



Oil Cooler

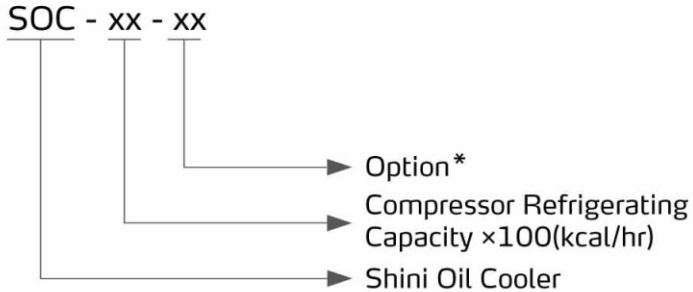
SOC-60



Refer carefully to this manual before operation.

SOC series

■ Coding Principle



Note: *

W= Heating Function; O= Oil Tank

■ Features

Standard configuration

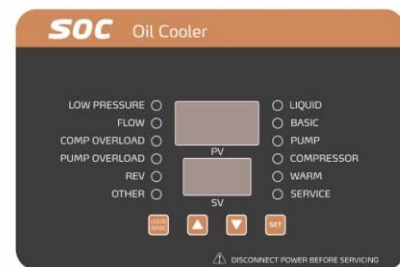
- Avoid machining accuracy variation of spindle caused by temperature rise.
- Improve the working efficiency of machining operation.
- Overload protection of compressor and oil pump.
- PCB type control provides easy operation.
- Cooling loop adopts high and low pressure control switch.
- Oil loop adopts pressure controller.

Accessory option

- Oil tank is optional.
- Heating function can be added to improve the working efficiency when the oil temperature is too low.

■ Application

SOC series oil cooler adopts airtight rotary type compressor and possesses excellent technical features. It is fit to various kinds of refrigerant such as R22, R407C, etc.. With the newly developed PCB control technology, SOC can accurately and stably control the oil temperature. It is suitable for host machine of the machining area such as CNC machining center, CNC punching machine, etc. and considered as indispensable equipment for modern industry.



