

CAPSULES AND CARTRIDGES

Capsules – Introduction	48
PES Capsule Filter (CCS)	49
PTFE Capsule Filters – Hydrophobic (CCF) and Hydrophilic (CCFH)	50
Polypropylene Capsule Filter (CCP)	51
Glass Microfiber Capsule Filter (CCG)	52
Cartridges – Introduction	53
End Fixture Configurations	54
Cellulose Acetate Membrane (TCR)	55
Polyethersulfone (PES) Membrane (TCS)	56
Polyethersulfone (PES) Membrane for the Food and Beverage Industries (TCS-G)	57
Polyethersulfone (PES) Membrane for the Electronics Industry (TCS-E)	58
Hydrophobic PTFE Membrane (TCF)	59
Hydrophilic PTFE Membrane (TCFH)	60
Coated Cellulose Acetate Membrane (TCY)	61
Single Layer Coated Cellulose Acetate Membrane (TCYE)	62
Polypropylene (TCP)	63
Single Layer Polypropylene (TCP/TCPE)	64
Multigrade Polypropylene (TCPD)	65
Epoxy Cellulose (TC)	66
Glass Fiber (TCG)	68
All Polypropylene (OH)	69
String Wound (W)	70
SS Cartridge Housing – ITS Type	71
SS Cartridge Housing – ITM Type	72
Sanitary SS Cartridge Housing – ITVA Type	73
Sanitary SS Cartridge Housing – ITWA Type	74
Polypropylene Cartridge Housing – IPP Type	75
Acrylic Cartridge Housing – IPA Type	76



Capsules – Introduction

- All-polypropylene housing is sturdy and chemically compatible
- Three membrane-type media and two depth-type media
- Wide range of retentive pore sizes
- All types available in three different lengths
- Diameter is a standard 78 mm
- Selected media available presterilized by ethylene oxide (EtO)

APPLICATIONS

- Filter tissue culture media, fermentation broth, and ground water
- Can be set in serial mode to maximize throughput volumes
- Point-of-use sterile filtration
- Use capsules for pilot/prototype studies, scale up to the same media in the cartridge format
- Not recommended for air filtration

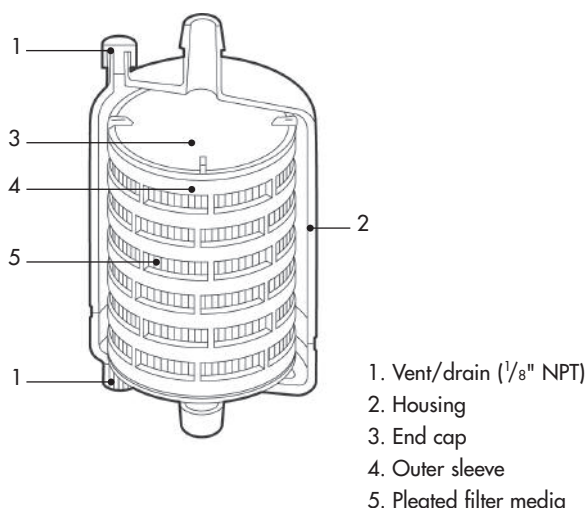


Five different filter media are available in the capsule format.

Media	Code	Characteristic	Media type	Pore Size or Nominal Rating (µm)	Membrane layers	Filtration area per capsule (cm ²)
PES	CCS	hydrophilic	membrane	0.20 – 0.45	double	up to 1800
PTFE	CCF	hydrophobic	membrane	0.05 – 1.0	single/double	up to 3600
PTFE	CCFH	hydrophilic	membrane	0.20	single	up to 3600
Polypropylene	CCP	hydrophobic	depth-type	0.8 – 30	N/A	up to 2600
Glass	CCG	-	depth-type	0.45 – 1.0	N/A	up to 1200

For detailed chemical compatibility information, see page 116.

When ordering length code "C", end fixture code "D" is not available.



B
1/4" NPTM



D
1/2" NPTM



H
3/8" hose barb



N
1-1/2" sanitary fitting

PES Capsule Filter (CCS)

- Can be sterilized by autoclaving (121°C, 30 min) or treatment with ethylene oxide (EtO)
- Available presterilized (EtO) or pre-rinsed (recommended when filtering high purity water)

APPLICATIONS

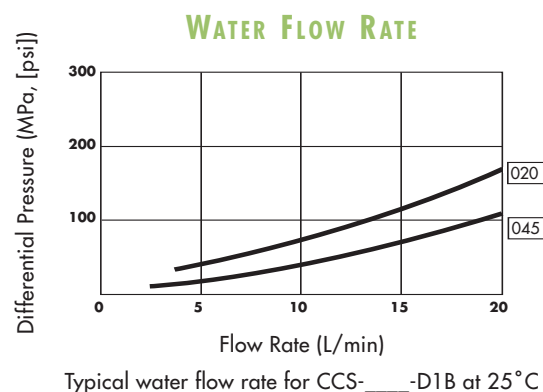
- Filter pure water, high purity chemicals, pharmaceuticals, cosmetics, and tissue culture media
- Remove bacteria or sub-micron particulates

SPECIFICATIONS

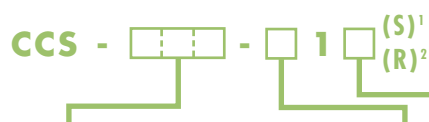
Maximum Inlet Pressure	0.39 MPa (57 psi)
Maximum Operating Temperature	60°C (140°F)

		CCS-020	CCS-045
Layers		Double	Double
Pore Size (µm)		0.20	0.45
Minimum bubble point (water)		≥0.39 MPa (57 psi)	≥0.29 MPa (43 psi)
LRV / Organism		≥7 B. diminuta	≥7 S. marcescens
Length Code	Length (mm)*	Filtration Area (cm²)	
C	102	450	
D	129	900	
E	201	1800	

*Length given is for capsule with end fixture H.



ORDERING INFORMATION



Pore size (µm)	Pore Size Code	Length (mm)	Length Code	End fixture (Inlet and Outlet)	End Fixture Code
0.20	020	102	C	1/4" NPTM	B
0.45	045	129	D	1/2" NPTM	D
		201	E	3/8" hose barb	H
				1 1/2" sanitary fitting	N

1. When ordering sterile units, specify "S" in the last position of the catalog number.
2. When ordering Pre-rinsed units, specify "R" in the last position of the catalog number.

PTFE Capsule Filters – Hydrophobic (CCF) and Hydrophilic (CCFH)

- Compatible: solvent and pH-resistant
- Hydrophobic:
 - Supported membrane except CCF-A10 and CCF-005
 - Single layer except CCF-A10 and CCF-005 which has double layer
 - 5 pore sizes
 - Can be sterilized by autoclaving (121°C, 30 min) or treatment with ethylene oxide (EtO).

- Hydrophilic:
 - Polyester membrane support
 - Single layer
 - 0.2 µm pore size

Note: Autoclaving or allowing membrane to dry will render it hydrophobic.

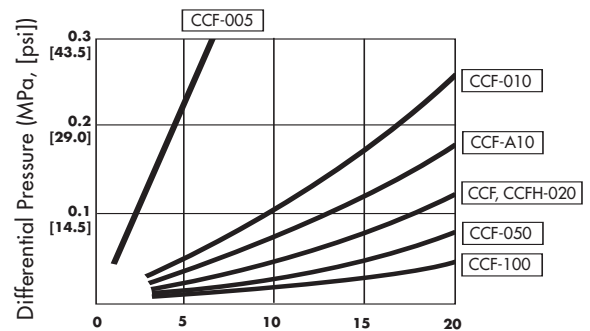
APPLICATIONS

- Use serially as prefilter and final filter
- Corrosive fluids and gases, photoresists, and both alkalis and acids
- Hydrophobic:
 - Solvent filtration
- Hydrophilic:
 - Solvents with higher surface tension
 - Heterogeneous fluid mixtures

SPECIFICATIONS

Maximum Inlet Pressure	0.39 MPa (57 psi)
Maximum Operating Temperature	60°C (140°F)

WATER FLOW RATE

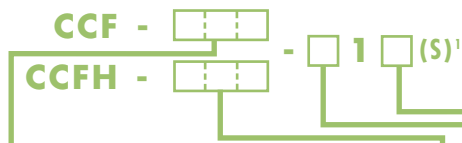


Typical water flow rate for CCF/CCFH-___-D1B at 25°C

	CCF-005	CCF-A10	CCF-010	CCF-020	CCF-050	CCF-100	CCFH-020
	Hydrophobic						Hydrophilic
Layers	Double	Double	Single	Single	Single	Single	Single
Pore size (µm)	0.05	0.10	0.10	0.20	0.50	1.0	0.20
Min. bubble point (IPA) MPa (psi)	≥0.16 (23)	≥0.15 (22)	≥0.13 (20)	≥0.09 (13)	≥0.05 (7)	≥0.03 (4)	-
Length Code	Filtration Area (cm²)						
C	102	900	900	570	570	570	900
D	129	1800	1800	1150	1150	1150	1800
E	201	3600	3600	2300	2300	2300	3600

*Length given is for capsule with end fixture H.

ORDERING INFORMATION



Pore Size (µm)	Pore Size Code
0.05	005
0.10	A10
0.10	010
0.20	020
0.50	050
1.00	100

Pore Size (µm)	Pore Size Code
0.2	020

Length (mm)	Length Code
102	C
129	D
201	E

End Fixtures (Inlet and Outlet)	End Fixture Code
1/4" NPTM	B
1/2" NPTM	D
3/8" hose barb	H
1 1/2" sanitary fitting	N

1. When ordering sterile units, specify "S" in the last position of the catalog number.

Polypropylene Capsule Filter (CCP)

- Depth-type matrix: high dirt holding capacity, superior retention
- Compatible with aqueous solutions and solvents
- Thermally welded to prevent fiber slough-off and minimize changes in pore size during filtration
- Wide range of particle size cut-offs
- Can be sterilized by autoclaving (121°C, 30 min) or treatment with ethylene oxide (EtO).

