SAYI AIR COMPRESSOR

Screw Air Compressors



SAYI Electric Co., Ltd.
Shanghai Sayi Yimai Technology Co., Ltd.

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PRESENTATION OF SAYI

SAYI Group, one of the largest leading manufacturers in China, specializes inair compressors, air blowers, and tobacco-baking burner equipment. As a professional manufacturer, the company is located in the eastern new area of Wenling City, Zhejiang Province, which covers an area of nearly 22 acres, i.e., 90,000 square meters of a production workshop zone.

With more than 22 years' experience, advanced equipment, production capability, high quality and stable lead time, which attracts many customers from different countries and our sales revenue is around 90 million U.S. Dollars yearly.

As we used to be cooperated with the brands name of FIAC, ABAC, Ingersoll Rand, Atlas, etc., as their indirect OEM manufacturer. We know how to take care of all our clients equally and with the same dedication and professionalism. Whatever your needs are, we are there to help you and also offer urgent service as well.

We have full range of screw air compressor includes single stage, two stage, work frequency, variable frequency, vsd, oil free type and etc, can meet your special request.

At Sayi Compressor and Ventilator Technique we team up with our customers to turn industrial ideas into smart connected air solutions and leading edge compressed air technology. Our passionate employee, expertise and service bring sustainable value to industries everywhere.

(Founded in 2020, Shanghai Sayi Yimai Technology Co., Ltd. is a subsidiary company of SAYI group, Which in charge of all business overseas.) depends on the situations.











OUR ADVANTAGES









Professional manufacturing technology and strict quality control

Sayi has the excellent manufacturing capacity that is proud of the industry, all products in the factory to ensure the delivery of high-quality products for customers.

Top-notch research and development and technology

Research and development is a strong driving force for the company to maintain sustainable development, and an excellent R & D team with sufficient R & D fund is the guarantee of perfect design. We are always committed to maintaining and strengthening our technical expertise and innovation capabilities to improve productivity for our customers.

SAYI AIR COMPRESSOR

SAYI DEDICATED TO SERVING ALL CUSTOMERS AROUND THE WORLD



Reduce Your Risk

No one likes unexpected surprises, breakdowns or complete system shutdowns. Sayi promises to do whatever it takes to keep your systems running and proactively prevent any d owntime.

Increase Simplicity

We make the entire selection process as simple as possible for you while tailoring the system to your specific requirements. We collect the data to give you the most accurate suggestions for both systems and service.

Reduce Your Cost

We don't believe in wasteful sales and inefficiency. Our goal is to offer the best product and the lowest total cost of ownership. We will work with you to figure out the right air system and warranty to make you successful.

SAYI PERMANENT MAGNET SYNCHRONOUS MOTOR



Characteristics of Motor

Super-level energy efficiency More energy efficient

The permanent magnet frequency conversion synchronous motor used in SAYI compressor passes national level energy eficiency laboratory tests, have exceeded the national first-class energy efficiency standards.

High Degree Of Protection Design

Safety and reliability have been guaranteed. Motor adopts IP54 high protection grade design, which can prevent failure caused by bad environment.

Comparison of Different Speed Efficiency of Permanent Magnet Synchronous Motor and Asynchronous Induction Motor

Due to different working principles, permanent-magnet variable-frequency synchronous motors maintain more than 95% efficiency and higher power factor at different speeds. The efficiency of permanent magnet frequency conversion synchronous motor at low speed is 20% higher than traditional asynchronous motor.

1 MORE EFFICIENT
GERMAN TECHNOLOGY

- Technology Innovation
- Long Life
- Low Noise
- High Efficiency Air End
- More Efficient
- Low Vibration



Characteristics of Motor

2 MORE COMFORTABLE
LOWER NOISE

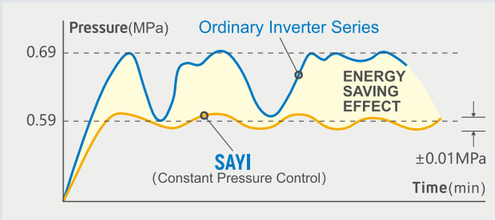
The frequency conversion type supplies energy according to the gas demand, without too much energy loss, the motor running frequency is low, and the mechanical rotation noise is reduced accordingly. Since the frequency conversion adjusts the motor rotation speed, it does not require repeated loading and unloading, which reduces the noise caused by frequent loading and unloading. Continuous loading pressure, reducing the noise generated by the unstable pressure.

