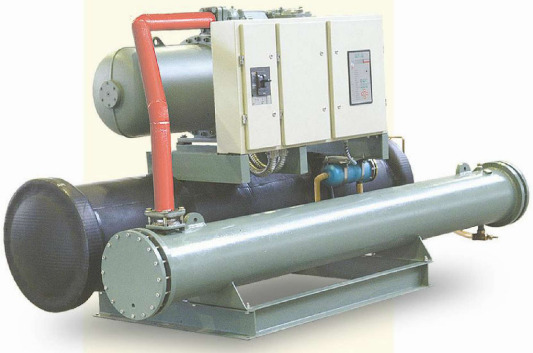
TECHNO ACTORS
Air-Conditioning & Refrigeration



WLC, RLC, ALC Series Chiller

**C Series Liquid Chiller

MODEL KEYWORD

WLC	3	S	B	140	O	6	W

Production series
WLC: Water-cooled Liquid chillers
RLC: Remote air-cooled Liquid chillers
ALC: Packaged Air-cooled Liquid chillers

Number of compressors
(1 , 2 , 3 , 4 , 5 , 6)

Compressor type
H: Reciprocating Hermetic
S: Reciprocating Semi hermetic
E: Compact Semi Hermetic Screw
F: Scroll Hermetic

Compressor brand
A: Carrier (Carlyle)
O: Copeland or DWM Copeland
B: Bitzer

Nominal capacity (5-560 RT)

Design improvements
O: Original (without additional options)
M: Microprocessor controller

Electrical power specifications

(V-Ph-Hz)	(V-Ph-Hz)	(V-Ph-Hz)
1 :575-3-60	4 :200-3-60	6 :400-3-50
2 :460-3-60	5 :200-1-60	7 :220-1-50
3 :230-360		

Packing specifications
D :Domestic packing
I: International packing
W: Without packing

ALC: Packaged Air-cooled Liquid chillers

RLC: Remote air-cooled Liquid chillers

WLC: Water-cooled Liquid chillers

C series liquid chillers are compact energy-efficient units designed to use in many commercial and industrial applications like office buildings, apartments, hotels, schools, hospitals, amusement centers, oil refineries, steel mills, food processing plants, petrochemical plants, paper mills and anywhere you need to decrease the temperature of water, alcohol, oil or any other liquids or fluids.

TECHNO ACTORS WLC, ALC series liquid chillers are packaged units complete designed to reduce installation time and costs. These units have been completed with cooler, compressors, condensers, refrigerant and power circuits, controls, refrigerant and oil charges that only need the addition of a condenser water supply, connection to the electrical power and chilled liquid distribution system. For RLC must be order air cooled condenser separately.

United Technologies Carrier brand Carlyle, Bitzer and Copeland high performance compressors used in the **C series liquid chillers are matched to TECHNO ACTORS high efficiency heat exchangers. The compressors are mounted on heavy-duty spring or rubber vibration isolators to minimize vibration transmission to the buildings. A crankcase heater that is always on during compressor off cycles protects the system against refrigerant migration and oil dilution and the potentially expensive problems they can cause. Compressor motors are protected against overheating and potential damage by quick sensing elements.

R134a REFRIGERANT:

R134a was the first chlorine free (ODP=0) HFC refrigerant that was tested comprehensively. It is now used world-wide in many refrigeration and air- conditioning units with good results. As well as being used as a pure substance, R134a is also applied as a component of variety.

R134a has similar thermodynamic properties to R12:

Refrigeration capacity, energy requirement, temperature properties and pressure levels are comparable, at least in air-conditioning and medium temperature refrigeration plants. This refrigerant can therefore be used as an alternative for most R12 applications.

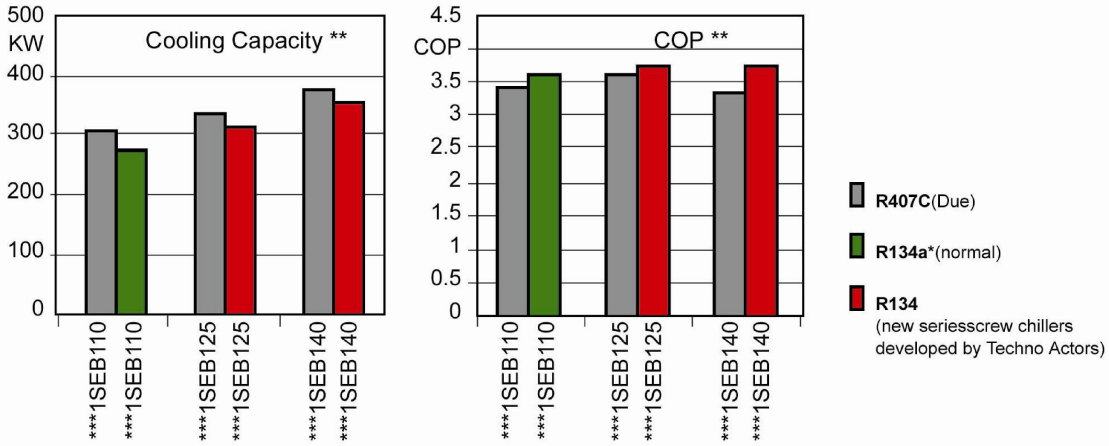
For some application R134a is even preferred as a substitute for R22, an important reason being the limitations to the use of R22 in new plants. However, the lower volumetric refrigeration capacity of R134a requires a larger compressor displacement than with R22. There are also limitations in the application with low evaporating temperatures to be considered.

TECHNO ACTORS Corporation taking advantage of modern technology and compressors for R134a refrigerant offers chillers with almost the same cooling capacity same body size, more displacement and the cost as R22 refrigerant. * The following diagram shows a comparison between the usage of new compressors and R134a with R407c. As it is shown in the diagram, we can achieve a higher COP with R134a in most cases.

NOTE: *Refrigerant R134a is also available for customized chillers. Also economizer is optional for chiller with Bitzer screw compressors. Please do not hesitate to contact us for more information.*

** Only in chillers equipped with bitzer screw compressors.*

Comparison - R134a



** Air Cooled Chiller Application (SST=5 C / SCT=50C / Sh=10K / with ECO)

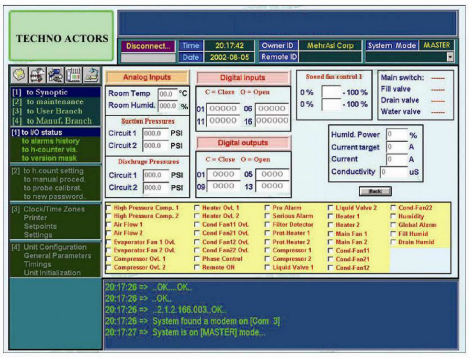
CONTROL PANEL:

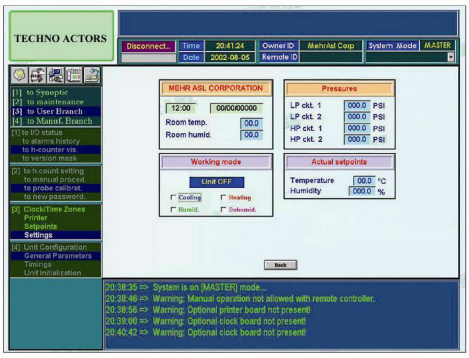
Control panels are designed with the most recent products by Telemechanicque, Simens, for circuit braker, contactors, relays and best material with warning lights, pressure gages and temperature display.

TECHNO ACTORS offers two kinds of Mechanical and Digital control circuit for its products. It uses the latest microprocessor control system technology and instruments which are made by the best qualified companies in Europe with its products.
All of products are capable of being designed for microprocessor control system. In such a systems all the pressures such as discharge, suction and oil pressure, also evaporator and condenser temperatures are controlled by pressure and temperature sensors or switches and all the measurement are processed with the main board. All the faults are processed with this board and the whole system is controlled with the main board. The LCD display on the controller lets the user to observer the pressures and temperatures, and enables to control and change the necessary parameters.

With such a boards, there is a option of adding printer, and supervisory (BMS) system, The BMS system which its software is provided by TECHNO ACTORS provides the opportunity for the user to be able to control all of the air conditioning units which are installed in different parts of their working area (This can be as for as the hole country)with a central PC computer via a telephone line and a modem.
Any kinds of function which could be done on the local display system can also be done on the central computer too. In other words, an operator with connecting to any unit can observe all the system parameters, and operate the system remotely. The BMS system provides saving in time and human resource and is suitable for organizations which have several air conditioning systems in various locations.

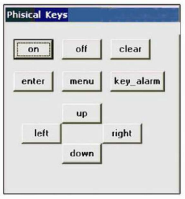
The following shows some windows used in BMS system.





The following shows some of micro controller parameters which are designed for a water cooled chiller with three compressors.
The key board and LCD display provides a user friendly environment for easy control and operation of the system. This system has some advantages over mechanical control system.

a- Controlling the evaporator pumps.
b- Controlling the condenser pumps and disabling them when they are not needed.
c- Controlling the cooling tower fans with respect to the cooling tower water temperature.
d- Controlling the condenser fans (air cooled chiller) with respect to the discharge pressure.
e- The compressors rotation option.
f- The pump down option.
g- The LAN local network capability.
h- The BMS supervisory system capability.




```
   TECHNO ACTORS
Chilled WTR  00.0 °C
Cooling WTR  00.0 °C
```

```
Discharge pressures:
HP ckt. 1   000.0 PSI
HP ckt. 2   000.0 PSI
HP ckt. 3   000.0 PSI
```

```
suction pressures:
LP ckt. 1   000.0 PSI
LP ckt. 2   000.0 PSI
LP ckt. 3   000.0 PSI
```

```
Oil pressures:
OP ckt. 1   000.0 PSI
OP ckt. 2   000.0 PSI
OP ckt. 3   000.0 PSI
```

```
to Synoptic menu
to Mainten. menu
to User   branch
to Manuf. branch
```

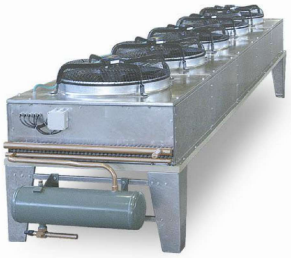
```
to I/O status ....
to alarms history
to h-counter vis.
to version mask ..
```

```
to h.count setting
to manual proced.
to probe calibrat.
to new password ..
```

```
Clock/Time Zones
Printer ........
Setpoints ......
Settings .......
```

```
Unit configuration
General parameters
Timings ..........
Unit initializat.
```

AIR COOLED CONDENSERS :



Air cooled condenser series Ac, Av, and Ak are used with chillers of type RLC and ALC. They are designed based on ARI 410-81 standard and TECHNO ACTORS laboratory results. Copper tubes with 3/8" OD size are used with our condensers. The fin arrangements are 14 fin per inch with Staggered geometry of 25 x 19 for aluminum fins and 25 x 12.5 for copper fins.
The fans used for condenser units are mostly external rotor types which are made by world's famous producers such as Nicotra, Ziehl-Abegg and... .

PARTS :

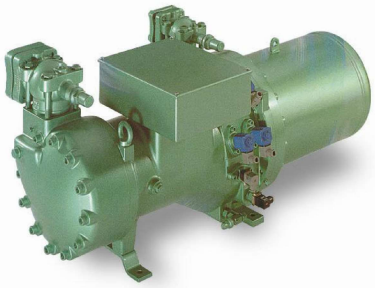
All the parts used for assembling such as service valves, expansion valves, sight-glass, liquid valves are provided from worlds famous producers such as Danfoss, Alco, Castel, and ...

THE COMPRESSORS USED IN LIQUID CHILLER

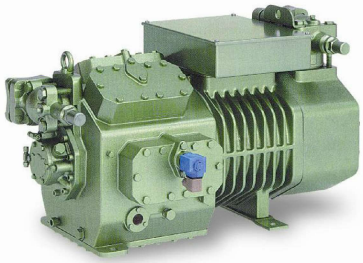
The compressors used with our units are provided from the world's famous producers such as Carrier (8 - 40 R-ton), Copeland (5 - 10 R-ton) in two type of hermetic and scroll, Bitzer (15 - 140 R-ton) in two types of semi-hermetic and screw. The advantage of screw and scroll compressors are lower noise & vibration, higher efficiency and longer working hours than reciprocating compressor. For more information contact with them directly.