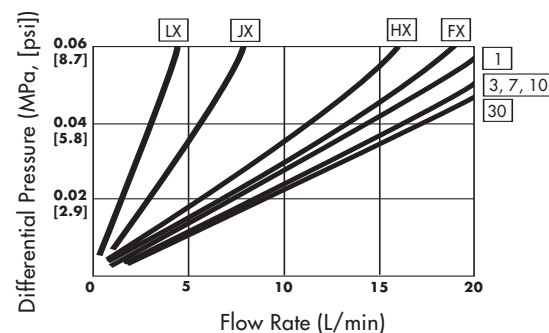
APPLICATIONS

- High purity water filtration
- Prefiltration to a final membrane filter such as PES or PTFE (CCS, CCF, or CCFH)
- Ultracleaning
- Filtration of process chemicals

SPECIFICATIONS

Maximum Inlet Pressure	0.39 MPa (57 psi)
Maximum Operating Temperature	60°C (140°F)

WATER FLOW RATE



Typical water flow rate for CCP-____-D1B at 25°C.

		CCP-								
		LX	JX	HX	FX	1	3	7	10	30
Particle size (µm)		0.8	1.0	2.0	3.0	2 – 5	5 – 10	10 – 20	10 – 20	20 – 30
% Particle retention		>99	>99	>99	>99	94	98	98	92	97
Length Code	Length* (mm)	Filtration Area (cm ²)								
C	102	400	500	500	550	500	600	500	550	650
D	129	800	1000	1000	1100	1000	1200	1000	1100	1300
E	201	1600	2000	2000	2200	2000	2400	2000	2200	2600

*Length given is for capsule with end fixture H.

ORDERING INFORMATION

CCP - [] - [] 1 []

Retention Characteristic Code	Length (mm)	Length Code	End Fixtures (Inlet and Outlet)	End Fixture Code
LX	102	C	1/4" NPTM	B
JX	129	D	1/2" NPTM	D
HX	201	E	3/8" hose barb	H
FX			1 1/2" sanitary fitting	N
1				
3				
7				
10				
30				

Glass Microfiber Capsule Filter (CCG)

- Depth-type matrix of borosilicate glass microfiber
- Large dirt holding capacity
- Resistant to most fluids except strong acids
- Contains a small amount of acrylic resin binder to enhance wet strength
- Can be sterilized by autoclaving (121°C, 30 min) or treatment with ethylene oxide (EtO).

APPLICATIONS

- Sea water filtration
- Aquaculture
- Prefiltration to a final membrane filter such as PES or PTFE (CCS, CCF, or CCFH)

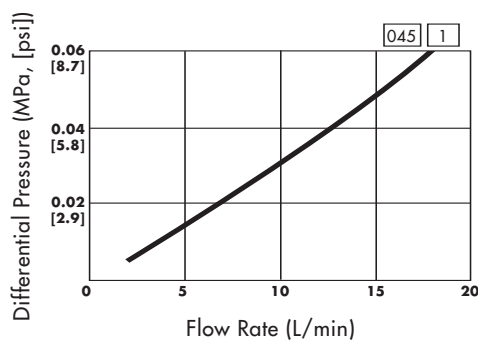
SPECIFICATIONS

Maximum Inlet Pressure	0.29 MPa (43 psi)
Maximum Operating Temperature	60°C (140°F)

	CCG-045	CCG-1
Nominal Pore Size (µm)	1 – 1.5 µm	1.5 – 2.0 µm
Length Code	Length* (mm)	Filtration Area (cm²)
C	102	300
D	129	600
E	201	1200

*Length given is for capsule with end fixture H.

WATER FLOW RATE



Typical water flow rate for CCG-____-D1B at 25°C.

ORDERING INFORMATION

CCG - [] - [] 1 []

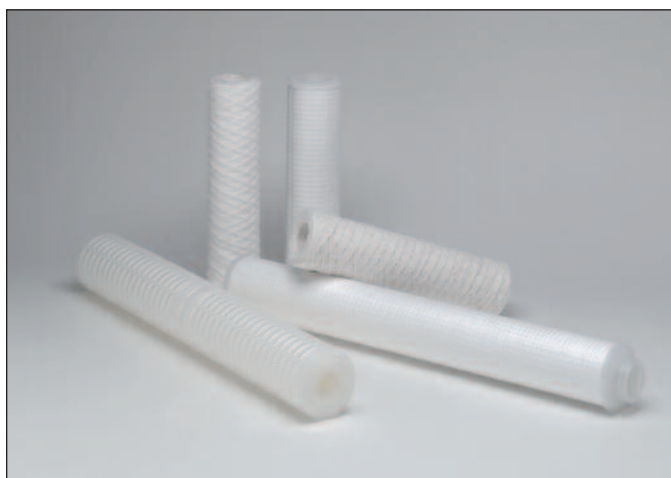
Nominal Pore Size (µm)	Nominal Pore Size Code	Length (mm)	Length Code	End Fixtures (Inlet and Outlet)	End Fixture Code
0.45	045	102	C	1/4" NPTM	B
1.0	1	129	D	1/2" NPTM	D
		201	E	3/8" hose barb	H
				1 1/2" sanitary fitting	N

Cartridges – Introduction

- Available in a wide variety of media and end fixture configurations
- Media can be mixed and configured in serial format to maximize throughput volumes, flow rates, and cartridge life
- Fit many commercially available filter housings

APPLICATIONS

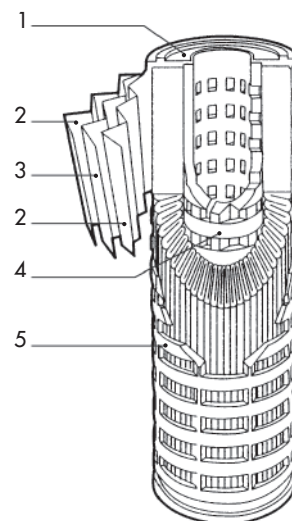
- Large surface area permits large throughput volumes and higher flow rates
- Suitable for both prefiltration and final filtration of fluids in pharmaceutical, food, beverage, and electronics industries
- Wide choice of media and core enables use in many chemical and thermal conditions



Eleven different filter media are available in cartridge format.

SPECIFICATIONS

Media	Code	Media type	Format	Absolute/ Nominal	Pore Size or Rating (µm)	Metric/ English lengths
Cellulose acetate	TCR	Membrane	Pleated, internal prefilter	Absolute	0.20 – 0.80	Metric
Polyethersulfone (PES)	TCS	Membrane	Pleated, internal prefilter	Absolute	0.20 – 0.45	Metric
Polyethersulfone (PES)	TCS-G	Membrane	Pleated, internal prefilter	Absolute	0.20 – 0.65	Metric
Polyethersulfone (PES)	TCS-E	Membrane	Pleated, internal prefilter	Absolute	0.20 – 0.45	Metric
Hydrophobic PTFE	TCF	Membrane	Pleated	Absolute	0.05 – 1.0	Metric
Hydrophilic PTFE	TCFH	Membrane	Pleated	Absolute	0.10 – 1.0	Metric
Coated cellulose acetate	TCY	Membrane	Pleated, dual layer	Nominal	0.21 – 2.0	Metric
Coated cellulose acetate	TCYE	Membrane	Pleated, single layer	Nominal	0.21 – 10	Metric
Polypropylene	TCP	Bonded fiber	Pleated, multiple layers	Nominal	0.8 – 3.0	Metric
Polypropylene	TCP/TCPE	Bonded fiber	Pleated, single layer	Nominal	1 – 30	Metric
Polypropylene, multigrade	TCPD	Depth-type	Spirally wound	Nominal	1 – 70	Metric
Epoxy cellulose	TC	Depth-type	Pleated	Nominal	1 – 30	Metric
Glass fiber	TCG	Depth-type	Pleated, dual layer	Nominal	0.45 – 1	Metric
All-polypropylene	OH	Bonded fiber	Graded density	Nominal	1 – 75	English
String (11 types of media)	W	String fiber	String wound	Nominal	0.5 – 200	English



1. End cap
2. Support media
3. Final membrane
4. Core tube
5. Outer sleeve

Gasket/O-ring Polymer	Gasket/O-ring Code	Autoclavable	Max Temp. (°C)
EPR	E	O	150
EPDM	D	O	150
Chloroprene	N	X	120
NBR	B	X	130
Silicone	S	O	230
FPM	V	O	260
PTFE (Gasket only)	H	O	260
FEP Encapsulated (O-ring only)	F	O	260

O – Recommended X – Not recommended

For detailed chemical compatibility information, see page 126.
Filter housings are available – call to discuss your particular needs.

End Fixture Configurations

Twelve different end configurations are pictured below; see the individual cartridge listings for availability. All-polypropylene (OH) and string wound (W) cartridges have a compression seal (not pictured), eliminating the need for gaskets or O-rings.



H Size 222 heat-resistant O-ring, flat closed
Standard O-ring: Silicone
Note: Autoclavable



M Size 222 O-ring, flat closed
Standard O-ring: EPR
Note: Non-Autoclavable



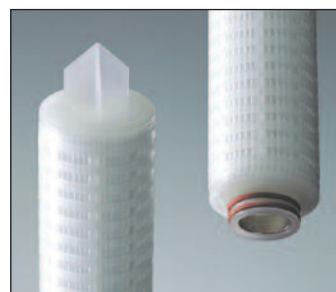
L Size 222 O-ring with internal stainless steel support, flat closed
Available for TCR-type only
Note: Autoclavable



K Size 222 heat-resistant O-ring, spear closed
Standard O-ring: Silicone
Note: Autoclavable



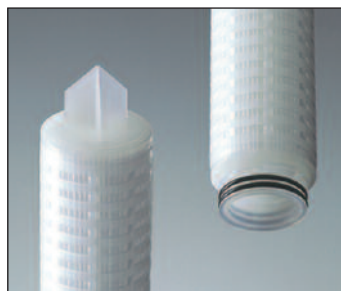
R Size 222 O-ring, spear closed
Standard O-ring: EPR
Note: Non-Autoclavable



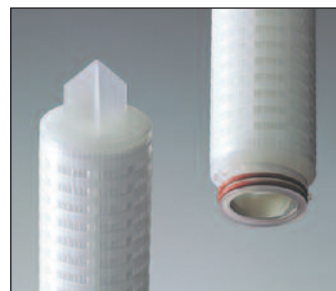
S Size 222 O-ring with tabs and internal stainless steel support, spear closed
Available for TCR-type only
Note: Autoclavable



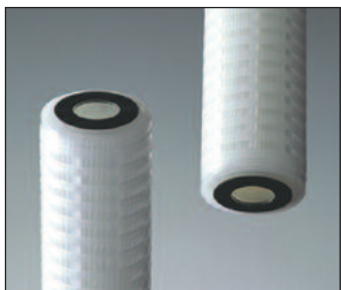
J Size 226 heat-resistant O-ring with tabs, spear closed
Standard O-ring: Silicone
Note: Autoclavable



