FLOW RESTRICTORS

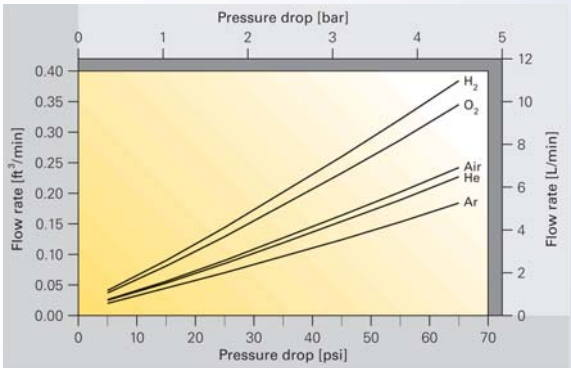
Technical Sheet 010

GKN SIKA-B / SIKA-R...*AX*

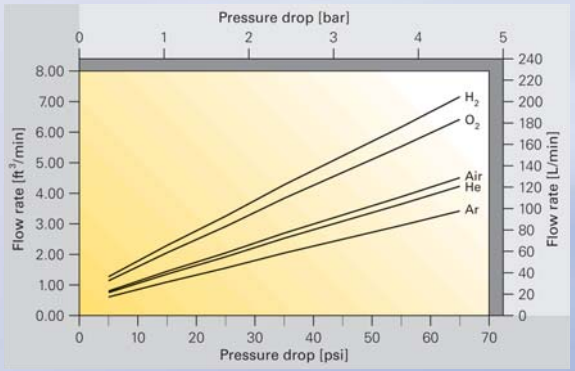
Flow restrictors & sensor protection

Advantages:

- long life time
- flow rates calibrated according customers request
- easy installation
- pore sizes 1 – 100 µm available
- FDA save 316L version available
- customized design possible



Flow rate for 5 µm restrictor



Flow rate for 20 µm restrictor

GKN SINTER METALS

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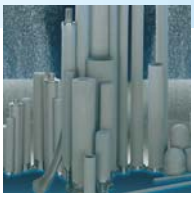
Materials and products

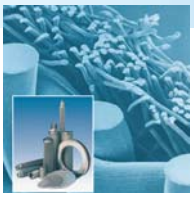
Material	Name	Mat.-No.	SIKA- R... IS	SIKA- R... AX	SIKA- R... AS	SIKA- FIL	SIKA- B	Fe in weight-%	Cr in weight-%	Ni in weight-%	C in weight-%	Mo in weight-%	Miscellany	Max. Temperature °C Reducing	Max. Temperature °C Oxidizing	Keyword
High alloyed material	AISI 304 L	1.4306	x	x	x			Bal.	18.0-20.0	8.0-12.0	<=0.03	0.5	N<=0.1	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	N<=0.1	540	400	
						x								380	320	
	AISI 904 L	1.4539	x	x	x			Bal.	19.0-21.0	24.0-26.0	<=0.02	4.0-5.0	N<=0.15 Cu 1.2-2.0	600	500	Resistant against sulphuric acid, phosphoric and hydrochloric acid
	AISI 310	1.4841	x			x		Bal.	24.0-26.0	19.0-22.0	<=0.25	-	-	800	600	Heat resistant
	FeCrAl	1.4767 Mod.				x		Bal.	19.0-22.0	-	<0.10	-	Al 5.0-6.5 with rare earth elements	unfit	1000	
Nickel based alloys*	Hastelloy C 22	2.4602	x					2.0-6.0	20.0-22.5	Bal.	<0.02	12.0-14.5	W 2.0-3.5, Co 2.5	650	650	Corrosion resistant with various agressive media. Duration application at > 400 °C possible
	Hastelloy C 276	2.4819	x	x				4.0-7.0	14.0-16.0	Bal.	<0.02	15.0-17.0	W 3.0-4.5	650	650	
	Hastelloy X	2.4665	x	x				17.0-20.0	20.5-23.0	Bal.	<0.15	8.0-10.0	Co 0.5-2.5 W 0.2-1.0	930	800	
	Inconel 600	2.4816	x	x	x			6.0-10.0	14.0-17.0	>=72.0	<0.15	-	-	700	600	
	Inconel 625	2.4856	x		x			<=5.00	20.0-23.0	>=58.0	<0.10	8.0-10.0	Nb 3.15-4.15	650	650	
	Monel 400	2.4360	x	x	x			<2.0	-	>=63.0	<0.30	-	Cu 28.0-34.0	500	500	Resistant against Cl-containing media
Bronze	CuSn 11	2.1052					x	-	-	-	-	-	-	300	250	Typically used for hydraulic & pneumatic
Titanium**	Ti	-	x	x				-	-	-	-	-	Ti > 99 %	500	500	Medicine, acid, electrolysis
Other	Other materials on request															

* Nickel based AX-products only after consultation. Not all dimensions feasible. **Not all raw materials are in stock.
Typical Iron or Nickel elements e.g. Si, Mn, P, S according to the literature.



SIKA-R...*IS*

- Made of sintered metal powder (a variety of alloys are used, depending on requirement)
- Filter grades from 0.5 - 200 µm
- Suitable for use up to 950 °C
- Seamless up to 1500 mm in length and up to 300 mm in diameter



SIKA-FIL

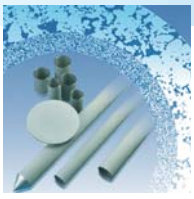
- Stainless steel fibers
- 60 - 90 % porosity
- Filter grades from 1 - 100 µm
- Used mainly in gas filtration with high gas velocities

SIKA-R...*AX*

- Axial pressed filters made of metal powder (A variety of alloys are used, depending upon requirement)
- Filter grades between 0.5 and 200 µm
- Used mainly in gas and liquid filtration

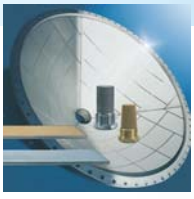
SIKA-R...*B*

- Gravity sintered filters made of bronze
- Filter grades between 8 and 200 µm
- Used mainly in pneumatic - hydraulic application and polymer filtration
- Best for shapes



SIKA...*AS*

- Asymmetric designed powder / powder composite, consisting of a support and a thin filter active layer of the SAME alloy
- Used in catalyst recovery and cross flow application



SIKA- Modules

- Customer designed elements with fitting
- Used mainly for sensor protection and flow resistors
- Welding constructions