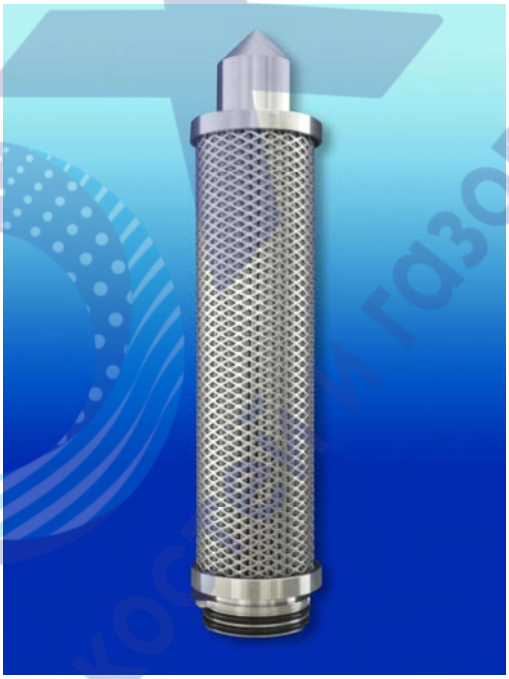
Process Filtration
From Pure to Sterile

(P)-GS N

MAIN FEATURES & BENEFITS:

- **High dirt holding capacity at low differential pressure and high flow rate**
- **Regenerable by Back-flushing or ultrasonication**
- **Excellent material resistance towards Steam and aggressive media**
- **Down to 0,01 µm in saturated steam**
- **Welded version approved for Food Contact Use acc. to CFR Title 21 & 1935/2004/EC**



INDUSTRIES:

- **Dairy**

- **Food & Beverage Industry**

- **Fermentation**

- **Pharmaceutical Industry**

- **Chemical Industry**

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PRODUCT DESCRIPTION

The (P)-GS N filter consists of a regenerable pleated stainless steel filter matrix in a stainless steel cartridge. The retention rate extends from 1 µm to 25 µm.

The (P)-GS N filter retains contaminants, such as particles, abrasion of valves and sealings as well as rust. An improved steam quality ensures longer service life of the filters to be sterilized and increases the efficiency of the entire process. The (P)-GS N filter element offers the possibility of a particularly economic filtration, since the filter medium can be regenerated by ultrasonic bath or by back-flushing. This is especially essential at high particle loads. The pleated stainless steel filter matrix ensures a very low differential pressure even at high contamination loads.

The heavy-duty construction of the (P)-GS N filter is designed to withstand a maximum differential pressure up to 5 bar. The filter may also be used in a temperature range of –20°C up to 210°C for the filtration of air, gases or liquids.

All components of the version with welded end caps meet the USA requirements for Food Contact Use in accordance with CFR (Code of Federal Regulations) Title 21. For applications without requirement of FDA approval, a cost-effective version with plastic steel potting is available. The filter element is manufactured in accordance with the manufacturing requirements, has no migration of filter media and is non-fibre releasing.

Typical applications for (P)-GS N filter elements include:

Steam Filtration

- Breweries
- Chemical industry
- Pharmaceutical industry
- Food and beverage
- Aseptic packaging
- Electronic industry
- Dairy industry
- Plastic industry

Gas Filtration

- Compressed air
- Carbon dioxide
- Nitrogen
- Tank Ventilation
- Highly aggressive gases

ФИЛЬТРАЦИЯ ЖИДКОСТЕЙ И ГАЗОВ

PRODUCT SPECIFICATIONS

Product Specification	
Filtration Surface*	• 0,22 m^2 per 250 mm element (10/30) • For other element sizes see correction factor CF in section “Available end cap configurations”
Temperature Range	• -50°C (-60°F) to 200°C (400°F) • > 150°C (300°F) welded end caps required
Maximum Differential Pressure (Flow Direction: Outside to Inside)	• 5 bar (75 psid), independent of the system pressure or temperature

