

IN-LINE FILTERS

Clean the Air

Use Porous Hollow Fiber Membrane Element.

High filtering performance

Filtering particle diameter
0.01 μ m
Filtering efficiency 99.99%

Compact with large flow rate

PLF050
15×15×50 mm [0.591×0.591×1.969in.]
50 l/min [1.77ft³/min.] (ANR)*
PLF100
21×21×60 mm [0.827×0.827×2.362in.]
100 l/min [3.53ft³/min.] (ANR)*

* Recommended maximum flow rate when air pressure is 0.7MPa [102psi.]
(amount of pressure drop: 0.03MPa [4.4psi.]).

Long operating life

Assures more than 10 times the membrane area of flat membrane elements occupying the same space.

Also...

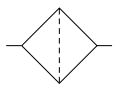
Mounting holes on the body allow direct mounting in locations of exactly the body width.

Application example

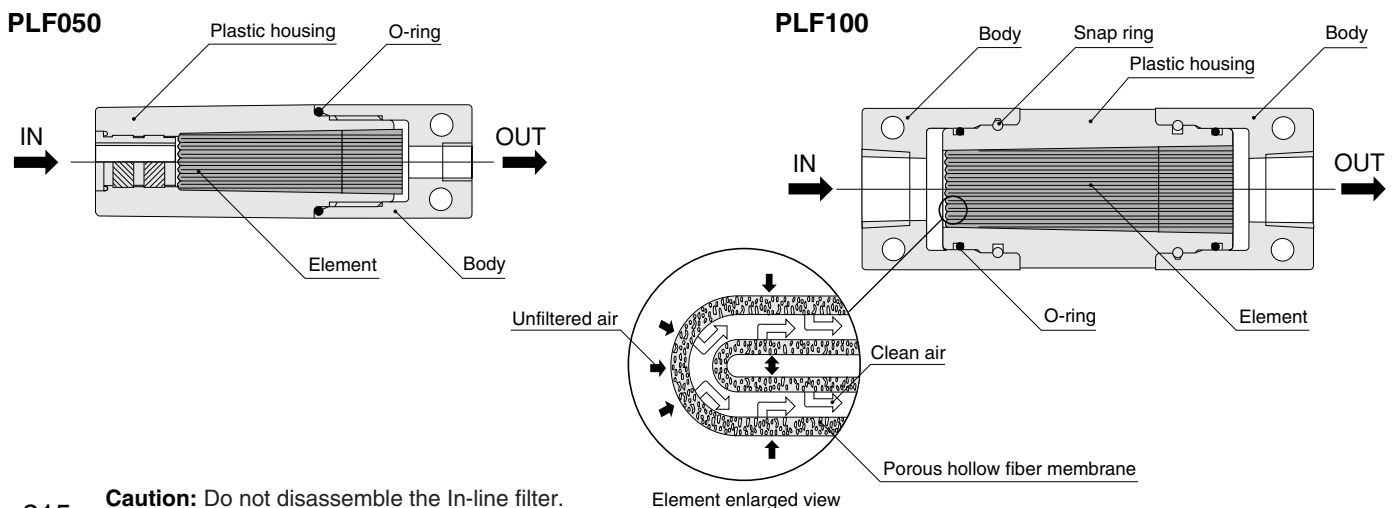
- Final filters for air blowing
- Semiconductor manufacturing devices, filters for vacuum breaking, etc....



