Carrier

Turn to the experts

A World of Comfort

A Quick Reference Guide to Sustainable Building Solutions

For inquiries email:
ricks@acimechsales.com
(206) 767-2600

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split systems (continued)

Toshiba Carrier Variable Refrigerant Flow Systems

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

MMYH Heat Pumps
6 to 38 Tons
Up to 29.0 IEER/Up to 4.5 COP

MMYF-1P Heat Recovery
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-AP Indoor Units
0.6 to 8 Tons
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 38APD/S
25 to 130 Tons
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1, AHRI Rated

Gemini® 38AUZ/D
6 to 20 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant,
AHRI Certified, ENERGY STAR®

Heat Pump Systems

Gemini® 40RUA/Q/S
6 to 30 Tons

Gemini® 38AUQ
6 to 20 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant,
AHRI Certified

Condensers, Air-Cooled

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

Indoor Air-Cooled Condensers 09XC
5 to 20 Tons
HFC Puron® Refrigerant (R-410A)

Gemini® Select 09DP
18 to 130 Tons
HFC Puron® Refrigerant (R-410A)

38 Series CDUs 25 tons and up

A World of Comfort

Founded by the inventor of modern air conditioning, Carrier is a world 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

AquaSnap® 30RA Scroll Chillers

10 to 150 Tons (50 & 60Hz)
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant, AHRI Certified

AquaSnap® 30RB Scroll Chillers

60 to 300 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 90.1-2016,
AHRI Certified

AquaSnap® 30RAP with Greenspeed® Intelligence Scroll Chillers

10 to 60 Tons (50 & 60 Hz)
Exceeds ASHRAE 90.1-2016
Variable-Speed Condenser Fans

AquaSnap® 30RB with Greenspeed® Intelligence Scroll Chillers

80 to 390 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1-2016 Compliant,
AHRI Certified
Variable-Speed Condenser Fans
Heat Recovery Option

AquaForce® 30XV with Greenspeed® Intelligence Screw Chillers

140 to 500 Tons (50 & 60Hz)
HFC-134a
Exceeds ASHRAE 90.1-2016,
AHRI Certified
Variable-Speed Compressor and
Condenser Fans

AquaForce® 30XV Screw Chillers with Waterside Economizer

140 to 500 Tons (50 & 60Hz)
HFC-134a
Meets Requirements of ASHRAE 90.1-2016
Toward Incorporating Waterside Economizer

ACI

MECHANICAL & HVAC SALES
HELPING BUILDINGS THRIVE

Seattle: 206-767-2600

chillers (continued)

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

350 to 800 Tons
HFO-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 1,600 Tons
HFC-134a or HFC/HFO-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
HFC-134a or HFC/HFO-513A
ASHRAE 90.1 Compliant, AHRI Certified
Wide Operating Envelope

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

300 to 700 Tons
HFC-134a or HFC/HFO-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
HFC-134a
Exceeds ASHRAE 90.1, AHRI Certified
Wide Operating Envelope

improve

The AquaEdge® 23XRV is the world's leading efficiency screw chiller, 42% better than industry standard.**

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

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

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

16 to 71 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant, AHRI Certified*
Heat Recovery Option
Modular Design for Easy Installation

AquaEdge® 17DA Open-Dr Centrifugal Chillers

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

Carrier

*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-handling units

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.

Carrier OptiClean™ Dual-Mode Air Scrubber & Negative Air Machine FN1AAF

600 to 1,500 cfm
99.97% efficient, long-life HEPA filter removes particles as small as 0.3 microns.

air terminals

Axis™ 35E Single Duct VAV Terminals

23 to 7,100 cfm
AHRI Certified

Axis™ 35J Single Duct Retrofit Terminals

23 to 3,700 cfm
AHRI Certified

Axis™ 35K Bypass Terminals

45 to 4,400 cfm
AHRI Certified

Axis™ 35L/N Dual Duct VAV Terminals

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

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

90 to 3,900 cfm
AHRI Certified

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

90 to 3,900 cfm
AHRI Certified

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

100 to 2,000 cfm
AHRI Certified

45Q DOAS Terminals

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

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

AirStream™ 42WKN Hydronic Cassette Fan Coil Units

0.75 to 3 Tons
ETL Listed

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

AirStream™ 40UV, UH Unit Ventilators

500 to 2,000 cfm
AHRI Certified
ETL Listed

packaged products

Packaged Rooftop Units

WeatherExpert® 48LC, 50LC

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

WeatherExpert® with EcoBlue™ Technology 48JC, 50JC

3 to 5 Tons

WeatherMaster® 48HC, 50HC
3 to 5 Tons (Select Models)

WeatherMaster® 50HCQ
6 to 10 Tons
High Efficiency
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1
IECC Compliant, AHRI Certified

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

3 to 5 Tons
High Efficiency
HFC Puron® Refrigerant (R-410A)
Exceeds ASHRAE 90.1
IECC Compliant, AHRI Certified

