



Liquid Chiller

nOWLC And nOALC Series



Features and Benefits

OMRAN cold generator reciprocating Liquid chiller are designed and built to provide reliable, efficient performance and easy serviceability. Complete factory run testing helps ensure every **OMRAN** chillers starts easily and operates reliable. The compressor alone undergoes a continuous series of demanding production checks such as proof and leak test and static electrical and multiple leak-back checks. These are Followed by several run tests to confirm proper operation of the chiller.

OMRAN 10 through 240 ton cold generator chillers are designed with service personal in mind. Compressor are standardized and assembled for easy access.

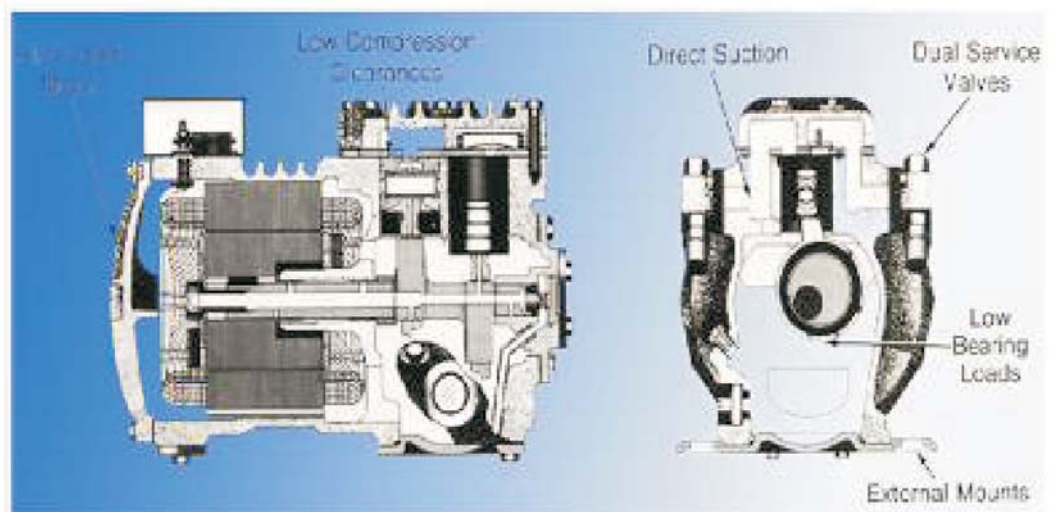
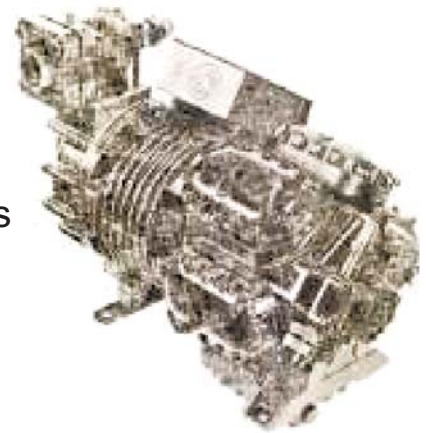
OMRAN chillers use, exclusively, Carrier and Copeland high efficiency semi-hermetic components heaving high technology design.

OMRAN chillers are equipped with multiple compressor connected in parallel in order to achieve greater operating flexibility. By cycling individual compressors the system capacity can be with full power saving for the compressors in operation by using the system of parallel compressors operation uncomplicated unload start is achieved by a simple time delay starting of single compressors as opposed to a compressor start with the total capacity.

Component Features:

COMPRESSOR

The compressor is driven by an electric motor Mounted directly on the compressor crankshaft with both the motor and the compressor working parts hermetically sealed within a common enclosure . The trouble some shaft seal is eliminated, motors can be sized specifically for the load to be handed , and the resulting design is compact, economical, efficient , and basically maintenance free. Compressor lubrication is provided by means of a positive displacement oil pump. Motor protection on these compressor is provided by a solid state components that provide pilot circuit protection , its advantages being that it provides three leg protection , reacts with great sensitivity to changes in motor temperature , and provides automatic reset motor protection . Compressors are equipped with an oil sight glass, oil equalizer, suction and discharge service valves and crankcase heater.



Component Features:

CONDENSER

The condenser is a shell and tube heat exchanger especially designed for the OMRAN liquid chillers. The condenser is sized sufficiently to hold the total refrigerant charge on pump down operation. An integrated sub-cooling section allows system capacity increase without on increase in power. Tube sheet is made from carbon steel St-52 specially finished, the bundle is fixed to the tube sheets by means of mechanical rolling expansion and special chemical glue for long time heavy duty operation.

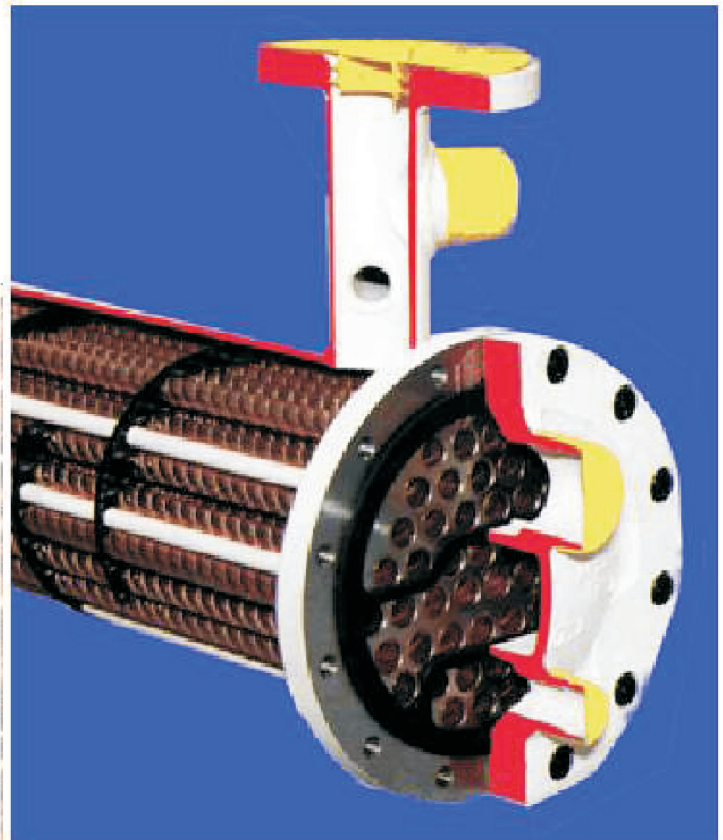
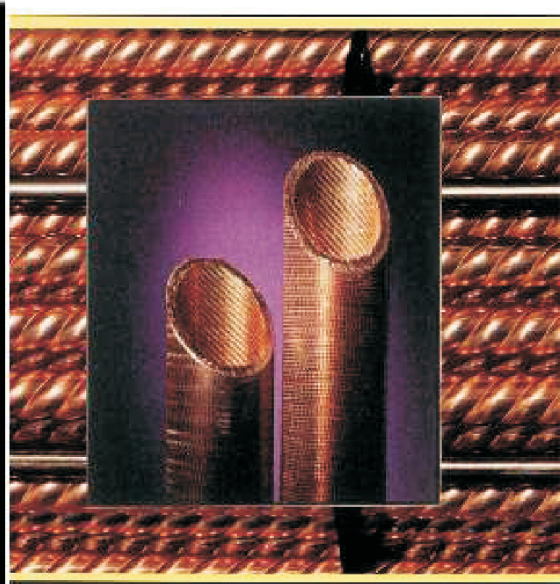


Component Features:

EVAPORATOR

The direct expansion shell and tube is designed properly for high effectiveness with removable head, one or two or more refrigerant circuits. The refrigerant flows in the tubes and a series of baffles in the shell recirculate liquid. The tubes are removable. Shell is made of steel and tubes made of copper fixed to steel end plates. Baffles are provided in the water flow to increase heat transfer efficiency. Evaporator are provided with drain and vent plugs.

Cooler shell is insulated with 1" thick flexible closed cell insulation, k factor 0.28 Btu.in/ft².h.°F (0.004 W/m. °K). Maximum working pressure of water side of water is 150 psig and refrigerant side is 240psig.



Component Features:

STRUCTURE

OMRAN cold generator reciprocating liquid chillers are fully assembled on rigid structural steel painted with one coat primer and one coat main paint.

The structure can be Supplied with epoxy paint on request for special requirements.

