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Snowman Group reserves the right to change its products without notice in advance.  
The technical parameters shall be subject to order contract or technical appendix of the contract.

**RefComp**

## Screw Compressor

### SW5L Series Semi-hermetic Screw Compressor Rack System



Advanced  
technology for  
commercial  
screw  
compressors

Advanced screw &  
reciprocating compressor  
technology from Italy



Global unified service hotline  
**400-109-6660**



## CONTENTS

Descriptions	Page
SW5L series semi-closed screw compression/condensing unit structure drawing	01
Product Introductions	05
Product Features	06
Naming Rules	07
Series of Low Temperature Screw Compressor Units	08
SW5L Series Compressor Unit Performance Parameters and Graphs	09
SW5L Series Compressor Unit Performance Parameters	13
SW5L Series Screw Compressor Unit Technical Parameters	19
SW5L Series Screw Compressor Unit Outline Drawings	21
Control Systems	22
Application Fields	23
Value-added Services	25

SW5L series semi-closed screw compression/condensing unit structure drawing



Compressor

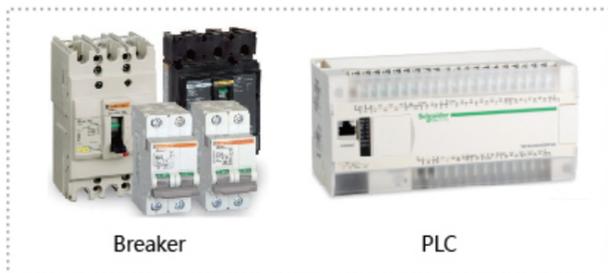


Cut- off valve



Expansion valve

Electrical control cabinet



Breaker

PLC



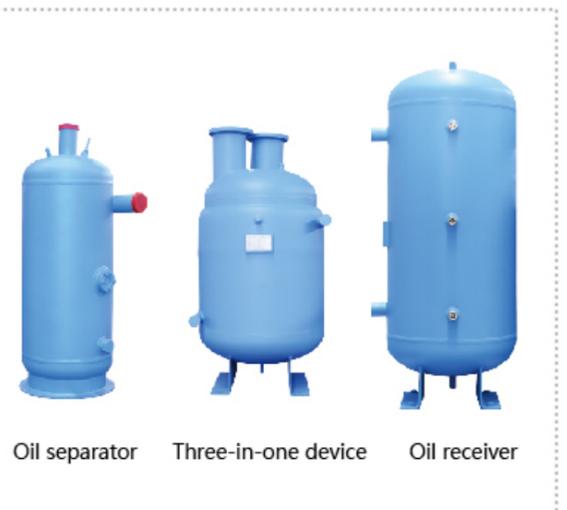
Smart touching screen



Pressure controller



板式换热器



Oil separator

Three-in-one device

Oil receiver



### Compressor

The world famous compressor manufacturer RefComp is a wholly-owned subsidiary of Snowman, with products of reliable quality and excellent performance, and has become a leader in air-conditioning and refrigeration compressor industry globally.

SW series screw compressors are suitable for cold storage applications and capable of multiple parallel running, with oil pressure control valve for energy adjustment.



### Cut-off valve

Cut-off valves in the refrigeration system are always having leakage problem. Paying attention to this, Snowman requires cut-off valves with excellent flow conditions and accurate linear characteristics, as well as meeting the directives and requirements of pressure vessels for every country. Danfoss valves has gained PED and CE certifications, which accord with Snowman's standards.



### Expansion valve

Danfoss thermal expansion valve, with stainless steel actuator, interchangeable flow components, accurate temperature filling, wide cooling capacity range, and low gap overlap.



### Plate heat-exchanger

Alfa Laval and Danfoss are the globally-renowned brands for plate heat-exchangers which are compact in structure, light in weight, easy to install, with evenly-distributed flow, stable thermal performance and less charge of refrigerant.



### Water-cooled condenser

The shell-and-tube type condenser, to condense the high temperature and high pressure gas refrigerant into high pressure liquid refrigerant, are widely used in various kinds of condensing heat-exchanging processes. Based on the heat transfer features of refrigerant and cooling medium, the heat-exchanging pipes adopt unique design, which enlarges the heat-exchanging surface and increases the heat-exchanging efficiency; in the meantime, optimizes the pipes design as well as improves the heat-exchange and cooling efficiency.



### Oil separator

In the cooling systems, there is always some lubricating oil exhausted along with gas refrigerant, and the oil separator separates the oil from the refrigerant to avoid the oil flowing into the internal system, which improves the heat-exchanger's efficiency, and in the meantime makes sure that lubricating oil back to compressor, to prolong the using life of the compressor and make the cooling system more efficient.



### Three-in-one device

Three-in-one device is a machine which is combined with liquid receiver, suction accumulator and heat-exchanger, with three functions in one device. Hence, it greatly improves the efficiency of cooling system and avoids the liquid running into compressor.

### Liquid receiver

Liquid receiver is for storing high pressure liquid refrigerant in the cooling system, to adjust and stable the circulation of refrigerant. In the meantime, it can also prevent high pressure liquid refrigerant from flowing into low pressure system, to stable the system functions. It has been widely used in the fields of air-conditioning and commercial cooling. There are two types of liquid receivers for option: horizontal (WZF) and vertical (LZF), with varieties of models.

### Pressure controller

As an important protection device, pressure controller raises a security barrier for compressor. Snowman has strict requirements on the quality of pressure controller. Danfoss pressure controller obtained CCC, CE, GL, DNV certifications with its excellent performance, and also gained Snowman's recognition with its extremely low breakdown rate.

### Control cabinet

Refrigeration compressor rack system is equipped with control cabinets with components from Siemens, Schneider, ABB, Omron and other imported or joint venture brands, which automatically control the whole process as well as detect various analog quantities and switch status in real time, simplifying the operation with one-button operation mode. Units can be controlled remotely and seamlessly connected with third-party PC communication port.

### Breaker

Circuit breakers are from the international top brand Schneider, easy to install in modular, with full range of certifications such as CCC, CE, UL, TUV, CCS, and in line with the EU RoHS directives.

### PLC

Control system adopts Schneider M218 series PLC.

### Smart touching screen

Through the Schneider 64K true color touching screen, to control the whole operation process of refrigeration equipment

Snowman commercial compressor unit adopts RefComp semi-hermetic screw compressor as the core component. Through optimization design, Snowman produce series of standard compressor units and compressor condensing units, which are applicable to a wide range of application fields such as pharmaceutical, chemical fiber, household electrical appliances, food, packaging, plastics, daily necessities, water conservancy and hydro power, construction (central air-conditioning) and others. The units can provide high, medium and low temperature of various ranges of cooling capacity, and offer every customer with the most economical, most efficient and safest solutions.

### Product Features

- mechatronic integration structure, with small footprint, easy to operate and maintain;
- world-renowned compressor, with high cooling capacity;
- special economizer, with higher operation efficiency and lower operating costs;
- adaptable for a wide range of temperatures;
- unique design of gas and liquid separation, greatly reducing the damage caused by liquid shocks due to strong fluctuation of loads.



#### Humanized--- beautiful appearance, easy maintenance

- Strictly-chosen best components, for quality assurance and stable and reliable operation;
- Compact modular design, to save space and investment costs;
- Beautiful appearance, reasonable layout, detailed consideration and constant improvement;
- Humanization design, with components easy to replace, low cost for maintenance;
- Flexible pipe fixation, less vibration and noise.



#### Smart--- one-touch operation, remote communication

- Intelligent control, energy adjustable according to the real time loads;
- Online remote control, to reduce labor costs;
- Multi-step energy adjustment, more accurate in load matching.



#### Safe--- multiple safety protection and alarm devices

- Monitoring compressor motor and displacement temperature;
- Monitoring motor rotating direction;
- Monitoring default phase;
- Monitoring oil flow, oil level and oil temperature;
- Monitoring high and low pressure;
- Automatic alarm and switch-off, recording contents and time for the appearing disturbances;
- Hierarchical password protection, to prevent improper operation of non-professional persons.

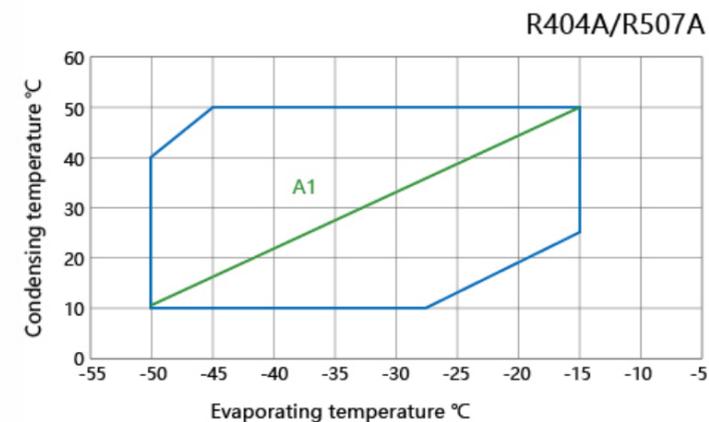
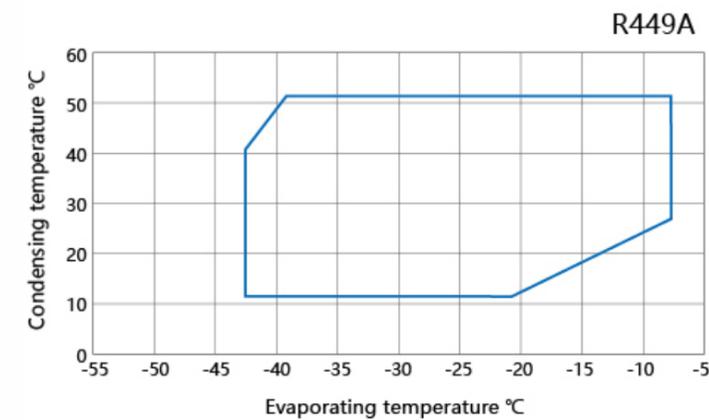
### RefComp- SW5L Semi-hermetic High-efficiency Screw Compressor

Snowman SW5L semi-hermetic efficient screw compressor had a total of 20 models, with 85~850m<sup>3</sup>/h displacement range from 20Hp~250Hp. The inlet temperature ranges from -45°C~25°C and exhaust temperature 40°C~120°C, suitable for Freon like R507A, R404A, R134a and R407C. Compressors are widely used in ice engineering, frozen food, marine refrigeration and deep-freezing fields.

