

CHEMRAPID® FILTERS

NON-DEWETTING PTFE MEMBRANE TECHNOLOGY

Chemrapid™ Series filters are composed of a surface-modified PTFE membrane that is bonded with PFA. It's higher surface energy solves the problem of membrane dewetting in process chemistries, especially those which are prone to outgassing.

Superior Filtration Efficiency and High Flow Rate

Chemrapid™ is suitable for filtration of aqueous process chemicals, including H_2SO_4 , H_3PO_4 , HNO_3 , HCl , NH_4OH , and H_2O_2 . The non-dewetting membrane performs well in elevated temperature acid and alkaline process chemistries, including SC1, SC2, and SPM. Excellent chemical compatibility and low metal extractables provide stable process performance. The surface-modified PTFE membrane is more likely to remain fully wet, resulting in full utilization of the media for higher flow rates and superior filtration efficiency. Pre-wet packaging and ultra-pure cleanliness reduces process start up time.



FEATURE

BENEFIT

All fluoropolymer construction

High chemical compatibility and ultra-low metal extractables

Surface modified PTFE

Resists dewetting and minimizes service disruption

100% integrity tested

Ensures complete particle capture from the start

High effective filtration area options

Provides high flow rates, low pressure drop, and long service life

Prewet option

Reduces equipment pre-operation time

Disposable filter options

One-piece design reduces risks of contamination and exposure to hazardous chemicals, allows quick installation and minimizes downtime.

Typical Applications

- Single Wafer and Batch Processing
- Wet Etch and Clean Processes

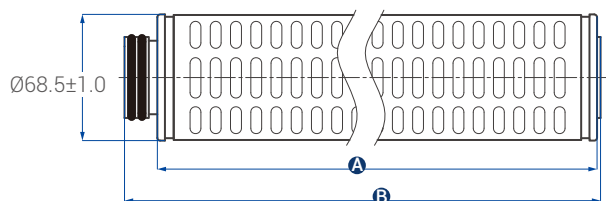
SPECIFICATION

	Cartridge	Disposable	Small In-line Type
Filter Media	Non-dewetting PTFE		
Core/Cage/End Caps	PFA	PFA	PFA
O-ring (Cartridge only)	TEV or FFKM	—	—
Shell (Disposable only)	—	PFA	PFA
Max. Operating Temperature	180°C	180°C	95°C
Max. Operating Pressure	—	0.58 MPa @25°C 0.097 MPa @180°C	0.4 MPa @25°C
Max. FWD Differential Pressure	0.49 MPa @25°C	—	—
Max. BWD Differential Pressure	0.39 MPa @25°C	—	—
Filter Areas *		Z1 (Ø83mm): 1.3m ² /10"	
	X1 (Ø68mm): 0.91m ² /10"	Z2 (Ø83mm): 2.2m ² /10"	Y1 (Ø36mm): 0.13m ² /3"
	X2 (Ø68mm): 1.21m ² /10"	Z3 (Ø83mm): 3.0m ² /10"	X1 (Ø68mm): 0.32m ² /4"
	X4 (Ø68mm): 1.21m ² /10"	Z4 (Ø83mm): 2.2m ² /10"	X2 (Ø68mm): 0.42m ² /4"
		Z5 (Ø83mm): 3.0m ² /10"	

* X1/X2/Z1/Z2/Z3 are suggested for temperature not higher than 120°C;
X4/Z4/Z5 are suggested for temperature not higher than 180°C;

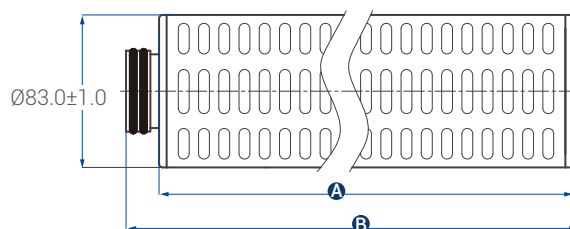
DIMENSIONS (CARTRIDGE)

Chemrapid X1/X2 (Connection: TC)



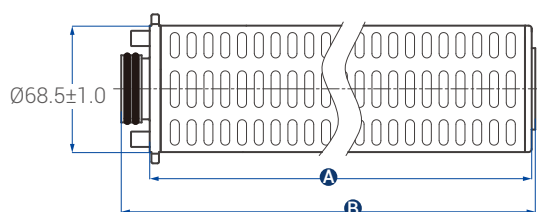
Length Code	A (mm)	B (mm)
03	74.0	96.0
04	105.0	127.0
10	237.5	259.5
20	476.0	498.0
30	714.5	736.5

Chemrapid Z1~Z9 Cartridge Filters (Connection: TC)



