

PhotoKleen™ EZD-3 Filter Assembly



Data Sheet MEEZD3ENg

Description

The PhotoKleen™ EZD-3 filter is designed for extremely small resist pump installations. It is specifically designed for small volume dispense systems, which have the smallest footprint. The PhotoKleen EZD-3 filter unit consists of a quick-disconnect head manifold and a High Density Polyethylene (HDPE) capsule. This configuration allows for safe, quick, and easy filter change outs. Three filter media – PTFE, HDPE and nylon 6,6 – are available. The naturally hydrophilic nylon 6,6 membrane allows for spontaneous wettability. This minimizes photochemical waste by providing quick start up and minimized bubble generation.

Features & Benefits

- Capsule-style filter assembly, Top in / top out flow direction with inlet flow stream down to the bottom
- Minimized hold-up volume (40 mL)
- Quick filter replacement (one step)
- Optimized for 60 mm-width resist pump for reduced dispense system
- Minimized dead space
- Reduces chemical waste during filter start up and change out.



Specifications (Filter Capsules)

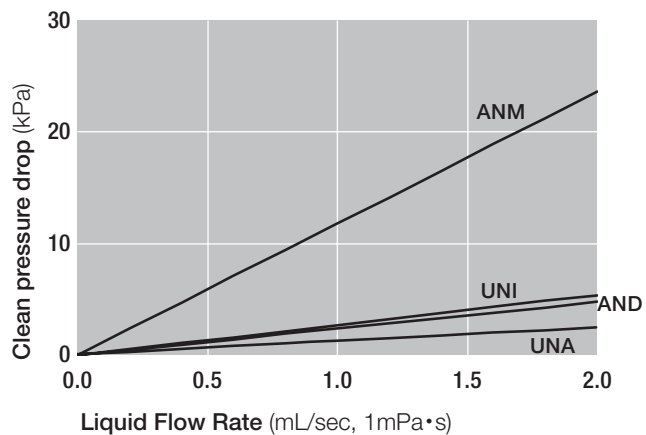
Materials of Construction

| Components | Materials | | |
|--------------------------|----------------------------------|----------------------------------|----------|
| Filter Media | P-Nylon | PE-Kleen | P Emflon |
| Support and Drainage | Hydrophilic Nylon6,6 | High Density Polyethylene (HDPE) | PTFE |
| Core, Cage, and End Caps | High Density Polyethylene (HDPE) | | |
| Housing | High Density Polyethylene (HDPE) | | |
| O-ring | Perfluoroelastomer | | |

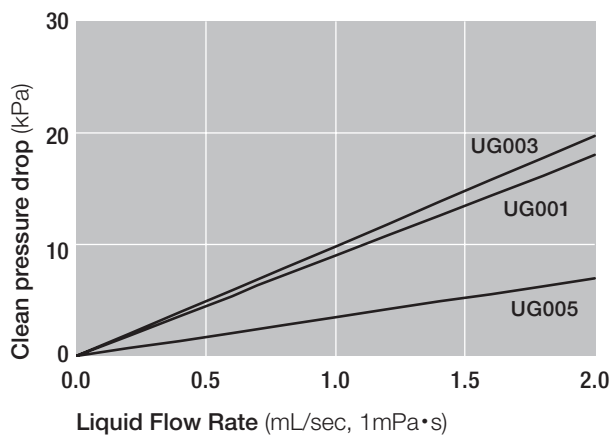
| Removal Ratings (µm) | P-Nylon | | PE-Kleen | | P Emflon |
|---------------------------------------|--|--|--|--|--|
| | 20 nm | 40 nm, 0.1, 0.2 | 10 nm | 30 nm, 0.05 | 0.05, 0.1, 0.2 |
| Nominal Filter Areas | 710 cm ² / 0.76 ft ² | 660 cm ² / 0.71 ft ² | 770 cm ² / 0.82 ft ² | 660 cm ² / 0.71 ft ² | 660 cm ² / 0.71 ft ² |
| | 0.27 MPa @ 20 °C / 39 psid @ 68 °F | | 0.29 MPa @ 30 °C / 42 psid @ 86 °F | | 0.29 MPa @ 30 °C / 42 psid @ 86 °F |
| Maximum Forward Differential Pressure | 30 °C / 86 °F | | | | |
| Maximum Operating Temperature | 0.29 MPaG @ 30 °C / 42 psig @ 86 °F | | | | |