Control Panel

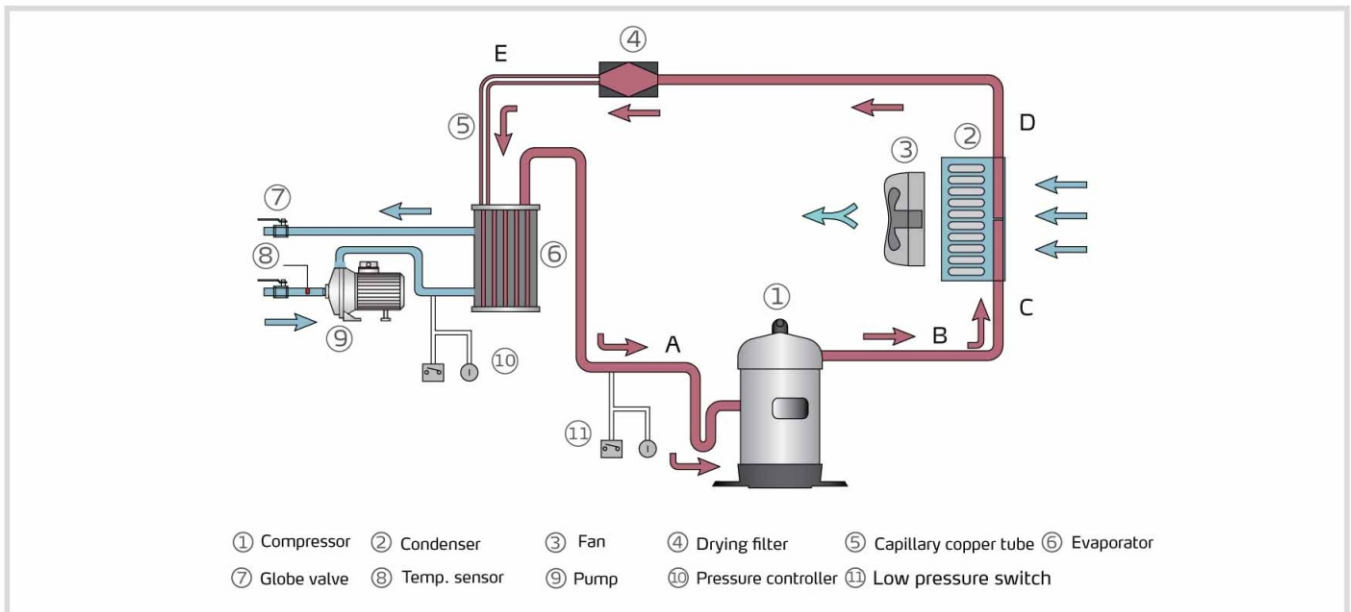


SOC-10 + Oil Tank (optional)

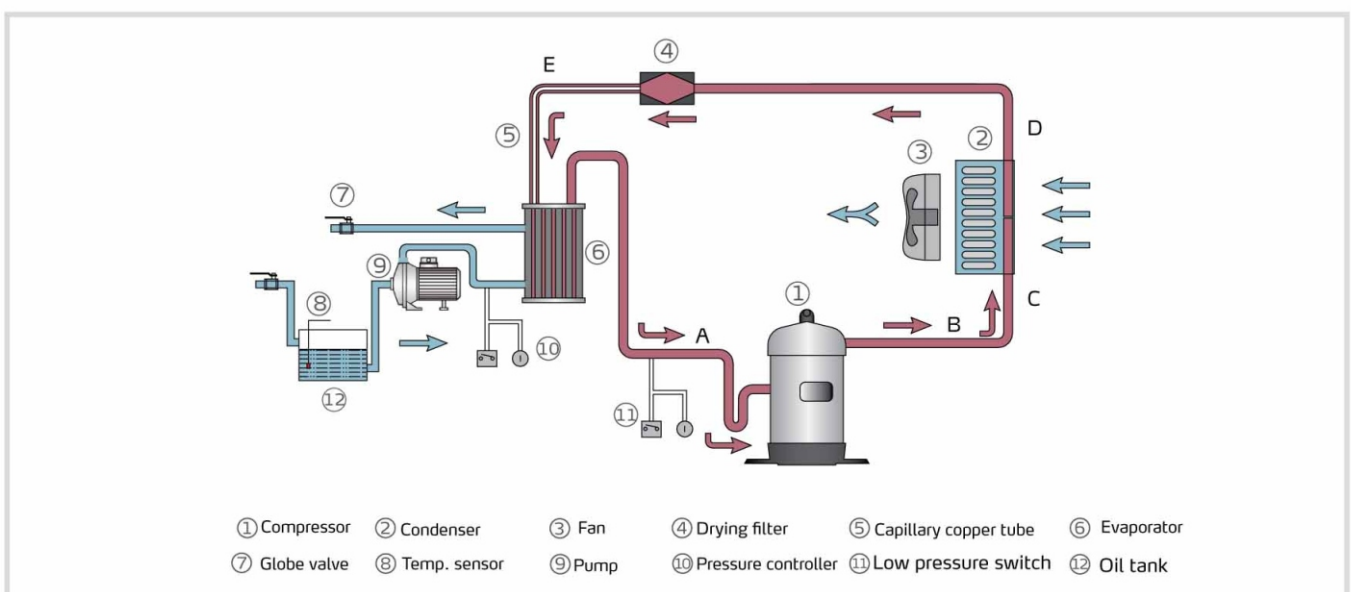
Working Principle

The SOC series oil cooler mainly consists of four parts, namely compressor, condenser, capillary copper tube and evaporator. The system adopts a single closed-loop design for refrigeration system. Refrigerant is alternatively changed from gas to liquid to absorb or release heat thus a cooling effect is achieved.

When the machine is started, compressor (1) starts working. Refrigerant is compressed into high pressure and high temperature gas in the process from A to B. In the process from B to C and D, this high pressure and high temperature gas is cooled when passing through the condenser (2) and changed into liquid. Heat is taken away by the cooling air. In the process from D to E, the pressure of liquid refrigerant is reduced when passing through capillary copper tube (5) and a part of the refrigerant is changed from liquid to gas. In the process from E to A, refrigerant absorbs the heat of processed oil in the evaporator (6) and returns back to the compressor. This heat exchange process repeats until process oil is cooled down to required temperature.



