



# Product Data

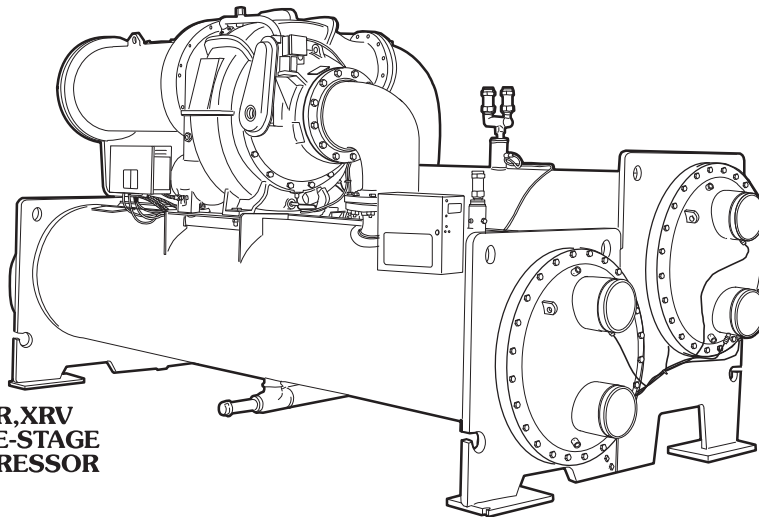
**AquaEdge™**  
19XR High-Efficiency Semi-Hermetic Centrifugal Liquid Chillers and  
19XRV High-Efficiency Semi-Hermetic Centrifugal Liquid Chillers with Greenspeed® Intelligence  
50/60 Hz  
HFC-134a

200 to 2250 Nominal Tons (703 to 7912 kW)

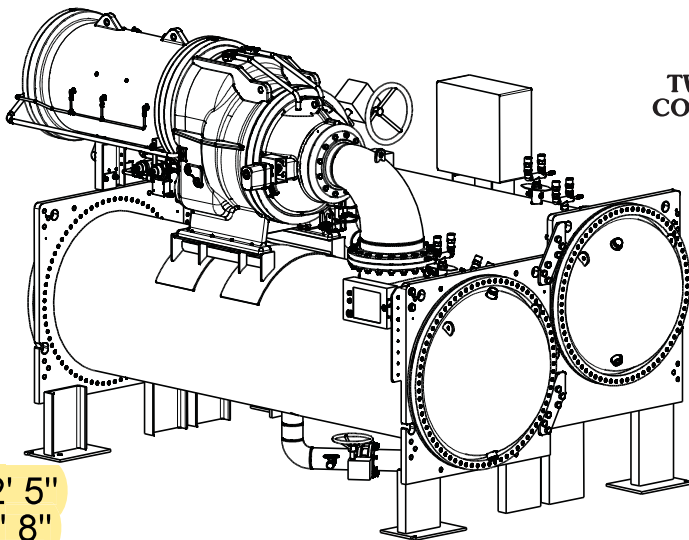
Model #: 19XRV2121247BHH64-  
Serial #: 1614Q23464

greenspeed  
**AQUAEDGE**

2014  
220 Tons



19XR, XRV  
SINGLE-STAGE  
COMPRESSOR



19XR  
TWO-STAGE  
COMPRESSOR

L: 12' 5"  
W: 5' 8"  
H: 8' 5"

**SEISMICOMPLIANT\***

\* Meets IBC 2006, ASCE-7-05, CBC 2007, and OSHPD seismic requirements.  
Seismic rating available on select models.



Carrier's AquaEdge™ centrifugal chillers offer:

- The use of non-ozone depleting refrigerant HFC-134a, which is not affected by scheduled US EPA refrigerant phaseouts
- An annual leak rate of 0.1%, the lowest published in the industry
- The ability to store the entire charge of refrigerant inside the chiller, minimizing the chance of leaks during refrigerant transfer for maintenance
- Semi-hermetic compression
- Free-standing medium voltage VFD (variable frequency drive) (option)
- Modular construction
- Positive pressure design
- Variable diffuser optimization logic, which can improve the integrated part load values (IPLV) (available on compressor frame sizes 4 and 5 with diffuser control enabled)
- Single stage (200 to 1600 tons)
- Two stage (800 to 2250 tons)

## Features/Benefits

**The Carrier-designed AquaEdge family of chillers achieves superior efficiencies without compromising the environment.**

The AquaEdge chillers' superior efficiencies are obtained at true operating conditions. Therefore, the effects of potential direct or indirect global warming are greatly diminished.

