

# Inline Ceramic Gas Filter



## High Accuracy Filtration

- For sub micron LSI processes, it is indispensable to supply high purity process gas to use point. Ultra clean piping was also a major concern for this purpose. To cope with such requirements, Pureron Japan has developed completely new filters using ceramic as filtering element and achieved  $0.003\mu\text{m}$  high accuracy filtration under stable condition.

## High Selectivity Indispensable for Etching and Thin Film

- Removal of impurity such as water and oxygen is very important seeking for high selectivity. High temperature baking is indispensable in order to surely remove impurity. Pureron Japan's ceramic filter has been developed from this viewpoint and high temperature baking at  $200^{\circ}\text{C}$  is possible.

## Cost Reduction by Maintenance-Free Operations

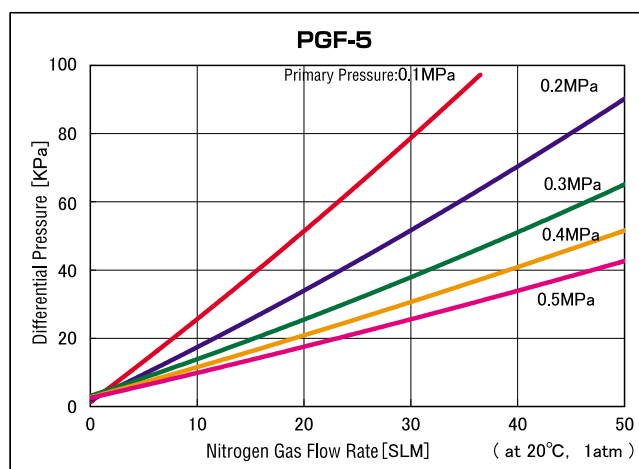
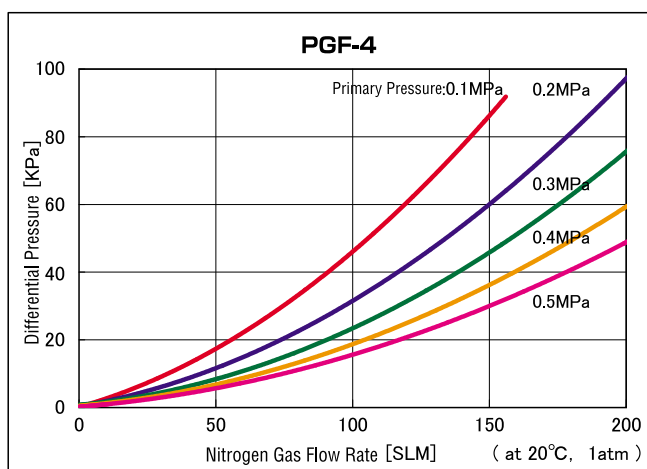
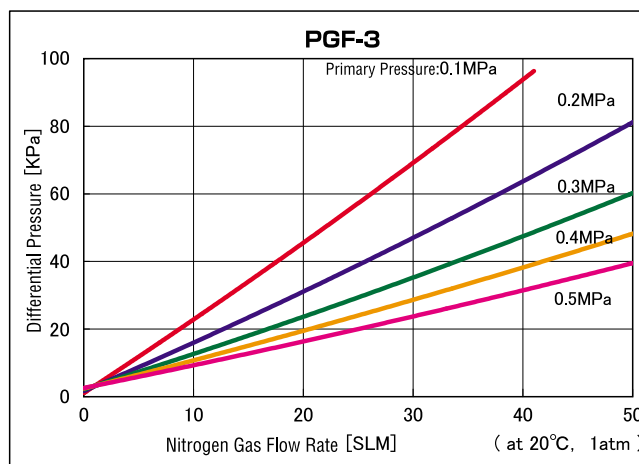
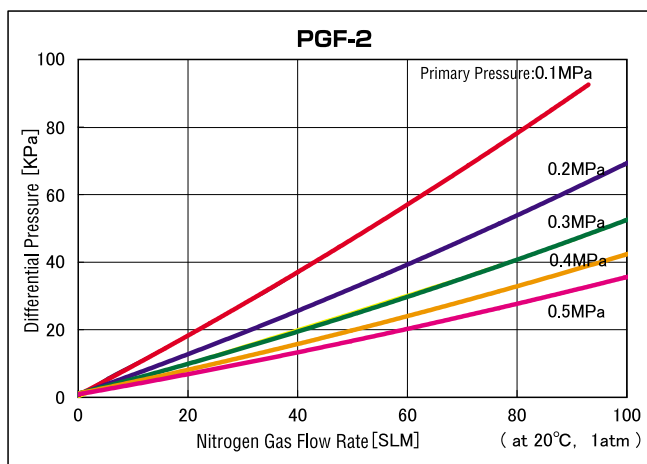
- Trilaminar filtration structure, depending on size of particle diameter, rarely generates clogging. Ceramic filter also offers superior durability and heat resistance compared with conventional filter. Consequently, little loss caused by down time of production realizes cost reduction in long term.

