

# Semi-Hermetic Compressor Catalogue



**Copeland**<sup>®</sup>  
brand products

  
**EMERSON**<sup>™</sup>  
Climate Technologies

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# General Information

It is not difficult to trace back the roots of Emerson's traditions of innovation and vision. Some of our key milestones on the road to customer satisfaction are listed here:

- 1921:** Edmund Copeland starts a new company to manufacture refrigeration equipment.
- 1927:** Annual Sales cross the US\$ 1 million mark.
- 1941:** Copelametic compressor is released.
- 1959:** Copelametic line is expanded to 30HP with 4 & 6 cylinder models.
- 1960:** The Company's stock is listed on the New York Stock Exchange.
- 1965:** Sales surpass US \$ 50 million.
- 1970:** Copelametic line is extended to 40HP, CR compressor introduced.
- 1981:** Discus semi-hermetic is launched.
- 1987:** Introduction of the Compliant Scroll.
- 1995:** Introduction of Glacier refrigeration scroll compressors.
- 1996:** Copeland completes 75 years.
- 2004:** Copeland becomes Emerson Climate Technologies
- 2005:** Global sales touch US\$ 17 Billion

Drive your business with Emerson Climate Technologies, the world's leading innovator in Heating, Ventilation, Air Conditioning and Refrigeration. In today's ever changing marketplace, we realize one constant: the key to customer satisfaction is delivering cost-effective and comprehensive solutions.

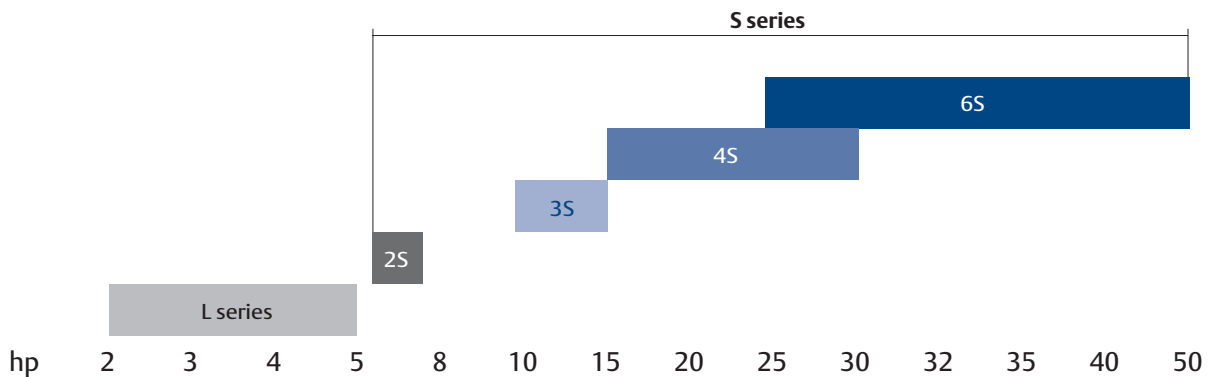
When you partner with Emerson, our unmatched combination of dynamic engineering, industry-leading technology and services yields reliable and affordable answers. Proven solutions so forward-thinking, they help you do the ultimate-exceed your expectations of growth.

This product selection catalogue provides a survey of the Emerson Climate Technologies' semi-hermetic product range offered for all major applications in refrigeration.

European in design, these compressors have been modified for wide-ranging operations with R22 using a cost-effective mechanical means of injection. To obtain an extended operating envelope with R22, a liquid injection method is used with a Discharge Temperature Control (DTC) valve installed on the compressor body. The DTC valve liquid injection system is a low cost and reliable solution.

We hope you find an ideal compressor that fits your unique needs in this selection catalogue.

## Copeland Semi-Hermetic Compressor



# Semi-hermetic compressor

## Emerson Climate Technologies' Best Practices Guide

### System Cleanliness

When brazing, the system should be protected with an inert gas such as nitrogen at a very low pressure. Only materials and components approved for refrigeration engineering are suitable.

It is absolutely necessary that all impurities (dirt, brazing scale, flux, etc.) are removed from the system before operation in order to avoid breakdowns. Many of these impurities are so small that they can pass through a filter and enter the suction side of the compressor. Other blockages can occur in the suction filter situated in the compressor, and a high pressure drop can cause damage. For this reason Emerson Climate Technologies strongly recommends the use of a large suction filter (which causes only a minimal drop of pressure) on all installations which are to be assembled on site or, in cases where the required cleanliness cannot be guaranteed.

### Compressor Cooling

Compressor motors must always be cooled, and cylinder head cooling may also be needed at certain operating conditions. Refer to the Performance Data tables for relevant compressors. 2S, 3S, 4S & 6S Compressors are suction gas-cooled - the motor is cooled by refrigerant gas that passes over the motor. An additional fan and discharge temperature control valve (DTC for short) may be required depending upon the operating conditions. Please refer to the respective Performance Data tables.

L compressors are air-cooled compressors, the motor gives out heat through the compressor body. The body must be cooled by forced airflow. For airflow volumes, refer to technical data table for L compressors. This airflow can come from the fan of an air-cooled condenser or from a separate fan. An additional head cooling of approx. 28.5m<sup>3</sup>/min vertical is required at some high pressure ratio conditions; refer to the L-series Performance Data tables.

### Lubrication

Oil used in refrigeration compressors is highly refined, dewaxed and dehydrated. In order to protect its quality, refrigeration oil is always shipped in tightly-sealed containers. All compressors leaving the factory are charged with Emerson-approved oil for normal operation. A list of Emerson-approved oils is provided here for your information.

All compressors using Ester Oil are marked with an "E" in the model code. Brand-new "E" compressors can also operate using R22. Emerson Climate Technologies has approved the following specific oils/lubricants after extensive laboratory and field testing:

#### Mineral oils used for R22:

Sun Oil Co.	Suniso 3GS
Shell	Shell 22 - 12
Texaco	Capella WF32
R.Fuchs	Fuchs Reniso KM 32

#### Ester Oils for R134a, R407C and R404A | R507:

ICI	Emkarate RL 32 CF (Original charge, also used for adjusting or recharging)
	Emkarate RL32-3MAF
Mobil	EAL Arctic 22 CC (used for adjusting or recharging)
	Limited refilling can be done with ICI Emkarate RL 32S.

**Note: Chlorine-free refrigerants, such as Hydro Fluoro Carbons (HFCs) show more polarity than CFCs. Therefore, mineral oils, which are normally used with CFCs, are not miscible with HFCs. Polyol Ester (POE) lubricants, being more polar than mineral oils, are miscible with HFCs and as such, POE is the lubricant to be used with HFCs.**

L series compressors have three different kinds of lubrication:

1. L compressors (except LA60) using mineral oil and R22 (HCFC) are equipped with a splasher lubrication system.
2. L compressors using ester oil and chlorine-free HFC refrigerants like R404A are equipped with an internal oil pump.

The 2S/3S/4S/6S series of compressors are pressure lubricated. The directionally independent oil pump is driven by the crankshaft and generates oil pressure that is normally in the range of 1 to 4 bar above the suction pressure. A relief valve inside the pump ensures that the oil pressure does not exceed the permitted level. The oil is sucked up from the crankcase via an oil screen. The oil pumps have an oil-pressure sensor fitted. The pressure sensor is directly screwed into the pump housing of the compressor. Internal channels link the switch to the suction and discharge ports of the oil pump.

### Refrigerant

Refrigerants can vary depending upon the type of application. Commonly used refrigerants are R22, R502, R134a & R404A. Specialized refrigerants are used for ultra-low temperature applications.

### Installation

Make sure that each shipment is equipped according to Emerson Climate Technologies' technical documentation, considering the application intended. For brazing connections where dissimilar or ferric metals are joined, a silver solder alloy rod with a minimum of 30% silver should be used. It may be either flux-coated or with separate flux. Limit the soldering paste or flux to the minimum required to prevent contamination of the solder joint internally. Flux only the male portion of the connection, never the female. After brazing, remove the surplus flux with a damp cloth. With the exception of rubber coated metallic gaskets (Wolverine) all gaskets must be oiled before fitting. This applies to the O-rings as well.

**Warning:** A compressor should never be operated beyond its approved application range! Please refer to the respective Performance Data tables. To avoid motor damage, the compressor must neither be started, nor may high potential testing be carried out, under vacuum.

The procedures listed below are intended to help you achieve a long service life from your compressor:

### Maximum Operating Pressures

The maximum operating pressures shown on the compressor nameplate must not be exceeded.

The compressor operating range may be restricted for various reasons, check the application range limitations under 'Performance Data' tables.

# Semi-hermetic compressor

## Emerson Climate Technologies' Best Practices Guide

### Vibration Absorption

In order to prevent the transmission of noise and vibration from the compressor through the refrigeration piping, vibration eliminators are often required in the suction and discharge lines. On small units where small diameter soft copper tubing is used for the refrigerant lines, a coil of tubing may provide adequate protection against vibration. On larger units, flexible metallic hose is frequently used. A neoprene jacket on the flexible metallic hose will protect the absorber against any possible damage from condensation or moisture.

Emerson recommends installation parallel to the crankshaft, as close to the compressor as possible. The starting torque of the motor will rock the compressor from side to side - therefore, mounting parallel to the crankshaft will allow the absorber to easily adjust to the movement.

### Principles of Piping Design

In general, pressure drop in refrigerant lines tends to decrease capacity and increase power requirements. Excessive pressure drops should be avoided. However, pressure drop is not the only criteria that must be considered in sizing refrigerant lines: refrigerant velocity, rather than pressure drop, must be the determining factor in suction piping design to ensure oil return.

### Filter Drier

Moisture is one of the basic enemies of a refrigeration system, and the moisture level in an operating system must be held to an acceptable low level to avoid system malfunctions or compressor damage. Even with the best precautions, moisture will enter a system any time it is opened for service. Small amounts of moisture can be removed by using a filter drier mounted in the refrigerant liquid line. Most driers are made in porous block form and can serve a dual function as both filter and drier.

### Moisture Indicator

A sight-glass in the liquid line allows the service person to observe the flow of liquid refrigerant. Moisture indicators have been incorporated in the sight glass. The moisture indicator provides a warning signal in the event moisture has entered the system, indicating that the drier should be changed or that other action should be taken to effectively dry the system.

### Suction Filter

In order to protect the compressor from contamination left in the system at the time of installation, suction line filters are widely used. The suction line filter may be of the sealed type for permanent installation or a replaceable element so that it can be easily changed.

### Oil separator

Although well-designed systems are effective in preventing oil-return problems, there are some cases where the use of oil separators may be necessary. They are most often required on ultra-low temperature systems, with flooded evaporators, or on other systems where inherent oil return problems are present. The oil separator when used is installed in the discharge line between the compressor and the condenser.

### Electrical Connections

Before connecting the compressor, make sure that the supply voltage, the phases and the frequency match the data specified on the compressor nameplate. Voltage ranges are shown on the compressor nameplate.

The electric motors are specially developed for use in refrigeration compressors. High quality insulation materials are used because the motors are subjected to varying loads and are in contact with refrigerant and refrigeration oil. Under normal operation, motors will never approach the temperature limit of 130°C.

**Warning:** The Compressor has been configured for direct on line start (DOL). If an installer chooses to use Part Winding or Star-Delta start, the factory-supplied jumpers should be removed.

### Star-Delta Motor (Y/Δ) - Code E

With the help of jumpers, this motor is interchangeable for star (Y) or delta (Δ) operation. It is suitable for two voltages (e. g. 220-240V in delta, 380-420V in star connection). If the supply voltage and the nominal voltage of the motor in Δ-connection are identical, the star connection motor can also be used for starting (be sure to remove factory-supplied jumpers before starting).

### Part-Winding Motor (YY/Y) - Code A

Part-winding motor compressors have six terminal leads. These leads are connected to two separate star-wound motors (2/3 + 1/3) and are internally connected. To connect on part-winding start, remove the factory-supplied jumpers from the terminals and follow the wiring diagram for selected compressor. A timer with a time-delay setting of not more than  $1 \pm 0.1$  seconds is required to delay the start of the second part-winding.

### Electric Motor Protector Code - W

The motor protector system consists of either 3 or 6 thermistors in the motor windings and an electronic module. The resistance of the thermistors remains relatively constant at normal operating temperature but will rise rapidly as tripping temperature is approached. The module senses the rising resistance and breaks the circuit to the compressor contactor coil. The module can also trigger an alarm if required. The module will automatically reset after the motor cools down by about 1-3K and a 30-minute time-delay only on 4S, 6S (No time delay on "L"). Then the compressor can restart.

### Evacuation

To ensure proper evacuation, good equipment should be used. The capability of the equipment should be verified regularly. The basic requirements are a vacuum pump, electronic vacuum gauge, connecting hoses and valves. To check the capability of the pump on a regular basis, it is connected to the vacuum gauge, recording the lowest vacuum level that it can reach. A pump that is unable to reach its specified vacuum level may have contaminated oil that needs to be changed. In general, vacuum gauges do not lose their calibration accuracy but like all electronic equipment, they should be handled with care and should never be exposed to high pressure. Common service gauges are totally inadequate for measuring vacuum as their resolution is not good enough.

Evacuation should be done with a good high vacuum pump that should be connected to both the low and high side evacuation valves with copper tube or high vacuum hoses (of minimum 1/4" internal diameter). A high vacuum gauge capable of registering pressure in microns should be attached to the system for pressure readings.

The vacuum pump should be operated until a pressure of 1500 microns absolute pressure is reached - at which time the vacuum should be broken with dry nitrogen until the system pressure rises above 0 psig. Open the compressor service valves (if supplied) and evacuate the entire system to 500 microns absolute pressure. Raise the pressure to 2psig with the refrigerant and remove the vacuum pump.

**Warning:** The motor compressor should not be started or operated while the system is under a high vacuum. To do so may cause serious damage to the motor windings because of the reduced dielectric strength of the atmosphere within the motor chamber.

# Semi-hermetic compressor

## Emerson Climate Technologies' Best Practices Guide

### No Self-Evacuation

**Warning:** The compressor should never be used for self-evacuation. The system should be evacuated by a vacuum pump from the high - and low - pressure sides at the same time with a vacuum pump specifically designed for vacuum duty, having a capability of pulling a vacuum of 50 microns or less, down to 0.3 m bar.

### Charging Refrigerant

Liquid refrigerant should be filled through the charge fitting in the receiver shut-off valve, or into the liquid line when the compressor is not running. The use of a filter-drier in the charging line is highly recommended. After start-up, refrigerant vapor can be charged through the suction side.

### Charging Oil

The oil level should be maintained at or slightly above the center of sight glass while operating. An abnormally low oil level may result in a loss of lubrication. While an excessively high oil level may result in oil slugging and possible damage to the compressor valves or excessive oil circulation. The oil level may vary considerably on start-up if liquid refrigerant is present in the crankcase. Therefore oil level should be checked after running the system for a while under stable conditions.

## Optional Accessories

### Discharge Temperature Control

R22 is a single-element refrigerant. Because of its characteristics at low evaporating temperatures and its high compression ratios, the temperature of compressed R22 gas becomes so high that it can cause damage to the compressor.

However, it is possible to use 2S, 3S, 4S and 6S compressors with R22 for low temperature applications (see Performance Data tables) when equipped with a DTC (Discharge Temperature Control) valve. The DTC valve senses the discharge temperature of cylinder head through a bulb, to control its opening/closing and liquid injection amount. As a result, the discharge temperature is controlled within the allowable range.

### Crankcase Heater

Crankcase heaters are intended to prevent liquid refrigerant from migrating to the compressor and mixing with the oil. The recommended oil temperature is 10°C - 70°C. The objective of the crankcase heater is to maintain the oil at a temperature that is higher than that of the coolest point in the system during the compressor off-cycle. The heater helps to prevent liquid slugging caused by oil foaming - and increased oil discharge - at compressor start-up. However, problems resulting from incorrect installation of the suction line cannot be prevented by the heater. The heater wattage has been selected to make over-heating of the oil impossible, provided the heaters are applied correctly. At low ambient temperatures, the heater wattage may not always be sufficient to prevent refrigerant from accumulating in the oil. In these cases, a pump-down cycle becomes necessary.

The oil in the crankcase could absorb a large or small amount of refrigerant depending on the pressure and temperature. When the compressor is out of service, the amount of refrigerant absorbed may be so high that the oil level in the compressor rises, creating the impression that the compressor has too much oil. When starting the compressor, the pressure in the crankcase decreases and the oil foams due to the vaporizing refrigerant. The pistons draw up the foam, and liquid slugging as well as an increased discharge of oil into the refrigerant circuit will occur.

### Oil Pressure Switch

Monitoring the actual oil differential pressure is an important criterion for the service life of the compressor. The oil pressure of compressors must be controlled by an oil-pressure switch which breaks the control circuit when the pressure difference between the oil pump outlet and the crankcase is too low. The switch must be properly selected and tamper proof. If the oil differential pressure drops below the minimum acceptable value, the compressor will be stopped after a 120-second delay. After resolving the problem the control has to be reset manually.

**Important Note: The use of an approved oil pressure switch is a condition of warranty!**



Specification for electro-mechanical oil pressure switches are as follows:

Cut-out pressure:  $0.63 \pm 0.14$  bar

Cut-in pressure:  $0.9 \pm 0.1$  bar

Time delay:  $120 \pm 15$  seconds

The following OPS are approved for use by Emerson Climate Technologies:

Manufacturer	Type
ALCO CONTROLS	FD 113 ZU
Ranco	P 30-5842
Danfoss	MP 55
Penn	P 45 NCA-12
Penn	P 45 NCB-3
Penn	P 45 NAA-3
Penn	P 45 NCA-9104

## Repair & Maintenance

### Changing Lubricant Oil

If the oil is black in colour, the crankcase should be drained and the oil replaced. If there has been a recent compressor failure on the system and the oil has an acidic odour, a fresh filter-drier should be installed in the suction line and left in the line for a period of 48 hours. If the oil is still discoloured, the suction line filter-drier element should again be changed. This should be continued until the oil is colourless and odourless. The filter-drier may then be replaced with a permanent type suction line filter.

### Handling Filter Driers

Every system opened for repair or installed in the field must have a liquid line filter-drier. Self-contained filter-driers or replaceable drier elements are factory-sealed for protection. If the seal is broken and the drier is exposed to air for a few minutes, the drier will pick up moisture from the atmosphere and will quickly lose much of its moisture removal ability. Driers are extremely sensitive to moisture. The system must be sealed and evacuated within few minutes of installation of a drier.

### Sealing Leakage

Check all capillary lines for wear and vibration. Tape or support as necessary. Check refrigerant line supports and braces to make sure they are not wearing or cutting the refrigerant line. Oil traces at flare nuts or valve connections indicate the possibility of a refrigerant leak. Wipe clean and tighten the flare nut.

### Electrical Burn-Out

#### Motor burn-out due to undersize contactors

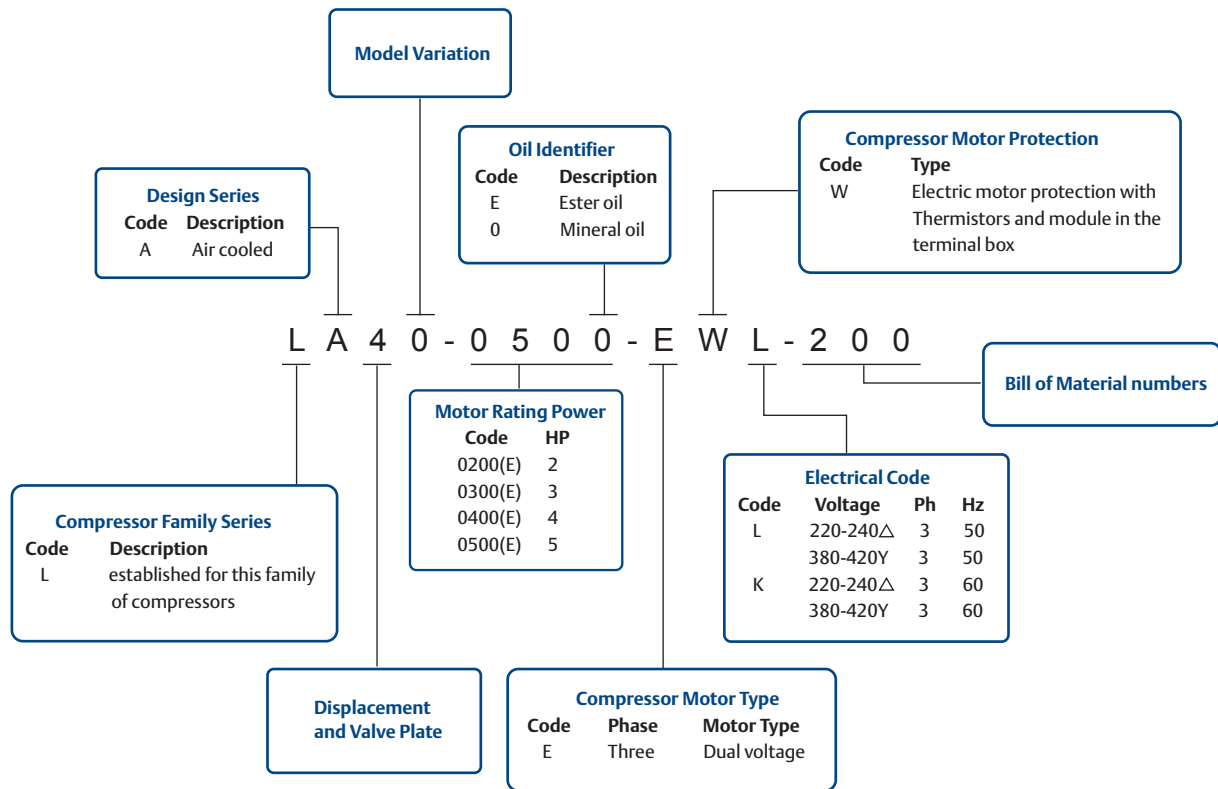
If contactors are undersized the contacts can weld. This could result in a complete motor burnout on all three phases despite the presence of a functioning protection system. If the application point of a compressor is changed, the contactor sizing should be rechecked.

#### Motor burn out due to by-passed protectors

If large sections of the windings are burned out, it must be assumed that the protector was either not connected or bypassed.

# L Series

## Model Nomenclature



## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C															
		-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7	10	12.5	
LA10-0200	Q	25			1.08	1.55	2.14	2.87	3.75	4.80	6.05	7.50	9.15	11.05	11.85	13.20	14.35
		30			0.94	1.39	1.94	2.63	3.45	4.45	5.65	7.00	8.55	10.35	11.15	12.40	13.55
		35			0.81	1.23	1.75	2.40	3.20	4.10	5.25	6.50	8.00	9.70	10.45	11.65	12.70
		40			0.68	1.07	1.57	2.17	2.90	3.80	4.85	6.05	7.45	9.05	9.80	10.90	11.95
		45			0.55	0.93	1.39	1.96	2.65	3.45	4.45	5.60	6.90	8.45	9.10	10.20	11.15
		50			0.43	0.79	1.22	1.75	2.40	3.15	4.10	5.15	6.40	7.85	8.50	9.50	10.40
		55					1.06	1.56	2.16	2.87	3.75	4.75	5.90	7.25	7.85		
	60					0.91	1.37	1.93	2.60	3.40	4.35	5.40					
	P	25			0.99	1.13	1.26	1.39	1.50	1.60	1.67	1.71	1.71	1.66	1.63	1.57	1.49
		30			0.97	1.12	1.27	1.42	1.56	1.69	1.79	1.86	1.90	1.90	1.88	1.84	1.79
		35			0.94	1.11	1.28	1.45	1.61	1.76	1.90	2.00	2.08	2.11	2.11	2.10	2.08
		40			0.91	1.09	1.27	1.46	1.65	1.83	1.99	2.13	2.24	2.31	2.33	2.34	2.34
		45			0.88	1.07	1.27	1.47	1.68	1.88	2.07	2.24	2.39	2.50	2.53	2.57	2.59
		50			0.84	1.04	1.25	1.48	1.71	1.93	2.15	2.34	2.52	2.67	2.71	2.78	2.81
55						1.24	1.48	1.72	1.97	2.21	2.44	2.64	2.82	2.89			
60					1.22	1.47	1.73	2.00	2.26	2.52	2.75						
LA20-0200	Q	25	0.63	1.00	1.51	2.17	3.00	4.00	5.15	6.55	8.20	10.05					
		30	0.52	0.87	1.35	1.96	2.74	3.70	4.80	6.15	7.70	9.45					
		35		0.75	1.19	1.77	2.49	3.40	4.45	5.70	7.20	8.90					
		40		0.63	1.04	1.58	2.26	3.10	4.10	5.30	6.70	8.30					
		45			0.89	1.39	2.03	2.81	3.75	4.90	6.25						
		50			0.75	1.21	1.80	2.54	3.45	4.50							
		55			0.61	1.04	1.59	2.28	3.10	4.15							
	P	25	0.88	1.05	1.23	1.42	1.62	1.80	1.97	2.10	2.21	2.27					
		30	0.85	1.03	1.23	1.44	1.65	1.87	2.06	2.24	2.38	2.48					
		35		1.00	1.21	1.44	1.68	1.92	2.15	2.36	2.54	2.68					
		40		0.97	1.19	1.44	1.70	1.96	2.22	2.46	2.68	2.87					
		45			1.17	1.43	1.71	2.00	2.28	2.56	2.81						
		50			1.13	1.41	1.71	2.02	2.33	2.64							
		55			1.09	1.39	1.70	2.03	2.37	2.71							
LA20-0300	Q	30			1.39	1.97	2.74	3.70	4.85	6.20	7.75	9.55	11.55	13.75	14.75	16.20	17.60
		35			1.22	1.76	2.49	3.40	4.50	5.75	7.25	8.95	10.85	12.95	13.85	15.30	16.60
		40			1.06	1.57	2.25	3.10	4.15	5.35	6.75	8.35	10.15	12.15	13.05	14.40	15.60
		45			0.90	1.38	2.02	2.82	3.80	4.95	6.25	7.80	9.50	11.40	12.20	13.50	14.65
		50			0.76	1.21	1.80	2.55	3.45	4.55	5.80	7.20	8.85	10.60	11.40	12.60	13.70
		55			0.63	1.05	1.60	2.30	3.15	4.15	5.35	6.65	8.20	9.90	10.60	11.75	12.75
		60					1.41	2.06	2.86	3.80	4.90	6.15	7.55	9.15	9.85		
	P	30			1.23	1.44	1.65	1.86	2.05	2.23	2.37	2.46	2.51	2.49	2.46	2.40	2.32
		35			1.22	1.44	1.67	1.91	2.13	2.34	2.51	2.65	2.74	2.76	2.76	2.72	2.67
		40			1.19	1.43	1.69	1.95	2.20	2.43	2.64	2.82	2.95	3.02	3.03	3.03	3.00
		45			1.17	1.42	1.69	1.97	2.25	2.52	2.76	2.97	3.14	3.26	3.29	3.31	3.31
		50			1.14	1.40	1.69	1.99	2.30	2.59	2.86	3.11	3.32	3.48	3.53	3.58	3.60
		55			1.10	1.38	1.69	2.01	2.33	2.65	2.96	3.24	3.48	3.68	3.75	3.83	3.88
		60					1.68	2.01	2.36	2.71	3.04	3.35	3.63	3.87	3.95		
LA40-0300	Q	25	1.06	1.65	2.41	3.35	4.55	5.95	7.60	9.60	11.85	14.45					
		30	0.90	1.46	2.18	3.10	4.20	5.55	7.10	9.00	11.15	13.65					
		35		1.27	1.95	2.80	3.85	5.10	6.65	8.40	10.50	12.85					
		40		1.08	1.72	2.53	3.50	4.70	6.15	7.85							
		45				2.26	3.20	4.35	5.70								
		50				2.00	2.88	3.95	5.25								
		55				1.75	2.57	3.60	4.80								
	P	25	1.20	1.42	1.67	1.92	2.17	2.42	2.64	2.84	3.01	3.12					
		30	1.18	1.42	1.68	1.96	2.24	2.52	2.80	3.05	3.26	3.44					
		35		1.41	1.69	1.99	2.30	2.62	2.94	3.23	3.51	3.75					
		40		1.39	1.68	2.01	2.35	2.71	3.07	3.41							
		45				2.02	2.40	2.79	3.18								
		50				2.03	2.43	2.86	3.29								
		55				2.03	2.46	2.91	3.39								

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C																	
		-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7	10	12.5			
LA40-0400	Q	30			2.24	3.10	4.20	5.60	7.20	9.10	11.30	13.75	16.50	19.50	20.80	22.90	24.70		
		35			1.99	2.80	3.85	5.15	6.70	8.50	10.55	12.85	15.50	18.30	19.60	21.50	23.20		
		40			1.76	2.52	3.50	4.70	6.15	7.85	9.80	12.00	14.45	17.20	18.40	20.20	21.80		
		45				2.26	3.20	4.30	5.70	7.30	9.10	11.20	13.50	16.10	17.20	18.90	20.40		
		50				2.01	2.87	3.95	5.25	6.75	8.45	10.40	12.60	15.00	16.00	17.70	19.10		
		55				1.78	2.58	3.60	4.80	6.20	7.80	9.65	11.70	13.95					
	P	30			1.71	1.98	2.26	2.54	2.80	3.04	3.24	3.39	3.49	3.51	3.49	3.44	3.37		
		35			1.71	2.00	2.31	2.62	2.92	3.20	3.45	3.66	3.81	3.90	3.91	3.90	3.87		
		40			1.71	2.02	2.35	2.69	3.03	3.35	3.65	3.91	4.12	4.27	4.31	4.34	4.35		
		45				2.03	2.39	2.76	3.13	3.49	3.84	4.14	4.41	4.62	4.68	4.76	4.80		
		50				2.04	2.42	2.82	3.22	3.62	4.01	4.37	4.69	4.96	5.05	5.15	5.25		
		55				2.05	2.45	2.87	3.31	3.74	4.17	4.58	4.95	5.30					
LA50-0400	Q	25	1.48	2.23	3.25	4.50	6.00	7.65	9.55										
		30	1.32	2.02	2.95	4.15	5.55	7.20	9.00										
		35	1.17	1.82	2.71	3.85	5.15	6.70	8.45										
		40	1.02	1.62	2.45	3.50	4.80	6.25	7.90										
		45			2.21	3.20	4.40	5.80	7.35										
		50			1.97	2.89	4.00	5.30	6.80										
	P	25	1.55	1.87	2.22	2.58	2.91	3.21	3.44										
		30	1.53	1.87	2.25	2.64	3.02	3.36	3.65										
		35	1.49	1.86	2.27	2.69	3.11	3.5	3.84										
		40	1.44	1.83	2.27	2.73	3.19	3.62	4.01										
		45			2.26	2.75	3.25	3.72	4.16										
		50			2.25	2.77	3.29	3.81	4.29										
55			2.22	2.76	3.33	3.88	4.41												