**Operating Weight 22,910 lbs**

# Model number nomenclature



## 19XR,XRV SINGLE-STAGE COMPRESSOR AND TWO-STAGE COMPRESSOR FRAME SIZE E

19XR- 21 21 2 4 7 BH H 64 -

### Description

19XR- — High Efficiency Semi-Hermetic Centrifugal Liquid Chiller

19XRV — High Efficiency Semi-Hermetic Centrifugal Liquid Chiller with Unit-Mounted VFD

### Special Order Indicator

- — Standard  
S — Special Order

### Cooler Size\*

10-12 (Frame 1)  
15-17 (Frame 1)  
20-22 (Frame 2)  
30-32 (Frame 3)  
35-37 (Frame 3)  
40-42 (Frame 4)  
45-47 (Frame 4)  
50-54 (Frame 5)  
5A-5C (Frame 5)†  
55-59 (Frame 5)  
5F-5H (Frame 5)†  
5K-5R (Frame 5)\*\*  
5T-5Z (Frame 5)\*\*  
60-64 (Frame 6)  
6K-6R (Frame 6)\*\*  
65-69 (Frame 6)  
6T-6Z (Frame 6)\*\*  
70-74 (Frame 7)  
7K-7R (Frame 7)\*\*  
75-79 (Frame 7)  
7T-7Z (Frame 7)\*\*  
80-84 (Frame 8)  
8K-8R (Frame 8)\*\*  
85-89 (Frame 8)  
8T-8Z (Frame 8)\*\*

### Motor Voltage Code

| Code | Volts-Phase-Hertz |
|------|-------------------|
| 60   | 200-3-60          |
| 61   | 230-3-60          |
| 62   | 380-3-60          |
| 63   | 416-3-60          |
| 64   | 460-3-60          |
| 65   | 575-3-60          |
| 66   | 2400-3-60         |
| 67   | 3300-3-60         |
| 68   | 4160-3-60         |
| 69   | 6900-3-60         |
| 50   | 230-3-50          |
| 52   | 400-3-50          |
| 53   | 3000-3-50         |
| 54   | 3300-3-50         |
| 55   | 6300-3-50         |
| 5A   | 10000-3-50        |
| 5B   | 11000-3-50        |
| 6A   | 11000-3-60        |
| 6B   | 10000-3-60        |
| 6C   | 13800-3-60        |

### Motor Efficiency Code

Compressor Frame 2, 3, 4, 5  
H — High Efficiency  
S — Standard Efficiency

Compressor Frame E  
A,B,C,D,E— A-E Gear Ratio

### Motor Code††

Impeller Diameter

Impeller Shroud

### Compressor Frame

2, 3, 4, 5 — Single-Stage  
E — Two-Stage

### Condenser Size\*

10-12 (Frame 1)  
15-17 (Frame 1)  
20-22 (Frame 2)  
30-32 (Frame 3)  
35-37 (Frame 3)  
40-42 (Frame 4)  
45-47 (Frame 4)  
50-54 (Frame 5)  
55-59 (Frame 5)  
60-64 (Frame 6)  
65-69 (Frame 6)  
70-74 (Frame 7)  
75-79 (Frame 7)  
80-84 (Frame 8)  
85-89 (Frame 8)



### Quality Assurance

Certified to ISO 9001

AHRI (Air Conditioning, Heating, and Refrigeration Institute) Performance Certified

\*Frame sizes 1 through 6 available on single-stage units only.

†Refer to 19XR,XRV Computer Selection Program for details on these sizes.

\*\* Frame sizes with K-R and T-Z are with 1 in. OD evaporator tubing.

