

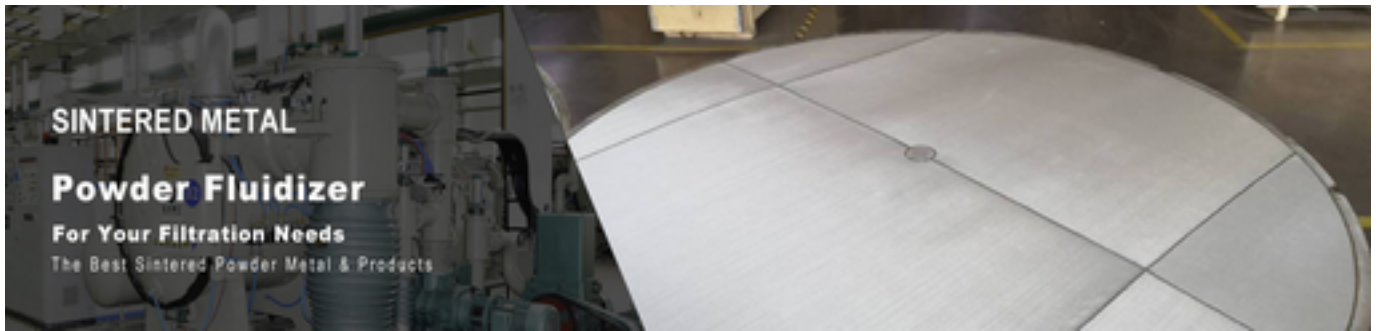
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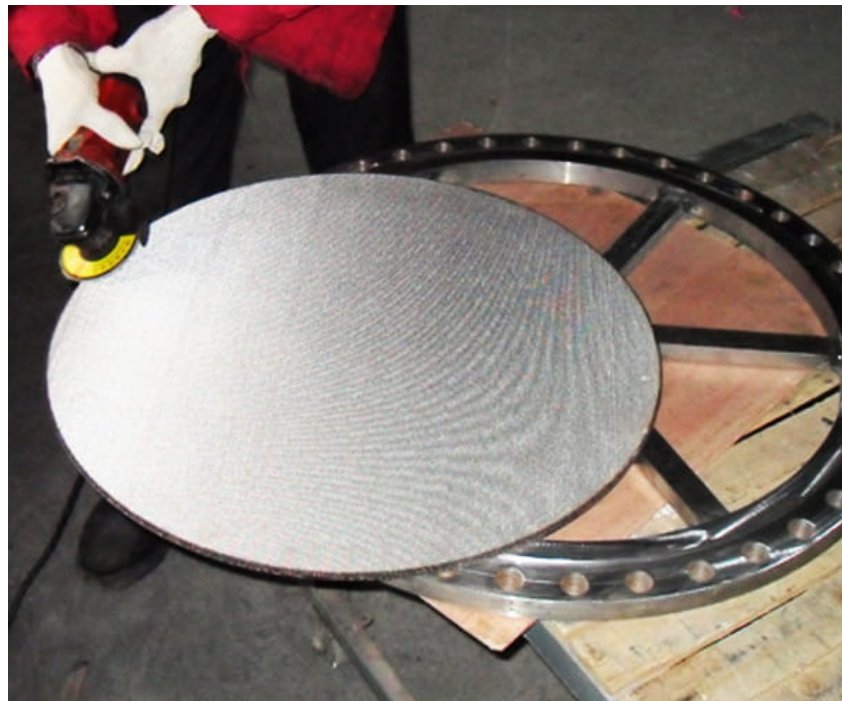
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Fine-grained bulk materials such as flour, cement, pigments, milk powders are often difficult to be stored, mixed and discharged because these fine-grained powders do not flow freely. They tend to agglomerate and form bridges or tunnels around the outlet and therefore, can only be removed effectively with some sorts of aids.