Typical Flow Characteristics - 1cP fluid, 20 °C

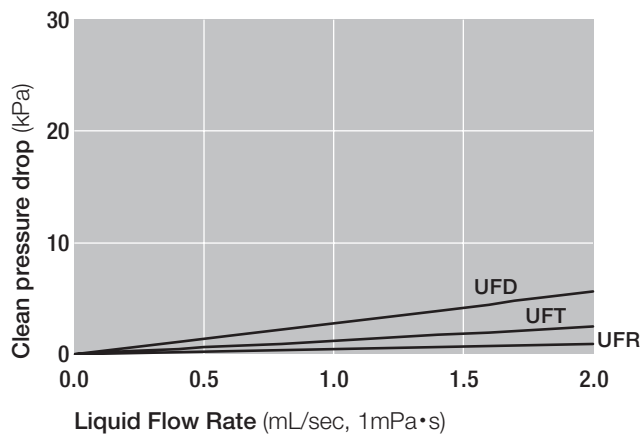
P-Nylon Filter (nylon 6,6 media)



PE-Kleen Filter (HDPE media)



P-Emflon (PTFE media)



Part Numbers / Ordering Information (Filter Capsules)

PHD11 1 EH11B

Table 1

| Code | Filter Media | Removal ratings |
|-------|-----------------------------------|-----------------|
| ANM | P-Nylon (Asymmetric Nylon 6,6) | 20 nm |
| AND | | 40 nm |
| UNI | P-Nylon (Nylon 6,6) | 0.1 μm |
| UNA | | 0.2 μm |
| UG001 | PE-Kleen (HDPE) | 10 nm |
| UG003 | | 30 nm |
| UG005 | | 50 nm |
| UFD | P Emflon (PTFE) | 50 nm |
| UFT | | 0.1 μm |
| UFR | | 0.2 μm |

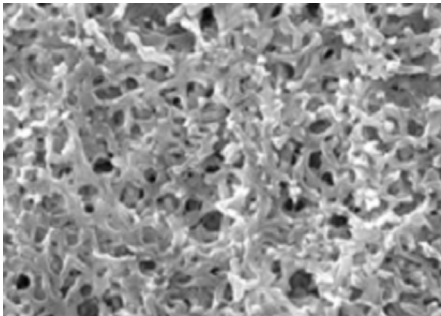
Spare Parts

| Product Name | Part Number | Memo |
|---------------|----------------|--|
| Dummy Capsule | PHDC12H11B | O-ring : Perfluoroelastomer |
| | PHDC12H11B-XP+ | O-ring : Perfluoroelastomer Special Clean Product |

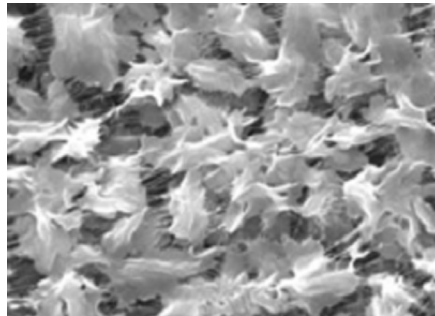
Caution: For optimal filtration performance, it is recommended to replace your filters at-least once a year. Annual replacements will reduce the potential of any leakages that may result due to prolonged chemical exposure. Pall warrants its filters for a period of 1 year from the date of shipment.