††Refer to the 19XR,XRV Computer Selection Program for motor size details.

## SEISMICOMPLIANT\*

\* Meets IBC 2006, ASCE-7-05, CBC 2007, and OSHPD seismic requirements. Seismic rating available on select models.

## 19XR,XRV DIMENSIONS (Nozzle-in-Head Waterbox)

| HEAT EXCHANGER SIZE   | A (Length, with Nozzle-in-Head Waterbox) |      |            |      |            |      | 19XR B (Width) |      | 19XR C (Height) |      | 19XR B (Width) |      | 19XR C (Height) |
|-----------------------|--|------|------------|------|------------|------|----------------|------|-----------------|------|----------------|------|-----------------|
|                       | 1-Pass                                   |      | 2-Pass*    |      | 3-Pass     |      | ft-in.         | mm   | ft-in.          | mm   | ft-in.         | mm   |                 |
|                       | ft-in.                                   | mm   | ft-in.     | mm   | ft-in.     | mm   |                |      |                 |      |                |      |                 |
| 10 to 12              | 11- 11                                   | 3632 | 11- 4      | 3464 | 11- 11     | 3632 | 5- 27/8        | 1597 | 6- 1 1/4        | 1861 | 5- 27/8        | 1597 |                 |
| 15 to 17              | 14- 2 1/2                                | 4331 | 13- 7 1/2  | 4163 | 14- 2 1/2  | 4331 | 5- 27/8        | 1597 | 6- 1 1/4        | 1861 | 5- 27/8        | 1597 |                 |
| 20 to 22              | 12- 0 1/2                                | 3670 | 11- 5 1/8  | 3483 | 12- 0 1/2  | 3670 | 5- 67/16       | 1688 | 6- 3 1/4        | 1911 | 5- 67/16       | 1688 |                 |
| 30 to 32†             | 14- 4                                    | 4369 | 13- 8 5/8  | 4182 | 14- 4      | 4369 | 5- 73/16       | 1707 | 6- 9 5/8        | 2073 | 5- 67/16       | 1688 |                 |
| 30 to 32**            | 14- 4                                    | 4369 | 13- 8 5/8  | 4182 | 14- 4      | 4369 | 5- 73/16       | 1707 | 6- 9 5/8        | 2073 | 5- 6 1/8       | 1680 |                 |
| 35 to 37†             | 16- 0 1/2                                | 4889 | 15- 5 1/8  | 4703 | 16- 0 1/2  | 4889 | 5- 73/16       | 1707 | 6- 9 5/8        | 2073 | 5- 67/16       | 1688 |                 |
| 35 to 37**            | 16- 0 1/2                                | 4889 | 15- 5 1/8  | 4703 | 16- 0 1/2  | 4889 | 5- 73/16       | 1707 | 6- 9 5/8        | 2073 | 5- 6 1/8       | 1680 |                 |
| 40 to 42              | 14- 10                                   | 4521 | 14- 3 5/8  | 4360 | 14- 6 3/4  | 4439 | 6- 3 1/8       | 1908 | 7- 0 3/4        | 2153 | 6- 2           | 1880 |                 |
