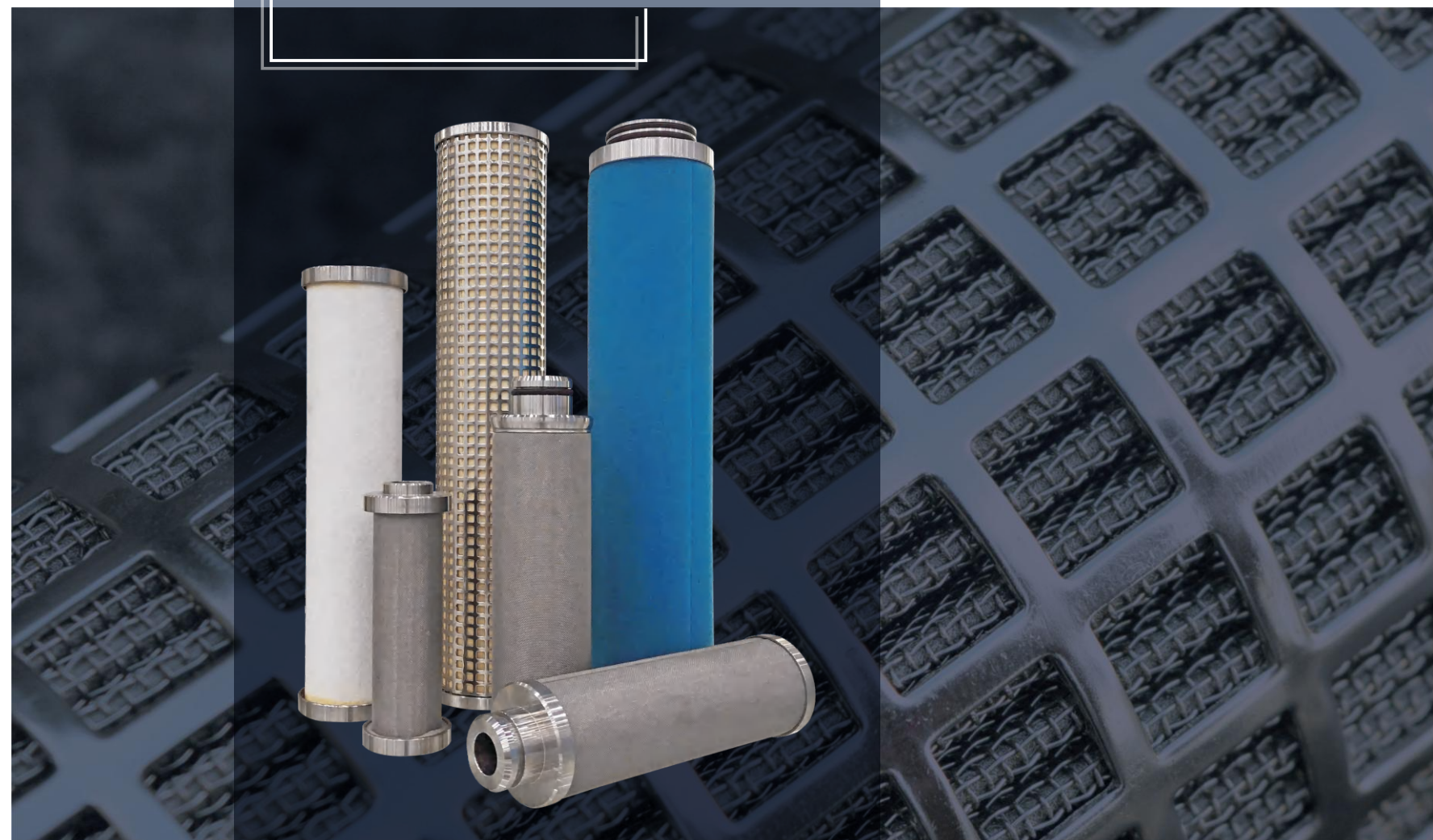




FILTER ELEMENT PRODUCT SERIES

PURIFY WORLD  
FROM  
SHENGDA



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SHENGDA FILTRATION

## CORPORATE PROFILE

Shengda Filtration is engaged in research, design and manufacture of filtration products since establishment in 1998. With advanced manufacturing equipment, sophisticated production technology, sound quality assurance system, we have passed the ISO 9001:2015 Quality Management System, ISO 14001:2015 Environmental Management System, ISO 45001:2018 Occupational Health and Safety Management System, EJ/T9001-2014 Nuclear Industry Quality Management System, Design and Manufacture License of Category A1, A2, Design and Manufacture certificate of authorization and Regulation Stamping by the American Society of Mechanical Engineers (ASME) with U stamp. The products are mainly applied to petroleum, chemical, coal chemical, natural gas, nuclear power, gas turbine generation, and wind power, coal-fired power generation, engineering machinery, and coal mining industry, etc.