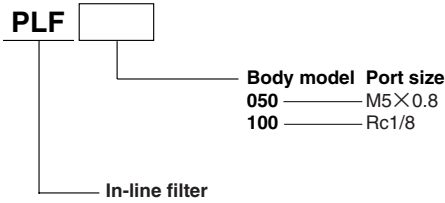
Symbol



Inner Construction and Major Parts



Order Codes



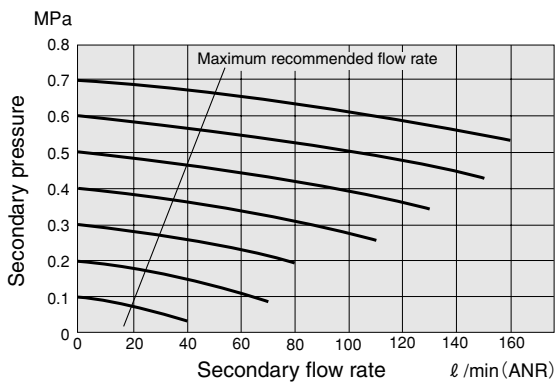
Specifications

Item	Model	PLF050	PLF100
Media		Air, N ₂	
Port size		M5×0.8	Rc1/8
Filtering particle diameter	μm	0.01	
Filtering efficiency	%	99.99	
Volume of processed air ^{Note 1}	ℓ/min [ft. ³ /min.] (ANR)	50 [1.77]	100 [3.53]
Membrane area	cm ² [in. ²]	46 [7.13]	126 [19.5]
Maximum operating pressure	MPa [psi.]	0.97 [141]	
Proof pressure	MPa [psi.]	1.47 [213]	
Proof differential pressure	MPa [psi.]	0.2 ^{Note 2} [29]	
Operating temperature range	°C [°F]	5~45 [41~113]	
Mass	g [oz.]	15 [0.53]	35 [1.23]
Major parts and materials	Body	Aluminum die-casting (electroless nickel plating)	
	Plastic housing	Nylon	
	Element	Porous hollow fiber membrane	
	O-ring	Synthetic rubber (NBR)	

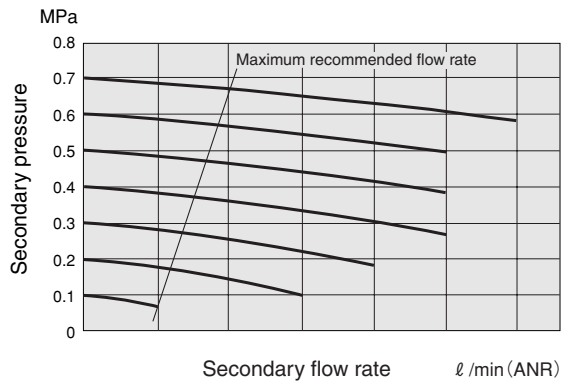
- Notes: 1. This is the recommended maximum flow rate when the air pressure is 0.7MPa [102psi.]. (Pressure drop 0.03MPa [4.4psi.])
 2. This is for an occurrence of momentary differential pressure. For steady-state use, stay within the recommended maximum flow rate.

Flow Rate Characteristics

PLF050



PLF100

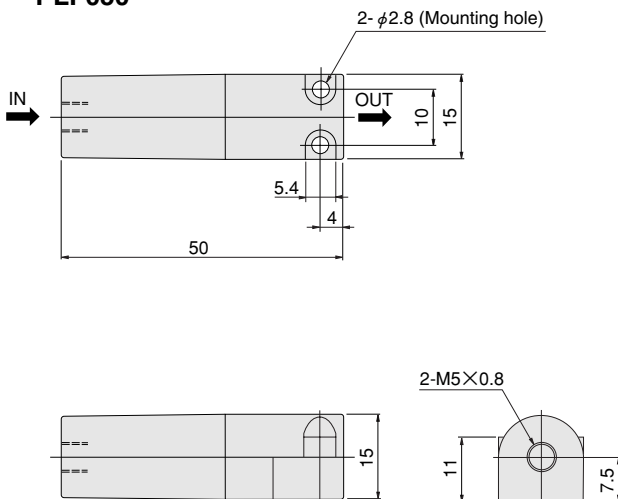


1MPa = 145psi. 1 ℓ/min = 0.0353ft.³/min.