- Copland reciprocating hermetic compressor

- Copland Hermetic Scroll compressor



- Bitzer compact screw compressor



- Bitzer reciprocating Semi - hermetic compressor

- United Technology Carrier (Carlyle reciprocating semi-hermetic

SELECTION METHOD FOR CHILLER

There is a simple selection method process for **C series water cooled liquid chillers based on MASS standard units as follows:

Wanted: to have 10 l/s chilled water & water outlet temp. 7 ºC & 5.5 ºC (~10 ºF) temp. drop in cooler.If ambeint dry bulb temp, is 35 ºC and cooling tower can supply cooling water with 25 ºC .which chiller is suitable?
In this catalogue we can find three type of liquid chiller: WLC, ALC, and RLC.Lets to find suitable chiller for 3 types (of course for RLC, ALC no need for cooling tower)

Cooling capacity= Q (Kw), 10L/s of water ~ 10Kg/s of water

Q (Kw) = 4.2 (Kj/kg. ºC) * Water flow (Kg/s) * Temp. Drop (ºC)
= 4.2 * 10 * 5.5 = 231 Kw =65.37 R.T

Attention: 4.2= water specific heat
Assumption: used refrigerant = R22 and fouling factor for condenser < 0.0002 (W/m2.K)To find suitable chiller we should calculated condensing temp.

Condensing temp. = Condensing inlet water temp. + A
For firs assumption A= 10
Condensing temp. = 25 + 10 = 35 ºC

With refering to capacity tables you can select WLC1EB080 for this chiller used STCAB2080 condenser therefore A=10.8 (refer to pag.30)
Condensing temp. = 25 + 10.8 = 35.8

With refering to capacity tables suitable model is **WLC1EB080**

- If you want to use RLC chiller:
  You can select a suitable air cooled condenser with refer to air cooled chiller.

- For ALC chiller:
  All of our air cooled condenser on ALC models design with 15 ºC differential temp.

Condensing temp. = 35 + 15 = 50 ºC

By refering to capacity tables The **ALC2SB090** model is suitable.

NOTE: *Capacity of water cooled condenser calculated with fouling factor equal to 0.0002(w/m^2.k).*

COMPRESSORS MODEL

	MODEL	Used Compressors model
▲	***1FO005	ZR72KC-TDF
▲	***1FO008	ZR90K3-TWD
▲	***2FO010	2 x ZR72KC-TFD
▲	***1FO010	ZR12M3-TWD
▲	***2FO015	2 x ZR90K3-TWD
▲	***2FO020	2 x ZR12M3-TWD
▲	***1HO005	CRNQ-0500
▲	***1HO008	QR 90 K1
▲▲	***1SA008	06DA818
▲	***1HO010	QR 12 M1
▲▲	***1SA010	06DA824
▲	***2HO010	2 x CRNQ-0500
▲▲▲	***1SB015	4P-15.2
▲▲	***1SA015	06DA537
▲	***2HO015	2 x QR 90 K1
▲▲	***1SA020	06DA250
▲	***2HO020	2 x QR 12 M1
▲▲▲	***1SB020	4N-20.2
▲▲	***1SA025	06EA265
▲▲▲	***1SB025	4H-25.2
▲▲	***1SA030	06EA275
▲▲▲	***1SB030	4G-30.2
▲▲	***2SA030	2 x 06DA537
▲▲▲	***2SB030	2 x 4P-15.2
▲▲	***1SA040	06EA299
▲▲▲	***1SB040	6G-40.2
▲▲	***2SA040	2 x 06DA250
▲▲▲	***2SB040	2 x 4N-20.2
▲▲	***2SA050	2 x 06EA265
▲▲▲	***1SB050	6F-50.2
▲▲▲	***2SB050	2 x 4H-25.2
▲▲	***2SA060	2 x 06EA275
▲▲▲	***1SB060	8GC-60.2
▲▲▲	***2SB060	2 x 4G-30.2
▲▲	***2SA070	06EA275 + 06EA299
▲▲▲	***1SB070	8FC-70.2
▲▲▲	***2SB070	4G-30.2 + 6G-40.2
▲▲	***2SA080	2 x 06EA299
▲▲▲	***2SB080	2 x 6G-40.2
▲▲	***3SA090	3 x 06EA275
▲▲▲	***2SB090	6G-40.2 + 6F-50.2
▲▲	***3SA100	2 x 06EA275 + 06EA299
▲▲▲	***2SB100	2 x 6F-50.2
▲▲▲	***3SB100	2 x 4G-30.2 + 6G-40.2
▲▲▲	***2SB110	4G-30.2 + 2 x 6G-40.2
▲▲	***3SA110	06EA275 + 2 x 06EA299
▲▲▲	***3SB120	3 x 6G-40.2
▲▲	***3SA120	3 x 06EA299
▲▲	***4SA120	4 x 06EA275
▲▲▲	***2SB120	2 x 8GC-60.2
▲▲▲	***2SB130	8GC-60.2 + 8FC-70.2
▲▲	***4SA140	2 x 06EA275 + 2 x 06EA299

	MODEL	Used Compressors model
▲▲▲	***4SB140	2 x 4G-30.2 + 2 x 6G-40.2
▲▲▲	***2SB140	2 x 8FC-70.2
▲▲▲	***3SB150	3 x 6F-50.2
▲▲	***4SA160	4 x 06EA299
▲▲▲	***4SB160	4 x 6G-40.2
▲▲▲	***3SB170	2 x 6F-50.2 + 8FC-70.2
▲▲▲	***3SB180	3 x 8GC-60.2
▲▲	***5SA200	5 x 06EA299
▲▲▲	***4SB200	4 x 6F-50.2
▲▲▲	***3SB210	3 x 8FC-70.2
▲▲	***6SA240	6 x 06EA299
▲▲▲	***6SB240	6 x 6G-40.2
▲▲▲	***4SB240	4 x 8GC-60.2
▲▲▲	***5SB250	5 x 6F-50.2
▲▲▲	***4SB280	4 x 8FC-70.2
▲▲▲	***5SB300	5 x 8GC-60.2
▲▲▲	***5SB350	5 x 8FC-70.2
▲▲▲	***6SB420	6 x 8FC-70.2
▲▲▲	***1EB050	CSH6551-50
▲▲▲	***1EB060	CSH6561-60
▲▲▲	***1EB070	CSH7551-70
▲▲▲	***1EB080	CSH7560-80
▲▲▲	***1EB090	CSH7571-90
▲▲▲	***2EB100	2 x CSH6551-50
▲▲▲	***1EB110	CSH8551-110
▲▲▲	***2EB120	2 x CSH6561-60
▲▲▲	***1EB125	CSH8561-125
▲▲▲	***2EB140	2 x CSH7551-70
▲▲▲	***1EB140	CSH8571-140
▲▲▲	***3EB150	3 x CSH6551-50
▲▲▲	***2EB160	2 x CSH7560-80
▲▲▲	***3EB180	3 x CSH6561-60
▲▲▲	***2EB180	2 x CSH7571-90
▲▲▲	***4EB200	4 x CSH6551-50
▲▲▲	***3EB210	3 x CSH7551-70
▲▲▲	***2EB220	2 x CSH8551-110
▲▲▲	***3EB240	3 x CSH7560-80
▲▲▲	***4EB240	4 x CSH6561-60
▲▲▲	***2EB250	2 x CSH8561-125
▲▲▲	***3EB270	3 x CSH7571-90
▲▲▲	***2EB280	2 x CSH8571-140
▲▲▲	***4EB280	4 x CSH7551-70
▲▲▲	***4EB320	4 x CSH7560-80
▲▲▲	***3EB330	3 x CSH8551-110
▲▲▲	***4EB360	4 x CSH7571-90
▲▲▲	***3EB375	3 x CSH8561-125
▲▲▲	***3EB420	3 x CSH8571-140
▲▲▲	***4EB440	4 x CSH8551-110
▲▲▲	***4EB500	4 x CSH8561-125
▲▲▲	***4EB560	4 x CSH8571-140

▲ *Copeland Compressor* ▲▲ *Carrier Compressor* ▲▲▲ *Bitzer Com-*

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲ ***1FO005	30	19.4	5.52	18.8	3.22	2.95	STCAA2005	0.84	7
	35	18.6	5.29	17.9	3.56	3.3		0.81	7
	40	17.8	5.06	16.9	3.89	3.69		0.77	6
	45	16.9	4.81	15.8	4.34	4.15		0.73	6
	50	16	4.55	14.8	4.78	4.66		0.70	6
	55	14.9	4.24	13.7	5.22	5.23		0.65	5
	60	13.8	3.92	12.7	5.66	5.86		0.60	5
▲ ***1HO005	30	18.8	5.3	-	3.7	-	STCAA2005	0.82	7
	35	17.5	5.0	-	4.0	-		0.76	7
	40	16.4	4.7	-	4.3	-		0.71	6
	45	15.2	4.3	-	4.6	-		0.66	6
	50	14.1	4.0	-	4.8	-		0.61	6
	55	12.9	3.7	-	5.1	-		0.56	5
	60	11.9	3.4	-	5.4	-		0.52	5
▲ ***1FO008	30	23.8	6.77	23.1	4.07	3.9	STCAA2008	1.03	21
	35	22.65	6.44	22	4.5	4.32		0.98	21
	40	21.5	6.11	20.8	4.93	4.82		0.93	20
	45	20.45	5.82	19.5	5.48	5.39		0.89	20
	50	19.4	5.52	18.2	6.04	6.03		0.84	19
	55	18.3	5.20	16.9	6.48	6.74		0.80	19
	60	17.2	4.89	15.6	6.92	7.5		0.75	18
▲ ***1HO008	30	29.9	8.5	-	5.9	-	STCAA2008	1.30	21
	35	27.5	7.8	-	6.3	-		1.20	21
	40	25.2	7.2	-	6.6	-		1.10	20
	45	23.0	6.5	-	6.9	-		1.00	20
	50	20.9	5.9	-	7.2	-		0.91	19
	55	18.6	5.3	-	7.5	-		0.81	19
	60	16.4	4.7	-	7.7	-		0.71	18
▲▲ ***1SA008	30	26.2	7.5	-	3.9	-	STCAA2008	1.14	20
	35	24.6	7	-	4.4	-		1.07	20
	40	23.1	6.6	-	5	-		1.00	19
	45	21.5	6.1	-	5.4	-		0.93	19
	50	19.8	5.6	-	5.9	-		0.86	18
	55	18.3	5.2	-	6.2	-		0.79	18
	60	16.7	4.7	-	6.6	-		0.72	18
▲ ***1FO010	30	33.5	9.53	33.1	5.47	5.4	STCAA2010	1.46	29
	35	32.1	9.13	31.5	6.1	6.04		1.40	29
	40	30.7	8.73	29.7	6.73	6.78		1.33	28
	45	29.2	8.29	27.8	7.52	7.61		1.27	28
	50	27.6	7.85	26.1	8.31	8.53		1.20	27
	55	26.5	7.54	24.2	8.75	9.54		1.15	27
	60	25.4	7.22	22.4	9.19	10.6		1.10	26

C.W.F.R :Cooler Water Flow Rate *C.P.D :Cooler Pressure Drop* *IN.P :INPUT POWER*

▲ *Copeland Compressor*

▲▲ *Carrier Compressor*

▲▲▲ *Bitzer Compressor*

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲ ***1HO010	30	38.2	10.9	-	8.1	-	STCAA2010	1.66	29
	35	35.3	10.0	-	8.6	-		1.53	29
	40	32.3	9.2	-	9.0	-		1.40	28
	45	29.5	8.4	-	9.5	-		1.28	28
	50	26.6	7.6	-	9.8	-		1.16	27
	55	23.8	6.8	-	10.2	-		1.03	27
	60	20.8	5.9	-	10.6	-		0.90	26
▲▲ ***1SA010	30	34.4	9.8	-	5.1	-	STCAA2010	1.49	29
	35	32.1	9.1	-	5.8	-		1.39	29
	40	29.8	8.4	-	6.4	-		1.29	28
	45	27.6	7.8	-	6.9	-		1.20	28
	50	25.4	7.2	-	7.5	-		1.10	27
	55	23.3	6.6	-	8	-		1.01	27
	60	21.2	6	-	8.5	-		0.92	26
▲ ***2FO010	30	38.8	11.04	37.6	6.44	5.9	2 x STCAA2005	1.69	29
	35	37.2	10.58	35.8	7.11	6.6		1.62	29
	40	35.6	10.13	33.8	7.78	7.38		1.55	28
	45	33.8	9.61	31.6	8.67	8.3		1.47	28
	50	32.0	9.10	29.6	9.56	9.32		1.39	27
	55	29.8	8.48	27.4	10.4	10.4		1.30	27
	60	27.6	7.85	25.4	11.3	11.7		1.20	26
▲ ***2HO010	30	37.4	10.6	-	7.4	-	2 x STCAA2005	1.63	29
	35	35.1	10.0	-	8.0	-		1.53	29
	40	32.8	9.3	-	8.6	-		1.43	28
	45	30.4	8.7	-	9.1	-		1.32	28
	50	28.1	8.0	-	9.7	-		1.22	27
	55	25.8	7.3	-	10.2	-		1.12	27
	60	10.8	3.1	-	4.9	-		0.47	26
▲▲▲ ***1SB015	30	48.3	13.7	47.5	9.4	8.1	STCAA2015	2.10	27
	35	46.0	13.1	44.8	10.4	9.2		2.00	27
	40	43.6	12.4	42.2	11.4	10.2		1.90	26
	45	41.2	11.7	39.5	12.5	12.2		1.79	26
	50	38.9	11.0	36.8	13.5	11.2		1.69	25
	55	36.4	10.4	34.1	14.4	13.1		1.58	25
	60	34.0	9.7	31.5	15.2	14.1		1.48	24
▲▲ ***1SA015	30	54.3	15.4	-	9.7	-	STCAA2015	2.36	31
	35	50.9	14.5	-	10.8	-		2.21	31
	40	47.6	13.5	-	12.2	-		2.07	30
	45	44.4	12.6	-	13.1	-		1.93	30
	50	41.2	11.7	-	14.2	-		1.79	29
	55	38.1	10.8	-	15.2	-		1.66	29
	60	35.0	10.0	-	15.9	-		1.52	28
▲ ***2FO015	30	47.6	13.54	46.2	8.1	7.8	2 x STCAA2008	2.07	26
	35	45.3	12.88	44	9.0	8.64		1.97	26
	40	43.0	12.23	41.6	9.9	9.64		1.87	25
	45	40.9	11.63	39	11.0	10.7		1.78	25
	50	38.8	11.04	36.4	12.1	12.0		1.69	24
	55	36.6	10.41	33.8	13.0	13.4		1.59	24
	60	34.4	9.78	31.2	13.8	15		1.50	23
▲ ***2HO015	30	59.7	17.0	-	11.8	-	2 x STCAA2008	2.60	26
	35	55.1	15.7	-	12.6	-		2.39	26
	40	50.4	14.3	-	13.3	-		2.19	25
	45	46.0	13.1	-	13.9	-		2.00	25
	50	41.7	11.9	-	14.4	-		1.81	24
	55	37.2	10.6	-	14.9	-		1.62	24
	60	32.9	9.3	-	15.5	-		1.43	23