RETENTION RATES

Retention Rates (Air, 20 °C, 90 Nm3/h, 10/30 Element)

Pore Size [µm]	98 % [µm]	>99,9 % [µm]	Thickness [mm]
1	0,3	< 1	0,37
5	1	< 5	0,35
25	15	25µm	0,17

Retention Rates (Steam, 121°C, 90 kg/h, 10/30 Element)

Pore Size [µm]	98 % [µm]	>99,9 % [µm]	Thickness [mm]
1	0,3	< 1	0,37
5	1	< 5	0,35
25	15	25µm	0,17

Fractional Efficiency (P)-GS N, 1µm, Air / Saturated Steam

	Fractional Efficiency [%]					
Pore Size [µm]	0,01 µm	0,07 µm	0,1 µm	0,2 µm	0,3 µm	0,4µm
1	99,995	97,656	96,679	96,805	98,747	99,484

MATERIAL COMPLIANCE USA

All components of the (P)-GS N filter element are FDA listed for food contact use in **the Code of Federal Regulations (CFR), Title 21.** For applications without requirement of FDA approval, a cost-effective version with plastic steel potting is available.

Filter Materials		CFR Title
Filter Matrix:	Stainless Steel 1.4404	211.65
Support:	Stainless Steel 1.4404	211.65
End Caps:	Stainless Steel 1.4301	211.65
O-Rings:	EPDM	177.2600
Alternatively:	Silicone	177.2600
	Buna	177.2600
	EPR	177.2600
	PTFE over silicone	177.1550
	PTFE over viton	177.1550

All products have been inspected and released by Quality Assurance as having met the following requirements:

- All filters are fabricated without the use of binders, adhesives, additives or surface-active agents.
- All filter components based on plastics are non-toxic and are certified bio-safe in accordance with current USP Class VI Tests for Plastic.

MATERIAL COMPLIANCE EU

The Donaldson (P)-GS N filter element with welded end caps meets the guideline for Food Contact Use as given in **European Regulation 1935/2004/EC**.

For specific details on the O-rings, please contact your Donaldson Sales Engineer.

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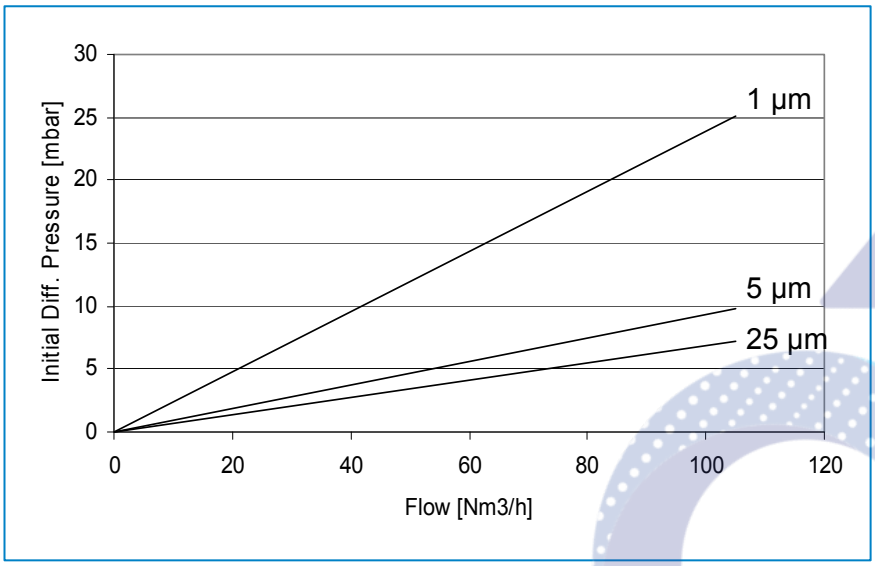
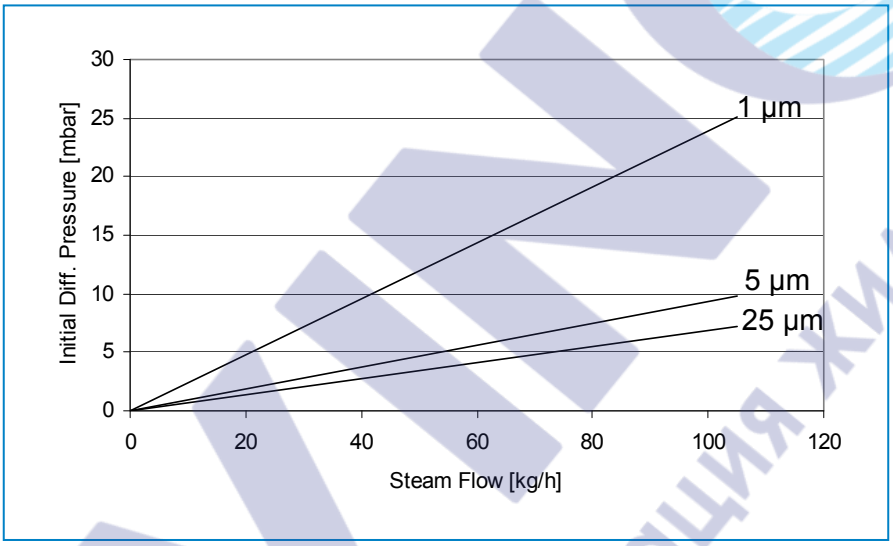
FLOW CHARACTERISTICS



