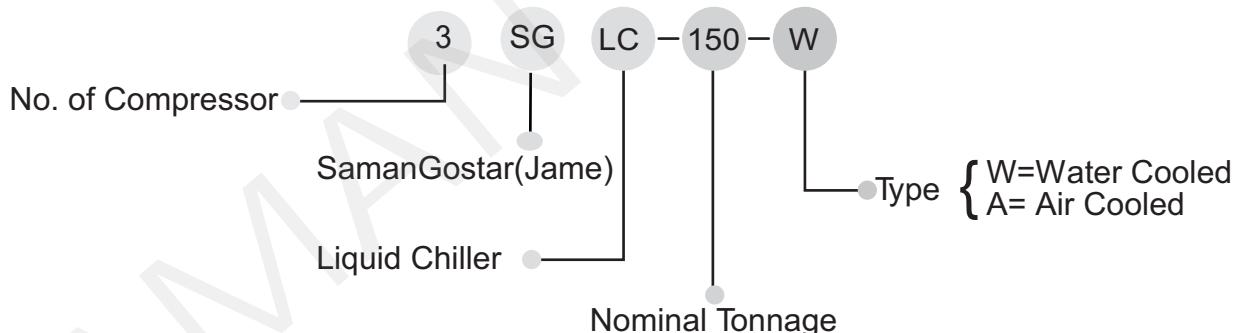




## CONTENTS

FEATURES .....	2
SELECTION INFORMATION.....	3
SELECTION PROCEDURE.....	4
PERFORMANCE DATA TABLES.....	5-12
DIMENSIONS .....	13-16
ELECTRICAL SCHEMATIC CURVE AT THE START-UP.....	17
TECHNICAL DATA TABLES .....	18-21
EVAPORATOR & CONDENSER FLOW PATTERN FIGURES .....	22-23
RECOMMENDED SERVICE AREA.....	24

## NOMENCLATURE



Please fill in the boxes with the appropriate characters at the time of placing orders



## FEATURES

SamanGostar Reciprocating Water Chillers are available in 2 types of air cooled & water cooled in capacity range of 3 to 240 tons of refrigeration and compressor configurations of one to four.

Evaporators and condensers are high efficiency shell and tube heat exchangers designed based on TEMA (Tubular Exchanger Manufacturers Association) standards.

Safety controls installed on all units include high and low pressure cut-outs, compressor oil pressure safety cut-out, water anti freeze thermostat, water flow switch and evaporator entering water thermostat.

The above mentioned are all chosen from the most recognized controls manufacturers in the air conditioning industry

Compressors are by DWM COPELAN, CARRIER, BOCH which happens to be one of the best and the most reliable brands.

Raw materials such as copper tubes, fittings and valves are supplied by well-respected manufacturers.

Electrical safety measures such as three phase controller, circuit breakers are, available on all units.

A fault detection system for the whole unit is available upon request.

## SELECTION INFORMATION

### General

Cooling capacity is tabulated for all chiller models at a variety of conditions to cover most comfort cooling and industrial system requirements. The water cooled SGLC-W series are rated over a range of leaving water temperatures of 42[° F] to 46[° F] condenser leaving water temperatures of 85[° F] to 105[° F]. The SGLC -A series are rated over the same evaporator chilled water range at condensing temperatures of 115[° F] to 135[° F].

### Chilled water quantity and range:

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. This flow rate in (GPM) is given in the performance data tables. The following formula can also be used when needed.

$$GPM = \frac{\text{Tons} \times 24}{\text{Chilled water range } (\Delta T) [^{\circ}\text{F}]}$$

### Water cooled chiller (SGLC-W) series:

A 10 [° F] condenser water range is generally the best compromise for the most economical cooling tower selection to satisfy the chiller requirements. Based on the above suggestion and referring to performance data tables under different condenser leaving water temperatures, we can extract the required condenser water flow rate are in (GPM) and the water side pressure drop (PD). Refer to the S.G.J. cooling tower catalogue for an appropriate cooling tower selection.

### Condenser water temperature and head pressure control:

Since cooling towers are used in conjunction with water cooled condensers, the condenser water temperature available, shall be at least 5[° F] above the ambient wet bulb temperature. For example if the ambient wet bulb temperature is 80[° F], a properly sized tower will provide 85[° F] condenser water temperature.

For proper operation of a reciprocating water cooled chiller, it is necessary to maintain a condenser leaving water temperature not lower than 85[° F]. This means that a method of head pressure control such as controlling cooling tower fan via a thermostat or using a condenser water regulating valve in order to control the condenser water flow rate, shall be employed.

### Air cooled chiller (SGLC-A ) series:

SGLC -A units require the use of remotely located air cooled condensers. The column headed QC in the performance data tables show the required THR capacity at each condensing temperature condition. Refer to the S.G.J. air cooled condenser catalogue for an appropriate condenser selection.

### Head pressure control and winter start in air cooled chillers:

Air cooled condensers used with chillers must always include an accurate method of controlling the condensing pressure at 185[psig] or higher. It is also necessary to determine the minimum outside air temperature at which the system will be operated. At an ambient temperature below 55[° F], a winter start system should be furnished with the condenser to enable the chiller to start without any difficulty.

## SELECTION PROCEDURE

Water cooled models:

Given:

Water flow rate to be chilled .....	110 GPM
Design chilled water range .....	10 F
Evaporator leaving water temp. ....	45 F
Design condenser water range .....	10 F
Condenser leaving water temp. ....	95 F

Determine unit model and size:

Required cooling capacity:

$$Q_e = \frac{GPM \times \text{Chilled water range}}{24} = \frac{110 \times 10}{24} = 45.83 \text{ tons of refrigeration}$$

From the corresponding performance data table (Evap. Lvg. water Temp. =45° F) we select unit 2 SGLC -60 W, offering 46.3 tons at 95° F condenser leaving water temperature. From the same table we extract the evap. water flow rate of 110.8 (GPM) and P.D. of 12.8 (ft.w.g.) for  $\Delta T=10^{\circ}\text{F}$ .

We can also determine the condenser water flow rate of 135.1 (GPM) and P.D. of 7.1 (ft.w.g.), with the condenser GPM value given above, refer to S.G.J cooling tower catalogue and select the required unit or units.

Aircooledmodels:

Given:

Water flow rate to be chilled .....	110 GPM
Design chilled water range .....	10 F
Evaporator leaving water temp. ....	45 F
Design condensing temp. ....	120 F
Ambient temp. ....	100 F

Determine unit model and size:

Required cooling capacity:

$$Q_e = \frac{GPM \times \text{Chilled water range}}{24} = \frac{110 \times 10}{24} = 45.83 \text{ tons of refrigeration}$$

from the corresponding performance data table (Evap. Lvg. water temp.=45° F) we select unit 2 SGLC -70A, offering 52.2 tons at 120° F condensing temp. from the same table we extract the evap water flow rate of 125(GPM) and P.D. of 17.2 (ft.w.g.) for  $\Delta T=10^{\circ}\text{F}$ .

We can also extract the condenser THR capacity of 808.7(MBH). With this value, refer to S.G.J air cooled condenser catalogue and select the required unit or units.

## PERFORMANCE DATA ; FOR WATER COOLED CHILLERS

Evaporator leaving water temp.=42(°F)

Models	Condenser Leaving Water Temperature (°F)																							
	85						95						105											
	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	Tons	KW	GPM	PD	GPM	PD	Tons	KW	GPM	PD	GPM	PD
	Tons	KW	GPM	PD	GPM	PD	Tons	KW	GPM	PD	GPM	PD	Tons	KW	GPM	PD	GPM	PD	Tons	KW	GPM	PD	GPM	PD
1 SGLC 5	5.2	4.0	12.4	2.8	15.5	2.5	4.7	4.4	11.2	1.6	14.4	2.3	4.3	4.8	10.3	1.3	13.7	2.1						
1 SGLC 10	9.7	7.1	23.2	2.8	27.8	5.9	9.0	7.9	21.6	2.5	26.7	5.5	8.4	8.4	20.1	2.2	25.6	5.1						
1 SGLC 15	12.7	9.4	30.4	3.4	36.5	5.0	11.9	10.3	28.5	3.0	35.2	4.6	11.1	11.2	26.6	2.1	34.0	4.2						
1 SGLC 20	154	10.9	36.9	3.3	44.1	5.9	14.2	11.8	34.0	2.9	42.7	5.5	13.7	12.7	32.8	2.7	41.3	5.1						
1 SGLC 25	19.3	13.8	46.2	4.0	55.1	9.2	18.1	15.1	36.2	3.5	53.3	8.6	17.1	16.4	40.9	3.1	51.7	8.0						
1 SGLC 30	23.1	17.0	55.3	5.3	66.3	7.1	21.7	18.3	52.0	4.6	63.9	6.6	20.4	19.8	48.8	4.0	61.8	6.0						
1 SGLC 35	28.7	21.4	68.7	8.2	82.9	5.2	27.0	23.3	64.6	7.4	80.2	4.7	25.2	25.5	60.3	6.5	77.4	4.2						
1 SGLC 40	32.8	25.7	78.5	5.7	95.0	4.6	30.8	27.5	73.7	4.7	91.6	4.2	28.9	29.8	69.2	4.0	88.6	3.8						
1 SGLC 50	42.0	29.5	100.5	9.5	121.3	6.2	39.0	32.5	93.3	8.8	116.4	5.5	36.3	35.5	86.9	8.0	112.2	5.3						
1 SGLC 60	49.0	36.0	117.3	7.5	142.6	8.0	44.8	38.6	107.3	6.5	132.9	7.2	42.9	43.0	102.7	5.5	131.5	6.4						
2 SGLC 30	25.3	18.8	60.6	6.2	72.7	4.9	23.8	20.4	57.0	5.0	70.3	4.5	22.2	22.2	53.2	4.0	67.8	4.1						
2 SGLC 40	30.7	21.8	73.5	5.3	87.4	5.8	28.9	23.4	69.2	4.3	84.4	5.4	27.2	25.4	65.1	3.6	81.8	5.0						
2 SGLC 50	38.5	27.6	92.2	8.7	109.9	9.1	36.2	30.2	86.7	7.8	106.2	8.5	34.1	32.7	81.6	6.8	103.0	7.9						
2 SGLC 60	46.2	34.2	110.6	13.2	132.5	7.1	43.4	36.7	103.9	12.0	127.7	6.6	40.8	39.6	97.7	11.1	123.6	6.0						
2 SGLC 70	57.5	42.9	137.7	17.5	165.9	5.2	53.9	47.0	129.1	17.0	160.1	4.7	50.6	51.0	121.2	16.6	155.1	4.2						
2 SGLC 80	65.0	51.2	155.6	16.5	188.4	4.5	61.0	54.9	146.1	16.1	181.5	4.1	57.2	59.3	137.0	15.5	175.5	3.7						
2 SGLC 100	84.0	53.0	201.1	14.5	242.0	6.1	78.4	64.5	187.7	13.3	233.7	5.5	73.0	71.0	174.0	12.5	224.7	5.3						
2 SGLC 120	98.2	71.0	235.1	14.9	285.0	8.0	89.6	77.2	214.5	11.6	269.1	7.2	85.9	85.5	205.6	10.5	266.5	6.4						
3 SGLC 60	46.0	32.7	110.1	12.7	131.1	5.8	43.4	35.1	103.9	11.7	126.6	5.4	40.9	38.2	97.9	10.7	122.8	5.0						
3 SGLC 75	57.2	41.3	137.0	16.5	163.3	9.1	53.7	45.2	128.6	14.7	157.8	8.5	50.6	48.9	121.1	13.0	153.0	7.9						
3 SGLC 90	69.2	51.1	165.7	14.0	197.2	7.1	65.1	54.9	155.9	12.4	190.0	6.6	61.2	59.3	146.5	11.0	183.9	6.0						
3 SGLC 105	86.3	64.1	206.6	14.0	246.7	5.2	80.7	70.2	193.2	12.3	238.0	4.7	75.8	76.2	181.5	10.8	230.4	4.2						
3 SGLC 120	95.7	75.2	229.1	18.0	275.4	4.5	89.8	81.4	215.0	16.3	265.8	4.1	83.8	88.3	200.6	14.4	256.4	3.7						
3 SGLC 150	124.7	88.5	298.5	18.3	360.8	6.1	116.2	97.2	278.2	15.7	347.1	5.5	108.1	106.5	258.8	13.8	334.6	5.3						
3 SGLC 180	145.8	106.8	349.0	19.0	424.0	8.0	134.6	115.8	322.3	15.5	403.0	7.2	128.0	127.5	306.4	13.2	397.2	6.4						
4 SGLC 80	60.9	43.3	145.8	15.0	172.3	4.5	57.3	46.7	137.2	13.3	166.2	4.1	54.0	50.6	129.3	11.9	161.1	3.7						
4 SGLC 100	76.9	55.1	184.1	8.5	218.0	6.1	72.3	60.3	173.1	7.8	210.7	5.5	68.1	65.2	163.0	6.9	204.3	5.3						
4 SGLC 120	92.3	66.9	221.0	9.5	262.1	8	86.5	73.1	207.1	8.4	252.8	7.2	81.4	78.9	194.9	7.4	244.7	6.4						
4 SGLC 140	115.0	85.4	275.3	17.8	328.8	6.4	108.3	93.1	258.6	16.9	317.7	5.8	101.0	101.6	241.8	15.8	307.0	5.3						
4 SGLC 160	127.4	100.5	305.0	15.3	367.2	8	119.9	108.4	287.1	13.4	355.0	7.5	111.8	117.7	267.7	11.7	342.3	6.9						
4 SGLC 200	165.8	117.7	397.0	16.1	479.8	9.7	154.8	130.0	370.6	14.0	462.7	9.0	144.0	141.6	344.7	11.5	445.6	8.6						
4 SGLC 240	194.3	142.0	465.1	16.8	565.0	9.8	179.0	154.5	428.6	13.4	537.2	9.1	171.0	171.2	409.4	11.8	529.2	8.7						

QE - Actual evaporator cooling capacity. [1 tons of ref.=12000 BTU/HR]

WC - Compressor motor power input at 380V, 3Ø, 50 Hz

PD - Water pressure drop [Ft. WG]

W.F.D. - Water flow data.