C.W.F.R :Cooler Water Flow Rate C.P.D :Cooler Pressure Drop IN.P :INPUT POWER

▲ Copeland Compressor ▲▲ Carrier Compressor ▲▲▲ Bitzer Compressor

- COOLING CAPACITIES R22

MODEL	COND	COOLING CAPACITY			IN.P (KW)		Condenser	C.W.F.R	C.P.D
	TEMP	KW(R22)	R.T(R22)	Kw(R407C)	R22	407C	model for WLC	Liter/S	KPa
▲▲ ***1SA020	30	73.3	20.8	-	13.3	-	STCAA2020	3.19	30
	35	68.4	19.4	-	14.5	-		2.97	30
	40	63.7	18.1	-	15.9	-		2.77	29
	45	59.2	16.8	-	16.9	-		2.57	29
	50	54.6	15.5	-	18.2	-		2.37	28
	55	50.1	14.2	-	19.3	-		2.18	28
	60	45.5	13.0	-	20.7	-		1.98	27
▲ ***2FO020	30	67.0	19.06	66.2	10.9	10.8	2 xSTCAA2010	2.91	36
	35	64.2	18.26	63	12.2	12.0		2.79	36
	40	61.4	17.46	59.4	13.4	13.5		2.67	35
	45	58.3	16.58	55.6	15.0	15.2		2.53	35
	50	55.2	15.71	52.2	16.6	17.0		2.40	34
	55	53.0	15.07	48.4	17.5	19.0		2.30	34
	60	50.8	14.45	44.8	18.3	21.3		2.21	33
▲ ***2HO020	30	76.5	21.7	-	16.2	-	2 xSTCAA2010	3.32	36
	35	70.5	20.1	-	17.1	-		3.07	36
	40	64.6	18.4	-	18.1	-		2.81	35
	45	59.0	16.8	-	18.9	-		2.56	35
	50	53.3	15.2	-	19.7	-		2.32	34
	55	47.4	13.5	-	20.4	-		2.06	34
	60	41.6	11.8	-	21.2	-		1.81	33
▲▲▲ ***1SB020	30	58.2	16.5	57.4	11.4	9.8	STCAA2020	2.53	26
	35	55.5	15.8	54.3	12.6	10.9		2.41	26
	40	52.7	15.0	51.1	13.7	12.0		2.29	25
	45	49.8	14.2	47.8	14.8	13.1		2.17	25
	50	46.8	13.3	44.5	16.0	14.2		2.04	24
	55	44.0	12.5	41.2	17.1	15.3		1.91	24
	60	41.3	11.7	38.0	18.3	16.4		1.80	23
▲▲ ***1SA025	30	96.7	27.5	-	17.6	-	STCAA2025	4.20	30
	35	89.9	25.6	-	19.1	-		3.91	30
	40	83.5	23.7	-	20.9	-		3.63	29
	45	77.1	21.9	-	22.7	-		3.35	29
	50	70.9	20.2	-	24.5	-		3.08	28
	55	64.9	18.5	-	25.0	-		2.82	28
	60	59.2	16.8	-	26.9	-		2.57	27
▲▲▲ ***1SB025	30	76.0	21.6	74.2	14.4	13.0	STCAA2025	3.31	36
	35	72.3	20.6	69.7	15.9	14.5		3.14	36
	40	68.5	19.5	65.1	17.1	15.9		2.98	35
	45	64.8	18.4	60.6	18.3	17.2		2.82	35
	50	61.2	17.4	56.1	19.5	18.5		2.66	34
	55	57.6	16.4	51.6	20.9	19.8		2.50	34
	60	54.1	15.4	47.1	15.9	21.0		2.35	33
▲▲ ***1SA030	30	103.1	29.3	-	19.8	-	STCAA2030	4.48	32
	35	97.1	27.6	-	22.1	-		4.22	32
	40	91.0	25.9	-	23.9	-		3.95	31
	45	84.8	24.1	-	25.7	-		3.69	31
	50	78.5	22.3	-	27.1	-		3.41	30
	55	72.2	20.5	-	28.9	-		3.14	30
	60	65.9	18.7	-	29.9	-		2.86	29
▲▲▲ ***1SB030	30	87.2	24.8	84.7	17.0	15.5	STCAA2030	3.79	36
	35	82.8	23.6	79.6	18.7	17.1		3.60	36
	40	78.6	22.4	74.4	20.2	18.7		3.42	35
	45	74.3	21.1	69.0	21.6	20.2		3.23	35
	50	70.2	20.0	63.5	23.2	21.6		3.05	34
	55	66.0	18.8	58.0	24.9	23.0		2.87	34
	60	62.0	17.6	53.0	27.0	24.4		2.70	33

C.W.F.R :Cooler Water Flow Rate C.P.D :Cooler Pressure Drop IN.P :INPUT POWER

▲ Copeland Compressor ▲▲ Carrier Compressor ▲▲▲ Bitzer Compressor

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲ ***2SA030	30	108.6	30.9	-	19.4	-	2 xSTCAA2015	4.72	32
	35	101.9	29.0	-	21.7	-		4.43	32
	40	95.3	27.1	-	24.4	-		4.14	31
	45	88.8	25.3	-	26.1	-		3.86	31
	50	82.4	23.4	-	28.4	-		3.58	30
	55	76.2	21.7	-	30.5	-		3.31	30
	60	70.1	19.9	-	31.8	-		3.05	29
▲▲▲ ***2SB030	30	96.6	27.5	94.9	18.9	16.22	2 xSTCAA2015	4.20	30
	35	91.9	26.1	89.7	20.8	18.31		4.00	30
	40	87.2	24.8	84.4	22.9	20.4		3.79	29
	45	82.4	23.4	79.0	25.0	22.37		3.58	29
	50	77.7	22.1	73.6	27.0	24.34		3.38	28
	55	72.8	20.7	68.2	28.8	26.2		3.17	28
	60	67.9	19.3	63.0	30.5	28.2		2.95	27
▲▲ ***1SA040	30	135.4	38.5	-	28.8	-	STCAA2040	5.89	313
	35	127.3	36.2	-	31.1	-		5.54	31
	40	119.4	34.0	-	33.2	-		5.19	30
	45	111.6	31.7	-	36.0	-		4.85	30
	50	103.9	29.5	-	37.1	-		4.52	29
	55	96.2	27.4	-	38.5	-		4.18	29
	60	88.8	25.3	-	40.4	-		3.86	28
▲▲▲ ***1SB040	30	131.0	37.3	127.1	25.5	23.1	STCAA2040	5.69	30
	35	124.3	35.4	119.4	28.0	25.5		5.41	30
	40	117.9	33.5	111.6	30.3	27.9		5.13	29
	45	111.6	31.7	103.5	32.5	30.1		4.85	29
	50	105.2	29.9	95.3	34.8	32.2		4.58	28
	55	99.1	28.2	87.1	37.4	34.4		4.31	28
	60	93.1	26.5	79.8	40.5	36.6		4.05	27
▲▲ ***2SA040	30	146.5	41.7	-	26.6	-	2 XSTCAA2020	6.37	35
	35	136.8	38.9	-	29.1	-		5.95	35
	40	127.4	36.2	-	31.9	-		5.54	34
	45	118.3	33.7	-	33.8	-		5.14	34
	50	109.2	31.1	-	36.4	-		4.75	33
	55	100.2	28.5	-	38.6	-		4.36	33
	60	91.1	25.9	-	41.4	-		3.96	32
▲▲▲ ***2SB040	30	116.3	33.1	114.8	22.8	19.64	2 xSTCAA2020	5.06	32
	35	111.0	31.6	108.5	25.1	21.79		4.83	32
	40	105.5	30.0	102.2	27.4	23.94		4.58	31
	45	99.7	28.3	95.6	29.7	26.19		4.33	31
	50	93.7	26.6	89.0	32.0	28.44		4.07	30
	55	87.9	25.0	82.4	34.2	30.6		3.82	30
	60	82.6	23.5	76.0	36.5	32.8		3.59	29
▲▲ ***2SA050	30	193.4	55.0	-	35.2	-	2 xSTCAA2025	8.41	40
	35	179.8	51.1	-	38.3	-		7.82	40
	40	166.9	47.5	-	41.7	-		7.26	39
	45	154.3	43.9	-	45.4	-		6.71	39
	50	141.9	40.3	-	48.9	-		6.17	38
	55	129.9	36.9	-	50.0	-		5.65	38
	60	118.3	33.7	-	53.8	-		5.14	37
▲▲▲ ***1SB050	30	154.1	43.8	150.5	32.5	28.6	STCAB2050	6.70	35
	35	146.4	41.6	141.8	35.3	31.2		6.37	35
	40	139.0	39.5	133.1	37.9	33.8		6.04	34
	45	131.6	37.4	124.4	40.5	36.5		5.72	34
	50	124.4	35.4	115.6	43.1	39.2		5.41	33
	55	117.3	33.4	107.0	46.0	50.0		5.10	33
	60	110.3	31.4	98.4	49.0	52.7		4.80	32

C.W.F.R :Cooler Water Flow Rate *C.P.D :Cooler Pressure Drop* *IN.P :INPUT POWER*