3 MORE STABLE
VARIABLE FREQUENCY REGULATION
STABLE SUPPLY PRESSURE



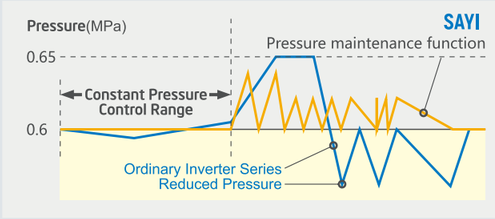
Adopting frequency conversion speed control to make full use of energy-saving effects to create a new generation of energy-saving compressor that saves electricity and energy

The conventional speed regulation method of the air compressor is to adjust the air intake volume by adjusting the inlet valve. The input power is large, and a large amount of energy is consumed in the current-carrying process of the valve. When using the variable frequency speed, if the flow requirements are reduced, the requi0 rements can be met by reducing the speed of the host.



Provide the necessary amount of air with the necessary pressure through constant pressure control

High-accuracy constant-pressure control with a pressure variation .range of +0.01 MPa or less can be performed, effectively providing the machine with the most suitable air pressure necessary. Moreover, the accuracy of the set pressure is 0.01MPa, accurate setting to achieve maximum energy savings.



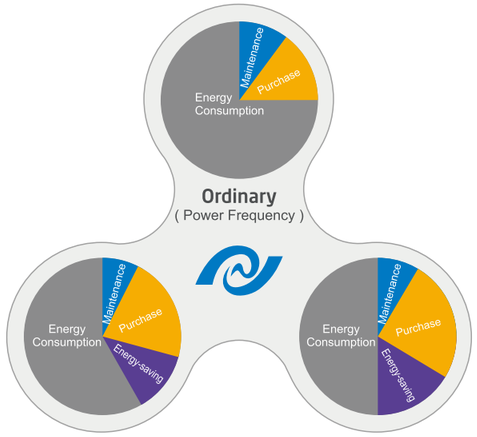
COMPARISON OF ENERGY-SAVING EFFECTS

When buying an air compressor, the traditional cost (ie, purchase cost +maintenance cost) accounts for only 25% of the total cost, while energy consumption accounts for 75%.

ORDINARY (INVERTER) SCREW AIR COMPRESSOR SAVES 10-20% ENERGY THAN ORDINARY (POWER FREQUENCY) SCREW AIR COMPRESSOR

SAYI FREQUENCY CONVERSION SCREW AIR COMPRESSOR SAVES 33-35% ENERGY THAN ORDINARY (POWER FREQUENCY) SCREW AIR COMPRESSOR





1. A 75KW ordinary screw air compressor runs for8000 hours a year, with an electricity fee of ¥ 0.62/kWh, and the electricity charge for one year is:
   75KW*8000 hours*0.62/KW.h= ¥ 372,000
2. SAYI 75KW screw air compressor, saving about 35% of energy a year.
   A Total of: 372,000 * 35%= ¥ 130,200
3. Return on Investment (ROI): About 1 Year

▲ Energy consumption ▲ Purchase
▲ Maintenance ▲ Power saving

MAINTENANCE OF AIR COMPRESSOR

We provide selective maintenance services for customer's equipment maintenance. The content is customized for your equipment. You can choose a single price maintenance or choose long-term parts supply or preventive maintenance contract, through the above contract, you can enjoy valued service and guarantee and overhauled and updated parts at competitive price. We also provide energy saving solution, such as energy recovery, frequency conversion, and energy-saving optimization systems, can greatly reduce your production cost.

GENUINE PARTS

Only use genuine parts and service of sayi to ensure the normal operation of the compressor group and normal life to the greatest extent.

SY-MII SERIES

TWO-STAGE SCREW AIR COMPRESSOR WITH PERMANENT MAGNET VARIABLE FREQUENCY



The principle of two-stage compression

After the first stage compression, the air is cooled by enhanced oilinjection to reduce the temperature of the second stage air, and the airis equally compressed to reduce the compression work. The isobaric ratio is used to set the pressure between two stages of compression, so the compression ratio of each stage is much lower than that of the single stage, the backflow leakage between the rotors is greatly reduced, the volumetric efficiency and adiabatic efficiency are greatly improved, and the compressed gas production is correspondingly increased. Under the same power, the gas production of two-stage compression is up to 15% than that of single-stage compression, which can achieve up to 15% energy saving effect.