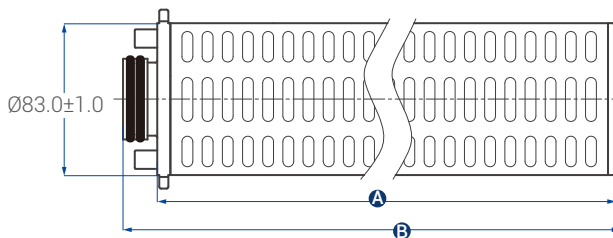
Length Code	A (mm)	B (mm)
10	225.5	246.5
20	452.5	471.0
30	675.5	696.5

(Connection: CLTC)



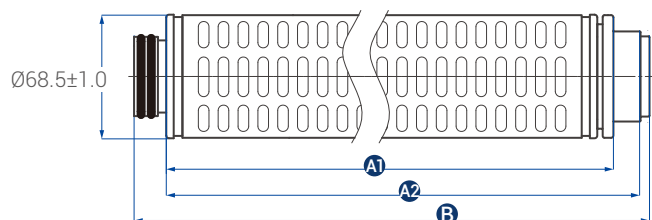
Length Code	A (mm)	B (mm)
10	238.0	260.0
20	471.5	493.5

(Connection: CLTC)



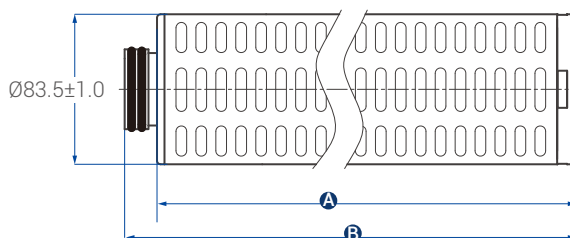
Length Code	A (mm)	B (mm)
10	217.0	238.0
20	447.0	468.0

(Connection: TPC.J)



Length Cod	A1 (mm)	A2 (mm)	B (mm)
10	245.0	260.0	284.0
20	506.0	521.0	545.0

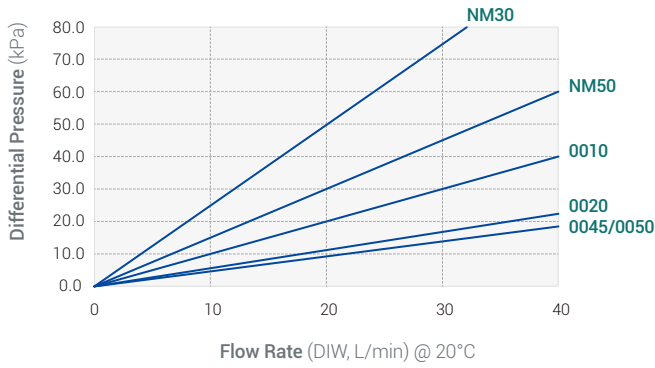
(Connection: ETC)



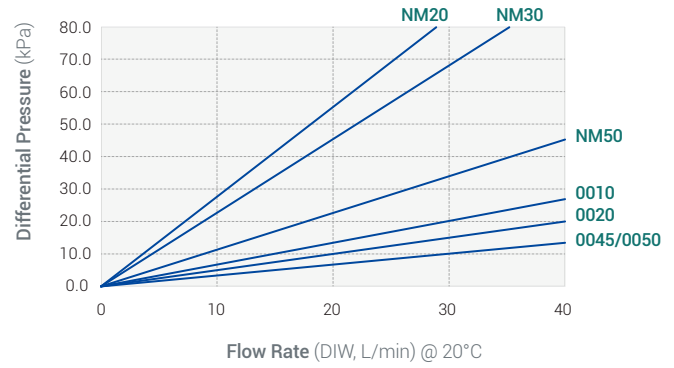
Length Code	A (mm)	B (mm)
10	231.0	250.0
10P	228.0	247.0

FLOW RATE (CARTRIDGE)

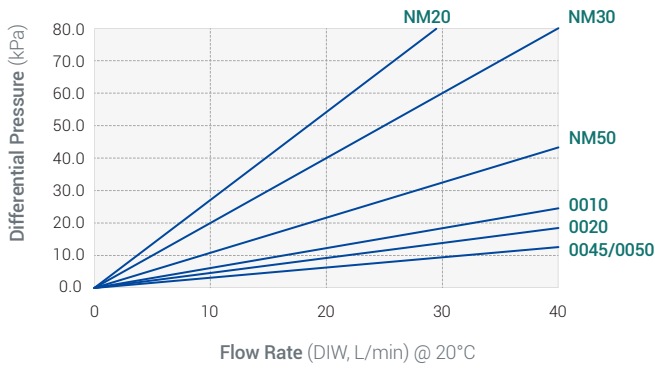
Chemrapid X1 Series 10" Cartridge Filters