- SRM "I" type patented alignment with 5+7 combination teeth ratio, running stable and efficiently, effectively applied in low temperature refrigeration;
- New technology--maximum speed up to 5000rpm, dramatically increase single refrigeration capacity;
- INT69 SNY protection module, protection of high motor temperature and reverse as well as lack of phase;
- 6 pieces PTC thermistors to prevent the motor heat burn;
- Motor running state feedback and real-time monitoring.



#### Compressor applications when using refrigerant:



50Hz Full load running  
10K Suction superheat  
Zone A1=Oil cooler is required

Condenser	Quantity of compressors	Compressor code	Compressor HP	Indoor/Outdoor	Refrigeration oil
					Refrigeration oil (1 letter) E- Ester oil A- Alkyl benzene synthetic oil M- Mineral oil (Omit)
				Indoor/Outdoor A- Indoor(Omit) B- Outdoor(without shed) C- Outdoor(with shed)	
			Compressor HP (3 letters) 003~390		
		Compressor code (3letters) P2L, P2H, P4L, P4H, P6L, P6H, SB4, SB6, 134, SRC, SWH, SWL, W5L			
	Quantity of compressors(1letter) Single compressor(Omit) 2 compressors parallel 3 compressors parallel 4 compressors parallel 5 compressors parallel 6 compressors parallel				
Condenser(1letter) N- None W- Water- cooled A- Air- cooled E- Evaporative					

Note: N2SW3L080A, means 2sets SW3L8000(80HP) semi-hermetic compressors installed in one package without condenser, indoor-type 2compressors parallel package with alkyl benzene synthetic oil.  
 N2P6L030,shows 2sets SPL030(30HP) reciprocating compressors installed in one package without condenser, indoor- type 2compressos parallel package with mineral oil.

### Service condition

- Ambient temperature: +5°C~+35°C
- Refrigerant oil: only provided or authorized by snowkey
- Cooling water condition:  
cooling water quality in the unit should meet the requirement of Code For Design Of Industrial Recirculating Cooling Water Treatment  
Pressure of the water supply is 0.1~0.6Mpa(water- cooled condenser)
- Entering temperature of cooling water : +15°C~+32°C
- Drafty machine room with HR below 85%.(Temperature is 20°C±5°C )
- Installed in the place where altitude is below 1000 meter , gas ,liquid and conductive dust won' t corroding metal or destroy the insulating layer

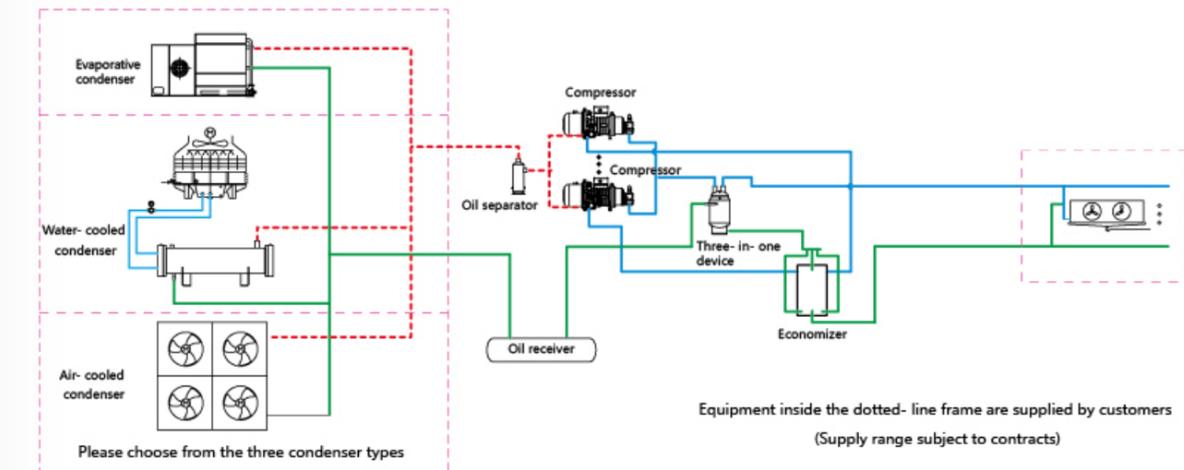
## Low Temperature Screw Compressor Unit Series

Low temperature screw compressor units are Snowman' s featured products, adopting RefComp SW series screw compressors, with power ranges from 20 to 600HP, and even reach to 900HP upon request from customers. The design and manufacturing of the units meet all demands of industrial refrigeration. The design and layout of all components maximize the reliability and maintainability for operation on site.

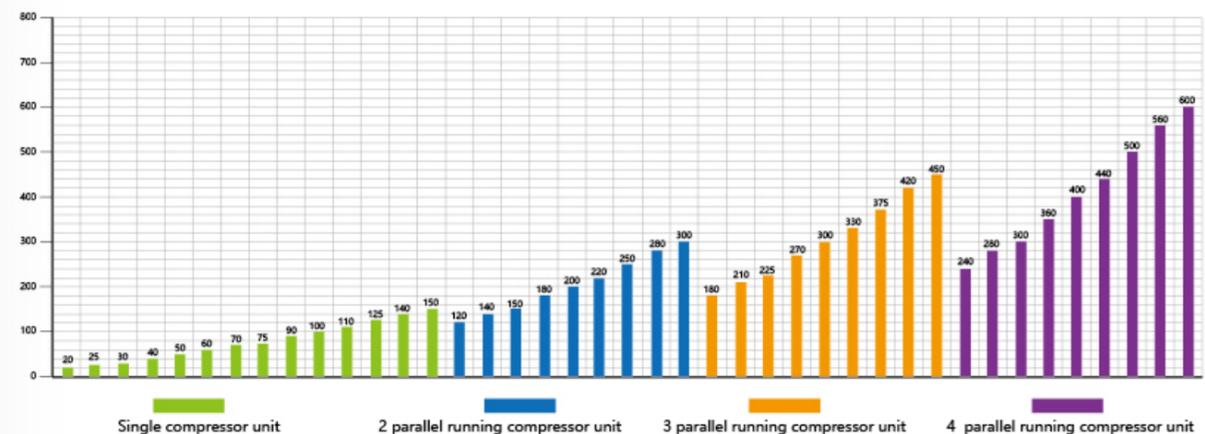


Refrigerant*	R404A/R507A
Refrigeration capacity**	22.5kW~622.8kW
Power supply	380V 3P 50Hz

\*Please inform us if you choose other types of refrigerant;  
 \*\*Based on standard working condition - 30/40°C, with refrigerant R507A;  
 Please inform us if choose multiple parallel running.



### Power of compressor unit



SW5L Series Compressor Unit Performance Parameters and Graphs

R507A

Evaporating Temperature °C	NWSL020E						NWSL025E					
	35		40	45	35	40	45					
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-45	16.5	19.3	14.6	21.5	12.5	24.1	18.9	21.6	16.7	24.2	14.3	27
-40	21.3	19.8	19.1	22	16.8	24.4	24.3	22.2	21.9	24.7	19.2	27.3
-35	27.2	20.5	24.7	22.6	22	24.8	31.1	22.9	28.2	25.3	25.2	27.8
-30	34.2	21.2	31.4	23.3	28.3	25.4	39.1	23.8	35.8	26.1	32.4	28.5
-25	42.4	22.1	39.2	24.1	35.8	26.1	48.3	24.7	44.7	27	40.8	29.3
-20	51.8	23.1	48.2	25.1	44.4	27	58.9	25.9	54.9	28.1	50.6	30.2

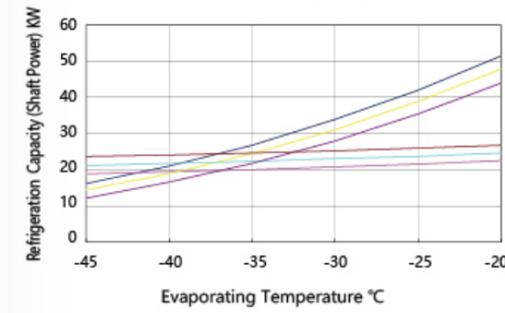
Evaporating Temperature °C	NWSL030E						NWSL040E					
	35		40	45	35	40	45					
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-45	22.4	25.5	19.9	28.5	17.1	31.8	27.1	29	24.1	32.5	20.7	36.5
-40	28.9	26.1	26	29.1	22.8	32.2	34.9	29.7	31.4	33.1	27.7	36.8
-35	36.8	26.9	33.5	29.8	29.9	32.8	44.4	30.5	40.5	33.8	36.2	37.3
-30	46.1	27.9	42.4	30.7	38.3	33.5	55.6	31.5	51.3	34.8	46.5	38
-25	56.9	29	52.7	31.7	48.2	34.4	68.6	32.8	63.8	35.9	58.5	39
-20	69.1	30.3	64.6	32.9	59.5	35.5	83.4	34.2	78.1	37.2	72.1	40.1

Evaporating Temperature °C	NWSL050E						NWSL060E					
	35		40	45	35	40	45					
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-45	31.2	33	27.7	37	23.9	41.6	39	42.3	34.8	47.8	30.1	54.1
-40	40	33.7	36.1	37.6	31.8	41.9	49.9	43	45.3	48.3	40.1	54.2
-35	50.8	34.7	46.5	38.5	41.6	42.4	63.3	44.1	58.1	49.2	52.3	54.5
-30	63.6	35.8	58.7	39.5	53.3	43.3	78.9	45.2	73.2	50.2	66.8	55.3
-25	78.4	37.1	72.9	40.7	66.9	44.3	97	46.7	90.7	51.5	83.6	56.3
-20	95.1	38.7	89	42.1	82.3	45.5	117.3	48.5	110.4	53	102.7	57.6

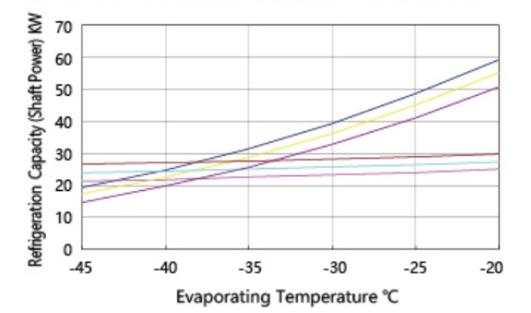
Evaporating Temperature °C	NWSL070E						NWSL075E					
	35		40	45	35	40	45					
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-45	42.1	44.5	37.4	50	32.2	56.2	46.1	48.4	41	54.2	35.3	60.9
-40	54.1	45.6	48.8	50.9	43	56.6	59.2	49.4	53.5	55.2	47.1	61.4
-35	68.8	46.9	62.8	52	56.3	57.3	75.2	50.8	68.8	56.4	61.6	62.2
-30	86.2	48.4	79.5	53.4	72.2	58.5	94.2	52.4	86.9	57.8	78.9	63.4
-25	106.4	50.3	98.9	55	90.7	59.9	116	54.3	108	59.6	99	64.9
-20	129.1	52.3	121	57	111.9	61.6	140.8	56.7	131.9	61.7	122.1	66.7

Notes:  
 Q for refrigeration capacity (kW), and P for shaft power(kW).Based on a liquid subcooling degree of 2K and a return gas superheat degree of 5K, with an economizer.  
 The above are some performance parameters of the compressor units. For more information, please contact our company for request.  
 The performance parameters of the compressor condensing unit can be referred to the performance parameter table of the compressor unit and the curve graph.

