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RefComp

Reciprocating Compressor Unit

SP Series Semi-hermetic Compressor/Condenser Unit (Reciprocating Unit)

Global service hotline:
400-109-6660

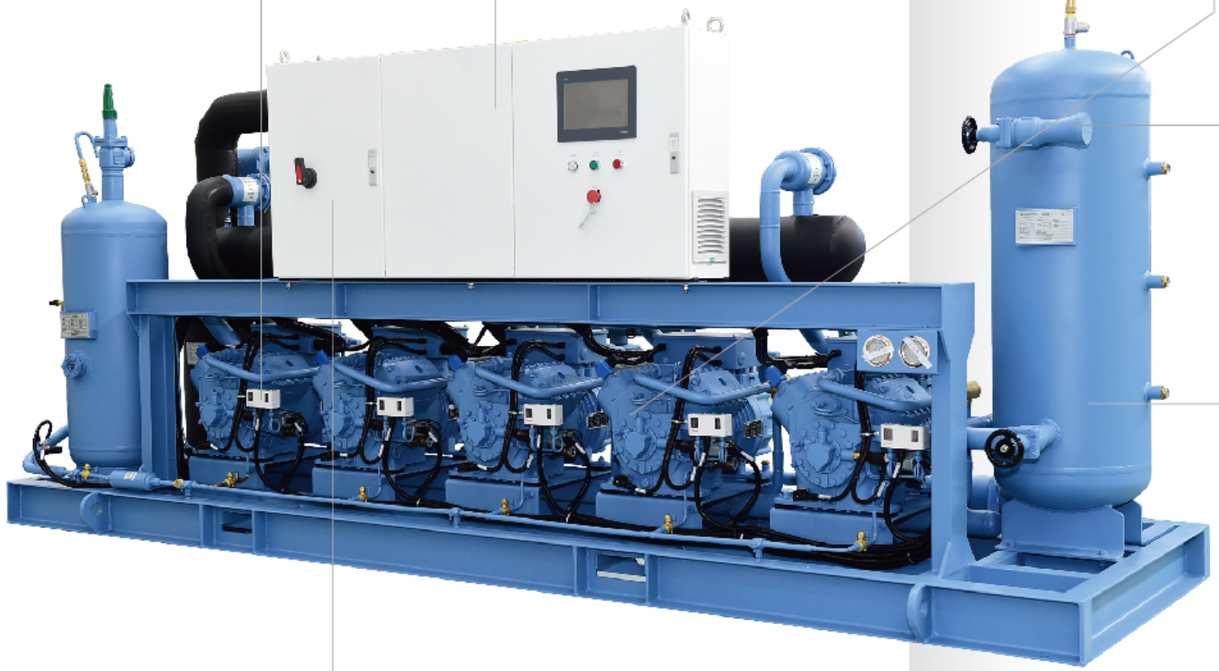
Contents

Structure Diagram of the Semi-hermetic Compressor/Condenser Unit (Reciprocating Unit)

The Snowman Group embraces cutting-edge Italian RefComp compressor technology, proudly introducing Italian RefComp compressors and compressor condenser units. Snowman manufactures its products with rigorous spirit and serves customers with a high standard of professionalism.

Pressure Controller

Smart Control Screen



Refrigeration Unit Control Cabinet

Circuit Breaker

Programmable Controller

Compressor

Shut-off Valve

Water-cooled Condenser

Oil separator

Three-in-One Vessel

Reservoir

Compressor

The RefComp compressor brand from Italy stands as a symbol of reliable quality, exceptional performance, which is mainly used in air conditioning refrigeration compressors.

The SP series reciprocating compressors are highly adaptable, delivering superior efficiency, low energy consumption, and seamless integration in parallel multi-head configurations.

Shut-off Valve

Shut-off valves are commonly potential leakage points in refrigeration systems. Snowman ensures that its shut-off valves are designed with optimal flow conditions and precise linear characteristics, with the valve components fully complying with international pressure equipment directives and requirements. Danfoss shut-off valves are PED and CE certified, aligning with Snowman' s stringent selection standards.

Water-cooled Condenser

The shell-and-tube condenser condenses the high-temperature and high-pressure gas refrigerant discharged from the compressor into high-pressure liquid refrigerant. It is widely applied in the condensation and heat exchange process of various refrigerants. According to the heat transfer characteristics of the refrigerant and cooling medium, the heat exchange tube adopts a unique design that increases the heat exchange area and enhances the external heat exchange coefficient. Additionally, the optimized tube bundle design improves the overall heat exchange efficiency and the efficiency of the refrigeration system.

Oil separator

In a refrigeration system, lubricating oil is inevitably discharged from the compressor with the gas refrigerant. The oil separator separates the oil from the gas refrigerant, preventing it from entering the system and improving heat exchange efficiency. It also ensures the lubricating oil returns to the compressor, extending the lifespan of the compressor and enhancing system efficiency.

Three-in-One Vessel

The three-in-one vessel combines a reservoir, gas-liquid separator, and heat exchanger into one, offering gas separation, liquid storage, and heat exchange functions. This significantly improves the efficiency of the refrigeration system and effectively prevents liquid refrigerant from entering the compressor.

Reservoir

The reservoir adjusts and stabilizes refrigerant circulation by storing high-pressure liquid refrigerant in the refrigeration system. It also acts as a liquid seal to prevent high-pressure gaseous refrigerant from flowing into the low-pressure system, ensuring system stability. It is extensively used in air conditioning and commercial refrigeration fields. The product is available in both horizontal and vertical models, with a full range of specifications.

Pressure Controller

The pressure controller is a crucial safety protection device for the compressor. Snowman has stringent quality requirements for the pressure controller. Danfoss pressure controllers are certified by CCC, CE, GL, DNV, and others, aligning with Snowman' s selection standards.

Refrigeration Unit Control Cabinet

The refrigeration unit' s control cabinet uses Siemens, Schneider, ABB, Omron, and other imported or joint venture brands for main control electrical components. The programmable controller uses imported brands like Siemens, Schneider, Mitsubishi, Omron, and Danfoss, along with large color HMI touchscreens for operation. The inverter is sourced from international well-known brands such as Siemens, Schneider, Mitsubishi, Danfoss, and Omron.

Circuit Breaker

The circuit breaker uses Schneider. Modular products are easy to install. The circuit breaker has obtained certifications such as CCC, CE, UL, TUV, CCS, and is compliant with the EU RoHS directive.

Programmable Controller

The control system uses Schneider' s M218 series programmable controller.

Smart Control Screen

Schneider' s 64K true-color touch screen enables automatic control of the entire equipment operation.

Snowman’ s commercial compressor units feature RefComp semi-hermetic reciprocating or semi-hermetic screw compressors as core components. Through optimized design, these form a series of standard compressor units or compressor/condenser units. Designed for industries such as pharmaceuticals, chemical fibers, electronics, food, packaging, plastics, daily commodities, water conservancy, and construction (air conditioning), offering a versatile and reliable solution. With refrigeration capacities in a broad range of temperatures — low, medium, and high — they provide energy-efficient and stable refrigeration solutions.

Product Features

- Integrated electromechanical structure, compact space, and easy operation and maintenance;
- Strong compressor refrigeration capacity;
- Wide range of temperature adaptation;
- Unique gas-liquid separator design greatly reduces the liquid slug damage caused by load fluctuations.

Humanized design: Aesthetic appeal, and easy maintenance

Carefully-selected premium parts with guaranteed quality and stable operation

Compact modular design, saving equipment room area and investment costs

Elegant design, thoughtful layout, meticulous attention to detail, and a commitment to continuous improvement

User-friendly design, easy-to-replace parts, and reducing maintenance costs

Flexible pipeline fixing, reduced vibration and noise

Smart—One-touch operation and remote communication

Intelligent control, real-time energy adjustment based on load

Remote control available, minimizing manual operation costs

Multi-stage energy adjustment for more accurate load matching

Stable—Multiple protections and alarm measures

Monitors the compressor motor and exhaust temperature

Monitors motor rotation direction

Monitors phase loss in the power supply

Monitors oil flow, oil level, and oil temperature

Monitors high and low pressure

Automatic alarm and shutdown, recording abnormal events and times

Password protection, preventing improper operation by unskilled personnel

SP Series Semi-hermetic Reciprocating Compressor

RefComp SP series semi-hermetic reciprocating compressors are suitable for air conditioning anolow-to-medium temperature evaporation applications, with refrigerants such as R407C, R404A, R507A, etc. This series inciudes 34 modeis with 4, 6, and 8 cylinders, offering adisplacement ranging from 17.5 to 222 m^3/h, and is designed for parallel configurations. RefComp SP series reciprocating compressors have the following characteristics:

- High efficiency and strength
- Advanced lubrication system
- Reliable and stable operation
- Low noise,smooth operation
- Compact and easy installation, integrating a filter, shut-off valve, and temperature sensor
- Easy to maintain

Crankshaft connecting rod reciprocating

Motor

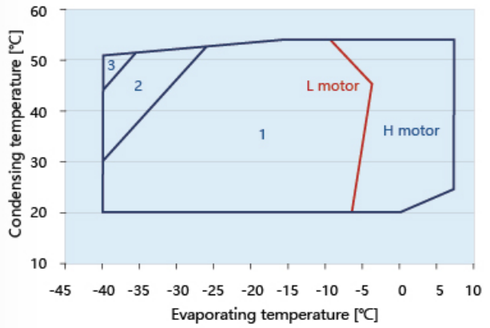
Bearing

Suction filter

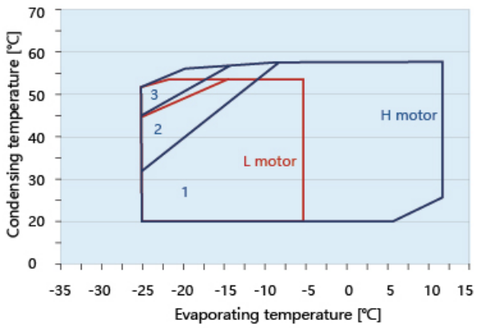
Application Scope

Full-load operating ranges
1 = Standard operating range (suction temperature [25℃])
2 = Additional cooling range
3 = Additional cooling + maximum 10K suction superheating range

R507A

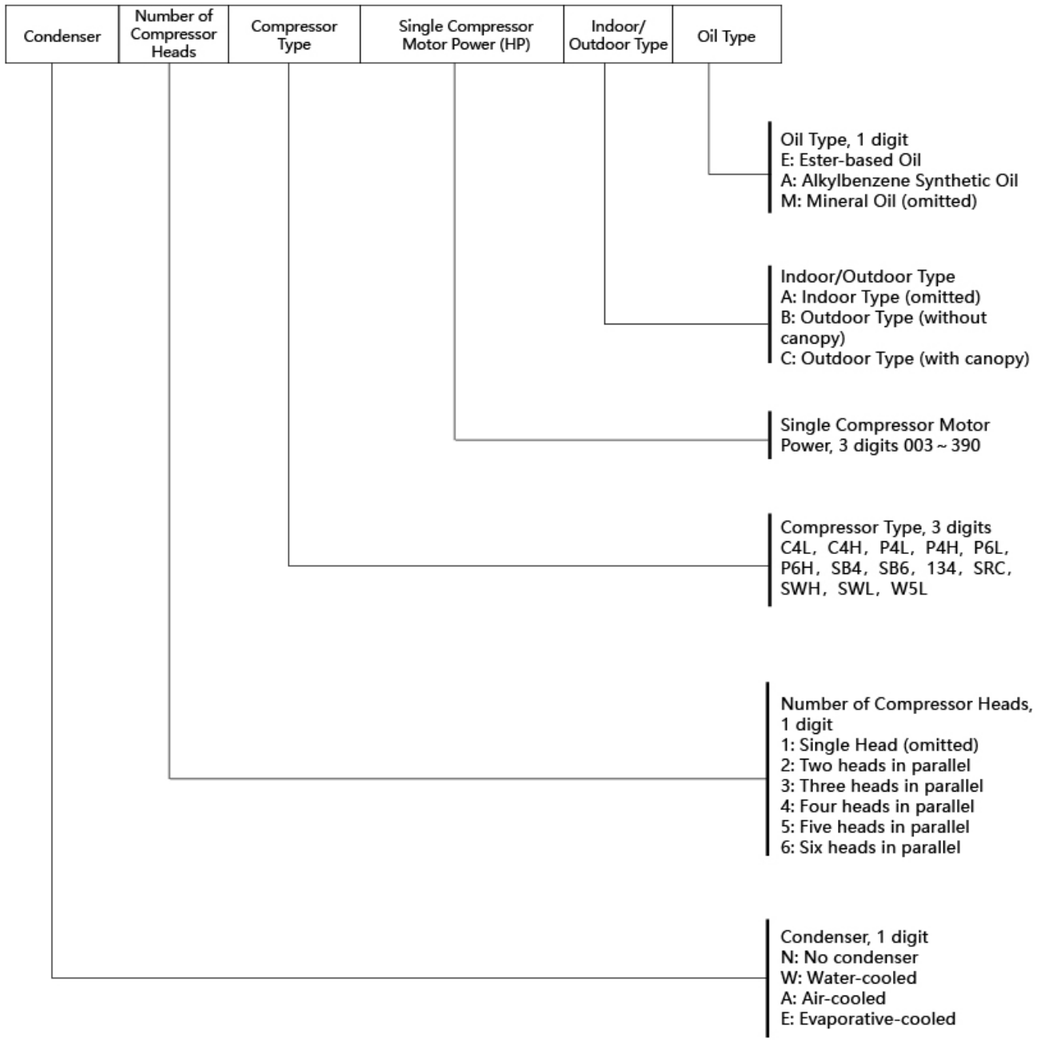


R407C



For details, refer to the Compressor Manual.

Product Name



Notes: N2SWL080A indicates a set with 2 units of indoor SW3L series 80HP screw compressors in parallel, without a condenser, using alkylbenzene synthetic oil as the lubricant.
N2P6L030 indicates a set with 2 units of indoor SPL series 30HP reciprocating compressors in parallel, without a condenser, using mineral oil as the lubricant.