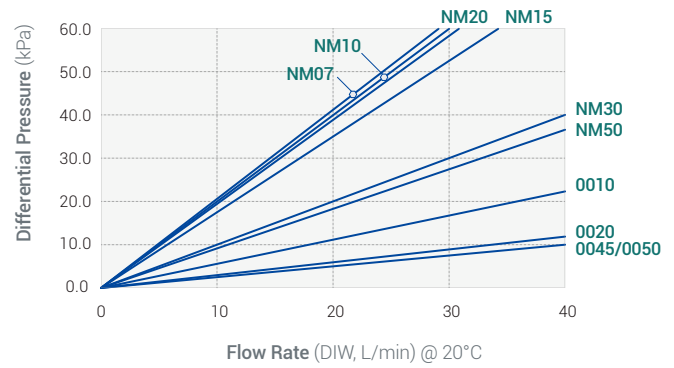
Chemrapid X2 Series 10" Cartridge Filters



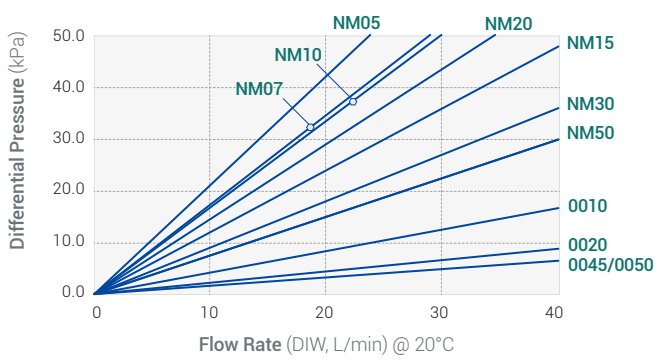
Chemrapid Z1 Series 10" Cartridge Filters



Chemrapid Z2 Series 10" Cartridge Filters



Chemrapid Z3 Series 10" Cartridge Filters



ORDER INFORMATION (CARTRIDGE)

CHR **1** **2** **3** **4** **5** **6** **7**

Block 1

Code	Diameter
X1	Ø68mm
X2	
Z1	
Z2	Ø83mm
Z3	

Block 4

Code	Length	
03	3"	Only for Ø68mm
04	4"	TC type
10P	10"	Only for ETC type
10	10"	All types
20	20"	Except ETC type
30	30"	TC

Block 2

Code	Removal Rating
NM05	5nm
NM07	7nm
NM10	10nm
NM15	15nm
NM20	20nm
NM30	30nm
NM50	50nm
0010	0.1µm
0020	0.2µm
0045	0.45µm
0050	0.5µm

Block 5

Code	O-ring Material
P	TEV
K	FFKM

Block 6

Code	Cleanliness	
XXS	<0.5µg/device	
XS	<1µg/device	5/7/10nm
S	<3µg/device	
L	<10µg/device	10/15/20/30nm
LV	Metal<10µg/device, low anion	
M	<25µg/device	
H	<40µg/device	≥50nm
E	Electronic Grade	

Block 3

Code	End Cap	
TC	Standard	Ø68mm/ Ø83mm
CLTC	For Cobetter PFA Housing	
ETC	For E PFA Housing	Ø83mm
TPCJ	For P PFA Housing	Ø68mm

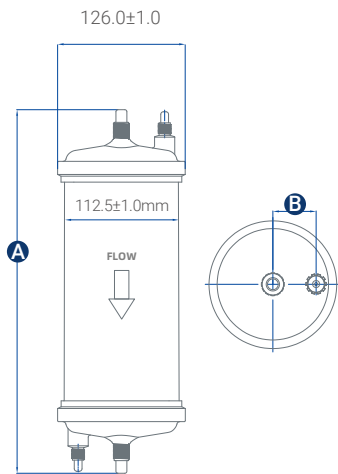
Block 7

Code	Package
D	Dry
W	Prewet, UPW

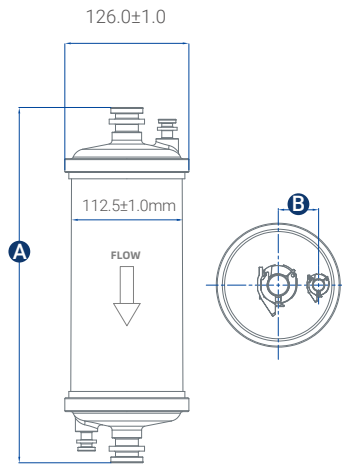
DIMENSIONS (DISPOSABLE) I

Chemrapid in-line disposable

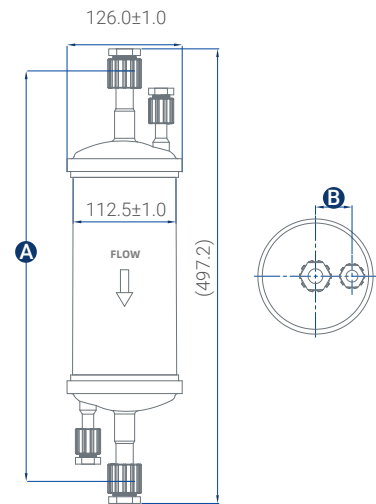
N type Flare series (F32, F33, F42, F43, F62, F63, F82, F83)