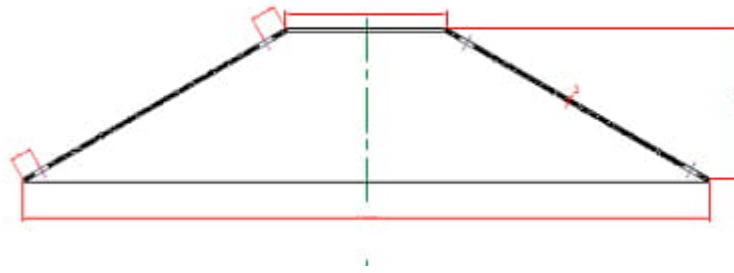
SINFT develops sintered metal fluidizer which can solve this problem.



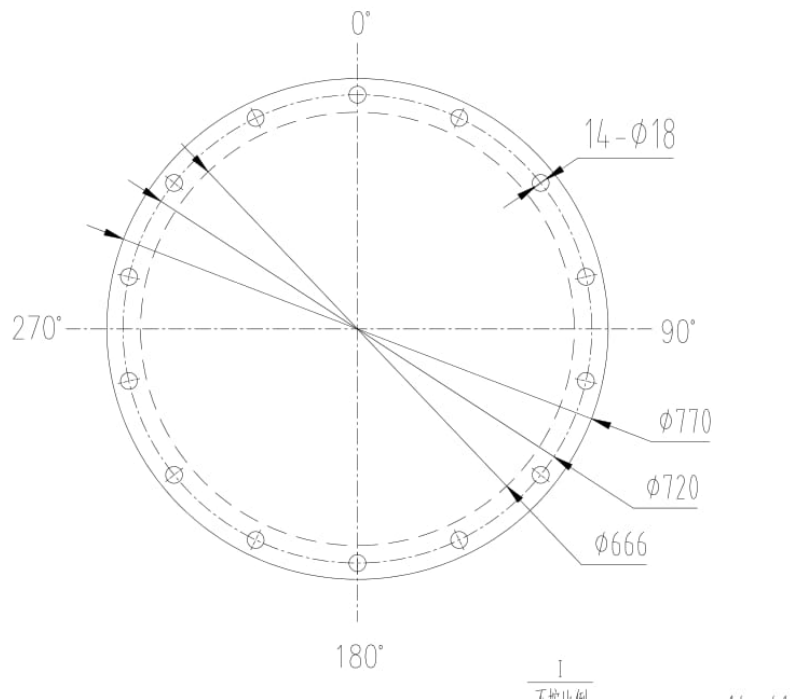
Powder Fluidizer Fluidizer production

The porous metal fluidizers are manufactured from isostatic cool pressing and high temperature vacuum sintering. It is a special application of modern fluidized bed technology for the treatment of bulk material of small particle sizes. Porous bottom or aeration units are assembled at the inner surface of bins and silos. Air is blown into the bin through the whole area of these porous units to fluidize the stored bulk material, to set it into a liquidlike state. Then caking or discharge problems can be solved. Besides that, the unit can also work as mixing or homogenization beds, thereby avoiding the need of additional discharge elements.

## Data & Specifications:



Powder Sintering Fluidizer



Sintered Metal Mesh Fluidizer

We can customize products acc. to specific requirements:

- Material required
- Micron rating required
- Operation Temperature
- Dimensions and tolerances
- Hardware and fittings to be connected

## Product Material:

- Stainless Steel (SS316L, 304L, 310S, 904L)
- Titanium
- Hastelloy (C-22, C-276, XB-2)