▲ Copeland Compressor *▲▲ Carrier Compressor* *▲▲▲ Bitzer Compressor*

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲▲ ***2SB050	30	152.1	43.3	148.4	28.9	26.02	2 xSTCAA2025	6.61	35
	35	144.5	41.1	139.3	31.8	28.91		6.28	35
	40	137.0	39.0	130.2	34.2	31.8		5.96	34
	45	129.6	36.9	121.2	36.6	34.42		5.64	34
	50	122.3	34.8	112.2	39.1	37.04		5.32	33
	55	115.2	32.8	103.2	41.9	39.6		5.01	33
	60	108.1	30.7	94.2	31.9	42		4.70	32
▲▲ ***2SA060	30	206.2	58.6	-	39.7	-	2 xSTCAB2030	8.96	29
	35	194.2	55.2	-	44.1	-		8.44	29
	40	181.9	51.7	-	47.9	-		7.91	28
	45	169.5	48.2	-	51.4	-		7.37	28
	50	157.0	44.6	-	54.1	-		6.82	27
	55	144.4	41.1	-	57.8	-		6.28	27
	60	131.6	37.4	-	59.8	-		5.72	26
▲▲▲ ***1SB060	30	193.7	55.1	190	38.0	34.8	STCAB2060	8.42	26
	35	184.0	52.3	179	43.8	38.6		8.00	26
	40	174.4	49.6	167.7	45.9	51.6		7.58	25
	45	164.6	46.8	156.3	49.9	44.8		7.16	25
	50	155.0	44.1	144.8	53.4	48.1		6.74	24
	55	145.4	41.4	132.5	55.9	51.5		6.32	24
	60	135.9	38.6	121.2	60.4	54.6		5.91	23
▲▲▲ ***2SB060	30	174.5	49.6	169.4	34.0	31.08	2 xSTCAB2030	7.59	40
	35	165.6	47.1	159.1	37.3	34.25		7.20	40
	40	157.2	44.7	148.8	40.4	37.42		6.83	39
	45	148.5	42.2	137.9	43.3	40.31		6.46	39
	50	140.3	39.9	127.0	46.5	43.2		6.10	38
	55	132.1	37.6	116.0	49.8	46		5.74	38
	60	124.1	35.3	106.0	54.0	48.8		5.40	37
▲▲ ***2SA070	30	238.4	67.8		48.7	-	STCAB2030 + STCAB2040	10.37	34
	35	224.3	63.8	-	53.4	-		9.75	34
	40	210.3	59.8	-	56.9	-		9.15	33
	45	196.2	55.8	-	61.3	-		8.53	33
	50	182.4	51.9	-	65.1	-		7.93	32
	55	168.4	47.9	-	67.4	-		7.32	32
	60	154.6	44.0	-	70.3	-		6.72	31
▲▲▲ ***1SB070	30	223.8	63.6	225.1	47.6	41.8	STCAB2070	9.73	33
	35	212.2	60.4	211.8	53.1	46.25		9.23	33
	40	200.7	57.1	198.5	57.3	50.7		8.73	32
	45	188.9	53.7	184.9	60.9	54.65		8.21	32
	50	177.2	50.4	171.3	65.6	58.6		7.70	31
	55	164.9	46.9	158.0	71.7	62.7		7.17	31
	60	153.0	43.5	144.5	72.8	66.8		6.65	30
▲▲▲ ***2SB070	30	218.2	62.1	211.8	42.5	38.6	STCAC2030 + STCAC2040	9.49	32
	35	207.1	58.9	198.9	46.7	42.6		9.01	32
	40	196.5	55.9	186.0	50.5	46.6		8.54	31
	45	185.8	52.8	172.4	54.2	50.2		8.08	31
	50	175.4	49.9	158.8	58.1	53.8		7.63	30
	55	165.2	47.0	145.1	62.3	57.4		7.18	30
	60	155.2	44.1	132.8	67.5	61.0		6.75	20
▲▲ ***2SA080	30	270.8	77.0	-	57.6	-	2 xSTCAC2040	11.78	36
	35	254.6	72.4	-	62.1	-		11.07	36
	40	238.9	67.9	-	66.4	-		10.39	35
	45	223.1	63.5	-	72.0	-		9.70	35
	50	207.8	59.1	-	74.2	-		9.03	34
	55	192.5	54.7	-	77.0	-		8.37	34
	60	177.6	50.5	-	80.7	-		7.72	33

C.W.F.R :Cooler Water Flow Rate C.P.D :Cooler Pressure Drop IN.P :INPUT POWER

▲ Copeland Compressor ▲▲ Carrier Compressor ▲▲▲ Bitzer Compressor

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲▲ ***2SB080	30	262.0	74.5	254.2	51.1	46.2	2 xSTCAC2040	11.39	35
	35	248.6	70.7	238.7	56.0	51		10.81	35
	40	235.8	67.1	223.2	60.6	55.8		10.25	34
	45	223.1	63.5	206.9	65.0	60.1		9.70	34
	50	210.5	59.9	190.6	69.7	64.4		9.15	33
	55	198.2	56.4	174.2	74.8	68.8		8.62	33
	60	186.3	53.0	159.6	81.0	73.2		8.10	32
▲▲ ***3SA090	30	309.2	88.0	-	59.5	-	3 xSTCAC4030	13.45	36
	35	291.2	82.8	-	66.2	-		12.66	36
	40	272.8	77.6	-	71.8	-		11.86	35
	45	254.3	72.3	-	77.1	-		11.06	35
	50	235.4	67.0	-	81.2	-		10.24	34
	55	216.6	61.6	-	86.6	-		9.42	34
	60	197.7	56.2	-	89.9	-		8.60	33
▲▲▲ ***2SB090	30	287.2	81.6	277.6	53.4	51.7	STCAC2040 + STCAC2050	12.48	35
	35	273.4	77.6	261.2	57.8	56.7		11.87	35
	40	260.1	73.9	244.7	62.0	61.7		11.3	34
	45	248.3	70.5	227.8	67.5	66.6		10.78	34
	50	232.8	66.3	210.9	72.6	71.4		10.13	33
	55	224	63.7	194.1	76.2	74.4		9.74	33
	60	212.6	60.3	178.2	80.9	79.3		9.22	32
▲▲ ***3SA100	30	341.7	97.2	-	68.3	-	2 xSTCAC2030 + STCAC2040	14.85	44
	35	321.5	91.4	-	75.1	-		13.98	44
	40	301.4	85.7	-	81.0	-		13.10	43
	45	281.1	79.9	-	87.3	-		12.22	43
	50	261.0	74.2	-	91.2	-		11.35	42
	55	240.6	68.4	-	96.3	-		10.46	42
	60	220.6	62.7	-	100.3	-		9.59	41
▲▲▲ ***2SB100	30	308.1	87.6	301.0	65.0	57.2	2 xSTCAC2050	13.40	36
	35	292.8	83.3	283.6	70.6	62.4		12.73	36
	40	277.9	79.1	266.2	75.7	67.6		12.08	35
	45	263.3	74.9	248.7	81.0	73		11.45	35
	50	248.9	70.8	231.2	86.1	78.4		10.82	34
	55	234.7	66.7	214.0	92.0	100		10.20	34
	60	220.7	62.8	196.8	98.1	105.4		9.59	33
▲▲▲ ***3SB100	30	305.5	86.9	296.5	59.9	54.18	2 xSTCAC2030 + STCAC2040	13.28	36
	35	289.9	82.5	278.45	65.9	59.75		12.61	36
	40	275.1	78.2	260.4	70.5	65.32		11.96	35
	45	260.1	74.0	241.35	76.5	70.36		11.31	35
	50	245.5	69.8	222.3	81.3	75.4		10.68	34
	55	231.2	65.8	203.1	88.9	80.4		10.05	34
	60	217.2	61.8	185.8	94.4	85.4		9.44	33
▲▲▲ ***3SB110	30	347.8	98.9	340.7	71.0	63.4	STCAC2030 + 2 xSTCAC2040	15.12	44
	35	330.4	94.0	320.8	76.8	69.4		14.37	44
	40	313.4	89.1	300.8	84.7	75.4		13.62	43
	45	296.3	84.3	280.6	89.8	81.4		12.88	43
	50	279.4	79.5	260.4	96.3	87.3		12.15	42
	55	262.7	74.7	239.5	101.1	101.5		11.42	42
	60	246.2	70.0	219.4	107.0	107.3		10.70	41
▲▲ ***3SA110	30	374.1	106.4	-	77.9	-	STCAC2030 + 2 xSTCAC2040	16.26	45
	35	351.9	100.1	-	83.8	-		15.30	45
	40	329.9	93.8	-	89.2	-		14.34	44
	45	307.9	87.6	-	96.2	-		13.39	44
	50	286.4	81.5	-	102.3	-		12.45	43
	55	264.6	75.3	-	105.8	-		11.51	43
	60	243.4	69.2	-	110.6	-		10.58	42

C.W.F.R :Cooler Water Flow Rate *C.P.D :Cooler Pressure Drop* *IN.P :INPUT POWER*

▲ Copeland Compressor *▲▲ Carrier Compressor* *▲▲▲ Bitzer Compressor*

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲▲ ***3SB120	30	392.9	111.8	381.3	76.6	69.3	3 xSTCAC4040	17.08	53
	35	373.0	106.1	358.1	84.0	76.5		16.22	53
	40	353.6	100.6	334.8	90.9	83.7		15.38	52
	45	334.7	95.2	310.4	97.6	90.2		14.55	52
	50	315.7	89.8	285.9	104.5	96.6		13.73	51
	55	297.4	84.6	261.3	112.2	103.2		12.93	51
	60	279.4	79.5	239.4	121.5	109.8		12.15	50
▲▲ ***3SA120	30	406.3	115.5	-	86.4	-	3 xSTCAC4040	17.66	53
	35	382.0	108.6	-	93.2	-		16.61	53
	40	358.3	101.9	-	99.5	-		15.58	52
	45	334.7	95.2	-	108.0	-		14.55	52
	50	311.7	88.6	-	111.3	-		13.55	51
	55	288.7	82.1	-	115.5	-		12.55	51
	60	266.4	75.8	-	121.1	-		11.58	50
▲▲ ***4SA120	30	412.4	117.3	-	79.3	-	4 xSTCAB2030	17.93	53
	35	388.3	110.4	-	88.2	-		16.88	53
	40	363.9	103.5	-	95.8	-		15.82	52
	45	339.0	96.4	-	102.7	-		14.74	52
	50	313.9	89.3	-	108.2	-		13.65	51
	55	288.7	82.1	-	115.5	-		12.55	51
	60	263.4	74.9	-	119.7	-		11.45	50
▲▲▲ ***2SB120	30	387.4	110.2	380.4	76.0	69.6	2 xSTCAC2060	16.84	52
	35	368.1	104.7	357.9	87.6	76.4		16.00	52
	40	348.8	99.2	335.4	91.8	83.2		15.16	51
	45	329.2	93.6	312.5	99.8	89.7		14.31	51
	50	309.9	88.1	289.6	106.9	96.2		13.47	50
	55	290.8	82.7	265.0	111.9	103		12.64	50
	60	271.7	77.3	242.0	120.8	109.2		11.81	49
▲▲▲ ***2SB130	30	417.5	118.7	415.3	85.2	76.6	STCAC2060 + STCAC2070	18.15	53
	35	396.3	112.7	390.75	90.1	84.45		17.23	53
	40	375.1	106.7	366.2	104.2	92.3		16.31	52
	45	353.5	100.6	341.15	110.5	99.5		15.37	52
	50	332.1	94.5	316.1	118.6	106.7		14.44	51
	55	310.4	88.3	290.5	129.3	114.2		13.49	51
	60	288.8	82.1	265.5	131.3	121.4		12.56	50
▲▲ ***4SA140	30	477.0	135.7	-	97.3	-	2 xSTCAA2030 + 2 xSTCAA2040	20.74	58
	35	448.8	127.6	-	106.9	-		19.51	58
	40	420.8	119.7	-	113.7	-		18.30	57
	45	392.6	111.7	-	122.7	-		17.07	57
	50	364.7	103.7	-	130.3	-		15.86	56
	55	336.9	95.8	-	134.8	-		14.65	56
	60	309.4	88.0	-	140.6	-		13.45	55
▲▲▲ ***4SB140	30	439.1	124.9	423.6	91.5	77.28	2 xSTCAA2030 + 2 xSTCAA2040	19.09	55
	35	417.1	118.6	397.8	99.3	85.25		18.14	55
	40	395.8	112.6	372	107.0	93.22		17.21	54
	45	374.8	106.6	344.8	113.6	100.41		16.30	54
	50	354.1	100.7	317.6	122.1	107.6		15.40	53
	55	333.8	94.9	290.2	128.4	114.8		14.51	53
	60	313.8	89.2	265.6	136.4	122		13.64	52
▲▲▲ ***2SB140	30	447.6	127.3	450.2	95.2	83.6	2 xSTCAC2070	19.46	56
	35	424.5	120.7	423.6	106.1	92.5		18.45	56
	40	401.4	114.2	397.0	114.7	101.4		17.45	55
	45	377.8	107.5	369.8	121.9	109.3		16.43	55
	50	354.3	100.8	342.6	131.2	117.2		15.40	54
	55	329.9	93.8	316.0	143.4	125.4		14.34	54
	60	305.9	87.0	289.0	145.7	133.6		13.30	53