We build up Filtration Test Lab for product research and development. Filtration test laboratory is professional in researching and developing filtration & separation technique. Supported with sophisticated test & inspection facility, the test lab can provide various performance evaluations of filter material, filter cartridge, and filter equipment. The main research can be divided into the following according to separation phase difference: gas-solid separation, gas-liquid separation, liquid-solid separation and liquid-liquid separation. Since establishment, we have overcome difficulties, from large-scale localization project to minor problem optimization of site operator accepted and recognized by customer and relevant national department.

Additionally, we are creating unique "Shengda Quality" all the time. "Shengda Quality" not only refers to products character, but also all-round optimization covering product, personality, business reputation, service, quality culture cultivation and quality environment creation. Personality means human character, and human dignity. As Shengda's staff, we shall not only show personal pride, sense of dignity, but also devote ourselves to creating own International brand, making "Shengda" world-renowned.

## QUALIFICATION HONOR



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## SPIRAL WOUND FILTER

### INTRODUCTION

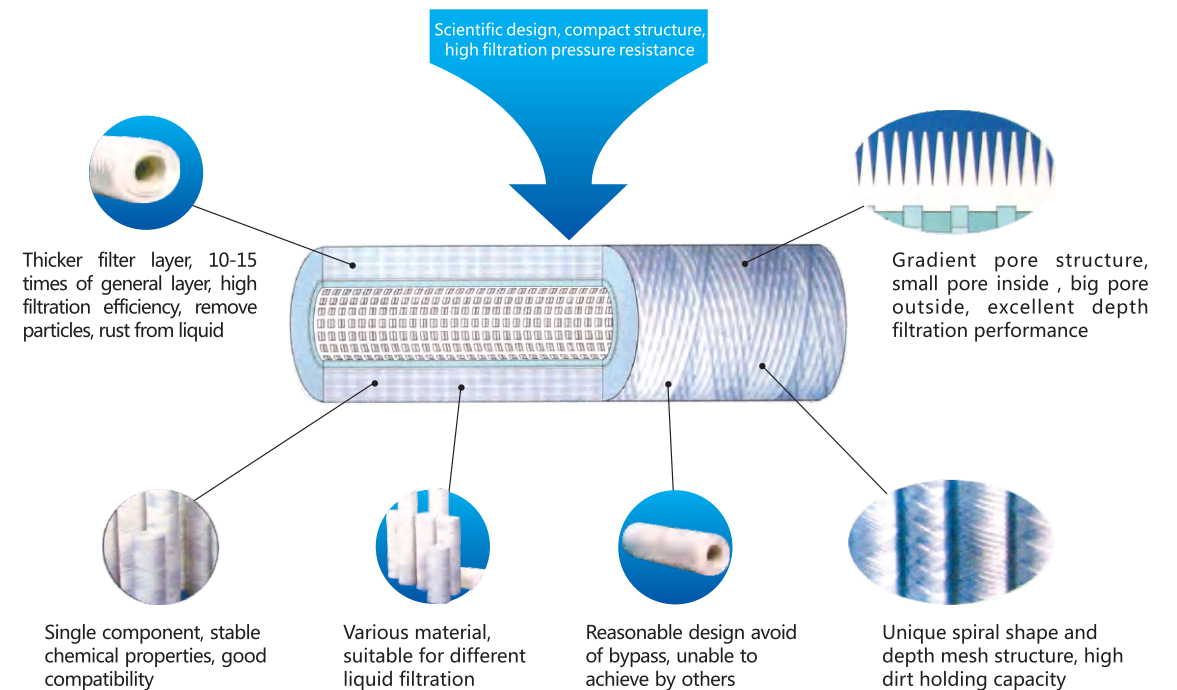
Spiral wound filter is a kind of depth filtration element, which is made of textile fiber winding on the perforated core according to special process. Different precision is achieved by changing winding density and arrangement. It is cellular structure, big pore outside, small pore inside, with excellent filtration performance, which can effectively remove the suspended solids, particles, rust, slit and other mechanical solids away from liquid.

