

THINK > Filter Technology



Seamless Standard Filter

GKN Sinter Metals Filters, the leading manufacturer of porous sinter metal products, offers a variety of solutions to fulfill customer requirements.

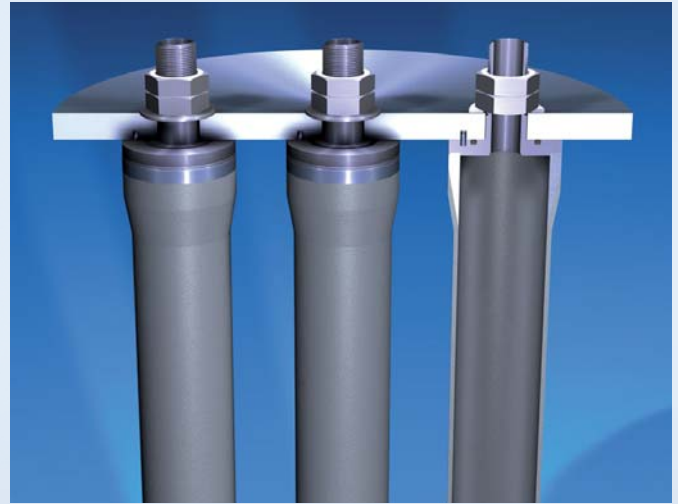
We are familiar with various applications in almost every industrial branch.

GKN's filter cartridges are manufactured by an isostatic compaction process, which results in outstanding homogenous pore size distribution with excellent mechanical properties.

Seamless designs can be produced up to 1,850 mm (72.8") length and 320 mm (12.6") OD. Larger elements (like for cross flow or triad design application) will be assembled in our certified in-house welding shop.

We offer custom made solutions that may be fitted into your existing plant without any modifications.

Further information – including 3D laser sintering – are available on GKN's homepage www.gknpm.com/filters.



GKN Standard Liquid Filter Design for outside in filtration



XL Filter Cartridge - Possible 100 % complete seamless design up to 72" porous

GKN Double Open End (DOE) and Hex-Nippel (HN) filters are 1:1 interchangeable with most other suppliers media.



Applications

- Sparging
- Carbonisation
- Catalyst recovery
- Catalyst retainer
- Flame arrestors
- Flow restrictors /
- Semiconductor industry
- Fluidizing / bulk handling
- Gas filtration
- (Hot) gas filtration
- Liquid filtration
- Steam filtration
- Slurry oil filtration
- Silencing
- Wine filtration
- Gas stripping
- Oxygen filtration
- ...

