



## Product Data

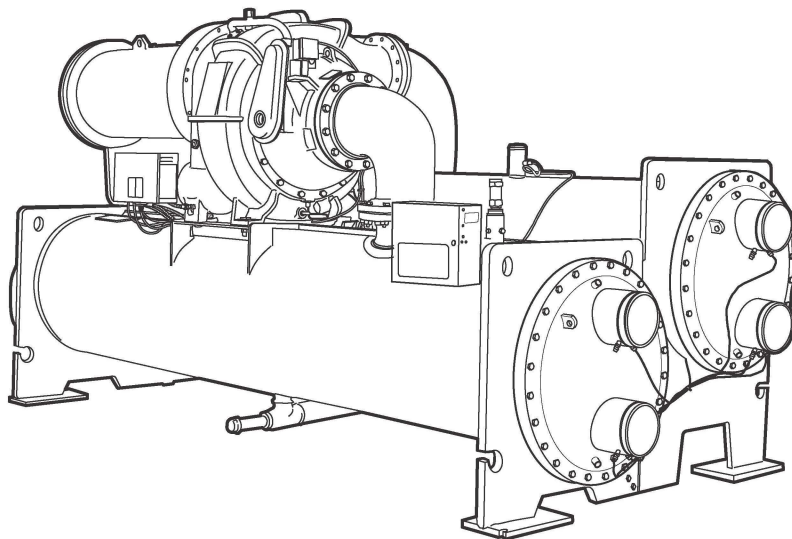
## EVERGREEN® 19XR,XRV High-Efficiency Hermetic Centrifugal Liquid Chiller 50/60 Hz HFC-134a

19XR — 200 to 1500 Nominal Tons (703 to 5275 kW)  
19XRV — 200 to 1450 Nominal Tons (703 to 5100 kW)

# Evergreen® CHILLERS

Model: 19XRV4647385KFH64  
Serial: 18788

Year: 2009  
Size: 500 Tons



19XR,XRV

Shipping Weight: 14,419 lbs.  
Operating Weight: 17,662 lbs.

L: 16'  
W: 6' 4"  
H: 7' 1"

Carrier's Evergreen® centrifugal chillers offer:

- The use of non-ozone depleting refrigerant HFC-134a, which is not affected by scheduled 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
- Hermetic compression
- Refrigerant-cooled VFD (19XRV)
- Modular construction
- Positive pressure design

## Features/Benefits

**The Carrier-designed Evergreen family of chillers achieve superior efficiencies without compromising the environment.**

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

### High efficiency

Today's owners of chilled water plants demand high efficiency from their chillers. Per ARI 550/590, chillers operate at design conditions less than one percent of the time. As a result, superior part-load efficiency is required for today's chilled water applications.

# Model number nomenclature



19XRV 46 47 385 KF H 64

19XR 52 51 473 DG H 64 -

**Description**

19XR — High Efficiency Hermetic Centrifugal Liquid Chiller

19XRV — Ultra High Efficiency Variable Speed Hermetic Centrifugal Liquid Chiller

**Cooler Size**

- 10-12 (Frame 1 XR)
- 15-17 (Frame 1 XR)
- 20-22 (Frame 2 XR)
- 30-32 (Frame 3 XR)
- 35-37 (Frame 3 XR)
- 40-42 (Frame 4 XR)
- 45-47 (Frame 4 XR)
- 50-52 (Frame 5 XR)
- 5A-5C (Frame 5 XR)\*
- 5F-5H (Frame 5XR)\*
- 60-62 (Frame 6 XR)
- 65-67 (Frame 6 XR)
- 70-72 (Frame 7 XR)
- 75-77 (Frame 7 XR)
- 80-82 (Frame 8 XR)
- 85-87 (Frame 8 XR)

**Condenser Size**

- 10-12 (Frame 1 XR)
- 15-17 (Frame 1 XR)
- 20-22 (Frame 2 XR)
- 30-32 (Frame 3 XR)
- 35-37 (Frame 3 XR)
- 40-42 (Frame 4 XR)
- 45-47 (Frame 4 XR)
- 50-52 (Frame 5 XR)
- 55-57 (Frame 5 XR)
- 60-62 (Frame 6 XR)
- 65-67 (Frame 6 XR)
- 70-72 (Frame 7 XR)
- 75-77 (Frame 7 XR)
- 80-82 (Frame 8 XR)
- 85-87 (Frame 8 XR)