REFRIGERANT PIPING

The refrigeration circuit piping is fabricated with suitable grade copper piping. Each refrigeration circuit includes a replaceable core filter drier , liquid line solenoid valve , thermostatic expansion valve , sight glass, suction filter, shut off valve , hot gas discharge muffler (optional) and vibration absorbers at the compressor connections.

The refrigeration circuit suction line is insulated with ½ inch wall thickness closed cell pipe insulation .



Component Features:

CONTROL PANEL

The unit mounted chiller control panel enclosure is fabricated out of heavy gauge sheet steel in phosphatized powder coated baked finish.

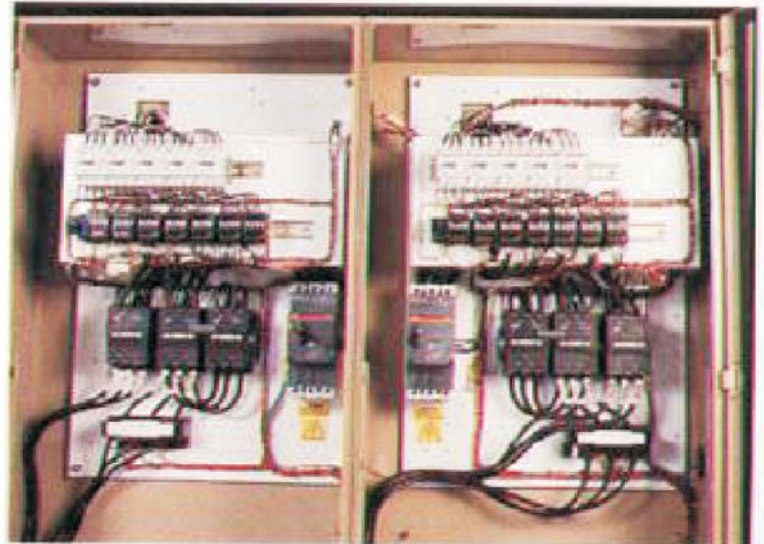
The panels are dust tight , inside visible. Faster key doors are provided for easy access and security . The control panel is natural convection ventilated .

Electrical power controls are separated From refrigerant controls to allow safe ready adjustment while the system is in operation .



The panel is factory wired , labeled , tagged and features 220V controls and the following as standard.

- Individual compressor and motor contactors.
- Circuit breakers and fuses for compressor and motors respectively.
- Over current protection.
- Low pressure safety switch .
- High pressure safety switch .
- Compressor oil failure switch.
- Evaporator freeze protection thermostat.
- Multi-step temperature controller.
- Control circuit fuses.
- Run , trips indication lights.
- Phase control.
- Ring relays.
- Etc,.....





OPTIONAL FEATURES

FACTORY INSTALLED OPTION

- Low ambient thermostat
- High ambient thermostat
- Alternative condenser material with coating
- Electronic expansion valve
- Ammeter and phase selector switch
- Part winding starting system
- Voltmeter and selector switch
- Individual refrigerant circuit
- Voltage module motoring
- Capacity control steps
- Run hour meter
- Changeover switch
- Pressure gauges
- Start unloader

FIELD INSTALLATION (OPTIONS)

- Chilled water flow switch
- Fault status indicator panel
- Multi-chillers sequencing panel

OTHER OPTIONS

- Alarm system
- Sound Attenuator
- Hot gas bypass
- Aux. Flow switch
- Aux. Gauges
- Cycle counter
- Mufflers

OPTIONAL FEATURES

- Mimicking and monitoring panels
- Water regulating valve
- Suction , discharge heat exchanger
- Oil separator
- Liquid separator
- Shell and coil Evaporator
- Shell and coil Condenser
- Coaxial tube Evaporator
- Coaxial tube Condenser
- Screw Compressors
- Changeable Stator Compressor



CONSIDERATION :

Multiple chiller operation :

If the capacity requires installing more than one chiller unit or where standby units are desired , units should be of equal size (or near) to ensure balanced Water flow.

Condenser fans Should not obstructed or air flow restricted in any way . Fan outlets should not be ducted in any case.



LOW AMBIENT OPERATION

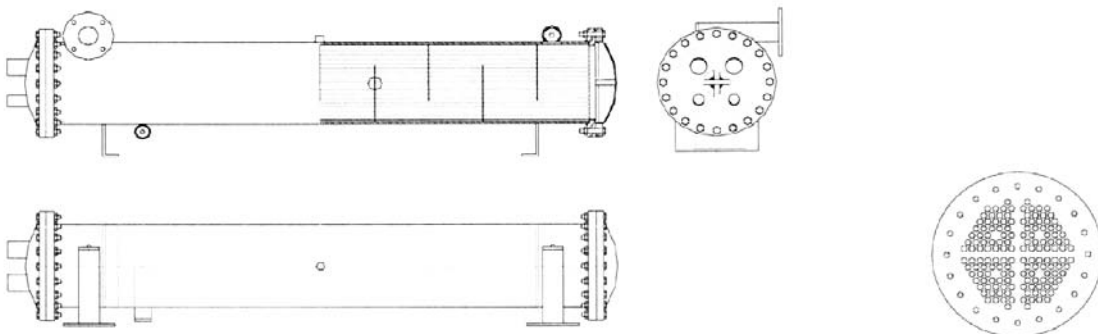
For efficient operation of chiller during Intermediate seasons, when temperatures may drop to 50°F , proper operation is

Controlled by the following:

Fan cycling controlled by high pressure switch to cycle one or more condenser fans.
this standard arrangement will keep condensing temperature and condensing pressure within design requirements.

TEST AND WORKING PRESSURE

Evaporator pressure		Ref.	Water
design working pressure	Psi g	250	270
	Kpa	1723	1861
Test pressure	Psi g	350	370
	Kpa	2413	2551
Condenser pressure		Ref.	Water
design working pressure	Psi g	350	250
	Kpa	2413	1723
Test pressure	Psi g	440	370
	Kpa	3033	2551



FOULING FACTORS

The units are at $0.0005 \text{ ft}^2 \cdot \text{h}^\circ\text{F}/\text{Btu}$ ($0.088^\circ\text{C} / \text{KW}$)
 Other than this fouling factor , apply the correction
 Factors to get the effect on cooling capacity
 And power input .

Foulin Factor		Capacity multiplier	Power multiplier
English	SI		
0.00025	0.044	1.01	1.00
0.00050	0.088	1.00	1.00
0.00100	0.0176	0.97	0.99
0.00200	0.352	0.92	0.97

LOW TEMPERATURE EVAPORATOR

when evaporator works at low temp low temperature we use glycol mixture as shown below:

Freezing point °F	Ethylene Glycol %by weight	Propylene Glycol % by weight
23	12	16
14	22	26
5	30	34
-4	36	40
-13	40	44
-22	44	48
-31	48	52
40	52	56

ALTITUDE CORRECTION FACTORS

The units rating based on sea level .
above sea level apply the following correction factors:

Altitude		Capacity Multiplier	Power Multiplier
ft.	M.		
0	0	1.00	1.00
2000	610	0.99	1.01
4000	1219	0.98	1.02
6000	1829	0.97	1.03
8000	2438	0.96	1.04
10000	3048	0.95	1.05

RANGE CORRECTION FACTORS

Capacity ratings based on 10°F (5.5°C) chilled water range . For this range use correction factor below.

Range		Capacity Multiplier	Power Multiplier
°F	°C		
8	4.4	0.995	0.988
10	5.5	1.000	1.000
12	6.7	1.005	1.002
14	7.8	1.010	1.004
16	8.9	1.015	1.006

FIN MATERIAL CORRECTION FACTORS

The units rating are based on copper tube and aluminum fins condenser . for alternative condenser material the following factors apply:

Condenser material	capacity Multiplier	Power Multiplier
Tubes/Fins		
Copper /Copper	1.010	0.992
Copper/Alum .+ special coated	0.955	1.002
Copper/Copper + special coated	1.005	0.994

LEGENDS AND NOTES :

ARI : air conditioning and Refrigeration institue

Btu =British thermal unit

C. Cap = Cooling Capacity in TR

CFM = Cubic Feet per Minute

GPM = Gallons Per Minute

Kpa =Kilo -Pascal

PI = Compressor power input in KW

RANGE = Ent. Chiller water (Temp.) - leaving chilled water (Temp.)

T.R./TR = Tons of refrigeration

WFR = Water Flow Rate

PD = Water pressure Drop (FT.WG)

THR = Total Heat Rejection (MBH =1000 Btu/hr)

GUIDE TO SELECTION :

GENERAL

The chiller capacity tables cover the most frequently Encountered leaving water temperature.