## ....Liquid Chiller

### PERFORMANCE DATA ; FOR AIR COOLED CHILLERS Evaporator leaving water temp.=42(°F)

Models	Condensing Temperature (°F)																			
	115				120				125				135							
	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]				
	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD
1 SGLC 5	4.3	4.8	61.2	10.2	1.4	4.1	5.0	59.1	9.8	1.2	4.0	5.2	57.0	9.6	1.2	3.6	5.6	53.4	8.6	1.0
1 SGLC 10	8.4	8.9	128.5	20.1	2.2	8.1	9.1	125.4	19.4	2.1	7.8	9.4	122.4	18.7	2.0	7.1	10.0	116.5	17.0	1.7
1 SGLC 15	11.3	11.7	172.0	27.1	2.2	10.9	12.1	168.5	26.1	2.0	10.5	14.5	165.0	25.1	1.7	9.7	13.3	158.0	23.2	1.4
1 SGLC 20	14.1	13.5	210.7	33.8	2.8	13.6	14.1	206.7	32.6	2.6	13.1	14.6	202.7	31.4	2.4	12.2	15.5	194.6	29.2	2.1
1 SGLC 25	17.5	17.3	263.5	41.9	3.2	16.9	18.0	258.6	40.5	3.0	16.3	18.6	253.5	39.0	2.8	15.2	19.7	243.2	36.4	2.5
1 SGLC 30	20.8	20.9	314.8	49.8	4.2	20.1	21.7	308.4	48.1	3.9	19.4	22.4	301.8	46.5	3.6	17.9	23.6	288.5	42.9	3.1
1 SGLC 35	25.9	27.0	394.7	62.0	6.6	25.0	28.0	387.1	59.9	6.1	24.1	29.0	379.5	57.7	5.7	22.4	30.9	364.3	53.6	5.1
1 SGLC 40	29.4	31.5	450.8	70.4	4.3	28.4	32.6	441.8	68.0	4.0	27.3	33.7	432.7	65.4	3.7	25.2	35.8	414.5	60.3	3.2
1 SGLC 50	37.8	36.9	570.1	90.5	8.2	36.4	38.2	558.7	87.2	8.0	35.0	39.5	546.1	83.8	7.8	32.3	41.9	521.4	77.3	7.4
1 SGLC 60	43.7	45.5	669.7	104.6	5.8	42.0	44.1	654.6	100.6	5.6	40.3	48.6	638.9	96.5	5.4	36.5	50.5	598.8	87.4	5.0
2 SGLC 30	22.7	23.5	345.7	54.4	4.4	22.0	24.3	338.8	52.7	4.2	21.1	25.1	331.8	50.5	4.0	19.6	26.7	317.7	46.9	3.7
2 SGLC 40	27.9	27.0	417.5	66.8	3.8	26.9	28.0	409.6	64.4	3.5	26.0	29.0	401.6	62.3	3.2	24.2	30.8	385.6	57.9	2.7
2 SGLC 50	34.9	34.6	525.3	83.6	7.0	33.7	35.9	515.4	80.7	6.7	32.5	37.1	505.3	77.8	6.4	30.2	39.3	484.9	72.3	5.9
2 SGLC 60	41.6	41.9	629.3	99.6	10.4	40.2	43.3	616.5	96.3	11.0	38.7	44.7	603.5	92.7	10.6	35.8	47.3	576.9	85.7	10.0
2 SGLC 70	51.9	54.0	790.5	124.3	16.8	50.1	56.1	775.4	120.0	16.4	48.3	58.0	760.1	115.6	16.0	44.7	61.7	729.7	107.0	15.3
2 SGLC 80	58.1	62.8	893.3	139.1	15.8	56.0	65.0	875.4	134.1	15.4	53.9	67.2	857.4	129.1	15.0	49.9	71.2	821.3	119.5	14.2
2 SGLC 100	75.0	74.3	1139.0	179.6	13.3	72.4	77.0	1117.0	173.3	12.8	69.6	79.6	1091.0	166.6	12.3	64.6	84.5	1046.0	154.7	11.4
2 SGLC 120	87.0	90.9	1336.0	208.3	12.0	83.7	94.1	1306.0	200.4	11.4	80.1	97.0	1272.0	191.8	10.8	72.7	102.0	1199.0	174.1	9.7
3 SGLC 60	41.7	40.5	626.4	99.8	11.1	40.3	42.0	614.6	96.5	10.6	38.9	43.5	602.7	93.1	10.1	36.2	46.2	578.8	86.7	8.8
3 SGLC 75	51.6	51.8	780.3	123.5	13.6	49.9	53.6	765.7	119.5	12.7	48.1	55.4	750.7	115.2	12.0	44.7	58.8	720.5	107.0	10.4
3 SGLC 90	61.8	62.6	936.1	148.0	11.1	59.6	64.8	917.1	142.7	10.4	57.4	66.9	897.7	137.4	9.7	53.1	70.7	858.2	127.1	8.5
3 SGLC 105	76.8	80.8	1174.0	183.9	11.1	74.2	83.8	1152.0	177.7	10.3	71.5	86.7	1129.0	171.2	9.5	66.3	92.2	1084.0	158.7	8.0
3 SGLC 120	84.4	93.2	1305.0	202.1	14.6	81.3	96.5	1279.0	194.7	13.7	78.3	99.6	1252.0	187.5	12.8	72.3	105.4	1199.0	173.1	11.0
3 SGLC 150	112.4	112.6	1710.0	269.1	13.4	108.2	116.6	1672.0	259.1	12.6	104.0	120.5	1636.0	249.0	11.8	96.9	127.7	1574.0	232.0	11.1
3 SGLC 180	130.1	135.4	1996.0	311.5	14.0	125.0	140.1	1951.0	299.3	13.6	120.0	145.0	1905.0	287.3	12.0	108.5	151.5	1788.0	259.8	10.0
4 SGLC 80	54.4	53.7	816.6	130.2	12.1	52.7	55.7	801.5	126.2	11.4	50.9	57.6	786.1	121.9	10.7	47.3	61.2	755.2	113.3	9.2
4 SGLC 100	68.9	69.0	1036.0	165.0	7.1	66.6	71.6	1017.0	159.5	6.6	64.3	74.0	996.9	154.0	6.1	59.8	78.4	957.1	143.2	5.2
4 SGLC 120	82.1	83.4	1238.0	196.6	7.5	79.2	86.3	1213.0	189.6	6.9	76.4	89.1	1188.0	182.9	6.3	70.7	94.1	1136.0	169.3	5.4
4 SGLC 140	102.4	108.0	1556.0	245.2	16.0	98.8	111.7	1527.0	236.6	15.4	95.3	115.6	1497.0	228.2	14.8	88.4	122.8	1438.0	211.7	13.7
4 SGLC 160	112.6	124.3	1733.0	269.6	11.9	108.6	128.7	1698.0	260.0	11.0	104.5	132.9	1664.0	250.2	10.1	96.7	140.6	1594.0	231.5	8.4
4 SGLC 200	149.2	150.5	2275.0	357.2	12.7	144.5	155.9	2236.0	346.0	12.2	139.0	161.1	2188.0	332.8	11.7	128.2	170.8	2081.0	306.1	10.7
4 SGLC 240	173.0	181.0	2652.0	414.2	14.4	167.0	187.4	2608.0	399.8	13.1	162.2	192.4	2568.0	389.3	12.0	145.0	202.6	2392.0	347.2	10.0

QE - Actual evaporator cooling capacity. [1 ton of ref.=12000 BTU/HR]

WC - Compressor motor power input at 380V, 3Ø, 50 Hz

PD - Water pressure drop [Ft. WG]

QC - Condenser total heat rejection [MBH=1000BTU/HR]

WF D - Water flow data



## ....Liquid Chiller

### PERFORMANCE DATA ; FOR WATER COOLED CHILLERS

Evaporator leaving water temp.=44(°F)

Models	Condenser Leaving Water Temperature (°F)																							
	85						95						105											
	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	Tons	KW	GPM	PD	Tons	KW	GPM	PD	Tons	KW	GPM	PD
	Tons	KW	GPM	PD	GPM	PD	Tons	KW	GPM	PD	GPM	PD	Tons	KW	GPM	PD	Tons	KW	GPM	PD	Tons	KW	GPM	PD
1 SGLC 5	5.3	4.4	12.7	1.9	15.6	2.6	4.9	4.5	11.7	1.7	15.0	2.7	4.6	4.9	11.0	1.5	13.9	2.5						
1 SGLC 10	9.9	7.3	23.7	2.9	28.4	6.1	9.3	7.9	22.2	2.6	27.3	5.7	8.6	8.5	20.6	2.3	26.2	5.5						
1 SGLC 15	13.2	9.5	31.6	3.6	37.6	5.2	12.4	10.4	29.6	3.2	36.4	4.8	11.6	11.2	27.8	2.2	35.2	4.5						
1 SGLC 20	16.0	10.9	38.4	3.5	45.4	6.1	15.1	11.9	36.2	3.0	44.0	5.7	14.2	12.8	34.0	2.6	42.5	5.3						
1 SGLC 25	20.1	13.9	48.2	4.2	57.1	9.6	19.0	15.1	45.5	3.8	55.3	9.0	17.9	16.5	42.7	3.4	53.6	8.5						
1 SGLC 30	24.1	17.2	57.6	5.7	68.7	7.4	22.7	18.7	54.2	5.0	66.4	6.9	21.3	20.0	51.0	4.4	64.1	6.4						
1 SGLC 35	29.9	21.5	71.5	9.1	85.7	5.5	28.2	23.5	67.4	8.3	83.0	5.0	26.3	25.7	63.0	7.3	80.2	4.8						
1 SGLC 40	34.2	25.8	82.0	6.0	98.6	5.0	32.1	27.8	76.9	5.1	95.0	4.6	30.2	30.1	72.3	4.4	91.9	4.3						
1 SGLC 50	43.2	29.6	103.6	10.1	124.7	7.0	41.0	32.5	98.2	9.5	120.6	6.4	38.2	36.0	91.4	9.0	117.1	6.0						
1 SGLC 60	51.5	36.0	123.3	8.5	148.6	8.6	48.5	39.8	116.1	7.5	143.9	8.2	44.8	43.4	107.2	6.5	137.2	7.9						
2 SGLC 30	26.4	19.0	63.2	6.6	75.4	5.2	24.8	20.7	59.4	5.6	72.8	4.8	23.2	22.5	55.6	4.8	70.4	4.5						
2 SGLC 40	32.0	21.9	76.6	6.1	90.5	6.0	30.1	23.8	72.1	5.1	87.6	5.6	28.3	25.7	67.9	4.4	84.7	5.2						
2 SGLC 50	40.0	27.7	95.8	9.0	113.5	9.4	37.7	30.2	90.3	8.0	109.9	8.8	35.4	33.0	84.8	7.0	106.4	8.3						
2 SGLC 60	48.2	34.4	115.4	13.8	137.4	7.4	45.3	36.5	108.5	12.6	132.8	6.9	42.6	40.1	102.1	11.6	128.3	6.4						
2 SGLC 70	59.7	43.1	142.9	18.0	171.2	5.5	56.3	46.9	134.8	17.4	165.8	5.0	52.6	51.4	125.9	16.7	160.1	4.8						
2 SGLC 80	67.1	51.5	160.7	17.0	193.5	4.8	62.9	55.3	150.6	16.6	186.5	4.4	59.0	59.9	141.3	16.0	180.4	4.1						
2 SGLC 100	86.5	59.2	207.0	15.2	248.0	7.0	81.8	64.9	195.8	13.8	241.2	6.4	76.3	71.6	182.6	19.5	233.7	6.3						
2 SGLC 120	102.6	79.3	245.6	14.5	296.5	8.6	96.0	79.8	229.8	13.0	286.2	8.2	89.6	86.7	214.5	11.5	275.3	7.9						
3 SGLC 60	48.0	32.8	114.9	13.1	135.8	6.0	45.3	35.7	108.5	12.1	131.7	5.6	42.7	38.4	102.2	11.0	127.3	5.2						
3 SGLC 75	59.6	41.5	142.7	17.1	169.3	9.4	56.3	45.2	134.8	15.5	164.1	8.8	52.8	49.4	126.4	13.9	158.7	8.3						
3 SGLC 90	72.0	51.4	172.4	14.5	203.9	7.4	67.7	55.2	162.1	12.9	196.7	6.9	63.7	59.9	152.5	11.5	190.3	6.4						
3 SGLC 105	89.5	64.3	214.3	14.5	254.7	5.5	84.0	70.2	201.6	13.0	246.4	5.0	78.7	76.9	188.4	11.6	237.9	4.8						
3 SGLC 120	100.0	75.7	239.4	18.7	285.7	4.8	94.9	82.0	227.2	17.1	278.1	4.4	87.8	89.4	210.2	14.8	266.4	4.1						
3 SGLC 150	129.0	89.0	308.8	19.0	371.5	7.0	121.8	97.6	291.6	17.5	360.2	6.4	113.6	107.5	272.0	15.8	348.4	6.0						
3 SGLC 180	153.5	107.4	367.5	19.8	443.1	8.6	149.0	119.8	356.7	18.5	441.2	8.2	133.5	130.0	319.6	15.0	412.2	7.9						
4 SGLC 80	63.7	43.5	152.5	16.2	179.2	4.8	60.0	47.0	143.7	14.4	172.9	4.4	56.6	51.2	135.5	12.9	167.6	4.1						
4 SGLC 100	80.2	55.4	192.0	9.3	226.0	7.0	75.8	60.3	181.5	8.6	219.0	6.4	71.2	65.9	170.5	7.7	211.9	6.0						
4 SGLC 120	96.1	68.5	230.1	10.3	272.1	8.6	90.9	73.2	217.6	9.4	263.2	8.2	85.0	79.9	203.5	8.2	254.0	7.9						
4 SGLC 140	119.4	85.8	285.9	18.5	339.5	6.7	112.4	93.6	269.1	17.6	328.4	6.2	105.0	102.6	251.4	16.4	317.2	5.6						
4 SGLC 160	133.2	101.2	318.9	16.6	381.4	8.2	125.5	109.5	300.5	14.7	368.9	7.6	117.1	119.2	280.4	12.9	355.8	7.1						
4 SGLC 200	171.5	118.5	410.6	16.7	493.3	10.4	162.0	130.0	387.8	15.2	479.8	9.8	151.2	143.5	362.0	13.5	442.0	8.5						
4 SGLC 240	204.0	144.5	488.4	17.5	590.0	10.8	196.0	159.8	457.3	15.5	570.0	10.0	177.5	173.5	425.0	12.9	548.6	9.3						

QE - Actual evaporator cooling capacity. [1 ton of ref.=12000 BTU/HR]

WC - Compressor motor power input at 380V, 3Ø, 50 Hz

PD - Water pressure drop [Ft. WG]