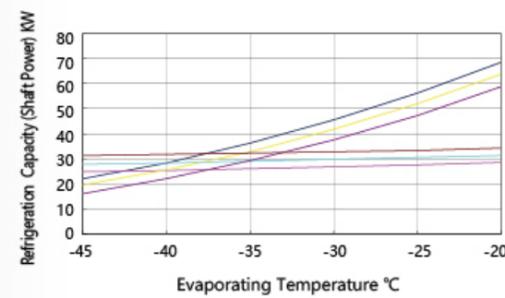
NWSL020E (R507A, Condensing Temperature: 35/40/45°C)



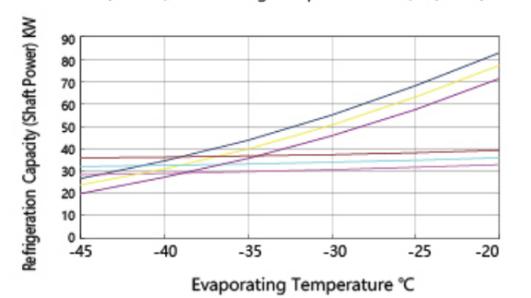
NWSL025E (R507A, Condensing Temperature: 35/40/45°C)



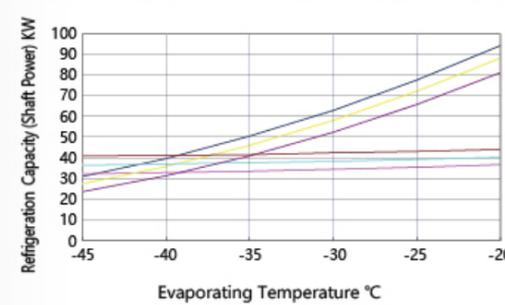
NWSL030E (R507A, Condensing Temperature: 35/40/45°C)



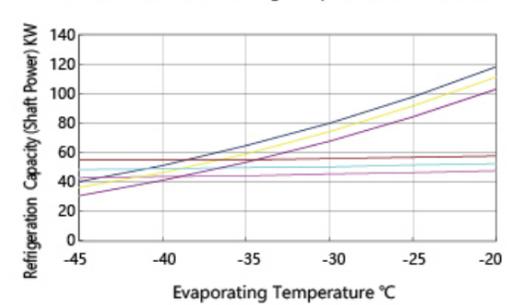
NWSL040E (R507A, Condensing Temperature: 35/40/45°C)



NWSL050E (R507A, Condensing Temperature: 35/40/45°C)

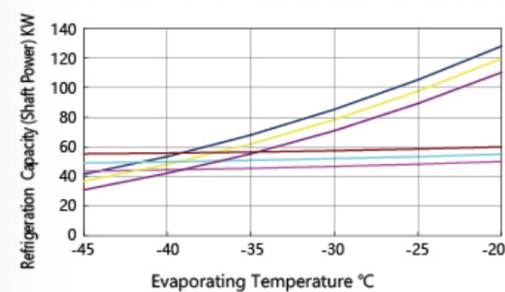


NWSL060E (R507A, Condensing Temperature: 35/40/45°C)



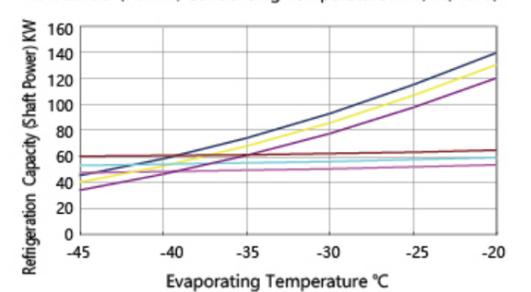
NWSL070E (R507A, Condensing Temperature: 35/40/45°C)

NWSL070E (R507A, Condensing Temperature: 35/40/45°C)



NWSL075E (R507A, Condensing Temperature: 35/40/45°C)

NWSL075E (R507A, Condensing Temperature: 35/40/45°C)



— 35°C Refrigeration Capacity — 40°C Refrigeration Capacity — 45°C Refrigeration Capacity  
 — 35°C Shaft Power — 40°C Shaft Power — 45°C Shaft Power

SW5L Series Compressor Unit Performance Parameters and Graphs (Continued)

R507A

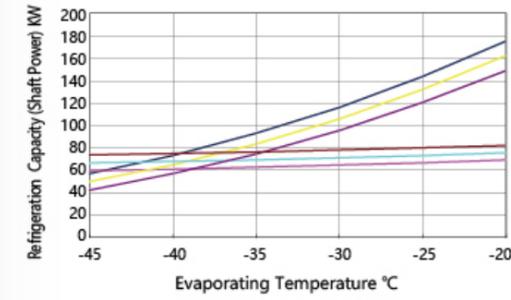
Evaporating Temperature °C	NW5L090E						NW5L100E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-45	55.6	58.5	49.1	65.2	41.9	72.5	59.2	62.6	52	69.5	44.3	77
-40	71.8	60.2	64.3	66.8	56.1	73.7	76.8	64.6	68.4	71.4	59.5	78.6
-35	91.7	62.3	83.1	68.7	73.8	75.2	98.3	66.9	88.6	73.6	78.4	80.5
-30	115.4	64.6	105.7	70.9	95.1	77.3	124	69.6	113.1	76.3	101.4	83
-25	143	67.4	132	73.5	120	79.6	154.1	72.9	141.8	79.3	128.3	85.7
-20	174.4	70.6	162.2	76.5	148.9	82.3	188.5	76.5	174.6	82.6	159.7	88.8

Evaporating Temperature °C	NW5L110E						NW5L125E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-45	63.6	66.6	56	74.1	47.6	82.1	71.3	72.7	62.5	80.6	53	89
-40	82.4	68.8	73.5	76.1	63.9	83.7	92.3	75.1	82.1	83	71.1	91.1
-35	105.4	71.2	95.2	78.4	84.2	85.8	118.4	77.9	106.6	85.7	94	93.7
-30	132.9	74.1	121.2	81.1	108.7	88.3	149.5	81.2	136	88.8	121.5	96.6
-25	164.9	77.4	151.8	84.3	137.7	91.2	185.8	84.9	170.5	92.4	154.2	99.9
-20	201.7	81.2	187	87.9	171.1	94.5	227.4	89.2	210.3	96.4	191.7	103.6

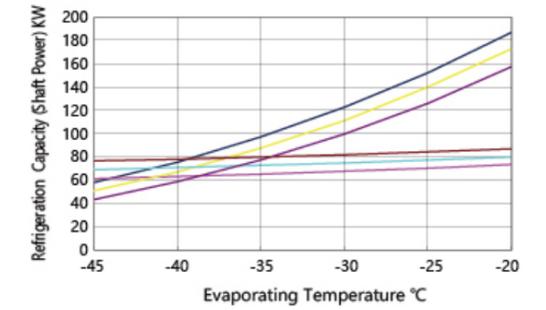
Evaporating Temperature °C	NW5L140E						NW5L150E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-45	76.2	77.2	66.7	85.6	56.6	94.6	82.8	84	71.9	92.7	60.4	101.9
-40	98.7	79.8	87.7	88.1	76	96.8	107.9	87.1	95.1	95.9	81.7	104.9
-35	126.5	82.7	113.9	91.1	100.3	99.5	139	90.6	124.2	99.4	108.5	108.3
-30	159.7	86.2	145.2	94.4	129.8	102.6	176.5	94.7	159.5	103.4	141.3	112.1
-25	198.4	90.2	182.1	98.2	164.5	106.1	220.6	99.4	201	107.9	180.4	116.4
-20	242.4	94.7	224.3	102.4	204.6	110	271.2	104.7	249.4	112.9	226	121.1

Notes:  
 Q for refrigeration capacity (kW), and P for shaft power(kW).Based on a liquid subcooling degree of 2K and a return gas superheat degree of 5K, with an economizer.  
 The above are some performance parameters of the compressor units. For more information, please contact our company for request.  
 The performance parameters of the compressor condensing unit can be referred to the performance parameter table of the compressor unit and the curve graph.