### FILTER MATERIAL

- Polypropylene, absorbent cotton, glass fiber, acrylic fiber

### CHARACTERISTIC

- Various precision, high filtration efficiency
- High porosity, large flow rate, low pressure drop
- Large dirt holding capacity, large flow rate, small differential pressure
- Good chemical compatibility
- Made from continuous fibers, high structural stability



### APPLICATION

- As pre filter for RO system
- For chemical material, organic solvents filtration
- For acid and alkali liquids filtration in chemical process
- For lubricant oil, cutting oil, fuel oil, heavy oil filtration

### TECHNICAL PARAMETER

- Filter precision: 0.5 ~ 100μm
- Max. heat resistance: 260°C
- Max. differential pressure resistance: 0.3Mpa



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## POLYPROPYLENE PLEAT FILTER (PP FILTER)

### INTRODUCTION

Polypropylene filter is a kind of advanced deep filtration filter, pp film acting as filtration material. The sealing for each part is made as a complete body by hot melt technology without adhesives. It can be used for various serious working service.

### FILTER MATERIAL

- Pure polypropylene

### CHARACTERISTIC

- Gradual pore size change to provide high dirt holding capacity
- Various precision to select
- Hot melt process: firm and no pollution release
- Good chemical compatibility, high flow rate, low differential pressure, long service life

### APPLICATION

For chemical solution, petroleum product, natural gas, water filtration, removing solid particles and gelatinous material to control pollution degree.

### TECHNICAL PARAMETER

- Filter precision: 0.1 ~ 60μm
- Max. heat resistance: 80°C
- Max. differential pressure resistance: 0.35MPa



## PLEAT FILTER (METAL MATERIAL)

### INTRODUCTION

Various kinds of pleat filter is made of stainless steel filter material, with the characteristic of high pressure resistance, high temperature resistance, chemical corrosion resistance etc. It also has good air permeability, high dirt holding capacity, long service-life, cleanable and repeat recycling, which is an ideal filter element in petroleum, chemical, chemical fiber industry.

### FILTER MATERIAL

- Stainless steel fiber sintered felt, stainless steel woven mesh

### CHARACTERISTIC

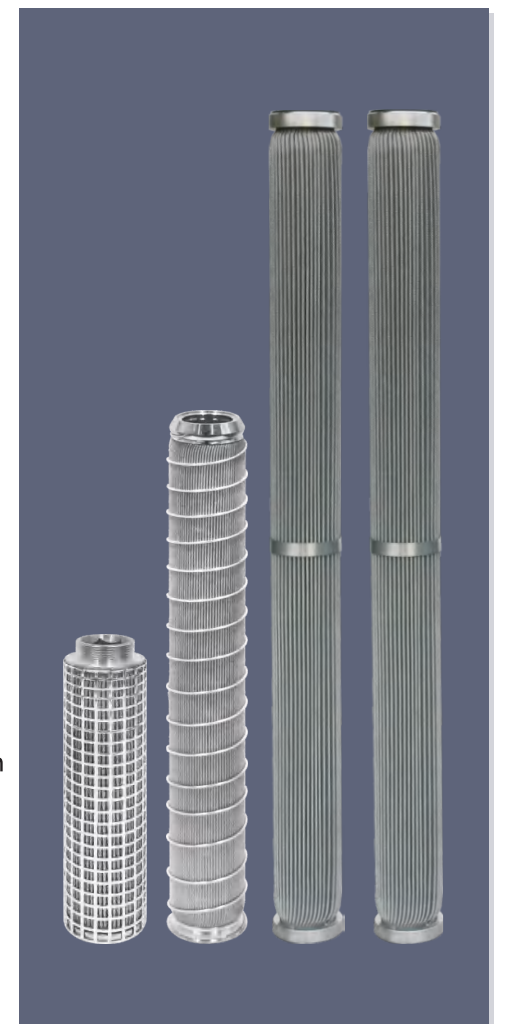
- Good air permeability, high porosity, large dirt holding capacity
- Good corrosion resistance, heat resistance, pressure resistance and wear resistance
- Uniform pore size, high filter precision
- Large flow rate per area
- Excellent chemical compatibility

### APPLICATION

- For various high temperature, corrosive liquid filtration in petroleum, chemical industry
- For natural gas, synthetic gas and other gases filtration
- For high-molecular polymer filtration
- For various hydraulic oil, lubricant oil and other oils filtration

### TECHNICAL PARAMETER

- Filter precision: 3μm ~ 800μm(liquid); 0.5μm ~ 80μm(gas)
- Max. working temperature: 1000°C
- Max. differential pressure resistance: 8MPa



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## MULTI-LAYER SINTERED MESH FILTER

### INTRODUCTION

Sintered mesh filter is made of multi-layer metal wire mesh stacked by special technique and sintered in the vacuum furnace. It is a kind of new filtration material with high strength and integrated steel performance, without the deficiencies of metal mesh, such as, low strength, poor steel performance, easy to deform and mesh hole transformation.