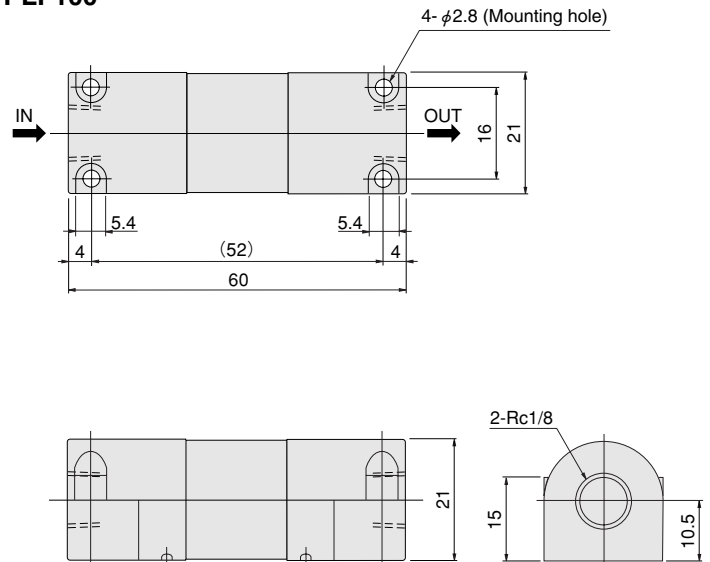
Caution: For steady-state use, stay within the recommended maximum flow rate.

Dimensions (mm)

PLF050



PLF100



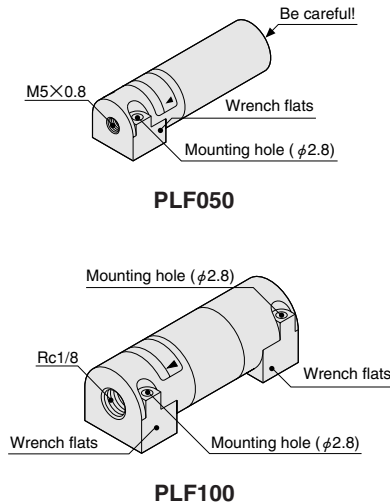
- It is not necessary to use all four mounting holes to secure in place. It is recommended that the mounting holes on either the IN side or OUT side only be used.

Handling Instructions and Precautions



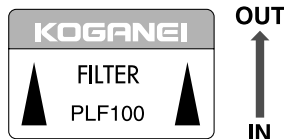
Mounting and piping

- When performing piping work, use wrench flats on the part of the body where piping threads are located, as shown in the figures below. While the **PLF100** may be rotated by applying force to the body and the plastic part, it is not designed to tolerate such rotation. Do not apply relational rotation between the body and the plastic part as much as possible when mounting, and after mounting, do not rotate further.



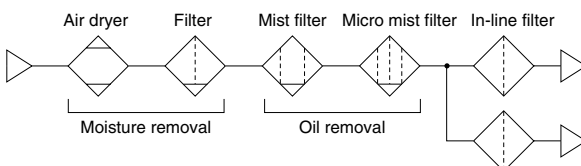
Caution: In the PLF050, the plastic part has been insert-processed. The tightening torque for piping parts in this section should be 157N·cm [13.9in·lbf] or less.

- Plumb the piping so that air flows in the direction of the black arrows shown on the label.
(Do not attempt to use with air flowing in the opposite direction.)



- Use the mounting holes shown in the figure above to secure the unit in place. For the PLF100, it is not necessary to use all four mounting holes. The mounting holes on either the IN side or OUT side can be used for installation.
- Plastic parts are used for the In-line filter. Do not use with metal piping or in other situations that apply excessive force.
- The In-line filter is designed for the removal of solid particles only. Remove moisture, oil, or other substances by other equipment.

● Recommended circuit



General precautions

- Always thoroughly blow off (use compressed air) the piping before plumbing. Entering chips, sealing tape, rust, etc., generated during plumbing could result in clogging.
- Use air or N₂ for the media. For the use of any other media, consult us.
- For the media, use air that does not contain oil or moisture. Clogging due to oil or moisture could lead to degradation of performance.
- The product cannot be used when the media or the ambient atmosphere contains any of the substances listed below.
Organic solvents, phosphate ester type hydraulic oil, sulphur dioxide, chlorine gas, or acids, etc.
- Avoid using in locations where the ambient temperature exceeds the specified operating temperature range.
- Avoid use when the specified maximum operating pressure is exceeded.
- This product is for industrial use. Do not use in life-support equipment or other equipment critical to human health and life.
- Avoid applying excessive external force on this product.
- Do not disassemble or modify this product.
- Do not expose this product to ultraviolet rays, wind or rain.
- When disposing of this product, always treat it as industrial waste.