Operating conditions

• Environmental temperature: +5℃~+35℃
• Lubricating oil: Lubricant provided or approved by Snowman.
• Cooling Water Conditions: The cooling water used in the unit must meet the quality requirements specified in GBs0050 Code for Design ofIndustrial Recirculating Cooling Water Treatment.
The unit's water supply pressure (for water-cooled condensers) should be between 0.1 and 0.6 MPa.
• Cooling Water Inlet Temperature: +15℃~+32℃
• When used indoors, ensure good ventilation in the equipment room with a relative humidity not exceeding 85% (at 20°c+5'C)
• The installation altitude should not exceed 1000 meters, and the environment should be free from gases, liquids, or conductive dust thatcouid corrode metais or damage insuiation.

Low-temperature reciprocating unit series

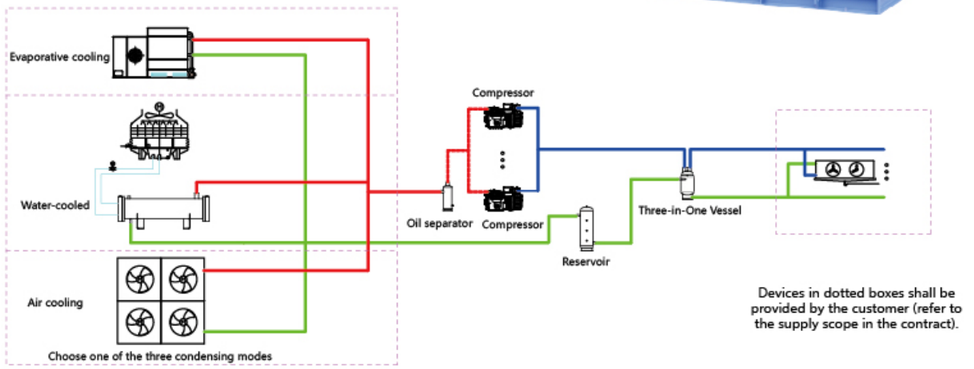
The low-temperature reciprocating unit is the RefComp SP series reciprocating compressor, with a power range from 6 to 160 HP. Units can be configured up to 240 HP based on user needs. They can be configured flexibly according to customer needs, including the water-cooled condenser, air-cooled condenser or no condenser. The low-temperature reciprocating units are the result of Snowman' s fifteen years of experience in reciprocating unit design, incorporating multiple humanized designs. They feature a complete set of ports, including evacuation ports, drainage ports, and charging ports for easy maintenance and repair.

Refrigerant*	R404A/R507A
Refrigeration capacity**	9.9 ~ 157.6kW
Power System	380V 3P 50Hz
Number of heads ***	1-4 sets

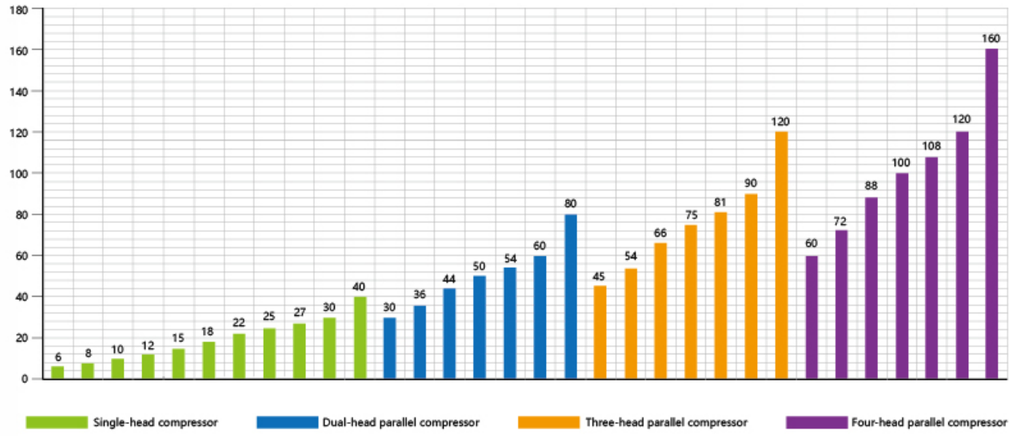
* If you need to use other refrigerants, please contact us.

** Based on standard working conditions -23/40℃, refrigerant R507A;

*** For parallel connection of more heads, please contact us.



Power of compressor



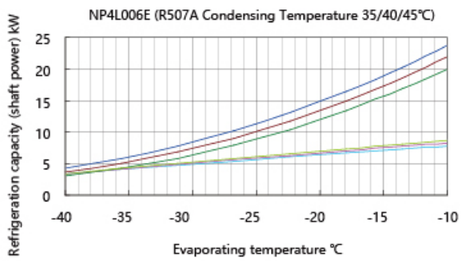
Performance Parameters Table and Curve Diagram of the SP(L) Series Single Compressor Unit

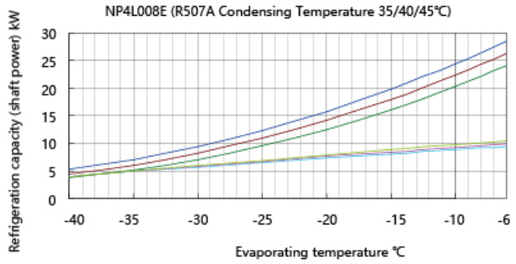
R507A

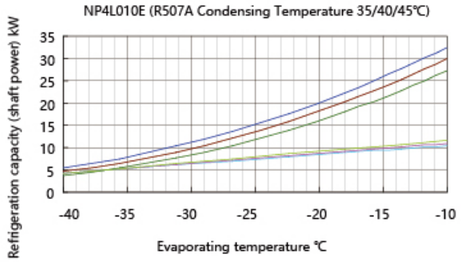
Evaporating temperature	NP4L006E						NP4L008E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-40	4.3	3.4	3.7	3.3	3.1	3.3	5.2	4	4.5	4	3.7	4
-35	5.8	4.1	5	4.1	4.2	4.2	7	4.9	6	4.9	5.1	5
-30	7.8	4.7	6.8	4.9	5.8	5	9.3	5.7	8.2	5.8	7	6
-25	10.2	5.4	9	5.6	7.9	5.8	12.2	6.5	10.9	6.7	9.5	6.9
-20	13.1	6	11.8	6.3	10.4	6.5	15.7	7.3	14.1	7.6	12.5	7.9
-15	16.5	6.7	15	7	13.4	7.3	19.8	8	17.9	8.4	16.1	8.8
-10	20.3	7.3	18.6	7.7	16.9	8.1	24.4	8.7	22.3	9.2	20.3	9.7
-6	23.8	7.7	21.9	8.2	20	8.6	28.5	9.3	26.3	9.8	24	10.4

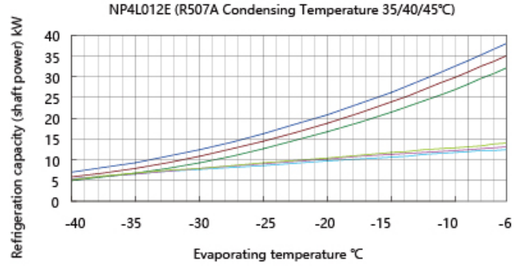
Evaporating temperature	NP4L010E						NP4L012E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-40	6	4.7	5.2	4.7	4.3	4.6	6.9	5.4	5.9	5.3	5	5.3
-35	8.1	5.7	7	5.8	5.9	5.8	9.3	6.5	8	6.6	6.8	6.6
-30	10.9	6.6	9.5	6.8	8.2	7	12.4	7.6	10.9	7.8	9.3	7.9
-25	14.2	7.6	12.7	7.8	11.1	8.1	16.3	8.6	14.5	8.9	12.6	9.2
-20	18.3	8.5	16.5	8.8	14.6	9.2	20.9	9.7	18.8	10.1	16.7	10.5
-15	23.1	9.3	20.9	9.8	18.8	10.2	26.3	10.7	23.9	11.2	21.5	11.7
-10	28.5	10.2	26.1	10.7	23.6	11.3	32.5	11.6	29.8	12.3	27	12.9
-6	33.3	10.8	30.7	11.5	28	12.1	38	12.4	35	13.1	32	13.8

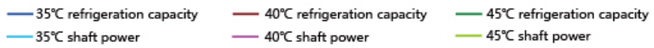
Notes: Q: refrigeration capacity (kW) P: shaft power (kW)











Performance Parameters Table and Curve Diagram of the SP(L) Series Single Compressor Unit (Continued)

R507A

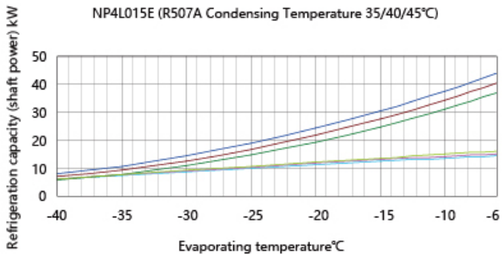
Evaporating temperature	NP4L015E						NP4L018E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-40	8	6.2	6.9	6.2	5.7	6.1	9.3	7.2	8	7.2	6.6	7.1
-35	10.7	7.5	9.3	7.6	7.8	7.7	12.4	8.7	10.8	8.8	9.1	8.9
-30	14.3	8.8	12.6	9	10.8	9.2	16.6	10.2	14.6	10.4	12.5	10.7
-25	18.8	10	16.7	10.3	14.6	10.7	21.8	11.6	19.4	12	16.9	12.4
-20	24.2	11.2	21.7	11.6	19.3	12.1	28	13	25.2	13.5	22.4	14
-15	30.4	12.3	27.6	12.9	24.8	13.5	35.3	14.3	32.1	15	28.8	15.7
-10	37.6	13.4	34.4	14.2	31.2	14.9	43.6	15.6	39.9	16.4	36.2	17.3
-6	43.9	14.3	40.5	15.1	36.9	16	51	16.6	46.9	17.5	42.9	18.5

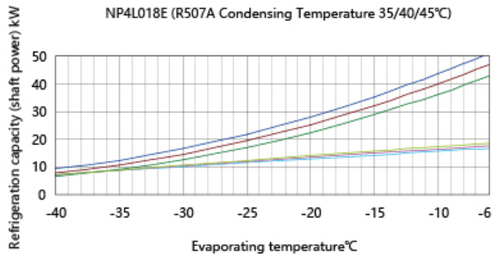
Evaporating temperature	NP4L022E						NP4L025E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-40	10.6	8.3	9.1	8.2	7.6	8.2	12.8	9.9	11	9.9	9.2	9.8
-35	14.3	10	12.4	10.1	10.4	10.2	17.2	12	14.9	12.2	12.5	12.3
-30	19.1	11.7	16.7	11.9	14.4	12.2	22.9	14	20.1	14.4	17.3	14.7
-25	25	13.3	22.2	13.7	19.4	14.2	30.1	16	26.8	16.5	23.4	17.1
-20	32.2	14.9	28.9	15.5	25.6	16.1	38.7	17.9	34.8	18.6	30.8	19.4
-15	40.5	16.4	36.8	17.2	33	18	48.7	19.7	44.2	20.7	39.7	21.6
-10	50	17.9	45.8	18.8	41.5	19.8	60.1	21.5	55.1	22.7	49.9	23.8
-6	58.4	19	53.8	20.1	49.1	21.2	70.3	22.9	64.8	24.2	59.1	25.5

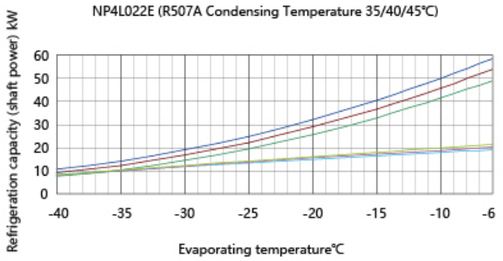
Evaporating temperature	NP6L027E						NP6L030E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-40	13.9	10.8	11.9	10.7	10	10.7	16	12.4	13.7	12.4	11.4	12.3
-35	18.7	13.1	16.2	13.2	13.6	13.4	21.4	15	18.6	15.2	15.7	15.4
-30	24.9	15.2	21.9	15.6	18.8	16	28.7	17.5	25.1	18	21.6	18.4
-25	32.7	17.4	29.1	18	25.4	18.5	37.6	20	33.5	20.6	29.2	21.3
-20	42.1	19.4	37.8	20.2	33.5	21.1	48.4	22.4	43.5	23.3	38.6	24.2
-15	53	21.5	48.1	22.5	43.2	23.5	60.9	24.7	55.3	25.8	49.6	27
-10	65.4	23.4	59.9	24.6	54.3	25.9	75.2	26.9	68.8	28.3	62.4	29.8
-6	76.4	24.9	70.4	26.3	64.3	27.8	87.9	28.6	80.9	30.3	73.9	31.9

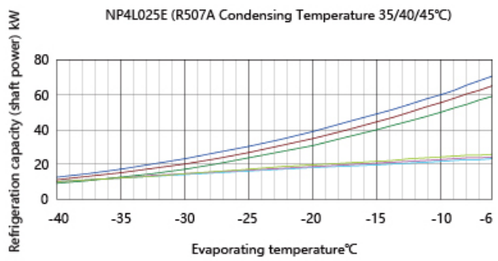
Evaporating temperature	NP6L040E					
	35		40		45	
	Q	P	Q	P	Q	P
-40	19.2	14.9	16.5	14.8	13.7	14.7
-35	25.7	18	22.3	18.2	18.8	18.4
-30	34.4	21	30.2	21.5	25.9	22
-25	45.2	24	40.1	24.8	35.1	25.6
-20	58	26.8	52.2	27.9	46.3	29
-15	73	29.6	66.3	31	59.5	32.4
-10	90.2	32.3	82.6	34	74.9	35.7
-6	105.5	34.4	97.1	36.3	88.7	38.3

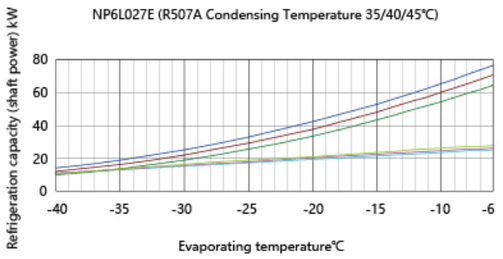
Notes: Q: refrigeration capacity (kW) P: shaft power (kW)