C.W.F.R :Cooler Water Flow Rate C.P.D :Cooler Pressure Drop IN.P :INPUT POWER

▲ Copeland Compressor ▲▲ Carrier Compressor ▲▲▲ Bitzer Compressor

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲▲ ***3SB150	30	462.2	131.5	451.5	97.5	85.8	3 xSTCAC2050	20.10	58
	35	439.2	124.9	425.4	105.8	93.6		19.10	58
	40	416.9	118.6	399.3	113.6	101.4		18.13	57
	45	394.9	112.3	373.1	121.5	109.5		17.17	57
	50	373.3	106.2	346.8	129.2	117.6		16.23	56
	55	352.0	100.1	321.0	138.0	125.7		15.30	56
	60	331.0	94.1	295.2	147.1	134.5		14.39	54
▲▲ ***4SA160	30	523.9	149.0	-	111.5	-	4 xSTCAA2040	22.78	71
	35	497.3	141.4	-	121.3	-		21.62	71
	40	471.5	134.1	-	131.0	-		20.50	70
	45	446.2	126.9	-	143.9	-		19.40	70
	50	420.9	119.7	-	150.3	-		18.30	69
	55	396.5	112.8	-	158.6	-		17.24	69
	60	372.5	105.9	-	169.3	-		16.20	68
▲▲▲ ***4SB160	30	501.8	142.7	508.4	97.8	92.4	4 xSTCAA2040	21.82	70
	35	476.9	135.6	477.4	107.4	102.0		20.73	70
	40	452.3	128.6	446.4	116.3	111.6		19.67	69
	45	427.9	121.7	413.8	124.8	120.2		18.60	69
	50	403.8	114.9	381.2	133.7	128.8		17.56	68
	55	380.1	108.1	348.4	143.4	137.6		16.52	68
	60	356.5	101.4	319.2	155.0	146.4		15.50	67
▲▲▲ ***3SB170	30	541.5	154.0	526.1	108.3	99	2 xSTCAC2050 + STCAC2070	23.54	73
	35	514.5	146.3	495.4	119.6	108.65		22.37	73
	40	487.7	138.7	464.7	128.4	118.3		21.21	72
	45	460.9	131.1	433.6	139.7	127.65		20.04	72
	50	434.3	123.5	402.5	149.8	137		18.88	71
	55	408.1	116.1	372	157.0	147.2		17.75	71
	60	382.1	108.7	341.3	166.1	158.4		16.61	70
▲▲▲ ***3SB180	30	581.1	165.3	570.6	113.9	104.4	3 xSTCAC2060	25.26	79
	35	552.1	157.0	536.9	131.5	114.6		24.00	79
	40	523.1	148.8	503.1	137.7	124.8		22.75	78
	45	493.8	140.5	468.8	149.6	134.6		21.47	78
	50	464.9	132.2	434.4	160.3	144.3		20.21	77
	55	436.2	124.1	397.5	167.8	154.5		18.97	77
	60	407.6	115.9	363.0	181.2	163.8		17.72	76
▲▲ ***5SA200	30	677.1	192.6	-	144.1	-	5xSTCAA2040	29.44	44
	35	636.6	181.1	-	155.3	-		27.68	44
	40	597.2	169.8	-	165.9	-		25.96	43
	45	557.8	158.6	-	179.9	-		24.25	43
	50	519.5	147.7	-	185.5	-		22.59	42
	55	481.2	136.9	-	192.5	-		20.92	42
	60	444.0	126.3	-	201.8	-		19.30	41
▲▲▲ ***4SB200	30	616.3	175.3	602.0	130.0	114.4	4 xSTCAA2050	26.79	42
	35	585.6	166.6	567.2	141.1	124.8		25.46	42
	40	555.9	158.1	532.4	151.5	135.2		24.17	41
	45	526.6	149.8	497.4	162.0	146.0		22.89	41
	50	497.7	141.6	462.4	172.2	156.8		21.64	40
	55	469.3	133.5	428.0	184.0	167.2		20.40	40
	60	441.3	125.5	393.6	196.1	178.1		19.19	39
▲▲▲ ***3SB210	30	671.3	190.9	675.3	142.8	210.8	3 xSTCAC2070	29.19	80
	35	636.7	181.1	635.4	159.2	125.4		27.68	80
	40	602.1	171.2	595.5	172.0	138.8		26.18	79
	45	566.8	161.2	554.7	182.8	152.1		24.64	79
	50	531.5	151.2	513.9	196.8	164.0		23.11	78
	55	494.8	140.7	474.0	215.1	175.8		21.51	78
	60	458.9	130.5	433.5	218.5	188.1		19.95	77

C.W.F.R :Cooler Water Flow Rate *C.P.D :Cooler Pressure Drop* *IN.P :INPUT POWER*

▲ Copeland Compressor *▲▲ Carrier Compressor* *▲▲▲ Bitzer Compressor*

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲ ***6SA240	30	812.5	231.1	-	172.9	-	6xSTCAA2040	35.33	44
	35	763.9	217.3	-	186.3	-		33.21	44
	40	716.6	203.8	-	199.1	-		31.16	43
	45	669.3	190.4	-	215.9	-		29.10	43
	50	623.4	177.3	-	222.6	-		27.10	42
	55	577.4	164.2	-	231.0	-		25.11	42
	60	532.8	151.5	-	242.2	-		23.17	41
▲▲▲ ***6SB240	30	785.9	223.5	762.6	153.2	138.6	6xSTCAA2040	34.17	56
	35	745.9	212.2	716.1	168.0	153.0		32.43	56
	40	707.1	201.1	669.6	181.8	167.4		30.74	55
	45	669.3	190.4	620.7	195.1	180.3		29.10	55
	50	631.6	179.6	571.8	209.1	193.2		27.46	54
	55	595.0	169.2	522.6	224.5	206.4		25.87	54
	60	559.4	159.1	478.8	243.2	219.6		24.32	53
▲▲▲ ***4SB240	30	774.8	220.4	760.8	151.9	139.2	4 xSTCAB2060	33.69	54
	35	736.2	209.4	715.8	175.3	152.8		32.01	54
	40	697.5	198.4	670.8	183.6	166.4		30.33	53
	45	658.5	187.3	625.0	199.5	179.4		28.63	53
	50	619.8	176.3	579.2	213.7	192.4		26.95	52
	55	581.6	165.4	530.0	223.7	206.0		25.29	52
	60	543.5	154.6	484.0	241.5	218.4		23.63	51
▲▲▲ ***5SB250	30	770.3	219.1	752.5	162.5	143.0	5xSTCAA2050	33.49	54
	35	732.0	208.2	709.0	176.4	156.0		31.83	54
	40	694.9	197.6	665.5	189.3	169.0		30.21	53
	45	658.2	187.2	621.8	202.5	182.5		28.62	53
	50	622.2	176.9	578.0	215.3	196.0		27.05	52
	55	586.6	166.8	535.0	230.1	210.6		25.51	52
	60	551.7	156.9	492.0	245.2	225.1		23.99	51
▲▲▲ ***4SB280	30	895.1	254.6	900.4	190.4	167.2	4 xSTCAB2070	38.92	63
	35	848.9	241.4	847.2	212.2	185.0		36.91	63
	40	802.8	228.3	794.0	229.4	202.8		34.90	62
	45	755.7	214.9	739.6	243.8	218.6		32.86	62
	50	708.6	201.5	685.2	262.5	234.4		30.81	61
	55	659.8	187.7	632.0	286.9	250.8		28.69	61
	60	611.8	174.0	578.0	291.3	267.2		26.60	60
▲▲▲ ***5SB300	30	968.5	275.4	951.0	189.9	174	5xSTCAB2060	42.11	66
	35	920.2	261.7	894.8	219.1	191		40.01	66
	40	871.9	248.0	838.5	229.4	203		37.91	65
	45	823.1	234.1	781.3	249.4	224		35.79	65
	50	774.8	220.4	724.0	267.2	240.5		33.69	64
	55	727.1	206.8	662.5	279.6	257.5		31.61	64
	60	679.3	193.2	605.0	301.9	273		29.54	63
▲▲▲ ***5SB350	30	1118.9	318.2	1125.5	238.1	209.0	5xSTCAB2070	48.65	77
	35	1061.2	301.8	1059.0	265.3	231.3		46.14	77
	40	1003.4	285.4	992.5	286.7	253.5		43.63	76
	45	944.6	268.7	924.5	304.7	273.3		41.07	76
	50	885.8	251.9	856.5	328.1	293.0		38.51	75
	55	824.7	234.6	790.0	358.6	313.5		35.86	75
	60	764.8	217.5	722.5	364.2	334.0		33.25	74
▲▲▲ ***6SB420	30	1342.7	381.9	1350.6	285.7	250.8	6xSTCAB2070	58.38	86
	35	1273.4	362.2	1270.8	318.3	277.5		55.36	86
	40	1204.1	342.5	1191.0	344.0	304.2		52.35	85
	45	1133.5	322.4	1109.4	365.7	327.9		49.28	85
	50	1062.9	302.3	1027.8	393.7	351.6		46.21	84
	55	989.7	281.5	948.0	430.3	376.2		43.03	84
	60	917.7	261.0	867.0	437.0	400.8		39.90	83

C.W.F.R :Cooler Water Flow Rate C.P.D :Cooler Pressure Drop IN.P :INPUT POWER

▲ Copeland Compressor ▲▲ Carrier Compressor ▲▲▲ Bitzer Compressor

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲▲ ***1EB050	30	143.6	40.9	139.6	28.7	25.2	STCAA2050	6.24	31
	35	136.2	38.7	131.95	31.7	27.6		5.92	31
	40	128.8	36.6	124.3	34.8	30		5.60	30
	45	120.1	34.2	115.15	37.5	33.45		5.22	30
	50	111.3	31.7	106	41.2	36.9		4.84	29
	55	101.9	29.0	95.8	44.3	40.7		4.43	29
	60	91.0	25.9	85.5	47.9	44.7		3.96	28
▲▲▲ ***1EB060	30	177.5	50.5	172.5	34.8	30.8	STCAB2060	7.72	40
	35	169.4	48.2	163.15	38.5	34		7.36	40
	40	161.4	45.9	153.8	42.5	37.2		7.02	39
	45	151.5	43.1	142.9	45.9	41.3		6.59	39
	50	141.7	40.3	132	50.6	45.4		6.16	38
	55	130.5	37.1	120.4	56.8	50.6		5.68	38
	60	118.9	33.8	109	62.6	55.8		5.17	37
▲▲▲ ***1EB070	30	212.0	60.3	207.5	41.6	36	STCAB2070	9.22	29
	35	200.7	57.1	196.45	44.6	39.4		8.73	29
	40	189.3	53.8	185.4	48.5	42.8		8.23	28
	45	175.2	49.8	171.7	53.1	47.1		7.62	28
	50	161.1	45.8	158	57.5	51.3		7.00	27
	55	145.6	41.4	142.6	63.3	56.7		6.33	27
	60	125.4	35.7	132.5	69.7	61.8		5.45	26
▲▲▲ ***1EB080	30	243.4	69.2	236.5	47.7	41.7	STCAB2080	10.58	35
	35	230.9	65.7	223.6	52.5	45.95		10.04	35
	40	218.3	62.1	210.7	57.5	50.2		9.49	34
	45	203.7	57.9	195.25	63.7	55.65		8.86	34
	50	189.1	53.8	179.8	67.6	61.1		8.22	33
	55	173.0	49.2	162.7	75.2	67.4		7.52	33
	60	157.0	44.6	145	82.6	73.6		6.82	32
▲▲▲ ***1EB090	30	275.4	78.3	267.6	53.0	46.7	STCAC2090	11.97	35
	35	263.0	74.8	253.05	58.4	51.55		11.43	35
	40	250.5	71.3	238.5	64.2	56.4		10.89	34
	45	235.4	67.0	221.8	71.3	62.65		10.24	34
	50	220.2	62.6	205.1	78.7	68.9		9.57	33
	55	203.0	57.7	187.3	84.6	76.8		8.83	33
	60	185.4	52.7	169	92.7	86		8.06	32
▲▲▲ ***2EB100	30	287.4	81.7	279.2	57.5	50.4	2 xSTCAC2050	12.49	35
	35	272.5	77.5	263.9	63.4	55.2		11.85	35
	40	257.5	73.2	248.6	69.6	60		11.20	34
	45	240.2	68.3	230.3	75.1	66.9		10.44	34
	50	222.8	63.4	212.0	82.5	73.8		9.69	33
	55	203.7	57.9	191.6	88.6	81.4		8.86	33
	60	182.0	51.8	171.0	95.8	89.4		7.91	32
▲▲▲ ***1EB110	30	349.2	99.3	341.1	64.7	56.7	STCAC2110	15.18	44
	35	330.4	94.0	322.95	70.3	62.05		14.37	44
	40	311.6	88.6	304.8	76.0	67.4		13.55	43
	45	288.5	82.1	282.25	82.4	74.1		12.54	43
	50	265.3	75.5	259.7	91.5	80.8		11.53	42
	55	239.6	68.2	234.4	99.9	89.4		10.42	42
	60	215.1	61.2	208	107.6	99		9.35	41
▲▲▲ ***2EB120	30	354.9	100.9	345.0	69.6	61.6	2 xSTCAC2060	15.43	45
	35	338.9	96.4	326.3	77.0	68		14.73	45
	40	322.8	91.8	307.6	84.9	74.4		14.03	44
	45	303.1	86.2	285.8	91.9	82.6		13.18	44
	50	283.4	80.6	264.0	101.2	90.8		12.32	43
	55	261.2	74.3	240.8	113.6	101.2		11.36	43
	60	237.8	67.6	218.0	125.1	111.6		10.34	42

C.W.F.R :Cooler Water Flow Rate *C.P.D :Cooler Pressure Drop* *IN.P :INPUT POWER*

