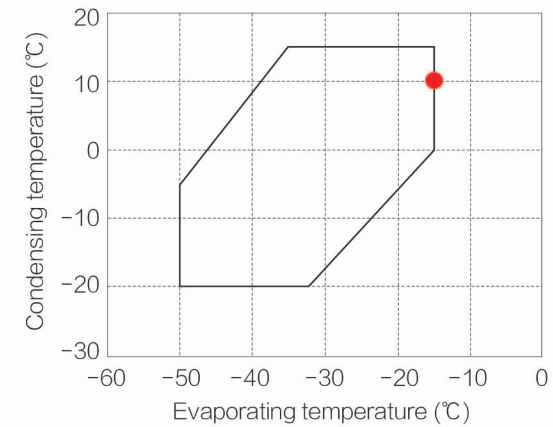


## Application

Compressor can be widely used with cascade system and 2-stage compound system.



## Application scope



# RefComp

## SPS Series CO<sub>2</sub> Piston Compressor

## Table of Technical Parameters

Project	Units	SPS21 Series								SPS22 Series			
Model		SPS21-1.5	SPS21-2	SPS21-2.5	SPS21-3	SPS21-3.5	SPS21-4.5	SPS21-5.5	SPS21-6.5	SPS22-8	SPS22-9	SPS22-11	
Disp.	50Hz	1.5	1.8	2.3	2.8	3.6	4.5	5.5	6.7	7.8	9.2	11.2	
Cyli.		2	2	2	2	2	2	2	2	2	2	2	
Pipe connections	Suction valve	mm	16	16	16	16	16	16	16	22	22	22	
		inch	5/8	5/8	5/8	5/8	5/8	5/8	5/8	7/8	7/8	7/8	
	Discharge valve	mm	12	12	12	12	12	12	12	12	16	16	16
		inch	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	5/8	5/8	5/8
electrical data	Motor conn.	volt	"Δ / Y Δ: 220-240V -3 -50Hz, 265-290V -3 -60Hz Y: 380-420V -3 -50Hz, 440-480V -3 -60Hz"										
	Max working current	A	4,2 / 2,4	4,8 / 2,8	6,0 / 3,4	6,8 / 3,9	8,5 / 4,9	9,9 / 5,7	13,3 / 7,6	16,1 / 9,3	17,5 / 10,1	20,1 / 11,5	24,7 / 14,2
	Max power consump.	kW	1.1	1.2	1.5	1.9	2.5	3.1	4.0	4.8	5.5	6.4	7.8
	Starting current	A	16,4 / 9,4	16,4 / 9,4	26,4 / 15,2	26,4 / 15,2	43,5 / 25,0	43,5 / 25,0	66,6 / 38,2	66,6 / 38,2	79,2 / 45,8	96,1 / 55,5	123,7 / 71,5
Weight	Kg	47	47	48	48	50	50	52	52	78	80	84	
Oil charge	Ltr.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.2	1.2	

Project	Units	SPS41 Series				SPS42 Series				
Model		SPS41-13	SPS41-15	SPS41-18	SPS41-22	SPS42-29	SPS42-35	SPS42-41	SPS42-48	
Disp.	50Hz	13.0	15.6	18.4	22.3	28.7	34.7	41.3	48.5	
Cyli.		4	4	4	4	4	4	4	4	
Pipe connections	Suction valve	mm	28	28	28	28	28	35	35	35
		inch	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 3/8	1 3/8	1 3/8
	Discharge valve	mm	16	16	22	22	22	28	28	28
		inch	5/8	5/8	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8
electrical data	Motor conn.	volt	"Δ / Y Δ: 220-240V -3 -50Hz, 265-290V -3 -60Hz Y: 380-420V -3 -50Hz, 440-480V -3 -60Hz"				"PW (Y/Y) 380-420V -3 -50Hz 440-480V -3 -60Hz"			
	Max working current	A	29,6 / 17,0	33,7 / 19,4	39,3 / 22,6	47,6 / 27,4	33.3	40.4	49.4	57.4
	Max power consump.	kW	8.8	10.7	12.7	15.5	19.5	23.7	28.4	33.6
	Starting current	A	161,7 / 93,5	203,8 / 117,8	235,2 / 136	235,2 / 136	121 / 198	162 / 265	185 / 303	215 / 352
Weight	Kg	97	98	103	103	158	162	172	175	
Oil charge	Ltr.	1.8	1.8	1.8	1.8	2.4	2.4	2.4	2.4	