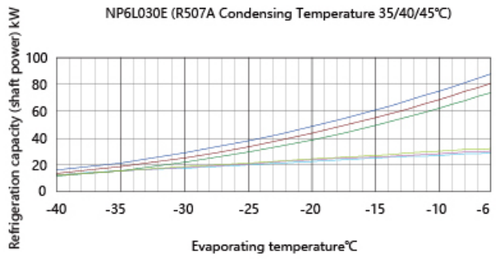


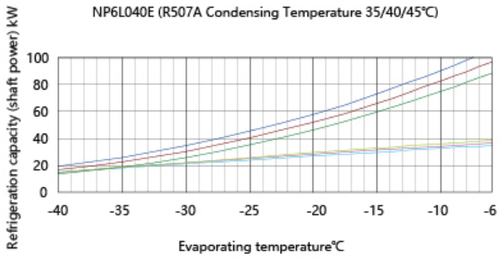


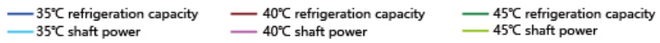












Performance Parameters Table of the SP(L) Series Compressor Unit

R507A

Unit model		N2P4L015E		N2P4L018E		N2P4L022E		N2P4L025E		N2P6L027E		N2P6L030E		N2P6L040E	
Compressor model		SP4L150E		SP4L180E		SP4L220E		SP4L250E		SP6L270E		SP6L300E		SP6L400E	
Units		2													
HP		30		36		44		50		54		60		80	
Evaporating temperature	Condensing temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-10	35	75.2	26.8	87.2	31.2	100	35.8	120.2	43	130.8	46.8	150.4	53.8	180.4	64.6
	40	68.8	28.4	79.8	32.8	91.6	37.6	110.2	45.4	119.8	49.2	137.6	56.6	165.2	68
	45	62.4	29.8	72.4	34.6	83	39.6	99.8	47.6	108.6	51.8	124.8	59.6	149.8	71.4
-15	35	60.8	24.6	70.6	28.6	81	32.8	97.4	39.4	106	43	121.8	49.4	146	59.2
	40	55.2	25.8	64.2	30	73.6	34.4	88.4	41.4	96.2	45	110.6	51.6	132.6	62
	45	49.6	27	57.6	31.4	66	36	79.4	43.2	86.4	47	99.2	54	119	64.8
-20	35	48.4	22.4	56	26	64.4	29.8	77.4	35.8	84.2	38.8	96.8	44.8	116	53.6
	40	43.4	23.2	50.4	27	57.8	31	69.6	37.2	75.6	40.4	87	46.6	104.4	55.8
	45	38.6	24.2	44.8	28	51.2	32.2	61.6	38.8	67	42.2	77.2	48.4	92.6	58
-25	35	37.6	20	43.6	23.2	50	26.6	60.2	32	65.4	34.8	75.2	40	90.4	48
	40	33.4	20.6	38.8	24	44.4	27.4	53.6	33	58.2	36	67	41.2	80.2	49.6
	45	29.2	21.4	33.8	24.8	38.8	28.4	46.8	34.2	50.8	37	58.4	42.6	70.2	51.2
-30	35	28.6	17.6	33.2	20.4	38.2	23.4	45.8	28	49.8	30.4	57.4	35	68.8	42
	40	25.2	18	29.2	20.8	33.4	23.8	40.2	28.8	43.8	31.2	50.2	36	60.4	43
	45	21.6	18.4	25	21.4	28.8	24.4	34.6	29.4	37.6	32	43.2	36.8	51.8	44
-35	35	21.4	15	24.8	17.4	28.6	20	34.4	24	37.4	26.2	42.8	30	51.4	36
	40	18.6	15.2	21.6	17.6	24.8	20.2	29.8	24.4	32.4	26.4	37.2	30.4	44.6	36.4
	45	15.6	15.4	18.2	17.8	20.8	20.4	25	24.6	27.2	26.8	31.4	30.8	37.6	36.8
-40	35	16	12.4	18.6	14.4	21.2	16.6	25.6	19.8	27.8	21.6	32	24.8	38.4	29.8
	40	13.8	12.4	16	14.4	18.2	16.4	22	19.8	23.8	21.4	27.4	24.8	33	29.6
	45	11.4	12.2	13.2	14.2	15.2	16.4	18.4	19.6	20	21.4	22.8	24.6	27.4	29.4

Notes: Q: Refrigeration capacity (kW), P: Shaft power (kW), R404A values are similar to R507A. For details, refer to R507A.
This is a partial list of compressor unit performance parameters. For more information, please contact us.
For the performance parameters of the compressor/condenser unit, refer to the Performance Parameters Table and Curve Diagram.

Performance Parameters Table of the SP(L) Series Compressor Unit (Continued)

R507A

Unit model		N3P4L015E		N3P4L018E		N3P4L022E		N3P4L025E		N3P6L027E		N3P6L030E		N3P6L040E	
Compressor model		SP4L150E		SP4L180E		SP4L220E		SP4L250E		SP6L270E		SP6L300E		SP6L400E	
Units		3													
HP		45		54		66		75		81		90		120	
Evaporating temperature	Condensing temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-10	35	112.8	40.2	130.8	46.8	150	53.7	180.3	64.5	196.2	70.2	225.6	80.7	270.6	96.9
	40	103.2	42.6	119.7	49.2	137.4	56.4	165.3	68.1	179.7	73.8	206.4	84.9	247.8	102
	45	93.6	44.7	108.6	51.9	124.5	59.4	149.7	71.4	162.9	77.7	187.2	89.4	224.7	107.1
-15	35	91.2	36.9	105.9	42.9	121.5	49.2	146.1	59.1	159	64.5	182.7	74.1	219	88.8
	40	82.8	38.7	96.3	45	110.4	51.6	132.6	62.1	144.3	67.5	165.9	77.4	198.9	93
	45	74.4	40.5	86.4	47.1	99	54	119.1	64.8	129.6	70.5	148.8	81	178.5	97.2
-20	35	72.6	33.6	84	39	96.6	44.7	116.1	53.7	126.3	58.2	145.2	67.2	174	80.4
	40	65.1	34.8	75.6	40.5	86.7	46.5	104.4	55.8	113.4	60.6	130.5	69.9	156.6	83.7
	45	57.9	36.3	67.2	42	76.8	48.3	92.4	58.2	100.5	63.3	115.8	72.6	138.9	87
-25	35	56.4	30	65.4	34.8	75	39.9	90.3	48	98.1	52.2	112.8	60	135.6	72
	40	50.1	30.9	58.2	36	66.6	41.1	80.4	49.5	87.3	54	100.5	61.8	120.3	74.4
	45	43.8	32.1	50.7	37.2	58.2	42.6	70.2	51.3	76.2	55.5	87.6	63.9	105.3	76.8
-30	35	42.9	26.4	49.8	30.6	57.3	35.1	68.7	42	74.7	45.6	86.1	52.5	103.2	63
	40	37.8	27	43.8	31.2	50.1	35.7	60.3	43.2	65.7	46.8	75.3	54	90.6	64.5
	45	32.4	27.6	37.5	32.1	43.2	36.6	51.9	44.1	56.4	48	64.8	55.2	77.7	66
-35	35	32.1	22.5	37.2	26.1	42.9	30	51.6	36	56.1	39.3	64.2	45	77.1	54
	40	27.9	22.8	32.4	26.4	37.2	30.3	44.7	36.6	48.6	39.6	55.8	45.6	66.9	54.6
	45	23.4	23.1	27.3	26.7	31.2	30.6	37.5	36.9	40.8	40.2	47.1	46.2	56.4	55.2
-40	35	24	18.6	27.9	21.6	31.8	24.9	38.4	29.7	41.7	32.4	48	37.2	57.6	44.7
	40	20.7	18.6	24	21.6	27.3	24.6	33	29.7	35.7	32.1	41.1	37.2	49.5	44.4
	45	17.1	18.3	19.8	21.3	22.8	24.6	27.6	29.4	30	32.1	34.2	36.9	41.1	44.1

Notes: Q: Refrigeration capacity (kW), P: Shaft power (kW). R404A values are similar to R507A. For details, refer to R507A.
This is a partial list of compressor unit performance parameters. For more information, please contact us.
For the performance parameters of the compressor/condenser unit, refer to the Performance Parameters Table and Curve Diagram.

Performance Parameters Table of the SP(L) Series Compressor Unit (Continued)

R507A

Unit model		N4P4L015E		N4P4L018E		N4P4L022E		N4P4L025E		N4P6L027E		N4P6L030E		N4P6L040E	
Compressor model		SP4L150E		SP4L180E		SP4L220E		SP4L250E		SP6L270E		SP6L300E		SP6L400E	
Units		4													
HP		60		72		88		100		108		120		160	
Evaporating temperature	Condensing temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-10	35	150.4	53.6	174.4	62.4	200	71.6	240.4	86	261.6	93.6	300.8	107.6	360.8	129.2
	40	137.6	56.8	159.6	65.6	183.2	75.2	220.4	90.8	239.6	98.4	275.2	113.2	330.4	136
	45	124.8	59.6	144.8	69.2	166	79.2	199.6	95.2	217.2	103.6	249.6	119.2	299.6	142.8
-15	35	121.6	49.2	141.2	57.2	162	65.6	194.8	78.8	212	86	243.6	98.8	292	118.4
	40	110.4	51.6	128.4	60	147.2	68.8	176.8	82.8	192.4	90	221.2	103.2	265.2	124
	45	99.2	54	115.2	62.8	132	72	158.8	86.4	172.8	94	198.4	108	238	129.6
-20	35	96.8	44.8	112	52	128.8	59.6	154.8	71.6	168.4	77.6	193.6	89.6	232	107.2
	40	86.8	46.4	100.8	54	115.6	62	139.2	74.4	151.2	80.8	174	93.2	208.8	111.6
	45	77.2	48.4	89.6	56	102.4	64.4	123.2	77.6	134	84.4	154.4	96.8	185.2	116
-25	35	75.2	40	87.2	46.4	100	53.2	120.4	64	130.8	69.6	150.4	80	180.8	96
	40	66.8	41.2	77.6	48	88.8	54.8	107.2	66	116.4	72	134	82.4	160.4	99.2
	45	58.4	42.8	67.6	49.6	77.6	56.8	93.6	68.4	101.6	74	116.8	85.2	140.4	102.4
-30	35	57.2	35.2	66.4	40.8	76.4	46.8	91.6	56	99.6	60.8	114.8	70	137.6	84
	40	50.4	36	58.4	41.6	66.8	47.6	80.4	57.6	87.6	62.4	100.4	72	120.8	86
	45	43.2	36.8	50	42.8	57.6	48.8	69.2	58.8	75.2	64	86.4	73.6	103.6	88
-35	35	42.8	30	49.6	34.8	57.2	40	68.8	48	74.8	52.4	85.6	60	102.8	72
	40	37.2	30.4	43.2	35.2	49.6	40.4	59.6	48.8	64.8	52.8	74.4	60.8	89.2	72.8
	45	31.2	30.8	36.4	35.6	41.6	40.8	50	49.2	54.4	53.6	62.8	61.6	75.2	73.6
-40	35	32	24.8	37.2	28.8	42.4	33.2	51.2	39.6	55.6	43.2	64	49.6	76.8	59.6
	40	27.6	24.8	32	28.8	36.4	32.8	44	39.6	47.6	42.8	54.8	49.6	66	59.2
	45	22.8	24.4	26.4	28.4	30.4	32.8	36.8	39.2	40	42.8	45.6	49.2	54.8	58.8

Notes: Q: Refrigeration capacity (kW), P: Shaft power (kW). R404A values are similar to R507A. For details, refer to R507A.
This is a partial list of compressor unit performance parameters. For more information, please contact us.
For the performance parameters of the compressor/condenser unit, refer to the Performance Parameters Table and Curve Diagram.

Technical Specifications of the SP(L) Series Reciprocating Compressor Unit

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
NP4L006	SP4LF0600	1	6	5/8"	DN32	1/2"	S009	5	50	16	PW	43	1500×850×1300			380
NP4L008	SP4LF0800		8							19		54				385
NP4L010	SP4LF1000		10	7/8"	DN40	5/8"				24		71				390
NP4L012	SP4LF1200		12							27		75				400
NP4L015	SP4L1500		15					6	67	29		88	1500×1000×1300			450
NP4L018	SP4L1800		18							33		102				460
NP4L022	SP4L2200		22		DN50					39		102				480
NP4L025	SP4L2500		25	1-1/8"		1-1/8"				43		123				500
NP6L027	SP6L2700		27					8	90	48		123	1600×1000×1400			550
NP6L030	SP6L3000		30							54		150				560
NP6L040	SP6L4000		40		DN65					75		201				600

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
N2P4L015	SP4L1500	2	30	DN25	DN50	7/8"	S009	20	36	58	PW	88	1900×1100×1670			900
N2P4L018	SP4L1800		36							66		102				
N2P4L022	SP4L2200		44		DN65				50	78		102				960
N2P4L025	SP4L2500		50	ND32		DN20				86		123				1050
N2P6L027	SP6L2700		54						67	96		123	2280×1110×1800			1100
N2P6L030	SP6L3000		60			DN25				108		150				1150
N2P6L040	SP6L4000		80		DN80				115	150		201				1250

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
N3P4L015	SP4L1500	3	45	DN25	DN65	7/8"	S009	28	50	87	PW	88	2600×1100×1700			1200
N3P4L018	SP4L1800		54	DN32		DN20			67	99		102				1250
N3P4L022	SP4L2200		66			DN25				117		102				1300
N3P4L025	SP4L2500		75		DN80				115	129		123				1350
N3P6L027	SP6L2700		81					30		144		123	3100×1150×1800			1550
N3P6L030	SP6L3000		90	DN40						162		150				1600
N3P6L040	SP6L4000		120		DN100	DN32				225		201				1750

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
N4P4L015	SP4L1500	4	60	DN32	DN65	DN25	S009	36	67	116	PW	88	3200×1200×1750			1550
N4P4L018	SP4L1800		72		DN80				115	132		102				1650
N4P4L022	SP4L2200		88	DN40						156		102				1700
N4P4L025	SP4L2500		100			DN32				172		123	3200×1200×1800			2000
N4P6L027	SP6L2700		108	DN50	DN100	DN32		40	150	192		123	4000×1450×2000			2250
N4P6L030	SP6L3000		120							216		150				2300
N4P6L040	SP6L4000		160		DN125					300		201	4000×1450×2100			2500

Notes: 1. The above technical specifications are based on the nominal working conditions of the SP(L) series compressor unit: Evaporating temperature: -23℃, condensing temperature: 40℃, refrigerant: R507A. If the above range is exceeded, please contact us for confirmation.
2. Unit power supply: 380V/3P/50Hz.

