

SRS Semi-hermetic Single-Stage Screw Compressor

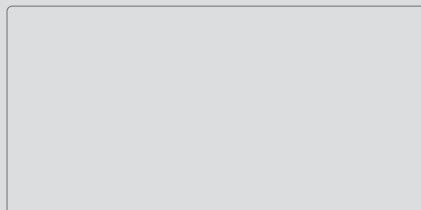
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SRMSweden

The inventor and leader of screw compressor
100-year legacy of technical quality & energy
efficiency



Focus on screw technology
for one hundred years

More than 3 million screw compressors all over the world
are technologically licensed by SRM



Semi-hermetic Single Stage Screw Compressor Unit



Innovative Compressor Design

- Semi-hermetic design with encapsulated motor
- IMPM permanent magnet synchronous motor
- Nodular steel housing for operating pressure up to 2.8 bar
- Roller bearings guarantee a reliable lifespan of 60,000 hours or more than 10 years
- Precise machining and individual pairing of rotors result in smooth operation at highest efficiency

Reliable safety protection system

- INT69 SNY protects the motor from overheating, phase fail and reverseing
- Oil flow switch ensures oil circulation control
- PT140°C discharge temperature monitor
- Oil circuit breaker and oil pressure sensor prevent oil flooding the compressor when the machine shuts down
- Discharge high pressure and temperature protection, high oil temperature protection, low Suction pressure protection, overload protection, oil differential pressure protection and low-oil alarm for vertical oil separator
- Relief valve protection

Efficient oil supply system

- Four-stage oil separation system for lowest oil carry over
- High efficiency oil cooler operate water-cooled or as thermo-syphon
- Differential pressure operated oil supply and lubrication without oil pump takes out a potential source of failure and reduces complexity cost and energy consumption

Advanced control system

- Touchscreen control for easy operation, one-key start with intelligent control system
- Easy to read real-time data like pressure, load, etc
- Automatic capacity control based on suction pressure operates more efficient in various conditions
- Oil temperature three-way control valve as option for utmost compressor protection
- Remote monitoring and operation by several interfaces

Economizer

Various economizer options for best efficiency in L/T applications

Integrated design

Optimized and balanced components in a compact design for small footprint and low on-site installation cost. Accessibility of control elements like valves and filters for easy service and maintenance

High efficiency detachable filter

Generously sized, high grade filters (suction/oil) ensure reliable and clean working conditions for your process safety.

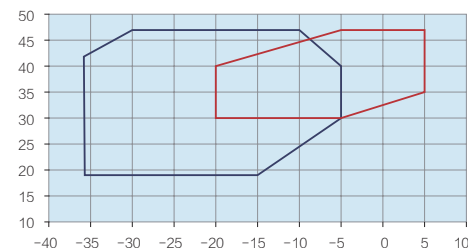
High precision reliable component

The use of components of reputable brands guarantees reliability and sustainable worldwide availability for service and maintenance

Application

SRS semi-hermetic single stage screw compressor packages comprise of 46 models with nominal displacements of 85-500m³/h (3000rpm). The units come with a complete scope of supply of compressor, oil separator, economizer (for L/T applications), oil cooler, oil filter, suction filter, safety and control valves, main control board with PLC and inverter mounted on a sturdy frame.

Work Range



— Working-condition 1(Page4-5)

— Working-condition 2(Page6-7)

