



Efficient & High- Performing Chiller Designed for **DATA CENTERS**

AQUAFORCE® 30XF AIR-COOLED VARIABLE-SPEED
SCREW CHILLER



About Carrier

A COMPANY COMMITTED TO ENGINEERING INNOVATIVE HVAC EXPERTISE



Carrier is one of the global provider of healthy, safe, sustainable and intelligent building and cold chain solutions. We develop innovative products and services with the aim of positively impacting people and industries.

As innovators at heart and inventors by heritage, our drive for innovation continues today with a renewed focus on creating sustainable, efficient and high-performance solutions is likely to meet the needs of our clientele.

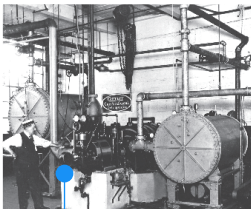
At Carrier, we see possibilities in everything, creating solutions that matter for people and our planet.

CARRIER'S HERITAGE: THE INVENTION THAT CHANGED THE WORLD

On July 17, 1902, Willis Carrier designed the first modern air-conditioning system to solve a problem at the Sackett & Wilhelms printing plant in Brooklyn, New York City. With this, he launched an industry that would fundamentally improve the way we live, work and play.



Willis Carrier developed the Carrier Air Humidifier.
1913



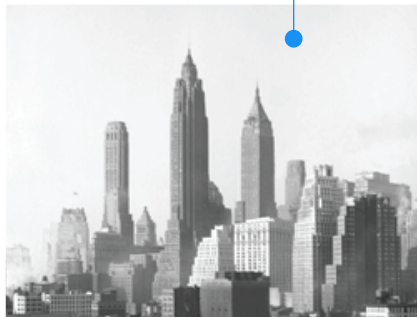
Carrier introduced the first home air conditioner.
1926



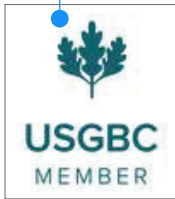
San Antonio, Texas, touts the world's first air-conditioned city bus.
1946



Carrier announced that the four biggest and most modern post-war skyscrapers in New York city would be air-conditioned from top to bottom by Carrier's Conduit Weather Master
1949



The University of Riyadh received two centrifugal chillers – marking the start of the largest comfort cooling installation in
1977

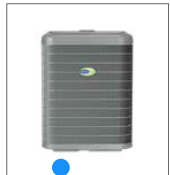


Carrier was instrumental in launching the U.S. Green Building Council® and was the first company in the world to join the
1993



Carrier Transicold, our land transportation solution, introduced the R134a refrigerant, coinciding with the production of the 100,000th container unit.
1993

Beijing National Stadium used Carrier air handling units.
2008



Carrier introduced Infinity®, an air source heat pump with the greatest heating efficiency.
2011

TIME named Carrier's OptiClean™ air scrubber a Best Invention of 2020.
2020



The world celebrates the 120th anniversary of modern air conditioning – an invention that fundamentally improved the way we live,
2022

THE CARRIER COMMITMENT

TO COMPLETE DATA CENTER OPTIMIZATION



The presence of data centers are now more important and strategic than ever before, but they also face greater scrutiny regarding their availability, flexibility and efficiency. As your data centers evolve to meet the needs of today, they deserve a cooling solution — and a trusted partner — that can evolve with it.

At Carrier, we deliver innovative solutions that meet your requirements, equipping you to confidently meet data center challenges. Our reliable range of HVAC systems efficiently cool operations, while reducing your energy consumption and carbon footprint. Our management systems integrate building and IT infrastructure for greater visibility and optimization, while our service and support help you enjoy a peace of mind by enabling continuous operations.

All this to ensure you have the confidence to operate with optimized performance at every turn of the data center lifecycle — and at Carrier, it's delivered by design.



AQUAFORCE® 30XF AIR-COOLED CHILLER

THE EFFICIENT DATA CENTER PARTNER

A premium cooling solution ideal for data center operations, the Carrier 30XF Air-Cooled Chiller is designed with an optimized combination of best-in-class technologies.



Reduced Energy Consumption

Exceptional performance of COP and IPLV at part load operations for lowered energy consumption.



Built-In Solution

Easier transportation and installation facilitated with inbuilt active harmonic filters and hydraulic kit with no requirement of external installation components.



Advanced, Intelligent Energy Monitoring

Integrated with user-friendly SmartVU™ intelligent control to display real-time service parameters. Offers an innovative energy monitoring system with current data on electrical energy consumption, cooling capacity and both instantaneous and average values of machine's energy efficiency. To maximize energy savings, it can also be remotely monitored with Carrier experts to carry out a diagnosis and optimize electricity consumption.



Free Cooling

100% Hydronic free-cooling harnesses the natural temperature difference with the external environment to cool indoor spaces without refrigeration, delivering up to 50% energy savings and significantly reducing operational costs while ensuring optimal performance.



Service Continuity and Redundancy

Equipped with an ultra-fast capacity recovery option for 100% recovery as low as 120 seconds in case of power outages, therefore improving uptime.



Improved Unit Performance

Permanent magnet motor on the compressor increases electrical performance at full-load and part-load operations. This results in improved overall efficiency during mechanical operations with no slip or rotor loss.



Low Noise Levels

Significantly reduced compressor and fan noise owing to new-generation Carrier 06Z variable-speed twin-screw compressor with integrated resonance attenuator and newly designed low-noise fans. An optional acoustic cover can be fitted for the screw compressor to further reduce noise levels.



Low-GWP Refrigerants

Available with ultra low GWP refrigerant of R1234ze(E), Low GWP refrigerant R513A & R134a.



