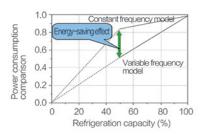
Energy-saving Analysis

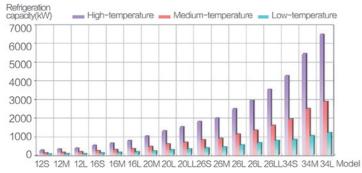
Frequency conversion control



With vector frequency control, it can properly distribute motor rotational torque to improve energy efficiency and save up to 38 % energy under some load conditions.

Technical Parameters

Unit Refrigeration Capacity



Notes: 1. Refrigeration volume measured with the speed of 2,960r/min, R717 refrigerant and suction superheat of 5°C. 2. High-temperature range: +5°C/35°C; medium-temperature range: -15°C/35°C; low-temperature range: -35°C/35°C. 3. The high-temperature and medium-temperature units are not equipped with the economizer, and the low-temperature units are equipped with the economizer.

	Item	Unit	12Series			16Series										20Series		
SOL	Model		SRM-12M			SRM-16S			SRM-16M			SRM-16L			SRM-20S			
Compressor	Theoretical displace- ment setting range	m³/h	265			435			544			652			850			
Com	Regulating range		Step regulation				Stepless regulation: 10 ~100 %								Stepless regulation: 10~100 %			
Refrigerant	Туре		R717	R22	R507A	R717	R22	R507A	R717	R22	R507A	R717	R22	R507A	R717	R22	R507A	
Refrige-	High temperature condition	kW	317	279	297	509	452	-0	636	547	1 - 1	762	657	1-1	1006	902	-	
ration	Middle temperature condition	kW	142	132	133	227	213	229	284	258	287	340	310	345	454	429	455	
capacity	Low temperature condition (ECO)	kW	59	68	73	105	124	141	133	150	176	160	182	212	214	251	281	
	High temperature condition	kW	55	55	75	90	90		110	110	1-	132	160	-	180	180	-	
	Middle temperature condition	kW	55	55	75	90	90	110	110	110	132	132	132	160	180	180	220	
Motor	Low temperature condition (ECO)	kW	45	55	55	75	90	110	110	110	132	110	132	160	160	160	200	
IVIOLOI	Power supply		3P、380V、50Hz			3P、380V、50Hz										3P、380V、50Hz		
	Rated speed	rpm	2960			2960										2960		
	Rotating direction		Towards motor shaft end: Anti-dockwise			Towards motor shaft end: Anti-clockwise										Towards motor shaft end: Anti-clockwise		
Oil numn	Model			_			GG419	5	GG4195			GG4195			GG4195			
Oil pump	Motor power	k\//	_			0.75 0.75							0.75		0.75			

	Item	Unit	20Series											26Series						
	Model	OTIL	SRM-20M			SRM-20L			SRM-20LL			SRM-26S			SRM-26M					
Compressor	Theoretical displace- ment setting range	m³/h	1100			1270			1496			1659			2075					
Sol	Regulating range				Step	pless regulation: 10~100 %						Stepless regulation: 10 ~100 %					6			
Refrigerant	Туре		R717	R22	R507A	R717	R22	R507A	R717	R22	R507A	R717	R22	R507A	R717	R22	R507A			
Refrige-	High temperature condition	kW	1302	1168	-	1503	1339	-	1796	1606	-	1970	1720	-	2463	2166	-			
ration	Middle temperature condition	kW	591	554	593	683	638	691	816	765	815	890	820	911	1110	1029	1143			
capacity	Low temperature condition (ECO)	kW	276	322	370	319	376	432	379	446	505	424	484	570	533	626	713.9			
	High temperature condition	kW	220	220	-	250	250	-	280	280	-	315	315	-	400	400	-			
	Middle temperature condition	kW	200	220	280	220	250	315	260	280	355	315	315	400	355	400	500			
Motor	Low temperature condition (ECO)	kW	180	200	260	200	220	280	220	260	315	250	280	400	315	400	450			
IVIOLOI	Power supply		3P、380V、50Hz								3P、380V、50Hz									
	Rated speed	rpm	2960									2960								
	Rotating direction		Towards motor shaft end: Anti-clockwise									Towards motor shaft end: Anti-clockwise								
Oilnumn	Model		(G4195	5	GG4195			GG4195			HJ4195			HJ4195					
Oil pump	Motor power	kW	0.75			0.75			0.75			1.5			1.5					

