

# KEEVALID™ SERIES CMP FILTER

## POLYPROPYLENE NANOFIBER DEPTH CMP SLURRY FILTRATION FOR SOURCE, GLOBAL LOOP, AND ON-POLISHER APPLICATIONS

Keevalid CMP filters are ideal where the highly efficient removal of defect causing contaminants is critical. The continuously graded pore structure removes defect causing particles while not changing the slurry manufacture's intended particle size distribution. Rolled nanofiber provides similar classification, but with higher flow characteristics.

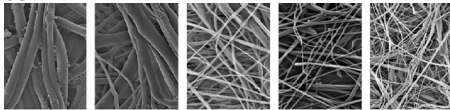
Cartridges and capsules come in a wide range of pore sizes, from 50nm to 40um, making them suitable for extending the life of downstream on-tool filters or as the final defect reducing solution just before slurry is dispensed.



### FEATURE

### BENEFIT

**Multi-layer micro and nanofiber**



Provides high flow rates and dirt holding capacity

**Graded-density depth media**

Highly efficient in removing defect-causing particles without changing the intended working particle size distribution

**Polypropylene media**

Compatible with most slurries

**Flushed with ultra-pure water**

Ensures high cleanliness and low particle shedding

**Rolled nanofiber media**

Provides the highest flux rate and efficient contaminant removal

**Cartridge length to 30"**

For higher flow source and global loop applications

**Variety of capsule sizes**

Fit most on-tool flow and spaces

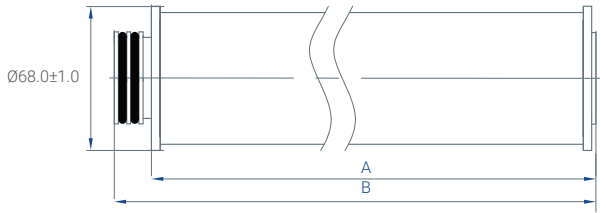
### Typical Applications

- Source, Global Loop, and On-tool
- Most slurries, including those for ILD, PMD, STI, W, and Cu/barrier

### SPECIFICATIONS

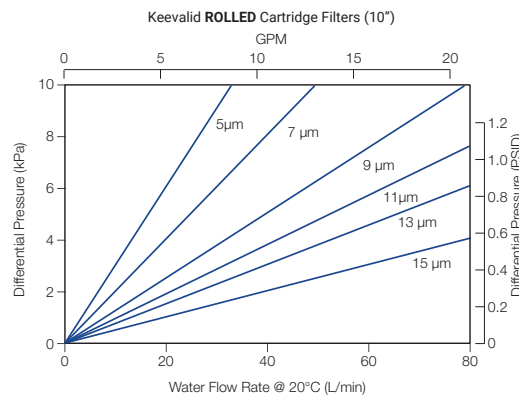
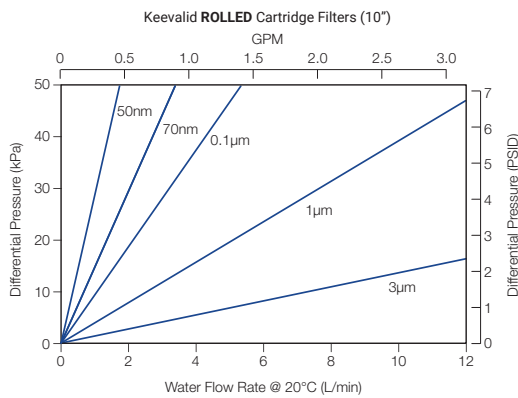
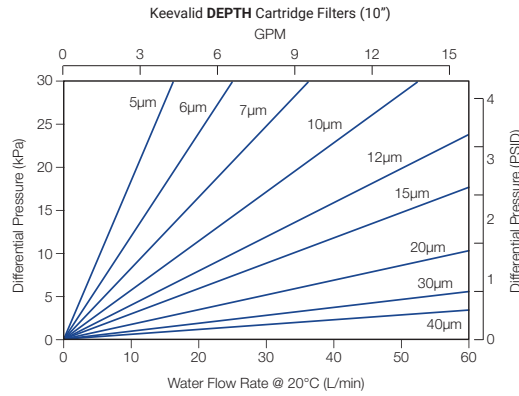
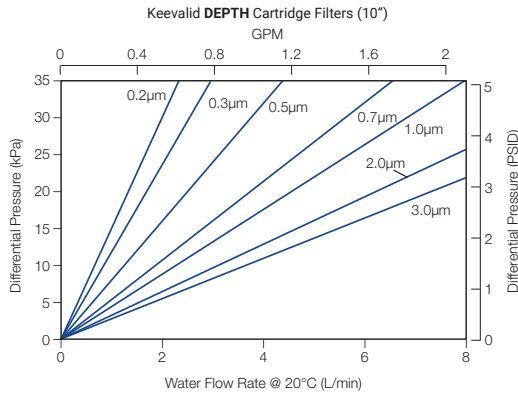
	Depth (VDKD)	Rolled (VDKR)
<b>Filter media</b>	Melt-Blown (Depth) Polypropylene Micro and Nanofiber	Rolled Polypropylene Micro and Nanofiber
<b>Retention</b>	0.1 µm to 40 µm	50 nm, 0.1 µm to 11 µm
<b>Cage/Core/End Caps</b>	Polypropylene	Polypropylene
<b>O-rings</b>	TEV, EPDM	TEV, EPDM
<b>Max. operating temperature</b>	Cartridge: 90°C; Capsule: Please refer to ordering information.	
<b>Capsule max. operating pressure</b>	Capsule max. operating pressure: Please refer to ordering information.	