- Inconel (600, 625,800)
- Monel (400 and so on)
- Nickel

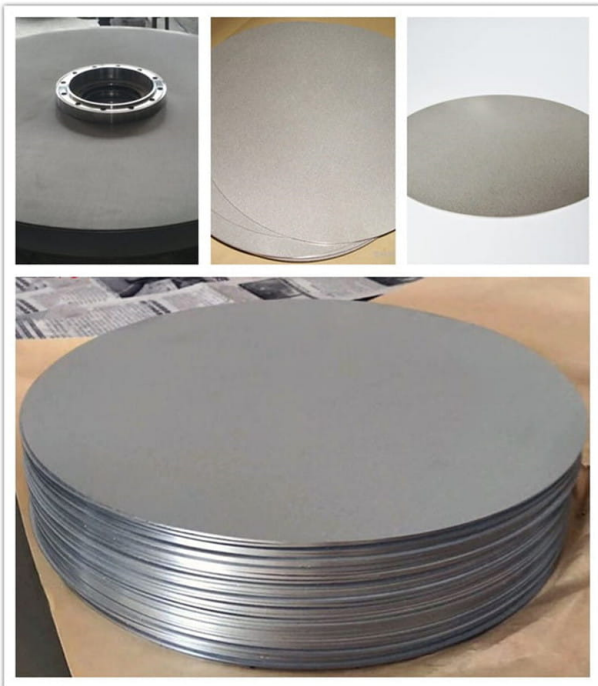
## **Material Type :**

Sintered Metal Mesh  
Powder Sintering

## **Features**

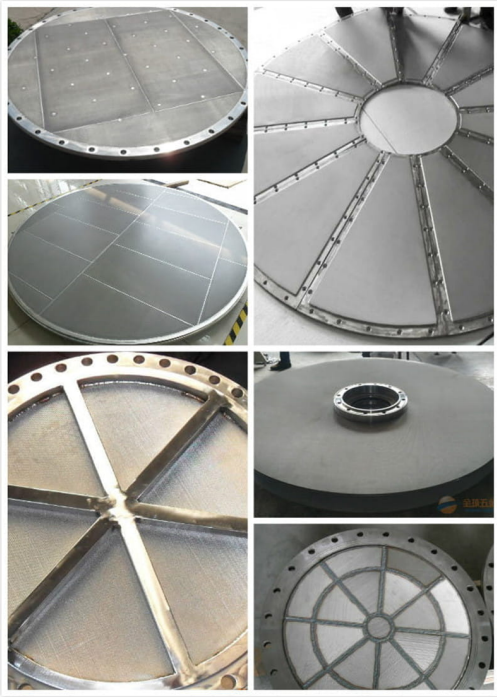
- Even air distribution across the entire surface
- Constructive simple solutions
- Specific selectable pore size
- High mechanical strength
- Good chemical resistance
- Simple installation
- Good corrosion resistance

## **Powder Sintering Fluidizer**



## **Sintered Metal Mesh Fluidizer**





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## Description

SINFT offers a wide range of porous metal spargers tips for laboratory and pilot scale bioreactors and fermenters. With media grades ranging from  $2\mu\text{m}$  to  $15\mu\text{m}$ , SINFT porous spargers offer the flexibility to generate bubble sizes which are optimal for your specific media, organism and mass transfer requirements. Various specifications and connections are available.

In many cell culture mediums, oxygen is difficult to be solubilized, which causes difficulty in optimizing the critical nutrient. SINFT micro spargers can significantly improve the mass transfer rates of oxygen or carbon dioxide by maximizing the surface area between the media and the aeration bubble.





## Features

- Precise pore size distributions
- Small gas bubble aerated
- Easily cleaned/back-flushed
- Corrosion/abrasion resistant
- High temperature resistance
- High pressure resistance
- No media migration and second pollution

## Product Material:

- Stainless Steel (SS316L, 304L, 310S, 904L)
- Titanium
- Hastelloy (C-22, C-276, XB-2)
- Inconel (600, 625, 800)
- Monel (400 and so on)
- Nickel

## Applications:

- Conventional Sintered Metal Spargers

Pure water and mineral water ozone sterilization aeration

Industrial waste water aeration

Aeration of domestic sewage treatment aeration tank

Aeration in high temptation environment

- Special Sintered Metal Spargers

Oil produced water degreasing aeration

Industrial waste water degreasing aeration

Aeration of high viscosity fluid

Aeration in high temptation environment

Aeration in easy scaling application

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SINFT **Sintered Tube Shape Sparger** are composed by three parts: sintered porous metal tube, solid metal plate and thread connection which are welded to the tube. Sintered porous tube is the main part which is sintered by pure titanium powder or SS316L powder. The micron rating and distribution of the pores can be controlled by the metal powder material.

Various specifications and connections are available. Tube spargers should be horizontal placed to increase the aeration area.