WF D - Water flow data



## ....Liquid Chiller

### PERFORMANCE FOR DATA ; FOR AIR COOLED CHILLERS Evaporator leaving water temp.=44(°F)

Models	Condensing Temperature (°F)																			
	115					120					125					135				
	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]		QE	WC	QC	Evap. W.F.D. [ΔT=10°F]		QE	WC	QC	Evap. W.F.D. [ΔT=10°F]		QE	WC	QC	Evap. W.F.D. [ΔT=10°F]	
	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD
1 SGLC 5	4.4	4.9	62.2	10.5	1.5	4.3	5.1	60.0	10.2	1.3	4.2	5.2	59.0	10.0	1.2	3.7	5.7	54.9	8.9	1.1
1 SGLC 10	8.6	8.9	131.9	20.6	2.3	8.3	9.3	128.8	19.9	2.2	7.9	9.6	125.7	18.9	2.1	7.3	10.1	119.8	17.5	1.8
1 SGLC 15	11.7	11.9	178.2	28.0	2.2	11.3	12.4	174.7	27.1	2.0	10.9	12.8	171.2	26.1	1.7	10.1	13.6	164.1	24.2	1.4
1 SGLC 20	14.3	13.6	215.5	34.2	2.6	13.9	14.2	211.5	33.3	2.4	13.4	14.7	207.4	32.1	2.2	12.5	15.7	199.3	29.9	2.0
1 SGLC 25	18.0	17.5	271.6	43.1	3.4	17.4	18.2	266.5	41.7	3.2	16.8	18.8	261.4	40.3	3.0	15.6	20.0	250.9	37.4	2.6
1 SGLC 30	21.5	21.2	324.6	51.5	4.5	20.7	22.0	318.2	49.6	4.2	19.9	22.7	311.5	47.7	4.0	18.4	24.0	298.0	44.1	3.5
1 SGLC 35	26.6	27.3	406.3	63.7	7.4	25.7	28.4	398.7	61.5	6.9	24.8	29.4	390.9	59.4	6.4	23.0	31.3	375.5	55.1	5.8
1 SGLC 40	30.3	32.9	389.7	72.5	4.4	29.2	33.1	456.4	69.9	4.1	28.1	34.2	447.2	67.3	3.8	26.0	36.4	428.8	62.3	3.1
1 SGLC 50	39.0	37.4	587.4	93.4	8.9	37.6	38.8	574.6	90.9	8.6	36.2	40.1	561.7	86.7	8.3	33.4	42.6	536.3	80.0	7.8
1 SGLC 60	45.3	46.1	690.6	108.9	6.7	43.6	47.8	675.5	104.4	6.2	41.8	49.3	658.7	100.1	5.8	37.9	51.8	620.2	90.8	5.0
2 SGLC 30	23.4	23.9	357.2	56.0	5.0	22.6	24.7	350.2	54.1	4.7	21.8	25.6	343.2	52.2	4.4	20.2	27.2	329.0	48.4	3.9
2 SGLC 40	28.6	27.3	429.7	68.5	4.5	27.6	28.3	421.8	66.1	4.2	26.7	29.4	413.7	63.9	3.9	24.8	31.3	397.5	59.4	3.3
2 SGLC 50	35.7	35.0	539.6	85.5	7.1	34.5	36.3	529.5	82.6	6.8	33.3	37.6	519.3	79.7	6.5	30.9	39.9	498.5	74.0	5.9
2 SGLC 60	42.8	42.4	649.3	102.5	11.7	41.3	44.0	636.4	98.9	11.2	39.8	45.4	623.1	95.3	10.7	36.8	48.1	596.1	88.1	9.7
2 SGLC 70	52.6	54.6	812.0	125.9	16.7	50.7	56.7	797.0	121.4	16.2	48.9	58.8	781.9	117.1	15.7	45.4	62.6	751.6	108.7	15.0
2 SGLC 80	59.2	63.4	913.2	141.7	16.1	57.1	65.7	895.2	136.7	15.7	54.9	67.9	876.9	131.4	15.2	50.8	72.1	840.6	121.6	14.2
2 SGLC 100	78.6	75.0	1182.0	188.2	14.0	75.7	77.8	1157.0	181.2	13.5	72.8	80.5	1131.0	174.3	13.0	67.2	85.5	1080.0	160.9	12.0
2 SGLC 120	89.9	92.1	1375.0	215.2	13.1	86.5	95.4	1345.0	207.1	12.5	82.9	98.5	1311.0	198.5	12.0	75.3	103.4	1236.0	180.3	11.0
3 SGLC 60	42.9	40.9	645.4	102.7	11.1	41.5	42.5	633.5	99.4	10.6	40.0	44.1	621.4	95.8	10.0	37.3	47	597.2	89.3	8.9
3 SGLC 75	53.1	52.4	805.0	127.1	14.0	51.3	54.4	789.8	122.8	13.7	49.5	56.2	774.4	118.5	13.4	46.0	59.7	743.0	110.1	10.8
3 SGLC 90	63.9	63.4	963.1	153.0	11.6	61.6	65.7	943.6	147.5	11.0	59.4	67.8	923.6	142.2	10.4	54.9	71.8	883.0	131.4	9.2
3 SGLC 105	79.3	81.7	1206.0	189.9	11.8	76.5	85.2	1183.0	183.2	11.0	73.8	87.8	1160.0	176.7	10.2	68.4	93.5	1113.0	163.8	8.7
3 SGLC 120	87.8	94.6	1349.0	210.2	14.8	84.6	98.0	1322.0	202.6	13.8	81.5	101.3	1295.0	195.1	12.8	75.3	107.4	1241.0	180.3	10.9
3 SGLC 150	117.9	112.5	1775.0	282.3	15.0	113.5	116.7	1737.0	271.7	14.2	109.2	120.7	1698.0	261.5	13.4	100.8	128.3	1622.0	241.3	11.8
3 SGLC 180	135.0	138.2	2064.0	323.2	15.3	129.9	143.2	2019.0	311.0	14.1	124.5	147.8	1969.0	298.1	13.0	112.8	155.2	1854.0	270.1	11.0
4 SGLC 80	56.7	54.4	850.0	135.8	13.0	54.8	56.5	834.2	131.2	12.2	52.9	58.5	818.1	126.7	11.4	49.3	62.3	785.8	118.0	9.9
4 SGLC 100	71.5	69.9	1075.0	171.2	7.8	69.1	72.5	1055.0	165.4	7.3	66.7	75.0	1034.0	159.7	6.8	62.0	79.7	992.0	148.0	5.8
4 SGLC 120	85.2	84.5	1285.0	204.0	8.3	82.2	87.6	1259.0	196.8	7.7	79.2	90.5	1233.0	189.6	7.1	73.3	95.8	1179.0	175.5	5.9
4 SGLC 140	105.6	108.9	1607.0	252.8	16.5	102.0	113.1	1577.0	244.2	15.9	98.3	117.1	1546.0	234.4	15.3	91.1	124.7	1484.0	218.1	14.1
4 SGLC 160	117.1	126.1	1801.0	280.4	12.9	112.9	130.7	1765.0	270.3	12.0	108.7	135.1	1729.0	260.3	11.1	100.5	143.3	1657	240.6	9.3
4 SGLC 200	156.4	149.8	2358.0	374.5	15.7	150.6	155.4	2307.0	360.6	15.2	144.9	160.7	2256.0	346.9	14.7	134.0	170.5	2157.0	320.8	13.7
4 SGLC 240	179.4	184.1	2746.0	429.5	14.1	172.6	190.8	2686.0	413.2	12.8	165.4	196.8	2619.0	396.0	11.5	149.9	206.8	2466.0	358.9	9.0

QE - Actual evaporator cooling capacity. [1 ton of ref.=12000 BTU/HR]

WC - Compressor motor power input at 380V, 3Ø, 50 Hz

PD - Water pressure drop [Ft. WG]

QC - Condenser total heat rejection [MBH=1000BTU/HR]

W.F.D. - Water flow data.



## ....Liquid Chiller

### PERFORMANCE DATA ; FOR WATER COOLED CHILLERS Evaporator leaving water temp.=45(°F)

Models	Condenser Leaving Water Temperature (°F)																								
	85								95								105								
	QE		WC		Evap. W.F.D. [ΔT=1°F]		Cond. W.F.D. [ΔT=1°F]		QE		WC		Evap. W.F.D. [ΔT=1°F]		Cond. W.F.D. [ΔT=1°F]		QE		WC		Evap. W.F.D. [ΔT=1°F]		Cond. W.F.D. [ΔT=1°F]		
	Tons	KW	GPM	PD	GPM	PD	GPM	PD	Tons	KW	GPM	PD	GPM	PD	GPM	PD	Tons	KW	GPM	PD	GPM	PD	GPM	PD	
1 SGLC 5	5.4	4.1	12.9	2.0	15.8	2.8	5.0	4.6	12.0	1.8	15.3	2.8	4.7	5.0	11.2	1.6	14.9	2.7							
1 SGLC 10	10.1	7.3	24.2	3.0	28.9	6.3	9.5	7.9	22.6	2.7	27.8	5.9	8.9	8.5	21.2	2.4	26.9	5.5							
1 SGLC 15	13.5	9.5	32.3	3.8	38.5	5.4	12.7	10.4	30.4	3.3	37.2	5.1	11.9	11.3	28.5	2.4	36.0	4.7							
1 SGLC 20	16.3	11.0	39.1	3.6	46.2	6.3	15.4	12.0	36.9	3.1	44.8	5.9	14.5	12.9	34.8	2.6	43.3	5.5							
1 SGLC 25	20.5	13.9	49.1	4.3	58	9.9	19.3	15.2	46.3	3.9	56.2	9.3	18.2	16.6	43.5	3.4	54.9	8.7							
1 SGLC 30	24.6	17.2	58.9	6	70.1	7.7	23.2	18.7	55.6	5.4	67.8	7.2	21.8	20.1	52.2	4.8	65.4	6.8							
1 SGLC 35	30.4	21.5	72.9	10.0	87.0	5.5	28.9	23.5	69.2	8.8	84.9	5.4	27.0	25.8	64.7	7.6	82.0	5.1							
1 SGLC 40	35.0	25.9	83.8	6.3	100.5	5.4	32.9	27.9	78.7	5.6	96.9	5.0	30.9	30.3	73.9	5.0	93.8	4.7							
1 SGLC 50	44.3	29.7	106.0	10.5	127.0	7.8	42.4	32.8	101.5	10.0	124.2	6.8	39.5	35.9	94.6	9.5	113.6	6.0							
1 SGLC 60	53.1	36.2	271.1	9.5	152.6	9.6	50.2	40.0	120.2	8.8	142.5	9.2	46.2	43.7	110.6	7.0	141.3	8.1							
2 SGLC 30	27.0	19.0	64.6	6.9	77.0	5.4	25.4	10.4	60.8	6.0	74.4	5.1	23.8	22.7	57.0	5.3	71.9	4.7							
2 SGLC 40	32.6	21.9	78.1	6.8	92.2	6.3	30.8	23.9	73.8	5.8	89.4	5.9	29.0	25.8	69.5	4.9	86.4	5.5							
2 SGLC 50	40.8	27.8	97.8	9.2	115.6	9.9	38.5	30.4	92.3	8.7	112.0	9.3	36.2	33.2	86.7	8.0	108.5	8.7							
2 SGLC 60	49.1	34.5	117.5	14.2	139.6	7.6	46.3	37.5	110.8	12.8	135.1	7.1	43.5	40.2	104.1	11.6	130.4	6.7							
2 SGLC 70	60.9	43.2	145.6	18.7	174.1	5.5	57.3	47.0	137.3	18.1	168.4	5.4	53.6	51.6	128.3	17.3	162.7	5.1							
2 SGLC 80	68.6	51.7	164.3	17.5	197.4	5.2	64.4	55.6	154.3	17.1	190.3	4.8	60.5	60.2	144.8	16.6	184.1	4.5							
2 SGLC 100	87.7	59.5	210.0	16.0	251.9	7.8	83.5	65.2	200.0	14.7	246.2	6.8	78.0	76.8	186.7	13.2	239.2	6.0							
2 SGLC 120	105.5	72.8	252.6	15.8	303.9	9.6	99.4	80.0	238.0	14.0	294.7	9.2	91.7	87.9	219.5	12.5	282.2	8.1							
3 SGLC 60	48.9	32.8	117.0	13.4	138.0	6.3	46.2	35.8	110.6	12.1	133.8	5.9	43.5	38.7	104.1	10.6	129.3	5.5							
3 SGLC 75	60.9	41.6	145.9	18.0	172.6	9.9	57.6	45.4	138.0	16.2	167.3	9.3	54.1	49.7	129.5	14.5	161.9	8.7							
3 SGLC 90	73.4	51.5	175.7	15.0	207.3	7.6	69	55.6	165.2	13.4	200.0	7.1	65.0	60.2	155.6	12.0	193.6	6.7							
3 SGLC 105	91.2	64.4	218.3	15.0	258.7	5.5	85.8	70.4	205.5	13.4	250.4	5.4	80.2	77.3	192.1	12.0	241.8	5.1							
3 SGLC 120	102.0	76.0	244.2	19.3	290.6	5.2	96.1	82.3	230.0	17.5	281.2	4.8	89.6	89.9	214.6	15.5	271.2	4.5							
3 SGLC 150	131.0	89.0	313.6	19.5	376.3	7.8	125	98.0	299.2	18.0	368.9	6.8	116.6	108	279.1	16.0	356.3	6.0							
3 SGLC 180	157.6	108.7	377.3	20.5	453.9	9.6	148.7	120.0	356.0	19.2	441.0	9.2	137.0	131.0	328.0	15.8	421.4	8.1							
4 SGLC 80	65.2	43.7	156.0	16.8	182.5	5.2	61.4	47.2	147.1	15.0	176.3	4.8	57.9	51.4	138.7	13.5	171.0	4.5							
4 SGLC 100	82.1	55.5	196.6	9.6	230.5	7.8	77.6	60.5	185.6	8.9	223.5	6.8	72.8	66.3	174.5	7.9	216.2	6.0							
4 SGLC 120	98.0	68.7	234.5	10.4	276.7	9.6	92.3	74.0	220.9	9.4	267.0	9.2	86.7	80.3	207.7	8.3	258.3	8.1							
4 SGLC 140	121.6	85.9	291.2	18.9	344.9	7.0	113.8	94.7	272.5	17.9	332.6	6.5	107.0	103.0	256.2	16.8	322.3	6.0							
4 SGLC 160	136.5	101.6	326.7	17.3	389.1	8.4	128.5	110.1	307.7	15.3	376.5	7.8	120.0	120.0	287.4	13.5	363.3	7.3							
4 SGLC 200	174.5	119.0	417.8	17.5	501.6	10.4	166.5	130.2	398.6	16.0	491.0	10.2	155.3	144.1	371.8	13.3	474.6	9.6							
4 SGLC 240	210.2	144.0	503.2	19.2	604.7	11.2	198.0	160.0	474.0	17.0	587.6	10.7	182.7	174.8	437.4	14.0	562.0	9.7							

QE - Actual evaporator cooling capacity. [1 ton of ref.=12000 BTU/HR]

WC - Compressor motor power input at 380V, 3Ø, 50 Hz

PD - Water pressure drop [Ft. WG]

W.F.D. - Water flow data.