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Technical Specifications of the SP(L) Series Water-cooled Reciprocating Compressor/Condenser Unit

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
WP4L006	SP4LF0600	1	6	DN32	1/2"	DN32	S009	5	6	16	PW	43	1500×850×1300			500
WP4L008	SP4LF0800		8			DN32				19		54				
WP4L010	SP4LF1000		10	DN40	5/8"	DN40				24		71				
WP4L012	SP4LF1200		12			DN40				27		75				
WP4L015	SP4L1500		15			DN40		6	10	29		88	1500×1000×1300			660
WP4L018	SP4L1800		18			DN50				33		102				660
WP4L022	SP4L2200		22			DN50				39		102				700
WP4L025	SP4L2500		25	DN50	1-1/8"	DN50		8	14	43		123				750
WP6L027	SP6L2700		27			DN50				48		123	1600×1000×1400			750
WP6L030	SP6L3000		30			DN65				54		150				760
WP6L040	SP6L4000		40	DN65		DN65				75		201				790

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
W2P4L015	SP4L1500	2	30	DN50	7/8"	DN50	S009	20	36	58	PW	88	2000×1400×1700			1400
W2P4L018	SP4L1800		36			DN65				66		102				
W2P4L022	SP4L2200		44	DN65		DN65			50	78		102				1500
W2P4L025	SP4L2500		50		DN20	DN65				86		123				1600
W2P6L027	SP6L2700		54			DN65			67	96		123	2500×1500×1800			1650
W2P6L030	SP6L3000		60		DN25	DN80				108		150				1700
W2P6L040	SP6L4000		80	DN80		DN80			115	150		201				2000

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
W3P4L015	SP4L1500	3	45	ND65	7/8"	DN65	S009	28	50	87	PW	88	2800×1600×1800			1700
W3P4L018	SP4L1800		54		ND20	DN65			67	99		102				1800
W3P4L022	SP4L2200		66			DN80				117		102				1850
W3P4L025	SP4L2500		75	ND80	ND25	DN80			115	129		123				2100
W3P6L027	SP6L2700		81			DN80		30		144		123	3300×1800×2000			2400
W3P6L030	SP6L3000		90			DN80				162		150				2500
W3P6L040	SP6L4000		120	ND100	ND32	DN100				225		201				2600

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
W4P4L015	SP4L1500	4	60	DN65	DN25	DN80	S009	36	67	116	PW	88	3500×1600×2000			2200
W4P4L018	SP4L1800		72	DN80		DN80			115	132		102				2500
W4P4L022	SP4L2200		88			DN80				156		102				1600
W4P4L025	SP4L2500		100		DN32	DN100				172		123				2900
W4P6L027	SP6L2700		108	DN100	DN32	DN100		40	150	192		123	4300×1800×2200			3200
W4P6L030	SP6L3000		120			DN100				216		150				3300
W4P6L040	SP6L4000		160	DN125		DN125				300		201				3600

Notes: 1. The above technical specifications are based on the nominal working conditions of the SP(L) series water-cooled compressor/condenser unit: Evaporating temperature: -23℃, condensing temperature: 40℃, cooling water inlet/outlet temperature: 30/35℃, refrigerant: R507A. If the above range is exceeded, please contact us for confirmation.
2. Unit power supply: 380V/3P/50Hz; 3. Water-side pressure drop: ≤ 70 kPa.

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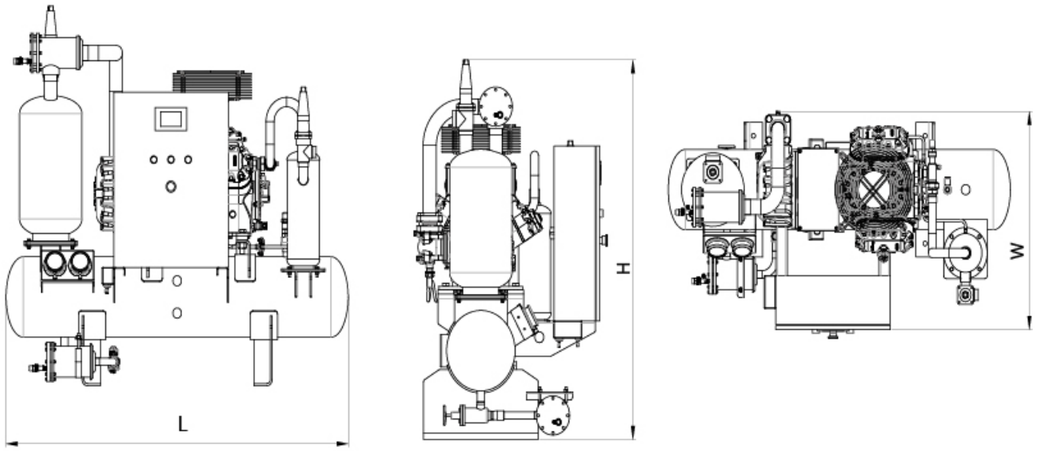
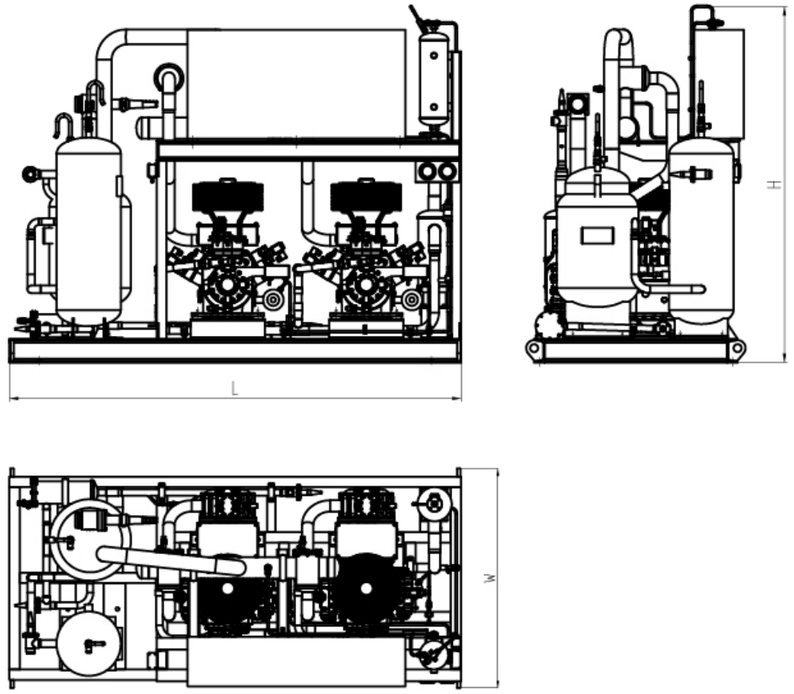
Dimension Diagram of the SP(L) Series Reciprocating Compressor Unit

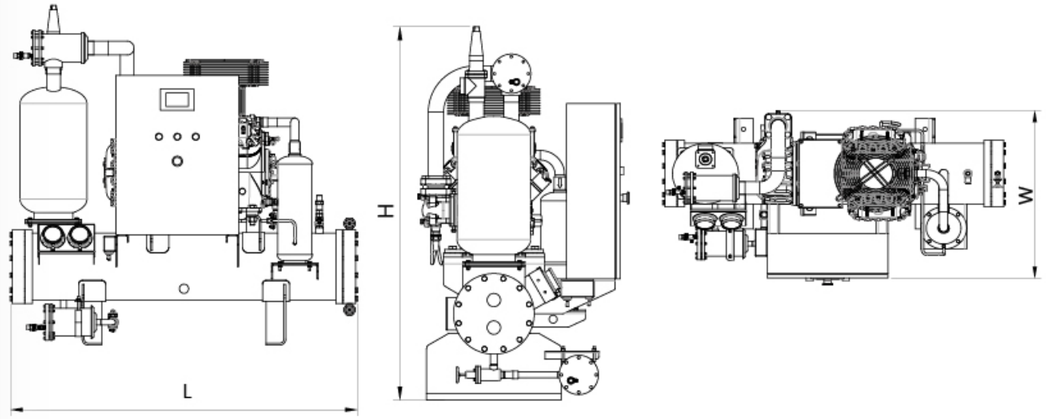


Single Reciprocating Compressor Unit

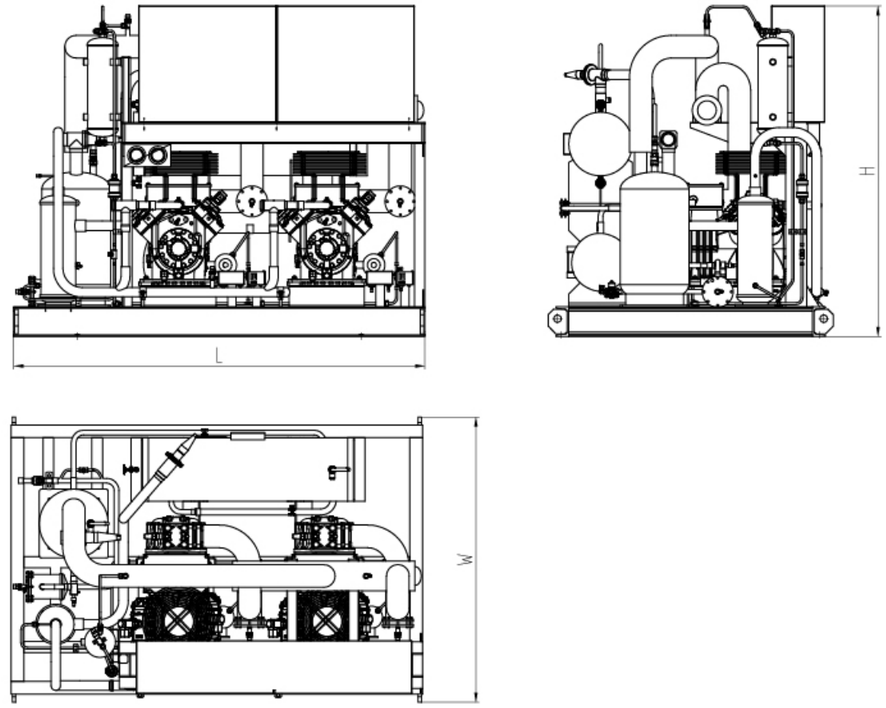


Parallel Reciprocating Compressor Unit

Dimension Diagram of the SP(L) Series Water-cooled Reciprocating Compressor/Condenser Unit



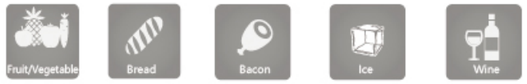
Water-cooled Single Compressor/Condenser Unit



Water-cooled Parallel Compressor/Condenser Unit

Medium- and High-temperature Reciprocating Unit Series

The medium and high-temperature reciprocating unit is the RefComp SP series reciprocating compressor, with a power range from 10 to 200 HP. Up to 300 HP can be configured based on user needs. Water-cooled condensers, air-cooled condensers or compressor units without a condenser are available for selection. Similar to low-temperature reciprocating units, medium and high-temperature reciprocating units are the result of Snowman' s years of experience in reciprocating unit design, incorporating multiple humanized designs. They feature a complete set of ports, including evacuation ports, drainage ports, and charging ports for easy maintenance and repair.

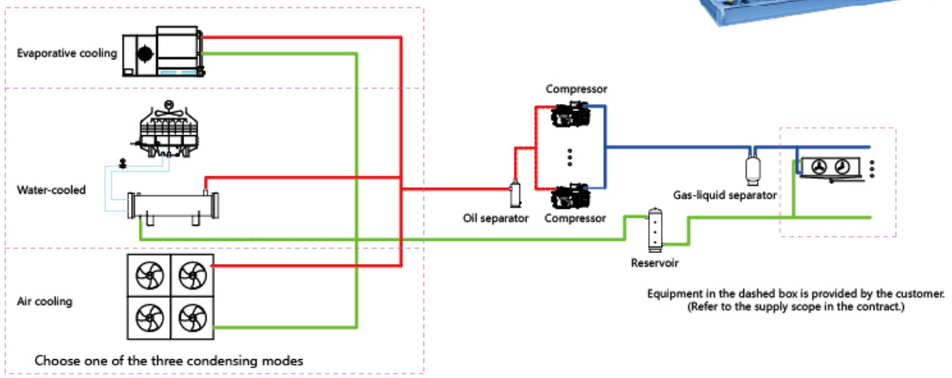


Refrigerant*	R404A/R507A
Refrigeration capacity**	21.3 ~ 361.6kW
Power System	380V 3P 50Hz
Number of heads ***	1-4 sets

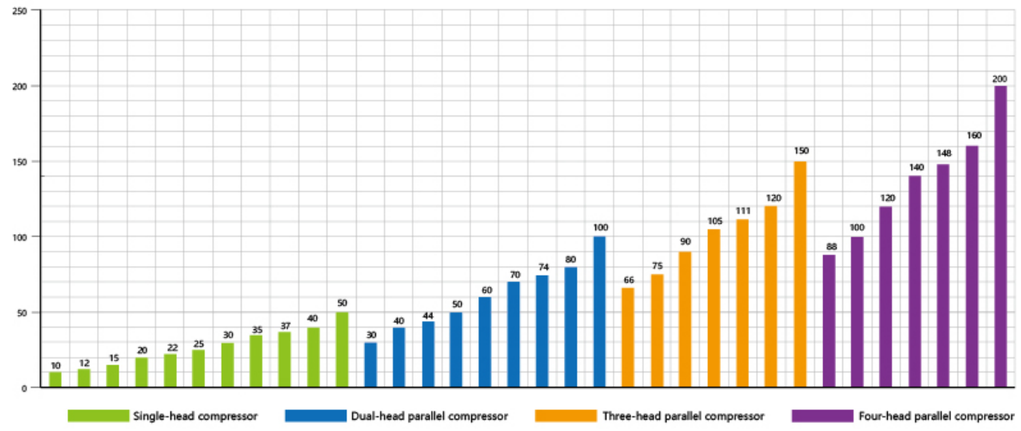
* If you need to use other refrigerants, please contact us.