P Size 226 O-ring with tabs, spear closed
Standard O-ring: EPR
Note: Non-Autoclavable



Q Size 226 O-ring with tabs and internal stainless steel support, spear closed
Available TCR-type only
Note: Autoclavable



F Flat Gasket
Standard Gasket: EPR
Note: Non-Autoclavable



N 120 size O-ring
Standard O-ring: Silicone
Note: Autoclavable



C Flat Gasket
Standard Gasket: Chloroprene (for PP) or NBR (for SS)
Available for TC-type only
Note: Non-Autoclavable

Cellulose Acetate (TCR)

- Dual cellulose acetate membranes provide internal prefiltration by placing a larger pore size membrane upstream of final rated pore size membrane
- Polyester membrane support is non-fiber releasing
- Low protein binding

APPLICATIONS

- Filter ultra-pure water, rinse waters, cosmetics, pharmaceuticals, and beverages (beer and wine)

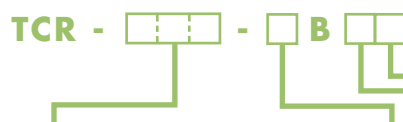
SPECIFICATIONS

	TCR-020	TCR-045	TCR-080
Pore size	0.20 µm	0.45 µm	0.80 µm
Dual membranes:			
Upstream	0.80 µm	0.80 µm	5.0 µm
Downstream	0.20 µm	0.45 µm	0.80 µm
Challenge organism	B. diminuta	S. marcescens	S. cerevisiae
LRV (Log reduction value)	≥7	≥7	≥7
Bubble Point (MPa)	≥0.294	≥0.235	≥0.088
Filtration area per single length	4200 cm ²		
Max. differential pressure (25°C)	0.39 MPa (57 psi)		
Max. operating temperature	80°C (176°F)		

Materials:

End cap	Polybutyleneterephthalate (PBT)
Sealing material	Medical grade polyurethane
Support media	Polyester
Prefilter membrane	Cellulose acetate
Final membrane	Cellulose acetate
Core tube	Polypropylene
Outer sleeve	Polypropylene

ORDERING INFORMATION



Pore Size (µm)	Pore Size Code
0.20	020
0.45	045
0.80	080

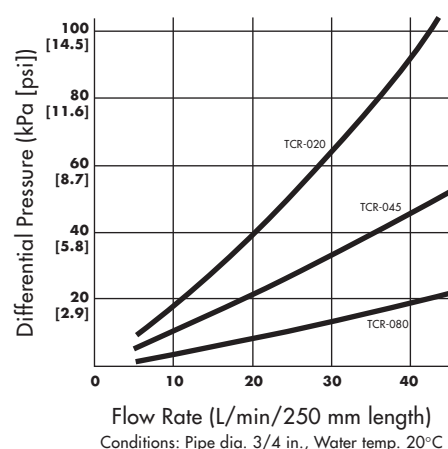
Length (mm)	Length Code
250 (single)	S
500 (double)	D
750 (triple)	T
1000 (quad)	Q

End Fixture Code	
F	R
N	S
M	P
L	Q

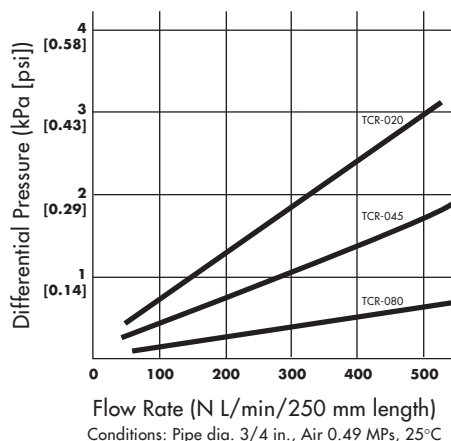
Note: Codes N, L, Q and S are autoclavable at 121°C, 30 min.

Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E (standard)
EPDM	D
Chloroprene	N
NBR	B
Silicone	S
FPM	V

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Polyethersulfone (PES) Membrane (TCS)

- Dual Polyethersulfone (PES) membranes provide internal prefiltration by placing a larger pore size membrane upstream of final rated pore size membrane
- Low extractables
- Enhanced chemical compatibility
- Quick rinse down
- Low protein binding
- 100% integrity tested during manufacturing
- Non-fiber releasing

APPLICATIONS

- Filtration for electronics, cosmetics, pharmaceuticals and beverage Industries

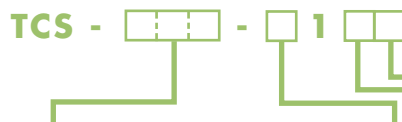
SPECIFICATIONS

	TCS-020	TCS-045
Pore size	0.20 µm	0.45 µm
Dual membranes:		
Upstream	0.45 µm	0.65 µm
Downstream	0.20 µm	0.45 µm
Challenge organism	B. diminuta	S. marcescens
LRV (Log reduction value)	≥7	≥7
Filtration area per single length	4000 cm ²	
Max. differential pressure (25°C)	0.39 MPa (57 psi)	
Max. operating temperature	80°C (176°F)	

Materials:

End cap	Polypropylene
Support media	Polypropylene
Prefilter membrane	Polyethersulfone (PES)
Final membrane	Polyethersulfone (PES)
Core tube	Polypropylene
Outer sleeve	Polypropylene

ORDERING INFORMATION



Pore Size (µm)	Pore Size Code
0.20	020
0.45	045

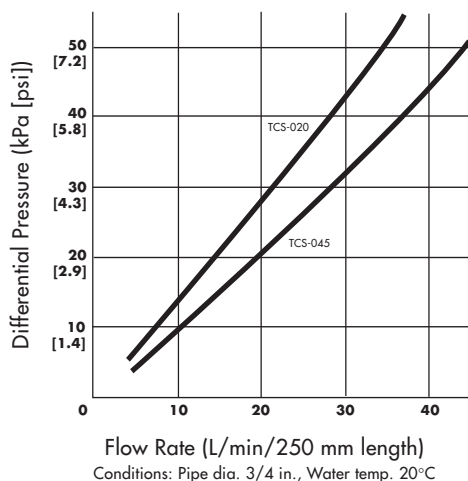
Length (mm)	Length Code
250 (single)	S
500 (double)	D
750 (triple)	T
1000 (quad)	Q

End Fixture Code	
F	R
N	K
M	P
H	J

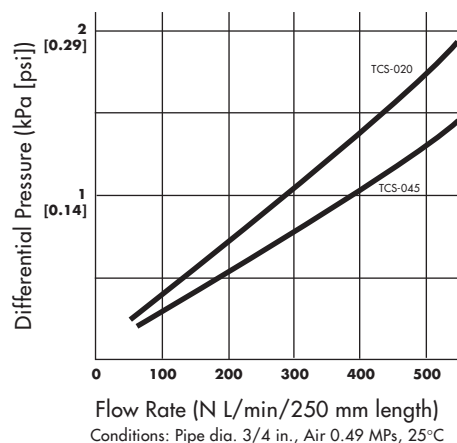
Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E (standard)
EPDM	D
Chloroprene	N
NBR	B
Silicone	S
FPM	V

Note: Codes H, J, K, and N are autoclavable at 121°C, 30 min.

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Polyethersulfone (PES) Membrane for the Food and Beverage Industries (TCS-G)

- Dual Polyethersulfone (PES) membranes provide internal prefiltration by placing a larger pore size membrane upstream of final rated pore size membrane
- Low extractables
- Enhanced chemical compatibility
- Quick rinse down
- Low protein binding
- 100% integrity tested during manufacturing
- Non-fiber releasing
- Selected types may be hot water sanitized

APPLICATIONS

- Food and beverage Industries

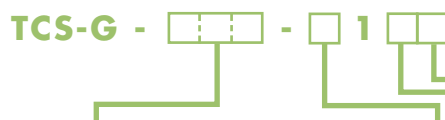
SPECIFICATIONS

	TCS-G020	TCS-G045	TCS-G065
Pore size	0.20 µm	0.45 µm	0.65 µm
Challenge Organism	B.diminuta	S.marcescens	S.cerevisiae
LRV (Log reduction value)	≥7	≥7	≥7
Max. differential pressure (25°C)	0.39 MPa [57 psi]		
Max. operating temperature	80°C (176°F)		
Filtration area (with 250 mm)	6600 cm ²		
Diffusion Rate (with 250 mm)	≤55 mL/min at 0.326 MPa	≤53 mL/min at 0.206 MPa	≤40 mL/min at 0.100 MPa

Materials:

End cap	Polypropylene
Support media	Polypropylene
Prefilter membrane	Polyethersulfone (PES)
Final membrane	Polyethersulfone (PES)
Core tube	Polypropylene
Outer sleeve	Polypropylene

ORDERING INFORMATION



Pore Size (µm)	Pore Size Code
0.20	020
0.45	045
0.65	065

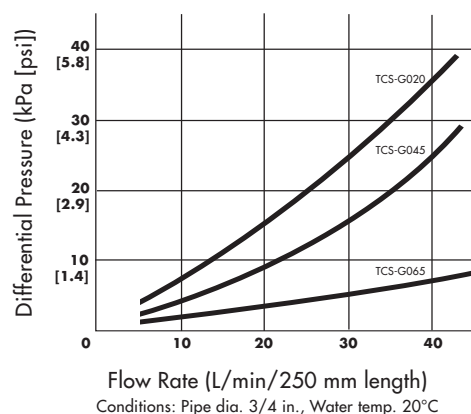
Length (mm)	Length Code
250 (single)	S
500 (double)	D
750 (triple)	T
1000 (quad)	Q

End Fixture Code	
F	R
M	P
H	J

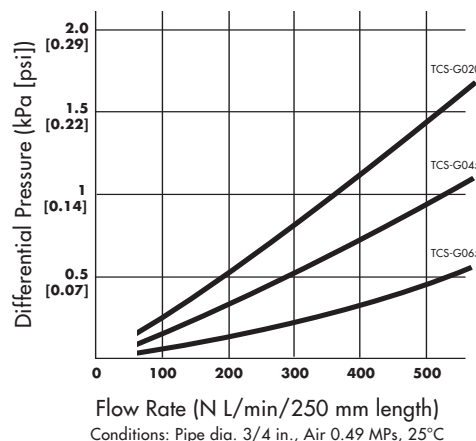
Note: Codes H, K, and J may be hot water sanitized at 85°C for 30 min, up to 100 times.

Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E
EPDM	D
Chloroprene	N
NBR	B
Silicone	S (standard)
FPM	V

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Polyethersulfone (PES) Membrane for the Electronics Industry (TCS-E)

- Dual Polyethersulfone (PES) membranes provide internal prefiltration by placing a larger pore size membrane upstream of final rated pore size membrane
- Low extractables
- Enhanced chemical compatibility
- Quick rinse down
- 100% integrity tested during manufacturing
- Non-fiber releasing
- Superior recovery of resistivity and TOC since cartridges are individually flushed with pure water in the manufacturing process

APPLICATIONS

- Filtration for electronics Industry

SPECIFICATIONS

	TCS-E020	TCS-E045	TCS-E045S
Pore size	0.20 µm	0.45 µm	0.45 µm
Filtration area (with 250 mm)	6700 cm ²		8800 cm ²
Max. differential pressure (25°C)	0.39 MPa [57 psi]		
Max. operating temperature	80°C (176°F)		

Materials:

	TCS-E-020/045	TCS-E-045S
End cap	Polypropylene	Polypropylene
Support media	Polypropylene	Polypropylene
Prefilter membrane	Polyethersulfone (PES)	-
Final membrane	Polyethersulfone (PES)	Polyethersulfone (PES)
Core tube	Polypropylene	Polypropylene
Outer sleeve	Polypropylene	Polypropylene

ORDERING INFORMATION

TCS-E - [] - [] 1 [] []

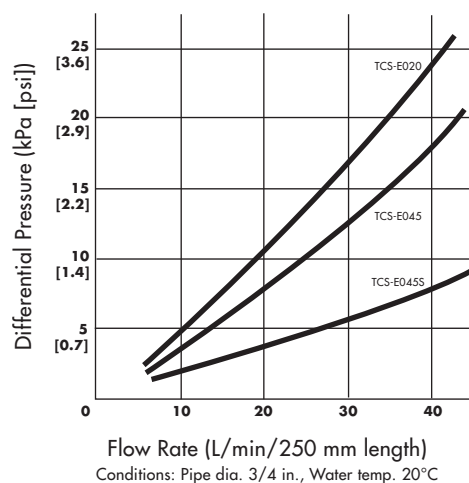
Pore Size (µm)	Pore Size Code
0.20	020
0.45	045
0.45	045S

Length (mm)	Length Code
250 (single)	S
500 (double)	D
750 (triple)	T
1000 (quad)	Q

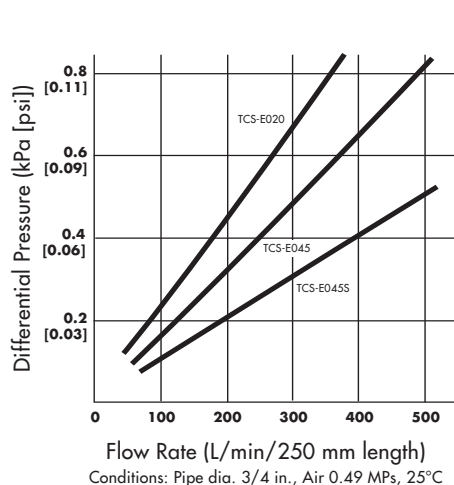
End Fixture Code	
F	R
M	P

Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E (standard)
EPDM	D
Chloroprene	N
NBR	B
Silicone	S
FPM	V

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Hydrophobic PTFE (TCF)

- PTFE membrane supported on a non-fiber releasing polypropylene backing
- Enhanced chemical resistance
- Selected types may be in-line steam sterilized (126°C, 30 min) or autoclaved (121°C, 30 min)

APPLICATIONS

- Filtration of photo resists and organic solvents
- Uses in the electronics industry and in chemical manufacturing
- Filtering gases and venting tanks

Note: Process fluids must have a surface tension of ≤ 32 mN/m (dyne/cm) to properly wet the filter and to achieve optimized flow rates and performance characteristics. For fluids with a surface tension ≥ 32 mN/m (dyne/cm), use hydrophilic PTFE (TCFH-type cartridges).

SPECIFICATIONS

	TCF-005	TCF-010	TCF-020	TCF-050	TCF-100	TCF-020L
Pore size	0.05 μm	0.10 μm	0.20 μm	0.50 μm	1.00 μm	0.20 μm
Filtration area per single length	9200 cm^2	9200 cm^2	7000 cm^2	7000 cm^2	7000 cm^2	16,400 cm^2
Max. differential pressure (25°C)	0.39 MPa (57 psi)					0.25 MPa (36 psi)
Max. operating temperature	80°C (176°F)					40°C (104°F)

Materials:

End cap	Polypropylene
Support media	Polypropylene
Membrane	PTFE
Core tube	Polypropylene
Outer sleeve	Polypropylene

ORDERING INFORMATION

TCF - 020L - *1 3 *2
TCF - - - 1 -

Pore Size (μm)	Pore Size Code
0.05	005
0.10	010
0.20	020
0.50	050
1.00	100

Length (mm)	Length Code
250 (single)	S
500 (double)	D
750 (triple)	T
1000 (quad)	Q

*1 Available with length codes S, D, and T.

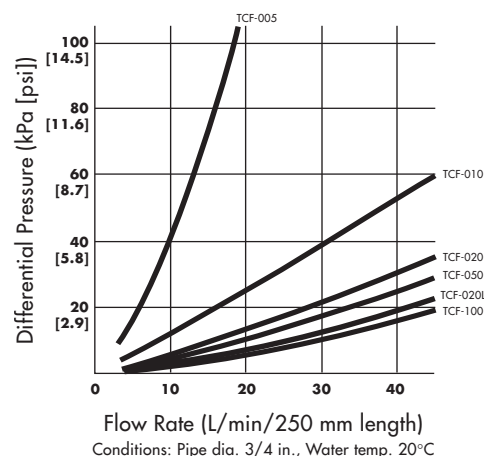
End Fixture Code	
F	R
N	K
M	P
H	J

Note: Codes H, J, K, and N are autoclavable at 121°C, 30 min, or can be steam sterilized at 126°C for 30 min.

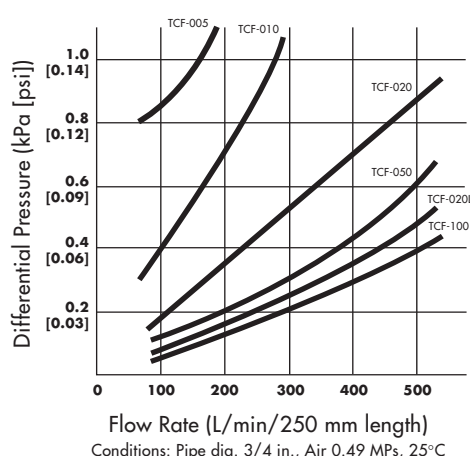
*2 Available with end fixture codes F, M, R, and P.

Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E (standard)
EPDM	D
Chloroprene	N
NBR	B
Silicone	S
FPM	V
PTFE	H (Gasket only)
FEP Encapsulated	F (O-ring only)

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Hydrophilic PTFE (TCFH)

- Unsupported PTFE membrane has been treated to render the matrix hydrophilic
- Polypropylene support is non-fiber releasing

Note: This cartridge is not autoclavable.

APPLICATIONS

- Strong acid and strong alkali solutions
- Photo resists
- Chemically aggressive liquids with a surface tension ≥ 32 mN/m (dyne/cm)

SPECIFICATIONS

	TCFH-010	TCFH-020	TCFH-050	TCFH-100	TCFH-020L
Pore size	0.10 μm	0.20 μm	0.50 μm	1.00 μm	0.20 μm
Filtration area per single length	9800 cm^2				21,600 cm^2
Max. differential pressure (25°C)	0.39 MPa (57 psi)				0.39 MPa (57 psi)
Max. operating temperature	80°C (176°F)				60°C (140°F)

Materials:

End cap	Polypropylene
Support media	Polypropylene
Membrane	Hydrophilic PTFE
Core tube	Polypropylene
Outer sleeve	Polypropylene

ORDERING INFORMATION

TCFH - - 1

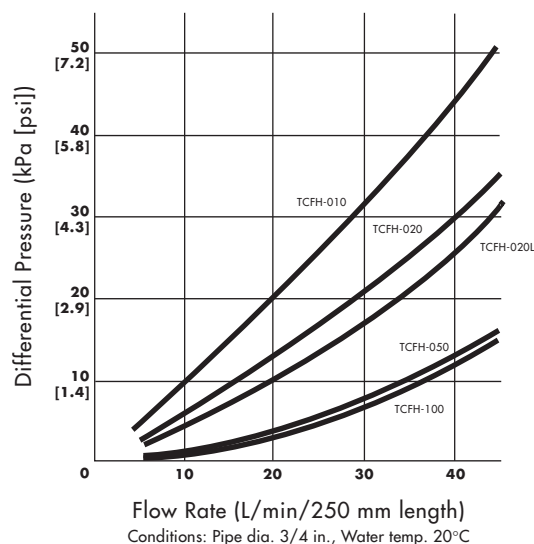
Pore Size (μm)	Pore Size Code
0.10	010
0.20	020/020L
0.50	050
1.00	100

Length (mm)	Length Code
250 (single)	S
500 (double)	D
750 (triple)	T
1000 (quad)	Q

End Fixture Code	
F	R
N	
M	P

Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E (standard)
EPDM	D
Chloroprene	N
NBR	B
Silicone	S
FPM	V
PTFE	H (Gasket only)
FEP Encapsulated	F (O-ring only)

TYPICAL WATER FLOW RATE



Coated Cellulose Acetate (TCY)

- Dual layer of coated cellulose acetate membrane
- Low protein binding
- Excellent dirt holding characteristics, superior particle retention
- Excellent water and air flow rates
- Non-fiber releasing

APPLICATIONS

- Use as a prefilter to a final membrane cartridge
- Filter protein-containing solutions for the food, cosmetic and pharmaceutical industries
- Purify process waters

SPECIFICATIONS

	TCY-ND, -LD, -HD
Filtration area per single length	5500 cm ²
Max. differential pressure (25°C)	0.49 MPa (71 psi)
Max. operating temperature	80°C (176°F)

Materials:

End cap	Polypropylene
Support media	Polypropylene
Prefilter membrane	Coated cellulose acetate
Final membrane	Coated cellulose acetate
Core tube	Polypropylene
Outer sleeve	Polypropylene

Retention Characteristic Code	Particle Size						
	0.21 µm	0.3 µm	0.48 µm	0.65 µm	0.8 µm	1.0 µm	2.0 µm
	% Particle Retention						
TCY-ND	99.9	99.9	99.9	>99.9			
TCY-LD		99	99.9	99.9	>99.9		
TCY-HD			99	99.9	99.9	99.9	>99.9

Test Criteria: Single length (250 mm) cartridge, flow rate 10 L/min.