The tables reflect a 10°F temperature drop Through the Evaporator. For temperature drops other than 10°F Refer to range correction factors table

The nOALC series for use with remote air cooled Condensers , is rated over the same leaving chilled water air cooled Water range at condensing temperatures from 115°F To 135°F.

OMRAN chillers should be selected with specific Design considerations and requirements and Parameters of the intended application. care and Good engineering judgment should lead to an efficient And cost effective selection.

CHILLED WATER FLOW RATE

Required cooling capacity and the desired chilled Water range are the two important factors in Determining the amount of water to be circulated in the Evaporator. The following formula can also be used When needed.

$$\text{WFR(usgpm)} = \frac{\text{C.Cap (T.R)} \times 24}{\text{RANGE}(^{\circ}\text{F})}$$

AIR COOLED WATER CHILLER

NOALC series are air cooled water chillers that Have remote condenser.

The actual condenser heat rejection is tabulated To permit proper condenser selection.

Discharge lines are usually selected for 2 to 5 PsiG pressure drop per 100 ft.

For more information refer to OMRAN air Cooled condenser catalogue.

SELECTION PROCEDURE:**WATER COOLED PROCEDURE**

1-establish machine requirements

- chilled water GPM
- leaving chilled water temp.
- chilled water range (∇t)
- leaving condenser water temp.
- condenser water range

2-cooling capacity (T.R) =
$$\frac{\text{WFR (us gpm)} \times \text{Range}}{24}$$

3-select unit model from the ratings.

4-determine chilled water (gpm) , pressure drop, and power input , electrical data and dimension.

SELECTION PROCEDURE:

AIR COOLED PROCEDURE

1-Establish machine requirements :

- chilled water GPM
- leaving chilled water temp.
- chilled water range
- design condensing temp.
- ambient temp.

2-cooling capacity (T.R) = $\frac{\text{WFR (us gpm)} \times \text{Range}}{24}$

3-select unit model from the ratings

4-determine chilled water (gpm) , pressure drop,
and power input , electrical data and dimension

5-select air cooled condenser model.

CAPACITY RATING

Capacity Ratings - Air cooled chillers

Evaporator leaving chilled water temperature = 42 °F										
Condensing temperature (°F)										
Unit size	115					120				
	C . Cap		Ch . w		THR	C . Cap		Ch . w		THR
	TR	PI	Gpm	PD		TR	PI	Gpm	PD	
1OALC-10	8.3	8.7	129.1	21.1	2.2	8.0	9.1	128.4	19.2	2.0
1OALC-15	11.4	11.3	175.2	28.2	2.2	10.8	12.1	172.1	25.8	2.0
1OALC-20	11.4	11.3	175.2	28.2	2.2	10.8	12.1	172.1	25.8	2.0
1OALC-25	17.2	17.4	273.5	42.8	3.2	16.8	18.1	255.5	40.9	2.9
1OALC-30	20.5	20.4	315.0	48.8	4.2	20.1	21.1	305.2	48.5	3.8
1OALC-35	26.1	27.2	390.1	62.1	6.6	25.8	28.5	385.5	59.9	6.2
1OALC-40	29.3	31.8	455.1	70.3	4.3	28.2	32.8	443.3	68.2	4.0
1OALC-50	37.2	36.5	570.9	92.1	8.1	35.9	38.3	560.2	87.1	7.9
1OALC-60	43.8	45.9	680.3	103.9	5.9	42.4	46.4	653.2	101.1	5.7
2OALC-30	22.6	23.8	340.3	55.4	4.4	22.1	24.5	339.1	52.5	4.1
2OALC-40	28.0	27.3	418.8	67.2	3.9	27.1	28.4	412.2	64.2	3.5
2OALC-50	34.8	35.0	541.4	83.2	7.3	34.0	35.8	520.3	81.0	6.8
2OALC-60	41.2	42.1	640.1	100.1	10.3	40.5	42.8	620.3	97.2	11.2
2OALC-70	51.2	54.3	795.2	125.2	16.9	50.0	56.3	774.2	123.3	16.0
2OALC-80	57.9	62.1	889.9	142.1	15.9	55.8	65.1	880.0	135.2	15.1
2OALC-100	75.8	74.7	1140.0	181.7	13.6	72.6	77.2	1120.1	178.2	12.7
2OALC-120	84.1	93.8	1320.0	210.1	14.2	81.8	96.5	1270.2	198.8	13.1
3OALC-60	41.6	40.6	630.0	100.1	11.0	40.8	42.0	615.3	97.3	10.8
3OALC-75	51.8	51.3	785.2	125.5	13.5	49.8	54.0	766.3	120.5	12.3
3OALC-90	61.5	62.2	935.1	144.0	11.1	59.5	64.4	920.1	143.8	10.2
3OALC-105	76.6	80.1	1180.1	188.3	11.2	75.0	83.2	1160.3	178.1	10.4
3OALC-120	84.4	93.8	1300.8	204.2	14.5	81.4	97.5	1280.0	196.1	13.1
3OALC-150	113.0	112.9	1720.3	270.1	13.3	108.2	117.0	1680.2	260.3	12.8
3OALC-180	130.3	135.5	2000.0	312.1	14.1	126.1	140.3	1960.0	300.0	13.2
4OALC-80	54.5	53.3	816.5	130.1	12.2	52.6	55.6	802.8	127.0	11.3
4OALC-100	68.9	70.1	1036.5	166.0	7.3	66.5	71.4	1020.0	160.3	6.5
4OALC-120	82.8	83.6	1240.0	197.1	7.6	79.9	86.6	1215.2	190.9	6.8
4OALC-140	103.0	108.2	1560.0	244.2	17.3	98.5	111.9	1530.0	240.7	15.0
4OALC-160	113.0	124.9	1734.0	270.8	12.1	108.8	128.0	1690.0	270.3	11.2
4OALC-200	150.0	150.6	2276.0	360.9	12.5	144.4	156.0	2240.0	350.5	12.3
4OALC-240	173.1	181.2	2700.0	415.3	14.2	167.5	188.1	2600.0	400.0	13.3

Rating Table Based on chilled water temp. Changed (Δ) 10 °F (5.5 °C).

CAPACITY RATING

Capacity Ratings - Air cooled chillers

Evaporator leaving chilled water temperature = 42 °F										
Unit size	Condensing temperature (°F)									
	125					135				
	C . Cap		Ch . w		THR	C . Cap		Ch . w		THR
	TR	PI	Gpm	PD		TR	PI	gpm	PD	
1WALC-10	7.7	9.0	123.1	18.5	1.9	7.2	10.1	114.3	17.5	1.7
1WALC-15	10.3	14.2	160.0	24.8	1.6	9.5	14.8	153.0	22.1	1.4
1WALC-20	13.0	14.8	200.1	31.2	2.3	12.1	15.7	190.1	29.1	2.1
1WALC-25	16.0	18.6	248.9	39.0	2.8	15.1	19.8	240.1	36.1	2.6
1WALC-30	19.1	22.8	300.0	46.2	3.6	17.8	24.0	281.1	42.1	3.0
1WALC-35	24.3	29.2	380.1	56.6	5.8	22.9	30.5	360.1	53.3	5.1
1WALC-40	27.1	33.8	425.2	64.8	3.8	25.5	35.5	415.0	60.0	3.1
1WALC-50	38.3	39.6	541.7	83.1	7.7	32.5	41.8	541.2	78.2	7.3
1WALC-60	41.0	48.2	640.1	95.9	5.4	37.7	50.8	600.1	86.0	5.1
2WALC-30	20.9	25.8	338.1	50.2	3.9	19.2	26.6	320.3	47.0	3.6
2WALC-40	26.4	29.8	409.9	61.7	3.1	24.6	31.0	381.4	58.0	2.9
2WALC-50	33.3	36.9	510.0	77.7	6.2	30.5	39.4	490.1	72.2	5.6
2WALC-60	37.9	43.9	602.2	94.5	10.1	34.9	47.1	582.1	86.6	9.8
2WALC-70	49.1	58.2	770.1	116.5	16.2	46.6	61.3	735.4	108.3	15.8
2WALC-80	53.3	66.2	862.1	132.2	14.9	48.9	70.1	832.1	119.3	14.1
2WALC-100	69.9	79.2	1095.0	168.0	12.1	64.9	83.2	1040.1	156.8	11.9
2WALC-120	79.9	99.2	1260.1	189.7	12.4	75.5	103.2	1200.2	171.0	11.1
3WALC-60	38.5	43.2	604.4	94.2	10.1	36.5	46.3	579.8	86.5	8.3
3WALC-75	48.2	55.8	755.5	116.3	12.1	44.8	58.3	730.3	108.0	10.4
3WALC-90	57.1	67.0	899.9	136.4	9.6	53.4	71.1	860.1	128.8	8.6
3WALC-105	72.0	86.5	1130.4	173.0	9.5	67.0	93.1	1100.0	160.1	8.1
3WALC-120	78.0	100.0	1260.3	188.2	12.9	72.5	105.4	1200.3	175.1	10.9
3WALC-150	104.2	120.3	1645.5	250.0	11.7	97.1	127.0	1590.0	230.0	11.2
3WALC-180	121.0	145.5	1900.0	280.3	12.1	108.8	151.7	1790.0	260.3	10.8
4WALC-80	50.5	57.5	790.0	122.1	10.6	47.4	61.3	756.6	113.8	9.3
4WALC-100	64.4	74.2	1000.0	155.5	6.3	59.9	78.5	960.0	144.5	5.2
4WALC-120	76.6	90.0	1200.0	183.4	6.5	70.3	94.2	1140.0	170.0	5.3
4WALC-140	95.5	116.5	1500.0	230.1	14.0	88.1	122.2	1440.0	212.2	13.5
4WALC-160	104.4	133.0	1650.0	260.0	10.3	96.5	140.5	1600.0	235.5	8.5
4WALC-200	140.0	162.0	2190.0	330.1	11.6	128.2	170.7	2090.0	308.0	10.6
4WALC-240	162.3	192.2	2610.0	340.1	12.0	146.0	202.2	2400.0	348.0	10.1

