

This Specification Guideline is designed to assist in the specification of Donaldson steam filters for culinary grade steam production. As a market leader in steam filtration products, Donaldson has set forth the following performance and material specifications as a guideline for steam filters. These are minimum, product-related requirements that do not represent the full range of requirements that your system may need and may not identify all potential considerations.

SECTION 1 – QUALITY ASSURANCE

- 1.1 *Filter elements must be completely staged, assembled, tested, and packaged in a facility whose quality management system is approved by an accredited registering body to the appropriate ISO9000 quality systems standard.*
- 1.2 *All component materials used must be FDA listed for food contact use in accordance with CFR Title 21 as well as EC/1935/2004. All plastic or elastomeric component materials shall meet the criteria for USP Class VI testing.*
- 1.3 *Filter elements must be non-shedding and fabricated without the use of binders, adhesives, additives, or surface-active agents.*

SECTION 2 – PERFORMANCE SPECIFICATIONS

Culinary Steam Filter Performance and Operating Specifications

Filter Specification	Value	Measure
Retention Efficiency (Steam)	≥95%	2.0 µm
Media Air Permeability	2.08	ft ³ /(min*ft ²) @ 0.5 in. H ₂ O ΔP
Regeneration Cycles Allowed	6	30 min. ultrasonic bath, aqueous solvent
Integrity Test	≥12	Inches H ₂ O Bubble Point
Operating Temperature Range	-4 to 392	Degrees Fahrenheit
Max Pressure Differential	75	lb/in ² (either direction)

SECTION 3 – INSTALLATION AND USE SPECIFICATIONS

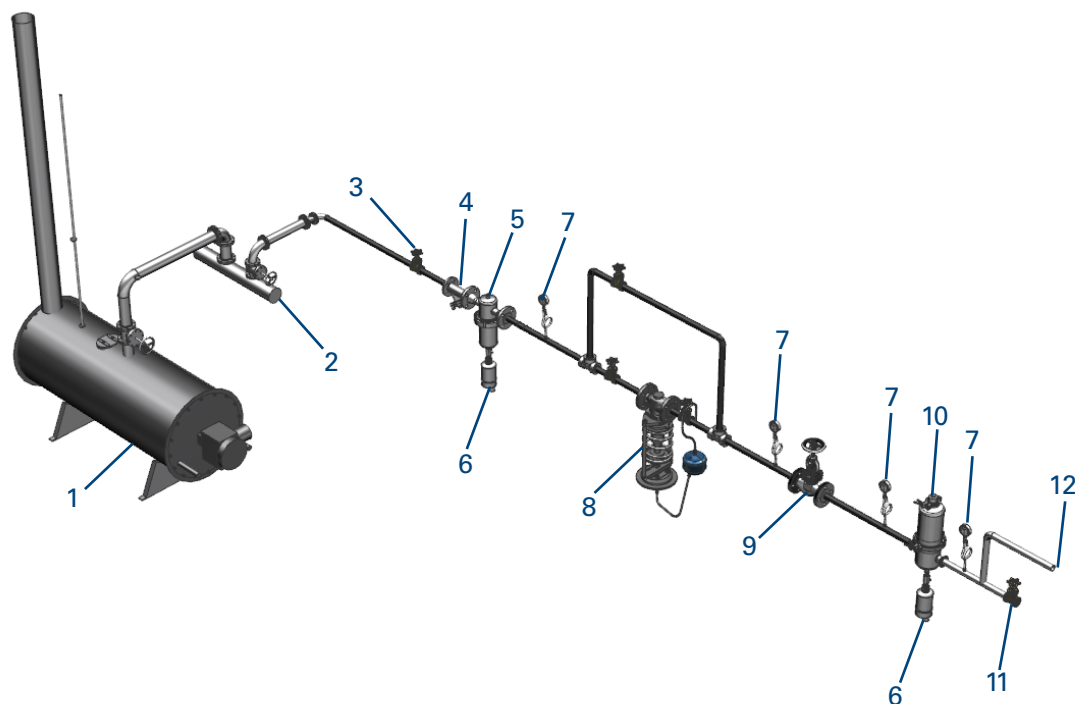
- 3.1 *Steam filters shall be installed at all points-of-use where steam either directly or indirectly comes in contact with food or food contact surfaces.*
- 3.2 *Steam filter assemblies should each have an appropriate means of discharging condensate, such as a float trap/drain. The drain design should be consistent in construction and material to the filter housing.*
- 3.3 *An entrainment or moisture separator must be installed near to and upstream of the culinary steam filter assembly to protect the filter from slugs of water, particularly during system startup.*
- 3.4 *The filter assembly and associated pipe work must be insulated in a way that keeps the steam relatively dry while still providing access to service the assembly or change the filter element.*

SECTION 4 – MATERIALS SPECIFICATIONS

Culinary Steam Filter Materials of Construction

Part	Material		CFR Title 21
	P-GS	P-GSLN	
Filtering Media	SAE grade 316	SAE grade 304	211.65
End Caps	SAE grade 304	SAE grade 304	211.65
O-rings	EPDM (alt. Fluoraz)	EPDM (alt. Fluoraz)	177.2600

RECOMMENDED CULINARY STEAM SYSTEM



No.	Description
1	Boiler
2	Steam Header
3	Stop Valve
4	Strainer
5	Entrainment Separator (P-EG housing with 25 µm P-GSLN element)
6	Condensate Trap
7	Pressure Gauge
8	Pressure Reducing Valve
9	Steam Throttling Valve
10	Culinary Steam Filter (PG-EG housing with 5 µm P-GS element)
11	Sampling Valve
12	Sanitary Check Valve and Tubing to Process

Important Notice

This document is not intended as a replacement for careful review of all applicable laws, regulations, and standards. It is the user's responsibility to design, use, and maintain a steam system in accordance with all applicable laws, regulations and standards. Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.



Donaldson Company, Inc.
 Process Filtration
 PO Box 1299
 Minneapolis, MN
 55440-1299 U.S.A.

Tel 800-543-3634 (USA)
 Tel 800-343-3639 (within Mexico)
 Fax 952-885-4791
 processfilters@donaldson.com
 donaldsonprocessfilters.com



Culinary-Grade Steam Filters – Specification Guideline (01/17)

© 2016 Donaldson Co., Inc. All Rights Reserved. The color blue is a trademark of Donaldson Company. All other marks belong to their respective owners.