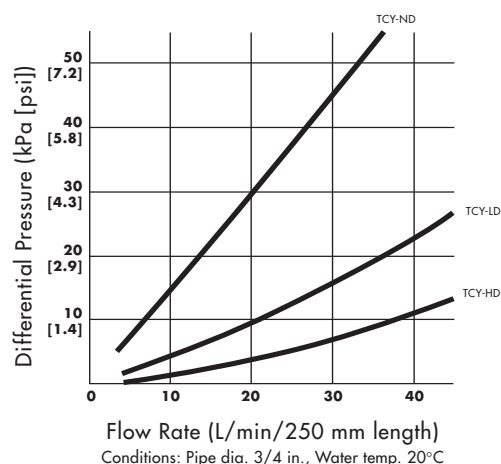
ORDERING INFORMATION

TCY - [] - [] 1 [] []

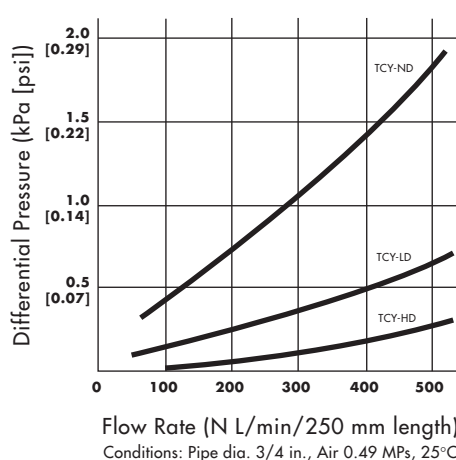
Retention Characteristic Code	Length (mm)	Length Code	End Fixture Code		Gasket/O-ring Polymer	Gasket/O-ring Code
ND	250 (single)	S	F	R	EPR	E (standard)
LD	500 (double)	D	N	K	EPDM	D
HD	750 (triple)	T	M	P	Chloroprene	N
	1000 (quad)	Q	H	J	NBR	B
					Silicone	S
					FPM	V

Note: Codes H, J, K, and N are autoclavable at 121°C, 30 min.

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Single Layer Coated Cellulose Acetate (TCYE)

- High efficiency single layer of coated cellulose acetate
- Economical
- Excellent particle retention
- Low protein binding, non-fiber releasing
- Excellent water and air flow rates

APPLICATIONS

- Filter process waters
- Filter protein-containing solutions for the food, cosmetic and pharmaceutical industries

SPECIFICATIONS

	TCYE-NS, -LS, -HS, -BS
Filtration area per single length	6200 cm ²
Max. differential pressure (25°C)	0.49 MPa (71 psi)
Max. operating temperature	80°C (176°F)

Materials:

End cap	Polypropylene
Support media	Polypropylene
Membrane	Coated cellulose acetate
Core tube	Polypropylene
Outer sleeve	Polypropylene

Retention Characteristic Code	Particle Size									
	0.21 µm	0.3 µm	0.48 µm	0.65 µm	0.8 µm	1.0 µm	2.0 µm	3.0 µm	5.0 µm	10 µm
	% Particle Retention									
TCYE-NS	99	99.9	99.9	>99.9						
TCYE-LS		98	99	99	>99.9					
TCYE-HS			96	99	99	99	>99.9			
TCYE-BS							98	99.9	99.9	>99.9

Test Criteria: Single length (250 mm) cartridge, flow rate 10 L/min.

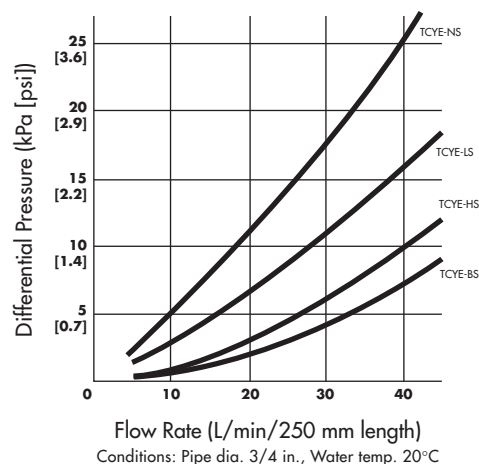
ORDERING INFORMATION

TCYE - [] - [] 1 [] []

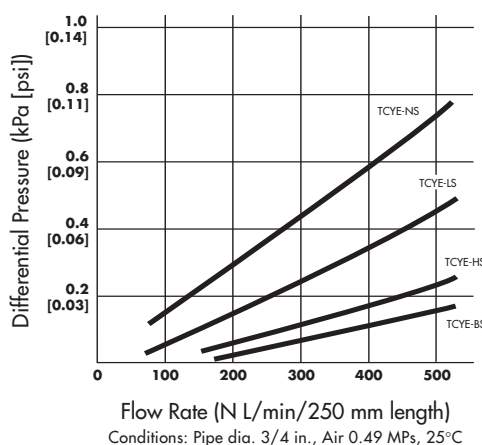
Retention Characteristic Code	Length (mm)	Length Code	End Fixture Code		Gasket/O-ring Polymer	Gasket/O-ring Code
NS	250 (single)	S	F	R	EPR	E (standard)
LS	500 (double)	D	N	K	EPDM	D
HS	750 (triple)	T	M	P	Chloroprene	N
BS	1000 (quad)	Q	H	J	NBR	B
					Silicone	S
					FPM	V

Note: Codes H, J, K, and N are autoclavable at 121°C, 30 min.

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Polypropylene (TCP)

- Multiple layers of nonwoven polypropylene maximize filtration efficiency
- Maximal throughput volumes and retention ratings
- Thermally bonded to prevent fiber slough-off, minimize extractables
- Supported both upstream and downstream (TCP-HX, FX only)

APPLICATIONS

- Filter process waters
- Filter protein-containing solutions for the food, cosmetic and pharmaceutical industries

SPECIFICATIONS

	TCP-LX	TCP-JX	TCP-HX	TCP-FX	TCP-02AM
Filtration area per single length	3300 cm ²	4500 cm ²	4200 cm ²	5100 cm ²	2900 cm ²
Max. differential pressure (25°C)	0.49 MPa (71 psi)				
Max. operating temperature	80°C (176°F)				

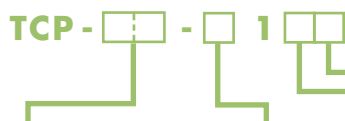
Materials:

End cap	Polypropylene
Support media	Polypropylene
Membrane	Polypropylene
Core tube	Polypropylene
Outer sleeve	Polypropylene

Retention Characteristic Code	Particle Size							% Retention (0.3 µm DOP)
	0.2 µm	0.48 µm	0.65 µm	0.8 µm	1.0 µm	2.0 µm	3.0 µm	
	% Particle Retention							
TCP-LX	45	90	98	>99				99.9999
TCP-JX		60	80	94	>99			99.999
TCP-HX				70	93	>99		99.99
TCP-FX				30	60	95	>99	99.84
TCP-02AM				43	77	>99		-

Test Criteria: Single length (250 mm) cartridge, flow rate 10 L/min.

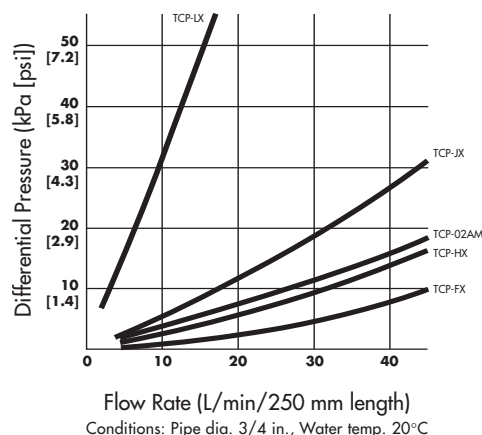
ORDERING INFORMATION



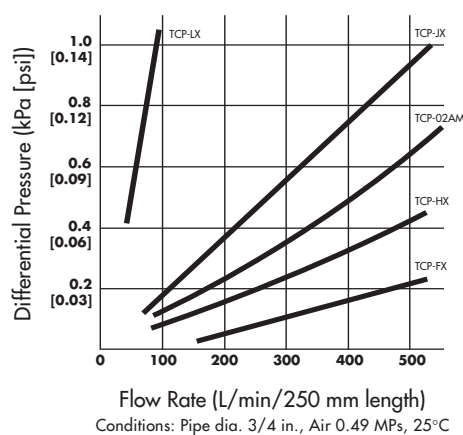
Retention Characteristic Code	Length (mm)	Length Code	End Fixture Code		Gasket/O-ring Polymer	Gasket/O-ring Code
LX	250 (single)	S	F	R	EPR	E (standard)
JX	500 (double)	D	N	K	EPDM	D
HX	750 (triple)	T	M	P	Chloroprene	N
FX	1000 (quad)	Q	H	J	NBR	B
02AM					Silicone	S
					FPM	V
					PTFE	H (Gasket only)
					FEP Encapsulated	F (O-ring only)

Note: Codes H, J, K, and N are autoclavable at 121°C, 30 min.