Rating Table Based on chilled water temp. Changed (Δ) 10 °F (5.5 °C).

CAPACITY RATING

Capacity Ratings - Air cooled chillers

Evaporator leaving chilled water temperature = 45 °F										
Unit size	Condensing temperature (°F)									
	125					135				
	C . Cap		Ch . w		THR	C . Cap		Ch . w		THR
	TR	PI	Gpm	PD		TR	PI	gpm	PD	
1OALC-10	8.3	9.7	130.0	19.9	2.0	7.4	10.1	125.0	18.2	1.2
1OALC-15	11.4	13.0	135.0	28.0	2.0	10.2	13.6	170.0	25.0	1.8
1OALC-20	13.6	14.9	210.0	35.0	2.4	12.5	15.8	200.0	33.0	1.7
1OALC-25	17.0	19.2	270.0	44.4	2.8	16.0	20.3	250.0	40.1	2.1
1OALC-30	20.2	23.0	320.0	52.0	4.5	19.0	24.8	300.0	48.2	2.2
IOALC-35	25.3	29.2	400.0	63.4	6.6	23.4	31.9	380.9	59.9	4.0
1OALC-40	29.2	34.4	450.0	75.6	4.3	26.5	36.6	430.0	60.1	6.1
1OALC-50	37.4	40.9	580.0	92.1	8.7	34.9	43.2	550.1	83.0	5.1
1OALC-60	42.5	50.0	670.0	108.0	6.5	39.2	52.5	640.1	95.1	7.5
2OALC-30	22.3	25.9	350.0	53.9	4.8	20.6	27.6	340.0	50.0	4.4
2OALC-40	27.4	29.5	430.0	70.4	4.6	25.6	31.4	405.0	60.0	3.9
2OALC-50	34.2	38.0	530.0	80.5	7.5	31.8	40.2	500.0	76.8	6.2
2OALC-60	40.4	45.8	640.0	99.2	11.0	37.5	48.5	600.0	95.5	9.9
2OALC-70	50.3	59.5	800.0	125.6	16.5	46.4	63.2	765.5	115.5	15.5
2OALC-80	56.5	68.9	900.0	136.6	16.2	52.0	72.6	860.0	126.6	15.0
2OALC-100	74.9	81.3	1100.0	178.4	13.6	69.0	86.2	1100.0	166.2	14.0
2OALC-120	85.0	99.9	1340.0	210.6	12.9	77.0	104.4	1300.0	190.0	12.0
3OALC-60	41.0	44.4	630.1	99.0	9.4	38.2	47.7	600.0	91.5	8.1
3OALC-75	51.0	56.8	795.1	125.0	13.5	47.3	60.5	760.0	118.0	12.3
3OALC-90	60.7	68.2	940.3	150.2	10.6	56.3	72.4	900.0	140.1	9.0
3OALC-105	75.3	88.9	1180.2	188.0	10.8	70.0	95.0	1140.0	170.5	9.2
3OALC-120	83.3	102.1	1320.1	200.0	13.3	77.2	109.0	1305.0	190.2	11.3
3OALC-150	113.4	121.3	1730.1	270.3	14.2	102.5	130.0	1650.2	250.5	12.2
3OALC-180	127.2	148.2	2000.0	300.1	13.6	116.6	156.1	1895.1	280.0	9.9
4OALC-80	54.4	59.0	840.0	130.2	12.4	50.4	62.9	800.1	120.8	10.1
4OALC-100	68.2	75.3	1060.2	170.2	7.5	63.2	80.3	1019.9	160.1	6.0
4OALC-120	81.0	91.3	1260.1	200.1	7.6	75.0	96.6	1200.1	180.5	6.3
4OALC-140	100.0	118.0	1580.5	250.3	16.6	93.1	125.7	1500.0	240.1	14.4
4OALC-160	111.7	136.6	1770.0	270.2	12.3	104.1	145.0	1701.2	260.1	10.0
4OALC-200	149.0	162.5	2300.1	360.8	15.8	137.3	172.3	2203.1	311.1	14.1
4OALC-240	170.0	198.4	2680.1	410.3	12.5	154.2	208.1	2540.3	370.4	9.2

Rating Table Based on chilled water temp. Changed (Δ) 10 °F (5.5 °C).