| 45 to 47              | 16- 6 1/2                                | 5042 | 16- 0 1/8  | 4880 | 16- 3 1/4  | 4959 | 6- 3 1/8       | 1908 | 7- 0 3/4        | 2153 | 6- 2           | 1880 |                 |
| 50 to 52**            | 14- 11                                   | 4546 | 14- 5      | 4395 | 14- 7 1/4  | 4451 | 6- 87/8        | 2054 | 7- 2 3/8        | 2194 | 6- 6 1/2       | 1994 |                 |
| 50 to 54, 5K to 5R††  | 14- 11                                   | 4546 | 14- 5      | 4395 | 14- 7 1/4  | 4451 | 6- 87/8        | 2054 | 7- 2 3/8        | 2194 | 6- 7 7/8       | 2029 |                 |
| 5A to 5C              | 14- 11                                   | 4546 | 14- 5      | 4395 | 14- 7 1/4  | 4451 | 6- 87/8        | 2054 | 7- 2 3/8        | 2194 | 6- 8 7/8       | 2054 |                 |
| 55 to 57**            | 16- 7 1/2                                | 5067 | 16- 1 1/2  | 4915 | 16- 3 3/4  | 4972 | 6- 87/8        | 2054 | 7- 2 3/8        | 2194 | 6- 6 1/2       | 1994 |                 |
| 55 to 59, 5T to 5Z††  | 16- 7 1/2                                | 5067 | 16- 1 1/2  | 4915 | 16- 3 3/4  | 4972 | 6- 87/8        | 2054 | 7- 2 3/8        | 2194 | 6- 7 7/8       | 2029 |                 |
| 5F to 5H              | 16- 7 1/2                                | 5067 | 16- 1 1/2  | 4915 | 16- 3 3/4  | 4972 | 6- 87/8        | 2054 | 7- 2 3/8        | 2194 | 6- 8 7/8       | 2054 |                 |
| 60 to 64, 6K to 6R    | 15- 0                                    | 4572 | 14- 5 3/4  | 4413 | 14- 7 3/4  | 4464 | 6- 0 5/8       | 2124 | 7- 4 3/8        | 2245 | 6- 10 5/8      | 2124 |                 |
| 65 to 69, 6T to 6Z    | 16- 8 1/2                                | 5093 | 16- 2 1/4  | 4934 | 16- 4 1/4  | 4985 | 6- 0 5/8       | 2124 | 7- 4 3/8        | 2245 | 6- 10 5/8      | 2124 |                 |
| 70 to 74, 7K to 7R††  | 17- 1 1/2                                | 5219 | 16- 11 1/2 | 5169 | 16- 10     | 5131 | 7- 11 1/2      | 2426 | 9- 6 1/4        | 2972 | 9- 1 3/8       | 2778 |                 |
| 70 to 74, 7K to 7R*** | 17- 1 1/2                                | 5219 | 16- 11 1/2 | 5169 | 16- 10     | 5131 | 7- 11 1/2      | 2426 | 9- 6 1/4        | 2972 | 9- 3 5/8       | 2835 |                 |
| 75 to 79, 7T to 7Z    | 19- 1 1/2                                | 5829 | 18- 11 1/2 | 5779 | 18- 10     | 5740 | 7- 11 1/2      | 2426 | 9- 6 1/4        | 2972 | 9- 3 5/8       | 2835 |                 |
| 80 to 84, 8K to 8R    | 17- 4 1/2                                | 5296 | 17- 1      | 5207 | 16- 10 1/2 | 5143 | 8- 10 3/4      | 2711 | 9- 8 1/8        | 3029 | 10- 0 9/16     | 3063 |                 |
| 85 to 89, 8T to 8Z    | 19- 4 1/2                                | 5905 | 19- 1      | 5817 | 18- 10 1/2 | 5753 | 8- 10 3/4      | 2711 | 9- 8 1/8        | 3029 | 10- 0 9/16     | 3063 |                 |

