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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.

Reciprocating Compressor Unit

AC/AP Series Semi-Hermetic Reciprocating Compressor Condensing Units



全球统一服务热线
400-109-6660



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Company Introduction

Fujian Snowman Group Co., Ltd. was founded in March 2000 and listed on the Shenzhen Stock Exchange of China in December 2011 (stock code: 002639). With compressors as its core, the company is a high-tech company, integrating R&D, design, manufacturing, sales, engineering installation and after-sales service of industrial and commercial refrigeration, refrigeration and complete sets of refrigeration and ice-making systems.

Global Business Layout:



Applications

Compressor condensing unit is a common refrigeration equipment, widely used in:



Commercial ice-making



Food Processing and Cold Chain Logistics



Commercial & Industrial Manufacturing & Air Conditioning



Low temperature storage of medicines and vaccines.....and many other fields.



Examples of common freezing and refrigeration temperature ranges are as follows:

Field	Temperature Range	Field	Temperature Range
Cold Storage	-15~0 °C	Ice making	-15~0°C
Supermarket freezer	-15~-20°C	Ice cream	-18~-22 °C
Flesh slaughter	-18~-25°C	Low temperature storage	-18~-30°C

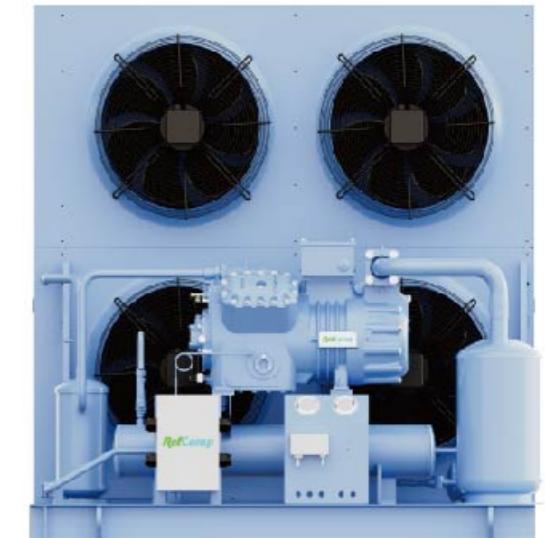
Product Introduction

The SP Series reciprocating compressor is RefComp's most widely used series of compressors, with a wide range of models. With a power range of 5~70HP and displacement range of 19.3~222m³/h, they are extensively applied in various industrial and commercial refrigeration and air-conditioning areas.



The RefComp compressors are technologically advanced and present a series of RefComp compressor condensing units, known as the AC/AP series.

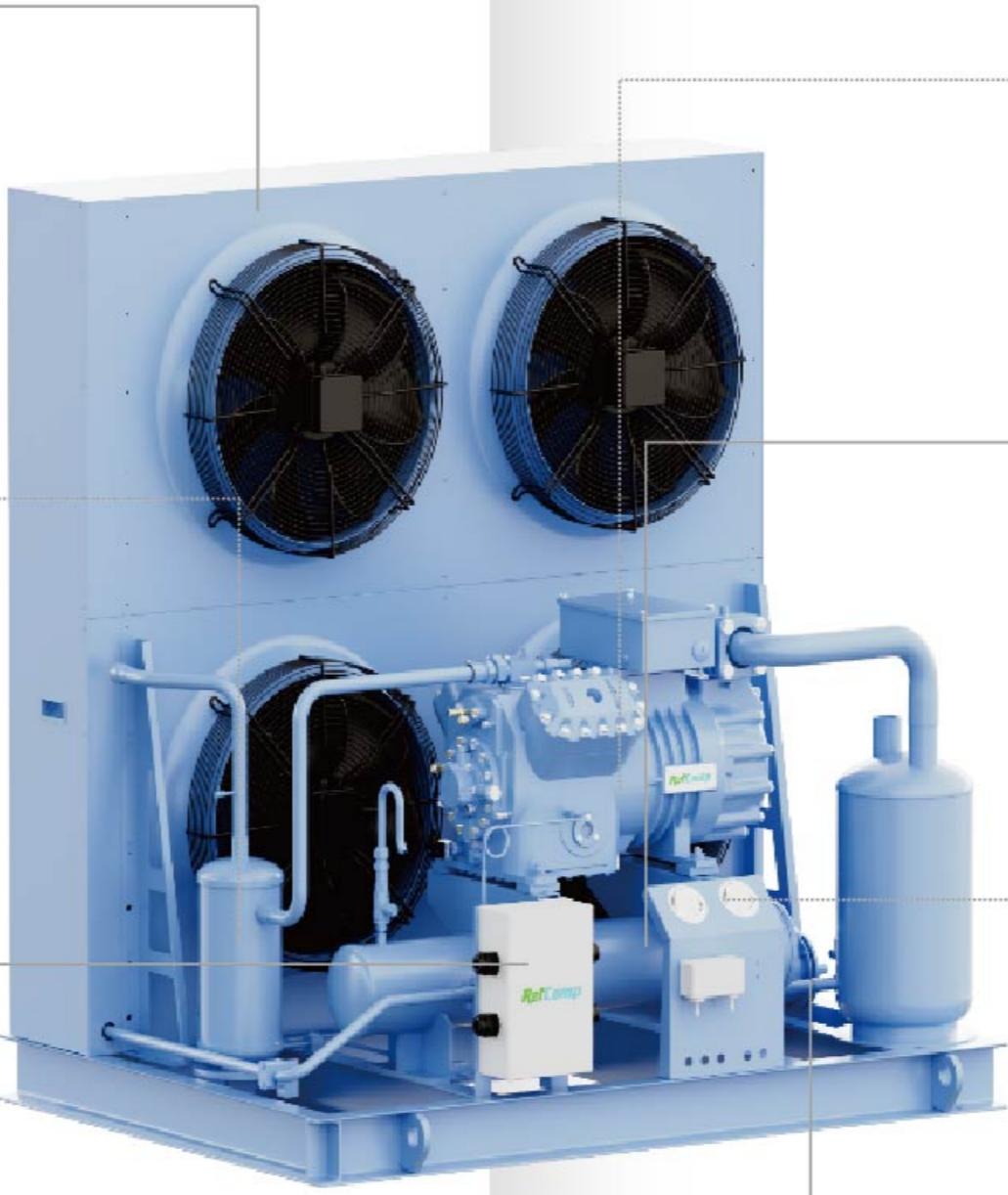
- Optimized solutions: for commercial and industrial refrigeration
- Fast return on investment and low life cycle costs
- Stable and reliable, always adapted to system requirements
- Flexible installation
- Open control interfaces and multiple control forms, quick commissioning, easy operation
- Creating energy-efficient refrigeration solutions



