Compressed Air Aftertreatment Specialist—GENEXIS

Compressed air is a safe and reliable power source widely used in modern industrial activities

The Importance of Compressed Air

Compressed air is currently the second largest power source after electric energy, and it is also an industrial gas source with multiple uses.

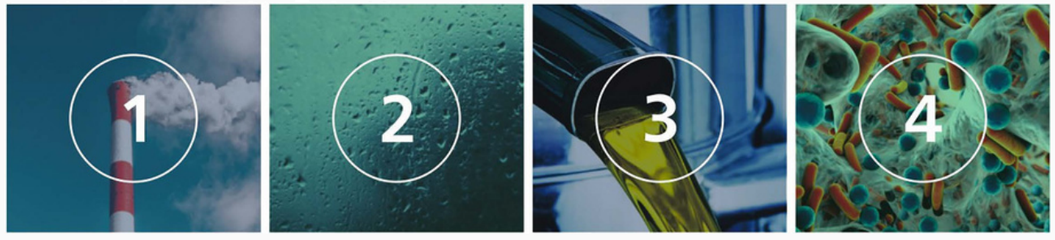
Widely used in petroleum, chemical industry, electric power, machinery, automotive, light industry, automobile manufacturing, electronics, food, medicine, biochemistry, etc. where compressed air is needed.

Why Use Compressed Air Filters

The atmosphere contains water vapor, hydrocarbons and solid particles. These impurities are sucked into the air compressor along with the air, and then enter the compressed air pipe network together with the residual lubricating oil. All this dust, oil and water mix together to form an extremely harmful corrosive sludge. If it is not filtered, it will quickly wear out the pneumatic equipment, block the valve, corrode the pipeline and pollute the gas source. resulting in:

- Air leakage 、 noise and production costs Increased
- Damage to tools and equipment Increased repair costs
- Destruction Damages the product or causes the product to be reworked, scrapped
- Automation equipment Precision machinery Processing equipment control is not in place
- Work environment is affected and pollution health and safety are threatened