(P)-GS N, 10/30, air, 20 °C, 1 bar absolute

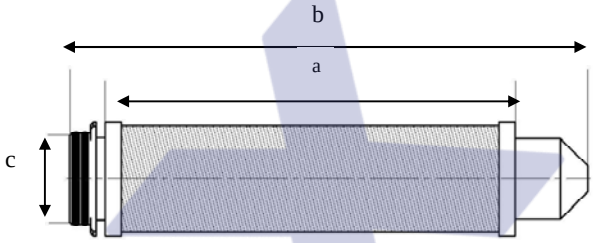


(P)-GS N, 10/30, saturated steam, 121 °C, 2 bar absolute

AVAILABLE END CAP CONFIGURATIONS

Dimensions (CODE 7 connection):

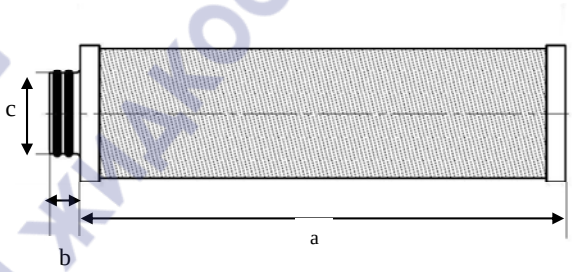
CODE 7						
Size	a		b		c	
	mm	inch	mm	inch	mm	inch
5”	128	5,04	142	5,59	56,5	22,2
10”	250	9,84	315	12,40	56,5	2,22
20”	500	19,68	585	22,24	56,5	2,22
30”	750	29,53	815	32,08	56,5	2,22



CODE 7: 2 x 226 o-rings, bayonet 2 locking tabs, locating fin

Dimensions (uf plug connection):

uf – plug Connection							
Size	a		b		C*		CF**
	mm	inch	mm	inch	mm	inch	
03/10	76	2,99	87	3,42	30	1,18	0,16
04/20	104	4,09	118	4,64	37	1,46	0,22
05/20	128	5,04	142	5,59	37	1,46	0,27
05/30	128	5,04	144	5,67	61	2,40	0,50
07/30	180	7,08	196	7,71	61	2,40	0,71
10/30	254	10	270	10,63	61	2,40	1,00
15/30	381	15	397	15,63	61	2,40	1,50
20/30	510	20	526	20,63	61	2,40	2,02
30/30	764	30	780	30,63	61	2,40	3,00
30/50	764	30	780	30,63	89	3,50	4,58



* Plug-type connection with double o-ring

** Correction factor Filtration surface & Flow rate

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