### Notes:

1. Capacity at 20°C suction gas temperature without liquid sub-cooling.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C															
		-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7	10	12.5	
LA10-020E	Q	20			1.52	2.10	2.81	3.65	4.70	5.90	7.30	8.95	10.85	13.00	13.95	15.50	16.80
		25			1.29	1.86	2.54	3.35	4.30	5.45	6.80	8.35	10.10	12.15	13.00	14.45	15.70
		30			1.05	1.60	2.25	3.05	3.95	5.00	6.25	7.70	9.35	11.25	12.10	13.40	14.60
		35			0.81	1.35	1.97	2.69	3.55	4.55	5.70	7.05	8.60	10.35	11.15	12.35	13.45
		40			0.57	1.09	1.67	2.35	3.15	4.05	5.15	6.40	7.80	9.45	10.15	11.30	12.35
		45				0.83	1.38	2.01	2.74	3.60	4.55	5.70	7.00	8.50	9.15	10.25	11.15
		50				0.58	1.09	1.68	2.34	3.10	4.00	5.05	6.20	7.60	8.20	9.15	
	55					0.81	1.34	1.94	2.63	3.45	4.35	5.40	6.65				
	P	20			0.93	1.08	1.22	1.35	1.46	1.55	1.61	1.64	1.62	1.57	1.53	1.46	1.39
		25			0.90	1.07	1.23	1.38	1.52	1.64	1.73	1.80	1.83	1.82	1.80	1.76	1.71
		30			0.86	1.05	1.23	1.40	1.57	1.72	1.85	1.95	2.02	2.05	2.05	2.04	2.02
		35			0.81	1.01	1.21	1.41	1.60	1.78	1.94	2.08	2.19	2.27	2.29	2.30	2.31
		40			0.74	0.96	1.18	1.40	1.62	1.83	2.03	2.20	2.35	2.47	2.51	2.55	2.58
		45				0.89	1.13	1.38	1.63	1.86	2.09	2.30	2.49	2.66	2.71	2.79	2.84
50					0.81	1.07	1.34	1.61	1.88	2.14	2.39	2.62	2.83	2.90	3.00		
55					0.99	1.28	1.58	1.88	2.17	2.46	2.73	2.97					
LA20-020E	Q	20	0.82	1.36	2.01	2.79	3.70	4.80	6.10								
		25	0.61	1.13	1.75	2.48	3.35	4.35	5.60								
		30		0.90	1.48	2.17	3.00	3.95	5.05								
		35		0.69	1.23	1.86	2.62	3.50	4.55								
		40			0.98	1.57	2.26	3.10	4.05								
		45			0.76	1.29	1.92	2.67	3.55								
		50				1.03	1.60	2.27	3.05								
	55				0.79	1.30	1.89	2.60									
	P	20	0.73	0.93	1.14	1.34	1.54	1.74	1.93								
		25	0.70	0.92	1.15	1.37	1.59	1.81	2.03								
		30		0.90	1.14	1.38	1.63	1.87	2.11								
		35		0.87	1.13	1.39	1.65	1.91	2.17								
		40			1.11	1.38	1.66	1.94	2.22								
		45			1.08	1.37	1.66	1.96	2.26								
50					1.34	1.65	1.97	2.29									
55				1.31	1.64	1.97	2.31										
LA20-030E	Q	20		1.58	2.25	3.05	4.05	5.25	6.65	8.25	10.15	12.30	14.70	17.40	18.60		
		25		1.35	1.99	2.76	3.70	4.80	6.10	7.60	9.40	11.40	13.65	16.30	17.40		
		30		1.13	1.73	2.46	3.35	4.35	5.60	7.00	8.65	10.50	12.65	15.10	16.10		
		35		0.92	1.49	2.17	3.00	3.95	5.05	6.40	7.90	9.65	11.65	13.90	14.90		
		40		0.72	1.25	1.88	2.63	3.50	4.55	5.80	7.20	8.80	10.65	12.80	13.70		
		45		0.51	1.02	1.60	2.30	3.10	4.05	5.20	6.50	8.00	9.70	11.65	12.50		
		50			0.79	1.33	1.96	2.71	3.60	4.60	5.80	7.15	8.75	10.50	11.30		
	55			0.56	1.06	1.63	2.31	3.10	4.00	5.10	6.35						
	P	20		1.20	1.40	1.58	1.74	1.86	1.96	2.02	2.05	2.02	1.95	1.83	1.76		
		25		1.18	1.41	1.62	1.81	1.98	2.13	2.24	2.31	2.35	2.34	2.28	2.24		
		30		1.15	1.40	1.64	1.86	2.07	2.26	2.41	2.54	2.63	2.68	2.69	2.68		
		35		1.09	1.36	1.63	1.89	2.13	2.36	2.56	2.73	2.88	2.98	3.05	3.07		
		40		1.02	1.32	1.61	1.89	2.17	2.43	2.67	2.89	3.08	3.24	3.37	3.41		
		45		0.94	1.25	1.56	1.87	2.18	2.47	2.75	3.01	3.25	3.47	3.65	3.71		
50				1.17	1.50	1.83	2.16	2.49	2.80	3.11	3.39	3.65	3.88	3.97			
55			1.08	1.42	1.77	2.13	2.48	2.83	3.17	3.49							
LA40-030E	Q	20		1.41	2.20	3.20	4.35	5.75	7.40	9.35							
		25		1.12	1.88	2.81	3.95	5.25	6.80	8.65							
		30		0.83	1.56	2.44	3.50	4.75	6.25	7.95							
		35			1.24	2.07	3.05	4.25	5.65	7.25							
		40			0.93	1.70	2.62	3.75	5.00	6.55							
		45				1.34	2.19	3.20	4.40	5.80							
		50				1.00	1.77	2.70	3.80	5.10							
	55					1.37	2.20	3.20	4.35								
	P	20		1.21	1.48	1.75	2.03	2.29	2.54	2.77							
		25		1.13	1.43	1.74	2.05	2.35	2.65	2.93							
		30		1.03	1.36	1.70	2.05	2.39	2.74	3.07							
		35			1.26	1.64	2.03	2.42	2.81	3.19							
		40			1.15	1.56	1.98	2.42	2.85	3.29							
		45				1.45	1.91	2.39	2.88	3.37							
50					1.31	1.82	2.34	2.88	3.42								
55					1.70	2.26	2.85	3.45									

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C															
		-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7	10	12.5	
LA40-040E	Q	20	2.26	3.15	4.25	5.60	7.25	9.15	11.40	14.00	17.00	20.40	24.20	25.90			
		25	1.97	2.82	3.85	5.15	6.65	8.45	10.60	13.05	15.90	19.10	22.80	24.30			
		30	1.69	2.48	3.45	4.65	6.10	7.80	9.80	12.10	14.80	17.80	21.30	22.80			
		35	1.40	2.15	3.05	4.20	5.50	7.10	9.00	11.15	13.70	16.60	19.80	21.30			
		40	1.13	1.82	2.67	3.70	4.95	6.40	8.15	10.20	12.55	15.30	18.40	19.70			
		45	0.86	1.49	2.27	3.20	4.35	5.70	7.35	9.25	11.45	13.95	16.90	18.10			
		50		1.17	1.88	2.74	3.80	5.05	6.50	8.25	10.30	12.65	15.40	16.50			
	55		0.85	1.49	2.26	3.20	4.35	5.65	7.25	9.15							
	P	20	1.64	1.88	2.14	2.39	2.63	2.87	3.08	3.27	3.43	3.56	3.64	3.66			
		25	1.60	1.86	2.13	2.41	2.67	2.93	3.17	3.38	3.57	3.72	3.83	3.86			
		30	1.56	1.85	2.15	2.45	2.75	3.04	3.31	3.56	3.77	3.96	4.10	4.15			
		35	1.50	1.83	2.17	2.51	2.84	3.17	3.48	3.77	4.03	4.26	4.45	4.51			
		40	1.40	1.77	2.16	2.55	2.93	3.31	3.67	4.01	4.32	4.60	4.84	4.92			
		45	1.24	1.67	2.11	2.55	2.99	3.42	3.84	4.24	4.61	4.95	5.25	5.35			
50			1.49	1.99	2.49	3.00	3.50	3.98	4.45	4.89	5.30	5.65	5.80				
LA50-040E	Q	25	1.62	2.55	3.70	5.05	6.65	8.60	10.80								
		30	1.28	2.16	3.25	4.50	6.05	7.85	9.95								
		35	0.96	1.79	2.79	4.00	5.45	7.10	9.05								
		40		1.42	2.36	3.50	4.80	6.35	8.20								
		45		1.07	1.93	2.95	4.20	5.60	7.30								
		50			1.52	2.46	3.55	4.90	6.40								
		55			1.13	1.97	2.95	4.15	5.55								
	P	25	1.48	1.84	2.21	2.57	2.94	3.29	3.62								
		30	1.40	1.78	2.19	2.60	3.01	3.41	3.80								
		35	1.28	1.71	2.14	2.60	3.06	3.52	3.97								
		40		1.60	2.08	2.57	3.08	3.60	4.11								
		45		1.47	1.99	2.53	3.08	3.65	4.22								
		50			1.87	2.45	3.06	3.68	4.31								
		55			1.73	2.35	3.01	3.68	4.37								

**Notes:**

1.Capacity at 20°C suction gas temperature without liquid sub-cooling.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-20	-15	-10	-5	0	5	7	10	12.5	
LA10-020E	Q	30	1.94	2.59	3.35	4.30	5.35	6.60	7.15	8.00	8.80
		35	1.73	2.34	3.05	3.90	4.95	6.10	6.60	7.45	8.20
		40	1.54	2.11	2.78	3.60	4.50	5.60	6.10	6.85	7.55
		45	1.36	1.89	2.52	3.25	4.15	5.15	5.60	6.30	6.95
		50	1.19	1.69	2.26	2.95	3.75	4.70	5.10	5.75	6.35
		55	1.04	1.50	2.03	2.65	3.40	4.25	4.60	5.20	5.75
		60	0.90	1.33	1.81	2.37	3.05	3.80	4.15	4.70	5.20
	62	0.84	1.26	1.73	2.27	2.90	3.65	3.95	4.50	4.95	
	P	30	1.00	1.09	1.17	1.23	1.27	1.30	1.30	1.30	1.29
		35	1.01	1.11	1.21	1.30	1.37	1.42	1.44	1.45	1.46
		40	1.02	1.14	1.26	1.37	1.46	1.54	1.56	1.60	1.62
		45	1.03	1.16	1.30	1.43	1.54	1.65	1.68	1.73	1.77
		50	1.04	1.18	1.33	1.48	1.62	1.75	1.79	1.86	1.91
		55	1.04	1.20	1.36	1.53	1.69	1.84	1.90	1.98	2.05
60		1.05	1.21	1.39	1.57	1.75	1.92	1.99	2.09	2.17	
62	1.06	1.22	1.40	1.58	1.77	1.95	2.02	2.13	2.21		
LA20-020E	Q	30	2.66	3.50	4.50	5.65	7.05	8.65	9.35	10.50	11.50
		35	2.42	3.20	4.15	5.25	6.55	8.05	8.75	9.80	10.80
		40	2.17	2.90	3.80	4.85	6.05	7.50	8.10	9.15	10.05
		45	1.94	2.64	3.45	4.45	5.60	6.90	7.50	8.45	9.35
		50	1.70	2.36	3.15	4.05	5.10	6.35	6.90	7.80	8.60
		55	1.48	2.10	2.82	3.65	4.65	5.80	6.30	7.10	7.85
		60	1.26	1.84	2.51	3.30	4.20	5.25	5.70	6.45	7.15
	62	1.17	1.74	2.39	3.15	4.00	5.00	5.45	6.20	6.90	
	P	30	1.16	1.30	1.41	1.50	1.57	1.60	1.60	1.59	1.58
		35	1.20	1.35	1.49	1.61	1.70	1.76	1.78	1.79	1.79
		40	1.23	1.40	1.56	1.71	1.82	1.92	1.94	1.97	1.99
		45	1.26	1.44	1.62	1.79	1.93	2.05	2.09	2.14	2.17
		50	1.27	1.47	1.67	1.86	2.03	2.17	2.23	2.29	2.34
		55	1.28	1.50	1.71	1.92	2.11	2.28	2.34	2.43	2.49
60		1.29	1.51	1.74	1.96	2.17	2.37	2.44	2.54	2.61	
62	1.29	1.51	1.74	1.97	2.19	2.40	2.48	2.58	2.65		
LA40-030E	Q	30	3.85	5.05	6.45	8.15	10.15	12.45	13.45	15.10	16.60
		35	3.50	4.65	6.00	7.60	9.45	11.65	12.60	14.15	15.60
		40	3.15	4.20	5.50	7.00	8.80	10.85	11.75	13.20	14.55
		45	2.81	3.85	5.05	6.45	8.10	10.05	10.90	12.30	13.55
		50	2.48	3.45	4.55	5.90	7.45	9.25	10.05	11.35	12.50
		55	2.16	3.05	4.10	5.35	6.80	8.45	9.20	10.40	11.50
		60	1.85	2.71	3.70	4.80	6.15	7.70	8.35	9.45	10.45
	62	1.73	2.57	3.50	4.60	5.90	7.35	8.05	9.10	10.05	
	P	30	1.77	1.96	2.13	2.27	2.39	2.48	2.50	2.52	2.53
		35	1.81	2.03	2.24	2.43	2.60	2.74	2.78	2.84	2.87
		40	1.85	2.10	2.35	2.58	2.79	2.98	3.05	3.14	3.21
		45	1.88	2.16	2.44	2.72	2.98	3.22	3.31	3.43	3.53
		50	1.90	2.21	2.53	2.84	3.15	3.44	3.55	3.72	3.84
		55	1.92	2.25	2.60	2.96	3.31	3.65	3.79	3.98	4.14
60		1.93	2.28	2.66	3.05	3.45	3.85	4.01	4.24	4.41	
62	1.93	2.29	2.68	3.09	3.51	3.92	4.09	4.34	4.51		
LA50-040E	Q	30	5.05	6.50	8.25	10.35	12.75	15.60	16.80	18.80	20.60
		35	4.65	6.05	7.70	9.65	11.95	14.65	15.80	17.70	19.40
		40	4.25	5.60	7.15	9.00	11.15	13.70	14.80	16.60	18.20
		45	3.90	5.15	6.60	8.35	10.35	12.75	13.80	15.50	17.00
		50	3.50	4.70	6.05	7.70	9.60	11.80	12.80	14.35	15.80
		55	3.15	4.25	5.55	7.05	8.80	10.85	11.80	13.25	14.60
		60	2.79	3.85	5.05	6.45	8.05	9.95	10.75	12.15	13.45
	62	2.65	3.70	4.85	6.20	7.75	9.55	10.35	11.70	13.00	
	P	30	2.14	2.37	2.60	2.79	2.96	3.09	3.14	3.18	3.21
		35	2.21	2.48	2.74	2.98	3.20	3.38	3.44	3.52	3.58
		40	2.27	2.57	2.87	3.15	3.42	3.65	3.73	3.85	3.93
		45	2.33	2.66	2.99	3.31	3.62	3.90	4.01	4.15	4.27
		50	2.39	2.74	3.10	3.46	3.81	4.14	4.26	4.44	4.58
		55	2.44	2.81	3.20	3.59	3.98	4.35	4.50	4.71	4.87
60		2.48	2.87	3.28	3.70	4.13	4.55	4.71	4.95	5.11	
62	2.50	2.89	3.31	3.74	4.18	4.62	4.79	5.05	5.21		

**Notes:**

1. Capacity at 20°C suction gas temperature without liquid sub-cooling.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C															
		-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7	10	12.5	
LA10-0200	Q	25			1.28	1.83	2.53	3.40	4.45	5.70	7.15	8.85	10.80	13.05	14.00	15.60	17.00
		30			1.12	1.64	2.29	3.10	4.10	5.25	6.65	8.25	10.10	12.25	13.15	14.65	16.00
		35			0.96	1.45	2.07	2.83	3.75	4.85	6.15	7.70	9.45	11.45	12.35	13.75	15.00
		40			0.80	1.27	1.85	2.56	3.45	4.45	5.70	7.15	8.80	10.70	11.55	12.90	14.10
		45			0.65	1.09	1.64	2.31	3.15	4.10	5.25	6.60	8.15	9.95	10.75	12.05	13.15
		50			0.51	0.93	1.44	2.07	2.83	3.75	4.80	6.10	7.55	9.25	10.00	11.20	12.25
		55					1.25	1.84	2.54	3.40	4.40	5.60	6.95	8.55	9.25		
	60					1.08	1.62	2.28	3.05	4.00	5.10	6.40					
	62					1.01	1.54	2.18	2.95	3.85	4.90	6.15					
	P	25			1.19	1.35	1.51	1.67	1.80	1.92	2.01	2.05	2.00	1.96	1.88	1.79	
		30			1.16	1.34	1.53	1.71	1.88	2.03	2.15	2.24	2.28	2.28	2.26	2.21	2.15
		35			1.13	1.33	1.53	1.74	1.93	2.12	2.28	2.40	2.49	2.54	2.54	2.52	2.49
		40			1.09	1.31	1.53	1.76	1.98	2.19	2.39	2.56	2.69	2.77	2.80	2.81	2.81
		45			1.05	1.28	1.52	1.77	2.02	2.26	2.49	2.69	2.86	3.00	3.04	3.08	3.10
50				1.01	1.25	1.50	1.77	2.05	2.32	2.57	2.81	3.02	3.20	3.26	3.33	3.38	
55						1.48	1.77	2.07	2.36	2.65	2.92	3.17	3.39	3.46			
60					1.46	1.76	2.08	2.40	2.71	3.02	3.30						
62					1.45	1.76	2.08	2.41	2.74	3.05	3.35						
LA20-0200	Q	25	0.74	1.18	1.78	2.56	3.55	4.70	6.10	7.75	9.65	11.85					
		30	0.62	1.03	1.59	2.32	3.25	4.35	5.70	7.25	9.05	11.15					
		35		0.88	1.40	2.09	2.95	4.00	5.25	6.75	8.50	10.50					
		40		0.74	1.22	1.86	2.66	3.65	4.85	6.25	7.90	9.80					
		45			1.05	1.64	2.39	3.30	4.45	5.80	7.35						
		50			0.88	1.43	2.13	3.00	4.05	5.30							
		55			0.72	1.22	1.87	2.69	3.70	4.85							
	P	25	1.05	1.25	1.48	1.71	1.94	2.16	2.36	2.53	2.65	2.72					
		30	1.01	1.23	1.47	1.73	1.99	2.24	2.47	2.68	2.86	2.98					
		35		1.20	1.46	1.73	2.02	2.30	2.58	2.83	3.05	3.22					
		40		1.16	1.43	1.73	2.04	2.36	2.67	2.96	3.22	3.44					
		45			1.40	1.72	2.05	2.40	2.74	3.07	3.37						
		50			1.36	1.70	2.05	2.42	2.80	3.17							
		55			1.31	1.66	2.04	2.44	2.84	3.25							
LA20-0300	Q	30			1.64	2.32	3.25	4.35	5.70	7.30	9.15	11.25	13.60	16.20	17.40	19.20	20.70
		35			1.44	2.08	2.95	4.00	5.30	6.80	8.55	10.55	12.80	15.30	16.40	18.10	19.50
		40			1.25	1.85	2.65	3.65	4.90	6.30	7.95	9.85	12.00	14.35	15.40	17.00	18.40
		45			1.07	1.63	2.38	3.35	4.50	5.85	7.40	9.20	11.20	13.45	14.40	15.90	17.30
		50			0.90	1.43	2.13	3.00	4.10	5.35	6.85	8.50	10.40	12.55	13.45	14.90	16.20
		55			0.74	1.23	1.89	2.72	3.70	4.90	6.30	7.90	9.65	11.65	12.50	13.85	15.10
		60					1.66	2.43	3.35	4.50	5.80	7.25	8.95	10.80	11.60		
	62					1.58	2.33	3.25	4.30	5.55	7.00	8.65	10.45	11.25			
	P	30			1.48	1.72	1.98	2.23	2.46	2.67	2.84	2.96	3.01	2.99	2.95	2.88	2.79
		35			1.46	1.73	2.01	2.29	2.56	2.80	3.01	3.18	3.28	3.32	3.31	3.27	3.21
		40			1.43	1.72	2.03	2.33	2.64	2.92	3.17	3.38	3.54	3.62	3.64	3.63	3.61
		45			1.40	1.71	2.03	2.37	2.70	3.02	3.31	3.57	3.77	3.91	3.95	3.98	3.98
		50			1.36	1.69	2.03	2.39	2.76	3.11	3.44	3.73	3.98	4.17	4.23	4.29	4.33
		55			1.32	1.66	2.03	2.41	2.80	3.18	3.55	3.88	4.18	4.42	4.50	4.59	4.65
60						2.01	2.42	2.83	3.25	3.65	4.02	4.36	4.65	4.74			
62					2.00	2.42	2.84	3.27	3.68	4.07	4.43	4.73	4.84				
LA40-0300	Q	25	1.25	1.95	2.85	4.00	5.35	7.00	9.00	11.30	14.00	17.00					
		30	1.06	1.72	2.57	3.65	4.95	6.55	8.40	10.60	13.15	16.10					
		35		1.49	2.30	3.30	4.55	6.05	7.85	9.95	12.35	15.20					
		40		1.27	2.03	3.00	4.15	5.55	7.25	9.25							
		45			2.66	3.75	5.10	6.70									
		50			2.36	3.40	4.65	6.20									
		55			2.06	3.05	4.25	5.65									
	P	25	1.44	1.71	2.00	2.30	2.61	2.90	3.17	3.41	3.61	3.75					
		30	1.42	1.70	2.02	2.35	2.69	3.03	3.35	3.65	3.92	4.13					
		35		1.69	2.02	2.38	2.76	3.15	3.52	3.88	4.21	4.50					
		40		1.66	2.02	2.41	2.82	3.25	3.68	4.09							
		45			2.43	2.88	3.34	3.82									
		50			2.43	2.92	3.43	3.95									
		55			2.43	2.95	3.50	4.07									



## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C																
		-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7	10	12.5		
LA40-0400	Q	30			2.64	3.65	4.95	6.60	8.50	10.75	13.30	16.20	19.40	23.00	24.60	27.00	29.10	
		35			2.35	3.30	4.55	6.05	7.90	10.00	12.45	15.20	18.20	21.70	23.10	25.40	27.40	
		40			2.08	3.00	4.15	5.55	7.30	9.30	11.60	14.15	17.10	20.30	21.70	23.80	25.70	
		45				2.66	3.75	5.10	6.70	8.60	10.75	13.20	15.90	19.00	20.30	22.30	24.10	
		50				2.37	3.40	4.65	6.15	7.95	9.95	12.25	14.85	17.70	18.90	20.90	22.60	
		55				2.10	3.05	4.25	5.65	7.30	9.20	11.35	13.80					
		60					2.73	3.85	5.15	6.70	8.50							
	62			2.64	3.65	4.95	6.60	8.50	10.75	13.30	16.20	19.40	23.00	24.60	27.00	29.10		
	P	30			2.05	2.37	2.71	3.04	3.36	3.65	3.89	4.07	4.18	4.21	4.19	4.13	4.05	
		35			2.05	2.40	2.77	3.14	3.51	3.85	4.15	4.39	4.57	4.68	4.69	4.68	4.65	
		40			2.05	2.43	2.82	3.23	3.64	4.03	4.38	4.69	4.94	5.10	5.15	5.20	5.20	
		45				2.44	2.87	3.31	3.76	4.19	4.60	4.97	5.30	5.55	5.60	5.70	5.75	
		50				2.45	2.90	3.38	3.87	4.35	4.81	5.25	5.60	5.95	6.05	6.20	6.30	
		55				2.46	2.94	3.45	3.97	4.49	5.00	5.50	5.95					
60						2.97	3.51	4.07	4.63	5.20								
62					2.99	3.53	4.11	4.69	5.25									

**Notes:**

1. Capacity at 20°C suction gas temperature without liquid sub-cooling.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C															
		-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7	10	12.5	
LA10-020E	Q	20			1.80	2.48	3.30	4.30	5.55	6.95	8.60	10.55	12.80	15.30	16.50	18.20	19.80
		25			1.52	2.19	3.00	3.95	5.10	6.45	8.00	9.85	11.90	14.30	15.40	17.00	18.50
		30			1.24	1.89	2.66	3.55	4.65	5.90	7.35	9.10	11.05	13.30	14.25	15.80	17.20
		35			0.96	1.59	2.32	3.20	4.20	5.35	6.70	8.30	10.15	12.20	13.15	14.60	15.90
		40			0.68	1.28	1.98	2.78	3.70	4.80	6.05	7.50	9.20	11.15	12.00	13.35	14.55
		45				0.98	1.63	2.38	3.25	4.25	5.40	6.75	8.25	10.05	10.80	12.05	13.20
		50				0.68	1.29	1.98	2.76	3.65	4.70	5.95	7.35	8.95	9.65	10.80	
	55					0.96	1.59	2.29	3.10	4.05	5.15	6.40	7.85				
	P	20			1.12	1.30	1.47	1.62	1.75	1.86	1.93	1.96	1.95	1.88	1.84	1.75	1.67
		25			1.09	1.28	1.48	1.66	1.83	1.97	2.08	2.16	2.19	2.18	2.16	2.11	2.05
		30			1.04	1.25	1.47	1.68	1.88	2.06	2.22	2.34	2.42	2.46	2.46	2.45	2.42
		35			0.97	1.21	1.45	1.69	1.92	2.14	2.33	2.50	2.63	2.72	2.75	2.77	2.77
		40			0.89	1.15	1.42	1.68	1.95	2.20	2.43	2.64	2.82	2.97	3.01	3.07	3.10
		45				1.07	1.36	1.66	1.95	2.24	2.51	2.77	2.99	3.19	3.26	3.34	3.41
50					0.97	1.29	1.61	1.93	2.26	2.57	2.87	3.14	3.39	3.48	3.60		
55					1.19	1.54	1.90	2.26	2.61	2.95	3.27	3.57					
LA20-020E	Q	20	0.97	1.61	2.38	3.30	4.40	5.70	7.20								
		25	0.72	1.33	2.06	2.95	3.95	5.15	6.60								
		30		1.07	1.75	2.56	3.50	4.65	5.95								
		35		0.81	1.45	2.20	3.10	4.15	5.35								
		40			1.16	1.85	2.67	3.65	4.75								
		45			0.89	1.52	2.27	3.15	4.20								
		50				1.22	1.89	2.68	3.60								
	55				0.94	1.53	2.23	3.05									
	P	20	0.87	1.12	1.37	1.61	1.85	2.09	2.31								
		25	0.84	1.11	1.37	1.64	1.91	2.17	2.43								
		30		1.08	1.37	1.66	1.95	2.24	2.53								
		35		1.05	1.35	1.66	1.98	2.29	2.61								
		40			1.33	1.66	1.99	2.33	2.67								
		45			1.29	1.64	1.99	2.35	2.72								
50					1.61	1.98	2.36	2.75									
55				1.57	1.96	2.36	2.77										
LA20-030E	Q	20		1.86	2.65	3.60	4.80	6.20	7.85	9.75	11.95	14.50	17.40	20.60	22.00		
		25		1.60	2.34	3.25	4.35	5.65	7.20	9.00	11.05	13.45	16.10	19.20	20.50		
		30		1.34	2.05	2.90	3.95	5.15	6.60	8.25	10.20	12.40	14.95	17.80	19.00		
		35		1.09	1.76	2.56	3.50	4.65	6.00	7.55	9.35	11.40	13.75	16.40	17.60		
		40		0.85	1.48	2.22	3.10	4.15	5.40	6.80	8.50	10.40	12.60	15.10	16.20		
		45		0.61	1.20	1.89	2.71	3.65	4.80	6.10	7.65	9.40	11.45	13.75	14.75		
		50			0.93	1.57	2.32	3.20	4.20	5.40	6.80	8.45	10.30	12.40	13.35		
	55			0.66	1.25	1.93	2.72	3.65	4.75	6.00	7.45						
	P	20		1.44	1.68	1.90	2.08	2.24	2.36	2.43	2.46	2.43	2.34	2.19	2.11		
		25		1.42	1.69	1.94	2.17	2.38	2.55	2.68	2.77	2.82	2.81	2.74	2.69		
		30		1.38	1.67	1.96	2.23	2.48	2.71	2.90	3.05	3.16	3.22	3.23	3.21		
		35		1.31	1.64	1.96	2.27	2.56	2.83	3.07	3.28	3.45	3.58	3.66	3.68		
		40		1.23	1.58	1.93	2.27	2.60	2.91	3.20	3.47	3.70	3.89	4.04	4.09		
		45		1.13	1.50	1.87	2.25	2.61	2.96	3.30	3.62	3.90	4.16	4.38	4.45		
50				1.41	1.80	2.20	2.59	2.99	3.36	3.73	4.07	4.38	4.66	4.76			
55			1.30	1.71	2.13	2.55	2.98	3.39	3.80	4.19							
LA40-030E	Q	20	1.66	2.60	3.75	5.15	6.80	8.75	11.00								
		25	1.32	2.22	3.30	4.65	6.20	8.05	10.20								
		30	0.98	1.84	2.88	4.15	5.60	7.35	9.40								
		35		1.46	2.44	3.60	5.00	6.65	8.55								
		40		1.09	2.01	3.10	4.40	5.90	7.70								
		45			1.58	2.59	3.80	5.20	6.85								
		50			1.17	2.09	3.20	4.50	6.00								
	55				1.61	2.60	3.80	5.15									
	P	20	1.45	1.77	2.11	2.43	2.75	3.05	3.33								
		25	1.35	1.72	2.09	2.46	2.82	3.18	3.52								
		30	1.23	1.63	2.04	2.46	2.87	3.28	3.68								
		35		1.52	1.97	2.43	2.90	3.37	3.83								
		40		1.37	1.87	2.38	2.90	3.42	3.95								
		45			1.74	2.30	2.87	3.45	4.04								
50				1.57	2.18	2.81	3.45	4.10									
55				2.03	2.72	3.42	4.14										

## Performance Data

# 60 Hz

Q=Capacity (kW) P=Power input (kW)