Advantages of the two-stage compression principle

Compared with single-stage compression, isothermal compression tends to save more work and theoretical energy saving 10-15%.

The compression ratio of each stage is lower, the internal leakage is reduced, and the volume ratio is increased by 5%~8%.

It is beneficial to adjust the rotor of each stage to reach a better linear speed range of 25~35m/s to obtain a higher compression transfer efficiency.



SY-M series

SINGLE STAGE SCREW AIR COMPRESSOR WITH PERMANENT MAGNET VARIABLE FREQUENCY

SAYI AIR COMPRESSOR
SCREW AIR COMPRESSOR

Technical parameters of single stage screw Air compressor with permanent magnet variable frequency

parameter \ Model		SY10M	SY15M	SY20M	SY25M	SY30M	SY40M	SY50M	SY60M	SY75M
Exhaust volume Exhaust pressure min/Mpa		1.2/0.7	1.65/0.7	2.5/0.7	3.2/0.7	3.8/0.7	5.3/0.7	6.8/0.7	7.4/0.7	10/0.7
		1.1/0.8	1.5/0.8	2.3/0.8	3.0/0.8	3.6/0.8	5.0/0.8	6.2/0.8	7.0/0.8	9.6/0.8
		0.95/1.0	1.3/1.0	2.1/1.0	2.7/1.0	3.2/1.0	4.5/1.0	5.6/1.0	6.2/1.0	8.5/1.0
		0.8/1.2	1.1/1.2	1.72/1.2	2.4/1.2	2.7/1.2	4.0/1.2	5.0/1.2	5.6/1.2	7.6/1.2
Lubricating oil quantity		4	8		12		20			45
Noise (A)		66 ± 2	68 ± 2					72 ± 2		
Driving mode		Direct link								
Power Supply		380V/50Hz								
power		7.5	11	15	18.5	22	30	37	45	55
Startup mode		Y–△ Start up, frequency conversion start								
Exterior dimension	L mm	800	950		1100		1200			1800
	W mm	625	775		800		925			1250
	H mm	840	1000		1160		1260			1600
weight [kg]		120	209		275		425			880
Outlet pipe diameter		G1/2	G3/4		G1 1/4		G1 1/2			G2

parameter \ Model		SY100M	SY125M	SY150M	SY175M	SY200M	SY250M	SY300M	SY350M
Exhaust volume Exhaust pressure min/Mpa		13.4/0.7	16.2/0.7	21/0.7	24.5/0.7	28.7/0.7	32/0.7	36/0.7	42/0.7
		12.6/0.8	15.0/0.8	19.8/0.8	23.2/0.8	27.6/0.8	30.4/0.8	34.3/0.8	40.5/0.8
		11.2/1.0	13.8/1.0	17.4/1.0	20.5/1.0	24.6/1.0	27.4/1.0	30.2/1.0	38.2/1.0
		10.0/1.2	12.3/1.2	14.8/1.2	17.4/1.2	21.5/1.2	24.8/1.2	27.7/1.2	34.5/1.2
Lubricating oil quantity		45		60		80	100	120	
Noise (A)		72 ± 2			75 ± 2			82 ± 2	
Driving mode		Direct link							
Power Supply		380V/50Hz							
power		75	90	110	132	160	185	220	250
Startup mode		Y–△ Start up, frequency conversion start							
Exterior dimension	L mm	1800	2350	2350		2550		3060	
	W mm	1250	1500	1500		1590		1880	
	H mm	1600	1850	1840		1920		2080	
weight [kg]		950	2000	2200	2500	3000	3500	4000	4500
Outlet pipe diameter		G2	DN65				DN80		



SY-MII series

TWO-STAGE SCREW AIR COMPRESSOR WITH PERMANENT MAGNET VARIABLE FREQUENCY

SAYI AIR COMPRESSOR
SCREW AIR COMPRESSOR

Technical parameters of two-stage Screw air compressor with permanent magnet Variable frequency