** Based on standard working conditions -7/40℃, refrigerant R507A;

*** For parallel connection of more heads, please contact us.



Power of compressor



Performance Parameters Table and Curve Diagram of the SP(H) Series Single Compressor Unit

R507A

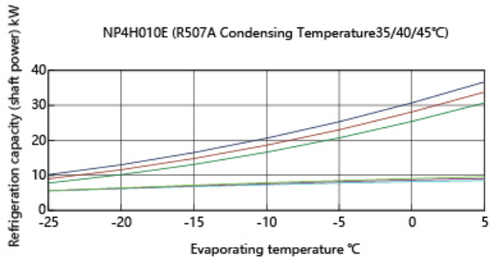
Evaporating temperature	NP4H010E						NP4H012E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-25	10.2	5.5	9	5.6	7.8	5.6	12.2	6.6	10.8	6.7	9.4	6.7
-20	13	6.2	11.6	6.3	10.2	6.4	15.6	7.4	14	7.6	12.2	7.7
-15	16.5	6.8	14.8	7	13.1	7.2	19.8	8.1	17.8	8.4	15.7	8.6
-10	20.6	7.3	18.6	7.6	16.6	7.9	24.7	8.8	22.4	9.2	19.9	9.5
-5	25.3	7.8	23	8.2	20.7	8.5	30.3	9.3	27.6	9.8	24.8	10.2
0	30.7	8.2	28.1	8.7	25.4	9.1	36.8	9.8	33.7	10.4	30.4	10.9
5	36.7	8.5	33.8	9.1	30.7	9.6	44.1	10.2	40.6	10.9	36.9	11.5

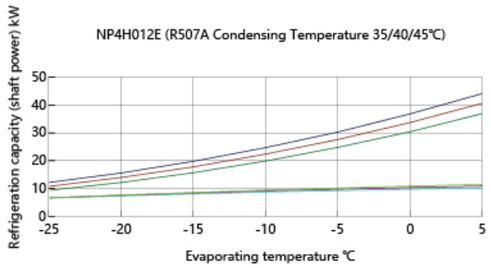
Evaporating temperature	NP4H015E						NP4H020E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-25	14.2	7.7	12.6	7.8	10.9	7.8	16.2	8.8	14.4	8.9	12.5	8.9
-20	18.3	8.6	16.3	8.8	14.3	9	20.9	9.9	18.6	10.1	16.3	10.3
-15	23.1	9.5	20.8	9.8	18.3	10.1	26.4	10.8	23.7	11.2	21	11.5
-10	28.8	10.2	26.1	10.7	23.2	11	32.9	11.7	29.8	12.2	26.5	12.6
-5	35.4	10.9	32.2	11.4	28.9	11.9	40.4	12.4	36.8	13.1	33.1	13.6
0	42.9	11.4	39.3	12.1	35.5	12.7	49.1	13	44.9	13.9	40.6	14.5
5	51.4	11.9	47.3	12.7	43	13.4	58.8	13.6	54.1	14.5	49.1	15.4

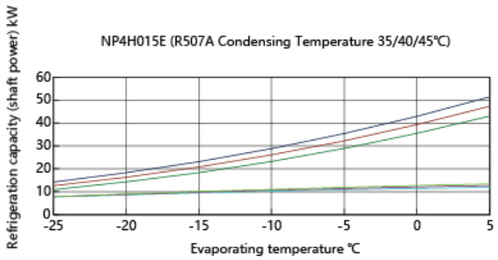
Evaporating temperature	NP4H022E						NP4H025E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-25	18.7	10.1	16.6	10.4	14.5	10.6	21.6	11.7	19.2	12.1	16.8	12.4
-20	23.8	11.3	21.4	11.7	18.9	12.1	27.6	13.1	24.8	13.6	22	14
-15	30.2	12.4	27.3	12.9	24.4	13.4	35	14.4	31.7	15	28.3	15.6
-10	37.7	13.3	34.4	14	30.9	14.6	43.7	15.5	39.9	16.2	35.9	17
-5	46.5	14.1	42.6	14.9	38.5	15.7	53.9	16.4	49.4	17.3	44.7	18.2
0	56.6	14.8	52.1	15.8	47.3	16.7	65.7	17.2	60.4	18.3	54.9	19.4
5	68.1	15.4	62.9	16.5	57.3	17.6	79	17.9	72.9	19.2	66.5	20.5

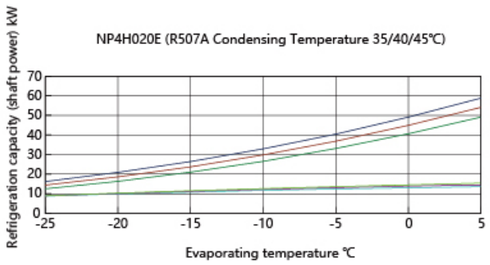
Evaporating temperature	NP4H030E						NP4H035E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-25	24.8	13.5	22	13.8	19.3	14.2	29.9	16.2	26.6	16.6	23.2	17
-20	31.7	15.1	28.5	15.6	25.2	16.1	38.2	18.1	34.3	18.8	30.3	19.3
-15	40.1	16.5	36.4	17.2	32.5	17.9	48.3	19.8	43.7	20.7	39	21.5
-10	50.1	17.7	45.7	18.6	41.1	19.5	60.2	21.3	54.9	22.4	49.4	23.4
-5	61.8	18.8	56.7	19.9	51.3	20.9	74.2	22.6	68	23.8	61.4	25.1
0	75.3	19.7	69.3	21	62.9	22.2	90.2	23.6	83	25.2	75.4	26.6
5	90.6	20.5	83.6	22	76.3	23.5	108.4	24.5	100.1	26.3	91.2	28.1

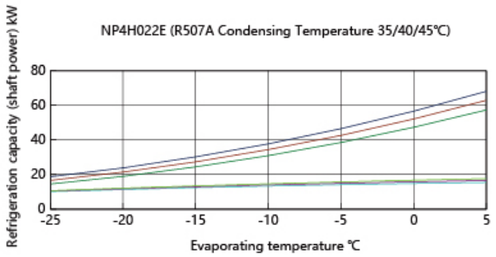
Notes: Q: refrigeration capacity (kW) P: shaft power (kW) R404A values are similar to R507A. For details, refer to R507A.

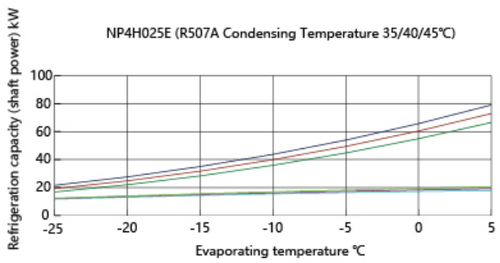


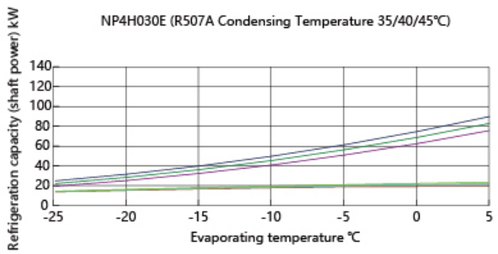


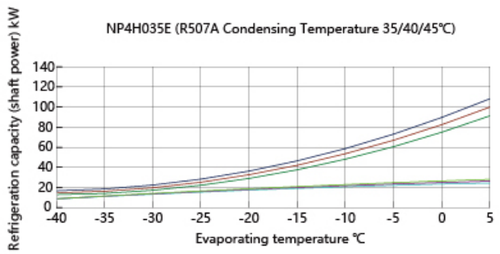












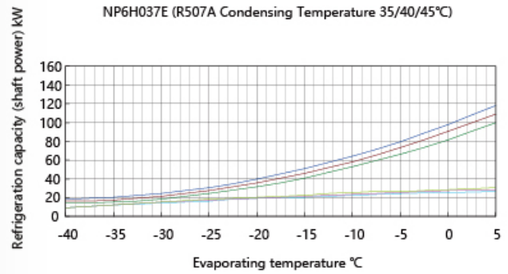
35℃ refrigeration capacity
35℃ shaft power
40℃ refrigeration capacity
40℃ shaft power
45℃ refrigeration capacity
45℃ shaft power

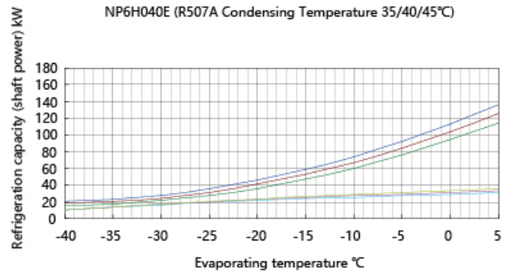
Performance Parameters Table and Curve Diagram of the SP(H) Series Single Compressor Unit (Continued)

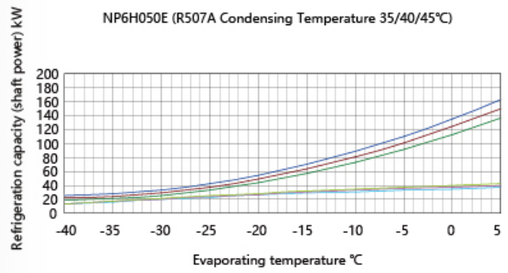
R507A

Evaporating temperature	NP6H037E						NP6H040E					
	35		40		45		35		40		45	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
-25	32.5	17.6	28.8	18.1	25.2	18.5	37.3	20.2	33.1	20.8	28.9	21.3
-20	41.5	19.7	37.3	20.4	33	21.1	47.7	22.7	42.8	23.5	37.9	24.2
-15	52.5	21.6	47.6	22.5	42.5	23.4	60.3	24.8	54.7	25.8	48.8	26.9
-10	65.6	23.2	59.8	24.3	53.8	25.5	75.4	26.7	68.8	28	61.8	29.3
-5	80.9	24.6	74.2	26	67.1	27.4	93	28.3	85.2	29.9	77.1	31.5
0	98.5	25.8	90.7	27.5	82.4	29.1	113.2	29.6	104.2	31.6	94.7	33.5
5	118.5	26.8	109.4	28.8	99.8	30.7	136.2	30.8	125.8	33.1	114.7	35.3

Evaporating temperature	NP6H050E					
	35		40		45	
	Q	P	Q	P	Q	P
-25	44.9	24.3	39.8	24.9	34.7	25.5
-20	57.3	27.2	51.4	28.1	45.5	29
-15	72.4	29.8	65.6	31	58.5	32.2
-10	90.4	32	82.4	33.5	74.1	35.1
-5	111.4	33.9	102.1	35.8	92.3	37.7
0	135.5	35.5	124.7	37.8	113.2	40
5	162.9	36.8	150.4	39.6	137.1	42.2







35℃ refrigeration capacity
35℃ shaft power
40℃ refrigeration capacity
40℃ shaft power
45℃ refrigeration capacity
45℃ shaft power

Notes: Q: refrigeration capacity (kW) P: shaft power (kW) R404A values are similar to R507A. For details, refer to R507A.

Performance Parameters Table of the SP(L) Series Compressor Unit R507A

Unit model		N2P4H15E		N2P4H20E		N2P4H022E		N2P4H025E		N2P4H030E		N2P4H035E		N2P6H037E		N2P6H040E		N2P6H050E	
Compressor model		SP4HF150E		SP4HF200E		SP4H220E		SP4H250E		SP4H300E		SP4H350E		SP6H370E		SP6H400E		SP6H500E	
Units		2																	
HP		30		40		44		50		60		70		74		80		100	
Evaporating temperature	Condensing temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
5	35	102.8	23.8	117.6	27.2	136.2	30.8	158	35.8	181.2	41	216.8	49	237	53.6	272.4	61.6	325.8	73.6
	40	94.6	25.4	108.2	29	125.8	33	145.8	38.4	167.2	44	200.2	52.6	218.8	57.6	251.6	66.2	300.8	79.2
	45	86	26.8	98.2	30.8	114.6	35.2	133	41	152.6	47	182.4	56.2	199.6	61.4	229.4	70.6	274.2	84.4
0	35	85.8	22.8	98.2	26	113.2	29.6	131.4	34.4	150.6	39.4	180.4	47.2	197	51.6	226.4	59.2	271	71
	40	78.6	24.2	89.8	27.8	104.2	31.6	120.8	36.6	138.6	42	166	50.4	181.4	55	208.4	63.2	249.4	75.6
	45	71	25.4	81.2	29	94.6	33.4	109.8	38.8	125.8	44.4	150.8	53.2	164.8	58.2	189.4	67	226.4	80
-5	35	70.8	21.8	80.8	24.8	93	28.2	107.8	32.8	123.6	37.6	148.4	45.2	161.8	49.2	186	56.6	222.8	67.8
	40	64.4	22.8	73.6	26.2	85.2	29.8	98.8	34.6	113.4	39.8	136	47.6	148.4	52	170.4	59.8	204.2	71.6
	45	57.8	23.8	66.2	27.2	77	31.4	89.4	36.4	102.6	41.8	122.8	50.2	134.2	54.8	154.2	63	184.6	75.4
-10	35	57.6	20.4	65.8	23.4	75.4	26.6	87.4	31	100.2	35.4	120.4	42.6	131.2	46.4	150.8	53.4	180.8	64
	40	52.2	21.4	59.6	24.4	68.8	28	79.8	32.4	91.4	37.2	109.8	44.8	119.6	48.6	137.6	56	164.8	67
	45	46.4	22	53	25.2	61.8	29.2	71.8	34	82.2	39	98.8	46.8	107.6	51	123.6	58.6	148.2	70.2
-15	35	46.2	19	52.8	21.6	60.4	24.8	70	28.8	80.2	33	96.6	39.6	105	43.2	120.6	49.6	144.8	59.6
	40	41.6	19.6	47.4	22.4	54.6	25.8	63.4	30	72.8	34.4	87.4	41.4	95.2	45	109.4	51.6	131.2	62
	45	36.6	20.2	42	23	48.8	26.8	56.6	31.2	65	35.8	78	43	85	46.8	97.6	53.8	117	64.4
-20	35	36.6	17.2	41.8	19.8	47.6	22.6	55.2	26.2	63.4	30.2	76.4	36.2	83	39.4	95.4	45.4	114.6	54.4
	40	32.6	17.6	37.2	20.2	42.8	23.4	49.6	27.2	57	31.2	68.6	37.6	74.6	40.8	85.6	47	102.8	56.2
	45	28.6	18	32.6	20.6	37.8	24.2	44	28	50.4	32.2	60.6	38.6	66	42.2	75.8	48.4	91	58
-25	35	28.4	15.4	32.4	17.6	37.4	20.2	43.2	23.4	49.6	27	59.8	32.4	65	35.2	74.6	40.4	89.8	48.6
	40	25.2	15.6	28.8	17.8	33.2	20.8	38.4	24.2	44	27.6	53.2	33.2	57.6	36.2	66.2	41.6	79.6	49.8
	45	21.8	15.6	25	17.8	29	21.2	33.6	24.8	38.6	28.4	46.4	34	50.4	37	57.8	42.6	69.4	51

Notes: Q: refrigeration capacity (kW) P: shaft power (kW) R404A values are similar to R507A. For details, refer to R507A.
This is a partial list of compressor unit performance parameters. For more information, please contact us.
For the performance parameters of the compressor/condenser unit, refer to the Performance Parameters Table and Curve Diagram.