## PERFORMANCE DATA ; FOR AIR COOLED CHILLERS

Evaporator leaving water temp.=45(°F)

Models	Condensing Temperature (°F)																			
	115				120				125				135							
	QE	WC	QC	Evap. W.F.D. [ΔT=1°F]	QE	WC	QC	Evap. W.F.D. [ΔT=1°F]	QE	WC	QC	Evap. W.F.D. [ΔT=1°F]	QE	WC	QC	Evap. W.F.D. [ΔT=1°F]				
	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD
1 SGLC 5	4.5	4.9	63.4	10.7	1.4	4.4	5.1	61.0	10.5	1.3	4.3	5.3	60.0	10.2	1.3	3.8	5.7	55.8	9.1	1.2
1 SGLC 10	8.9	9.3	135.2	21.3	2.4	8.5	9.4	131.9	20.4	2.2	8.2	9.6	128.8	19.6	2.1	7.5	10.2	122.6	18.0	1.8
1 SGLC 15	12.0	12.0	182.3	28.7	2.4	11.6	12.5	178.7	27.8	2.2	11.2	12.9	134.1	26.8	2.0	10.3	13.7	167.8	24.7	1.6
1 SGLC 20	14.7	13.7	219.6	35.2	2.7	14.2	14.3	215.5	34.0	2.5	13.7	14.8	211.3	32.8	2.3	12.7	15.8	203.0	30.4	2.0
1 SGLC 25	18.3	17.6	275.9	43.8	3.5	17.7	18.3	270.7	42.4	3.2	17.1	19.0	265.4	41.0	2.9	15.9	20.2	254.6	38.1	2.4
1 SGLC 30	22.0	21.4	331.2	52.7	5.0	21.2	22.1	324.5	50.8	4.7	20.4	22.9	317.6	48.8	4.4	18.9	24.3	303.7	45.3	3.9
1 SGLC 35	27.1	27.5	412.7	64.7	7.7	26.2	28.5	404.8	62.7	7.2	25.2	29.6	396.8	60.3	6.7	23.4	31.5	380.9	56.0	6.0
1 SGLC 40	31.0	32.1	474.7	74.2	5.1	29.9	33.3	465.4	71.6	4.8	29.0	34.3	457.6	69.4	4.5	26.7	36.7	437.0	63.9	4.0
1 SGLC 50	40.2	32.7	682.2	96.3	9.2	38.7	39.2	589.2	92.7	8.9	37.2	40.6	576.1	89.1	8.6	34.4	43.1	549.8	82.4	8.0
1 SGLC 60	46.4	46.4	704.8	111.1	7.1	44.7	48.2	689.8	107.0	6.7	42.6	46.7	673.1	102.7	6.3	39.0	52.3	634.6	93.4	5.5
2 SGLC 30	24.0	24.2	364.3	57.5	5.4	23.2	25.0	357.1	55.6	5.1	22.3	25.8	349.9	53.4	4.8	20.7	27.5	335.4	49.6	4.3
2 SGLC 40	29.3	27.4	438.1	70.2	5.1	28.3	28.5	429.9	67.8	4.8	27.3	29.6	421.6	65.4	4.5	25.4	31.5	404.9	60.8	3.8
2 SGLC 50	36.5	35.2	550.2	87.4	8.1	35.3	36.6	539.9	84.5	7.5	34.1	37.9	529.3	81.6	7.1	31.6	40.3	507.8	75.7	6.2
2 SGLC 60	43.7	42.7	660.2	104.6	11.7	42.2	44.2	646.9	101.0	11.2	40.6	45.7	633.3	97.2	10.7	37.6	48.5	605.5	90.0	9.7
2 SGLC 70	54.1	54.9	824.4	129.5	17.7	52.2	57.0	808.7	125.0	17.2	50.3	59.1	792.8	120.4	16.7	46.6	63.0	761.1	111.6	15.9
2 SGLC 80	60.7	63.8	931.9	145.3	16.7	58.5	66.2	913.4	140.1	16.3	56.3	68.5	894.8	134.8	16.0	52.1	72.8	857.6	124.7	15.2
2 SGLC 100	80.3	75.5	1206.0	192.3	14.0	77.4	78.4	1180.0	185.3	13.5	74.5	81.1	1154.0	178.4	13.0	68.8	86.3	1102.0	164.7	12.0
2 SGLC 120	92.5	92.8	1408.0	221.5	13.7	89.1	96.3	1378.0	213.3	13.0	85.5	99.4	1345.0	209.7	12.3	77.7	104.6	1268.0	186.0	11.0
3 SGLC 60	43.7	41.1	655.9	104.6	10.7	42.3	42.8	643.7	101.3	10.0	40.8	44.3	631.3	97.7	9.3	38.0	47.3	606.4	91.0	8.0
3 SGLC 75	54.4	52.8	821.1	130.2	14.7	52.6	54.8	805.7	125.9	14.0	50.7	56.7	790.0	121.4	13.3	47.1	60.3	758.1	112.8	12.0
3 SGLC 90	65.2	52.9	979.7	156.1	12.1	62.9	66.1	959.9	150.6	11.3	60.6	68.3	939.7	145.1	10.5	56.1	72.3	898.5	134.3	9.0
3 SGLC 105	80.8	82.1	1226.0	193.5	12.2	78.0	85.3	1202.0	186.8	11.4	75.2	88.4	1179.0	180.0	10.6	69.8	94.2	1132.0	167.1	9.0
3 SGLC 120	89.6	95.2	1373.0	214.5	15.5	86.4	98.6	1345.0	206.9	14.5	83.2	102.0	1318.0	199.2	13.5	77.0	108.3	1263.0	184.4	11.6
3 SGLC 150	120.0	113.2	1804.0	287.3	15.6	115.8	117.5	1765.0	277.3	14.8	111.3	121.6	1726.0	266.5	14.0	102.8	129.2	1648.0	246.1	12.5
3 SGLC 180	137.7	139.0	2100.0	329.7	15.9	132.8	144.1	2056.0	318.0	14.7	127.3	148.8	2006.0	304.8	13.4	115.6	156.5	1891.0	276.8	10.0
4 SGLC 80	58.1	54.7	867.0	139.1	13.5	56.1	56.8	851.0	134.3	12.7	54.2	58.9	834.6	129.8	12.0	50.4	62.8	801.8	120.7	10.4
4 SGLC 100	73.2	70.4	1097.0	175.3	8.0	70.7	73.1	1076.0	169.3	7.5	68.3	75.6	1055.0	163.5	7.0	63.5	80.4	1012.0	152.0	6.0
4 SGLC 120	87.0	85.0	1308.0	208.3	8.4	83.9	88.1	1281.0	200.9	7.8	80.9	91.1	1254.0	193.7	7.2	74.9	96.5	1199.0	179.3	6.0
4 SGLC 140	107.7	109.5	1633.6	257.9	16.9	104.0	113.7	1603.0	249.0	16.3	100.2	117.9	1571.0	239.9	15.7	92.9	125.6	1509.0	222.4	14.5
4 SGLC 160	120.1	127.1	1839.0	287.5	13.5	115.8	131.8	1803.0	277.3	12.6	111.5	136.3	1766.0	267.0	11.7	103.1	144.7	1693.0	246.8	9.9
4 SGLC 200	159.8	150.9	2404.0	382.6	16.0	154.2	156.6	2352.0	369.2	15.5	148.2	162.0	2300.0	354.8	15.0	136.9	172.3	2197.0	327.8	14.0
4 SGLC 240	183.8	185.4	2804.0	440.1	14.6	177.1	192.2	2745.0	424.0	13.3	169.9	198.5	2678.0	406.8	11.9	154.4	208.8	2525.0	369.7	8.9

QE - Actual evaporator cooling capacity. [1 ton of ref.=12000 BTU/HR]

WC - Compressor motor power input at 380V, 3Ø, 50 Hz

PD - Water pressure drop [Ft. WG]

QC - Condenser total heat rejection [MBH=1000BTU/HR]

W.F.D. - Water flow data.



## ....Liquid Chiller

### PERFORMANCE DATA ; FOR WATER COOLED CHILLERS Evaporator leaving water temp.=46 (°F)

Models	Condenser Leaving Water Temperature (°F)																	
	85						95						105					
	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	QE	WC	Evap. W.F.D. [ΔT=10°F]	Cond. W.F.D. [ΔT=10°F]	Tons	KW	GPM	PD	GPM	PD
	Tons	KW	GPM	PD	Tons	KW	GPM	PD	Tons	KW	GPM	PD	Tons	KW	GPM	PD	GPM	PD
1 SGLC 5	5.6	4.2	13.4	2.1	16.4	2.9	5.1	4.5	12.2	2.8	15.4	2.6	4.7	4.8	11.2	1.4	14.7	2.6
1 SGLC 10	10.3	7.3	24.6	3.1	29.4	6.6	9.6	8.0	23.1	2.8	28.3	6.1	9.0	8.6	21.7	2.5	27.3	5.6
1 SGLC 15	18.8	9.6	32.6	3.9	38.7	5.5	12.8	10.4	30.6	3.4	37.5	4.1	12.0	11.4	28.7	2.6	36.1	4.8
1 SGLC 20	16.6	11.0	39.8	3.8	46.8	6.5	15.7	12.0	37.5	3.3	45.4	6.2	14.8	12.5	35.4	2.9	43.9	5.8
1 SGLC 25	20.9	13.9	49.9	4.5	58.9	10.3	19.7	15.2	47.2	4.0	57.1	9.6	18.5	16.7	44.3	3.6	55.3	9.1
1 SGLC 30	25.0	17.3	59.8	6.3	70.9	8.0	23.5	18.8	56.3	5.5	68.6	7.5	22.1	20.3	52.9	4.9	66.2	7.0
1 SGLC 35	31.0	21.6	74.4	11.0	86.7	5.7	28.8	23.7	69.0	10.0	84.1	5.4	26.8	25.9	64.1	9.0	81.1	5.0
1 SGLC 40	35.6	26.0	85.1	6.5	101.7	6.0	33.4	27.9	80.0	5.3	98.1	5.4	31.3	30.5	75.0	4.3	94.9	5.0
1 SGLC 50	46.5	30.5	111.3	11.5	132.8	7.0	43.9	32.8	105.1	10.5	128.4	6.8	40.5	36.5	97.0	9.5	123.0	6.6
1 SGLC 60	54.0	36.5	129.2	10.0	155.0	10.2	51.0	40.4	122.1	8.8	150.8	9.4	47.7	44.2	114.2	7.0	145.7	8.7
2 SGLC 30	27.5	19.2	65.1	7.2	77.4	5.5	25.7	20.8	61.3	6.0	74.9	4.1	23.9	22.8	57.2	5.0	72.2	4.8
2 SGLC 40	33.3	21.9	79.8	7.5	93.7	6.5	31.4	24.0	75.1	6.5	90.8	6.2	29.5	24.9	70.6	5.8	87.7	5.8
2 SGLC 50	41.7	27.8	99.9	9.4	117.8	10.3	39.4	30.5	94.3	8.5	114.2	9.6	37.0	33.3	88.6	7.5	110.6	9.1
2 SGLC 60	49.9	34.6	119.5	14.6	141.8	8.0	47.0	37.7	112.6	13.4	137.2	7.5	44.2	40.5	105.8	12.4	132.4	7.0
2 SGLC 70	62.0	43.2	148.4	19.5	176.6	5.7	58.4	47.2	139.8	19.0	168.2	5.4	54.6	51.9	130.7	18.4	162.2	5.0
2 SGLC 80	69.9	51.8	152.2	18.0	200.6	5.9	65.7	55.8	143.0	17.6	193.5	5.3	61.7	61.6	134.2	17.1	187.2	4.9
2 SGLC 100	92.0	59.5	220.2	17.5	626.0	7.0	86.7	63.6	207.6	18.5	254.2	6.8	80.1	72.5	191.8	14.5	243.6	6.6
2 SGLC 120	106.9	73.2	255.9	16.5	307.5	10.2	100.8	80.8	241.3	14.5	298.7	9.4	94.5	88.6	226.2	11.5	288.6	8.7
3 SGLC 60	49.9	32.9	119.4	13.8	140.4	6.5	47.1	35.9	112.8	12.5	136.0	6.2	44.3	38.9	106.1	11.2	131.5	5.8
3 SGLC 75	62.4	41.8	149.5	18.6	176.0	10.3	59.0	45.7	141.3	16.9	170.7	9.6	55.5	50.0	132.8	15.1	165.3	9.1
3 SGLC 90	74.8	52.5	187.9	15.5	211.0	8.0	70.2	55.8	168.1	13.9	203.6	7.5	66.1	60.5	158.3	12.5	196.5	7.0
3 SGLC 105	93.0	64.8	223.2	15.0	261.0	5.7	86.4	71.1	207.0	13.0	252.3	5.4	80.4	77.6	192.3	11.8	243.3	5.0
3 SGLC 120	104.1	76.3	249.2	19.9	296.0	5.9	97.6	81.9	233.8	17.9	285.7	5.3	91.7	90.4	219.5	16.2	276.5	4.9
3 SGLC 150	137.1	89.4	328.2	20.5	391.3	7.0	126.2	98.8	309.0	18.8	379.5	6.8	119.7	109.0	286.6	16.5	364.4	6.6
3 SGLC 180	159.4	110.0	381.6	22.0	459.1	10.2	150.2	121.6	359.6	19.2	445.9	9.4	141.0	139.5	337.6	16.5	432.7	8.7
4 SGLC 80	66.5	43.7	159.2	17.6	185.8	5.9	62.7	47.3	150.1	15.8	179.4	5.3	59.1	51.7	141.6	14.3	174.0	4.9
4 SGLC 100	83.5	55.6	199.9	9.7	233.8	7.0	78.9	60.7	189.0	9.0	226.7	6.8	74.1	66.6	177.5	8.0	219.4	6.6
4 SGLC 120	100.0	68.1	239.4	11.0	281.0	10.2	94.5	74.0	226.2	10.0	272.2	9.4	88.6	80.7	212.2	8.8	263.1	8.7
4 SGLC 140	124.0	86.4	297.6	19.0	347.0	7.3	115.2	94.8	276.9	17.9	336.4	6.7	107.2	103.5	256.4	16.6	324.4	6.3
4 SGLC 160	138.7	102.0	332.2	18.0	394.9	8.6	130.7	110.6	313.0	16.0	382.1	8.1	122.3	120.6	292.8	14.2	369.0	7.5
4 SGLC 200	182.3	119.0	436.5	19.8	520.4	11.2	171.8	130.2	411.3	16.5	503.9	10.4	159.3	145.0	381.4	14.0	485.0	9.8
4 SGLC 240	212.4	146.3	508.5	20.0	611.6	11.4	200.3	161.5	479.5	17.5	594.2	10.7	188.1	176.2	450.3	14.8	570.0	10.0

QE - Actual evaporator cooling capacity.[1 ton of ref .=12000 BTU/HR]

WC - Compressor motor power input at 380V, 3Ø, 50 Hz

PD - Water pressure drop [Ft. WG]

WFD. - Water flow data.