Model / parameter		SY50MII	SY60MII	SY75MII	SY100MII	SY125MII	SY150MII
Exhaust volume Exhaust pressure min/Mpa		7.2m³/0.7mpa	9.8m³/0.7mpa	12.8m³/0.7mpa	17.5m³/0.7mpa	20.8m³/0.7mpa	24.5m³/0.7mpa
		7.1m³/0.8mpa	9.7m³/0.8mpa	12.5m³/0.8mpa	16.5m³/0.8mpa	19.8m³/0.8mpa	23.5m³/0.8mpa
		6.3m³/1.0mpa	7.8m³/1.0mpa	9.6m³/1.0mpa	12.5m³/1.0mpa	16.9m³/1.0mpa	19.7m³/1.0mpa
		5.4m³/1.3mpa	6.5m³/1.3mpa	8.6m³/1.3mpa	11.2m³/1.3mpa	14.3m³/1.3mpa	17.6m³/1.3mpa
Lubricating oil quantity		30		65		102	
Noise (A)		72 ± 2					
Driving mode		Direct link					
Power Supply		380V/50Hz					
power		37	45	55	75	90	110
Startup mode		Y–△ Start up, frequency conversion start					
Exterior dimension	L mm	1770	1900	2160		2620	
	W mm	1140	1220	1410		1620	
	H mm	1460	1560	1760		1920	
weight [kg]		1080	1680	1980	2080	3280	3480
Outlet pipe diameter		R1–1/2		R2		R2–1/2	

Model / parameter		SY175MII	SY200MII	SY250MII	SY270MII	SY300MII	SY350MII
Exhaust volume Exhaust pressure min/Mpa		30m³/0.7mpa	34.5m³/0.7mpa	41m³/0.7mpa	44.6m³/0.7mpa	48.6m³/0.7mpa	55m³/0.7mpa
		28m³/0.8mpa	33.6m³/0.8mpa	38.4m³/0.8mpa	43m³/0.8mpa	47m³/0.8mpa	54m³/0.8mpa
		23.5m³/1.0mpa	30m³/1.0mpa	32.5m³/1.0mpa	38.5m³/1.0mpa	41m³/1.0mpa	46m³/1.0mpa
		19.8m³/1.3mpa	23.8m³/1.3mpa	28.6m³/1.3mpa	32.8m³/1.3mpa	38m³/1.3mpa	40m³/1.3mpa
Lubricating oil quantity		120		140		170	
Noise (A)		75 ± 2				82 ± 2	
Driving mode		Direct link					
Power Supply		380V/50Hz					
power		132	160	185	200	220	250
Startup mode		Y–△ Start up, frequency conversion start					
Exterior dimension	L mm	2960		3210		3480	
	W mm	1830		1940		2040	
	H mm	2020		2200		2350	
weight [kg]		3980	4280	5200	5600	6500	6600
Outlet pipe diameter		DN80		DN80		DN100	

SY-A series

SINGLE STAGE SCREW AIR COMPRESSOR WITH POWER FREQUENCY FIXED SPEED



SAYI AIR COMPRESSOR
SCREW AIR COMPRESSOR

Technical parameters of single stage screw air compressor with Power frequency fixed speed

Model / parameter		SY10A	SY15A	SY20A	SY25A	SY30A	SY40A	SY50A
Exhaust volume Exhaust pressure min/Mpa		1.2/0.7	1.65/0.7	2.5/0.7	3.2/0.7	3.8/0.7	5.3/0.7	6.8/0.7
		1.1/0.8	1.5/0.8	2.3/0.8	3.0/0.8	3.6/0.8	5.0/0.8	6.2/0.8
		0.95/1.0	1.3/1.0	2.1/1.0	2.7/1.0	3.2/1.0	4.5/1.0	5.6/1.0
		0.8/1.2	1.1/1.2	1.72/1.2	2.4/1.2	2.7/1.2	4.0/1.2	5.0/1.2
Lubricating oil quantity		4	8		12		20	
Noise (A)		66 ± 2	68 ± 2					
Driving mode		Direct link						
Power Supply		380V/50Hz						
power		7.5	11	15	18.5	22	30	37
Startup mode		Y–△ Start-up						
Exterior dimension	L mm	880	1080		1250		1500	
	W mm	600	720		850		1000	
	H mm	820	1000		1080		1225	
weight [kg]		162	300		408		602	
Outlet pipe diameter		G3/4	G3/4		G1 1/4		G1 1/2	