CAPACITY RATING

Capacity Ratings - water cooled chillers

Unit size	Evaporator leaving chilled water temperature = 42 °F																	
	Condenser Entering water temp. (°F),(condenser temp. rise 10 °F)																	
	75						85						95					
	C . Cap		Ch . w		Cond . w		C . Cap		Ch . w		Cond . w		C . Cap		Ch . w		Cond . w	
	TR	PI	Gpm	PD	gpm	PD	TR	PI	gpm	PD	gpm	PD	TR	PI	gpm	PD	gpm	PD
1OALC-10	9.8	7.1	23.3	2.9	25.4	5.6	9.3	7.4	2.17	2.4	23.2	5.5	9.1	8.3	20.7	2.3	26.0	5.2
1OALC-15	12.8	9.3	32.5	3.5	34.3	5.3	12.2	10.1	29.8	3.2	33.3	5.0	11.8	11.1	25.4	2.3	34.3	4.1
1OALC-20	15.3	10.8	35.0	3.4	40.1	5.8	14.8	11.5	34.3	3.1	41.7	5.2	13.8	12.1	33.1	2.8	43.3	4.9
1OALC-25	19.7	13.7	45.9	4.0	55.3	9.3	18.5	15.3	35.9	3.6	52.9	8.5	17.7	16.2	40.8	3.1	51.6	8.1
1OALC -30	23.4	17.2	55.1	5.4	64.2	7.3	21.9	18.7	52.3	4.8	62.5	6.2	20.5	19.5	47.9	4.2	62.5	6.3
1OALC-35	28.8	21.7	68.8	7.9	83.3	5.5	28.0	24.1	62.6	7.3	81.0	4.2	26.0	26.1	62.1	6.7	75.4	4.0
1OALC-40	32.5	25.2	78.3	5.9	95.5	4.1	3.10	28.2	73.3	4.9	90.9	4.7	28.7	29.5	68.9	4.3	88.7	3.9
1OALC-50	42.7	29.7	101.1	9.8	120.8	6.1	39.5	32.7	92.9	8.9	115.5	5.6	36.1	35.8	87.1	8.1	112.9	5.5
1OALC-60	49.2	36.8	118.3	7.8	140.5	7.9	44.5	38.2	108.0	6.3	131.2	7.1	43.0	44.1	103.2	5.7	133.1	6.8
2OALC-30	25.8	18.9	61.2	6.5	73.2	4.8	23.5	20.2	58.1	5.2	71.2	4.6	22.8	22.2	53.4	4.2	68.7	4.2
2OALC-40	30.8	21.6	73.4	5.9	88.1	5.7	28.8	23.5	69.5	4.4	85.2	5.5	27.7	25.3	65.2	3.7	81.5	5.2
2OALC-50	38.6	27.5	92.3	8.8	110.2	9.2	36.3	30.8	87.2	7.7	106.0	8.6	34.2	32.8	81.5	6.6	104.1	7.7
2OALC-60	46.6	34.4	110.7	13.7	133.2	7.2	43.7	36.5	104.4	12.5	128.8	6.8	41.2	39.5	97.2	12.1	124.0	6.2
2OALC-70	58.2	42.2	138.1	17.7	165.5	5.2	53.9	48.8	131.7	17.5	160.5	4.8	51.7	52.2	122.1	16.7	156.0	4.2
2OALC-80	65.2	51.0	156.2	16.7	188.1	4.3	61.2	54.2	146.7	16.5	183.0	4.3	58.2	59.8	138.2	15.6	175.6	3.8
2OALC-100	84.2	53.3	202.0	14.7	243.3	6.2	78.5	64.4	188.0	13.5	235.5	5.6	73.3	72.0	175.5	12.2	225.2	5.4
2OALC-120	98.9	71.0	236.6	15.0	288.2	8.3	90.0	77.3	215.2	11.7	270.0	7.4	86.2	85.5	205.5	10.7	268.8	6.7
3OALC-60	41.2	32.8	110.2	12.8	133.2	5.9	43.5	36.2	104.4	11.8	127.2	5.5	41.2	38.5	97.9	10.8	124.4	5.2
3OALC-75	57.3	42.1	138.0	16.6	164.2	9.2	54.1	45.1	129.9	14.8	156.2	8.3	50.5	47.2	122.7	13.3	150.0	7.7
3OALC-90	70.1	52.2	166.2	14.3	198.1	7.2	66.0	54.8	156.2	12.2	192.1	6.5	61.9	59.2	147.1	11.3	180.0	6.1
3OALC-105	86.1	65.0	208.1	14.5	250.0	5.1	81.0	82.4	216.6	16.4	268.8	4.2	83.3	89.2	201	14.5	257.2	3.8
3OALC-120	96.1	25.7	230.2	18.2	275.6	4.8	89.7	82.2	216.6	16.3	266.6	4.3	84.1	88.2	202.2	14.5	260.0	3.2
3OALC-150	125.5	88.6	299.5	18.4	362.2	6.2	117.0	97.3	277.2	15.8	348.8	5.2	109.2	107.0	255.5	13.9	335.2	5.6
3OALC-180	146.9	106.1	350.1	19.1	425.2	8.2	135.2	115.8	322.9	15.6	403.3	7.3	129.5	127.7	306.0	13.2	398.8	6.4
4OALC-80	61.0	44.0	145.5	15.5	173.2	4.7	58.2	47.2	138.2	13.3	166.3	4.2	55.2	51.1	130.1	11.8	162.2	3.9
4OALC-100	76.3	55.2	179.1	8.2	220.0	6.3	73.1	59.6	175.0	7.9	212.2	5.7	68.2	65.8	165.8	6.8	208.7	5.7
4OALC-120	93.7	67.2	223.4	9.6	269.3	8.2	87.3	73.3	209.8	8.8	264.8	7.8	80.9	78.2	195.7	7.8	250.2	6.9
4OALC-140	117.3	86.2	280.4	18.1	340.0	6.8	109.5	93.8	260.2	16.3	320.2	5.8	102.8	107.8	240.2	16.1	310.0	5.8
4OALC-160	129.2	100.8	308.2	15.9	372.1	8.1	120.1	109.1	280.2	13.5	365.8	7.2	112.8	117.8	271.1	11.1	340.2	6.7
4OALC-200	167.2	118.1	390.2	16.6	480.1	9.8	152.1	130.7	375.6	14.2	463.1	9.4	144.8	149.6	340.8	11.5	440.0	8.3
4OALC-240	196.6	143.2	466.1	16.1	570.8	9.9	180.0	158.5	429.0	13.1	533.2	9.3	170.2	170.8	410.2	12.0	529.3	8.8

Rating Table Based on chilled and condenser water temp. Changed (Δt) 10 °F (5.5°C).

CAPACITY RATING

Capacity Ratings - Air cooled chillers

Evaporator leaving chilled water temperature = 42°F

Unit size	Condensing temperature (°F)									
	125					135				
	C . Cap		Ch . w		THR	C . Cap		Ch . w		THR
	TR	PI	Gpm	PD		TR	PI	gpm	PD	
1OALC-10	7.7	9.0	123.1	18.5	1.9	7.2	10.1	114.3	17.5	1.7
1OALC-15	10.3	14.2	160.0	24.8	1.6	9.5	14.8	153.0	22.1	1.4
1OALC-20	13.0	14.8	200.1	31.2	2.3	12.1	15.7	190.1	29.1	2.1
1OALC-25	16.0	18.6	248.9	39.0	2.8	15.1	19.8	240.1	36.1	2.6
1OALC-30	19.1	22.8	300.0	46.2	3.6	17.8	24.0	281.1	42.1	3.0
1OALC-35	24.3	29.2	380.1	56.6	5.8	22.9	30.5	360.1	53.3	5.1
1OALC-40	27.1	33.8	425.2	64.8	3.8	25.5	35.5	415.0	60.0	3.1
1OALC-50	38.3	39.6	541.7	83.1	7.7	32.5	41.8	541.2	78.2	7.3
1OALC-60	41.0	48.2	640.1	95.9	5.4	37.7	50.8	600.1	86.0	5.1
2OALC-30	20.9	25.8	338.1	50.2	3.9	19.2	26.6	320.3	47.0	3.6
2OALC-40	26.4	29.8	409.9	61.7	3.1	24.6	31.0	381.4	58.0	2.9
2OALC-50	33.3	36.9	510.0	77.7	6.2	30.5	39.4	490.1	72.2	5.6
2OALC-60	37.9	43.9	602.2	94.5	10.1	34.9	47.1	582.1	86.6	9.8
2OALC-70	49.1	58.2	770.1	116.5	16.2	46.6	61.3	735.4	108.3	15.8
2OALC-80	53.3	66.2	862.1	132.2	14.9	48.9	70.1	832.1	119.3	14.1
2OALC-100	69.9	79.2	1095.0	168.0	12.1	64.9	83.2	1040.1	156.8	11.9
2OALC-120	79.9	99.2	1260.1	189.7	12.4	75.5	103.2	1200.2	171.0	11.1
3OALC-60	38.5	43.2	604.4	94.2	10.1	36.5	46.3	579.8	86.5	8.3
3OALC-75	48.2	55.8	755.5	116.3	12.1	44.8	58.3	730.3	108.0	10.4
3OALC-90	57.1	67.0	899.9	136.4	9.6	53.4	71.1	860.1	128.8	8.6
3OALC-105	72.0	86.5	1130.4	173.0	9.5	67.0	93.1	1100.0	160.1	8.1
3OALC-120	78.0	100.0	1260.3	188.2	12.9	72.5	105.4	1200.3	175.1	10.9
3OALC-150	104.2	120.3	1645.5	250.0	11.7	97.1	127.0	1590.	230.0	11.2
3OALC-180	121.0	145.5	1900.0	280.3	12.1	108.8	151.7	1790.0	260.3	10.8
4OALC-80	50.5	57.5	790.0	122.1	10.6	47.4	61.3	756.6	113.8	9.3
4OALC-100	64.4	74.2	1000.0	155.5	6.3	59.9	78.5	960.0	144.5	5.2
4OALC-120	76.6	90.0	1200.0	183.4	6.5	70.3	94.2	1140.0	170.0	5.3
4OALC-140	95.5	116.5	1500.0	230.1	14.0	88.1	122.2	1440.0	212.2	13.5
4OALC-160	104.4	133.0	1650.0	260.0	10.3	96.5	140.5	1600.0	235.5	8.5
4OALC-200	140.0	162.0	2190.0	330.1	11.6	128.2	170.7	2090.0	308.0	10.6
4OALC-240	162.3	192.2	2610.0	340.1	12.0	146.0	202.2	2400.0	348.0	10.1

Rating Table Based on chilled water temp. Changed (Δ) 10°F (5.5 °C).