▲ Copeland Compressor *▲▲ Carrier Compressor* *▲▲▲ Bitzer Compressor*

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲▲ ***1EB125	30	396.5	112.8	385.4	74.8	65	STCAC2125	17.24	53
	35	376.1	107.0	364.35	81.8	71.6		16.35	53
	40	355.6	101.2	343.3	88.9	78.2		15.46	52
	45	331.9	94.4	318.05	97.6	86.75		14.43	52
	50	308.1	87.6	292.8	106.3	95.3		13.40	51
	55	281.8	80.2	265	117.4	105.2		12.25	561
	60	255.3	72.6	237	127.7	115.3		11.10	50
▲▲▲ ***2EB140	30	424.1	120.6	415.0	83.2	72	2 xSTCAC2070	18.44	55
	35	401.3	114.1	392.9	89.2	78.8		17.45	55
	40	378.5	107.7	370.8	97.1	85.6		16.46	54
	45	350.3	99.6	343.4	106.2	94.1		15.23	54
	50	322.1	91.6	316.0	115.0	102.6		14.01	53
	55	291.2	82.8	285.2	126.6	113.4		12.66	53
	60	250.9	71.3	265.0	139.4	123.6		10.91	52
▲▲▲ ***1EB140	30	450.7	128.2	438	83.5	73.1	STCAC2140	19.59	58
	35	430.5	122.4	414.15	91.6	80.7		18.72	58
	40	410.3	116.7	390.3	100.1	88.3		17.84	57
	45	1283.0	364.9	363.05	111.6	98.1		55.78	57
	50	360.5	102.5	335.8	124.3	107.9		15.68	56
	55	332.3	94.5	306.6	132.9	120.3		14.45	56
	60	304.6	86.6	277.5	145.0	132.5		13.24	55
▲▲▲ ***3EB150	30	431.0	122.6	418.8	81.3	75.6	3 xSTCAC2050	18.74	55
	35	408.7	116.2	395.9	88.8	82.8		17.77	55
	40	386.4	109.9	372.9	96.6	90.0		16.80	54
	45	360.2	102.4	345.5	105.9	100.4		15.66	54
	50	334.1	95.0	318.0	115.2	110.7		14.53	53
	55	305.6	86.9	287.4	127.3	122.1		13.29	53
	60	273.1	77.7	256.5	136.5	134.1		11.87	52
▲▲▲ ***2EB160	30	486.8	138.5	473.0	95.5	83.4	2 xSTCAC2060	21.17	59
	35	461.8	131.3	447.2	104.9	91.9		20.08	59
	40	436.7	124.2	421.4	114.9	100.4		18.99	58
	45	407.5	115.9	390.5	127.3	111.3		17.72	58
	50	378.3	107.6	359.6	135.1	122.2		16.45	57
	55	346.1	98.4	325.4	150.5	134.8		15.05	57
	60	313.9	89.3	290.0	165.2	147.2		13.65	56
▲▲▲ ***3EB180	30	709.7	201.9	517.5	139.2	92.4	3 xSTCAC2060	30.86	46
	35	677.8	192.8	489.5	154.0	102.0		29.47	46
	40	645.7	183.6	461.4	169.9	111.6		28.07	45
	45	606.3	172.4	428.7	183.7	123.9		26.36	45
	50	566.8	161.2	396.0	202.4	136.2		24.64	44
	55	522.4	148.6	361.2	227.1	151.8		22.71	44
	60	475.5	135.2	327.0	250.3	167.4		20.67	43
▲▲▲ ***2EB180	30	550.7	156.6	535.2	105.9	93.4	2 xSTCAC2090	23.94	71
	35	525.9	149.6	506.1	116.9	103.1		22.87	71
	40	501.2	142.5	477.0	128.5	112.8		21.79	70
	45	470.9	133.9	443.6	142.7	125.3		20.47	70
	50	440.6	125.3	410.2	157.3	137.8		19.15	69
	55	406.0	115.5	374.6	169.2	153.6		17.65	69
	60	370.7	105.4	338.0	185.4	172		16.12	68
▲▲▲ ***4EB200	30	574.8	163.5	558.4	115.0	100.8	4 xSTCAA2050	24.99	78
	35	544.9	155.0	527.8	126.7	110.4		23.69	78
	40	515.2	146.5	497.2	139.2	120.0		22.40	77
	45	480.3	136.6	460.6	150.1	133.8		20.88	77
	50	445.6	126.7	424.0	165.0	147.6		19.37	76
	55	407.4	115.9	383.2	177.1	162.8		17.71	76
	60	364.1	103.5	342.0	191.6	178.8		15.83	75

C.W.F.R :Cooler Water Flow Rate C.P.D :Cooler Pressure Drop IN.P :INPUT POWER

▲ Copeland Compressor ▲▲ Carrier Compressor ▲▲▲ Bitzer Compressor

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY			IN.P (KW)		Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
		KW(R22)	R.T(R22)	Kw(R407C)	R22	407C			
▲▲▲ ***3EB210	30	636.1	180.9	622.5	124.7	108.0	3 xSTCAC2070	27.66	45
	35	602.0	171.2	589.4	133.8	118.2		26.17	45
	40	567.8	161.5	556.2	145.6	128.4		24.69	44
	45	525.5	149.5	515.1	159.2	141.2		22.85	44
	50	483.3	137.5	474.0	172.6	153.9		21.01	43
	55	436.8	124.2	427.8	189.9	170.1		18.99	43
	60	376.3	107.0	397.5	209.1	185.4		16.36	42
▲▲▲ ***2EB220	30	698.5	198.7	682.2	129.4	113.4	2 xSTCAC2110	30.37	45
	35	660.9	188.0	645.9	140.6	124.1		28.73	45
	40	623.2	177.2	609.6	152.0	134.8		27.09	44
	45	576.9	164.1	564.5	164.8	148.2		25.08	44
	50	530.6	150.9	519.4	183.0	161.6		23.07	43
	55	479.3	136.3	468.8	199.7	178.8		20.84	43
	60	430.2	122.4	416.0	215.1	198		18.71	41
▲▲▲ ***3EB240	30	730.4	207.7	709.5	143.2	125.1	3 xSTCAD2080	31.76	46
	35	692.6	197.0	670.8	157.4	137.9		30.11	46
	40	655.0	186.3	632.1	172.4	150.6		28.48	45
	45	611.2	173.8	585.8	191.0	167.0		26.57	45
	50	567.3	161.4	539.4	202.6	183.3		24.67	44
	55	519.1	147.7	488.1	225.7	202.2		22.57	44
	60	470.9	133.9	435.0	247.8	220.8		20.47	43
▲▲▲ ***4EB240	30	709.7	201.9	690.0	139.2	123.2	4 xSTCAB2060	30.86	46
	35	677.8	192.8	652.6	154.0	136.0		29.47	46
	40	645.7	183.6	615.2	169.9	148.8		28.07	45
	45	606.3	172.4	571.6	183.7	165.2		26.36	45
	50	566.8	161.2	528.0	202.4	181.6		24.64	44
	55	522.4	148.6	481.6	227.1	202.4		22.71	44
	60	475.5	135.2	436.0	250.3	223.2		20.67	43
▲▲▲ ***2EB250	30	792.9	225.5	770.8	149.6	130	2 xSTCAD2125	34.47	55
	35	752.1	213.9	728.7	163.5	143.2		32.70	55
	40	711.3	202.3	686.6	177.8	156.4		30.93	54
	45	663.8	188.8	636.1	195.2	173.5		28.86	54
	50	616.3	175.3	585.6	212.5	190.6		26.79	53
	55	563.8	160.3	530.0	234.9	210.4		24.51	53
	60	510.6	145.2	474.0	255.3	230.6		22.20	52
▲▲▲ ***3EB270	30	826.1	234.9	802.8	158.9	140.1	3 xSTCAD2090	35.92	57
	35	788.9	224.4	759.2	175.3	154.7		34.30	57
	40	751.7	213.8	715.5	192.7	169.2		32.68	56
	45	706.3	200.9	665.4	214.0	188.0		30.71	56
	50	660.8	187.9	615.3	236.0	206.7		28.73	55
	55	609.2	173.3	561.9	253.8	230.4		26.49	55
	60	556.1	158.2	507.0	278.1	258.0		24.18	54
▲▲▲ ***2EB280	30	901.3	256.3	876.0	166.9	146.2	2 xSTCAD2140	39.19	64
	35	860.9	244.9	828.3	183.2	161.4		37.43	64
	40	820.5	233.4	780.6	200.1	176.6		35.67	63
	45	2566.1	729.8	726.1	223.1	196.2		111.57	63
	50	721.2	205.1	671.6	248.7	215.8		31.36	62
	55	664.8	189.1	613.2	265.9	240.6		28.90	62
	60	609.2	173.3	555.0	290.1	265		26.49	61
▲▲▲ ***4EB280	30	848.3	241.3	830.0	166.3	144.0	4 xSTCAB2070	36.88	58
	35	802.6	228.3	785.8	178.4	157.6		34.90	58
	40	757.0	215.3	741.6	194.1	171.2		32.91	57
	45	700.6	199.3	686.8	212.3	188.2		30.46	57
	50	644.4	183.3	632.0	230.1	205.2		28.02	56
	55	582.3	165.6	570.4	253.2	226.8		25.32	56
	60	501.7	142.7	530.0	278.7	247.2		21.81	55

C.W.F.R :Cooler Water Flow Rate *C.P.D :Cooler Pressure Drop* *IN.P :INPUT POWER*

▲ Copeland Compressor *▲▲ Carrier Compressor* *▲▲▲ Bitzer Compressor*

- COOLING CAPACITIES

MODEL	COND TEMP	COOLING CAPACITY KW(R22)	R.T(R22)	Kw(R407C)	IN.P (KW) R22	407C	Condenser model for WLC	C.W.F.R Liter/S	C.P.D KPa
▲▲▲ ***4EB320	30	973.8	277.0	946.0	190.9	166.8	4 xSTCAB2080	42.34	66
	35	923.5	262.7	894.4	209.9	183.8		40.15	66
	40	873.3	248.4	842.8	229.8	200.8		37.97	65
	45	815.0	231.8	781.0	254.7	222.6		35.43	65
	50	756.5	215.1	719.2	270.2	244.4		32.89	64
	55	692.2	196.9	650.8	301.0	269.6		30.10	64
	60	627.8	178.6	580.0	330.4	294.4		27.30	63
▲▲▲ ***3EB330	30	1047.7	298.0	1023.3	194.0	170.1	3 xSTCAd2110	45.55	83
	35	991.2	281.9	968.9	210.9	186.2		43.10	83
	40	934.8	265.9	914.4	228.0	202.2		40.65	82
	45	865.4	246.1	846.8	247.2	222.3		37.62	82
	50	795.9	226.4	779.1	274.4	242.4		34.60	81
	55	719.1	204.5	703.2	299.6	268.2		31.26	81
	60	645.4	183.5	624.0	322.7	297.0		28.06	81
▲▲▲ ***4EB360	30	1101.3	313.2	1070.4	211.8	186.8	4 xSTCAB2090	47.88	85
	35	1051.8	299.2	1012.2	233.7	206.2		45.73	85
	40	1002.3	285.1	954.0	257.0	225.6		43.58	84
	45	941.7	267.8	887.2	285.4	250.6		40.94	84
	50	881.1	250.6	820.4	314.7	275.6		38.31	83
	55	812.2	231.0	749.2	338.4	307.2		35.31	83
	60	741.5	210.9	676.0	370.7	344.0		32.24	81
▲▲▲ ***3EB375	30	1189.4	338.3	1156.2	224.4	195.0	3 xSTCAD2125	51.71	79
	35	1128.1	320.8	1093.1	245.2	214.8		49.05	79
	40	1066.9	303.5	1029.9	266.7	234.6		46.39	78
	45	995.7	283.2	954.2	292.8	260.3		43.29	78
	50	924.4	262.9	878.4	318.8	285.9		40.19	77
	55	845.6	240.5	795.0	352.3	315.6		36.77	77
	60	765.9	217.8	711.0	383.0	345.9		33.30	76
▲▲▲ ***3EB420	30	1352.0	384.5	1314.0	250.4	219.3	3 xSTCAD2125	58.78	86
	35	1291.4	367.3	1242.5	274.8	242.1		56.15	86
	40	1230.7	350.0	1170.9	300.2	264.9		53.51	85
	45	3849.3	1094.8	1089.2	334.7	294.3		167.36	85
	50	1081.7	307.6	1007.4	373.0	323.7		47.03	84
	55	997.1	283.6	919.8	398.8	360.9		43.35	84
	60	913.8	259.9	832.5	435.1	397.5		39.73	83
▲▲▲ ***4EB440	30	1397.0	397.3	1364.4	258.7	226.8	4 xSTCAC2110	60.74	88
	35	1321.7	375.9	1291.8	281.2	248.2		57.46	88
	40	1246.4	354.5	1219.2	304.0	269.6		54.19	87
	45	1153.7	328.1	1129.0	329.6	296.4		50.16	87
	50	1061.2	301.8	1038.8	365.9	323.2		46.14	86
	55	958.7	272.7	937.6	399.5	357.6		41.68	86
	60	860.5	244.7	832.0	430.2	396.0		37.41	85
▲▲▲ ***4EB500	30	1585.7	451.0	1541.6	299.2	260.0	4 xSTCAC2125	68.95	89
	35	1504.2	427.8	1457.4	327.0	286.4		65.40	89
	40	1422.6	404.6	1373.2	355.6	312.8		61.85	88
	45	1327.6	377.6	1272.2	390.5	347.0		57.72	88
	50	1232.5	350.6	1171.2	425.0	381.2		53.59	87
	55	1127.5	320.7	1060.0	469.8	420.8		49.02	87
	60	1021.2	290.4	948.0	510.6	461.2		44.40	86
▲▲▲ ***4EB560	30	1802.6	512.7	1752.0	333.8	292.4	4 xSTCAC2140	78.38	93
	35	1721.8	489.7	1656.6	366.3	322.8		74.86	93
	40	1640.9	466.7	1561.2	400.2	353.2		71.34	92
	45	5132.3	1459.7	1452.2	446.3	392.4		223.14	92
	50	1442.3	410.2	1343.2	497.4	431.6		62.71	91
	55	1329.6	378.1	1226.4	531.8	481.2		57.81	91
	60	1218.3	346.5	1110.0	580.2	530.0		52.97	90