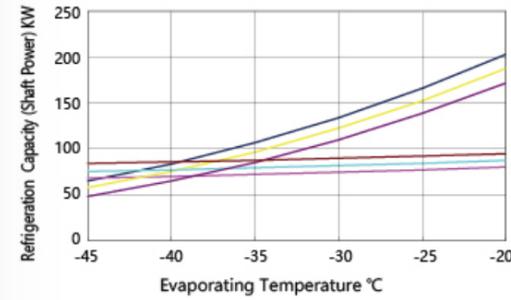
NSWL090E (R507A, Condensing Temperature: 35/40/45°C)



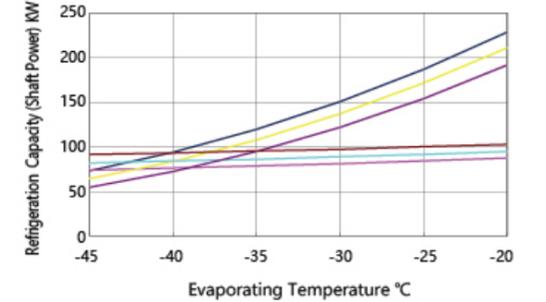
NSWL100E (R507A, Condensing Temperature: 35/40/45°C)



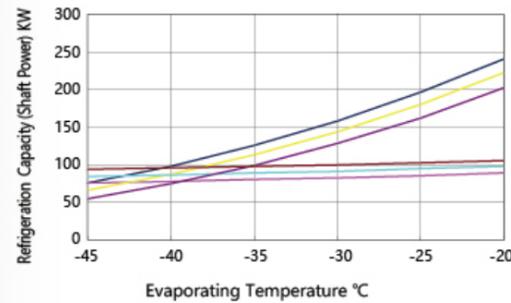
NSWL110E (R507A, Condensing Temperature: 35/40/45°C)



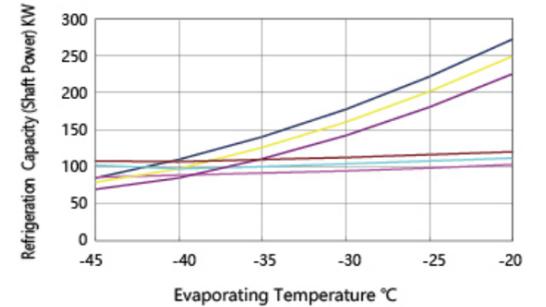
NSWL125E (R507A, Condensing Temperature: 35/40/45°C)



NSWL140E (R507A, Condensing Temperature: 35/40/45°C)



NSWL150E (R507A, Condensing Temperature: 35/40/45°C)



SW5L Series Compressor Unit Performance Parameters (Continued)

R507A

Unit Model	N2W5L020E	N2W5L025E	N2W5L030E	N2W5L040E	N2W5L050E	N2W5L060E	N2W5L070E	N2W5L075E									
Compressor Model	SW5L020	SW5L025	SW5L030	SW5L040	SW5L050	SW5L060	SW5L070	SW5L075									
Quantity	2																
Evaporating Temperature	Condensing Temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-20	35	103.6	46.2	117.8	51.8	138.2	60.6	166.8	68.4	190.2	77.4	234.6	97	258.2	104.6	281.6	113.4
	40	96.4	50.2	109.8	56.2	129.2	65.8	156.2	74.4	178	84.2	220.8	106	242	114	263.8	123.4
	45	88.8	54	101.2	60.4	119	71	144.2	80.2	164.6	91	205.4	115.2	223.8	123.2	244.2	133.4
-25	35	84.8	44.2	96.6	49.4	113.8	58	137.2	65.6	156.8	74.2	194	93.4	212.8	100.6	232	108.6
	40	78.4	48.2	89.4	54	105.4	63.4	127.6	71.8	145.8	81.4	181.4	103	197.8	110	216	119.2
	45	71.6	52.2	81.6	58.6	96.4	68.8	117	78	133.8	88.6	167.2	112.6	181.4	119.8	198	129.8
-30	35	68.4	42.4	78.2	47.6	92.2	55.8	111.2	63	127.2	71.6	157.8	90.4	172.4	96.8	188.4	104.8
	40	62.8	46.6	71.6	52.2	84.8	61.4	102.6	69.6	117.4	79	146.4	100.4	159	106.8	173.8	115.6
	45	56.6	50.8	64.8	57	76.6	67	93	76	106.6	86.6	133.6	110.6	144.4	117	157.8	126.8
-35	35	54.4	41	62.2	45.8	73.6	53.8	88.8	61	101.6	69.4	126.6	88.2	137.6	93.8	150.4	101.6
	40	49.4	45.2	56.4	50.6	67	59.6	81	67.6	93	77	116.2	98.4	125.6	104	137.6	112.8
	45	44	49.6	50.4	55.6	59.8	65.6	72.4	74.6	83.2	84.8	104.6	109	112.6	114.6	123.2	124.4
-40	35	42.6	39.6	48.6	44.4	57.8	52.2	69.8	59.4	80	67.4	99.8	86	108.2	91.2	118.4	98.8
	40	38.2	44	43.8	49.4	52	58.2	62.8	66.2	72.2	75.2	90.6	96.6	97.6	101.8	107	110.4
	45	33.6	48.8	38.4	54.6	45.6	64.4	55.4	73.6	63.6	83.8	80.2	108.4	86	113.2	94.2	122.8
-45	35	33	38.6	37.8	43.2	44.8	51	54.2	58	62.4	66	78	84.6	84.2	89	92.2	96.8
	40	29.2	43	33.4	48.4	39.8	57	48.2	65	55.4	74	69.6	95.6	74.8	100	82	108.4
	45	25	48.2	28.6	54	34.2	63.6	41.4	73	47.8	83.2	60.2	108.2	64.4	112.4	70.6	121.8
-48	35	28.2	38	32.4	42.6	38.6	50.2	46.6	57.2	53.6	65.2	67	83.8	72.2	88	79.2	95.6
	40	24.8	42.4	28.4	47.8	33.8	56.4	40.8	64.4	47.2	73.4	59.2	95	63.6	99	69.8	107.6

Notes:  
 Q for refrigeration capacity (kW), and P for shaft power(kW).Based on a liquid subcooling degree of 2K and a return gas superheat degree of 5K, with an economizer.  
 The above are some performance parameters of the compressor units. For more information, please contact our company for request.  
 The performance parameters of the compressor condensing unit can be referred to the performance parameter table of the compressor unit and the curve graph.

SW5L Series Compressor Unit Performance Parameters (Continued)

R507A

Unit Model	N2W5L090E	N2W5L100E	N2W5L110E	N2W5L125E	N2W5L140E	N2W5L150E							
Compressor Model	SW5L090	SW5L100	SW5L110	SW5L125	SW5L140	SW5L150							
Quantity	2												
Evaporating Temperature	Condensing Temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-20	35	348.8	141.2	377	153	403.4	162.4	454.8	178.4	484.8	189.4	542.4	209.4
	40	324.4	153	349.2	165.2	374	175.8	420.6	192.8	448.6	204.8	498.8	225.8
	45	297.8	164.6	319.4	177.6	342.2	189	383.4	207.2	409.2	220	452	242.2
-25	35	286	134.8	308.2	145.8	329.8	154.8	371.6	169.8	396.8	180.4	441.2	198.8
	40	264	147	283.6	158.6	303.6	168.6	341	184.8	364.2	196.4	402	215.8
	45	240	159.2	256.6	171.4	275.4	182.4	308.4	199.8	329	212.2	360.8	232.8
-30	35	230.8	129.2	248	139.2	265.8	148.2	299	162.4	319.4	172.4	353	189.4
	40	211.4	141.8	226.2	152.6	242.4	162.2	272	177.6	290.4	188.8	319	206.8
	45	190.2	154.6	202.8	166	217.4	176.6	243	193.2	259.6	205.2	282.6	224.2
-35	35	183.4	124.6	196.6	133.8	210.8	142.4	236.8	155.8	253	165.4	278	181.2
	40	166.2	137.4	177.2	147.2	190.4	156.8	213.2	171.4	227.8	182.2	248.4	198.8
	45	147.6	150.4	156.8	161	168.4	171.6	188	187.4	200.6	199	217	216.6
-40	35	143.6	120.4	153.6	129.2	164.8	137.6	184.6	150.2	197.4	159.6	215.8	174.2
	40	128.6	133.6	136.8	142.8	147	152.2	164.2	166	175.4	176.2	190.2	191.8
	45	112.2	147.4	119	157.2	127.8	167.4	142.2	182.2	152	193.6	163.4	209.8
-45	35	111.2	117	118.4	125.2	127.2	133.2	142.6	145.4	152.4	154.4	165.6	168
	40	98.2	130.4	104	139	112	148.2	125	161.2	133.4	171.2	143.8	185.4
	45	83.8	145	88.6	154	95.2	164.2	106	178	113.2	189.2	120.8	203.8
-48	35	95.2	115	101.4	123	108.8	131	121.8	142.8	130.2	151.6	141	164.6
	40	83.2	128.4	88	136.8	94.8	145.8	105.6	158.6	113	168.4	121.2	182

Notes:  
 Q for refrigeration capacity (kW), and P for shaft power(kW).Based on a liquid subcooling degree of 2K and a return gas superheat degree of 5K, with an economizer.  
 The above are some performance parameters of the compressor units. For more information, please contact our company for request.  
 The performance parameters of the compressor condensing unit can be referred to the performance parameter table of the compressor unit and the curve graph.

SW5L Series Compressor Unit Performance Parameters (Continued)

R507A

Unit Model	N3W5L020E	N3W5L025E	N3W5L030E	N3W5L040E	N3W5L050E	N3W5L060E	N3W5L070E	N3W5L075E									
Compressor Model	SW5L020	SW5L025	SW5L030	SW5L040	SW5L050	SW5L060	SW5L070	SW5L075									
Quantity	3																
Evaporating Temperature	Condensing Temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-20	35	155.4	69.3	176.7	77.7	207.3	90.9	250.2	102.6	285.3	116.1	351.9	145.5	387.3	156.9	422.4	170.1
	40	144.6	75.3	164.7	84.3	193.8	98.7	234.3	111.6	267	126.3	331.2	159	363	171	395.7	185.1
	45	133.2	81	151.8	90.6	178.5	106.5	216.3	120.3	246.9	136.5	308.1	172.8	335.7	184.8	366.3	200.1
-25	35	127.2	66.3	144.9	74.1	170.7	87	205.8	98.4	235.2	111.3	291	140.1	319.2	150.9	348	162.9
	40	117.6	72.3	134.1	81	158.1	95.1	191.4	107.7	218.7	122.1	272.1	154.5	296.7	165	324	178.8
	45	107.4	78.3	122.4	87.9	144.6	103.2	175.5	117	200.7	132.9	250.8	168.9	272.1	179.7	297	194.7
-30	35	102.6	63.6	117.3	71.4	138.3	83.7	166.8	94.5	190.8	107.4	236.7	135.6	258.6	145.2	282.6	157.2
	40	94.2	69.9	107.4	78.3	127.2	92.1	153.9	104.4	176.1	118.5	219.6	150.6	238.5	160.2	260.7	173.4
	45	84.9	76.2	97.2	85.5	114.9	100.5	139.5	114	159.9	129.9	200.4	165.9	216.6	175.5	236.7	190.2
-35	35	81.6	61.5	93.3	68.7	110.4	80.7	133.2	91.5	152.4	104.1	189.9	132.3	206.4	140.7	225.6	152.4
	40	74.1	67.8	84.6	75.9	100.5	89.4	121.5	101.4	139.5	115.5	174.3	147.6	188.4	156	206.4	169.2
	45	66	74.4	75.6	83.4	89.7	98.4	108.6	111.9	124.8	127.2	156.9	163.5	168.9	171.9	184.8	186.6
-40	35	63.9	59.4	72.9	66.6	86.7	78.3	104.7	89.1	120	101.1	149.7	129	162.3	136.8	177.6	148.2
	40	57.3	66	65.7	74.1	78	87.3	94.2	99.3	108.3	112.8	135.9	144.9	146.4	152.7	160.5	165.6
	45	50.4	73.2	57.6	81.9	68.4	96.6	83.1	110.4	95.4	125.7	120.3	162.6	129	169.8	141.3	184.2
-45	35	49.5	57.9	56.7	64.8	67.2	76.5	81.3	87	93.6	99	117	126.9	126.3	133.5	138.3	145.2
	40	43.8	64.5	50.1	72.6	59.7	85.5	72.3	97.5	83.1	111	104.4	143.4	112.2	150	123	162.6
	45	37.5	72.3	42.9	81	51.3	95.4	62.1	109.5	71.7	124.8	90.3	162.3	96.6	168.6	105.9	182.7
-48	35	42.3	57	48.6	63.9	57.9	75.3	69.9	85.8	80.4	97.8	100.5	125.7	108.3	132	118.8	143.4
	40	37.2	63.6	42.6	71.7	50.7	84.6	61.2	96.6	70.8	110.1	88.8	142.5	95.4	148.5	104.7	161.4

Notes:  
 Q for refrigeration capacity (kW), and P for shaft power(kW).Based on a liquid subcooling degree of 2K and a return gas superheat degree of 5K, with an economizer.  
 The above are some performance parameters of the compressor units. For more information, please contact our company for request.  
 The performance parameters of the compressor condensing unit can be referred to the performance parameter table of the compressor unit and the curve graph.