here are mainly 10 kinds of common pollutants in compressed air system



- Atmospheric dust
- Rust
- Pipeline spalling

- Water vapor
- Condensed water
- Water mist

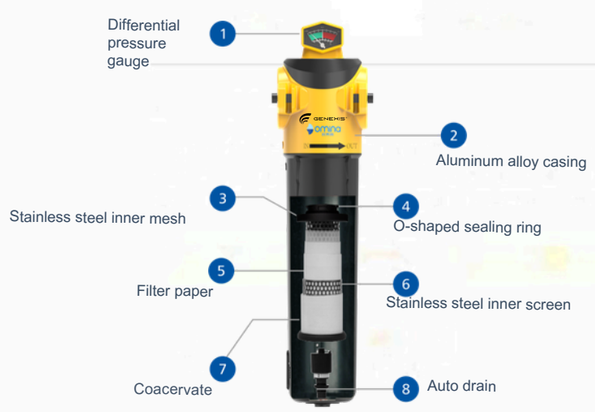
- Liquid oil
- Oil mist
- Oil vapor

- Microorganisms

GENEXIS precision filter

How compressed air filters work

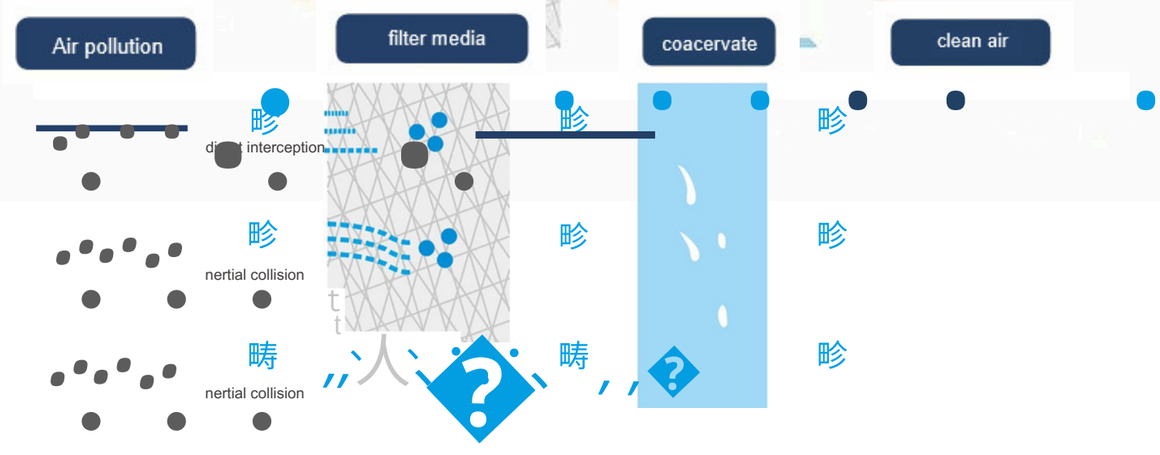
When the compressed air to be treated enters the filter, the flow rate slows down, and the— large-particle droplets fall down under the action of gravity, and some liquid droplets and solid particles are directly intercepted when passing through the glass fiber filter layer, while the smaller ones When the liquid droplets and solid particles with the airflow pass through the filter element, they are captured by the filter material due to inertial collisions and gradually condense into larger droplets. The smaller solid particles do not change direction with the airflow, but only in Brownian motion. Once they approach the filter material Affected by the electrostatic attraction of fibers, it is adsorbed on the filter cloth. The filtered oil and water are concentrated at the bottom of the filter and discharged through the drain.



code	Component description
	Accurately indicate the differential pressure of the filter element and remind you to replace the filter element in time.
	high-strength hardness material, special anti-corrosion treatment.
	Stainless steel inner mesh, strong anti-corrosion strength
	0-type sealing ring: better sealing and strength
	Imported filter paper, exquisite workmanship, filter layer, small pressure
5	difference, large dust holding capacity
6	Stainless steel outer mesh
7	Coacervate is resistant to high temperature and strong corrosion resistance
8	High stability and long service life of automatic drain

Ensure compressed air quality

In order to ensure that the compressed air is clean, dry and stable, please replace it with the original filter element of Siyexing Company. Throughout its lifetime, the filter element is constantly being hit by oil, powder, weakly acidic condensate, and high-velocity dust particles, and has to filter out these impurities to keep protecting your compressed air system. Exceeding the replacement interval will weaken the filter media and reduce filter performance. These potential and serious defects in performance cannot be detected simply by differential pressure indicating equipment, and it is very necessary to replace the filter element regularly.



Choose a reasonable filter manufacturer

- Quality assurance: Under normal working conditions, the special anti-corrosion treatment shell is guaranteed to be used for 15 years, and the filter element is guaranteed to be used for 6000-8000 hours.
- Safety guarantee: the shell is under pressure (0~1.6MPa), and the spare parts are resistant to high and low temperature (-20°C~850°C corrosion resistance has passed the safety certification of relevant national agencies and departments
- Production enterprise reputation and service: whether the production enterprise has follow-up service, quality assurance and technical support capabilities.
- strength of the enterprise: The enterprise must have the technical ability and testing ability to continuously update the products.
- Product practicability and advantages: The product must meet the actual needs of the production equipment of the enterprise, must meet the demand standard, has practical and beneficial advantages, and can formulate special products according to different working conditions.

The benefits of changing the filter element on time

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Guaranteed highquality compressedair

Protection of adsorption dryer beds

Improve productivity and profitability;

Reduce operating costs;

protect downstream equipment.