Filter Media Electron Micrograph

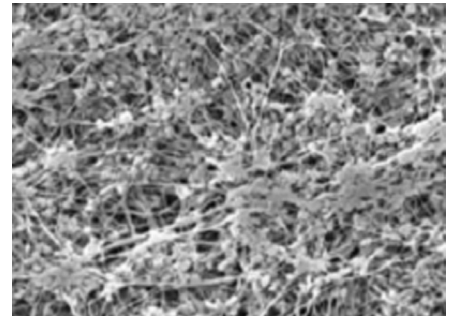
P-Nylon (Nylon 6,6)



PE-Kleen (HDPE)

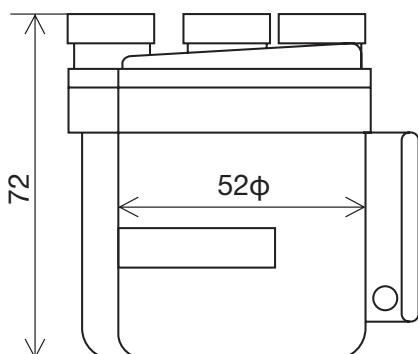


P Emflon (PTFE)

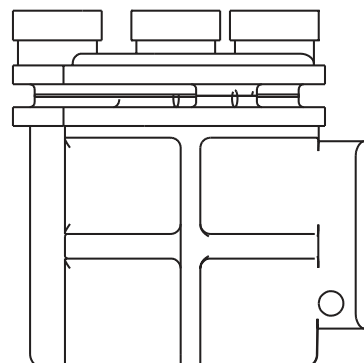


Dimensions

Filter Capsule



Dummy Capsule
(P/N: PHDC12H11B, PHDC12H11B-XP+)



Specifications (Head Manifold)

Materials of Construction

| Components | Materials |
|-----------------|-------------|
| Head | PFA / HDPE |
| Fitting | PFA / PCTFE |
| Stage and lever | SUS304 |

Connections

| Type | Inlet / Outlet | Vent |
|--------------------------------|-------------------------------------|-------------------------------------|
| Super Pillar ¹ type | 1/4" (6.35 x 3.9 mm) Elbow union | 1/4" (6.35 x 3.9 mm) Elbow union |
| | 1/4" (6.35 x 3.9 mm) Straight union | 1/4" (6.35 x 3.9 mm) Straight union |
| | 1/4" (6.35 x 3.9 mm) Fitting | 1/4" (6.35 x 3.9 mm) Fitting |
| Flowell ² 60 series | 4 x 3 mm / 4 x 2 mm Fitting | 4 x 3 mm / 4 x 2 mm Fitting |
| | 5 x 3 mm Fitting | 5 x 3 mm Fitting |

¹ Pillar is a trademark of Nippon Pillar Packing Co.,Ltd.

² Flowell is a trademark of Flowell Co.,Ltd.

Part Numbers / Ordering Information (Head Manifold)