**Compressor Code**

(First Digit Indicates Compressor Frame Size)

**Special Order Indicator**

- Standard

S — Special Order

**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
- 51 — 346-3-50
- 52 — 400-3-50
- 53 — 3000-3-50
- 54 — 3300-3-50
- 55 — 6300-3-50

**Motor Efficiency Code**

H — High Efficiency

S — Standard Efficiency

**Motor Code †**



ASME  
'U' Stamp

ARI Standard  
550/590 WC

ARI (Air Conditioning  
and Refrigeration Institute)  
Performance Certified

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

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

# Physical data



## 19XR COMPRESSOR AND MOTOR WEIGHTS\*— STANDARD AND HIGH EFFICIENCY MOTORS

### COMPRESSOR FRAME SIZE 2†, LOW VOLTAGE MOTORS

MOTOR SIZE	ENGLISH						SI					
	Compressor Weight** (lb)	Stator Weight†† (lb)		Rotor Weight (lb)		End Bell Cover (lb)	Compressor Weight** (kg)	Stator Weight (kg)		Rotor Weight (kg)		End Bell Cover (kg)
		60 Hz	50 Hz	60 Hz	50 Hz			60 Hz	50 Hz	60 Hz	50 Hz	
BD	2300	1014	1014	240	255	182	1044	460	460	109	116	83
BE	2300	1053	1053	252	273	182	1044	478	478	114	124	83
BF	2300	1096	1102	266	294	182	1044	498	500	121	133	83
BG	2300	1160	1160	289	311	182	1044	527	527	131	141	83
BH	2300	1160	1198	289	328	182	1044	527	544	131	149	83
BJ	2300	1198	—	328	—	182	1044	544	—	149	—	83
JB	2300	1003	1063	226	248	—	1043	455	482	103	112	—
JC	2300	1063	1113	248	263	—	1043	482	505	112	119	—
JD	2300	1113	1149	263	278	—	1043	505	521	119	126	—
JE	2300	1149	1196	278	295	—	1043	521	542	126	134	—
JF	2300	1196	—	295	—	—	1043	542	—	134	—	—

### COMPRESSOR FRAME SIZE 3†, LOW AND MEDIUM VOLTAGE MOTORS

MOTOR SIZE	ENGLISH						SI					
	Compressor Weight** (lb)	Stator Weight†† (lb)		Rotor Weight (lb)		End Bell Cover (lb)	Compressor Weight** (kg)	Stator Weight†† (kg)		Rotor Weight (kg)		End Bell Cover (kg)
		60 Hz	50 Hz	60 Hz	50 Hz			60 Hz	50 Hz	60 Hz	50 Hz	
KB	2816	965	995	221	229	274	1278	438	452	100	104	124
KC	2816	995	1015	229	236	274	1278	452	461	104	107	124
KD	2816	1015	1045	236	244	274	1278	461	474	107	111	124
KE	2816	1045	1065	244	251	274	1278	474	484	111	114	124
<b>KF</b>	<b>2816</b>	1065	1090	251	259	274	1278	484	495	114	118	124
KG	2816	1090	1110	259	267	274	1278	495	504	118	121	124
CD	2816	1220	1238	288	313	274	1278	554	562	131	142	124
CE	2816	1253	1285	305	330	274	1278	569	583	138	150	124
CL	2816	1261	1328	305	346	274	1278	572	603	138	157	124
CM	2816	1321	1380	313	363	274	1278	600	627	142	165	124
CN	2816	1369	1423	330	379	274	1278	622	646	150	172	124
CP	2816	1411	1444	346	387	274	1278	641	656	157	176	124
CQ	2816	1419	1522	363	387	274	1278	644	691	165	176	124
CR	2816	1522	—	346	—	274	1278	691	—	157	—	124

\*Total compressor weight is the sum of the compressor aerodynamic components (compressor weight column), stator, rotor, and end bell cover weights.

†Compressor size number is the first digit of the compressor code. See Model Number Nomenclature on page 5.