N type Nanolink series (N84)



N type Female series (F64F, P64F)

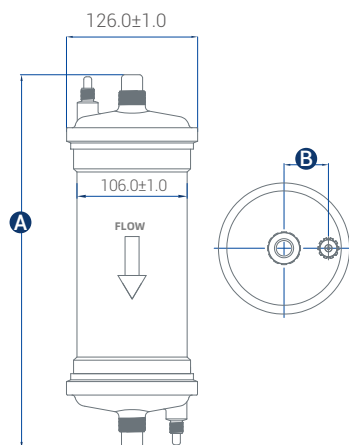


Code	Inlet/Outlet	Length	A (mm)	B (mm)
N-05-F32	In-line (N type F32)	5"	240.0	42.7
N-05-F33	In-line (N type F33)	5"	240.0	42.7
N-05-F42	In-line (N type F42)	5"	240.0	42.7
N-05-F43	In-line (N type F43)	5"	240.0	42.7
N-05-F62	In-line (N type F62)	5"	240.0	42.7
N-05-F63	In-line (N type F63)	5"	240.0	42.7
N-05-F82	In-line (N type F82)	5"	240.0	42.7
N-05-F83	In-line (N type F83)	5"	257.0	42.7
N-05-N84	In-line (N type N84)	5"	284.0	41.0
N-10-F32	In-line (N type F32)	10"	359.0	42.7
N-10-F33	In-line (N type F33)	10"	359.0	42.7
N-10-F42	In-line (N type F42)	10"	359.0	42.7
N-10-F43	In-line (N type F43)	10"	359.0	42.7
N-10-F62	In-line (N type F62)	10"	359.0	42.7
N-10-F63	In-line (N type F63)	10"	359.0	42.7
N-10-F82	In-line (N type F82)	10"	376.0	42.7
N-10-F83	In-line (N type F83)	10"	376.0	42.7
N-10-N84	In-line (N type N84)	10"	403.0	41.0
N-10-F64F	In-line (N type F64F)	10"	497.2	40.0
N-10-P64F	In-line (N type P64F)	10"	487.0	40.0
N-10-HS82	In-line (N type HS82)	10"	360.0	42.0
N-10-HS84	In-line (N type HS82)	10"	360.0	42.0

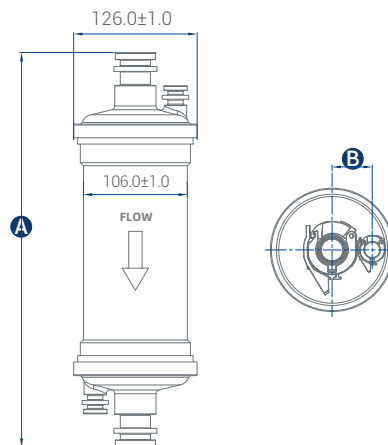
DIMENSIONS (DISPOSABLE) II

Chemrapid in-line disposable

NP type Flare series (F32, F33, F42, F43, F62, F63, F82, F83)

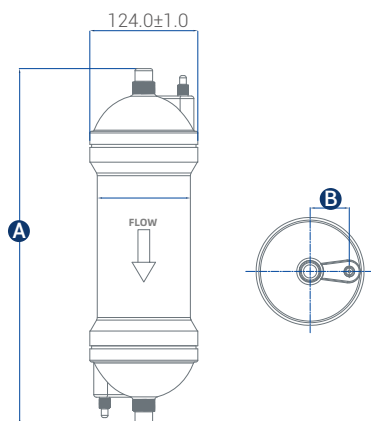


NP type Nanolink series (N84)

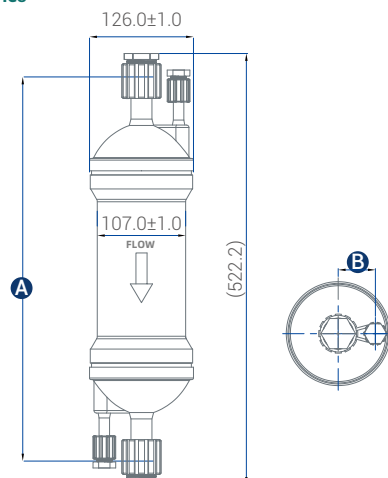


Code	Inlet/Outlet	Length	A (mm)	B (mm)
NP-10-F32	In-line (NP type F32)	10"	359.0	42.7
NP-10-F33	In-line (NP type F33)	10"	359.0	42.7
NP-10-F42	In-line (NP type F42)	10"	359.0	42.7
NP-10-F43	In-line (NP type F43)	10"	359.0	42.7
NP-10-F62	In-line (NP type F62)	10"	359.0	42.7
NP-10-F63	In-line (NP type F63)	10"	359.0	42.7
NP-10-F82	In-line (NP type F82)	10"	376.0	42.7
NP-10-F83	In-line (NP type F83)	10"	376.0	42.7
NP-10-N84	In-line (NP type N84)	10"	403.0	41.0

