



AQUAEDGE[®] 23XRV CHILLER WITH GREENSPEED[®] INTELLIGENCE

The Ultimate in Simplicity Leads to the Most Robust and Efficient Chiller

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THREE MOVING PARTS

The robust dependable performance of 23XRV chillers stems from Carrier's advanced compression technology. Brilliant in its simplicity, the only moving parts are the screw rotors and variable speed electric motor.

DO YOU WANT COMPLEX.. or SOMETHING THAT ACTUALLY WORKS?

23XRV compressor bearings have a minimum life of >50 years without scheduled maintenance.

IS YOUR CHILLER THIS EXTREME?

- Running without cooling tower fans
- Running with condenser water >105°F (40.6°C)
- Running with stuck bypass valve
- Running with undersized condenser pumps

START YOUR PATH TO HVAC SATISFACTION HERE...



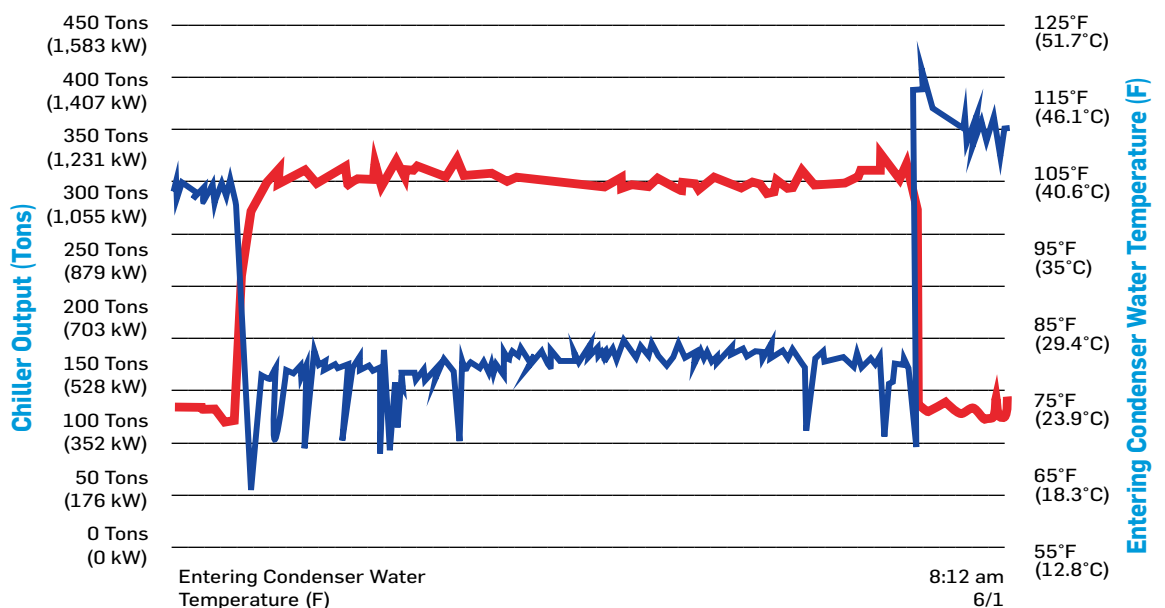
SIMPLE ELEGANT DESIGN

- No surge
- No purge
- No shaft seals
- No guide vanes
- No slide valves
- No chlorine
- No phase-out
- No refrigerant pumps
- No pressurization systems
- No bearing capacitors to change
- No pumps, hoses or clamps for VFD
- No glycol cooling required for VFD

"R" compressor shown

Data recorders in Arkansas capture the extreme conditions a 23XRV can be subjected to and just keep on running. The tower fan failed at this industrial site and the 23XRV continued to operate with entering condenser water at or above 105°F (40.6°C) until the fan was repaired.

Can your chiller do this?



IS YOUR CHILLER THIS FLEXIBLE?

Maximum Tons per Amp

For an MCA of 400 the maximum capacities are as follows:



23XRV
437 Tons
(1,536.9 kW)



VFD Centrifugal
405 Tons
(1,424.3 kW)
7% Difference



Constant Speed Centrifugal
292 Tons
(1,026.9 kW)
33% Difference

- Higher power factor results in lower Minimum Circuit Ampacity (MCA)
- Can reduce wire size
- Can reduce breaker size
- 23XRV can help increase capacity of old chiller plants using existing wire.
- AHRI Operating Conditions: 44°F LCWT/2.30 Ton (6.57°C LCWT/0.4305 L/(s-kW) 85°F (28.4°C/94.3F (34.6°C) ECdWT

MAXIMUM TONS PER AMP

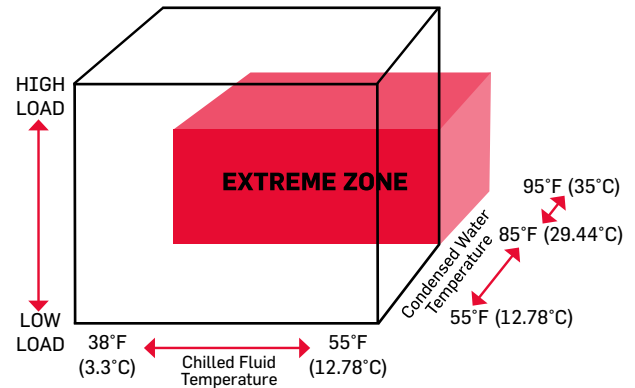
The 23XRV chiller can give you more tons per amp than a constant speed centrifugal chiller or even a variable speed drive centrifugal chiller!