See Note 7

\*Assumes both cooler and condenser nozzles on same end of chiller.

†Compressor frame size 2.

\*\*Compressor frame size 3.

††Compressor frame size 4.

\*\*\*Compressor frame size 5 and E.

NOTES:

1. Service access should be provided per American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 15, latest edition, National Fire Protection Association (NFPA) 70, and local safety code.
2. Allow at least 3 ft (915 mm) overhead clearance for service rigging for frame 2-4 compressor. Overhead clearance for service rigging frame 5 and E compressor should be 5 ft (1524 mm).

3. Dimensions are approximate. Certified drawings available upon request.

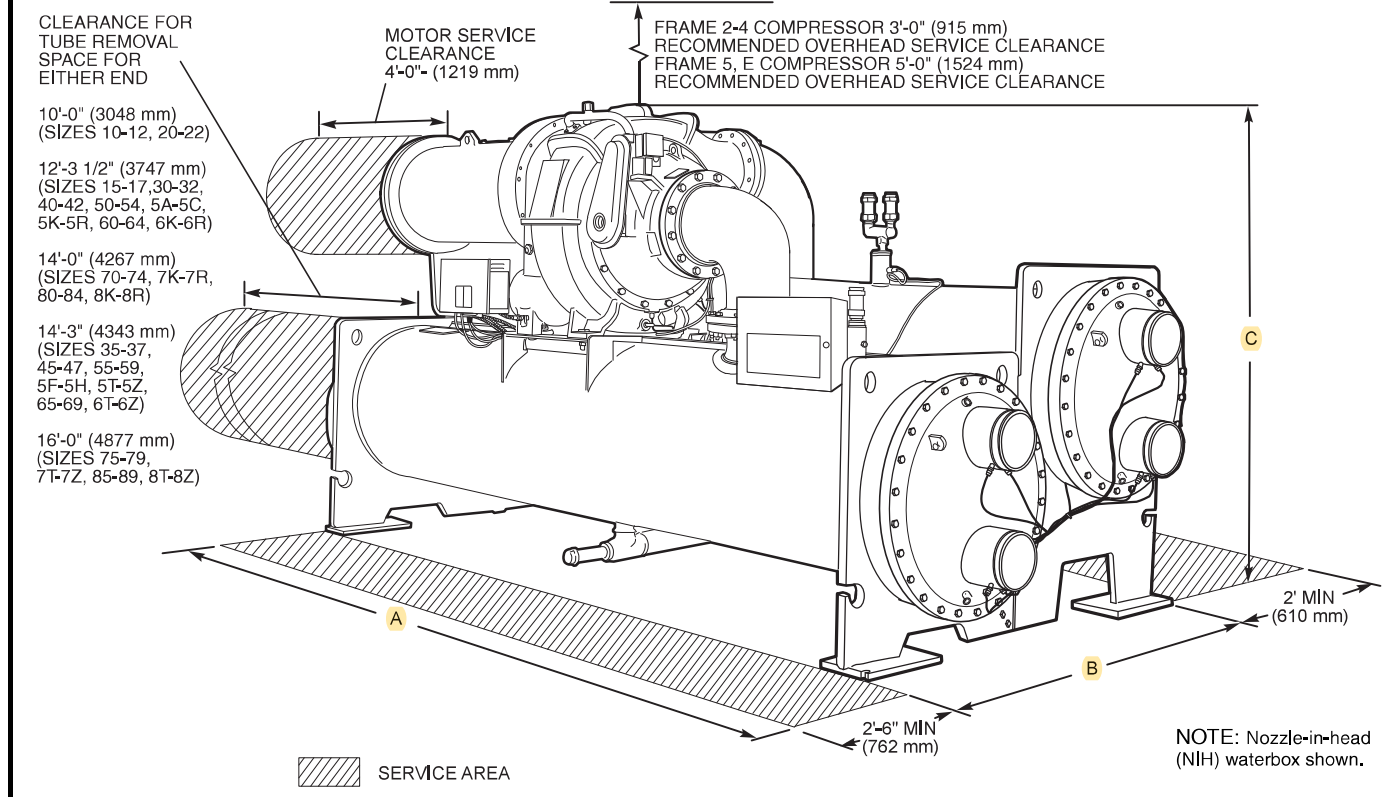
4. Marine waterboxes may add 6 in. (152 mm) to the width of the machine. See certified drawings for details.

5. 'A' length dimensions shown are for standard 150 psig (1034 kPa) design and Victaulic connections. The 300 psig (2068 kPa) design and/or flanges will add length. See certified drawings.

6. Not all waterbox/pass combinations are available with unit-mounted VFD. Check selection program and Drawing Manager for availability.

7. 19XRV heights can vary depending on the configuration. Check 19XRV certified drawings for height information.

