

Product Data Sheet

Steam Filter Elements EFSTP..D.. (D25,D1)

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Field of application

Type EFSTP filter elements of filtration grades D are sintered metal steam filter elements suitable for filter housings of type FWP. They are mainly designed for separating solid contaminants from (water) steam flows (steam filtration), i.e. rust, abrasion, etc. and are available with micron ratings of 25μ and 1μ (culinary steam quality). Filtration grade D filter elements, of course, also separate solid contaminants from high temperature compressed air flows and are therefore used for particle filtration from compressed air flows at high temperatures.

Features

Type EFSTP filter elements of filtration grades D consist of a dimensionally stable, micro porous stainless steel sintered body with a void volume of up to 40% with micron ratings of 25μ and 1μ and stainless steel end caps.

EFSTP..D.. steam filter elements are manufactured using stainless steel hardware and are assembled using the latest welding technology. The welding process ensures a reliable, durable and thermal resistant joint of all components and is fundamental to the operational safety of a steam filter element. There are no resin bonded joints that may soften at high temperatures or break during heating-up or cooling-down due to different thermal expansions of different materials, both making the integrity of the steam filter element a risk. Despite of the welded design, the same stainless steel materials are used for the sintered metal body and end caps in order to avoid different thermal expansions and thus to further ensure integrity of the steam filter element. Due to the use of stainless steel for all hardware components neither rust nor corrosion may affect the differential pressure of the steam filter element in a negative way.

All the features mentioned above are a contribution to a steam filter element which has a high performance (high separation efficiency) combined with economic efficiency (low differential pressure) and maximum operating safety (welded stainless steel design).



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Basic data

Model	Nominal steam capacity (VN) (25μ) ^{*1}	Nominal steam capacity (VN) (1μ) ^{*1}	Max. operating pressure	Min./Max. operating temperature
EFSTP90	50 kg/h	13 kg/h	---	-10°C - +134°C When using a high temperature sealing kit -10°C - + 200°C
EFSTP120	130 kg/h	30 kg/h		
EFSTP140	290 kg/h	70 kg/h		
EFSTP180	550 kg/h	140 kg/h		
EFSTP190	820 kg/h	210 kg/h		

*1 - refers to saturated steam at 134°C (2 bar)

Purity classes according to ISO 8573-1

Contamination	D25	D1
Solid particles ^{*2}	Class 6-7	Class 4
Water content	---	---
Total oil content	---	---

*2 - typical result, on the assumption of suitable inlet concentrations as well as operating and marginal conditions.

Steam capacity conversion factor

«F» - Pressure and temperature

0.5 bar 111°C	1 bar 120°C	1.5 bar 127°C	2 bar 134°C	2.5 bar 139°C	3 bar 144°C	3.5 bar 148°C	4 bar 152°C	4.5 bar 156°C	5 bar 159°C	6 bar 165°C	7 bar 170°C	8 bar 175°C	9 bar 180°C	10 bar 184°C	12 bar 192°C	15 bar 201°C
0.52	0.68	0.84	1.00	1.16	1.31	1.46	1.62	1.77	1.92	2.22	2.52	2.82	3.12	3.41	4.0	4.9

Calculation of the converted steam capacity

Converted steam capacity VK	Nominal required steam capacity VN _{min}
$VK = VN \times F$	$VN_{min} = VK / F$

VK : Converted steam capacity calculated for the operating conditions

VN_{min}: Nominal required steam capacity calculated for the operating conditions, based on the steam capacity at operating conditions

Maintenance rules

	D25	D1
All models	Replacement of filter element once a year the latest on a differential pressure of 30% of the upstream steam pressure	

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Product specific data

Specification	D
Maximum allowable differential pressure at flow a→i / i→a	10 bar / 5 bar
Micron ratings	25 μ or 1 μ

Materials

Component	
Sintered metal body	Stainless steel 1.4404 (AISI 316L, V4A)
End caps	Stainless steel 1.4404 (AISI 316L, V4A)
Sealing materials	EPDM

Dimensions

Model	Height (total height)	Ø	Connection	Ø Inlet (inside)
EFSTP90	69 mm (89 mm)	54 mm	T-Code	22 mm
EFSTP120	126 mm (146 mm)	54 mm	T-Code	22 mm
EFSTP140	245 mm (267 mm)	76 mm	Code 7	41 mm
EFSTP180	508 mm (530 mm)	76 mm	Code 7	41 mm
EFSTP190	760 mm (782 mm)	76 mm	Code 7	41 mm

Classification according to Pressure Equipment Directive 2014/68/EU for group 2 fluids

Model	Volume	Category
All models	Filter elements are not part of the Pressure Equipment Directive 2014/68/EU	

Other directives

Model	
All models	---

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