

# Sinterflo® AP IFR

## Sintered Porous Media In-Line Flow Restrictors



When a set flow rate is required, Porvair's Sinterflo® In-line Porous Metal Flow Restrictors are the low-cost alternative that can replace your flow controllers, needle valves, and calibrated orifices.

Flow limiting devices are often installed in compressed gas supply lines and gas distribution manifolds to prevent unintentional high gas flow caused by ruptured gas lines, or malfunctioning valve or pressure regulators.

### Typical Applications

- Medical
- Chemical
- Pharmaceutical
- Safety Devices
- Semiconductor
- Food and Beverage
- Aerospace
- Leak Detection
- Replacement for Flow Controllers/Needle Valves
- Chromatography
- OEM

### Design flexibility

Porvair's porous metal flow restrictors can accommodate almost any flow requirement. For technical data on a specific flow restrictor, or help on selecting the best flow restrictor for your application, contact the Porvair sales team with the following information, to discuss product availability:

1. Gas type and operating temperature
2. Inlet pressure
3. Downstream pressure
4. Desired downstream flow rate
5. Fitting size, type, and material.

### Features and Benefits

- **Improved gas safety management**  
Porous metal flow restrictors are in-line devices that precisely limit the gas flow in case of catastrophic failure of a valve, pressure regulator, distribution manifold or gas supply line. They can be used in a wide range of inert, highly toxic and pyrophoric gases to reduce the handling risk.
- **Reliable, tamper proof flow control**  
Porous metal flow restrictors have no moving parts and do not require any power. They will continue to provide accurate, fixed flow without adjustment over the product's lifespan.
- **Sintered porous media provides laminar flow**  
These porous metal flow restrictors are designed with large numbers of small, interconnected passageways that restrict and limit flow in a gas line. Unlike single bore flow restrictors, these porous metal flow restrictors have a reduced chance of plugging, decreased flow turbulence, and reduced flow burden for a longer lasting product.
- **Pressure stabilization**  
Prevention of pressure surges and pressure shock protects and improves dynamic flow control performance downstream.

### Specifications

#### All metal construction

A stainless steel porous element is fitted into a standard stainless steel face seal fitting. Other materials and fitting configurations are available.

Calibrated using N2, He, H2, Air, O2 or Ar. Other density gases will be calibrated using N2 as a correlation.

#### Wide range of operating conditions

Standard flow tolerance of +7.5% of the rated flow at the rated pressure and gas type.

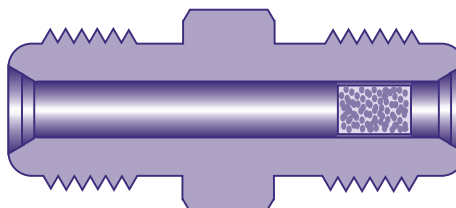
Down stream flow rates from 60 SLPM down to 1 SCCM.

Operating pressures up to 110psig (standardising to atmosphere).

Sustained operating conditions in temperatures up to 450°C in inert gas applications.

### Cross Section Example

Example Hardware B: 1/4" x 1/4" VCR



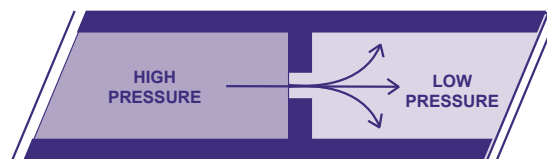
### Porvair Sinterflo® AP IFR Flow Restrictors

- Low gas approach velocity, virtually no effect on performance.
- Sinterflo® AP media with multiple pathway resists particulate fouling.
- Low velocity gas flow creates laminar downstream flow.



### Traditional Single Orifice Device

- High gas velocity, pressure, heat causing erosion.
- Particulate fowling changes gas flow volume.
- Downstream turbulent gas flow.



### Ordering Guide

Product Code: **1** **2** **3** **4** **5** **6** **7** Eg: SIFR-C-SS-30-N2-500-0

1. Part Number	2. Hardware	3. Porous Material		4. Inlet Pressure (psig)	5. Calibration Gas Type		6. Flow Rate	7. Outlet Pressure (psig)	
SIFR	A Bushing only	SS	Stainless Steel 316L	Up to 110psig	CDA	Air	1- 60,000 SCCM	0	Atmosphere
	B 1/4" x 1/4" VCR				N2	Nitrogen		-15	Vacuum
	C 1/8" x 1/8" VCR				He	Helium			
	D 1/4" Tube Union				H2	Hydrogen			
	E 1/8" Tube Union				O2	Oxygen			
	F 1/4" x 1/4" Compression				Ar	Argon			
	G 1/8" x 1/8" Compression								
	H 1/8" x 1/4" Compression								
	I 1/4" x 1/4" Straight Pipe Adapter								
	J 1/8" x 1/8" Straight Pipe Adapter								

Note: The following table does not represent all available flow restrictor options. Contact a Porvair sales representative for requests.

PF901/Rev8:Aug24