Model	Con. Temp. °C	Evaporating Temperature °C															
		-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	7	10	12.5	
LA40-040E	Q	20	2.67	3.70	5.05	6.60	8.55	10.80	13.45	16.50	20.00	24.00	28.60	30.50			
		25	2.33	3.35	4.55	6.05	7.85	10.00	12.50	15.40	18.70	22.60	26.90	28.70			
		30	1.99	2.95	4.10	5.50	7.20	9.20	11.55	14.30	17.50	21.10	25.10	26.90			
		35	1.66	2.54	3.60	4.95	6.50	8.40	10.60	13.15	16.10	19.50	23.40	25.10			
		40	1.33	2.15	3.15	4.35	5.85	7.55	9.65	12.05	14.80	18.00	21.70	23.30			
		45	1.01	1.76	2.68	3.80	5.15	6.75	8.65	10.90	13.50	16.50	19.90	21.40			
		50		1.38	2.22	3.25	4.45	5.95	7.70	9.75	12.15						
	55		1.01	1.76	2.67	3.75	5.10	6.70									
	P	20	1.97	2.26	2.56	2.86	3.16	3.44	3.70	3.93	4.12	4.27	4.37	4.39			
		25	1.92	2.23	2.56	2.89	3.21	3.51	3.80	4.06	4.28	4.46	4.59	4.63			
		30	1.87	2.22	2.58	2.94	3.30	3.64	3.97	4.27	4.53	4.75	4.92	4.98			
		35	1.80	2.19	2.60	3.01	3.41	3.80	4.18	4.52	4.84	5.10	5.35	5.40			
		40	1.68	2.13	2.59	3.05	3.52	3.97	4.40	4.81	5.20	5.50	5.80	5.90			
		45	1.49	2.00	2.53	3.06	3.59	4.11	4.61	5.10	5.55	5.95	6.30	6.45			
50			1.78	2.38	2.99	3.60	4.20	4.78	5.35	5.85							
55			1.45	2.14	2.83	3.53	4.22	4.89									

**Notes:**

1. Capacity at 20°C suction gas temperature without liquid sub-cooling.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-20	-15	-10	-5	0	5	7	10	12.5	
LA10-020E	Q	30	2.29	3.05	3.95	5.05	6.30	7.75	8.40	9.45	10.40
		35	2.05	2.76	3.60	4.65	5.80	7.20	7.80	8.75	9.65
		40	1.82	2.49	3.30	4.25	5.35	6.60	7.20	8.10	8.95
		45	1.60	2.23	2.95	3.85	4.85	6.05	6.60	7.45	8.20
		50	1.41	1.99	2.67	3.50	4.40	5.50	6.00	6.80	7.50
		55	1.22	1.77	2.40	3.15	4.00	5.00	5.45	6.15	6.80
		60	1.06	1.56	2.14	2.80	3.60	4.50	4.90	5.55	6.10
	62	1.00	1.49	2.04	2.68	3.40	4.30	4.65	5.30	5.85	
	P	30	1.19	1.30	1.40	1.47	1.53	1.56	1.56	1.56	1.55
		35	1.21	1.34	1.46	1.56	1.64	1.71	1.72	1.74	1.75
		40	1.22	1.37	1.51	1.64	1.75	1.85	1.88	1.92	1.94
		45	1.23	1.39	1.56	1.71	1.85	1.98	2.02	2.08	2.12
		50	1.24	1.42	1.60	1.77	1.94	2.10	2.15	2.23	2.29
		55	1.25	1.44	1.64	1.83	2.02	2.21	2.28	2.38	2.45
60		1.26	1.46	1.67	1.88	2.10	2.31	2.39	2.51	2.60	
62	1.27	1.46	1.68	1.90	2.12	2.34	2.43	2.56	2.66		
LA20-020E	Q	30	3.15	4.15	5.30	6.70	8.30	10.20	11.05	12.40	13.60
		35	2.85	3.80	4.90	6.20	7.75	9.50	10.30	11.60	12.70
		40	2.57	3.45	4.50	5.70	7.15	8.85	9.60	10.80	11.85
		45	2.29	3.10	4.10	5.25	6.60	8.15	8.85	10.00	11.00
		50	2.01	2.79	3.70	4.75	6.05	7.50	8.15	9.20	10.15
		55	1.75	2.48	3.35	4.30	5.50	6.85	7.45	8.40	9.30
		60	1.49	2.18	2.95	3.85	4.95	6.15	6.70	7.60	8.40
	62	1.39	2.06	2.82	3.70	4.70	5.90	6.45	7.30	8.00	
	P	30	1.40	1.56	1.69	1.80	1.88	1.92	1.92	1.91	1.89
		35	1.44	1.62	1.79	1.93	2.04	2.12	2.14	2.15	2.15
		40	1.48	1.68	1.88	2.05	2.19	2.30	2.33	2.37	2.39
		45	1.51	1.73	1.95	2.15	2.32	2.46	2.51	2.57	2.61
		50	1.53	1.77	2.01	2.23	2.44	2.61	2.67	2.75	2.81
		55	1.54	1.80	2.05	2.30	2.53	2.74	2.81	2.91	2.98
60		1.54	1.81	2.08	2.35	2.61	2.84	2.93	3.05	3.13	
62	1.54	1.81	2.09	2.37	2.63	2.88	2.97	3.10	3.18		
LA40-030E	Q	30	4.55	5.95	7.65	9.65	11.95	14.70	15.90	17.80	19.50
		35	4.10	5.45	7.05	8.95	11.15	13.75	14.90	16.70	18.40
		40	3.70	5.00	6.50	8.25	10.35	12.80	13.85	15.60	17.20
		45	3.30	4.50	5.95	7.60	9.55	11.85	12.85	14.50	16.00
		50	2.95	4.05	5.40	6.95	8.80	10.90	11.85	13.40	14.75
		55	2.55	3.60	4.85	6.30	8.00	10.00	10.85	12.30	13.55
		60	2.19	3.20	4.35	5.70	7.25	9.05	9.85	11.15	12.30
	62	2.04	3.05	4.15	5.45	6.95	8.70	9.45	10.75	11.85	
	P	30	2.13	2.35	2.55	2.73	2.87	2.97	3.00	3.03	3.03
		35	2.18	2.44	2.69	2.92	3.12	3.28	3.34	3.40	3.45
		40	2.22	2.52	2.82	3.10	3.35	3.58	3.66	3.77	3.85
		45	2.26	2.59	2.93	3.26	3.57	3.86	3.97	4.12	4.24
		50	2.29	2.65	3.03	3.41	3.78	4.13	4.27	4.46	4.61
		55	2.30	2.70	3.12	3.55	3.97	4.38	4.55	4.78	4.97
60		2.32	2.74	3.19	3.67	4.14	4.62	4.81	5.10	5.30	
62	2.32	2.75	3.22	3.71	4.21	4.71	4.91	5.20	5.40		

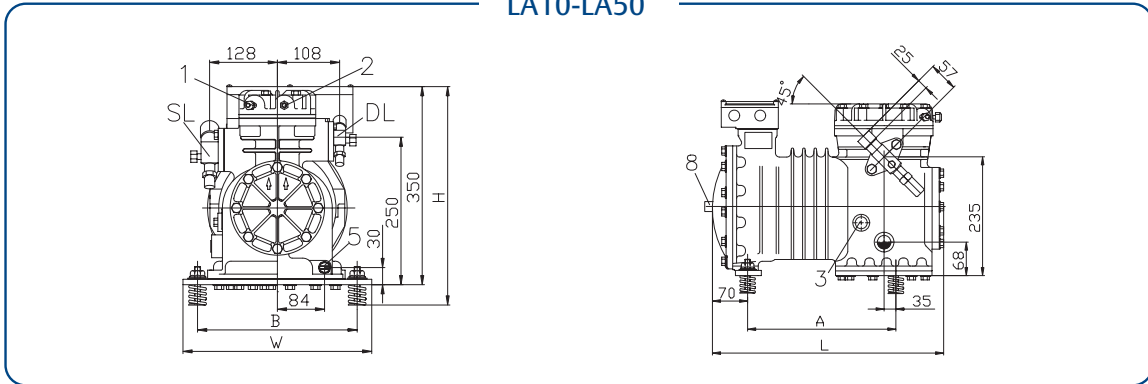
**Notes:**

1. Capacity at 20°C suction gas temperature without liquid sub-cooling.

# L Series

## Dimensions

LA10-LA50

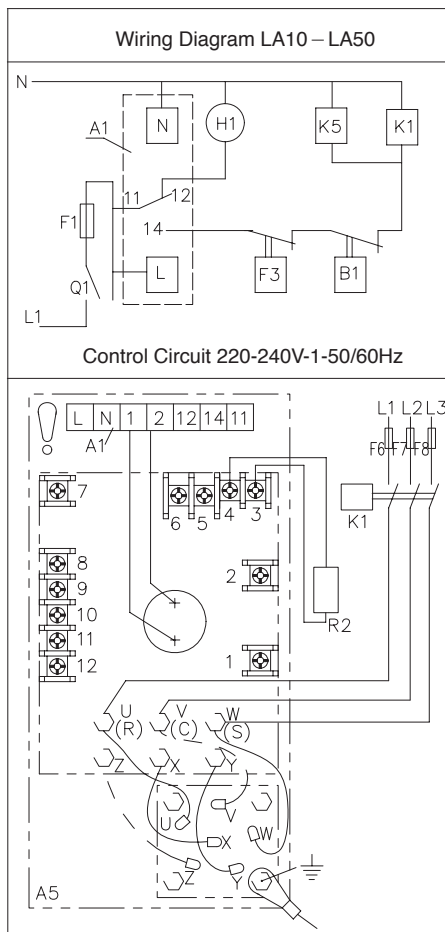


**SL: Suction line DL: Discharge line**

1	Schrader-low pressure connection	1/8" - 27NPTF	2	Schrader - high-pressure connection	1/8"-27NPTF
3	Plug Oil Charge	1/4"-18NPTF	4	Oil Screen built-in	----
5	Sleeve (Crankcase heater)	3/8" - 18NPSL	6	Plug Oil-pressure control H.P.	1/4" - 6 mm
7	Magnetic Plug	3/8"-18NPTF	8	Magnetic Plug	1/8"-27NPTF
9	Plug Oil-pressure control H.P.	1/4"-18NPTF	10	Oil Pressure connection	1/4"- 6 mm

## Electrical Wiring Diagrams

The following diagram is supplied to customers for reference. A switch can be added to the crankcase heater circuit.



### Electrical Code Note:

- A1: Motor protection module
- A2: Oil pressure controller
- A5: Terminal box
- B1: Thermostat
- F1: Fuse for control circuit
- F3: H/L pressure relays
- F6, F7, F8: Fuses for main circuit
- H1, H2: Alarm indicator
- K1: Compressor contact coil
- K5: Fan motor contact coil
- L1, L2, L3: Voltage connection 380-420V-3-50/60 Hz
- N: Neutral connection
- R2: Crankcase heater
- 1-12: Accessory Connections
- Q1: Main Switch

# L Series

## Electrical Data

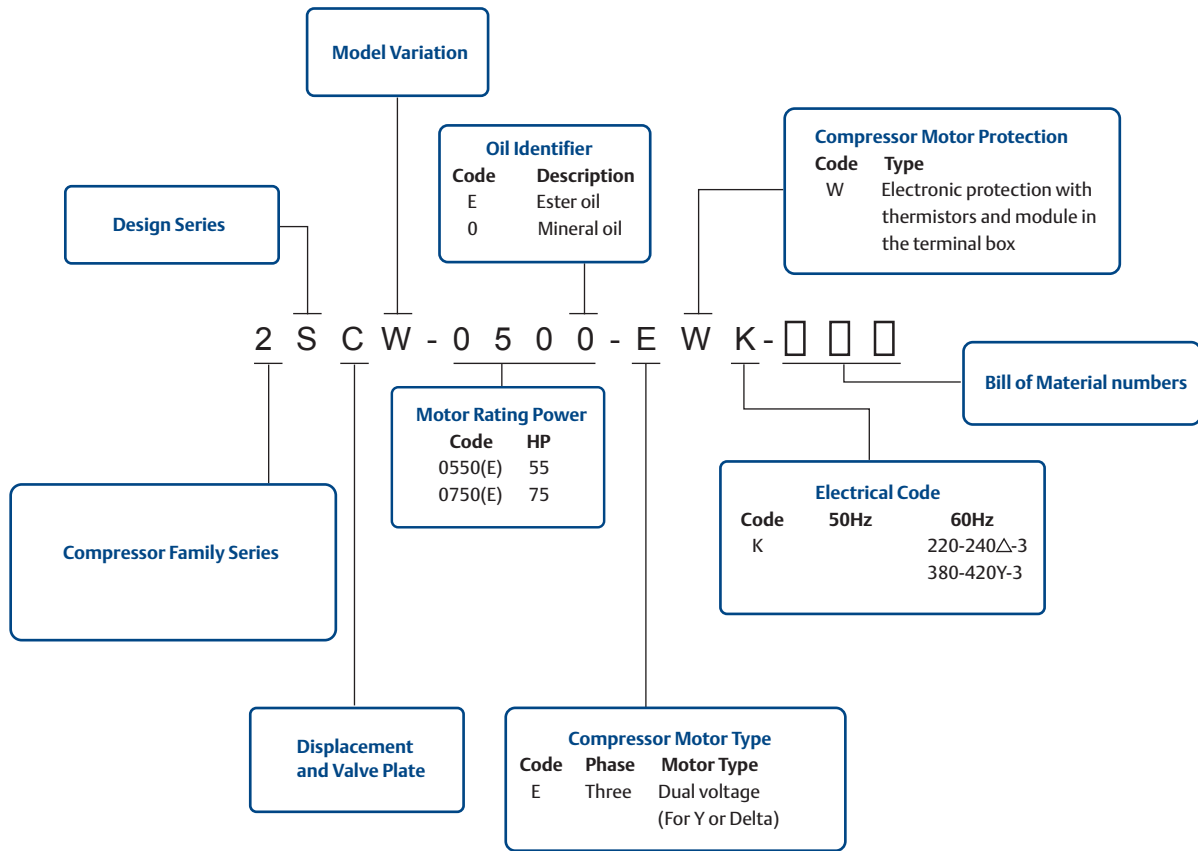
Motor current (A) (400 V-3-50Hz/ 380V-3-60Hz)  $t_c=40^\circ\text{C}$  (Condensing temperature)

Model	Evaporating Temperature $^\circ\text{C}$													
	-50	-45	-40	-35	-25	-20	-15	-10	-5	0	5	10	12.5	
<b>R22</b>	LA10-0200			3.5/4.2	3.6/4.3	3.8/4.6	4.0/4.8	4.1/5.0	4.3/5.1	4.4/5.3	4.5/5.4	4.6/5.5	4.7/5.6	4.7/5.6
	LA20-0200		3.4/4.1	3.6/4.3	3.7/4.5	4.2/5.1	4.5/5.4	4.7/5.7	5.0/6.0	5.2/6.3				
	LA20-0300			3.7/4.5	3.9/4.7	4.4/5.3	4.7/5.6	4.9/5.9	5.2/6.2	5.4/6.5	5.5/6.6	5.6/6.8	5.7/6.8	5.6/6.8
	LA40-0300		4.1/4.9	4.3/5.2	4.6/5.6	5.4/6.5	5.8/6.9	6.2/7.4						
	LA40-0400			4.3/ 5.2	4.6/ 5.6	5.4/6.4	5.8/ 6.9	6.2/ 7.4	6.5/ 7.8	6.9/ 8.2	7.1/ 8.6	7.3/ 8.8	7.4/ 8.9	7.5/ 9.0
	LA50-0400	4.2/ N/A	4.5/ N/A	5.0/ N/A	5.5/ N/A	6.5/ N/A	7.0/ N/A							
<b>R134a</b>	LA10-020E					2.8/3.3	2.9/3.5	3.0/3.6	3.2/3.8	3.3/3.9	3.4/4.0	3.4/4.1	3.5/4.2	
	LA20-020E					2.8/3.4	3.0/3.6	3.1/3.8	3.3/4.0	3.4/4.1	3.6/4.3	3.6/4.3	3.6/4.4	
	LA40-030E					4.2/5.1	4.5/5.4	4.7/5.7	5.0/6.0	5.2/6.3	5.5/6.6	5.6/6.8	5.7/6.9	
	LA50-040E					5.1/ N/A	5.4/ N/A	5.8/ N/A	6.1/ N/A	6.5/ N/A	6.8/ N/A	7.0/ N/A	7.1/ N/A	
<b>R404A R507</b>	LA10-020E			2.7/3.2	2.9/3.5	3.4/4.1	3.7/4.4	3.9/4.7	4.2/5.0	4.2/5.3	4.6/5.6	4.8/5.8	4.9/5.9	5.0/6.0
	LA20-020E			2.7/3.3	3.0/3.6	3.7/4.5	4.2/5.0							
	LA20-030E		3.9/4.7	4.1/4.9	4.4/5.2	4.8/5.8	5.1/6.1	5.3/6.4	5.5/6.6	5.8/6.9	6.0/7.2	6.1/7.4		
	LA40-030E		3.4/4.1	3.8/4.6	4.3/5.2	5.5/6.6	6.2/7.4							
	LA40-040E		4.3/ 5.1	4.6/ 5.5	4.9/ 5.9	5.8/ 7.0	6.3/ 7.5	6.7/ 8.1	7.2/ 8.6	7.6/ 9.1	7.9/ 9.5	8.2/ 9.8		
	LA50-040E		4.2/ N/A	4.7/ N/A	5.4/ N/A	7.0/ N/A	7.9/ N/A							

## Electrical Data

MRA & LRA

Model	MRA(A)		LRA(A)	
	EWL/EWK 380-420-3-50/60 Y	EWL/EWK 220-240-3-50/60 Δ	EWL/EWK 380-420-3-50/60 Y	EWL/EWK 220-240-3-50/60 Δ
LA10-0200	5.70/6.84	9.86/12.0	34.0 - 37.6/43.0-48.5	59.0 - 64.0/75.0-84.0
LA20-0200	5.50/6.60	9.52/11.6	34.0 - 37.6/43.0-48.5	59.0 - 64.0/75.0-84.0
LA20-0300	7.20/8.64	12.5/15.1	48.0 - 53.0/63.0-69.5	83.0 - 91.0/109.0-121.0
LA40-0300	7.10/8.52	12.3/14.9	48.0 - 53.0/63.0-69.5	83.0 - 91.0/109.0-121.0
LA40-0400	9.30/11.20	16.10/19.5	62.0 - 68.5/68.9-76.1	107 - 117/120-131
LA50-0400	8.60/ N/A	14.90/ N/A	62.0 - 68.5/ N/A	107 - 117/ N/A
LA60-0500	10.6/12.7	18.3/22.3	68.0 - 75.0/81.0-90.0	117.0 - 129.0/142.0-157.0
LR60-0500	15.5/N/A	N/A	68.0 - 75.0/ N/A	117.0 - 129.0/ N/A
LA10-020E	5.70/6.84	9.86/12.0	34.0 - 37.6/43.0-48.5	59.0 - 64.0/75.0-84.0
LA20-020E	4.50/5.40	7.79/9.45	34.0 - 37.6/43.0-48.5	59.0 - 64.0/75.0-84.0
LA20-030E	6.80/8.16	11.8/14.3	48.0 - 53.0/63.0-69.5	83.0 - 91.0/109.0-121.0
LA40-030E	7.30/8.76	12.6/15.3	48.0 - 53.0/63.0-69.5	83.0 - 91.0/109.0-121.0
LA40-040E	9.50/ 11.4	16.40/ 20.0	62.0 - 68.5/ 68.9-76.1	107 - 117/ 120-131
LA50-040E	8.90/ N/A	15.40/ N/A	62.0 - 68.5/ N/A	107 - 117/ N/A





## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-40	-35	-30	-25	-20	-15	-10	-5		
2SCW-0550	Q	10	4.15	5.70	7.65	9.80	12.40	15.40	18.90	23.00	
		15	3.65	5.20	7.15	9.25	11.75	14.70	18.10	22.00	
		20	3.15	4.70	6.65	8.70	11.10	13.95	17.20	21.00	
		25	2.64	4.15	6.15	8.10	10.45	13.15	16.30	20.00	
		30	2.15	3.60	5.65	7.55	9.80	12.40	15.40	19.00	
		35	1.68	3.10	4.75	6.95	9.10	11.60	14.55	17.90	
		40		2.58	4.20	6.05	8.45	10.85	13.65	16.90	
		45			3.60	5.40	7.75	10.05	12.75	15.90	
		50				4.75	6.75	9.30	11.85	14.80	
		55					6.05	8.20	10.95	13.80	
		60						7.45	10.10	12.75	
		62						7.10	9.75	12.35	
		P	10	2.39	2.67	2.90	3.08	3.18	3.20	3.12	2.92
			15	2.45	2.78	3.07	3.31	3.49	3.59	3.60	3.50
		20	2.48	2.85	3.20	3.51	3.76	3.94	4.04	4.04	
		25	2.47	2.89	3.30	3.67	4.00	4.26	4.45	4.55	
		30	2.44	2.91	3.37	3.81	4.21	4.55	4.83	5.05	
		35	2.38	2.90	3.42	3.92	4.40	4.82	5.20	5.50	
		40		2.88	3.45	4.02	4.56	5.05	5.55	5.90	
		45			3.47	4.10	4.72	5.30	5.85	6.35	
		50				4.17	4.86	5.55	6.15	6.75	
		55					5.00	5.75	6.45	7.15	
		60						5.95	6.75	7.55	
		62						6.05	6.90	7.70	
2SKW-0750	Q	10	5.50	7.30	9.40	11.90	14.90	18.40	22.50	27.20	
		15	4.95	6.70	8.80	11.25	14.15	17.50	21.40	26.00	
		20	4.40	6.10	8.25	10.60	13.35	16.60	20.40	24.70	
		25	3.80	5.50	7.65	9.90	12.55	15.70	19.30	23.50	
		30	3.25	4.90	7.10	9.25	11.80	14.75	18.20	22.20	
		35	2.71	4.30	6.20	8.60	11.00	13.85	17.20	21.00	
		40		3.75	5.55	7.60	10.25	12.95	16.10	19.70	
		45			4.90	6.90	9.50	12.05	15.00	18.50	
		50				6.15	8.35	11.15	14.00	17.30	
		55					7.55	9.95	12.95	16.10	
		60						9.05	11.95	14.85	
		62						8.65	11.50	14.35	
		P	10	2.86	3.19	3.48	3.68	3.78	3.73	3.52	3.10
			15	2.98	3.36	3.70	3.99	4.19	4.27	4.20	3.95
		20	3.07	3.48	3.88	4.24	4.54	4.74	4.81	4.72	
		25	3.13	3.56	4.01	4.44	4.83	5.15	5.35	5.40	
		30	3.16	3.62	4.11	4.61	5.10	5.50	5.80	6.05	
		35	3.19	3.66	4.19	4.74	5.30	5.80	6.25	6.60	
		40		3.70	4.25	4.85	5.45	6.10	6.65	7.15	
		45			4.31	4.96	5.65	6.35	7.00	7.60	
		50				5.05	5.80	6.60	7.35	8.10	
		55					6.00	6.85	7.70	8.55	
		60						7.10	8.05	9.00	
		62						7.20	8.20	9.20	

**Note:**

1. Data based on 20°C Suction Gas Return temperature without liquid sub-cooling.
2.   suction gas superheat is limited to 20K
3.   Head fan is required and suction gas superheat is limited to 20K

## Performance Data

# 50 Hz

Q=Capacity (kW) P=Power input (kW)

Model	Con. Temp. °C	Evaporating Temperature °C											
		-45	-40	-35	-30	-25	-20	-15	-10	-5			
2SCW-0550	Q	10	3.50	4.80	6.35	8.25	10.45	13.05	16.10	19.60	23.60		
		15	3.20	4.45	5.95	7.75	9.85	12.35	15.30	18.60	22.50		
		20	2.90	4.10	5.55	7.25	9.25	11.65	14.45	17.70	21.40		
		25	2.62	3.75	5.10	6.75	8.70	11.00	13.65	16.70	20.30		
		30	2.35	3.45	4.75	6.30	8.15	10.30	12.85	15.80			
		35	2.08	3.10	4.35	5.85	7.60	9.65					
		40	1.39	2.82	4.00	5.40	7.05						
		45	1.13	2.53	3.65	5.00							
		50		1.80	3.35	4.60							
		55		1.54	3.00	4.20							
		Air	P	10	1.97	2.27	2.55	2.78	2.96	3.07	3.09	3.02	2.84
				15	2.03	2.37	2.69	2.98	3.22	3.40	3.51	3.52	3.43
				20	2.06	2.44	2.81	3.15	3.46	3.70	3.89	3.99	4.00
				25	2.08	2.50	2.91	3.30	3.66	3.98	4.24	4.43	4.53
30	2.08			2.53	2.98	3.43	3.85	4.23	4.57	4.84			
35	2.07			2.55	3.04	3.54	4.01	4.47					
40	2.05			2.56	3.09	3.63	4.16						
45	2.03			2.56	3.13	3.71							
50				2.56	3.16	3.79							
55				2.55	3.19	3.86							

**Note:**

1. Data based on 20°C Suction Gas Return temperature without liquid sub-cooling.
2. ■■■ Head fan is required and suction gas superheat is limited to 20K

## Performance Data

# 50 Hz

Q=Capacity (kW) P=Power input (kW)

Model	Con. Temp. °C	Evaporating Temperature °C									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	
2SCW-055E	Q	20	3.20	4.45	6.05	7.95	10.20	12.90	16.00	19.50	23.60
		25	2.83	4.05	5.55	7.35	9.55	12.05	15.00	18.40	22.30
		30	2.24	3.65	5.05	6.80	8.80	11.20	14.00	17.20	20.90
		35	1.87	3.20	4.55	6.15	8.10	10.35	12.95	16.00	19.40
		40	1.51	2.49	4.05	5.55	7.35	9.45	11.90	14.70	17.90
		45	1.17	2.06	3.55	4.90	6.55	8.50	10.75	13.40	16.40
		50		1.64	2.61	4.25	5.75	7.55	9.60	12.05	14.85
	55		1.25	2.09	3.60	4.95	6.55	8.45	10.65	13.25	
	P	20	2.20	2.66	3.11	3.53	3.90	4.19	4.41	4.51	4.50
		25	2.17	2.67	3.18	3.67	4.11	4.51	4.82	5.05	5.15
		30	2.11	2.66	3.22	3.77	4.29	4.77	5.20	5.55	5.75
		35	2.03	2.61	3.22	3.83	4.42	4.98	5.50	5.95	6.30
		40	1.93	2.54	3.18	3.85	4.51	5.15	5.75	6.30	6.80
		45	1.81	2.44	3.12	3.83	4.55	5.25	5.95	6.60	7.20
50			2.31	3.02	3.77	4.55	5.35	6.10	6.85	7.55	
2SKW-075E	Q	20	3.85	5.45	7.40	9.75	12.55	15.80	19.60	24.00	29.00
		25	3.35	4.90	6.75	8.95	11.60	14.65	18.20	22.40	27.10
		30	2.60	4.35	6.10	8.20	10.65	13.50	16.90	20.70	25.20
		35	2.11	3.50	5.50	7.45	9.70	12.40	15.50	19.10	23.30
		40	1.64	2.95	4.85	6.70	8.80	11.25	14.15	17.50	21.40
		45	1.21	2.43	3.80	5.95	7.90	10.20	12.85	15.90	19.50
		50		1.94	3.20	5.25	7.00	9.10	11.55	14.35	17.60
	55		1.50	2.66	3.95	6.15	8.05	10.25	12.80	15.80	
	P	20	2.74	3.26	3.76	4.23	4.67	5.05	5.40	5.65	5.85
		25	2.73	3.30	3.86	4.41	4.92	5.40	5.85	6.20	6.55
		30	2.70	3.31	3.93	4.54	5.15	5.70	6.20	6.70	7.15
		35	2.64	3.30	3.97	4.64	5.30	5.95	6.55	7.15	7.70
		40	2.58	3.27	3.98	4.71	5.45	6.15	6.85	7.55	8.20
		45	2.50	3.23	3.98	4.75	5.55	6.30	7.10	7.90	8.65
50			3.17	3.96	4.78	5.60	6.45	7.35	8.20	9.05	
55		3.12	3.94	4.79	5.70	6.60	7.50	8.45	9.40		

**Note:**

1. Data based on 20°C Suction Gas Return temperature without liquid sub-cooling.
2. □ Suction Gas temperature is limited to 0°C
3. ■ Head fan is required and Suction Gas temperature is limited to 0°C

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C								
		-40	-35	-30	-25	-20	-15	-10	-5	
2SCW-0550	Q	10	4.90	6.75	9.00	11.55	14.60	18.20	22.30	27.10
		15	4.30	6.15	8.45	10.95	13.85	17.30	21.30	26.00
		20	3.70	5.55	7.85	10.25	13.10	16.40	20.30	24.80
		25	3.10	4.90	7.25	9.60	12.35	15.50	19.30	23.60
		30	2.54	4.30	6.65	8.90	11.55	14.65	18.20	22.40
		35	1.98	3.65	5.60	8.20	10.75	13.70	17.20	21.10
		40		3.05	4.95	7.10	9.95	12.80	16.10	19.90
		45			4.25	6.35	9.15	11.90	15.00	18.70
		50				5.60	7.95	10.95	14.00	17.50
		55					7.10	9.70	12.95	16.30
		60						8.75	11.90	15.10
		62						8.40	11.50	14.60
	2SCW-0550	P	10	2.87	3.20	3.48	3.69	3.82	3.84	3.74
		15	2.94	3.33	3.68	3.97	4.19	4.31	4.32	4.20
		20	2.97	3.42	3.84	4.21	4.51	4.73	4.85	4.85
		25	2.96	3.47	3.96	4.41	4.80	5.10	5.35	5.45
		30	2.92	3.49	4.05	4.57	5.05	5.45	5.80	6.05
		35	2.86	3.48	4.11	4.71	5.25	5.80	6.25	6.60
		40		3.45	4.14	4.82	5.50	6.10	6.65	7.10
		45			4.16	4.92	5.65	6.35	7.00	7.60
		50				5.00	5.85	6.65	7.40	8.10
		55					6.00	6.90	7.75	8.55
		60						7.15	8.10	9.05
		62						7.25	8.25	9.25
2SKW-0750		Q	10	6.50	8.60	11.10	14.05	17.60	21.70	26.60
		15	5.80	7.90	10.40	13.25	16.70	20.70	25.30	30.50
		20	5.15	7.20	9.75	12.50	15.80	19.60	24.00	29.20
		25	4.50	6.50	9.05	11.70	14.85	18.50	22.80	27.70
		30	3.85	5.80	8.35	10.90	13.90	17.40	21.50	26.20
		35	3.20	5.10	7.30	10.15	13.00	16.40	20.30	24.80
		40		4.40	6.55	8.95	12.10	15.30	19.00	23.30
		45			5.80	8.10	11.20	14.25	17.80	21.80
		50				7.30	9.85	13.15	16.50	20.40
		55					8.90	11.75	15.30	18.90
		60						10.65	14.10	17.50
		62						10.20	13.60	17.00
	2SKW-0750	P	10	3.43	3.83	4.17	4.42	4.53	4.48	4.22
		15	3.58	4.03	4.44	4.79	5.05	5.15	5.05	4.74
		20	3.68	4.17	4.65	5.10	5.45	5.70	5.75	5.65
		25	3.75	4.27	4.81	5.35	5.80	6.15	6.40	6.50
		30	3.80	4.34	4.93	5.55	6.10	6.60	7.00	7.25
		35	3.83	4.39	5.00	5.70	6.35	6.95	7.50	7.90
		40		4.43	5.10	5.80	6.55	7.30	7.95	8.55
		45			5.20	5.95	6.75	7.60	8.40	9.15
		50				6.10	6.95	7.90	8.80	9.70
		55					7.20	8.20	9.25	10.30
		60						8.50	9.65	10.80
		62						8.65	9.80	11.00