SW5L Series Compressor Unit Performance Parameters (Continued)

R507A

Unit Model	N3W5L090E	N3W5L100E	N3W5L110E	N3W5L125E	N3W5L140E	N3W5L150E							
Compressor Model	SW5L090	SW5L100	SW5L110	SW5L125	SW5L140	SW5L150							
Quantity	3												
Evaporating Temperature	Condensing Temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-20	35	523.2	211.8	565.5	229.5	605.1	243.6	682.2	267.6	727.2	284.1	813.6	314.1
	40	486.6	229.5	523.8	247.8	561	263.7	630.9	289.2	672.9	307.2	748.2	338.7
	45	446.7	246.9	479.1	266.4	513.3	283.5	575.1	310.8	613.8	330	678	363.3
-25	35	429	202.2	462.3	218.7	494.7	232.2	557.4	254.7	595.2	270.6	661.8	298.2
	40	396	220.5	425.4	237.9	455.4	252.9	511.5	277.2	546.3	294.6	603	323.7
	45	360	238.8	384.9	257.1	413.1	273.6	462.6	299.7	493.5	318.3	541.2	349.2
-30	35	346.2	193.8	372	208.8	398.7	222.3	448.5	243.6	479.1	258.6	529.5	284.1
	40	317.1	212.7	339.3	228.9	363.6	243.3	408	266.4	435.6	283.2	478.5	310.2
	45	285.3	231.9	304.2	249	326.1	264.9	364.5	289.8	389.4	307.8	423.9	336.3
-35	35	275.1	186.9	294.9	200.7	316.2	213.6	355.2	233.7	379.5	248.1	417	271.8
	40	249.3	206.1	265.8	220.8	285.6	235.2	319.8	257.1	341.7	273.3	372.6	298.2
	45	221.4	225.6	235.2	241.5	252.6	257.4	282	281.1	300.9	298.5	325.5	324.9
-40	35	215.4	180.6	230.4	193.8	247.2	206.4	276.9	225.3	296.1	239.4	323.7	261.3
	40	192.9	200.4	205.2	214.2	220.5	228.3	246.3	249	263.1	264.3	285.3	287.7
	45	168.3	221.1	178.5	235.8	191.7	251.1	213.3	273.3	228	290.4	245.1	314.7
-45	35	166.8	175.5	177.6	187.8	190.8	199.8	213.9	218.1	228.6	231.6	248.4	252
	40	147.3	195.6	156	208.5	168	222.3	187.5	241.8	200.1	256.8	215.7	278.1
	45	125.7	217.5	132.9	231	142.8	246.3	159	267	169.8	283.8	181.2	305.7
-48	35	142.8	172.5	152.1	184.5	163.2	196.5	182.7	214.2	195.3	227.4	211.5	246.9
	40	124.8	192.6	132	205.2	142.2	218.7	158.4	237.9	169.5	252.6	181.8	273

Notes:  
 Q for refrigeration capacity (kW), and P for shaft power(kW).Based on a liquid subcooling degree of 2K and a return gas superheat degree of 5K, with an economizer.  
 The above are some performance parameters of the compressor units. For more information, please contact our company for request.  
 The performance parameters of the compressor condensing unit can be referred to the performance parameter table of the compressor unit and the curve graph.

SW5L Series Compressor Unit Performance Parameters (Continued)

R507A

Unit Model		N4W5L020E	N4W5L025E	N4W5L030E	N4W5L040E	N4W5L050E	N4W5L060E	N4W5L070E	N4W5L075E								
Compressor Model		SW5L020	SW5L025	SW5L030	SW5L040	SW5L050	SW5L060	SW5L070	SW5L075								
Quantity		4															
Evaporating Temperature	Condensing Temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-20	35	207.2	92.4	235.6	103.6	276.4	121.2	333.6	136.8	380.4	154.8	469.2	194	516.4	209.2	563.2	226.8
	40	192.8	100.4	219.6	112.4	258.4	131.6	312.4	148.8	356	168.4	441.6	212	484	228	527.6	246.8
	45	177.6	108	202.4	120.8	238	142	288.4	160.4	329.2	182	410.8	230.4	447.6	246.4	488.4	266.8
-25	35	169.6	88.4	193.2	98.8	227.6	116	274.4	131.2	313.6	148.4	388	186.8	425.6	201.2	464	217.2
	40	156.8	96.4	178.8	108	210.8	126.8	255.2	143.6	291.6	162.8	362.8	206	395.6	220	432	238.4
	45	143.2	104.4	163.2	117.2	192.8	137.6	234	156	267.6	177.2	334.4	225.2	362.8	239.6	396	259.6
-30	35	136.8	84.8	156.4	95.2	184.4	111.6	222.4	126	254.4	143.2	315.6	180.8	344.8	193.6	376.8	209.6
	40	125.6	93.2	143.2	104.4	169.6	122.8	205.2	139.2	234.8	158	292.8	200.8	318	213.6	347.6	231.2
	45	113.2	101.6	129.6	114	153.2	134	186	152	213.2	173.2	267.2	221.2	288.8	234	315.6	253.6
-35	35	108.8	82	124.4	91.6	147.2	107.6	177.6	122	203.2	138.8	253.2	176.4	275.2	187.6	300.8	203.2
	40	98.8	90.4	112.8	101.2	134	119.2	162	135.2	186	154	232.4	196.8	251.2	208	275.2	225.6
	45	88	99.2	100.8	111.2	119.6	131.2	144.8	149.2	166.4	169.6	209.2	218	225.2	229.2	246.4	248.8
-40	35	85.2	79.2	97.2	88.8	115.6	104.4	139.6	118.8	160	134.8	199.6	172	216.4	182.4	236.8	197.6
	40	76.4	88	87.6	98.8	104	116.4	125.6	132.4	144.4	150.4	181.2	193.2	195.2	203.6	214	220.8
	45	67.2	97.6	76.8	109.2	91.2	128.8	110.8	147.2	127.2	167.6	160.4	216.8	172	226.4	188.4	245.6
-45	35	66	77.2	75.6	86.4	89.6	102	108.4	116	124.8	132	156	169.2	168.4	178	184.4	193.6
	40	58.4	86	66.8	96.8	79.6	114	96.4	130	110.8	148	139.2	191.2	149.6	200	164	216.8
	45	50	96.4	57.2	108	68.4	127.2	82.8	146	95.6	166.4	120.4	216.4	128.8	224.8	141.2	243.6
-48	35	56.4	76	64.8	85.2	77.2	100.4	93.2	114.4	107.2	130.4	134	167.6	144.4	176	158.4	191.2
	40	49.6	84.8	56.8	95.6	67.6	112.8	81.6	128.8	94.4	146.8	118.4	190	127.2	198	139.6	215.2

Notes:  
 Q for refrigeration capacity (kW), and P for shaft power(kW).Based on a liquid subcooling degree of 2K and a return gas superheat degree of 5K, with an economizer.  
 The above are some performance parameters of the compressor units. For more information, please contact our company for request.  
 The performance parameters of the compressor condensing unit can be referred to the performance parameter table of the compressor unit and the curve graph.

SW5L Series Compressor Unit Performance Parameters (Continued)

R507A

Unit Model		N4SWL090E	N4SWL100E	N4SWL110E	N4SWL125E	N4SWL140E	N4SWL150E
Compressor Model		SW5L090	SW5L100	SW5L110	SW5L125	SW5L140	SW5L150
Quantity		4					
Evaporating Temperature	Condensing Temperature	Q	P	Q	P	Q	P
-20	35	697.6	282.4	754	306	806.8	324.8
	40	648.8	306	698.4	330.4	748	351.6
	45	595.6	329.2	638.8	355.2	684.4	378
-25	35	572	269.6	616.4	291.6	659.6	309.6
	40	528	294	567.2	317.2	607.2	337.2
	45	480	318.4	513.2	342.8	550.8	364.8
-30	35	461.6	258.4	496	278.4	531.6	296.4
	40	422.8	283.6	452.4	305.2	484.8	324.4
	45	380.4	309.2	405.6	332	434.8	353.2
-35	35	366.8	249.2	393.2	267.6	421.6	284.8
	40	332.4	274.8	354.4	294.4	380.8	313.6
	45	295.2	300.8	313.6	322	336.8	343.2
-40	35	287.2	240.8	307.2	258.4	329.6	275.2
	40	257.2	267.2	273.6	285.6	294	304.4
	45	224.4	294.8	238	314.4	255.6	334.8
-45	35	222.4	234	236.8	250.4	254.4	266.4
	40	196.4	260.8	208	278	224	296.4
	45	167.6	290	177.2	308	190.4	328.4
-48	35	190.4	230	202.8	246	217.6	262
	40	166.4	256.8	176	273.6	189.6	291.6

Notes:  
 Q for refrigeration capacity (kW), and P for shaft power(kW).Based on a liquid subcooling degree of 2K and a return gas superheat degree of 5K, with an economizer.  
 The above are some performance parameters of the compressor units. For more information, please contact our company for request.  
 The performance parameters of the compressor condensing unit can be referred to the performance parameter table of the compressor unit and the curve graph.