Performance Parameters Table of the SP(H) Series Compressor Unit (Continued) R507A

Unit model		N3P4H15E		N3P4H20E		N3P4H022E		N3P4H025E		N3P4H030E		N3P4H035E		N3P6H037E		N3P6H040E		N3P6H050E	
Compressor model		SP4HF150E		SP4HF200E		SP4H220E		SP4H250E		SP4H300E		SP4H350E		SP6H370E		SP6H400E		SP6H500E	
Units		3																	
HP		45		60		66		75		90		105		111		120		150	
Evaporating temperature	Condensing temperature	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
5	35	154.2	35.7	176.4	40.8	204.3	46.2	237	53.7	271.8	61.5	325.2	73.5	355.5	80.4	408.6	92.4	488.7	110.4
	40	141.9	38.1	162.3	43.5	188.7	49.5	218.7	57.6	250.8	66	300.3	78.9	328.2	86.4	377.4	99.3	451.2	118.8
	45	129	40.2	147.3	46.2	171.9	52.8	199.5	61.5	228.9	70.5	273.6	84.3	299.4	92.1	344.1	105.9	411.3	126.6
0	35	128.7	34.2	147.3	39	169.8	44.4	197.1	51.6	225.9	59.1	270.6	70.8	295.5	77.4	339.6	88.8	406.5	106.5
	40	117.9	36.3	134.7	41.7	156.3	47.4	181.2	54.9	207.9	63	249	75.6	272.1	82.5	312.6	94.8	374.1	113.4
	45	106.5	38.1	121.8	43.5	141.9	50.1	164.7	58.2	188.7	66.6	226.2	79.8	247.2	87.3	284.1	100.5	339.6	120
-5	35	106.2	32.7	121.2	37.2	139.5	42.3	161.7	49.2	185.4	56.4	222.6	67.8	242.7	73.8	279	84.9	334.2	101.7
	40	96.6	34.2	110.4	39.3	127.8	44.7	148.2	51.9	170.1	59.7	204	71.4	222.6	78	255.6	89.7	306.3	107.4
	45	86.7	35.7	99.3	40.8	115.5	47.1	134.1	54.6	153.9	62.7	184.2	75.3	201.3	82.2	231.3	94.5	276.9	113.1
-10	35	86.4	30.6	98.7	35.1	113.1	39.9	131.1	46.5	150.3	53.1	180.6	63.9	196.8	69.6	226.2	80.1	271.2	96
	40	78.3	32.1	89.4	36.6	103.2	42	119.7	48.6	137.1	55.8	164.7	67.2	179.4	72.9	206.4	84	247.2	100.5
	45	69.6	33	79.5	37.8	92.7	43.8	107.7	51	123.3	58.5	148.2	70.2	161.4	76.5	185.4	87.9	222.3	105.3
-15	35	69.3	28.5	79.2	32.4	90.6	37.2	105	43.2	120.3	49.5	144.9	59.4	157.5	64.8	180.9	74.4	217.2	89.4
	40	62.4	29.4	71.1	33.6	81.9	38.7	95.1	45	109.2	51.6	131.1	62.1	142.8	67.5	164.1	77.4	196.8	93
	45	54.9	30.3	63	34.5	73.2	40.2	84.9	46.8	97.5	53.7	117	64.5	127.5	70.2	146.4	80.7	175.5	96.6
-20	35	54.9	25.8	62.7	29.7	71.4	33.9	82.8	39.3	95.1	45.3	114.6	54.3	124.5	59.1	143.1	68.1	171.9	81.6
	40	48.9	26.4	55.8	30.3	64.2	35.1	74.4	40.8	85.5	46.8	102.9	56.4	111.9	61.2	128.4	70.5	154.2	84.3
	45	42.9	27	48.9	30.9	56.7	36.3	66	42	75.6	48.3	90.9	57.9	99	63.3	113.7	72.6	136.5	87
-25	35	42.6	23.1	48.6	26.4	56.1	30.3	64.8	35.1	74.4	40.5	89.7	48.6	97.5	52.8	111.9	60.6	134.7	72.9
	40	37.8	23.4	43.2	26.7	49.8	31.2	57.6	36.3	66	41.4	79.8	49.8	86.4	54.3	99.3	62.4	119.4	74.7
	45	32.7	23.4	37.5	26.7	43.5	31.8	50.4	37.2	57.9	42.6	69.6	51	75.6	55.5	86.7	63.9	104.1	76.5

Notes: Q: refrigeration capacity (kW) P: shaft power (kW) R404A values are similar to R507A. For details, refer to R507A.
This is a partial list of compressor unit performance parameters. For more information, please contact us.
For the performance parameters of the compressor/condenser unit, refer to the Performance Parameters Table and Curve Diagram.

Performance Parameters Table of the SP(H) Series Compressor Unit (Continued)

R507A

Unit model		N4P4H022E		N4P4H025E		N4P4H030E		N4P4H035E		N4P6H037E		N4P6H040E		N4P6H050E	
Compressor model		SP4H220E		SP4H250E		SP4H300E		SP4H350E		SP6H370E		SP6H400E		SP6H500E	
Units		4													
HP		88		100		120		140		148		160		200	
		Q	P	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
5	35	272.4	61.6	316	71.6	362.4	82	433.6	98	474	107.2	544.8	123.2	651.6	147.2
	40	251.6	66	291.6	76.8	334.4	88	400.4	105.2	437.6	115.2	503.2	132.4	601.6	158.4
	45	229.2	70.4	266	82	305.2	94	364.8	112.4	399.2	122.8	458.8	141.2	548.4	168.8
0	35	226.4	59.2	262.8	68.8	301.2	78.8	360.8	94.4	394	103.2	452.8	118.4	542	142
	40	208.4	63.2	241.6	73.2	277.2	84	332	100.8	362.8	110	416.8	126.4	498.8	151.2
	45	189.2	66.8	219.6	77.6	251.6	88.8	301.6	106.4	329.6	116.4	378.8	134	452.8	160
-5	35	186	56.4	215.6	65.6	247.2	75.2	296.8	90.4	323.6	98.4	372	113.2	445.6	135.6
	40	170.4	59.6	197.6	69.2	226.8	79.6	272	95.2	296.8	104	340.8	119.6	408.4	143.2
	45	154	62.8	178.8	72.8	205.2	83.6	245.6	100.4	268.4	109.6	308.4	126	369.2	150.8
-10	35	150.8	53.2	174.8	62	200.4	70.8	240.8	85.2	262.4	92.8	301.6	106.8	361.6	128
	40	137.6	56	159.6	64.8	182.8	74.4	219.6	89.6	239.2	97.2	275.2	112	329.6	134
	45	123.6	58.4	143.6	68	164.4	78	197.6	93.6	215.2	102	247.2	117.2	296.4	140.4
-15	35	120.8	49.6	140	57.6	160.4	66	193.2	79.2	210	86.4	241.2	99.2	289.6	119.2
	40	109.2	51.6	126.8	60	145.6	68.8	174.8	82.8	190.4	90	218.8	103.2	262.4	124
	45	97.6	53.6	113.2	62.4	130	71.6	156	86	170	93.6	195.2	107.6	234	128.8
-20	35	95.2	45.2	110.4	52.4	126.8	60.4	152.8	72.4	166	78.8	190.8	90.8	229.2	108.8
	40	85.6	46.8	99.2	54.4	114	62.4	137.2	75.2	149.2	81.6	171.2	94	205.6	112.4
	45	75.6	48.4	88	56	100.8	64.4	121.2	77.2	132	84.4	151.6	96.8	182	116
-25	35	74.8	40.4	86.4	46.8	99.2	54	119.6	64.8	130	70.4	149.2	80.8	179.6	97.2
	40	66.4	41.6	76.8	48.4	88	55.2	106.4	66.4	115.2	72.4	132.4	83.2	159.2	99.6
	45	58	42.4	67.2	49.6	77.2	56.8	92.8	68	100.8	74	115.6	85.2	138.8	102

Notes: Q: refrigeration capacity (kW) P: shaft power (kW) R404A values are similar to R507A. For details, refer to R507A.
This is a partial list of compressor unit performance parameters. For more information, please contact us.
For the performance parameters of the compressor/condenser unit, refer to the Performance Parameters Table and Curve Diagram.

Technical Specifications of the SP(H) Series Reciprocating Compressor

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (L×W×H) (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
NP4H010	SP4HF1000	1	10	7/8"	1-3/8"	5/8"	S009	5	50	24	PW	71	1500×850×1300			400
NP4H012	SP4HF1200		12	1-1/8"						27		75				405
NP4H015	SP4HF1500		15		1-5/8"					33		86				410
NP4H020	SP4HF2000		20							40		106				425
NP4H022	SP4H2200		22		DN40	7/8"		7	67	37		102	1500×1000×1300			460
NP4H025	SP4H2500		25		DN50					43		123				470
NP4H030	SP4H3000		30	1-3/8"						52		150				490
NP4H035	SP4L3500		35							56		178				520
NP6H037	SP6H3700		37			1-1/8"		8	90	60		178	1600×1000×1400			570
NP6H040	SP6H4000		40	1-5/8"	DN65					75		201				580
NP6H050	SP6H5000		50							93		233				630

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (L×W×H) (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
N2P4H015	SP4HF1500	2	30	DN25	DN50	7/8"	S009	17	50	66	PW	86	1900×1000×1600			750
N2P4H020	SP4HF2000		40	DN32		DN20				80		106				780
N2P4H022	SP4H2200		44					20	67	74		102	2000×1000×1700			900
N2P4H025	SP4H2500		50		DN65	DN25				86		123				950
N2P4H030	SP4H3000		60							104		150				960
N2P4H035	SP4L3500		70	DN40						112		178				1000
N2P6H037	SP6H3700		74	DN50	DN80	DN40		21	115	120		178	2500×1100×1700			1200
N2P6H040	SP6H4000		80							150		201				1250
N2P6H050	SP6H5000		100		DN100				150	186		233				1300

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (L×W×H) (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
N3P4H022	SP4H2200	3	66	DN40	DN65	DN25	S009	30	115	111	PW	102	2700×1220×1750			1500
N3P4H025	SP4H2500		75		DN80	DN32				129		123				1550
N3P4H030	SP4H3000		90	DN50						156		150				1600
N3P4H035	SP4L3500		105		DN100				150	168		178	2800×1220×1800			1650
N3P6H037	SP6H3700		111							180		178	3180×1220×1800			1730
N3P6H040	SP6H4000		120			DN40				225		201				1750
N3P6H050	SP6H5000		150	DN65					220	279		233	3250×1220×1800			1795

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (L×W×H) (mm)			Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Liquid supply pipe	Model	Initial charge (L)					L	W	H	
N4P4H022	SP4H2200	4	88	DN50	DN80	DN32	S009	36	115	148	PW	102	3400×1200×1800			1650
N4P4H025	SP4H2500		100		DN100				150	172		123				1750
N4P4H030	SP4H3000		120			DN40				208		150				1750
N4P4H035	SP4L3500		140	DN65						224		178				1900
N4P6H037	SP6H3700		148					90	220	240		178	4200×1450×1800			2400
N4P6H040	SP6H4000		160			DN50				300		201				2400
N4P6H050	SP6H5000		200		DN125	DN65		110	300	372		233	4200×1450×2050			2450

Notes: 1. The above technical specifications are based on the nominal working conditions of the SP(H) series compressor unit: Evaporating temperature: -7℃, condensing temperature: 40℃, refrigerant: R507A. If the above range is exceeded, please contact us for confirmation.
2. Unit power supply: 380V/3P/50Hz.

