

Advanced Filter System I

Oxygen, Moisture and Hydrocarbon Purifier with Indicator Model ALAFS1

The Advanced Filter System I (AFS-I) from Air Liquide is a high capacity gas purifier that removes O₂, H₂O and hydrocarbons (with 5 or more carbons) to low ppb levels from inert and hydrogen gas streams. AFS-I is strongly recommended for use with gas chromatography (GC), inductively-coupled plasma spectroscopy (ICP) detector testing platforms and carrier gas supply lines. The high capacity and robust construction make it suitable for installations requiring multiple instruments.

The AFS-I is constructed in two parts, a stainless steel manifold that connects to the gas line which is intended to stay in place permanently, and a high-capacity aluminum cartridge that is changed periodically when the filter bed is consumed. Brackets and hardware (included) are used to mount the manifold to a bench or wall. Once the manifold is installed, the easily replaceable cartridge is attached to the manifold with a clamping knob. The cartridge design features double seals at all joints, and a sealed polycarbonate shield to provide protection in the event of sight-glass breakage. Two high sensitivity indicators provide visual indications via distinct color changes for oxygen and moisture breakthrough.



Benefits/Features

- Sensitive visual indicators for oxygen and moisture
- Simple cartridge replacement with twist on/off assembly knob
- Dual sealing system
- Check valves protect gas lines during cartridge replacement
- Stainless steel manifold fittings
- 10 micron frits on cartridge
- 100% helium leak tested and shipped filled with helium

Specifications

- Source Gas:** He, Ar, N₂, H₂
- Operating Pressure Range:** 10 – 200 psig (0.7 – 14 bar) at 70°F (21°C)

Operating Temperature Range:

60°F to 95°F (15°C to 35°C)

Performance: See Table 1

Volume: 250cc

Flow Rate: 2 slpm maximum recommended

Inlet and Outlet Connections: See Table 2

Dimensions:

12" x 2" x 2" (304.5mm x 50.8mm x 50.8mm)

Weight: 3 lbs. (1.4 kg) approximately

Materials of Construction

Outer Body/Tube: Aluminum

Inner Tube: Stainless steel

Seals: Fluoro-elastomer

Manifolds, Fittings and Frits: Stainless steel

Table 1

Removal Performance	Efficiency	Capacity
Oxygen	5 ppb	850 cc (0.7 g)
Water	20 ppb	12 g
Hydrocarbons	5 ppb	8 g

Table 2

Model Number	Description	Inlet and Outlet Connections
QALAFS1-2KIT	AFS I, complete kit includes AFS manifold	1/8" compression
QALAFS1-4KIT	AFS I, complete kit includes AFS manifold	1/4" compression
QALAFS1-RC	AFS I, replacement cartridge	Port holes (mate to AFS manifold)
QALAFS-2MAN	AFS manifold replacement	1/8" compression
QALAFS-4MAN	AFS manifold replacement	1/4" compression