Model / parameter		SY60A	SY75A	SY100A	SY125A	SY150A	SY175A
Exhaust volume Exhaust pressure min/Mpa		7.4/0.7	10/0.7	13.4/0.7	16.2/0.7	21/0.7	24.5/0.7
		7.0/0.8	9.6/0.8	12.6/0.8	15.0/0.8	19.8/0.8	23.2/0.8
		6.2/1.0	8.5/1.0	11.2/1.0	13.8/1.0	17.4/1.0	20.5/1.0
		5.6/1.2	7.6/1.2	10.0/1.2	12.3/1.2	14.8/1.2	17.4/1.2
Lubricating oil quantity		20	45			60	
Noise (A)		72 ± 2					75 ± 2
Driving mode		Direct link					
Power Supply		380V/50Hz					
power		45	55	75	90	110	132
Startup mode		Y–△ Start-up					
Exterior dimension	L mm	1500	1800	1980		2480	
	W mm	1000	1250	1230		1500	
	H mm	1225	1600	1560		1840	
weight [kg]		602	880	1087	1800	2200	2500
Outlet pipe diameter		G1 1/2	G2	DN65			

SY-A & M series

ALL-IN-ONE TYPE SCREW AIR COMPRESSOR WITH PRESSURE 8-16 BAR, SPECIAL FOR LASER CUTTING MACHINE



Combination of all-in-one screw air compressor

Screw air compressor, air dryer, air tank, line filters

Advantages of all-in-one screw air compressor

1. Integrated design with beautiful appearance, fewer parts, and connectors reduce the possibility of unit failure any leakage: correct discharge of dry compressed air, fully guarantee the quality of user terminal gas; greatly save customer installation costs and use space.
2. With new modular design structure, compact layout, ready to install and work.
3. After strict testing of the unit, the vibration value of the unit is far lower than the international standard.
4. The optimized pipeline design reduces the length and number of pipelines, thereby reducing the incidence of pipeline leakage and internal losses caused by the pipeline system.
5. Adopting a freeze dryer with excellent performance, a compact rotary refrigeration compressor, and a high cooling capacity configuration scheme to ensure reliable operation under high-temperature conditions.