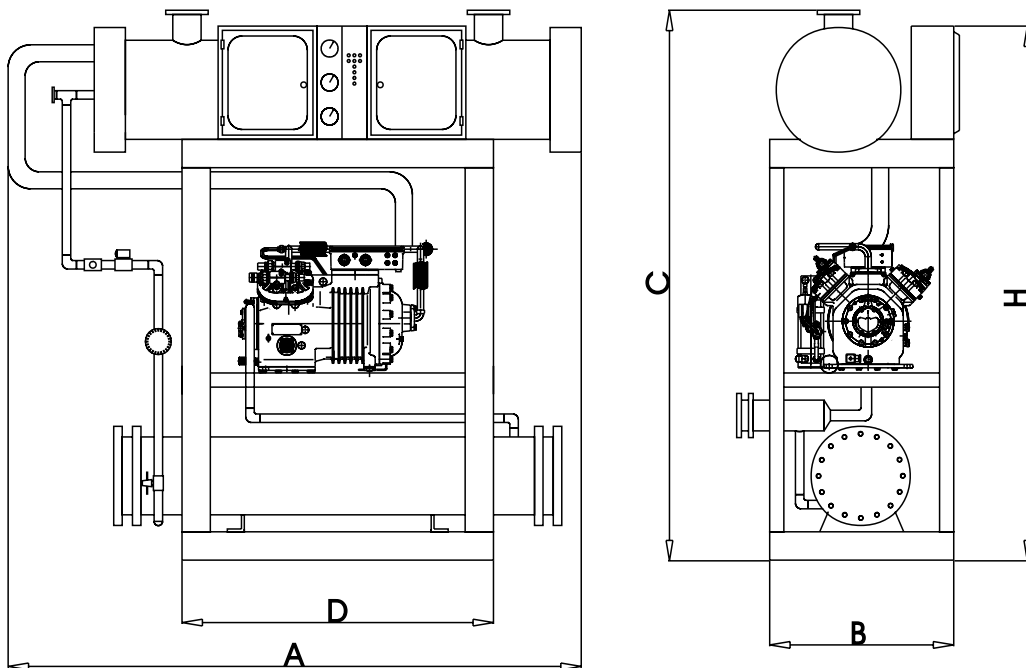
CAPACITY RATING

Capacity Ratings -water cooled chillers

Unit size	Evaporator leaving chilled water temperature = 45 °F																	
	Condenser Entering water temp. (°F),(condenser temp. rise 10 °F)																	
	75						85						95					
	C . Cap		Ch . w		Cond m		C . Cap		Ch . w		Cond . w		C . Cap		Ch . w		Cond . w	
	TR	PI	Gpm	PD	gpm	PD	TR	PI	gpm	PD	gpm	PD	TR	PI	Gpm	PD	gpm	PD
1OWLC-10	10.3	7.5	25.3	3.1	28.7	6.2	9.6	7.8	22.8	2.8	27.9	5.9	8.8	8.4	21.3	2.5	26.7	5.6
1OWLC-15	13.6	9.6	3.4	3.7	38.4	5.5	12.8	10.5	31.2	3.4	38.1	5.2	11.8	11.2	28.6	2.3	38.0	4.6
1OWLC-20	16.4	11.1	39.5	3.7	48.8	6.5	15.5	12.1	37.0	3.2	45.0	6.0	14.6	13.0	35.0	2.6	44.0	5.6
1OWLC-25	21.0	14.0	50.1	4.4	58.3	10.1	19.4	15.9	46.6	3.8	56.1	9.4	18.4	16.7	44.5	3.1	55.0	8.8
1OWLC-30	24.2	17.3	58.8	6.2	70.3	7.8	24.1	18.8	55.5	5.5	68.0	7.1	22.0	20.8	53.2	4.8	65.5	6.2
1OWLC-35	31.0	21.6	73.0	10.8	88.8	5.6	29.0	23.3	70.1	8.9	85.0	5.5	27.3	26.0	64.4	7.5	82.0	5.0
1OWLC-40	35.1	25.7	84.8	6.6	103.4	5.7	33.0	28.0	78.8	5.7	97.0	5.2	31.0	30.4	74.0	5.1	93.2	4.8
1OWLC-50	44.2	29.8	107.7	10.8	130.0	7.9	42.1	32.9	102.6	10.1	126.3	6.9	40.0	36.0	94.7	9.6	115.0	6.2
1OWLC-60	54.0	36.6	130.1	9.3	150.0	9.7	50.1	40.8	120.3	8.9	148.1	9.3	46.3	44.0	110.0	7.2	143.1	8.1
2OWLC-30	27.2	19.1	64.7	6.8	77.3	5.6	25.6	10.6	60.9	6.1	76.6	5.2	24.0	23.0	57.3	5.4	72.0	4.8
2OWLC-40	32.7	22.0	78.2	6.9	92.3	6.3	31.0	24.0	73.4	5.9	90.0	6.0	29.1	25.9	70.0	5.0	87.2	5.8
2OWLC-50	40.9	27.9	98.1	9.3	118.9	10.0	38.8	30.6	92.4	8.8	114.0	9.4	36.3	33.4	88.0	8.2	110.0	8.8
2OWLC-60	49.5	34.6	118.2	14.4	140.5	7.7	46.4	37.6	110.9	12.9	136.5	7.2	43.4	40.0	104.0	11.7	130.0	6.8
2OWLC-70	61.0	43.3	148.2	18.8	176.2	5.6	57.9	47.2	138.4	18.4	170.2	5.5	53.7	51.8	130.5	18.4	165.0	5.5
2OWLC-80	68.5	51.6	166.3	17.6	199.5	5.3	64.5	55.7	155.6	17.3	190.0	4.9	60.8	60.5	150.4	16.9	185.2	4.5
2OWLC-100	87.9	59.7	212.2	16.2	255.1	7.9	84.4	65.3	202.2	14.9	250.0	6.7	78.2	77.9	188.7	13.4	240.0	6.7
2OWLC-120	106.2	72.9	258.3	15.9	306.9	9.7	100.0	80.1	249.1	14.1	300.0	9.3	91.4	88.0	220.2	12.9	285.5	8.5
3OWLC-60	49.0	32.9	118.8	13.8	138.2	6.4	46.4	35.9	110.0	12.4	134.4	6.0	43.6	38.8	104.2	10.7	130.0	5.6
3OWLC-75	61.0	41.8	150.1	18.5	172.3	10.0	57.8	46.0	140.0	16.3	168.1	9.4	54.4	50.0	130.0	14.6	160.0	8.8
3OWLC-90	73.2	51.6	175.0	15.6	207.4	7.5	70.0	55.8	165.5	13.5	200.5	7.0	65.6	60.0	156.0	12.2	195.5	6.8
3OWLC-105	91.3	64.8	220.0	15.4	260.0	5.5	85.0	70.2	206.7	13.8	250.0	5.5	80.3	77.5	192.0	12.4	240.0	5.5
3OWLC-120	102.7	76.2	250.0	19.2	290.0	5.4	95.9	83.0	230.6	17.6	280.0	4.9	89.2	90.0	215.0	15.5	270.0	4.5
3OWLC-150	131.5	90.0	315.2	20	380.0	7.9	125.3	97.9	300.0	18.8	370.0	7.0	116.3	108.5	280.0	16.1	360.0	6.3
3OWLC-180	158.0	109.0	380.0	20.5	450.0	9.8	148.5	120.2	360.0	19.0	440.0	9.3	138.0	131.4	330.0	16.0	430.2	8.2
4OWLC-80	66.0	43.8	158.0	16.7	183.4	5.3	61.5	47.3	150.0	15.2	175.0	4.8	58.0	51.5	138.8	13.6	170.0	4.7
4OWLC-100	82.4	55.8	200.0	9.7	235.0	7.7	77.7	60.6	190.0	9.0	225.5	6.9	73.0	66.4	175.0	7.6	220.0	6.8
4OWLC-120	98.2	68.6	235.0	10.5	280.0	9.5	93.0	75.0	225.0	9.5	260.0	9.4	86.8	80.5	210.0	8.4	260.5	8.9
4OWLC-140	121.5	85.8	299.0	19.0	350.0	6.9	114.0	96.0	270.4	17.8	335.0	6.5	107.2	104.0	260.0	17.0	325.0	6.5
4OWLC-160	136.4	101.8	330.0	17.4	390.5	8.8	128.9	110.5	305.5	15.5	380.0	7.7	119.8	120.1	290.0	13.9	356.0	7.4
4OWLC-200	174.5	119.5	418.9	17.6	500.6	10.8	167.4	130.4	400.0	16.5	490.0	10.5	156.4	144.2	370.0	13.5	470.0	9.5
4OWLC-240	210.4	144.3	506.2	19.3	600.0	11.5	197.0	160.6	470.0	17.8	590.0	10.9	182.5	175.0	440.0	14.5	565.5	9.6

Rating Table Based on chilled and condenser water temp. Changed (Δt)10 °F (5.5 °C).