NK type Flare series (F62, F82)



NK type Female series (F84F, P84F)

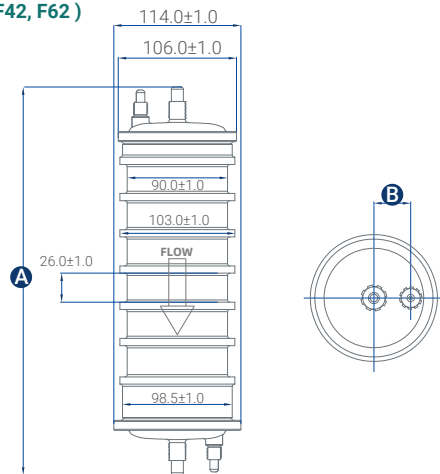


Code	Inlet/Outlet	Length	A (mm)	B (mm)
NK-10-F62	In-line (NK type F62)	10"	409.0	45.0
NK-10-F82	In-line (NK type F82)	10"	435.0	45.0
NK-10-F84F	In-line (NK type F84F)	10"	522.2	45.0
NK-10-P84F	In-line (NK type P84F)	10"	507.4	45.0

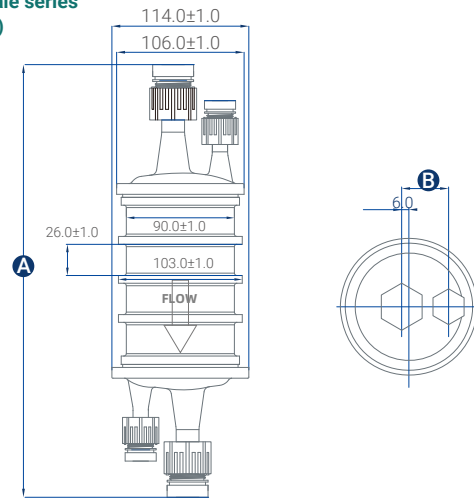
DIMENSIONS (DISPOSABLE) III

Chemrapid in-line disposable

XQ type Flare series (F32, F42, F62)



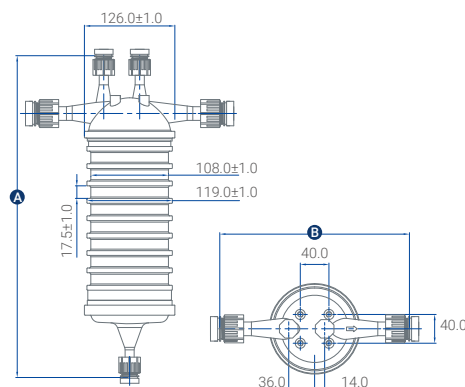
XQ type Female series (F64F, P64F)



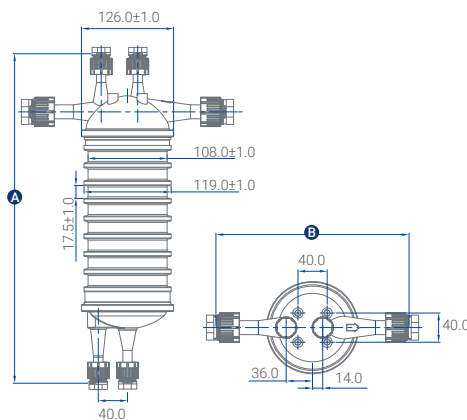
Code	Disposable type	Length	A (mm)	B (mm)
XQ-05-F32	In-line (XQ type F32)	5"	242.0	33.0
XQ-05-F42	In-line (XQ type F42)	5"	242.0	33.0
XQ-05-F62	In-line (XQ type F62)	5"	250.0	33.0
XQ-05-F64F	In-line (XQ type F64F)	5"	366.2	39.0
XQ-05-P64F	In-line (XQ type P64F)	5"	366.0	39.0
XQ-10-F32	In-line (XQ type F32)	10"	348.0	33.0
XQ-10-F42	In-line (XQ type F42)	10"	348.0	33.0
XQ-10-F62	In-line (XQ type F62)	10"	348.0	33.0
XQ-10-F64F	In-line (XQ type F64F)	10"	472.2	39.0
XQ-10-P64F	In-line (XQ type P64F)	10"	472.0	39.0