	Item	Unit	26Series							34Series									
Soc	Model		SRM-26L			SRM-26LL			S	SRM-34S			SRM-34M			RM-3	4L		
Compressor	Theoretical displace- ment setting range	m³/h	2478			2944			3360			4280			5084				
S	Regulating range		Stepless regula			ation: 10~100%			Stepless regulation: 10~100 %										
Refrigerant	Туре		R717	R22	R507A	R717	R22	R507A	R717	R22	R507A	R717	R22	R507A	R717	R22	R507A		
Refrige-	High temperature condition	kW	2932	2596	-	3504	3115	-	4240	3903	4385	5408	5003	5632	6450	5944	6737		
ration	Middle temperature condition	kW	1326	1235	1369	1585	1482	1633	1934	1898	2052	2477	2444	2652	2859	2930	3180		
capacity	Low temperature condition (ECO)	kW	644	745	862	768	893	1070	824	1021	1184	1021	1311	1514	1197	1554	1776		
	High temperature condition	kW	500	500	1-1	560	560		710	630	800	900	800	1000	1120	1000	1250		
	Middle temperature condition	kW	450	450	560	500	560	710	630	630	800	800	800	1000	1000	1000	1250		
Motor	Low temperature condition (ECO)	kW	355	450	560	450	500	630	560	630	800	710	800	1000	800	1000	1250		
IVIOLOI	Power supply			3	P、380	V 50H	łz		3P、380V、50Hz										
2	Rated speed	rpm			29	960			2960										
	Rotating direction		Towards motor shaft end: Anti-clockwise						Towards motor shaft end: Anti-clockwise										
Oil numn	Model		HJ4195			HJ4195			HJ4195			HJ4195			HJ4195				
Oil pump	Motor power	kW	1.5				1.5		1.5 1.5							1.5			



Open-type Single-stage

Variable-frequency Screw Compressor Unit





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Advanced Control Center

- User-friendly interface, startup with one button, easy operation and intelligent control;
- Real-time monitoring, Touch screen capable of displaying system pressure, energy regulation load position, run time, operation mode, running status, etc. in real time and capable of data logging;
- Equipped with a preventive safety system which ensures unattended operation to be safe and
- Automatic energy regulation allows the unit to operate effectively under different conditions;
- Automatic management of oil temperature limits the oil temperature in a certain range, ensuring the efficient and stable operation of the unit:
- Automatic control of pressure ensuring the discharge pressure, suction pressure, etc. are within the setting range;
- Remote operation, local operation and other operation modes are available for the system to turn on and turn off the equipment.

Leading Compressor In The World

- SRM patent protected "i" profile, 5+7 tooth mesh combo, high efficiency, low noise and stable operation;
- 10%-100% stepless energy regulation and high-sensitivity energy regulation structure;
- Adjustable VI for operation of high energy efficiency ratio under various conditions;
- Rotor is manufactured with quality forged steel and is of high strength and wear resistance;
- Precise and highly wear resistance roller bearing with a design service life of 100,000h;
- Innovative shaft seal structure with tight sealing and high wear resistance applicable to 10,000 rpm;
- High-strength body designed with ductile cast iron allows working pressure up to 2.8 Mpa; the special low temperature resistant castings guarantee the stable operation under it working conditions;
- Optimized design of runner leads to a smooth air circulation and less energy consumption; the unit operates safely and reliably with well-distributed temperature field.