MODEL DESCRIPTION (R134a & R513A)

| | | | | | |
|------|---|------|-------|--|---|
| 30XF | A | 1152 | PT015 | | |
| | | | | Option codes | Description |
| | | | | 012 | High-Static Fan (120Pa) |
| | | | | 012B | High-Speed Fan (60Hz) |
| | | | | 015 | Low Noise (Sheet Metal Enclosure) |
| | | | | 015S | Super Low Noise |
| | | | | 263 | E-Coating |
| | | | | 842 | ASME Heat Exchanger |
| | | | | 020A | IP54 Control Box |
| | | | | 148B | J-Bus Gateway |
| | | | | 148C | BACnet Gateway |
| | | | | 148D | Lon Gateway |
| | | | | 156 | Energy Management Module |
| | | | | 158A | 7" Touch Screen |
| | | | | 275 | Remote Controller |
| | | | | 282 | EMC Classification C2 |
| | | | | 295 | Ultra Fast Capacity Recovery |
| | | | | 301 | Lead/Lag Control |
| | | | | 329D | Compressor with Induction Motor |
| | | | | 041A | Water Exchanger Frost Protection |
| | | | | 041B | Evaporator and Hydronic Kit (Anti-freeze Protection) |
| | | | | 081AT | ATS (Automatic Transfer Switch) |
| | | | | 093A | Compressor Discharge Valves |
| | | | | 104 | 1.6Mpa Evaporator |
| | | | | 107 | Reversed Evaporator Connection |
| | | | | 281 | Evaporator with Aluminum Jacket |
| | | | | 299 | 38mm Evaporator Insulation |
| | | | | 305A | Spring Damping |
| | | | | 309D | Isolate Valve for Safety Valve (Dual Safety Valve) |
| | | | | 312A | Australian Compliance |
| | | | | 314 | Flange Connection |
| | | | | 324A | AHF THiD 5% (Unit Mount) |
| | | | | 901 | Water-Side Plate with Aluminum Spray Coating |
| | | | | | |
| | | | | Unit cooling capacity code | |
| | | | | A – R134a Refrigerant | |
| | | | | C – R513A Refrigerant | |
| | | | | Variable frequency screw air-cooling unit | |



OPERATING RANGE (R134a & R513A)

| Evaporator water temperature | °C | Minimum | Maximum |
|---|----|---------|---------|
| Water entering temperature at start-up | - | | 45* |
| Water entering temperature during operation | | 6.8 | 30 |
| Water leaving temperature during operation | | 3.3 | 20 |
| Note: If the leaving water temperature is below 4°C, a glycol/water solution or the frost protection option must be used. | | | |
| Condenser air temperature | | Minimum | Maximum |
| Storage | | -20 | 68 |
| Operation | | -20 | 50** |

Note: If the air temperature is below 0°C, a glycol/water solution or the frost protection option must be used.

*Based on the installation type and the air temperature | **Part load, based on the water temperature

MODEL DESCRIPTION (R1234ze(E))

| 30XF | Z | 2100 | PT015 | Option codes | Description |
|------|---|------|-------|---|--|
| | | | | 012B | High speed fan at 1140rpm |
| | | | | 15 | Low noise (sheet metal enclosure) |
| | | | | 015LS | Super low noise |
| | | | | 020A | Ip54 control box protect box |
| | | | | 023A | Improves aesthetics and piping protection against impacts |
| | | | | 041A | Evaporator frost protection |
| | | | | 041B | Evaporator & hydraulic module frost protection |
| | | | | 85A | Chiller connect to 2 seprated power supplied (Control , Main Pumps & Heaters connect to external UPS 400V) |
| | | | | 85B | Chiller connect to 2 separated power supplied (Control connect to 230V UPS only) |
| | | | | 92 | Service valve set |
| | | | | 116V | Hp vfd single pump hydraulic module |
| | | | | 149B | Modbus over IP and rs485 |
| | | | | 149 | Bacnet over IP |
| | | | | 152P | Remote pump control |
| | | | | 156+ | Energy management module plus |
| | | | | 194 | Dual relief valves on 3-way valve |
| | | | | 200 | Australian regulation |
| | | | | 232 | Capacity booster |
| | | | | 256 | Insulation of the evap. in/out ref.lines |
| | | | | 263 | Super enviro-shield anti-corrosion protection (e-coat) |
| | | | | 263AC | E-coat on free cooling coils |
| | | | | 266 | Welded evaporator connection kit |
| | | | | 295+ | Ultra fast capacity recovery |
| | | | | 305A | Total hydraulic intergrated free-cooling |
| | | | | 305C | Total hydraulic free-cooling – glycol free |
| | | | | 329 | Compressor with permanent magnet |
| | | | | 331 | Plastic tarp |
| | | | | 338 | Hydraulic free-cooling removal |
| | | | | 340A | Ats(automatic transfer switch) |
| | | | | 346A | Configurable active harmonic filter 150a |
| | | | | 346B | Configurable active harmonic filter 300a |
| | | | | 346C | Configurable active harmonic filter 450a |
| | | | | 70D | Main disconnect switch with shortcircuit protection |
| | | | | 282 | Emc class. c2. as per en 61800-3 |
| | | | | 284 | 230v electrical plug |
| | | | | 294 | Energy metering |
| | | | | 335 | 400-3-60 power supply |
| | | | | 337 | Surge arrester |
| | | | | Unit cooling capacity code | |
| | | | | Z- R1234ze(E) | |
| | | | | Variable frequency screw air-cooling unit | |



OPERATING RANGE (R1234ze(E))

| Unit operating range | | | |
|--|----|--------------------|-------------------|
| Water Heat Exchanger | | Minimum | Maximum |
| Water inlet temperature at start-up | °C | - | 45 ⁽¹⁾ |
| Water inlet temperature during operation | °C | 6.8 | 36 |
| Water outlet temperature during operation | °C | 3,3 ⁽²⁾ | 26 |
| Water inlet- outlet temperature difference during operation at full load | °C | 3 | 15 |
| Air Heat Exchanger | | Minimum | Maximum |
| Ambient air temperature during storage | °C | -20 | 68 |
| Ambient air temperature during operation | °C | -20 ⁽³⁾ | 55 |

Note:

The use of brine or antifreeze protection option is required if pure water is to be used and to be cooled below 4°C.