WeatherMaker® 48TC, 50TC
7.5 to 27.5 Tons

WeatherMaker® 50TCQ
7.5 to 20 Tons
Standard Efficiency
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
IECC Compliant, AHRI Certified

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

3 to 6 Tons
Standard Efficiency
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
IECC Compliant, AHRI Certified

Applied Rooftop Units

WeatherExpert® 48/50N Series

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

WeatherMaster® 48/50P Series

30 to 100 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
IECC Compliant, AHRI Certified
Optional Greenspeed® Intelligence

WeatherMaker® 48/50A Series

20 to 60 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant
IECC Compliant, AHRI Certified
Optional Greenspeed® Intelligence

48/50 Series RTUs 25 tons and up
50 Series WSHP with aggregate 25 tons and up

packaged products (continued)

Indoor Self-Contained Systems

Comfort™ 50ZP
Packaged Air Conditioner

Comfort™ 50ZH
Packaged Heat Pump

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

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

Omnizone™ 50BV

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

water source and geothermal heat pumps

Aquazone™ 50PCH, 50PCV Compact Units

0.5 to 6 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant

Aquazone™ 50PSH, PSV Horizontal/Vertical Upflow

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

Aquazone™ 50PTH, PTV Horizontal/Vertical Upflow

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

Aquazone™ 50PSW Water-to-Water Units

3 to 35 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant

Aquazone™ 50HQP Horizontal Large Capacity

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

Aquazone™ 50VQP Vertical Large Capacity

6 to 30 Tons
HFC Puron® Refrigerant (R-410A)
Standard and Extended Range Models
ASHRAE 90.1 Compliant, AHRI Certified

Aquazone™ 50PEC Console Units

0.75 to 1.5 Tons
HFC Puron® Refrigerant (R-410A)
ASHRAE 90.1 Compliant, AHRI Certified

energy recovery

EnergyX® System Energy Recovery Ventilators (ERV)

WeatherMaster® Rooftops

dedicated outdoor air products

62X Air-Cooled DOAS Units

3 to 55 Tons
Optional Integrated ERV
Up to 1,200 MBH Gas Heat
Available Liquid Subcooling
Reheat Package

Building Automation Systems

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

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
- CO_2
- Humidity
- Motion
- Light Level

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

Controls coordinated with local Carrier branch sales team

improve

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

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, Arcnet 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.
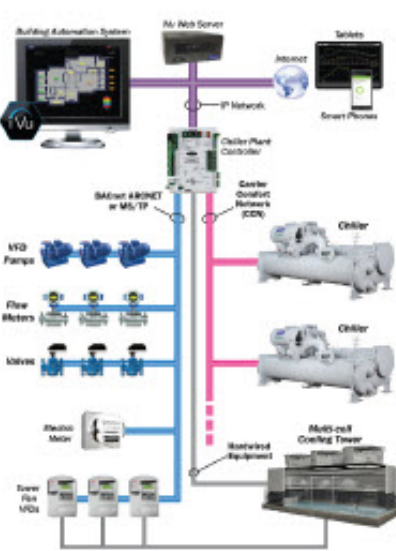

Plant Control and Optimization

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
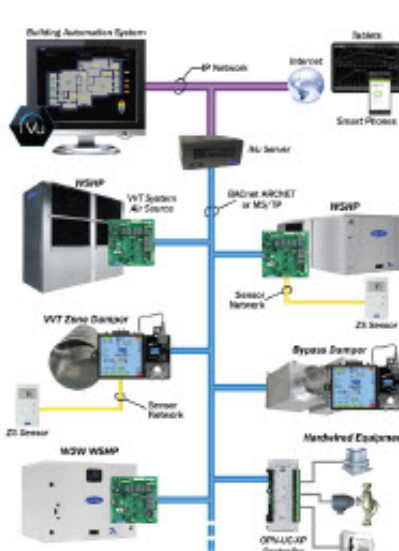- Water system optimization via intelligent setpoint reset

Water-Cooled Chillers

Packaged Rooftops

Water Source Heat Pumps

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, LEED® analysis and 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.

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-fee 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, applying HAP to the LEED 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 (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
- LEED Optimize Energy Performance analysis
- Energy modeling for schematic design

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
- HAP for LEED Optimize Energy Performance analysis

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

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. Carrier University's literature programs include books, PowerPoint presentations and narrated self-study programs. 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

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

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.

- Provides contact information for your local sales office
- Provides roof-curb adapter info on replacement jobs
- Provides cloud-based data updates to keep app current

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
- Provides cloud-based data updates to keep app current

Carrier apps are free and available for download at the Apple App Store for the iPad® tablet and iPhone®, and from Google Play for Android™ smartphones. Links to downloads are also available at carrier.com/commercial.

information at the click of a button

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.

Engineering Newsletter
The Carrier Engineering Newsletter is a quarterly communication providing helpful, topical information concerning industry news and HVAC design trends and solutions.

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.