SOC Working Principle (no oil tank)



SOC Working Principle (with oil tank)

SOC series

Options

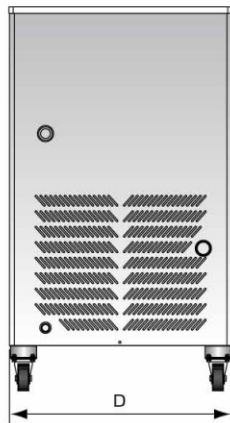
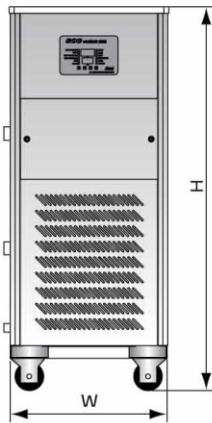


Oil tank

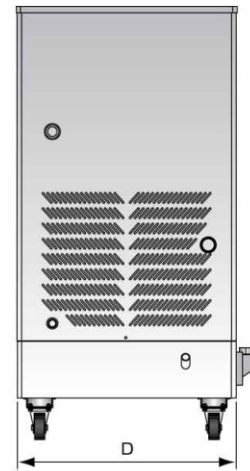
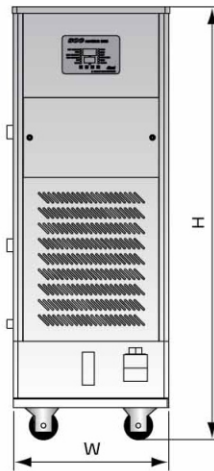


Heater

Outline Drawings



No oil tank



With oil tank

Item	Parameter	Model	SOC-10	SOC-30	SOC-60
		Dimensions D×W×H (cm)	No oil tank		43×35×64
With oil tank			43×35×82	59×46×124	69×49×144



■ Specifications SIC-W

Item	Parameter	Model	SOC-10	SOC-30	SOC-60
Refrigeration capacity	kW		0.98/1.18	2.9/3.48	5.8/6.96
	kcal/hr		840/1008	2500/3000	5000/6000
Temperature control	Fixed temperature control type		Setting range 10°C~40°C		
	Differential temperature control type		Room / machine body temperature tracking type, Setting range 10°C~40°C		
Compressor (50Hz/60Hz)	Type		Rotary type		
	Output Power	kW	0.58 / 0.7	1.03 / 1.24	1.95 / 2.34
		HP	0.65 / 0.93	1.5 / 1.8	3 / 3.6
Refrigerant	Weight (kg)		0.55	1.3	2.1
	Control Mode		Capillary copper tube		
	Type		R22		
Evaporator	Type		Tube-in-shell type		
Condenser	Type		Fin type		
	Blow power(kW)		—	0.15	0.18
Oil Pump (50Hz/60Hz)	Power (kW)		0.18 / 0.22	0.75 / 0.9	1.1 / 1.3
	Pump Flow (L/Min)		3.7 / 4.5	15 / 18	30 / 36
	Working Pressure (kgf/cm ²)		3.5/4.2	15/18	25/30
Total power(kW)			0.76/0.9	1.93/2.3	3.23/3.88
Pipe Coupling (inch)	Chilled oil outlet		1/2"×1	3/4"×1	1"×1
	Chilled oil inlet		1/2"×1	3/4"×1	1"×1
	Oil tank Drainage port		1/4"×1	1/2"×1	1/2"×1
Oil viscosity			Hydraulic oil, lubricant oil 4-300cst		
Oil tank capacity (optional)			25L	35L	45L
Weight (kg)	No oil tank		67	110	160
	With oil tank		90	135	200
Power			3Φ,380VAC,50Hz		
Measures Exchange			1 kW = 860 kcal/hr	1 RT = 3,024 kcal/hr	10,000 Btu/hr = 2,520 kcal/hr

Note: 1) The above cooling capacity is tested based on the conditions of ambient temperature of 35°C , oil temperature of 35°C and oil type of ISO VG32.

We reserve the right to change specifications without prior notice.

- 2) Oil tank and heating function are optional, please state clearly when ordering.
- 3) Contact us for special Specification requests.

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