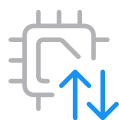
If the air temperature is to fall below 0°C, a glycol/water solution or the freeze protection option must be used.

(1) Operating at partial load

(2) According to the type of installation and air temperature.

(3) Options 41A/41B mandatory for start-ups below -5°C.

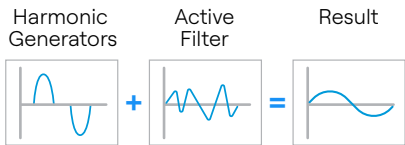
DESIGNED TO MEET DATA CENTER REQUIREMENTS



Automatic Transfer Switch



Ultra Fast Capacity Recovery



Active Harmonic Filter



Brand-New 06Z Compressor



Variable Speed Fan



Design of Wind Side Micro Channel Heat Exchanger



Variable Frequency Starting



Modular Design



Free Cooling



Extensive Low-Noise Options



Carrier SmartVU™
Control System



Low-GWP Refrigerants

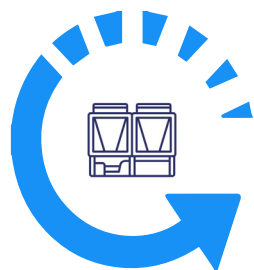


Automatic Transfer Switch

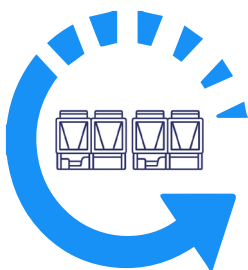


- Advanced and intelligent power-switching device guided by a dedicated control logic
- Ensures a continuous supply of electricity from one of two power sources to a connected load circuit

Ultra Fast Capacity Recovery



Single Circuit Chiller:
60 seconds at 100% Load*



Dual Circuit & Duplex Chiller:
120 seconds at 100% Load*

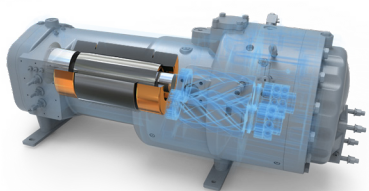
- Delay in chiller restart and capacity regain following power outage may increase water temperature and potentially affect the desired operation; an additional water volume system or loop is deployed to overcome the issue
- This feature ensures an immediate restart of chiller operations after power restoration with 100% capacity recovery in less than 3 minutes

Active Harmonic Filter



- Can be selected to eliminate harmonics at the source, with less than 5% of Total Harmonic Distortion
- The option maintains a low and safe level of harmonics to ensure reliability
- No energy is lost in the distribution system with higher power optimization in data centers
- This unit-mounted option helps in maintaining a clean electrical environment

Brand-New 06Z Compressor



- Newly optimized tooth number pairing ratio with precise meshing for lower compressor vibration and lower unit leakage rate as compared to previous generation of compressors
- Compressor adopts a slide valve-free design to achieve full frequency conversion adjustment, effectively reducing mechanical losses with a larger adjustment range and precise control
- Internal pressure ratio control valve achieves precise adjustment; by opening and closing internal solenoid valve according to diverse pressure loads and ratios, it adapts to varied working conditions and significantly improves unit performance under partial loads
- Variable speed compressor had a wide operating range with a single unit operating load as low as

Variable Speed Fan



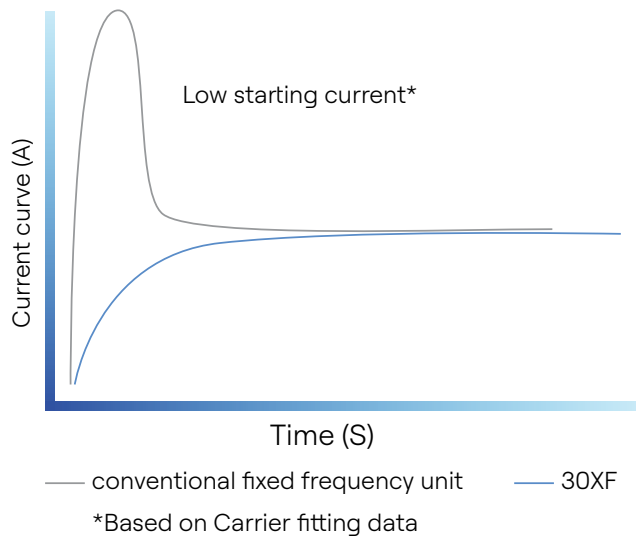
- Significantly increases air volume and lowers fan noise
- Impeller design incorporates composite materials and integral casting mold
- Shield reduces leakage and turbulence between impeller and air outlet
- Efficient variable speed fan motor with 80% motor efficiency

Design of Wind Side Micro Channel Heat Exchanger



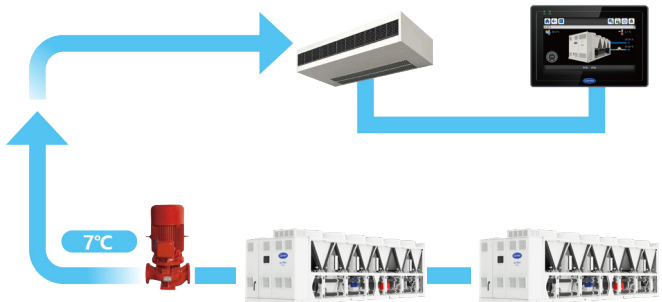
- Refrigerant uses micro channel heat exchanger technology on wind side to lower refrigerant filling and protect the environment
- Sturdy and reliable standard nano level TCP coating on the fins' surface enables to improve their anti-corrosion performance while maintaining heat transfer performance without being affected; higher anti-corrosion E-coating can also be opted to achieve better anti-corrosion results
- V-shape coil design which is conducive to uniform distribution of wind field, ensuring exceptional unit performance

Variable Frequency Starting



Using a frequency converter to achieve soft start of the compressor, the low starting current avoids impact of excessive starting current on the power grid caused by conventional

Modular Design



Modules can be connected in series to avoid operational interference and achieve stable control of water temperature. This ensures more stable operations of the unit.