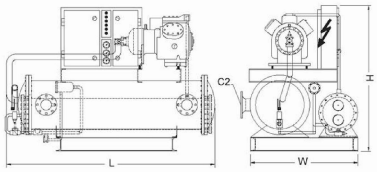
C.W.F.R :Cooler Water Flow Rate C.P.D :Cooler Pressure Drop IN.P :INPUT POWER

▲ Copeland Compressor ▲▲ Carrier Compressor ▲▲▲ Bitzer Compressor

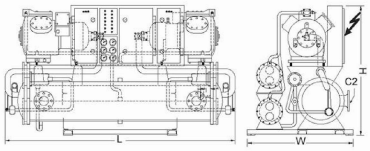
- WLC**** CHILLER DIMENSION WITH HERMETIC & SEMI-HERMETIC COMPRESSORS

Model	L[mm]	H[mm]	W[mm]	C2[inch]
WLC1HO005	1250	1100	750	2
WLC1**008	1250	1100	750	2
WLC1**010	1250	1200	800	2
WLC1S*015	1350	1200	800	2
WLC1S*020	1350	1200	850	2
WLC1S*025	1350	1250	850	3
WLC1S*030	1350	1250	850	3
WLC1S*040	1350	1300	900	3
WLC1SB050	1350	1300	900	3
WLC1SB060	1850	1350	900	3
WLC1SB070	1850	1350	900	3
WLC2HO010	1500	1100	850	2
WLC2**015	1500	1100	850	2
WLC2**020	1500	1200	900	2
WLC2S*030	2000	1200	900	3
WLC2S*040	2000	1200	950	3
WLC2S*050	2000	1200	950	3
WLC2S*060	2000	1200	1000	3
WLC2S*070	2000	1250	1000	3
WLC2S*080	2000	1250	1000	3
WLC2SB090	2000	1300	1050	4
WLC2SB100	2000	1300	1050	4
WLC2SB110	2500	1350	1100	4
WLC2SB120	2500	1350	1100	4
WLC2SB130	2500	1350	1100	4
WLC2SB140	2500	1350	1100	4
WLC3S*090	2300	2000	1300	4
WLC3S*100	2300	2000	1300	4
WLC3S*110	2300	2000	1300	4
WLC3S*120	2300	2100	1320	4
WLC3SB150	2800	2100	1320	4
WLC3SB170	2800	2100	1320	5
WLC3SB180	2800	2200	1350	5
WLC3SB200	2800	2200	1350	5
WLC3SB210	2800	2200	1350	5
WLC4S*120	3600	2200	1320	5
WLC4S*140	3600	2200	1320	5
WLC4S*160	3600	2200	1320	5
WLC4SB200	3600	2200	1320	5
WLC4SB240	3600	2200	1320	5
WLC4SB280	3600	2200	1320	6
WLC5S*200	3800	2300	1320	5
WLC5SB250	3800	2300	1320	6
WLC5SB300	3800	2400	1850	6
WLC5SB350	3800	2400	1850	6
WLC6S*240	4800	2300	1320	6
WLC6SB360	4800	2400	1850	6
WLC6SB420	4800	2400	1850	6

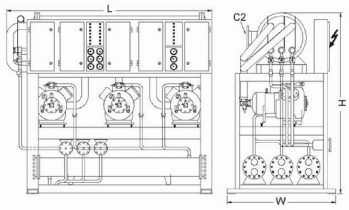
C2 :Evaporator water connection



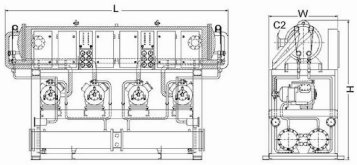
WLC1* CHILLER DIMENSION**



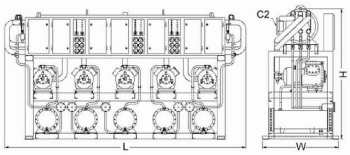
WLC2* CHILLER DIMENSION**



WLC3S CHILLER DIMENSION**



WLC4S CHILLER DIMENSION**



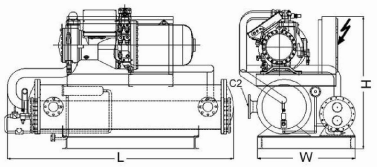
WLC5S CHILLER DIMENSION**

WLC6S CHILLER DIMENSION**

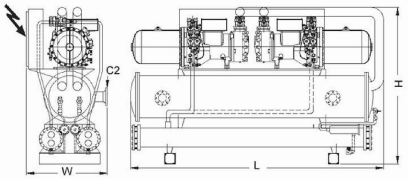
- WLC*EB* CHILLER DIMENSION WITH SCREW COMPRESSORS

Model	L[mm]	H[mm]	W[mm]	C2[inch]
WLC1EB050	1400	1400	1000	3
WLC1EB060	1900	1400	1000	3
WLC1EB070	1900	1400	1000	3
WLC1EB080	2350	1450	1050	3
WLC1EB090	2350	1450	1500	4
WLC1EB110	2400	1500	1100	4
WLC1EB125	2400	1500	1100	4
WLC1EB140	2400	1500	1100	4
WLC2EB100	2800	2000	950	4
WLC2EB120	2800	2000	950	4
WLC2EB140	2800	2000	950	4
WLC2EB160	2800	2000	950	5
WLC2EB180	2800	2050	1000	5
WLC2EB220	2800	2050	1000	5
WLC2EB250	3500	2050	1050	6
WLC2EB280	3500	2100	1050	6
WLC3EB150	2800	2350	1350	4
WLC3EB180	2800	2350	1350	5
WLC3EB210	2800	2400	1350	5
WLC3EB240	3300	2400	1400	6
WLC3EB270	3300	2500	1400	6
WLC3EB330	3300	2500	1500	6
WLC3EB375	3300	2500	1500	6
WLC3EB420	3300	2500	1500	6
WLC4EB200	4000	2450	1200	5
WLC4EB240	4000	2500	1200	6
WLC4EB280	4000	2500	1400	6
WLC4EB320	4000	2550	1450	6
WLC4EB360	4000	2600	1400	6
WLC4EB440	4500	2600	1500	6
WLC4EB500	4500	2600	1500	6
WLC4EB560	4500	2600	1500	6

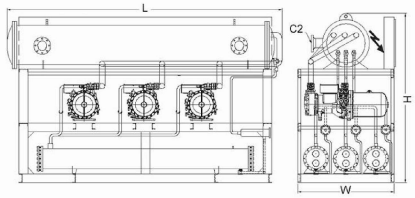
C2 :Evaporator water connection



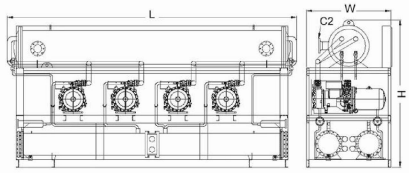
WLC1EB* CHILLER DIMENSION



WLC2EB* CHILLER DIMENSION



WLC3EB* CHILLER DIMENSION

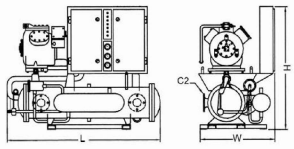


WLC4EB* CHILLER DIMENSION

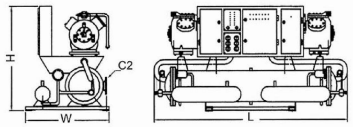
- RLC**** CHILLER DIMENSION WITH HERMETIC & SEMI-HERMETIC COMPRESSORS

Model	L[mm]	H[mm]	W[mm]	C2[inch]
RLC1HO005	1250	1100	750	2
RLC1**008	1250	1100	750	2
RLC1**010	1250	1200	800	2
RLC1S*015	1350	1200	800	2
RLC1S*020	1350	1200	850	2
RLC1S*025	1350	1250	850	3
RLC1S*030	1350	1250	850	3
RLC1S*040	1350	1300	900	3
RLC1SB050	1350	1300	900	3
RLC1SB060	1850	1350	900	3
RLC1SB070	1850	1350	900	3
RLC2HO010	1500	1100	850	2
RLC2**015	1500	1100	850	2
RLC2**020	1500	1200	900	2
RLC2S*030	2000	1200	900	3
RLC2S*040	2000	1200	950	3
RLC2S*050	2000	1200	950	3
RLC2S*060	2000	1200	1000	3
RLC2S*070	2000	1250	1000	3
RLC2S*080	2000	1250	1000	3
RLC2SB090	2000	1300	1050	4
RLC2SB100	2000	1300	1050	4
RLC2SB110	2500	1350	1100	4
RLC2SB120	2500	1350	1100	4
RLC2SB130	2500	1350	1100	4
RLC2SB140	2500	1350	1100	4
RLC3S*090	2300	1900	1300	4
RLC3S*100	2300	1900	1300	4
RLC3S*110	2300	1900	1300	4
RLC3S*120	2300	2000	1320	4
RLC3SB150	2800	2000	1320	4
RLC3SB170	2800	2000	1320	5
RLC3SB180	2800	2100	1350	5
RLC3SB200	2800	2100	1350	5
RLC3SB210	2800	2100	1350	5
RLC4S*120	3600	2100	1320	5
RLC4S*140	3600	2100	1320	5
RLC4S*160	3600	2100	1320	5
RLC4SB200	3600	2100	1320	5
RLC4SB240	3600	2100	1320	5
RLC4SB280	3600	2100	1320	6
RLC5S*200	3800	2200	1320	5
RLC5SB250	3800	2200	1320	6
RLC5SB300	3800	2300	1850	6
RLC5SB350	3800	2300	1850	6
RLC6S*240	4800	2300	1320	6
RLC6SB360	4800	2300	1850	6
RLC6SB420	4800	2300	1850	6

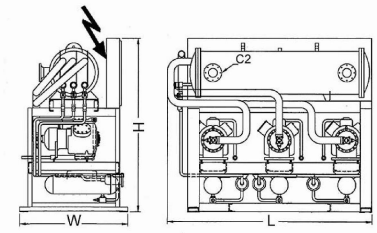
C2 :Evaporator water connection



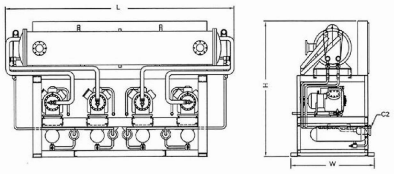
RLC1* CHILLER DIMENSION**



RLC2* CHILLER DIMENSION**



RLC3S CHILLER DIMENSION**



RLC4S CHILLER DIMENSION**

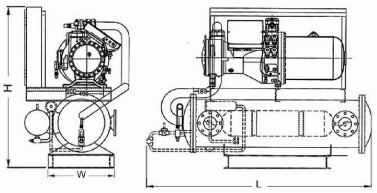
RLC5S CHILLER DIMENSION**

RLC6S CHILLER DIMENSION**

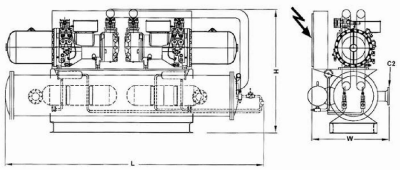
- RLC*EB* CHILLER DIMENSION WITH SCREW COMPRESSORS