Nominal Working Condition

Working-condition 1: +5°C / 35°C

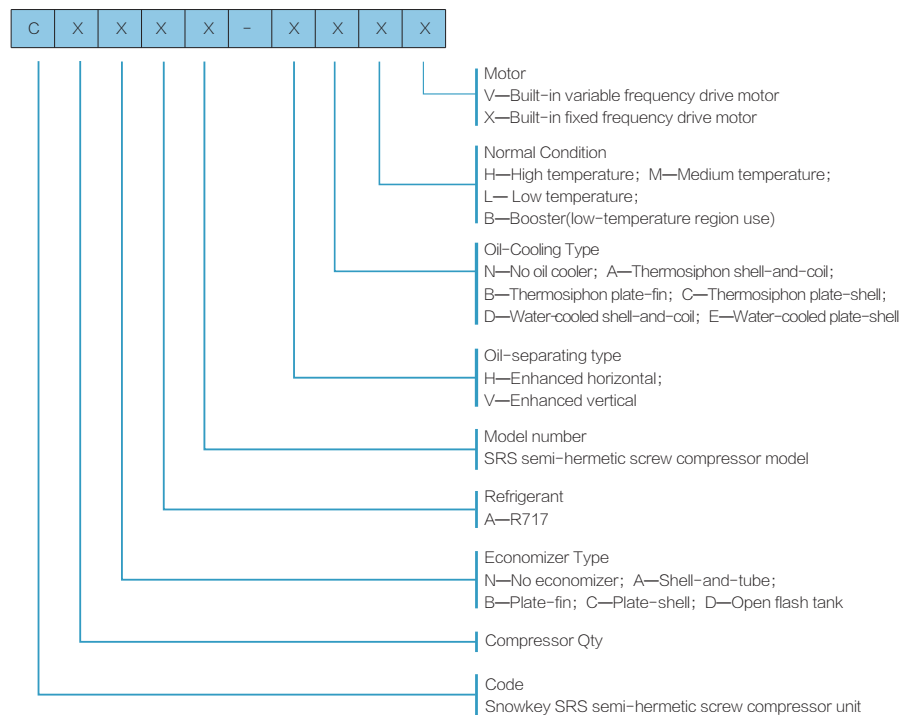
Working-condition 2: -15°C / 35°C

Application Fields

- Food Processing/Preservation
- Seafood/Aquafarming
- Industry
- Beverage Industry
- Meat Industry
- Cold chain logistics
- Chemical and Pharmaceutical Industries
- Construction Industry
- Agriculture

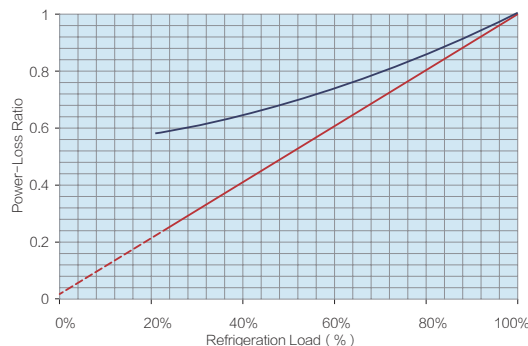


Model Code Introduction



Energy Efficiency Analysis

Variable Frequency Control



Increased efficiency in part load by frequency control compared to mechanical slider operation

— Variable Frequency Drive
— Slide Valve Drive

Specification For SRS One Compressor Unit (Evaporating Temperature -10~+5℃)

Compressor Series			08 Series		10 Series	12 Series	
Compressor	Model		SRS-08S	SRS-08M	SRS-10S	SRS-12S	SRS-12M
	Nominal Displacement	m³/h	85	100	140	210	230
Refrigeration Capacity	Normal Conditions(+5/35℃)	kW	121.3	143.5	197.7	298.2	328.3
Motor (Standard)	Input Power(+5/35℃)	kW	28.5	33.4	46.9	69.4	75.0
	Voltage		400V/3P/50HZ				
	Nominal Speed	r/min	2960				
Refrigerant	Type		R717				
Refrigeration Oil	Model		A055				
	Charge	L	95	95	95	130	130
Dimensions Approx.	L	mm	2100	2100	2100	2100	2100
	W	mm	1100	1100	1100	1100	1100
	H	mm	2200	2200	2200	2300	2300
Weight Approx.	Net Weight	kg	950	955	1000	1300	1305
	Operating Weight	kg	1140	1145	1190	1560	1565