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Single Layer Polypropylene (TCP/TCPE)

- All-polypropylene construction, medium is single layer of thermally bonded polypropylene
- Pore size range 1 – 30 μm
- TCP
 - Upstream and downstream support
 - Larger effective filtration area
- TCPE
 - Thicker grade of polypropylene is stronger and does not require support
 - Less effective filtration area

APPLICATIONS

- Use as a prefilter in series upstream of a final membrane to clarify solutions
- Applications that require chemical resistance and chemical cleanliness

SPECIFICATIONS

	TCP-1	TCP-3	TCP-7	TCP-10	TCP-30	TCPE-3	TCPE-10	TCPE-30
Nominal pore size	1 μm	3 μm	7 μm	10 μm	30 μm	3 μm	10 μm	30 μm
Filtration area per single length	4200 cm²	5600 cm²	4200 cm²	5000 cm²	6200 cm²	3700 cm²		
Max. differential pressure (25°C)	0.49 MPa (71 psi)							
Max. operating temperature	80°C (176°F)							

ORDERING INFORMATION

TCP - [] - [] 1 []

TCPE - [] - [] 1 []

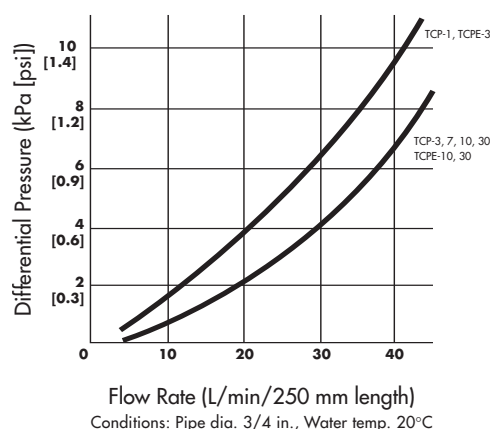
Materials:

End cap	Polypropylene
Support Media (TCP)	Polypropylene
Membrane	Polypropylene
Core tube	Polypropylene
Outer sleeve	Polypropylene

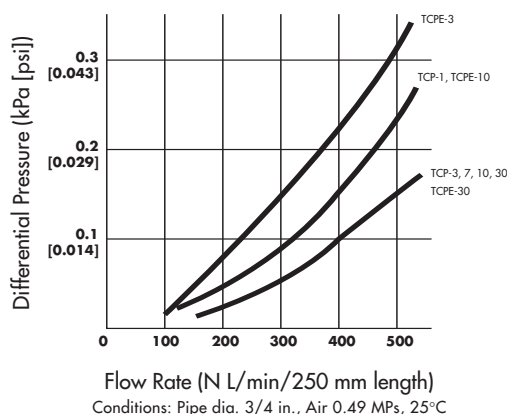
Nominal Pore Size Code (TCP)	Nominal Pore Size Code (TCPE)	Length (mm)	Length Code	End Fixture Code		Gasket/O-ring Polymer	Gasket/O-ring Code
1	-	250 (single)	S	F	R	EPR	E (standard)
3	3	500 (double)	D	N	K	EPDM	D
7	-	750 (triple)	T	M	P	Chloroprene	N
10	10	1000 (quad)	Q	H	J	NBR	B
30	30					Silicone	S
						FPM	V
						PTFE	H (Gasket only)
						FEP Encapsulated	F (O-ring only)

Note: Codes H, J, K, and N are autoclavable at 121°C, 30 min

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Multigrade Polypropylene (TCPD)

- Spirally wound multigrade all-polypropylene construction
- Increasing depth retention gradient: as fluid flows through the cartridge, retention efficiency increases
- Maximal chemical compatibility

APPLICATIONS

- Ideal for viscous fluids and fluids that have a heterogeneous particle population
- Prefilter or clarifying filter
- Filtration of pure or rinse waters, magnetized paint coatings, synthetic resins, high viscosity resins, plating solutions, etching solutions and strong alkali solutions

SPECIFICATIONS

	TCPD-01A, -02A, -03A, -05A, -1, -3, -7, -10, -30
Max. differential pressure (25°C)	0.49 MPa (71 psi)
Max. operating temperature	80°C (176°F)

Materials:

End cap	Polypropylene
Support media	Polypropylene net
Filter	Polypropylene
Core tube	Polypropylene

Retention Characteristic Code	Particle Size									
	0.6 µm	1.0 µm	2 µm	3 µm	5 µm	10 µm	20 µm	30 µm	40 µm	70 µm
	% Particle Retention									
TCPD-01A	90	>99.9								
TCPD-02A		>99	>99.9							
TCPD-03A		95	>99	>99.9						
TCPD-05A			95	>99	>99.9					
TCPD-1			90	95	>99					
TCPD-3				70	90	>99				
TCPD-7					40	80	>99			
TCPD-10						60	90	95	>99	
TCPD-30							60	90	95	>99

ORDERING INFORMATION

TCPD - [] - [] 1 []

Nominal Pore Size Code	
01A	1
02A	3
03A	7
05A	10
	30

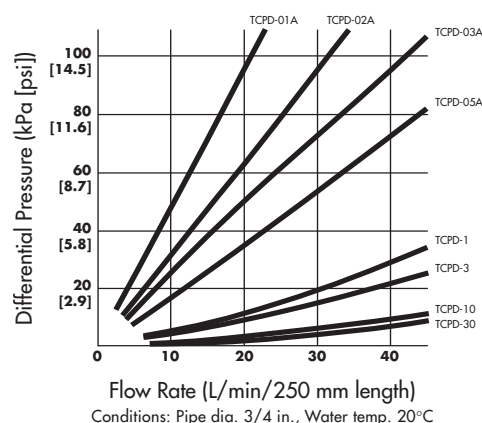
Length (mm)	Length Code
250 (single)	S
500 (double)	D
750 (triple)	T
1000 (quad)	Q

End Fixture Code	
F	R
N	K
M	P
H	J

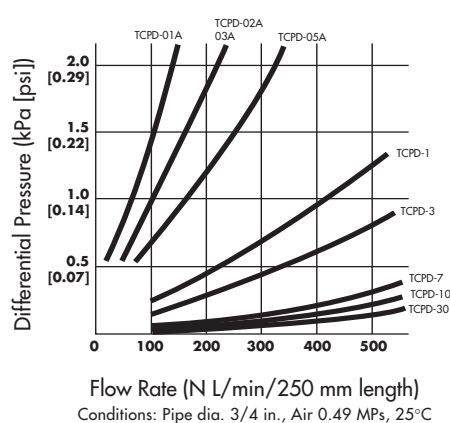
Note: Codes H, J, K, and N are autoclavable at 121°C, 30 min.

Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E (standard)
EPDM	D
Chloroprene	N
NBR	B
Silicone	S
FPM	V
PTFE	H (Gasket only)
FEP Encapsulated	F (O-ring only)

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Epoxy Cellulose (TC)

- 100% cellulose wet strengthened with epoxy resin to minimize fiber release
- Available with standard polypropylene core or with stainless steel core (type 304, single length only) for high temperature applications
- See Glass Fiber (TCG) for smaller nominal pore sizes

APPLICATIONS

- Filter high viscosity liquids such as syrups
- Filter fuels, oils, cutting oils and resins
- Purify industrial and rinse waters

Note: TC-type are not autoclavable.

SPECIFICATIONS

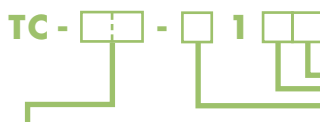
	TC type				TC- _ -S4C_			
Molded Material	Polypropylene				Stainless steel			
	1	3	10	30	1	3	10	30
Nominal pore size	1 µm	3 µm	10 µm	30 µm	1 µm	3 µm	10 µm	30 µm
Filtration area per single length	4000 cm ²				3400 cm ²			
Max. differential pressure (25°C)	0.49 MPa (71 psi)				0.49 MPa (71 psi)			
Max temperature	80°C (176°F)				150°C (302°F)			

Materials:

End cap	Polypropylene Stainless steel (seal material: silicone)
Filter	Epoxy Cellulose
Core tube	Polypropylene or stainless steel

ORDERING INFORMATION

Polypropylene molded material



Nominal Pore Size (µm)	Nominal Pore Size Code	Length (mm)	Length Code
1	1	250 (single)	S
3	3	500 (double)	D
10	10	750 (triple)	T
30	30	1000 (quad)	Q*

End Fixture Code	
F	R
N	P
M	C

Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E
Chloroprene	N (standard)
NBR	B
Silicone	S
FPM	V

*Quad length (1000 mm) not available in end fixture Code C.

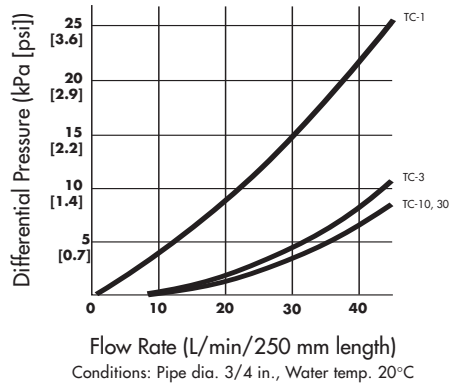
ORDERING INFORMATION

Stainless steel molded material

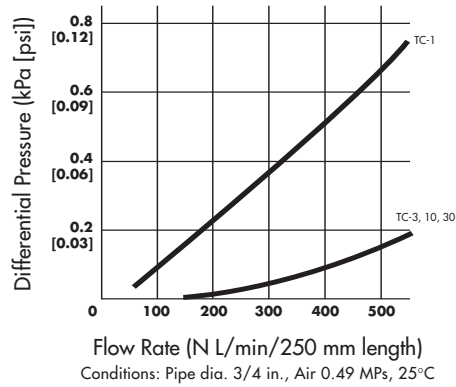
TC - - S4C

Nominal Pore Size (μm)	Nominal Pore Size Code	Gasket/O-ring Polymer	Gasket/O-ring Code
1	1	NBR	B (standard)
3	3	EPR	E
10	10	Silicone	S
30	30	FPM	V

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



Glass Fiber (TCG)

- Upstream polypropylene followed by a glass fiber layer that is wet strengthened with acrylic resin
- For larger pore size retention see Epoxy Cellulose (TC)

Note: TCG-type cartridges are not autoclavable.

