



BROCHURE

SINTERED FILTERS

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SCAN FOR
VCARD



SINCE 1940

Technical supplier



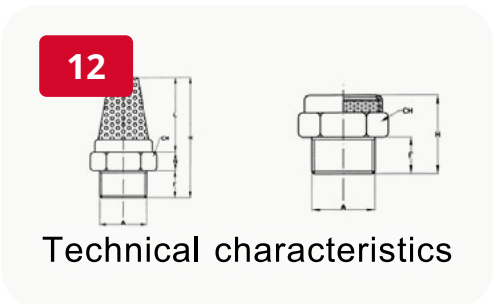
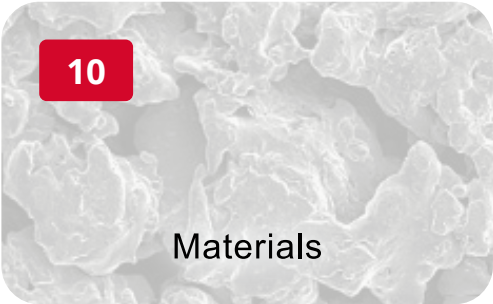
THN is a specialist in technical products, we have divided these products into five product groups: piston rings, Fey laminar rings, plain bearings, sintered filters en linear components.

We can deliver these millions of products superfast thanks to a smart stock, far-reaching IT automation and efficient logistics.



06

SINTERED FILTERS



The complete product line

FIVE PRODUCT GROUPS

Besides sintered filters, THN also has an extensive range of piston rings, Fey laminar rings, plain bearings and linear components.



Piston rings



Fey laminar rings



Plain bearings



Linear components

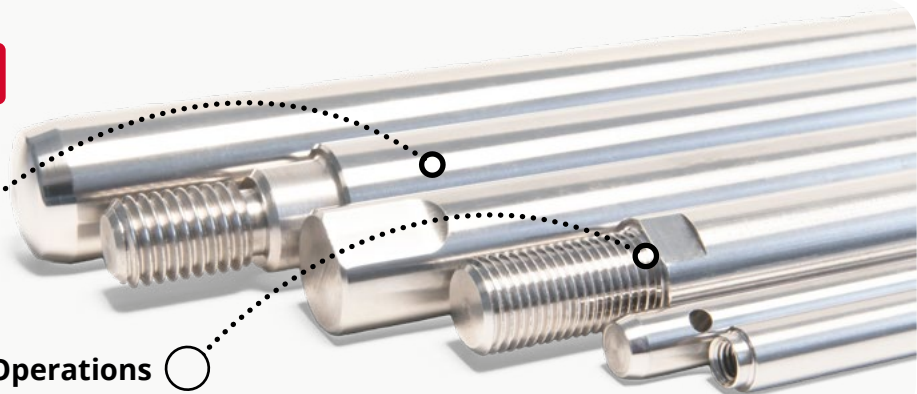


FEATURED

Precision shafts



Operations



Sintered filters

GENERAL

Sintered filters are being used in an increasing number of applications. These filters are made from bronze, stainless steel or polyethylene. Sintered filters are characterized by close tolerances, a good price/quality ratio and a broad filter range of 0.5 to 200µm for ss and 8 to 100µm for bronze.

THN can supply a wide standard range of sintered filters, also known as PUKS. As well as its standard range, THN can also supply many customized sintered filters. We design and develop these together with our customers so we can supply sintered filters that match their exact specifications.