DIAGRAM

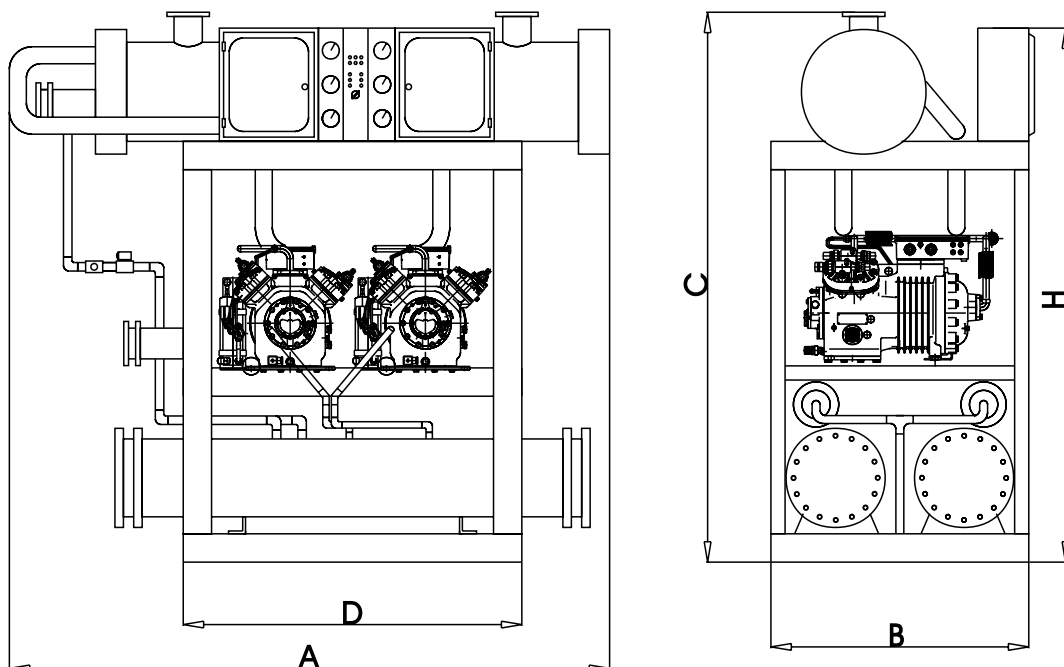


DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	I	D.L	L.L
2 OWL C-30	2500	1720	1500	1600	910	1060	2x4"	2x3"	2000	2x1 1/8"	2x7/8"
2 OWLC-40	2500	1720	1500	1600	910	1060	2x4"	2x3"	2000	2x1 1/8"	2X7/8"
2 OWLC-50	2500	1770	1500	1600	910	1060	2x4"	2x3"	20	2x1 1/8"	2X1 1/8"
2 OWLC-60	2900	1770	1500	1600	910	1060	4x2 1/4"	2x3"	2400	2x1 3/8"	2X1 1/8"
2 OWLC-70	2900	1770	1500	1600	1010	1160	4x2 1/4"	2x4"	2400	2x1 3/8"	2X1 1/8"
2 OWLC-80	2900	1770	1500	1600	1010	1160	4x2 1/4"	2x4"	2400	2x1 3/8"	2X1 1/8"
2 OWLC-100	3500	2030	1620	1740	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2X1 3/8"
2 OWLC-120	3500	2030	1620	1740	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2X1 3/8"

MODEL	A	B	C	D	E	F	G	H	I	D.L	L.L
2 OALC-30	2500	1720	1500	1600	910	1060	2x4"	2x3"	2000	2x1 1/8"	2x7/8"
2 OALC-40	2500	1720	1500	1600	910	1060	2x4"	2x3"	2000	2x1 1/8"	2X7/8"
2 OALC-50	2500	1770	1500	1600	910	1060	2x4"	2x3"	20	2x1 1/8"	2X1 1/8"
2 OALC-60	2900	1770	1500	1600	910	1060	4x2 1/4"	2x3"	2400	2x1 3/8"	2X1 1/8"
2 OALC-70	2900	1770	1500	1600	1010	1160	4x2 1/4"	2x4"	2400	2x1 3/8"	2X1 1/8"
2 OALC-80	2900	1770	1500	1600	1010	1160	4x2 1/4"	2x4"	2400	2x1 3/8"	2X1 1/8"
2 OALC-100	3500	2030	1620	1740	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2X1 3/8"
2 OALC-120	3500	2030	1620	1740	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2X1 3/8"

DIAGRAM

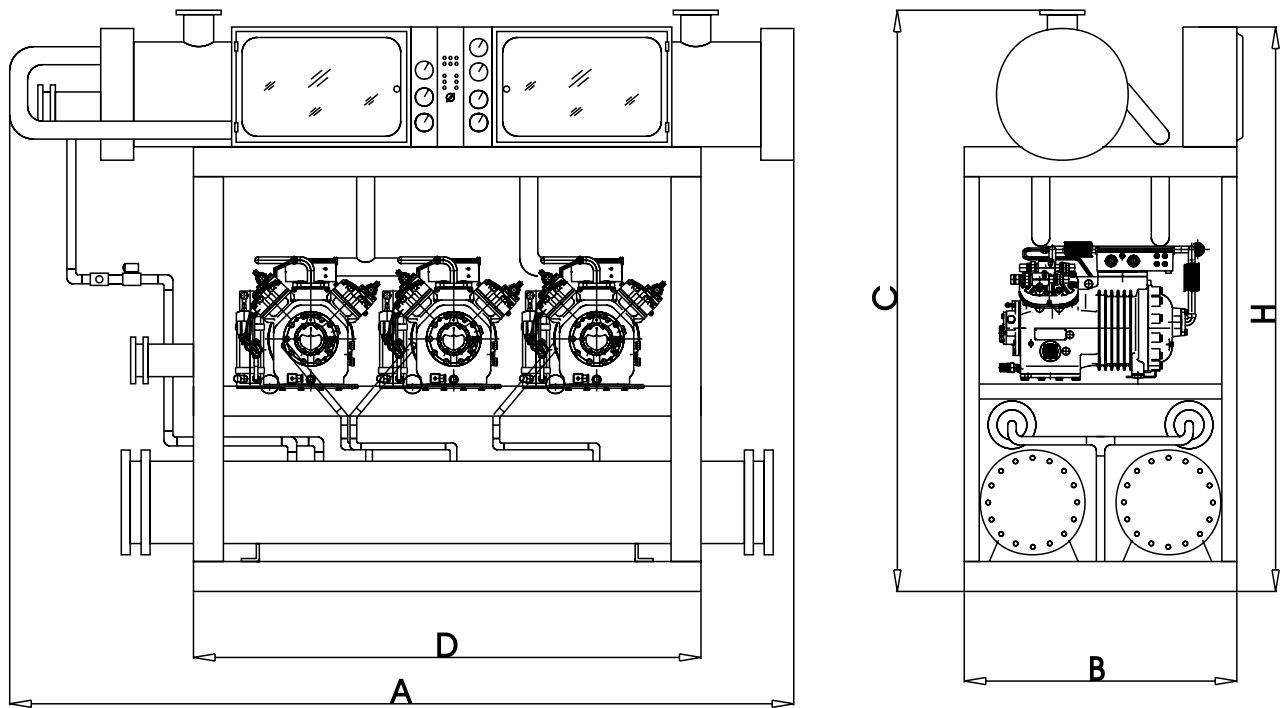


DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	I	D.L	L.L
2 OWL C-30	2500	1720	1500	1600	910	1060	2x4"	2x3"	2000	2x1 1/8"	2x7/8"
2 OWLC-40	2500	1720	1500	1600	910	1060	2x4"	2x3"	2000	2x1 1/8"	2X7/8"
2 OWLC-50	2500	1770	1500	1600	910	1060	2x4"	2x3"	20	2x1 1/8"	2X1 1/8"
2 OWLC-60	2900	1770	1500	1600	910	1060	4x2 1/4"	2x3"	2400	2x1 3/8"	2X1 1/8"
2 OWLC-70	2900	1770	1500	1600	1010	1160	4x2 1/4"	2x4"	2400	2x1 3/8"	2X1 1/8"
2 OWLC-80	2900	1770	1500	1600	1010	1160	4x2 1/4"	2x4"	2400	2x1 3/8"	2X1 1/8"
2 OWLC-100	3500	2030	1620	1740	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2X1 3/8"
2 OWLC-120	3500	2030	1620	1740	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2X1 3/8"