## Features

- Precise pore size distributions
- Small bubble created
- Easily cleaned/back-flushed
- Corrosion/abrasion resistant
- High temperature resistance
- High pressure resistance
- No media migration and second pollution



## Data & Specifications:

No.	Code	Tube OD(mm)	Length(mm)	Connection	Aeration Area(m2)	O2 utilization ratio
1	SFT-BQG-01	Φ4-60 30-40%	8-64	M6-M20	-	
2	SFT-BQG-02	Φ60-120 30-40%	60-750	G1/2"-G1"	0.5-3	
3	SFT-BQG-03	Φ60-150 30-40%	250-1000	G1/2"-G1"	0.5-4	

## Product Material:

- Stainless Steel (SS316L, 304L, 310S, 904L)
- Titanium
- Hastelloy (C-22, C-276, XB-2)
- Inconel (600, 625, 800)
- Monel (400 and so on)
- Nickel

Note: Special material, sizes and shape can be customized. Pls. contact SINFT at [iris@sinfftfilter.com](mailto:iris@sinfftfilter.com) if you have more exacting requirements.

## Applications:

- Conventional Sintered Metal Spargers

Pure water and mineral water ozone sterilization aeration  
 Industrial waste water aeration  
 Aeration of domestic sewage treatment aeration tank

Aeration in high temperature environment

- Special Sintered Metal Spargers

Oil produced water degreasing aeration

Industrial waste water degreasing aeration

Aeration of high viscosity fluid

Aeration in high temperature environment

Aeration in easy scaling application

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**Sintered Spherical Shape Sparger** are composed by three parts: sintered porous spherical part in titanium, solid titanium plate and thread connection.

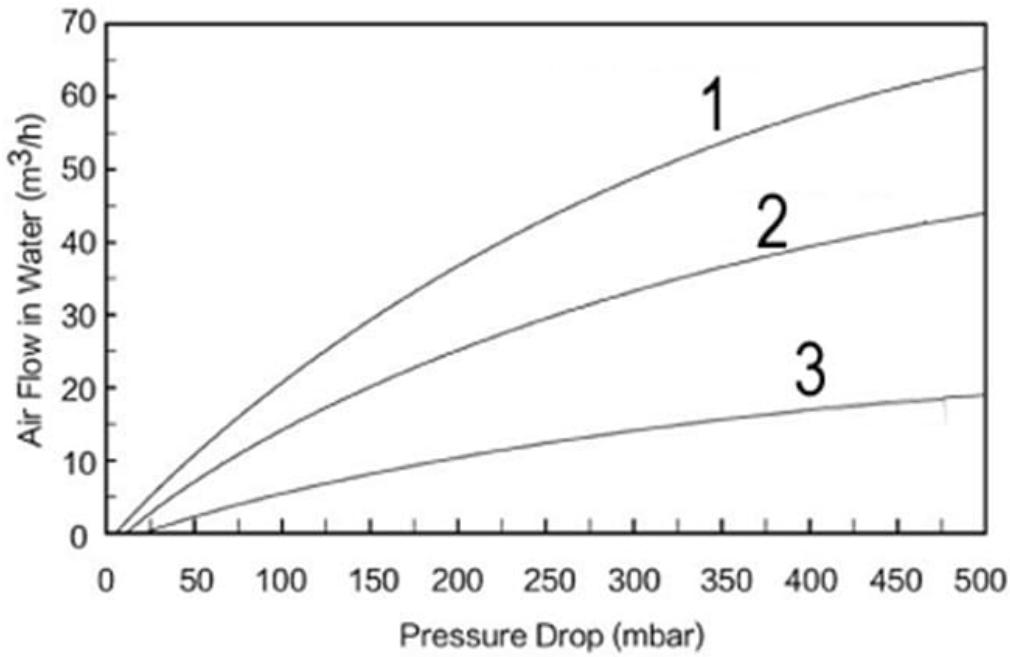
Sintered porous spherical part is the main part which is sintered by pure titanium powder material.

The micron rating and distribution of the pores can be controlled by the metal powder.



## Features

- Precise pore size distributions
- Small bubble created
- Easily cleaned/back-flushed
- Corrosion/abrasion resistant
- High temperature resistance
- High pressure resistance
- No media migration and second pollution



**Data & Specifications:**

No.	Code	Gas Outlet(mm)	Height(mm)	Connection	Aeration Area(m2)	O2 utilization ratio
1	SFT-TFBQ-100	Φ100 32.22-45.33%	57	R 1/2"	0.5	
2	SFT-TFBQ-150	Φ150 32.22-45.33%	76	R 1/2"	0.8	
3	SFT-TFBQ-180	Φ180 32.22-45.33%	82	R 1/2"	1	

Note: Special material, sizes and shape can be customized. Pls. contact SINFT sales at [iris@sinftfilter.com](mailto:iris@sinftfilter.com) if you have more exacting requirements.