## KEEVALID CARTRIDGES



Length Code	A	B
<b>10</b>	254.0 ±2 mm (10.0")	272.0 ±2 mm (10.7")
<b>20</b>	508.0 ±3 mm (20.0")	526.0 ±3 mm (20.7")
<b>30</b>	762.0 ±3 mm (30.0")	780.0 ±3 mm (30.7")

## KEEVALID CARTRIDGE FLOW RATES



## KEEVALID ROLLED CARTRIDGE ORDERING INFORMATION (222/FLAT)

EXAMPLE: **VDKR09000AC20ED** = rolled filter with 9 µm removal rating, 20" length, EPDM seal, packaged dry

**VDKR**



**OAC**



**Removal Rating**

**NM50** = 50nm    **0050** = 0.5 µm    **0700** = 7 µm    **1600** = 16 µm  
**NM70** = 70nm    **0070** = 0.7 µm    **0900** = 9 µm    **3000** = 30 µm  
**0010** = 0.1 µm    **0100** = 1.0 µm    **1100** = 11 µm    **5000** = 50 µm  
**0020** = 0.2 µm    **0300** = 3.0 µm    **1300** = 13 µm    **100H** = 100 µm  
**0030** = 0.3 µm    **0500** = 5.0 µm    **150H** = 150 µm

**Nominal Length**

**10** = 10"  
**20** = 20"  
**30** = 30"

**Seal Material**

**P** = TEV  
**E** = EPDM

**Package**

**D** = Dry

## KEEVALID DEPTH CARTRIDGE ORDERING INFORMATION (222/FLAT)

EXAMPLE: **VDKR00100AC20ED** = depth filter with 0.1 µm removal rating, 20" length, EPDM seal, packaged dry

**VDKD**



**OAC**



**Removal Rating**

**0010** = 0.1 µm    **0200** = 2.0 µm    **1200** = 12 µm  
**0020** = 0.2 µm    **0300** = 3.0 µm    **1500** = 15 µm  
**0030** = 0.3 µm    **0500** = 5.0 µm    **2000** = 20 µm  
**0050** = 0.5 µm    **0600** = 6 µm    **3000** = 30 µm  
**0070** = 0.7 µm    **0700** = 7 µm    **4000** = 40 µm  
**0100** = 1.0 µm    **1000** = 10 µm