## Specification

Filtration Accuracy	0.003 $\mu$ m (however, it is 0.1 $\mu$ m at purified water filtration)
Recommended Flow Rate	10 to 200L/min (refer to flow rate characteristic curve for each model)
Max. Operating Pressure	17MPa (2,465PSIG) at 20°C      16.5MPa (2,392PSIG) at 120°C
Max. Allowable Differential Pressure	9.6MPa (1,392PSIG) at 20°C
Max. Continuous Operating Temperature	120°C
Baking Temperature	200°C
External Leakage	2 $\times 10^{-11}$ Pa $\cdot$ m <sup>3</sup> /sec or less
Materials	Housing: SUS316L    Roughness: Rmax0.7 $\mu$ m or less Element: Alumina ceramics (Al <sub>2</sub> O <sub>3</sub> )    Seal: PTFE
Joint	1/4", 3/8", 1/2", 3/4"    VCR®, Swagelok®, UPG®, and others

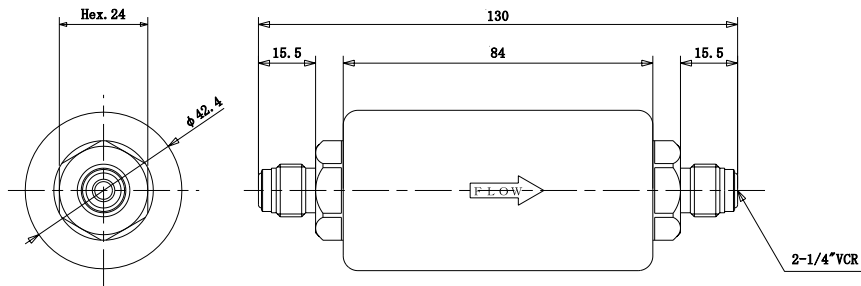
Ceramic  
Gas Filter

## Flow Rate Characteristics

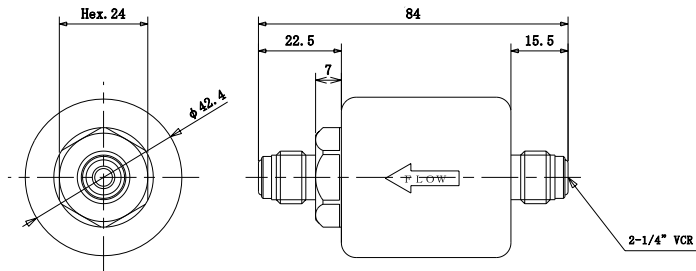


## Dimensional Outline Drawing

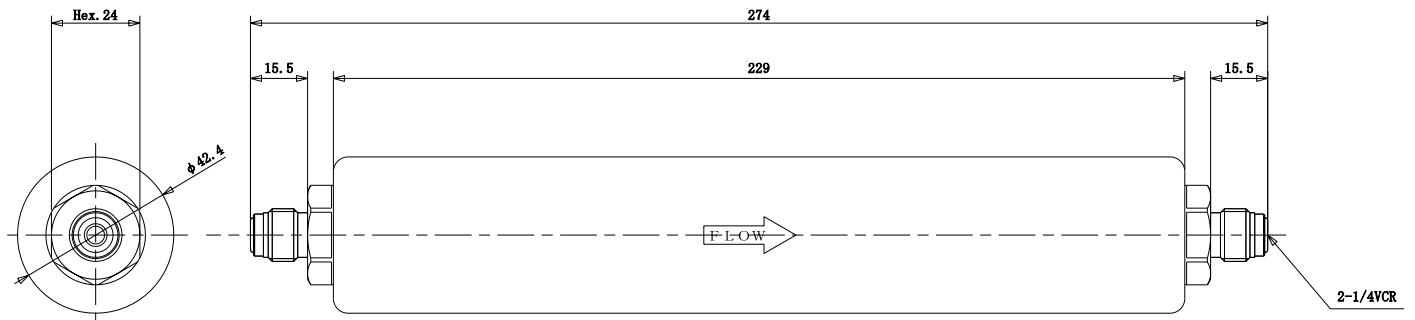
PGF-2-02VR•PC07



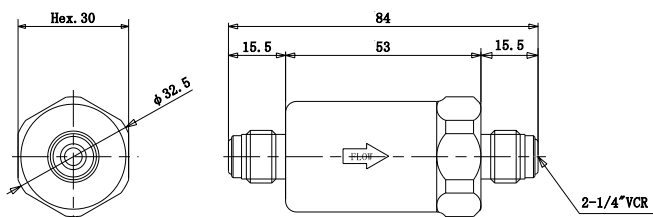
PGF-3-02VR•PC07



PGF-4-02VR•PC07



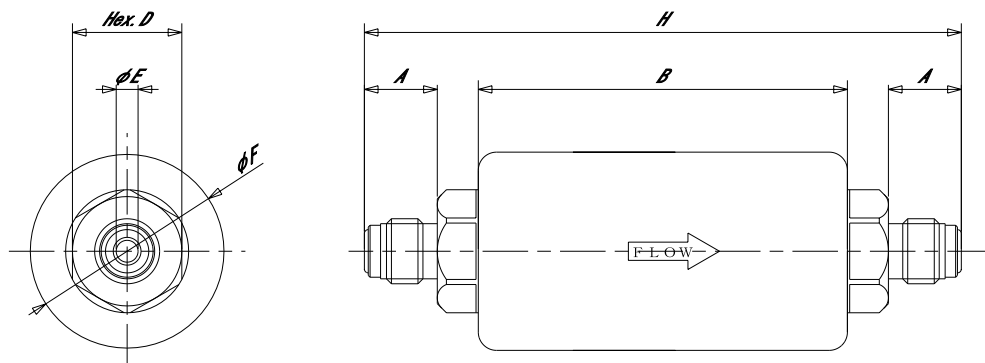
PGF-5-02VR•PC07



## Dimensions

Model	A(mm)	B(mm)	D(mm)	E(inch)	F(mm)	H(mm)