Disadvantages and consequences of not replacing the filter element

☒ Theadsorption bedofthe damagedadsorption drying equipment leads to unplanned replacement of the adsorbent;

的Corrosion of the output pipe network, blockage or freezing of valves, cylinders and pneumatic components;

的The production process is inefficient and the product qualification rate is low;

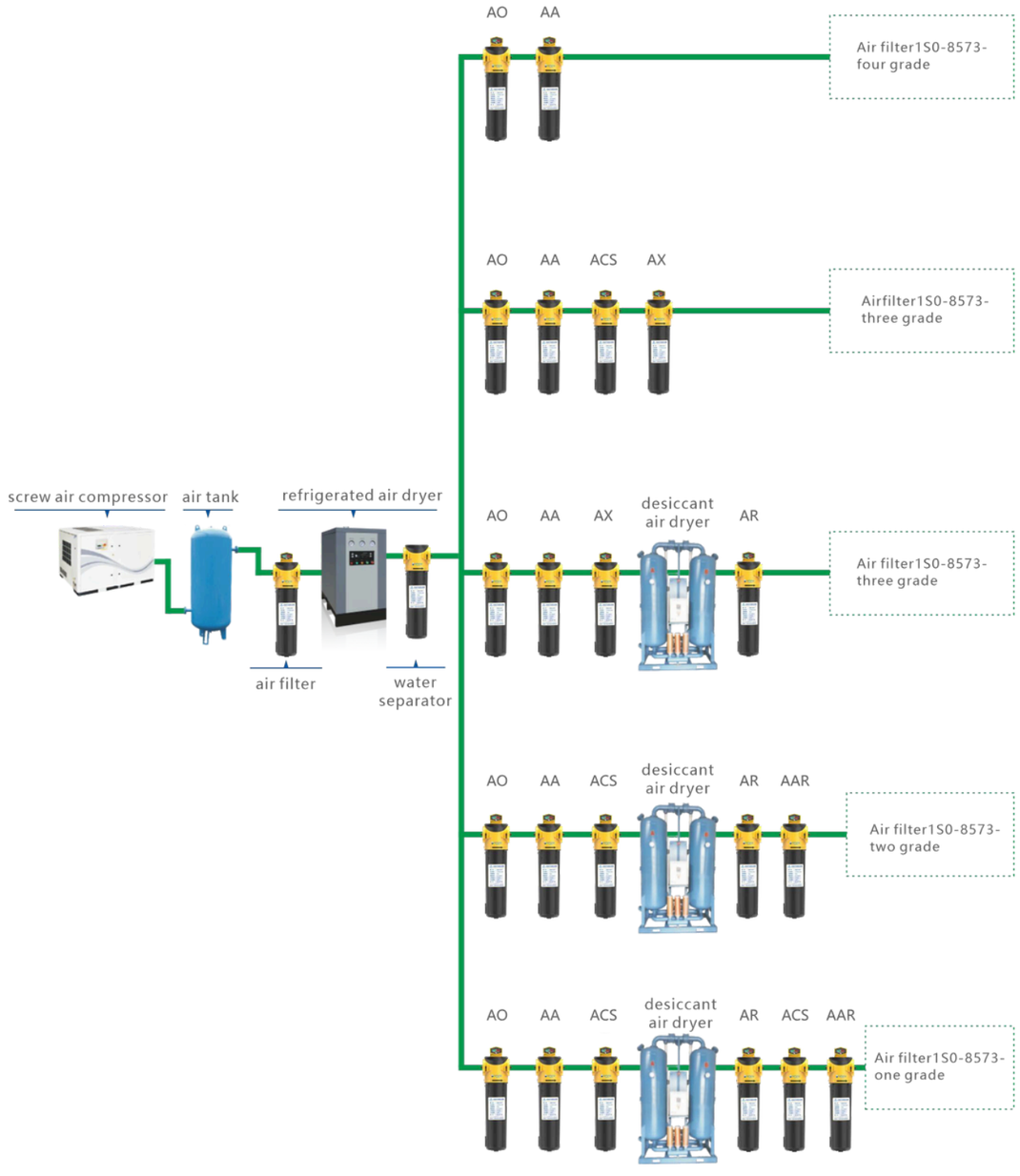
的 Increased manufacturing costs, increased downtime;

☒ Damage to machinery and equipment.