SW5L Series Screw Compressor Unit Technical Parameters

Unit Model	Compressor			Unit Piping (mm)			Refrigeration Oil		Reservoir Gross Volume (L)	Max Current (A)	Starting Mode	Single Compressor Start Current (A)	Unit Dimensions L×W×H(mm)	Net Weight (kg)
	Model	Quantity	Power (HP)	Discharge Pipe	Suction Pipe	Liquid Pipe	Model	Preliminary Charge Volume (L)						
NSWL020A	SW5L020	1	20	DN20	DN50	DN15	C100	40	100	48	PW	127/185	1850×1300×1800	800
NSWL025A	SW5L025		25					40		52		144/210		
NSWL030A	SW5L030		30					40		58		150/243		
NSWL040A	SW5L040		40	DN25	DN65	DN20		40	130	70		277/398	1950×1350×1850	950
NSWL050A	SW5L050		50					40		80		303/406	1950×1350×1850	1000
NSWL060A	SW5L060		60					40		105		139/422	2100×1300×1900	1200
NSWL070A	SW5L070		70	DN32	DN80	DN20		40	150	120		159/459	2100×1400×1900	1250
NSWL075A	SW5L075		75					55		135		193/580	2100×1400×1900	1300
NSWL090A	SW5L090		90	DN40	DN100	DN25		55	220	142		224/693	2400×1500×2200	1500
NSWL100A	SW5L100		100					55		154		224/693	2400×1500×2200	1600
NSWL110A	SW5L110		110					55		170		318/953	2400×1500×2200	1700
NSWL125A	SW5L125		125	DN50	DN100	DN25		85	270	185		276/876	2400×1600×2300	2000
NSWL140A	SW5L140		140					85		200		354/1155	2400×1600×2300	2100
NSWL150A	SW5L150		150					85		220		354/1155	2400×1600×2300	2200

Unit Model	Compressor			Unit Piping (mm)			Refrigeration Oil		Reservoir Gross Volume (L)	Max Current (A)	Starting Mode	Single Compressor Start Current (A)	Unit Dimensions L×W×H(mm)	Net Weight (kg)		
	Model	Quantity	Power (HP)	Discharge Pipe	Suction Pipe	Liquid Pipe	Model	Preliminary Charge Volume (L)								
N2SWL060A	SW5L060	2	120	DN50	DN100	DN25	C100	55	150	210	Y-Δ	139/422	3700×2000×2200	3500		
N2SWL070A	SW5L070		140					75		240		159/459			3700×2000×2200	3550
N2SWL075A	SW5L075		150					85		270		193/580			3700×2000×2200	3600
N2SWL090A	SW5L090		180	DN32	DN100	DN25		90	220	284		224/693	3900×2150×2300	4000		
N2SWL100A	SW5L100		200					90		308		224/693	3900×2150×2300	4100		
N2SWL110A	SW5L110		220					100		340		318/953	3900×2150×2300	4200		
N2SWL125A	SW5L125		250	DN65	DN150	DN40		105	300	370		276/876	4400×2250×2400	4500		
N2SWL140A	SW5L140		280					105		400		354/1155	4400×2250×2400	4650		
N2SWL150A	SW5L150		300					135		440		354/1155	4400×2250×2400	4800		

Notes:1. The above data are based on nominal working conditions of SW5L series compressor condensing units: E.T. - 30°C, C.T. 40°C, refrigerant R507A. If beyond above ranges, please contact us.  
 2. The above data are for reference only, which is subject to the actual design of our company.  
 3. Power supply 380V/3P/50Hz.

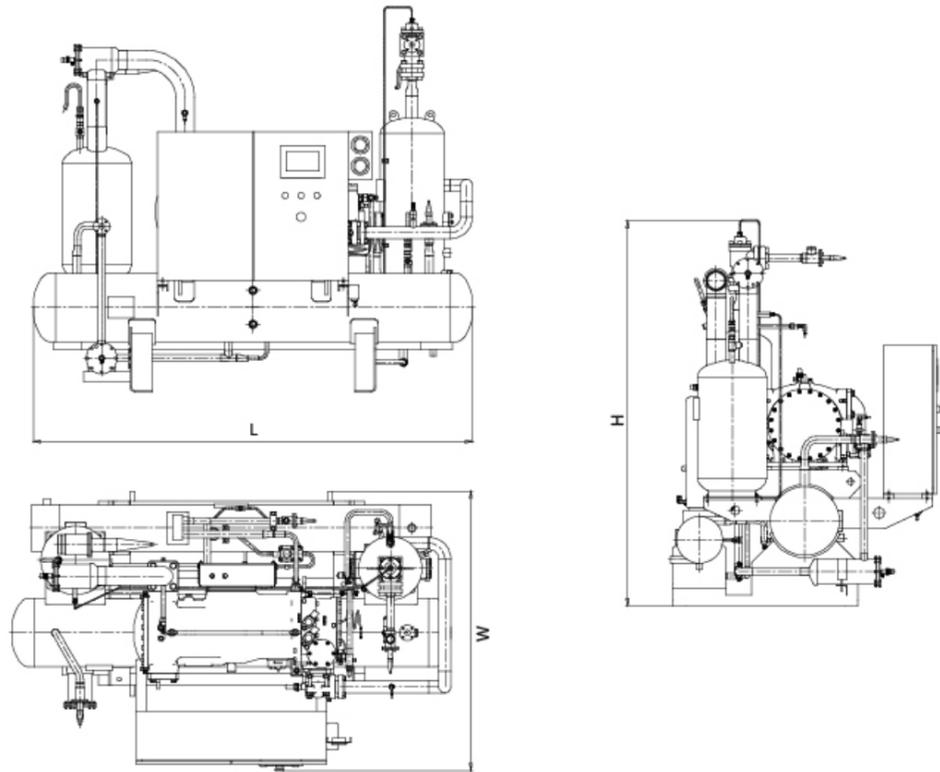
SW5L Series Screw Compressor Unit Technical Parameters (Continued)

Unit Model	Compressor			Unit Piping (mm)			Refrigeration Oil		Reservoir Gross Volume (L)	Max Current (A)	Starting Mode	Single Compressor Start Current (A)	Unit Dimensions L×W×H(mm)	Net Weight (kg)		
	Model	Quantity	Power (HP)	Discharge Pipe	Suction Pipe	Liquid Pipe	Model	Preliminary Charge Volume (L)								
N3SWL060A	SW5L060	3	180	DN50	DN125	DN32	C100	90	220	315	Y-Δ	139/422	4500×2100×2350	4100		
N3SWL070A	SW5L070		210					90		360		159/459			4500×2100×2350	4200
N32SWL075A	SW5L075		225					100		405		193/580			4500×2100×2350	4350
N3SWL090A	SW5L090		270	DN65	DN150	DN40		135	350	426		224/693	4700×2250×2350	4500		
N3SWL100A	SW5L100		300					135		462		224/693	4700×2250×2350	4700		
N3SWL110A	SW5L110		330					135		510		318/953	4700×2250×2350	5000		
N3SWL125A	SW5L125		375	DN80	DN200	DN50		135	500	555		276/876	5200×2350×2450	5200		
N3SWL140A	SW5L140		420					135		600		354/1155	5200×2350×2450	5500		
N3SWL150A	SW5L150		450					200		660		354/1155	5200×2350×2450	5800		

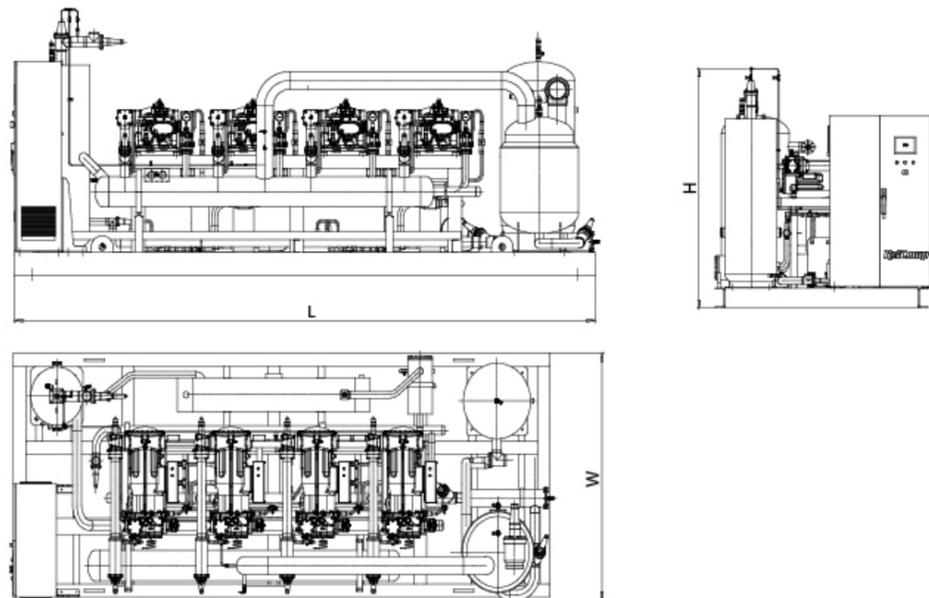
Unit Model	Compressor			Unit Piping (mm)			Refrigeration Oil		Reservoir Gross Volume (L)	Max Current (A)	Starting Mode	Single Compressor Start Current (A)	Unit Dimensions L×W×H(mm)	Net Weight (kg)		
	Model	Quantity	Power (HP)	Discharge Pipe	Suction Pipe	Liquid Pipe	Model	Preliminary Charge Volume (L)								
N4SWL060A	SW5L060	4	240	DN65	DN150	DN40	C100	105	350	420	Y-Δ	139/422	5300×2150×2400	6100		
N4SWL070A	SW5L070		280					135		480		159/459			5300×2150×2400	6150
N4SWL075A	SW5L075		300					135		540		193/580			5300×2150×2400	6200
N4SWL090A	SW5L090		360	DN80	DN200	DN50		135	500	568		224/693	5500×2300×2400	7200		
N4SWL100A	SW5L100		400					135		616		224/693	5500×2300×2400	7300		
N4SWL110A	SW5L110		440					200		680		318/953	5500×2300×2400	7400		
N4SWL125A	SW5L125		500	DN100	DN65	DN50		210	600	740		276/876	6000×2400×2500	8500		
N4SWL140A	SW5L140		560					210		800		354/1155	6000×2400×2500	8700		
N4SWL150A	SW5L150		600					210		880		354/1155	6000×2400×2500	8900		

Notes:1. The above data are based on nominal working conditions of SW5L series compressor condensing units: E.T. - 30°C, C.T. 40°C, refrigerant R507A. If beyond above ranges, please contact us.  
 2. The above data are for reference only, which is subject to the actual design of our company.  
 3. Power supply 380V/3P/50Hz.