**Note:**

1. Data based on 20°C Suction Gas Return temperature without liquid sub-cooling.
2.   suction gas superheat is limited to 20K
3.   Head fan is required and suction gas superheat is limited to 20K

## Performance Data

# 60 Hz

Q=Capacity (kW) P=Power input (kW)

Model	Con. Temp. °C	Evaporating Temperature °C											
		-45	-40	-35	-30	-25	-20	-15	-10	-5			
2SCW-0550	Q	10	4.15	5.65	7.50	9.70	12.35	15.40	19.00	23.10	27.90		
		15	3.45	5.25	7.00	9.10	11.65	14.60	18.00	22.00	26.50		
		20	3.45	4.85	6.50	8.55	10.95	13.75	17.10	20.90	25.20		
		25	3.10	4.45	6.05	8.00	10.25	12.95	16.10	19.80	23.90		
		30	2.77	4.05	5.60	7.45	9.60	12.20	15.20	18.70			
		35	2.46	3.70	5.15	6.90	8.95	11.40					
		40	1.64	3.35	4.70	6.40	8.35						
		45	1.34	3.00	4.30	5.90							
		50		2.13	3.95	5.40							
		55		1.82	3.55	4.95							
		Air	P	10	2.36	2.73	3.06	3.34	3.56	3.68	3.71	3.62	3.40
				15	2.43	2.84	3.23	3.58	3.87	4.08	4.21	4.23	4.12
				20	2.48	2.93	3.37	3.78	4.15	4.45	4.67	4.79	4.80
				25	2.50	2.99	3.49	3.96	4.39	4.78	5.10	5.30	5.45
30	2.50			3.04	3.58	4.11	4.62	5.10	5.50	5.80			
35	2.49			3.06	3.65	4.24	4.82	5.35					
40	2.47			3.07	3.71	4.36	5.00						
45	2.43			3.08	3.76	4.46							
50				3.07	3.79	4.55							
55				3.07	3.83	4.63							

**Note:**

1. Data based on 20°C Suction Gas Return temperature without liquid sub-cooling.
2. ■ Head fan is required and suction gas superheat is limited to 20K

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

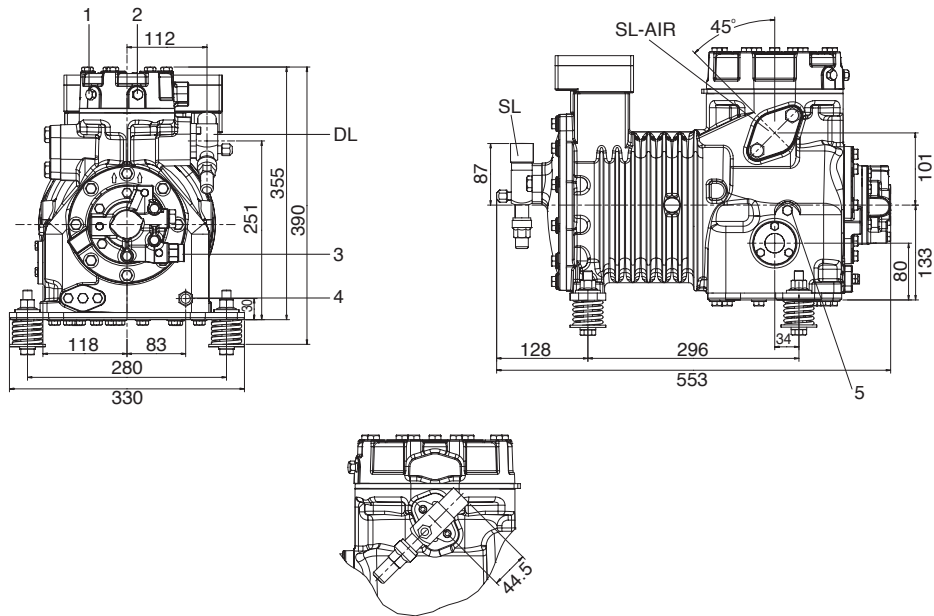
Model	Con. Temp. °C	Evaporating Temperature °C									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	
2SCW-055E	Q	20	3.75	5.25	7.10	9.35	12.05	15.20	18.90	23.10	27.80
		25	3.35	4.80	6.55	8.70	11.25	14.25	17.70	21.70	26.30
		30	2.64	4.30	5.95	8.00	10.40	13.25	16.50	20.30	24.60
		35	2.21	3.80	5.40	7.30	9.55	12.20	15.30	18.90	22.90
		40	1.79	2.93	4.75	6.55	8.65	11.15	14.00	17.40	21.20
		45	1.39	2.43	4.15	5.80	7.75	10.00	12.70	15.80	19.40
		50	0.00	1.94	3.10	5.05	6.80	8.90	11.35	14.20	17.50
	55	0.00	1.47	2.46	4.25	5.85	7.75	10.00	12.60	15.60	
	P	20	2.64	3.19	3.73	4.23	4.67	5.05	5.30	5.40	5.40
		25	2.60	3.21	3.82	4.40	4.94	5.40	5.80	6.05	6.20
		30	2.54	3.19	3.86	4.52	5.15	5.70	6.25	6.65	6.90
		35	2.44	3.14	3.86	4.59	5.30	6.00	6.60	7.15	7.55
		40	2.32	3.05	3.82	4.61	5.40	6.20	6.90	7.55	8.15
		45	2.17	2.92	3.74	4.59	5.45	6.30	7.15	7.90	8.60
50			2.77	3.62	4.53	5.45	6.40	7.30	8.20	9.05	
2SKW-075E	Q	20	4.55	6.45	8.75	11.50	14.80	19.60	23.10	28.30	34.00
		25	3.95	5.80	8.00	10.60	13.65	17.30	21.50	26.40	32.00
		30	3.05	5.15	7.20	9.65	12.55	15.90	19.90	24.50	29.70
		35	2.49	4.10	6.45	8.75	11.45	14.60	18.30	22.50	27.40
		40	1.94	3.50	5.75	7.90	10.40	13.30	16.70	20.70	25.20
		45	1.43	2.87	4.50	7.00	9.30	12.00	15.10	18.80	23.00
		50	0.00	2.29	3.80	6.20	8.30	10.75	13.60	16.90	20.80
	55	0.00	1.77	3.15	4.70	7.30	9.50	12.10	15.10	18.60	
	P	20	3.29	3.92	4.52	5.10	5.60	6.05	6.45	6.80	7.05
		25	3.28	3.96	4.64	5.30	5.90	6.50	7.00	7.45	7.85
		30	3.23	3.98	4.72	5.45	6.15	6.85	7.45	8.05	8.60
		35	3.17	3.96	4.76	5.55	6.35	7.15	7.85	8.60	9.25
		40	3.09	3.92	4.78	5.65	6.50	7.40	8.25	9.05	9.85
		45	3.00	3.87	4.77	5.70	6.65	7.60	8.55	9.45	10.40
50			3.81	4.75	5.75	6.75	7.75	8.80	9.80	10.80	
55		3.75	4.72	5.75	6.80	7.90	9.00	10.10	11.30		

**Note:**

1. Data based on 20°C Suction Gas Return temperature without liquid sub-cooling.
2. □ Suction Gas temperature is limited to 0°C
3. ■ Head fan is required and Suction Gas temperature is limited to 0°C

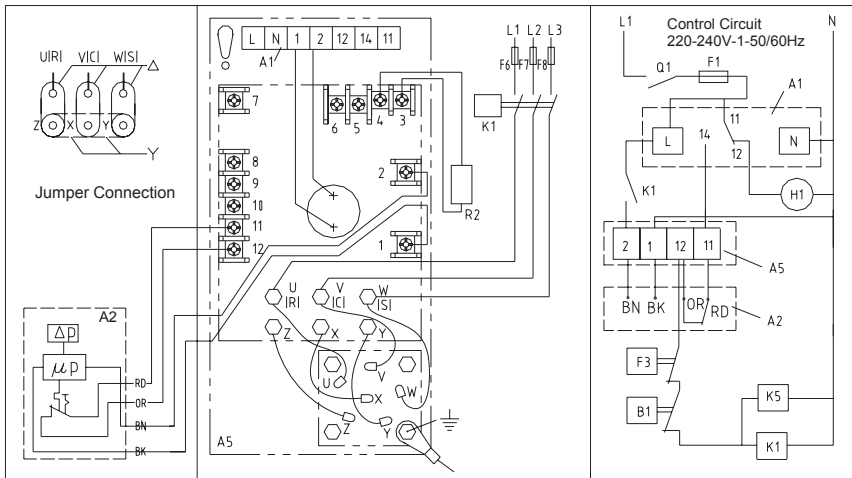
# 2S Series

## Dimensions



SL Suction line	(sweat)
DL Discharge line	(sweat)
1. Plug low pressure connection	1/8"-27NPTF
2. Plug high pressure connection	1/8"-14NPTF
3. OPS1 sensor connection	
4. Pocket for heater with protection plug	3/8"-18NPSL
5. Plug oil charge	1/4"-18NPTF

The following diagram is supplied to customers for reference. A switch can be added to the crankcase heater circuit.



### Symbol description:

- A1:** Motor protection module
- A2:** Oil differential pressure switch OPS1
- A5:** Terminal box
- B1:** Thermostat
- F1:** Fuse for control circuit
- F3:** H/L pressure relays
- F6, F7, F8:** Fuses for main circuit
- H1, H2:** Alarm indicator
- K1:** Compressor contact coil
- K5:** Fan motor contact coil
- N:** Neutral connection

- L1, L2, L3:** Voltage connection  
380-420V-3-50/60Hz-Y  
220-240V-3-50/60Hz-Delta
- R2:** Crankcase heater
- 1-12:** Accessory Connections
- Q1:** Main Switch

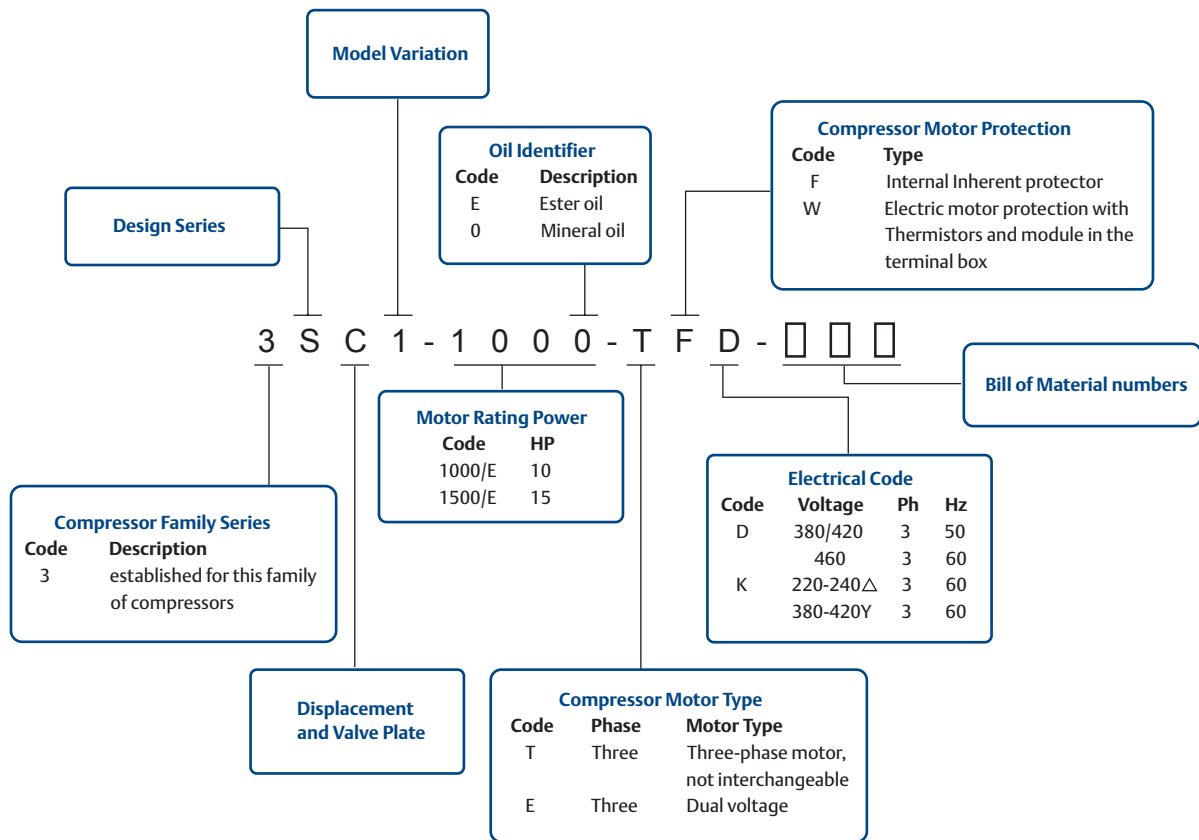
**Note:** The thermistor assembled in the compressor can only be connected to terminal 1 & 2 of module A1, see the wiring diagram. The maximum measurable voltage of the thermistor is 3V. The cold resistance of the thermistor is  $\leq 750$ .



## Electrical Data

Compressor	Power	RLA (A)	LRA (A)
2SCW-0550-EWL	380-420V 3PH 50HZ	12.8	67.0-74.1
	220-240V 3PH 50HZ	22.1	116-128
2SCW-055E-EWL	380-420V 3PH 50HZ	13.1	67.0-74.1
	220-240V 3PH 50HZ	22.7	116-128
2SCW-0550-EWK	380-420V 3PH 60HZ	15.4	97.0-107
	220-240V 3PH 60HZ	26.8	167-182
2SCW-055E-EWK	380-420V 3PH 60HZ	15.7	97.0-107
	220-240V 3PH 60HZ	27.5	167-182
2SKW-0750-EWL	380-420V 3PH 50HZ	15.7	77.0-85.3
	220-240V 3PH 50HZ	27.2	134-147
2SKW-075E-EWL	380-420V 3PH 50HZ	16.4	77.0-85.3
	220-240V 3PH 50HZ	28.4	134-147
2SKW-0750-EWK	380-420V 3PH 60HZ	18.8	87.0-96.5
	220-240V 3PH 60HZ	33.0	151-168
2SKW-075E-EWK	380-420V 3PH 60HZ	19.7	87.0-96.5
	220-240V 3PH 60HZ	34.4	151-168

## Model Nomenclature



## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	
3SC1-1000	Q	10	4.72	6.47	8.65	11.33	14.55	18.36	22.81	27.95	33.82
		15	4.25	5.92	8.00	10.57	13.65	17.30	21.58	26.52	32.18
		20	3.79	5.37	7.36	9.80	12.74	16.24	20.34	25.08	30.53
		25	3.33	4.83	6.71	9.03	11.84	15.18	19.10	23.65	28.87
		30	2.88	4.30	6.08	8.28	10.94	14.12	17.86	22.21	27.21
		35	2.45	3.78	5.46	7.53	10.05	13.06	16.62	20.77	25.56
		40	2.04	3.28	4.85	6.80	9.17	12.02	15.39	19.34	23.91
		45	1.65	2.80	4.26	6.08	8.31	10.99	14.18	17.92	22.26
		50		2.35	3.70	5.38	7.46	9.98	12.98	16.51	20.63
	55		1.92	3.16	4.71	6.64	8.99	11.80	15.12	19.02	
	P	10	2.74	3.15	3.55	3.95	4.35	4.76	5.19	5.63	6.09
		15	2.80	3.24	3.67	4.10	4.54	4.99	5.45	5.93	6.42
		20	2.82	3.29	3.77	4.24	4.72	5.21	5.71	6.23	6.76
		25	2.80	3.32	3.84	4.37	4.89	5.42	5.97	6.53	7.11
		30	2.75	3.30	3.90	4.47	5.05	5.63	6.22	6.83	7.46
		35	2.66	3.24	3.93	4.56	5.19	5.83	6.48	7.15	7.83
		40	2.55	3.17	3.94	4.63	5.33	6.03	6.74	7.47	8.21
		45	2.40	3.06	3.93	4.69	5.45	6.22	7.00	7.80	8.61
50			2.94	3.90	4.74	5.57	6.42	7.27	8.14	9.02	
55		1.92	3.86	4.77	5.69	6.61	7.54	8.48	9.45		
3SS1-1500	Q	10	6.31	8.69	11.64	15.20	19.45	24.46	30.28	36.99	44.65
		15	5.66	7.95	10.77	14.18	18.25	23.04	28.62	35.04	42.39
		20	5.01	7.22	9.92	13.18	17.06	21.64	26.97	32.13	40.16
		25	4.38	6.50	9.08	12.19	15.89	20.25	25.34	31.21	37.94
		30	3.77	5.80	8.26	11.22	14.74	18.89	23.73	29.33	35.76
		35	3.18	5.12	7.47	10.28	13.62	17.56	22.16	27.48	33.61
		40	2.61	4.47	6.70	9.36	12.53	16.26	20.62	25.67	31.49
		45	2.07	3.85	5.96	8.48	11.47	14.99	19.11	23.9	29.41
		50		3.26	5.26	7.64	10.45	13.76	17.65	22.16	27.38
	55		2.71	4.60	6.84	9.47	12.58	16.23	20.48	25.40	
	P	10	3.72	4.33	4.93	5.53	6.16	6.84	7.58	8.40	9.34
		15	3.77	4.44	5.10	5.76	6.43	7.15	7.92	8.78	9.74
		20	3.78	4.52	5.24	5.95	6.68	7.44	8.26	9.15	10.14
		25	3.75	4.57	5.35	6.13	6.91	7.73	8.59	9.53	10.55
		30	3.69	4.58	5.44	6.28	7.13	8.00	8.92	9.90	10.97
		35	3.60	4.57	5.51	6.43	7.34	8.28	9.25	10.29	11.40
		40	3.48	4.54	5.56	6.56	7.55	8.55	9.59	10.68	11.84
		45	3.33	4.49	5.60	6.68	7.75	8.83	9.93	11.09	12.31
50			4.43	5.63	6.80	7.95	9.11	10.29	11.51	12.80	
55		4.35	5.65	6.92	8.16	9.40	10.66	11.95	13.31		

**Note:**

1. Data based on 20°C suction gas temperature, 0°C Sub-cooling
2.  DTC (Discharge Temperature Control) valve is required to de-superheat.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C						
		-40	-35	-30	-25	-20	-17.8	
3SC1-100E	Q	22	6.05	8.05	10.40	13.10	16.30	17.90
		25	5.90	7.85	10.10	12.70	15.80	17.30
		30	5.50	7.30	9.40	11.85	14.75	16.20
		35	4.95	6.60	8.60	10.90	13.60	14.95
		40	4.30	5.85	7.70	9.85	12.40	13.65
		45	3.70	5.15	6.85	8.85	11.20	12.40
		50	3.15	4.45	6.05	7.90	10.10	11.20
	54	2.80	4.05	5.50	7.25	9.35	10.35	
	P	22	3.89	4.55	5.22	5.89	6.57	6.88
		25	4.03	4.72	5.41	6.11	6.83	7.15
		30	4.11	4.83	5.57	6.32	7.10	7.45
		35	4.04	4.81	5.59	6.41	7.25	7.63
		40	3.90	4.71	5.55	6.42	7.33	7.75
		45	3.74	4.60	5.49	6.43	7.42	7.86
50		3.63	4.54	5.50	6.50	7.56	8.05	
54	3.62	4.58	5.58	6.65	7.77	8.29		
3SS1-150E	Q	22	8.45	11.30	14.65	18.60	23.20	25.40
		25	7.90	10.65	13.90	17.70	22.20	24.30
		30	7.15	9.75	12.80	16.40	20.60	22.70
		35	6.55	9.00	11.85	15.30	19.20	21.10
		40	6.00	8.25	10.95	14.10	17.80	19.60
		45	5.45	7.50	9.95	12.90	16.30	17.90
		50	4.75	6.60	8.85	11.50	14.60	16.10
	54	4.00	5.70	7.80	10.20	13.10	14.50	
	P	22	5.95	6.85	7.70	8.50	9.25	9.55
		25	6.00	6.90	7.80	8.65	9.50	9.85
		30	6.05	7.05	8.00	8.95	9.90	10.3
		35	6.10	7.15	8.20	9.25	10.30	10.7
		40	6.10	7.20	8.30	9.45	10.60	11.1
		45	6.05	7.20	8.40	9.60	10.90	11.4
50		5.95	7.15	8.40	9.75	11.10	11.7	
54	5.80	7.05	8.40	9.75	11.20	11.9		

**Note:**

1. Data based on 18.3°C suction gas temperature, 0°C Sub-cooling.
2. Additional cooling is required if return gas temperature is higher than 10C.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	
3SC1-1000	Q	10	5.57	7.63	10.21	13.37	17.17	21.67	26.92	32.98	39.91
		15	5.02	6.98	9.44	12.47	16.11	20.42	25.46	31.29	37.97
		20	4.47	6.33	8.68	11.56	15.04	19.16	24.00	29.60	36.02
		25	3.93	5.70	7.92	10.66	13.97	17.91	22.53	27.90	34.07
		30	3.40	5.07	7.17	9.77	12.91	16.66	21.07	26.20	32.11
		35	2.89	4.46	6.44	8.89	11.86	15.41	19.61	24.51	30.16
		40	2.41	3.87	5.72	8.02	10.82	14.18	18.16	22.82	28.21
		45	1.95	3.31	5.03	7.17	9.80	12.97	16.73	21.14	26.27
		50		2.77	4.36	6.35	8.81	11.77	15.31	19.49	24.35
	55		2.27	3.72	5.56	7.84	10.60	13.92	17.85	22.44	
	P	10	3.29	3.78	4.25	4.74	5.22	5.72	6.23	6.76	7.31
		15	3.36	3.88	4.40	4.93	5.45	5.99	6.54	7.11	7.71
		20	3.38	3.95	4.52	5.09	5.67	6.25	6.85	7.47	8.11
		25	3.36	3.99	4.61	5.24	5.87	6.51	7.16	7.83	8.53
		30	3.30	3.99	4.68	5.36	6.05	6.76	7.47	8.20	8.96
		35	3.19	3.96	4.71	5.47	6.23	7.00	7.78	8.58	9.40
		40	3.05	3.89	4.72	5.56	6.39	7.23	8.09	8.96	9.86
		45	2.88	3.80	4.71	5.63	6.54	7.47	8.40	9.36	10.33
50			3.68	4.68	5.68	6.69	7.70	8.72	9.76	10.82	
55		3.53	4.63	5.72	6.82	7.93	9.05	10.18	11.34		
3SS1-1500	Q	10	7.44	10.26	13.73	17.94	22.95	28.86	35.73	43.65	52.68
		15	6.67	9.38	12.71	16.74	21.54	27.19	33.77	41.35	50.02
		20	5.92	8.52	11.71	15.55	20.13	25.53	31.82	39.08	47.38
		25	5.17	7.67	10.72	14.38	18.75	23.90	29.90	36.83	44.77
		30	4.45	6.85	9.75	13.24	17.40	22.29	28.00	34.61	42.20
		35	3.75	6.05	8.81	12.13	16.07	20.72	26.15	32.43	39.65
		40	3.08	5.28	7.91	11.05	14.78	19.18	24.33	30.29	37.16
		45	2.44	4.54	7.04	10.01	13.53	17.69	22.55	28.20	34.71
		50		3.85	6.21	9.01	12.33	16.24	20.82	26.15	32.31
	55		3.20	5.43	8.07	11.18	14.85	19.15	24.16	29.97	
	P	10	4.46	5.20	5.91	6.64	7.40	8.21	9.09	10.09	11.20
		15	4.52	5.33	6.12	6.91	7.72	8.58	9.51	10.54	11.68
		20	4.54	5.43	6.29	7.14	8.02	8.93	9.91	10.98	12.17
		25	4.50	5.48	6.42	7.35	8.30	9.27	10.31	11.43	12.66
		30	4.43	5.50	6.53	7.54	8.56	9.61	10.71	11.88	13.16
		35	4.32	5.49	6.61	7.71	8.81	9.93	11.10	12.34	13.68
		40	4.17	5.45	6.68	7.87	9.06	10.26	11.51	12.81	14.21
		45	4.00	5.39	6.72	8.02	9.30	10.59	11.92	13.30	14.77
50			5.31	6.76	8.16	9.54	10.93	12.34	13.81	15.35	
55		5.22	6.79	8.30	9.79	11.28	12.79	14.35	15.97		

**Note:**

1. Data based on 18.3°C suction gas temperature, 0°C Sub-cooling.
2. ■ DTC (Discharge Temperature Control) valve is required to de-superheat.

## Performance Data

# 60 Hz

Q=Capacity (kW) P=Power input (kW)

Model	Con. Temp. °C	Evaporating Temperature °C												
		-25	-20	-15	-10	-5	0	5	7	10	12.5			
3SCH-1000	10	16.00	20.40	25.60	32.00	39.00								
	20	14.05	18.00	22.70	28.30	35.00	42.50	51.50	55.50					
	30	12.30	15.80	20.00	25.00	31.00	38.00	46.00	49.50	55.50	60.50			
	40	10.15	13.80	17.50	21.90	27.20	33.50	40.50	44.00	49.00	53.50			
	45		12.35	16.30	20.50	25.40	31.00	38.00	41.00	46.00	50.50			
	50		11.45	14.75	19.10	23.70	29.10	35.50	38.50	43.00	47.00			
	55			13.65	17.80	22.00	27.10	33.00	35.50	40.00	44.00			
	60			12.65	16.10	20.50	25.10	30.50	33.00	37.00	40.50			
	62				15.60	19.80	24.40	29.70	32.00	36.00	39.50			
	10	4.99	5.20	5.25	5.20	5.00								
	20	5.75	6.15	6.40	6.60	6.65	6.55	6.25	6.10					
	30	6.30	6.90	7.40	7.80	8.10	8.30	8.30	8.30	8.20	8.05			
	40	6.75	7.50	8.25	8.90	9.45	9.90	10.30	10.40	10.50	10.50			
	45		7.80	8.60	9.40	10.10	10.70	11.20	11.40	11.60	11.70			
50		8.00	8.95	9.85	10.70	11.50	12.10	12.30	12.70	12.90				
55			9.25	10.30	11.30	12.20	13.00	13.30	13.70	14.00				
60			9.55	10.70	11.90	12.90	13.90	14.30	14.80	15.20				
62				10.90	12.10	13.20	14.20	14.60	15.20	15.60				
3SSH-1500	10	22.50	28.20	35.00	43.00	52.50								
	20	19.90	25.00	31.00	38.50	47.00	57.00	68.50	73.50					
	30	17.40	22.10	27.60	34.00	42.00	51.00	61.00	66.00	73.00	79.50			
	40	14.65	19.40	24.30	30.00	37.00	45.00	54.50	58.50	65.00	71.00			
	45		17.50	22.80	28.30	34.50	42.50	51.00	55.00	61.00	66.50			
	50		16.20	20.70	26.40	32.50	39.50	47.50	51.50	57.00	62.50			
	55			19.20	24.60	30.00	37.00	44.50	48.00	53.00	58.00			
	60			17.70	22.30	28.10	34.00	41.50	44.50	49.50	54.00			
	62				21.60	27.20	33.00	40.00	43.00	48.00	52.50			
	10	7.10	7.45	7.70	7.75	7.65								
	20	8.15	8.75	9.25	9.60	9.85	9.90	9.80	9.65					
	30	8.80	9.65	10.40	11.10	11.70	12.10	12.40	12.40	12.40	12.40			
	40	9.30	10.40	11.40	12.40	13.30	14.10	14.70	15.00	15.20	15.40			
	45		10.70	11.80	13.00	14.00	15.00	15.90	16.20	16.60	16.90			
50		11.00	12.30	13.60	14.80	16.00	17.00	17.40	18.00	18.40				
55			12.70	14.20	15.60	16.90	18.20	18.70	19.30	19.90				
60			13.20	14.80	16.40	17.90	19.40	19.90	20.80	21.40				
62				15.10	16.70	18.30	19.90	20.50	21.30	22.00				

**Note:**

1. Data based on 18.3°C suction gas temperature, 0°C Sub-cooling.
2. ■ Additional cooling is required if return gas temperature is higher than 10C.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C						
		-40	-35	-30	-25	-20	-17.8	
3SC1-100E	Q	22	7.30	9.70	12.55	15.80	19.70	21.60
		25	7.15	9.45	12.15	15.30	19.00	20.90
		30	6.60	8.80	11.35	14.30	17.80	19.50
		35	5.95	7.95	10.35	13.15	16.40	18.00
		40	5.20	7.05	9.30	11.90	14.95	16.50
		45	4.45	6.20	8.25	10.65	13.50	14.95
		50	3.80	5.40	7.30	9.55	12.20	13.50
	54	3.35	4.90	6.65	8.75	11.25	12.50	
	P	22	4.67	5.45	6.25	7.10	7.90	8.25
		25	4.84	5.65	6.50	7.35	8.20	8.60
		30	4.93	5.80	6.70	7.60	8.55	8.95
		35	4.85	5.75	6.70	7.70	8.70	9.15
		40	4.68	5.65	6.65	7.70	8.80	9.30
		45	4.49	5.50	6.60	7.70	8.90	9.45
50		4.36	5.45	6.60	7.80	9.10	9.65	
54	4.35	5.50	6.70	8.00	9.35	9.95		
3SS1-150E	Q	22	10.25	13.60	17.60	22.20	27.60	30.00
		25	10.00	13.25	17.00	21.50	26.70	29.20
		30	9.30	12.30	15.90	20.10	25.00	27.40
		35	8.35	11.15	14.50	18.40	23.00	25.30
		40	7.25	9.90	13.00	16.70	21.00	23.10
		45	6.20	8.65	11.55	14.95	19.00	20.90
		50	5.30	7.55	10.20	13.35	17.10	18.90
	54	4.75	6.85	9.35	12.30	15.80	17.50	
	P	22	6.75	7.90	9.10	10.20	11.40	12.00
		25	7.00	8.20	9.40	10.60	11.90	12.40
		30	7.15	8.40	9.70	11.00	12.40	13.00
		35	7.05	8.35	9.75	11.10	12.60	13.30
		40	6.80	8.20	9.65	11.20	12.80	13.50
		45	6.50	8.00	9.55	11.20	12.90	13.70
50		6.30	7.90	9.55	11.30	13.20	14.00	
54	6.30	7.95	9.70	11.60	13.50	14.40		