Compressor Series			14Series		16Series	
Compressor	Model		SRS-14S	SRS-14M	SRS-16S	SRS-16M
	Nominal Displacement	m³/h	310	340	420	450
Refrigeration Capacity	Normal Conditions(+5/35℃)	kW	458.2	512.1	617.3	661.4
Motor (Standard)	Input Power(+5/35℃)	kW	101.0	111.2	118.5	125.6
	Voltage		400V/3P/50HZ			
	Nominal Speed	r/min	2960			
Refrigerant	Type		R717			
Refrigeration Oil	Model		A055			
	Charge	L	220	220	285	285
Dimensions Approx.	L	mm	2500	2500	2600	2600
	W	mm	1100	1100	1100	1100
	H	mm	2400	2400	2500	2500
Weight Approx.	Net Weight	kg	1750	1755	2160	2165
	Operating Weight	kg	2190	2195	2730	2735

Note: All parameters are subject to change

Specification for SRS two compressors in parallel unit (Evaporating Temperature -10~+5℃)

Compressor Series			08Series		10Series	12Series	
Compressor	Model		SRS-08S	SRS-08M	SRS-10S	SRS-12S	SRS-12M
	Nominal Displacement	m³/h	85 × 2	100 × 2	140 × 2	210 × 2	230 × 2
Refrigeration Capacity	Normal Conditions(+5/35℃)	kW	242.6	287.0	395.4	596.4	656.6
Motor (Standard)	Input Power(+5/35℃)	kW	57.0	66.8	93.8	138.8	150.0
	Voltage		400V/3P/50HZ				
	Nominal Speed	r/min	2960				
Refrigerant	Type		R717				
Refrigeration Oil	Model		A055				
	Charge	L	120	145	205	300	300
Dimensions Approx.	L	mm	3000	3000	3300	3500	3500
	W	mm	1100	1100	1100	1100	1100
	H	mm	2200	2300	2400	2500	2500
Weight Approx.	Net Weight	kg	1360	1480	1750	2400	2405
	Operating Weight	kg	1600	1770	2160	3000	3005

Compressor Series			14Series		16Series	
Compressor	Model		SRS-14S	SRS-14M	SRS-16S	SRS-16M
	Nominal Displacement	m³/h	310 × 2	340 × 2	420 × 2	450 × 2
Refrigeration Capacity	Normal Conditions(+5/35℃)	kW	916.4	1024.2	1234.6	1322.8
Motor (Standard)	Input Power(+5/35℃)	kW	202.0	222.4	237.0	251.2
	Voltage		400V/3P/50HZ			
	Nominal Speed	r/min	2960			
Refrigerant	Type		R717			
Refrigeration Oil	Model		A055			
	Charge	L	560	560	560	560
Dimensions Approx.	L	mm	4000	4000	4300	4300
	W	mm	1100	1100	1200	1200
	H	mm	2850	2850	2850	2850
Weight Approx.	Net Weight	kg	3490	3500	3950	3960
	Operating Weight	kg	4610	4620	5070	5080

Note: All parameters are subject to change

Specification for SRS one compressor unit (Evaporating Temperature -25~10℃)

Compressor Series			08Series			10Series		12Series	
Compressor	Model		SRS-08S	SRS-08M	SRS-08L	SRS-10S	SRS-10L	SRS-12S	SRS-12M
	Nominal Displacement	m³/h	85	100	120	140	168	210	230
Refrigeration Capacity	Normal Conditions (-15/35℃)	kW	55.3	65.1	78.0	88.4	106.0	120.4	140.3
Motor (Standard)	Input Power(-15/35℃)	kW	20.9	25.0	29.4	34.7	39.4	46.5	52.8
	Voltage		400V/3P/50HZ						
	Nominal Speed	r/min	2960						
Refrigerant	Type		R717						
Refrigeration Oil	Model		A055						
	Charge	L	95	95	95	95	95	110	110
Dimensions Approx.	L	mm	2100	2100	2100	2100	2100	2100	2200
	W	mm	1100	1100	1100	1100	1100	1100	1100
	H	mm	2200	2200	2200	2200	2200	2200	2200
Weight Approx.	Net Weight	kg	950	955	965	1050	1070	1250	1255
	Operating Weight	kg	1140	1145	1155	1240	1260	1470	1475