SW5L Series Screw Compressor Unit Outline Drawings



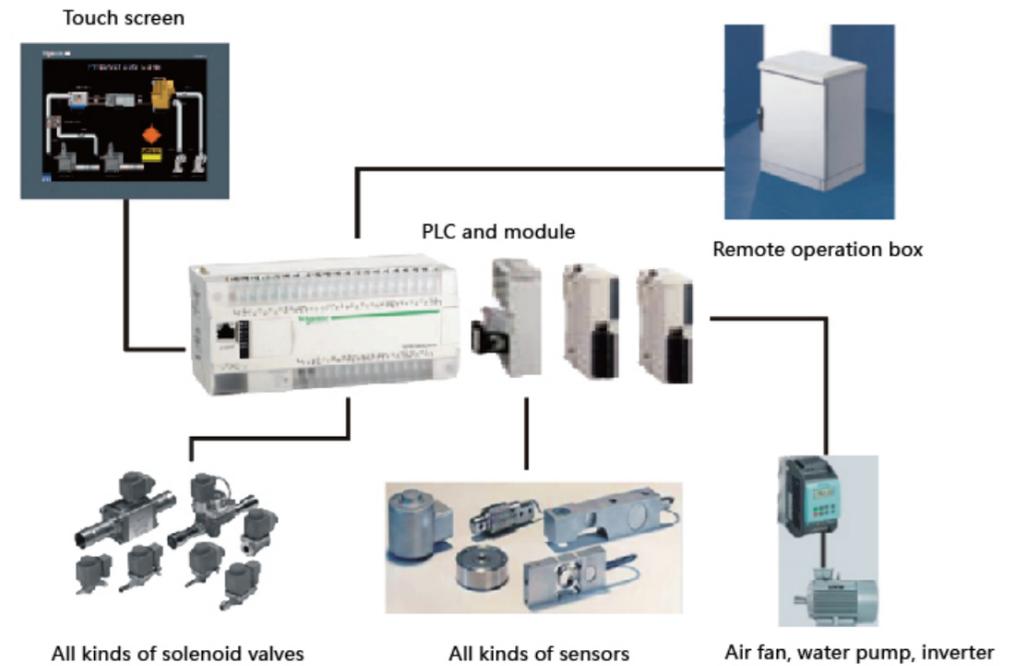
Single Compressor Unit



Parallel Compressor Unit

Control System

The control system adopts Schneider M218 and M241 series PLC and is equipped with Schneider 64K true-color touch screen to automatically control the whole operation process of the equipment, to real-time detect every analog collection and switches situation signal of the system, simplifying the operation process with one-touch operation mode. There are various control modes for option, like remote control and local control; with communication port prepared (MODBUS, PROFIBUS- DP, TCP/IP for option) to Seamless connection with DCS system.



Interface display

To real-time display the status of the unit such as discharge pressure, suction pressure, discharge temperature, compressor load, running time, etc., and to record various alarms and reminders.

Setting classified security access passwords to prevent non-professionals from inputting incorrect parameters to affect system running.



Unit control

Programmable controller can automatically increase/decrease the load of compressor or start/shut the compressor when system temperature and pressure are detected to reach the control points; and it can automatically adjust the running time of each compressor to extend the service life of compressor.



Unit protection

- Compressor under-voltage, default phase, phase sequence and overheating protection;
- Compressor overload protection;
- Compressor high discharge pressure protection;
- Compressor low suction pressure protection;
- Compressor oil pressure difference protection;
- Oil separator level protection.

## Application Fields



### Fruits & Vegetables

Apple (- 1.1~4.4°C)  
 Peach (- 0.6~0°C)  
 Sweet melon (2.2~4.4°C)  
 Pear (0°C)  
 Potato (1~3°C)  
 Papaya (7.2°C)  
 Please contact us for more information about storage temperatures of other fruits and vegetables.



### Quick Freezing and Cold Storage

High temperature storage (5°C~15°C)  
 Cold storage (5°C~-5°C)  
 Freezing storage (- 18°C~-25°C)  
 Deep-freezing storage (- 45°C~-60°C)  
 Quick-freezing storage (- 35°C~-40°C)  
 Fresh-keeping storage (5°C~-2°C)



### Meat Processing

Carcass processing (25°C)  
 Cooling flushing (- 15°C/0~4°C)  
 Portioning and packaging (8~12°C)  
 Quick-freezing storage (- 20°C)  
 Fresh keeping storage (0~4°C)



### Seafood/Fishery

Pre-cooling (- 1~4°C)  
 Quick-freezing (- 30~-50°C)  
 Cold storage (- 30°C)

Notes: Different seafood has different temperature requirements, e.g. tuna requiring temperature below - 50°C.



### Dairy Products

Raw milk storage (4~6°C)  
 Pasteurized milk (4°C)  
 Set yogurt (0~4°C)  
 Stirred yogurt (0~7°C)  
 Ice cream (- 18~22°C)



### Ice Making

Flake ice (- 20°C)  
 Plate ice (- 15°C)  
 Tube ice (- 15°C)  
 Block ice (- 15°C)  
 Slurry ice (- 15°C)



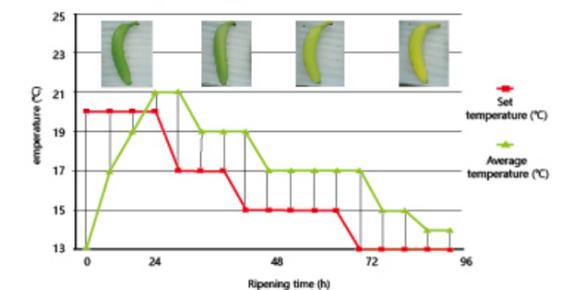
### Mushrooms Growing

Ambient temperature and relative humidity for each stage of mushrooms

	Hyphal growth	Fruiting body growth
Agaricus bisporus	20~25°C 70~80%	14~18°C 85~95%
Black fungus	22~28°C 85~95%	20~24°C 90~95%
White fungus	22~26°C 60%	23~25°C 85~95%
Pleurotus eryngii	20~26°C 70%	14~16°C 70~90%



### Banana Ripening



## Value-added Services

Fujian Snowman Co., Ltd is not only a compressor unit manufacturer but also a leading enterprise with automation integration technology for refrigeration systems. With rich product lines, we can provide best systems and "one-stop" service for the customers, which is the relentless pursuit of Snowman. Besides of compressor units and main components, Snowman also provides spare parts to meet customers' requirements for spare parts and peripherals.

### Evaporative Condenser



Persisting in technological creation and improvement, Snowman developed SLC, SEC, STC, VC series of evaporative condenser successively. With decades of application experience and many unique designs, Snowkey brand evaporative condenser is durable and easy for maintenance.

	Heat exhaust (kW)	Circulating water (m <sup>3</sup> /h)
SEC	320~2490	45~190
STC	600~2500	114~190
SLC	100~1240	45~130
VC	43~420	22~28

\*Based on company's standard conditions.

### Air-cooled Condenser



V-type and plate-type air-cooled condenser, with high-efficient air cooler, floating coil pipe which can efficiently avoid refrigerant leakage, with gold foil, copper foil and hydrophilic film for option.

Heat-exchanging rate	9.59~1739.81kW
Heat-exchanging pipe	3/8" high-efficient internal thread heat-exchanging pipes
Fin	Sine-wave type aluminum fins
Blackstrap	Thickened galvanized steel plate with anti-corrosive paint
Fan quantity	1~24 sets

### Air Cooler



Coolers have a wide range of cooling capacities, various defrosting methods with high-quality raw materials; especially applicable for the high-demanding fields like food, dairy products and pharmacy.

Heat-exchanging pipe material	Stainless steel pipe, mild steel pipe, aluminum pipe or phosphorized copper pipe
Fin	Stainless steel fin, hydrophilic film aluminum fin
Shell	Aluminum, stainless steel, galvanized
Defrosting	Water defrosting, electrical defrosting, hot-gas defrosting, air defrosting

### Remote Telecommunication/Central Control System

Snowkey central control system adopts distributed computer control method, using Wellintech Kingview software, which can perfectly realize monitoring refrigerating process and sharing resources with users' monitoring center, with powerful functions, stable performance, visual operation interface, true-color display, and strong data storing & communicating capability.



Report output	Temperature report, pressure report, failure report
Communication protocol	MODBUS-RTU, MODBUS-TCP/IP, PROFIBUS-DP
Monitoring system	JK-E-01
Industrial computer	e.g. Advantech IPC-610 series
Serial conversion module	ADAM-4510/4520
Configuration software	e.g. Wellintech Kingview 6.53
Display	11 inch, 32 inch
Printer	A4, A3

### Cold Storage Panel



Snowkey combined-type cold storage panel is automatically rolled and formed by fully imported equipment, with following advantages: simple in structure, attractive in appearance, high in intensity and strength, good in stability, shock-resistant and anti-corrosive. It is combined type of design, no gaps between connections, which is waste-reducing, convenient for site installation and short in construction period. There are various types and shapes, which can be tailored according to customers' requirements.

Thickness(mm)	50, 75, 100, 125, 150, 175, 200
Height(mm)	1800, 2200, 2700, 3200, 3600, 4500, 5400, 6300, 7200, 8100, 13000
Width(mm)	960, 980, 1100
Surface material	Color-paint-coated steel plate, resin steel plate, aluminum plate and stainless steel plate.
Connection mode	Eccentric hook, labyrinth

### Filter



ALCO, O&F filter can efficiently remove water content and impurity to prevent compressor, solenoid valve and expansion valve from damage.

	ALCO	O&F
Filter	EK series dry filter	FE/FEM series replaceable filter cartridge
Filter cartridge	D-48	FRE series suction filter

Value-added Services

Refrigerant



First well-known refrigerant brand such as Dupont, Honeywell, Juhua, to ensure refrigeration system to work efficiently.

Refrigerant	R134a	R507	R404A
Boiling point (1atm), °C	- 26.2	- 46.7	- 46.8
Critical temperature, °C	101.1	70.9	72.1
Critical pressure, kPa	4070	3794	3732
Saturated vapor pressure (25°C), kPa	661.9	1287	1255
Gasification heat/vaporization latent heat (boiling point 1atm), kJ/kg	216	200.5	207

Refrigeration Oil



To ensure the service life of compressors, genuine refrigeration oil is recommended. Alternative refrigeration oil must basically conform to the performance of original refrigeration oil and with relevant using experience.

