



## SA90~250 Two stage compressor series

SA90-250 screw air compressors







## Pursuing Excellence, Enriching Life

Fusheng has always adhered to the philosophy of “providing excellent products and services through innovation” in the optimization of product design, manufacturing processes, and customer service with the ISO9001 quality management system. We believe our “visible quality process.” is the key. Our products are sold in more than 60 countries around the world and have earned a notable reputation for providing extraordinary added value to our customers.

To internationalize our marketing coverage, we have established production facilities in Taiwan, China (Beijing, Shanghai, Zhongshan), Vietnam, the U.S. (Pittsburg, St. Louis), Germany and Spain, as well as branch offices in Thailand, Malaysia and Indonesia. Our well-established distribution channels ensure the highest quality service to our valued customers – worldwide.

Our continued pursuit of precision and perfection, the drive for optimum quality, and exceedingly high expectations for personable and enthusiastic customer service, will always be our ultimate goals and measures of success. We believe our sincere commitment to these principles will benefit and enrich people’s lives and bring a higher standard of excellence to the industry.





# SA SAVING ENERGY

## Two stage compression, first grade energy efficiency

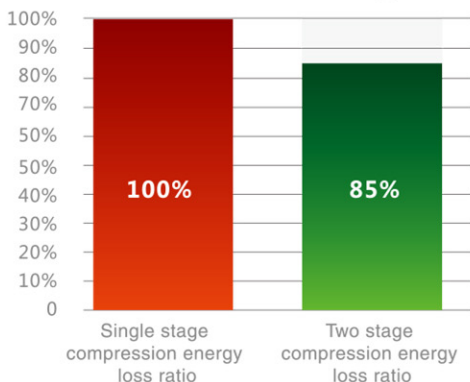
- High efficient energy saving, reduces cost of compressor in its life cycle.
- Two stage compressor is closer to isothermal compression.
- Reduce leakage increases volumetric efficiency.
- Saving more than 10% energy compare to single stage compression.
- Stable and reliable.
- Low pressure differential applied to parts.
- Low heat load
- Easy maintenance and service.
- Safety and environmental protection.

Compare to single stage compression, high temperature air compressed at first stage of two stage compressor is cooled down by oil and air being constant compressed to reduce second stage inlet temperature. Entire compression process is close to isothermal compression which reduces energy loss. Pressure ratio for each stage of two stage compression is decreased and leakage between rotor seal is reduced significantly. Outstanding increased airoend volumetric efficiency optimized cost-efficiency ratio when operated in continuous full load.



### Energy loss ratio for two stage and single stage compression with the same power compressor.

Compare two stage and single stage compression with the same power, efficiency gains is up to about 15%, energy loss can be saved around 15% accordingly.

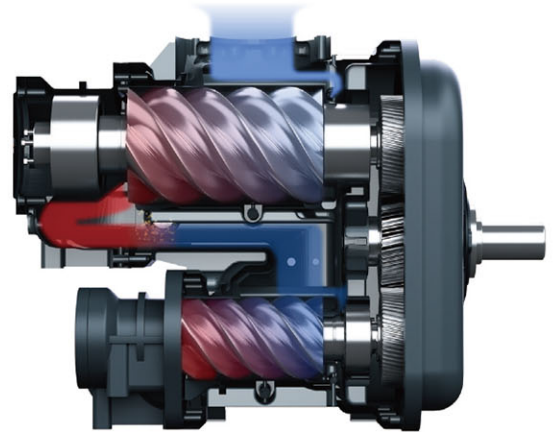


## Energy-efficient two stage compression airend

- Unique airend design integrated the first and second stage compression units in one airend. Rotor of each stage compression unit is able to gain the best line speed by gear-driven.
- Cold oil is injected in between the first and second stage airend for cooling which realize the optimum cooling effect between stages. Through oil quantity control, efficiency is improved significantly and also maintains compressed air is above pressure dew point to eliminate formation of water and avoid the second stage airend corrosion and system oil emulsification issue at the same time.

Axial inlet design is introduced for the first and second stage airend:

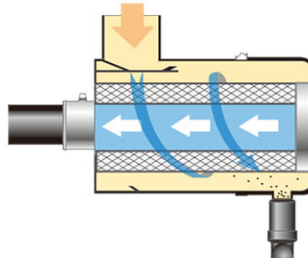
- ▮ Effective length of screw is adequately used to optimize compressor efficiency.
- ▮ Reduce axial imbalance force to improve service life of airend and bearing.
- ▮ Significantly reduces operation noise



## Effectively integrated overall design

### Safe, efficient air filter system

- ▮ Large particles dust in the air will follow cyclone air fall in rubber slot that located in air filter front end instead of adsorbing on filter element surface and causing clog.
- ▮ Long service life filter with large filtering area and small inlet resistance ensure pure and free of impurities air.
- ▮ Independent air filter inlet duct sucks external cooler air directly that makes higher suction density to improve the machine efficiency.



### Air inlet valve

Combined non-return, break oil, modulation functions and designed with low pressure drop to optimize suction efficiency. Automatically adjusted according to actual compression air demand during operation and has precise pressure control in unload which enables high efficiency and energy saving.