*Please refer to your local sales representative for more information.

Free Cooling



- 100% Hydronic free-cooling harnesses the natural temperature difference with the external environment to cool indoor spaces without refrigeration, delivering up to 50% energy savings and significantly reducing operational costs while ensuring optimal performance

Extensive Low-Noise Options

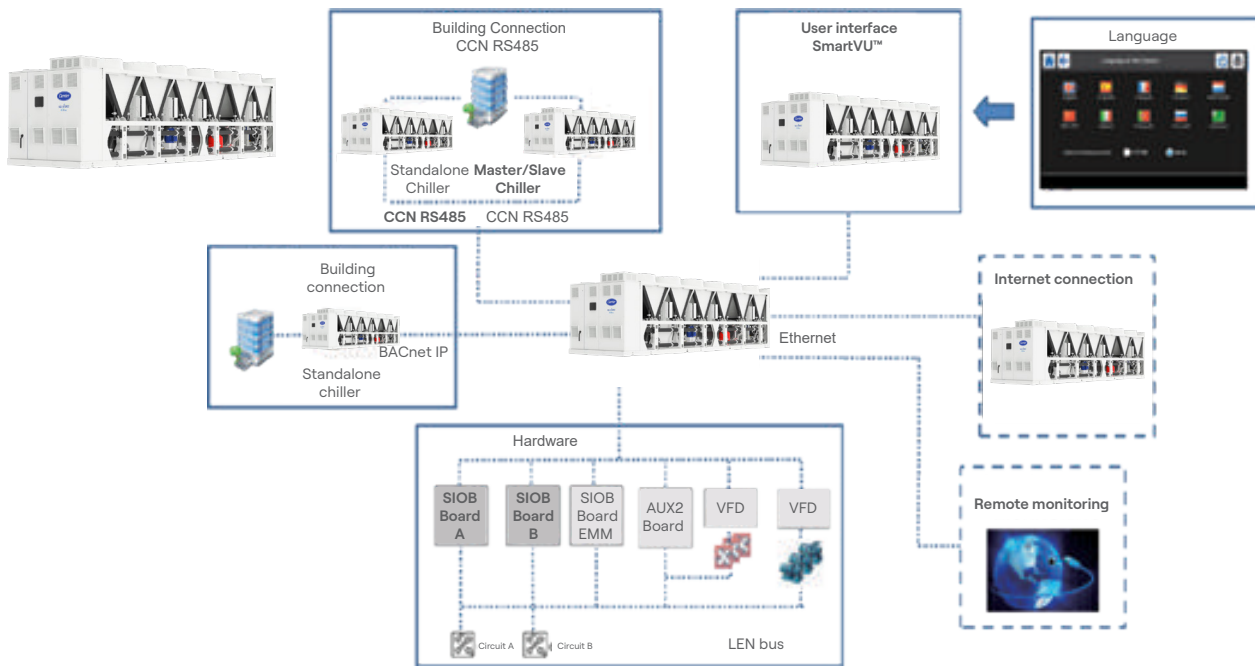


- Varied noise reduction options can be customized as per requirements
- Ultra-low noise option is based on, where compressor suction pipe is packed with sound-absorption materials and equipped with a low-noise fan to further lower the machine's overall noise
- Spring damping balances the weight unit combined with compressor vibration dampers to form dual vibration reduction which efficiently alleviates noise transmission caused by unit vibration across the building structure
- Hardware soundproof cover can further isolate the noise of components such as exhaust pipes and compressors


CARRIER SmartVu™ CONTROL SYSTEM

An integrated, dynamic and intelligent touch-screen system, enjoy enhanced equipment and system management with the intelligent Carrier SmartVu™. It is equipped with a host of advanced features that ensure productivity, connectivity and efficiency.


SmartVu™ also comes with intelligent protocol module Wi-Fi that supports CCN, BACnet IP, Modbus TCP/IP and Modbus RTU protocols, leveraging the Carrier Smart Service based on Big Data Processing.




Features



Intuitive
Touch Screen Interface



PID to Indicate All
Parameter Data for Chiller



Email Alerts







Image Tile
Menu Layout



DCT for Simplified
Service Operations



Time Scheduling for
Reduced Energy Bills



Direct Access to
Service Documents



MAINTENANCE YOU CAN COUNT ON

Maximize performance, protect your investments and maintain your HVAC budget with the customizable BlueEdge service platform. Carrier helps you create a plan that ensures your equipment's peak performance and longevity.



First Year Service Contract

When you purchase certain qualifying equipment, you'll benefit from our complimentary BlueEdge First Year Service Contract. Includes operating inspections by factory-certified Carrier technicians provided during the standard equipment warranty period. You'll also receive high priority for non-scheduled service events.

Customers with IoT-enabled equipment will receive digital support that includes advance notifications, remote diagnostics and enhanced field service support.

BlueEdge Services

24/7 Emergency Support & Prioritization

Stay ahead of failures and reduce operating costs, available 24/7. Service agreement customers receive priority for service calls.

IAQ Offerings

Continuously monitor various air quality parameters and conditions for changes so adjustments can be made to get indoor air quality to healthy levels.

Digital offerings

Connect your equipment to Carrier's cloud-based IoT platform, securely sharing real-time data to visualize, analyze and optimize machine health and life cycle outcomes.

Annual Preventive Maintenance

Our technicians perform thorough maintenance in machine shutdown mode that ensures longevity and higher reliability when placed back into service. Cooling and heating start-up services ensure optimal seasonal performance.