**Note:**

1. Data based on 18.3°C suction gas temperature, 0°C Sub-cooling.
2. ■ Additional cooling is required if return gas temperature is higher than 10C.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-30	-25	-20	-15	-10	-5	0	5	7	
3SCH-100E	Q	20	13.85	17.50	22.10	27.40	34.00	41.00	49.50	59.50	63.50
		25	12.65	16.20	20.50	25.50	31.50	38.50	46.50	55.50	59.50
		30	11.50	14.85	18.90	23.70	29.30	36.00	43.50	52.00	55.50
		35	10.35	13.55	17.30	21.80	27.00	33.00	40.00	48.00	51.50
		40	9.30	12.25	15.70	19.90	24.70	30.50	37.00	44.50	47.50
		45	8.20	10.95	14.20	18.00	22.40	27.60	33.50	40.50	43.50
		50	7.20	9.70	12.65	16.10	20.10	24.80	30.50	36.50	39.50
	55		8.50	11.15	14.25	17.80	22.10	27.00	32.50	35.00	
	P	20	5.85	6.40	6.90	7.30	7.55	7.65	7.55	7.25	7.05
		25	6.05	6.75	7.35	7.90	8.35	8.65	8.75	8.65	8.50
		30	6.25	7.00	7.75	8.45	9.00	9.50	9.80	9.90	9.90
		35	6.35	7.20	8.05	8.85	9.60	10.20	10.70	11.10	11.10
		40	6.40	7.35	8.30	9.25	10.10	10.90	11.60	12.10	12.20
		45	6.45	7.45	8.50	9.50	10.50	11.50	12.30	13.00	13.20
50		6.45	7.50	8.65	9.75	10.90	12.00	13.00	13.80	14.10	
55		7.55	8.75	9.95	11.20	12.40	13.50	14.60	14.90		
3SSH-150E	Q	20	19.20	24.00	29.90	37.00	45.00	54.50	65.00	77.50	83.00
		25	17.70	22.30	27.80	34.50	42.00	51.00	61.00	72.50	77.50
		30	16.20	20.60	25.80	32.00	39.00	47.50	57.00	68.00	72.50
		35	14.80	19.00	23.90	29.60	36.50	44.00	53.00	63.00	67.50
		40	13.40	17.30	21.90	27.20	33.50	40.50	49.00	58.00	62.00
		45	12.00	15.70	19.90	24.90	30.50	37.00	44.50	53.00	57.00
		50	10.65	14.05	18.00	22.50	27.60	33.50	40.50	48.00	51.50
	55		12.45	16.00	20.10	24.70	30.00	36.00	43.00	46.50	
	P	20	8.15	8.95	9.70	10.40	10.90	11.40	11.80	12.00	12.10
		25	8.50	9.45	10.30	11.10	11.80	12.50	13.00	13.40	13.50
		30	8.80	9.85	10.90	11.80	12.70	13.40	14.10	14.70	14.90
		35	9.00	10.20	11.30	12.40	13.40	14.40	15.20	15.90	16.20
		40	9.15	10.50	11.80	13.00	14.10	15.20	16.20	17.10	17.50
		45	9.20	10.70	12.10	13.50	14.80	16.00	17.20	18.30	18.70
50		9.20	10.80	12.40	13.90	15.40	16.80	18.10	19.30	19.80	
55		10.90	12.60	14.30	15.90	17.40	18.90	20.30	20.90		

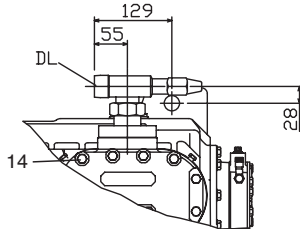
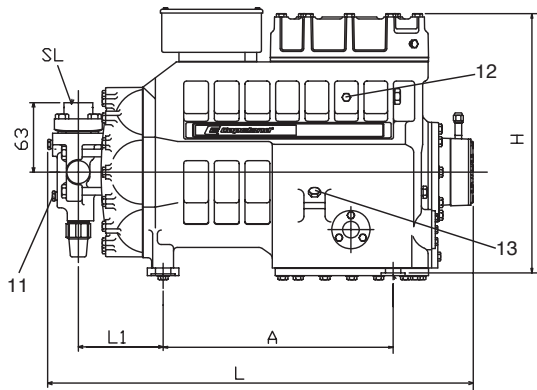
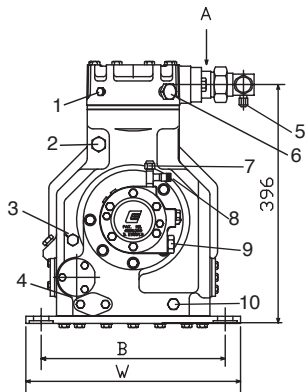
**Note:**

Data based on 20°C suction gas temperature, 0°C Sub-cooling



# 3S Series

## Dimensions



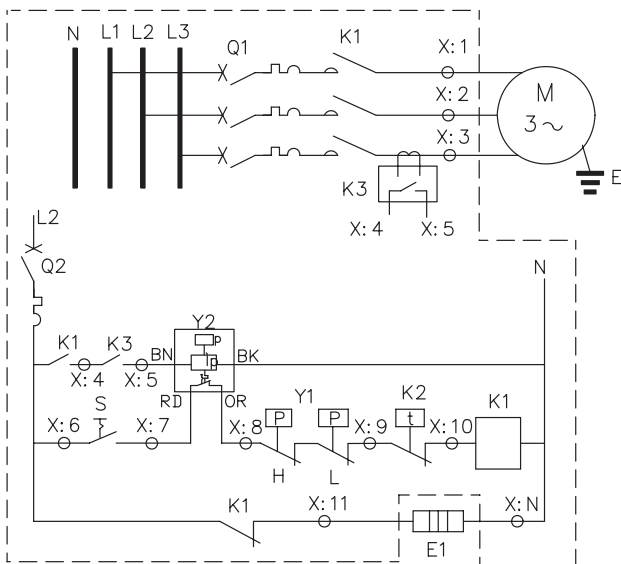
**SL: Suction line DL: Discharge line**

1	Plug low pressure connection	1/8"-27NPTF	2	Plug low pressure connection	1/2"-14NPTF
3	Plug oil-pressure control L. P.	1/4"-18NPTF	4	Magnetic plug	1/8"-27NPTF
5	Nut high pressure connection	7/16"-20UNF	6	Plug high pressure connection	1/2"-14NPTF
7	Connection oil-pressure control H.P.	1/4"	8	Oil pressure connection	7/16"-20UNF
9	OPS1 sensor connection	M24	10	Sleeve (crankcase heater)	3/8"-18NPSL
11	Plug low-pressure connection	1/8"-27NPTF	12	DTC valve plug connection	1/4"-18NPTF
13	Plug oil charge	1/4"-18NPTF	14	Plug high pressure connection	1/8"-27NPTF

## Electrical Wiring Diagrams

The following principal diagram is supplied to customers for reference. A switch can be added to the crankcase heater circuit.

### Electrical Diagrams With Motor Protector Code-F



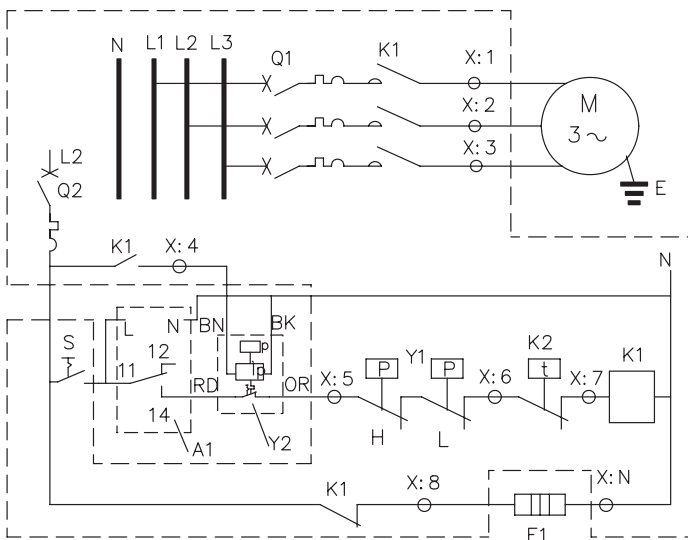
#### Electrical Code Note:

- M: Compressor motor
- Q1: The mini-breaker
- Q2: The mini-breaker
- S: Switch
- K1: Contactor
- K2: Thermostat
- K3: Current sensing relay
- E1: Crankcase heater
- Y1: H/L pressure switches
- Y2: Oil Pressure differential Switch OPS1
- A1: Motor protector module
- X: Terminals

#### Color code:

- RD: red;
- OR: orange;
- BN: brown;
- BK: black

### Electrical Diagrams With Motor Protector Code-W

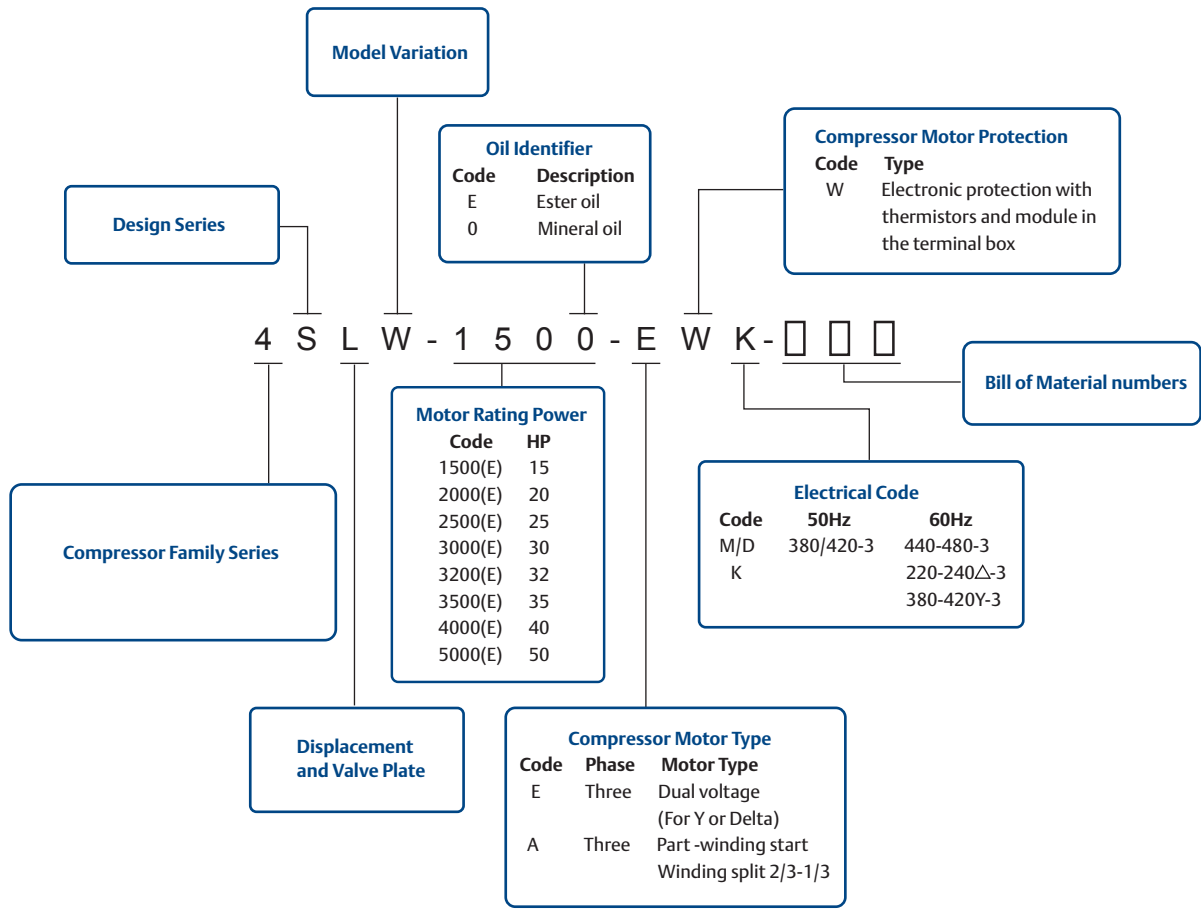


## Electrical Data

Compressor	Power	RLA (A)	LRA (A)
3SC1-1000-TFD	380-420V 3PH 50HZ/460V 3PH 60HZ	17.9	83.0
3SC1-100E-TFD	380-420V 3PH 50HZ/460V 3PH 60HZ	18.9	83.0
3SS1-1500-TFD	380-420V 3PH 50HZ/460V 3PH 60HZ	25.9	138.0
3SS1-150E-TFD	380-420V 3PH 50HZ/460V 3PH 60HZ	27.2	138.0
3SC1-1000-EWK	380-420V/220-240V 3PH 60HZ	20.4	96.0
3SC1-100E-EWK	380-420V/220-240V 3PH 60HZ	35.8	165
3SS1-1500-EWK	380-420V/220-240V 3PH 60HZ	29.1	138
3SS1-150E-EWK	380-420V/220-240V 3PH 60HZ	50.9	238

# 4S/6S Series

## Model Nomenclature



# 4S/6S Series



## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	
4SLW-1500	Q	30	5.53	8.08	11.37	15.43	20.30	26.01	32.59	40.08	48.51
		35	4.84	7.20	10.29	14.14	18.78	24.25	30.58	37.80	45.96
		40	4.18	6.33	9.19	12.80	17.19	22.39	28.45	35.38	43.24
		45	3.58	5.49	8.10	11.45	15.56	20.48	26.23	32.86	40.38
		50		4.72	7.06	10.11	13.93	18.53	23.96	30.25	37.43
	55		4.05	6.08	8.83	12.32	16.58	21.66	27.59	34.39	
	P	30	5.36	6.40	7.46	8.51	9.55	10.55	11.48	12.33	13.06
		35	5.37	6.50	7.67	8.85	10.02	11.17	12.27	13.30	14.24
		40	5.34	6.55	7.82	9.12	10.44	11.74	13.00	14.21	15.35
		45	5.25	6.56	7.93	9.35	10.79	12.24	13.67	15.07	16.40
50			6.50	7.98	9.52	11.09	12.69	14.28	15.85	17.38	
55		6.40	7.97	9.63	11.33	13.08	14.83	16.58	18.29		
4STW-2000	Q	30	6.57	9.54	13.32	17.99	23.66	30.39	38.29	47.44	57.94
		35	5.91	8.69	12.24	16.66	22.03	28.44	35.97	44.73	54.79
		40	5.24	7.83	11.15	15.30	20.36	26.44	33.60	41.95	51.57
		45	4.58	6.95	10.04	13.91	18.66	24.39	31.17	39.10	48.27
		50		6.07	8.90	12.49	16.92	22.29	28.68	36.19	44.90
	55		5.16	7.73	11.03	15.13	20.14	26.13	33.21	41.45	
	P	30	5.85	7.02	8.24	9.52	10.81	12.10	13.37	14.59	15.75
		35	5.99	7.24	8.56	9.94	11.35	12.77	14.18	15.56	16.88
		40	6.11	7.44	8.86	10.35	11.88	13.43	14.98	16.51	17.99
		45	6.20	7.62	9.14	10.73	12.38	14.07	15.76	17.44	19.09
50			7.79	9.40	11.10	12.87	14.69	16.52	18.36	20.17	
55		7.93	9.64	11.46	13.34	15.29	17.27	19.25	21.23		
6SLW-2500	Q	30	7.91	11.80	16.71	22.66	29.70	37.87	47.20	57.72	69.49
		35	7.00	10.60	15.19	20.83	27.54	35.37	44.35	54.52	65.92
		40	6.12	9.39	13.66	18.96	25.33	32.81	41.43	51.23	62.25
		45	5.26	8.21	12.14	17.09	23.10	30.21	38.45	47.86	58.49
		50		7.05	10.62	15.21	20.85	27.57	35.42	44.43	54.65
	55		5.94	9.14	13.35	18.60	24.92	32.36	40.96	50.75	
	P	30	7.90	9.39	11.01	12.70	14.38	15.99	17.46	18.72	19.71
		35	8.05	9.67	11.44	13.29	15.15	16.95	18.63	20.12	21.34
		40	8.13	9.88	11.80	13.81	15.85	17.84	19.73	21.44	22.90
		45	8.16	10.03	12.09	14.26	16.47	18.65	20.75	22.68	24.38
50			10.10	12.29	14.61	17.00	19.37	21.67	23.81	25.75	
55		10.07	12.40	14.87	17.42	19.98	22.48	24.84	27.01		
6STW-3200	Q	30	9.69	14.12	19.63	26.35	34.40	43.92	55.05	67.92	82.66
		35	8.44	12.62	17.83	24.20	31.87	40.96	51.61	63.95	78.13
		40	7.25	11.17	16.07	22.09	29.35	38.00	48.17	59.98	73.58
		45	6.13	9.77	14.35	20.01	26.87	35.07	44.74	56.02	69.04
		50		8.43	12.69	17.98	24.43	32.17	41.35	52.08	64.51
	55		7.16	11.09	16.00	22.03	29.31	37.98	48.16	59.99	
	P	30	9.09	10.94	12.82	14.74	16.72	18.76	20.86	23.04	25.30
		35	9.04	11.05	13.11	15.22	17.40	19.66	21.99	24.42	26.94
		40	9.01	11.17	13.40	15.70	18.08	20.54	23.10	25.77	28.55
		45	9.01	11.32	13.71	16.18	18.75	21.42	24.20	27.10	30.13
50			11.50	14.05	16.69	19.44	22.31	25.31	28.43	31.70	
55		11.74	14.43	17.24	20.17	23.23	26.43	29.77	33.27		
6SUW-4000	Q	30	12.10	17.70	24.80	33.30	43.50	55.60	69.60	85.70	104.10
		35	10.60	16.00	22.70	30.80	40.60	52.10	65.60	81.10	98.80
		40	9.10	14.20	20.50	28.20	37.50	48.50	61.40	76.20	93.30
		45	7.70	12.30	18.20	25.40	34.20	44.60	56.90	71.10	87.50
		50		10.50	15.90	22.60	30.80	40.60	52.20	65.80	81.40
	55		8.60	13.50	19.70	27.30	36.50	47.40	60.20	75.00	
	P	30	11.70	13.90	16.20	18.60	20.90	23.10	25.30	27.30	29.20
		35	11.90	14.30	16.70	19.30	21.80	24.40	26.90	29.30	31.60
		40	12.00	14.50	17.20	19.90	22.70	25.50	28.30	31.10	33.80
		45	12.20	14.80	17.60	20.50	23.50	26.60	29.70	32.80	35.90
50			15.00	17.90	21.00	24.20	27.60	31.00	34.40	37.90	
55		15.20	18.20	21.40	24.90	28.40	32.10	35.90	39.70		

### Notes:

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2. □ Head fan is required and suction gas superheat is limited to 20K
3. ■ DTC liquid injection and head fan are required.

# 4S/6S Series



## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C												
		-25	-20	-15	-10	-5	0	5	7	10	12.5			
4SAH-2000	Q	10	21.40	26.90	33.50	41.00	50.00	60.50						
		20	19.10	24.10	30.00	37.00	45.50	55.00	66.00	70.50				
		30	16.80	21.40	26.80	33.00	40.50	49.50	59.50	63.50	70.50	77.00		
		40	13.90	18.20	23.50	29.20	36.00	43.50	52.50	56.50	63.00	68.50		
		45	12.65	16.70	21.90	27.30	33.50	41.00	49.50	53.00	59.00	64.50		
		50	11.20	14.95	19.70	25.30	31.00	38.00	46.00	49.50	55.00	60.50		
		55			17.70	23.00	28.90	35.50	43.00	46.00	51.50	56.00		
	60				20.50	26.60	32.50	39.50	42.50	47.50	52.00			
	62				19.70	25.70	31.50	38.00	41.00	46.00	50.50			
	P	10	5.90	6.15	6.25	6.20	5.90	5.30						
		20	6.80	7.30	7.65	7.90	7.95	7.80	7.40	7.15				
		30	7.50	8.20	8.85	9.40	9.80	10.00	10.00	10.00	9.80	9.60		
		40	8.05	9.00	9.85	10.70	11.40	12.00	12.40	12.50	12.60	12.60		
		45	8.30	9.30	10.30	11.30	12.10	12.90	13.50	13.70	13.90	14.00		
50				10.70	11.80	12.80	13.70	14.50	14.80	15.20	15.40			
55					12.30	13.50	14.50	15.50	15.90	16.30	16.70			
4SHH-2500	Q	10	27.00	33.50	41.50	51.00	62.00	74.50						
		20	23.80	30.00	37.50	46.50	56.50	68.50	82.00	88.00				
		30	20.80	26.70	33.50	42.00	51.50	62.00	75.00	80.50	89.00	97.00		
		40	17.20	22.90	29.80	37.00	46.00	56.00	67.00	72.00	80.50	87.50		
		45	15.70	21.20	27.90	35.00	43.00	52.50	63.50	68.00	75.50	82.50		
		50	14.00	19.10	25.40	32.50	40.50	49.00	59.50	64.00	71.00	77.50		
		55			23.00	29.90	37.50	46.00	55.50	59.50	66.50	72.50		
	60				27.00	35.00	42.50	51.50	55.50	61.50	67.00			
	62				26.10	33.50	41.00	50.00	53.50	59.50	65.00			
	P	10	8.05	8.35	8.50	8.45	8.10	7.50						
		20	8.65	9.35	9.90	10.30	10.40	10.30	9.90	9.70				
		30	9.30	10.30	11.20	12.00	12.60	12.90	13.10	13.10	13.00	12.80		
		40	9.95	11.20	12.40	13.60	14.60	15.40	16.00	16.20	16.40	16.50		
		45	10.30	11.70	13.00	14.30	15.50	16.50	17.40	17.70	18.00	18.30		
50		10.50	12.10	13.50	15.00	16.30	17.60	18.70	19.10	19.60	19.90			
55				14.00	15.60	17.10	18.60	19.90	20.30	21.00	21.50			
4SJH-3000	Q	10	31.50	40.00	49.50	60.50	73.50	89.00						
		20	27.70	35.50	44.50	55.00	67.00	81.50	98.00	105.00				
		30	23.90	31.00	39.50	49.00	60.50	74.00	89.00	95.50	106.00	116.00		
		40	19.20	26.00	34.50	43.50	54.00	66.00	79.50	85.50	95.50	104.00		
		45	17.30	23.80	32.00	40.50	50.50	62.00	75.00	80.50	90.00	98.00		
		50	14.90	21.20	28.90	37.50	47.00	57.50	70.00	75.50	84.00	92.00		
		55			25.80	34.00	43.50	53.50	65.00	70.00	78.50	85.50		
	60				30.50	40.00	49.50	60.00	65.00	72.50	79.50			
	62				29.30	39.00	48.00	58.00	63.00	70.00	77.00			
	P	10	9.20	9.70	10.00	10.00	9.75	9.15						
		20	9.95	10.90	11.70	12.20	12.50	12.50	12.20	12.00				
		30	10.70	12.00	13.20	14.30	15.10	15.70	16.00	16.00	16.00	15.90		
		40	11.40	13.10	14.60	16.10	17.40	18.50	19.40	19.70	20.10	20.30		
		45	11.80	13.50	15.30	16.90	18.50	19.80	21.00	21.40	21.90	22.30		
50		12.00	14.00	15.90	17.70	19.50	21.10	22.50	23.00	23.70	24.20			
55				16.40	18.40	20.30	22.20	23.90	24.50	25.30	26.00			
6SHH-3500	Q	10	40.00	50.00	61.50	75.00	91.00	109.00						
		20	35.50	45.00	55.50	68.00	82.50	99.50	119.00	127.50				
		30	31.50	39.50	49.50	61.00	74.50	90.00	107.50	115.50	128.00	139.00		
		40	25.90	34.00	43.50	54.00	66.00	80.00	96.00	103.00	114.50	124.50		
		45	23.60	31.00	40.50	50.50	62.00	75.00	90.50	97.00	107.50	117.50		
		50	20.80	27.90	37.00	47.00	58.00	70.50	84.50	91.00	101.00	110.00		
		55			33.00	43.00	53.50	65.50	78.50	84.50	94.00	102.50		
	60				38.50	49.50	60.50	73.00	78.50	87.00	95.00			
	62				37.00	48.00	58.50	70.50	76.00	84.50	92.00			
	P	10	12.30	12.90	13.10	13.10	12.70	11.90						
		20	13.50	14.50	15.30	15.90	16.20	16.10	15.60	15.30				
		30	14.70	16.10	17.40	18.50	19.40	20.00	20.30	20.40	20.30	20.10		
		40	15.80	17.60	19.30	21.00	22.40	23.70	24.70	25.10	25.40	25.70		
		45	16.30	18.30	20.20	22.10	23.80	25.40	26.80	27.30	27.90	28.30		
50		16.70	18.90	21.00	23.20	25.20	27.10	28.80	29.40	30.20	30.90			
55				21.80	24.10	26.40	28.60	30.60	31.40	32.50	33.30			

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C												
		-25	-20	-15	-10	-5	0	5	7	10	12.5			
6SJH-4000	10	47.00	59.00	73.00	89.50	109.00	131.50							
	20	41.00	52.50	65.50	81.00	99.00	119.50	143.50	154.00					
	30	35.50	45.50	58.00	72.00	88.50	107.50	129.50	139.00	154.50	168.50			
	40	27.90	38.00	50.00	63.00	78.50	95.50	115.50	124.50	138.50	151.00			
	45	24.80	34.50	46.50	59.00	73.00	89.50	108.50	117.00	130.00	142.00			
	50	20.90	30.00	41.50	54.50	68.00	83.50	101.50	109.50	122.00	133.50			
	55			36.50	49.00	63.00	77.50	94.50	102.00	114.00	124.50			
	60				43.50	57.50	71.50	87.50	94.50	105.50	115.50			
	62				41.50	55.50	69.00	84.50	91.50	102.50	112.00			
		10	14.00	14.70	15.10	15.20	14.80	14.00						
		20	15.40	16.70	17.80	18.50	19.00	19.00	18.50	18.20				
		30	16.70	18.50	20.20	21.70	22.80	23.70	24.10	24.10	24.10	23.90		
		40	17.80	20.20	22.40	24.50	26.40	28.00	29.30	29.70	30.20	30.50		
		45	18.30	20.90	23.40	25.80	28.00	30.10	31.80	32.40	33.10	33.70		
	50	18.70	21.50	24.30	27.00	29.60	32.00	34.10	34.90	35.90	36.70			
	55			25.10	28.10	31.00	33.80	36.30	37.30	38.60	39.60			
	60				29.10	32.30	35.40	38.40	39.50	41.10	42.30			
	62				29.40	32.80	36.10	39.20	40.30	42.00	43.40			
6SKH-5000	10	52.00	65.50	82.50	102.50	126.00	153.00							
	20	47.00	60.00	76.00	94.50	116.50	142.00	171.00	184.00					
	30	42.00	54.00	68.50	85.50	105.50	129.00	155.50	167.50	186.50	203.00			
	40	35.00	46.50	61.00	76.00	94.00	115.00	139.00	149.50	166.50	181.50			
	45	32.50	43.00	57.00	71.50	88.00	107.50	130.00	140.00	156.00	170.50			
	50	29.00	39.00	51.50	66.50	82.00	100.50	121.50	130.50	145.50	159.00			
	55			46.50	60.50	76.00	93.00	112.50	121.00	134.50	147.00			
	60				54.00	70.00	85.50	103.50	111.00	124.00	135.00			
	62				52.00	67.50	82.50	99.50	107.50	119.50	130.50			
		10	15.70	16.80	17.40	17.70	17.40	16.50						
		20	17.50	19.20	20.60	21.70	22.40	22.60	22.10	21.80				
		30	19.00	21.30	23.40	25.30	26.80	27.90	28.60	28.70	28.70	28.50		
		40	20.30	23.10	25.80	28.40	30.70	32.70	34.30	34.90	35.50	35.90		
		45	20.90	23.90	26.90	29.80	32.40	34.90	37.00	37.70	38.60	39.30		
	50	21.50	24.70	27.90	31.00	34.10	36.90	39.40	40.30	41.60	42.50			
	55			28.80	32.20	35.60	38.70	41.70	42.80	44.30	45.50			
	60				33.30	36.90	40.50	43.80	45.10	46.90	48.30			
	62				33.70	37.50	41.10	44.60	45.90	47.80	49.30			

### Notes:

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2.   Suction gas superheat is limited to 20K
3.   Head fan is required and suction gas superheat is limited to 10K