APPLICATIONS

- Filter high viscosity liquids such as syrups
- Filter fuels, oils, cutting oils and resins
- Purify industrial and rinse waters

SPECIFICATIONS

	TCG-045	TCG-1
Nominal pore size	0.45 μm	1 μm
Filtration area per single length	3300 cm^2	
Max. differential pressure (25°C)	0.49 MPa (71 psi)	
Max. operating temperature	80°C (176°F)	

Materials:

End cap	Polypropylene
Upstream support	Polypropylene
Filter	Glass Fiber
Downstream support	Polypropylene
Core tube	Polypropylene
Outer sleeve	Polypropylene

ORDERING INFORMATION

TCG - [] - [] 1 []

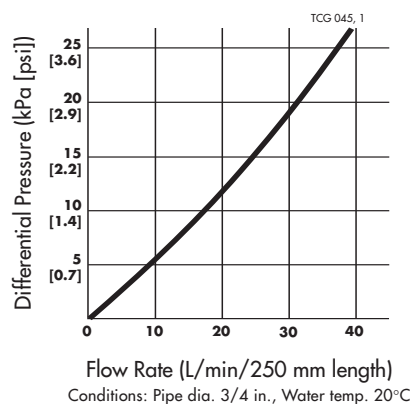
Nominal Pore Size (μm)	Nominal Pore Size Code
0.45	045
1	1

Length (mm)	Length Code
250 (single)	S
500 (double)	D
750 (triple)	T
1000 (quad)	Q

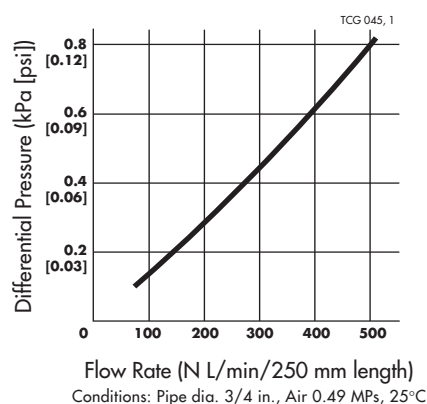
End Fixture Code	
F	R
N	
M	P

Gasket/O-ring Polymer	Gasket/O-ring Code
EPR	E
EPDM	D
Chloroprene	N (standard)
NBR	B
Silicone	S
FPM	V

TYPICAL WATER FLOW RATE



TYPICAL AIR FLOW RATE



All Polypropylene (OH)

- All-polypropylene construction: melt blown polypropylene filaments are spun into a gradient density media, maximizing particle retention
- Excellent flow rates
- Double open end: Compression seal eliminates the need for O-rings or gaskets

SPECIFICATIONS

	OH
Nominal pore size	1 – 75 µm
Max. operating pressure (25°C)	0.11 MPa (15 psi)
Max. temperature	60°C (140°F)

ORDERING INFORMATION

OH Q - - C

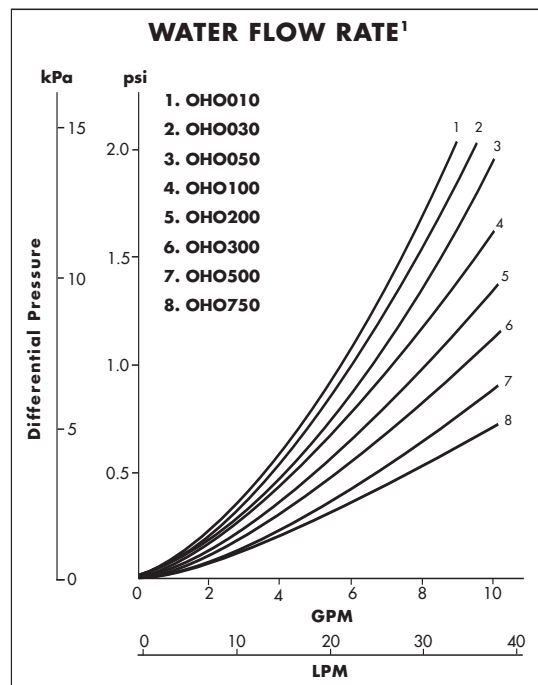
Nominal Pore Size (µm)	Nominal Pore Size Code
1	010
3	030
5	050
10	100
20	200
30	300
50	500
75	750

Length (inches)	Length Code
10	10
20	20
30	30
40	40

APPLICATIONS

- Prefilter upstream of a final pleated cartridge
- Moderate differential pressures and temperatures

PERFORMANCE DATA



1. Conditions: clean water at 25°C; data are for 10-inch cartridges

String Wound (W)

- Manufactured using “string” of selected materials wound around a core tube
- Core tubes available in polypropylene and three grades of steel
- Continuously wound – no joints that would restrict flow or allow by-pass
- Double-open end – compression seal eliminates the need for O-rings or gaskets
- Selection of materials allows a wide range of chemical and temperature tolerances

APPLICATIONS

- Coarse filtration upstream of a final pleated filter
- Filtration of industrial water
- Clarification of process fluids

SPECIFICATIONS

	All W cartridges
Nominal pore size	0.5 – 200 µm
Max. inlet pressure (25°C)	0.11 MPa (15 psi)

ORDERING INFORMATION

W - - C O

String Composition	String Composition Code	Core Composition	Core Composition Code	Nominal Pore Size (µm)	Nominal Pore Size Code	Length (inches)	Length Code
Bleached cotton, industrial	B	Tin plated steel	D	0.5	005	5	B
Bleached cotton, FDA	C	304 stainless	F	1	010	9.75	F
Glass fiber	G	316 stainless	G	3	030	10	1
Baked glass fiber	H	Polypropylene	P	5	050	20	2
Nylon	N	Special core extender, cover	Z	10	100	30	3
Polypropylene, FDA	P			15	150	40	4
Fibrillated polypropylene	Q			20	200		
Rayon	R			25	250		
Polyester	S			30	300		
Industrial polypropylene	V			40	400		
				50	500		
				75	750		
				100	P10		
				125	P12		
				150	P15		
				200	P20		

Stainless Steel Cartridge Housing – ITS Type

- Stainless steel housing for single cartridge filter, consisting of body and head with center post
- Easily perform cartridge filter replacement by loosening the cap nut and removing the housing head
- Choose from 3/4" PT or 1" PT inlet/outlet
- Designed for use with end fixture codes C and F
- Mounting accessories available

SPECIFICATIONS

Model		ITS	ITS-2	ITS-B	ITS-2B
Cartridge Capacity		250 mm x 1	500 mm x 1	250 mm x 1	500 mm x 1
Cartridge Compatibility		End fixture codes: C and F			
Inlet/Outlet		3/4" PT		1" PT	
Dimensions (mm)	Height	366	619	369	622
	Diameter	121	121	123	123
Max. Operation Pressure		0.69 MPa (100 psi)			
Composition		Head: SCS14 Body: SUS316 Gasket: FPM, PTFE			
Weight (kg)		2.0	4.0	2.4	4.4

Note: Use thread-sealing tape on tapered inlet and outlet.

ORDERING INFORMATION

Model	ITS	ITS-2	ITS-B	ITS-2B
Catalog No.	26804010	26804020	26804040	26804030

OPTIONAL ACCESSORIES

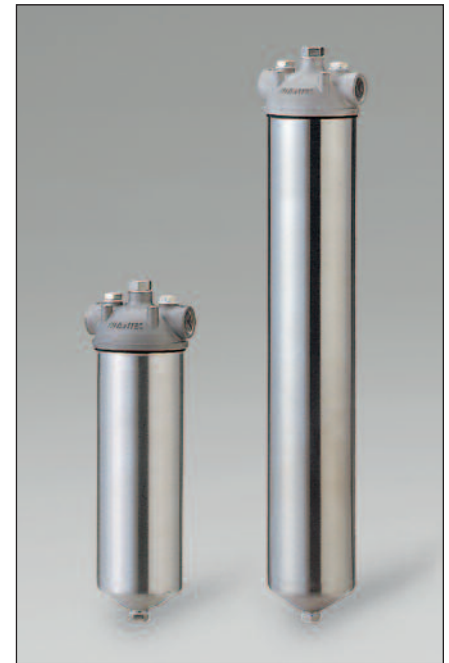
Model	ITS, ITS-B Stand	Mounting Kit
Composition	SUS304	Galvanized Steel
Catalog No.	28804030	28804055



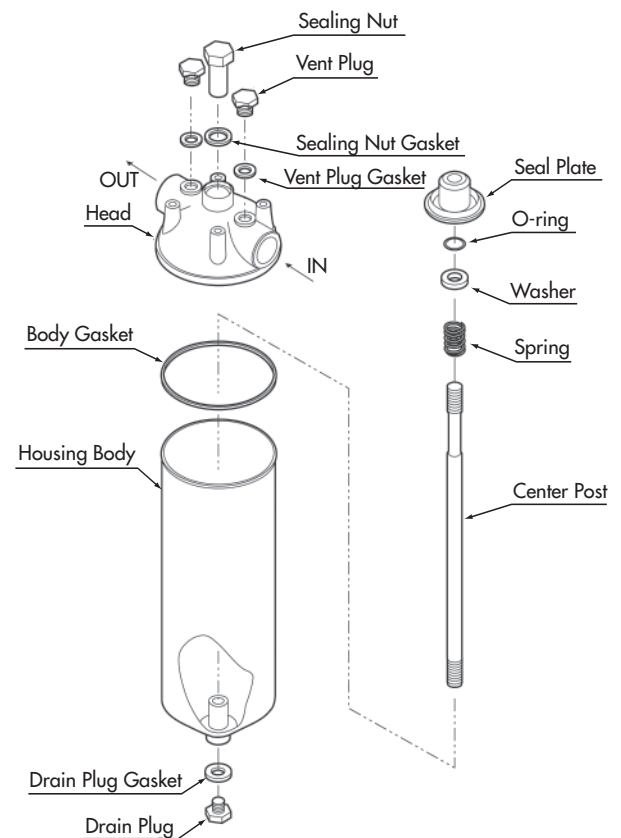
Stand



Unit with Mounting Kit



ITS, ITS-2



Stainless Steel Cartridge Housing – 1TM Type

- 2-part stainless steel housing for a single cartridge filter, consisting of body and head with clamp
- Easily perform cartridge filter replacement by loosening the sealing clamp and removing the housing head
- Few components allows for simple maintenance, and easy operation
- Lightweight housing can be cleaned by a washing machine
- Designed for use with end fixture codes M, H, and L

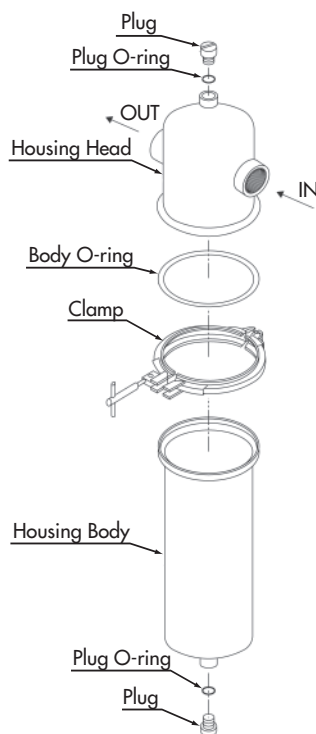
SPECIFICATIONS

Model		1TM-1S-MV	1TM-2S-MV
Cartridge Capacity		250 mm x 1	500 mm x 1
Cartridge Compatibility		End fixture codes: M, H, L	
Inlet/Outlet		1" PT	
Dimensions (mm)	Height	451	704
	Diameter	181	
Max. Operation Pressure		0.49 MPa (71 psi)	
Composition		O-ring: FPM	Head, Body: SU5304
Weight (kg)		1.8	2.2

Note: Use thread-sealing tape on tapered inlet and outlet.