### FILTER MATERIAL

- Stainless steel sintered mesh, SS 316L, 304, 321, others on request

### CHARACTERISTIC

- Stable mesh pore shape, uniform porosity
- Large flow capacity, good permeability, small differential pressure
- Easy to machine, good welding performance
- Super mechanical strength and pressure resistance strength after sintered
- Surface filtration structure, easy to back flush, simple process, super performance

### APPLICATION

- For various high temperature, corrosive liquid filtration in petroleum, chemical industry
- For various melt polymer filtration in chemical fiber film industry.
- For gas filtration and separation
- For various oil products filtration and separation

### TECHNICAL PARAMETER

- Filter precision:  $3\mu\text{m} \sim 800\mu\text{m}$ (liquid);  $1\mu\text{m} \sim 80\mu\text{m}$ (gas)
- Max. working temperature:  $600^{\circ}\text{C}$
- Max. differential pressure resistance: 3.5MPa



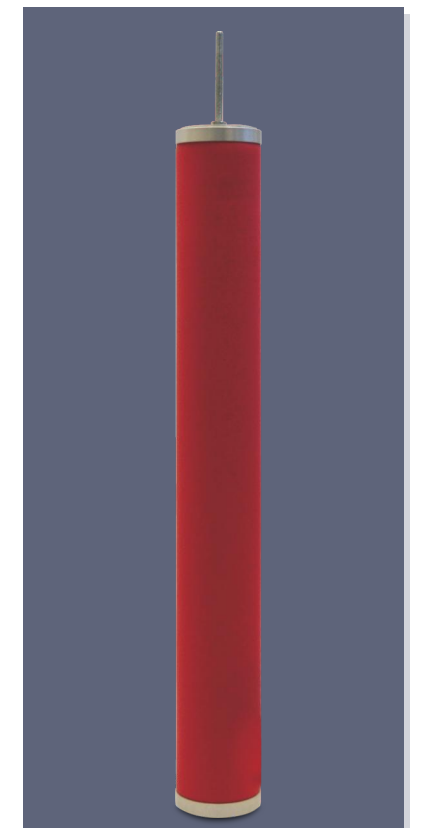
## COALESCENCE FILTER AND SEPARATION FILTER

### INTRODUCTION

Gas-liquid coalescence filter is used to separate small liquid drop from gas by capturing, coalescing and discharging. Filter is made of various filter material and each filter material has different functions.

Liquid-liquid coalescence filter is made of a special layer, by using hydrophilia function of material surface to separate liquid. When medium passing through coalescing layer, particles will be absorbed on the fiber surface, and small liquid drop will be combined, coalesced together, to become a big liquid drop. When the liquid drop is big enough, it will be dropping from the surface by the effect of gravity and continuous medium. By that way, different liquid will be separated. For special service, separation filter can be considered for better performance.

The function of Liquid-liquid separation filter is by using the difference in the tension value of the surface of the material to the different components of the medium to block the droplets of the disperse phase falling off from the coalescer through, and the continuous-phase liquid can pass smoothly, thereby achieving the secondary of different components. Usually, it can be used along with coalescence filter.