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Technical Specifications of the SP(H) Water-Cooled Reciprocating Compressor/Condenser Unit

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (L×W×H) (mm)	Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Cooling water pipe	Model	Initial charge (L)						
WP4H010	SP4HF1000	1	10	1-3/8"	5/8"	DN40	S009	5	6	24	PW	71	1500×850×1300	380
WP4H012	SP4HF1200		12			DN40				27		75		380
WP4H015	SP4HF1500		15	1-5/8"	7/8"	DN40				33		86		400
WP4H020	SP4HF2000		20			DN50				40		106		400
WP4H022	SP4H2200		22	DN40		DN50		7	10	37		102	1500×1000×1300	450
WP4H025	SP4H2500		25	DN50		DN50				43		123		490
WP4H030	SP4H3000		30			DN50				52		150		490
WP4H035	SP4H3500		35		1-1/8"	DN65				56		178		530
WP6H037	SP6H3700		37			DN65		8	14	60		178	1600×1000×1400	570
WP6H040	SP6H4000		40	DN65		DN65				75		201		600
WP6H050	SP6H5000		50			DN65				93		233		600

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (L×W×H) (mm)	Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Cooling water pipe	Model	Initial charge (L)						
W2P4H015	SP4HF1500	2	30	DN50	7/8"	DN65	S009	17	50	66	PW	86	2000×1300×1700	1200
W2P4H020	SP4HF2000		40		DN20	DN65				80		106		1200
W2P4H022	SP4H2200		44			DN65		20	67	74		102	2100×1500×1800	1350
W2P4H025	SP4H2500		50	DN65	DN25	DN65				86		123		1450
W2P4H030	SP4H3000		60			DN80				104		150		1450
W2P4H035	SP4H3500		70			DN80			115	112		178		1700
W2P6H037	SP6H3700		74	DN80	DN40	DN80		21		120		178	2600×1500×1800	1900
W2P6H040	SP6H4000		80			DN80				150		201		2000
W2P6H050	SP6H5000		100	DN100		DN100			150	186		233		2100

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (L×W×H) (mm)	Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Cooling water pipe	Model	Initial charge (L)						
W3P4H015	SP4HF1500	3	45	DN65	DN25	DN65	S008	23	67	99	PW	86	2800×1400×1800	1550
W3P4H020	SP4HF2000		60			DN80				120		106		1600
W3P4H022	SP4H2200		66	DN80	DN32	DN80		30	115	111		102	3000×1650×1900	2200
W3P4H025	SP4H2500		75			DN80				129		123		2300
W3P4H030	SP4H3000		90			DN80				156		150		2400
W3P4H035	SP4H3500		105	DN100		DN100			150	168		178		2450
W3P6H037	SP6H3700		111			DN100				180		178		2550
W3P6H040	SP6H4000		120		DN40	DN100				225		201	3500×1650×2000	2700
W3P6H050	SP6H5000		150			DN125			220	279		233		2750

Unit model	Compressor			Unit pipe (mm)			Lubricant		Total volume of reservoir (L)	Maximum Working Current (A)	Startup mode	Single compressor starting current (A)	Outline dimension (L×W×H) (mm)	Unit net weight (kg)
	Model	Units	Power (HP)	Discharge pipe	Suction pipe	Cooling water pipe	Model	Initial charge (L)						
W4P4H015	SP4HF1500	4	60	DN80	DN32	DN80	S008	30	115	132	PW	86	3600×1600×1900	2300
W4P4H020	SP4HF2000		80			DN80				160		106		2350
W4P4H022	SP4H2200		88			DN80		36	150	148		102	3700×1700×1950	2600
W4P4H025	SP4H2500		100	DN100	DN40	DN100				172		123		2700
W4P4H030	SP4H3000		120			DN100				208		150		2750
W4P4H035	SP4H3500		140			DN100				224		178		3000
W4P6H037	SP6H3700		148	DN100		DN125		90	220	240		178	4500×1900×2200	3500
W4P6H040	SP6H4000		160		DN50	DN125				300		201		3600
W4P6H050	SP6H5000		200	DN125	DN65	DN125		110	300	372		233		3700

Notes: 1. The above technical specifications are based on the nominal working conditions of the SP(H) series water-water-cooled compressor unit: Evaporating temperature: -7℃, condensing temperature: 40℃, cooling water inlet/outlet temperature: 30/35℃, refrigerant: R507A. If the above range is exceeded, please contact us for confirmation.

2. Unit power supply: 380V/3P/50Hz; 3. Water-side pressure drop: ≤ 70 kPa.

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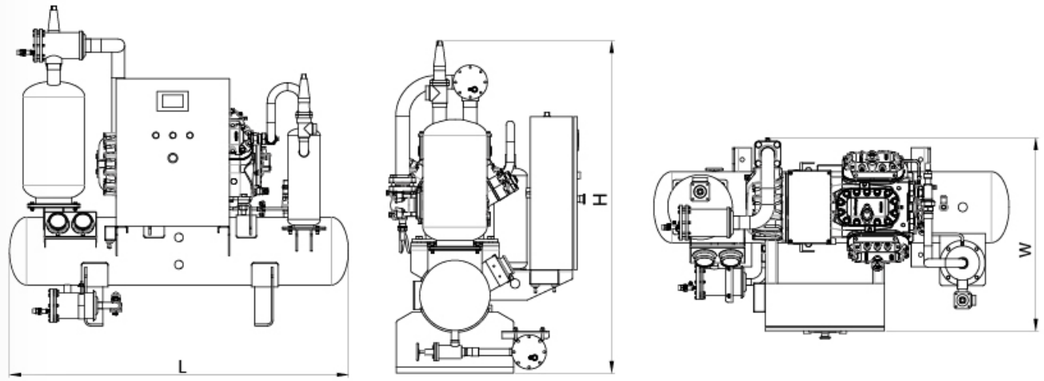
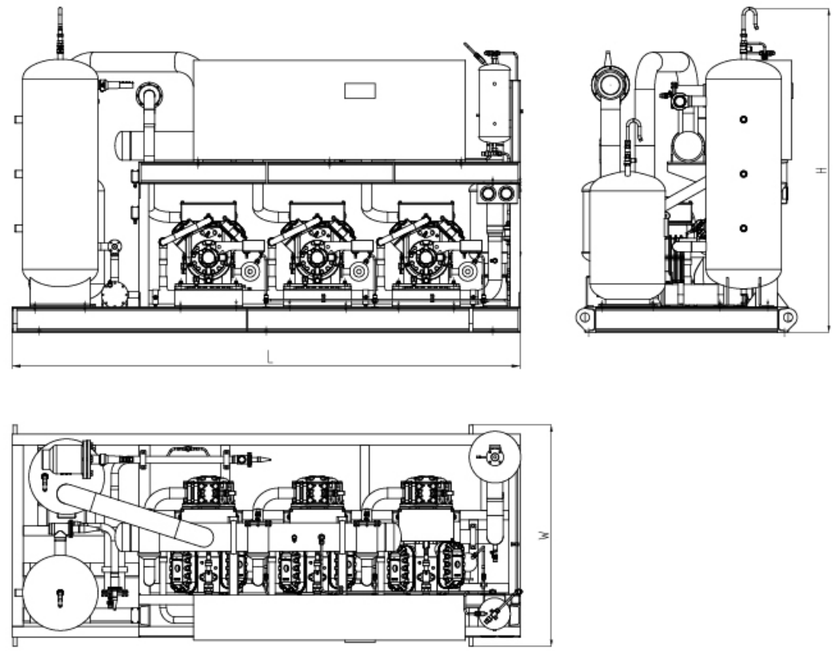
Dimension Diagram of the SP(H) Series Reciprocating Compressor Unit

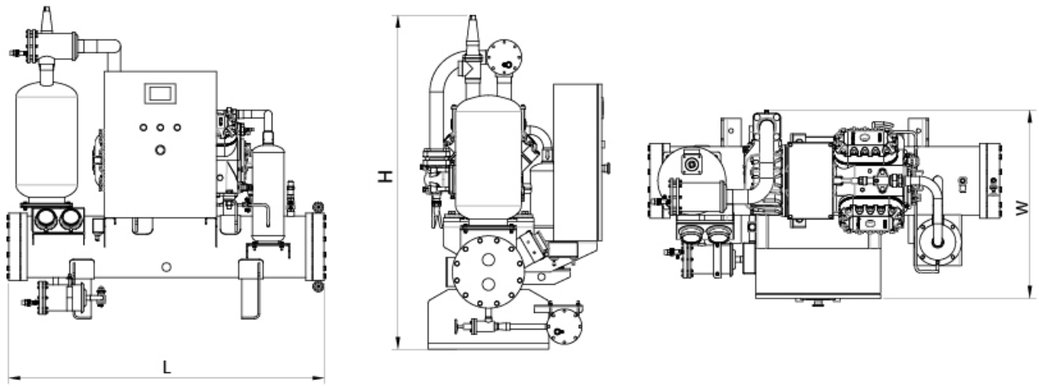


Single Reciprocating Compressor Unit

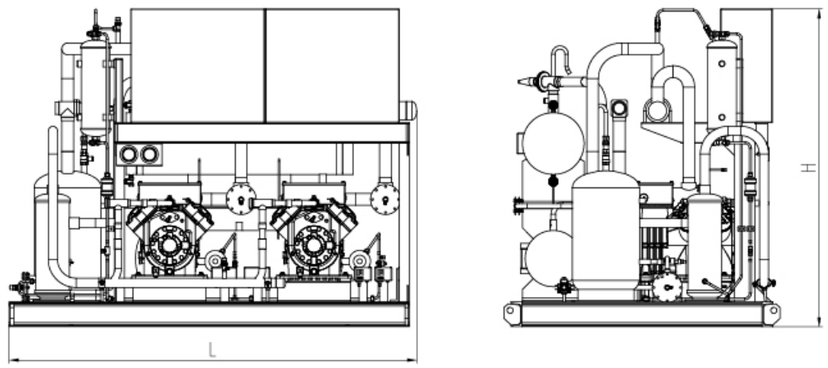


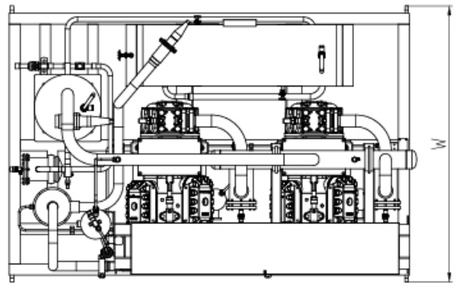
Parallel Reciprocating Compressor Unit

Dimension Diagram of the SP(H) Series Water-cooled Reciprocating Compressor/Condenser Unit



Water-cooled Single Compressor/Condenser Unit

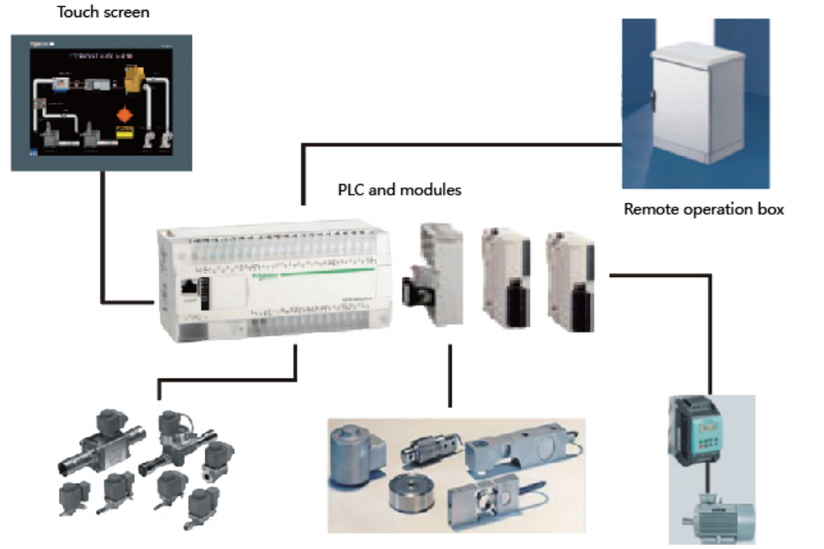




Water-cooled Parallel Compressor/Condenser Unit

Control System

The control system is the Schneider M218 series programmable controller with a Schneider 64K true-color touch screen. It enables auto control of the entire equipment operation process, real-time monitoring of all system signals, including analog collection values and switch states. One-touch operation mode simplifies the process. The unit provides remote control, local control, and other control modes, with communication ports reserved (Optional MODBUS, PROFIBUS-DP, TCP/IP) for seamless connection to third-party upper computers.



Interface Display

Displays real-time unit status such as exhaust pressure, suction pressure, exhausttemperature, compressor load, and running time, and records various alarms andnotifications.
Tiered access passwords are set to prevent unskilled personnel from enteringincorrect parameters, which may affect system operation.

Unit Control

The programmable controller detects the system temperature and pressure values.When the temperature or pressure reaches the set control point, it automaticallyadjusts the compressor load or switches the compressor on/off. Automaticallyadjusts the operating time of each compressor to ensure even operation time andextend compressor life.

Unit Protection

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

Application Fields

Fruit and Vegetable Cold Storage

Apples (-1.1℃ to 4.4℃)
Peaches (-0.6℃ to 0℃)
Melons (2.2℃ to 4.4℃)
Pears (0℃)
Potatoes (1℃ to 3℃)
Papayas (7.2℃)
For more fruit and vegetable cold storage temperatures, please contact us.

Quick-freezing and cold storage

High-temperature storage (5℃ to 15℃)
Refrigerated storage (5℃ to -5℃)
Freezing storage (-18℃ to -25℃)
Deep freezing storage (-45℃ to -60℃)
Quick freezing storage (-35℃ to -40℃)
Fresh storage (5℃ to -2℃)

Meat Processing

Carcass processing (25℃)
Cooling and acid removal (-15℃/0℃ to 4℃)
Cutting and packaging (8℃ to 12℃)
Quick-freezing storage (-20℃)
Fresh-keeping storage (0℃ to 4℃)

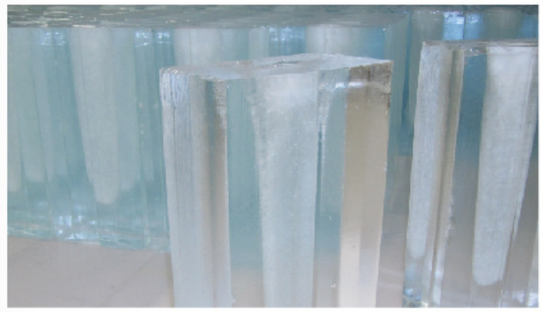
Seafood/Fisheries

Pre-cooling (-1 to 4℃)
Quick freezing (-30 to -50℃)
Refrigeration (-30℃)

Notes: Different seafood have different temperature requirements. Tuna needs to be stored below -50℃.