ORDERING INFORMATION

Model	1TM-1S-MV	1TM-2S-MV
Catalog No.	26805010	26805020



1TM-1S-MV, 1TM-2S-MV

Sanitary Stainless Steel Cartridge Housing – 1TVA Type

- Sanitary stainless steel housing for a single cartridge filter, with sanitary ferrule type inlet, outlet, and seal for easy inspection and cleaning
- 3½ S-clamp wraps around body and base sections, which can be easily removed for disassembly
- Designed for use with end fixture codes* C and F
- 1TVA Type is compatible with applications that require vented housings

SPECIFICATIONS

Model		1TVA-1S-FS	1TVA-2S-FS	1TVA-3S-FS
Cartridge Capacity		250 mm x 1	500 mm x 1	750 mm x 1
Cartridge Compatibility		End fixture codes: C and F*		
Inlet/Outlet		1S ferrule		
Dimensions (mm)	Height	408	658	908
	Diameter	200		
Max. Operation Pressure		0.49 MPa (71 psi)		
Composition		Gasket: Silicon, PTFE Ball Valve: SUS316 Body, Base, Clamp: SUS304		
Weight (kg)		3.5	5.0	6.5

Note: Ball valve cannot be sterilized by autoclave.
Use thread-sealing tape on tapered inlet and outlet.

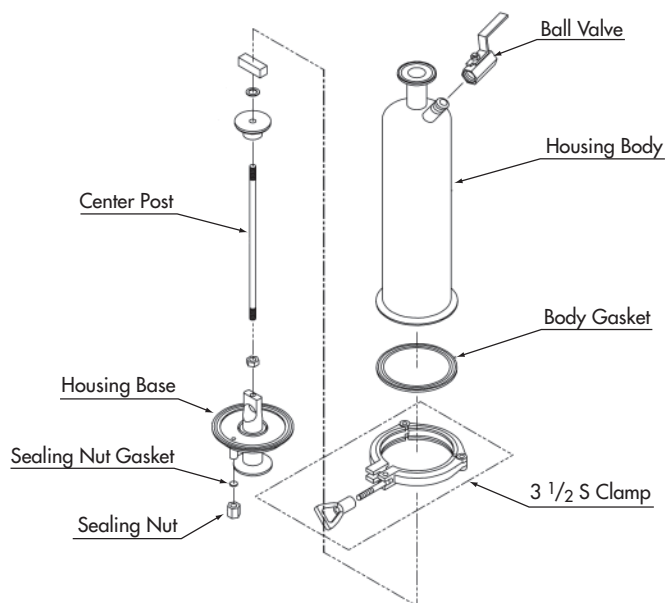
* Please contact us for information on sanitary housings compatible with other filter cartridge end fixture codes.

ORDERING INFORMATION

Model	1TVA-1S-FS	1TVA-2S-FS	1TVA-3S-FS
Catalog No.	26980101	26980102	26980103



1TVA-1S-FS



Sanitary Stainless Steel Cartridge Housing – 1TWA Type

- Sanitary stainless steel housing for a single cartridge filter, with sanitary ferrule type inlet, outlet, and seal for easy inspection and cleaning
- 4S-clamp wraps around body and base sections; 3½S-nut seals the top plate and body
- Designed for use with end fixture codes* C and F
- Inlet/outlet base of 1TWA Type allows unit be placed on short, straight sections of piping

SPECIFICATIONS

Model		1TWA-1S-FS	1TWA-2S-FS	1TWA-3S-FS
Cartridge Capacity		250 mm x 1	500 mm x 1	750 mm x 1
Cartridge Compatibility		End fixture codes: C and F*		
Inlet/Outlet		1S ferrule		
Dimensions (mm)	Height	412	667	917
	Diameter	183		
Max. Operation Pressure		0.49 MPa (71 psi)		
Composition		Gasket: Silicon Top Plate, Body, Base, Clamp: SUS304		
Weight (kg)		5.4	6.9	9.2

Note: Ball valve cannot be sterilized by autoclave.
Use thread-sealing tape on tapered inlet and outlet.

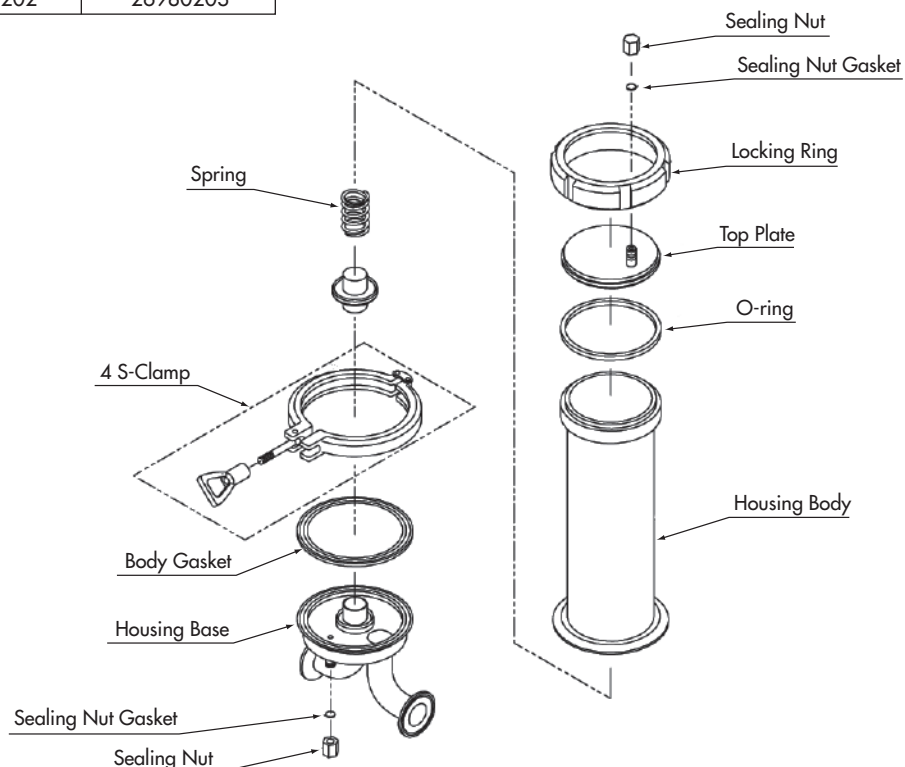
* Please contact us for information on sanitary housings compatible with other filter cartridge end fixture codes.

ORDERING INFORMATION

Model	1TWA-1S-FS	1TWA-2S-FS	1TWA-3S-FS
Catalog No.	26980201	26980202	26980203



1TWA-1S-FS



Polypropylene Cartridge Housing – 1PP Type

- Polypropylene housing for a single cartridge filter, with $\frac{3}{4}$ " PTF (PT nipple) type inlet and outlet; high quality and economical
- Suitable for sanitary applications, such as pharmaceutical or high purity water filtration; smooth inner walls of housing deter adhesion and accumulation of microbes and minute particles
- Designed for use with end fixture codes* C and F
- Several accessories for mounting the unit are available
- Unit head available with push-button vent

SPECIFICATIONS

Model		1PP-1-FS	1PP-2-FS
Cartridge Capacity		250 mm x 1	500 mm x 1
Cartridge Compatibility		End fixture codes: C and F*	
Inlet/Outlet		$\frac{3}{4}$ " PTF (PT nipple)	
Dimensions (mm)	Height	340	594
	Diameter	126	
Max. Operation Temperature		60°C	
Max. Operation Pressure		0.49 MPa (71 psi) @ 25°C, 0.19 MPa (28 psi) @ 60°C	
Composition		Head, Body, Adapter, Drain Cap, Nipple: Polypropylene O-ring: Silicone, FPM, Ethylene-propylene Vent, Adapter Spring: SUS304	
Weight (kg)		0.84	1.3

Note: 1PA Type units are made for liquid filtration only and are not suitable for air filtration.
1PA Type units cannot be sterilized by autoclave.
Use thread-sealing tape on tapered inlet and outlet.

* Please contact us for information on polypropylene housings compatible with other filter cartridge end fixture codes.

ORDERING INFORMATION

Model	1PP-1-FS	1PP-2-FS
Catalog No.	43011000	43021000

OPTIONAL ACCESSORIES

		Catalog No.
Housing Stand (SUS304)	1PP-1K (for 1PP-1)	44801010
	1PP-2K (for 1PP-2)	44801020
Mounting Kit (SUS304)		44801030
Tightening Tools (PVC)	1PP-H (for head)	44801040
	1PP-B (for body)	44801050

Customize the unit with:

- Silicone, FPM, or Ethylene-propylene O-rings
- Inlet/outlet pressure gauges
- SUS304, PE-coated SUS304, or titanium adapter springs
- Housing available with SUS304 push-button vent or polypropylene vent (with O-ring seal).

Contact us for more information on these options.



1PP-1, 1PP-2

Acrylic Cartridge Housing – 1PA Type

- Acrylic housing for a single cartridge filter, with $\frac{3}{4}$ " PF type inlet and outlet; high quality and economical
- Transparent housing permits observation of filtration process
- Lightweight yet strong construction; can be assembled by hand
- Designed for use with end fixture codes C and F

SPECIFICATIONS

Model		1PA
Cartridge Capacity		250 mm x 1
Cartridge Compatibility		End fixture codes: C and F
Inlet/Outlet		$\frac{3}{4}$ " PF ($\frac{3}{4}$ " PFM x $\frac{3}{4}$ " PTM changeable)
Dimensions (mm)	Height	345
	Diameter	170
Max. Operation Temperature		38°C
Max. Operation Pressure		0.5 MPa (73 psi) @ 38°C
Composition		Head: Polypropylene Body: Acrylonitrile Styrene Resin (acrylic) Body O-ring: Silicone Connector O-ring: NBR
Weight (kg)		1.0

Note: - 1PA Type units are made for aqueous filtration only and are not suitable for air or organic solvent filtration.
 - 1PA Type units cannot be sterilized by autoclave.
 - Units include hand-tightening tool as standard accessory.
 - Use thread-sealing tape on tapered inlet and outlet.

ORDERING INFORMATION

Model	1PA
Catalog No.	26807000

OPTIONAL ACCESSORIES



Model	ø15mm Hose Adapter	L-shape Mounting Kit	Housing Stand
Composition	Polypropylene	SUS304	SUS304
Catalog No.	28801011	28801022	28801012



1PA