\*\*Compressor aerodynamic component weight only. Does not include motor weight.

††Stator weight includes the stator and shell.

\*\*\*For high-voltage motors, add the following: 300 lb (136 kg) to stator, 150 lb (68 kg) to rotor, and 40 lb (18 kg) to end bell.

NOTE: Standard-efficiency motor designations are followed by the letter S (e.g., BDS); high-efficiency motor designations are followed by the letter H (e.g., BDH). See Model Number Nomenclature on page 5.



### 19XR HEAT EXCHANGER WEIGHTS

CODE	English						Metric (SI)					
	Dry Rigging Weight (lb)*		Machine Charge				Dry Rigging Weight (kg)*		Machine Charge			
	Cooler Only	Condenser Only	Refrigerant Weight (lb)		Water Weight (lb)		Cooler Only	Condenser Only	Refrigerant Weight (kg)		Water Weight (kg)	
			Cooler	Condenser	Cooler	Condenser			Cooler	Condenser	Cooler	Condenser
10	2,707	2,704	290	200	283	348	1228	1227	132	91	128	158
11	2,777	2,772	310	200	309	374	1260	1257	141	91	140	170
12	2,848	2,857	330	200	335	407	1292	1296	150	91	152	185
15	2,968	2,984	320	250	327	402	1346	1354	145	113	148	182
16	3,054	3,068	340	250	359	435	1385	1392	154	113	163	197
17	3,141	3,173	370	250	391	475	1425	1439	168	113	177	215
20	3,407	3,373	345	225	402	398	1545	1530	156	102	182	181
21	3,555	3,540	385	225	456	462	1613	1606	175	102	207	210
22	3,711	3,704	435	225	514	526	1683	1680	197	102	233	239
30	4,071	3,694	350	260	464	464	1847	1676	159	118	210	210
31	4,253	3,899	420	260	531	543	1929	1769	191	118	241	246
32	4,445	4,100	490	260	601	621	2016	1860	222	118	273	282
35	4,343	4,606	400	310	511	513	1970	2089	181	141	232	233
36	4,551	4,840	480	310	587	603	2064	2195	218	141	266	274
37	4,769	5,069	550	310	667	692	2163	2299	249	141	303	314
40	4,908	5,039	560	280	863	915	2226	2286	254	127	391	415
41	5,078	5,232	630	280	930	995	2303	2373	286	127	422	451
42	5,226	5,424	690	280	990	1074	2370	2460	313	127	449	487
45	5,363	5,602	640	330	938	998	2433	2541	290	150	425	453
46	5,559	5,824	720	330	1014	1088	2522	2642	327	150	460	494
47	5,730	6,044	790	330	1083	1179	2599	2742	358	150	491	535
50	5,713	6,090	750	400	1101	1225	2591	2762	340	181	499	556
51	5,940	6,283	840	400	1192	1304	2694	2850	381	181	541	591
52	6,083	6,464	900	400	1248	1379	2759	2932	408	181	566	626
55	6,257	6,785	870	490	1201	1339	2838	3078	395	222	545	607
56	6,517	7,007	940	490	1304	1429	2956	3178	426	222	591	648
57	6,682	7,215	980	490	1369	1514	3031	3273	445	222	621	687
5A	5,124	N/A	500	N/A	1023	N/A	2324	N/A	227	N/A	464	N/A
5B	5,177	N/A	520	N/A	1050	N/A	2348	N/A	236	N/A	476	N/A
5C	5,243	N/A	550	N/A	1079	N/A	2378	N/A	249	N/A	489	N/A
5F	5,577	N/A	550	N/A	1113	N/A	2530	N/A	249	N/A	505	N/A
5G	5,640	N/A	570	N/A	1143	N/A	2558	N/A	259	N/A	518	N/A
5H	5,716	N/A	600	N/A	1176	N/A	2593	N/A	272	N/A	533	N/A
60	6,719	6,764	940	420	1400	1521	3048	3068	426	191	635	690
61	6,895	6,949	980	420	1470	1597	3128	3152	445	191	667	724
62	7,038	7,130	1020	420	1527	1671	3192	3234	463	191	693	758
65	7,392	7,682	1020	510	1530	1667	3353	3484	463	231	694	756
66	7,594	7,894	1060	510	1610	1753	3445	3581	481	231	730	795
67	7,759	8,102	1090	510	1674	1838	3519	3675	494	231	759	834
70	9,942	10,782	1220	780	2008	2223	4510	4891	553	354	911	1008
71	10,330	11,211	1340	780	2164	2389	4686	5085	608	354	982	1084
72	10,632	11,612	1440	780	2286	2544	4823	5267	653	354	1037	1154
75	10,840	11,854	1365	925	2183	2429	4917	5377	619	420	990	1102
76	11,289	12,345	1505	925	2361	2619	5121	5600	683	420	1071	1188
77	11,638	12,803	1625	925	2501	2796	5279	5807	737	420	1134	1268
80	12,664	12,753	1500	720	2726	2977	5744	5785	680	327	1236	1350
81	12,998	13,149	1620	720	2863	3143	5896	5964	735	327	1299	1426
82	13,347	13,545	1730	720	3005	3309	6054	6144	785	327	1363	1501
85	13,804	14,008	1690	860	2951	3238	6261	6354	767	390	1339	1469
86	13,191	14,465	1820	860	3108	3428	5983	6561	826	390	1410	1555
87	14,597	14,923	1940	860	3271	3618	6621	6769	880	390	1484	1641