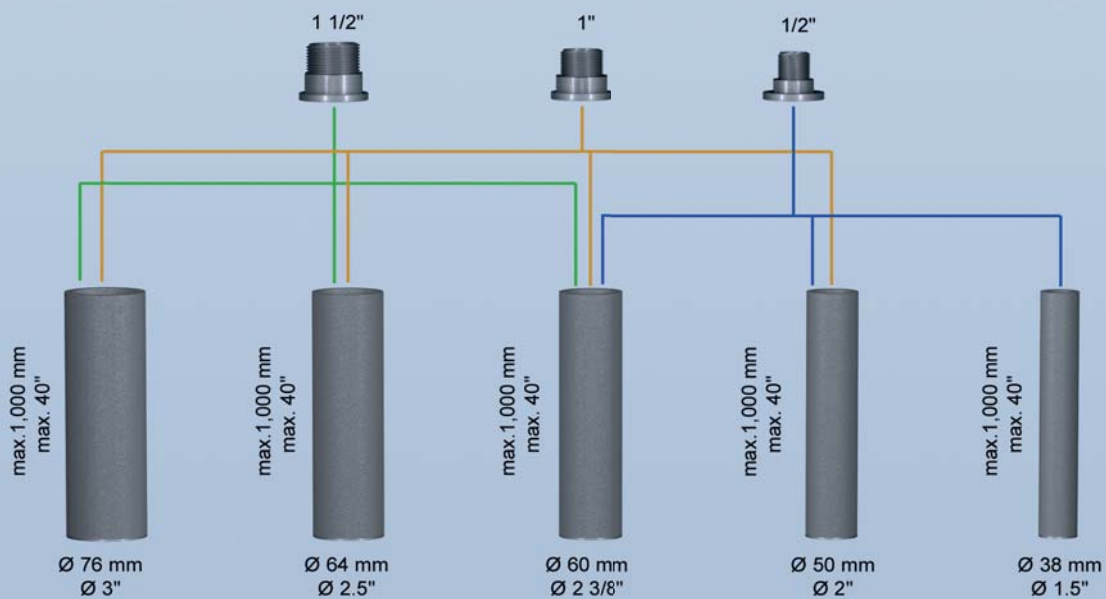


72" seamless inside - out filter

Advantages

- High temperature resistance
- High corrosion resistance
- Nickel based alloys available
- High mechanical strength
- Excellent back pulse performance
- Design freedom
- Seamless filter body
- Cryogen application possible

GKN Standard HN-Filter



Fitting Matrix

Further to our fully customized solutions with diameters available from 4 - 320 mm (0.15"-12"), we can now offer shorter delivery times for the most common standard dimensions (acc. to above sketch) made of AISI 316L.

Standard Powder Materials

Material	Name	Mat.-No.	SIKA-					Fe	Cr	Ni	C	Mo	Si	Miscellany	Max. Temperature °C		Keyword	
			R...	FIL	B	Reducing	Oxidizing											
			IS	AX	AS	in weight- %												
High alloyed material	AISI 304L	1.4306	x	x	x		Bal.	18.0-20.0	8.0-12.0	≤0.03	≤0.1	≤2.5	-	600	500	Standard for food application		
	AISI 316 L	1.4404	x	x	x		Bal.	16.0-18.0	10.0-14.0	≤0.03	2.0-3.0	≤2.5	-	540	400			
						x								380	320			
	AISI 904L	1.4539	x	x	x		Bal.	19.0-21.0	24.0-26.0	≤0.03	4.0-5.0	≤2.3	Cu 1.0-2.0	600	500	Resistant against sulphuric, phosphoric and hydrochloric acid		
	AISI 310	1.4841				x	Bal.	24.0-26.0	19.0-22.0	≤0.20	-	≤2.5	-	800	600	Heat resistant		
Nickel based alloys*	Hastelloy C22	2.4602	x		x		2.0-6.0	20.0-22.5	Bal.	≤0.03	12.5-14.5	≤0.5	W 2.5-3.5 Co ≤2.5	650	650	Corrosion resistant with various aggressive media. Duration application at > 400 °C possible.		
	Hastelloy C 276	2.4819	x	x			4.0-7.0	14.5-16.5	Bal.	≤0.03	15.0-17.0	≤0.8	W 3.0-4.5 Co ≤2.5	650	650			
	Hastelloy X	2.4665	x	x			17.0-20.0	20.5-23.0	Bal.	≤0.15	8.0-10.0	≤1.0	W 0.2-1.0 Co 0.5-2.5	930	800			
	Inconel 600	2.4816	x	x	x		6.0-10.0	14.0-17.0	Bal.	≤0.03	-	≤2.5	-	700	600			
	Inconel 625	2.4856	x				≤4.00	20.0-24.0	Bal.	≤0.08	8.0-10.0	≤2.3	Nb 3.0-4.0	650	650			
	Monel 400	2.4360	x	x			≤1.0	-	≥63.0	≤0.05	-	≤1.0	Cu 28.0-34.0	500	500	Resistant against Cl-containing media		
Bronze	CuSn 11	2.1052 mod.					x	-	-	-	-	-	Sn 10.0-11.5 Cu bal.	300	250	Typically used for hydraulic and pneumatic		
Titanium	Ti	-	x	x				-	-	-	-	-	Ti > 99 %	500	500	Medicine, acids and electrolysis		
Other	Other materials on request																	

Not all raw materials are in stock. Materials for fittings on request.

Due to powder metallurgy process, there are slight deviations in the element composition compared to the material standards.