CHARACTERISTICS

The main characteristics of sintered filters are:

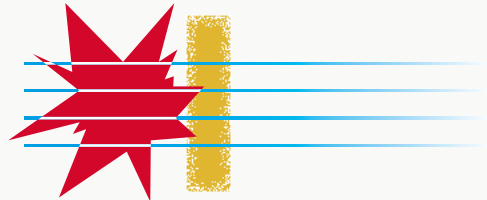
- High temperature resistance
- Thermal stability
- Good resistance to corrosion
- High mechanical strength
- Flexible design
- Self-supporting molded sections suitable for high pressure differentials

Applications of sintered filters

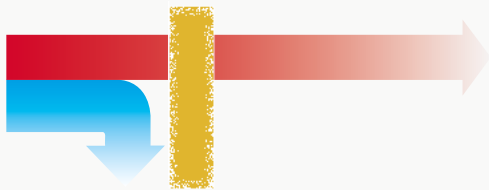
APPLICATIONS

This page lists five applications of sintered filters.

PROTECT



FILTERING AND SEPARATING



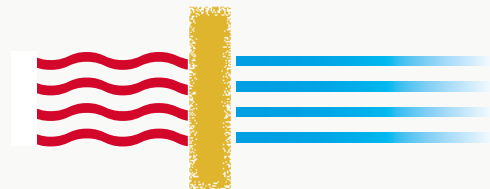
DISPERSING



THROTTLING & DEMPING



EQUALIZING



Characteristics & production

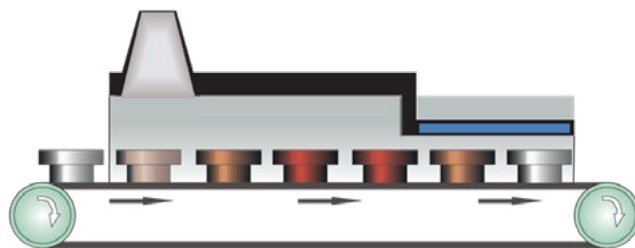
BRONZE SINTERED FILTERS

Bronze sintered filters are made from spherical bronze powder. The form, size and distribution of the powder are important parameters which affect the filter's properties.

Bronze sintered filters are produced using the gravity sintering method. The bronze powder is placed in a mold and sintered.

During sintering, the powder particles are fused to one another at temperatures well below the melting point of the material. This process gives the highly porous filters their characteristic shape and properties.

After sintering, the size and position of the pores are mechanically fixed. The powder particles also form a rigid whole. This gives the filters a strength, form and stability equal to those of a bronze component.



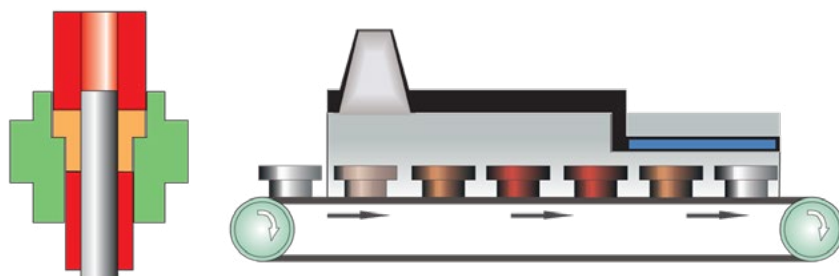
RVS SINTERED FILTERS

RVS sintered filters are made from any metallurgical material that is produced as a powder. The filter's ultimate properties are influenced by the shape, size and distribution of the powder. The most common materials are highly alloyed RVS types, but there are also nickel-based RVS varieties and titanium.