PGF-2-02VR・PC07	15.5	84.0	Hex.24	1/4	φ42.4	130.0
PGF-2-02SW・PC07	10.0	84.0	Hex.24	1/4	φ42.4	119.0
PGF-2-03VR・PC07	19.0	92.0	Hex.24	3/8	φ42.4	146.0
PGF-2-03SW・PC07	12.0	92.0	Hex.24	3/8	φ42.4	131.0
PGF-3-02VR・PC07	15.5	46.0	Hex.24	1/4	φ42.4	84.0
PGF-3-02SW・PC07	10.0	46.0	Hex.24	1/4	φ42.4	73.0
PGF-3-03VR・PC07	19.0	48.4	Hex.24	3/8	φ42.4	112.0
PGF-4-02VR・PC07	15.5	229.0	Hex.24	1/4	φ42.4	274.0
PGF-4-03VR・PC07	19.0	230.0	Hex.24	3/8	φ42.4	284.0
PGF-5-02VR・PC07	15.5	53.0	Hex.30	1/4	φ32.5	84.0
PGF-5-02SW・PC07	10.0	53.0	Hex.30	1/4	φ32.5	73.0

Ceramic  
Gas Filter



## Options

- Filter baking: 200°C, 2 hours
- Metal cap
- For ultra large flow rate 500 to 3,000L/min, PGF-11 type is available.

## How to Order

PGF - **2** - **02** **VR** • **PC07**

Type      Bore Diameter      Type of Joint      Roughness Degree of Inner Face

Indication of Flow Rate			
2 : 40 to 80SLM 3 : 10 to 40SLM 4 : 80 to 200SLM 5 : 10 to 40SLM	02 : 1/4" 03 : 3/8" 04 : 1/2" 06 : 3/4"	VR : VCR® SW : Swagelok® UP : UPG® For other joints, please contact us.	R max 0.7μm (option : R max. 0.2μm) : PC02

※Specification is subject to change without notice.