Compressor Series			12Series		14Series		16Series		
Compressor	Model		SRS-12L	SRS-14S	SRS-14M	SRS-14L	SRS-16S	SRS-16M	SRS-16L
	Nominal Displacement	m³/h	250	310	340	370	420	450	500
Refrigeration Capacity	Normal Conditions (~15/35℃)	kW	154.4	194.4	214.4	231.6	261.4	278.8	310.0
Motor (Standard)	Input Power(~15/35℃)	kW	57.5	72.4	79.8	86.2	96.0	102.4	113.8
	Voltage		400V/3P/50HZ						
	Nominal Speed	r/min	2960						
Refrigerant	Type		R717						
Refrigeration Oil	Model		A055						
	Charge	L	110	125	140	140	140	175	175
Dimensions Approx.	L	mm	2200	2500	2500	2500	2600	2600	2700
	W	mm	1100	1100	1100	1100	1100	1100	1100
	H	mm	2200	2200	2300	2300	2300	2300	2400
Weight Approx.	Net Weight	kg	1260	1500	1700	1705	1900	1905	2100
	Operating Weight	kg	1480	1750	1980	1985	2180	2255	2450

Note: All parameters are subject to change

Specification for SRS two compressors in parallel

(Evaporating Temperature -25~10℃)

Compressor Series			08Series			10Series		12Series	
Compressor	Model		SRS-08S	SRS-08M	SRS-08L	SRS-10S	SRS-10L	SRS-12S	SRS-12M
	Nominal Displacement	m³/h	85×2	100×2	120×2	140×2	168×2	210×2	230×2
Refrigeration Capacity	Normal Conditions (-15/35℃)	kW	110.6	130.2	156.0	176.8	212.0	240.8	280.6
Motor (Standard)	Input Power(-15/35℃)	kW	41.8	50.0	58.8	69.4	78.8	93.0	105.6
	Voltage		400V/3P/50HZ						
	Nominal Speed	r/min	2960						
Refrigerant	Type		R717						
Refrigeration Oil	Model		A055						
	Charge	L	120	120	120	140	140	155	175
Dimensions Approx.	L	mm	2950	2950	2950	3250	3250	3700	3700
	W	mm	1100	1100	1100	1100	1100	1100	1100
	H	mm	2200	2200	2200	2300	2300	2300	2400
Weight Approx.	Net Weight	kg	1450	1460	1480	1650	1690	2060	2260
	Operating Weight	kg	1690	1700	1720	1930	1970	2370	2610

Compressor Series			12Series	14Series			16Series		
Compressor	Model		SRS-12L	SRS-14S	SRS-14M	SRS-14L	SRS-16S	SRS-16M	SRS-16L
	Nominal Displacement	m³/h	250×2	310×2	340×2	370×2	420×2	450×2	500×2
Refrigeration Capacity	Normal Conditions (-15/35℃)	kW	308.8	388.8	428.8	463.2	522.8	557.6	620.0
Motor (Standard)	Input Power(-15/35℃)	kW	115.0	144.8	159.6	172.4	192.0	204.8	227.6
	Voltage		400V/3P/50HZ						
	Nominal Speed	r/min	2960						
Refrigerant	Type		R717						
Refrigeration Oil	Model		A055						
	Charge	L	175	255	260	280	280	345	370
Dimensions Approx.	L	mm	3700	3700	3700	3700	4500	4500	4500
	W	mm	1100	1100	1100	1100	1200	1200	1200
	H	mm	2400	2400	2500	2500	2500	2500	2500
Weight Approx.	Net Weight	kg	2270	2750	3070	3080	3500	3510	3700
	Operating Weight	kg	2620	3260	3530	3640	4060	4200	4440

Note: All parameters are subject to change