



## 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 manufacturer's intended particle size distribution. Rolled nanofiber provides similar classification, but with higher flow characteristics.

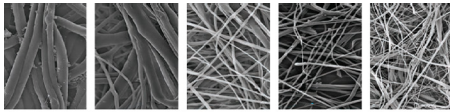
Cartridges and capsules come in a wide range of pore sizes, from 70nm to 40um, making them suitable for extending the life of downstream on-tool filters or as the final defect reducing solution just before slurry is dispensed.

#### FEATURE

#### BENEFIT

##### Multi-layer nanofiber media

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

##### Optional rolled nanofiber media

Provides the highest flux rate and efficient contaminant removal

##### Cartridge length to 20"

Cartridge lengths are available for higher flow source and global loop applications

##### Variety of capsule sizes

Fit most on-tool flow and spaces



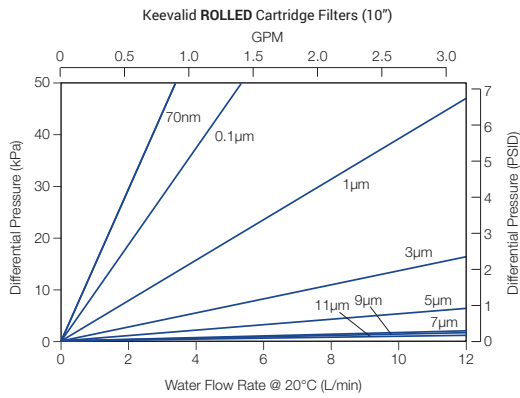
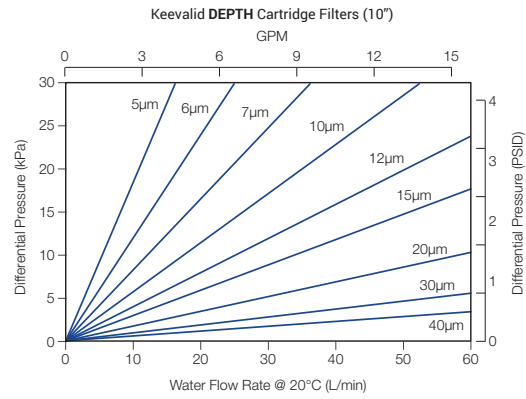
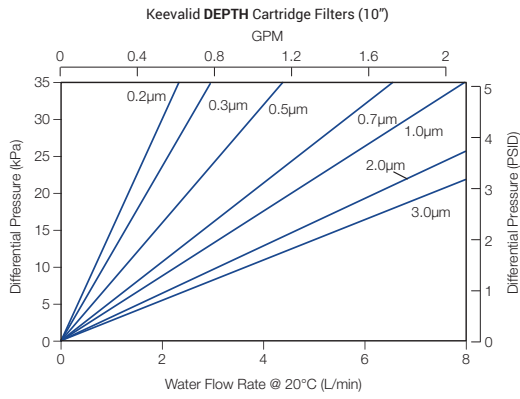
#### Typical Applications

- 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  | 70 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 CARTRIDGE FLOW RATES



## KEEVALID CARTRIDGE ORDERING INFORMATION (222/FLAT)

EXAMPLE: **VDKD01000TC10EWH** = depth filter, 1.0 µm, 10" length, EPDM seal, packaged Prewet

**VDK**



**Type**

R = Rolled  
D = Depth



**Removal Rating**

**Rolled Only:**  
**NM50** = 50nm  
**NM70** = 70nm  
**Others:**  
**0010** = 0.1 µm  
**0020** = 0.2 µm  
**0030** = 0.3 µm  
**0050** = 0.5 µm  
**0070** = 0.7 µm  
**0100** = 1.0 µm  
**0200** = 2.0 µm  
**0300** = 3.0 µm  
**0500** = 5 µm

**OAC**



**Nominal Length**

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



**Seal Material**

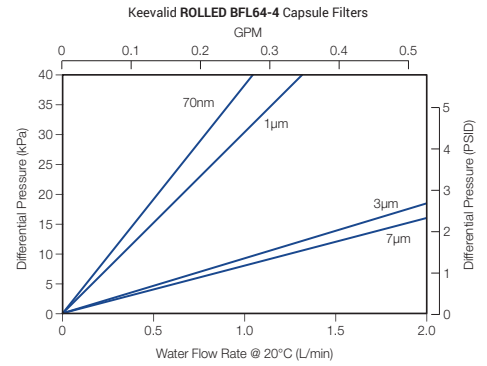
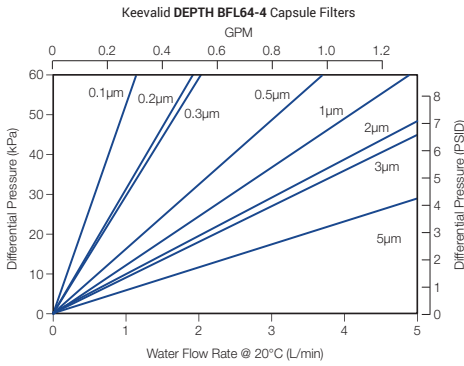
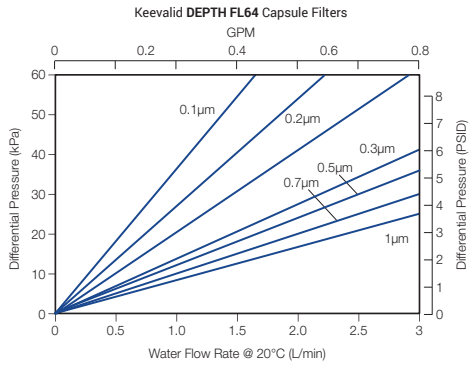
**P** = TEV  
**E** = EPDM