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	
4SLW-150E	Q	20	9.75	13.30	17.60	22.70	28.70	36.00	44.00		
		25	8.25	12.15	16.20	21.00	26.70	33.50	41.00	50.50	
		30	7.25	11.00	14.85	19.40	24.70	31.00	38.50	46.50	56.50
		35	6.30	9.25	13.50	17.70	22.70	28.50	35.50	43.00	52.00
		40	5.40	8.10	12.15	16.10	20.60	26.00	32.00	39.50	48.00
		45	4.50	7.00	9.90	14.40	18.60	23.40	29.20	36.00	43.50
		50		5.95	8.55	12.75	16.50	20.90	26.00	32.00	39.00
	55		5.00	7.20	9.80	14.40	18.30	22.90	26.80	33.50	
	P	20	6.00	7.05	8.15	9.20	10.20	11.10	12.00		
		25	6.00	7.15	8.35	9.50	10.70	11.80	12.80	13.70	
		30	6.00	7.20	8.50	9.80	11.10	12.40	13.60	14.70	15.70
		35	5.90	7.25	8.60	10.00	11.50	12.90	14.30	15.60	16.90
		40	5.80	7.20	8.70	10.20	11.80	13.40	15.00	16.50	18.00
		45	5.70	7.15	8.75	10.40	12.10	13.80	15.60	17.30	19.00
50			7.10	8.75	10.50	12.40	14.20	16.10	18.00	19.90	
55		7.00	8.75	10.60	12.60	14.60	16.60	18.70	20.80		
4STW-200E	Q	20	11.50	15.70	20.70	26.70	34.00	42.50	52.00		
		25	9.70	14.30	19.10	24.80	31.50	39.50	49.00	59.50	
		30	8.40	12.90	17.50	22.90	29.30	37.00	45.50	55.50	67.00
		35	7.15	10.70	15.80	20.90	26.90	34.00	42.00	51.50	62.50
		40	5.95	9.20	14.15	18.90	24.50	31.00	38.50	47.50	57.50
		45	4.75	7.75	11.30	16.80	22.00	28.00	35.00	43.00	52.50
		50		6.35	9.55	14.75	19.40	24.90	31.50	39.00	47.50
	55		4.90	7.75	11.05	16.80	21.80	27.60	32.50	41.00	
	P	20	6.65	8.00	9.30	10.60	11.80	13.00	14.00		
		25	6.65	8.10	9.55	11.00	12.40	13.70	14.90	16.00	
		30	6.60	8.15	9.70	11.30	12.90	14.40	15.80	17.10	18.20
		35	6.45	8.10	9.85	11.60	13.30	15.00	16.60	18.10	19.50
		40	6.25	8.00	9.90	11.80	13.70	15.60	17.40	19.10	20.70
		45	5.95	7.85	9.85	11.90	14.00	16.10	18.10	20.00	21.90
50			7.60	9.75	11.90	14.20	16.50	18.70	20.90	22.90	
55		7.30	9.55	11.90	14.30	16.80	19.20	21.60	23.90		
6SLW-250E	Q	20	14.35	19.50	25.90	33.50	42.50	53.00	65.00		
		25	12.10	17.70	23.80	31.00	39.50	49.50	60.50	73.50	
		30	10.55	16.00	21.70	28.50	36.50	45.50	56.00	68.50	82.00
		35	9.10	13.25	19.60	25.90	33.50	42.00	52.00	63.00	75.50
		40	7.70	11.55	17.60	23.40	30.50	38.00	47.50	57.50	69.50
		45	6.40	9.90	14.15	20.90	27.20	34.50	43.00	52.50	63.00
		50		8.30	12.10	18.50	24.10	30.50	38.00	47.00	56.50
	55		6.80	10.10	14.05	21.10	26.90	33.50	39.50	49.00	
	P	20	8.40	10.10	11.80	13.60	15.30	16.90	18.30		
		25	8.40	10.20	12.10	14.10	16.00	17.80	19.50	20.90	
		30	8.40	10.30	12.40	14.50	16.60	18.60	20.50	22.30	23.80
		35	8.35	10.40	12.60	14.80	17.10	19.40	21.50	23.50	25.30
		40	8.25	10.40	12.70	15.10	17.60	20.00	22.40	24.70	26.70
		45	8.05	10.30	12.80	15.40	18.00	20.60	23.20	25.70	28.10
50			10.30	12.80	15.50	18.30	21.20	24.00	26.70	29.30	
55		10.10	12.80	15.70	18.60	21.60	24.70	27.60	30.50		
6STW-320E	Q	20	17.50	23.60	31.00	40.50	51.00	64.00	78.50		
		25	14.70	21.40	28.40	37.00	47.00	59.00	72.50	88.50	
		30	12.85	19.20	25.80	33.50	43.00	54.00	66.50	81.50	98.00
		35	11.10	15.90	23.30	30.50	39.00	49.50	61.00	74.50	90.00
		40	9.45	13.85	20.80	27.50	35.50	44.50	55.50	67.50	82.00
		45	7.95	11.90	16.70	24.50	31.50	40.00	49.50	61.00	74.00
		50		10.10	14.30	21.60	27.90	35.50	44.00	54.00	66.00
	55		8.40	12.05	16.40	24.30	31.00	38.50	45.00	56.50	
	P	20	10.10	12.00	14.00	16.00	18.00	19.90	21.60		
		25	10.00	12.10	14.30	16.50	18.70	20.90	23.00	24.80	
		30	9.90	12.10	14.50	16.90	19.40	21.80	24.20	26.50	28.50
		35	9.70	12.00	14.60	17.20	19.90	22.70	25.30	28.00	30.40
		40	9.45	11.90	14.60	17.40	20.40	23.40	26.40	29.40	32.20
		45	9.20	11.80	14.60	17.60	20.80	24.10	27.40	30.70	33.90
50			11.60	14.50	17.70	21.10	24.60	28.20	31.90	35.50	
55		11.40	14.40	17.80	21.40	25.20	29.10	33.00	37.00		



## Performance Data

# 50 Hz

Q=Capacity (kW) P=Power input (kW)

Model	Con. Temp. °C	Evaporating Temperature °C										
		-45	-40	-35	-30	-25	-20	-15	-10	-5		
6SUW-400E	Q	20	19.60	26.70	35.50	46.00	58.50	73.50				
		25	16.50	24.40	32.50	42.50	54.50	68.00	84.00	102.50		
		30	14.55	22.10	29.80	39.00	50.00	63.00	78.00	95.50	115.00	
		35	12.70	18.30	27.10	35.50	46.00	58.00	72.00	88.50	107.00	
		40	10.90	16.00	24.30	32.50	42.00	53.00	66.00	81.50	98.50	
		45	9.15	13.85	19.50	29.00	37.50	48.00	60.00	74.00	90.50	
		50		11.70	16.80	25.70	33.50	43.00	54.00	67.00	82.00	
		55		9.70	14.15	19.60	29.60	38.00	48.00	57.00	71.50	
		P	20	12.20	14.40	16.60	18.70	20.80	22.70	24.50		
			25	12.20	14.60	17.00	19.40	21.80	24.10	26.30	28.30	
		30	12.10	14.70	17.30	20.00	22.70	25.30	27.90	30.40	32.70	
		35	11.90	14.60	17.50	20.40	23.40	26.40	29.40	32.30	35.00	
		40	11.60	14.50	17.60	20.80	24.00	27.40	30.70	34.00	37.30	
		45	11.30	14.30	17.60	21.00	24.60	28.20	31.90	35.60	39.40	
		50		14.10	17.50	21.20	25.00	29.00	33.00	37.20	41.30	
		55		13.80	17.40	21.30	25.40	29.70	34.10	38.60	43.20	

### Notes:

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2.  Suction gas temperature is limited to 0°C
3.  Head fan is required and suction gas temperature is limited to 0°C.
4.  Suction gas superheat is limited to 20°C.

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	7	
4SAH-200E	Q	30	11.00	14.65	18.90	24.00	30.00	37.00	45.00	54.50	65.00	69.50
		35	9.70	13.20	17.30	22.00	27.60	34.00	41.50	50.00	60.00	64.50
		40		11.80	15.60	20.00	25.20	31.00	38.00	46.00	55.00	59.50
		45		10.40	13.95	18.00	22.80	28.30	34.50	42.00	50.50	54.00
		50		9.05	12.30	16.10	20.30	25.30	31.00	37.50	45.50	48.50
	55		7.70	10.70	14.05	17.90	22.30	27.50	33.50	40.00	43.00	
	P	30	6.50	7.50	8.45	9.30	10.10	10.80	11.40	11.80	11.90	11.90
		35	6.55	7.60	8.65	9.70	10.60	11.50	12.20	12.80	13.20	13.20
		40		7.70	8.85	10.00	11.10	12.10	13.00	13.70	14.30	14.50
		45		7.75	9.05	10.30	11.50	12.60	13.70	14.60	15.40	15.60
50			7.80	9.15	10.50	11.90	13.20	14.40	15.50	16.40	16.70	
55		7.80	9.25	10.70	12.20	13.60	15.00	16.30	17.40	17.80		
4SHH-250E	Q	30	13.45	18.00	23.30	29.60	37.00	45.50	55.50	67.00	80.50	86.00
		35	12.00	16.30	21.30	27.10	34.00	42.00	51.00	62.00	74.00	79.50
		40		14.60	19.20	24.60	31.00	38.00	46.50	56.50	67.50	72.50
		45		13.00	17.20	22.20	27.80	34.50	42.00	51.00	61.00	65.50
		50		11.45	15.30	19.70	24.70	30.50	37.50	45.00	54.00	58.00
	55		9.95	13.35	17.20	21.60	26.60	32.50	39.50	47.00	50.50	
	P	30	8.20	9.40	10.60	11.80	12.80	13.70	14.40	15.00	15.20	15.30
		35	8.35	9.70	11.00	12.30	13.60	14.70	15.60	16.40	17.00	17.10
		40		9.95	11.40	12.90	14.30	15.60	16.70	17.80	18.60	18.90
		45		10.20	11.80	13.40	14.90	16.40	17.80	19.00	20.10	20.50
50			10.50	12.10	13.80	15.50	17.20	18.70	20.20	21.50	22.00	
55		10.70	12.40	14.20	16.10	17.90	19.60	21.30	22.90	23.40		
4SJH-300E	Q	30	16.20	21.60	28.00	35.50	44.50	55.00	67.00	80.50	96.50	103.50
		35	14.35	19.50	25.60	32.50	41.00	50.50	62.00	75.00	89.50	96.00
		40		17.50	23.20	29.80	37.50	46.50	57.00	69.00	82.50	88.50
		45		15.40	20.80	26.90	34.00	42.00	52.00	62.50	75.50	81.00
		50		13.45	18.30	23.90	30.50	38.00	46.50	56.50	68.00	73.00
	55		11.40	15.80	20.80	26.60	33.00	41.00	50.00	60.00	64.50	
	P	30	9.20	10.80	12.50	14.10	15.60	17.00	18.20	19.20	20.00	20.20
		35	9.30	11.10	12.90	14.70	16.40	18.00	19.50	20.80	21.80	22.20
		40		11.30	13.20	15.20	17.10	18.90	20.70	22.20	23.50	24.00
		45		11.40	13.50	15.60	17.70	19.80	21.70	23.50	25.10	25.70
50			11.50	13.70	16.00	18.30	20.50	22.70	24.70	26.60	27.30	
55		11.50	13.80	16.30	18.70	21.20	23.60	25.90	28.00	28.80		
6SHH-350E	Q	30	20.10	26.70	34.50	43.50	54.50	67.50	82.00	99.00	118.50	126.50
		35	17.80	24.10	31.50	40.00	50.00	62.00	75.50	91.00	109.00	117.00
		40		21.60	28.40	36.50	45.50	56.50	69.00	83.50	100.00	107.00
		45		19.20	25.50	33.00	41.00	51.00	62.50	75.50	90.50	97.00
		50		16.80	22.60	29.10	36.50	45.50	55.50	67.00	80.50	86.50
	55		14.55	19.70	25.50	32.00	40.00	48.50	59.00	71.00	76.00	
	P	30	11.60	14.00	16.40	18.60	20.50	22.20	23.60	24.50	25.00	25.10
		35	11.70	14.30	16.80	19.20	21.40	23.40	25.10	26.40	27.30	27.50
		40		14.50	17.20	19.80	22.30	24.50	26.50	28.10	29.30	29.70
		45		14.70	17.50	20.30	23.00	25.50	27.70	29.70	31.20	31.80
50			14.80	17.80	20.80	23.70	26.40	28.90	31.10	33.00	33.70	
55		14.90	18.10	21.20	24.20	27.20	29.90	32.40	34.60	35.40		
6SJH-400E	Q	30	24.10	32.00	41.00	52.00	65.00	80.00	97.00	117.00	140.00	150.00
		35	21.30	28.60	37.00	47.50	59.00	73.00	89.00	107.50	128.50	137.50
		40		25.50	33.50	43.00	53.50	66.00	80.50	97.50	116.50	125.00
		45		22.50	29.80	38.50	48.00	59.50	72.50	87.50	105.00	112.50
		50		19.70	26.30	34.00	42.50	52.50	64.50	77.50	93.00	100.00
	55		16.90	22.90	29.50	37.00	46.00	56.00	68.00	81.50	87.50	
	P	30	14.20	16.50	18.80	21.00	23.10	25.00	26.70	28.10	29.10	29.40
		35	14.30	16.80	19.40	21.80	24.30	26.50	28.60	30.40	31.80	32.30
		40		17.10	19.80	22.60	25.30	27.90	30.30	32.50	34.40	35.00
		45		17.40	20.30	23.20	26.20	29.10	31.80	34.40	36.70	37.60
50			17.60	20.70	23.80	27.00	30.20	33.30	36.20	38.90	39.90	
55		17.90	21.10	24.40	27.80	31.20	34.60	37.80	40.90	42.10		
6SKH-500E	Q	30	27.70	37.00	48.00	61.00	76.50	94.50	115.50	139.00	166.50	178.00
		35	24.70	33.50	43.50	56.00	70.50	87.50	106.50	129.00	154.00	165.00
		40		30.00	39.50	51.00	64.50	80.00	98.00	118.50	142.00	152.00
		45		26.50	35.50	46.00	58.00	72.50	89.00	107.50	129.00	138.50
		50		23.10	31.50	41.00	52.00	65.00	79.50	97.00	116.50	125.00
	55		19.70	27.10	35.50	45.50	57.00	70.50	85.50	103.00	111.00	
	P	30	16.20	19.10	22.00	24.80	27.40	29.80	31.80	33.30	34.30	34.60
		35	16.30	19.40	22.50	25.60	28.60	31.40	33.90	36.00	37.70	38.10
		40		19.50	22.80	26.30	29.60	32.90	35.80	38.50	40.70	41.40
		45		19.40	23.00	26.80	30.50	34.10	37.50	40.70	43.50	44.50
50			19.30	23.10	27.10	31.10	35.10	39.00	42.70	46.00	47.30	
55		19.00	23.00	27.20	31.60	36.00	40.30	44.40	48.30	49.80		

**Notes:**

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2.  Head fan is required.

# 4S/6S Series

**R407C**  
(Dew Point)

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C															
		-25	-20	-15	-10	-5	0	5	7	10	12.5	15					
4SAH-200E	Q	10	19.30	24.50	31.00	38.50	47.50	57.50									
		20	17.20	22.10	27.90	35.00	43.00	52.50	64.00	69.00	76.50						
		30	15.00	19.40	24.70	31.00	38.50	47.50	57.50	62.00	69.00	75.50	82.50				
		40	12.05	16.00	21.40	27.10	33.50	41.50	50.50	54.50	61.00	67.00	73.50				
		45	10.85	14.60	19.70	25.00	31.00	38.50	47.00	51.00	57.00	62.50	68.50				
		50	9.70	13.15	17.30	22.90	28.70	35.50	43.50	47.00	53.00	58.00	63.50				
		55		11.70	15.50	20.80	26.20	32.50	40.00	43.00	48.50	53.50	58.50				
	60			13.80	18.00	23.60	29.40	36.00	39.00	44.00	48.50	53.50					
	65				15.90	21.00	26.30	32.50	35.50	39.50	44.00	48.00					
	P	10	5.05	5.40	5.60	5.65	5.50	5.10									
		20	5.85	6.40	6.90	7.25	7.45	7.45	7.25	7.10	6.75						
		30	6.50	7.25	8.00	8.65	9.15	9.55	9.75	9.75	9.70	9.60	9.40				
		40	6.95	7.90	8.90	9.80	10.60	11.40	11.90	12.10	12.30	12.40	12.50				
		45	7.15	8.15	9.25	10.30	11.30	12.10	12.90	13.20	13.50	13.70	13.90				
		50	7.25	8.35	9.55	10.70	11.80	12.90	13.80	14.20	14.60	15.00	15.30				
		55		8.50	9.80	11.10	12.30	13.50	14.60	15.10	15.60	16.10	16.50				
	60			9.95	11.40	12.70	14.10	15.40	15.90	16.60	17.10	17.60					
65			13.10	14.60	16.10	17.60	19.10	20.00	21.00	22.00	23.00						
4SHH-250E	Q	10	22.60	29.10	37.00	46.50	57.50	70.50									
		20	20.50	26.50	34.00	42.50	53.00	65.00	79.50	85.50	95.50						
		30	18.10	23.60	30.50	38.50	47.50	59.00	71.50	77.50	86.50	95.00	103.50				
		40	14.45	19.50	26.40	33.50	42.00	52.00	63.50	68.50	76.50	84.00	92.00				
		45	13.10	17.80	24.40	31.00	39.00	48.00	59.00	63.50	71.50	78.50	86.00				
		50	11.75	16.10	21.40	28.50	36.00	44.50	54.50	59.00	66.00	72.50	79.50				
		55		14.45	19.30	26.00	32.50	40.50	50.00	54.00	60.50	66.50	73.00				
	60			17.20	22.60	29.50	36.50	45.00	49.00	55.00	60.50	66.50					
	65				19.90	26.30	33.00	40.50	43.50	49.00	54.00	59.50					
	P	10	6.75	7.30	7.70	7.95	7.90	7.55									
		20	7.45	8.30	9.05	9.65	10.00	10.20	10.00	9.85	9.55						
		30	8.05	9.10	10.20	11.10	11.90	12.50	12.80	12.90	12.90	12.80	12.60				
		40	8.50	9.80	11.10	12.30	13.50	14.50	15.30	15.60	15.90	16.10	16.20				
		45	8.65	10.10	11.50	12.90	14.20	15.40	16.50	16.80	17.30	17.60	17.90				
		50	8.85	10.30	11.90	13.40	14.90	16.30	17.60	18.00	18.60	19.10	19.50				
		55		10.60	12.20	13.90	15.60	17.10	18.60	19.20	19.90	20.50	21.00				
	60			12.60	14.40	16.20	17.90	19.60	20.20	21.10	21.90	22.50					
65				14.80	16.80	18.70	20.60	21.30	22.30	23.10	23.90						
4SJH-300E	Q	10	26.90	34.50	44.00	55.50	69.00	84.50									
		20	24.40	32.00	40.50	51.00	63.50	78.00	94.50	101.50	113.50						
		30	21.50	28.40	36.50	46.00	57.50	70.50	85.50	92.00	102.50	112.00	122.00				
		40	16.90	23.40	32.00	40.50	50.50	62.00	75.50	81.00	90.50	99.00	107.50				
		45	14.95	21.10	29.30	37.50	47.00	57.50	70.00	75.50	84.00	92.00	100.00				
		50	13.00	18.90	25.60	34.50	43.00	53.00	64.50	69.50	77.50	84.50	92.50				
		55		16.50	22.80	31.00	39.00	48.50	59.00	63.50	71.00	77.50	84.50				
	60			20.00	26.70	35.00	43.50	53.00	57.00	64.00	70.00	76.50					
	65				23.30	31.00	38.50	47.00	51.00	57.00	62.50	68.00					
	P	10	7.90	8.55	9.00	9.10	8.90	8.30									
		20	8.95	10.10	11.00	11.70	12.00	12.10	11.80	11.50	11.10						
		30	9.60	11.10	12.50	13.70	14.60	15.30	15.60	15.70	15.60	15.40	15.20				
		40	9.80	11.80	13.60	15.30	16.70	18.00	18.90	19.20	19.60	19.70	19.80				
		45	9.75	11.90	14.00	15.90	17.60	19.10	20.40	20.80	21.30	21.70	21.90				
		50	9.65	12.00	14.20	16.40	18.30	20.10	21.60	22.20	22.90	23.40	23.90				
		55		11.90	14.40	16.70	18.90	21.00	22.80	23.50	24.40	25.00	25.60				
	60			14.40	17.00	19.40	21.70	23.80	24.60	25.70	26.50	27.30					
65				17.10	19.80	22.30	24.70	25.60	26.90	27.90	28.80						

# 4S/6S Series

**R407C**  
(Dew Point)

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 50 Hz

Model	Con. Temp. °C	Evaporating Temperature °C														
		-25	-20	-15	-10	-5	0	5	7	10	12.5	15				
6SHH-350E	Q	10	35.00	44.50	56.50	70.50	87.50	107.00								
		20	31.00	40.00	51.00	63.50	79.00	97.00	118.00	127.00	142.00					
		30	27.20	35.00	45.00	56.50	70.00	86.50	105.00	113.50	126.50	138.50	151.50			
		40	21.70	29.00	39.00	49.00	61.50	75.50	92.00	99.50	111.00	122.00	133.50			
		45	19.70	26.50	36.00	45.50	57.00	70.00	85.50	92.50	103.50	113.50	124.00			
		50	17.80	24.10	31.50	42.00	52.50	64.50	79.00	85.00	95.50	105.00	114.50			
		55		21.70	28.70	38.50	48.00	59.00	72.50	78.00	87.50	96.00	105.50			
		60			25.70	33.50	43.50	53.50	65.50	71.00	79.50	87.50	96.00			
		65				29.80	39.00	48.50	59.00	64.00	72.00	79.00	86.50			
		P	10	9.50	10.40	11.00	11.40	11.30	10.90							
			20	11.00	12.30	13.50	14.40	15.00	15.30	15.20	15.00	14.60				
			30	12.30	13.90	15.50	17.00	18.20	19.20	19.80	19.90	19.90	19.80	19.60		
			40	13.30	15.20	17.20	19.10	20.90	22.40	23.70	24.10	24.60	24.90	25.10		
			45	13.70	15.80	17.90	20.00	22.00	23.80	25.40	25.90	26.70	27.20	27.50		
		50	14.10	16.20	18.50	20.80	23.00	25.10	27.00	27.60	28.60	29.20	29.80			
		55		16.60	19.00	21.50	23.90	26.20	28.40	29.20	30.30	31.10	31.90			
		60			19.50	22.00	24.60	27.20	29.60	30.50	31.80	32.80	33.70			
		65				22.50	25.30	28.00	30.70	31.70	33.20	34.30	35.40			
6SJH-400E	Q	10	40.50	52.00	66.00	83.00	103.00	127.00								
		20	36.50	47.50	60.50	76.00	94.50	116.50	141.50	152.50	170.50					
		30	32.50	42.50	54.00	68.50	85.00	104.50	127.50	137.50	153.50	168.00	183.50			
		40	26.00	35.00	47.50	60.00	74.50	92.00	112.00	121.00	135.00	148.00	162.00			
		45	23.50	32.00	43.50	55.50	69.50	85.50	104.00	112.50	126.00	138.00	150.50			
		50	20.90	28.90	38.50	51.00	63.50	78.50	96.00	103.50	116.00	127.00	139.00			
		55		25.70	34.50	46.50	58.00	72.00	87.50	95.00	106.00	116.50	127.50			
		60			30.50	40.00	52.50	65.00	79.50	85.50	96.00	105.50	115.50			
		65				35.00	46.50	57.50	70.50	76.50	86.00	94.50	103.50			
		P	10	11.80	12.80	13.50	13.70	13.40	12.50							
			20	13.30	14.90	16.20	17.30	17.90	18.00	17.50	17.10	16.30	23.00	22.60		
			30	14.40	16.50	18.50	20.20	21.70	22.70	23.30	23.30	23.30	23.00	22.60		
			40	15.10	17.60	20.10	22.50	24.70	26.70	28.20	28.70	29.30	29.60	29.80		
			45	15.30	18.00	20.70	23.40	26.00	28.40	30.40	31.00	31.90	32.50	33.00		
		50	15.30	18.20	21.20	24.20	27.10	29.80	32.30	33.20	34.40	35.30	36.00			
		55		18.40	21.60	24.80	28.10	31.20	34.00	35.10	36.60	37.70	38.80			
		60			21.80	25.30	28.80	32.30	35.60	36.80	38.60	40.00	41.30			
		65				25.60	29.40	33.20	36.90	38.30	40.40	42.00	43.50			
6SKH-500E	Q	10	49.50	64.00	82.00	103.50	129.00	159.00								
		20	43.00	57.00	73.00	93.00	116.00	143.00	174.50	188.00	210.50					
		30	37.00	49.50	64.00	82.00	102.50	126.50	154.50	167.00	187.00	204.50	224.00			
		40	27.90	39.50	55.00	71.00	89.00	110.50	135.00	145.50	163.00	178.50	195.50			
		45	24.50	35.50	50.50	65.50	82.50	102.00	125.00	135.00	151.00	165.50	181.00			
		50	21.10	31.50	44.00	60.00	75.50	94.00	115.00	124.50	139.50	152.50	167.00			
		55		27.80	39.50	54.50	69.00	86.00	105.50	114.00	127.50	139.50	153.00			
		60			34.50	47.00	62.50	78.00	95.50	103.50	115.50	127.00	138.50			
		65				41.50	56.00	70.00	86.00	93.00	104.00	114.00	124.50			
		P	10	14.20	15.30	16.10	16.50	16.60	16.20							
			20	16.10	17.80	19.20	20.40	21.20	21.60	21.50	21.40	21.00	28.10	28.00		
			30	17.50	19.90	22.00	23.90	25.50	26.70	27.60	27.80	28.00	28.10	28.00		
			40	18.10	21.00	24.00	26.70	29.20	31.40	33.20	33.90	34.70	35.20	35.70		
			45	18.00	21.40	24.70	27.80	30.70	33.40	35.80	36.60	37.70	38.60	39.30		
		50	17.50	21.30	25.00	28.60	32.00	35.20	38.10	39.10	40.60	41.70	42.70			
		55		20.90	25.10	29.10	33.00	36.70	40.10	41.40	43.20	44.60	45.90			
		60			24.70	29.30	33.70	37.90	41.80	43.30	45.50	47.20	48.80			
		65				29.00	33.90	38.70	43.20	45.00	47.50	49.50	51.50			

### Notes:

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2.   Suction gas superheat is limited to 20K
3.   Head fan is required and suction gas superheat is limited to 20K.

# 4S/6S Series



## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	
4SLW-1500	Q	30	6.64	9.65	12.50	17.30	23.30	30.50	38.50	47.50	57.50
		35	5.87	8.76	11.00	15.70	21.30	28.00	35.50	44.50	54.00
		40	5.11	7.88	10.65	14.05	19.40	25.70	33.00	41.50	50.50
		45	4.34	6.84	9.90	12.45	17.50	23.50	30.50	38.50	47.00
		50		5.91	8.73	11.55	15.60	21.20	27.80	35.50	43.50
		55		4.88	7.47	10.87	13.61	19.00	25.20	32.50	40.50
	P	30	6.28	7.42	8.95	10.30	11.70	13.00	14.10	15.10	15.70
		35	6.16	7.62	9.20	10.80	12.30	13.80	15.10	16.20	17.10
		40	6.04	7.75	9.34	11.10	12.80	14.50	16.00	17.30	18.40
		45	5.91	7.85	9.56	11.40	13.20	15.10	16.80	18.30	19.70
		50		7.85	9.67	11.50	13.60	15.60	17.50	19.30	20.80
55			7.82	9.63	11.60	14.63	16.00	18.10	20.10	21.80	
4STW-2000	Q	30	7.97	12.48	14.35	20.00	27.00	35.50	45.00	56.00	68.00
		35	7.00	11.14	12.90	18.20	24.90	33.00	42.00	52.50	64.00
		40	6.03	9.79	12.32	16.30	22.70	30.50	39.00	49.00	60.50
		45	5.06	8.45	12.01	14.50	20.50	27.70	36.00	46.00	56.50
		50		7.09	11.22	13.90	18.20	25.10	33.00	42.50	52.50
		55		5.73	9.23	13.41	17.49	22.30	29.90	38.50	48.50
	P	30	7.17	8.88	9.75	11.40	13.10	14.80	16.40	17.70	18.80
		35	7.04	8.79	10.10	11.90	13.70	15.60	17.40	19.00	20.30
		40	6.91	9.22	11.19	12.30	14.30	16.30	18.30	20.10	21.70
		45	6.78	9.30	11.51	12.60	14.70	16.90	19.10	21.10	22.90
		50		9.13	11.63	13.29	15.00	17.40	19.70	22.00	24.10
55			8.88	11.59	14.17	17.45	19.70	22.20	24.70	25.00	
6SLW-2500	Q	30	9.96	14.09	18.20	25.00	33.50	43.50	55.00	68.00	82.00
		35	8.50	12.62	16.40	22.90	31.00	40.50	51.50	64.00	77.50
		40	7.04	11.26	16.26	20.70	28.30	37.50	48.00	60.00	73.00
		45	5.58	9.86	15.10	18.50	25.70	34.50	44.50	55.50	68.50
		50		8.66	13.07	17.29	23.00	31.00	40.50	51.50	64.00
		55		7.46	10.79	15.68	19.05	28.00	37.00	47.50	59.00
	P	30	9.61	13.40	13.10	15.30	17.40	19.30	21.10	22.50	23.60
		35	9.24	12.45	13.50	15.80	18.10	20.40	22.50	24.20	25.60
		40	8.87	11.82	14.69	16.20	18.80	21.40	23.70	25.80	27.50
		45	8.50	11.64	15.01	16.60	19.40	22.20	24.80	27.20	29.30
		50		11.70	15.03	17.20	19.80	22.90	25.80	28.50	30.90
55			12.18	14.75	17.89	23.29	23.40	26.60	29.70	32.40	
6STW-3200	Q	30	11.46	17.64	22.90	31.00	40.50	51.50	64.50	79.50	97.00
		35	9.79	15.95	20.50	28.20	37.00	48.00	60.50	74.50	91.50
		40	8.12	14.02	20.33	25.50	34.00	44.00	56.00	70.00	85.50
		45	6.45	12.12	18.22	22.80	31.00	40.50	52.00	65.00	80.00
		50		9.86	16.03	21.88	27.90	37.00	47.50	60.00	74.50
		55		7.55	13.84	20.69	25.12	33.50	43.50	55.00	68.50
	P	30	11.31	12.42	15.40	17.90	20.40	22.90	25.40	27.80	30.00
		35	10.95	13.77	15.80	18.50	21.20	24.00	26.80	29.50	32.10
		40	10.58	14.51	17.59	19.00	22.00	25.00	28.10	31.10	34.10
		45	10.22	14.63	18.15	19.50	22.60	25.90	29.30	32.60	36.00
		50		14.14	18.27	20.52	23.20	26.70	30.30	34.00	37.70
55			13.03	17.93	22.17	27.10	27.50	31.30	35.30	39.40	
6SUW-4000	Q	30	13.60	20.40	28.80	38.90	51.10	65.40	82.20	101.50	123.70
		35	11.90	18.30	26.30	36.00	47.60	61.20	77.30	95.80	117.00
		40	10.10	16.20	23.70	32.90	43.80	56.80	72.00	89.70	110.00
		45	8.40	14.10	21.10	29.70	39.90	52.20	66.60	83.30	102.60
		50		11.90	18.40	26.30	35.90	47.30	60.80	76.60	94.80
		55		9.80	15.70	22.90	31.80	42.30	54.90	69.70	86.80
	P	30	14.50	17.20	20.10	23.10	26.00	28.90	31.70	34.30	36.60
		35	14.80	17.70	20.80	24.00	27.30	30.50	33.60	36.70	39.40
		40	15.00	18.10	21.40	24.80	28.30	31.80	35.40	38.80	42.00
		45	15.10	18.30	21.70	25.40	29.10	33.00	36.80	40.60	44.20
		50		18.30	21.90	25.70	29.70	33.80	38.00	42.10	46.20
55			18.10	21.90	25.90	30.10	34.50	38.90	43.40	47.80	

**Notes:**

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2. □ Head fan is required and suction gas superheat is limited to 20K
3. ■ DTC liquid injection and head fan are required.