Structural Diagram

Air-cooled Condenser

- Optimize airflow organization, improve internal circulation efficiency.
- Specific process to ensure the system's cleanliness.
- Corrosion prevention and thicker plates ensure reliability.
- Relatively low operating costs.



Oli Separator

- An indispensable key component that extends equipment life and improves overall performance.
- Accurate filtration technology and optimized structural design.
- Efficient oil separator can significantly reduce noise and pulsation on the discharge side.
- Optimized oil return line.

Junction Box

- Convenient for system linking and centralized control.
- IP65
- Control cabinet, PCL control cabinet, and VFD control cabinet are optional.

RefComp SP Series Compressor

- Fully equipped configuration, reliable semi-hermetic reciprocating compressor.
- Wide operation range.
- High efficiency and stable performance.

Liquid Reservoir

- Scientific flow field design and pressure control achieve efficient gas-liquid separation.
- Stable system function.
- Low resistance with compact design, preventing wet compression of the compressors.

Pressure Control Panel

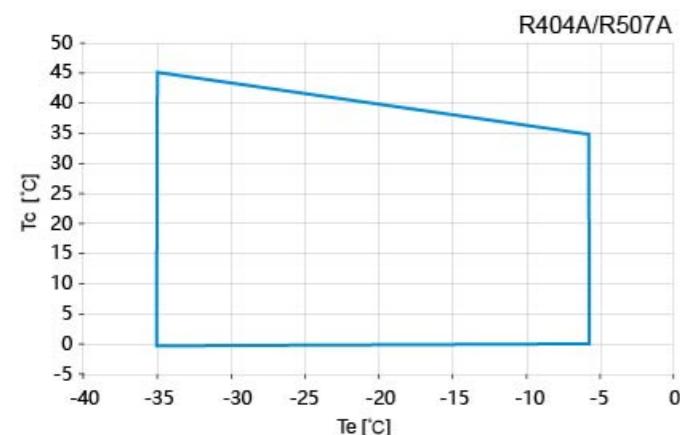
- Pressure controller with LP/HP pressure gauges.
- A highly sensitive and low-error pressure controller ensures that the system operates within a safe range.

Piping

- Optimize the piping layout and flow velocity to ensure smooth flow of refrigerant.
- Fully consider the convenience of equipment maintenance.
- An optimized structural design reduces pipe vibration.

Application Range

AP4L022E Unit Operating Range



The above is a diagram of the operating range of a compressor condensing unit, using AP4L022E as an example. Please note that parameters are subject to change without notice.

For more information on refrigerant types etc. Please contact us.