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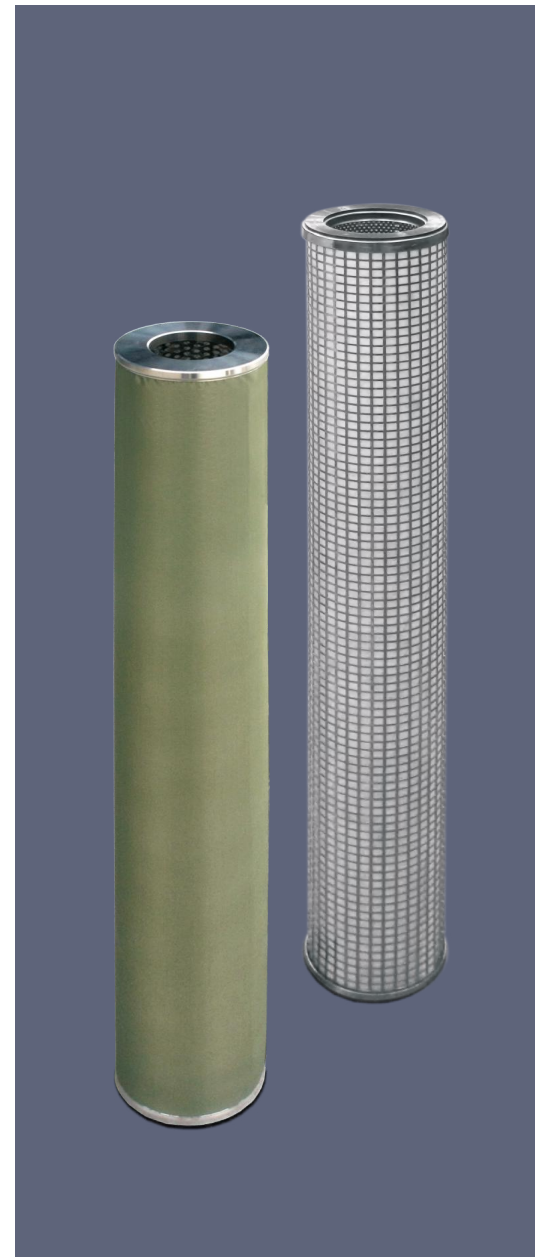
## COALESCENCE FILTER AND SEPARATION FILTER

### FILTER MATERIAL

- ▶ Coalescence filter is made of non-metal composite material, metal filter material can be used for special service
- ▶ Separation filter is made of metal material after special treatment, other materials on request

### APPLICATION

- ▶ Gas-liquid coalescence filter is used for various gas drying, to separate misty liquid from the gas, such as gas-liquid separation after air compressor, amine or glycol extraction tower, air compressor lubricant oil in fuel oil factory and chemical industry. Besides it can also be applied for dry gas sealing device from compressor inside, guarantee compressor running stably.
- ▶ Liquid-liquid coalescence filter is used for the separation of liquid-liquid mixtures (non-miscible) with a certain difference in specific gravity, such as separation of water from gasoline aviation fuel and diesel oil, separation of oil from quench water, and separation of amines from liquefied petroleum gas.



## COALESCENCE FILTER AND SEPARATION FILTER

### CHARACTERISTIC

- ▶ The coalescing process of the coalescence filter element is dynamic and stable state which can continuously filter the working medium
- ▶ The coalescence effect is good after special treatment on filter material combination, which can effectively remove the dispersed phase
- ▶ Different proposal will be selected according to different service to get the better effect

### TECHNICAL PARAMETER

- ▶ Gas-liquid coalescence filter  
Filter precision: 99.999% for 0.3μm  
Max. differential pressure resistance: 0.5MPa  
Max. heat resistance: 120°C
- ▶ Liquid-liquid coalescence filter  
Filter precision: within 30ppm(max.) according to different service  
Max. differential pressure resistance: 0.35MPa  
Max. heat resistance: 150°C



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# AIR FILTER

## INTRODUCTION

Air filter is made of pleated filter layer, core and caps, which is used for air filtration and purification in the air inlet of equipment to keep equipment normally running. Different filter material and structure may be selected according to site service and required precision to get the best performance.

## FILTER MATERIAL

- ▶ Wood pulp fiber material, blended fiber material, chemical fiber material, glass fiber material

## CHARACTERISTIC

- ▶ Closed rubber sealing is of low hardness, high strength, which has ensured gas tightness
- ▶ Micro structure, uniform porosity, high filter efficiency
- ▶ Low running resistance, large dirt holding capacity, long service-life
- ▶ Clean, no fiber dropping, stable performance

## APPLICATION

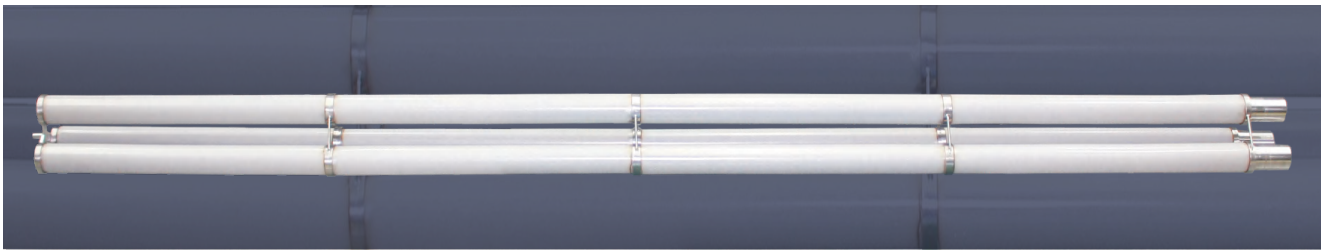
- ▶ Air inlet filter for gas turbine
- ▶ Inlet filter for air compressor
- ▶ Air inlet filter for various rotary equipment