## ....Liquid Chiller

### PERFORMANCE DATA ; FOR AIR COOLED CHILLERS Evaporator leaving water temp.=46 (°F)

Models	Condensing Temperature (°F)																			
	115				120				125				135							
	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]	QE	WC	QC	Evap. W.F.D. [ΔT=10°F]				
	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD	Tons	KW	MBH	GPM	PD
1 SGLC 5	4.7	4.9	65.0	11.2	1.5	4.5	5.1	62.0	10.8	1.3	4.4	5.3	61.1	10.5	1.2	3.8	5.8	56.6	9.1	1.2
1 SGLC 10	9.1	9.1	137.4	21.8	2.5	8.7	9.4	134.2	20.8	2.3	8.3	9.7	131.0	19.9	2.1	7.7	10.3	124.7	18.4	1.8
1 SGLC 15	12.1	12.1	183.2	29.0	2.5	11.7	12.5	179.6	28.0	2.3	11.2	12.9	176.0	26.8	2.0	10.4	13.8	168.7	24.9	1.5
1 SGLC 20	14.9	13.8	222.7	35.7	3.0	14.4	14.3	218.6	34.5	2.8	13.9	14.9	214.4	33.3	2.6	13.0	15.9	205.9	31.1	2.3
1 SGLC 25	18.7	17.7	280.4	44.8	3.7	18.1	18.4	275.1	43.3	3.4	17.4	19.1	269.8	41.7	3.1	16.2	20.3	258.6	38.8	2.6
1 SGLC 30	22.3	21.5	335.4	53.4	5.1	21.5	22.2	328.7	51.5	4.8	20.7	23.0	321.7	49.6	4.5	19.2	24.4	307.6	46.0	4.0
1 SGLC 35	27.2	27.5	413.4	65.1	9.2	26.2	28.6	405.5	62.7	8.7	25.3	29.6	397.6	60.6	8.3	23.4	31.6	381.6	56.0	7.6
1 SGLC 40	31.4	32.3	480.8	75.4	4.5	30.4	33.5	471.4	72.8	4.2	29.3	34.7	461.9	70.2	3.9	27.1	36.9	442.8	64.9	3.4
1 SGLC 50	40.9	38.0	611.6	97.9	9.4	39.4	39.4	598.4	94.3	9.1	37.9	40.8	585.1	90.7	8.8	35.0	43.4	558.8	83.8	8.2
1 SGLC 60	47.4	46.7	716.9	113.5	7.6	45.6	48.4	701.9	109.2	7.0	43.8	50.1	685.1	104.9	6.4	39.9	52.7	646.7	95.5	5.2
2 SGLC 30	24.5	24.2	370.9	58.7	5.4	23.6	25.1	363.7	56.5	5.0	22.9	25.9	357.7	54.8	4.6	21.1	27.7	341.7	50.5	4.0
2 SGLC 40	30.0	27.6	447.2	71.8	6.0	29.0	28.7	438.9	69.4	5.4	28.0	29.8	430.5	67.0	4.8	26.0	31.8	413.5	62.3	4.0
2 SGLC 50	37.4	35.4	561.2	89.5	7.6	36.1	36.8	550.6	86.4	7.1	34.9	38.2	539.9	83.6	6.7	32.4	40.6	518.0	77.6	5.8
2 SGLC 60	44.5	42.9	671.2	106.5	12.5	43.0	44.5	657.8	103.0	12.0	41.4	46.0	644.0	99.1	11.5	38.3	48.8	615.8	91.7	10.5
2 SGLC 70	55.2	55.2	837.7	132.2	18.8	53.2	57.4	821.8	127.4	18.2	51.3	59.5	805.8	122.8	17.9	47.6	63.5	773.7	114.0	16.7
2 SGLC 80	61.9	64.2	948.0	148.2	17.2	59.7	66.7	929.3	142.9	16.8	57.5	69.0	910.4	137.3	16.4	53.2	73.4	872.8	127.4	15.6
2 SGLC 100	80.6	75.6	1210.0	193.0	14.3	77.7	78.5	1184.0	186.6	13.8	74.8	81.2	1158.0	179.1	12.3	69.1	86.4	1106.0	165.4	11.2
2 SGLC 120	94.1	93.3	1441.0	225.3	14.2	90.7	96.7	1411.0	217.2	13.5	87.0	99.9	1378.0	208.3	12.7	79.2	105.7	1301.0	189.6	12.1
3 SGLC 60	44.6	36.2	550.0	106.8	11.3	43.1	43.0	655.1	103.2	10.7	41.7	44.6	642.5	99.8	10.1	38.8	47.6	617.3	92.9	8.8
3 SGLC 75	55.7	53.1	838.3	133.4	15.2	53.8	55.2	822.6	128.8	14.3	52.0	57.1	806.6	124.6	13.4	48.3	60.8	774.1	115.6	11.8
3 SGLC 90	66.3	64.1	994.5	158.7	12.6	64.0	66.5	974.5	153.2	11.8	61.7	68.7	954.0	147.7	11.0	57.1	72.8	912.3	136.7	9.4
3 SGLC 105	80.4	82.0	1220.0	192.5	10.8	77.6	85.2	1197.0	185.8	10.0	74.9	88.2	1174.0	179.3	9.2	69.4	94.0	1127.0	166.2	7.2
3 SGLC 120	91.7	95.8	1400.0	219.6	16.2	88.5	99.4	1373.0	211.9	15.2	85.2	102.8	1345.0	204.0	14.2	78.9	109.3	1290.0	188.9	12.3
3 SGLC 150	120.6	113.3	1810.0	288.7	16.4	116.1	117.6	1771.0	278.0	15.6	111.8	121.7	1731.0	267.7	14.8	103.2	129.4	1654.0	247.1	13.2
3 SGLC 180	139.6	134.5	2122.0	334.2	16.5	134.4	144.6	2078.0	321.5	15.2	129.0	149.4	2028.0	308.9	13.9	117.3	157.3	1863.0	280.8	10.9
4 SGLC 80	59.3	55.0	882.7	142.0	14.3	57.3	57.2	866.4	137.2	13.5	55.7	58.9	852.8	133.4	12.7	51.6	63.3	816.5	123.5	11.0
4 SGLC 100	74.4	70.7	1113.0	178.1	8.1	72.0	73.4	1092.0	172.4	7.6	69.5	76.1	1071.0	166.4	7.1	64.6	80.9	1028.0	154.7	6.1
4 SGLC 120	88.8	85.6	1332.0	212.6	8.9	85.7	88.7	1305.0	205.2	8.3	82.6	91.8	1278.0	197.8	7.7	76.5	97.3	1222.0	183.2	6.5
4 SGLC 140	107.3	109.3	1629.0	256.9	16.6	103.6	113.6	1598.0	248.0	16.0	99.9	117.7	1567.0	239.2	15.4	92.6	125.4	1505.0	221.7	14.2
4 SGLC 160	122.3	127.8	1864.0	288.0	14.2	118.0	132.6	1832.0	282.5	13.3	113.6	137.2	1795.0	272.0	12.4	105.2	145.7	1721.0	251.9	10.6
4 SGLC 200	161.1	151.2	2420.0	385.7	16.2	155.3	157.0	2368.0	371.8	15.7	149.4	162.5	2365.0	357.7	15.2	138.1	172.8	2214.0	330.6	14.2
4 SGLC 240	185.5	185.8	2824.0	445.2	15.2	178.7	192.7	2765.0	427.8	13.9	171.4	199.0	2698.0	410.4	12.5	155.9	209.5	2545.0	373.3	9.5

QE - Actual evaporator cooling capacity. [1 ton of ref.=12000 BTU/HR]

WC - Compressor motor power input at 380V, 3Ø, 50 Hz

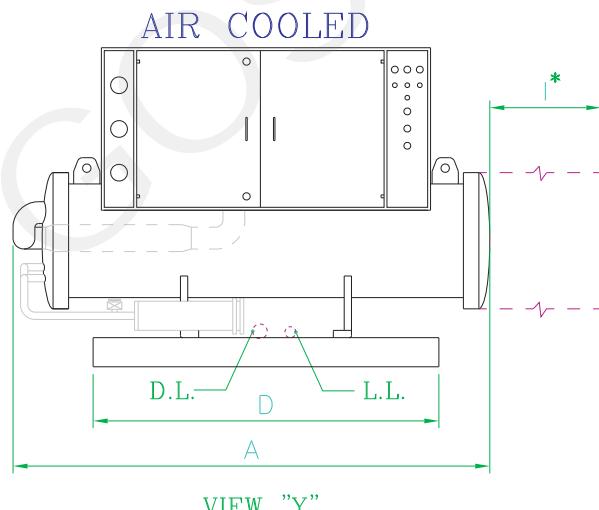
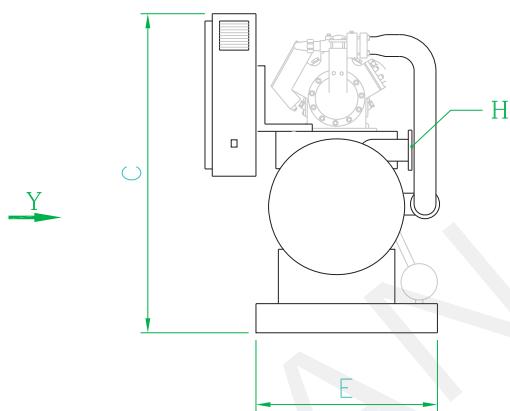
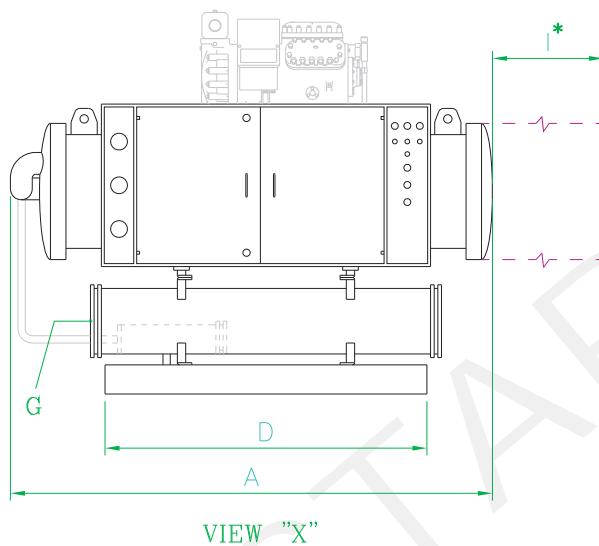
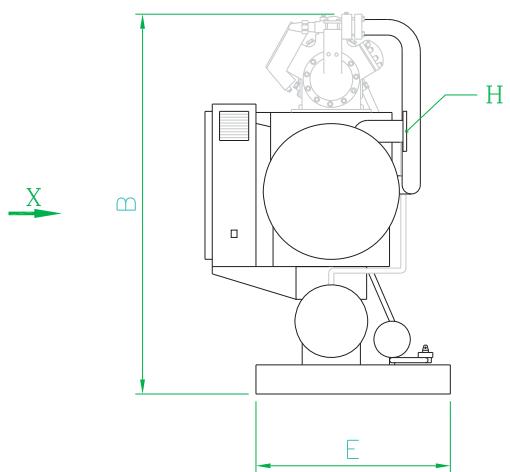
PD - Water pressure drop [Ft. WG]

QC - Condenser total heat rejection [MBH=1000BTU/HR]

W.F.D. - Water flow data.



## 1 COMPRESSOR



## Dimensions

Model	A	B	C	D	E	F	G	H	I	D. L	L. L
1 SGLC 5 W, A	1700	1150	1000	700	705	705	2 x 1 1/2"	1 1/2"	1500	5/8"	5/8"
1 SGLC10 W, A	1700	1250	1100	700	705	705	2 x 2"	2"	1500	1 1/8"	7/8"
1 SGLC15 W, A	2000	1300	1100	700	705	705	2 x 2"	2"	1800	1 1/8"	7/8"
1 SGLC20 W, A	2000	1300	1100	700	705	705	2 x 2 1/2"	2 1/2"	1800	1 1/8"	7/8"
1 SGLC25 W, A	2500	1300	1100	700	705	705	2 x 2 1/2"	2 1/2"	2300	1 1/8"	1 1/8"
1 SGLC30 W, A	2500	1300	1100	900	705	705	2 x 2 1/2"	3"	2300	1 3/8"	1 1/8"
1 SGLC35 W, A	2500	1300	1100	900	705	705	2 x 2 1/2"	3"	2300	1 3/8"	1 1/8"
1 SGLC40 W, A	2500	1450	1250	900	705	705	2 x 3"	3"	2300	1 3/8"	1 1/8"
1 SGLC50 W, A	2500	1650	1400	900	705	705	2 x 3"	3"	2300	1 5/8"	1 3/8"
1 SGLC60 W, A	2500	1650	1400	900	705	705	2 x 3"	3"	2300	1 5/8"	1 3/8"

Note: For air cooled models, discharge & liquid line sizes are based on a maximum distance of 15 meters between chiller and air cooled condenser

D. L = Discharge Line

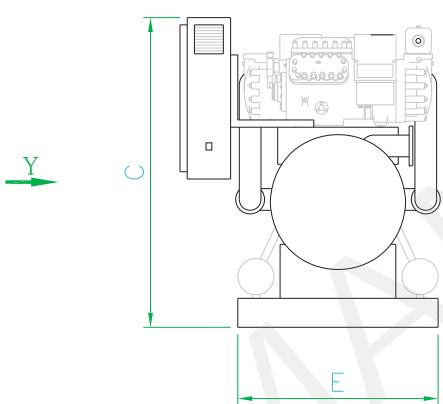
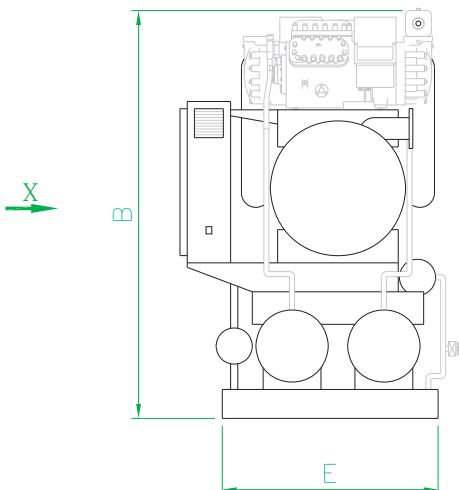
L. L = Liquid Line

All Dimensions in mm.