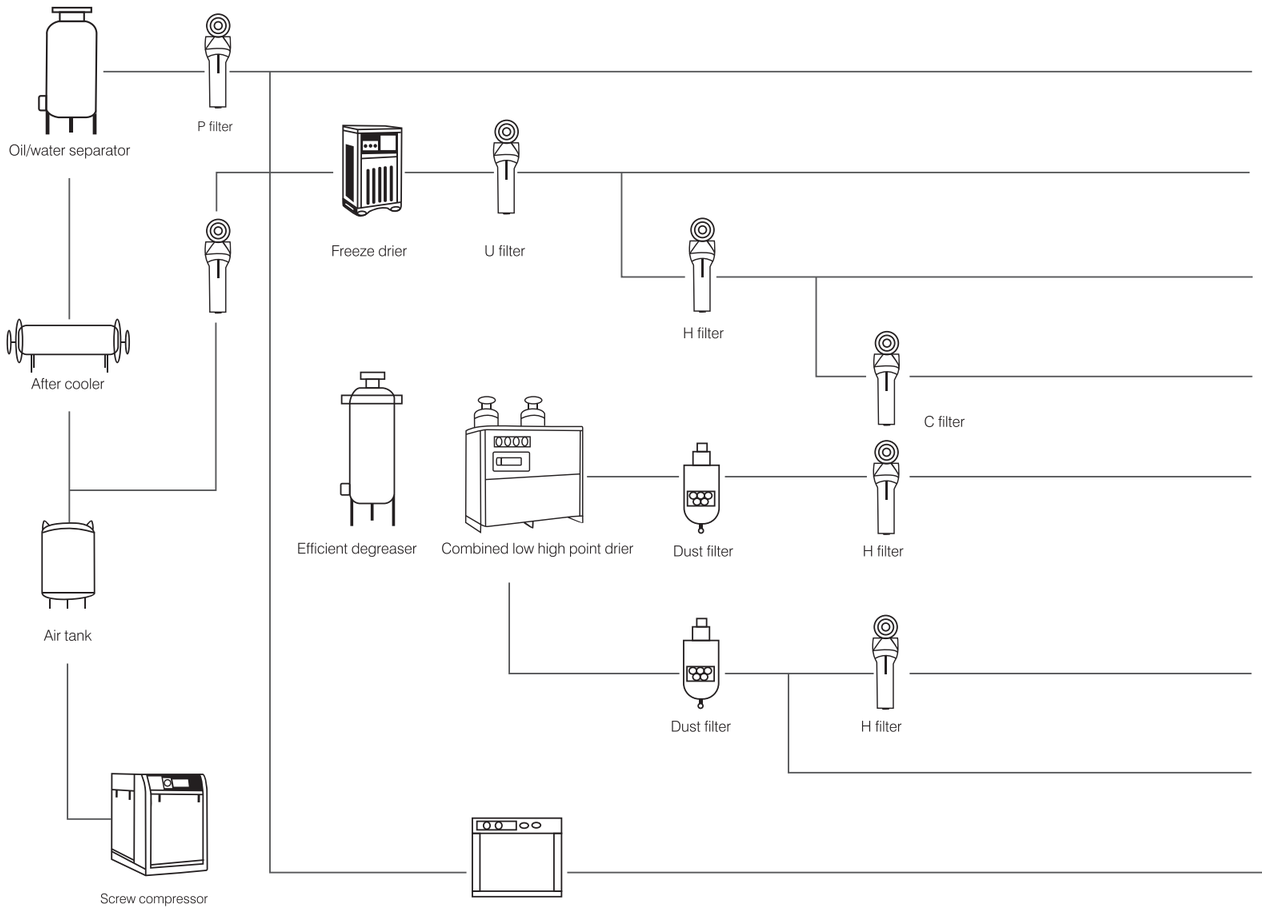
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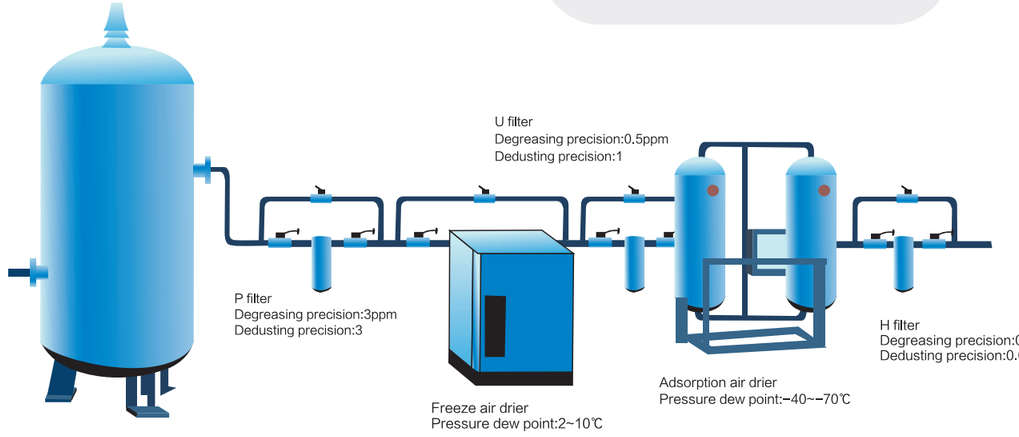
Technical parameters of All-in-one Type Screw air compressor

Parameter / Model	SY-20M All-in-one	SY-30M All-in-one
Air delivery	1.35 m³/min	2.3 m³/min
Discharge Pressure	1.58 Mpa	1.58 Mpa
Power	15 kW	22 kW
Speed	3000 r/min	3000 r/min
Volt/Frequency	380V/50HZ	380V/50HZ
Motor profection	IP 23/F	IP 23/F
Driving Mode	Direct driven	Direct driven
Noise dB(A)	<80±2dB(A)	<80±2dB(A)
Cooling mode	Air cooling	Air cooling
lubricating oil capacity	10L	18L
Startup mode	PM start	PM start
Outlet size	G3/4"	G1"
Overall dimensions	1600*820*1650mm	1600*820*1650mm
Air tank	400 L	500 L
Weight	470 KG	570 KG

Compressed Air System Configuration



Remove 99% water, Oil content:5PPM	→	Pneumatic tools and pneumatic chuck, commom air gun for cleaning
Ordinary dew point:-23℃, Oil content:3PPM	→	Pneumatic machinery,electroplating, spray painting,and other process in need of compressed air
Ordinary dew point:-23℃, Oil content:0.01PPM	→	Advanced pneumatic transit painting, pneumatic bearing,gauge
Ordinary dew point:-23℃, Oil content:3PPM	→	Medicine,food,industry,breath,air, deodorization,degerming
Ordinary dew point:-23℃, Oil content:3PPM	→	Electrical power,chemistry,precision machinery
Ordinary dew point:-40℃~-70℃ Oil content:0.01PPM	→	Pneumatic instruments,fabric fiber, environmental protection
Ordinary dew point:-40℃~-70℃ Oil content:0.01PPM	→	Film,air drying electronic parts
Ordinary dew point:-40℃~-70℃ Oil content:0.01PPM	→	Biology engineering,advanced spray painting,electronics
	→	Oxygen and Nitrogen making industry