Operating Inspections

Carrier thoroughly inspects and adjusts your equipment

Preventive Maintenance

Receive more frequent preventive maintenance outside of the standard preventive maintenance schedules based on individual equipment requirements and needs.

Predictive Maintenance

Advanced diagnostic service options expose hidden problems before they become emergency issues and schedule repairs at times most convenient for you.

Unscheduled Repairs, Parts & Labor

Repair or replacement of moving parts and maintainable



Carrier-certified technicians understand the intricacies of your business and the daily demands on the equipment in your facility.

How we ensure the highest-quality customer service:

- ✂ Factory-trained and certified technicians
- ⚙ Carrier factory-authorized parts
- ⌚ Comprehensive HVAC equipment expertise across all brands
- 🔒 Focus on safety and efficiency
- 📋 Standard procedures
- 🤝 Customer-focused service team
- 👍 First year service contract with qualifying equipment

WE SERVICE ALL EQUIPMENT BRANDS

We have extensive experience servicing all major heating, ventilation and cooling manufacturers' equipment, as well as excellent technical understanding of HVAC

[Air- and Water-Cooled](#)

[Chillers](#)

[Packaged Unitary Equipment](#)

[Air Handling Units](#)

[Cooling Towers](#)

[Building Controls](#)

[Heat Exchangers](#)

[Boilers](#)

[Split Systems](#)

[Pumps](#)

CARRIER COMMERCIAL SERVICE SOLUTIONS



HEALTHY BUILDINGS

Suite of advanced solutions to help deliver healthier, safer, more efficient and productive indoor air quality regardless of your building type/indoor environment.



DIGITAL OFFERINGS

Advanced analytics and actionable insights to deliver key outcomes. Connected chillers receive 24/7 support from the BlueEdge Command Center with real-time monitoring by top-tier engineers.



CARRIER RENTAL SYSTEMS

Specialized cooling, heating, dehumidification and power generation rental equipment for temporary solutions and long-term projects.



CARRIER I-VU® BUILDING AUTOMATION

Building automation and control products help optimize the use of HVAC systems to deliver healthier, more

CARRIER 30XF TECHNICAL SPECIFICATIONS (R134a & R513A)

| Model | | Unit | 0501 | | 0651 | | 0751 | | 0851 | | 1002 | |
|-----------------------------|-----------------|------|---|-------|-----------------------|-------|-----------------------|-------|-----------------------|-------|------------------------|-------|
| | | | R134a | R513A | R134a | R513A | R134a | R513A | R134a | R513A | R134a | R513A |
| Nominal cooling capacity | IDC 1 condition | kW | 738.3 | 737.8 | 928.7 | 928.3 | 1,129 | 1,128 | 1,275 | 1,275 | 1,497 | 1,496 |
| Compressor power | | | 172.2 | 178.8 | 213.7 | 222 | 254.1 | 263.8 | 291.4 | 302.5 | 349.8 | 363.3 |
| Total power | | | 184 | 190.6 | 228 | 236.6 | 271.5 | 281.2 | 311.6 | 322.7 | 372.8 | 386.3 |
| Cooling capacity | IDC 2 condition | | 587.1 | 546.6 | 739.9 | 689.1 | 876.3 | 814.9 | 1,024 | 952.9 | 1,174 | 1,092 |
| Compressor power | | | 169.8 | 162 | 204.6 | 198 | 233.1 | 222 | 274 | 259 | 335.4 | 318 |
| Total power | | | 181.6 | 174 | 219.2 | 212 | 250.5 | 239 | 294.2 | 280 | 358.4 | 341 |
| Minimum capacity | | % | 25% | | 30% | | 25% | | 25% | | 10% | |
| Refrigerant(s) | | | R134a/R513A | | | | | | | | | |
| Circuit A | | kg | 85 | | 95 | | 130 | | 145 | | 85 | |
| Circuit B | | | - | | - | | - | | - | | 85 | |
| Circuit C | | | - | | - | | - | | - | | - | |
| Circuit D | | | - | | - | | - | | - | | - | |
| Compressor | | | Variable Speed Semi-Hermetic Screw Compressor | | | | | | | | | |
| Circuit A | | | 1 | | 1 | | 1 | | 1 | | 1 | |
| Circuit B | | | - | | - | | - | | - | | 1 | |
| Circuit C | | | - | | - | | - | | - | | - | |
| Circuit D | | | - | | - | | - | | - | | - | |
| Control | | | Carrier SmartVU™ System | | | | | | | | | |
| Condenser | | | Micro Channel | | | | | | | | | |
| Fans | | | VI generation FlyingBird axial fan | | | | | | | | | |
| Quantity | | | 8 | | 10 | | 12 | | 14 | | 16 | |
| Total airflow | IDC1 condition | L/s | 40,084 | | 50,105 | | 60,127 | | 70,148 | | 80,169 | |
| Fan speed | | RPM | 950 | | | | | | | | | |
| Total airflow | IDC2 condition | L/s | 40,084 | | 50,105 | | 60,127 | | 70,148 | | 80,169 | |
| Fan speed | | RPM | 950 | | | | | | | | | |
| Evaporator | | | Flooded Heat Exchanger | | | | | | | | | |
| Water content | | L | 84 | | 101 | | 101 | | 127 | | 146 | |
| Nominal flow rate | IDC1 condition | L/s | 18 | | 22 | | 27 | | 31 | | 35 | |
| Nominal pressure drop | | kPa | 8 | | 11 | | 19 | | 24 | | 43 | |
| Flow rate | IDC2 condition | L/s | 14 | | 18 | | 21 | | 25 | | 28 | |
| Pressure drop | | kPa | 5.50 | | 7.35 | | 11.9 | | 15.8 | | 27.6 | |
| Connection | | | Victaulic | | | | | | | | | |
| Nominal Diameter | | DN | 150 | | 150 | | 150 | | 150 | | 150 | |
| Electrical data | | | | | | | | | | | | |
| Power supply | | | 400V-3Ph-50Hz | | | | | | | | | |
| Control power supply | | | 24V via Internal Transformer | | | | | | | | | |
| Start-up method | | | VFD Start | | | | | | | | | |
| Fan and control power | | kW | 11.8 | | 14.6 | | 17.4 | | 20.2 | | 23.0 | |
| Maximum unit current draw | Circuit A+B | A | 314 | | 388 | | 453 | | 518 | | 625 | |
| | Circuit C+D | | - | | - | | - | | - | | - | |
| Maximum start-up current | Circuit A+B | | 314 | | 388 | | 453 | | 518 | | 625 | |
| | Circuit C+D | | - | | - | | - | | - | | - | |
| Max operation power | Circuit A+B | kW | 202 | | 250 | | 292 | | 334 | | 402 | |
| | Circuit C+D | | - | | - | | - | | - | | - | |
| Unit dimensions (L x W x H) | | mm | 6,982 x 2,253 x 2,297 | | 6,982 x 2,253 x 2,297 | | 8,176 x 2,253 x 2,297 | | 9,370 x 2,253 x 2,297 | | 10,519 x 2,253 x 2,297 | |
| Shipping weight | | kg | 5,096 | | 5,751 | | 6,376 | | 6,774 | | 8,683 | |
| Operating weight (Standard) | | | 4,935 | | 5,600 | | 6,255 | | 6,610 | | 8,475 | |