### 19XR, XRV DIMENSIONS



### 19XR, XRV DIMENSIONS — SINGLE-STAGE COMPRESSOR AND TWO-STAGE COMPRESSOR FRAME SIZE E (Marine Waterbox)

| HEAT EXCHANGER SIZE | A (Length, Marine Waterbox) |      |              |      | 19XR B WIDTH |      | 19XRV B WIDTH |      | 19XR, XRV C HEIGHT |
|---------------------|-----------------------------|------|--------------|------|--------------|------|---------------|------|--------------------|
|                     | 2-Pass*                     |      | 1 or 3-Pass† |      | ft-in.       | mm   | ft-in.        | mm   |                    |
|                     | ft-in.                      | mm   | ft-in.       | mm   |              |      |               |      |                    |
| 10 to 12            | NA                          | NA   | NA           | NA   | NA           | NA   | NA            | NA   | See Note 6         |
| 15 to 17            | NA                          | NA   | NA           | NA   | NA           | NA   | NA            | NA   |                    |
| 20 to 22            | 12- 5 1/2                   | 3797 | 14- 1 1/4    | 4299 | 6- 1 1/16    | 1856 | 6- 1 1/16     | 1856 |                    |
| 30 to 32            | 14- 9                       | 4496 | 16- 4 3/4    | 4997 | 6- 1 1/16    | 1856 | 6- 1 1/16     | 1856 |                    |
| 35 to 37            | 16- 5 1/2                   | 5017 | 18- 1 1/4    | 5518 | 6- 1 1/16    | 1856 | 6- 1 1/16     | 1856 |                    |
| 40 to 42            | 15- 2 3/4                   | 4642 | 16- 8 1/4    | 5086 | 6- 3 1/4     | 1911 | 6- 3 1/4      | 1911 |                    |
| 45 to 47            | 16- 11 1/4                  | 5163 | 18- 4 3/4    | 5607 | 6- 3 1/4     | 1911 | 6- 3 1/4      | 1911 |                    |
| 50 to 54, 5K to 5R  | 15- 3 1/2                   | 4661 | 16- 8 1/2    | 5093 | 6- 8 7/8     | 2054 | 6- 8 7/8      | 2054 |                    |
| 5A to 5C            | 15- 3 1/2                   | 4661 | 16- 8 1/2    | 5093 | 6- 8 7/8     | 2054 | 6- 8 7/8      | 2054 |                    |
| 55 to 59, 5T to 5Z  | 17- 0                       | 5182 | 18- 5        | 5613 | 6- 8 7/8     | 2054 | 6- 8 7/8      | 2054 |                    |
| 5F to 5H            | 17- 0                       | 5182 | 18- 5        | 5613 | 6- 8 7/8     | 2054 | 6- 8 7/8      | 2054 |                    |
| 60 to 64, 6K to 6R  | 15- 4 1/8                   | 4677 | 16- 8 3/4    | 5099 | 6- 11 3/4    | 2127 | 6- 11 3/4     | 2127 |                    |
| 65 to 69, 6T to 6Z  | 17- 0 5/8                   | 5197 | 18- 5 1/4    | 5620 | 6- 11 3/4    | 2127 | 6- 11 3/4     | 2127 |                    |
| 70 to 74, 7K to 7R  | 18- 3 5/8                   | 5579 | 19- 9 3/4    | 6039 | 8- 8 1/8     | 2645 | 9- 6 3/8      | 2905 |                    |
| 75 to 79, 7T to 7Z  | 20- 3 5/8                   | 6188 | 21- 9 3/4    | 6649 | 8- 8 1/8     | 2645 | 9- 6 3/8      | 2905 |                    |
| 80 to 84, 8K to 8R  | 18- 4                       | 5583 | 19- 10 1/2   | 6058 | 9- 5 5/8     | 2886 | 10- 5         | 3175 |                    |
| 85 to 89, 8T to 8Z  | 20- 4                       | 6198 | 21- 10 1/2   | 6668 | 9- 5 5/8     | 2886 | 10- 5         | 3175 |                    |

\*Assumes both cooler and condenser nozzles on same end of chiller.

†1 or 3-pass length applies if cooler is a 1 or 3-pass design.

**NOTES:**

- Service access should be provided per American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 15, latest edition, National Fire Protection Association (NFPA) 70, and local safety code.
- Allow at least 3 ft (915 mm) overhead clearance for service rigging for frame 2-4 compressor. Overhead clearance for service rigging for frame 5 and frame E compressor should be 5 ft (1524 mm).
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