CD series
AIR DRYER





ENERGY SAVING

The copper or aluminum alloy three-in-one heat exchanger design, the enlarged pre-cooling and regenerator design, minimize the process loss of cooling capacity, improve the recycling of cooling capacity, and increase the outlet temperature of compressed air at the same time, effectively reducing product gas moisture content .

EFFICIENT

The integrated heat exchanger is equipped with deflector fins to make the compressed air uniform inside heat exchange, built-in air-water separation device and stainless steel filter, water seperation is more tharough.

INTELLIGENT

Multi-channel temperature and pressure monitoring, real-time display of dew point temperature, automatic recording of accumulated running time, Add compressor protection, display the real-time current of the compressor, have self-diagnosis function, display the corresponding alarm code automatically protects the equipment.

STABILITY

In response to the International Montreal Pratocol, all models of this series adopt R407C environmental protection. The refrigerant has zero damage to the atmosphere and meets the needs of the international market.

STABILITY

Standard configuration of constant pressure expansion valve, hot gas bypess valve,water volume regulating valve, adaptive to changes in operating conditions, and automatic antifreeze adjustment function. While saving energy, prolong the service life of equipment.

The optional Internet of Things component enables remote monitoring of dryers through mobile phones or other networked display terminals.

Rated Working Condition of Cd Series Air Dryer

Ambient temperature:2-45℃	Water inlet pressure:0.2-0.3MPa
Inlet water temperature:2-35℃	Compressed air inlet temperature: 15-65℃
Pressure drop:0.025MPa(under 0.7MPa inlet pressure)	Pressure dew point: 2℃- 10℃
Compressed air pressure: 0.7MPa, up to 1.0MPa(higher pressure can be customized)	
Installation environment: no sunlight, no rain, good ventilation, installed on a horizontal hard foundation, no abvious dust and flying catkins.	

Technical Data of Air Dryer

Model	Compressor Power (kW)	Voltage Frequency (V/Hz)	Pressure (bar)	Air Flow (m^3/min)	Inlet Air Temperature (℃)	Dew Point (℃)	Refrigeration Capacity W (BTU/hr)	Volumn of Freon	Inlet Diameter	Outlet Diameter
CD-10F	0.25	220/50	2~10	1.0	≤45	2~10	230(785)	R134A-350g	G1	G1
CD-16F	0.35	220/50	2~10	1.6	≤45	2~10	310(1058)	R134A-450g	G1	G1
CD-26F	0.7	220/50	2~10	2.6	≤45	2~10	2255(7694)	R22-800g	G1	G1
CD-36F	1.1	220/50	2~10	3.6	≤45	2~10	2720(9281)	R22-900g	G1 1/2	G1 1/2
CD-65F	1.5	220/50	2~10	6.5	≤45	2~10	4225(14416)	R22-1000g	G1 1/2	G1 1/2
CD-85F	1.7	220/50	2~10	8.5	≤45	2~10	4520(15422)	R22-1100g	G2	G2
CD-115F	2.0	220/50	2~10	11.5	≤45	2~10	5090(17367)	R22-1200g	G2 1/2	G2 1/2
CD-135F	3.0	220/50	2~10	13.5	≤45	2~10	5310(18118)	R22-1300g	G2 1/2	G2 1/2
CD-160F	3.2	380/50	2~10	16	≤45	2~10	8235(28098)	R22-2100g	DN80	DN80
CD-200F	4.5	380/50	2~10	20	≤45	2~10	14500(49474)	R22-2100g	DN80	DN80
CD-300F	5.8	380/50	2~10	30	≤45	2~10	16400(55958)	R22-4600g	DN100	DN100
CD-400F	8.6	380/50	2~10	40	≤45	2~10	26500(90419)	R22-7500g	DN100	DN100
CD-500F	11.0	380/50	2~10	50	≤45	2~10	36250(123685)	R22-9000g	DN125	DN125



Precision Filter



