



PoroFine – SS/SK

Sintered metal filter cartridges & spargers



POROFINE-SS filter cartridge is made by a metal sintering process, that is a solid state reaction joining metallic particles to each other.

At temperatures well below melting point, bridges are formed between the particles by diffusion.

A stainless steel 316 L powder with particles of selected size is the basic material for manufacturing sintered cartridges.

POROFINE –SS filter medium has up to 60% of the volume made up of voids for the coarser pore sizes.

POROFINE –SS is the best solution for heavy working conditions. It can easily withstand high differential pressure, chemicals and cleaning by back flushing.

These features make **POROFINE -SS** suitable for filtration of many process fluids such as high temperature polymers or service fluids such as saturated steam for sterilisation or solvents for ultrasonic cleaning.

POROFINE -SK is suitable for introducing micro-bubbles into liquids to offer a large contact surface for the chemical or physical exchange between gas and liquid.

Application include the direct heating of fluids by steam, sparging of beer and wine etc.

POROFINE –SS for filtration is available in all standard lengths, configurations and pore sizes.

POROFINE -SK for sparging is available as tubes with an outer diameter of 60 mm or 22 mm blind at one end and with a threaded BSP connection at the other end, the standard lengths are as per code selection table suggested pore sizes are 3 and 5 micron.

Special parts can be designed according to customer specification.

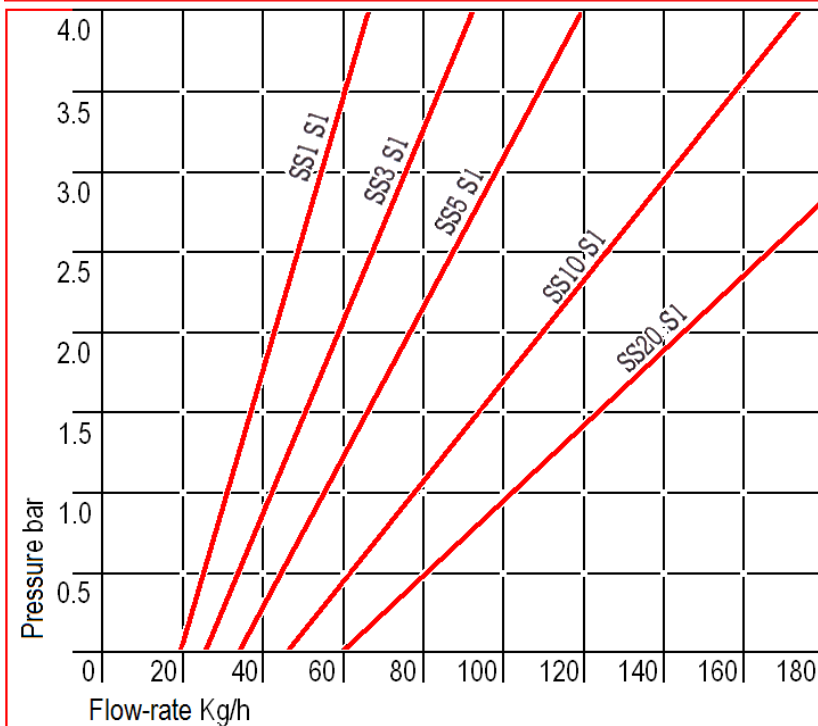
Possible deviations from standard can involve dimensions as well as material and porosity of the cartridge.

CODE SELECTION

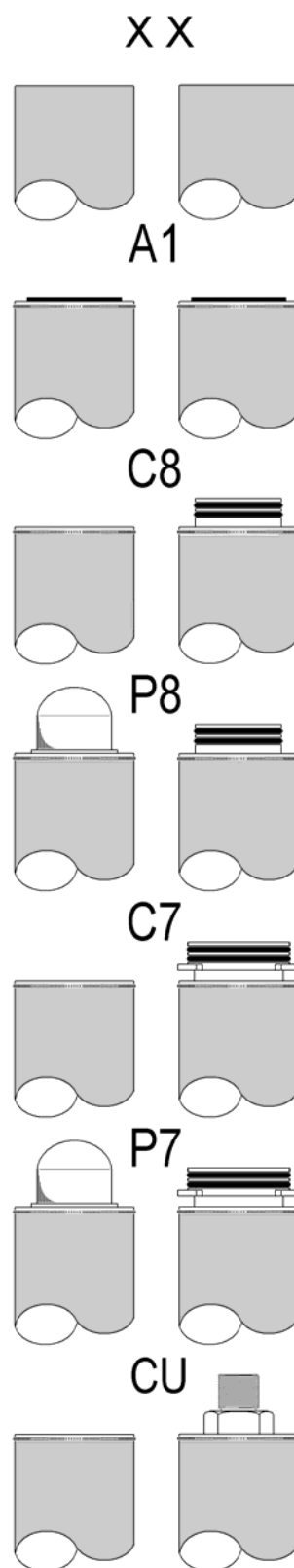
	SS	5	- 60 -	2	A	1	V
Application		Porosity (µm)	Outer diameter (mm)	Length (inch)	End "1"	End "2"	Gaskets
Filter = SS		1 3 5 10 20	-60-	10" = 1 20" = 2 30" = 3 40" = 4	Open with flat gasket = A Capped = C Spike = P	Open with flat gasket = 1 O.R. 222 = 8 O.R. 226 = 7	Buna = N Viton = V Silicone = S EPDM = E PTFE = T
Sparger = SK		1 3 5 10 20	- 60 - - 22 -	Length (mm) 125 - 250 - 500 80 - 165	Blind = C None = X	Port Threaded = U None = X	
	SK	1	- 22 -	80	X	X	

PoroFine – SS Porous stainless steel filter elements

Saturated steam flow-rate for a 10" element assuming 0.1 bar as clean pressure drop



Filter cartridge end configurations



Chemical compatibility of porous stainless steel

Fluid	Concentration	AISI 316 ss compatibility	Recommended gasket
ACIDS			
• Nitric Acid	max 10%	satisfactory	All
• Nitric Acid	10% - 80%	satisfactory	PTFE
• Hydrochloric Acid	max 30%	not recommended	PTFE
• Sulphuric Acid	max 75%	not recommended	Viton
• Sulphuric Acid	75% - 95%	limited resistance	Viton
• Sulphuric Acid	95% - 100%	satisfactory	Viton
BASES			
• Sodium Hydroxide	max 40%	satisfactory	EPDM
• Potassium Hydroxide	max 30%	satisfactory	EPDM
STERILIZING AGENTS			
• Sodium Hypochlorite	All	acceptable	EPDM
• Hydrogen Peroxide	All	satisfactory	All
• Ethylene Oxide	All	satisfactory	Neoprene
OTHER CHEMICALS			
• Organic Solvents	-	very good	PTFE
• Sea Water	-	acceptable	All
• Deionized Water	-	satisfactory	All



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