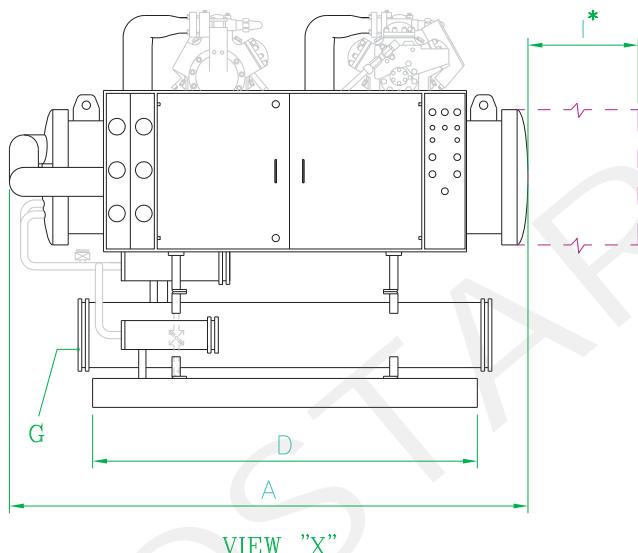
\* Servicing space to be allowed on either end.



## 2 COMPRESSORS

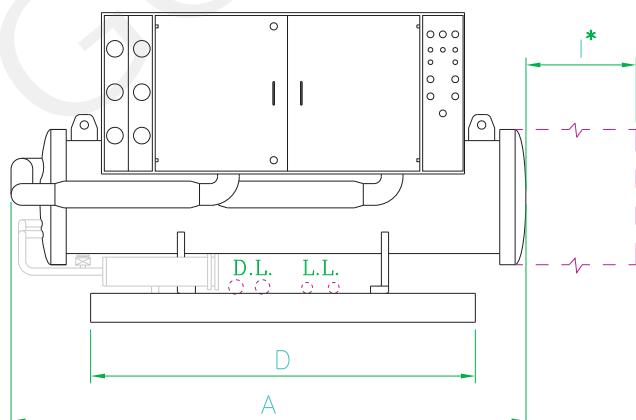


### WATER COOLED



VIEW "X"

### AIR COOLED



VIEW "Y"

## Dimensions

Model	A	B	C	D	E	F	G	H	I	D. L	L. L
2 SGLC 30 W, A	2500	1350	1150	1400	850	850	4 x 2"	3"	2300	2 x 1 1/8"	2 x 7/8"
2 SGLC 40 W, A	2500	1400	1200	1400	850	850	4 x 2 1/2"	3"	2300	2 x 1 1/8"	2 x 7/8"
2 SGLC 50 W, A	2500	1400	1200	1400	850	850	4 x 2 1/2"	3"	2300	2 x 1 1/8"	2 x 1 1/8"
2 SGLC 60 W, A	2900	1400	1200	1400	850	850	4 x 2 1/2"	3"	2700	2 x 1 3/8"	2 x 1 1/8"
2 SGLC 70 W, A	2900	1450	1250	1400	950	950	4 x 2 1/2"	4"	2700	2 x 1 3/8"	2 x 1 1/8"
2 SGLC 80 W, A	2900	1500	1300	1400	950	950	4 x 3"	4"	2700	2 x 1 3/8"	2 x 1 1/8"
2 SGLC100 W, A	2950	1800	1550	1500	1000	1000	4 x 3"	5"	2700	2 x 1 5/8"	2 x 1 3/8"
2 SGLC120 W, A	2950	1800	1550	1500	1000	1000	4 x 3"	5"	2700	2 x 1 5/8"	2 x 1 3/8"

Note: For air cooled models, discharge & liquid line sizes are based on a maximum distance of 15 meters between chiller and air cooled condenser

D. L = Discharge Line

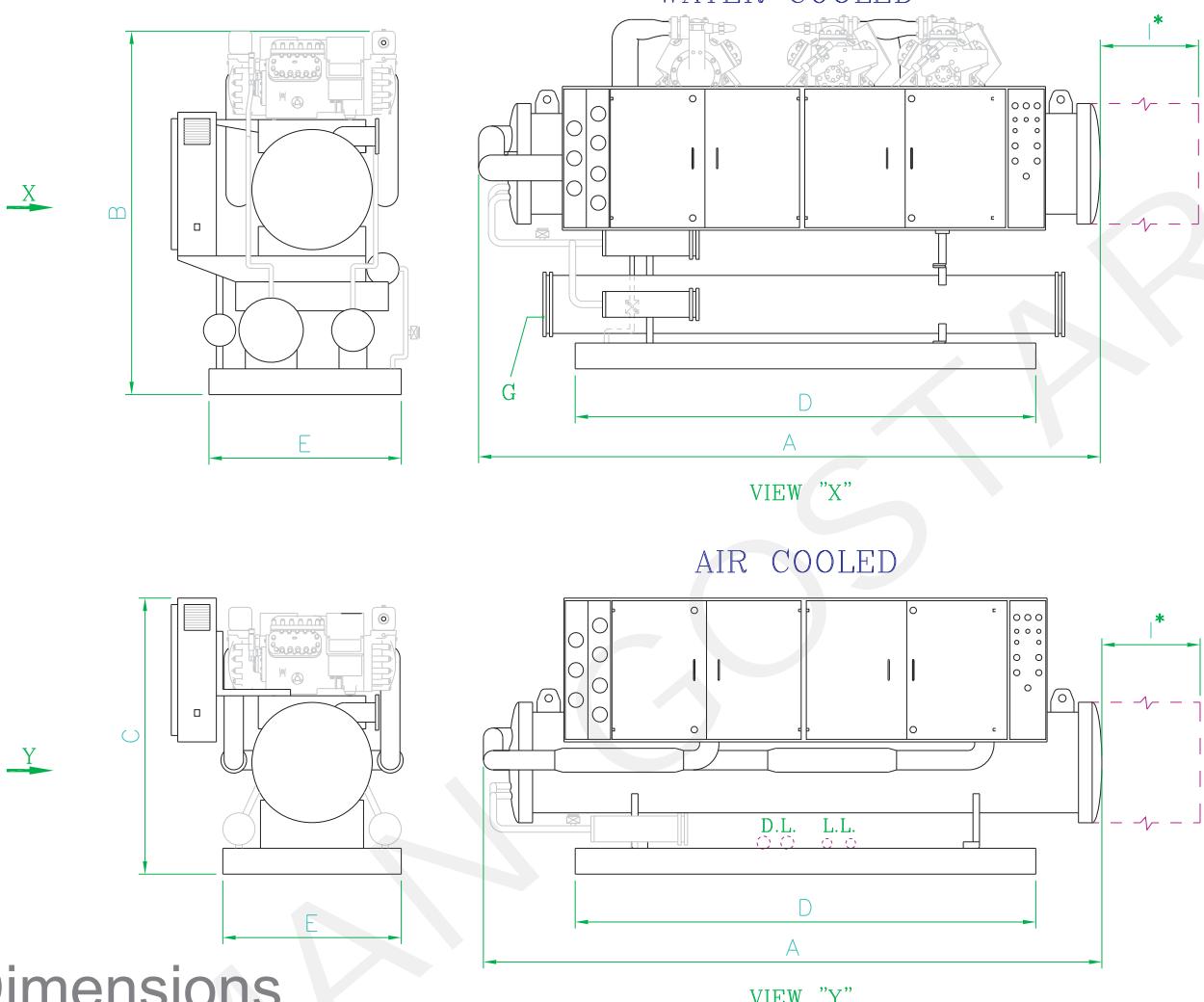
L. L = Liquid Line

All Dimensions in mm



....Liquid Chiller

## 3 COMPRESSORS



## Dimensions

Model	A	B	C	D	E	F	G	H	I	D. L	L. L
3 SGLC 60 W, A	3000	1450	1200	1400	850	850	2 x 3" 2 x 2 1/2"	3"	2800	1 1/8" 1 3/8"	7/8 1 1/8"
3 SGLC 75 W, A	3000	1500	1200	1800	930	930	2 x 3" 2 x 2 1/2"	4"	2800	1 1/8" 1 5/8"	1 1/8" 1 3/8"
3 SGLC 90 W, A	3500	1500	1200	1800	930	930	2 x 3" 2 x 2 1/2"	4"	3300	1 3/8" 1 5/8"	1 1/8" 1 3/8"
3 SGLC 105 W, A	3200	1600	1300	1800	930	930	2 x 3" 2 x 2 1/2"	5"	3000	1 3/8" 2 1/8"	1 1/8" 1 3/8"
3 SGLC 120 W, A	3500	1650	1300	1800	930	930	4 x 3"	5"	3300	1 3/8" 2 1/8"	1 1/8" 1 3/8"
3 SGLC 150 W, A	3550	1850	1550	2060	1100	1100	2 x 4" 2 x 3"	5"	3300	1 5/8" 2 5/8"	3 x 13/8
3 SGLC 180 W, A	4050	1900	1550	2060	1100	1100	2 x 4" 2 x 3"	6"	3800	1 5/8" 2 5/8"	3 x 13/8

Note: For air cooled models, discharge & liquid line sizes are based on a maximum distance of 15 meters between chiller and air cooled condenser

D. L = Discharge Line

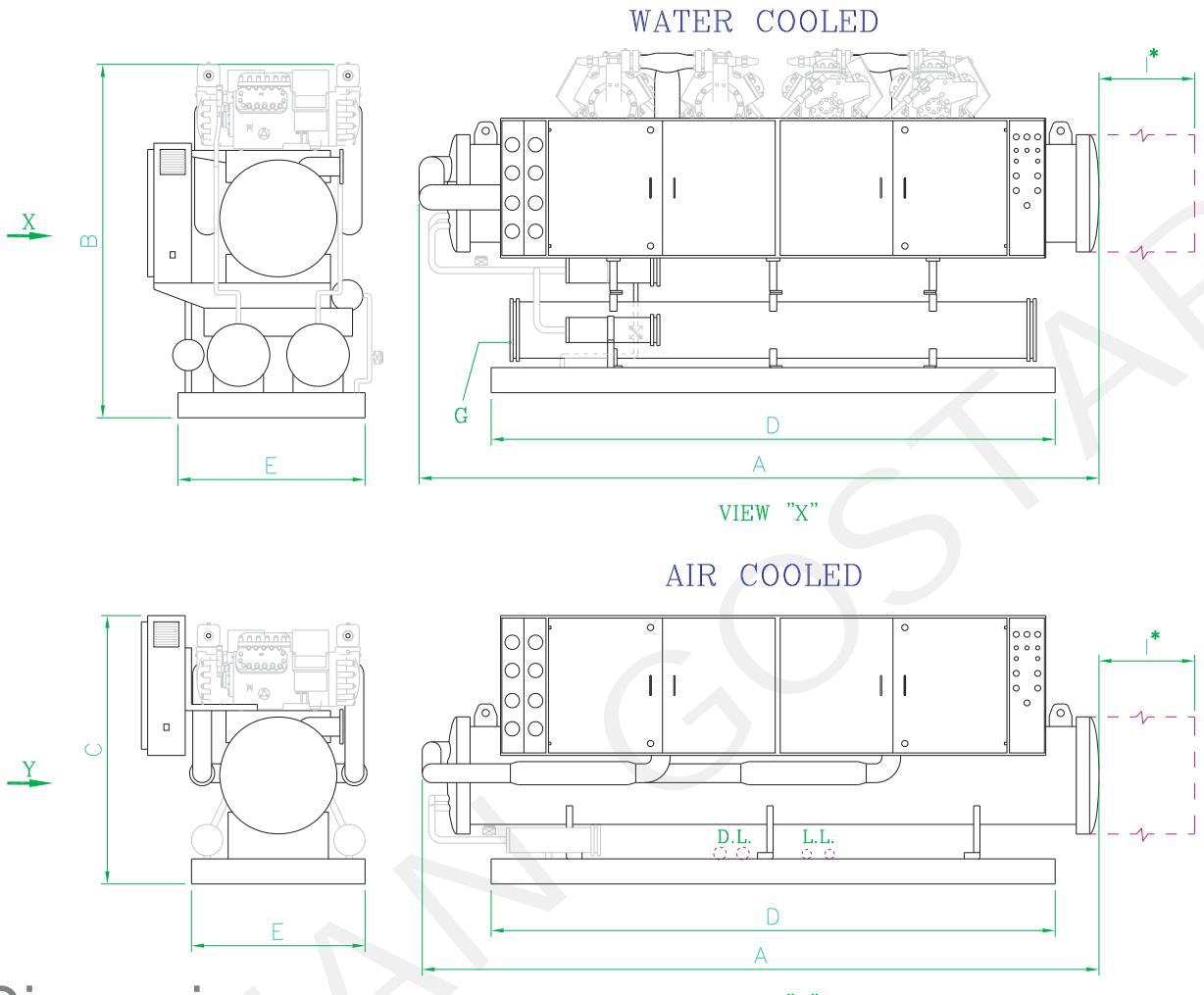
L. L = Liquid Line

All Dimensions in mm.

\* Servicing space to be allowed on either end.