Chemrapid T-line disposable

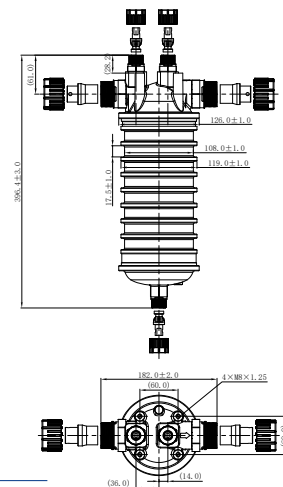
T type Female series



TV type Female series



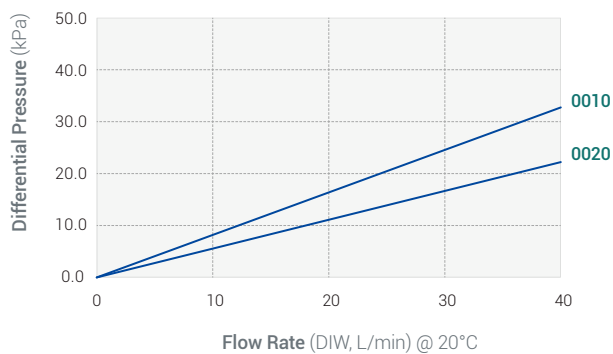
T/TV type male series



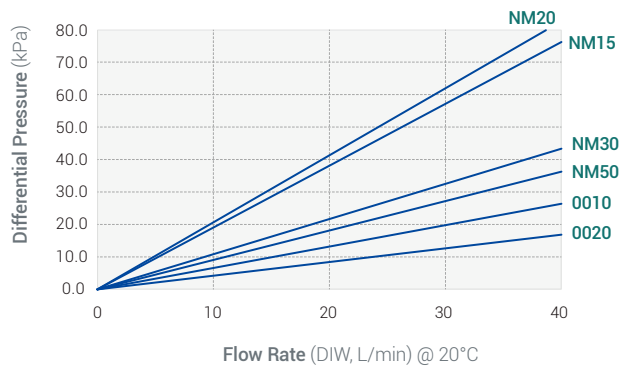
Code	Inlet/Outlet	Length	A (mm)	B (mm)
T-10-F64F	T-line (T-type F64F)	10"	432.2	249.0
T-10-P64F	T-line (T-type P64F)	10"	447.4	267.0
T-10-S64F	T-line (T-type S64F)	10"	448.0	264.0
TV-10-F64F	T-line (TV-type F64F)	10"	435.4	249.0
TV-10-P64F	T-line (TV-type P64F)	10"	450.6	267.0
T-10-HS84	T-line (T-type HS84)	10"	396.4	182.0
TV-10-HS84	T-line (TV-type HS84)	10"	392.3	182.0

FLOW RATE (DISPOSABLE)

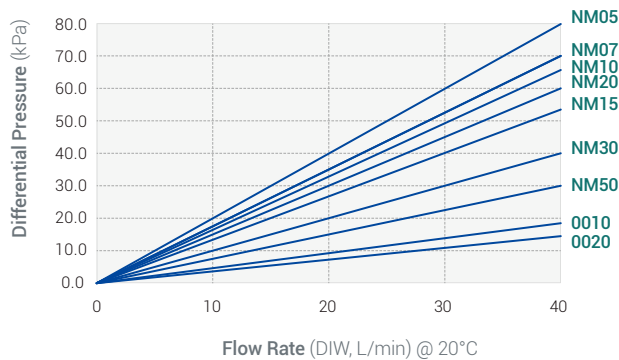
Chemrapid Z1 Series 10" Disposable with 1" Fitting



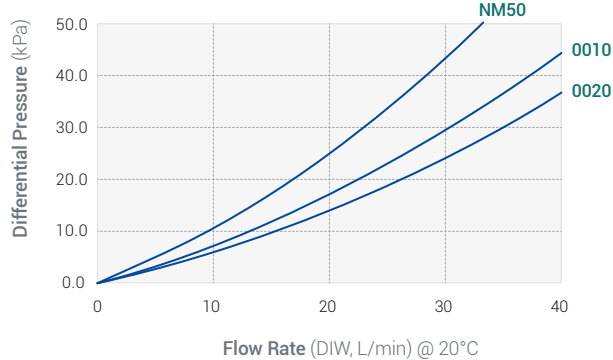
Chemrapid Z2 Series 10" Disposable with 1" Fitting



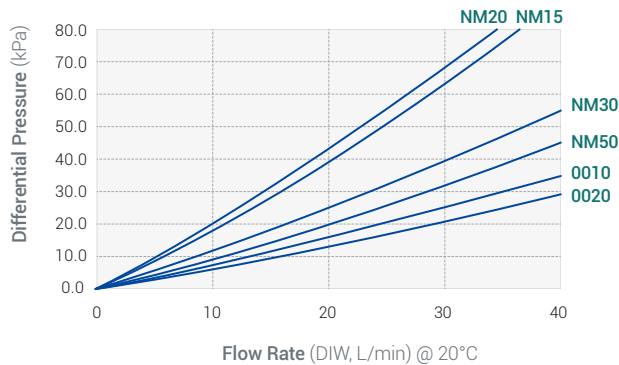
Chemrapid Z3 Series 10" Disposable with 1" Fitting