**Nominal Length**

**10** = 10"  
**20** = 20"  
**30** = 30"

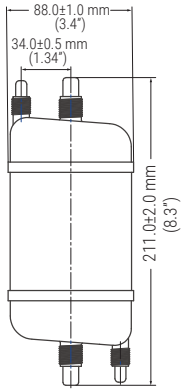
**Seal Material**

**P** = TEV  
**E** = EPDM

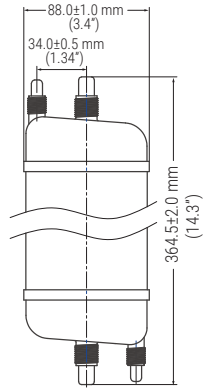
**Package**

**D** = Dry

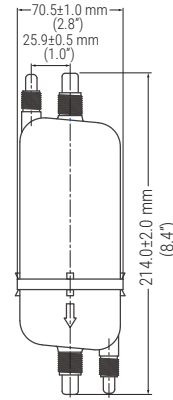
**KEEVALID CAPSULE AND MANIFOLD DIMENSIONS**



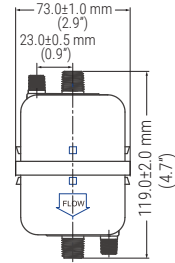
**BFL64-4**



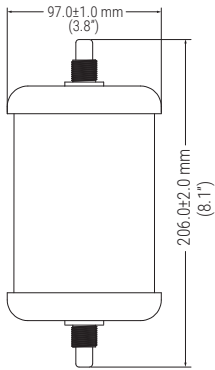
**BFL64-10**



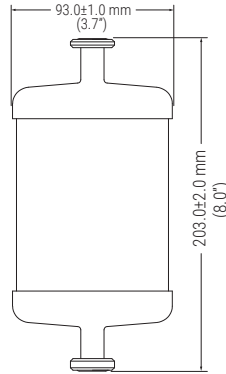
**FL64**



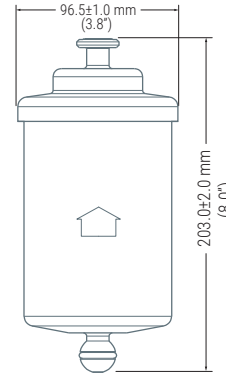