- Notes:
1. IDC1 Condition: entering/leaving water temperature = 30/20°C, outdoor air temperature = 35°C, fouling factor = 0.018m2K/kW
2. IDC2 Condition: entering/leaving water temperature = 30/20°C, outdoor air temperature = 45°C, fouling factor = 0.018m2K/kW
3. Allowable voltage fluctuations ±10%
4. Models A and B are shipped independently for Models 1300 to 1700
5. Both R134a and R513A refrigerants are AHRI-certified

| Model | | Unit | 1152 | | 1300 | | 1400 | | 1500 | | 1600 | | 1700 | |
|-----------------------------|-----------------|------|---|------------------------|-------|------------------------|-------|------------------------|-------|------------------------|-------|------------------------|-------|-------|
| | | | R134a | R513A | R134a | R513A | R134a | R513A | R134a | R513A | R134a | R513A | R134a | R513A |
| Nominal cooling capacity | IDC 1 condition | kW | 1,731 | 1,730 | 1,834 | 1,833 | 2,021 | 2,020 | 2,223 | 2,223 | 2,384 | 2,384 | 2,519 | 2,519 |
| Compressor power | | | 396.2 | 411.8 | 422.6 | 438.9 | 462.4 | 480.1 | 503.4 | 522.8 | 542.1 | 563.6 | 579.5 | 601.6 |
| Total power | | | 422.3 | 437.6 | 451.2 | 467.5 | 493.8 | 511.5 | 537.6 | 557 | 579.1 | 600.6 | 619.3 | 641.4 |
| Cooling capacity | IDC 2 condition | | 1,318 | 1,226 | 1,451 | 1,351 | 1,597 | 1,486 | 1,744 | 1,622 | 1,882 | 1,750 | 2,028 | 1,887 |
| Compressor power | | | 362.5 | 347.4 | 399.6 | 383.7 | 434.1 | 414.4 | 469.1 | 445.4 | 501.5 | 475 | 546.4 | 516.4 |
| Total power | | | 388.3 | 373.2 | 428.2 | 412.3 | 465.5 | 445.8 | 503.3 | 479.6 | 538.5 | 512 | 586.2 | 556.2 |
| Minimum capacity | | % | 15% | | 15% | | 15% | | 15% | | 15% | | 15% | |
| Refrigerant(s) | | | R134a/R513A | | | | | | | | | | | |
| Circuit A | | kg | 120 | 95 | | 95 | | 135 | | 135 | | 145 | | |
| Circuit B | | | 70 | - | | - | | - | | - | | - | | |
| Circuit C | | | - | 95 | | 135 | | 135 | | 145 | | 145 | | |
| Circuit D | | | - | - | | - | | - | | - | | - | | |
| Compressor | | | Variable Speed Semi-Hermetic Screw Compressor | | | | | | | | | | | |
| Circuit A | | | 1 | 1 | | 1 | | 1 | | 1 | | 1 | | |
| Circuit B | | | 1 | - | | - | | - | | - | | - | | |
| Circuit C | | | - | 1 | | 1 | | 1 | | 1 | | 1 | | |
| Circuit D | | | - | - | | - | | - | | - | | - | | |
| Control | | | Carrier SmartVU™ System | | | | | | | | | | | |
| Condenser | | | Micro Channel | | | | | | | | | | | |
| Fans | | | VI generation FlyingBird axial fan | | | | | | | | | | | |
| Quantity | | | 18 | 20 | | 22 | | 24 | | 26 | | 28 | | |
| Total airflow | IDC1 condition | L/s | 90,190 | 100,211 | | 110,232 | | 120,253 | | 130,274 | | 140,295 | | |
| Fan speed | | RPM | 950 | | | | | | | | | | | |
| Total airflow | IDC2 condition | L/s | 90,190 | 100,211 | | 110,232 | | 120,253 | | 130,274 | | 140,295 | | |
| Fan speed | | RPM | 950 | | | | | | | | | | | |
| Evaporator | | | Flooded Heat Exchanger | | | | | | | | | | | |
| Water content | | L | 174 | 202 | | 202 | | 202 | | 228 | | 254 | | |
| Nominal flow rate | IDC1 condition | L/s | 43 | 44 | | 49 | | 53 | | 57 | | 61 | | |
| Nominal pressure drop | | kPa | 14 | 25 | | 29 | | 35 | | 40 | | 43 | | |
| Flow rate | IDC2 condition | L/s | 32 | 35 | | 38 | | 42 | | 45 | | 49 | | |
| Pressure drop | | kPa | 8.18 | 17.9 | | 21.2 | | 24.8 | | 27.9 | | 31.0 | | |
| Connection | | | | | | | | | | | | | | |
| Nominal Diameter | | DN | 150 | 150 | | 150 | | 200 | | 200 | | 200 | | |
| Electrical data | | | | | | | | | | | | | | |
| Power supply | | | 400V-3Ph-50Hz | | | | | | | | | | | |
| Control power supply | | | 24V via Internal Transformer | | | | | | | | | | | |
| Start-up method | | | VFD Start | | | | | | | | | | | |
| Fan and control power | | kW | 25.8 | 28.6 | | 31.4 | | 34.2 | | 37.0 | | 39.8 | | |
| Maximum unit current draw | Circuit A+B | A | 688 | 388 | | 388 | | 453 | | 453 | | 518 | | |
| | Circuit C+D | | - | 388 | | 453 | | 453 | | 518 | | 518 | | |
| Maximum start-up current | Circuit A+B | | 688 | 388 | | 388 | | 453 | | 453 | | 518 | | |
| | Circuit C+D | | - | 388 | | 453 | | 453 | | 518 | | 518 | | |
| Max operation power | Circuit A+B | kW | 443 | 250 | | 250 | | 292 | | 292 | | 334 | | |
| | Circuit C+D | | - | 250 | | 292 | | 292 | | 334 | | 334 | | |
| Unit dimensions (L x W x H) | | mm | 11,713 x 2,253 x 2,297 | 14,202 x 2,253 x 2,297 | | 15,396 x 2,253 x 2,297 | | 16,590 x 2,253 x 2,297 | | 17,784 x 2,253 x 2,297 | | 18,978 x 2,253 x 2,297 | | |
| Shipping weight | | kg | 9,648 | 11,659 | | 12,288 | | 12,913 | | 13,330 | | 13,728 | | |
| Operating weight (Standard) | | | 9,410 | 11,357 | | 12,016 | | 12,671 | | 13,045 | | 13,400 | | |