Conditions of Use

Low temperature		Middle and high temperature		
Design working condition	Storage temperature range	Design working condition	Storage temperature range	(m³/h)
-23/48°C	-25~-15°C	-7/48°C	-15~0°C	
Electrical System: 400V/3P/50Hz				
Oil: Use RefComp supplied or approved refrigeration oils				
Refrigerant: R404A/R507A				

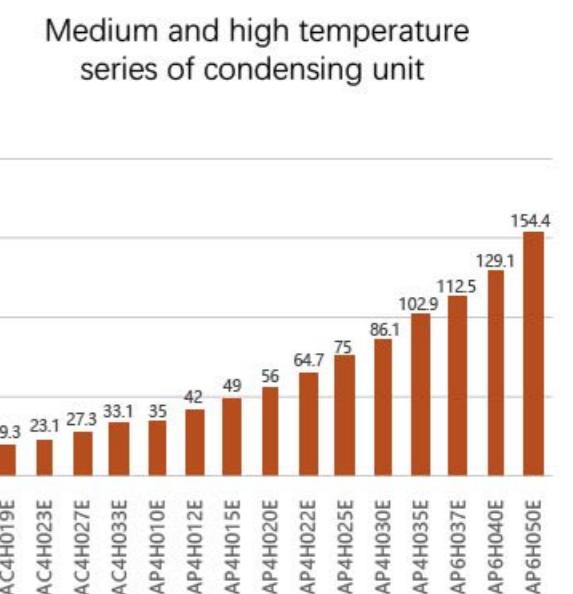
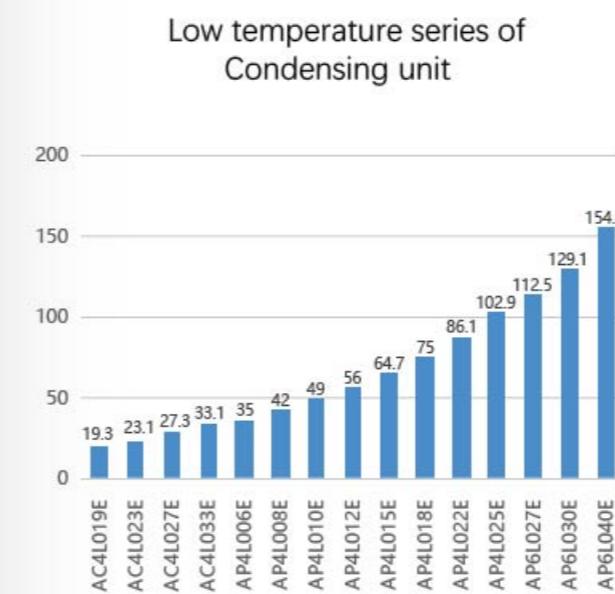
Application environment: ventilated room, relative humidity is not more than 85% (temperature of 20 °C ±5 °C) The altitude of the installation place is not more than 1000 meters above sea level, and there is no gas, liquid and conductive dust in the environment that is enough to corrode the metal and destroy the insulation. Note: If you need to use other refrigerants, please contact us to confirm; if you need more compressor in parallel, please contact us.

Explanation of Type Designation

Number	Designation	Indicate	Interpretations
1	Condensor Type	A	A—Air Cooling
2	Compressor NO.	1、2、3、4、5、6	e.g.: 1 - single compressor (may be omitted); 2 - two compressors in parallel; 3 - three compressors in parallel
3	Compressor Type	Three in all.	e.g.: C4L, C4H, P4L, P4H, P6L, P6H and so on
4	Compressor Motor Horsepower	Three in all.	006~050
5	Oil	One in all.	E-ester oils

The above is the naming of the compressor condensing unit.

Displacement



Performance

The following performance data are based on RefComp Selection Software v2.0.7, R404A/R507A refrigerants.

Type (standard)	Refrigeration Capacity Q0/kW MT T0=-7°C/ Tc=48°C R404A/R507A	Refrigeration Capacity Q0/kW LT T0=-23°C/ Tc=48°C R404A/R507A
AC4L019E	10.5	4.8
AC4H019E	10.3	4.4
AC4L023E	12.1	5.5
AC4H023E	12.4	5.5
AC4L027E	14.8	6.9
AC4H027E	15.2	7
AC4L033E	18.6	8.3
AC4H033E	18.4	8.6
AP4L006E	19.4	8.8
AP4H010E	18.9	8.6
AP4L008E	23.3	10.6
AP4H012E	22.7	10.3
AP4L010E	27.2	12.3
AP4H015E	26.5	12
AP4L012E	31.1	14.1
AP4H020E	30.3	13.7
AP4L015E	35.9	16.3
AP4H022E	35.5	16.1
AP4L018E	41.7	18.9
AP4H025E	41.2	18.6
AP4L022E	47.8	21.7
AP4H030E	47.2	21.4
AP4L025E	—	26.1
AP4H035E	56.6	25.7
AP6L027E	62.5	28.4
AP6H037E	61.8	28
AP6L030E	71.9	32.6
AP6H040E	71	32.1
AP6L040E	86.2	39.1
AP6H050E	85	38.5