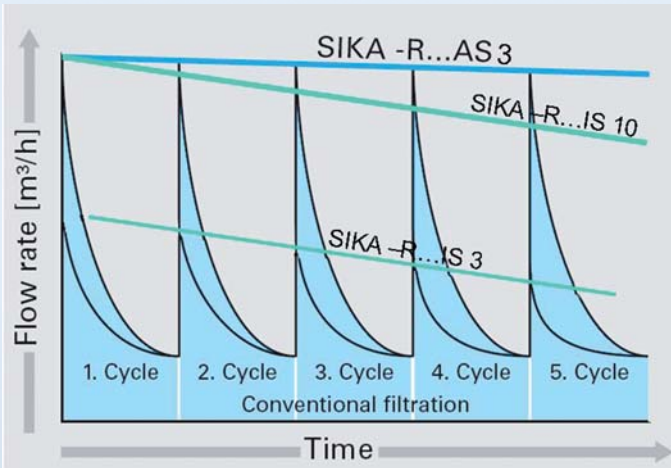
* Nickel based AX-products only after consultation. Not all dimensions feasible.

GKN Filter Grades

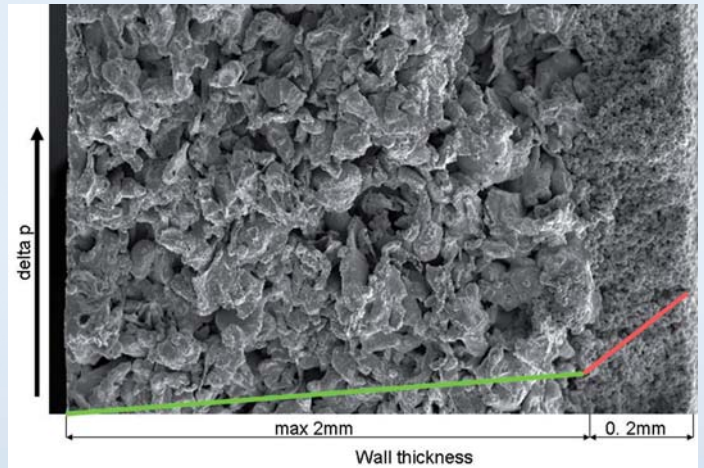
SIKA-R	0.1	AS
SIKA-R	0.3	AS
SIKA-R	0.5	IS
SIKA-R	0.5	AS
SIKA-R	1	IS
SIKA-R	1	AS
SIKA-R	2	AS
SIKA-R	3	IS
SIKA-R	3	AS
SIKA-R	5	IS
SIKA-R	8	IS
SIKA-R	10	IS
SIKA-R	15	IS
SIKA-R	20	IS
SIKA-R	30	IS
SIKA-R	50	IS
SIKA-R	80	IS
SIKA-R	100	IS
SIKA-R	150	IS
SIKA-R	200	IS

Filter grades available are in a range from 0.1 µm to 200 µm.