**NPT42**



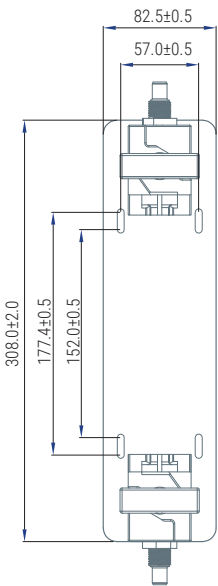
**ECX2J**



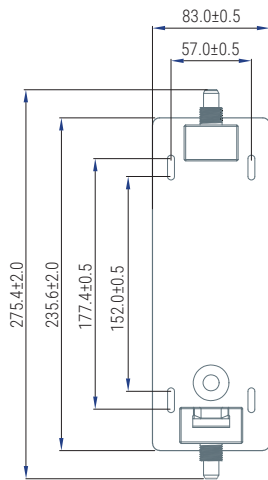
**CC2W**



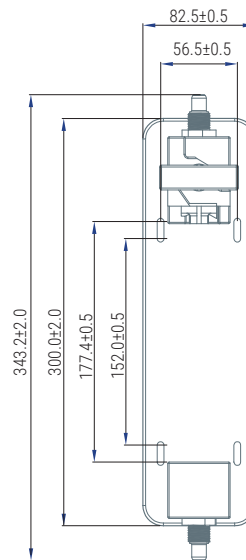
**ECX3**



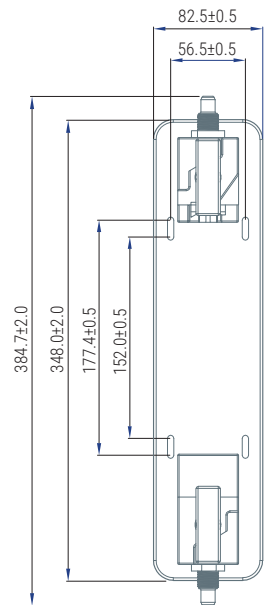
**CC2W-P-2Q-3F-MF**



**ECX3-S-0N-3F-MF**

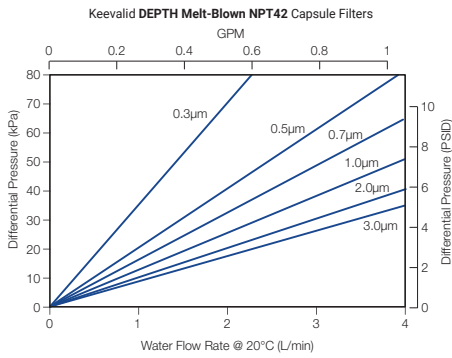
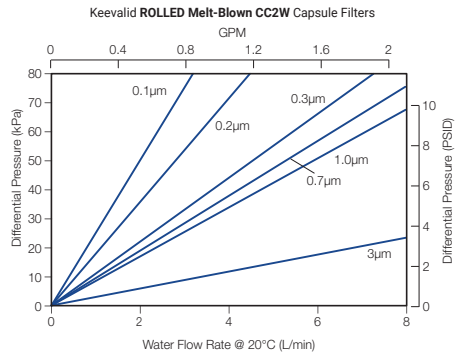
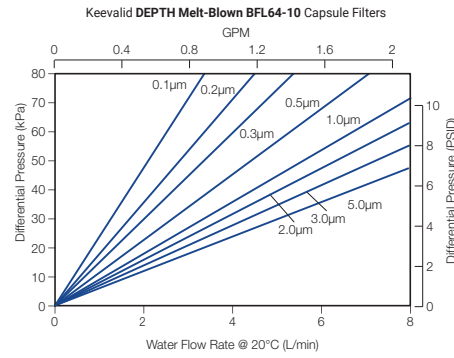
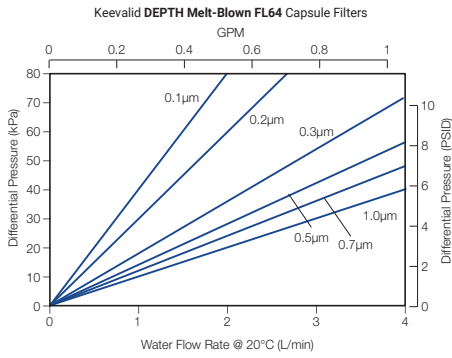
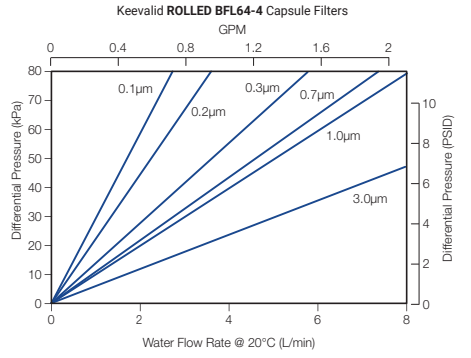
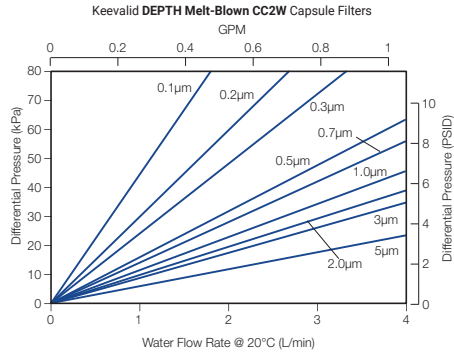
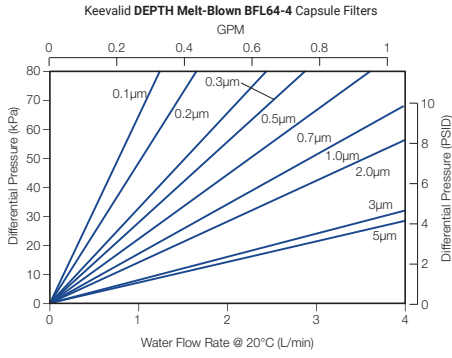