**Product Material:**

- Stainless Steel (SS316L, 304L,310S,904L)
- Titanium
- Hastelloy (C-22,C-276,XB-2)
- Inconel (600, 625,800)
- Monel (400 and so on)
- Nickel

### **Applications:**

- Conventional Sintered Metal Spargers

Pure water and mineral water ozone sterilization aeration

Industrial waste water aeration

Aeration of domestic sewage treatment aeration tank

Aeration in high temptation environment

- Special Sintered Metal Spargers

Oil produced water degreasing aeration

Industrial waste water degreasing aeration

Aeration of high viscosity fluid

Aeration in high temptation environment

Aeration in easy scaling application

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## Description

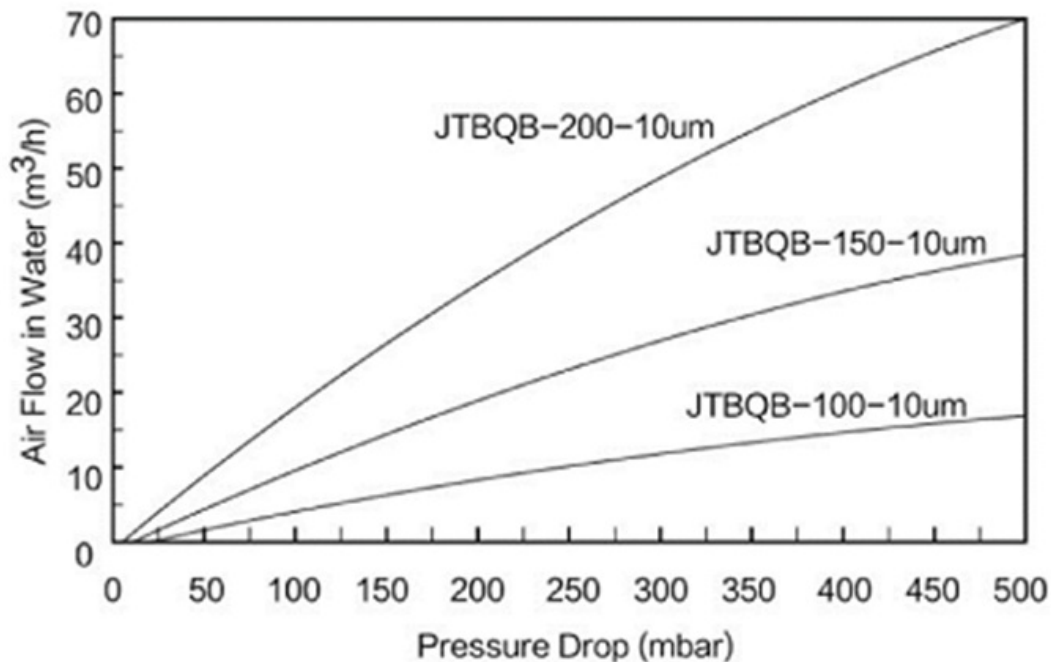
SINFT disc spargers are composed by four parts: sintered porous disc in titanium, shell in SS316L, flange in SS316L and sparger gasket.

Sintered porous disc is the main part which is sintered by pure titanium powder material. The micron rating and distribution of the pores can be controlled by the metal powder.



## Features

- Precise pore size distributions
- Small bubble created
- Easily cleaned/back-flushed
- Corrosion/abrasion resistant
- High temperature resistance
- High pressure resistance
- No media migration and second pollution



### Data & Specifications:

No.	Code	Gas Outlet(mm)	Height(mm)	Connection	Aeration Area(m2)	O2 utilization ratio
1	SFT-FBQ-100	Φ100	60	R 1/2"	0.4	32.22-45.33%
2	SFT-FBQ-150	Φ150	68	R 1/2"	0.8	32.22-45.33%
3	JSFT-FBQ-200	Φ200	83	R 1/2"	1	32.22-45.33%

Note: Special material, sizes and shape can be customized. Pls. contact SINFT sales at [iris@sinffilter.com](mailto:iris@sinffilter.com) if you have more exacting requirements.