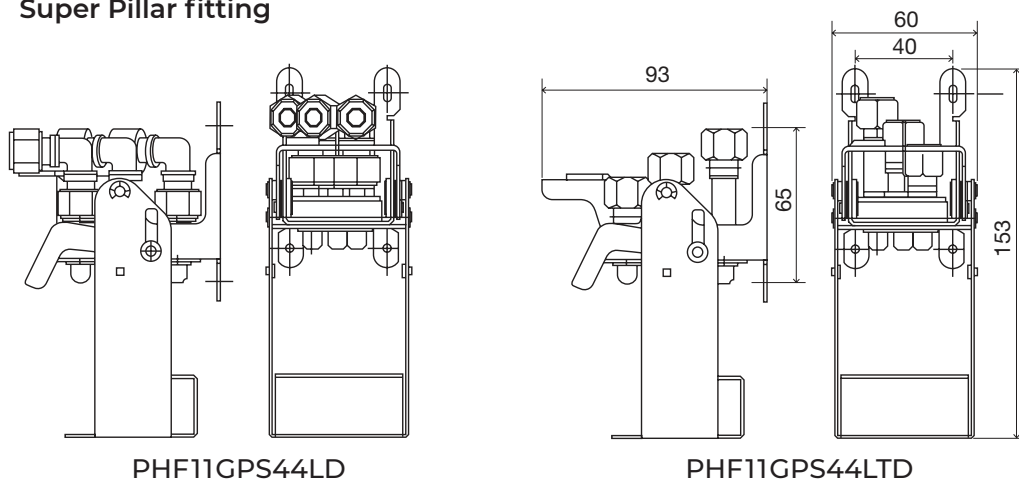
PHF11G 1

Table 1

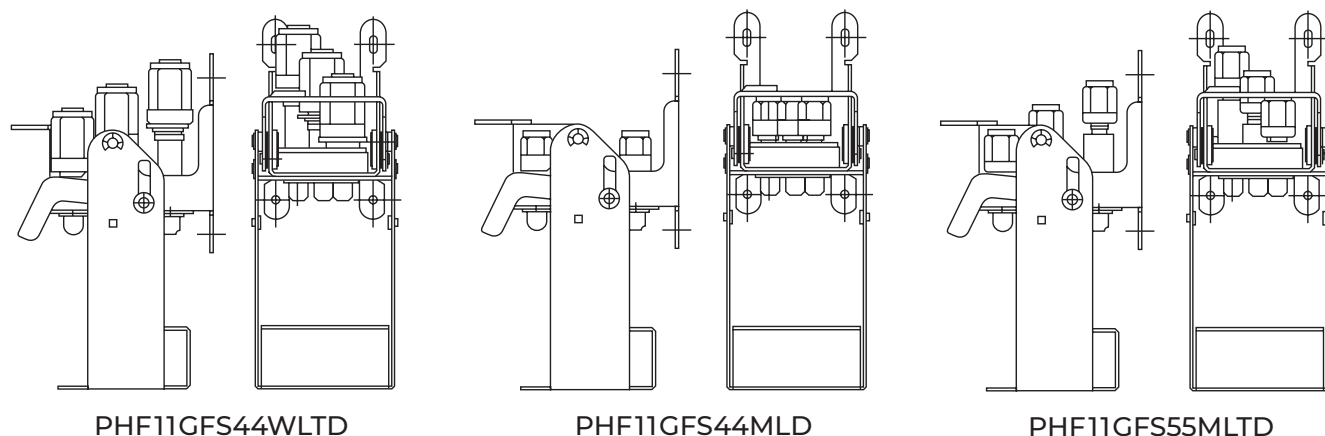
| Code | Inlet / Outlet | Vent |
|----------|--|--|
| PS44LD | 1/4" (6.35 x 3.9 mm) Super Pillar Elbow union | 1/4" (6.35 x 3.9 mm) Super Pillar Elbow union |
| PS44LTD | 1/4" (6.35 x 3.9 mm) Super Pillar Straight union | 1/4" (6.35 x 3.9 mm) Super Pillar Straight union |
| FS44WLTD | 1/4" (6.35 x 4.3 mm) Flowell 60 Fitting | 1/4" (6.35 x 4.3 mm) Flowell 60 Fitting |
| FS44MLD | 4 x 3 mm / 4 x 2 mm Flowell 60 Fitting | 4 x 3 mm / 4 x 2 mm Flowell 60 Fitting |
| FS55MLTD | 5 x 3 mm Flowell 60 Fitting | 5 x 3 mm Flowell 60 Fitting |

Dimensions

Super Pillar fitting



Flowell 60 fitting



Representative example part numbers

(Head Manifold)

PHF11GFS44WLTD

PHF11GFS44MLD

PHF11GPS44LD

PHF11GPS44LTD

PHF11GFS55MLTD

(Capsules)

PHD11UNAEH11B

PHD11UNIEH11B

PHD11ANMEH11B

PHD11ANDEH11B

PHD11UG005EH11B

PHD11UG003EH11B

PHD11UG001EH11B

PHD11UFREH11B

PHD11UFTEH11B

PHD11UFDEH11B



Microelectronics

25 Harbor Park Drive
Port Washington, NY 11050
+1 516 484 3600 telephone
+1 800 360 7255 toll free US

Nihon Pall Ltd.

6-5-1, Nishishinjuku,
Shinjuku-ku
Tokyo 163-1325 Japan
+81 3 6901 5700 telephone
+81 3 5322 2109 fax

Visit us on the Web at www.pall.com/microelectronics
Contact us at www.pall.com/contact

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