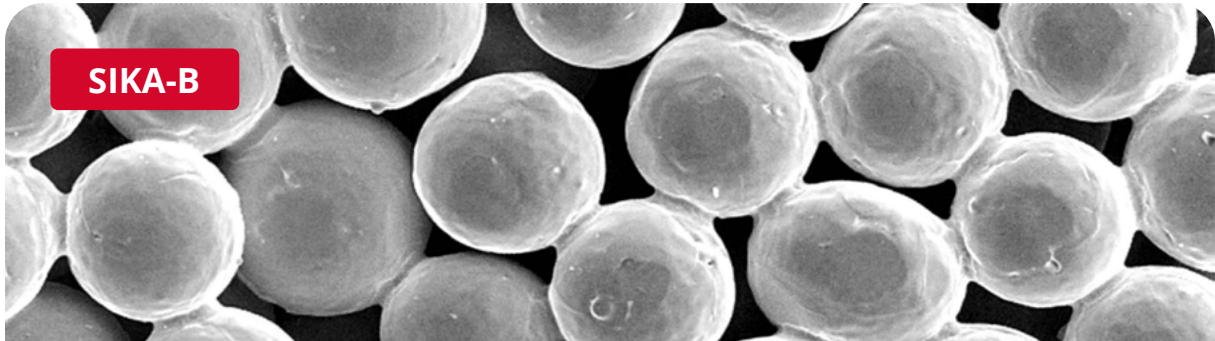
During the production of RVS sintered filters, the powder is compressed into a mold to create a solid, brittle compressed. The pore size can be determined by the powder that is chosen and the pressing force that is applied.

During sintering, the powder particles are fused to one another at temperatures well below the melting point of the material. This process gives the highly porous filters their characteristic shape and properties.

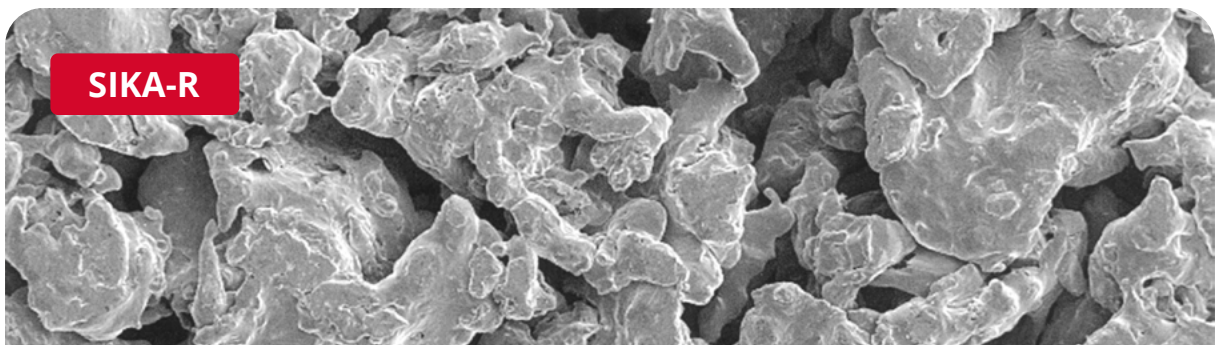
After sintering, the size and position of the pores are mechanically fixed. The powder particles also form a rigid whole. This gives the filters a strength, form and stability equal to those of a metal component.



Materials sintered filters



SIKA-B are sintered porous bronze parts produced from spherical bronze powder. These items are highly corrosion resistant, are characterized by a high structural stability and strength, they are self-supporting and suitable for high pressure differentials.



SIKA-R are sintered porous RVS parts produced for irregularly shaped RVS powder, AISI 316L. They are stronger than bronze filters because of the powder's irregular shape. They are also suitable for higher temperatures.

Material specifications

SPECIFICATIONS					
Group	Material	W. no.	Max. temp		Key words
			Reduce	Oxidize	
Bronze	CuSn12	2.1052	300	250	For hydraulics and pneumatics
High-alloyed materials	AISI 304L	1.4306	540	400	(The) standard for applications in the food industry
	AISI 316L	1.4404	540	400	
	AISI 904L	1.4539	600	500	Resistant to sulphuric, phosphoric and hydrochloric acid
	AISI 310	1.4841	800	600	Heat-resistant
	FeCrAl	1.4767	900	900	
Nickel alloys	Hastelloy C 22	2.4602	650	650	Resistant to corrosion from different aggressive media. Sustained temperatures of >400 are possible.
	Hastelloy C 276	2.4819	650	600	
	Hastelloy X	2.4665	925	925	
	Inconel 600	2.4816	650	650	
	Inconel 625	2.4856	650	600	
	Monel 400	2.4360	500	500	Resistant to media containing Cl
Titanium	Ti	-	500	500	Medicines, acids, electrolysis