# 4S/6S Series



## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C												
		-25	-20	-15	-10	-5	0	5	7	10	12.5			
4SAH-2000	Q	10	25.20	31.50	39.50	48.50	59.00	71.50						
		20	22.50	28.50	35.50	44.00	53.50	65.00	77.50	83.50				
		30	19.80	25.20	31.50	39.00	48.00	58.00	70.00	75.00	83.50	91.00		
		40	16.40	21.40	27.70	34.50	42.50	51.50	62.00	67.00	74.50	81.00		
		45	14.95	19.70	25.80	32.00	39.50	48.50	58.50	62.50	69.50	76.00		
		50	13.20	17.70	23.30	29.90	37.00	45.00	54.50	58.50	65.00	71.00		
		55			20.90	27.10	34.00	41.50	50.50	54.50	60.50	66.00		
	60				24.20	31.50	38.50	46.50	50.50	56.00	61.50			
	62				23.20	30.50	37.00	45.00	48.50	54.50	59.50			
	P	10	7.10	7.40	7.50	7.40	7.05	6.40			7.10	7.40		
		20	8.15	8.75	9.20	9.50	9.55	9.35	8.90	8.60	8.15	8.75		
		30	9.00	9.85	10.60	11.30	11.80	12.00	12.00	12.00	9.00	9.85		
		40	9.70	10.80	11.80	12.80	13.70	14.40	14.90	15.00				
		45	9.95	11.20	12.40	13.50	14.60	15.50	16.20	16.40				
50		10.20	11.50	13.30	14.20	15.40	16.50	17.40	17.80					
55					14.80	16.20	17.50	18.60	19.00					
4SHH-2500	Q	10	32.00	39.50	49.00	60.00	73.00	88.00						
		20	28.10	35.50	44.50	55.00	67.00	81.00	97.00	104.00				
		30	24.50	31.50	39.50	49.50	60.50	73.50	88.50	95.00	105.00	114.50		
		40	20.30	27.00	35.00	44.00	54.00	66.00	79.50	85.00	94.50	103.00		
		45	18.60	25.00	33.00	41.00	51.00	62.00	74.50	80.50	89.50	97.50		
		50	16.50	22.60	30.00	38.50	47.50	58.00	70.00	75.50	84.00	91.50		
		55			27.20	35.50	44.50	54.00	65.50	70.50	78.50	85.50		
	60				32.00	41.00	50.00	60.50	65.50	72.50	79.50			
	62				31.00	40.00	48.50	59.00	63.50	70.50	77.00			
	P	10	9.65	10.00	10.20	10.10	9.75	9.00						
		20	10.40	11.20	11.90	12.30	12.50	12.40	11.90	11.60				
		30	11.20	12.40	13.50	14.40	15.10	15.50	15.70	15.70	15.60	15.30		
		40	12.00	13.50	14.90	16.30	17.50	18.50	19.20	19.50	19.70	19.80		
		45	12.30	14.00	15.60	17.20	18.60	19.80	20.90	21.20	21.70	21.90		
50		12.70	14.50	16.20	18.00	19.60	21.10	22.40	22.90	23.50	23.90			
55				16.80	18.70	20.60	22.30	23.80	24.40	25.20	25.80			
4SJH-3000	Q	10	37.50	47.00	58.00	71.50	87.00	105.00						
		20	32.50	41.50	52.50	65.00	79.50	96.00	115.50	124.00				
		30	28.20	36.50	46.50	58.00	71.50	87.00	105.00	112.50	125.50	136.50		
		40	22.60	30.50	40.50	51.50	63.50	77.50	94.00	101.00	112.50	123.00		
		45	20.40	28.10	38.00	48.00	59.50	73.00	88.50	95.00	106.00	115.50		
		50	17.60	25.00	34.00	44.50	55.50	68.00	82.50	89.00	99.50	108.50		
		55			30.50	40.50	51.50	63.50	77.00	83.00	92.50	101.00		
	60				36.00	47.50	58.50	71.00	76.50	85.50	93.50			
	62				34.50	45.50	56.50	68.50	74.00	83.00	90.50			
	P	10	11.00	11.60	12.00	12.00	11.70	11.00						
		20	12.00	13.10	14.00	14.60	15.00	15.00	14.70	14.40				
		30	12.90	14.40	15.90	17.10	18.10	18.80	19.20	19.30	19.20	19.10		
		40	13.70	15.70	17.60	19.30	20.90	22.20	23.30	23.70	24.10	24.30		
		45	14.10	16.20	18.30	20.30	22.20	23.80	25.20	25.70	26.30	26.80		
50		14.40	16.70	19.00	21.20	23.30	25.30	27.00	27.60	28.40	29.10			
55				19.60	22.10	24.40	26.60	28.60	29.40	30.40	31.20			
6SHH-3500	Q	10	47.50	59.00	72.50	88.50	107.00	129.00						
		20	42.00	53.00	65.50	80.50	97.50	117.50	140.50	150.50				
		30	37.00	47.00	58.50	72.00	88.00	106.00	127.00	136.00	151.00	164.00		
		40	30.50	40.00	51.50	64.00	78.00	94.50	113.50	122.00	135.00	147.00		
		45	27.90	36.50	48.00	59.50	73.00	88.50	106.50	114.50	127.00	138.50		
		50	24.60	33.00	43.50	55.50	68.00	83.00	99.50	107.00	119.00	129.50		
		55			39.00	50.50	63.50	77.00	93.00	100.00	111.00	121.00		
	60				45.00	58.50	71.50	86.00	92.50	103.00	112.50			
	62				43.50	56.50	69.00	83.50	89.50	99.50	109.00			
	P	10	14.80	15.40	15.80	15.70	15.30	14.30						
		20	16.30	17.40	18.40	19.10	19.40	19.30	18.80	18.40				
		30	17.70	19.40	20.90	22.20	23.30	24.00	24.40	24.40	24.30	24.10		
		40	19.00	21.10	23.20	25.20	26.90	28.40	29.70	30.10	30.50	30.80		
		45	19.60	21.90	24.30	26.50	28.60	30.50	32.20	32.70	33.50	34.00		
50		20.10	22.70	25.30	27.80	30.20	32.50	34.50	35.30	36.30	37.10			
55				26.10	29.00	31.70	34.30	36.80	37.70	39.00	40.00			

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C												
		-25	-20	-15	-10	-5	0	5	7	10	12.5			
6SJH-4000	10	55.50	69.50	86.50	106.00	128.50	155.00							
	20	48.50	61.50	77.50	95.50	116.50	141.00	169.00	181.50					
	30	41.50	54.00	68.50	85.00	104.50	127.00	153.00	164.50	182.50	199.00			
	40	33.00	44.50	59.50	74.50	92.50	113.00	136.50	146.50	163.50	178.00			
	45	29.20	40.50	55.00	69.50	86.00	105.50	128.00	138.00	153.50	168.00			
	50	24.70	35.50	49.00	64.00	80.00	98.50	119.50	129.00	144.00	157.50			
	55			43.00	58.00	74.00	91.50	111.50	120.00	134.00	147.00			
	60				51.00	68.00	84.50	103.00	111.50	124.50	136.50			
	62				49.00	65.50	81.50	100.00	108.00	120.50	132.00			
	10	16.80	17.60	18.20	18.20	17.80	16.80							
	20	18.50	20.00	21.30	22.20	22.70	22.70	22.20	21.80					
	30	20.00	22.30	24.30	26.00	27.40	28.40	28.90	29.00	28.90	28.60			
	40	21.40	24.20	26.90	29.40	31.70	33.60	35.20	35.70	36.30	36.60			
	45	21.90	25.00	28.10	31.00	33.70	36.10	38.10	38.80	39.80	40.40			
50	22.40	25.80	29.10	32.40	35.50	38.40	40.90	41.90	43.10	44.00				
55			30.10	33.70	37.20	40.50	43.60	44.70	46.30	47.50				
60				34.90	38.80	42.50	46.00	47.40	49.30	50.80				
62				35.30	39.30	43.30	47.00	48.40	50.40	52.00				
6SKH-5000	10	61.00	77.50	97.50	121.00	148.50	181.00							
	20	55.50	71.00	89.50	111.50	137.50	167.50	202.00	217.00					
	30	49.50	64.00	81.00	101.00	124.50	152.00	183.50	197.50	220.00	240.00			
	40	41.50	54.50	72.00	90.00	111.00	135.50	164.00	176.50	196.50	214.50			
	45	38.00	51.00	67.00	84.00	104.00	127.00	153.50	165.50	184.00	201.00			
	50	34.00	46.00	61.00	78.50	97.00	118.50	143.00	154.00	171.50	187.50			
	55			54.50	71.00	89.50	109.50	132.50	142.50	159.00	173.50			
	60				64.00	82.50	101.00	122.00	131.00	146.00	159.50			
	62				61.50	80.00	97.50	117.50	126.50	141.00	154.00			
	10	18.90	20.10	20.90	21.20	20.80	19.80							
	20	21.00	23.00	24.80	26.10	26.90	27.10	26.60	26.20					
	30	22.80	25.60	28.10	30.30	32.20	33.50	34.30	34.50	34.40	34.20			
	40	24.40	27.80	31.00	34.10	36.80	39.30	41.20	41.80	42.60	43.10			
	45	25.10	28.70	32.30	35.70	38.90	41.80	44.30	45.20	46.40	47.20			
50	25.80	29.60	33.50	37.30	40.90	44.20	47.30	48.40	49.90	51.00				
55			34.60	38.70	42.70	46.50	50.00	51.30	53.20	54.60				
60				40.00	44.30	48.60	52.60	54.10	56.20	57.90				
62				40.50	45.00	49.30	53.50	55.10	57.40	59.20				

### Notes:

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2.   Suction gas superheat is 20K
3.   Head fan is required and suction gas superheat is limited to 10K

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C									
		-45	-40	-35	-30	-25	-20	-15	-10	-5	
4SLW-150E	Q	20	11.55	15.70	20.70	26.80	34.00	42.50	52.00		
		25	9.75	14.35	19.10	24.80	31.50	39.50	48.50	59.50	
		30	8.55	13.00	17.50	22.90	29.20	36.50	45.00	55.00	66.50
		35	7.40	10.90	15.90	20.90	26.80	33.50	41.50	51.00	61.50
		40	6.35	9.55	14.35	18.90	24.30	30.50	38.00	46.50	56.50
		45	5.35	8.30	11.65	17.00	21.90	27.70	34.50	42.00	51.50
		50		7.05	10.10	15.00	19.50	24.60	30.50	38.00	46.00
	55		5.85	8.50	11.55	17.00	21.60	27.00	31.50	39.50	
	P	20	7.20	8.50	9.75	11.00	12.20	13.40	14.40		
		25	7.20	8.60	10.00	11.40	12.80	14.10	15.40	16.50	
		30	7.15	8.65	10.20	11.80	13.30	14.80	16.30	17.70	18.90
		35	7.10	8.70	10.30	12.10	13.80	15.50	17.20	18.80	20.30
		40	7.00	8.65	10.40	12.30	14.20	16.10	18.00	19.80	21.50
		45	6.85	8.60	10.50	12.50	14.50	16.60	18.70	20.80	22.70
50			8.50	10.50	12.60	14.80	17.10	19.40	21.60	23.90	
55		8.40	10.50	12.70	15.10	17.50	20.00	22.50	24.90		
4STW-200E	Q	20	13.60	18.50	24.40	31.50	40.00	50.00	61.50		
		25	11.45	16.90	22.50	29.30	37.50	46.50	57.50	70.00	
		30	9.95	15.20	20.60	27.00	34.50	43.50	53.50	65.50	79.00
		35	8.45	12.60	18.70	24.70	31.50	40.00	49.50	60.50	73.50
		40	7.00	10.90	16.70	22.30	28.90	36.50	45.50	56.00	68.00
		45	5.60	9.20	13.35	19.90	25.90	33.00	41.50	51.00	62.00
		50		7.50	11.25	17.40	22.90	29.40	37.00	46.00	56.00
	55		5.80	9.15	13.05	19.90	25.70	32.50	38.50	48.50	
	P	20	8.00	9.55	11.20	12.70	14.20	15.60	16.80		
		25	8.00	9.70	11.50	13.20	14.90	16.50	17.90	19.20	
		30	7.90	9.75	11.70	13.60	15.50	17.30	19.00	20.50	21.80
		35	7.75	9.75	11.80	13.90	16.00	18.00	20.00	21.80	23.40
		40	7.50	9.65	11.90	14.10	16.40	18.70	20.90	23.00	24.90
		45	7.15	9.45	11.80	14.30	16.80	19.30	21.70	24.00	26.20
50			9.15	11.70	14.30	17.00	19.70	22.40	25.00	27.50	
55		8.75	11.50		17.20	20.10	23.00	25.90	28.70		
6SLW-250E	Q	20	16.90	23.00	30.50	39.50	50.50	62.50	77.00		
		25	14.25	20.90	28.00	36.50	46.50	58.50	71.50	87.00	
		30	12.45	18.90	25.60	33.50	43.00	54.00	66.50	80.50	96.50
		35	10.75	15.70	23.20	30.50	39.50	49.50	61.00	74.50	89.00
		40	9.10	13.65	20.80	27.60	35.50	45.00	56.00	68.00	82.00
		45	7.60	11.70	16.70	24.70	32.00	40.50	50.50	61.50	74.50
		50		9.80	14.30	21.80	28.50	36.00	45.00	55.50	67.00
	55		8.05	11.95	16.60	24.90	32.00	40.00	46.50	57.50	
	P	20	10.10	12.10	14.20	16.30	18.30	20.20	21.90		
		25	10.10	12.30	14.60	16.90	19.20	21.30	23.30	25.10	
		30	10.10	12.40	14.90	17.40	19.90	22.30	24.60	26.70	28.50
		35	10.00	12.50	15.10	17.80	20.50	23.20	25.80	28.20	30.40
		40	9.85	12.50	15.30	18.20	21.10	24.10	26.90	29.60	32.10
		45	9.70	12.40	15.40	18.40	21.60	24.80	27.90	30.90	33.70
50			12.30	15.40	18.60	22.00	25.40	28.80	32.10	35.20	
55		12.10	15.40	18.80	22.30	26.00	29.60	33.20	36.60		
6STW-320E	Q	20	20.60	27.80	37.00	47.50	60.50	75.50	92.50		
		25	17.40	25.20	33.50	43.50	55.50	69.50	85.50	104.00	
		30	15.20	22.70	30.50	40.00	51.00	64.00	79.00	96.00	115.50
		35	13.10	18.80	27.50	36.00	46.00	58.00	72.00	88.00	106.00
		40	11.15	16.330	24.60	32.50	41.50	52.50	65.50	80.00	96.50
		45	9.35	14.05	19.70	28.90	37.50	47.00	58.50	72.00	87.00
		50		11.90	16.990	25.40	33.00	42.00	52.00	64.00	77.50
	55		9.90	14.25	19.30	28.70	36.50	45.50	53.00	66.50	
	P	20	12.10	14.50	16.80	19.30	21.60	23.90	25.90		
		25	12.00	14.50	17.10	19.80	22.50	25.10	27.60	29.80	
		30	11.90	14.50	17.30	20.30	23.20	26.20	29.00	31.70	34.20
		35	11.70	14.50	17.50	20.60	23.90	27.20	30.40	33.50	36.50
		40	11.40	14.30	17.50	20.90	24.50	28.10	31.70	35.20	38.60
		45	11.00	14.10	17.50	21.10	24.90	28.90	32.80	36.80	40.60
50			13.90	17.40	21.30	25.30	29.60	33.90	38.20	42.50	
55		13.60	17.30	21.40	25.70	30.20	34.90	39.660	44.40		



## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C										
		-45	-40	-35	-30	-25	-20	-15	-10	-5		
6SUW-400E	Q	20	23.10	31.50	42.00	54.50	69.00	86.50	106.50			
		25	19.50	28.80	38.50	50.00	64.00	80.50	99.50	121.00		
		30	17.20	26.10	35.00	46.00	59.00	74.50	92.50	112.50	136.00	
		35	14.95	21.660	32.00	42.00	54.50	68.50	85.00	104.50	126.00	
		40	12.85	18.90	28.70	38.00	49.50	62.50	78.00	96.00	116.50	
		45	10.85	16.30	23.10	34.00	44.50	56.50	71.00	87.50	106.50	
		50		13.85	19.80	30.50	39.50	51.00	64.00	79.00	96.50	
		55		11.45	16.70	23.10	35.00	45.00	57.00	67.00	84.50	
		P	20	14.60	17.30	19.90	22.50	25.00	27.30	29.40		
			25	14.60	17.50	20.40	23.30	26.20	28.90	31.60	34.00	
			30	14.50	17.60	20.80	24.00	27.20	30.40	33.50	36.40	39.20
		35	14.30	17.50	21.00	24.50	28.10	31.70	35.20	38.70	42.10	
		40	13.90	17.40	21.10	24.90	28.80	32.80	36.80	40.80	44.70	
		45	13.50	17.20	21.10	25.20	29.50	33.90	38.30	42.80	47.20	
		50		16.90	21.00	25.40	30.00	34.80	39.60	44.60	49.60	
		55		16.50	20.90	25.50	30.40	35.60	40.90	46.30	51.80	

### Notes:

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2.  Suction gas temperature is limited to 0°C
3.  Head fan is required and suction gas temperature is 0°C
4.  Suction gas superheat is 20K.

# 4S/6S Series

# R404A

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C										
		-35	-30	-25	-20	-15	-10	-5	0	5	7	
4SAH-200E	Q	30	13.00	17.30	22.30	28.30	35.50	43.50	53.00	64.00	76.50	82.00
		35	11.45	15.60	20.40	26.00	32.50	40.00	49.00	59.50	71.00	76.00
		40		13.90	18.40	23.60	29.70	37.00	45.00	54.50	65.00	70.00
		45		12.30	16.50	21.30	26.90	33.50	41.00	49.50	59.50	63.50
		50		10.70	14.55	18.90	24.00	29.90	36.50	44.50	53.50	57.50
	55		9.10	12.60	16.60	21.10	26.40	32.50	39.50	47.50	51.00	
	P	30	7.80	9.00	10.10	11.20	12.20	13.00	13.70	14.10	14.30	14.30
		35	7.85	9.15	10.40	11.60	12.80	13.80	14.70	15.30	15.80	15.90
		40		9.25	10.60	12.00	13.30	14.50	15.60	16.50	17.10	17.40
		45		9.35	10.80	12.30	13.80	15.20	16.40	17.50	18.50	18.80
50			9.35	11.00	12.60	14.20	15.80	17.20	18.60	19.70	20.10	
55		9.35	11.10	12.90	14.60	16.40	18.00	19.50	20.90	21.40		
4SHH-250E	Q	30	15.90	21.20	27.50	35.00	43.50	54.00	65.00	79.50	95.00	101.50
		35	14.15	19.20	25.10	32.00	40.00	49.50	60.50	73.00	87.50	93.50
		40		17.20	22.70	29.10	36.50	45.00	55.00	66.50	79.50	85.50
		45		15.30	20.40	26.10	33.00	40.50	49.50	60.00	72.00	77.00
		50		13.50	18.00	23.20	29.20	36.00	44.00	53.00	64.00	68.50
	55		11.70	15.70	20.30	25.40	31.50	38.50	46.50	55.50	59.50	
	P	30	9.80	11.30	12.80	14.10	15.40	16.40	17.30	17.90	18.30	18.30
		35	10.00	11.60	13.20	14.80	16.30	17.60	18.80	19.70	20.40	20.50
		40		11.90	13.70	15.40	17.10	18.70	20.10	21.30	22.30	22.60
		45		12.30	14.10	16.00	17.90	19.70	21.30	22.80	24.10	24.60
50			12.60	14.50	16.60	18.60	20.60	22.50	24.30	25.90	26.40	
55		12.80	14.90	17.10	19.30	21.40	23.60	25.60	27.40	28.10		
4SJH-300E	Q	30	19.10	25.50	33.00	42.00	52.50	64.50	79.00	95.00	114.00	122.00
		35	16.90	23.00	30.00	38.50	48.50	60.00	73.00	88.50	106.00	113.50
		40		20.60	27.40	35.00	44.50	55.00	67.00	81.50	97.50	104.50
		45		18.20	24.50	31.50	40.00	50.00	61.00	74.00	89.00	95.50
		50		15.80	21.60	28.20	36.00	44.50	55.00	66.50	80.00	86.00
	55		13.45	18.70	24.60	31.50	39.00	48.50	58.50	71.00	76.00	
	P	30	11.00	13.00	15.00	16.90	18.70	20.40	21.90	23.10	24.00	24.30
		35	11.20	13.30	15.50	17.60	19.70	21.60	23.40	24.90	26.20	26.60
		40		13.50	15.90	18.20	20.50	22.70	24.80	26.60	28.20	28.80
		45		13.70	16.20	18.80	21.30	23.70	26.10	28.20	30.20	30.90
50			13.80	16.50	19.20	21.90	24.60	27.20	29.70	31.90	32.80	
55		13.80	16.60	19.50	22.50	25.40	28.30	31.00	33.60	34.60		
6SHH-350E	Q	30	23.70	31.50	40.50	51.50	64.50	79.50	97.00	117.00	139.50	149.50
		35	21.10	28.40	37.00	47.50	59.00	73.00	89.00	107.50	128.50	138.00
		40		25.50	33.50	43.00	54.00	66.50	81.50	98.50	117.50	126.00
		45		22.60	30.00	38.50	48.50	60.00	73.50	89.00	106.50	114.50
		50		19.90	26.60	34.50	43.50	53.50	65.50	79.50	95.00	102.00
	55		17.20	23.30	30.00	38.00	47.00	57.50	69.50	83.50	90.00	
	P	30	13.90	16.80	19.60	22.30	24.60	26.70	28.30	29.50	30.10	30.10
		35	14.00	17.10	20.20	23.10	25.70	28.10	30.10	31.70	32.70	33.00
		40		17.40	20.60	23.80	26.70	29.40	31.80	33.70	35.20	35.60
		45		17.60	21.00	24.40	27.60	30.60	33.30	35.60	37.50	38.10
50			17.80	21.40	24.90	28.40	31.70	34.70	37.30	39.60	40.40	
55		17.90	21.70	25.40	29.10	32.60	35.90	38.90	41.50	42.50		
6SJH-400E	Q	30	28.40	37.50	48.50	61.50	76.50	94.00	114.50	138.00	165.00	177.00
		35	25.10	33.50	44.00	56.00	70.00	86.00	105.00	126.50	151.50	162.00
		40		30.00	39.50	50.50	63.00	78.00	95.00	115.00	137.50	147.50
		45		26.60	35.00	45.00	56.50	70.00	85.50	103.50	124.00	133.00
		50		23.20	31.00	40.00	50.00	62.00	76.00	91.50	110.00	118.00
	55		20.00	27.00	35.00	44.00	54.00	66.00	80.00	96.00	103.00	
	P	30	17.00	19.80	22.50	25.20	27.80	30.10	32.10	33.70	34.90	35.30
		35	17.20	20.20	23.20	26.20	29.10	31.80	34.30	36.40	38.20	38.80
		40		20.50	23.80	27.10	30.30	33.40	36.30	39.00	41.30	42.10
		45		20.90	24.30	27.90	31.40	34.90	38.20	41.30	44.10	45.10
50			21.20	24.80	28.60	32.40	36.20	39.90	43.40	46.70	47.90	
55		21.40	25.30	29.30	33.30	37.40	41.50	45.40	49.10	50.60		
6SKH-500E	Q	30	32.50	43.50	56.50	72.00	90.00	111.50	136.00	164.50	196.50	210.00
		35	29.20	39.50	51.50	66.00	83.00	103.00	126.00	152.00	182.00	195.00
		40		35.50	47.00	60.00	76.00	94.50	115.50	139.50	167.50	179.50
		45		31.50	42.00	54.00	68.50	85.50	105.00	127.00	152.50	163.50
		50		27.30	37.00	48.00	61.50	76.50	94.00	114.00	137.00	147.50
	55		23.20	32.00	42.00	54.00	67.50	83.00	101.00	122.00	131.00	
	P	30	19.50	22.90	26.40	29.80	32.90	35.70	38.10	40.00	41.20	41.50
		35	19.50	23.20	27.00	30.70	34.40	37.70	40.70	43.20	45.20	45.80
		40		23.30	27.40	31.50	35.60	39.40	43.00	46.20	48.80	49.70
		45		23.30	27.60	32.10	36.60	40.90	45.00	48.80	52.20	53.40
50			23.10	27.70	32.50	37.30	42.10	46.80	51.20	55.20	56.70	
55		22.80	27.60	32.70	37.90	43.20	48.30	53.30	58.00	59.80		

### Notes:

1. Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
2.   Head fan is required.

# 4S/6S Series

**R407C**  
(Dew Point)

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C															
		-25	-20	-15	-10	-5	0	5	7	10	12.5	15					
4SAH-200E	Q	10	22.70	28.90	36.50	45.50	56.00	68.00									
		20	20.30	26.00	33.00	41.00	51.00	62.00	75.50	81.00	90.50						
		30	17.70	22.90	29.20	36.50	45.50	56.00	68.00	73.00	81.50	89.50	97.50				
		40	14.20	18.90	25.30	32.00	40.00	49.00	60.00	64.50	72.00	79.00	86.50				
		45	12.80	17.20	23.30	29.50	37.00	45.50	55.50	60.00	67.50	74.00	81.00				
		50	11.45	15.50	20.40	27.00	34.00	42.00	51.50	55.50	62.50	68.50	75.00				
		55		13.80	18.30	24.60	31.00	38.50	47.00	51.00	57.00	63.00	69.00				
		60			16.30	21.30	27.90	34.50	42.50	46.50	52.00	57.50	63.00				
		65				18.80	24.80	31.00	38.50	41.50	47.00	51.50	57.00				
		P	10	6.10	6.45	6.70	6.75	6.60	6.10								
			20	7.05	7.70	8.30	8.70	8.95	8.95	8.70	8.50	8.10					
			30	7.80	8.70	9.60	10.40	11.00	11.50	11.70	11.70	11.60	11.50	11.30			
			40	8.35	9.50	10.70	11.70	12.80	13.60	14.30	14.50	14.80	14.90	15.00			
			45	8.55	9.80	11.10	12.30	13.50	14.60	15.50	15.80	16.20	16.50	16.70			
			50	8.70	10.00	11.40	12.80	14.20	15.40	16.60	17.00	17.60	18.00	18.30			
			55		10.20	11.70	13.30	14.80	16.20	17.60	18.10	18.80	19.30	19.80			
			60			12.00	13.60	15.30	16.90	18.50	19.10	19.90	20.60	21.20			
		65				13.90	15.70	17.50	19.30	19.90	20.90	21.70	22.40				
4SHH-250E	Q	10	26.70	34.50	43.50	54.50	68.00	83.50									
		20	24.20	31.50	40.00	50.50	62.50	77.00	93.50	101.00	113.00						
		30	21.30	27.90	36.00	45.00	56.50	69.50	84.50	91.50	102.00	112.00	122.50				
		40	17.10	23.10	31.00	39.50	49.50	61.00	74.50	80.50	90.50	99.00	108.50				
		45	15.40	21.00	28.80	36.50	46.00	57.00	69.50	75.00	84.00	92.50	101.00				
		50	13.85	19.00	25.30	33.50	42.50	52.50	64.00	69.50	78.00	85.50	93.50				
		55		17.10	22.80	30.50	38.50	48.00	58.50	63.50	71.50	78.50	86.00				
		60			20.30	26.60	35.00	43.50	53.00	57.50	65.00	71.50	78.00				
		65				23.50	31.00	38.50	47.50	51.50	58.00	64.00	70.50				
		P	10	8.10	8.80	9.25	9.50	9.45	9.05								
			20	8.95	10.00	10.90	11.60	12.00	12.20	12.00	11.80	11.40					
			30	9.65	10.90	12.20	13.30	14.20	14.90	15.40	15.50	15.40	15.40	15.20			
			40	10.20	11.70	13.30	14.80	16.20	17.40	18.40	18.70	19.10	19.30	19.50			
			45	10.40	12.10	13.80	15.50	17.10	18.50	19.80	20.20	20.80	21.20	21.50			
			50	10.60	12.40	14.30	16.10	17.90	19.60	21.10	21.60	22.40	22.90	23.40			
			55		12.70	14.70	16.70	18.70	20.60	22.30	23.00	23.90	24.60	25.30			
			60			15.10	17.20	19.40	21.50	23.50	24.30	25.40	26.20	27.00			
		65				17.80	20.10	22.40	24.70	25.50	26.80	27.80	28.70				
4SJH-300E	Q	10	31.50	41.00	52.00	65.50	81.00	99.50									
		20	28.80	37.50	48.00	60.50	75.00	92.00	111.50	120.00	134.00						
		30	25.40	33.50	43.00	54.50	67.50	83.00	100.50	108.50	121.00	132.00	144.00				
		40	19.90	27.60	37.50	48.00	59.50	73.00	89.00	95.50	106.50	116.50	127.00				
		45	17.70	24.90	34.50	44.00	55.00	68.00	82.50	89.00	99.00	108.50	118.00				
		50	15.40	22.30	30.00	40.50	50.50	62.50	76.00	82.00	91.50	100.00	109.00				
		55		19.50	26.90	36.50	46.00	57.00	69.50	75.00	83.50	91.50	99.50				
		60			23.60	31.50	41.50	51.50	62.50	67.50	75.50	82.50	90.00				
		65				27.50	36.50	45.50	55.50	60.00	67.00	73.50	80.50				
		P	10	9.50	10.30	10.80	10.90	10.70	10.00								
			20	10.80	12.10	13.20	14.00	14.40	14.50	14.10	13.80	13.30					
			30	11.50	13.40	15.00	16.40	17.60	18.40	18.80	18.80	18.70	18.50	18.20			
			40	11.80	14.10	16.30	18.30	20.10	21.60	22.70	23.10	23.50	23.70	23.80			
			45	11.70	14.30	16.80	19.00	21.10	22.90	24.40	24.90	25.60	26.00	26.30			
			50	11.60	14.40	17.10	19.60	22.00	24.10	26.00	26.60	27.50	28.10	28.60			
			55		14.30	17.20	20.10	22.70	25.20	27.40	28.20	29.20	30.10	30.80			
			60			17.30	20.40	23.30	26.10	28.60	29.50	30.80	31.80	32.70			
		65				20.50	23.80	26.80	29.70	30.70	32.20	33.40	34.50				

## Performance Data

Q=Capacity (kW) P=Power input (kW)