Model	L[mm]	H[mm]	W[mm]	C2[inch]
RLC1EB050	1400	1400	1000	3
RLC1EB060	1900	1400	1000	3
RLC1EB070	1900	1400	1000	3
RLC1EB080	2350	1450	1050	3
RLC1EB090	2350	1450	1500	4
RLC1EB110	2400	1500	1100	4
RLC1EB125	2400	1500	1100	4
RLC1EB140	2400	1500	1100	4
RLC2EB100	2800	1800	950	4
RLC2EB120	2800	1800	950	4
RLC2EB140	2800	1800	950	4
RLC2EB160	2800	1800	950	5
RLC2EB180	2800	1850	1000	5
RLC2EB220	2800	1850	1000	5
RLC2EB250	3500	1850	1050	6
RLC2EB280	3500	1900	1050	6
RLC3EB150	2800	2250	1350	4
RLC3EB180	2800	2250	1350	5
RLC3EB210	2800	2300	1350	5
RLC3EB240	3300	2300	1400	6
RLC3EB270	3300	2400	1400	6
RLC3EB330	3300	2400	1500	6
RLC3EB375	3300	2400	1500	6
RLC3EB420	3300	2400	1500	6
RLC4EB200	4000	2450	1200	5
RLC4EB240	4000	2400	1200	6
RLC4EB280	4000	2400	1400	6
RLC4EB320	4000	2450	1450	6
RLC4EB360	4000	2500	1400	6
RLC4EB440	4500	2500	1500	6
RLC4EB500	4500	2500	1500	6
RLC4EB560	4500	2500	1500	6

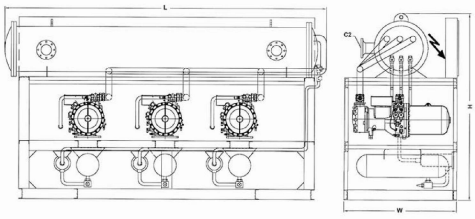
C2 :Evaporator water connection



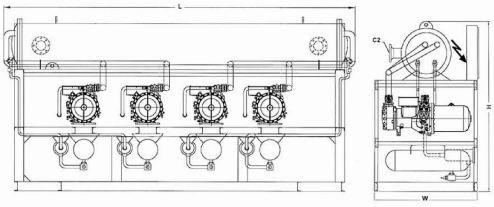
RLC1EB* CHILLER DIMENSION



RLC2EB* CHILLER DIMENSION



RLC3EB* CHILLER DIMENSION

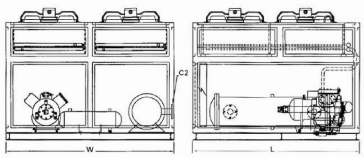


RLC4EB* CHILLER DIMENSION

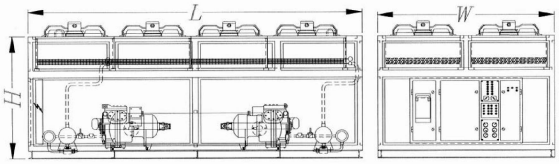
- ALC**** CHILLER DIMENSION

Model	L[mm]	H[mm]	W[mm]	C2[inch]
ALC1HO005	1000	700	700	2
ALC1* *008	1000	700	700	2
ALC1* *010	1000	700	1000	2
ALC1S*015	1500	700	1000	2
ALC1S*020	2200	1000	1200	2
ALC1S*025	2200	1000	1200	2
ALC1S*030	3200	1400	1200	2
ALC1S*040	2300	1600	2200	3
ALC1SB050	3200	1600	2200	3
ALC1SB060	3200	1600	2200	3
ALC1SB070	4300	1600	2200	3
ALC2HO010	4300	1600	2200	3
ALC2S**015	1500	700	1000	2
ALC2S**020	2200	1000	1200	2
ALC2S*030	3200	1400	1200	2
ALC2S*040	2300	1600	2200	3
ALC2S*050	3200	1600	2200	3
ALC2S*060	3200	1600	2200	3
ALC2S*070	4300	1600	2200	3
ALC2S*080	4300	1600	2200	3
ALC2SB090	5300	1600	2200	3
ALC2*B100	5300	1600	2200	3
ALC2*B120	5200	2600	2500	4
ALC2*B140	5200	2600	2500	4
ALC2EB160	5200	2600	2500	4
ALC2EB180	6200	2600	2500	5
ALC2EB220	6200	2600	2500	5
ALC2EB250	7500	2600	2500	6
ALC2EB280	7500	2600	2500	6
ALC3S*90	4000	2600	2500	3
ALC3S*120	5200	2600	2500	4
ALC3*B150	7600	2600	2500	4
ALC3*B180	7600	2600	2500	5
ALC3*B210	7600	2600	2500	5
ALC3EB240	7800	2600	2500	6
ALC3EB270	10000	2600	2500	6
ALC3EB330	10500	2600	2500	6
ALC3EB375	11300	2600	2500	6
ALC3EB420	11300	2600	2500	6
ALC4EB200	8600	2600	2500	6
ALC4EB240	8600	2600	2500	6
ALC4EB280	8600	2600	2500	6
ALC4EB320	8600	2600	2500	6
ALC4EB360	11000	2600	2500	6
ALC4EB440	11000	2600	2500	6
ALC4EB500	12300	2600	2500	6

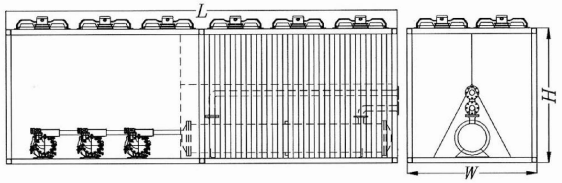
C2 :Evaporator water connection



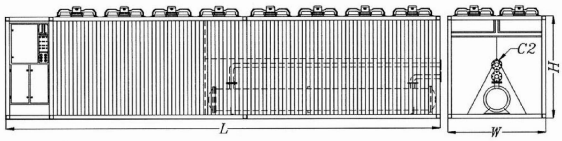
ALC1S CHILLER DIMENSION**



ALC2* CHILLER DIMENSION**



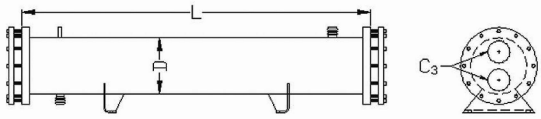
ALC3* CHILLER DIMENSION**



ALC4EB* CHILLER DIMENSION

- DIMENTION & PRESSURE DROP FOR WATER COOLED CONDENSERS

For calculation of total pressure drop in the condensers use this table:

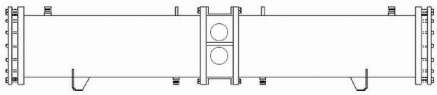


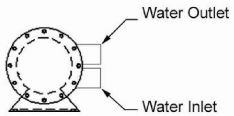
Condenser Table

MODEL	ΔP bar	L [mm]	D [inch]	C3 [inch]	A
STCAA2005	0.18	1000	6	1 1/2	11.9
STCAA2008	0.18	1000	6	1 1/2	11.5
STCAA2010	0.18	1000	6	1 1/2	11.6
STCAA2015	0.19	1000	8	1 1/2	11.7
STCAA2020	0.19	1000	8	2	11.7
STCAA2025	0.19	1000	10	2	11.7
STCAA2030	0.20	1000	10	2	11.7
STCAC2030	0.40	2000	8	2	10.4
STCAA2040	0.22	1000	12	3	11.7
STCAC2040	0.40	2000	8	3	10.4
STCAA2050	0.22	1000	12	3	11.6
STCAB2050	0.31	1500	10	3	10.8
STCAC2050	0.43	2500	10	3	10.4
STCAB2060	0.31	1500	12	3	10.8

MODEL	ΔP bar	L [mm]	D [inch]	C3 [inch]	A
STCAC2060	0.46	2000	10	3	10.4
STCAB2070	0.30	1500	12	4	10.8
STCAC2070	0.44	2000	10	4	10.8
STCAB2080	0.32	1500	12	4	10.4
STCAC2080	0.45	2000	12	4	8.1
STCAB2090	0.38	1500	14	4	10.8
STCAC2090	0.44	2000	12	4	10.4
STCAD2090	0.66	3000	10	4	8.2
STCAC2110	0.42	2000	12	4	10.4
STCAD2110	0.67	3000	12	4	8.2
STCAC2125	0.43	2000	14	4	10.4
STCAD2125	0.65	3000	12	4	8.1
STCAC2140	0.44	2000	14	4	10.4
STCAD2140	0.65	3000	12	4	8.2

A= Condensing Temp. - Water inlet Temp.



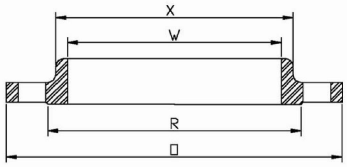


- Condensers linked for chillers with 4 compressor

Attention: *The selection method range covers the use of **C series water chillers only, for any other fluids' chilling selection method contact us directly.*

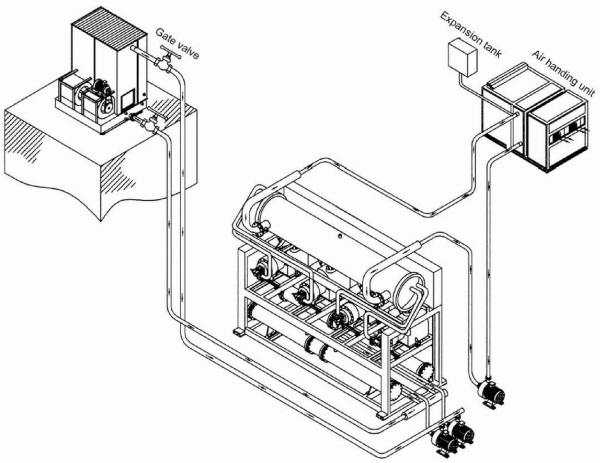
DIMENSION OF COOLER FLANGES :

Dimensions of typical commercial steel flanges that are used in coolers' water connections according to ASA B16.5-1960

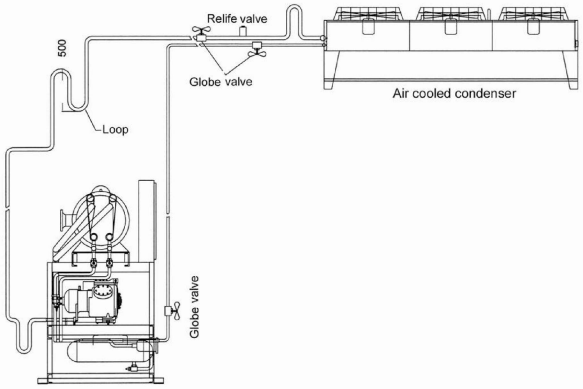


NOMINAL SIZE [inch]	O [mm]	R [mm]	W [mm]	X [mm]	DIAMETER of BOLTS	NUMBER of BOLTS HOLES
2	152	92	62	78	16	4
3	191	127	91	108	16	4
4	229	157	116	135	16	8
5	254	186	144	164	19	8
6	279	216	171	192	19	8

- WATER COOLED LIQUID CHILLERS INSTALATION (4 COMPRESSORS)



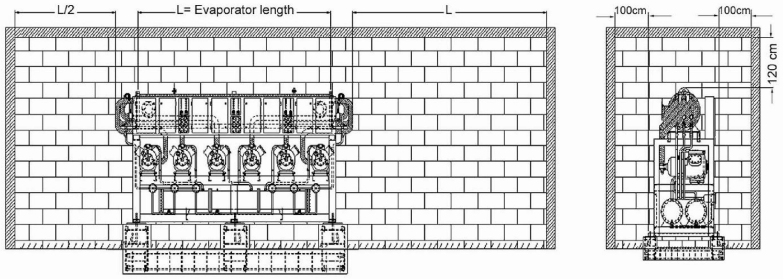
- AIR COOLED LIQUID CHILLERS (RLC) INSTALATION



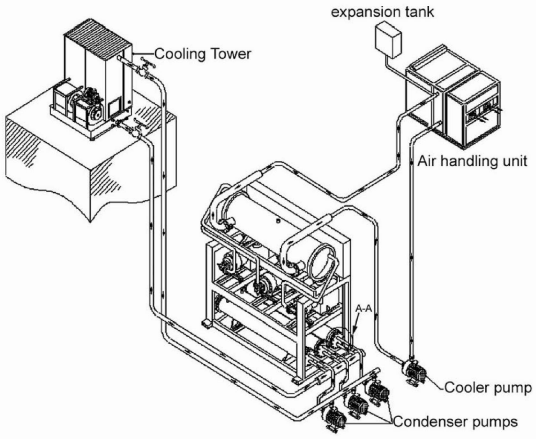
The above piping method is only a general suggestion.
For a specific application contact our design Dep.

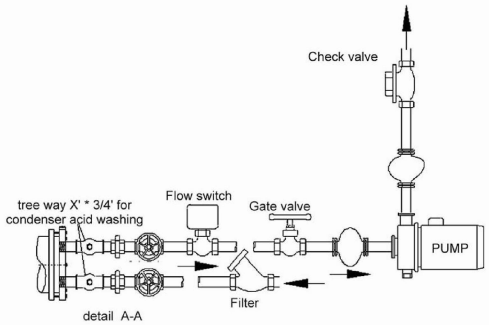
POSITIONING AND PIPING

Minimum distance advisable from the wall:



-The service valves shown in this shematic are choosen and installed by the user.





The above piping method is only a general suggestion. For a specific application contact our design Dep.