ASsymmetric membrane SIKA R...AS out-in-filter



Advantage: increased lifespan



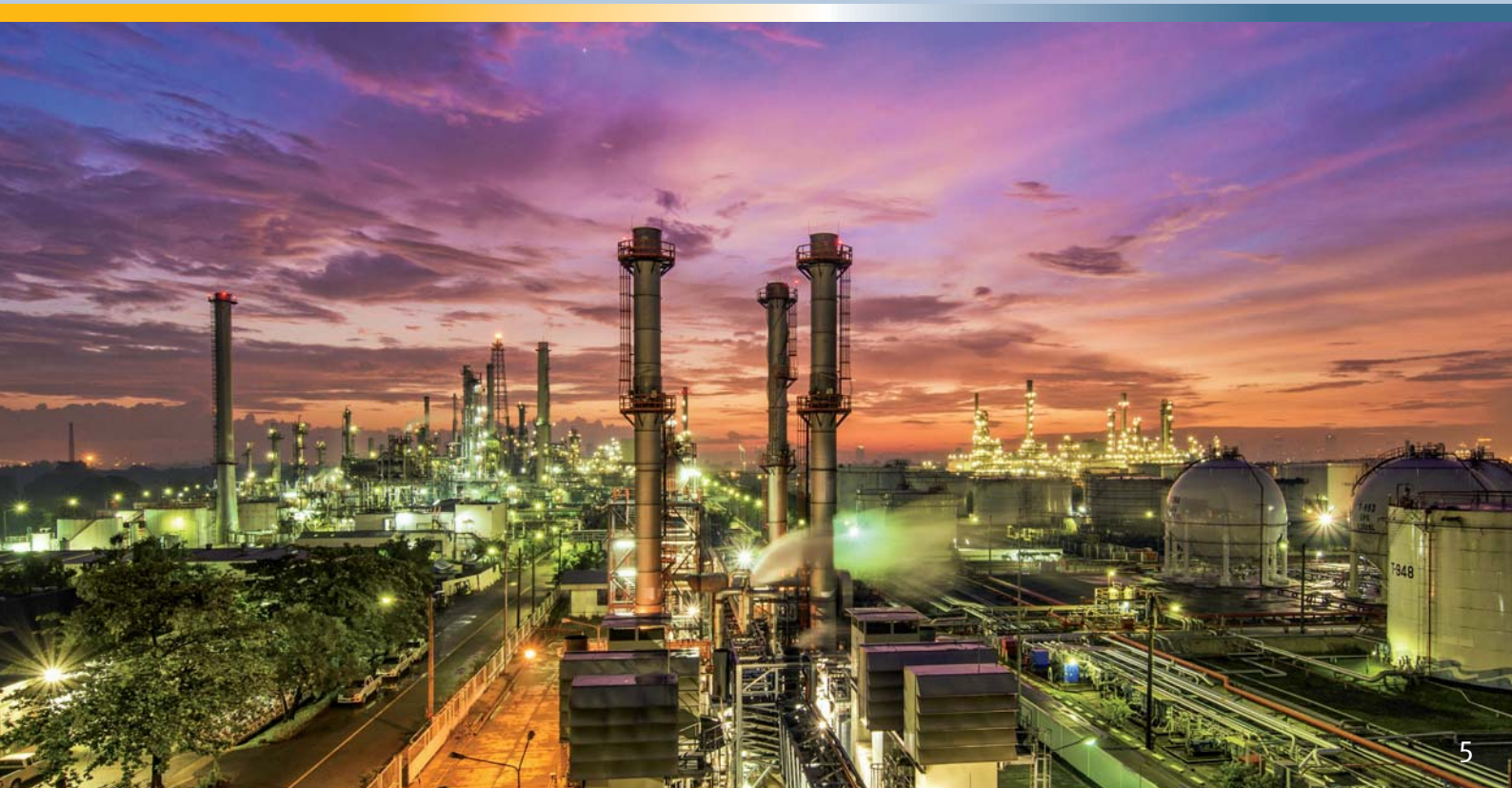
Advantage: decreased pressure drop

SIKA-R AS membranes show up a double-layer construction with a thin filter-active membrane applied on top of a coarse carrier material.

Filter grades available are in a range from 0.1 μm to 3 μm .

SIKA-R AS can be manufactured of all standard alloys available, membrane and carrier are always made of the same alloy.

Main field of application for metallic membranes are catalyst recovery (Raney Nickel, Pd-, Pt-catalysts) and gas filtration finer than 5 μm .



Basic information for designing a filter

1. Customer's information

Enquiry date:	<input type="text"/>	
Company name:	<input type="text"/>	
Contact name:	<input type="text"/>	
Street address:	<input type="text"/>	
ZIP:	<input type="text"/>	Email: <input type="text"/>
Town, US State:	<input type="text"/>	Phone: <input type="text"/>
Country:	<input type="text"/>	Mobile: <input type="text"/>

2. The planned application of the SIKA element?

Filtration <input type="checkbox"/>	Equalizing <input type="checkbox"/>	Fluidising <input type="checkbox"/>	Others <input type="text"/>
Separation <input type="checkbox"/>	Silencing <input type="checkbox"/>	Sparging <input type="checkbox"/>	<input type="text"/>
Throttling <input type="checkbox"/>	Protecting <input type="checkbox"/>	Degassing <input type="checkbox"/>	<input type="text"/>

3. What kind of gas or liquid will flow through the SIKA element?

Medium specification	<input type="text"/>
Operation density	<input type="text"/>
Dynamic viscosity	<input type="text"/>
Operation temperature	<input type="text"/>
Operation flow rate	<input type="text"/>
Absolute pressure before the SIKA element	<input type="text"/>
Wanted or permissible pressure drop of clean filter	<input type="text"/>
Max permissible pressure drop of used filter	<input type="text"/>