## 4 COMPRESSORS



## Dimensions

Model	A	B	C	D	E	F	G	H	I	D. L	L. L
4 SGLC 80 W, A	3500	1500	1250	1500	950	950	4 x 3"	5"	3300	2 x 1 <sup>5</sup> / <sub>8</sub>	2 x 1 <sup>1</sup> / <sub>8</sub>
4 SGLC 100 W, A	3500	1550	1300	2260	1050	1050	4 x 3"	5"	3300	2 x 1 <sup>5</sup> / <sub>8</sub>	2 x 1 <sup>3</sup> / <sub>8</sub>
4 SGLC 120 W, A	3500	1550	1300	2260	1050	1050	4 x 3"	5"	3300	2 x 2 <sup>1</sup> / <sub>8</sub>	2 x 1 <sup>3</sup> / <sub>8</sub>
4 SGLC 140 W, A	3550	1700	1400	2260	1050	1050	4 x 3"	5"	3300	2 x 2 <sup>1</sup> / <sub>8</sub>	2 x 1 <sup>3</sup> / <sub>8</sub>
4 SGLC 160 W, A	3550	1800	1450	2260	1050	1050	4 x 3"	5"	3300	2 x 2 <sup>1</sup> / <sub>8</sub>	2 x 1 <sup>3</sup> / <sub>8</sub>
4 SGLC 200 W, A	4150	1950	1600	2620	1120	1120	4 x 4"	6"	3800	2 x 2 <sup>5</sup> / <sub>8</sub>	4 x 1 <sup>3</sup> / <sub>8</sub>
4 SGLC 240 W, A	4650	2000	1600	2620	1120	1120	4 x 4"	6"	4300	2 x 2 <sup>5</sup> / <sub>8</sub>	4 x 1 <sup>3</sup> / <sub>8</sub>

Note: For air cooled models, discharge & liquid line sizes are based on a maximum distance of 15 meters between chiller and air cooled condenser

D. L = Discharge Line

L. L = Liquid Line

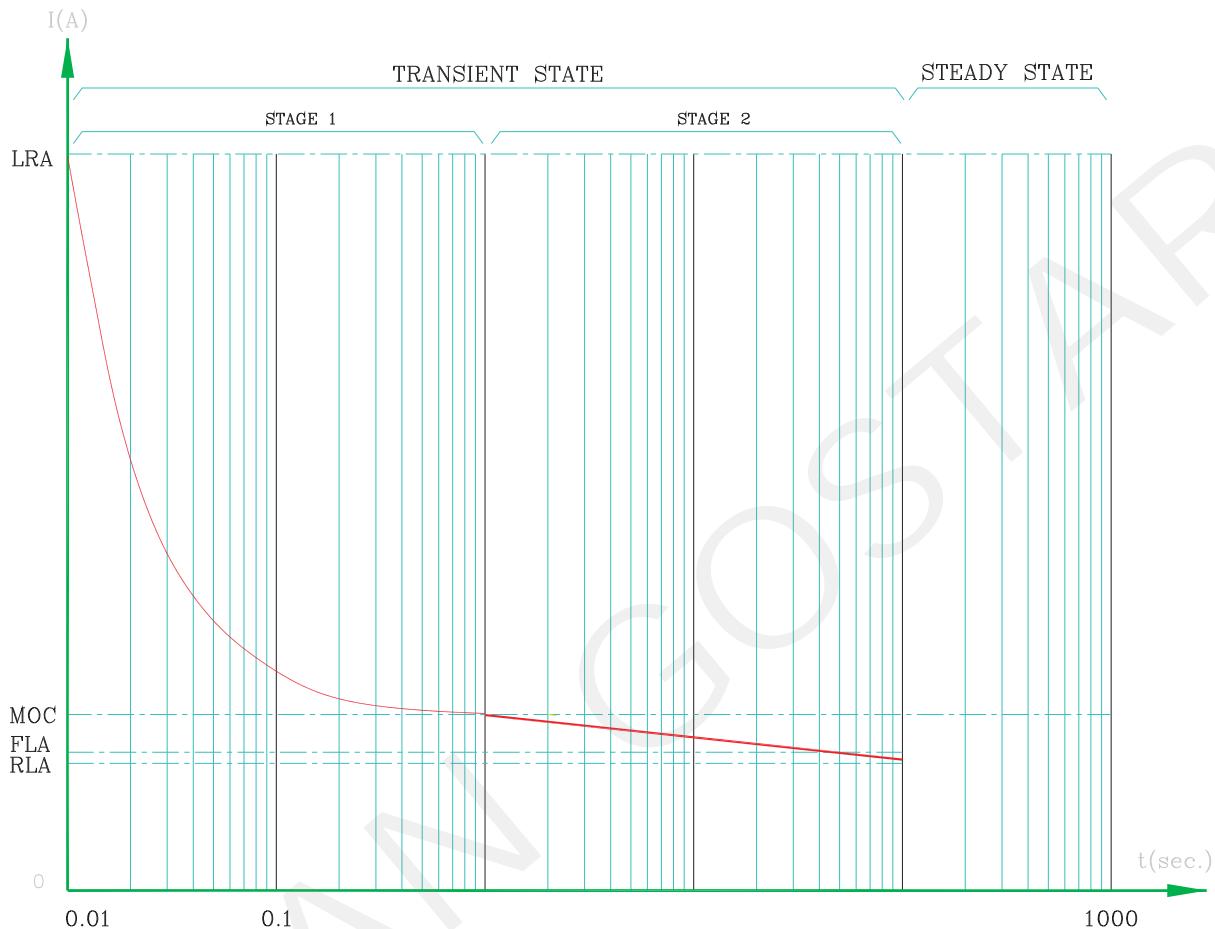
All Dimensions in mm.

\* Servicing space to be allowed on either end.



## ELECTRICAL

## SCHEMATIC CURVE AT THE START-UP (PER COMPRESSOR)



GRAPH FIG. NO.1

**LOCKED ROTOR AMPS. (LRA):** Peak Of Transient Electrical current At The Instant Of Compressor Motor Start-Up . (Stage1)

**MAXIMUM OPERATING CURRENT (MOC) :** Maximum Electrical current Tolerates By Compressor Motor . This Current Exists Only When The System Has Been Idle (Warm Evaporator , Condenser & Connecting Pipings ) & Lasts For A Short Period Until The System Reaches The Steady State Condition. Other Wise The Stage 2 Of Transient State On The Graph Can Be Ignored.

**FULL LOAD AMPS.(FLA):** Maximum Electrical Drawn At The Most Undesirable System Working Condition Under Steady state Operation .

**RATED LOAD AMPS.(RLA) :** Nominal Electrical Current Drawn At Normal Working Condition Under Steady State Operation .

**NOTE :** Because Of The Part Winding Start Method For Packaged Units Equipped With 50 Hp And Higher Compressors And Packaged Units That Utilise Unloaders The Transient Stage Is Drastically Reduced And Its Curve Differs From The Above.



....Liquid Chiller

## TECHNICAL DATA

### Single compressor :

Model	SG LC 5	SGLC 10	SGLC 15	SGLC 20	S GLC 25	S GLC 30	S GLC 35	SGLC 40	S GLC 50	SGLC 60		
	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled
Compressor motor (Per Unit)	HP	5	10	15	20	25	30	35	40	50	60	
RLA	7.5	8.8	14.9	18.1	19.9	24.3	23.3	27.3	28.8	33.7	34.6	40.3
FLA	8.6	9.8	17.4	20.3	23.3	27.4	26.6	30.3	33.2	37.7	39.9	45.1
MOC	10.3		21.3		28.8		31.6		42.9		48	
LRA	55		121		129		175		199		221	
Max KW Input	4.7	5.6	9.5	11.4	12.9	15.4	14.9	17.5	19.2	22.3	23.3	26.8
System	FLA	8.6	9.8	17.4	20.3	23.3	27.4	26.6	30.3	33.2	37.7	39.9
* Wire Size	4x1.5	4x1.5	4x4	4x4	4x6	4x6	4x6	4x10	4x10	4x16	4x16	4x25
Physical Data	Oil Charge (U.S Gals)	0.5	1	1	1	1.1	1.1	1.1	1.1	2	2	2
	** Ref. Charge (Kg)	2.5	1.5	5	3	7.5	4.5	10	6	12.5	7.5	15
	Oper. Weight (Kg)	360	310	460	410	670	570	770	660	820	700	970

### Two compressor :

Model	2 SG LC 30	2 SGLC - 40	2SGLC - 50	2 SGLC - 60	2 SG LC 70	2 SG LC - 80	2 SGLC - 100	2 SGLC - 120	
	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	
Compressor motor (Per Unit)	HP	15	20	25	30	35	40	50	60
RLA	19.9	24.3	23.2	27.3	28.8	33.7	34.6	40.3	45.3
FLA	23.3	27.4	26.6	30.3	33.2	37.7	39.9	45.7	52.6
MOC	28.8		31.6		42.9		48		63.6
LRA	129		175		199		221		304
System	Max KW Input	25.8	46.6	29.8	35	38.4	44.6	46.6	53.6
	FLA	46.6	54.8	53.2	60.6	66.4	75.4	79.8	90.2
	* Wire Size	4x1.6	4x25	4x25	4x25	4x35	4x35	3x50/25	3x70/35
Physical Data	Oil Charge (U.S Gals)	2	2	2.2	2.2	2.2	4	4	4
	** Ref. Charge (Kg)	15	9	20	12	25	12	30	18
	Oper. Weight (Kg)	1210	1010	1370	1150	1450	1200	1690	1380

Note: LRA: Locked Rotor Amps

MOC: Maximum Operating Current

FLA: Full Load Amps

RLA : Rated Load Amps

\* Suggested cable size based on copper conductor under full load conditions ( FLA) at maximum ambient temperature of 50 C and maximum distance of 70 m.

\*\* Excluding the amount of refrigerant for an air cooled condenser & relevant pipings.



## ....Liquid Chiller

### TECHNICAL DATA

#### Three compressor:

Model	3 SG LC - 60		3 SGLC - 75		3 SGLC - 90		3 SGLC - 105		3 SGLC - 120		3 SGLC - 15		3 SGLC - 180	
	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled
Electrical Data	HP	20		25		30		35		40		50		60
	Compressor motor (Per Unit)	RLA	23.2	27.3	28.8	33.7	34.6	40.3	45.3	53.3	52.5	61.3	63.8	72.6
		FLA	26.6	30.3	33.2	37.7	39.9	45.1	52.6	60	60.7	68.9	72.2	80.9
		MOC	31.6		42.9		48		63.6		75.3		89.4	
		LRA	175		199		221		304		304		393	
	System	Max KW Input	44.7	52.5	57.6	66.9	69.9	80.4	89.1	103.8	105.9	123.3	122.7	140.7
		FLA	79.8	90.9	99.6	113.1	119.7	135.3	157.8	180	182.1	206.7	216.7	242.7
	*	Wire Size	4x35	3x50/25	3x70/35	3x70/35	3x70/35	3x95/50	3x120/70	3x150/70	3x150/70	3x185/95	3x240/120	3x300/150
Physical Data	Oil Charge (U.S Gals)		3		3.3		3.3		3.3		6		6	
	** Ref . Charge (Kg)	30	18	37.5	22.5	45	27	52.5	31.5	60	36	75	45	90
	OperWeight (Kg)	1890	1550	2160	1750	2500	2000	2880	2250	2980	2350	3100	2470	3280
														2630

#### Four compressor:

Model	4 SGLC - 80		4SGLC-100		4SGLC-120		4SGLC-140		4SGLC-160		4SGLC-200		4SGLC-240	
	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled
Electrical Data	HP	20		25		30		35		40		50		60
	Compressor motor (Per Unit)	RLA	23.2	27.3	28.8	33.7	34.6	40.3	45.3	53.3	52.6	61.3	63.8	72.6
		FLA	26.6	30.3	33.2	37.7	39.9	45.1	52.6	60	60.7	68.9	72.2	80.9
		MOC	31.6		42.9		48		63.6		75.3		89.4	
		LRA	175		199		221		304		304		393	
	System	Max KW Input	59.6	70	76.8	89.2	93.2	107.2	118.8	138.4	141.2	164.4	163.6	187.6
		FLA	106.4	121.2	132.8	150.8	159.6	180.4	210.4	240	242.8	275.6	288.8	323.6
	*	Wire Size	3x70/35	3x70/35	3x95/50	3x120/70	3x120/70	3x150/70	3x185/95	3x240/120	3x240/120	3x300/150	3x300/150	2(3x120/70)
Physical Data	Oil Charge (U.S Gals)		4		4.4		4.4		4.4		8		8	
	** Ref . Charge (Kg)	40	24	50	30	60	36	70	42	80	48	100	60	120
	OperWeight (Kg)	2570	2150	3000	2450	3200	26000	3680	2900	3880	3100	4100	3300	4350
														3550

Note: LRA : Locked Rotor Amps

MOC: Maximum Operating Current

FLA : Full Load Amps

RLA : Rated Load Amps

\* Suggested cable size based on copper conductor under full load conditions ( FLA ) at maximum ambient temperature of 50 °C and maximum distance of 70 m.

\*\* Excluding the amount of refrigerant for an air cooled condenser & relevant ninins

## TECHNICAL DATA

### Single compressor models:

Model	SG LC - 5		SGLC - 10		SGLC - 15		SGLC - 20		SG LC - 30		SGLC - 40		S GLC - 50		SGLC - 60	
	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled
Compressor motor (Per Unit)	HP	5	10	15	20	30	40	50	60							
Electrical Data	RLA	8.4	9.9	14.7	17	18.9	22.1	29.1	33.7	35.3	40.5	48.3	53.4	59.1	65	71.2 77.3
	FLA	11.1	9	15.9	19	20.2	24.9	32.2	38.7	39.1	47	51	59.2	62.9	72.2	75.3 84.8
	MOC	12		20.5		27		41.9		51		55		77		88.2
	LRA	55		104		156		175		221		331		458		476
System	Max KW Input	4.9	6.2	8.9	11.2	11	14.2	18.9	23.1	22.9	27.8	25	30.9	31.1	37.5	35.7 42.9
	FLA	11.1	9	15.9	19	20.2	24.9	32.2	38.7	39.1	47	51	59.2	62.9	72.2	75.3 84.8
	* Wire Size	4x1.5	4.15	4x2.5	4x4	4x4	4x6	4x10	4x10	4x16	4x16	4x25	4x25	4x35	4x35	3x50/25
Physical Data	Oil Charge (U.S Gals)	1		2		1		2		2		2		2		2
	** Ref. Charge (Kg)	3.5	21	7	4.2	10.5	6.3	10	8.4	21	12.6	28	16.8	35	21	42 25.2
	Oper. Weight (Kg)	360	310	460	410	670	570	770	660	970	810	1220	1110	1380	1180	1585 1350

### Two compressor :

Model	2 SG LC 30		2 SGLC 40		2 SGLC 60		2 S GLC 80		2 SGLC - 100		2 SGLC - 120		
	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	
Compressor motor (Per Unit)	HP	15		20		30		40		50		60	
Electrical Data	RLA	18.9	22.2	29.1	33.7	35.3	40.5	48.3	53.4	59.7	65	71.2 77.3	
	FLA	20.2	24.9	32.2	38.7	39.1	47	51	59.2	62.9	72.2	75.3 84.8	
	MOC	27		41.9		51		55		77		88.2	
	LRA	156		175		221		311		458		476	
System	Max KW Input	9.8	12.4	17.8	22.4	22	28.4	37.8	46.2	45.8	55.6	50 61.8	
	FLA	22.2	18	31.8	38	40.4	49.8	64.4	77.4	78.2	94	102 118.4	
	* Wire Size	4x4	4x4	4x10	4x10	4x16	4x16	4x25	4x35	3x50/25	3x50/25	3x50/25 3x70/135	
Physical Data	Oil Charge (U.S Gals)	2		4		4		4		4		4	
	** Ref. Charge (Kg)	21	12.6	28	16.8	42	25.2	56	33.6	70	42	84	50.4
	Oper. Weight (Kg)	1210	1010	1370	1150	1690	1380	2140	1690	2200	1750	2350	1810

Note: LRA: Locked Rotor Amps

MOC: Maximum Operating Current

FLA: Full Load Amps

RLA : Rated Load Amps

\* Suggested cable size based on copper conductor under full load conditions ( FLA) at maximum ambient temperature of 50 C and maximum distance of 70 m.

\*\* Excluding the amount of refrigerant for an air cooled condenser & relevant pipinas.



