Certified



WeatherExpert® with EcoBlue™ Technology 48JC, 50JC

3 to 5 Tons
Ultra High Efficiency
R-410A
Exceeds ASHRAE 90.1, IECC Compliant, AHRI Certified



WeatherMaster® with EcoBlue™ Technology 48GC, 50GC, 50GCQ

48GC, 50GC 3 to 25 Tons
50GCQ 3 to 10 Tons
High Efficiency
R-410A
Exceeds ASHRAE 90.1, IECC Compliant, AHRI Certified



WeatherMaker® with EcoBlue™ Technology 48FC, 50FC, 50FCQ

48FC, 50FC 3 to 27.5 Tons
50FCQ 3 to 25 Tons
Standard Efficiency
R-410A
ASHRAE 90.1 Compliant, IECC Compliant, AHRI Certified

Applied Rooftop Units



WeatherMaster® 48/50V Series

27.5 to 35 Tons
R-410A
ASHRAE 90.1 Compliant
IECC Compliant, AHRI Certified
Standard Greenspeed® Intelligence



WeatherMaster® 48/50P Series

40 to 100 Tons
R-410A
ASHRAE 90.1 Compliant
IECC Compliant, AHRI Certified
Optional Greenspeed® Intelligence



WeatherMaker® 48/50A Series

20 to 60 Tons
R-410A
ASHRAE 90.1 Compliant
IECC Compliant, AHRI Certified
Optional Greenspeed® Intelligence

Small Packaged Products



Performance™ 50VG, 48VG

High Efficiency 2 to 5 Tons
Packaged Cooling with Electric Heat or Gas Heat
R-410A

Comfort™ 50VL

Base Efficiency 2 to 5 Tons
Packaged Cooling with Electric Heat
R-410A

Comfort™ 50VT

Base Efficiency 2 to 5 Tons
Packaged Heat Pump
R-410A

Performance™ 50VR, 48VR

High Efficiency 2 to 5 Tons
Packaged Heat Pump or
Hybrid Heat Dual Fuel Heat Pump
R-410A

Comfort™ 48VL

Base Efficiency 2 to 5 Tons
Packaged Cooling with Gas Heat
R-410A

Comfort™ 48VT

Base Efficiency 2 to 5 Tons
Hybrid Heat Dual Fuel Heat Pump
R-410A

INTERACTIVE SOFTWARE TOOLS

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 that combines features for peak load estimating, system design, whole building energy modeling, energy modeling for schematic design. 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; Building System Optimizer, a tool for rapid energy modeling; 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. Further information on software features and license costs can be found at carrier.com/commercial/en/us/software/hvac-system-design.

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. The software is available through the HVACPartners.com customer portal.

Software Support and Training

All Carrier eDesign Suite and E-CAT software is backed by free support for licensed users. In addition, for-free software training is offered in cities across the U.S. and Canada every year. Training covers peak load estimating and system design, whole building energy modeling 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 (peak loads, system design, energy modeling)
- System Design Load (peak loads, system design)
- Block Load (peak loads, system design)
- Building System Optimizer (rapid energy modeling)
- Engineering Economic Analysis (lifecycle costing)
- Refrigerant Piping Design

Hourly Analysis Program (HAP) Capabilities

- Peak load estimating
- System design
- Whole building energy modeling
- Energy modeling for schematic design
- Visual 3D building modeling

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 modeling
- Advanced Modeling Techniques

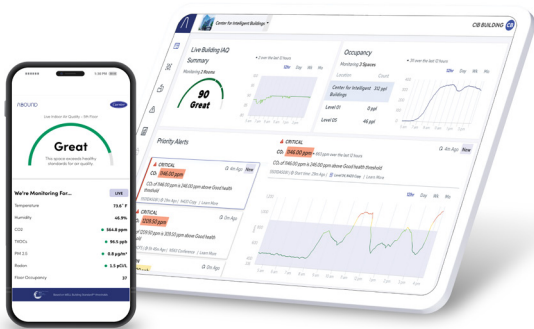
To learn more, visit us at
carrier.com/commercial