- Notes:
1. IDC1 Condition: entering/leaving water temperature = 30/20°C, outdoor air temperature = 35°C, fouling factor = 0.018m2K/kW
2. IDC2 Condition: entering/leaving water temperature = 30/20°C, outdoor air temperature = 45°C, fouling factor = 0.018m2K/kW
3. Allowable voltage fluctuations ±10%
4. Models A and B are shipped independently for Models 1300 to 1700
5. Both R134a and R513A refrigerants are AHRI-certified

CARRIER 30XF TECHNICAL SPECIFICATIONS (R1234ze(E))

| Model | | 30XFZ with PT338 without free cooling | 0550 | 0600 | 0750 | 0900 | 1000 | 1100 |
|-----------------------------|----------------|--|---|--------|--------|--------|--------|--------|
| Nominal cooling capacity | IDC1 condition | kW | 550 | 615 | 809 | 950 | 1,066 | 1118 |
| Compressor power | | | 120 | 130 | 176 | 209 | 241 | 240 |
| Total power | | | 133 | 143 | 195 | 230 | 265 | 268 |
| Cooling capacity | IDC2 condition | | 507 | 568 | 711 | 835 | 948 | 1033 |
| Compressor power | | | 146 | 154 | 196 | 229 | 267 | 294 |
| Total power | | | 160 | 172 | 214 | 250 | 292 | 322 |
| Minimum capacity | | % | 20% | 18% | 24% | 20% | 18% | 10% |
| Refrigerant(s) | | | R1234ze (E) | | | | | |
| Module A | | kg | 82 | 85 | 124 | 126 | 128 | 80 |
| Module B | | | - | - | - | - | - | 82 |
| Compressor | | | Variable speed semi-hermetic screw compressor | | | | | |
| Module A | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Module B | | | - | - | - | - | - | 1 |
| Control | | | Carrier SmartVu 7 inch Touch screen | | | | | |
| Condenser | | | Microchannel | | | | | |
| Fans | | | VI generation FlyingBird axial fan | | | | | |
| Quantity | | | 8 | 10 | 10 | 12 | 14 | 16 |
| Total air flow | IDC1 condition | m3/h | 143500 | 165869 | 183069 | 217133 | 252528 | 290997 |
| Total air flow | IDC2 condition | | 147666 | 185555 | 183626 | 220588 | 257620 | 295116 |
| Fan speed | Max | rpm | 950 | | | | | |
| Evaporator | | | Flooded heat exchanger | | | | | |
| Water content | | l | 141 | 154 | 206 | 206 | 206 | 314 |
| Nominal flow rate | IDC1 condition | l/s | 13 | 15 | 19 | 23 | 26 | 27 |
| Nominal pressure drop | | kPa | 40 | 48 | 38 | 49 | 59 | 25 |
| Flow rate | IDC2 condition | l/s | 12 | 14 | 17 | 20 | 23 | 25 |
| Pressure drop | | kPa | 35 | 43 | 31 | 40 | 49 | 21 |
| Connection | | | Victaulic | | | | | |
| Nominal Diameter | | DN | 125 | 125 | 150 | 150 | 150 | 150 |
| Electrical data | | | | | | | | |
| Power supply | | | 400V-3Ph-50Hz | | | | | |
| Control power supply | | | 24V via internal transformer | | | | | |
| Start-up method | | | VFD start | | | | | |
| Fan and control power IDC1 | Module A+B | kW | 13 | 13 | 18 | 21 | 24 | 28 |
| Fan and control power IDC2 | | | 14 | 18 | 18 | 21 | 25 | 28 |
| Maximum unit current | | A | 274 | 310 | 355 | 421 | 482 | 537 |
| Maximum start-up current | | | 274 | 310 | 355 | 421 | 482 | 537 |
| Max operation power | | kW | 177 | 200 | 229 | 271 | 311 | 346 |
| Unit length (Operating) | | mm | 5591 | 6785 | 6785 | 7979 | 9173 | 11003 |
| Unit width | | | 2258 | | | | | |
| Unit height | | | 2325 | | | | | |
| Shipping weight | | kg | 4262 | 4548 | 5591 | 5881 | 6207 | 8288 |
| Operating weight (Standard) | | | 4403 | 4702 | 5797 | 6087 | 6413 | 8602 |