## TECHNICAL PARAMETER

- ▶ Filter efficiency: G3 ~ H13
- ▶ Max. pressure drop resistance: 1200Pa
- ▶ Max. heat resistance: 200°C



# SINTERED METAL POWDER FILTER



## INTRODUCTION

Sintered metal powder material is made of metal powder, by isostatic compaction or rolling forming, and sintered in high temperature vacuum environment. The required sinter power filter can be fabricated according to the selection of different metal powder size and process parameters, surface sintered asymmetric membrane technique, adjustable pore size and distribution. Applicable shape covers cartridge, disc, etc.

## FILTER MATERIAL

- ▶ Stainless steel powder, bronze powder, nickel powder, titanium powder, high temperature alloy powder, others on request

## CHARACTERISTIC

- ▶ Good chemical stability, acid and alkali-resistance, used in a wide range of PH value
- ▶ Good mechanical strength, easy to regenerate, long service-life
- ▶ Uniform pore size distribution, high separation efficiency
- ▶ Heat resistance, heat impact resistance
- ▶ No dust dropping, no secondary pollution

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## SINTERED METAL POWDER FILTER

### APPLICATION

- Filtration of high molecular polymer
- Precious particles recovery(catalyst and others)
- Gas filtration, gas distribution
- Liquid filtration
- Silencing. Liquid stabilization

### TECHNICAL PARAMETER

- Filter precision:  $1\mu\text{m} \sim 40\mu\text{m}$ (liquid)  
 $0.1\mu\text{m} \sim 5\mu\text{m}$ (gas)
- Max. heat resistance:  $800^{\circ}\text{C}$
- Max. differential pressure resistance: 3MPa



## DUST REMOVAL FILTER BAG

### INTRODUCTION

Dust removal filter bag is usually made of needle felt, woven cloth and other materials, that with the advantage of high porosity, good permeability, long service life compared with traditional felt cloth. On this basis, Shengda has developed a new kind of filter bag, that is, metal fiber felt filter bag, which not only is of the characteristics of traditional filter bag, but also, can avoid traditional filter bag shortage of long elongation, transformation, low temperature resistance. Different filter bags are on request according to different service.

### FILTER MATERIAL

- Metal filter bag : stainless steel fiber sintered felt
- Non-metal filter bag for ambient temperature: dacron needle felt filter bag, antistatic dacron needle felt filter bag, dacron needle felt filter bag(easy to clean) , needle felt filter bag with dacron film, water and oil proof dacron needle felt filter bag, No. 208 dacron woven fabric filter bag, No. 729 dacron woven fabric bag filter, polypropylene needle felt filter bag, etc
- Non-metal filter bag for high temperature: NOMEX & CONEX needle felt filter bag, Fumeisi bag filter, glass fiber needle felt bag filter, PPS acid and alkali resistant needle felt filter bag, P84 needle felt filter bag, Fiber Reinforced Plastics fiber woven filter bag, glass fiber expansion filter bag, etc
- Accessories are available, such as, cage, orifice plate , clamp, expansion ring

### CHARACTERISTIC

- The max. temperature resistance of traditional filter bag is up to  $300^{\circ}\text{C}$  ; metal filter bag can be up to  $1000^{\circ}\text{C}$
- Cost saving as lower pressure drop for a long term which can reduce filter bag change-out cost
- Good chemical compatibility and wear resistance
- Strength surface filtration capacity, better pulsing performance.