\*Rigging weights are for standard tubes of standard wall thickness (Turbo-B3 and Spikefin 2, 0.025-in. [0.635 mm] wall).

**NOTES:**

1. Cooler includes the control panel (ICVC), suction elbow, and 1/2 the distribution piping weight.
2. Condenser includes float valve and sump, discharge elbow, and 1/2 the distribution piping weight.
3. For special tubes refer to the 19XR/XRV Computer Selection Program.
4. All weights for standard 2-pass NIH (nozzle-in-head) design.

# Dimensions



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

HEAT EXCHANGER SIZE	A (Length, with Nozzle-in-Head Waterbox)						19XR B (Width)		19XR C (Height)		19XR V B (Width)		19XR V 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	ft-in.	mm								
10 to 12	11-11	3632	11-4	3454	11-11	3632	5- 27/8	1597	6- 11/4	1861	5-27/8	1597	7- 3	2210
15 to 17	14- 2 1/2	4331	13- 7 1/2	4153	14- 2 1/2	4331	5- 27/8	1597	6- 11/4	1861	5-27/8	1597	7- 3	2210
20 to 22	11-11 3/4	3651	11- 4 3/4	3473	11-11 3/4	3651	5- 67/16	1688	6- 3 1/4	1911	5-67/16	1688	7- 10 1/4	2394
30 to 32†	14- 3 1/4	4350	13- 8 1/4	4172	14- 3 1/4	4350	5- 7 3/16	1707	6- 9 5/8	2073	5-67/16	1688	7- 6 3/4	2305
30 to 32**	14- 3 1/4	4350	13- 8 1/4	4172	14- 3 1/4	4350	5- 7 3/16	1707	6- 9 5/8	2073	5-61/8	1680	7- 6 3/4	2305
35 to 37†	15-11 3/4	4870	15- 4 3/4	4693	15-11 3/4	4870	5- 7 3/16	1707	6- 9 5/8	2073	5-67/16	1688	7- 6 3/4	2305
35 to 37**	15-11 3/4	4870	15- 4 3/4	4693	15-11 3/4	4870	5- 7 3/16	1707	6- 9 5/8	2073	5-61/8	1680	7- 6 3/4	2305
40 to 42	14- 9	4496	14- 3 1/8	4347	14- 6	4420	6- 3 1/8	1908	7- 0 3/4	2153	6- 2	1880	7- 11	2413
45 to 47	16- 5 1/2	5017	15-11 5/8	4867	16- 2 1/2	4940	6- 3 1/8	1908	7- 0 3/4	2153	6- 2	1880	7- 11	2413
50 to 52**	14-10	4521	14- 4 1/2	4382	14- 6 1/2	4432	6- 8 7/8	2054	7- 2 3/8	2194	6- 6 1/2	1994	8- 6 3/4	2610
50 to 52††	14-10	4521	14- 4 1/2	4382	14- 6 1/2	4432	6- 8 7/8	2054	7- 2 3/8	2194	6- 7 7/8	2029	8- 6 3/4	2610
5A to 5C	14-10	4521	14- 4 1/2	4382	14- 6 1/2	4432	6- 8 7/8	2054	7- 2 3/8	2194	6- 8 7/8	2054	8- 6 3/4	2610
55 to 57**	16- 6 1/2	5042	16- 1	4902	16- 3	4953	6- 8 7/8	2054	7- 2 3/8	2194	6- 6 1/2	1994	8- 6 3/4	2610
55 to 57††	16- 6 1/2	5042	16- 1	4902	16- 3	4953	6- 8 7/8	2054	7- 2 3/8	2194	6- 7 7/8	2029	8- 6 3/4	2610
5F to 5H	16- 6 1/2	5042	16- 1	4902	16- 3	4953	6- 8 7/8	2054	7- 2 3/8	2194	6- 8 7/8	2054	8- 6 3/4	2610
60 to 62	14-11	4547	14- 5 1/4	4400	14- 7	4445	6- 0 5/8	2124	7- 4 3/8	2245	6- 10 5/8	2124	8- 9 7/8	2689
65 to 67	16- 7 1/2	5067	16- 1 3/4	4921	16- 3 1/2	4966	6- 0 5/8	2124	7- 4 3/8	2245	6- 10 5/8	2124	8- 9 7/8	2689
70 to 72††	17- 0 1/2	5194	16-11	5156	16- 9 1/4	5112	7-11 1/2	2426	9- 9 1/2	2972	9- 1 3/8	2778	10	3048
70 to 72***	17- 0 1/2	5194	16-11	5156	16- 9 1/4	5112	7-11 1/2	2426	9- 9 1/2	2972	9- 3 5/8	2835	10	3048
75 to 77	19- 0 1/2	5804	18-11	5766	18- 9 1/4	5721	7-11 1/2	2426	9- 9 1/2	2972	9- 3 5/8	2835	10	3048
80 to 82	17- 3 1/2	5271	17- 0 1/2	5194	16- 9 1/2	5118	8-10 3/4	2711	9- 11 1/4	3029	10- 0 9/16	3063	10	3048
85 to 87	19- 3 1/2	5880	19- 0 1/2	5804	18- 9 1/2	5728	8-10 3/4	2711	9- 11 1/4	3029	10- 0 9/16	3063	10	3048