### Independent bearing lubrication

- ▮ Bearing lubrication does not rely on oil vapor from secondary return pipe but by using independent lubrication piping.
- ▮ Equipped with separated oil filter which ensures cleanness of lubricating oil.

### High efficiency, easy-to-maintain oil separator



- ▮ The supersized oil separator design features a larger separation area that reduce the pressure drop during the air/oil separation while providing better filtration, thus making the compressed air system more efficient.

A patented rotating shaft design is adopted on the separator cover. The replacement of oil separator is made much easier.



## Energy-saving and Eco-friendly



### GoService platform (optional)

Compressor IoT Smart Service platform on Cloud enables integration of monitoring, troubleshooting and maintenance. Send compressor fault information and operation status to specified technician via SMS and e-mail timely.

### End face sealed to prevent leakage

- All interfaces use trivalent blue-and-white environmental protection zinc connectors and end faces are sealed to prevent leakage.



### Improved noise control

- Fusheng SA series air compressor has improved noise control. In addition to an efficient aircend vibration-damping device, independent inlet duct and cooling fan of air filter and motor also have low noise design which reduce aircend operation noise from source.



### Asbestos-free gaskets protects operator health

- In operation, asbestos material causes damage to human body and environment. In consideration of operator health, machine uses high temperature, pressure resistance asbestos-free gaskets.

### IE3 high efficiency motor



All SA series screw compressors use IE3 motor which enable compressor assembly to have higher energy-efficient performance and improved energy-efficiency.

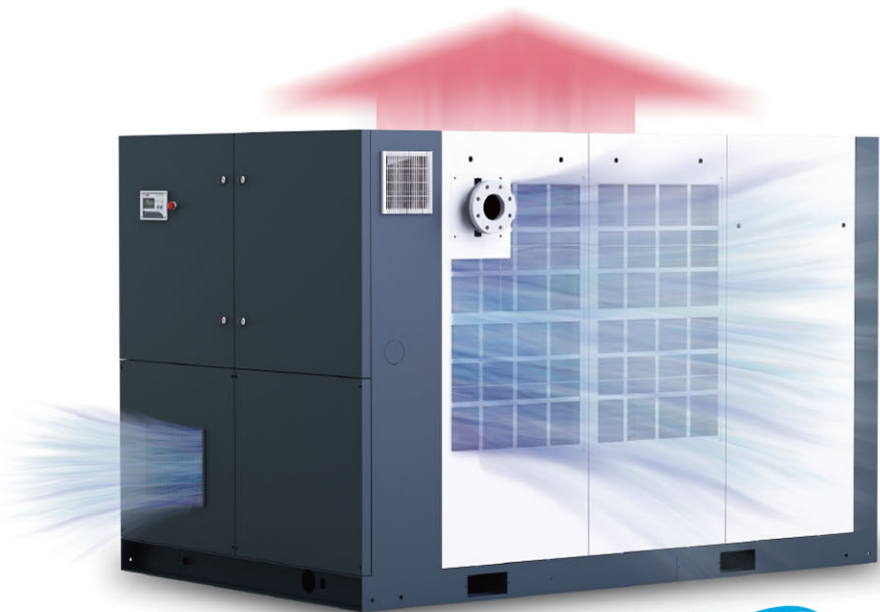
## Unique cooling flow field

- Air-cooled models use centrifugal fan which direct cooler air from external to cool cooler. Hot air is exhausted from top of assembly directly. Cooler itself has large heat exchange area which provides good cooling effect. Meanwhile, suction hole of centrifugal air blower located inside machine exhausts hot air directly to keep lower temperature within compressor and reduce operation noise.

- Water cooling model features heavy duty cooler with excellent cooling result and is suitable for high temperature environments. Compressed air passed at a time without pressure drop. Water goes inside of tube while air goes outside. Straight tube design is easy to clean.



- Only cover removal is needed for cleaning air cooling cooler instead of removing/installing air duct cover.
- Electrical control box and inverter cabinet guides cooler air from outside to ensure the best heat dissipation.
- Independent motor air inlet duct not only enables motor to draw cooler ambient air but also has silencer design.
- Dual fan design determines fans to be activated according to ambient temperature. This design is a "mechanical frequency converter" for fan.