Technical characteristics

SIKA-B | BRONZE

Filter type	Permeability coefficient		Grade efficiency x (T = 98% absolute) [µm]	Bubble-Point pressure Δp [mbar]	Shear strength τ [Nmm ²]	
	α [10 - 12 m ²]	β [10 - 7 m]				
SIKA-B	8	2	52	15	35	130
SIKA-B	12	6	64	27	23	120
SIKA-B	20	10	83	38	15	110
SIKA-B	30	14	89	52	13	100
SIKA-B	45	43	144	80	7.8	90
SIKA-B	60	50	202	100	7,0	90
SIKA-B	80	114	282	135	4,3	80
SIKA-B	100	127	406	183	3,7	70
SIKA-B	120	230	633	231	2,9	60
SIKA-B	150	248	643	260	2,5	40
SIKA-B	200	463	1046	320	1,5	30

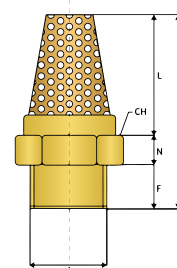
SIKA-R | RVS

Filter type	Permeability coefficient		Grade efficiency x (T = 98% absolute) [μm]	Bubble-Point pressure Δp [mbar]	Shear strength τ [Nmm ²]	
	α [10 - 12 m ²]	β [10 - 7 m]				
SIKA-R	0,5	0,08	0,3	1,3	89	350
SIKA-R	1	0,13	0,6	1,9	85	355
SIKA-R	3	0,4	1,7	3,3	59	311
SIKA-R	5	0,8	2,0	6,8	40	278
SIKA-R	7	2,5	15	7,8	25	200
SIKA-R	10	3,9	24	9,0	23	160
SIKA-R	15	5,6	13	20	16	200
SIKA-R	20	8,3	22	26	15	138
SIKA-R	30	13	18	32	11	144
SIKA-R	40	27	37	40	9,0	135
SIKA-R	50	36	36	44	6,0	121
SIKA-R	80	52	48	52	5,0	98
SIKA-R	100	65	58	65	4,5	85
SIKA-R	150	117	53	110	3,5	110
SIKA-R	200	150	69	130	3,0	95

Puks sintered filters

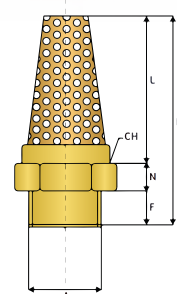
ZBN

A	N	F	L	H	CH
BSP 1/8 "	4	6	17	27	13
BSP 1/4 "	5	8	19	32	16
BSP 3/8 "	5	8	27	40	19
BSP 1/2 "	5	10	32	47	24
BSP 3/4 "	5	10	38	53	30
BSP 1 "	6	10	49	65	36
M5	3	4	11	18	8



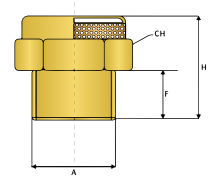
ZBL

A	N	F	L	H	CH
BSP 1/8 "	4	6	32	42	13
BSP 1/4 "	5	7	35	47	16
BSP 3/8 "	5	8	39	52	19
BSP 1/2 "	5	10	52	67	24
BSP 3/4 "	5	10	59	74	30
BSP 1 "	6	10	73	89	36
M5	4	4	18	26	8



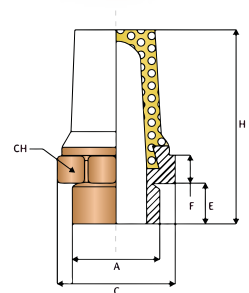
ZBV

A	F	H	CH
BSP 1/8 "	6	13	13
BSP 1/4 "	7	16	16
BSP 3/8 "	8	16	19
BSP 1/2 "	10	18	24
BSP 3/4 "	10	19	30
BSP 1 "	10	20	36
M5	5	12	8