....Liquid Chiller

## TECHNICAL DATA

### Three compressor:

Model		3 SG LC - 60		3 SGLC - 90		3 SGLC - 120		3 SGLC - 150		3 SGLC - 180	
Electrical Data	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	
	HP	20	30	40	50	60					
	RLA	29.1	33.7	35.3	40.5	48.3	53.4	59.1	65	71.2	77.3
	FLA	32.2	38.7	39.1	47	51	59.2	62.9	72.2	75.3	84.8
	MOC	41.9		51		55		77		88.2	
	LRA	175		221		311		458		476	
	Max KW Input	56.7	69.3	68.7	83.4	75	92.7	93.3	112.5	107.1	128.7
	FLA	96.6	116.1	117.3	141	153	177.6	188.7	216.6	225.9	254.4
	* Wire Size	3x50/25	3x70/35	3x70/35	3x95/50	3x95/50	3x120/70	3x150/70	3x185/95	3x185/95	3x240/120
Physical Data	Oil Charge (U.S Gals)	6		6		6		6		6	
	** Ref . Charge (Kg)	42	12.6	63	31.8	84	50.4	105	63	126	75.6
	OperWeight (Kg)	1890	1550	2500	2000	2980	2350	3100	2470	3280	2630

### Four compressor :

Model		4 SGLC - 80		4SGLC-120		4SGLC-160		4SGLC-200		4SGLC-240	
Electrical Data	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	
	HP	20	30	40	50	60					
	RLA	29.1	33.7	35.3	40.5	48.3	53.4	59.1	65	71.2	77.3
	FLA	32.2	38.7	39.1	47	51	59.2	62.9	72.2	75.3	84.8
	MOC	41.9		51		55		77		88.2	
	LRA	175		221		311		458		476	
	Max KW Input	75.6	92.4	91.6	111.2	100	123.6	124.4	150	142.8	171.6
	FLA	128.8	154.8	156.4	188	204	236.8	251.6	288.8	301.2	339.2
	* Wire Size	3x70/35	3x95/50	3x120/70	3x150/70	3x150/70	3x185/95	3x240/120	3x240/120	3x300/150	2x(3x120/70)
Physical Data	Oil Charge (U.S Gals)	8		8		8		8		8	
	** Ref. Charge (Kg)	56	33.6	84	50.4	122	67.2	140	84	168	100.8
	OperWeight (Kg)	2570	2150	3200	2600	3880	3100	4100	3300	4350	3550

Note: LRA : Locked Rotor Amps

MOC: Maximum Operating Current

FLA : Full Load Amps

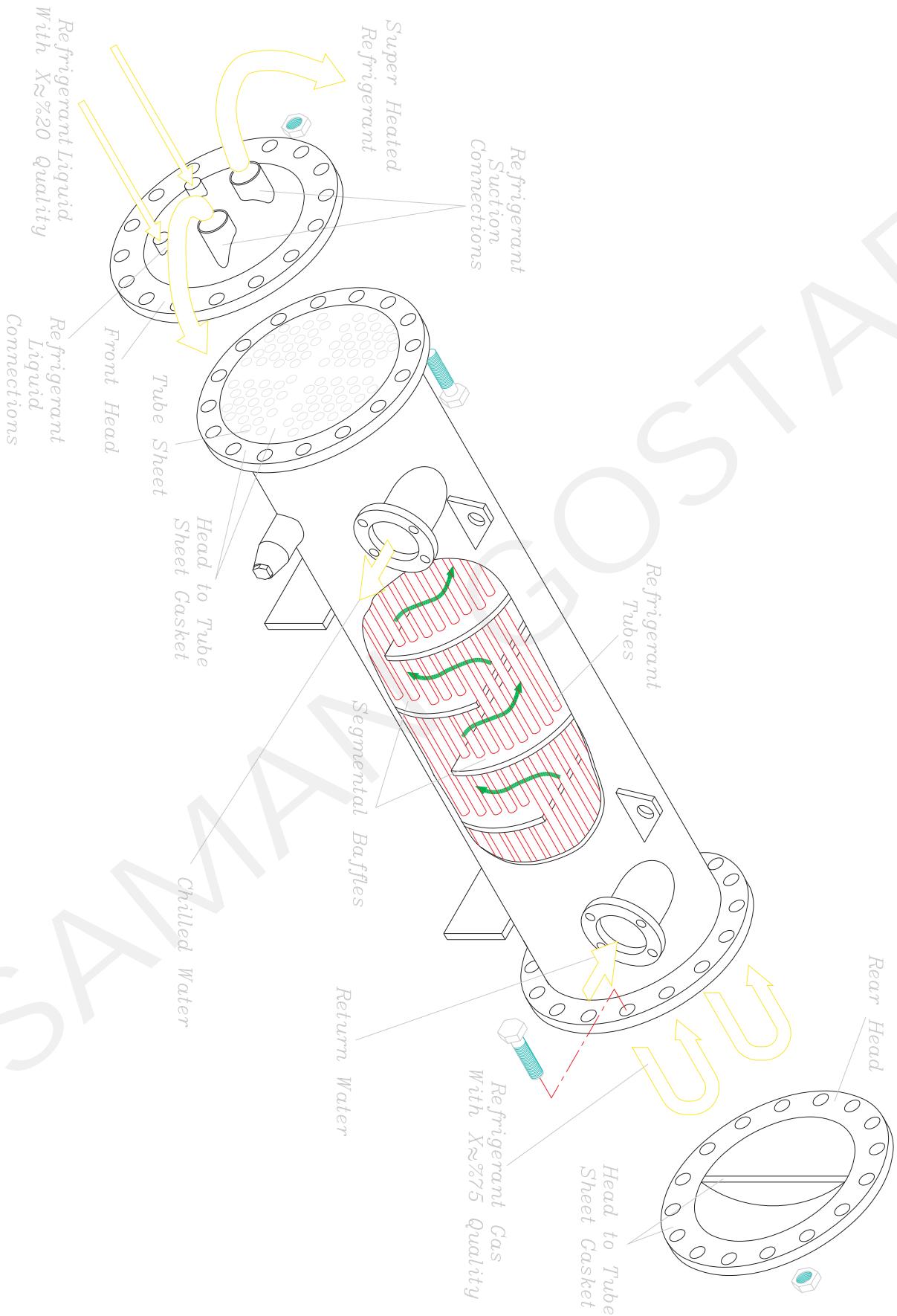
RLA : Rated Load Amps

\* Suggested cable size based on copper conductor under full load conditions ( FLA ) at maximum ambient temperature of 50 C and maximum distance of 70 m.

\*\* Excluding the amount of refrigerant for an air cooled condenser & relevant ninings



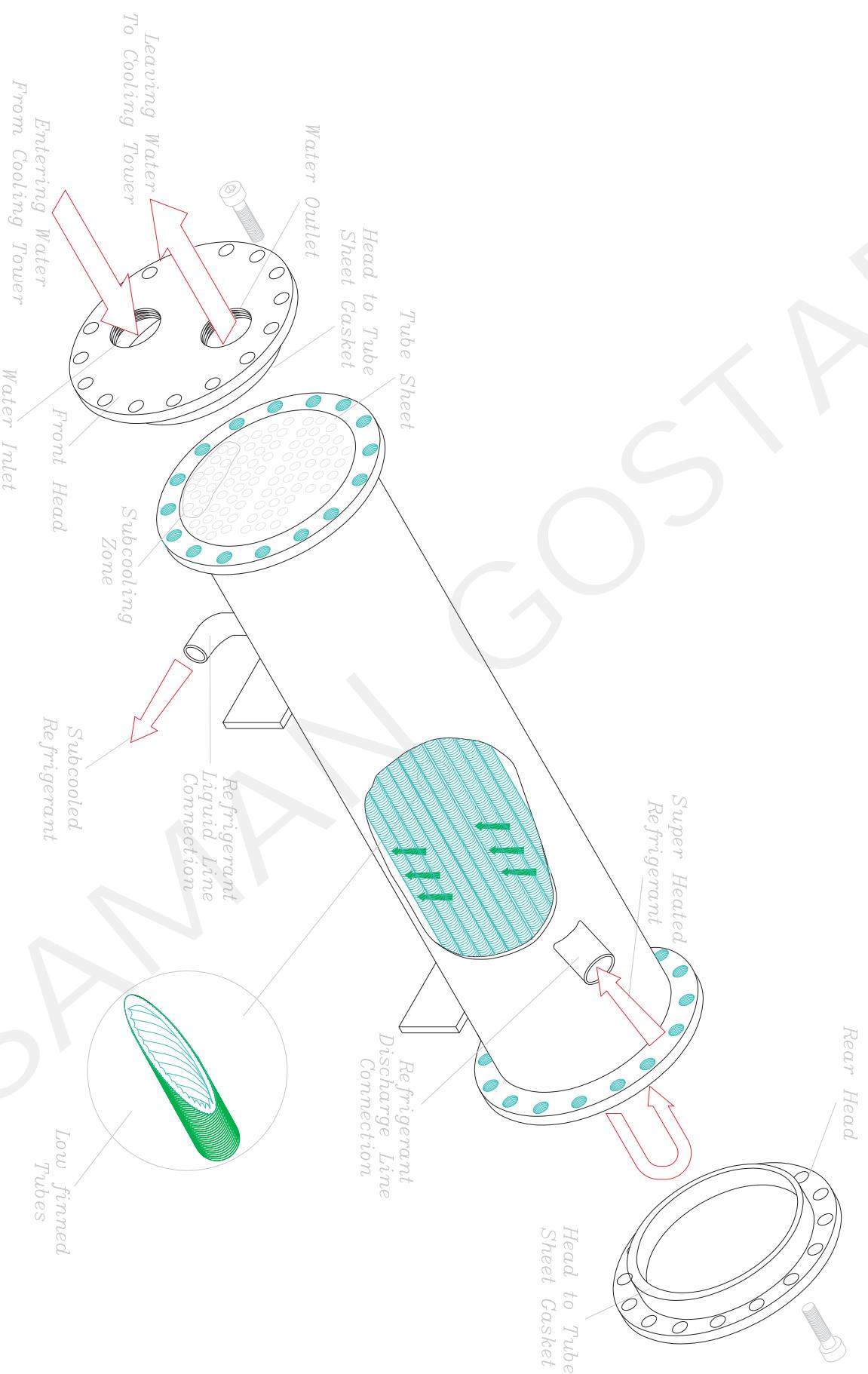
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TYPICAL SHELL & TUBE EVAPORATOR WITH FIXED TUBE SHEETS

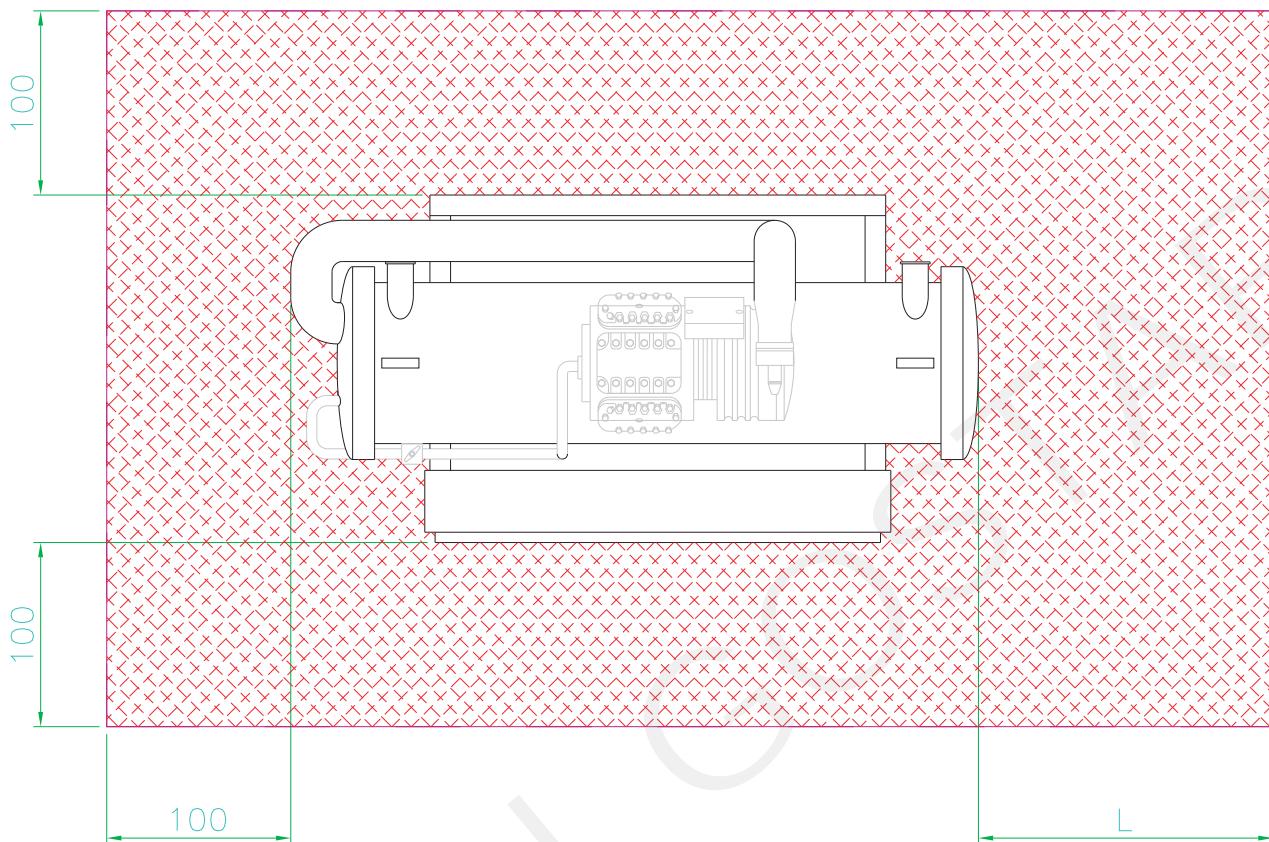


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## RECOMMENDED SERVICE AREA



Model	SGLC-5	SGLC -10	SGLC-15	SGLC -20	SGLC -25	SGLC-30	SGLC -35	SGLC -40	SGLC-50	SGLC-60
L	1500	1500	1800	1800	2300	2300	2300	2300	2300	2300

Model	2SGLC-30	2SGLC-40	2SGLC-50	2SGLC-60	2SGLC-70	2SGLC-80	2SGLC100	2SGLC-120
L	2300	2300	2300	2700	2700	2700	2700	2700

Model	3SGLC-60	3SGLC-75	3SGLC-90	3SGLC-105	3SGLC-120	3SGLC150	3SGLC-180
L	2800	2800	3300	3000	3300	3300	3800

Model	4SGLC-80	4SGLC-100	4SGLC-120	4SGLC-140	4SGLC-160	4SGLC-200	4SGLC-240
L	3300	3300	3300	3300	3300	3800	4300

Note: All dimensions in mm.