Filter Grade	Cross Section	Application	Performance Data
AO Grade		• Tool • Motor • Cylinder	Particle removal ≤1.0μm Residual oil content ≤0.1ppm
AA Grade		• Spraying • Blow molding • Instrument • Control valve	Particle removal ≤0.01μm Residual oil content ≤0.01ppm
AX Grade		• Nitrogen replacement • Transmission • Stirring • Electronic component	Particle removal ≤0.01μm Residual oil content ≤0.005ppm
ACS Grade		• Food and medicine • Stirring • Electronic component	Particle removal NA Residual oil content ≤0.003ppm

Purification treatment system application industry

Product application configuration diagram



OMD compressed air filter

The following product flows are air handling flows at a rated working pressure of 7 barg (100 psig).

型号	管道接口	流量			滤芯数量及型号	外形规格						示意图具体以实物为准
		L/S	m^3/min	cfm		W宽	D直径	H高	A	B	C	
LY-DO10	Rc1/2"	16.7	1.0	35.3	1*0010K	92	81	256	36	62	160	
LY-D015	Rc3/4"	20.0	1.5	42.4	1*0015K	92	81	256	36	62	160	
LY-D024	Rc1"	41.7	2.5	88.3	1*0025K	92	81	256	36	62	160	
LY-D035	Rc1-1/2"	63.3	3.8	134.1	1*0040K	128	112	346	49	62	160	
LY-D060	Rc1-1/2"	120.0	6.5	230	1*0070K	128	112	429	49	62	160	
LY-D090	Rc2"	200.0	10.5	370	1*0100K	160	140	544	62	62	160	
LY-D120	Rc2-1/2"	233.3	13.5	494.2	1*0150K	160	140	544	62	62	160	
LY-D150	Rc2-1/2"	300.0	18	635.4	1*0200K	160	140	820	62	62	160	

WELDED PRECISION FILTERPRECISION FILTER(D SERIES)-TECHNICAL DATA SHEET

Model	Air flow (Nm^3/min)	Filter element model	Inlet/Outlet	Dimension (W*H)
LY-D220	22	(grade)-220*1	DN65	400*1180
LY-D240	28.5	(grade)-120B*2	DN80	475*1183
LY-D360	37	(grade)-180B*2	DN100	495*1206
LY-D450	45	(grade)-220*2	DN100	460*1200
LY-D550	55	(grade)-180*3	DN125	520*1150
LY-D650	65	(grade)-220*3	DN125	520*1300
LY-D750	75	(grade)-180*4	DN125	580*1320
LY-D880	88	(grade)-220*4	DN125	580*1320
LY-D1100	110	(grade)-220*5	DN150	645*1380
LY-D1300	130	(grade)-220*6	DN150	645*1380
LY-D1500	150	(grade)-220*7	DN200	730*1500
LY-D1700	170	(grade)-220*8	DN200	730*1500

Precision filter -- Activated carbon filter

Activated carbon filter

Oil vapor passes through the coalescing filter as easily as compressed air in the form of a gas, so the adsorption filter needs to provide a large activated carbon adsorption bed to ensure efficient oil mist filtration and odor removal. Since humid air will reduce the adsorption of activated carbon, it is generally installed behind the adsorption dryer. Active broken filter is not used to remove Xu liquid oil or sol, poor maintenance or no pre-filter installed will accelerate its performance failure.

- The advanced filter element design concept makes the filter smaller and more compact.
- The shell is made of aluminum alloy die-casting, with compact structure and long service life. All shells are cleaned, degreased and special anti-corrosion treatment before spraying to improve durability
- The shell can withstand pressure for 96 hours under the pressure of 3.2Mpa, and the maximum pressure is 12.0Mpa
- Under the working condition of temperature 1.5~80℃ and pressure not higher than 1.6MPa, the shell is guaranteed to be used for 10 years, and the filter element is guaranteed to be used for 6000-8000 hours, which is suitable for offshore platform operations.
- The precise threaded interface makes the installation easier, and the parallel connection of the shells can reduce the installation
- The air leakage of the filter is the loss of energy, and many slight air leakage phenomena are not easy to be found. Omina filter adopts 100% strict full inspection, and is divided into semi-finished products and finished products, which fully protects the interests of users.