**ECX3-P-1Q-3F-MF**



**ECX3-P-2Q-3F-MF**

# KEEVALID CAPSULE FLOW RATES



## KEEVALID ROLLED CAPSULE ORDERING INFORMATION

EXAMPLE: **VDKR0100-BFL64-10D** = rolled filter, 1.0 µm, Flare BFL64-10 type with 3/8" I/O and 1/4" V/D, packaged dry

### VDKR



#### Removal Rating

NM50 = 50nm  
 NM70 = 70nm  
 0010 = 0.1 µm  
 0020 = 0.2 µm  
 0030 = 0.3 µm  
 0100 = 1.0 µm  
 0300 = 3.0 µm  
 0500 = 5.0 µm



#### O-ring

- = -  
 V = FKM  
 (CC2KW & ECX3)



#### Package

D = Dry  
 W = Prewet, UPW

Connection Type	Inlet/Outlet	Vent/Drain	Lengths	Max. Operating Temp.	Max. Operating Pressure
BFL64-4 = Flare Type	3/8"	1/4"	211 mm (8.3")	40°C	0.41 MPa
BFL64-10 = Flare Type	3/8"	1/4"	363 mm (14.3")		@40°C
FL64 = Flare Type	3/8"	1/4"	214 mm (8.4")	60°C	0.51 MPa
NPT42 = NPT	1/4"	1/8"	119 mm (4.7")		@38°C
ECX2J = Flare Type	3/8"	-	206 mm (8.1")	40°C	0.35 MPa
CC2W = Easy Touch, match with Cobetter manifold			203 mm (8.0")		@20°C
ECX3 = Easy Touch, match with Cobetter manifold			203 mm (8.0")		

2.0 µm, 3.0 µm, and 5.0 µm are not available for the FL64 type capsule.  
 0.1 µm is not available for the NPT42 type capsule

## KEEVALID DEPTH CAPSULE ORDERING INFORMATION

EXAMPLE: **VDKD010-BFL64-10D** = depth filter, 1.0 µm, Flare BFL64-10 type with 3/8" I/O and 1/4" V/D, packaged dry

### VDKD



#### Removal Rating

0010 = 0.1 µm  
 0020 = 0.2 µm  
 0030 = 0.3 µm  
 0050 = 0.5 µm  
 0100 = 1.0 µm  
 0200 = 2.0 µm  
 0300 = 3.0 µm  
 0500 = 5.0 µm



#### O-ring

- = -  
 V = FKM  
 (CC2KW & ECX3)



#### Package

D = Dry  
 W = Prewet, UPW

Connection Type	Inlet/Outlet	Vent/Drain	Lengths	Max. Operating Temp.	Max. Operating Pressure
BFL64-4 = Flare Type	3/8"	1/4"	211 mm (8.3")	40°C	0.41 MPa
BFL64-10 = Flare Type	3/8"	1/4"	363 mm (14.3")		@40°C
FL64 = Flare Type	3/8"	1/4"	214 mm (8.4")	60°C	0.51 MPa
NPT42 = NPT	1/4"	1/8"	119 mm (4.7")		@38°C
ECX2J = Flare Type	3/8"	-	206 mm (8.1")	40°C	0.35 MPa
CC2W = Easy Touch, match with Cobetter manifold			203 mm (8.0")		@20°C
ECX3 = Easy Touch, match with Cobetter manifold			203 mm (8.0")		

2.0 µm, 3.0 µm, and 5.0 µm are not available for the FL64 type capsule.  
 0.1 µm is not available for the NPT42 type capsule

## MANIFOLD ORDERING INFORMATION

Part Numbers	Description
CC2W-P-2Q-3F-MF	Keevalid CC2W manifold with two valves
ECX3-S-0N-3F-MF	Keevalid ECX3 manifold without valve
ECX3-P-1Q-3F-MF	Keevalid ECX3 manifold with one valve
ECX3-P-2Q-3F-MF	Keevalid ECX3 manifold with two valves



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