# 60 Hz

Model	Con. Temp. °C	Evaporating Temperature °C														
		-25	-20	-15	-10	-5	0	5	7	10	12.5	15				
6SHH-350E	Q	10	41.00	52.50	66.50	83.50	103.00	126.50								
		20	36.50	47.00	60.00	75.00	93.00	114.50	139.00	150.00	167.50					
		30	32.00	41.50	53.00	66.50	83.00	102.00	124.00	133.50	149.50	163.50	179.00			
		40	25.70	34.50	46.00	58.00	72.50	89.00	108.50	117.50	131.00	144.00	157.50			
		45	23.30	31.50	42.50	54.00	67.00	82.50	101.00	109.00	122.00	133.50	146.50			
		50	20.90	28.40	37.50	49.50	62.00	76.00	93.00	100.50	112.50	123.50	135.50			
		55		25.60	34.00	45.00	56.50	70.00	85.50	92.00	103.50	113.50	124.50			
		60			30.50	39.50	51.00	63.50	77.50	84.00	94.00	103.50	113.00	113.00		
		65				35.00	46.00	57.00	70.00	75.50	85.00	93.00	102.00			
		P	10	11.40	12.40	13.20	13.60	13.60	13.10							
			20	13.20	14.80	16.20	17.30	18.10	18.40	18.20	18.00	17.50				
			30	14.70	16.70	18.60	20.40	21.90	23.00	23.70	23.90	23.90	23.80	23.50		
			40	16.00	18.30	20.60	22.90	25.00	26.90	28.40	28.90	29.50	29.90	30.10		
			45	16.40	18.90	21.50	24.00	26.40	28.60	30.50	31.10	32.00	32.60	33.10		
		50	16.90	19.50	22.20	24.90	27.60	30.10	32.30	33.20	34.30	35.10	35.80			
		55		20.00	22.80	25.80	28.70	31.40	34.00	35.00	36.30	37.30	38.20			
		60			23.40	26.50	29.60	32.60	35.50	36.60	38.20	39.40	40.50			
		65				27.00	30.30	33.60	36.80	38.00	39.80	41.20	42.50			
6SJH-400E	Q	10	47.50	61.50	78.00	98.00	122.00	149.50								
		20	43.50	56.00	71.50	90.00	111.50	137.00	167.00	180.00	201.00					
		30	38.50	50.00	64.00	80.50	100.50	123.50	150.00	162.00	181.00	198.50	216.50			
		40	30.50	41.50	56.00	70.50	88.00	108.50	132.00	142.50	159.50	175.00	191.00			
		45	27.70	38.00	51.50	65.50	81.50	101.00	123.00	132.50	148.50	162.50	177.50			
		50	24.70	34.00	45.00	60.00	75.00	93.00	113.50	122.50	137.00	150.00	164.00			
		55		30.50	40.50	54.50	68.50	84.50	103.50	112.00	125.50	137.50	150.50			
		60			36.00	47.00	61.50	76.50	93.50	101.00	113.50	124.50	136.00			
		65				41.50	55.00	68.00	83.50	90.50	101.50	111.50	122.00			
		P	10	14.20	15.40	16.10	16.40	16.10	15.00							
			20	16.00	17.90	19.50	20.70	21.40	21.60	21.00	20.50	19.60				
			30	17.30	19.80	22.10	24.20	26.00	27.20	27.90	28.00	27.90	27.60	27.10		
			40	18.10	21.10	24.10	27.00	29.70	32.00	33.80	34.40	35.10	35.50	35.70		
			45	18.30	21.60	24.90	28.10	31.20	34.00	36.40	37.30	38.30	39.10	39.60		
		50	18.40	21.90	25.50	29.10	32.50	35.80	38.80	39.80	41.30	42.30	43.20			
		55		22.00	25.90	29.80	33.70	37.40	40.80	42.10	43.90	45.30	46.50			
		60			26.10	30.30	34.60	38.70	42.70	44.20	46.30	48.00	49.50			
		65				30.70	35.30	39.80	44.30	46.00	48.40	50.40	52.30			
6SKH-500E	Q	10	58.50	75.50	97.00	122.50	152.50	187.50								
		20	51.00	67.00	86.50	109.50	137.00	168.50	205.50	222.00	248.50					
		30	43.50	58.00	75.50	96.50	121.00	149.50	182.50	197.00	220.50	241.50	264.00			
		40	33.00	47.00	65.00	83.50	105.00	130.00	159.00	172.00	192.50	211.00	230.50			
		45	28.90	42.00	60.00	77.00	97.00	120.50	147.50	159.50	178.50	195.50	214.00			
		50	24.90	37.50	52.00	70.50	89.50	111.00	136.00	147.00	164.50	180.00	197.00			
		55		33.00	46.50	64.00	81.50	101.50	124.00	134.50	150.50	165.00	180.50			
		60			41.00	55.50	73.50	92.00	112.50	122.00	136.50	149.50	163.50			
		65				49.00	66.00	82.50	101.00	109.50	122.50	134.50	147.00			
		P	10	17.10	18.30	19.30	19.80	19.90	19.40							
			20	19.40	21.40	23.10	24.40	25.40	25.90	25.80	25.70	25.20				
			30	21.10	23.80	26.40	28.60	30.60	32.10	33.10	33.40	33.70	33.70	33.60		
			40	21.70	25.40	28.80	32.10	35.00	37.70	39.90	40.60	41.60	42.30	42.80		
			45	21.60	25.70	29.60	33.40	36.90	40.10	42.90	43.90	45.30	46.30	47.20		
		50	21.00	25.60	30.00	34.30	38.40	42.20	45.70	46.90	48.70	50.10	51.30			
		55		25.10	30.10	34.90	39.60	44.00	48.10	49.70	51.80	53.50	55.10			
		60			29.70	35.10	40.40	45.40	50.20	52.00	54.60	56.70	58.60			
		65				34.80	40.70	46.40	51.90	54.00	57.00	59.40	61.70			

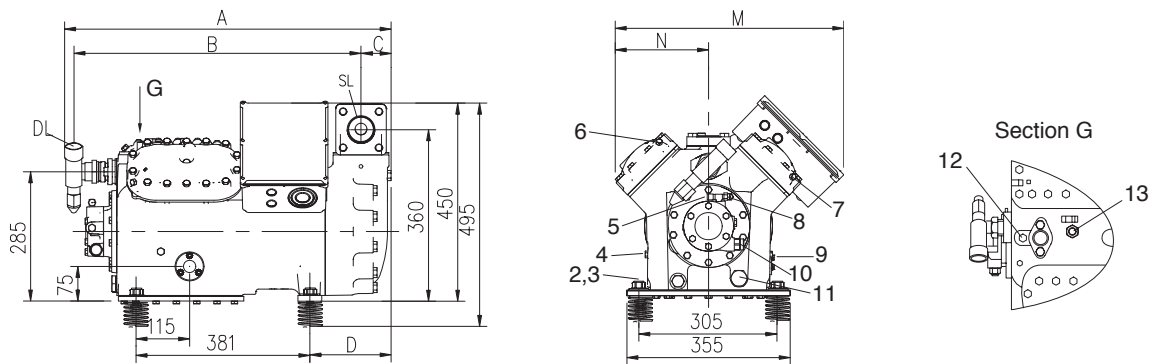
### Notes:

- Cooling capacity at 20°C suction gas temperature without liquid sub-cooling.
- Suction gas superheat is limited to 20K
- Head fan is required and suction gas superheat is limited to 10K

# 4S/6S Series

## Dimensions

The following drawings are applicable to compressor models 4SLW-1500, 4SLW-150E, 4STW-2000 and 4STW-200E:



**Fig. 5**  
(SL: Suction line DL: Discharge line)

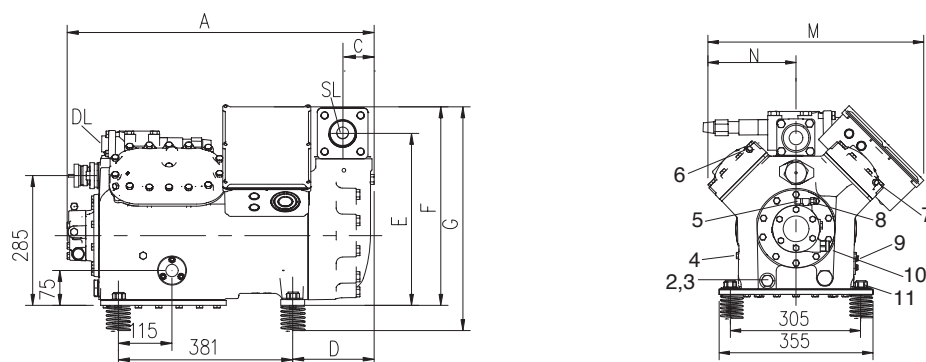
<b>1</b>	Plug low-pressure connection	1/8"-27NPTF	<b>2</b>	Oil screen built in	
<b>3</b>	Magnetic plug	1"-16UN	<b>4</b>	Plug oil charge	1/4"-18NPTF
<b>5</b>	Oil-pressure connection	7/16"-20UNF	<b>6</b>	Plug high-pressure connection	1/8"-27NPTF
<b>7</b>	Plug DTC valve sensor connection (used for 50Hz compressor)	1/2"-14NPTF	<b>8</b>	Oil-pressure control H. P.	1/4" ≈ 6mm
<b>9</b>	Plug oil-pressure control L. P.	1/4"-18NPTF	<b>10</b>	Sensor connection/OPS1	X
<b>11</b>	Sleeve (crankcase heater)	1/2"-14NPSL	<b>12</b>	Plug DTC valve sensor connection (used for 60Hz compressor)	1/2"-14NPTF
<b>13</b>	Liquid injection adapter connection	1/4"-18NPTF			

Model		A	B	C	D	M	N
4SLW-1500	4SLW-150E	680	600	55	155	485	205
4STW-2000	4STW-200E	725	635	65	200	490	210

# 4S/6S Series

## Dimensions

The following drawings are applicable to compressor models 4SAH-2000, 4SAH-200E, 4SHH-2500, 4SHH-250E, 4SJH-3000 and 4SJH-300E:



**Fig. 6**  
(SL: Suction line DL: Discharge line)

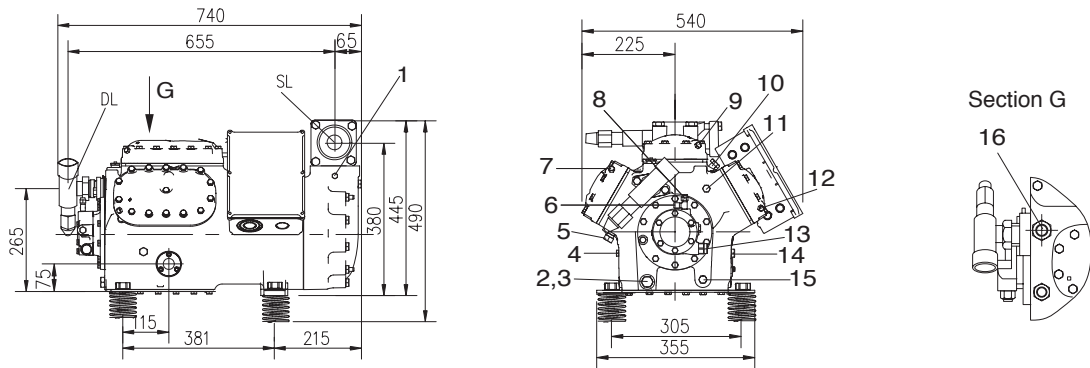
1	Plug low-pressure connection	1/8"-27NPTF	2	Oil screen built in	
3	Magnetic plug	1"-16UN	4	Plug oil charge	1/4"-18NPTF
5	Oil-pressure connection	7/16"-20UNF	6	Plug high-pressure connection	1/8"-27NPTF
7	Plug high-pressure connection	1/8"-27NPTF	8	Oil-pressure control H. P.	1/4" ≈ 6mm
9	Plug oil-pressure control L. P.	1/4"-18NPTF	10	Sensor connection/OPS1	X
11	Sleeve (crankcase heater)	1/2"-14NPSL			

Model	A	C	D	E	F	G	M	N
4SAH-2000 4SAH-200E	650	55	155	360	450	495	485	205
4SHH-2500 4SHH-250E	670	65	180	380	450	495	490	210
4SJH-3000 4SJH-300E	690	65	200	380	450	495	515	230

# 4S/6S Series

## Dimensions

The following diagrams are applicable to compressor models 6SLW-2500, 6SLW-250E, 6SHH-3500 & 6SHH-350E



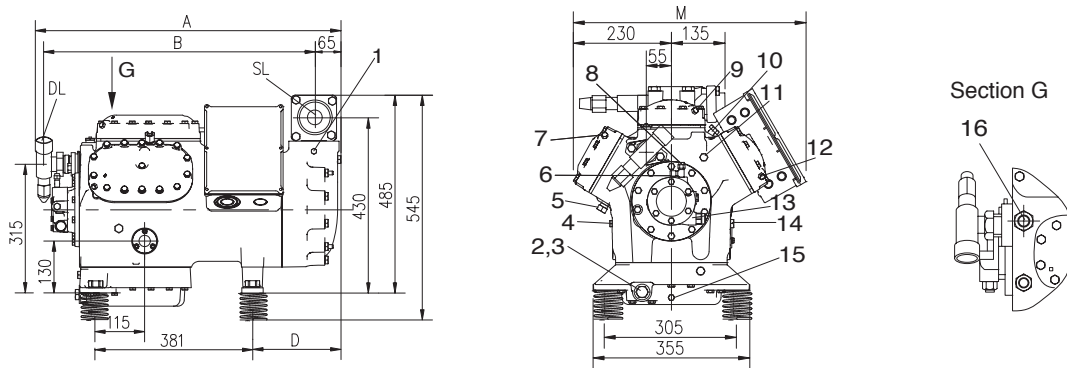
**Fig. 7**  
(SL: Suction line DL: Discharge line)

1	Plug low-pressure connection	1/8"-27NPTF	2	Oil screen built in	
3	Magnetic plug	1"-16UN	4	Plug oil charge	1/4"-18NPTF
5	Liquid injection adapter connection	1/4"-18NPTF	6	Oil-pressure connection	7/16"-20UNF
7	Plug DTC valve sensor connection (used for 6SLW compressor at 50Hz)	1/2"-14NPTF	8	Oil-pressure control H. P.	1/4"≈ 6mm
9	Plug high-pressure connection	1/8"-27NPTF	10	Liquid injection adapter connection	3/8"-18NPTF
11	Plug high-pressure connection	1/4"-18NPTF	12	Plug high-pressure connection	1/8"-27NPTF
13	Sensor connection/OPS1	X	14	Plug oil-pressure control L. P.	1/4"-18NPTF
15	Sleeve (crankcase heater)	1/2"-14NPSL	16	Plug DTC valve sensor connection (used for 6SLW Compressor at 60Hz)	1/2"-14NPTF

# 4S/6S Series

## Dimensions

The following drawings are applicable to compressor models 6STW-3200, 6STW-320E, 6SJH-4000 & 6SJH-400E:



**Fig. 8**  
(SL: Suction line DL: Discharge line)

1	Plug low-pressure connection	1/8"-27NPTF	2	Oil screen built in	
3	Magnetic plug	1"-16UN	4	Plug oil charge	1/4"-18NPTF
5	Liquid injection adapter connection	1/4"-18NPTF	6	Oil-pressure connection	7/16"-20UNF
7	Plug DTC valve sensor connection (used for 6STW Compressor at 50Hz)	1/2"-14NPTF	8	Oil-pressure control H. P.	1/4"≈ 6mm
9	Plug high-pressure connection	1/8"-27NPTF	10	Liquid injection adapter connection	3/8"-18NPTF
11	Plug high-pressure connection	1/4"-18NPTF	12	Plug high-pressure connection	1/8"-27NPTF
13	Sensor connection/OPS1	X	14	Plug oil-pressure control L. P.	1/4"-18NPTF
15	Bore crankcase heater	12.7mm	16	Plug DTC valve sensor connection (used for 6STW Compressor at 60Hz)	1/2"-14NPTF

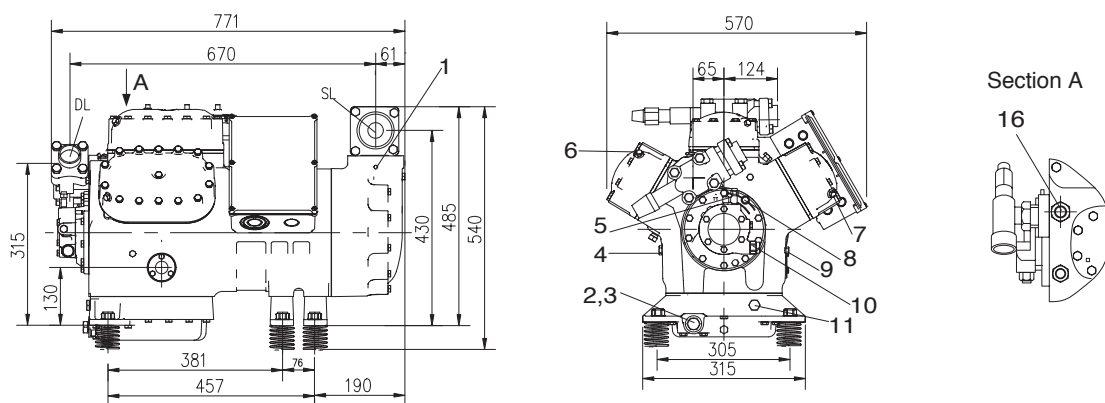
Model	A	B	D	M
6STW-3200 6STW-320E	740	655	215	540
6SJH-4000 6SJH-400E	760	675	235	565



# 4S/6S Series

## Dimensions

The following diagrams are applicable for compressor models 6SUW-4000, 6SUW-400E, 6SKH-5000 & 6SKH-500E:



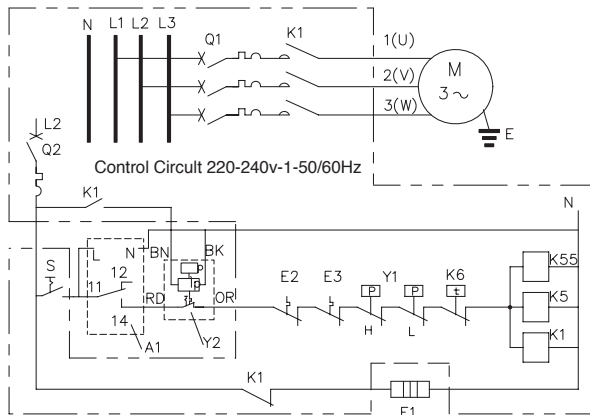
**Fig. 9**  
(SL: Suction line DL: Discharge line)

1	Plug low-pressure connection	1/8"-27NPTF	2	Oil screen built in	
3	Magnetic plug	1"-16UN	4	Plug oil charge	1/4"-18NPTF
5	Liquid injection adapter connection	1/4"-18NPTF	6	Oil-pressure connection	7/16"-20UNF
7	Plug high-pressure connection	1/8"-27NPTF	8	Oil-pressure control H. P.	1/4"≈ 6mm
9	Plug high-pressure connection	1/8"-27NPTF	10	Liquid injection adapter connection	3/8"-18NPTF
11	Plug high-pressure connection	1/4"-18NPTF	12	Plug high-pressure connection	1/8"-27NPTF
13	Sensor connection/OPS1	X	14	Plug oil-pressure control L. P.	1/4"-18NPTF
15	Bore crankcase heater	ø1/2"=12.7mm	16	Plug DTC valve sensor connection (used for 6SUW Compressor)	1/2"-14NPTF

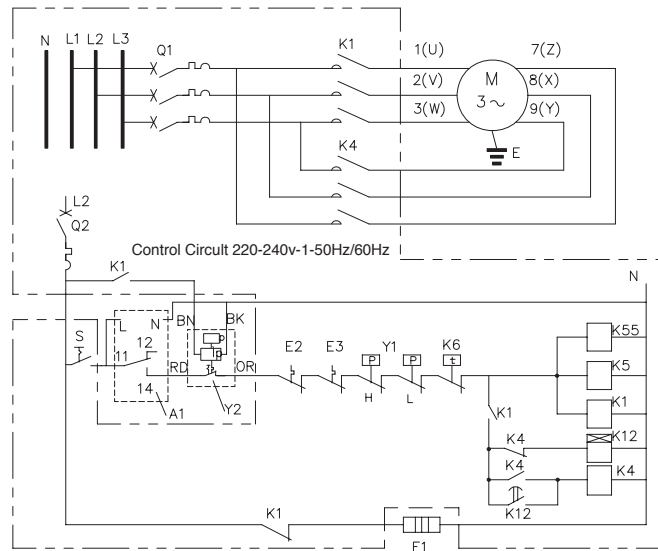
# 4S/6S Series

## Electrical Wiring Diagrams

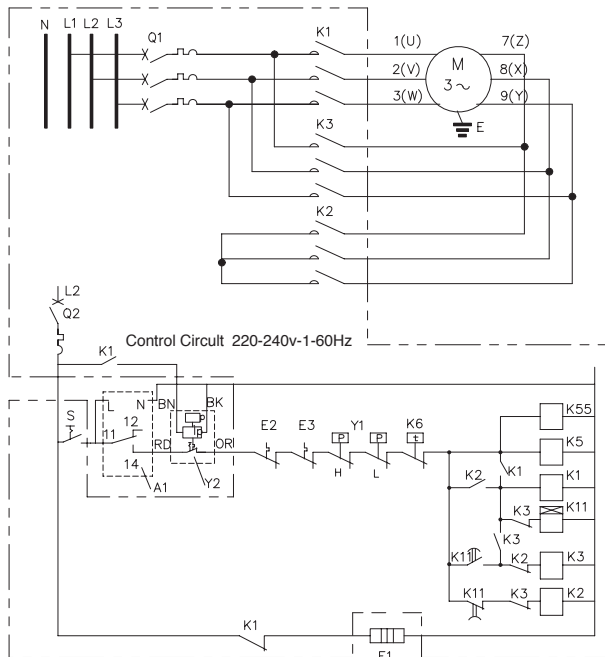
Electrical diagram for direct start



Electrical diagram For Part winding Start (AWM/D model)



Electrical diagram For Y-Δ Start (EWK Model)



**Electrical Code Note:**

- M: Compressor motor
- Q1: Mini-breaker
- Q2: Mini-breaker
- S: Switch
- K1-K4: contactor M1
- K5, K55: Fan contactor
- K6: Thermostat
- K11: Time delay relay 1-3s for Y/Δ start
- K12: Time delay relay 1s ±0.1s for part winding start
- E1: Crankcase Heater
- E2-E3: Thermal protection switch for fan
- Y1: H/L pressure switches
- Y2: Oil Differential Pressure Switch OPS1
- A1: Motor protector module
- A5: Terminal Box of Compressor

**Color code:**

- RD: red;
- OR: orange;
- BN: brown;
- BK: black
- Q1: mini-breaker

# 4S/6S Series

## Electrical Data

Compressor	Power	MRA (A)	LRA (A)
4SLW-1500-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	31.1/31.1	125-140/118-132
4SLW-150E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	35.1/35.1	125-140/118-132
4SA1-2000-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	31.6/31.6	158-175/164-178
4SA1-200E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	31.6/31.6	158-175/164-178
4STW-2000-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	34.9/34.9	143-160/137-154
4STW-200E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	39.6/39.6	143-160/137-154
4SH1-2500-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	42.4/42.4	180-199/183-200
4SH1-250E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	42.4/42.4	180-199/183-200
4SJ1-3000-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	48.0/48.0	200-221/196-213
4SJ1-300E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	48.3/48.3	200-221/196-213
6SLW-2500-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	45.4/45.4	173-192/166-184
6SLW-250E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	51.6/51.6	173-192/166-184
6SH1-3500-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	63.6/63.6	275-304/268-292
6SH1-350E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	63.6/63.6	275-304/268-292
6STW-3200-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	58.3/58.3	253-284/243-273
6STW-320E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	64.9/64.9	253-284/243-273
6SJ1-4000-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	75.3/75.3	275-304/268-292
6SJ1-400E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	75.3/75.3	275-304/268-292
6SUW-4000-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	71.1/71.1	275-304/268-292
6SUW-400E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	78.0/78.0	275-304/268-292
6SK1-5000-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	89.4/89.4	355-393/351-383
6SK1-500E-AWM/D	380-420V 3Ph 50Hz/440-480V 3Ph 60Hz	89.4/89.4	355-393/351-383
4SLW-1500-EWK	380-420V/220-240V 3Ph 60Hz	37.3/64.6	163-180/282-312
4SLW-150E-EWK	380-420V/220-240V 3Ph 60Hz	42.1/72.9	163-180/282-312
4SA1-2000-EWK	380-420V/220-240V 3Ph 60Hz	37.9/66.4	203-224/354-386
4SA1-200E-EWK	380-420V/220-240V 3Ph 60Hz	37.9/66.4	203-224/354-386
4STW-2000-EWK	380-420V/220-240V 3Ph 60Hz	41.8/72.4	180-199/312-345
4STW-200E-EWK	380-420V/220-240V 3Ph 60Hz	47.5/82.3	180-199/312-345
4SH1-2500- EWK	380-420V/220-240V 3Ph 60Hz	50.9/89.0	228-252/397-433
4SH1-250E- EWK	380-420V/220-240V 3Ph 60Hz	50.9/89.0	228-252/397-433
4SJ1-3000- EWK	380-420V/220-240V 3Ph 60Hz	57.6/101	243-268/424-462
4SJ1-300E- EWK	380-420V/220-240V 3Ph 60Hz	58.0/101	243-268/424-462
6SLW-2500-EWK	380-420V/220-240V 3Ph 60Hz	54.5/94.4	214-236/370-409
6SLW-250E-EWK	380-420V/220-240V 3Ph 60Hz	61.9/107.2	214-236/370-409
6SH1-3500-EWK	380-420V/220-240V 3Ph 60Hz	76.3/134	332-367/579-632
6SH1-350E-EWK	380-420V/220-240V 3Ph 60Hz	76.3/134	332-367/579-632
6STW-3200-EWK	380-420V/220-240V 3Ph 60Hz	70.1/121.4	325-359/562-622
6STW-320E-EWK	380-420V/220-240V 3Ph 60Hz	77.8/134.7	325-359/562-622
6SJ1-4000- EWK	380-420V/220-240V 3Ph 60Hz	90.4/158	332-367/579-632
6SJ1-400E- EWK	380-420V/220-240V 3Ph 60Hz	90.4/158	332-367/579-632
6SUW-4000- EWK	380-420V/220-240V 3Ph 60Hz	85.3/149	332-367/579-632
6SUW-400E- EWK	380-420V/220-240V 3Ph 60Hz	93.6/164	332-367/579-632
6SK1-5000- EWK	380-420V/220-240V 3Ph 60Hz	107/188	436-482/761-830
6SK1-500E- EWK	380-420V/220-240V 3Ph 60Hz	107/188	436-482/761-830

# L/2S/3S/4S/6S Series

## Technical Data

MODEL	Number of Cylinders	Bore/Stroke (mm)	Nominal HP (HP)	Motor Speed (RPM) 50Hz / 60Hz	Displacement (m <sup>3</sup> /hr) 50Hz/60Hz	Discharge line ø (mm)	Suction line ø (mm)	Length (L)(mm)	Length (L1)(mm)
LA10-0200 LA10-020E	2	44.5/36.5	2	1450 / 1750	9.86/11.9	15	22	460	
LA20-0200 LA20-020E	2	50.8/36.5	2	1450 / 1750	12.9/15.6	15	22	460	
LA20-0300 LA20-030E	2	50.8/36.5	3	1450 / 1750	12.9/15.6	15	22	460	
LA40-0300 LA40-030E	2	60.4/36.5	3	1450 / 1750	18.2/21.9	15	28	460	
LA40-0400 LA40-040E	2	60.4/36.5	4	1450 / 1750	18.2/21.9	15	28	460	
LA50-0400 LA50-040E	2	61.9/42.8	4	1450 / 1750	22.5/27.1	15	28	460	
2SCW-0550 2SCW-055E	2	60.3/54.0	5.5	1450 / 1750	26.8/32.34	7/8	1 1/8	560	
2SKW-0750 2SKW-075E	2	65.1/54.0	7.5	1450 / 1750	31.2/37.65	7/8	1 1/8	560	
3SC1-1000 3SC1-100E	3	60.4/50.8	10	1450 / 1750	38.0/45.6	1 1/8	1 3/8	653	101
3SS1-1500 3SS1-150E	3	61.9/63.5	15	1450 / 1750	49.9/59.9	1 1/8	1 3/8	680	128
4SLW-1500 4SLW-150E	4	68.3/55.6	15	1450 / 1750	70.8/85.0	1 1/8	1 5/8		
4SAH-2000 4SAH-200E	4	63.5/50.8	20	1450 / 1750	56//67.2	1 1/8	1 5/8		
4STW-2000 4STW-200E	4	74.7/55.6	20	1450 / 1750	84.7/101.6	1 3/8	2 1/8		
4SHH-2500 4SHH-250E	4	68.3/55.6	25	1450 / 1750	70.8/85.0	1 1/8	2 1/8		
4SJH-3000 4SJH-300E	4	74.7/55.6	30	1450 / 1750	84.7/101.6	1 3/8	2 1/8		
6SLW-2500 6SLW-250E	6	68.3/55.6	25	1450 / 1750	106/127.2	1 3/8	2 1/8		
6SHH-3500 6SHH-350E	6	68.3/55.6	35	1450 / 1750	106/127.2	1 3/8	2 1/8		
6STW-3200 6STW-320E	6	74.7/55.6	32	1450 / 1750	127/152.4	1 3/8	2 1/8		
6SJH-4000 6SJH-400E	6	74.7/55.6	40	1450/ 1750	127/152.4	1 3/8	2 1/8		
6SUW-4000 6SUW-400E	6	80.6/57.0	40	1450 / 1750	151.8/182.2	1 5/8	2 5/8		
6SKH-5000 6SKH-500E	6	80.6/57.0	50	1450 / 1750	151.8/182.2	1 5/8	2 5/8		

# L/2S/3S/4S/6S Series

## Technical Data

MODEL	Width (W)(mm)	Height (without fan) (H)(mm)	Height (with fan) (J) (mm)	Mounting hole size (mm)	Mounting install Dim. AxB(mm)	Oil Charge (Liters)	Motor Cooling: Min. Air Quantity (m <sup>3</sup> /min)	Net weight (Kg)	Gross weight (kg)
LA10-0200 LA10-020E	330	385	555	22	295 X 279	2.4	18.5	77	85
LA20-0200 LA20-020E	330	385	555	22	295 X 279	2.4	18.5	76	84
LA20-0300 LA20-030E	330	385	555	22	295 X 279	2.4	18.5	79	87
LA40-0300 LA40-030E	330	385	555	22	295 X 279	2.4	38.5	78	86
LA40-0400 LA40-040E	330	385	555	22	295 X 279	2.4	38.5	80	88
LA50-0400 LA50-040E	330	385	555	22	295 X 279	2.4	38.5	81	89
2SCW-0550 2SCW-055E	330	395	565	22	295 X 279	2.4		91	100
2SKW-0750 2SKW-075E	330	395	565	22	295 X 279	2.4		92	101
3SC1-1000 3SC1-100E	370	480	650	25.4	381X305	3.7		157	175
3SS1-1500 3SS1-150E	370	480	650	25.4	381X305	3.7		169	187
4SLW-1500 4SLW-150E				25.5		3.4		180	207
4SAH-2000 4SAH-200E				25.5		3.8		183	210
4STW-2000 4STW-200E				25.5		3.4		192	219
4SHH-2500 4SHH-250E				25.5		3.8		194	221
4SJH-3000 4SJH-300E				25.5		3.8		210	237
6SLW-2500 6SLW-250E				25.5		3.4		210	237
6SHH-3500 6SHH-350E				25.5		4.0		224	251
6STW-3200 6STW-320E				25.5		6.8		234	261
6SJH-4000 6SJH-400E				25.5		6.8		252	279
6SUW-4000 6SUW-400E				25.5		6.8		265	294
6SKH-5000 6SKH-500E				25.5		6.8		268	295

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