## RefComp Italy

The World Famous Brand for Screw Compressor and Piston Compressor

Focusing on commercial refrigeration compressor

25 years of experience in semi-hermetic compressor manufacture

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## RefComp

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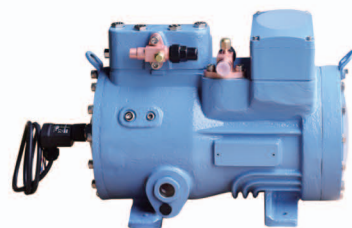
## RefComp SPS Series piston compressor

SPS series piston compressor, suitable for CO<sub>2</sub> sub-critical cycle, covers 19 models with displacement ranging from 1.5–48.5 m<sup>3</sup>/h and motor power ranging from 0.5–30Hp. The system and its parts are specially designed and developed for CO<sub>2</sub> system to ensure highly efficient and stable operation. SPS piston compressors are highly efficient, durable and compact.



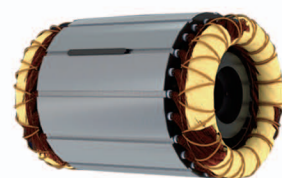
### Crankshaft, connecting rod and piston

- Compact structure, with a balancing block, the crankshaft adopts wear-resisting, high standard, high strength ductile casting iron that being special heat treated, to meet the requirements of heavy load operation;
- Connecting rods and pistons are built with wear-resistant, high strength aluminum. They can bear high impact during operation, meanwhile the lightened structure makes the compressor operate more steadily.



### Machine body

- Working pressure of 60bar, advanced design, high quality casted body which meets the stress requirements of machine body;
- Optimized airflow runner design, low resistance.



### Motor

- Specially designed highly efficient motor provides more horsepower. It also meets various electrical supply requirements in different regions.



### Motor protection

- INT69 protection module, motor over temperature and phase-loss protection;
- 6 PTC thermistors connected in series prevent motor from overheating. System operating info tracking, real-time feedback of motor and system operational status.



### Valve plate

- A Reliable valve plate design uses shock-resistant spring valve pin, which is more responsive, reliable and has long service life.



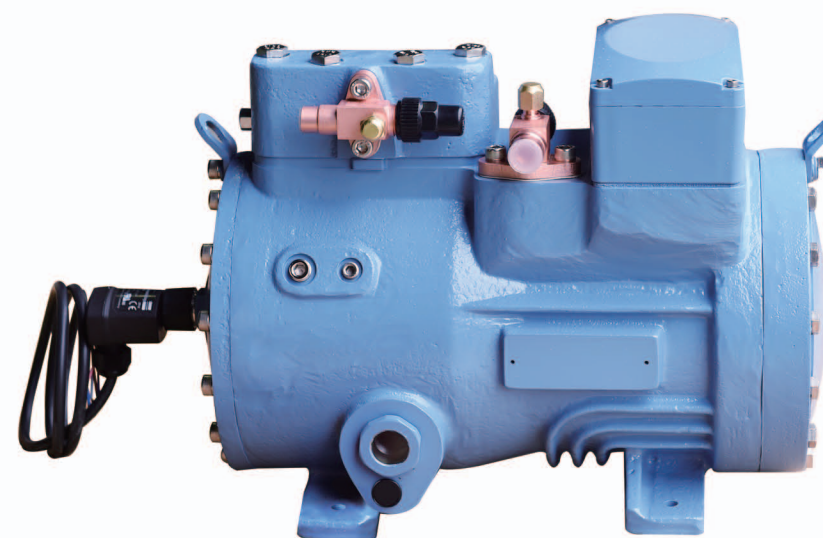
### Safety valve

- External safety valve to ensure the internal pressure is kept within safe value;
- High standard design requirement, reliable tight sealing, precise opening, timely full opening, stable release, timely re-seating, safe and reliable.



### Suction Filter

- Built-in high density suction filter to remove the impurities in refrigerant and protect motor.



### Bearing Bush

- Combined roller bearings with thrust bush to support the crankshaft's rotation axially and radially. High tolerance and composite materials in use make the crankshaft rotate highly efficiently and stably.

1. Using environmental friendly refrigerant CO<sub>2</sub> gives advantages in the areas that require better safety and environmental protection.
2. Compact structure and high efficiency, SPS series compressors have the same capacity as standard compressors but require less space.