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Compressed Air Filter Unit AI-1000

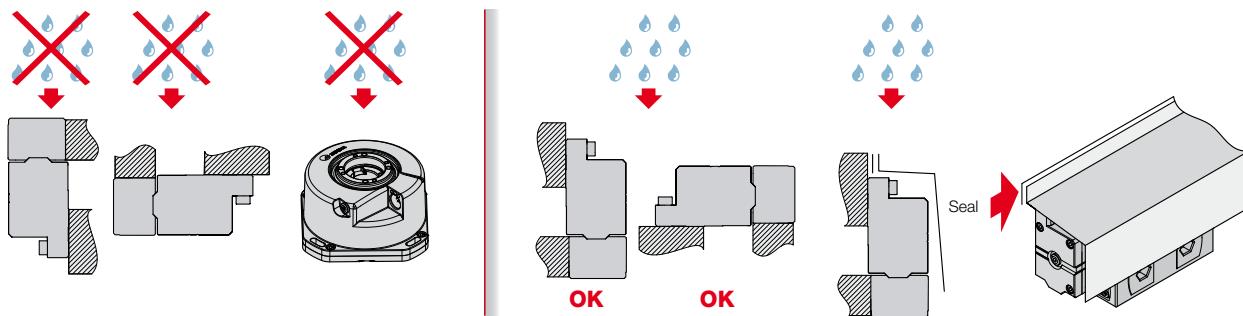


Compressed air filter unit

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

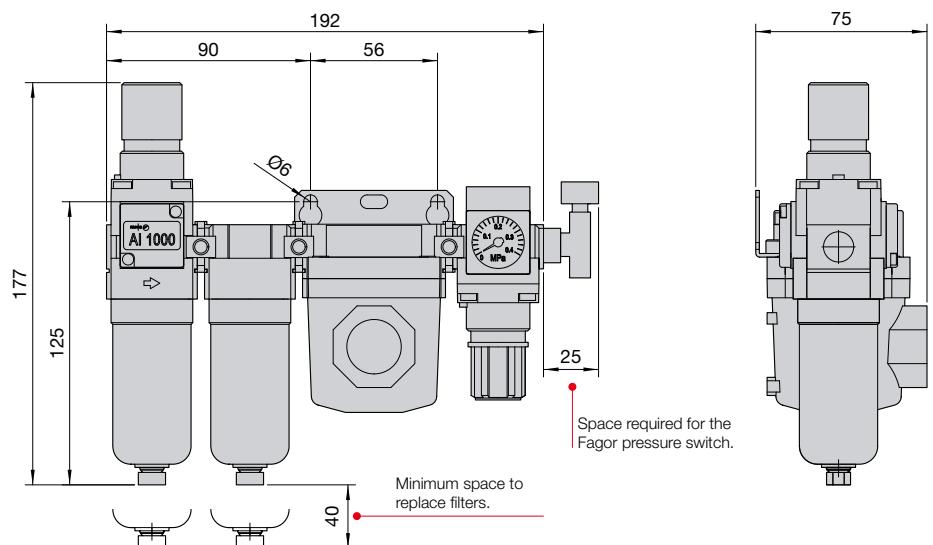
The Fagor AI-1000 unit is ideal for regulating the amount of air. This unit has been specifically designed to supply compressed air in accordance with the conditions required for the measurement systems. The AI-1000 unit has three stages of filters and a pressure regulator with a pressure

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	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		CLASS 4	
	Pressure dew point at 10°C		Pressure dew point at 3°C	
Total oil content	CLASS 4		CLASS 1	
	Max. oil concentration 5 mg/m ³		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 1/4"
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)



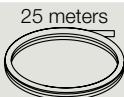
Replacement filters

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

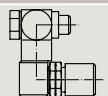


Fittings

Straight fitting (without nut) for linear encoder and ϕ 6x1 tube
Part number: 82620170



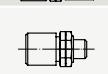
Double elbow fitting for linear encoder and ϕ 6x1 tube
Part number: 82620176



Straight fitting for linear encoder and ϕ 6x1 tube
Part number: 82620172



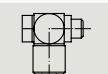
Straight fitting for angled encoder and ϕ 6x1 tube
Part number: 82620173



Angled fitting for linear encoder and ϕ 6x1 tube
Part number: 82620174

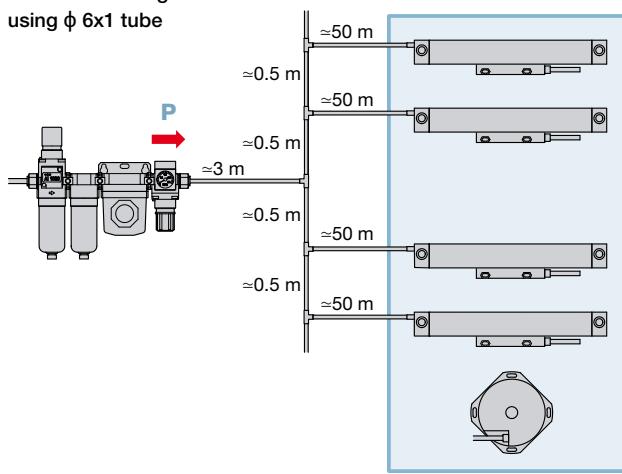


Angled fitting for angled encoder and ϕ 6x1 tube
Part number: 82620175



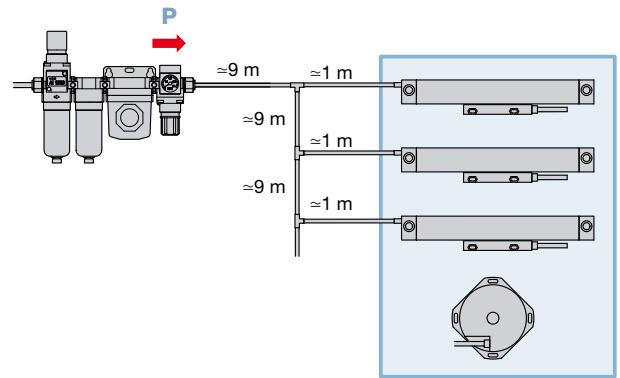
Connection example

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 6x1 tube



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

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