Lingyu　　others

Corrosion comparison chart after 2 years of normal working conditions

Details make quality

Reasonable thread design and excellent thread processing technology help users save time and effort.

The world's leading anti-corrosion treatment technology greatly improves the corrosion resistance of the shell, expands the application field, and avoids the secondary pollution of the product itself.

Arrow marks allow the operator to clearly understand the airflow direction.

Equipped with a differential pressure gauge or differential pressure indicator, it can simply measure the differential pressure and display the pressure drop of the filter element, so as to avoid excessive pressure differential or abnormal filter element clogging.

Genuine raw materials to ensure the strength, toughness and stability of the product.

he liquid level mirror is used to detect whether the drain is working normally, and the second is to observe whether the air in the front section is polluted. Whether the air compressor in front is leaking oil or deteriorated.

Parallel connection design can help users save installation space and time.

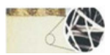
Smooth elbow design, greatly reducing turbulent flow and reducing pressure drop

Precision compressed air filter element introduction

Filter structure

FPN sealing ring prevents unfiltered air from passing through to achieve better filtering effect

The stainless steel inner and outer orifice mesh ensures the strength of the filter element and also protects the glass fiber, avoiding the secondary pollution of the compressed air caused by the damage of the filter element due to material rust



The 96% porosity has a large capacity to hold dust, low energy consumption, and a pressure drop of 0.08-0.18bar. It has a long service life and can reach 6000-8000h under normal working conditions.

The stainless steel support net ensures the strength of the filter element, and the design structure of layered filtration ensures the filtration accuracy of the filter element

The end cover is made of special material. Under the pressure of 1.8Mpa, it can withstand high temperature of 240 degrees without deformation, and it will not change shape at -20 degrees.General acid and alkali chemical corrosion, withstand harsh compressed air environment. The outer material has good hydrophobicity and oleophobicity.

The outer material prevents oil or water from being blown away again by the air and is compatible with many lubricants.

Coalescing filter

product introduction

Coalescing filters are perhaps the most important item in purification equipment. They are not only designed to filter oil mist and water, but also filter solid particles to an acceptable level, such as 0.01 micron. In the installed system, the first filter acts as a pre-filter The role of the filter protects the high-efficiency filter from large-area pollution, thereby providing high-quality compressed air, which is gradually guaranteed by matching filters with corresponding precision.

There is a problem with the air system

A large amount of water in the air compression system will cause pipe corrosion, permanent damage to valves, cylinders, pneumatic tools and equipment, and reduce the efficiency of the aftercooler/heat exchanger. If the cylinder stroke is not in place, the photoelectric capture is not accurate, which affects the operation of automation equipment.

Regular maintenance for consistent compressed air quality

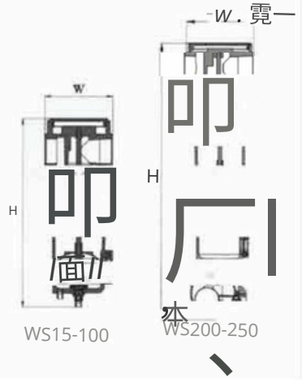
Why Filter Elements Must Be Replaced In order to meet the strict requirements of modern industry and the
international standard of IS08573-2001 compressed air quality grade, high-quality filter media are used in compressed air filters, however, the service life and dirt-holding capacity of this filter media are limited. The purpose of installing a filter is to obtain compressed air that meets the specified quality requirements. Therefore, providing stable compressed air that meets the quality requirements is the main reason for replacing the filter element. The replacement of the filter element is based on the compressed air that the manufacturer prompts to meet the requirements.

FWS Cyclone Water Separator

Product selection of FWS high-efficiency cyclone air-water separator

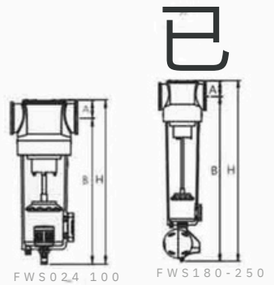
The following product flows are air handling flows at a rated working pressure of 7 barg (100 psig).