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## DUST REMOVAL FILTER BAG

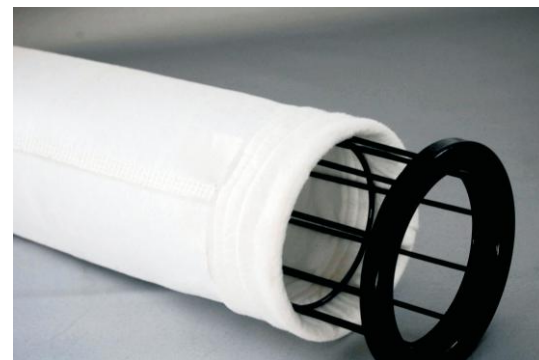
### APPLICATION

- ▶ For back blow system in F301 PP degassing recycle plant
- ▶ For smoke gas treatment dust-removal system in steel mill, foundry, refractory factory, power plant etc
- ▶ For fine material recycle, liquid and solid separation and smelting smoke filtration of aluminum electrolysis, lead, tin, zinc, copper and other rare metals
- ▶ For smoke gas filtration in waste gas incinerators, coal-fired boilers, fluidized bed boilers, etc;
- ▶ Asphalt concrete mixing, building materials, cement ceramics, lime, gypsum and other production sites
- ▶ Liquid-solid separation and fine material recovery in chemical, coke, carbon black, dyes, pharmaceuticals, plastics and other fields
- ▶ Dust control and purification collection in mining, food processing, flour, electronics, wood processing and other industries

### TECHNICAL PARAMETER

Any model and material of needle felt filter bag can be made by us, and customized is welcomed. This kind of products are of heat resistance, high strength, acid and alkali corrosion resistance, wear resistance and blend resistance etc, what's more, they are cleanable, oil and water proof, antistatic too.

- ▶ Filter precision:  $1\mu\text{m} \sim 200\mu\text{m}$
- ▶ Max. heat resistance: Non-metal filter bag  $\leq 300^\circ\text{C}$   
Metal filter bag  $\leq 1000^\circ\text{C}$
- ▶ Max. differential pressure resistance: 5Kpa ( Non-metal filter bag ) ; 15Kpa ( Metal filter bag )



## DISK FILTER

### INTRODUCTION

The disk filter is made of edge protection by metal mesh and core of different mesh, or by sintered mesh or sintered felt, which is mainly used for oil filtration in filter press, oil line system filtration in ship, diesel and other machines, as well as the chemical fiber industry installed in front of spinning machine for synthetic fiber and man-made fiber, impurities filtration for spinning concentrate.

### FILTER MATERIAL

- ▶ Stainless steel woven mesh, stainless steel sintered felt, stainless steel sintered mesh, phosphor copper mesh, brass screen

### CHARACTERISTIC

- ▶ High mechanical strength and pressure resistance
- ▶ Structure replaceable, maintenance accessible
- ▶ Good permeability, low resistance, large flow rate



### APPLICATION

- ▶ For various model of low viscosity oil lubrication plant filtration
- ▶ For oil line system filtration in filter press, ship, diesel and other machines
- ▶ Filtration in biaxially oriented polypropylene film manufacturing factory

### TECHNICAL PARAMETER

- ▶ Filter precision:  $5\text{--}800\mu\text{m}$
- ▶ Max. heat resistance:  $600^\circ\text{C}$
- ▶ Max. differential pressure resistance: 3.5MPa



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# WEDGE WIRE SCREEN FILTER(JOHNSON PIPE)

## INTRODUCTION

Wedge wire screen pipe filter is composed of ribs(vertical ribs or support ribs) and V-shaped wire, adopting the advanced full contour welding fabrication process, which is of high strength and smooth welding seam. There are only two welding points between V-shapped opening and particles, which can largely decrease clogging risk.

## FILTER MATERIAL

- ▶ 304, 321, 316L, 904L, 2205, 2507, Monel, titanium etc

## CHARACTERISTIC

- ▶ High mechanical strength, withstand higher pressure resistance
- ▶ Uniform filtration slot, easy for uniform filter cake forming, better for backflushing
- ▶ Accurate filter precision, large opening area with great treatment capacity
- ▶ No particle stacking corner is found due to Nearly 2-D structure. Wedge slot can accumulate the backflush energy. Backflushing performance is satisfied