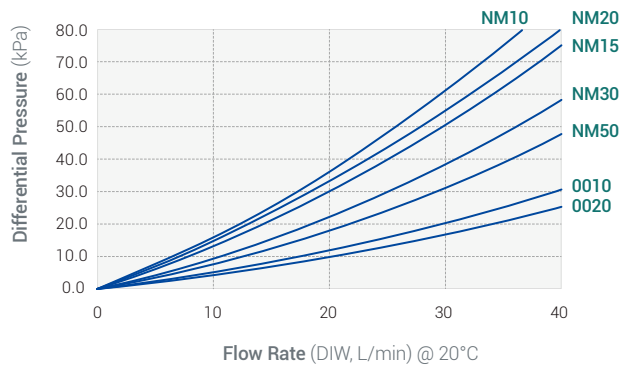
Chemrapid Z1 Series 10" Disposable with 3/4" Fitting



Chemrapid Z2 Series 10" Disposable with 3/4" Fitting



Chemrapid Z3 Series 10" Disposable with 3/4" Fitting



ORDER INFORMATION (DISPOSABLE)

CHR **1** **2** **3** **4** **5** **6** **7**

Block 1

Code	Diameter
X1	Ø68 mm Only for XQ type
X2	
X4	
Z1	Ø83 mm
Z2	
Z3	
Z4	
Z5	

Block 2

Code	Flow Type
N	In-line
NP	In-line
NK	In-line
XQ	In-line
T	T-line
TV	T-line with core vent

Block 3

Code	Removal Rating
NM05	5nm
NM07	7nm
NM10	10nm
NM15	15nm
NM20	20nm
NM30	30nm
NM50	50nm
0010	0.1µm
0020	0.2µm
0045	0.45µm
0050	0.5µm

Block 4

Code	Normal Length
05	5"
10	10"

Block 5

Code	Connection Type	Inlet/Outlet	Vent/Drain (head)	Vent/Drain (bowl)	Disposable Type
F32	Flare type	3/8"male	1/4"male	1/4"male	N/NP type
F33	Flare type	3/8"male	3/8"male	3/8"male	
F42	Flare type	1/2"male	1/4"male	1/4"male	
F43	Flare type	1/2"male	3/8"male	3/8"male	
F62	Flare type	3/4"male	1/4"male	1/4"male	
F63	Flare type	3/4"male	3/8"male	3/8"male	
F82	Flare type	1"male	1/4"male	1/4"male	
HS82	1" Super Pillar S300	1/4"	1/4"		
HS84	1" Super Pillar S300	1/2"	1/2"		
F83	Flare type	1"male	3/8"male	3/8"male	
N84	Nonalink type	1"male	1/2"male	1/2"male	
F64F	Flare female	3/4"female	1/2"female	1/2"female	NP type
P64F	Pillar type female	3/4"female	1/2"female	1/2"female	
F62	Flare type	3/4"male	1/4"male	1/4"male	NK type
F82	Flare type	1"male	1/4"male	1/4"male	
F84F	Flare female	1"female	1/2"female	1/2"female	
P84F	Pillar type female	1"female	1/2"female	1/2"female	
F32	Flare type	3/8"male	1/4"male	1/4"male	
F42	Flare type	1/2"male	1/4"male	1/4"male	XQ type
F62	Flare type	3/4"male	1/4"male	1/4"male	
F64F	Flare female	3/4"female	1/2"female	1/2"female	
P64F	Pillar type female	3/4"female	1/2"female	1/2"female	
F64F	Flare female	3/4"female	1/2"female	1/2"female	T/TV type
P64F	Pillar type female	3/4"female	1/2"female	1/2"female	
HS84	Super Pillar S300	1"male	1/2"male	1/2"male	

Block 6

Code	Cleanliness
XXS	<0.5µg/device
XS	<1µg/device
S	<3µg/device
L	<10µg/device
M	<25µg/device
H	<40µg/device
E	Electronic Grade

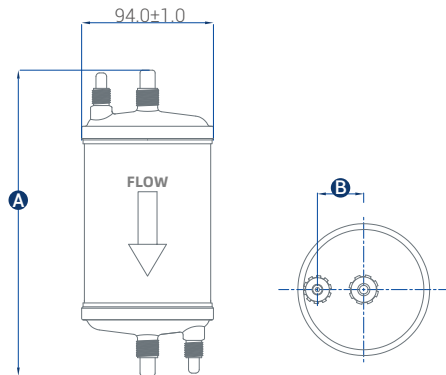
Block 7

Code	Package
D	Dry
W	Prewet, UPW

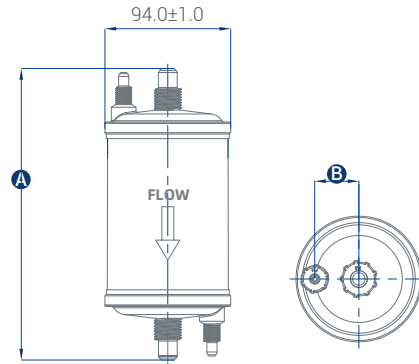
DIMENSIONS (SMALL IN-LINE DISPOSABLE)

