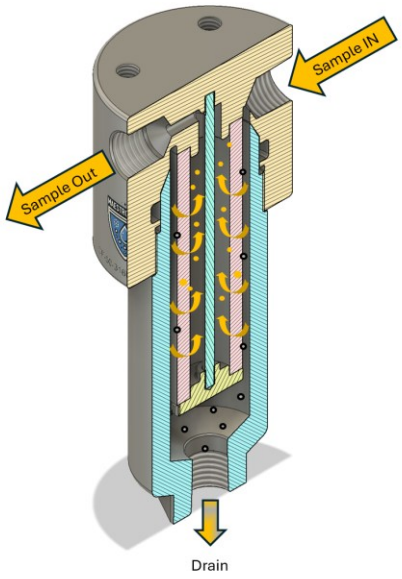
Product Brief – MaestroGuard® Filter

CF-50-316L

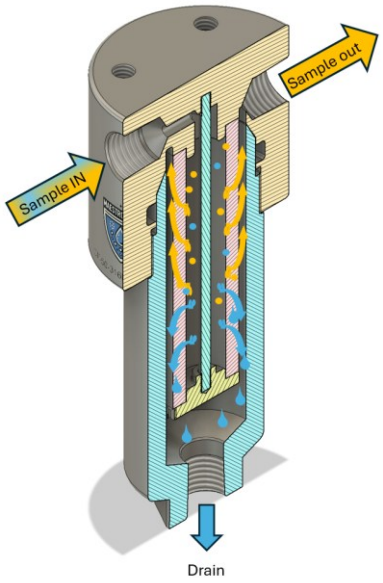
1. Product Overview

The CF-50-316L is a high-performance particle and coalescing filter designed for sample gas purification in industrial process analysis. It ensures reliable removal of liquids and particulates from corrosive, explosive, and inert gas streams. This unit is optimized for durability, ease of maintenance, and low pressure drop.

Functional diagram illustrating the CF-50-316L particle filter



Functional diagram illustrating the CF-50-316L coalescence filter



2. Key Features

- Ultra-Fine Filtration – Captures submicron particles, aerosols, water, and hydrocarbons (< 0.1 µm pore size).
- Robust & Compact – Made from 316L stainless steel, ideal for corrosive or high-pressure environments.
- Chemical Resistance – Borosilicate particle and coalescing elements withstand aggressive gases and solvents.
- High Pressure & Temperature – Withstands pressures up to 160 bar and temperatures up to 500°C.
- Modular & Maintainable – Easy membrane replacement without disconnecting tubing.

3. Technical Specifications

Parameter	Specification
Housing Material	Stainless Steel 316L (1.4404)
Filter Element	Particle and Coalescer type
Filtration Efficiency	< 0.1 µm to 25 µm
Max Operating Pressure	Up to 300 bar
Temperature Range	–40°C to 327°C (depending on seal)
Flow Rate	Up to 6000 L/h air
Connections	NPT Female or on request
Seal Materials	FKM, FFKM
Certificates / Compliance	EN 10204 3.1, CE, ATEX, PED 2014/68/EU, ISO 11114-4, ISO 15156 / NACE MR0175

No self-ignition hazard – compliant with requirements for explosive environments.

4. Application Areas

- Gas Analysis Systems – For explosive, inert, and corrosive gases (e.g., H_2, CO_2, SO_2)
- Process Monitoring – Reliable performance in field and lab settings
- Hydrogen Production & Fuel Cells – Dry, clean gas ensures system protection
- Environmental Monitoring – Accuracy in NOx, SOx, and hydrocarbon measurement

5. Ordering Information

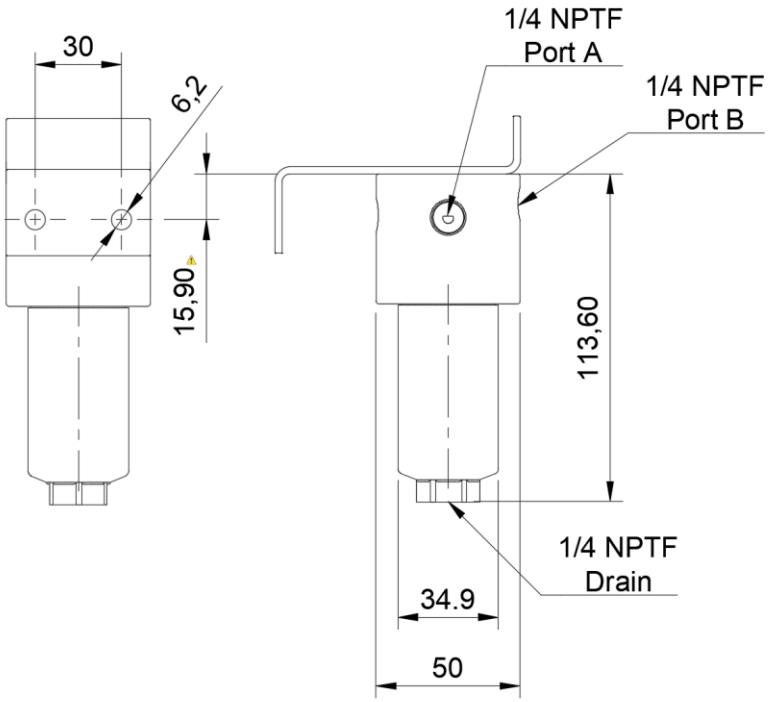
Order Number	Description
CF-50-316L-300-FKM-V1	CF-50 MaestroGuard® Gas Filter, 300 bar, O-ring FKM
CF-50-316L-300-FFKM-V1	CF-50 MaestroGuard® Gas Filter, 300 bar, O-ring FFKM
Option	
MB-CF-50-SS-H	CF-50 Mounting Bracket in Stainless Steel 316L Horizontal installation
MB-CF-50-SS-V	CF-50 Mounting Bracket in Stainless Steel 316L Vertical installation
Filter Element	
PFC-50-01B-V1	CF-50 Particle Filter Cartridge 0,1µm, Borosilicate set of 5
PFC-50-01SP-V1	CF-50 Particle Filter Cartridge 0,1µm, Sintered PTFE
PFC-50-10SP-V1	CF-50 Particle Filter Cartridge 1,0µm, Sintered PTFE
PFC-50-100SP-V1	CF-50 Particle Filter Cartridge 10,0µm, Sintered PTFE
PFC-50-250SP-V1	CF-50 Particle Filter Cartridge 25,0µm, Sintered PTFE
CFC-50-01B-V1	CF-50 Coalescing Filter Cartridge 0,1µm, Borosilicate set of 5
CFC-50-10B-V1	CF-50 Coalescing Filter Cartridge 1,0µm, Borosilicate set of 5
Spare Parts	
OCF-50-FKM-V1	CF50 O-ring FKM
OCF-50-FFKM-V1	CF50 O-ring FFKM

6. Benefits

- High coalescing efficiency
- Long service life with minimal maintenance
- High dirt-holding capacity
- Chemically resistant to wide range of compounds
- Optimized for analytical precision



7. Dimensions



Specifications are subject to change without notice
as part of our continuous improvement efforts.

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