ABOUND

HVAC Performance

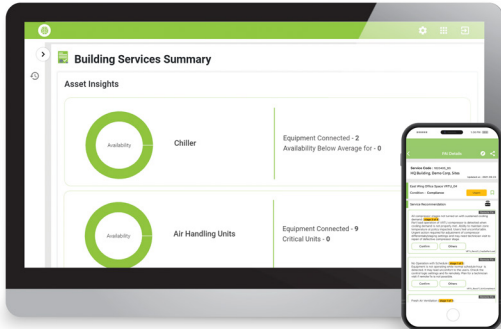
Abound™ is a cloud-based digital platform and suite of connected solutions that uses advanced technologies to aggregate, analyze, and visualize data to enable real-time, intelligent, outcome-based results. Abound allows building owners and managers to make decisions for their buildings to be more efficient, comfortable, healthy, and sustainable.

REMOTE SERVICE OFFERINGS



Healthy Air

- Aggregate, analyze, visualize and report on Indoor Air Quality and HVAC comfort against industry benchmarks like WELL™
- Enabled via wireless IOT sensors and equipment BMS integration



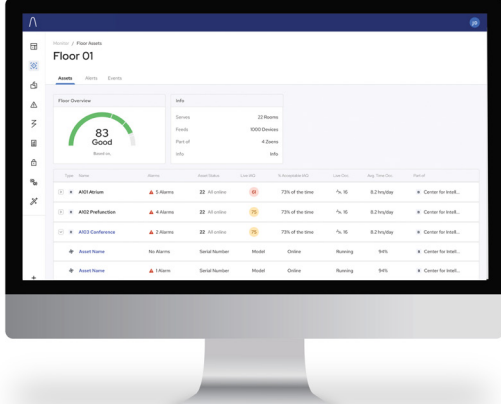
Predictive Insights

- Leverage AI to prevent unplanned downtime, improve energy efficiency and reduce operational costs of BAS and HVAC assets



Net Zero Management

- Track and analyze monthly energy use and benchmark
- Proactively identify conservation measures
- Automatically calculate and convert energy usage data to GHG emissions



Spaces

- People counting in entrance ways and large open spaces
- Understand space utilization against healthy, sustainable and operational goals

Launching 2024



Comfort™ 50ZP
Packaged Air Conditioner

Comfort™ 50ZH
Packaged Heat Pump

Indoor Self-Contained Systems



Omnizone™ 50XC Water-Cooled/
Air-Cooled/Remote Air-Cooled
5 to 20 Tons
R-410A
AHRI Certified



Omnizone™ 50BV
18 to 60 Tons
R-410A
ASHRAE 90.1 Compliant

WATER SOURCE AND GEOTHERMAL HEAT PUMPS



Aquazone™ 50PCH, 50PCV
Compact Units
0.5 to 6 Tons
R-410A
ASHRAE 90.1 Compliant



Aquazone™ 50PSH, PSV
Horizontal/Vertical Upflow
0.5 to 6 Tons
R-410A
Exceeds ASHRAE 90.1, AHRI Certified



Aquazone™ 50PTH, PTV
Horizontal/Vertical Upflow
2 to 6 Tons
R-410A
Exceeds ASHRAE 90.1, AHRI Certified



Aquazone™ 50PSW
Water-to-Water Units
3 to 35 Tons
R-410A
ASHRAE 90.1 Compliant



Aquazone™ 50HQP
Horizontal Large Capacity
6 to 20 Tons
R-410A
ASHRAE 90.1 Compliant, AHRI Certified

Aquazone™ 50VQP
Vertical Large Capacity
6 to 30 Tons
R-410A
Standard and Extended Range Models
ASHRAE 90.1 Compliant, AHRI Certified

