



## STEAM Filter Cartridges

- steam filters
- 316L stainless steel

Steam is an often neglected part of a process, regarded as an add on to a customers liquid or gas filtration needs.

It has however, large specific applications in it's own right and should be treated with the same level of importance as air, gas and liquid systems if long filter lifetimes and system cost effectiveness are to be achieved.

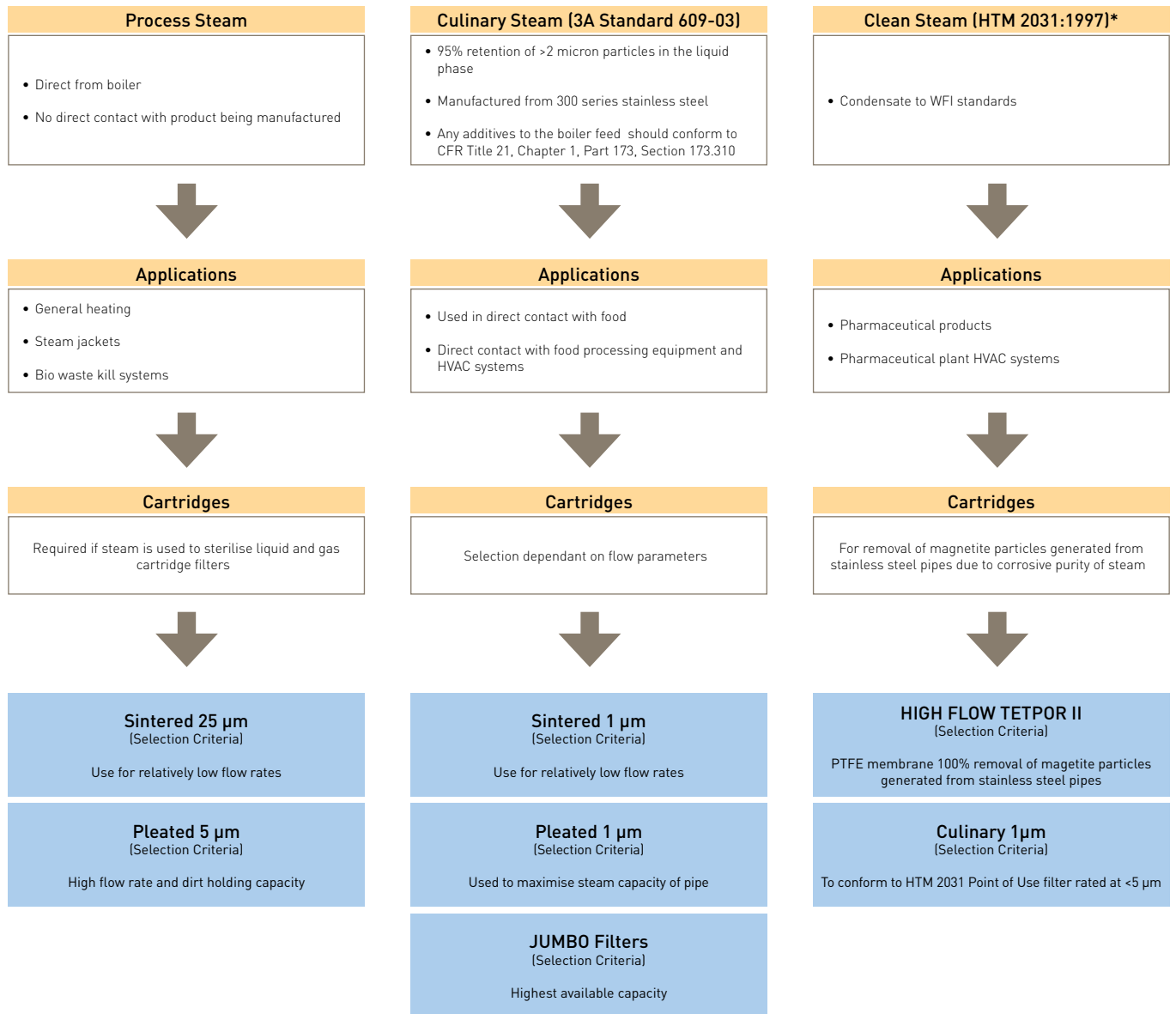
The quality of steam used within the food and dairy industries has been raised higher on the agenda in an ever increasing number of companies. Minimum acceptable standards are now being quoted on a more regular basis with particular reference to 'Culinary Grade' steam. Steam serves several purposes in the food and beverage industry. It is critical that this steam is of a high quality to ensure effective and continuous operation of the process.