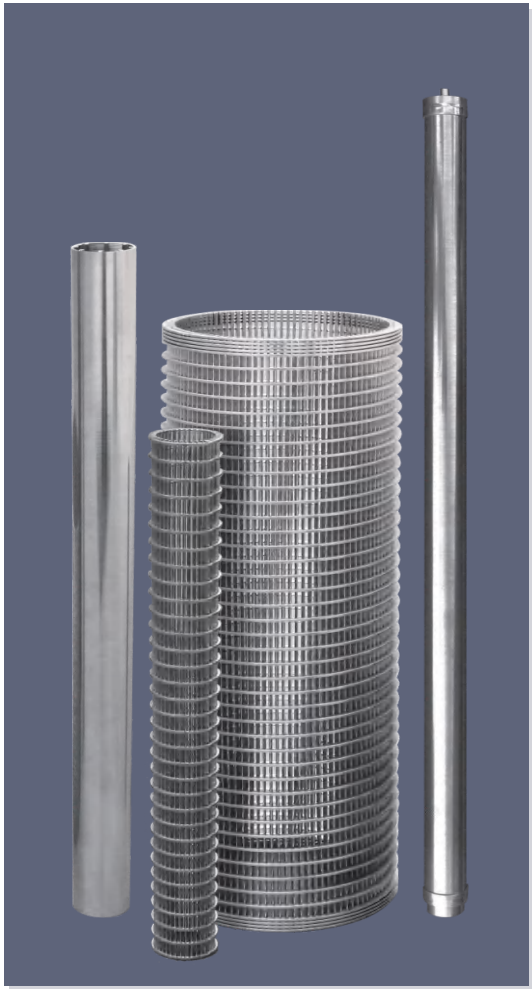
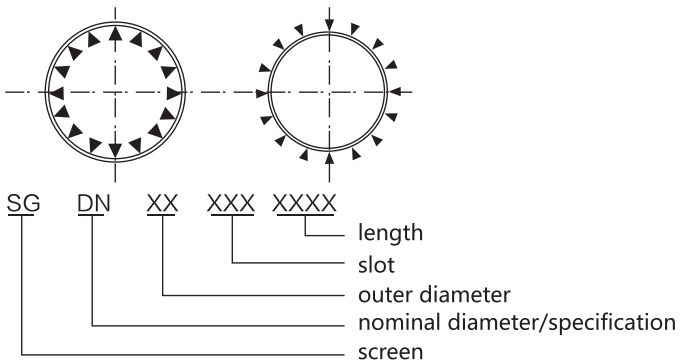
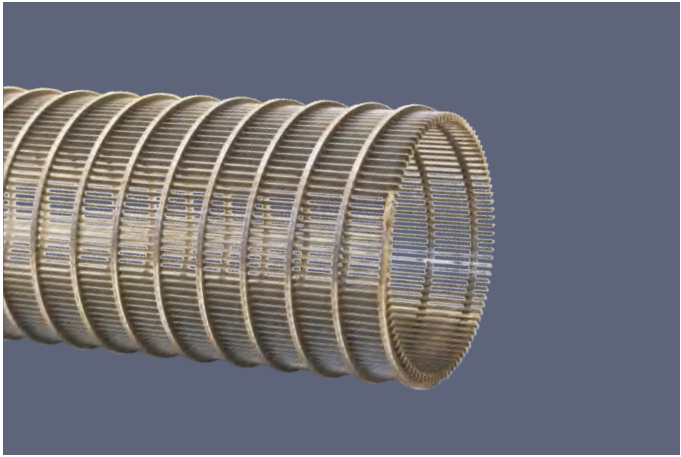
## APPLICATION

- ▶ For backwashing filter element
- ▶ For molecular sieve support
- ▶ For ion exchange unit
- ▶ For sand prevention in oil well, gas well and water well etc.
- ▶ Polypropylene desiccant grid
- ▶ Stainless steel nozzle cap



## TECHNICAL PARAMETER

- ▶ Filter precision:  $\geq 20\mu\text{m}$
- ▶ Max. heat resistance:  $800^{\circ}\text{C}$
- ▶ Max. differential pressure resistance: 3MPa



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# FILTER FOR HYDRAULIC LUBRICATION SYSTEM

## INTRODUCTION

This filter is installed in the oil line filter or hydraulic system to remove the mechanical powder as well as other mechanical impurities from the oil pipeline, which can prolong the system service life, and is the ideal filter for petrochemical, chemical, power and chemical fiber industry.

## FILTER MATERIAL

- ▶ Stainless steel sintered mesh, glass fiber filter paper, stainless steel woven mesh, wool pulp paper

## CHARACTERISTIC

- ▶ Composite structure, high filtration accuracy
- ▶ Large dirt holding capacity, long service life
- ▶ High corrosion resistance and pressure resistance
- ▶ Increased flow rate per unit area
- ▶ Filter made by stainless steel woven mesh, uniform pore size, high strength, easy to clean

## APPLICATION

- ▶ It is widely used in petroleum, chemical, power plants, mining, pharmaceutical, food, engineering machinery and other industries

## TECHNICAL PARAMETER

- ▶ Filter precision: 3 ~ 200μm
- ▶ Max. heat resistance: 150℃
- ▶ Max. differential pressure resistance: 2MPa



# PARTNERS



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