### Product Material:

- Stainless Steel (SS316L, 304L,310S,904L)
- Titanium
- Hastelloy (C-22,C-276,XB-2)
- Inconel (600, 625,800)
- Monel (400 and so on)
- Nikel

## **Applications:**

- Conventional Sintered Metal Spargers

Pure water and mineral water ozone sterilization aeration

Industrial waste water aeration

Aeration of domestic sewage treatment aeration tank

Aeration in high temptation environment

- Special Sintered Metal Spargers

Oil produced water degreasing aeration

Industrial waste water degreasing aeration

Aeration of high viscosity fluid

Aeration in high temptation environment

Aeration in easy scaling application

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## Sintered Titanium Filter Cartridges



©	Filtering precision $\mu\text{m}$	Maximum Aperture $\mu\text{m}$	coefficient of permeability $10^{-12}\text{m}^2$	Permeability $\text{m}^3/\text{h}.\text{m}^2.\text{kpa}$	Thickness mm	Compressive strength $\text{Mpa}/\text{cm}^2$	Maximum Operating Temperatures $^{\circ}\text{C}$
T9	0.2	2.5		1.5	3	3.0	300
T8	0.5	4		3	3	3.0	300
T7	1	6		5	3	3.0	300
T6	2	10		15	3	3.0	300
T5	5	15	0.04	40	3	2.5	300
T4	10	30	0.15	120	3	2.5	300
T3	20	60	1.01	250	3	2.5	300
T2	30	100	2.01	500	3	2.5	300
T1	50	160	3.02	800	3	2.5	300





### Sintered Titanium Filter Cartridges



Material: titanium and titanium alloy  
Shape: pipe/tube, plate/sheet, disc, ring, bar, foil, cone

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## ***Stainless Steel Pneumatic Muffler***

Stainless steel pneumatic muffler, also called stainless steel sintered silencer, is widely used on the exhausts of valves to reduce the noise and prevent metal chips, abrasive grits, dust and other contaminants from entering open exhaust ports and causing premature valve failure.

The stainless steel material can ensure the excellent anti-corrosion performance and durable life. According to different mesh types, they can be divided into:

Powder sintered pneumatic muffler.

Woven mesh pneumatic muffler.

Compressed knitted mesh = pneumatic muffler.



## SFT-XY-01

Screw Thread	Dimension	
Size	L	S
M5"	8	8
G 1/8"	11	11
G 1/4"	16	14
G 3/8"	19	17
G 1/2"	22	22
G 3/4"	25	27
G 1"	33	33

## SFT-XY-02

Screw Thread	Dimension	
Size	L	S
G 1/8"	25	12
G 1/4"	34	17
G 3/8"	44	19
G 1/2"	45	22
G 3/4"	55	27
G 1"	68	34

## SFT-XY-03

Screw Thread	Dimension	
Size	L	S
10-32 cmF	18	8
G 1/8"	22	11
G 1/4"	35	14
G 3/8"	38	17
G 1/2"	47	22
G 3/4"	57	27
G 1"	73	34
G 1 1/4"	83	43
G 1 1/2"	93	51

## SFT-XY-04

Screw Thread	Dimension	
Size	L	
G 1/8"	13	
G 1/4"	17	
G 3/8"	19	
G 1/2"	20	
G 3/4"	22	

G 1"	25	
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### SFT-XY-05

Screw Thread	Dimension	
Size	L	S
G 1/8"	15	12
G 1/4"	20	17
G 3/8"	20	19
G 1/2"	22	22
G 3/4"	24	27
G 1"	27	34

### SFT-XY-06

Screw Thread	Dimension	
Size	L	S
M5"	7.5	8
G 1/8"	9.5	12
G 1/4"	11	17
G 3/8"	12.5	19
G 1/2"	13.5	22
G 3/4"	17	27
G 1"	20.5	34

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## ***Sintered Powder Sensor Housing***

SINFT sintered powder sensor shell are made by sintering 316L powder material in high temperature. They have been widely used in environmental protection, petroleum, natural gas, chemical, environmental detection, instrumentation, pharmaceutical equipment and other fields.