### Features and Benefits

- 316L stainless steel filter cartridges
- Exceptionally high flow rates
- Available in culinary grade 1 micron
- High dirt holding capacity
- 'JUMBO' filter configuration ensures maximum utilisation of pipework capacity



## Which Filter for Which Application ?



## Specifications - PLEATED

### Materials of Construction

- Filtration Media: 316L Stainless Steel
- Inner Support Core: 316L Stainless Steel
- Outer Support Cage: 316L Stainless Steel
- End Caps: 316L Stainless Steel
- Standard o-rings/gaskets: EPDM Rubber *(standard)*  
Silicone and Viton *(options available)*

*All components of the cartridge are manufactured from materials suitable for contact with food and conform to the relevant requirements of FDA Code of Federal Regulations Title 21 Indirect Food Additives: Polymers; European Regulation EC1935 / 2004 concerning materials and objects in contact with food products; Biological Safety per current USP Class VI - 121 °C Plastics and ISO10993 equivalents.*

### Recommended Operating Conditions

The maximum differential pressure in direction of flow (outside to in) is 10 barg (145.03 psig).

The maximum differential pressure in direction of flow (in to outside) is 2 barg (29.00 psig).

The maximum recommended continuous operating temperature range is -75 °C (-103 °F) to +200 °C (392 °F).

*Note: Temperature dependant on o-ring compound*

### Effective Filtration Area (EFA)

10" (250 mm) 0.15 m<sup>2</sup> (1.61 ft<sup>2</sup>)

### Housing Materials of Construction

- Material: 316L Stainless Steel
- Surface Finish:
  - Single Internal: Electropolished Ra 0.8
  - Single External: Mechanical Polish (Commercial Bright)
  - Jumbo Internal: Upstream - Beadblast
  - Jumbo External: Outlet Assembly - Linished 180 grit Beadblast
- Vent / Drain:
  - Single / Jumbo: 1/4" BSPP Female Thread
- Seal Material: EPDM Aseptic Seal

### Housing Design Pressure and Temperature

Single: 16 barg (232.06 psig) @ 200 °C (392 °F)

Jumbo: 7 barg (101.52 psig) @ 170.5 °C (338.9 °F)

Figure	Housing Code	Connection Size	Capacity Kg / hr @ 1 barg	Overall Height	Replacement Filter Code
1	HBACE01KY	1.5" (38.1 mm)	150	14.8" (376 mm)	ZCHSK...C
1	HBACE011C	2" (50.8 mm)	280	20.7" (526 mm)	ZCHS1...C
2	VISCE-01J-D	3" (50.8 mm)	750	30.0" (763 mm)	ZCHS-J-...3
2	VISCE-01J-E	4" (101.6 mm)	1300	35.2" (895 mm)	ZCHS-J-...4
2	VISCE-03J-G	6" (152.4 mm)	2300	41.2" (1049 mm)	3 x ZCHS-J-...3
2	VISCE-03J-H	8" (203.2 mm)	3750	48.7" (1237 mm)	3 x ZCHS-J-...4

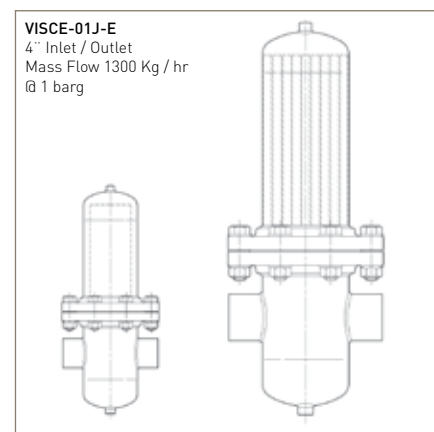
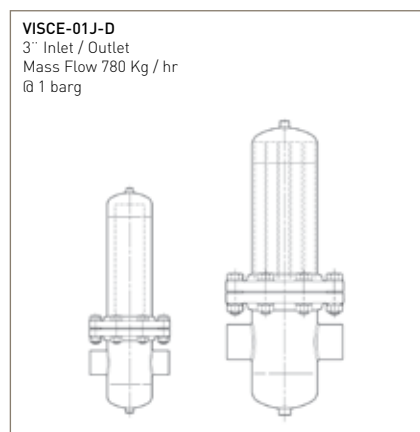
*Note: For efficient steam distribution it is recommended that steam velocities are restricted to 25 m / sec<sup>-1</sup>. For more information on the HBACE range, please contact Parker domnick hunter.*