Model	Pipe size	capacity L/S m³/min cfm	quantity	Dimensions W宽	D直径	H高	The schematic diagram is subject to the actual object
WSlS	Rcl/2"	40.0 2.4 84.5	1	89	79	228	
WS25	Rc3/4"	60.0 3.6 127.1	1	89	79	228	
WSS0	Rel"	75.0 158.8 4.5	1	89	79	263	
WS75	Rel"	125.0264.0 7.5	1	120	110	335	
WSlOO	Rcl-1/2"	166. 7 10.0 353.1 233.	1	120	110	335	
WSlSO	Rcl-1/2"	8 14.0 494.2	1	120	110	434	
WS200	Rc2"	300.1 18.0 635.6	1	162	151	660	
WS250	Rc2-1/2"	416.8 25.0 882.8	1	162	151	660	
WS350	Rc2-1/2"	584. 5 35.0 1235.5	1	162	151	950	



Product selection of FWS high-efficiency cyclone air-water separator

Model	Pipe size	capacity L/S	m³/min	cfm	quantity	Dimensions W宽	D直径	H高	The schematic diagram is subject to the actual object
FWS024	Rcl/2"	40.0	2.4	84.5	1	96	79	228	
FWS036	Rc3/4.	60.0	3.6	127.1	1	96	79	228	
FWS045	Rel"	75.0	4.5	158.9	1	96	79	263	
FWS075	Rel"	125.0	7.5	264.0	1	138	111	335	
FWSlOO	Rcl-1/2"	166. 7	10.0	353.1	1	138	111	335	
FWS140	Rcl-1/2"	233.8	14.0	494.2	1	138	111	434	
FWS180	Rc2"	300.1	18.0	635.6	1	174	142	660	
FWS250	Rc2-1/2"	416. 8	25.0	882.8	1	174	142	660	
FWS350	Rc2-1/2"	584.5	35.0	1235.5	1	174	142	946	



The benefits of installing a gas-water separator in the air system

1、.R educe water corrosion on pipes and damage to valves, cylinders, electronic components and other equipment
2、Protects filters from contamination by large volumes of liquid
3、Improve air quality
4、Pre-filters for protection of refrigeration and adsorption dryers
5、Efficient removal of liquid from all fluids
6、Reduce operation and maintenance costs
7、Install a gas-water separator, the efficiency of removing liquid water is over 99%

filter accessories

Drain introduction

The drainer shel is made of genuine alumium aloy material by die-casting, which has strong tightness, the surface s sprayed and solidifed, and it is resistant to the corrosion of the synthetic lubrcating oil of the air compressor, The product is easy to install. has no noise， is easy to clean. and has no loss of compressed air. Safe to run.Regularly clean the inside of the drain housing every week, the effect of the drain is better and tis less likely to be clogged! Startind from the design concept of freestyle floatina ball automatic water technology. this series of products does not need to consume electricity,is safe, low-carbon environmentally friendly and truly saves costs for customers

Standard accessories

Differential pressuregauge

Liquid levelmirror

Manual and automatic integrated drain

6 factors

Decide which filters you want

Filter selection reference

- capacity
- Filtration medium temperature
- Viscosity of filter media
- Chemical Properties of Filter Media
- required filter grade
- continuity of existence

Instruction

1. horoughly clean the filter and filter connecting parts, and install the filter element and housing correctly.
2. Before starting up, first check whether the booster pump is running smoothly, check whether the connection is tight, and whether the valves are closed
3. Before starting the machine, first open the liquid inlet valve slowly, pass the exhaust, and then open the liquid outlet valve for normal filtration.
4. if it is found that the fitration pressure diference is greater than 0.1Mpa or the flow rate drops significanty, it indicates that most of the filter element's pore size is blocked, and it can be recoiled or cleaned, and the filter element can be replaced.