

Compressed Air Filter Unit AI-1000

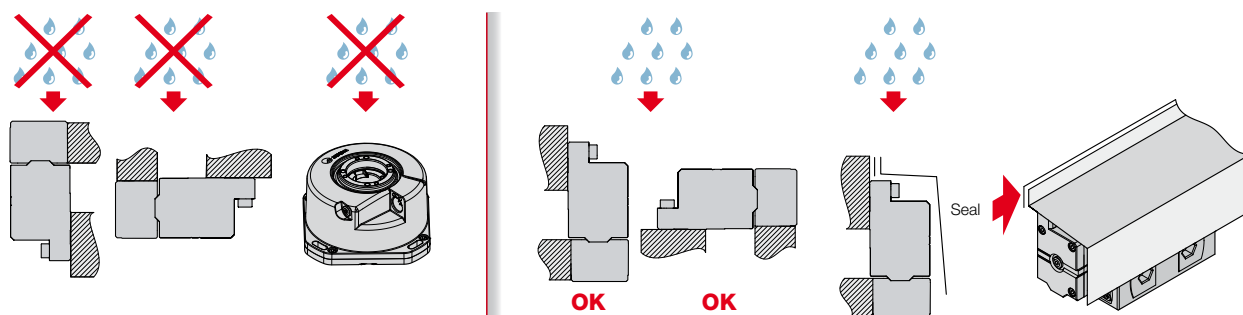


Compressed air filter unit

Level of protection for Fagor enclosed measuring systems

The linear models meet the IEC 60529 standards on IP53 protection levels while the angular systems meet the IP64 protection levels. During construction, it is recommended that the rubber seals on the linear models are facing away from the splash liquids and that for either linear or angular models the splash liquids must not contain substances that would have harmful effects on the system parts. When required, equipment can be protected with additional constructive measures.

Furthermore, the equipment is designed to operate with pressurized air and provide additional protection against contamination. For optimum supply of sealing air to the encoders the required air flow is 7 l/min to 10 l/min for each linear measurement system and between 1 l/min and 4 l/min per angular measurement system. The compressed air that goes directly into the measurement system must be conditioned by a system to achieve the required purity level.



AI-1000

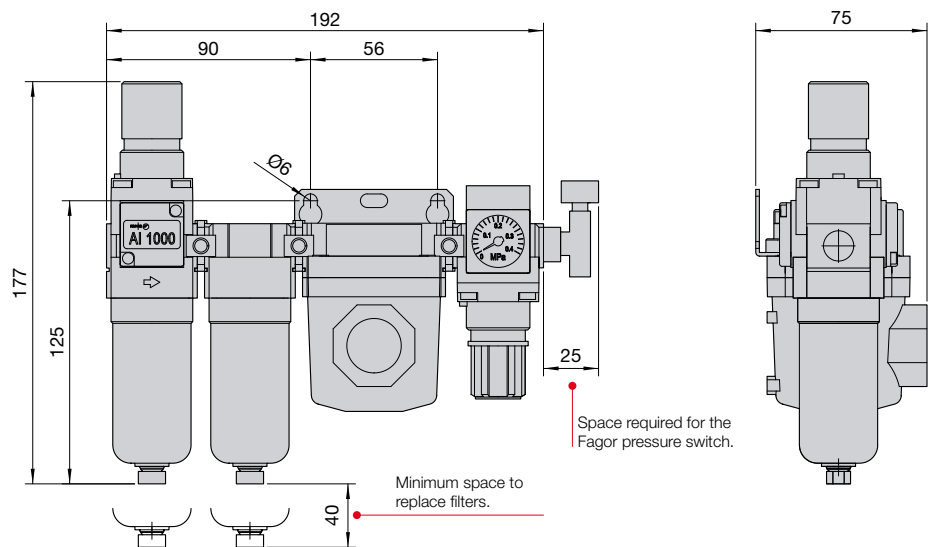
The Fagor AI-1000 unit is ideal for regulating the amount of air. This unit has been specifically designed to supply compressed air in accordance with the conditions required for the measurement systems. The AI-1000 unit has three stages of filters and a pressure regulator with a pressure

gauge. With regard to impurities, it is essential that the supplied compressed air to the AI-1000 unit complies with purity classes 5/6/4 to ensure that the output air complies with purity classes 1/4/1. The definitions of purity classes as per ISO 8573-1:2010 are described below:

| | Inlet 5 / 6 / 4 | | Outlet 1 / 4 / 1 | |
|-------------------------|---|--|--|--|
| Solid contaminants | CLASS 5 | | CLASS 1 | |
| | Particle size | Number of particles per m ³ | Particle size | Number of particles per m ³ |
| | 0.1 µm to 0.5 µm | Not specified | 0.1 µm to 0.5 µm | ≤ 20 000 |
| | 0.5 µm to 1.0 µm | Not specified | 0.5 µm to 1.0 µm | ≤ 400 |
| | 1.0 µm to 5.0 µm | ≤ 100 000 | 1.0 µm to 5.0 µm | ≤ 10 |
| Max. pressure dew point | CLASS 6 Pressure dew point at 10°C | | CLASS 4 Pressure dew point at 3°C | |
| Total oil content | CLASS 4 Max. oil concentration 5 mg/m ³ | | CLASS 1 Max. oil concentration 0.01 mg/m ³ | |

| Specifications | AI-1000 |
|-----------------------|---|
| Design | Unit for purifying and regulating compressed air |
| Output connection | Up to 10 linear or angular encoders |
| Configuration | Two particle filters Oil vapor filter Pressure regulator for adjusting output pressure |
| Purity Classes | Inlet: 5/6/4 (according to ISO 8573-1: 2010) Outlet: 1/4/1 (according to ISO 8573-1: 2010) |
| Operating temperature | 5° C - 60° C |
| Connections | Inlet and outlet fittings G ¼" |
| Maintenance | Change the filters every two years or whenever the initial pressure has dropped by 40% |
| Mass | 0,9 Kg |

Dimensions

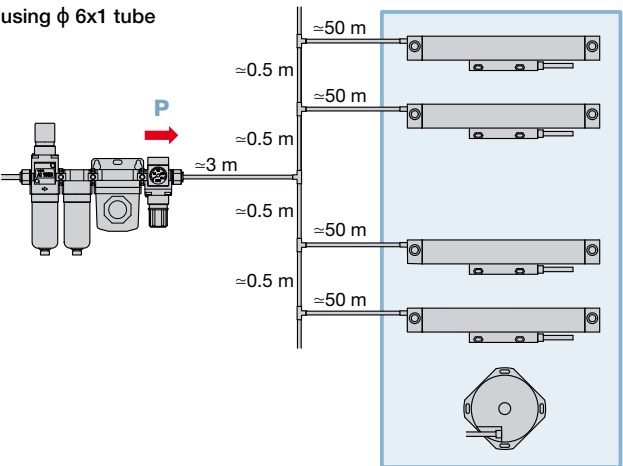


| Accessories | | | |
|---|--|--|--|
| Pressure switch For monitoring pressure drops indicating the need to replace the filters Part number: 02201005 | | Inlet and outlet fittings (G 1/4") Part number: 02201009 (tube input ϕ 8) Part number: 02201010 (tube outlet ϕ 6) | |
| Replacement filters Part number: 02201006 (5 μ) Part number: 02201007 (0.3 μ) Part number: 02201008 (oil) | | Tube T connector ϕ 6 quick connection Part number: 02201011 | |
| Polyurethane tube ϕ 6x1 Part number: 02201012 | | Nylon vessel Improved chemical resistance properties Part number: 02201013 | |

| Fittings | | | |
|--|--|--|--|
| Straight fitting (without nut) for linear encoder and ϕ 6x1 tube Part number: 82620170 | | Double elbow fitting for linear encoder and ϕ 6x1 tube Part number: 82620176 | |
| Straight fitting for linear encoder and ϕ 6x1 tube Part number: 82620172 | | Straight fitting for angled encoder and ϕ 6x1 tube Part number: 82620173 | |
| Angled fitting for linear encoder and ϕ 6x1 tube Part number: 82620174 | | Angled fitting for angled encoder and ϕ 6x1 tube Part number: 82620175 | |

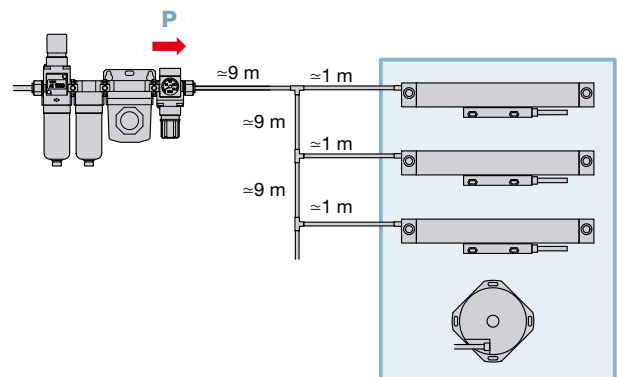
Connection example

Parallel mounting
using ϕ 6x1 tube



P = 0.1 MPa / 1 bar 1-3 encoders
P = 0.2 MPa / 2 bar 4-6 encoders
P = 0.3 MPa / 3 bar 7-10 encoders

Serial mounting
using ϕ 6 x 1 tube



P = 0.1 MPa / 1 bar 1-3 encoders
P = 0.25 MPa / 2.5 bar 4-6 encoders



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