**SINFT Sintered Powder Sensor Housing** protection guard have excellent performances of smooth and flat internal and external tube wall, uniform pores and high strength. The dimensional tolerance of most models is controlled within 0.05 mm.

Usage: temperature and humidity sensor housing

Theory: current and inductance sensor, current and inductance

Output: Analog Sensor ,digital sensor

Material: sintered stainless steel material, can be customized

Pore Size: 20um 30-40, 40-50, 50-60, 60-70, 70-90

Type: RHT sensor

Accuracy: temperature:  $\pm 0.2^{\circ}\text{C}$  @0-90 $^{\circ}\text{C}$  , humidity:  $\pm 2\%$  RH @(0~100)% RH

Features: Excellent long-term stability, LCD display or weatherproof transmitter cover, maximum load 665 $\Omega$

Applications: drying, test chamber, combustion air , meteorological measurement

Certificate: ISO9001 M.D CE

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- > Widely used including water purification&hydrogen purification
- > Durable performance and good back flush flow rate
- > High heat resistance up to 600°C
- > Ability to withstand high pressure up to 3000psi
- > 9% particle removing efficiency



Regular Filson sintered metal mesh discs have a micron rating range of about 2-300µm. In contrast, Filson's porous metal disc has a great advantage on filtration accuracy of about 0.2 µm with a high filtration efficiency of up to 99.9%.

- . Raw material: SS304, SS 316L, SS 904L, bronze, Inconel ...
- . Temperature range: -200°Cto 600°C
- . Shape: round, toroidal, oval ...
- . Particle removal efficiency: 99.9%
- . Filtration accuracy: 0.2µm to 200µm

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SINFT designs and manufactures high-performance sintered powder metal and sintered powder filter products for all industries such as Mushroom head aerator, Aerator cylinder, Titanium alloy aerator, Sintered powder filter element, Sintered Powder Metal Sensors, Sintered Copper Filter, Sintered powder metal silencer and material-specific filters and any other sintered powder metal part.

Grades: 316L, Hastelloy® (C-22, C-276, C, B, X), iron alumindes (FAS), Ni-200, and Inconel® (IN-600, IN-625). The fluid medium (corrosiveness) of the target environment and targeted flow rates will influence material choice.

### ***Customizable Filter Element End Cap***



### ***Optional Filter Element Interface***



# ***Sintered Stainless Steel Powder Filter Element***

## **Specification:**

1. **Material:** titanium powder particle, stainless steel powder particle.
2. **Filter Media:** titanium powder sintered, SUS316 powder sintered.
3. **OD:** 10mm, 20mm, 30mm, 40mm, 50mm, 60mm, 70mm, 80mm, etc.
4. **Thickness of wall:** 1.0mm, 2.0mm, 3.0mm, 4.0mm, 5.0mm, etc.
5. **Length:** 10", 20", 30", 40".
6. **Connectors:** DOE, SOE, tire rod, thread (NPT, BSP, Metric) screw, flange, 220, 222, 226 (Code7).
7. **Working Temperature:** -200 - 1000°C.
8. **Filter Shape:** could be cartridge filters, disc filters, cup filters, cap filters, filter plate, etc.





Sintered Titanium Powder Filter Element						
Mode	Filtering level	Filtering precision (um)	Maximum Aperture (um)	Permeability (m <sup>3</sup> /h.m <sup>2</sup> . K pa)	Thickness (mm)	Compressive strength (Mpa/cm <sup>2</sup> )
SFT-STA-1	T9	0.2	2.5	1.5	0.6 - 10	3
SFT-STA-2	T8	0.5	4	3		3
SFT-STA-3	T7	1	6	5		3
SFT-STA-4	T6	2	10	15		3
SFT-STA-5	T5	5	15	40		2.5
SFT-STA-6	T4	10	30	120		2.5
SFT-STA-7	T3	20	60	250		2.5
SFT-STA-8	T2	30	100	500		2.5
SFT-STA-9	T1	50	160	800		2.5