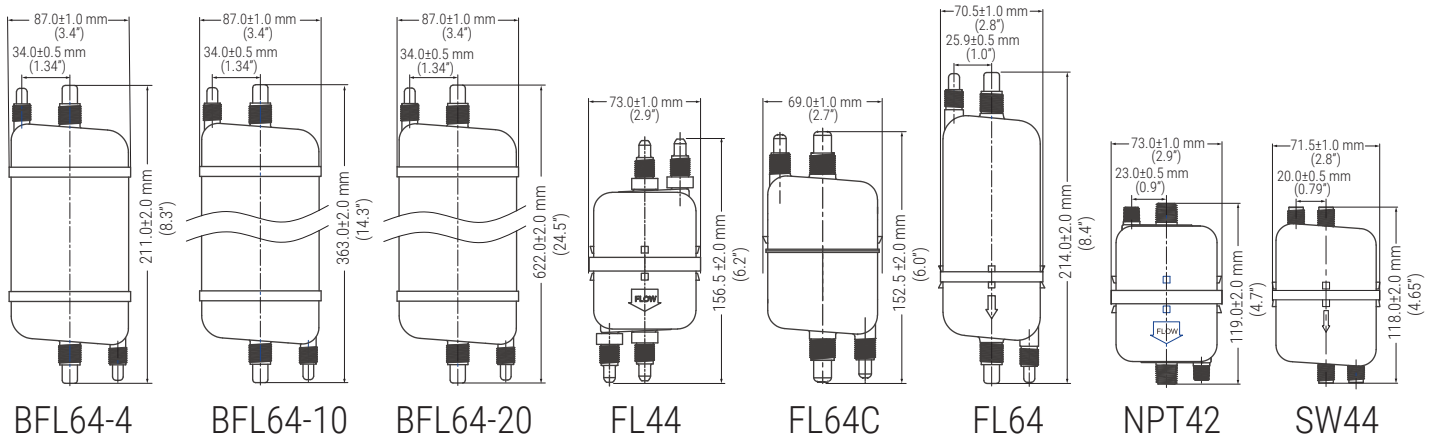
**Package**

**D** = Dry  
**WH** = Prewet,  
 UPW + 1% H<sub>2</sub>O<sub>2</sub>

## KEEVALID CAPSULE FLOW RATES



## KEEVALID CAPSULE DIMENSIONS



## KEEVALID CAPSULE ORDERING INFORMATION

EXAMPLE: **VDKD01001BFL64-20W** = depth filter, 1.0 µm, Flare BFL64-10 type with 3/8" I/O and 1/4" V/D, packaged Prewet

**VDK**



**Type**

R = Rolled  
D = Depth



**Removal Rating**

**Rolled Only:**

NM70 = 70nm  
NM70 = 70nm  
**Others:**

0010 = 0.1 µm  
0020 = 0.2 µm  
0030 = 0.3 µm  
0050 = 0.5 µm  
0070 = 0.7 µm  
0100 = 1.0 µm

**Depth Only:**

0200 = 2.0 µm  
0300 = 3.0 µm  
0500 = 5.0 µm



**Package**

D = Dry  
W = Prewet, UPW  
WH = Prewet,  
UPW + 1% H<sub>2</sub>O<sub>2</sub>

| 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 @40°C          |
| BFL64-10 = Flare Type | 3/8"         | 1/4"       | 363 mm (14.3")  |                      |                         |
| BFL64-20 = Flare Type | 3/8"         | 1/4"       | 622 mm (24.5")  |                      |                         |
| FL44 = Flare Type     | 1/4"         | 1/4"       | 156.5 mm (6.2") | 60°C                 | 0.51 MPa @38°C          |
| FL64C = Flare Type    | 3/8"         | 1/4"       | 152 mm (6.0")   |                      |                         |
| FL64 = Flare Type     | 3/8"         | 1/4"       | 214 mm (8.4")   |                      |                         |
| NPT42 = NPT           | 1/4"         | 1/8"       | 119 mm (4.7")   |                      |                         |
| SW44 = Compression    | 1/4"         | 1/4"       | 118mm (4.6")    | 40°C                 | 0.35 MPa @20°C          |
| CC21 = Easy Touch     |              |            |                 |                      |                         |



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