For further details
Please refer to RefComp Software



Technical Data

Series	Compressor Condensing Unit	Compressor			Condenser			
		Models	Displacement /m³/h	Nominal Power /HP	Diameter	Number	Air flow	Power
SPC4	AC4L019E	SPC4-19L	19.3	5	500	1	6416	504
	AC4H019E	SPC4-19H		6	500	2	12832	1008
	AC4L023E	SPC4-23L	23.1	5	500	1	6187	504
	AC4H023E	SPC4-23H		6	500	2	12832	1008
	AC4L027E	SPC4-27L	27.3	6	500	1	6187	504
	AC4H027E	SPC4-27H		8	500	2	12374	1008
	AC4L033E	SPC4-33L	33.1	8	500	2	12832	1008
SP4	AC4H033E	SPC4-33H		10	400	4	12852	864
	AP4L006E	SP4LN0600	35	6	500	2	12832	1008
	AP4H010E	SP4HN1000		10	400	4	12852	864
	AP4L008E	SP4LN0800	42	8	500	2	12374	1008
	AP4H012E	SP4HN1200		12	400	6	19896	1296
	AP4L010E	SP4LN1000	49	10	400	4	12852	864
	AP4H015E	SP4HN1500		15	500	4	25664	2016
	AP4L012E	SP4LN1200	56	12	400	6	19896	1296
	AP4H020E	SP4HN2000		20	500	4	24748	2016
	AP4L015E	SP4L1500	64.7	15	400	6	19896	1296
	AP4H022E	SP4H2200		22	500	4	24748	2016
	AP4L018E	SP4L1800	75	18	500	4	25664	2016
	AP4H025E	SP4H2500		25	600	4	35808	3300
	AP4L022E	SP4L2200	86.1	22	500	4	24748	2016
	AP4H030E	SP4H3000		30	710	2	26998	3242
	AP4L025E	SP4L2500	102.9	25	600	4	35808	3300
	AP4H035E	SP4H3500		35	630	4	40388	3748
SP6	AP6L027E	SP6L2700	112.5	27	600	4	35808	3300
	AP6H037E	SP6H3700		37	630	4	40388	3748
	AP6L030E	SP6L3000	129.1	30	710	2	26998	3242
	AP6H040E	SP6H4000		40	710	4	53996	6484
	AP6L040E	SP6L4000	154.4	40	630	4	40388	3748
	AP6H050E	SP6H5000		50	630	6	62820	5622

1. The above data is based on the electric system 400V/3P/50Hz.

2. Refrigerant R404A/507A.

3. SPH series air-cooled compressor-condensing units are designed for -7/48°C, SPL series air-cooled compressor-condensing units are designed for -23/48°C, beyond the above conditions, please contact us for customization.

Note: Snowman Group reserves the right to change its products without prior notice, and the technical parameters of the products are subject to the order contract or the technical annex of the contract.

Configuration

No.	Item	Standard	Optional
1	Compressor components		
1.1	Compressor	✓	
1.2	Electrical accessories (include INT69/Crankcase heater)	✓	
1.3	Discharge shut-off valve	✓	
1.4	Suction shut-off valve	✓	
1.5	Rubber vibration dampers	✓	
1.6	Electronic oil pressure differential switch (for SP series)	✓	
1.7	Mechanical oil pressure differential switch (for SP series)		✓
1.8	Pressure controller	✓	
1.9	High pressure gauges	✓	
1.10	Low pressure gauges	✓	
2	Discharge line components		
2.1	Copper tube	✓	
2.2	Needle Charging Valve	✓	
3	Air-cooled condenser component		
3.1	Air-cooled condenser	✓	
4	Liquid Line Components		
4.1	Receiver	✓	
4.2	Safety valve	✓	
4.3	Ball valve	✓	
4.4	Filter	✓	
4.5	Sight glass	✓	
4.6	Solenoid valve	✓	
4.7	Solenoid coil	✓	
4.8	Copper tube	✓	
5	Oil Line Components		
5.1	Oil separator	✓	
5.2	Coiled copper tube	✓	
5.3	Shut-off valve	✓	
6	Suction Line Components		
6.1	Suction accumulator (for low temperature models)	✓	
6.2	Copper tube	✓	
7	Unit Electrical Components		
7.1	Wiring box	✓	
7.2	Control cabinet		✓
7.3	PLC control cabinet		✓
7.4	VFD control cabinet		✓
8	Others		
8.1	SRMTEC refrigeration oil	✓	
8.2	Unit baseframe	✓	