### Correction Factors

To use the table above, the steam flow rates must be at 1 barg (14.50 psig). For system flows at different line pressures, divide the system flow by the correction factor below to find the equivalent flow @ 1 barg (14.50 psig).

Steam Pressure	0	1	2	3	4	5	6	7	8	9	10
Correction Factor	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5

Table showing the relative system size difference between pleated cartridges left and sintered cartridges right.



## Specifications - SINTERED

### Materials of Construction

- Filtration Media: Sintered Stainless Steel (316L)
- End Caps: Stainless Steel 1.4301 (AISI 304)
- Standard o-rings/gaskets: EPDM Rubber

All components of the cartridge are manufactured from materials suitable for contact with food and conform to the relevant requirements of FDA Code of Federal Regulations Title 21 'Indirect Food Additives: Polymers; European Regulation EC1935 / 2004 concerning materials and objects in contact with food products; Biological Safety per current USP Class VI - 121 °C Plastics and ISO10993 equivalents.

### Recommended Operating Conditions

The maximum differential pressure in direction of flow (outside to in) is 10 barg (145.03 psig).

The maximum differential pressure in direction of flow (in to outside) is 5 barg (72.51 psig).

The maximum recommended continuous operating temperature range is -75 °C (-103 °F) to +200 °C (392 °F).

Note: Temperature dependant on o-ring compound

### Housing Materials of Construction

- Material: 316L Stainless Steel
- Surface Finish:
  - Internal: Electropolished Ra 0.8
  - External: Mechanical Polish (Commercial Bright)
- Vent / Drain: 1/4" BSPP Female Thread (Supplied with Plug)
- Seal Material: EPDM Aseptic Seal

### Housing Design Pressure and Temperature

16 barg (232.06 psig) @ 200 °C (392 °F)

1	Figure	Housing Code	Connection Size	Capacity Kg / hr @ 1 barg		Overall Height	Replacement Filter Code
				1 µm	25 µm		
	1	HBACE01KY	1.5" (38.1 mm)	21	45	14.8" (376 mm)	ZCSSK...C
	1	HBACE011C	2" (50.8 mm)	40	160	20.7" (526 mm)	ZCSS1...C
	1	HBACE012C	2" (50.8 mm)	82	280	30.5" (776 mm)	ZCSS2...C

Note: For efficient steam distribution it is recommended that steam velocities are restricted to 25 m / sec<sup>1</sup>. For more information on the HBACE range, please contact Parker domnick hunter.

### Correction Factors

To use the table above, the steam flow rates must be at 1 barg (14.50 psig). For system flows at different line pressures, divide the system flow by the correction factor below to find the equivalent flow @ 1 barg (14.50 psig).

Steam Pressure	0	1	2	3	4	5	6	7	8	9	10
Correction Factor	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5

## Ordering Information

### SINTERED

ZCSS [ ] - [ ] [ ]

Code   Length (Nominal)	Code   Nominal Micron Rating (Steam)	Code   Endcap
B 2.5" (65 mm)	001 1.0 µm	B dh DOE
A 5" (125 mm)	025 25.0 µm	C BF / 226 Bayonet
K 5" (125 mm)		T TRUESEAL
1 10" (250 mm)		
2 20" (500 mm)		
3 30" (750 mm)		

### PLEATED

ZCHS [ ] - [ ] [ ]

Code   Length (Nominal)	Code   Nominal Micron Rating (Steam)	Code   Endcap
B 2.5" (65 mm)	005 5.0 µm	B dh DOE
A 5" (125 mm)	001 1.0 µm (Culinary)	C BF / 226 Bayonet
K 5" (125 mm)		T TRUESEAL
1 10" (250 mm)		3 3" JUMBO
2 20" (500 mm)		4 4" JUMBO
3 30" (750 mm)		

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