Dairy Products

Raw milk storage (4 to 6℃)
Pasteurized milk (4℃)
Set yogurt (0 to 4℃)
Stirred yogurt (0 to 7℃)
Ice cream, frozen yogurt (-18 to 22℃)



Ice Making

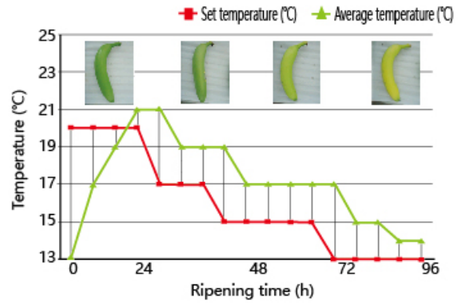
Flake ice (-20℃)
Block ice (-15℃)
Tube ice (-15℃)
Cube ice (-15℃)
Fluidized ice (-15℃)

Edible Fungi

Environmental Temperature and Relative Humidity at Each Growth Stage of Edible Fungi

	Mycelium growth	Sporocarp growth
Agaricus bisporus	20 ~ 25℃ 70 ~ 80%	14 ~ 18℃ 85 ~ 95%
Black fungus	22 ~ 28℃ 85 ~ 95%	20 ~ 24℃ 90 ~ 95%
White fungus	22 ~ 26℃ 60%	23 ~ 25℃ 85 ~ 95%
King oyster mushroom	20 ~ 26℃ 70%	14 ~ 16℃ 70 ~ 90%

Banana Ripening



Value-added Services

Snowman Group stands as a large manufacturing enterprise for compressor/condenser units and refrigeration equipment, and an integrated technology enterprise in automation refrigeration systems, offering an extensive product line. Our mission is to deliver "one-stop" services, allowing our customers to address all their needs in one go. In addition to supplying compressor units and major components, Snowman also provides spare parts to meet customers' demands for spare parts and peripheral products.

Evaporative condenser

Snowkey brand evaporative condensers under Snowman are committed to continuous research, innovation and technical improvement. We have developed multiple series of evaporative condensers, including SLC, SEC, STC, VC, among others. With decades of application experience and numerous unique and practical designs, our products are built for durability and ease of maintenance.

	Heat Discharge Capacity (kW)	Circulating water quantity (m^3/h)
SEC	320 ~ 2490	60 ~ 270
SLC	100 ~ 2000	60 ~ 130
VC	43 ~ 420	22 ~ 60

* Measured under our standard working conditions

Air-cooled Condensers

Refrigerant leakage is effectively prevented with well-known brand V-shaped, flat plate air-cooled condensers, high-efficiency fans, and floating coil pipes. Gold foil, copper foil, and hydrophilic film options are provided for selection.

Heat transfer capacity	9.59 ~ 1739.81kW
Heat exchange tube	3/8" internal thread heat exchange tube
Fin	Sine wave aluminum fins
Sheet Metal	Thick galvanized steel plate, anti-corrosion baked paint
Number of Fans	1 to 24 units

Air Coolers

The Snowkey brand air coolers are designed to provide a wide range of cooling capacities and defrosting methods, crafted from premium raw materials. They are particularly suitable for applications in high-demand industries such as food, dairy products, and pharmaceuticals.

Heat exchanger tube material	Stainless steel pipes, low carbon steel pipes, aluminum pipes, or phosphor-deoxidized copper pipes
Fin	Stainless steel sheets, hydrophilic film aluminum fins
Housing	Aluminum, stainless steel, galvanized
Defrosting	Water defrost, electric defrost, hot gas defrost, natural air defrost
Applicable Medium	Freon, ammonia, CO2, ethylene glycol-water solution, water, etc.

Remote Communication/Central Control System

The Snowman central control system utilizes a distributed computer control approach, using KingView software from Wellin Tech. It features advanced functions, stable performance, a visual operation interface, and true color graphic display. With robust data storage and communication capabilities, the system facilities refrigeration project monitoring and resource sharing with the user' s monitoring center.

Reports Output	Temperature report, pressure report, and fault report,
Communication Protocol	MODBUS、PROFIBUS-DP、TCP/IP
Monitoring System	JK-E-01
Industrial Computer	Advantech IPC-610 Series
Serial Port Module (Advantech)	ADAM-4510/4520
Configuration Software (Beijing Wellin Tech)	KingView 6.53/512, 1024, Unlimited Points/USB Dongle
Monitor (DELL)	11-inch, 22-inch
Printer (HP)	A4、A3

Cold Storage Panel

Snowman modular cold storage panels are manufactured using fully imported processing equipment with automatic roll forming technology. These panels feature a simple yet elegant structure, exceptional strength, and excellent stability, and are designed for superior seismic and corrosion resistance. The modular design ensures seamless connections with no gaps at the seams, minimizing waste. It is easy to install on-site, significantly shortening construction cycles. Panels come in various types and can be customized for specific cold storage needs.

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-coated steel plates, resin-coated steel plates, aluminum plates, stainless steel plates
Connection Type	Eccentric hooks, labyrinth type

Filter

Filters effectively remove moisture and impurities, preventing damage to compressors, solenoid valves, expansion valves, and other components.

Value-added Services

Refrigerant

Refrigerants from prominent brands such as DuPont, Honeywell, and Juhua guarantee the stable operation of the refrigeration system.

Refrigerant	R134a	R507A	R404A
Boiling Point (1atm) ℃	-26.2	-46.7	-46.8
Critical Temperature ℃	101.1	70.9	72.1
Critical Pressure, KPa	4070	3794	3732
Saturated Vapor Pressure (25℃) KPa	661.9	1287	1255
Heat of vaporization/Latent heat of evaporation (at boiling point, 1atm) kJ/kg	216	200.5	207

Lubricant

To ensure the compressor's service life, it is recommended to use the original factory oil. When using alternative oils, they must offer performance characteristics comparable to the original oil and be supported by relevant usage experience.

Applicable Models	Refrigerant	Vi	Applicable Conditions	Lubricant
SRC-S medium-high temperature applications	R507A/R404A	All		S002
	R407C	All	Te≥-20℃	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℃	S009
		-	Tc≥55℃	S010

Sensors

HB is a pioneer in position and level sensors, renowned for delivering high-quality, functionality, and user-friendly products. Their products ensure superior control precision, and exceptional environmental adaptability.

Sensors	Applications
HBSR	Level detection
HBOC	Oil level control
HBLT	Linear level detection
HBLC	Linear level control
HBSO	Oil level detection
HBDX	Return gas humidity detection
HBSC2	CO2 level detection
HBCP	Compressor protection
SA96	Long-stroke displacement detection
SLCD	Short-stroke displacement detection
ME8909	Analog position measurement and capacity control

Copper tube

TP2M/Y copper tubes, with quality meeting GB/T17791 requirements Cu12 and above are straight tubes, with a length of 3 meters.

Specification	Dimensions	Specification	Dimensions
Cu6	6.35×0.8	Cu22	22.225×1.2
Cu10	9.525×0.8	Cu28	28.575×1.5
Cu12	12.7×1.1	Cu35	34.925×1.5
Cu16	15.88×1.2	Cu42	41.275×1.8
Cu19	19.05×1.2	Cu54	53.975×1.8

Programmable Controller

The Schneider M218 series and Siemens S7-200 series programmable controllers facilitate the automation control of refrigeration equipment, streamlining the operator's process. With a wealth of expertise in control processes accumulated through years of serving a diverse range of clients, Snowman is committed to delivering solutions that are precisely tailored to 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	CO2 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 GXO, HiTech PWS, Siemens Smart-line series color touch human-machine interfaces are customizable to display and control the operational status of refrigeration system components.

	GXO	PWS	700IE
Color	#c65536	#c65536	#c65536
Dimensions	7"	7.5"	7"
Communication Interface	USB/SUB-D9	SUB-D9/SUB-D25 /USB/RJ45	SUB-D9/RJ45

Circuit Breaker

Circuit breakers from well-known brands like Schneider, Moeller, Shilin, and Lazzen offer circuit breakers, certified by CCC, CE, UL, TUV, CCS, and other certifications.

Brands	Applicable Models
Schneider	NSC series, OSM series, NSX series, GV2 series, EZD series,
MOELLER	PKZM Series
Shilin	BHA series, BM series
Lazzen	NDM Series

Value-added Services

Inverters

Schneider and Danfoss inverters are integral to control the start/stop, speed, status monitoring, fault alarm, and remote control of three-phase asynchronous motors, serving as the key to system intelligent control.

Brands	Series	Motor Power	Output Frequency	Instantaneous Over-torque	IP class
Schneider	ATV61 Series	0.75 to 630Kw	0.5 to 200Hz	120%	IP20
	ATV71 Series	0.37 to 63.Kw	0.5 to 200Hz	150%	IP20
	ATV212 Series	0.75 to 75Kw	0.5 to 200Hz	120%	IP21
	ATV303 Series	0.11 to 15Kw	0.5 to 500Hz	170%	IP41
Danfoss	PC300	0.25 to 800Kw	0.5 to 200Hz	190%	IP21

Power Meter

Schneider and Lide power meters are used for real-time monitoring of system power parameters, improving system operating efficiency and reducing energy costs.

Brands		Schneider	Lide
Series		PM1200	LD-C83
Working Range		DC100-400V	DC100-300V
Accuracy	Power Consumption	<5W	<5W
	Voltage	0.5%	0.2%
	Current	0.5%	0.5%
	Power	1.0%	0.5%
	Frequency		0.05%

Phase Sequence Protector

The phase sequence protector detects power voltage and phase sequence, preventing accidents or equipment damage caused by large power voltage deviations or phase sequence failures.

Brands	Swiss Carlo Gavazzi
Input Power Type	Three-phase
Voltage Measurement Range	AC208 ~ 480V
Accuracy	1%
Certification/Standards	CE-UL-CSA
Electrical Lifetime	>1x105 times
Function	Phase sequence, phase loss protection, regenerative voltage monitoring

Pressure Controller

The Danfoss KP series pressure controllers are globally recognized with prestigious certifications, including CCC, CE, GL, and UL. They feature a rapid response time, exceptional electrical and mechanical reliability, and outstanding resistance to vibration and shock, making them perfect for high and low pressure protection in refrigeration compressors, condensing pressure regulation, and precise refrigeration load control.

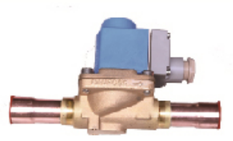
Model	Low Pressure		Low Pressure		Reset	
	Adjustment Range	Differential Pressure	Adjustment Range	Differential Pressure	Low Pressure	High Pressure
KP1	-0.2 ~ 7.5	0.7 ~ 4			Auto	
KP2	-0.2 ~ 5	0.4 ~ 1.5			Auto	
KP5			8 ~ 32	3		Manual
KP15	-0.2 ~ 7.5	0.7 ~ 4	8 ~ 32	4	Auto	Manual

Temperature Controller

Temperature controllers enable high-precision measurements and temperature control, minimizing energy waste. They come with communication modules.

Brands	Xiamen Yudian
Environmental temperature	-10 ~ +60℃
Environmental Humidity	< 90%RH
Accuracy	Level 0.2 (AI-7/AI-8 series) Level 0.3 (AI-5 series)
Temperature Drift	≤0.001%FS/℃ (AI-7/AI-8 series) ≤0.015%FS/℃ (AI-5 series)
Power Voltage	100 to 240VAC/50 to 60Hz or 24VDC/AC +10%, -15%
Display	LED

Solenoid Valve



Danfoss EVR-type solenoid valves can be used for liquid lines, suction lines, and hot gas lines in the fluorine systems. With a medium temperature resistance up to 105℃, they are suitable for refrigeration, freezing, and air conditioning systems in various scenarios.

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
Connection 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

The ball valve is used for liquid, suction, and hot gas lines in refrigeration, freezing, and air conditioning systems. It is a manually adjustable shut-off valve, suitable for bi-directional flow.

Refrigerant	CFC, HCFC, HFC
Medium Temperature	-40℃~150℃
Maximum Working Pressure	45bar
Maximum Testing Pressure	65bar
Maximum Allowable Leakage	<2.8 gram/year
Certification	UL, CE

Shut-off Valve, Check Valve, Control Valve

Danfoss STC manual shut-off valves and SVL series supply line components are designed to withstand low temperatures and meet the pressure requirements of future high-pressure refrigerants such as CO_2. The unique sealing structure guarantees exceptional product performance and significantly extends service life.

Product Name	Model	Nominal Diameter (mm)	Refrigerant	Maximum Working Pressure (MPa)	Applicable Temperature (℃)
Shut-off Valve	STC	DN15~80	R507A、R404A、	5.2	-50~150
Shut-off Check Valve	SCA	DN15~125	R744、R134a、	5.2	-60~150
Control Valve	REG	DN6~65	R717	5.2	-60~150

Safety Valve

The safety valve is an overpressure protection device for the equipment. When the operating pressure exceeds the allowable value, the valve automatically opens to prevent further pressure buildup, thus protecting the entire system.

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 the set pressure
Sealing Pressure	0.9 times the set pressure
Applicable Temperature	-40~105℃
Applicable Medium	Refrigerants, oil, water, etc.
Set Pressure	1.5MPa、1.6MPa、18.5MPa、2.4MPa

Temperature Control Water Valve

The temperature control water valve adjusts the flow rate constantly as needed, suitable for temperature control. Cooling water in the refrigeration system, hot water or steam in the heating system.

Adjustment Range	10~80℃
Maximum Temperature Sensing Package Temperature	130℃
Capillary Length	2.3m

Cooling Tower

The cooling tower is the terminal for heat release in the refrigeration system, and its heat release capacity directly affects the stable operation of the refrigeration system. Snowman prioritizes the quality of cooling towers by carefully selecting renowned brands.

Circulating Water Volume (m³/h)	3~600
Housing	Glass fiber reinforced plastic
Filler	PVC
Fan	Reinforced plastic and aluminum alloy
Motor	Fully enclosed outdoor motor

Value-added Services

Service Tools:

To excel in any task, one must first sharpen their tools. In the same way, after-sales service is built on the crucial tools.

Tool Box

Vacuum Pump

Quick Wrench

Halogen Leak Detector

Refrigerant Charging Meter

Tube Expander

Multimeter

Torque Wrench

Countersink