Applicable Models	Refrigerant	Vi	Applicable Conditions	Lubricant
SRC-S medium-high temperature applications	R507A/R404A	All		S002
	R407C	All	Te≥-20°C	S003
	R134a	≠2.2		S002
2.2			S003	
SRC-S-ZL	R134a/R404A/R507A/R407C	All		S002
134-S	R134a	≠2.2		S002
		2.2		S003
SW	R407C/R404A/R507A	All		S002
SPS	R744	-		S006
SPT	R744	-	Pd≤110bar Ps≤35bar	S007
		-	Pd > 110bar Ps > 35bar	S012
SP/SBC/SPM	R134a/R404A/R507A/R407C	-	Tc < 55°C	S009
		-	Tc ≥ 55°C	S010

Sensor



HB is the global leader of products for positioning and level sensor field in terms of quality, function and user-friendly. Its control accuracy and environmental adaptability is satisfactory.

Sensor	Applications
HBSR	Liquid level detection
HBOC	Oil level control
HBLT	Linear liquid level detection
HBLC	Linear liquid level control
HBSO	Oil level detection
HBDX	Returned-gas humidity detection
HBSC2	Carbon dioxide liquid level detection
HBCP	Compressor protection
SA96	Long stroke displacement detection
SLCD	Short stroke displacement detection
ME8909	Analog position measurement and capacity control

Copper Pipe



TP2M/Y copper pipe, with quality conform to the GB/T17791, PED and ASME standard requirements. It's straight pipe for above Cu12 and length 3m.

Specifications	Size	Specifications	Size
Cu6	6.35×0.8	Cu22	22.225×1.2
Cu10	9.525×0.8	Cu28	28.575×1.5
Cu12	12.7×1	Cu35	34.925×1.5
Cu16	15.875×1.2	Cu42	41.275×1.8
Cu19	19.05×1.2	Cu54	53.975×1.8

Programmable Controller



Schneider M218 series or Siemens S7-200 series programmable control unit to realize automatic control of refrigeration equipment operation process and simplify the operation process for operators. Snowman serves different customers in a long term, accumulating rich process experience. To carry the tailored program is available for the customers.

Typical Control Processes		
Commercial compressor unit control process	Commercial chiller unit control process	Cold storage project control process
Open-type compressor unit control process	Three-stage falling film chiller control process	CO <sub>2</sub> cold storage project control process
Plate ice machine control process	Ice storage and transport system control process	
Block ice machine control process	Tube ice machine control process	

Touch Screen



Schneider, SIEMENS and other series multi-color touch panel human-machine interface. can display details according to customers' actual design, directly reflect and control the operation status of every component of the refrigeration system.

Brand	Schneider	700IE
Color	65536 Color	65536 Color
Size	7'	7'
Communication interface	SUB- D9	SUB- D9/RJ45

Breaker



We select breakers from world famous brands such as Schneider, Liangxin, which pass many certifications such as CCC, CE, UL, TUV, certification.

Brand	Application Category
Schneider	NSC Series, OSM Series
Nader	NDM1 Series, NDM2 Series

Value-added Services

Inverter



Schneider and Danfoss frequency converters are used in 3- phase asynchronous motor start- stop, speed control, status monitoring, breakdown alarming and remote control, which are the key to intelligent control system.

Brand	Serie	Motor power	Output frequency	Over current	Protection level
Schneider	ATV71Serie	0.37to630kW	0.5to200Hz	120%	IP20
	ATV61Serie	0.75to630kW	0.5to200Hz	110%	IP20
Danfoss	FC302	0.25to800kW	0.5to200Hz	160%	IP21
	FC202	0.25to800kW	0.5to200Hz	110%	IP21

Electrical Power Parameters Measuring Instruments



Schneider and LD measuring instruments are for real- time monitoring the power parameters of the system, to improve system efficiency and reduce power costs.

	Brand	Schneider	LD
	Series	PM1200	LD- C83
	Scope	DC100- 400V	DC100- 300V
Precision	Power consumption	<5W	<5W
	Voltage	0.5%	0.2%
	Current	0.5%	0.5%
	Power	1.0%	0.5%
	Frequency	0.1%	0.05%

Phase Sequence Protectors



The phase sequence protector is used to detect the voltage of the power supply and the judgment of the phase sequence, so as to avoid the accident or equipment damage caused by the large deviation of the power supply voltage or the fault of the phase sequence.

Brand	Carlo Gavazzi, Switzerland
Power supply type	3phase
Voltage measurement range	AC208~480V
Precision	1%
Certifications and standards	CE- UL- CSA
Lifespan	>1x105(times)
Functions	Phase sequence, phase failure protection, regeneration and voltage monitoring

Pressure Controller



Danfoss KP series pressure controller obtained certifications such as CCC, CE, GL and UL , etc.. It has short vibration time, high electrical and mechanical reliability, vibration and shock resistance, which can be used for high and low pressure protection, condensing pressure regulation, cooling load regulation for refrigeration compressors.

Model	Low pressure		High pressure		Reset	
	Adjustment range	Differential pressure	Adjustment range	Differential pressure	Low pressure	High pressure
KP1	- 0.2~7.5	0.7~4			Automatic	
KP2	- 0.2~5	0.4~1.5			Automatic	
KP5			8~32	3		Manual
KP15	- 0.2~7.5	0.7~4	8~32	4	Automatic	Manual

Temperature Controller



Temperature controller is for high precision measurement and temperature control, to minimize energy waste. Temperature controller is equipped with a communication module.

Brand	Yudian
Ambient temperature	- 10 ~ +60°C
Environment humidity	< 90%RH
Precision	0.2 level (AI- 7/AI- 8 Series) 0.3 level (AI- 5 Series)
Temperature drift	≤0.001%FS/°C (AI- 7/AI- 8 Series) ≤0.015%FS/°C (AI- 5 Series)
Power supply	100 ~ 240VAC/50 ~ 60Hz&24VDC/AC +10%, - 15%

Solenoid Valve



Danfoss EVR solenoid valve is applied for liquid pipes, suction pipes and hot gas pipes of freon systems. Resistant temperature of medium is up to 105 °C, which can be used for cold storage, refrigeration, air- conditioning devices on various occasions.

Solenoid valve coil	
018F6701	220~230V 50Hz
018F6732	220~230V 60Hz

Model	EVR 3	EVR 6	EVR 10	EVR 15	EVR 20	EVR 22	EVR 25	EVR 32	EVR 40
Connector size	3/8	3/8	1/2	5/8	7/8	1- 3/8	1- 1/8	1- 3/8	1- 5/8
		1/2	5/8	7/8	1- 1/8		1- 3/8		2- 1/8

Value-added Services

Ball Valve

Ball valves are used for liquid pipes, suction pipes and hot- gas pipes of refrigeration, freezing and air conditioning equipment. It is manually-adjusted valve, applied to two-way flow.



Refrigerant	CFC, HCFC, HFC
Medium temperature	- 40°C~150°C
Maximum working pressure	45bar
Maximum test pressure	65bar
Allowed maximum leakage amount	<2.8gram R22/Year
Certification	UL, CE

Plate Heat-exchanger



Alfa Laval brazed plate heat-exchanger consists of a series of welded stainless steel corrugated sheets, with fluid flowing evenly in every pass, of very high heat transfer efficiency and strength. Some models are also equipped with double refrigerant circuit. It is commonly applied for economizers, oil coolers, water heat-exchangers, etc. of refrigeration systems.

Applicable medium	Refrigerant, water, glycol, refrigeration oil
Maximum working pressure	40 bar
Design temperature	- 100~150°C

Globe Valve, Stop-check Valve, Regulating Valve



Danfoss STC manual stop valves and SVL series liquid pipe components are used for low temperature resistance, which meet the pressure requirements of the future high pressure refrigerants such as CO2. The unique sealing structure guarantees the product's performance and extends its service life.

Product name	Model	Path(mm)	Refrigerant	Maximum working pressure (MPa)	Applicable temperature (°C)
Globe valve	STC	DN15~80	R22, R507,	5.2	- 50~150
Stop-check valves	SCA	DN15~125	R404A, R744,	5.2	- 60~150
Regulating valve	REG	DN6~65	R134a, R717	5.2	- 60~150

Thermostatic Expansion Valve



Expansion valve is for regulating the flow and reduce the pressure of refrigeration systems. Thermostatic expansion valve regulates the supply of liquid refrigerant in the evaporator through detecting the super-heat of the refrigerant with thermometer bulb. It matches the supply quantity and the load to ensure stable evaporating temperature.

Minimum temperature	- 60°C
Maximum test pressure	32bar
Maximum working pressure	28bar
Applicable refrigerant	R22, R507, R404A, R134a,

Safety Valve



As a device for over-pressure protection, safety valve automatically opens when the pressure exceeds the allowed value during operating, to prevent the pressure from rising continuously, which plays an important role in whole system protection.

Model	SFA- 22C300T
Nominal pressure	5.0MPa
Nominal diameter	1/4, 3/8, 1/2, 3/4, 1, 1-1/4
Strength test pressure	7.5MPa
Discharge pressure	≤1.1 times of the set pressure
Seal pressure	0.9 times of the set pressure
Applicable temperature	- 40~105°C
Applicable medium	Refrigerant, oil and water, etc
Set pressure	1.5MPa, 1.6MPa, 18.5MPa, 2.4MPa

Temperature Control Valve



The temperature control valve constantly adjusts the flow values according to the needs, which is good to control through temperatures, suitable for cooling water from refrigeration systems and hot water or steam from heating systems.

Model	AVTA25
Adjustment range	10~80°C
Maximum temperature of temperature bulb	130°C
Capillary length	2.3m

Cooling Tower



The cooling tower is the terminal of heat released from refrigeration systems. The heat capacity directly affects the operation efficiency of a refrigeration system. Snowman pays attention to the quality of cooling towers and choose world-renowned brands.

Water circulation (m³/h)	3~600
Shell	Glass-fiber reinforced plastics
Filler	High level PVC
Fan	High level reinforced plastics and aluminum alloys
Motor	Closed-type outdoor motor

## Value-added Services

### Service Tools:

Good tools are prerequisite to the successful execution of a job. The following tools are the must for after- sales services.



Toolbox



Vacuum pump



Speed wrench



Halide leak detector



Freon filling mete



Tube expander



Multi- meter



Torque wrench



Chamfer