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

†Compressor frame size 2.

\*\*Compressor frame size 3.

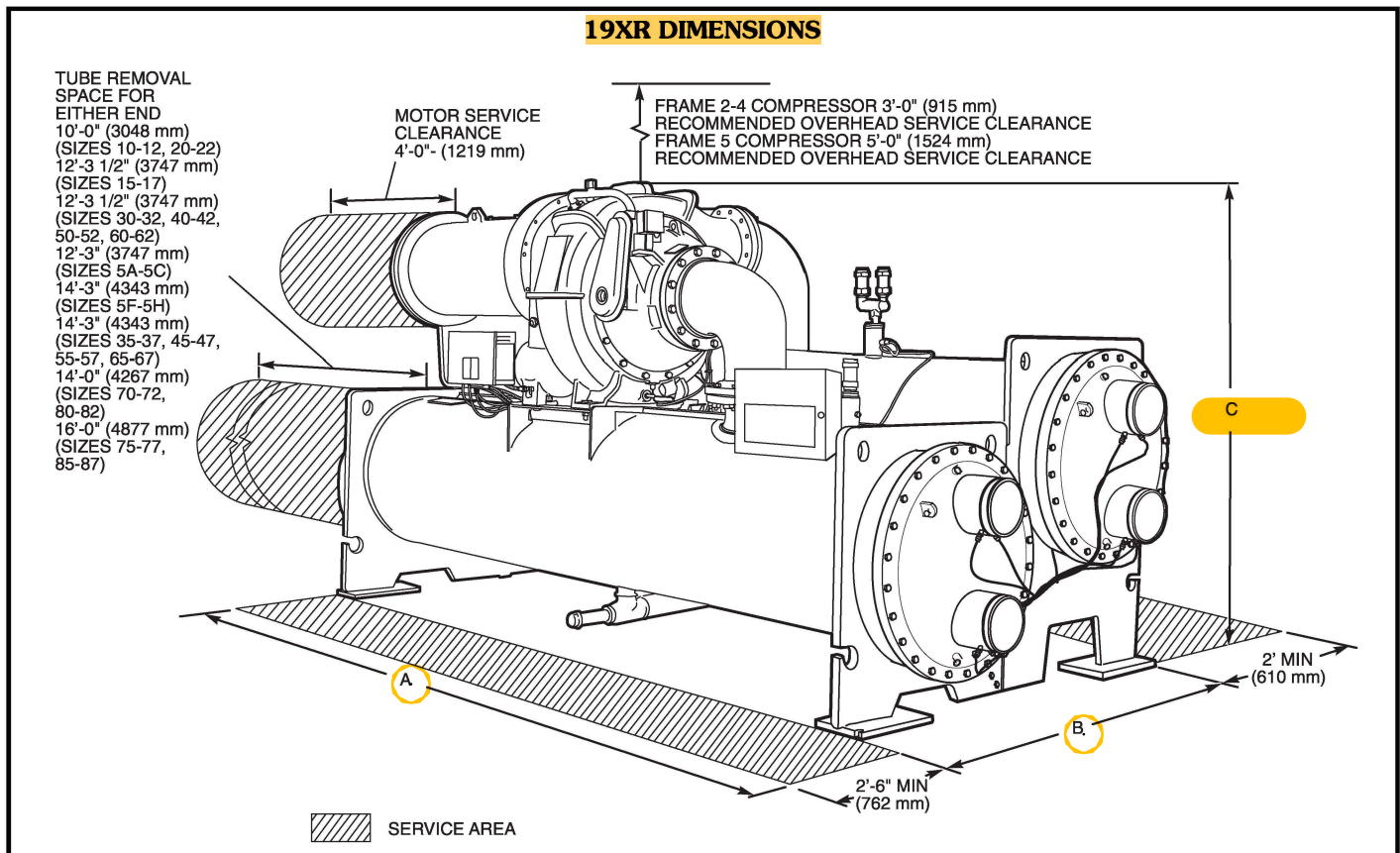
††Compressor frame size 4.

\*\*\*Compressor frame size 5.

### NOTES:

1. Service access should be provided per American Society of Heating, Refrigeration, 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 compressor should be 5 ft (1524 mm).
3. Dimensions are approximate. Certified drawings available upon request.
4. Marine waterboxes may add 6 in. to the width of the machine. See certified drawings for details.
5. 'A' length dimensions shown are for standard 150 psig design and victaulic connections. The 300 psig 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.

### 19XR DIMENSIONS



### 19XR DIMENSIONS (Marine Waterbox)

HEAT EXCHANGER SIZE	A (Length, Marine Waterbox)				19XR B WIDTH		19XR/V 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 52	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 57	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 62	15- 4 1/8	4677	16- 8 3/4	5099	6-11 3/4	2127	6- 11 3/4	2127	
65 to 67	17- 0 5/8	5197	18- 5 1/4	5620	6-11 3/4	2127	6- 11 3/4	2127	
70 to 72	17- 10 3/4	5455	19- 9 3/4	6039	8- 8 1/8	2645	9- 5 7/8	2778	
70 to 72	17- 10 3/4	5455	19- 9 3/4	6039	8- 8 1/8	2645	9- 6 3/8	2905	
75 to 77	19- 10 3/4	6188	21- 9 3/4	6648	8- 8 1/8	2645	9- 6 3/8	2905	
80 to 82	18- 0 5/8	5502	19-10 1/2	6058	9- 6	2896	10- 5	3175	
85 to 87	20- 0 5/8	6112	21-10 1/2	6668	9- 6	2896	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, Refrigeration, 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 frame 5 compressor should be 5 ft (1524 mm).
- Dimensions are approximate. Certified drawings available upon request.

- Marine waterboxes may add 6 in., to the width of the machine. See certified drawings for details.
- 'A' length dimensions shown are for standard 150 psig design and victaulic connections. The 300 psig design and/or flanges will add length. See certified drawings.
- 19XR, XRV height — check certified drawings.
- Not all waterbox/pass combinations are available with unit-mounted VFD. Check selection program for availability.