## Technical parameters

	Delivery (m3/min)	Working Pressure (barg)	Power (kW)	Dimension (mm)			Weight (kg)
				Length	Width	Height	
SA90A-7T	19.5	7	90	2900	1860	1945	4000
SA90A-8T	18.2	8					
SA90A-10T	16.3	10					
SA90A-12T	14.6	12					
SA90W-7T	19.5	7	90	2900	1860	1945	4000
SA90W-8T	18.2	8					
SA90W-10T	16.3	10					
SA90W-12T	14.6	12					
SA110A-7T	23.5	7	110	2900	1860	1945	4350
SA110A-8T	22.0	8					
SA110A-10T	19.2	10					
SA110A-12T	17.8	12					
SA110W-7T	23.5	7	110	2900	1860	1945	4250
SA110W-8T	22.0	8					
SA110W-10T	19.2	10					
SA110W-12T	17.8	12					
SA132A-7T	27.6	7	132	2900	1860	1945	4200
SA132A-8T	26.1	8					
SA132A-10T	23.2	10					
SA132A-12T	21.5	12					
SA132W-7T	27.6	7	132	2900	1860	1945	4200
SA132W-8T	26.1	8					
SA132W-10T	23.2	10					
SA132W-12T	21.5	12					
SA160A-7T	34.0	7	160	3520	2290	2030	4480
SA160A-8T	32.3	8					
SA160A-10T	28.6	10					
SA160A-12T	26.5	12					
SA160W-7T	34.0	7	160	3520	2290	2030	4380
SA160W-8T	32.3	8					
SA160W-10T	28.6	10					
SA160W-12T	26.5	12					
SA200A-7T	43.1	7	200	4200	2300	2300	7000
SA200A-8T	40.5	8					
SA200A-10T	35.0	10					
SA200A-12T	31.0	12					
SA200W-7T	43.1	7	200	4200	2300	2300	6500
SA200W-8T	40.5	8					
SA200W-10T	35.0	10					
SA200W-12T	31.0	12					
SA220A-7T	47.5	7	220	4200	2300	2300	7000
SA220A-8T	44.5	8					
SA220A-10T	38.7	10					
SA220A-12T	34.2	12					
SA220W-7T	47.5	7	220	4200	2300	2300	6500
SA220W-8T	44.5	8					
SA220W-10T	38.7	10					
SA220W-12T	34.2	12					
SA250A-7T	54.3	7	250	4200	2300	2300	7000
SA250A-8T	51.5	8					
SA250A-10T	45.3	10					
SA250A-12T	40.0	12					
SA250W-7T	54.3	7	250	4200	2300	2300	6500
SA250W-8T	51.5	8					
SA250W-10T	45.3	10					
SA250W-12T	40.0	12					

## High Quality service

- Fusheng have prepared high quality spare parts for you.
- Spare parts are stored in the warehouses of distributor service system throughout the world.
- You can have them in timely, easily at nearest location.
- High quality spare parts and considerate service of Fusheng professional will ensure the continuity and reliability of your production.



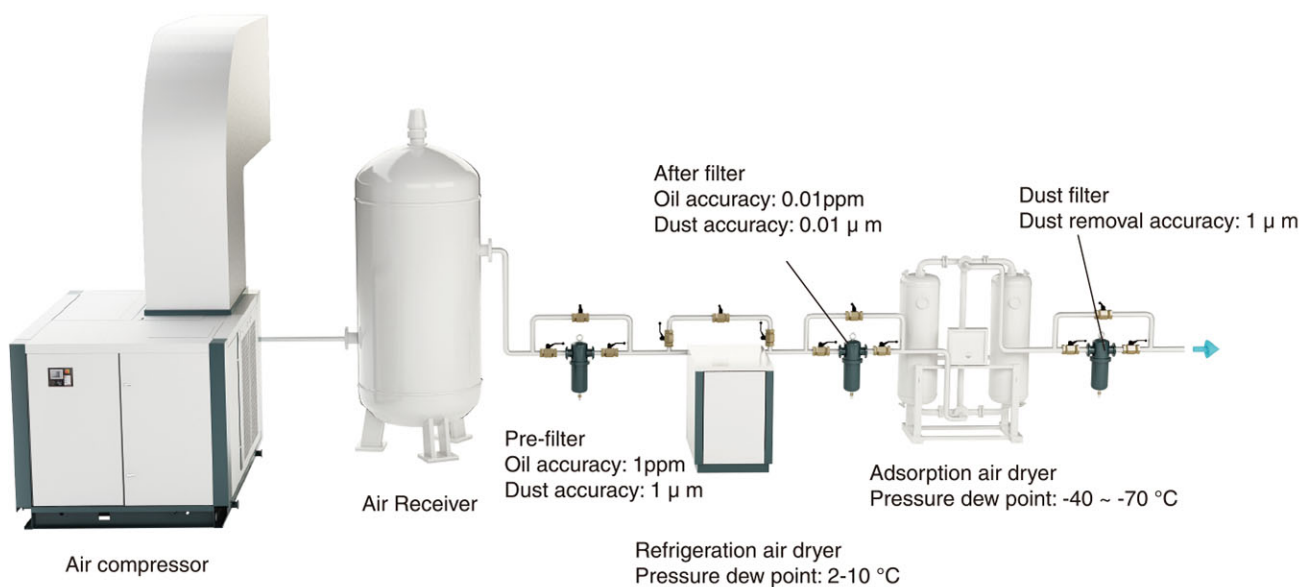
## Planning your compressed air system

### Site requirements

- Compressor room should locate in wide, good lighting facility to facilitate maintenance and service.
- Compressor room should have flat ground, with proper temperature, less dust, clean air and good ventilation to ensure the best operation.

### Compressed air quality and requirements

- Compressed air produced by oil-lub screw air compressor contains large quantity of water and little oil which will damage precision instrument, meters and lower product quality.
- In accordance with process and requirements of compressed air quality, select appropriate air dryer, precise filter (filters oil and fine particle) is necessary.







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