Sintered Stainless Steel Powder Filter Element						
Model	Filtering level	Filtering precision (um)	Maximum Aperture (um)	Permeability (m <sup>3</sup> /h.m <sup>2</sup> . kPa)	Thickness (mm)	Compressive strength (Mpa/cm <sup>2</sup> )
SFT-SSL-1	S9	0.2	2.5	1.0	0.6 - 10	3
SFT-SSL-2	S8	0.5	4	3		3
SFT-SSL-3	S7	1.5	6	5		3
SFT-SSL-4	S6	2.5	10	10		3

SFT-SSL-5	S5	5	15	40	2.5
SFT-SSL-6	S4	10	30	160	2.5
SFT-SSL-7	S3	28	60	350	2.5
SFT-SSL-8	S2	40	100	700	2.5
SFT-SSL-9	S1	65	160	1000	2.5

## ***Sintered Powder Metal Sensors***



## ***Sintered Metal Sparger***



***Sintered Copper Filter***



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The sintered titanium powder filter elements are made of industrial high-purity titanium powder. As a honest manufacturer, we use 99.6899% titanium powder as raw material. After sieving, cooling and isostatic pressing of the raw materials, the microfiltration elements are sintered by high temperature and high vacuum. Finished products are featured with uniform structure, small filtration resistance, high separation and purification efficiency.

It is especially suitable for urban sewage, new expansion of large-scale water plants & renovation of old aeration tanks, ozone aeration in the water treatment industry and catalytic gas aeration in the chemical industry.

**Feature**

- . Real manufacturers, SINFT owns production
- . Uniform aperture distribution, high porosity.
- . Small aeration bubble diameter & large gas-liquid boundary area.
- . High temperature resistance, can be used normally below 280 ƆC.
- . Low filtration resistance, high separation and purification efficiency.
- . No hole blockage, good chemical stability, resistant to acid & alkali.
- . Good oxidation resistance, 40% lower energy consumption than conventional aerator.
- . No magnetic, non-toxic, no shedding, no pollution, good biological compatibility.
- . Strong anti-microbial ability, does not interact with microorganisms.
- . Good airtightness and compact structure, suitable for harsh working conditions.

**Sintered Metal Sparger Type:**



Aerator cylinder



Aerator plate



Mushroom head aerator



Precision threads and burnished finish



### Specification

. **Materials:** pure titanium powder (99.6899%).

. **Bore Diameter:** 0.22–100  $\mu\text{m}$ .

. **Porosity:** 35% –50%.

. **Working Temperature:**  $\leq 280\text{ }^{\circ}\text{C}$ .

. **Compressive Strength:** 0.5 - 1.5 Mpa.

#### . Aerator Plate

1. **Diameter:** 100 mm, 150 mm, 180 mm.

2. **Thickness:** 2–5 mm.

3. **Filter rating:** 0.22  $\mu\text{m}$ , 0.45  $\mu\text{m}$ , 1  $\mu\text{m}$ , 3  $\mu\text{m}$ , 5  $\mu\text{m}$ , 10  $\mu\text{m}$ , 20  $\mu\text{m}$ , 30  $\mu\text{m}$ , 50  $\mu\text{m}$ , 80  $\mu\text{m}$ , 100  $\mu\text{m}$ .

#### . Aerator Cylinder

1. **Diameter:** 22 mm, 30 mm, 50 mm, 60 mm, 80 mm, 100 mm, 120 mm.

2. **Length:** 125 mm, 250 mm, 300 mm, 500 mm, 600 mm, 750 mm, 1000 mm.



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Екатеринбург (343)384-55-89	Москва (495)268-04-70	Санкт-Петербург (812)309-46-40	Хабаровск (4212)92-98-04
Иваново (4932)77-34-06	Мурманск (8152)59-64-93	Саратов (845)249-38-78	Челябинск (351)202-03-61
Ижевск (3412)26-03-58	Набережные Челны (8552)20-53-41	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Иркутск (395)279-98-46	Нижний Новгород (831)429-08-12	Симферополь (3652)67-13-56	Ярославль (4852)69-52-93
Россия (495)268-04-70	Киргизия (996)312-96-26-47	Казахстан (7172)727-132	