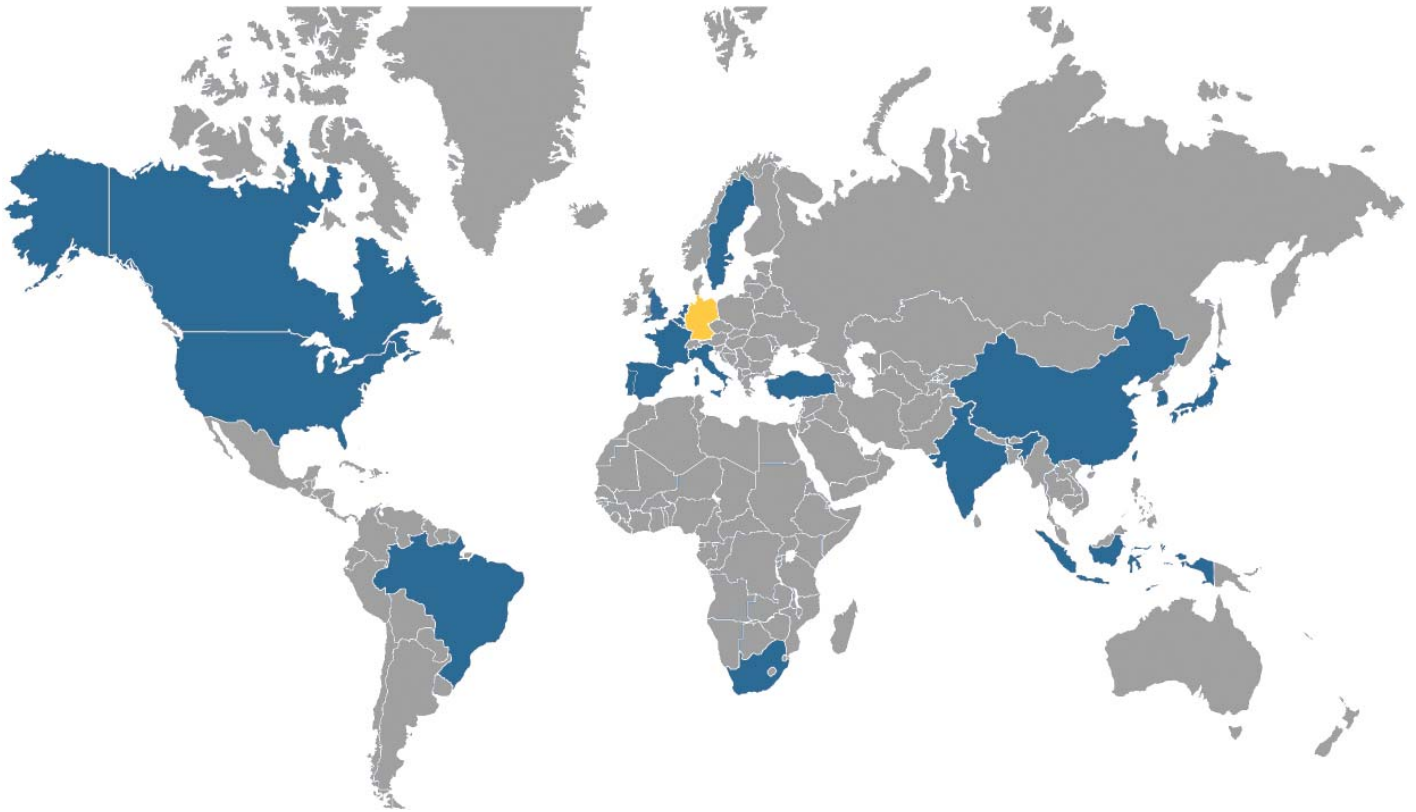
4. Which particles must be retained by a SIKA element?

Kind	<input type="text"/>
Size of the particle	<input type="text"/>
Shape of the particle	<input type="text"/>
Filter grade	<input type="text"/>



5. How will the SIKA element be applied?

Shape of the element	Tube <input type="checkbox"/>	Cartridge <input type="checkbox"/>	Sheet <input type="checkbox"/>
	Disc <input type="checkbox"/>	Other <input type="checkbox"/>	
Connecting element	Flange <input type="checkbox"/>	Thread <input type="checkbox"/>	Other <input type="checkbox"/>
Housing diameter	<input type="text"/>	Quantity	<input type="text"/>

6. Short description of the process:



Our locations:

-  Head Quarter and Manufacturing
-  Local Sales Partners

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