Chemrapid small in-line disposable

X type Flare series (F32, F42, F62)

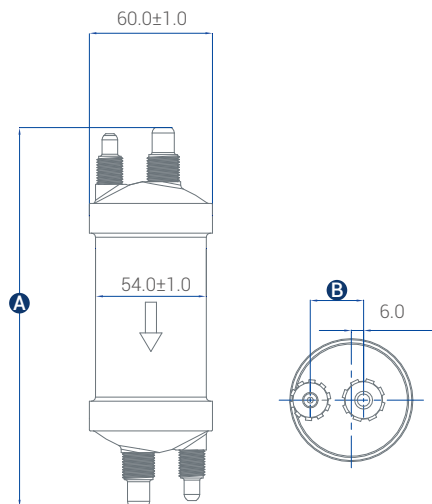


X type Follwell series (F32, F42, F62)

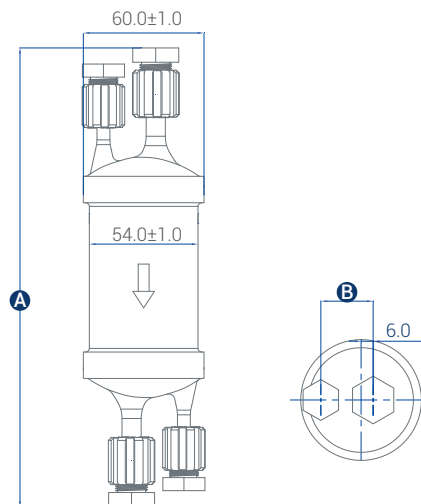


Code	Disposable type	Length	A (mm)	B (mm)
X-02-F32	In-line (X type F32)	2"	155.8	33.0
X-02-F42	In-line (X type F42)	2"	155.8	33.0
X-02-F62W42	In-line (X type F60W42)	2"	155.8	33.0
X-04-F32	In-line (X type F32)	4"	218.0	33.0
X-04-F42	In-line (X type F42)	4"	218.0	33.0
X-04-F62W42	In-line (X type F60W42)	4"	218.0	33.0

SX type Flare series (F32)



SX type Female series (F32F, FW32F, P32F)



Code	Disposable type	Length	A (mm)	B (mm)
SX-03-F32	In-line (SX type F32)	3"	185.0	26.0
SX-03-F32F	In-line (SX type F32F)	3"	201.0	26.0
SX-03-FW32F	In-line (SX type FW32F)	3"	203.0	26.0
SX-03-P32F	In-line (SX type P32F)	3"	212.0	26.0

ORDER INFORMATION (SMALL IN-LINE DISPOSABLE)

CHR 1 2 3 4 5 6

Block 1	
Code	Available Type
X1	X
X2	
Y1	SX

Block 4		
Code	Nominal Length	
02	2"	X in-line only
03	3"	SX in-line only
04	4"	X in-line only

Block 2	
Code	Type
X	X in-line
SX	SX inline

Block 5					
Code	Connection Type	Inlet/Outlet	Vent/Drain (head)	Vent/Drain (bowl)	Disposable Type
F32	Flare type	3/8"male	1/4"male	1/4"male	X in-line type
F42	Flare type	1/2"male	1/4"male	1/4"male	
F62	Flare type	3/4"male	1/4"male	1/4"male	
F32	Flare type	3/8"male	1/4"male	1/4"male	SX in-line type
F32F	Flare type	3/8"female	1/4"male	1/4"male	
FW32F	Flowell type	3/8"female	1/4"male	1/4"male	
P32F	Pillar type female	3/8"female	1/4"male	1/4"male	
S32F	Super Pillar S300 female	3/8"female	1/4"male	1/4"male	

Block 3	
Code	Removal Rating
NM05	5nm
NM07	7nm
NM10	10nm
NM15	15nm
NM20	20nm
NM30	30nm
NM50	50nm
0010	0.1µm
0020	0.2µm
0045	0.45µm
0050	0.5µm

Block 6		
Code	Cleanliness	
XXS	<0.5µg/device	
XS	<1µg/device	5/7/10nm
S	<3µg/device	
L	<10µg/device	≥15nm
M	<25µg/device	

Block 7	
Code	Package
D	Dry
W	Prewet, UPW



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