NO CHILLER CAN MATCH THE 23XRV'S PERFORMANCE AND EFFICIENCY <0.30 KW/TON

Operating Range

Elevated Condenser:

- Scaled Tower
- Reduced Flow
- Dirty Condenser Tubes
- 23XRV Provides 10°F (5.5°C) Safety Factor



WIDE OPERATING RANGE

So flexible the same identical 23XRV chiller can be utilized in Seattle, WA and Guatemala.

Robust

Flexible

Unmatched Performance

TRANSIENTS

The 23XRV has the capability to react to changes in the system at a rate of 70 percent per minute. This allows more flexibility within the chiller system and can also result in a smaller loop volume requirement.

LOWEST LIFE CYCLE CHILLER

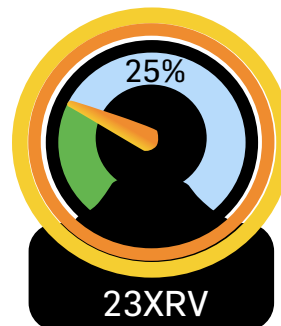
Because of its simple, speed-optimizing operation, 23XRV chillers deliver balanced efficiency across a wide range of conditions, which can help earn LEED credits in the energy and atmosphere category. 23XRV efficiency at 75 percent load is up to 17 percent more efficient than other variable speed chillers.

SPEED TURNDOWN

The 23XRV can achieve 75 percent speed reduction versus just 35 percent for centrifugal compressors. The more speed reduction means more energy savings.

SPEED = LOAD

SPEED = WEATHER

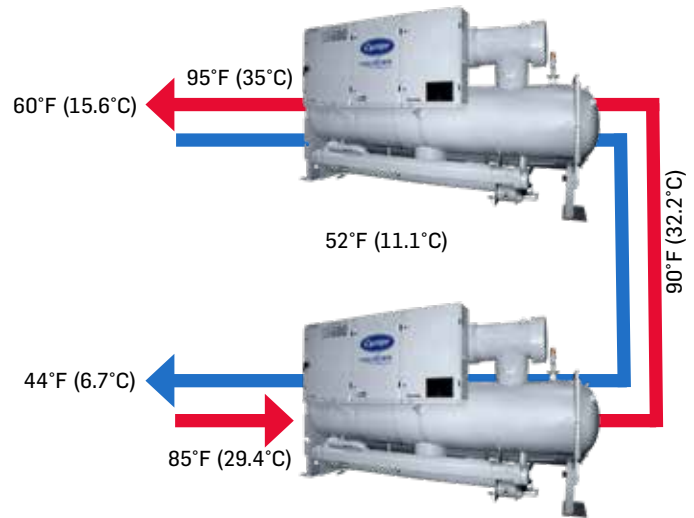


Maximize Efficiency with Series Counterflow (SCF)

- Up to 25 percent better full load efficiency than ASHRAE 90.1 2019 standards*
- The AquaEdge 23XRV is the world's leading efficiency screw chiller, 44% better than the industry standard.**
- Up to 6 dbA quieter than parallel chillers
- Identical surge free screw chillers provide ease of operation and flexibility
- Constant or variable flow, N or N + 1 arrangements
- Simple AdvanTE3C plant controls optimize pumps, towers and chillers

* (2) 250 ton (879 kW) variable speed 23XRV chillers in series counterflow arrangement.

** Among electric-driven, water-cooled chillers as mentioned by Integrated Part Load Value conditions based on ASHRAE 90.1 2019 minimum requirement.



23XRV in series counterflow as low as 0.27 kW/Ton (NPLV)

Peace of Mind

Carrier's 19/23 series AquaEdge chillers are provided with a 0.1 percent leak-proof warranty.* Carrier provides coverage against refrigerant leaks for the first five years of ownership. For customers who have a service agreement with Carrier Commercial Service, Carrier will extend the warranty for the life of the chiller.

*For U.S. and Canada only. Warranty is not available in all markets.



Water cooled chillers within the scope of the AHRI WCCL certification program are certified in accordance with the AHRI Water-Cooled Water-Chilling and Heat Pump Water-Heating Packages Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org.

SEISMICOMPLIANT™

*Meets IBC 2006, ASCE-7-05, CBC 2007, and OSHPD seismic requirements

Benefits at a Glance

FOR BUILDING OWNERS AND MANAGERS

- Reduces operating expenses
- Easy to maintain
- Quiet operation
- Reliable operation
- Environmentally responsible refrigerant

FOR CONSULTING ENGINEERS

- Exceeds ASHRAE 90.1
- HFC or HFC/HFO refrigerant
- High-efficiency optimization
- Ideal for replacement projects

FOR CONTRACTORS

- Easy to disassemble
- Diagnostic touchscreen controls
- Reliable performance
- Reduces installation expenses

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