Vector Frequency Converter

With SVPWM vector frequency conversion control, the unit is capable of adjusting the rotational speed according to the conditions, properly distributing motor rotation torque, which results in energy-saving efficient operation and low cost.

Efficient And Reliable Motor

- With an asynchronous motor, the unit may operate effectively and generate low noise; and a permanent magnet synchronous motor may also be configured.
- The unit is equipped with the low-voltage (380V) motor. 6kV and 10kV or other special electric motors are also available.

Skid Type Design

Optimized structure design, highly integrated unit, small floor space, easy transportation & installation and short installation cycle.

Flexible Coupling

- Flexible couplings are used to connect the compressor and motor;
- Adapter is optional to be integrated betweem compressor and motor, making operation more smoothly.

To keep the system clean, the unit is equipped with precise oil filter of big volume and precise suction filter for filtering the extraneous matters possibly generated during the installation and operation of the refrigeration system, ensuring the efficient and stable operation. The filter is easy to use and maintain, and is detachable for cleaning.

Efficient Oil Supply System

- The oil separator utilizes the four-level oil separating system(impact, gravity, packing and efficient molecular sieve) to achieve an oil separating efficiency of up to 3 ~ 5 ppm, effectively reducing the lubricant that enters the refrigeration system to improve the operation efficiency.
- · Efficient oil cooler. The cooling method can either be water cooling or refrigerant cooling:
- . A reliable, power-saving and pre-lubricating small oil pump supplies oil by differential pressure during stable operation.
- Multi-points oil spray cooling system make sure highly efficient and reliable operation.

Precise Cetachable Filter

Reliable Precise Elements

All the elements in the system are produced by wellknown manufacturers and of high reliability and quality assurance.

Economizer

The unit is equipped with the economizer to realize the relatively large overcooling degree of high-pressure liquid from the condenser and improve system COP.

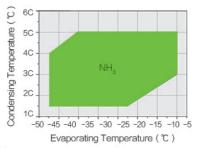
Application Of Unit

SRMTEC open-type single-stage variable-frequency screw compressor units offer 15 models in 5 series. It is developed to achieve high reliability and efficiency. The speed is adjustable from 1,000 to 6,000rpm, and the exhaust volume is 215-5,084m³/h. It is applicable to various conventional refrigerants such as R717, R404A, R507A, etc. The unit, controlled by the computer intelligently, can be operated easily, with a high degree of automation. It is equipped with the compressor, open-type motor, control center, vector frequency converter, oil separator, oil cooler, economizer, large-capacity filter, pre-lubricated oil pump, auto control elements, etc.

Applicable Conditions

Item	Range
Evaporating temperature (℃)	-45~20
Discharge temperature (℃)	≤110
Oil supply temperature (℃)	40~65

Applicable Temperature Range



Rated Condition

High temperature range: +5°C/+35°C Medium temperature range: -15℃/+35℃ Low temperature range: -35°C/+35°C

Application

Food industry

Dumplings, tangyuan, cooked wheaten food, fish balls, cooked food, margarine and other systems

Aquatic product industry

Fish, shrimp, shellfish and other systems

Dairy industry

Preservation and low-temperature dehydration of canned dairy products.

Beverage industry

Coffee and ice cream refrigeration.

Butchery and processing industry

Quick-freezing and cold storage of chicken, duck, pig, cattle, sheep, etc.

Refrigerated logistics industry

Large, medium and small freezing storehouses, preservation storehouses and constant-temperature chemical storehouses.

Chemical and pharmaceutical industries

Temperature control in chemical processes, freeze drying of medicine and temperature control in pharmaceutical processes

Construction industry

Block ice, flake ice, tube ice and ice engraving arts, artificial snow, skating rink, etc.

Temperature control of biological environment, grain cooling, constanttemperature and constant-humidity storehouse, air-conditioned preservation storehouse and fruit maturation acceleration storehouse.