MODEL	A	B	C	D	E	F	G	H	I	D.L	L.L
2 OALC-30	2500	1720	1500	1600	910	1060	2x4"	2x3"	2000	2x1 1/8"	2x7/8"
2 OALC-40	2500	1720	1500	1600	910	1060	2x4"	2x3"	2000	2x1 1/8"	2X7/8"
2 OALC-50	2500	1770	1500	1600	910	1060	2x4"	2x3"	20	2x1 1/8"	2X1 1/8"
2 OALC-60	2900	1770	1500	1600	910	1060	4x2 1/4"	2x3"	2400	2x1 3/8"	2X1 1/8"
2 OALC-70	2900	1770	1500	1600	1010	1160	4x2 1/4"	2x4"	2400	2x1 3/8"	2X1 1/8"
2 OALC-80	2900	1770	1500	1600	1010	1160	4x2 1/4"	2x4"	2400	2x1 3/8"	2X1 1/8"
2 OALC-100	3500	2030	1620	1740	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2X1 3/8"
2 OALC-120	3500	2030	1620	1740	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2X1 3/8"

DIAGRAM

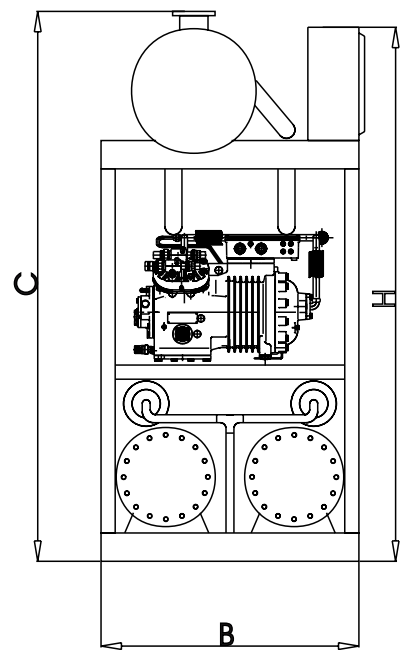
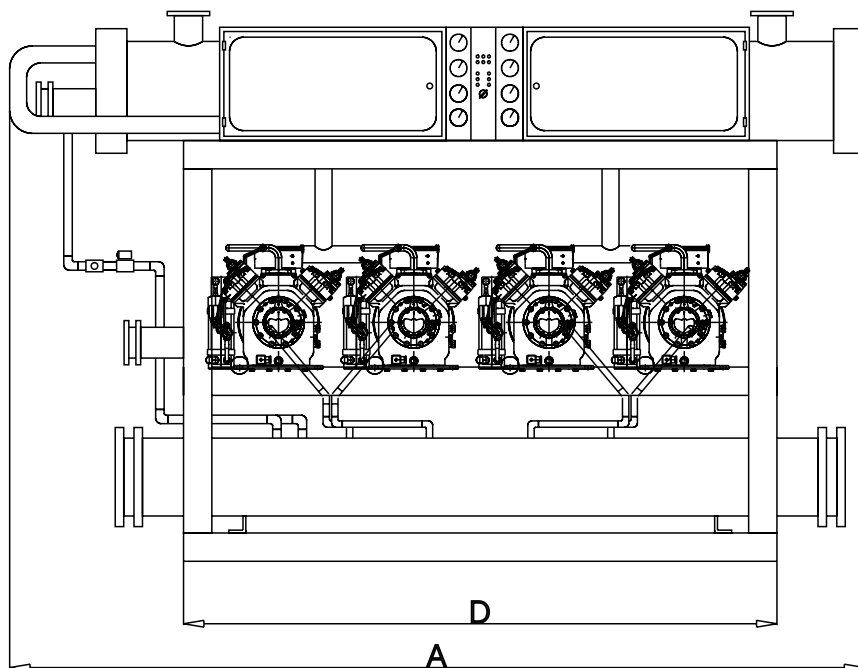


DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	I	D.L	L.L
30WLC-60	3000	1940	1550	2000	940	1110	2X2 ½" 2X2"	2x4"	2500	1 3/8" 1 1/8"	1 3/8" 7/8"
30WLC-75	3000	1940	1550	2000	990	1160	2X3" 2X2"	2x4"	2500	1 5/8" 1 1/8"	1 3/8" 1 1/8"
30WLC-90	3500	1940	1550	2000	990	1160	2X3" 2X2"	2x4"	3000	1 5/8" 1 3/8"	1 3/8" 1 1/8"
30WLC-105	3200	1940	1550	2000	990	1160	2X3" 2X2 ½"	2x5"	2700	2 1/8" 1 3/8"	1 3/8" 1 1/8"
30WLC-120	3500	1970	1550	2000	990	1210	2X3" 2X2 ½"	2x5"	3000	2 1/8" 1 3/8"	1 3/8" 1 1/8"
30WLC-150	4000	2280	1720	2300	1210	1360	2X4" 2X3"	2x5"	3500	2 5/8" 1 5/8"	3x1 3/8"
30WLC-180	4000	2280	1720	2300	1210	1360	2X4" 2X3"	2x6"	3500	2 5/8" 1 5/8"	3x1 3/8"

MODEL	A	B	C	D	E	F	G	H	I	D.L	L.L
30ALC-60	3000	1940	1550	2000	940	1110	2X2 ½" 2X2"	2x4"	2500	1 3/8" 1 1/8"	1 3/8" 7/8"
30ALC-75	3000	1940	1550	2000	990	1160	2X3" 2X2"	2x4"	2500	1 5/8" 1 1/8"	1 3/8" 1 1/8"
30ALC-90	3500	1940	1550	2000	990	1160	2X3" 2X2"	2x4"	3000	1 5/8" 1 3/8"	1 3/8" 1 1/8"
30ALC-105	3200	1940	1550	2000	990	1160	2X3" 2X2 ½"	2x5"	2700	2 1/8" 1 3/8"	1 3/8" 1 1/8"
30ALC-120	3500	1970	1550	2000	990	1210	2X3" 2X2 ½"	2x5"	3000	2 1/8" 1 3/8"	1 3/8" 1 1/8"
30ALC-150	4000	2280	1720	2300	1210	1360	2X4" 2X3"	2x5"	3500	2 5/8" 1 5/8"	3x1 3/8"
30ALC-180	4000	2280	1710	2300	1210	1360	2X4" 2X3"	2x6"	3500	2 5/8" 1 5/8"	3x1 3/8"

DIAGRAM



DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	I	D.L	L.L
40WLC-80	3500	1940	1600	2500	1060	1260	4x2 1/2"	2x4"	3000	2x15/8"	2x1 1/8"
40WLC-100	3500	2070	1660	2500	1060	1260	4x3"	2x5"	3000	2x15/8"	2x1 3/8"
40WLC-120	3500	2070	1660	2500	1060	1260	4x3"	2x5"	3000	2x2 5/8"	2x1 3/8"
40WLC-140	3500	2070	1660	2500	1060	1260	4x3"	2x5"	3000	2x2 1/8"	2x1 3/8"
40WLC-160	3500	2070	1660	2500	1060	1260	4x3"	2x5"	3000	2x2 1/8"	2x1 3/8"
40WLC-200	4000	2070	1700	2900	1240	1310	4x4"	2x6"	3500	2x2 5/8"	4x1 3/8"
40WLC-240	4500	2170	1700	2900	1240	1310	4x4"	2x6"	4000	2x2 5/8"	4x1 3/8"

MODEL	A	B	C	D	E	F	G	H	I	D.L	L.L
40ALC-80	3500	1940	1600	2500	1060	1260	4x2 1/2"	2x4"	3000	2x1 5/8"	2x1 1/8"
40ALC-100	3500	2070	1660	2500	1060	1260	4x3"	2x5"	3000	2x1 5/8"	2x1 3/8"
40ALC-120	3500	2070	1660	2500	1060	1260	4x3"	2x5"	3000	2x2 5/8"	2x1 3/8"
40ALC-140	3500	2070	1660	2500	1060	1260	4x3"	2x5"	3000	2x2 1/8"	2x1 3/8"
40ALC-160	3500	2070	1660	2500	1060	1260	4x3"	2x5"	3000	2x2 1/8"	2x1 3/8"
40ALC-200	4000	2070	1700	2900	1240	1310	4x4"	2x6"	3500	2x2 5/8"	4x1 3/8"
40ALC-240	4500	2170	1700	2900	1240	1310	4x4"	2x6"	4000	2x2 5/8"	4x1 3/8"

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Due to National Refrigeration is policy of continuous product improvement, we reserve the right to make changes without notice.