DEDICATED OUTDOOR AIR PRODUCTS



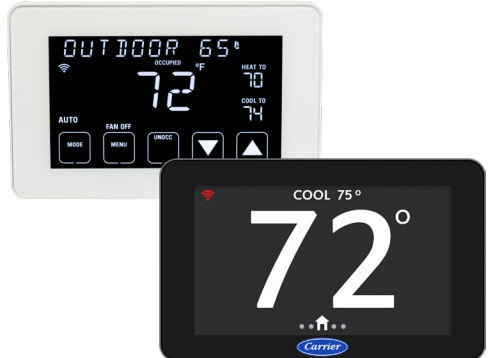
Aquazone™ 50PEC Console Units
0.75 to 1.5 Tons
R-410A
ASHRAE 90.1 Compliant, AHRI Certified



62X Air-Cooled DOAS Units
3 to 55 Tons
Optional Integrated ERV
Up to 1,200 MBH Gas Heat
Available Liquid Subcooling Reheat Package



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



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 appliance
- i-Vu® web-based software for on-premise server
- i-Vu® web-based software via Carrier cloud server
- 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

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 options:

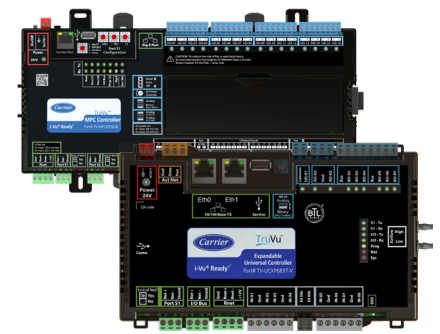
- Wired/Communicating
- Temperature
- CO₂
- Humidity
- Motion
- Light Level
- Particulate matter
- Volatile Organic Compounds (VOC)
- Energy metering

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.

Connect™ BACnet Thermostats

- **Color Capacitive Touchscreen:** 4.3" vibrant full-color LCD swipe and scroll screen that's easy to navigate and view from any angle
- **BACnet:** Easy integration with i-Vu system or any BACnet-compliant BMS
- **Sensors:** Onboard Temperature and Humidity
- **Direct Wi-Fi® Access:** Easily connect to your building's network
- **Applications:** Supports up to 4 heating and 3 cooling stages with various new or existing HVAC equipment with 24 VAC control
- **7-Day Scheduling:** Precisely adjust optimum comfort setpoints to achieve energy savings
- **Demand Response Ready:** For participation in local demand response programs
- **Over-the-Air Software Updates:** Directly sent over Wi-Fi network without having to manually check for update

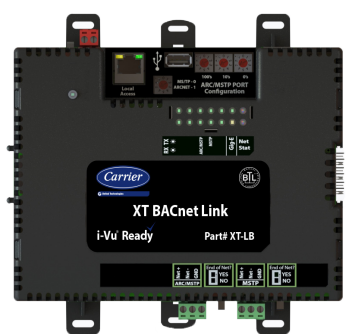


Programmable Controllers

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



Integration Modules/Routers

Expand your control system easily using Carrier i-Vu® routers and i-Vu® links. The i-Vu® router provides BACnet® routing capabilities between its control system's Ethernet backbone (BACnet/IP), and a subnetwork of Carrier controllers, (MS/TP or CCN).

Carrier 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.



Plant Control and Optimization

The Carrier® ChillerVu™ plant control system combines application-specific hardware and proprietary software to deliver total plant room automation and improved energy efficiency. Combining the ChillerVu™ plant control system with the ChillerVu™ chilled water system optimizer product results in complete chilled water system energy optimization, reducing overall system energy consumption, while ensuring occupant comfort, improving system reliability and minimizing system downtime.

- Advanced sequencing
- Preconfigured plant room graphics
- Preconfigured energy dashboards
- Water system optimization via intelligent setpoint reset