ZBR

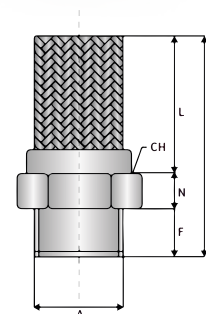
A	E	F	H	C	CH
BSP 1/8 "	4,5	3,8	20,5	12,6	12
BSP 1/4 "	6	4,5	26,5	16	15
BSP 3/8 "	7	5,4	33,9	20	19
BSP 1/2 "	8	6	40,5	24,5	23
BSP 3/4 "	9	7,5	51,5	32	30
BSP 1 "	11	9	66	38,5	36
M5	5,5	3,5	17	8	7



Puks sintered filters

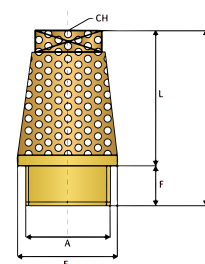
ZRN

A	N	F	L	H	CH
BSP 1/8 "	5	6	16	27	13
BSP 1/4 "	5	8	20	33	16
BSP 3/8 "	5	8	27	40	19
BSP 1/2 "	5	10	30	45	24



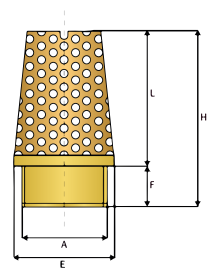
VBN

A	E	F	L	H	CH
BSP 1/8 "	12	6	15	21	7
BSP 1/4 "	15	8	19	27	8
BSP 3/8 "	19	8	28	38	10
BSP 1/2 "	23	10	33	43	14
BSP 3/4 "	30	13	40	53	17
BSP 1 "	36	15	48	63	23



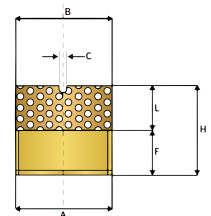
SBN

A	E	F	L	H
BSP 1/8 "	12	6	15	21
BSP 1/4 "	15	7	19	26
BSP 3/8 "	19	8	28	36
BSP 1/2 "	23	10	33	43
BSP 3/4 "	30	13	40	53
BSP 1 "	38	15	48	63



SBK

A	B	F	L	H	C
BSP 1/8 "	10	6	6	12	1,5
BSP 1/4 "	13	8	6	14	1,5
BSP 3/8 "	17	8	8	16	1,5
BSP 1/2 "	20	12	8	20	2,5
BSP 3/4 "	26	14	9	23	2,5
BSP 1 "	33	14	11	25	2,5



Custom sintered filters

CUSTOMIZED

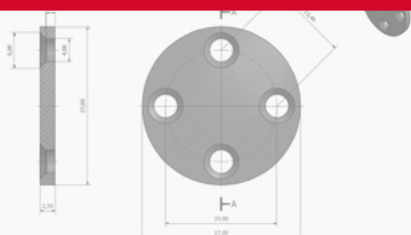
The growing demand for custom sintered filters means that a major proportion of the sintered filters which we supply are customized. We work closely with our customers to design and develop sintered filters that meet their exacting specifications.



PROCESS

- 1. Application:** The first phase of the process is to decide what the product will be used for, what function the filter must perform and what technical characteristics are needed.
- 2. Design:** Depending on the data gathered during the first phase, the product feasibility is investigated and a technical drawing is produced.
- 3. Production:** Once the customer has approved the drawing, the next step will usually be to start with a test series. If the test series looks like meeting all of the customer's wishes and requirements, then we switch to serial production.

FROM DRAWING TO SINTERED FILTER





NEED TECHNICAL ADVICE?

We are at your service

Are you looking for sintered filters and would like to contact one of our specialist directly? Call us on +31 (0)53 - 432 34 46 or send an e-mail to info@thn.nl. We'll be happy to help.



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