Notes:
1.IDC1 Condition: entering/leaving water temperature=30/20℃, outdoor air temperature = 35℃, fouling factor = 0.018m2K/kW
2.IDC2 Condition: entering/leaving water temperature=30/20℃, outdoor air temperature = 45℃, fouling factor = 0.018m2K/kW

3. Allowable voltage fluctuations ±10%
4. All 30XFZ with R1234ze(E) refrigerant is AHRI-certified

| Model | | 30XFZ with PT338 without free cooling | 1250 | 1400 | 1500 | 1700 | 1800* | 1900 | 2000 | 2100 |
|-----------------------------|----------------|--|---|--------|--------|---------|---------|--------|--------|--------|
| Nominal cooling capacity | IDC1 condition | kW | 1250 | 1427 | 1525 | 1777 | 1877 | 1978 | 2076 | 2174 |
| Compressor power | | | 261 | 312 | 335 | 403 | 421 | 439 | 463 | 487 |
| Total power | | | 288 | 343 | 366 | 440 | 461 | 482 | 509 | 537 |
| Cooling capacity | IDC2 condition | | 1155 | 1216 | 1276 | 1430 | 1555 | 1679 | 1787 | 1904 |
| Compressor power | | | 311 | 329 | 337 | 385 | 417 | 450 | 489 | 520 |
| Total power | | | 346 | 361 | 372 | 420 | 456 | 492 | 534 | 569 |
| Minimum capacity | | % | 9% | 11% | 10% | 11% | 11% | 10% | 9% | 9% |
| Refrigerant(s) | | | R1234ze (E) | | | | | | | |
| Module A | | kg | 83 | 126 | 126 | 126 | 128 | 128 | 128 | 130 |
| Module B | | | 85 | 82 | 85 | 130 | 130 | 132 | 134 | 134 |
| Compressor | | | Variable speed semi-hermetic screw compressor | | | | | | | |
| Module A | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Module B | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Control | | | Carrier SmartVu 7 inch Touch screen | | | | | | | |
| Condenser | | | Microchannel | | | | | | | |
| Fans | | | VI generation FlyingBird axial fan | | | | | | | |
| Quantity | | | 20 | 18 | 20 | 20 | 22 | 24 | 26 | 28 |
| Total air flow | IDC1 condition | m3/h | 337329 | 325669 | 347549 | 363891 | 401341 | 438222 | 471655 | 509043 |
| Total air flow | IDC2 condition | | 370897 | 331443 | 369349 | 367233 | 404204 | 441169 | 478235 | 515294 |
| Fan speed | Max | rpm | 950 | | | | | | | |
| Evaporator | | | Flooded heat exchanger | | | | | | | |
| Water content | | l | 356 | 412 | 433 | 506 | 526 | 549 | 549 | 562 |
| Nominal flow rate | IDC1 condition | l/s | 30 | 34 | 37 | 43 | 45 | 48 | 50 | 52 |
| Nominal pressure drop | | kPa | 30 | 26 | 29 | 32 | 35 | 39 | 42 | 46 |
| Flow rate | IDC2 condition | l/s | 28 | 29 | 31 | 34 | 37 | 40 | 43 | 46 |
| Pressure drop | | kPa | 26 | 19 | 21 | 22 | 25 | 29 | 32 | 36 |
| Connection | | | Victaulic | | | | | | | |
| Nominal Diameter | | DN | 150 | 150 | 150 | 150/200 | 150/200 | 150 | 150 | 150 |
| Electrical data | | | | | | | | | | |
| Power supply | | | 400V-3Ph-50Hz | | | | | | | |
| Control power supply | | | 24V via internal transformer | | | | | | | |
| Start-up method | | | VFD start | | | | | | | |
| Fan and control power IDC1 | | kW | 27 | 31 | 31 | 36 | 40 | 44 | 46 | 49 |
| Fan and control power IDC2 | | | 35 | 32 | 35 | 35 | 39 | 42 | 46 | 49 |
| Maximum unit current | Module A+B | A | 607 | 629 | 677 | 748 | 795 | 842 | 893 | 945 |
| Maximum start-up current | | | 607 | 629 | 677 | 748 | 795 | 842 | 893 | 945 |
| Max operation power | | kW | 391 | 405 | 436 | 482 | 512 | 542 | 575 | 609 |
| Unit length (Operating) | | mm | 13393 | 12199 | 13393 | 13143 | 14335 | 15529 | 16723 | 17919 |
| Unit width | | | 2258 | | | | | | | |
| Unit height | | | 2325 | | | | | | | |
| Shipping weight | | kg | 8949 | 9712 | 10059 | 11077 | 11427 | 11751 | 12075 | 12447 |
| Operating weight (Standard) | | | 9305 | 10124 | 10492 | 11583 | 11953 | 12300 | 12624 | 13009 |

Notes:
1.IDC1 Condition: entering/leaving water temperature=30/20℃, outdoor air temperature = 35℃, fouling factor = 0.018m2K/kW
2.IDC2 Condition: entering/leaving water temperature=30/20℃, outdoor air temperature = 45℃, fouling factor = 0.018m2K/kW

3. Allowable voltage fluctuations ±10%
4. All 30XFZ with R1234ze(E) refrigerant is AHRI-certified

*Also available from Carrier's manufacturing facility in India.

NOTES



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